

1.Description

The PTVSHC3D7VU protects sensitive semiconductor components from damage or upset due to electrostatic discharge (ESD) and other voltage induced transient events.

The PTVSHC3D7VU is available in a SOD-323 package with working voltages of 7 volt.

3.Features

- 1100W Peak pulse power per line ($t_p=8/20\mu s$)
- Response time is typically < 1ns
- Protect one I/O or power line
- Low clamping Voltage
- Transient protection for data lines to IEC 61000-4-2(ESD)
- $\pm 30KV$ (air), $\pm 30KV$ (contact); IEC 61000-4-4 (EFT) 40A (5/50ns)

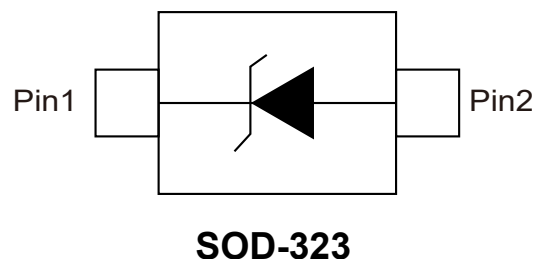
2.Mechanical Characteristics

- Lead finish: 100% matte Sn(Tin)
- Mounting position: Any
- Qualified max reflow temperature: $260^{\circ}C$
- Pure tin plating: 7 ~ 17 μm
- Pin flatness: $\leq 3mi$

4.Applications

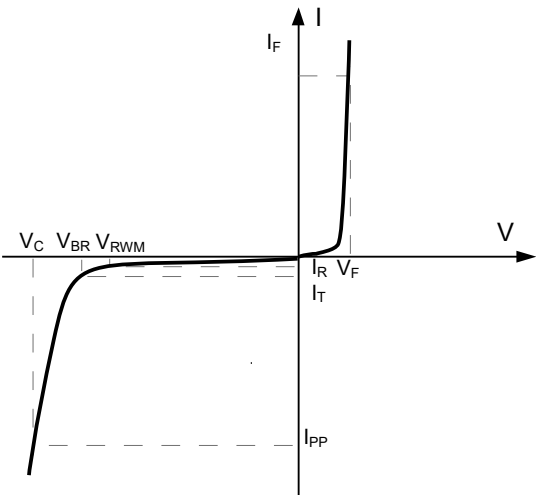
- Cell phone handsets and accessories
- Personal digital assistants (PDA's)
- Notebooks, desktops, and servers
- Portable instrumentation
- Cordless phones
- Digital cameras
- Peripherals
- MP3 players

5.Pinning information





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



Symbol	Parameter
V _{RWM}	Peak Reverse Working Voltage
I _R	Reverse Leakage Current @ V _{RWM}
V _{BR}	Breakdown Voltage @ I _T
I _T	Test Current
I _{PP}	Maximum Reverse Peak Pulse Current
V _C	Clamping Voltage @ I _{PP}
P _{PP}	Peak Pulse Power
C _J	Junction Capacitance
I _F	Forward Current
V _F	Forward Voltage @ I _F



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

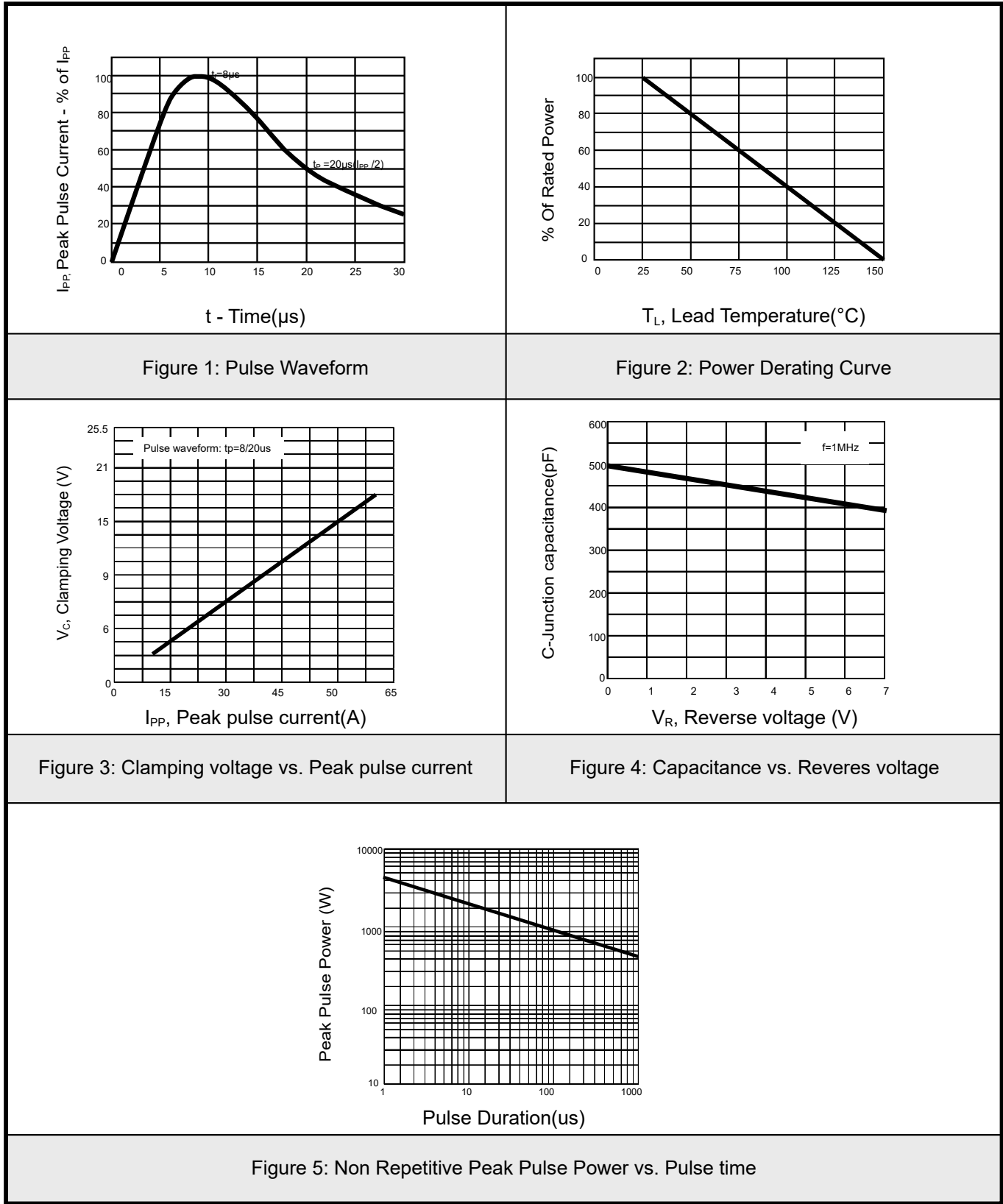
Parameter	Symbol	Conditions	Min	Typ	Max	Units
Working Voltage	V_{RWM}				7	V
Breakdown Voltage	V_{BR}	$I_T=1\text{mA}$		8	9.5	V
Reverse Leakage Current	I_R	$V_{RWM}=7\text{V}$			1	μA
Clamping Voltage	V_C	$I_{PP}=60\text{A}$, $t_p=8/20\mu\text{s}$		18	25	V
Junction Capacitance	C_J	$V_R=0\text{V}$, $f=1\text{MHz}$	470	500	550	pF

8. Absolute maximum rating @ 25°C

Parameter	Symbol	Value	Units
Peak Pulse Power ($t_p=8/20\mu\text{s}$)	P_{PP}	1100	W
Lead Soldering Temperature	T_L	260 (10 sec)	$^{\circ}\text{C}$
Junction Temperature	T_J	-55 to 125	$^{\circ}\text{C}$
Storage Temperature	T_{STG}	-55 to 150	$^{\circ}\text{C}$



9. Typical characteristic





10.Solder Reflow Recommendation

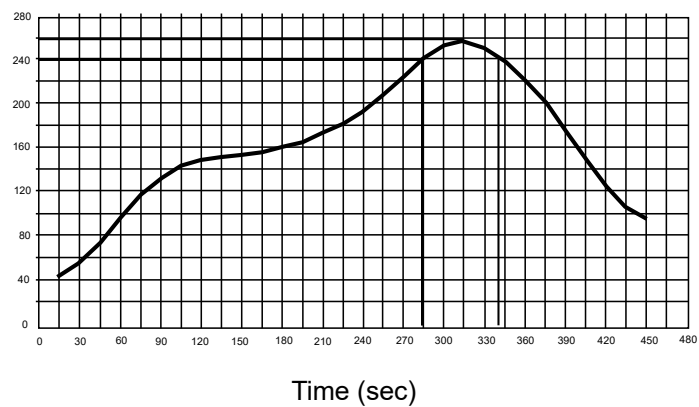
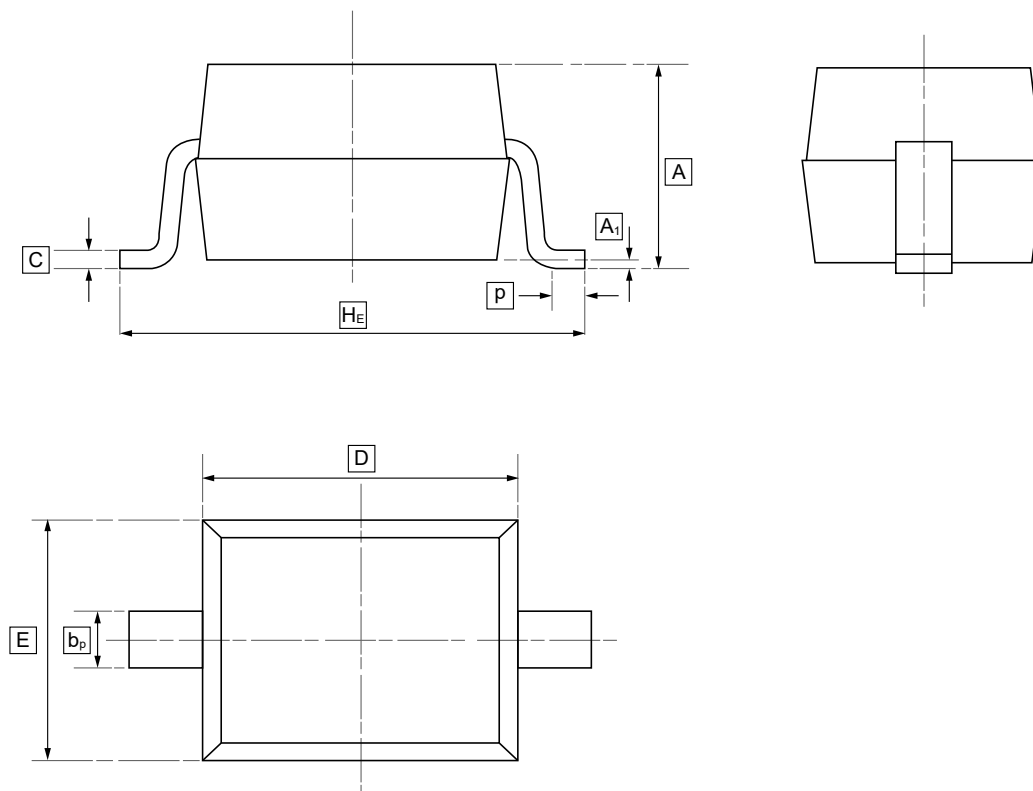


Figure 6: Peak Temp=257°C, Ramp Rate=0.802deg. °C/sec



11.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



12.Ordering information



ww: Batch Code

Order Code	Package	Base QTY	Delivery Mode
UMW PTVSHC3D7VU	SOD-323	3000	Tape and reel



13.Disclaimer

UMW reserves the right to make changes to all products, specifications. Customers should obtain the latest version of product documentation and verify the completeness and currency of the information before placing an order.

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