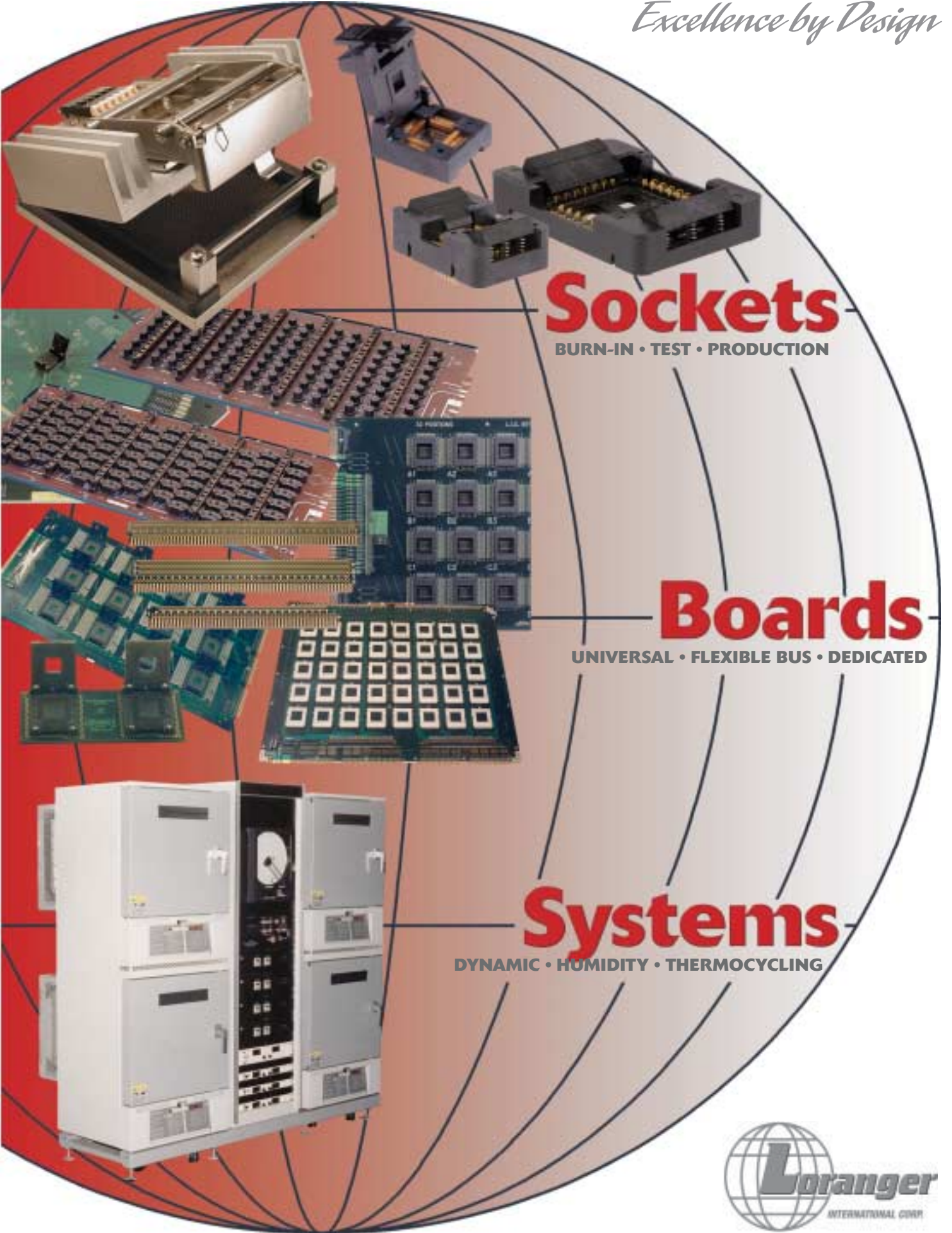


Excellence by Design



Sockets

BURN-IN • TEST • PRODUCTION

Boards

UNIVERSAL • FLEXIBLE BUS • DEDICATED

Systems

DYNAMIC • HUMIDITY • THERMOCYCLING



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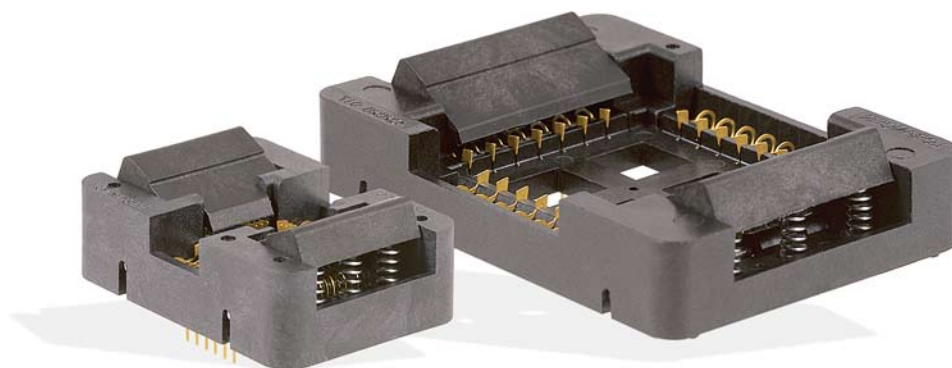
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New! OpenTop QFN Sockets



Design Features

- *IMPROVED* Airflow in Burn-in
- *IMPROVED* Automation for Burn-in Loading and Unloading
- Pitches of 0.35mm and Greater
- *IMPROVED* Proven Contact Design
- *IMPROVED* Efficient Size Yields Higher Board Densities
- Package Aligns Quickly in Socket
- Fast Delivery of High Quantities

Let us show you our latest for your requirement!

**Socket Contact Solutions Available for
0.3mm Diameter Solder Bumps and Pads**



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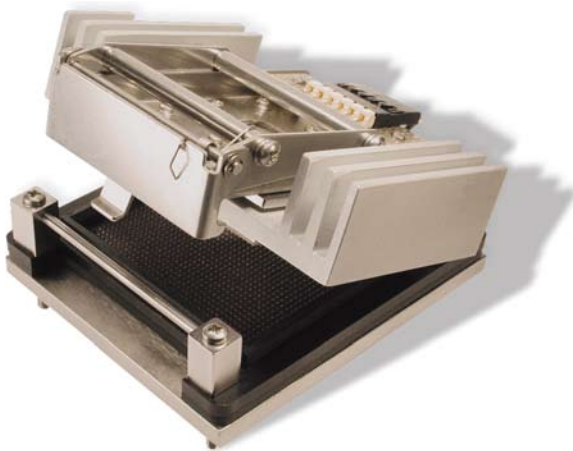
QFN Socket Family

Design Features

- *Depth-Controlled Wiping Contact*
- *Accurate, Tightly-Controlled Package Fit*
- *Zero-Insertion-Force*
- *Open Top Socket Design*
- *Optional Case Contacts for Electrical or Thermal Requirements*



SmartSocket™ with Heat Sinks, Heaters, Junction Sensors, Logic Circuits



Design Features

- *Finned Aluminum Heatsink Cover Dissipates Heat from Package*
- *Pitches of 0.35mm and Up*
- *Optional Package Temperature Sensor (RTD or Junction Thermocouple)*
- *Optional Socket Heater to Stabilize Package Temperature*
- *Proven Contact Design*
- *SMT and Efficient Size for High Board Densities*
- *Package Aligns Quickly in Socket*
- *Fast Delivery in High Quantities*



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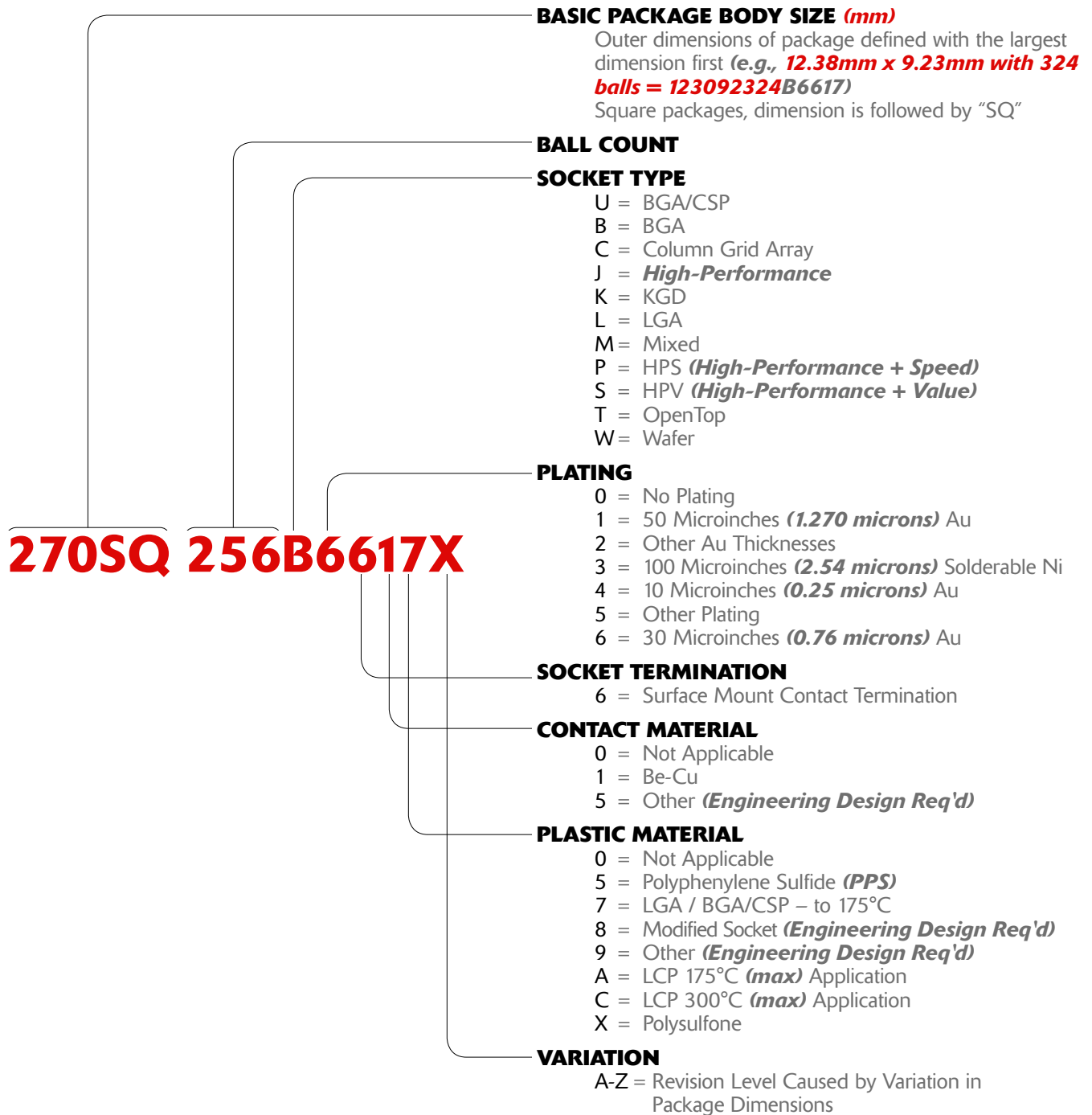
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Part Number Designations

For BGA/CSP & LGA Sockets Only

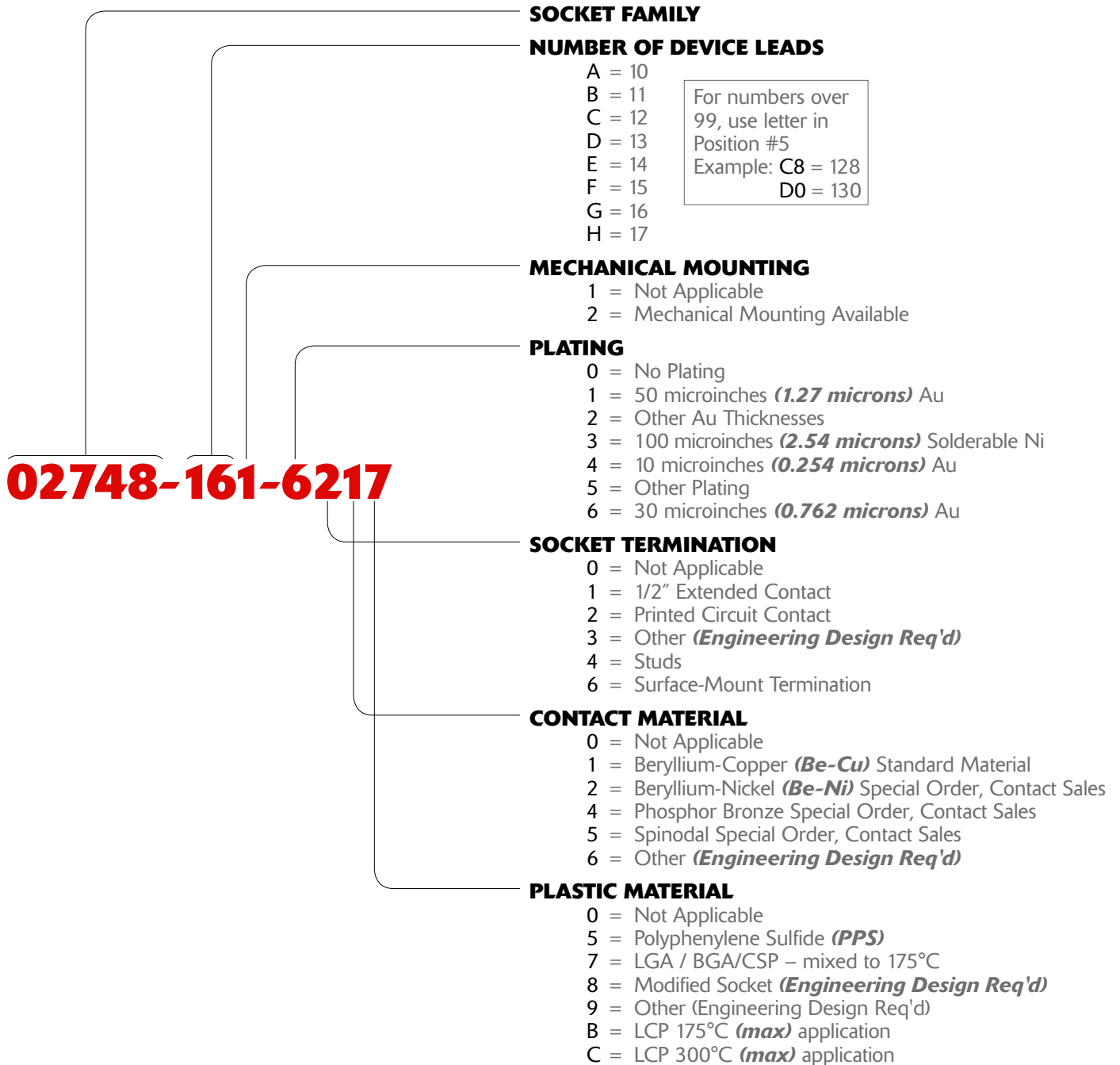


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Part Number Designations

For Other Sockets



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Key Design Features of Loranger Sockets

- *Ease of Loading / Unloading*
- *Maximum Contact Force for Good Connection*
- *Wiping Action Cleans Interface Surfaces to Minimize Contact Resistance*
- *Smallest Footprint for Highest Board Density*

Information given herein is believed to be accurate but is presented without guarantee, warranty, or responsibility of any kind, expressed or implied, by Loranger International Corporation.



“Your Complete Burn-in Source for Sockets, Boards and Systems”

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BGA/CSP Sockets

Design Features

- *Designed to Connect to Packages for Burn-in and Test Accommodating Variations in Package Thicknesses*
- *Contact Pitches of 0.35mm and Greater*
- *Direct-Contact Sockets Join Package Solder Balls to Surface Mount Pads on Board*
- *Up to 20 Grams Contact Normal Force per Solder Ball for Reduced Witness Marking assures Good Contact with High Hertz-force Concentration*
- *Socket Contact Wipes Diameter of Solder Ball*
- *Low-Profile and Small Footprint Design Increases Board Density*
- *Surface-mount Design Irons Out Coplanarity Issues and Reduces Need for Extra Board Layers*



I/O	Pitch (mm)	Pkg Body L (mm)	Pkg Body W (mm)	Pkg H / T (mm)	Array	Socket Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
4	0.50	0.96	0.96	0.51	2 x 2	ClamShell	1.050	0.750	0.440	009SQ 004J6617
4	0.50	0.96	0.96	0.46	2 x 2	ClamShell	1.050	0.750	0.440	009SQ 004U6617
4	0.50	1.06	0.96	0.74	2 x 2	ClamShell	1.050	0.750	0.440	010009004U6617
4	0.50	1.06	1.06	0.74	2 x 2	ClamShell	1.050	0.750	0.440	010SQ 004J6617
4	0.60	1.20	1.20	0.67	2 x 2	ClamShell	1.050	0.750	0.445	012SQ 004J6617
4	0.50	1.55	1.55	0.58	2 x 2	ClamShell	1.050	0.750	0.440	016SQ 004U6617
4	2.50	3.50	3.50	1.15	2 x 2	ClamShell	1.050	0.750	0.440	035SQ 004B6617
5	0.50	1.33	0.83	0.58	3 x 3 D*	ClamShell	1.050	0.750	0.440	013008005J6617
5	0.50	1.32	0.82	0.55	2 x 3 D*	ClamShell	1.050	0.750	0.440	013008005U6617
5	0.50	1.33	0.96	0.74	2 x 3 D*	ClamShell	1.050	0.750	0.440	013009005U6617
5	0.50	1.41	1.00	0.55	3 x 3 D*	ClamShell	1.050	0.750	0.535	014010005J6617
6	0.40	1.38	1.00	0.58	2 x 3	ClamShell	1.050	0.750	0.530	013010006J6617
6	0.50	1.46	0.96	0.50	3 x 2	ClamShell	1.050	0.750	0.440	014009006J6617
6	0.50	1.58	1.08	0.58	2 x 3	ClamShell	1.050	0.750	0.440	015010006J6617
6	0.50	1.54	1.04	0.50	2 x 3	ClamShell	1.050	0.750	0.440	015010006J6618A
6	0.50	1.54	1.08	0.50	2 x 3	ClamShell	1.050	0.750	0.440	015010006J6618B
8	0.40	1.60	0.80	0.58	8 x 2	ClamShell	1.050	0.750	0.530	016008016J6617
8	0.40	1.60	0.80	0.58	8 x 2	ClamShell	1.050	0.750	0.530	016008016J6618A
8	0.50	2.09	0.99	0.56	2 x 4	ClamShell	1.050	0.750	0.650	020009008U6617
8	0.50	2.00	2.00	0.95		ClamShell	1.050	0.750	0.450	020SQ 008J6617
8	0.50	2.00	2.00	0.90	3 x 3 D*	ClamShell	1.050	0.750	0.650	020SQ 008U6617
8	0.50	2.00	2.00	0.72	3 x 3 D*	ClamShell	1.050	0.750	0.650	020SQ 008U6618A
8	0.50	2.24	1.49	0.67	2 x 4	ClamShell	1.050	0.750	0.440	022014008U6617
8	0.50	2.26	1.56	0.70	2 x 4	ClamShell	1.050	0.750	0.450	022015008J6617
8	0.65	3.00	2.00	1.40	2 x 4	ClamShell	1.050	0.750	0.507	030020008U6617

* Depopulated, See Drawing for Specific Array



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BGA/CSP Sockets

I/O	Pitch (mm)	Pkg Body L (mm)	Pkg Body W (mm)	Pkg H / T (mm)	Array	Socket Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
9	0.40	1.25	1.25	0.58	3 x 3	ClamShell	1.050	0.750	0.536	012SQ 009J6617
9	0.40	1.25	1.25	0.58	3 x 3	ClamShell	1.050	0.750	0.535	012SQ 009J6618A
9	0.50	1.43	1.43	0.87	3 x 3	ClamShell	1.050	0.750	0.650	014SQ 009U6617
9	0.50	1.50	1.50	0.75	3 x 3	ClamShell	1.050	0.750	0.440	015SQ 009J6618A
9	0.50	1.52	1.52	0.58	3 x 3	ClamShell	1.050	0.750	0.440	015SQ 009J6618B
10	0.50	2.07	1.55	0.69	3 x 4 D*	ClamShell	1.050	0.750	0.440	020015010J6617
10	0.80	4.06	1.99	0.63	5 x 2 max	ClamShell	1.050	0.750	0.650	040019014J6617
12	0.50	2.00	1.40	0.73	3 x 4	ClamShell	1.050	0.750	0.650	020014012U6617
12	0.50	2.00	1.50	0.62	3 x 4	ClamShell	1.050	0.750	0.440	020015012J6617
14	0.62	4.01	2.61	0.79	5 x 3 D*	ClamShell	1.050	0.750	0.450	040026014J6617
14	0.80	4.00	3.20	0.94	4 x 5 D*	ClamShell	1.050	0.750	0.445	040032014U6617
14	0.80	4.00	3.50	0.95	5 x 4 D*	ClamShell	1.050	0.750	0.650	040035014U6617
15	0.50	2.50	2.50	0.90	4 x 4 D*	ClamShell	1.050	0.750	0.560	025SQ 015S6617
15	0.50	2.50	2.50	0.90	4 x 4 D*	ClamShell	1.050	0.750	0.560	025SQ 015U6617
15	0.50	3.53	2.37	0.93	3 x 6 D*	ClamShell	1.050	0.750	0.650	035023015U6617
16	Multi	1.44	1.05	0.63	2 x 4	ClamShell	1.050	0.750	0.535	014010016J6617
16	0.40	1.96	1.96	0.58	4 x 4	ClamShell	1.050	0.750	0.530	019019020J6617
16	0.50	2.50	2.50	1.00	4 x 4	ClamShell	1.050	0.750	0.440	025SQ 016U6617
16	0.50	3.00	3.00	1.00	5 x 5 D*	ClamShell	1.050	0.750	0.670	030SQ 016U6617
19	0.80	7.60	7.00	1.55	6 x 7 D*	ClamShell	1.050	0.750	0.650	076070019U6617
20	0.40	1.96	1.56	0.58	5 x 4	ClamShell	1.050	0.750	0.530	019015020J6617
20	0.40	2.30	1.71	0.58	5 x 4	ClamShell	1.050	0.750	0.530	023017020J6617
20	0.65	4.00	3.00	0.98	5 x 4	ClamShell	1.050	0.750	0.650	040030020U6617
24	0.50	3.00	3.00	1.00	5 x 5 D*	ClamShell	1.050	0.750	0.440	030SQ 024U6617
24	0.57	3.72	3.52	0.96	5 x 5 D*	ClamShell	1.050	0.750	0.450	037035024J6617
25	0.40	1.97	1.97	0.05	5 x 5	ClamShell	1.050	0.750	0.530	019SQ 025J6617
25	0.40	2.28	2.23	0.55	5 x 5	ClamShell	1.050	0.750	0.530	022022025J6617
25	0.50	2.75	2.55	0.58	5 x 5	ClamShell	1.050	0.750	0.450	027025025U6617
25	0.80	4.17	4.17	0.82	5 x 5	ClamShell	1.050	0.750	0.660	041SQ 025U6617
25	0.80	5.00	5.00	1.30	5 x 5	ClamShell	1.050	0.750	0.650	050SQ 025U6617
30	0.40	2.40	2.00	0.45	6 x 5	ClamShell	1.050	0.750	0.530	024020030J6617
30	0.40	2.54	2.45	0.60	6 x 5	ClamShell	1.050	0.750	0.530	025024030J6617
30	0.65	4.00	3.50	0.71	6 x 5	ClamShell	1.050	0.750	0.450	040035030J6617
30	0.65	4.00	3.50	0.71	6 x 5	ClamShell	1.050	0.750	0.440	040035030P6617
31	0.75	5.00	5.00	1.12	6 x 6 D*	ClamShell	1.050	0.750	0.507	050SQ 031U6617
32	0.65	4.44	4.44	0.78	6 x 6 D*	ClamShell	1.050	0.750	0.445	044SQ 032U6617
32	0.65	4.44	4.44	0.78	6 x 6 D*	ClamShell	1.050	0.750	0.445	044SQ 032U6619
32	1.00	6.00	6.00	1.84	6 x 6 D*	ClamShell	1.050	0.750	0.507	060SQ 032B6617
36	0.80	6.00	6.00	1.56	6 x 6	ClamShell	1.050	0.750	0.445	060SQ 036U6617
36	0.80	6.00	6.00	1.60	6 x 6	ClamShell	1.050	0.750	0.650	060SQ 036U6618A
36	1.27	10.00	9.00	1.47	6 x 7 D*	ClamShell	1.050	0.750	0.507	100090036B6617
40	0.65	6.30	5.20	1.03		ClamShell	1.050	0.750	0.450	063051022J6617
40	0.65	6.50	2.60	0.64	10 x 4	ClamShell	1.050	0.750	0.650	065026040U6617

* Depopulated, See Drawing for Specific Array



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40	0.50	9.30	7.15	0.69	4 x 10	ClamShell	1.050	0.750	0.650	093071040U6617
40	0.50	9.95	6.95	1.10	Special D*	ClamShell	1.050	0.750	0.650	099069040U6617
43	1.00	8.00	8.00	2.60	7 x 7 D*	ClamShell	1.050	0.750	0.507	080SQ 043B6617
44	0.80	7.26	6.31	0.84	6 x 8 D*	ClamShell	1.050	0.750	0.650	072063044U6617
44	0.65	10.71	5.60	0.96	8 x 6 D*	ClamShell	1.050	1.470	0.650	107056046U6617
44	0.65	10.71	5.60	0.96	8 x 6 D*	ClamShell	1.050	1.470	0.650	107056046U6618A
46	0.75	7.87	5.76	0.91	6 x 8 D*	ClamShell	1.050	0.750	0.650	078057046U6617
46	0.50	8.00	7.00	1.10	12 x 10 D*	ClamShell	1.050	0.750	0.650	080070040U6617
46	0.75	8.00	7.00	1.10	6 x 8 D*	ClamShell	1.050	0.750	0.650	080070046U6617
46	0.75	8.50	6.90	1.30	6 x 8 D*	ClamShell	1.050	0.750	0.650	085069046U6617
46	0.75	8.87	7.24	0.76	6 x 8 D*	ClamShell	1.050	0.750	0.650	088072046U6617
46	0.65	10.30	7.69	0.78	8 x 6 D*	ClamShell	1.050	1.470	0.690	103077047U6617
46	0.65	10.30	7.69	0.78	8 x 6 D*	ClamShell	1.050	1.470	0.650	103077047U6618A
47	1.00	18.00	14.16	3.46	8 x 8 D*	ClamShell	1.470	1.050	0.667	180141047B6617
48	0.50	4.00	4.00	0.90	7 x 7 D*	ClamShell	1.050	0.750	0.445	040SQ 048U6617
48	0.50	4.00	4.00	1.15	7 x 7 D*	ClamShell	1.050	0.750	0.450	040SQ 048U6618A
48	0.50	6.00	6.00	1.25	10 x 10 D*	ClamShell	1.050	0.750	0.445	060SQ 048U6617
48	0.50	6.00	6.00	1.25	10 x 10 D*	ClamShell	1.050	0.750	0.650	060SQ 048U6618A
48	0.75	7.00	7.00	1.24	6 x 8	ClamShell	1.050	0.750	0.650	070SQ 048U1618A
48	0.80	7.00	7.00	1.55	7 x 7 D*	ClamShell	1.050	0.750	0.650	070SQ 048U6617
48	0.75	7.00	7.00	1.10	6 x 8	ClamShell	1.050	0.750	0.650	070SQ 048U6618B
48	0.80	7.00	7.00	1.40	7 x 7 D*	ClamShell	1.050	0.750	0.650	070SQ 048U6618C
48	0.75	8.00	7.00	1.20	6 x 8	ClamShell	1.050	0.750	0.650	080070048U6618A
48	0.80	8.15	6.15	1.15	6 x 8	ClamShell	1.050	0.750	0.445	081061048J6617
48	0.80	8.15	6.15	0.95	6 x 8	ClamShell	1.050	0.750	0.445	081061048J6618A
48	0.80	9.00	8.00	1.10	6 x 8	ClamShell	1.050	0.750	0.650	090080048U6617
48	0.80	9.00	8.00	1.25	6 x 8	ClamShell	1.050	0.750	0.650	090080048U6618A
48	0.80	9.00	8.00	1.10	6 x 8	ClamShell	1.050	0.750	0.650	090080048U6618B
48	0.75	9.40	7.32	0.75	6 x 8	ClamShell	1.050	0.750	0.650	094073048U6617
48	0.75	9.62	6.85	0.68	6 x 8	ClamShell	1.050	0.750	0.650	096068048U6617
48	0.75	9.62	6.85	0.78	6 x 8	ClamShell	1.050	0.750	0.650	096068048U6618A
48	0.80	12.00	7.00	1.40	6 x 8	ClamShell	1.050	0.750	0.650	120070048U6617
48	0.75	12.00	7.00	1.15	6 x 8	ClamShell	1.050	0.750	0.650	120070048U6618A
48	0.80	12.00	7.00	1.20	6 x 8	ClamShell	1.050	0.750	0.650	120070048U6618B
48	1.00	12.00	10.00	1.56	6 x 8	ClamShell	1.050	0.750	0.507	120100048B6617
48	1.00	12.00	10.00	1.56	6 x 8	ClamShell	1.050	0.750	0.570	120100048B6618A
48	1.00	12.00	10.00	1.15	6 x 8	ClamShell	1.050	0.750	0.507	120100048B6618B
48	1.00	12.00	10.00	1.25	6 x 8	ClamShell	1.050	0.750	0.507	120100048B6618C
48	0.80	12.00	10.00	1.56	6 x 8	ClamShell	1.050	0.750	0.650	120100048U6617
49	0.50	3.56	3.56	0.60	7 x 7	ClamShell	1.050	0.750	0.450	035SQ 049J6617
49	0.48	3.84	3.74	0.46	7 x 7	ClamShell	1.050	0.750	0.450	037038049J6617
49	0.50	3.70	3.70	0.92	7 x 7	ClamShell	1.050	0.750	0.450	037SQ 049U6617
49	0.50	4.00	4.00	0.95	7 x 7	ClamShell	1.050	0.750	0.450	040SQ 049U6617

* Depopulated, See Drawing for Specific Array



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BGA/CSP Sockets

I/O	Pitch (mm)	Pkg Body L (mm)	Pkg Body W (mm)	Pkg H / T (mm)	Array	Socket Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
49	0.50	4.00	4.00	1.05	7 x 7	ClamShell	1.050	0.750	0.450	040SQ 049U6618A
49	0.40	4.25	3.12	0.51	9 x 7 D*	ClamShell	1.050	0.750	0.530	042031049J6617
49	0.65	5.00	5.00	1.15	7 x 7	ClamShell	1.050	0.750	0.650	050SQ 049U6617
49	0.80	6.00	6.00	1.19	7 x 7	ClamShell	1.050	0.750	0.650	060SQ 049U6617
49	0.80	6.00	6.00	1.36	7 x 7	ClamShell	1.050	0.750	0.445	060SQ 049U6618A
49	0.80	7.00	7.00	1.20	7 x 7	ClamShell	1.050	0.750	0.650	070SQ 049U6617
49	0.80	7.00	7.00	1.45	7 x 7	ClamShell	1.050	0.750	0.650	070SQ 049U6618A
49	0.80	7.00	7.00	1.40	7 x 7	ClamShell	1.050	0.750	0.650	070SQ 049U6618B
49	1.00	8.00	8.00	1.30	7 x 7	ClamShell	1.050	0.750	0.667	080SQ 049B6617
52	0.50	5.00	5.00	1.05	9 x 9 D*	ClamShell	1.050	0.750	0.650	050SQ 052U6617
52	0.80	7.60	7.00	1.55	8 x 9 D*	ClamShell	1.050	0.750	0.445	076070019J6617
52	0.80	7.60	7.00	1.36	8 x 9 D*	ClamShell	1.050	0.750	0.445	076070019J6618A
54	0.50	5.00	5.00	0.95	9 x 9 D*	Clamshell	1.050	0.750	0.450	050SQ 054J6617
54	1.27	12.93	11.66	1.05	7 x 9 D*	ClamShell	1.470	1.050	0.672	129116054P6617
54	1.00	13.00	10.00	1.30	8 x 8 D*	ClamShell	1.470	1.050	0.667	130100054B6617
55	0.80	11.50	7.50	2.96	8 x 13 D*	ClamShell	1.470	1.050	0.650	115075055U6617
56	0.50	6.00	6.00	1.11	10 x 10 D*	ClamShell	1.050	0.750	0.450	060SQ 056J6617
56	0.50	6.00	6.00	1.25	10 x 10 D*	ClamShell	1.050	0.750	0.650	060SQ 056U6617
56	0.50	6.00	6.00	1.02	10 x 10 D*	ClamShell	1.050	0.750	0.650	060SQ 056U6618A
56	0.50	6.00	6.00	1.25	10 x 10 D*	ClamShell	1.050	0.750	0.650	060SQ 056U6618B
56	0.50	6.00	6.00	1.10	10 x 10 D*	ClamShell	1.050	0.750	0.650	060SQ 056U6618C
56	0.80	11.50	7.50	2.96	8 x 13 D*	ClamShell	1.470	1.050	0.650	115075056U6617
56	0.75	12.00	7.00	1.15	8 x 7	ClamShell	1.050	0.750	0.650	120070056U6617
60	0.80	11.50	11.00	1.07	9 x 11 D*	ClamShell	1.050	0.750	0.450	115110060J6617
60	0.80	11.50	11.00	1.07	9 x 11 D*	ClamShell	1.050	0.750	0.460	115110060U6617
61	1.27	11.02	11.02	3.53	11 X 11 D*	ClamShell	1.050	0.750	0.445	110SQ 061J6617
62	Multi	11.79	8.95	1.14	12 x 9 D*	ClamShell	1.050	0.750	0.650	117089062U6617
62	0.80	11.79	8.95	1.14	12 x 9 D*	ClamShell	1.050	0.750	0.650	117089062U6618A
62	1.00	13.00	11.27	0.92	9 x 12 D*	ClamShell	1.470	1.050	0.667	130112062U6617
64	0.40	4.00	4.00	1.00	8 x 8	ClamShell	1.050	0.750	0.530	040SQ 064J6618A
64	0.50	6.00	6.00	1.02	10 x 10 D*	Clamshell	1.050	0.750	0.450	060SQ 064U6617
64	0.50	6.00	6.00	0.94	8 x 8	ClamShell	1.050	0.750	0.450	060SQ 064U6618A
64	0.80	7.00	7.00	1.62	8 x 8	ClamShell	1.050	0.750	0.507	070SQ 064U6617
64	0.80	8.00	8.00	1.19	8 x 8 D*	ClamShell	1.050	0.750	0.445	080SQ 064J6617
64	0.80	8.00	8.00	1.37	8 x 8	ClamShell	1.050	0.750	0.650	080SQ 064U6617
64	0.80	8.00	8.00	1.10	8 x 8	ClamShell	1.050	0.750	0.650	080SQ 064U6618A
64	0.80	8.00	8.00	0.90	8 x 8	ClamShell	1.050	0.750	0.445	080SQ 064U6618B
64	0.80	8.00	8.00	1.65	8 x 8	ClamShell	1.050	0.750	0.445	080SQ 064U6618C
64	0.80	8.00	8.00	1.35	8 x 8	ClamShell	1.050	0.750	0.507	080SQU064U6617
64	1.00	9.00	9.00	1.13	8 x 8	ClamShell	1.050	0.750	0.507	090SQ 064B6617
64	1.00	9.00	9.00	1.53	8 x 8	ClamShell	1.050	0.750	0.507	090SQ 064B6618A
64	1.00	9.11	9.11	2.25	9 x 9 D*	ClamShell	1.050	0.750	0.507	091SQ 064B6617
64	0.80	12.00	8.00	1.20	8 x 8	ClamShell	1.050	0.750	0.650	120080064U6617

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BGA/CSP Sockets

I/O	Pitch (mm)	Pkg Body L (mm)	Pkg Body W (mm)	Pkg H / T (mm)	Array	Socket Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
64	0.80	12.00	8.00	1.30	8 x 12 D*	ClamShell	1.050	0.750	0.650	120080064U6618A
64	1.00	10.00	13.00	1.10	8 x 8	ClamShell	1.470	1.050	0.667	130100064B6617
64	1.00	18.00	14.00	4.42	8 x 8	ClamShell	1.470	1.050	0.667	180140064B6617
64	1.00	18.00	14.16	3.16	8 x 8	ClamShell	1.470	1.050	0.605	180141064J6617
64	1.00	18.00	14.16	3.16	8 x 8	ClamShell	1.470	1.050	0.772	180141064P6617
65	0.80	8.00	8.00	1.19	8 x 9 D*	ClamShell	1.050	0.750	0.445	080SQ 065J6617
67	0.80	12.00	8.00	1.15	8 x 12 D*	ClamShell	1.050	0.750	0.507	120080067U6617
68	0.50	5.00	5.00	1.09	9 x 9 D*	ClamShell	1.050	0.750	0.440	050SQ 068U6617
68	0.50	5.00	5.00	1.09	12 x 12 D*	ClamShell	1.050	0.750	0.440	070SQ 144U6618A
70	0.50	5.00	5.00	1.10	9 x 9	ClamShell	1.050	0.750	0.440	050SQ 081U6618A
71	0.65	7.00	7.00	0.95	9 x 9 D*	ClamShell	1.050	0.750	0.445	070SQ 071U6617
72	0.50	5.00	5.00	1.01	9 x 9 D*	ClamShell	1.050	0.750	0.440	050SQ 072U6617
72	0.80	8.00	8.00	1.10	9 x 9 D*	ClamShell	1.050	0.750	0.650	080SQ 072U6617
73	0.80	8.00	8.00	1.10	9 x 9 D*	ClamShell	1.050	0.750	0.650	080SQ 073U6617
80	0.50	5.00	5.00	1.00	9 x 9 D*	ClamShell	1.050	0.750	0.650	050SQ 032U6618B
80	0.50	5.00	5.00	0.95	9 x 9 D*	ClamShell	1.050	0.750	0.450	050SQ 080J6617
80	0.50	5.00	5.00	1.00	9 x 9 D*	ClamShell	1.050	0.750	0.650	050SQ 080U6617
80	0.50	6.00	6.00	1.10	9 x 9 D*	ClamShell	1.050	0.750	0.650	060SQ 080U6617
80	0.50	6.00	6.00	1.24	10 x 10 D*	ClamShell	1.050	0.750	0.450	060SQ 080U6618A
80	0.50	7.00	7.00	1.45	12 x 12 D*	ClamShell	1.050	0.750	0.440	070SQ 080U6617
80	0.80	8.00	8.00	1.45	9 x 9 D*	ClamShell	1.050	0.750	0.650	080SQ 080U6617
80	0.80	9.00	9.00	1.45	10 x 10 D*	ClamShell	1.050	0.750	0.650	090SQ 080U6617
80	0.80	9.00	9.00	1.35	10 x 10 D*	ClamShell	1.050	0.750	0.650	090SQ 080U6618A
80	0.80	10.00	10.00	1.30	10 x 10 D*	ClamShell	1.050	0.750	0.650	100SQ 080U6617
80	1.00	11.00	11.00	1.60	10 x 10 D*	ClamShell	1.050	0.750	0.507	110SQ 080B6617
80	1.00	10.00	12.00	1.60	8 x 10	ClamShell	1.050	0.750	0.507	120100080B6617
80	1.00	13.00	13.00	1.40	12 x 12 D*	ClamShell	1.470	1.050	0.667	130SQ 080B6617
80	1.00	13.00	13.00	4.79	12 x 12 D*	ClamShell	1.470	1.050	0.522	130SQ 080B6618A
81	0.50	5.00	5.00	1.00	9 x 9	ClamShell	1.050	0.750	0.440	050SQ 081U6617
81	0.80	8.00	8.00	1.12	9 x 9	ClamShell	1.050	0.750	0.650	080SQ 081U6617
81	0.80	8.00	8.00	1.12	9 x 9	ClamShell	1.050	0.750	0.650	080SQ 081U6618A
81	0.80	9.00	9.00	1.40	9 x 9	ClamShell	1.050	0.750	0.650	090SQ 081U6617
81	0.80	9.00	9.00	1.18	9 x 9	ClamShell	1.050	0.750	0.650	090SQ 081U6618A
81	1.00	10.00	10.00	1.17	9 x 9	ClamShell	1.050	0.750	0.507	100SQ 081B6617
84	0.50	6.00	5.00	1.20	11 x 9 D*	ClamShell	1.050	0.750	0.440	060050084U6617
84	0.50	7.00	7.00	1.25	12 x 12 D*	ClamShell	1.050	0.750	0.650	070SQ 084U6617
84	0.50	8.00	8.00	1.15	13 x 13 D*	ClamShell	1.050	0.750	0.650	080SQ 084U6617
84	0.50	8.00	8.00	1.14	13 x 13 D*	ClamShell	1.050	0.750	0.650	080SQ 084U6618A
84	1.00	10.00	10.00	1.80	10 x 10 D*	ClamShell	1.050	0.750	1.062	100SQ 084B6617
84	1.00	10.00	10.00	1.84	10 x 10 D*	ClamShell	1.050	0.750	0.672	100SQ 084B6618A
84	1.00	11.00	11.00	1.54	10 x 10 D*	ClamShell	1.050	0.750	0.507	110SQ 084B6617
84	1.00	11.00	11.00	1.37	10 x 10 D*	ClamShell	1.050	0.750	0.507	110SQ 084B6618A
84	0.50	12.00	12.00	1.02	22 x 22 D*	ClamShell	1.470	1.050	0.850	120SQ 084U6617

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BGA/CSP Sockets

I/O	Pitch (mm)	Pkg Body L (mm)	Pkg Body W (mm)	Pkg H / T (mm)	Array	Socket Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
88	0.80	11.00	8.00	1.35	8 x 12 D*	ClamShell	1.050	1.470	0.650	110080088U6617
88	0.80	11.00	8.00	1.23	8 x 12 D*	ClamShell	1.050	1.470	0.650	110080088U6618A
90	0.80	12.34	18.82	1.20	8 x 15 D*	ClamShell	1.580	1.200	0.745	240190090U6617
90	0.80	12.34	18.82	1.20	8 x 15 D*	ClamShell	1.580	1.200	0.745	240190090U6618A
92	0.80	17.16	10.20	0.96	10 x 18 D*	ClamShell	1.470	1.050	0.650	171102092U6617
96	0.50	8.00	8.00	1.07	14 x 14 D*	ClamShell	1.050	0.750	0.650	080SQ 096U6617
96	0.50	8.00	8.00	1.80	14 x 14 D*	ClamShell	1.050	0.750	0.450	080SQ 096U6618A
96	0.50	8.00	8.00	1.46	14 x 14 D*	ClamShell	1.050	0.750	0.450	080SQ 096U6618B
96	0.80	13.50	5.50	1.40	6 x 16	ClamShell	1.470	1.050	0.850	135055096U6617
98	0.50	5.50	5.50	0.98	11 x 20 D*	ClamShell	1.050	0.750	0.650	055SQ 098U6617
100	0.50	7.00	7.00	1.10	10 x 10	ClamShell	1.050	0.750	0.650	070SQ 100U6617
100	0.65	7.00	7.00	1.24	10 x 10	ClamShell	1.050	0.750	0.507	070SQ 100U6618A
100	0.80	9.00	9.00	1.40	10 x 10	ClamShell	1.050	0.750	0.445	090SQ 100J6618B
100	0.80	9.00	9.00	1.10	10 x 10	ClamShell	1.050	0.750	0.650	090SQ 100U6617
100	0.80	9.00	9.00	1.35	10 x 10	ClamShell	1.050	0.750	0.445	090SQ 100U6618B
100	0.80	10.00	10.00	1.40	10 x 10	ClamShell	1.050	0.750	0.650	100SQ 100U6617
100	0.80	10.00	10.00	1.30	10 x 10	ClamShell	1.050	0.750	0.650	100SQ 100U6618A
100	0.80	10.00	10.00	1.30	10 x 10	ClamShell	1.050	0.750	0.507	100SQ 100U6618B
100	0.80	10.00	10.00	1.40	10 x 10	ClamShell	1.050	0.750	0.507	100SQU100U6617
100	1.00	11.00	11.00	1.10	10 x 10	ClamShell	1.050	0.750	0.507	110SQ 100B6617
100	1.00	11.00	11.00	1.29	10 x 10	ClamShell	1.050	0.750	0.507	110SQ 100B6618A
100	1.00	11.00	11.00	1.71	10 x 10	ClamShell	2.236	0.600	1.090	110SQ 100J6617
106	0.65	11.00	11.00	1.52	12 x 12 D*	ClamShell	1.470	1.050	0.650	110SQ 106U6617
106	0.75	14.40	12.25	0.89	16 x 18 D*	ClamShell	1.470	1.050	0.667	144122106U6617
106	0.75	14.40	12.25	0.81	16 x 18 D*	ClamShell	1.470	1.050	0.667	144122106U6618A
108	1.00	13.00	11.00	1.54	12 x 12 D*	ClamShell	1.470	1.050	0.507	130SQ 108B6617
112	0.50	7.00	6.50	0.52	13 x 14 D*	ClamShell	1.050	0.750	0.450	070065112P6617
112	0.50	7.00	7.00	1.02	12 x 12 D*	ClamShell	1.050	0.750	0.650	070SQ 112U6617
113	0.50	7.00	7.00	1.15	12 x 12 D*	ClamShell	1.050	0.750	0.502	070SQ 113U6617
114	0.80	5.50	16.00	1.40	19 x 6	ClamShell	1.470	1.050	0.850	160055114U6617
116	0.80	12.00	12.00	1.13	12 x 12 D*	ClamShell	1.470	1.050	0.850	120SQ 116U6617
119	1.27	22.00	14.00	2.63	17 x 7	ClamShell	1.660	1.320	0.667	220140119B6617
120	1.00	17.00	11.00	1.60	10 x 16 D*	ClamShell	1.470	1.050	0.667	170110120B6617
120	1.00	19.00	19.00	1.40	17 x 17 D*	ClamShell	1.470	1.050	0.667	190SQ 120B6617
121	0.80	10.00	10.00	1.70	11 x 11	ClamShell	1.050	0.750	0.650	100SQ 121U6617
121	0.80	10.00	10.00	1.30	11 x 11	ClamShell	1.050	0.750	0.522	100SQ 121U6618A
121	1.00	12.00	12.00	1.71	11 x 11	ClamShell	1.470	1.050	0.667	120SQ 121B6617
121	1.00	12.00	12.00	1.71	11 x 11	ClamShell	1.470	1.050	0.410	120SQU121B6617
121	1.00	12.00	12.00	1.71	11 x 11	ClamShell	1.520	1.810	0.552	120SQU121P6617
123	0.80	14.00	9.00	1.55	16 x 10 D*	ClamShell	1.470	1.060	0.605	140090123U6617
124	0.50	7.00	7.00	1.00	12 x 12 D*	ClamShell	1.050	0.750	0.650	070SQ 124U6617
124	0.50	8.00	8.00	1.00	12 x 12 D*	ClamShell	1.050	0.750	0.650	080SQ 124U6617
124	0.80	11.00	11.00	1.26	12 x 12 D*	ClamShell	1.470	1.050	0.605	110SQ 124U6617

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I/O	Pitch (mm)	Pkg Body L (mm)	Pkg Body W (mm)	Pkg H / T (mm)	Array	Socket Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
128	0.80	10.00	10.00	1.15	12 x 12 D*	ClamShell	1.050	0.750	0.460	100SQ 128U6618A
128	0.80	11.00	11.00	1.40	12 x 12 D*	ClamShell	1.470	1.050	0.650	110SQ 128U6617
128	0.80	10.95	10.95	1.35	12 x 12 D*	ClamShell	1.470	1.050	0.650	110SQ 128U6618A
128	0.80	11.00	11.00	1.40	12 x 12 D*	ClamShell	1.470	1.050	0.650	110SQ 128U6618B
128	1.00	20.32	20.32	2.95	18 x 18 D*	ClamShell	1.660	1.320	0.667	203SQ 128B6617
128	1.00	20.60	20.60	3.45	18 x 18 D*	ClamShell	1.660	1.320	0.667	206SQ 128B6617
132	0.50	8.00	8.00	1.00	14 x 14 D*	ClamShell	1.050	0.750	0.450	080SQ 132U6617
132	0.50	8.00	8.00	1.05	14 x 14 D*	ClamShell	1.050	0.750	0.450	080SQ 132U6618A
132	0.50	8.00	8.00	1.23	14 x 14 D*	ClamShell	1.050	0.750	0.450	080SQ 132U6618B
132	0.80	12.00	12.00	1.02	14 x 14 D*	ClamShell	1.470	1.050	0.850	120SQ 132U6617
132	0.80	12.00	12.00	1.10	14 x 14 D*	ClamShell	1.470	1.050	0.850	120SQ 132U6618A
132	1.00	16.00	16.00	5.52	15 x 15 D*	ClamShell	1.470	1.050	2.242	160SQ 132B6617
143	0.50	7.00	7.00	1.00	12 x 12 D*	ClamShell	1.050	0.750	0.650	070SQ 143U6617
143	0.50	7.00	7.00	1.00	12 x 12 D*	ClamShell	1.050	0.750	0.650	070SQ 144U6617
143	0.50	7.00	7.00	1.00	12 x 12 D*	ClamShell	1.050	0.750	0.650	070SQU143U6618
143	1.00	13.00	13.00	4.79	12 x 12 D*	ClamShell	1.470	1.050	1.080	130SQ 080B6618B
144	0.50	7.00	7.00	1.00	12 x 12 D*	ClamShell	1.050	0.750	0.650	070SQU144U6618
144	0.50	10.00	10.00	1.13	15 x 15 D*	ClamShell	1.050	0.750	0.502	100SQ 144U6617
144	0.80	10.00	10.00	1.13	12 x 12	ClamShell	1.050	0.750	0.650	100SQ 144U6618A
144	0.80	10.00	10.00	1.35	12 x 12	ClamShell	1.050	0.750	0.522	100SQ 144U6618B
144	0.80	10.00	10.00	1.75	12 x 12	ClamShell	1.050	0.750	0.522	100SQ 144U6618C
144	0.80	10.00	10.00	1.22	12 x 12	ClamShell	1.050	0.750	0.460	100SQ 144U6618D
144	0.80	11.00	11.00	2.95	12 x 12	ClamShell	1.470	1.050	0.850	110SQ 144U6617
144	0.80	11.00	11.00	1.26	12 x 12	ClamShell	1.470	1.050	0.650	110SQ 144U6618A
144	0.80	12.00	12.00	1.35	14 x 14 D*	ClamShell	1.470	1.050	0.702	120SQ 144P6618A
144	0.80	12.00	12.00	1.30	13 x 13 D*	ClamShell	1.470	1.050	0.850	120SQ 144U6617A
144	0.80	12.00	12.00	1.10	13 x 13 D*	ClamShell	1.470	1.050	0.850	120SQ 144U6618B
144	0.80	12.00	12.00	1.45	13 x 13 D*	ClamShell	1.470	1.050	0.850	120SQ 144U6618C
144	0.80	12.00	12.00	1.40	13 x 13 D*	ClamShell	1.470	1.050	0.667	120SQ 144U6618D
144	0.80	12.00	12.00	1.30	13 x 13 D*	ClamShell	1.470	1.050	0.850	120SQU144U6618A
144	1.00	13.00	13.00	1.54	12 x 12	ClamShell	1.470	1.050	0.507	130SQ 144B6617
144	1.00	13.00	13.00	1.45	12 x 12	ClamShell	1.470	1.050	0.507	130SQ 144B6618A
144	1.00	13.00	13.00	1.13	12 x 12	ClamShell	1.470	1.050	0.507	130SQ 144B6618B
144	1.00	13.00	13.00	2.67	12 x 12	ClamShell	1.470	1.050	0.507	130SQ 144B6618C
144	1.00	13.00	13.00	1.45	12 x 12	ClamShell	1.470	1.050	0.772	130SQ 144P6618A
144	0.80	13.00	13.00	1.34	13 x 13 D*	ClamShell	1.470	1.050	0.850	130SQ 144U6617
144	0.80	13.00	13.00	1.26	14 x 14 D*	ClamShell	1.470	1.050	0.662	130SQ 144U6618A
144	1.00	15.00	15.00	1.54	14 x 14 D*	ClamShell	1.470	1.050	0.667	150SQ 144B6617
144	1.00	15.00	15.00	1.54	14 x 14 D*	ClamShell	1.470	1.050	0.667	150SQ 144B6618A
145	0.40	5.49	5.50	0.50	13 x 13 D*	ClamShell	1.050	0.750	0.530	055054169J6617
148	0.50	9.00	9.00	1.26	16 x 16 D*	ClamShell	1.050	0.750	0.440	090SQ 148U6617
150	0.80	14.00	10.00	1.40	16 x 11 D*	ClamShell	1.470	1.050	0.605	140100150U6617
151	0.50	10.00	10.00	1.17	18 x 18 D*	ClamShell	1.050	0.750	0.650	100SQ 151U6617

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BGA/CSP Sockets

I/O	Pitch (mm)	Pkg Body L (mm)	Pkg Body W (mm)	Pkg H / T (mm)	Array	Socket Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
154	0.50	7.00	7.00	1.04	13 x 13	ClamShell	1.050	0.750	0.440	070SQ 154U6617
154	0.80	12.50	11.00	1.50	15 x 11 D*	ClamShell	1.470	1.050	0.530	125110154J6617
158	1.00	27.00	27.00	3.50	26 x 26 D*	ClamShell	1.810	1.520	0.650	270SQ 672B6618C
160	0.80	12.00	12.00	1.10	14 x 14 D*	ClamShell	1.470	1.050	0.850	120SQ 160U6617
160	0.80	12.00	12.00	1.33	14 x 14 D*	ClamShell	1.470	1.050	0.672	120SQ 160U6618A
160	0.80	13.00	13.00	1.43	14 x 14 D*	ClamShell	1.470	1.050	0.850	130SQ 160U6617
165	0.80	14.00	14.00	1.26	11 x 15	ClamShell	1.470	1.050	0.652	140SQ 165U6617
167	0.50	8.00	8.00	1.14	13 x 13 D*	ClamShell	1.050	0.750	0.650	080SQ 167U6617
167	0.50	14.00	14.00	1.40	26 x 26 D*	ClamShell	1.470	1.050	0.600	140SQ 167U6617
168	0.80	13.13	16.97	1.40	20 x 14 D*	ClamShell	1.470	1.050	0.850	170131168U6617
169	0.50	7.00	7.00	0.97	13 x 13	ClamShell	1.050	0.750	0.450	070SQ 169J6617
169	0.50	7.00	7.00	1.15	13 x 13	ClamShell	1.050	0.750	0.440	070SQ 169U6617
169	0.50	8.00	8.00	1.15	13 x 13	ClamShell	1.050	0.750	0.650	080SQ 169U6617
169	0.80	11.00	11.00	1.45	13 x 13	ClamShell	1.470	1.050	0.650	110SQ 169U6617
169	0.80	12.00	12.00	1.35	13 x 13	ClamShell	1.470	1.050	0.600	120SQ 169J6617
176	1.00	15.00	15.00	1.65	14 x 14 D*	ClamShell	1.470	1.050	0.522	150SQ 176B6617
176	0.80	15.00	15.00	1.30	17 x 17 D*	ClamShell	1.470	1.050	0.605	150SQ 176U6617
179	0.80	12.00	12.00	1.13	14 x 14 D*	ClamShell	1.470	1.050	0.850	120SQ 179U6617
179	0.80	12.00	12.00	1.30	14 x 14 D*	ClamShell	1.470	1.050	0.850	120SQ 179U6618A
179	0.80	12.00	12.00	1.30	14 x 14 D*	ClamShell	1.470	1.050	0.850	120SQ 179U6618B
180	0.80	12.00	12.00	1.10	14 x 14 D*	ClamShell	1.470	1.050	0.850	120SQ 180U6617
180	0.80	12.00	12.00	1.35	14 x 14 D*	ClamShell	1.470	1.050	0.850	120SQ 180U6618A
180	0.80	12.00	12.00	1.29	14 x 14 D*	ClamShell	1.470	1.050	0.850	120SQ 180U6618B
180	0.80	13.00	13.00	1.45	14 x 14 D*	ClamShell	1.470	1.050	0.850	130SQ 180U6617
181	0.50	10.00	10.00	1.13	17 x 17 D*	ClamShell	1.050	0.750	0.440	100SQ 181U6617
185	0.80	13.00	11.00	2.96	15 x 13 D*	ClamShell	1.470	1.050	0.850	130110185U6617
191	0.76	14.35	14.12	0.81	16 x 16 D*	ClamShell	1.470	1.050	0.850	144141191U6617
192	0.80	8.00	8.00	1.35	8 x 8	ClamShell	4.900	1.100	0.308	080SQ 192C6618A
192	0.80	14.00	14.00	1.40	16 x 16 D*	ClamShell	1.470	1.050	0.850	140SQ 192U6617
196	0.50	8.00	8.00	1.14	14 x 14	ClamShell	1.050	0.750	0.450	080SQ 196U6617
196	0.50	8.00	8.00	1.23	15 x 15 D*	ClamShell	1.050	0.750	0.450	080SQ 196U6618A
196	0.50	8.00	8.00	1.30	14 x 14	ClamShell	1.050	0.750	0.450	080SQ 196U6618B
196	0.80	12.00	12.00	1.10	14 x 14	ClamShell	1.470	1.050	0.850	120SQ 196U6617
196	0.80	12.00	12.00	1.29	14 x 14	ClamShell	1.470	1.050	0.605	120SQ 196U6618A
196	1.00	15.00	15.00	1.54	14 x 14	ClamShell	1.470	1.050	0.667	150SQ 196B6617
196	1.00	15.00	15.00	1.54	14 x 14	ClamShell	1.470	1.050	0.507	150SQ 196B6618A
196	1.00	15.00	15.00	1.13	14 x 14	ClamShell	1.470	1.050	0.507	150SQ 196B6618B
196	1.00	15.00	15.00	1.35	14 x 14	ClamShell	1.470	1.050	0.507	150SQ 196B6618C
196	1.00	15.00	15.00	1.45	14 x 14	ClamShell	1.470	1.050	0.522	150SQ 196B6618G
196	1.00	15.00	15.00	1.54	14 x 14	ClamShell	1.470	1.050	0.667	150SQ 196B6618H
196	1.00	15.00	15.00	1.76	14 x 14	ClamShell	1.470	1.050	0.522	150SQ 196B6618J
196	1.00	15.00	15.00	1.30	14 x 14	ClamShell	1.470	1.050	0.460	150SQ 196B6618K
196	1.00	15.00	15.00	1.40	14 x 14	ClamShell	1.470	1.050	0.605	150SQ 196J6617

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BGA/CSP Sockets

I/O	Pitch (mm)	Pkg Body L (mm)	Pkg Body W (mm)	Pkg H / T (mm)	Array	Socket Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
196	1.00	15.00	15.00	1.45	14 x 14	ClamShell	1.470	1.050	0.522	150SQ 196S6618G
196	1.00	17.00	17.00	1.56	14 x 14	ClamShell	1.470	1.050	0.507	170SQ 196B6618A
200	0.80	13.00	13.00	1.33	15 x 15 D*	ClamShell	1.470	1.050	0.850	130SQ 200U6617
204	0.50	12.00	8.00	1.24	14 x 22 D*	ClamShell	1.470	1.050	0.600	120080204J6617
208	0.80	13.00	13.00	1.60	15 x 15 D*	ClamShell	1.470	1.050	0.605	130SQ 208U6617
208	0.80	15.00	15.00	1.10	17 x 17 D*	ClamShell	1.470	1.050	0.605	150SQ 208U6617
208	0.80	15.00	15.00	1.40	17 x 17 D*	ClamShell	1.470	1.050	0.605	150SQ 208U6618A
208	0.80	15.00	15.00	1.65	17 x 17 D*	ClamShell	1.470	1.050	0.605	150SQ 208U6618B
208	1.00	17.00	17.00	1.56	16 x 16 D*	ClamShell	1.470	1.050	0.667	170SQ 208B6617
208	1.00	17.00	17.00	1.40	16 x 16 D*	ClamShell	1.470	1.050	0.667	170SQ 208B6618A
208	1.00	17.00	17.00	2.26	16 x 16 D*	ClamShell	1.470	1.050	0.667	170SQ 208B6618B
208	1.00	17.00	17.00	1.30	16 x 16 D*	ClamShell	1.470	1.050	0.667	170SQ 208B6618C
208	1.00	17.00	17.00	1.56	16 x 16 D*	ClamShell	1.470	1.050	0.667	170SQ 208B6618D
209	0.80	16.00	16.00	1.34	19 x 19 D*	ClamShell	1.470	1.050	0.667	160SQ 209U6617
212	0.80	16.00	16.00	1.34	19 x 19 D*	ClamShell	1.470	1.050	0.605	160SQ 212U6617
216	0.50	10.00	10.00	1.18	18 x 18 D*	ClamShell	1.050	0.750	0.440	100SQ 216J6617
217	1.27	23.00	23.00	2.13	17 x 17 D*	ClamShell	1.660	1.320	0.667	230SQ 217B6617
220	1.00	17.00	17.00	1.60	16 x 16 D*	ClamShell	1.470	1.050	0.667	170SQ 220B6617
224	0.80	13.00	13.00	1.15	15 x 15 D*	ClamShell	1.470	1.050	0.605	130SQ 224U6617
224	0.80	13.00	13.00	1.16	15 x 15 D*	ClamShell	1.470	1.050	0.605	130SQ 224U6618A
224	0.80	16.00	16.00	1.45	18 x 18 D*	ClamShell	1.470	1.050	0.667	160SQ 224U6617
225	0.50	8.00	8.00	0.96	15 x 15	ClamShell	1.050	0.750	0.450	080SQ 225J6617
225	0.50	8.00	8.00	0.86	15 x 15	ClamShell	1.050	0.750	0.550	080SQ 225U6617
225	0.80	13.00	13.00	1.13	15 x 15	ClamShell	1.470	1.050	0.605	130SQ 225U6617
225	0.80	13.00	13.00	0.98	15 x 15	ClamShell	1.470	1.050	0.667	130SQ 225U6618A
225	0.80	13.00	13.00	1.45	15 x 15	ClamShell	1.470	1.050	0.605	130SQ 225U6618B
225	1.00	19.00	19.00	2.01	18 x 18 D*	ClamShell	1.660	1.320	0.667	190SQ 225B6617
225	1.50	27.00	27.00	2.13	15 x 15	ClamShell	1.810	1.520	0.667	270SQ 225B6617
227	0.80	16.00	16.00	1.17	19 x 19 D*	ClamShell	1.470	1.050	0.667	160SQ 227U6617
228	0.50	12.00	8.00	1.24	14 x 22 D*	ClamShell	1.470	1.050	0.600	120080228J6617
228	0.50	12.00	12.00	1.02	22 x 22 D*	ClamShell	1.470	1.050	0.662	120SQ 228U6617
228	0.80	16.00	16.00	1.31	19 x 19 D*	ClamShell	1.470	1.050	0.667	160SQ 228U6617
228	1.00	17.00	17.00	1.91	16 x 16 D*	ClamShell	1.470	1.050	0.610	170SQ 228B6617
229	1.00	33.00	33.00	3.45	32 x 32 D*	ClamShell	2.190	1.900	0.792	330SQ 229B6617
232	0.80	14.00	14.00	1.13	16 x 16 D*	ClamShell	1.470	1.050	0.667	140SQ 232U6617
233	0.80	15.00	15.00	1.13	17 x 17 D*	ClamShell	1.470	1.050	0.667	150SQ 233U6617
233	0.80	15.00	15.00	1.25	17 x 17 D*	ClamShell	1.470	1.050	0.605	150SQ 233U6618A
233	0.80	15.00	15.00	1.13	17 x 17 D*	ClamShell	1.470	1.050	0.605	150SQ 233U6618B
233	0.80	15.00	15.00	1.13	17 x 17 D*	ClamShell	1.470	1.050	0.605	150SQ 233U6618C
233	1.00	19.00	19.00	2.21	18 x 18 D*	ClamShell	1.660	1.320	0.605	190SQ 233B6617
233	1.27	23.00	23.00	2.13	17 x 17 D*	ClamShell	1.660	1.320	0.667	230SQ 233B6617
233	1.27	23.00	23.00	2.04	17 x 17 D*	ClamShell	1.660	1.320	0.667	230SQ 233B6618A
233	1.27	23.00	23.00	2.33	17 x 17 D*	ClamShell	1.660	1.320	0.667	230SQ 233B6618B

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BGA/CSP Sockets

I/O	Pitch (mm)	Pkg Body L (mm)	Pkg Body W (mm)	Pkg H / T (mm)	Array	Socket Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
236	0.50	10.00	10.00	1.45	18 x 18 D*	ClamShell	1.050	0.750	0.502	100SQ 236U6617
236	0.50	10.00	10.00	1.15	18 x 18 D*	ClamShell	1.050	0.750	0.440	100SQ 236U6618A
236	1.00	17.00	17.00	1.66	16 x 16 D*	ClamShell	1.470	1.050	0.667	170SQ 236B6617
238	1.00	22.00	16.00	1.83	21 x 15 D*	ClamShell	1.660	1.320	0.667	220160238B6617
240	0.80	15.00	15.00	1.35	17 x 17 D*	ClamShell	1.470	1.050	0.600	150SQ 240J6617
240	0.80	15.00	15.00	1.35	17 x 17 D*	ClamShell	1.470	1.050	0.605	150SQ 240S6617
240	0.80	15.00	15.00	1.35	17 x 17 D*	ClamShell	1.470	1.050	0.605	150SQ 240U6617
240	0.80	16.00	16.00	1.59	17 x 17 D*	ClamShell	1.470	1.050	0.667	160SQ 240U6617
240	1.27	23.00	23.00	2.13	17 x 17 D*	ClamShell	1.660	1.320	0.605	230SQ 240B6617
244	0.40	8.00	8.00	0.91	18 x 18 D*	ClamShell	1.050	0.750	0.535	080SQ 244J6617
254	0.50	12.00	12.00	1.14	21 x 21 D*	ClamShell	1.470	1.050	0.502	120SQ 254U6617
254	0.50	12.00	12.00	1.14	21 x 21 D*	ClamShell	1.470	1.050	0.502	120SQ 254U6618A
254	0.50	12.00	12.00	1.14	21 x 21 D*	ClamShell	1.470	1.050	0.472	120SQU254U6617
254	0.50	12.00	12.00	1.14	21 x 21 D*	ClamShell	1.470	1.050	0.530	120SQU254U6618A
255	1.27	25.00	21.00	3.50	16 x 16 D*	ClamShell	1.810	1.520	1.102	250210255B6617
256	0.80	14.00	14.00	2.96	16 x 16	ClamShell	1.470	1.060	0.605	140SQ 256U6617
256	0.80	14.00	14.00	1.36	16 x 16	ClamShell	1.470	1.060	0.061	140SQ 256U6618A
256	0.80	15.00	15.00	1.65	17 x 17 D*	ClamShell	1.470	1.050	0.605	150SQ 256U6617
256	1.00	17.00	17.00	1.56	16 x 16	ClamShell	1.470	1.050	0.667	170SQ 256B6617
256	1.00	17.00	17.00	1.76	16 x 16	ClamShell	1.470	1.050	0.667	170SQ 256B6618A
256	1.00	17.00	17.00	1.13	16 x 16	ClamShell	1.470	1.050	0.667	170SQ 256B6618B
256	1.00	17.00	17.00	1.10	16 x 16	ClamShell	1.470	1.050	0.667	170SQ 256B6618C
256	1.00	17.00	17.00	1.45	16 x 16	ClamShell	1.470	1.050	0.667	170SQ 256B6618D
256	1.00	17.00	17.00	1.13	16 x 16	ClamShell	1.470	1.050	0.507	170SQ 256B6618E
256	1.00	17.00	17.00	1.29	16 x 16	ClamShell	1.470	1.050	0.667	170SQ 256B6618F
256	1.00	17.00	17.00	1.62	16 x 16	ClamShell	1.470	1.050	0.667	170SQ 256B6618G
256	1.00	17.00	17.00	1.53	16 x 16	ClamShell	1.580	1.200	0.672	170SQ 256B6618J
256	1.00	17.00	17.00	1.73	16 x 16	ClamShell	1.470	1.050	0.650	170SQ 256B6618K
256	1.00	17.00	17.00	1.81	16 x 16	ClamShell	1.470	1.050	0.650	170SQ 256B6618L
256	1.00	17.00	17.00	1.55	16 x 16	ClamShell	1.470	1.050	0.667	170SQ 256S6617
256	1.00	17.00	17.00	1.61	16 x 16	ClamShell	1.470	1.050	0.667	170SQ 256S6618H
256	0.80	17.00	17.00	1.40	20 x 20 D*	ClamShell	1.580	1.200	0.600	170SQ 256U6617
256	1.00	17.00	17.00	1.56	16 x 16	ClamShell	1.470	1.050	0.667	170SQU256B6618
256	1.00	19.00	19.00	1.56	16 x 16	ClamShell	1.470	1.050	0.667	190SQ 256B6617
256	1.27	27.00	27.00	2.13	20 x 20 D*	ClamShell	1.810	1.520	0.667	270SQ 256B6617
256	1.27	27.00	27.00	1.45	20 x 20 D*	ClamShell	1.810	1.520	0.667	270SQ 256B6618A
256	1.27	27.00	27.00	1.80	20 x 20 D*	ClamShell	1.810	1.520	0.275	270SQ 256B6618B
256	1.27	27.00	27.00	1.45	20 x 20 D*	ClamShell	1.810	1.520	0.667	270SQ 256B6618D
256	1.27	27.00	27.00	1.65	20 x 20 D*	ClamShell	1.810	1.520	0.667	270SQ 256B6618E
256	1.27	27.00	27.00	2.33	20 x 20 D*	ClamShell	1.810	1.520	0.667	270SQ 256B6618F
256	1.27	27.00	27.00	2.13	20 x 20 D*	ClamShell	1.810	1.520	0.605	270SQ 256B6618G
256	1.27	27.00	27.00	1.80	20 x 20 D*	ClamShell	1.810	1.520	1.263	270SQ 256B6618H
256	1.27	27.00	27.00	2.27	20 x 20 D*	ClamShell	1.810	1.520	0.605	270SQ 256B6618I

* Depopulated, See Drawing for Specific Array



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BGA/CSP Sockets

I/O	Pitch (mm)	Pkg Body L (mm)	Pkg Body W (mm)	Pkg H / T (mm)	Array	Socket Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
256	1.27	27.00	27.00	2.43	20 x 20 D*	ClamShell	1.810	1.520	0.605	270SQ 256B6618J
256	1.27	27.00	27.00	1.50	20 x 20 D*	ClamShell	1.810	1.520	0.425	270SQD256B6618A
257	0.80	16.00	16.00	1.25	19 x 19 D*	ClamShell	1.470	1.050	0.672	160SQ 257S6617
257	0.80	16.00	16.00	1.25	19 x 19 D*	ClamShell	1.470	1.050	0.672	160SQ 257U6617
260	0.50	12.00	12.00	1.10	22 x 22 D*	ClamShell	1.470	1.050	0.600	120SQ 260U6617
260	0.50	18.00	8.40	0.99	35 x 14 D*	ClamShell	1.580	1.200	0.600	180084260J6617
260	0.50	18.00	8.40	0.99	35 x 14 D*	ClamShell	1.580	1.200	0.600	180084260P6617
261	0.80	15.00	15.00	1.13	17 x 17 D*	ClamShell	1.470	1.050	0.605	150SQ 261U6617
266	1.00	29.00	29.00	3.15	28 x 28 D*	ClamShell	2.700	2.340	1.000	290SQ 266B6617
272	1.27	27.00	27.00	2.33	20 x 20 D*	ClamShell	1.810	1.520	0.667	270SQ 272B6617
272	1.27	27.00	27.00	2.33	20 x 20 D*	ClamShell	1.810	1.520	0.605	270SQ 272B6618A
272	1.27	27.00	27.00	2.23	20 x 20 D*	ClamShell	1.810	1.520	0.667	270SQ 272B6618B
272	1.27	27.00	27.00	2.33	20 x 20 D*	ClamShell	1.810	1.520	0.672	270SQ 272M6617
275	0.50	10.00	10.00	0.95	18 x 18 D*	ClamShell	1.470	1.050	0.600	100SQ 275U6617
276	0.50	13.00	13.00	1.08	24 x 24 D*	ClamShell	1.470	1.050	0.600	130SQ 276U6617
276	1.00	19.00	19.00	1.44	18 x 18 D*	ClamShell	1.660	1.320	0.667	190SQ 276B6617
280	0.80	15.00	15.00	1.21	18 x 18 D*	ClamShell	1.470	1.050	0.667	150SQ 280U6617
280	0.80	16.00	16.00	1.10	19 x 19 D*	ClamShell	1.470	1.050	0.667	160SQ 280U6617
280	0.80	16.00	16.00	1.34	19 x 19 D*	ClamShell	1.470	1.050	0.667	160SQ 280U6618A
280	1.27	27.00	27.00	2.33	20 x 20 D*	ClamShell	1.810	1.520	0.672	270SQ 280B6617
285	0.80	16.00	16.00	1.35	18 x 18 D*	ClamShell	1.470	1.050	0.667	160SQ 285U6617
285	0.80	16.00	16.00	1.35	18 x 18 D*	ClamShell	1.470	1.050	0.350	160SQU285U6617
285	0.80	16.00	16.00	1.71	18 x 18 D*	ClamShell	1.470	1.050	0.667	160SQU285U6618A
288	0.80	16.00	16.00	1.31	19 x 19 D*	ClamShell	1.470	1.050	0.605	160SQ 288U6617
288	0.80	19.00	19.00	1.40	22 x 22 D*	ClamShell	1.580	1.200	0.667	190SQ 288U6617
288	0.80	19.00	19.00	1.10	22 x 22 D*	ClamShell	1.580	1.200	0.667	190SQ 288U6618A
289	0.50	9.00	9.00	1.15	17 x 17	ClamShell	1.470	1.050	0.600	090SQ 289U6617
289	0.65	12.00	12.00	1.35	17 x 17	ClamShell	1.470	1.050	0.600	120SQ 289U6617
289	1.00	21.59	21.59	2.79	17 x 17	ClamShell	1.660	1.320	0.667	215SQ 289B6617
289	1.00	22.50	22.50	2.34	17 x 17	ClamShell	1.660	1.320	0.667	225SQ 289B6617
292	1.27	27.00	27.00	2.33	20 x 20 D*	ClamShell	1.810	1.520	0.667	270SQ 292B6617
292	1.27	27.00	27.00	2.33	20 x 20 D*	ClamShell	1.810	1.520	0.605	270SQ 292B6618A
296	1.27	27.00	27.00	2.33	20 x 20 D*	ClamShell	1.810	1.520	0.667	270SQ 296B6617
300	0.50	12.00	12.00	1.25	22 x 22 D*	ClamShell	1.470	1.050	0.600	120SQ 300U6617
300	0.50	13.00	13.00	1.44	22 x 22 D*	ClamShell	1.470	1.050	0.667	130SQ 300U6617
300	1.00	19.00	19.00	1.40	18 x 18 D*	ClamShell	1.660	1.320	0.605	190SQ 300B6617
300	1.27	27.00	27.00	2.13	20 x 20 D*	ClamShell	1.810	1.520	0.667	270SQ 300B6617
300	1.27	27.00	27.00	2.33	20 x 20 D*	ClamShell	1.810	1.520	0.667	270SQ 300B6618A
304	1.27	31.00	31.00	1.51	23 x 23 D*	ClamShell	2.190	1.900	0.730	310SQ 304B6617
304	1.27	31.00	31.00	1.51	23 x 23 D*	ClamShell	2.190	1.900	0.730	310SQ 304B6618B
304	1.27	31.00	31.00	2.44	23 x 23 D*	ClamShell	2.190	1.900	0.730	310SQ 304B6618C
304	1.27	31.00	31.00	1.24	23 x 23 D*	ClamShell	2.190	1.900	0.792	350SQ 304B6618
308	0.50	12.00	12.00	1.25	22 x 22 D*	ClamShell	1.470	1.050	0.600	120SQ 308U6617

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BGA/CSP Sockets

I/O	Pitch (mm)	Pkg Body L (mm)	Pkg Body W (mm)	Pkg H / T (mm)	Array	Socket Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
308	0.50	12.00	12.00	1.19	22 x 22 D*	ClamShell	1.470	1.050	0.600	120SQ 308U6618A
312	1.27	23.00	23.00	3.65	18 x 18 D*	ClamShell	1.810	1.520	0.732	230SQ 312B6617
312	1.27	37.50	37.50	1.54	29 x 29 D*	ClamShell	2.390	2.100	0.792	375SQ 312B6617
313	2.54	35.00	35.00	2.27	25 x 25 D*	ClamShell	2.190	1.900	0.792	350SQ 313B6617
313	2.54	35.00	35.00	3.03	25 x 25 D*	ClamShell	2.190	1.900	0.792	350SQ 313B6618A
316	0.80	17.00	17.00	1.40	20 x 20 D*	ClamShell	1.470	1.050	0.682	170SQ 316U6617
316	1.27	27.00	27.00	2.13	20 x 20 D*	ClamShell	1.810	1.520	0.667	270SQ 316B6617
316	1.27	27.00	27.00	2.33	20 x 20 D*	ClamShell	1.810	1.520	0.667	270SQ 316B6618A
320	0.80	18.00	18.00	1.35	21 x 21 D*	ClamShell	1.580	1.200	0.667	180SQ 320U6617
320	1.00	25.00	25.00	1.50	24 x 24 D*	ClamShell	1.810	1.520	0.667	250SQ 320B6617
320	1.00	25.00	25.00	1.50	24 x 24 D*	ClamShell	1.810	1.520	1.012	250SQ 320B6618A
324	0.80	15.00	15.00	1.10	18 x 18	ClamShell	1.470	1.050	0.672	150SQ 324U6617
324	0.80	15.00	15.00	1.33	18 x 18	ClamShell	1.470	1.050	0.610	150SQ 324U6618A
324	1.00	19.00	19.00	1.77	18 x 18	ClamShell	1.660	1.320	0.667	190SQ 324B6617
324	1.00	19.00	19.00	2.20	18 x 18	ClamShell	1.660	1.320	0.667	190SQ 324B6618A
324	1.00	19.00	19.00	2.03	18 x 18	ClamShell	1.660	1.320	0.667	190SQ 324B6618B
324	1.00	19.00	19.00	1.55	18 x 18	ClamShell	1.660	1.320	0.605	190SQ 324B6618C
324	1.00	19.00	19.00	1.81	18 x 18 D*	ClamShell	1.660	1.320	0.605	190SQ 324B6618D
324	1.00	19.00	19.00	2.03	18 x 18	ClamShell	1.660	1.320	0.605	190SQ 324B6618E
324	1.00	19.00	19.00	1.77	18 x 18	ClamShell	1.660	1.320	0.605	190SQ 324J6617
324	1.00	20.32	20.32	2.95	18 x 18	ClamShell	1.660	1.320	0.667	203SQ 324B6617
324	1.00	23.00	23.00	2.25	22 x 22 D*	ClamShell	1.660	1.320	0.667	230SQ 324B6618A
324	1.00	23.00	23.00	1.76	22 x 22 D*	ClamShell	1.660	1.320	0.667	230SQ 324B6618B
324	1.00	23.00	23.00	2.25	22 x 22 D*	ClamShell	1.660	1.320	0.667	230SQ 324B6618C
324	1.27	27.00	27.00	2.33	20 x 20 D*	ClamShell	1.810	1.520	0.667	270SQ 324B6617
324	1.27	27.00	27.00	2.33	20 x 20 D*	ClamShell	1.810	1.520	0.275	270SQ 324B6618A
328	1.27	27.00	27.00	2.33	20 x 20 D*	ClamShell	1.810	1.520	0.667	270SQ 328B6617
328	1.27	27.00	27.00	2.33	20 x 20 D*	ClamShell	1.810	1.520	0.667	270SQ 328B6618A
329	1.27	31.00	31.00	2.33	23 x 23 D*	ClamShell	2.190	1.900	0.792	310SQ 329B6617
329	1.27	31.00	31.00	2.33	23 x 23 D*	ClamShell	2.190	1.900	0.792	310SQ 329B6618A
336	1.27	27.00	27.00	2.33	20 x 20 D*	ClamShell	1.810	1.520	0.667	270SQ 336B6617
336	1.27	27.00	27.00	3.05	20 x 20 D*	ClamShell	1.810	1.520	0.667	270SQ 336B6618A
338	1.00	23.00	23.00	2.20	22 x 22 D*	ClamShell	1.660	1.320	0.605	230SQ 338B6617
340	1.00	23.00	23.00	2.40	22 x 22 D*	ClamShell	1.660	1.320	0.605	230SQ 340B6617
340	1.27	35.00	35.00	2.23	26 x 26 D*	ClamShell	2.190	1.900	0.730	350SQ 440B6618
341	0.50	13.00	13.00	1.15	24 x 24 D*	ClamShell	1.470	1.050	0.662	130SQ 341U6617
344	0.50	14.00	14.00	1.15	26 x 26 D*	ClamShell	1.470	1.050	0.600	140SQ 344U6617
352	0.80	19.00	19.00	1.51	22 x 22 D*	ClamShell	1.580	1.200	0.667	190SQ 352U6617
352	1.27	27.00	27.00	2.47	26 x 26 D*	ClamShell	1.810	1.520	0.667	270SQ 352B6618A
352	1.00	27.00	27.00	3.43	26 x 26 D*	ClamShell	1.810	1.520	2.033	270SQ 352B6618C
352	1.27	35.00	35.00	2.33	26 x 26 D*	ClamShell	2.190	1.900	0.792	350SQ 352B6617
352	1.27	35.00	35.00	1.40	26 x 26 D*	ClamShell	2.190	1.900	0.792	350SQ 352B6618A
352	1.27	35.00	35.00	1.50	26 x 26 D*	ClamShell	2.190	1.900	0.792	350SQ 352B6618B

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BGA/CSP Sockets

I/O	Pitch (mm)	Pkg Body L (mm)	Pkg Body W (mm)	Pkg H / T (mm)	Array	Socket Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
352	1.27	35.00	35.00	2.36	26 x 26 D*	ClamShell	2.190	1.900	0.792	350SQ 352B6618C
352	1.27	35.00	35.00	1.73	26 x 26 D*	ClamShell	2.190	1.900	0.792	350SQ 352B6618D
352	1.27	35.00	35.00	1.73	26 x 26 D*	ClamShell	2.190	1.900	0.263	350SQ 352B6618E
352	1.27	35.00	35.00	2.33	26 x 26 D*	ClamShell	2.190	1.900	0.792	350SQ 352B6618F
352	1.27	35.00	35.00	2.44	26 x 26 D*	ClamShell	2.210	1.900	0.730	350SQ 352B6618G
352	1.27	35.00	35.00	1.38	26 x 26 D*	ClamShell	2.210	1.900	0.487	350SQD352B6618
352	1.27	35.00	35.00	1.50	26 x 26 D*	ClamShell	2.210	1.900	0.487	350SQD352B6618A
356	0.50	13.00	13.00	0.95	24 x 24 D*	ClamShell	1.470	1.050	0.662	130SQ 356U6617
356	0.50	14.00	14.00	1.00	24 x 24 D*	ClamShell	1.470	1.050	0.667	140SQ 356U6617
356	1.27	35.00	35.00	2.33	26 x 26 D*	ClamShell	2.190	1.900	0.792	350SQ 356B6617
361	0.65	13.00	13.00	1.30	19 x 19	ClamShell	1.470	1.050	0.600	130SQ 361U6617
361	0.80	17.00	17.00	1.44	19 x 19	ClamShell	1.470	1.050	0.600	170SQ 361J6617
362	0.50	13.00	13.00	1.10	25 x 25 D*	ClamShell	1.470	1.050	0.600	130SQ 416U6617
364	1.00	21.00	21.00	2.23	20 x 20 D*	ClamShell	1.660	1.320	0.610	210SQ 364B6617
364	1.00	21.00	21.00	2.23	20 x 20 D*	ClamShell	1.660	1.320	0.610	210SQ 364J6617
368	1.27	35.00	35.00	2.33	26 x 26 D*	ClamShell	2.190	1.900	0.792	350SQ 368B6617
368	1.27	35.00	35.00	2.33	26 x 26 D*	ClamShell	2.190	1.900	0.730	350SQ 368B6618
371	1.27	35.00	35.00	2.38	26 x 26 D*	ClamShell	2.190	1.900	0.730	350SQ 371B6617
375	0.80	19.00	19.00	2.07	22 x 22 D*	ClamShell	1.580	1.200	0.640	190SQ 375U6617
384	1.00	33.78	29.46	3.05	25 x 23 D*	ClamShell	1.990	1.660	0.450	04481 420 661A
385	1.27	31.00	31.00	2.33	23 x 23 D*	ClamShell	2.190	1.900	0.792	310SQ 385B6617
388	1.00	23.00	23.00	2.25	22 x 22 D*	ClamShell	1.660	1.320	0.667	230SQ 388B6617
388	1.27	27.00	27.00	2.64	20 x 20 D*	ClamShell	1.810	1.520	0.667	270SQ 388B6617
388	1.27	35.00	35.00	2.33	26 x 26 D*	ClamShell	2.190	1.900	0.792	350SQ 388B6617
388	1.27	35.00	35.00	2.33	26 x 26 D*	ClamShell	2.190	1.900	0.792	350SQ 388B6618A
388	1.27	35.00	35.00	2.34	26 x 26 D*	ClamShell	2.190	1.900	2.482	350SQ 388B6618B
388	1.27	35.00	35.00	2.34	26 x 26 D*	ClamShell	2.190	1.900	0.792	350SQ 388B6618C
388	1.27	35.00	35.00	3.62	26 x 26 D*	ClamShell	2.190	1.900	0.792	350SQ 388B6618D
388	1.27	35.00	35.00	2.34	26 x 26 D*	ClamShell	2.190	1.900	0.666	350SQU388B6617
399	0.80	17.00	17.00	1.60	20 x 20 D*	ClamShell	1.470	1.050	0.672	170SQ 399U6617
399	0.80	19.00	19.00	2.07	22 x 22 D*	ClamShell	1.580	1.200	0.640	190SQ 399U6617
400	1.00	21.00	21.00	1.76	20 x 20	ClamShell	1.660	1.320	0.667	210SQ 400B6617
400	1.27	27.00	27.00	2.13	20 x 20	ClamShell	1.810	1.520	0.667	270SQ 400B6617
400	1.27	27.00	27.00	2.38	20 x 20	ClamShell	1.810	1.520	0.667	270SQ 400B6618A
405	0.50	12.00	12.00	1.20	22 x 22 D*	ClamShell	1.470	1.050	0.530	120SQ 405U6617
408	0.50	14.00	14.00	1.15	26 x 26 D*	ClamShell	1.470	1.050	0.600	140SQ 408U6617
408	0.50	16.00	16.00	0.95	29 x 29 D*	ClamShell	1.470	1.050	0.662	160SQ 408U6617
417	0.50	13.00	13.00	1.16	25 x 25 D*	ClamShell	1.470	1.050	0.600	130SQ 417U6617
420	1.00	27.00	27.00	0.56	26 x 26 D*	ClamShell	1.810	1.520	0.605	270SQ 420B6617
420	1.27	35.00	35.00	2.33	26 x 26 D*	ClamShell	2.190	1.900	0.730	350SQ 420B6617
420	1.27	35.00	35.00	2.45	26 x 26 D*	ClamShell	2.210	1.900	0.730	350SQ 420B6618A
424	0.80	19.00	19.00	1.40	23 x 23 D*	ClamShell	1.660	1.320	0.667	190SQ 424U6617
432	1.27	35.00	35.00	2.33	26 x 26 D*	ClamShell	2.190	1.900	0.730	350SQ 432B6618

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I/O	Pitch (mm)	Pkg Body L (mm)	Pkg Body W (mm)	Pkg H / T (mm)	Array	Socket Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
432	1.27	35.00	35.00	2.33	26 x 26 D*	ClamShell	2.190	1.900	0.792	350SQ 476B6617
432	1.27	40.00	40.00	1.54	31 x 31 D*	ClamShell	2.390	2.100	0.792	400SQ 432B6617
432	1.27	40.00	40.00	2.50	31 x 31 D*	ClamShell	2.390	2.100	0.730	400SQ 432B6618A
436	0.50	14.00	14.00	1.27	26 x 26 D*	ClamShell	1.470	1.050	0.600	140SQ 436U6617
440	1.27	35.00	31.00	3.57	22 x 21 D*	ClamShell	2.190	1.900	0.730	350310462B6617
440	1.27	35.00	35.00	2.22	26 x 26 D*	ClamShell	2.190	1.900	0.792	350SQ 440B6618A
452	1.27	35.00	35.00	2.33	26 x 26 D*	OpenTop	2.190	1.900	0.730	350SQ 452B6617
456	1.00	23.00	23.00	2.23	22 x 22 D*	ClamShell	1.660	1.320	0.667	230SQ 456B6617
456	1.00	23.00	23.00	2.23	22 x 22 D*	ClamShell	1.660	1.320	0.605	230SQ 456B6618A
456	1.27	35.00	35.00	2.33	26 x 26 D*	ClamShell	2.190	1.900	0.792	350SQ 456B6617
456	1.27	35.00	35.00	2.33	26 x 26 D*	ClamShell	2.190	1.900	0.792	350SQ 456B6618
456	1.27	35.00	35.00	2.13	26 x 26 D*	ClamShell	2.190	1.900	0.792	350SQ 456B6618A
456	1.27	35.00	35.00	2.46	26 x 26 D*	ClamShell	2.190	1.900	0.792	350SQ 456B6618B
456	1.27	35.00	35.00	2.55	26 x 26 D*	ClamShell	2.190	1.900	0.792	350SQ 456B6618C
456	1.27	35.00	35.00	2.33	26 x 26 D*	ClamShell	2.190	1.900	0.730	350SQ 456B6618D
458	1.00	31.00	31.00	2.23	30 x 30 D*	ClamShell	2.190	1.900	0.792	310SQ 458B6617
464	1.27	35.00	35.00	2.33	26 x 26 D*	ClamShell	2.190	1.900	0.792	350SQ 464B6618
469	0.50	14.00	14.00	1.44	22 x 22 D*	ClamShell	1.470	1.050	0.600	140SQ 484U6617
472	1.27	29.00	29.00	4.17	22 x 22 D*	ClamShell	2.190	1.900	0.730	290SQ 472B6617
484	0.80	19.00	19.00	1.62	22 x 22 D*	ClamShell	1.580	1.200	0.610	190SQ 484U6617
484	1.00	23.00	23.00	1.82	22 x 22	ClamShell	1.660	1.320	0.650	230SQ 484B6617
484	1.00	23.00	23.00	1.97	22 x 22	ClamShell	1.660	1.320	0.650	230SQ 484B6618A
484	1.00	23.00	23.00	3.20	22 x 22	ClamShell	1.660	1.320	0.650	230SQ 484B6618B
484	1.00	23.00	23.00	2.23	22 x 22	ClamShell	1.660	1.320	0.650	230SQ 484B6618C
484	1.00	23.00	23.00	1.93	22 x 22 D*	ClamShell	1.660	1.320	0.605	230SQ 484B6618D
484	1.00	27.00	27.00	2.23	26 x 26 D*	ClamShell	1.810	1.520	0.650	270SQ 484B6617
484	1.00	31.00	31.00	2.13	26 x 26 D*	ClamShell	2.190	1.900	0.792	310SQ 484B6617
492	1.27	35.00	35.00	2.33	26 x 26 D*	ClamShell	2.190	1.900	1.020	350SQ 492B6617
492	1.27	35.00	35.00	2.33	26 x 26 D*	ClamShell	2.190	1.900	0.730	350SQ 492B6618A
503	1.27	40.00	40.00	2.33	29 x 29 D*	ClamShell	2.590	2.300	1.020	400SQ 503B6617
505	1.27	35.00	35.00	2.33	26 x 26 D*	ClamShell	2.190	1.900	1.020	350SQ 505B6617
516	1.27	35.00	35.00	2.38	26 x 26 D*	ClamShell	2.190	1.900	1.020	350SQ 516B6617
520	1.27	40.00	40.00	2.10	31 x 31 D*	ClamShell	2.390	2.100	1.020	400SQ 520B6617
520	1.27	40.00	40.00	1.70	31 x 31 D*	ClamShell	2.390	2.100	1.020	400SQ 520B6618A
520	1.27	40.00	40.00	2.33	31 x 31 D*	ClamShell	2.390	2.100	1.020	400SQ 520B6618B
520	1.27	40.00	40.00	1.50	31 x 31 D*	ClamShell	2.390	2.100	0.730	400SQ 520B6618C
521	1.27	43.00	43.00	3.41	33 x 33 D*	ClamShell	2.590	2.300	1.020	430SQ 521B6617
529	1.27	31.00	31.00	2.33	23 x 23	ClamShell	2.190	1.900	0.792	310SQ 529B6617
529	1.27	37.50	37.50	2.33	29 x 29 D*	ClamShell	2.390	2.100	0.730	375SQ 529B6617
538	1.00	31.00	31.00	3.05	30 x 30 D*	ClamShell	2.190	1.900	0.792	310SQ 538B6617
538	1.00	31.00	31.00	3.05	30 x 30 D*	ClamShell	2.190	1.900	0.792	310SQ 538B6618A
544	0.80	27.00	14.00	1.82	17 x 33	ClamShell	1.810	1.520	0.600	270140544U6617
544	0.80	27.00	14.00	1.94	33 x 17 D*	ClamShell	1.810	1.520	0.600	282250269B6617

* Depopulated, See Drawing for Specific Array



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BGA/CSP Sockets

I/O	Pitch (mm)	Pkg Body L (mm)	Pkg Body W (mm)	Pkg H / T (mm)	Array	Socket Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
553	1.27	37.50	37.50	2.33	29 x 29 D*	ClamShell	2.390	2.100	1.020	375SQ 553B6617
556	1.00	31.00	31.00	2.25	30 x 30 D*	ClamShell	2.190	1.900	1.020	310SQ 556B6617
560	1.00	31.00	31.00	2.23	30 x 30 D*	ClamShell	2.190	1.900	1.020	310SQ 560B6617
560	1.27	35.00	35.00	2.33	26 x 26 D*	ClamShell	2.190	1.900	1.020	350SQ 560B6617
560	1.27	40.00	40.00	2.49	30 x 30 D*	ClamShell	2.390	2.100	0.730	400SQ 560B6617
560	1.27	42.50	42.50	1.54	33 x 33 D*	ClamShell	2.590	2.300	1.020	425SQ 560B6617
560	1.27	42.50	42.50	3.50	33 x 33 D*	ClamShell	2.590	2.300	0.730	425SQ 560B6618A
569	1.27	40.00	40.00	2.33	31 x 31 D*	ClamShell	2.390	2.100	1.020	400SQ 569B6617
569	1.27	40.00	40.00	3.10	31 x 31 D*	ClamShell	2.390	2.100	1.020	400SQ 569B6618A
580	1.00	35.00	35.00	2.37	34 x 34 D*	ClamShell	2.190	1.900	1.020	350SQ 580B6617
580	1.00	35.00	35.00	1.47	34 x 34 D*	ClamShell	2.190	1.900	0.730	350SQ 580B6618A
587	1.27	37.50	37.50	3.40	28 x 28 D*	ClamShell	2.390	2.100	1.020	375SQ 587B6617
595	0.50	20.45	9.98	0.97	35 x 17	ClamShell	1.580	1.200	0.600	204099237J6618A
595	0.50	20.45	9.98	0.97	35 x 17	ClamShell	1.580	1.200	0.600	204099595J6618A
600	1.27	40.00	40.00	2.50	31 x 31 D*	ClamShell	2.390	2.100	1.020	400SQ 600B6617
600	1.27	45.00	45.00	1.54	35 x 35 D*	ClamShell	2.590	2.300	1.020	450SQ 600B6617
600	1.27	45.00	45.00	2.08	35 x 35 D*	ClamShell	2.590	2.300	0.730	450SQ 600B6618A
624	1.27	40.00	40.00	2.49	30 x 30 D*	ClamShell	2.390	2.100	0.730	400SQ 624B6617
625	1.27	35.00	35.00	2.38	26 x 26 D*	ClamShell	2.190	1.900	1.020	350SQ 625B6617
652	1.27	37.50	37.50	3.40	28 x 28 D*	ClamShell	2.390	2.100	1.020	375SQ 652B6617
655	1.27	45.00	45.00	2.60	34 x 34 D*	ClamShell	2.590	2.300	1.020	450SQ 655B6617
657	1.00	31.00	31.00	2.23	30 x 30 D*	ClamShell	2.190	1.900	0.730	310SQ 657J6617
664	1.27	35.00	35.00	6.42	26 x 26 D*	ClamShell	2.190	1.900	1.020	350SQ 664B6617
665	1.27	40.00	40.00	2.25	31 x 31 D*	ClamShell	2.390	2.100	1.020	400SQ 665B6617
668	1.00	27.00	27.00	2.65	26 x 26	ClamShell	1.810	1.520	0.605	270SQ 668B6617
672	1.00	27.00	27.00	1.86	26 x 26 D*	ClamShell	1.810	1.520	0.650	270SQ 672B6617
672	1.00	27.00	27.00	2.01	26 x 26 D*	ClamShell	1.810	1.520	0.650	270SQ 672B6618A
672	1.00	27.00	27.00	3.50	26 x 26 D*	ClamShell	1.810	1.520	0.650	270SQ 672B6618B
672	1.00	27.00	27.00	2.23	26 x 26 D*	ClamShell	1.810	1.520	0.650	270SQ 672B6618D
672	1.00	27.00	27.00	1.97	26 x 26 D*	ClamShell	1.810	1.520	0.650	270SQ 672B6618E
672	1.27	35.00	35.00	3.20	26 x 26 D*	ClamShell	2.600	2.600	0.950	350SQ 672B6617
672	1.27	35.00	35.00	2.36	26 x 26 D*	ClamShell	2.600	2.600	0.890	350SQ 672B6618A
676	1.00	27.00	27.00	3.15	26 x 26	ClamShell	1.810	1.520	0.650	270SQ 676B6617
676	1.00	31.00	31.00	2.23	30 x 30 D*	ClamShell	2.190	1.900	1.020	310SQ 676B6617
676	1.27	35.00	35.00	2.22	26 x 26	ClamShell	2.190	1.900	1.020	350SQ 676B6617
676	1.27	35.00	35.00	2.33	26 x 26	ClamShell	2.190	1.900	1.020	350SQ 676B6618A
676	1.27	35.00	35.00	2.22	26 x 26	ClamShell	2.190	1.900	1.020	350SQ 676B6618B
680	1.00	40.00	40.00	1.60	39 x 39 D*	ClamShell	2.390	2.100	1.020	400SQ 680B6617
680	1.00	40.00	40.00	1.60	39 x 39 D*	ClamShell	2.390	2.100	1.020	400SQ 680B6618A
680	1.00	40.00	40.00	1.40	39 x 39 D*	ClamShell	2.390	2.100	1.020	400SQ 680B6618B
696	1.00	31.00	31.00	2.13	30 x 30 D*	ClamShell	2.190	1.900	1.020	310SQ 696B6617
696	1.00	31.00	31.00	2.13	30 x 30 D*	ClamShell	2.190	1.900	0.792	310SQ 696B6618A
700	1.00	35.00	35.00	2.23	34 x 34 D*	ClamShell	2.190	1.900	1.020	350SQ 700B6617

* Depopulated, See Drawing for Specific Array



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BGA/CSP Sockets

I/O	Pitch (mm)	Pkg Body L (mm)	Pkg Body W (mm)	Pkg H / T (mm)	Array	Socket Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
708	1.00	31.00	31.00	2.13	30 x 30 D*	ClamShell	2.190	1.900	0.792	310SQ 708B6617
708	1.00	31.00	31.00	2.36	30 x 30 D*	ClamShell	2.190	1.900	0.730	310SQ 708B6618A
720	1.00	32.50	25.00	4.99	24 x 31 D*	ClamShell	2.190	1.900	1.902	325250720B6617
729	1.27	40.00	40.00	3.19	27 x 27	ClamShell	2.700	2.340	1.022	400SQ 729B6617
780	1.00	29.00	29.00	3.15	28 x 28 D*	ClamShell	2.190	1.900	1.020	290SQ 780B6617
787	1.00	35.00	35.00	3.23	32 x 32 D*	ClamShell	2.190	1.900	1.020	350SQ 787B6617
788	1.00	35.00	35.00	2.40	34 x 34 D*	ClamShell	2.700	1.900	1.000	350SQ 788B6617
836	1.00	50.00	50.00	2.61	49 x 49 D*	ClamShell	3.250	2.740	1.212	500SQ 836B6617
860	1.00	42.50	42.50	3.04	42 x 42 D*	ClamShell	2.590	2.300	1.020	425SQ 860B6617
896	1.00	31.00	31.00	2.23	30 x 30 D*	ClamShell	2.700	2.340	0.940	310SQ 896B6617
900	1.00	31.00	31.00	2.41	30 x 30	ClamShell	2.700	2.340	0.940	310SQ 900B6617
900	1.00	31.00	31.00	2.23	30 x 30	ClamShell	2.700	2.340	0.940	310SQ 900B6618A
901	1.00	37.50	37.50	2.23	36 x 36 D*	ClamShell	2.700	2.340	1.020	375SQ 901B6617
913	1.00	40.00	40.00	2.23	39 x 39 D*	ClamShell	2.390	2.100	1.020	400SQ 913B6617
956	1.27	40.00	40.00	3.22	31 x 31 D*	ClamShell	2.700	2.340	0.972	400SQ 956B6617
1000	1.00	40.00	40.00	2.23	38 x 38 D*	ClamShell	2.700	2.340	1.062	400SQ1000B6617
1004	1.00	40.00	40.00	3.05	38 x 38 D*	ClamShell	2.700	2.340	1.250	400SQ1004B6617
1020	1.00	33.00	33.00	3.60	32 x 32 D*	ClamShell	2.700	2.340	1.310	330SQ1020B6617
1020	1.00	33.00	33.00	3.40	32 x 32 D*	ClamShell	2.700	2.340	1.310	330SQ1020B6618A
1063	1.00	40.00	40.00	2.23	39 x 39 D*	ClamShell	2.700	2.340	0.972	400SQ1069B6617
1121	1.00	40.00	40.00	3.10	39 x 39 D*	ClamShell	2.700	2.340	0.972	400SQ1117B6617
1121	1.00	40.00	40.00	3.20	39 x 39 D*	ClamShell	2.700	2.340	0.972	400SQ1121B6617
1148	1.00	35.00	35.00	3.20	34 x 34 D*	ClamShell	2.700	2.340	0.810	350SQ1148B6617
1152	1.00	35.00	35.00	3.20	34 x 34 D*	ClamShell	2.700	2.340	1.000	350SQ1156B6618C
1156	1.00	35.00	35.00	3.85	34 x 34	ClamShell	2.700	2.340	1.020	350SQ1156B6617
1156	1.00	35.00	35.00	3.75	34 x 34	ClamShell	2.700	2.340	1.000	350SQ1156B6618A
1156	1.00	35.00	35.00	2.25	34 x 34	ClamShell	2.700	2.340	1.000	350SQ1156B6618D
1156	1.00	35.00	35.00	3.75	35 x 35	ClamShell	4.000	6.000	2.440	350SQ1156S6617
1157	1.00	40.00	40.00	2.45	39 x 39 D*	ClamShell	2.700	2.340	1.250	400SQ1157B6617
1157	1.00	40.00	40.00	2.45	39 x 39 D*	ClamShell	2.700	2.340	1.250	400SQ1157B6618A
1413	1.00	40.00	40.00	3.11	39 x 39 D*	ClamShell	2.700	2.340	1.250	400SQ1417B6617
1413	1.00	40.00	40.00	2.25	39 x 39 D*	ClamShell	2.700	2.340	1.250	400SQ1417B6618A
1413	1.00	40.00	40.00	3.11	39 x 39 D*	ClamShell	2.700	2.340	0.972	400SQ1417B6618B
1508	1.00	40.00	40.00	3.30	39 x 39 D*	ClamShell	2.700	2.340	1.000	400SQ1508B6617
1508	1.00	40.00	40.00	3.12	39 x 39 D*	ClamShell	2.700	2.340	1.275	400SQ1508B6618A
1517	1.00	40.00	40.00	3.20	39 x 39 D*	ClamShell	2.700	2.340	1.275	400SQ1517B6617
1521	1.00	40.00	40.00	2.50	39 x 39	ClamShell	2.390	2.100	1.020	400SQ 232B6617
2397	1.00	50.00	50.00	2.25	49 x 49	ClamShell	3.250	2.740	1.212	500SQ2397B6617
2549	1.00	52.80	52.80	4.65	51 x 51 D*	ClamShell	3.250	2.740	1.220	528SQ 106B6617



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LGA Sockets

Design Features

- Contact Pitches of 0.35mm and Greater
- Socket Contact Wipes Diameter of Package Land
- Low-Profile and Small Footprint Design Increases Board Density
- Surface-mount Design Corrects Coplanarity Issues Reducing Need for Extra Board Layers



I/O	Pitch (mm)	Pkg Body L (mm)	Pkg Body W (mm)	Pkg H / T (mm)	Array	Socket Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
2	**	1.57	1.07	0.89	Special D*	Clamshell	1.050	0.750	0.502	015010048U6617
6	0.50	1.60	1.60	0.55	3 on 2	ClamShell	1.050	0.750	0.440	016SQ 007J6618B
7	0.50	1.60	1.60	0.75	3 on 2 plus 1	ClamShell	1.050	0.750	0.440	016SQ 007J6617
9	0.80	3.00	3.00	0.90	3 x 3	ClamShell	1.050	0.750	0.450	030SQ 009J6617
10	1.27	11.02	11.02	1.91	11 x 11 D*	ClamShell	1.050	0.750	0.507	110SQ 010L6617
13	**	35.00	14.90	0.57	6 on 1, 7 on 1	ClamShell	2.190	1.900	0.730	349142013L6617
16	1.67	8.00	8.00	4.60	4 on 4	ClamShell	0.930	0.760	0.740	03719 291 6218B
16	0.75	4.00	4.00	0.90	4 x 4	Clamshell	1.050	0.750	0.450	040SQ 016J6617
16	0.68	4.00	4.00	1.20		Clamshell	1.050	0.750	0.450	040SQ 028J6617
18	1.10	14.00	8.50	6.10	7 on 2, 2 on 2	ClamShell	1.470	1.050	0.605	140085018L6617
20	0.70	7.00	7.00	4.50	10 on 2	ClamShell	1.050	0.750	0.450	070SQ 020J6617
20	1.10	9.50	9.50	7.60	8 on 2, 2 on 2					095SQ 020LAPKB
20	1.10	9.50	9.50	7.60	8 on 2, 2 on 2	ClamShell	1.470	1.050	0.605	140120020L6617
22	0.60	7.00	7.00	4.50	11 on 2	ClamShell	1.050	0.750	0.440	070SQ 022L6617
22	1.40	10.56	8.66	5.80	Special D*	ClamShell	1.050	0.750	0.507	105086022L6617
24	0.90	8.13	5.84	1.91	6 x 8 D*	ClamShell	1.050	0.750	0.507	081058012L6617
25	0.90	10.06	5.66	1.91	10 x 5 D*	ClamShell	1.050	0.750	0.507	105056023L6617
30	1.00	40.00	40.00	1.50	39 x 39 D*	ClamShell	2.390	2.100	0.730	400SQ 030J6617
31	Multi	8.00	6.00	1.15		ClamShell	1.050	0.750	0.450	080060031J6617
31	Multi	8.00	6.00	1.15		ClamShell	1.050	0.750	0.450	080060031J6618A
32	0.80	8.00	6.00	1.10	10 on 2, 5 on 2	ClamShell	1.050	0.750	0.450	080060031J6618B
32	0.90	11.02	11.02	1.91	11 x 11 D*	ClamShell	1.050	0.750	0.507	110SQ 032L6617
36	0.80	9.00	9.00	1.92	9 on 4	ClamShell	0.940	0.810	0.740	03719 371 6218B
36	0.80	8.00	8.00	1.40	10 on 2 plus 16	ClamShell	1.050	0.750	0.450	080SQ 036J6617
36	0.80	8.00	8.00	1.15		ClamShell	1.050	0.750	0.450	080SQ 036J6618B
36	1.00	9.00	9.00	1.06	8 x 8 D*	ClamShell	1.050	0.750	0.650	090SQ 036L6617
36	1.00	15.00	15.00	1.02	Special D*	ClamShell	1.470	1.050	0.850	150SQ 036L6617
37	0.80	9.00	9.00	3.18	10 x 10 D*	ClamShell	1.050	0.750	0.445	090SQ 037U6617
44	0.90	10.97	8.94	1.91	8 x 11 D*	ClamShell	1.050	0.750	0.507	109089040L6617
45	0.50	5.04	5.04	0.85	Special D*	ClamShell	1.050	0.750	0.450	050SQ 045J6617
48	1.00	12.00	10.00	1.56	6 x 8	ClamShell	1.050	0.750	0.650	120100048L6617

* Depopulated, See Drawing for Specific Array ** Pitch is not available due to package configuration



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LGA Sockets

I/O	Pitch (mm)	Pkg Body L (mm)	Pkg Body W (mm)	Pkg H / T (mm)	Array	Socket Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
56	0.80	9.00	9.00	1.10	8 x 8 D*	ClamShell	1.050	0.750	0.650	090SQ 056L6617
59	0.50	7.04	6.04	1.00		ClamShell	1.050	0.750	0.450	D0706 059J6617
61	0.90	11.02	11.02	1.91	11 x 11 D*	ClamShell	1.050	0.750	0.507	110SQ 034L6617
61	1.27	11.02	11.02	1.91	11 X 11 D*	ClamShell	1.050	0.750	0.445	110SQ 046L6617
61	1.27	13.08	13.08	2.92	11 x 11 D*	ClamShell	1.470	1.050	0.605	135130061J6617
64	0.80	13.00	13.00	1.36	16 on 2, 14 on 2	ClamShell	1.210	1.090	0.740	03719 641 6217
64	0.65	6.00	6.00	0.81	8 x 8	ClamShell	1.050	0.750	0.450	060SQ 064J6617
64	1.00	13.00	10.00	1.10	8 x 8	ClamShell	1.470	1.050	0.605	130100064J6617
65	0.40	5.00	5.00	0.75	Special D*	ClamShell	1.050	0.750	0.530	050SQ 065J6617
65	0.50	11.00	7.00	1.15		ClamShell	1.050	0.450	0.450	110070065J6617
78	0.75	8.00	8.00	0.95	10 x 10 D*	ClamShell	1.050	0.750	0.440	080SQ 078U6617
81	1.27	42.82	16.30	15.46	9 x 9	ClamShell	1.460	1.140	0.762	428127081L6617
90	1.00	10.60	9.80	1.45	9 x 10	ClamShell	1.050	0.750	0.450	106098090J6617
100	0.80	9.00	9.00	3.18	10 x 10	ClamShell	1.050	0.750	0.507	090SQ 100U6618A
114	0.75	26.00	20.75	1.70	Special D*	ClamShell	1.810	1.520	0.650	260207114U6617
128	0.50	10.00	10.00	1.00	Special D*	ClamShell	1.050	0.750	0.650	100SQ 128U6617
132	Multi	11.20	9.00	1.35	11 x 12	ClamShell	1.050	0.750	0.450	112090132J6617
144	0.80	13.00	13.00	1.40	12 x 12 D*	ClamShell	1.470	1.050	0.850	130SQ 144L6617
160	1.27	24.87	24.87	0.64	Special D*	ClamShell	1.810	1.520	1.190	248SQ 160L6617
176	0.50	13.00	13.00	1.00	Special D*	ClamShell	1.470	1.050	0.850	130SQ 176U6617
196	1.00	15.00	15.00	2.02	14 x 14	ClamShell	1.470	1.050	0.650	150SQ 196L6617
228	1.00	17.00	17.00	2.77	16 x 16 D*	ClamShell	1.470	1.050	0.667	170SQ 228LAPKB
228	1.00	***	***	***	16 x 16 D*	ClamShell	1.810	1.520	0.605	210SQ 228L6617
228	1.00	21.00	21.00	2.77	16 x 16 D*	ClamShell	1.810	1.520	0.650	210SQ 228P6617
255	1.00	21.00	21.00	2.82	16 x 16 D*	ClamShell	1.660	1.320	0.650	210SQ 255L6617
255	1.27	21.00	21.00	2.82	16 x 16	ClamShell	1.810	1.520	0.730	210SQ 255P6617
256	1.00	17.00	17.00	1.12	16 x 16	ClamShell	1.470	1.050	0.650	170SQ 256L6617
256	1.27	27.03	27.03	1.53	20 x 20 D*	ClamShell	1.810	1.520	0.650	270SQ 256L6617
272	1.27	27.00	27.00	1.53	20 x 20 D*	ClamShell	1.810	1.520	0.662	270SQ 272L6617
312	1.27	37.50	37.50	0.91	29 x 29 D*	ClamShell	2.390	2.100	1.020	375SQ 312L6617
360	1.27	25.00	25.00	1.98	19 x 19 D*	ClamShell	1.810	1.520	0.650	250SQ 360L6617
360	1.27	25.00	25.00	2.03	19 x 19 D*	ClamShell	1.810	1.520	0.650	250SQ 360L6618A
360	1.27	25.00	25.00	2.03	19 x 19 D*	ClamShell	1.810	1.520	0.650	250SQ 360L6618B
360	1.27	25.00	25.00	1.98	18 x 18 D*	ClamShell	1.810	1.520	0.410	250SQU360L6618
384	1.02	35.46	32.51	0.90	23 x 23 D*	ClamShell	1.990	1.660	0.450	04481 384 661A
388	1.27	27.00	27.00	1.81	20 x 20 D*	ClamShell	1.810	1.520	0.650	270SQ 388L6617
400	1.00	20.00	20.00	1.70	20 x 20	ClamShell	1.660	1.320	0.650	200SQ 400L6617
410	1.00	28.00	28.00	1.91	27 x 27 D*	ClamShell	2.190	1.900	1.162	280SQ 728L6618A
472	1.27	29.00	29.00	2.84	22 x 22 D*	ClamShell	2.190	1.900	1.020	290SQ 472L6617
472	1.27	29.00	29.00	3.24	22 x 22 D*	ClamShell	2.190	1.900	0.832	290SQ 472L6618A
472	1.27	29.00	29.00	3.14	22 x 22 D*	ClamShell	2.190	1.900	0.832	290SQ 472L6618B

* Depopulated, See Drawing for Specific Array



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I/O	Pitch (mm)	Pkg Body L (mm)	Pkg Body W (mm)	Pkg H / T (mm)	Array	Socket Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
472	1.27	29.00	29.00	2.84	22 x 22 D*	ClamShell	2.190	1.900	0.832	290SQ 472P6617
472	1.27	29.00	29.00	3.24	22 x 22 D*	ClamShell	2.190	1.900	0.730	290SQ 472P6618A
472	1.27	29.00	29.00	3.14	22 x 22 D*	ClamShell	2.190	1.900	0.730	290SQ 472P6618B
575	1.27	31.00	31.00	1.07	24 x 24 D*	ClamShell	2.190	1.900	1.020	310SQ 575L6617
575	1.27	31.00	31.00	1.07	24 x 24 D*	ClamShell	2.190	1.900	1.020	310SQ 575L6618A
575	1.27	31.00	31.00	1.07	24 x 24 D*	ClamShell	2.190	1.900	1.020	310SQU575L6618E
587	1.27	37.50	37.50	4.03	28 x 28 D*	ClamShell	2.390	2.100	1.020	375SQ 587L6617
587	1.27	37.50	37.50	4.03	28 x 28 D*	ClamShell	2.390	2.100	1.020	375SQ 587L6618A
644	1.27	35.00	35.00	4.41	26 x 26 D*	ClamShell	2.190	1.900	1.020	350SQ 664L6617
767	1.00	35.00	35.00	11.24	32 x 32 D*	ClamShell	2.190	1.900	1.020	350SQ 767L6617
767	1.00	35.00	35.00	3.99	32 x 32 D*	ClamShell	2.190	1.900	1.020	350SQ 767L6618A
949	1.27	40.00	40.00	3.14	31 x 31 D*	ClamShell	2.700	2.340	1.300	400SQ 949L6617
1368	1.12	45.00	45.00	3.19	37 x 37 D*	ClamShell	2.700	2.340	0.932	450SQ1368L6617
1368	1.12	45.00	45.00	3.19	37 x 37 D*	ClamShell	2.700	2.340	1.180	450SQ1368L6618A
1368	1.12	45.00	45.00	3.19	37 x 37 D*	ClamShell	2.700	2.340	1.430	450SQ1368L6618B
1368	1.12	45.00	45.00	3.19	37 x 37 D*	ClamShell	2.700	2.340	1.140	450SQ1368L6618C
1368	1.12	45.00	45.00	3.19	37 x 37 D*	ClamShell	2.700	2.340	1.290	450SQ1368L6618D
1368	1.12	45.00	45.00	3.19	37 x 37 D*	ClamShell	2.700	2.340	1.290	450SQ1368L6618E
1368	1.12	45.00	45.00	2.31	37 x 37 D*	ClamShell	2.700	2.340	0.357	450SQ1368L6618F
1368	1.12	45.00	45.00	2.31	37 x 37 D*	ClamShell	2.700	2.340	0.357	450SQ1368L6618G



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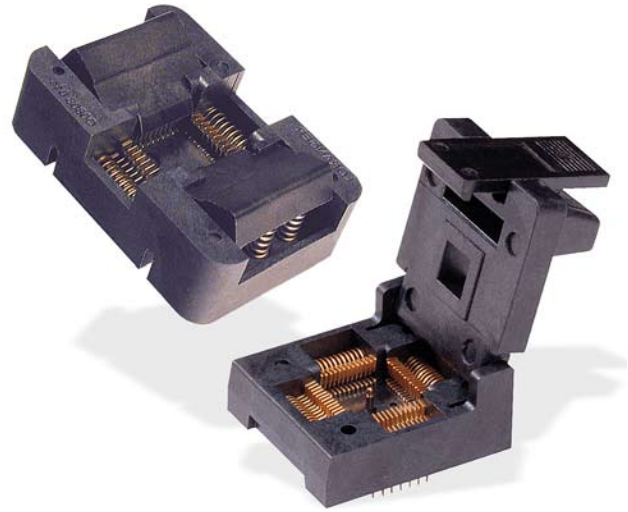
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QFN Sockets

Design Features

- *OpenTop or ClamShell Designs*
- *Depth-controlled Wiping Contact*
- *Accurate, Tightly-controlled Package Fit*
- *Zero-insertion-force*
- *Contact Pitches of 0.35mm and Greater*



I/O	Pitch (mm)	Pkg Body L (mm)	Pkg Body W (mm)	Pkg H / T (mm)	Pkg Name	Array	Kelvin	Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
3	0.95	3.00	2.00	0.90	QFN		No	ClamShell	0.750	0.500	0.730	03433 031 6215
3	Multi	3.00	2.90	1.60	QFN	1 on 1, 2 on 1	Yes	ClamShell	0.810	0.510	0.740	03434 031 6215
3	**	5.00	4.00	0.75	QFN	2 on 2 plus 1	No	ClamShell	0.810	0.600	0.740	03713 251 6218D
3	0.65	2.00	2.00	0.92	QFN	2 on 1,1 on 1	No	ClamShell	0.810	0.510	0.740	03717 071 6218D
3	**	3.00	3.00	0.75	QFN	2 on 2 plus 1	Yes	ClamShell	0.810	0.510	0.740	03727 111 6218B
3	**	3.00	3.00	1.00	QFN		No	ClamShell	0.800	0.510	0.740	03729 071 6218D
3	**	6.00	5.00	1.85	QFN		No	ClamShell	0.810	0.680	0.740	04244 031 6215
4	0.50	1.30	1.00	0.50	QFN	2 on 2	No	ClamShell	0.810	0.510	0.740	03723 081 6217
4	0.73	1.42	1.18	0.64	QFN	2 on 2	No	ClamShell	0.740	0.500	0.730	03733 081 6217
4	2.54	5.00	3.20	.85 to 1.04	DFN	2 x 2	No	ClamShell	0.810	0.560	0.740	03740 041 6217
4	2.54	6.15	5.16	0.80	PolarPAK		Yes	ClamShell	0.810	0.680	0.740	03741 041 6217
4	2.10	3.20	2.50	0.85	QFN	2 on 2	No	ClamShell	0.810	0.510	0.740	03748 041 6217
5	0.50	1.20	1.60	0.55	DFN	2 on 2, plus 1	No	ClamShell	1.050	0.750	0.450	012016010J6617
5	0.50	1.20	1.20	0.75	DFN	2 on 2	No	ClamShell	1.050	0.750	0.450	012SQ 008J6617
5	0.65	2.00	2.00	0.90	MLP	3 on 1,2 on 1	No	OpenTop	0.490	0.220	0.360	03713 051 6215
5	1.32	6.10	3.56	0.76	QFN		Yes	ClamShell	0.810	0.510	0.740	03731 051 6217
5	0.45	2.00	2.00	0.75	QFN	4 on 1 plus 1	Yes	ClamShell	0.810	0.510	0.740	04712 051 6217
6	0.35	1.00	1.00	0.35	QFN	3 on 2	No	ClamShell	1.050	0.750	0.536	010SQ 006J6617
6	0.50	1.66	1.20	0.55	SOT-563	3 on 2	No	ClamShell	1.050	0.750	0.440	016012006J6617
6	0.50	1.60	1.60	0.75	QFN	3 on 2	No	ClamShell	1.050	0.750	0.440	016SQ 006J6617
6	0.50	1.60	1.60	0.50	QFN	3 on 2	No	ClamShell	1.050	0.750	0.440	016SQ 006J6618A
6	0.65	2.00	2.00	0.90	MLP	3 on 2	No	OpenTop	0.490	0.220	0.360	03713 061 6215
6	0.65	2.00	2.00	0.90	MLP		No	OpenTop	0.490	0.220	0.360	03713 061 6218A
6	0.97	3.00	3.00	1.30	QFN	3 on 2	No	ClamShell	0.810	0.510	0.740	03713 101 6218D
6	0.65	2.00	2.00	0.75	QFN	3 on 1,2 on 1 plus 1	No	ClamShell	0.810	0.510	0.740	03717 071 6218C
6	0.65	2.00	2.00	0.60	QFN	3 on 2	No	ClamShell	0.810	0.510	0.740	03717 071 6218E
6	1.27	6.22	4.32	1.30	QFN	3 on 2	No	ClamShell	0.800	0.600	0.740	03723 061 6217
6	0.50	3.00	2.00	0.35	QFN	3 on 2	No	ClamShell	0.810	0.510	0.740	03727 071 6218A
6	0.95	5.00	2.00	0.70	QFN	2 on 2 plus 2	No	ClamShell	0.810	0.510	0.740	03729 061 6217
6	0.95	5.00	2.00	0.75	QFN		No	ClamShell	0.810	0.510	0.740	03729 061 6218A

** Pitch is not available due to package configuration



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QFN Sockets

I/O	Pitch (mm)	Pkg Body L (mm)	Pkg Body W (mm)	Pkg H / T (mm)	Pkg Name	Array	Kelvin	Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
6	0.50	1.50	1.00	0.75	QFN	3 on 2	No	ClamShell	0.760	0.510	0.740	03732 061 6217
6	0.50	1.45	1.00	0.50	QFN	3 on 2	No	ClamShell	0.810	0.510	0.740	03732 121 6217
6	0.50	1.50	1.20	0.82	QFN	3 on 2	No	ClamShell	0.810	0.510	0.740	03733 061 6217
6	0.50	1.50	1.20	0.75	QFN	2 on 2	No	ClamShell	0.810	0.510	0.740	03733 061 6218A
6	0.95	3.00	2.00	0.95	MLP	3 on 2	No	ClamShell	0.800	0.510	0.740	03733 071 6218A
6	0.50	1.50	1.50	0.75	QFN	3 on 2	No	ClamShell	0.810	0.510	0.740	03743 061 6217
6	0.50	1.66	1.20	0.57	SOT-666/SC-89	3 on 2	No	ClamShell	0.780	0.510	0.740	03780 121 6217
6	0.50	1.60	1.20	0.57	QFN	3 on 2	No	ClamShell	0.780	0.510	0.740	03780 121 6218A
6	0.40	1.20	1.00	0.55	QFN	3 on 2	No	ClamShell	0.770	0.510	0.710	03940 061 6217
6	0.40	1.20	1.00	0.50	QFN	3 on 2	No	ClamShell	0.770	0.510	0.710	03940 061 6218A
6	1.27	6.00	5.00	0.90	MLP		No	ClamShell	0.760	0.680	0.740	04260 061 6217
6	1.27	5.89	4.90	1.04	QFN	4 on 1,2 on 1	Yes	ClamShell	0.900	0.760	0.740	04261 061 6217
6	1.27	5.89	4.90	1.04	QFN	4 on 1,2 on 1	No	ClamShell	0.950	0.760	0.740	04261 061 6218A
6	0.65	3.05	3.05	1.04	QFN		No	ClamShell	0.810	0.510	0.740	04265 061 6217
6	0.65	3.05	3.05	1.04	QFN		No	ClamShell	0.810	0.510	0.740	04266 061 6217
6	Multi	4.72	3.76	1.00	QFN	3 on 2	No	ClamShell	1.050	0.750	0.440	047037012J6617
7	0.50	1.60	1.60	0.50	QFN	3 on 2 plus 1	No	ClamShell	1.050	0.750	0.440	016SQ 007J6618A
7	0.95	3.00	3.00	0.90	MLP	3 on 2 plus 1	No	ClamShell	0.800	0.510	0.740	03713 071 6217
7	0.65	2.00	2.00	0.93	SLP-6L	3 on 2 plus 1	No	ClamShell	0.760	0.510	0.740	03717 071 6217
7	0.65	2.00	2.00	0.75	QFN	3 on 2 plus 1	No	ClamShell	0.810	0.510	0.740	03717 071 6218B
7	0.65	2.00	2.00	0.50	QFN	3 on 2	No	ClamShell	0.810	0.510	0.740	03717 071 6218F
7	0.65	2.20	2.50	0.75	CSP	3 on 2 plus 1	No	ClamShell	0.810	0.510	0.740	03718 071 6217
7	0.65	3.00	3.00	0.90	QFN	3 on 2 plus 1	No	ClamShell	0.810	0.600	0.740	03718 131 6218B
7	0.65	3.00	3.00	0.90	QFN	3 on 2 plus 1	No	ClamShell	0.810	0.600	0.730	03718 131 6218C
7	0.50	2.00	1.50	0.35	QFN	3 on 2 plus 1	No	ClamShell	0.760	0.510	0.740	03721 071 6217
7	0.50	2.00	1.50	0.53	QFN	3 on 2 plus 1	No	ClamShell	0.810	0.510	0.740	03721 071 6218B
7	0.50	2.00	2.00	0.75	SLP-8L	3 on 2 plus 1	No	ClamShell	0.810	0.510	0.740	03722 071 6217
7	0.50	2.00	2.00	0.55	SLP-8L	3 on 2 plus 1	No	ClamShell	0.810	0.510	0.740	03722 071 6218B
7	0.95	3.29	2.92	0.75	QFN	3 on 2 plus 1	No	ClamShell	0.800	0.510	0.740	03723 071 6217
7	0.65	2.00	2.21	0.91	QFN	3 on 2 plus 1	No	ClamShell	0.770	0.500	0.710	03728 071 6217
7	0.95	3.00	3.00	0.75	QFN	3 on 2 plus 1	No	ClamShell	0.760	0.510	0.740	03729 071 6217
7	0.95	3.00	3.00	0.75	QFN	3 on 2	No	ClamShell	0.800	0.510	0.740	03729 071 6218A
7	0.95	3.00	3.00	0.90	QFN	3 on 2 plus 1	No	ClamShell	0.800	0.510	0.740	03729 071 6218B
7	0.95	3.00	3.00	0.85	QFN	3 on 2 plus 1	No	ClamShell	0.800	0.510	0.740	03729 071 6218C
7	0.95	3.00	3.00	0.90	QFN	3 on 2 plus 1	No	ClamShell	0.800	0.510	0.740	03729 071 6218E
7	0.40	2.00	1.30	0.55	QFN	3 on 2	No	ClamShell	0.770	0.510	0.710	03940 071 6217
7	0.50	5.00	2.05	0.76	QFN	3 on 2	No	ClamShell	0.810	0.510	0.740	04263 071 6217
7	0.65	2.00	2.00	0.75	DFN	3 on 2 plus 1	Yes	ClamShell	0.810	0.510	0.740	04717 071 6217
8	0.40	1.40	1.40	0.55	QFN	3 on 2,1 on 2	No	ClamShell	1.050	0.750	0.530	014SQ 008J6617
8	0.50	1.50	1.50	0.55	QFN	3 on 2,1 on 2	No	ClamShell	1.050	0.750	0.450	015SQ 008J6617
8	0.75	3.50	3.00	1.00	COB		No	ClamShell	0.810	0.510	0.740	03675 081 6217
8	0.50	3.00	3.00	0.75	QFN	4 on 2	No	ClamShell	0.790	0.600	0.740	03713 081 6217

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QFN Sockets

I/O	Pitch (mm)	Pkg Body L (mm)	Pkg Body W (mm)	Pkg H / T (mm)	Pkg Name	Array	Kelvin	Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
8	0.80	4.00	4.00	0.75	QFN	4 on 2	No	ClamShell	0.810	0.600	0.740	03714 081 6217
8	0.80	4.00	4.00	0.90	QFN	4 on 2	No	ClamShell	0.810	0.600	0.740	03714 091 6218A
8	0.65	3.00	3.00	0.90	QFN	4 on 2	No	ClamShell	0.810	0.510	0.740	03717 091 6218B
8	0.65	3.00	3.00	0.90	MLP	2 on 4	No	ClamShell	0.800	0.590	0.730	03718 081 6217
8	0.50	2.00	2.00	0.75	SLP-8L	4 on 2	No	ClamShell	0.810	0.510	0.740	03722 091 6218A
8	0.65	3.00	3.00	0.90	QFN	4 on 2	No	ClamShell	1.800	0.510	0.740	03723 091 6218A
8	0.65	3.00	3.00	0.75	QFN	4 on 2	No	ClamShell	1.800	0.510	0.740	03723 091 6218B
8	0.65	3.00	3.00	0.80	QFN	4 on 2	No	ClamShell	0.800	0.510	0.740	03723 091 6218C
8	0.50	1.60	1.60	0.50	QFN	3 on 2,1 on 2	No	ClamShell	0.750	0.510	0.740	03732 081 6217
8	0.50	2.30	2.30	0.70	QFN	4 on 2	No	ClamShell	0.810	0.510	0.740	03742 091 6218A
8	0.50	2.30	2.30	0.75	QFN	4 on 2	No	ClamShell	0.810	0.510	0.740	03742 091 6218B
8	1.27	5.00	5.00	1.52	QFN	3 on 2,1 on 2	No	ClamShell	0.810	0.680	0.740	03853 081 6218B
8	1.27	5.00	5.00	1.17	QFN	3 on 2,1 on 2	No	ClamShell	0.810	0.680	0.740	03853 081 6218C
8	1.27	4.50	5.00	1.98	QFN	3 on 2,1 on 2	No	ClamShell	0.810	0.680	0.740	03853 081 6218D
8	0.40	1.50	1.50	0.55	QFN	3 on 2, 1 on 2	No	ClamShell	0.770	0.510	0.710	03940 081 6217
8	0.40	1.40	1.40	0.55	QFN	3 on 2,1 on 2	No	ClamShell	0.770	0.510	0.710	03941 081 6217
8	1.27	5.20	5.55	0.90	DFN		No	ClamShell	0.940	0.760	0.740	04258 081 6217
8	1.27	5.20	5.55	0.90	DFN		Yes	ClamShell	0.940	0.760	0.740	04259 081 6217
8	1.27	5.99	4.92	0.93	MLP	4 on 2	No	ClamShell	0.810	0.510	0.740	04260 081 6217
8	1.27	5.99	5.00	0.95	MLP	4 on 2	No	ClamShell	0.810	0.510	0.740	04260 091 6217
8	1.27	5.15	5.90	1.00	CSP	8 on 4	Yes	ClamShell	0.810	0.510	0.740	04262 081 6217
8	0.50	4.55	2.00	0.76	QFN	3 on 2	No	ClamShell	0.810	0.860	0.790	04264 081 6217
8	0.65	3.05	3.20	0.80	QFN	4 on 2	No	ClamShell	0.810	0.510	0.740	04266 061 6218A
8	0.65	3.00	3.00	0.90	QFN	4 on 2	No	ClamShell	0.810	0.510	0.740	04266 091 6218A
8	1.27	6.00	5.00	0.90	MLP	4 on 2	No	ClamShell	1.110	0.510	0.770	04270 091 6218A
8	0.65	2.90	2.30	0.80	QFN	4 on 2	Yes	ClamShell	1.030	0.510	0.770	04626 081 6217
8	0.50	1.60	1.60	0.75	DFN	3 on 2 plus 2	Yes	ClamShell	0.810	0.510	0.740	04713 081 6217
8	0.65	2.05	2.05	0.75	DFN	3 on 2 plus 2	Yes	ClamShell	0.810	0.510	0.740	04717 081 6217
8	0.65	3.00	1.90	0.75	DFN	4 on 2	Yes	ClamShell	1.030	0.860	0.770	04717 091 6218A
8	0.65	3.00	1.70	0.80	DFN	4 on 2	Yes	ClamShell	0.081	0.510	0.740	04718 091 6218A
9	0.50	2.00	2.00	0.90	MLP	4 on 2 plus 1	No	ClamShell	0.750	0.500	0.730	03613 091 6217
9	0.50	2.00	2.00	0.90	MLP	4 on 2	No	ClamShell	0.750	0.500	0.730	03613 091 6218A
9	0.50	1.96	1.98	0.90	QFN	4 on 2 plus 1	No	ClamShell	0.810	0.510	0.740	03613 091 6218B
9	0.50	3.00	2.50	0.75	QFN	4 on 2 plus 1	No	ClamShell	0.810	0.510	0.740	03713 091 6217
9	0.80	4.00	4.00	0.90	QFN	4 on 2 plus 1	No	ClamShell	0.810	0.600	0.740	03714 091 6217
9	0.80	4.00	4.00	0.75	QFN	4 on 2 plus 1	No	ClamShell	0.810	0.600	0.740	03714 091 6218B
9	0.80	4.00	4.00	0.55	QFN	4 on 2 plus 1	No	ClamShell	0.810	0.600	0.740	03714 091 6218C
9	0.50	3.00	3.00	0.75	QFN	4 on 2 plus 1	No	ClamShell	0.810	0.600	0.740	03714 171 6218J
9	0.65	3.00	3.00	0.75	QFN	4 on 2 plus 1	No	ClamShell	0.750	0.510	0.740	03717 091 6217
9	0.65	3.00	3.00	0.90	LPCC	2 on 4 plus 1	No	ClamShell	0.800	0.590	0.730	03718 091 6215
9	0.80	3.00	3.00	1.20	QFN	4 on 2 plus 1	No	ClamShell	0.760	0.600	0.740	03719 091 6217
9	0.80	3.00	3.00	1.32	QFN	4 on 2 plus 1	No	ClamShell	0.810	0.600	0.740	03719 091 6218B

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QFN Sockets

I/O	Pitch (mm)	Pkg Body L (mm)	Pkg Body W (mm)	Pkg H / T (mm)	Pkg Name	Array	Kelvin	Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
9	0.80	3.00	3.00	1.05	QFN	4 on 2 plus 1	No	ClamShell	0.810	0.600	0.740	03719 091 6218C
9	0.80	3.00	3.00	0.95	QFN	4 on 2 plus 1	No	ClamShell	0.810	0.600	0.740	03719 091 6218D
9	0.80	3.00	3.00	1.15	QFN	4 on 2 plus 1	No	ClamShell	0.810	0.600	0.740	03719 091 6218E
9	0.50	2.00	2.00	0.55	QFN	4 on 2 plus 1	No	ClamShell	0.760	0.510	0.740	03721 091 6217
9	0.50	2.00	2.00	0.88	SLP-8L	4 on 2 plus 1	No	ClamShell	0.760	0.510	0.740	03722 091 6217
9	0.50	2.00	2.00	0.75	SLP-8L	4 on 2 plus 1	No	ClamShell	0.810	0.510	0.740	03722 091 6218B
9	0.50	2.00	2.00	0.50	QFN	4 on 2 plus 1	No	ClamShell	0.810	0.510	0.740	03722 091 6218C
9	0.65	3.00	3.00	0.90	QFN	4 on 2 plus 1	No	ClamShell	1.800	0.510	0.740	03723 091 6217
9	0.65	2.00	2.00	0.75	QFN	3 on 2,1 on 2 Plus 1	No	ClamShell	0.810	0.510	0.740	03726 091 6217
9	0.50	2.00	3.00	0.90	QFN	4 on 2 plus 1	No	ClamShell	0.810	0.510	0.740	03727 091 6217
9	0.50	2.00	3.00	0.90	QFN	4 on 2	No	ClamShell	0.810	0.510	0.740	03727 091 6218A
9	0.50	2.00	3.00	0.75	QFN	4 on 2 plus 1	No	ClamShell	0.810	0.510	0.740	03727 091 6218B
9	0.50	2.00	3.00	0.55	QFN	4 on 2 plus 1	No	ClamShell	0.810	0.510	0.740	03727 091 6218C
9	0.65	2.00	2.00	0.75	LLP	2 on 4 plus 1	No	ClamShell	0.750	0.500	0.730	03728 091 6217
9	Multi	6.00	6.00	1.40	SSLGA	3 on 2,1 on 2 Plus 1	No	ClamShell	0.860	0.710	0.740	03733 091 6217
9	0.65	6.40	3.00	0.75	QFN	4 on 2	No	ClamShell	1.030	0.510	0.740	03738 091 6218A
9	0.50	2.50	2.50	0.75	QFN	4 on 2 plus 1	No	ClamShell	0.810	0.510	0.740	03743 091 6217
9	2.54	14.00	9.00	3.06	QFN	3 on 2,3 on 1	No	ClamShell	1.280	1.160	0.780	03743 131 6218B
9	0.50	2.50	2.50	0.75	QFN	4 on 2 plus 1	No	ClamShell	0.810	0.600	0.740	03743 151 6218B
9	0.80	4.50	3.50	0.90	QFN	4 on 2 plus 1	No	ClamShell	0.810	0.600	0.740	03912 091 6217
9	0.45	3.00	2.00	0.75	QFN	8 on 2 plus 1	No	ClamShell	0.770	0.510	0.710	03945 091 6217
9	1.27	5.00	6.00	0.75	QFN	4 on 2 plus 1	No	ClamShell	0.810	0.510	0.740	04260 091 6218B
9	1.27	6.00	5.00	0.70	DFN	4 on 2 plus 2	Yes	ClamShell	1.110	0.510	0.770	04270 091 6218B
9	0.45	2.00	2.00	0.75	QFN	4 on 2 plus 1	No	ClamShell	1.030	0.510	0.740	04712 091 6218A
9	0.45	2.00	2.00	0.55	QFN	4 on 2 plus 1	Yes	ClamShell	1.030	0.510	0.740	04712 091 6218B
9	0.45	2.00	2.00	0.75	QFN	4 on 2 plus 1	Yes	ClamShell	1.030	0.510	0.740	04712 091 6218C
9	0.65	3.00	3.00	0.90	SON	4 on 2 plus 1	Yes	ClamShell	1.030	0.770	0.770	04713 091 6218A
9	0.65	3.00	1.90	0.80	DFN		Yes	ClamShell	1.030	0.860	0.770	04717 091 6217
10	0.51	11.43	11.43	2.67	QFN		No	ClamShell	1.000	0.840	0.740	03711 101 6217
10	0.50	3.00	3.00	0.75	QFN	5 on 2	No	ClamShell	0.810	0.510	0.740	03713 101 6217
10	0.65	4.00	4.00	0.90	QFN	5 on 2	No	ClamShell	0.800	0.600	0.740	03718 111 6218A
10	0.95	5.00	4.00	0.90	MLPD	4 on 2 plus 1	No	ClamShell	0.810	0.510	0.740	03729 091 6217
10	0.50	2.10	1.60	0.50	QFN	4 on 2,1 on 2	No	ClamShell	0.810	0.560	0.740	03732 101 6217
10	0.50	2.10	1.60	0.55	QFN	4 on 2,1 on 2	No	ClamShell	0.810	0.560	0.740	03732 101 6218A
10	0.50	2.00	1.50	0.65	QFN	2 on 2,4 on 2	No	ClamShell	0.770	0.510	0.710	03733 101 6217
10	0.50	2.00	1.50	0.37	QFN	4 on 2,1 on 2	No	ClamShell	0.770	0.510	0.710	03733 101 6218A
10	**	6.15	5.16	0.80	PolarPAK		Yes	ClamShell	0.810	0.680	0.740	03741 101 6217
10	0.40	1.80	1.40	0.55	QFN	3 on 2,2 on 2	No	ClamShell	0.770	0.510	0.710	03940 101 6217
10	0.40	1.40	1.80	0.75	QFN	3 on 2,2 on 2	No	ClamShell	0.770	0.510	0.710	03940 101 6218A
10	0.40	1.80	1.40	0.50	QFN	3 on 2,2 on 2	No	ClamShell	0.770	0.510	0.710	03940 101 6218B
10	0.40	2.00	2.00	0.56	QFN	5 on 2	No	ClamShell	0.770	0.510	0.710	03940 111 6218A
10	0.40	2.30	2.30	0.75	QFN	5 on 2	No	ClamShell	0.770	0.510	0.710	03941 111 6218A

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QFN Sockets

I/O	Pitch (mm)	Pkg Body L (mm)	Pkg Body W (mm)	Pkg H / T (mm)	Pkg Name	Array	Kelvin	Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
10	Multi	4.00	3.00	1.00	QFN		No	ClamShell	1.050	0.750	0.540	040030010J6617
10	0.65	3.00	2.00	0.90	MLP	4 on 2,1 on 2	Yes	ClamShell	1.030	0.510	0.770	04718 081 6217
11	0.50	3.00	3.00	0.75	QFN	5 on 2 plus 1	No	ClamShell	0.810	0.510	0.740	03713 101 6218A
11	0.50	3.00	3.00	0.90	QFN	5 on 2 plus 1	No	ClamShell	0.810	0.510	0.740	03713 101 6218B
11	0.50	3.00	3.00	0.85	QFN	5 on 2 plus 1	No	ClamShell	0.810	0.510	0.740	03713 101 6218C
11	0.50	3.00	3.00	0.90	MLPM	5 on 2 plus 1	No	ClamShell	0.710	0.510	0.840	03713 111 6217
11	0.65	4.00	4.00	0.90	QFN	5 on 2 plus 1	No	ClamShell	0.790	0.590	0.730	03718 111 6217
11	0.50	3.00	4.00	0.90	CSP	5 on 2 plus 1	No	ClamShell	0.770	0.510	0.710	03721 111 6217
11	0.50	4.00	3.00	0.90	CSP	5 on 2	No	ClamShell	0.770	0.510	0.740	03721 111 6218A
11	0.50	3.50	3.00	0.90	QFN	5 on 2 plus 1	No	ClamShell	0.750	0.590	0.730	03722 111 6217
11	0.50	4.00	3.00	0.75	QFN	5 on 2 plus 1	No	ClamShell	0.800	0.510	0.740	03723 111 6217
11	0.50	3.00	3.00	0.75	QFN	5 on 2 plus 1	No	ClamShell	0.810	0.510	0.740	03727 111 6217
11	0.50	3.00	3.00	0.75	QFN	5 on 2	No	ClamShell	0.810	0.510	0.740	03727 111 6218A
11	0.50	3.00	3.00	0.53	QFN	5 on 2 plus 1	No	ClamShell	0.810	0.510	0.740	03727 111 6218C
11	0.50	2.50	2.50	0.85	CSP	5 on 2 plus 1	No	ClamShell	0.770	0.510	0.710	03732 111 6217
11	0.50	2.50	2.50	0.75	QFN	5 on 2 plus 1	No	ClamShell	0.770	0.510	0.710	03732 111 6218B
11	0.80	5.00	4.00	0.75	LPP	2 on 2,3 on 2 plus 1	No	ClamShell	0.800	0.600	0.740	03733 111 6217
11	0.50	3.50	3.00	0.90	QFN	5 on 2 plus 1	No	ClamShell	0.860	0.710	0.740	03733 151 6218A
11	0.50	3.00	2.00	0.75	QFN	5 on 2 plus 1	No	ClamShell	0.810	0.510	0.740	03742 111 6217
11	0.50	3.00	3.00	0.90	QFN	5 on 2 plus 1	No	ClamShell	0.780	0.510	0.710	03743 111 6218B
11	2.54	30.48	25.40	4.95	Oscillator	7 on 1,4 on 1	No	ClamShell	1.820	1.300	0.750	04341 111 6217
11	2.54	30.48	25.40	4.95	Oscillator	7 on 1,4 on 1	No	ClamShell	1.870	1.300	0.810	04341 111 6218A
11	0.40	2.20	2.20	0.55	MLP	5 on 2 plus 1	Yes	ClamShell	0.810	0.510	0.740	04740 111 6217
12	0.40	2.00	1.40	0.35	QFN	5 on 2,1 on 2	No	ClamShell	1.050	0.750	0.530	020014012J6618A
12	1.80	7.00	7.00	3.41	QFN	3 on 4	No	ClamShell	0.860	0.710	0.740	03714 451 6218B
12	**	8.00	8.00	1.60	QFN	4 on 2,1 on 1,2 on	No	ClamShell	0.930	0.760	0.740	03723 121 6217
12	0.65	5.00	5.00	1.20	QFN	6 on 2	No	ClamShell	0.770	0.600	0.710	03728 251 6218A
12	0.65	5.00	5.00	0.90	QFN	6 on 2	No	ClamShell	0.770	0.600	0.710	03728 251 6218B
12	2.54	30.48	27.94	4.95	Oscillator	8 on 1,4 on 1	No	ClamShell	1.950	1.300	0.810	04341 121 6218B
12	2.54	30.48	25.40	4.82	CO-223		No	ClamShell	1.870	1.300	0.830	04349 121 6215
12	2.54	30.48	25.40	6.35	LCC	4 on 1,8 on 1	No	ClamShell	1.870	1.300	0.830	04349 121 6218A
12	0.45	3.00	3.00	0.75	QFN	6 on 2	Yes	ClamShell	1.030	0.510	0.770	04712 121 6218A
13	0.40	2.50	2.50	0.55	QFN	6 on 2 plus 1	No	ClamShell	1.050	0.750	0.530	025SQ 013J6617
13	0.50	3.00	1.35	0.90	QFN	12 on 2 plus 1	No	ClamShell	1.050	0.750	0.450	030013013J6617
13	0.50	3.00	1.35	0.50	QFN	12 on 2 plus 1	No	ClamShell	1.050	0.750	0.450	030013013J6618A
13	0.50	4.00	3.00	0.90	QFN	6 on 2	No	ClamShell	0.810	0.510	0.740	03713 131 6218A
13	0.50	4.00	3.00	0.75	QFN	6 on 2 plus 1	No	ClamShell	0.810	0.510	0.740	03713 131 6218B
13	0.50	3.00	3.00	0.88	QFN	3 on 4 plus 1	No	ClamShell	0.810	0.600	0.740	03714 131 6217
13	0.50	3.00	3.00	0.88	QFN	3 on 4 plus 1	No	ClamShell	0.810	0.600	0.740	03714 131 6218A
13	0.50	4.00	4.00	0.90	QFN	4 on 4	No	ClamShell	0.810	0.600	0.740	03714 171 6218K
13	0.65	4.00	4.00	0.85	QFN	3 on 4 plus 1	No	ClamShell	0.810	0.600	0.740	03717 131 6217
13	0.65	3.00	3.00	0.90	QFN	3 on 4 plus 1	No	ClamShell	0.800	0.600	0.730	03718 131 6217

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QFN Sockets

I/O	Pitch (mm)	Pkg Body L (mm)	Pkg Body W (mm)	Pkg H / T (mm)	Pkg Name	Array	Kelvin	Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
13	0.50	3.00	3.00	0.85	SLP-12	6 on 2 plus 1	No	ClamShell	0.770	0.510	0.710	03722 131 6217
13	0.80	4.00	4.00	0.90	QFN	3 on 4 plus 1	No	ClamShell	0.800	0.600	0.740	03723 131 6217
13	0.80	4.00	4.00	0.75	QFN	3 on 4 plus 1	No	ClamShell	0.740	0.590	0.730	03723 131 6218A
13	0.50	2.50	2.50	0.90	LPCC	3 on 4 plus 1	No	ClamShell	0.810	0.610	0.740	03724 131 6217
13	0.50	2.50	2.50	0.40	QFN	3 on 4	No	ClamShell	0.770	0.510	0.710	03724 131 6218A
13	1.00	5.00	5.00	1.98	QFN	3 on 4 plus 1	No	ClamShell	0.810	0.680	0.740	03744 131 6217
13	1.90	8.37	8.37	1.45	QFN	3 on 4 plus 1	No	ClamShell	0.940	0.760	0.740	03747 131 6217
13	0.40	2.00	2.00	0.46	QFN	3 on 4 plus 1	No	ClamShell	0.770	0.510	0.710	03940 131 6217
13	0.40	3.00	3.00	0.75	QFN	6 on 2 plus 1	No	ClamShell	0.810	0.510	0.740	03941 131 6217
13	0.45	3.00	2.00	0.75	QFN	6 on 2 plus 1	No	ClamShell	0.770	0.510	0.710	03945 131 6217
13	0.45	3.00	3.00	0.50	QFN	6 on 2 plus 1	No	ClamShell	0.770	0.510	0.710	03946 131 6217
13	0.45	3.00	3.00	0.60	QFN	6 on 2 plus 1	No	ClamShell	0.770	0.510	0.710	03946 131 6218B
13	0.45	3.00	3.00	0.80	QFN	6 on 2 plus 1	Yes	ClamShell	1.030	0.510	0.770	04712 131 6217
13	0.45	3.00	3.00	0.95	QFN	6 on 2 plus 1	Yes	ClamShell	1.030	0.510	0.770	04712 131 6218B
13	0.45	3.00	3.00	0.75	QFN	6 on 2 plus 1	Yes	ClamShell	1.030	0.510	0.770	04712 131 6218C
13	0.45	3.00	3.00	0.90	QFN	6 on 2 plus 1	Yes	ClamShell	1.030	0.510	0.770	04712 131 6218D
14	0.40	2.00	2.00	0.35	QFN	5 on 2,2 on 2	No	ClamShell	1.050	0.750	0.530	020SQ 014J6617
14	0.40	2.00	2.00	0.55	QFN	4 on 2,3 on 2	No	ClamShell	1.050	0.750	0.530	020SQ 014J6618B
14	0.50	4.00	3.00	0.90	QFN	6 on 2 plus 2	No	ClamShell	0.810	0.510	0.740	03713 131 6218C
14	0.50	3.00	2.00	0.55	QFN	6 on 2 plus 2	No	ClamShell	0.770	0.510	0.710	03713 141 6217
14	0.80	5.00	3.00	1.45	MLF	6 on 2,1 on 2	No	ClamShell	0.800	0.600	0.740	03719 141 6217
14	0.80	5.00	3.00	0.95	MLF	6 on 2,1 on 2	No	ClamShell	0.800	0.600	0.740	03719 141 6218A
14	Multi	5.00	3.00	1.10	QFN	6 on 2 plus 2 centers	No	ClamShell	0.800	0.600	0.740	03729 141 6217
14	1.27	5.00	5.00	0.89	QFN	3 on 2,4 on 2	No	ClamShell	0.810	0.680	0.740	03853 141 6217
15	0.50	4.00	4.00	0.75	QFN	7 on 2 plus 1	No	ClamShell	0.750	0.590	0.730	03713 151 6217
15	0.50	4.00	4.00	1.20	QFN	7 on 2 plus 1	No	ClamShell	0.810	0.600	0.740	03713 151 6218B
15	0.50	3.00	2.50	0.85	SOT-763-1	5 on 2,2 on 2 plus 1	No	ClamShell	0.750	0.590	0.730	03722 151 6217
15	0.50	3.00	2.50	0.75	MLP	5 on 2,2 on 2 plus 1	No	ClamShell	0.750	0.590	0.730	03722 151 6218A
15	0.50	3.00	2.50	0.95	QFN	5 on 2,2 on 2 plus 1	No	ClamShell	0.810	0.600	0.740	03722 151 6218B
15	0.50	4.00	3.00	0.75	MLP	7 on 2 plus 1	No	ClamShell	0.740	0.590	0.730	03723 151 6217
15	0.50	4.00	3.00	0.75	QFN	7 on 2 plus 1	No	ClamShell	0.740	0.590	0.730	03723 151 6218A
15	0.50	4.00	3.00	0.85	QFN	7 on 2 plus 1	No	ClamShell	0.790	0.600	0.740	03723 151 6218B
15	0.50	2.50	2.50	0.85	QFN	4 on 2,3 on 2 plus 1	No	ClamShell	0.760	0.600	0.740	03743 151 6217
15	0.50	2.50	2.50	0.55	QFN	4 on 4 plus 1	No	ClamShell	0.810	0.600	0.740	03743 151 6218C
15	0.80	6.00	5.00	0.95	LLP	7 on 2 plus 1	No	ClamShell	0.810	0.510	0.740	03913 151 6217
15	0.40	3.00	3.00	0.55	QFN	7 on 2 plus 1	No	ClamShell	0.770	0.510	0.710	03940 151 6217
15	0.50	4.00	4.00	0.75	QFN	7 on 4 plus 1	No	Clamshell	1.050	0.750	0.530	040SQ 015J6617
15	0.50	5.00	5.00	1.50	CSP	7 on 2	No	OpenTop	0.970	0.590	0.390	Q0505 291 6218B
15	0.50	5.00	5.00	1.20	CSP	7 on 2 plus 1	No	OpenTop	0.970	0.590	0.390	Q0505 291 6218C
15	0.50	5.00	5.00	1.20	CSP	7 on 2	No	OpenTop	0.970	0.590	0.390	Q0505 291 6218D
16	0.40	2.60	1.80	0.50	QFN	4 on 4	No	ClamShell	1.050	0.750	0.530	026018017J6617
16	0.50	3.50	3.50	1.00	Laminated Plastic	3 on 2,5 on 2	No	ClamShell	0.800	0.600	0.740	03713 161 6217

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QFN Sockets

I/O	Pitch (mm)	Pkg Body L (mm)	Pkg Body W (mm)	Pkg H / T (mm)	Pkg Name	Array	Kelvin	Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
16	0.50	3.50	3.50	0.55	QFN	7 on 2,3 on 2	No	ClamShell	0.810	0.600	0.740	03713 161 6218A
16	0.80	7.00	6.00	0.90	MLP	8 on 2	No	ClamShell	0.860	0.710	0.740	03713 171 6218A
16	0.50	4.00	4.00	0.75	QFN	4 on 4	No	ClamShell	0.810	0.600	0.740	03714 161 6217
16	0.50	3.00	3.00	0.90	QFN	4 on 4	No	ClamShell	0.810	0.600	0.740	03714 171 6218M
16	1.80	9.20	9.20	3.30	QFN	4 on 4	No	ClamShell	1.000	0.810	0.740	03715 171 6218A
16	0.65	4.00	4.00	0.97	MLF	4 on 4	No	ClamShell	0.800	0.600	0.740	03718 161 6215
16	0.65	4.00	4.00	0.90	LPCC	4 on 4	No	ClamShell	0.800	0.600	0.740	03718 161 6218B
16	0.65	4.00	4.00	2.60	QFN	4 on 4	No	ClamShell	0.800	0.600	0.740	03718 161 6218C
16	0.80	5.00	5.00	1.00	MLFP	4 on 4	No	ClamShell	0.800	0.680	0.740	03719 161 6217
16	Multi	12.00	12.00	2.10	QFN	14 on 2 plus 2	Yes	ClamShell	1.150	1.010	0.750	03729 161 6217
16	0.90	6.00	3.00	1.10	QFN	7 on 2 plus 2	No	ClamShell	0.810	0.600	0.740	03739 161 6217
16	Multi	7.00	4.00	1.15	QFN		No	ClamShell	0.860	0.710	0.740	03743 171 6218A
16	0.40	2.60	1.80	0.75	QFN	4 on 4	No	ClamShell	0.770	0.510	0.710	03940 171 6217
16	0.40	2.60	1.80	0.55	QFN	4 on 4	No	ClamShell	0.770	0.510	0.710	03940 171 6218B
16	0.40	2.60	1.80	0.50	QFN	4 on 4	No	ClamShell	0.770	0.510	0.710	03940 171 6218C
16	0.45	4.00	4.00	0.75	QFN	8 on 2	Yes	ClamShell	1.030	0.510	0.770	04712 171 6218A
16	0.50	4.00	4.00	0.75	QFN	4 on 4	Yes	ClamShell	1.030	0.860	0.770	04714 171 6218A
16	5.08	25.00	25.00	4.51	SOC	4 on 4 plus 1	Yes	OpenTop	1.740	1.370	0.560	Q2525 016 6217
17	0.40	3.30	1.35	0.75	TDFN	8 on 2 plus 1	No	ClamShell	1.050	0.750	0.550	033013017J6617
17	0.40	3.30	1.35	0.75	TDFN	8 on 2 plus 1	No	ClamShell	1.050	0.750	0.550	033013017J6618A
17	0.80	7.00	5.00	2.00	QFN	5 on 2,5 on 1,2 on 1	No	ClamShell	0.860	0.710	0.740	03713 271 6218B
17	0.50	3.00	3.00	0.90	QFN	4 on 4 plus 1	No	ClamShell	0.810	0.600	0.740	03714 171 6217
17	0.50	3.00	3.00	0.90	QFN	4 on 4 plus 1	No	ClamShell	0.810	0.600	0.740	03714 171 6217A
17	0.50	5.00	5.00	0.75	LLP	8 on 2 plus 1	No	ClamShell	0.810	0.680	0.740	03714 171 6218A
17	0.50	3.00	3.00	0.90	QFN	4 on 4 plus 1	No	ClamShell	0.760	0.600	0.410	03714 171 6218B
17	0.50	3.00	3.00	0.75	QFN	4 on 4 plus 1	No	ClamShell	0.810	0.600	0.740	03714 171 6218C
17	0.50	4.00	4.00	0.90	QFN	4 on 4 plus 1	No	ClamShell	0.810	0.600	0.740	03714 171 6218D
17	0.50	3.00	3.00	0.70	QFN	4 on 4 plus 1	No	ClamShell	0.810	0.600	0.740	03714 171 6218E
17	0.50	3.00	3.00	0.85	QFN	4 on 4 plus 1	No	ClamShell	0.810	0.600	0.740	03714 171 6218F
17	0.50	3.00	3.00	0.70	QFN	4 on 4 plus 1	No	ClamShell	0.810	0.600	0.740	03714 171 6218G
17	0.50	3.00	3.00	0.50	QFN	4 on 4 plus 1	No	ClamShell	0.810	0.600	0.740	03714 171 6218H
17	0.50	4.00	4.00	0.75	QFN	4 on 4 plus 1	No	ClamShell	0.810	0.600	0.740	03714 171 6218L
17	1.00	6.00	6.00	1.45	QFN	4 on 4 plus 1	No	ClamShell	0.810	0.680	0.740	03714 391 6218B
17	1.00	6.00	6.00	1.98	QFN	4 on 4 plus 1	No	ClamShell	0.810	0.680	0.740	03714 391 6218C
17	0.50	3.04	3.04	1.00	QFN	5 on 2,3 on 2 plus 1	No	ClamShell	0.810	0.680	0.740	03716 171 6217
17	0.50	3.00	3.00	0.75	HBCC	3 on 2,5 on 2 plus 1	No	ClamShell	0.810	0.680	0.740	03717 171 6217
17	0.50	3.00	3.00	0.75	QFN	5 on 2,3 on 2 plus 1	No	ClamShell	0.810	0.680	0.740	03717 171 6218A
17	0.65	4.00	4.00	0.90	QFN	4 on 4 plus 1	No	ClamShell	0.800	0.600	0.740	03718 171 6217
17	0.65	4.00	4.00	1.45	MLF	4 on 4	No	ClamShell	0.760	0.600	0.740	03718 171 6218A
17	0.65	4.00	4.00	0.90	MLF	4 on 4 plus 1	No	ClamShell	0.810	0.600	0.740	03718 171 6218B
17	0.65	4.00	4.00	1.30	QFN	4 on 4 plus 1	No	ClamShell	0.810	0.600	0.740	03718 171 6218C
17	0.65	4.00	4.00	0.75	QFN	4 on 4 plus 1	No	ClamShell	0.810	0.600	0.740	03718 171 6218D

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QFN Sockets

I/O	Pitch (mm)	Pkg Body L (mm)	Pkg Body W (mm)	Pkg H / T (mm)	Pkg Name	Array	Kelvin	Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
17	0.80	5.00	5.00	0.85	QFN	4 on 4 plus 1	No	ClamShell	0.810	0.680	0.740	03719 171 6217
17	0.80	5.00	5.00	0.90	QFN	4 on 4 plus 1	No	ClamShell	0.810	0.680	0.740	03719 171 6218B
17	0.50	4.00	1.60	0.75	QFN	8 on 2 plus 1	No	ClamShell	0.770	0.510	0.710	03720 171 6217
17	0.50	5.00	3.00	0.75	QFN	8 on 2 plus 1	No	ClamShell	0.810	0.510	0.740	03721 171 6217
17	0.50	4.50	3.25	0.95	CSP	6 on 2,4 on 1 plus 1	No	ClamShell	0.810	0.600	0.740	03721 211 6218A
17	0.50	3.50	2.50	0.85	SOT-763-1	6 on 2,2 on 2 plus 1	No	ClamShell	0.750	0.590	0.730	03722 171 6217
17	0.50	3.50	2.50	0.75	MLP	6 on 2,2 on 2 plus 1	No	ClamShell	0.750	0.590	0.730	03722 171 6218A
17	0.50	3.50	2.50	0.95	QFN	6 on 2 & 2 on 2 plus 1	No	ClamShell	0.810	0.600	0.740	03722 171 6218B
17	0.80	4.00	4.00	0.75	BCC	5 on 2,3 on 2 plus 1	No	ClamShell	0.810	0.600	0.740	03723 171 6217
17	0.80	4.00	4.00	0.85	QFN	5 on 2,3 on 2 plus 1	No	ClamShell	0.810	0.600	0.740	03723 171 6218B
17	0.50	5.00	4.00	0.75	QFN	8 on 2 plus 1	No	ClamShell	0.800	0.600	0.740	03723 291 6218C
17	0.50	5.00	4.00	0.90	QFN	8 on 2 plus 1	No	ClamShell	0.800	0.600	0.740	03723 291 6218E
17	0.50	2.50	2.50	0.55	QFN	4 on 4 plus 1	No	ClamShell	0.760	0.560	0.740	03724 171 6217
17	0.50	3.00	3.00	0.75	QFN	5 on 2,3 on 2 plus 1	No	ClamShell	0.810	0.680	0.740	03727 171 6217
17	0.50	4.50	4.00	0.95	QFN		No	ClamShell	0.810	0.680	0.740	03731 211 6218A
17	0.50	5.00	4.00	0.95	--	8 on 2	No	ClamShell	0.760	0.510	0.740	03732 171 6218A
17	1.25	6.00	6.00	1.40	QFN	5 on 2,3 on 2 plus 1	No	ClamShell	0.860	0.710	0.740	03733 171 6217
17	1.25	6.00	6.00	1.40	QFN	5 on 2,3 on 2 plus 1	No	ClamShell	0.860	0.710	0.740	03733 171 6218A
17	1.00	6.84	6.84	2.60	QFN	4 on 4	No	ClamShell	0.870	0.710	0.740	03744 171 6218A
17	1.91	11.64	9.14	1.50	QFN	5 on 2,3 on 2 plus 1	No	ClamShell	1.000	0.840	0.680	03747 171 6218A
17	0.45	4.00	3.00	0.75	QFN	8 on 2 plus 1	No	ClamShell	0.770	0.510	0.710	03945 171 6217
17	0.45	2.80	2.50	0.85	QFN	6 on 2,3 on 1,2 on 1	No	ClamShell	0.770	0.510	0.710	03946 171 6217
17	0.45	4.00	4.00	0.75	QFN	8 on 2 plus 1	Yes	ClamShell	1.030	0.510	0.770	04712 171 6217
17	2.54	26.00	26.00	2.77	HPH IMS	3 on 2,7 on 1,4 on 1	Yes	OpenTop	1.850	1.310	0.560	Q2626 017 6217
18	0.50	5.00	4.00	0.90	QFN	8 on 2 plus 2	No	ClamShell	0.800	0.600	0.740	03723 291 6218F
18	0.63	5.00	5.00	0.90	QFN	8 on 2 Plus 2	No	ClamShell	0.810	0.680	0.740	03726 171 6217
18	1.00	12.00	8.00	2.10	QFN	9 on 2	No	ClamShell	0.900	0.760	0.740	03733 251 6218A
18	1.27	7.00	7.00	0.85	QFN	4 on 4 plus 2	No	ClamShell	0.860	0.710	0.740	04260 181 6217
18	1.70	8.00	8.00	1.45	QFN	5 on 2,3 on 2 plus 2	No	ClamShell	0.940	0.760	0.740	D0808 018M6217
18	0.50	6.00	5.00	0.90	QFN	9 on 2	No	OpenTop	1.030	0.610	0.450	Q0605 018 6217
19	0.50	4.00	4.00	0.85	QFN	5 on 2,4 on 2 plus 1	No	ClamShell	0.800	0.600	0.740	03713 191 6217
19	1.00	6.00	5.00	1.45	QFN	5 on 2,4 on 2 plus 2	No	ClamShell	0.810	0.680	0.740	03743 191 6217
20	0.50	4.00	4.00	0.90	LPCC	5 on 4	No	ClamShell	0.810	0.600	0.740	03714 201 6217
20	0.80	5.00	5.00	0.90	QFN	4 on 2,6 on 2	No	ClamShell	0.810	0.680	0.740	03719 211 6218A
20	0.50	3.50	3.50	0.55	QFN	7 on 2,3 on 2	No	ClamShell	0.810	0.600	0.740	03723 211 6218A
20	0.50	4.00	3.00	0.90	QFN	7 on 1,3 on 2	No	ClamShell	0.810	0.600	0.740	03723 231 6218B
20	0.50	4.00	3.00	0.90	QFN	7 on 1,2 on 1,3 on	No	ClamShell	0.810	0.600	0.740	03723 231 6218C
20	0.65	5.00	5.00	1.10	QFN	5 on 4	No	ClamShell	0.810	0.680	0.740	03728 211 6217
20	Multi	8.00	8.00	1.30	QFN	4 on 2,7 on 1 & 6	No	Clamshell	0.940	0.760	0.740	03729 201 6217
20	0.80	5.00	5.00	0.90	QFN	5 on 4 plus 1	No	ClamShell	0.770	0.600	0.710	03912 211 6217
20	0.80	6.00	6.00	0.85	MLFP	5 on 4	No	ClamShell	0.750	0.680	0.730	03913 211 6218A
20	0.80	6.00	6.00	0.95	LF-CSP	5 on 4 plus 1	No	ClamShell	0.810	0.680	0.740	03913 211 6218B

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I/O	Pitch (mm)	Pkg Body L (mm)	Pkg Body W (mm)	Pkg H / T (mm)	Pkg Name	Array	Kelvin	Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
20	Multi	10.00	8.00	1.33	QFN	5 on 2,4 on 2	No	ClamShell	0.990	0.830	0.730	D1008 020M6217
21	1.00	7.50	5.50	1.40	Oscar Module	7 on 2,3 on 2 plus 1	No	ClamShell	0.860	0.600	0.740	03713 211 6215
21	0.50	4.00	4.00	0.75	LLP	5 on 4 plus 1	No	ClamShell	0.800	0.600	0.740	03714 211 6218A
21	0.50	4.00	4.00	0.75	LLP	5 on 4 plus 1	No	ClamShell	0.810	0.600	0.740	03714 211 6218B
21	0.50	4.00	4.00	0.90	QFN	5 on 4 plus 1	No	ClamShell	0.810	0.600	0.740	03714 211 6218C
21	0.50	4.00	4.00	0.75	QFN	5 on 4 plus 1	No	ClamShell	0.800	0.590	0.730	03714 211 6218D
21	0.50	4.00	4.00	0.90	QFN	5 on 4 plus 1	No	ClamShell	0.810	0.600	0.740	03714 211 6218E
21	0.65	5.00	5.00	0.90	QFN	5 on 4 plus 1	No	ClamShell	0.810	0.680	0.740	03718 211 6217
21	0.65	5.00	5.00	0.90	QFN	5 on 4	No	ClamShell	0.810	0.680	0.740	03718 211 6218A
21	0.80	5.00	5.00	0.90	QFN	5 on 4 plus 1	No	ClamShell	0.810	0.680	0.740	03719 211 6217
21	0.50	4.50	2.50	0.85	SOT-764-1	8 on 2,2 on 2 plus 1	No	ClamShell	0.750	0.590	0.730	03722 211 6217
21	0.50	4.50	2.50	0.75	QFN	8 on 2,2 on 2 plus 1	No	ClamShell	0.750	0.590	0.730	03722 211 6218A
21	0.50	5.00	5.00	0.90	QFN	9 on 2,plus 3	No	ClamShell	0.810	0.680	0.740	03723 191 6217
21	0.50	5.00	4.00	0.75	QFN	4 on 2,6 on 2 plus 1	No	ClamShell	0.800	0.600	0.740	03723 291 6218B
21	0.50	6.00	5.00	0.90	MLP	10 on 2 plus 1	No	ClamShell	0.810	0.510	0.740	03732 211 6217
21	0.50	4.00	3.00	0.95	SOT-797-1	6 on 2,4 on 2 plus 1	No	ClamShell	0.760	0.600	0.740	03733 211 6217
21	0.50	4.00	3.00	0.85	QFN	6 on 2,4 on 2 plus 1	No	ClamShell	0.810	0.600	0.740	03733 211 6218B
21	0.50	4.00	3.00	0.55	QFN	6 on 2,4 on 2 plus 1	No	ClamShell	0.810	0.600	0.740	03733 211 6218C
21	0.50	4.00	3.00	0.75	QFN	6 on 2,4 on 2 plus 1	No	ClamShell	0.810	0.600	0.740	03733 211 6218D
21	1.00	12.00	8.00	2.10	QFN	Special D*	No	ClamShell	0.900	0.760	0.740	03733 251 6218B
21	0.50	5.50	4.00	1.35	QFN	10 on 2 plus 1	No	ClamShell	0.810	0.680	0.740	03742 211 6217
21	1.90	11.08	11.08	5.20	QFN	5 on 4	No	ClamShell	1.030	0.860	0.750	03747 211 6218A
21	0.50	4.00	4.00	0.75	CSP	5 on 4 plus 1	No	OpenTop	0.970	0.590	0.390	Q0404 211 6217
22	0.65	6.00	4.50	1.10	QFN	8 on 2,3 on 1,1 on	No	ClamShell	0.810	0.680	0.740	03718 221 6217
22	0.96	6.60	6.60	1.20	QFN	7 on 2,3 on 2 Plus 1	No	ClamShell	0.860	0.710	0.740	03729 221 6217
22	0.90	7.00	4.00	1.10	QFN	6 on 2,4 on 2 Plus 2	No	ClamShell	0.860	0.710	0.740	03739 211 6217
22	0.90	7.00	4.00	1.20	QFN	6 on 2,4 on 2 plus 2	No	ClamShell	0.810	0.710	0.740	03749 211 6217
22	0.50	6.00	5.00	0.90	QFN	11 on 2 plus 1	No	OpenTop	1.030	0.610	0.450	Q0605 022 6217
23	1.00	8.00	5.00	1.45	QFN	5 on 2,6 on 2 plus 1	No	ClamShell	0.940	0.760	0.740	03743 231 6217
23	0.50	6.00	5.00	0.90	QFN	11 on 2 plus 1	No	OpenTop	1.030	0.610	0.450	Q0605 023 6217
24	0.50	4.50	3.50	1.00	Laminated Plastic	3 on 2,9 on 2	No	ClamShell	0.810	0.600	0.740	03713 241 6217
24	0.50	5.00	4.00	0.75	Laminated Plastic	7 on 2,5 on 2	No	ClamShell	0.810	0.600	0.740	03713 241 6218A
24	0.50	5.00	4.00	0.90	Laminated Plastic	7 on 2,5 on 2	No	ClamShell	0.790	0.600	0.740	03713 241 6218B
24	0.50	4.50	3.50	0.75	Laminated Plastic	3 on 2,9 on 2	No	ClamShell	0.810	0.600	0.740	03713 241 6218C
24	0.50	4.50	3.50	0.55	Laminated Plastic	3 on 2,9 on 2	No	ClamShell	0.750	0.590	0.730	03713 241 6218D
24	0.50	5.00	4.00	0.75	LLP	7 on 2 & 5 on 2	No	ClamShell	0.800	0.600	0.740	03713 251 6218C
24	0.50	4.00	4.00	0.90	LPCC	6 on 4	No	ClamShell	0.800	0.600	0.740	03714 251 6218A
24	0.65	5.00	5.00	0.85	QFN	6 on 4	No	ClamShell	0.770	0.600	0.710	03718 251 6218A
24	0.50	4.00	4.00	0.75	BCC	7 on 2,5 on 2	No	ClamShell	0.810	0.600	0.740	03723 241 6218A
25	0.50	5.00	4.00	0.75	LLP	7 on 2,5 on 2 plus 1	No	ClamShell	0.750	0.590	0.730	03713 251 6218A
25	0.50	5.00	4.00	0.90	LLP	7 on 2,5 on 2 plus 1	No	ClamShell	0.750	0.600	0.740	03713 251 6218B
25	0.50	5.00	4.00	0.90	QFN	5 on 2,7 on 2 plus 1	No	Clamshell	0.810	0.600	0.740	03713 251 6218E

** Pitch is not available due to package configuration



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QFN Sockets

I/O	Pitch (mm)	Pkg Body L (mm)	Pkg Body W (mm)	Pkg H / T (mm)	Pkg Name	Array	Kelvin	Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
25	0.50	4.00	4.00	0.95	SOT-616-1	6 on 4 plus 1	No	ClamShell	0.800	0.600	0.740	03714 251 6217
25	0.50	4.00	4.00	0.86	LPCC	6 on 4 plus 1	No	ClamShell	0.810	0.600	0.740	03714 251 6218B
25	0.50	4.00	4.00	0.80	QFN	6 on 4 plus 1	No	ClamShell	0.800	0.600	0.740	03714 251 6218C
25	0.50	4.00	4.00	0.80	QFN	6 on 4	No	ClamShell	0.800	0.600	0.740	03714 251 6218D
25	0.50	4.00	4.00	0.95	QFN	6 on 4 plus 1	No	ClamShell	0.800	0.600	0.740	03714 251 6218E
25	0.50	4.00	4.00	0.90	QFN	6 on 4 plus 1	No	ClamShell	0.810	0.600	0.740	03714 251 6218F
25	0.50	4.00	4.00	0.75	QFN	6 on 4 plus 1	No	ClamShell	0.800	0.600	0.740	03714 251 6218G
25	0.50	4.00	4.00	0.55	QFN	6 on 4 plus 1	No	ClamShell	0.800	0.600	0.740	03714 251 6218J
25	0.50	4.00	4.00	0.50	QFN	6 on 4 plus 1	No	ClamShell	0.800	0.600	0.740	03714 251 6218K
25	0.61	8.00	8.00	1.80	QFN	4 on 2, 10 on 1, 1 on 1 Plus Center	No	ClamShell	0.940	0.760	0.740	03715 251 6217
25	0.65	5.00	5.00	0.85	QFN	6 on 4 plus 1	No	ClamShell	0.770	0.600	0.710	03718 251 6217
25	0.65	5.00	5.00	0.75	QFN	6 on 4 plus 1	No	ClamShell	0.770	0.600	0.710	03718 251 6218B
25	0.50	5.50	3.50	0.85	SOT815	10 on 2, 2 on 2	No	ClamShell	0.810	0.710	0.740	03722 251 6217
25	0.50	4.00	4.00	0.75	QFN	7 on 2, 5 on 2 plus 1	No	ClamShell	0.810	0.600	0.740	03723 251 6217
25	0.50	4.50	4.50	1.15	MCM	6 on 4	No	ClamShell	0.810	0.600	0.740	03724 251 6218A
25	0.50	4.04	4.04	1.00	QFN	7 on 2, 5 on 2 plus 1	No	ClamShell	0.810	0.600	0.740	03732 251 6217
25	0.40	4.00	3.00	0.55	QFN	7 on 2, 5 on 2 plus 1	No	ClamShell	1.050	0.750	0.530	040030025J6617
25	0.70	6.00	4.00	1.50	QFN	6 on 4 plus 1	No	ClamShell	1.050	0.750	0.530	060040025J6617
26	0.80	7.00	5.00	1.69	QFN	5 on 2, 8 on 2	No	ClamShell	0.860	0.710	0.740	03713 271 6218A
26	0.65	6.00	6.00	0.75	QFN	8 on 3, 2 on 1	No	ClamShell	0.810	0.680	0.740	03718 261 6217
26	1.38	10.00	8.00	1.32	QFN		No	ClamShell	0.950	0.840	0.740	D1008 026M6217
27	0.50	7.00	4.00	0.90	QFN	12 on 2 plus 3	No	ClamShell	0.810	0.680	0.740	03723 271 6217
28	0.50	3.00	3.00	0.90	QFN	6 on 4 plus 4	No	ClamShell	1.050	0.750	0.530	030SQ 028J6617
28	0.50	5.50	4.50	1.00	LCC	7 on 4	No	ClamShell	0.810	0.680	0.740	03713 281 6217
28	0.50	5.04	5.04	0.89	QFN	7 on 4	No	ClamShell	0.810	0.680	0.740	03714 281 6217
28	0.65	6.00	6.00	0.92	MLF	7 on 4	No	ClamShell	0.810	0.680	0.740	03718 281 6217
28	0.50	5.00	4.00	1.40	QFN	6 on 2, 8 on 2	No	ClamShell	0.800	0.600	0.740	03723 291 6218G
28	0.50	5.00	5.00	0.92	QFN	7 on 4	No	ClamShell	0.810	0.680	0.740	03724 281 6217
28	0.50	5.00	5.00	0.75	LLP	7 on 4	No	ClamShell	0.810	0.680	0.740	03734 281 6217
28	Multi	93.98	51.31	4.45	QFN		No	ClamShell	4.500	3.250	2.200	03743 211 6217
28	0.50	5.00	5.00	1.65	CSP	7 on 4	No	OpenTop	0.970	0.590	0.390	Q0505 291 6218A
28	0.50	5.00	5.00	1.20	CSP	7 on 4	No	OpenTop	0.970	0.590	0.390	Q0505 291 6218E
29	0.50	4.00	4.00	0.85	QFN	8 on 2, 6 on 2 plus 1	No	ClamShell	0.800	0.600	0.740	03713 291 6217
29	0.50	5.04	5.04	0.89	QFN	7 on 4 plus 1	No	ClamShell	0.810	0.680	0.740	03714 291 6217
29	0.65	6.00	6.00	0.90	QFN	7 on 4 plus 1	No	ClamShell	0.810	0.680	0.740	03718 281 6218
29	0.65	6.00	6.00	0.85	QFN	7 on 4	No	ClamShell	0.810	0.680	0.740	03718 281 6218B
29	0.80	8.00	8.00	1.45	QFN	7 on 4 plus 1	No	ClamShell	0.930	0.750	0.730	03719 291 6217
29	0.80	8.00	8.00	1.45	QFN	7 on 4 plus 4 centers	No	ClamShell	0.940	0.760	0.740	03719 291 6218A
29	0.50	6.00	4.00	0.85	QFN	11 on 2, 6 on 1 plus 1	No	ClamShell	0.810	0.680	0.740	03721 291 6217
29	0.50	5.00	5.00	0.90	QFN	9 on 2, 8 on 1 plus 3	No	ClamShell	0.810	0.680	0.740	03722 291 6217
29	0.50	5.00	4.00	0.90	QFN	8 on 2, 6 on 2 plus 1	No	ClamShell	0.800	0.600	0.740	03723 291 6217
29	0.50	5.00	4.00	0.75	QFN	8 on 2, 6 on 2 plus 1	No	ClamShell	0.800	0.600	0.740	03723 291 6218D

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QFN Sockets

I/O	Pitch (mm)	Pkg Body L (mm)	Pkg Body W (mm)	Pkg H / T (mm)	Pkg Name	Array	Kelvin	Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
29	0.50	5.00	5.00	0.90	QFN	7 on 4 plus 1	No	ClamShell	0.760	0.680	0.740	03724 291 6217
29	0.70	6.04	6.04	1.45	QFN	8 on 2,6 on 2 plus 1	No	ClamShell	0.860	0.710	0.740	03726 291 6217
29	0.70	6.04	6.04	0.90	QFN	8 on 2,6 on 2 plus 1	No	ClamShell	0.860	0.710	0.740	03726 291 6218B
29	1.00	8.00	8.00	1.15	QFN	7 on 4 plus 1	No	ClamShell	0.940	0.760	0.740	03729 291 6218B
29	0.99	8.00	8.00	1.45	QFN	7 on 4 plus 1	No	ClamShell	0.940	0.760	0.740	03729 291 6218C
29	0.50	6.50	4.00	0.95	QFN		No	ClamShell	0.810	0.680	0.740	03733 291 6218A
29	0.50	5.00	5.00	0.75	MO-220	7 on 4 plus 1	No	ClamShell	0.760	0.680	0.740	03734 291 6217
29	0.50	5.00	5.00	0.35	QFN	7 on 4 plus 1	No	ClamShell	0.810	0.680	0.740	03734 291 6218B
29	0.50	5.00	5.00	0.85	QFN	7 on 4 plus 1	No	ClamShell	0.810	0.680	0.740	03734 291 6218C
29	0.76	6.00	6.00	1.10	QFN	8 on 2,6 on 2 plus 1	No	ClamShell	0.810	0.680	0.740	03739 291 6217
29	0.75	11.00	7.00	0.90	MLP	14 on 2	No	ClamShell	0.860	0.710	0.740	03775 291 6218A
29	0.40	4.00	4.00	0.876	QFN	7 on 4 plus 1	No	ClamShell	0.770	0.600	0.710	03940 291 6217
29	0.40	4.00	4.00	0.750	QFN	7 on 4 plus 1	No	ClamShell	0.770	0.600	0.710	03940 291 6218B
29	0.45	4.00	4.00	0.75	QFN	7 on 4 plus 1	No	Clamshell	1.050	0.750	0.530	040SQ 029J6617
29	0.40	4.00	4.00	0.75	QFN	7 on 4 plus 1	No	Clamshell	1.050	0.750	0.530	040SQ 029J6618A
29	0.50	5.00	5.00	1.20	CSP	7 on 4 plus 1	No	OpenTop	0.970	0.590	0.390	Q0505 291 6218F
30	0.50	6.50	4.50	0.95	QFN	8 on 1,11 on 2	No	ClamShell	0.760	0.680	0.740	03713 301 6217
30	0.99	8.00	8.00	1.15	QFN	8 on 2,6 on 2 plus 2	No	ClamShell	0.860	0.760	0.740	03729 291 6217
31	Multi	10.20	8.00	1.30	SOT831-1	9 on 2,6 on 2 plus 1	No	ClamShell	1.000	0.840	0.740	03729 311 6217
31	0.75	7.00	6.00	0.90	QFN	8 on 2, 7 on 2 plus 2	No	ClamShell	0.940	0.760	0.740	03775 311 6217
31	0.80	10.00	10.00	2.10	QFN		Yes	ClamShell	0.950	0.840	0.740	03790 311 6217
31	1.00	8.00	7.00	1.35	QFN	7 on 2,5 on 2 Plus 1	No	ClamShell	1.050	0.750	0.455	D0807 043J6618B
32	0.50	5.50	4.50	1.00	QFN	7 on 2,9 on 2	No	ClamShell	0.810	0.680	0.740	03713 321 6217
32	0.50	5.50	4.50	0.75	QFN	7 on 2,9 on 2	No	ClamShell	0.810	0.680	0.740	03713 321 6218A
32	0.50	5.00	5.00	0.84	LPCC-32	8 on 4	No	ClamShell	0.810	0.680	0.740	03714 321 6217
32	0.50	5.00	5.00	0.98	QFN	8 on 4	No	ClamShell	0.810	0.680	0.740	03714 321 6218A
32	0.65	7.00	7.00	0.90	QFN	8 on 4	No	ClamShell	0.860	0.700	0.730	03718 331 6218A
32	0.50	6.20	5.20	0.85	QFN	9 on 2,7 on 2	No	ClamShell	0.860	0.710	0.740	03722 331 6218A
32	0.80	8.00	8.00	1.45	QFN	7 on 4 plus 4	No	ClamShell	0.940	0.760	0.740	03919 291 6217
32	0.50	5.00	5.00	0.74	BCC	Special D*	No	ClamShell	1.050	0.750	0.650	050SQ 032U6617
33	0.50	5.04	5.04	1.20	QFN	7 on 2,9 on 2 plus 1	No	ClamShell	0.810	0.680	0.740	03714 331 6217
33	0.50	5.00	5.00	0.85	QFN	8 on 4 plus 1	No	ClamShell	0.810	0.680	0.740	03714 331 6218A
33	0.50	4.93	4.93	0.90	LPCC	8 on 4 plus 1	No	ClamShell	0.810	0.680	0.740	03714 331 6218B
33	0.50	5.00	5.00	0.85	QFN	8 on 4 plus 1	No	ClamShell	0.760	0.670	0.730	03714 331 6218C
33	0.50	5.00	5.00	1.45	QFN	4 on 4	Yes	ClamShell	0.810	0.680	0.740	03714 331 6218D
33	0.50	5.04	5.04	1.00	QFN	9 on 2,7 on 2 Plus 1	No	ClamShell	0.810	0.680	0.740	03714 331 6218E
33	0.50	6.00	6.00	0.75	LLP	8 on 4 plus 1	No	ClamShell	0.860	0.700	0.730	03714 411 6218B
33	0.50	6.05	6.05	0.75	LLP	8 on 4 plus 1	No	ClamShell	0.860	0.700	0.730	03714 411 6218C
33	0.65	7.00	7.00	2.60	QFN	8 on 4 plus 1	No	ClamShell	0.860	0.710	0.740	03718 331 6218B
33	0.50	6.00	4.00	0.90	QFN	10 on 2,6 on 2	No	ClamShell	0.810	0.510	0.740	03721 331 6217
33	0.50	5.00	5.00	0.90	LPCC	8 on 4 plus 1	No	ClamShell	0.810	0.680	0.740	03723 331 6217
33	0.50	5.00	5.00	0.75	QFN	8 on 4 plus 1	No	ClamShell	0.810	0.680	0.740	03723 331 6218B

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QFN Sockets

I/O	Pitch (mm)	Pkg Body L (mm)	Pkg Body W (mm)	Pkg H / T (mm)	Pkg Name	Array	Kelvin	Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
33	0.50	5.00	5.00	0.90	QFN	8 on 4 plus 1	No	ClamShell	1.600	1.630	0.740	03723 331 6218C
33	0.65	6.00	6.00	0.90	QFN	8 on 4 plus 1	No	ClamShell	0.950	0.710	0.710	03728 331 6217
33	0.50	6.00	5.00	0.75	QFN	9 on 2,7 on 2 plus 1	No	ClamShell	0.810	0.710	0.740	03733 331 6217
33	0.50	6.00	5.00	0.75	QFN	9 on 2,7 on 2	No	ClamShell	0.810	0.710	0.740	03733 331 6218A
33	0.50	6.00	5.00	0.90	QFN	9 on 2,7 on 2 plus 1	No	ClamShell	0.860	0.710	0.740	03733 331 6218B
33	0.50	6.00	5.00	0.85	QFN	9 on 2,7 on 2 plus 1	No	ClamShell	0.860	0.710	0.740	03733 331 6218C
33	1.00	10.00	8.00	1.20	QFN	8 on 4 plus 1	No	ClamShell	0.950	0.840	0.740	03743 331 6217
33	1.00	10.00	8.00	1.70	QFN	8 on 4 plus 1	No	ClamShell	0.950	0.840	0.740	03743 331 6218A
33	1.27	14.04	10.04	1.75	QFN	7 on 2 9 on 2 plus 1	No	ClamShell	1.140	1.010	0.750	03830 331 6217
33	0.40	5.00	4.00	0.75	QFN	9 on 2,7 on 2 plus 1	No	ClamShell	1.050	0.750	0.530	050040033J6617
34	0.50	4.50	4.00	0.85	QFN	9 on 2, 6 on 2 plus 7	Yes	ClamShell	1.050	0.750	0.450	045040037J6617
35	0.70	8.00	6.00	1.10	QFN	9 on 2,8 on 2 Plus 1	No	ClamShell	0.940	0.760	0.740	03726 351 6217
35	0.70	8.00	6.00	1.05	QFN	11 on 2,6 on 2 plus 1	No	ClamShell	0.940	0.760	0.740	03726 351 6218B
35	Multi	10.00	8.00	1.10	QFN	9 on 2,8 on 2 plus 1	No	ClamShell	1.000	0.840	0.740	03729 351 6217
35	0.76	9.04	5.42	1.10	QFN	12 on 2,5 on 2	No	ClamShell	0.990	0.810	0.740	03739 351 6217
36	0.80	12.00	12.00	2.10	QFN		Yes	ClamShell	1.090	1.010	0.750	03719 361M6217
36	1.00	12.00	8.00	2.10	QFN		No	ClamShell	0.900	0.760	0.740	03733 251 6218C
36	0.80	10.00	10.00	1.55	QFN	9 on 4	No	ClamShell	1.000	0.840	0.740	03913 371 6218A
36	1.02	10.67	10.67	2.10	LCC	9 on 4	No	ClamShell	1.082	0.860	0.750	04440 361 6215
36	1.00	9.85	9.00	1.40	QFN	9 on 2,8 on 2 plus 2	No	ClamShell	1.050	0.750	0.450	098090036J6617
37	0.80	9.00	9.00	0.75	LLP	9 on 4 plus 1	No	ClamShell	0.990	0.810	0.740	03714 371 6217
37	0.80	9.00	9.00	1.45	QFN	9 on 4 plus 1	No	ClamShell	0.930	0.800	0.730	03719 371 6217
37	0.50	6.00	6.00	0.90	QFN	9 on 4 plus 1	No	ClamShell	0.860	0.700	0.730	03724 371 6217
37	0.50	6.00	6.00	0.75	QFN	9 on 4	No	ClamShell	0.860	0.710	0.740	03724 371 6218A
37	0.50	6.00	6.00	0.75	QFN	9 on 4 plus 1	No	ClamShell	0.860	0.710	0.740	03724 371 6218B
37	0.40	5.00	5.00	0.750	QFN	9 on 4 plus 1	No	ClamShell	0.770	0.600	0.710	03940 371 6217
37	0.40	5.00	5.00	0.450	QFN	9 on 4 plus 1	No	ClamShell	0.770	0.600	0.710	03940 371 6218B
38	0.65	7.00	6.00	0.95	QFN	9 on 2,8 on 2 plus 4	No	ClamShell	0.940	0.760	0.740	03718 381 6217
38	0.85	10.00	8.00	1.10	QFN	9 on 4 plus 2	No	ClamShell	1.000	0.840	0.740	03729 381 6217
39	0.50	7.00	5.00	0.90	MLP	12 on 2,7 on 2	No	ClamShell	0.860	0.710	0.740	03713 391 6217
39	0.50	6.00	6.00	0.75	QFN	9 on 4 plus 1	No	ClamShell	0.760	0.670	0.730	03714 391 6217
39	0.65	8.00	6.00	1.45	QFN	10 on 2,9 on 2	No	ClamShell	0.940	0.760	0.740	03718 391 6217
40	0.50	6.50	5.50	1.00	Laminated Plastic	9 on 2,11 on 2	No	ClamShell	0.810	0.680	0.740	03713 401 6217
40	0.50	6.00	6.00	0.95	MLF	10 on 4	No	ClamShell	0.860	0.700	0.730	03714 411 6218A
40	0.50	6.00	6.00	0.90	QFN	10 on 2,8 on 2	No	ClamShell	0.860	0.710	0.740	03714 411 6218L
40	0.50	7.00	5.00	0.90	QFN	12 on 2,8 on 2	No	Clamshell	0.920	0.710	0.710	03733 411 6218B
40	1.00	14.00	12.00	1.80	QFN	14 on 2,5 on 1, 7	No	OpenTop	1.360	0.920	0.440	Q1412 040 6217
41	0.50	5.04	5.04	1.00	QFN	9 on 2, 7 on 2 plus 9	No	ClamShell	0.810	0.680	0.740	03712 411 6217
41	0.50	6.00	6.00	0.95	QFN	10 on 4 plus 1	No	ClamShell	0.860	0.710	0.740	03714 411 6217
41	0.50	6.00	6.00	0.75	QFN	10 on 4 plus 1	No	ClamShell	0.860	0.700	0.730	03714 411 6218D
41	0.50	6.00	6.00	0.90	QFN	10 on 4 plus 1	No	ClamShell	0.860	0.710	0.740	03714 411 6218E
41	0.50	6.02	6.02	0.58	QFN	10 on 4 plus 1	No	ClamShell	0.860	0.710	0.740	03714 411 6218F

** Pitch is not available due to package configuration



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QFN Sockets

I/O	Pitch (mm)	Pkg Body L (mm)	Pkg Body W (mm)	Pkg H / T (mm)	Pkg Name	Array	Kelvin	Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
41	0.50	6.00	6.00	1.45	QFN	10 on 4 plus 1	No	ClamShell	0.860	0.710	0.740	03714 411 6218G
41	0.50	6.00	6.00	0.90	QFN	10 on 4 plus 1	No	ClamShell	2.000	1.630	0.740	03714 411 6218H
41	0.50	6.00	6.00	0.90	QFN	10 on 4 plus 1	No	ClamShell	0.860	0.710	0.740	03714 411 6218J
41	0.50	6.00	6.00	0.85	QFN	10 on 4 plus 1	No	ClamShell	0.860	0.710	0.740	03714 411 6218K
41	0.50	6.04	6.04	1.00	QFN	9 on 2,11 on 2 plus 1	No	ClamShell	0.810	0.680	0.740	03723 411 6217
41	0.50	6.04	6.04	2.03	QFN	9 on 2,11 on 2 plus 1	No	ClamShell	0.860	0.710	0.740	03723 411 6218B
41	0.50	6.00	6.00	0.09	QFN	10 on 4 plus 1	No	ClamShell	0.860	0.710	0.740	03724 411 6217
41	0.50	7.00	5.00	0.90	QFN	12 on 2,8 on 2 plus 1	No	Clamshell	0.920	0.710	0.710	03733 411 6217
41	0.40	5.00	5.00	0.75	SOT-788-1	10 on 4 plus 1	No	ClamShell	0.770	0.600	0.710	03940 411 6217
43	0.50	9.00	3.50	0.75	QFN	17 on 2,4 on 2 plus 1	No	ClamShell	0.950	0.760	0.740	03722 431 6217
43	Multi	8.00	7.00	1.35	QFN	13 on 2,8 on 2 Plus 1	No	ClamShell	1.050	0.750	0.455	D0807 043J6617
44	0.50	7.00	7.00	0.75	QFN	12 on 2,10 on 2	No	ClamShell	0.860	0.710	0.740	03713 441 6217
44	0.50	7.00	7.00	0.93	MLF2	11 on 4	No	ClamShell	0.860	0.710	0.740	03714 451 6218A
44	0.65	8.00	8.00	0.90	QFN	11 on 4	No	ClamShell	0.880	0.750	0.730	03718 451 6218A
44	0.50	8.70	8.70	1.40	PLL2	11 on 4	No	ClamShell	0.990	0.810	0.840	03814 441 6218A
44	0.65	8.00	8.00	0.90	QFN	11 on 4	No	OpenTop	1.140	0.770	0.440	Q0808 044 6217
45	0.50	7.00	7.00	0.75	QFN	12 on 2,10 on 2	No	ClamShell	0.860	0.710	0.740	03713 451 6217
45	0.50	7.00	7.00	0.85	QFN	11 on 4 plus 1	No	ClamShell	0.860	0.710	0.740	03714 451 6217
45	0.50	7.00	7.00	0.75	QFN	11 on 4 plus 1	No	ClamShell	0.860	0.710	0.740	03714 451 6218C
45	0.50	8.00	6.00	0.85	QFN	13 on 2,9 on 2	No	ClamShell	0.940	0.760	0.740	03723 451 6217
45	0.65	9.00	9.00	1.00	QFN	11 on 4 plus 1	No	ClamShell	0.950	0.760	0.740	03728 451 6217
46	1.00	12.00	9.00	1.70	MCM	10 on 4 plus 8	No	ClamShell	1.470	1.050	0.605	120090046J6617
46	0.35	5.00	5.00	0.90	QFN		No	ClamShell	1.050	0.750	0.450	D0505 045J6617
48	0.50	12.50	8.10	1.00	LCC	24 on 2	No	ClamShell	0.930	0.750	0.730	03713 481 6217
48	0.50	7.00	7.00	1.00	QFN	10 on 2,14 on 2	No	ClamShell	0.860	0.710	0.740	03713 491 6218A
48	0.50	7.07	7.07	1.20	RF-LGA	11 on 2,13 on 2	No	ClamShell	0.930	0.750	0.730	03714 481 6217
48	0.50	7.00	7.00	1.80	QFN	12 on 4	No	ClamShell	0.870	0.710	0.740	03714 491 6218D
48	1.02	16.61	14.20	3.66	QFN		No	ClamShell	1.270	1.160	0.780	04450 481 6215
49	0.50	7.07	7.07	1.20	QFN	11 on 2,13 on 2	No	ClamShell	0.930	0.750	0.740	03714 491 6217
49	0.50	7.00	7.00	0.85	QFN	12 on 4 plus 1	No	ClamShell	0.860	0.710	0.740	03714 491 6218A
49	0.50	7.04	7.04	1.00	QFN	11 on 2,13 on 2	No	ClamShell	0.870	0.740	0.730	03714 491 6218B
49	0.50	7.00	7.00	1.80	QFN	12 on 4 minus 3	No	ClamShell	0.870	0.710	0.740	03714 491 6218C
49	0.50	7.00	7.00	0.85	QFN	12 on 4 plus 1	No	ClamShell	0.810	0.710	0.410	03714 491 6218E
49	0.50	7.00	7.00	0.90	QFN	12 on 4 plus 1	No	ClamShell	0.870	0.710	0.740	03714 491 6218F
49	0.50	7.00	7.00	0.85	QFN	12 on 4 plus 1	No	ClamShell	0.810	0.710	0.410	03714 491 6218G
49	0.50	7.00	7.00	0.90	QFN	12 on 4 plus 1	No	ClamShell	0.870	0.710	0.740	03714 491 6218J
49	0.50	7.00	7.00	0.90	QFN	12 on 4	No	ClamShell	0.870	0.710	0.740	03714 491 6218K
49	0.50	7.00	7.00	0.75	QFN	12 on 4 plus 1	No	ClamShell	0.870	0.710	0.740	03714 491 6218L
49	0.50	7.00	7.00	1.35	QFN	12 on 4 plus 1	No	ClamShell	0.870	0.710	0.740	03714 491 6218M
49	0.50	7.00	7.00	0.85	QFN	12 on 4 plus 1	No	ClamShell	0.870	0.710	0.740	03714 491 6218N
49	0.50	7.00	7.00	0.75	QFN	13 on 2,11 on 2	No	ClamShell	0.930	0.750	0.740	03723 491 6217
49	0.50	7.05	7.05	0.75	QFN	12 on 4 plus 1	No	ClamShell	0.870	0.710	0.740	03724 491 6217



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QFN Sockets

I/O	Pitch (mm)	Pkg Body L (mm)	Pkg Body W (mm)	Pkg H / T (mm)	Pkg Name	Array	Kelvin	Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
49	0.50	8.00	7.00	1.27	QFN	12 on 4 plus 1	No	Clamshell	0.940	0.760	0.740	03733 491 6217
49	0.40	6.00	6.00	0.85	SOT-788-1	12 on 4 plus 1	No	ClamShell	0.810	0.710	0.740	03940 491 6217
51	0.50	10.00	5.00	0.95	LF-CSP	17 on 2,8 on 2 plus 1	No	ClamShell	0.990	0.810	0.740	03713 511 6217
51	0.50	10.00	5.00	0.95	LF-CSP	17 on 2,8 on 2 plus 1	No	ClamShell	0.990	0.810	0.740	03713 511 6218B
53	0.50	7.00	7.00	0.75	QFN	14 on 2,12 on 2 plus 1	No	ClamShell	0.940	0.760	0.740	03713 531 6217
53	0.50	8.00	8.00	0.84	QFN	13 on 4 plus 1	No	ClamShell	0.920	0.710	0.710	03714 531 6217
53	0.40	6.00	6.00	0.90	QFN	12 on 4,1 each corner, plus center	No	ClamShell	0.920	0.710	0.710	03940 531 6217
53	0.40	6.00	6.00	0.90	QFN	12 on 4,1 each corner, plus center	No	ClamShell	0.920	0.710	0.710	03940 531 6218B
53	0.40	7.20	7.20	0.90	QFN	13 on 4 plus 1	No	ClamShell	1.050	0.750	0.530	072SQ 053J6617
56	0.50	8.07	8.07	1.20	RF-LGA	13 on 2,15 on 2	No	ClamShell	0.950	0.760	0.740	03714 561 6217
56	0.50	8.00	8.00	0.85	MLF	14 on 4	No	ClamShell	0.940	0.760	0.740	03734 561 6217
56	0.50	8.00	8.00	0.85	MLF	14 on 4	No	ClamShell	0.890	0.760	0.410	03734 561 6218A
56	0.50	8.00	8.00	0.85	MLF	14 on 4	No	ClamShell	0.940	0.760	0.740	03734 561 6218C
57	0.50	8.06	8.06	1.20	RF-LGA	15 on 2,13 on 2 plus 1	No	ClamShell	0.940	0.760	0.740	03714 571 6217
57	0.50	8.06	8.06	1.00	QFN	15 on 2,13 on 2 plus 1	No	ClamShell	0.950	0.760	0.740	03714 571 6218A
57	0.50	8.04	8.04	1.00	QFN	15 on 2,13 on 2 plus 4 CENTERS	No	ClamShell	0.950	0.760	0.740	03714 571 6218B
57	0.50	9.00	9.00	0.75	LLP	14 on 4 plus 1	No	ClamShell	0.990	0.810	0.740	03724 571 6217
57	0.50	8.00	8.00	0.95	MLF	14 on 4 plus 1	No	ClamShell	0.940	0.760	0.740	03734 571 6217
57	0.50	8.00	8.00	0.85	QFN	14 on 4 plus 1	No	ClamShell	0.890	0.760	0.410	03734 571 6218A
57	0.50	8.00	8.00	0.85	MLF	14 on 4 plus 1	No	ClamShell	0.890	0.760	0.410	03734 571 6218B
57	0.50	8.00	8.00	0.85	MLF	14 on 4 plus 1	No	ClamShell	0.890	0.760	0.410	03734 571 6218C
57	0.65	7.00	5.00	0.75	QFN		No	ClamShell	1.050	0.750	0.450	D0705 057J6617
61	0.50	11.00	6.00	1.15	QFN	19 on 2,11 on 2	No	Clamshell	1.030	0.860	0.740	03713 611 6217
65	0.50	9.04	9.04	1.20	RF-LGA	17 on 2,15 on 2	No	ClamShell	0.990	0.810	0.740	03713 651 6218A
65	0.50	9.04	9.04	1.00	QFN	17 on 2,15 on 2	No	ClamShell	0.990	0.810	0.740	03713 651 6218B
65	0.50	9.00	9.00	0.85	MLF	16 on 4 plus 1	No	ClamShell	0.990	0.810	0.740	03714 651 6217
65	0.50	9.00	9.00	0.85	QFN	16 on 4 plus 1	No	ClamShell	0.930	0.800	0.730	03714 651 6218A
65	0.50	9.00	9.00	0.90	QFN	16 on 4 plus 1	No	ClamShell	2.000	1.630	2.092	03714 651 6218B
65	0.50	10.00	10.00	0.85	QFN	16 on 4 PLUS 1	No	ClamShell	1.000	0.840	0.740	03714 731 6218C
65	0.50	6.50	6.50	0.75	BCC	Special D*	No	ClamShell	1.050	0.750	0.650	065SQ 065U6617
65	0.40	9.00	7.00	0.75	QFN	19 on 2,13 on 2	No	ClamShell	1.050	0.750	0.530	090070065J6617
69	0.40	8.00	8.00	0.90	QFN	17 on 4 plus 1	No	ClamShell	0.920	0.710	0.710	03940 691 6217
69	0.40	8.00	8.00	0.85	QFN	17 on 4 plus 2	No	ClamShell	0.920	0.710	0.710	03940 691 6218A
73	0.50	10.00	10.00	0.80	QFN	18 on 4 plus 1	No	ClamShell	0.950	0.840	0.740	03714 731 6217
73	0.50	10.00	10.00	0.85	MLF2	18 on 4 plus 1	No	ClamShell	0.950	0.840	0.740	03714 731 6218A
73	0.50	10.00	10.00	0.90	MO-220 PNAF	18 on 4 plus 1	No	ClamShell	0.950	0.840	0.740	03714 731 6218B
73	0.50	10.00	10.00	0.85	QFN	18 on 4 plus 1	No	ClamShell	0.950	0.840	0.740	03714 731 6218D
75	0.50	11.00	10.00	1.45	MCM	19 on 2,18 on 2	No	Clamshell	1.030	0.860	0.740	03713 751 6217
77	0.40	9.00	9.00	0.85	CSP	19 on 4 plus 1	No	ClamShell	0.920	0.710	0.710	03940 771 6217



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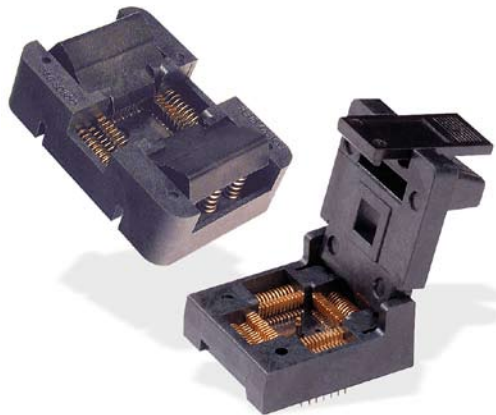
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QFN Sockets

I/O	Pitch (mm)	Pkg Body L (mm)	Pkg Body W (mm)	Pkg H / T (mm)	Pkg Name	Array	Kelvin	Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
77	0.50	7.00	7.00	1.00			No	ClamShell	1.050	0.750	0.440	D0707 077P6617
79	0.50	12.00	12.00	0.90	QFN		No	ClamShell	1.470	1.050	0.600	D1212 161J6618B
81	0.50	8.00	8.00	0.75	QFN	12 in 10 in 2 rows on 4	No	ClamShell	0.990	0.880	0.695	D0808 081M6217
85	0.40	6.00	6.00	0.75	QFN		No	ClamShell	1.050	0.750	0.530	060SQ 085J6617
85	0.50	7.00	7.00	0.75	QFN		No	ClamShell	1.050	0.750	0.450	D0707 085J6617
89	0.40	10.00	10.00	0.85	CSP	22 on 4 plus 1	No	ClamShell	1.000	0.840	0.710	03940 891 6217
89	0.40	10.00	10.00	0.85	QFN	22 on 4 plus 1	No	ClamShell	1.000	0.840	0.710	03940 891 6218A
89	0.40	10.00	10.00	0.75	QFN	22 on 4 plus 1	No	ClamShell	1.000	0.840	0.710	03940 891 6218B
89	0.40	10.00	10.00	0.85	QFN	22 on 4	No	ClamShell	1.470	1.050	0.600	100SQ 104J6617
89	0.50	12.00	12.00	0.85	QFN	22 on 4, plus 1	No	ClamShell	1.470	1.050	0.600	120SQ 089J6617
90	Multi	12.00	6.00	1.45	MCM		No	ClamShell	1.050	0.750	0.450	D1206 051J6617
108	0.40	12.00	12.00	0.85	MLF2	27 on 4	No	ClamShell	1.470	1.050	0.535	120SQ 144J6618E
149	0.50	13.50	9.00	0.75	QFN		No	ClamShell	1.470	1.050	0.600	D1309 149J6617
153	0.50	13.50	9.00	0.75	QFN		No	ClamShell	1.470	1.050	0.600	D1309 149J6618A
161	0.50	12.00	12.00	0.75	QFN	40 on 4 Plus 1	No	ClamShell	1.470	1.050	0.600	D1212 161J6617
161	0.50	12.00	12.00	0.90	QFN	40 on 4 Plus 1	No	ClamShell	1.470	1.050	0.600	D1212 161J6618A
165	0.50	12.00	12.00	0.55	QFN	41 on 4 Plus 1	No	ClamShell	1.470	1.050	0.600	D1212 173J6617
222	0.40	0.50	10.00	0.90	QFN		No	ClamShell	1.050	0.750	0.535	100SQ 222J6617



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Optical Transceiver Sockets



Design Features

- *Contact Pitches of 0.35mm and Greater*
- *Openings for the Fiber Optic Connector to Attach to Device during Testing*
- *ClamShell Lid Design Open Widely for Insertion/Withdrawal*
- *Floating Covers Accommodate Irregular or Oddly-shaped Devices*

I/O	Pitch (mm)	Pkg Body L (mm)	Pkg Body W (mm)	Pkg H / T (mm)	Pkg Name	Array	Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
58	1.13	53.75	14.59	11.56	MTX and MRX	16 x 12 D*	ClamShell	2.590	2.300	1.082	440180058B6617
72	1.27	41.80	14.00	12.56	Multi Channel	12 x 8 D*	ClamShell	1.520	1.350	1.102	300140072B6617
72	1.27	41.80	14.00	12.56	Multi Channel	12 x 8 D*	ClamShell	1.520	1.350	1.280	300140072L6617
143	1.00	13.00	13.00	4.79	BGA/CSP	12 x 12 D*	ClamShell	1.810	1.520	2.340	130SQ 143P6617



* Depopulated, See Drawing for Specific Array



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PGA Sockets

Design Features

- *Reliable Normally-closed Contacts*
- *Multiple-point Wiping Action Cleans Contact Area*
- *Zero-insertion-force*
- *Small Footprint Enables Higher Board Density*



I/O	Pitch (in)	Pkg Body L (in)	Pkg Body W (in)	Pkg Body H/T (in)	Array	Rows	Columns	Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
105	0.100	***	***	***	19 x 19 D*	19	19	OpenTop	2.160	2.355	0.450	01919 105D6255
131	0.100	***	***	***	14 x 14 D*	14	14	OpenTop	2.360	2.210	0.450	01919 131L4215
132	0.100	***	***	***	14 x 14 D*	14	14	OpenTop	2.160	2.355	0.300	01919 132L4215
168	0.100	1.750	1.750	0.084	17 x 17 D*	17	17	OpenTop	2.360	2.210	0.450	01919 168L6255
169	0.100	***	***	***	17 x 17 D*	17	17	OpenTop	2.160	2.355	0.300	01919 169 X255
224	0.100	***	***	***	15 x 15 D*	15	15	OpenTop	2.160	2.355	0.300	01919 224LX255
234	0.100	***	***	***	19 x 19 D*	19	19	OpenTop	2.160	2.265	0.320	01919 234 4218
236	0.100	***	***	***	19 x 19 D*	19	19	OpenTop	2.160	2.265	0.320	01919 236 4218
236	0.100	***	***	***	19 x 19 D*	19	19	OpenTop	2.160	2.355	0.320	01919 N61 X2X5
237	0.100	***	***	***	19 x 19 D*	19	19	OpenTop	2.160	2.265	0.320	01919 237 4218
237	0.100	***	***	***	19 x 19 D*	19	19	OpenTop	2.160	2.265	0.320	01919 237C4218
237	0.100	***	***	***	19 x 19 D*	19	19	OpenTop	2.160	2.265	0.320	01919 237RX218
237	0.100	***	***	***	19 x 19 D*	19	19	OpenTop	2.160	2.355	0.320	01919 N71 4255
237	0.100	***	***	***	19 x 19 D*	19	19	OpenTop	2.210	2.355	0.320	01919 N71 4258
238	0.100	***	***	***	19 x 19 D*	19	19	OpenTop	2.160	2.265	0.320	01919 238 4218
238	0.100	***	***	***	19 x 19 D*	19	19	OpenTop	2.210	2.355	0.320	01919 N81 4255
239	0.100	***	***	***	19 x 19 D*	19	19	OpenTop	2.160	2.265	0.320	01919 239 4218
257	0.100	***	***	***	19 x 19 D*	19	19	OpenTop	2.160	2.355	0.300	01919 257L6255
257	0.100	***	***	***	19 x 19 D*	19	19	OpenTop	2.160	2.355	0.300	01919 257RX255
285	0.100	***	***	***	19 x 19 D*	19	19	OpenTop	2.210	2.355	0.320	01919 S51 4258
361	0.100	***	***	***	19 x 19 D*	19	19	OpenTop	2.160	2.355	0.300	01919 361L6255

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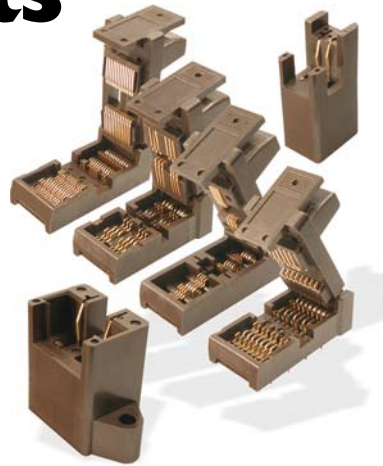
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Gull Wing Sockets

Design Features

- *Open Top and Clamshell*
- *Enables Greatest Airflow Over Package with Low Profile*
- *“Live Bug” and “Dead Bug” Insertion for Burn-in and Test*
- *Kelvin and non kelvin Contacts*



I/O	Pitch (in)	Pkg Type	Pkg Name	Pkg Body L (in)	Pkg Body W (in)	Pkg H / T (in)	Kelvin	Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
2	**	--	DO-214AB	0.235	0.270	0.085	Yes	ClamShell	1.340	0.620	0.750	03337 161S6218F
2	**	Powermite	--	0.075	0.075	0.040	Yes	ClamShell	0.970	0.510	0.740	04140 061 6217
2	**	--	SOD-323	0.067	0.049	0.037	Yes	ClamShell	0.880	0.510	0.750	04332 041 6217
3	0.020	--	SOT-523	0.063	0.031	0.031	No	ClamShell	0.790	0.510	0.730	03285 121 6218A
3	0.037	--	L-3 SOT	0.114	0.051	0.039	No	ClamShell	0.790	0.510	0.730	03293 121 6218A
3	0.075	--	SOT-23	0.120	0.100	0.075	No	ClamShell	1.640	0.910	0.760	03333 061 6215
3	**	Lo-Power SMD	--	0.350	0.300	0.120	Yes	ClamShell	1.390	0.620	0.750	03337 161S6218G
3	0.215	--	D-3	0.590	0.628	0.198	Yes	OpenTop	1.200	0.530	0.940	03661 032 6215
3	0.090	--	TI KPT	0.282	0.238	0.075	Yes	OpenTop	0.470	0.390	0.880	03662 031 6215
3	0.100	--	KTE	0.370	0.355	0.075	Yes	ClamShell	1.070	0.510	0.740	04240 031 6215
3	0.091	--	KTP	0.282	0.238	0.075	Yes	ClamShell	1.070	0.510	0.740	04241 031 6215
3	0.075	--	SOT-23	0.118	0.078	0.039	No	ClamShell	0.790	0.510	0.730	04329 121 6218A
3	0.075	--	Super SOT	0.115	0.055	0.039	Yes	ClamShell	0.790	0.510	0.730	04330 061 6217
3	0.075	--	Super SOT	0.115	0.055	0.040	Yes	ClamShell	0.790	0.600	0.730	04330 121 6217
3	0.037	--	SOT-23-6	0.114	0.063	0.028	Yes	ClamShell	0.790	0.510	0.730	04331 121 6218D
3	0.037	--	SOT-23	0.117	0.055	0.037	Yes	ClamShell	1.120	0.560	0.740	04334 121 6218D
3	0.026	SOT	SOT-323, SC-70	0.079	0.050	0.036	Yes	ClamShell	1.100	0.510	0.740	04335 121 6218C
4	0.026	--	SC-70 / SOT-343	0.079	0.049	0.035	No	ClamShell	1.390	0.620	0.750	03256 181 6218A
4	0.075	--	SOT-143	0.113	0.051	0.035	No	ClamShell	1.390	0.620	0.750	03331 081 6215
4	0.100	SOIC	4L-SOIC	0.142	0.173	0.098	No	ClamShell	1.390	0.620	0.750	03337 161S6218S
4	0.100	--	P-TO263-32	0.403	0.394	0.173	Yes	ClamShell	1.240	0.510	0.740	04246 041 6215
4	0.050	SOT	SOT669	0.193	0.157	0.041	Yes	Clamshell	1.120	0.510	0.740	04254 041 6217
4	**	Gull Wing	SOD-123	0.106	0.063	0.045	Yes	ClamShell	0.790	0.510	0.730	04328 041 6217
5	0.037	--	SOT-23	0.115	0.063	0.045	No	ClamShell	1.390	0.620	0.750	03332 101 6215
5	0.050	SOIC	5L-SOIC	0.142	0.173	0.098	No	ClamShell	1.340	0.620	0.750	03337 161S6218C
5	0.059	--	SOT-223	0.256	0.140	0.066	Yes	ClamShell	1.070	0.510	0.740	04220 051 6215
5	0.037	--	SOT-595	0.114	0.063	0.043	Yes	ClamShell	1.120	0.510	0.740	04234 101 6215
5	0.067	--	KTG	0.370	0.355	0.075	Yes	ClamShell	1.070	0.510	0.740	04238 051 6215
5	0.067	PSMP	--	0.412	0.395	0.175	Yes	ClamShell	1.240	0.510	0.740	04245 051 6215
5	0.067	D2PAK	5L D2PAK	0.591	0.386	0.157	Yes	ClamShell	1.240	0.510	0.740	04245 051 6218A
5	0.037	SOT	SOT-23-5	0.115	0.065	0.048	Yes	ClamShell	0.790	0.600	0.740	04331 101 6217

** Pitch is not available due to package configuration -- Contact Sales for device size and specifications



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Gull Wing Sockets

I/O	Pitch (in)	Pkg Type	Pkg Name	Pkg Body L (in)	Pkg Body W (in)	Pkg H / T (in)	Kelvin	Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
5	0.026	SC70	SC70	0.079	0.049	0.035	Yes	ClamShell	1.100	0.510	0.740	04335 121 6218A
6	0.026	--	H-P SC-70	0.079	0.049	0.035	No	ClamShell	1.340	0.620	0.750	03256 181 6215
6	0.037	--	MW-8	0.114	0.051	0.039	No	ClamShell	0.790	0.510	0.730	03293 121 6217
6	0.037	TSOP	TSOP-6-6-1	0.114	0.063	0.041	No	ClamShell	0.740	0.510	0.740	03295 121 6217
6	0.100	SOT	MSH4010-3A	0.510	0.365	0.135	No	ClamShell	1.690	1.050	0.750	03337 061 X2X8A
6	0.100	SOIC	6L-SOIC	0.335	0.250	0.158	No	OpenTop	1.110	0.830	0.730	03557 281 6258
6	0.050	Gull Wing	--	0.130	0.193	0.046	No	ClamShell	1.070	0.550	0.750	04120 161 6218B
6	**	Powernite	--	0.075	0.075	0.040	No	ClamShell	0.970	0.510	0.740	04140 061 6218A
6	0.050	GULL WING	PSOIC	0.256	0.138	0.067	Yes	ClamShell	1.070	0.510	0.740	04222 061 6215
6	0.037	--	SOT-23-6	0.115	0.065	0.048	Yes	ClamShell	0.790	0.510	0.730	04331 121 6217
6	0.037	SOT	SOT-23-6	0.134	0.087	0.052	Yes	ClamShell	0.790	0.510	0.730	04331 121 6218A
6	0.037	--	SOT-23-6, TSOP-6	0.116	0.065	0.041	No	ClamShell	0.790	0.510	0.730	04331 121 6218B
6	0.037	--	SOT-23-6	0.115	0.065	0.052	Yes	ClamShell	0.790	0.510	0.750	04331 121 6218C
6	0.037	--	SOT-23, -24, -25, -26	0.114	0.065	0.045	Yes	ClamShell	1.120	0.510	0.740	04334 121 6215
6	0.037	--	SOT-23, -24, -25, -26	0.114	0.065	0.045	No	ClamShell	1.120	0.510	0.740	04334 121 6218
6	0.037	--	SOT-23	0.114	0.065	0.047	Yes	ClamShell	1.120	0.560	0.740	04334 121 6218B
6	0.037	--	SOT-23, -24, -25, -26	0.117	0.064	0.038	Yes	ClamShell	1.120	0.560	0.740	04334 121 6218C
6	0.037	SOT	SOT	0.118	0.067	0.047	No	ClamShell	1.120	0.560	0.740	04334 121 6218E
6	0.026	Gull Wing	SOIC	0.079	0.049	0.035	Yes	ClamShell	1.050	0.510	0.740	04335 121 6215
7	**	--	SKDO-178	0.275	0.300	0.075	No	ClamShell	1.230	1.160	0.750	03410 071 6217
7	0.050	Power Flex	--	0.355	0.355	0.075	Yes	ClamShell	1.070	0.650	0.740	04137 071 6217
7	0.050	KTN	--	0.370	0.355	0.075	Yes	ClamShell	1.070	0.510	0.740	04237 071 6215
8	0.050	SOIC	16-SOIC	0.180	0.180	0.057	No	ClamShell	1.340	0.620	0.750	03337 161S6218A
8	0.100	--	HP-2232	0.396	0.280	0.186	No	OpenTop	1.110	0.830	0.730	03557 081 X258
8	0.040	Micro Path	Micro Path	0.360	0.130	0.180	No	ClamShell	1.070	0.510	0.740	04100 081 6215
8	0.050	--	HMX 2000-P11	0.244	0.208	0.137	No	ClamShell	1.070	0.550	0.750	04120 161 6218A
8	0.024	SOIC	--	0.114	0.063	0.041	No	ClamShell	0.790	0.510	0.730	04233 081 6215
8	0.020	SOIC	8L-SOIC	0.079	0.092	0.030	No	ClamShell	0.790	0.510	0.730	04320 081 6217
8	0.020	TSOP	TSOP8	0.079	0.069	0.041	No	ClamShell	0.780	0.510	0.720	04321 081 6217
8	0.026	SOT	SOT-23	0.114	0.065	0.047	No	ClamShell	0.790	0.510	0.730	04334 081 6215
8	0.024	SOIC	8L-SOIC	0.114	0.063	0.041	No	ClamShell	0.790	0.510	0.730	04334 081 6218B
8	0.026	Micro	Micro 8	0.118	0.118	0.040	Yes	ClamShell	1.120	0.510	0.740	04335 081 6215
8	0.026	Mini SOIC	--	0.118	0.118	0.038	Yes	ClamShell	1.200	0.510	0.740	04335 081 6218A
8	0.026	Mini SOIC	--	0.118	0.118	0.038	No	ClamShell	1.200	0.510	0.740	04335 081 6218B
8	0.026	Mini SOIC	--	0.118	0.118	0.040	No	ClamShell	1.200	0.510	0.740	04335 081 6218C
8	0.026	TSSOP	TSSOP-8	0.118	0.173	0.043	Yes	ClamShell	1.250	0.570	0.740	04335 281 6218C
8	0.026	TSSOP	TSSOP-8	0.118	0.173	0.043	No	ClamShell	1.250	0.570	0.740	04335 281 6218F
8	0.026	SOT	SOT-23	0.114	0.064	0.046	Yes	ClamShell	1.120	0.510	0.740	04336 081 6215
8	0.050	SOIC	--	0.193	0.154	0.061	Yes	ClamShell	1.220	0.560	0.740	04337 081 6218A
8	0.050	SOIC	8L-SOIC	0.194	0.158	0.070	Yes	ClamShell	1.220	0.560	0.740	04337 161 6218A
8	0.050	SO	SO-8	0.193	0.154	0.061	Yes	ClamShell	1.220	0.560	0.740	04337 161 6218B
8	0.050	SOIC	SOIC-8L	0.192	0.155	0.064	Yes	ClamShell	1.220	0.560	0.740	04337 161 6218C
8	0.050	SOIC	SOIC-8L	0.193	0.158	0.064	No	ClamShell	1.220	0.560	0.740	04337 161 6218D

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Gull Wing Sockets

I/O	Pitch (in)	Pkg Type	Pkg Name	Pkg Body (in)	LPkg Body (in)	W Pkg H / T (in)	Kelvin	Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
8	0.050	SOIC	SOIC	0.193	0.154	0.061	No	ClamShell	1.220	0.560	0.740	04337 161 6218G
8	0.050	SOIC	SOIC	0.193	0.154	0.061	No	ClamShell	1.220	0.560	0.740	04337 161 6218H
8	0.050	SOIC	SOIC	0.193	0.154	0.061	No	ClamShell	1.220	0.560	0.740	04337 161 6218J
8	0.050	SOIC	SOIC	0.193	0.154	0.061	No	ClamShell	1.220	0.560	0.740	04337 161 6218K
8	0.026	DCT / SSOP	--	0.116	0.110	0.043	Yes	ClamShell	1.200	0.510	0.740	04338 081 6215
8	0.100	SMD	SMD-8	0.385	0.250	0.130	Yes	ClamShell	1.330	0.510	0.740	04340 081 6215
8	0.100	PDID	--	0.375	0.259	0.185	Yes	ClamShell	1.330	0.510	0.740	04340 081 6218A
8	0.050	Gull Wing	SOT	0.200	0.250	0.079	Yes	ClamShell	1.330	0.510	0.740	04340 081 6218B
8	0.050	SOIC	SOIC	0.193	0.154	0.061	Yes	ClamShell	1.220	0.650	0.740	04351 081 6215
8	0.050	SOIC	SOIC	0.193	0.164	0.061	Yes	ClamShell	1.220	0.650	0.740	04351 081 6218A
8	0.031	SOT	SOT23 L8	0.140	0.087	0.049	No	ClamShell	0.790	0.510	0.715	04354 081 6215
9	0.050	--	SA3736	0.180	0.180	0.070	No	ClamShell	1.340	0.620	0.750	03730 091 6215
9	0.050	SOG	--	0.197	0.197	0.067	No	ClamShell	1.390	0.620	0.750	03730 091 6218B
9	0.075	KTA	--	0.770	0.380	0.075	Yes	ClamShell	1.310	0.910	0.740	04239 091 1218A
9	0.075	KTA	--	0.770	0.380	0.075	Yes	ClamShell	1.090	0.910	0.740	04239 091 6215
10	0.050	--	HIP SO-10	0.375	0.367	0.136	No	ClamShell	1.570	1.050	0.750	03337 321 6218G
10	0.025	NAIO	NAIO-10	0.118	0.107	0.055	No	ClamShell	1.390	0.620	0.750	03875 161 6218A
10	0.050	SIR	--	0.520	0.270	0.245	No	ClamShell	1.290	0.840	0.710	04100 101 6215
10	0.020	Micro Max	--	0.118	0.118	0.040	Yes	ClamShell	1.200	0.510	0.740	04333 101 6215
10	0.020	Mini SOIC	--	0.118	0.118	0.043	No	ClamShell	1.200	0.510	0.740	04333 101 6218
10	0.020	TSSOP	10L-TSSOP	0.118	0.118	0.040	No	ClamShell	1.200	0.510	0.740	04333 101 6218A
10	0.020	MSOP	10L-TSSOP	0.118	0.118	0.037	Yes	ClamShell	1.200	0.510	0.740	04333 111 6215
10	0.050	Gull Wing	SOT	0.242	0.239	0.065	Yes	ClamShell	1.390	0.510	0.740	04340 101 622C
10	0.050	Gull Wing	SOT	0.266	0.248	0.065	Yes	ClamShell	1.330	0.510	0.740	04340 141 6218A
11	0.050	SIR	--	0.520	0.176	0.177	No	ClamShell	1.290	0.840	0.710	04100 111 6215
11	0.020	TSSOP	10L-TSSOP	0.118	0.118	0.037	No	ClamShell	1.200	0.510	0.740	04333 111 6218A
12	0.050	--	8L Gull Wing	0.195	0.156	0.071	No	ClamShell	1.330	0.620	0.750	03337 161S6218Z
12	0.050	Power Amp IC	--	0.394	0.158	0.068	No	ClamShell	1.390	0.620	0.750	03337 161SX2X8I
12	0.100	SOIC	12L-SOIC	0.613	0.330	0.200	No	ClamShell	1.080	0.730	0.740	04127 121 6215
12	0.039	P-DSO	P-DSO-12	0.307	0.303	0.102	Yes	ClamShell	1.390	0.630	0.740	04350 121 6215
12	0.031	--	--	0.193	0.154	0.062	Yes	ClamShell	1.220	0.560	0.740	04354 131 6215
12	0.032	SOIC	SOIC	0.193	0.154	0.062	No	ClamShell	1.030	0.610	0.440	Q0403 131 6218A
13	0.031	Gull Wing		0.193	0.154	0.067	Yes	ClamShell	1.210	0.560	0.740	04354 131 6218A
14	0.050	SOT	SMD	**	**	**	No	ClamShell	1.870	1.220	0.760	03337 281 X2X8A
14	0.026	TSSOP	TSSOP-16	0.197	0.173	0.041	Yes	ClamShell	1.250	0.510	0.740	04335 161 6218B
14	0.050	Wide Body SOIC	Wide Body SOIC	0.426	0.254	0.062	Yes	ClamShell	1.330	0.510	0.740	04337 141 6215
14	0.050	DBXCPDSO-GILD	DBXCPDSO-GILD	0.426	0.251	0.068	Yes	ClamShell	1.550	0.870	0.510	04337 141 6218B
14	0.050	--	SP-13	0.437	0.238	0.195	No	ClamShell	1.330	0.510	0.740	04337 141 6218C
14	0.050	--	SP-13	0.437	0.238	0.154	No	ClamShell	1.330	0.510	0.740	04337 141 6218E
14	0.050	SOIC	SOIC	0.340	0.154	0.070	Yes	ClamShell	1.220	0.560	0.740	04337 161 6218F
15	0.055	TO	TO-263	0.364	0.850	0.173	Yes	ClamShell	1.300	1.030	0.740	04230 151 6215
15	0.050	KTC	--	0.380	0.770	0.075	Yes	ClamShell	1.440	0.910	0.510	04237 151 1218A
15	0.050	KTC	--	0.770	0.380	0.075	Yes	ClamShell	1.220	0.965	0.740	04237 151 6215

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15	0.050	KTC	--	0.380	0.761	0.075	Yes	ClamShell	1.170	0.965	0.740	04237 151 6218B
16	0.050	SOT	SO 8, SO 14, and SO 16	**	**	**	No	ClamShell	1.690	0.910	0.760	03337 161 X2X5
16	0.050	SOIC	16L SOIC	***	***	***	No	ClamShell	1.690	0.910	0.760	03337 161 X2X8A
16	0.050	SOT	SOT-109A (SOIC)	0.394	0.158	0.070	No	ClamShell	1.390	0.620	0.740	03337 161S6215
16	0.050	SMD	--	0.270	0.235	0.085	No	ClamShell	1.430	0.620	0.750	03337 161S6218
16	0.050	SOIC	16L-SOIC	0.640	0.220	0.085	No	ClamShell	1.340	0.620	0.750	03337 161S6218B
16	0.050	SOIC	16L-SOIC	0.330	0.330	***	No	ClamShell	1.430	0.620	0.750	03337 161S6218R
16	0.050	SO	SO-8	***	***	***	No	ClamShell	1.390	0.620	0.750	03337 161S6218T
16	0.050	SOT	SO-16	**	**	**	No	ClamShell	1.760	1.220	0.760	03337 281 X2X8B
16	0.030	Gull Wing	FlatPack	0.230	0.230	0.057	No	ClamShell	1.070	1.020	0.750	03725 161 6218A
16	0.026	SSOP	28L-SSOP	0.244	0.209	0.073	No	ClamShell	1.340	0.620	0.750	03825 281 6218A
16	0.025	MSOP	--	0.193	0.107	0.052	No	ClamShell	1.340	0.620	0.750	03875 161 6215
16	0.025	SSOP	16L-SSOP	0.198	0.154	0.055	No	ClamShell	1.390	0.620	0.750	03925 281 6218A
16	0.050	SOIC	SA 30E SOIC	0.435	0.206	0.167	No	ClamShell	1.070	0.550	0.750	04120 161 6215
16	0.050	SOIC	SAR 10 SOIC	0.050	0.311	0.167	No	ClamShell	1.120	0.550	0.750	04122 161 6215
16	0.100	Gull Wing	Gull Wing	1.000	1.000	0.200	No	ClamShell	1.820	1.310	0.830	04127 161 6217
16	0.020	Gull Wing	PwSSO-16	0.193	0.154	0.060	Yes	ClamShell	1.390	0.630	0.740	04333 171 6217
16	0.026	Gull Wing	--	0.193	0.154	0.060	Yes	ClamShell	1.250	0.510	0.740	04335 141 6215
16	0.026	TSSOP	16L-TSSOP	0.197	0.173	0.043	Yes	ClamShell	1.250	0.510	0.740	04335 161 6215
16	0.026	TSSOP	TSSOP-16	0.236	0.173	0.045	No	ClamShell	1.250	0.510	0.740	04335 161 6218A
16	0.026	SOT	SOT	0.197	0.173	0.043	Yes	ClamShell	1.250	0.510	0.740	04335 161 6218D
16	0.050	SOP / SOIC	--	0.390	0.154	0.070	Yes	ClamShell	1.220	0.560	0.740	04337 161 6215
16	0.050	SOIC	SOIC	0.390	0.154	0.061	No	ClamShell	1.220	0.560	0.730	04337 161 6218E
17	0.030	Gull Wing	FlatPack	0.230	0.230	0.057	No	ClamShell	1.070	1.020	0.750	03725 171 6217
17	0.031	--	--	0.277	0.277	0.085	No	ClamShell	1.120	0.550	0.750	04124 171 6215
17	0.031	--	--	0.277	0.277	0.085	No	ClamShell	1.120	0.550	0.750	04124 171 6218A
17	Multi	HSOP16	SOT822-1	0.626	0.433	0.138	No	ClamShell	1.250	0.730	0.740	04352 171 6217
20	0.050	--	SO-20	***	***	***	No	ClamShell	1.870	1.220	0.760	03337 201 X2X8
20	0.050	--	HIPSO20	0.627	0.433	0.134	No	ClamShell	1.570	1.050	0.750	03337 321 X2X8E
20	0.026	TSSOP	TSSOP-20	0.256	0.173	0.043	Yes	ClamShell	1.250	0.570	0.740	04335 281 6218E
20	0.026	TSSOP	TSSOP-8	0.256	0.173	0.039	Yes	ClamShell	1.250	0.570	0.740	04335 281 6218G
20	0.050	SOIC	20L-SOIC	0.626	0.433	0.132	Yes	ClamShell	1.475	0.660	0.740	04337 201 6215
20	0.049	Gull Wing	Gull Wing	0.256	0.256	0.067	Yes	ClamShell	1.380	0.710	0.740	04337 281 6218
20	0.050	SOT	SOT-163-1	0.500	0.295	0.100	Yes	ClamShell	1.380	0.088	0.740	04337 281 6218D
23	0.070	Gull Wing		1.142	0.472	0.128	No	ClamShell	1.370	1.260	0.750	04357 301 6218A
24	0.025	SSOP	24L-SSOP	0.395	0.154	0.055	No	ClamShell	1.340	0.620	0.750	03925 281 6218B
24	0.030	--	SP6T	0.381	0.266	0.070	No	ClamShell	1.110	0.560	0.740	04113 241 6217
24	0.025	Gull Wing	SSOP	0.340	0.154	0.061	No	ClamShell	1.250	0.570	0.740	04323 281 6218A
24	0.026	Gull Wing	Gull Wing	0.341	0.154	0.067	Yes	ClamShell	1.250	0.570	0.740	04334 281 6218A
24	0.026	TSSOP	24L-TSSOP	0.307	0.173	0.047	Yes	ClamShell	1.250	0.570	0.740	04335 281 6218A
24	0.026	TSSOP	TSSOP24	0.307	0.173	0.043	Yes	ClamShell	1.250	0.570	0.740	04335 281 6218B
28	0.050	SOIC	28L-SOIC	***	***	***	No	ClamShell	1.650	1.050	0.750	03337 241 X2X8B
28	0.050	SOT	SOT-136, 137, 167,	0.780	0.310	0.070	No	ClamShell	1.870	1.220	0.760	03337 281 6215

-- Contact Sales for device sizes and specifications



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Gull Wing Sockets

I/O	Pitch (in)	Pkg Type	Pkg Name	Pkg Body L (in)	Pkg Body W (in)	Pkg H / T (in)	Kelvin	Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
28	0.026	SSOP	28L-SSOP	0.402	2.090	0.073	No	ClamShell	1.340	0.620	0.750	03825 281 6215
28	0.025	SSOP	28L-SSOP	0.395	0.154	0.055	No	ClamShell	1.340	0.620	0.750	03925 281 6215
28	0.025	Gull Wing	SSOP	0.395	0.154	0.055	Yes	ClamShell	1.250	0.570	0.740	04323 281 6217
28	0.033	Gull Wing		0.392	0.154	0.067	Yes	ClamShell	1.250	0.570	0.740	04334 281 6215
28	0.026	TSSOP	TSSOP28	0.390	0.173	0.040	Yes	ClamShell	1.250	0.570	0.740	04335 281 6215
28	0.050	SOIC	28L-SOIC	0.706	0.296	0.100	Yes	ClamShell	1.380	0.860	0.740	04337 281 6215
28	0.050	SOIC	28L-SOIC	0.604	0.295	0.098	Yes	ClamShell	1.380	0.860	0.740	04337 281 6218B
28	0.050	SOIC	28L-SOIC	0.705	0.295	0.104	Yes	ClamShell	1.380	0.860	0.740	04337 281 6218C
28	0.050	SOIC	28L-SOIC	0.402	0.295	0.100	Yes	ClamShell	1.380	0.860	0.740	04337 281 6218E
30	0.031	--	--	0.504	0.295	0.104	No	ClamShell	1.100	0.650	0.730	04124 301 6217
32	0.050	SOIC	32L-SOIC	0.840	0.400	0.065	No	ClamShell	1.650	1.050	0.750	03337 321 6215
32	0.050	SOT	SOT287	0.807	0.295	0.104	No	ClamShell	1.120	0.950	0.750	03437 321 6217
32	0.039	Gull Wing	Gull Wing	0.774	0.335	0.169	No	ClamShell	1.130	0.950	0.750	04125 321 6217
34	0.040	SOIC	34L-SOIC	0.715	0.300	0.101	No	ClamShell	1.650	1.050	0.750	03340 341 6215
44	0.020	SSOP	44 L SSOP	0.504	0.209	0.073	No	ClamShell	1.070	0.650	0.740	04320 441 6217
46	0.020	Gull Wing	PwSSO-46	0.626	0.433	0.130	Yes	ClamShell	1.630	0.850	0.740	04333 471 6217



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SMD Sockets

Design Features



- *Constant Force on DUT Assure Reliability Throughout Burn-in and Test*
- *Kelvin and Non-Kelvin for Burn-in and Test Applications*
- *Zero-Insertion-Force in ClamShell Models and Low-Insertion-Force in Top-loading OpenTop Styles*

I/O	Pitch (in)	Pkg Name	Pkg Body L (in)	Pkg Body W (in)	Pkg H / T (in)	Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
2	**	DO-214AB	0.264	0.217	0.096	ClamShell	1.390	0.620	0.750	03337 161S6218U
2	**	DO-214AA	0.245	0.143	0.090	OpenTop	0.635	0.335	0.725	03451 041 6218A
2	**	SMD	0.062	0.033	0.018	ClamShell	0.790	0.510	0.730	03580 021 6217
2	**	SMD	0.081	0.049	0.018	ClamShell	0.790	0.510	0.730	03581 021 6217
2	**	SMD	0.042	0.022	0.015	ClamShell	0.760	0.510	0.710	03582 021 6217
2	**	SMD	0.039	0.024	0.020	ClamShell	0.760	0.510	0.710	03584 021 6217
2	**	SOD-15	0.254	0.197	0.106	ClamShell	1.010	0.610	0.740	04131 041 6215
2	**	SMD	0.615	0.495	0.150	ClamShell	1.220	0.650	0.740	04141 021 6217
2	***	SMD	0.047	0.031	0.024	ClamShell	0.790	0.510	0.730	04327 081 6217
2	**	SMD	0.055	0.050	0.022	ClamShell	0.760	0.510	0.710	04582 041 6217
3	**	SMD-4	1.080	0.625	0.140	ClamShell	1.490	0.940	0.740	03245 031 6215
3	0.075	SOT-23	0.120	0.100	0.075	ClamShell	1.620	0.910	0.760	03333 061 6218A
3	**	SMD-2	0.755	0.535	0.190	ClamShell	1.870	1.220	0.760	03345 031 6215
3	**	SMD-2.1	0.690	0.525	0.140	ClamShell	1.810	1.220	0.760	03345 031 6218A
3	**	SMD-2	0.690	0.535	0.150	ClamShell	1.810	1.220	0.760	03345 031 6218B
3	**	MIL-PACK II	0.770	0.500	0.180	ClamShell	1.760	1.220	0.760	03345 031 X2X8
3	0.050	SMD-1	0.625	0.450	0.140	ClamShell	1.870	1.220	0.760	03346 031 6215
3	**	M-259	0.625	0.500	0.120	ClamShell	1.870	1.220	0.760	03346 031 6218A
3	**	HP XTR	0.625	0.450	0.140	ClamShell	1.870	1.220	0.760	03346 031 6218B
3	0.050	SMD-1.1	0.625	0.450	0.136	ClamShell	1.810	1.220	0.760	03346 031 6218C
3	**	SMD	0.655	0.450	0.125	ClamShell	1.760	1.220	0.760	03346 031 6218D
3	**	SMD	0.655	0.450	0.125	ClamShell	1.760	1.220	0.760	03346 031 6218E
3	0.050	SMD-1	0.625	0.450	0.140	ClamShell	1.870	1.220	0.760	03346 031 X2X8
3	**	SMD	0.310	0.255	0.091	ClamShell	0.940	0.760	0.740	03793 061 6217
3	**	SMD	0.310	0.255	0.091	ClamShell	0.940	0.760	0.740	03793 061 6218A
3	**	SMD	0.313	0.213	0.102	ClamShell	0.800	0.510	0.740	04144 031 6215
3	**	3L SMD-2	0.525	0.690	0.136	ClamShell	1.280	1.160	0.780	04145 031 6215
3	**	3L SMD-2	0.525	0.690	0.136	ClamShell	1.280	1.160	0.780	04145 031 6225
3	**	3L SMD-2	0.625	0.450	0.140	ClamShell	1.000	0.840	0.740	04146 031 6215
3	**	SMD-3.1	0.247	0.205	0.030	ClamShell	0.910	0.610	0.740	04343 031 6217
3	**	SMD-3.1	0.305	0.210	0.080	ClamShell	0.800	0.510	0.740	04344 031 6215

** Pitch is not available due to package configuration



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SMD Sockets

I/O	Pitch (in)	Pkg Name	Pkg Body L (in)	Pkg Body W (in)	Pkg H / T (in)	Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
3	**	SMD-3.1	0.775	0.500	0.140	ClamShell	1.390	0.860	0.750	04345 031 6215
3	**	SMD-5	0.400	0.296	0.129	ClamShell	1.390	0.860	0.750	04346 031 6218A
4	**	SMD	0.039	0.024	0.014	ClamShell	1.050	0.750	0.440	010006004J6617
4	**	GMELF-PKG	0.225	0.192	0.192	OpenTop	0.620	0.620	0.650	03450 081 6218
4	**	SMD	0.086	0.056	0.034	OpenTop	0.480	0.480	0.360	03485 041 6215
4	**	SMD	0.234	0.199	0.078	OpenTop	0.660	0.630	0.360	03486 041 6215
4	**	SMD	0.024	0.012	0.011	ClamShell	0.770	0.510	0.710	03583 041 6217
4	0.067	SMD	0.126	0.106	0.043	OpenTop	0.515	0.255	0.360	03723 051 6218A
4	0.129	SMD-4	0.400	0.296	0.150	ClamShell	0.900	0.760	0.740	03791 041M6217
4	0.129	SMD	0.400	0.296	0.175	ClamShell	0.950	0.760	0.740	03791 041MX218A
4	**	2X TPS	0.287	0.169	0.114	ClamShell	1.020	0.610	0.740	04132 041 6215
4	0.050	SMD	0.220	0.150	0.068	ClamShell	0.810	0.680	0.740	04270 081 6217
5	**	SMD	0.242	0.148	0.047	ClamShell	0.810	0.680	0.740	03585 051 6217
5	0.045	DPAK-5	0.391	0.258	0.090	ClamShell	1.120	0.510	0.740	04247 051 6215
5	**	SMD-3.1	0.545	0.296	0.100	ClamShell	0.990	0.810	0.740	04345 051 6215
6	**	SMD	0.039	0.032	0.018	ClamShell	1.050	0.750	0.535	010008006J6617
6	**	SMD	0.039	0.035	0.014	ClamShell	1.050	0.750	0.440	010009006J6617
6	**	SMD	0.197	0.195	0.061	ClamShell	0.810	0.680	0.740	03792 061 6217
6	**	SMD	0.197	0.195	0.061	ClamShell	0.810	0.680	0.740	03792 061 6218A
8	0.050	SMD-8	0.380	0.250	0.130	OpenTop	0.990	0.850	0.710	03558 281 6258A
8	0.050	SAC60	0.432	0.236	0.206	ClamShell	0.820	0.710	0.870	04105 081 6217



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SIP Sockets

Design Features

- *Top-loading In-line TO Packages for Burn-in and Test*
- *Variety of Pitches, Lead Lengths and Diameters*
- *Modified and Custom Sockets Available, (Kelvin or Double-sided Contact Options)*



I/O	Pitch (in)	Pkg Type	Pkg Name	Socket Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
2	0.474	TO	TO-3P	OpenTop	0.760	0.410	0.850	02903 031 6218A
2	0.100	--	--	OpenTop	0.220	0.310	0.600	02997 161 6218M
3	0.100	TO	TO-220	OpenTop	0.860	0.400	0.780	02901 031 6215
3	0.050	TO	TO-92	OpenTop	0.330	0.260	0.580	02950 041 6218A
4	0.050	TO	TO-92	OpenTop	0.330	0.260	0.580	02950 041 6215
4	0.100	--	Olean HVO3	OpenTop	1.110	0.310	0.620	02997 101 6218D
4	0.162	TO	TO-127, -225AB and -254	OpenTop	1.630	0.350	0.610	03129 042 6215
4	0.150	--	--	OpenTop	0.660	0.280	0.680	03530 041 6215
5	0.110	TO	TO-218	OpenTop	0.700	0.550	0.610	03560 051 6215
6	0.100	--	--	OpenTop	1.100	0.300	0.650	02996 062 6215
6	0.125	--	--	OpenTop	1.450	0.270	0.740	03125 062 6215
6	0.150	--	--	OpenTop	1.710	0.350	0.640	03548 062 6215
7	0.100	--	--	OpenTop	0.780	0.310	0.600	02997 071 X258+
7	0.067	TO	TO-218	OpenTop	0.620	0.550	0.600	03561 071 6215
8	0.150	--	--	OpenTop	1.330	0.530	0.630	03548 081 6215
9	0.100	--	--	OpenTop	1.010	0.310	0.620	02997 091 6215
9	0.100	--	--	OpenTop	1.010	0.310	0.620	02997 091 6218C
10	0.100	--	Olean HVO3	OpenTop	1.110	0.310	0.620	02997 101 6215
10	0.100	--	Olean HVO3	OpenTop	1.000	0.310	0.620	02997 101 6218E
10	0.200	--	--	OpenTop	2.210	0.310	0.620	02997 211 6218L
12	0.100	--	--	OpenTop	1.600	0.300	0.620	02997 161 6218K
12	0.100	--	--	OpenTop	1.710	0.300	0.620	02997 161 6218L
14	0.050	SIP	SIP	OpenTop	0.710	0.580	0.580	03235 241 6218C
15	0.100	--	--	OpenTop	1.710	0.310	0.620	02997 161 6218H
15	0.100	--	--	OpenTop	2.210	0.310	0.620	02997 211 6218B
16	0.100	--	--	OpenTop	1.710	0.310	0.620	02997 161 6215
16	0.100	--	--	OpenTop	1.600	0.300	0.620	02997 161 6218J
16	0.100	--	--	OpenTop	2.510	0.310	0.620	02997 162 6215
16	0.100	--	--	OpenTop	1.250	0.340	0.600	03545 202 6218G
17	0.075	--	--	OpenTop	1.340	0.260	0.580	02975 171 6215
20	0.100	--	--	OpenTop	2.210	0.310	0.620	02997 211 6218F
20	0.100	--	--	OpenTop	0.336	2.860	0.615	03545 202 6215



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SIP Sockets

I/O	Pitch (in)	Pkg Type	Pkg Name	Socket Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
20	0.100	--	--	OpenTop	2.290	0.340	0.625	03545 202 6218E
21	0.070	--	--	OpenTop	1.540	0.260	0.580	02970 211 6215
21	0.100	--	--	OpenTop	2.210	0.310	0.620	02997 211 6215
21	0.100	--	--	OpenTop	3.010	0.310	0.620	02997 212 6215
22	0.100	--	--	OpenTop	3.070	0.340	0.625	03545 202 6218B
25	0.200	--	--	OpenTop	4.950	0.420	0.600	03237 251 6211
28	0.070	--	--	OpenTop	2.030	0.260	0.580	02970 281 6215
28	0.075	--	--	OpenTop	2.165	0.260	0.580	02975 281 6215
30	0.050	SIP	SIP	OpenTop	0.860	0.680	0.580	03235 301 6215
30	0.100	--	--	OpenTop	3.870	0.340	0.615	03545 302 X2X8+
32	0.100	--	--	OpenTop	2.870	0.340	0.620	03545 202 6218F
36	0.100	--	--	OpenTop	4.470	0.340	0.625	03545 202 6218C
44	0.050	SIP	SIP	OpenTop	1.210	0.680	0.580	03235 441 6215



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ZigZag Sockets



Design Features

- Top-loading In-line TO Packages for Burn-in and Test
- Variety of Pitches, Lead Lengths and Diameters
- Modified and Custom Sockets Available, (Kelvin or Double-sided Contact Options)

I/O	Pitch (in)	Pkg Name	Pkg Body L (in)	Pkg Body W (in)	Pkg H / T (in)	Row-to-Row (in)	Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
5	0.067	Power Transistor	***	***	***	0.150	OpenTop	1.240	0.540	0.490	02937 052 6215
5	0.067	Power Transistor	***	***	***	0.150	OpenTop	1.250	0.550	0.510	02937 052 6218A
5	0.067	Power Transistor	***	***	***	0.150	OpenTop	0.560	0.550	0.510	02937 052 6218B
9	0.039	--	**	**	**	0.157	OpenTop	0.465	0.460	0.550	03565 251 6218
9	0.050	SOT-523-1	0.524	0.524	0.098	0.200	OpenTop	0.880	0.800	0.700	04552 091 6217
9	0.050	SOT-523-1	0.524	0.524	0.098	0.200	OpenTop	0.870	0.570	0.700	04562 091 6217
15	0.080	--	1.230	0.709	0.089	0.160	OpenTop	1.380	0.510	0.610	03550 151 6215
15	0.050	MS-31, MT-72	0.787	0.699	0.177	0.200	OpenTop	0.960	0.550	0.600	03551 151 6215
16	0.050	--	***	***	***	0.100	OpenTop	0.930	0.350	0.580	03562 161 6215
17	0.050	SOT-243-1	0.945	0.472	0.173	0.200	OpenTop	1.250	0.800	0.595	04552 171 6217
17	0.050	SOT-243-1	0.945	0.472	0.173	0.200	OpenTop	1.240	0.590	0.610	04562 171 6217
17	0.050	SOT-475-1	0.937	0.472	0.173	0.200	OpenTop	1.240	0.590	0.610	04563 171 6217
20	0.050	--	***	***	***	0.100	OpenTop	1.130	0.350	0.690	03562 201 6215
23	0.050	TO-220	1.188	0.689	0.177	0.200	OpenTop	2.060	0.610	0.510	02937 232 6215
23	0.050	SOT-411-1	1.202	0.472	0.175	0.200	OpenTop	1.550	0.800	0.520	04552 231 6217
23	0.050	SOT-411-1	1.201	0.472	0.175	0.200	OpenTop	1.550	0.800	0.520	04553 231 6217
23	0.050	SOT-411-1	1.200	0.472	0.175	0.200	OpenTop	1.540	0.590	0.520	04562 231 6217
24	0.050	--	***	***	***	0.100	OpenTop	1.330	0.350	0.580	03562 241 6215
25	0.039	--	1.142	0.610	0.177	0.157	OpenTop	1.150	0.460	0.680	03564 251 6215
25	0.039	--	1.142	0.610	0.177	0.157	OpenTop	1.150	0.460	0.660	03565 251 6215
27	0.039	SOT-521-1	1.200	0.472	0.175	0.157	OpenTop	1.450	0.800	0.520	04555 271 6217
27	0.039	SOT827-1 DBS27	1.142	0.618	0.177	0.157	OpenTop	1.460	0.800	0.520	04556 271 6217
27	0.039	Flexiwatt 27 HB	1.151	0.618	0.177	0.157	OpenTop	1.460	0.800	0.520	04556 271 6218A
27	0.039	SOT827-1	1.142	0.886	0.177	0.158	OpenTop	1.460	0.800	0.520	04557 271 6217
27	0.039	SOT-521-1	1.200	0.472	0.175	0.157	OpenTop	1.450	0.570	0.610	04565 271 6217
27	0.039	PO35N	1.151	0.618	0.177	0.157	OpenTop	1.450	0.590	0.610	04566 271 6217
27	0.039	PO35N	1.151	0.618	0.177	0.157	OpenTop	1.450	0.570	0.610	04575 271 6217
27	0.039	PO35N	1.151	0.618	0.177	0.157	OpenTop	1.450	0.570	0.610	04575 271 6218A
27	0.039	PO35N	1.151	0.618	0.177	0.157	OpenTop	1.580	0.570	0.630	04575 271 6218B
28	0.050	--	***	***	***	0.100	OpenTop	1.530	0.350	0.690	03562 281 6215
32	0.050	--	1.823	0.500	0.330	0.100	OpenTop	1.700	0.350	0.690	03562 321 6215
37	0.039	SOT725-1	1.652	0.618	0.177	0.157	OpenTop	1.910	0.800	0.580	04566 371 6217

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Microwave/Hybrid Sockets

Design Features

- For Heatsinks and Special Lead Configurations
- Standard and Custom Designs for Variety of Package Sizes, including Custom Hybrids & Microwave Packages
- Stand-alone Sockets and Integrated 50 Impedance Designs
- Kelvin and Non Kelvin



I/O Pitch	Pkg Name	Pkg Body L (in)	Pkg Body W (in)	Pkg H / T (in)	Socket Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N	
2	**	TSSOP	0.104	0.104	0.030	ClamShell	1.590	0.910	0.760	03322 041 6215
2	**	Multiplier/IF Amp	3.540	0.820	0.207	ClamShell	3.870	2.150	0.780	03750 022 6215
3	0.076	SOT-23	0.112	0.055	0.039	ClamShell	1.640	0.910	0.760	03334 061 6215
3	0.076	--	***	***	***	ClamShell	1.680	0.910	0.760	03334 061 X2X8A
3	**	2-LD	0.500	0.400	0.160	ClamShell	1.480	1.270	0.815	03347 031 6218A
3	**	--	0.675	0.385	0.143	ClamShell	1.480	1.270	0.810	03347 031 6218B
3	**	--	1.340	0.765	0.143	ClamShell	1.480	1.270	0.810	03347 031 6218C
3	**	--	1.030	0.800	0.183	ClamShell	1.480	1.270	0.810	03347 031 6218D
3	**	SA3085, SA3088	0.400	0.400	0.104	ClamShell	1.275	1.140	0.815	03348 031 6215
3	**	RF	0.400	0.500	0.140	ClamShell	1.330	1.140	0.815	03348 031 6218A
3	**	RF	0.400	0.500	0.100	ClamShell	1.330	1.140	0.815	03348 031 X2X8
3	**	Microwave SA-374 or etc	0.250	0.250	0.086	ClamShell	1.275	1.140	0.815	03349 031 6215
3	**	HPAC-200 GB/GT	0.225	0.200	0.105	ClamShell	1.365	1.140	0.990	03349 031 X2X8
3	**	--	0.800	0.230	1.850	ClamShell	1.365	1.200	0.990	03349 031 X2X8D
3	**	--	0.800	0.230	1.650	ClamShell	1.270	1.140	0.815	03349 031 X2X8E
3	**	M-124, -170, -171	0.800	0.250	0.155	ClamShell	1.535	1.270	0.815	03357 031 6215
3	**	M-151	0.800	0.250	0.250	ClamShell	1.535	1.270	0.815	03358 031 6215
3	**	--	0.800	0.230	0.150	ClamShell	1.480	1.270	0.810	03358 031 6218A
3	**	--	0.372	0.372	0.173	ClamShell	0.800	0.580	0.560	03362 031 ASSY
3	**	RF705	1.340	0.385	0.142	ClamShell	3.000	2.750	2.870	03363 031 ASSY
3	**	H30X	0.490	0.100	0.030	ClamShell	1.520	0.795	0.615	03366 031 ASSY
3	0.026	H-P SC-70	0.079	0.049	0.037	ClamShell			0.615	03366 041 0005F
3	0.026	H-P SC-70	0.049	0.079	0.037	ClamShell	1.590	0.910	0.615	03366 041 0005G
3	**	--	0.750	0.246	0.124	ClamShell		1.000	0.560	03373 041 ASSY
3	**	--	0.250	0.250	0.112	ClamShell	0.860	0.710	0.740	03466 071 6218A
3	**	Dual Oscillator	1.990	0.840	0.210	ClamShell	2.010	1.490	0.762	03758 032 6215
3	**	PLL Converter Module	***	***	***	ClamShell	2.900	2.120	0.800	03761 032 ASSYA
3	**	LO Genterator	2.684	1.650	0.270	ClamShell	2.420	3.870	0.700	03763 032 6215
3	**	LO Genterator	2.380	2.000	0.225	ClamShell	3.000	2.100	0.740	03767 032 ASSY
3	**	IF AMP	1.110	1.010	0.330	ClamShell	1.600	1.330	0.770	03768 032 6215A
3	**	IF AMP	1.170	0.846	0.330	ClamShell	1.600	1.330	0.770	03768 032 6215B
3	**	--	***	***	***		3.000	2.000	2.160	07124 SKT ASSY
3	**	--	***	***	***		3.500	3.000	2.160	07127 SKT ASSY

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Microwave/Hybrid Sockets

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4	**	KUKJE	0.070	0.070	0.045	ClamShell	1.590	0.910	0.760	03326 041 6215
4	**	--	0.100	0.100	0.054	ClamShell				03336 041 0008E
4	**	HPAC-70GT	0.109	0.109	0.070	ClamShell	1.590	0.910	0.760	03336 041 6215A
4	**	HPAC-70GT, 100 .100X etc	***	***	***	ClamShell	1.590	0.910	0.760	03336 041 6215B
4	**	MAR-8SM	0.190	0.184	0.060	ClamShell	1.590	0.910	0.760	03336 041 6218E
4	**	--	***	***	***	ClamShell	1.680	0.910	0.760	03336 041 X2X8B
4	**	HP#55	***	***	***	ClamShell	1.680	0.910	0.760	03336 041 X2X8C
4	**	--	***	***	***	ClamShell	1.590	0.910	0.760	03336 041 X2X8D
4	**	HP- #71	0.250	0.070	0.050	ClamShell	1.590	0.910	0.750	03336 041 X2X8F
4	**	HP- #01	0.420	0.300	0.070	ClamShell	1.590	0.910	0.750	03336 041 X2X8G
4	**	ODS-844	0.050	0.260	0.270	ClamShell	1.870	1.220	0.760	03338 041 6215
4	**	--	0.050	0.260	0.280	ClamShell	1.810	1.220	0.760	03338 041 6218B
4	**	--	0.550	0.550	0.280	ClamShell	1.810	1.220	0.760	03338 041 6218D
4	**	M-107, -123, -126, etc	0.430	0.430	0.160	ClamShell	1.690	1.090	0.820	03339 041 6215
4	**	HP-70	0.070	0.070	0.035	ClamShell	1.590	0.910	0.620	03365 041 ASSY
4	**	HPAC-100	0.110	0.110	0.054	ClamShell	1.590	0.910	0.620	03366 041 0005A
4	**	HP- #71	0.260	0.034	0.050	ClamShell			0.615	03366 041 0005B
4	**	HP-#01	0.420	0.100	0.070	ClamShell	1.590	0.910	0.615	03366 041 0005C
4	**	HP-#71	0.260	0.070	0.034	ClamShell	1.590	0.910	0.615	03366 041 0005D
4	**	HPAC-100	0.100	0.100	0.054	ClamShell	1.590	0.910	0.730	03366 041 0008
4	**	--	0.500	0.500	0.145	ClamShell	1.590	1.060	0.560	03375 051 ASSY
4	**	--	***	***	***	ClamShell	1.900	1.850	1.090	03377 041 ASSY
4	0.200	Voltage Controlled etc	3.100	1.250	0.320	ClamShell	2.060	3.900	1.590	03765 042 6215
4	**	--	0.900	1.090	0.250	OpenTop	2.110	2.100	0.648	07610 031 ASSY
5	**	M-112, 115, 036, 038 etc	0.900	0.399	0.230	ClamShell	1.480	1.270	0.815	03347 051 6215
5	**	Microwave M-259	0.650	0.385	0.230	ClamShell	1.480	1.270	0.815	03347 051 6218A
5	0.435	--	0.680	0.400	0.200	ClamShell	2.020	1.570	0.770	03355 051 6215
5	0.425	--	1.340	0.586	0.195	ClamShell	2.020	1.570	0.770	03355 051 6218A
5	**	H-P PlanPak	0.250	0.250	0.138	ClamShell	1.590	0.910	0.800	03366 051 ASSY
5	**	H-P PlanPak	0.375	0.375	***	ClamShell	1.590	0.910	0.790	03367 051 ASSY
5	**	Microwave SMTO-8	0.450	0.450	0.175	ClamShell	1.590	0.910	0.615	03369 051 ASSY
5	**	--	0.532	0.246	0.125	ClamShell	1.420	1.060	0.560	03372 061 ASSY
5	**	--	0.532	0.246	0.125	ClamShell	1.420	1.060	0.590	03372 061 ASSYA
5	**	SMTO-8	0.450	0.450	0.170	ClamShell		0.725	0.560	03379 051 ASSY
5	0.075	Receiver	1.310	1.240	0.207	ClamShell	2.250	2.750	0.780	03752 052 6215
5	0.100	Switch/Diplexer	2.310	1.430	0.270	ClamShell	2.420	3.870	0.700	03763 052 6215
5	0.075	Oscillator	1.325	1.065	0.240	ClamShell	2.160	2.750	0.780	03766 052 6215
5	**	--	3.100	0.930	0.185	OpenTop	4.000	2.300	2.100	07523 SKT ASSY
5	**	--	2.719	1.254	0.185	OpenTop	3.100	2.480	2.200	07525 SKT ASSY
6	**	SMTO-8	0.525	0.525	0.170	ClamShell		1.060	0.560	03378 071 ASSY
7	**	MCM	0.515	0.540	0.090	ClamShell	1.670	1.460	0.720	03715 071 6215
7	0.100	Transmit Drive	2.740	1.370	0.207	ClamShell	2.060	3.900	0.780	03760 072 6215
7	0.100	Veii Delta	3.060	0.860	0.210	ClamShell	2.060	3.900	1.550	03764 072 6215

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7	0.100	Veii Delta	3.060	0.860	0.210	ClamShell	2.060	3.900	1.550	03764 072 X2X8
7	**	--	2.430	0.803	0.175	OpenTop				07522 SKT ASSY
7	**	--	3.730	1.945	0.185	OpenTop	4.800	3.000	2.200	07526 SKT ASSY
8	0.100	ODS-801	***	***	***	ClamShell	1.870	1.220	0.760	03341 081 6215
8	**	M53	0.536	0.250	0.134	ClamShell	1.780	1.220	0.760	03342 081 X2X8
8	0.050	--	0.738	0.370	0.028	ClamShell	1.710	2.060	0.780	03705 081 621A
8	0.100	Switch/Diplexer	1.690	0.830	0.207	ClamShell	3.870	2.150	0.780	03750 082 6215
8	0.050	Reg/Mode	1.845	1.370	0.247	ClamShell	2.750	2.250	0.780	03756 082 6215
8	0.100	Dual Receiver	2.400	2.000	0.310	ClamShell	2.420	3.200	0.700	03759 082 6215
9	**	--	0.715	0.580	0.115	ClamShell	1.670	1.460	0.720	03711 091 6215
9	0.075	Transmitter	1.970	1.030	0.207	ClamShell	2.250	2.750	0.780	03753 092 6215
9	0.100	Dual Transmitter	2.400	1.990	0.270	ClamShell	2.420	3.200	0.700	03759 092 6215
9	0.100	Transmit Drive	3.230	1.830	0.270	ClamShell	2.420	3.870	0.700	03763 092 6215
9	**	--	3.210	1.850	0.395	ClamShell	4.700	3.500	1.260	07233 SKT ASSY
10	0.200	ODS-821, ODS-821	0.536	0.250	0.134	ClamShell	1.870	1.220	0.760	03342 101 6215
10	0.040	--	0.580	0.710	0.124	ClamShell	1.590	0.910	0.560	03374 101 ASSY
10	0.040	--	0.580	0.710	0.124	ClamShell	1.590	0.910	0.560	03374 101 ASSYA
10	0.100	--	1.000	0.550	0.028	ClamShell	1.710	2.060	0.780	03710 101 621A
10	0.075	Switch/Limiter	2.240	1.380	0.347	ClamShell	2.250	2.750	0.780	03754 102 6215
10	0.100	Veii Sum	2.760	1.000	0.210	ClamShell	2.060	3.900	1.550	03762 102 6218
10	0.100	Veii Sum	2.760	1.000	0.210	ClamShell	3.900	2.060	1.550	03762 102 6218A
11	0.075	--	1.370	1.370	0.165	ClamShell	1.045	0.525	0.504	03352 111 6215
11	**	--	0.620	0.560	0.115	ClamShell	1.670	1.460	0.720	03711 111 6215
11	**	--	0.620	0.560	0.115	ClamShell	1.670	1.460	0.720	03711 111 621A
11	**	IF AMP	***	***	0.280	ClamShell	1.600	1.330	0.770	03769 112 6215
11	**	--	4.160	0.930	0.185	OpenTop	5.200	2.300	2.100	07524 SKT ASSY
11	**	--	2.571	1.970	0.170	OpenTop	3.400	3.400	2.200	07590 SKT ASSY
12	**	--	4.160	0.930	0.175	OpenTop	5.200	2.300	2.100	07520 SKT ASSY
13	0.090	SW/LNA	2.240	1.590	0.315	ClamShell	2.150	2.730	0.770	03767 132 6215
15	0.150	SOP	1.500	0.650	0.190	ClamShell	1.710	2.420	0.750	03720 151 6215
16	0.090	SW/LNA	2.240	1.590	0.294	ClamShell	2.150	2.730	0.770	03767 162 6215A
16	0.090	SW/LNA	2.240	1.590	0.294	ClamShell	2.150	2.730	0.770	03767 162 6215B
17	0.025	--	0.480	0.476	0.115	ClamShell	1.670	1.460	0.720	03711 171 6215
18	0.100	--	1.065	0.570	0.028	ClamShell	1.710	2.060	0.780	03710 181 621A
18	0.100	ssdi-MILPACK III	***	***	***	ClamShell	1.630	2.060	0.780	03710 181 X218
18	**	--	3.850	0.135	0.170	OpenTop	5.200	2.300	2.100	07521 SKT ASSY
18	**	--	2.620	3.068	0.170	OpenTop	4.000	4.000	2.200	07589 SKT ASSY
18	**	--	2.130	2.170	0.300	OpenTop	6.900	6.900	2.200	07603 SKT ASSY
19	0.095	Hybrid QUAD	***	***	***	OpenTop	0.900	0.700	0.655	03161 192 6215
21	0.080	--	4.900	1.200	0.205	OpenTop	5.700	3.000	2.200	07463 SKT ASSY
23	0.050	--	0.525	0.485	0.115	ClamShell	1.670	1.460	0.720	03711 231 6215
24	0.100	--	***	***	***	OpenTop	1.030	0.930	0.610	03161 242 X2X5
24	0.039	HSOP	0.626	0.433	0.132	ClamShell	1.200	0.730	0.740	04125 241 6217

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Microwave/Hybrid Sockets

I/O Pitch	Pkg Name	Pkg Body L (in)	Pkg Body W (in)	Pkg H / T (in)	Socket Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N	
25	0.050	--	1.260	0.551	0.335	ClamShell	1.340	1.470	0.750	03785 251 6217
25	0.050	--	1.270	0.551	0.215	ClamShell	1.340	1.470	1.090	03786 251 6217
26	0.090	Hybrid QUAD	***	***	***	OpenTop	1.020	0.920	0.630	03161 262 6215
28	0.050	CLCC	0.720	0.400	0.090	ClamShell	0.940	1.010	0.740	03850 281 6215
28	0.030	QFP	0.360	0.390	0.063	ClamShell	1.140	1.010	0.750	04113 281 6217
28	**	--	3.700	2.020	0.310	OpenTop	4.500	3.250	2.200	07550 SKT ASSY
33	0.035	ABB HAFO	0.742	0.349	0.028	ClamShell	1.630	2.060	0.780	03706 331 6215
34	**	--	0.610	0.480	0.115	ClamShell	1.670	1.460	0.720	03711 251 6215
34	0.025	--	0.815	0.510	0.115	ClamShell	1.670	1.460	0.720	03712 171 6215
36	0.040	ABB HAFO AB	0.730	0.480	0.094	ClamShell	1.630	2.060	0.780	03716 361 6215
36	0.039	--	0.874	0.492	0.256	ClamShell	1.280	1.160	0.780	03787 361 6217
40	0.050	TapePak	0.682	0.682	0.127	OpenTop	1.100	1.100	0.750	03567 401 6255
40	0.040	QFP	0.480	0.480	0.113	ClamShell	1.300	1.050	1.000	03801 401 6215
44	0.050	QFP	0.650	0.650	0.120	ClamShell	1.610	1.470	0.780	04115 441 6217
47	**	--	2.700	1.756	0.160	OpenTop	4.000	2.900	2.200	07579 SKT ASSY
53	0.030	--	0.807	0.627	0.115	ClamShell	1.670	1.460	0.720	03711 531 6215
101	0.028	--	1.001	0.850	0.115	ClamShell	1.670	1.460	0.720	03711 A11 6215
104	0.025	--	0.890	0.890	0.115	ClamShell	1.670	1.460	0.720	03711 A41 6215
128	0.025	--	1.175	1.010	0.115	ClamShell	1.870	1.460	0.720	03711 C81 6215
136	0.026	TapePak	1.405	1.405	0.189	OpenTop	1.875	1.875	0.570	03570 D61 6255
**	**	--	***	***	***		4.000	3.000	2.160	07121 SKT ASSY



** Pitch is not available due to package configuration -- Contact Sales for device sizes and specifications



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LCC w/Castellations Sockets



Design Features

- For "Live Bug" and "Dead Bug" Burn-in and Testing Independent of Package Thickness
- Positive Wiping Action Insures Reliable Contacts Deep Inside Castellations
- Dual Style Load and Unload Features

I/O	Pitch (in)	Pkg Name	Pkg Body L (in)	Pkg Body W (in)	Pkg H / T (in)	Socket Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
2	**	LCC	0.126	0.063	0.043	OpenTop	0.515	0.210	0.360	03713 021 621B
3	0.038	LCC	0.120	0.100	0.051	ClamShell	0.770	0.510	0.710	03432 031 6217
3	0.038	LCC	0.120	0.100	0.062	ClamShell	0.770	0.510	0.710	03432 031 6218A
4	0.200	LCC	0.400	0.340	0.095	ClamShell	1.340	0.620	0.750	03337 161S6218D
4	0.050	LCC	**	**	**	OpenTop	0.635	0.335	0.725	03451 041 6215
4	0.200	LCC	0.275	0.200	0.090	OpenTop	0.870	0.620	0.670	03454 161 X2X8
4	0.150	LCC	0.300	0.240	0.090	ClamShell	1.340	0.620	0.750	03771 041 6215
4	0.300	Oscillator	0.910	0.710	0.142	ClamShell	1.270	1.160	0.780	04342 041 6215
4	0.296	Oscillator	0.700	0.464	0.230	ClamShell	1.340	0.760	0.750	04347 041 6215
4	0.296	Oscillator	0.752	0.444	0.036	ClamShell	1.390	0.760	0.750	04348 041 6215
5	**	LCC	1.150	1.000	0.395	OpenTop	1.410	1.350	0.700	04018 051 6215
6	0.050	LCC	0.245	0.170	0.065	OpenTop	0.640	0.360	0.690	03451 061 6215
6	0.100	LCC	0.295	0.200	0.089	OpenTop	0.590	0.415	0.650	03451 101 6218A
6	0.100	LCC	0.276	0.197	0.063	OpenTop	0.720	0.630	0.710	03451 131 6218A
6	0.050	LCC	0.180	0.180	0.042	OpenTop	0.570	0.360	0.690	03452 061 6215
6	0.100	LCC	0.430	0.340	0.105	OpenTop	0.850	0.750	0.710	03456 061 6215
6	0.100	LCC	0.550	0.350	0.135	OpenTop	0.850	0.750	0.840	03457 061 6215
6	0.100	LCC	0.553	0.353	0.135	OpenTop	0.850	0.750	0.710	03457 061 6218A
6	0.100	LCC	0.805	0.510	0.215	OpenTop	1.070	0.930	0.700	03460 061 6255
6	0.050	LCC	0.245	0.170	0.068	ClamShell	0.810	0.600	0.740	04270 061 6217
6	0.100	Oscillator	0.808	0.540	0.215	ClamShell	1.220	0.940	0.740	04347 061 6215
6	0.100	Oscillator	0.808	0.540	0.225	ClamShell	1.220	0.940	0.740	04348 061 6215
8	0.050	LCC	0.220	0.220	0.045	OpenTop	0.620	0.620	0.650	03450 081 6215
8	0.055	LCC	0.175	0.120	0.070	ClamShell	1.340	0.620	0.750	03770 081 6215
8	0.050	LCC	0.217	0.217	0.055	ClamShell	0.810	0.680	0.740	03853 081 6217
8	0.050	LCC	0.197	0.197	0.037	ClamShell	0.810	0.680	0.740	03853 081 6218A
8	0.050	LCC	0.197	0.126	0.056	OpenTop	0.600	0.500	0.580	04051 081 6215
10	0.050	LCC	0.276	0.197	0.067	OpenTop	0.590	0.415	0.650	03451 101 6215
10	0.050	LCC	0.295	0.195	0.070	OpenTop	0.590	0.415	0.650	03451 101 6218
10	0.050	LCC	0.276	0.197	0.075	OpenTop	0.730	0.730	0.700	03452 101 6215
10	0.100	LCC	0.550	0.450	0.130	OpenTop	0.850	0.950	0.730	03455 101 6255
10	0.044	LCC	0.197	0.126	0.045	OpenTop	0.600	0.500	0.580	04051 101 6215
12	0.050	LCC	0.180	0.180	0.075	OpenTop	0.620	0.620	0.650	03450 121 6215
12	0.040	LCC	0.180	0.180	0.067	OpenTop	0.620	0.620	0.650	03458 121 6215
12	0.050	LCC	0.253	0.253	0.045	ClamShell	0.920	0.710	0.710	03853 121 6217

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LCC w/Castellations Sockets

I/O	Pitch (in)	Pkg Name	Pkg Body L (in)	Pkg Body W (in)	Pkg H / T (in)	Socket Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
12	0.050	LCC	0.202	0.202	0.047	ClamShell	0.770	0.600	0.710	03854 131 6217
12	0.100	LCC	0.700	0.450	0.136	ClamShell	1.280	1.160	0.780	04361 121 6218A
12	0.050	LCC	0.217	0.217	0.106	ClamShell	0.920	0.710	0.730	04365 121 6215
13	0.050	LCC	0.278	0.200	0.067	OpenTop	0.720	0.630	0.710	03451 131 6215
13	0.100	LCC	1.000	1.200	0.195	OpenTop	1.590	1.260	0.700	04018 131 6255
14	0.100	LCC	0.800	0.540	0.260	OpenTop	1.070	0.930	0.700	03460 141 6255
14	0.100	LCC	0.895	0.595	0.136	ClamShell	1.280	1.160	0.780	04362 141 6218A
16	0.050	LCC	0.410	0.230	0.070	OpenTop	0.870	0.620	0.670	03453 161 6215
16	0.050	LCC	0.410	0.150	0.045	OpenTop	0.870	0.620	0.670	03454 161 6215
16	0.050	LCC	0.353	0.288	0.105	ClamShell	0.940	0.760	0.740	03852 181 6218A
16	0.050	LCC 16 PAD	0.277	0.277	0.065	OpenTop	0.730	0.730	0.590	04040 16D 6215
18	0.050	LCC	***	***	***	OpenTop	0.885	0.745	0.740	03451 181 6215
18	0.050	LCC	0.350	0.285	0.070	OpenTop	0.750	0.685	0.710	03452 181 6215A
18	0.050	LCC	0.353	0.288	0.105	OpenTop	0.750	0.685	0.710	03452 181 6218B
18	0.050	LCC	**	**	**	OpenTop	0.760	0.735	0.740	03452 181 X215
18	0.050	LCC	***	***	***	OpenTop	0.810	0.745	0.740	03452 181 X255
18	0.050	LCC	0.250	0.250	0.064	ClamShell	0.920	0.710	0.710	03853 181 6217
18	0.050	LCC	0.250	0.250	0.088	Clamshell	1.280	1.160	0.780	063SQ 018J6617
20	0.050	LCC	0.350	0.350	0.070	OpenTop	0.750	0.750	0.740	03450 201 6215B
20	0.050	LCC	0.350	0.350	0.070	OpenTop	0.810	0.810	0.740	03450 201 6218A
20	0.050	LCC	0.350	0.350	0.070	OpenTop	0.750	0.750	0.710	03450 201PX215B
20	0.050	LCC	0.350	0.350	0.077	ClamShell	0.950	0.760	0.740	03853 201 6217
20	0.050	LCC 20 PAD	0.350	0.350	0.083	OpenTop	0.730	0.730	0.590	04040 20D 6215A
22	0.050	LCC	0.377	0.342	0.060	OpenTop	0.785	0.730	0.720	03452 221 6215
24	0.050	LCC	**	**	**	OpenTop	0.850	0.850	0.725	03450 241 6215
25	0.050	LCC	0.450	0.450	0.085	ClamShell	1.030	0.860	0.740	03853 281 6217
28	0.050	LCC	0.450	0.450	0.070	OpenTop	0.850	0.850	0.710	03450 281 6215B
28	0.050	LCC	0.450	0.450	0.070	OpenTop	0.850	0.850	0.710	03450 281 6255C
28	0.050	LCC	0.450	0.450	0.070	OpenTop	0.910	0.910	0.740	03450 281 6255D
28	0.050	LCC	***	***	***	OpenTop	0.910	0.910	0.740	03450 281 X255
28	0.050	LCC	***	***	***	OpenTop	0.910	0.910	0.740	03450 281PX255
28	0.050	LCC	0.450	0.386	0.098	OpenTop	0.880	0.810	0.710	03451 281 6258
28	0.050	LCC	0.450	0.378	0.098	OpenTop	0.880	0.810	0.730	03451 281 6258A
28	0.050	LCC	0.451	0.451	0.076	OpenTop	0.830	0.830	0.590	04040 28D 6215A
32	0.050	LCC	0.551	0.450	0.080	OpenTop	0.850	0.950	0.740	03451 321 6215A
32	0.050	LCC	0.551	0.450	0.080	OpenTop	0.850	0.950	0.730	03451 321PX215A
32	0.050	LCC	0.700	0.450	0.080	OpenTop	1.100	0.850	0.730	03452 321 6215
32	0.050	LCC	0.820	0.400	0.090	ClamShell	1.230	1.160	0.780	03850 321 6215
40	0.040	LCC	0.480	0.480	0.070	OpenTop	0.870	0.870	0.600	04040 40D 6215B
48	0.040	LCC	0.560	0.560	0.088	Clamshell	1.280	1.160	0.780	04440 481 6215
49	0.031	LCC	0.450	0.450	0.089	ClamShell	1.030	0.860	0.740	03719 491 6217
68	0.025	LCC	0.560	0.560	0.088	Clamshell	1.280	1.160	0.630	04440 681 6217
84	0.040	LCC	0.920	0.920	0.081	OpenTop	1.330	1.330	0.710	03458 841 6215
84	0.050	LCC	1.150	1.150	0.080	ClamShell	1.860	1.570	0.750	03853 841 6217
84	0.050	LCC	1.150	1.150	0.080	ClamShell	1.860	1.570	0.750	03853 841 6218A

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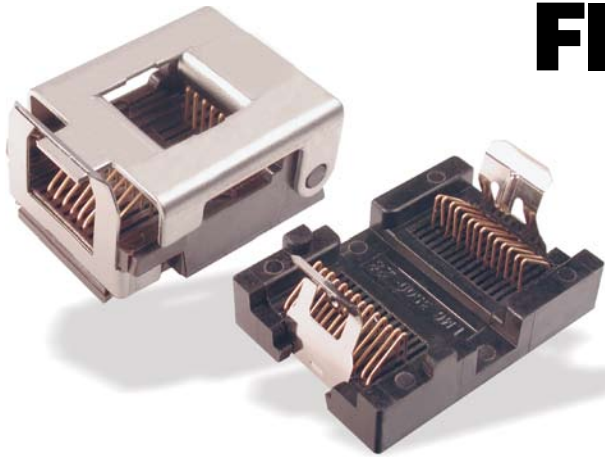
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FlatPack Sockets



Design Features

OpenTop Sockets

- Easily Auto Load / Unload Packages
- OpenTop Promotes Better Air Flow Around Device
- Lowest Price for Burn-in and Test

ClamShell Sockets

- Rugged Construction
- Reliable Connections with Wire-formed Contacts

I/O	Pitch (in)	Pkg Name	Pkg Body L (in)	Pkg Body W (in)	Pkg Body H/T (in)	Socket Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
3	**	FlatPack	0.250	0.250	0.112	ClamShell	0.860	0.700	0.730	03466 071 6215
3	**	DO / SOD	***	***	***	ClamShell	1.670	1.460	0.720	03711 032 621A
7	0.045	FlatPack	0.260	0.215	0.055	ClamShell	1.540	0.870	0.750	03708 081 6218A
8	**	FlatPack	0.250	0.250	0.152	ClamShell	0.900	0.760	0.740	03467 081 6215
8	0.250	FlatPack	***	***	***	OpenTop	1.180	0.320	0.660	03533 061 X2X8C
8	0.050	FlatPack	***	***	***	ClamShell	1.205	0.885	0.635	03600 082 X429
8	0.045	FlatPack	0.420	0.420	0.060	ClamShell	1.560	0.870	0.860	03708 081 6215
8	0.045	FlatPack	0.260	0.215	0.060	ClamShell	1.528	0.860	0.750	03708 081 X2X8
10	0.106	MMIC	0.388	0.328	0.055	ClamShell	1.590	0.910	0.615	03368 101 ASSY
10	0.050	FlatPack	0.255	0.255	0.093	ClamShell	1.040	0.510	0.730	04325 101 6217
11	0.045	FlatPack	0.260	0.335	0.065	ClamShell	1.560	0.870	0.860	03707 111 6215
13	0.060	Hybrid FlatPack	1.370	1.370	0.165	ClamShell	1.045	0.525	0.614	03351 131 6215
14	0.050	Butterfly FlatPack	***	***	***	OpenTop	1.310	0.820	0.710	03194 141 6211
14	0.050	FlatPack	1.000	0.750	0.175	ClamShell	1.370	0.840	0.640	03370 141 6215
16	0.050	Butterfly FlatPack	***	***	***	OpenTop	1.310	0.820	0.710	03194 161 6211
16	0.050	Adapter	***	***	***	OpenTop	1.310	0.910	0.760	03227 161 1215
16	0.050	Adapter	***	***	***	OpenTop	1.310	0.910	0.760	03229 161 1215
16	0.050	Adapter	***	***	***	OpenTop	1.310	0.910	0.880	03230 161 1215
16	0.040	FlatPack	1.370	1.370	***	OpenTop	1.310	0.820	0.710	03250 161 6211
16	0.050	Hybrid FlatPack	1.370	1.370	0.165	ClamShell	1.045	0.525	0.614	03350 161 6215
16	0.050	Hybrid FlatPack	***	***	***	ClamShell	1.045	0.525	0.614	03350 161 6218D
16	0.050	FlatPack	1.370	1.370	0.165	ClamShell	1.370	0.840	0.640	03370 161 6215
16	0.030	FlatPack	0.230	0.230	0.055	ClamShell	1.070	1.020	0.750	03725 161 6217
16	0.030	FlatPack	0.230	0.230	0.052	ClamShell	1.130	1.020	0.745	03725 161 X25A
16	0.050	FlatPack	0.441	0.293	0.119	ClamShell	1.070	0.550	0.750	04123 161 6217
16	0.050	FlatPack	0.441	0.293	0.136	ClamShell	1.120	0.550	0.750	04123 161 6218A
22	0.040	FlatPack	0.500	0.460	0.113	ClamShell	1.210	1.090	0.850	03466 221 6215
24	0.050	Butterfly FlatPack	***	***	***	OpenTop	1.310	0.820	0.710	03194 241 6215
24	0.050	FlatPack	***	***	***	ClamShell	1.600	0.820	0.640	03370 241 6215

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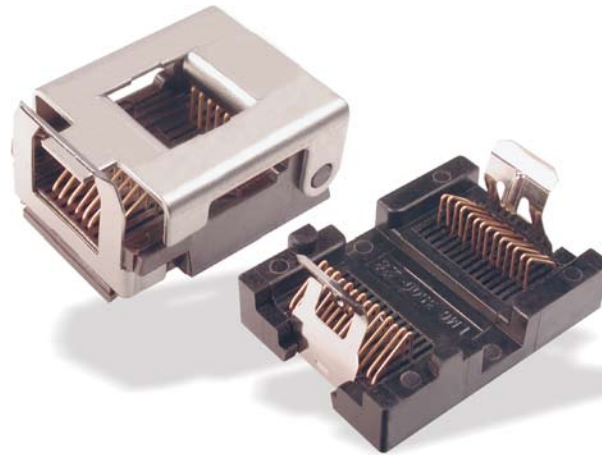
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FlatPack Sockets

I/O	Pitch (in)	Pkg Name	Pkg Body L (in)	Pkg Body W (in)	Pkg Body H/T (in)	Socket Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
28	0.050	FlatPack	***	***	***	OpenTop	1.580	1.160	0.710	03500 281 6211
30	0.050	FlatPack	1.250	1.250	***	OpenTop	1.580	1.160	0.710	03500 301 6215
36	0.050	FlatPack	0.732	0.335	0.161	ClamShell	1.350	1.470	0.750	04114 361 6215
40	Multi	FlatPack	1.550	0.714	0.551	ClamShell	2.660	1.540	0.730	223181040 6217
40	Multi	FlatPack	1.550	0.714	1.390	ClamShell	1.810	1.540	0.575	223181040 6218A
44	0.050	FlatPack	2.000	2.000	***	ClamShell	2.530	2.130	1.130	02900 441 6215
46	0.050	FlatPack	***	***	***	ClamShell	2.530	2.130	1.130	02900 461 6215
48	0.040	CQFP	0.565	0.565	0.113	ClamShell	2.500	2.640	0.780	03701 681 6218B
50	0.050	FlatPack	***	***	***	ClamShell	2.530	2.130	1.130	02900 501 6215
64	0.050	FlatPack	***	***	***	ClamShell	2.500	2.640	0.900	03700 641 6215
64	0.050	FlatPack	1.730	0.705	0.195	ClamShell	2.100	2.090	0.730	04437 641 6217
68	0.040	CQFP	0.755	0.755	0.070	ClamShell	2.500	2.640	0.880	03701 681 6215
68	0.050	FlatPack	1.180	1.370	0.165	ClamShell	2.500	2.640	0.900	03702 682 6215
74	0.050	FlatPack	1.995	0.890	0.165	ClamShell	2.280	2.340	0.730	04437 741 6217
84	0.020	CQFP	1.100	0.900	0.155	ClamShell	2.810	1.450	0.740	04250 841 6217
100	0.026	--	1.405	1.405	***	OpenTop	1.875	1.875	0.570	03570 A01BX255
136	0.026	--	1.405	1.405	***	OpenTop	1.875	1.875	0.570	03570 D61PX255
192	0.026	--	1.405	1.405	***	OpenTop	1.875	1.875	0.570	03570 J21 X255
192	0.026	--	1.405	1.405	***	OpenTop	1.875	1.875	0.570	03570 J21BX255
332	Multi	FlatPack	1.550	0.714	0.139	ClamShell	2.660	1.540	0.730	223181334M6617
332	Multi	FlatPack	1.550	0.714	0.139	ClamShell	2.660	1.540	0.255	223181334M6618A



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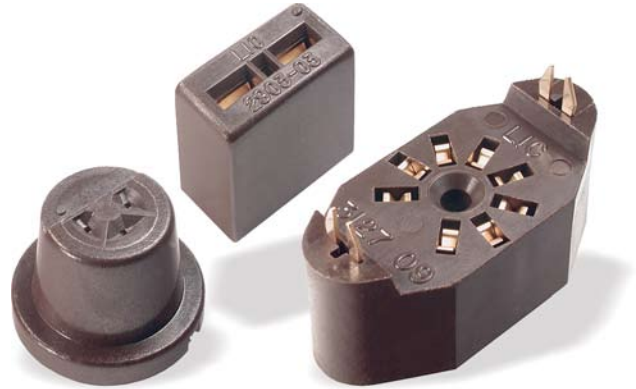
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TO Sockets

Design Features

- *Top-loading Sockets for Burn-in and Test*
- *Kelvin and Single-sided Contacts*
- *Small Size Offers Maximum Board Density*
- *Package Standoffs Aid DUT Removal*
- *Wide Funnel Entry Guides Device Leads*



I/O	Pitch (in)	Pkg Name	Pin Circle Dia (in)	Socket L (in)	Socket W (in)	Socket H (in)	P/N
1	**		TO	0.720	0.490	0.870	03534 052 X258
2	0.200		--	1.250	0.400	0.780	02901 032 6218A
2	0.100		TO-220	1.250	0.400	0.780	02902 032 6218A
2	0.105		TO	0.710	0.540	0.610	03548 051 X2X8D
2	0.105		TO	0.710	0.540	0.610	03548 051 X2X8E
2	0.201		TO-273	0.570	0.420	0.940	03664 031 6215
3	0.067		TO-92	0.860	0.400	0.780	02447 031 6215
3	0.067		TO-92	1.250	0.400	0.780	02447 032 6215
3	0.150		TO-254	0.590	0.400	0.750	02475 031 6215
3	**		TO-61, -62, -63	1.760	0.760	0.760	02542 032 6215
3	**		TO-39	0.200	0.610	0.610	02767 031 6215
3	**		TO-5	0.200	0.610	0.730	02789 031 6215
3	**		TO-5	0.200	0.620	0.670	02789 031 6215A
3	**		TO-5, TO-39	0.200	0.860	0.670	02789 031 6215B
3	**		TO-5	0.200	1.060	0.602	02789 032 6215
3	0.100		TO-220	0.860	0.400	0.780	02901 031 6215
3	0.100		TO-220	1.250	0.400	0.780	02901 032 6215
3	0.100		TO-220	1.250	0.400	0.780	02902 032 6215
3	0.253		TO-3P, 126, 127, 202, 218, 220, 221, 225, 247, etc	0.760	0.410	0.850	02903 031 5215A
3	0.222		TO-3P, -126 (Case 77-04), -127 (Case 90-05) -202 etc	0.760	0.410	0.850	02903 031 6215
3	0.222		TO-3P, 126, 127, 202, 218, 220, 221, 225, 247, etc	0.760	0.410	0.850	02903 031 6215A
3	0.222		TO-3P, 126, 127, 202, 218, 220, 221, 225, 247, etc	0.760	0.410	0.850	02903 031 6218B
3	0.222		TO-3P, 126, 127, 202, 218, 220, 221, 225, 247, etc	0.760	0.410	0.850	02903 031 6415A
3	0.253		TO-3P, 126, 127, 202, 218, 220, 221, 225, 247, etc	0.760	0.410	0.850	02903 031 ASSY
3	0.253		TO-3P, 126, 127, 202, 218, 220, 221, 225, 247, etc	0.760	0.410	0.850	02903 031 HSAS
3	0.222		TO-3P	1.470	0.410	0.850	02903 032 6215
3	0.222		TO-3P	1.470	0.410	0.850	02903 032 6415A
3	0.430		TO-3	1.540	0.720	0.895	03127 032 6215
3	0.430		TO-3, TO-204	1.540	0.720	0.870	03128 032 6215
3	0.430		TO-3, TO-204	1.540	0.720	0.870	03128 032 6215A

** Pitch is not available due to package configuration



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TO Sockets

I/O	Pitch (in)	Pkg Name	Pin Circle Dia (in)	Socket L (in)	Socket W (in)	Socket H (in)	P/N
3	0.091	TO-252AA, TO-252AD		1.250	0.820	0.750	03360 061 6215
3	0.200	TO-66, 124, 213, 423		1.540	0.720	0.870	03534 032 6215
3	0.150	TO		1.690	0.540	0.930	03651 052 6118A
3	0.100	TO-220, D2 PAK, 418B-02		0.540	0.390	1.040	03660 031 6215
3	0.100	TO-220, D2 PAK		0.540	0.390	1.040	03660 031 6218B
3	0.100	TO-220, D2 PAK		0.540	0.390	1.040	03660 031 6218C
3	0.100	TO-220, D2 PAK		0.540	0.390	1.040	03660 031 6218D
3	0.100	TO-263		0.540	0.390	1.040	03660 031 6218E
3	0.100	TO-263		0.540	0.390	1.040	03660 031 6218F
3	0.100	TO-220, D2 PAK		0.550	0.400	1.050	03660 031 6258
3	0.100	TO-273		0.570	0.420	0.940	03663 031 6215
3	0.181	TO-252AA, DPAK		1.070	0.510	0.740	04241 031 6218A
3	0.090	--		1.020	0.510	0.740	04241 031 6218B
3	0.090	TO-252		1.070	0.510	0.740	04241 031 6218C
3	0.091	TO-252		1.070	0.510	0.740	04241 031 6218D
3	0.091	I-PAK		1.070	0.510	0.740	04241 031 6218E
3	0.100	SUPER D2 PAK, TO-220		1.670	0.560	0.740	04242 031 6215
3	0.090	TO		1.020	0.500	0.730	04248 031 6217
3	0.091	TO		1.070	0.510	0.740	04249 031 6215
3	0.090	TO		1.070	0.510	0.740	04249 031 6218A
4	**	TO-5 in Carrier		1.010	0.740	0.600	02737 082 6228A
4	**	TO-5	0.200	0.610	0.610	0.660	02767 041 6215
4	**	TO-5		0.615	0.615	0.760	02789 041 6215A
4	**	TO-5	0.200	1.040	0.603	0.730	02789 042 6215
4	0.050	TO		0.330	0.260	0.580	02950 041 6215
4	0.050	TO		0.330	0.260	0.580	02950 041 X22C
4	**	P003-S	0.500	1.540	0.750	0.895	03127 092 6218A
4	0.050	TO-5 and -18	0.100-0.200	0.610	0.610	0.770	03518 041 6218B
4	0.050	TO-5 and -18	0.100-0.200	0.610	0.610	0.770	03518 041 6218C
4	**	TO-5 and -18	0.100-0.200	0.610	0.610	0.770	03518 041 6255A
4	**	TO-5 and -18	0.100-0.200	0.610	0.610	0.770	03518 042 6255
4	**	TO-HEADER	0.056	0.490	0.200	0.730	03520 041 6255
4	0.105	TO		0.710	0.540	0.610	03548 051 X2X8A
4	0.091	SOT-223, TO-261		1.070	0.510	0.740	04243 041 6215
4	0.045	P-TO-252-5-1		1.240	0.510	0.740	04244 041 6215
4	0.050	TO-252		1.120	0.510	0.740	04244 051 6218A
4	0.050	PPAK		1.250	0.510	0.740	04244 061 6217
4	0.067	TO-263-5-2		1.240	0.510	0.740	04245 041 6215
4	0.200	TO-263		1.220	0.510	0.740	04246 041 6218
4	0.100	TO-263		1.190	0.510	0.740	04246 041 6218A
4	0.059	SOT-89		1.120	0.510	0.740	04253 041 6217
4	0.040	TO-HEADER		0.460	0.230	0.360	04520 041 621A

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TO Sockets

I/O	Pitch (in)	Pkg Name	Pin Circle Dia (in)	Socket L (in)	Socket W (in)	Socket H (in)	P/N
4	Multi	TO-220		0.550	0.490	0.350	04522 061 6218B
5	**	TO-46	0.200	0.610	0.610	0.650	02767 051 6215
5	**	TO-3, 66, 123, 124, 204, 213		1.540	0.720	0.870	03534 052 6215
5	0.200	TO-3, 204 / TO-66, -213, -123, -124		1.540	0.720	0.870	03534 052 6215A
5	0.200	TO-3, 204 / TO-66, -213, -123, -124		1.540	0.720	0.870	03534 052 6218C
5	**	TO-3GK		1.550	0.760	0.860	03544 052 6215
5	0.105	TO-3P, -126, -152		0.710	0.540	0.640	03548 051 6215
5	0.105	TO		0.710	0.540	0.610	03548 051 6218B
5	0.105	TO		0.710	0.540	0.610	03548 051 X258
5	0.105	TO-220, -218, -247 and -3		1.510	0.540	0.850	03650 052 6115
5	0.150	TO		1.690	0.540	0.930	03651 052 6115
5	0.050	TO-252		1.120	0.510	0.740	04244 051 6215
6	**	TO-5	0.200	0.610	0.610	0.660	02767 061 6215
6	**	TO-5	0.200	0.860	0.860	0.720	02789 061 6215A
6	0.050	TO-220		1.430	0.530	0.740	04225 071 6215
6	0.050	TO-220		1.430	0.530	0.740	04235 071 6215
6	0.050	TO-263		1.170	0.650	0.740	04257 061 6217
6	Multi	TO-HEADER		0.550	0.490	0.350	04522 061 6218A
7	0.067	TO-220 5L		0.620	0.550	0.580	03561 071 6218B
7	0.050	TO-220, DD PAK		0.510	0.530	0.940	03660 071TX215
7	0.050	TO-220, D2 PAK		0.510	0.530	0.940	03660 071X6215
7	0.034	TO-252		1.080	0.510	0.740	04185 081 6218A
7	0.050	TO-263, -267		1.220	0.650	0.740	04255 071 6217
7	0.050	TO-263		1.220	0.650	0.740	04255 071 6218A
7	0.050	TO-263		1.170	0.650	0.740	04255 071 6218B
8	**	TO-5 in Carrier		1.010	0.740	0.660	02737 082 6225
8	**	TO-5	0.200	0.610	0.610	0.660	02767 081 6215
8	**	TO-5	0.230	0.630	0.630	0.660	02768 081 6215
8	**	TO-5	0.200	0.860	0.860	0.710	02789 081 6215
9	**	TO-3	0.500	1.540	0.760	0.895	03127 092 6215
10	**	TO-5 in Carrier		1.010	0.740	0.600	02737 102 6225
10	**	TO-100 in Carrier, TO-230		1.010	0.740	0.590	02738 102 6225
10	**	TO-5	0.200	0.610	0.610	0.660	02767 101 6215
10	**	TO-5 /L10	0.200	0.610	0.610	0.530	02767 101 6218A
11	0.067	TO-220		0.960	0.550	0.600	03551 111 6215
11	0.067	TO-218		0.890	0.550	0.690	03561 111 6215
12	0.100	TO-8		1.010	0.870	0.740	02998 121 6225
12	0.095	TO-8		0.710	0.710	0.770	03162 121 6215A
12	0.150	TO		1.810	0.870	**	03515 121 X2X5
12	0.067	TO-220		0.700	0.950	1.030	03551 121 6215
15	0.050	--		0.910	0.530	0.940	03660 151 6215
15	0.050	--		0.910	0.530	0.940	03660 151 X255

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TO Sockets

I/O	Pitch (in)	Pkg Name	Pin Circle Dia (in)	Socket L (in)	Socket W (in)	Socket H (in)	P/N
15	0.050		--	0.910	0.530	0.940	03660 151BX2X5
15	0.050		--	0.910	0.530	0.940	03660 151TX2X5
15	0.050	KTD/KTS		1.350	0.910	0.530	04236 151 1218A
15	0.050		--	1.140	0.910	0.770	04236 151 6215
16	**	MO-097 / TO-204	0.600	1.540	0.885	0.700	03127 162 6215
23	Multi	Smart Power 23 lead		1.430	1.620	0.445	04540 301 6218A
27	0.039	Flexiwatt-SMD-27		1.350	1.590	0.750	04227 271 6217
27	0.039	Flexiwatt-SMD-27		3.000	1.840	1.400	04227 271 6218A



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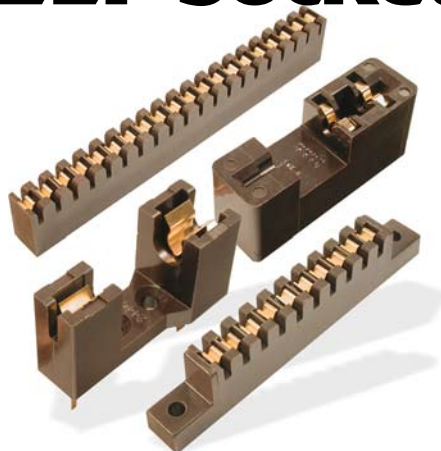
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Axial, Radial & MELF Sockets

Design Features

- *Building-block Stripsockets for Automated Carrier Packaging*
- *Accepts Multiple-lead Diameters*
- *Excellent Contact Design for Wiping Action on Lead's Diameter*
- *Tailored for Production, Burn-in and Testing*
- *Modifications Available*



I/O	Pitch (in)	Pkg Type	Pkg Name	Socket Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
2	**	Stud Mount	--	OpenTop	0.920	0.570	0.780	02445 021 6215
2	**	--	DO-4, 5	OpenTop	1.485	0.570	0.780	02446 022 6215
2	**	--	--	OpenTop	1.800	0.370	0.780	03186 021 6215
2	**	--	--	OpenTop	1.800	0.370	0.780	03186 021 X2X8
2	**	Res / Cap	--	ClamShell	1.700	0.910	0.760	03335 121 6215
2	**	Kemet Tantalum	--	ClamShell	1.390	0.620	0.750	03337 161S6218Y
2	**	--	--	OpenTop	0.635	0.270	0.725	03451 041 6218B
2	**	--	--	OpenTop	0.635	0.270	0.725	03451 041 6218C
2	**	--	--	OpenTop	0.635	0.270	0.725	03451 041 6218D
2	**	--	--	OpenTop	0.635	0.270	0.725	03451 041 X2X5B
2	**	--	DO-213AA	OpenTop	0.870	0.560	0.690	03480 101 6215
2	**	--	DO-213AB/TO-41	OpenTop	0.870	0.620	0.690	03481 101 6215
2	**	--	DO-213AB/TO-41	OpenTop	0.870	0.620	0.690	03481 101 6218
2	0.130	Dual Diode	--	OpenTop	0.315	0.315	0.690	03532 021 6215
2	0.190	Hybrid	--	OpenTop	0.430	0.200	0.680	03533 021 6215
2	0.300	--	PSP-20, 22D	OpenTop	1.380	0.460	0.630	03555 021 6215
3	**	--	ODS-819	ClamShell	1.870	1.220	0.760	03343 081 6215
3	**	--	ODS-115 -180	ClamShell	1.870	1.220	0.760	03344 061 6215
3	0.150	--	--	OpenTop	0.880	0.185	0.690	03533 031 6215
4	0.190	--	--	OpenTop	0.875	0.185	0.690	03533 081 6218A
6	0.200	--	--	OpenTop	1.230	0.360	0.635	02992 101 6218F
6	0.125	--	--	OpenTop	0.940	0.540	0.690	03533 061 6215
6	0.125	--	--	OpenTop	0.940	0.540	0.690	03533 061 6218D
6	0.125	--	--	OpenTop	0.940	0.540	0.690	03533 061 6218E
6	0.200	--	--	OpenTop	1.600	0.310	0.630	03600 061 6218A
8	0.190	--	--	OpenTop	1.635	0.185	0.690	03533 081 6215
8	0.148	--	--	OpenTop	1.635	0.185	0.690	03533S081 6215
8	0.200	--	--	OpenTop	1.600	0.310	0.630	03600 081 6218A
8	0.200	--	--	OpenTop	1.600	0.270	0.630	03600 251 6218E
9	0.100	--	--	OpenTop	1.030	0.330	0.690	03533 091 6215
10	0.200	--	--	OpenTop	2.000	0.360	0.690	02992 101 6215A
10	0.200	--	--	OpenTop	3.010	0.360	0.690	02992 102 6215

** Pitch is not available due to package configuration -- Contact sales for specifications



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Axial, Radial & MELF Sockets

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14	0.200	--	--	OpenTop	1.600	0.310	0.650	03600 251 6218B
16	0.200	--	--	OpenTop	2.300	0.310	0.650	03600 082 6215
18	0.200	--	--	OpenTop	3.600	0.360	0.640	02992 181 6215A
19	0.200	--	--	OpenTop	3.650	0.360	0.620	03546 191 6215
19	0.200	--	--	OpenTop	3.650	0.360	0.600	03546 191 6218
20	0.200	--	--	OpenTop	4.000	0.360	0.640	02991 201 6215A
20	0.200	--	--	OpenTop	4.000	0.036	0.640	02991 201 X255A
20	0.200	--	--	OpenTop	4.000	0.360	0.640	02992 201 6215A
20	0.225	--	--	OpenTop	4.990	0.725	0.640	03549 201 6215
21	0.200	--	--	OpenTop	4.030	0.360	0.640	03547 211 6215
21	0.200	--	--	OpenTop	4.030	0.360	0.640	03547 211 6218
22	0.100	--	--	OpenTop	2.180	1.610	0.270	035XX SKT SET
24	Multi	--	--	OpenTop				03600 241 ASSY
25	0.200	--	--	OpenTop	5.000	0.360	0.640	02991 251 6215A
25	0.200	--	--	OpenTop	5.000	0.360	0.640	02991 251 X2X5
25	0.200	--	--	OpenTop	5.000	0.360	0.640	02992 251 6215A
25	0.200	--	--	OpenTop	5.000	0.360	0.640	02992 251 6218D
25	0.200	--	--	OpenTop	6.010	0.360	0.640	02992 252 6215
25	0.180	--	--	OpenTop	4.670	0.360	0.630	03312 251 6251
25	0.200	--	--	OpenTop	5.000	0.310	0.650	03600 251 6215
25	0.200	--	--	OpenTop	5.000	0.710	0.650	03600 252 6215
25	0.300	--	--	OpenTop	7.510	0.310	0.650	03630 251 6215
25	0.300	--	--	OpenTop	7.510	0.310	0.650	03630 251 X455



** Pitch is not available due to package configuration -- Contact Sales for specifications



“Your Complete Burn-in Source for Sockets, Boards and Systems”

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DIP Sockets



Design Features

- *High-side Contacts Accept Misaligned Leads*
- *Positive Contact Wiping Action*
- *Easy Removal with Dipstick Unloading Tool or Fingertip Insertion and Withdrawal*
- *Standoffs Help Board Cleaning and Decrease Solder Wicking*

I/O	Pitch (in)	Pkg Name	Row-to-Row (in)	Socket L (in)	Socket W (in)	Socket H (in)	P/N
6	0.100	DIP		0.710	0.580	0.580	03235 241 6218E
10	0.050	DIP		0.700	0.570	0.570	03235 241 6218D
10	0.050	DIP		0.710	0.580	0.580	03235 241 6218F
10	0.100	D-10		0.840	0.300	0.630	03600 251 X458
12	0.100	DIP	0.900	1.100	0.300	0.650	02993 121 6215
12	0.050	DIP	0.300	0.700	0.570	0.570	03235 241 6218B
14	0.100	Side-brazed DIP	0.300	0.810	0.590	0.590	02758 141 6215
14	0.100	DIP	0.300	0.810	0.570	0.600	03111 141 6215
16	0.100	Side-brazed DIP	0.300	0.910	0.590	0.590	02758 161 6215
16	0.100	Side-brazed DIP		1.110	0.590	0.590	02758 201 6218B
16	0.100	DIP	0.300	0.910	0.570	0.700	03111 161 6215
16	0.100	DIP	0.300	1.110	0.570	0.600	03111 201 6218A
16	0.050	DIP	0.300	0.710	0.580	0.580	03235 241 6218A
18	0.100	Side-brazed DIP	0.400	1.010	0.590	0.580	02758 181 6215
18	0.100	Side-brazed DIP	0.600	1.270	0.805	0.250	03000 182 0428
18	0.100	DIP	0.300	1.010	0.570	0.600	03111 181 6215
19	0.100	Hybrid DIP	0.875	1.290	1.070	0.390	03140 192 6215
20	0.100	Side-brazed DIP	0.300	1.110	0.590	0.590	02758 201 6215
20	0.100	DIP	0.300	1.110	0.570	0.600	03111 201 6215
20	0.050	DIP		0.710	0.580	0.580	03235 241 6218
22	0.100	Side-brazed DIP	0.400	1.210	0.690	0.590	02758 221 6211
22	0.100	DIP	0.400	1.210	0.690	0.600	03111 221 6215
24	0.100	Side-brazed DIP	0.600	1.310	0.900	0.610	02758 241 6211
24	0.100	DIP	0.600	1.310	0.870	0.600	03111 241 6215
24	0.050	DIP	0.300	0.710	0.580	0.580	03235 241 6215
27	Multi	SPM27-BA & BB		2.040	2.100	0.525	03570 271 6217
28	0.100	Side-brazed DIP	0.600	1.520	0.900	0.590	02758 281 X2X1
28	0.100	Side-brazed DIP	0.600	1.520	0.900	0.610	02758 282 6215
28	0.100	DIP	0.600	1.510	0.870	0.600	03111 281 6215
28	0.100	DIP	0.300	1.510	0.570	0.610	03112 281 6215
28	0.100	DIP	0.300	1.270	0.570	0.610	03112 281 6218A
30	0.050	DIP	0.400	0.860	0.680	0.580	03235 301 6215
30	0.050	DIP	0.400	0.860	0.680	0.580	03235 301 6218D
32	0.100	Side-brazed DIP	0.600	2.110	0.890	0.590	02758 401 6218A



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PLCC/SOJ Sockets

Design Features

- *OpenTop and Clamshell Loading For Burn-in and Test*
- *Wide Contact Area for Reliable Connection and Current-carrying Capacity*
- *No Device Lead Deformation or Excess Stress on the Device Lead*



I/O	Pitch (in)	Pkg Type	Pkg Name	Pkg Body L (in)	Pkg Body W (in)	Pkg Body H/T (in)	Kelvin	Style	Socket L (in)	Socket W (in)	Socket H (in)	P/N
2	**	--	SOD-8	0.253	0.195	0.109	Yes	ClamShell	1.390	0.620	0.750	03337 161S6218K
2	**	--	SOD-45	0.253	0.195	0.109	Yes	ClamShell	1.390	0.620	0.750	03337 161S6218L
2	**	--	403A-03 SMB	1.700	0.140	0.085	Yes	ClamShell	1.390	0.620	0.750	03337 161S6218M
2	**	--	403-03 SMC	0.270	0.235	0.085	Yes	ClamShell	1.390	0.620	0.750	03337 161S6218N
2	**	SMCJ	--	0.241	0.242	0.212	Yes	ClamShell	1.640	0.910	0.760	03337 161S6218W
2	**	SOD-6	--	0.171	0.144	0.087	Yes	ClamShell	0.910	0.520	0.730	04130 041 6215
4	0.200	--	--	0.552	0.372	0.160	No	OpenTop	0.990	0.850	0.710	03558 201 6258
6	0.100	J-LEAD	--	0.550	0.366	0.178	No	ClamShell	0.870	0.870	0.610	03470 061 6215
6	0.037	--	--	0.120	0.094	0.040	Yes	ClamShell	0.810	0.510	0.740	04629 061 6217
8	0.026	--	--	0.120	0.095	0.041	Yes	ClamShell	0.970	0.500	0.760	04625 081 6217
10	0.050	MPC	--	0.270	0.270	0.056	No	ClamShell	1.390	0.620	0.750	03337 161S6218J
10	0.016	SOJ	10L-SOJ	0.089	0.069	0.039	No	ClamShell	0.770	0.510	0.710	03620 101 6217
12	0.020	--	--	0.120	0.095	0.041	Yes	ClamShell	0.970	0.500	0.760	04621 121 6217
14	0.016	SOJ	10L-SOJ	0.120	0.094	0.040	No	ClamShell	0.720	0.510	0.710	03620 141 6217
16	0.050	--	--	0.410	0.347	0.125	No	OpenTop	1.110	0.830	0.750	03557 161 6255
20	0.050	--	--	0.388	0.388	0.180	No	OpenTop	0.860	0.860	0.740	03553 201 6255
20	0.050	--	--	0.675	0.335	0.180	No	OpenTop	1.040	0.800	0.710	03554 201 6255
20	0.050	--	--	0.504	0.589	0.187	No	OpenTop	1.100	0.870	0.740	03556 201 6255
20	0.050	--	--	0.510	0.347	0.125	No	OpenTop	1.100	0.830	0.730	03557 201 6255
20	0.050	--	--	0.681	0.385	0.137	No	OpenTop	0.990	0.850	0.710	03558 201 6255
24	0.050	--	--	0.438	0.438	0.174	No	OpenTop	0.910	0.910	0.740	03553 241 6255
24	0.050	--	--	0.612	0.347	0.130	No	OpenTop	1.100	0.830	0.730	03557 241 6255
24	0.020	SOJ	SOJ	0.163	0.163	0.039	No	ClamShell	0.810	0.500	0.740	03621 241 6217
26	0.050	--	--	0.675	0.335	0.180	No	OpenTop	1.040	0.800	0.710	03554 261 6255
26	0.050	--	--	0.681	0.385	0.137	No	OpenTop	0.990	0.850	0.710	03558 261 6255
28	0.050	--	--	**	**	**	No	OpenTop	0.960	0.960	0.740	03553 281 6255
28	0.050	--	--	0.710	0.347	0.125	No	OpenTop	1.110	0.830	0.730	03557 281 6255
29	0.016	SOJ	10L-SOJ	0.146	0.146	0.038	No	ClamShell	0.770	0.510	0.710	03620 281 6217
32	0.050	--	--	0.718	0.467	0.070	No	OpenTop	1.180	0.920	0.710	03542 321 6255
32	0.050	--	--	0.590	0.490	0.132	No	OpenTop	1.090	0.990	0.725	03553 321 6255
44	0.050	--	--	0.688	0.688	0.175	No	OpenTop	1.160	1.160	0.720	03553 441 6215
48	0.040	--	--	0.600	0.600	0.125	No	OpenTop	1.050	1.050	0.710	03540 481 6255
48	0.020	--	--	0.354	0.354	0.093	No	ClamShell	0.950	0.760	0.740	03735 491 6218A
52	0.050	--	--	0.788	0.788	0.180	No	OpenTop	1.260	1.260	0.740	03553 521 6255
68	0.050	--	--	0.988	0.988	0.180	No	OpenTop	1.460	1.460	0.740	03553 681 625A
68	0.050	--	--	0.990	0.990	0.158	No	ClamShell	1.540	1.450	0.770	03853 681 6217
84	0.050	--	--	1.195	1.195	0.180	No	OpenTop	1.630	1.630	0.720	03553 841 6215

** Pitch is not available due to package configuration -- Contact sales for device specifications



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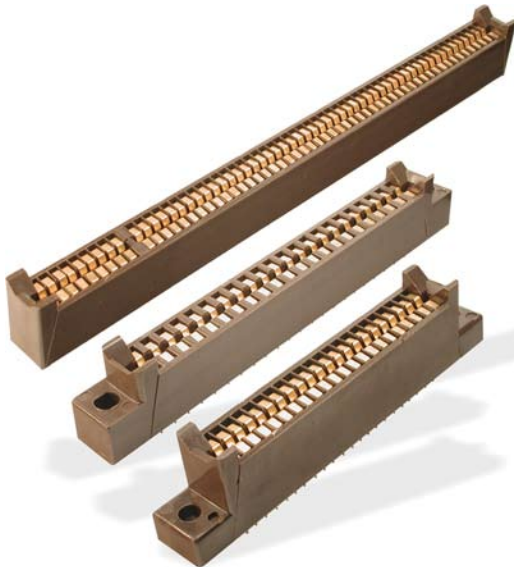
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Connectors

Design Features



- Independent Contacts Provide Maximum I/O Possibilities
- Contact Termination Pitches of 0.100", 0.150" and 0.156"
- V-slot Guides the PCB Edgifiers to the Contacts for Board Thicknesses of 0.054" min. to 0.070" (max)
- With or Without Mounting Ears

I/O	Pitch (in)	Connector L (in)	Connector W (in)	Connector H (in)	Mounting Screw Holes	P/N
7	0.156	3.150	0.700	1.030	Thru Hole	03989 111 6218A
7	0.156	3.150	0.700	1.030	Thru Hole	03989 111 6218B
7	0.156	3.150	0.700	1.030	Thru Hole	03989 111 6218C
12	**	2.670	2.670	0.930	Thru Hole	02031 122 6218B
30	0.156	3.200	0.460	0.750	Thru Hole	02989 302 6215
30	0.156	3.190	0.450	0.750	Thru Hole	02989 302 6218A
36	0.156	4.440	0.460	0.760	Thru Hole	02989 362 6215
42	0.100	3.140	0.460	0.750	Thru Hole	03199 442 6218C
44	0.156	4.440	0.460	0.760	Thru Hole	02989 442 6215
44	0.156	4.440	0.460	0.760	Thru Hole	02989 442 X155
44	0.156	4.440	0.460	0.760	Thru Hole	02989S442 X155
44	0.100	3.140	0.460	0.760	Thru Hole	03199 442 6215
48	0.100	2.870	0.460	0.760	Thru Hole	03199 501 6218A
50	0.100	2.870	0.460	0.760	Thru Hole	03199 501 6215
52	0.100	2.970	0.460	0.750	Thru Hole	03199 521 6215
52	0.100	2.970	0.460	0.750	Thru Hole	03199 522 6215
60	0.156	6.000	0.460	0.760	Thru Hole	02989 602 6215
60	0.156	6.000	0.460	0.760	Thru Hole	02989 602 X125
68	0.156	6.000	0.460	0.760	Thru Hole	02989 682 6215
70	0.100	4.440	0.460	0.760	Thru Hole	03199 702 6215
72	0.156	6.630	0.460	0.760	Thru Hole	02989 722 6215
72	0.156	5.210	0.460	0.740	Thru Hole	02989 722 6218A
86	0.156	7.630	0.460	0.760	Thru Hole	02989 862 6215
86	0.156	7.630	0.450	0.750	Thru Hole	02989 862 6218B
86	0.100	5.230	0.460	0.750	Thru Hole	03199 862 6215
88	0.100	6.370	0.460	0.760	Thru Hole	03199 C01 X218A
88	0.100	6.370	0.460	0.610	Thru Hole	03199 C01 X218B
98	0.100	5.400	0.450	0.650	Thru Hole	03199 A01 6218A
98	0.100	5.400	0.450	0.650	Thru Hole	03199 A01 6218B
98	0.100	9.560	0.460	0.760	Thru Hole	03199 H22 6218E
100	0.100	5.400	0.460	0.660	Thru Hole	03199 A01 6215

** Pitch is not available due to board configuration



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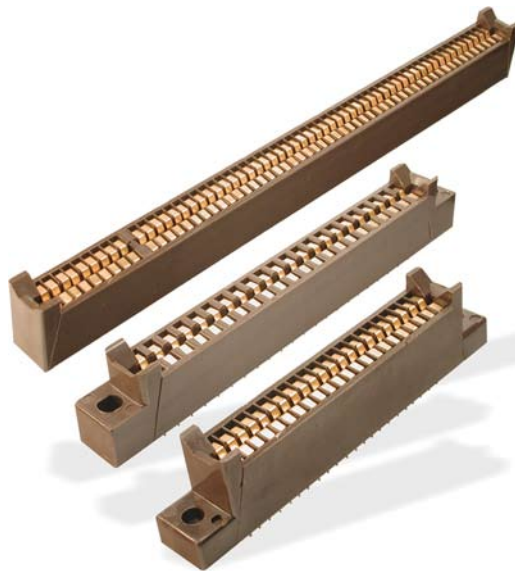
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Connectors

I/O	Pitch (in)	Connector L (in)	Connector W (in)	Connector H (in)	Mounting Screw Holes	P/N
100	0.100	6.000	0.460	0.660	Thru Hole	03199 A02 6215
100	0.100	6.000	0.460	0.660	Thru Hole	03199 A02 X1X5
102	0.100	9.560	0.460	0.760	Thru Hole	03199 H22 X218A
116	0.150	9.610	0.460	0.760	Thru Hole	03150 B62 6215
118	0.100	6.370	0.460	0.750	Thru Hole	03198 C01 6218A
118	0.100	6.370	0.460	0.750	Thru Hole	0319800-A
118	0.100	6.370	0.460	0.750	Thru Hole	0319800-B
120	0.100	6.370	0.460	0.750	Thru Hole	03198 C01 X255
120	0.100	6.370	0.460	0.760	Thru Hole	03199 C01 6215
120	0.100	6.370	0.460	0.750	Thru Hole	03199 C01 X255B
120	0.100	7.000	0.460	0.750	Thru Hole	03199 C02 6215
120	0.100	7.000	0.460	0.750	Thru Hole	03199 C02 X155B
120	0.100	7.000	0.460	0.660	Thru Hole	03199 C02 X2X5A
120	0.100	7.000	0.460	0.750	Thru Hole	03199 C02 X2X5B
128	0.100	6.870	0.460	0.660	Thru Hole	03199 C81 6215
130	0.100	6.870	0.460	0.660	Thru Hole	03199 D01 6215
131	0.100	9.560	0.460	0.760	Thru Hole	03199 H22 6218F
168	0.100	9.560	0.460	0.750	Thru Hole	03199 H22 6218J
172	0.100	9.560	0.460	0.760	Thru Hole	03199 H02 6215
172	0.100	9.560	0.460	0.760	Thru Hole	03199 H22 6215



** Pitch is not available due to package configuration



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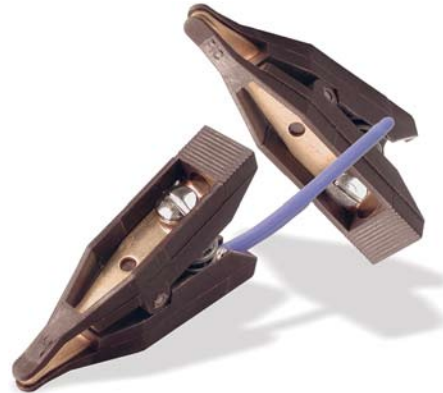
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Sockets Accessories

Design Features

- Kelvin Alligator Clips
- High temperature application $\leq 175^{\circ}\text{C}$
- Length-to-order Teflon-insulated stranded wire



2	Yes	Clip	1.640	0.340	0.660	0500700
2	Yes	Clip	1.640	0.340	0.660	0500700
2	Yes	Clip	1.640	0.340	0.660	0500700W
2	Yes	Clip	1.640	0.340	0.660	0500700W-2W
2	Yes	Clip	1.640	0.340	0.660	0500700W-3W
18	N/A					085SQ 018LAPKB
90	N/A					188123090UAPKB
90	N/A					216133090UAPKB
228	N/A					210SQ 228LAPKB
	N/A					Torque Set BGA
	N/A					Torque Set CSP

- Socket Assembly Torque Wrench Kit
- Fixed and adjustable torque wrench Kits for BGA/LGA socket mounting



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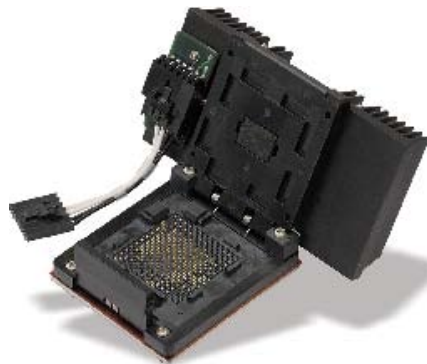
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Loranger SmartSocket

FEATURES

- Individual Temperature Monitor/Controller embedded on each socket.
- Heater wattage outputs can be customized for customer applications. Typical heater cartridges are 24V at 20 Watts.
- Electronics located on the heat sink are rated to operate to 125°C ambient temperature. (The setpoint for the temperature reading within the socket can be higher than 125°C. The requirement is that the air outside the socket around the electronics is less than or equal to 125°C.)
- Overall accuracy of the measured temperature is $\pm 2^{\circ}\text{C}$.
- Overshoot/undershoot of temperature setpoint controller is $\pm 1^{\circ}\text{C}$.
- The SmartSocket™ has four connections, including +24V. Interface to burn-in board can be by plunger pins or wire leads.
- Up to 100 SmartSockets™ can be bussed together on a burn-in board before additional electronic switching hardware would be required. Switching hardware could be on the burn-in board or back plane board.
- SmartSocket™ software is installed on the connecting PC to program the temperature setpoint of each socket and monitor the sockets. Once programmed, the PC does not actually need to be connected to the socket for the socket to operate.
- A SmartCable™ is used to connect the SmartSocket™ to a Serial Port of a PC for setting temperature setpoint and reading of the temperature data. For PC's without a standard Serial Port, a USB to Serial Adapter can be used to connect the SmartSocket™ to a USB port.
- The four electrical connections required by each SmartSocket™ are 24VDC input, 24VDC return, Clock, and Data. All four of these can be bussed on the burn-in board, meaning that all 24VDC inputs can be tied together, 24VDC returns can be tied together, Clock lines can be tied together, and Data lines can be tied together. However, because of the high currents required by the 24VDC input and return lines, care must be taken that edgefinders or other input connections to the burn-in board do not have their current ratings exceeded. For example, a typical edgefinder is rated to at most 5 Amps current. So if 20 SmartSockets™ each drawing 0.9 Amps are on one board, then at least 4 edgefinders would be required for the 24VDC input and at least 4 edgefinders would be required for the 24VDC return. Since Clock and Data lines are low current, each needs only a single edgefinder or connector contact.



**Loranger Smart Socket
with heater and
temperature sensor for
external control**



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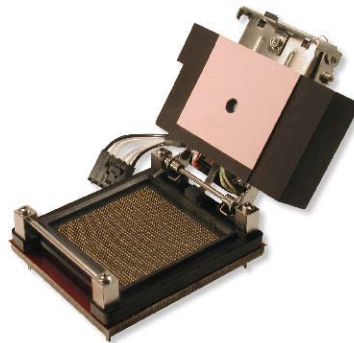
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Loranger SmartSocket

Loranger SmartSocket Specifications

FEATURE	Loranger SmartSocket
Input Power	16 - 25 Volts DC (nominal 24V); Other DC voltages possible with component changes.
Temperature Range	Software capable of 0C to +160C but temperature of package determined by Burn-in System Environment. RTD and Heater are rated to 200C. Other electronic components on SmartSocket are rated to 125C.
Output Power to Control Load	Pulse Width Modulated (PWM) using 24VDC at 20 to 80 Watts (0.83 to 3.33 Amps). Other DC voltages possible.
Load Type	Resistive Heater(s) located in the base of the heat sink.
Displayability and Settability	1 C
Overshoot/Undershoot	+/-1C
Accuracy	+/-2C
End User Calibration	Both offset and gain (span) adjustments.
Basic Control Algorithm	Proportional/Integral (PI) – Proportional Band is +/- 2C
Sensor	100 Ohm Platinum RTD located at the tip of the heat pipe near the device; Internal package Diode optional
Interface to Burn-in Board	Four connections (Data, Clock, 24V, Common) by plunger contacts or wire leads. Connections on burn-in board from multiple SmartSockets can be bussed together.
Mechanical Mounting	Smart Socket Circuitry on PC Board (0.45" x 0.8" x 1.78") is attached via standoffs and screws to socket heatsink. Other arrangements are possible.
PC Computer Control	Through Software Application
PC Computer Interface	Through RS-232 port with SmartCable.
Addressability	Each SmartSocket has identifying number/address from 1 to 100. Software allows user to change socket number.
SmartSockets per PC	Up to 100; More than 100 with Additional Electronic Switching Hardware/Software
SmartSockets per Power Supply	Determined by Wattage per Socket and Size of Power Supply.
Datalogging	Temperature data from all SmartSockets logged to PC disk at user set interval. Graphs of temperature can be displayed on monitor.



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Thermoplastic Materials

THERMOPLASTICS >>>	Nylon 6 / 12	Nylon 4 / 6 (30% glass)	Polyester PET	Polycarbonate Lexan®	Polyester PBT (Valox®)	Polysulfone	Modified Polyester TFE (Tefzel®)	Polyetheretherketone PEEK	Polyetherimide PEI (Ultem®)	LCP 175°C Max Use	LCP 300°C Max Use	Polyphenylene Sulfide PPS (Ryton®)	Polyethere Sulfide PES	Polyamide-imide PAI (Torlon®)
GENERAL PROPERTIES														
Specific Gravity	1.07	1.68	1.27	1.21	1.62	1.24	1.86	1.32	1.51	1.61	1.57	1.60	1.51	1.40
Water Absorption (% at 24 hrs)	0.40	1.60	0.05	0.15	0.07	0.22	0.20	0.50	0.16	0.02	.01-.02	0.05	0.20	0.28
Max Suggested Continuous Temp (°C)	65	149	120	125	140	150	150	160	165	180	250	210	225	250
MECHANICAL PROPERTIES														
Flexural Strength (x 10 ⁴ psi - average)	1.40	3.40	3.35	1.32	2.70	1.54	3.00	2.40	3.30	3.70	2.30	2.68	1.72	3.07
Flexural Modulus (x 10 ⁶ psi - average)	0.29	1.30	1.30	0.325	1.10	0.39	0.95	0.59	1.30	2.10	1.50	1.70	0.59	0.644
Compressive Strength (x10 ⁴ psi - average)	2.40	N/A	2.50	1.25	1.80	1.39	1.00	2.50	3.70	2.00	N/A	2.10	N/A	4.00
Tensile Strength (x 10 ⁴ psi - average)	8.80	2.30	2.30	9.00	1.70	1.02	1.20	1.45	2.00	3.00	2.40	1.90	1.20	2.69
Izod Impact Strength (notch side ft-lbs/in)	1.00	1.30	1.90	12.00	1.30	1.20	7.00	1.80	2.00	2.80	2.20	1.40	1.50	2.50
Hardness Rockwell Scale	R-114	R-120	M-100	M-70	M-90	M-69	R-50	M-99	M-114	M-87	N/A	R-123	M-98	E-78
ELECTRICAL PROPERTIES														
Dielectric Constant (60 Hz, dry)	4.00	4.20	3.60	3.01	3.80	3.07	2.60	3.20	3.70	4.10	2.90	3.90	N/A	4.00
Dielectric Strength (volts/mil, short time, dry)	400	N/A	550	425	750	425	400	480	770	1100	1100	450	780	600
Dissipation Power Factor (1 MHz dry)	0.02	0.023	0.012	0.01	0.02	0.003	0.005	0.003	0.005	0.006	0.003	0.006	N/A	0.009
Volume Resistivity (10 ¹⁵ Ω-cm at 23°C)	1	3	30	10	3.4	50	10	49	30	1	1	4.5	10	3
Arc Resistance (seconds)	121	N/A	90	120	28	122	72	N/A	85	137	137	34	N/A	125
THERMAL PROPERTIES														
Deflection Temperature (°C at 264 psi)	82	284	224	132	204	174	210	160	210	230	241	243	210	275
Coefficient of Linear Expansion (10 ⁻⁵ inch/inch/°C at 23°C)	5.00	N/A	29	3.75	3.30	3.10	0.72	2.60	3.10	5.00	N/A	1.20	2.60	2.00

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Socket Contact Metallurgy

PROPERTIES	Phosphor Bronze C51000 Grade A	Beryllium-Copper C17200 (Alloy 25)	Beryllium-Nickel Alloy N03360	Stainless Steel 302	Cu-Ni-Sn C72900 (Spinodal)	Solder 63Sn37Pb (for reference)
Density (lbs/in ³) (g/cc)	0.320 8.86	0.302 8.35	0.294 8.14	0.29 8.14	0.317 8.77	0.30 8.4
Melting Temperature (°F) (°C)	1750 - 1920 950 - 1050	1600 - 1800 870 - 980	2185 - 2420 1195 - 1325	2550 - 2590 1399 - 1421	1742 (solidus) 950	361 183
Coefficient of Thermal Expansion (10 ⁻⁶ in/in-°F) (10 ⁻⁶ in/in-°C)	9.9 17.8	9.9 17.8	8.0 14.5	9.6 17.3	9.1 16.4	13.3 23.9
Electrical Conductivity (% IASC)	15	22	4 - 6	2.4	7.8	11.9
Tensile Modulus of Elasticity (x10 ⁶ psi)	16	19	28 - 30	28	18.5 - 19.5	2.3
Ultimate Tensile Strength (x10 ³ psi) SEE NOTE 1	91 - 105	152 - 212	215 - 270	85 - 110	130 - 195	4.4 - 6.7
Yield Strength (x10 ³ psi) SEE NOTE 1	52 - 122	125 - 195	150 - 230	35 - 75	100 - 185	4.0 - 4.4
Elongation (%) SEE NOTE 1	4 - 45	3 - 10	8 - 12	1 - 10	2 - 6 (min)	35 - 53
Rockwell Hardness (C Scale) SEE NOTE 1	67 - 78 (Scale B)	36 - 42	37 - 63 (converted value) Diamond Pyramid	80 - 85 (Scale B) Vickers	26 - 42 (converted value) 343 - 695	12.2 (16W Scale) 275 - 410
Endurance Strength (Stress x10 ³ psi after 10 ⁶ cycles in reverse bending)	30	30 - 48	90 - 110	34	N/A	1.5 - 2.3 SEE NOTE 2
Recommended Temp Usage (°C maximum)	100	175	350	300	225	140

NOTE 1 VALUE DEPENDS ON HEAT TREATMENT/WORK HARDENING.

NOTE 2 DEPENDS ON NUMBER OF CYCLES RANGING FROM 2648 - 4292 AND CROSSHEAD SPEED.

Socket Contact Plating

Plating is normally recommended for testing above ambient temperature to prevent oxide growth and thus reduce increases in contact resistance with age. We use a minimum of 30 microinches gold plating, as the standard, applied in a manner related to Military Standard #G-452204B. Porosity is checked by examination under a 10X microscope for pores. Some cost savings have been made by plating with 100 microinches of solderable nickel, which offers good protection of the base metal at elevated temperatures, an option to the designer, however, normal shelf life is 5 months (*without use*).

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Socket Performance Data

For BGA/CSP & LGA Sockets

Electrical Performance

Pitch (mm)	Socket Style	Contact Style	Self-Induction (nH)	Capacitance (pF)	Delay (ps)	Crosstalk (mV/V)
1.0, 1.27	Standard	Standard	8.3	0.7	162.3	0.036
	HPV	Standard	3.2	0.7*	64.3	—
	HPS	Plunger	2.1	0.6	60	—
	APS	Plunger	2.0	0.2	20	—
0.65, 0.8	Standard	Standard	6.8	0.7*	69	—
	HPV	Standard	—	0.7*	—	—
	HPS	Plunger	1.0	0.4	20	—
	APS	Plunger	1.4*	0.4*	24*	—
0.5	Standard	Standard	6.0	0.4*	49	—
	HPV	Standard	—	0.4*	—	—
	HPS	Plunger	1.0	0.4*	20	—
	APS	Plunger	1.4*	0.4*	24*	—
0.4	APS	Plunger	1.2*	0.4*	22*	—

* estimated value – other values are results of tests

Pitch (mm)	Socket Style	Contact Style	Contact Resistance (ohms)	Current to Raise Temp in Cell by 50°C (amps)
1.0, 1.27	Standard	Standard	0.139*	0.139
	HPV	Standard	0.139*	0.195
	HPS	Plunger	0.047	2.014
	APS	Plunger	0.048	1.110
0.65	Standard	Standard	0.250*	0.097
	HPV	Standard	0.250*	0.110
	HPS	Plunger	0.056	1.230
	APS	Plunger	0.047	1.034*
0.5	Standard	Standard	0.249*	0.102
	HPV	Standard	0.249*	0.121
	HPS	Plunger	0.056	1.230
	APS	Plunger	0.047	1.034*
0.4	APS	Plunger	0.039	1.052*

* estimated value – other values are results of tests

Materials

Property	Material	Value
UL Temperature Index	LCP/PPS	220-240°C/200-220°C
Insulation Resistance	LCP/PPS	10 ¹⁴ /10 ¹⁶ -cm

Underwriters Laboratories, Inc. Relative Thermal Index is maximum temperature below which electrical and mechanical integrity of material is maintained over a reasonable time.

LCP = liquid crystal plastic

PPS = polyphthlene sulfide

Accelerated Testing

Socket Style	P/N	Successful Cycles
ClamShell	350SQ664B8817	51,800 ²
OpenTop	099069040T6617	50,000 ³

Test reports available upon request

² 50,000 cycles of opening and closing cover with device in socket plus 1,800 cycles with device out of socket. No failure of contacts or hinges occurred.

³ 50,000 cycles of compression and relaxation of socket top with no device installed.



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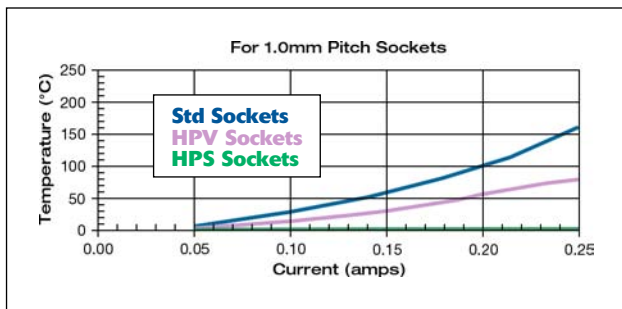
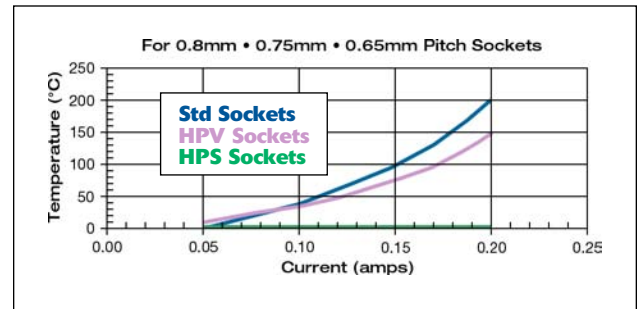
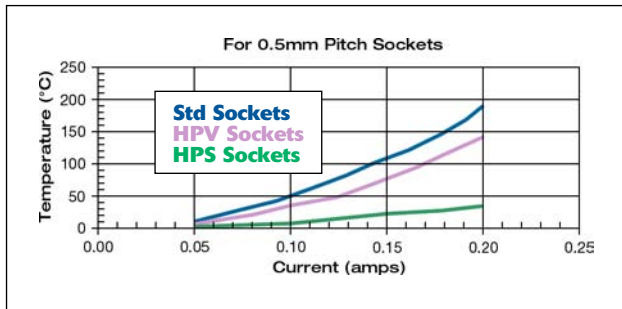
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Socket Performance Data

For BGA/CSP & LGA Sockets

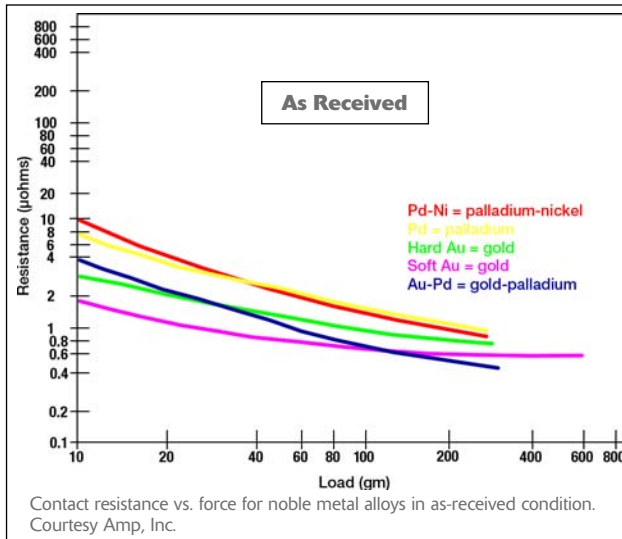
Temperature Rise of Contact with Current



Special Socket Features

- Sockets are easily removed/replaced from/to burn-in boards for maintenance or inspection by removal of four nuts. No soldering required.
- Witness marks placed on solder balls during burn-in verification that burn-in has been successfully accomplished.
- Socket designs are suitable for μ BGA(CSP) packages with 0.5mm pitches or greater.
- Contacts push up on solder balls eliminating concern over tensile forces at ball-package interface.
- Socket contacts are electroplated gold over nickel, providing the lowest interface resistance and highest corrosion resistance.

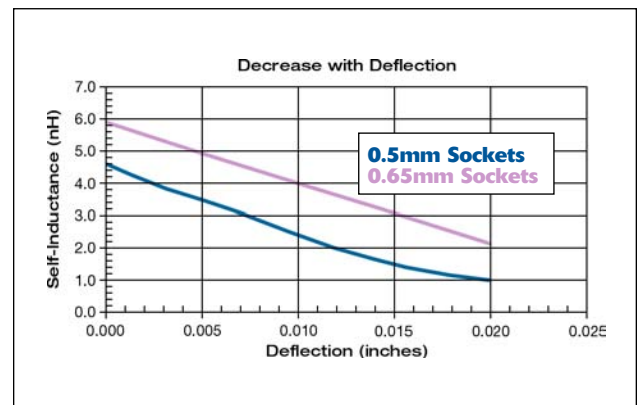
Gold Coating on Socket Contacts



Gold coating on socket contacts provides the lowest resistance over the load (10 gm to 40 gm).

– Robert S. Mroczkowski *Electronic Connector Handbook* McGraw-Hill 1998.

Calculated Self-Inductance in HPV BGA/CSP Contacts



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Signal Degradation

Calculated for Socket Contacts

Contact L & C		Delay (ns)	Signal Delay Frequency (GHz)					Z (Ohms)	Signal Attenuation for DC Contact Resistance (mOhms)					
Self L (nH)	Self C (pF)		1	2.5	5	10	20		25	50	100	150	200	250
0.25	0.2	0.007	0.7%	1.8%	3.5%	7.1%	14.1%	35.4	0.1%	0.1%	0.3%	0.4%	0.6%	0.7%
0.25	0.4	0.010	1.0%	2.5%	5.0%	10.0%	20.0%	25.0	0.1%	0.2%	0.4%	0.6%	0.8%	1.0%
0.25	0.6	0.012	1.2%	3.1%	6.1%	12.2%	24.5%	20.4	0.1%	0.2%	0.5%	0.7%	1.0%	1.2%
0.25	0.8	0.014	1.4%	3.5%	7.1%	14.1%	28.3%	17.7	0.1%	0.3%	0.6%	0.8%	1.1%	1.4%
0.25	1.0	0.016	1.6%	4.0%	7.9%	15.8%	31.6%	15.8	0.2%	0.3%	0.6%	0.9%	1.2%	1.6%
0.5	0.2	0.010	1.0%	2.5%	5.0%	10.0%	20.0%	50.0	0.0%	0.1%	0.2%	0.3%	0.4%	0.5%
0.5	0.4	0.014	1.4%	3.5%	7.1%	14.1%	28.3%	35.4	0.1%	0.1%	0.3%	0.4%	0.6%	0.7%
0.5	0.6	0.017	1.7%	4.3%	8.7%	17.3%	34.6%	28.9	0.1%	0.2%	0.3%	0.5%	0.7%	0.9%
0.5	0.8	0.020	2.0%	5.0%	10.0%	20.0%	40.0%	25.0	0.1%	0.2%	0.4%	0.6%	0.8%	1.0%
0.5	1.0	0.022	2.2%	5.6%	11.2%	22.4%	44.7%	22.4	0.1%	0.2%	0.4%	0.7%	0.9%	1.1%
1.0	0.2	0.014	1.4%	3.5%	7.1%	14.1%	28.3%	70.7	0.0%	0.1%	0.1%	0.2%	0.3%	0.4%
1.0	0.4	0.020	2.0%	5.0%	10.0%	20.0%	40.0%	50.0	0.0%	0.1%	0.2%	0.3%	0.4%	0.5%
1.0	0.6	0.024	2.4%	6.1%	12.2%	24.5%	49.0%	40.8	0.1%	0.1%	0.2%	0.4%	0.5%	0.6%
1.0	0.8	0.028	2.8%	7.1%	14.1%	28.3%	56.6%	35.4	0.1%	0.1%	0.3%	0.4%	0.6%	0.7%
1.0	1.0	0.032	3.2%	7.9%	15.8%	31.6%	63.2%	31.6	0.1%	0.2%	0.3%	0.5%	0.6%	0.8%
2.0	0.2	0.020	2.0%	5.0%	10.0%	20.0%	40.0%	100.0	0.0%	0.0%	0.1%	0.1%	0.2%	0.2%
2.0	0.4	0.028	2.8%	7.1%	14.1%	28.3%	56.6%	70.7	0.0%	0.1%	0.1%	0.2%	0.3%	0.4%
2.0	0.6	0.035	3.5%	8.7%	17.3%	34.6%	69.3%	57.7	0.0%	0.1%	0.2%	0.3%	0.3%	0.4%
2.0	0.8	0.040	4.0%	10.0%	20.0%	40.0%	80.0%	50.0	0.0%	0.1%	0.2%	0.3%	0.4%	0.5%
2.0	1.0	0.045	4.5%	11.2%	22.4%	44.7%	89.4%	44.7	0.1%	0.1%	0.2%	0.3%	0.4%	0.6%
3.0	0.2	0.024	2.4%	6.1%	12.2%	24.5%	49.0%	122.5	0.0%	0.0%	0.1%	0.1%	0.2%	0.2%
3.0	0.4	0.035	3.5%	8.7%	17.3%	34.6%	69.3%	86.6	0.0%	0.1%	0.1%	0.2%	0.2%	0.3%
3.0	0.6	0.042	4.2%	10.6%	21.2%	42.4%	84.9%	70.7	0.0%	0.1%	0.1%	0.2%	0.3%	0.4%
3.0	0.8	0.049	4.9%	12.2%	24.5%	49.0%	98.0%	61.2	0.0%	0.1%	0.2%	0.2%	0.3%	0.4%
3.0	1.0	0.055	5.5%	13.7%	27.4%	54.8%	109.5%	54.8	0.0%	0.1%	0.2%	0.3%	0.4%	0.5%
4.0	0.2	0.028	2.8%	7.1%	14.1%	28.3%	56.6%	141.4	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%
4.0	0.4	0.040	4.0%	10.0%	20.0%	40.0%	80.0%	100.0	0.0%	0.0%	0.1%	0.1%	0.2%	0.2%
4.0	0.6	0.049	4.9%	12.2%	24.5%	49.0%	98.0%	81.6	0.0%	0.1%	0.1%	0.2%	0.2%	0.3%
4.0	0.8	0.057	5.7%	14.1%	28.3%	56.6%	113.1%	70.7	0.0%	0.1%	0.1%	0.2%	0.3%	0.4%
4.0	1.0	0.063	6.3%	15.8%	31.6%	63.2%	126.5%	63.2	0.0%	0.1%	0.2%	0.2%	0.3%	0.4%
5.0	0.2	0.032	3.2%	7.9%	15.8%	31.6%	63.2%	158.1	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%
5.0	0.4	0.045	4.5%	11.2%	22.4%	44.7%	89.4%	111.8	0.0%	0.0%	0.1%	0.1%	0.2%	0.2%
5.0	0.6	0.055	5.5%	13.7%	27.4%	54.8%	109.5%	91.3	0.0%	0.1%	0.1%	0.2%	0.2%	0.3%
5.0	0.8	0.063	6.3%	15.8%	31.6%	63.2%	126.5%	79.1	0.0%	0.1%	0.1%	0.2%	0.3%	0.3%
5.0	1.0	0.071	7.1%	17.7%	35.4%	70.7%	141.4%	70.7	0.0%	0.1%	0.1%	0.2%	0.3%	0.4%
6.0	0.2	0.035	3.5%	8.7%	17.3%	34.6%	69.3%	173.2	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%
6.0	0.4	0.049	4.9%	12.2%	24.5%	49.0%	98.0%	122.5	0.0%	0.0%	0.1%	0.1%	0.2%	0.2%
6.0	0.6	0.060	6.0%	15.0%	30.0%	60.0%	120.0%	100.0	0.0%	0.0%	0.1%	0.1%	0.2%	0.2%
6.0	0.8	0.069	6.9%	17.3%	34.6%	69.3%	138.6%	86.6	0.0%	0.1%	0.1%	0.2%	0.2%	0.3%
6.0	1.0	0.077	7.7%	19.4%	38.7%	77.5%	154.9%	77.5	0.0%	0.1%	0.1%	0.2%	0.3%	0.3%
7.0	0.2	0.037	3.7%	9.4%	18.7%	37.4%	74.8%	187.1	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%



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Signal Degradation

Calculated for Socket Contacts

Contact L & C		Delay (ns)	Signal Delay Frequency (GHz)					Z (Ohms)	Signal Attenuation for DC Contact Resistance (mOhms)					
Self L (nH)	Self C (pF)		1	2.5	5	10	20		25	50	100	150	200	250
7.0	0.4	0.053	5.3%	13.2%	26.5%	52.9%	105.8%	132.3	0.0%	0.0%	0.1%	0.1%	0.2%	0.2%
7.0	0.6	0.065	6.5%	16.2%	32.4%	64.8%	129.6%	108.0	0.0%	0.0%	0.1%	0.1%	0.2%	0.2%
7.0	0.8	0.075	7.5%	18.7%	37.4%	74.8%	149.7%	93.5	0.0%	0.1%	0.1%	0.2%	0.2%	0.3%
7.0	1.0	0.084	8.4%	20.9%	41.8%	83.7%	167.3%	83.7	0.0%	0.1%	0.1%	0.2%	0.2%	0.3%
8.0	0.2	0.040	4.0%	10.0%	20.0%	40.0%	80.0%	200.0	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%
8.0	0.4	0.057	5.7%	14.1%	28.3%	56.6%	113.1%	141.4	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%
8.0	0.6	0.069	6.9%	17.3%	34.6%	69.3%	138.6%	115.5	0.0%	0.0%	0.1%	0.1%	0.2%	0.2%
8.0	0.8	0.080	8.0%	20.0%	40.0%	80.0%	160.0%	100.0	0.0%	0.0%	0.1%	0.1%	0.2%	0.2%
8.0	1.0	0.089	8.9%	22.4%	44.7%	89.4%	178.9%	89.4	0.0%	0.1%	0.1%	0.2%	0.2%	0.3%
9.0	0.2	0.042	4.2%	10.6%	21.2%	42.4%	84.9%	212.1	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%
9.0	0.4	0.060	6.0%	15.0%	30.0%	60.0%	120.0%	150.0	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%
9.0	0.6	0.073	7.3%	18.4%	36.7%	73.5%	147.0%	122.5	0.0%	0.0%	0.1%	0.1%	0.2%	0.2%
9.0	0.8	0.085	8.5%	21.2%	42.4%	84.9%	169.7%	106.1	0.0%	0.0%	0.1%	0.1%	0.2%	0.2%
9.0	1.0	0.095	9.5%	23.7%	47.4%	94.9%	189.7%	94.9	0.0%	0.1%	0.1%	0.2%	0.2%	0.3%

L = self-inductance in nH
 C = self-capacitance in pF
 td = time delay in seconds
 Z = characteristic impedance in Ohms
 $\mu = 10^{-6}$
 $n = 10^{-9}$
 $p = 10^{-12}$

NOTES

- Delay and attenuation are only for socket contacts. Actual values for sockets on a burn-in board will be much greater because of contributions from device, burn-in board, equipment, cables, connectors, etc.
- Maximum frequency appropriate for a socket depends on how much signal degradation is acceptable for the application. Signal delays in red are for values >10%.
- Values for delay and attenuation are independent of contact type. BGAs, LGAs and QFNs all have the same delay and attenuation for the same L, C and R.

Pitch	Socket/Contacts	L (nH)	C (pF)
1.0mm & 1.27mm	Standard/Standard	8.3	0.7
	HPV/Standard	3.2	0.7*
	HPS/Plunger	2.1	0.6
0.65mm	Standard/Standard	6.8	0.7*
	HPV/Standard	4.9	0.7*
	HPS/Plunger	1.1	0.4
0.5mm	Standard/Standard	6.0	0.4*
	HPV/Standard	3.4	0.4*
	HPS/Plunger	1.1	0.4

*Estimated value. Other values are test results.



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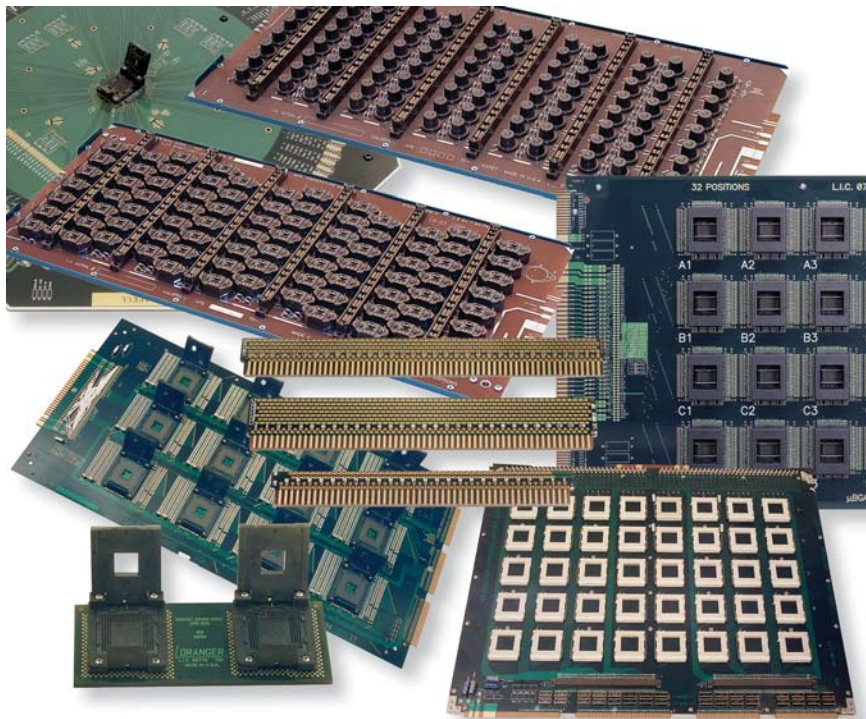
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Burn-in Boards



Dedicated • Flexible Bus • Programmable • Universal

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Key Design Features of Loranger Burn-in Boards

- **Engineering Excellence – Careful Evaluation in the Preparation of New Designs Results in the Highest Density for Lowest Cost-per-position**
- **Double-sided and Multilayer**
- **Full-scale Quality Control – 100% Tested Assures Reliability and User Confidence**
- **CAD/CAM and Laser Plot Artwork Generation**
- **Expedited Delivery**
- **Isolation/Support Frame – Protects boards from damage, high-temperature warpage or twisting. Guarantees accurate board alignment in the oven rack and allows easy storage. Protects personnel from exposure to the sharp solder joint on the underside of board.**
- **Long Finger Tab (2.75") – The correct length to allow easy access to the mating edgcard connector OUTSIDE the chamber environment. ("Short" finger tab boards require connector to be located INSIDE the chamber which could cause reliability problems and difficulty for maintenance.)**
- **Offset Finger Tab – Prevents operator from improperly installing board assembly in oven chamber.**
- **Optional Test Fingers – Spot check (setup) or continuously monitor (during burn-in) the bias supplies and dynamic signals at the farthest point from where they enter the board.**
- **Support Puller – An integral part of the assembly which allows easy insertion and removal of the board inside the test chamber.**
- **Wide Dimension (11") – This width is the best trade-off to get the lowest cost and maximum overall DUT socket density in a chamber. Permits additional customer cost savings as fewer board assemblies, edgcard connectors, and internal rack supports, need to be purchased to achieve the desired burn-in part throughput.**

Information given herein is believed to be accurate but is presented without guarantee, warranty, or responsibility of any kind, expressed or implied, by Loranger International Corporation.

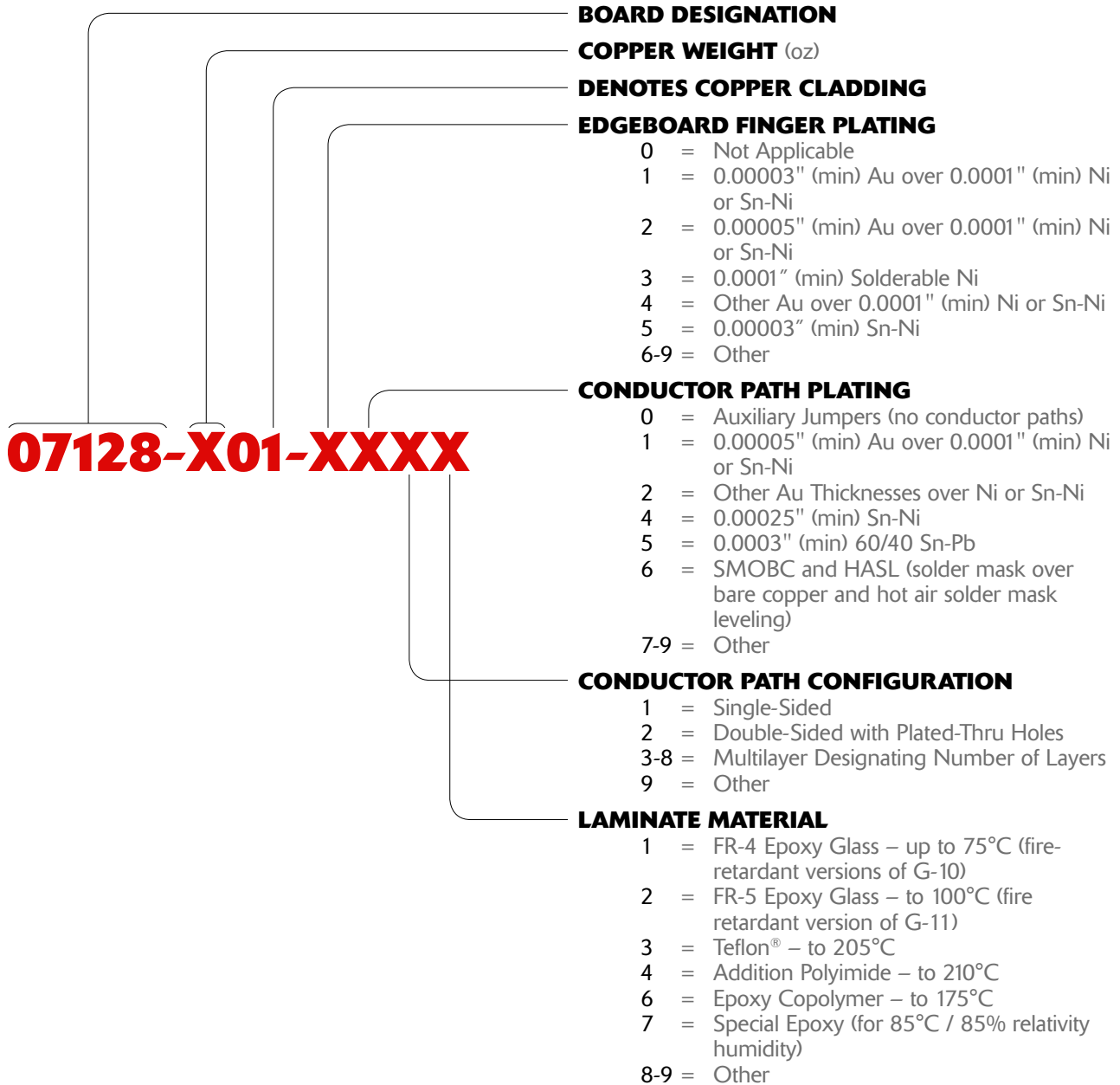


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Part Number Designations

For Printed Circuit Boards



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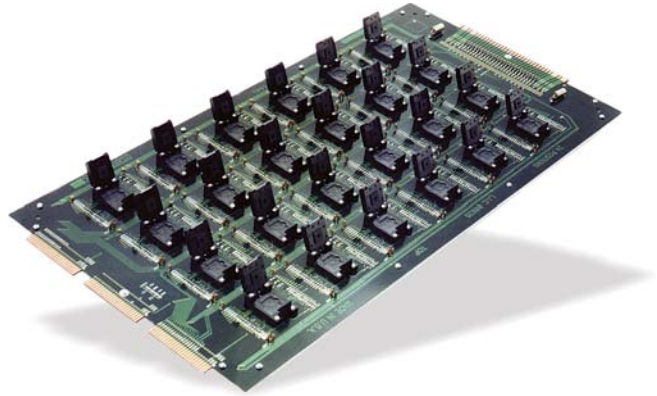
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Dedicated Boards

Design Features

- *Highest Density to Maximize Throughput*
- *Lowest Cost per Device Position for Volume*
- *Input Isolation and Output Loading Availability*
- *All Device Types and Package Styles*
- *Clean Dynamic Signals and Low Power Supply Noise Through Use of Power Gridding*, Decoupling, and Line Termination Techniques*
- *Custom Engineering by Professionals with Years of Experience in Device Socket and Board Design Manufacturing*



In production burn-in areas, the need exists to burn-in large quantities of certain devices or families of devices. Here the requirement of flexibility or versatility, important to Test Engineering, Quality Control or Failure Analysis Burn-In Departments, is overshadowed by maximum throughputs at the lowest possible cost. To meet this need, we manufacture thousands of "dedicated" board designs to customer satisfaction.

Dedicated Boards, which achieve high device socket density because space is not required for programming hardware, can be made for all device families, package styles and board sizes for either static or dynamic burn-in. Resistors, capacitors and other discrete components for input isolation, output loading, and supply decoupling may be added to simulate the circuit the devices will actually experience in field use.

For customers experienced in burn-in, we will review burn-in schematics and provide quotations regardless of the burn-in system being used.

For customers just getting started in burn-in, we can recommend static or dynamic burn-in schematics and provide standard dedicated boards which will stress and exercise semiconductor devices to determine their reliability. As with all of our boards, these dedicated circuits are unique in the testing industry in that the design, manufacture, and assembly of both boards and the device sockets are done at Loranger.



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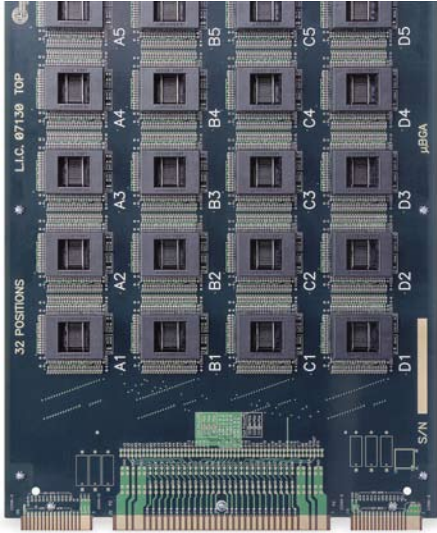
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Flexible Bus Boards



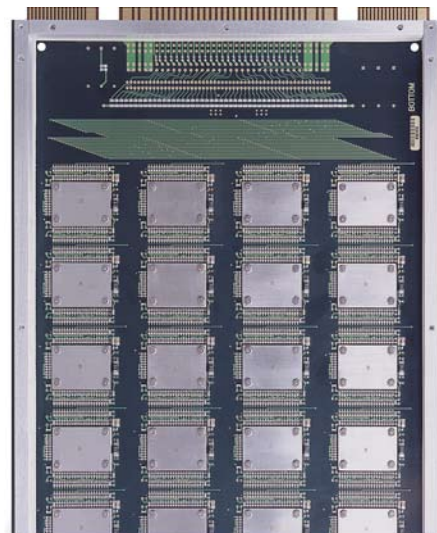
Design Features

- *Highest Density of Burn-in Sockets*
- *Decreases Board Inventory*
- *Pin Programmability and Gross Loading by Board or Column Within a Board*
- *Elimination of Board Obsolescence via Programming Features*

Flexible Bus burn-in boards, usually used for static burn in, permit the user to program any incoming bias power to any pin on all the sockets. To accomplish this, each equivalent pin on each socket is connected to all the equivalent pins on the remaining sockets via a trace on the burn-in board. For example, all Pin 1s are connected together, all Pin 2s are connected together, etc. A trace is then run on the burn-in board from each pin number to a programming station. This programming station may be a program board and edge connector pair, a program socket, or other means of interconnection. The incoming bias power lines, which enter the burn-in board via edgeboard fingers or other means, also proceed to the programming station. The user can then connect each pin to the proper incoming bias power line using jumper wires, resistors or other passive components.

Flexible Bus board should be used when the operation involves static burn-in of large quantities of different device types. The main disadvantage of using the Flexible Bus concept is that individual devices are not protected from interaction with adjacent devices unless resistors are used separately at each socket.

A common modification of this idea is called "resistor isolated flexible bus" which is actually a dedicated board with resistors to locally protect each device. Another subset is to isolate by row or column only.



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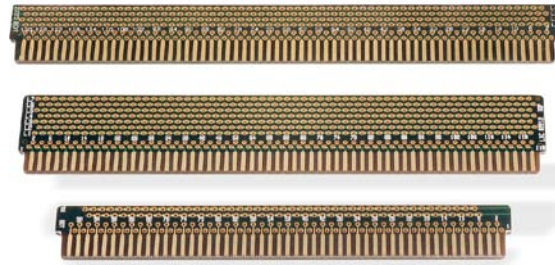
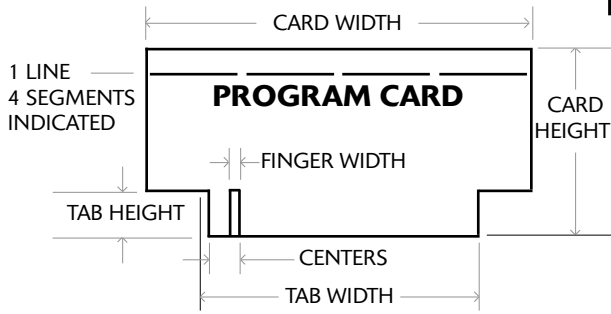
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Program Cards



Edgifiers	Key Slot	Pitch	Connector P/N	Tab W* (in) (+0.015)	Tab H (in) (+0.015)	Card W (in) (+0.015)	Card H (in) (+0.015)	P/N
30/60	Yes	0.156	02989-60X-X2X5	5.087	0.350	5.375	1.555	02201-271-1226G
30/60	Yes	0.156	02989-60X-X2X5	5.087	0.350	5.375	0.885	02201-241-1226D
30/60	Yes	0.156	02989-60X-X2X5	5.087	0.350	5.375	0.710	02201-221-1226B
30/60	Yes	0.156	02989-60X-X2X5	5.087	0.350	5.375	1.155	02201-271-1224G
30/60	Yes	0.156	02989-60X-X2X5	5.087	0.350	5.375	0.885	02201-241-1224D
30/60	Yes	0.156	02989-60X-X2X5	5.087	0.350	5.375	0.710	02201-221-1224B
25/50	No	0.100	03199-50X-X2X5	2.585	0.350	2.720	1.555	02203-271-1226G
25/50	No	0.100	03199-50X-X2X5	2.585	0.350	2.720	0.885	02203-241-1226D
25/50	No	0.100	03199-50X-X2X5	2.585	0.350	2.720	0.710	02203-221-1226B
25/50	No	0.100	03199-50X-X2X5	2.585	0.350	2.720	1.155	02203-271-1224G
25/50	No	0.100	03199-50X-X2X5	2.585	0.350	2.720	0.885	02203-241-1224D
25/50	No	0.100	03199-50X-X2X5	2.585	0.350	2.720	0.710	02203-221-1224B
36/72	No	0.156	02989-72X-X2X5	5.750	0.350	6.060	1.155	02205-271-1226G
36/72	No	0.156	02989-72X-X2X5	5.750	0.350	6.060	0.885	02205-241-1226D
36/72	No	0.156	02989-72X-X2X5	5.750	0.350	6.060	0.710	02205-221-1226B
36/72	No	0.156	02989-72X-X2X5	5.750	0.350	6.060	1.155	02205-271-1224G
36/72	No	0.156	02989-72X-X2X5	5.750	0.350	6.060	0.885	02205-241-1224D
36/72	No	0.156	02989-72X-X2X5	5.750	0.350	6.060	0.710	02205-221-1224B
50/100	No	0.100	03199-A0X-X2X5	5.850	0.350	5.250	1.155	02208-271-1226G
50/100	No	0.100	03199-A0X-X2X5	5.850	0.350	5.250	0.885	02208-241-1226D
50/100	No	0.100	03199-A0X-X2X5	5.850	0.350	5.250	0.710	02208-221-1226B
50/100	No	0.100	03199-A0X-X2X5	5.850	0.350	5.250	1.155	02208-271-1226G
50/100	No	0.100	03199-A0X-X2X5	5.850	0.350	5.250	0.885	02208-241-1226D
50/100	No	0.100	03199-A0X-X2X5	5.850	0.350	5.250	0.710	02208-221-1226B
60/120	No	0.100	03199-C0X-X2X5	6.085	0.350	6.250	1.155	02212-271-1226G
60/120	No	0.100	03199-C0X-X2X5	6.085	0.350	6.250	0.885	02212-241-1226D
60/120	No	0.100	03199-C0X-X2X5	6.085	0.350	6.250	0.710	02212-221-1226B
60/120	No	0.100	03199-C0X-X2X5	6.085	0.350	6.250	1.155	02212-271-1226G
60/120	No	0.100	03199-C0X-X2X5	6.085	0.350	6.250	0.885	02212-241-1226D
60/120	No	0.100	03199-C0X-X2X5	6.085	0.350	6.250	0.710	02212-221-1226B
64/128	Yes	0.100	03199-C8X-X2X5	6.585**	0.350	6.750	1.155	02218-271-1226G
64/128	Yes	0.100	03199-C8X-X2X5	6.585**	0.350	6.750	0.885	02218-241-1226D
64/128	Yes	0.100	03199-C8X-X2X5	6.585**	0.350	6.750	0.710	02218-221-1226B
64/128	Yes	0.100	03199-C8X-X2X5	6.585**	0.350	6.750	1.155	02218-271-1226G
64/128	Yes	0.100	03199-C8X-X2X5	6.585**	0.350	6.750	0.885	02218-241-1226D
64/128	Yes	0.100	03199-C8X-X2X5	6.585**	0.350	6.750	0.710	02218-221-1226B
65/130	No	0.100	03199-D0X-X2X5	6.585	0.350	6.750	1.155	02223-271-1226G
65/130	No	0.100	03199-D0X-X2X5	6.585	0.350	6.750	0.885	02223-241-1226D
65/130	No	0.100	03199-D0X-X2X5	6.585	0.350	6.750	0.710	02223-221-1226B
65/130	No	0.100	03199-D0X-X2X5	6.585	0.350	6.750	1.155	02223-271-1226G
65/130	No	0.100	03199-D0X-X2X5	6.585	0.350	6.750	0.885	02223-241-1226D
65/130	No	0.100	03199-D0X-X2X5	6.585	0.350	6.750	0.710	02223-221-1226B



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Universal Boards

Design Features

- **Board Obsolescence** – Since the test schematic is the item that most often changes for different device functions over time, only a change in the program board is required once the Motherboard and the SocketSaver are purchased. Thus the Motherboards and SocketSavers are not obsoleted with each change in function.
- **Lowest Total Cost** – Cost savings are achieved immediately when the first new program card is ordered. Since the Motherboard and SocketSaver remain the same, each new program board order divides the previous purchase up into smaller units.
- **Inventory and Storage** – In a well thought-out program, the Motherboards are presumably always in burn-in or loading for the next run so storage space is reduced for large board sizes. Furthermore, SocketSavers are typically in the same burn-in/load cycle so space for the SocketSavers is only required when packaging mixes change. This leaves the program boards which are stored and inventoried for each dedicated test program. However, storage typically consists of small cell sizes of less than 2-1/2" by 4" so control becomes an easier task.



The **Universal Board** design provides the test and burn-in engineer with a multifaceted tool to get the job done quickly at the lowest total cost as follows:

- **Flexibility** – The **Universal** concept consists of three parts: 1) the “mother burn-in board” with its common buses for signals, power and ground, 2) the SocketSavers which plug into the top side of the Motherboard, and 3) the program boards which plug into the underside of the motherboard, it is obvious that the only section dedicated to a particular test schematic is the program board. Therefore, flexibility is achieved on the motherboard because the signal, power and ground inputs can be reconfigured by the program board to feed a new test set to the SocketSaver™. Likewise, since the SocketSaver™ is totally programmed by the program board, it is capable of being reprogrammed over and over again as new requirements emerge.
- **Packaging Changes are Easy** – Obviously the only element in the Universal method that is affected by packaging changes is the socket itself. Therefore, if there is a need to concurrently qualify a certain device in two or more package forms, the engineer simply utilizes a SocketSaver™ for each package style and a program board to setup an identical bias plan on each package.



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SocketSavers™



Pkg Type	Pkg Pitch (in)	Card Length (in)	Card Width (in)	Used on Motherboard P/N	Board P/N	Socket P/N
Dual 16 QFP	0.300	2.300	2.075	1919-N71	6764-201-0526	3725-161
Quad 28 SOJ	0.050	2.700	2.050	1919-N71	6674-201-0526	3557-281
Dual 28 SOIC	0.050	2.925	2.025	1919-N71	6763-201-0526	3337-281
Dual 44 PLCC	0.050	TBD	TDB	1919-N71	TBD	3553-441
Dual 52 TQFP	0.0256	2.600	2.025	1919-N71	6636-201-0526	E52-065-03
Dual 52 PLCC	0.050	2.925	2.025	1919-N71	6653-201-0526	3553-681
Dual 64 TQFP	0.0197	2.925	2.025	1919-S51	6653-201-0526	IC51-0644-8072
Dual 68 PLCC	0.050	2.925	2.025	1919-N71	6575-201-0526	3553-681
80 QFP	0.315	2.450	2.050	1919-N71	6610-201-0526	E80-08-13A
84 PLCC	0.050	2.925	2.025	1919-N71	6586-201-0526	3553-841
84 PGA	0.100	TBD	TBD	1919-N71	TBD	1919-AA-6258
100 QFP	0.0256	2.050	2.025	1919-N71	6551-201-0526	IC51 1004 814 1
100 PQFP	0.0256	2.050	2.000	1919-N71	6690-201-0526	IC51 1004 814 1
120 QFP	0.0315	2.045	2.050	1919-N71	6612-201-0526	E120 0.8 04A
160 QFP	0.0256	2.450	2.050	1919-N71	6614-201-0526	E16 0.65 10
160 QFP	0.0256	2.650	2.450	1919-N71	6634-201-0526	W653160281
164 CLDCC	0.0250	TBD	TBD	1919-N71	6595-201-0526	TBD
208 QFP (46mm)	0.0256	2.900	2.300	1919-S51	6570-201-0526	C564 208 21
208 QFP	0.0197	2.900	2.300	1919-S51	6627-201-0526	IC51 2084 1052
Dual 256 BGA/CSP	0.050	4.875	2.112	1919-N71 (2)	6778-201-0564	4491-256
256 BGA/CSP	0.050	5.325	2.000	1919-N71 (2)	6788-201-0544	4471-256
420 CBGA	0.040	5.100	2.525	1919-N71 (2)	6594-201-0576	PA201010A 1434



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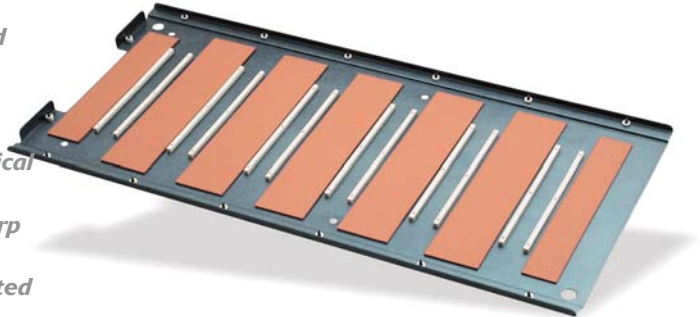
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Protection Equipment

Design Features

Isolation/Support Frame

- *Protect Boards from Physical Damage during Handling and Storage*
- *Stiffen Boards to Prevent Board Warpage and Twisting*
- *Guides Board Edgifiers into Mating Edge Connector*
- *Improve Dynamic Signal Integrity with Electrical Noise Isolator*
- *Safety Feature – Protect Operators from Sharp Solder Joint on Bottom of Board*
- *Protect Boards from Potential Fire from Shorted Devices on the Board Below*



Powered Cool-down Storage Rack

- *Maintain Power During Cool-Down*
- *Provide Safe Mobile Transportation of Boards*

A dependable burn-in assembly must rely on high-quality test sockets, board materials, special printed circuit layout techniques, and careful, experienced assembly procedures. The board support structure, powered cool-down racks and mobile storage carts are important but often overlooked items when burn-in boards are purchased.

We use a special **Isolation/Support Frame** to guard your investment by protecting the burn-in board assemblies for many years. The main purpose of the isolation/support frame is to protect the board from damage, since these assemblies are often roughly handled, especially when removed hot from burn-in chambers. The Isolation/Support Frame protects the burn-in board in the event it is dropped from a table or cart, a frequent accident in production burn-in areas.

Storage of board assemblies is also easier with this Isolation/Support Frame and our **Powered Cool-down Storage Rack**.

In the chamber, where boards experience severe environmental conditions for long periods of time, the Isolation/Support Frame stiffens the board along its entire length, minimizing board warpage and twisting as well as protecting the boards in case a shorted device on the board below bursts into flames.

For dynamic burn-in applications, the Isolation/Support Frame acts as a shield to prevent signals from radiating between boards, resulting in improved signal integrity. The Powered Cool-down Storage Rack enables boards to maintain power during cool-down – meeting certain military conditions.

Since static burn-in applications normally do not require such cool-down, our **Guardian™ Mobile Storage Cabinet** protects your investment while affording easy, safe transportation to and from the burn-in ovens economically.

All-in-all, we have your investment in mind and continue to provide “people-engineered” products that make sense and save dollars.



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HAST AND HUMIDITY Boards



With years of experience, Loranger has produced thousands of boards in a variety of configurations for every conceivable device. Here is an example of a design configuration for Humidity and HAST (Highly Accelerated Stress Test) applications. Humidity, typically 85 C and 85% Relative Humidity, and HAST, typically 130 C, 85% Relative Humidity and elevated pressure, require special board material and design considerations.

Design Features

- Special board materials are available for HAST and Humidity applications
- Boards are designed with optimal trace and component spacing
- Traces are typically placed only on the inner layers of the board for protection from the humidity environment
- Conformal coating is available for further protection
- Boards are available without frames to minimize thermal mass
- Surface mount or plated through hole component designs available
- Contact your Loranger sales representative to discuss your specific requirements



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PCB Layout Design Goals

Each PC board design must be treated uniquely as each layout is a combination of proper material selections, mechanical constraints and electrical wizardry. However, the following list of design goals should be reviewed on each layout.

- **Maximize Voltage Spacing** – generally line spaces of 0.010" (min) can be maintained for differentials of less than 50 volts. However, we've built boards with 1,000 volt differentials with consequent increased trace spacing.
- **Minimum Line Widths and Spaces** – generally 0.010" line widths and spaces can be easily obtained. However, 0.025" minimum spaces and traces are preferred to accommodate manufacturing cost and wear concerns. Smaller dimensions add significant costs, but we've produced boards having 0.004" lines and spaces!
- **Multilayer Design** – where possible, double-sided PC boards with plated-thru-holes are preferred for economy, reliability and ease of repair. However, multi-layers of 4 to 26 layers are available.
- **Circuit Layout** – we normally prefer a 1/2" "circuit-free" zone around the entire perimeter of the PC board, save the edgefinger area, to meet manufacturing standards, sharpness of layout and mechanical attachment spacing for framing like the **Isolation/Support Frame**.
- **Plated-thru-hole Design** – economic concerns generally force our designers to consider four rules for PTH sizing:
 - 1) Minimize the number of different hole sizes to avoid drill bit changes
 - 2) Ideally design the PTHs to be 0.010" over the diagonal of the socket or device lead fitting the hole for good solderability and ease of component loading
 - 3) Refrain from holes under 0.031" diameter to meet manufacturing concerns (drill bits below 0.031" break and wander easily – adding significant cost for holes below 0.015" diameter.)
 - 4) Respect the ratio hole diameter to PC board thickness (1:3 maximum). To assure accuracy and economy, 0.040" minimum holes to 0.062" thick PC boards work well.
- **Feed-thru Holes** – minimize the number of feed-thru holes that do not have a component lead soldered into it to enhance reliability.
- **Pad Areas Around PTHs** – for soundness of solder joints, design with a minimum of 50% more pad area than PTH area (0.010" minimum annular ring).
- **Blind and Buried or Built-Up Vias** – minimize the use of vias in multilayer design for circuit integrity and cost.
- **Other Design Issues** – Following are guidelines for the proper techniques to be used when designing burn-in boards for RAM, ROM, CPU and other electrically-delicate devices. Based upon individual customer requirements, we incorporate these and other proprietary techniques to produce high-quality burn-in boards with exceptional signal integrity. Separate cost must be quoted, however, to uniquely tune a design for a specific device type.
- **Power Distribution** – The single most important aspect of successful memory burn-in board design is good power distribution accompanied with carefully designed decoupling and power girding.
- **Power Grids** – Power distribution is an important layout consideration. Both voltage and ground buses should be bused up and down the burn-in board throughout every device position, providing multiple paths through the array, reducing the effective inductance of the power distribution system. Traces running the power supply voltages throughout the array should be as wide as possible.
- **Bulk Decoupling** – For low-frequency decoupling, use 47 to 200µF capacitors between the supply voltage and common return. These capacitors should be solid tantalum capacitors which have better transient response than most other large value capacitors and put more capacitance into a small package, simplifying board layout. Half the bulk capacitance should be placed near the point where the supplies enter the board and the other half at the far side of the DUT so the array lies between the bulk decoupling capacitors. It is important that both the capacitance and voltage ratings of solid tantalum capacitors be derated for use at 125°C, the maximum operating temperature specified by most capacitor manufacturers. Although solid tantalum capacitors are expensive, their cost is insignificant when compared to the value of the DUT they protect.



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PCB Layout Design Goals

- **Local Decoupling** – to avoid high frequencies and overcome the voltage spikes developed on power supply pins of memory devices when turned on or off by dynamic control signals. Board layout utilizing a 0.1µF capacitor per DUT. Located physically close to each chip and have the shortest possible traces from their respective power supply to the ground. To reduce inductance further, these traces should be as wide as area will allow.
- **Speed and Signal Distribution** – the second most important aspect of successful burn-in board design is signal distribution.

TABLE I - ADVANCED CMOS DESIGN GUIDELINES				
Description	Crosstalk	Internal Rail Noise	Power Dist Noise	EMI
Use outputs close to ground for asynchronous outputs		X		
Run traces perpendicularly to adjacent layers	X			X
Keep coupled as short as possible	X			X
Shield asynchronous traces	X			X
Avoid wirewrap on long backplane asynchronous signals	X			X
Separate analog traces	X			X
Use power and ground planes	X	X	X	X
Use decoupling capacitors		X	X	X
Use termination	X			X
Keep I/O traces short	X			X
Minimize trace length	X			X
Minimize power impedance			X	X
Keep system boxes electrically isolated				X
Use leadless components when possible	X			X

In summary, the foregoing rules are general, sound, engineering design practices. Unique needs may force the modification or enhancement of these rules. Other concerns for electrical noise, line termination and decoupling, may further augment the design and layouts. PTH pads, conductor paths, edgefinger plating, nomenclature, solder mask and fabrication details are covered by IPC-A600 Process Specifications.



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Laminate Materials Data

IPC-D-275

September 1991

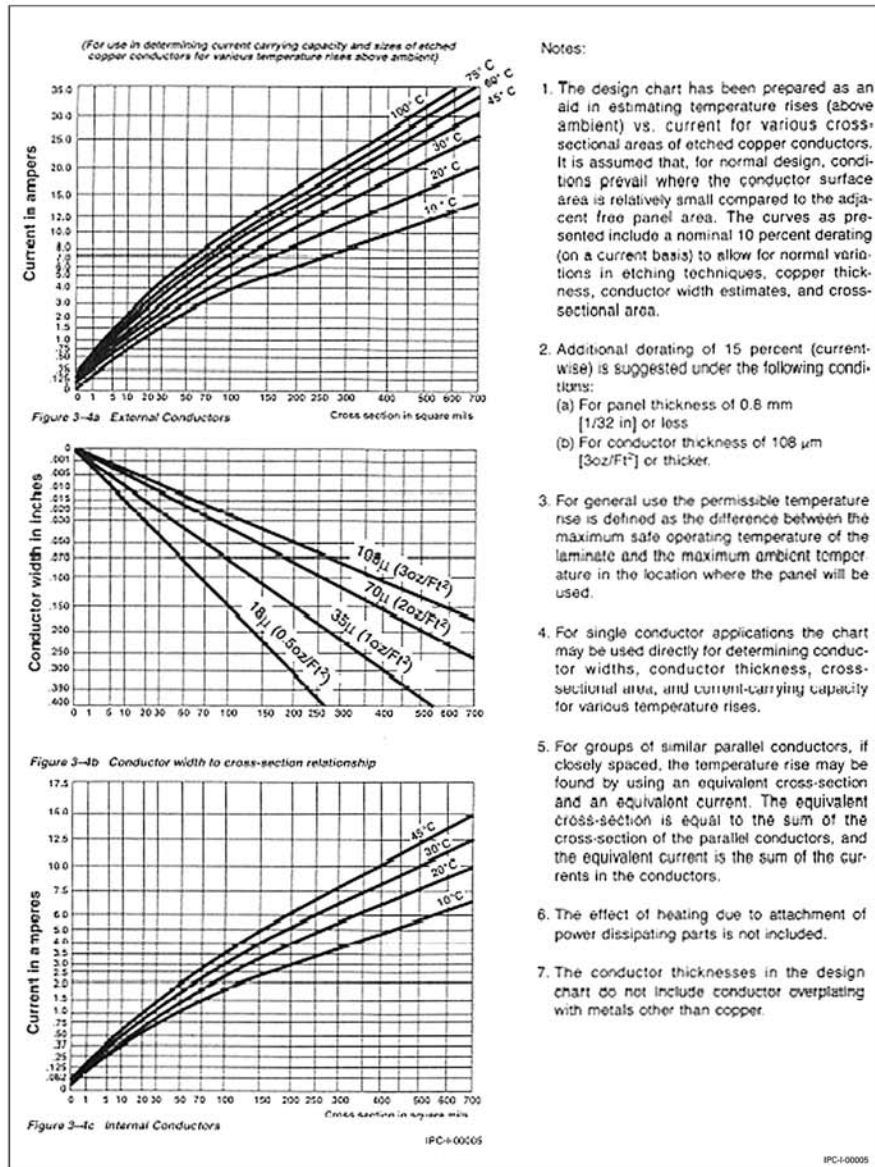


Figure 3-4 Conductor thickness and width for internal and external layers (inches)

PC Board Conductor Current-Carrying Capacity

Current-carrying capacity of various PC board conductor widths for different temperature rises above ambient. (NOTE: Since burn-in is normally performed at elevated temperatures, a safety factor is required.)

The above page is copied from Mil-STD-275C.

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Laminate Materials Data

TYPE	FR-4/G-10 ¹	FR-5/G-11 ²	Addition ⁴ Polyimide	Epoxy ⁵ Copolymer	Special ⁶ Epoxy	Teflon ^{®3} (PTFE)
------	------------------------	------------------------	------------------------------------	---------------------------------	-------------------------------	--------------------------------

PROPERTIES

GENERAL PROPERTIES

General Applications	Ambient Temp to 100°C	Low-Cost 125°C Applications	Best to 210°C Applications	Best to 160°C Applications	Low Leakage	Microwave Substrate
Water Absorption (% in 24 hrs)	0.08 - 0.20	0.11 - 0.25	0.16 - 0.40	0.11 - 0.20	0.08	0.01 - 0.02
Normal Color	Whitish Green	Whitish Green	Reddish Brown	Reddish Brown	White or Natural	Gray
Specific Gravity	1.80 - 1.93	1.80 - 1.90	1.80 - 1.85	1.80	1.8 (min)	2.20

MECHANICAL PROPERTIES

Peel Strength (lbs/in of width)	8.0 - 10.5	8.0 - 9.0	4.8 - 9.0	6.0 - 9.5	10.0 - 12.0	8.0
Flexural Strength L-W (psi x 10 ³)	70 - 95	70 - 80	50 - 97	75 - 100	70	15
Izod Impact L-W (notched, ft-lbs/in)	13 - 15	11 - 12	10.3 - 13	N/A	11	N/A
Hardness (Rockwell M Scale)	110	110	120	N/A	115	Soft
Compression Strength (psi x 10 ³) FW	55 - 65	65	N/A	N/A	N/A	4
Tensile Strength (psi x 10 ³)	50 - 54	50	50	N/A	N/A	4

ELECTRICAL PROPERTIES

Dielectric Constant (at 1 MHz)	4.6 - 4.8	4.7 - 4.8	4.4 - 5.3	4.5 - 4.8	4.7 - 4.9	2.1 - 2.6
Dielectric Strength (volts/mil S-T)	500 - 800	500 - 800	22 kV - 60 kV	800	60 kV (min)	50 kV
Dissipation Factor (at 1MHz)	0.019 - 0.021	0.02	0.003 - 0.02	0.002 - 0.015	0.02	0.0004 - 0.0008
Volume Resistivity (10 ¹⁴ Ω-cm at 23°C)	0.05 - 5.10	0.01 - 3.00	10.00	3.00	1.00 - 10.00	0.10 - 1.00
Surface Resistivity (Ω/square at 23°C)	0.01 - 0.90	0.001 - 0.04	5.00	0.30	0.50	0.01 - 3.00
Arc Resistance (seconds)	75 - 120	120	127 - 180	123	100	180

THERMAL PROPERTIES

Loranger Estimated Continuous Heat Resistance	100°C	125°C	210°C	160°C	125°C	210°C
Mfg' er Temp Rating - Electrical	130 - 138°C	140 - 149°C	260°C	200°C	130°C	260°C

¹ FR-4 is the flame-retardant version of Nema G-10*

² FR-5 is the flame-retardant version of Nema G-11 laminate for critical electrical applications

³ UL 94 VEO = 10-second flameout after source removed and no drip (i.e., socket adaptors, humidity tests)

⁴ UL 94 VEO = 10-second flameout after source removed and no drip

⁵ UL 94 VE2 = 30-second flameout after source removed with drip

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Component Materials Data

PC Board Capacitor Specifications

Characteristics of Capacitors Used in Burn-in

TYPE >>>> Parameters	Tantalum		Ceramic		Film	Mica
	Wet Slug	Solid	NPO	X7R		
Mfg Rated Temp Limit	125-175°C ¹	125°C	125-200°C ²	125°C	100-175°C ³	85°C
Generally Selected for	150°C and Hi-capacitance	125°C and Hi-capacitance	150°C	125°C	Not For Burn-in	Not For Burn-in
Voltage Rating	3-500V	3-100V	50-200V	50-200V	100-600V	200-500V
Type Voltage Selected	35-50V	35-50V	500-100V	50-100V	100-200V	200V
Surge Voltage @ 85% (% rated)	115%	115%	250%	250%	150%	200%
Capacitor Rating	1-1200µF	0.001-300µF	1-10,000pF	1-270,000pF	200pF - 10µF	1-5,500pF
Capacitor Change Due to Temp (% at Rated Temp)	+20 to -80%	+15 to -10%	±30 ppm/°C	±15%	±5%	±100 ppm/°C
General Tolerance	5-20%	10-20%	1-5%	10-20%	5-20%	1-20%
Dissipation Factor	9-20%	4-10%	0.10%	2.5%	0.75%	0.2%
Frequency Limit at 23°C	100 kHz	1 MHz	70 MHz	11 MHz	100 kHz	100 MHz
Insulation Resistance at 23°C	N/A	N/A	100,000 MΩ	100,000 MΩ	30,000 MΩ	100,000 MΩ
Relative Cost	Most Expensive	Moderately Expensive	Moderately Expensive	Above Average	Average	Least Expensive

¹ Some go to 175°C w/voltage derating.

² Glass-cased NPO caps work up to 200°C in small cap values (below 1000pF) and derated voltage.

³ Teflon® film can go to 175°C with low cap values and derated voltages.

NOTE: Many factors affect cost and this relative listing may change depending on specific situations (particularly higher temperature in a class.) Specific manufacturers' data may vary from data shown (reference only).

Additional Considerations

Uninsulated Wire Data

Ave. Gauge	Dia (in)	Circular (mils)	Current Carrying Capacity	Lbs per 1000 ft	DC Resistance (mΩ / ft)
24	0.02	404	1	1.2	51.0
22	0.025	640	1.5	1.9	32.0
20	0.032	1,020	2.4	3.1	20.0
18	0.04	1,620	3.8	4.9	13.0
16	0.051	2,580	6	7.8	8.0
14	0.064	4,110	9.7	12	5.0
12	0.081	6,530	15	20	3.0
10	0.102	10,380	24	31	2.0
8	0.129	16,510	39	50	1.3
6	0.162	26,204	62	79	0.8
4	0.204	41,740	99	126	0.5
2	0.258	66,400	157	201	0.32
0	0.325	106,000	252	320	0.2
00	0.365	133,000	316	403	0.16
000	0.410	167,800	386	508	0.13

NOTE: Current-carry capacity is based on maximum current that will cause less than a 10°C rise above ambient.

Recommended Conductor Spacing

Minimum Space Between Conductors at Various Altitudes

Applied Voltage	Sea Level (in)	6,500 ft (in)	10,000 ft (in)
0-200	0.010	0.013	0.018
300	0.026	0.033	0.038
400	0.044	0.057	0.065
500	0.069	0.087	0.100
600	0.096	0.122	0.140
700	0.131	0.165	0.190
800	0.166	0.209	0.240
900	0.207	0.261	0.300
1000	0.252	0.318	0.365

NOTE: 1) Voltage and altitude affect minimum spacing requirements.
2) Humidity and salt contaminating environments require further derating on the above values. Conformal coating enhances reliability by protecting the board from contamination and



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Component Materials Data

PC Board Resistor Specifications

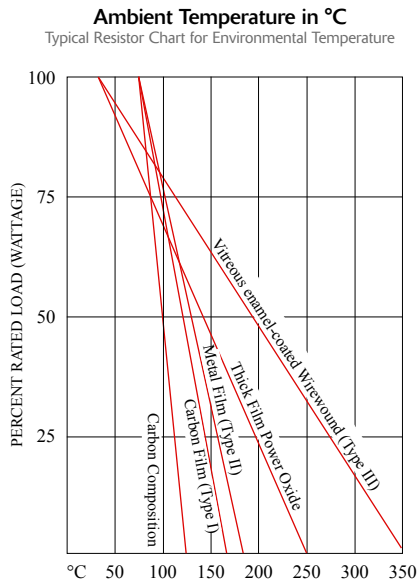
Characteristics of Resistors Used in Burn-in

RESISTOR TYPE >>> PARAMETER	Wirewound	Metal Film	Carbon Film	Carbon Composite	Thick Film Pwd Oxide
Cost	Most Expensive	Above Average	Average	Least Expensive	Above Average
Generally Selected for	160°C (Type III)	150°C (Type II)	125°C (Type I)	Not for Burn-in	to 175°C
Wattage Range	1 to 1000W	1/10 to 3W	1/2 to 2W	1/8 to 2W	1 to 9W
Practical Resistance Range (Ω)	0.1 to 10k	10 to 1 M	5 to 1 M	5 to 1M	0.1 to 240k
Temperature Coefficient (ppm/°C)	+20 to +4000	+25 to +100	+200 to +600	+625 to +3000	+200
Momentary Overload (5 seconds)	800% rated wattage	500% rated wattage	500% rated wattage	500% rated wattage	250% rated wattage
Noise	Most Quiet if Noninductive	Quiet	Less Quiet	Least Quiet	Quiet
Moisture Resistance	Good	Good	Fair	Very Poor	Average
General Tolerance	1 to 5%	1%	5%	10%	2 to 5%
Hi-Frequency Characteristics	Inductive (Noninductive Wound-type increases cost)	Low Series Inductance	Negligible Series Inductance	Negligible Series Inductance	No Series Inductance
		Low Shunt Capacitance	Low Shunt Capacitance	Low Shunt Capacitance	Low Shunt apacitance

Derating Chart

Free Air Rating

Note: Reference Only. Specific manufacturers' devices may vary from data shown.



PC Board Solder Selections

Solder Point	Eutectic Max Use	Recommended	Composition
Type I	183°C	143°C	60% Sn, 40% Pb or equivalent
Type II	221°C	175°C	96% Sn, 4% Ag or equivalent
Type III A	310°C	250°C	97.5% Pb, 1% Sn, 1.5% Ag or equivalent
Type III B	308°C	250°C	5% Sn, 95% Pb or equivalent

Conformal Coating and Solder Masks

Solder masks are generally required. However, where insulation needs are great or where humidity or other atmospheric contaminants are present, conformal coating may be recommended also. Consult Loranger for recommendation of special applications.

Wire Size Selection

Generally, wire sizes should be one size larger than required to insure safety, minimize voltage drops and crosstalk between lines. Wire insulation is normally silicone or Teflon® for all oven atmospheres to 200°C and silicone glass braid above 200°C. Stranded wire is preferred over solid conductors. Outside the oven, THHN insulation is used.

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