

VI. Bridge Rectifier

SMD Glass Passivated Bridge Rectifier (Fast Recovery, Low Profile Type) RMD1S~RMD7S (Package: MTS)

<p>FEATURES</p> <ul style="list-style-type: none"> • Fast recovery, low switching loss • Reliable low cost construction utilizing molded plastic technique • High surge current capability • Small size, simple installation • Plastic material has Underwriters Laboratory Flammability Classification 94V-0 <p>MECHANICAL DATA</p> <ul style="list-style-type: none"> • Case : Molded plastic • Terminals : Plated terminals, solderable per MIL-STD-202, Method 208 • Polarity : Polarity symbols marked on body • Mounting position : Any • Handling precaution : None 	<p>Case: MTS Dimensions in inches and (millimeters)</p>
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Ratings & Electrical Characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derate by 20%.

Characteristics	Symbol	RMD 1S	RMD 2S	RMD 3S	RMD 4S	RMD 5S	RMD 6S	RMD 7S	Units
Maximum recurrent peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS 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 rectified current on glass-epoxy P.C.B. (Note 2) on aluminum substrate (Note 3)	I_o	0.5 0.8							Amps
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load, (JEDEC Method)	I_{FSM}	25							Amps
Maximum forward voltage at 0.4A DC and at 25	V_F	1.3							Volts
Maximum reverse current $T_a=25$ at rated DC blocking voltage $T_a=125$	I_R	5.0 500							μA
Typical junction capacitance (Note 1)	C_j	13							PF
Maximum reverse recovery time (Note 4)	T_{rr}	150			250		500		ns
Typical thermal resistance (Note 3)	R_{th-JA}	70							/ W
Typical thermal resistance (Note 2)	R_{th-JL}	20							/ W
Operating and storage temperature range	T_j, T_{stg}	-55 to +150							

Notes:

1. Measured at 1.0 MHz and applied reverse voltage of 4.0 volts D.C.

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" (20 x 20mm) mounted on 0.05 x 0.05" (1.3 x 1.3mm) solder pad.

4. Reverse Recovery Test Conditions: $I_F=0.5A$, $I_R=1.0A$, $I_{RR}=0.25A$

Ratings and Characteristic Curves of RMD1S~RMD7S

Fig. 1 – Maximum Forward Current Derating Curve

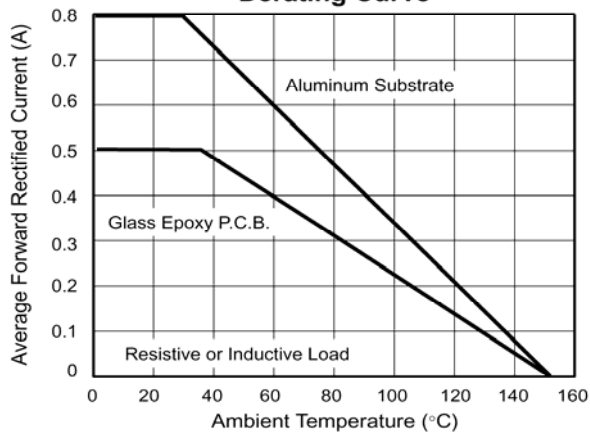


Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current

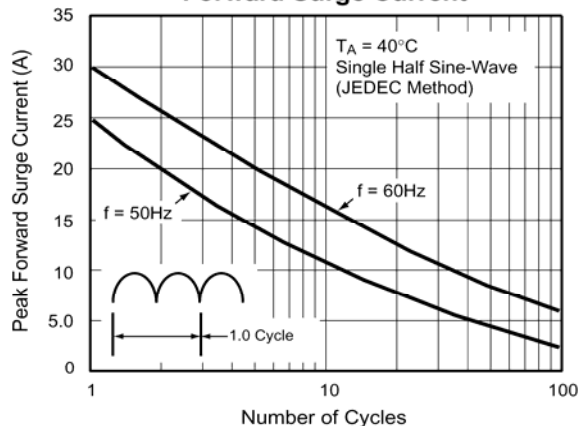


Fig. 3 – Typical Instantaneous Forward Characteristics

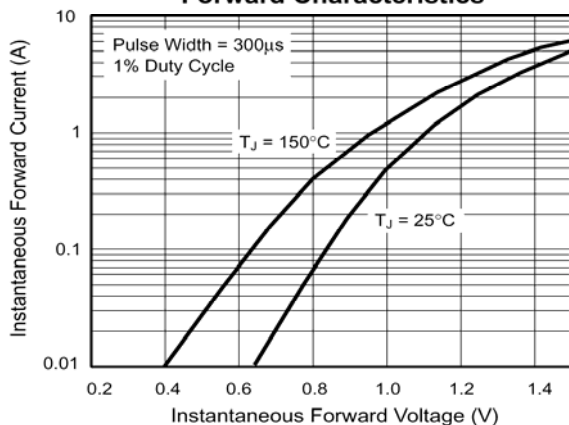


Fig. 4 - Typical Reverse Leakage Characteristics Per Leg

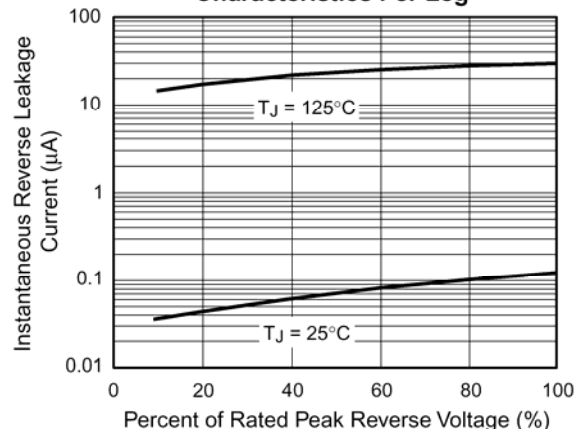


Fig. 5 - Typical Junction Capacitance Per Leg

