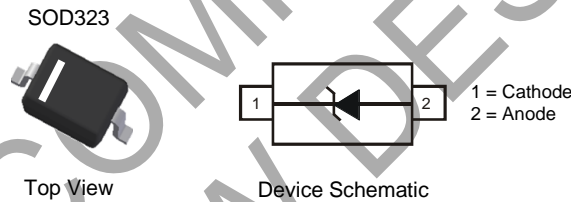


Features

- 350 Watts Peak Pulse Power (tp = 8 x 20µs)
- IEC 61000-4-2 (ESD): Air – 15kV, Contact – 8kV
- IEC 61000-4-2 (ESD), HBM – 16kV
- IEC61000-4-4 (EFT): Level 4, 40A
- IEC61000-4-5 (Lightning): 24A
- Unidirectional Configuration
- **Totally Lead-Free & Fully RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. “Green” Device (Note 3)**
- **For automotive applications requiring specific change control (i.e.: parts qualified to AEC-Q100/101/104/200, PPAP capable, and manufactured in IATF 16949 certified facilities), please refer to the related automotive grade (Q-suffix) part. A listing can be found at <https://www.diodes.com/products/automotive/automotive-products/>.**
- This part is qualified to JEDEC standards (as references in AEC-Q) for High Reliability. <https://www.diodes.com/quality/product-definitions/>

Mechanical Data

- Package: SOD323
- Package Material: Molded Plastic, “Green” Molding Compound, Note 3. 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
- Polarity: Cathode Band
- Weight: 0.005 grams (Approximate)

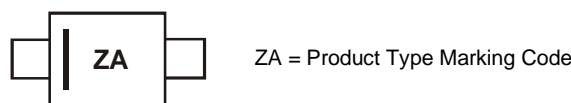


Ordering Information (Note 4)

Orderable Part Number	Package	Packing	
		Qty.	Carrier
SD05-7	SOD323	3000	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



Thermal Characteristics

Characteristic	Symbol	Value	Unit
Peak Pulse Power (tp = 8 x 20µs) (Note 5) TA = +25°C	Ppk	350	W
Thermal Resistance, Junction to Ambient (Note 5) TA = +25°C	RθJA	625	°C/W
Operating and Storage Temperature Range	TJ, TSTG	-55 to +150	°C

Electrical Characteristics (@TA = +25°C, unless otherwise specified.)

Reverse Standoff Voltage	Breakdown Voltage VBR @ Ir		Test Current Ir (mA)	Max Reverse Leakage @ VRWM (Note 6) IR (µA)	Max Clamping Voltage @ IPP = 5A (Note 7) Vc (V)	Max Clamping Voltage Vc @ IPP (Note 7)		Total Max Capacitance CT VR = 0 f = 1MHz (pF)
	Min (V)	Max (V)				Vc (V)	IPP (A)	
VRWM (V)	Min (V)	Max (V)	Ir (mA)	IR (µA)	Vc (V)	Vc (V)	IPP (A)	(pF)
5	6.2	7.3	1.0	10	9.8	14.5	24	350

- Notes:
- Device mounted on FR-4 PC board with suggested pad layout, which can be found on our website at <https://www.diodes.com/design/support/packaging/diodes-packaging/>. Measured across pin 1 and pin 2.
 - Short duration pulse test used to minimize self-heating effect.
 - Clamping voltage value is based on an 8 x 20µs peak pulse current (Ipp) waveform.

NOT RECOMMENDED FOR NEW DESIGN

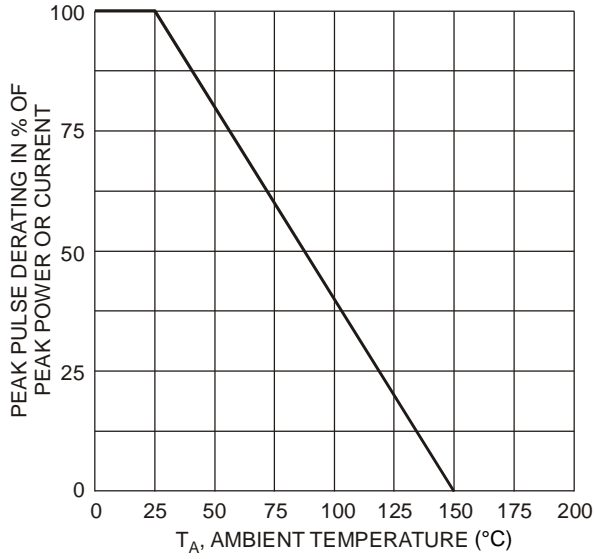


Fig. 1 Pulse Derating Curve

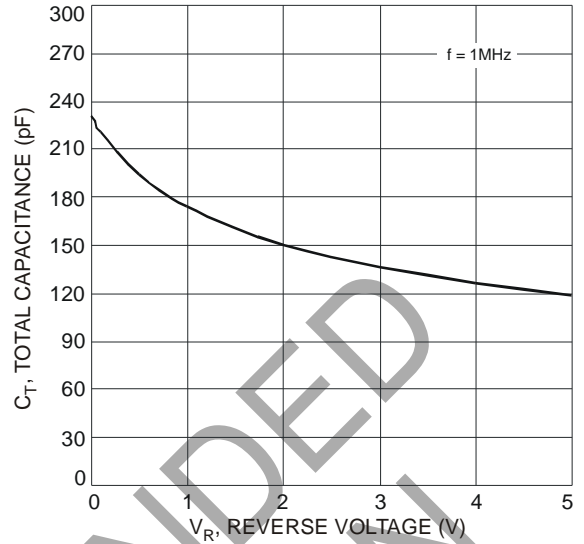


Fig. 2 Typical Total Capacitance vs. Reverse Voltage

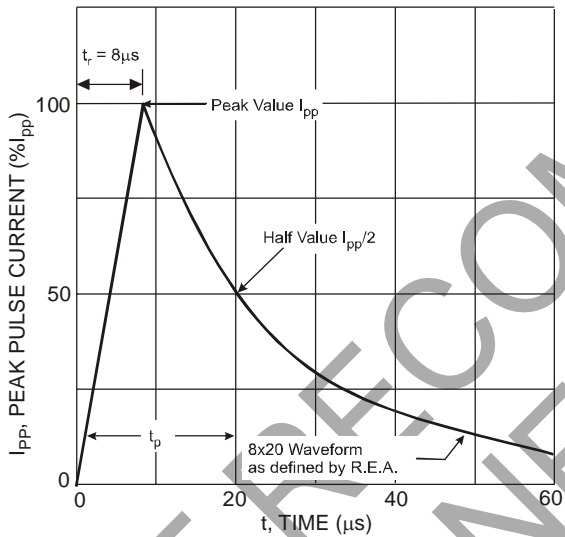


Fig. 3 Pulse Waveform

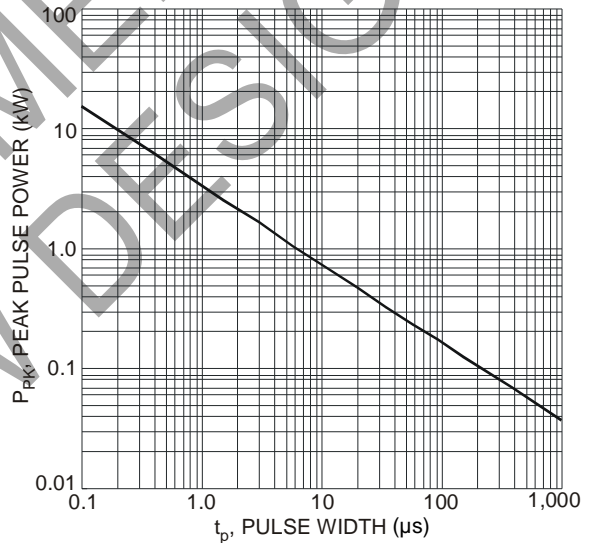


Fig. 4 Pulse Rating Curve

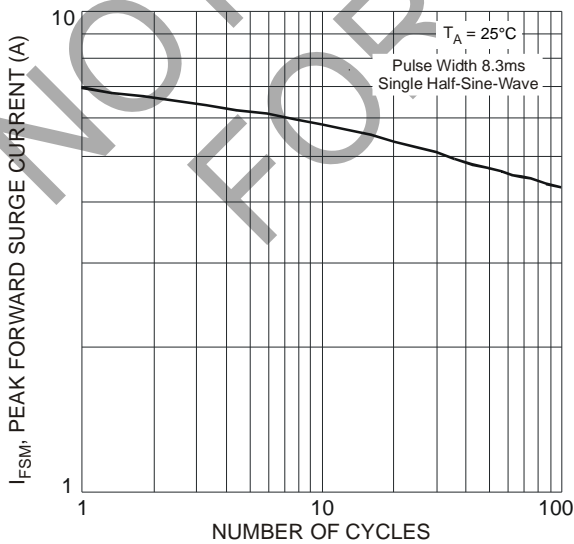
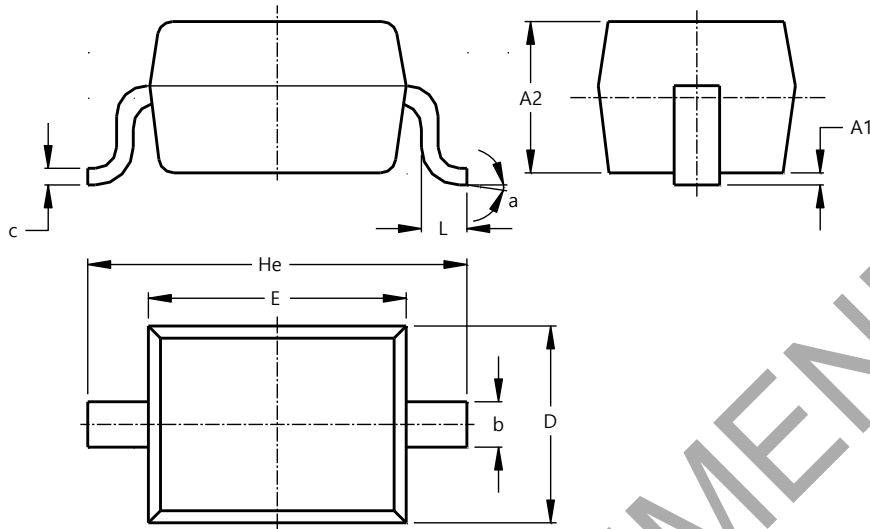


Fig. 5 Maximum Non-Repetitive Surge Current

Package Outline Dimensions

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

SOD323

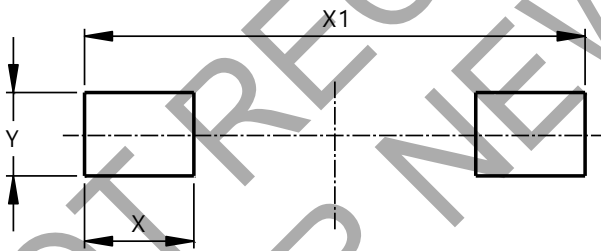


SOD323			
Dim	Min	Max	Typ
A1	--	0.10	0.05
A2	1.00	1.10	1.05
b	0.25	0.35	0.30
c	0.10	0.15	0.11
D	1.20	1.40	1.30
E	1.60	1.80	1.70
He	2.30	2.70	2.50
L	0.20	0.40	0.30
a	0°	8°	--
All Dimensions in mm			

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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