



Bi-directional ESD Protection Diode

Peak Pulse Power - 100 Watts
Reverse Working Voltage - 5V

Description

The H04X35V0BU is ultra-low capacitance ESD 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

- 1 Channel of ESD Protection (Bi-directional)
- Peak Pulse Power :Ppp = 100W (tp=8/20 us)
- Reverse Working Voltage : 5V
- Low Leakage Current
- Low Clamping Voltage
- Junction Capacitance : 0.3pF (Max)
- IEC 61000-4-2 (ESD) :±20kV(Contact) / ±25kV(Air)

Applications

- USB Data Line Protection, Type-C / 3.0 / 3.1
- High definition multi-media interface (HDMI) 1.4 / 2.0

Mechanical Data

- Case: DFN0603 Package
- Case Material: UL Flammability Classification Rating 94V-0
- Component in accordance to RoHS
- Halogen Free

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

Ordering Information

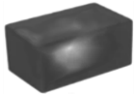
- Package :DFN0603
- Reel Size :7 (inches)
- Quantity Per Reel :15,000/Tape & Reel
- Quantity One Box :150,000/Tape & Reel
- Quantity One Carton :600,000/Tape & Reel

Marking Information



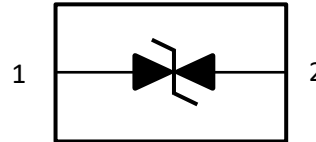
"5BU"=Product Type Marking Code

Package Outline



DFN0603 Top View

Device Schematic & PIN Configuration



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

Absolute Ratings

Parameter	Symbol	Value	Unit
Peak Pulse Power Dissipation (8/20 us)	P _{PP}	100	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)		±25	
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	---	V _{RWM}	-	-	5	V
Reverse Breakdown Voltage	I _T = 1mA	V _B	6	-	-	V
Reverse Current	V _R = 5V	I _R	-	-	0.1	uA
Reverse Clamping Voltage	I _{PP} = 1A (8/20µs)	V _C	-	-	13	V
	I _{PP} = 4A (8/20µs)		-	-	25	
TLP Clamping Voltage	I _{PP} =16A, T _P =100ns	V _{TLP}	-	31	-	V
Dynamic Resistance	TLP Pulse	R _{DYN}	-	1.3	-	Ω
Junction Capacitance	V _R = 0V, F = 1MHz	C _j	-	0.25	0.3	p F



Rating and Characteristic Curves

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

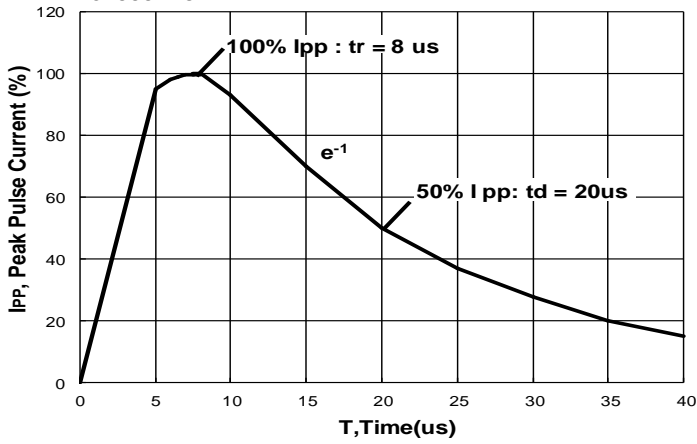


FIG.2 - Power Dissipation Versus Pulse Time

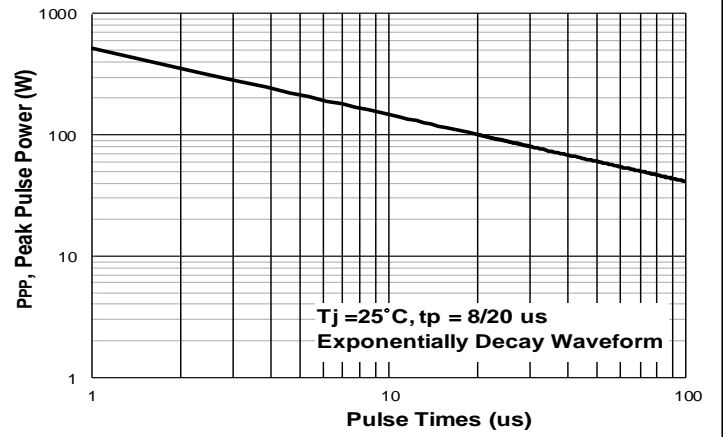


FIG.3 - Peak Pulse Power Versus Tj

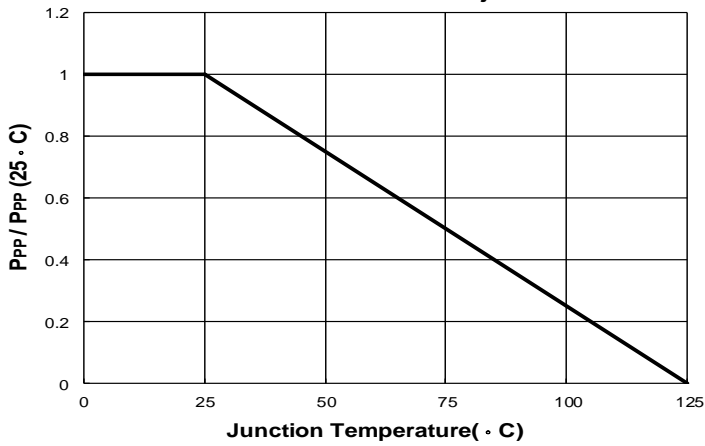
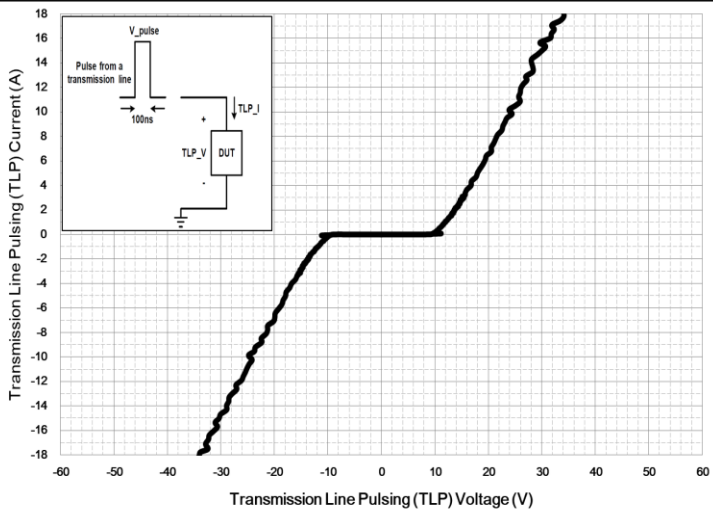
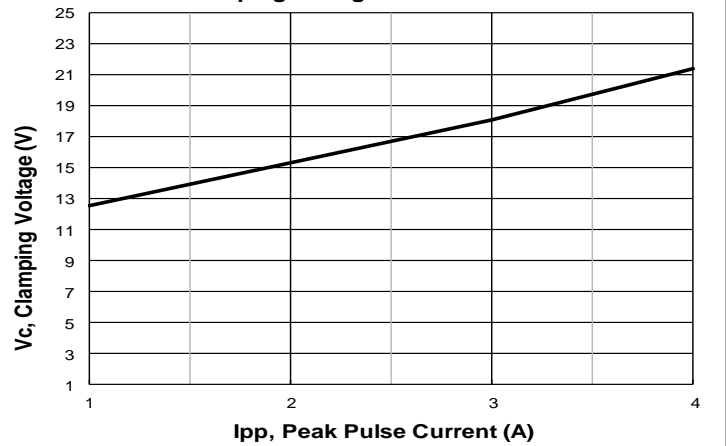
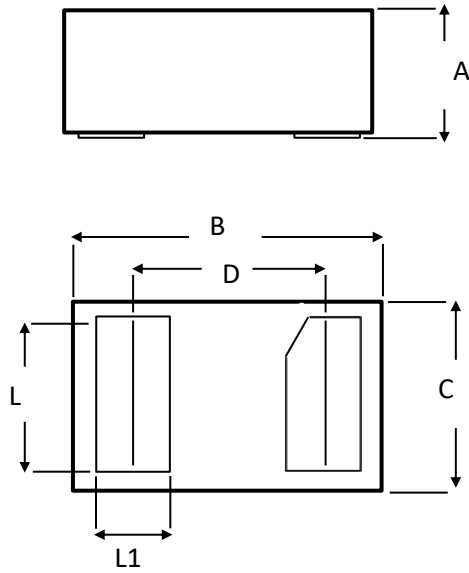


FIG.4 - Clamping Voltage Characteristic



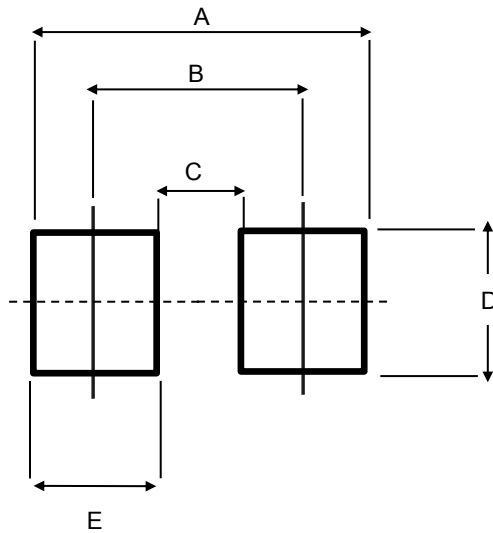


Package Outline Dimensions



DFN0603 Package		
Dim	Min	Max
A	0.28	0.35
B	0.58	0.65
C	0.28	0.34
L	0.2	0.26
L1	0.13	0.19
D	0.36(Typ)	
All Dimensions in mm		

Suggested Soldering Pad Layout



Dim.	Value
A	0.64
B	0.40
C	0.16
D	0.34
E	0.24
All Dimensions in mm	



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