

30A 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 (@)
- Marking Information: See Page 2
- Ordering Information: See Page 2
- Weight: TO-220AB 2.1 grams (approximate) ITO-220AB – 1.9 grams (approximate)



TO-220AB



ITO-220AB

Anode Cathode 3 Anode Package Pin Out Configuration

Maximum Ratings $@T_A = 25^{\circ}C$ unless otherwise specified

Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	V _{RRM}		
Working Peak Reverse Voltage	V _{RWM}	150	V
DC Blocking Voltage	V _{RM}		
RMS Reverse Voltage	V _{R(RMS)}	106	V
Average Rectified Output Current @ T _C = 150°C	lo	30	A
Non-Repetitive Peak Forward Surge Current 8.3ms	1	300	٨
Single Half Sine-Wave Superimposed on Rated Load	IFSM	200	А
Peak Repetitive Reverse Surge Current (2uS-1Khz)	I _{RRM}	2	A

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Maximum Thermal Resistance (per leg) Package = TO-220AB Package = ITO-220AB	$R_{ ext{ heta}JC}$	2 4	°C/W
Operating and Storage Temperature Range	TJ, T _{STG}	-65 to +175	°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 = 0.1mA
Forward Voltage Drop	V _F	-	- 0.78	0.92 0.82	V	I _F = 15A, T _J = 25°C I _F = 15A, T _J = 125°C
Leakage Current (Note 1)	I _R	-	-	0.1 10	mA	$V_R = 150V, T_J = 25^{\circ}C$ $V_R = 150V, T_J = 125^{\circ}C$

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.

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SBR30150CT SBR30150CTFP

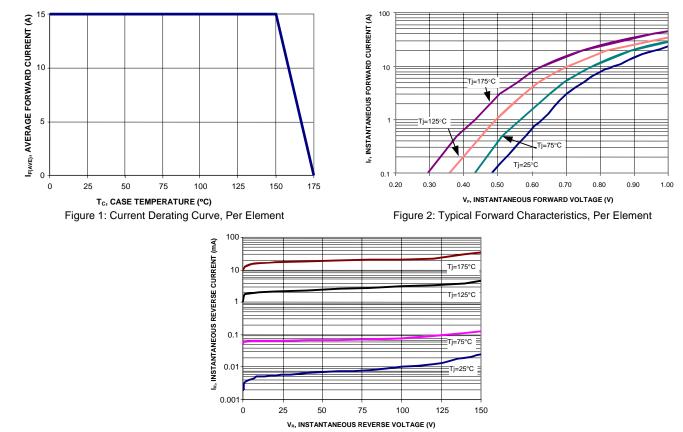


Figure 3: Typical Reverse Characteristics, Per Element

Ordering Information (Note 3)

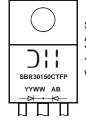
Part Number	Case	Packaging
SBR30150CT	TO-220AB	50 pieces/tube
SBR30150CTFP	ITO-220AB	50 pieces/tube

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

Marking Information



SBR30150CT = 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)



SBR30150CTFP = 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)

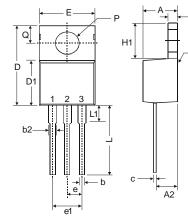
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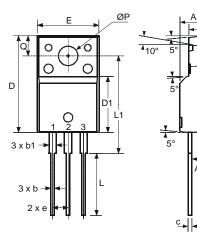
Package Outline Dimensions

A1

SEATING PLANE

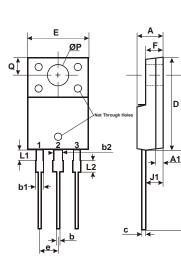


	TO-220AB					
Dim	Min	Тур	Max			
Α	3.56	-	4.82			
A1	0.51	-	1.39			
A2	2.04	-	2.92			
b	0.39	0.81	1.01			
С	0.356	-	0.61			
D	14.22	-	16.51			
D1	8.39	-	9.01			
е		2.54				
e1	5.08					
Ε	9.66	9.66 - 10.				
H1	5.85	-	6.85			
L	12.70	-	14.73			
L1	-	-	6.35			
Ρ	3.54	-	4.08			
Q	2.54	-	3.42			
All Dimensions in mm						



ITO-220AB (Note 4)					
Dim	/				
Α	4.50	4.70	4.90		
A1	3.04 3.24 3.44		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 16.0		16.07		
D1	8.99	9.19	9.39		
e		2.54			
ш	9.91	10.11	10.31		
Ц	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					

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	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		
	E	9.96	10.36		
	е	2.54 typ			
	F	2.80	3.20		
L	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) 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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