

## CPDZ5V0P-HF

### RoHS Device

### Halogen Free



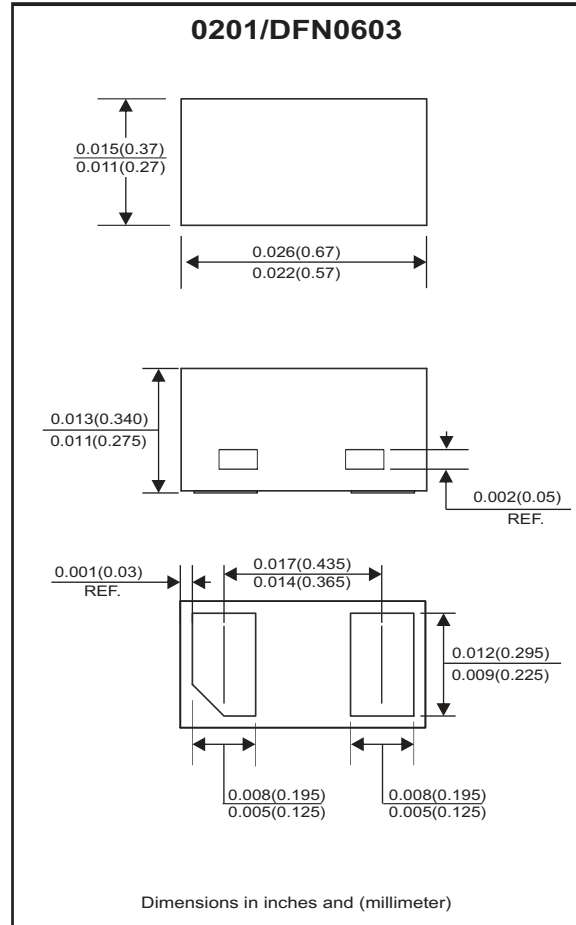
### Features

- Bi-directional ESD protection of one line.
- IEC61000-4-2 Level 4 ESD protection.
- Low capacitance: 0.9pF
- Low reverse stand-off voltage: 5V
- Low reverse clamping voltage.
- Low leakage current.

### Mechanical data

- Case: 0201/DFN0603 package, molded plastic.
- Polarity: Color band denotes cathode end.
- Mounting position: Any

### Circuit diagram



### Maximum Ratings (at T<sub>A</sub>=25°C unless otherwise noted)

Parameter	Conditions	Symbol	Value	Unit
IEC 61000-4-2	Air model	V <sub>ESD</sub> <sup>(1)</sup>	±15	kV
	Contact model		±15	
	JESD22-A114-B ESD voltage		Per human body model	
ESD voltage	Machine model		±0.4	
Peak pulse power		P <sub>PP</sub> <sup>(2)</sup>	80	W
Peak pulse current		I <sub>PP</sub> <sup>(2)</sup>	4	A
Lead solder temperature	Maximum(10 second duration)	T <sub>L</sub>	260	°C
Operation temperature range		T <sub>J</sub>	150	°C
Storage temperature range		T <sub>STG</sub>	-55~+150	°C

#### Notes:

- (1) Device stressed with ten non-repetitive ESD pulses.
- (2) Non-repetitive current pulse 8/20μs exponential decay waveform according to IEC61000-4-5

## Electrical Characteristics (at $T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Working peak reverse voltage		$V_{RWM}^{(1)}$			5	V
Reverse leakage current	$V_{RWM} = 5\text{V}$	$I_R$			1	$\mu\text{A}$
Breakdown voltage	$I_T = 1\text{mA}$	$V_{(BR)}$	6.5	9.0		V
Clamping voltage	$I_{PP} = 4\text{A}$	$V_C^{(2)}$			20	V
Junction capacitance	$V_R = 0\text{V}, f = 1\text{MHz}$	$C_J$			0.9	pF

**Notes:**

- (1) Other voltage available upon request.
- (2) Non-repetitive current pulse 8/20 $\mu\text{s}$  exponential decay waveform according to IEC61000-4-5

## RATING AND CHARACTERISTIC CURVES (CPDZ5V0P-HF)

Fig.1 - 8/20 $\mu\text{s}$  Peak Pulse Current Waveform Acc. IEC 61000-4-5

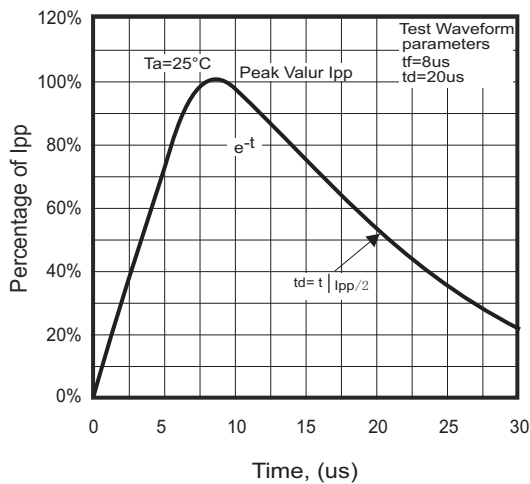


Fig.2 - Capacitance Characteristics

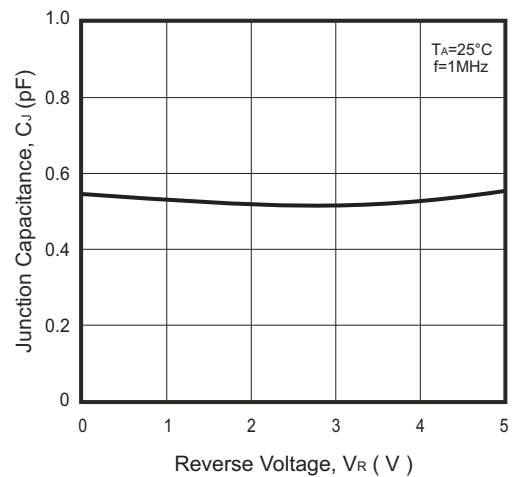
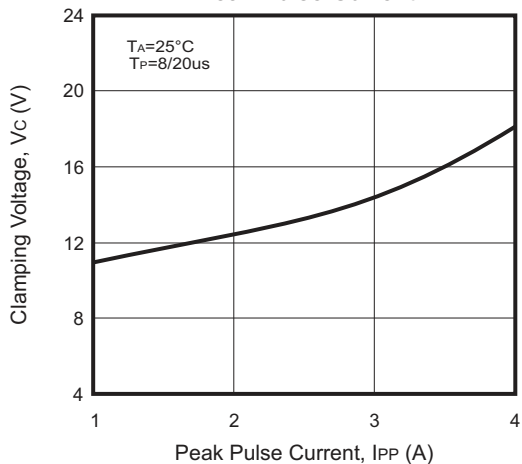
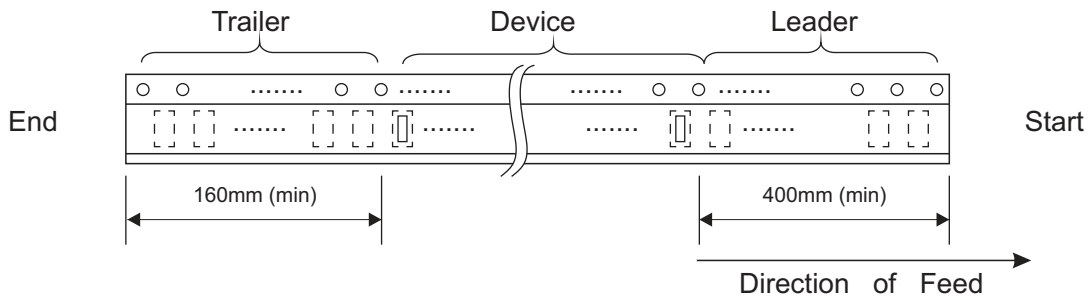
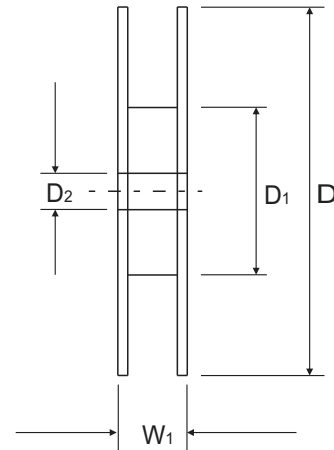
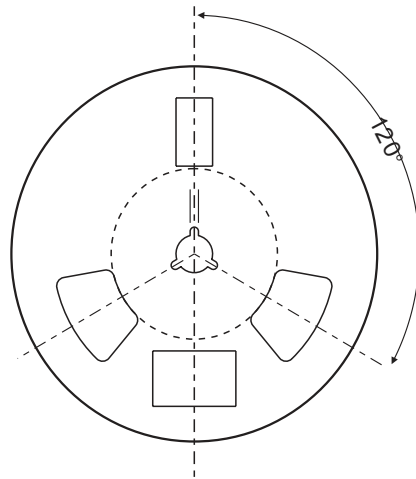
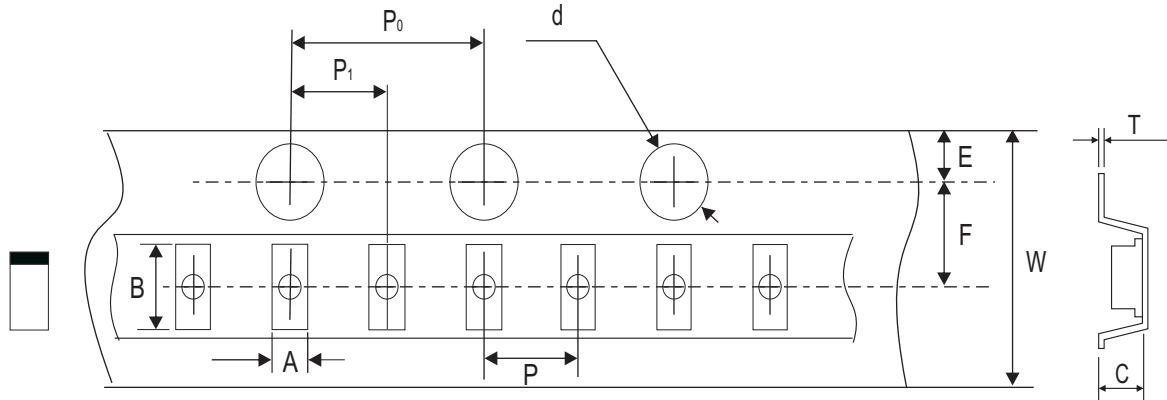


Fig.3 - Clamping Voltage Vs. Peak Pulse Current



## Reel Taping Specification

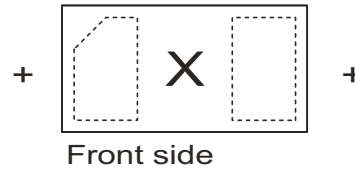


0201 (DFN0603)	SYMBOL	A	B	C	d	D	D <sub>1</sub>	D <sub>2</sub>
	(mm)	0.39 + 0.03/-0.02	0.72 ± 0.03	0.36 ± 0.03	1.50 + 0.10	178.00 ± 1.00	54.40 ± 0.40	13.00 ± 0.20
	(inch)	0.015 + 0.001/0.001	0.028 ± 0.001	0.014 ± 0.001	0.059 + 0.004	7.008 ± 0.039	2.142 ± 0.016	0.512 ± 0.008

0201 (DFN0603)	SYMBOL	E	F	P	P <sub>0</sub>	P <sub>1</sub>	T	W	W <sub>1</sub>
	(mm)	1.75 ± 0.10	3.50 ± 0.05	2.00 ± 0.05	4.00 ± 0.05	2.00 ± 0.05	0.23 ± 0.05	8.00 ± 0.10	12.30 ± 0.10
	(inch)	0.069 ± 0.004	0.138 ± 0.002	0.079 ± 0.004	0.157 ± 0.004	0.079 ± 0.004	0.009 ± 0.002	0.315 ± 0.008	0.484 ± 0.004

## Marking Code

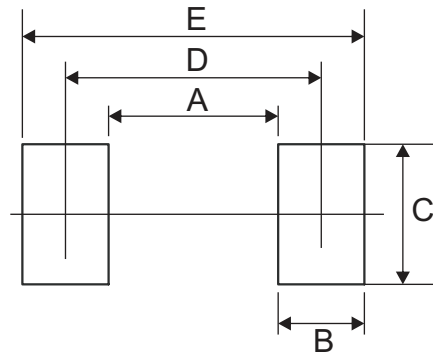
Part Number	Marking Code
CPDZ5V0P-HF	X



X: Product type marking code

## Suggested PAD Layout

SIZE	0201(DFN0603)	
	(mm)	(inch)
A	0.16	0.006
B	0.24	0.009
C	0.34	0.013
D	0.40	0.016
E	0.64	0.025



## Standard Packaging

Case Type	Qty Per Reel	Reel Size
	(Pcs)	(inch)
0201(DFN0603)	10,000	7