

## Schottky Barrier Rectifiers

## MBRF1030-MBRF10200

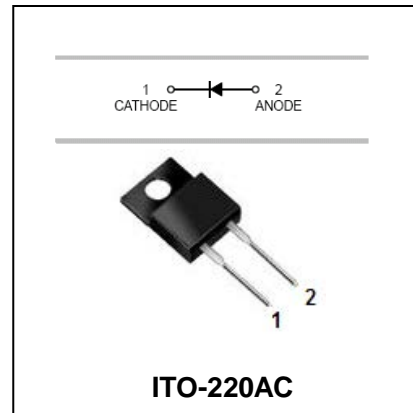
### FEATURES

- 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

HF



### Ordering Information

Part Number	Package	Shipping	Marking Code
MBRF1030□	ITO-220AC	50/Tube	MBRF1030
MBRF1035□	ITO-220AC	50/Tube	MBRF1035
MBRF1040□	ITO-220AC	50/Tube	MBRF1040
MBRF1045□	ITO-220AC	50/Tube	MBRF1045
MBRF1050□	ITO-220AC	50/Tube	MBRF1050
MBRF1060□	ITO-220AC	50/Tube	MBRF1060
MBRF1080□	ITO-220AC	50/Tube	MBRF1080
MBRF10100□	ITO-220AC	50/Tube	MBRF10100
MBRF10150□	ITO-220AC	50/Tube	MBRF10150
MBRF10200□	ITO-220AC	50/Tube	MBRF10200

□: none is for Lead Free package;

"G" is for Halogen Free package

### MAXIMUM RATING operating temperature range applies unless otherwise specified

Sym bol	Parameter	MBRF 1030	MBRF 1035	MBRF 1040	MBRF 1045	MBRF 1050	MBRF 1060	MBRF 1080	MBRF 10100	MBRF 10150	MBRF 10200	Un it
$V_{RRM}$	Repetitive Peak Reverse Voltage	30	35	40	45	50	60	80	100	150	200	V
$V_{RMS}$	RMS Voltage	21	25	28	32	35	42	56	70	105	140	V
$V_{DC}$	DC Blocking Voltage	30	35	40	45	50	60	80	100	150	200	V
$I_{F(AV)}$	Average Forward Rectified Current	10										A
$I_{FSM}$	Peak Forward Surge Current 8.3ms Single Half-sine-wave Superimposed on	150										A

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	Rsted Load		
$R_{\theta JC}$	Maximum Thermal Resistance(Note1)	4.0	$^{\circ}\text{C}/\text{W}$
$T_j$	Operating Junction Temperature Range	-55 to +150	$^{\circ}\text{C}$
$T_{stg}$	Storage Temperature Range	-55 to +175	$^{\circ}\text{C}$

Note:1.Thermal resistance from junction to case.

### ELECTRICAL CHARACTERISTICS @ $T_a=25^{\circ}\text{C}$ unless otherwise specified.

Parameter	Symbol	Test conditions	MBRF1030- MBRF1045	MBRF1050- MBRF1060	MBRF1080- MBRF10100	MBRF10150- MBRF10200	UNIT
			MAX				
Reverse Current	$I_R$	$V_R=V_{RRM}, T_A=25^{\circ}\text{C}$ $V_R=V_{RRM}, T_A=125^{\circ}\text{C}$	0.1 15	0.1 25	0.1 50	0.1 50	mA
Forward Voltage	$V_F$ (Note1)	$I_F=10\text{A}, T_A=25^{\circ}\text{C}$ $I_F=10\text{A}, T_A=125^{\circ}\text{C}$	0.70 0.57	0.80 0.70	0.85 0.71	0.90 0.80	V

Note:1.Pulse test:300 $\mu\text{s}$  width,1% duty cycle.

### TYPICAL CHARACTERISTICS @ $T_a=25^{\circ}\text{C}$ unless otherwise specified.

FIG.1- FORWARD CURRENT DERATING CURVE

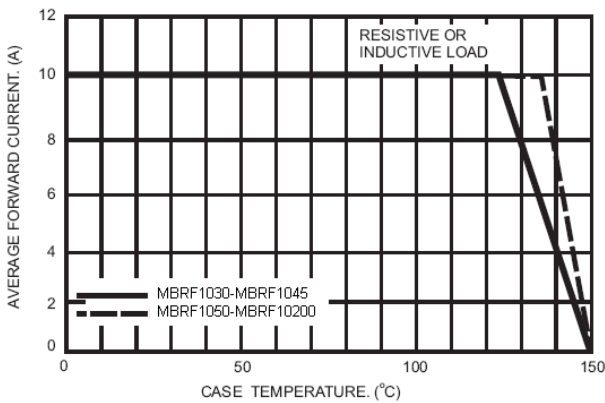
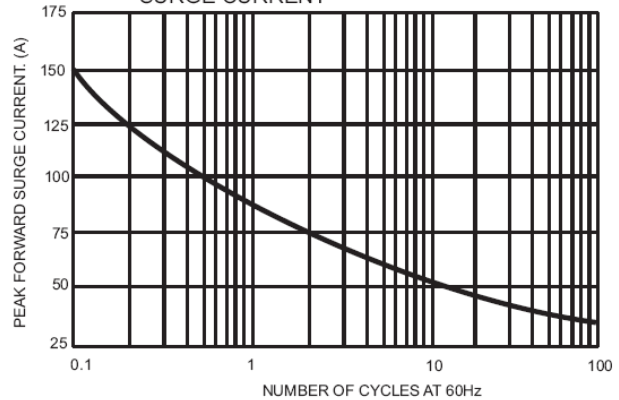


FIG.2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT



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FIG.3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

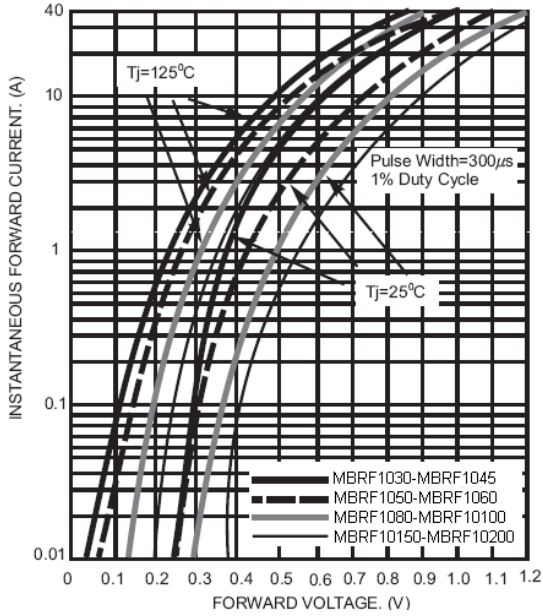
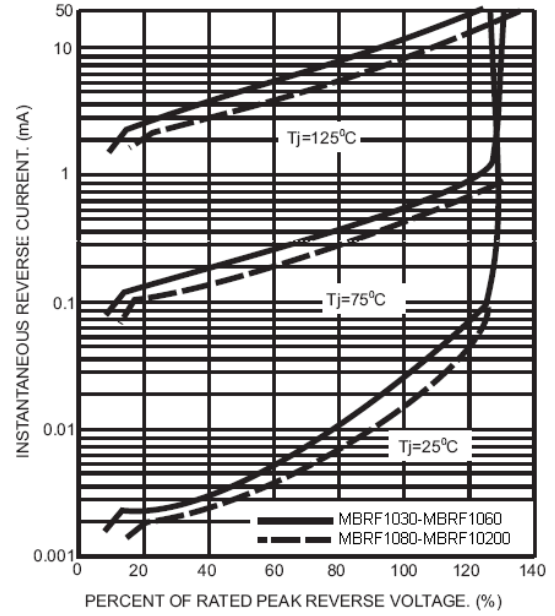


FIG.4- TYPICAL REVERSE CHARACTERISTICS



## PACKAGE OUTLINE

Plastic surface mounted package

ITO-220AC

