



2 CHANNEL LOW CAPACITANCE BI-DIRECTIONAL TVS ARRAY

Features

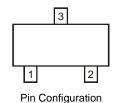
- Provides ESD Protection per IEC 61000-4-2 Standard: Air – ±30kV, Contact – ±30kV
- 2 Channels of Bi-Directional ESD Protection
- Low Channel Input Capacitance
- Typically Used at Portable Electronics, Cellular Handsets and Communication Systems
- Lead Free/RoHS Compliant (Note 1)
- "Green" Device (Note 2)

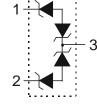
Mechanical Data

- Case: SOT323
- 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: 0.006 grams (approximate)





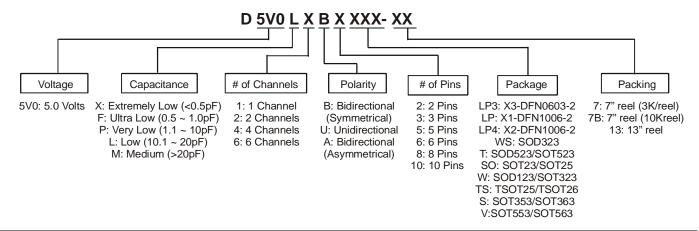




Top View

Device Schematic

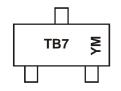
Ordering Information (Note 3)



Part Number	Case	Packaging
D5V0L2B3W-7	SOT323	3000/Tape & Reel

- Notes: 1. EU Directive 2002/95/EC (RoHS) & 2011/65/EU (RoHS 2) compliant. No purposely added lead. Halogen and Antimony free.
 - 2. Diodes Inc.'s "Green" policy can be found on our website at http://www.diodes.com.
 - 3. For packaging details, go to our website at http://www.diodes.com.

Marking Information



TB7 = Product Type Marking Code YM = Date Code Marking Y = Year (ex: Z = 2012) M = Month (ex: 9 = September)

Date Code Key

Year	201	1	2012		2013	20	14	2015		2016	2	2017
Code	Υ		Z		Α	E	3	С		D		Е
Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Code	1	2	3	4	5	6	7	8	9	0	N	D



Characteristic	Symbol	Value	Unit	Conditions
Peak Pulse Power Dissipation	P _{PP}	84	W	8/20μs, Per Fig. 1
Peak Pulse Current	I _{PP}	6	Α	8/20μs, 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

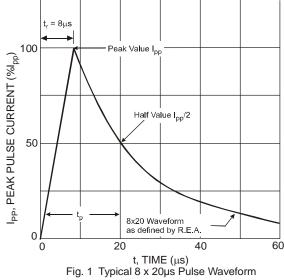
Characteristic	Symbol	Value	Unit
Package Power Dissipation (Note 5)	P_{D}	200	mW
Thermal Resistance, Junction to Ambient (Note 5)	$R_{ hetaJA}$	625	°C/W
Operating Junction Temperature Range	TJ	-65 to +150	°C
Storage Temperature Range	T _{STG}	-65 to +150	°C

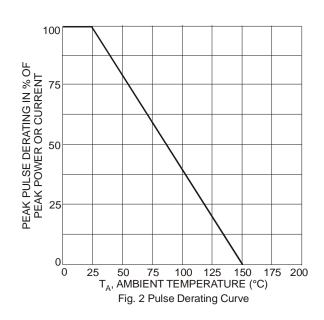
Electrical Characteristics @T_A = 25°C unless otherwise specified

Characteristic	Symbol	Min	Тур	Max	Unit	Test Conditions
Reverse Working Voltage	V_{RWM}	-	-	5.0	V	-
Breakdown Voltage	V_{BR}	6	7	8	V	$I_R = 1.0 \text{mA}$
Reverse Leakage Current (Note 6)	I _R	-	10	100	nA	$V_{RWM} = 5V$
		-	7.0	9.0	V	$I_{PP} = 1A, t_p = 8/20 \mu s$
Clamping Voltage (Note 4)	VCL	=	8.7	10.7	V	$I_{PP} = 3A, t_p = 8/20 \mu s$
	VCL	-	10.5	12.0	V	$I_{PP} = 5A$, $t_p = 8/20 \mu s$
		-	11.5	14.0	V	$I_{PP} = 6A, t_p = 8/20 \mu s$
Differential Resistance	R _{DIF}	-	0.2	-	Ω	$I_R = 1.0A$, $t_p = 8/20 \mu s$
Channel Input Capacitance	C _T	1	15	20	pF	V _{IN} = 0 V, f = 1MHz (Channel to Pin 3)

Notes:

- 4. Measured from pin 1 to 3 or pin 2 to 3; Non-repetitive current pulse per Fig. 1.
 5. 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
- 6. Short duration pulse test used to minimize self-heating effect.







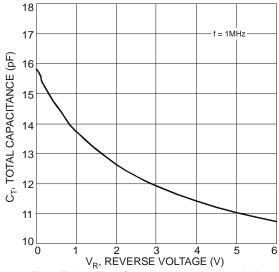
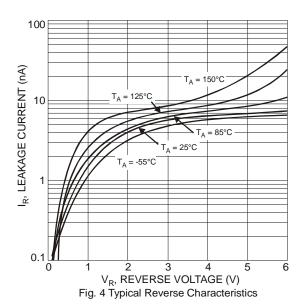
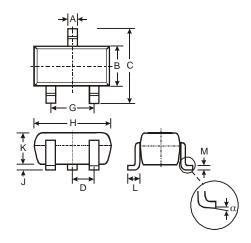


Fig. 3 Typical Total Capacitance vs. Reverse Voltage

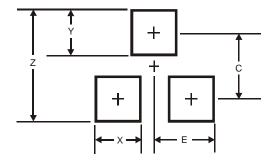


Package Outline Dimensions



SOT323						
Dim	Min	Max	Тур			
Α	0.25	0.40	0.30			
В	1.15	1.35	1.30			
С	2.00	2.20	2.10			
D	-	-	0.65			
G	1.20	1.40	1.30			
Η	1.80	2.20	2.15			
7	0.0	0.10	0.05			
K	0.90	1.00	1.00			
٦	0.30					
M	0.10	0.18	0.11			
α	0°	8°	-			
All Dimensions in mm						

Suggested Pad Layout



Dimensions	value (in mm)
Z	2.8
Х	0.7
Υ	0.9
С	1.9
E	1.0



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