

Features

- Multilayer Metal -Silicon Potential Structure.
- High Junction Temperature Capability
- Low Power Loss, High Efficiency
- High Surge Capacity , High Current Capability
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant(Note 1) ("P" Suffix Designates Compliant. See Ordering Information)

Maximum Ratings

- Operating Junction Temperature Range: -55°C to +175°C
- Storage Temperature Range: -55°C to +175°C
- Typical Thermal Resistance: 0.5°C/W Junction to Case

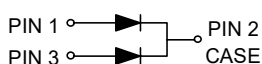
MCC Part Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
MBR40100PTH	MBR40100PTH	100V	70V	100V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	40A	$T_C = 150^\circ\text{C}$
Peak Forward Surge Current	I_{FSM}	400A	8.3ms, Half Sine Wave
Instantaneous Forward Voltage	V_F	0.78V(Typ.)	$I_F=20\text{A}; T_J=25^\circ\text{C}$
		0.83V(Max.)	$I_F=20\text{A}; T_J=25^\circ\text{C}$
		0.66V(Typ.)	$I_F=20\text{A}; T_J=125^\circ\text{C}$
		0.73V(Max.)	$I_F=20\text{A}; T_J=125^\circ\text{C}$
Maximum Reverse Current at Rated DC Blocking Voltage	I_R	0.01mA 3mA	$T_J=25^\circ\text{C}$ $T_J=125^\circ\text{C}$
Typical Junction Capacitance	C_J	425pF	$f=1.0\text{MHz}, V_R=4\text{V}$

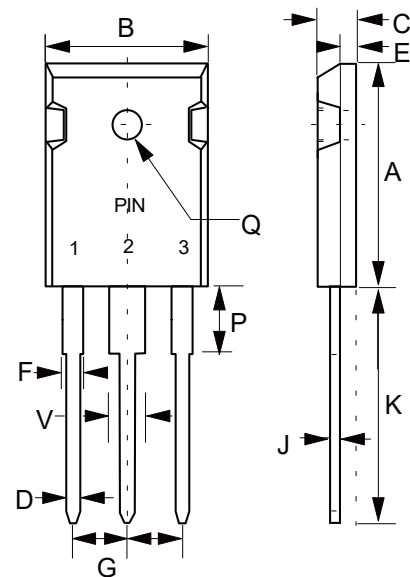
Note:1. High Temperature Solder Exemptions Applied, see EU Directive Annex 7a.

Internal Structure



**40 Amp
Schottky
Barrier Rectifier
100 Volts**

TO-247



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.787	0.866	20.00	22.00	
B	0.598	0.638	15.20	16.20	
C	0.185	0.208	4.70	5.30	
D	0.035	0.059	0.90	1.50	
E	0.059	0.094	1.50	2.40	
F	0.067	0.091	1.70	2.30	
J	0.019	0.031	0.48	0.80	
K	0.748	0.833	19.00	21.15	
P	0.122	0.189	3.10	4.80	
Q	0.118	0.150	3.00	3.80	Φ
V	0.106	0.134	2.70	3.40	
G	0.197	0.224	5.00	5.70	

Curve Characteristics

Fig. 1 - Current Derating Curve

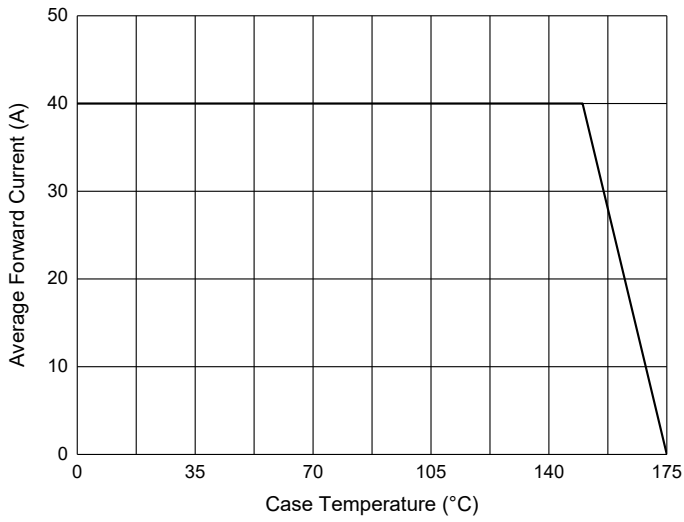


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

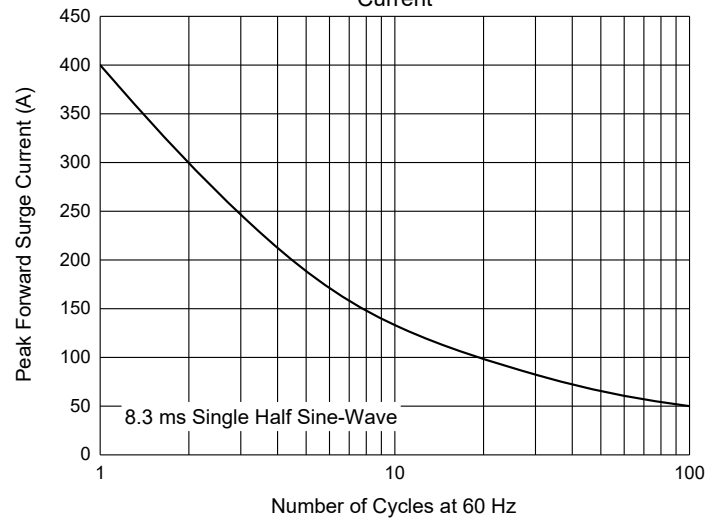


Fig. 3 - Forward Characteristics

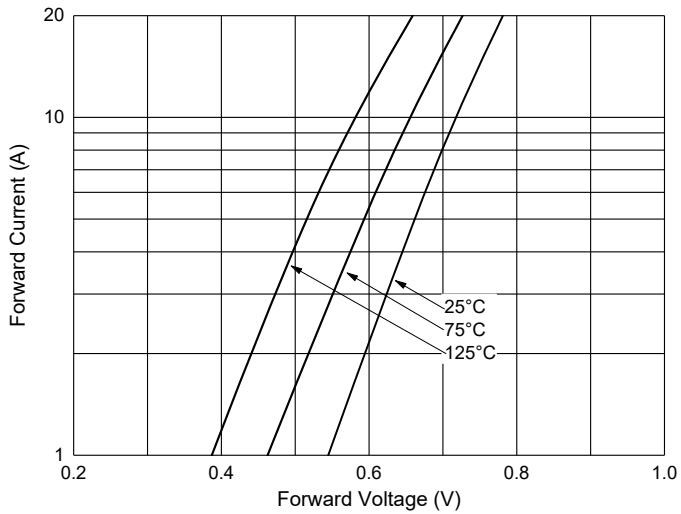
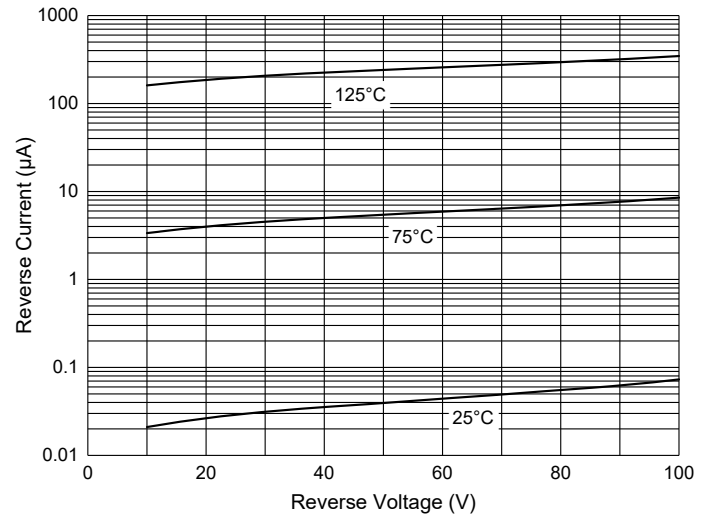


Fig. 4 - Typical Reverse Leakage Characteristics



Ordering Information

Device	Packing
Part Number-BP	Tube:30pcs/Tube, 360pcs/Box,1.8K/Ctn;

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

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