

WILLAS

MD1S
THRU
MD7S

**SINGLE-PHASE GLASS PASSIVATED
SILICON BRIDGE RECTIFIER**
VOLTAGE RANGE 50 to 1000 Volts CURRENT 0.8 Ampere

FEATURES

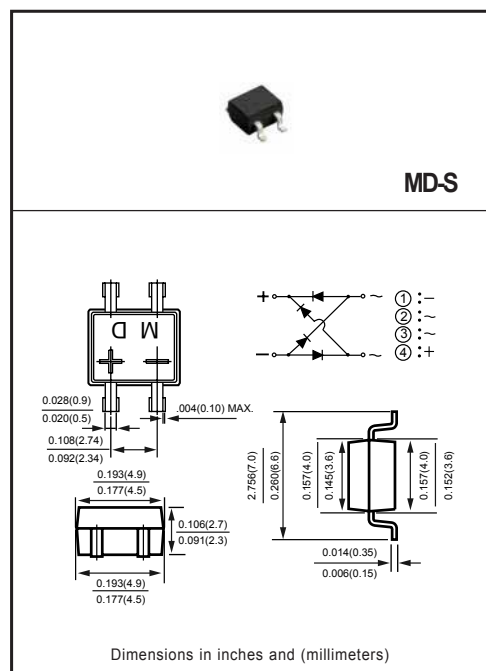
- * Surge overload rating - 30 amperes peak
- * Ideal for printed circuit board
- * Reliable low cost construction utilizing molded
- * Glass passivated device
- * Polarity symbols molded on body
- * Mounting position: Any
- * Weight: 0.134 gram
- * Molding gap does not represent a positive/negative direction
- * RoHS product for packing code suffix "G"
- Halogen free product for packing code suffix "H"

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%.



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

RATINGS	SYMBOL	MD1S	MD2S	MD3S	MD4S	MD5S	MD6S	MD7S	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 = 30°C	I _O	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 Thermal Resistance (Note 2)	R _{θJA}	85							°C/W
	R _{θJL}	20							
Typical Junction Capacitance (Note 3)	C _J	15							pF
Operating and Storage Temperature Range	T _J ,T _{STG}	-55 to + 150							°C

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

CHARACTERISTICS	SYMBOL	MD1S	MD2S	MD3S	MD4S	MD5S	MD6S	MD7S	UNITS
Maximum Forward Voltage Drop per Bridge Element at 0.8A DC	V_F	1.05							Volts
Maximum Reverse Current at Rated	I_R	10							μAmps
DC Blocking Voltage per element		0.5							mAmps

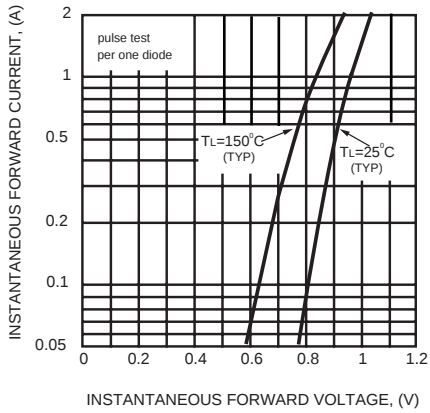
Note: 1. "Fully ROHS compliant", "100% Sn plating (Pb-free)."

2. Thermal Resistance: PCB mounted.

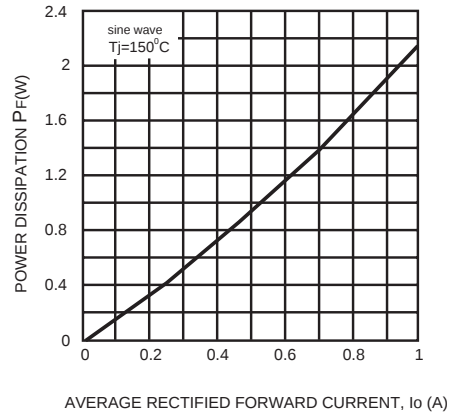
3. Measured at 1 MHz and applied reverse voltage of 4.0 volts.

RATING AND CHARACTERISTIC CURVES (MD1S THRU MD7S)

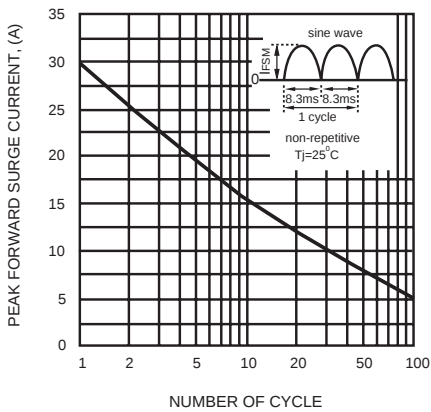
TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



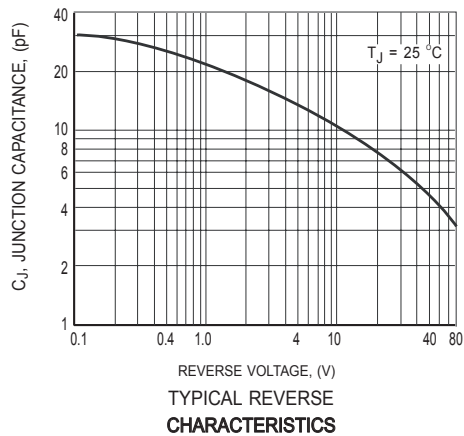
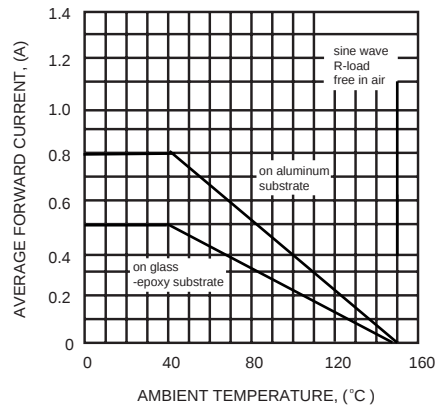
POWER DISSIPATION



SURGE FORWARD CURRENT CAPABILITY

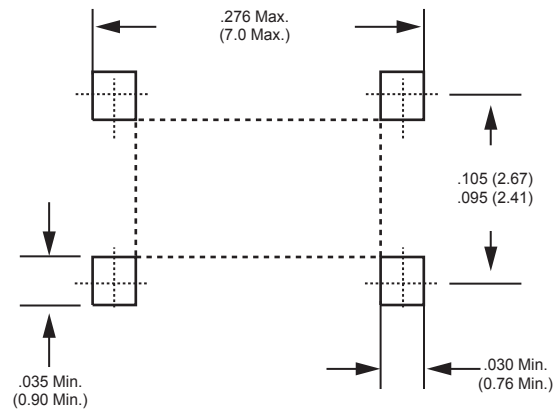


TYPICAL FORWARD CURRENT DERATING CURVE



TYPICAL REVERSE CHARACTERISTICS

Mounting Pad Layout



Dimensions in inches and (millimeters)