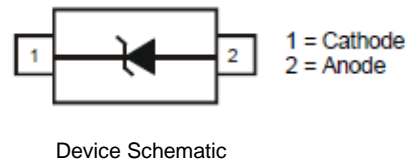


### Features

- Ideal for ESD Protection
- Low Capacitance (8pF Typical)
- Small Package Size
- **Totally Lead-Free & Fully RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. "Green" Device (Note 3)**

### Mechanical Data

- Case: SOD523
- Case Material: Molded Plastic, "Green" Molding Compound. UL Flammability Classification Rating 94V-0
- Terminals: Matte Tin Finish Annealed Over Alloy 42 Leadframe (Lead-Free Plating). Solderable per MIL-STD-202, Method 208<sup>(3)</sup>
- Polarity: See Diagram
- Weight: 0.001 grams (Approximate)

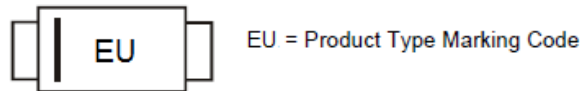


### Ordering Information (Note 4)

Part Number	Case	Packaging
T5V0LCS5-7	SOD523	3,000/Tape & Reel

- Notes:
1. No purposely added lead. Fully EU Directive 2002/95/EC (RoHS) & 2011/65/EU (RoHS 2) compliant.
  2. See [http://www.diodes.com/quality/lead\\_free.html](http://www.diodes.com/quality/lead_free.html) for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
  3. Halogen- and Antimony-free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
  4. For packaging details, go to our website at <http://www.diodes.com/products/packages.html>.

### Marking Information



### Maximum Ratings (@T<sub>A</sub> = +25°C, unless otherwise specified.)

Characteristic	Symbol	Value	Unit	Conditions
ESD Protection – Contact Discharge	V <sub>ESD_CONTACT</sub>	-15, +25	kV	Standard IEC 61000-4-2
ESD Protection – Air Discharge	V <sub>ESD_AIR</sub>	-15, +25	kV	Standard IEC 61000-4-2
ESD Protection – Human Body Model	V <sub>ESD_HBM</sub>	±8	kV	MIL-STD-883
ESD Protection – Machine Model	V <sub>ESD_MM</sub>	±400	V	MIL-STD-883

**Thermal Characteristics**

Characteristic	Symbol	Value	Unit
Power Dissipation (Note 5)	$P_D$	200	mW
Thermal Resistance, Junction to Ambient Air (Note 5)	$R_{\theta JA}$	625	$^{\circ}C/W$
Operating and Storage Temperature Range	$T_J, T_{STG}$	-65 to +150	$^{\circ}C$

**Electrical Characteristics** (@ $T_A = +25^{\circ}C$ , unless otherwise specified.)

Type Number	Operating Voltage @ $I_{ZT} = 1.0mA$ (Note 6) $V_{RWM}$ (Volts)			Breakdown Voltage Range @ $I_{ZT} = 5.0mA$ (Note 6) $V_{BR}$ (Volts)			Maximum Zener Impedance $f = 1kHz$ $Z_{ZK}$ @ $I_{ZK} = 0.5mA$	Typical Total Capacitance $f = 1MHz$ $C_T$ @ $V_R = 5V$	Maximum Reverse Current (Note 6) $I_R$ @ $V_R = 2.5V$
	Min	Typ	Max	Min	Typ	Max	$\Omega$	pF	$\mu A$
T5V0LCS5	3.00	—	—	5.45	5.60	5.75	150	8	1.0

Notes: 5. Mounted on FR-4 PC Board with recommended pad layout which can be found on our website at <http://www.diodes.com/package-outlines.html>.  
6. Short duration pulse test used to minimize self-heating effect.

NEW PRODUCT

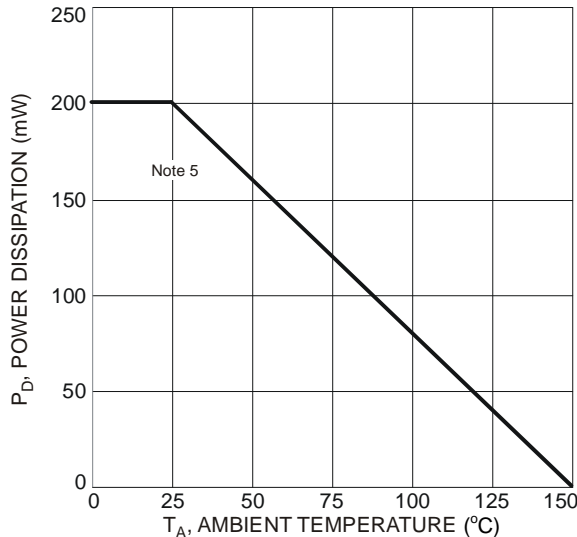


Figure 1 Power Derating Curve

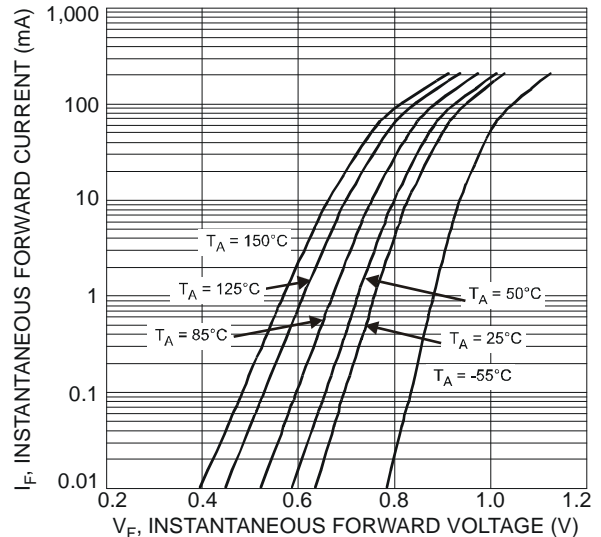


Figure 2 Typical Forward Characteristics

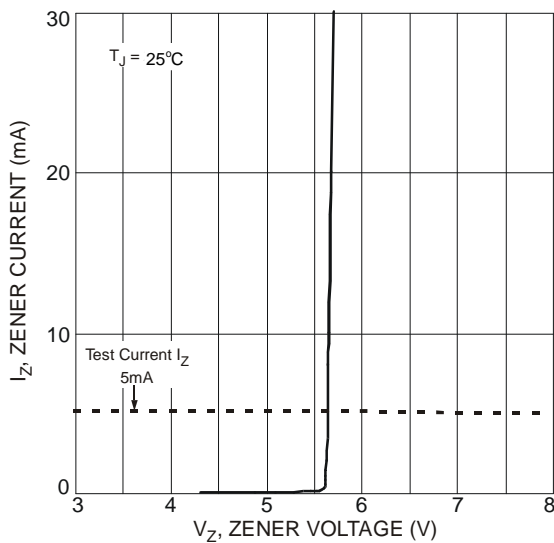


Figure 3 Typical Zener Breakdown Characteristics

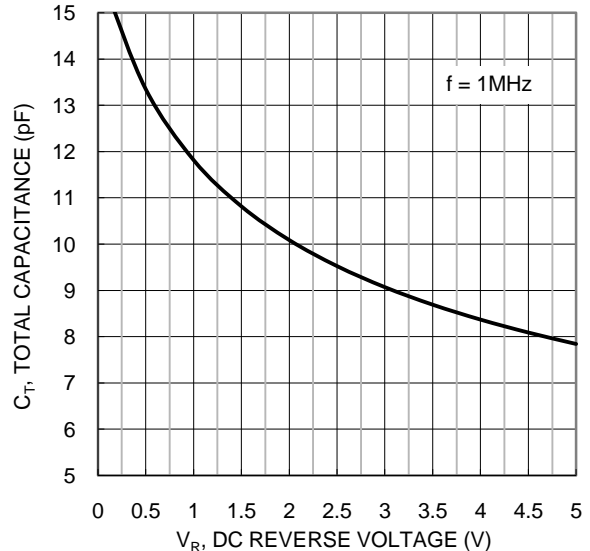
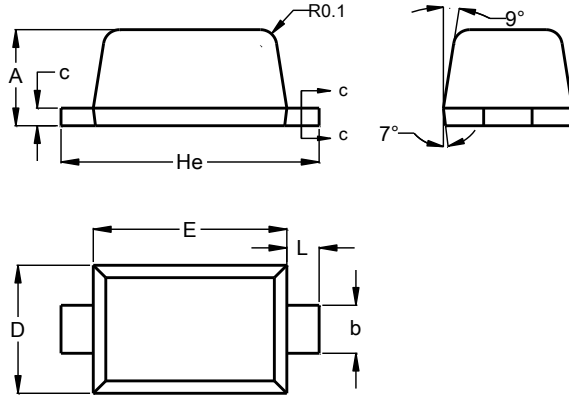


Figure 4 Total Capacitance vs. Reverse Voltage

**Package Outline Dimensions**

Please see <http://www.diodes.com/package-outlines.html> for the latest version.

**SOD523**



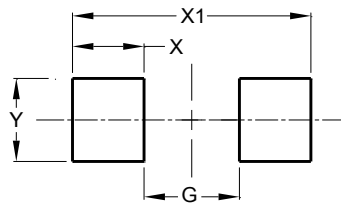
SOD523		
Dim	Min	Max
A	0.55	0.65
b	0.26	0.34
c	0.11	0.17
D	0.75	0.85
E	1.15	1.25
He	1.55	1.65
L	0.10	0.30
All Dimensions in mm		

NEW PRODUCT

**Suggested Pad Layout**

Please see <http://www.diodes.com/package-outlines.html> for the latest version.

**SOD523**



Dimensions	Value (in mm)
G	0.80
X	0.60
X1	2.00
Y	0.70

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