THE DATASHEET OF

SBR60A150CT

SBR60A150CT

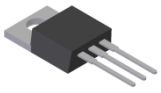
60A SBR
SUPER BARRIER RECTIFIER

Features

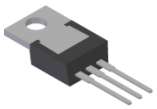
- Low Forward Voltage Drop
- Patented Superior Barrier Rectifier SBR® Technology
- Excellent High Temperature Stability
- Patented Super Barrier Rectifier Technology
- Soft, Fast Switching Capability
- +175ºC Operating Junction Temperature
- TO220AB
  - **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**
- Available in "Green" Packages: TO220AB
  - **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**
  - **Halogen and Antimony Free. "Green" Device (Note 3)**
- **Also Available in Green Molding Compound (Note 4)**

Mechanical Data

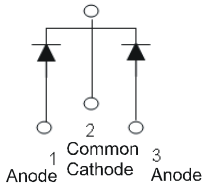
- Case: TO220AB
- Case Material: Molded Plastic, UL Flammability Classification Rating 94V-0
- Terminals: Matte Tin Finish Annealed over Copper Leadframe. Solderable per MIL-STD-202, Method 208 e3
- Weight: 1.85 grams (Approximate)



TO220AB
Top View



TO220AB
Bottom View



Package Pin Out
Configuration

Ordering Information (Note 5)

Part Number	Case	Packaging
SBR60A150CT	TO220AB	50 Pieces/Tube
SBR60A150CT-G (Note 4)	TO220AB	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/quality/lead_free.html 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: SBR60A150CT-G.
5. For packaging details, go to our website at http://www.diodes.com/products/packages.html.

Marking Information



SBR60A150CT = Product Type Marking Code
AB = Foundry and Assembly Code
YYWW = Date Code Marking
YY = Last Two Digits of Year (ex: 15 = 2015)
WW = Week (01 to 53)

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Maximum Ratings (Per Leg) (@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
Average Rectified Output Current Per Device (Per Leg) (Total)	I_O	30 60	A
Non-Repetitive Peak Forward Surge Current 8.3mS Single Half Sine-Wave Superimposed on Rated Load	I_{FSM}	250	A

Thermal Characteristics (Per Leg)

Characteristic	Symbol	Value	Unit
Typical Thermal Resistance Thermal Resistance Junction to Case (Note 6) Thermal Resistance, Junction to Ambient (Note 6)	 $R_{\theta JC}$ $R_{\theta JA}$	 1.2 8	°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	Typ	Max	Unit	Test Condition
Forward Voltage Drop	V_F	-	0.86 0.72	0.93 0.77	V	I_F = 30A, T_J = +25°C I_F = 30A, T_J = +125°C
Leakage Current (Note 7)	I_R	-	0.05 9.5	0.3 40	mA	V_R = 150V, T_J = +25°C V_R = 150V, T_J = +125°C

Notes: 6. Device mounted on heatsink (Black Aluminum, 50mm x 30mm x 23mm).
7. Short duration pulse test used to minimize self-heating effect.

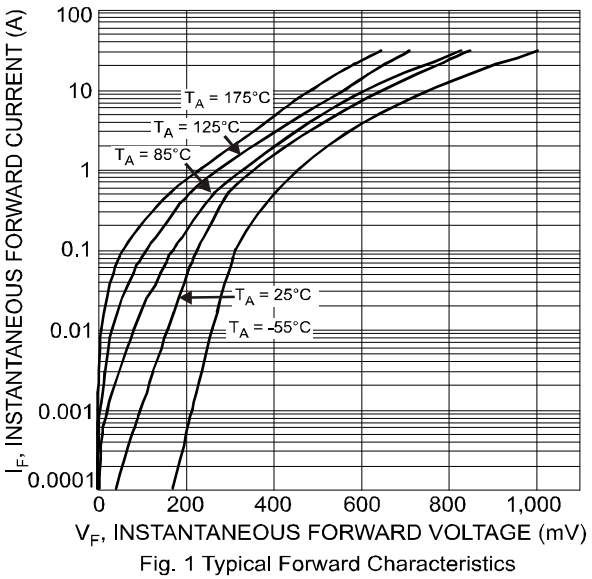

Fig. 1 Typical Forward Characteristics

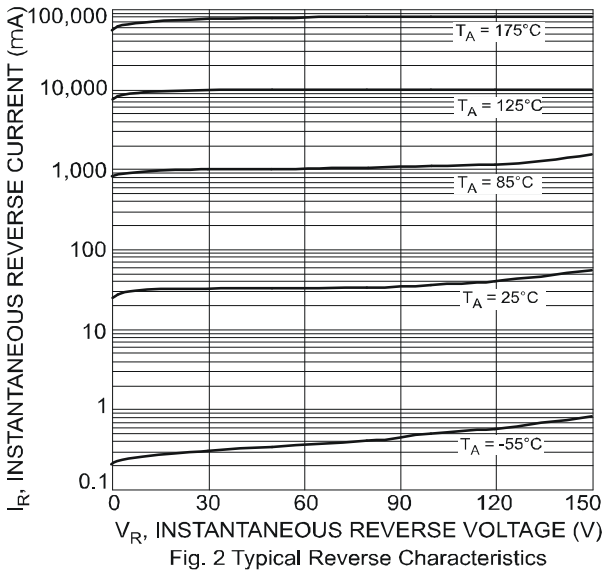

Fig. 2 Typical Reverse Characteristics

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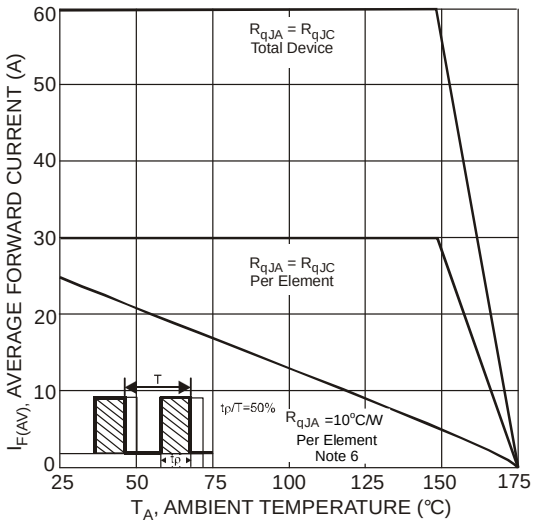
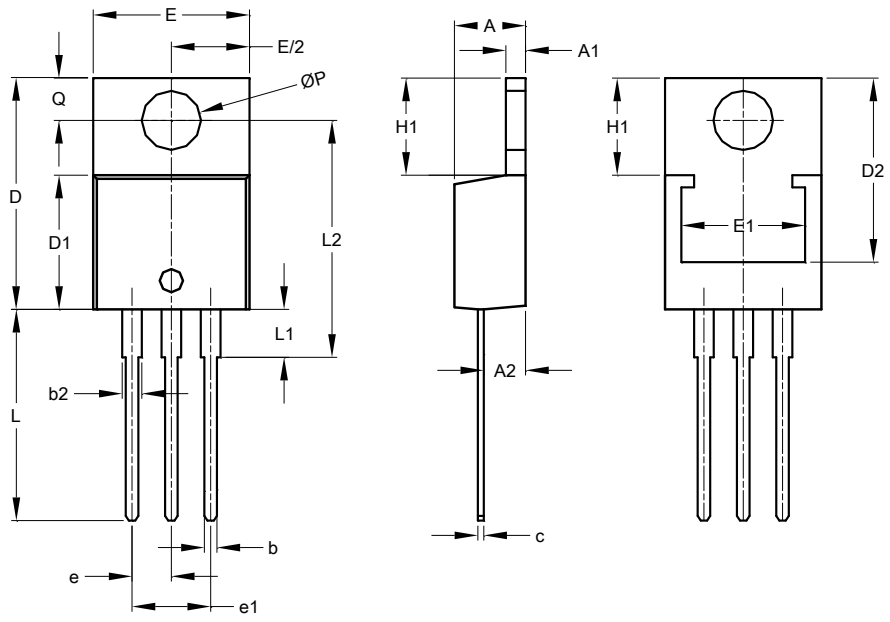


Fig. 3 Forward Current Derating Curve

Package Outline Dimensions

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

TO220AB



TO220AB			
Dim	**Min**	**Max**	**Typ**
A	3.56	4.82	-
A1	0.51	1.39	-
A2	2.04	2.92	-
b	0.39	1.01	0.81
b2	1.15	1.77	1.24
c	0.356	0.61	-
D	14.22	16.51	-
D1	8.39	9.01	-
D2	11.45	12.87	-
e	-	-	2.54
e1	-	-	5.08
E	9.66	10.66	-
E1	6.86	8.89	-
H1	5.85	6.85	-
L	12.70	14.73	-
L1	-	6.35	-
L2	15.80	16.20	16.00
P	3.54	4.08	-
Q	2.54	3.42	-
All Dimensions in mm			

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