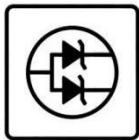


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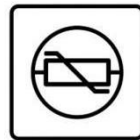
ESD



TVS



TSS



MOV



GDT



PLED

MBRAXXT3G(MS)

Product specification









Features

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- Metal silicon junction, majority carrier conduction
- For surface mount applications
- Guard ring for overvoltage protection
- Low power loss, high efficiency
- High current capability, low forward voltage drop
- High surge capability

Mechanical Data

- **Case:** JEDEC DO-214AC molded plastic body
- **Terminals:** leads solderable per MIL-STD-750, Method 2026
- **Polarity:** Color band denotes cathode end

Reference News

Outline	Marking						
							
SMA	MBRA120T3G(MS)	MBRA130T3G(MS)	MBRA140T3G(MS)	MBRA150T3G(MS)	MBRA160T3G(MS)	MBRA180T3G(MS)	MBRA100T3G(MS)

Maximum Ratings and Electrical Characteristics

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

Parameter	Symbols	MBRA120 T3G(MS)	MBRA130 T3G(MS)	MBRA140 T3G(MS)	MBRA150 T3G(MS)	MBRA160 T3G(MS)	MBRA180 T3G(MS)	MBRA100 T3G(MS)	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	20	30	40	50	60	80	100	V
Maximum RMS Voltage	V_{RMS}	14	21	28	35	42	56	70	V
Maximum DC Blocking Voltage	V_{DC}	20	30	40	50	60	80	100	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	1							A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	40							A
Maximum Forward Voltage at 1 A ¹⁾	V_F	0.55		0.75		0.85			V
Maximum DC Reverse Current at $T_a = 25^\circ\text{C}$ Rated DC Blocking Voltage ¹⁾ $T_a = 100^\circ\text{C}$	I_R	0.2							mA
		10							
Typical Thermal Resistance ²⁾	$R_{\theta JA}$ $R_{\theta JL}$	88					28		°C/W
Operating Junction Temperature Range	T_J	- 65 to + 125			- 65 to + 150				°C
Storage Temperature Range	T_S	- 65 to + 150							°C

1) Pulse test: 300 μs pulse width, 1% duty cycle

2) P.C.B mounted with 0.2 X 0.2" (5 X 5 mm) copper pad areas

RATINGS AND CHARACTERISTIC CURVES

FIG.1-FORWARD CURRENT DERATING CURVE

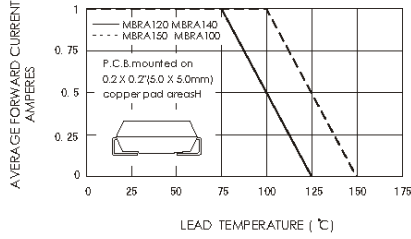


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

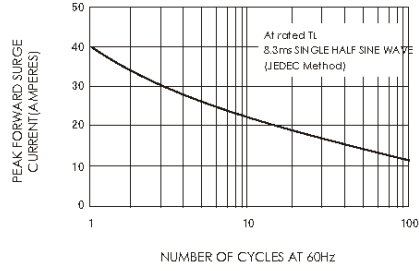


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

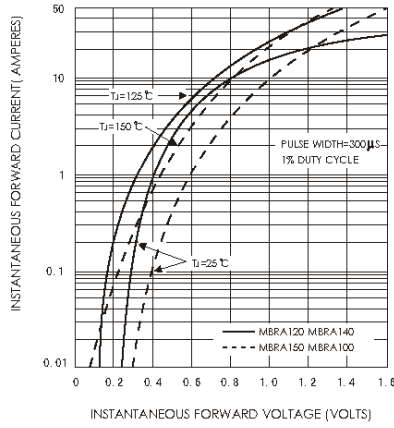


FIG.4-TYPICAL REVERSE CHARACTERISTICS

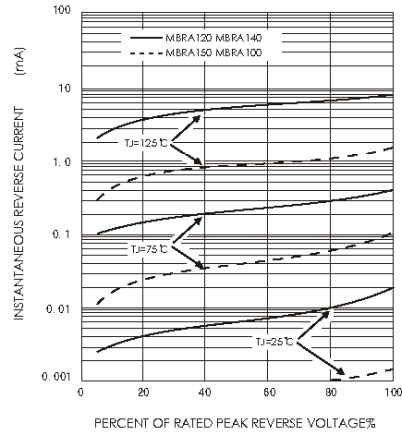
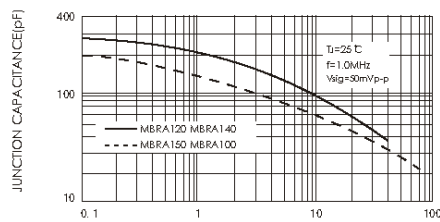
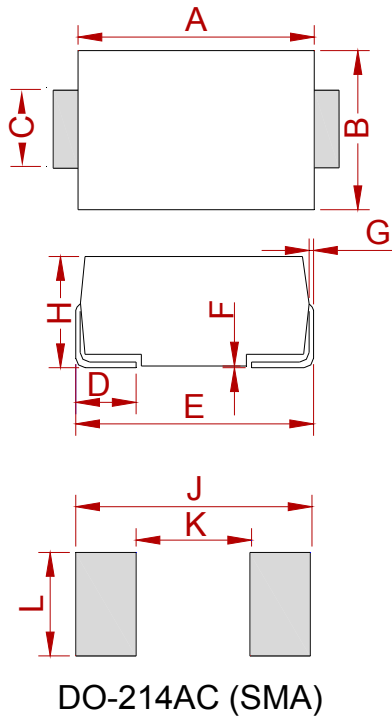


FIG.5-TYPICAL JUNCTION CAPACITANCE

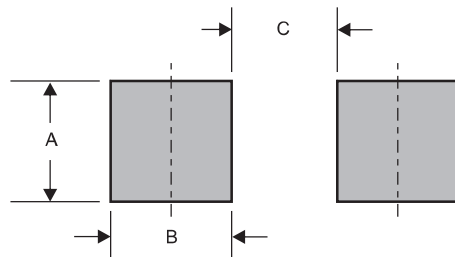


PACKAGE MECHANICAL DATA



Ref.	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	4.25	4.65	0.167	0.183
B	2.50	2.90	0.098	0.114
C	1.35	1.65	0.053	0.065
D	0.76	1.52	0.030	0.060
E	4.93	5.28	0.194	0.208
F	0.051	0.203	0.002	0.008
G	0.15	0.31	0.006	0.012
H	1.98	2.41	0.078	0.095
J	6.50		0.256	
K		2.30		0.090
L	1.70		0.067	

Suggested solder pad layout



Dimensions in inches and (millimeters)

PACKAGE	A	B	C
SMA	0.110 (2.80)	0.063 (1.60)	0.087 (2.20)

REEL SPECIFICATION

P/N	PKG	QTY
MBRAXXT3G(MS)	SMA	2000

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