

**SINGLE-PHASE GLASS PASSIVATED  
MINI FAST RECOVERY SURFACE MOUNT BRIDGE RECTIFIER**  
VOLTAGE RANGE 50 to 1000 Volts CURRENT 0.8 Ampere

**FEATURES**

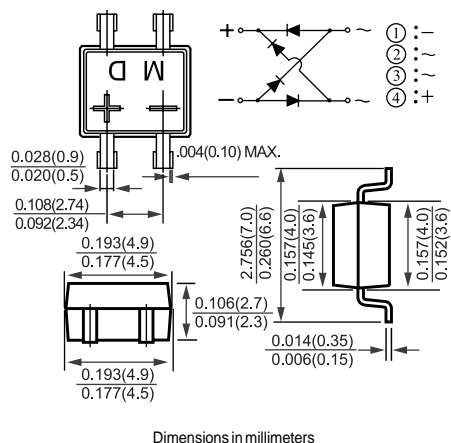
- \* Surge overload rating - 30 amperes peak
- \* Ideal for printed circuit board
- \* Reliable low cost construction utilizing molded
- \* Glass passivated device
- \* Polarity symbols molded on body
- \* Mounting position: Any
- \* Weight: 0.5 gram

**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**



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

RATINGS	SYMBOL	FMD1S	FMD2S	FMD3S	FMD4S	FMD5S	FMD6S	FMD7S	UNITS	
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	Volts	
Maximum RMS Bridge Input Voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	Volts	
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	Volts	
Maximum Average Forward Output Rectified Current TA = 30°C -on glass-epoxy P.C.B. ( NOTE 1 ) -on aluminum substrate ( NOTE 2 )	I <sub>O</sub>	0.5						0.8		Amp
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I <sub>FSM</sub>	30								Amps
Typical Junction Capacitance ( Note3 )	C <sub>J</sub>	15								pF
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55 to +150								°C

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

CHARACTERISTICS	SYMBOL	FMD1S	FMD2S	FMD3S	FMD4S	FMD5S	FMD6S	FMD7S	UNITS	
Maximum Forward Voltage Drop per Bridge Element at 0.4A DC	V <sub>F</sub>	1.30								Volts
Maximum Reverse Current at rated	I <sub>R</sub>	10						@TA = 25°C		uAmps
DC Blocking Voltage per element								100		
Maximum Reverse Recovery Time ( Note 4 )	t <sub>rr</sub>	150			250		500			

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.

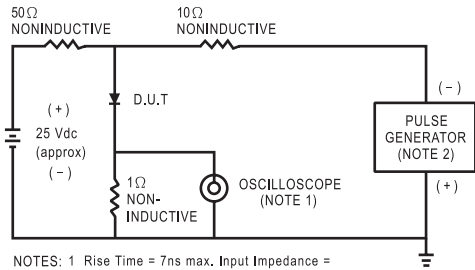
3. Measured at 1MHz and applied reverse voltage of 4.0 volts.

4. Test Conditions: I<sub>F</sub> = 0.5A, I<sub>R</sub> = 1.0A, I<sub>RR</sub> = 0.25A.

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

# RATING AND CHARACTERISTIC CURVES ( FMD1S THRU FMD7S )

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



- NOTES: 1 Rise Time = 7ns max. Input Impedance = 1 megohm, 22pF.  
2. Rise Time = 10ns max. Source Impedance = 50 ohms.

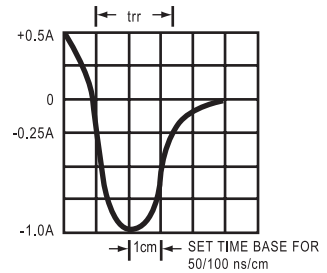


FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

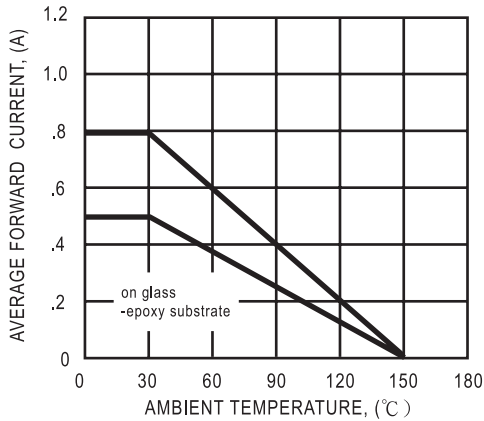


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

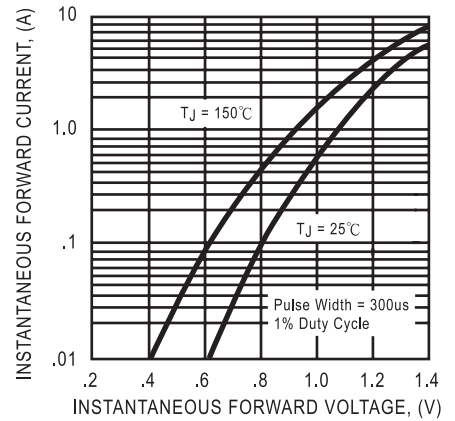


FIG. 4 - TYPICAL JUNCTION CAPACITANCE

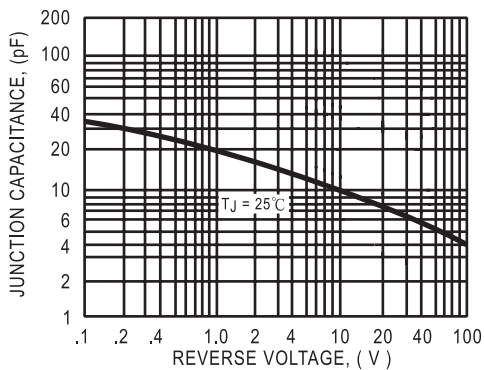


FIG. 3 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

