UMW ESD5Z5.0C

1.Description

The ESD5Z3.3C 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.Features

- EC61000-4-2 (ESD) ±30kV (Contact) ±30kV (Air)
- IEC61000-4-4 (EFT) 40A (5/50ηs)
- Peak power dissipation: 75W (8/20μs)
- Protects one I/O line
- Low clamping voltage
- Working voltages : 5V
- Low leakage current

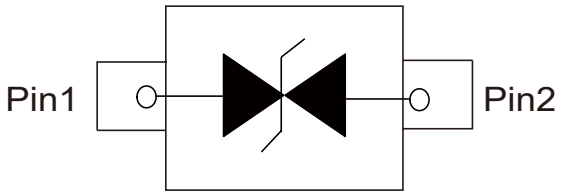
3.Applications

- High Speed Line :USB1.0/2.0, VGA, DVI, SDI
- Serial and Parallel Ports
- Notebooks, Desktops, Servers
- Projection TV
- Cellular handsets and accessories
- Portable instrumentation
- Peripherals

4.Machanical Data

- SOD-523 package
- Terminals: Tin plated, solderable per MIL-STD-750, method 2026
- Reel size: 7 inch
- MSL3

5.Pinning information



SOD-523

6.Absolute Maximum Ratings

Parameter	Symbol	Value	Units
ESD per IEC 61000-4-2 (Contact)	V_{ESD}	±30	kV
ESD per IEC 61000-4-2 (Air)		±30	kV
Peak Pulse Power (8/20μs)	P_{PP}	75	W
Junction Temperature	T_{OPT}	-40 to 150	°C
Storage Temperature	T_{STG}	-40 to 150	°C

7.Electrical Characteristics

Parameter	Symbol	Conditions	Min	Typ	Max	Units
Reverse Working Voltage	V_{RWM}				5	V
Reverse Breakdown Voltage	V_{BR}	I_T=1mA	5.6		9	V
Reverse Leakage Current	I_R	V_{RWM}=5V			1	μA
Clamping Voltage	V_C	I_{PP}=1A, t_p=8/20μs			9.5	V
Clamping Voltage	V_C	I_{PP}=5A, t_p=8/20μs			15	V
Junction capacitance	C_J	V_R=0V, f=1MHz			15	pF

8.Typical characteristic

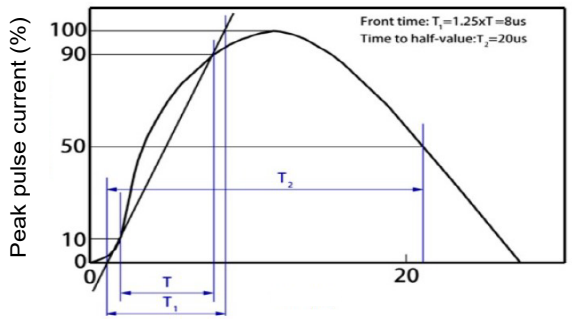


Figure 1: 8/20μs Waveform per IEc61000-4-5

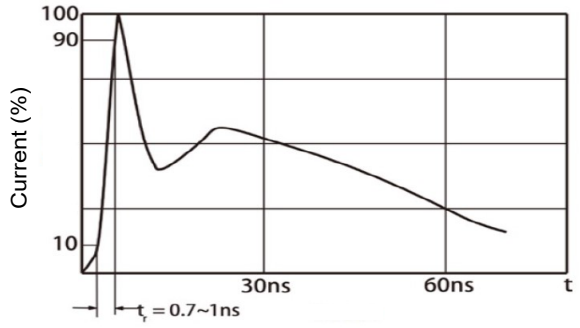


Figure 2: Contact Discharge Current Waveformper IEC 61000-4-2)

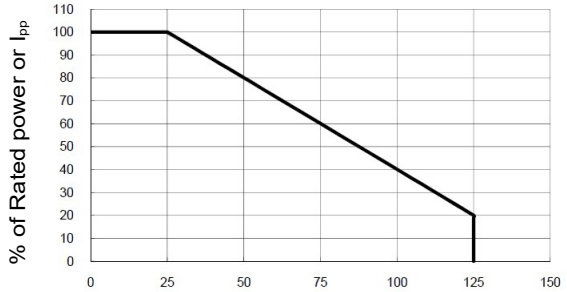


Figure 3: Power Derating Curve

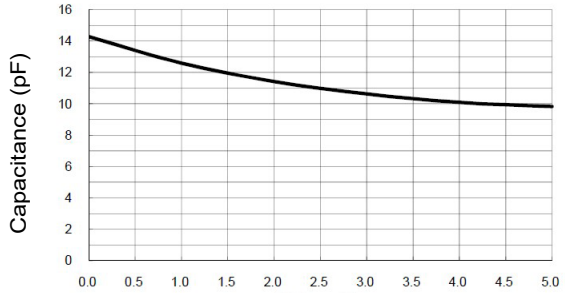


Figure 4: Voltage vs Capacitance

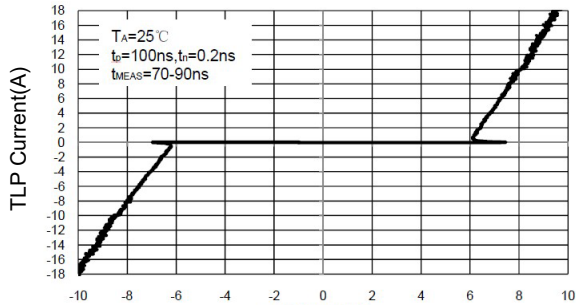


Figure 5: Transmission Line Pulsing (TLP) Measurement

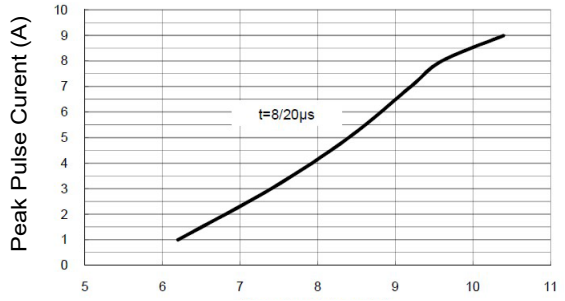
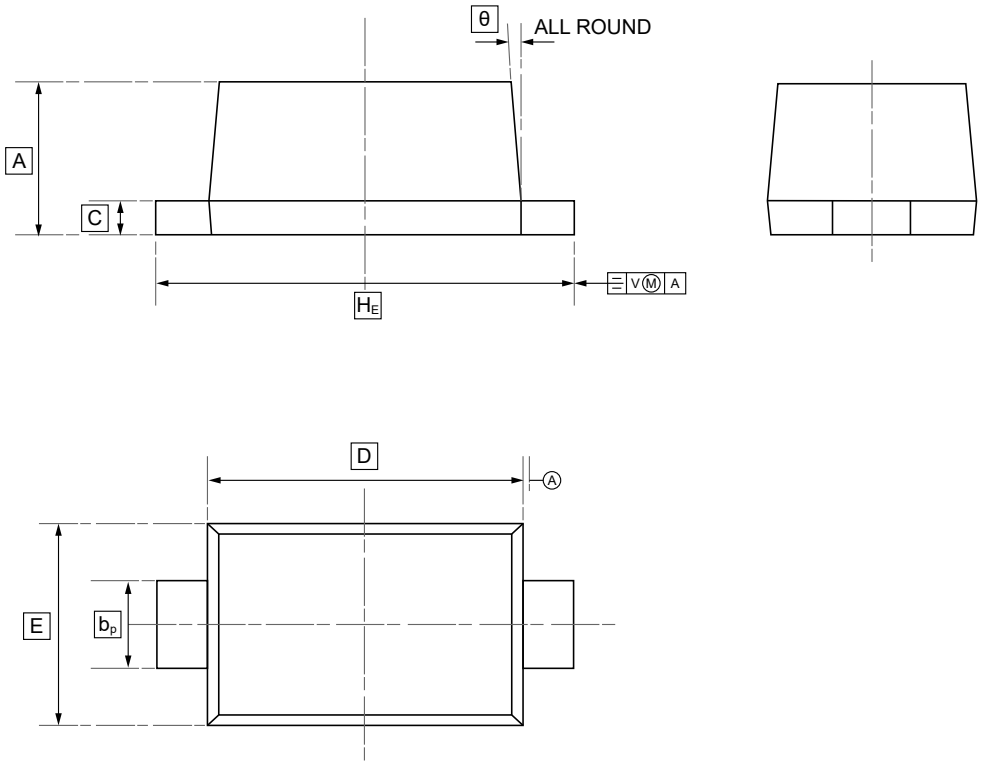


Figure 6: Clamping Voltage vs Peak Pulse Current

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 ESD5Z5.0C	SOD-523	3000	Tape and reel

11.Disclaimer

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