

**SINGLE-PHASE GLASS PASSIVATED  
MINI SUPER FAST SURFACE MOUNT BRIDGE RECTIFIER**  
**VOLTAGE RANGE 50 to 200 Volts CURRENT 0.5 Ampere**

**FEATURES**

- \* Surge overload rating - 30 amperes peak
- \* Ideal for printed circuit board
- \* Reliable low cost construction utilizing molded
- \* Glass passivated device
- \* Polarity symbols molded on body
- \* Mounting position: Any
- \* Weight: 0.5 gram

**MECHANICAL DATA**

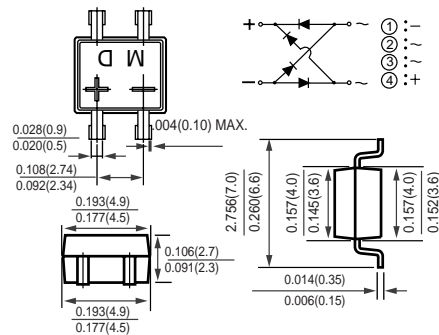
- \* Epoxy : Device has UL flammability classification 94V-0

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25 °C ambient temperature unless otherwise specified.  
Single phase, half wave, 60 Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.



**MD-S**



Dimensions in millimeters

**MAXIMUM RATINGS** (At TA = 25°C unless otherwise noted)

RATINGS	SYMBOL	EMD1S	EMD2S	EMD3S	EMD4S	UNITS
Maximum Recurrent Peak Reverse Voltage	VRRM	50	100	150	200	Volts
Maximum RMS Bridge Input Voltage	VRMS	35	70	105	140	Volts
Maximum DC Blocking Voltage	VDC	50	100	150	200	Volts
Maximum Average Forward Output Rectified Current at TA = 30°C - on glass-epoxy P.C.B. ( NOTE 1 ) - on aluminum substrate ( NOTE 2 )	IO	0.5 0.8				Amp
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	IFSM	20				Amps
Typical Junction Capacitance ( Note 5 )	CJ	15				pF
Operating and Storage Temperature Range	TJ,TSTG	-55 to + 150				°C

**ELECTRICAL CHARACTERISTICS** (At TA = 25°C unless otherwise noted)

CHARACTERISTICS	SYMBOL	EMD1S	EMD2S	EMD3S	EMD4S	UNITS
Maximum Forward Voltage Drop per Bridge Element at 0.5A DC	VF	1.05				Volts
Maximum Reverse Current at rated @ TA = 25°C	IR	10				uAmps
DC Blocking Voltage per element @ TA = 125°C		0.5				mAmps
Maximum Reverse Recovery Time (Note 4)	trr	50				nSec

NOTE: 1. On glass-epoxy P.C.B. mounted on 0.05 X 0.05" (1.3 X 1.3mm) pads.

2. On aluminum substrate P.C.B. with an area of 0.8 X 0.8 X 0.25" (20 X 20 X 6.4mm) mounted on 0.05 X 0.05" (1.27 X 1.27mm) solder pad.

3. Suffix "-S" Surface Mount for Mini Dip Bridge.

4. Test Conditions: IF=0.5A, IR=-1.0A, IRR=-0.25A.

5. Measured at 1MHz and applied reverse voltage of 4.0 volts.

# RATING AND CHARACTERISTIC CURVES ( EMD1S THRU EMD4S )

FIG. 1 - TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

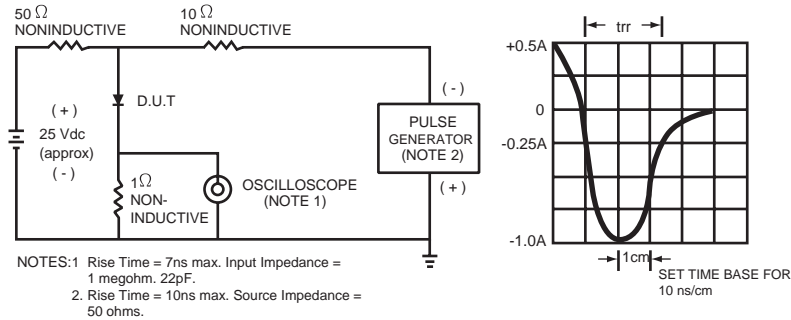


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

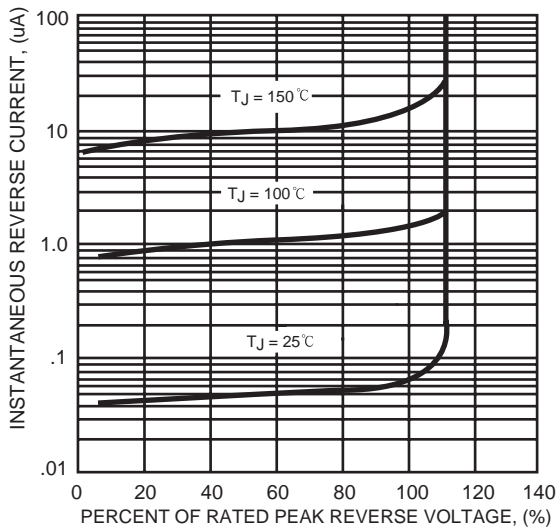


FIG. 5 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

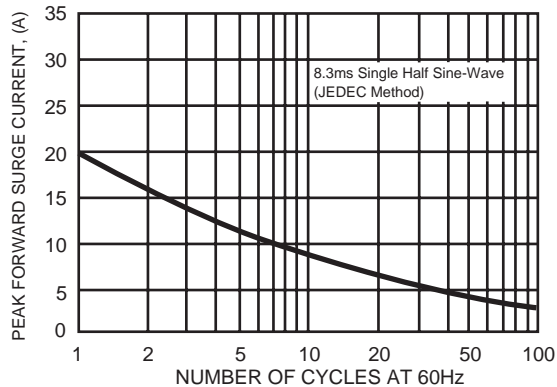


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

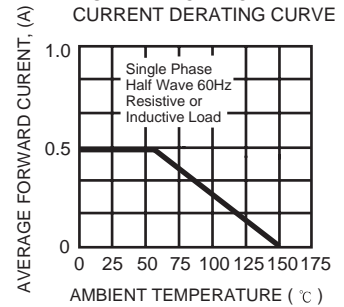


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

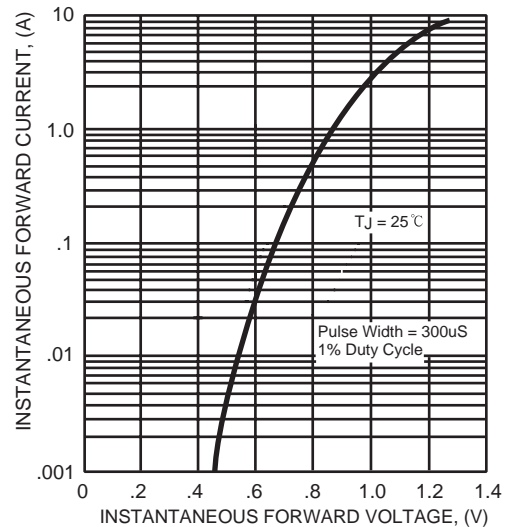
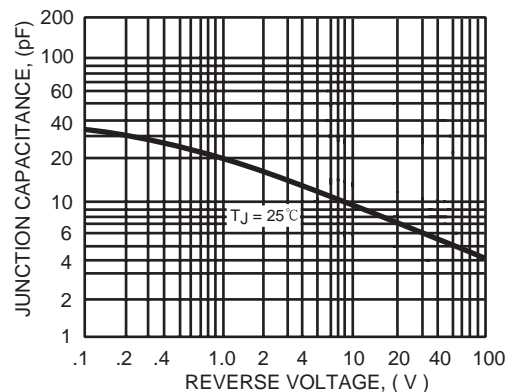
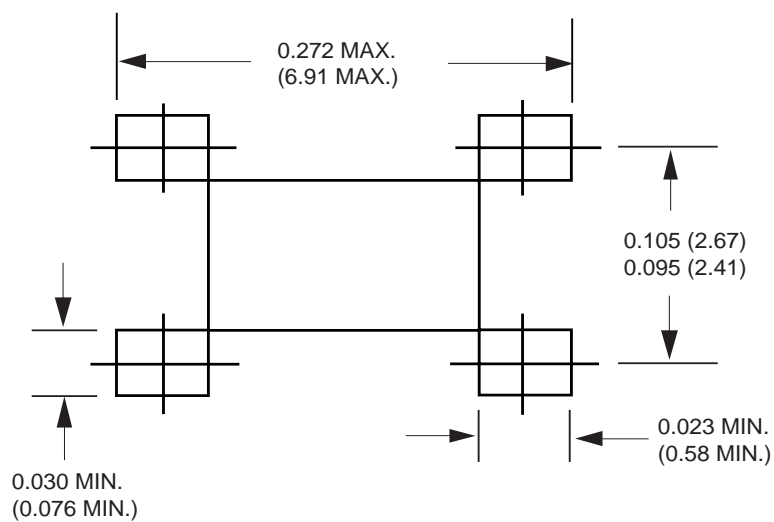


FIG. 6 - TYPICAL JUNCTION CAPACITANCE



## Mounting Pad Layout



Dimensions in inches and (millimeters)