

RoHS Compliant Product  
A suffix of "-C" specifies halogen & lead-free

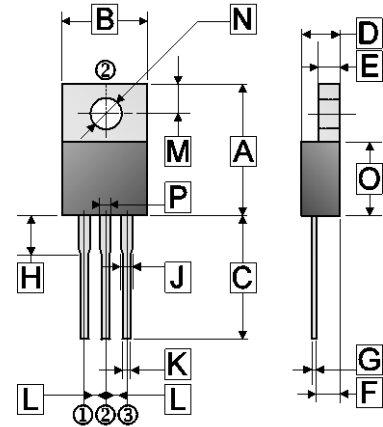
## FEATURES

- Low Forward Voltage Drop
- High Current Capability
- High Reliability
- High Surge Current Capability
- Epitaxial Construction

## MECHANICAL DATA

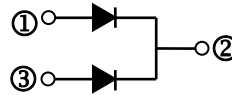
- Case: Molded Plastic
- Epoxy: UL94V-0 Rate Flame Retardant
- Lead: Lead Solderable per MIL-STD-202 Method 208 Guaranteed
- Polarity: As Marked
- Mounting Position: Any

### TO-220



## ORDER INFORMATION

Part Number	Type
SBR20200	Lead (Pb)-free
SBR20200-C	Lead (Pb)-free and Halogen-free



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	14.22	16.51	J	0.70	1.78
B	9.57	10.90	K	0.38	1.11
C	12.50	14.75	L	2.01	3.07
D	3.56	5.10	M	2.22	3.43
E	0.51	1.47	N	3.10	4.31
F	2.03	3.19	O	8.10	9.65
G	0.279	0.76	P	1.18 TYP.	
H	2.95	4.5			

## 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, de-rate current by 20%.)

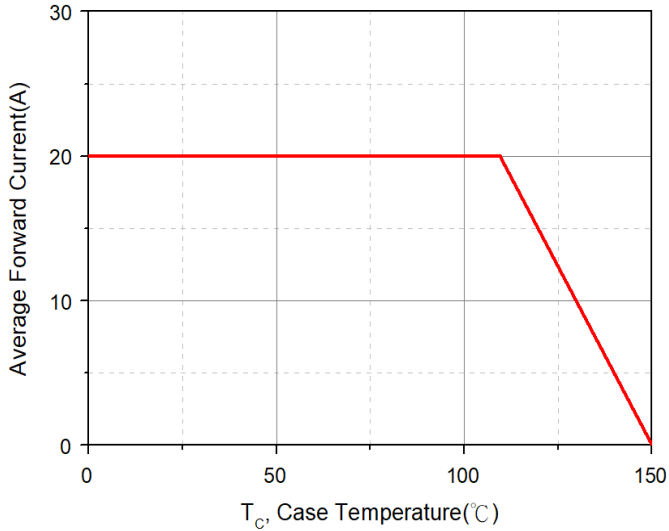
Parameter		Symbol	Rating	Unit
Maximum Recurrent Peak Reverse Voltage		$V_{RRM}$	200	V
Working Peak Reverse Voltage		$V_{RSM}$	200	V
Maximum DC Blocking Voltage		$V_{DC}$	200	V
Maximum Average Forward Rectified Current	Per Leg	$I_F$	10	A
	Per Device		20	
Peak Forward Surge Current, 8.3ms single half sine-wave superimposed on rated load (JEDEC method)		$I_{FSM}$	180	A
Maximum Instantaneous Forward Voltage @ $I_F=10A$	$T_A=25^\circ C$	$V_F$	0.92	V
	$T_A=125^\circ C$		0.8	
Maximum DC Reverse Current at Rated DC Blocking Voltage <sup>4</sup>	$T_A=25^\circ C$	$I_R$	0.02	mA
	$T_A=125^\circ C$		5	
Typical Junction Capacitance <sup>1</sup>		$C_J$	250	pF
Typical Thermal Resistance <sup>2</sup>		$R_{\theta JC}$	2	°C/W
Typical Thermal Resistance <sup>3</sup>		$R_{\theta JA}$	10	
Voltage Rate Of Change (Rated $V_R$ )		$dv/dt$	10000	V/ $\mu s$
Operating Temperature Range		$T_J$	-50~150	°C
Storage Temperature Range		$T_{STG}$	-65~175	

Notes:

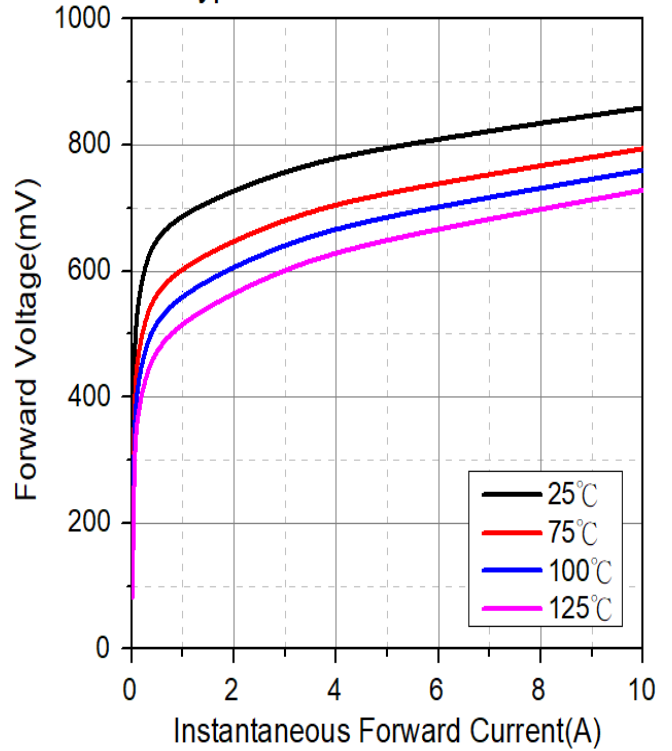
1. Measured at 1MHz and applied reverse voltage of 5V D.C.
2. Thermal Resistance Junction to Case.
3. Thermal Resistance Junction to Ambient.
4. Pulse test: 300uS pulse width, 1% duty cycle.

**RATINGS AND CHARACTERISTIC CURVES**

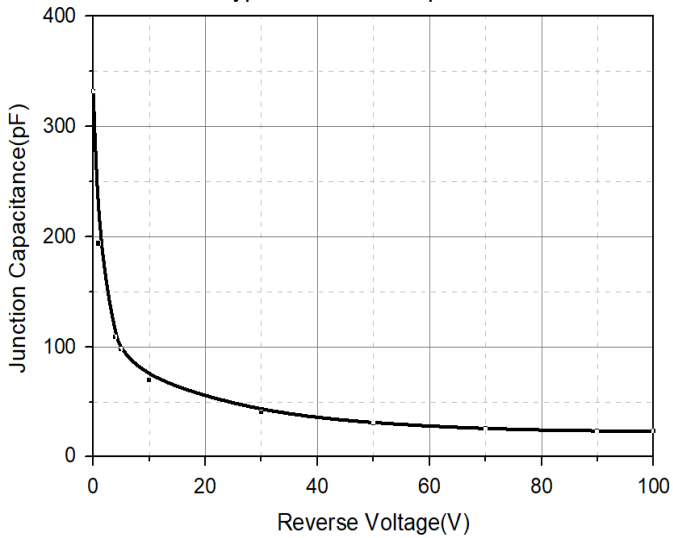
Typical Forward Current Derating Curve



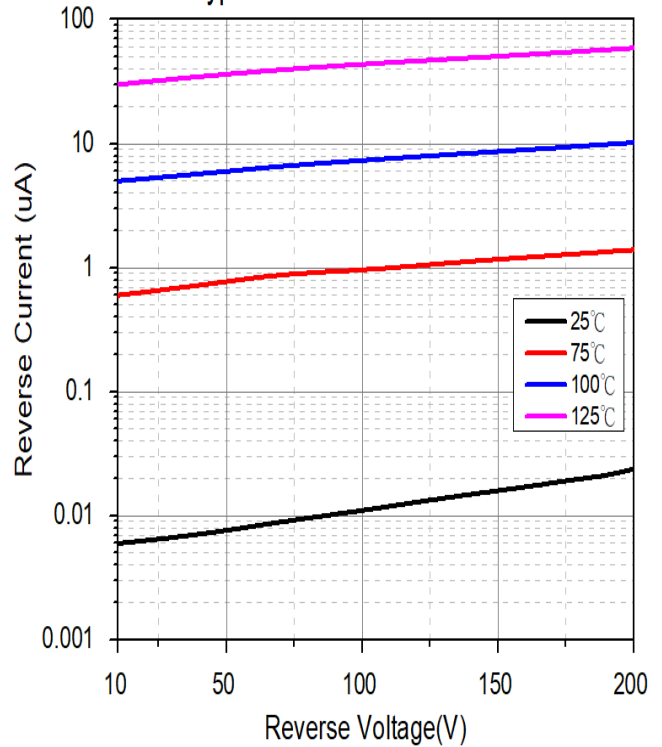
Typical Forward Characteristic



Typical Junction Capacitance



Typical Reverse Characteristic



Maximum Non-Repetitive Forward Surge Current

