



Preliminary

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 inverter, free wheeling, and polarity protection application.
- High temperature soldering guaranteed: 260°C /10 seconds /0.375", (9.5mm) lead lengths at 5 lbs., (2.3kg) tension

Mechanical Data

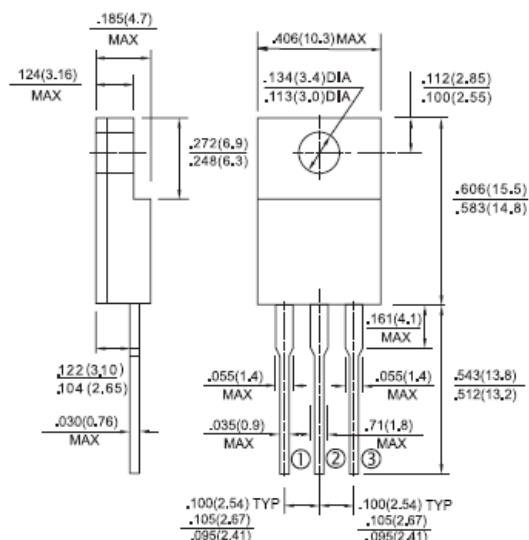
- Cases: JEDEC ITO-220AB Molded plastic
- Terminal: Pure tin plated, lead free, solderable per MIL-STD-202, Method 208 guaranteed
- Polarity: As marked
- Mounting position : Any
- Mounting Torque : 5 in.-lbs. max.
- Weight: 2.24 gram

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%



Dimensions in inches and (millimeters)



Marking Diagram

MBRF30LXXCT= Specific Device Code

G = Green Compound
Y = Year Code
WW = Work Week Code

Type Number	Symbol	MBRF30L45CT	MBRF30L60CT	MBRF30L100CT	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	45	60	100	V
Maximum RMS Voltage	V_{RMS}	31	42	70	V
Maximum DC Blocking Voltage	V_{DC}	45	60	100	V
Maximum Average Forward Rectified Current .375 (9.5mm) Lead Length @TC = 120°C	$I_{(AV)}$	30			A
Peak Repetitive Forward Current (Rated VR, Square Wave, 20KHz) At TC = 130°C	I_{FRM}	30			A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	220			A
Peak Repetitive Reverse surge Current (Note 1)	I_{RRM}	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_F	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_R	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_j	600	460	460	Pf
Typical Thermal Resistance per leg.(Note 3)	$R_{\theta JC}$	4.0			°C/W
Operating Temperature Range	T_J	-65 to +150			°C
Storage Temperature Range	T_{STG}	-65 to +175			°C

Notes: 1. 2.0Us PU;SE WIDTH. F=1.0kh, Continue 10 cycles

2. Measured at 1 MHz and Applied Reverse Voltage of 4.0 V D.C.

3. Thermal Resistance from junction to case Per Leg, with Heatsink size (4"x6"x0.25") Al-plate.

RATINGS AND CHARACTERISTIC CURVES (MBRF30L45CT - MBRF30L100CT)

FIG.1 Forward Current Derating Curve

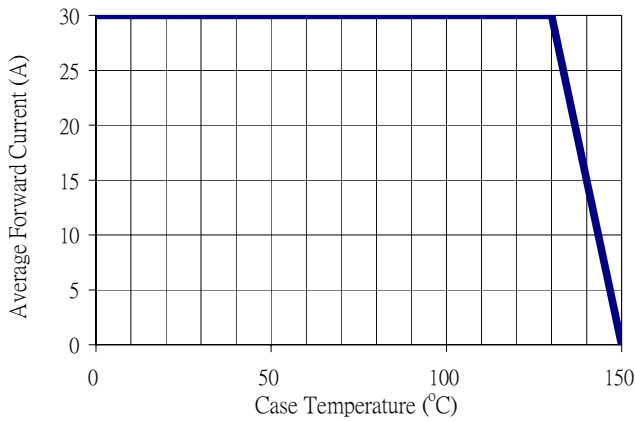


FIG 2 Maximum Forward Surge Current

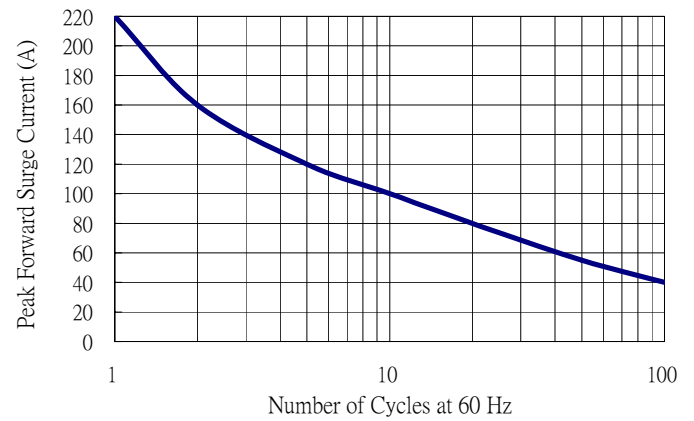


FIG 3 Maximum reverse leakage current

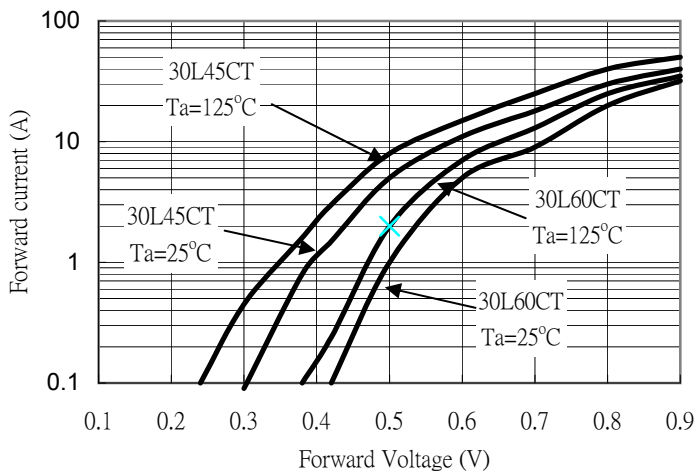


FIG 4 Maximum reverse leakage character

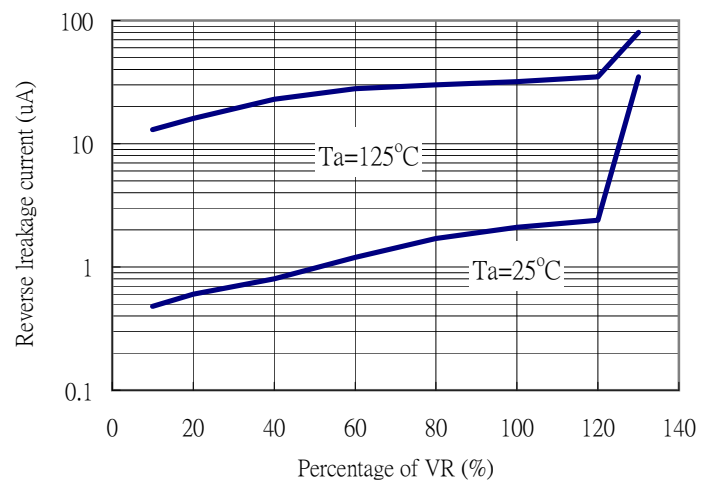


FIG 5 Typical Junction Capacitance

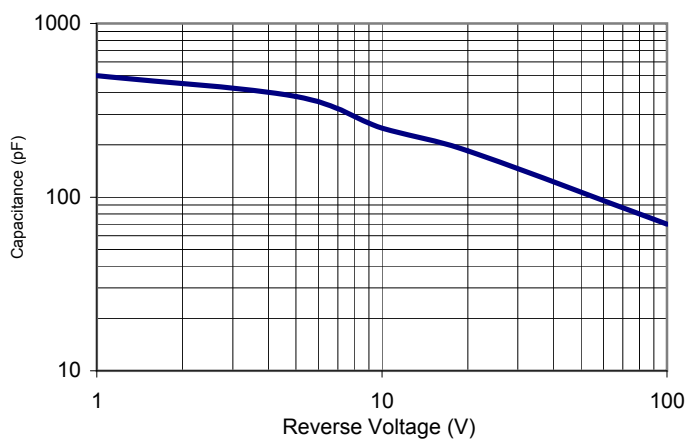


FIG 6 Typical Transient Thermal Rresistance

