

## VI. Bridge Rectifier

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

<p><b><u>FEATURES</u></b></p> <ul style="list-style-type: none"> <li>• Fast recovery, low switching loss</li> <li>• Reliable low cost construction utilizing molded plastic technique</li> <li>• High surge current capability</li> <li>• Small size, simple installation</li> <li>• Plastic material has Underwriters Laboratory Flammability Classification 94V-0</li> </ul> <p><b><u>MECHANICAL DATA</u></b></p> <ul style="list-style-type: none"> <li>• Case : Molded plastic</li> <li>• Terminals : Plated terminals, solderable per MIL-STD-202, Method 208</li> <li>• Polarity : Polarity symbols marked on body</li> <li>• Mounting position : Any</li> <li>• Handling precaution : None</li> </ul>	<p style="text-align: center;">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							$\mu A$
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)	Rth-JA	70							/ W
Typical thermal resistance (Note 2)	Rth-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.

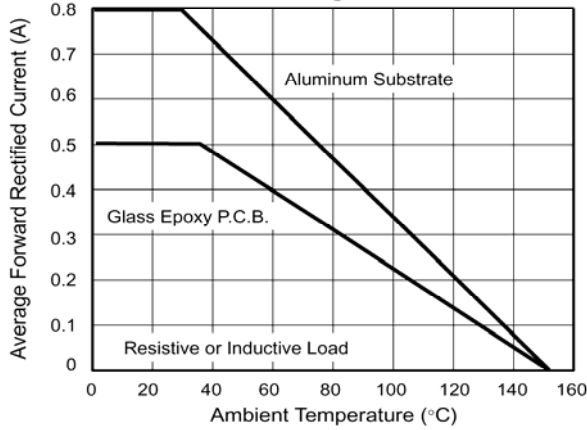
2. On glass epoxy P.C.B. mounted on 0.05 x 0.05" (1.3 x 1.3mm) pads.

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.

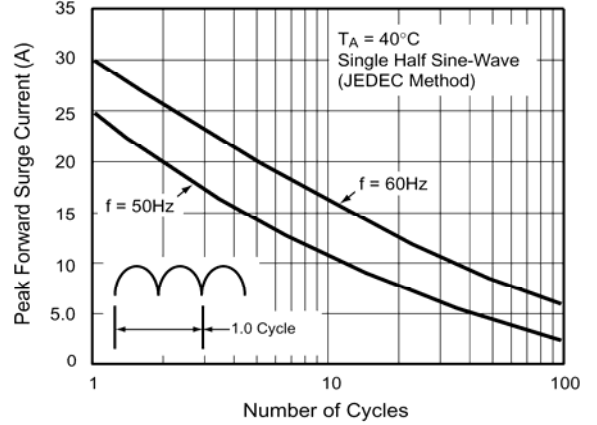
4. Reverse Recovery Test Conditions:  $I_F=0.5A, I_R=1.0A, I_{RR}=0.25A$

# Ratings and Characteristic Curves of RMD1S~RMD7S

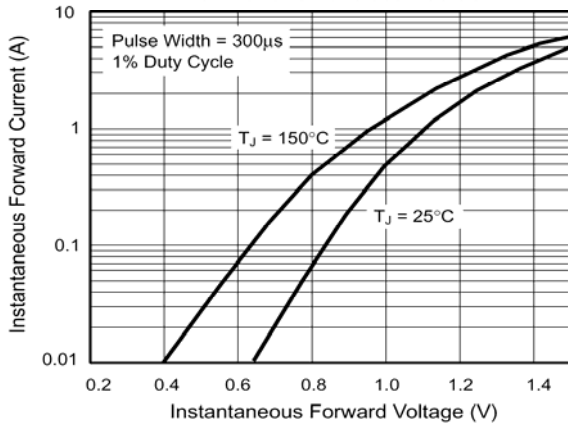
**Fig. 1 – Maximum Forward Current Derating Curve**



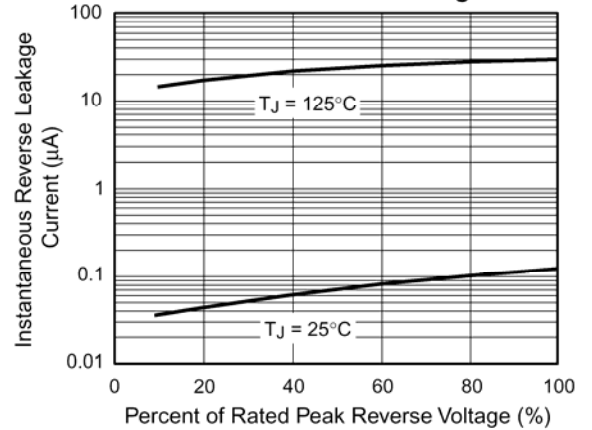
**Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current**



**Fig. 3 – Typical Instantaneous Forward Characteristics**



**Fig. 4 - Typical Reverse Leakage Characteristics Per Leg**



**Fig. 5 - Typical Junction Capacitance Per Leg**

