

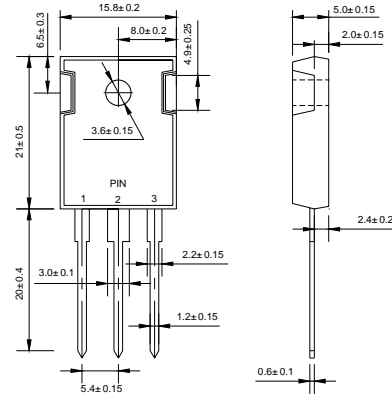


Features

- ◇ High surge capacity.
- ◇ For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications.
- ◇ Metal silicon junction, majority carrier conduction.
- ◇ High current capacity, low forward voltage drop.
- ◇ Guard ring for over voltage protection.

VOLTAGE RANGE: 30 - 100 V
FORWARD CURRENT: 60 A

TO-247



Dimensions in millimeters

Mechanical Data

- ◇ Case: JEDEC TO-3P, molded plastic body
- ◇ Terminals: Solderable per MIL-STD-750, Method 2026
- ◇ Polarity: As marked
- ◇ Position: Any
- ◇ Weight: 0.223 ounce, 6.3 grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

		MBR 6030PT	MBR 6035PT	MBR 6040PT	MBR 6045PT	MBR 6050PT	MBR 6060PT	MBR 6080PT	MBR 60100PT	UNITS
Maximum recurrent peak reverse voltage	V_{RRM}	30	35	40	45	50	60	80	100	V
Maximum RMS Voltage	V_{RMS}	21	25	28	32	35	42	56	70	V
Maximum DC blocking voltage	V_{DC}	30	35	40	45	50	60	80	100	V
Maximum average forward total device rectified current @ $T_C = 105^\circ\text{C}$	$I_{F(AV)}$	60								A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	500								A
Maximum forward voltage @ $I_F=30A, T_C=25$	V_F	0.62			0.75		0.85			V
Maximum reverse current @ $T_A=25^\circ\text{C}$ at rated DC blocking voltage @ $T_A=100^\circ\text{C}$	I_R	20								mA
		200								
Maximum thermal resistance (Note2)	$R_{\theta JC}$	1.4								$^\circ\text{C}/\text{W}$
Operating junction temperature range	T_J	- 55 ---- + 150						- 65 --- + 175		$^\circ\text{C}$
Storage temperature range	T_{STG}	- 55 ---- + 150						- 65 --- + 175		$^\circ\text{C}$

NOTE: 1. Thermal resistance from junction to case.



Ratings AND Characteristic Curves

FIG.1 – PEAK FORWARD SURGE CURRENT

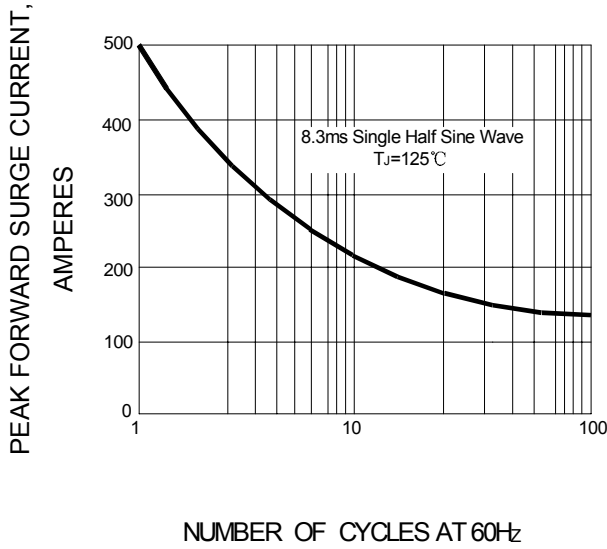


FIG.2 – FORWARD DERATING CURVE

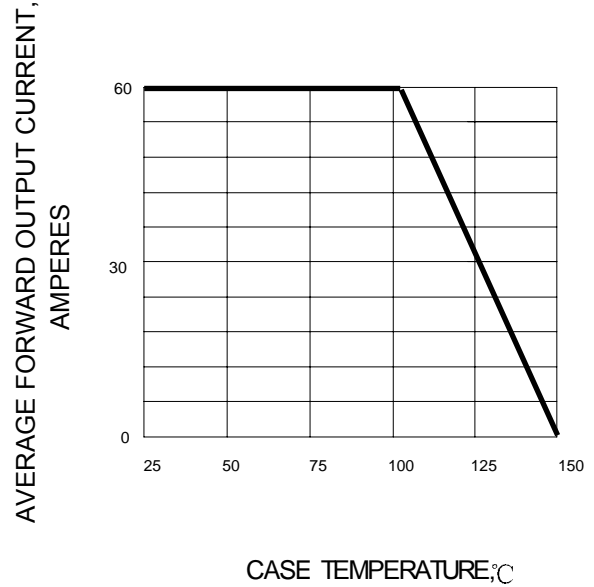


FIG.3 – TYPICAL FORWARD CHARACTERISTIC

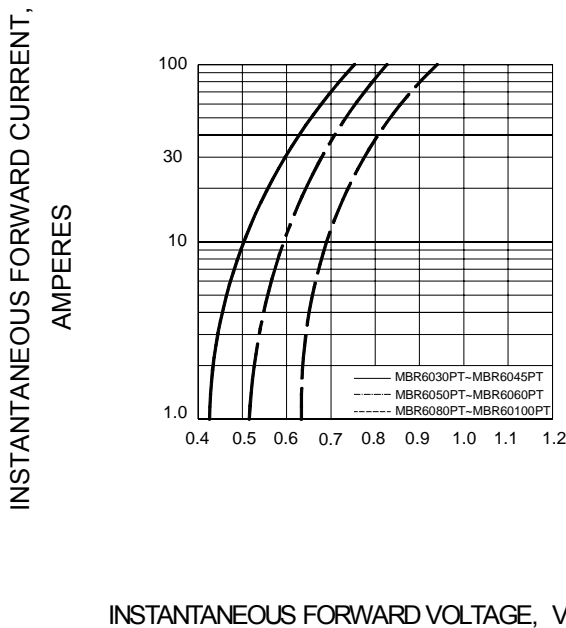
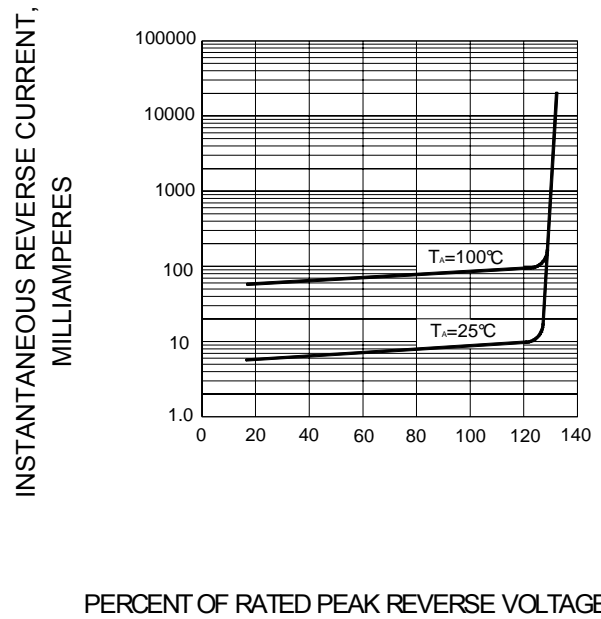


FIG.4 – TYPICAL REVERSE CHARACTERISTIC



Package	Packing	Box Size L×W×H(mm)	Quantity(pcs/box)	Carton Size L×W×H(mm)	Quantity(pcs/carton)
TO-247	30pcs/Tube	570×155×50	450	580×340×125	1800