

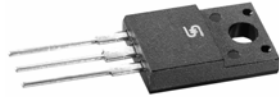


SBRF2060CT - SBRF20200CT

Isolation 20.0 AMPS. Schottky Barrier Rectifiers
ITO-220AB

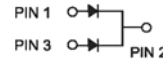
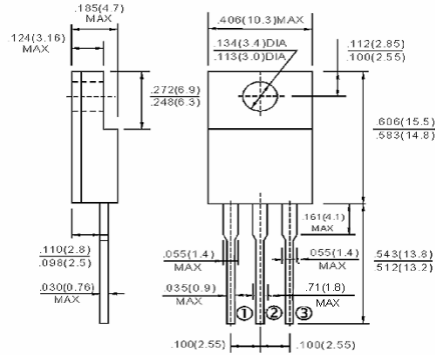


RoHS
COMPLIANCE



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



Dimensions in inches and (millimeters)

Mechanical Data

- ◇ Cases: ITO-220AB molded plastic
- ◇ Terminals: Leads 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

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	SBRF 2060CT	SBRF 20100CT	SBRF 20150CT	SBRF 20200CT	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	60	100	150	200	V
Maximum RMS Voltage	V_{RMS}	42	70	105	140	V
Maximum DC Blocking Voltage	V_{DC}	60	100	150	200	V
Maximum Average Forward Rectified Current at $T_C=135^\circ\text{C}$	$I_{(AV)}$	Total device Per Leg				A
Peak Repetitive Forward Current Per leg (Rated V_R , 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}	0.5				A
Maximum Instantaneous Forward Voltage at (Note 2)	V_F	0.80 0.70 0.95 0.85	0.85 0.75 0.95 0.85	0.95 0.85 1.05 0.95	0.99 0.87 1.23 1.10	V
Maximum Instantaneous Reverse Current @ $T_C=25^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_C=125^\circ\text{C}$	I_R	10	0.1 5		0.15 100	mA
Voltage Rate of Change, (Rated V_R)	dV/dt	10,000				V/ μS
Typical Thermal Resistance Per Leg (Note 3)	$R_{\theta JC}$	3.5				$^\circ\text{C}/\text{W}$
Typical Junction Capacitance	C_j	310				pF
RMS Isolation Voltage (MBRF Type Only) from Terminals to Heatsink with $t=1.0$ Second, $RH \leq 30\%$	V_{ISO}	4500 (Note 4) 3500 (Note 5) 1500 (Note 6)				V
Operating Junction Temperature Range	T_J	-65 to +150				$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-65 to +175				$^\circ\text{C}$

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 Per Leg, with Heatsink Size (4"x6"x0.25") Al-Plate

4. Clip mounting (on case), where lead does not overlap heatsink with 0.110" offset.

5. Clip Mounting (on case), where leads do overlap heatsink.

6. Screw Mounting with 4-40 screw, where washer diameter is ≤ 4.9 mm (0.19")

RATINGS AND CHARACTERISTIC CURVES (SBRF2060CT THRU SBRF20200CT)

FIG.1- FORWARD CURRENT DERATING CURVE

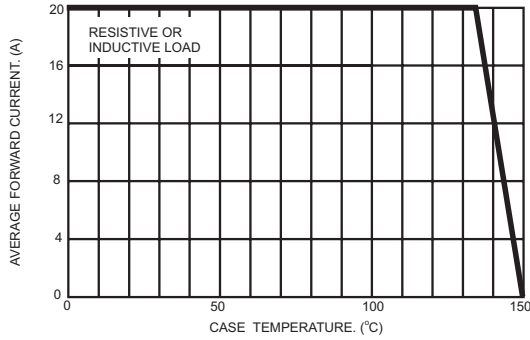


FIG.2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

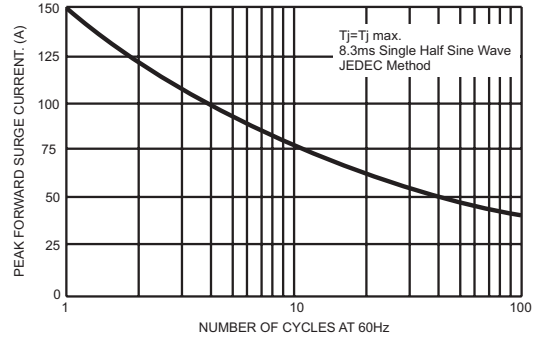


FIG.3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

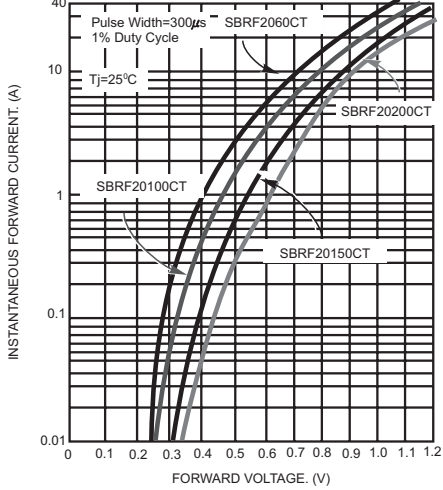


FIG.4- TYPICAL REVERSE CHARACTERISTICS PER LEG

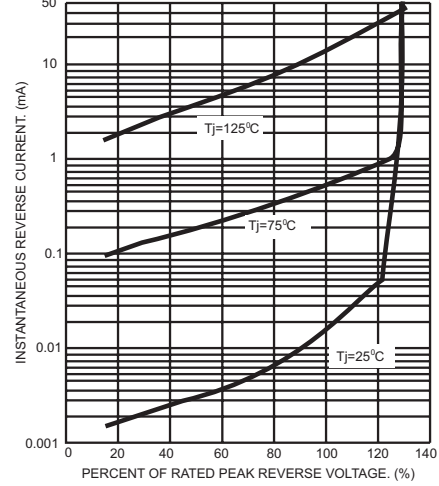


FIG.5- TYPICAL JUNCTION CAPACITANCE PER LEG

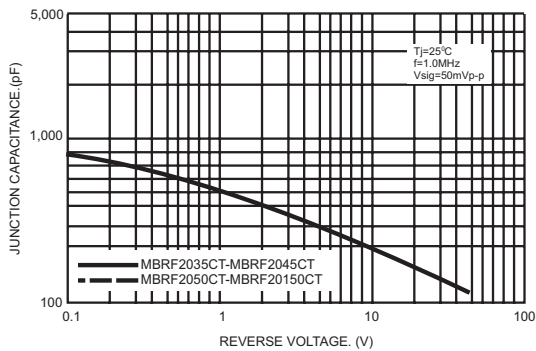


FIG.6- TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG

