



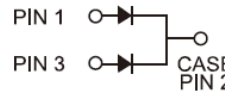
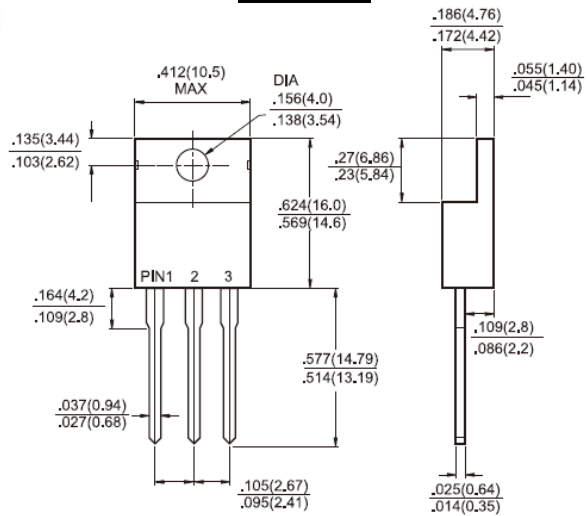
MBR30L45CT - MBR30L100CT
30.0AMPS Low V_F Schottky Barrier Rectifiers
TO-220AB

Features

- ✧ UL Recognized File # E-326243
- ✧ Low power loss, high efficiency
- ✧ High current capability, low forward voltage drop
- ✧ Plastic material used carriers Underwriters Laboratory Classification 94V-0
- ✧ High surge current capability
- ✧ Guard-ring for overvoltage protection
- ✧ For use in low voltage - high frequency inverter, 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
- ✧ Green compound with suffix "G" on packing code & prefix "G" on datecode

Mechanical Data

- ✧ Case: JEDEC TO-220AB molded plastic
- ✧ Terminals: Pure tin plated leads, solderable per MIL-STD-202, Method 208 guaranteed
- ✧ Polarity: As marked
- ✧ Mounting position: Any
- ✧ Mounting torque: 5 in- lbs, max
- ✧ Weight: 1.92 grams



Dimensions in inches and (millimeters)

Marking Diagram



- MBR30LXXCT = Specific Device Code
- G = Green Compound
- Y = Year
- WW = Work Week

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	MBR 30L45CT	MBR 30L60CT	MBR 30L100CT	Unit	
Maximum Repetitive 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 @ T _C =120°C	I _{F(AV)}	30			A	
Peak Repetitive Forward Current (Rated V _R , Square Wave, 20KHz) at T _C =130°C	I _{FRM}	30			A	
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load	I _{FSM}	220			A	
Peak Repetitive Reverse Surge Current (Note 1)	I _{RRM}	1			A	
Maximum Instantaneous Forward Voltage	V _F	IF=15A, T _A =25°C	0.55	0.60	0.66	V
		IF=15A, T _A =125°C	0.50	0.56	0.57	
		IF=30A, T _A =25°C	0.74	0.75	0.80	
		IF=30A, T _A =125°C	0.67	0.70	0.66	
Maximum Reverse Current @ Rated V _R (Note 2)	I _R	T _A =25 °C	0.4	0.48	0.2	uA
		T _A =100 °C	200	150	15	mA
Voltage Rate of Change,(Rated V _R)	dV/dt	10000			V/us	
Typical Junction Capacitance (Note 3)	C _j	600	460		pF	
Typical Thermal Resistance (Note 4)	R _{θJC}	1			°C/W	
Operating Temperature Range	T _J	- 65 to + 150			°C	
Storage Temperature Range	T _{STG}	- 65 to + 175			°C	

- Note 1: 2.0uS Pulse Width, f=1.0KHz
- Note 2: Pulse Test : 300uS Pulse Width, 1% Duty Cycle
- Note 3: Measure at 1 MHz and Applied Reverse Voltage of 4.0V D.C.
- Note 4: Heatsink Size (4" x 6" x 0.25") Al-Plate

RATINGS AND CHARACTERISTIC CURVES (MBR30L45CT THRU MBR30L100CT)

FIG.1 FORWARD CURRENT DERATING CURVE

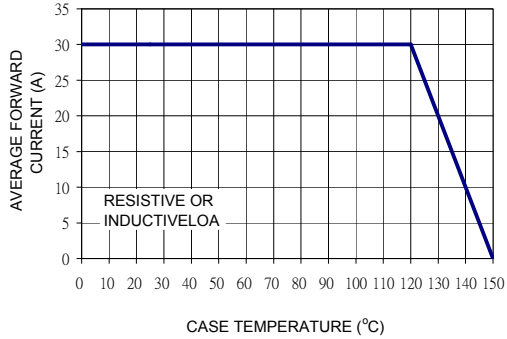


FIG. 2 MAXIMUM FORWARD SURGE CURRENT

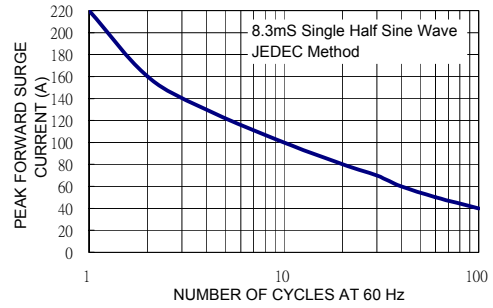


FIG. 3 TYPICAL FORWARD CHARACTERISTICS

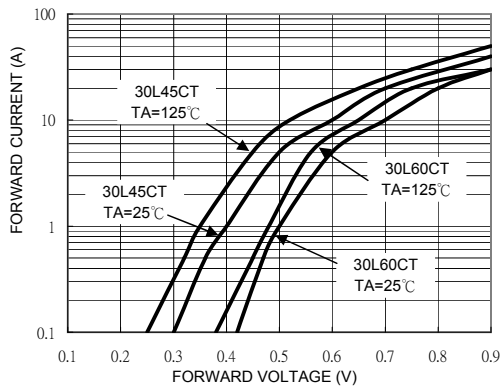


FIG. 4 TYPICAL REVERSE CHARACTERISTICS

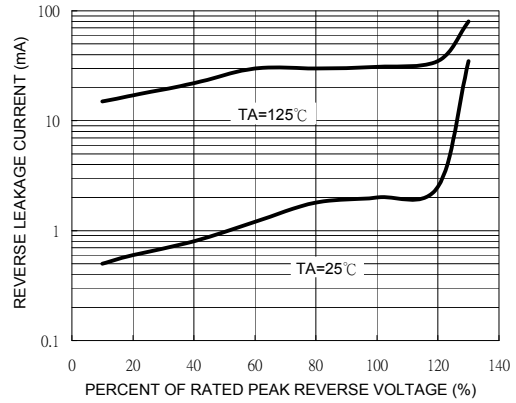


FIG. 5 TYPICAL JUNCTION CAPACITANCE

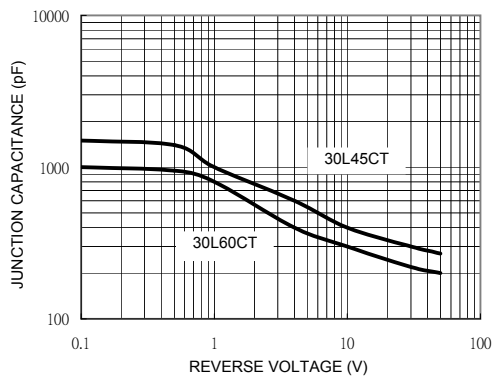


FIG. 6 TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG

