



Bi-directional ESD Protection Diode

Peak Pulse Power - 150 Watts
Reverse Working Voltage - 12V

Description

The H05X212VB is a low capacitance ESD designed to provide electrostatic discharge (ESD) protection for data, control or power lines.

Features

- 1 Channel of ESD Protection (Bi-directional)
- Peak Pulse Power :P_{pp} = 150W (tp=8/20 us)
- Reverse Working Voltage : 12V
- Low Leakage Current
- Low Clamping Voltage
- Low Capacitance
- IEC 61000-4-2 (ESD) :±20kV(Contact) / ±25kV(Air)

Applications

- High-speed data lines
- Computers and peripherals
- Audio & video equipment
- Communication system
- Parallel ports

Mechanical Data

- Case: DFN1006 Package
- Case Material: "Green" Molding Compound 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

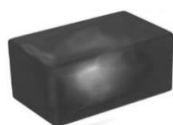
- Package :DFN1006
- Reel Size :7 (inches)
- Quantity Per Reel :10,000/Tape & Reel
- Quantity One Box :100,000/Tape & Reel
- Quantity One Carton :400,000/Tape & Reel

Marking Information



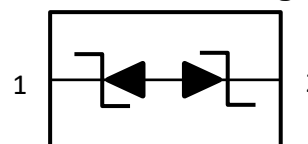
"MOC"=Product Type Marking Code

Package Outline



DFN1006 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}	150	W
Peak Pulse Current (8/20 us)	I _{PP}	5	A
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}	-	-	12	V
Reverse Breakdown Voltage	I _T = 1mA	V _B	13.3	-	-	V
Reverse Current	V _R =12V	I _R	-	-	0.5	μA
Reverse Clamping Voltage	I _{PP} = 1A (8/20μs)	V _C	-	-	19	V
	I _{PP} = 5A (8/20μs)		-	-	26	
Junction Capacitance	V _R = 0V, F = 1MHz	C _j	-	-	15	p F



Rating and Characteristic Curves

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

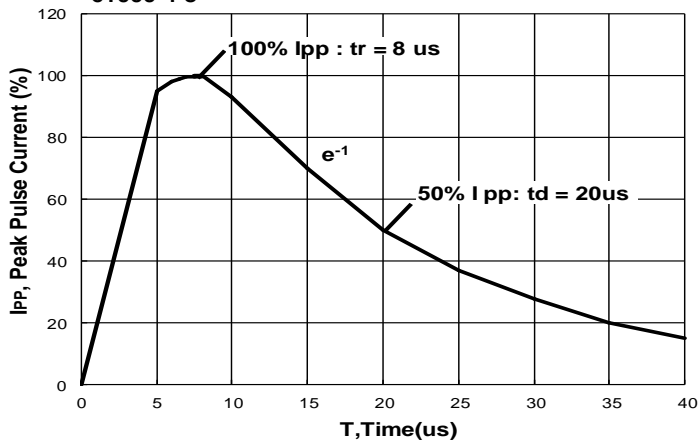


FIG.2 - Power Dissipation Versus Pulse Time

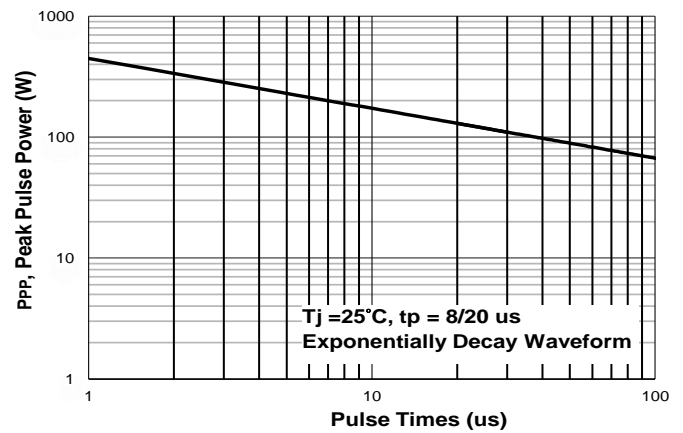


FIG.3 - Peak Pulse Power Versus Tj

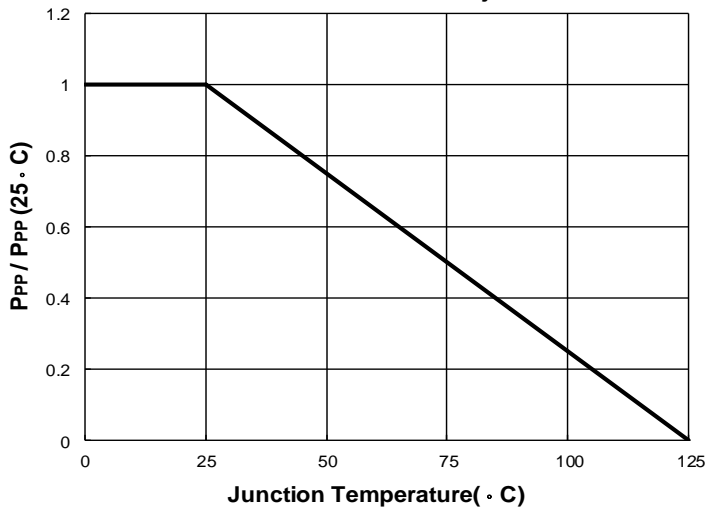
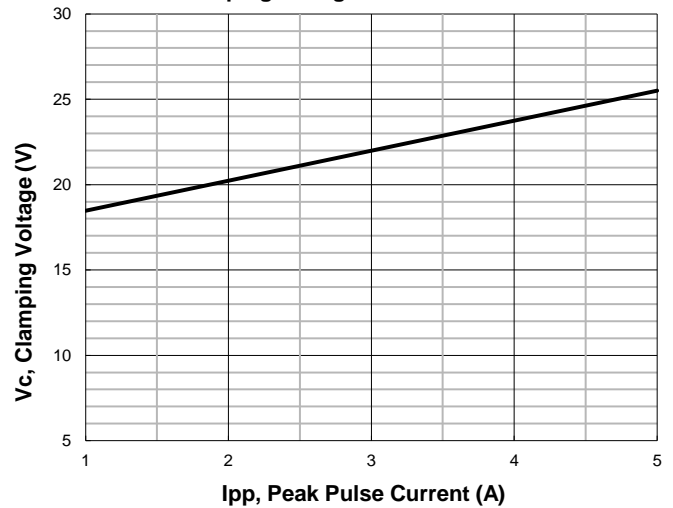
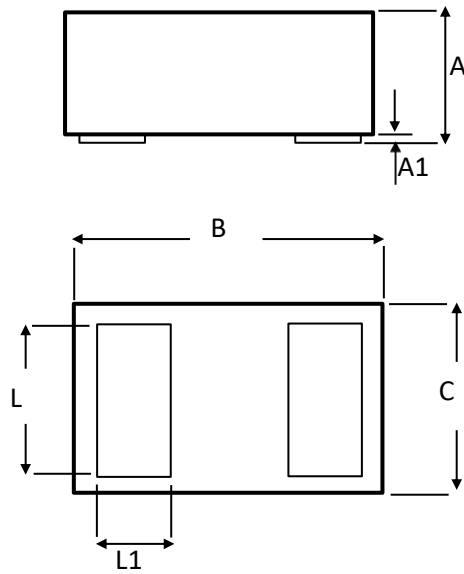


FIG.4 - Clamping Voltage Characteristic



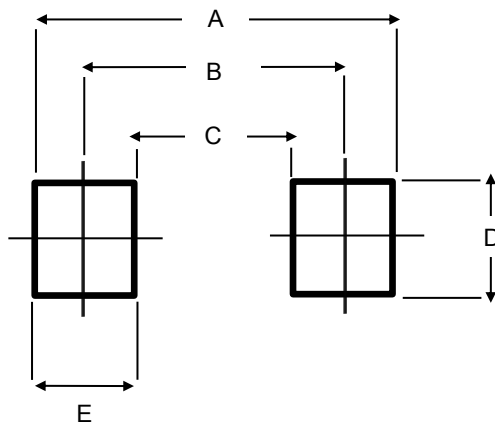


Package Outline Dimensions



DFN1006 Package		
Dim	Min	Max
A	0.45	0.55
A1	-	0.02
B	0.95	1.05
C	0.55	0.65
L	0.45	0.55
L1	0.2	0.3
All Dimensions in mm		

Suggested Soldering Pad Layout



Dim.	Value
A	1.10
B	0.90
C	0.30
D	0.60
E	0.40
All Dimensions in mm	



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