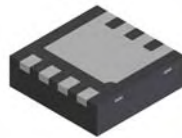


Features

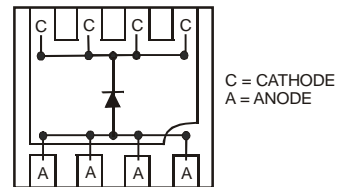
- Guard Ring Die Construction for Transient Protection
- Low Power Loss, High Efficiency
- Low Forward Voltage Drop
- For Use in Low Voltage, High Frequency Inverters, Free Wheeling, and Polarity Protection Applications
- High Forward Surge Current Capability
- **Lead Free by Design, RoHS Compliant (Note 1)**
- **"Green" Device (Note 3)**



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 over Copper lead frame. Solderable per MIL-STD-202, Method 208
- Polarity: See Diagram
- Marking Information: See Page 2
- Ordering Information: See Page 2
- Weight: 0.0172 grams (approximate)



BOTTOM VIEW
Schematic and Pin Configuration

Maximum Ratings @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}	30	V
Working Peak Reverse Voltage	V _{RWM}		
DC Blocking Voltage	V _R		
RMS Reverse Voltage	V _{R(RMS)}	21	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}	30	A

Thermal Characteristics

Characteristic	Symbol	Typ	Max	Unit
Thermal Resistance Junction to Soldering Point	R _{θJS}	—	3	°C/W
Thermal Resistance Junction to Ambient Air (Note 2)	R _{θJA}	130	—	°C/W
Power Dissipation (Note 2)	P _D	—	0.75	W
Operating and Storage Temperature Range	T _J , T _{STG}	-65 to +150		°C

Electrical Characteristics @T_A = 25°C unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 4)	V _{(BR)R}	30	—	—	V	I _R = 5.0mA
Forward Voltage	V _F	—	0.30	0.35	V	I _F = 1.0A, T _J = 25°C
		—	0.18	0.29		I _F = 1.0A, T _J = 125°C
		—	0.33	0.40		I _F = 2.0A, T _J = 25°C
		—	0.22	0.37		I _F = 2.0A, T _J = 125°C
		—	0.35	0.45		I _F = 3.0A, T _J = 25°C
		—	0.26	0.42		I _F = 3.0A, T _J = 125°C
Reverse Current (Note 4)	I _R	—	0.27	1.0	mA	T _J = 25°C, V _R = 30V
		—	55	90	mA	T _J = 100°C, V _R = 30V

- Notes:
1. No purposefully added lead.
 2. FR-4 PCB, 2 oz. Copper, minimum recommended pad layout per <http://www.diodes.com/datasheets/ap02001.pdf>. T_A = 25°C.
 3. Diodes Inc.'s "Green" policy can be found on our website at http://www.diodes.com/products/lead_free/index.php.
 4. Short duration pulse test used to minimize self-heating effect.

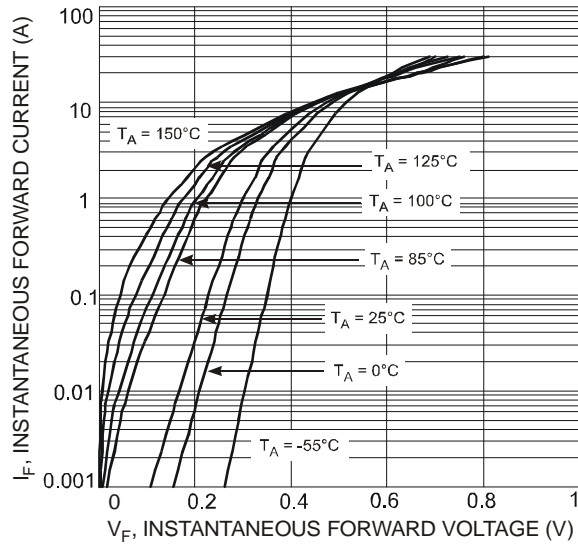


Fig. 1 Typical Forward Characteristics

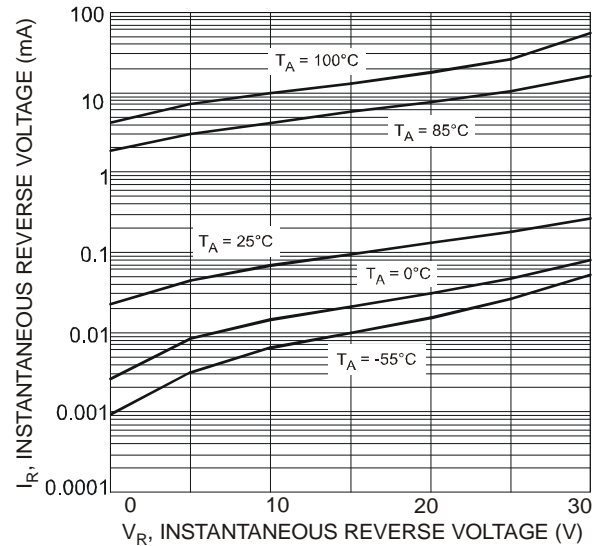


Fig. 2 Typical Reverse Characteristics

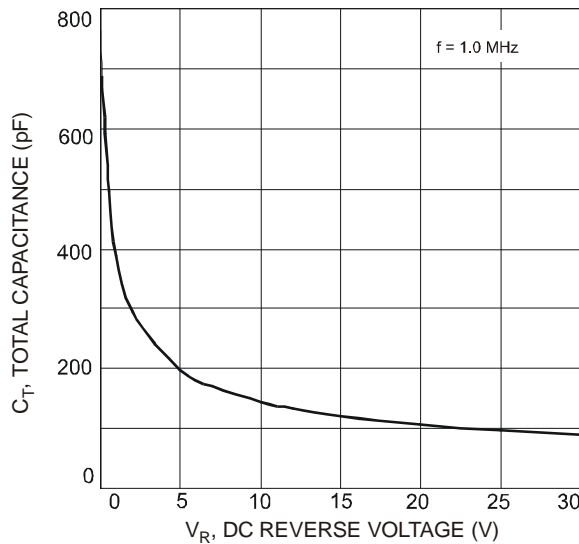


Fig. 3 Total Capacitance vs. Reverse Voltage

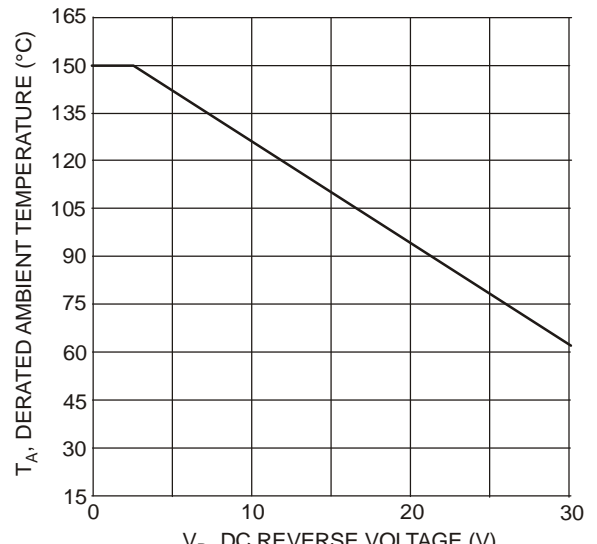


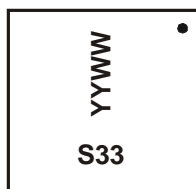
Fig. 4 Operating Temperature Derating

Ordering Information (Note 5)

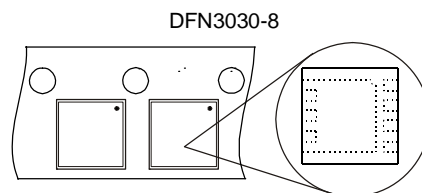
Part Number	Case	Packaging
B3L30LP-7	DFN3030-8	3000/Tape & Reel

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

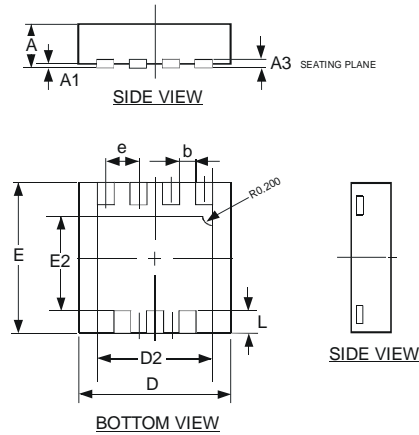
Marking Information



S33 = Product marking code
YYWW = Date code marking
YY = Last digit of year ex: 06 for 2006
WW = Week code 01 to 52

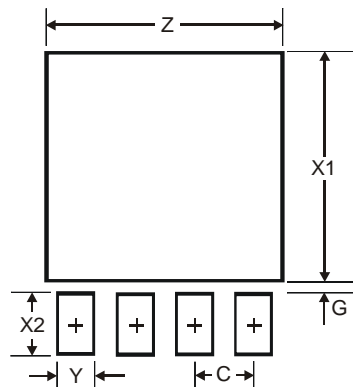


Package Outline Dimensions



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

IMPORTANT NOTICE

Diodes Incorporated and its subsidiaries reserve the right to make modifications, enhancements, improvements, corrections or other changes without further notice to any product herein. Diodes Incorporated does not assume any liability arising out of the application or use of any product described herein; neither does it convey any license under its patent rights, nor the rights of others. The user of products in such applications shall assume all risks of such use and will agree to hold Diodes Incorporated and all the companies whose products are represented on our website, harmless against all damages.

LIFE SUPPORT

Diodes Incorporated products are not authorized for use as critical components in life support devices or systems without the expressed written approval of the President of Diodes Incorporated.