RECTRON SEMICONDUCTOR
TECHNICAL SPECIFICATION

MD1SJ THRU MD7SJ

SINGLE-PHASE GLASS PASSIVATED SILICON BRIDGE RECTIFIER

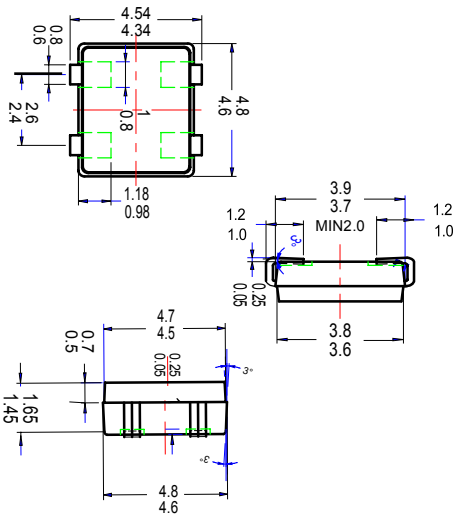
VOLTAGE RANGE 50 to 1000 Volts CURRENT 0.5 Ampere

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
* UL listed under the recognized component directory, file #E94233.



Dimensions in millimeters

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
resistive or inductive load.

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

RATINGS	SYMBOL	MD1SJ	MD2SJ	MD3SJ	MD4SJ	MD5SJ	MD6SJ	MD7SJ	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°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 Current Squarad Time	I^2t	3.7							A^2/Sec
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	85							°C/W
	$R_{\theta JL}$	20							
Operating and Storage Temperature Range	T_J,T_{STG}	-55 to + 150							°C

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

CHARACTERISTICS		SYMBOL	MD1SJ	MD2SJ	MD3SJ	MD4SJ	MD5SJ	MD6SJ	MD7SJ	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°C	I_R	5.0							µAmps
	@T_A = 125°C		0.5							mAmps

Note: 1."Fully ROHS compliant","100% Sn plating(Pb-free).
2. Thermal Resistance: PCB mounted.

2012-03
REV:B

RATING AND CHARACTERISTICS CURVES (MD1SJ THRU MD7SJ)

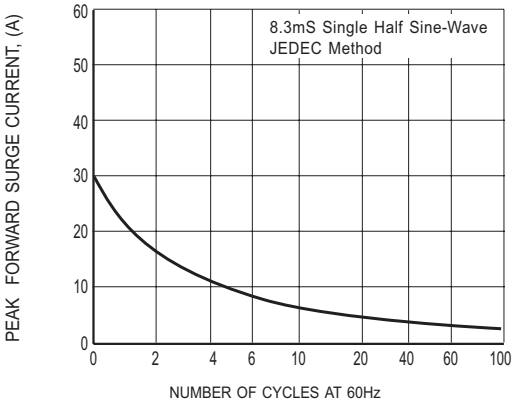


FIG. 1 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

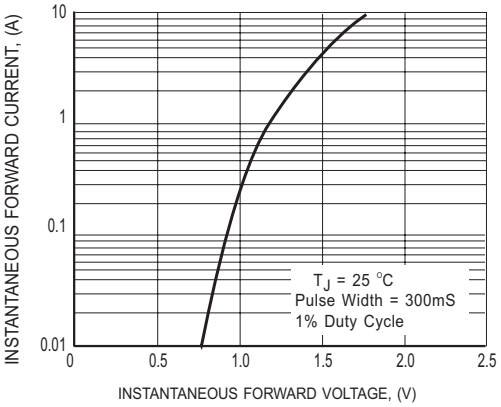


FIG.2 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

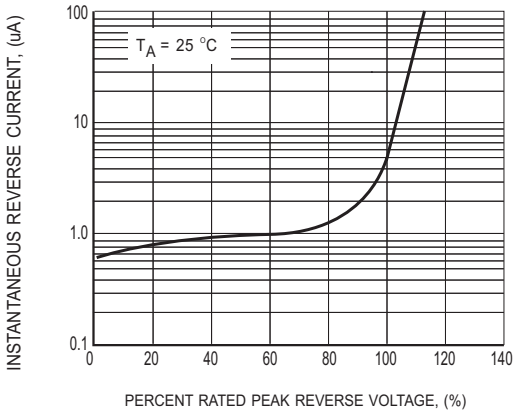


FIG.3 TYPICAL REVERSE CHARACTERISTICS

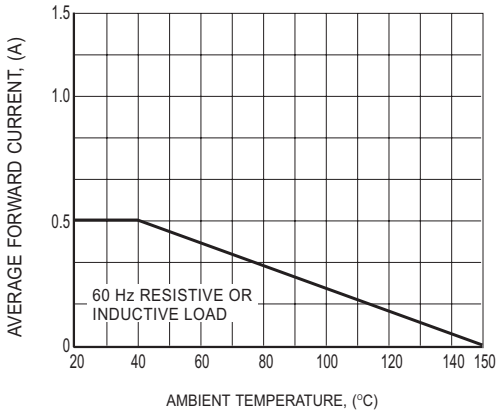
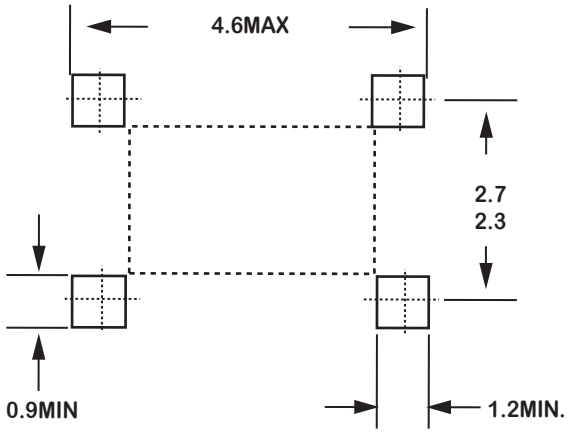


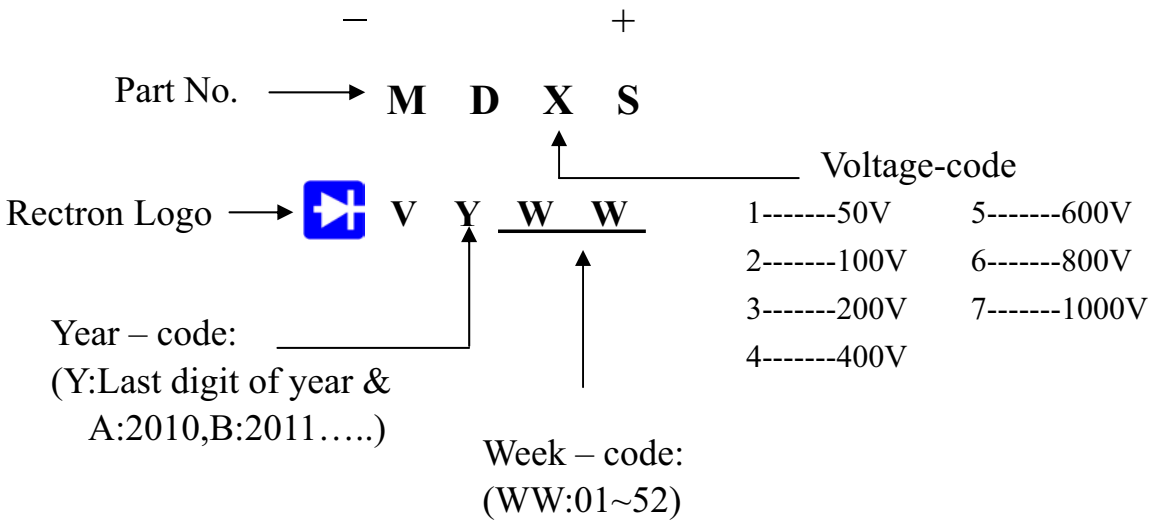
FIG.4 TYPICAL FORWARD CURRENT DERATING CURVE

Mounting Pad Layout



Dimensions in millimeters

Marking Description



PACKAGING OF DIODE AND BRIDGE RECTIFIERS

REEL PACK

PACKAGE	PACKING CODE	EA PER REEL	COMPONENT SPACE(mm)	TAPE SPACE (mm)	REEL DIA (mm)	CARTON SIZE (mm)	EA PER CARTON	GROSS WEIGHT(Kg)
MDSJ	-T	500	---	---	178	390*205*310	16,000	---
MDSJ	-W	3,000	---	---	330	355*360*350	48,000	15.50

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