



MBRF10100D - MBRF10200D

10.0AMPS Isolated Schottky Barrier Rectifier

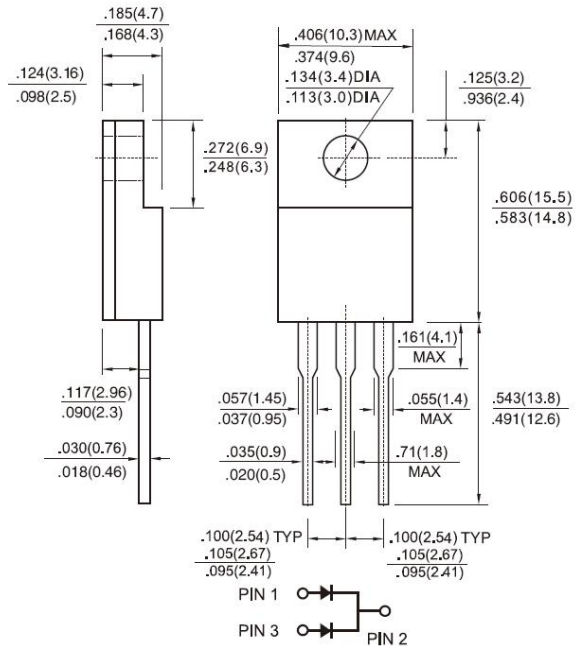
ITO-220AB

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
- ✧ Guarding for overvoltage protection
- ✧ High temperature soldering guaranteed: 260°C / 10 seconds, 0.25"(6.35mm) from case
- ✧ 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



Dimensions in inches and (millimeters)

Marking Diagram



MBRF10XXD = 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 10100D	MBRF 10150D	MBRF 10200D	Unit
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	100	150	200	V
Maximum RMS Voltage	V_{RMS}	70	105	140	V
Maximum DC blocking voltage	V_{DC}	100	150	200	V
Maximum Average Forward Rectified Current @ $T_c = 133^\circ\text{C}$ (Total Device)	$I_{F(AV)}$	10			A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	120			A
Peak Repetitive Reverse Surge Current	I_{RRM}	0.5			A
Maximum Instantaneous Forward Voltage at (Note 1) $I_F = 5A, T_A = 25^\circ\text{C}$ $I_F = 5A, T_A = 125^\circ\text{C}$ $I_F = 10A, T_A = 25^\circ\text{C}$ $I_F = 10A, T_A = 125^\circ\text{C}$	V_F	0.85 0.75 0.95 0.85	0.88 0.78 0.98 0.88		V
Maximum Reverse Current at Rated DC Blocking Voltage $T_A = 25^\circ\text{C}$ $T_A = 125^\circ\text{C}$	I_R	0.1 5			mA mA
Voltage rate of change (Rated V_R)	dV/dt	10,000			V/ μS
Maximum Thermal Resistance Per Leg (Note 2)	$R_{\theta JC}$	3.5			$^\circ\text{C}/\text{W}$
Operating Temperature Range	T_J	-65 to +150			$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-65 to +150			$^\circ\text{C}$

Note1: Pulse Test : 300us Pulse Width, 1% Duty cycle

Note2: Thermal Resistance from Junction to Case Per Leg

RATINGS AND CHARACTERISTIC CURVES (MBRF10100D THRU MBRF10150D)

FIG.1 MAXIMUM FORWARD CURRENT DERATING CURVE

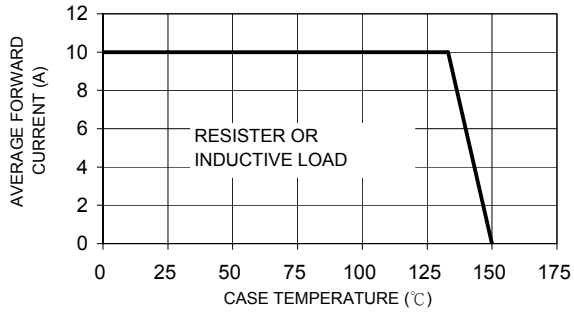


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

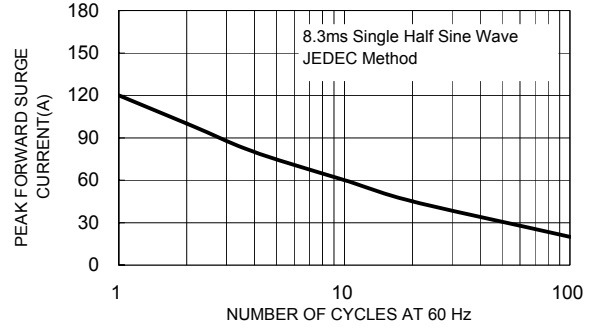


FIG. 3 TYPICAL FORWARD CHARACTERISTICS

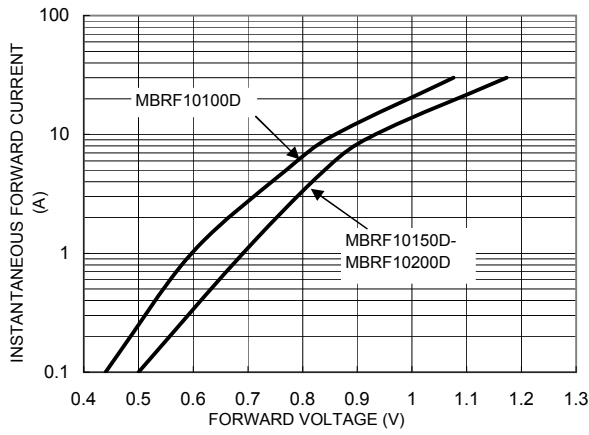


FIG. 4 TYPICAL REVERSE CHARACTERISTICS

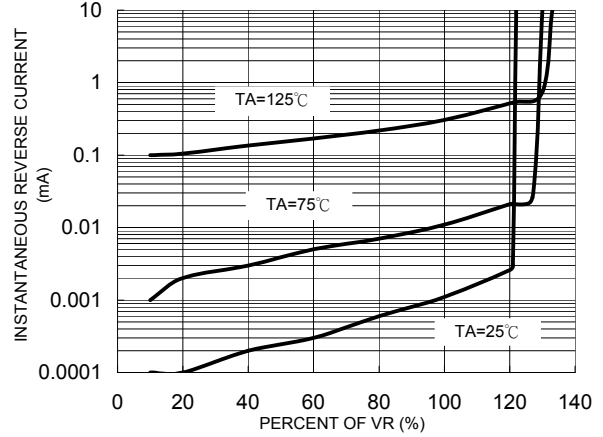


FIG. 5 TYPICAL JUNCTION CAPACITANCE

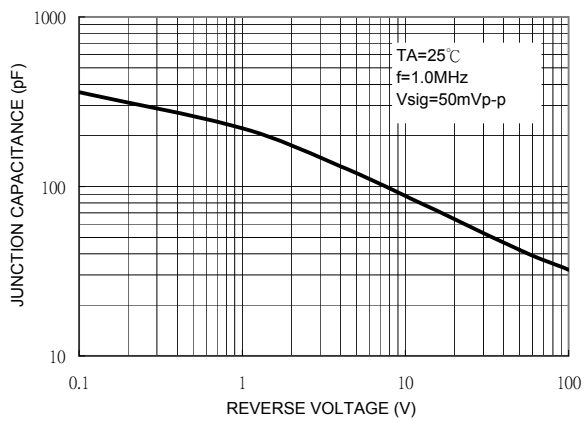


FIG. 6 TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG

