H05H425V0L

Uni-directional ESD Protection Array

Peak Pulse Power - 125 Watts
Reverse Working Voltage - 5V

Description

The H05H425V0L is low capacitance ESD array designed to protect high speed data interfaces.This 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

- Peak Pulse Power :Ppp = 125W (tp=8/20 us)
- Reverse Working Voltage : 5V
- Protects Two Data Lines
- Low Clamping Voltage
- Low Capacitance: 1.0 pF Typical (I/O-Gnd)
- IEC 61000-4-2 (ESD) :±30kV(Contact) / ±30kV(Air)

Applications

- USB2.0 power and data lines protection
- Notebook and Handhelds
- Video line protection
- Set-Top Box
- Local area network (LAN) equipment

Mechanical Data

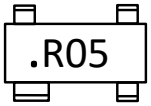
- Case: SOT143 Package
- Case Material: “Green” Molding Compound UL Flammability Classification Rating 94V-0
- Terminals:Matte tin plated,solderable per MIL-STD-750,method 2026
- Component in accordance to RoHS
- Halogen Free

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

Ordering Information

- Package :SOT143
- Reel Size :7 (inches)
- Quantity Per Reel :3,000 pcs
- Quantity One Box :45,000 pcs
- Quantity One Carton :180,000 pcs

Marking Information



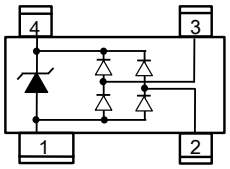
" R05 " = Product Type Marking Code

Package Outline



SOT143 Top View

Device Schematic & PIN Configuration



Pin Assignment	
1	Ground
2,3	Input lines
4	Vcc

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

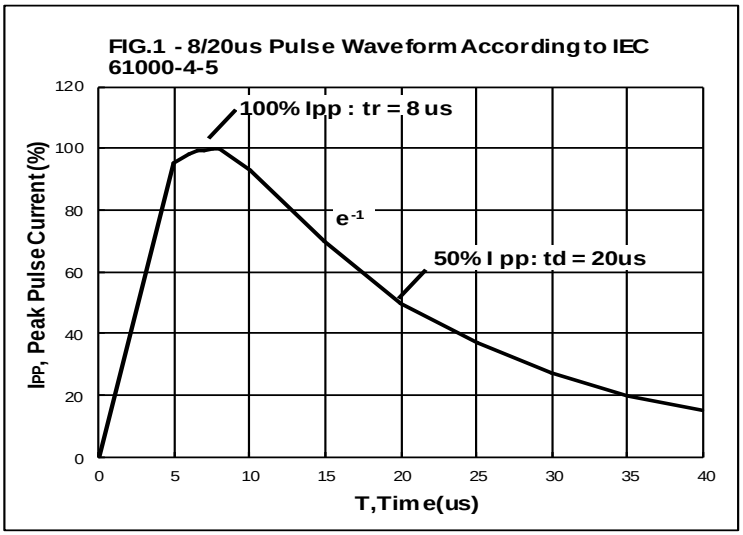
Absolute Ratings

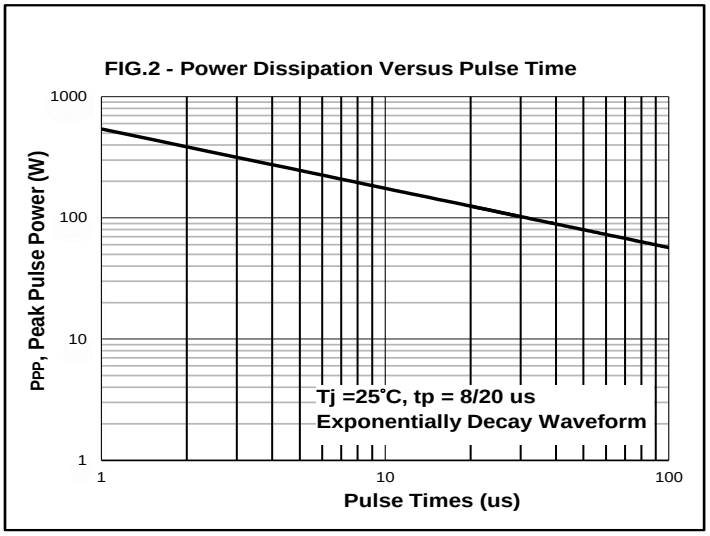
Parameter	Symbol	Value	Unit
Peak Pulse Power Dissipation (8/20 us)	P_{PP}	125	W
Peak Pulse Current (8/20 us)	I_{PP}	5	A
Operating Supply Voltage	V_{DC}	5.5	V
ESD Protection- Contact (Standard IEC 61000-4-2)	V_{ESD}	±30	k V
ESD Protection- Air (Standard IEC 61000-4-2)		±30	
Operating Temperature Range	T_J	-55 to +125	° C
Storage Temperature Range	T_{STG}	-55 to +150	° C

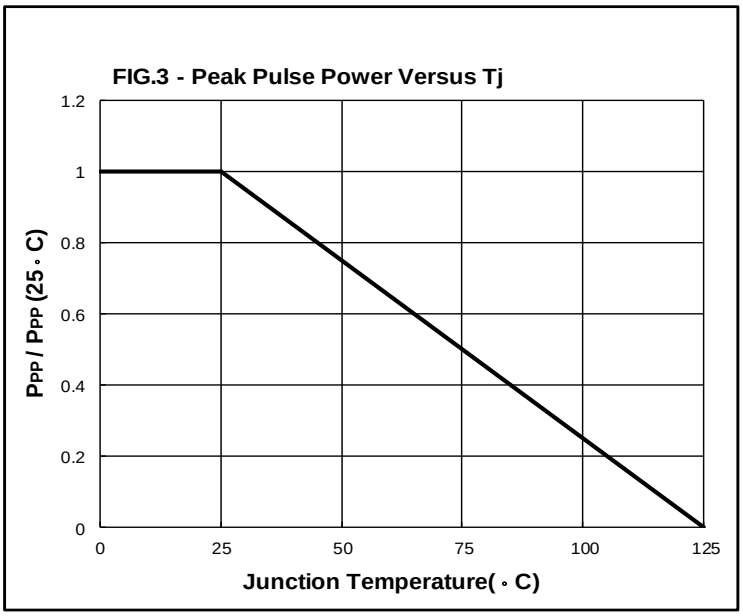
Electrical Characteristics

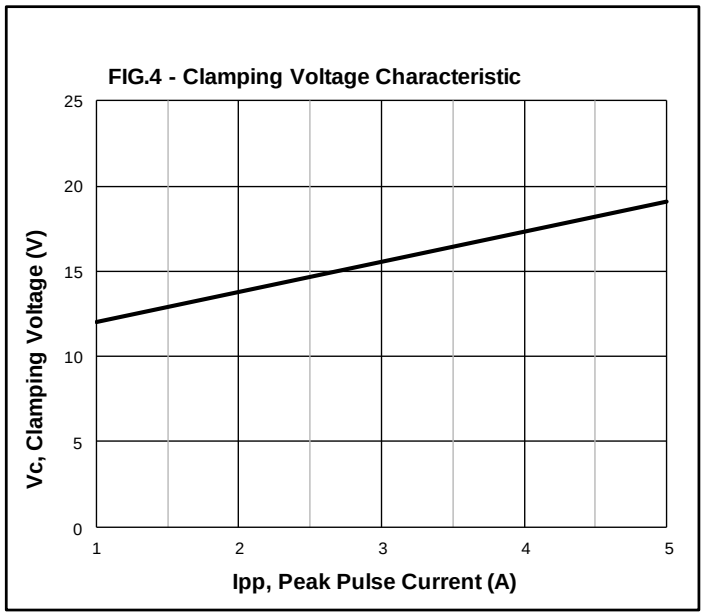
Parameter	Test Conditions	Symbol	Min	Typ	Max	Unit
Reverse Working Voltage	Any I/O pin to ground	V_{RWM}	-	-	5	V
Reverse Breakdown Voltage	I_T= 1mA Any I/O pin to ground	V_B	6	-	-	V
Reverse Current	V_R = 5V Any I/O pin to ground	I_R	-	-	1.0	uA
Forward Voltage	IT = 15mA Any I/O pin to ground	V_F	-	-	1.2	V
Reverse Clamping Voltage	I_{PP} = 1A (8/20μs) Any I/O pin to ground	V_C	-	-	15.5	V
	I_{PP} = 5A (8/20μs) Any I/O pin to ground		-	-	25	
Junction Capacitance	VR = 0V, F = 1MHz Between I/O pins	Cj	-	0.5	0.6	p F
	V_R = 0V, F = 1MHz Any I/O pin to ground		-	1.0	1.2	

Rating and Characteristic Curves



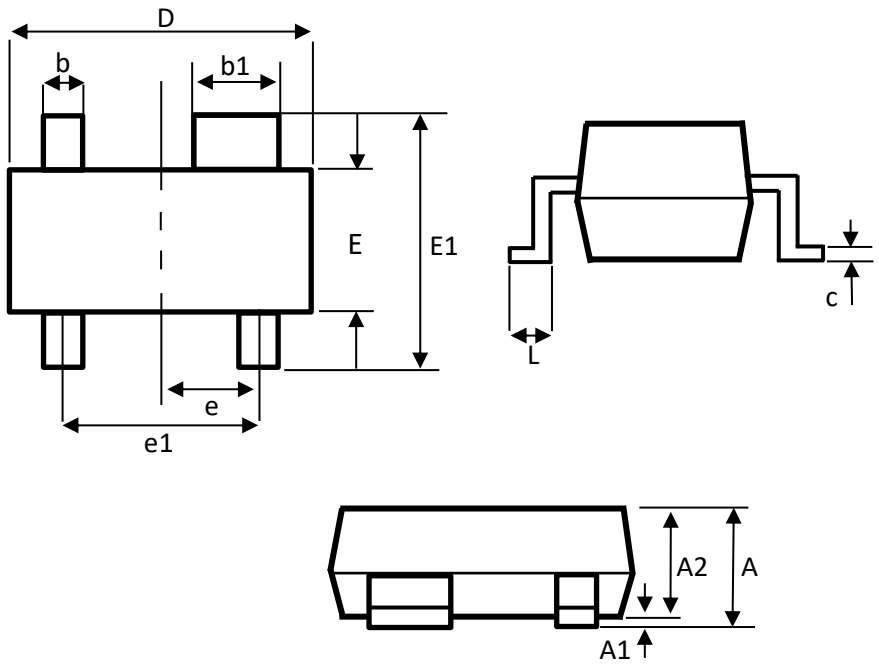






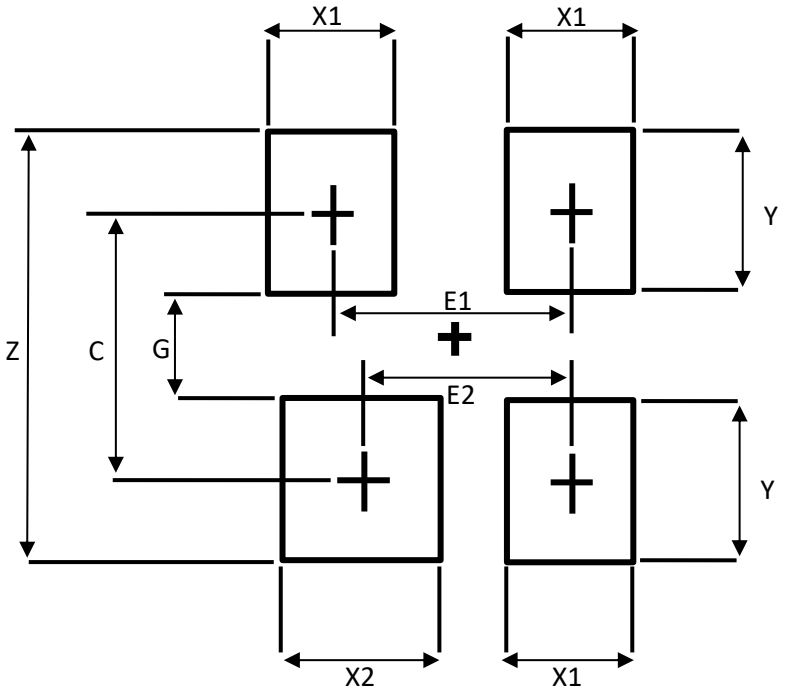
The curve above is for reference only.

Package Outline Dimensions



SOT143 Package		
Dim	Min	Max
A	0.90	1.15
A1	-	0.10
A2	0.90	1.05
b	0.30	0.50
b1	0.75	0.90
c	0.08	0.15
D	2.80	3.00
E	1.20	1.40
E1	2.25	2.55
e	0.95 TYP	
e1	1.80	2.00
L	0.30	0.50
All Dimensions in mm		

Suggested Soldering Pad Layout



Dim.	Millimeters
C	2.20
E1	1.92
E2	1.72
G	0.80
X1	1.00
X2	1.20
Y	1.40
Z	3.60

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