

DESCRIPTION

The SELC3304P10 is an ultra low capacitance TVS array. It is designed to protect computing applications such as gigabit Ethernet, HDMI, USB and DVI interfaces as well as telecommunication equipment and systems.

The SELC3304P10 is available in the space-saving DFN2510P10 package configuration. It meets the IEC 61000-4-2 (ESD), 61000-4-4 (EFT) and 61000-4-5 (Surge) requirements. At higher operating frequencies or faster edge rates, insertion loss and signal integrity are a major concern. This device in conjunction with passive components integrated into a TVS/filter network can be used for EMI/RFI protection.

FEATURES

- > 250 Watts Peak Pulse Power per Line (tp=8/20μs)
- > Protects four high speed lines
- > Low capacitance: 0.5pF max
- > Weight: 5.0mg
- > RoHS Compliant

APPLICATIONS

- > High Definition Multi-Media Interface (HDMI)
- > Digital Visual Interface (DVI)
- > USB3.0/USB3.1 Interfaces
- > PCI Express
- > Serial ATA

IEC COMPATIBILITY

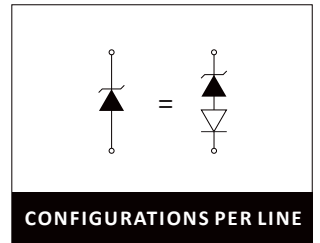
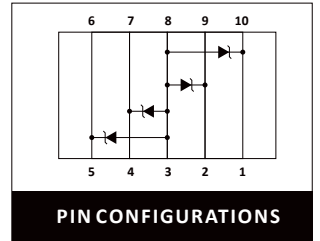
- > IEC61000-4-2 (ESD) ±30kV (air), ±30kV (contact)
- > IEC61000-4-4 (EFT) 40A (5/50ns)
- > IEC61000-4-5 (Lightning) 10A (8/20μs)

MAXIMUM RATINGS @25 °C UNLESS OTHERWISE SPECIFIED

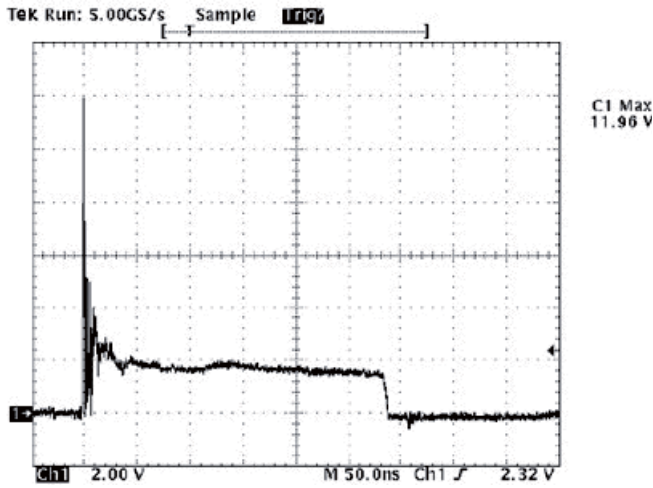
PARAMETER	SYMBOL	VALUE	UNIT
Peak Pulse Power (tp=8/20μs waveform)	PPP	250	Watts
Lead Soldering Temperature	TL	260(10 sec.)	°C
Operang Temperature Range	TJ	-55~125	°C
Storage Temperature Range	TSTG	-55~150	°C

ELECTRICAL CHARACTERISTICS PER LINE @25 °C UNLESS OTHERWISE SPECIFIED

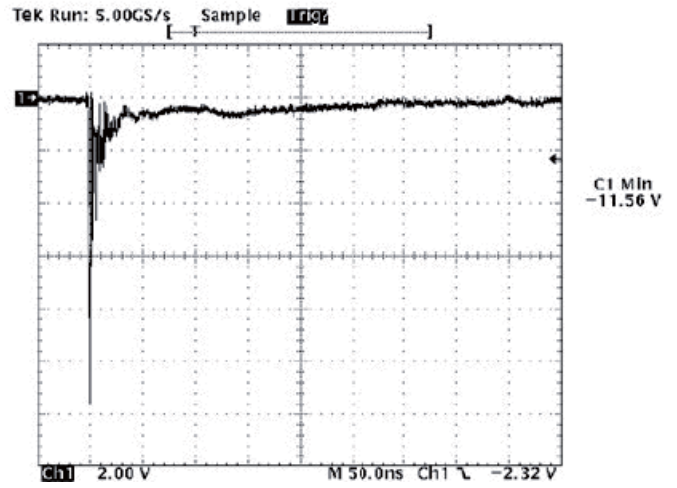
PART NUMBER	DEVICE MARKING	VRWM (V) Max.	VB (V) Min.	IT (mA)	VC @1A Max.	VC		IR (uA) Max.	CT (pF) Max.
						Max.	@A		
SELC3304P10	304U	3.3	4.0	1	7.0	25.0	10.0	1	0.5



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

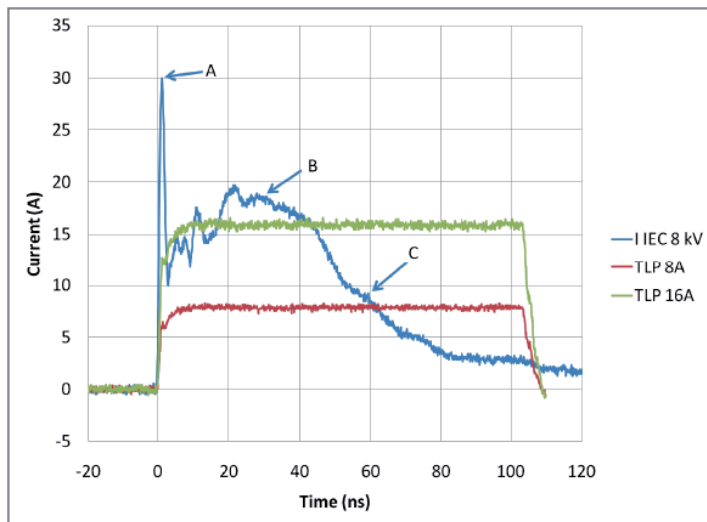


ESD Clamping
(-8KV Contact per IEC 61000-4-2)



TRANSMISSION LINE PULSE (TLP)

Transmission Line Pulse(TLP) is a measurement technique used in the Electrostatic Discharge(ESD) arena to characterize performance attributes of devices under ESD stresses. TLP is able to obtain current versus voltage (I-V) curves in which each data point is obtained with a 100 ns long pulse, with currents up to 40A. TLP was first used in the ESD field to study human body model (HBM) in integrated circuits, but it is an equally valid tool in the field of system level ESD. The applicability of TLP to system level ESD is illustrated in Figure 1, which compares an 8 kV IEC 61000-4-2 current waveform with TLP current pulses of 8 and 16 A. The current levels and duration for the pulses are similar and the initial rise time for the TLP pulse is comparable to the rise time of the IEC 61000-4-2's initial current spike. This application note will give a basic introduction to TLP measurements and explain the datasheet parameters extracted from TLP for protection on products.



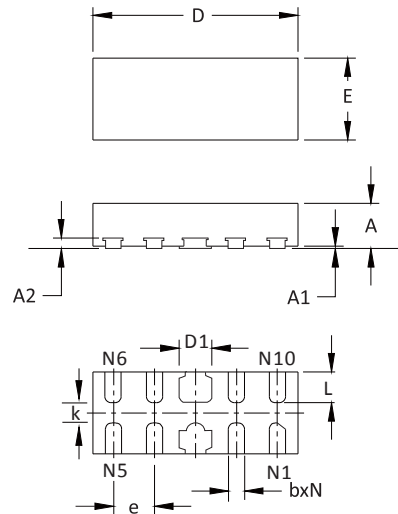
Comparison of a Current Waveform of IEC 61000-4-2 with TLP Pulses at 8 and 16 A.

The IEC 61000-4-2 ESD waveforms is true to the Standard and is shown here as captured on an oscilloscope. The points A, B, and C show the points on the waveforms specified in IEC 61000-4-2.

SELC3304P10	1A(tp=100ns)	8A(tp=100ns)
	6.5V(typ.)	12.5V(typ.)

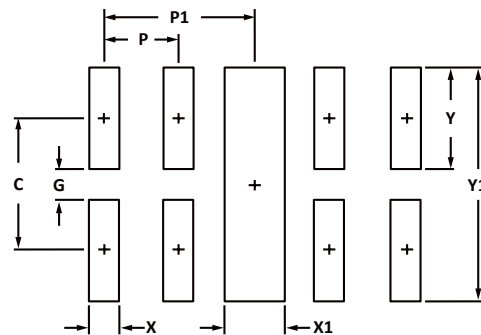
DFN2510P10 PACKAGE INFORMATION

OUTLINE DIMENSIONS				
DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	0.50	0.60	0.020	0.024
A1	0	0.05	0	0.002
A2	0.110REF		0.004REF	
b	0.15	0.25	0.006	0.010
D	2.40	2.60	0.094	0.102
E	0.90	1.10	0.035	0.043
e	0.50 TYP.		0.020 TYP.	
L	0.30	0.45	0.012	0.018
D1	0.35	0.45	0.014	0.018
k	0.15MIN		0.006MIN	
N	8		8	



PAD LAYOUT DIMENSIONS		
DIM	MILLIMETERS	INCHES
	NOMINAL	NOMINAL
C	0.875	0.34
G	0.20	0.008
P	0.50	0.020
P1	1.00	0.039
X	0.20	0.008
X1	0.40	0.016
Y	0.675	0.027
Y1	1.55	0.061

NOTES
1. Controlling dimension: Millimeters.



ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
SELC3304P10	DFN2510P10	3000PCS	7"

CONTACT US

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