

VOLTAGE RANGE: 35 - 60 V

CURRENT: 16 A

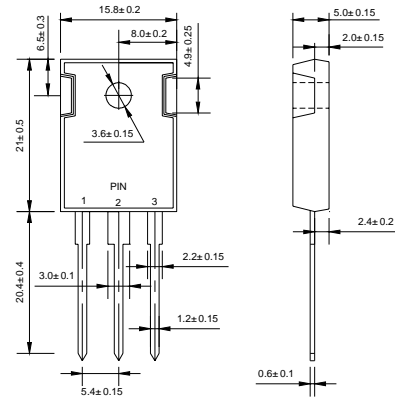
Features

- ◇ 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: Leads, solderable per MIL-STD-750, Method 2026
- ◇ Polarity: As marked
- ◇ Weight: 0.223 ounce, 6.3 grams
- ◇ Position: Any

TO-3P



Dimensions in millimeters

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

		MBR 1635PT	MBR 1645PT	MBR 1650PT	MBR 1660PT	UNITS
Maximum recurrent peak reverse voltage	V_{RRM}	35	45	50	60	V
Maximum RMS Voltage	V_{RMS}	25	32	35	42	V
Maximum DC blocking voltage	V_{DC}	35	45	50	60	V
Maximum average forward total device rectified current @ $T_c = 125^\circ\text{C}$	$I_{F(AV)}$	16.0				A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	150.0				A
Maximum forward voltage per leg ($I_F=8.0\text{A}, T_c=25^\circ\text{C}$) (NOTE 1) ($I_F=8.0\text{A}, T_c=125^\circ\text{C}$)	V_F	0.63		0.75		V
Maximum reverse current @ $T_c=25^\circ\text{C}$ at rated DC blocking voltage @ $T_c=125^\circ\text{C}$	I_R	0.2		1.0		m A
Maximum thermal resistance (NOTE 2)	$R_{\theta JC}$	1.5				$^\circ\text{C}/\text{W}$
Operating junction temperature range	T_J	- 55 ---- + 150				$^\circ\text{C}$
Storage temperature range	T_{STG}	- 55 ---- + 175				$^\circ\text{C}$

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

2. Thermal resistance from junction to case and thermal resistance from junction to ambient.

Ratings AND Characteristic Curves

FIG.1 – FORWARD CURRENT DERATING CURVE

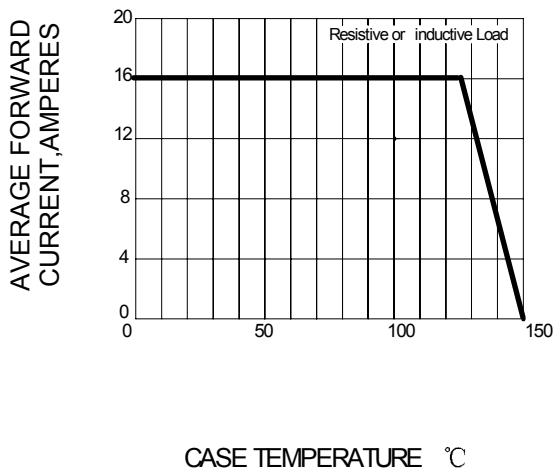


FIG.2 – MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PERLEG

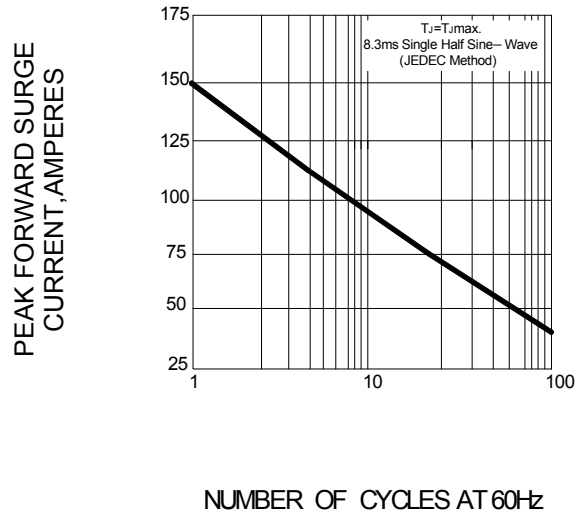


FIG.3 – TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC PERLEG

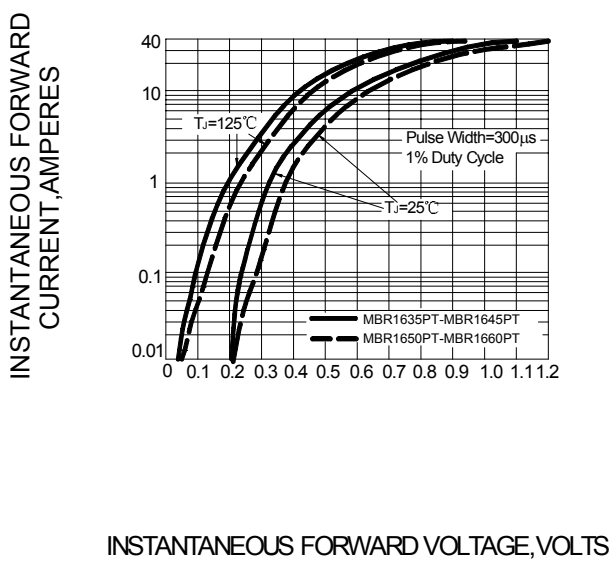


FIG.4 – TYPICAL REVERSE CHARACTERISTICS

