

**10A SBR<sup>®</sup>**  
**Super Barrier Rectifier**

NEW PRODUCT

**Features**

- Excellent High Temperature Stability
- Super Barrier Design
- Soft, Fast Switching Capability
- Molded Plastic TO-220AB, and ITO-220AB packages
- **Lead Free Finish, RoHS Compliant (Note 2)**

**Mechanical Data**

- Case Material: Molded Plastic, UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Terminals: Matte Tin Finish annealed over Copper leadframe. Solderable per MIL-STD-202, Method 208 **(e3)**
- Marking Information: See Page 3
- Ordering Information: See Page 3

**Maximum Ratings** @ T<sub>A</sub> = 25°C unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V <sub>RRM</sub> V <sub>RWM</sub> V <sub>RM</sub>	200	V
RMS Reverse Voltage	V <sub>R(RMS)</sub>	141	V
Average Rectified Output Current @ T <sub>C</sub> = 115°C	I <sub>O</sub>	10	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I <sub>FSM</sub>	110	A
Maximum Thermal Resistance (per leg) Package = TO-220AB (Note 3) Package = ITO-220AB (Note 3)	R <sub>θJC</sub>	3 7	°C/W
Operating and Storage Temperature Range	T <sub>j</sub> , T <sub>STG</sub>	-65 to +150	°C

**Electrical Characteristics** @ T<sub>A</sub> = 25°C unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 1)	V <sub>(BR)R</sub>	200	-	-	V	I <sub>R</sub> = 0.1 mA
Forward Voltage Drop (per leg)	V <sub>F</sub>	-	- 0.69	0.90 0.74	V	I <sub>F</sub> = 5A, T <sub>j</sub> = 25°C I <sub>F</sub> = 5A, T <sub>j</sub> = 125°C
Leakage Current (Note 1)	I <sub>R</sub>	-	5 1	100 25	μA mA	V <sub>R</sub> = 200V, T <sub>j</sub> = 25 °C V <sub>R</sub> = 200V, T <sub>j</sub> = 125 °C

- Notes:
1. Short duration pulse test used to minimize self-heating effect.
  2. RoHS revision 13.2.2003. High temperature solder exemption applied, see *EU Directive Annex Note 7*.
  3. Device mounted on heatsink (Black Aluminum 45mm x 20mm x 12mm)

**SBR10200CT**  
**SBR10200CTFP**

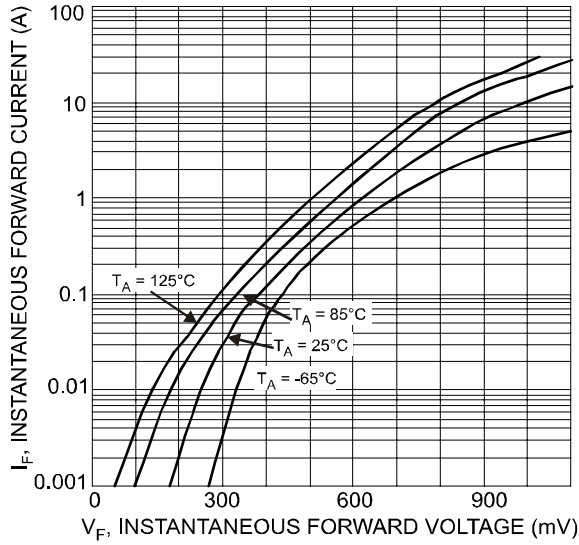


Fig. 1 Typical Forward Characteristics

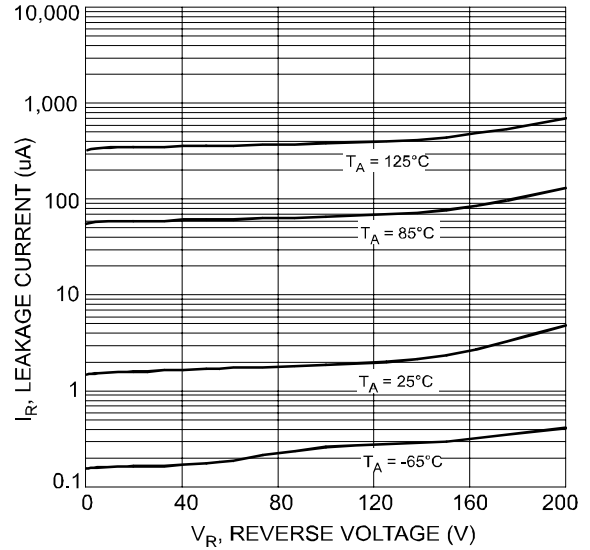


Fig. 2 Typical Reverse Characteristics

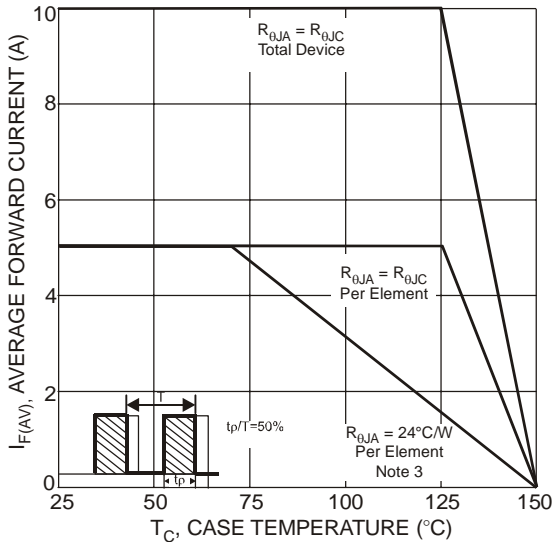
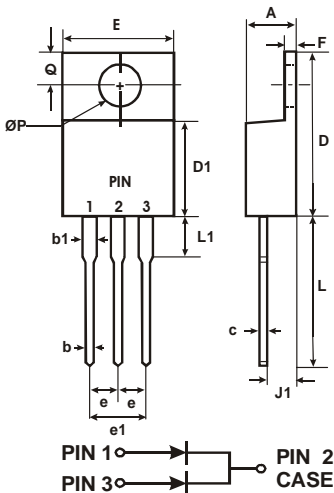
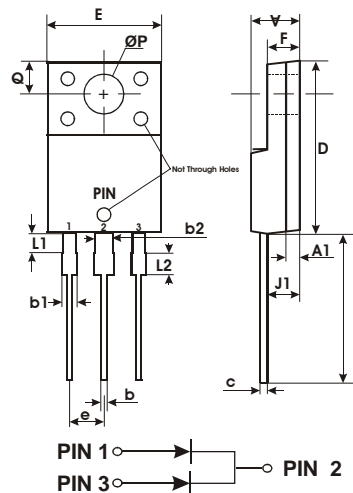


Fig. 3 Forward Current Derating Curve

## Package Outline Drawings

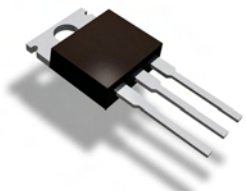
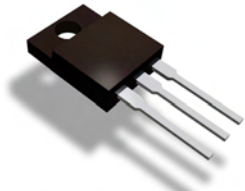
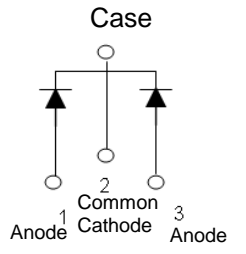
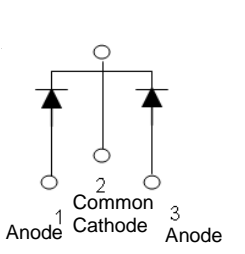
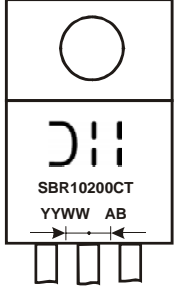
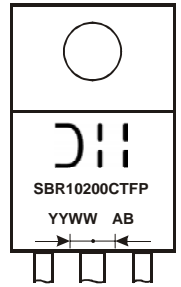


TO-220AB		
DIM.	MIN.	MAX.
A	4.47	4.67
b	0.71	0.91
b1	1.17	1.37
c	0.31	0.53
D	14.65	15.35
D1	8.50	8.90
E	10.01	10.31
e	2.54 typ	
e1	4.98	5.18
F	1.17	1.37
J1	2.52	2.82
L	13.40	13.80
L1	3.56	3.96
ØP	3.735	3.935
Q	2.59	2.89
All Dimensions in mm		



ITO-220AB		
DIM.	MIN.	MAX.
A	4.30	4.70
b	0.50	0.75
b1	1.10	1.35
b2	1.50	1.75
c	0.50	0.75
D	14.80	15.20
E	9.96	10.36
e	2.54 typ	
F	2.80	3.20
J1	2.50	2.90
L	12.80	13.60
L1	1.70	1.90
ØP	3.50 typ	
Q	2.70 typ	
All Dimensions in mm		

## Marking, Polarity, Weight & Ordering Information

	SBR10200CT	SBR10200CTFP
Case Style	 TO-220AB	 ITO-220AB
Polarity	<p>Case</p> 	
Marking		
Weight	2.1g	1.9g
Ordering Information	SBR10200CT 50 pieces/tube	SBR10200CTFP 50 pieces/tube
Date Code	YY = Last two digits of year, ex = 06 = 2006 WW = Week (01-52)	
Other Marking Information	A = Foundry Code B = Assembly Code	

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