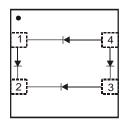




0.5A SBR® BRIDGE SUPER BARRIER RECTIFIER

Features

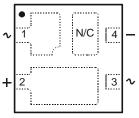
- Ultra Low Leakage Current
- Excellent High Temperature Stability
- Patented Super Barrier Rectifier Technology
- Soft, Fast Switching Capability
- 150°C Operating Junction Temperature
- Lead Free Finish, RoHS Compliant (Note 1)
- "Green" Device (Note 3)



Top View Device Schematic

Mechanical Data

- Case: DFN3030-4
- 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
- Marking Information: See Page 3
- Ordering Information: See Page 3
- Weight: 0.02 grams (approximate)



Top View 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%

Tor 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}	60	V
Average Rectified Output Current	Io	500	mA
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load (Per Diode)	I _{FSM}	8	А

Thermal Characteristics

Characteristic	Symbol	Тур	Max	Unit
Thermal Resistance Junction to Ambient Air (Note 2)	$R_{\theta JA}$	215	=	°C/W
Operating and Storage Temperature Range	T _J , T _{STG}	-55 to	+150	°C

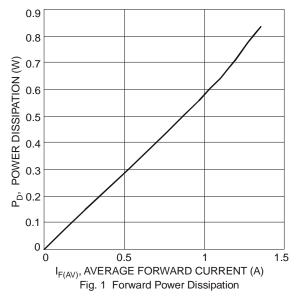
Electrical Characteristics @T_A = 25°C unless otherwise specified

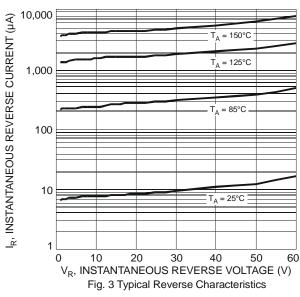
Characteristic	Symbol	Min	Тур	Max	Unit	Test Condition
Forward Voltage (Per Diode)	V _F	-	- 0.43 0.40	0.42 0.49 0.46	V	I _F = 0.25A, T _J = 25°C I _F = 0.5A, T _J = 25°C I _F = 0.5A, T _J = 125°C
Reverse Current (Note 4) (Per Diode)	I _R	-	17 2.8	100 20	μA mA	$V_R = 60V, T_J = 25^{\circ}C$ $V_R = 60V, T_J = 125^{\circ}C$

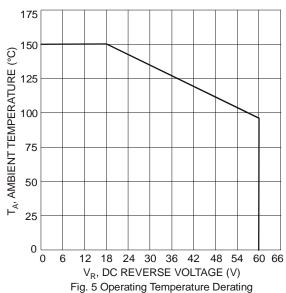
Notes:

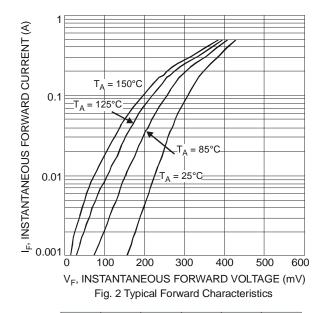
- 1. EU Directive 2002/95/EC (RoHS). All applicable RoHS exemptions applied, see EU Directive 2002/95/EC Annex Notes.
- 2. Polymide PCB, 2 oz. copper; minimum recommended pad layout per http://www.diodes.com/datasheets/ap02001.pdf.
- 3. Diodes Inc.'s "Green" policy can be found on our website at http://www.diodes.com/products/lead_free/index.php
- 4. Short duration pulse test used to minimize self-heating effect.

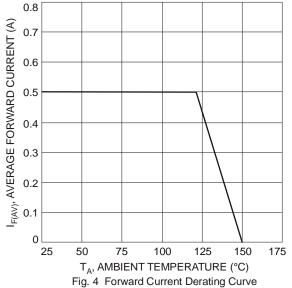














Ordering Information (Note 5)

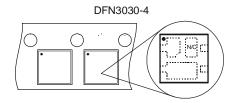
Part Number	Case	Packaging
SBR05M60BLP-7	DFN3030-4	3000/Tape & Reel

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

Marking Information



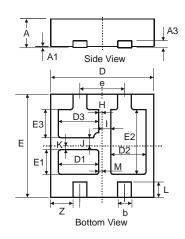
5 6 = Product Type Marking Code YM = Date Code Marking Y = Year (ex: W = 2009) M = Month (ex: 9 = September)



Date Code Key

Year	2009	9	2010		2011	20	12	2013		2014	2	2015
Code	W		Χ		Υ	2	7	Α		В		С
Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Code	1	2	3	4	5	6	7	8	9	0	N	D

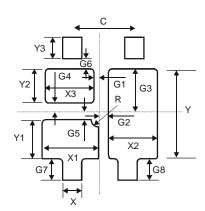
Package Outline Dimensions



DFN3030-4					
Dim	Min	Max	Тур		
Α	0.57	0.63	0.60		
A1	0	0.05	0.02		
A3	-	-	0.15		
b	0.35	0.45	0.40		
D	2.90	3.10	3.00		
D1	1.075	1.275	1.175		
D2	0.925	1.125	1.025		
D3	1.075	1.275	1.175		
Е	2.90	3.10	3.00		
е	-	-	1.30		
E1	0.615	0.815	0.715		
E2	1.78	1.98	1.88		
E3	0.715	0.915	0.815		
Η	0.05	0.15	0.10		
	0.20	0.30	0.25		
7	0.185	0.285	0.235		
K	0.065	0.165	0.115		
L	0.30	0.60	0.45		
М	0.05	0.15	0.10		
Z	-	-	0.65		
All Dimensions in mm					



Suggested Pad Layout



Dimensions	Value (in mm)
С	1.300
G1	0.100
G2	0.150
G3	0.830
G4	0.115
G5	0.135
G6	0.170
G7	0.500
G8	0.500
R	0.150
Х	0.500
X1	1.375
X2	1.225
Х3	1.175
Y	1.980
Y1	1.015
Y2	0.715
Y3	0.650

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