

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

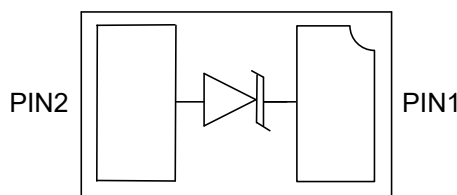
- SLP1006P2 package
- RoHS/WEEE Compliant
- Nominal Dimensions: 1.0 x 0.6 x 0.50 mm
- Lead Finish: NiPdAu

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

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

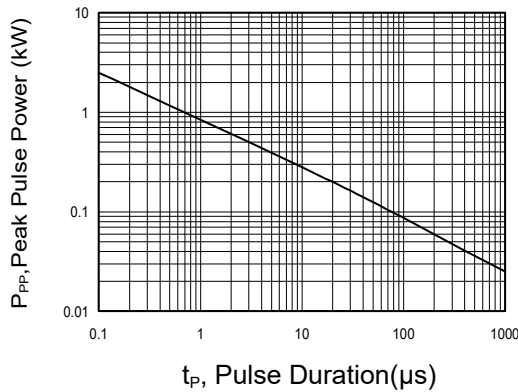


Figure 1: Non-Repetitive Peak Pulse Power vs. Pulse Time

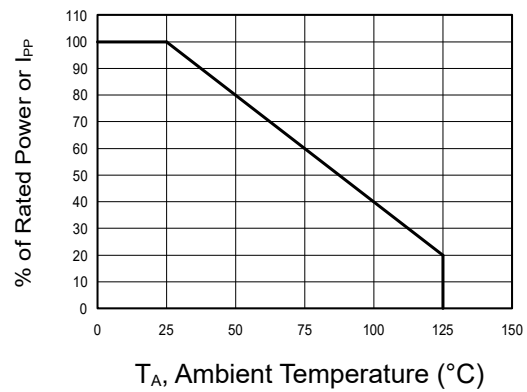


Figure 2: Power Derating Curve

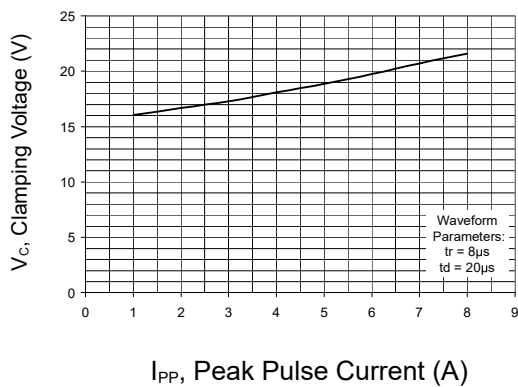


Figure 3: Clamping Voltage vs. Peak Pulse Current

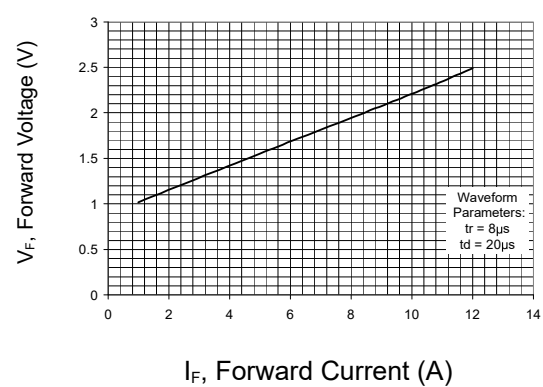


Figure 4: Forward Voltage vs. Forward Current

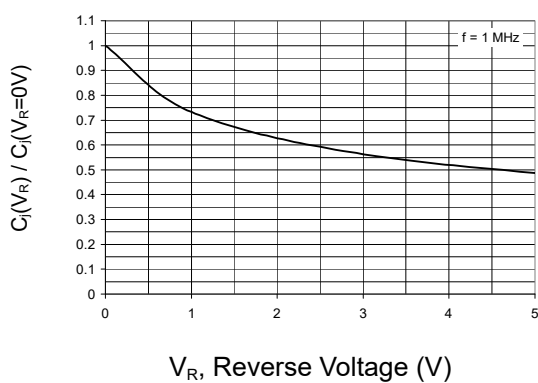


Figure 5: Normalized Junction Capacitance vs. Reverse Voltage

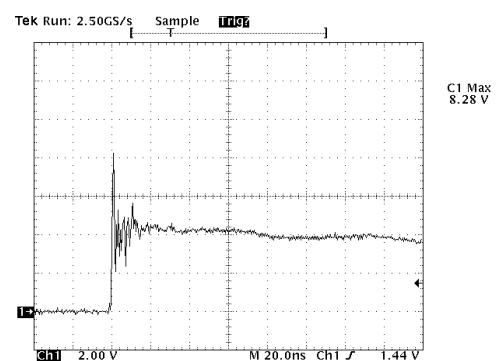


Figure 6: ESD Clamping
(8kV Contact per IEC 61000-4-2)



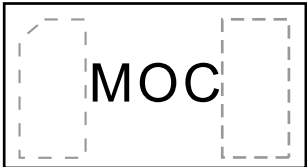
DIMENSIONS (mm are the original dimensions)

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

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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