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台舟电子

TPESD9C5.0ST5G

Low Capacitance Uni-directional TVS Diode

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Features

- Ultra low capacitance: 0.5pF typical
- Ultra low leakage: nA level
- Low operating voltage: 5V
- Low clamping voltage
- 3-pin leadless package
- Up to 2-line protects
- Complies with following standards:
  - IEC 61000-4-2 (ESD) immunity test
    - Air discharge: ±30kV
    - Contact discharge: ±25kV
  - IEC61000-4-5 (Lightning) 4A (8/20μs)
  - IEC61000-4-4 (EFT) 40A (5/50ns)
- RoHS Compliant

Mechanical Characteristics

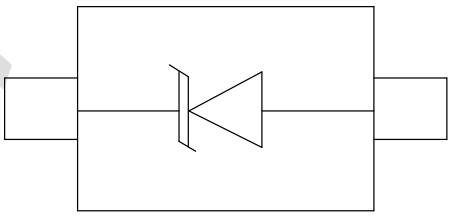
- Package：SOD-923(0402)
- Ultra low leakage: nA level
- Case Material: “Green” Molding Compound.
- UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 3 per J-STD-020

Shipping Qty :8000 Or 10000 /7Inch Tape & Reel

Applications

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

Dimensions and Pin Configuration



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

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs)	Ppk	80	W
Peak Pulse Current (8/20μs)	IPP	4.5	A
ESD per IEC 61000−4−2 (Air) ESD per IEC 61000−4−2 (Contact)	VESD	±20 ±15	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)	5.4	6.7	8.5	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} = 4A (8 x 20us pulse) (Pin1-Pin2)			15	V
Junction Capacitance	C_J	VR = 0V, f = 1MHz		0.5		pF

Characteristic Curves

Fig1. 8/20μs Pulse Waveform

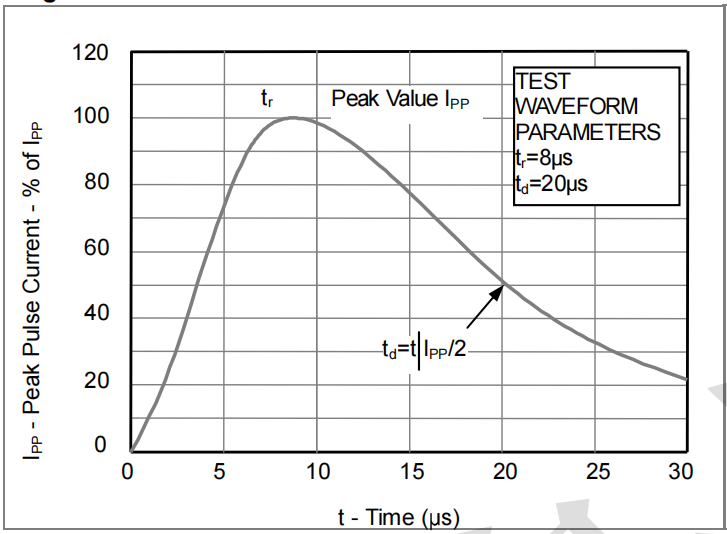


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

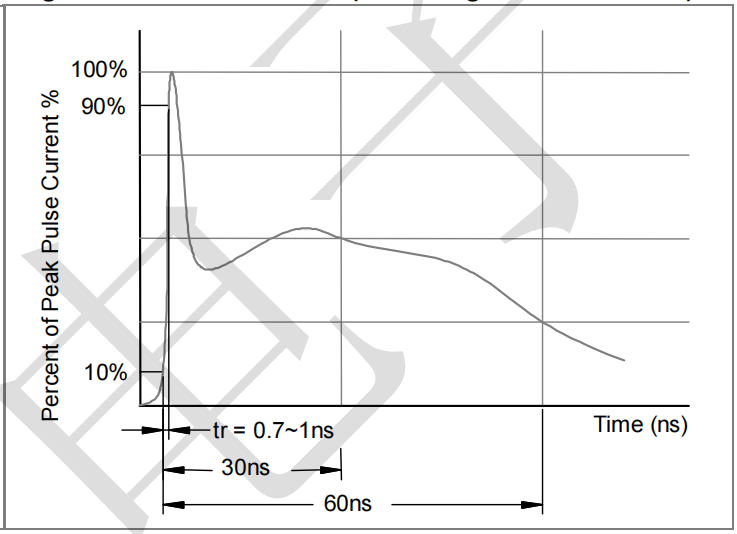
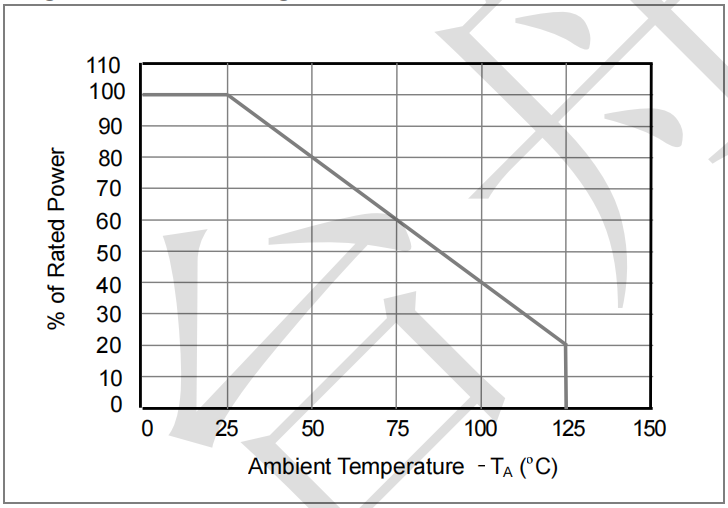
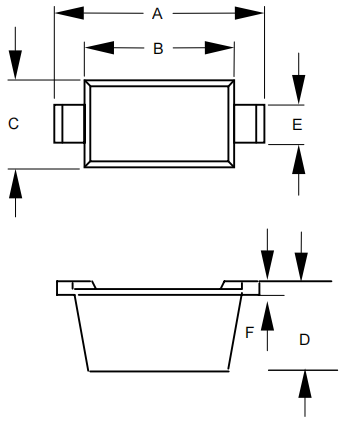


Fig3. Power Derating Curve

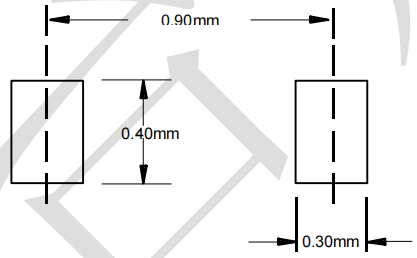


Outline Drawing - SOD-923(0402)



DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.037	.041	0.95	1.05	
B	.030	.033	0.75	0.85	
C	.022	.026	0.55	0.65	
D	.014	.017	0.36	0.43	
E	.006	.010	0.15	0.25	
F	.003	.007	0.07	0.17	

Land Pattern - SOD-923(0402)



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Global Electronic Components Distributor

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TECH PUBLIC:

TPB1A30-123 TPESD0504S6-A ESD5B5.0ST1G-P IRFR2405TRPBF-TP QM3003J-TP TPADM809SAKSZ TPSPX3819M5-L-3-3 TPZVN3320FTA DMP6350S FDC6301N-TP TPESD0402G08V TPS3809L30DBVR-TP TPS7B6950DBVR-TP BSN20W DDTA143ZCA FDMS7670AS-TP TPAPX809S-31SA TPESD5311N TPGC12C-1 BV15C SN7002W TPB05A40-323 TPD1213A-02SM TPFMMT493 TPWSB5557Z TPADM809LAKSZ TPDMG6602SVT TPZXMP3A13FTA LTH7 SI3932DV