0.8A, 200V - 600V Miniature Glass Passivated Fast Recovery Surface Mount Bridge Rectifier

FEATURES

- Ideal for automated placement
- Reliable low cost construction utilizing molded plastic technique
- High surge current capability
- Small size, simple installation
- UL Recognized File # E-326243
- Moisture sensitivity level: level 1, per J-STD-020
- 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)
- Lighting application

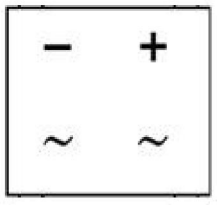
MECHANICAL DATA

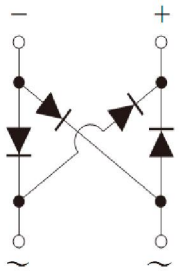
- Case: TO-269AA (MBS)
- Molding compound meets UL 94V-0 flammability rating
- Terminal: Matte tin plated leads, solderable per J-STD-002
- Meet JESD 201 class 2 whisker test
- Polarity: As marked
- Weight: 0.12g (approximately)

KEY PARAMETERS		
PARAMETER	**VALUE**	**UNIT**
$I_{F(AV)}$	0.8	A
V_{RRM}	200 - 600	V
I_{FSM}	30	A
$T_{J\ MAX}$	150	°C
Package	TO-269AA (MBS)	
Configuration	Quad	

Pb-Free RoHS COMPLIANT HALOGEN FREE

TO-269AA (MBS)





ABSOLUTE MAXIMUM RATINGS (T_A = 25°C unless otherwise noted)

PARAMETER	SYMBOL	RMB2S	RMB4S	RMB6S	UNIT
Marking code on the device		RMB2S	RMB4S	RMB6S	
Repetitive peak reverse voltage	V_{RRM}	200	400	600	V
Reverse voltage, total rms value	$V_{R(RMS)}$	140	280	420	V
Maximum DC blocking voltage	V_{DC}	200	400	600	V
Maximum average forward current 60Hz sine wave resistance load on glass-epoxy P.C.B.	$I_{F(AV)}$	0.5			A
Maximum average forward current 60Hz sine wave resistance load on aluminum substrate		0.8			A
Surge peak forward current, 8.3 ms single half sine-wave superimposed on rated load per diode	I_{FSM}	30			A
Rating for fusing (t<8.3ms)	I^2t	3.74			A^2s
Junction temperature	T_J	- 55 to +150			°C
Storage temperature	T_{STG}	- 55 to +150			°C

THERMAL PERFORMANCE

PARAMETER	SYMBOL	TYP	UNIT
Junction-to-ambient thermal resistance per diode	$R_{\Theta JA}$	85	°C/W

ELECTRICAL SPECIFICATIONS (T_A = 25°C unless otherwise noted)

PARAMETER	CONDITIONS	SYMBOL	TYP	MAX	UNIT
Forward voltage per diode (1)	I_F = 0.4A, T_J = 25°C	V_F	-	1	V
Reverse current @ rated V_R per diode (2)	T_J = 25°C	I_R	-	5	μA
	T_J = 125°C		-	100	μA
Junction capacitance	1 MHz, V_R=4.0V	C_J	13	-	pF
Reverse recovery time	I_F=0.5A,I_R=1.0A I_{RR}=0.25A	t_{rr}	-	150	ns

Notes:

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

ORDERING INFORMATION

PART NO.	PART NO. SUFFIX(*)	PACKING CODE	PACKING CODE SUFFIX	PACKAGE	PACKING
RMBxS (Note 1, 2)	H	RC	G	MBS	3,000 / 13" Paper reel
		MC			3,000 / 13" Plastic reel

Notes:

1. "x" defines voltage from 200V (RMB2S) to 600V (RMB6S)
2. Whole series with green compound (halogen-free)

*: Optional available

EXAMPLE

EXAMPLE P/N	PART NO.	PART NO. SUFFIX	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION
RMB2SHRCG	RMB2S	H	RC	G	Green compound AEC-Q101 qualified

CHARACTERISTICS CURVES

(T_A = 25°C unless otherwise noted)

Fig.1 Forward Current Derating Curve

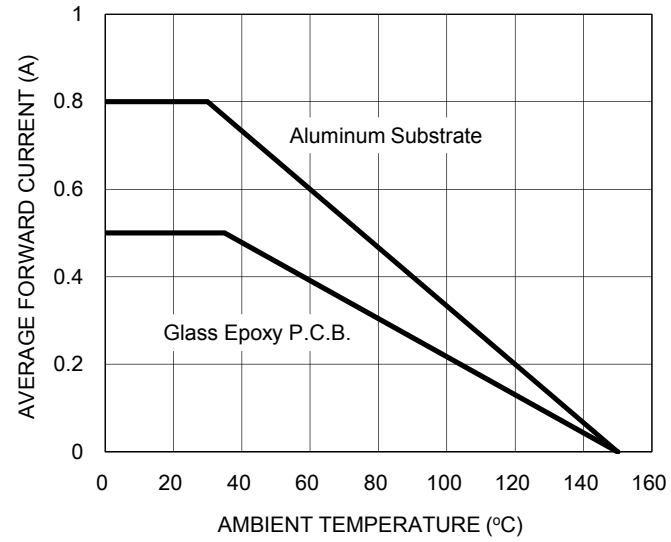


Fig.2 Typical Junction Capacitance

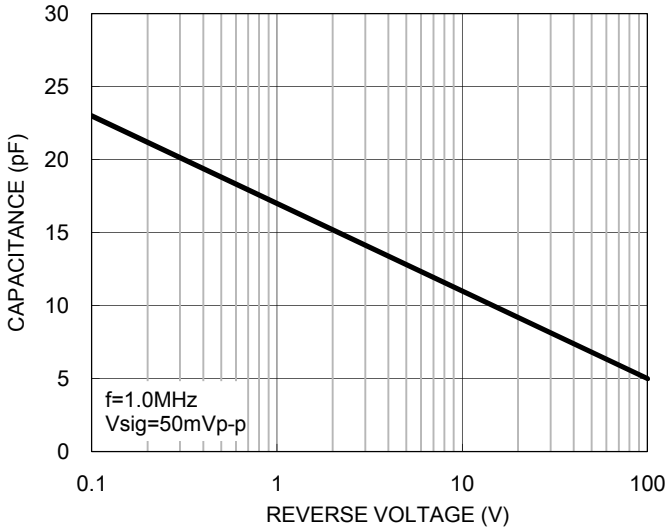


Fig.3 Typical Reverse Characteristics

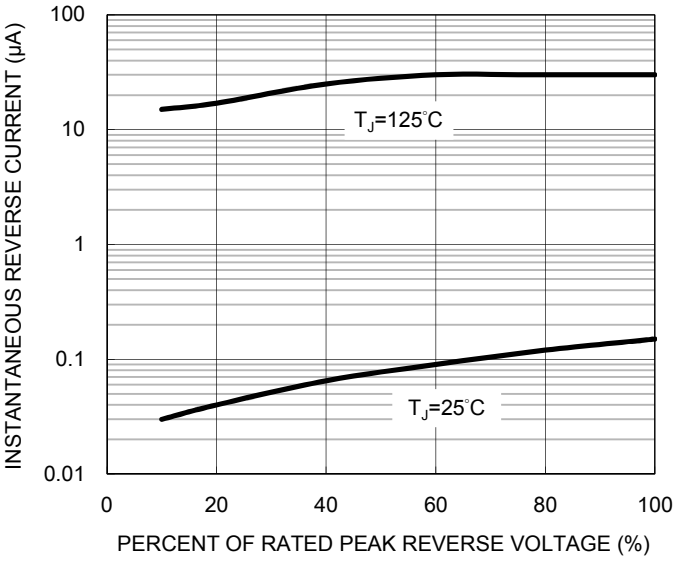
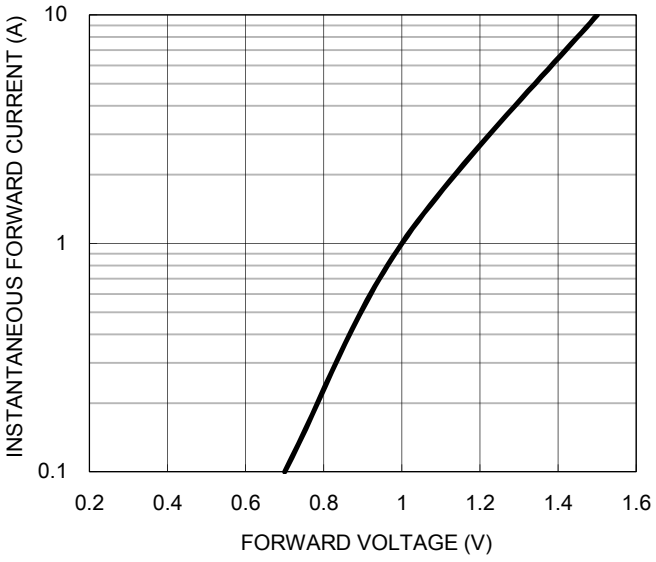


Fig.4 Typical Forward Characteristics



CHARACTERISTICS CURVES

(T_A = 25°C unless otherwise noted)

Fig.5 Maximum Non-repetitive Forward Surge Current

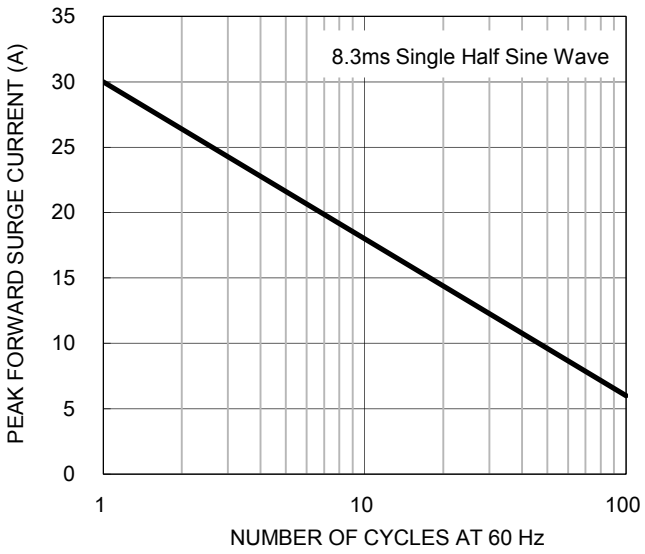
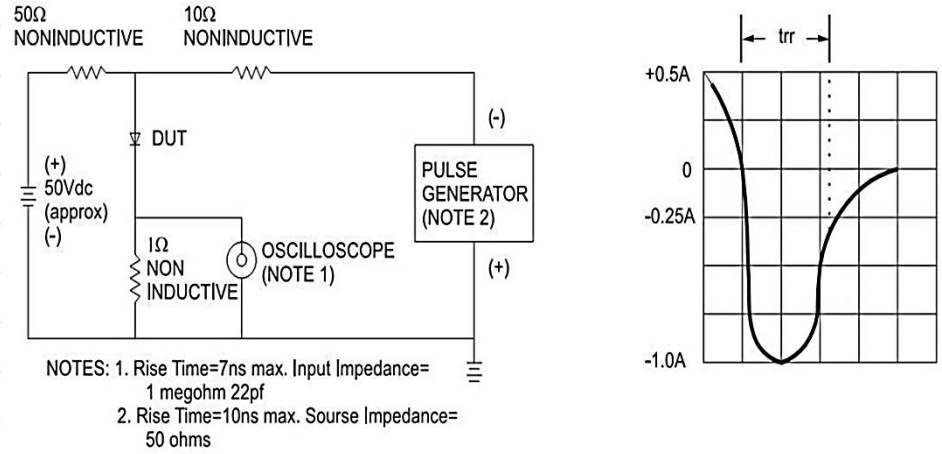
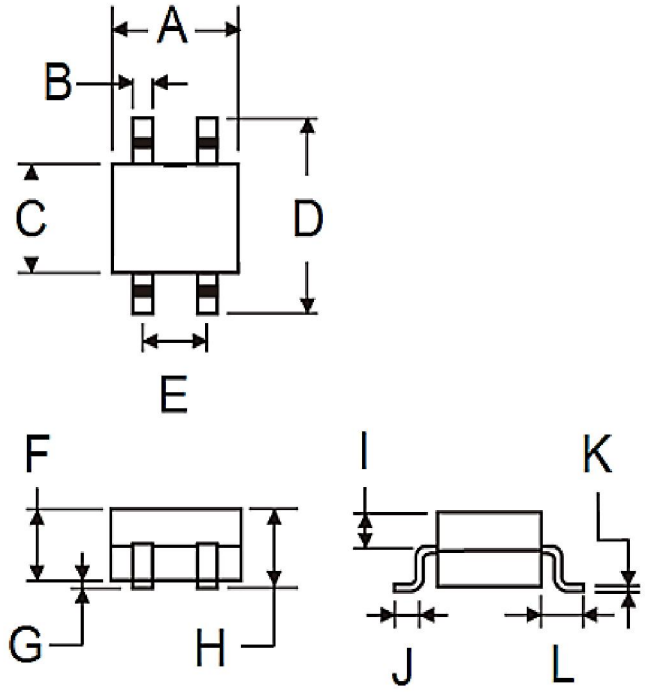


Fig.6 Reverse Recovery Time Characteristic and Test Circuit Diagram



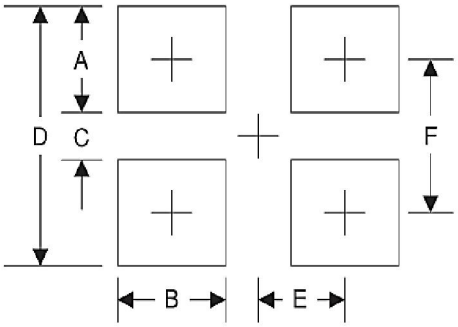
PACKAGE OUTLINE DIMENSIONS

TO-269AA (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	1.70	0.067
B	0.90	0.035
C	4.40	0.173
D	8.10	0.319
E	1.30	0.051
F	6.30	0.248

MARKING DIAGRAM

P/N = Marking Code
YW = Date Code
F = Factory Code

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