



MBR1630 thru MBR16150

SCHOTTKY BARRIER RECTIFIERS

REVERSE VOLTAGE - 30 to 150Volts
FORWARD CURRENT - 16.0 Amperes

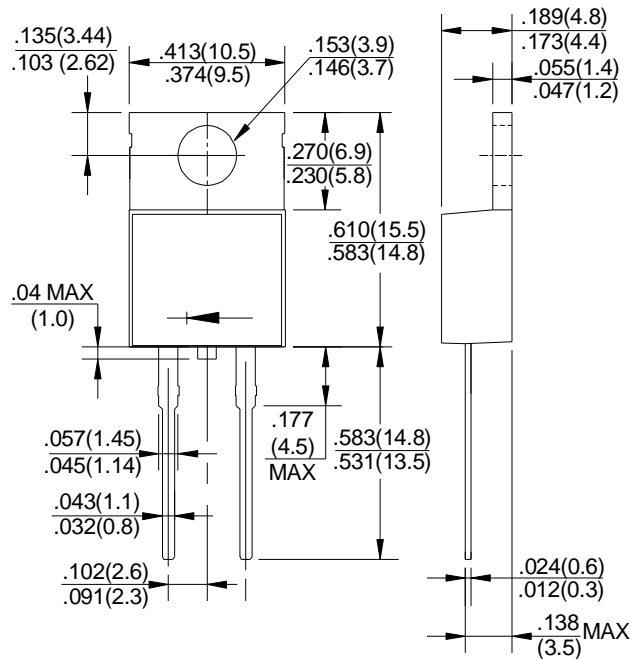
FEATURES

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

TO-220AC



Dimensions in inches and (millimeters)

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	MBR 1630	MBR 1640	MBR 1650	MBR 1660	MBR 1680	MBR 16100	MBR 16150	UNIT
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	30	40	50	60	80	100	150	V
Maximum RMS Voltage	V _{RMS}	21	28	35	42	56	70	105	V
Maximum DC Blocking Voltage	V _{DC}	30	40	50	60	80	100	150	V
Maximum Average Forward Rectified Current (See Fig.1)	I _(AV)	16.0							A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Super Imposed on Rated Load (JEDEC Method)	I _{FSM}	150							A
Peak Forward Voltage (Note1) IF=16A @T _J =25°C	V _F	0.63		0.75		0.85		0.95	V
IF=16A @T _J =125°C		0.57		0.65		0.75		0.92	
Maximum DC Reverse Current @T _J =25°C	I _R	0.5		0.5		0.3		0.1	mA
at Rated DC Bolcking Voltage @T _J =125°C		15		10		7.5		5	
Typical Junction Capacitance (Note2)	C _J	500							pF
Typical Thermal Resistance (Note3)	R _{θJC}	3.0							°C/W
Operating Temperature Range	T _J	-55 to +150							°C
Storage Temperature Range	T _{STG}	-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.

REV. 1, 30-Dec-2011

FIG. 1 – FORWARD CURRENT DERATING CURVE

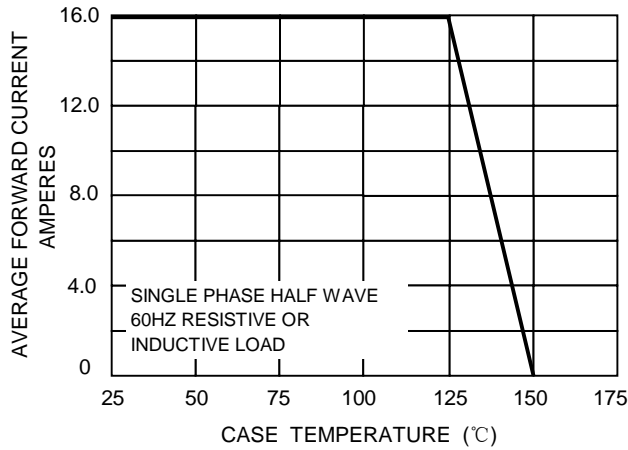


FIG. 2 – MAXIMUM NON-REPETITIVE SURGE CURRENT

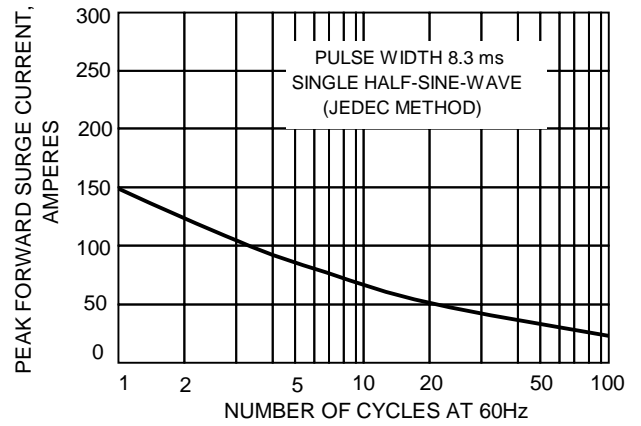


FIG.3-TYPICAL REVER CHARACTERISTICS

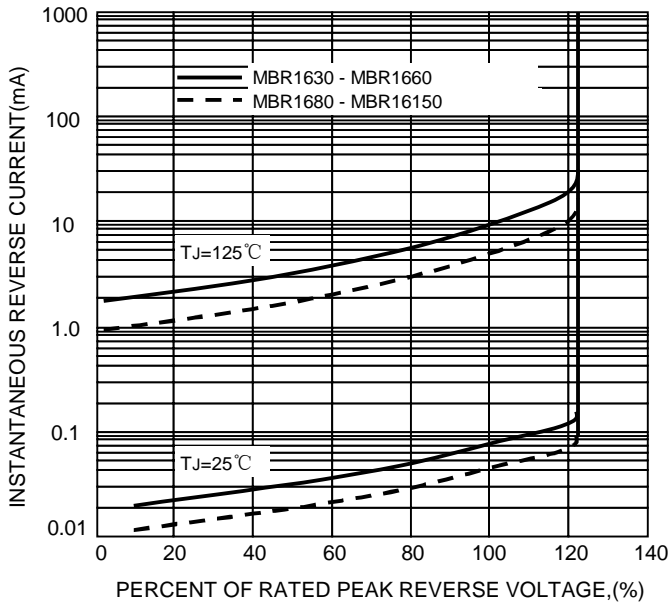


FIG.4-TYPICAL FORWARD CHARACTERISTICS

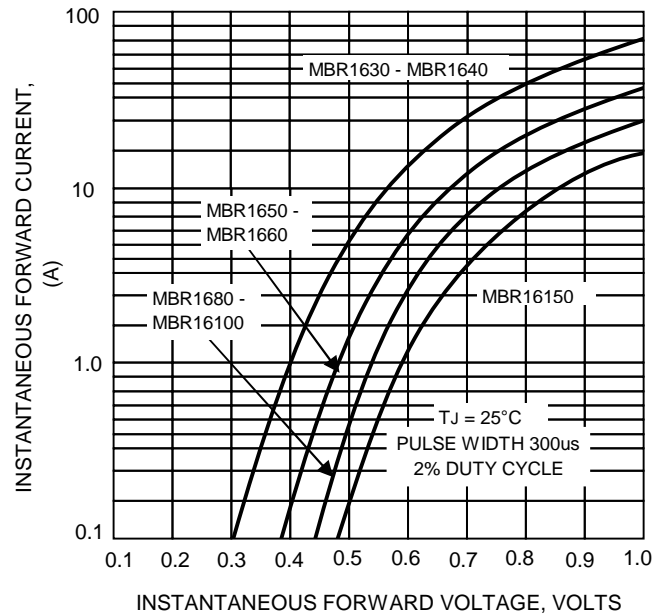


FIG.5 – TYPICAL JUNCTION CAPACITANCE

