

## Features

- Multilayer Metal -Silicon Potential Structure
- Guardring for Over Voltage Protection
- 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 +150°C
- Storage Temperature Range: -55°C to +150°C
- Typical Thermal Resistance: 0.5 °C/WJunction to Case

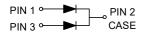
MCC Part Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
MBR4045PT	MBR4045PT	45V	31.5V	45V

## Electrical Characteristics @ 25°C Unless Otherwise Specified

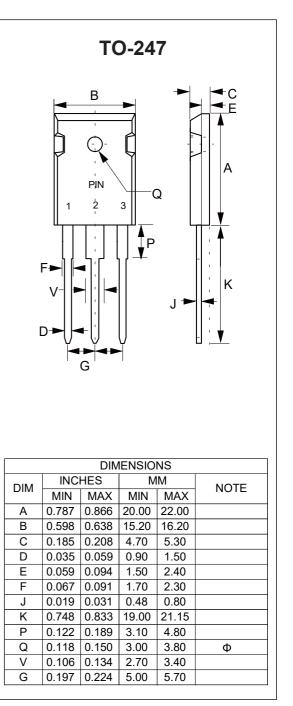
Average Rectified Forward Current (Rated VR-20Khz Square Wave) - 50% Duty Cycle	I <sub>F(AV)</sub>	40A	T <sub>C</sub> =110⁰C
Peak Forward Surge Current	I <sub>FSM</sub>	250A	8.3ms,Half Sine
Maximum Instantaneous Forward Voltage	V <sub>F</sub>	0.56V(Typ) 0.61V(Max) 0.51V(Max)	I <sub>F</sub> =20A; T <sub>J</sub> =25⁰C I <sub>F</sub> =20A; T <sub>J</sub> =25⁰C I <sub>F</sub> =20A; T <sub>J</sub> =125⁰C
Maximum Reverse Current at Rated DC Blocking Voltage	I <sub>R</sub>	0.1mA 15mA	Tյ=25⁰C Tյ=125⁰C

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

### **Internal Structure**









# **Curve Characteristics**

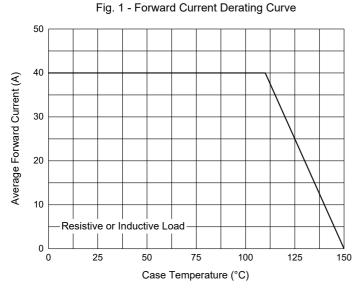
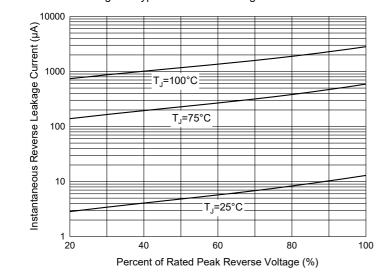


Fig. 3 - Typical Reverse Leakage Characteristics



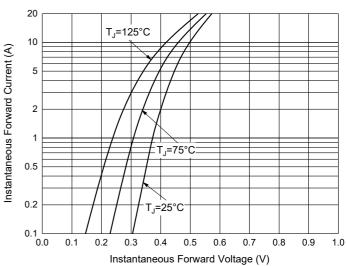


Fig. 2 - Typical Instantaneous Forward Characteristics



## **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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