



# MBRF1020 THRU MBRF10100

## SCHOTTKY BARRIER RECTIFIER

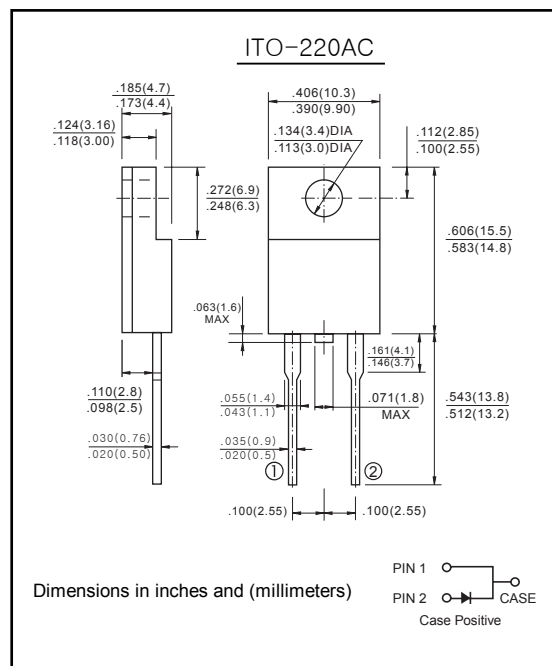
Reverse Voltage - 20 to 100 Volts      Forward Current - 10.0 Ampere

### FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Dual rectifier construction, positive center tap
- Metal silicon junction, majority carrier conduction
- Low power loss, high efficiency
- Guardring for overvoltage protection
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications

### MECHANICAL DATA

- Case: JEDEC ITO-220AC molded plastic body
- Terminals: Plated leads, solderable per MIL-STD-750, Method 2026
- High temperature soldering guaranteed:  
250°C/10 seconds, 0.25" (6.35mm) from case
- Polarity: As marked
- Mounting Position: Any
- Mounting Torque: 10 in-lbs maximum
- Weight: 2.24 grams (approx.)



### 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 current derate by 20%.

Characteristic	Symbol	MBRF 1020	MBRF 1030	MBRF 1040	MBRF 1045	MBRF 1050	MBRF 1060	MBRF 1080	MBRF 10100	Unit	
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>	20	30	40	45	50	60	80	100	V	
Working Peak Reverse Voltage	V <sub>RWM</sub>									V	
DC Blocking Voltage	V <sub>R</sub>									V	
RMS Reverse Voltage	V <sub>R(RMS)</sub>	14	21	28	32	35	42	56	70	V	
Average Rectified Output Current @T <sub>C</sub> = 95°C	I <sub>O</sub>	10								A	
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	150								A	
Forward Voltage @I <sub>F</sub> = 10.0A	V <sub>FM</sub>	0.55			0.75		0.85			V	
Peak Reverse Current @T <sub>A</sub> = 25°C At Rated DC Blocking Voltage @T <sub>A</sub> = 100°C	I <sub>RM</sub>	0.5				50					mA
Typical Junction Capacitance (Note 1)	C <sub>j</sub>	700								pF	
Operating and Storage Temperature Range	T <sub>j</sub> , T <sub>STG</sub>	-65 to +150								°C	

Note: 1. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.



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## RATINGS AND CHARACTERISTIC CURVES

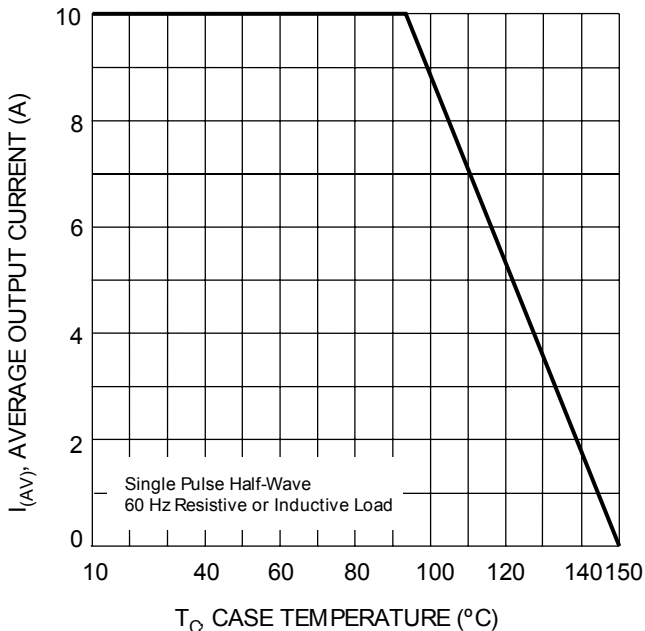


Fig. 1 Forward Current Derating Curve

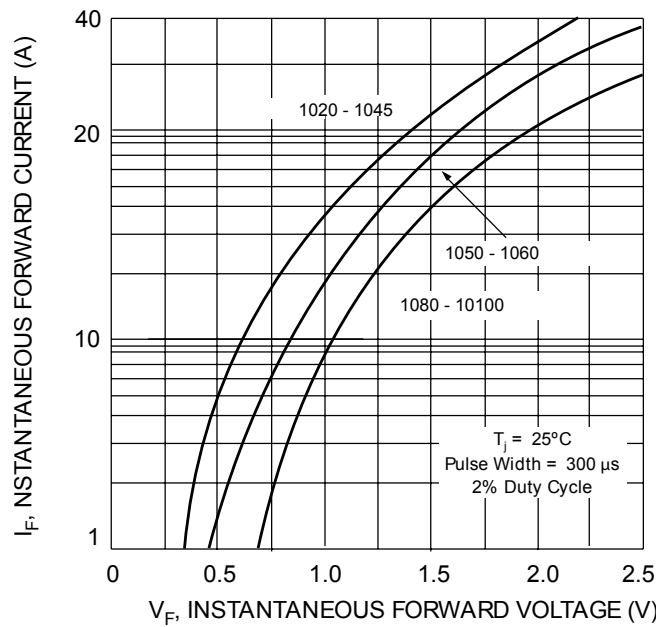


Fig. 2 Typical Forward Characteristics

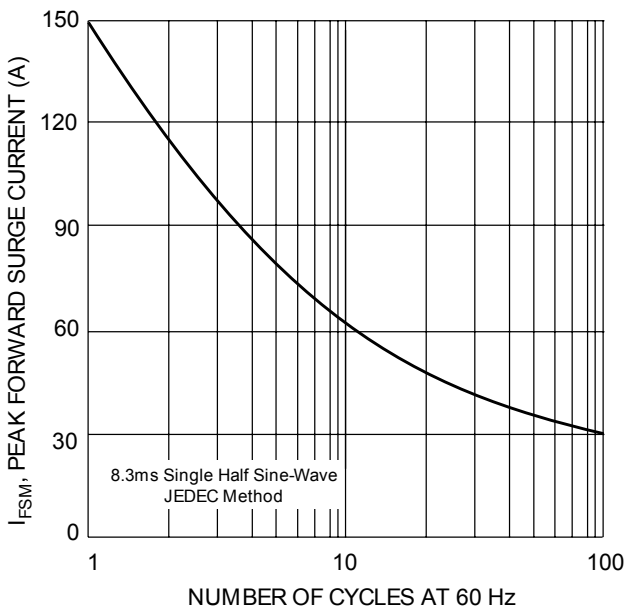


Fig. 3 Maximum Non-Repetitive Peak Fwd Surge Current

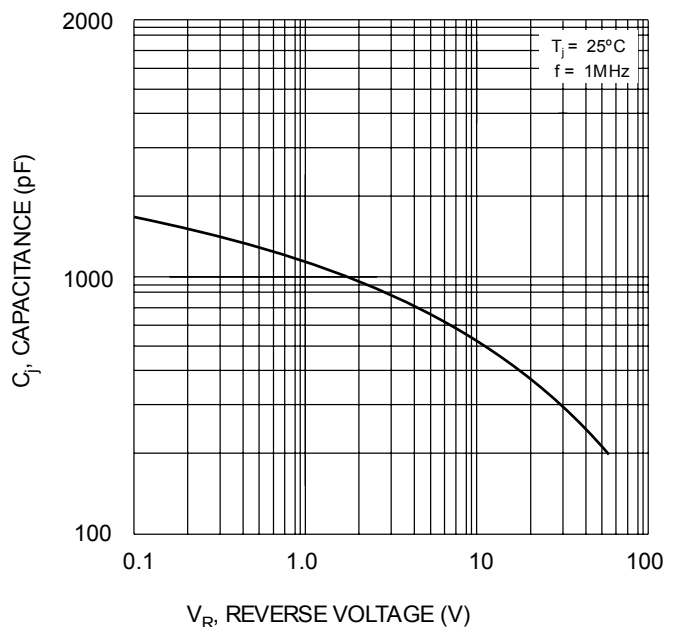


Fig. 4 Typical Junction Capacitance