

### **SBR20100CT** SBR20100CTFP

### 20A SBR® SUPER BARRIER RECTIFIER

#### **Features**

- Low Forward Voltage Drop
- **Excellent High Temperature Stability**
- Patented Super Barrier Rectifier Technology
- Soft, Fast Switching Capability
- ±10kV ESD Protection Per IEC 61000-4-2
- Lead Free Finish, RoHS Compliant (Note 2)
- Also Available in Green Molding Compound (Note 4)

### **Mechanical Data**

- Case: TO-220AB, ITO-220AB
- Case Material: Molded Plastic, UL Flammability Classification Rating 94V-0
- Terminals: Matte Tin Finish annealed over Copper leadframe. Solderable per MIL-STD-202, Method 208 @3
- Marking Information: See Page 3
- Ordering Information: See Page 2
- Weight: TO-220AB 1.85 grams (approximate) ITO-220AB – 1.65 grams (approximate)







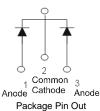
**Bottom View** 



ITO-220AB Top View



ITO-220AB Bottom View



Configuration

## Maximum Ratings (Per Leg) @TA = 25°C unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitance 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>	100	V
Average Rectified Output Current Per Device (Per Leg) (Total)	lo	10 20	А
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I <sub>FSM</sub>	150	А
Peak Repetitive Reverse Surge Current (2uS-1Khz)	I <sub>RRM</sub>	2	A
Isolation Voltage (ITO-220AB Only) From terminal to heatsink t = 3 sec.	V <sub>AC</sub>	2000	V

# Thermal Characteristics (Per Leg)

Characteristic	Symbol	Value	Unit
Typical Thermal Resistance Package = TO-220AB Package = ITO-220AB	R <sub>θ</sub> JC	2 4	°C/W
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-65 to +175	°C

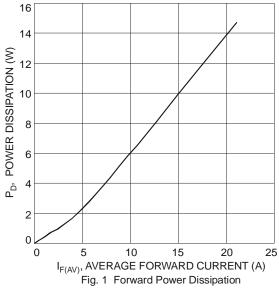
# Electrical Characteristics (Per Leg) @TA = 25°C unless otherwise specified

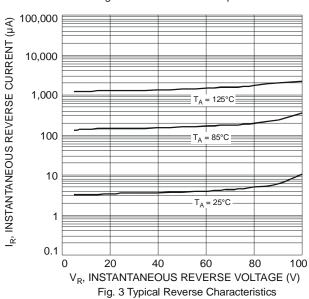
Characteristic	Symbol	Min	Тур	Max	Unit	Test Condition
Forward Voltage Drop	V <sub>F</sub>	-	0.67	0.82 0.75	I V	I <sub>F</sub> = 10A, T <sub>J</sub> = 25°C I <sub>F</sub> = 10A, T <sub>J</sub> = 125°C
Leakage Current (Note 1)	I <sub>R</sub>	-	-	0.1 10	mA	$V_R = 100V, T_J = 25^{\circ}C$ $V_R = 100V, T_J = 125^{\circ}C$

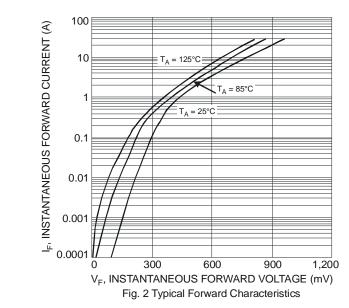
Notes: 1. Short duration pulse test used to minimize self-heating effect.

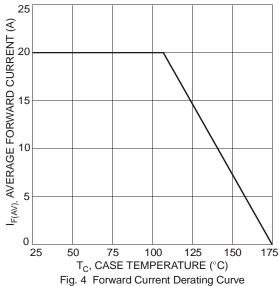
2. EU Directive 2002/95/EC (RoHS). All applicable RoHS exemptions applied, see EU Directive 2002/95/EC Annex Notes.











## Ordering Information (Notes 3 & 4)

Part Number	Case	Packaging
SBR20100CT	TO-220AB	50 pieces/tube
SBR20100CT-G	TO-220AB	50 pieces/tube
SBR20100CTFP	ITO-220AB	50 pieces/tube
SBR20100CTFP-G	ITO-220AB	50 pieces/tube
SBR20100CTFP-JT	ITO-220AB (Alternate)	50 pieces/tube

Notes: 3. For packaging details, go to our website at http://www.diodes.com/datasheets/ap02007.pdf.

4. For Green Molding Compound version part numbers, add "-G" suffix to part number above. Examples: SBR20100CT-G.



## **Marking Information**

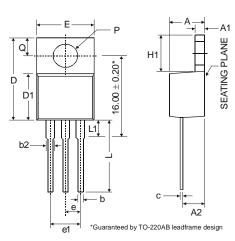


SBR20100CT = Product Type Marking Code AB = Foundry and Assembly Code YYWW = Date Code Marking YY = Last two digits of year (ex: 06 = 2006) WW = Week (01 - 53)

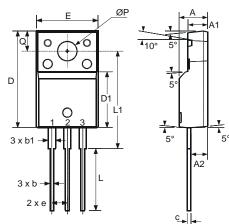


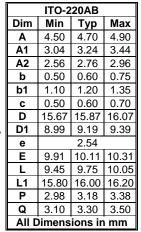
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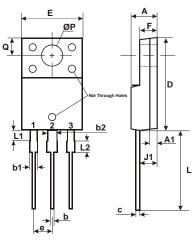
## **Package Outline Dimensions**



TO-220AB				
Dim	Min	Тур	Max	
Α	3.56	1	4.82	
<b>A</b> 1	0.51	1	1.39	
A2	2.04	•	2.92	
b	0.39	0.81	1.01	
b2	1.15	1.24	1.77	
C	0.356	1	0.61	
D	14.22	•	16.51	
D1	8.39	-	9.01	
е	2.54			
e1	5.08			
Е	9.66	ı	10.66	
H1	5.85	1	6.85	
L	12.70	-	14.73	
L1	-		6.35	
Р	3.54	-	4.08	
ø	2.54	-	3.42	
All Dimensions in mm				







ITO-220AB				
Α	ALTERNATE			
DIM.	MIN.	MAX.		
Α	4.30	4.70		
A1	1	.3		
b	0.50	0.75		
b1	1.10	1.35		
b2	1.50	1.75		
С	0.50	0.75		
D	14.80	15.20		
Е	9.96	10.36		
е	2.54 typ			
F	2.80	3.20		
J1	2.50	2.90		
L	12.80	13.60		
L1	1.70	1.90		
L2	1.90	2.10		
ØP	3.50 typ			
Q	2.70 typ			
All Din	All Dimensions in mm			



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