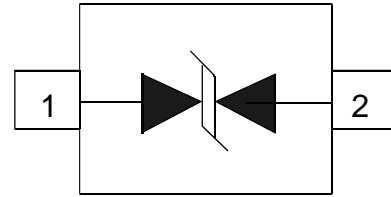


Description

The TVSS5VCES-02GP is designed to protect voltage sensitive components from ESD and transient voltage events. Excellent clamping capability, low leakage, and fast response time, make these parts ideal for ESD protection on designs where board space is at a premium.



Features

- Small Body Outline Dimensions
- Low Body Height
- Peak Power up to 200 Watts @ 8 x 20 μ s Pulse
- Low Leakage current
- Response Time is Typically < 1 ns

Complies with the following standards

IEC61000-4-2

Level 4 15 kV (air discharge)

8 kV(contact discharge)

MIL STD 883E - Method 3015-7 Class 325 kV

HBM (Human Body Model)

Applications

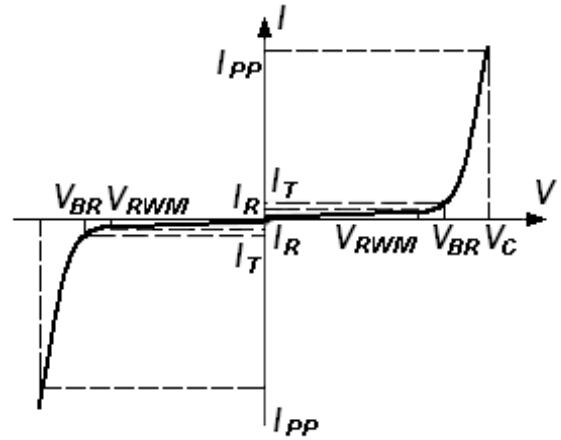
- Cellular phones
- Portable devices
- Digital cameras
- Power supplies

Absolute Ratings ($T_{amb}=25^{\circ}C$)

Symbol	Parameter	Value	Units	
P_{PP}	Peak Pulse Power ($t_p = 8/20\mu s$)	200	W	
T_L	Maximum lead temperature for soldering during 10s	260	$^{\circ}C$	
T_{stg}	Storage Temperature Range	-55 to +155	$^{\circ}C$	
T_{op}	Operating Temperature Range	-40 to +125	$^{\circ}C$	
T_j	Maximum junction temperature	150	$^{\circ}C$	
	IEC61000-4-2 (ESD)	air discharge contact discharge	± 15 ± 8	kV
	IEC61000-4-4 (EFT)		40	A
	ESD Voltage	Per Human Body Model	16	kV
		Per Machine Model	400	V

Electrical Parameter

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}
I_T	Test Current
V_{BR}	Breakdown Voltage @ I_T



Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified. $V_F = 0.9V$ at $I_F = 10mA$

Part Numbers	V_{BR}			I_T	V_{RWM}	I_R	V_F	I_F	C
	Min.	Typ.	Max.				Max.	Typ.	Typ. 0v bias
	V	V	V				V	mA	pF
TVSS5VCES-02GP	5.8	6.7	7.8	1	5.0	1	1.25	200	30

*Surge current waveform per Figure 1.

- V_{BR} is measured with a pulse test current I_T at an ambient temperature of 25°C.

Typical Characteristics

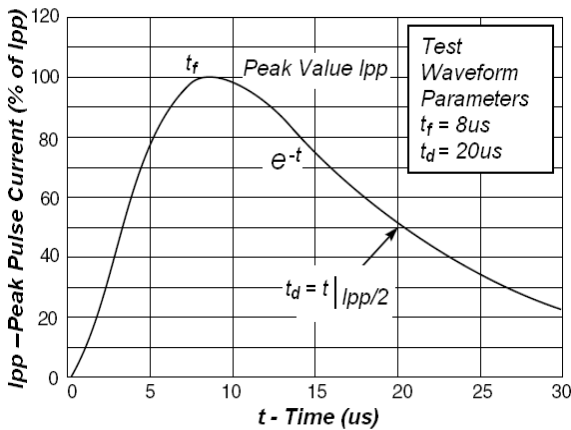
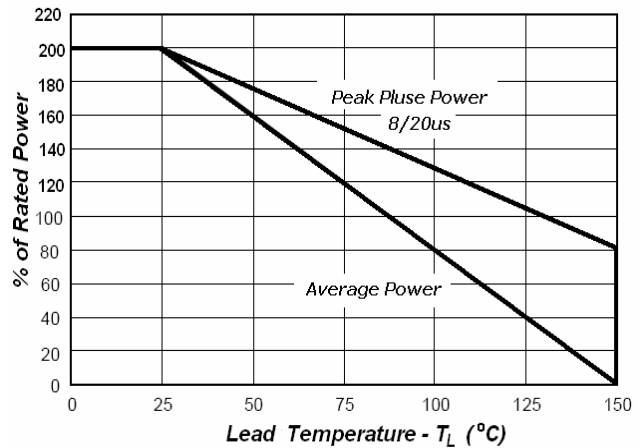
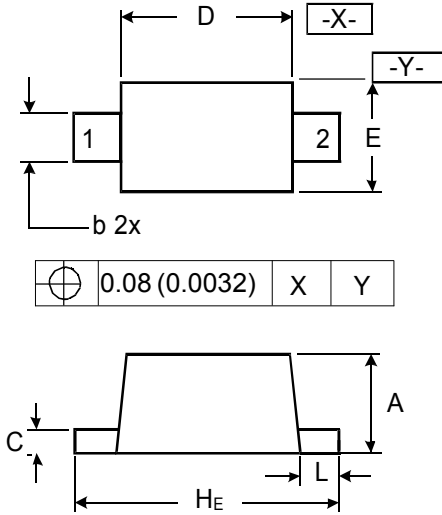


Fig1. Pulse Waveform



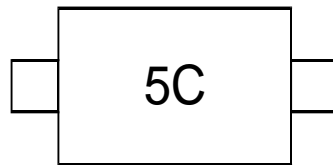
Outline Drawing – SOD523



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 _E	1.50	1.70	0.059	0.067
L	0.15	0.25	0.006	0.010

Marking



Ordering information

Order code	Package	Baseqty	Deliverymode
TVSS5VCES-02GP	SOD-523	3000	Tape and reel