

# Schottky Barrier Rectifier



## 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	: TO-220AC molded plastic
Polarity	: As marked on the body
Weight	: 0.08 ounces, 2.24 grams
Mounting Position	: Any
Reverse Voltage	: 100 Volts
Forward Current	: 10 Amperes

## 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	Values	Unit
Max. Recurrent Peak Reverse Voltage	$V_{RRM}$	100	V
Max. RMS Voltage	$V_{RMS}$	70	
Max. DC Blocking Voltage	$V_{DC}$	100	
Max. Average Forward Rectified Current (See Fig.1)	$I_{(AV)}$	10	A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Super Imposed on Rated Load (JEDEC Method)	$I_{FSM}$	150	
Peak Forward Voltage (Note 1) $I_F=10A @T_J=25^{\circ}C$ $I_F=10A @T_J=125^{\circ}C$ $I_F=20A @T_J=25^{\circ}C$ $I_F=20A @T_J=125^{\circ}C$	$V_F$	0.85 0.71 - -	V
Max. DC Reverse Current at Rated DC Blocking Voltage at $T_A = 25^{\circ}C$ $T_A = 125^{\circ}C$	$I_R$	0.1 6	mA
Typical Junction Capacitance (Note 2)	$C_J$	1100	pF
Typical Thermal Resistance (Note 3)	$R_{\theta JC}$	2	°C/W
Operating Temperature Range	$T_J$	-55 to +150	°C
Storage Temperature Range	$T_{STG}$	-55 to +175	°C

## Notes:

1. 300µs pulse width, 2% duty cycle.
2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
3. Thermal resistance junction to case
4. The typical data above is for reference only

## Ratings and Characteristic Curves

FIG. 1 – FORWARD CURRENT DERATING CURVE

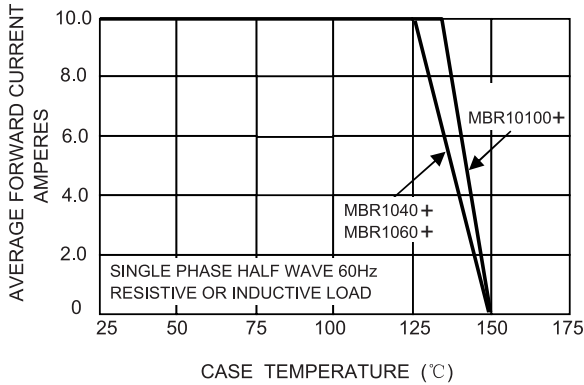


FIG. 2 – MAXIMUM NON-REPETITIVE SURGE CURRENT

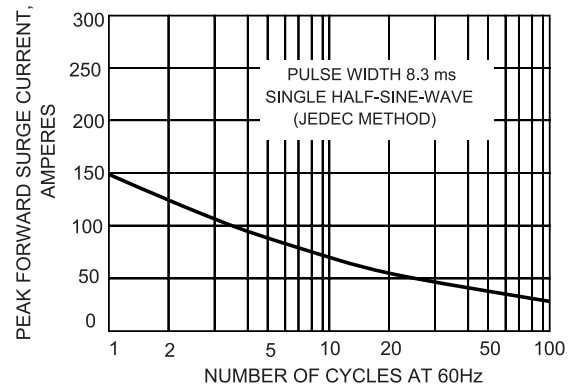


FIG.3-TYPICAL REVERSE

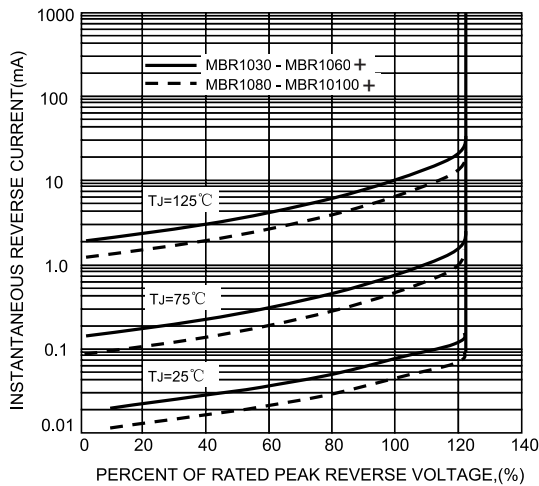


FIG.4-TYPICAL FORWARD CHARACTERISTICS

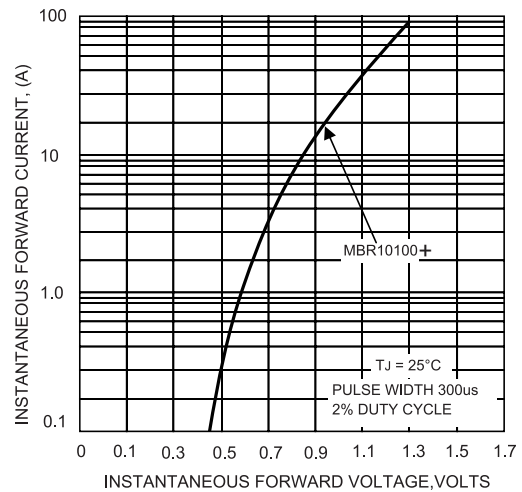
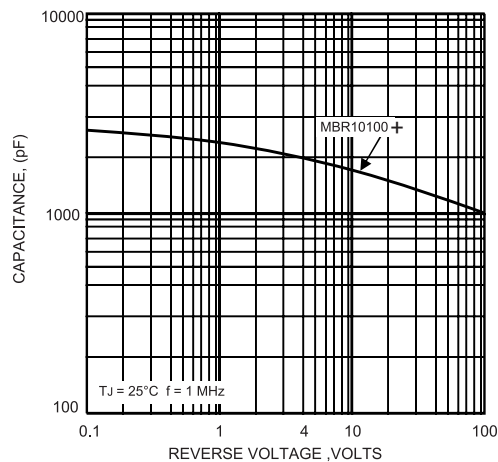
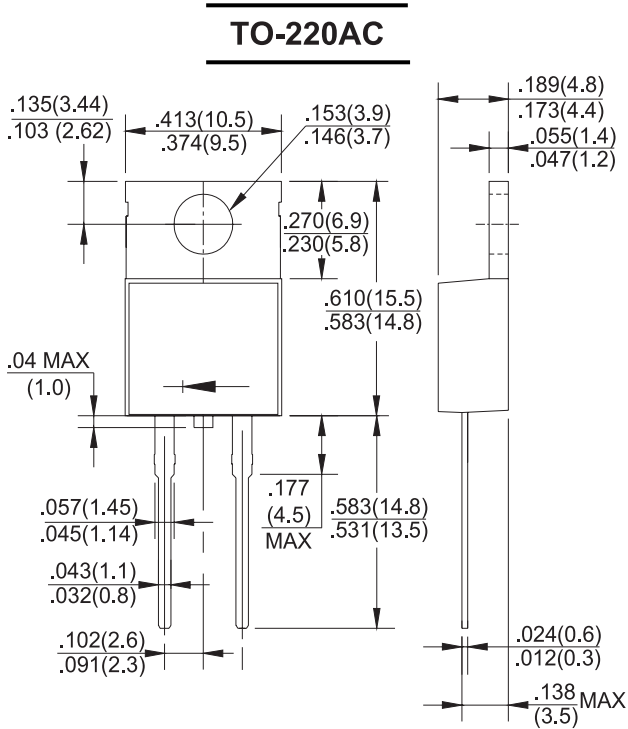


FIG.5 – TYPICAL JUNCTION CAPACITANCE



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## Dimensions:



Dimensions : Inches (Millimetres)

## Part Number Table

Description	Part Number
Schottky Barrier Rectifiers	MBR10100+

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