

20A SBR[®] SUPER BARRIER RECTIFIER

Features

- Low Forward Voltage Drop
- Excellent High Temperature Stability
- Patented Super Barrier Rectifier Technology
- Soft, Fast Switching Capability
- Lead-Free Finish; RoHS Compliant (Notes 1 & 2)
- Also Available in Green Molding Compound (Note 4)
 - Halogen and Antimony Free. "Green" Device (Note 3)

Mechanical Data

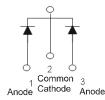
- Case: TO-220AB, ITO-220AB
- Case Material: Molded Plastic, UL Flammability Classification Rating 94V-0
- Terminals: Matte Tin Finish annealed over Copper leadframe.
 Solderable per MIL-STD-202, Method 208 63
- Weight: TO-220AB 1.85 grams (approximate)
 ITO-220AB 1.65 grams (approximate)











TO-220AB Top View

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
(49)	SBR20150CT	TO-220AB	50 pieces/tube
Pb	SBR20150CT-G	TO-220AB	50 pieces/tube
Pb	SBR20150CTFP	ITO-220AB	50 pieces/tube
Pb	SBR20150CTFP-G	ITO-220AB	50 pieces/tube
Pb)	SBR20150CTFP-JT	ITO-220AB (Alternate)	50 pieces/tube
Pb	SBR20150CTFP-JT-G	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: SBR20150CT-G.
- 5. For packaging details, go to our website at http://www.diodes.com.

Marking Information



SBR20150CT = 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)



SBR20150CTFP = 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) (@T_A = +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	V_{RRM}		
Working Peak Reverse Voltage	V_{RWM}	150	V
DC Blocking Voltage	V_{RM}		
Average Rectified Output Current (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	А
Peak Repetitive Reverse Surge Current (2µS - 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)

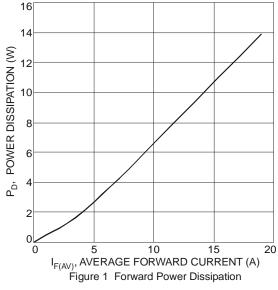
Characteristic	Symbol	Value	Unit
Typical Thermal Resistance			
Package = TO-220AB	$R_{ heta JC}$	2	°C/W
Package = ITO-220AB	•	4	
Operating and Storage Temperature Range	T _J , T _{STG}	-65 to +175	°C

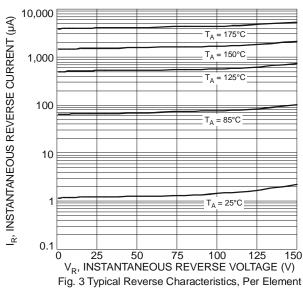
Electrical Characteristics (Per Leg) (@TA = +25°C, unless otherwise specified.)

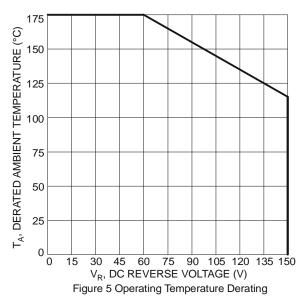
Characteristic	Symbol	Min	Тур	Max	Unit	Test Condition
Forward Voltage Drop	V _F	-	- 0.71	0.88 0.79	V	I _F = 10A, T _J = +25°C I _F = 10A, T _J = +125°C
Leakage Current (Note 6)	I _R	-	-	0.1 10	mA	V _R = 150V, T _J = +25°C V _R = 150V, T _J = +125°C

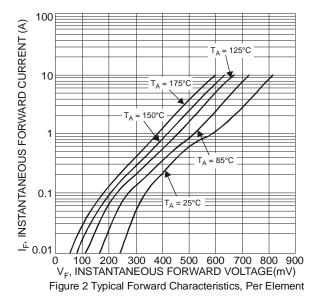
Notes: 6. Short duration pulse test used to minimize self-heating effect.

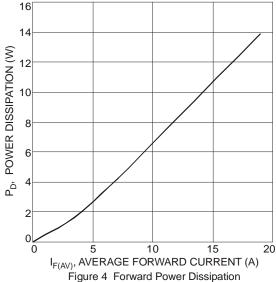








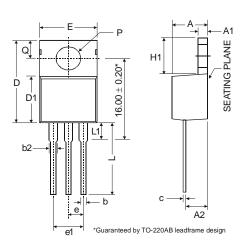




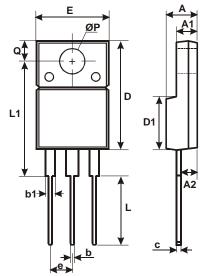


Package Outline Dimensions

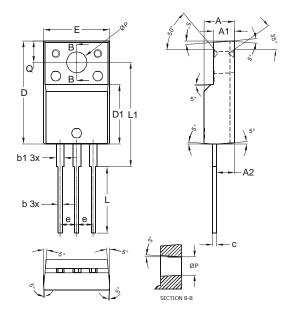
Please see AP02002 at http://www.diodes.com/datasheets/ap02002.pdf for latest version.



TO-220AB				
Dim	Min	Тур	Max	
Α	3.56	ı	4.82	
A1	0.51	ı	1.39	
A2	2.04	1	2.92	
b	0.39	0.81	1.01	
b2	1.15	1.24	1.77	
С	0.356	-	0.61	
D	14.22	-	16.51	
D1	8.39	-	9.01	
е		2.54		
e1	5.08			
Е	9.66	•	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					
Alternate					
Dim	Min	Max			
Α	4.36	4.77			
A 1	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			
٦	9.87	10.67			
L1	15.8	17			
ØP	3.08	3.39			
Q	2.6	3.0			
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		
Ø	3.10	3.30	3.50		
All Dimensions in mm					



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