



**THE DATASHEET OF  
DZQA6V8AXV5-7**



## Features

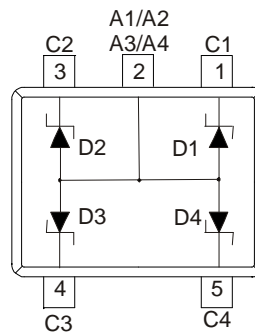
- Quad TVS in Common Anode Configuration
- Ultra-Small Surface Mount Package
- Ideal For Transient Suppression and ESD Protection
- **Lead Free By Design/RoHS Compliant (Note 1)**
- **"Green Device" (Note 2)**
- **Qualified to AEC-Q101 Standards for High Reliability**

## ESD Capability

- IEC 61000-4-2 Contact Method  $\pm 8\text{kV}$
- IEC 61000-4-2 Air Discharge Method  $\pm 15\text{kV}$

## 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)



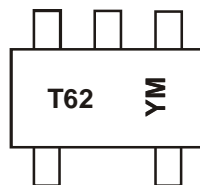
TOP VIEW  
Device Schematic

## 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

Year	2009	2010	2011	2012	2013	2014	2015
Code	W	X	Y	Z	A	B	C

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

Characteristic	Symbol	Value	Unit
Forward Voltage @ $I_F = 10\text{mA}$	$V_F$	0.9	V

**Thermal Characteristics**

Characteristic	Symbol	Value	Unit
Power Dissipation (Notes 4 & 5)	$P_D$	380	mW
Peak Power Dissipation, 8x20 $\mu\text{s}$ Waveform (Note 6)	$P_{pk}$	20	W
Thermal Resistance, Junction-to-Ambient (Note 4)	$R_{\theta JA}$	327	$^\circ\text{C/W}$
Operating and Storage Temperature Range	$T_J, T_{STG}$	-55 to +150	$^\circ\text{C}$

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

Type Number	Marking Code	Breakdown Voltage (Note 7)			Leakage Current (Note 7)		Clamping Voltage (Note 6)		Capacitance @0V Bias(pF) (Note 8)		Capacitance @3V Bias(pF) (Note 8)	
		$V_{BR} @ I_T = 1\text{mA}$			$I_{RM} @ V_{RM}$		$V_C \text{ Max } @ I_{PP}$		$C_T$		$C_T$	
		Min (V)	Nom (V)	Max (V)	Max( $\mu\text{A}$ )	(V)	$V_C$ (V)	$I_{PP}$ (A)	Typ	Max	Typ	Max
DZQA6V8AXV5	T62	6.47	6.8	7.14	1	4.3	13	1.6	12.5	15	7.6	9.5

- Notes:
- 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>.
  - Only 1 diode under power. For all 4 diodes under power,  $P_D$  will be 25% of the listed value.
  - Non-repetitive current pulse per Figure 3 and derate above  $T_A = 25^\circ\text{C}$  per Figure 1.
  - Short duration pulse test used to minimize self-heating effect.
  - Per element,  $f = 1\text{MHz}$ ,  $T_A = 25^\circ\text{C}$

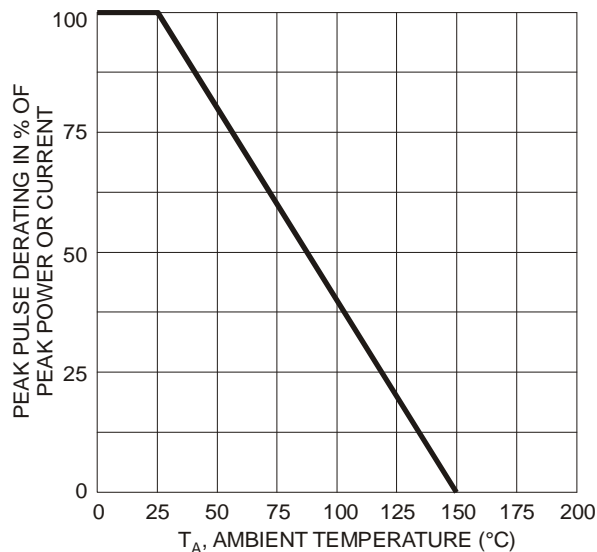


Fig. 1 Pulse Derating Curve

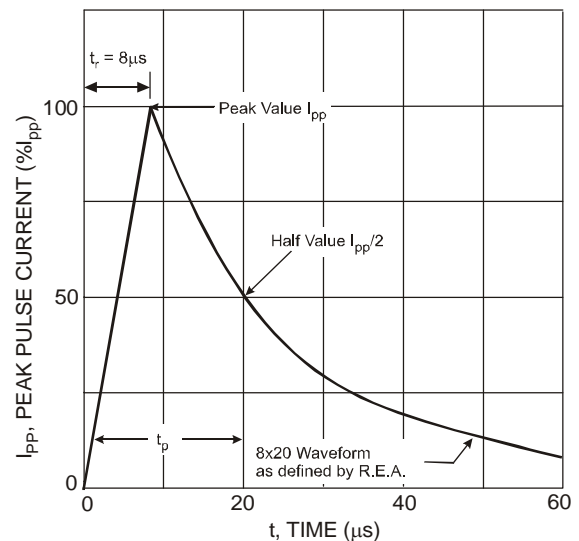


Fig. 2 Pulse Waveform

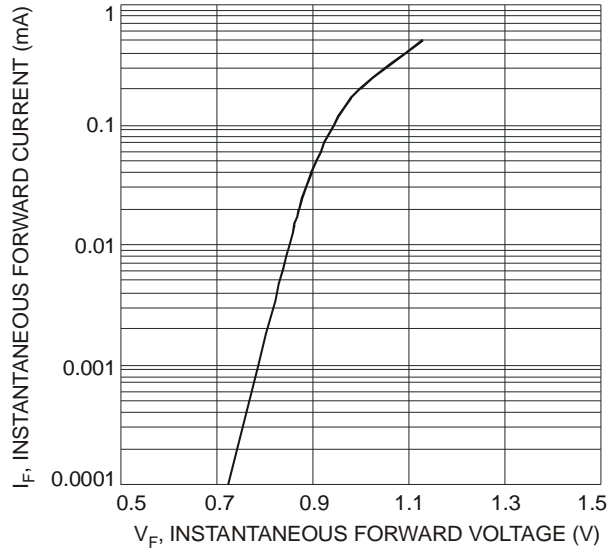


Fig. 3 Typical Forward Characteristics

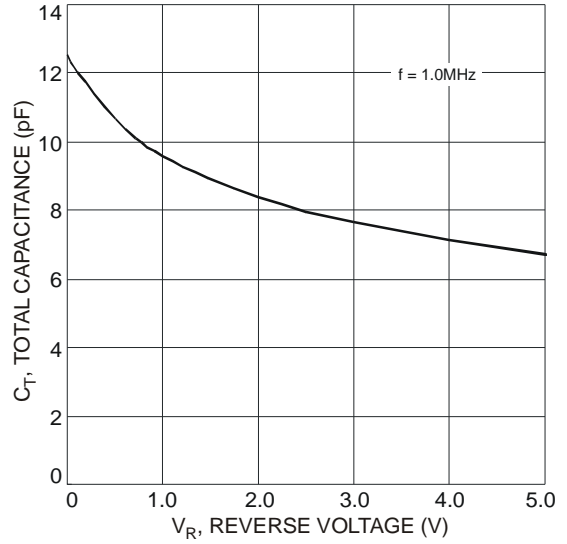
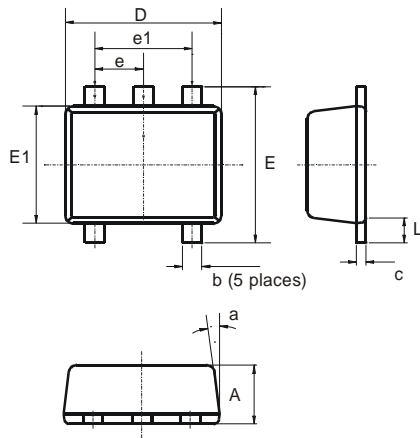


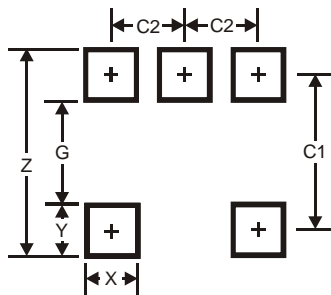
Fig. 4 Typical Total Capacitance vs. Reverse Voltage (Per Element)

**Package Outline Dimensions**



SOT553			
Dim	Min	Max	Typ
A	0.55	0.60	0.60
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
L	0.10	0.30	0.20
b	0.15	0.30	0.20
e	0.50 Typ		
e1	1.00 Typ		
a	6°	8°	7°
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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