



SURFACE MOUNT ZENER DIODE

Features

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

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-020
- Terminal Connections: See Diagram
- Terminals: Finish Matte Tin annealed over Alloy 42 leadframe. Solderable per MIL-STD-202, Method 208
- Marking Information: See Page 2Ordering Information: See Page 2
- Weight: 0.004 grams (approximate)



Top View

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)	$R_{ hetaJA}$	833	°C/W

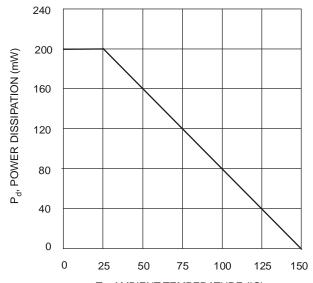
Electrical Characteristics @T_A = 25°C unless otherwise specified

Type Number	Marking Code (Note 4)	Zener Voltage Range (Note 3))	Maximum Zener Impedance (Note 5)			Maximum Reverse Current (Note 5)	
Number	(14016 4)	Vz @ Izt		I _{ZT}	Z _{ZT} @ I _{ZT}	Z _{ZK} @ I _{ZK}	I _{ZK}	I _R	@ V _R	
		Nom (V)	Min (V)	Max (V)	mA	Ω	2	mA	uA	٧
BZT52C51S	WW	51	48.0	54.0	5	100	750	1.0	0.1	38

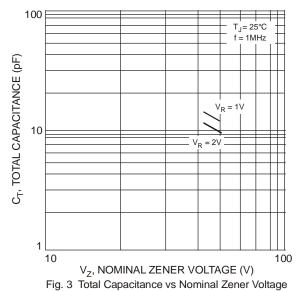
Notes:

- 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 Sb₂O₃ Fire Retardants.





 $\rm T_A, AMBIENT\ TEMPERATURE\ (^{\circ}C)$ Fig. 1 Power Dissipation vs Ambient Temperature



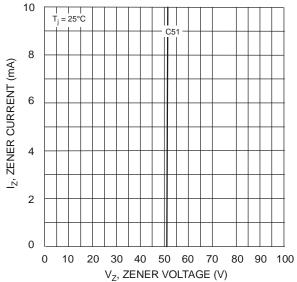


Fig. 2 Zener Breakdown Characteristics

Ordering Information (Note 7)

Part Number	Case	Packaging
BZT52C51S-7	SOD-323	3,000/Tape & Reel
BZT52C51S-13	SOD-323	10,000/Tape & Reel

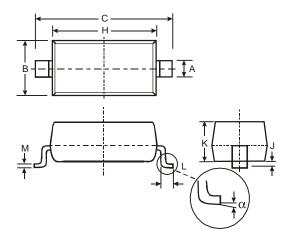
Notes: 7. For packaging details, go to our website at http://www.diodes.com/datasheets/ap02007.pdf.

Marking Information



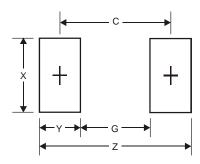


Package Outline Dimensions



SOD-323				
Dim Min		Max		
Α	0.25	0.35		
В	1.20	1.40		
C 2.30		2.70		
Н	1.60	1.80		
J	0.00	0.10		
K	1.0	1.1		
L 0.20 0.40				
M 0.10		0.15		
α	0°	8°		
All Dimensions in mm				

Suggested Pad Layout



Dimensions	Value (in mm)
Z	3.75
G	1.05
Х	0.65
Y	1.35
C	2.40



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