TAIWAN SEMICONDUCTOR

The Smartest Choice

MBRF835CT - MBRF8150CT

8.0 AMPS. Isolated Schottky Barrier Rectifiers

ITO-220AB

Pb-Free

RoHS COMPLIANT

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℃/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: 1.74 grams

Ordering Information

Part No.	Package	Packing	Packing code	Packing code (Green)
MBRF835CT	ITO-220AB	50 / TUBE	C0	C0G

Maximum Ratings and Electrical Characteristics

Rating at 25 ℃ ambient temperature unless otherwise specified.

Parameter	Symbol	MBRF 835 CT	MBRF 845 CT	MBRF 850 CT	MBRF 860 CT	MBRF 890 CT	MBRF 8100 CT	MBRF 8150 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	$I_{F(AV)}$	8							A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	150							A
Maximum Instantaneous Forward Voltage (Note 1) IF=4A, TA=25℃	V_F	0.55		0.70		0.85		0.95	V
Maximum Reverse Current @ Rated VR T_A=25 ℃	I_R	0.1							mA
T_A=125 ℃		15		10		5			
Typical Thermal Resistance Per Leg	$R_{\theta jC}$	6							^{O}C/W
Operating Temperature Range	T_J	- 65 to + 150							^{O}C
Storage Temperature Range	T_{STG}	- 65 to + 150							^{O}C

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

Version:G12

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RATINGS AND CHARACTERISTIC CURVES (MBRF835CT THRU MBRF8150CT)

FIG.1 FORWARD CURRENT DERATING CURVE

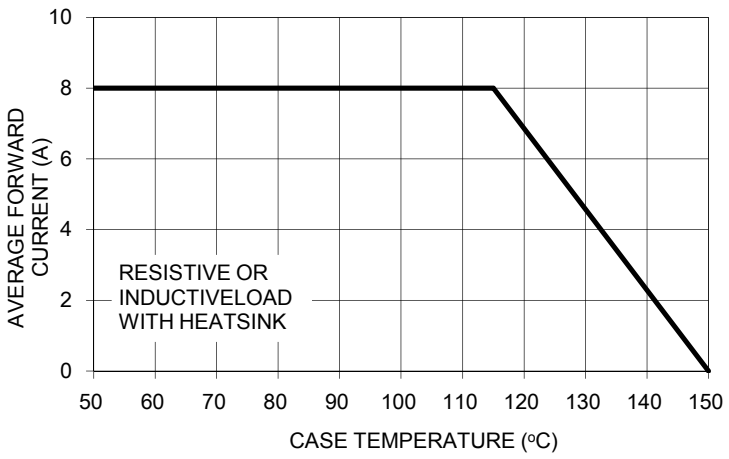


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

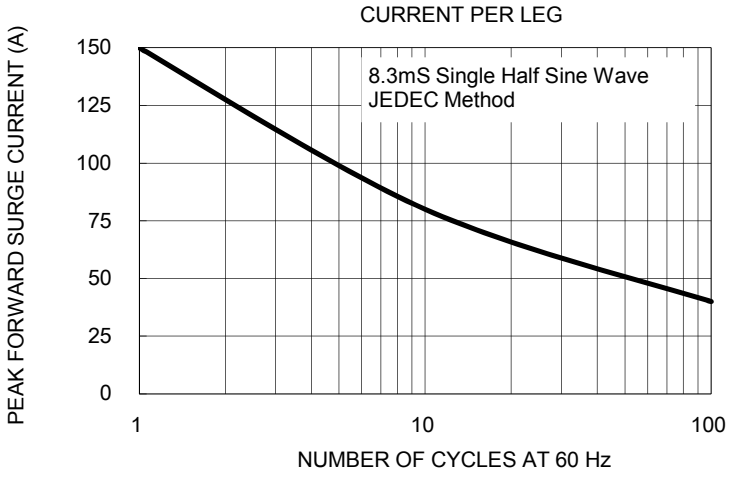


FIG. 3 TYPICAL FORWARD CHARACTERISTICS PER LEG

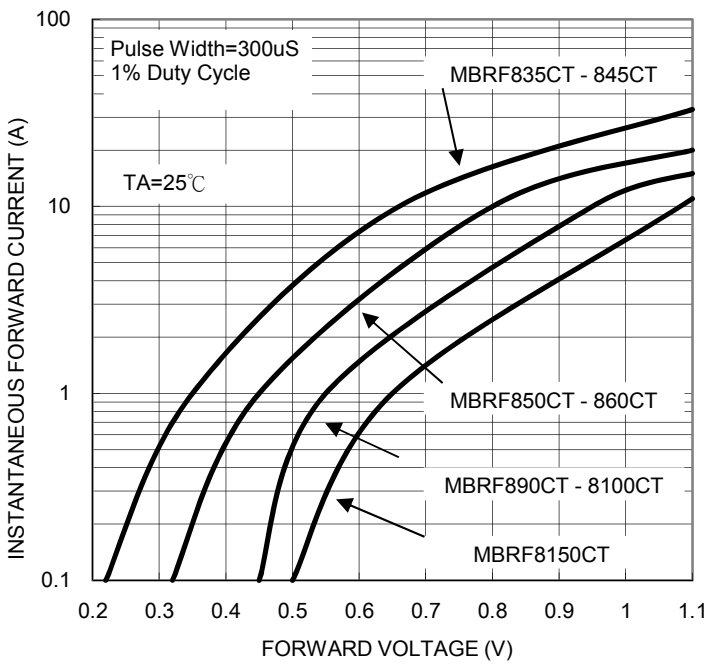


FIG. 4 TYPICAL REVERSE CHARACTERISTICS PER LEG

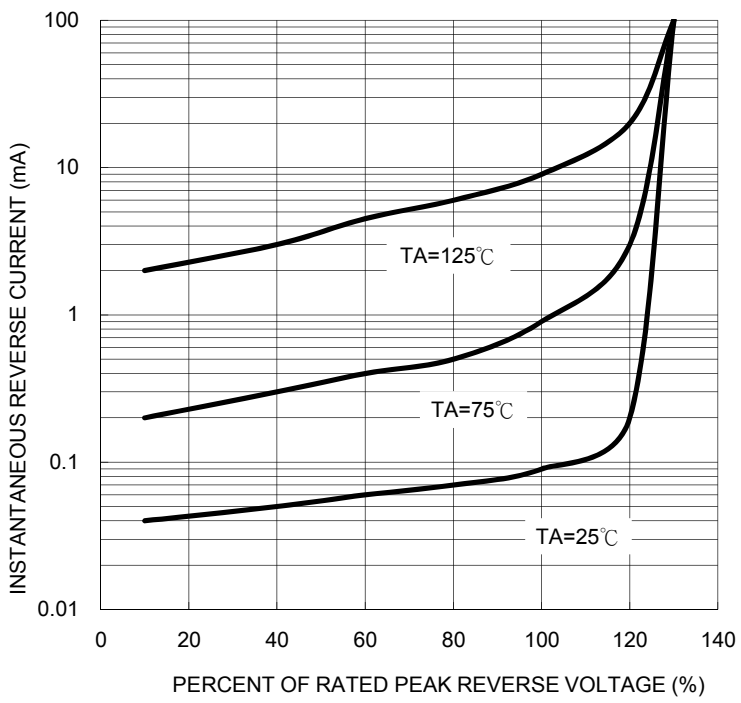


FIG. 5 TYPICAL JUNCTION CAPACITANCE PER LEG

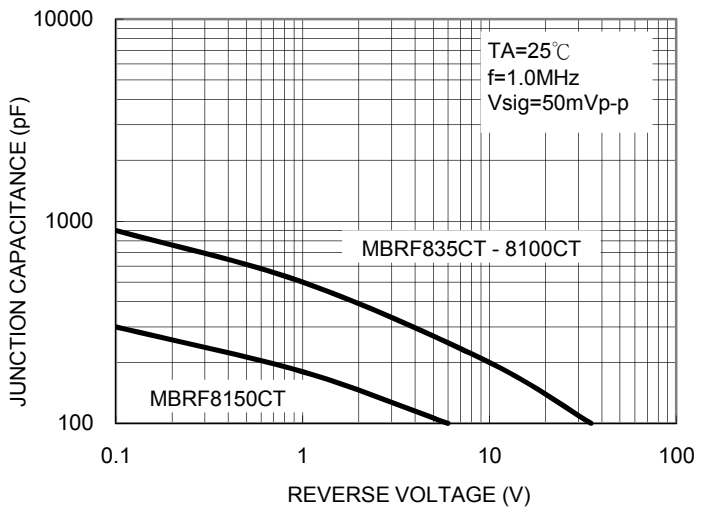
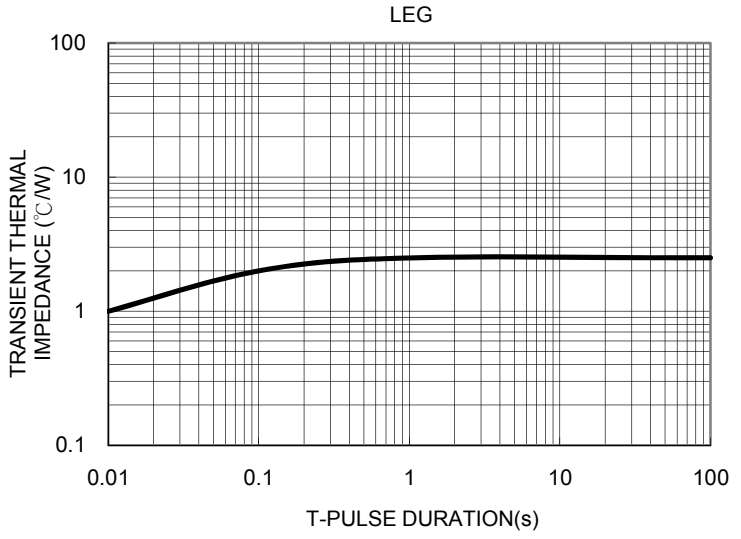


FIG. 6 TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG



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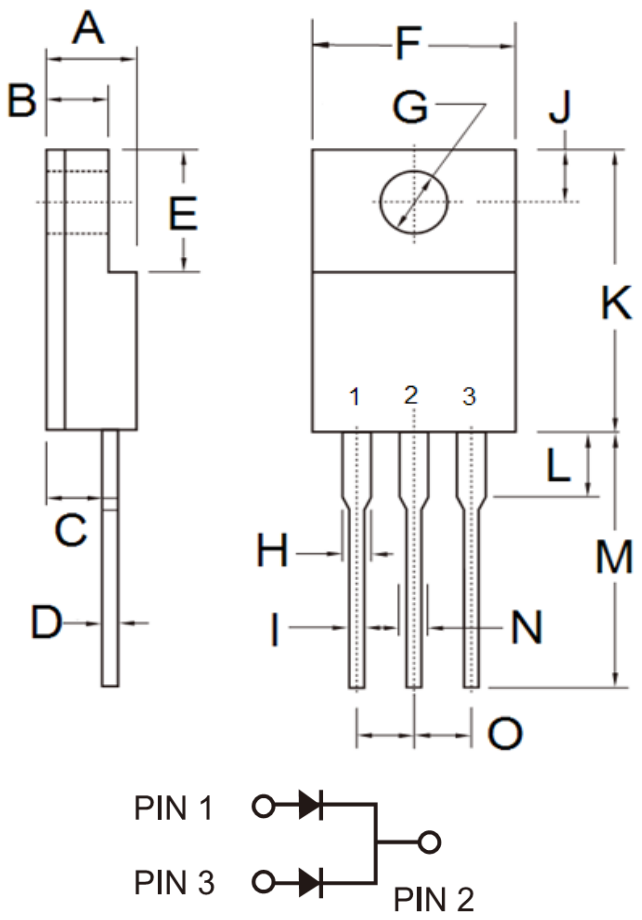
Ordering information

Part No.	Package	BULK Packing	Packing code	Packing code (Green)
MBRF8xxCT	ITO-220AB	50 / TUBE	C0	C0G

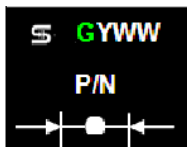
Note: "xx" is Device Code from "35" thru "150".

Dimensions



DIM.	Unit(mm)		Unit(inch)	
	Min	Max	Min	Max
A	4.30	4.70	0.169	0.185
B	2.50	3.16	0.098	0.124
C	2.30	2.96	0.091	0.117
D	0.46	0.76	0.018	0.030
E	6.30	6.90	0.248	0.272
F	9.60	10.30	0.378	0.406
G	3.00	3.40	0.118	0.134
H	0.95	1.45	0.037	0.057
I	0.50	0.90	0.020	0.035
J	2.40	3.20	0.094	0.126
K	14.80	15.50	0.583	0.610
L	-	4.10	-	0.161
M	12.60	13.80	0.496	0.543
N	-	1.80	-	0.071
O	2.41	2.67	0.095	0.105

Marking Diagram



P/N = Specific Device Code
G = Green Compound
YWW = Date Code