

CPDZ5V0-HF

RoHS Device

Halogen Free



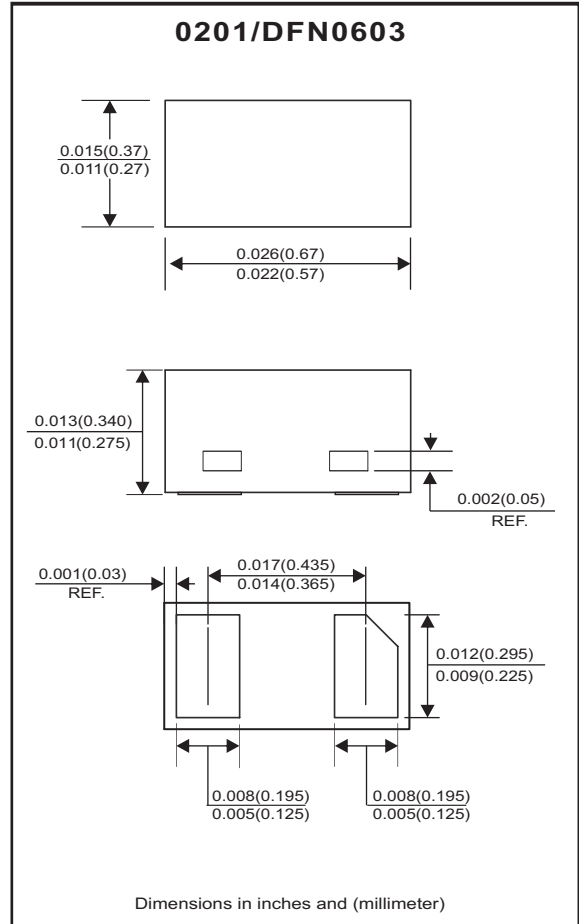
Features

- Bi-directional ESD protection of one line.
- IEC61000-4-2 Level 4 ESD protection.
- Low capacitance: 3pF(Typ.)
- 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 TA=25°C unless otherwise noted)

Parameter	Conditions	Symbol	Limit	Unit
IEC 61000-4-2	Air model	$V_{ESD}^{(1)}$	±15	kV
	Contact model		±15	
	JESD22-A114-B ESD voltage		±16	
ESD voltage	Machine model		±0.4	
Peak pulse power		$P_{PP}^{(2)}$	52	W
Peak pulse current		$I_{PP}^{(2)}$	4	A
Lead solder temperature	Maximum(10 second duration)	T_L	260	°C
Operation temperature range		T_J	150	°C
Storage temperature range		T_{STG}	-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 TA=25°C unless otherwise noted)

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Working peak reverse voltage		$V_{RWM}^{(1)}$			5	V
Reverse leakage current	$V_{RWM} = 5V$	I_R			1	μA
Breakdown voltage	$I_T = 1mA$	$V_{(BR)}$	5.6		8	V
Clamping voltage	$I_{PP} = 4A$	$V_C^{(2)}$			13	V
Junction capacitance	$V_R = 0V, f = 1MHz$	C_J		3		pF

Notes:

- (1) Other voltage available upon request.
- (2) Non-repetitive current pulse 8/20 μs exponential decay waveform according to IEC61000-4-5

RATING AND CHARACTERISTIC CURVES (CPDZ5V0-HF)

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

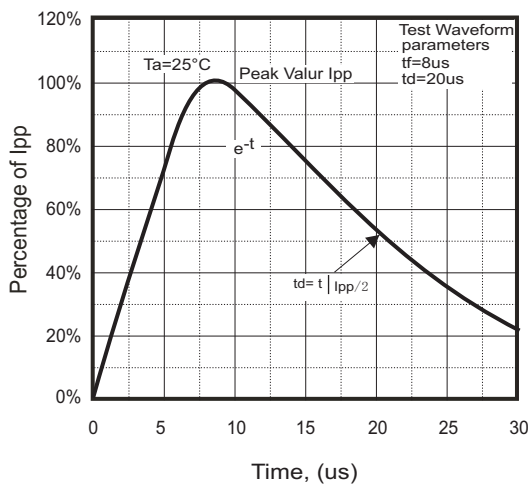


Fig. 2 - Capacitance Characteristics

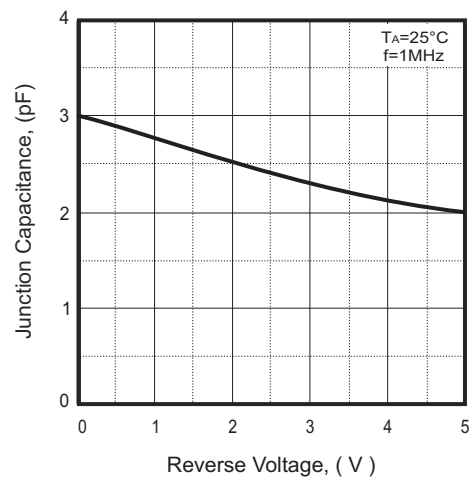
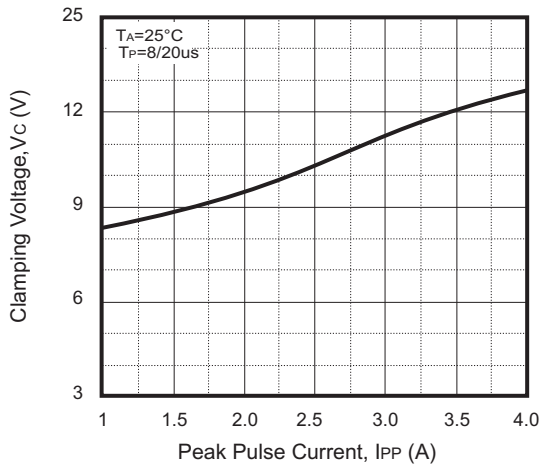
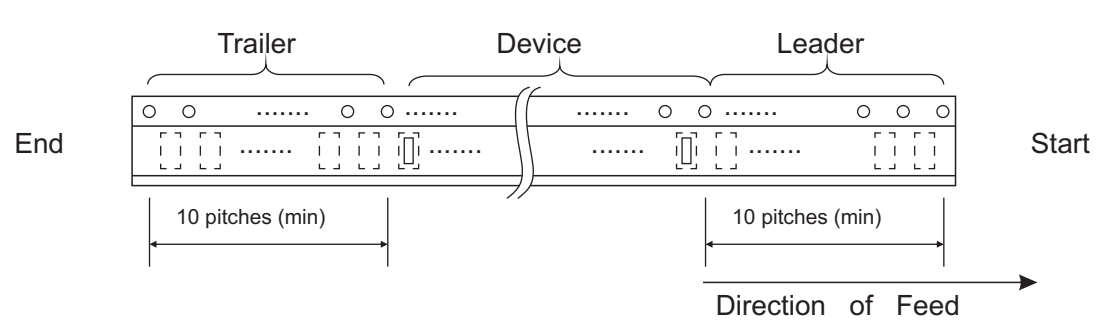
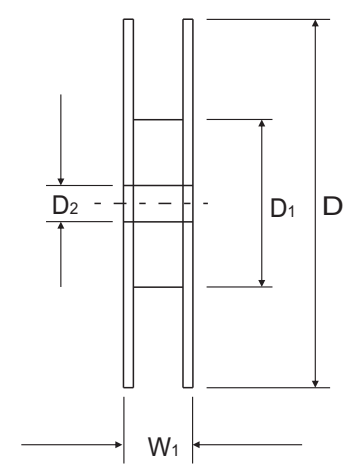
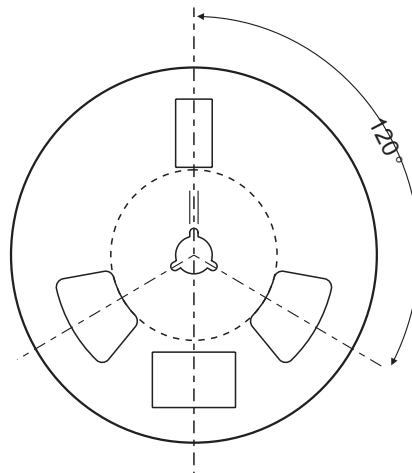
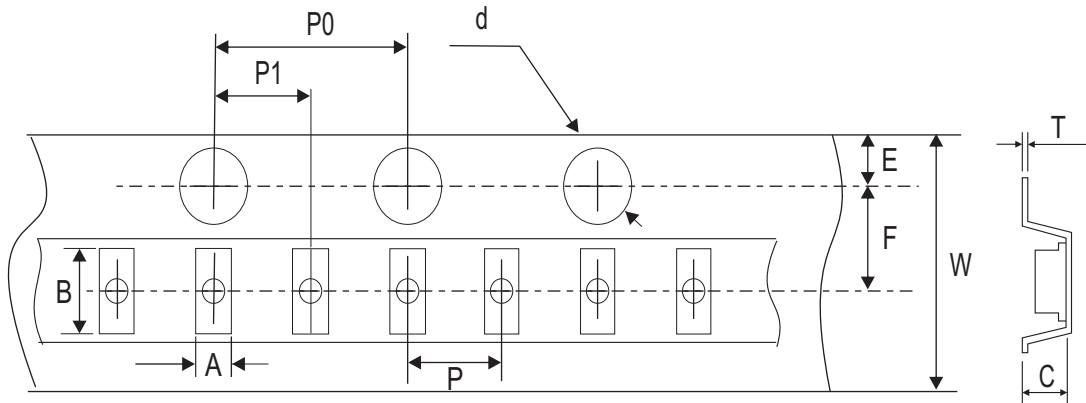


Fig.3 - Clamping Voltage Vs. Peak Pulse Current



Reel Taping Specification



0201 (DFN0603)	SYMBOL	A	B	C	d	D	D ₁	D ₂
	(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 ₀	P ₁	T	W	W ₁
	(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

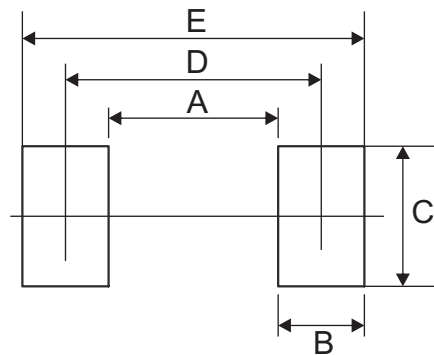
Marking Code

Part Number	Marking Code
CPDZ5V0-HF	I



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