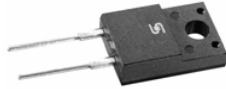
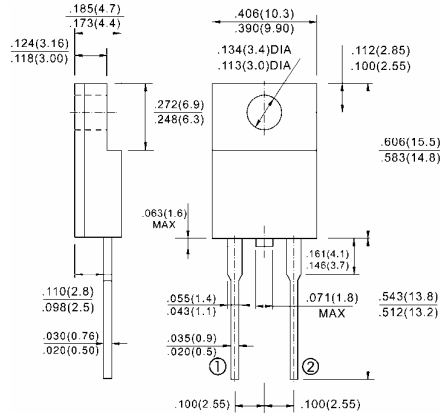


MBRF1035 - MBRF10200

Isolated 10.0 AMPS. Schottky Barrier Rectifiers



ITO-220AC



Dimensions in inches and (millimeters)

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

Mechanical Data

- ✧ Cases: ITO-220AC molded plastic body
- ✧ Terminals: Pure tin plated, lead free. solder able 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

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	Units	
Maximum Recurrent 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 See Fig. 1	$I_{(AV)}$	10								A	
Peak Repetitive Forward Current (Square Wave, 20KHz) at $T_c=135^\circ\text{C}$	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		0.5						A	
Voltage Rate of Change (Rated V_R)	dV/dt	10,000								V/uS	
Maximum Instantaneous Forward Voltage at (Note 2) $I_F=10A, T_c=25^\circ\text{C}$ $I_F=10A, T_c=125^\circ\text{C}$ $I_F=20A, T_c=25^\circ\text{C}$ $I_F=20A, T_c=125^\circ\text{C}$	V_F	—	0.57	0.80	0.70	0.85	0.71	1.05	—	V	
Maximum Instantaneous Reverse Current @ $T_c=25^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_c=125^\circ\text{C}$ (Note 2)	I_R	15		10		6		2		mA mA	
Typical Junction Capacitance	C_j	390		300		220				pF	
Maximum Thermal Resistance, Junction to Case	$R_{\theta JC}$	3.0							4.0		°C/W
Operating Junction Temperature Range	T_J	-65 to +150								°C	
Storage Temperature Range	T_{STG}	-65 to +175								°C	

- Notes: 1. 2.0us Pulse Width, $f=1.0$ KHz.
2. Pulse Test: 300us Pulse Width, 1% Duty Cycle.
3. Mounted on Heatsink Size of 2" x 3" x 0.25" in Al-Plate.

RATINGS AND CHARACTERISTIC CURVES (MBRF1035 THRU MBRF10200)

FIG.1- FORWARD CURRENT DERATING CURVE

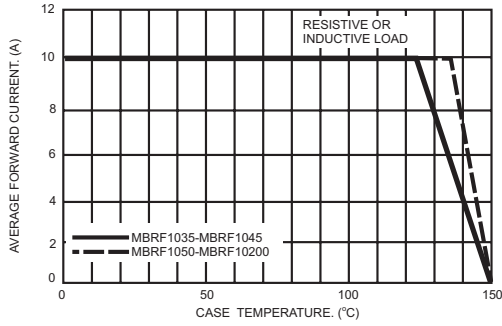


FIG.2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

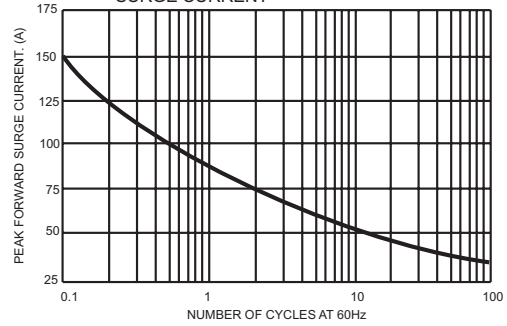


FIG.3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

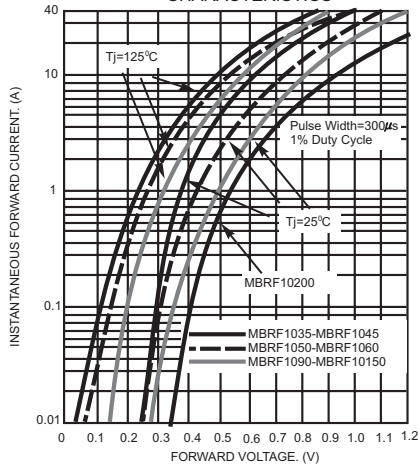


FIG.4- TYPICAL REVERSE CHARACTERISTICS

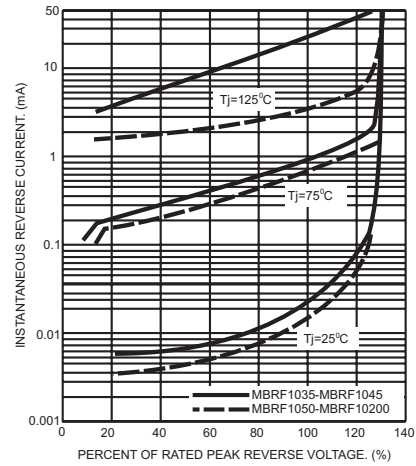


FIG.5- TYPICAL JUNCTION CAPACITANCE

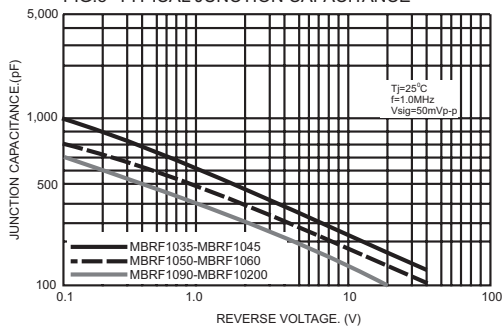


FIG.6- TYPICAL TRANSIENT THERMAL CHARACTERISTICS

