

**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

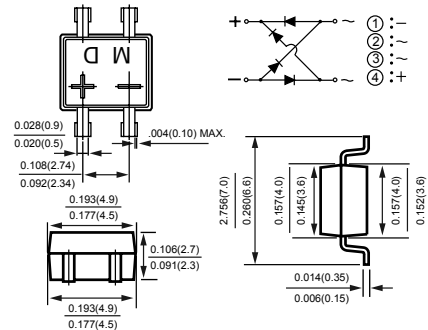
MECHANICAL DATA

- * Epoxy: Device has UL flammability classification 94V-O

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 inches and (millimeters)

MAXIMUM RATINGS (At $T_A = 25^\circ\text{C}$ unless otherwise noted)

RATINGS	SYMBOL	FMD1S	FMD2S	FMD3S	FMD4S	FMD5S	FMD6S	FMD7S	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS Bridge Input Voltage	V_{RMS}	35	70	140	280	420	480	700	Volts
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Output Current at $T_A = 30^\circ\text{C}$ -on glass-epoxy P.C.B. (Note 2) -on aluminum substrate (Note 3)	I_O	0.5 0.8							Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	30							Amps
Typical Junction Capacitance (Note 4)	C_J	15							pF
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to + 150							$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS (At $T_A = 25^\circ\text{C}$ 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_F	1.30							Volts
Maximum Reverse Current at Rated	I_R	10							μAmps
DC Blocking Voltage per element		0.1							mAmps
Maximum Reverse Recovery Time (Note 5)	t_{rr}	150			250		500		nS

Note: 1."Fully ROHS compliant", "100% Sn plating(Pb-free).

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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 X 0.25" (20 X 20 X 6.4mm) mounted on 0.05 X 0.05" (1.27 X 1.27mm) solder pad.

4. Measure at 1MHz and applied reverse voltage of 4.0 volts.

5. Test Condition : $I_F=0.5\text{A}$, $I_R=-1.0\text{A}$, $I_{RR}=-0.25\text{A}$.

RATING AND CHARACTERISTICS CURVES (FMD1S THRU FMD7S)

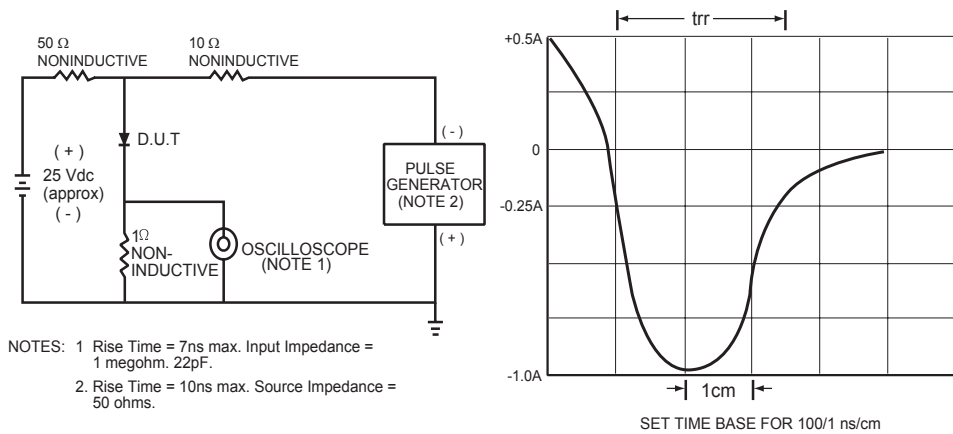


FIG.1 TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

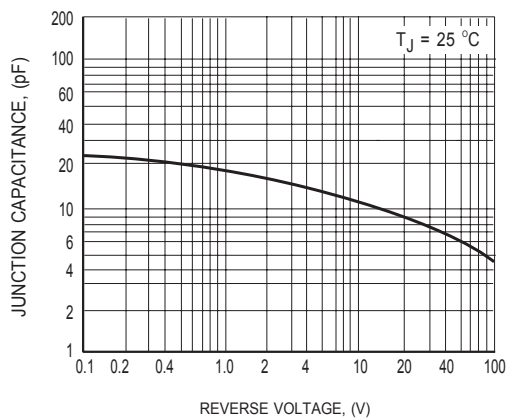


FIG.2 TYPICAL JUNCTION CAPACITANCE

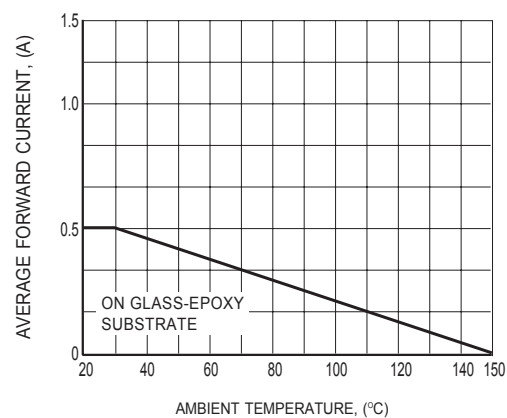


FIG.3 TYPICAL FORWARD CURRENT DERATING CURVE

RATING AND CHARACTERISTICS CURVES (FMD1S THRU FMD7S)

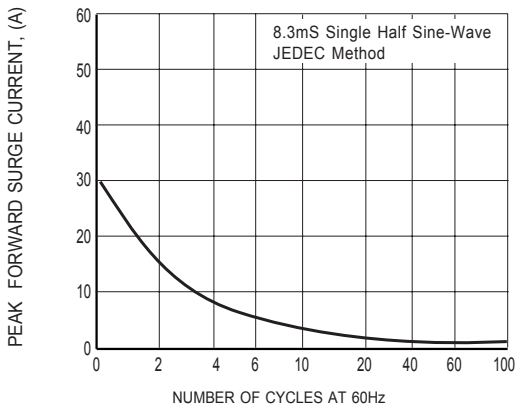


FIG. 4 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

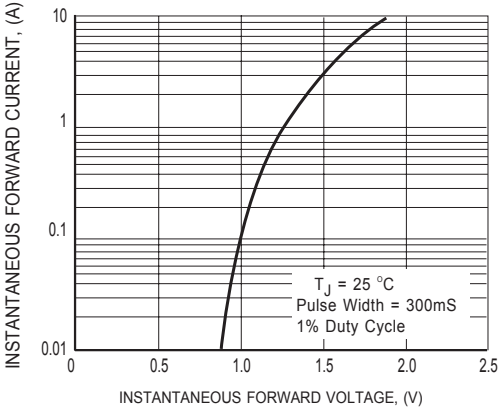


FIG.5 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

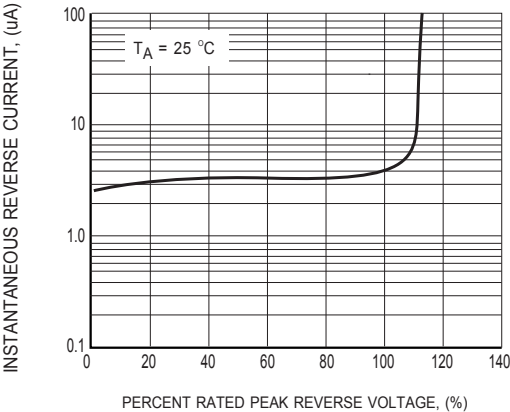
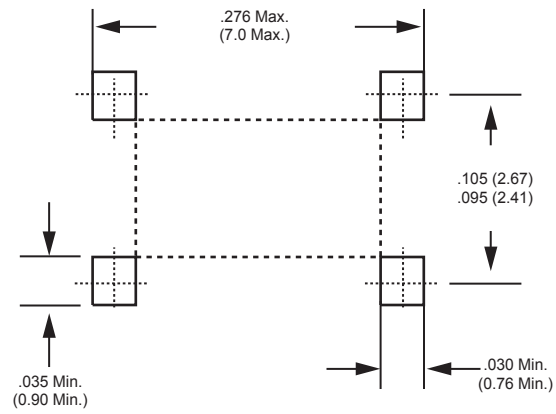


FIG.6 TYPICAL REVERSE CHARACTERISTICS

Mounting Pad Layout



Dimensions in inches and (millimeters)

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