UMW SMxxOC

1.Description

The SMxxOC Series is designed for applications requiring transient overvoltage protectioncapability. They are intended for use in voltage and ESD sensitive equipment such as computers,printers, business machines communication systems, medical equipment and other applications. These devices are ideal for situations where board space is at a premium.

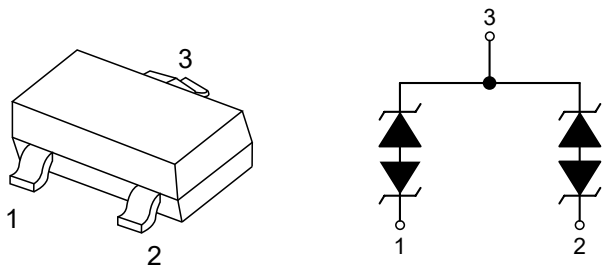
2.Features

- 130 Watts Peak Pulse Power per (8/20μs)
- IEC61000-4-2 (ESD) ±15kV (air), ±8kV (contact)
- IEC61000-4-4 (EFT) 40A (5/50ns)
- Protects two bidirectional line
- Low clamping voltage
- Low leakage current
- Working voltages : 5.0V, 12V
- Meets MSL 1 Requirements

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
- Quick charger

4.Pinning information



SOT-23

5.Absolute Maximum Ratings

Parameter	Symbol	Value	Units
ESD per IEC 61000-4-2 (Air)	V_{ESD}	±30	kV
ESD per IEC 61000-4-2 (Contact)		±20	kV
Peak Pulse Power(t_p=8/20us waveform)	P_{PP}	130	W
Junction Temperature	T_{OPT}	-55 to 150	°C
Storage Temperature	T_{STG}	-55 to 150	°C
Lead Solder Temperature – Maximum (10 Second Duration)	T_L	260 (10 sec.)	°C

6.Electrical Characteristics(T_A=25°C)

PART NUMBER	DEVICE MARKING	V_{RWM} (V) (max.)	V_B (V) (min.)	I_T (mA)	V_C@1A (V) (max.)	V_C (V) (max.)	V_C (V) (@A)	I_R (μA) (max.)	C_T (pF) (max.)
UMW SM05OC	CO05	5	5.6	1	8.5	16	8	1	15
UMW SM12OC	CO12	12	13.3	1	19	26	5	0.2	15

Notes: The above data are for reference only.

7.Typical characteristic

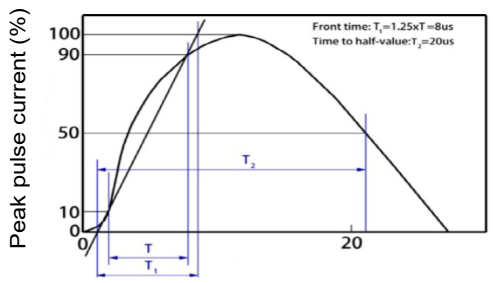


Figure 1: 8/20μs Waveform per IEC61000-4-5

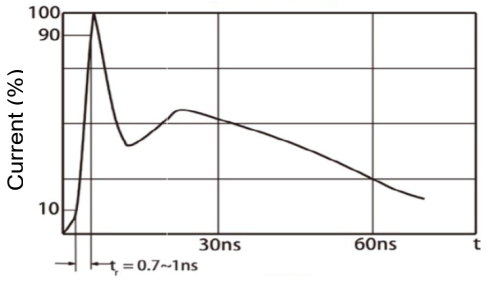


Figure 2: Contact Discharge Current Waveform per IEC 61000-4-2)

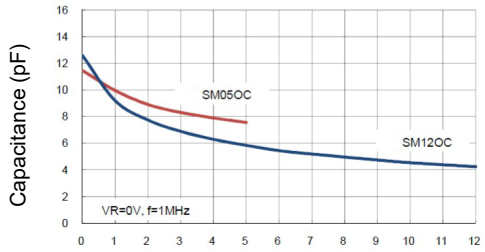


Figure 3: Voltage vs Capacitance

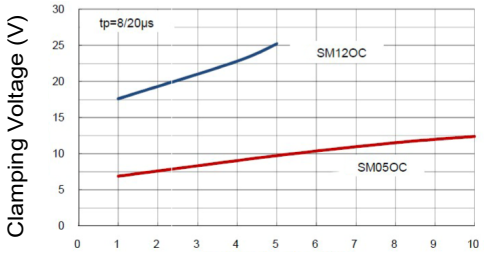
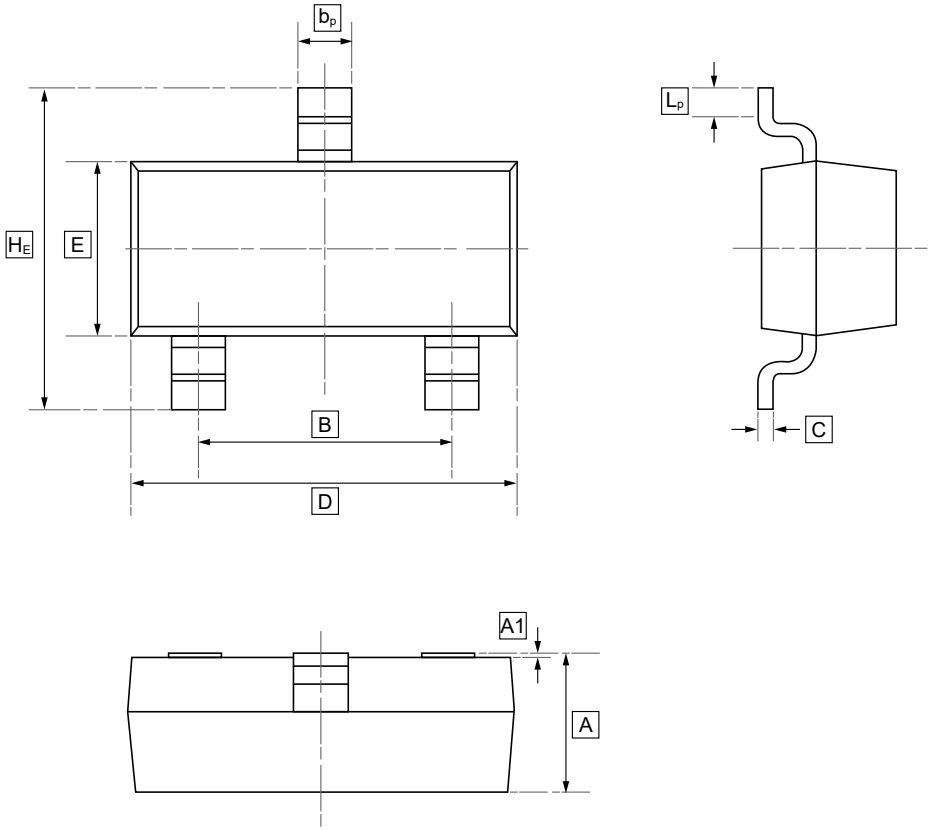


Figure 4: Peak Pulse Current vs Clamping Voltage

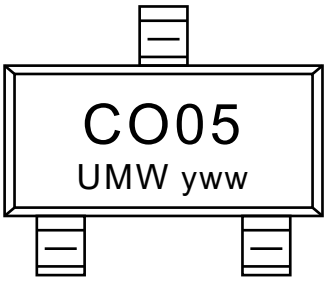
8.SOT-23 Package Outline Dimensions



DIMENSIONS (mm are the original dimensions)

Symbol	A	B	b_p	C	D	E	H_E	A1	L_p
Min	0.95	1.78	0.35	0.08	2.70	1.20	2.20	0.013	0.20
Max	1.40	2.04	0.50	0.19	3.10	1.65	3.00	0.100	0.50

9.Ordering information



yww: Batch Code

Order Code	Marking	Package	Base QTY	Delivery Mode
UMW SM05OC	CO05	SOT-23	3000	Tape and reel
UMW SM12OC	CO12	SOT-23	3000	Tape and reel

10.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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