

Features

- * 60W peak pulse power (8/20 μ s)
- * Protects one data or power line
- * Operating voltage: $\pm 5V$
- * Ultra low clamping voltage
- * Complies with following standards:
 - IEC 61000-4-2 (ESD) immunity test
 - Air discharge: $\pm 30kV$
 - Contact discharge: $\pm 30kV$
 - IEC61000-4-5 (SURGE) 6A (8/20 μ s)

Ordering Information

Part Number	Qty per Reel	Reel Size
TPESD9B5.0ST5G	8000	7"

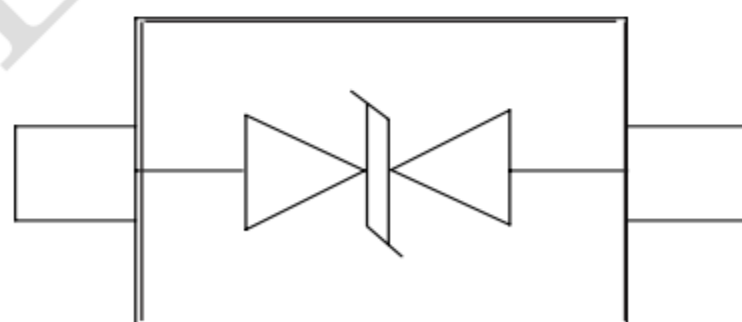
Mechanical Characteristics

- * 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



Marking:



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

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs)	Ppk	60	W
Peak Pulse Current (8/20μs)	IPP	6	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	VRWM				5	V
Breakdown Voltage	VBR	IT = 1mA(Pin1-Pin2)	6	7	8	V
Reverse Leakage Current	IR	VRWM = 5.0V(Pin2-Pin1)			0.08	μA
Clamping Voltage	VC	IPP = 1A (8 x 20us pulse) (Pin1-Pin2)			8	V
Clamping Voltage	VC	IPP = 6A (8 x 20us pulse) (Pin1-Pin2)			10	V
Junction Capacitance	CJ	VR = 0V, f = 1MHz (Pin1-Pin2)		15		pF

Characteristic Curves

Fig1. 8/20 μ s Pulse Waveform

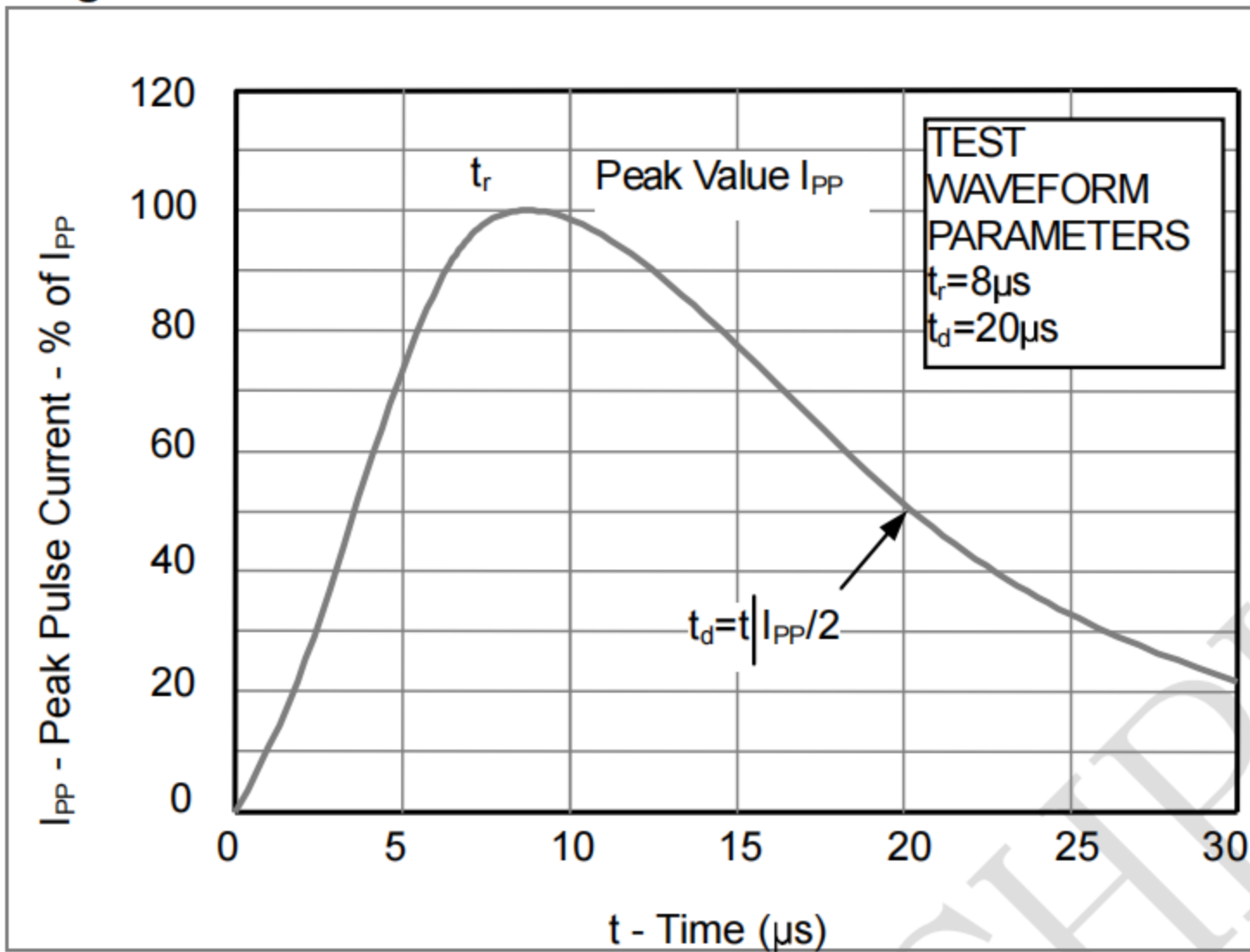


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

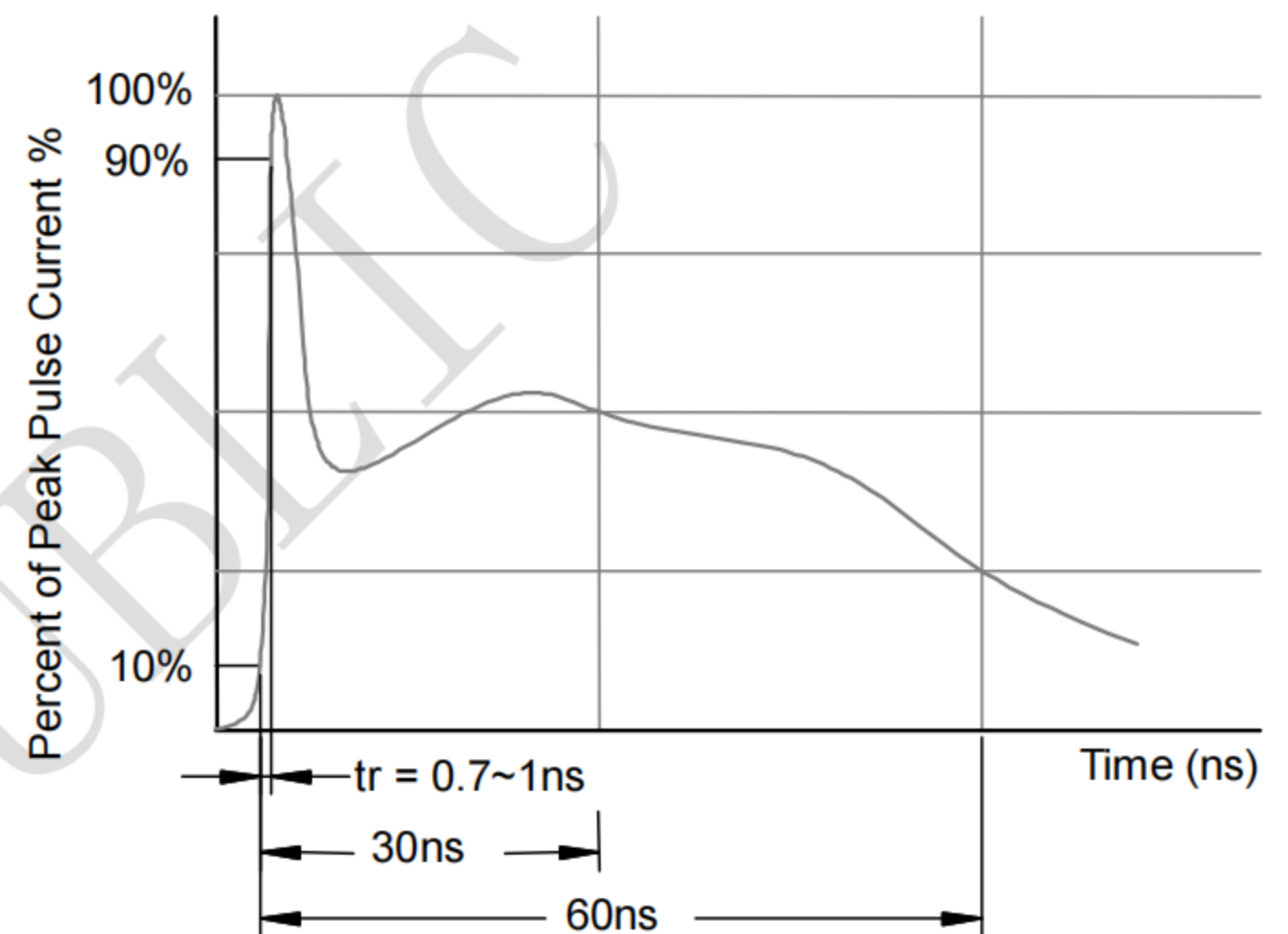
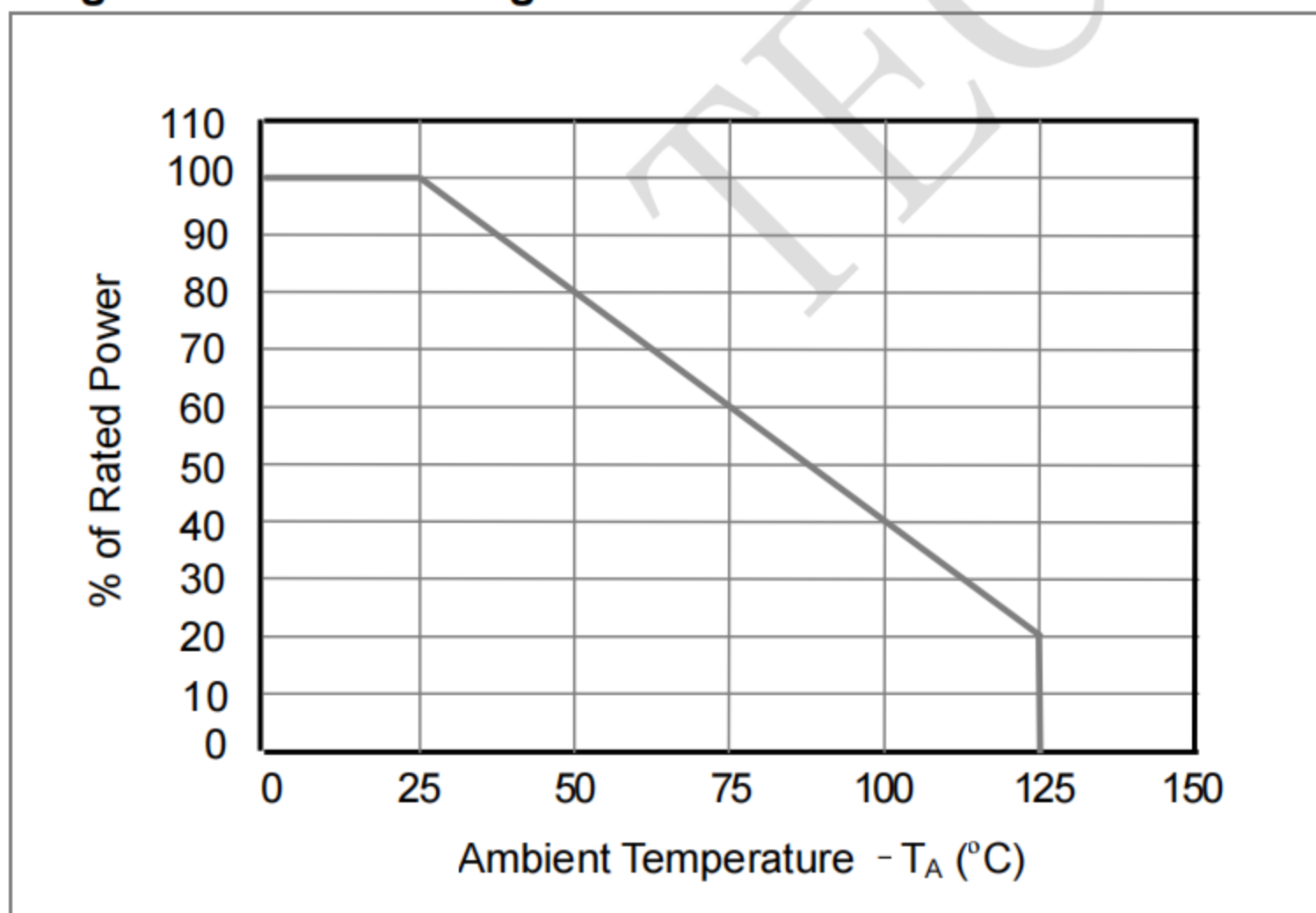
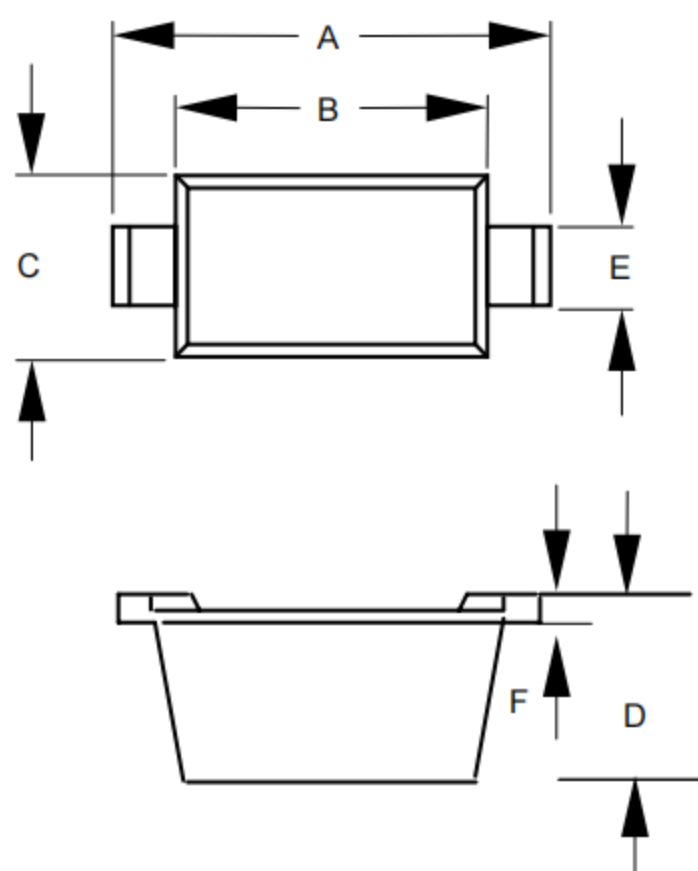


Fig3. Power Derating Curve



Outline Drawing - SOD-923(0402)



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)

