TECH PUBLIC
台舟电子

Features

* Ultra small package: 1.0x0.6x0.5mm
* Ultra low capacitance: 0.35 pF typical
* Ultra low leakage: nA level
* Low operating voltage: ±5V
* Low clamping voltage
* 2-pin leadless package
* Complies with following standards:
  − IEC 61000-4-2 (ESD) immunity test
     Air discharge: ±20kV
     Contact discharge: ±15kV
  − IEC61000-4-5 (Lightning) 4A (8/20μs)
* RoHS Compliant
* Lead Finish: NiPdAu

Mechanical Characteristics

* Package: DFN1006-2 (0402)
* Lead Finish: Matte Tin
* Case Material: "Green" Molding Compound.
* Moisture Sensitivity: Level 3 per J-STD-020
* Terminal Connections: See Diagram Below

Applications
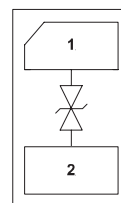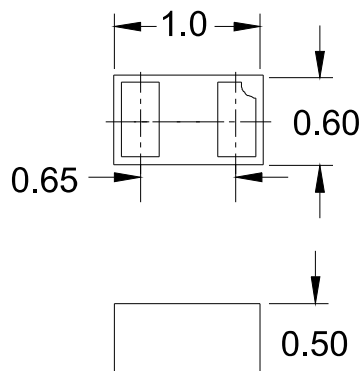
* Smart phones
* Display Ports
* MDDI Ports
* USB Ports
* Digital Video Interface (DVI)
* PCI Express and Serial SATA Ports

Ordering Information

Part Number	Qty per Reel	Reel Size
TPESD8LS5.0CT5G	10000	7"

Dimensions and Pin Configuration

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

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs)	P_{pk}	80	W
Peak Pulse Current (8/20μs)	I_{pp}	4	A
ESD per IEC 61000−4−2 (Air) ESD per IEC 61000−4−2 (Contact)	V_{ESD}	±20 ±15	kV
Operating Temperature Range	T_J	−55 to +125	°C
Storage Temperature Range	T_{stg}	−55 to +150	°C

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

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	V_{RWM}			5	V	
Breakdown Voltage	V_{BR}	5.8	7.5	9	V	I_T = 1mA
Reverse Leakage Current	I_R			0.08	μA	V_{RWM} = 5V
Clamping Voltage	V_C			12	V	I_{PP} = 1A (8 x 20μs pulse)
Clamping Voltage	V_C			21	V	I_{PP} = 4A (8 x 20us pulse)
Junction Capacitance	C_J		0.35	0.5	pF	VR = 0V, f = 1MHz IO to IO

Typical Performance Characteristics (T_A=25°C unless otherwise Specified)
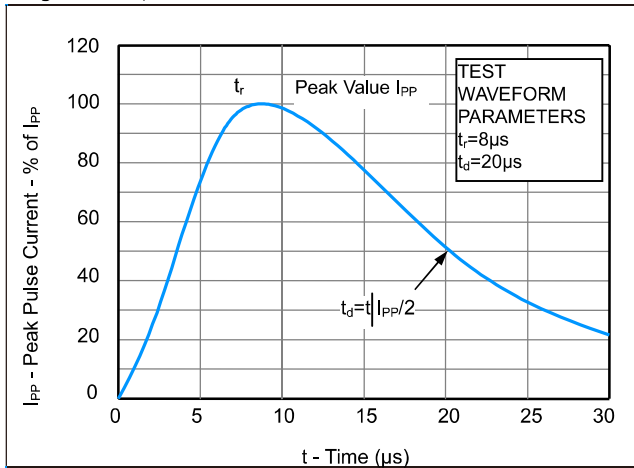
Fig1. 8/20μs Pulse Waveform

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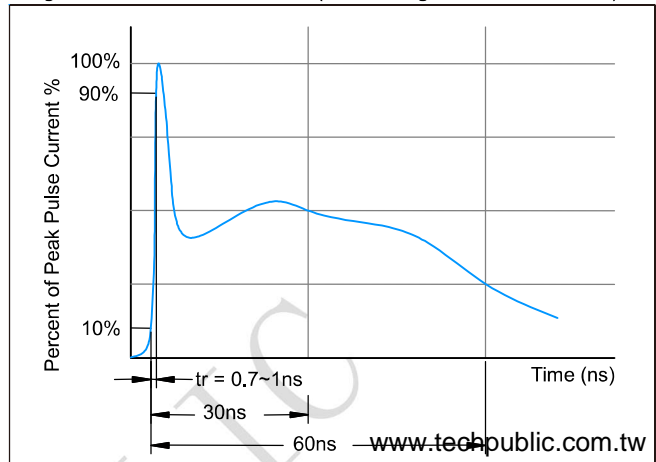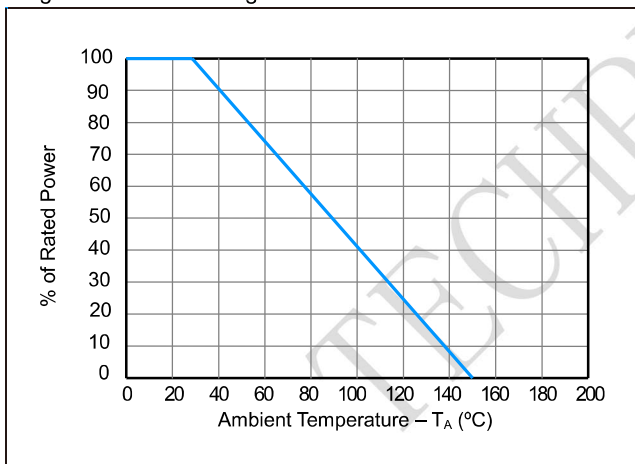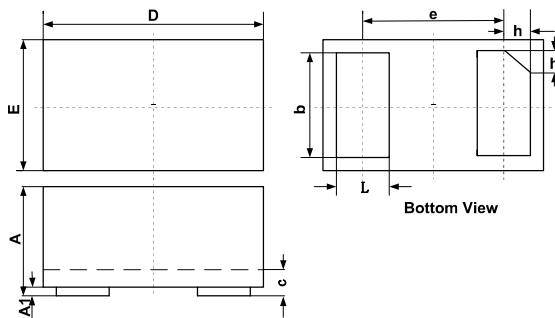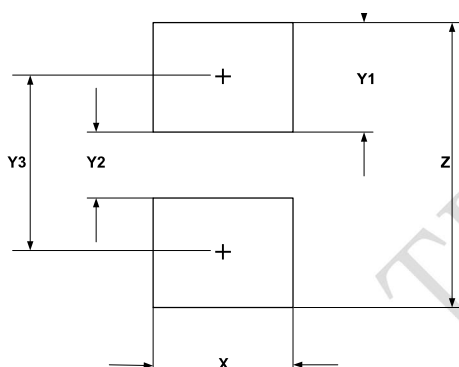

Fig3. Power Derating Curve

DFN1006-2 Package Outline Drawing (0402)

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

Suggested Land Pattern

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

Marking:

Or

1 88 2   1 PS * 2

PS= Device Code
*= Date Code