

Features

- Ultra-small package (1.0 x 0.6 x 0.5mm)
- Ultra low capacitance: 0.35pf typ
- Ultra low operating voltage:15V
- Low clamping voltage
- Two - pin leadless package
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1

Mechanical Characteristics

- Package: DFN1006-2 (0402)
- Lead Finish: Matte Tin
- UL Flammability Classification Rating 94V-0
- Quantity Per Reel:3,000 or 10000pcs
- Reel Size:7inch

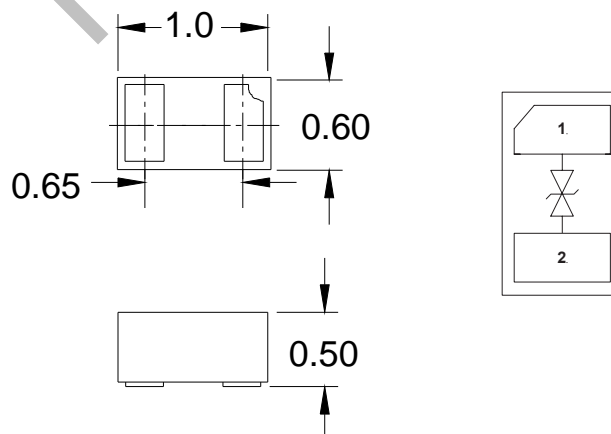
Applications

- USB 2.0 power and data line
- Set-top box and digital TV
- Digital video interface (DVI)
- Notebook Computers
- SIM Ports
- 10/100 Ethernet

Ordering Information

Part Number	Qty per Reel	Reel Size
TPESD1521P	3000/10000	7"

Dimensions and Pin Configuration

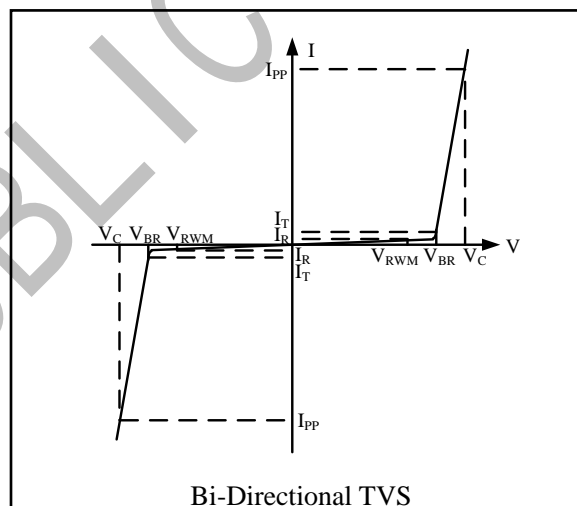


Absolute Maximum Ratings (Tamb=25°C unless otherwise specified)

Parameter	Symbol	Limits	unit
IEC61000-4-2(ESD) Contact Air	V_{ESD}	± 15 ± 8	KV
Peak Pulse Power (8/20us)	P_{pk}	50	W

Electrical Characteristics (TA=25°C unless otherwise specified)

Symbol	Parameter
V_{RWM}	Nominal Reverse Working Voltage
I_R	Reverse Leakage Current @ V_{RWM}
V_{BR}	Reverse Breakdown Voltage @ I_T
I_T	Test Current for Reverse Breakdown
V_C	Clamping Voltage @ I_{PP}
I_{PP}	Maximum Peak Pulse Current
C_{ESD}	Parasitic Capacitance
V_R	Reverse Voltage
f	Small Signal Frequency



Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	V_{RWM}			16	V	
Breakdown Voltage	V_{BR}	18	24		V	$I_T = 1\text{mA}$
Reverse Leakage Current	I_R			0.5	μA	$V_{RWM} = 16\text{V}$
Clamping Voltage	V_C			28	V	$I_{PP} = 1\text{A}$ (8 x 20 μs pulse)
Junction Capacitance	C_J		0.35	0.5	pF	$V_R = 0\text{V}$, f = 1MHz

PROTECTION PRODUCTS
Typical characteristics

Typical Performance Characteristics ($T_A=25^\circ\text{C}$ unless otherwise Specified)

Fig1. 8/20 μs Pulse Waveform

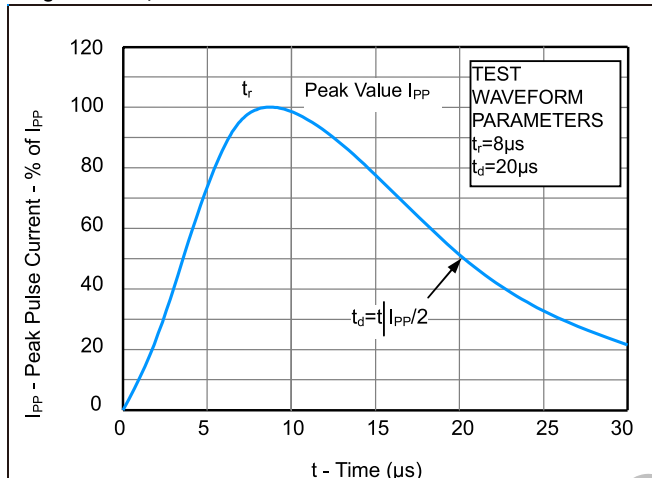


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

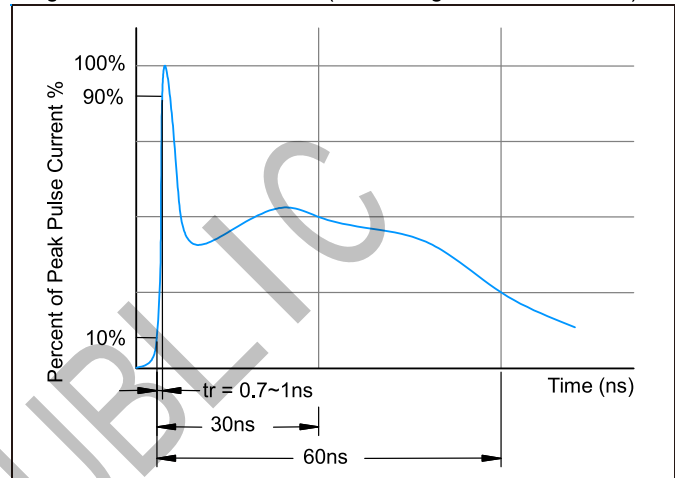


Fig3. Power Derating Curve

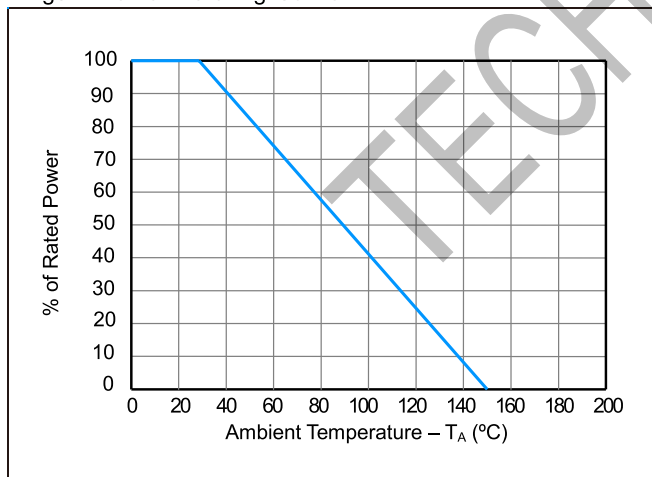
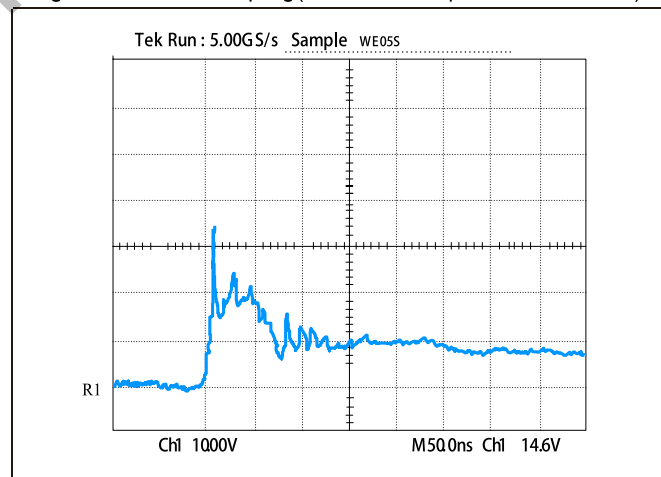
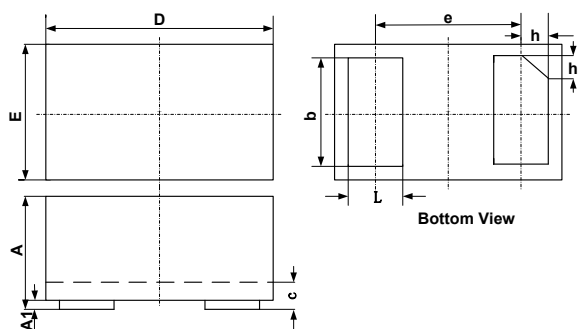


Figure 4: ESD Clamping (8kV Contact per IEC 61000-4-2)

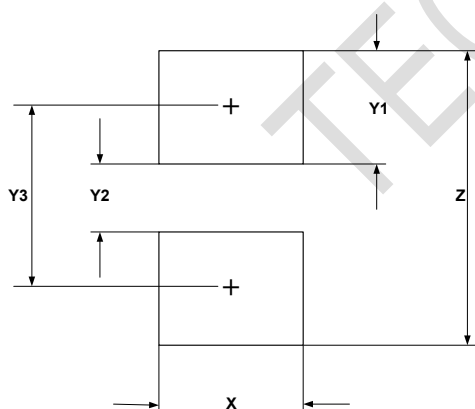


Outline Drawing - DFN1006-2



SYM	DIMENSIONS					
	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.45	0.50	0.55	0.018	0.020	0.022
A1	0.00	0.02	0.05	0.000	0.001	0.002
b	0.45	0.50	0.55	0.018	0.020	0.022
c	0.12	0.15	0.18	0.005	0.006	0.007
D	0.95	1.00	1.05	0.037	0.039	0.041
e	0.65 BSC			0.026 BSC		
E	0.55	0.60	0.65	0.022	0.024	0.026
L	0.20	0.25	0.30	0.008	0.010	0.012
h	0.07	0.12	0.17	0.003	0.005	0.007

Land Pattern - DFN1006-2



SYM	DIMENSIONS	
	MILLIMETERS	INCHES
X	0.60	0.024
Y1	0.50	0.020
Y2	0.30	0.012
Y3	0.80	0.032
Z	1.30	0.052

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