

1. Descriptions

The ESD3B3CM 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. Because of its small size, it is suited for use in cellular phones, portable devices, digital cameras, power supplies and many other portable applications where board space comes at a premium. Also because of its low capacitance, it is suited for use in high frequency designs such as high speed line applications.

This device has been specifically designed to protect sensitive components which are connected to data and transmission lines from overvoltage caused by ESD (electrostatic discharge), and EFT (electrical fast transients).

2. Features

- ESD per IEC 61000-4-2 ± 30 kV (Contact)
- ESD per IEC 61000-4-2 ± 30 kV (Air)
- IEC61000-4-4 (EFT) 40A (5/50ns)
- Peak power dissipation: 500W (8/20 μ s)
- Protects one Vcc or data line
- Low clamping voltage
- Working voltages : 3.3V
- Low leakage current
- Low capacitance

3. Applications

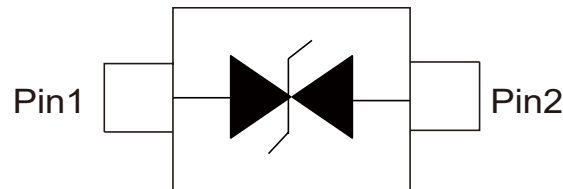
- Cell Phone Handsets and Accessories
- Microprocessor based equipment
- Personal Digital Assistants (PDA's)
- Notebooks, Desktops, and Servers
- Portable Instrumentation
- Networking and Telecom
- Serial and Parallel Ports
- Peripherals

4. Mechanical Data

- SOD-323 package
- Flammability Rating: UL 94V-0
- High temperature soldering guaranteed: 260°C/10s
- Packaging: Tape and Reel
- Reel size: 7 inch



5. Pinning Information



SOD-323

6. Absolute Maximum Rating

Parameter	Symbol	Rating	Units
ESD per IEC 61000-4-2 (Contact)	V_{ESD}	± 30	kV
ESD per IEC 61000-4-2 (Air)		± 30	kV
Peak Pulse Power (8/20 μ s)	P_{PP}	500	W
Operating Temperature	T_{OPT}	-55 to 150	$^{\circ}C$
Storage Temperature	T_{STG}	-55 to 150	$^{\circ}C$

7. Electrical Characteristics $T_A = 25^{\circ}C$

Parameter	Symbol	Conditions	Min	Typ	Max	Units
Reverse Working Voltage	V_{RWM}				3.3	V
Reverse Breakdown Voltage	V_{BR}	$I_T = 1mA$	4		6	V
Reverse Leakage Current	I_R	$V_{RWM} = 3.3V$			1	μA
Clamping Voltage	V_C	$I_{PP} = 1A, t_p = 8/20\mu s$			6.5	V
		$I_{PP} = 28A, t_p = 8/20\mu s$		13	18	V
Junction Capacitance	C_J	$V_R = 0V, f = 1MHz$		38	45	pF

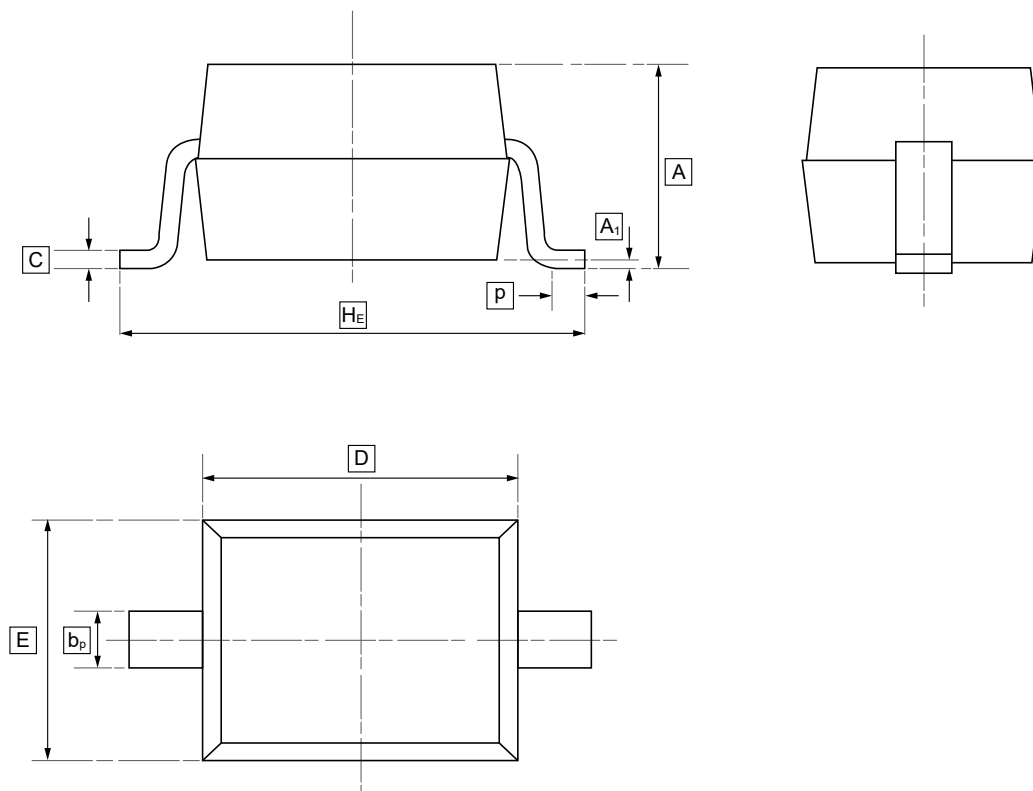


5. Typical Characteristic

Figure 1: 8/20µs Waveform per IEC61000-4-5	Figure 2: Contact Discharge Current Waveform (per IEC 61000-4-2)
Figure 3: Voltage vs Capacitance	Figure 4: Clamping Voltage vs Peak Pulse Current



6.SOD-323 Package Outline Dimensions

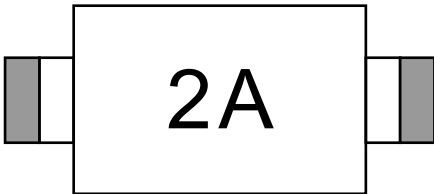


DIMENSIONS (mm are the original dimensions)

Symbol	A	b_p	C	D	E	H_E	A_1	p
Min	0.90	0.25	0.10	1.60	1.15	2.30	0.01	0.20
Max	1.20	0.40	0.15	1.80	1.35	2.80	0.10	0.50



7.Ordering information



Order Code	Package	Base QTY	Delivery Mode
UMW ESD3B3CM	SOD-323	3000	Tape and reel



8.Disclaimer

UMW reserves the right to make changes to all products, specifications. Customers should obtain the latest version of product documentation and verify the completeness and currency of the information before placing an order.

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