

Lead-free Green D5V0L4B5V 4 CHANNEL LOW CAPACITANCE BI-DIRECTIONAL TVS ARRAY

Features

- Provides ESD Protection per IEC 61000-4-2 Standard: Air – ±30kV, Contact – ±30kV
- 4 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)

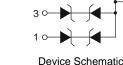
Mechanical Data

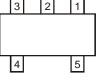
Case: SOT553

-0 2

- 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 Copper leadframe (Lead Free Plating). Solderable per MIL-STD-202, Method 208
- Weight: 0.002 grams (approximate)

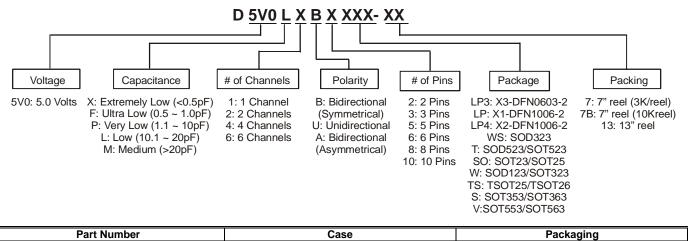






Top View Pin Configuration

Ordering Information (Note 3)



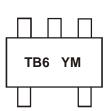
D5V0L4B5V-7	SOT553	3000/Tape & Reel

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

Notes:



TB6 = 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		2014			2016		2017	
Code	Y		Z		А	l	3	С		D		E	
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	



Maximum Ratings @T_A = 25°C unless otherwise specified

Characteristic	Symbol	Value	Unit	Conditions
Peak Pulse Power Dissipation	PPP	84	W	8/20μs, Per Fig. 2
Peak Pulse Current	IPP	6	A	8/20μs, Per Fig. 2
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

Notes:

Characteristic	Symbol	Value	Unit
Package Power Dissipation (Note 5)	PD	380	mW
Thermal Resistance, Junction to Ambient (Note 5)	$R_{ ext{ heta}JA}$	327	°C/W
Operating Junction Temperature Range	TJ	-65 to +150	°C
Storage Temperature Range	T _{STG}	-65 to +150	°C

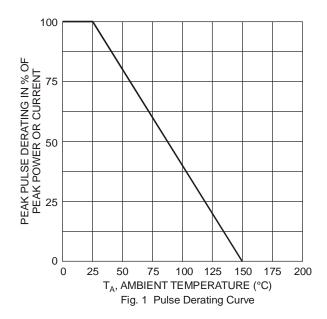
Electrical Characteristics @T_A = 25°C unless otherwise specified

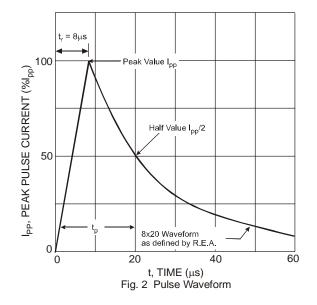
Characteristic	Symbol	Min	Тур	Max	Unit	Test Conditions	
Reverse Working Voltage	V _{RWM}	-	-	5.0	V	-	
Breakdown Voltage	V _{BR}	6	7	8	V	I _R = 1.0mA	
Reverse Leakage Current (Note 6)	I _R	-	10	100	nA	$V_{RWM} = 5V$	
Clamping Voltage (Note 4)	Mai	-	7.0	9.0	V	$I_{PP} = 1A, t_p = 8/20\mu S$	
		-	8.7	10.7	V	$I_{PP} = 3A, t_p = 8/20\mu S$	
	VCL	-	10.5	12.0	V	I _{PP} = 5A, t _p = 8/20μS	
		-	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	CT	-	15	20	pF	$V_{IN} = 0V$, f = 1MHz (Channel to Pin 2)	

4. Measured from channel to pin 2; Non-repetitive current pulse per Fig. 2.

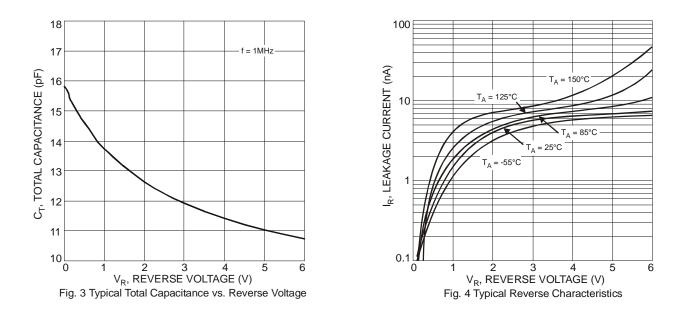
5. Device mounted on FR-4 PCB pad layout (2oz copper) as shown on Diodes, Inc. suggested pad layout AP02001, which can be found on our website at http://www.diodes.com.

6. Short duration pulse test used to minimize self-heating effect.

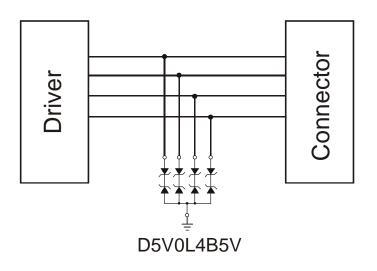








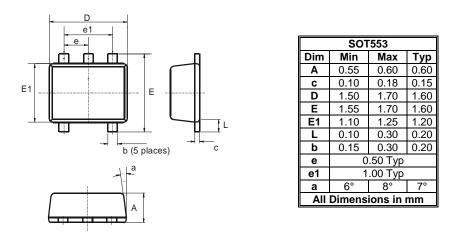
Typical Applications



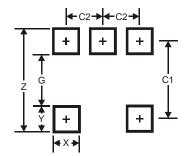


D5V0L4B5V

Package Outline Dimensions



Suggested Pad Layout



Dimensions	Value (in mm)
Z	2.2
G	1.2
Х	0.375
Y	0.5
C1	1.7
C2	0.5



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