



# MBRF1630 thru MBRF16150

<b>SCHOTTKY BARRIER RECTIFIERS</b>	<b>REVERSE VOLTAGE - 30 to 150Volts</b> <b>FORWARD CURRENT - 16.0 Amperes</b>
<p><b>FEATURES</b></p> <ul style="list-style-type: none"> <li>●Metal of silicon rectifier , majority carrier conduction</li> <li>●Guard ring for transient protection</li> <li>●Low power loss,high efficiency</li> <li>●High current capability,low VF</li> <li>●High surge capacity</li> <li>●Plastic package has UL flammability classification 94V-0</li> <li>●For use in low voltage,high frequency inverters,free wheeling,and polarity protection applications</li> </ul> <p><b>MECHANICAL DATA</b></p> <ul style="list-style-type: none"> <li>●Case: ITO-220AC molded plastic</li> <li>●Polarity: As marked on the body</li> <li>●Weight: 0.08ounces,2.24 grams</li> <li>●Mounting position :Any</li> </ul>	<p><b>ITO-220AC</b></p> <p>Dimensions in inches and (millimeters)</p>

**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	MBRF 1630	MBRF 1640	MBRF 1650	MBRF 1660	MBRF 1680	MBRF 16100	MBRF 16150	UNIT
Maximum Recurrent Peak Reverse Voltage	VRRM	30	40	50	60	80	100	150	V
Maximum RMS Voltage	VRMS	21	28	35	42	56	70	105	V
Maximum DC Blocking Voltage	VDC	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)	IFSM	150							A
Peak Forward Voltage (Note1) IF=16A @TJ=25°C IF=16A @TJ=125°C	VF	0.63		0.75		0.85		0.95	V
		0.57		0.65		0.75		0.92	
Maximum DC Reverse Current at Rated DC Bolcking Voltage @TJ=25°C @TJ=125°C	IR	0.5		0.5		0.3		0.1	mA
		15		10		7.5		5	
Typical Junction Capacitance (Note2)	CJ	500							pF
Typical Thermal Resistance (Note3)	RθJC	3.0							°C/W
Operating Temperature Range	TJ	-55 to +150							°C
Storage Temperature Range	TSTG	-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

## MBRF1630 thru MBRF16150



FIG. 1 – FORWARD CURRENT DERATING CURVE

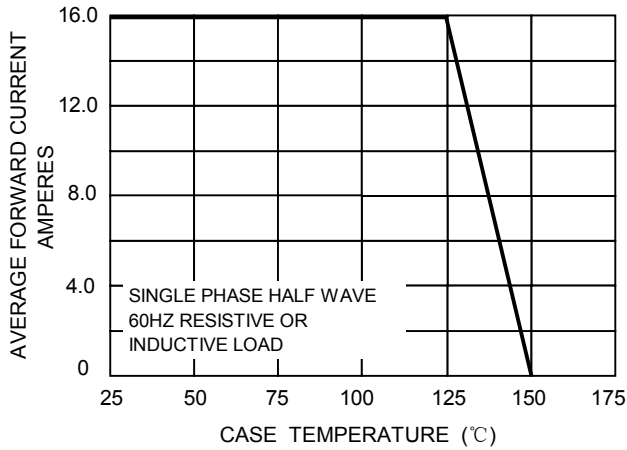


FIG. 2 – MAXIMUM NON-REPETITIVE SURGE CURRENT

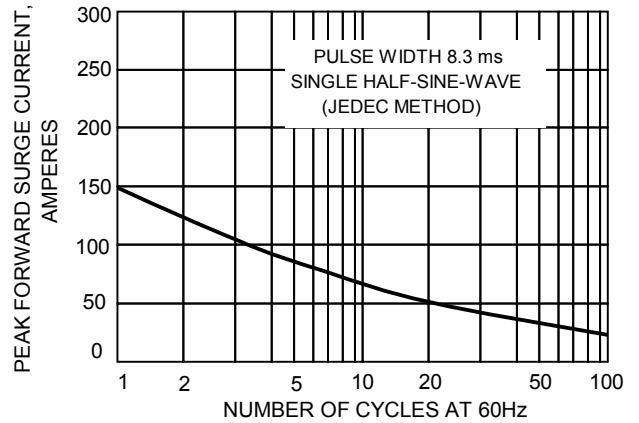


FIG.3-TYPICAL REVER CHARACTERISTICS

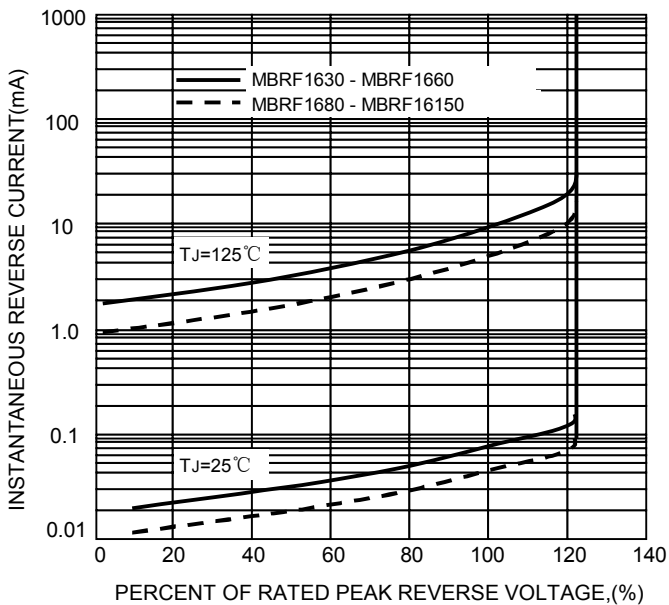


FIG.4-TYPICAL FORWARD CHARACTERISTICS

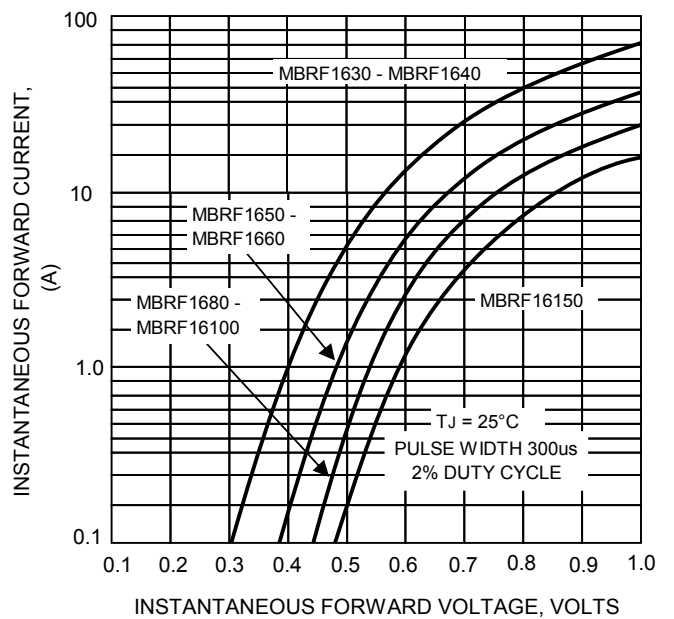


FIG.5 – TYPICAL JUNCTION CAPACITANCE

