

10A SBR[®] SUPER BARRIER RECTIFIER

Features

- Ultra 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
 - 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 Bottom View



ITO-220AB Top View



ITO-220AB Bottom View



Package Pin-Out Configuration

Ordering Information (Notes 4 and 5)

	Part Number	Case	Packaging
Pv)	SBR10U150CT	TO-220AB	50 pieces/tube
Pb	SBR10U150CT-G	TO-220AB	50 pieces/tube
Pv)	SBR10U150CTFP	ITO-220AB	50 pieces/tube
Ph	SBR10U150CTFP-G	ITO-220AB	50 pieces/tube
P	SBR10U150CTFP-JT	ITO-220AB (Alternate)	50 pieces/tube

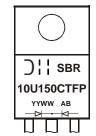
Notes:

- 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: SBR10U150CT-G.
- 5. For packaging details, go to our website at http://www.diodes.com.

Marking Information



SBR10U150CT = 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)



SBR10U150CTFP = 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 _{RRM} V _{RWM} V _{RM}	150	V
Average Rectified Output Current	Per Leg Total	Io	5 10	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}	3	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 (per leg) Package = TO-220AB Package = ITO-220AB	$R_{ hetaJC}$	2 4	°C/W
Operating and Storage Temperature Range	T _J , T _{STG}	-65 to +175	°C

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

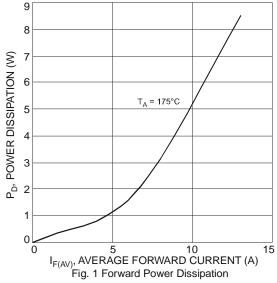
Characteristic	Symbol	Min	Тур	Max	Unit	Test Condition
Forward Voltage Drop	V _F	-	- 0.60 -	0.79 0.63 0.88	V	I _F = 5A, T _J = 25°C I _F = 5A, T _J = 125°C I _F = 10A, T _J = 25°C
Leakage Current (Note 6)	I _R	-	-	0.2 25	mA	$V_R = 150V, T_J = 25^{\circ}C$ $V_R = 150V, T_J = 125^{\circ}C$

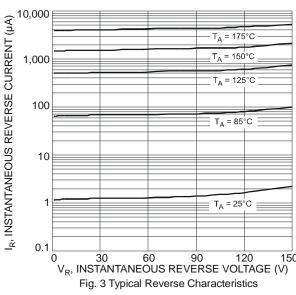
Notes:

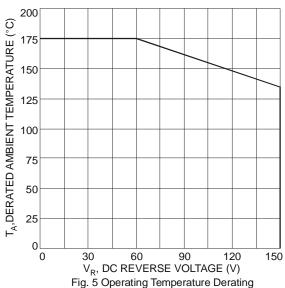
^{6.} Short duration pulse test used to minimize self-heating effect.

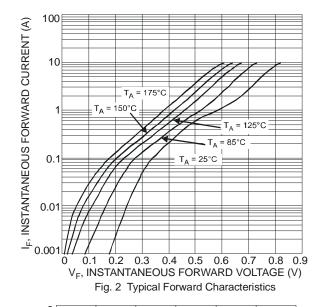
^{7.} Using heatsink (by Black Aluminum (45mm * 20mm * 12mm)

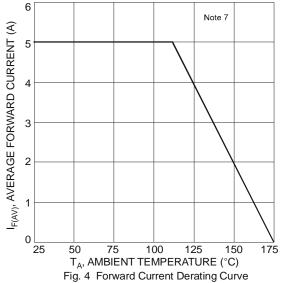






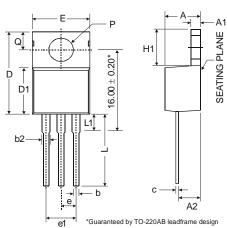




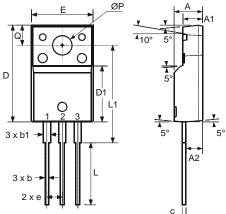




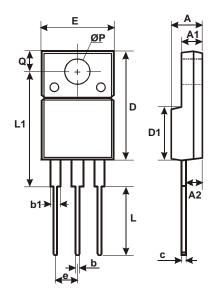
Package Outline Dimensions



	TO-220AB					
Dim	Min	Тур	Max			
Α	3.56	1	4.82			
A1	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	-	0.61			
D	14.22	-	16.51			
D1	8.39	1	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			
Р	3.54	-	4.08			
Q	2.54	-	3.42			
AII E	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 C	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		
ø	2.6	3.0		
All Dimensions in mm				



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