

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 1)
- Also Available in Green Molding Compound (Note 2)

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 ⁽¹⁾
- Weight: TO-220AB 1.85 grams (approximate) ITO-220AB – 1.65 grams (approximate)





TO-220AB Top View

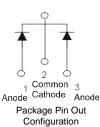
TO-220AB Bottom View



ITO-220AB

Top View

ITO-220AB Bottom View



Ordering Information (Notes 2 & 3)

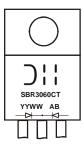
Part Number	Case	Packaging
SBR3060CT	TO-220AB	50 pieces/tube
SBR3060CT-G	TO-220AB	50 pieces/tube
SBR3060CTFP	ITO-220AB	50 pieces/tube
SBR3060CTFP-G	ITO-220AB	50 pieces/tube
SBR3060CTFP-JT	ITO-220AB (Alternate)	50 pieces/tube

Notes: 1. EU Directive 2002/95/EC (RoHS). All applicable RoHS exemptions applied, see EU Directive 2002/95/EC Annex Notes

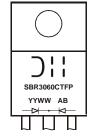
2. For Green Molding Compound version part numbers, add "-G" suffix to part number above. Examples: SBR3060CT-G.

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

Marking Information



SBR3060CT = 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)



SBR3060CTFP = 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

Cingle phase holf	LUCKA COLLA TO	aintina ar indu	ative lead
Single phase, half	wave, ounz, re	sistive or indu	cuve ioad.

Characteristic		Symbol	Value	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage		V _{RRM} V _{RWM} V _{RM}	60	V
Average Rectified Output Current	Per Leg Total	Ι _Ο	15 30	А
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load		I _{FSM}	200	А
Peak Repetitive Reverse Surge Current (2uS-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
Maximum Thermal Resistance (per leg) Package = TO-220AB Package = ITO-220AB	$R_{ heta JC}$	2 4	°C/W
Operating and Storage Temperature Range	T _J , T _{STG}	-65 to +150	℃

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

Characteristic	Symbol	Min	Тур	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 4)	V _{(BR)R}	60	-	-	V	$I_R = 0.5 mA$
Forward Voltage Drop	V _F	-	0.62	0.70 0.65	V	I _F = 15A, T _J = 25°C I _F = 15A, T _J = 125°C
Leakage Current (Note 4)	I _R	-	-	0.5 100	mA	V _R = 60V, T _J = 25°C V _R = 60V, T _J = 125°C

Notes: 4. Short duration pulse test used to minimize self-heating effect.



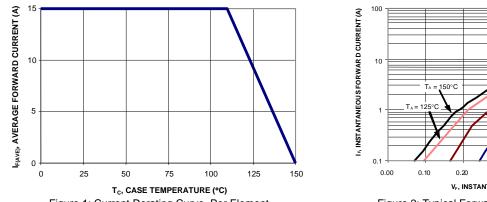


Figure 1: Current Derating Curve, Per Element

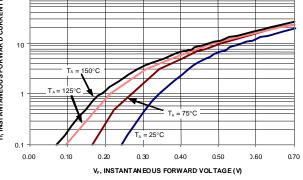


Figure 2: Typical Forward Characteristics, Per Element

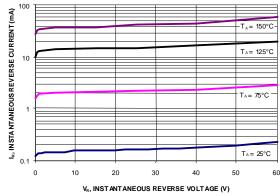
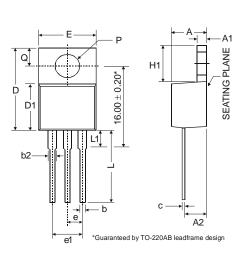


Figure 3: Typical Reverse Characteristics, Per Element



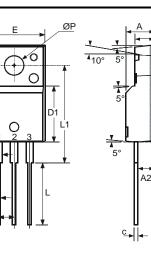
Package Outline Dimensions



	TO-220AB				
Dim	Min	Тур	Max		
Α	3.56	1	4.82	Q	
A1	0.51	-	1.39	Ĩ¥	
A2	2.04	-	2.92		
b	0.39	0.81	1.01	D	
b2	1.15	1.24	1.77		
c	0.356	-	0.61		
D	14.22	-	16.51		
D1	8.39	1	9.01	<u> </u>	
е	2.54		3 x b1		
e1		5.08			
ш	9.66	-	10.66		
H1	5.85	1	6.85	3 x b	
L	12.70	-	14.73	2)	
L1	-	-	6.35	27	
Ρ	3.54	-	4.08		
q	2.54	-	3.42		
All [All Dimensions in mm				

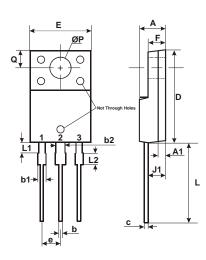
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С



ITO-220AB (Note 5)				
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	
c	0.50	0.60	0.70	
D	15.67	15.87	16.07	
D1	8.99	9.19	9.39	
е	2.54			
ш	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				

. 5°



ITO-220AB ALTERNATE					
~	(Note 5)				
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			
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					

5. 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. Notes:



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