



MBRF1535CT - MBRF15150CT

15.0 AMPS. Isolated Schottky Barrier Rectifiers

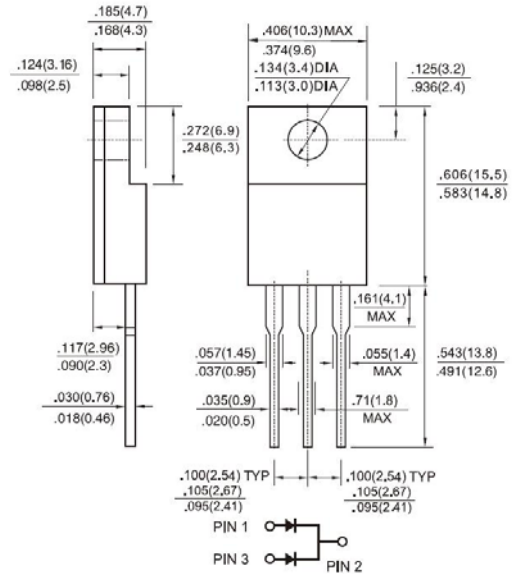
ITO-220AB

Features

- ✧ UL Recognized File # E-326243
- ✧ Plastic material used carriers Underwriters Laboratory Classification 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
- ✧ Guard-ring for overvoltage protection
- ✧ High temperature soldering guaranteed: 260°C/10 seconds, at terminals
- ✧ Green compound with suffix "G" on packing code & prefix "G" on datecode

Mechanical Data

- ✧ Case: ITO-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: 1.75 grams



Dimensions in inches and (millimeters)



Marking Diagram

MBRF15XXCT = 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	MBRF 1535 CT	MBRF 1545 CT	MBRF 1550 CT	MBRF 1560 CT	MBRF 1590 CT	MBRF 15100 CT	MBRF 15150 CT	Unit
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	35	45	50	60	90	100	150	V
Maximum RMS Voltage	V _{RMS}	24	31	35	42	63	70	105	V
Maximum DC Blocking Voltage	V _{DC}	35	45	50	60	90	100	150	V
Maximum Average Forward Rectified Current at Tc=105°C	I _{F(AV)}	15							A
Peak Repetitive Forward Current (Rated VR, Square Wave, 20KHz) at Tc=105°C	I _{FRM}	15							A
Peak Forward Surge Current, 8.3 ms Single Half Sine- wave Superimposed on Rated Load (JEDEC method)	I _{FSM}	150							A
Peak Repetitive Reverse Surge Current (Note 1)	I _{RRM}	1		0.5					A
Maximum Instantaneous Forward Voltage (Note 2) IF=7.5A, TA=25°C IF=7.5A, TA=125°C IF=15A, TA=25°C IF=15A, TA=125°C	V _F	-		0.75		0.92		0.95	V
		0.57		0.65		0.82		0.92	
		0.84		-		-		-	
		0.72		-		-		-	
Maximum Reverse Current @ Rated VR TA=25 °C TA=125 °C	I _R	0.5		0.3		0.1			mA
		10		7.5		5			
Voltage Rate of Change (Rated V _R)	dV/dt	10000							V/us
Typical Thermal Resistance Per Leg	R _{θJC}	3.5							°C/W
Operating Temperature Range	T _J	- 65 to + 150							°C
Storage Temperature Range	T _{STG}	- 65 to + 150							°C

Note 1: 2.0uS Pulse Width, $f=1.0\text{KHz}$

Note 2: Pulse Test : 300uS Pulse Width, 1% Duty Cycle

RATINGS AND CHARACTERISTIC CURVES (MBRF1535CT THRU MBRF15150CT)

FIG.1 FORWARD CURRENT DERATING CURVE

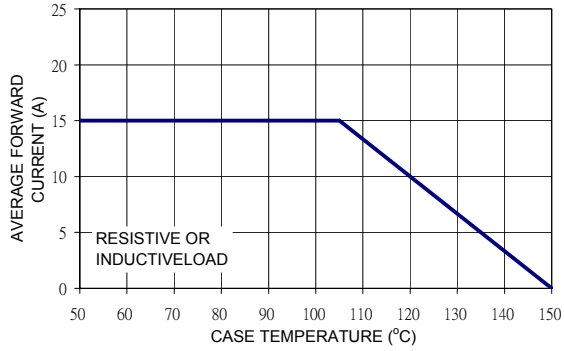


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

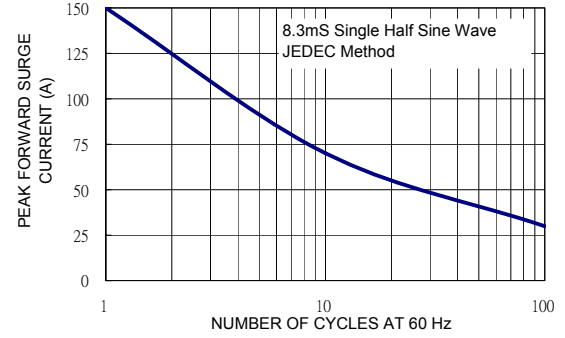


FIG. 3 TYPICAL FORWARD CHARACTERISTICS PER LEG

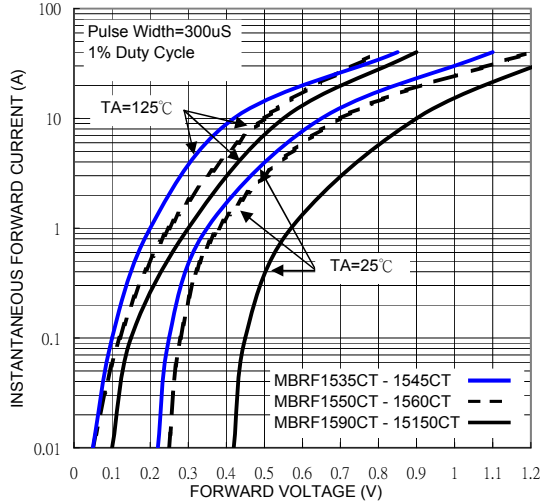


FIG. 4 TYPICAL REVERSE CHARACTERISTICS PER LEG

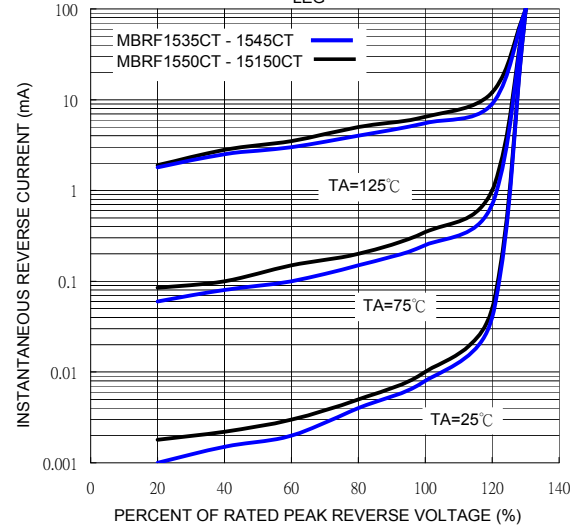


FIG. 5 TYPICAL JUNCTION CAPACITANCE PER LEG

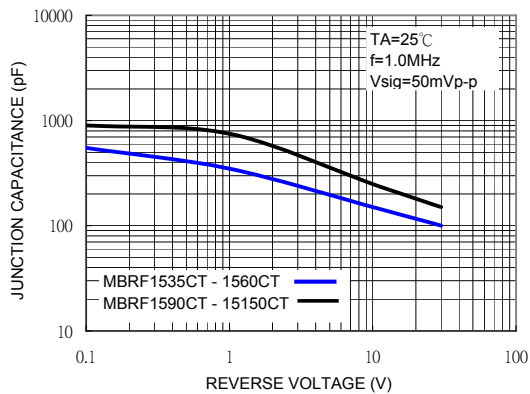


FIG. 6 TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG

