

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 (Notes 1 & 2)
- Also Available in Green Molding Compound
 - Halogen and Antimony Free. "Green" Device (Note 3)

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
- Weight: TO-220AB 1.85 grams (approximate) ITO-220AB - 1.65 grams (approximate)







TO-220AB **Bottom View**



ITO-220AB Top View



ITO-220AB **Bottom View**



Package Pin-Out Configuration

Ordering Information (Notes 4 and 5)

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

Notes:

- 1. EU Directive 2002/95/EC (RoHS) & 2011/65/EU (RoHS 2) compliant. All applicable RoHS exemptions applied.
- 2. See http://www.diodes.com for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
- 3. Halogen- and Antimony-free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
- 4. For Green Molding Compound version part numbers, add "-G" suffix to part number above. Examples: SBR20100CT-G.
- 5. For packaging details, go to our website at http://www.diodes.com.

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)



SBR20100CTFP = 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)



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 _{RM} V _{RM} V _{RM}	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 _{FSM}	150	A	
Peak Repetitive Reverse Surge Current (2uS-1Khz)	I _{RRM}	2	Α	
Isolation Voltage (ITO-220AB Only) From terminal to heatsink t = 3 sec.	V _{AC}	2000	V	

Thermal Characteristics (Per Leg)

Characteristic	Symbol	Value	Unit
Typical Thermal Resistance Package = TO-220AB	R _{eJC}	2	°C/W
Package = ITO-220AB	ТОӨЛС	4	3/11
Operating and Storage Temperature Range	T _J , T _{STG}	-65 to +175	°C

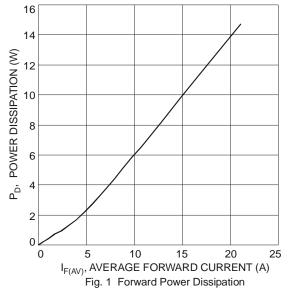
Electrical Characteristics (Per Leg) @TA = 25°C unless otherwise specified

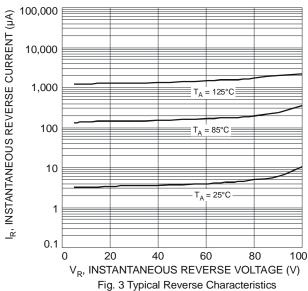
Characteristic	Symbol	Min	Тур	Max	Unit	Test Condition
Forward Voltage Drop	VF	ı	- 0.67	0.82 0.75	· · · · //	I _F = 10A, T _J = 25°C I _F = 10A, T _J = 125°C
Leakage Current (Note 6)	I _R	-	-	0.1 10	l ma	$V_R = 100V, T_J = 25^{\circ}C$ $V_R = 100V, T_J = 125^{\circ}C$

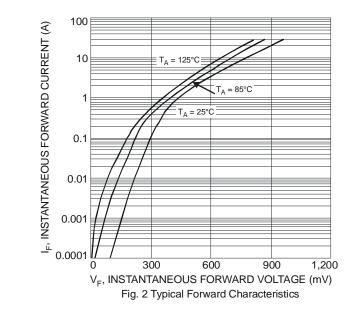
Notes: 6. Short duration pulse test used to minimize self-heating effect.

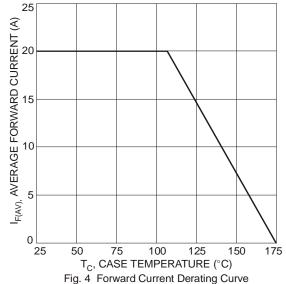






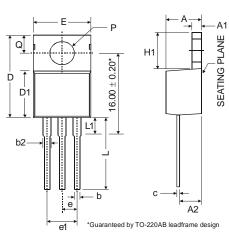




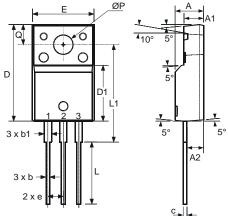




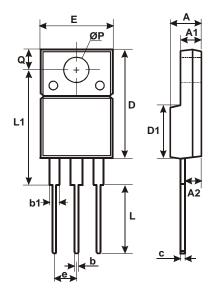
Package Outline Dimensions



	TO-220AB				
Dim	Min	Тур	Max		
Α	3.56	-	4.82		
A 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		
С	0.356	1	0.61		
D	14.22	-	16.51		
D1	8.39	-	9.01		
е		2.54			
e1		5.08			
Е	9.66	1	10.66		
H1	5.85	-	6.85		
L	12.70		14.73		
L1	-	-	6.35		
Р	3.54		4.08		
Q	2.54		3.42		
All Dimensions in mm					



ITO-220AB					
Dim	Min	Тур	Max		
Α	4.50	4.70	4.90		
A1	3.04	3.24	3.44		
A2	2.56	2.76	2.96		
b	0.50	0.60	0.75		
b1	1.10	1.20	1.35		
С	0.50	0.60	0.70		
D	15.67	15.87	16.07		
D1	8.99	9.19	9.39		
е	2.54				
Е	9.91	10.11	10.31		
L	9.45	9.75	10.05		
L1	15.80	16.00	16.20		
Р	2.98	3.18	3.38		
Q	3.10	3.30	3.50		
All Dimensions in mm					



ITO-220AB					
Alternate					
Dim Min Max					
Α	4.36	4.77			
A1	2.54	3.1			
A2	2.54	2.8			
b	0.55	0.75			
b1	1.2	1.5			
C	0.38	0.68			
D	14.5	15.5			
D1	8.38	8.89			
Е	9.72	10.27			
е	2.41	2.67			
L	9.87	10.67			
L1	15.8	17			
ØP	3.08	3.39			
Q	2.6	3.0			
All Dimensions in mm					





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