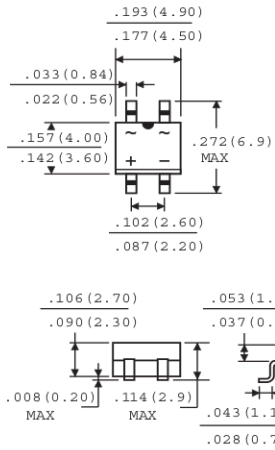
TAIWAN SEMICONDUCTOR

MBS2 - MBS10

Single Phase 0.8 AMPS. Glass Passivated Bridge Rectifiers

RoHS COMPLIANCE

MBS



Dimensions in inches and (millimeters)

Features

- ✧ UL Recognized File # E-96005
- ✧ Ideal for printed circuit board
- ✧ Reliable low cost construction utilizing molded plastic technique
- ✧ High surge current capability
- ✧ High temperature soldering guaranteed: 260°C / 10 seconds at 5 lbs., (2.3 kg) tension
- ✧ Small size, simple installation
- ✧ Leads solderable per MIL-STD-202 Method 208

Maximum Ratings and Electrical Characteristics

Rating at 25°C 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	Units
Maximum Recurrent 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	$I_{(AV)}$	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 @ 0.4A	V_F	1.0					V
Maximum DC Reverse Current @ T_A=25 °C at Rated DC Blocking Voltage @ T_A=125 °C	I_R	5.0 100					uA uA
Typical Junction Capacitance Per Leg	Cj	13					pF
Typical Thermal Resistance Per Leg	$R_{\theta JA}$	85					°C/W
Operating Temperature Range	T_J	-55 to +150					°C
Storage Temperature Range	T_{STG}	-55 to +150					°C

Note: 1. Measured at 1.0MHz and Applied Reverse Voltage of 4.0 Volts D.C.

RATINGS AND CHARACTERISTIC CURVES (MBS2 THRU MBS10)

FIG.1- DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

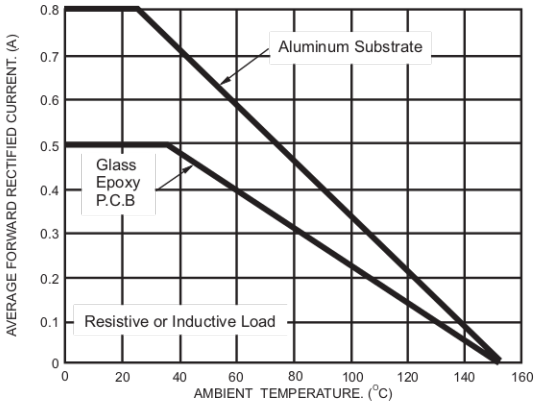


FIG.2- TYPICAL REVERSE LEAKAGE CHARACTERISTICS PER LEG

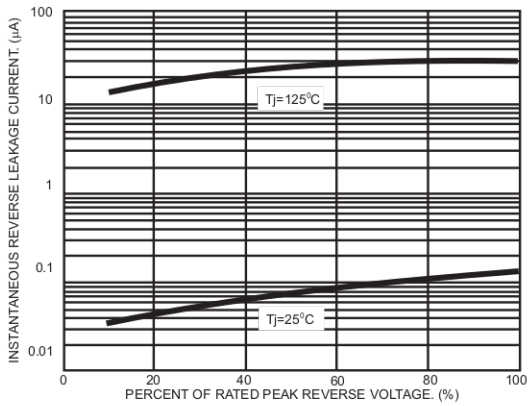


FIG.3-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

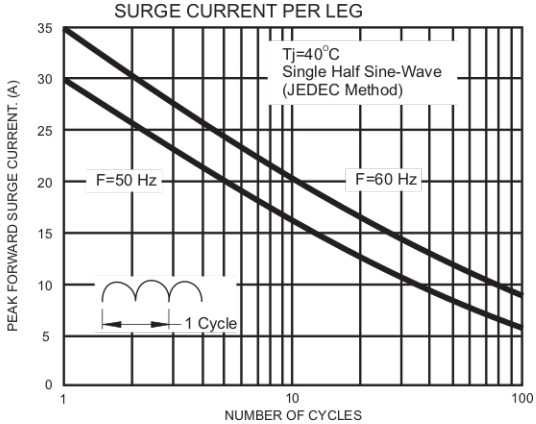


FIG.4- TYPICAL JUNCTION CAPACTITANCE PER LEG

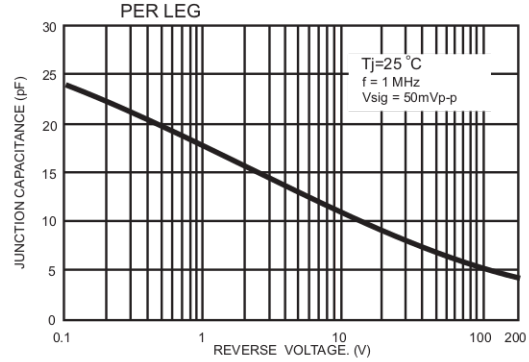


FIG.5- TYPICAL FORWARD VOLTAGE CHARACTERISTICS PER LEG