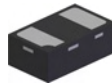


## Features

- Ultra Low Forward Voltage Drop
- Superior Reverse Avalanche Capability
- Patented Super Barrier Rectifier Technology
- Soft, Fast Switching Capability
- 150°C Operating Junction Temperature
- **Lead Free by Design, RoHS Compliant (Note 1)**
- **“Green” Device (Note 2)**

## Mechanical Data

- Case: DFN1006H4-2
- Case Material: Molded Plastic, “Green” Molding Compound. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Terminal Connections: Cathode Dot
- Terminals: Finish - NiPdAu over Copper leadframe. Solderable per MIL-STD-202, Method 208
- Marking Information: See Page 2
- Ordering Information: See Page 2
- Weight: 0.001 grams (approximate)



Bottom View

## Maximum Ratings @ $T_A = 25^\circ\text{C}$ 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	$V_{RRM}$ $V_{RWM}$ $V_{RM}$	20	V
RMS Reverse Voltage	$V_{R(RMS)}$	14	V
Average Rectified Output Current (See Figure 1)	$I_O$	700	mA
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	$I_{FSM}$	7	A

## Thermal Characteristics @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	Value	Unit
Maximum Thermal Resistance (Note 3)	$R_{\theta JA}$	224	$^\circ\text{C}/\text{W}$
Operating and Storage Temperature Range	$T_j, T_{STG}$	-65 to +150	$^\circ\text{C}$

## Electrical Characteristics @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 4)	$V_{(BR)R}$	20	-	-	V	$I_R = 50\mu\text{A}$
Forward Voltage Drop	$V_F$	-	0.34 0.46 0.51 0.48	0.38 0.50 0.55 0.51	V	$I_F = 0.1\text{A}, T_j = 25^\circ\text{C}$ $I_F = 0.5\text{A}, T_j = 25^\circ\text{C}$ $I_F = 0.7\text{A}, T_j = 25^\circ\text{C}$ $I_F = 0.7\text{A}, T_j = 125^\circ\text{C}$
Leakage Current (Note 4)	$I_R$	-	6 1.5	50 5	$\mu\text{A}$ mA	$V_R = 20\text{V}, T_j = 25^\circ\text{C}$ $V_R = 20\text{V}, T_j = 150^\circ\text{C}$

- Notes:
1. No purposefully added lead.
  2. Diodes Inc.'s “Green” policy can be found on our website at [http://www.diodes.com/products/lead\\_free/index.php](http://www.diodes.com/products/lead_free/index.php).
  3. Device mounted on FR-4 substrate. 2" x 2" 2oz. Copper, single sided PCB board.
  4. Short duration pulse test used to minimize self-heating effect.

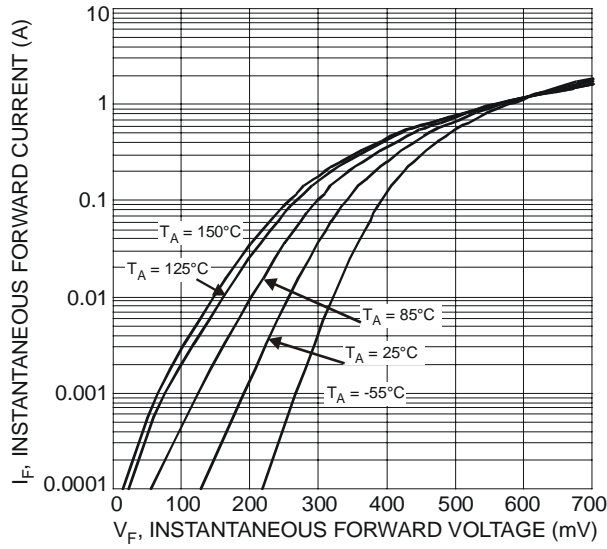


Fig. 1 Typical Forward Characteristics

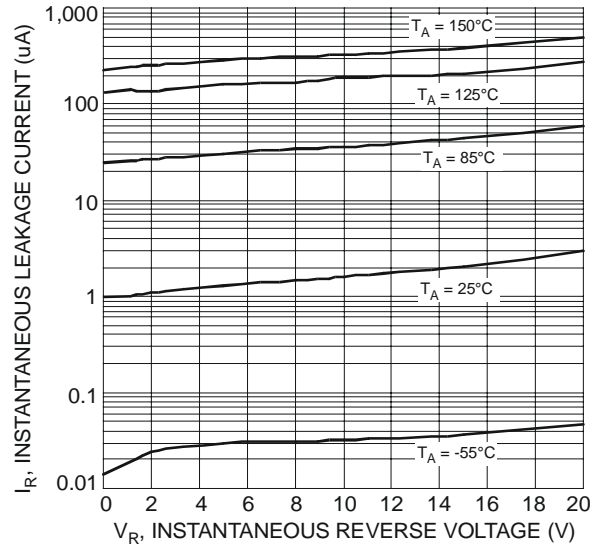


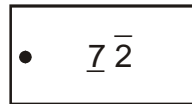
Fig. 2 Typical Reverse Characteristics

**Ordering Information** (Note 5)

Part Number	Case	Packaging
SBR07U20LPS-7	DFN1006H4-2	3000/Tape & Reel

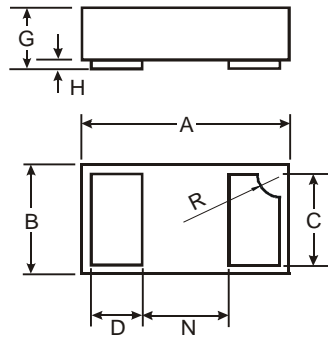
Notes: 5. For packaging details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.

**Marking Information**



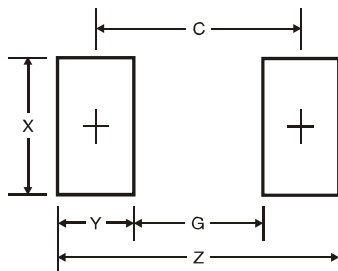
$\overline{72}$  = Product Type Marking Code  
Dot Denotes Cathode Side

**Package Outline Dimensions**



DFN1006H4-2			
Dim	Min	Max	Typ
A	0.95	1.075	1.00
B	0.55	0.675	0.60
C	0.45	0.55	0.50
D	0.20	0.30	0.25
G	0.34	0.4	0.37
H	0	0.05	0.03
N	—	—	0.40
R	0.05	0.15	0.10
All Dimensions in mm			

**Suggested Pad Layout**



Dimensions	Value (in mm)
Z	1.1
G	0.3
X	0.7
Y	0.4
C	0.7

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