

0.8A, 600V - 1000V Glass Passivated Bridge Rectifier

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

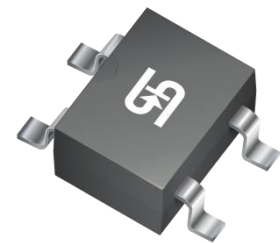
APPLICATIONS

- Switching mode power supply (SMPS)
- Adapters
- Lighting application

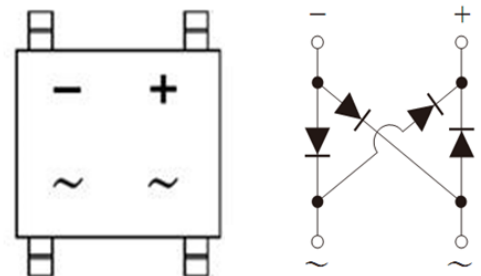
MECHANICAL DATA

- Case: MBS
- Molding compound :meets UL 94V-0 flammability rating
- Packing code with suffix "G" means green compound (halogen-free)
- Moisture sensitivity level: level 1, per J-STD-020
- Terminal: Matte tin plated leads, solderable per J-STD-002
- Meet JESD 201 class 1A whisker test
- Polarity: As marked
- Weight: 0.12 g (approximately)

KEY PARAMETERS		
PARAMETER	VALUE	UNIT
$I_{F(AV)}$	0.8	A
V_{RRM}	600 - 1000	V
I_{FSM}	35	A
T_{JMAX}	150	°C
Package	MBS	
Configuration	Quad	



MBS



ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ unless otherwise noted)					
PARAMETER	SYMBOL	MBS6-K	MBS8-K	MBS10-K	UNIT
Marking code on the device		MBS6	MBS8	MBS10	
Repetitive peak reverse voltage	V_{RRM}	600	800	1000	V
Reverse voltage, total rms value	$V_{R(RMS)}$	420	560	700	V
Maximum DC blocking voltage	V_{DC}	600	800	1000	V
Forward current On glass-epoxy	$I_{F(AV)}$	0.5			A
Forward current On aluminum substrate		0.8			
Surge peak forward current, 8.3 ms single half sine-wave superimposed on rated load	I_{FSM}	35			A
I^2t value (of a surge on-state current)	I^2t	5.08			A^2s
Junction temperature	T_J	-55 to +150			°C
Storage temperature	T_{STG}	-55 to +150			°C

THERMAL PERFORMANCE			
PARAMETER	SYMBOL	LIMIT	UNIT
Junction-to-lead thermal resistance	$R_{\theta JL}$	20	°C/W
Junction-to-ambient thermal resistance	$R_{\theta JA}$	85	°C/W

ELECTRICAL SPECIFICATIONS ($T_A = 25^\circ\text{C}$ unless otherwise noted)					
PARAMETER	CONDITIONS	SYMBOL	TYP.	MAX.	UNIT
Forward voltage ⁽¹⁾	$I_F = 0.4\text{A}, T_J = 25^\circ\text{C}$	V_F	-	1.0	V
Reverse current @ rated V_R ⁽²⁾	$T_J = 25^\circ\text{C}$	I_R	-	5	μA
	$T_J = 125^\circ\text{C}$		-	100	μA

Notes:

1. Pulse test with $PW=0.3$ ms
2. Pulse test with $PW=30$ ms.

ORDERING INFORMATION				
PART NO.	PACKING CODE	PACKING CODE SUFFIX	PACKAGE	PACKING
MBS6-K (Note 1)	RC	G	MBS	3,000 / 13" Paper reel

Note:

1. Whole series with green compound (halogen-free)

EXAMPLE P/N				
EXAMPLE P/N	PART NO.	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION
MBS6-K RCG	MBS6-K	RC	G	Green compound

CHARACTERISTICS CURVES

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

Fig.1 Forward Current Derating Curve

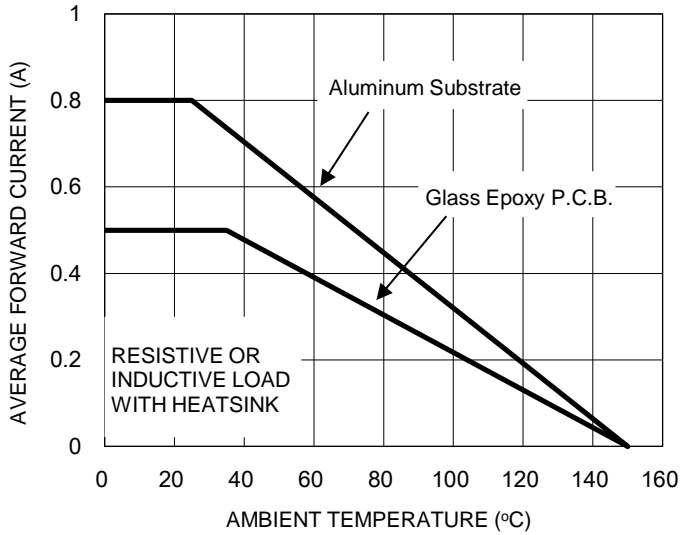


Fig.2 Typical Junction Capacitance

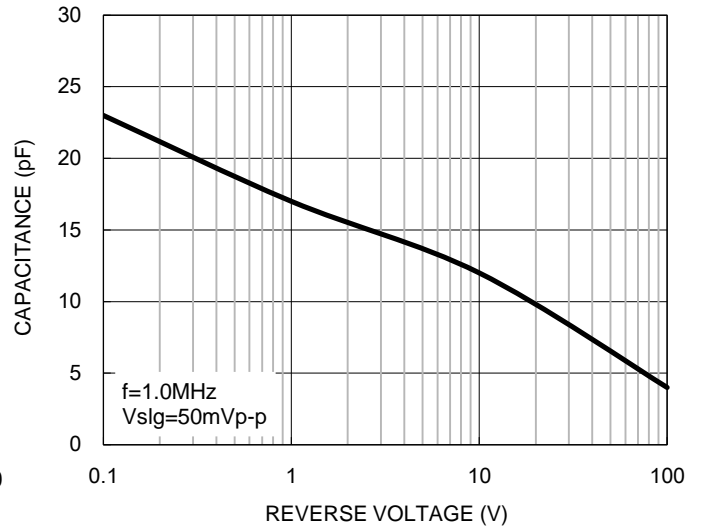


Fig.3 Typical Reverse Characteristics

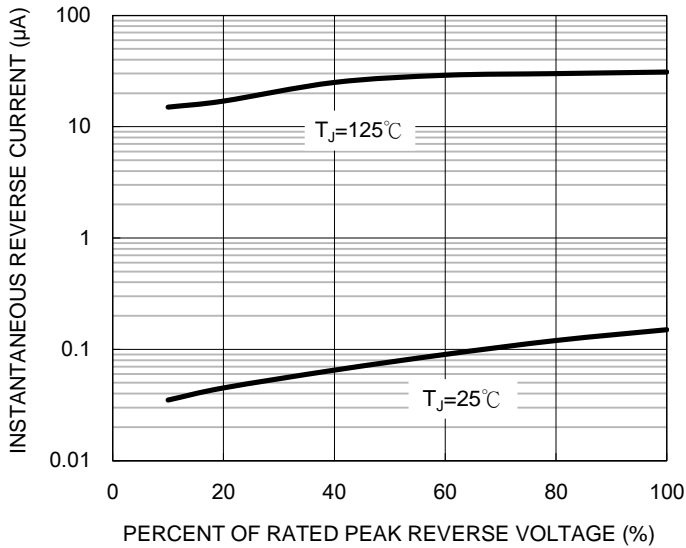
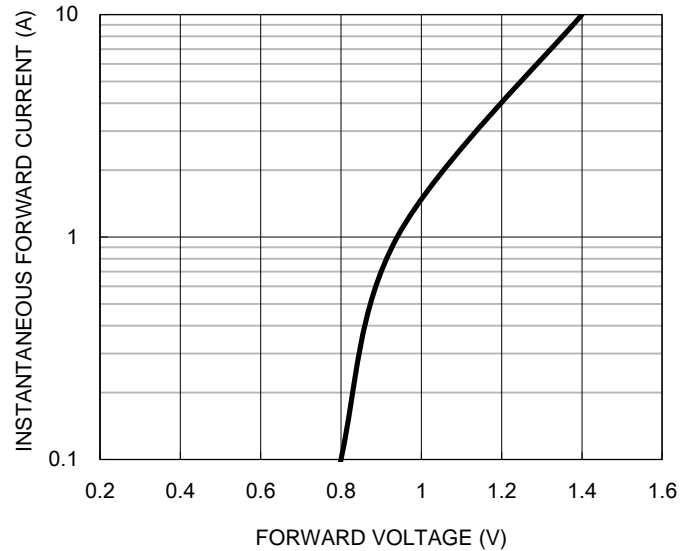


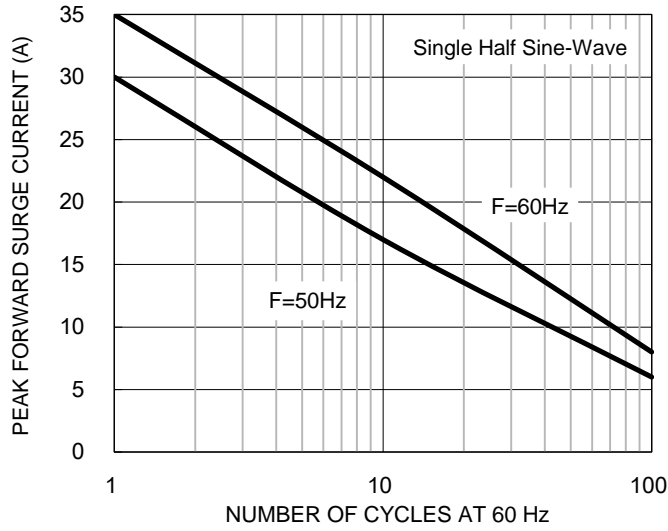
Fig.4 Typical Forward Characteristics



CHARACTERISTICS CURVES

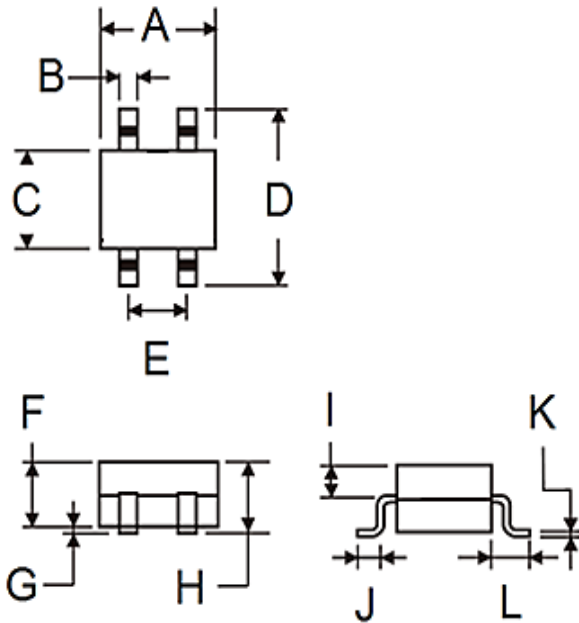
($T_A = 25^\circ\text{C}$ unless otherwise noted)

Fig.5 Maximum Non-repetitive Forward Surge Current



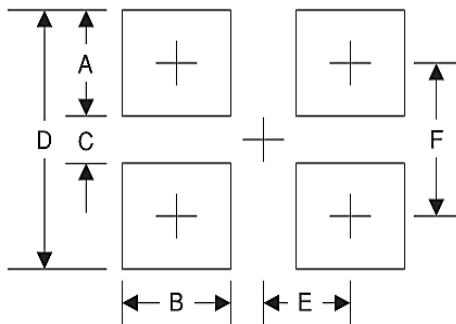
PACKAGE OUTLINE DIMENSIONS

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 = Marking Code
- YW = Date Code
- F = Factory Code

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