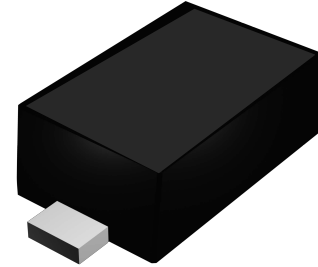


## Features

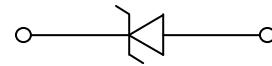
- 250W peak pulse power ( $t_p=8/20\mu s$ )
- SOD-523 package
- Fast response time, typically  $< 1\text{ ns}$
- Excellent clamping voltage
- Low leakage current
- IEC 61000-4-2  $\pm 15\text{kV}$  (Air) ESD protection
- IEC 61000-4-2  $\pm 8\text{kV}$  (Contact) ESD protection
- IEC 61000-4-4 40A (5/50ns) EFT protection
- RoHS compliant



SOD-523

## Applications

- Cellular phones
- Portable devices
- Digital cameras
- Power supplies



Schematic Diagram

## Absolute Maximum Ratings

( $T_A=25^\circ\text{C}$  unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power ( $T_P=8/20\mu s$ )	P <sub>pp</sub>	250	W
Peak Pulse Current ( $T_P=8/20\mu s$ )	I <sub>pp</sub>	13	A
Operating temperature	T <sub>J</sub>	-55 to +150	°C
Storage temperature	T <sub>STG</sub>	-55 to +150	°C

## Electrical Characteristics

( $T_A=25^\circ\text{C}$  unless otherwise specified)

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Reverse stand-off Voltage	V <sub>RWM</sub>	-	-	-	5	V
Reverse Breakdown Voltage	V <sub>BR</sub>	I <sub>T</sub> =1mA	6.2	-	7.4	V
Reverse Leakage Current	I <sub>R</sub>	V <sub>R</sub> =5V	-	-	1	μA
Clamping Voltage	V <sub>C</sub>	I <sub>PP</sub> =5A, T <sub>P</sub> =8/20μS	-	-	11.6	V
Clamping Voltage	V <sub>C</sub>	I <sub>PP</sub> =9.4A, T <sub>P</sub> =8/20μS	-	-	19.5	V
Junction Capacitance	C <sub>J</sub>	V <sub>R</sub> =0V, f=1MHz	-	80		pF

## Typical Characteristic Curves

Fig.1 Peak Pulse Power vs Pulse Time

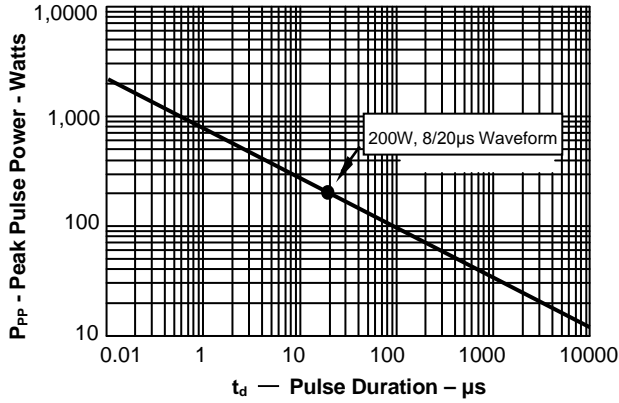


Fig.2 Pulse WaveForm-8/20μs

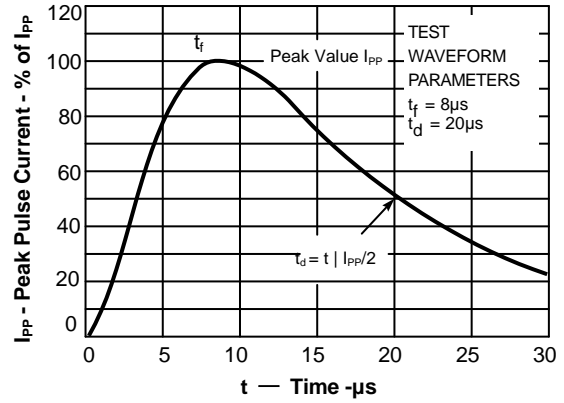


Fig.3 Power Derating Curve

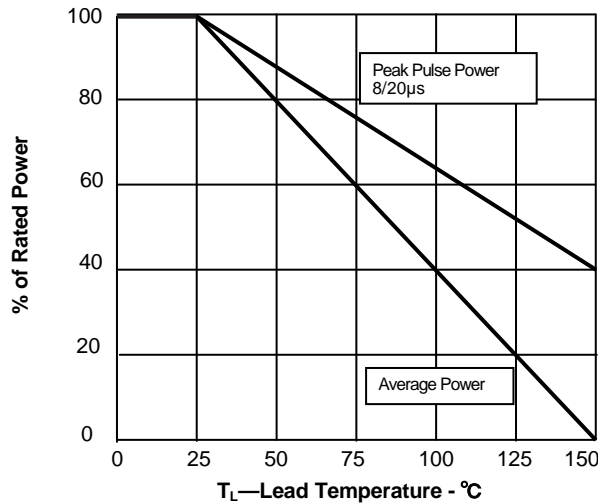
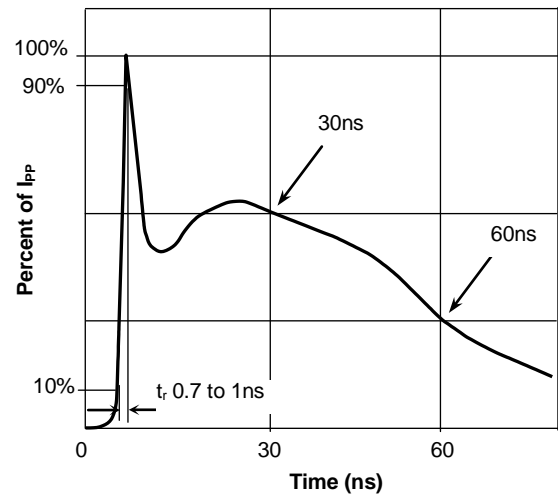
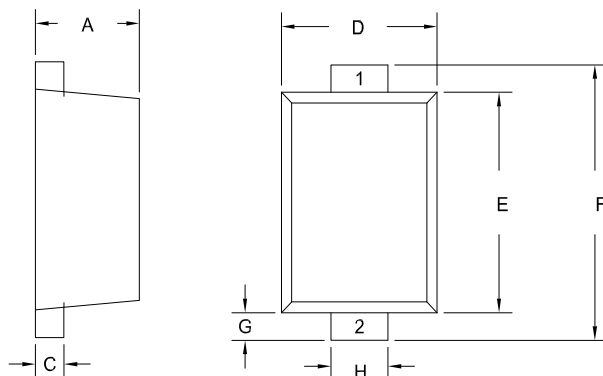


Fig.4 Pulse Waveform-ESD(IEC61000-4-2)



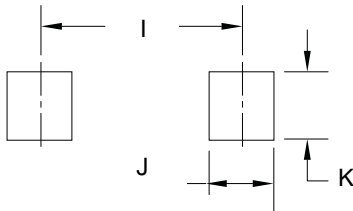
## Product Dimensions



SOD-523

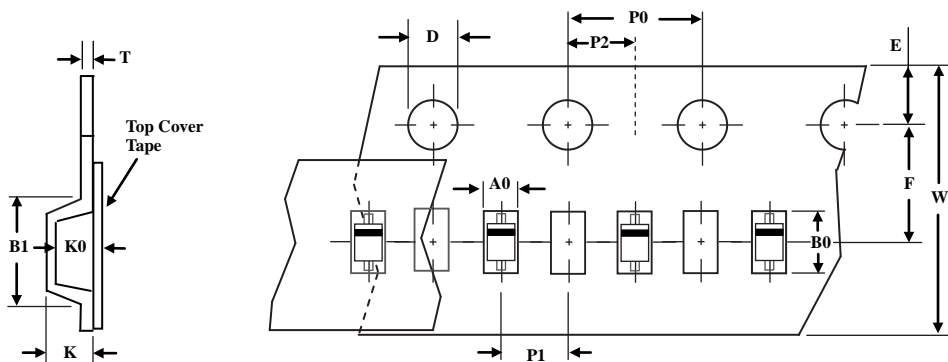
Dim	mm	
	min	max
A	0.50	0.70
C	0.07	0.20
D	0.70	0.90
E	1.10	1.30
F	1.50	1.70
G	0.15	0.25
H	0.25	0.35

### PAD Dimensions



Dim	mm	
	min	max
I	1.35	
J	0.35	
K	0.39	

### Package Information

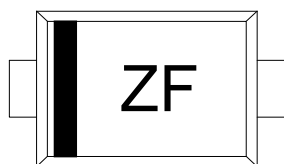


TapeSize(W)	B1 max	D	E	F	K max	P0	P1	P2	T max	W max
8	4.55	1.55±0.05	1.75±0.1	3.5±0.05	2.4	4.0±0.1	2.0±0.05	2.0±0.05	0.6	8.3

Note: 1. unit : mm

2. A0, B0, and K0 are determined by component size. The clearance between the components and the cavity must be within 0.05mm min to 0.50 mm max. The component cannot rotate more than 10° within the determined cavity.

### Marking



### Order Information

Device	Package	Net Weight	Carrier	Quantity	HSF Status
SPESP5VD523-2U	SOD-523	0.0014g	Tape & Reel	8000pcs / Reel	RoHS compliant