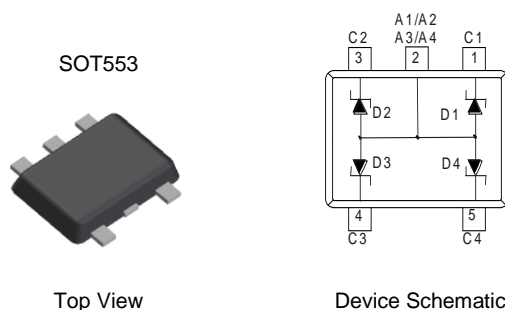


## Features

- Quad TVS in Common Anode Configuration
- Ultra-Small Surface Mount Package
- Ideal for Transient Suppression and ESD Protection
- **Totally Lead-Free & Fully RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. "Green" Device (Note 3)**
- **For automotive applications requiring specific change control (i.e.: parts qualified to AEC-Q100/101/200, PPAP capable, and manufactured in IATF 16949 certified facilities), please refer to the related automotive grade (Q-suffix) part. A listing can be found at <https://www.diodes.com/products/automotive/automotive-products/>.**
- This part is qualified to JEDEC standards (as references in AEC-Q) for High Reliability. <https://www.diodes.com/quality/product-definitions/>

## Mechanical Data

- Case: SOT553
- Case Material: Molded Plastic, "Green" Molding Compound. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminal Finish: Matte Tin, Annealed Over Copper Leadframe. Solderable per MIL-STD-202, Method 208 (63)
- Weight: 0.002 grams (Approximate)

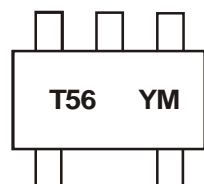


## Ordering Information (Note 4)

Part Number	Compliance	Case	Packaging
DZQA5V6AXV5-7	Standard	SOT553	3,000/Tape & Reel

- Notes:
1. No purposely added lead. Fully EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3) compliant.
  2. See <https://www.diodes.com/quality/lead-free/> for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
  3. Halogen- and Antimony-free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
  4. For packaging details, go to our website at <https://www.diodes.com/design/support/packaging/diodes-packaging/>.

## Marking Information



T56 = Product Type Marking Code  
YM = Date Code Marking  
Y = Year (ex: H = 2020)  
M = Month (ex: 9 = September)

### Date Code Key

Year	2008	...	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Code	V	...	H	I	J	K	L	M	N	O	P	R

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Code	1	2	3	4	5	6	7	8	9	O	N	D

**Maximum Ratings** (@T<sub>A</sub> = +25°C, unless otherwise specified.)

Characteristic	Symbol	Value	Unit
Forward Voltage @ I <sub>F</sub> = 10mA	V <sub>F</sub>	0.9	V

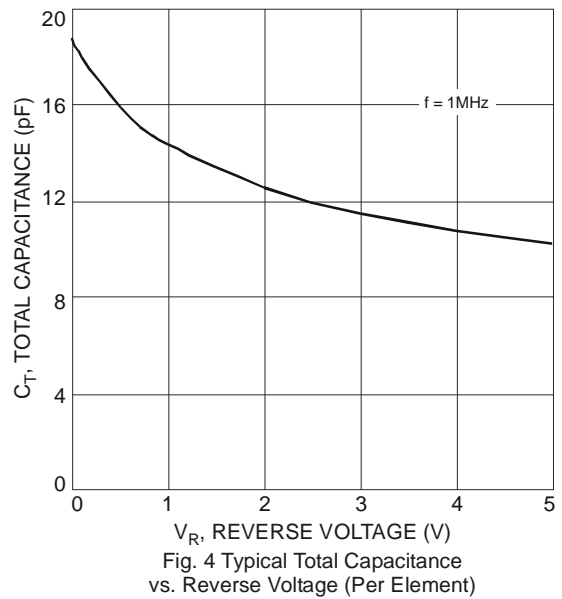
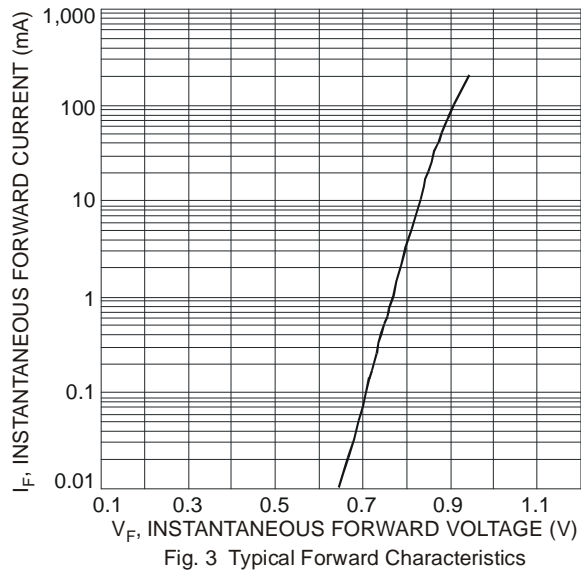
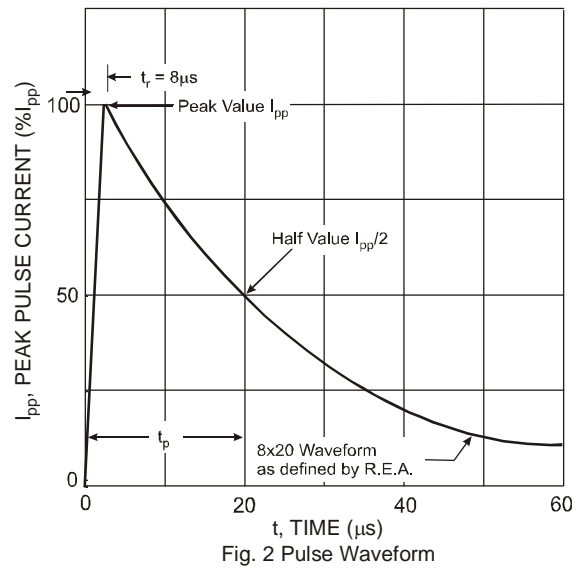
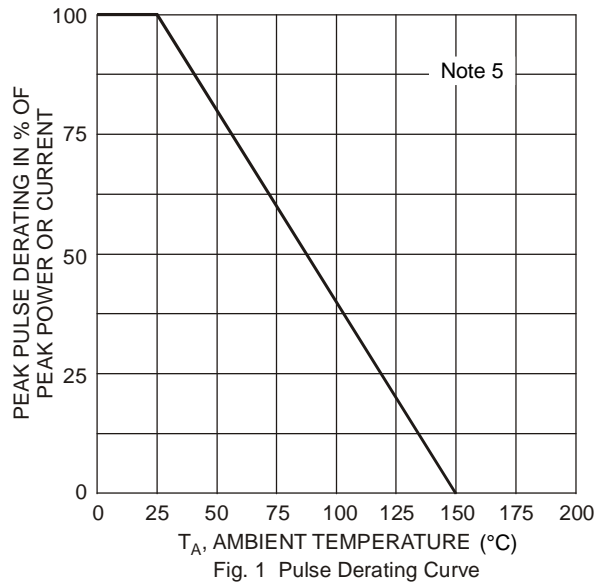
**Thermal Characteristics**

Characteristic	Symbol	Value	Unit
Power Dissipation (Notes 5 & 6)	P <sub>D</sub>	380	mW
Peak Power Dissipation, 8x20μS Waveform (Note 7)	P <sub>PK</sub>	20	W
Thermal Resistance, Junction to Ambient (Note 5)	R <sub>θJA</sub>	327	°C/W
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55 to +150	°C

**Electrical Characteristics** (@T<sub>A</sub> = +25°C, unless otherwise specified.)

Type Number	Marking Code	Breakdown Voltage (Note 8)			Leakage Current (Note 8)		Max. Clamping Voltage (Note 7)		Capacitance @ 0V Bias (pF) (Note 9)		Capacitance @ 3V Bias (pF) (Note 9)	
		V <sub>BR</sub> @ I <sub>T</sub> = 1mA			I <sub>RM</sub> @ V <sub>RM</sub>		V <sub>C</sub> @ I <sub>PP</sub>		C <sub>T</sub>		C <sub>T</sub>	
		Min (V)	Nom (V)	Max (V)	Max (μA)	(V)	V <sub>C</sub> (V)	I <sub>PP</sub> (A)	Typ	Max	Typ	Max
DZQA5V6AXV5	T56	5.3	5.6	5.9	1	3.0	13	1.6	18.7	20	11.4	12.3

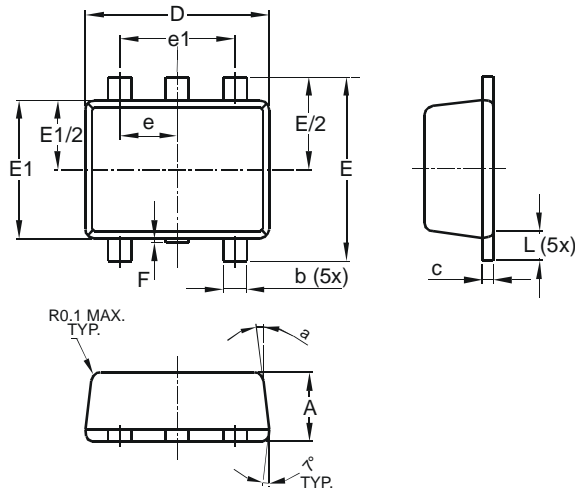
- Notes:
- Device mounted on FR-4 PCB, 1 inch x 0.85 inch x 0.062 inch; pad layout as shown on Diodes Incorporated's Suggested Pad Layout document, which can be found on our website at <http://www.diodes.com>.
  - Only 1 diode under power. For all 4 diodes under power, P<sub>D</sub> will be 25% of the listed value.
  - Non-repetitive current pulse per Figure 2 and derate above T<sub>A</sub> = +25°C per Figure 1.
  - Short duration pulse test used to minimize self-heating effect.
  - Per element, f = 1MHz, T<sub>A</sub> = +25°C



## Package Outline Dimensions

Please see <http://www.diodes.com/package-outlines.html> for the latest version.

SOT553

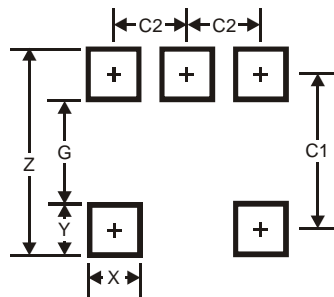


SOT553			
Dim	Min	Max	Typ
A	0.55	0.62	0.60
b	0.15	0.30	0.20
c	0.10	0.18	0.15
D	1.50	1.70	1.60
E	1.55	1.70	1.60
E1	1.10	1.25	1.20
e	0.50 BSC		
e1	1.00 BSC		
F	0.00	0.10	—
L	0.10	0.30	0.20
a	6°	8°	7°
All Dimensions in mm			

## Suggested Pad Layout

Please see <http://www.diodes.com/package-outlines.html> for the latest version.

SOT553



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

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