



ESD Array Protection Device

Peak Pulse Power - 50 Watts
Reverse Working Voltage - 3.3V

Description

The H04X643V3U is ultra low capacitance ESD arrays designed to protect high speed data interfaces. This series has been specifically designed to protect sensitive components which are connected to high-speed data and transmission lines from over voltage caused by ESD (electrostatic discharge).



Features

- Protects four I/O lines (Data line)
- Peak Pulse Power :Ppp = 50W (tp=8/20 us)
- Reverse Working Voltage : 3.3V
- 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) / ±25kV(Air)

Applications

- High Definition Multi-Media Interface(HDMI) 1.3, 1.4 and 2.0 version
- Digital visual interface (DVI)
- Display prot™ interface
- USB 3.0/3.1
- MDDI ports / SATA

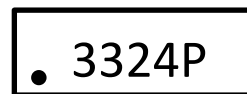
Mechanical Data

- Case: DFN2510 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 :DFN2510
- 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



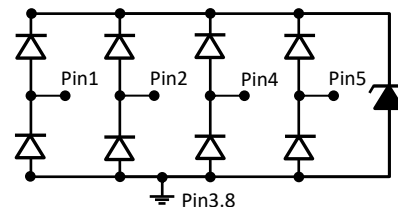
Product Type Marking Code

Package Outline



DFN2510 Top View

Device Schematic & PIN Configuration



Pin Assignment	
1, 2, 4, 5	Input lines
6, 7, 9, 10	NC
3, 8	Ground

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

Absolute Ratings

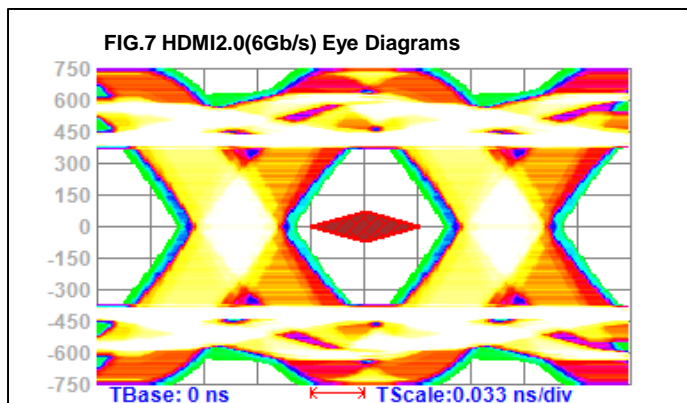
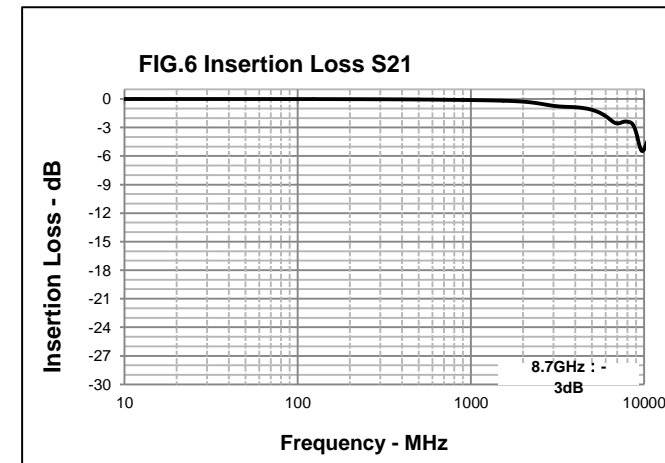
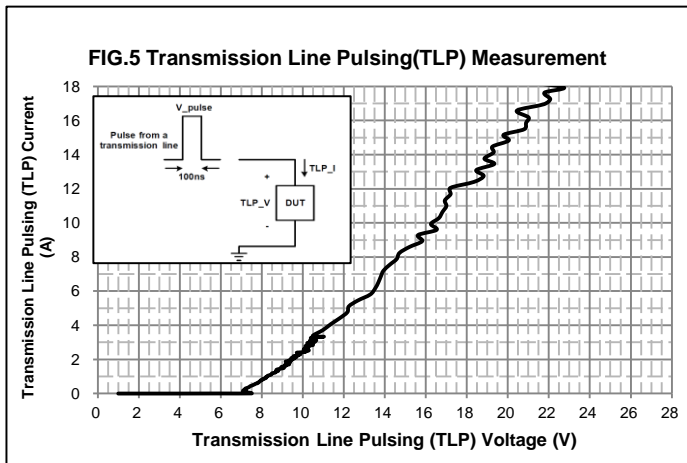
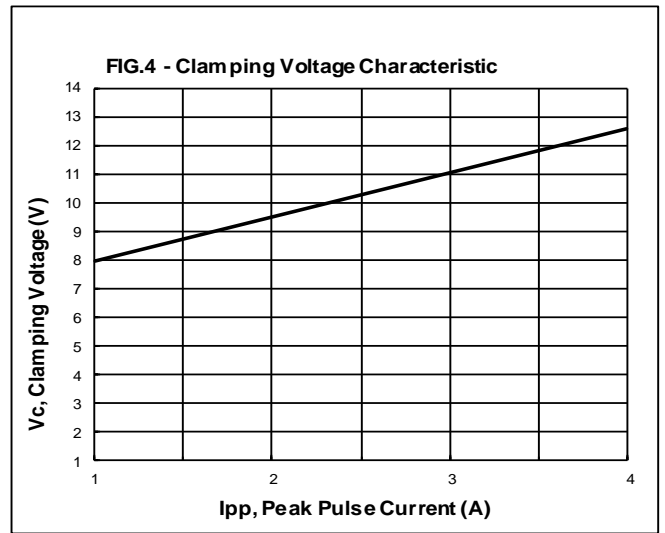
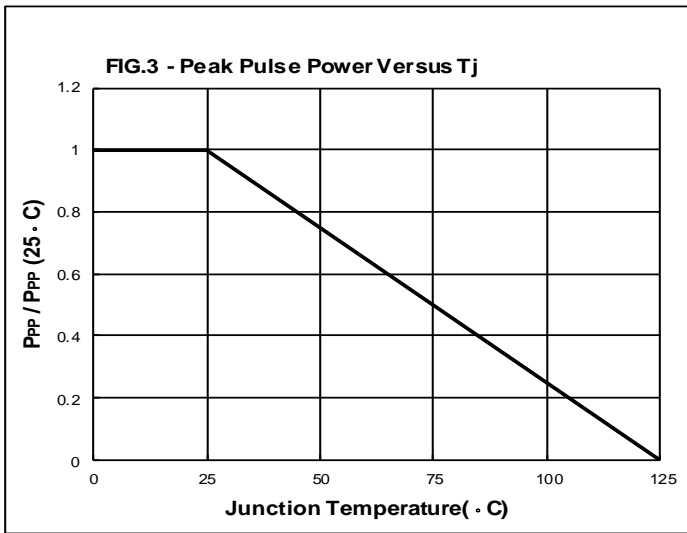
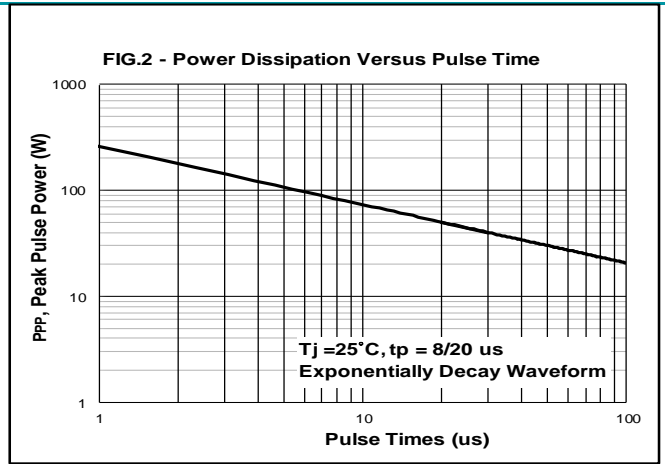
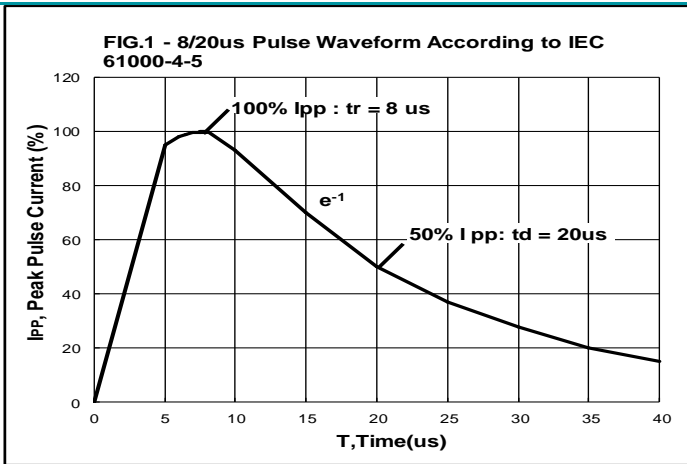
Parameter	Symbol	Value	Unit
Peak Pulse Power Dissipation (8/20 us)	PPP	50	W
Peak Pulse Current (8/20 us)	IPP	4	A
ESD Protection- Contact (Standard IEC 61000-4-2)	VESD	±20	k V
ESD Protection- Air (Standard IEC 61000-4-2)		±25	
Operating Temperature Range	TJ	-55 to +125	° C
Storage Temperature Range	TSTG	-55 to +150	° C
Soldering Temperature, t max =10s	TL	260	° C

Electrical Characteristics

Parameter	Test Conditions	Symbol	Min	Typ	Max	Unit
Reverse Working Voltage	Any I/O pin to ground	VRWM	-	-	3.3	V
Reverse Breakdown Voltage	IT= 1mA	VB	4.2	-	9	V
Reverse Current	VR = 3.3V	IR	-	-	1	uA
Reverse Clamping Voltage	IPP = 1A (8/20µs)	VC	-	-	10	V
	IPP = 4A (8/20µs)		-	-	14	
TLP Clamping Voltage	IPP =16A, TP=100ns	VCL	-	21	-	V
Dynamic Resistance	TLP Pulse	RDYN	-	0.85	-	Ω
Junction Capacitance	VR = 0V, F = 1MHz Between I/O pins	Cj	-	0.25	0.3	p F
	VR = 0V, F = 1MHz Any I/O pin to ground		-	0.5	0.6	

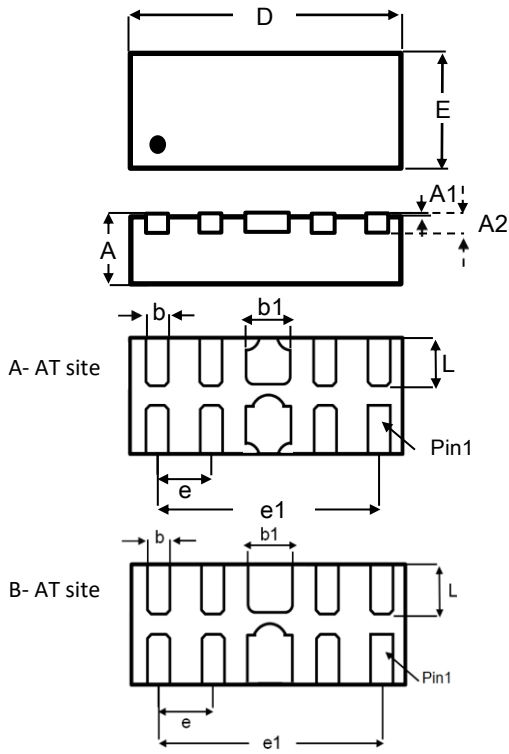


Rating and Characteristic Curves





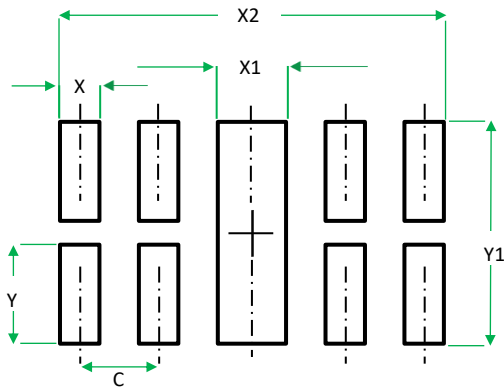
Package Outline Dimensions



DFN2510 Package			
Dim.	Min	Typ	Max
D	2.45	2.50	2.55
E	0.95	1.00	1.05
A	0.45	0.50	0.55
A1	0.00	-	0.05
A2	0.15REF		
b	0.15	0.20	0.25
b1	0.35	0.40	0.45
e	-	0.50	-
e1	-	2.00	-
L	0.33	0.38	0.43
All Dimensions in mm			

Note: HY internal have both AT site

Suggested Soldering Pad Layout



Dim.	Value
X	0.25
X1	0.45
X2	2.25
Y	0.63
Y1	1.40
C	0.50
All Dimensions in mm	



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