UMW TVSS5VCES-02GP-J

1.Description

The TVSS5VCES-02GP-J 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.

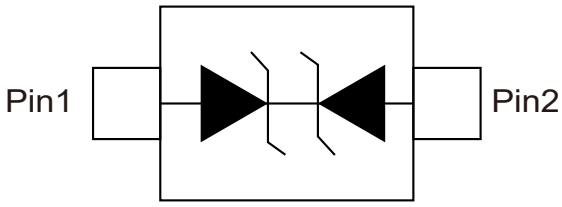
2.Applications

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

3.Features

- Small Body Outline Dimensions
- Low Body Height
- Peak Power up to 200 Watts @8x20_μs 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 3
  25 kV HBM (Human Body Model)

4.Pinning information



SOD-523

5.Absolute Maximum Ratings

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

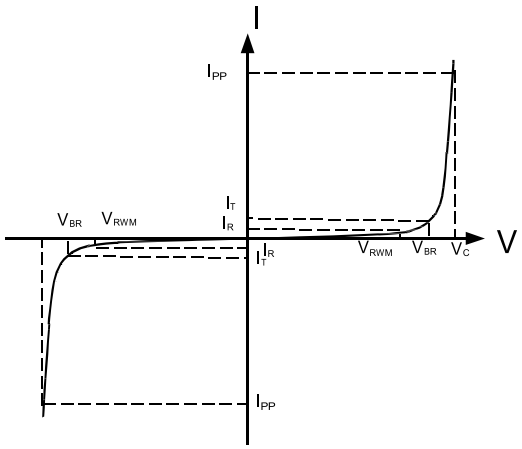
6.Electrical Characteristics

Type Number	V_{BR}			I_T	V_{RWM}	I_R	V_F	I_F	C
	Min.	Typ.	Max.				Max.	Typ.	Typ. 0v bias
	V	V	V	mA	V	μA	V	mA	pF
TVSS5VCES-02GP-J	5.8	6.7	7.8	1	5	1	1.25	200	30

*Surge current waveform per Figure 1.

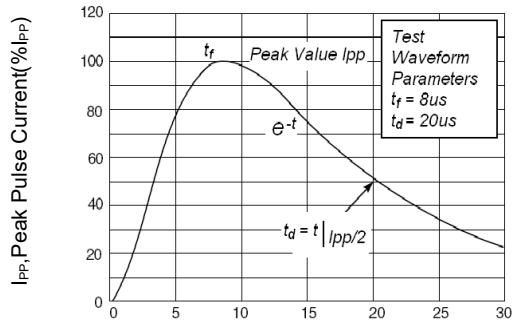
1. V_{BR} is measured with a pulse test current IT at an ambient temperature of 25°C.

7.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}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current

8.Typical characteristic



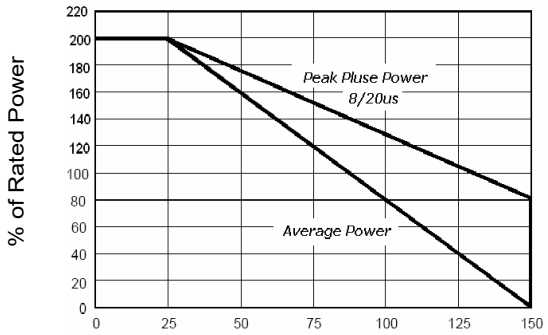
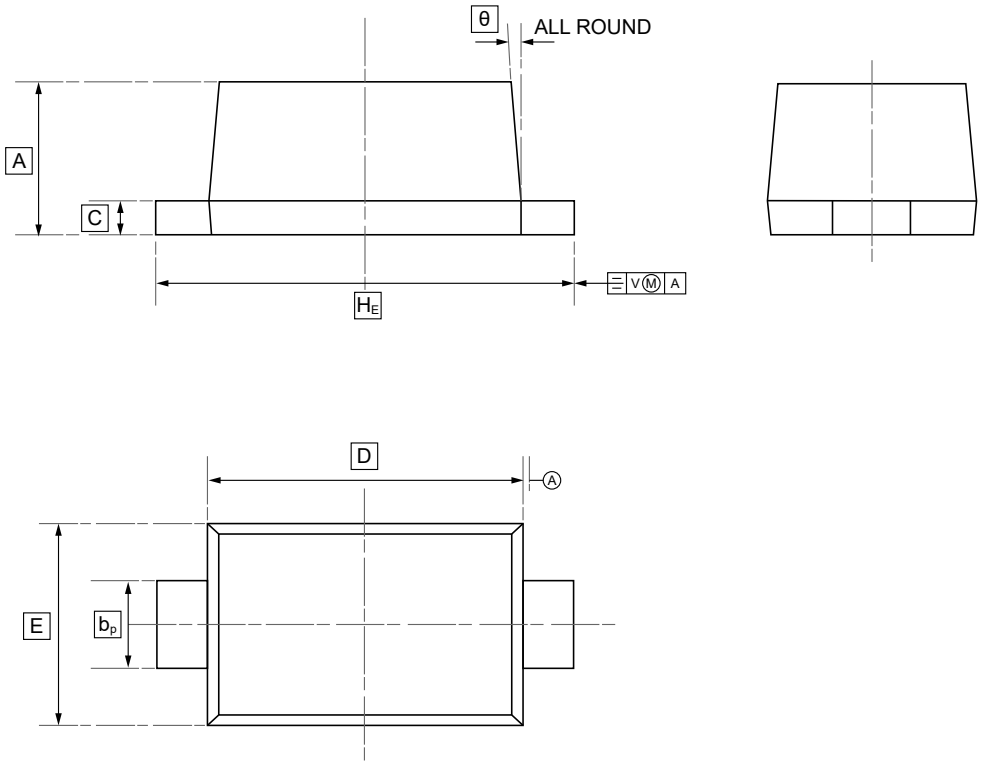


Figure 1: Pulse Waveform

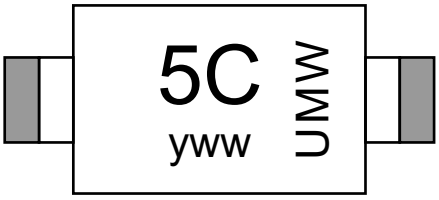
9.SOD-523 Package Outline Dimensions



DIMENSIONS (mm are the original dimensions)

Symbol	A	b_p	C	D	E	H_E	θ
Min	0.58	0.3	0.100	1.15	0.75	1.5	5°
Max	0.68	0.4	0.135	1.25	0.85	1.7	

10.Ordering information



yww: Batch Code

Order Code	Package	Base QTY	Delivery Mode
UMW TVSS5VCES-02GP-J	SOD-523	3000	Tape and reel

11.Disclaimer

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