

Product Summary

V _{BR} (Min)	I _{PP} (Max)	C _T (Max)
26.0V	8A	80pF

Description

This new generation TVS is designed to protect sensitive electronics from the damage due to ESD. The combination of small size and high ESD surge capability makes it ideal for use in portable applications such as cellular phones, digital cameras, and MP3 players.

Applications

- Cellular handsets
- Portable electronics
- Computers and peripherals

Features

- Provides ESD Protection per IEC 61000-4-2 Standard: Air $\pm 30\text{kV}$, Contact $\pm 30\text{kV}$
- Low Channel Input Capacitance
- **Totally Lead-Free & Fully RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. "Green" Device (Note 3)**
- An automotive-compliant part is available under separate datasheet ([SD24Q](#))

Mechanical Data

- Package: SOD323
- Package Material: Molded Plastic, "Green" Molding Compound. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Matte Tin Finish Annealed over Alloy 42 Leadframe (Lead Free Plating). Solderable per MIL-STD-202, Method 208 (E3)
- Weight: 0.004 grams (Approximate)

SOD323



Top View



Device Schematic

Ordering Information (Note 4)

Orderable Part Number	Package	Marking	Reel Size (inches)	Tape Width (mm)	Packing	
					Qty.	Carrier
SD24-7	SOD323	PA4	7	8	3,000	Tape & Reel

Notes:

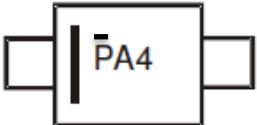
1. No purposely added lead. Fully EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3) compliant.
2. See <https://www.diodes.com/quality/lead-free/> for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
3. Halogen- and 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 <https://www.diodes.com/design/support/packaging/diodes-packaging/>.

Marking Information

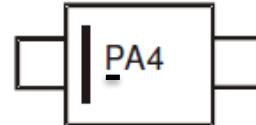
Option A: Made in Shanghai



Option B: Made in Chengdu



Option C: Made in Eris

PA4 = Product Type Marking Code
Bar Denotes Pin 1

Maximum Ratings (@ $T_A = +25^\circ\text{C}$, unless otherwise specified.)

Characteristic	Symbol	Value	Unit	Conditions
Peak Pulse Power	P_{PP}	350	W	8/20 μs , per Figure 3
Peak Pulse Current	I_{PP}	8	A	8/20 μs , per Figure 3
ESD Protection – Contact Discharge	$V_{ESD_CONTACT}$	± 30	kV	IEC 61000-4-2 Standard
ESD Protection – Air Discharge	V_{ESD_AIR}	± 30	kV	IEC 61000-4-2 Standard

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Package Power Dissipation (Note 5)	P_D	250	mW
Thermal Resistance, Junction to Ambient (Note 5)	$R_{\theta JA}$	500	°C/W
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +150	°C

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

Characteristic	Symbol	Min	Typ	Max	Unit	Test Conditions
Reverse Standoff Voltage	V_{RWM}	—	—	24.0	V	—
Channel Leakage Current (Note 6)	I_{RM}	—	—	1	μA	$V_R = V_{RWM}$
Breakdown Voltage	V_{BR}	26.0	—	—	V	$I_R = 1\text{mA}$
Clamping Voltage	V_{CL}	—	—	34.0	V	$I_{PP} = 1\text{A}, t_p = 8/20\mu\text{s}$
		—	—	40.0		$I_{PP} = 5\text{A}, t_p = 8/20\mu\text{s}$
		—	—	44.0		$I_{PP} = 8\text{A}, t_p = 8/20\mu\text{s}$
Channel Input Capacitance	C_T	—	—	80	pF	$V_R = 0\text{V}, f = 1\text{MHz}$

Notes: 5. Device mounted on FR-4 PCB pad layout (2oz copper) as shown on Diodes Incorporated's suggested 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.

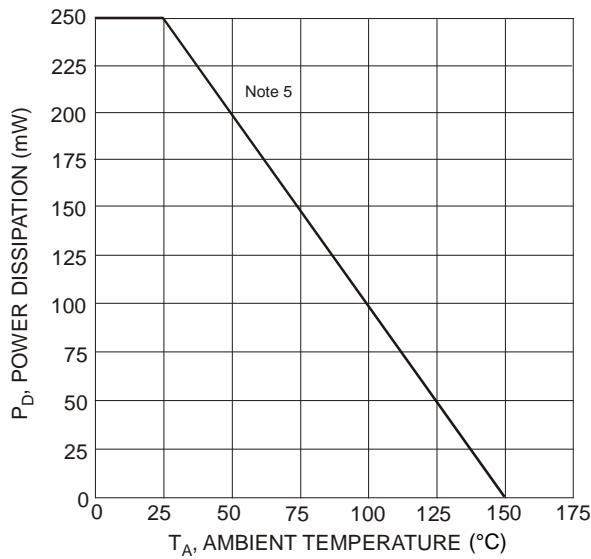


Figure 1 Power Derating Curve

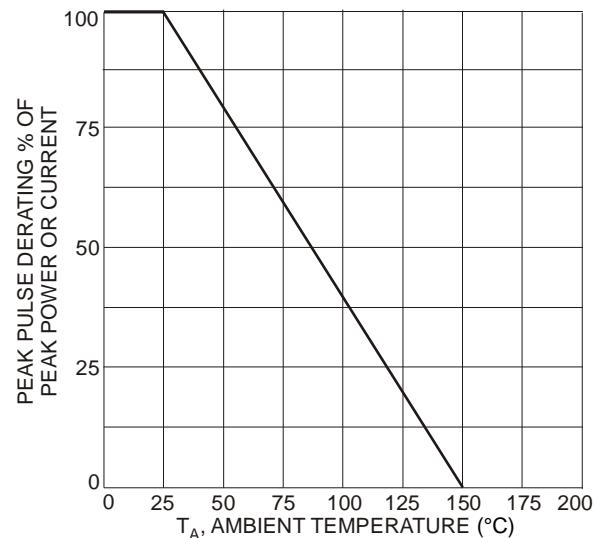
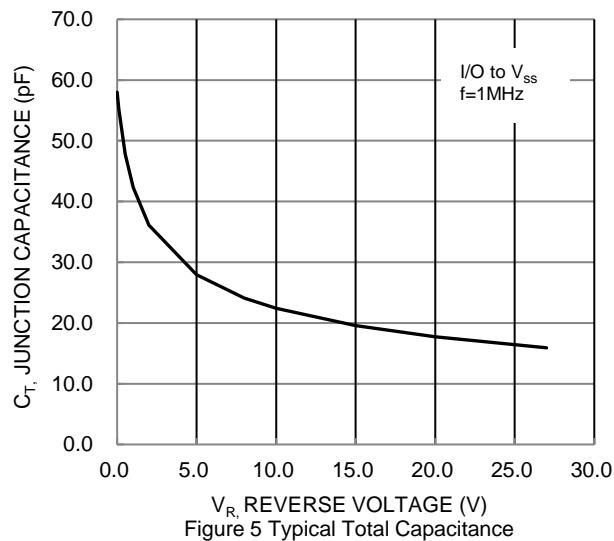
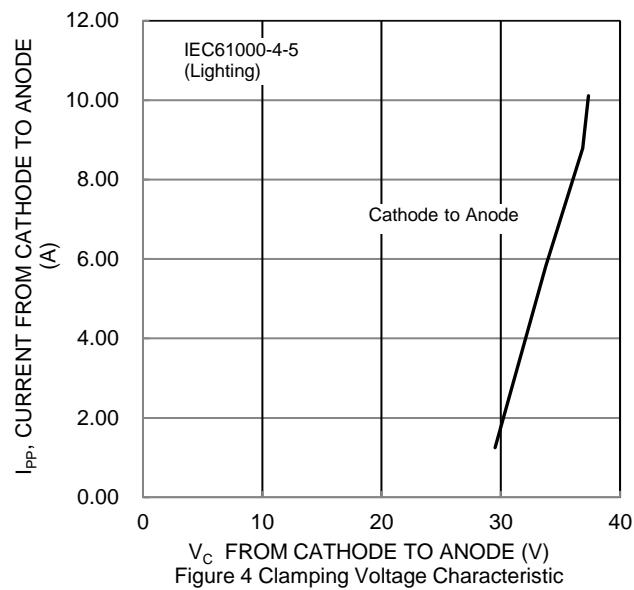
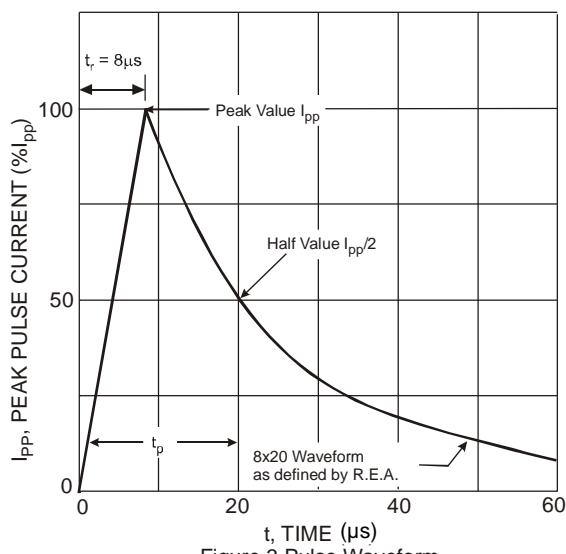


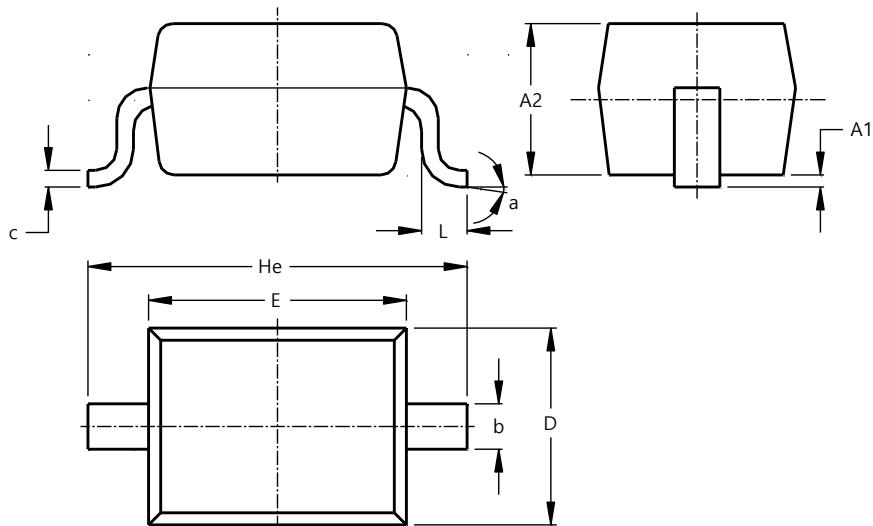
Figure 2 Pulse Derating Curve



Package Outline Dimensions

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

SOD323



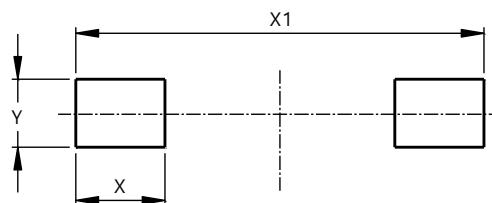
SOD323			
Dim	Min	Max	Typ
A1	--	0.10	0.05
A2	1.00	1.10	1.05
b	0.25	0.35	0.30
c	0.10	0.15	0.11
D	1.20	1.40	1.30
E	1.60	1.80	1.70
He	2.30	2.70	2.50
L	0.20	0.40	0.30
a	0°	8°	--

All Dimensions in mm

Suggested Pad Layout

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

SOD323



Dimensions	Value (in mm)
X	0.590
X1	2.700
Y	0.450

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