

## CPDZ5V0C-HF

**RoHS Device**  
**Halogen Free**



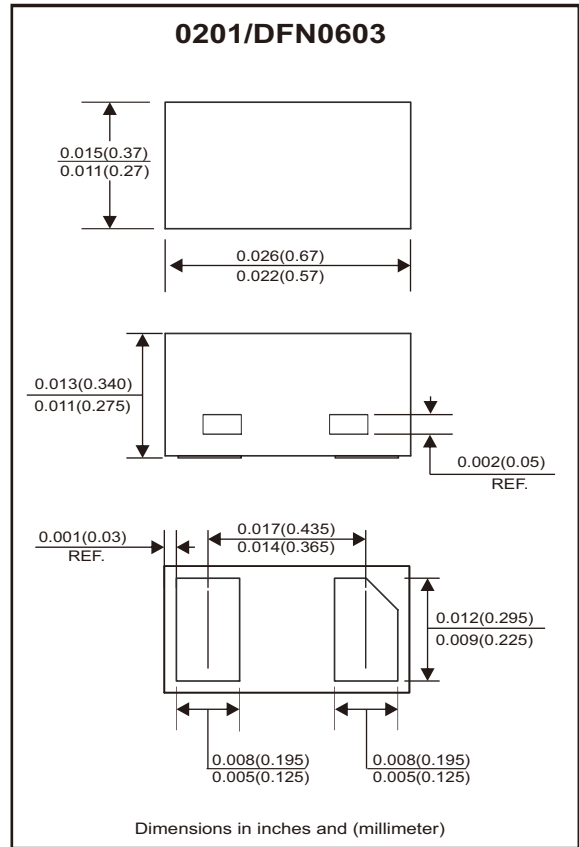
### Features

- Bi-directional ESD protection.
- IEC61000-4-2 Level 4 ESD protection.
- Surface mount package.
- Ultra small SMD package:0201
- High component density.
- Low clamping voltage.
- Low leakage.

### Mechanical data

- Case: 0201/DFN0603 package, molded plastic.
- Terminals: Gold plated, solderable per MIL-STD-750, method 2026.
- Polarity: Color band denotes cathode end.
- Mounting position: Any

### Circuit diagram



### Maximum Rating (at TA=25°C unless otherwise noted)

Parameter	Conditions	Symbol	Value	Unit
Peak pulse power	T <sub>P</sub> = 8/20us	P <sub>PP</sub>	30	W
Peak pulse current	T <sub>P</sub> = 8/20us	I <sub>PP</sub>	2	A
ESD capability	IEC 61000-4-2(air) IEC 61000-4-2(contact)	ESD	±15 ±8	kV
Operation temperature range		T <sub>j</sub>	-40~+125	°C
Storage temperature range		T <sub>STG</sub>	-55~+150	°C

### Electrical Characteristics (at TA=25°C unless otherwise noted)

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Working peak reverse voltage		V <sub>RWM</sub>			5	V
Breakdown voltage	I <sub>T</sub> = 1mA	V <sub>BR</sub>	5.5		9.5	V
Reverse leakage current	V <sub>RWM</sub> = 5V	I <sub>R</sub>			100	nA
Clamping voltage	I <sub>PP</sub> = 1A, T <sub>P</sub> = 8/20us I <sub>PP</sub> = 2A, T <sub>P</sub> = 8/20us	V <sub>C</sub>			12 15	V
Junction capacitance	V <sub>R</sub> = 0V, f = 1MHz	C <sub>J</sub>		3		pF

## RATING AND CHARACTERISTIC CURVES (CPDZ5V0C-HF)

Fig.1 - 8/20us Peak Pulse Current Waveform Acc. IEC 61000-4-5

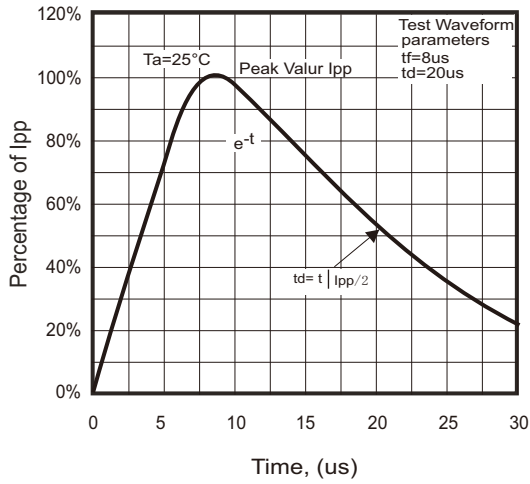


Fig.2 - Power Rating Derating Curve

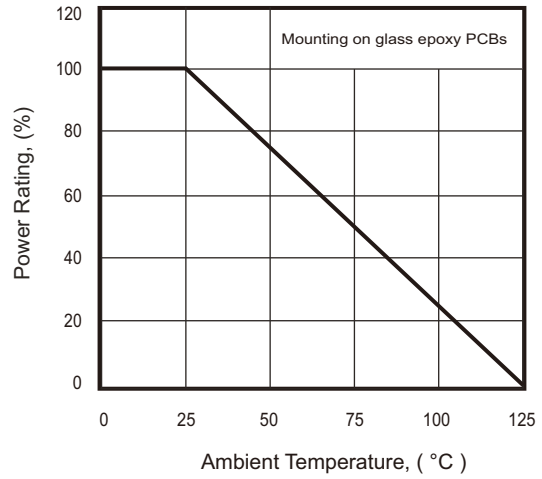


Fig.3 - Clamping Voltage Vs. Peak Pulse Current

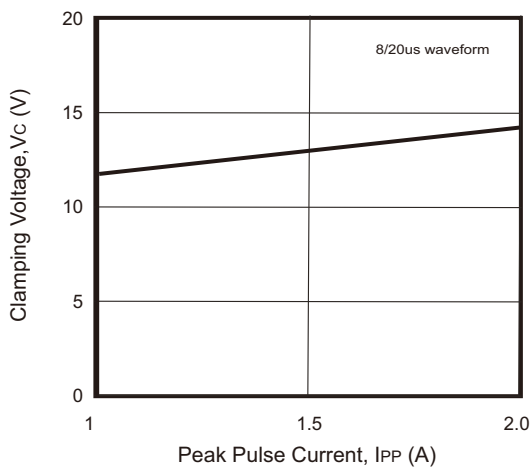
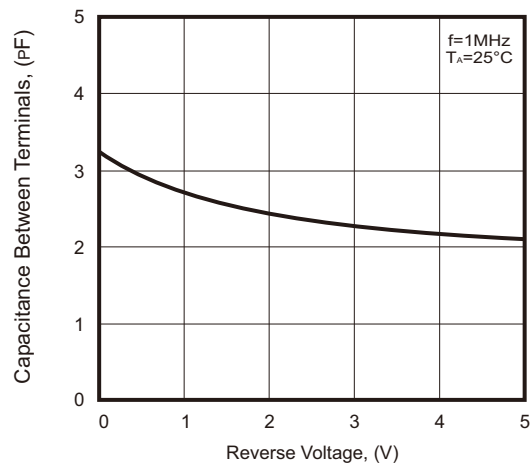
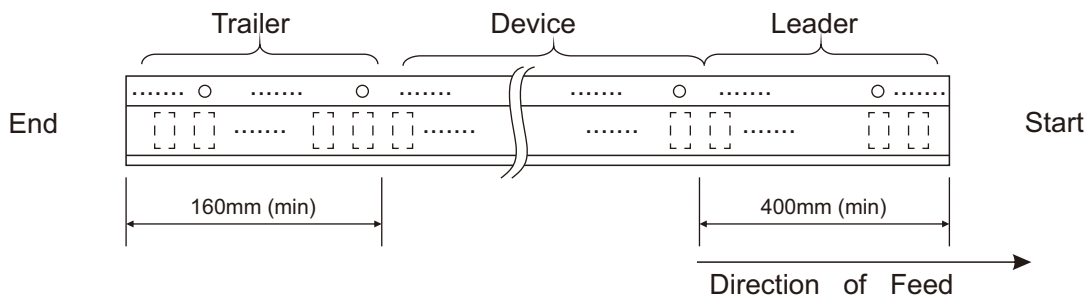
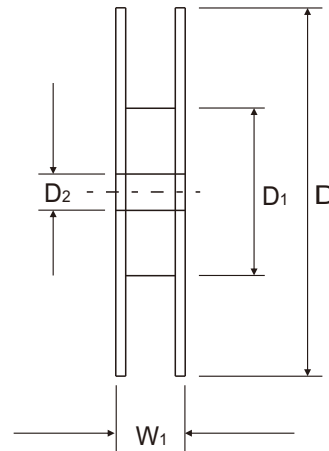
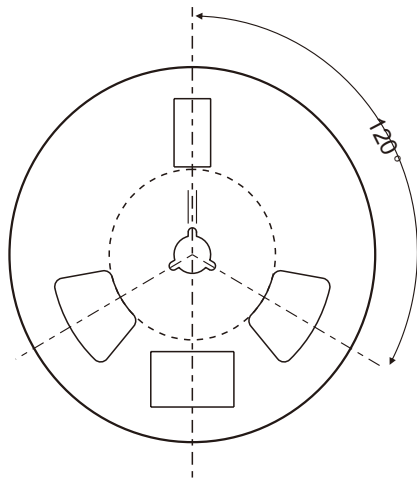
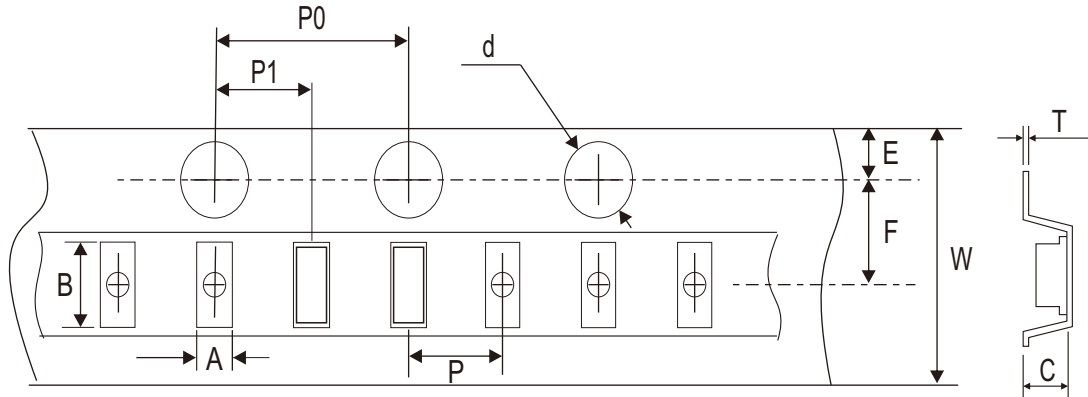


Fig.4 - Capacitance Between Terminals Characteristics



## 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 ± 1.00	54.4 ± 0.40	13.0 ± 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 ± 0.002	0.157 ± 0.002	0.079 ± 0.002	0.009 ± 0.002	0.315 ± 0.004	0.484 ± 0.004

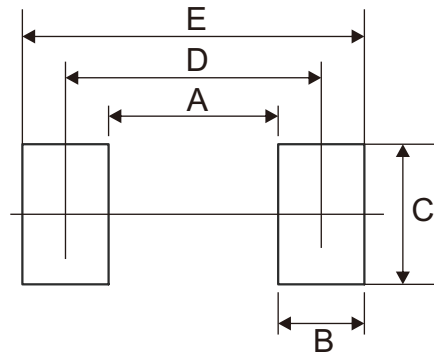
## Marking Code

Part Number	Marking Code
CPDZ5V0C-HF	5



## Suggested PAD Layout

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



## Standard Packaging

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