NEW PRODUCT

SBR660CTL

6A SBR®
SUPER BARRIER RECTIFIER

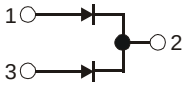
Features

- Excellent High Temperature Stability
- Patented Super Barrier Rectifier Technology
- Soft, Fast Switching Capability
- **Lead Free Finish, RoHS Compliant (Note 2)**
- **"Green" Molding Compound (No Br, Sb)**

Mechanical Data

- Case: DPAK (TO-252)
- Case Material: Molded Plastic, UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020D
- Terminals: Matte Tin Finish annealed over Copper leadframe. Solderable per MIL-STD-202, Method 208 e3
- Marking Information: See Page 3
- Ordering Information: See Page 3
- Weight: 0.33 grams (approximate)

Top View



Polarity

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}	60	V
Average Rectified Output Current (Per Leg) (Total)	I_O	3 6	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I_{FSM}	80	A

Thermal Characteristics (Per Leg)

Characteristic	Symbol	Value	Unit
Typical Thermal Resistance (per leg) (Note 3) Package = TO-252	$R_{\theta JC}$	2	°C/W
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +150	ºC

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

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Leakage Current (Note 1)	I_R	- -	- 5	0.5 100	mA	V_R = 60V, T_J = 25ºC V_R = 60V, T_J = 125ºC
Forward Voltage Drop	V_F	-	-	0.57	V	I_F = 3A, T_J = 25ºC

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. Device mounted on Polymide substrate, 125mm^{2}Copper pad, double-sided, PC Board.

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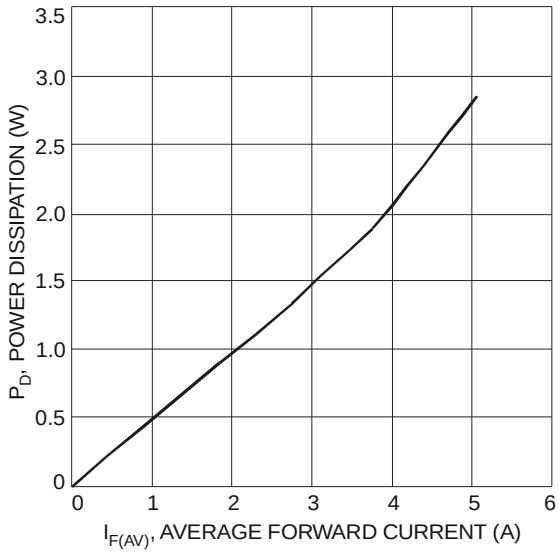

Fig. 1 Forward Power Dissipation

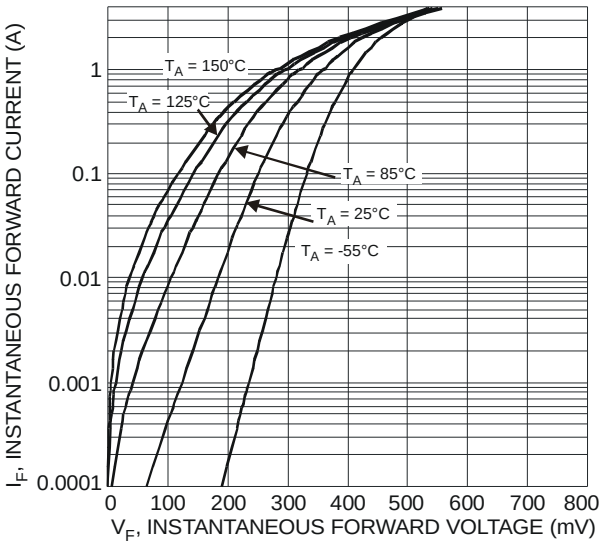

Fig. 2 Typical Forward Characteristics

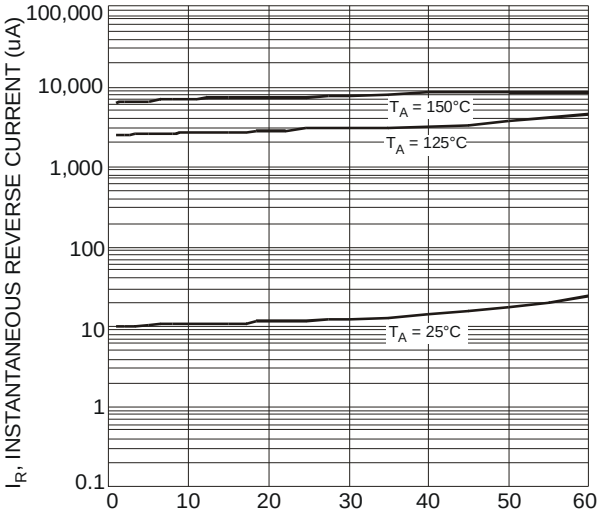

Fig. 3 Typical Reverse Characteristics

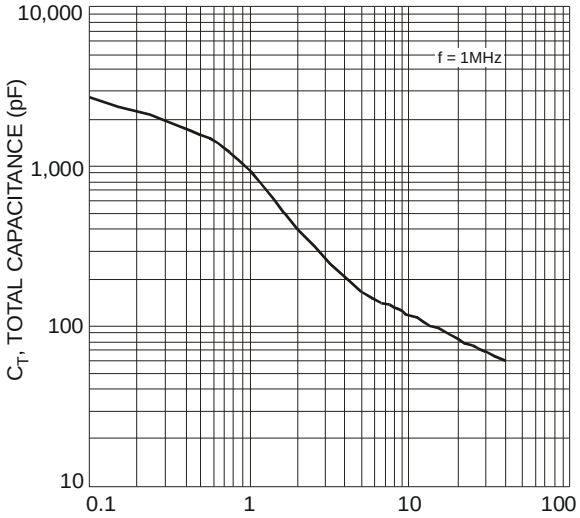

Fig. 4 Total Capacitance vs. Reverse Voltage

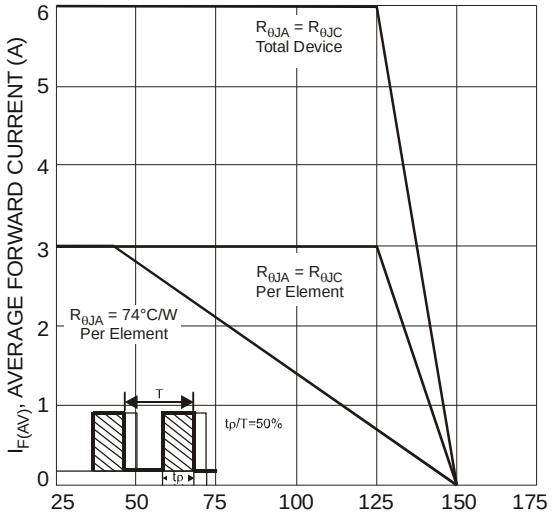

Fig. 5 Forward Current Derating Curve

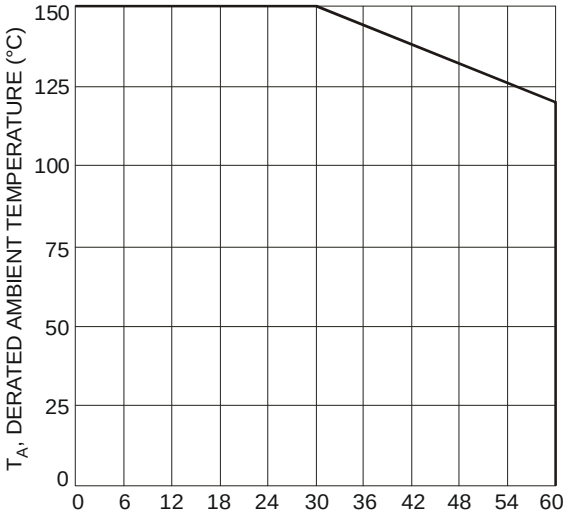

Fig. 6 Operating Temperature Derating

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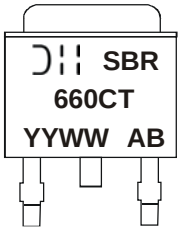
Ordering Information (Note 4)

Part Number	Case	Packaging
SBR660CTL	DPAK (TO-252)	80 pieces/tube
SBR660CTL-13	DPAK (TO-252)	2500 pieces/reel

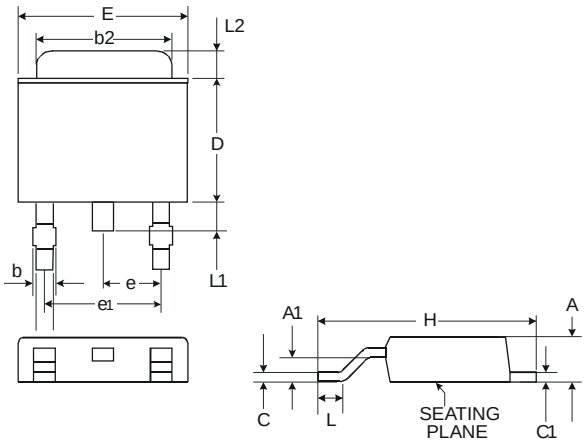
Notes: 4. For packaging details, go to our website at http://www.diodes.com/datasheets/ap02007.pdf.

Marking Information



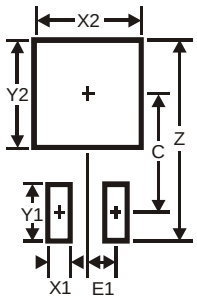
SBR660CT = Product Type Marking Code
AB = Foundry and Assembly Code
YYWW = Date Code Marking
YY = Last two digits of year (ex: 08 = 2008)
WW = Week (01-52)

Package Outline Dimensions



DPAK		
Dim	**Min**	**Max**
A	2.18	2.40
A1	0.89	1.14
b	0.61 Typ	
b2	5.20	5.50
C	0.45	0.58
C1	0.45	0.58
D	5.40	6.20
E	6.35	6.80
e	2.28 Typ	
e1	4.57 Typ	
H	9.00	10.40
L	0.51	—
L1	0.64	1.02
L2	0.88	1.27
All Dimensions in mm		

Suggested Pad Layout



Dimensions	Value (in mm)
Z	11.6
X1	1.5
X2	7.0
Y1	2.5
Y2	7.0
C	6.9
E1	2.3

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