

**Uni-directional ESD Protection Diode****Peak Pulse Power - 60 Watts**
Reverse Working Voltage - 5.0V**Description**

The H04D645V0L is 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 highspeed data and transmission lines from overvoltage caused by ESD(electrostatic discharge).

Features



- Protects up to four high-speed I/O lines & one power line
- Peak Pulse Power :Ppp = 60W (tp=8/20 us)
- Reverse Working Voltage : 5V
- Low capacitance: 0.6pF .max (Any I/O pin to ground)
- Low Clamping Voltage
- IEC 61000-4-2 (ESD) :±20kV(Contact) / ±30kV(Air)

Applications

- USB2.0 Power and Data lines protection
- Digital Visual Interface (DVI)
- High Definition Multi-Media Interface (HDMI)
- Display Ports
- MDDI Ports

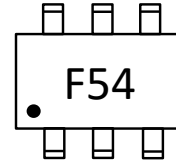
Mechanical Data

- Case: SOT363 Package
- Case Material: "Green" Molding Compound UL Flammability Classification Rating 94V-0
- Terminals:Matte tin plated,solderable per MIL-STD-750,method 2026
- Component in accordance to RoHS
- Halogen Free

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

Ordering Information

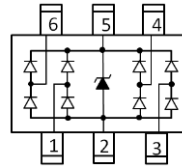
- Package :SOT363
- Reel Size :7 (inches)
- Quantity Per Reel :3,000/Tape & Reel
- Quantity One Box :45,000/Tape & Reel
- Quantity One Carton :180,000/Tape & Reel

Marking Information

" F54 " = Product Type Marking Code

Package Outline

SOT363 Top View

Device Schematic & PIN Configuration

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

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

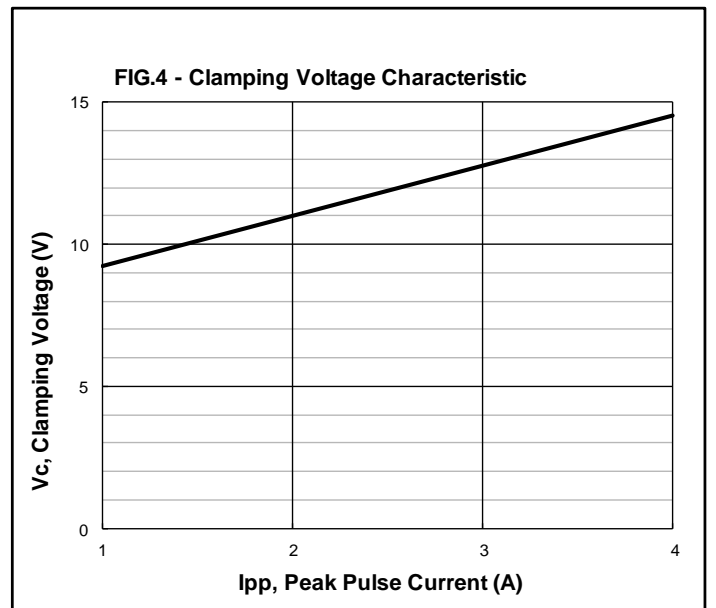
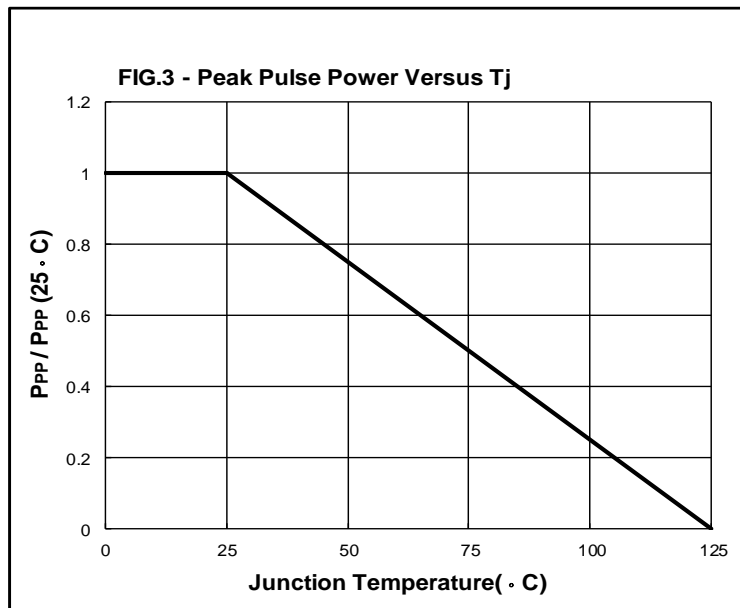
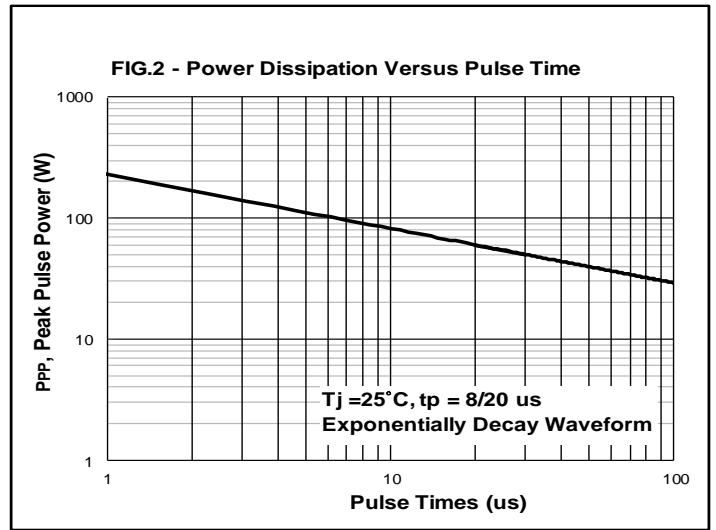
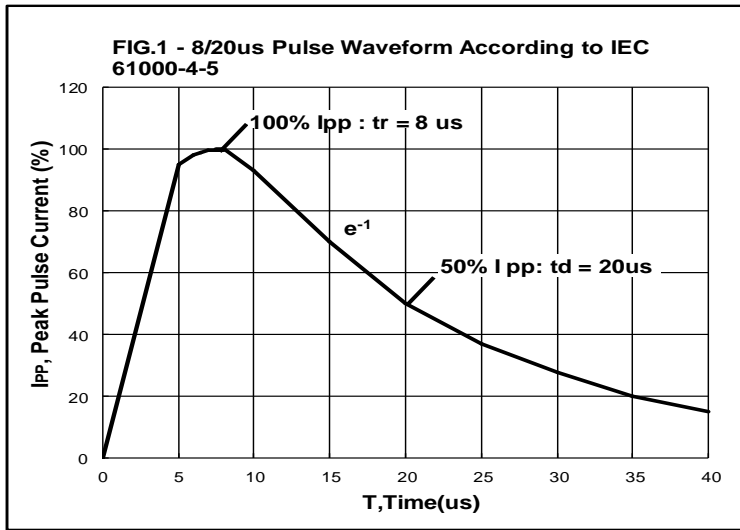
Parameter	Symbol	Value	Unit
Peak Pulse Power Dissipation (8/20 us)	P _{PP}	60	W
Peak Pulse Current (8/20 us)	I _{PP}	4	A
ESD Protection- Contact (Standard IEC 61000-4-2)	V _{ESD}	±20	k V
ESD Protection- Air (Standard IEC 61000-4-2)		±30	
Operating Temperature Range	T _J	-55 to +125	° C
Storage Temperature 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 Any I/O pin to ground	V _B	6	-	9	V
Reverse Current	V _R = 5V Any I/O pin to ground	I _R	-	-	1	uA
Reverse Clamping Voltage	I _{PP} = 1A (8/20µs) Any I/O pin to ground	V _C	-	-	10	V
	I _{PP} = 4A (8/20µs) Any I/O pin to ground		-	-	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		-	0.45	0.6	p F

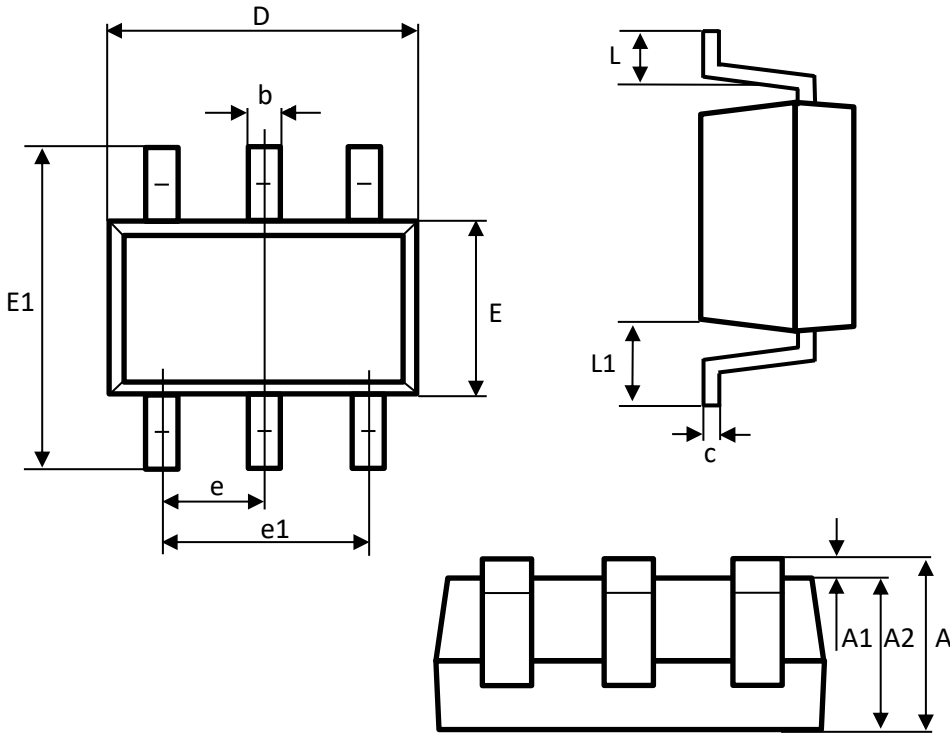


Rating and Characteristic Curves



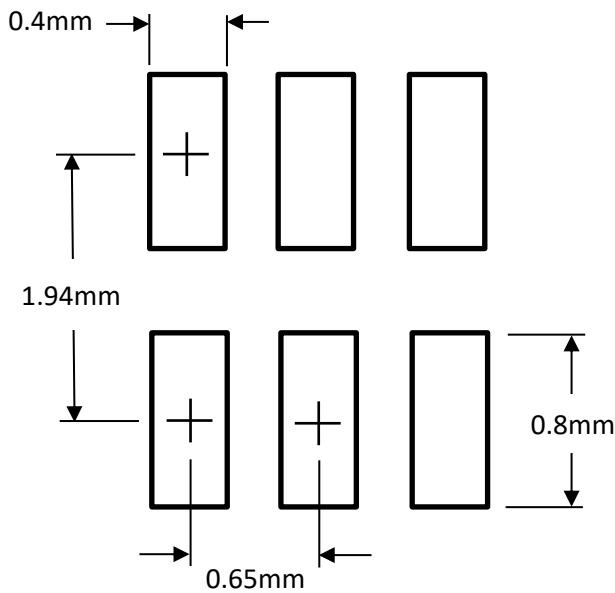


Package Outline Dimensions



SOT363 Package		
Dim	Min	Max
A	0.90	1.10
A1	0.00	0.10
A2	0.90	1.00
b	0.15	0.35
c	0.08	0.15
D	2.00	2.20
E	1.15	1.35
E1	2.15	2.45
e	0.650 Typ.	
e1	1.20	1.40
L	0.525 Ref.	
L1	0.26	0.46
All Dimensions in mm		

Suggested Soldering Pad Layout





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