

Features

- * 100W peak pulse power (8/20 μ s)
- * Protects one data or power line
- * Operating voltage: 3.3V
- * Ultra low clamping voltage
- * Complies with following standards:
 - IEC 61000-4-2 (ESD) immunity test
 - Air discharge: ± 30 kV
 - Contact discharge: ± 30 kV
 - IEC61000-4-5 (SURGE) 10A (8/20 μ s)

Ordering Information

Part Number	Qty per Reel	Reel Size
TPESD9X3.3ST5G	8000	7"

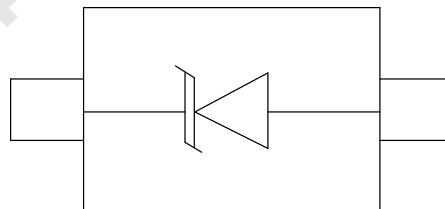
Mechanical Characteristics

- * 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

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	100	W
Peak Pulse Current (8/20μs)	IPP	10	A
ESD per IEC 61000-4-2 (Air)	VESD	±30	kV
ESD per IEC 61000-4-2 (Contact)		±30	
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}				3.3	V
Breakdown Voltage	V _{BR}	I _T = 1mA(Pin1-Pin2)	5			V
Reverse Leakage Current	I _R	V _{RWM} = 3.3V(Pin2 -Pin1)			0.1	μA
Clamping Voltage	V _C	I _{PP} = 1A (8 x 20us pulse) (Pin1-Pin2)			8	V
Clamping Voltage	V _C	I _{PP} = 10A (8 x 20us pulse) (Pin1-Pin2)			11	V
Junction Capacitance	C _J	V _R = 0V, f = 1MHz			90	pF

Characteristic Curves

Fig1. 8/20 μ s Pulse Waveform

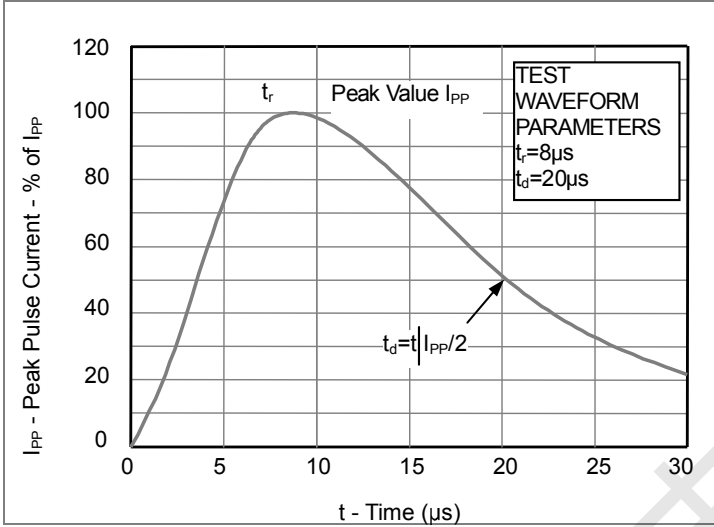


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

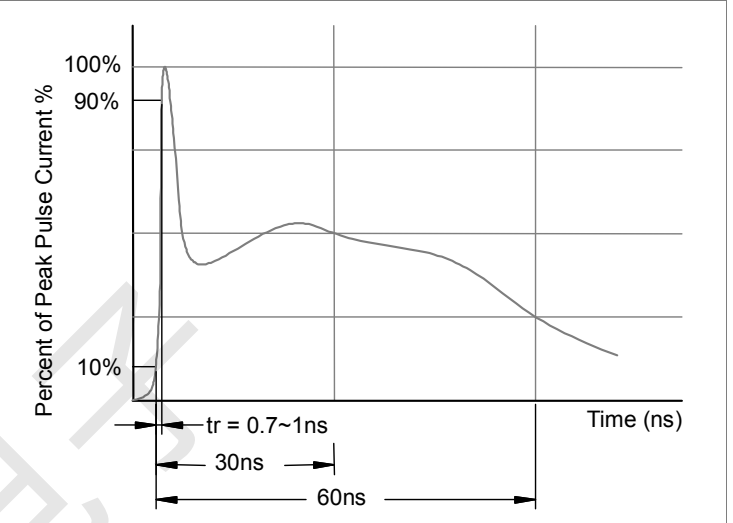
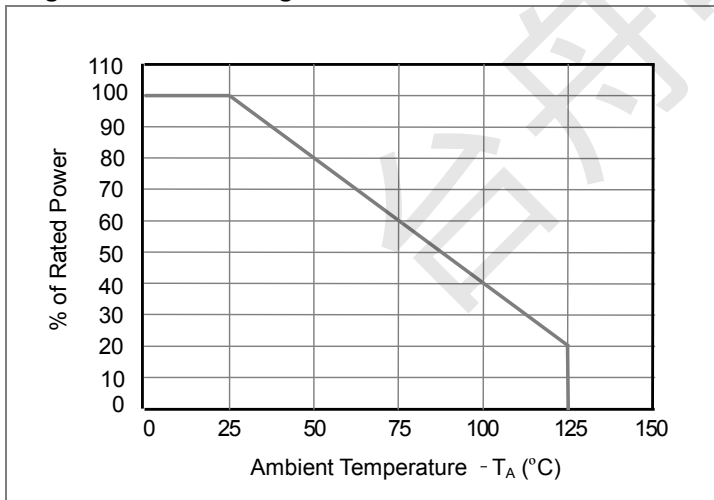
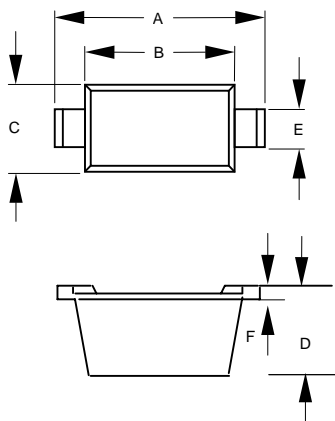


Fig3. Power Derating Curve

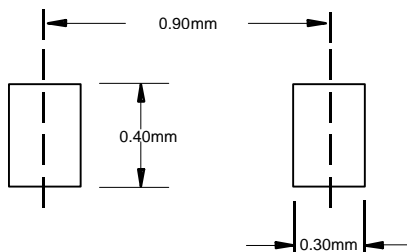


Outline Drawing - SOD-923(0402)



DIM	DIMENSIONS				NOTE
	INCHES		MM		
	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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