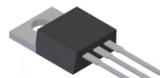


Features

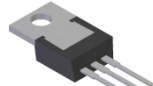
- Ultra Low Forward Voltage Drop
- Low Leakage Current
- Excellent High Temperature Stability
- Patented Super Barrier Rectifier Technology
- Soft, Fast Switching Capability
- 150°C Operating Junction Temperature
- **Lead Free Finish, RoHS Compliant (Note 2)**
- **Also Available in Green Molding Compound (Note 4)**

Mechanical Data

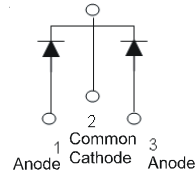
- Case: TO-200AB
- Case Material: Molded Plastic, UL Flammability Classification Rating 94V-0
- Terminals: Matte Tin Finish annealed over Copper leadframe. Solderable per MIL-STD-202, Method 208
- Marking Information: See Page 2
- Ordering Information: See Page 2
- Weight: 1.85 grams (approximate)



TO-220AB
Top View



TO-220AB
Bottom View



Package Pin Out
Configuration

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}	60	V
Working Peak Reverse Voltage	V _{RWM}		
DC Blocking Voltage	V _{RM}		
Average Rectified Output Current (Per Leg)	I _O	20	A
(Total)		40	
Non-Repetitive Peak Forward Surge Current 8.3mS Single Half Sine-Wave Superimposed on rated load	I _{FSM}	280	A

Thermal Characteristics (Per Leg)

Characteristic	Symbol	Value	Unit
Typical Thermal Resistance, Junction to Case	R _{θJC}	2	°C/W
Operating and Storage Temperature Range	T _J , T _{STG}	-65 to +150	°C

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

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Forward Voltage Drop (per leg)	V _F	-	0.55	0.60	V	I _F = 20A, T _J = 25°C
			0.54	0.57		I _F = 20A, T _J = 125°C
Leakage Current (Note 1)	I _R	-	0.07	0.5	mA	V _R = 60V, T _J = 25°C
			15	100		V _R = 60V, T _J = 125°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.

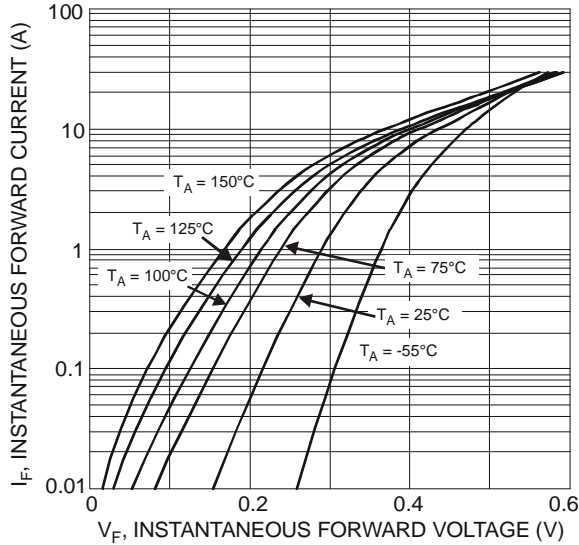


Fig. 1 Typical Forward Characteristics

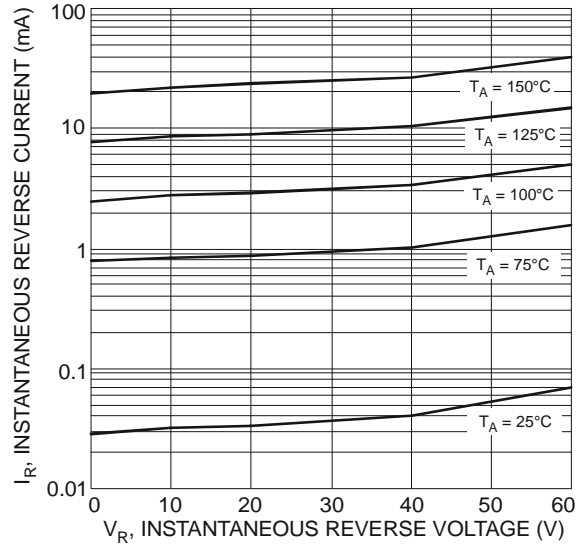


Fig. 2 Typical Reverse Characteristics

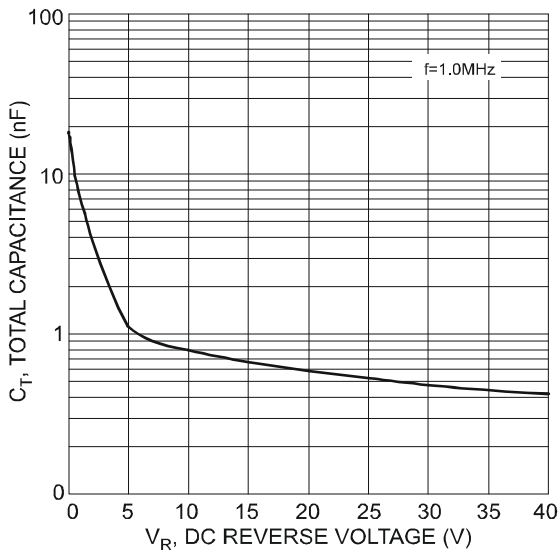


Fig. 3 Total Capacitance vs. Reverse Voltage

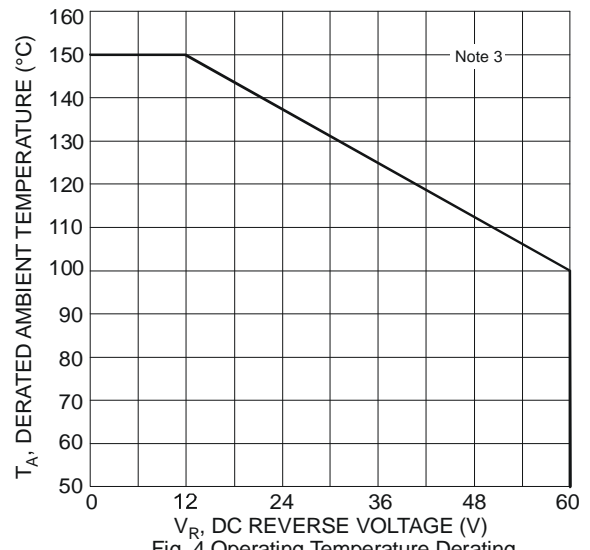


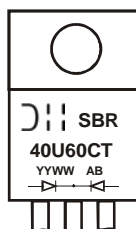
Fig. 4 Operating Temperature Derating

Ordering Information (Notes 3 & 4)

Part Number	Case	Packaging
SBR40U60CT	TO-220AB	50 pieces/tube
SBR40U60CT-G	TO-220AB	50 pieces/tube

- Notes: 3. For packaging details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.
4. For Green Molding Compound version part numbers, add "-G" suffix to part number above. Examples: SBR40U60CT-G.

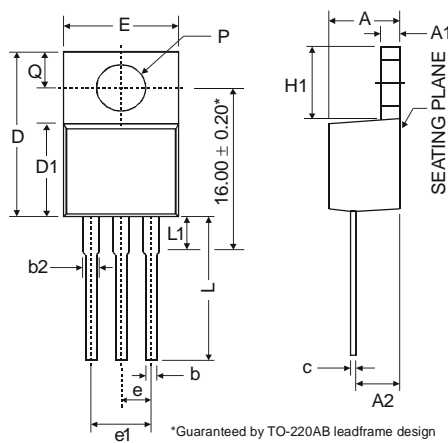
Marking Information



SBR40U60CT = 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)

SBR is a registered trademark of Diodes Incorporated.

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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