UMW LESD5D5.0CT1G

1.Description

The LESD5D5.0CT1G 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.

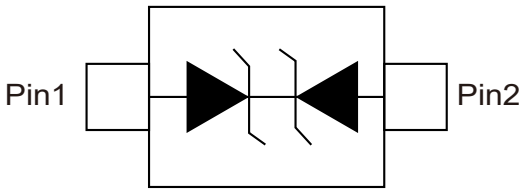
2.Applications

- Cellular phones
- Portable devices
- Digital cameras
- Power supplies

3.Features

- Small Body Outline Dimensions
- Low Body Height
- Peak Power up to 150 Watts @8x20_s Pulse
- Low Leakage current
- Response Time is Typically < 1 ns
- ESD Rating of Class 3 (> 16 kV) per Human
- Body Model
- IEC61000-4-2 Level 4 ESD Protection
- IEC61000-4-4 Level 4 EFT Protection

4.Pinning information

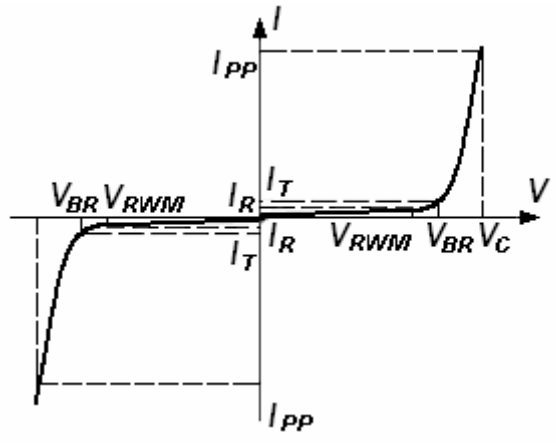


SOD-523

5.Absolute Ratings

Parameter	Symbol	Value	Units
Peak Pulse Power (t_p=8/20μs)	P_{PP}	150	W
Maximum lead temperature for soldering during 10s	T_L	260	°C
Storage Temperature Range	T_{STG}	-55 to 155	°C
Junction Temperature Range	T_{OP}	-40 to 125	°C
Maximum junction temperature	T_J	150	°C
IEC 61000−4−2 (ESD) air discharge		±15	kV
IEC 61000−4−2 (ESD) contact discharge		±8	kV
IEC61000-4-4 (EFT)		40	A
ESD Voltage Per Human Body Model		16	kV

6.Electrical Parameter



Symbol	Parameter
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
V_{RWM}	Working Peak Reverse Voltage
I_R	Maximum Reverse Leakage Current @ V_{RWM}
I_T	Test Current
V_{BR}	Breakdown Voltage @ I_T

7.Electrical Characteristic (T_A=25°C unless otherwise noted)

Device	V_{RWM} (V)	I_R(uA) @ V_{RWM}	V_{BR} (V)@ I_T (Note 1)		I_T	V_C (V) @I_{PP}=5A*	V_C (V) @Max I_{PP}*	I_{PP} (A)*	P_{PK} (W)*	C (pF)
	Max	Max	Min	Max	mA	Typ	Max	Max	Max	Typ
LESD5D5.0CT1G	5	1	5.6	7.8	1	11.6	18.6	9.4	174	15

Notes:

*Surge current waveform per Figure 1.

1. V_{BR} is measured with a pluse test current IT at an ambient temperature of 25°C.

8.Typical characteristic

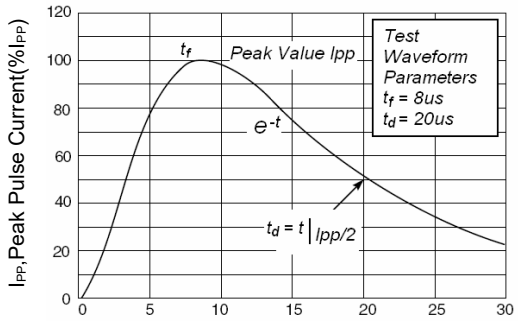


Figure 1: Pulse Waveform

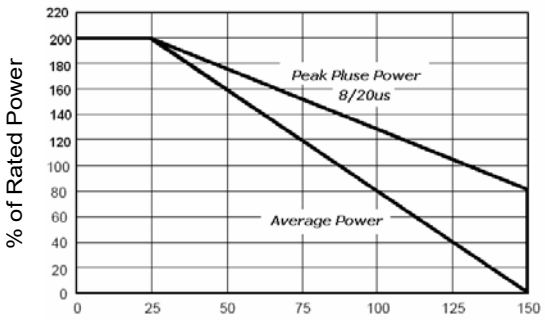


Figure 2: Power Derating

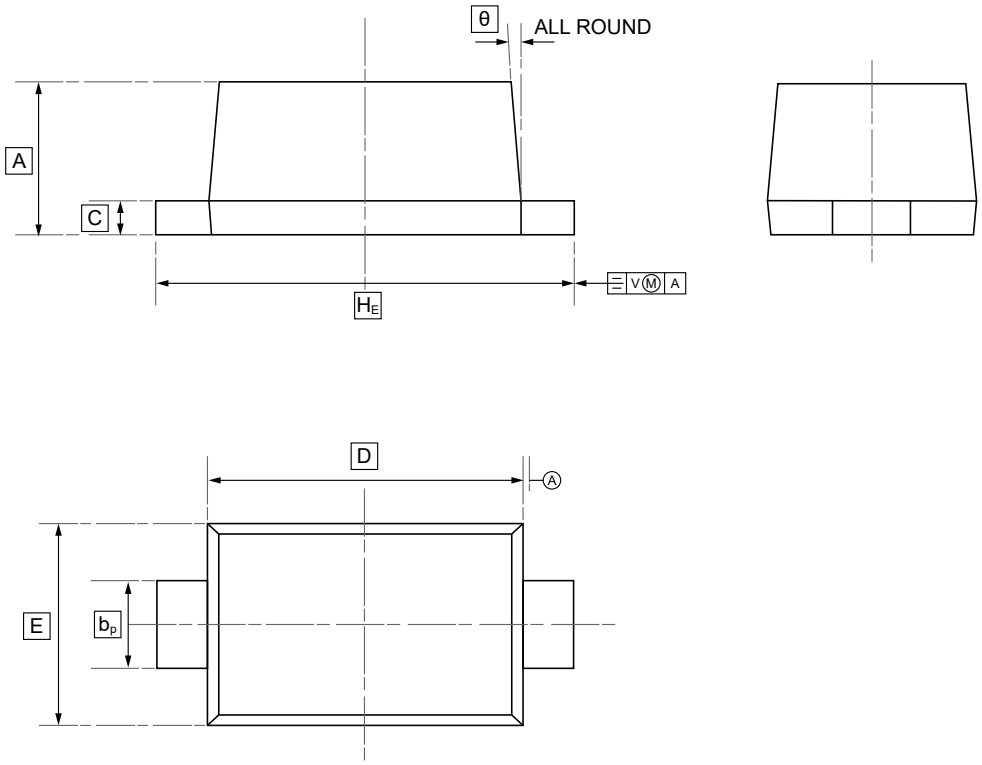
Application Note

Electrostatic discharge (ESD) is a major cause of failure in electronic systems. Transient Voltage Suppressors (TVS) are an ideal choice for ESD protection. They are capable of clamping the incoming transient to a low enough level such that damage to the protected semiconductor is prevented.

Surface mount TVS offers the best choice for minimal lead inductance. They serve as parallel protection elements, connected between the signal lines to ground. As the transient rises above the operating voltage of the device, the TVS becomes a low impedance path diverting the transient current to ground. The LESD5D5.0CT1G is the ideal board evel protection of ESD sensitive semiconductor components.

The tiny SOD-523 package allows design flexibility in the design of high density boards where the space saving is at a premium. This enables to shorten the routing and contributes to hardening against ESD.

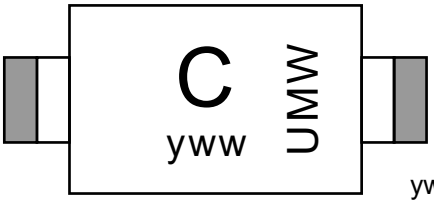
9.SOD-523 Package Outline Dimensions



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 LES5D5.0CT1G	SOD-523	3000	Tape and reel

11.Disclaimer

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