



### 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
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1

### Maximum Ratings

- Operating Temperature: -55°C to +150°C
- Storage Temperature: -55°C to +150°C
- Maximum Thermal Resistance: 244°C/W Junction to Ambient

MCC Catalog 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	$V_F$	0.45V	$I_{FM}=0.5A$ $T_A=25^\circ\text{C}$
MBR0520		0.55V	
MBR0530		0.55V	
MBR0540		0.70V	
MBR0560		0.80V	
Maximum DC Reverse Current At Rated DC Blocking Voltage	$I_R$	0.2mA	$T_J=25^\circ\text{C}$
Typical Junction Capacitance	$C_J$	30pF	Measured at 1.0MHz, $V_R=4.0\text{V}$
Power dissipation	$P_D$	410mW	

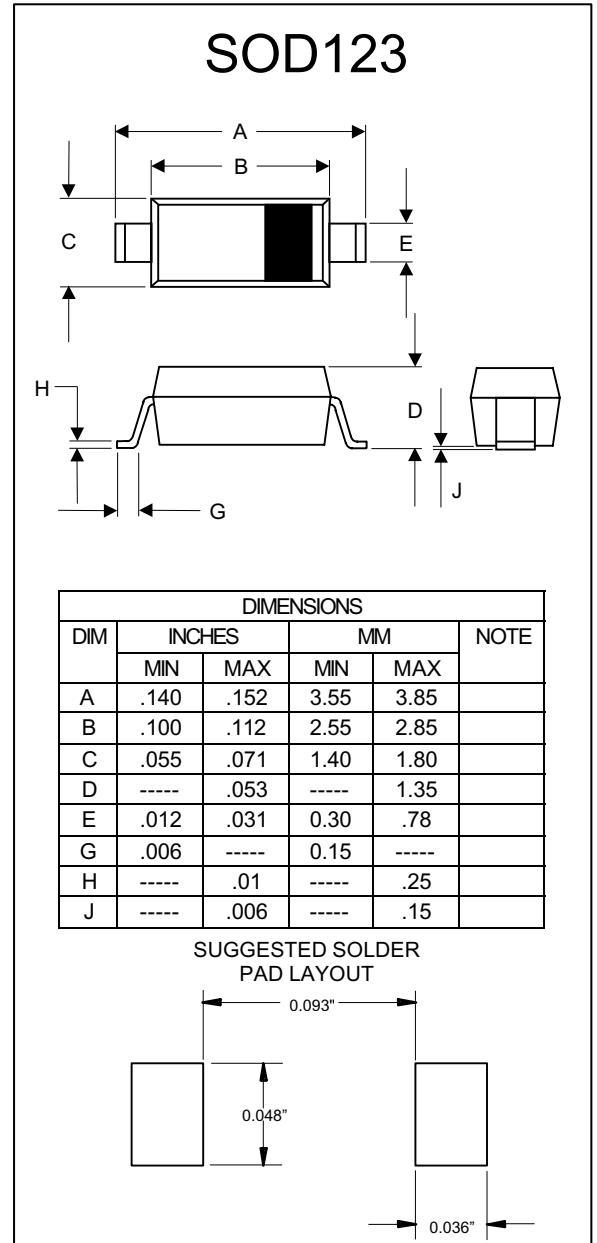
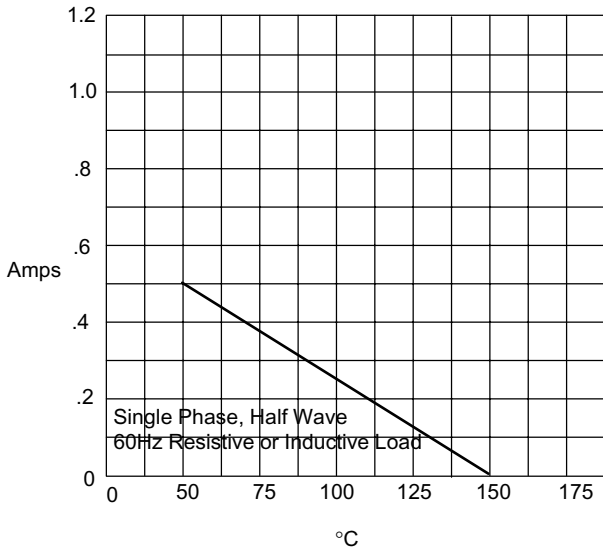


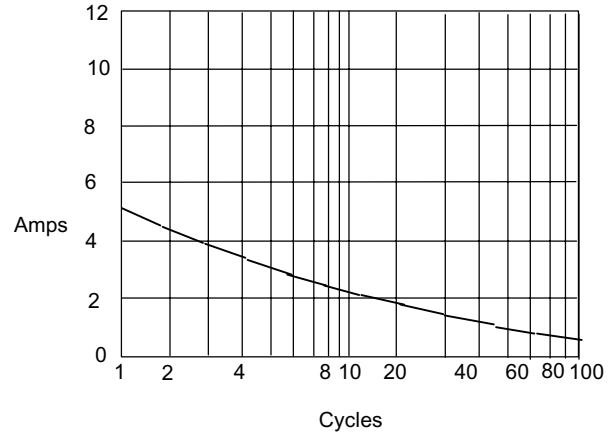


Figure 1  
Forward Derating Curve



Average Forward Rectified Current - Amperes versus Ambient Temperature - °C

Figure 2  
Peak Forward Surge Current



Peak Forward Surge Current - Amperes versus Number Of Cycles At 60Hz - Cycles

Figure 3  
Typical Forward Characteristics  
MBR0520

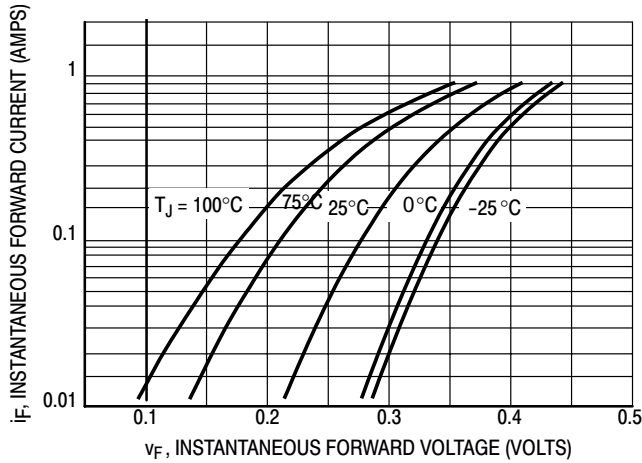


Figure 4  
Typical Forward Characteristics  
MBR0530~MBR0540

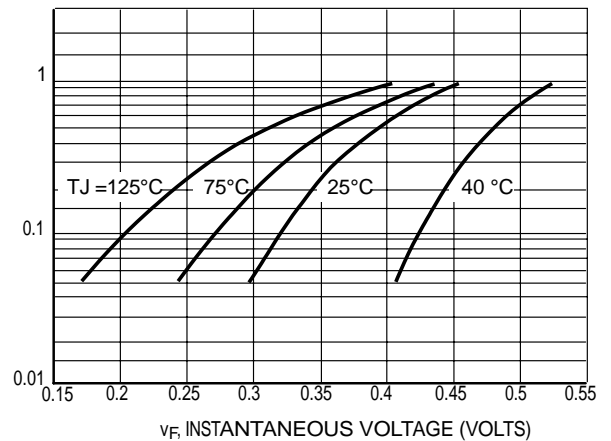


Figure 5  
Typical Forward Characteristics  
MBR0560

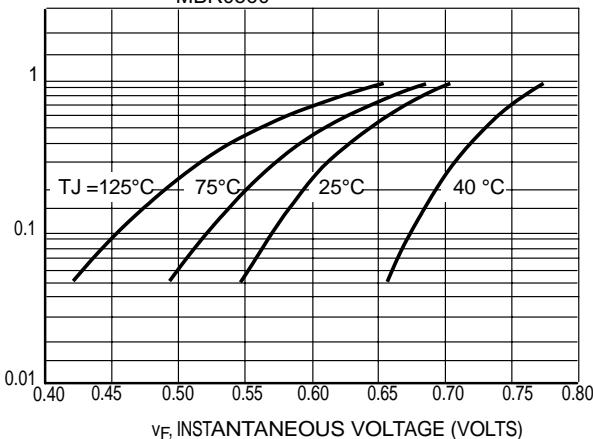


Figure 6  
Typical Forward Characteristics  
MBR0580

