Features

- Solid-state silicon-avalanche technology
- Low operating and clamping voltage
- Up to four I/O Lines of Protection
- Ultra low capacitance: 0.25pF typical(I/O to I/O)
- Low Leakage
- Low operating voltage:5V
- Flow-Through design

Mechanical Characteristics

- SLP1610P4 package
- Molding compound flammability rating: UL 94V-0
- Marking: Marking Code
- Packaging: Tape and Reel
- RoHS Compliant

Applications

- Digital Visual Interface(DVI)
- MDDI Ports
- Display Port TM Interface
- PCI Express
- High Definition Multi-Media Interface(HDMI)
- HDMI Interfaces

IEC COMPATIBILITY (EN61000-4)

- IEC 61000-4-2 (ESD) ±25kV (air), ±20kV (contact)
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 5A (**8/20μs**)

Schematic & PIN Configuration
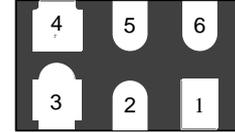
SLP1610P4

Pin	Identificaion
1,2	Input line
5,6	Output Lines (No Internal Connection)
3,4	Ground

Circuit Diagram
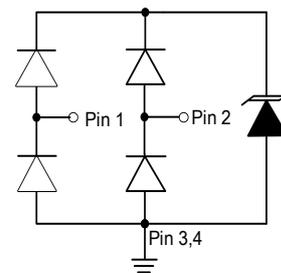
Line Protection

Absolute Maximum Rating

Rating	Symbol	Value	Units
Peak Pulse Power (t_p =8/20µs)	P_{PP}	100	Watts
Peak Pulse Current (t_p =8/20µs)	I_{pp}	5	A
Operating Temperature	T_J	-55 to + 125	°C
Storage Temperature	T_{STG}	-55 to +150	°C

Electrical Parameters (T=25°C)

Symbol	Parameter
I_{PP}	Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
V_{RWM}	Working Peak Reverse Voltage
I_R	Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current
I_F	Forward Current
V_F	Forward Voltage @ I_F
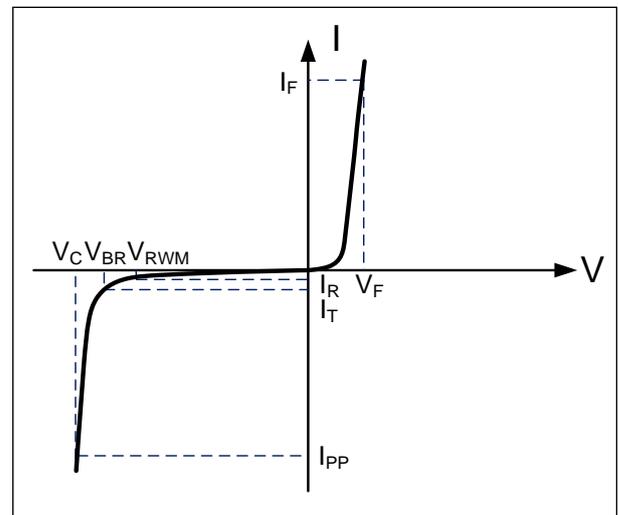
Electrical Characteristics

Parameter	Symbol	Conditions	Minimum	Typical	Maximum	Units
Reverse Stand-Off Voltage	V_{RWM}	Any I/O pin to ground			5.0	V
Reverse Breakdown Voltage	V_{BR}	I_t = 1mA Any I/O pin to ground	5.6			V
Reverse Leakage Current	I_R	V_{RWM} = 5V, T=25°C Any I/O pin to ground			0.5	µA
Clamping Voltage	Vc	I_{pp}=5A, t_p=8/20µs Any I/O pin to ground			15	V
Junction Capacitance	C_j	V_R = 0V, f = 1MHz I/O pin to GND		0.6	0.8	pF
		V_R = 0V, f = 1MHz Between I/O pins		0.25	0.4	pF

Typical Characteristics

### Non-Repetitive Peak Pulse Power vs. Pulse Time

Peak Pulse Power - Ppp (KW) vs Pulse Duration - tp (us)

100W 8/20μs Waveform

Power Derating curve

% of Rated Power or I_{PP} vs Ambient Temperature - T_A (°C)

Pulse Waveform

Percent of I_{pp} vs Time (us)

Waveform Parameters:
tr=8us
td=20us

e^{-t}

Td = I_{PP}/2
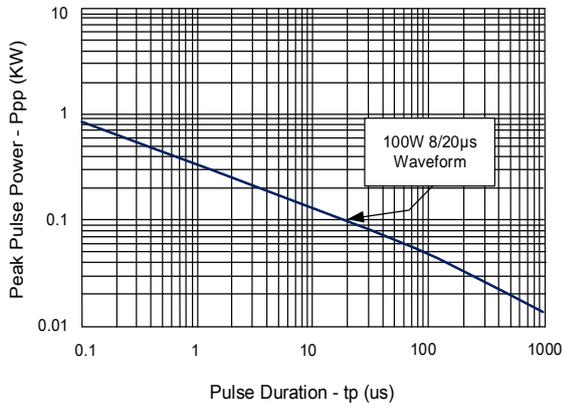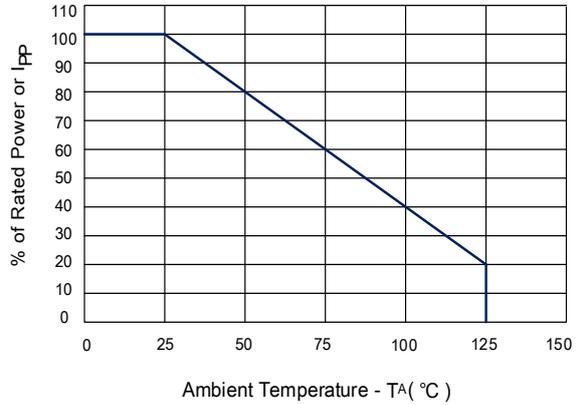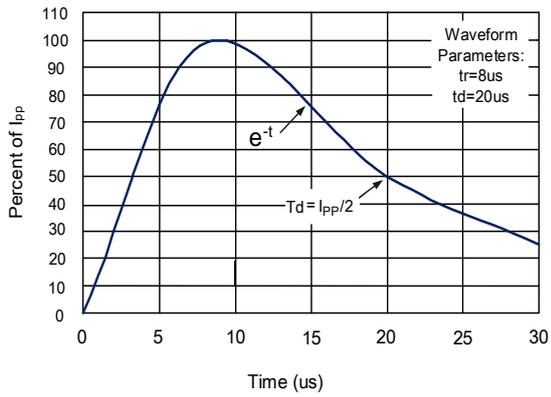
Clamping Voltage vs.Peak Pulse Current

Clamping Voltage - V_C(V) vs Peak Pulse Current - I_{pp} (A)

Line to Line

Line to Gnd

Waveform parameters:
tr=8us
td=20us
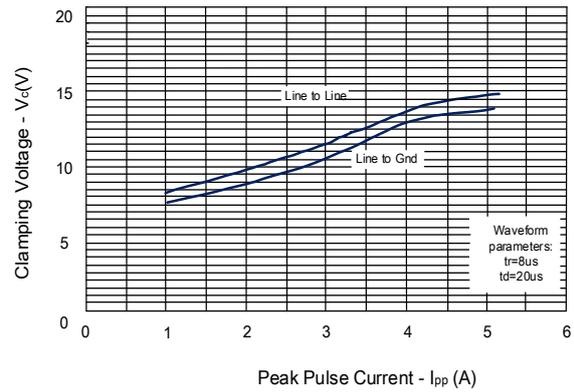
Normalized Capacitance vs. Reverse Voltage

$C (V_R) / C_J (V_R = 0)$ vs Reverse voltage - V_R (V)

F=1MHz
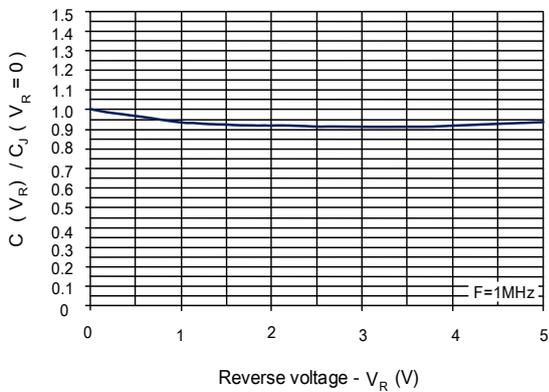
Outline Drawing – SLP1610P4
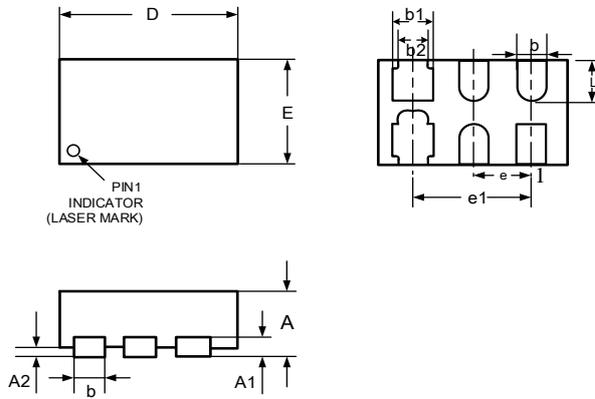
NOTES:

CONTROLLING DIMENSIONS ARE IN MILLIMETERS (ANGLES IN DEGREES).

DIM	DIMENSIONS			
	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
D	1.55	1.65	0.061	0.065
E	0.95	1.05	0.037	0.041
L	0.33	0.43	0.013	0.017
b	0.15	0.25	0.006	0.010
b1	0.35	0.45	0.014	0.018
b2	0.25	0.35	0.010	0.014
e	0.50BSC		0.020BSC	
e1	1.00BSC		0.039BSC	
A	0.45	0.55	0.018	0.022
A1	0.15REF		0.006REF	
A2	0.00	0.05	0.000	0.002
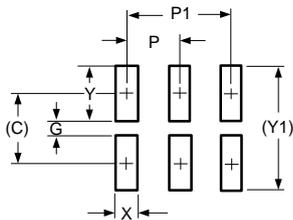
DIMENSIONS		
DIM	INCHES	MILLIMETERS
C	0.024	0.60
G	0.004	0.10
P	0.020	0.50
P1	0.039	1.0
X	0.012	0.30
Y	0.020	0.50
Y1	0.063	1.60

NOTES:

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

2. THIS LAND PATTERN IS FOR REFERENCE PURPOSES ONLY.

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