



TECHNICAL SPECIFICATION

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

VOLTAGE RANGE 50 to 1000 Volts CURRENT 0.5 Ampere

**MB1S
THRU
MB10S**

FEATURES

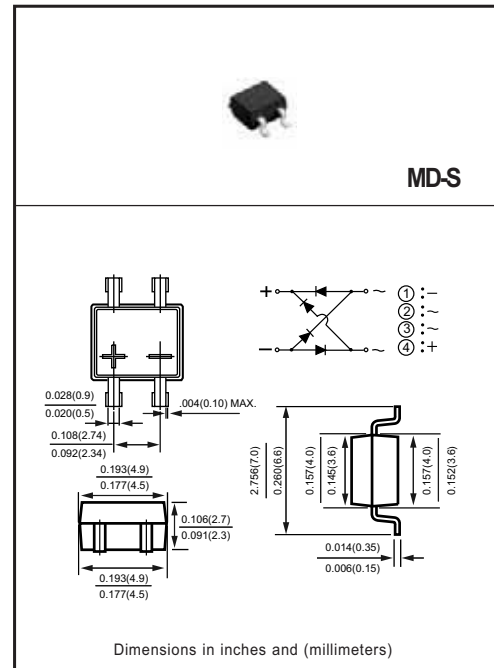
- * Surge overload rating - 30 amperes peak
- * Ideal for printed circuit board
- * Reliable low cost construction utilizing molded
- * Glass passivated device
- * Polarity symbols molded on body
- * Mounting position: Any
- * MSL: Level 1

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							μAmps
	@ $T_A = 125^\circ\text{C}$	0.5							mAmps

Note: 1. "ROHS compliant"

2. Thermal Resistance: PCB mounted.

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RATING AND CHARACTERISTICS CURVES (MB1S THRU MB10S)

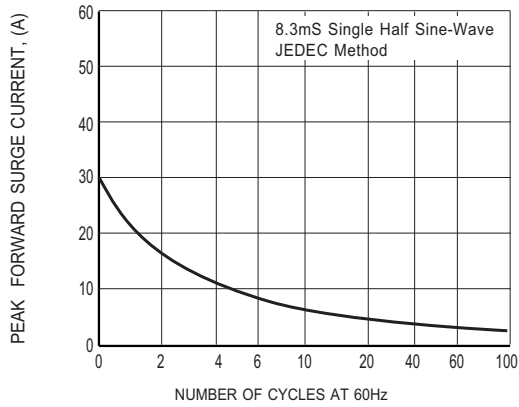


FIG. 1 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

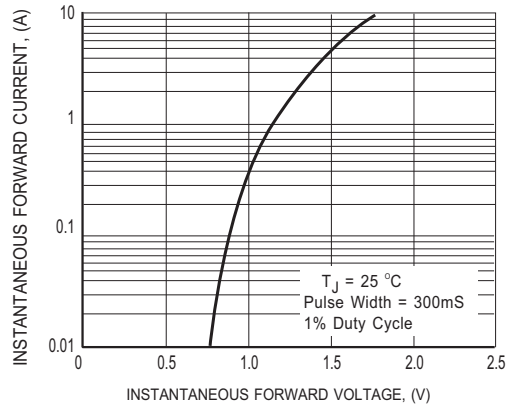


FIG. 2 - MAXIMUM INSTANTANEOUS FORWARD CHARACTERISTICS

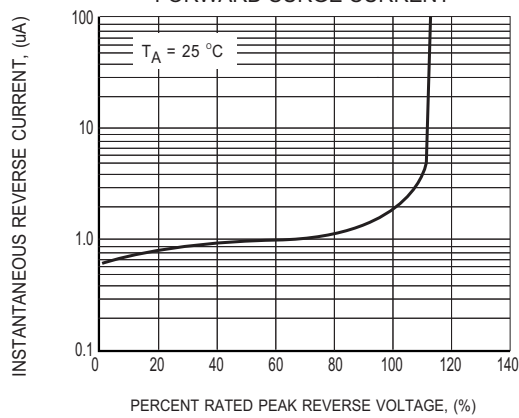


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

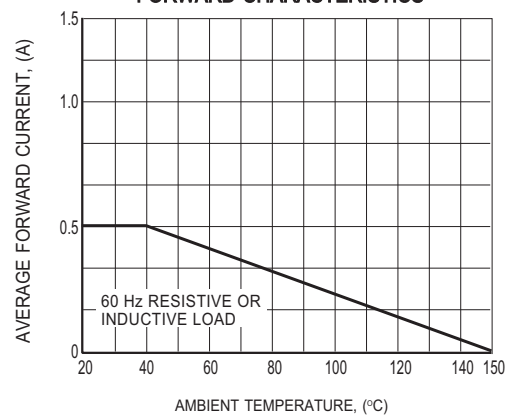
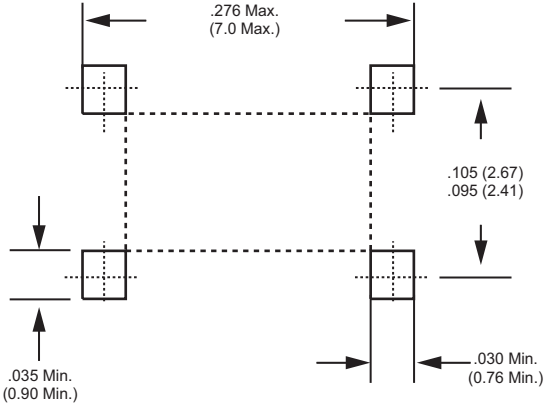


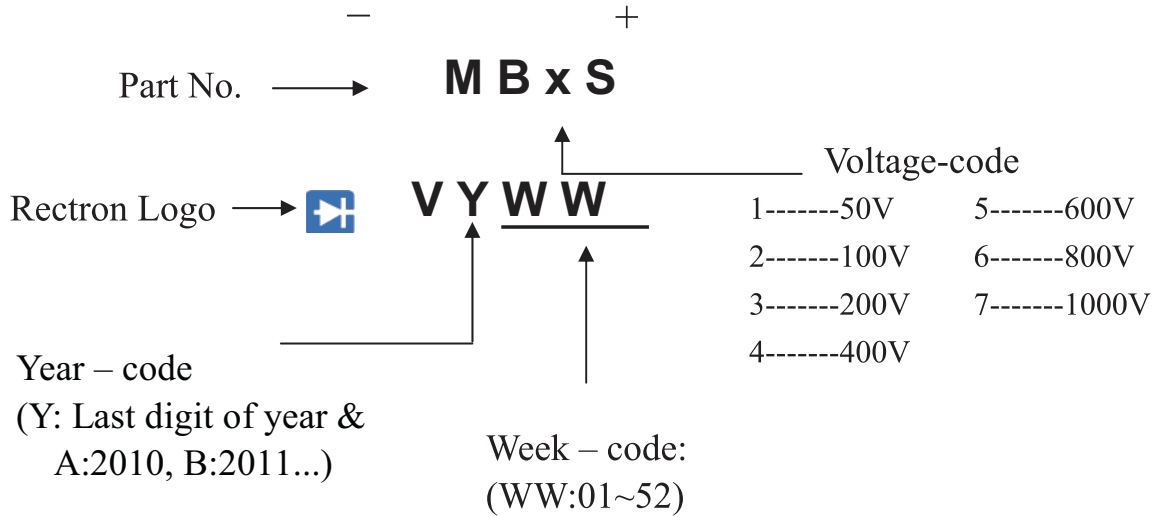
FIG. 4 - TYPICAL FORWARD CURRENT DERATING CURVE

Mounting Pad Layout



Dimensions in inches and (millimeters)

Marking Description



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

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