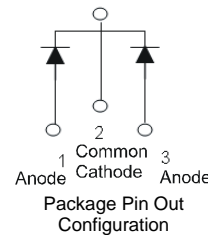


Features

- 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 ⁽³⁾
- 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)	I _O	30	A
(Total)		60	
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}	8	°C/W
Thermal Resistance Junction to Case (Note 3)			
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

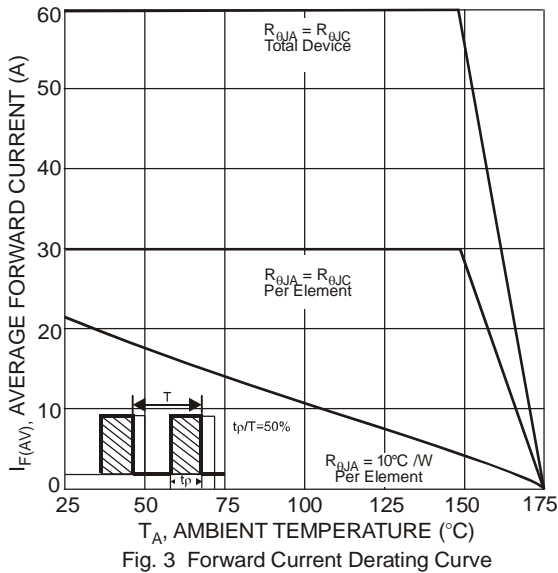
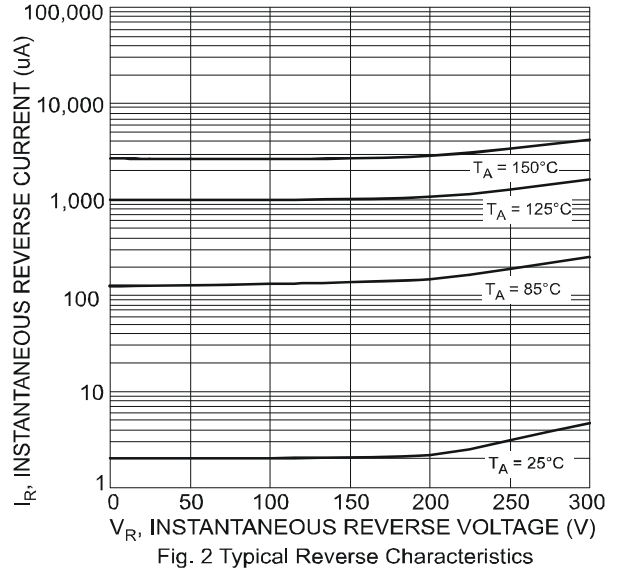
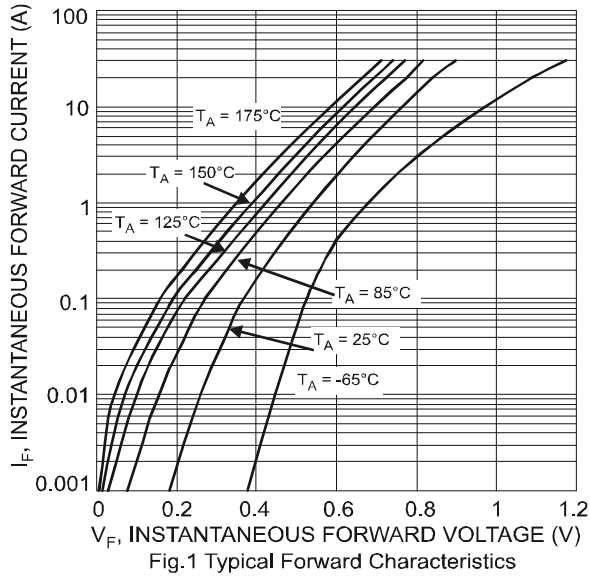
- Notes:
1. Short duration pulse test used to minimize self-heating effect.
 2. EU Directive 2002/95/EC (RoHS). All applicable RoHS exemptions applied. Please visit our website at http://www.diodes.com/products/lead_free.html.
 3. FR-4 PCB, 2 oz. Copper, minimum recommended pad layout per <http://www.diodes.com/datasheets/ap02001.pdf>

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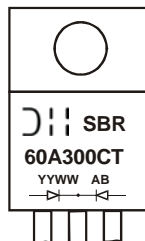


Ordering Information (Notes 4 & 5)

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.

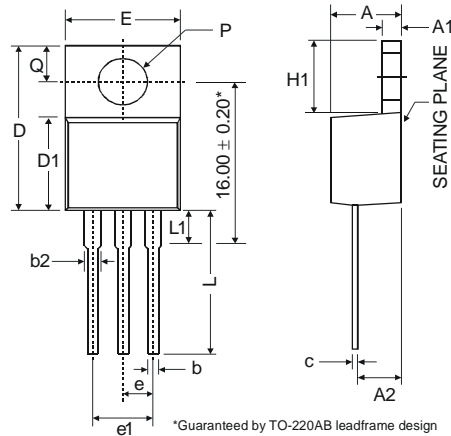
Marking Information



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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