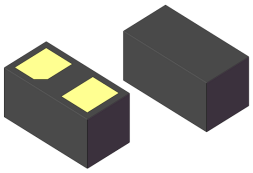
Transient Voltage Suppressors for ESD Protection

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:



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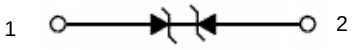


DEVICE MARKING AND ORDERING INFORMATION

Device	Marking	Shipping
TESDL051BD06	Q	15000/Tape&Reel

MAXIMUM RATINGS

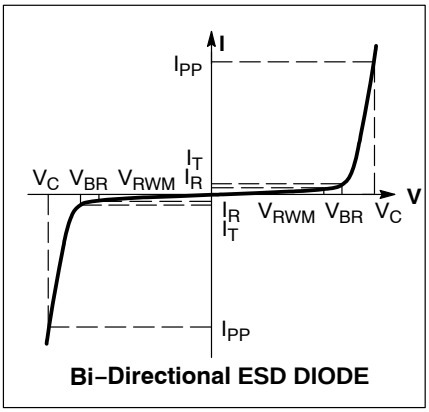
Rating	Symbol	Value	Unit
IEC 61000-4-2 (ESD) Air discharge Contact discharge		±25 ±20	kV kV
ESD Voltage Per Human Body Model		16	kV
Total Power Dissipation on FR-5 Board (Note 1) @ T_A=25	PD	200	mW
Junction and Storage Temperature Range	TJ,TSTG	-55 to 150	
Lead Solder Temperature – Maximum (10 Second 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 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
P_{pk}	Peak Power Dissipation
C	Capacitance @ V_R = 0 and f = 1.0 MHz



ELECTRICAL CHARACTERISTICS

Device	V_{RWM} (V)	I_R (μA) @ V_{RWM}	V_{BR} (V) @ I_T (Note 1)		I_T (mA)	I_{PP} (A)	V_C (V) @ Max I_{PP}	P_{PK} (W) (8*20 μs)	C (pF)		
	Max	Max	Min	Max		Max	Max	Max	Min	Typ	Max
TESDL051BD06	5.0	0.5	6	8.8	1.0	4	20	80	0.18	0.24	0.3

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 1.

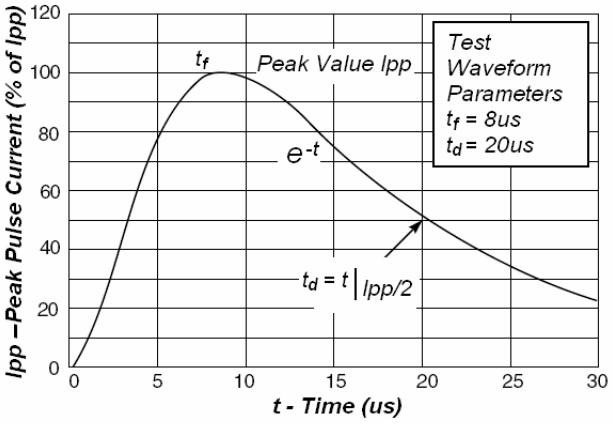


Fig1. Pulse Waveform

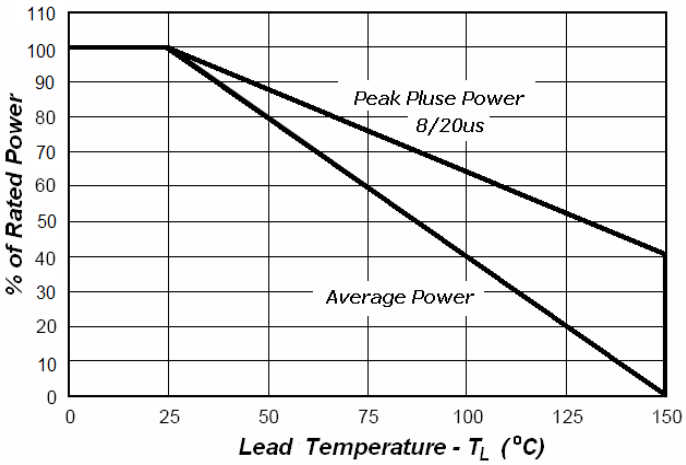


Fig2.Power Derating Curve

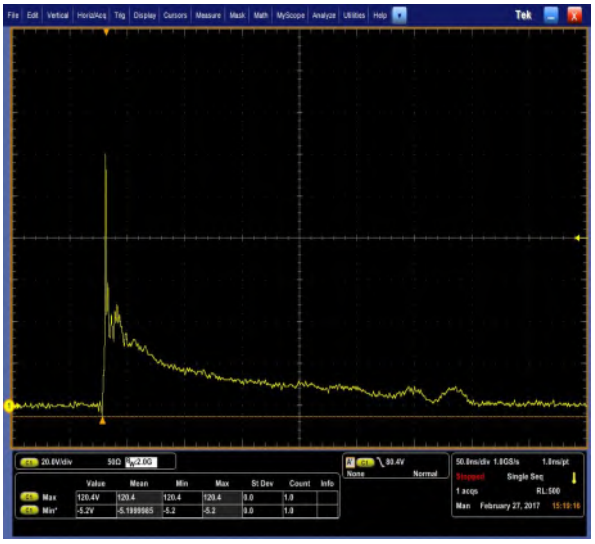


Fig3. ESD Clamping Voltage Screenshot
Positive 8 kV Contact per IEC61000-4-2

Fig4. ESD Clamping Voltage Screenshot
Negative 8 kV Contact per IEC61000-4-2

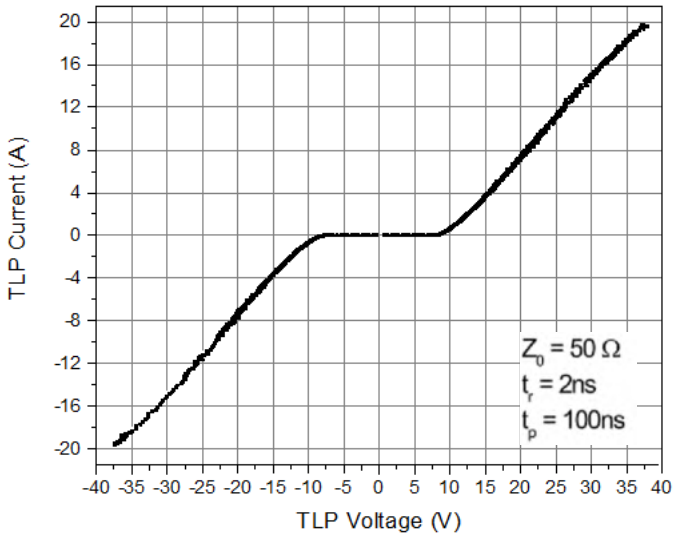
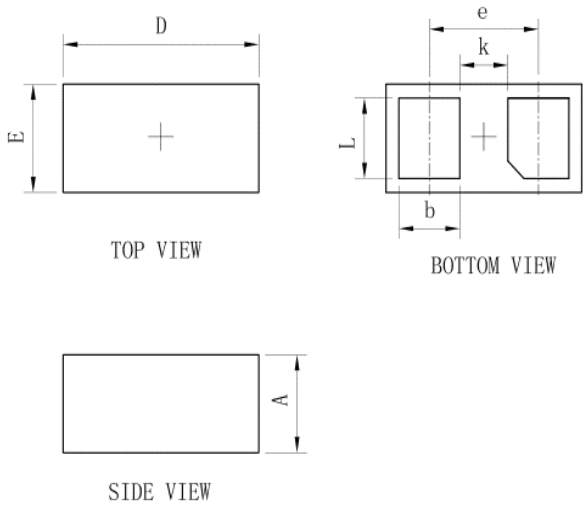


Fig5.TLP Measurement

OUTLINE AND DIMENSIONS



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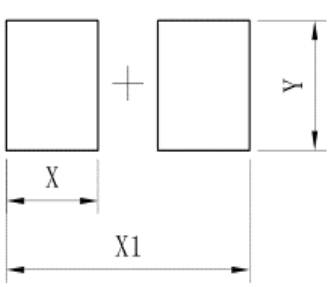
Dim	Min	Typ.	Max
D	0.58	0.61	0.64
E	0.28	0.31	0.34
e	-	0.34	-
L	0.20	0.23	0.26
b	0.16	0.19	0.22
A	0.25	0.28	0.31
k	0.12	0.15	0.18
All Dimensions in mm			

SOLDERING FOOTPRINT



DFN-0603	
DIM	(mm)
X	0.23
X1	0.61
Y	0.30

NOTICE

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