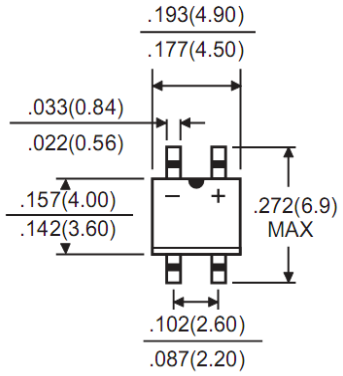
TAIWAN SEMICONDUCTOR

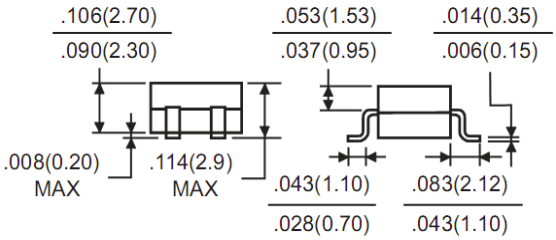
MBS2 - MBS10

Single Phase 0.8 AMP Glass Passivated Bridge Rectifiers

MBS

RoHS COMPLIANCE





Dimensions in inches and (millimeters)

Features

- UL Recognized File # E-326243
- Ideal for printed circuit board
- Reliable low cost construction utilizing molded plastic technique
- High surge current capability
- High temperature soldering guaranteed: 260℃/10 seconds at 5 lbs., (2.3kg) tension
- Small size, simple installation
- Green compound with suffix "G" on packing code & prefix "G" on datecode

Mechanical Data

- Case: Molded plastic body
- Terminal: Leads solderable per MIL-STD-202 Method 208
- Weight: 0.123 grams

Marking Diagram

MBSX	= Specific Device Code
G	= Green Compound
Y	= Year
M	= Work Month

Maximum Ratings and Electrical Characteristics

Rating at 25 ℃ ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%

Type Number	Symbol	MBS2	MBS4	MBS6	MBS8	MBS10	Unit
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	200	400	600	800	1000	V
Maximum RMS Voltage	V_{RMS}	140	280	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	200	400	600	800	1000	V
Maximum Average Forward Rectified Current On glass-epoxy P.C.B. On aluminum substrate	$I_{F(AV)}$	0.5 0.8					A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	35					A
Maximum Instantaneous Forward Voltage (Note 1) @ 0.4A	V_F	1.0					V
Maximum DC Reverse Current T_A=25 ℃ at Rated DC Blocking Voltage T_A=125 ℃	I_R	5 100					uA
Rating of fusing (t<8.3ms)	I^2T	5.08					A^2S
Typical Junction Capacitance Per Leg (Note 2)	Cj	13					pF
(Note 3) Typical Thermal Resistance (Note 4) (Note 3)	$R_{\theta jA}$ $R_{\theta jA}$ $R_{\theta jL}$	85 70 20					$^OC/W$
Operating Temperature Range	T_J	- 55 to + 150					^OC
Storage Temperature Range	T_{STG}	- 55 to + 150					^OC

Note 1: Pulse Test with PW=300 usec,1% Duty Cycle

Note 2: Measure at 1.0MHz and Applied Reverse Voltage of 4.0 Volts D.C.

Note 3: On glass epoxy P.C.B. mounted on 0.05" x 0.05" (1.3mm x 1.3mm) pads

Note 4: On aluminum substrate P.C.B. with an area of 0.8" x 0.8" (20mm x 20mm) mounted on 0.05" x 0.05" (1.3mm x 1.3mm) solder pads

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RATINGS AND CHARACTERISTIC CURVES (MBS2 THRU MBS10)

FIG.1 MAXIMUM FORWARD CURRENT DERATING CURVE

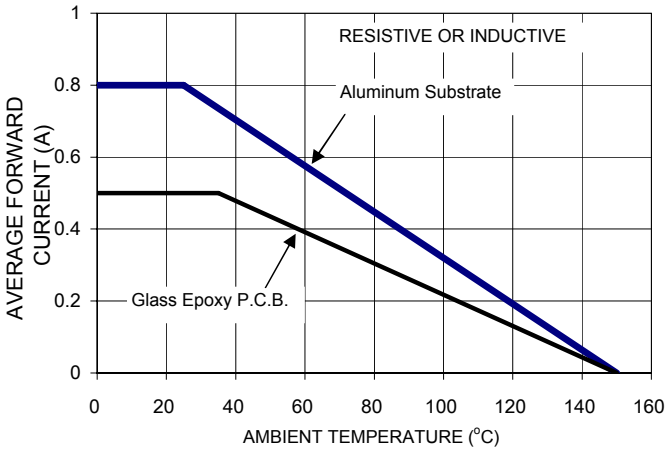


FIG. 2 TYPICAL REVERSE CHARACTERISTICS PER LEG

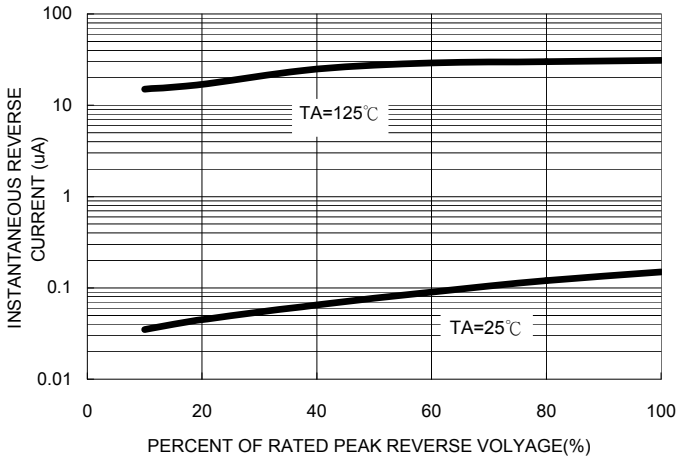


FIG. 3 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

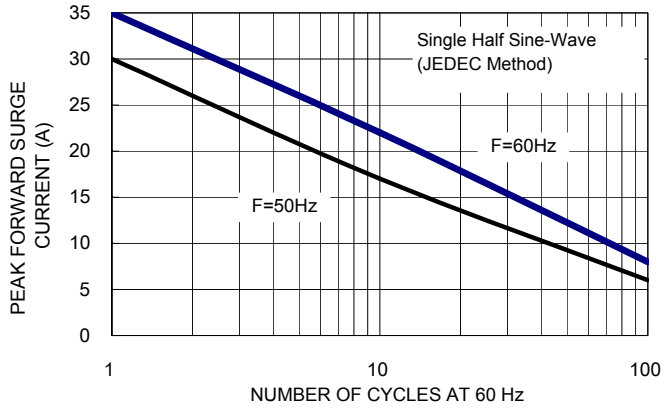


FIG. 4 TYPICAL JUNCTION CAPACITANCE PER LEG

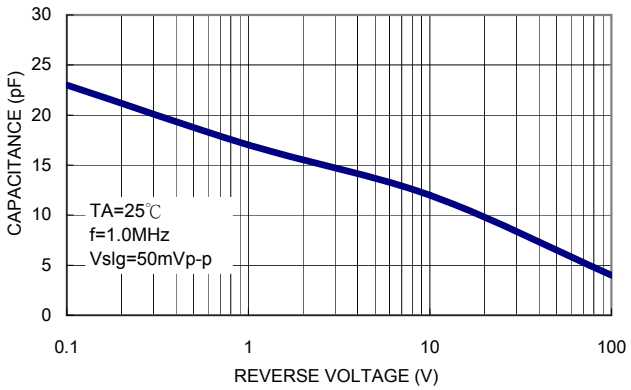
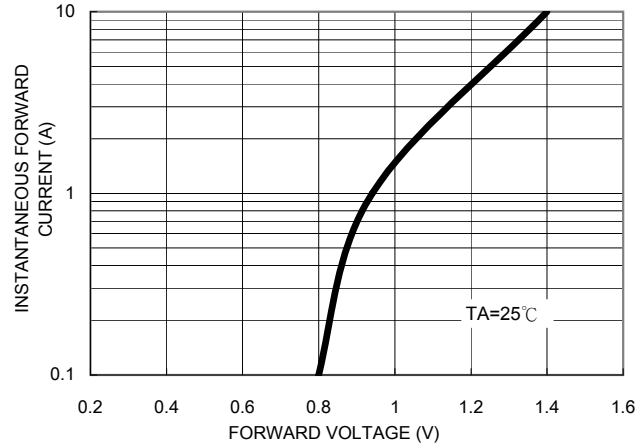


FIG. 5 TYPICAL FORWARD CHARACTERISTICS PER LEG



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