

MBRF3035CT - MBRF30150CT **30.0 AMPS. Isolated Schottky Barrier Rectifiers** **ITO-220AB**



RoHS
COMPLIANCE

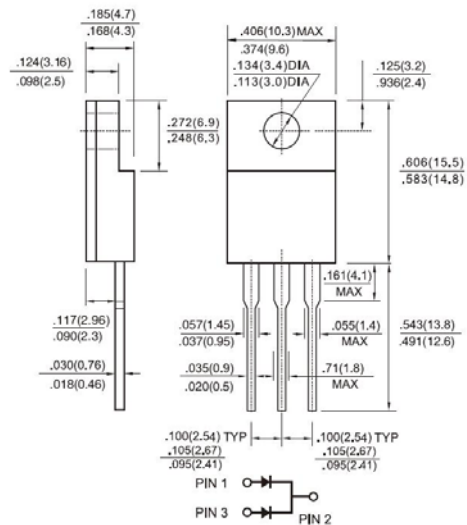


Features

- 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: 1.69 grams



Dimensions in inches and (millimeters)



Marking Diagram

MBRF30XXCT = 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 3035 CT	MBRF 3045 CT	MBRF 3050 CT	MBRF 3060 CT	MBRF 2590 CT	MBRF 30100 CT	MBRF 30150 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=130°C	I _{F(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}	200							A
Peak Repetitive Reverse Surge Current (Note 1)	I _{RRM}	1			0.5				A
Maximum Instantaneous Forward Voltage (Note 2) IF=15A, TA=25°C IF=15A, TA=125°C IF=30A, TA=25°C IF=30A, TA=125°C	VF	0.70 0.60 0.82 0.73	0.75 0.65 - -		0.84 0.70 0.94 0.82		0.95 0.80 1.05 0.92		V
Maximum Reverse Current @ Rated VR TA=25 °C TA=125 °C	IR	0.2 201510							mA
Voltage Rate of Change (Rated VR)	dV/dt	10000							V/us
Typical Junction Capacitance	Cj	580		480		360			V/us
Typical Thermal Resistance Per Leg	RθJC	4							°C/W
Operating Temperature Range	TJ	- 65 to + 150							°C
Storage Temperature Range	TSTG	- 65 to + 175							°C

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

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

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RATINGS AND CHARACTERISTIC CURVES (MBRF3035CT THRU MBRF30150CT)

FIG. 1 FORWARD CURRENT DERATING CURVE

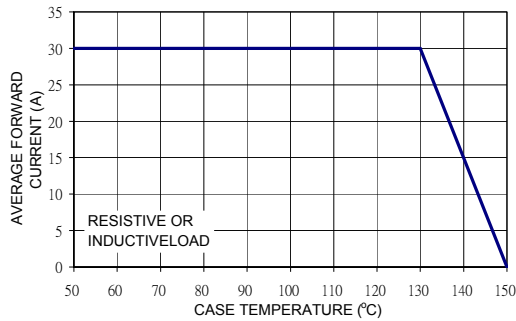


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

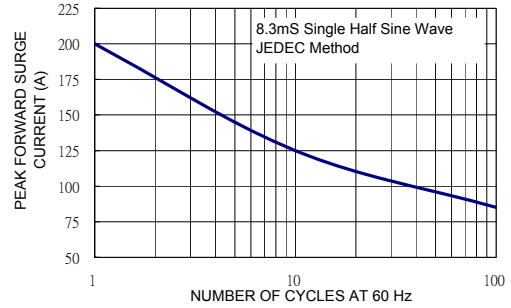


FIG. 3 TYPICAL FORWARD CHARACTERISTICS PER LEG

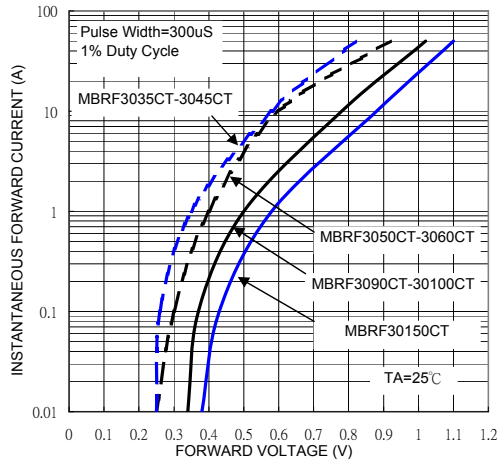


FIG. 4 TYPICAL REVERSE CHARACTERISTICS PER LEG

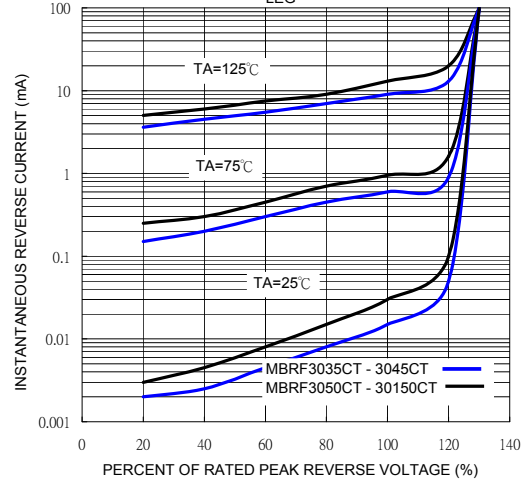


FIG. 5 TYPICAL JUNCTION CAPACITANCE PER LEG

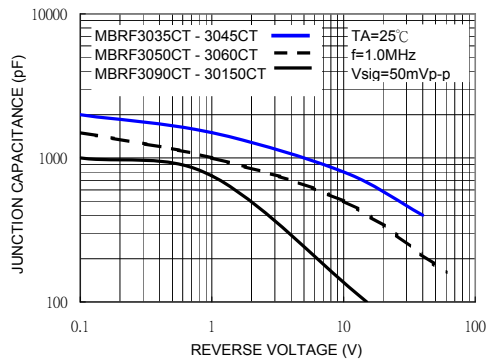
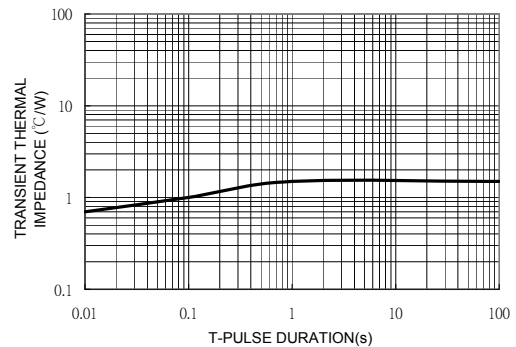


FIG. 6 TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG



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