

# MSKSEMI 美森科

SEMICONDUCTOR



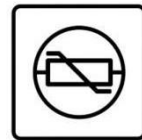
ESD



TVS



TSS



MOV



GDT



PLED

## MBRS140T3G(MS)

Product specification



## FEATURES

- Very Low Forward Voltage Drop
- Small Compact Surface Mountable Package
- Highly Stable Oxide Passivated Junction
- Guardring for Stress Protection
- 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** : 0.1079 gram

## Reference News

Outline	Marking
	
SMB	

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

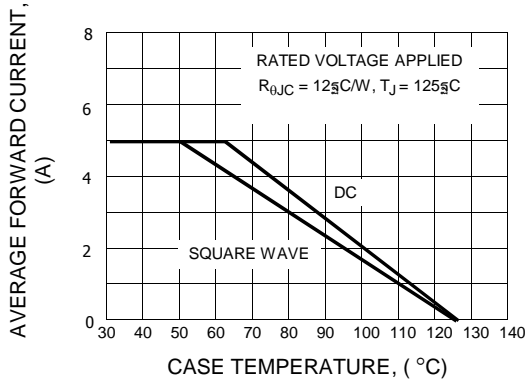
Rating at 25°C ambient temperature unless otherwise specified.  
 Single phase, half wave, 60 Hz, resistive or inductive load.  
 For capacitive load, derate current by 20%.

RATING	SYMBOL	VALUE	UNIT
Maximum Repetitive Reverse Voltage	V <sub>RRM</sub>	40	V
Maximum Working Peak Reverse Voltage	V <sub>RWM</sub>	40	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	40	V
Maximum Average Rectified Forward Current (T <sub>L</sub> = 115°C)	I <sub>F(AV)</sub>	1.0	A
Non-repetitive Peak Surge Current (Surge applied at rated load conditions half wave, single phase)	I <sub>FSM</sub>	40	A
Maximum Instantaneous Forward Voltage (Note 1) (I <sub>F</sub> = 1.0 A, T <sub>J</sub> = 25°C)	V <sub>F</sub>	0.60	V
Maximum Instantaneous Reverse Current (Note 1) T <sub>J</sub> = 25°C T <sub>J</sub> = 100°C	I <sub>R</sub>	1.0	mA
		10	mA
Thermal Resistance - Junction to Lead (T <sub>L</sub> = 25°C)	R <sub>θJL</sub>	12	°C/W
Operating Junction Temperature	T <sub>J</sub>	- 65 to +125	°C

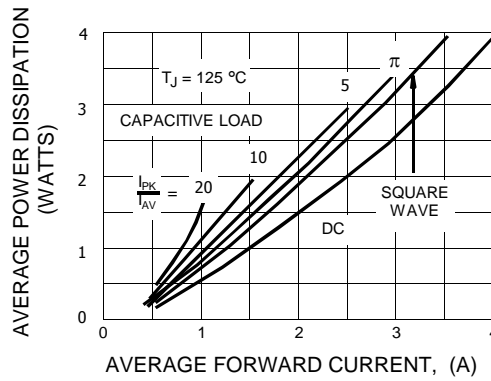
**Note:** (1) Pulse Test : Pulse Width = 300μs Duty Cycle ≤ 2%

**RATING AND CHARACTERISTIC CURVES**

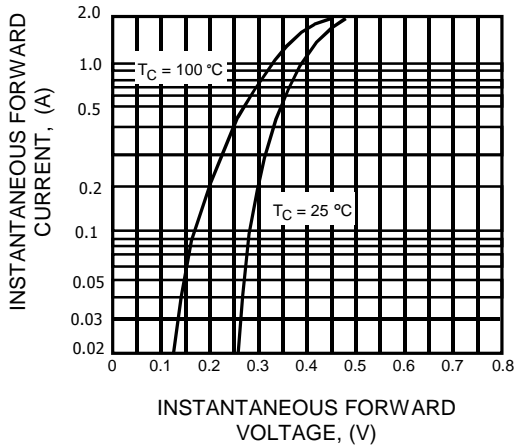
**FIG.1 - CURRENT DERATING (CASE)**



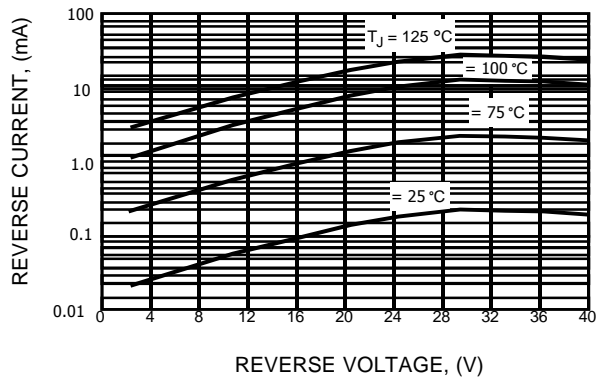
**FIG.2 - POWER DISSIPATION**



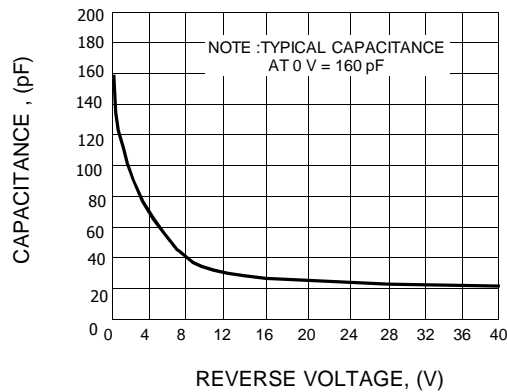
**FIG.3 - TYPICAL FORWARD VOLTAGE**



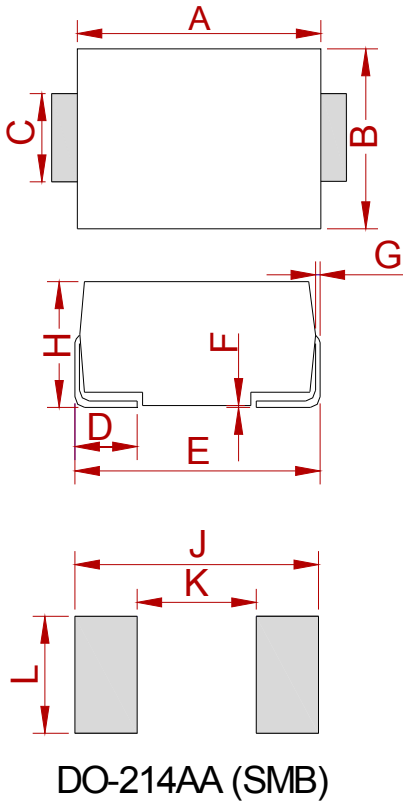
**FIG.4 - TYPICAL REVERSE CURRENT**



**FIG. 5 TYPICAL CAPACITANCE**

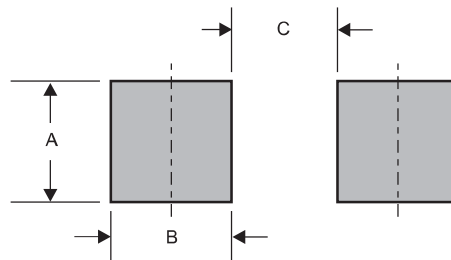


**PACKAGE MECHANICAL DATA**



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
MBRS140T3G(MS)	SMB	3000

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