

Features

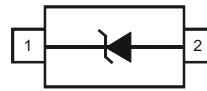
- 350 Watts Peak Pulse Power ($t_p = 8 \times 20 \mu s$)
- IEC 61000-4-2 (ESD): Air – 15kV, Contact – 8kV
- IEC 61000-4-2 (ESD), HBM – 30kV
- Unidirectional Configuration
- **Lead Free/RoHS Compliant (Note 3)**
- **“Green” Device (Note 4)**
- **Qualified to AEC-Q101 Standards for High Reliability**

Mechanical Data

- Case: SOD-323
- Case 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
- Ordering Information: See Page 3
- Marking Information: See Page 3
- Weight: 0.0089 grams (approximate)



Top View



Device Schematic

1 = Cathode
2 = Anode

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Peak Pulse Power ($t_p = 8 \times 20 \mu s$) (Note 6) $T_A = 25^\circ C$	P_{pk}	350	W
Thermal Resistance, Junction to Ambient (Note 6) $T_A = 25^\circ C$	$R_{\theta JA}$	625	$^\circ C/W$
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150	$^\circ C$

Electrical Characteristics @ $T_A = 25^\circ C$ unless otherwise specified (Note 7)

Reverse Standoff Voltage	Breakdown Voltage $V_{BR} @ I_T$		Test Current I_T (mA)	Max. Reverse Leakage @ V_{RWM} (Note 5) I_R (μA)	Max. Clamping Voltage @ $I_{PP} = 5A$ (Note 2) V_C (V)	Max. Clamping Voltage $V_C @ I_{PP}$ (Note 2)		Total Max Capacitance C_T (Note 1) (pF)	
	Min (V)	Max (V)				V_C (V)	I_{PP} (A)		
V_{RWM} (V)	5	6.2	7.3	1.0	10	9.8	14.5	24	350

- Notes:
1. $V_R = 0V, f = 1MHz$.
 2. Clamping voltage value is based on an $8 \times 20 \mu s$ peak pulse current (I_{pp}) waveform.
 3. No purposefully added lead.
 4. Diodes Inc.'s “Green” policy can be found on our website at http://www.diodes.com/products/lead_free/index.php.
 5. Short duration pulse test used to minimize self-heating effect.
 6. Device mounted on FR-4 PC board with suggested pad layout, which can be found on our website at <http://www.diodes.com/datasheets/ap02001.pdf>. Measured across pin 1 and pin 2.

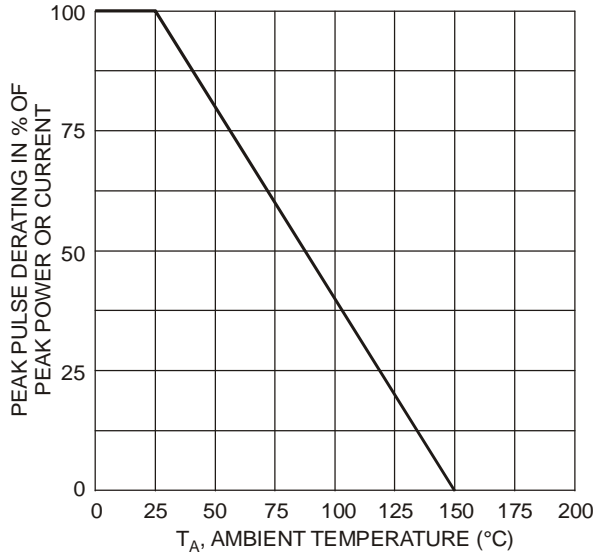


Fig. 1 Pulse Derating Curve

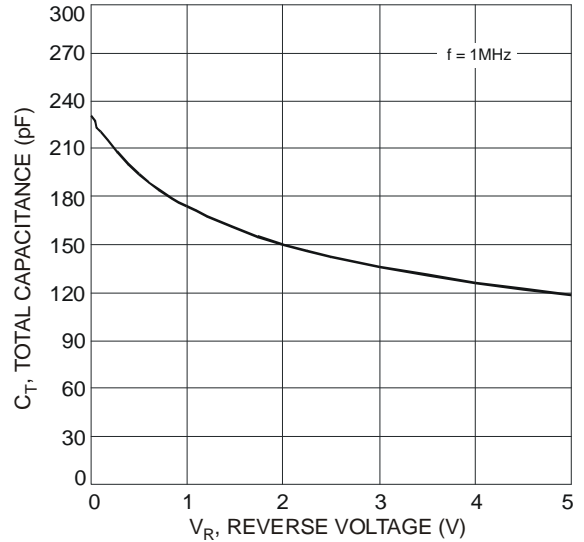


Fig. 2 Typical Total Capacitance vs. Reverse Voltage

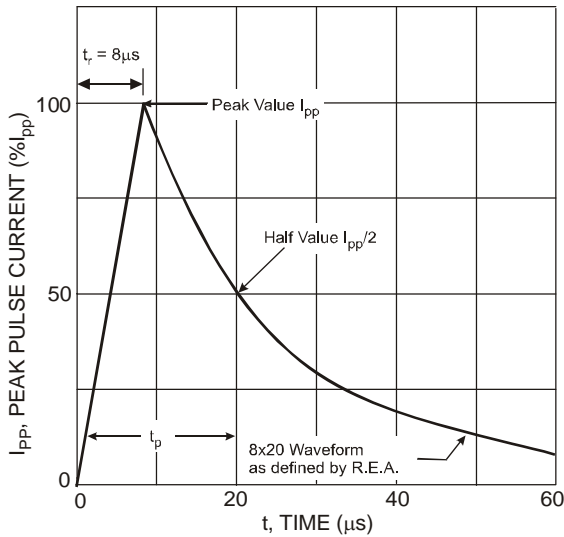


Fig. 3 Pulse Waveform

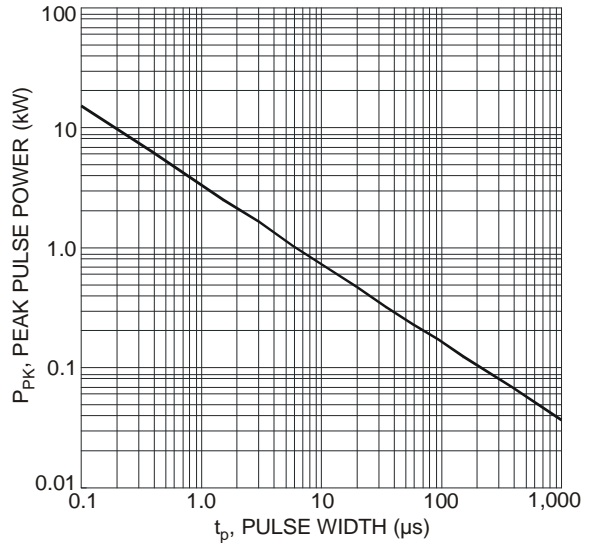


Fig. 4 Pulse Rating Curve

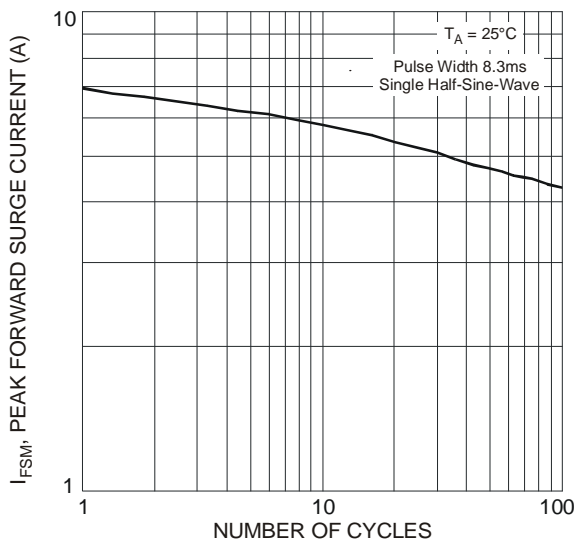


Fig. 5 Maximum Non-Repetitive Surge Current

Ordering Information (Note 8)

Part Number	Case	Packaging
SD05-7	SOD-323	3000/Tape & Reel

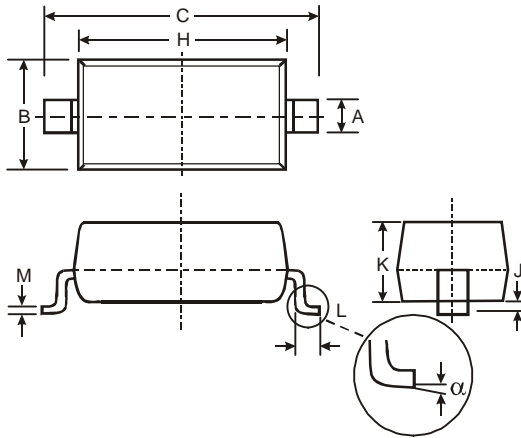
Notes: 8. For packaging details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.

Marking Information



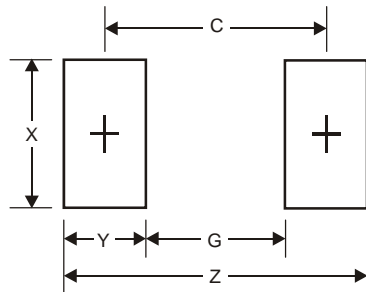
ZA = Product type marking code

Package Outline Dimensions



SOD-323		
Dim	Min	Max
A	0.25	0.35
B	1.20	1.40
C	2.30	2.70
H	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
X	0.65
Y	1.35
C	2.40

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