


**SBR0230T5**

## 0.2A SBR<sup>®</sup> Super Barrier Rectifier

### Features

- Low Leakage Current
- Excellent High Temperature Stability
- Patented Super Barrier Rectifier Technology
- Soft, Fast Switching Capability
- 150°C Operating Junction Temperature
- **Lead Free Finish, RoHS Compliant**
- **“Green” Molding Compound (No Br, Sb)**

### Mechanical Data

- Case: SOD-523
- Case Material: Molded Plastic, “Green” Molding compound. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Polarity Indicator: Cathode Band
- Terminals: Finish – Matte Tin annealed over Alloy 42 leadframe. Solderable per MIL-STD-202, Method 208
- Marking Information: See Page 3
- Ordering Information: See Page 3
- Weight: 0.002 grams (approximate)

### Maximum Ratings @ T<sub>A</sub> = 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	V <sub>RRM</sub>	30	V
Working Peak Reverse Voltage	V <sub>RWM</sub>		
DC Blocking Voltage	V <sub>RM</sub>		
RMS Reverse Voltage	V <sub>R(RMS)</sub>	21	V
Average Rectified Output Current (See Figure 1)	I <sub>O</sub>	0.2	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I <sub>FSM</sub>	5	A
Maximum Thermal Resistance Thermal Resistance Junction to Soldering (Note 1)	R <sub>θJA</sub>	400	°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
Reverse Breakdown Voltage (Note 2)	V <sub>(BR)R</sub>	30	-	-	V	I <sub>R</sub> = 400 μA
Forward Voltage Drop	V <sub>F</sub>	-	0.50	0.54	V	I <sub>F</sub> = 0.1A, T <sub>j</sub> = 25°C
			0.46	0.49		I <sub>F</sub> = 0.1A, T <sub>j</sub> = 85°C
			0.57	0.61		I <sub>F</sub> = 0.2A, T <sub>j</sub> = 25°C
			0.55	0.58		I <sub>F</sub> = 0.2A, T <sub>j</sub> = 85°C
Leakage Current (Note 2)	I <sub>R</sub>	-	-	20	μA mA	V <sub>R</sub> = 30V, T <sub>j</sub> = 25 °C
			-	0.1		V <sub>R</sub> = 30V, T <sub>j</sub> = 125 °C

- Notes:
1. FR-4 PCB, 2 oz. Copper, minimum recommended pad layout per <http://www.diodes.com/datasheets/ap02001.pdf>.
  2. Short duration pulse test used to minimize self-heating effect.

**SBR0230T5**

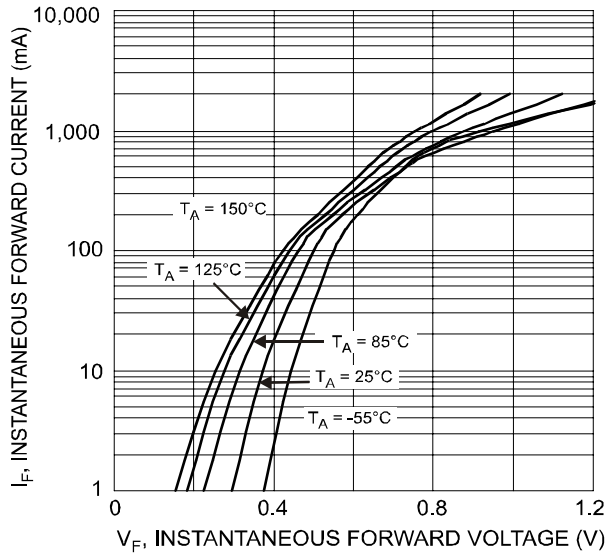


Fig. 1 Typical Forward Characteristics

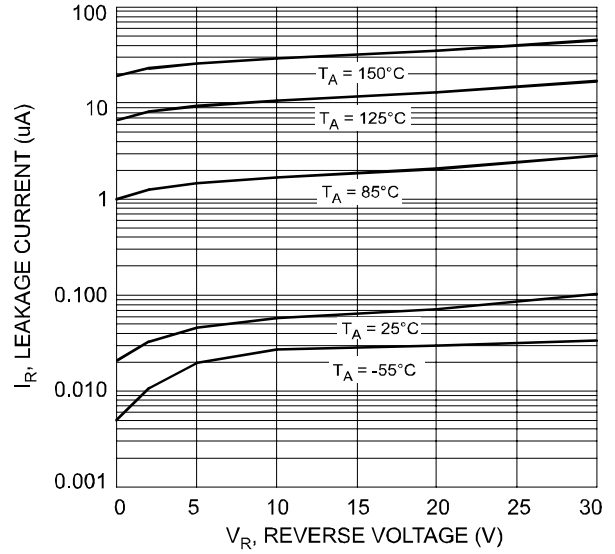


Fig. 2 Typical Reverse Characteristics

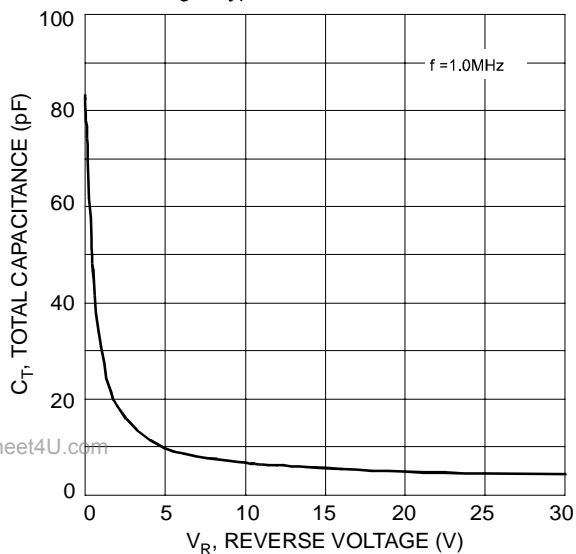


Fig. 3 Typical Total Capacitance

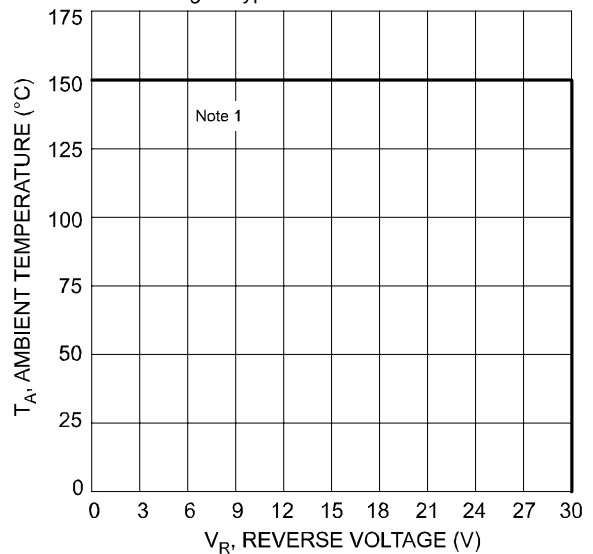
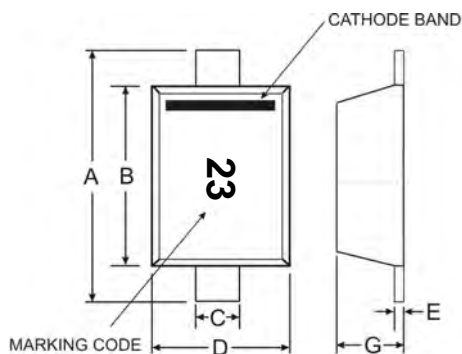


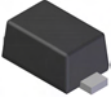
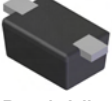

Fig. 4  $V_R$  vs  $T_A$

## Package Outline Drawing



SOD-523		
Dim	Min	Max
A	1.50	1.70
B	1.10	1.30
C	0.25	0.35
D	0.70	0.90
E	0.10	0.20
G	0.55	0.65
All Dimensions in mm		

**Marking, Polarity, Weight & Ordering Information**

<b>SBR0230T5</b>	Case Style		Marking	Weight
	 Top View	 Back View		0.002g (approx.)

Ordering Information	Date Code
SBR0230T5-7 3000/Tape & Reel	23 = Product Type Marking Code

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