UMW BSD3C051V

1.Features

- 350Watts peak pulse power (tp = 8/20μs)
- Bidirectional configurations
- Solid-state silicon-avalanche technology
- Low clamping voltage
- Low leakage current
- IEC 61000-4-2 ±30kV contact ±30kV air
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 16A(8/20μs)

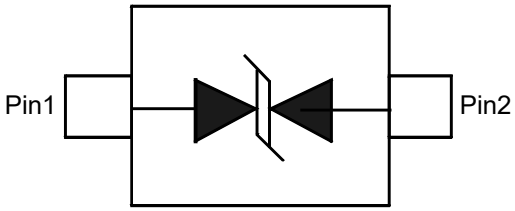
2.Applications

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

3.Mechanical Data

- SOD-323 package
- Packaging: Tape and Reel
- Molding compound flammability rating: UL94V-0

4.Pinning information



SOD-323

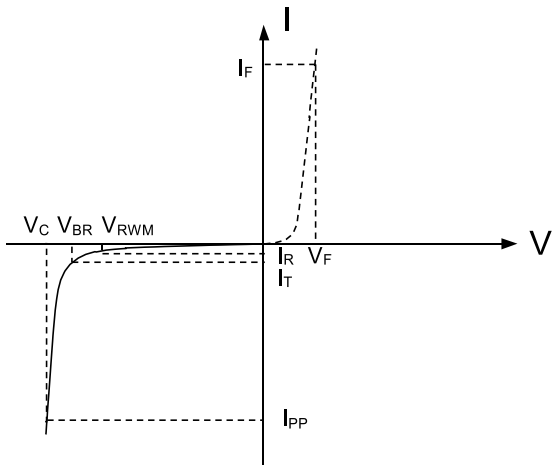
5.Absolute Maximum Ratings T_A= 25°C

Parameter	Symbol	Value	Units
Peak Pulse Power (t_p=8/20μs)	P_{PP}	350	Watts
Peak Pulse Current (t_p=8/20μs)(note1)	I_{PP}	16	A
ESD per IEC 61000-4-2(Air)	V_{ESD}	30	kV
ESD per IEC 61000-4-2(Contact)		30	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

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

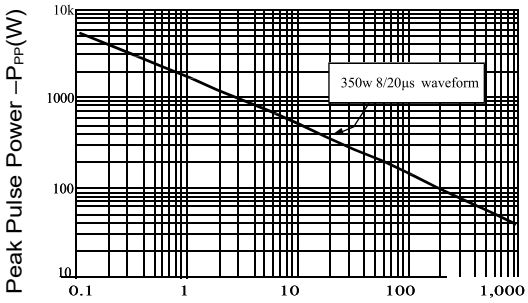
Parameter	Symbol	Conditions	Min	Typ	Max	Units
Reverse Stand-Off Voltage	V_{RWM}				5	V
Reverse Breakdown Voltage	V_{BR}	I_T=1mA	6			V
Reverse Leakage Current	I_R	V_{RWM}=5V, T=25°C			1	uA
Clamping Voltage	V_C	I_{PP}=16A, t_p=8/20μs			20	V
Junction capacitance	C_J	V_R=0V, f=1MHz		60		pF

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



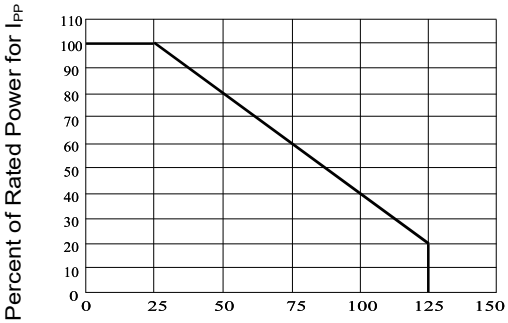
Symbol	Parameter
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
V_{RWM}	Working Peak Reverse Voltage
I_R	Maximum Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current

8.Typical characteristic



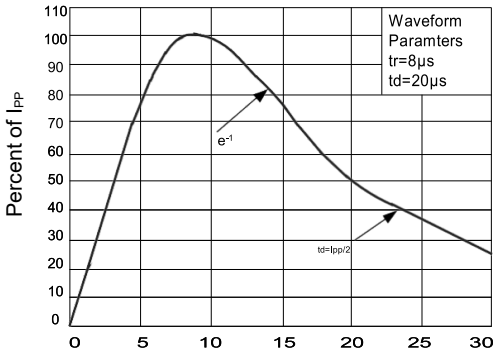
t_d - Pulse Duration - μs

Figure 1: Peak Pulse Power vs. Pulse Time



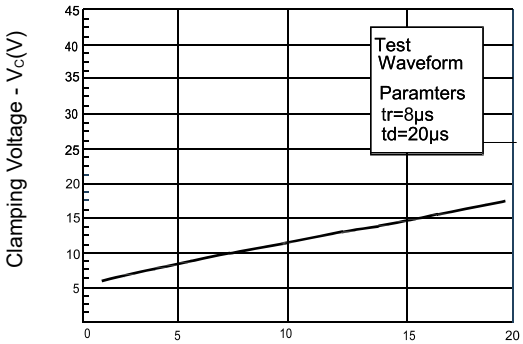
Ambient Temperature - T_A(°C)

Figure 2: Power Derating Curve



Time (μs)

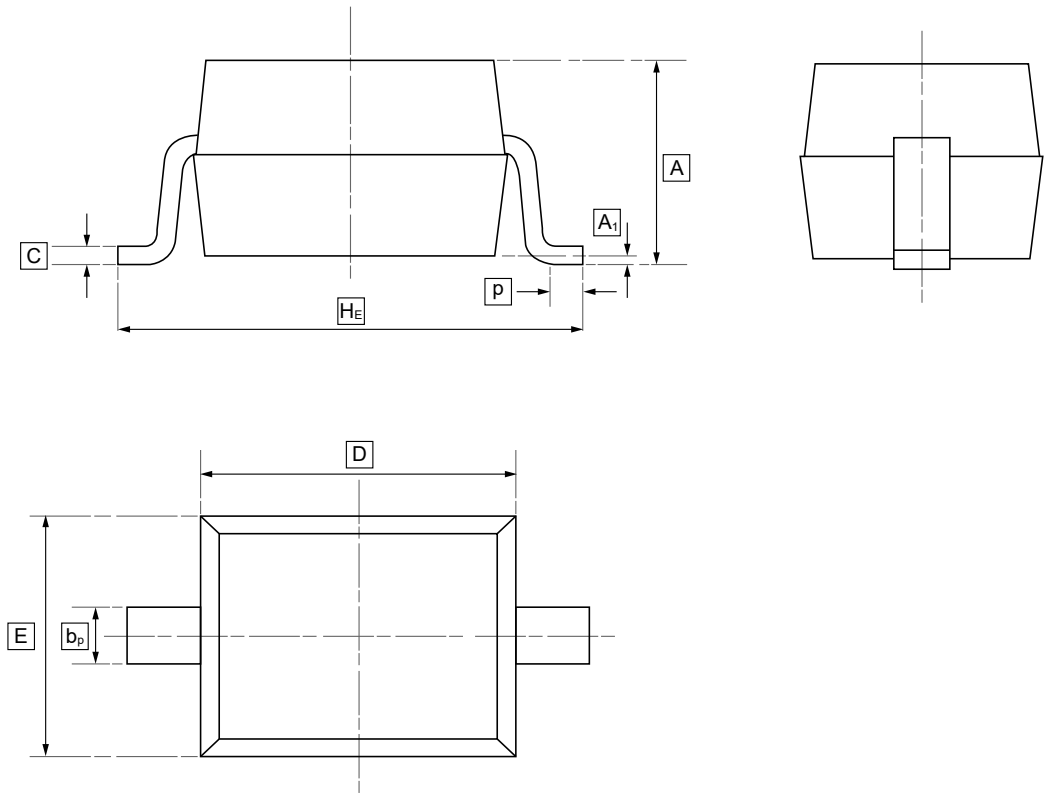
Figure 3: Pulse Waveform



Peak Pulse Current - I_{PP} (A)

Figure 4: Clamping Voltage vs.Ipp

9.SOD-323 Package Outline Dimensions



DIMENSIONS (mm are the original dimensions)

Symbol	A	b_p	C	D	E	H_E	A_1	P
Min	0.90	0.25	0.10	1.60	1.15	2.30	0.01	0.20
Max	1.20	0.40	0.15	1.80	1.35	2.80	0.10	0.50

10.Ordering information

ww: Batch Code

Order Code	Package	Base QTY	Delivery Mode
UMW BSD3C051V	SOD-323	3000	Tape and reel

11.Disclaimer

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