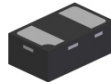


## Features

- 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: X2-DFN1006-2
- 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 (e4)
- Weight: 0.001 grams (approximate)



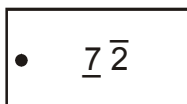
Bottom View

## Ordering Information (Note 4)

Part Number	Case	Packaging
SBR07U20LPS-7	X2-DFN1006-2	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](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



72 = Product Type Marking Code  
Dot Denotes Cathode Side

## Maximum Ratings (@T<sub>A</sub> = +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	V <sub>RRM</sub>	20	V
Working Peak Reverse Voltage	V <sub>RWM</sub>		
DC Blocking Voltage	V <sub>RM</sub>		
RMS Reverse Voltage	V <sub>R(RMS)</sub>	14	V
Average Rectified Output Current	I <sub>O</sub>	700	mA
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I <sub>FSM</sub>	7	A

**Thermal Characteristics** (@ $T_A = +25^\circ\text{C}$ , unless otherwise specified.)

Characteristic	Symbol	Value	Unit
Maximum Thermal Resistance (Note 5)	$R_{\theta JA}$	224	$^\circ\text{C/W}$
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 6)	$V_{(BR)R}$	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 6)	$I_R$	—	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: 5. Device mounted on FR-4 substrate with minimum recommended pad layout, which can be found on our website at <http://www.diodes.com>.  
 6. Short duration pulse test used to minimize self-heating effect.

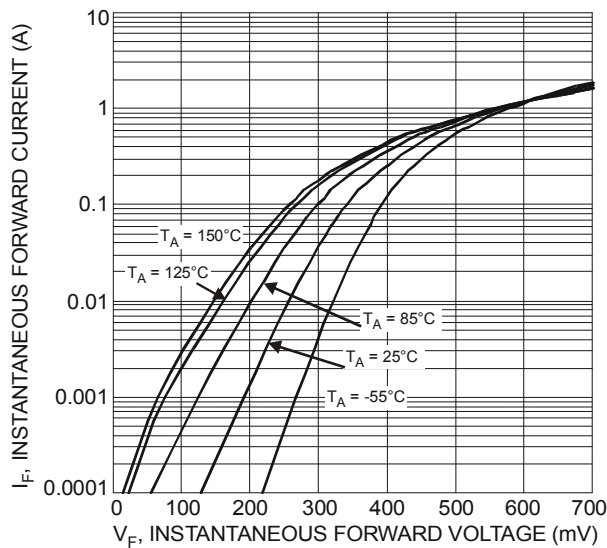


Fig. 1 Typical Forward Characteristics

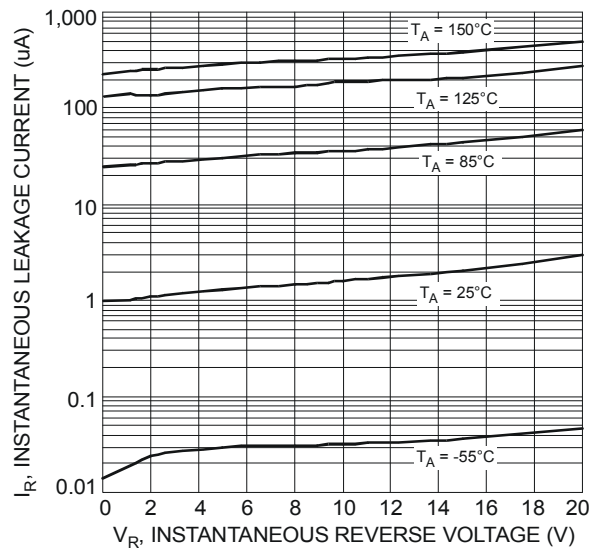
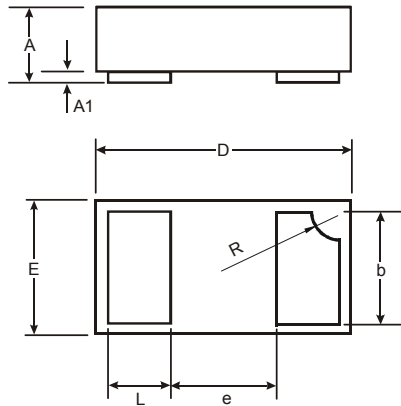


Fig. 2 Typical Reverse Characteristics

## Package Outline Dimensions

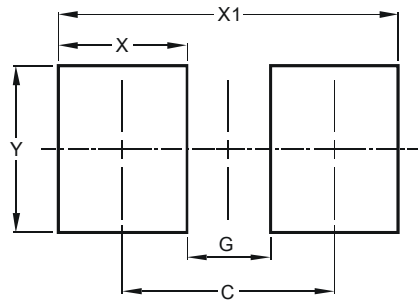
Please see AP02002 at <http://www.diodes.com/datasheets/ap02002.pdf> for the latest version.



X2-DFN1006-2			
Dim	Min	Max	Typ
A	0.34	0.4	0.37
A1	0	0.05	0.03
b	0.45	0.55	0.50
D	0.95	1.075	1.00
E	0.55	0.675	0.60
e	—	—	0.40
L	0.20	0.30	0.25
R	0.05	0.15	0.10
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)
C	0.70
G	0.30
X	0.40
X1	1.10
Y	0.70

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