



B3L30LP

3A SCHOTTKY BARRIER RECTIFIER

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
- Totally Lead-Free & Fully RoHS Compliant (Notes 1 & 2)
- Halogen and Antimony Free. "Green" Device (Note 3)

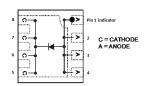
Mechanical Data

- Case: U-DFN3030-8
- Case Material: Molded Plastic, "Green" Molding Compound.
 UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Finish NiPdAu over Copper lead frame.
 Solderable per MIL-STD-202, Method 208
- Polarity: See Diagram
- Weight: 0.0172 grams (approximate)

U-DFN3030-8



Bottom View



Top View Schematic and Pin Configuration

Ordering Information (Note 4)

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

Notes:

- 1. No purposely added lead. Fully EU Directive 2002/95/EC (RoHS) & 2011/65/EU (RoHS 2) compliant.
- 2. See http://www.diodes.com/quality/lead_free.html for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
- 3. Halogen- and Antimony-free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
- 4. For packaging details, go to our website at http://www.diodes.com/products/packages.html.

Marking Information

S33

Pin 1 indicator

S33 = Product marking code YYWW = Date code marking YY = Last digit of year (ex: 13 for 2013) WW = Week code (01 ~ 53)



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 Working Peak Reverse Voltage DC Blocking Voltage	V _{RRM} V _{RWM} V _R	30	>
RMS Reverse Voltage	V _{R(RMS)}	21	V
Average Rectified Output Current	lo	3.0	Α
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave Superimposed on Rated Load	I _{FSM}	30	А

Thermal Characteristics

Characteristic		Symbol	Тур	Max	Unit
Thermal Resistance Junction to Soldering Point		$R_{ heta JS}$	_	3	°C/W
Thermal Resistance Junction to Ambient Air	(Note 5)	$R_{ heta JA}$	130	_	°C/W
Power Dissipation	(Note 6) (Note 7) (Note 8)	P _D	_ _ _	2.5 4.0 4.5	W
Operating and Storage Temperature Range		T _J , T _{STG}	-65 to +150		°C

Electrical Characteristics (@TA = +25°C, unless otherwise specified.)

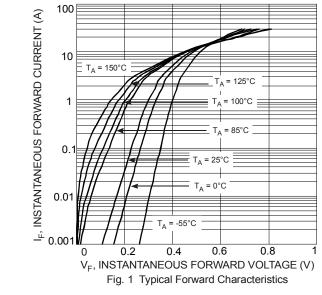
Characteristic	Symbol	Min	Тур	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 9)	$V_{(BR)R}$	30	_	_	V	I _R = 5.0mA
	VF	_	0.28	_	V	I _F = 0.5A, T _J = +25°C
		_	0.30	0.35		I _F = 1.0A, T _J = +25°C
		_	0.18	0.29		I _F = 1.0A, T _J = +125°C
Forward Voltage		_	0.33	0.40		I _F = 2.0A, T _J = +25°C
		_	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 9)		_	0.27	1.0	mA	$T_J = +25^{\circ}C, V_R = 30V$
Reverse Current (Note 9)	IR		55	90	mA	$T_J = +100$ °C, $V_R = 30V$

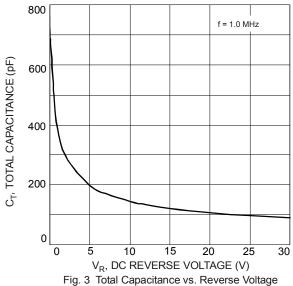
5. FR-4 PCB, 2 oz. Copper, minimum recommended pad layout per http://www.diodes.com. T_A = +25°C. 6. Device mounted on FR-4 PCB, 25mm² pad area. 7. Device mounted on FR-4 PCB, 75mm² pad area. Notes:

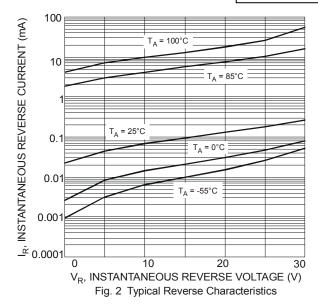
- 8. Aluminum PCB with copper mounting pad area of 75mm².

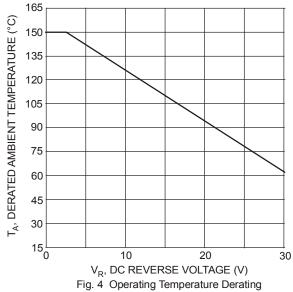
 9. Short duration pulse test used to minimize self-heating effect.







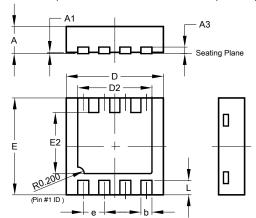






Package Outline Dimensions

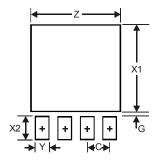
Please see AP02002 at http://www.diodes.com/datasheets/ap02002.pdf for latest version.



U-DFN3030-8					
Dim	Min	Max	Тур		
Α	0.57	0.63	0.60		
A1	0	0.05	0.02		
A3	ı	1	0.15		
b	0.29	0.39	0.34		
D	2.90	3.10	3.00		
D2	2.19	2.39	2.29		
е	-	-	0.65		
Е	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

Please see AP02001 at http://www.diodes.com/datasheets/ap02001.pdf for the latest version.



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

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