H04XC25V0U

ESD Array Protection Device

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

Description

The H04XC25V0U 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 :Ppp = 60W (tp=8/20 us)
- Reverse Working Voltage : 5V
- Low Leakage Current
- Low Clamping Voltage
- Ultra Low Junction Capacitance : I/O to I/O , 0.2pF (Typ)
- IEC 61000-4-2 (ESD) :±20kV(Contact) / ±30kV(Air)

Applications

- High Definition Multi-Media Interface (HDMI 1.4 & 1.3)
- USB 3.0 and USB 2.0
- DisplayPort Interface
- MDDI Ports / SATA / LVDS

Mechanical Data

- Case: DFN1210-6L 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 :DFN1210-6L
- 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



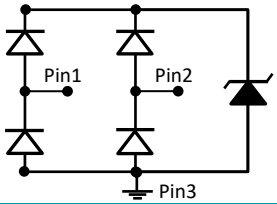
Product Type Marking Code

Package Outline



DFN1210-6L Package

Device Schematic & PIN Configuration



Pin Assignment	
1, 2	Input lines
4, 5, 6	NC
3	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
Operating Supply Voltage	V_{DC}	5.5	V
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 Leakage Current	V_R = 5V	I_R	-	-	0.1	uA
Reverse Clamping Voltage	I_{PP} = 1A (8/20μs)	V_C	-	-	10	V
	I_{PP} = 4A (8/20μs)		-	-	15	
Junction Capacitance	VR = 0V, F = 1MHz Between I/O pins	Cj	-	0.2	0.4	p F
	V_R = 0V, F = 1MHz Any I/O pin to ground		-	0.4	0.6	

Rating and Characteristic Curves

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

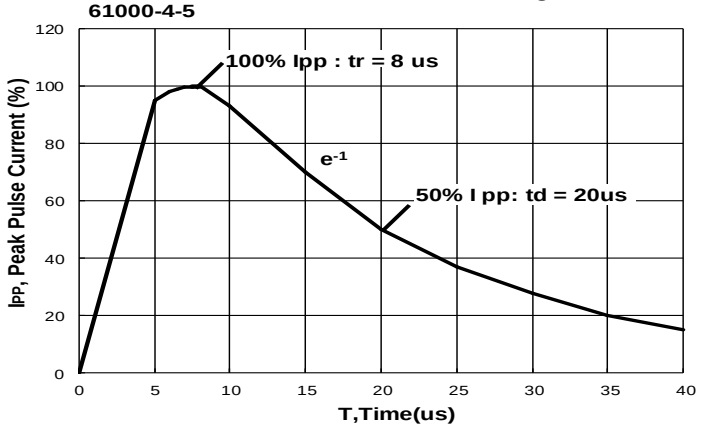


FIG.2 - Power Dissipation Versus Pulse Time

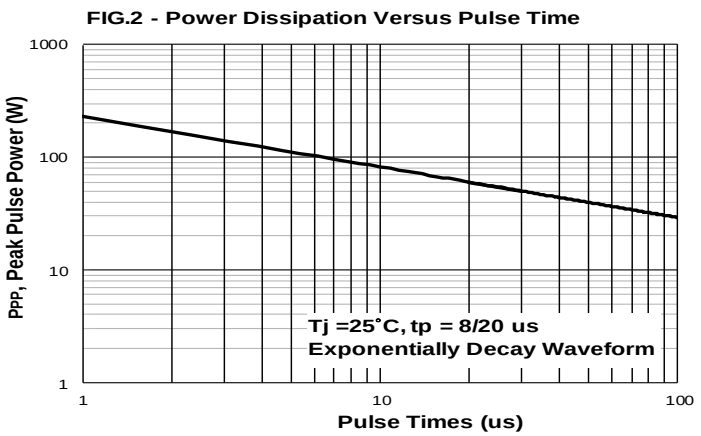


FIG.3 - Peak Pulse Power Versus Tj

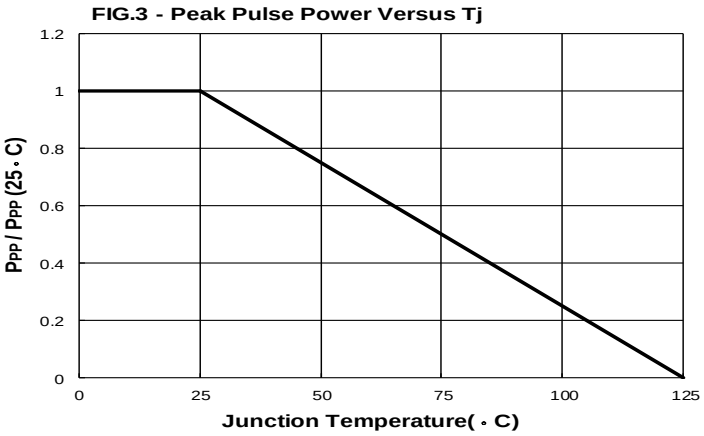
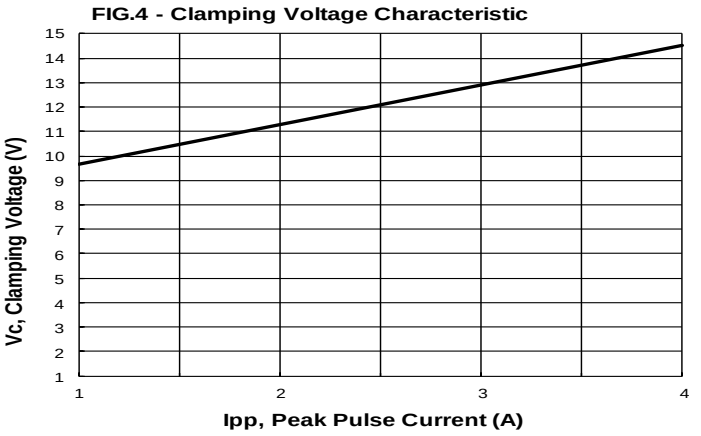
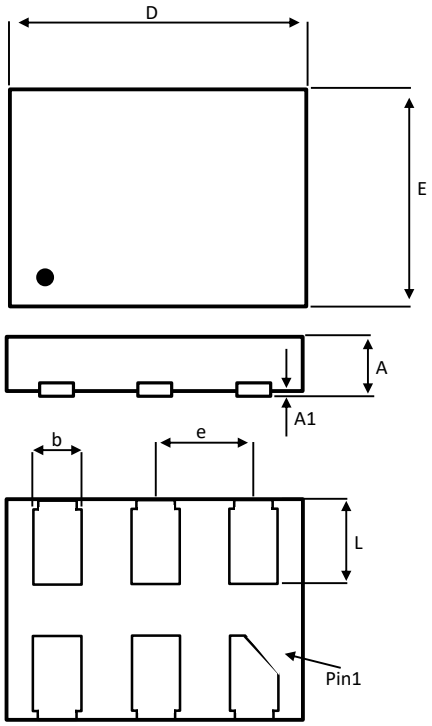


FIG.4 - Clamping Voltage Characteristic



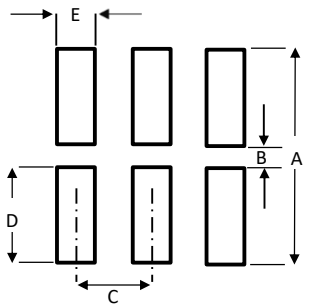
The curve above is for reference only.

Package Outline Dimensions



DFN1210-6L Package			
Dim.	Min	Typ	Max
D	1.15	1.20	1.25
E	0.95	1.00	1.10
A	0.45	0.50	0.55
A1	0.00	0.03	0.05
b	0.15	0.20	0.25
e	0.40 BSC		
L	0.34	0.38	0.42
All Dimensions in mm			

Suggested Soldering Pad Layout



Dim.	Value
A	1.55
B	0.20
C	0.40
D	0.67
E	0.20
All Dimensions in mm	

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