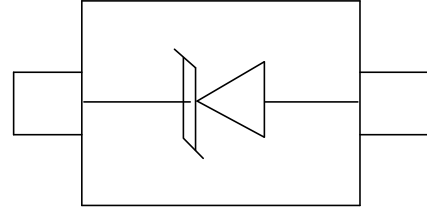


## Feature

- Protects one data or power line
- Operating voltage : 5V
- Ultra low clamping voltage
- Complies with following standards :
  - IEC 61000-4-2 ( ESD ) immunity test
    - Air discharge :  $\pm 23\text{KV}$
    - Contact discharge :  $\pm 20\text{k V}$



## Mechanical Characteristics

- Ultra low leakage : NA level
- Case Material : Green Molding Compound

## Applications

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

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

Parameter	Symbol	Value	Unit
ESD per IEC 61000-4-2 (Air)	VESD	±23	kV
ESD per IEC 61000-4-2 (Contact)		±20	
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 <sub>RWM</sub>				5	V
Breakdown Voltage	V <sub>BR</sub>	I <sub>T</sub> = 1mA(Pin1-Pin2)	5.6		9	V
Reverse Leakage Current	I <sub>R</sub>	V <sub>RWM</sub> = 5.0V(Pin2-Pin1)			0.08	μA
Clamping Voltage	V <sub>C</sub>	I <sub>PP</sub> = 1A (8 x 20us pulse) (Pin1-Pin2)			9	V
Clamping Voltage	V <sub>C</sub>	I <sub>PP</sub> = 4A (8 x 20us pulse) (Pin1-Pin2)			15	V
Junction Capacitance	C <sub>J</sub>	V <sub>R</sub> = 0V, f = 1MHz (Pin1-Pin2)		0.6	0.9	pF

Characteristic Curves

Fig1. 8/20μs Pulse Waveform

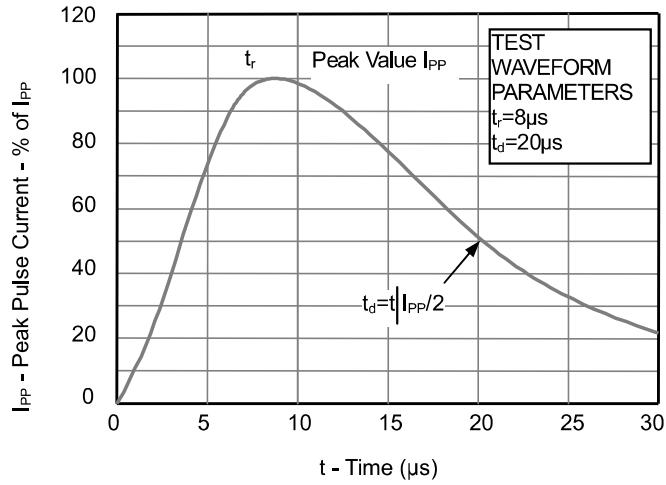


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

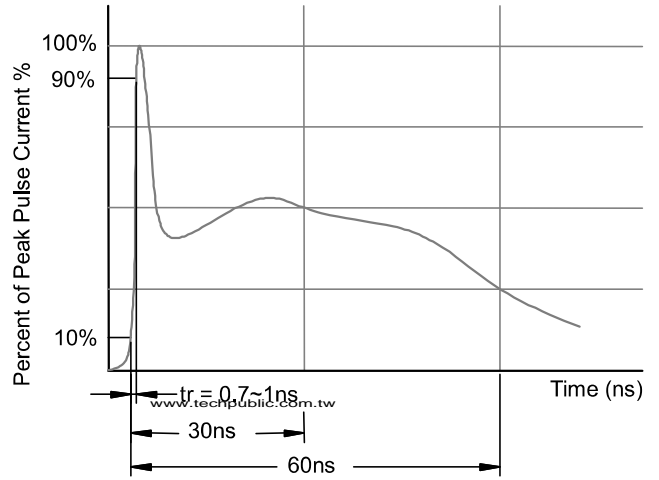
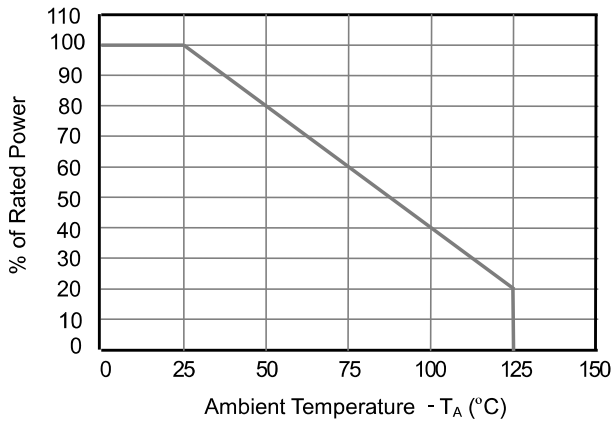
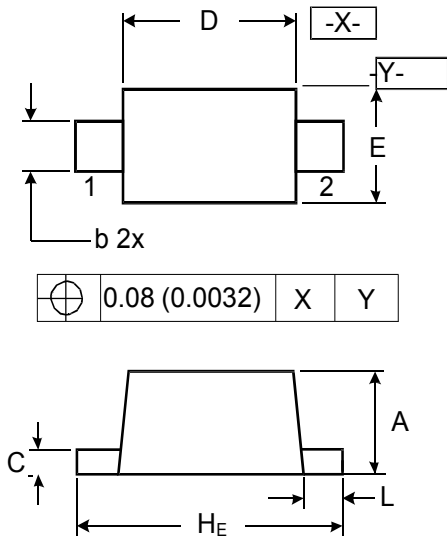


Fig3. Power Derating Curve



**Outline Drawing – SOD-523**



**DIMENSIONS**

SYMBOL	MILLIMETER		INCHES	
	MIN	MAX	MIN	MAX
A	0.50	0.70	0.020	0.028
b	0.25	0.35	0.010	0.014
C	0.07	0.20	0.0028	0.0079
D	1.10	1.30	0.043	0.051
E	0.70	0.90	0.028	0.035
H <sub>E</sub>	1.50	1.70	0.059	0.067
L	0.15	0.25	0.006	0.010

**Marking**

**Ordering information**

Order code	Package	Base qty	Delivery mode
UMW PESD5V0U1UB	SOD-523	3000	Tape and reel

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