ULTRA LOW CAPACITANCE TVS ARRAY



DESCRIPTION

The DL0521P is an ultra low capacitance transient voltage suppressor array, designed to protect computing applications from the damaging effects of Electrostatic Discharge and Electrical Fast Transients.

The DL0521P meets IEC 61000-4-2 (ESD) and IEC 61000-4-4 (EFT) requirements. At higher operating frequencies or faster edge rates, insertion loss and signal integrity are a major concern. This device offers an ultra low capacitance and low leakage current in a miniature DFN-2-0402 package.

FEATURES

- Compatible with IEC 61000-4-2 (ESD)
- Compatible with IEC 61000-4-4 (EFT)
- Compatible with IEC 61000-4-5 (Surge)
- 20 Watts Peak Pulse Power per Line (tp = 8/20μs)
- ESD Protection
- Low Clamping Voltage
- Protects One Bidirectional Line
- Ultra Low Capacitance: 0.6 pF
- · RoHS Compliant
- REACH Compliant

MECHANICAL CHARACTERISTICS

- Molded JEDEC DFN-2-0402 Package
- Approximate Weight: 2 milligrams
- Lead-Free Pure-Tin Plating (Annealed)
- Solder Reflow Temperature:
 - Pure-Tin Sn, 100: 260-270°C
- 8mm Tape and Reel Per EIA Standard 481
 Flammability Rating UL 94V-0

APPLICATIONS

- Ethernet 10/100/1000 Base T
- FireWire
- Wireless Communications
- USB 1.0, USB 2.0 & USB 3.0

PIN CONFIGURATION

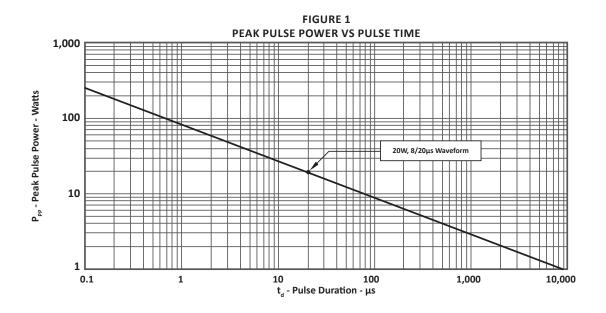


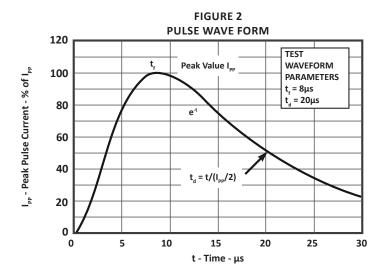
TYPICAL DEVICE CHARACTERISTICS

MAXIMUM RATINGS @ 25°C Unless Otherwise Specified							
PARAMETER SYMBOL VALUE							
Peak Pulse Power (tp = 8/20μs) - See Figure 1	P _{pp}	20	Watts				
Operating Temperature	T _A	-55 to 150	°C				
Storage Temperature	T _{STG}	-55 to 150	°C				

ELECTRICAL CHARACTERISTICS PER LINE @ 25°C Unless Otherwise Specified									
PART NUMBER	DEVICE MARKING	RATED STAND-OFF VOLTAGE	MINIMUM BREAKDOWN VOLTAGE	MAXIMUM CLAMPING VOLTAGE (Fig. 2)	MAXIMUM LEAKAGE CURRENT	TYPICAL CAPACITANCE			
		V _{wm} VOLTS	@ 1mA V _(BR) VOLTS	@I _p = 1A V _c VOLTS	@V _{wм} Ι _D μΑ	@0V, 1MHz C _, pF			
DL0521P	S	5.0	6.0	20.0	1	0.6			

TYPICAL DEVICE CHARACTERISTICS



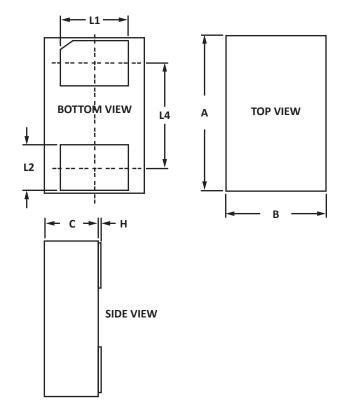


DFN-2-0402 PACKAGE INFORMATION

OUTLINE DIMENSIONS							
DIM	MILLIM	IETERS	INCHES				
	MIN	MAX	MIN	MAX			
А	0.90	1.05	0.035	0.041			
В	0.51	0.65	0.02	0.024			
С	0.51	0.60	0.02	0.024			
Н	0~0.10	0~0.10	0~0.004	0~0.004			
L1	0.45	0.55	0.018	0.022			
L2	0.18	0.30	0.007	0.012			
L4	0.65	BSC	0.026	5 BSC			

NOTES

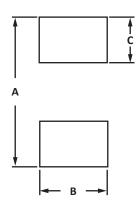
- 1. Dimensioning and tolerances per ANSI Y14.M, 1985.
- 2. Controlling dimension: inches.
- 3. Dimensions are exclusive of mold flash and metal burrs.



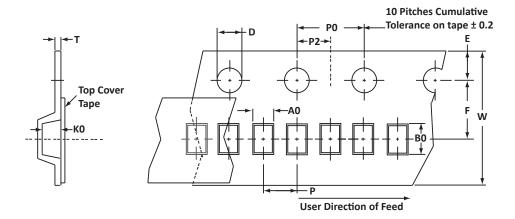
PAD LAYOUT DIMENSIONS							
MILLIN	IETERS	INCHES					
MIN MAX		MIN	MAX				
1.30	1.50	0.051	0.059				
0.60	0.70	0.024	0.028				
0.40	0.55	0.016	0.022				
	MILLIN MIN 1.30 0.60	MILLIMETERS MIN MAX 1.30 1.50 0.60 0.70	MILLIMETERS INC MIN MAX MIN 1.30 1.50 0.051 0.60 0.70 0.024				

NOTES

1. Controlling dimension: inches.



TAPE AND REEL



SPECIFICATIONS												
REEL DIA.	TAPE WIDTH	A0	В0	ко	D	E	F	w	P0	P2	Р	tmax
178mm (7")	8mm	0.70 ± 0.05	1.15 ± 0.10	0.56 ± 0.05	1.55 ± 0.10	1.75 ± 0.10	3.50 ± 0.05	8.00 ± 0.30	4.00 ± 0.10	2.00 ± 0.05	2.00 ± 0.05	0.25

NOTES

- 1. Dimensions are in millimeters.
- 2. Surface mount product is taped and reeled in accordance with EIA-481.
- 3. Suffix T710 = 7" Reel 10,000 pieces per 8mm tape.
- 4. Marking on Part marking code (see page 2).

Package outline, pad layout and tape specifications per document number 06094.R1 3/11 - Option 2.

ORDERING INFORMATION							
BASE PART NUMBER	LEADFREE SUFFIX	TAPE SUFFIX	REEL SIZE	TUBE QTY			
DL0521P	n/a	-T710	10,000	7"	n/a		
This device is only available in a Lead-Free configuration.							

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COMPANY INFORMATION

COMPANY PROFILE

In business more than 25 years, ProTek Devices™ is a privately held semiconductor company. The company offers a product line of overvoltage protection and overcurrent protection components. These include transient voltage suppressor array (TVS arrays) avalanche breakdown diode, steering diode TVS array and electronics SMD chip fuses. These components deliver circuit protection in electronic systems from numerous overvoltage and overcurrent events. They include lightning; electrostatic discharge (ESD); nuclear electromagnetic pulses (NEMP); inductive switching; and electromagnetic interference (EMI) / radio frequency interference (RFI). ProTek Devices also offers LED wafer die for ESD protection and related high frequency products. ProTek Devices is ISO 9001:2015 certified.

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