

RoHS Compliant Product

A suffix of "-C" specifies halogen & lead-free



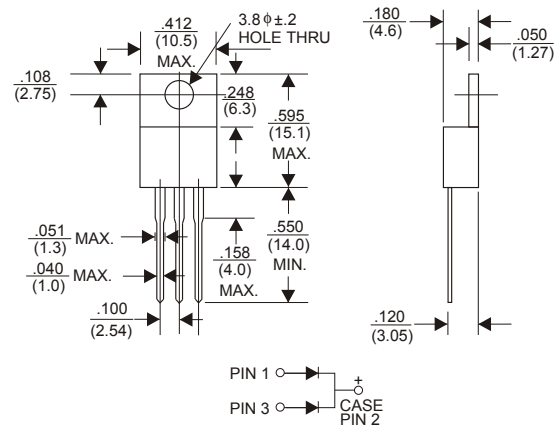
TO-220

## FEATURES

- \* Low forward voltage drop
- \* High current capability
- \* High reliability
- \* High surge current capability
- \* Epitaxial construction

## MECHANICAL DATA

- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Lead: Lead solderable per MIL-STD-202, method 208 guaranteed
- \* Polarity: As Marked
- \* Mounting position: Any
- \* Weight: 2.24 grams(Approximately)



Dimensions in inches and (millimeters)

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating 25°C ambient temperature unless otherwise specified.  
Single phase half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

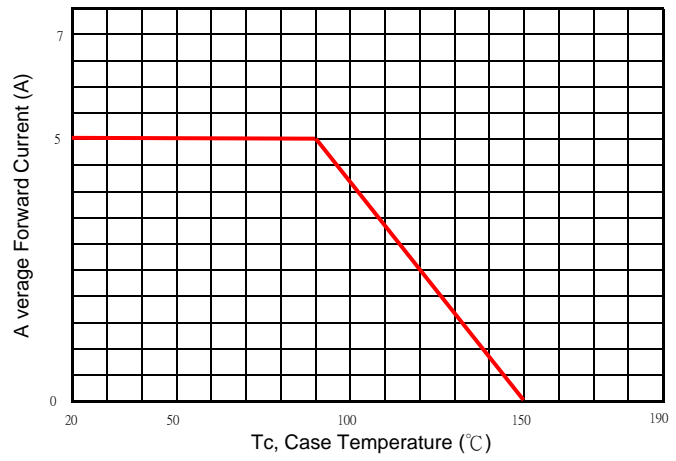
TYPE NUMBER	SYMBOL	SBR1040	UNITS
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	40	V
Working Peak Reverse Voltage	$V_{RSM}$	40	V
Maximum DC Blocking Voltage	$V_{DC}$	40	V
Maximum Average Forward Rectified Current (Per Leg)	$I_F$	5	A
(Per Device)		10	
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	130	A
Maximum Instantaneous Forward Voltage ( $I_F = 5$ Amps, $T_F = 25^\circ\text{C}$ , per leg)	$V_F$	0.55	V
Maximum Instantaneous Forward Voltage ( $I_F = 5$ Amps, $T_F = 125^\circ\text{C}$ , per leg)		0.48	
Maximum DC Reverse Current at Rated DC Blocking Voltage $T_a = 25^\circ\text{C}$	$I_R$	0.80	mA
$T_a = 125^\circ\text{C}$		15	
Typical Junction Capacitance (Note 1)	$C_J$	450	pF
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	2.5	$^\circ\text{C/W}$
Voltage Rate Of Change (Rated $V_R$ )	$dv/dt$	10000	V/us
Operating Temperature Range	$T_J$	-50 ~ +150	$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-65 ~ +175	$^\circ\text{C}$

NOTES:

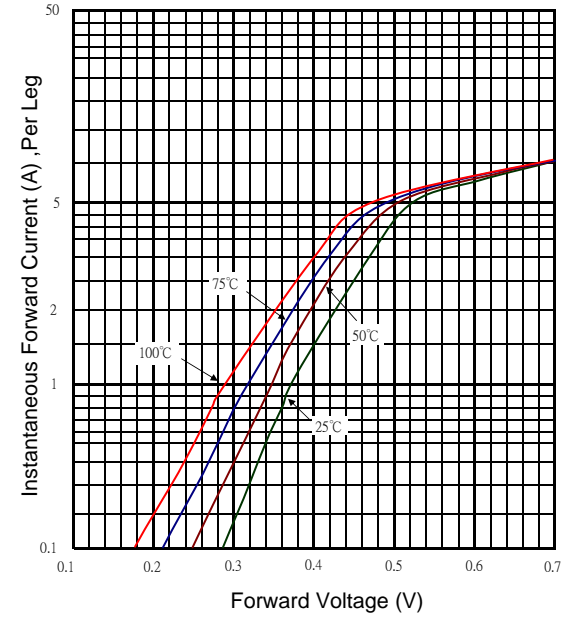
1. Measured at 1MHz and applied reverse voltage of 5.0V D.C.
2. Thermal Resistance Junction to Case.

RATING AND CHARACTERISTIC CURVES

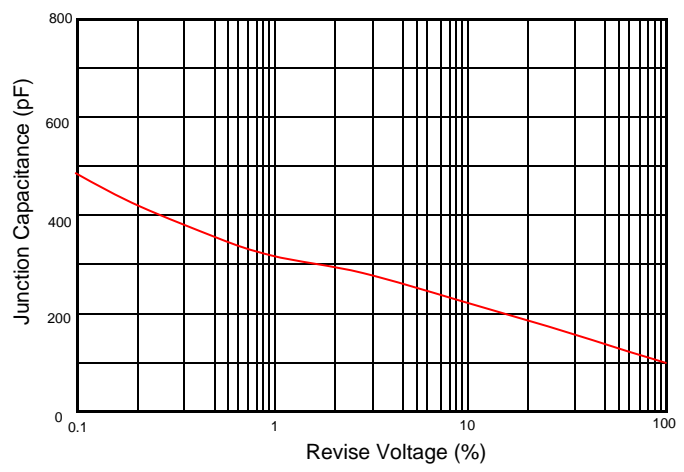
Typical Forward Current Derating Curve



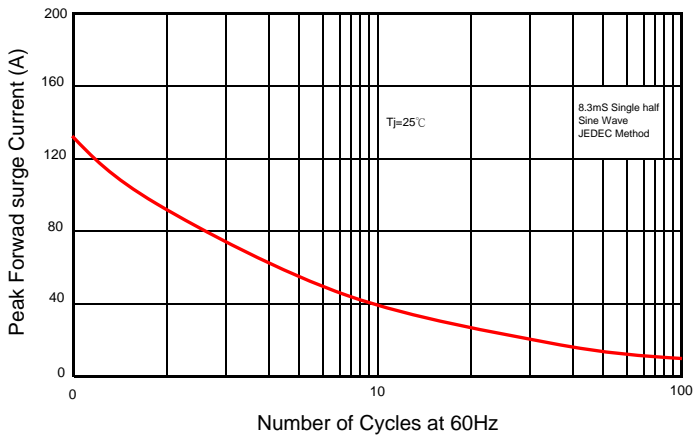
Typical Forward Characteristic



Typical Junction Capacitance



Maximum Non- Repetitive Forward Surge Current



Typical Reverse Characteristic

