



TECHNICAL SPECIFICATION

**SINGLE-PHASE GLASS PASSIVATED  
SILICON BRIDGE RECTIFIER**

**VOLTAGE RANGE 50 to 1000 Volts CURRENT 0.5 Ampere**

**MB1S  
THRU  
MB10S**

**FEATURES**

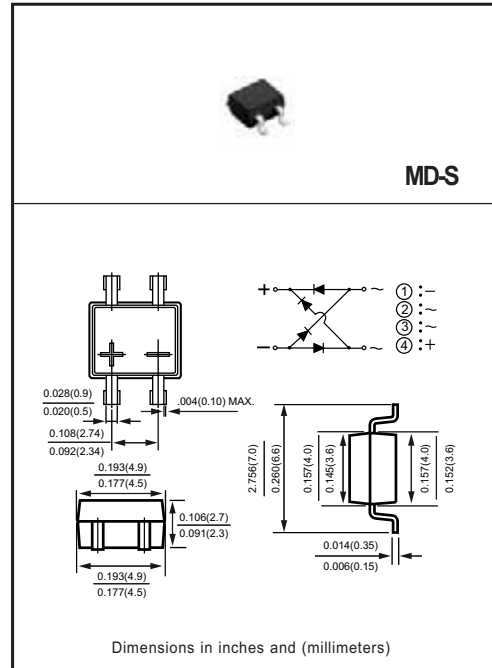
- \* Surge overload rating - 30 amperes peak
- \* Ideal for printed circuit board
- \* Reliable low cost construction utilizing molded
- \* Glass passivated device
- \* Polarity symbols molded on body
- \* Mounting position: Any
- \* MSL: Level 1

**MECHANICAL DATA**

- \* Epoxy: Device has UL flammability classification 94V-O
- \* UL listed under the recognized component directory, file #E94233.

**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%.



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

RATINGS	SYMBOL	MB1S	MB2S	MB3S	MB4S	MB6S	MB8S	MB10S	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	560	700	Volts
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Output Current at $T_A = 40^\circ\text{C}$	$I_O$	0.5							Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	30							Amps
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	85							$^\circ\text{C}/\text{W}$
	$R_{\theta JL}$	20							
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	MB1S	MB2S	MB3S	MB4S	MB6S	MB8S	MB10S	UNITS
Maximum Forward Voltage Drop per Bridge Element at 0.5A DC	$V_F$	1.05							Volts
Maximum Reverse Current at Rated DC Blocking Voltage per element	@ $T_A = 25^\circ\text{C}$	5.0							$\mu\text{Amps}$
	@ $T_A = 125^\circ\text{C}$	0.5							mAmps

Note: 1. "ROHS compliant"

2. Thermal Resistance: PCB mounted.

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## RATING AND CHARACTERISTICS CURVES ( MB1S THRU MB10S )

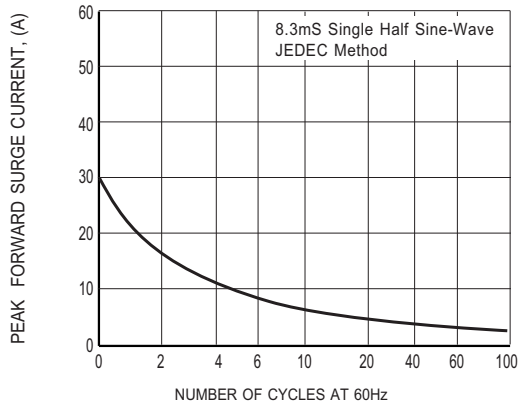


FIG. 1 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

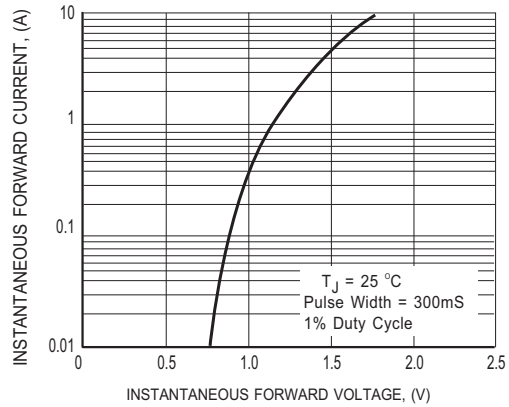


FIG. 2 MAXIMUM INSTANTANEOUS FORWARD CHARACTERISTICS

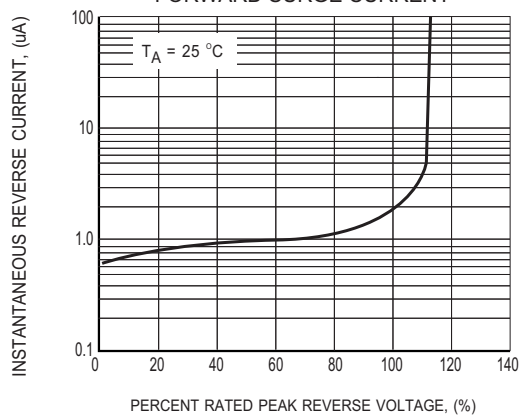


FIG. 3 TYPICAL REVERSE CHARACTERISTICS

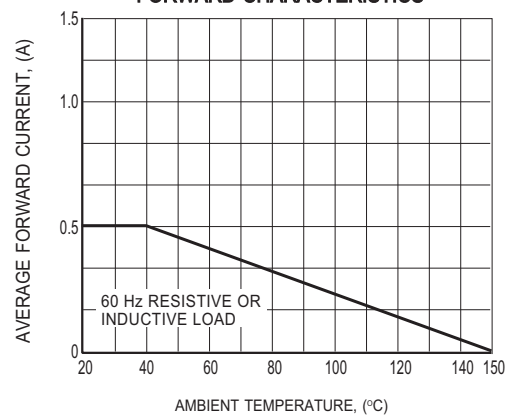
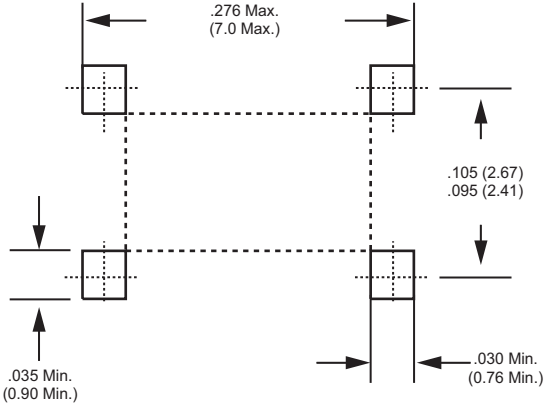


FIG. 4 TYPICAL FORWARD CURRENT DERATING CURVE

# Mounting Pad Layout



Dimensions in inches and (millimeters)



## PACKAGING OF DIODE AND BRIDGE RECTIFIERS

### REEL PACK

PACKAGE	PACKING CODE	EA PER REEL	EA PER INNER BOX	COMPONENT SPACE (mm)	TAPE SPACE (mm)	REEL DIA (mm)	CARTON SIZE (mm)	EA PER CARTON	GROSS WEIGHT(Kg)
MD-S	-T	500	2,000	---	---	178	390*205*310	16,000	---
MD-S	-W	3,000	6,000	---	---	330	360*355*360	48,000	15.50