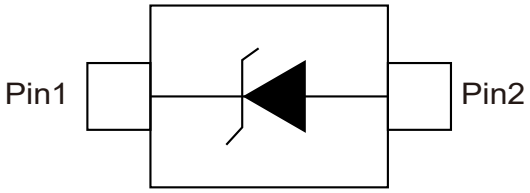
1.Features

- 45Watts peak pulse power (t_p=8/20μs)
- Tiny SOD -523 package
- Solid-state silicon-avalanche technology
- Low clamping voltage
- Low leakage current
- Low capacitance (Cj=0.7pF typ.)
- Protection one data/power line

2.Applications

- Cell Phone Handsets and Accessories
- Microprocessor based equipment
- Personal Digital Assistants(PDA's)
- Notebooks, Desktops, and Servers
- Portable Instrumentation

3.Pinning information



SOD-523

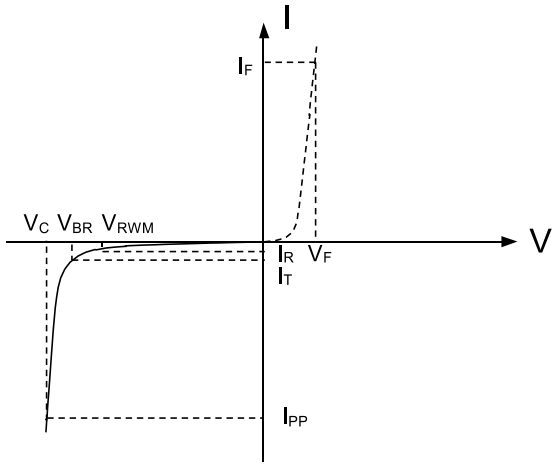
4.Absolute Maximum Ratings T_A= 25°C

Parameter	Symbol	Value	Units
Peak Pulse Power (t_p=8/20μs)	P_{PP}	45	Watts
Peak Pulse Current (t_p=8/20μs)(note1)	I_{PP}	3.5	A
ESD per IEC 61000-4-2(Air)	V_{ESD}	15	kV
ESD per IEC 61000-4-2(Contact)		10	kV
Lead Soldering Temperature	T_L	260(10seconds)	°C
Junction Temperature	T_J	-55 to 125	°C
Storage Temperature	T_{STG}	-55 to 125	°C

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

Parameter	Symbol	Conditions	Min	Typ	Max	Units
Reverse Stand-OffVoltage	V_{RWM}				5	V
Reverse BreakdownVoltage	V_{BR}	I_T=1mA	6	7.5		V
Reverse LeakageCurrent	I_R	V_{RWM}=5V, T=25°C		0.1	0.5	uA
Peak Pulse Current	I_{PP}	t_p=8/20μs			3.5	A
Clamping Voltage	V_C	I_{PP}=3.5A, t_p=8/20μs			13	V
Junction Capacitance	C_J	V_R=0V, f=1MHz		0.6	0.9	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

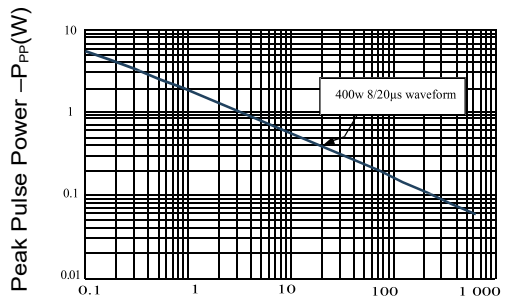


Figure 1: Peak Pulse Power vs. Pulse Time

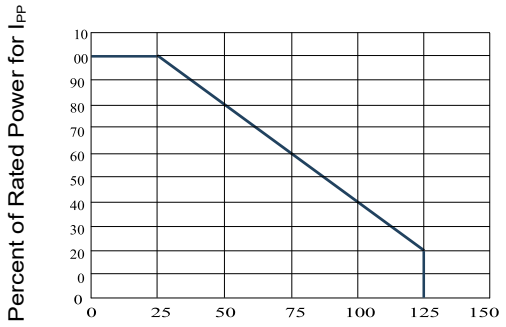


Figure 2: Power Derating Curve

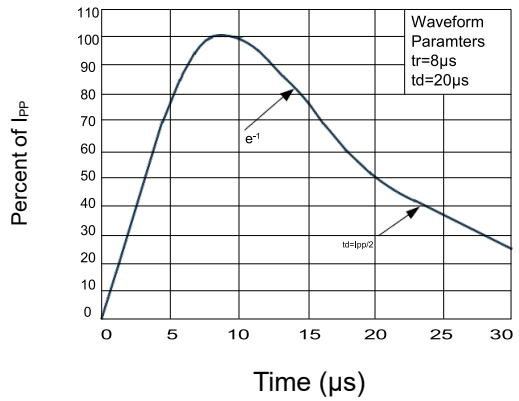


Figure 3: Pulse Waveform

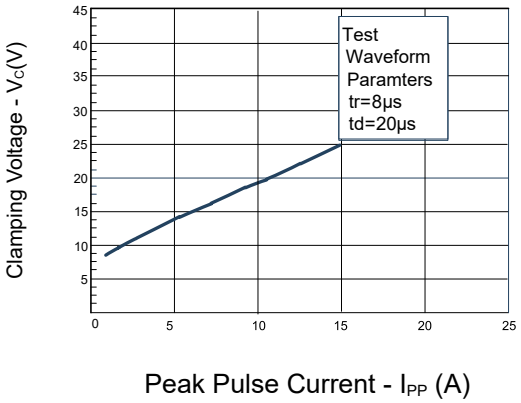
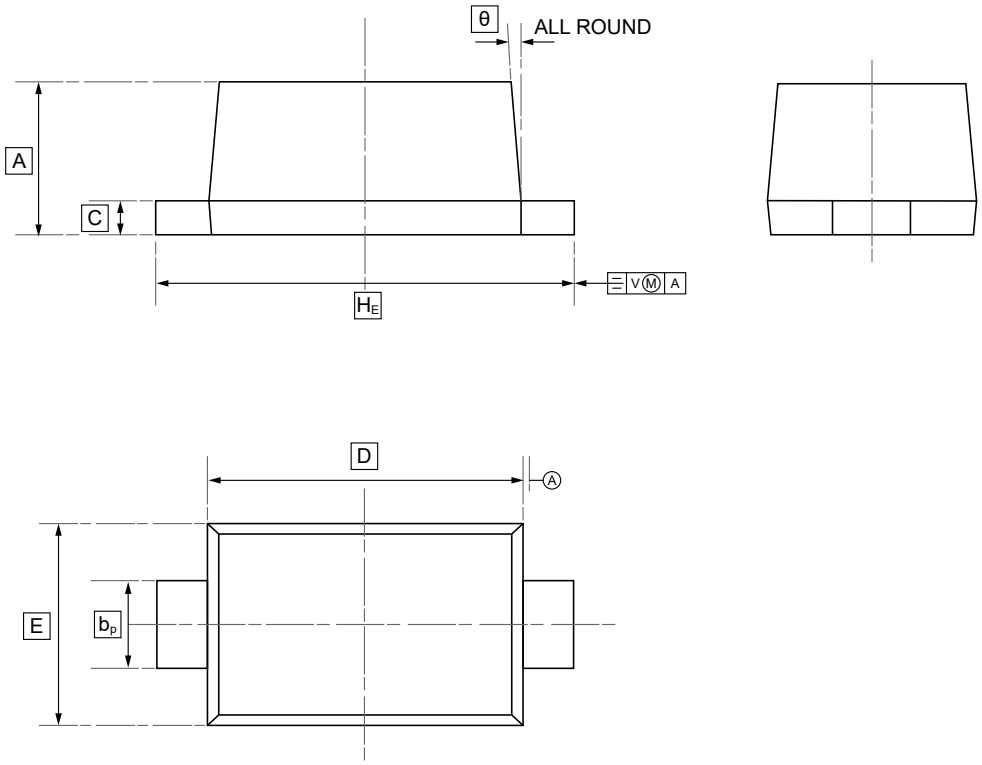


Figure 4: Clamping Voltage vs.Ipp

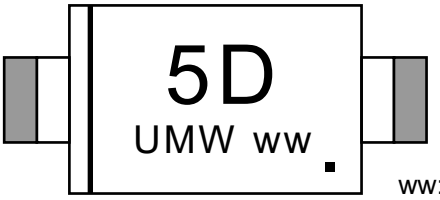
8.SOD-523 Package Outline Dimensions



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



ww: Batch Code

Order Code	Package	Base QTY	Delivery Mode
UMW BSD5A051U	SOD-523	3000	Tape and reel

10.Disclaimer

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