

VOLTAGE RANGE: 30 - 100 V
CURRENT: 40 A

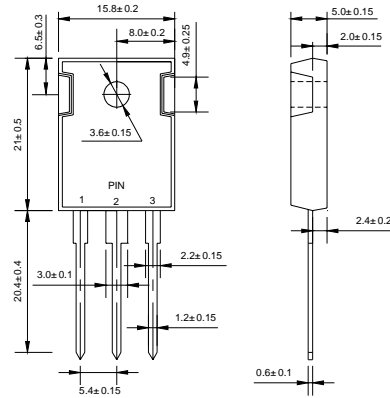
Features

- ◇ 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.

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

TO-3P(TO-247AD)



Dimensions in millimeters

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

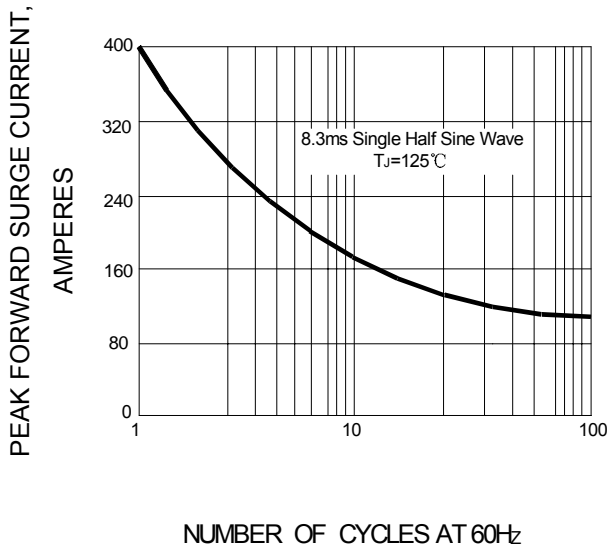
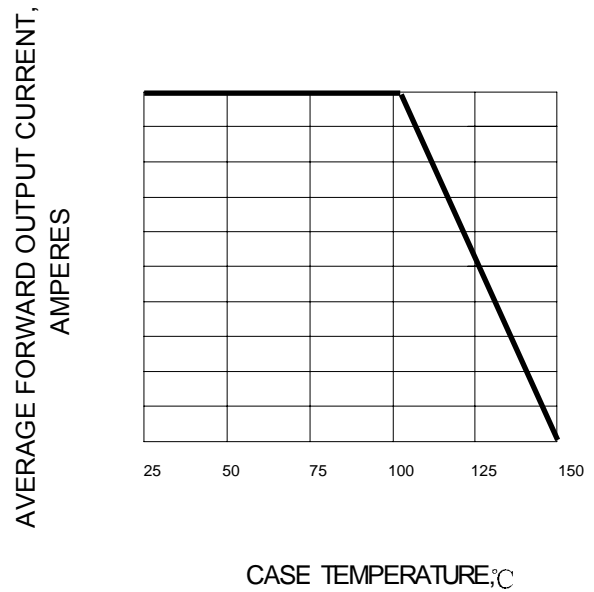
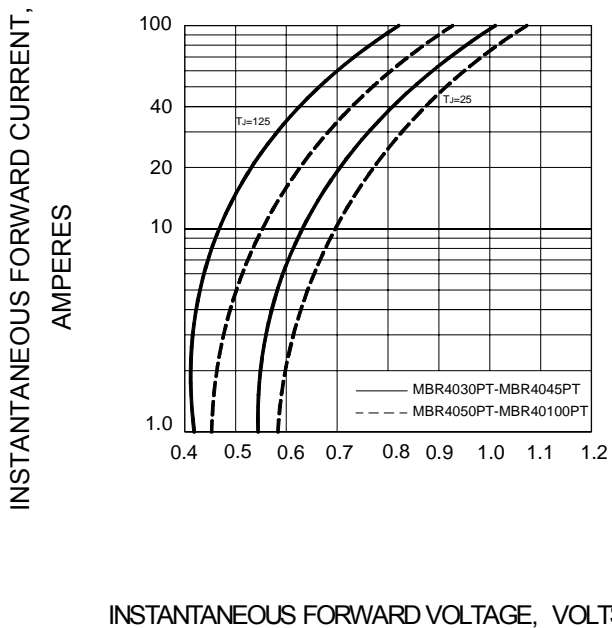
Ratings at 25°C ambient temperature unless otherwise specified.

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

		MBR 4030PT	MBR 4035PT	MBR 4040PT	MBR 4045PT	MBR 4050PT	MBR 4060PT	MBR 4080PT	MBR 40100PT	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 @ $T_c = 105^\circ\text{C}$	$I_{F(AV)}$	40								A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	400								A
Maximum forward voltage ($I_F=20\text{A}, T_c=25^\circ\text{C}$) ($I_F=20\text{A}, T_c=125^\circ\text{C}$) ($I_F=40\text{A}, T_c=25^\circ\text{C}$) ($I_F=40\text{A}, T_c=125^\circ\text{C}$)	V_F	-				0.80				V
		0.57				0.70				
		0.84				0.95				
		0.72				0.85				
Maximum reverse current @ $T_A=25^\circ\text{C}$ at rated DC blocking voltage @ $T_A=125^\circ\text{C}$	I_R	1.0								mA
		100								
Maximum thermal resistance (Note2)	$R_{\theta JC}$	1.4								$^\circ\text{C}/\text{W}$
Operating junction temperature range	T_J	- 55 ---- + 150								$^\circ\text{C}$
Storage temperature range	T_{STG}	- 55 ---- + 150								$^\circ\text{C}$

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
