TECH PUBLIC
台舟电子

PESD5V0F1BL

Low Capacitance Bi-directional TVS Diode

www.sot23.com.tw

Features

* Ultra low capacitance: 0.6 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: ±18kV

* – IEC61000-4- 5 (Lightning) 2A (8/20μs)

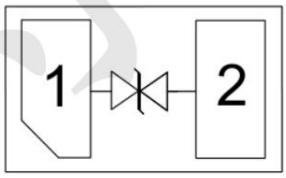
Mechanical Characteristics

* Package：DFN1006-2(0402)
* Ultra low leakage: nA level
* Case Material: “Green” Molding Compound.
* UL Flammability Classification Rating 94V-0
* Moisture Sensitivity: Level 3 per J-STD-020
* Shipping Qty :10000/7Inch Tape & Reel

Applications

* Mobile Phones and Accessories
* Battery Protection
* USB VBus
* Power Line Protection
* Hand Held Portable Applications

Dimensions and Pin Configuration



MARKING Code



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

Parameter	Symbol	Value	Unit
ESD per IEC 61000−4−2 (Air) ESD per IEC 61000−4−2 (Contact)	VESD	±20 ±18	kV
Operating Temperature Range	TJ	−55 to +125	°C
Storage Temperature Range	Tstg	−55 to +150	°C

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

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Working Voltage	V_{RWM}				5	V
Breakdown Voltage	V_{BR}	I_T = 1mA(Pin1-Pin2)	6.5		9	V
Reverse Leakage Current	I_R	V_{RWM} = 5. 0V(Pin2-Pin1)			0.08	μA
Clamping Voltage	V_C	I_{PP} = 1A (8 x 20us pulse) (Pin1-Pin2)			9	V
Clamping Voltage	V_C	I_{PP} = 2A (8 x 20us pulse) (Pin1-Pin2)			15	V
Junction Capacitance	C_J	VR = 0V, f = 1MHz (Pin1-Pin2)		0.6		pF

Characteristic Curves

Fig1. 8/20μs Pulse Waveform

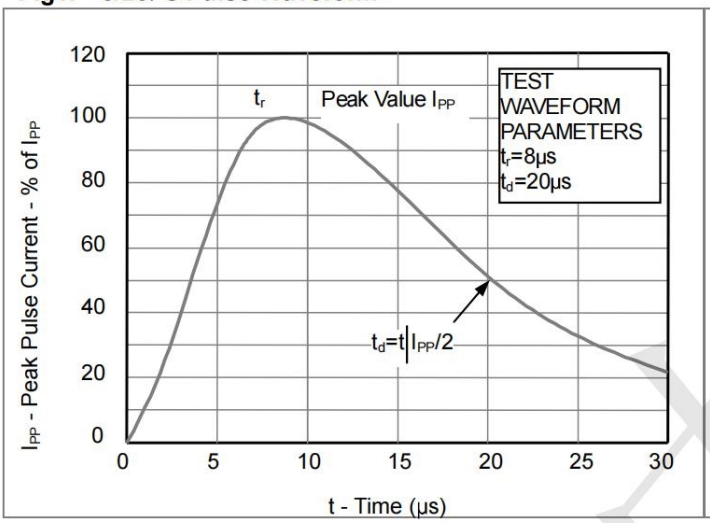


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

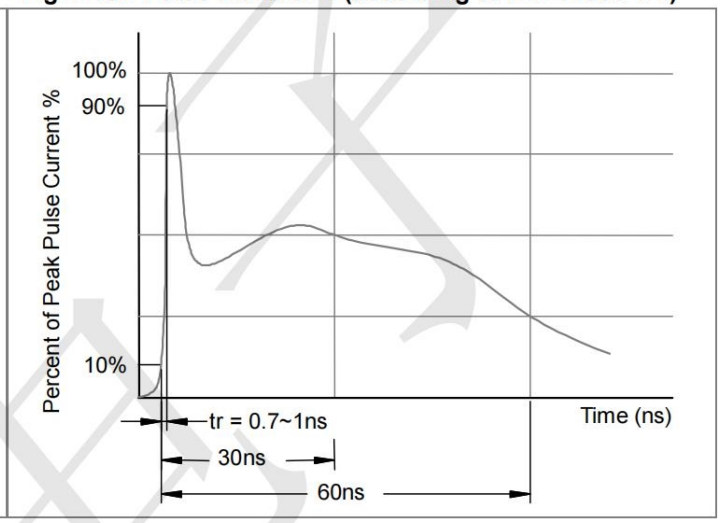
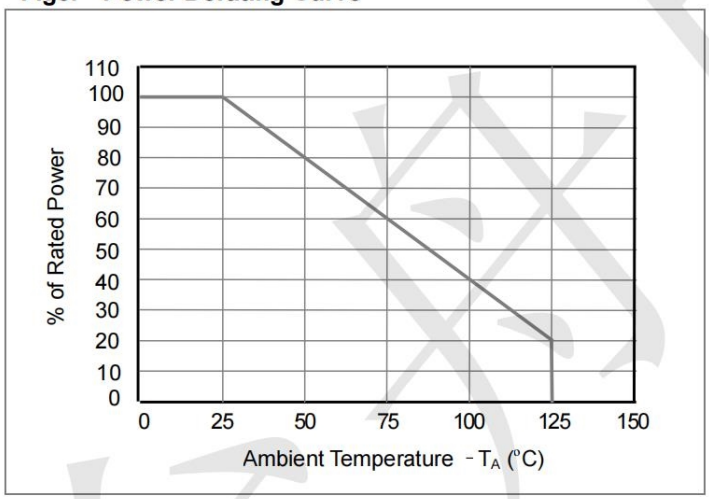
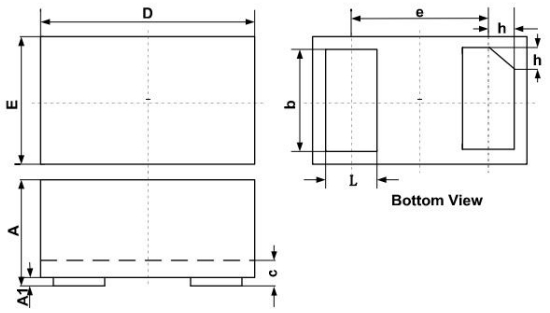


Fig3. Power Derating Curve

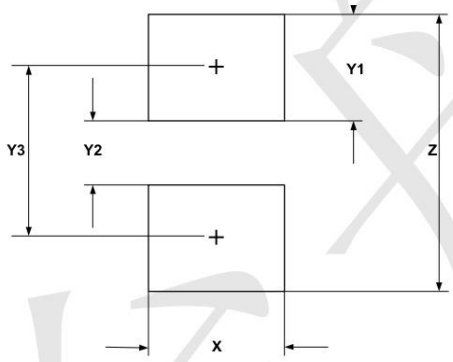


DFN1006-2 Package Outline Drawing (0402)



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

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