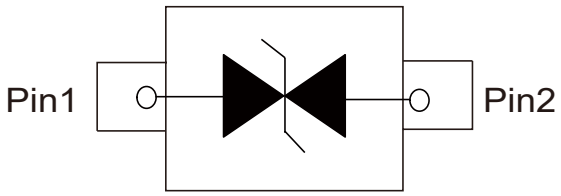
1.Features

- 100Watts peak pulse power (t_p=8/20μs)
- Bidirectional configurations
- Solid-state silicon-avalanche technology
- Low clamping voltage
- Low leakage current
- IEC C OMPATIBILITY (EN61000-4)
- IEC 61000-4-2 ±25kV contact ±25kV air
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 10A (8/20μs)

2.Applications

- Microprocessor based equipment
- Personal Digital Assistants (PDA's)
- Notebooks, Desktops, and Servers
- Portable Instrumentation
- Pagers Peripherals

3.Pinning information



SOD-523

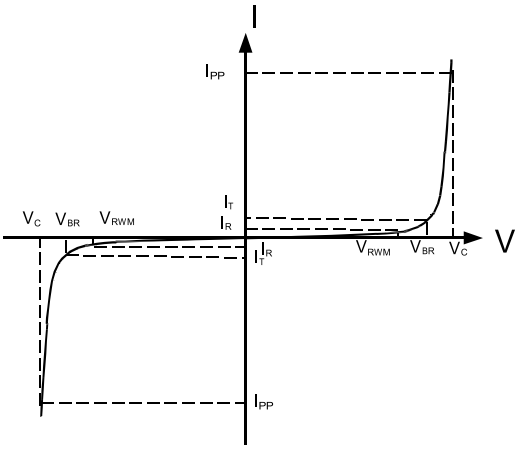
4.Absolute Maximum Ratings

Parameter	Symbol	Value	Units
Peak Pulse Power (t_p=8/20μs)	P_{PP}	100	Watts
Peak Pulse Current (t_p=8/20μs)(note1)	I_{PP}	10	A
ESD per IEC 61000-4-2(Air)	V_{ESD}	25	kV
ESD per IEC 61000-4-2(Contact)		25	kV
Lead Soldering Temperature	T_L	260(10seconds)	°C
Junction Temperature	T_J	-55 to 150	°C
Storage Temperature	T_{STG}	-55 to 150	°C

5.Electrical Characteristics

Parameter	Symbol	Conditions	Min	Typ	Max	Units
Reverse Stand-Off Voltage	V_{RWM}				5	V
Reverse Breakdown Voltage	V_{BR}	I_T=1mA	6			V
Reverse Leakage Current	I_R	V_{RWM}=5V, T=25°C			1	uA
Clamping Voltage	V_C	I_{PP}=10A, t_p=8/20μs			10	V
Junction capacitance	C_J	V_R=0V, f=1MHz		13	15	pF

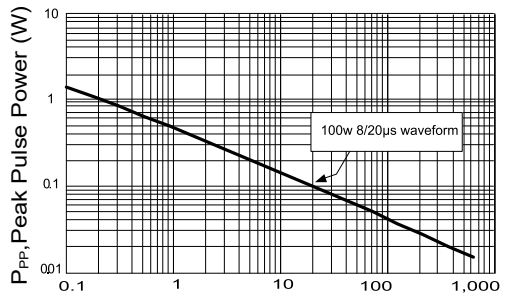
6.Electrical Parameters (T_A=25°C unless otherwise noted)



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}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current

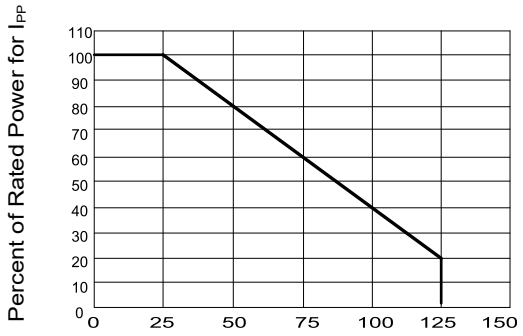
Notes: 8/20μs pulse waveform.

7.Typical characteristic



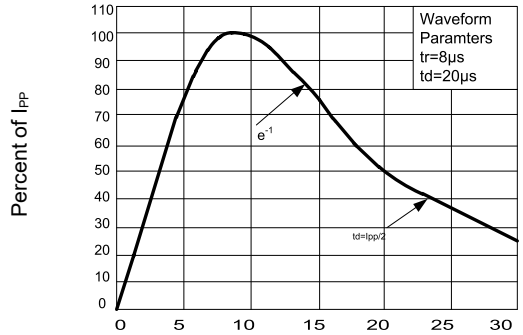
t_d, Pulse Duration(μs)

Figure 1: Peak Pulse Power vs. Pulse Time



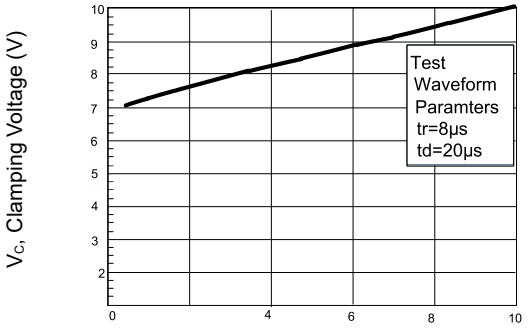
T_A, Ambient Temperature(°C)

Figure 2: Power Derating Curve



Time (μs)

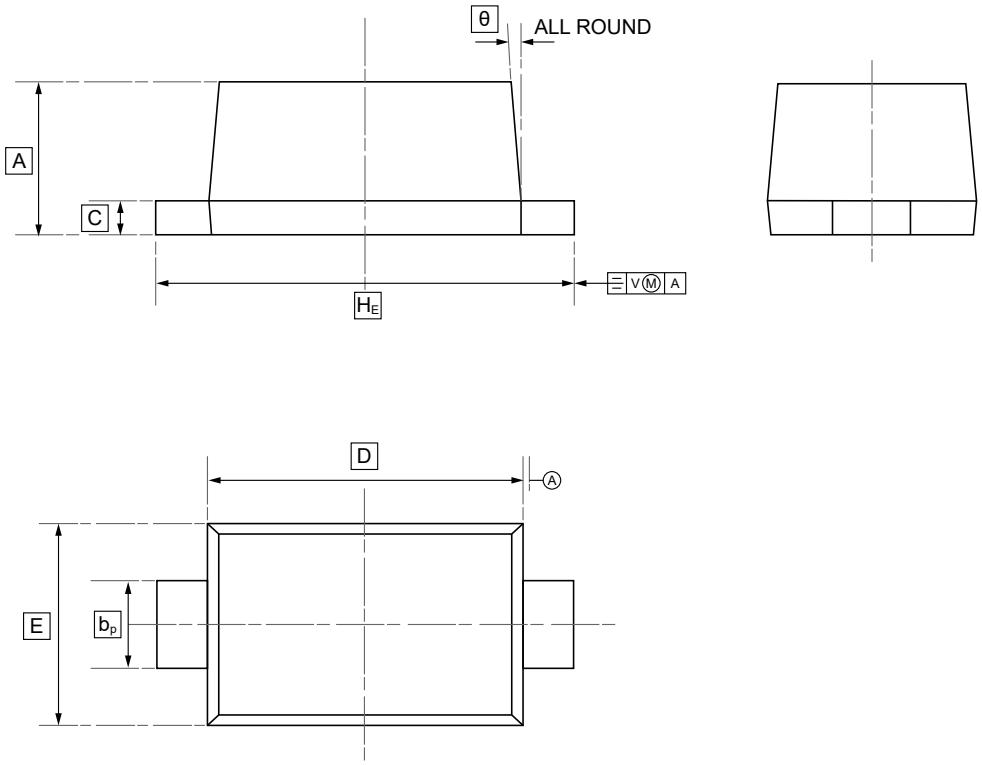
Figure 3: Pulse Waveform



I_{PP}, Peak Pulse Current(A)

Figure 4: Clamping Voltage vs.Ipp

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

yww: Batch Code

Order Code	Package	Base QTY	Delivery Mode
UMW PTD522G13M5B10	SOD-523	3000	Tape and reel

10.Disclaimer

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