



Glass Passivated Bridge Rectifiers



MBS

Features

- Surface Mount Package
- Glass Passivated Diode Construction
- Moisture Resistant Epoxy Case
- High Surge Current Capability
- High Temperature Soldering Guaranteed:
260°C/10seconds
- Save Space on Printed Circuit Boards
- Polarity: Polarity Symbols Marked on Body
- Mounting Position: Any

Primary Characteristics

I_F	0.8	A
V_{RRM}	200~1000	V
I_{FSM}	30	A
V_F	1.1	V
T_J max	150	°C

Ordering Information

Part No.	Remark	Package	Packing
MB05S thru MB10S	General	MBS	5000 / Tape & Reel
MB05S thru MB10S-H	Halogen Free		
MB05S thru MB10S-Q	AEC-Q101 qualified		

Maximum Ratings ($T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	MB05S	MB1S	MB2S	MB4S	MB6S	MB8S	MB10S	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum average forward rectified current On Glass-epoxy P.C.B On aluminum substrate	I_F	0.5 0.8							A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	30							A
Maximum Instantaneous Forward Voltage @0.8A	V_F	1.1							V
Maximum DC Reverse Current @ $T_A=25^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_A=125^\circ\text{C}$	I_R	5 100							uA
Typical Junction Capacitance (Note 1)	C_j	13							pF
Typical Thermal Resistance	$R_{\theta JA}$	85							°C/W
Operating Temperature Range	T_J	-55 to +150							°C
Storage Temperature Range	T_{STG}	-55 to +150							°C
Marking Code		MB05S	MB1S	MB2S	MB4S	MB6S	MB8S	MB10S	

Notes:

1.Measured at 1.0MHZ and applied reverse voltage of 4.0V DC



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Rating and Characteristics Curves

FIG.1- DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

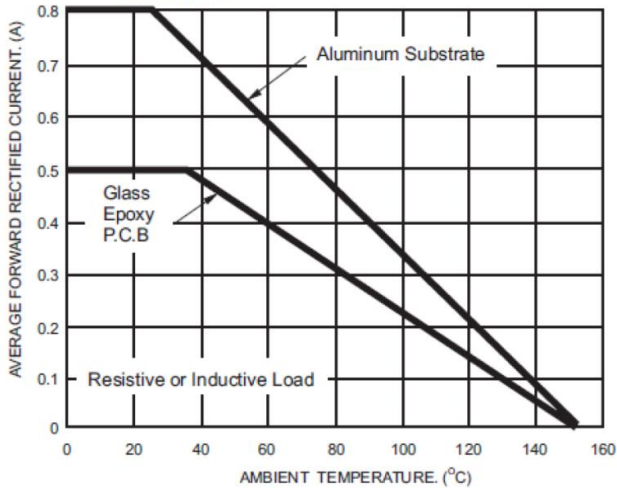


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

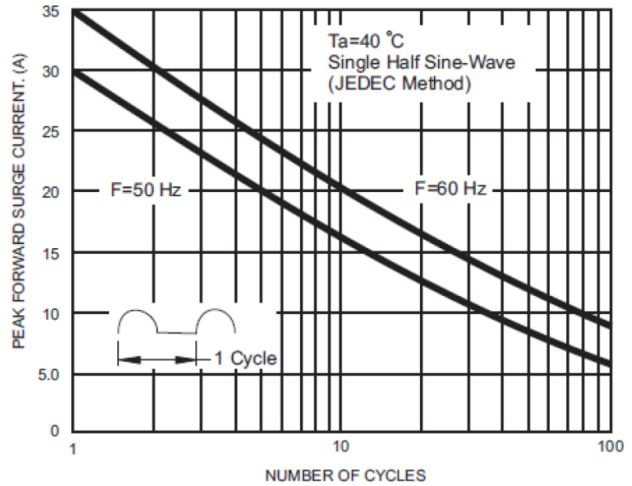


FIG.3- TYPICAL FORWARD VOLTAGE CHARACTERISTICS PER LEG

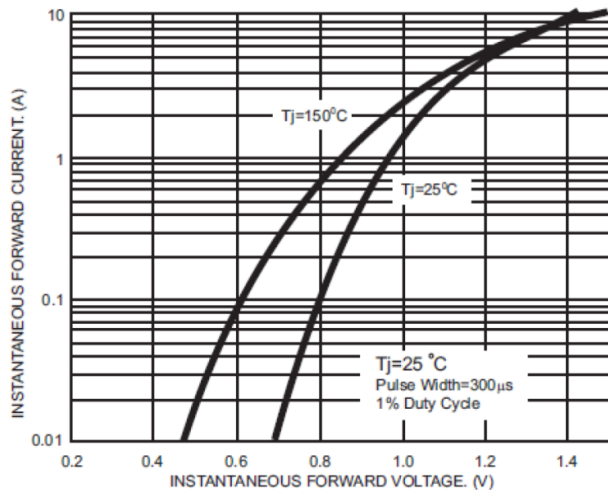


FIG.4- TYPICAL REVERSE LEAKAGE CHARACTERISTICS PER LEG

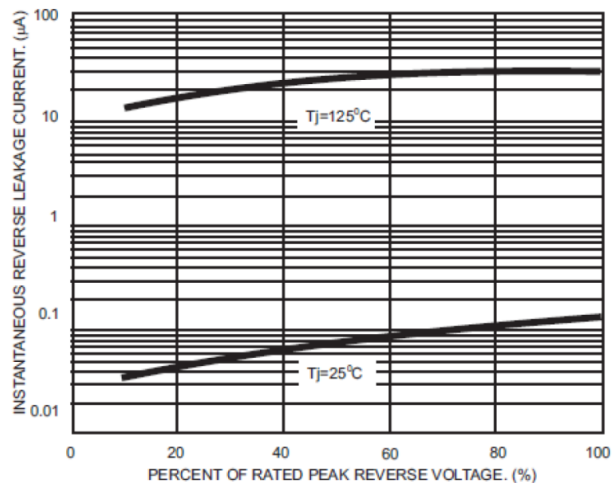
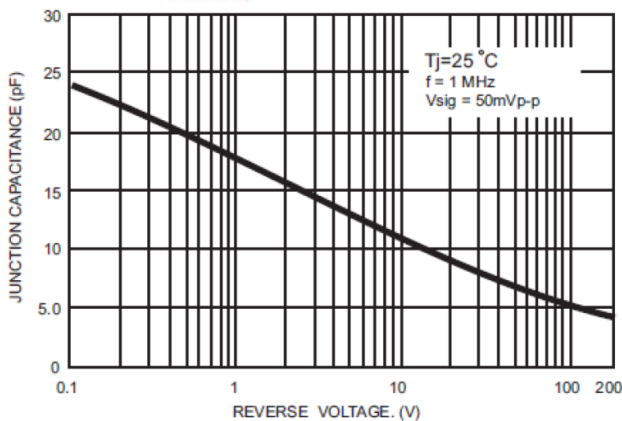
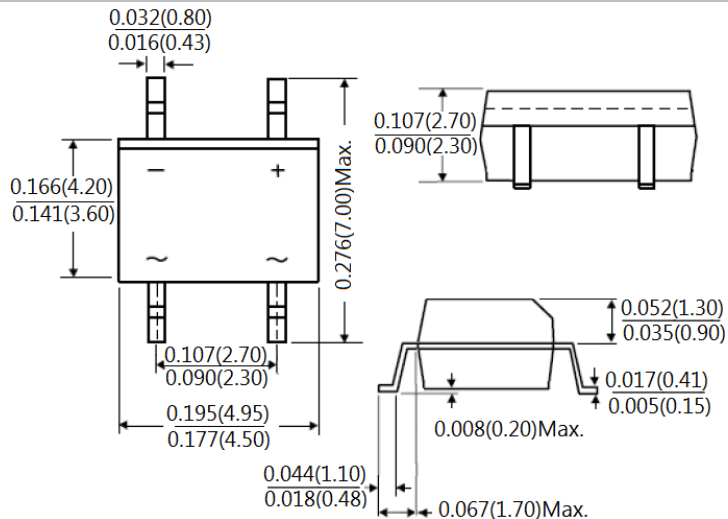


FIG.5- TYPICAL JUNCTION CAPACITANCE PER LEG





Package Outline Dimensions

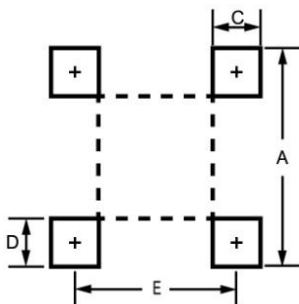


MBS

Dimensions in inches and (millimeters)

Suggested Pad Layout

Outline Dimension	MBS (mm)
A	8.10
C	0.90
D	1.90
E	2.67



Tap & Reel Specification

ITEM	SYMBOL	MBS(mm)
Carrier width	A	5.31±0.1
Carrier length	B	8.00±0.1
Carrier depth	C	1.59±0.1
Sprocket hole	d	1.60±0.1
Reel outside diameter	D	330.00±1.0
Feed hole diameter	D0	13.50±1.0
Reel inner diameter	D1	75.00±1.0
Sprocket hole position	E	1.75±0.1
Punch hole position	F	5.50±0.05
Sprocket hole pitch	P	8.00±0.1
Sprocket hole pitch	P0	4.00±0.1
Embossment center	P1	2.00±0.1
Overall tape thickness	T	0.30±0.05
Tape width	W	12.00±0.1
Reel width	W2	15.50±1.0
Reel width	W1	11.50±0.5

