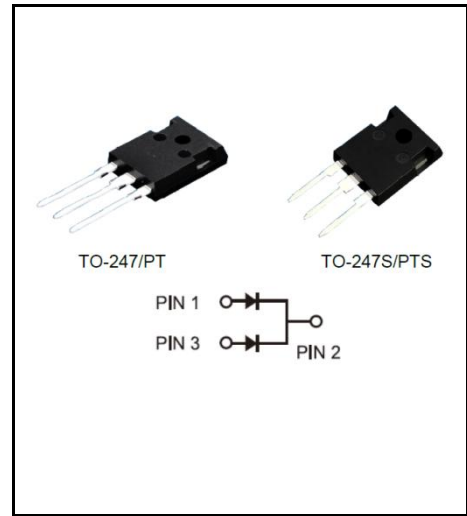


**SCHOTTKY BARRIER RECTIFIER**
**Reverse Voltage - 45 V**
**Forward Current - 40 A**

**FEATURES**

- ◆ Low forward voltage
- ◆ High current capability
- ◆ High forward surge capability
- ◆ Low power losses, High efficiency
- ◆ Guarding for over voltage protection
- ◆ Lead free in comply with EU RoHS 2011/65/EU directives

**MECHANICAL DATA**

- ◆ Case: TO-247/PT TO-247/PTS
- ◆ Solder bath temperature 275°C maximum, 10s per JESD22-106

**Primary Characteristic**

<b>I<sub>o</sub></b>	<b>2*20A</b>
<b>V<sub>RRM</sub></b>	<b>45V</b>
<b>I<sub>FSM</sub></b>	<b>380A</b>
<b>V<sub>F</sub></b>	<b>0.51V</b>
<b>T<sub>J</sub> Max</b>	<b>150°C</b>

**Maximum Ratings (Per Leg) at Ta=25°C unless otherwise specified**

Parameter	Symbols	Value	Units
Maximum Repetitive Peak Reverse Voltage	<b>V<sub>RRM</sub></b>	45	<b>V</b>
Maximum RMS voltage	<b>V<sub>RMS</sub></b>	45	<b>V</b>
Maximum DC Blocking Voltage	<b>V<sub>DC</sub></b>	45	<b>V</b>
Maximum Average Forward Rectified Current	Per Leg	20	<b>A</b>
	Total	40	
Peak Forward Surge Current, 8.3ms Single Half Sine-wave	<b>I<sub>FSM</sub></b>	380	<b>A</b>
Operating Temperature Range	<b>T<sub>J</sub></b>	-55 ~ +150	<b>°C</b>
Storage Temperature Range	<b>T<sub>STG</sub></b>	-55 ~ +150	<b>°C</b>
Typical Thermal Resistance <sup>(Note1)</sup> TO-247PT, TO-247PTS	<b>R<sub>θJA</sub> R<sub>θJC</sub></b>	2	<b>°C/W</b>

**Note1: Thermal resistance from Junction to case per leg mounted on heatsink.**
**Electrical Characteristics (Per Leg) unless otherwise specified**

Characteristics	Symbols	Value		Units	
		Typ	Max		
Forward Voltage Drop(Note2) at I <sub>F</sub> =5A at I <sub>F</sub> =10A at I <sub>F</sub> =20A	<b>V<sub>F</sub></b>	TA=25°C	0.45	-	<b>V</b>
		TA=125°C	0.36	-	
		TA=25°C	0.51	-	
		TA=125°C	0.44	-	
		TA=25°C	0.56	0.65	
		TA=125°C	0.51	-	
Maximum Reverse Current at V <sub>R</sub> =45V	<b>I<sub>R</sub></b>	TA=25°C	20	100	<b>uA</b>
		TA=125°C	7	-	<b>mA</b>

**Note2: Pulse test: 300 μs pulse width, 1 % duty cycle**

**RATINGS AND CHARACTERISTIC CURVES**

FIG.1 MAXIMUM FORWARD CURRENT DERATING CURVE

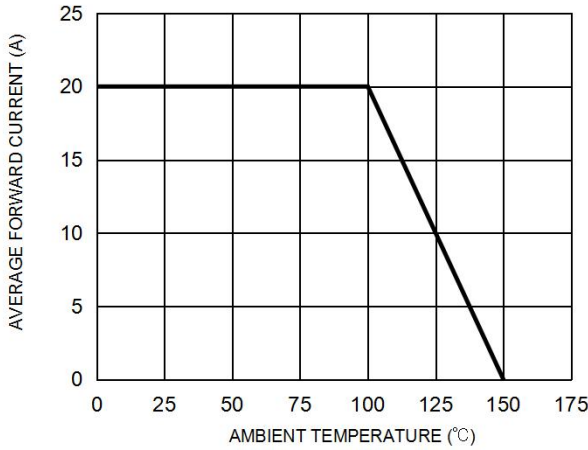


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

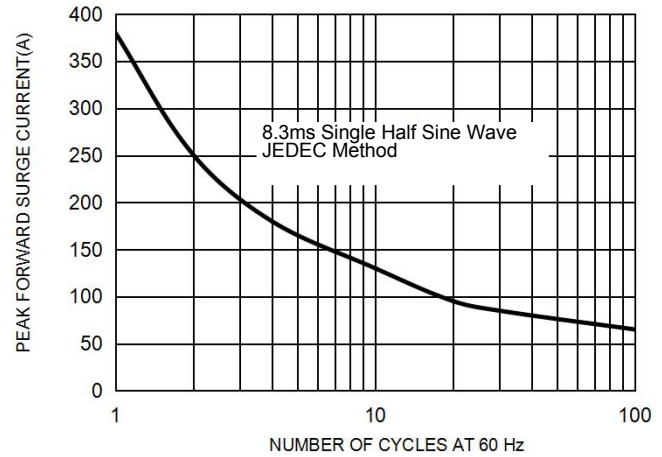


FIG. 3 TYPICAL FORWARD CHARACTERISTICS PER LEG

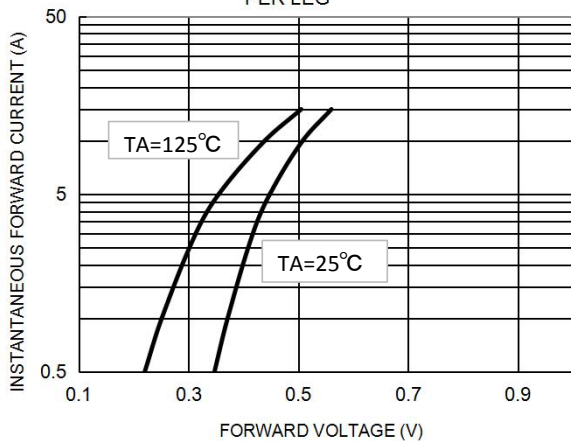
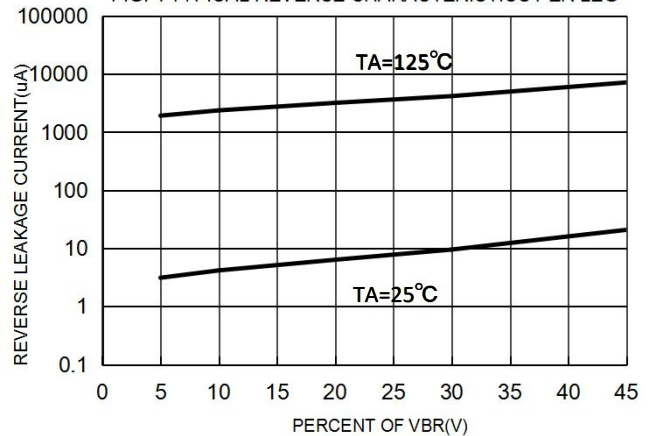


FIG. 4 TYPICAL REVERSE CHARACTERISTICS PER LEG



**Marking on the body**



**MAKING:**



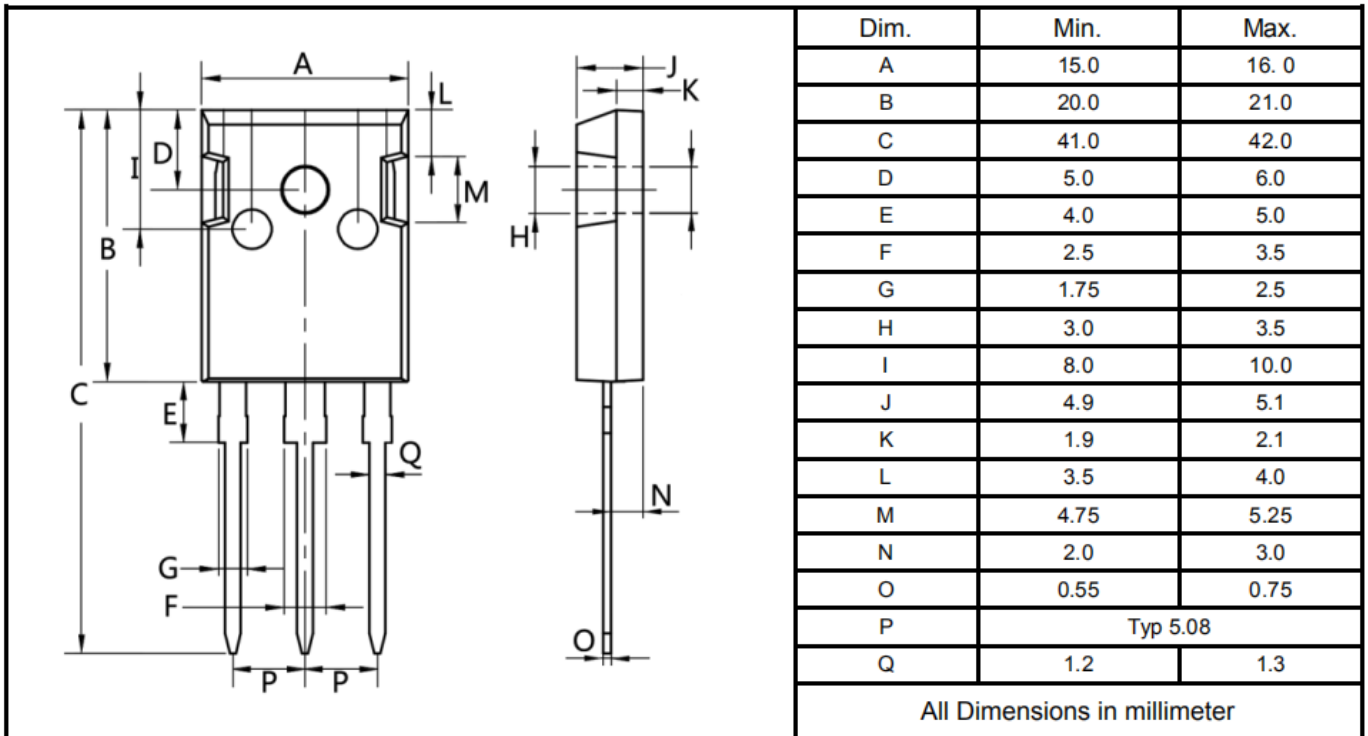
**Ordering information**

Part Number	Package	Unit Weight	Base Quantity	Delivery mode
MBR4045PT	TO-247	0.209oz(5.93g)	30 pcs / tube	600pcs/box 2400pcs/carton
MBR4045PTS	TO-247S	0.158oz(4.48g)	30 pcs / tube	600pcs/box 2400pcs/carton

Note: For Halogen Free molding compound, add "H" suffix to part number above.

Package Outline Dimensions millimeters

**TO-247**



**TO-247S**

