



# MBRF3020 THRU MBRF30200

## 30.0 AMP SCHOTTKY BARRIER RECTIFIERS



### FEATURES

- \* Low forward voltage drop
- \* High current capability
- \* High reliability
- \* High surge current capability
- \* Good for switching mode application

### MECHANICAL DATA

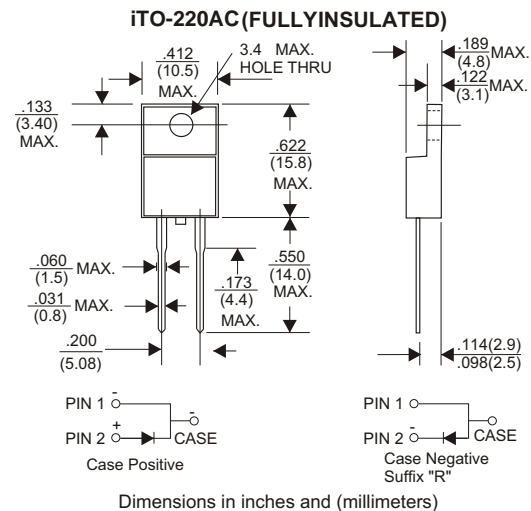
- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Lead: Lead solderable per MIL-STD-202, method 208 guaranteed
- \* Polarity: As Marked
- \* Mounting position: Any

### VOLTAGE RANGE

20 to 200 Volts

### CURRENT

30.0 Amperes



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating 25°C ambient temperature unless otherwise specified.  
Single phase half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

TYPE NUMBER	MBRF3020	MBRF3045	MBRF3060	MBRF3080	MBRF30100	MBRF30150	MBRF30200	UNITS
Maximum Recurrent Peak Reverse Voltage	20	45	60	80	100	150	200	V
Maximum RMS Voltage	14	32	42	56	70	105	140	V
Maximum DC Blocking Voltage	20	45	60	80	100	150	200	V
Maximum Average Forward Rectified Current at T <sub>c</sub> =125°C	30							A
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	250							A
Maximum Instantaneous Forward Voltage at 30A	0.55	0.7	0.85		0.92			V
Maximum DC Reverse Current at Rated DC Blocking Voltage	0.1				0.02			mA
	5				2			mA
Typical Junction Capacitance (Note 1)	570							pF
Typical Thermal Resistance R <sub>θJC</sub> (Note 2)	2.5							°C/W
Operating Temperature Range T <sub>J</sub>	-65 — +150							°C
Storage Temperature Range T <sub>STG</sub>	-65 — +150							°C

#### NOTES:

1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
2. Thermal Resistance Junction to Case.

## RATING AND CHARACTERISTIC CURVES (MBRF3020 THRU MBRF30200)

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

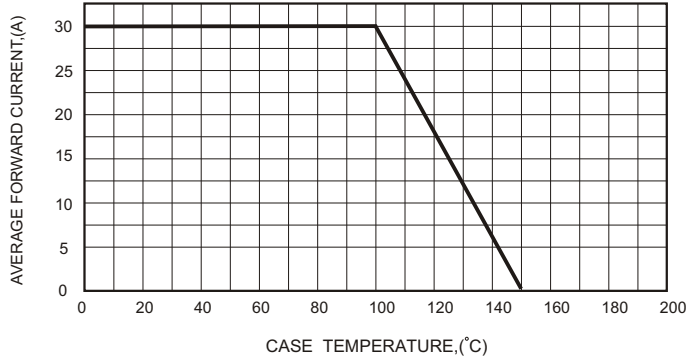


FIG.2-TYPICAL FORWARD CHARACTERISTICS

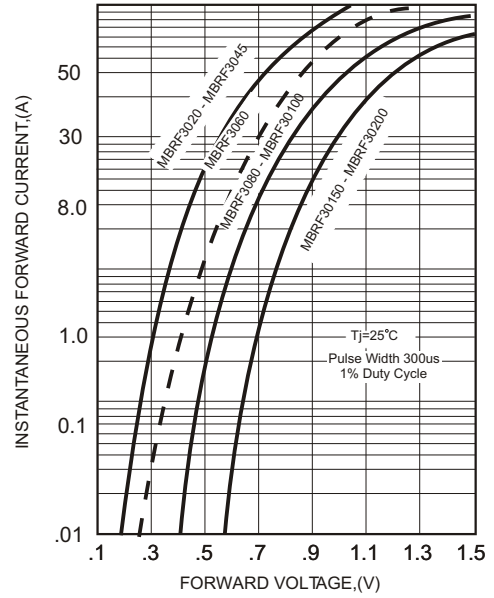


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

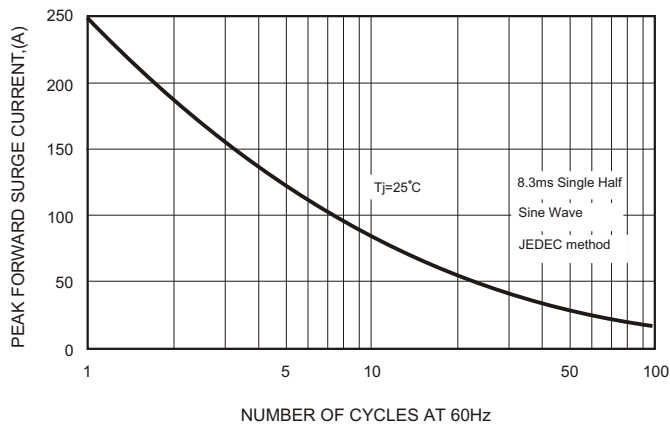


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

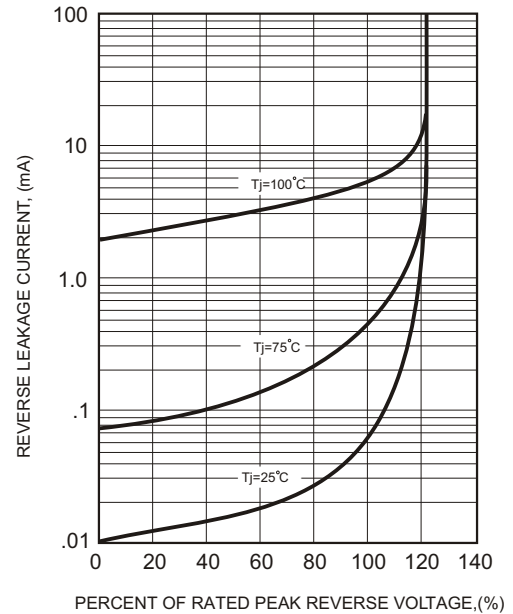


FIG.4-TYPICAL JUNCTION CAPACITANCE

