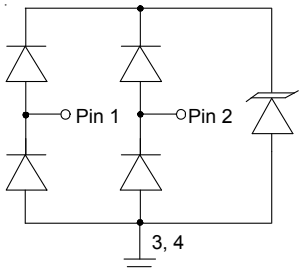
RCLAMP0522P.TCT

Low Capacitance TVS Diode Array

Features

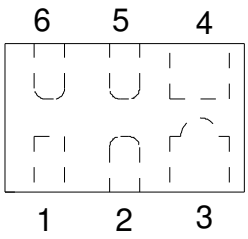
- Ultra Low Capacitance 0.5pF typical
- Low operating Voltage: 5.0 V
- Low clamping voltage
- IEC61000−4−4 (EFT) 40A (5/50ns)
- IEC61000-4-5(Lightning)5A(5/50ns)

Internal Structure



Applications

- USB 2.0
- HDMI 1.3
- SATA and eSATA
- DVI
- IEEE 1394
- PCI Express
- Portable Electronics
- Notebooks



Pin	Identification
1 - 2	Input Lines
5 - 6	Output Lines (No Internal Connection)
3 - 4	Ground

Mechanical Characteristics

- JEDEC SLP1610P4 package
- Molding compound flammability rating: UL 94V-0

Absolute Maximum Ratings (T_A=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs)	Ppk	150	W
Peak Pulse Current (8/20μs)	IPP	5	A
ESD per IEC 61000−4−2 (Air) ESD per IEC 61000−4−2 (Contact)	VESD	±25 ±20	kV
Operating Temperature Range	TJ	−55 to +125	°C
Storage Temperature Range	Tstg	−55 to +150	°C

Electrical Characteristics (T_A=25°C unless otherwise specified)

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
DP, DM, USB ID TVS						
Reverse Working Voltage	V_{RWM}			5.0	V	
Breakdown Voltage	V_{BR}	6.0			V	I_T = 1mA
Reverse Leakage Current	I_R			0.5	μA	V_{RWM} = 5.0V
Clamping Voltage	V_C			15	V	I_{PP} = 1A (8 x 20μs pulse), any I/O pin to ground
Clamping Voltage	V_C			25	V	I_{PP} = 5A (8 x 20μs pulse), any I/O pin to ground
Junction Capacitance	C_J		0.5	1.0	pF	VR = 0V, f = 1MHz, any I/O pin to ground

Typical Characteristics

Fig1. 8/20μs Pulse Waveform

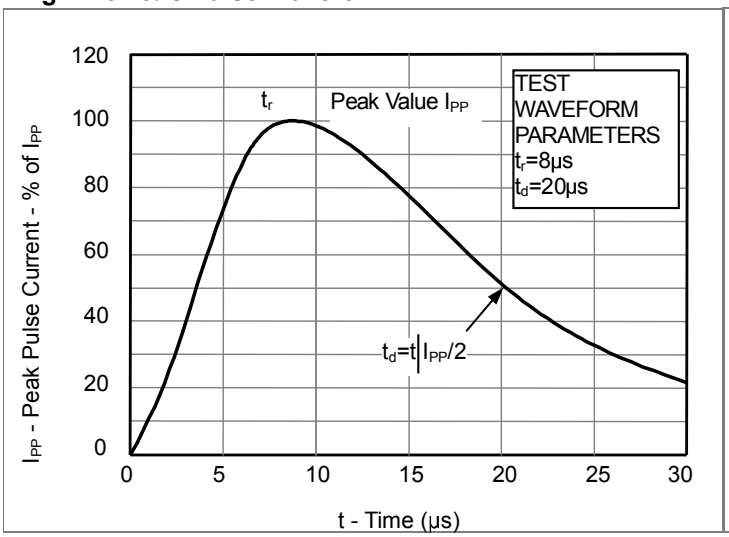


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

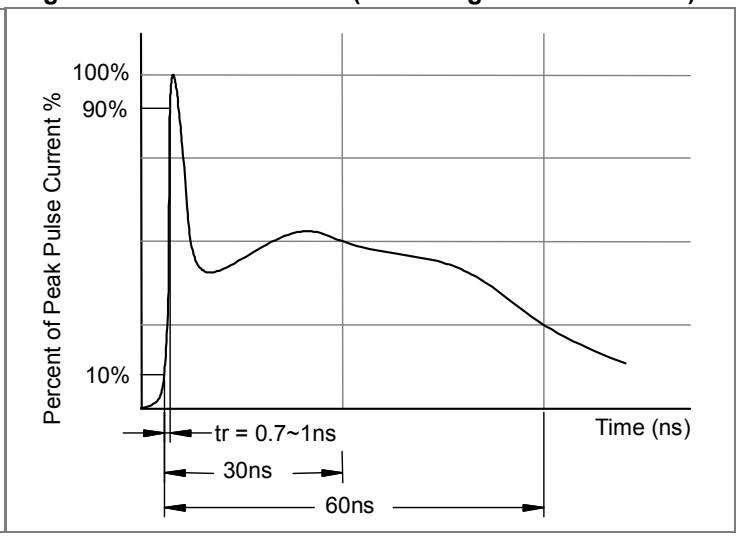
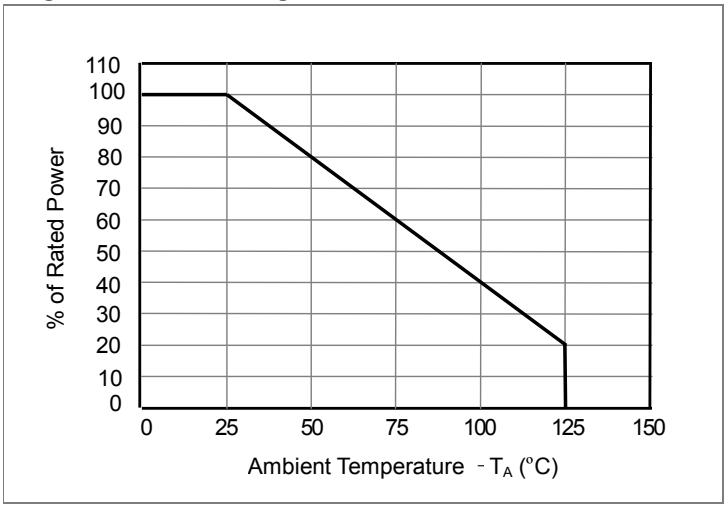
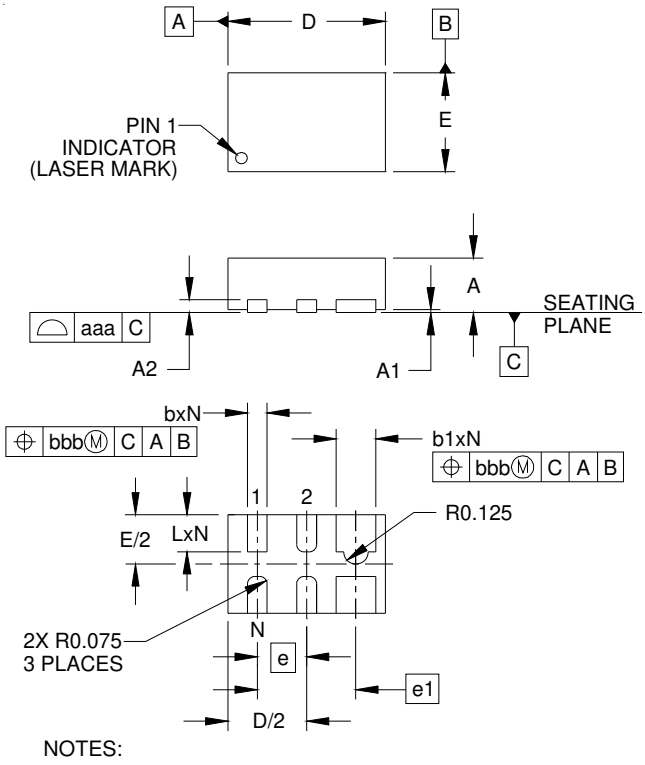


Fig3. Power Derating Curve

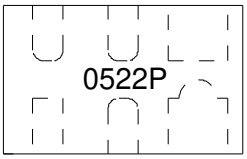


Outline Drawing - SLP1610P4



DIMENSIONS						
DIM	INCHES			MILLIMETERS		
	MIN	NOM	MAX	MIN	NOM	MAX
A	.020	.023	.026	0.50	0.58	0.65
A1	0.00	.001	.002	0.00	0.03	0.05
A2		(.005)			(0.13)	
b	.006	.008	.010	0.15	0.20	0.25
b1	.014	.016	.018	0.35	0.40	0.45
D	.059	.063	.067	1.50	1.60	1.70
E	.035	.039	.043	0.90	1.00	1.10
e		.020 BSC			0.50 BSC	
e1		.039 BSC			1.00 BSC	
L	.012	.015	.017	0.30	0.38	0.43
N		4			4	
aaa		.003			0.08	
bbb		.004			0.10	

Marking



Ordering information

Order code	Package	Base qty	Delivery mode
UMW RCLAMP0522P	SLP1610P4	3000	Tape and reel