

MITSUBISHI HYBRID IC M57145L-01

HYBRID IC FOR ON-BOARD POWER SUPPLY

DESCRIPTION

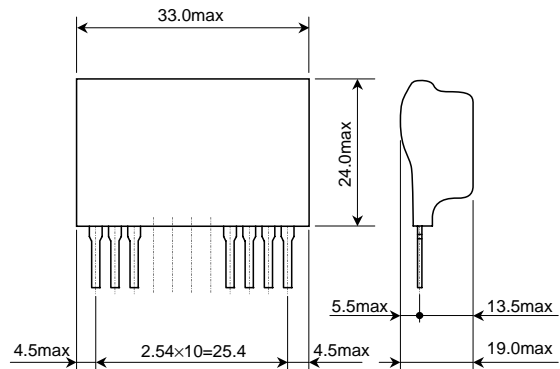
M57145L-01 is an insulated type DC-DC converter which can supply 2 outputs from 12 ~ 18VDC single input. The insulation can endure to 2500Vrms and a pair of output voltages is +15.8V, -8.2V which can suitable for power supply to IGBT driver.

FEATURES

- Input voltage DC12 ~ 18V
- Output voltage +24V, 100mA
+8.2V
- Insulation endurance between input and output 2500Vrms 1minute
- Small SIP structure

OUTLINE DRAWING

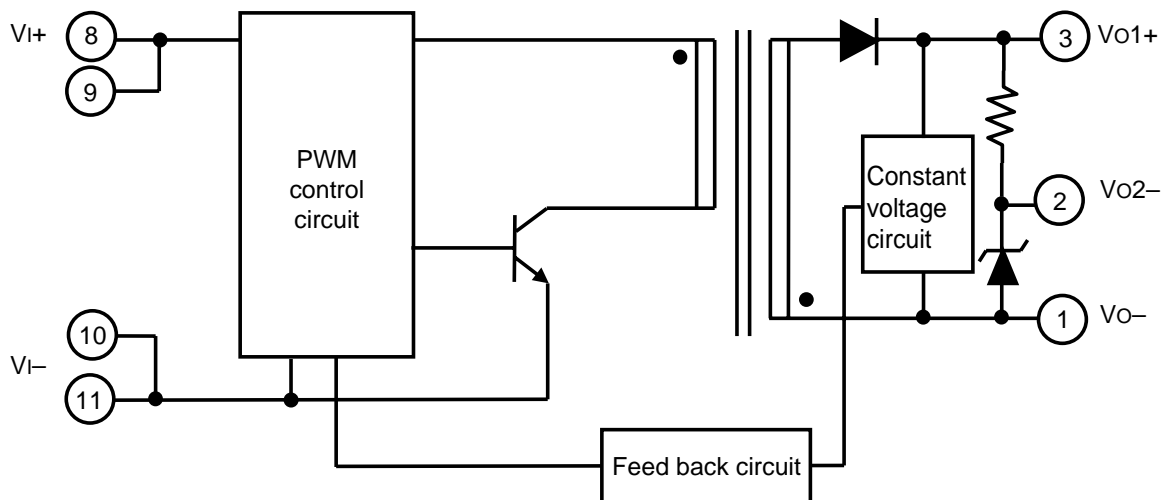
Dimensions: mm



APPLICATION

Power supply for IGBT driver, etc.

BLOCK DIAGRAM



M57145L-01

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MAXIMUM RATINGS (Ta = 25°C, unless otherwise noted)

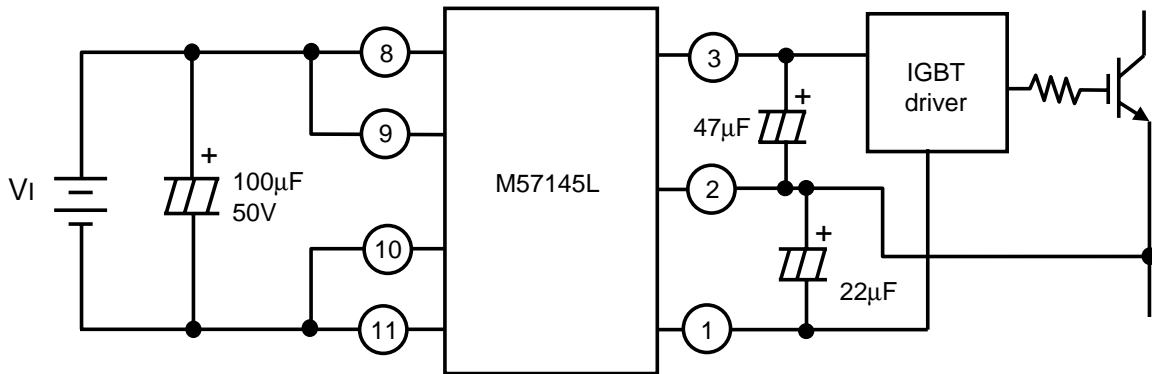
Symbol	Parameter	Conditions	Ratings	Unit
Vi	Input voltage	–	18	V
IL1	Load current 1	③ pin output current	100(*)	mA
Topr	Operating temperature	No condensation	-10 ~ +70	°C
Tstg	Storage temperature	No condensation	-20 ~ +85	°C
Viso1	Electrical isolation between input and outputs	Sine wave voltage, 60Hz, 1 minutes	2500	Vrms

(*)See the derating curve in next page.

ELECTRICAL CHARACTERISTICS (VIN=15V, Ta = 25°C, unless otherwise noted)

Symbol	Parameter	Conditions	Limits			Unit
			Min.	Typ.	Max.	
Vi	Input voltage	Recommended range	12	—	18	V
Vo1	Output voltage 1	③ pin voltage Io = 0 ~ 60mA	22.8	24.0	25.2	V
Vo2	Output voltage 2	② pin voltage No load of ②, ③ pins	7.96	8.2	8.43	V
Reg-I	Input regulation	IL = 60mA, Vi = 12 ~ 18V, No load of ② pin	–	–	50	mV
Reg-L	Load regulation	IL = 0 ~ 60mA, No load of ② pin	–	–	50	mV
η	Efficiency	IL = 60mA, No load of ② pin	–	68	–	%

APPLICATION EXAMPLE



Note: The value of capacitance of electrolytic capacitor between ③, ② and ① pin must be detail adjusted by IGBT and driver.

TYPICAL CHARACTERISTICS

