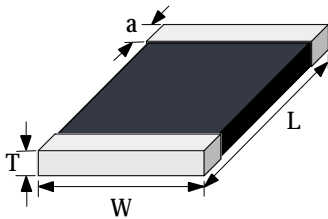


## ESD Protection of High Speed Signal Lines

### 0402 H Series



Dimensions



SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
Tmax.	-	0.024	-	0.60
a	0.004	0.016	0.10	0.40
L	0.035	0.043	0.90	1.10
W	0.016	0.024	0.40	0.60

### Features

- As Jumobotek's electrical advantages and physical Advantages <For More> 2005.12.22
- Bidirectional clamping in a two pin device
- No polarity, suitable for uni- and bidirectional lines
- Low capacitance
- Low clamping voltage compared to typical MLV ESD devices
- Capable of withstanding numerous ESD strikes
- RoHS compliant

### Application examples

- USB 2.0 and IEEE 1394
- DVI and HDMI interfaces
- HDTV
- High speed Ethernet
- PHS
- GPS
- Blue Tooth, PDA, DSC
- Antennas
- Printer ports
- Cellular phones

### WebLinks

Further infos see:

[www.jumobotek.com](http://www.jumobotek.com)

Further technical infos

Please E-mail: [service@jumobotek.com](mailto:service@jumobotek.com)

### Specifications

- Packaging  
Tape and Reel  
T 7 inch reel (10,000 pcs.)
- Material  
Body: Semiconducting Ceramic  
Terminals: Ni/Sn plated (code "P" )
- Operating Temperature  
-40 to +85°C (without derating)
- Solderability  
260°C 2 sec (IEC 60068-2-58)
- Soldering Heat Resistance  
260°C 5 sec. (IEC 60068-2-58)
- Response Time  
<0.5ns
- Temperature coefficient ( $\alpha V$ ) of clamping voltage ( $V_c$ ) @ specified test current  
<0.01%/ °C
- Power dissipation  
0.05W max.
- Withstand ESD durability test severity of IEC 61000-4-2 Level 4 :  
Contact discharge mode ; typical 8KV, max 20KV  
Air discharge mode ; typical 15KV, max 30KV  
Standards  
IEC 61000-4-2  
IEC 61000-4-3  
IEC 61000-4-4

Type	Allowable continuous working voltage	Breakdown voltage at 1mA(DC) test current	Max. clamping voltage at spec. current (8/20 $\mu$ s) $V_c$ (V@A)	Typ. Capacitance 1MHz $C_{typ}$ (pF)	Typical Inductance $L_{typ}$ (nH)
	$V_{M(DC)}$ (V)	$V_{N(DC)}$ (V)			
PD02S180H300PT	2~18	22 ~ 32	50@ 1	30	0.8
PD02S180H200PT	2~18	22 ~ 32	50@ 1	20	0.8
PD02S180H100PT	2~18	22 ~ 32	55@ 1	10	0.8
PD02S180H050PT	2~18	45 ~ 60	100@ 1	5	0.8
PD02S180H020CT	2~18	320 ~ 360	520@ 1	2	0.8

### How to order

PD	02	S	180	H	300	P	T
Type code	Chip Size	Single Chip	Allowable Working voltage	High-speed signal line application	Capacitance Code	Termination Code	Packing Code
PolyDiode	02 = EIA0402		180 = 2~18VDC		300 = $30 \times 10^0$ 050 = $5 \times 10^0$	P: Electroplating by Ni/Sn	T: Tape&Reel B: Bulk