

## 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: -65°C to +125°C
- Storage Temperature Range: -65°C to +150°C
- Maximum Thermal Resistance: 305°C/W Junction to Ambient

MCC Part Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
MBR0520L	SD	20V	14V	20V
MBR0530L	SE	30V	21V	30V
MBR0540L	SF	40V	28V	40V

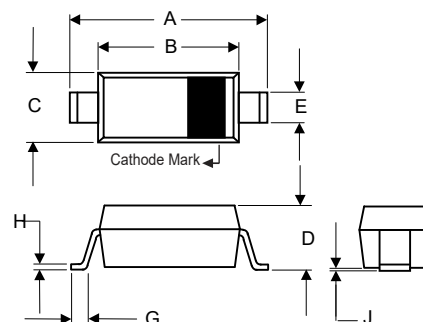
## Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	0.5A	
Peak Forward Surge Current	$I_{FSM}$	5.5A	8.3ms Half Sine
Maximum Forward Voltage	$V_F$	0.3V	$I_F=0.1A$
		0.385V	$I_F=0.5A$
		0.43V	$I_F=0.5A$
Maximum DC Reverse Current At Rated DC Blocking Voltage	$I_R$	75µA	$V_R=10V$
		250µA	$V_R=20V$
		20µA	$V_R=15V$
		130µA	$V_R=30V$
		10µA	$V_R=20V$
		20µA	$V_R=40V$
		5mA	$T_J=100^\circ C, V_R=40V$
Typical Junction Capacitance	$C_J$	170pF	$V_R=0, f=1MHz$
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.

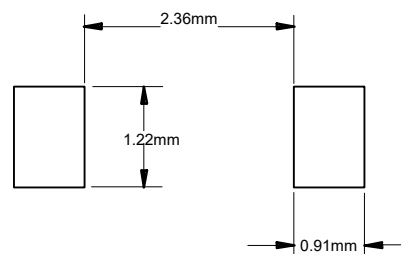
# 0.5 Amp Low VF Schottky Rectifier 20 to 40 Volts

## 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



## Internal Structure and Marking Code



MBR0520L



MBR0530L



MBR0540L

## Curve Characteristics

MBR0520L

Fig. 1 - Forward Characteristics

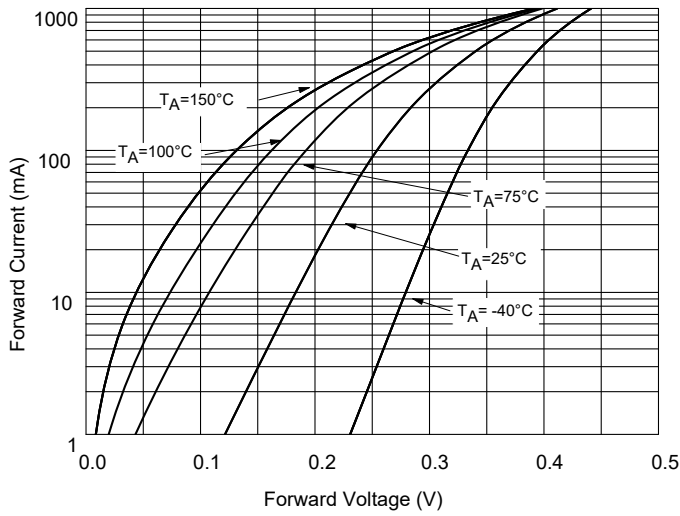


Fig. 2 - Typical Reverse Leakage Characteristics

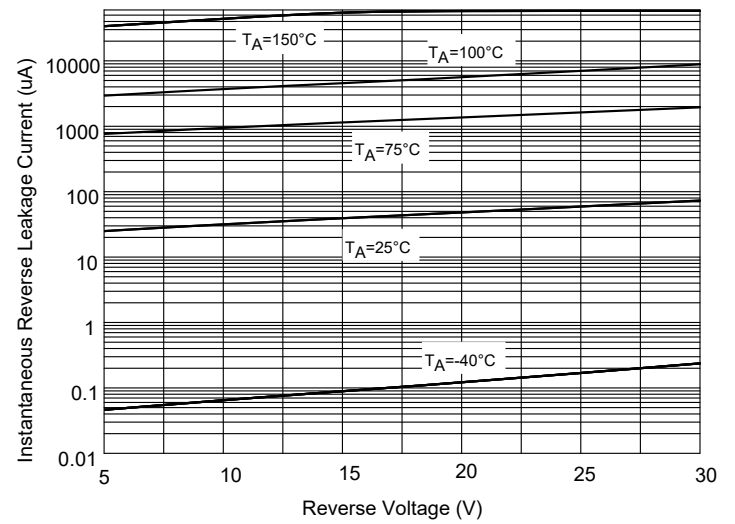


Fig. 3 - Capacitance Characteristics

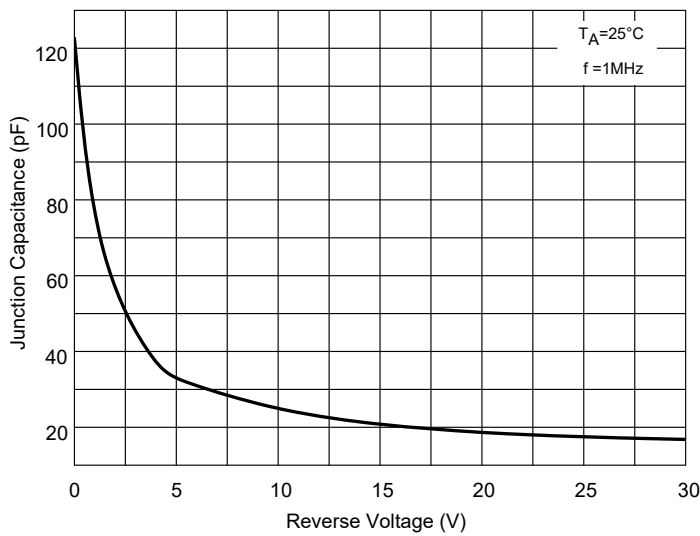
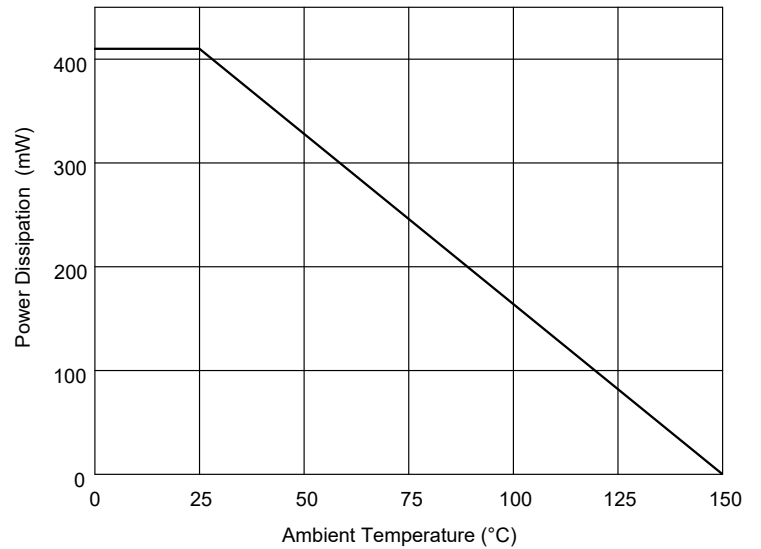
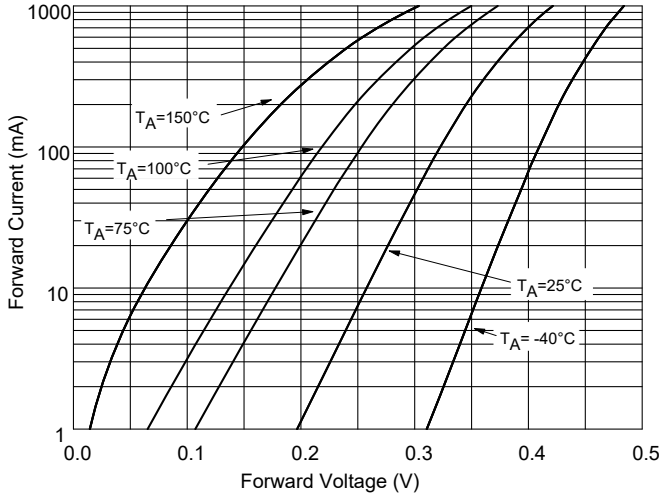


Fig. 4 - Power Derating Curve

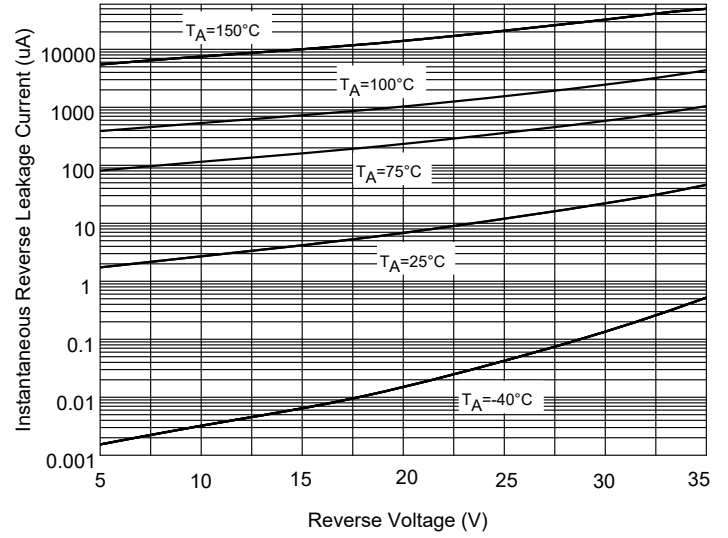


**MBR0530L**

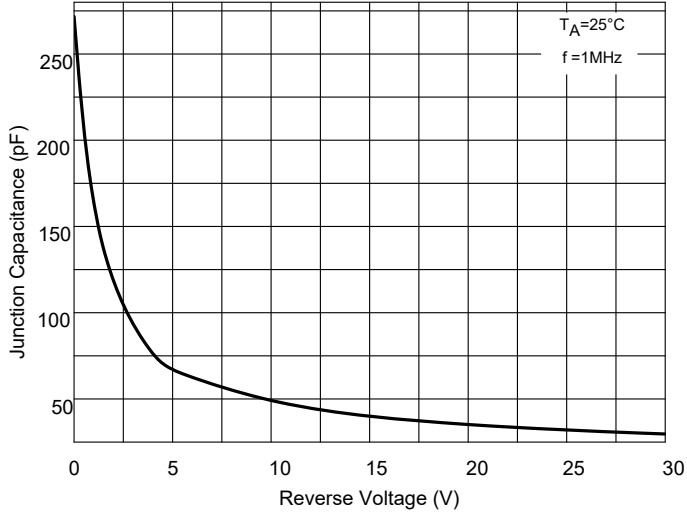
**Fig. 1 - Forward Characteristics**



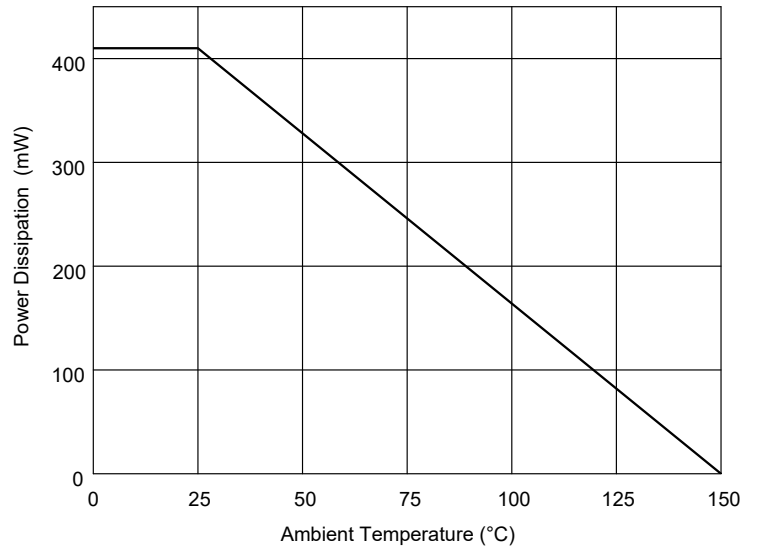
**Fig. 2 - Typical Reverse Leakage Characteristics**



**Fig. 3 - Capacitance Characteristics**



**Fig. 4 - Power Derating Curve**



MBR0540L

Fig. 1 - Forward Characteristics

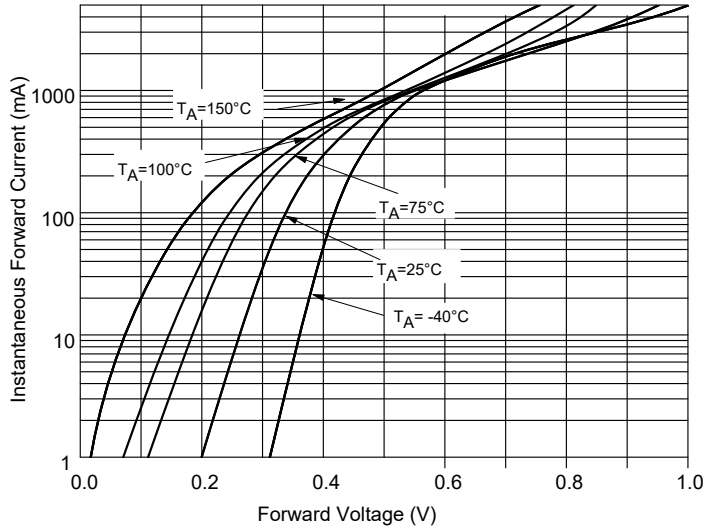


Fig. 2 - Typical Reverse Leakage Characteristics

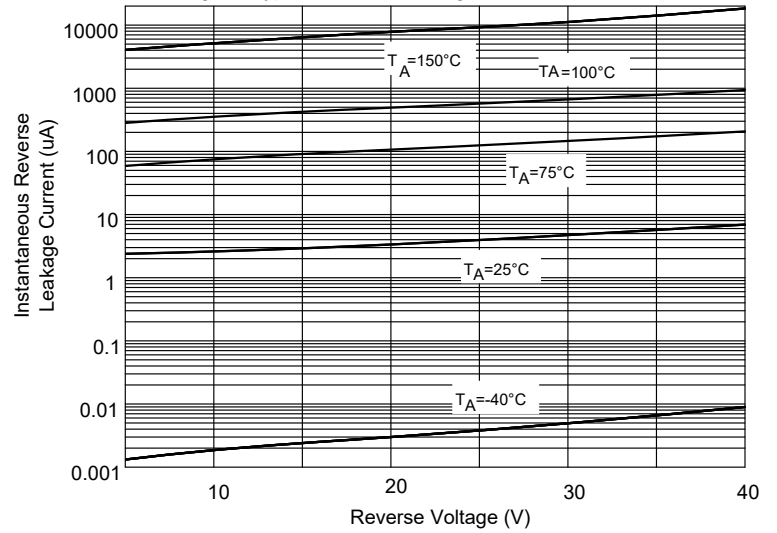


Fig. 3 - Capacitance Characteristics

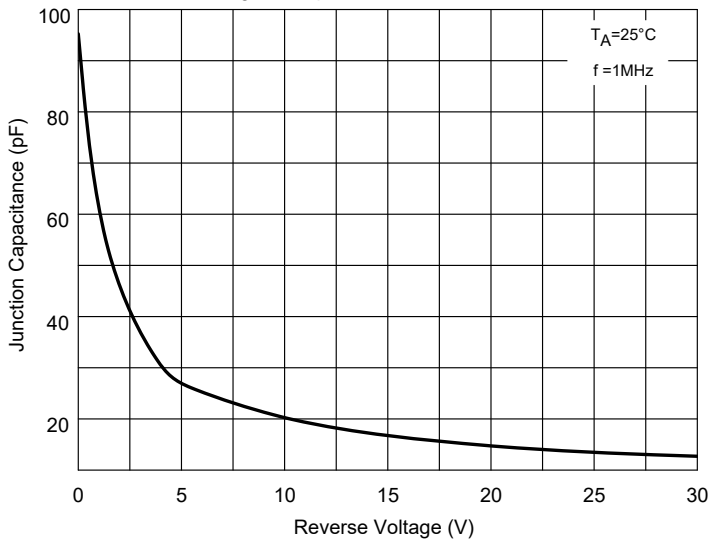
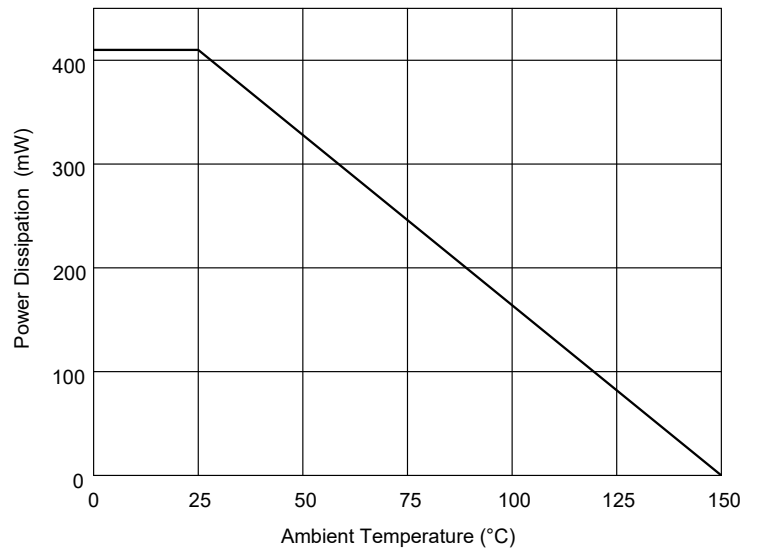


Fig. 4 - Power Derating Curve



## Ordering Information

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

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