

1. Description

The UClamp series of TVS arrays are designed to protect sensitive electronics from damage or latch-up due to ESD. It is designed to replace multilayer varistors (MLVs) in portable applications such as cell phones, note-book computers, and PDAs. It features large cross-sectional area junctions for conducting high transient currents.

3. Features

- Transient protection for data lines to
- IEC 61000-4-2 (ESD) $\pm 15\text{kV}$ (air), $\pm 8\text{kV}$ (contact) IEC
- 61000-4-4 (EFT) 40A ($t_p = 5/50\text{ns}$)
- Cable Discharge Event (CDE)
- Ultra-small package (1.0 x 0.6 x 0.5mm)

4. Mechanical Characteristics

- SLP1006P2 package
- RoHS/WEEE Compliant
- Nominal Dimensions: 1.0 x 0.6 x 0.50 mm
- Lead Finish: NiPdAu

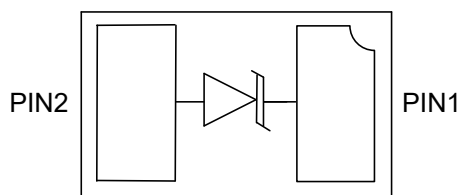
2. Applications

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

- Protects one I/O or power line
- Low clamping voltage
- Working voltage: 12V
- Low leakage current
- Solid-state silicon-avalanche technology

- Molding compound flammability rating: UL94V-0
- Marking: Marking code, cathode band
- Packaging: Tape and Reel

5. Pinning information



SLP1006P2



6. Absolute Maximum Rating

Parameter	Symbol	Value	Units
Peak Pulse Power ($t_p=8/20\mu s$)	P_{PK}	200	W
Maximum Peak Pulse Current ($t_p=8/20\mu s$)	I_{PP}	8	A
ESD per IEC 61000-4-2(Air)	V_{ESD}	± 20	kV
ESD per IEC 61000-4-2(Contact)		± 15	kV
Junction Temperature	T_J	-55 to 125	$^{\circ}C$
Storage Temperature	T_{STG}	-55 to 150	$^{\circ}C$

7. Electrical Characteristics ($T_A=25^{\circ}C$ unless otherwise specified)

Parameter	Symbol	Conditions	Min	Typ	Max	Units
Reverse Stand-Off Voltage	V_{RWM}				12	V
Breakdown Voltage	V_{BR}	$I_T=1mA$	13.3	15.5	17.5	V
Reverse Leakage Current	I_R	$V_{RWM}=12V, T=25^{\circ}C$		0.1	1	μA
Forward Voltage	V_F	$I_F=10mA$		0.8		V
Clamping Voltage	V_C	$I_{PP}=1A, t_p=8/20\mu s$			19	V
Clamping Voltage	V_C	$I_{PP}=8A, t_p=8/20\mu s$			25	V
Junction Capacitance	C_J	$V_R=0V, f=1MHz$			60	pF



8. Typical Characteristic

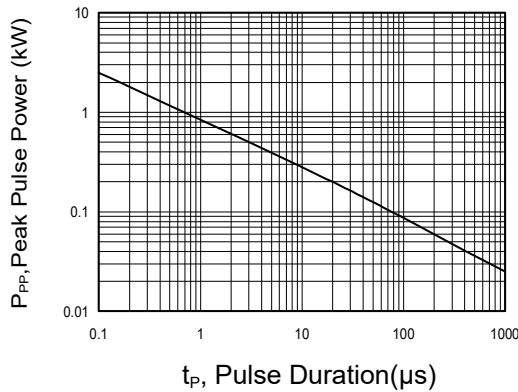


Figure 1: Non-Repetitive Peak Pulse Power vs. Pulse Time

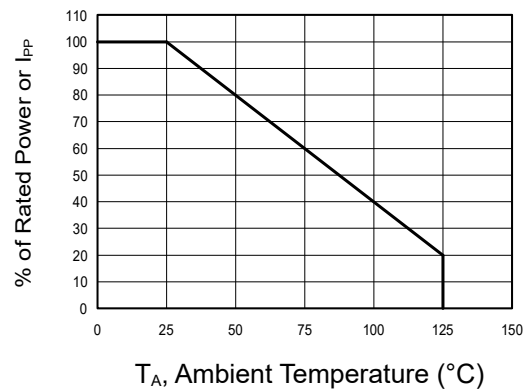


Figure 2: Power Derating Curve

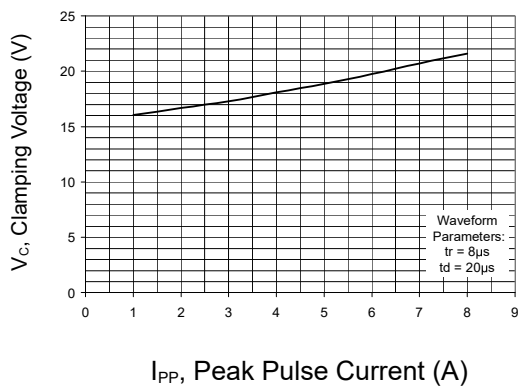


Figure 3: Clamping Voltage vs. Peak Pulse Current

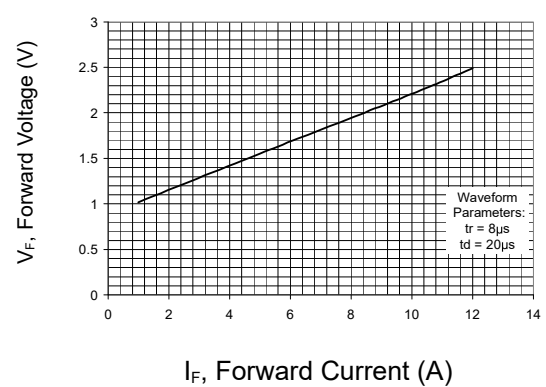


Figure 4: Forward Voltage vs. Forward Current

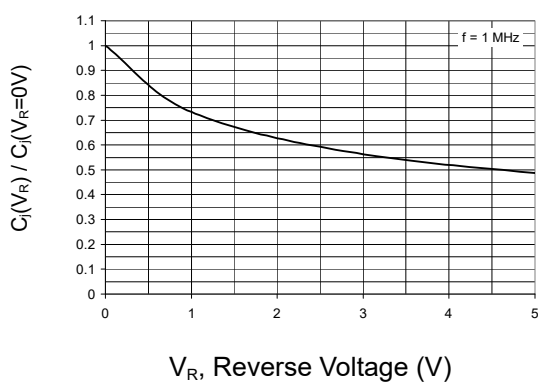


Figure 5: Normalized Junction Capacitance vs. Reverse Voltage

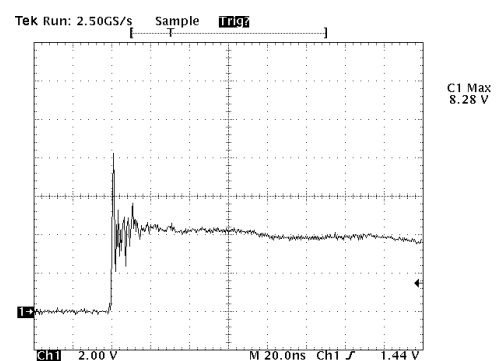
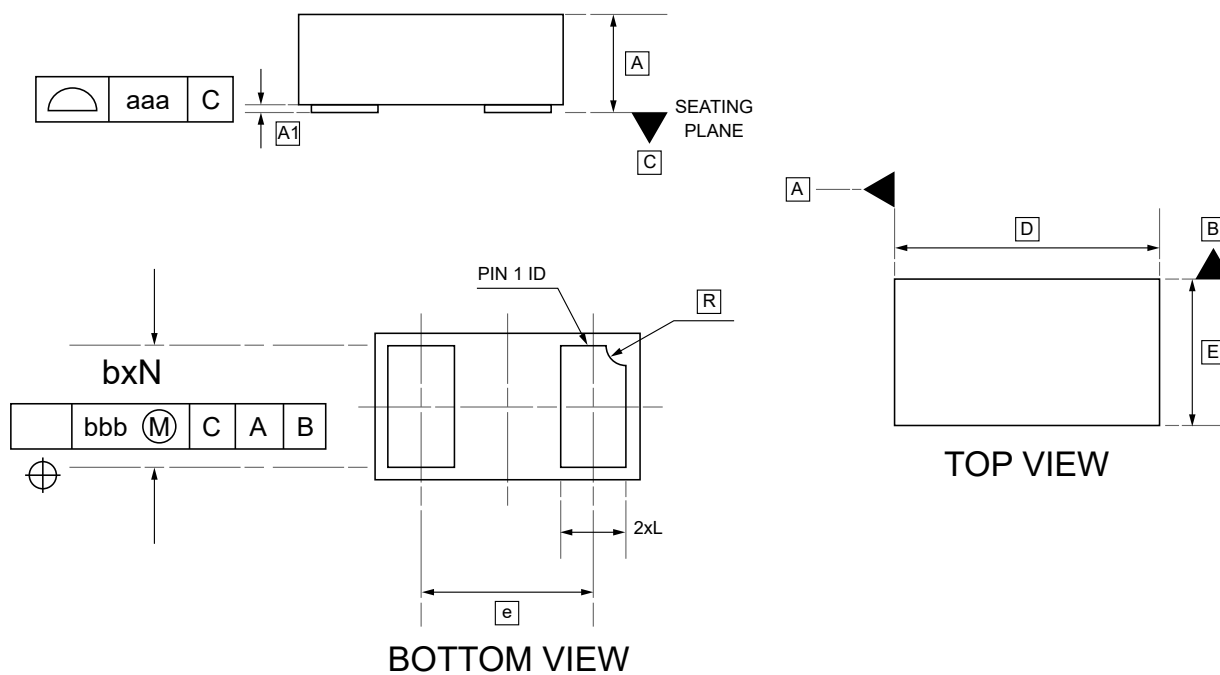


Figure 6: ESD Clamping
(8kV Contact per IEC 61000-4-2)



9.SLP1006P2 Package Outline Dimensions



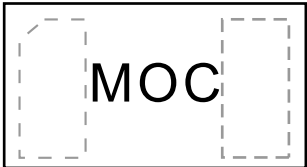
DIMENSIONS (mm are the original dimensions)

Symbol	A	A1	b	D	E	e	L	R	N	aaa	bbb
Min	0.37	0.00	0.45	0.90	0.50	0.65	0.20	0.05	2	0.08	0.10
Max	0.43	0.05	0.55	1.10	0.70	BSC	0.30	0.15			

Notes: 1.CONTROLLING DIMENSIONS ARE IN MILLIMETERS (ANGLES IN DEGREES).



10.Ordering information



Order Code	Package	Base QTY	Delivery Mode
UMW UCLAMP1201P	SLP1006P2	10000	Tape and reel



11.Disclaimer

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