0.8A, 200V - 1000V Glass Passivated Bridge Rectifiers

FEATURES

- Ideal for automated placement
- Reliable low cost construction utilizing molded plastic technique
- High surge current capability
- UL Recognized File # E-326854
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21 definition

MBS

Pb-Free

RoHS COMPLIANT

MECHANICAL DATA

Case: Molded plastic body

Molding compound, UL flammability classification rating 94V-0

Moisture sensitivity level: level 1, per J-STD-020

Part no. with suffix "H" means AEC-Q101 qualified

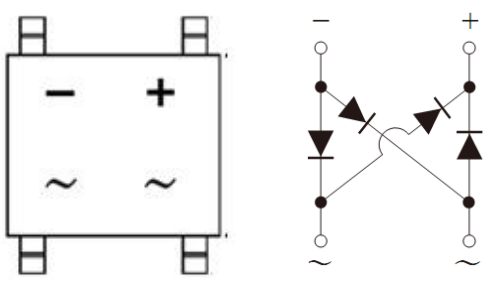
Packing code with suffix "G" means green compound (halogen-free)

Terminal: Matte tin plated leads, solderable per JESD22-B102

Meet JESD 201 class 2 whisker test

Polarity: Polarity as marked on the body

Weight: 0.12 g (approximately)



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise noted)							
PARAMETER	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	I_{FSM}	35					A
Maximum instantaneous forward voltage (Note 1) I_F= 0.4 A	V_F	1.0					V
Maximum DC reverse current T_J=25 °C at rated DC blocking voltage T_J=125 °C	I_R	5 100					μA
Rating for fusing (t<8.3ms)	I^2t	5.08					A^2s
Typical junction capacitance per leg (Note 2)	C_J	13					pF
Typical thermal resistance (Note 3) (Note 4) (Note 3)	$R_{\theta JL}$ $R_{\theta JA}$ $R_{\theta JA}$	20 70 85					°C/W
Operating junction temperature range	T_J	- 55 to +150					°C
Storage temperature range	T_{STG}	- 55 to +150					°C

Note 1: Pulse Test with PW=300μs,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

ORDERING INFORMATION					
PART NO.	PART NO. SUFFIX	PACKING CODE	PACKING CODE SUFFIX	PACKAGE	PACKING
MBSx (Note 1, 2)	H	RC	G	MBS	3,000 / 13" Paper reel

Note 1: "x" defines voltage from 200V (MBS2) to 1000V (MBS10)

Note 2: Whole series with green compound

EXAMPLE					
PREFERRED PART NO.	PART NO.	PART NO. SUFFIX	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION
MBS10HRCG	MBS10	H	RC	G	AEC-Q101 qualified Green compound

RATINGS AND CHARACTERISTICS CURVES

(T_A=25°C unless otherwise noted)

FIG.1 MAXIMUM FORWARD CURRENT DERATING CURVE

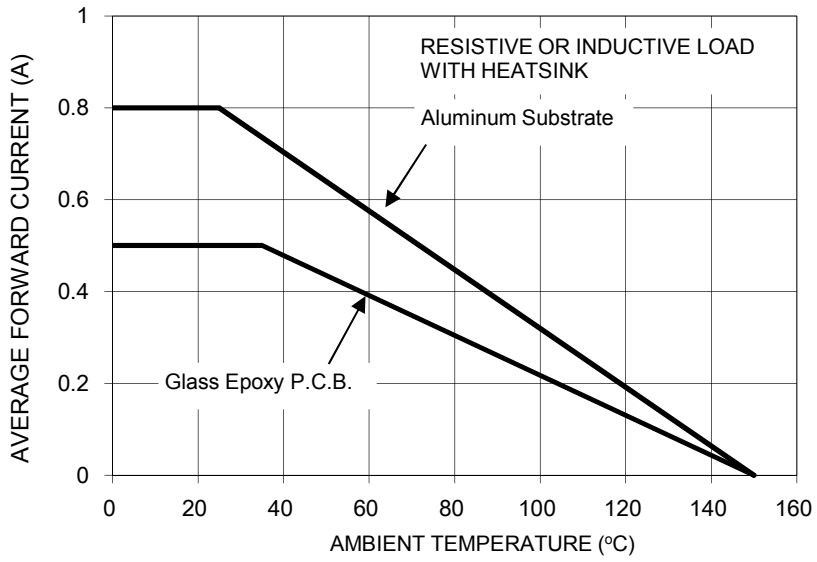


FIG. 2 TYPICAL REVERSE CHARACTERISTICS PER LEG

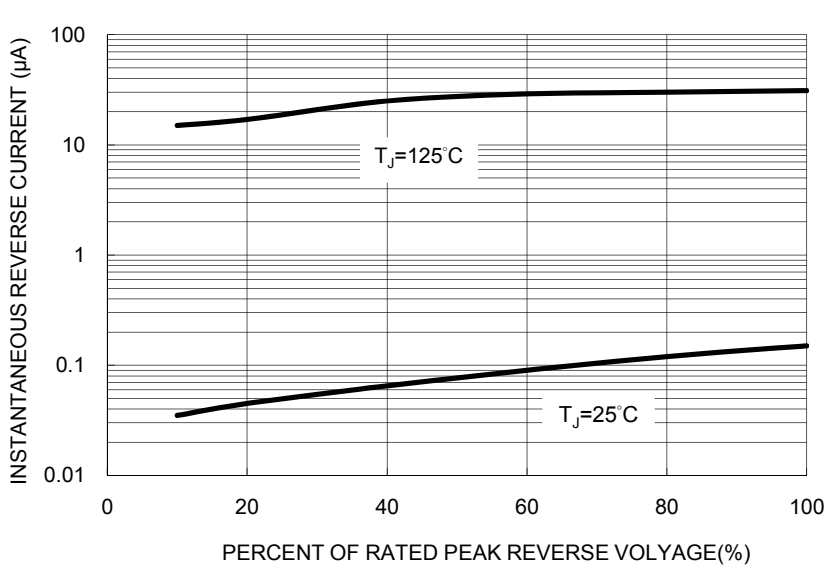


FIG. 3 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

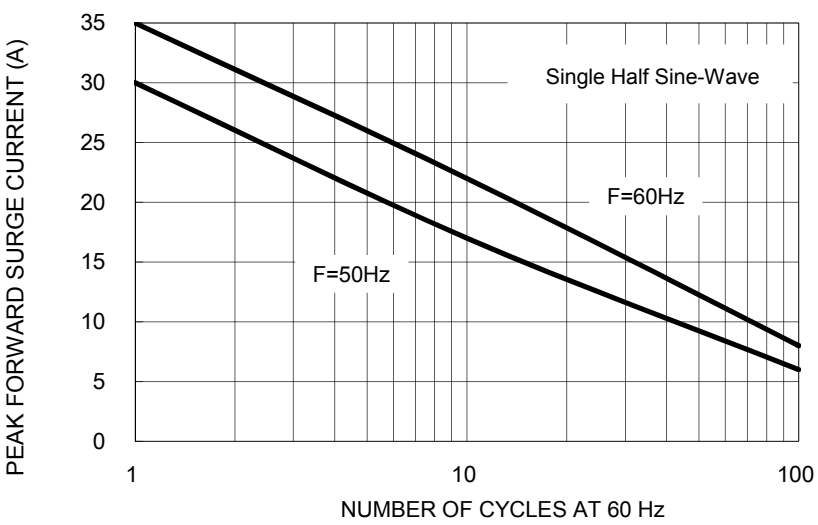


FIG. 4 TYPICAL FORWARD CHARACTERISTICS PER LEG

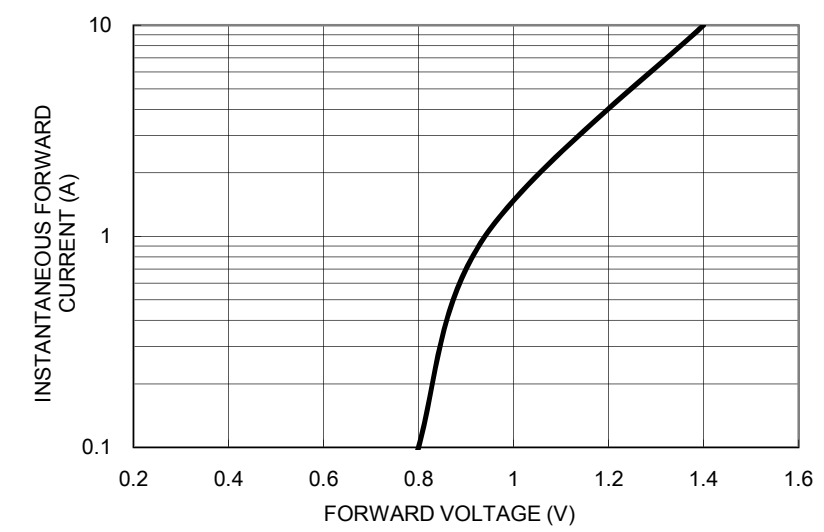
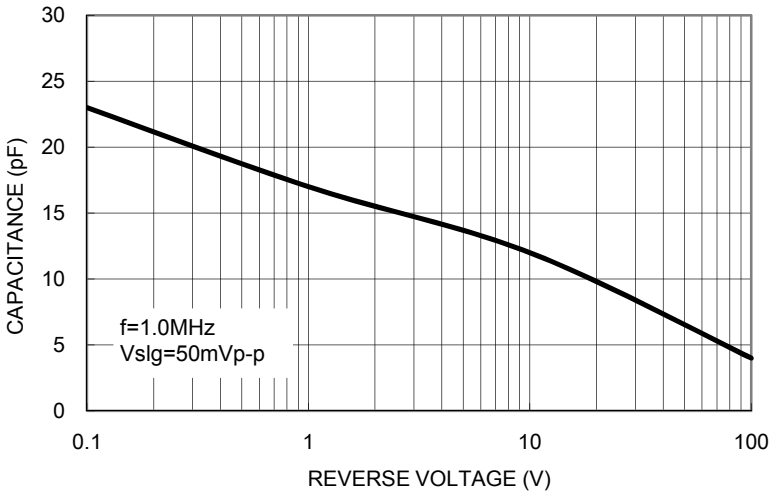
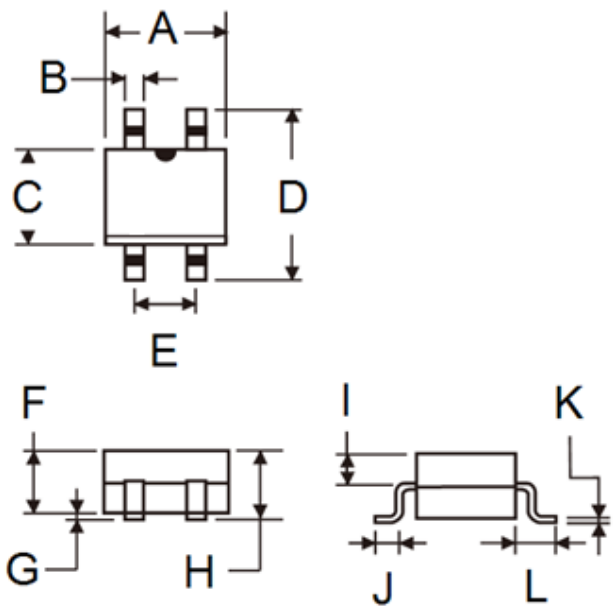


FIG. 5 TYPICAL JUNCTION CAPACITANCE PER LEG



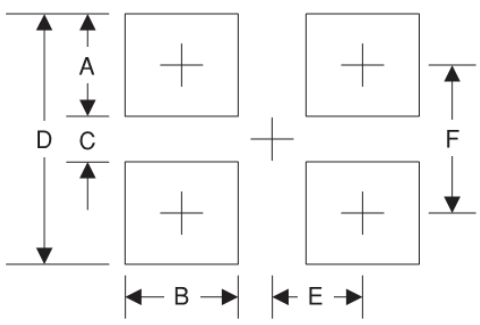
PACKAGE OUTLINE DIMENSIONS

MBS



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	4.50	4.90	0.177	0.193
B	0.56	0.84	0.022	0.033
C	3.60	5.00	0.142	0.197
D	-	6.90	-	0.272
E	2.20	2.60	0.087	0.102
F	2.30	2.70	0.091	0.106
G	-	0.20	-	0.008
H	-	2.90	-	0.114
I	0.95	1.53	0.037	0.060
J	0.70	1.10	0.028	0.043
K	0.15	0.35	0.006	0.014
L	1.10	2.12	0.043	0.083

SUGGESTED PAD LAYOUT



Symbol	Unit (mm)	Unit (inch)
A	1.7	0.067
B	0.9	0.035
C	4.4	0.173
D	8.1	0.319
E	1.3	0.051
F	6.3	0.248

MARKING DIAGRAM

P/N = Specific Device Code
YW = Date Code
F = Factory Code

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