


SBR02U100LP
0.2A SBR[®]
Surface Mount Super Barrier Rectifier
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-020C
- 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

Maximum Ratings @ T_A = 25°C unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load.
 For capacitive 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}	100	V
RMS Reverse Voltage	V _{R(RMS)}	70	V
Average Rectified Output Current (See Figure 1)	I _O	250	mA
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I _{FSM}	5	A
Maximum Thermal Resistance Thermal Resistance, Junction to Ambient (Note 2) T _A = 25°C Thermal Resistance, Junction to Ambient (Note 3) T _A = 25°C	R _{θJA} R _{θJA}	270 235	°C/W
Operating and Storage Temperature Range	T _j , T _{STG}	-65 to +150	°C

Electrical Characteristics @ T_A = 25°C unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 4)	V _{(BR)R}	100	-	-	V	I _R = 1mA
Forward Voltage Drop	V _F	-	0.67 0.76 0.60	0.72 0.80 0.65	V	I _F = 100mA, T _j = 25°C I _F = 200mA, T _j = 25°C I _F = 200mA, T _j = 125°C
Leakage Current (Note 4)	I _R	-	0.04 6	1.0 50	μA	V _R = 75V, T _j = 25°C V _R = 75V, T _j = 85°C

- Notes:
1. RoHS revision 13.2.2003. High temperature solder exemption applied, see *EU Directive Annex Note 7*.
 2. FR-4 PCB, 2 oz. Copper, minimum recommended pad layout per <http://www.diodes.com/datasheets/ap02001.pdf>
 3. Polyimide PCB, 2 oz. Copper, minimum recommended pad layout per <http://www.diodes.com/datasheets/ap02001.pdf>
 4. Short duration pulse test used to minimize self-heating effect.

SBR02U100LP

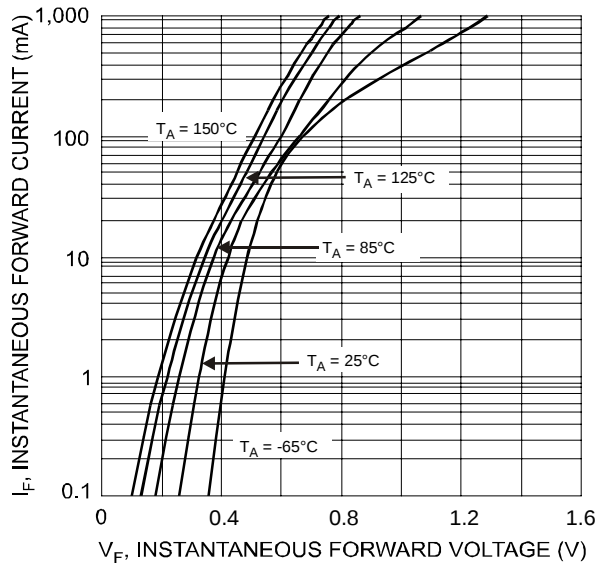


Fig. 1 Typical Forward Characteristics

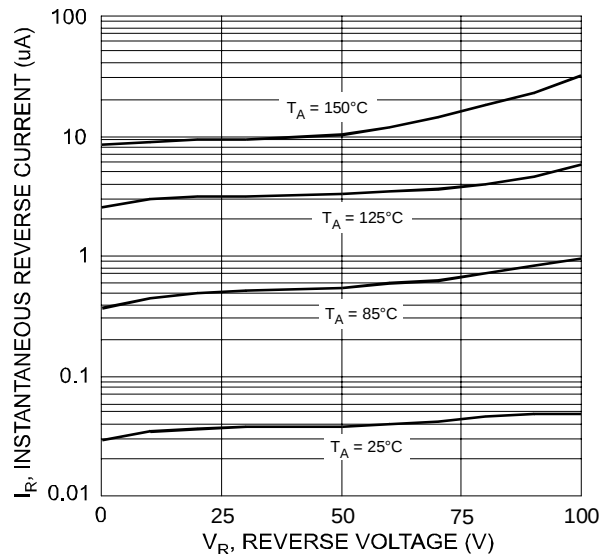


Fig. 2 Typical Reverse Characteristics

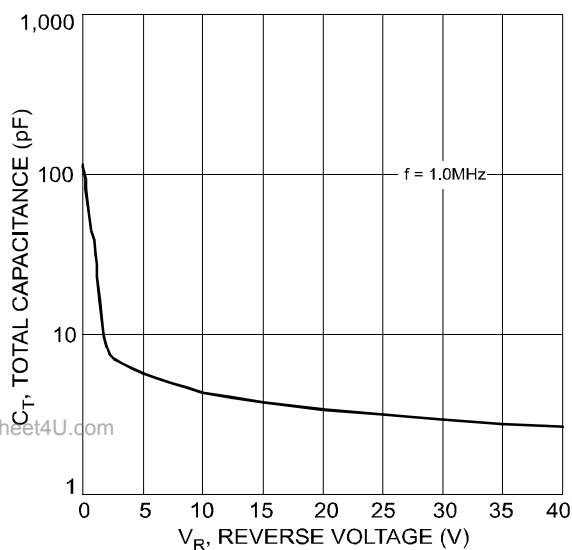


Fig. 3 Typical Total Capacitance

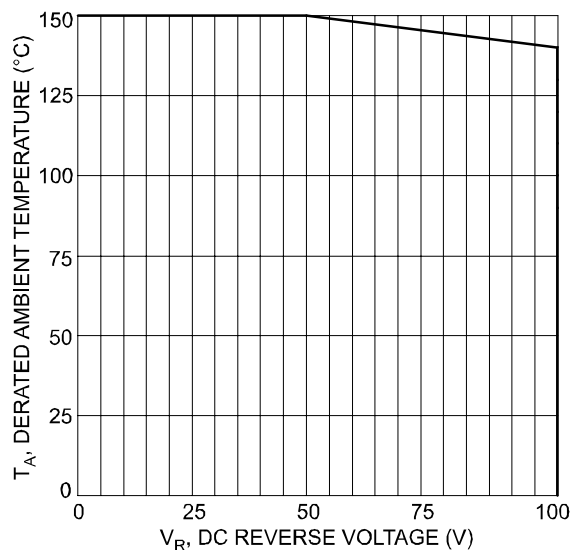


Fig. 4 Operating Temperature Derating

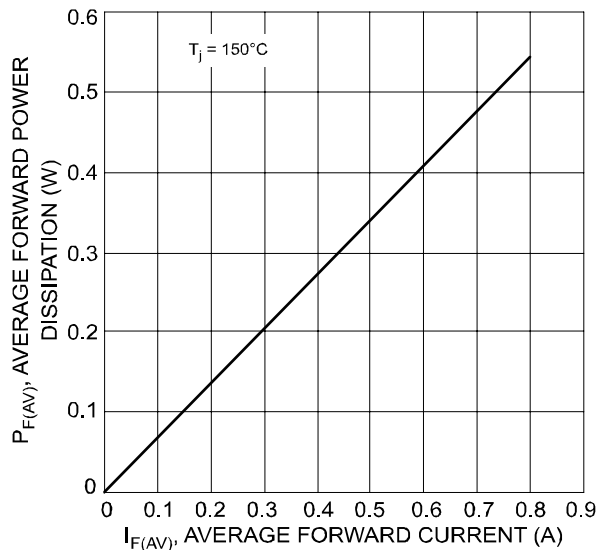


Fig. 5 Forward Power Dissipation

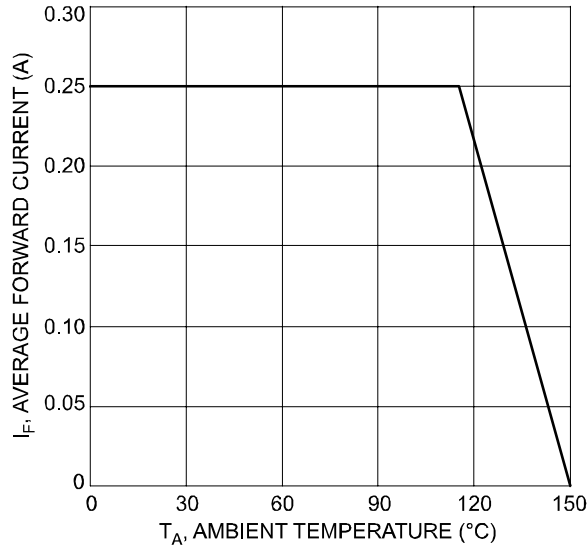
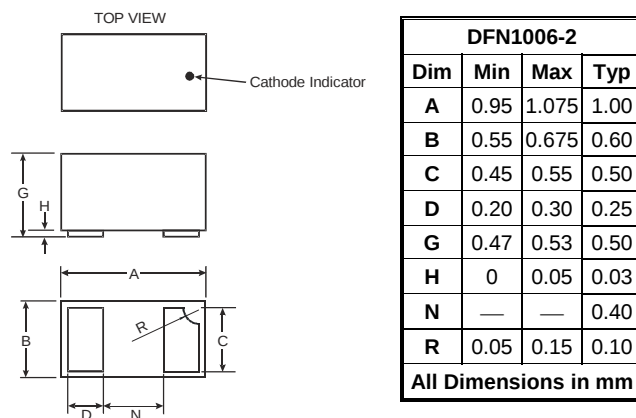


Fig. 6 DC Forward Current Derating

SBR02U100LP

Package Outline Drawing

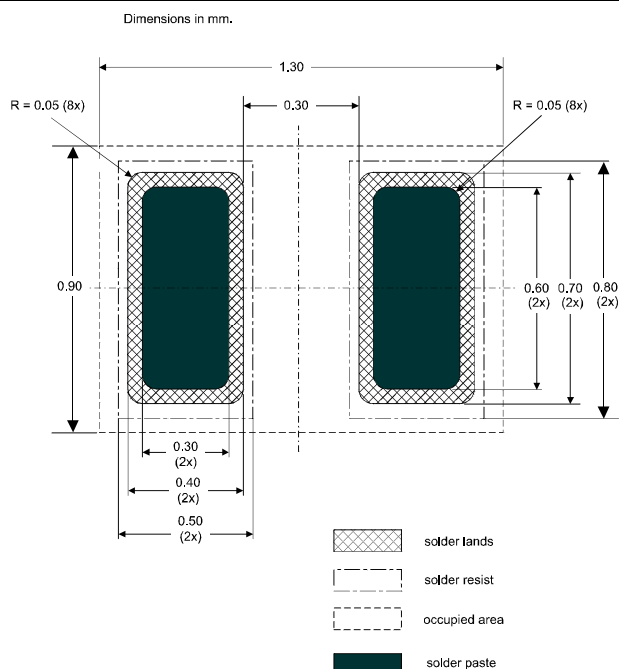


Marking, Polarity, Weight & Ordering Information

SBR02U100LP	Case Style (DFN1006-2)		Marking	Weight
	 Top View	 Back View	 	0.001g (approx.)

Ordering Information	Date Code
SBR02U100LP-7 3000/Tape & Reel	2A, 2A = Product Type Marking Code Dot Denotes Cathode Side

Suggested Pad Layout



IMPORTANT NOTICE

Diodes Incorporated and its subsidiaries reserve the right to make modifications, enhancements, improvements, corrections or other changes without further notice to any product herein. Diodes Incorporated does not assume any liability arising out of the application or use of any product described herein; neither does it convey any license under its patent rights, nor the rights of others. The user of products in such applications shall assume all risks of such use and will agree to hold Diodes Incorporated and all the companies whose products are represented on our website, harmless against all damages.

LIFE SUPPORT

Diodes Incorporated products are not authorized for use as critical components in life support devices or systems without the expressed written approval of the President of Diodes Incorporated.