

Features

- High Surge Capacity and High Current Capability
- Low Power Loss High Efficiency
- Halogen Free Available Upon Request By Adding Suffix "-HF"
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1
- Lead Free Finish/RoHS Compliant(Note 1) ("P" Suffix Designates Compliant. See Ordering Information)

Maximum Ratings

- Mounting Torque: 5 in-lbs Maximum
- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +175°C
- Thermal Resistance: 2.0°C/W Junction to Case

MCC Part Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
MBR1620	MBR1620	20V	14V	20V
MBR1630	MBR1630	30V	21V	30V
MBR1635	MBR1635	35V	24.5V	35V
MBR1640	MBR1640	40V	28V	40V
MBR1645	MBR1645	45V	31.5V	45V
MBR1660	MBR1660	60V	42V	60V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	16A	$T_C=125^\circ\text{C}$
Peak Forward Surge Current	I_{FSM}	150A	8.3ms, half sine
Maximum Forward Voltage Drop Per Element MBR1620~MBR1645 MBR1660 MBR1620~MBR1645 MBR1660	V_F	0.63V 0.75V 0.57V 0.65V	$I_{FM}=16\text{A}$ $T_J=25^\circ\text{C}$ $T_J=125^\circ\text{C}$
Maximum DC Reverse Current At Rated DC Blocking Voltage MBR1620~MBR1645 MBR1660 MBR1620~MBR1645 MBR1660	I_R	0.5mA 0.2mA 15mA 10mA	$T_J=25^\circ\text{C}$ $T_J=25^\circ\text{C}$ $T_J=125^\circ\text{C}$ $T_J=125^\circ\text{C}$
Typical Junction Capacitance	C_J	450pF	Measured at 1.0MHz, $V_R=4.0\text{V}$

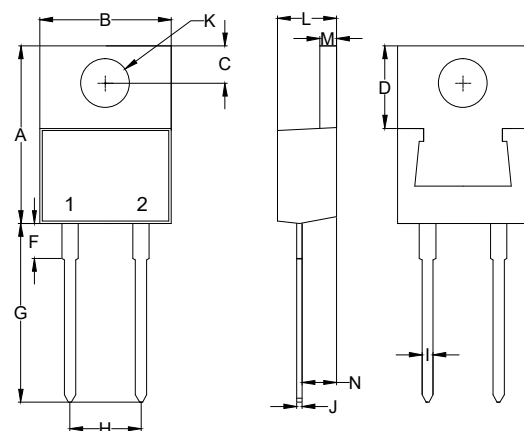
Note :1. High Temperature Solder Exemption Applied, see EU Directive Annex 7a.

Internal Structure



16 Amp Schottky Barrier Rectifier 20 to 60 Volts

TO-220AC



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.560	0.625	14.22	15.88	
B	0.380	0.420	9.65	10.67	
C	0.100	0.135	2.54	3.43	
D	0.230	0.270	5.84	6.86	
F	-----	0.250	-----	6.35	
G	0.500	0.580	12.70	14.73	
H	0.190	0.210	4.83	5.33	
I	0.020	0.045	0.51	1.14	
J	0.012	0.025	0.30	0.64	
K	0.139	0.161	3.53	4.09	Φ
L	0.140	0.190	3.56	4.83	
M	0.045	0.055	1.14	1.40	
N	0.080	0.115	2.03	2.92	

Curve Characteristics

Fig. 1 - Forward Current Derating Curve

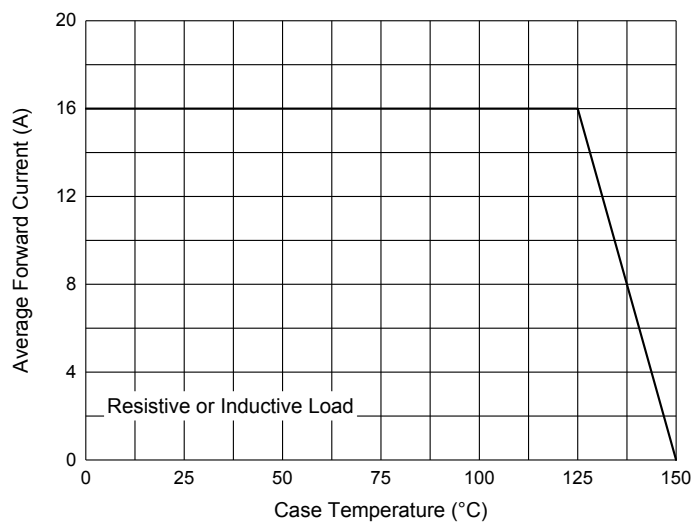


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

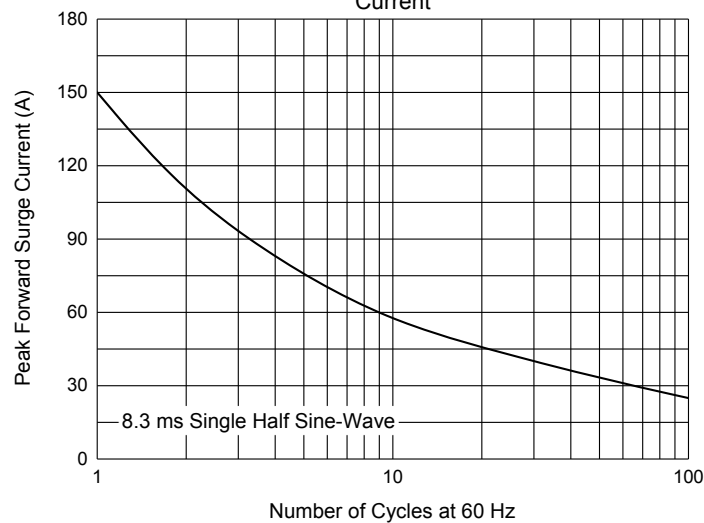


Fig. 3 - Typical Instantaneous Forward Characteristics

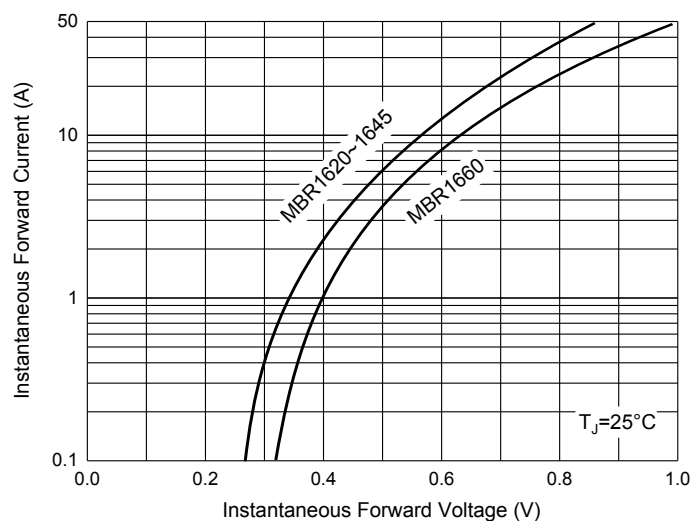
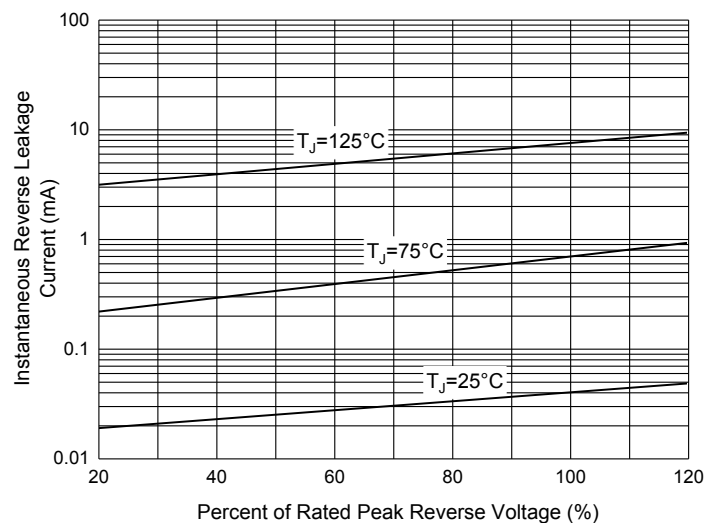


Fig. 4 - Typical Reverse Leakage Characteristics



Ordering Information

Device	Packing
Part Number-BP	Bulk:50pcs/Tube, 1Kpcs/Box, 5Kpcs/Carton

Note : Adding "-HF" Suffix For Halogen Free, eg. Part Number-BP-HF

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