

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 ⁽³⁾
- Weight: TO-220AB 1.85 grams (approximate) ITO-220AB – 1.65 grams (approximate)





TO-220AB Top View

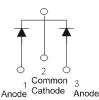
TO-220AB Bottom View



ITO-220AB Top View



ITO-220AB Bottom View



Package Pin Out Configuration

Ordering Information (Notes 4 and 5)

	Part Number	Case	Packaging
R	SBR20150CT	TO-220AB	50 pieces/tube
Pb,	SBR20150CT-G	TO-220AB	50 pieces/tube
R	SBR20150CTFP	ITO-220AB	50 pieces/tube
Creen	SBR20150CTFP-G	ITO-220AB	50 pieces/tube
Þ	SBR20150CTFP-JT	ITO-220AB (Alternate)	50 pieces/tube
(PD) Green	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.

See http://www.diodes.com for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
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.

Characteristic		Symbol	Value	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage		V _{RRM} Vrwm V _{RM}	150	V
Average Rectified Output Current	(Per Leg) (Total)	lo	10 20	А
Non-Repetitive Peak Forward Surge Current Single Half Sine-Wave Superimposed on Ra		I _{FSM}	150	А
Peak Repetitive Reverse Surge Current (2µS	- 1Khz)	I _{RRM}	2	А
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 _{θJC}	2	°C/W
Package = ITO-220AB		4	
Operating and Storage Temperature Range	TJ, T _{STG}	-65 to +175	°C

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

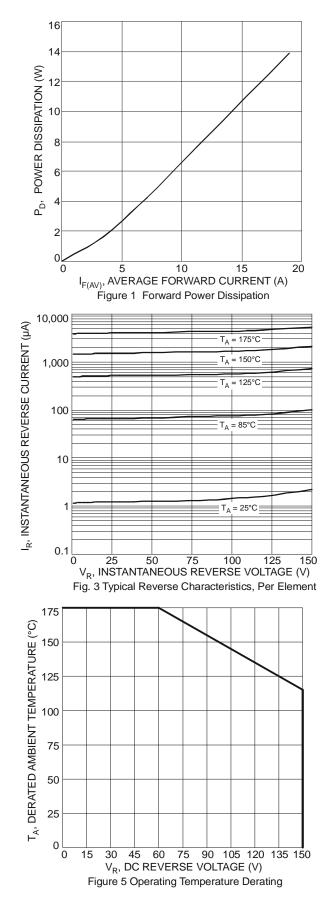
Characteristic	Symbol	Min	Тур	Max	Unit	Test Condition
Forward Voltage Drop	V _F	-	- 0.71	0.88 0.79	V	I _F = 10A, T _J = +25°C I _F = 10A, T _J = +125°C
Leakage Current (Note 6)	I _R	-	-	0.1 10	mΑ	$V_R = 150V, T_J = +25^{\circ}C$ $V_R = 150V, T_J = +125^{\circ}C$

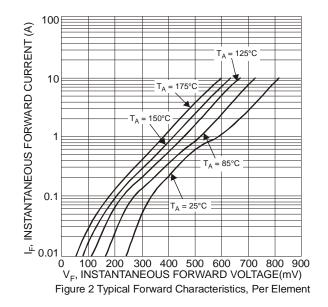
Notes: 6. Short duration pulse test used to minimize self-heating effect.

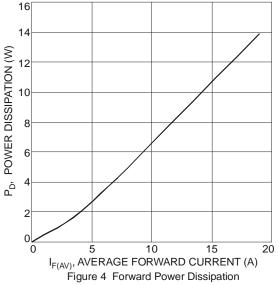
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SBR20150CT SBR20150CTFP





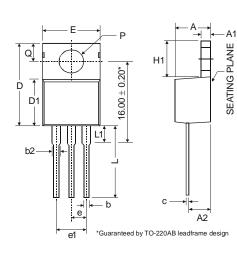


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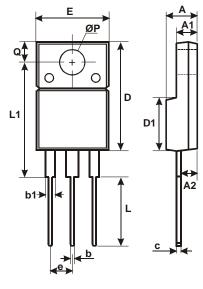


Package Outline Dimensions

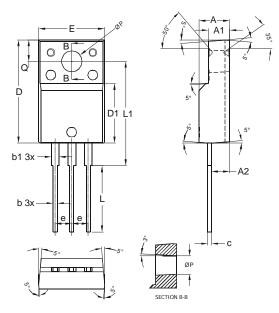
Please see AP02002 at http://www.diodes.com/datasheets/ap02002.pdf for latest version.



	TO-220AB				
Dim	Min	Тур	Max		
Α	3.56	-	4.82		
A1	0.51	-	1.39		
A2	2.04	-	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	I	9.01		
е	2.54				
e1	5.08				
Ε	9.66	-	10.66		
H1	5.85	-	6.85		
L	12.70	-	14.73		
L1	-	-	6.35		
Ρ	3.54	-	4.08		
Q	2.54	-	3.42		
	Dimens	ions i	n mm		



ITO-220AB						
Alternate						
Dim	Dim Min					
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				
С	0.38	0.68				
D	14.5	15.5				
D1	8.38	8.89				
E	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						



	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				
Ρ	2.98	3.18	3.38				
Q	3.10	3.30	3.50				
All Dimensions in mm							

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