



DATA SHEET

SEMICONDUCTOR

MBRX120W~MBRX140W

1.0 Amp Schottky Barrier Rectifier



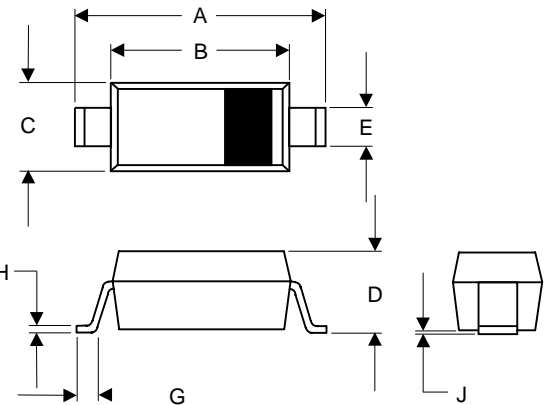
Features

- High Current Capability
- Extremely Low Thermal Resistance
- For Surface Mount Application
- Higher Temp Soldering: 250°C for 10 Seconds At Terminals
- Low Forward Voltage

SOD123

Maximum Ratings

- Operating Temperature: -55°C to +125°C
- Storage Temperature: -55°C to +150°C
- Maximum Thermal Resistance: 5°C/W Junction to Lead



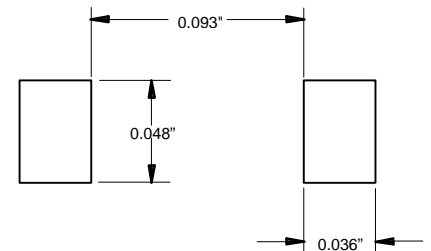
MCC Catalog Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
MBRX120W	X2	20V	14V	20V
MBRX130W	X3	30V	21V	30V
MBRX140W	X4	40V	28V	40V

DIM	DIMENSIONS				NOTE
	INCHES		MM		
	MIN	MAX	MIN	MAX	
A	.140	.152	3.55	3.85	
B	.100	.112	2.55	2.85	
C	.055	.071	1.40	1.80	
D	-----	.053	-----	1.35	
E	.012	.031	0.30	.78	
G	.006	-----	0.15	-----	
H	-----	.01	-----	.25	
J	-----	.006	-----	.15	

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	1.0A	$T_J=90^\circ\text{C}$
Peak Forward Surge Current	I_{FSM}	20A	8.3ms half sine
Maximum Instantaneous Forward Voltage MBRX120W MBRX130W MBRX140W	V_F	0.50V 0.55V 0.55V	$I_{FM}=1.0A$ $T_A=25^\circ\text{C}$
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	0.3mA	$T_J=25^\circ\text{C}$
Typical Junction Capacitance	C_J	30pF	Measured at 1.0MHz, $V_R=4.0V$

SUGGESTED SOLDER PAD LAYOUT



DEVICE CHARACTERISTICS

MBRX120W~MBRX140W

Figure 1
Typical Forward Characteristics

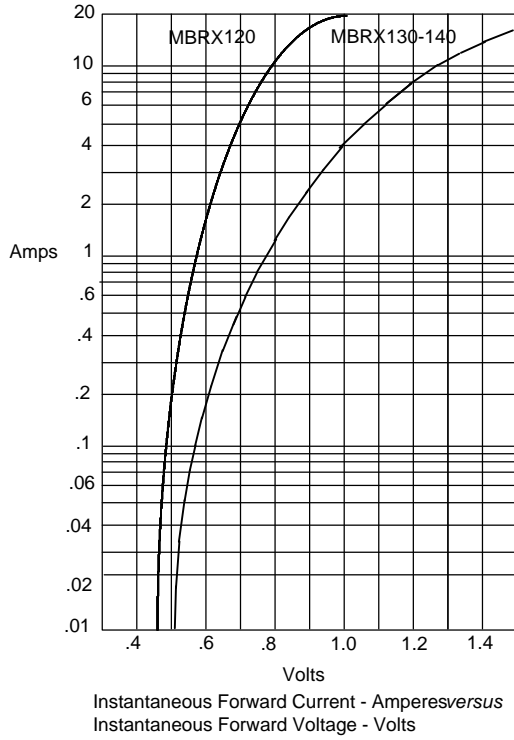


Figure 2
Junction Capacitance

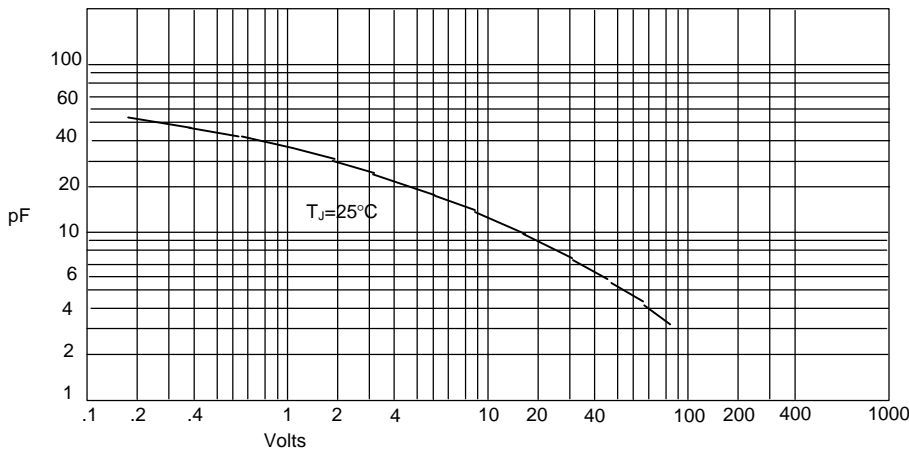
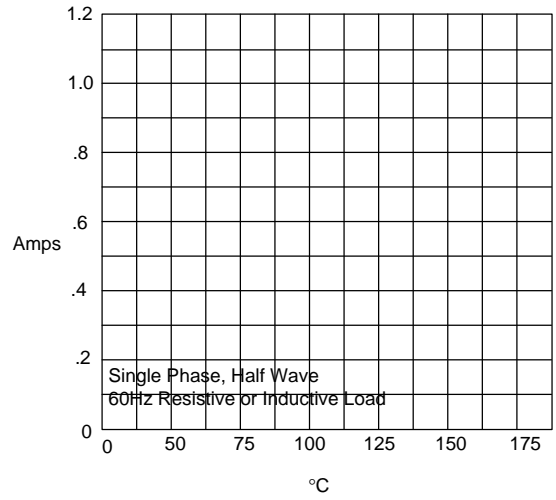
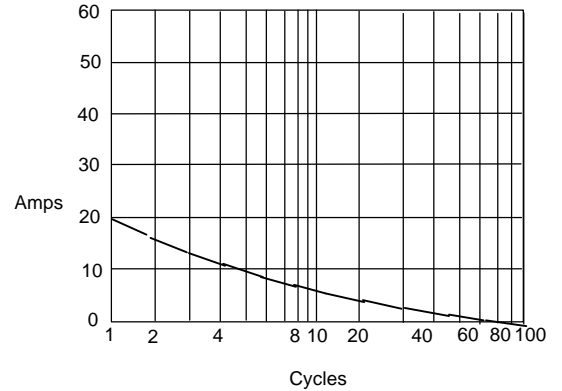


Figure 3
Forward Derating Curve



Average Forward Rectified Current - Amperes versus Ambient Temperature - $^\circ\text{C}$

Figure 4
Peak Forward Surge Current



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