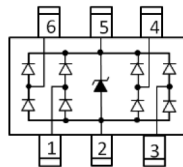


RoHS
Compliant



Device Schematic & PIN Configuration



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

Description

The H04C645V0U 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 overvoltage caused by ESD (electrostatic discharge).

Applications

- USB2.0 Power and Data lines protection
- Digital Visual Interface (DVI)
- Notebook and PC Computers
- Video Graphics Cards
- SIM ports

Features

- Protects up to four high-speed I/O lines & one power line
- Peak Pulse Power : P_{pp} = 60W (t_p=8/20 us)
- Reverse Working Voltage : 5V
- Ultra low capacitance: 0.5pF .max (Any I/O pin to ground)
- Low Clamping Voltage
- IEC 61000-4-2 (ESD) : ±20kV(Contact) / ±30kV(Air)

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

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	
Soldering Temperature, t max =10s	T _L	260	

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Farnell.com/multicomp-pro
sg.element14.com/b/multicomp-pro

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	$I_T = 1\text{mA}$ Any I/O pin to ground	V_B	6	-	9	
Reverse Current	$V_R = 5\text{V}$ Any I/O pin to ground	I_R			1	μA
Reverse Clamping Voltage	$I_{PP} = 1\text{A}$ (8/20 μs) Any I/O pin to ground	V_C	-		10	V
	$I_{PP} = 4\text{A}$ (8/20 μs) Any I/O pin to ground				15	
Junction Capacitance	$V_R = 0\text{V}$, $F = 1\text{MHz}$ Between I/O pins	C_j		0.2	0.25	pF
	$V_R = 0\text{V}$, $F = 1\text{MHz}$ Any I/O pin to ground			0.45	0.5	

Rating and Characteristic Curves

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

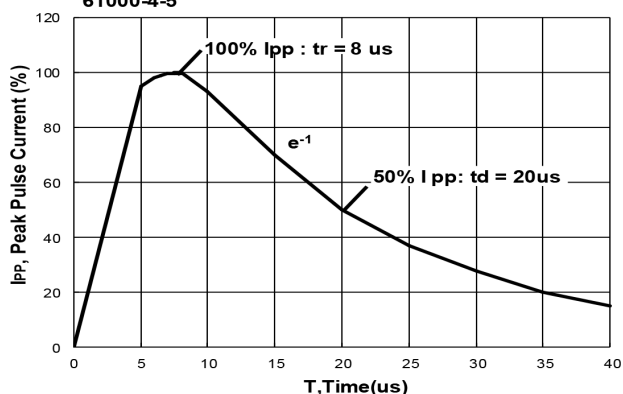


FIG.2 - Power Dissipation Versus Pulse Time

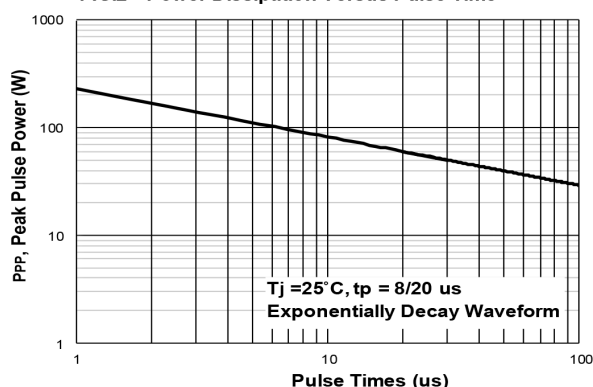


FIG.3 - Peak Pulse Power Versus Tj

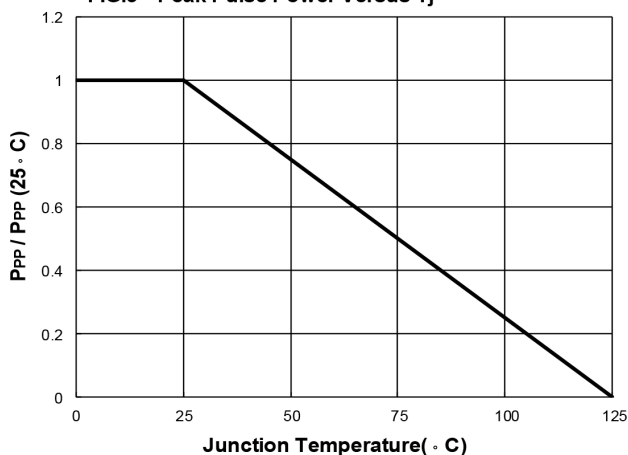
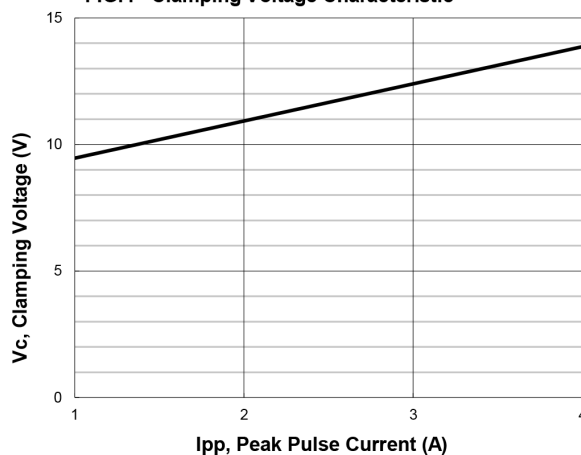
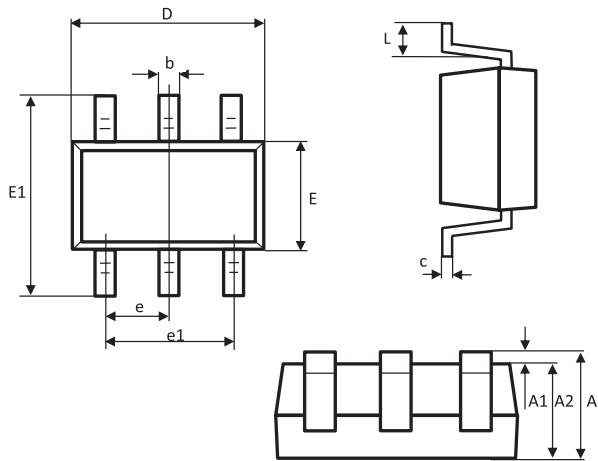


FIG.4 - Clamping Voltage Characteristic

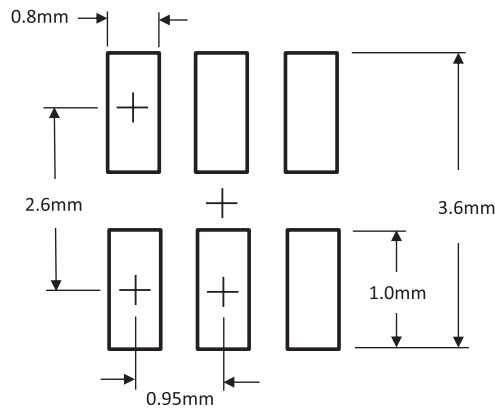


Package Outline Dimensions



SOT26 Package		
Dim	Min	Max
A	1.05	1.25
A1	0	0.1
A2	1.05	1.15
b	0.3	0.5
c	0.1	0.2
D	2.82	3.02
E	1.5	1.7
E1	2.65	2.95
e	0.95 typ	
e1	1.8	2
L	0.3	0.6

Suggested Soldering Pad Layout



Part Number Table

Description	Part Number
ESD Protection Diode, Uni-Directional, 4A, 15V, SOD-323	H04C645V0U

Dimensions : Millimetres

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