EiMS05 thru EiMS24
Compact, Four Line, ESD/EFT/Surge Monolithic TVS Diode Network

FEATURES

- Compact Design in SOT23 for use in portable applications
- Protects four uni-directional lines
- ESD protection to IEC 1000-4-2, Level 4
- Low Leakage Current
- Monolithic IC for higher reliability at lower cost
- Manufactured using Proprietary technology
- Transient protection for data lines to

IEC 1000-4-2 (ESD) 15kV (air), 8kV (contact)
IEC 1000-4-4 (EFT) 40A (tp =5/50ns)
IEC 1000-4-5 (Lightning) 12A (tp =8/20µs)

DESCRIPTION

Epic's MS series of Compact Monolithic TVS Diode Networks are designed to protect components from damage or Latch-up caused by electrostatic discharge (ESD), electrical fast transients (EFT), and induced lightning.
TVS diodes are characterized by their high surge capability, low operating and clamping voltages, and fast response time. This makes them ideal for use as board level protection of sensitive semiconductor components.
The common anode design allows the user to protect four separate lines with one package.

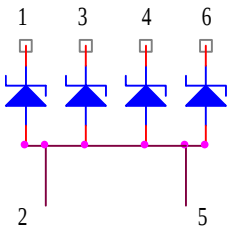
APPLICATIONS

- Personal Digital Assistants
- Cell Phones
- Microprocessor Based equipment
- Notebooks, Desktops, Servers
- Portable electronics
- Set Top Box
- Peripherals

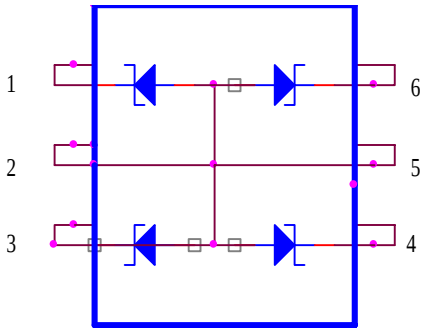
MECHANICAL CHARACTERISTICS

- Available in SOT-23 6-Lead Package

Circuit Drawing:



PinConfiguration



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Monolithic TVS Diode Network

Semiconductor, Inc.

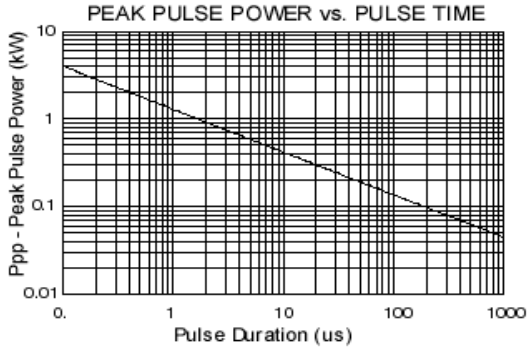
MAXIMUM RATINGS

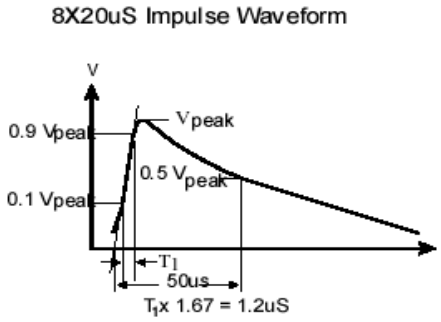
RATING	SYMBOL	VALUE	UNIT
Peak Pulse Power (tp = 8 x 20 µs)	Ppk	300	Watts
Operating Temperature	Tj	-55 to +125	°C
Storage Temperature	Tstg	-55 to +150	°C

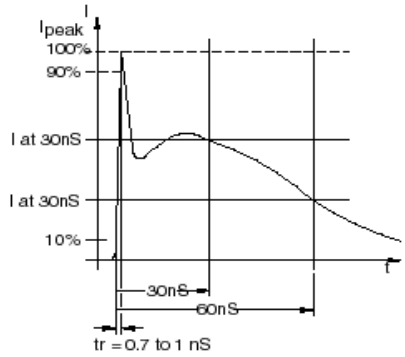
ELECTRICAL CHARACTERISTICS @ 25°C

	Reverse Stand-off Voltage	Min Vbr @ 1mA	Max Clamping Voltage @Ip=5A	Max Peak Pulse Current tp=8/20 µs	Leakage Current @ V_{RWM}	Max. Cap. @0V, 1 Mhz
	V_{RWM}	BV(min)	Vc	Ip	I_R	Cj
	Volts	Volts	Volts	A	µA	pf
EiMS05	5	6	9.8	24	20	400
EiMS12	12	13.3	19	24	1	150
EiMS15	15	16.7	24	24	1	125
EiMS24	24	27	40	24	1	75

Note : Clamping voltage valus are based upon an industry standard 8 x 20µs peak pulse current (Ipp) waveform.







Level	First Peak Current (A)	Peak Current at 30ns (A)	Peak Current at 60ns (A)	Test Voltage (Contact Discharge) (kV)	Test Voltage (Air Discharge) (kV)
1	7.5	4	8	2	2
2	15	8	4	4	4
3	22.5	12	6	6	8
4	30	16	8	8	15

IEC 1000-4-2 ESD WAVEFORM & DISCHARGE PARAMETERS