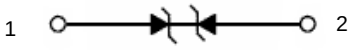
Transient Voltage Suppressors for ESD Protection

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
TESDN241BD82	4C	10000/Tape&Reel

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
IEC 61000-4-2 (ESD) Air Contact discharge		±30 ±30	kV kV
Total Power Dissipation on FR-5 Board (Note 1) @ T_A=25	PD	200	mW
Junction and Storage Temperature Range	TJ,TSTG	-55 to 150	
Lead Solder Temperature – Maximum (10 Second Duration)	TL	260	

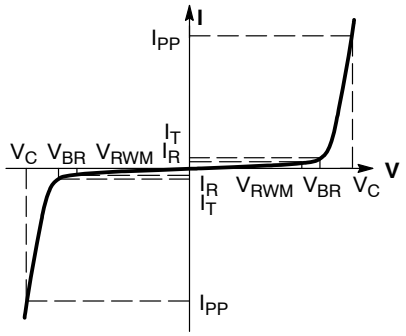
Stresses exceeding Maximum Ratings may damage the device. Maximum Rating are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

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

Electrical Parameter

(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
P_{pk}	Peak Power Dissipation
C	Capacitance @ V_R = 0 and f = 1.0 MHz



Electrical Parameter (T_A = 25°C unless otherwise noted)

Device	V_{RWM} (V)	I_R (μ A) @ V_{RWM}	V_{BR} (V) * @ I_T = 1mA	I_{PP} (A)**	V_C (V) ** @ I_{PP} = 1A	V_C (V) ** @ I_{PP} = 5A	P_{PK} (W)**	C (pF) VR=0V, f=1MHz;
	Max	Max	Min	Max	Max	Max	Max	Max
TESDN241BD82	24	0.1	26	5	29	35	175	30

* V_{BR} is measured with a pulse test current I_T at an ambient temperature of 25°C.

** Surge current waveform per Figure 1.

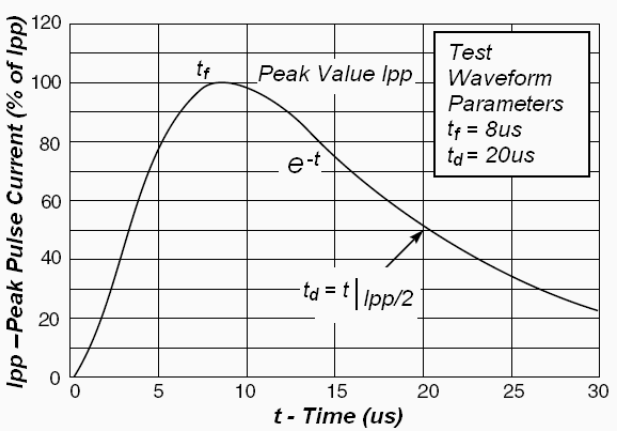


Fig 1. Pulse Waveform

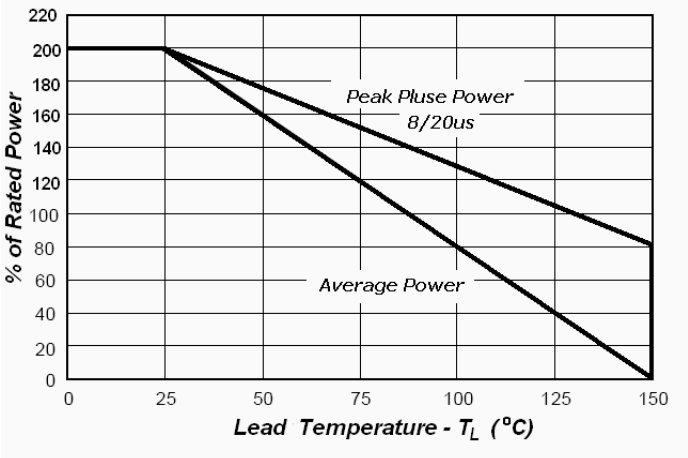


Fig2.Power Derating Curve

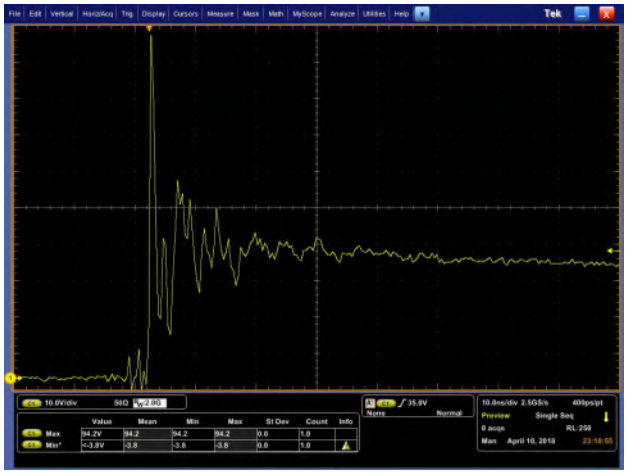


Figure 3.ESD Elamping Voltage Screenshot Positive 8 kV Eontact per IEE61000-4-2

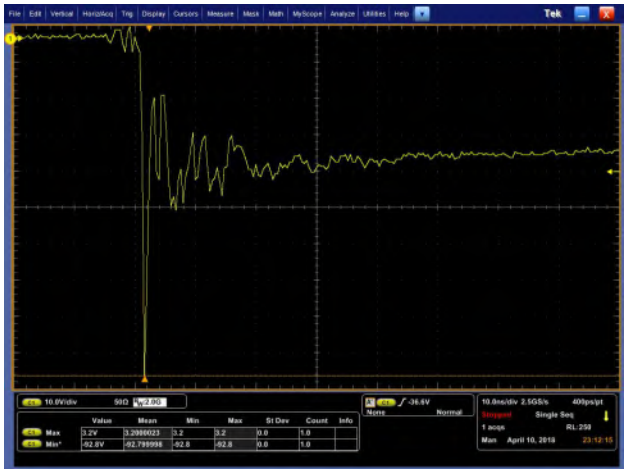


Figure 4.ESD Elamping Voltage Screenshot Negative 8 kV Eontact per IEE61000-4-2

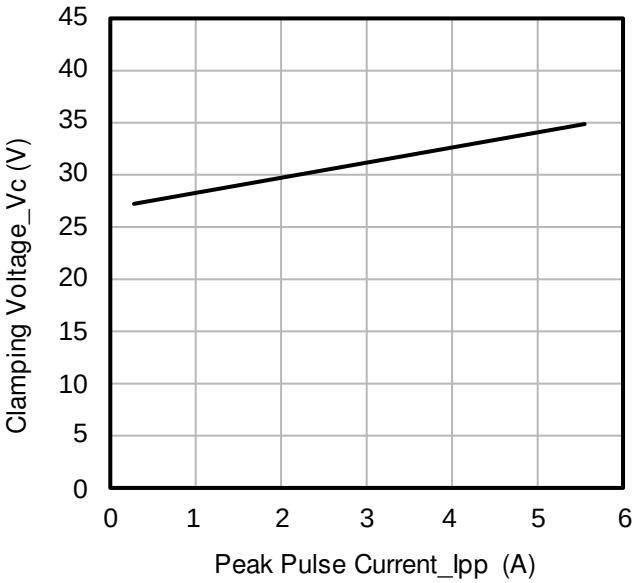
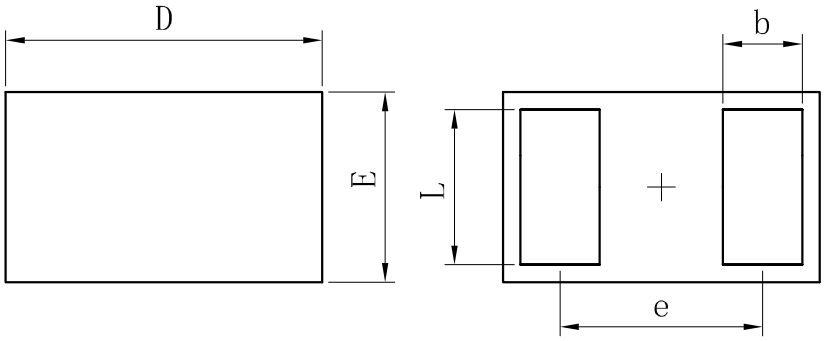
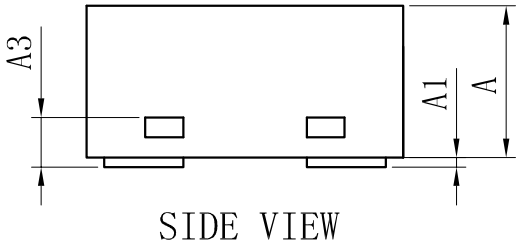


Fig 5 .Clamping Voltage vs. Peak Pulse Current

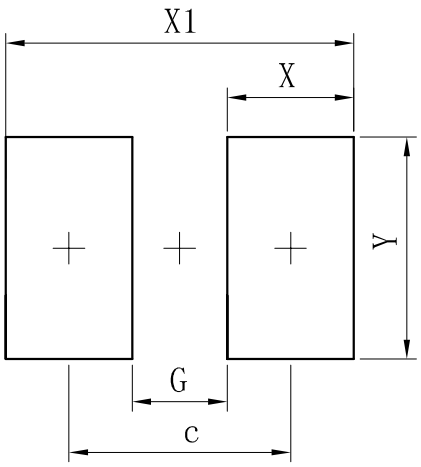
OUTLINE AND DIMENSIONS



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

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