

EMD1S THRU EMD4S

MINIATURE GLASS PASSIVATED SUPER FAST SINGLE-PHASE SURFACE MOUNT BRIDGE RECTIFIER



康比電子
HORNBY ELECTRONIC

REVERSE VOLTAGE: 50 to 200 VOLTS
FORWARD CURRENT: 0.5 AMPERE

FEATURES

- Surge overload rating: 25 amperes peak
- Ideal for printed circuit board
- Plastic material has Underwriters Laboratory Flammability Classification 94V-0
- Fast recovery, low switching loss
- Reliable low cost construction utilizing molded

MECHANICAL DATA

Case: Molded plastic, MD-S

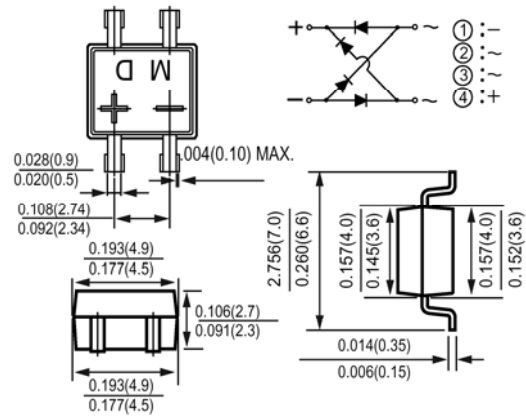
Epoxy: UL 94V-O rate flame retardant

Terminals: Leads solderable per MIL-STD-202, method 208 guaranteed

Mounting position: Any

Weight: 0.008ounce, 0.22gram

MD-S



Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

	Symbols	EMD1S	EMD2S	EMD3S	EMD4S	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	150	200	Volts
Maximum RMS Voltage	V_{RMS}	35	70	105	140	Volts
Maximum DC Blocking Voltage	V_{DC}	50	100	150	200	Volts
Maximum Average Forward Rectified Current (see Fig. 1) on glass-epoxy P.C.B (Note 2) on aluminum substrate (Note 3)	$I_{(AV)}$	0.5 0.8				Amp
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	25				Amp
Maximum Forward Voltage at 0.4A DC and 25°C	V_F	1.05				Volts
Maximum Reverse Current at $T_A=25^\circ\text{C}$ at Rated DC Blocking Voltage $T_A=125^\circ\text{C}$	I_R	5.0 500				uAmp
Typical Junction Capacitance (Note 1)	C_J	13				pF
Maximum Reverse Recovery Time (Note 4)	T_{RR}	50				nS
Typical Thermal Resistance (Note 3)	$R_{\theta JA}$	70				°C/W
Typical Thermal Resistance (Note 2)	$R_{\theta JL}$	20				°C/W
Operating and Storage Temperature Range	T_J, T_{stg}	-55 to +150				°C

NOTES:

1- Measured at 1 MHz and applied reverse voltage of 4.0 VDC.

2- On glass epoxy P.C.B. mounted on 0.05 x 0.05" (1.3 x 1.3mm) pads

3- On aluminum substrate P.C.B. with an area of 0.8" x 0.8" (20 x 20mm) mounted on 0.05 x 0.05" (1.3 x 1.3mm) solder pad

4- Reverse Recovery Test Conditions: $I_F=0.5A$, $I_R=1A$, $I_{RR}=0.25A$.

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RATINGS AND CHARACTERISTIC CURVES

Fig. 1 – Maximum Forward Current Derating Curve

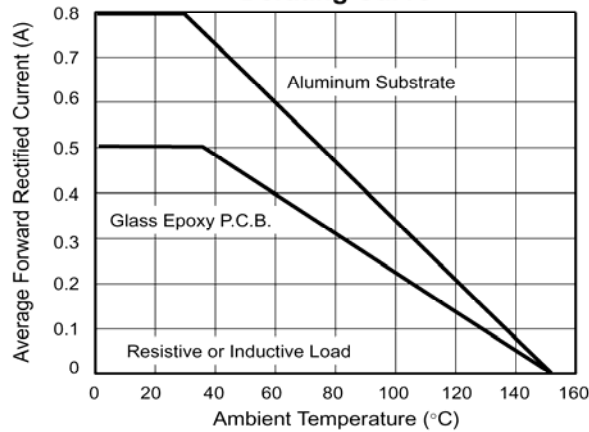


Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current

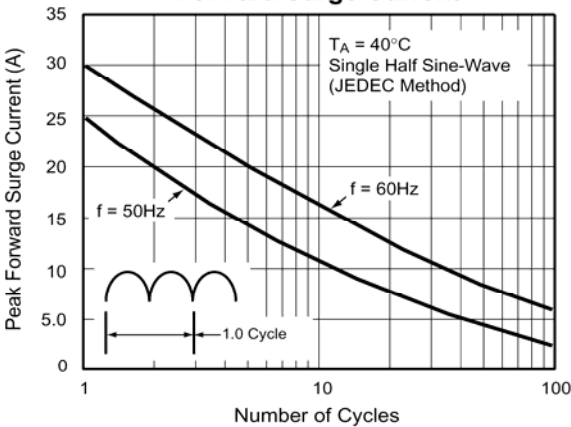


Fig. 3 – Typical Instantaneous Forward Characteristics

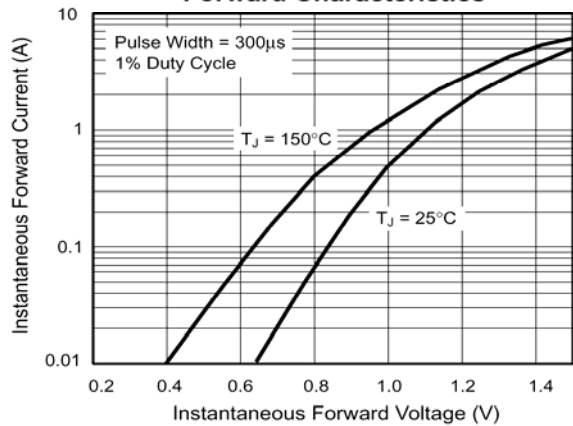


Fig. 4 - Typical Reverse Leakage Characteristics Per Leg

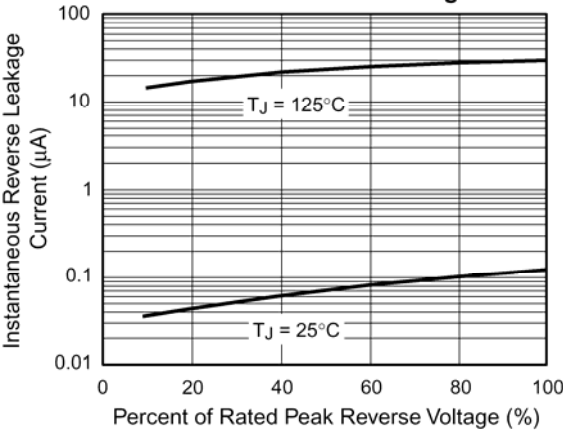


Fig. 5 - Typical Junction Capacitance Per Leg

