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MBRS240LT3G(MS)

Product specification



FEATURES

- Small Compact Surface Mountable Package
- Highly Stable Oxide Passivated Junction
- Guard-Ring for Overvoltage Protection
- Low Forward Voltage Drop
- Pb / RoHS Free

MECHANICAL DATA

- **Case** : SMB Molded plastic
- **Epoxy** : UL94V-O rate flame retardant
- **Lead** : Lead Formed for Surface Mount
- **Polarity** : Color band denotes cathode end
- **Mounting position** : Any
- **Weight** : 0.117 gram

Reference News

Outline	Marking
	
SMB	

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%.

RATING	SYMBOL	VALUE	UNIT
Maximum Repetitive Reverse Voltage	V_{RRM}	40	V
Maximum Working Peak Reverse Voltage	V_{RWM}	40	V
Maximum DC Blocking Voltage	V_{DC}	40	V
Maximum Average Rectified Forward Current (At Rated V_R , $T_C = 100\text{ }^\circ\text{C}$)	$I_{F(AV)}$	2.0	A
Non-repetitive Peak Surge Current (Surge applied at rated load conditions half wave, single phase, 60Hz)	I_{FSM}	25	A
Maximum Instantaneous Forward Voltage (Note 1) ($I_F = 2.0\text{ A}$, $T_J = 25\text{ }^\circ\text{C}$) ($I_F = 2.0\text{ A}$, $T_J = 125\text{ }^\circ\text{C}$)	V_F	0.430	V
		0.375	
Maximum Instantaneous Reverse Current (Note1) (Ratedc Voltage, $T_J = 25\text{ }^\circ\text{C}$) (Ratedc Voltage, $T_J = 100\text{ }^\circ\text{C}$)	I_R	2.0	mA
		60	
Thermal Resistance - Junction to Lead (Note2)	$R_{\theta JL}$	18	$^\circ\text{C/W}$
Thermal Resistance - Junction to Lead (Note3)	$R_{\theta JA}$	78	$^\circ\text{C/W}$
Storage/Operating Case Temperature	T_{stg}, T_C	- 55 to +150	$^\circ\text{C}$
Operating Junction Temperature	T_J	- 55 to +125	$^\circ\text{C}$

Notes:

- (1) Pulse Test : Pulse Width $\leq 250\text{ }\mu\text{s}$, Duty Cycle $\leq 2\%$.
- (2) Mounted with minimum recommended pad size, PC Board FR4.
- (3) 1 inch square pad size (1 x 0.5 inch for each lead) on FR4 board.

RATING AND CHARACTERISTIC CURVES

FIG.1 - CURRENT DERATING

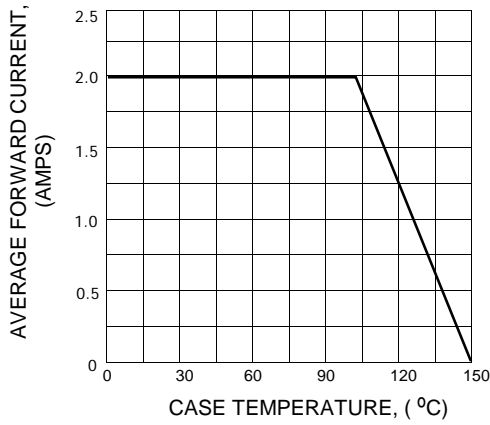


FIG.2 - FORWARD POWER DISSIPATION

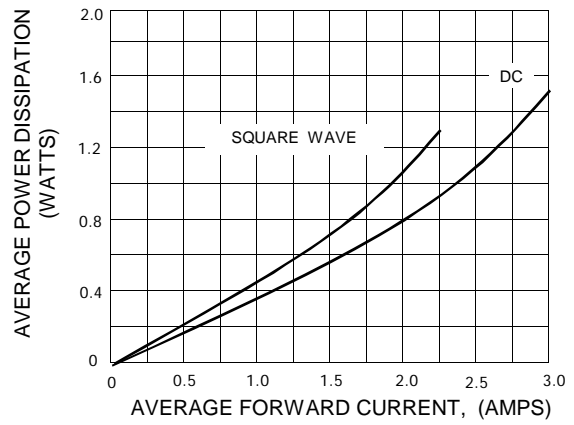


FIG.3 - TYPICAL FORWARD VOLTAGE

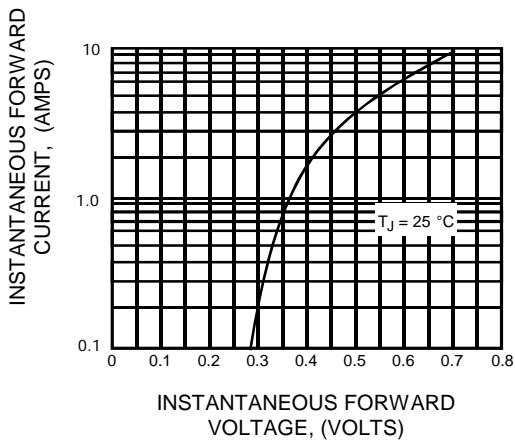
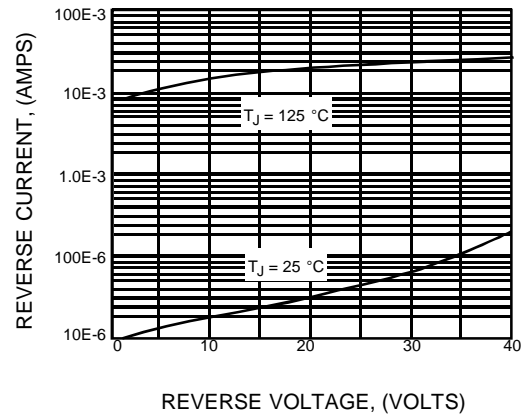
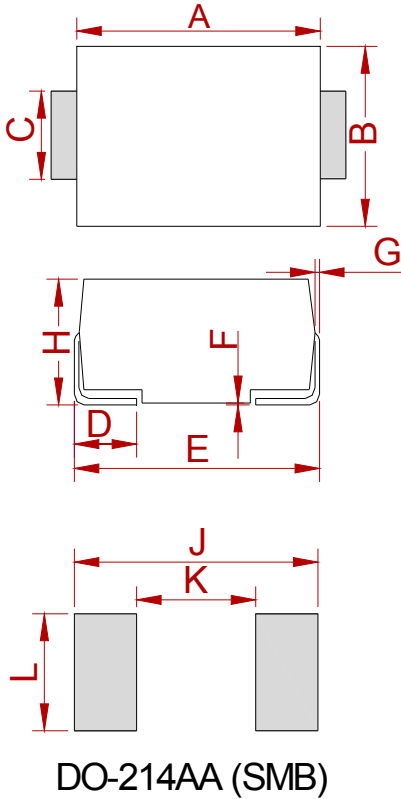


FIG.4 - TYPICAL REVERSE CURRENT

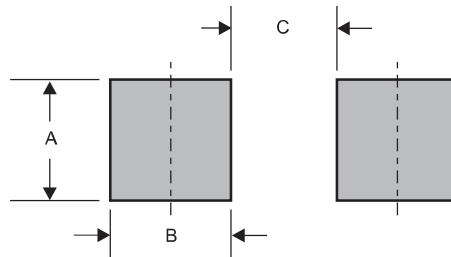


PACKAGE MECHANICAL DATA



Ref.	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	4.25	4.75	0.167	0.187
B	3.30	3.94	0.130	0.155
C	1.85	2.21	0.073	0.087
D	0.76	1.52	0.030	0.060
E	5.08	5.59	0.200	0.220
F	0.051	0.203	0.002	0.008
G	0.15	0.31	0.006	0.012
H	2.11	2.44	0.083	0.096
J	6.80		0.270	
K		2.60		0.100
L	2.40		0.090	

Suggested solder pad layout



Dimensions in inches and (millimeters)

PACKAGE	A	B	C
SMB	0.078 (2.00)	0.059 (1.50)	0.110 (2.80)

REEL SPECIFICATION

P/N	PKG	QTY
MBRS240T3G(MS)	SMB	3000

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