

**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-020
- Terminal Connections: Cathode Dot
- Terminals: Finish - NiPdAu over Copper leadframe. Solderable per MIL-STD-202, Method 208
- Weight: 0.001 grams



Top View



Bottom View

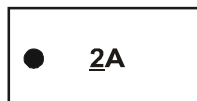
**Ordering Information** (Note 2)

Part Number	Case	Packaging
SBR02U100LP-7	DFN1006-2	3000/Tape & Reel
SBR02U100LP-7B	DFN1006-2	10,000/Tape & Reel

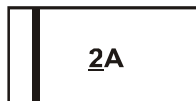
- Notes:
1. EU Directive 2002/95/EC (RoHS). All applicable RoHS exemptions applied, see EU Directive 2002/95/EC Annex Notes.
  2. For packaging details, go to our website at <http://www.diodes.com>.

**Marking Information**

SBR02U100LP-7


 Top View  
 Dot Denotes  
 Cathode Side

SBR02U100LP-7B


 Top View  
 Bar Denotes  
 Cathode Side

 $\underline{2}A$  = Product Type Marking Code

**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>	100	V
Working Peak Reverse Voltage	V <sub>RWM</sub>		
DC Blocking Voltage	V <sub>RM</sub>		
RMS Reverse Voltage	V <sub>R(RMS)</sub>	70	V
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

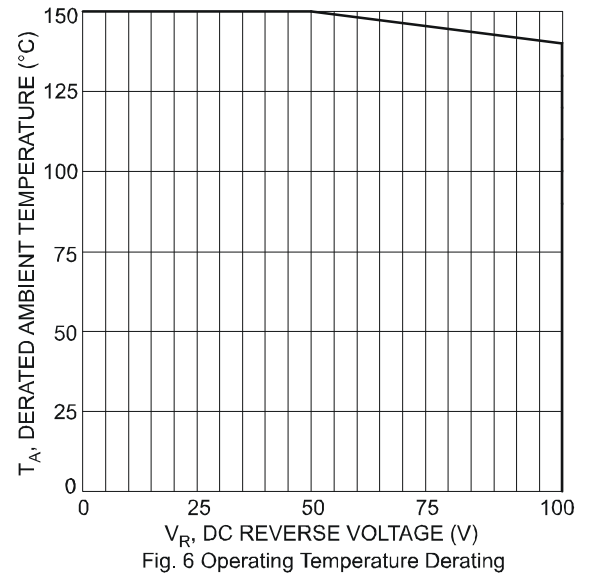
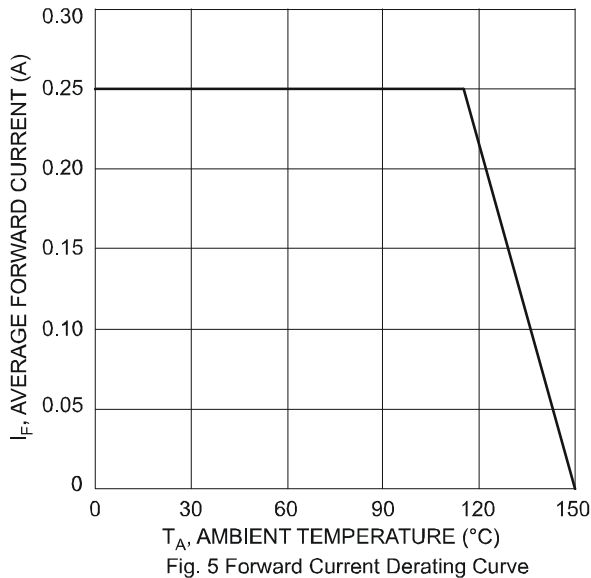
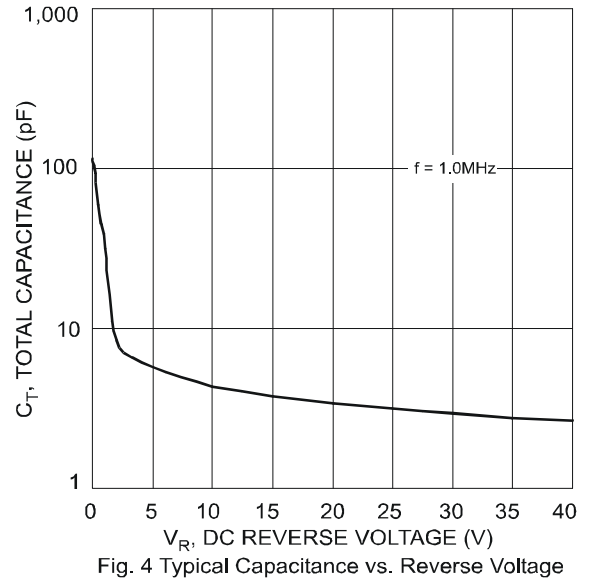
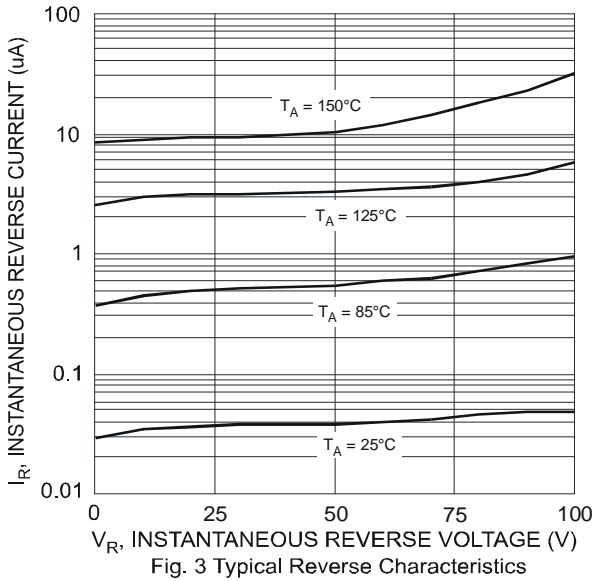
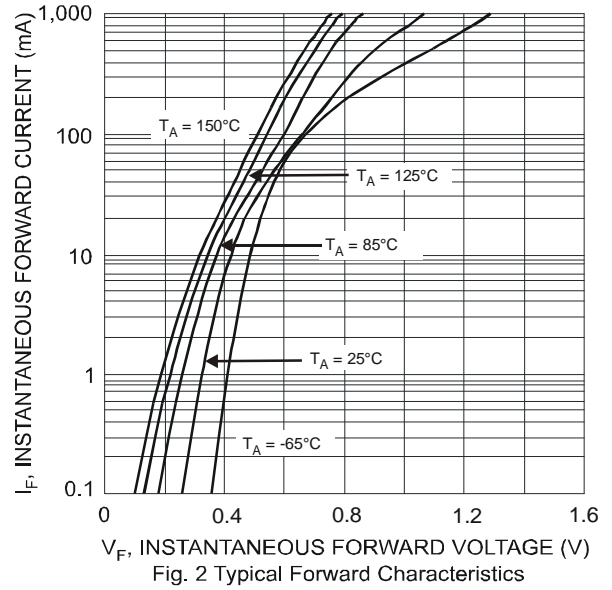
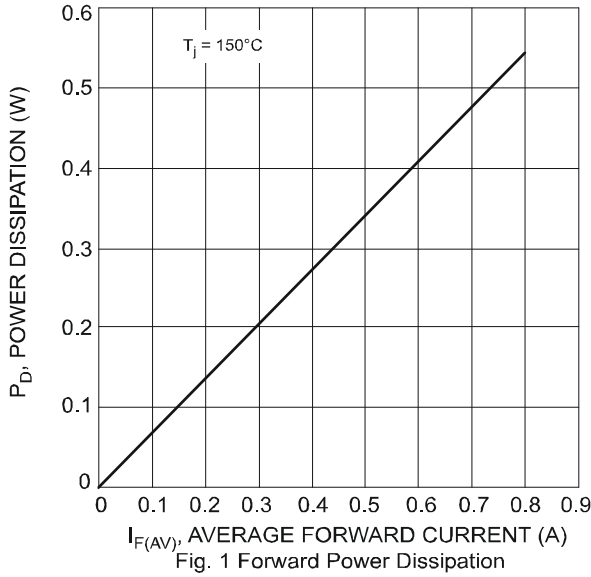
**Thermal Characteristics**

Characteristic	Symbol	Value	Unit
Maximum Thermal Resistance			
Thermal Resistance, Junction to Ambient (Note 3) T <sub>A</sub> = 25°C	R <sub>θJA</sub>	270	°C/W
Thermal Resistance, Junction to Ambient (Note 4) T <sub>A</sub> = 25°C	R <sub>θJA</sub>	235	
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

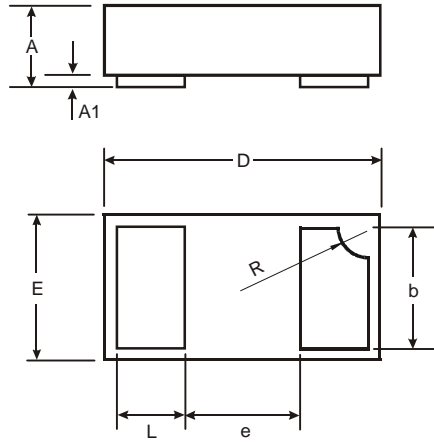
Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 5)	V <sub>(BR)R</sub>	100	-	-	V	I <sub>R</sub> = 1mA
Forward Voltage Drop	V <sub>F</sub>	-	0.67	0.72	V	I <sub>F</sub> = 100mA, T <sub>J</sub> = 25°C
			0.76	0.80		I <sub>F</sub> = 200mA, T <sub>J</sub> = 25°C
			0.60	0.65		I <sub>F</sub> = 200mA, T <sub>J</sub> = 125°C
Leakage Current (Note 5)	I <sub>R</sub>	-	0.04	1.0	μA	V <sub>R</sub> = 75V, T <sub>J</sub> = 25°C
			6	50		V <sub>R</sub> = 75V, T <sub>J</sub> = 85°C

- Notes:
3. FR-4 PCB, 2 oz. Copper, minimum recommended pad layout per <http://www.diodes.com>
  4. Polyimide PCB, 2 oz. Copper, minimum recommended pad layout per <http://www.diodes.com>
  5. Short duration pulse test used to minimize self-heating effect.



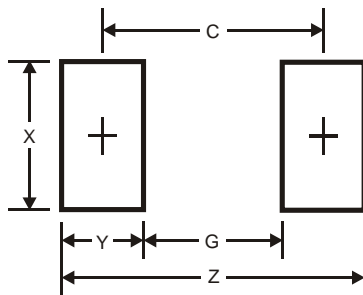
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**Package Outline Dimensions**



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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