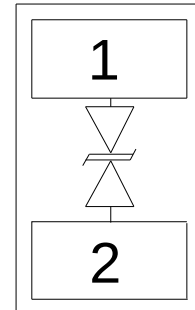


Features

- High ESD withstand Voltage: **+/-17kV** (Contact) and **+/- 25kV** (Air) per **IEC 61000-4-2**
- Able to withstand over 1000 ESD strikes per IEC 61000-4-2 Level 4
- Ultra-small **0201 package**
- Protects one high-speed data line
- Low reverse current: <10nA typical (VR=5V)
- Working voltage: +/- 5V
- Low capacitance: 0.35pF typical
- Dynamic resistance: 0.90 Ohms (Typ)
- Solid-state silicon-avalanche technology



SLP0603P2X3

Mechanical Characteristics

- SLP0603P2X3 package
- Pb-Free, Halogen Free, RoHS/WEEE Compliant
- Nominal Dimensions: 0.6 x 0.3 x 0.25 mm
- Lead Finish: NiAu
- Molding compound flammability rating: UL 94V-0
- Packaging : Tape and Reel

Applications

- HDMI 1.3 and HDMI 1.4
- USB 2.0
- MHL
- LVDS Interfaces
- FM Antenna
- PCI Express
- eSATA Interfaces

Absolute Maximum Rating

Rating	Symbol	Value	Units
Peak Pulse Power (tp = 8/20μs)	Ppk	100	Watts
Peak Pulse Current (tp = 8/20μs)	IPP	4	A
ESD per IEC 61000-4-2 (Air) ¹ ESD per IEC 61000-4-2 (Contact) ¹	V _{ESD}	+/- 25 +/- 17	kV
Operating Temperature	T _J	-55 to +125	°C
Storage Temperature	T _{STG}	-55 to +150	°C

Electrical Characteristics (T=25°C)

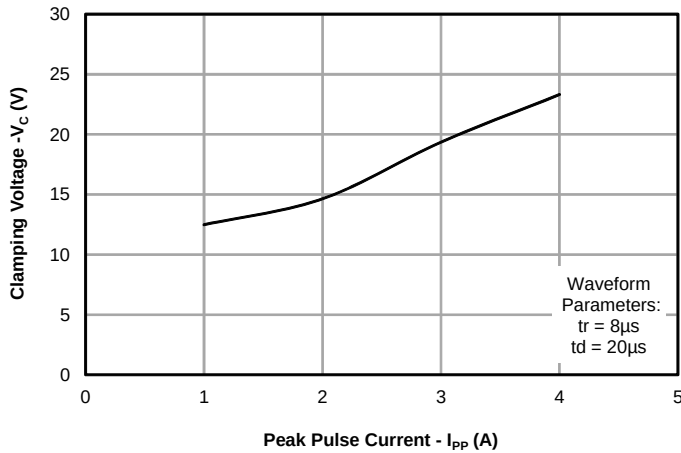
Parameter	Symbol	Conditions	Minimum	Typical	Maximum	Units
Reverse Stand-Off Voltage	V _{RWM}				5	V
Reverse Breakdown Voltage	V _{BR}	I _t = 1mA	6	9.3	11	V
Reverse Leakage Current	I _R	V _{RWM} = 5V, T=25°C		0.005	0.100	μA
Clamping Voltage	V _C	I _{PP} = 1A, tp = 8/20μs			15	V
Clamping Voltage	V _C	I _{PP} = 4A, tp = 8/20μs			25	V
Dynamic Resistance ^{2, 3, 4}	R _D	tp = 100ns		0.90		Ohms
Junction Capacitance	C _J	V _R = 0V, f = 1MHz		0.35	0.50	pF

Notes

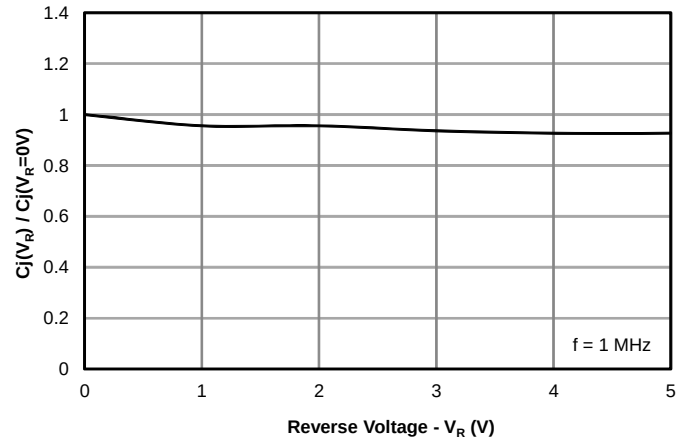
- 1)ESD gun return path connected to ESD ground reference plane.
- 2)Transmission Line Pulse Test (TLP) Settings: t_p = 100ns, t_r = 0.2ns, I_{TLP} and V_{TLP} averaging window: t₁ = 70ns to t₂ = 90ns.
- 3) Dynamic resistance calculated from I_{TLP} = 4A to I_{TLP} = 16A
- 4)Guaranteed by design. Not production tested

Typical Characteristics

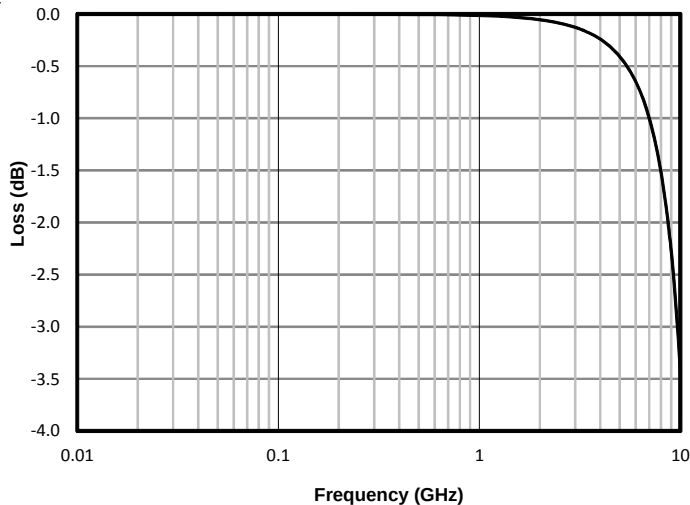
Clamping Voltage vs. Peak Pulse Current



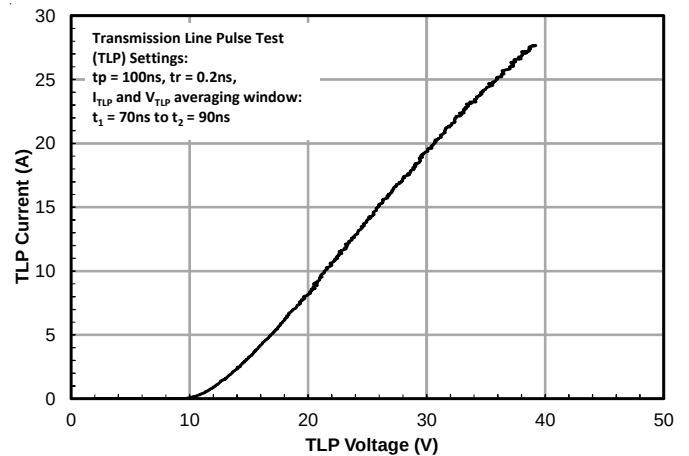
Typical Capacitance vs. Reverse Voltage



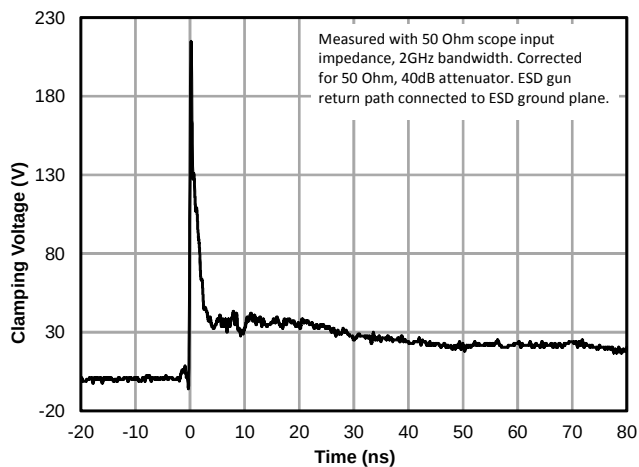
Typical Insertion Loss (S21)



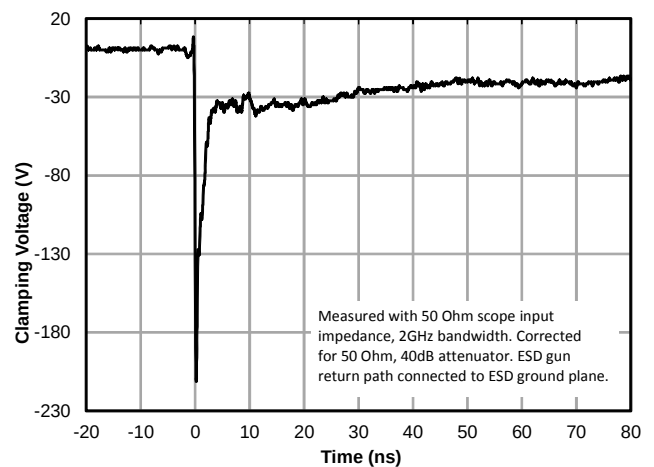
TLP Characteristic



ESD Clamping (+8kV Contact per IEC 61000-4-2)



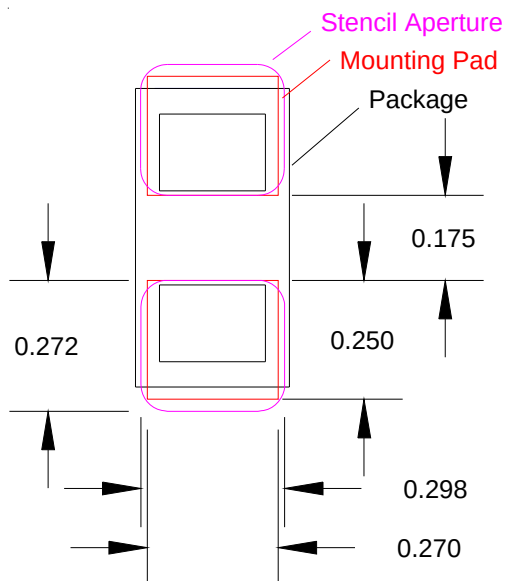
ESD Clamping (-8kV Contact per IEC 61000-4-2)



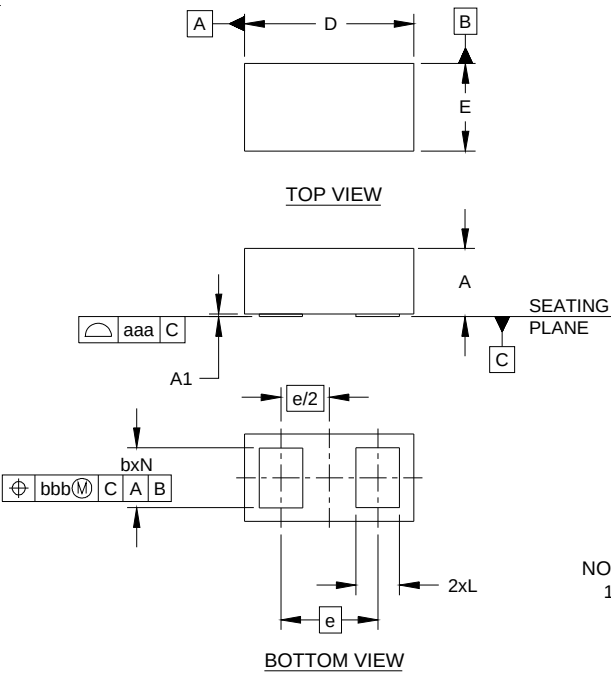
Applications Information

Assembly Parameter	Recommendation
Solder Stencil Design	Laser cut, Electro-polished
Aperture shape	Rectangular with rounded corners
Solder Stencil Thickness	0.100 mm (0.004")
Solder Paste Type	Type 4 size sphere or smaller
Solder Reflow Profile	Per JEDEC J-STD-020
PCB Solder Pad Design	Non-Solder mask defined
PCB Pad Finish	OSP OR NiAu

Recommended Mounting Pattern

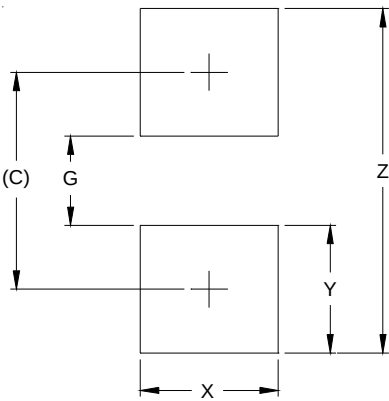


Dimensions SLP0603P2X3



DIMENSIONS			
DIM	MILLIMETERS		
	MIN	NOM	MAX
A	0.235	0.25	0.265
A1	0.000	0.02	0.025
b	0.20	0.22	0.24
D	0.585	0.62	0.655
E	0.285	0.32	0.355
e	0.355 BSC		
L	0.14	0.16	0.18
N	2		
aaa	0.08		
bbb	0.10		

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



DIMENSIONS	
DIM	MILLIMETERS
C	(0.425)
G	0.175
X	0.270
Y	0.250
Z	0.675

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