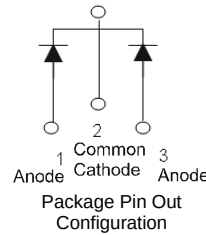
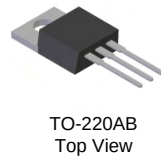


Features

- Low Forward Voltage Drop
- Low Leakage Current
- Excellent High Temperature Stability
- Patented Super Barrier Rectifier Technology
- Soft, Fast Switching Capability
- 175°C Operating Junction Temperature
- **Lead Free Finish, RoHS Compliant (Note 2)**
- **Also Available in Green Molding Compound (Note 5)**

Mechanical Data

- Case: TO-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 
- Marking Information: See Page 2
- Ordering Information: See Page 2
- Weight: 1.85 grams (approximate)



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	V _{RRM}	300	V
Working Peak Reverse Voltage	V _{RWM}		
DC Blocking Voltage	V _{RM}		
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}	235	A

Thermal Characteristics (Per Leg)

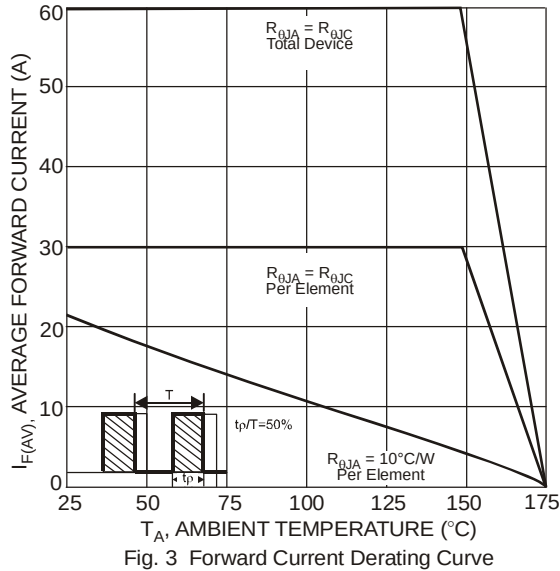
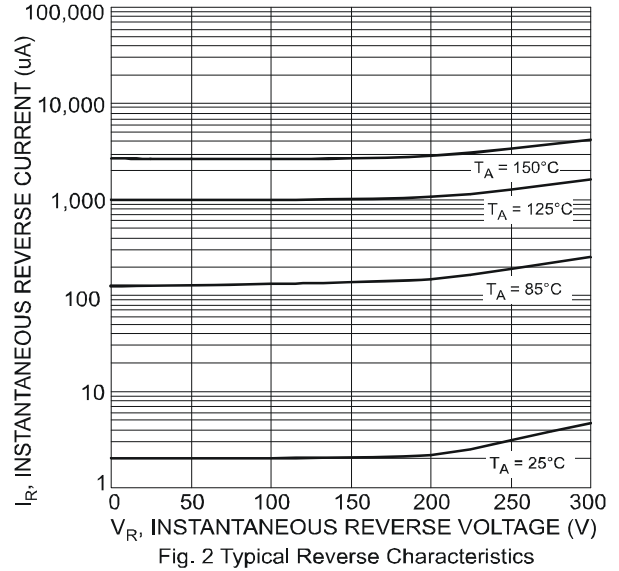
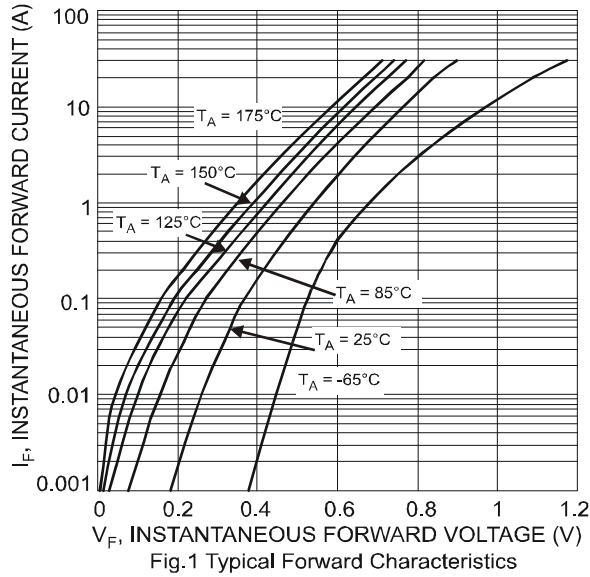
Characteristic	Symbol	Value	Unit
Typical Thermal Resistance	R _{θJC} R _{θJA}	8	°C/W
Thermal Resistance Junction to Case (Note 3)		52	
Thermal Resistance, Junction to Ambient (Note 3)			
Operating and Storage Temperature Range	T _J , T _{STG}	-65 to +175	°C

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

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Forward Voltage Drop	V _F	-	0.89 0.78	0.94 0.82	V	I _F = 30A, T _J = 25°C I _F = 30A, T _J = 125°C
Leakage Current (Note 1)	I _R	-	5 2	100 10	μA mA	V _R = 300V, T _J = 25°C V _R = 300V, T _J = 125°C
Reverse Recovery Time	t _{rr}	-	32 26	50 35	ns	I _F = 0.5A, I _R = 1A, I _{RR} = 0.25A I _F = 1A, V _R = 30V di/dt = 100A/μs, T _J = 25°C

Notes: 1. Short duration pulse test used to minimize self-heating effect.
2. EU Directive 2002/95/EC (RoHS). All applicable RoHS exemptions applied. Please visit our website at http://www.diodes.com/products/lead_free.html.
3. FR-4 PCB, 2 oz. Copper, minimum recommended pad layout per <http://www.diodes.com/datasheets/ap02001.pdf>

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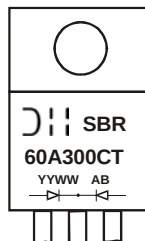


Ordering Information (Notes 4 & 5)

Part Number	Case	Packaging
SBR60A300CT	TO-220AB	50 pieces/tube
SBR60A300CT-G	TO-220AB	50 pieces/tube

Notes: 4. For packaging details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.
5. For Green Molding Compound version part numbers, add "-G" suffix to part number above. Examples: SBR60A300CT-G.

Marking Information



SBR60A300CT = Product Type Marking Code
AB = Foundry and Assembly Code
YYWW = Date Code Marking
YY = Last two digits of year (ex: 07 = 2007)
WW = Week (01-52)

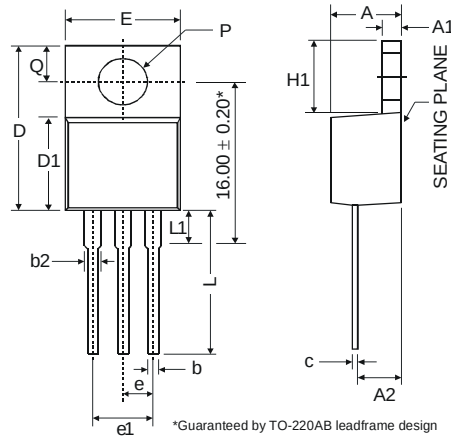
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Package Outline Dimensions



TO-220AB			
Dim	Min	Typ	Max
A	3.56	-	4.82
A1	0.51	-	1.39
A2	2.04	-	2.92
b	0.39	0.81	1.01
b2	1.15	1.24	1.77
c	0.356	-	0.61
D	14.22	-	16.51
D1	8.39	-	9.01
e	2.54		
e1	5.08		
E	9.66	-	10.66
H1	5.85	-	6.85
L	12.70	-	14.73
L1	-	-	6.35
P	3.54	-	4.08
Q	2.54	-	3.42
All Dimensions in mm			

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2. support or sustain life and whose failure to perform when properly used in accordance with instructions for use provided in the labeling can be reasonably expected to result in significant injury to the user.

B. A critical component is any component in a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or to affect its safety or effectiveness.

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