NEW PRODUCT

BZT52C51S

SURFACE MOUNT ZENER DIODE

Please click here to visit our online spice models database.

Features

- Planar Die Construction
- General Purpose, Medium Current
- Ideally Suited for Automated Assembly Processes
- **Lead, Halogen and Antimony Free, RoHS Compliant "Green" Device (Notes 1, 2 and 6)**

SOD-323		
Dim	**Min**	**Max**
A	2.30	2.70
B	1.60	1.80
C	1.20	1.40
D	1.05 Typical	
E	0.25	0.35
G	0.20	0.40
H	0.10	0.15
J	0.05 Typical	
α	0°	8°
All Dimensions in mm		

Mechanical Data

- Case: SOD-323
- Case Material: Molded Plastic, “Green” Molding Compound. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020D
- Terminal Connections: See Diagram
- Terminals: Finish – Matte Tin annealed over Alloy 42 leadframe. Solderable per MIL-STD-202, Method 208
- Marking & Type Code Information: See Electrical Specifications Table
- Ordering Information: See Page 3
- Weight: 0.004 grams (approximate)

Maximum Ratings @T_A = 25°C unless otherwise specified

Characteristic		Symbol	Value	Unit
Forward Voltage	@ I_F = 10mA	V_F	0.9	V
Operating and Storage Temperature Range		T_J, T_{STG}	-65 to +150	°C

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Power Dissipation (Note 3)	P_D	200	mW
Thermal Resistance, Junction to Ambient Air (Note 3)	$R_{\theta JA}$	833	°C/W

Electrical Characteristics @T_A = 25°C unless otherwise specified

Type Number	Marking Code (Note 4)	Zener Voltage Range (Note 3)				Maximum Zener Impedance (Note 5)			Maximum Reverse Current (Note 5)	
		V_Z @ I_{ZT}			I_{ZT}	Z_{ZT} @ I_{ZT}	Z_{ZK} @ I_{ZK}	I_{ZK}	I_R	@ V_R
		Nom (V)	Min (V)	Max (V)	mA	Ω		mA	uA	V
BZT52C51S	WW	51	48.0	54.0	5	100	750	1.0	0.1	38

Notes:
1. No purposefully added lead. Halogen and Antimony Free.
2. Diodes Inc's "Green" policy can be found on our website at http://www.diodes.com/products/lead_free/index.php
3. Short duration pulse test used to minimize self-heating effect.
4. When provided, otherwise, parts are provided with date code only, and type number identification appears on reel only.
5. f = 1kHz.
6. Product manufactured with Green Molding Compound and does not contain Halogens or Sb_2O_3 Fire Retardants.

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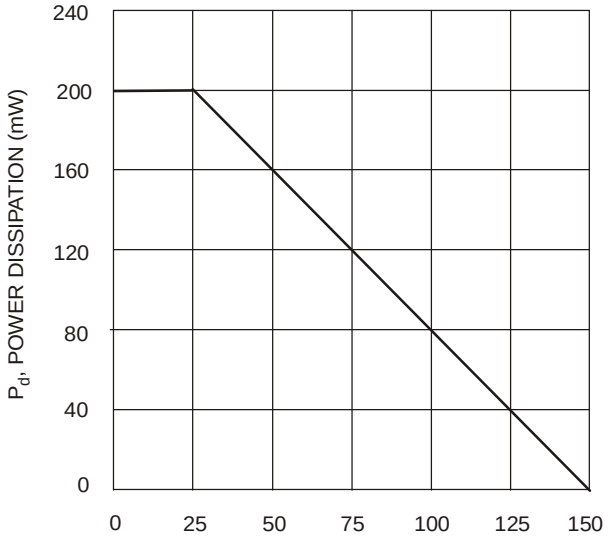

Fig. 1 Power Dissipation vs Ambient Temperature

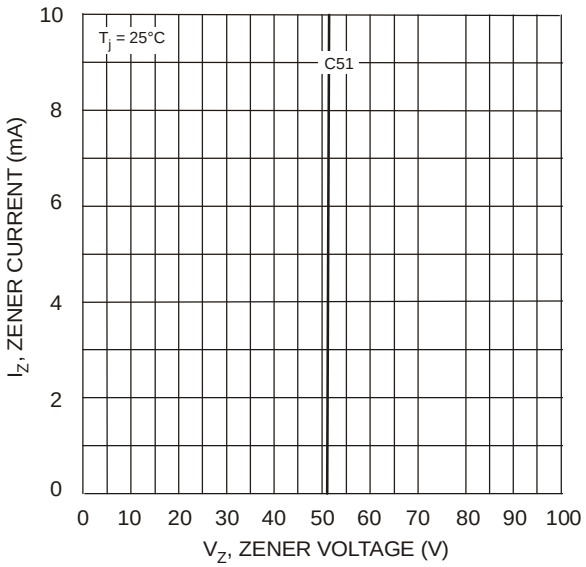

Fig. 2 Zener Breakdown Characteristics

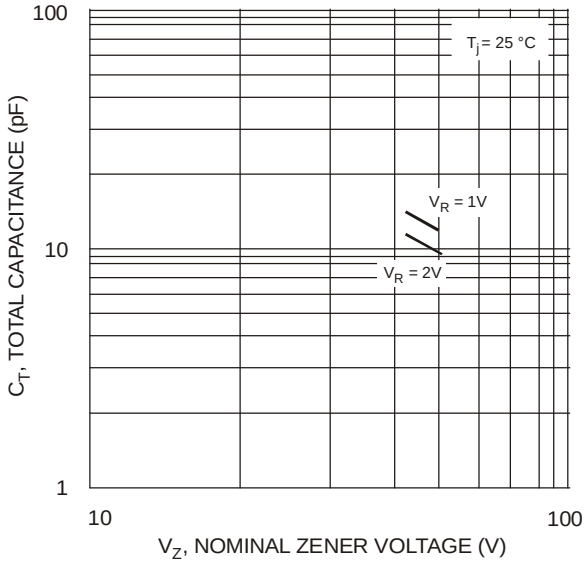

Fig. 3 Total Capacitance vs Nominal Zener Voltage

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Ordering Information (Note 7)

Device	Packaging	Shipping
BZT52C51S-7	SOD-323	3000/Tape & Reel

Notes: 7. For packaging details, go to our website at http://www.diodes.com/datasheets/ap02007.pdf.

Marking Information

WW = Product Type Marking Code (See Table 1)