

### Features

- Multilayer Metal -Silicon Potential Structure
- Guardring for Over Voltage Protection
- 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

- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Typical Thermal Resistance: 0.5 °C/W Junction to Case

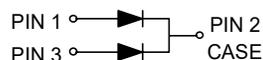
MCC Part Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
MBR4045PT	MBR4045PT	45V	31.5V	45V

### Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Rectified Forward Current (Rated VR-20Khz Square Wave) - 50% Duty Cycle	$I_{F(AV)}$	40A	$T_C=110^\circ\text{C}$
Peak Forward Surge Current	$I_{FSM}$	250A	8.3ms, Half Sine
Maximum Instantaneous Forward Voltage	$V_F$	0.56V(Typ) 0.61V(Max) 0.51V(Max)	$I_F=20A; T_J=25^\circ\text{C}$ $I_F=20A; T_J=25^\circ\text{C}$ $I_F=20A; T_J=125^\circ\text{C}$
Maximum Reverse Current at Rated DC Blocking Voltage	$I_R$	0.1mA 15mA	$T_J=25^\circ\text{C}$ $T_J=125^\circ\text{C}$

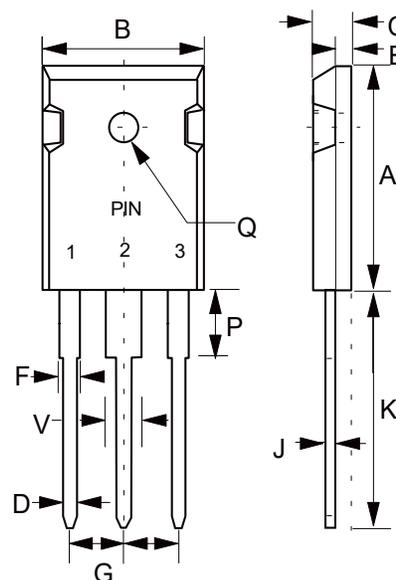
Note:1. High Temperature Solder Exemptions Applied, see EU Directive Annex 7a.

### Internal Structure



# 40 Amp Schottky Barrier Rectifier 45 Volts

## TO-247



### DIMENSIONS

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 - Forward Current Derating Curve

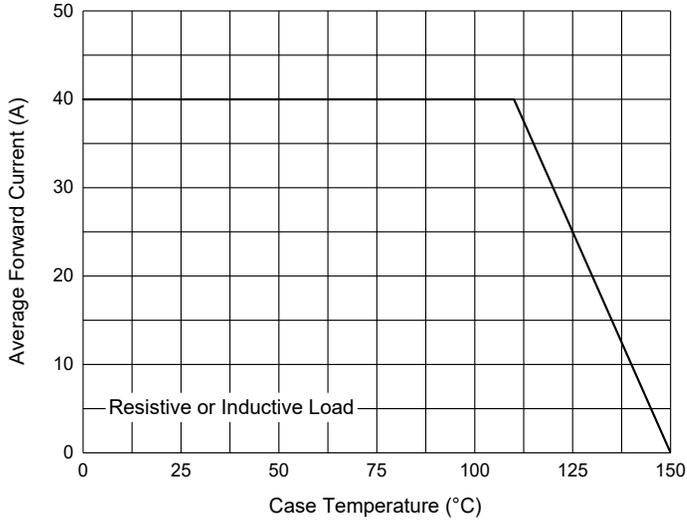


Fig. 2 - Typical Instantaneous Forward Characteristics

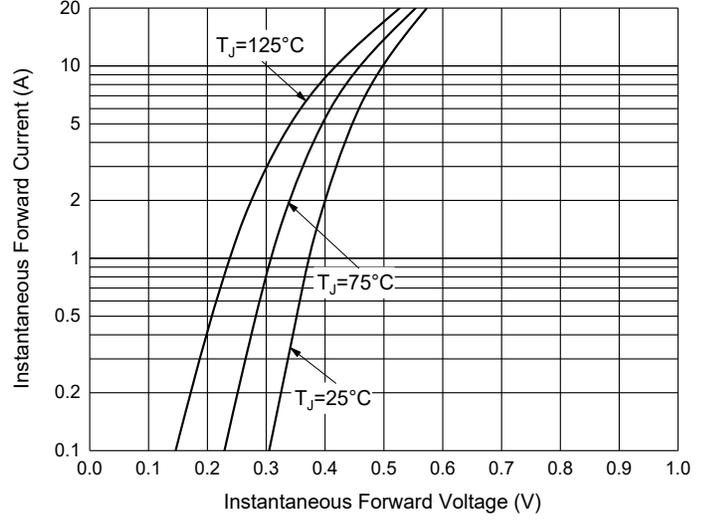
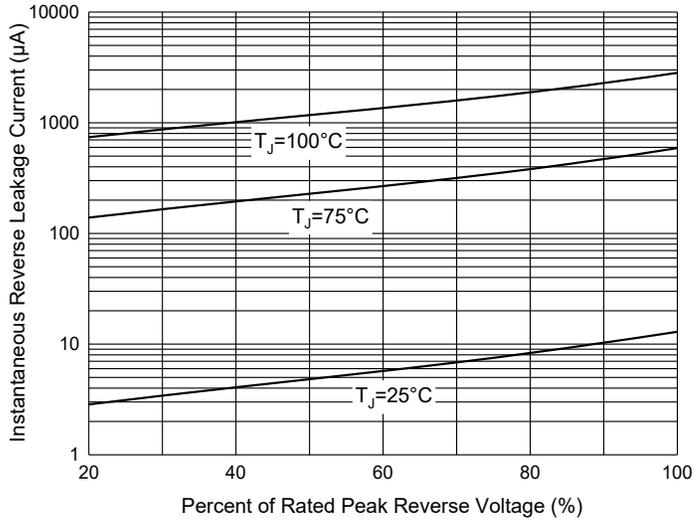


Fig. 3 - Typical Reverse Leakage Characteristics



## 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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