

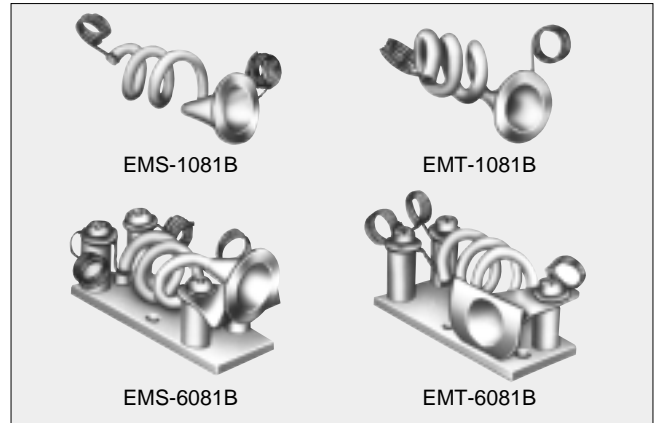
ELECTRON MULTIPLIERS



Secondary Electron Multipliers (CERATRON®-E) Pulse Counting

FEATURES

1. Low noise.
2. High gain.
3. Fast response.
4. High heat resistance (Bakeable).
5. Stable operation in ultra high vacuum.
6. Extremely resistant to electron and ion impacts.
7. Compact and light weight.
8. Simple construction.



SPECIFICATIONS

Model	Mounting Assembly	Maximum Applied Voltage	Gain	Maximum Output Current	Detects	Applications
EMS-1081B	NO	4.0 kV	1×10 ⁸ min. at 4.0kV	linear to 1μA	ions, electrons β-particles soft x-rays vacuum UV photons (solar blind)	electron spectroscopy. scanning electron-microscopy. mass spectroscopy. residual gas analysis UV spectroscopy.
EMS-6081B	YES	4.0 kV				
EMT-1081B	NO	4.0 kV				
EMT-6081B	YES	4.0 kV				

DIMENSIONS

● CERATRON®-E Tube Dimensions

Outer Diameter	Inner Diameter
3.1mm	1.2mm

● Lead Wire (Shown as)

Dimensions	Material
ø0.5×100mm	SUS-304 Stainless steel

● Collector

Dimensions	Material
ø5	silver plate

(in mm
size tolerance)
* . ±1
** . ±0.5

CHARACTERISTICS

Typical Gain vs. Voltage	Fig.1
Baking Temperature	Bakeable to 250°C
Vacuum Cycle	CERATRON®-E operates quite stably even after many atmospheric exposures.
Background Noise	Less than 0.01 count/sec.
Maximum Operating Pressure	5×10 ⁻³ Pa A higher pressure may cause an ionic feedback effect which disturbs normal operation. (no gain degradation after operation at a higher pressure.)
Rise Time	2.0±0.3 n. sec.

• Typical gain vs. applied voltage curve

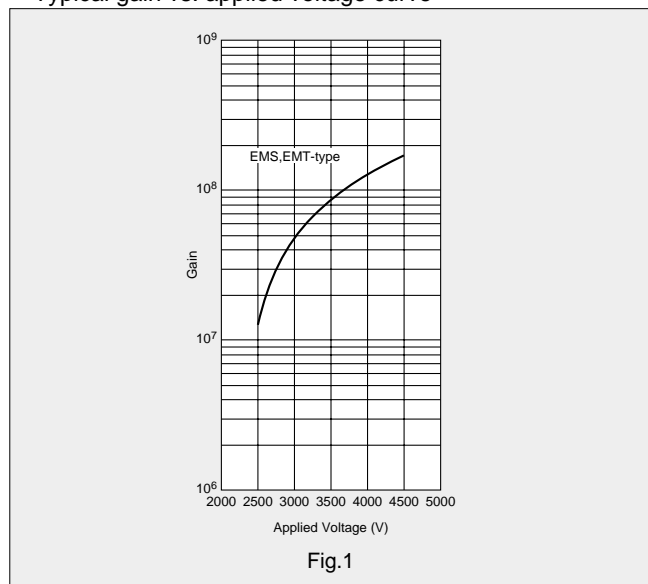
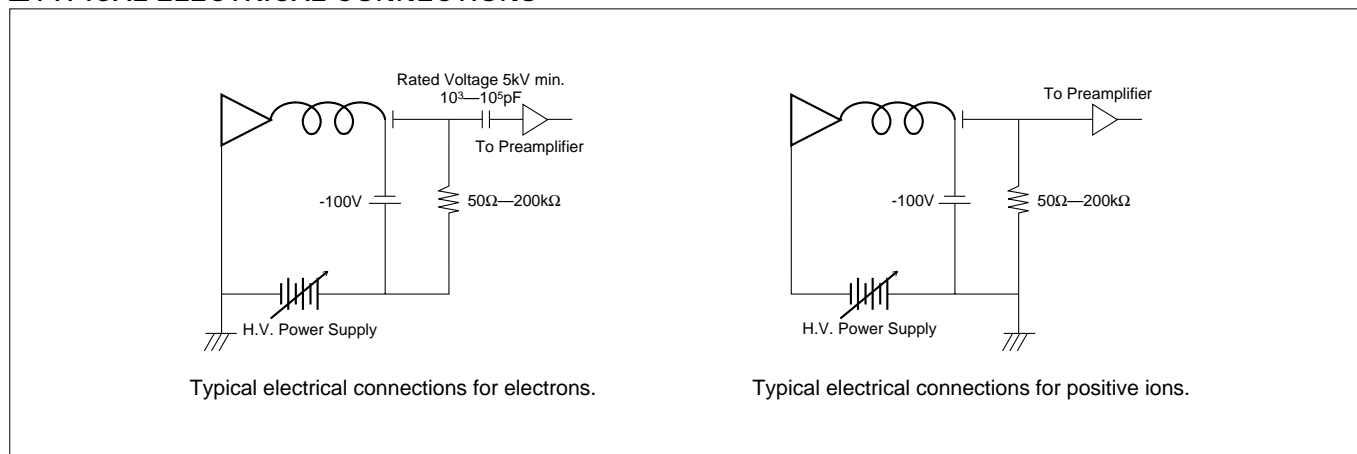


Fig.1

TYPICAL ELECTRICAL CONNECTIONS



Typical electrical connections for electrons.

Typical electrical connections for positive ions.

⚠ Note:**1. Export Control**

⟨For customers outside Japan⟩

Murata products should not be used or sold for use in the development, production, stockpiling or utilization of any conventional weapons or mass-destructive weapons (nuclear weapons, chemical or biological weapons, or missiles), or any other weapons.

⟨For customers in Japan⟩

For products which are controlled items subject to the "Foreign Exchange and Foreign Trade Law" of Japan, the export license specified by the law is required for export.

2. Please contact our sales representatives or product engineers before using our products listed in this catalog for the applications listed below which require especially high reliability for the prevention of defects which might directly cause damage to the third party's life, body or property, or when intending to use one of our products for other applications than specified in this catalog.

- ① Aircraft equipment
- ② Aerospace equipment
- ③ Undersea equipment
- ④ Power plant equipment
- ⑤ Medical equipment
- ⑥ Transportation equipment (vehicles, trains, ships, etc.)
- ⑦ Traffic signal equipment
- ⑧ Disaster prevention / crime prevention equipment
- ⑨ Data-processing equipment
- ⑩ Application of similar complexity and/or reliability requirements to the applications listed in the above

3. Product specifications in this catalog are as of June 2000. They are subject to change or our products in it may be discontinued without advance notice. Please check with our sales representatives or product engineers before your ordering. If there are any questions, please contact our sales representatives or product engineers.**4. The parts numbers and specifications listed in this catalog are for information only. You are requested to approve our product specification or to transact the approval sheet for product specification, before your ordering.****5. Please note that unless otherwise specified, we shall assume no responsibility whatsoever for any conflict or dispute that may occur in connection with the effect of our and/or third party's intellectual property rights and other related rights in consideration of your using our products and/or information described or contained in our catalogs. In this connection, no representation shall be made to the effect that any third parties are authorized to use the rights mentioned above under licenses without our consent.****6. None of ozone depleting substances (ODS) under the Montreal Protocol is used in manufacturing process of us.**