

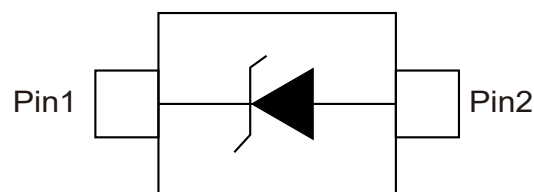
## 1.Description

This new generation TVS is designed to protect sensitive electronics from the damage due to ESD. The combination of small size and high ESD surge capability makes it ideal for use in portable applications .

## 2.Features

- Provides ESD Protection per IEC 61000-4-2  
Standard: Air  $\pm 30\text{kV}$ , Contact  $\pm 30\text{kV}$
- One Channel of ESD Protection
- Low Channel Input Capacitance

## 3.Pinning information



**SOD-523**

## 4.Maximum Ratings

Parameter	Symbol	Conditions	Value	Units
Peak Pulse Power Dissipation	$P_{PP}$	8/20 $\mu\text{s}$ , Per Fig. 1	360	W
Peak Pulse Current	$I_{PP}$	8/20 $\mu\text{s}$ , Per Fig. 1	6	A
ESD Protection – Contact Discharge	$V_{\text{ESD\_Contact}}$	Standard IEC 61000-4-2	$\pm 30$	kV
ESD Protection – Air Discharge	$V_{\text{ESD\_Air}}$	Standard IEC 61000-4-2	$\pm 30$	kV



## 5. Thermal Characteristics

Parameter	Symbol	Value	Units
Package Power Dissipation (Note 5)	$P_D$	250	mW
Thermal Resistance, Junction to Ambient (Note 5)	$R_{\theta JA}$	500	°C/W
Storage Temperature Range	$T_J, T_{STG}$	-65 to 150	°C

## 6. Electrical Characteristic ( $T_A=25^\circ\text{C}$ unless otherwise noted)

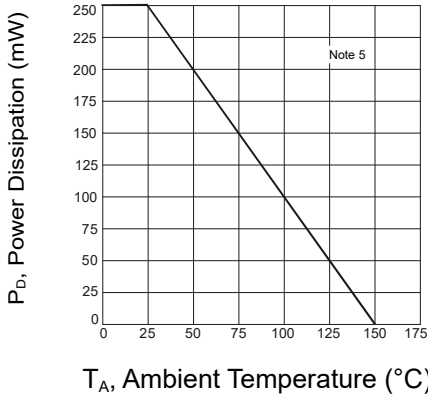
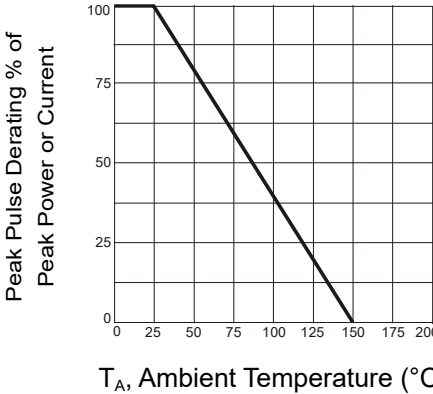
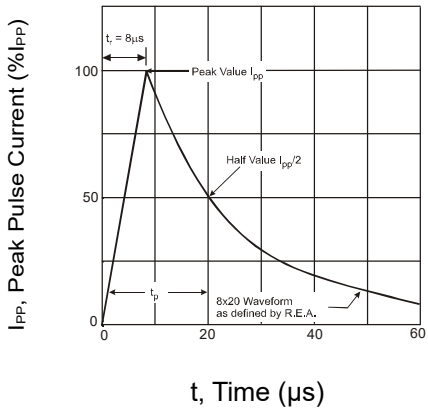
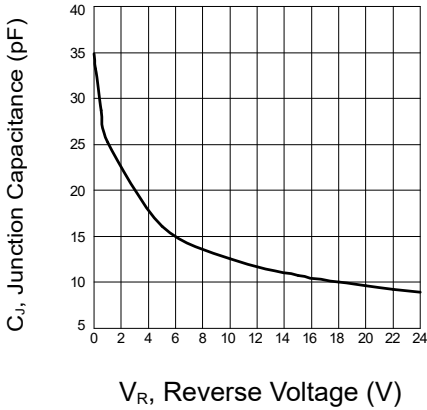
Parameter	Symbol	Conditions	Min	Typ	Max	Units
Reverse Standoff Voltage	$V_{RWM}$				24	V
Channel Leakage Current (Note 6)	$I_{RM}$	$V_{RWM}=24\text{V}$			200	nA
Clamping Voltage, IEC 61000-4-5	$V_{CL}$	$I_{PP}=1\text{A}, t_p=8/20\mu\text{s}$			36	V
Breakdown Voltage	$V_{BR}$	$I_{PP}=6\text{A}, t_p=8/20\mu\text{s}$			60	V
		$I_R=1\text{mA}$	27		34	V
Channel Input Capacitance	$C_T$	$V_R=0\text{V}, f=1\text{MHz}$		35		pF

Notes:

1. Device mounted on FR-4 PCB pad layout (2oz copper)
2. Short duration pulse test used to minimize self-heating effect.

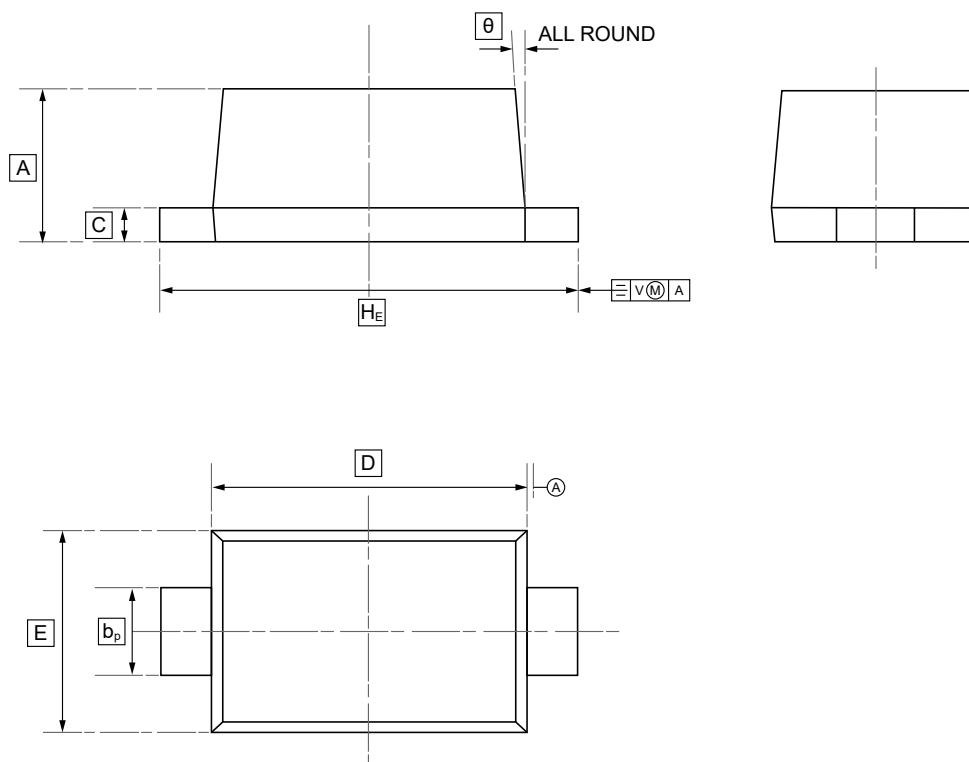


7. Typical characteristic

	
Figure 1: Power Derating Curve	Figure 2: Pulse Derating Curve
	
Figure 3: Pulse Waveform	Figure 4: Typical Junction Capacitance



## 8.SOD-523 Package Outline Dimensions



### DIMENSIONS (mm are the original dimensions)

Symbol	A	b <sub>p</sub>	C	D	E	H <sub>E</sub>	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	



9.Ordering information



ww: Batch Code

Order Code	Package	Base QTY	Delivery Mode
UMW D24V0S1U2TQ-7	SOD-523	3000	Tape and reel



## **10.Disclaimer**

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