ESD2510LC0524P
Ultra Low Capacitance ESD Protection Array

General description
Ultra Low Capacitance ESD Protection Array.

FEATURES
- Transient protection for high-speed data lines
  IEC 61000-4-2(ESD) ±20KV(Contact)
  ±25KV(Air)
  IEC 61000-4-4(EFT) 40A(5/50ns)
- Package optimized for high-speed lines
- Protects four data line
- Low capacitance: 0.2pF (I/O to I/O)
- Low leakage current
- Low clamping voltage
- Each I/O pin can withstand over 1000 ESD strikes for ±8KV contact discharge

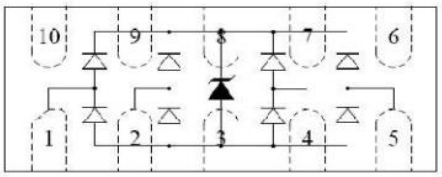
APPLICATIONS:
- Serial ATA
- MDDI Ports
- USB 2.0/3.0 Power and Data Line Protection
- Display Ports
- High Definition Multi-Media Interface (HDMI)
- Digital Visual Interface (DVI)

MACHANICAL DATA
- DFN2510 package
- Flammability Rating: UL 94V-0
- Terminal: Matte tin plated.
- High temperature soldering guaranteed:260℃/10s

Marking: 0524P

Package Outline

DFN2510 Package



PIN CONFIGURATION

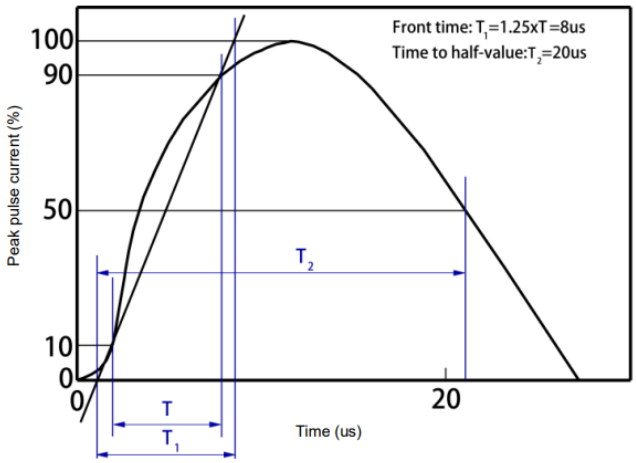
ABSOLUTE MAXIMUM RATING

Symbol	Parameter	Value	Units
PPP	Peak Pulse Power (8/20μs)	60	W
VESD	ESD per IEC 61000-4-2 (Contact) ESD per IEC 61000-4-2 (Air)	±20 ±25	kV
TOPT	Operating Temperature	-55/+125	℃
TSTG	Storage Temperature	-55/+150	℃

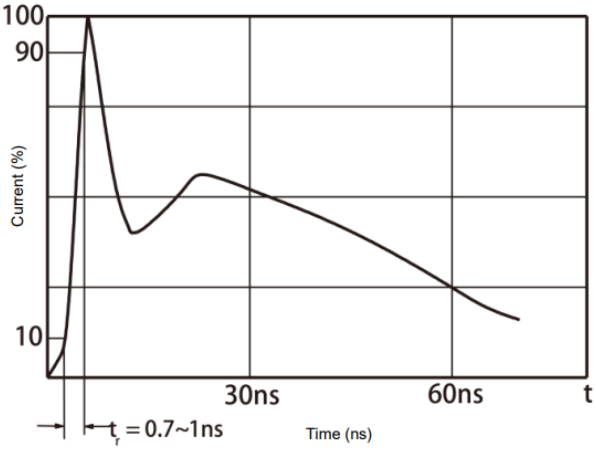
ELECTRICAL CHARACTERISTICS (Ta=25℃)						
Symbol	**Parameter**	**Test Condition**	**Min**	**Typ**	**Max**	**Units**
VRWM	Reverse Working Voltage	Any I/O pin to GND			5.0	V
VBR	Reverse Breakdown Voltage	I_T = 1mA Any I/O pin to GND	6.0		9.0	V
IR	Reverse Leakage Current	V_{RWM} = 5V Any I/O pin to GND			1.0	μA
V_C	Clamping Voltage	I_{PP} = 1A, t_p = 8/20μs Any I/O pin to GND			10	V
V_C	Clamping Voltage	I_{PP} = 4A, t_p = 8/20μs Any I/O pin to GND			15	V
CESD	Parasitic Capacitance	V_R = 0V, f = 1MHz Between I/O and GND		0.4	0.5	pF
CESD	Parasitic Capacitance	V_R = 0V, f = 1MHz Between I/O and I/O		0.2	0.3	pF

Note: I/O pins are pin 1,2,4,5, GND pins are pin 3,8.

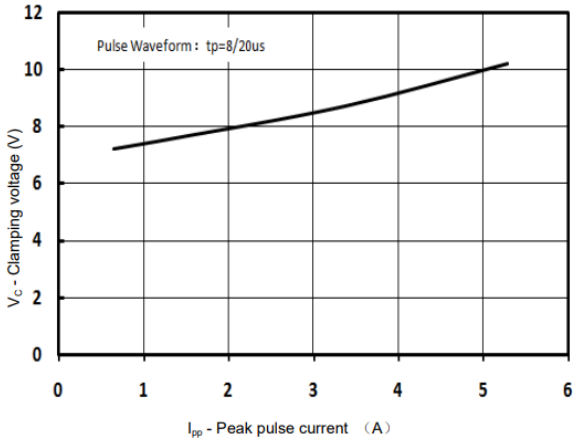
Typical Characteristic:



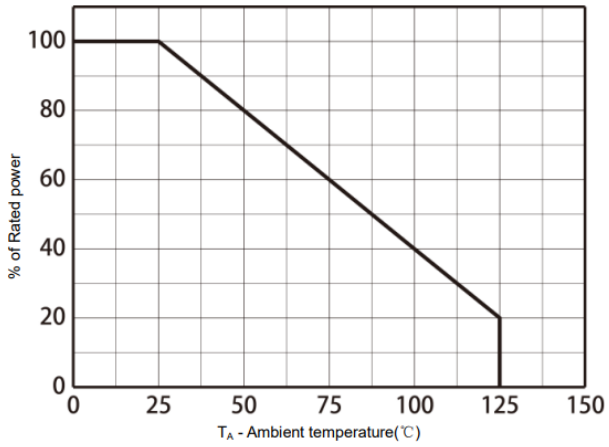
8/20 us waveform per IEC61000-4-5



Contact discharge current waveform per IEC61000-4-2



Clamping Voltage vs. Peak pulse current



Power derating vs. Ambient temperature

Clamping Voltage vs. Peak pulse current

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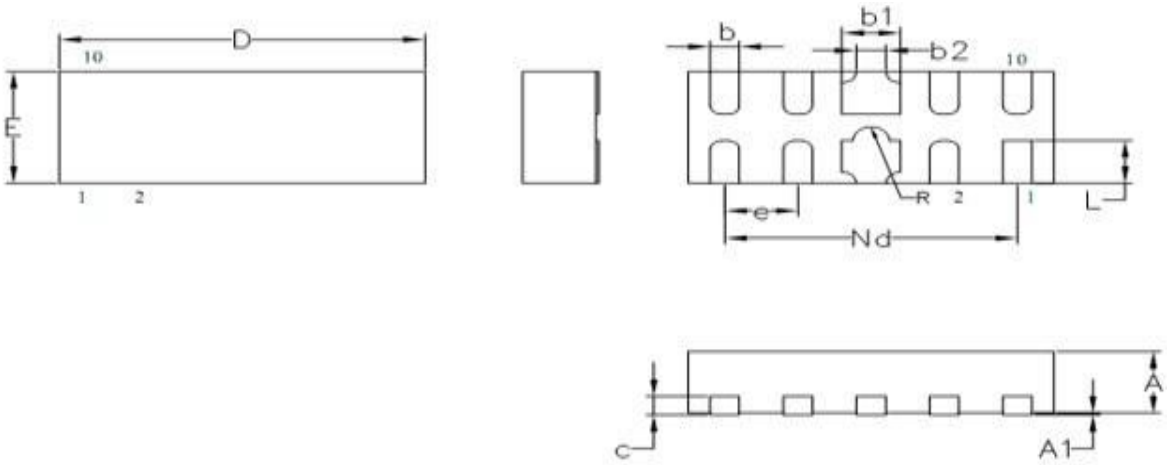
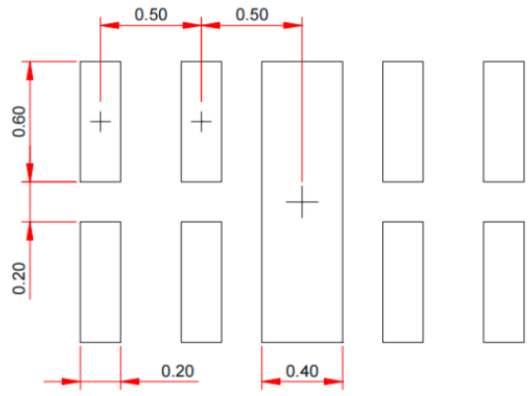
DFN2510 PACKAGE OUTLINE DIMENSIONS



Symbol	Dimensions (mm)		
	Min.	Nom.	Max.
D	2.45	2.50	2.55
E	0.95	1.00	1.05
b1	0.35	0.40	0.45
b2		0.20REF	
b	0.15	0.20	0.25
L	0.33	0.38	0.43
Nd		2.00BSC	
e		0.50BSC	
R	0.10	0.125	0.15
A	0.45	0.50	0.55
c		0.15REF	
A1	0.00	-	0.05

Recommend Land Pattern (Unit: mm)



Note:
This recommended land pattern is for reference purpose only.

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