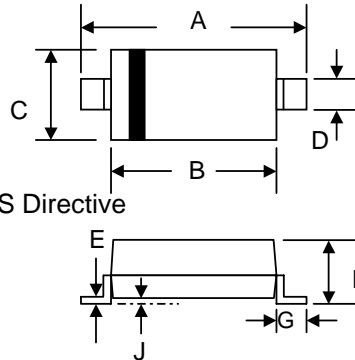


Date Sheet 3332, Rev -

**Green Products**

**Features**

- Low Turn-on Voltage
- Fast Switching
- PN Junction Guard Ring for Transient and ESD Protection
- Designed for Surface Mount Application
- Plastic Material – UL Recognition Flammability Classification 94V-0
- Green Products in Compliance with the RoHS Directive



SOD-123				
Dim	Min	Max	Min	Max
A	3.6	3.9	0.14	0.154
B	2.5	2.8	0.098	0.110
C	1.4	1.8	0.055	0.070
D	0.5	0.7	0.020	0.028
E	—	0.2	—	0.008
G	0.4	—	0.016	—
H	0.95	1.35	0.037	0.053
J	—	0.12	—	0.005
	In mm		In inch	

**Mechanical Data**

- Case: SOD-123, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: 0.01 grams (approx.)

**Maximum Ratings** @T<sub>A</sub>=25°C unless otherwise specified

Characteristic	Symbol	MBR0520L	MBR0530-G	MBR0540-G	Unit
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>				
Working Peak Reverse Voltage	V <sub>VRM</sub>	20	30	40	V
DC Blocking Voltage	V <sub>R</sub>				
RMS Reverse Voltage	V <sub>R(RMS)</sub>	14	21	28	V
Average Rectified Output Current @T <sub>L</sub> = 75°C	I <sub>O</sub>	0.5			A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	5.5			A
Power Dissipation (Note 1)	P <sub>d</sub>	410			mW
Typical Thermal Resistance, Junction to Ambient Air (Note 1)	R <sub>θJA</sub>	244			°C/W
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-65 to +125			°C

**Electrical Characteristics** @T<sub>A</sub>=25°C unless otherwise specified

Characteristic	Symbol	MBR0520L	MBR0530-G	MBR0540-G	Unit
Forward Voltage Drop @I <sub>F</sub> = 0.1A / 0.5A	V <sub>FM</sub>	0.3 / 0.385	0.375 / 0.43	— / 0.51	V
Peak Reverse Leakage Current @V <sub>R</sub> = 50% / 100% DC Blocking Voltage	I <sub>RM</sub>	75 / 250	20 / 130	10 / 20	μA
Typical Junction Capacitance (V <sub>R</sub> = 0V DC, f = 1MHz)	C <sub>j</sub>	170			pF

Note: 1. Valid provided that terminals are kept at ambient temperature.

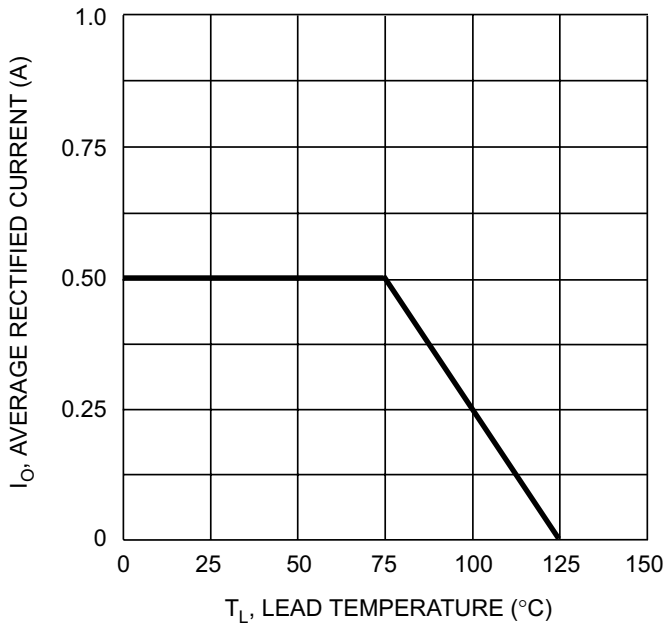


Fig. 1 Forward Current Derating Curve

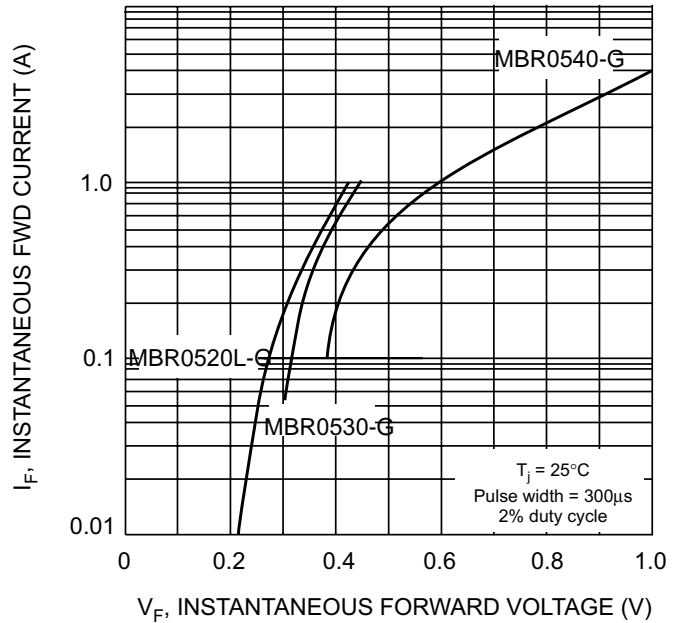


Fig. 2 Typical Forward Characteristics

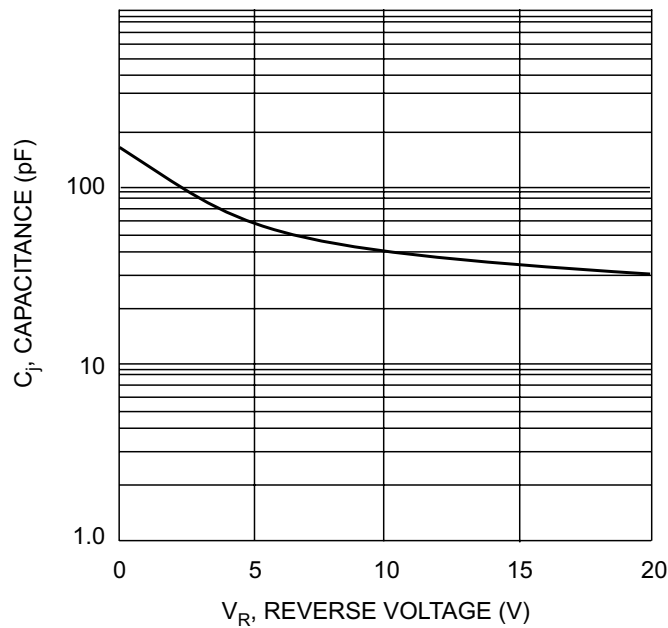


Fig. 3 Typ. Junction Capacitance vs Reverse Voltage

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