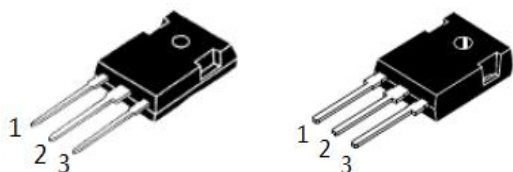




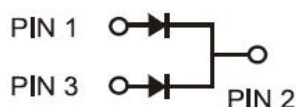
MBR3045PT/PTS

SCHOTTKY BARRIER RECTIFIER



TO-247/PT

TO-247S/PTS



FEATURES

- Low forward voltage
- High current capability
- High forward surge capability
- Low power losses, High efficiency
- Guarding for over voltage protection



RoHS
COMPLIANT

APPLICATIONS

Low VF Schottky barrier rectifier are designed for high frequency, miniature switched mode power supplies such as adapters ,lighting and on-board DC/DC conerters

Primary Characteristic

I_O	2*15A
V_{RRM}	45V
I_{FSM}	300A
V_F	0.58V
T_{jmax}	150°C
Assembly code	AK

MECHANICAL DATA

- **Case:** Molded plastic
- **Polarity:** As marked
- **Mounting Position:** Any
- **Molded Plastic:** UL Flammability Classification Rating 94V-0
- Lead free in compliance with EU RoHS 2011/65/EU directive
- Solder bath temperature 275°C maximum,10s per JESD 22-B106

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

Characteristics	Symbol	Value	Unit
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	45	V
Working Peak Reverse Voltage	V_{RWM}	45	V
Maximum DC Blocking Voltage	V_{DC}	45	V
Maximum Average Forward Rectified Current	Per Leg Total	15	A
		30	
Peak Forward Surge Current,8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	300	A
Operating Temperature Range	T_J	150	°C
Storage Temperature Range	T_{STG}	-40 to +150	°C
Typical Thermal Resistance (Note1)	$R_{\theta JC}$	2	°C/W

Note1: Thermal resistance from Junction to case per leg mounted on heatsink.

Electrical Characteristics (Per Leg) unless otherwise specified

Characteristics		Symbol	Value		Unit
Forward Voltage Drop(Note2)		V_F	Typ.	Max.	V
at $I_F=5A$	TA=25°C		0.48	-	
	TA=125°C		0.41	-	
at $I_F=10A$	TA=25°C		0.56	0.60	
	TA=125°C		0.51	-	
at $I_F=15A$	TA=25°C		0.63	0.66	
	TA=125°C		0.58	-	
Maximum Reverse Current at $V_R=45V$	TA=25°C	I_R	8	50	μA
	TA=125°C		5	-	mA

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



MBR3045PT/PTS SCHOTTKY BARRIER RECTIFIER

RATINGS AND CHARACTERISTIC CURVES

FIG. 1 MAXIMUM FORWARD CURRENT DERATING CURVE

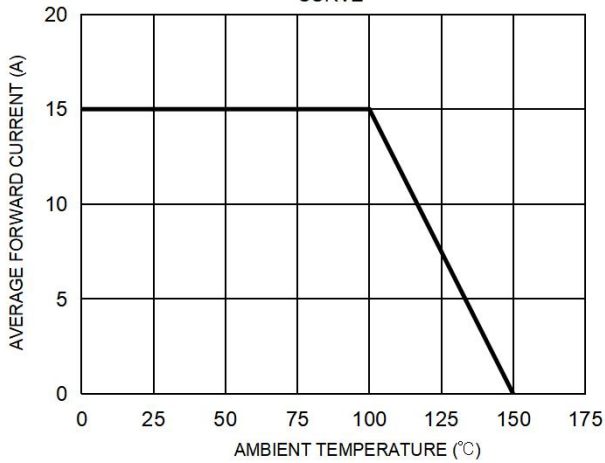


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

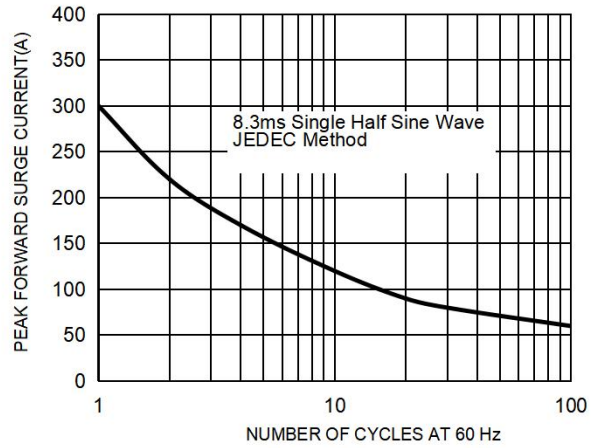


FIG. 3 TYPICAL FORWARD CHARACTERISTICS PER LEG

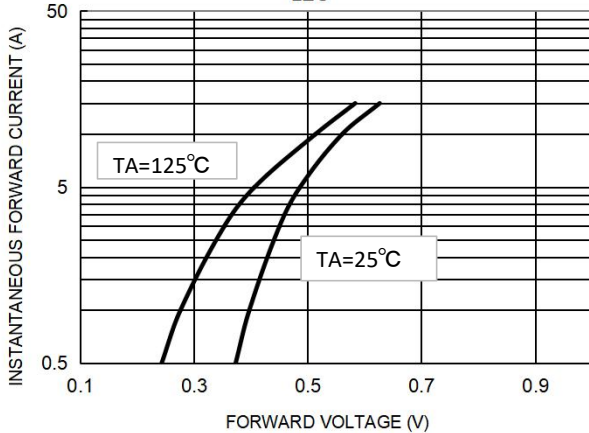
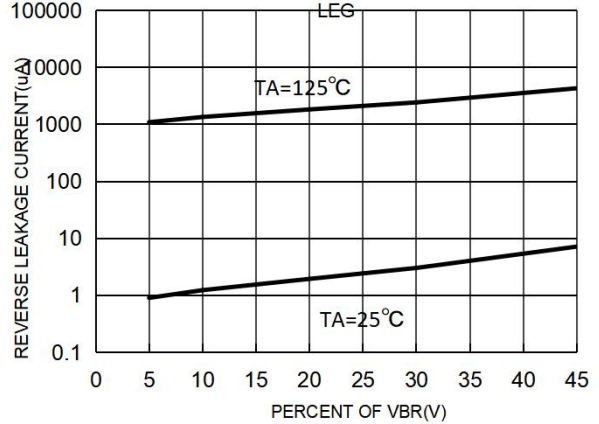


FIG. 4 TYPICAL REVERSE CHARACTERISTICS PER LEG

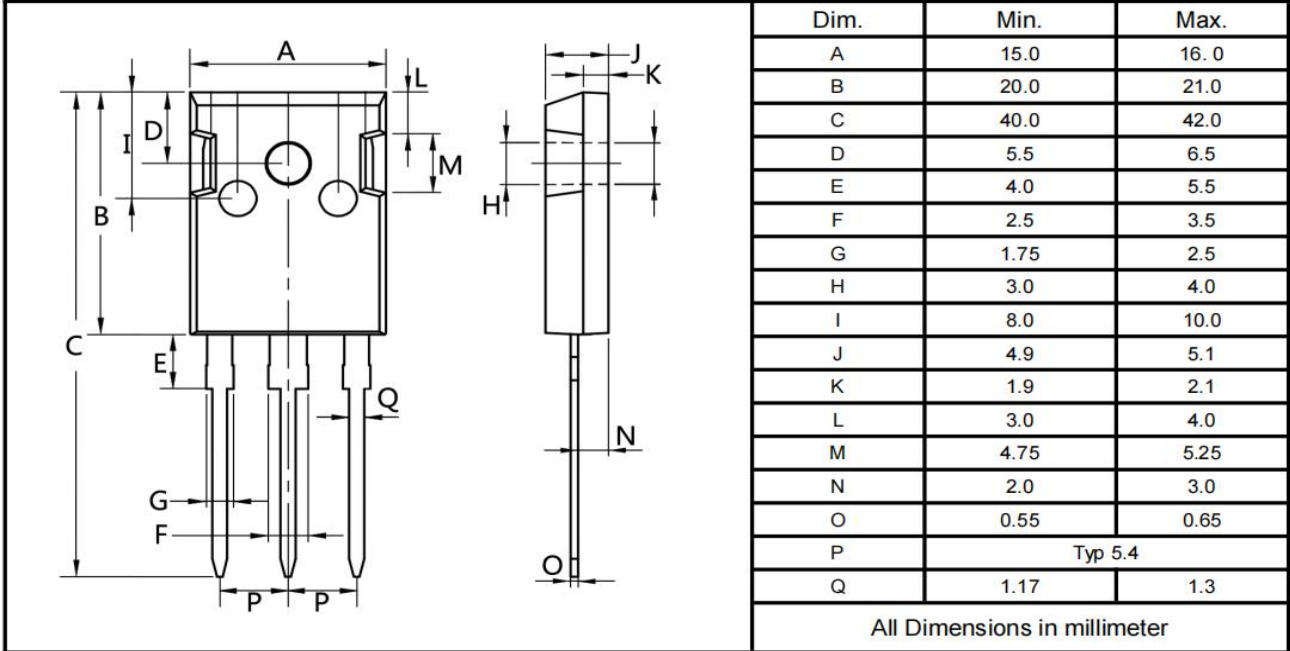




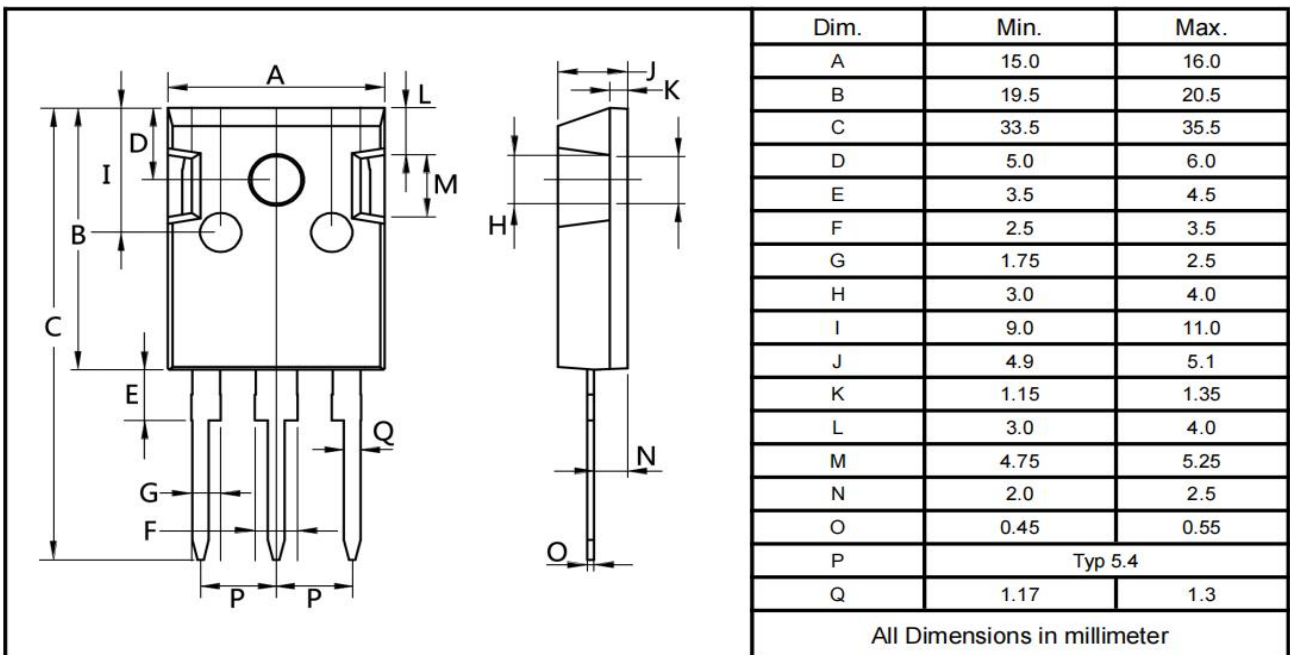
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Package Outline Dimensions millimeters

TO-247



TO-247S



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