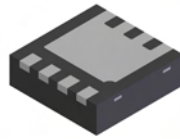


## Features

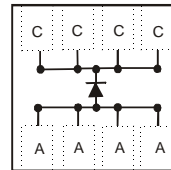
- Ultra Low Forward Voltage Drop
- Superior Reverse Avalanche Capability
- Patented Super Barrier Rectifier Technology
- Soft, Fast Switching Capability
- 150°C Operating Junction Temperature
- **Lead Free Finish, RoHS Compliant (Note 1)**
- **“Green” Molding Compound Device (Note 2)**



Bottom View

## Mechanical Data

- Case: DFN3030-8
- Case Material: Molded Plastic, “Green” Molding Compound. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020D
- Terminals: Finish – NiPdAu annealed over Copper lead frame. Solderable per MIL-STD-202, Method 208 (E3)
- Marking Information: See Page 3
- Ordering Information: See Page 3
- Weight: 0.0172 grams (approximate)


 C = CATHODE  
A = ANODE

Top View

## Maximum Ratings @ $T_A = 25^\circ\text{C}$ 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	$V_{RRM}$	150	V
Working Peak Reverse Voltage	$V_{RWM}$		
DC Blocking Voltage	$V_{RM}$		
RMS Reverse Voltage	$V_{R(RMS)}$	106	V
Average Rectified Output Current (See Figure 1)	$I_O$	3.0	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	$I_{FSM}$	33	A

## Thermal Characteristics

Characteristic	Symbol	Value	Unit
Maximum Thermal Resistance	$R_{\theta JA}$	60	$^\circ\text{C}/\text{W}$
Thermal Resistance Junction to Ambient (Note 3) @ $T_A = 25^\circ\text{C}$			
Operating and Storage Temperature Range	$T_J, T_{STG}$	-65 to +150	$^\circ\text{C}$

## Electrical Characteristics @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 4)	$V_{(BR)R}$	150	-	-	V	$I_R = 2\text{mA}$
Forward Voltage	$V_F$	-	-	0.91	V	$I_F = 3.0\text{A}, T_J = 25^\circ\text{C}$
Reverse Current (Note 4)	$I_R$	-	-	2	mA	$V_R = 150\text{V}, T_J = 25^\circ\text{C}$

- Notes:
1. EU Directive 2002/95/EC (RoHS). All applicable RoHS exemptions applied, see *EU Directive 2002/95/EC Annex Notes*.
  2. Diodes Inc.'s “Green” policy can be found on our website at [http://www.diodes.com/products/lead\\_free/index.php](http://www.diodes.com/products/lead_free/index.php)
  3. Device mounted on polyimide substrate, 2oz. Copper, 75mm<sup>2</sup> pad area, double side PCB.
  4. Short duration pulse test used to minimize self-heating effect.

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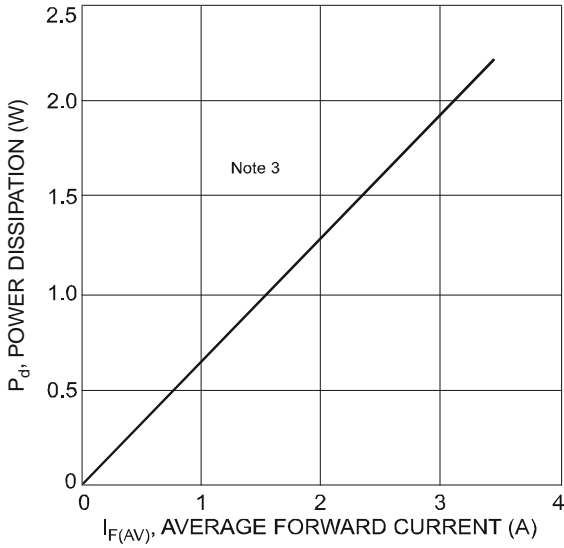


Fig. 1 Forward Power Dissipation

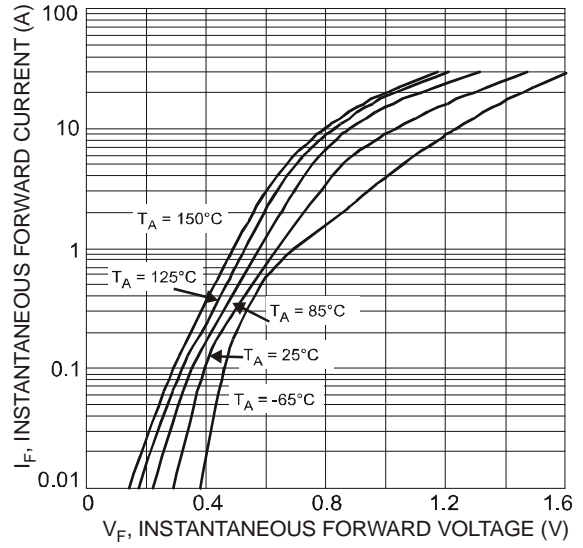


Fig. 2 Typical Forward Characteristics

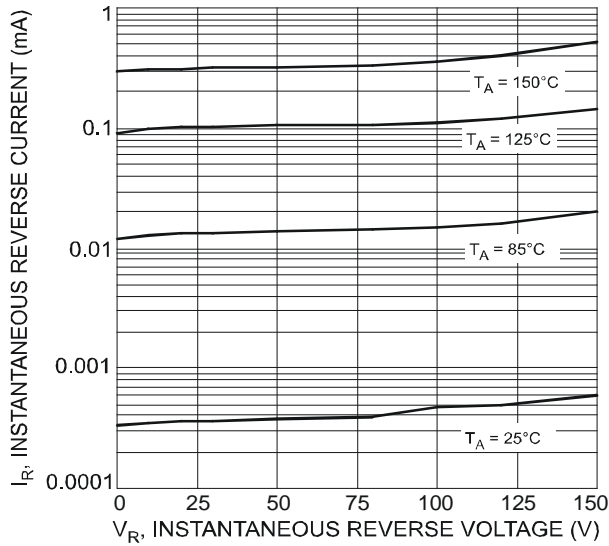


Fig. 3 Typical Reverse Characteristics

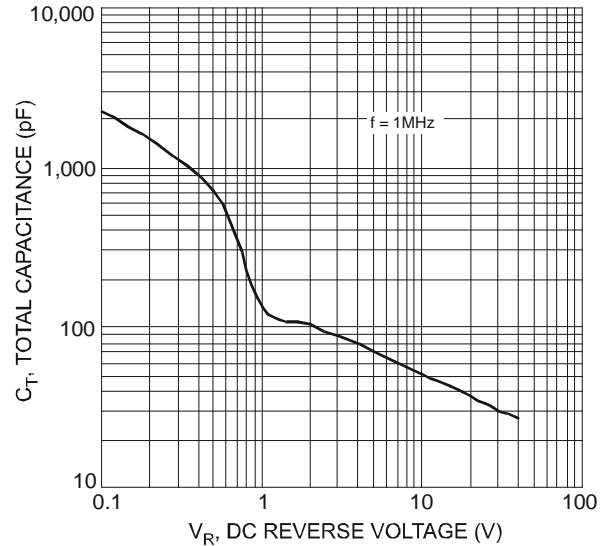


Fig. 4 Total Capacitance vs. Reverse Voltage

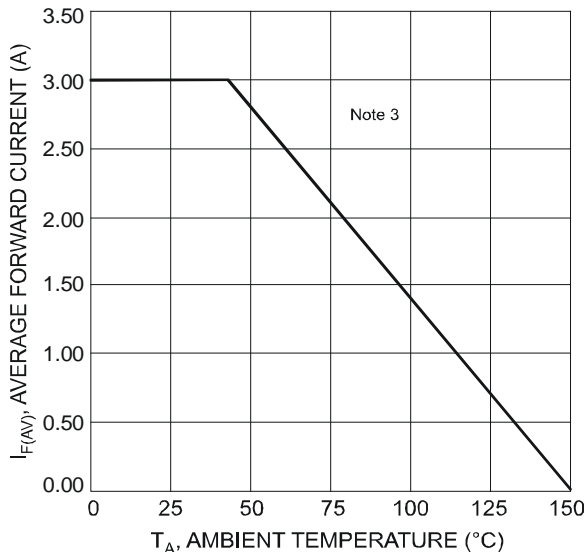


Fig. 5 Forward Current Derating Curve

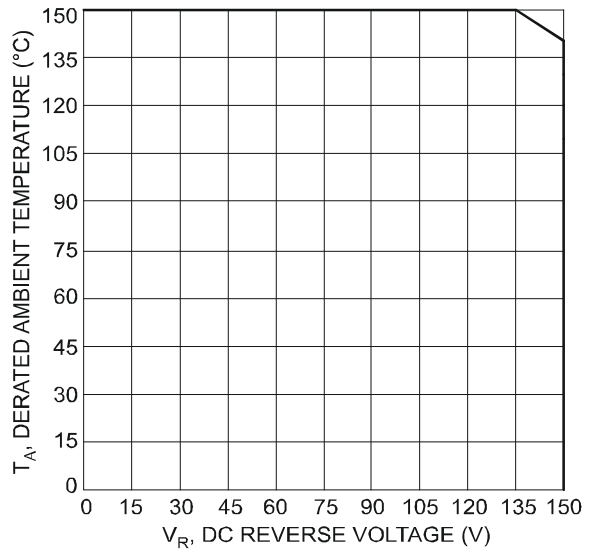


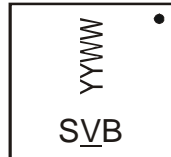
Fig. 6 Operating Temperature Derating

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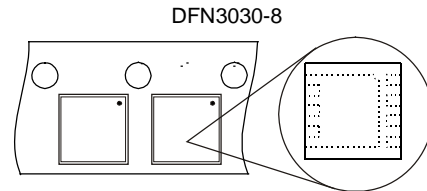
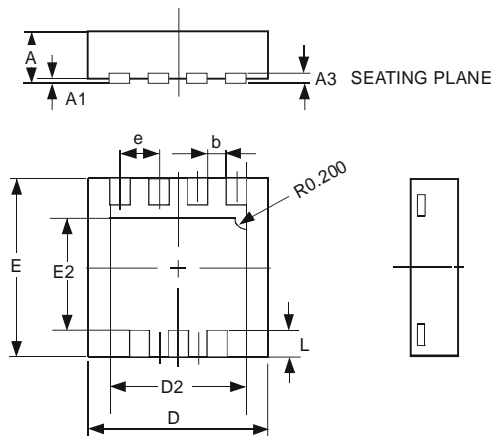
**Ordering Information** (Note 5)

Part Number	Case	Packaging
SBR3U150LP-7	DFN3030-8	3000/Tape & Reel

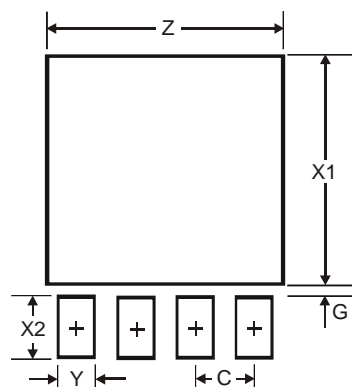
Notes: 5. For packaging details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.

**Marking Information**


SVB = Product marking code  
 YYWW = Date code marking  
 YY = Last digit of year ex: 06 for 2006  
 WW = Week code 01 to 52


**Package Outline Dimensions**


DFN3030-8			
Dim	Min	Max	Typ
A	0.57	0.63	0.60
A1	0	0.05	0.02
A3	—	—	0.15
b	0.29	0.39	0.34
D	2.90	3.10	3.00
D2	2.19	2.39	2.29
e	—	—	0.65
E	2.90	3.10	3.00
E2	1.64	1.84	1.74
L	0.30	0.60	0.45
All Dimensions in mm			

**Suggested Pad Layout**


Dimensions	Value (in mm)
Z	2.59
G	0.11
X1	2.49
X2	0.65
Y	0.39
C	0.65

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