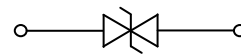


**Features**

- 400 Watts peak pulse power ( $t_p=8/20\ \mu\text{S}$ )
- Bidirectional configuration
- Fast response time, typically  $< 1\ \text{ns}$
- Excellent clamping voltage
- Low leakage current
- IEC 61000-4-2  $\pm 30\text{kV}$  (Air) ESD protection
- IEC 61000-4-2  $\pm 30\text{kV}$  (Contact) ESD protection
- IEC 61000-4-5 20A (8/20us) Surge protection
- IEC 61000-4-4 40A (5/50ns) EFT protection



**SOD-523**



**Schematic Diagram**

**Applications**

- Cellular Phones
- Portable Devices
- Digital Cameras
- Power Supplies



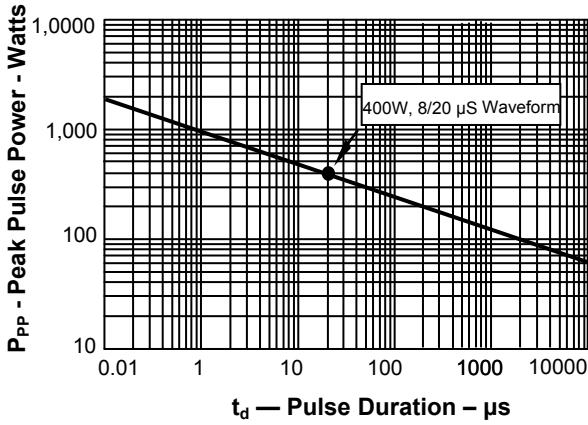
**Absolute Maximum Ratings** ( $T_A=25^\circ\text{C}$  unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power ( $t_p=8/20\ \mu\text{S}$ )	$P_{PP}$	400	W
Peak Pulse Current ( $t_p=8/20\ \mu\text{S}$ )	$I_{PP}$	20	A
Operating Temperature	$T_J$	-55 to +150	$^\circ\text{C}$
Storage Temperature	$T_{STG}$	-55 to +150	$^\circ\text{C}$

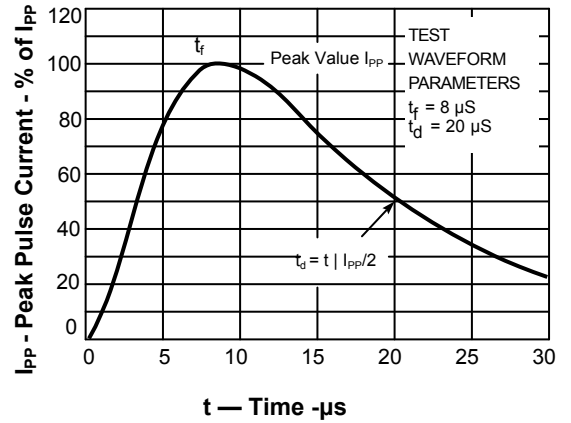
**Electrical Characteristics** ( $T_A=25^\circ\text{C}$  unless otherwise specified.)

Parameterer	Symbol	Condition	Min	Typ	Max	Unit
Reverse Stand-Off Voltage	$V_{RWM}$	-	-	-	5	V
Reverse Breakdown Voltage	$V_{BR}$	$I_T=1\text{mA}$	6	-	9	V
Reverse Leakage Current	$I_R$	$V_R=5\text{V}$	-	-	1	$\mu\text{A}$
Clamping Voltage	$V_C$	$I_{PP}=20\text{A}, T_P=8/20\ \mu\text{S}$	-	-	20	V
Junction Capacitance	$C_J$	$V_R=0, f=1\text{MHz}$	-	35	40	pF

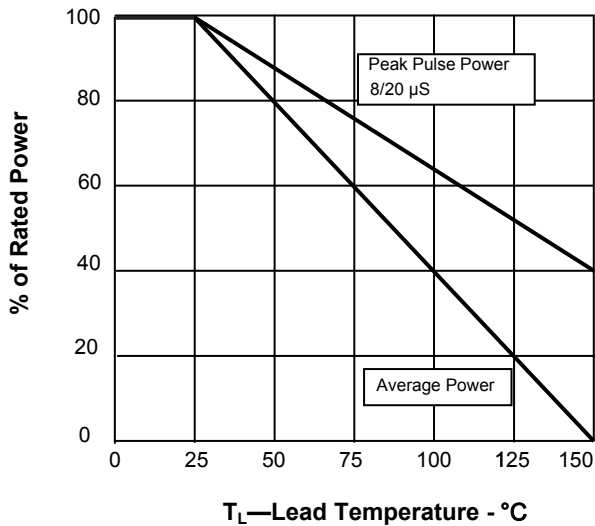
**Typical Characteristic Curves**



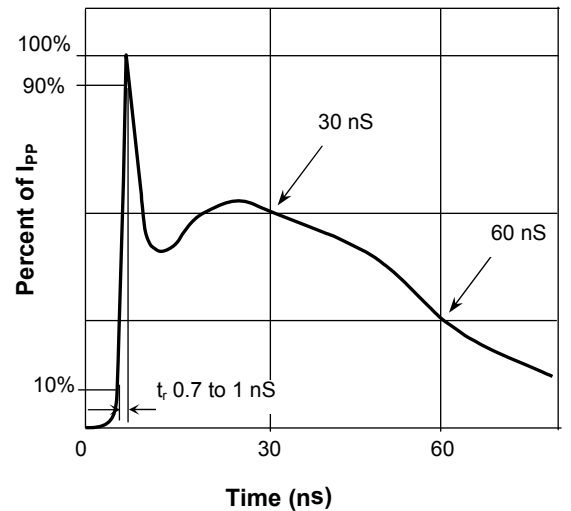
**Figure 1. Peak Pulse Power vs Pulse Time**



**Figure 2. Pulse WaveForm-8/20μs**



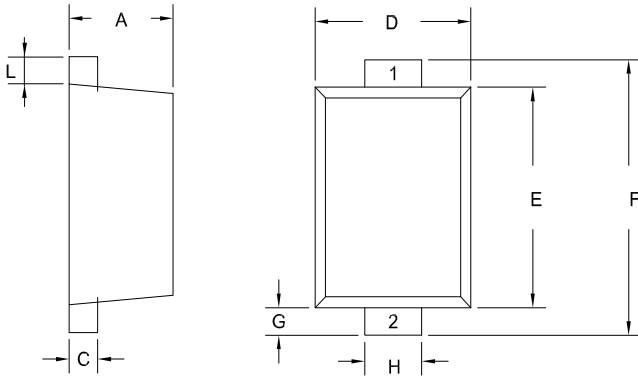
**Figure 3. Pulse Derating Curve**



**Figure 4. Pulse Waveform-ESD (IEC61000-4-2)**

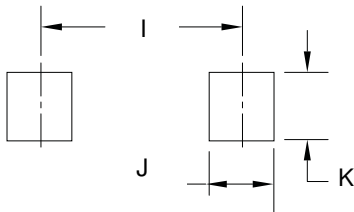
**Package Outline Dimensions**

SOD-523



Dim	Millimeters	
	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
L	0.15	0.25

**Recommended Pad Dimensions**



Dim	Millimeters
I	1.35
J	0.35
K	0.39

**Order Information**

Device	Package	Marking	Carrier	Quantity	HSF Status	Net Weight
GSES5VD523H-2B	SOD-523	C5	Tape & Reel	5000pcs/Reel	RoHS compliant	0.0014g