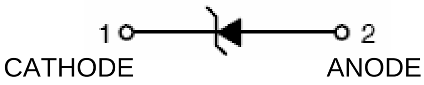
Transient Voltage Suppressors for ESD Protection

FEATURES：

- Low Leakage
- Response Time is Typically < 1 ns
- IEC61000−4−2 Level 4 ESD Protection
- These are Pb−Free Devices
- We declare that the material of product compliance with RoHS requirements and Halogen Free.

Circuit Diagram & Pin Configuration:

SOD-882



DEVICE MARKING AND ORDERING INFORMATION

Device	Marking	Shipping
TESDN051AD82	G	10000/Tape&Reel

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
IEC 61000-4-2 (ESD) Air discharge Contact discharge		±15 ±8	kV kV
ESD Voltage Per Human Body Model		16	kV
Total Power Dissipation on FR-5 Board (Note 1) @ T_A=25	PD	150	mW
Junction and Storage Temperature Range	TJ,TSTG	-55 to 150	
Lead Solder Temperature – Maximum (10 Second Duration)	TL	260	

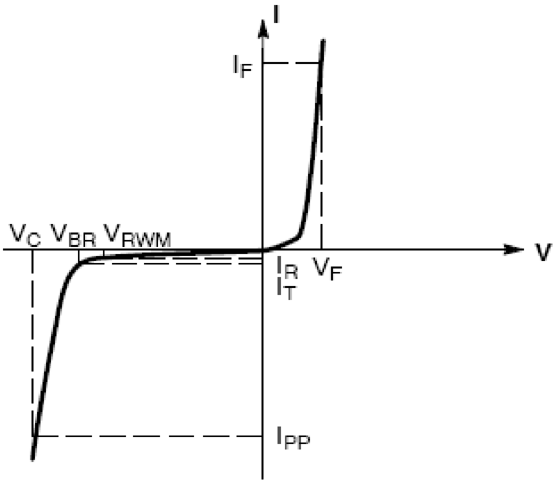
Stresses exceeding Maximum Ratings may damage the device. Maximum Rating are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

1. FR-5 = 1.0*0.75*0.62 in.

ELECTRICAL CHARACTERISTICS

(T_A = 25°C unless otherwise noted)

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
I_F	Forward Current
V_F	Forward Voltage @ I_F
P_{pk}	Peak Power Dissipation
C	Max. Capacitance @V_R = 0 and f = 1 MHz



Uni-Directional TVS

ELECTRICAL CHARACTERISTICS

Device	V_{RWM} (V)	I_R (μA) @ V_{RWM}	V_{BR} (V) @ I_T (Note 2)	I_T （mA）	I_{PP} (A) (Note 3)	V_C (V) @ Max I_{PP} (Note 3)	P_{PK} (W) (8*20 μs)	C (pF)
	Max	Max	Min		Max	Max	Typ	Typ
TESDN051AD82	5.0	1.0	6.2	1.0	8.7	12.3	107	65

Other voltage available upon request.

2. V_{BR} is measured with a pulse test current IT at an ambient temperature of 25

3. Surge current waveform per Figure 3.

TYPICAL CHARACTERISTICS

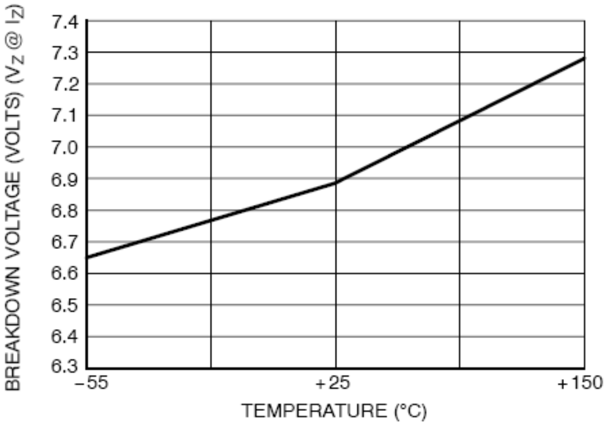


Figure 1. Typical Breakdown Voltage versus Temperature

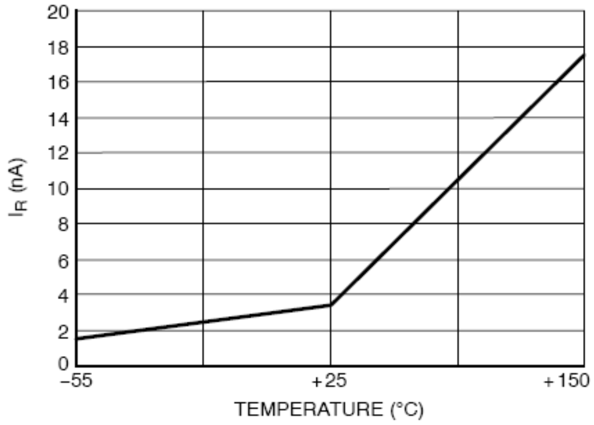


Fig 2. Typical Leakage Current versus Temperature

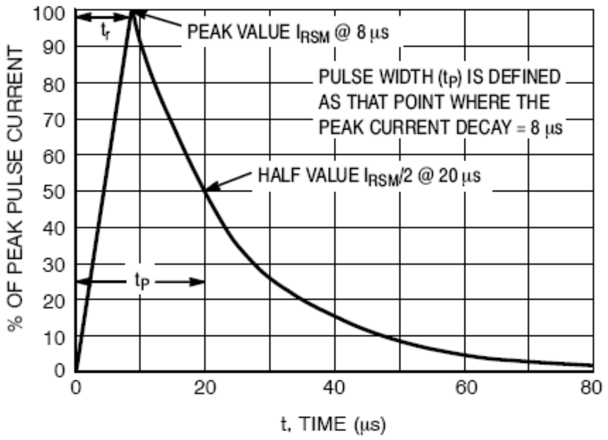


*Figure 3. 8*20 s Pulse Waveform*

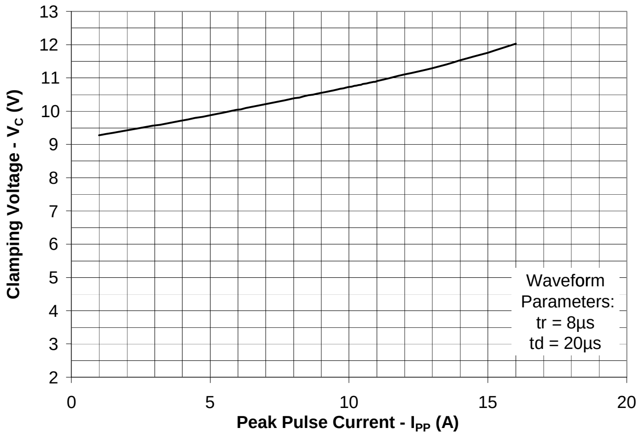


Fig 4. Normalized Junction Capacitance Voltage vs. Reverse Voltage

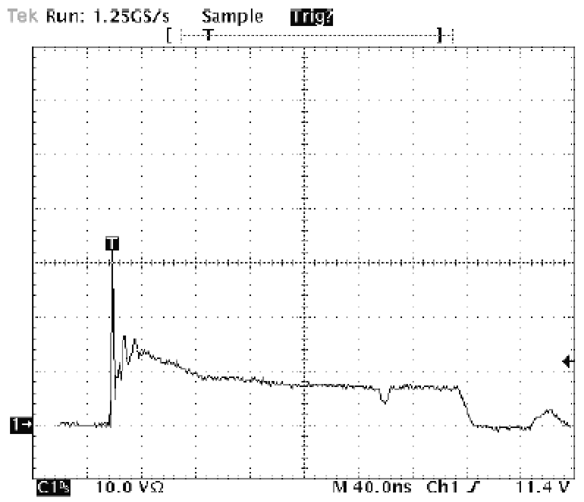


Figure 5. Positive 8kV contact per IEC 61000-4-2

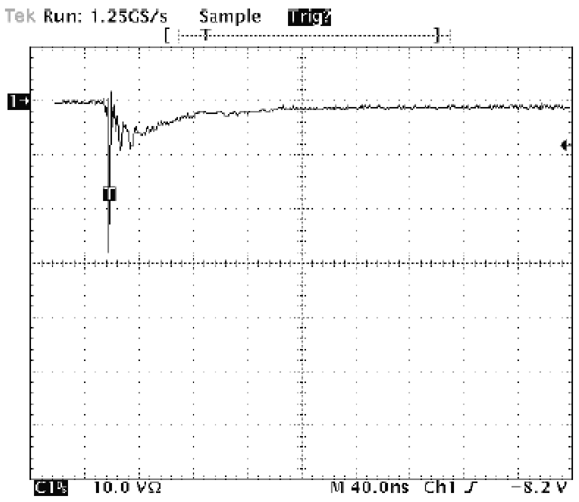
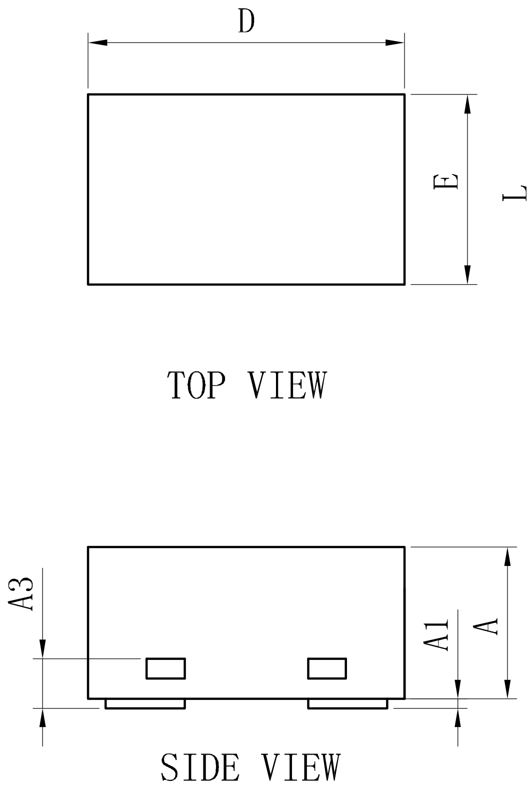


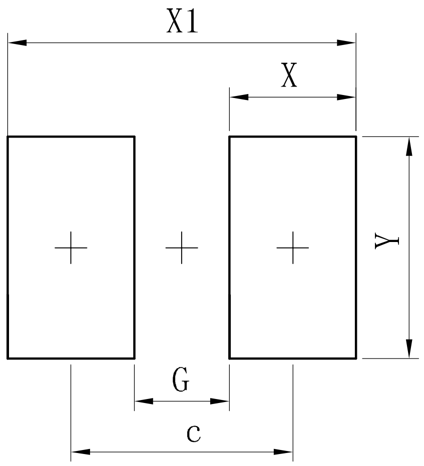
Fig 6. Negative 8kV contact per IEC 61000-4-2

OUTLINE AND DIMENSIONS



SOD882			
Dim	Min	Typ	Max
D	0.95	1.00	1.05
E	0.55	0.60	0.65
e	-	0.64	-
L	0.44	0.49	0.54
b	0.20	0.25	0.30
A	0.43	0.48	0.53
A1	0	-	0.05
A3	0.127REF.		
All Dimensions in mm			

SOLDERING FOOTPRINT



Dimensions	(mm)
c	0.70
G	0.30
X	0.40
X1	1.10
Y	0.70

NOTICE

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