

Transient Voltage Suppressors for ESD Protection

Description

The ULC0524P is designed to protect voltage sensitive components from ESD and transient voltage events. Excellent clamping capability, low leakage, and fast response time, make these parts ideal for ESD protection on designs where board space is at a premium.

Features

- ◆ 100 Watts Peak Pulse Power per Line (tp=8/20µs)
- ◆ Protects Four High Speed Lines
- ◆ Low Capacitance: 0.3pF
- ◆ Low Operating Voltage: 5V
- ◆ RoHS Compliant
- ◆ IEC61000-4-2(ESD) ±15kV (air discharge), ±8kV (contact discharge)
- ◆ IEC61000-4-4 (EFT) 40A (5/50ns)
- ◆ IEC61000-4-5 (LIGHTING) 4A (8/20µs)

Applications

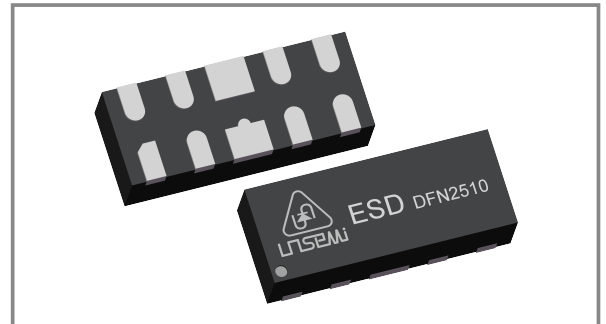
- ◆ High Definition Multimedia Interface (HDMI)
- ◆ Digital Visual Interface (DVI)
- ◆ Unified Display Interface (UDI)
- ◆ MDDI Ports
- ◆ PCI Express
- ◆ Serial ATA

Mechanical Characteristics

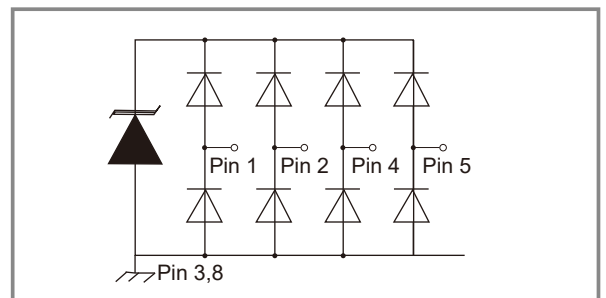
Parameter	Symbol	Value	Units
Peak Pulse Power (Tp=8/20µs waveform)	P _{pp}	100	Watts
Lead Soldering Temperature	T _L	260 (10 sec.)	°C
Storage Temperature Range	T _{STG}	-55 to +150	°C
Operating Junction Temperature Range	T _J	-40 to +125	°C



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Functional Diagram



Mechanical Data

- ◆ DFN2510P10(2.5x1.0mm) Package
- ◆ Molding Compound Flammability Rating : UL 94V-O
- ◆ Weight 15.0 Milligrams (Approximate)
- ◆ Lead Finish : Lead Free

Electrical Characteristics @ 25°C Unless Otherwise Specified)

Characteristics	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Reverse Working Voltage	V_{RWM}	--	--	--	5.0	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1mA$;	6.0	--	--	V
Reverse Leakage Current	I_R	$V_{RWM}=5.0V, T=25^\circ C$;	--	--	1.0	μA
Clamping Voltage	V_C	$I_{PP}=1.0A, T_P = 8/20\mu s$;	--	11.0	15.0	V
		$I_{PP}=4A, T_P = 8/20\mu s$;	--	15.0	25.0	V
Junction Capacitance	C_J	$V_R = 0V, f = 1MHz ; I/O-I/O$	--	0.3	--	pF
		$V_R = 0V, f = 1MHz ; I/O-GND$	--	0.6	--	pF

Characteristic Curves

Fig1. 8/20 μs Pulse Waveform

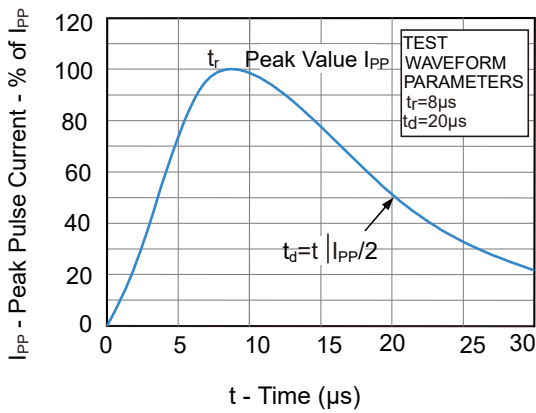
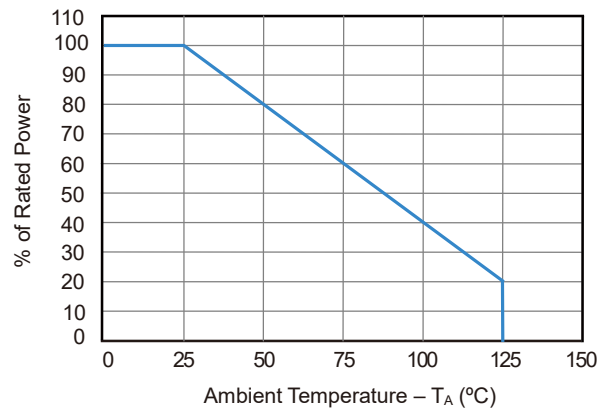
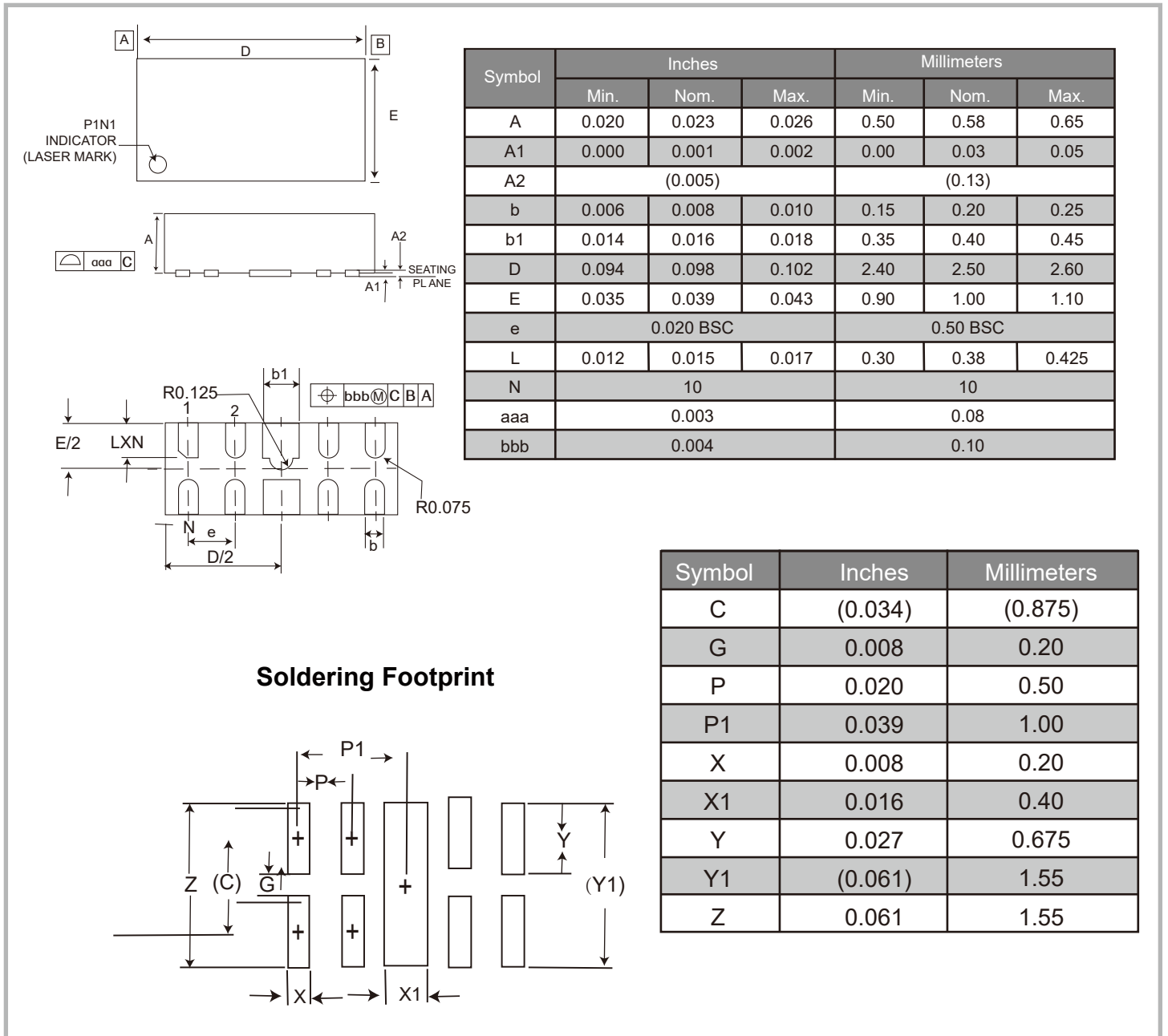


Fig2. Power Rating Derating Curve



DFN2510P10 Package Outline & Dimensions



Ordering Information

Device	Marking	Package	Quantity	Reel Size
ULC0524P	P524	DFN2510P10	3,000pcs/Reel	7 inch

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