

10A 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 (Note 2)

Mechanical Data

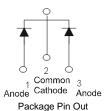
- Case: TO-220AB, ITO-220AB
- Case Material: Molded Plastic, UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020D
- Terminals: Matte Tin Finish annealed over Copper leadframe. Solderable per MIL-STD-202, Method 208 (3)
- Marking Information: See Page 2
- Ordering Information: See Page 2
- Weight: 2.1 grams TO-220AB (approximate)
 1.9 grams ITO-220AB (approximate)







ITO-220AB



Configuration

Maximum Ratings @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 Working Peak Reverse Voltage DC Blocking Voltage	V _{RRM} V _{RWM} V _{RM}	150	V
RMS Reverse Voltage	V _{R(RMS)}	106	V
Average Rectified Output Current @ T _C = 115°C	I ₀	10	Α
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I _{FSM}	120	А
Peak Repetitive Reverse Surge Current (2uS-1Khz)	I _{RRM}	2	Α

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Maximum Thermal Resistance (per leg)			
Package = TO-220AB	R _e JC	2	°C/W
Package = ITO-220AB		4	
Operating and Storage Temperature Range	T _J , T _{STG}	-65 to +150	°C

Electrical Characteristics @T_A = 25°C unless otherwise specified

Characteristic	Symbol	Min	Тур	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 1)	V _{(BR)R}	150	-	-	V	$I_R = 0.2mA$
Forward Voltage Drop	V _F	-	- 0.69	0.92 0.79	V	I _F = 5A, T _J = 25°C I _F = 5A, T _J = 125°C
Leakage Current (Note 1)	I _R	-	-	0.25 25	mA	V _R = 150V, T _J = 25°C V _R = 150V, T _J = 125°C

Notes:

- 1. Short duration pulse test used to minimize self-heating effect.
- 2. RoHS revision 13.2.2003. High temperature solder exemption applied, see *EU Directive Annex Note 7*.



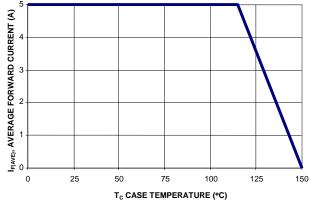


Figure 1: Current Derating Curve, Per Element

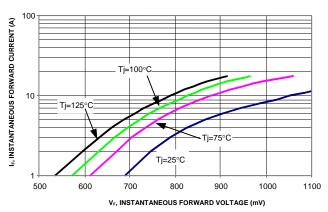


Figure 2: Typical Forward Characteristics, Per Element

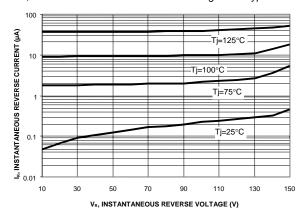


Figure 3: Typical Reverse Characteristics, Per Element

Ordering Information (Note 3)

Part Number	Case	Packaging
SBR10150CT	TO-220AB	50 pieces/tube
SBR10150CTFP	ITO-220AB	50 pieces/tube

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

Marking Information



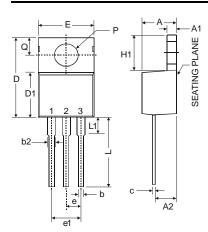
SBR10150CT = Product Type Marking Code AB = Foundry and Assembly Code YYWW = Date Code Marking YY = Last two digits of year, ex: 06 = 2006 WW = Week (01-52)



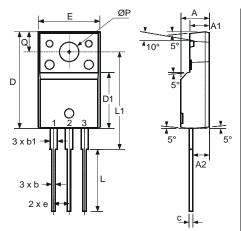
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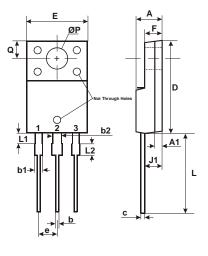
Package Outline Dimensions



	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	
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	1	6.85	
L	12.70	-	14.73	
L1	-	-	6.35	
Р	3.54	-	4.08	
Q	2.54	-	3.42	
All	All Dimensions in mm			



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	ITO-220AB				
		te 4)			
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					



ITO-220AB					
ALTERNATE (Note 4)					
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	1 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 Dimensions in mm					

Notes: 4. For product manufactured with Date Code 0733 (week 33, 2007) and newer, please refer to ITO-220AB dimensions. For product manufactured prior to Date Code 0733, please refer to ITO-220AB ALTERNATE dimensions.

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