

### SCHOTTKY BARRIER RECTIFIERS

VOLTAGE RANGE: 30 - 100 V  
CURRENT: 5.0 A

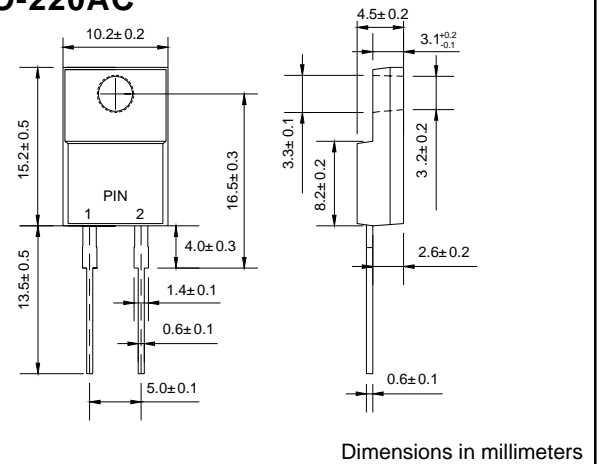
#### FEATURES

- ◇ 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.
- ◇ The plastic material carries U/L recognition 94V-0

#### MECHANICAL DATA

- ◇ Case: JEDEC ITO-220AC, molded plastic body
- ◇ Terminals: Solderable per MIL-STD-750, Method 2026
- ◇ Polarity: As marked
- ◇ Position: Any
- ◇ Weight: 0.056 ounces, 1.587 gram

#### ITO-220AC



#### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

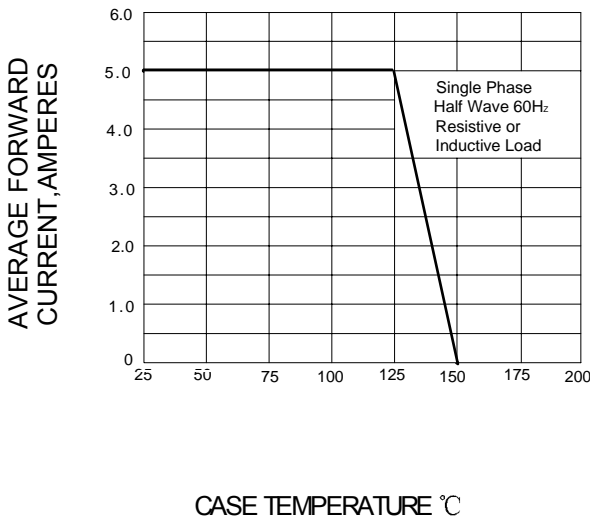
Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

		MBRF 530	MBRF 535	MBRF 540	MBRF 545	MBRF 550	MBRF 560	MBRF 580	MBRF 5100	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 @ $T_C = 125^\circ\text{C}$	$I_{F(AV)}$	5.0								A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	125								A
Maximum forward voltage ( $I_F=5.0\text{A}$ ) (Note 1)	$V_F$	0.70			0.80		0.85			V
Maximum reverse current @ $T_A=25^\circ\text{C}$ at rated DC blocking voltage @ $T_A=100^\circ\text{C}$	$I_R$	0.1								mA
		15								
Maximum thermal resistance (Note 2)	$R_{\theta JC}$	3.0								K/W
Operating junction temperature range	$T_J$	- 55 ---- + 150								°C
Storage temperature range	$T_{STG}$	- 55 ---- + 150								°C

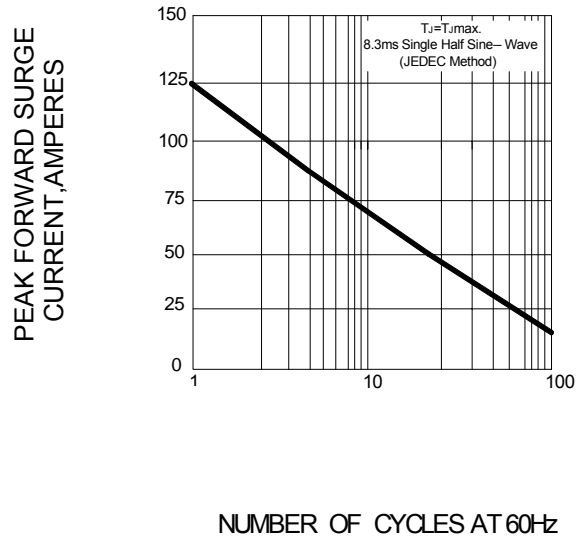
NOTE: 1. Pulse test: 300µs pulse width, 1% duty cycle.  
2. Thermal resistance from junction to case.

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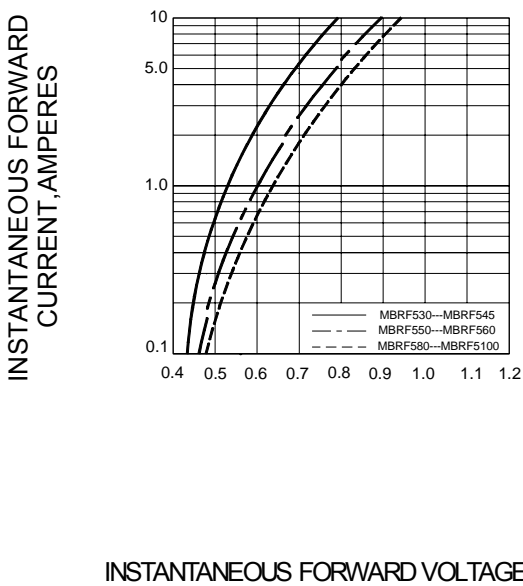
**FIG.1 – FORWARD CURRENT DERATING CURVE**



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



**FIG.3 – TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC PER LEG**



**FIG.4 – TYPICAL REVERSE CHARACTERISTICS**

