

### Features

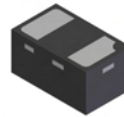
- Ultra Low Forward Voltage Drop
- Superior Reverse Avalanche Capability
- Patented Super Barrier Rectifier Technology
- Soft, Fast Switching Capability
- 150°C Operating Junction Temperature
- **Lead Free Finish, RoHS Compliant (Note 1)**
- **“Green” Molding Compound (No Br, Sb)**
- **Qualified to AEC-Q101 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
- Terminal Connections: Cathode Dot
- Terminals: Finish - NiPdAu over Copper leadframe. Solderable per MIL-STD-202, Method 208
- Marking Information: See Page 3
- Ordering Information: See Page 3
- Weight: 0.001 grams (approximate)



Top View



Bottom View

### 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>	40	V
Working Peak Reverse Voltage	V <sub>RWM</sub>		
DC Blocking Voltage	V <sub>RM</sub>		
Average Rectified Output Current (See Figure 1)	I <sub>O</sub>	250	mA
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I <sub>FSM</sub>	5	A

### Thermal Characteristics

Characteristic	Symbol	Value	Unit
Typical Thermal Resistance, Junction to Ambient T <sub>A</sub> = 25°C (Note 3)	R <sub>θJA</sub>	270	°C/W
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-65 to +150	°C

### Electrical Characteristics @T<sub>A</sub> = 25°C unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Forward Voltage Drop	V <sub>F</sub>	-	0.15	0.21	V	I <sub>F</sub> = 0.1mA, T <sub>J</sub> = 25°C
		-	0.22	0.28		I <sub>F</sub> = 1.0mA, T <sub>J</sub> = 25°C
		-	0.29	0.35		I <sub>F</sub> = 10mA, T <sub>J</sub> = 25°C
		-	0.41	0.49		I <sub>F</sub> = 100mA, T <sub>J</sub> = 25°C
		-	0.49	0.59		I <sub>F</sub> = 200mA, T <sub>J</sub> = 25°C
		-	0.47	0.56		I <sub>F</sub> = 200mA, T <sub>J</sub> = 125°C
Leakage Current (Note 2)	I <sub>R</sub>	-	0.5	-	μA	V <sub>R</sub> = 25V, T <sub>J</sub> = 25°C
			0.6	10		V <sub>R</sub> = 40V, T <sub>J</sub> = 25°C

- Notes:
1. EU Directive 2002/95/EC (RoHS). All applicable RoHS exemptions applied. Please visit our website at [http://www.diodes.com/products/lead\\_free.html](http://www.diodes.com/products/lead_free.html).
  2. Short duration pulse test used to minimize self-heating effect.
  3. FR-4 PCB, 2oz. Copper, minimum recommended pad layout per <http://www.diodes.com/datasheets/ap02001.pdf>.

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SBR0240LP

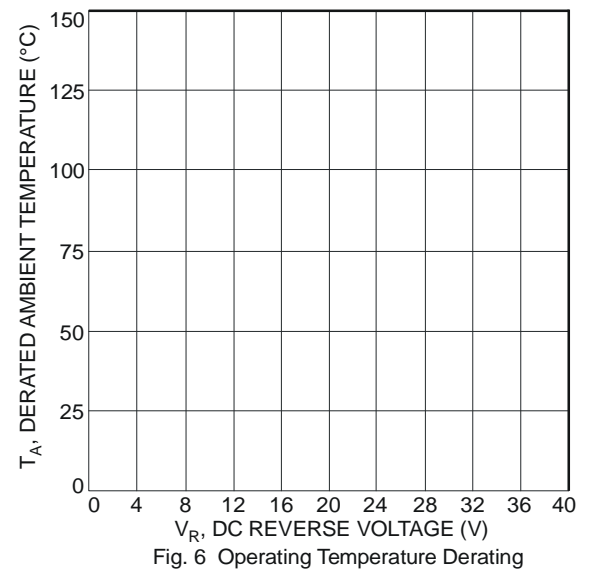
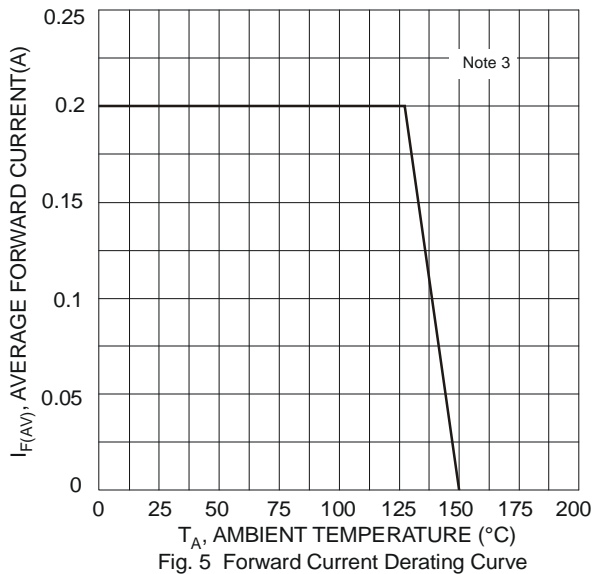
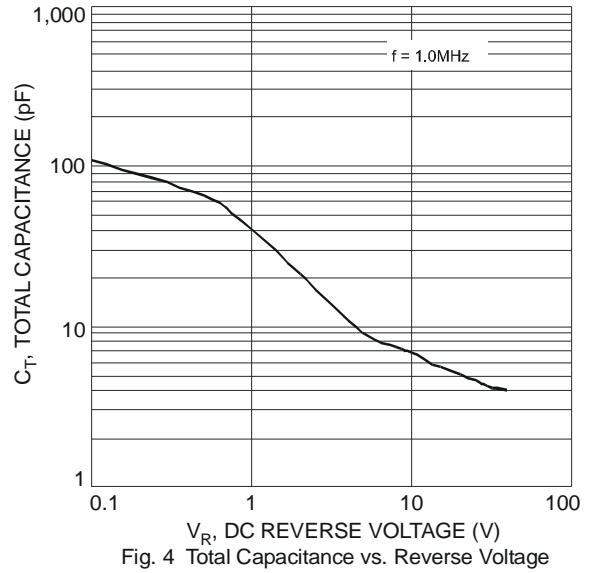
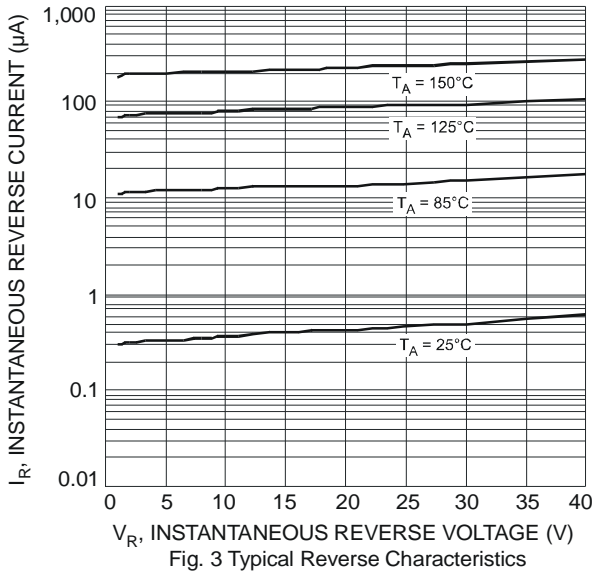
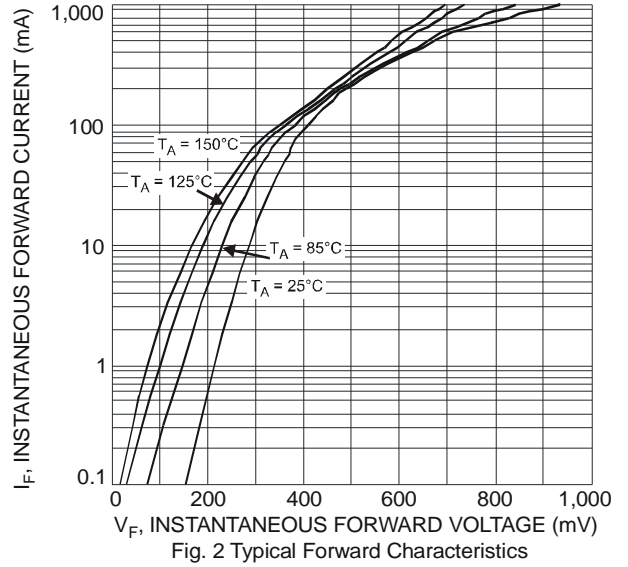
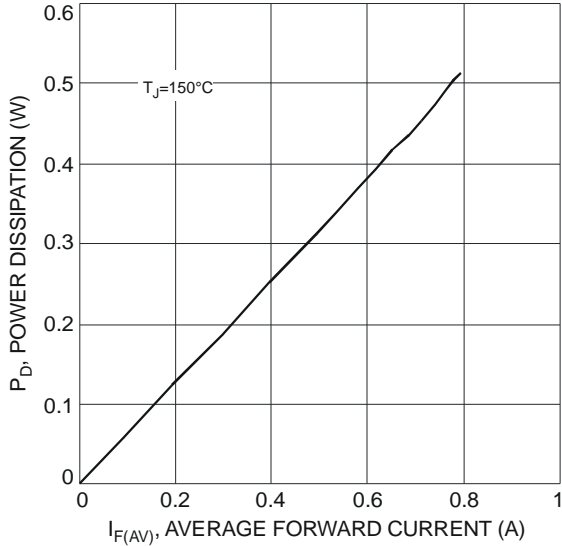
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**Ordering Information** (Note 3)

Part Number	Case	Packaging
SBR0240LP-7	DFN1006-2	3000/Tape & Reel

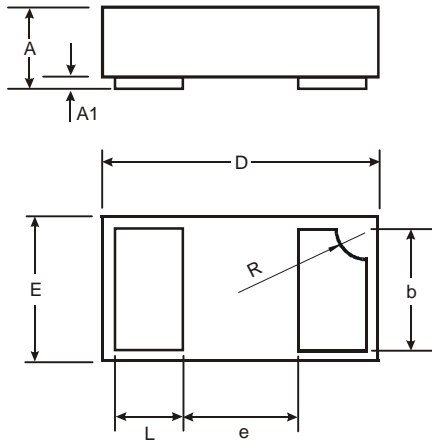
Notes: 3. For packaging details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.

**Marking Information**



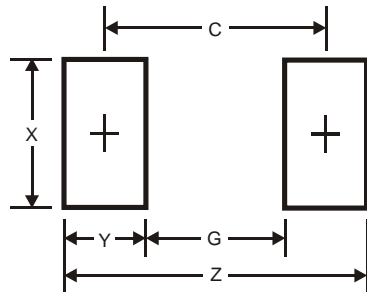
24= Product Type Marking Code  
Dot Denotes Cathode Side

**Package Outline Dimensions**



DFN1006-2			
Dim	Min	Max	Typ
A	0.47	0.53	0.50
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**



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

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SBR0240LP

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