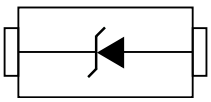
Description

The PTVSHC3D7VU ESD protector is designed to replace multilayer varistors (MLVs) in portable applications such as cell phones, notebook computers, and PDA's. They feature large cross-sectional area junctions for conducting high transient currents, offer desirable electrical characteristics for board level protection, such as fast response time, lower operating voltage, lower clamping voltage and no device degradation when compared to MLVs. 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. It is used to meet the ESD immunity requirements of IEC 61000-4-2, (±30kV air, ±30kV contact discharge)



Feature

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

Applications

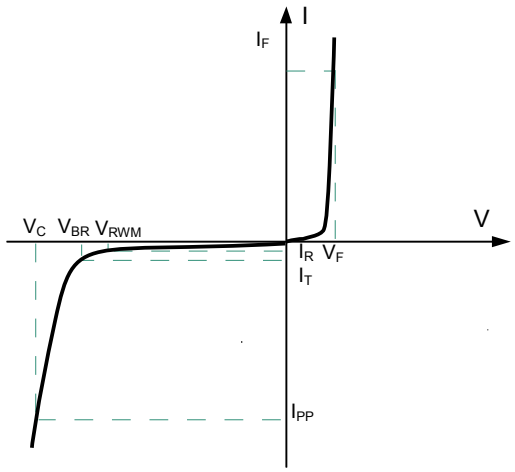
- Cell phone handsets and accessories
- Personal digital assistants (PDA's)
- Notebooks, desktops, and servers
- Portable instrumentation
- Cordless phones
- Digital cameras
- Peripherals
- MP3 players

Mechanical Characteristics

- Lead finish:100% matte Sn(Tin)
- Mounting position: Any
- Qualified max reflow temperature:260℃
- Pure tin plating: 7 ~ 17 um
- Pin flatness:≤3mil

Electronics Parameter

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



Electrical characteristics per line@25℃(unless otherwise specified)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Peak Reverse Working Voltage	V_{RWM}				7	V
Breakdown Voltage	V_{BR}	I_t =1mA		8	9.5	V
Reverse Leakage Current	I_R	V_{RWM} =7V			1	μA
Clamping Voltage	V_C	I_{PP}=60A t_P = 8/20μs		18	25	V
Junction Capacitance	C_j	V_R=0V f = 1MHz	470	500	550	pF

Absolute maximum rating@25℃

Rating	Symbol	Value	Units
Peak Pulse Power (t_P = 8/20μS)	P_{pp}	1100	W
Lead Soldering Temperature	T_L	260 (10 sec)	℃
Operating Temperature	T_J	-55 to +125	℃
Storage Temperature	T_{STG}	-55 to +150	℃

Typical Characteristics

Fig 1.Pulse Waveform

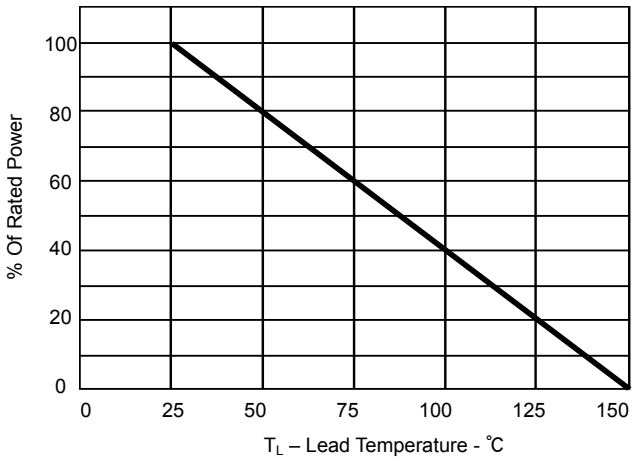


Fig 2.Power Derating Curve

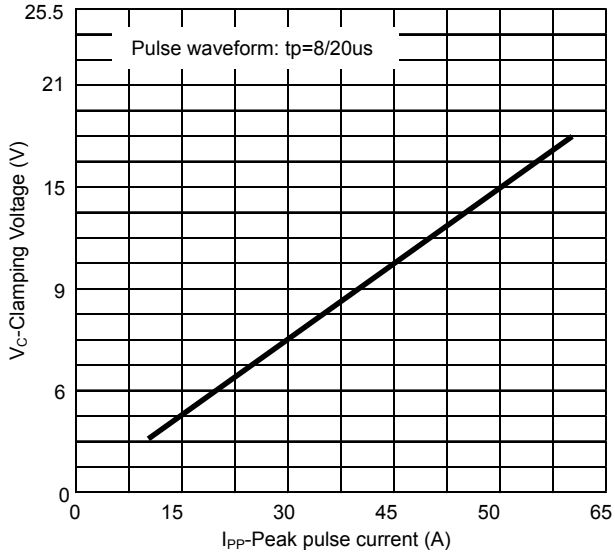


Fig 3. Clamping voltage vs. Peak pulse current

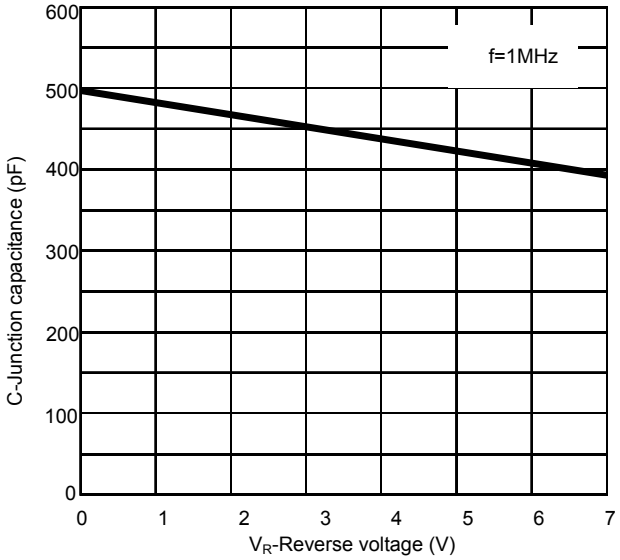


Fig 4. Capacitance vs. Reveres voltage

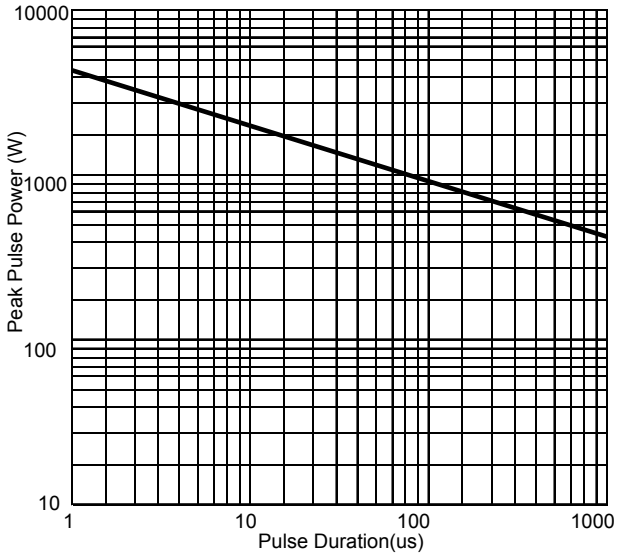
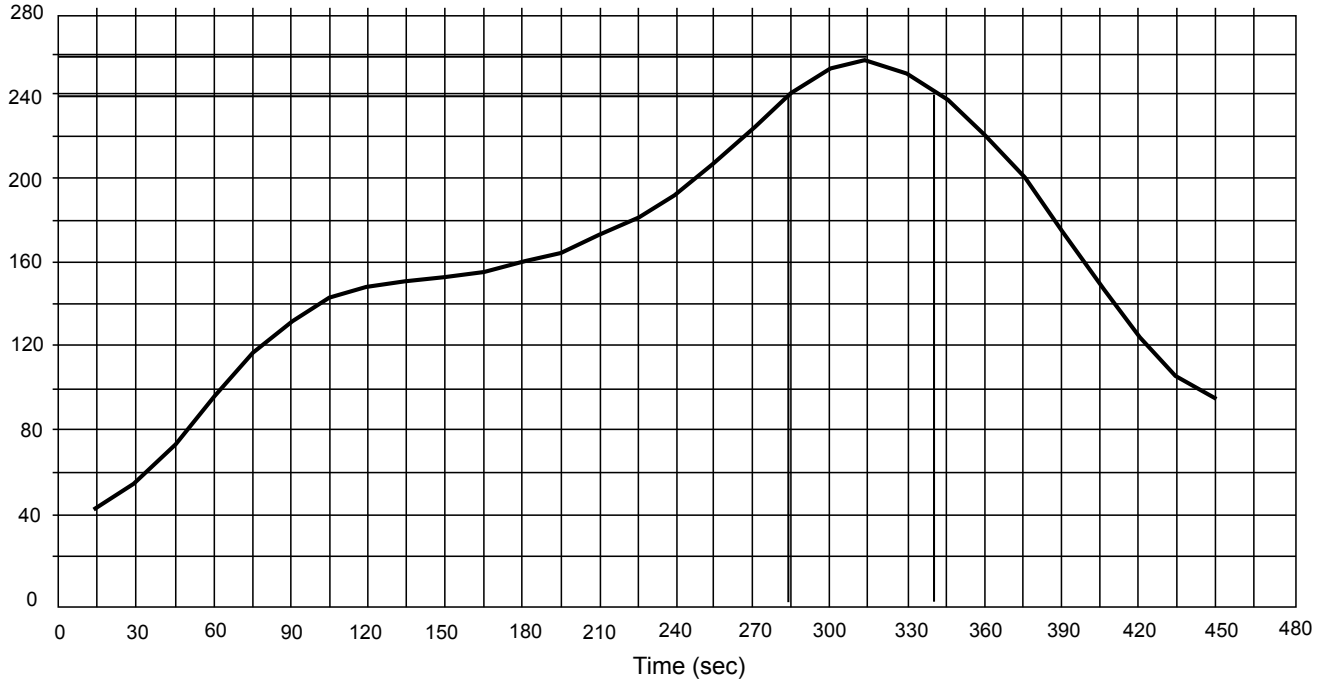


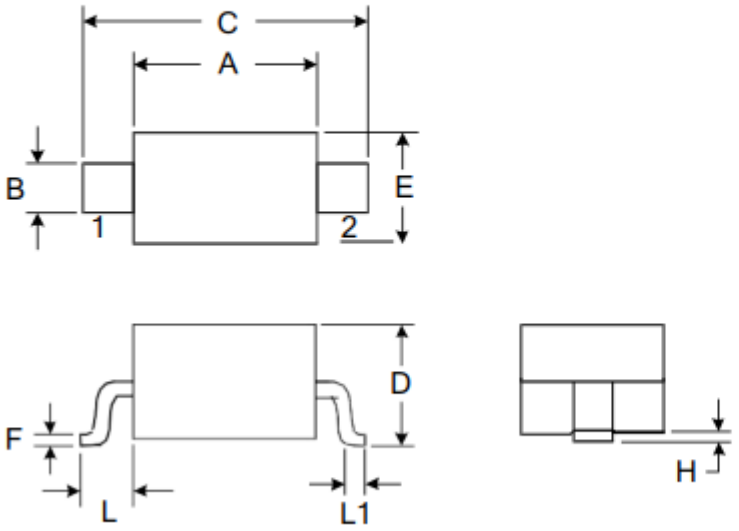
Fig 5. Non Repetitive Peak Pulse Power vs. Pulse time

Solder Reflow Recommendation

Peak Temp=257℃, Ramp Rate=0.802deg. ℃/sec

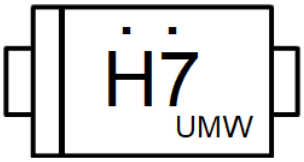


Outline Drawing – SOD323



DIMENSIONS				
SYMBOL	MILLIMETER		INCHES	
	MIN	MAX	MIN	MAX
A	1.600	1.800	0.063	0.071
B	0.250	0.350	0.010	0.014
C	2.500	2.700	0.098	0.106
D		1.000		0.039
E	1.200	1.400	0.047	0.055
F	0.080	0.150	0.003	0.006
L	0.475 REF		0.019REF	
L1	0.250	0.400	0.010	0.016
H	0.000	0.100	0.000	0.004

Marking



Ordering information

Order code	Package	Base qty	Delivery mode
UMW PTVSHC3D7VU	SOD-323	3000	Tape and reel

单击下面可查看定价，库存，交付和生命周期等信息

>>UMW(友台半导体)