UMW D24V0S1U2TQ-7

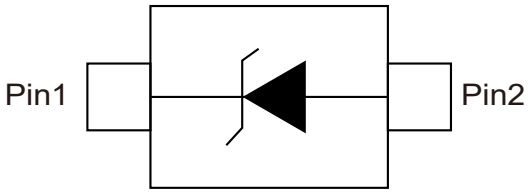
1.Description

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 ±30kV, Contact ±30kV
- 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}	8/20μs, Per Fig. 1	360	W
Peak Pulse Current	I_{PP}	8/20μs, Per Fig. 1	6	A
ESD Protection – Contact Discharge	$V_{ESD\_Contact}$	Standard IEC 61000-4-2	±30	kV
ESD Protection – Air Discharge	V_{ESD_Air}	Standard IEC 61000-4-2	±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°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}=24V			200	nA
Clamping Voltage, IEC 61000-4-5	V_{CL}	I_{PP}=1A, t_p=8/20μs			36	V
Breakdown Voltage		I_{PP}=6A, t_p=8/20μs			60	V
	V_{BR}	I_R=1mA	27		34	V
Channel Input Capacitance	C_T	V_R=0V, f=1MHz		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

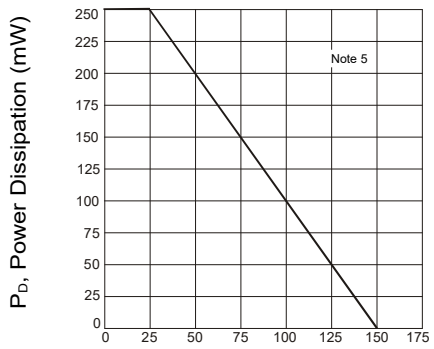


Figure 1: Power Derating Curve

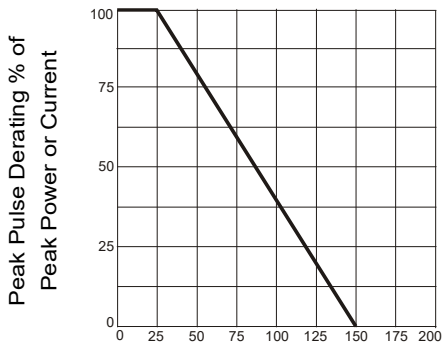


Figure 2: Pulse Derating Curve

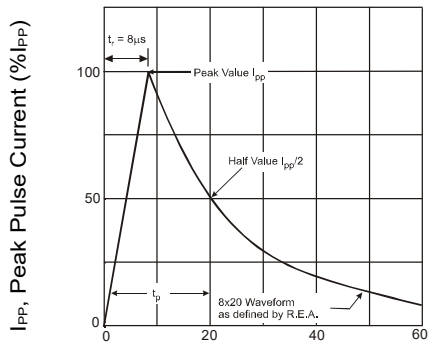


Figure 3: Pulse Waveform

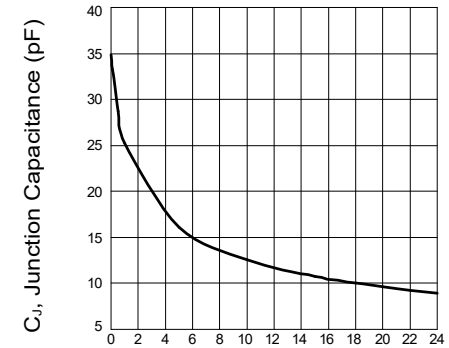
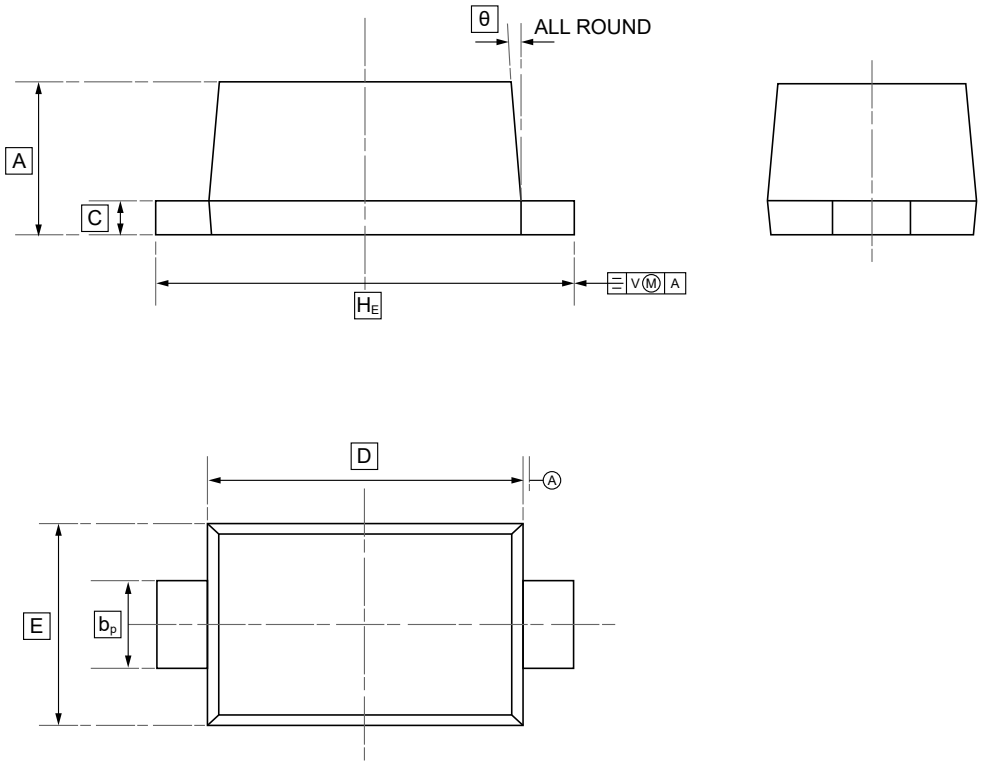


Figure 4: Typical Junction Capacitance

8.SOD-523 Package Outline Dimensions



DIMENSIONS (mm are the original dimensions)

Symbol	A	b_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	

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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