

MBRX120 THRU MBRX160

1.0 Amp Schottky Barrier Rectifier 20 to 60 Volts

Features

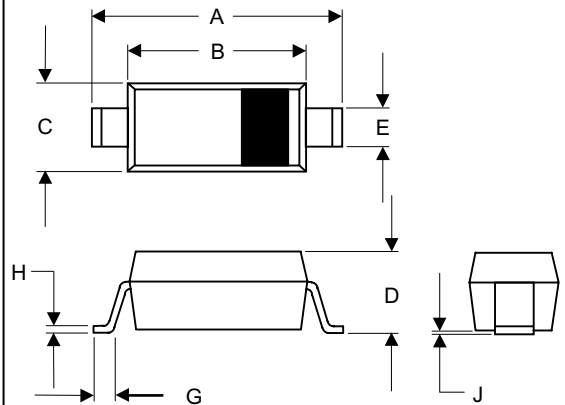
- Lead Free Finish/RoHS Compliant (Note1)("P"Suffix designates Compliant. See ordering information)
- Extremely Low Thermal Resistance
- For Surface Mount Application
- Low Forward Voltage
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Halogen free available upon request by adding suffix "-HF"

Maximum Ratings

- Operating Temperature: -55°C to +125°C
- Storage Temperature: -55°C to +150°C
- Maximum Thermal Resistance: 200°C/W Junction to Ambient

MCC Catalog Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
MBRX120	X2	20V	14V	20V
MBRX130	X3	30V	21V	30V
MBRX140	X4	40V	28V	40V
MBRX160	X6	60V	42V	60V

SOD123



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 MBRX120 MBRX130 MBRX140 MBRX160	V_F	0.50V 0.55V 0.55V 0.72V	$I_{FM}=1.0A$ $T_A=25^\circ\text{C}$
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, $V_R=4.0V$

Note: 1. High Temperature Solder Exemption Applied, see EU Directive Annex 7.

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	

SUGGESTED SOLDER PAD LAYOUT

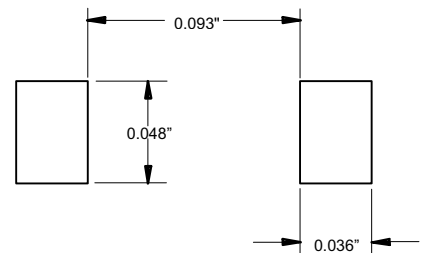


Figure 1
Typical Forward Characteristics

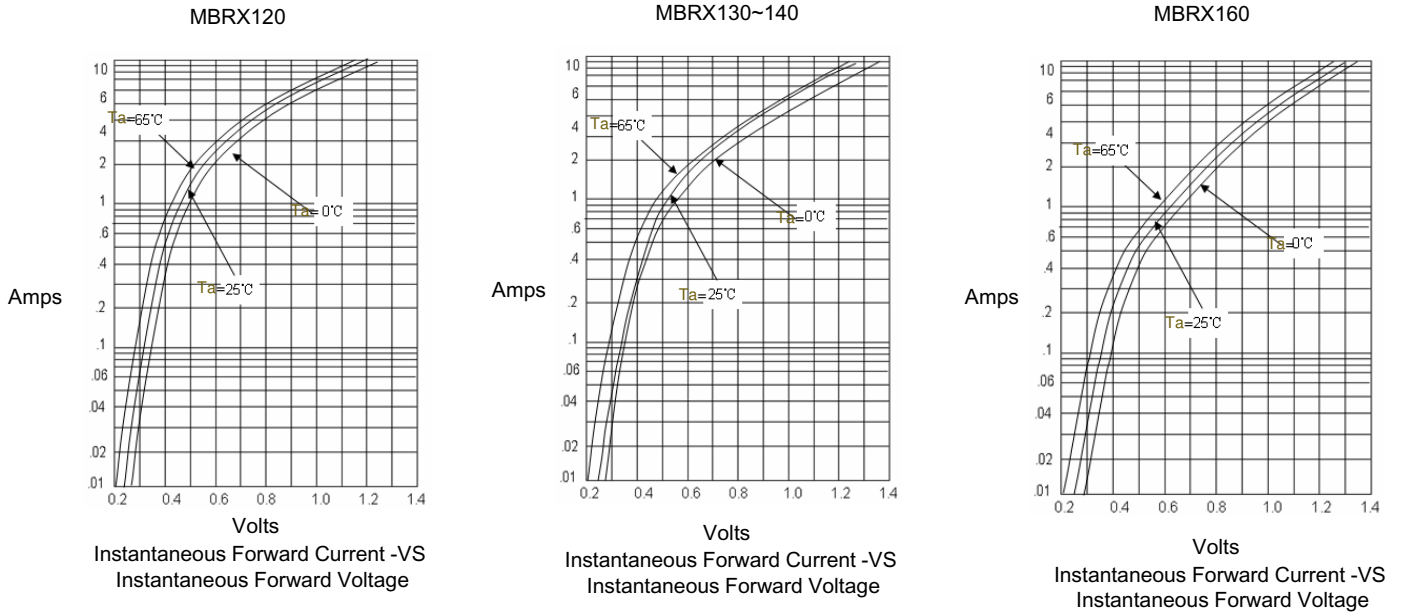
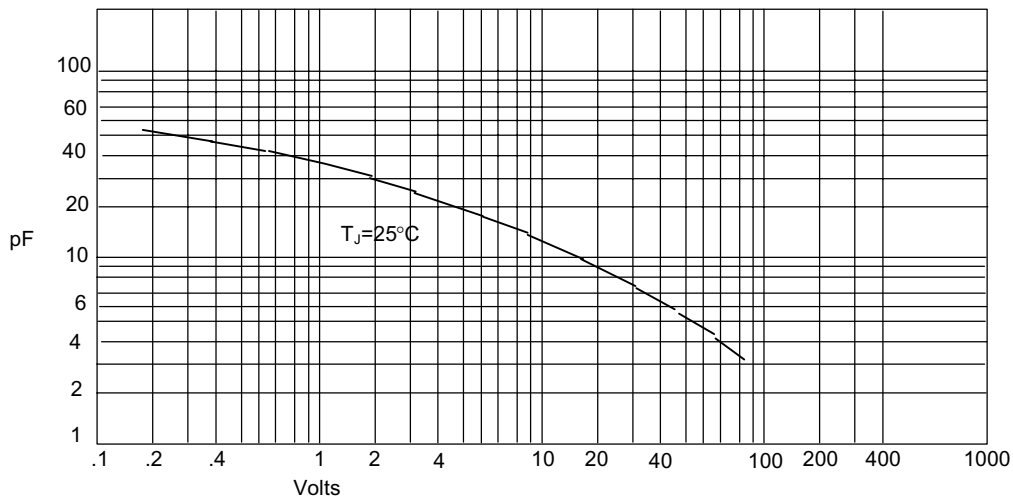
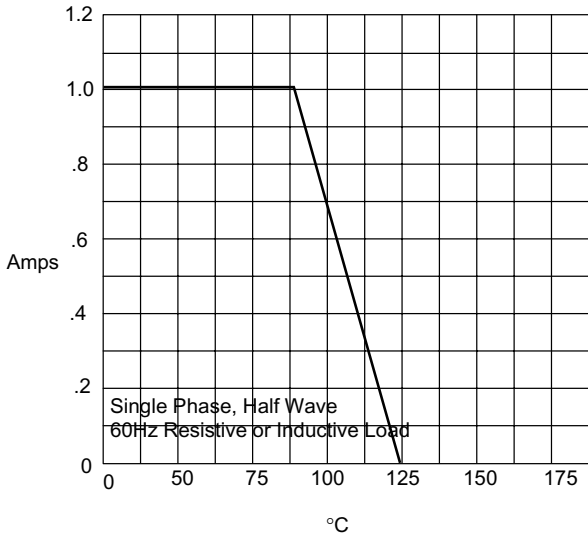


Figure 2
Junction Capacitance



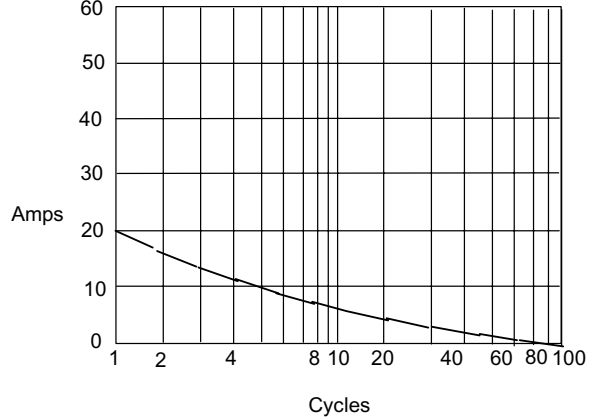
MBRX120 thru MBRX160

Figure 3
Forward Derating Curve



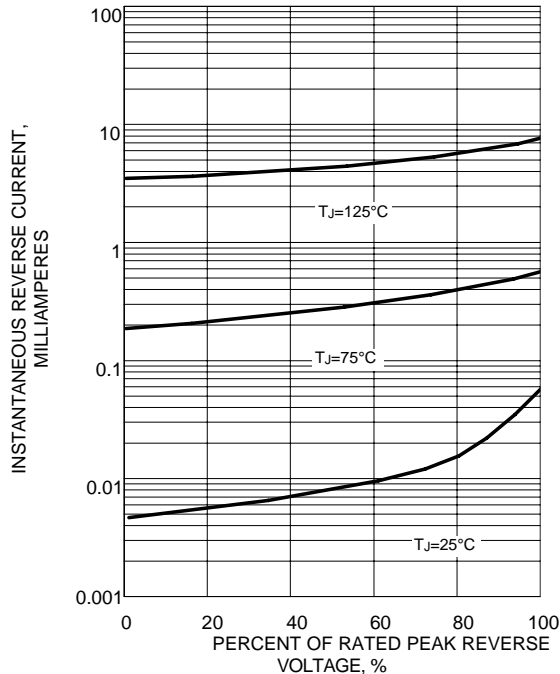
Average Forward Rectified Current - Amperes versus Ambient Temperature - °C

Figure 4
Peak Forward Surge Current



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

FIG. 5 - TYPICAL REVERSE CHARACTERISTICS

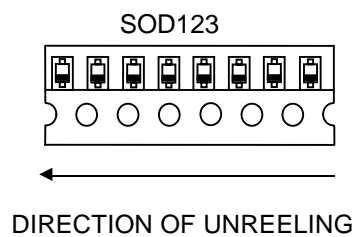


SURFACE MOUNT

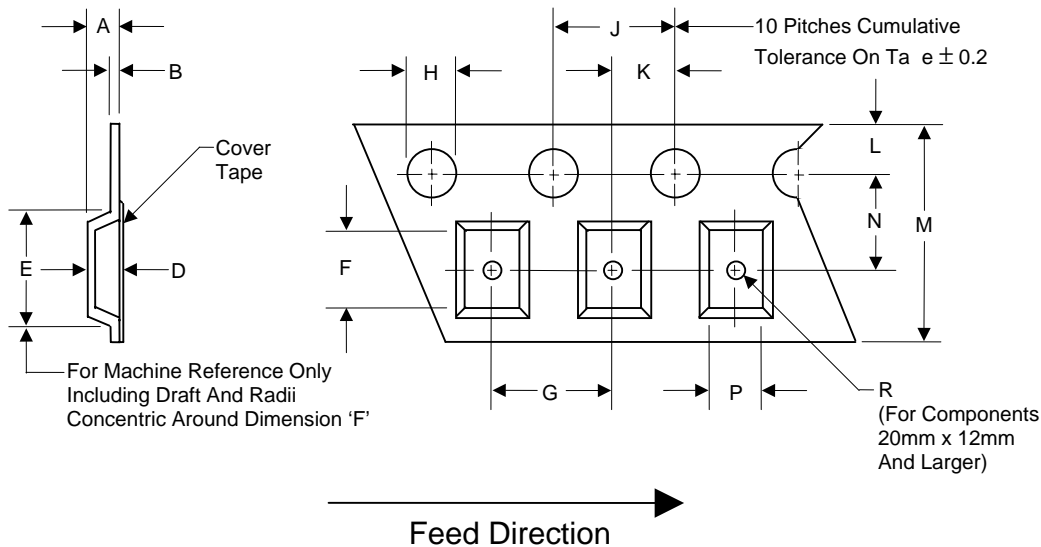
SURFACE MOUNT

TYPE	TAPE SIZE (mm)	BULK/TUBE QUANTITY	7 INCH REEL QUANTITY	13 INCH REEL QUANTITY
SOD123	8	-----	3000	-----

TAPE DIMENSIONS AND ORIENTATION 8mm Tape (in millimeters)

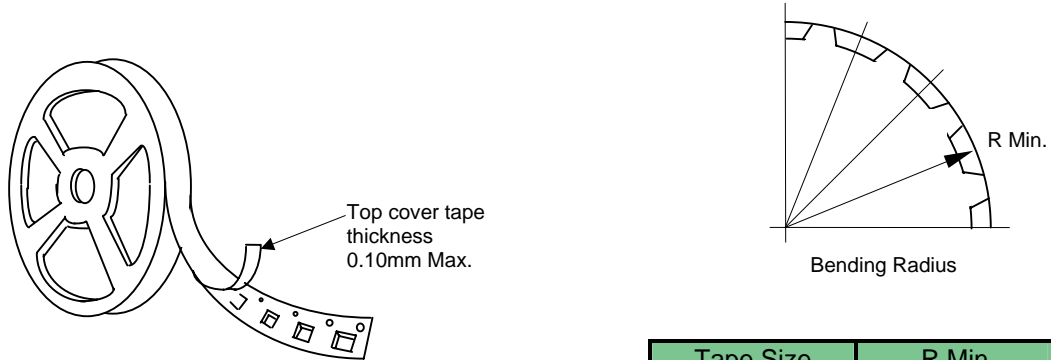


Embossed Carrier Tape Specifications (8mm Tape)

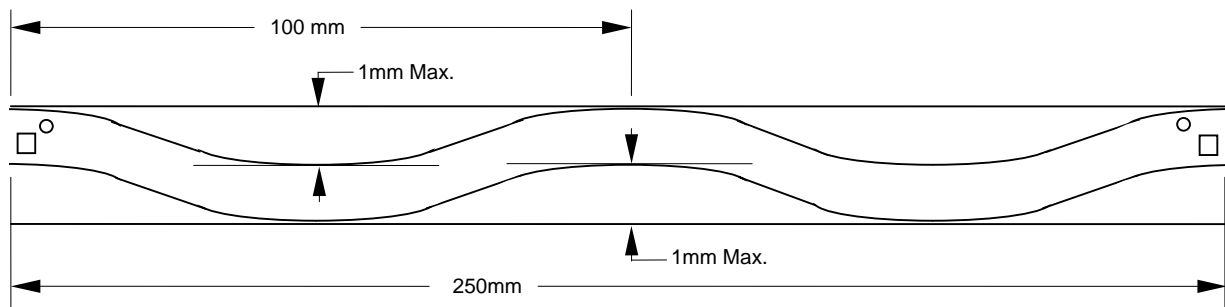


Tape Size	H	L	J	B (Max)	D, F, P	Constant Dimensions	
8	1.5 ^{+0.1, -0.0}	1.75 ± 0.10	4.0 ± 0.1	0.600	See Note 1		
Tape Size	E (Max)	R (Min)	N	A (Max)	K	M	Variable Dimensions
8mm	4.2	1.0	3.5 ± 0.05	2.4	2.0 ± 0.05	8.0 ± 0.30	
Tape Size	G						
	4.0 ± 0.10		8.0 ± 0.10		12.0 ± 0.10		16.0 ± 0.10
8mm	X						

SURFACE MOUNT

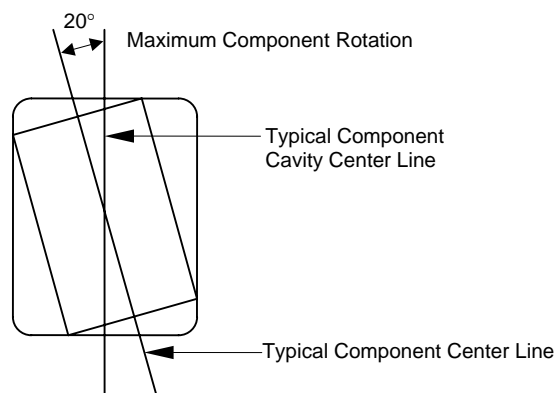


Tape Size	R Min.
8mm	25mm



Camber (Top View)

Allowable camber to be 1mm/100mm non-accumulative over 250mm





Micro Commercial Components

Ordering Information :

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

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

IMPORTANT NOTICE

Micro Commercial Components Corp. reserves the right to make changes without further notice to any product herein to make corrections, modifications , enhancements , improvements , or other changes . Micro Commercial Components Corp . does not assume any liability arising out of the application or use of any product described herein; neither does it convey any license under its patent rights ,nor the rights of others . The user of products in such applications shall assume all risks of such use and will agree to hold Micro Commercial Components Corp . and all the companies whose products are represented on our website, harmless against all damages.

LIFE SUPPORT

MCC's products are not authorized for use as critical components in life support devices or systems without the express written approval of Micro Commercial Components Corporation.

CUSTOMER AWARENESS

Counterfeiting of semiconductor parts is a growing problem in the industry. Micro Commercial Components (MCC) is taking strong measures to protect ourselves and our customers from the proliferation of counterfeit parts. MCC strongly encourages customers to purchase MCC parts either directly from MCC or from Authorized MCC Distributors who are listed by country on our web page cited below. Products customers buy either from MCC directly or from Authorized MCC Distributors are genuine parts, have full traceability, meet MCC's quality standards for handling and storage. MCC will not provide any warranty coverage or other assistance for parts bought from Unauthorized Sources. MCC is committed to combat this global problem and encourage our customers to do their part in stopping this practice by buying direct or from authorized distributors.