



# MBRF30L45CT - MBRF30L100CT

**30.0 AMP. Schottky Barrier Rectifiers  
ITO-220AB**

## Features

- ◆ Low power loss, high efficiency.
- ◆ High current capability, Low forward voltage drop.
- ◆ Plastic material used carries Underwriters Laboratory Classifications UL 94V-0
- ◆ High surge current capability.
- ◆ Guard-ring for transient protection.
- ◆ For use in low voltage, high frequency invertor, free wheeling, and polarity protection application.
- ◆ High temperature soldering guaranteed: 260°C /10 seconds /.375",(9.5mm) lead lengths at 5 lbs., (2.3kg) tension

## Mechanical Data

- ◆ Cases: JEDEC ITO-220AB Molded plastic
- ◆ Terminal: Pure tin plated, lead free, solderable per MIL-STD-202, Method 208 guaranteed
- ◆ Polarity: As marked
- ◆ Mounting position : Any
- ◆ Mounting Torque : 5 in-lbs. max.
- ◆ Weight: 2.24 gram

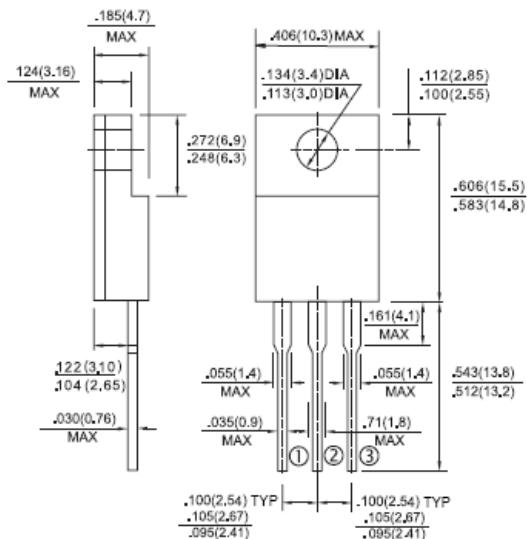
## Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%

Type Number	Symbol	MBRF30L45CT	MBRF30L60CT	MBRF30L100CT	Units
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	45	60	100	V
Maximum RMS Voltage	V <sub>RMS</sub>	31	42	70	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	45	60	100	V
Maximum Average Forward Rectified Current .375 (9.5mm) Lead Length @TC = 120°C	I <sub>(AV)</sub>		30		A
Peak Repetitive Forward Current (Rated VR, Square Wave, 20KHz) At TC = 130°C	I <sub>FRM</sub>		30		A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method )	I <sub>FSM</sub>		220		A
Peak Repetitive Reverse surge Current (Note 1)	I <sub>RRM</sub>	1	2	2	A
Maximum Instantaneous Forward Voltage at (Note 2) IF=15A TC =25 °C IF=15A TC =125 °C IF=30A TC =25 °C IF=30A TC =125 °C	V <sub>F</sub>	0.55 0.50 0.74 0.67	0.60 0.56 0.75 0.70	0.66 0.57 0.80 0.66	V
Maximum DC Reverse Current @ TA=25 °C at Rated DC Blocking Voltage @ TA=100 °C	I <sub>R</sub>	0.4 200	0.48 130	0.2 15	mA
Voltage rate of change (rated VR)	dV/dt		10,000		V/uS
Typical Junction Capacitance (Note 2)	C <sub>j</sub>	600	460	460	Pf
Typical Thermal Resistance per leg.(Note 3)	R <sub>θJC</sub>		4.0		°C/W
Operating Temperature Range	T <sub>J</sub>		-65 to +150		°C
Storage Temperature Range	T <sub>STG</sub>		-65 to +175		°C



## Dimensions in inches and (millimeters)



### Marking Diagram

MBRF30LXXCT= Specific Device Code  
G = Green Compound  
Y = Year Code  
WW = Work Week Code

## RATINGS AND CHARACTERISTIC CURVES (MBRF30L45CT - MBRF30L100CT)

FIG.1 Forward Current Derating Curve

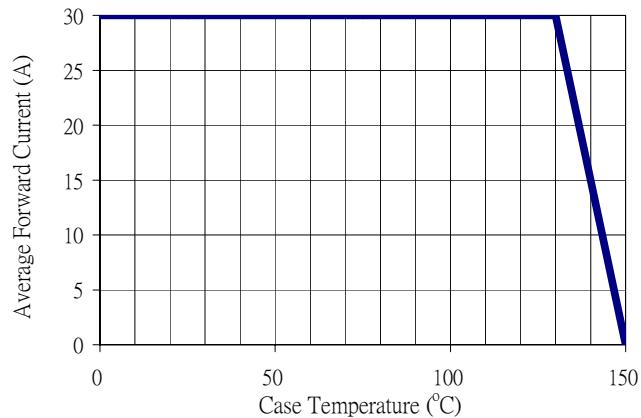


FIG 2 Maximum Forward Surge Current

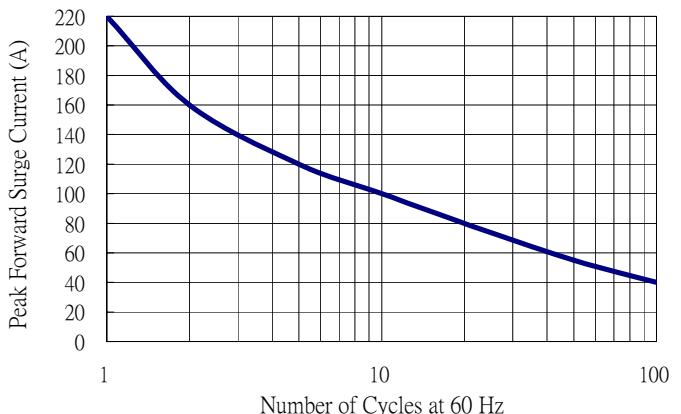


FIG 3 Maximum reverse leakage current

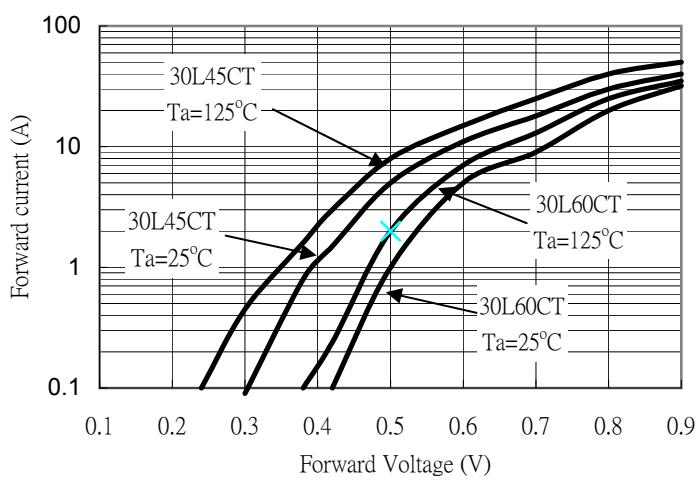


FIG 4 Maximum reverse leakage character

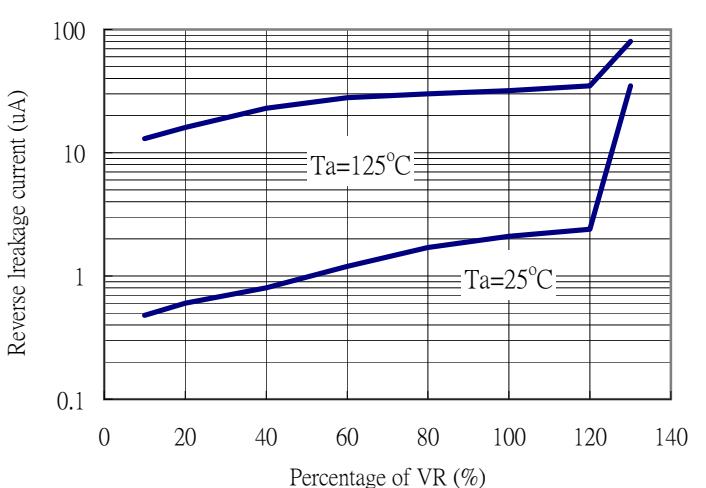


FIG 5 Typical Junction Capacitance

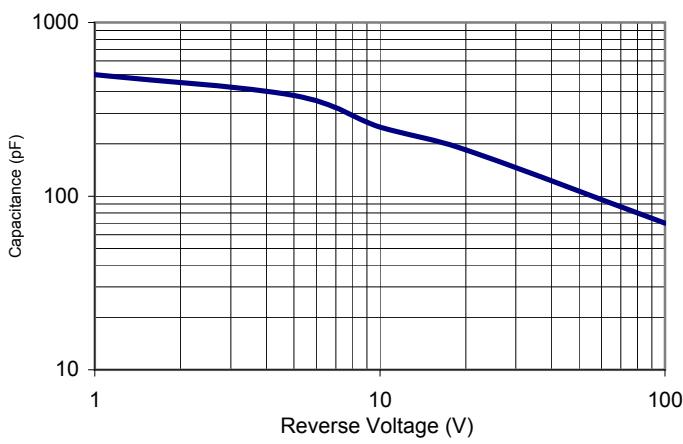


FIG 6 Typical Transient Thermal Resistance

