

Features

- Halogen Free. "Green" Device (Note 1)
- Lead Free Finish/RoHS Compliant(Note 2) ("P" Suffix Designates Compliant. See Ordering Information)
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1
- Low Forward Voltage Drop and Low Power Loss

Maximum Ratings

- Operating Junction Temperature Range: -65°C to +150°C
- Storage Temperature Range: -65°C to +150°C
- Typical Thermal Resistance: 2.5°C/W Junction to Case

MCC Part Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
MBRB1020	MBRB1020	20V	14V	20V
MBRB1030	MBRB1030	30V	21V	30V
MBRB1035	MBRB1035	35V	24.5V	35V
MBRB1040	MBRB1040	40V	28V	40V
MBRB1050	MBRB1050	50V	35V	50V
MBRB1060	MBRB1060	60V	42V	60V
MBRB1080	MBRB1080	80V	56V	80V
MBRB10100	MBRB10100	100V	70V	100V
MBRB10150	MBRB10150	150V	105V	150V
MBRB10200	MBRB10200	200V	140V	200V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	10A	$T_L=125^\circ\text{C}$
Peak Forward Surge Current	I_{FSM}	150A	8.3ms, Half Sine
Maximum Instantaneous Forward Voltage MBRB1020-1040 MBRB1050-1060 MBRB1080-10100 MBRB10150 MBRB10200	V_F	0.60V 0.75V 0.85V 0.90V 0.95V	$I_{FM}=10\text{A};$ $T_J=25^\circ\text{C}$
Maximum DC Reverse Current at Rated DC Blocking Voltage	I_R	0.1mA 20mA	$T_J=25^\circ\text{C}$ $T_J=125^\circ\text{C}$

Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

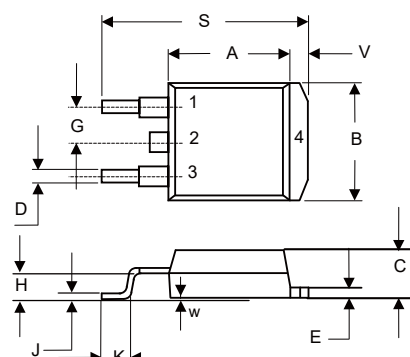
2. High temperature solder exemption applied, see EU directive annex 7a.

Internal Structure



10 Amp Schottky Barrier Rectifier 20 to 200 Volts

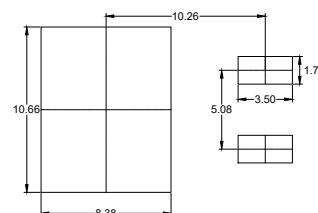
D²-PAK



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.331	0.370	8.40	9.40	
B	0.378	0.417	9.60	10.60	
C	0.165	0.189	4.20	4.80	
D	0.027	0.037	0.68	0.94	
E	0.045	0.055	1.14	1.40	
G	0.10		2.54		TYP.
H	0.096	0.134	2.43	3.40	
J	0.011	0.025	0.28	0.64	
K	0.071	0.131	1.80	3.32	
S	0.575	0.625	14.60	15.87	
V	0.042	0.058	1.07	1.47	
W	0.000	0.010	0.00	0.25	

Suggested Solder Pad Layout

Unit:mm



Curve Characteristics

Fig. 1 - Forward Current Derating Curve

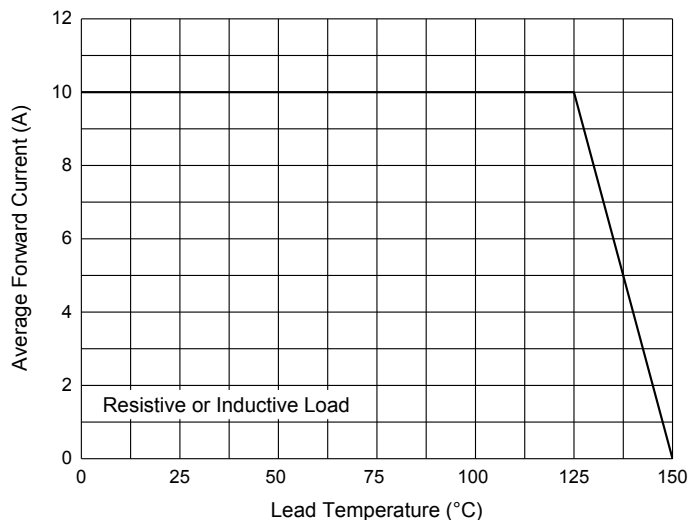


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

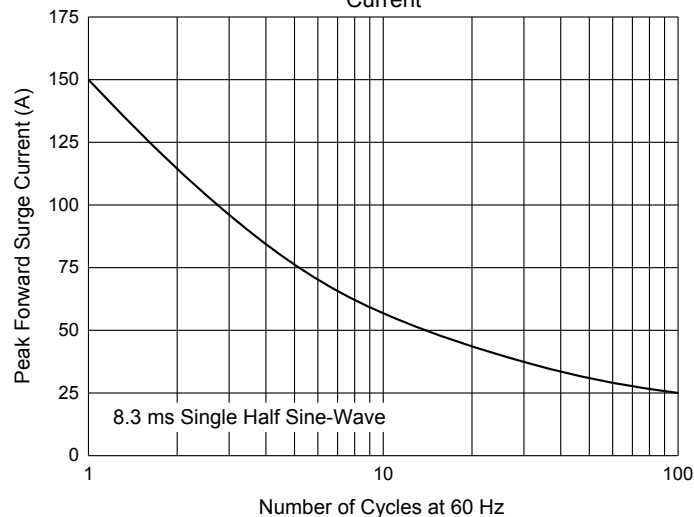


Fig. 3 - Typical Instantaneous Forward Characteristics

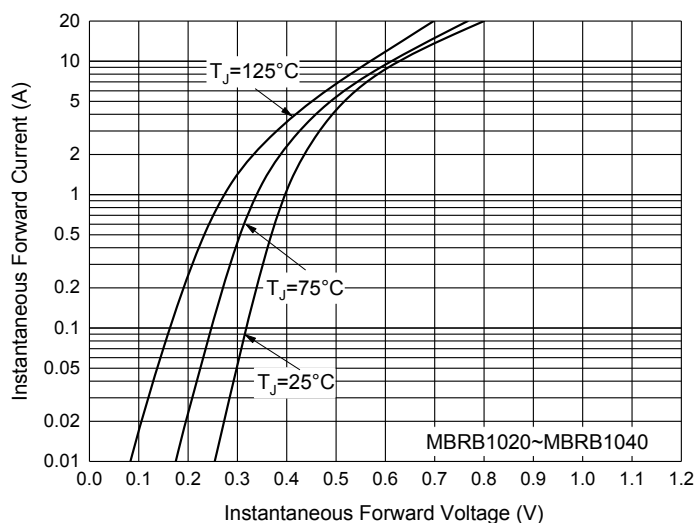


Fig. 4 - Typical Instantaneous Forward Characteristics

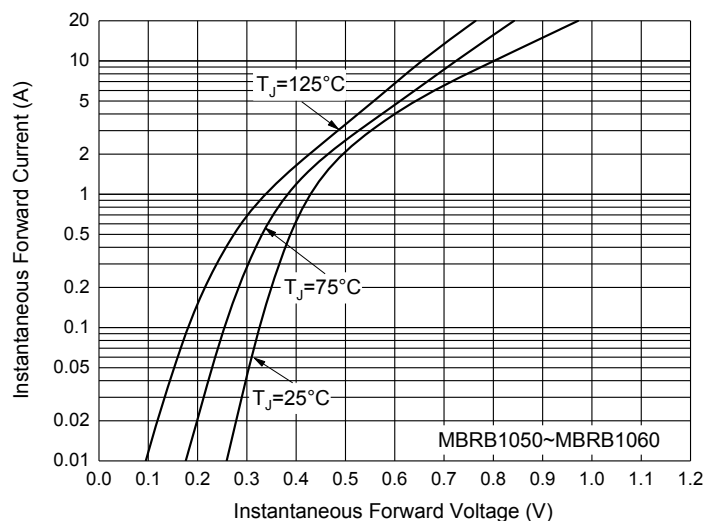


Fig. 5 - Typical Instantaneous Forward Characteristics

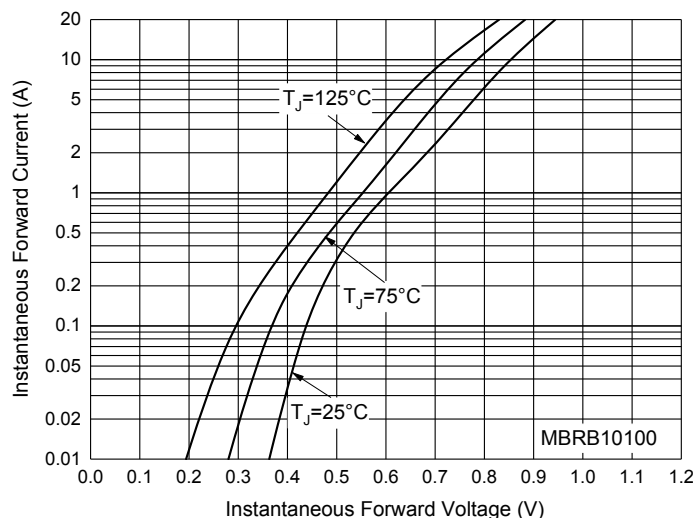
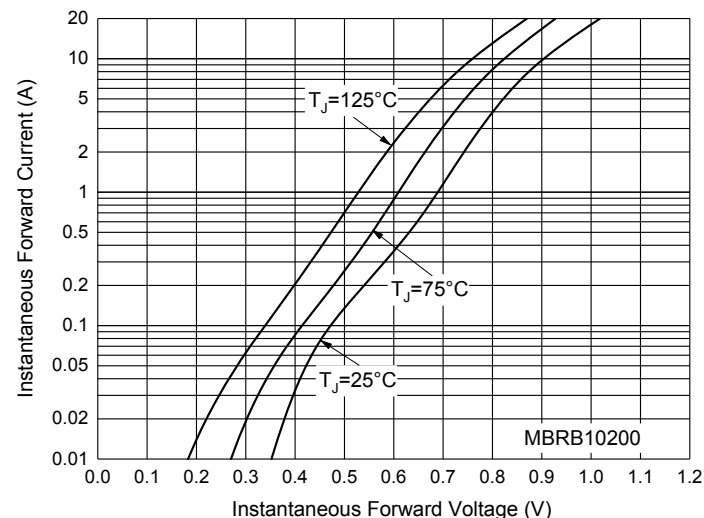


Fig. 6 - Typical Instantaneous Forward Characteristics



Curve Characteristics

Fig. 7 - Typical Reverse Leakage Characteristics

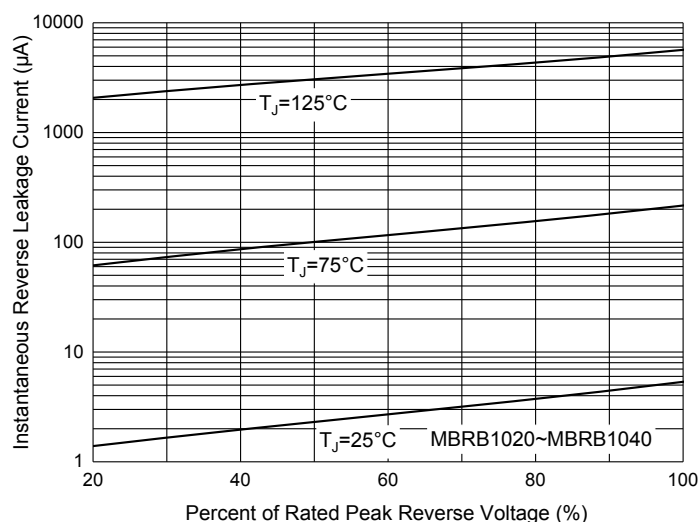


Fig. 8 - Typical Reverse Leakage Characteristics

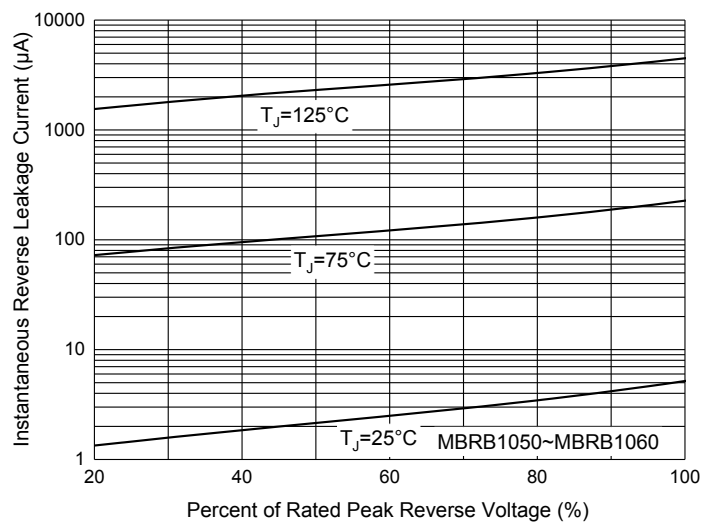


Fig. 9 - Typical Reverse Leakage Characteristics

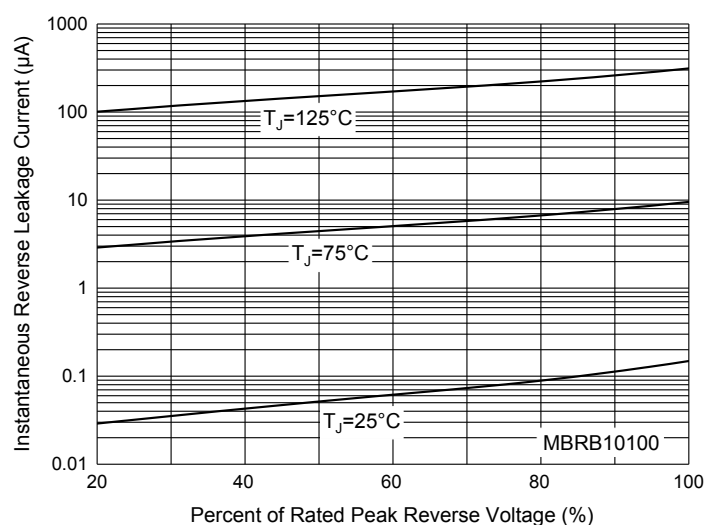
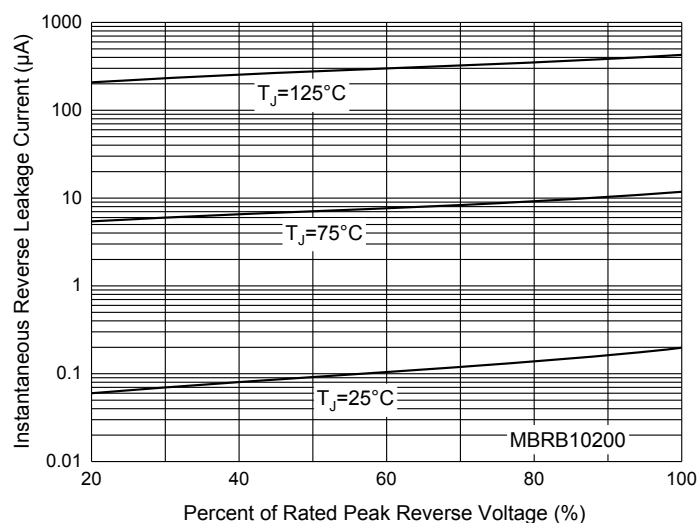


Fig. 10 - Typical Reverse Leakage Characteristics



Ordering Information

Device	Packing
Part Number-TP	Tape&Reel: 800pcs/Reel
Part Number-BP	Tube: 5Kpcs/Ctn

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