

1.Features

- Small Body Outline Dimensions:
0.063" x 0.032" (1.6x0.8 mm)
- Low Body Height: 0.024" (0.6 mm) Nom
- 100 Watts peak pulse power ($t_p = 8/20\mu s$)
- Protects one I/O or power line
- Replacement for MLV(0603)
- Low clamping voltage
- Working voltage: 5V
- Low leakage current
- Solid-state silicon-avalanche technology

2.Applications

- Cellular Handsets & Accessories
- Personal Digital Assistants (PDAs)
- Notebooks & Handhelds
- Portable Instrumentation
- Digital Cameras
- MP3 players

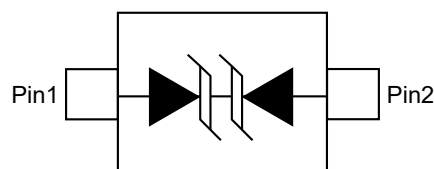
3.IEC COMPATIBILITY(EN61000-4)

- IEC 61000-4-2(ESD)+15kV(air)
+8kV(contact)
- IEC 61000-4-4 (EFT)40A(5/50ns)
- IEC 61000-4-5 (Lightning) 5.5A(8/20 μs)

4.Mechanical Characteristics

- JEDEC SOD-523 package
- Molding compound flammability rating:
UL 94V-0
- Marking : Marking Code
- Packaging : Tape and Reel per EIA481
- RoHS/WEEE Compliant

5.Pinning information



SOD-523



6. Absolute Maximum Ratings $T_A = 25^\circ\text{C}$

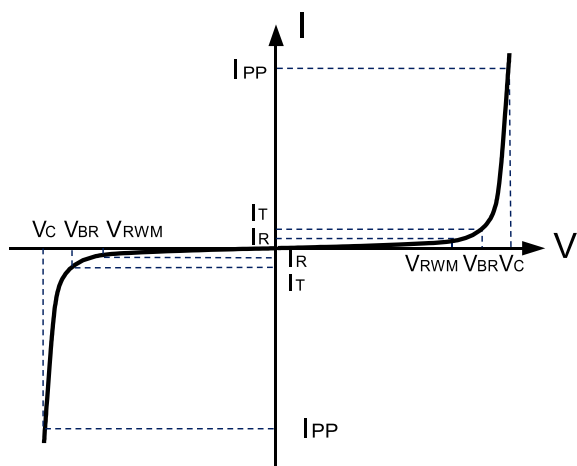
Parameter	Symbol	Value	Units
Peak Pulse Power ($t_p=8/20\mu\text{s}$)	P_{PP}	100	Watts
Maximum Peak Pulse Current ($t_p=8/20\mu\text{s}$)	V_{FP}	5.5	A
Junction Temperature	T_J	-55 to 125	$^\circ\text{C}$
Storage Temperature	T_{STG}	-55 to 150	$^\circ\text{C}$



7. Electrical Characteristic ($T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Conditions	Min	Typ	Max	Units
Reverse Stand-Off Voltage	V_{RWM}				5	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1\text{mA}$	6			V
Reverse Leakage Current	I_R	$V_{RWM}=5\text{V}$, $T=25^\circ\text{C}$			1	μA
Clamping Voltage	V_C	$I_{PP}=5.5\text{A}$, $t_p=8/20\mu\text{s}$			15.5	V
Junction capacitance	C_J	$V_R=0\text{V}$, $f=1\text{MHz}$		10		pF

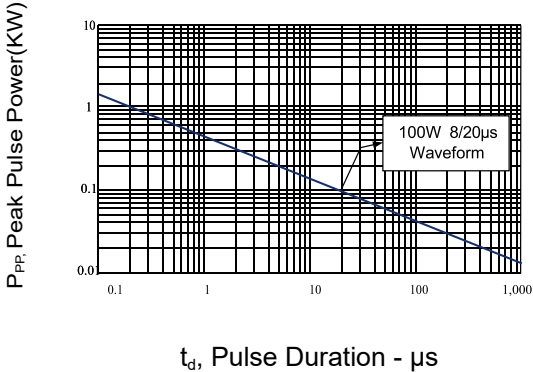
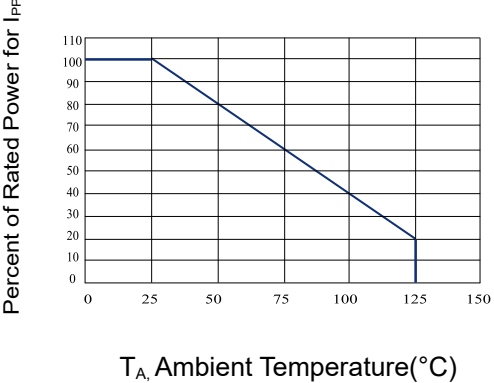
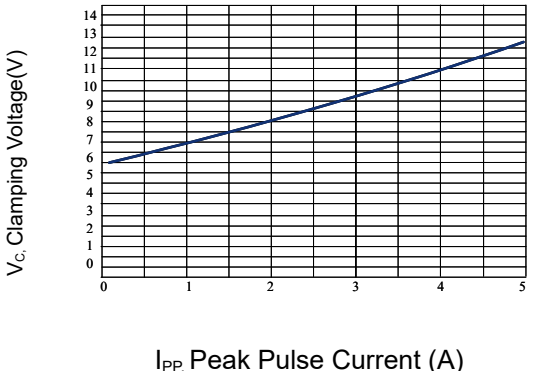
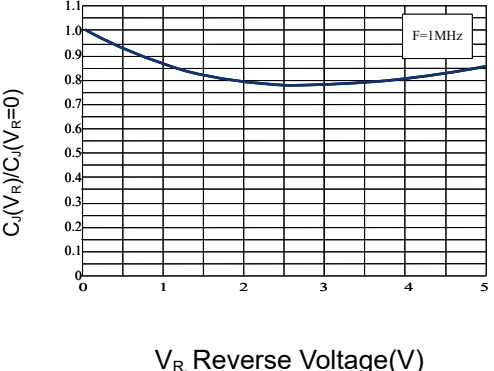
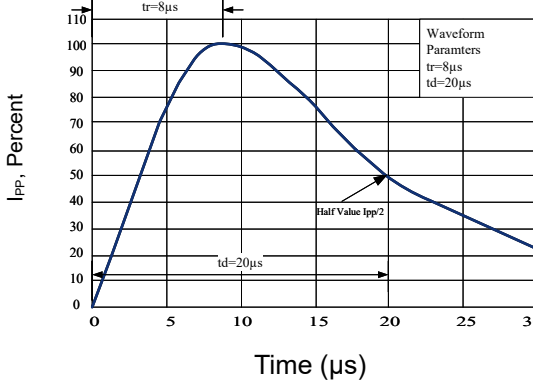
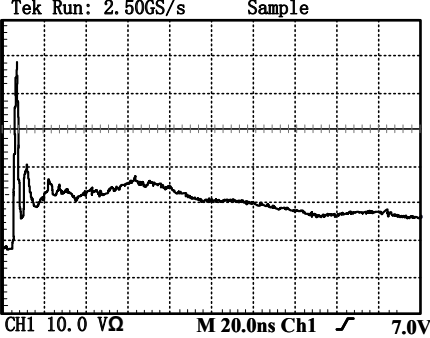
8. Electrical Parameters ($T=25^\circ\text{C}$)



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
I_F	Forward Current
V_F	Forward Voltage @ I_F

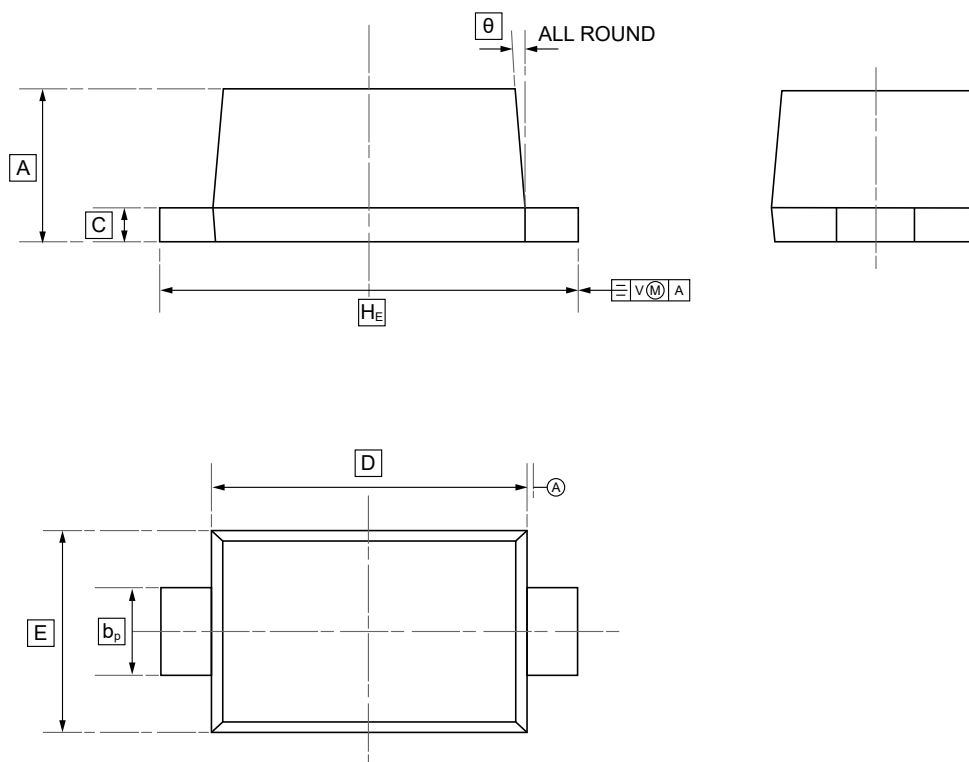


9. Typical characteristic

 P_{PP}, Peak Pulse Power(KW) t_d, Pulse Duration - μs	 Percent of Rated Power for I_{PP} T_A, Ambient Temperature($^{\circ}C$)
Figure 1: Peak Pulse Power vs. Pulse Time	Figure 2: Power Derating Curve
 V_C, Clamping Voltage(V) I_{PP}, Peak Pulse Current (A)	 $C_J(V_R)/C_J(V_R=0)$ V_R, Reverse Voltage(V)
Figure 3: Clamping Voltage vs. Peak Pulse Current Current	Figure 4: Normalized Junction Capacitance vs. Reverse Voltage
 I_{PP}, Percent Time (μs) Waveform Parameters $t_r=8\mu s$ $t_d=20\mu s$ Half Value $I_{PP}/2$	 Tek Run: 2.50GS/s Sample CH1 10.0 VΩ M 20.0ns Ch1 7.0V
Figure 5: Pulse Waveform	Figure 6: ESD Clamping(8kV Contact per IEC 61000-4-2)



10.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	



11.Ordering information



yww: Batch Code

Order Code	Package	Base QTY	Delivery Mode
UMW BSD5C051V	SOD-523	3000	Tape and reel



12.Disclaimer

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