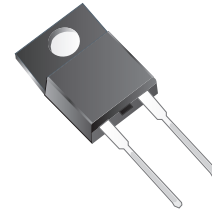


MBRF1030-G Thru. MBRF10100-G

Reverse Voltage: 30 to 100 V

Forward Current: 10 A

RoHS Device

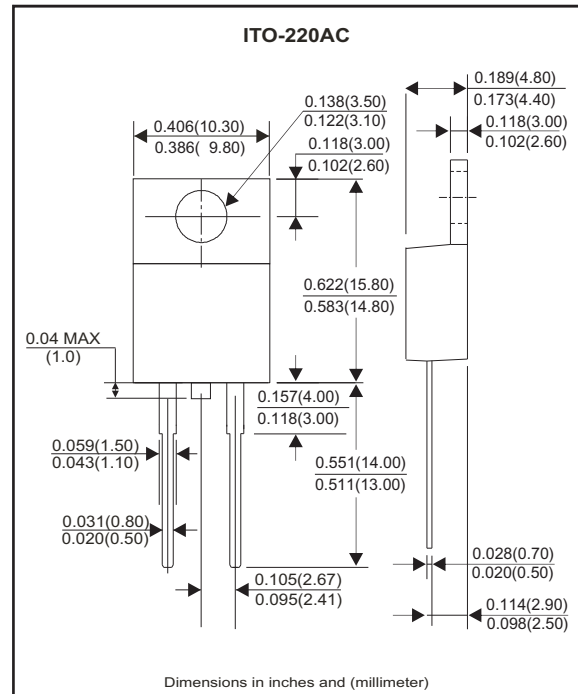


Features

- Guard ring for transient protection.
- Low power loss high efficiency.
- High current capability.
- High surge capacity.
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications.

Mechanical Data

- Case: JEDEC ITO-220AC, molded plastic body.
- Terminals: Pure tin plated, lead free. Solderable per MIL-STD-750, Method 2026
- Polarity: As marked on the body.
- Mounting position: Any
- Weight: 2.24 grams



Maximum Ratings And Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load derate current by 20%.

Parameter	Symbol	MBRF 1030-G	MBRF 1040-G	MBRF 1045-G	MBRF 1050-G	MBRF 1060-G	MBRF 1080-G	MBRF 10100-G	Unit	
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	30	40	45	50	60	80	100	V	
Maximum RMS Voltage	V_{RMS}	21	28	31.5	35	42	56	70	V	
Maximum DC Blocking Voltage	V_{DC}	30	40	45	50	60	80	100	V	
Maximum Average Forward Rectified Current (See Fig.1)	$I_{(AV)}$	10.0							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 (Note 1)	V_F	IF=10A@ Tj= 25°C		0.70		0.80		0.85		V
		IF=10A@ Tj=125°C		0.57		0.70		0.71		
		IF=20A@ Tj= 25°C		0.84		0.95		-		
		IF=20A@ Tj=125°C		0.72		0.85		-		
Maximum DC Reverse Current @ Tc= 25°C at Rate DC Blocking Voltage @ Tc= 125°C at (Note 2)	I_R	0.1		0.1		0.1		mA		
		15		10		6.0				
Typical Junction Capacitance (Note 2)	C_J	400					1100		pF	
Typical Thermal Resistance (Note 3)	$R_{\theta JC}$	2.5					2.0		°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.

RATING AND CHARACTERISTIC CURVES (MBRF1030-G Thru. MBRF10100-G)

Fig.1 - Forward Current Derating Curve

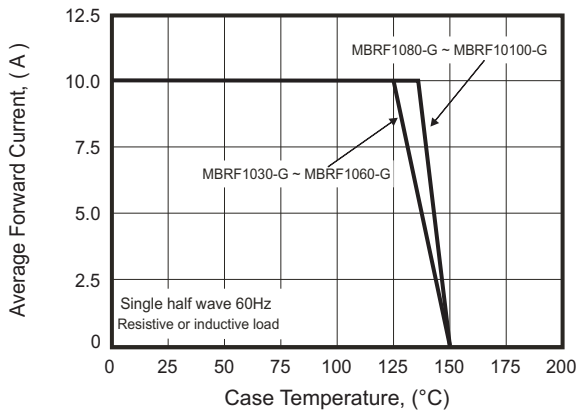


Fig.2 - Maximum Non-Repetitive Surge Current

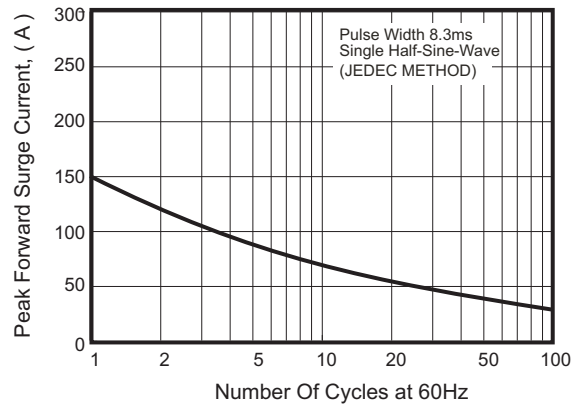


Fig.3 - Typical Reverse Characteristics

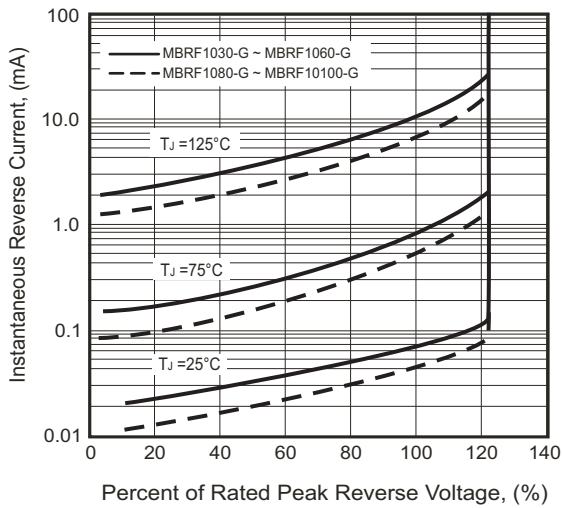


Fig.4 - Typical Revers Characteristics

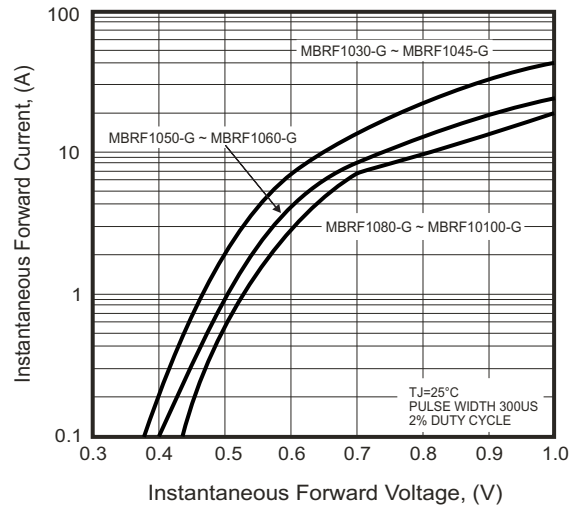
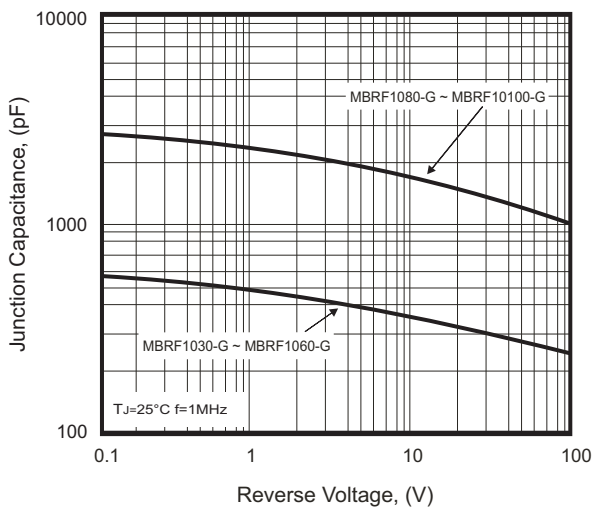
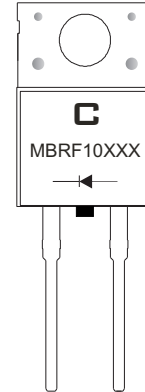


Fig.5 - Typical Junction Capacitance



Marking Code

Part Number	Marking code
MBRF1030-G	MBRF1030
MBRF1040-G	MBRF1040
MBRF1045-G	MBRF1045
MBRF1050-G	MBRF1050
MBRF1060-G	MBRF1060
MBRF1080-G	MBRF1080
MBRF10100-G	MBRF10100



XX / XXX = Product type marking code
C = Comchip Logo

Standard Packaging

Case Type	TUBE PACK	
	TUBE (pcs)	BOX (pcs)
ITO-220AC	50	2,000