QZX563C6V8C

QUAD SURFACE MOUNT TVS ARRAY

NEW PRODUCT

Features

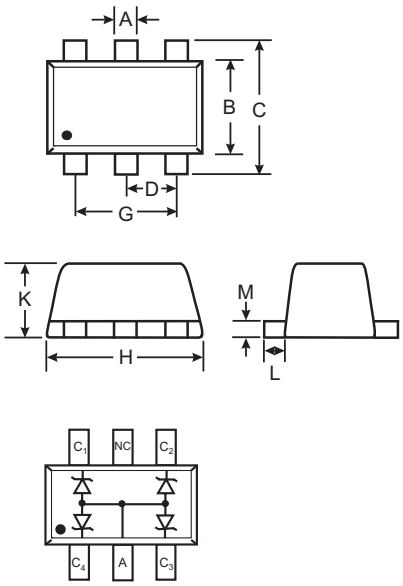
- Quad TVS in Common Anode Configuration
- Nominal Zener Voltage: 6.8V
- Ultra-Small Surface Mount Package
- Ideal For Transient Suppression
- **Lead Free By Design/RoHS Compliant (Note 1)**
- **"Green Device" (Note 2)**
- **Qualified to AEC-Q101 Standards for High Reliability**

ESD Capability

- IEC 61000-4-2 Contact Method: ±8kV
- IEC 61000-4-2 Air Discharge Method: ±25kV

Mechanical Data

- Case: SOT-563
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Terminal Finish: Matte Tin, Annealed Over Copper Leadframe. Solderable per MIL-STD-202, Method 208
- Orientation: See Diagram
- Marking: See Table Below
- Weight: 0.003 grams (approximate)
- Ordering Information: See Page 2



SOT-563			
Dim	**Min**	**Max**	**Typ**
A	0.15	0.30	0.25
B	1.10	1.25	1.20
C	1.55	1.70	1.60
D		0.50	
G	0.90	1.10	1.00
H	1.50	1.70	1.60
K	0.56	0.60	0.60
L	0.10	0.30	0.20
M	0.10	0.18	—
All Dimensions in mm			

Maximum Ratings @T_A = 25°C unless otherwise specified

Characteristic	Symbol	Value	Unit
Forward Voltage @ I_F = 10mA (Note 3)	V_F	0.9	V
Forward Voltage @ I_F = 100mA (Note 3)	V_F	1.0	V
Power Dissipation (Note 4)	P_d	150	mW
Peak Power Dissipation, 10x1000μS Waveform (Note 5)	P_{pk}	10	W
Peak Power Dissipation, 8x20μS Waveform (Note 5)		80	
Thermal Resistance, Junction-to-Ambient (Note 4)	$R_{\theta JA}$	833	°C/W
Operating and Storage Temperature Range	T_j, T_{STG}	-65 to +150	°C

Electrical Characteristics @T_A = 25°C unless otherwise specified

Type Number	Marking Code	Reverse Standoff Voltage and Leakage		Breakdown Voltage (Note 3)			Maximum Reverse Current (Note 3)		Typical Junction Capacitance
		V_{RWM}	I_R @ V_{RWM}	V_{BR} @ I_T = 1mA			I_R @ V_R		C_T @ V_R = 0V, f = 1MHz
		V	μA	Min (V)	Nom (V)	Max (V)	μA	V	pF
QZX563C6V8C	CB	5	1.5	6.47	6.8	7.14	1.0	3.0	63

Note:
1. No purposefully added lead.
2. Diodes Inc.'s "Green" policy can be found on our website at http://www.diodes.com/products/lead_free/index.php.
3. Short duration pulse test used to minimize self-heating effect.
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/datasheets/ap02001.pdf.
5. Non-repetitive current pulse per Figure 2 and derate above T_A = 25°C per Figure 1.

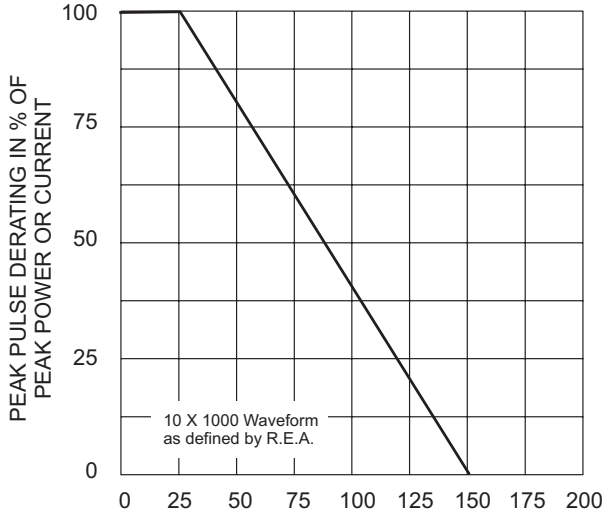


Fig. 1, Pulse Derating Curve

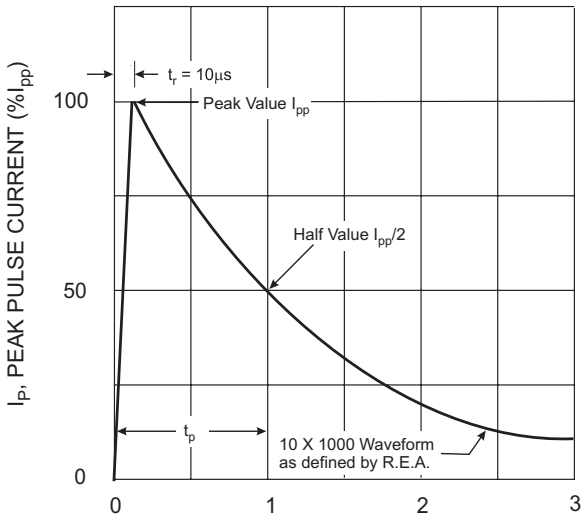


Fig. 2, Pulse Waveform

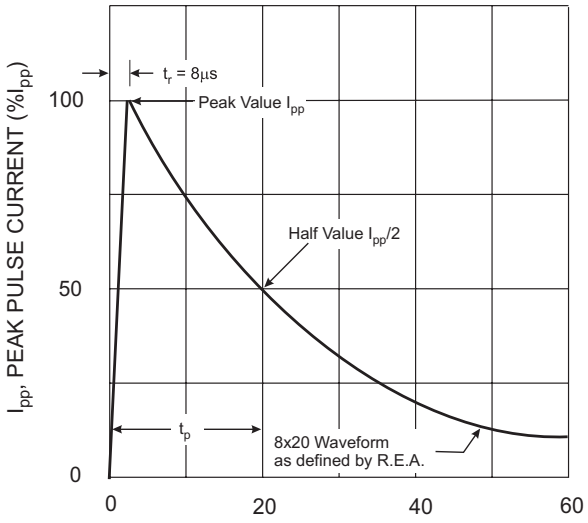


Fig. 3, Pulse Waveform

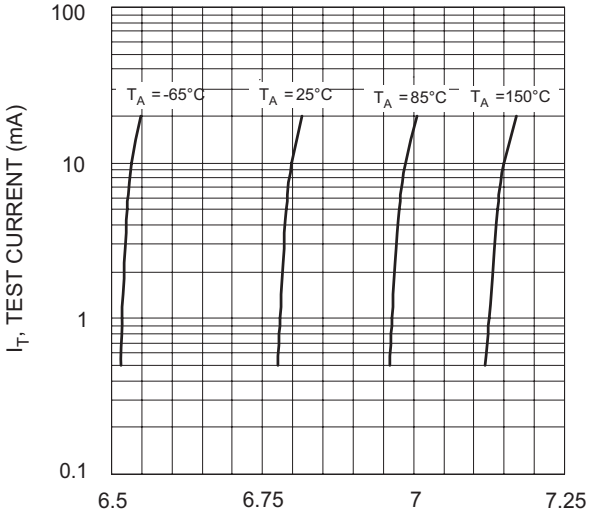


Fig. 4, Breakdown Voltage vs. Test Current

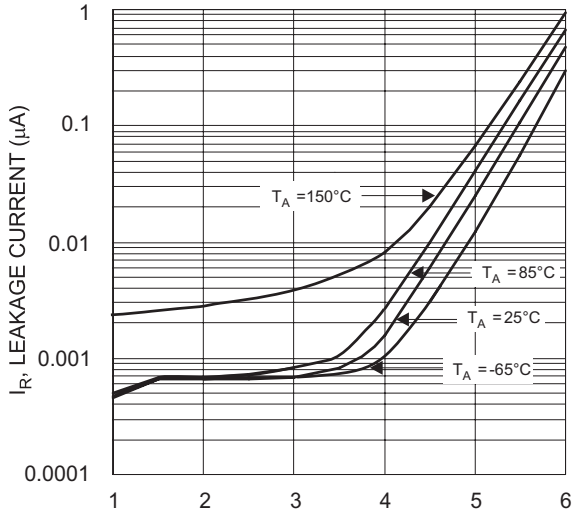


Fig. 5, Leakage Current vs. Reverse Voltage

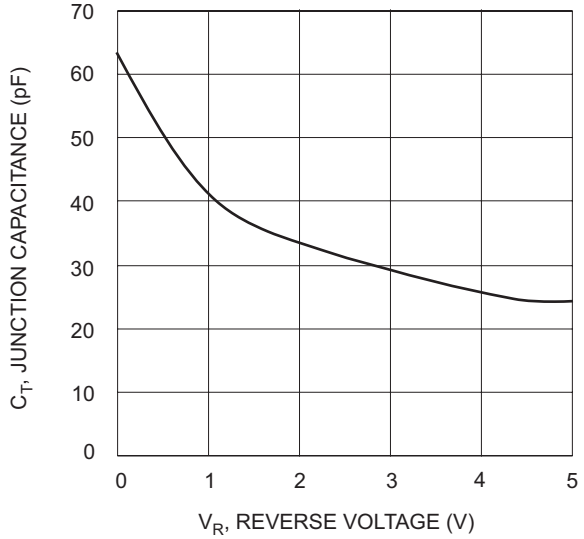


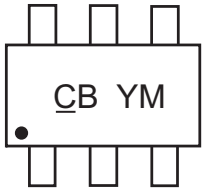
Fig. 6, Typical Junction Capacitance vs. Reverse Voltage

NEW PRODUCT

Ordering Information (Note 6)

Device	Packaging	Shipping
QZX563C6V8C-7	SOT-563	3000/Tape & Reel

Marking Information



XX = Product Type Marking Code (See Page 1)
YM = Date Code Marking
Y = Year (Ex: S = 2005)
M = Month (ex: 9 = September)

Date Code Key

Year	2005	2006	2007	2008	2009
Code	S	T	U	V	W

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

Notes: 6. For Packaging Details: go to our website at http://www.diodes.com/datasheets/ap02007.pdf.