

SCHOTTKY BARRIER RECTIFIERS

VOLTAGE RANGE: 30 - 100 V
CURRENT: 40 A

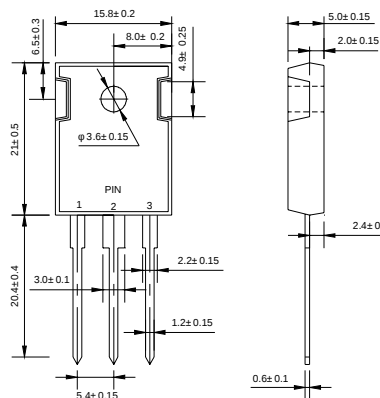
FEATURES

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

NOTE: 1. Thermal resistance from junction to case.

FIG.1 – PEAK FORWARD SURGE CURRENT

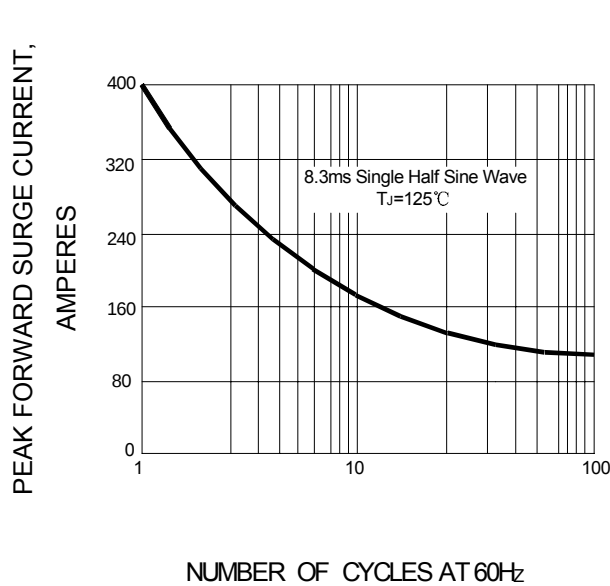


FIG.2 – FORWARD DERATING CURVE

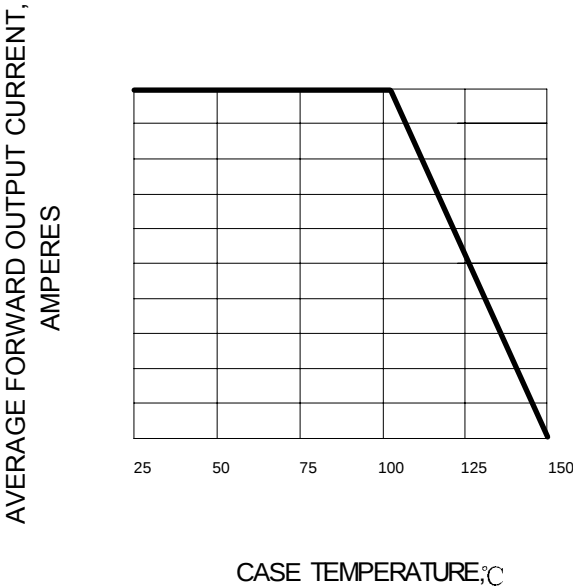


FIG.3 – TYPICAL FORWARD CHARACTERISTIC

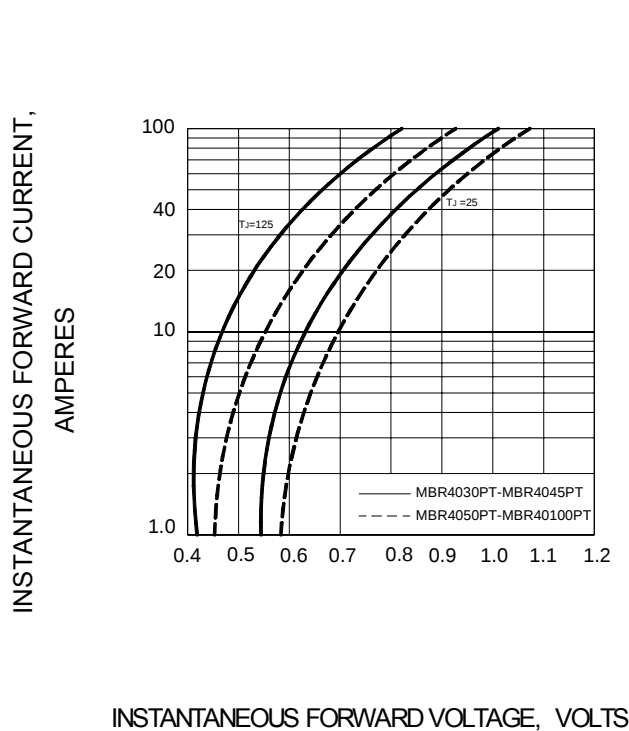


FIG.4 – TYPICAL REVERSE CHARACTERISTIC

