

Features

- Low Power Loss, High Efficiency
- Guardring For Overvoltage Protection
- Low Forward Voltage Drop And High Frequency Operation
- For Use in High Frequency Inverters, Free Wheeling And Polarity Protection Applications
- Lead Free Finish/RoHS Compliant (Note 1) ("P" Suffix Designates RoHS Compliant. See Ordering Information)
- Halogen Free Available Upon Request By Adding Suffix "-HF"
- Epoxy Meets UL 94 V-0 Flammability Rating

Maximum Ratings

- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Typical Thermal Resistance Per Leg: 4.0°C/W Junction to Case

MCC Part Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
MBR30150FCT	MBR30150FCT	150V	105V	150V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Maximum Average Forward Rectified Current	$I_{F(AV)}$	30A	(See Fig.1)
Peak Forward Surge Current	I_{FSM}	260A	8.3ms, Half Sine
Peak Repetitive Reverse Current Per Leg	I_{RRM}	1.0A	$t_p = 2.0\mu s$, 1KHz
Voltage Rate of Change (Rated V_R)	dv/dt	10,000V/us	
Maximum Instantaneous Forward Voltage Per Leg (Note 5)	V_F	0.90V 0.75V 0.99V 0.86V	$I_F=15A, T_C=25^\circ C$ $I_F=15A, T_C=125^\circ C$ $I_F=30A, T_C=25^\circ C$ $I_F=30A, T_C=125^\circ C$
Maximum Reverse Current Per Leg at Working Peak Reverse Voltage	I_R	5.0 μA 1.0mA	$T_J=25^\circ C$ $T_J=125^\circ C$
RMS Isolation Voltage (MBRF type only) From Terminals to Heatsink With $t = 1.0$ Second, RH $\leq 30\%$	V_{ISOL}	4500V 3500V 1500V	(Note 2) (Note 3) (Note 4)

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

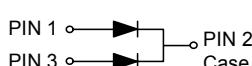
2. Clip mounting (on case), where lead does not overlap heatsink with 0.110" offset

3. Clip mounting (on case), where leads do overlap heatsink

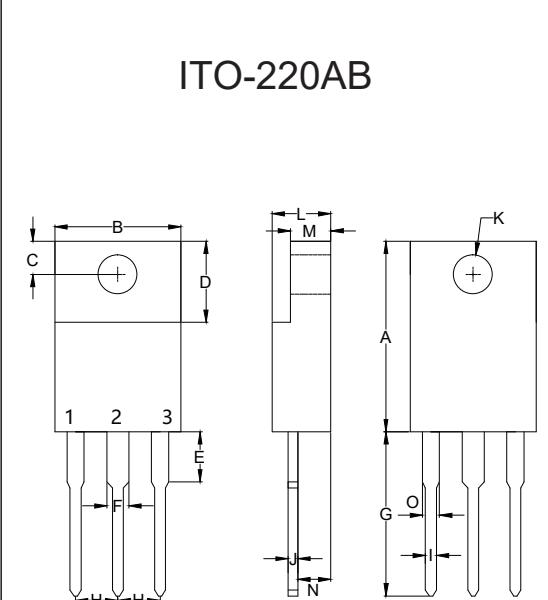
4. Screw mounting with 4-40 screw, where washer diameter is < 4.9 mm (0.19")

5. Pulse test: 300us pulse width, 1% duty cycle

Internal Structure



30 Amp Schottky Barrier Rectifier 150 Volts



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.567	0.642	14.40	16.30	
B	-----	0.421	-----	10.70	
C	0.085	0.128	2.15	3.25	
D	0.248	0.272	6.30	6.90	
E	-----	0.177	-----	4.50	
F	-----	0.071	-----	1.80	
G	0.500	0.539	12.70	14.20	
H	0.100	-----	2.55	-----	
I	-----	0.035	-----	0.90	
J	-----	0.032	-----	0.80	
K	0.102	0.150	2.60	3.80	Φ
L	-----	0.201	-----	5.10	
M	-----	0.140	-----	3.56	
N	0.083	0.126	2.10	3.20	
O	-----	0.071	-----	1.80	

Curve Characteristics

Fig. 1 - Forward Current Derating Curve

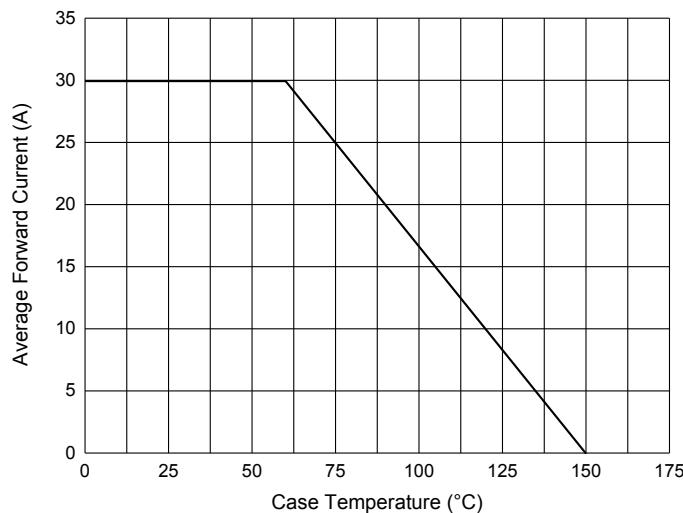


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

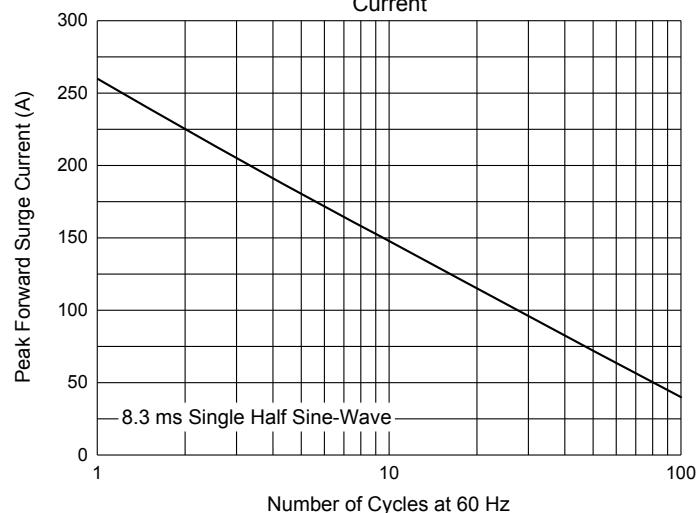


Fig. 3 - Typical Instantaneous Forward Characteristics

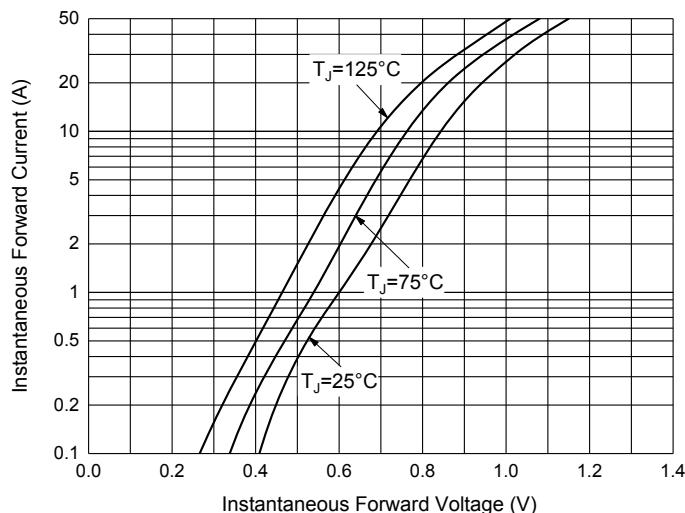
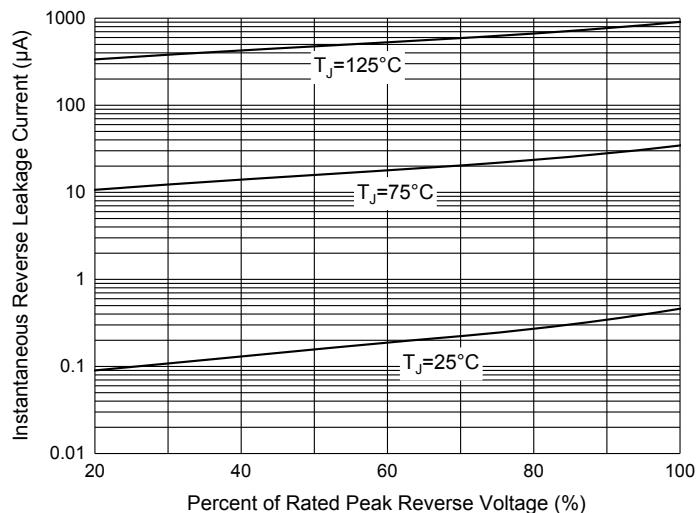


Fig. 4 - Typical Reverse Leakage Characteristics



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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