

SCHOTTKY BARRIER RECTIFIERS

VOLTAGE RANGE: 30 - 100 V
CURRENT: 7.5 A

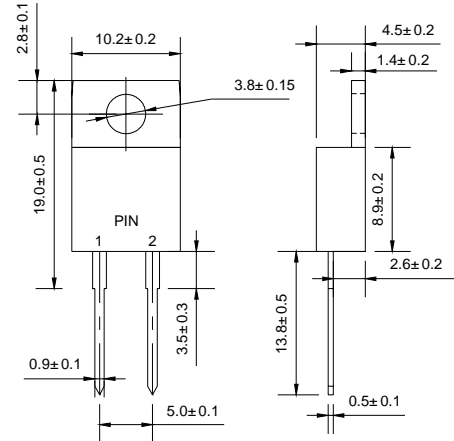
FEATURES

- ◇ 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 TO-220AC, molded plastic body
- ◇ Terminals: Leads, solderable per MIL-STD-750, Method 2026
- ◇ Polarity: As marked
- ◇ Position: Any
- ◇ Weight: 0.064 ounces, 1.81 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 730	MBR 735	MBR 740	MBR 745	MBR 750	MBR 760	MBR 780	MBR 7100	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 @ $T_c = 125^\circ\text{C}$	$I_{F(AV)}$	7.5								A	
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	150								A	
Maximum forward voltage ($I_F=7.5\text{A}, T_c=125^\circ\text{C}$) ($I_F=7.5\text{A}, T_c=25^\circ\text{C}$) (Note 1) ($I_F=15\text{A}, T_c=25^\circ\text{C}$)	V_F		0.57			0.70		-		V	
			0.70			0.80		0.85			
			0.84			0.95		-			
Maximum reverse current @ $T_c=25^\circ\text{C}$ at rated DC blocking voltage @ $T_c=125^\circ\text{C}$	I_R		0.1						0.5		m A
			15						50		
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

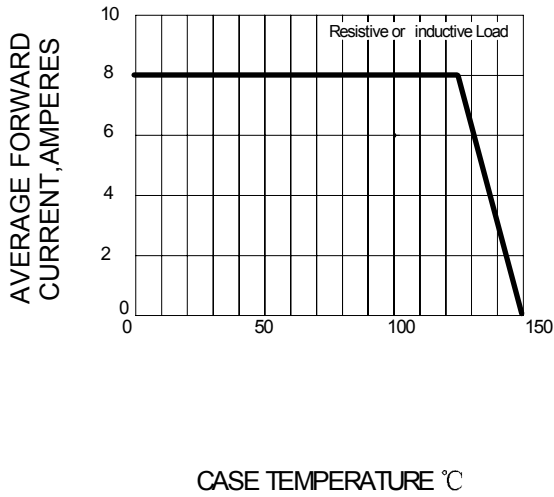


FIG.2 – MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

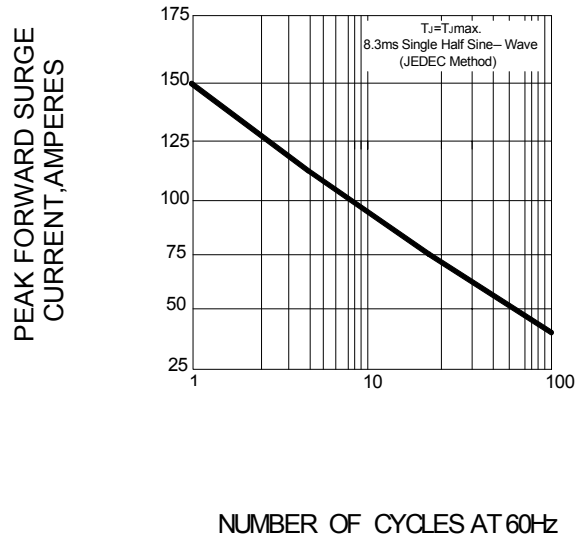


FIG.3 – TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC PER LEG

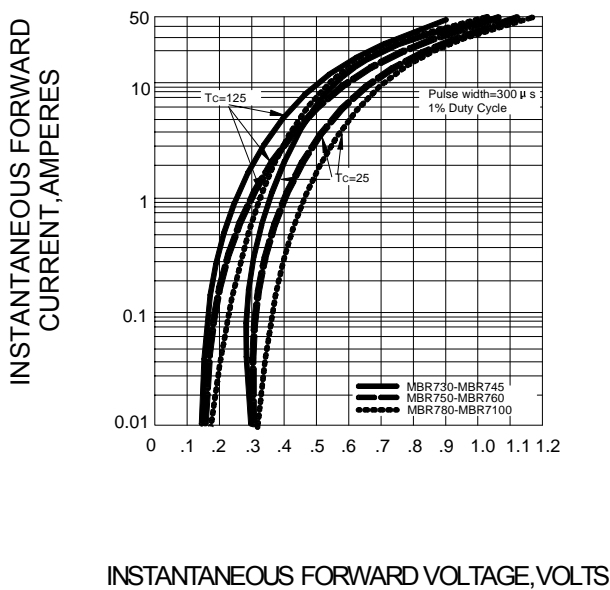


FIG.4 – TYPICAL REVERSE CHARACTERISTICS

