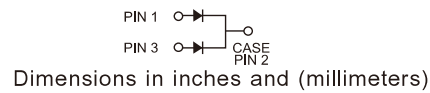
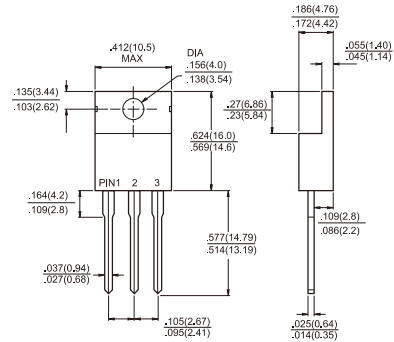




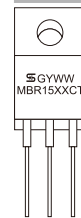
# MBR1535CT - MBR15150CT

## 15.0 AMPS. Schottky Barrier Rectifiers

### TO-220AB



Dimensions in inches and (millimeters)



Marking Diagram

MBR15XXCT= Specific Device Code  
 G = Green Compound  
 Y = Year  
 WW = Work Week

### Features

- ✧ UL Recognized File # E-326243
- ✧ Plastic material used carries Underwriters Laboratory Classifications 94V-0
- ✧ Metal silicon junction, majority carrier conduction
- ✧ Low power loss, high efficiency
- ✧ High current capability, low forward voltage drop
- ✧ High surge capability
- ✧ For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications
- ✧ Guardring for overvoltage protection
- ✧ High temperature soldering guaranteed: 260°C/10 seconds, 0.25"(6.35mm) from case
- ✧ Green compound with suffix "G" on packing code & prefix "G" on datecode.

### Mechanical Data

- ✧ Cases: JEDEC TO-220AB molded plastic body
- ✧ Terminals: Pure tin plated, lead free. solderable per MIL-STD-750, Method 2026
- ✧ Polarity: As marked
- ✧ Mounting position: Any
- ✧ Mounting torque: 5 in. - lbs. max
- ✧ Weight: 1.90grams

### 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 1535CT	MBR 1545CT	MBR 1550CT	MBR 1560CT	MBR 1590CT	MBR 15100CT	MBR 15150CT	Units	
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	35	45	50	60	90	100	150	V	
Maximum RMS Voltage	V <sub>RMS</sub>	24	31	35	42	63	70	105	V	
Maximum DC Blocking Voltage	V <sub>DC</sub>	35	45	50	60	90	100	150	V	
Maximum Average Forward Rectified Current at T <sub>c</sub> =105°C	I <sub>F(AV)</sub>	15							A	
Peak Repetitive Forward Current (Rated V <sub>R</sub> , Square Wave, 20KHz) at T <sub>c</sub> =105°C	I <sub>FRM</sub>	15							A	
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I <sub>FSM</sub>	150							A	
Peak Repetitive Reverse Surge Current (Note 2)	I <sub>RRM</sub>	1.0		0.5					A	
Maximum Instantaneous Forward Voltage at: I <sub>F</sub> =7.5A, T <sub>A</sub> =25°C I <sub>F</sub> =7.5A, T <sub>A</sub> =125°C I <sub>F</sub> =15A, T <sub>A</sub> =25°C I <sub>F</sub> =15A, T <sub>A</sub> =125°C	V <sub>F</sub>	— 0.57 0.84 0.72	— — — —	0.75 0.65 — —	— — — —	0.92 0.82 — —	— — — —	1.05 0.92 — —	V	
Maximum Instantaneous Reverse Current at Rated DC Blocking Voltage (Note 1) @ T <sub>A</sub> =25 °C @ T <sub>A</sub> =125 °C	I <sub>R</sub>	0.5 10	— —	0.3 7.5	— —	— —	0.1 5.0	— —	mA mA	
Voltage Rate of Change (Rated V <sub>R</sub> )	dV/dt	10,000							V/μS	
Typical Junction Capacitance	C <sub>j</sub>	400				200				pF
Maximum Typical Thermal Resistance (Note 3)	R <sub>θJA</sub> R <sub>θJC</sub>	— —			10 1.5		— —			°C/W
Operating Junction Temperature Range	T <sub>J</sub>	-65 to +150							°C	
Storage Temperature Range	T <sub>STG</sub>	-65 to +175							°C	

- Notes: 1. Pulse Test: 300us Pulse Width, 1% Duty Cycle  
 2. 2.0us Pulse Width, f=1.0 KHz  
 3. Mount on Heatsink Size of 2 " x 3 " x 0.25" Al-Plate.

## RATINGS AND CHARACTERISTIC CURVES (MBR1535CT THRU MBR15150CT)

FIG.1- FORWARD CURRENT DERATING CURVE

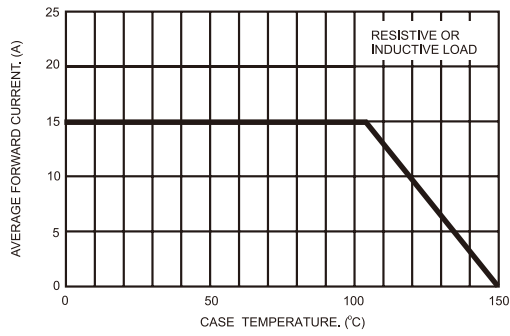


FIG.2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

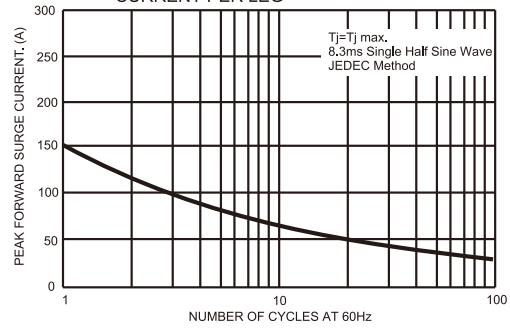


FIG.3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

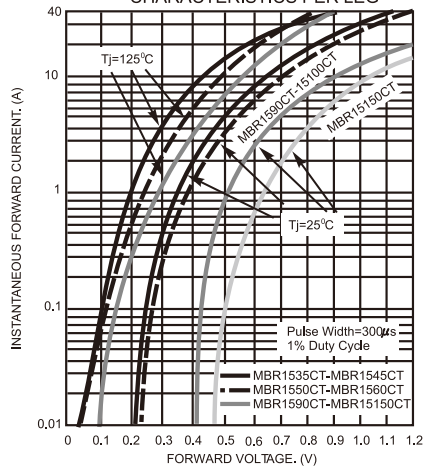


FIG.4- TYPICAL REVERSE CHARACTERISTICS PER LEG

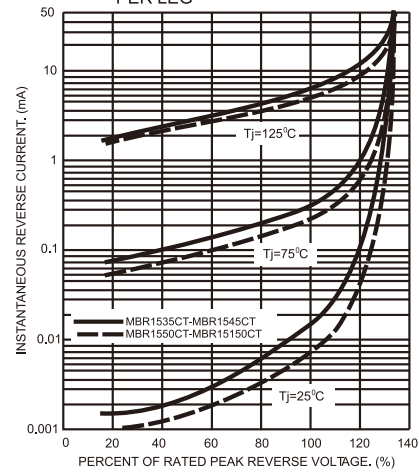


FIG.5- TYPICAL JUNCTION CAPACITANCE PER LEG

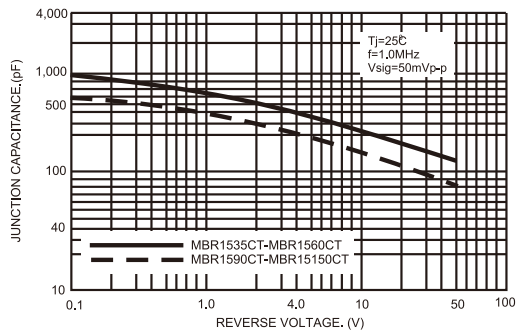


FIG.6- TYPICAL TRANSIENT THERMAL CHARACTERISTICS PER LEG

