

### SCHOTTKY BARRIER RECTIFIER

VOLTAGE RANGE: 30 - 100 V  
CURRENT: 16 A

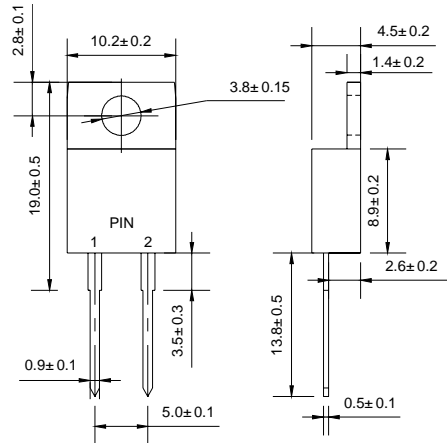
#### FEATURES

- ◇ 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-220AC, molded plastic body
- ◇ Terminals: Leads, solderable per MIL-STD-750, Method 2026
- ◇ Polarity: As marked
- ◇ Position: Any
- ◇ Weight: 0.069 ounces, 1.96 gram

#### TO-220AC



Dimensions in millimeters

#### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

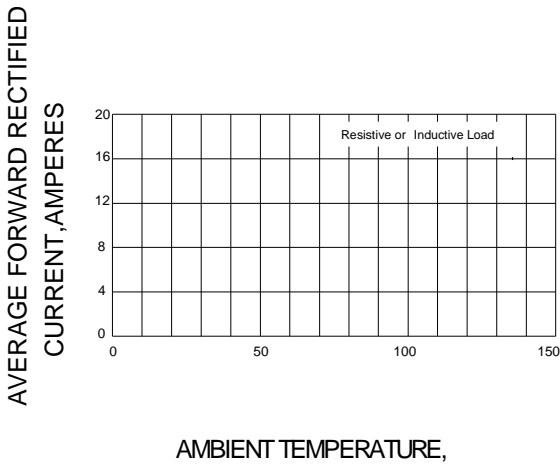
Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

		MBR 1630	MBR 1635	MBR 1640	MBR 1645	MBR 1650	MBR 1660	MBR 1690	MBR 16100	UNITS
Maximum recurrent peak reverse voltage	$V_{RRM}$	30	35	40	45	50	60	90	100	V
Maximum RMS Voltage	$V_{RMS}$	21	25	28	32	35	42	63	70	V
Maximum DC blocking voltage	$V_{DC}$	30	35	40	45	50	60	90	100	V
Maximum average forward total device rectified current @ $T_c = 125^\circ C$	$I_{F(AV)}$	16								A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	150								A
Maximum forward voltage (Note 1)	$V_F$		0.63				0.75	0.85		V
			0.57				0.65	-		
Maximum reverse current at rated DC blocking voltage	$I_R$		0.2				1.0			m A
			40				50			
Maximum thermal resistance (Note2)	$R_{\theta JC}$	1.5								°C/W
Operating junction temperature range	$T_J$	- 55 ---- + 150								°C
Storage temperature range	$T_{STG}$	- 55 ---- + 175								°C

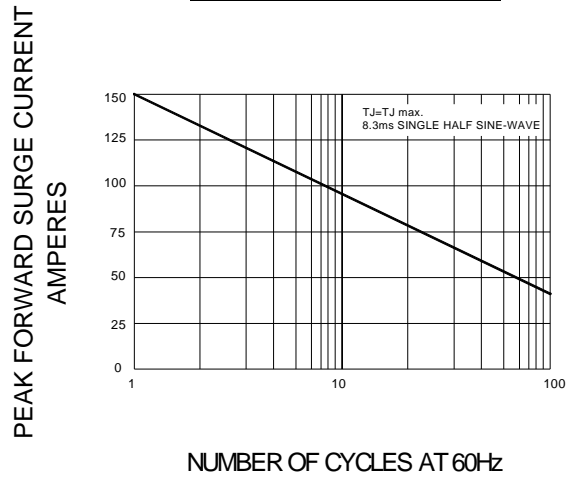
NOTE: 1. Pulse test: 300µs pulse width, 1% duty cycle.

2. Thermal resistance from junction to case.

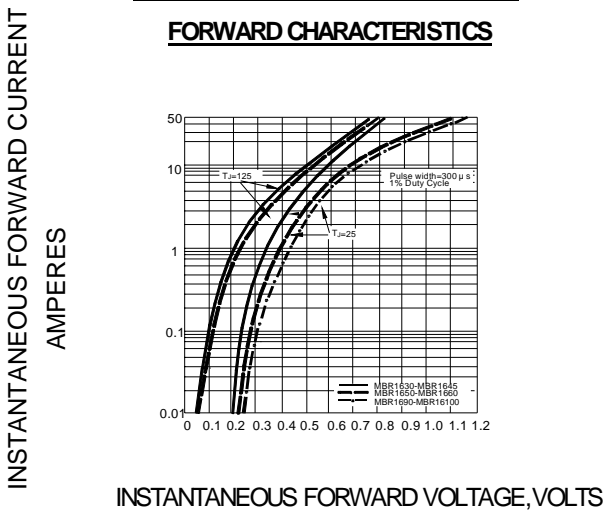
**FIG.1 – FORWARD CURRENT DERATING CURVE**



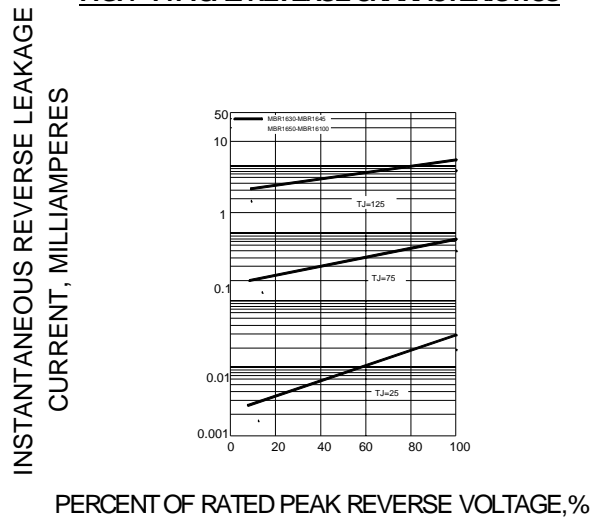
**FIG.2 – MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT**



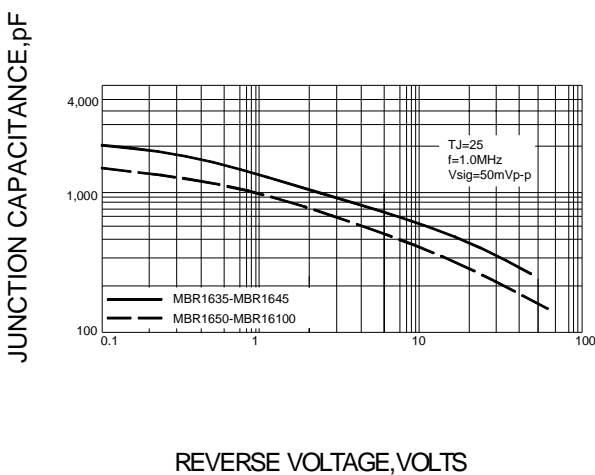
**FIG.3 – TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



**FIG.4 – TYPICAL REVERSE CHARACTERISTICS**



**FIG.5 – TYPICAL JUNCTION CAPACITANCE**



**FIG.6 – TYPICAL TRANSIENT THERMAL IMPEDANCE**

