





4A SBR[®] SUPER BARRIER RECTIFER

Features

- Ultra Low Forward Voltage Drop
- Superior Reverse Avalanche Capability
- Patented Super Barrier Rectifier Technology
- Soft, Fast Switching Capability
- 150°C Operating Junction Temperature
- Totally Lead-Free & Fully RoHS Compliant (Notes 1 & 2)
- Halogen and Antimony Free. "Green" Device (Note 3)

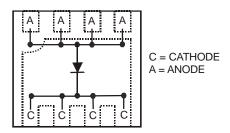
Mechanical Data

- 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 annealed over Copper lead frame.
 Solderable per MIL-STD-202, Method 208 (3)
- Weight: 0.0172 grams (approximate)

U-DFN3030-8



Bottom View



Top View Schematic and Pin Configuration

Ordering Information (Note 4)

-				
	Part Number	Case	Packaging	
	SBR4U130LP-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 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.

Marking Information



STF = Product marking code YYWW = Date code marking YY = Last digit of year (ex: 08 for 2008) 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 _{RM}	130	V
RMS Reverse Voltage	V _{R(RMS)}	92	V
Average Rectified Output Current	lo	4	А
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I _{FSM}	40	А

Thermal Characteristics

Characteristic		Symbol	Value	Unit
Maximum Thermal Resistance Junction to Ambient	(Note 5) (Note 6)	$R_{ hetaJA}$	55 180	°C/W
Operating and Storage Temperature Range		T _J , T _{STG}	-65 to +150	°C

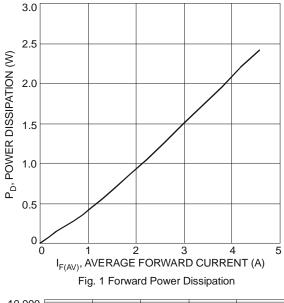
Electrical Characteristics (@T_A = +25°C, unless otherwise specified.)

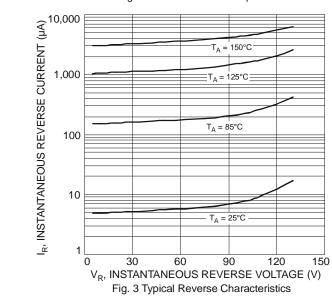
Characteristic	Symbol	Min	Тур	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 7)	$V_{(BR)R}$	130	-	ı	V	$I_R = 0.1 \text{mA}$
Forward Voltage	V _F	-	0.68 0.55 -	0.75 0.62 0.88	V	I _F = 4A, T _J = +25°C I _F = 4A, T _J = +125°C I _F = 10A, T _J = +25°C
Reverse Current (Note 7)	I _R	-	18 2.5	100 20	μA mA	V _R = 130V, T _J = +25°C V _R = 130V, T _J = +125°C

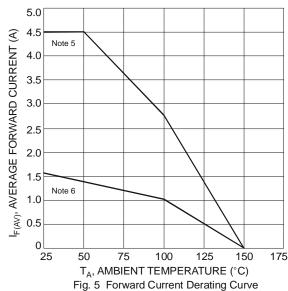
Notes:

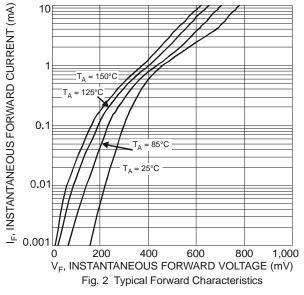
- 5. Device mounted on Polymide Substrate, 140mm² copper pad, double sided, PC board.
- Device mounted on FR-4 Substrate, 1" x 1", 2oz. Copper, single-sided PC board.
 Short duration pulse test used to minimize self-heating effect.

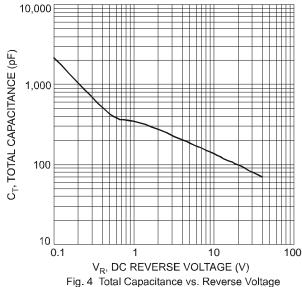


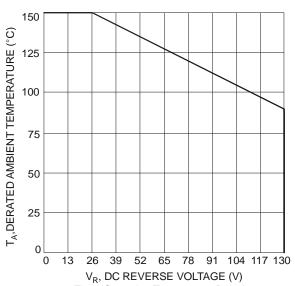








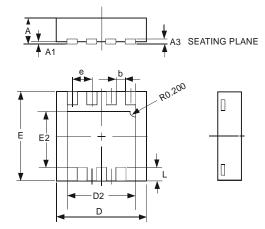






Package Outline Dimensions

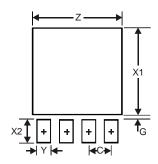
Please see AP02002 at http://www.diodes.com/datasheets/ap02002.pdf for latest version.



U-DFN3030-8						
Dim	Min	Max	Тур			
Α	0.57	0.63	0.60			
A1	0	0.05	0.02			
A3	_	_	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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