

VI. Bridge Rectifier

Single-Phase Silicon Bridge Rectifiers MB2S~MB10S

(Package: MBS (TO-269AA))

<p>FEATURES</p> <ul style="list-style-type: none"> • Reliable low cost construction utilizing molded plastic technique. • High surge current capability. • Saves space on printed circuit boards. • High temperature soldering guaranteed: 260 / 10 seconds at 5 lbs (2.3 Kg) tension. <p>MECHANICAL DATA</p> <ul style="list-style-type: none"> • Case : Molded plastic. • Terminals : Plated leads. • Polarity : Polarity symbols marked on case. • Mounting position : Any. • Weight : 0.115 grams 	<p>Case: MBS (TO-269AA) 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%.

Characteristic	Symbol	MB2S	MB4S	MB6S	MB8S	MB10S	Units
Maximum repetitive peak reverse voltage	V_{RRM}	200	400	600	800	1000	Volts
Maximum RMS voltage	V_{RMS}	140	280	420	560	700	Volts
Maximum DC blocking voltage	V_{DC}	200	400	600	800	1000	Volts
Maximum average forward rectified current on glass-epoxy P.C.B. on aluminum substrate	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}			35			Amps
Maximum instantaneous forward voltage drop at 0.4A	V_F			1.0			Volts
Maximum DC reverse current at @ Ta = 25 rated DC blocking voltage per leg @ Ta = 125	I_R			5.0 500			μA
Typical thermal resistance (Note 1) (Note 2)	Rth-JA Rth-JL			70 20			$^{\circ}W$
Operating junction temperature range	T_j			-55 to +150			
Storage temperature range	T_{stg}			-55 to +150			

Notes:

1. 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.
2. On glass epoxy P.C.B. mounted on 0.05 x 0.05" (1.3 x 1.3mm) pads.

Ratings and Characteristic Curves of MB2S~MB10S

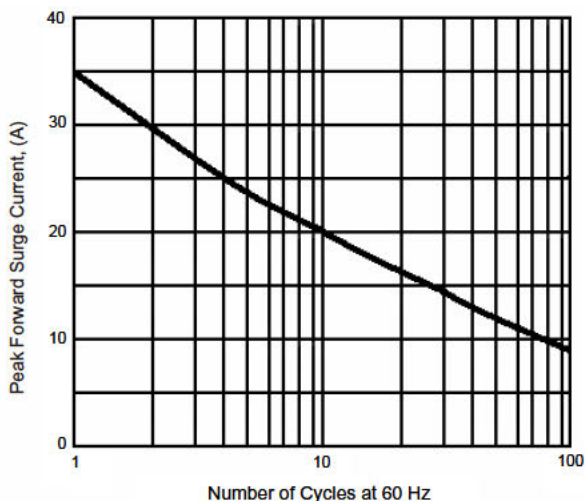


Fig.1 Maximum Non-Repetitive Forward Surge Current per Bridge Element

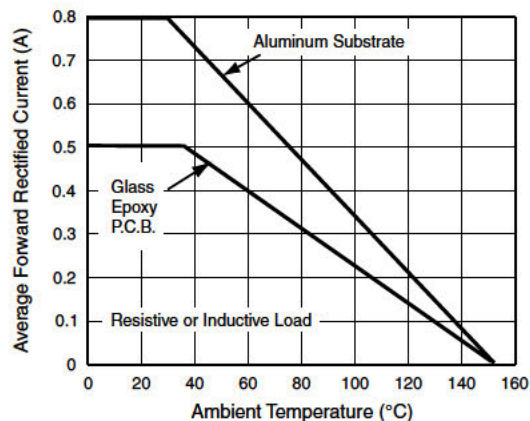


Fig.2 Derating Curve for Output Rectified Current

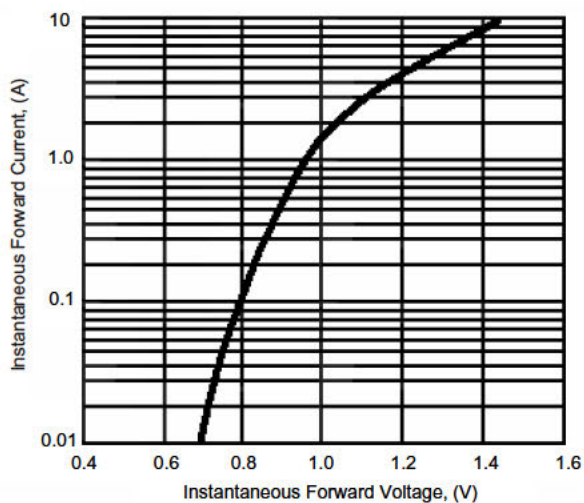


Fig.3 Typical Instantaneous Forward Characteristics per Bridge Element

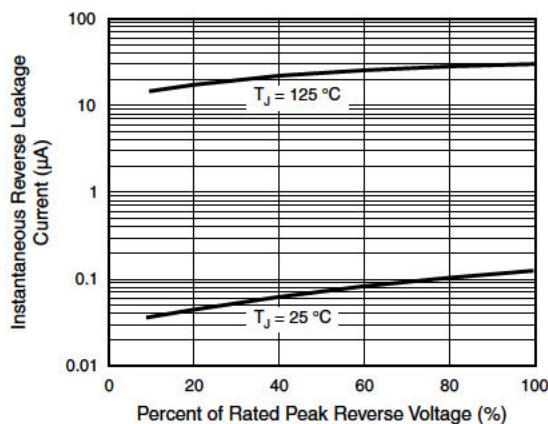


Fig.4 Typical Reverse Leakage Characteristics Per Leg