

MBRF1035CT - MBRF10200CT

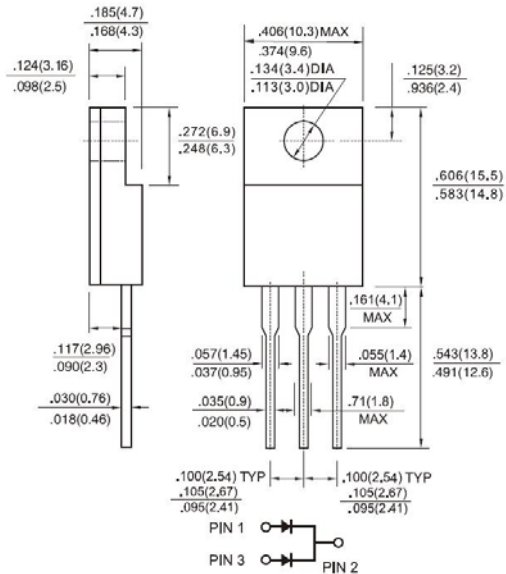
10.0 AMPS. Isolated Schottky Barrier Rectifiers

ITO-220AB



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

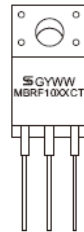


Mechanical Data

- ✦ 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

Dimensions in inches and (millimeters)

Marking Diagram



- MBRF10XXCT = 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	MBRF	MBRF	MBRF	MBRF	MBRF	MBRF	MBRF	Unit
		1035 CT	1045 CT	1050 CT	1060 CT	1090 CT	10100 CT	10150 CT	10200 CT	
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 at $T_c=133^\circ\text{C}$	$I_{F(AV)}$	10								A
Peak Repetitive Forward Current (Rated VR, Square Wave, 20KHz) at $T_c=133^\circ\text{C}$	I_{FRM}	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 (Note 1)	I_{RRM}	0.5								A
Maximum Instantaneous Forward Voltage (Note 2) $I_F=5A, T_A=25^\circ\text{C}$ $I_F=5A, T_A=125^\circ\text{C}$ $I_F=10A, T_A=25^\circ\text{C}$ $I_F=10A, T_A=125^\circ\text{C}$	V_F	0.70 0.57 0.80 0.67		0.80 0.65 0.90 0.75		0.85 0.75 0.95 0.85		0.88 0.78 0.98 0.88		V
Maximum Reverse Current @ Rated VR $T_A=25^\circ\text{C}$ $T_A=125^\circ\text{C}$	I_R	0.1								mA
		15		10				5		
Voltage Rate of Change (Rated V_R)	dV/dt	10000								V/us
Typical Thermal Resistance Per Leg	$R_{\theta JC}$	3.5								$^\circ\text{C/W}$
Operating Temperature Range	T_J	- 65 to + 150								$^\circ\text{C}$
Storage Temperature Range	T_{STG}	- 65 to + 150								$^\circ\text{C}$

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

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

RATINGS AND CHARACTERISTIC CURVES (MBRF1035CT THRU MBRF10200CT)

FIG. 1 FORWARD CURRENT DERATING CURVE

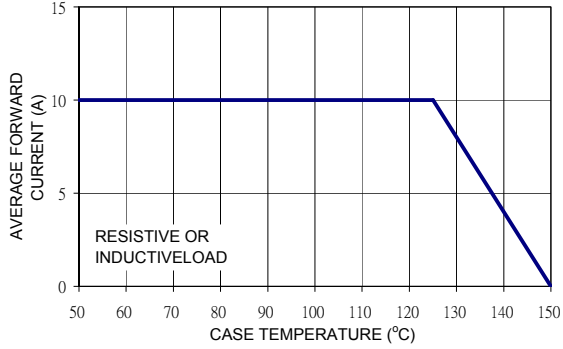


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

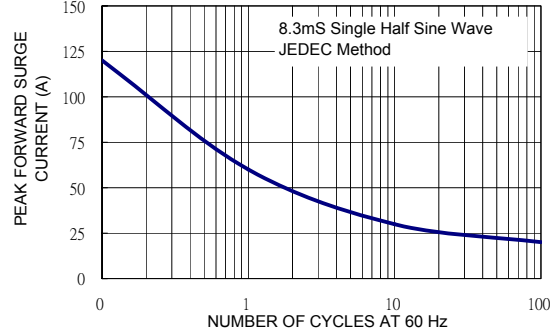


FIG. 3 TYPICAL FORWARD CHARACTERISTICS PER LEG

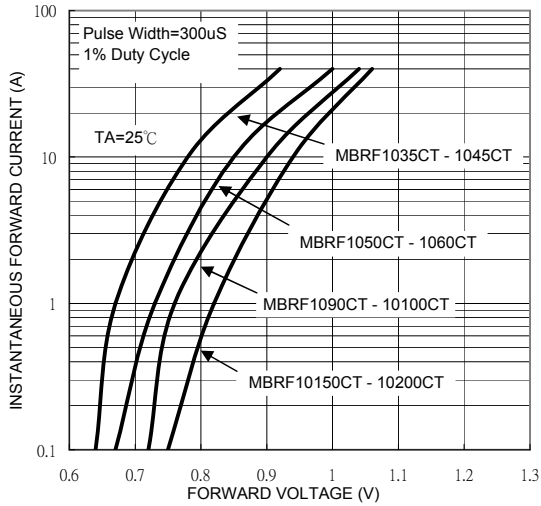


FIG. 4 TYPICAL REVERSE CHARACTERISTICS PER LEG

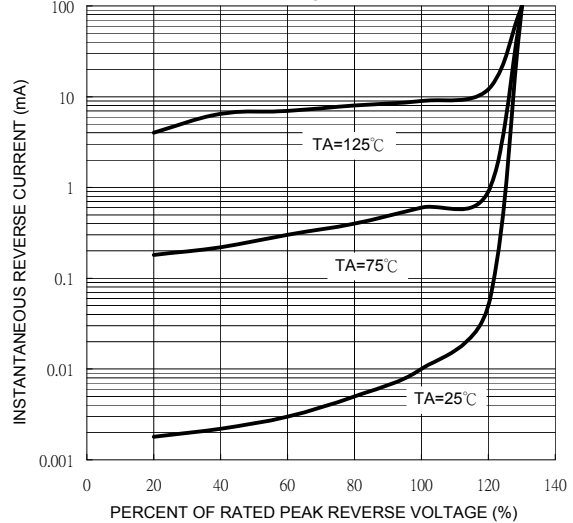


FIG. 5 TYPICAL JUNCTION CAPACITANCE PER LEG

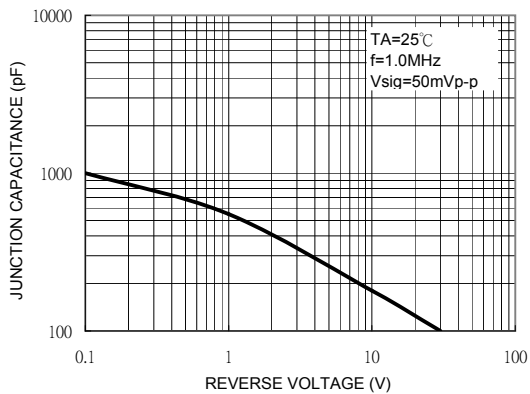


FIG. 6 TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG

