





0.2A SBR[®] SUPER BARRIER RECTIFIER

Features

- Ultra Low Leakage Current
- Excellent High Temperature Stability
- Patented Super Barrier Rectifier Technology
- Soft, Fast Switching Capability
- 175°C Operating Junction Temperature
- Lead Free Finish, RoHS Compliant (Note 1)
- "Green" Molding Compound (No Br, Sb)
- Qualified to AEC-Q101 Standards for High Reliability

Mechanical Data

Case: DFN1006-2

 Case Material: Molded Plastic, "Green" Molding Compound. UL Flammability Classification Rating 94V-0

Moisture Sensitivity: Level 1 per J-STD-020D

Polarity Indicator: Cathode Dot

 Terminals: Finish - NiPdAu over Copper leadframe. Solderable per MIL-STD-202, Method 208

Marking Information: See Page 3Ordering Information: See Page 3

Weight: 0.001 grams (Approximate)



Top View



Bottom View

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%.

V_{RRM}		
V_{RWM}	30	V
V_{RM}		
V _{R(RMS)}	21	V
lο	0.2	Α
I _{FSM}	5.0	А
	V _{RWM} V _{RM} V _{R(RMS)} I _O	V _{RWM} 30 V _{RM} 21 I _O 0.2

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Maximum Thermal Resistance Thermal Resistance Junction to Soldering (Note 2) Thermal Resistance Junction to Ambient (Note 3)	$R_{ hetaJS} \ R_{ hetaJA}$	18 263	°C/W
Operating and Storage Temperature Range	T _J , T _{STG}	-65 to +175	°C

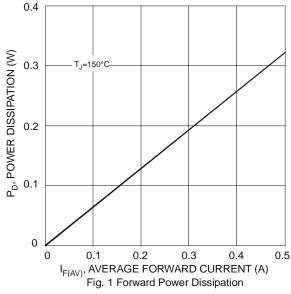
Electrical Characteristics @T_A = 25°C unless otherwise specified

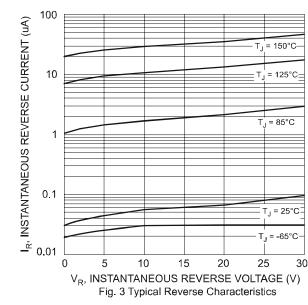
Characteristic	Symbol	Min	Тур	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 4)	V _{(BR)R}	30	-	-	V	I _R = 400μA
Forward Voltage Drop	V _F	-	0.50 0.42 0.57 0.51	0.54 0.45 0.61 0.54	V	I _F = 0.1A, T _J = 25°C I _F = 0.1A, T _J = 150°C I _F = 0.2A, T _J = 25°C I _F = 0.2A, T _J = 150°C
Leakage Current (Note 4)	I _R	-	0.1 46	0.5 150	HΙΔ	$V_R = 30V, T_J = 25^{\circ}C$ $V_R = 30V, T_J = 150^{\circ}C$

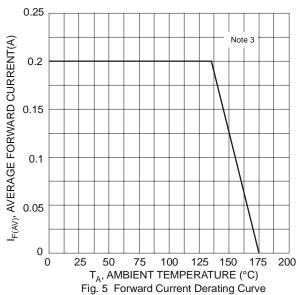
Notes:

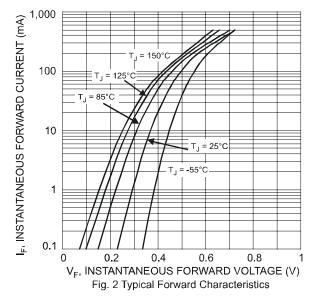
- 1. RoHS revision 13.2.2003. High temperature solder exemption applied, see EU Directive Annex Note 7.
- 2. Theoretical R_{eus} calculated from the top center of the die straight down to the PCB cathode tab solder junction.
- 3. FR-4 PCB, 2oz. Copper, minimum recommended pad layout per http://www.diodes.com/datasheets/ap02001.pdf.
- 4. Short duration pulse test used to minimize self-heating effect.

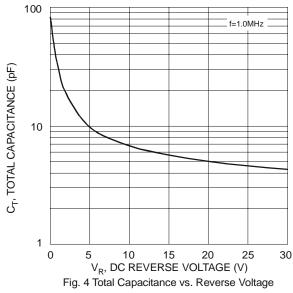


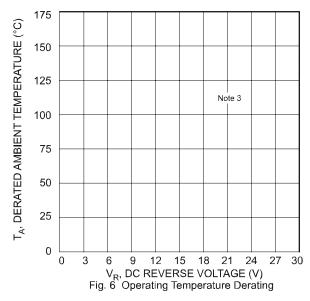












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Ordering Information (Note 5)

Part Number	Case Packaging	
SBR02M30LP-7	DFN1006-2	3000/Tape & Reel

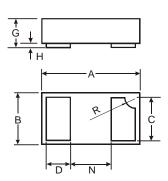
Notes: 5. For packaging details, go to our website at http://www.diodes.com/datasheets/ap02007.pdf.

Marking Information



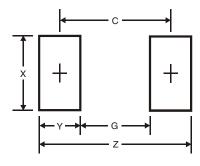
23 = Product Type Marking Code Dot Denotes Cathode Side

Package Outline Dimensions



DFN1006-2					
Dim	Min	Max	Тур		
Α	0.95	1.075	1.00		
В	0.55	0.675	0.60		
C	0.45	0.55	0.50		
D	0.20	0.30	0.25		
G	0.47	0.53	0.50		
Н	0	0.05	0.03		
N — 0.4					
R	0.05	0.15	0.10		
All Dimensions in mm					

Suggested Pad Layout



Dimensions	Value (in mm)
Z	1.1
G	0.3
Х	0.7
Y	0.4
С	0.7

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