



ESD Array Protection Device

Peak Pulse Power - 60 Watts
Reverse Working Voltage - 5V

Description

The H04X525V0L is ultra low capacitance ESD array designed to protect high speed data interfaces. This has been specifically designed to protect sensitive components which are connected to high-speed data and transmission lines from overvoltage caused by ESD (electrostatic discharge).

Features

- Protects two I/O lines (Data line)
- Peak Pulse Power : P_{pp} = 60W (tp=8/20 us)
- Reverse Working Voltage : 5V
- Low Leakage Current
- Low Clamping Voltage
- Ultra Low Junction Capacitance : I/O to I/O , 0.3pF (Max)
- IEC 61000-4-2 (ESD) : ±20kV(Contact) / ±30kV(Air)

Applications

- High Definition Multi-Media Interface (HDMI)
- Digital Visual Interface (DVI)
- Display Prot™ Interface
- MDDI Ports / SATA / LVDS
- PCI Express

Mechanical Data

- Case: DFN1610-6L Package
- Case Material: "Green" Molding Compound UL Flammability

Classification Rating 94V-0

- Terminal: Matte tin plated.
- Component in accordance to RoHS
- Halogen Free

Note: Products with logo  or  are made by HY Electronic (Cayman) Limited.

Ordering Information

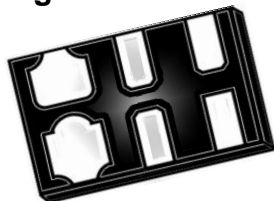
- Package : DFN1610-6L
- Reel Size : 7 (inches)
- Quantity Per Reel : 3,000/Tape & Reel
- Quantity One Box : 30,000/Tape & Reel
- Quantity One Carton : 120,000/Tape & Reel

Marking Information

0522P

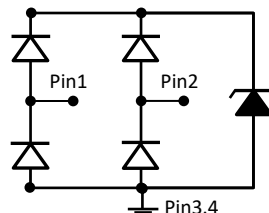
Product Type Marking Code

Package Outline



DFN1610-6L Package

Device Schematic & PIN Configuration



Pin Assignment	
1, 2	Input lines
5, 6	NC
3, 4	Ground

Maximum Ratings (@TA = +25°C, unless otherwise specified.)

Absolute Ratings

Parameter	Symbol	Value	Unit
Peak Pulse Power Dissipation (8/20 us)	P _{PP}	60	W
Peak Pulse Current (8/20 us)	I _{PP}	4	A
ESD Protection- Contact (Standard IEC 61000-4-2)	V _{ESD}	±20	k V
ESD Protection- Air (Standard IEC 61000-4-2)		±30	
Operating Temperature Range	T _J	-55 to +125	° C
Storage Temperature Range	T _{STG}	-55 to +150	° C
Soldering Temperature, t max =10s	T _L	260	° C

Electrical Characteristics

Parameter	Test Conditions	Symbol	Min	Typ	Max	Unit
Reverse Working Voltage	Any I/O pin to ground	V _{RWM}	-	-	5	V
Reverse Breakdown Voltage	I _T = 1mA	V _B	6	-	-	V
Reverse Current	V _R = 5V	I _R	-	-	1	uA
Reverse Clamping Voltage	I _{PP} = 1A (8/20μs)	V _C	-	-	10	V
	I _{PP} = 4A (8/20μs)		-	-	15	
Junction Capacitance	V _R = 0V, F = 1MHz Between I/O pins	C _j	-	0.2	0.3	p F
	V _R = 0V, F = 1MHz Any I/O pin to ground		-	0.4	0.6	

H04X525V0L-7-99-01

Rev-1, 1-Jun-2021



Rating and Characteristic Curves

FIG.1 - 8/20us Pulse Waveform According to IEC 61000-4-5

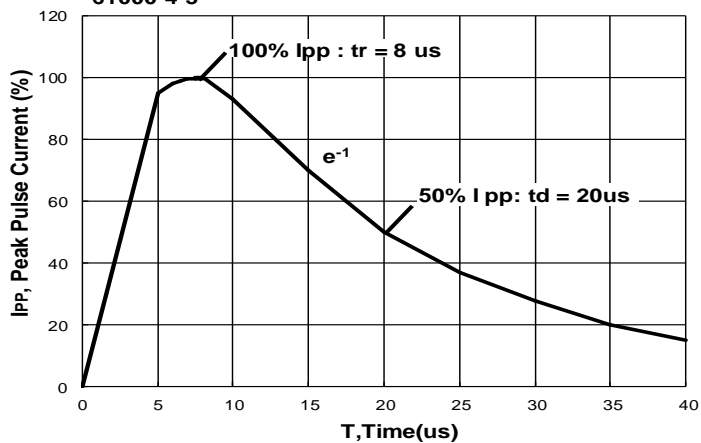


FIG.2 - Power Dissipation Versus Pulse Time

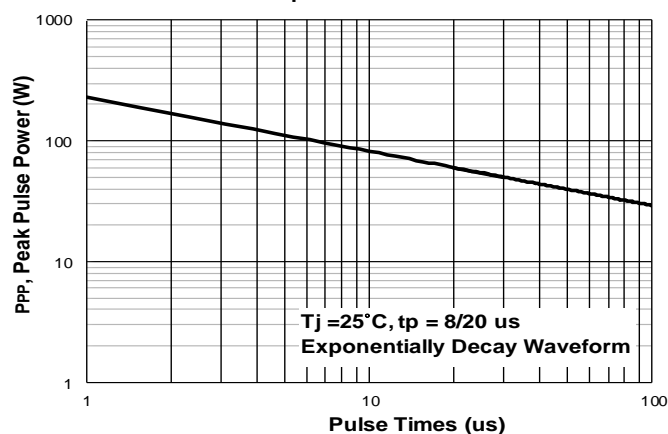


FIG.3 - Peak Pulse Power Versus T_j

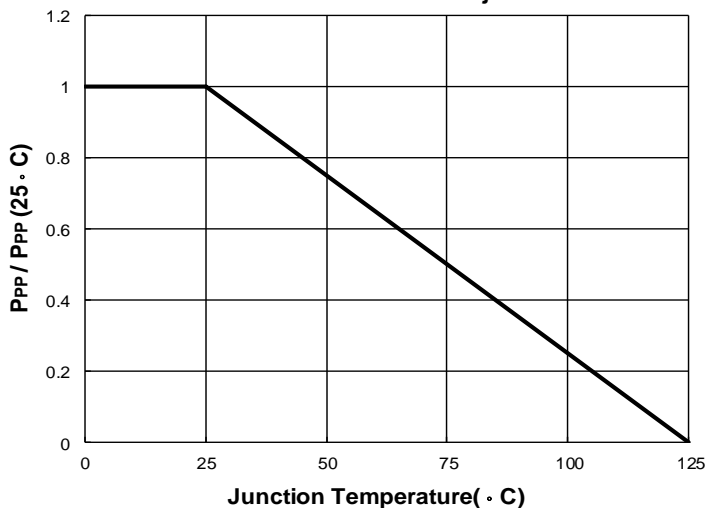
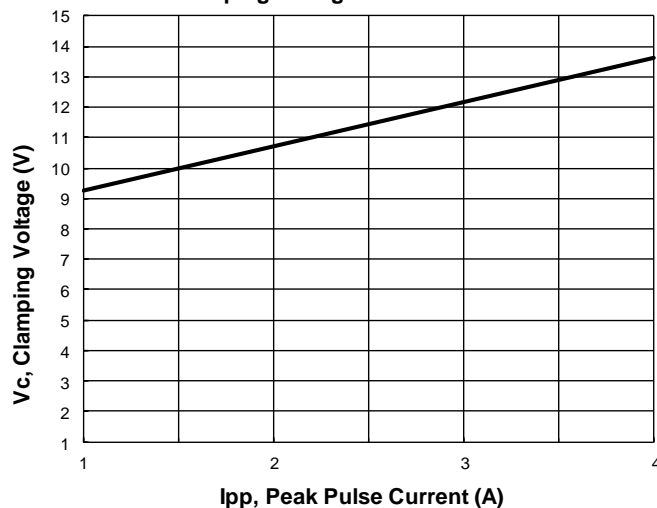
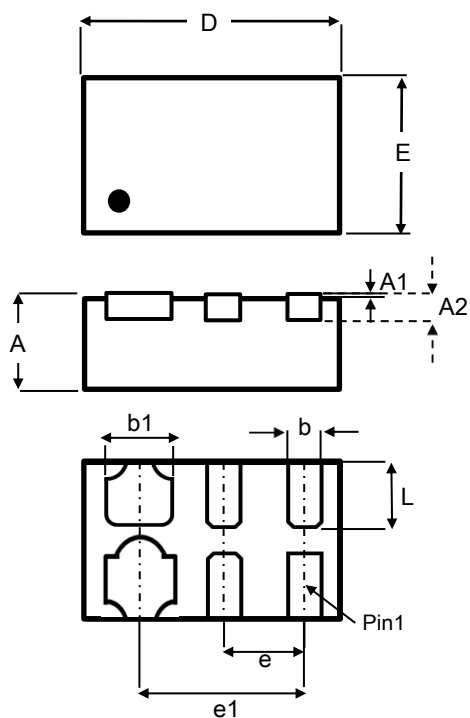


FIG.4 - Clamping Voltage Characteristic



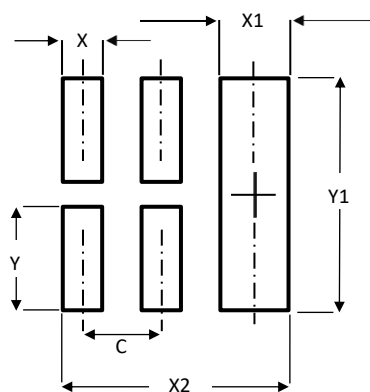


Package Outline Dimensions



DFN1610-6L Package			
Dim.	Min	Typ	Max
D	1.55	1.60	1.65
E	0.95	1.00	1.05
A	0.45	0.50	0.55
A1	0.00	-	0.05
A2	0.15 REF		
b	0.15	0.20	0.25
b1	0.35	0.40	0.45
e	0.50 BSC		
e1	1.00 BSC		
L	0.33	0.38	0.43
All Dimensions in mm			

Suggested Soldering Pad Layout



Dim.	Value
X	0.25
X1	0.45
X2	1.35
Y	0.63
Y1	1.40
C	0.50
All Dimensions in mm	



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