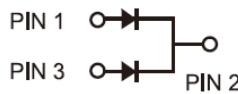
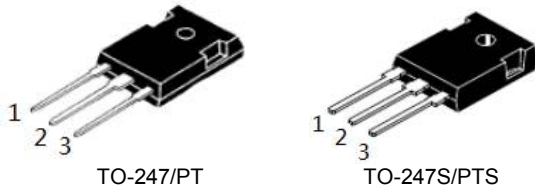




# MBR40100PT/PTS

## SCHOTTKY BARRIER RECTIFIER



### FEATURES

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



### 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*20A
$V_{RRM}$	100V
$I_{FSM}$	450A
$V_F$	0.66V
$T_{Jmax}$	150°C
Assembly code	CO

### 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 $T_a=25^\circ\text{C}$ unless otherwise specified

Characteristics	Symbol	Value	Unit
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	100	V
Working Peak Reverse Voltage	$V_{RWM}$	100	V
Maximum DC Blocking Voltage	$V_{DC}$	100	V
Maximum Average Forward Rectified Current	Per Leg	20	A
	Total	40	
Peak Forward Surge Current,8.3 ms Single Half Sine-wave	$I_{FSM}$	450	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 $I_F=5A$	$T_A=25^\circ\text{C}$		0.64	-	
	$T_A=125^\circ\text{C}$		0.52	-	
at $I_F=10A$	$T_A=25^\circ\text{C}$		0.72	-	
	$T_A=125^\circ\text{C}$		0.59	-	
at $I_F=20A$	$T_A=25^\circ\text{C}$		0.79	0.85	
	$T_A=125^\circ\text{C}$		0.66	-	
Maximum Reverse Current at $V_R=100V$	$T_A=25^\circ\text{C}$		$I_R$	4	
	$T_A=125^\circ\text{C}$	3		-	mA

Note2:Pulse test: 300  $\mu\text{s}$  pulse width, 1 % duty cycle



### Characteristic Curves ( $T_A=25^\circ\text{C}$ unless otherwise noted)

FIG.1 MAXIMUM FORWARD CURRENT DERATING CURVE

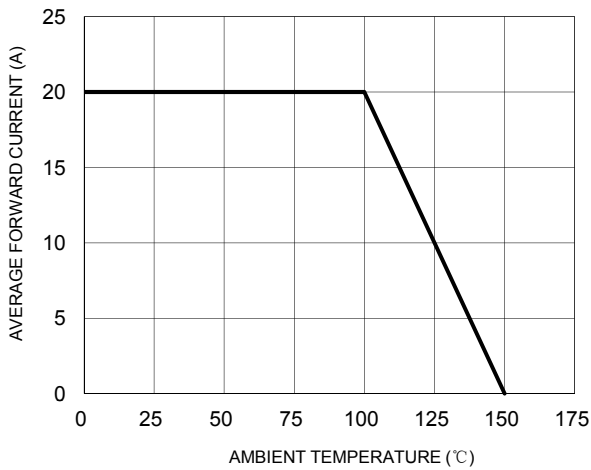


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

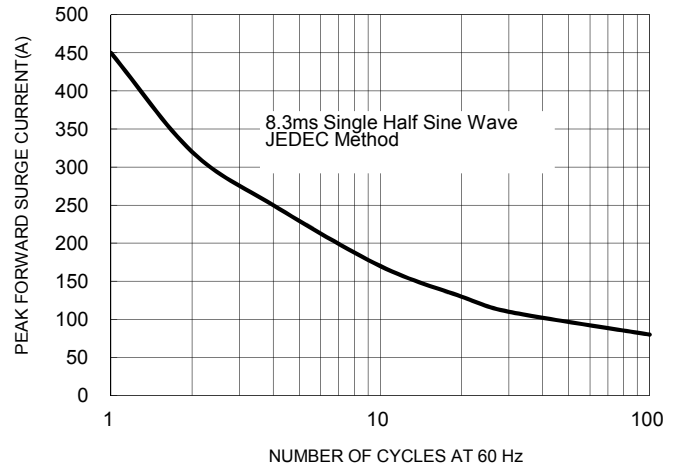


FIG. 3 TYPICAL FORWARD CHARACTERISTICS PER LEG

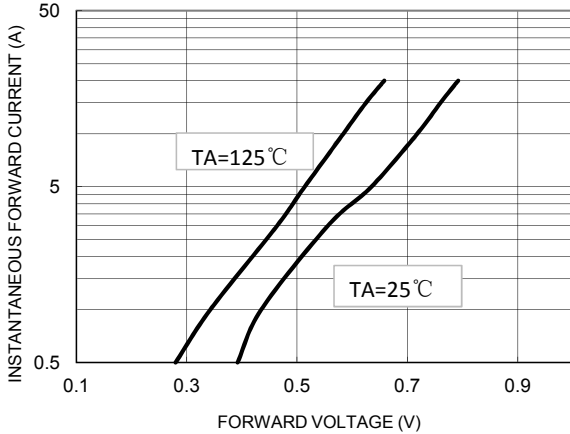
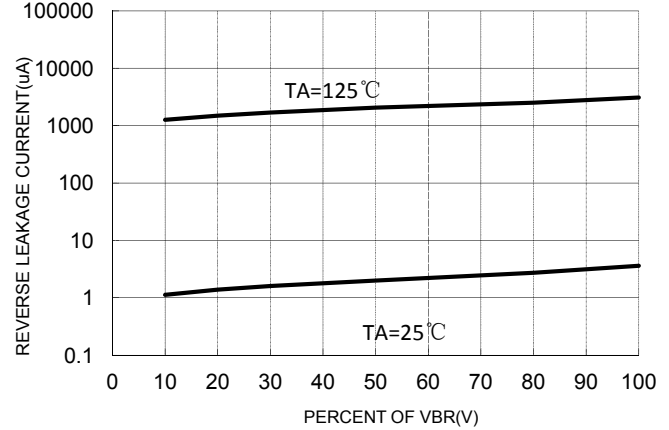


FIG. 4 TYPICAL REVERSE CHARACTERISTICS PER LEG



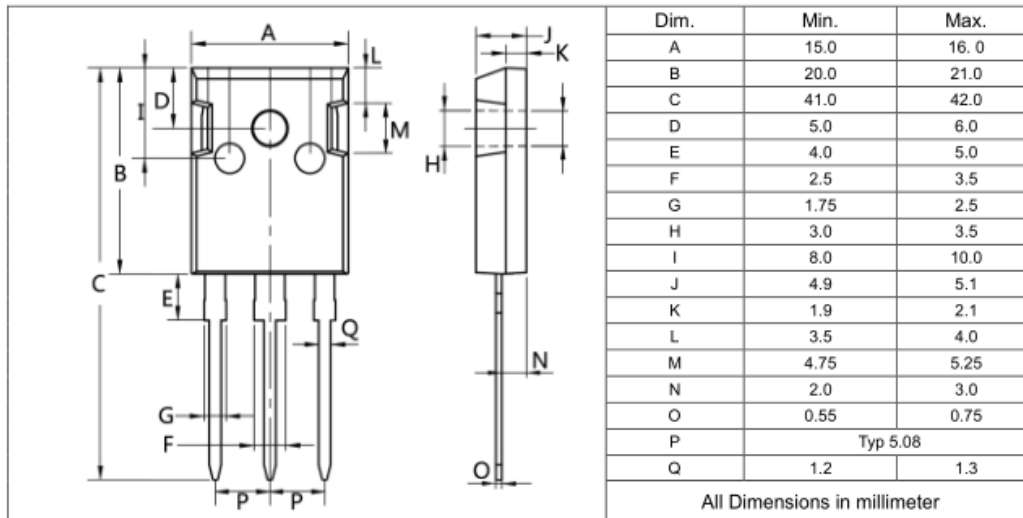


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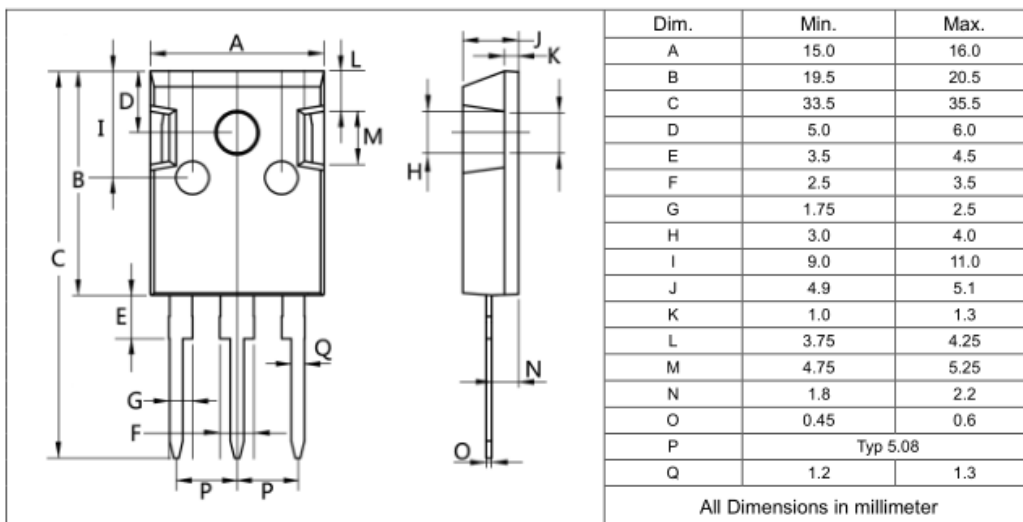
## SCHOTTKY BARRIER RECTIFIER

### Package Outline Dimensions millimeters

TO-247



TO-247S



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