

## SCHOTTKY BARRIER RECTIFIERS

REVERSE VOLTAGE - **30 to 100**Volts  
FORWARD CURRENT - **10.0** Amperes

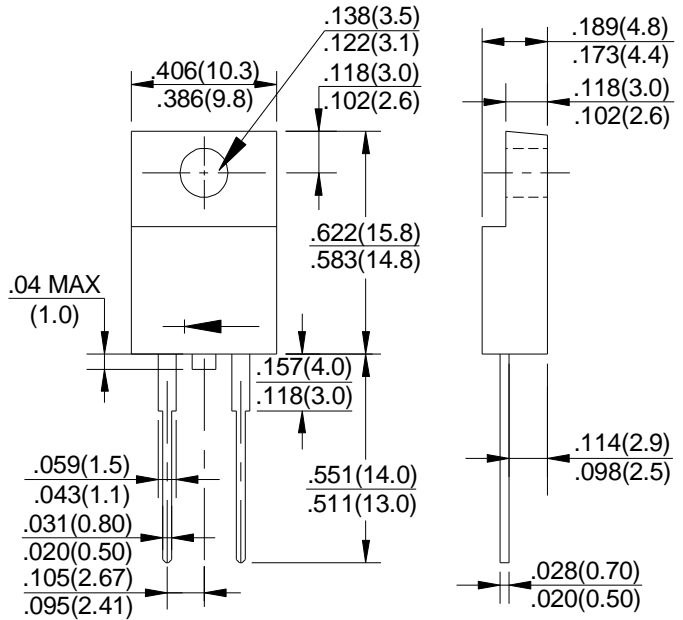
### FEATURES

- Metal of silicon rectifier , majority carrier conduction
- Guard ring for transient protection
- Low power loss,high efficiency
- High current capability,low VF
- High surge capacity
- Plastic package has UL flammability classification 94V-0
- For use in low voltage,high frequency inverters,free wheeling,and polarity protection applications

### MECHANICAL DATA

- Case: ITO-220AC molded plastic
- Polarity: As marked on the body
- Weight: 0.08ounces,2.24 grams
- Mounting position :Any

### ITO-220AC



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave ,60Hz, resistive or inductive load.

For capacitive load, derate current by 20%

CHARACTERISTICS	SYMBOL	MBRF1030	MBRF1040	MBRF1050	MBRF1060	MBRF1080	MBRF10100	UNIT
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	30	40	50	60	80	100	V
Maximum RMS Voltage	V <sub>RMS</sub>	21	28	35	42	56	70	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	30	40	50	60	80	100	V
Maximum Average Forward Rectified Current ( See Fig.1)	I <sub>(AV)</sub>	10.0						A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Super Imposed on Rated Load (JEDEC Method)	I <sub>FSM</sub>	150						A
Peak Forward Voltage (Note1) IF=10A @T <sub>J</sub> =25°C IF=10A @T <sub>J</sub> =125°C IF=20A @T <sub>J</sub> =25°C IF=20A @T <sub>J</sub> =125°C	V <sub>F</sub>	0.70 0.57 0.84 0.72		0.80 0.70 0.95 0.85		0.85 0.71 - -		V
Maximum DC Reverse Current at Rated DC Bolcking Voltage	I <sub>R</sub>	0.1 15		0.1 10		0.1 6.0		mA
Typical Junction Capacitance (Note2)	C <sub>J</sub>	400				1100		pF
Typical Thermal Resistance (Note3)	R <sub>θJC</sub>	2.5				2.0		°C/W
Operating Temperature Range	T <sub>J</sub>	-55 to +150						°C
Storage Temperature Range	T <sub>STG</sub>	-55 to +175						°C

NOTES:1.300us pulse width,2% duty cycle.

2.Measured at 1.0 MHz and applied reverse voltage of 4.0V DC.

3.Thermal resistance junction to case.

**RATING AND CHARACTERISTIC CURVES**  
**MBRF1030 thru MBRF10100**



FIG. 1 – FORWARD CURRENT DERATING CURVE

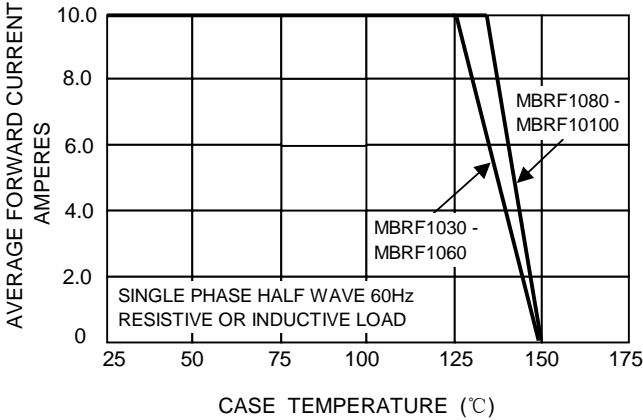


FIG. 2 – MAXIMUM NON-REPETITIVE SURGE CURRENT

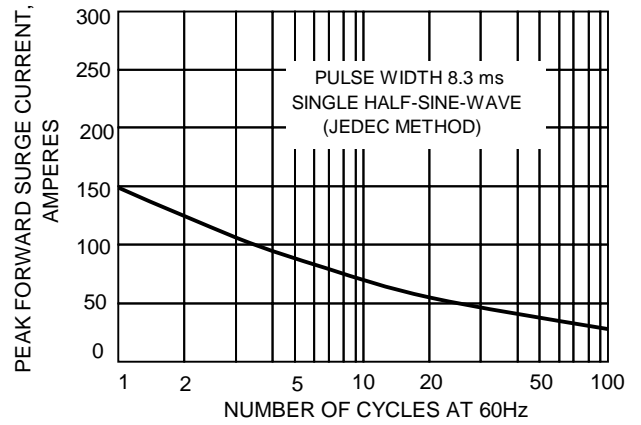


FIG.3-TYPICAL REVER CHARACTERISTICS

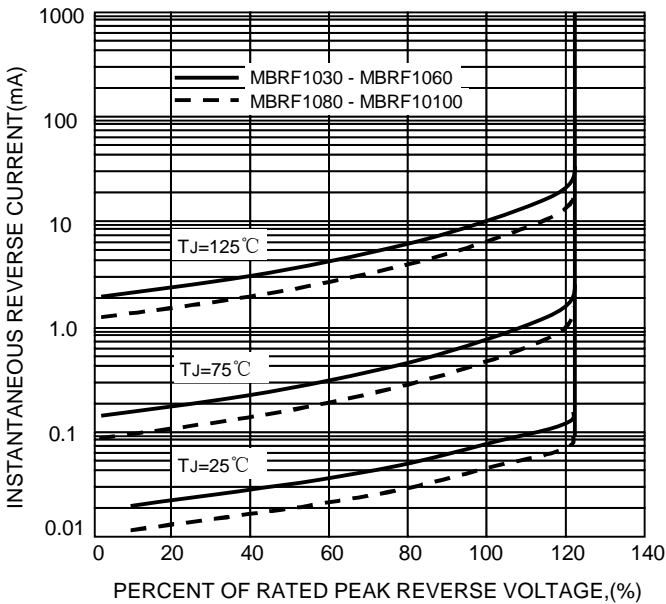


FIG.4-TYPICAL FORWARD CHARACTERISTICS

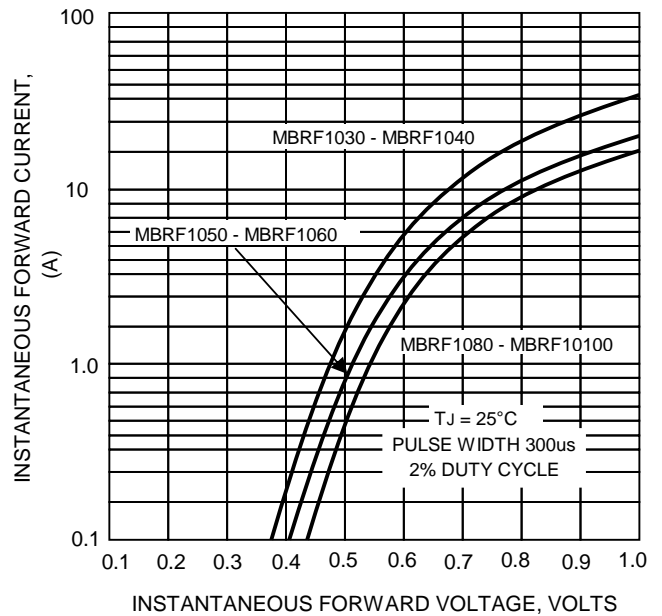


FIG.5 – TYPICAL JUNCTION CAPACITANCE

