



### Features

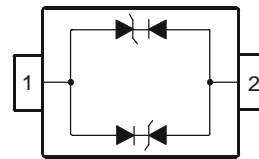
- 350 Watts Peak Pulse Power ( $t_p = 8 \times 20 \mu s$ )
- 61000-4-2 (ESD): Air – 15kV, Contact – 8kV
- 61000-4-5 (Surge): 24A,  $8/20 \mu s$  – Level 2(Line-Gnd) & Level 3 (Line-Line)
- Low Capacitance,  $t_{yp} = 3 \text{ pF}$
- Bi-directional Configuration
- Lead Free/RoHS Compliant (Note 3)
- “Green” Device (Note 4)
- Qualified to AEC-Q101 Standards for High Reliability

### Mechanical Data

- Case: SOD-323
- Case Material: Molded Plastic, “Green” Molding Compound, Note 4. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Solderable per MIL-STD-202, Method 208
- Lead Free Plating (Matte Tin Finish annealed over Alloy 42 leadframe).
- Polarity: Cathode Band
- Ordering Information: See Page 2
- Marking Information: See Page 2
- Weight: 0.004 grams (approximate)



Top View



Device Schematic

### Thermal Characteristics, Total Device

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) $T_A = 25^\circ C$	$R_{\theta JA}$	500	$^\circ C/W$
Operating and Storage Temperature Range	$T_J, T_{STG}$	-55 to +150	$^\circ C$

### Electrical Characteristics @ $T_A = 25^\circ C$ unless otherwise specified

Reverse Standoff Voltage	Breakdown Voltage $V_{BR} @ I_T$		Test Current $I_T$ (mA)	Max. Reverse Leakage @ $V_{RWM}$ (Note 5) $I_R$ ( $\mu A$ )	Max. Clamping Voltage @ $I_{PP} = 1 A$ (Note 2) $V_C$ (V)	Max. Clamping Voltage $V_C @ I_{PP}$ (Note 2)		Typical Total Capacitance $C_T$ (Note 1) (pF)
	Min (V)	Max (V)				$V_C$ (V)	$I_{PP}$ (A)	
$V_{RWM}$ (V)	3.3	4.0	1.0	5	7	19	20	3

- 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](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>.

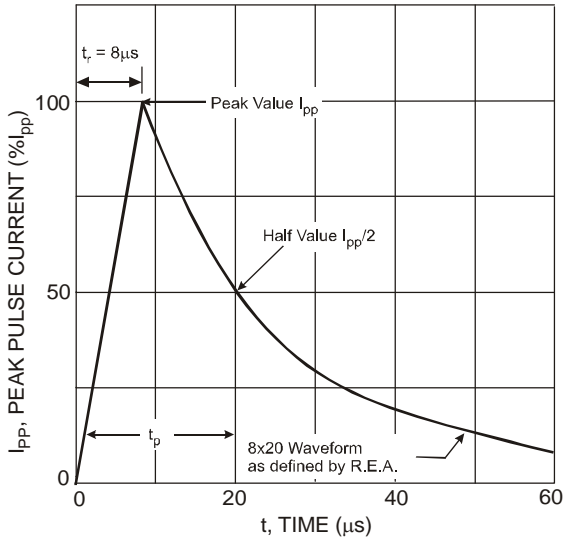


Fig. 1 Pulse Waveform

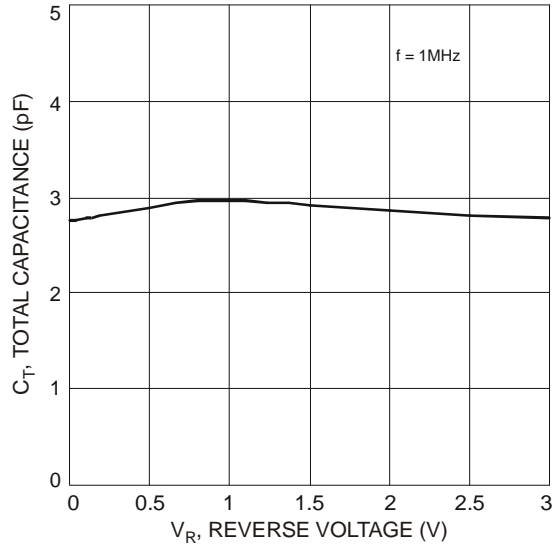


Fig. 2 Typical Total Capacitance vs. Reverse Voltage

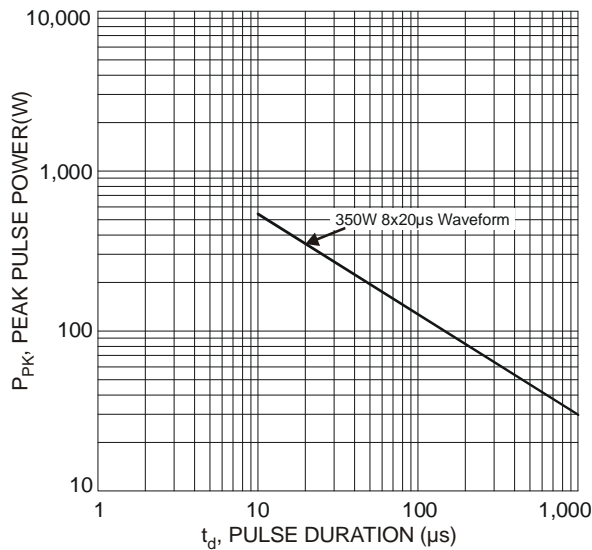


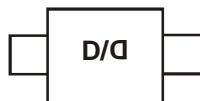
Fig. 3 Max. Peak Pulse Power vs. Power Duration

**Ordering Information** (Note 7)

Part Number	Case	Packaging
T3V3BLCS3-7	SOD-323	3000/Tape & Reel

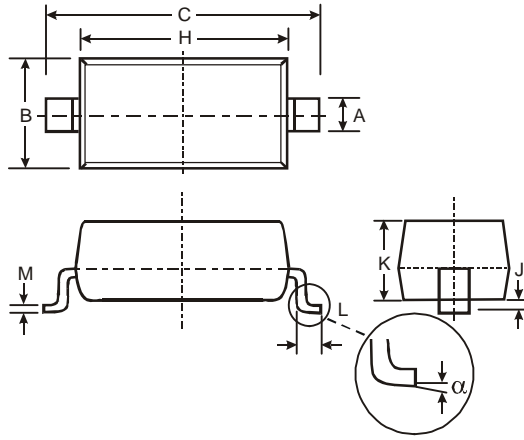
Notes: 7. For packaging details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.

**Marking Information**



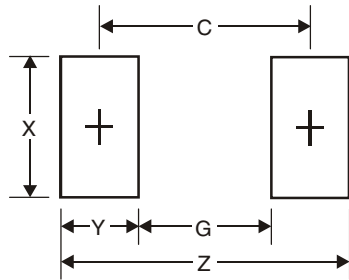
D/D = Product Type Marking Code

**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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