



Micro Commercial Components

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MBRX02520 THRU MBRX02560

**0.25 Amp
Schottky Barrier
Rectifier
20 to 60 Volts**

Features

- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Extremely Low Thermal Resistance
- Reverse Energy Tested and High Current Capability
- Guard Ring Protection
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0 and MSL Rating 1

Maximum Ratings

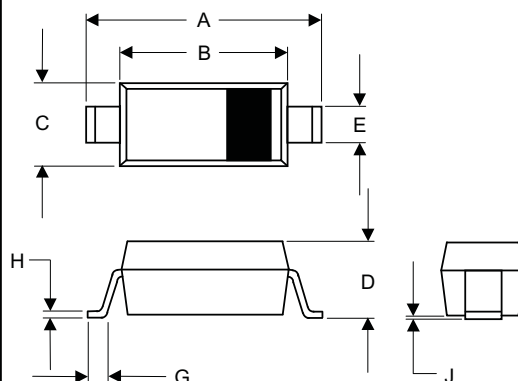
- Operating Temperature: -55°C to +150°C
- Storage Temperature: -55°C to +150°C
- Maximum Thermal Resistance: 65°C/W Junction to Lead

MCC Catalog Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
MBRX02520	A	20V	14V	20V
MBRX02530	B	30V	21V	30V
MBRX02540	C	40V	28V	40V
MBRX02550	D	50V	35V	50V
MBRX02560	E	60V	42V	60V

Electrical Characteristics @ 25°C Unless Otherwise Specified

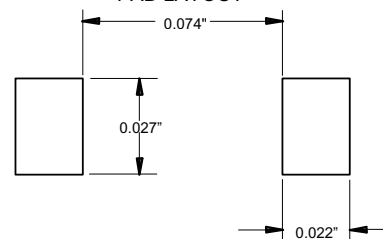
Average Forward Current	$I_{F(AV)}$	0.25A	$T_J = 115^\circ\text{C}$
Peak Forward Surge Current	I_{FSM}	5A	8.3ms half sine
Maximum Instantaneous Forward Voltage MBRX02520 MBRX02530-40 MBRX02550-60	V_F	0.45V 0.55V 0.70V	$I_{FM} = 0.25\text{A}$ $T_J = 25^\circ\text{C}$
Maximum DC Reverse Current At Rated DC Blocking	I_R	0.5mA 20mA	$T_A = 25^\circ\text{C}$ $T_A = 100^\circ\text{C}$
Typical Junction Capacitance	C_J	10pF	Measured at 1.0MHz, $V_R = 4.0\text{V}$

SOD323



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.090	.113	2.30	2.88	
B	.063	.071	1.60	1.80	
C	.045	.053	1.15	1.35	
D	.031	.049	0.80	1.24	
E	.010	.016	0.25	0.40	
G	.004	.018	0.10	0.45	
H	.004	.010	0.10	0.25	
J	-----	.006	-----	0.15	

SUGGESTED SOLDER PAD LAYOUT

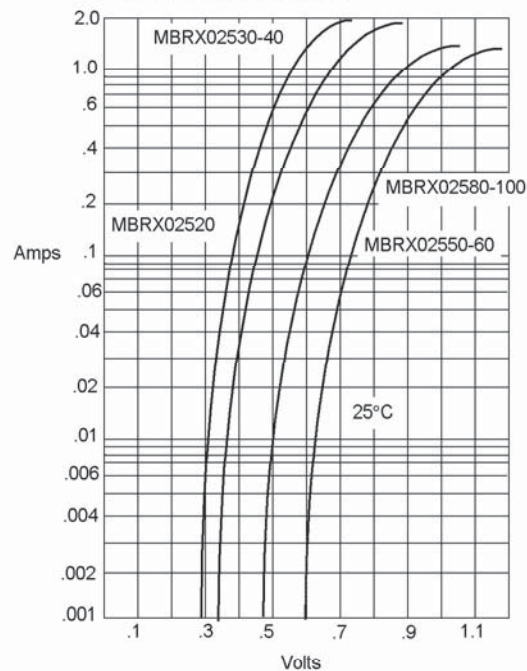


MBRX02520 thru MBRX02560



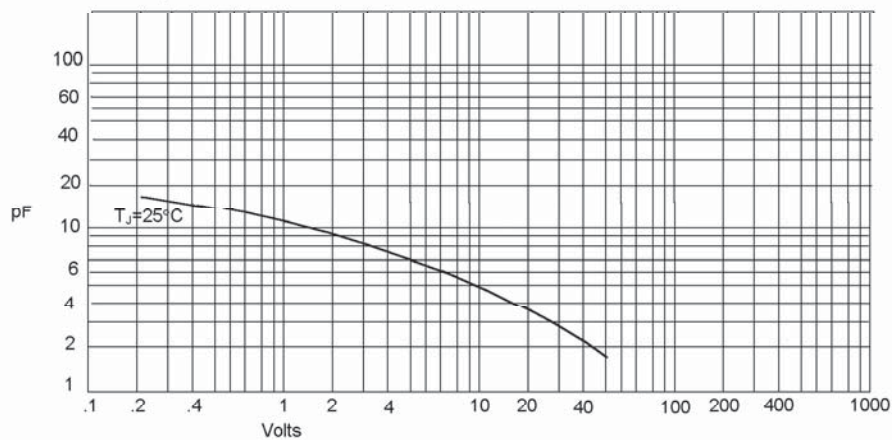
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Figure 1
Typical Forward Characteristics



Instantaneous Forward Current - Amperes versus
Instantaneous Forward Voltage - Volts

Figure 2
Junction Capacitance



Junction Capacitance - pF versus
Reverse Voltage - Volts

M.C.C.
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The graph illustrates the relationship between current (Amps) and temperature (°C) for a single-phase, half-wave 60Hz resistive or inductive load. The current remains constant at 0.25 Amps from 0°C to 80°C. Beyond 80°C, the current decreases linearly, reaching 0 Amps at 125°C.

Temperature (°C)	Current (Amps)
0	0.25
80	0.25
125	0.00

Figure 6
Peak Forward Surge Current

A line graph showing the relationship between the peak forward surge current (in Amperes) and the number of cycles for a 1N4001 diode. The y-axis is labeled 'Amps' and ranges from 0 to 12 in increments of 2. The x-axis is labeled 'Cycles' and has a logarithmic scale with major ticks at 1, 2, 4, 8, 10, 20, 40, 60, 80, and 100. A single curve starts at approximately 5.0 Amps at 1 cycle and decreases as the number of cycles increases, reaching approximately 0.5 Amps at 100 cycles.

Cycles	Peak Forward Surge Current (Amps)
1	5.0
2	4.0
4	3.2
8	2.5
10	2.2
20	1.8
40	1.4
60	1.1
80	0.9
100	0.7

Revision: 10

Ordering Information

Device	Packing
(Part Number)-TP	Tape&Reel;3Kpcs/Reel

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