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DZQA6V8AXV5

#### QUAD SURFACE MOUNT TVS ARRAY

#### **Features**

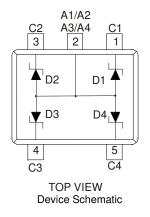
- Quad TVS in Common Anode Configuration
- Ultra-Small Surface Mount Package
- Ideal For Transient Suppression and ESD Protection
- Lead Free By Design/RoHS Compliant (Note 1)
- "Green Device" (Note 2)
- Qualified to AEC-Q101 Standards for High Reliability

### **ESD Capability**

- IEC 61000-4-2 Contact Method ±8kV
- IEC 61000-4-2 Air Discharge Method ±15kV

### **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
- Weight: 0.002 grams (approximate)



#### Ordering Information (Note 3)

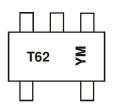
Part Number	Case	Packaging
DZQA6V8AXV5-7	SOT553	3000/Tape & Reel

Notes: 1. No purposefully added lead.

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**



T62 = Product type marking code YM = Date code marking Y = Year (Ex: W = 2009) M = Month (ex: 9 = September)

Date Code Key

Balo bodo noj												
Year	200	9	2010 2011		20	2012 2013			2014	2	2015	
Code	W		Х		Y	2	<u>Z</u>	А		В		С
Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Code	1	2	3	4	5	6	7	8	9	0	Ν	D



# Maximum Ratings @T<sub>A</sub> = 25°C unless otherwise specified

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

### **Thermal Characteristics**

Characteristic	Symbol	Value	Unit
Power Dissipation (Notes 4 & 5)	PD	380	mW
Peak Power Dissipation, 8x20µS Waveform (Note 6)	P <sub>pk</sub>	20	W
Thermal Resistance, Junction-to-Ambient (Note 4)	R <sub>0JA</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

Туре	Marking	Breakdown Voltage (Note 7)		Leakage Current (Note 7)		Clamping Voltage (Note 6)		Capacitance @0V Bias(pF) (Note 8)		Capacitance @3V Bias(pF) (Note 8)		
Number	Code	V <sub>BR</sub> @I <sub>T</sub> = 1mA		I <sub>RM</sub> @ V <sub>RM</sub>		V <sub>C</sub> Max @ I <sub>PP</sub>		С	т	CT		
		Min (V)	Nom (V)	Max (V)	Max(µA)	(V)	V <sub>c</sub> (V)	IPP(A)	Тур	Max	Тур	Max
DZQA6V8AXV5	T62	6.47	6.8	7.14	1	4.3	13	1.6	12.5	15	7.6	9.5

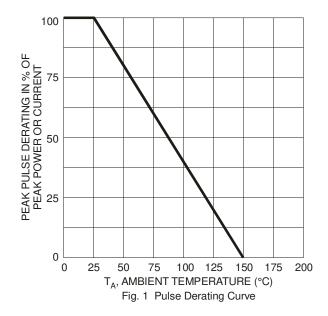
Notes: 4. Device mounted on FR-4 PCB, 1 inch x 0.85 inch x 0.062 inch; pad layout as shown on Diodes Inc. Suggested Pad Layout Document AP02001,

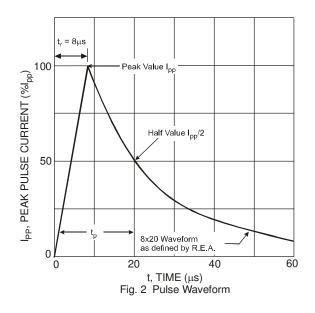
which can be found on our website at http://www.diodes.com.

5. Only 1 diode under power. For all 4 diodes under power, P<sub>D</sub> will be 25% of the listed value. 6. Non-repetitive current pulse per Figure 3 and derate above  $T_A = 25^{\circ}C$  per Figure 1.

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

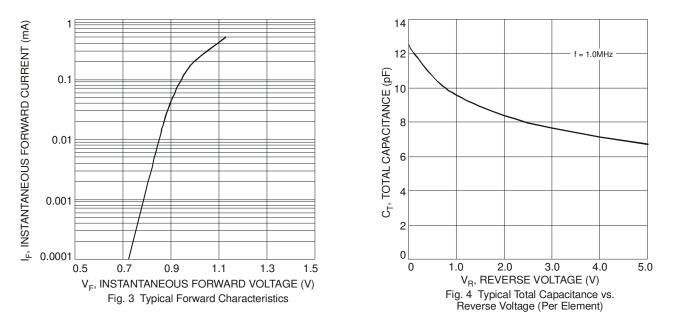
8. Per element, f = 1MHz,  $T_A = 25^{\circ}C$ 



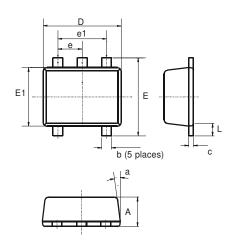




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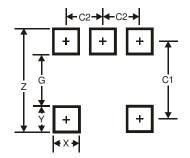


# Package Outline Dimensions



SOT553									
Dim	Min	Min Max Typ							
Α	0.55	0.60	0.60						
c	0.10	0.10 0.18 0.15							
D	1.50 1.70 1.60								
Е	1.55 1.70 1.60								
E1	1.10	1.25	1.20						
L	0.10	0.30	0.20						
b	0.15 0.30 0.20								
е	0.50 Typ								
e1	1.00 Typ								
а	6°	8°	7°						
All	All Dimensions in mm								

## **Suggested Pad Layout**



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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