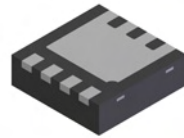


Features

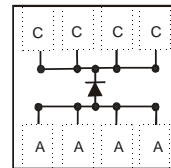
- Ultra Low Forward Voltage Drop
- Superior Reverse Avalanche Capability
- Patented Super Barrier Rectifier Technology
- Soft, Fast Switching Capability
- 150°C Operating Junction Temperature
- **Lead Free Finish, RoHS Compliant (Note 1)**
- **“Green” Molding Compound Device (Note 2)**



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

Device Schematic

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}	100	V
Working Peak Reverse Voltage	V_{RWM}		
DC Blocking Voltage	V_{RM}		
RMS Reverse Voltage	$V_{R(RMS)}$	70	V
Average Rectified Output Current	I_O	3.0	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I_{FSM}	32	A

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Maximum Thermal Resistance	$R_{\theta JA}$	61	$^\circ\text{C/W}$
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)	$V_{(BR)R}$	100	-	-	V	$I_R = 1\text{mA}$
Forward Voltage	V_F	-	0.44	0.48	V	$I_F = 1.0\text{A}, T_J = 25^\circ\text{C}$
		-	0.67	0.71		$I_F = 3.0\text{A}, T_J = 25^\circ\text{C}$
		-	0.42	0.45		$I_F = 1.0\text{A}, T_J = 125^\circ\text{C}$
		-	0.58	0.61		$I_F = 3.0\text{A}, T_J = 125^\circ\text{C}$
Reverse Current (Note 4)	I_R	-	16	200	μA mA	$V_R = 100\text{V}, T_J = 25^\circ\text{C}$
		-	3	15		$V_R = 100\text{V}, T_J = 125^\circ\text{C}$

- Notes:
1. RoHS revision 13.2.2003. High temperature solder exemption applied, see *EU Directive Annex Note 7*.
 2. Diodes Inc.'s “Green” policy can be found on our website at http://www.diodes.com/products/lead_free/index.php
 3. Device mounted on Polyimide substrate, 2 oz. Copper, 75mm² pad area, double side PCB.
 4. Short duration pulse test used to minimize self-heating effect.

SBR is a registered trademark of Diodes Incorporated.

SBR3U100LP

Document number: DS30998 Rev. 4 - 2

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March 2008

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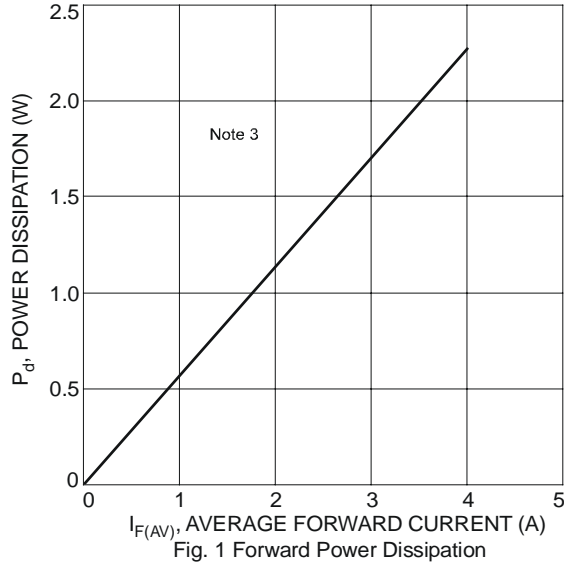


Fig. 1 Forward Power Dissipation

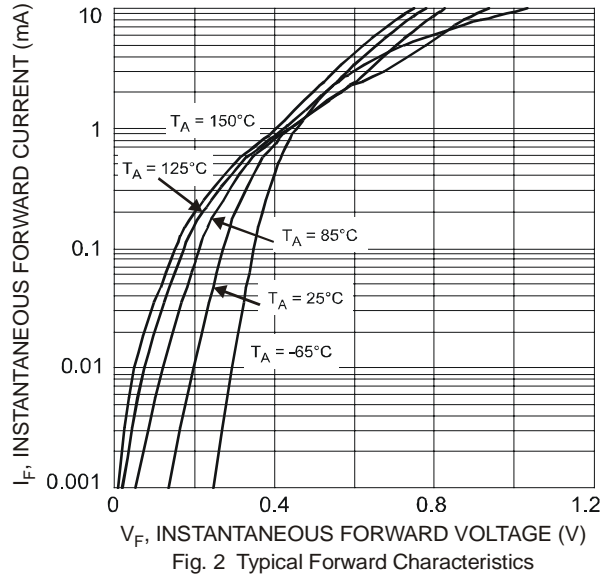


Fig. 2 Typical Forward Characteristics

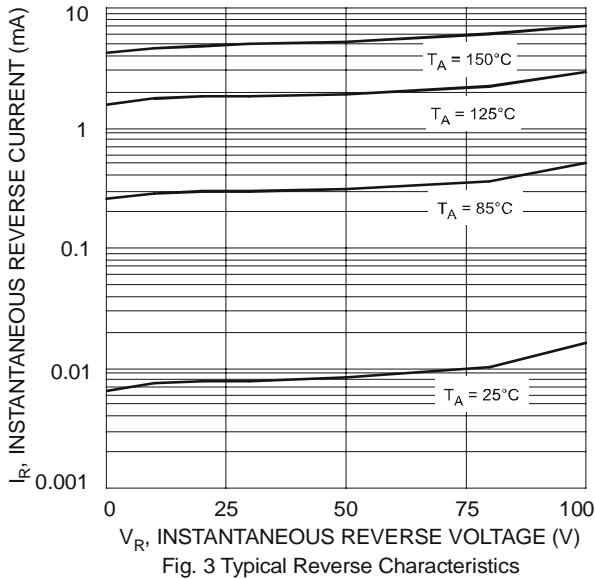


Fig. 3 Typical Reverse Characteristics

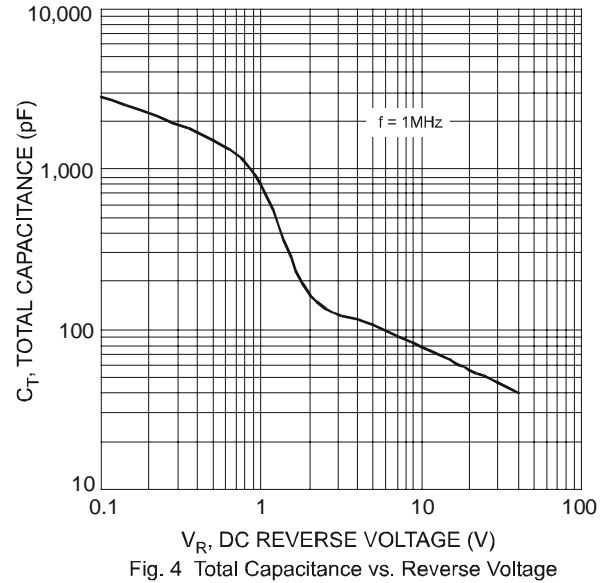


Fig. 4 Total Capacitance vs. Reverse Voltage

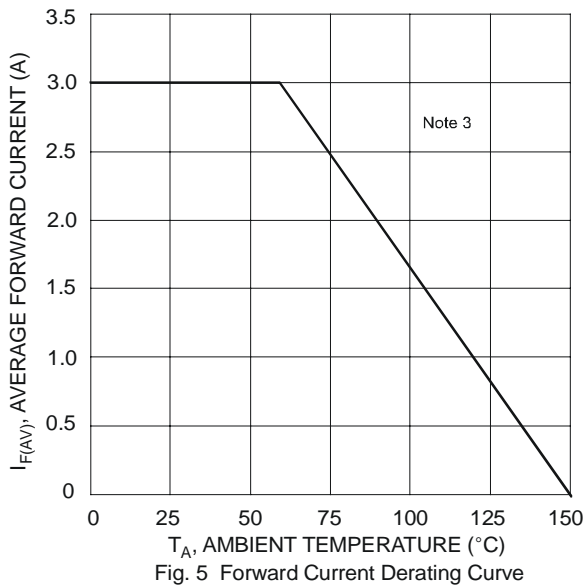


Fig. 5 Forward Current Derating Curve

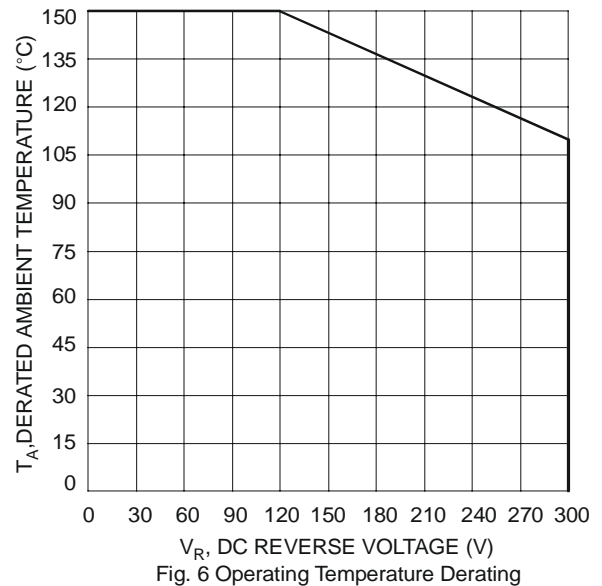


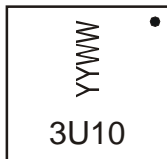
Fig. 6 Operating Temperature Derating

Ordering Information (Note 6)

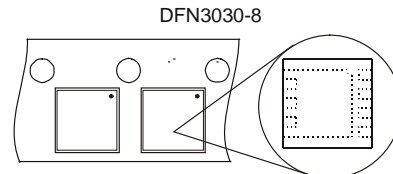
Part Number	Case	Packaging
SBR3U100LP-7	DFN3030-8	3000/Tape & Reel

Notes: 6. For packaging details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.

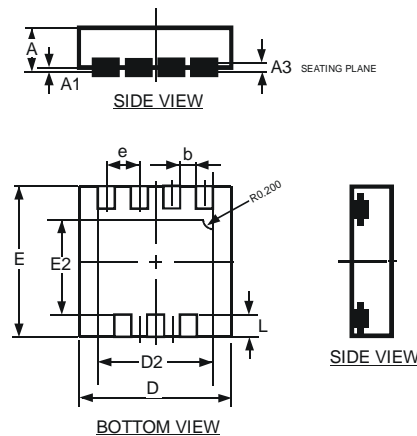
Marking Information



3U10 = Product marking code
YYWW = Date code marking
YY = Last digit of year ex: 06 for 2006
WW = Week code 01 to 52

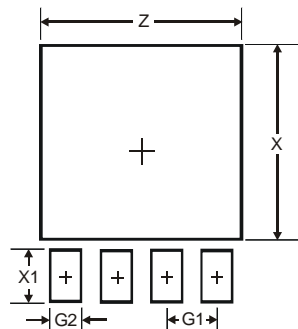


Package Outline Dimensions



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)
G1	0.65
G2	0.39
X	2.49
X1	0.65
Z	2.59

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