

Features

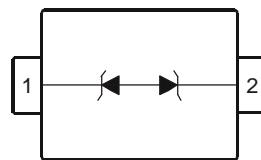
- Provides ESD Protection per IEC 61000-4-2 Standard:
Air – $\pm 30\text{kV}$, Contact – $\pm 30\text{kV}$
- 1 Channel of ESD Protection
- Low Channel Input Capacitance
- Typically Used in Cellular Handsets, Portable Electronics, Communication Systems, Computers and Peripherals
- Lead Free/RoHS Compliant (Note 1)**
- “Green” Device (Note 2)**

Mechanical Data

- Case: SOD323
- Case 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
- Weight: 0.004 grams (approximate)

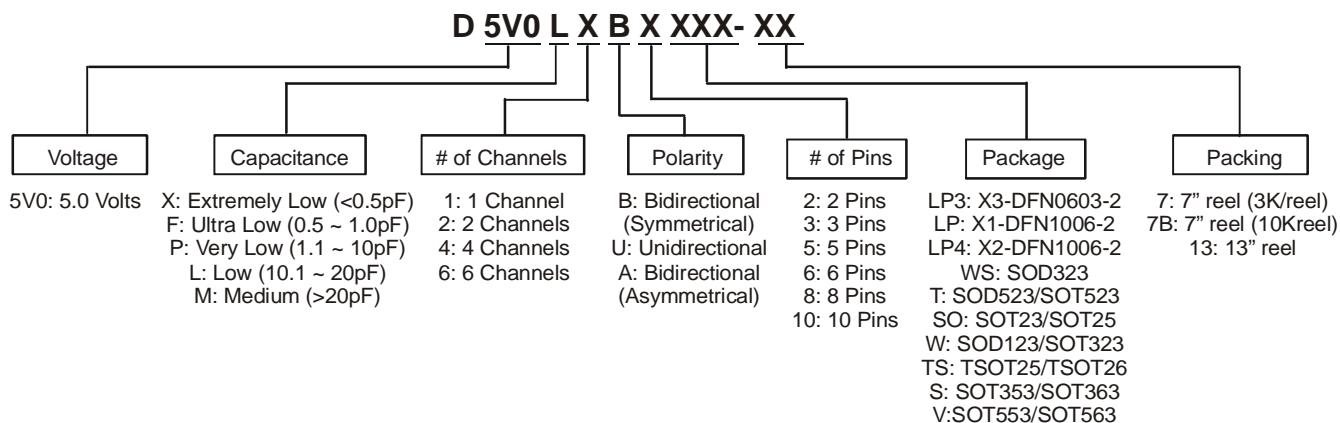


Top View



Device Schematic

Ordering Information (Note 3)



Part Number	Case	Packaging
D5V0L1B2WS-7	SOD323	3000/Tape & Reel

Notes:

- EU Directive 2002/95/EC (RoHS) & 2011/65/EU (RoHS 2) compliant. No purposely added lead. Halogen and Antimony free.
- Diodes Inc.’s “Green” policy can be found on our website at <http://www.diodes.com>.
- For packaging details, go to our website at <http://www.diodes.com>.

Marking Information



NN = Product Type Marking Code

Maximum Ratings @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	Value	Unit	Conditions
Peak Pulse Power Dissipation	P_{PP}	84	W	8/20 μs , Per Fig. 1
Peak Pulse Current	I_{PP}	6	A	8/20 μs , Per Fig. 1
ESD Protection – Contact Discharge	$V_{ESD_Contact}$	± 30	kV	Standard IEC 61000-4-2
ESD Protection – Air Discharge	V_{ESD_Air}	± 30	kV	Standard IEC 61000-4-2

Thermal Characteristics

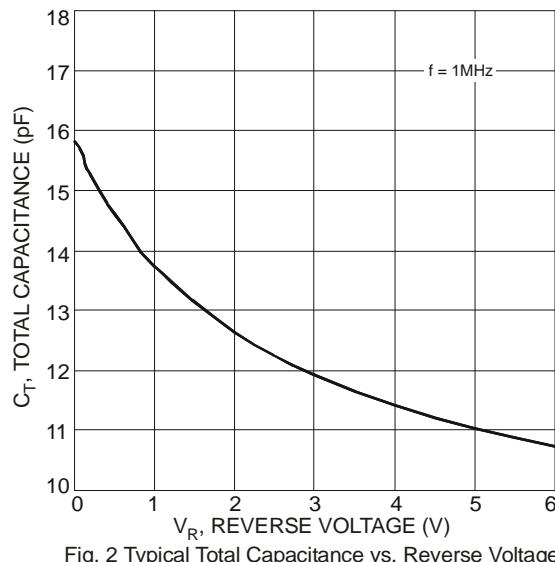
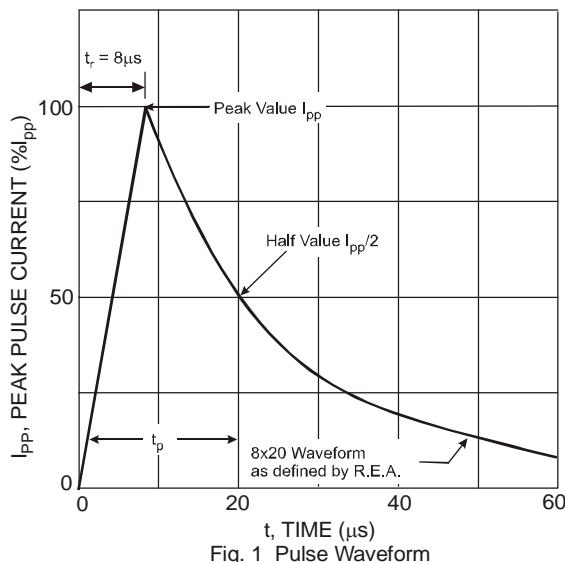
Characteristic	Symbol	Value	Unit
Package Power Dissipation (Note 4)	P_D	200	mW
Thermal Resistance, Junction to Ambient (Note 4)	$R_{\theta JA}$	625	$^\circ\text{C}/\text{W}$
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +150	$^\circ\text{C}$

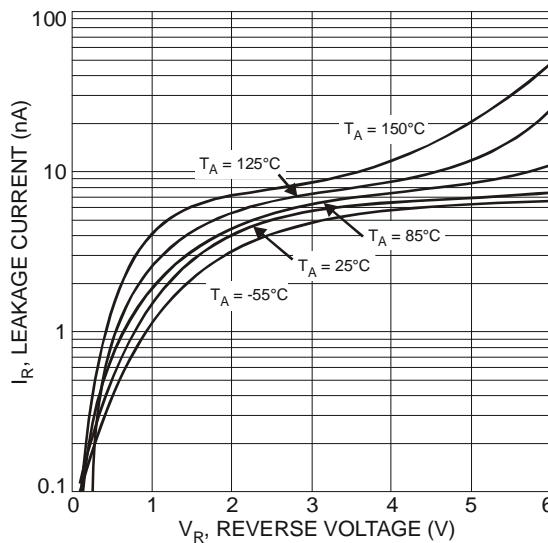
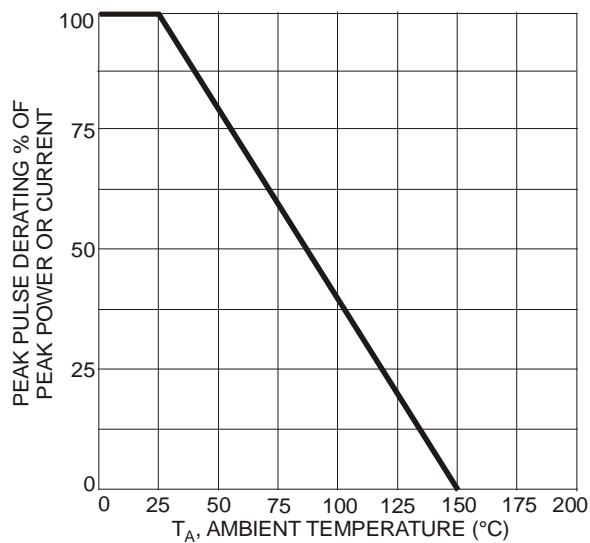
Electrical Characteristics @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Unit	Test Conditions
Reverse Standoff Voltage	V_{RWM}	-	-	5	V	-
Channel Leakage Current (Note 5)	I_{RM}	-	10	100	nA	$V_{RWM} = 5\text{V}$
Clamping Voltage, Positive Transients	V_{CL}	-	7.0 8.7 10.5 11.5	9.0 10.7 12.0 14.0	V	$I_{PP} = 1\text{A}, t_p = 8/20\mu\text{s}$ $I_{PP} = 3\text{A}, t_p = 8/20\mu\text{s}$ $I_{PP} = 5\text{A}, t_p = 8/20\mu\text{s}$ $I_{PP} = 6\text{A}, t_p = 8/20\mu\text{s}$
Breakdown Voltage	V_{BR}	6	7	8	V	$I_R = 1\text{mA}$
Differential Resistance	R_{DIF}	-	0.2	-	Ω	$I_R = 1\text{A}, t_p = 8/20\mu\text{s}$
Channel Input Capacitance	C_T	-	15	20	pF	$V_R = 0\text{V}, f = 1\text{MHz}$

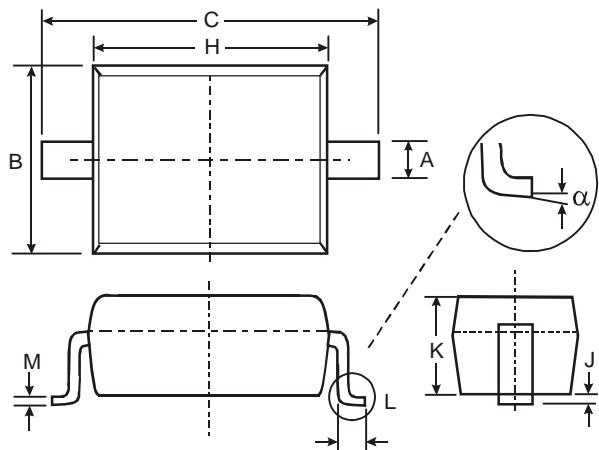
Notes:

4. Device mounted on FR-4 PCB pad layout (2oz copper) as shown on Diodes, Inc. suggested pad layout AP02001, which can be found on our website at <http://www.diodes.com>.
5. Short duration pulse test used to minimize self-heating effect.





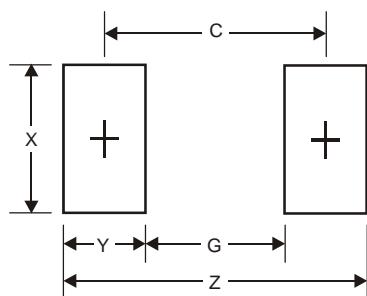
Package Outline Dimensions



SOD323		
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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