

Schottky Barrier Rectifiers

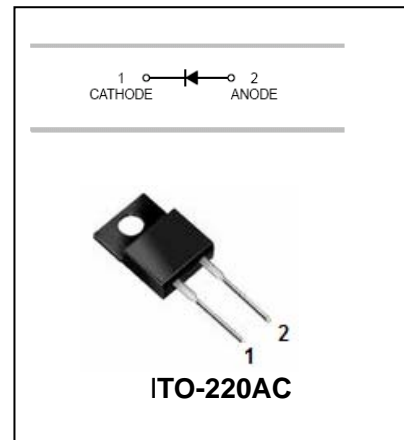
MBRF2020---MBRF20100

FEATURES

- High surge capacity.
- For use in low voltage,high frequency Inverters,free wheeling,and polarity protection applications.
- Metal silicon junction,majority carrier conduction.
- High current capacity,lowforward voltage drop.
- Guard ring for over voltage protection.



Lead-free



MAXIMUM RATING operating temperature range applies unless otherwise specified

Symbol	Parameter	MBRF 2020	MBRF 2030	MBRF 2040	MBRF 2045	MBRF 2050	MBRF 2060	MBRF 2080	MBRF 20100	Unit
V_{RRM}	Recurrent Peak Reverse Voltage	20	30	40	45	50	60	80	100	V
V_{RMS}	RMS Voltage	14	21	28	32	35	42	56	70	V
V_{DC}	DC Blocking Voltage	20	30	40	45	50	60	80	100	V
$I_{F(AV)}$	Average Forward Total Device Rectified Current @ $T_A=100^{\circ}C$	20								A
I_{FSM}	Peak Forward Surge Current 8.3ms Single Half Sine-wave Superimposed on rated load	150								A
$R_{\theta JC}$	Thermal Resistance (Note1)	2								$^{\circ}C/W$
$T_j T_{stg}$	Operating Junction and Storage Temperature Range	-55 to +150								$^{\circ}C$

Note:1.Thermal resistance from junction to case.



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ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

Parameter	Symbol	Test conditions	MBRF2020- MBRF2045	MBRF2050- MBRF2060	MBRF2080- MBRF20100	UNIT
			MAX			
Reverse Current	I_R	$V_R=V_{RRM}, T_A=25^\circ C$ $V_R=V_{RRM}, T_A=125^\circ C$	0.5 50			mA
Forward Voltage	V_F (Note1)	$I_F=20A, T_A=25^\circ C$ $I_F=20A, T_A=125^\circ C$	0.70 0.57	0.80 0.70	0.85 0.70	V

Note:1.Pulse test:300µs pulse width,1% duty cycle.

TYPICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

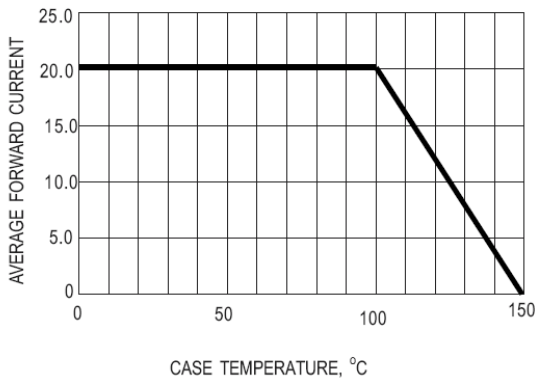


Fig.1- FORWARD CURRENT DERATING CURVE

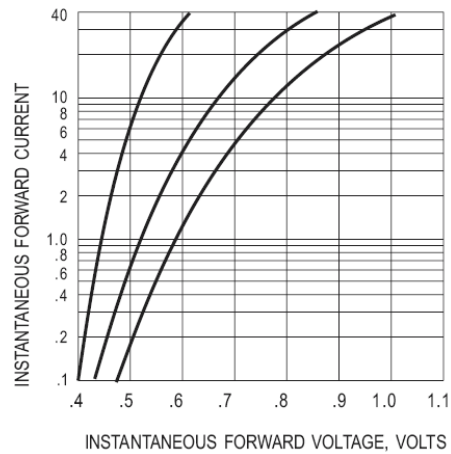


Fig.2- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC

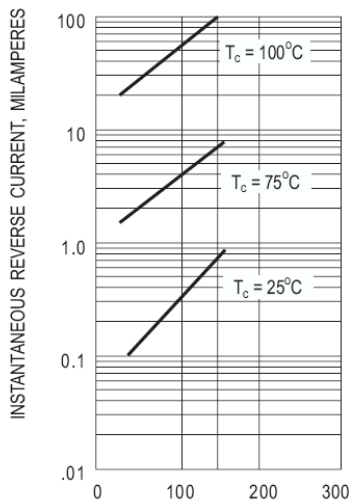


Fig.3- TYPICAL REVERSE CHARACTERISTIC

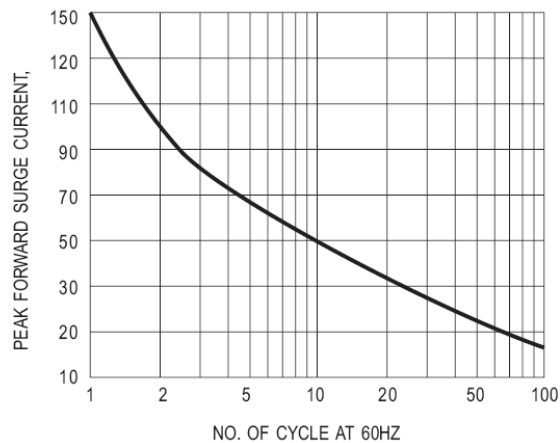


Fig.4- MAXIMUM NON-REPETITIVE SURGE CURRENT

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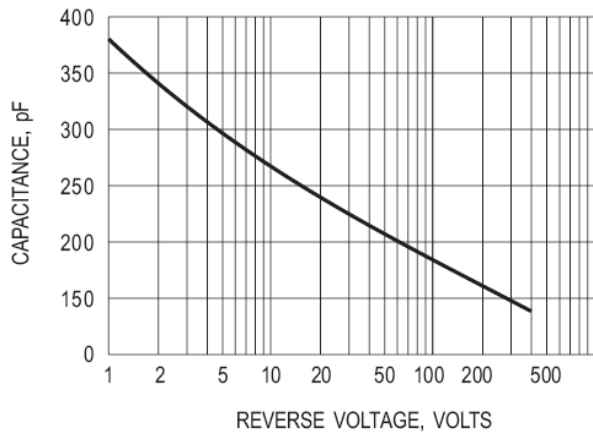


Fig.5- TYPICAL JUNCTION CAPACITANCE

PACKAGE OUTLINE

Plastic surface mounted package

ITO-220AC

