

## Features

- 30 Watts Peak Pulse Power per Line ( $t_p = 8/20\mu s$ )
- Bidirectional Configuration
- Protects One Power or I/O Port
- ESD Protection > 40 kilovolts
- Low Clamping Voltages
- Ultra Low Capacitance: 3 pF Typical



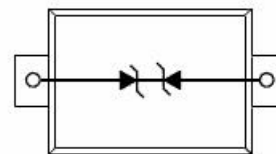
SOD-523

## IEC Compatibility (EN61000-4)

- IEC 61000-4-2 (ESD) : $\pm 25kV$  (air),  $\pm 25kV$  (contact)
- IEC 61000-4-4 (EFT) :40A (5/50ns)
- IEC 61000-4-5(Surge): 2.5A, 8/20 $\mu s$

## Applications

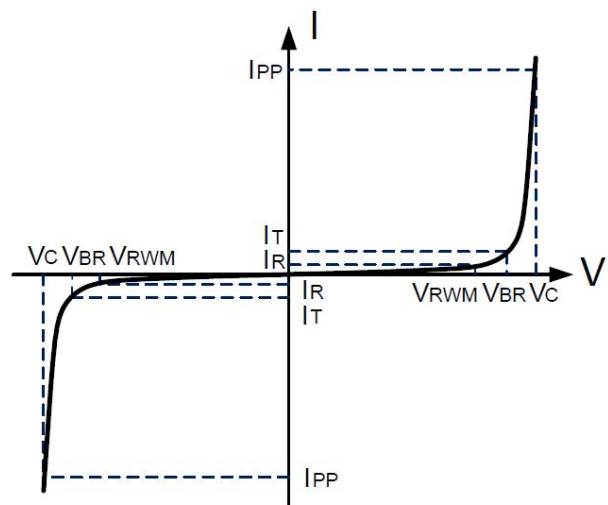
- Ethernet - 10/100/1000 Base T
- Cellular Phones
- Handheld - Wireless Systems
- Personal Digital Assistant (PDA)
- USB Interface



## Electrical Parameters

Parameter	Symbol	Value	Units
Peak pulse power ( $t_p=8/20\mu s$ )	$P_{PP}$	30	Watts
Operating Temperature	$T_J$	$-55^{\circ}C \sim 150^{\circ}C$	$^{\circ}C$
Storage Temperature	$T_{STG}$	$-55^{\circ}C \sim 150^{\circ}C$	$^{\circ}C$

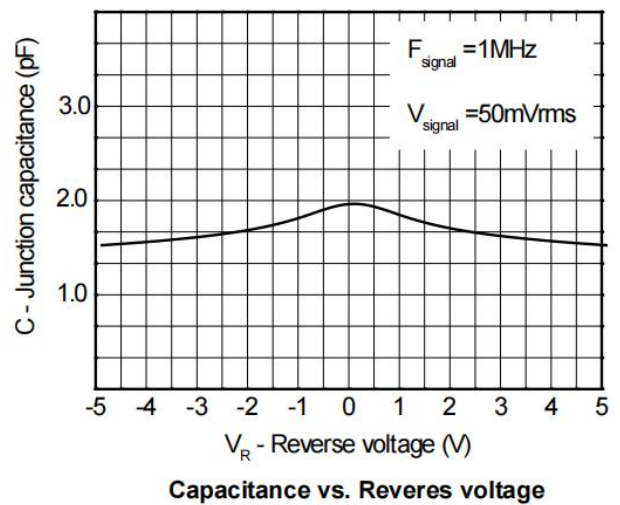
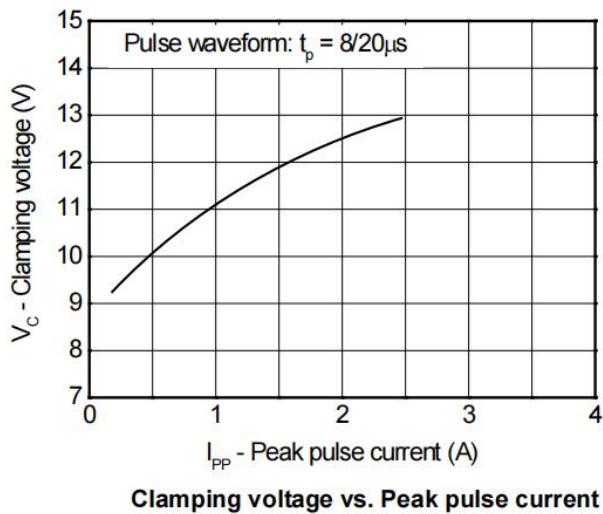
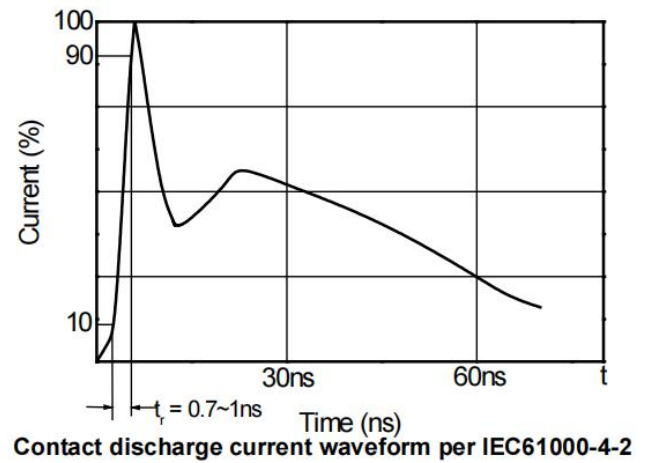
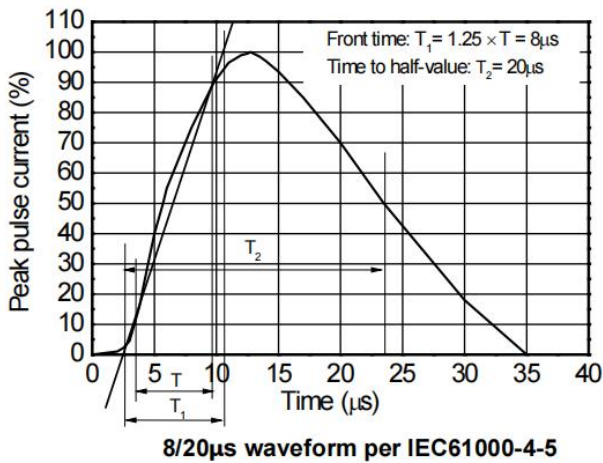
Symbol	Parameter
$I_{PP}$	Maximum Reverse Peak Pulse Current
$V_C$	Clamping Voltage @ $I_{PP}$
$V_{RWM}$	Working Peak Reverse Voltage
$I_R$	Maximum Reverse Leakage Current @ $V_{RWM}$
$V_{BR}$	Breakdown Voltage @ $I_R$
$I_T$	Test Current
$I_F$	Forward Current
$V_F$	Forward Voltage @ $I_F$

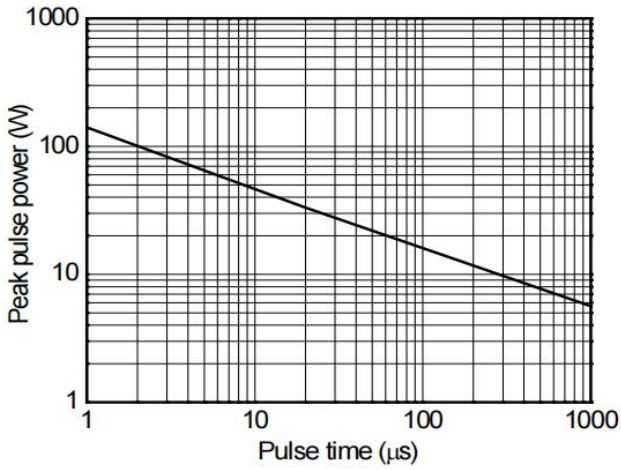


**Ratings and characteristic curves ( $T_A=25^{\circ}\text{C}$  unless otherwise noted)**

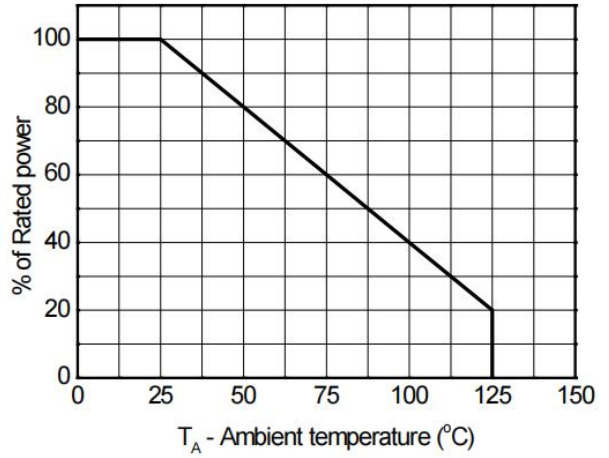
Parameter	Symbol	Condition	Min	Max	Units
Reverse Stand-off Voltage	$V_{RWM}$	Pin2 to 1/Pin1 to 2		5.0	V
Reverse Breakdown Voltage	$V_{BR}(\text{min})$	$I_Z=1\text{mA}$	5.5		V
Reverse Leakage Current	$I_R(\text{max})$	@ $V_{RWM}$		0.5	$\mu\text{A}$
Clamping Voltage	$V_C$	$I_{PP}=2.5\text{A}$ $t_p=8/20\mu\text{s}$		13	V
Junction Capacitance	$C_J$	$V_R = 0\text{V}$ , $f = 1\text{MHz}$		3.5	pf

**Typical Characteristics**





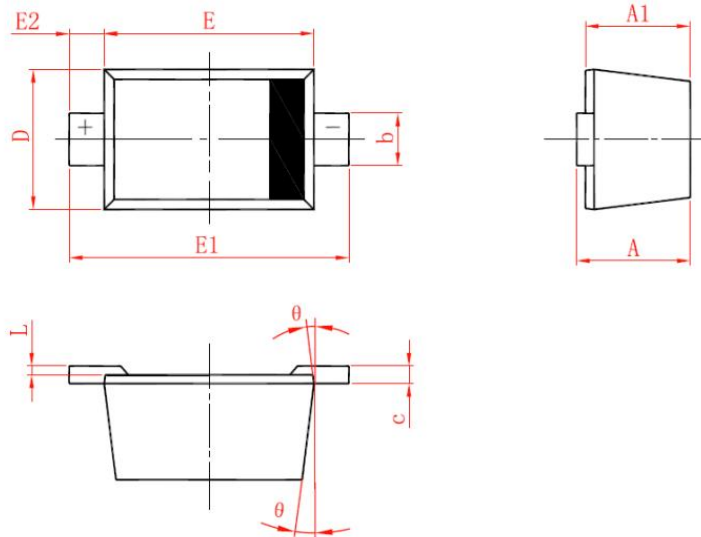
Non-repetitive peak pulse power vs. Pulse time



Power derating vs. Ambient temperature

**Dimensions**

**SOD-523**



Symbol	Dimensions in millimeter		
	Min.	Typ.	Max.
A	0.510	0.640	0.770
A1	0.500	0.600	0.700
b	0.250	0.300	0.350
c	0.080	0.115	0.150
D	0.750	0.800	0.850
E	1.100	1.200	1.300
E1	1.500	1.600	1.700
E2	0.200 Ref		
L	0.010	0.040	0.070
θ	7° Ref		