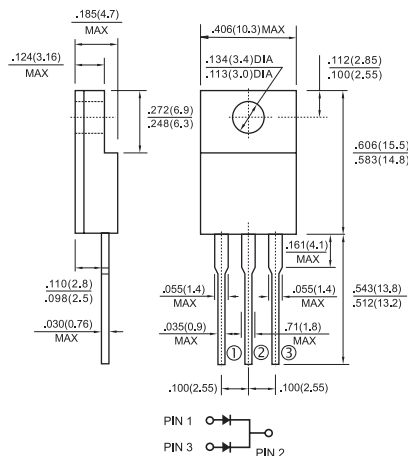


MBRF1535CT - MBRF15150CT

Isolated 15.0 AMPS. Schottky Barrier Rectifiers

ITO-220AB



Features

- ◇ 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 transient protection
- ◇ High temperature soldering guaranteed: 260°C/10 seconds, 0.25"(6.35mm) from case

Mechanical Data

- ◇ Cases: 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: 0.08 ounce, 2.24 grams

Dimensions in inches and (millimeters)

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	Units	
		1535 CT	1545 CT	1550 CT	1560 CT	1590 CT	15100 CT	15150 CT		
Maximum Recurrent 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 $T_C=105^{\circ}C$	$I_{(AV)}$	15							A	
Peak Repetitive Forward Current (Rated V_R , Square Wave, 20KHz) at $T_C=105^{\circ}C$	I_{FRM}	15.0							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		0.5					A	
Maximum Instantaneous Forward Voltage at (Note 2) $I_F=7.5A, T_C=25^{\circ}C$ $I_F=7.5A, T_C=125^{\circ}C$ $I_F=15A, T_C=25^{\circ}C$ $I_F=15A, T_C=125^{\circ}C$	V_F	—	0.57	0.84	0.75	0.65	0.92	0.82	0.95	V
Maximum Instantaneous Reverse Current @ $T_C=25^{\circ}C$ at Rated DC Blocking Voltage (Note 2) @ $T_C=125^{\circ}C$	I_R	0.5	10	0.3	7.5	0.1	5.0	0.92	mA mA	
Voltage Rate of Change (Rated V_R)	dV/dt	10,000							V/uS	
Maximum Thermal Resistance Per Leg (Note 3)	$R_{\theta JC}$	3.5							$^{\circ}C/W$	
Operating Junction Temperature Range	T_J	-65 to +150							$^{\circ}C$	
Storage Temperature Range	T_{STG}	-65 to +175							$^{\circ}C$	

- Notes:
1. 2.0us Pulse Width, $f=1.0$ KHz
 2. Pulse Test: 300us Pulse Width, 1% Duty Cycle
 3. Thermal Resistance from Junction to Case with Heatsink size of 2 in x 3 in x 0.25 in Al-Plate.

RATINGS AND CHARACTERISTIC CURVES (MBRF1535CT THRU MBRF15150CT)

FIG.1- FORWARD CURRENT DERATING CURVE

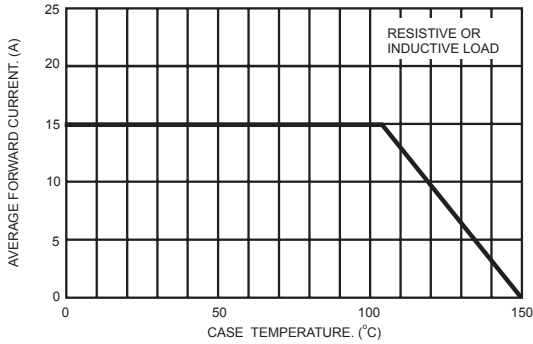


FIG.2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

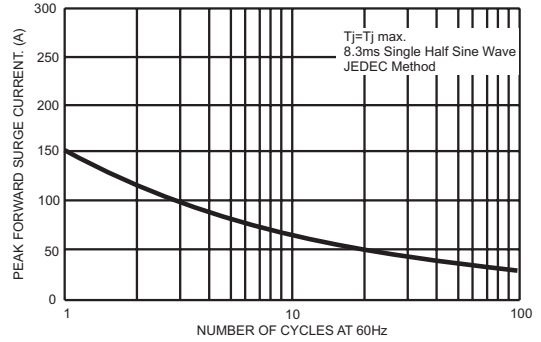


FIG.3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

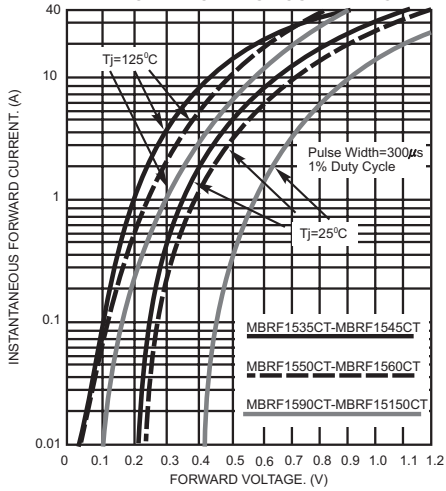


FIG.4- TYPICAL REVERSE CHARACTERISTICS PER LEG

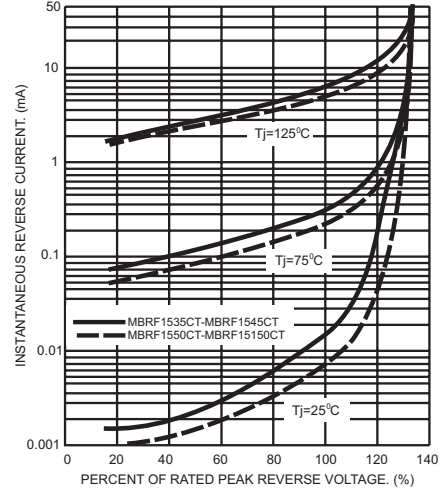


FIG.5- TYPICAL JUNCTION CAPACITANCE PER LEG

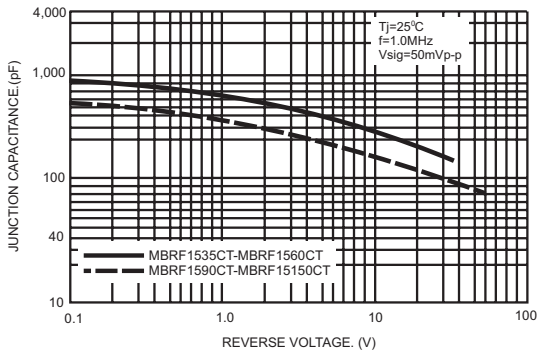


FIG.6- TYPICAL TRANSIENT THERMAL CHARACTERISTICS PER LEG

