



**KERSEMI**

# MBRF1030CT-G Thru. MBRF10100CT-G

**Voltage: 30 to 100 V**

**Current: 10.0 A**

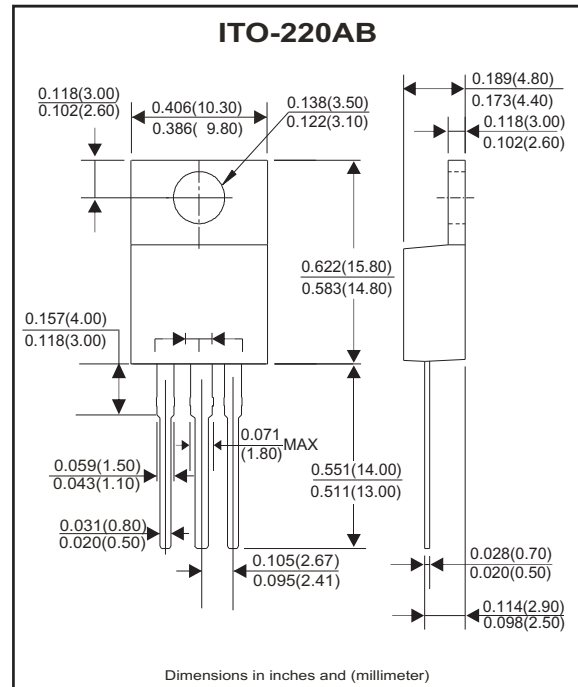
**RoHS Device**

## Features

- Metal of silicon rectifier, majority carrier conduction.
- 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: ITO-220AB, molded plastic
- Epoxy: UL 94-V0 rate flame retardant.
- 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 1030CT-G	MBRF 1040CT-G	MBRF 1045CT-G	MBRF 1050CT-G	MBRF 1060CT-G	MBRF 1080CT-G	MBRF 10100CT-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							A	
Peak Forward Surge Current , 8.3ms Single Half Sine-Wave Super Imposed On Rated Load(JEDEC Method)	$I_{FSM}$	120							A	
Peak Forward Voltage (Note 1)	$V_F$	IF=5A@ Tj= 25°C		0.70		0.80		0.85		
		IF=5A@ Tj=125°C		0.57		0.65		0.75		
		IF=10A@ Tj= 25°C		0.80		0.90		0.95		
		IF=10A@ Tj=125°C		0.70		0.75		0.85		
Maximum DC Reverse Current at Rate DC Blocking Voltage	$I_R$	@ Tj= 25°C							0.1	mA
		@ Tj= 125°C							15	
Typical Junction Capacitance (Note2)	$C_J$	170			220		300		pF	
Typical Thermal Resistance (Note3)	$R_{\theta JC}$	3.0						3.0		°C/W
Operating Temperature Range	$T_J$	-55 to +150							°C	
Storage Temperature Range	$T_{STG}$	-55 to +175							°C	

**NOTES:**

- 300us pulse width, 2% duty cycle.
- Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
- Thermal resistance junction to case.

# Schottky Barrier Rectifiers



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FIG.1 - Forward Current Derating Curve

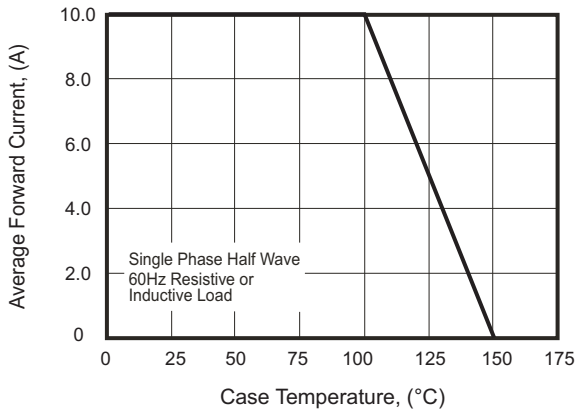


FIG.2 - Maximum Non-Repetitive Surge Current

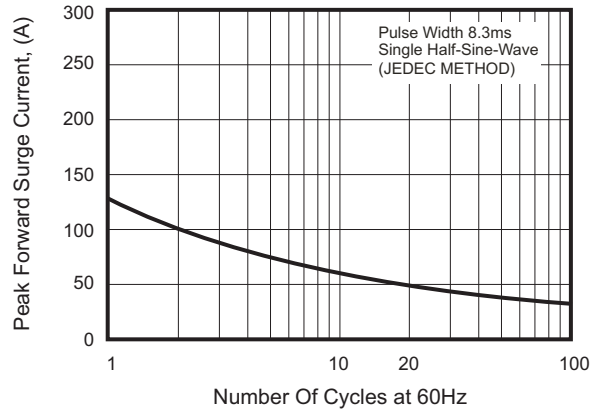


FIG.3 - Typical Revers Characteristics

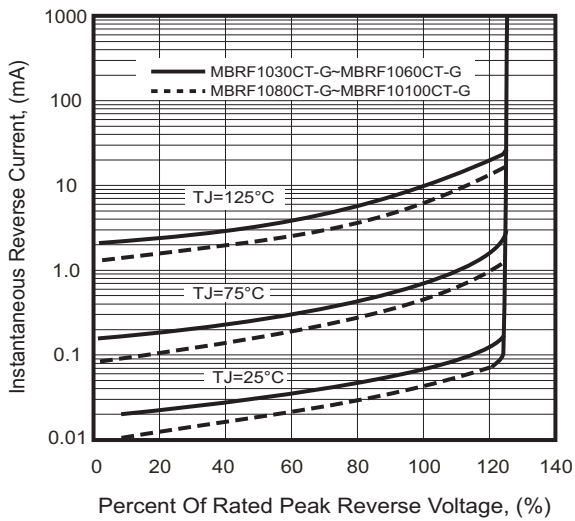


FIG.4 - Typical Forward Characteristics

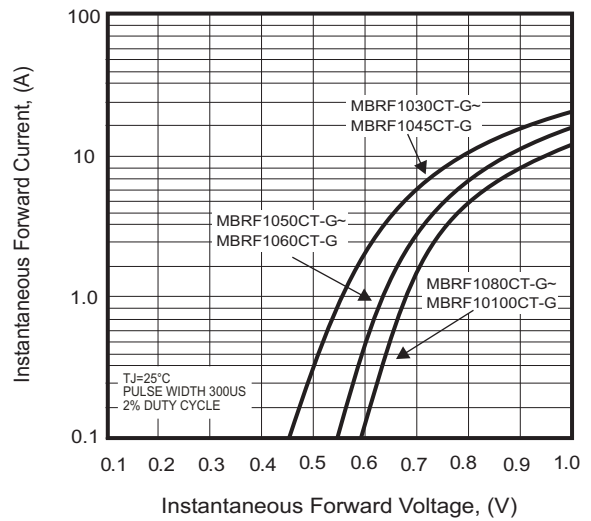
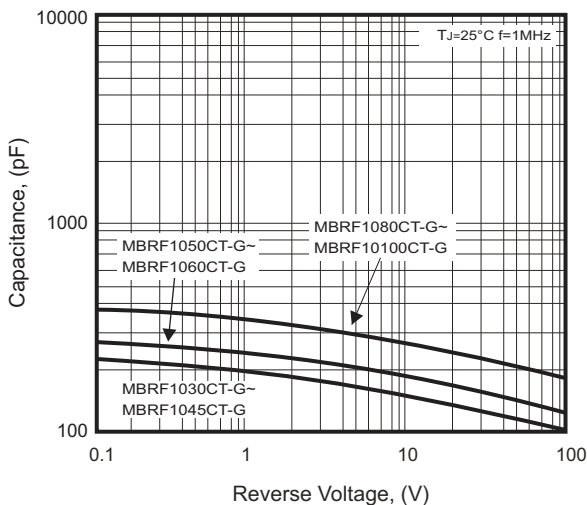
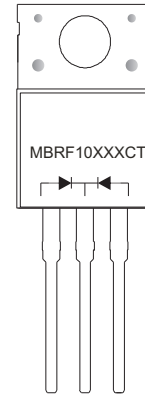


FIG.5 - Typical Junction Capacitance



## Marking Code

Part Number	Marking code
MBRF1030CT-G	MBRF1030CT
MBRF1040CT-G	MBRF1040CT
MBRF1045CT-G	MBRF1045CT
MBRF1050CT-G	MBRF1050CT
MBRF1060CT-G	MBRF1060CT
MBRF1080CT-G	MBRF1080CT
MBRF10100CT-G	MBRF10100CT



**XX / XXX = Product type marking code**  
**C = Compchip Logo**

## Standard Packaging

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