

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: 1.74 grams

Ordering Information

Part No.	Package	Packing	Packing code	Green Compound Packing code
MBRF835CT	ITO-220AB	50 / TUBE	D0	D0G

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	MBRF	MBRF	MBRF	MBRF	MBRF	MBRF	Unit
		835 CT	845 CT	850 CT	860 CT	890 CT	8100 CT	8150 CT	
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) $I_F=4A, T_A=25^\circ C$	V_F	0.55	0.70		0.85		0.95		V
Maximum Reverse Current @ Rated VR $T_A=25^\circ C$ $T_A=125^\circ C$	I_R	0.1							mA
		15		10		5			
Typical Thermal Resistance Per Leg	$R_{\theta JC}$	6							°C/W
Operating Temperature Range	T_J	- 65 to + 150							°C
Storage Temperature Range	T_{STG}	- 65 to + 150							°C

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

RATINGS AND CHARACTERISTIC CURVES (MBRF835CT THRU MBRF8150CT)

FIG.1 FORWARD CURRENT DERATING CURVE

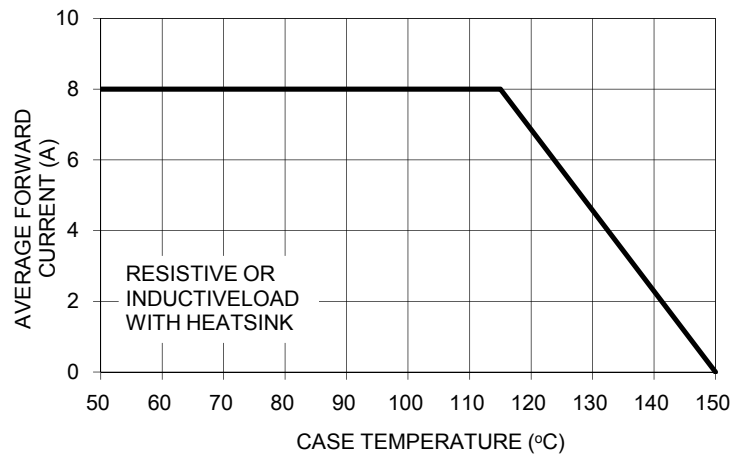


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

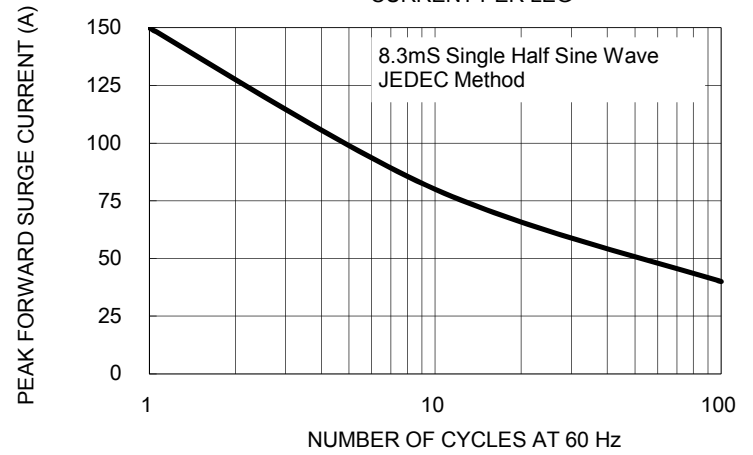


FIG. 3 TYPICAL FORWARD CHARACTERISTICS PER LEG

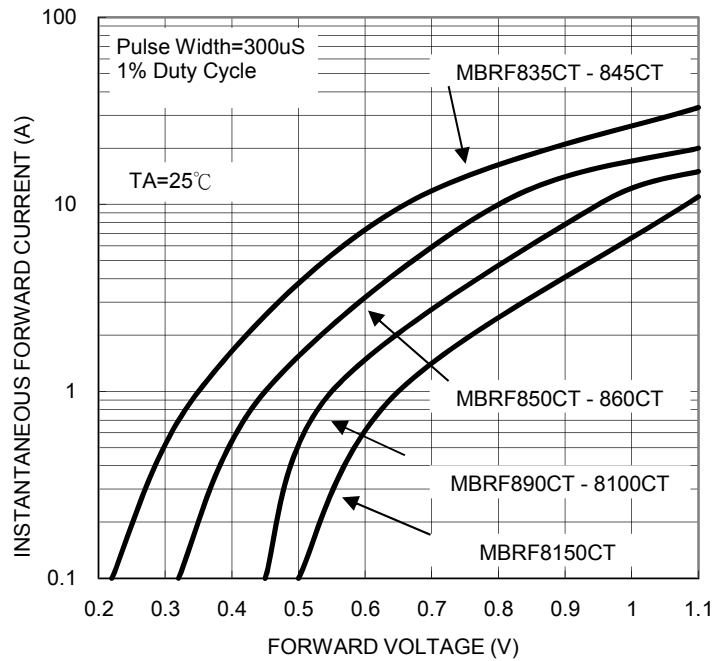


FIG. 4 TYPICAL REVERSE CHARACTERISTICS PER LEG

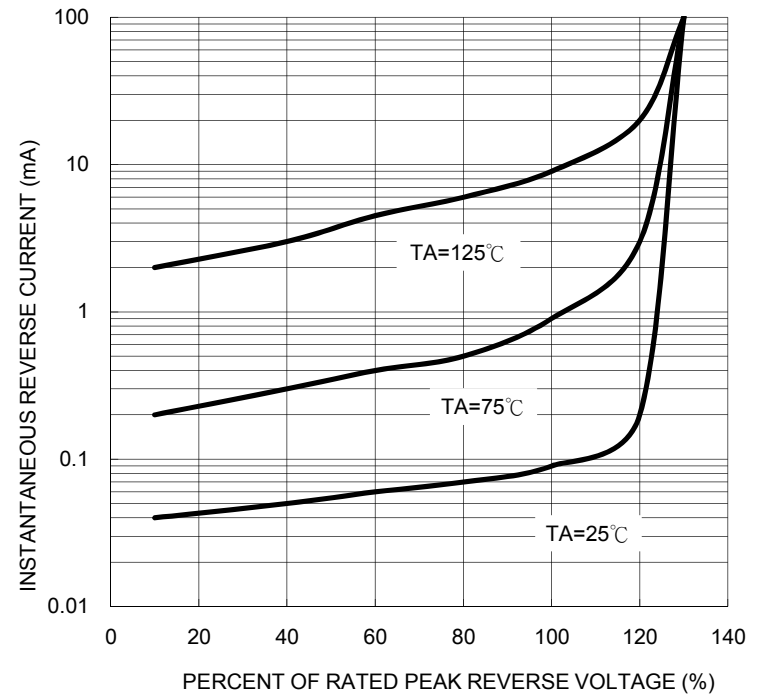


FIG. 5 TYPICAL JUNCTION CAPACITANCE PER LEG

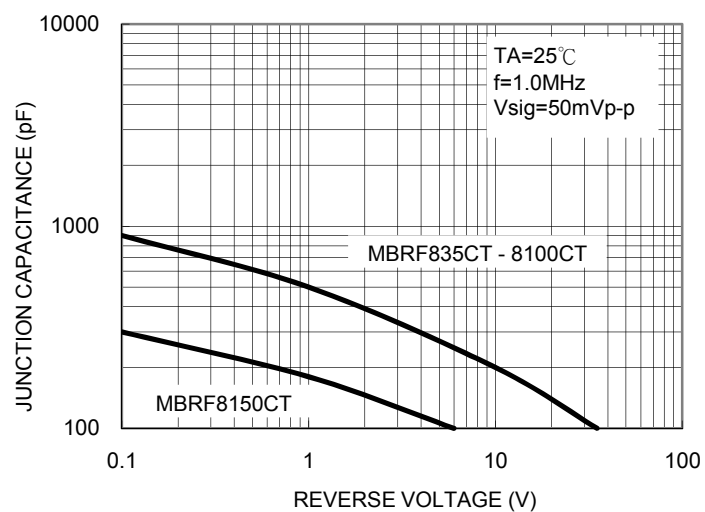
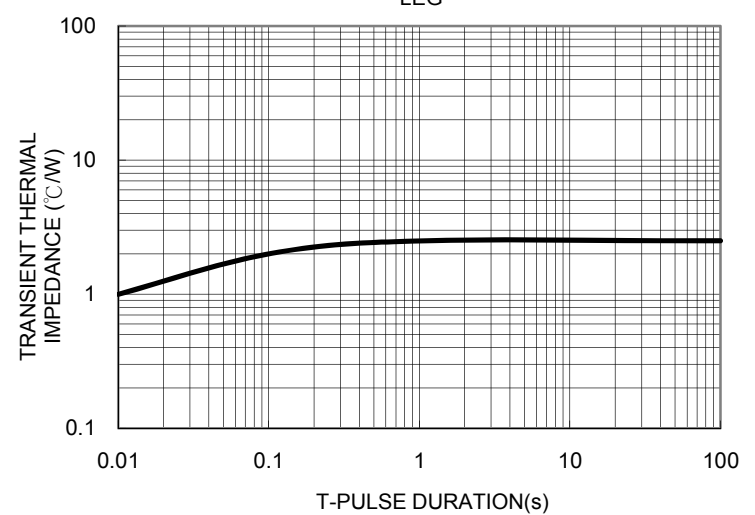


FIG. 6 TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG

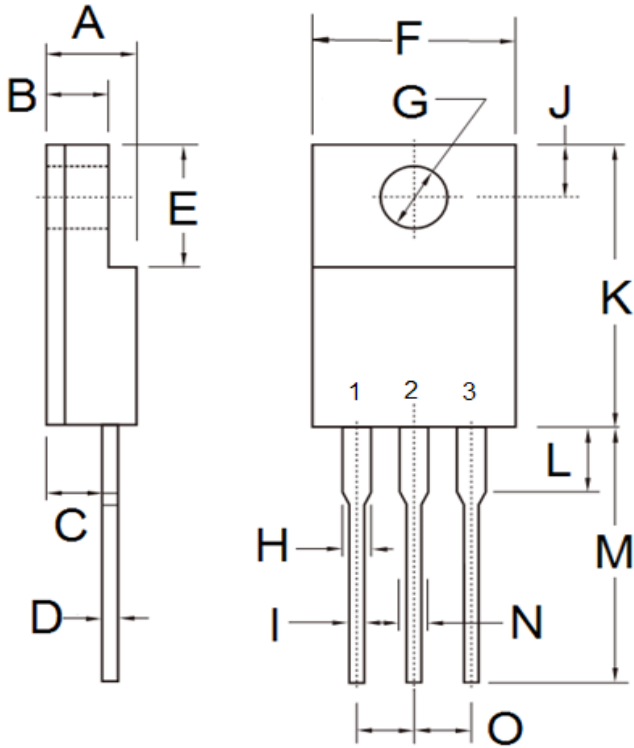


Ordering information

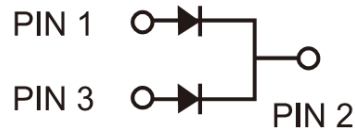
Part No.	Package	BULK Packing	Packing code	Green Compound Packing code
MBRF8xxCT	ITO-220AB	50 / TUBE	C0	C0G
	ITO-220AB	50 / TUBE	D0	D0G

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