

Features

- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)
- For Surface Mount Application
- Low Forward Voltage And Extremely Low Thermal Resistance
- Halogen Free. "Green" Device (Note 1)
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1

Maximum Ratings

- Operating Junction Temperature Range: -55°C to +125°C
- Storage Temperature Range: -55°C to +150°C
- Maximum Thermal Resistance(Note 2): 244°C/W Junction to Ambient

MCC Part Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
MBR0520	R2	20V	14V	20V
MBR0530	R3	30V	21V	30V
MBR0540	R4	40V	28V	40V
MBR0560	R6	60V	42V	60V
MBR0580	R8	80V	56V	80V

Electrical Characteristics @ 25°C Unless Otherwise Specified

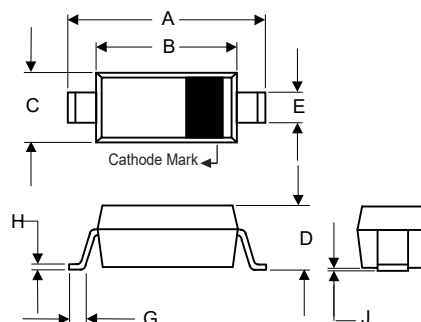
Average Forward Current	$I_{F(AV)}$	0.5A	$T_A = 50^\circ\text{C}$
Peak Forward Surge Current	I_{FSM}	5.5A	8.3ms Half Sine
Maximum Instantaneous Forward Voltage			
MBR0520	V_F	0.45V	$I_{FM}=0.5A;$ $T_J = 25^\circ\text{C}$
MBR0530		0.55V	
MBR0540		0.55V	
MBR0560		0.70V	
MBR0580		0.80V	
Maximum DC Reverse Current at Rated DC Blocking Voltage	I_R	0.1mA	$T_J = 25^\circ\text{C}$
Typical Junction Capacitance	C_J	30pF	Measured at 1.0MHz, $V_R=4.0V$
Power Dissipation	P_D	410mW	

Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

Note:2. Mounted on FR4 PCB, Single-sided Copper, Suggested Pad Layout.

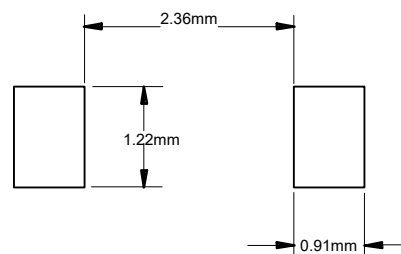
0.5 Amp Schottky Rectifier 20 to 80 Volts

SOD-123



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.140	0.152	3.55	3.85	
B	0.100	0.112	2.55	2.85	
C	0.055	0.071	1.40	1.80	
D	----	0.053	----	1.35	
E	0.018	0.026	0.45	0.65	
G	0.006	----	0.15	----	
H	----	0.010	----	0.25	
J	----	0.006	----	0.15	

Suggested Solder Pad Layout



Curve Characteristics

Fig. 1 - Forward Characteristics

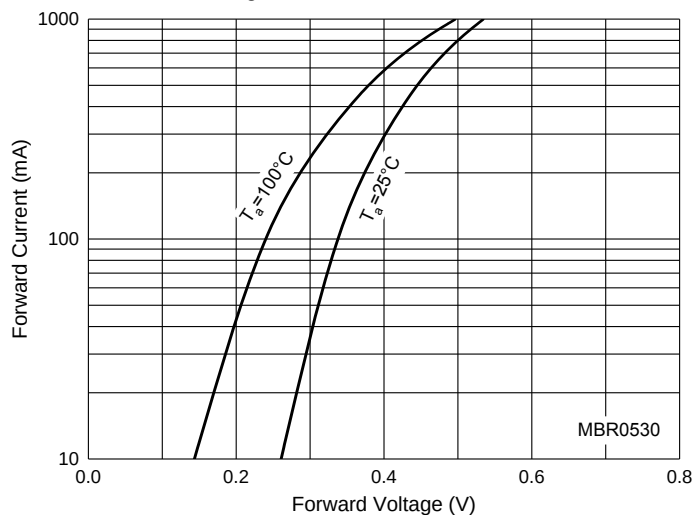


Fig. 2 - Reverse Characteristics

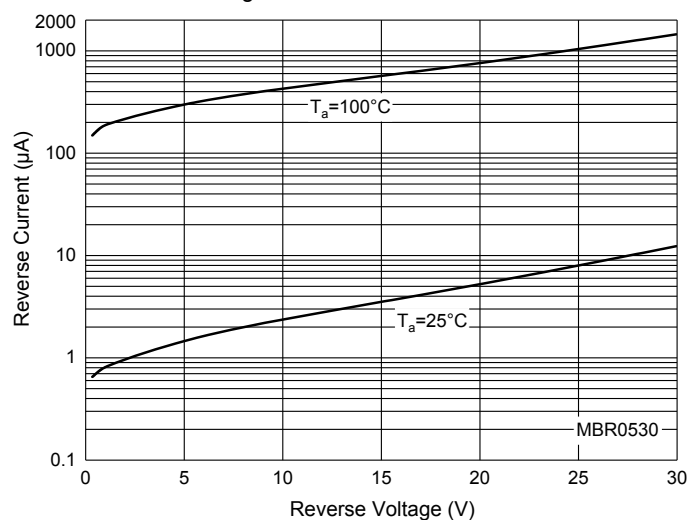


Fig. 3 - Capacitance Characteristics

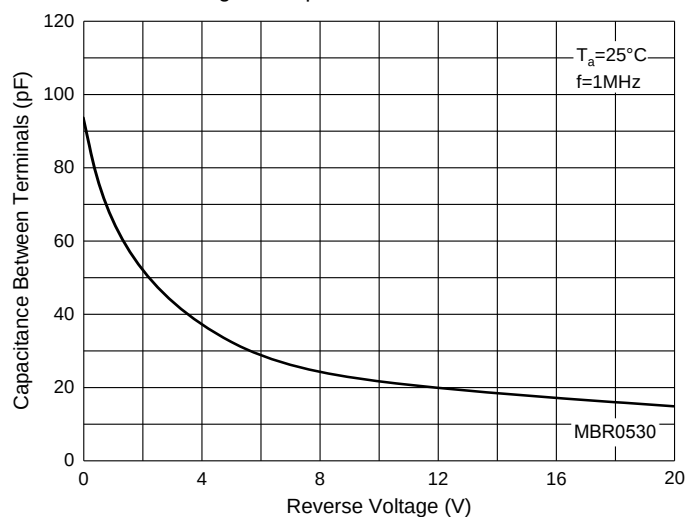
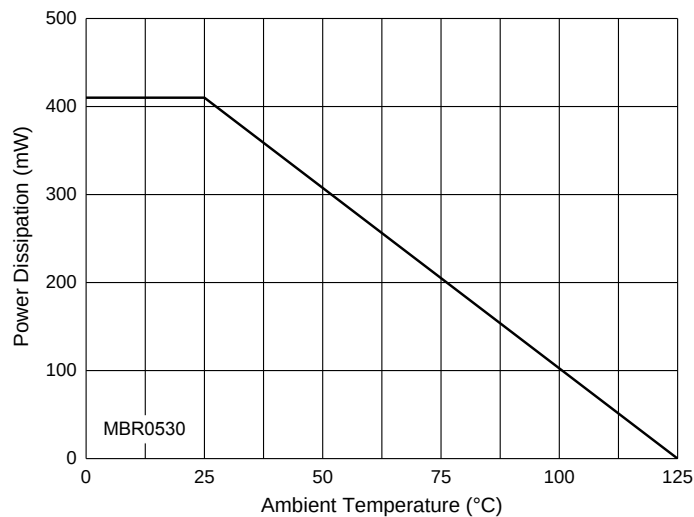


Fig. 4 - Power Derating Curve



Ordering Information

Device	Packing
Part Number-TP	Tape&Reel: 3Kpcs/Reel
Part Number-13P	Tape&Reel: 10Kpcs/Reel

For packaging details, go to our website at <https://www.mccsemi.com/pdf/productpackaging/SOD-123%20Package.pdf>

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