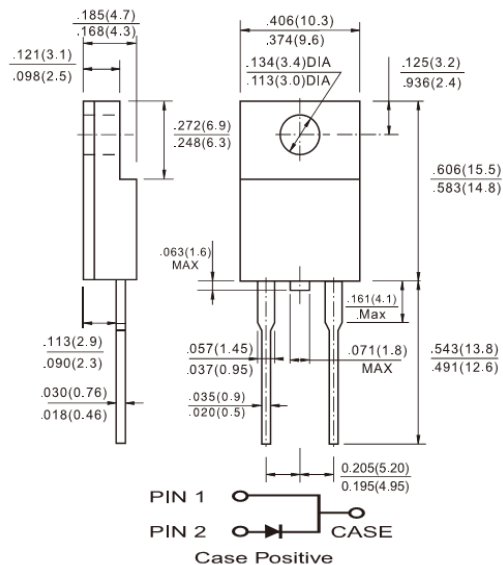




MBRF1035 - MBRF10200

10.0 AMPS. Isolated Schottky Barrier Rectifiers

ITO-220AC



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-220AC 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

MBRF10XX = 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 1035	MBRF 1045	MBRF 1050	MBRF 1060	MBRF 1090	MBRF 10100	MBRF 10150	MBRF 10200	Unit
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	35	45	50	60	90	100	150	200	V
Maximum RMS Voltage	V _{RMS}	24	31	35	42	63	70	105	140	V
Maximum DC Blocking Voltage	V _{DC}	35	45	50	60	90	100	150	200	V
Maximum Average Forward Rectified Current	I _{F(AV)}	10								A
Peak Repetitive Forward Current (Rated VR, Square Wave, 20KHz) at Tc=135 °C	I _{FRM}	20								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		0.5						A
Maximum Instantaneous Forward Voltage (Note 2) IF=10A, T _A =25°C IF=10A, T _A =125°C	V _F	0.70 0.57		0.80 0.70		0.85 0.71		1.05 -		V
Maximum Reverse Current @ Rated VR T _A =25 °C T _A =125 °C	I _R	0.1								mA
		15		10		6		2		
Voltage Rate of Change (Rated V _R)	dV/dt	10000								V/us
Typical Junction Capacitance	C _j	390		300		220				pF
Typical Thermal Resistance	R _{θJC}	3							4	°C/W
Operating Temperature Range	T _J	- 65 to + 150								°C
Storage Temperature Range	T _{STG}	- 65 to + 175								°C

Note 1: 2.0uS Pulse Width, f=1.0KHz

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

RATINGS AND CHARACTERISTIC CURVES (MBRF1035 THRU MBRF10200)

FIG.1 FORWARD CURRENT DERATING CURVE

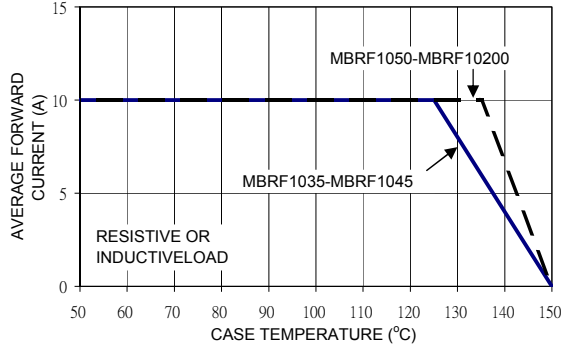


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

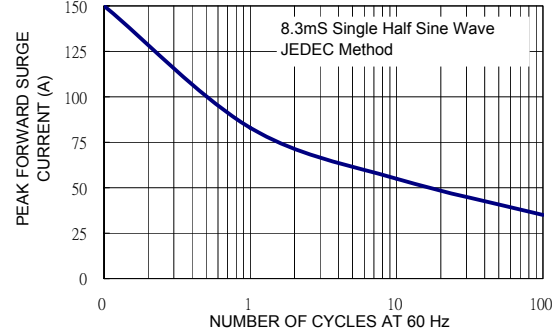


FIG. 3 TYPICAL FORWARD CHARACTERISTICS PER LEG

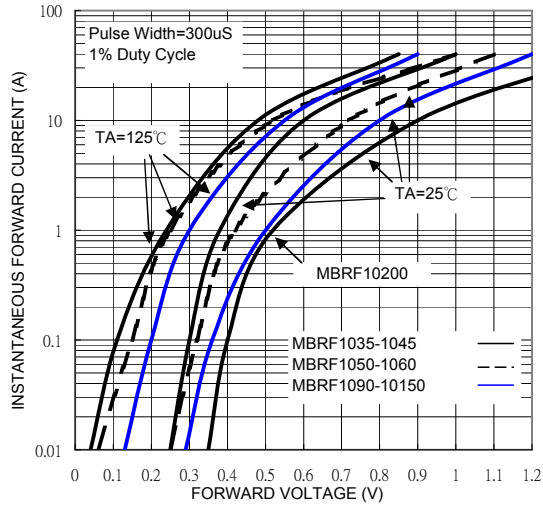


FIG. 4 TYPICAL REVERSE CHARACTERISTICS PER LEG

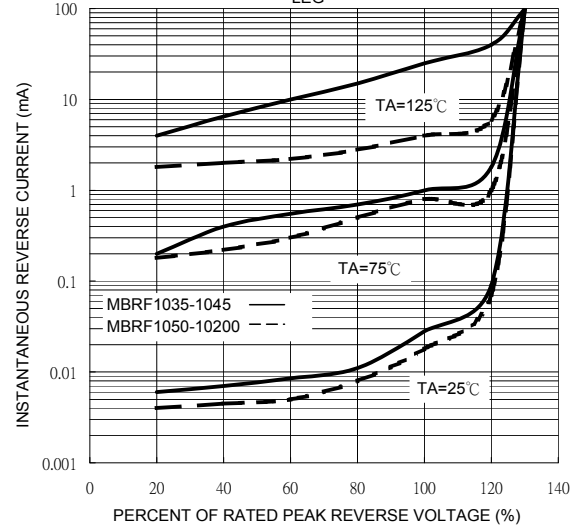


FIG. 5 TYPICAL JUNCTION CAPACITANCE PER LEG

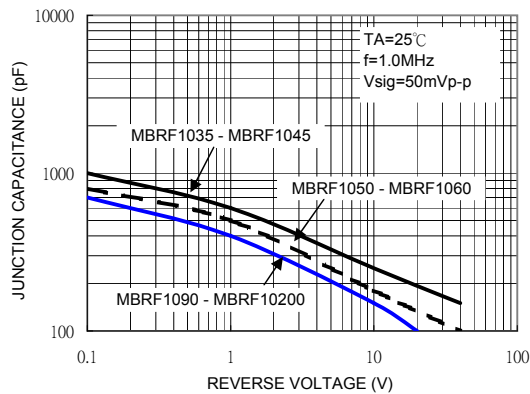


FIG. 6 TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG

