NEW PRODUCT

Lead-free Green

SPICE MODEL: SBR0230T5

SBR0230T5

0.2A SBR®
Super Barrier Rectifier

Features

- Low Leakage Current
- Excellent High Temperature Stability
- Patented Super Barrier Rectifier Technology
- Soft, Fast Switching Capability
- 150ºC 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_A = 25ºC 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}	30	V
RMS Reverse Voltage	$V_{R(RMS)}$	21	V
Average Rectified Output Current (See Figure 1)	I_O	0.2	A
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 Soldering (Note 1)	$R_{\theta JA}$	400	°C/W
Operating and Storage Temperature Range	T_j, T_{STG}	-65 to +150	ºC

Electrical Characteristics @ T_A = 25ºC unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 2)	$V_{(BR)R}$	30	-	-	V	I_R = 400 µA
Forward Voltage Drop	V_F	-	0.50 0.46 0.57 0.55	0.54 0.49 0.61 0.58	V	I_F = 0.1A, T_j = 25ºC I_F = 0.1A, T_j = 85ºC I_F = 0.2A, T_j = 25ºC I_F = 0.2A, T_j = 85ºC
Leakage Current (Note 2)	I_R	-	- -	20 0.1	µA mA	V_R = 30V, T_j = 25 ºC V_R = 30V, T_j = 125 ºC

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.

SBR is a registered trademark of Diodes Incorporated.

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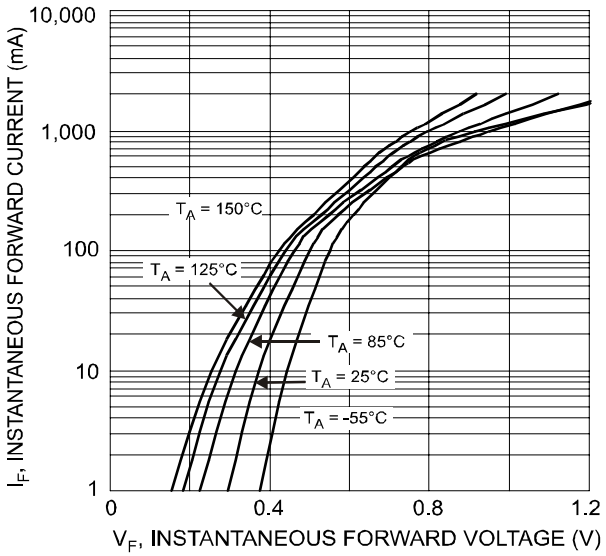


Fig.1 Typical Forward Characteristics

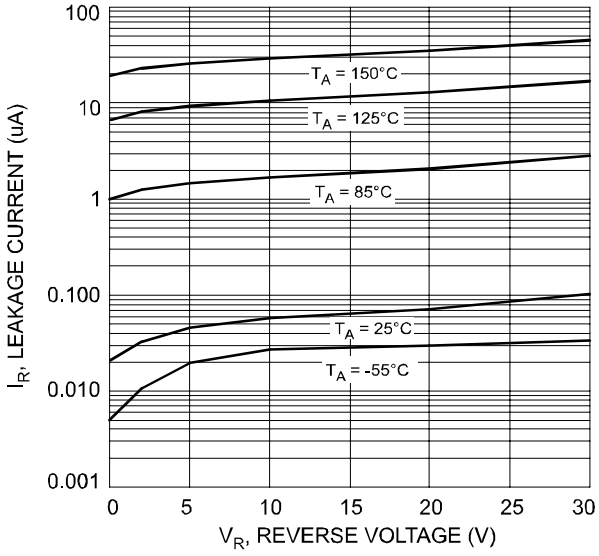


Fig. 2 Typical Reverse Characteristics

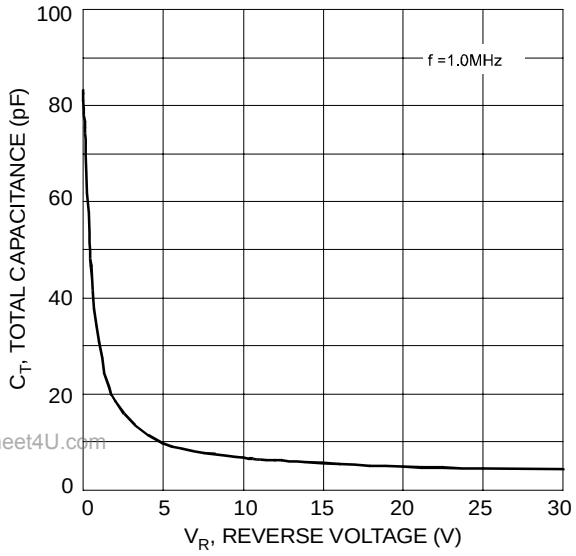


Fig. 3 Typical Total Capacitance

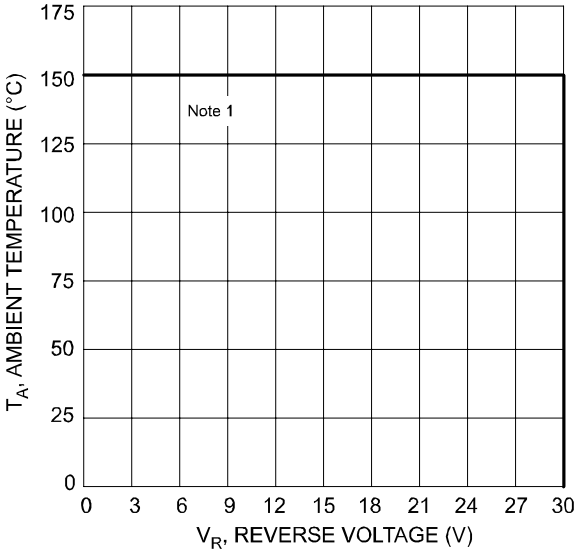
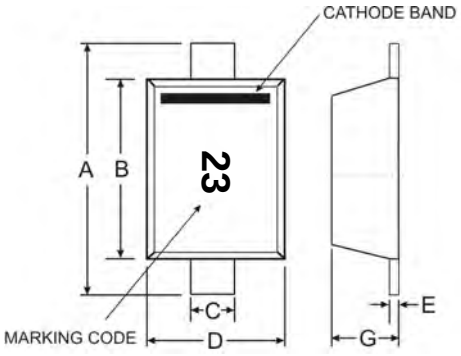


Fig. 4 V_R vs T_A

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		

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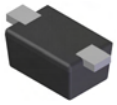
Marking, Polarity, Weight & Ordering Information

	Case Style		Marking	Weight
SBR0230T5	 Top View	 Back View		0.002g (approx.)

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