NZL5V6ATT1

SC75 Dual Common Anode Zener for ESD Protection

This dual monolithic silicon voltage suppressor is designed for applications requiring transient overvoltage protection capability. It is intended for use in voltage and ESD sensitive equipment such as computers, printers, business machines, communication systems, medical equipment, and other applications. Its dual junction common anode design protects four separate lines using only one package. These devices are ideal for situations where board space is at a premium.

Specification Features

- SC−75 Package Allows Two Separate Unidirectional Configurations
- Low Leakage < 1 μA @ 3 Volt
- Breakdown Voltage: 5.3−5.9 Volt @ 1 mA
- Low Capacitance (40 pF typical between terminals)
- ESD Protection Meeting IEC61000−4−2

Mechanical Characteristics

- Void Free, Transfer−Molded, Thermosetting Plastic Case
- Corrosion Resistant Finish, Easily Solderable
- Package Designed for Optimal Automated Board Assembly
- Small Package Size for High Density Applications

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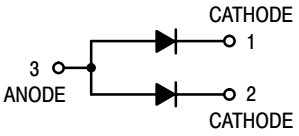
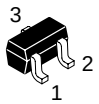
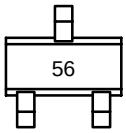




SC−75
CASE 463
STYLE 4

MARKING DIAGRAM



56 = Device Marking

ORDERING INFORMATION

Device	Package	Shipping
NZL5V6ATT1	SC−75	3000/Tape & Reel

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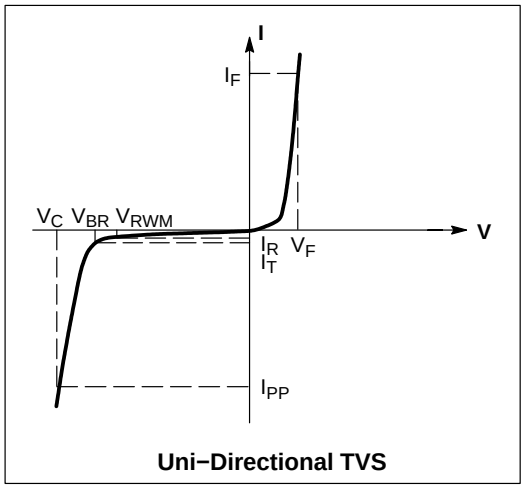
ELECTRICAL CHARACTERISTICS

(T_A = 25°C unless otherwise noted)

UNIDIRECTIONAL (Circuit tied to Pins 1 and 3 or 2 and 3)

Symbol	Parameter
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
V_{RWM}	Working Peak Reverse Voltage
I_R	Maximum Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current
ΘV_{BR}	Maximum Temperature Coefficient of V_{BR}
I_F	Forward Current
V_F	Forward Voltage @ I_F
Z_{ZT}	Maximum Zener Impedance @ I_{ZT}
I_{ZK}	Reverse Current
Z_{ZK}	Maximum Zener Impedance @ I_{ZK}



Uni−Directional TVS

MAXIMUM RATINGS (T_A = 25°C unless otherwise noted)

Characteristic		Symbol	Value	Unit
Steady State Power − 1 Diode (Note 1)		P_D	150	mW
Maximum Junction Temperature		T_{Jmax}	150	°C
Operating Junction and Storage Temperature Range		T_J T_{stg}	−55 to +150	°C
ESD Discharge	IEC61000−4−2, Air Discharge IEC61000−4−2, Contact Discharge	V_{PP}	±15 ±8	kV
Lead Solder Temperature (10 seconds duration)		T_L	260	°C

ELECTRICAL CHARACTERISTICS

	Breakdown Voltage V_{BR} @ 1 mA (Volts)			Leakage Current I_{RM} @ V_{RM} = 3.0 V	Typical Capacitance @ 0 V Bias @ 1 MHz	Max V_F @ I_F = 10 mA
Device	**Min**	**Nom**	**Max**	**(μA)**	**(pF)**	**(V)**
NZL5V6	5.3	5.6	5.9	1.0	40	1.25

1. Only 1 diode under power. For all 4 diodes under power, P_D will be 25%. Mounted on FR−4 board with min pad.

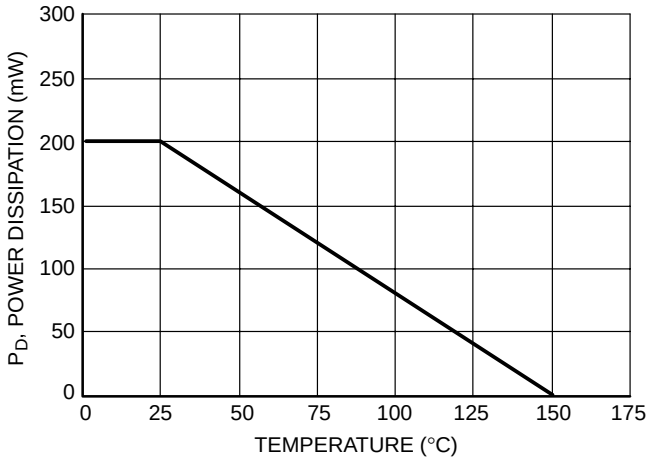


Figure 1. Steady State Power Derating Curve

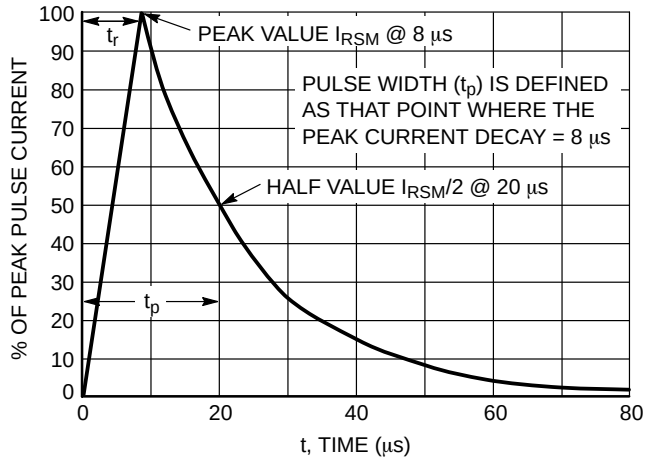


Figure 2. 8 X 20 μs Pulse Waveform

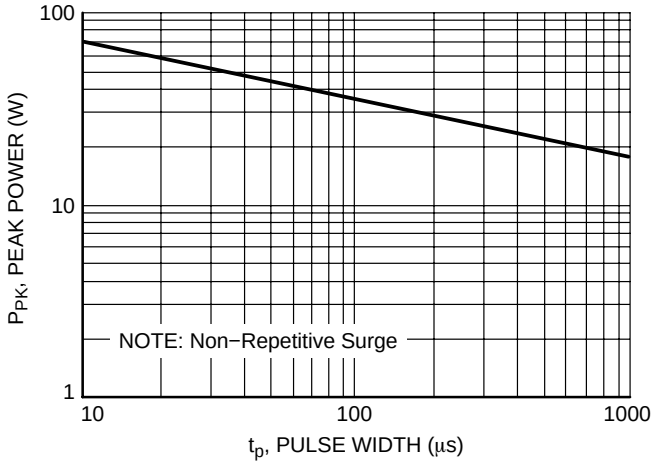


Figure 3. Pulse Rating Curve

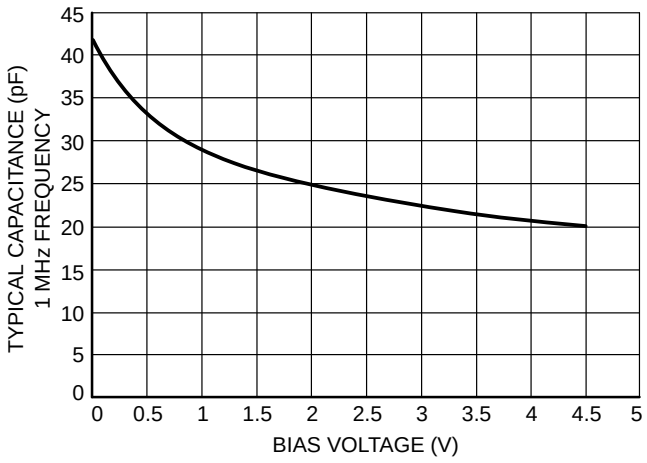


Figure 4. Capacitance

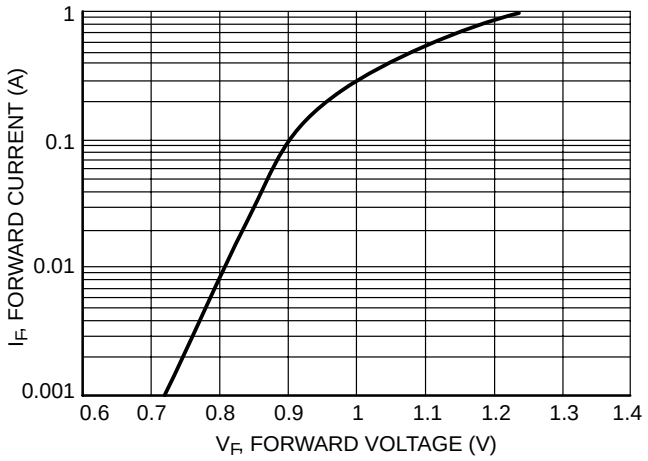


Figure 5. Forward Current versus Forward Voltage

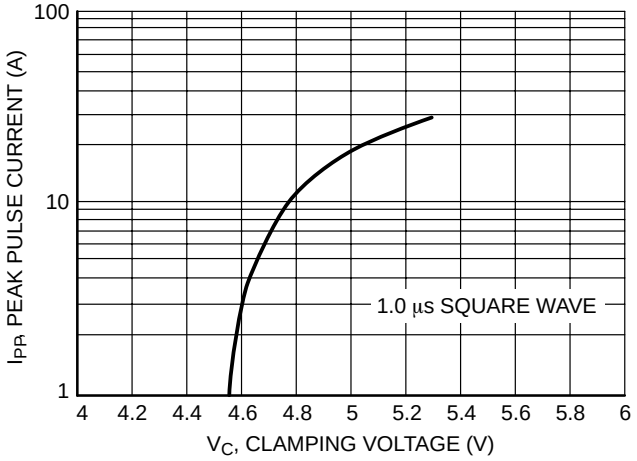
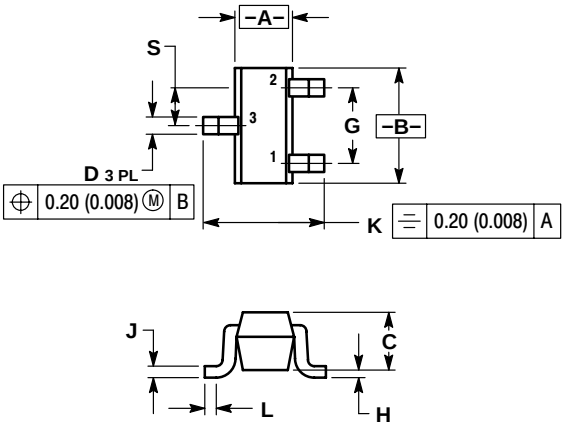


Figure 6. Clamping Voltage versus Peak Pulse Current (Reverse Direction)

PACKAGE DIMENSIONS

SC−75 (SC−90, SOT−416)
CASE 463−01
ISSUE B



NOTES:
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: MILLIMETER.

	MILLIMETERS		INCHES	
DIM	MIN	MAX	MIN	MAX
A	0.70	0.80	0.028	0.031
B	1.40	1.80	0.055	0.071
C	0.60	0.90	0.024	0.035
D	0.15	0.30	0.006	0.012
G	1.00 BSC		0.039 BSC	
H	---	0.10	---	0.004
J	0.10	0.25	0.004	0.010
K	1.45	1.75	0.057	0.069
L	0.10	0.20	0.004	0.008
S	0.50 BSC		0.020 BSC	

STYLE 4:
PIN 1. CATHODE
2. CATHODE
3. ANODE

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