



**THE DATASHEET OF  
ACPDZC5V0C-HF**



## ACPDZC5V0C-HF

RoHS Device  
Halogen Free



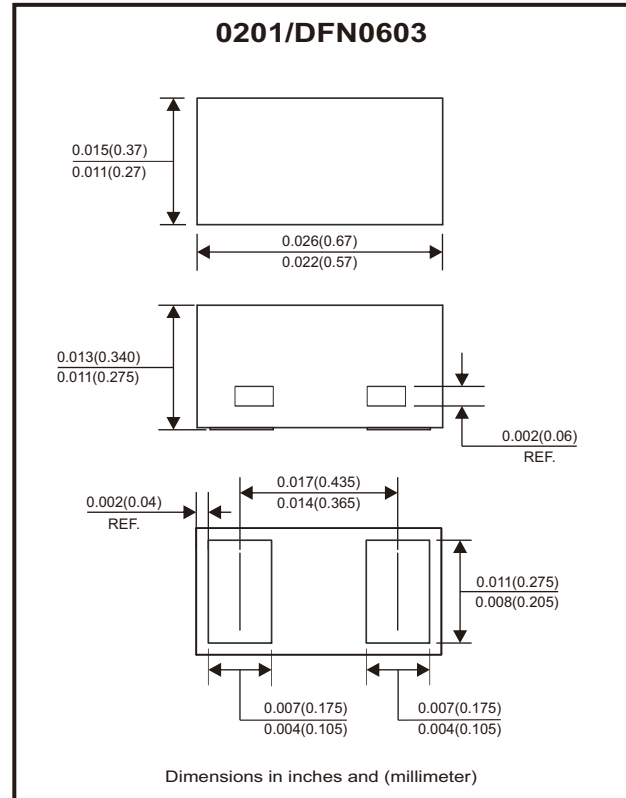
### Features

- 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.
- AEC-Q101 Qualified.

### 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	$T_P = 8/20\mu s$	$P_{PP}$	30	W
Peak pulse current	$T_P = 8/20\mu s$	$I_{PP}$	2	A
ESD capability	IEC 61000-4-2(air) IEC 61000-4-2(contact)	ESD	$\pm 15$ $\pm 8$	kV
Operating temperature range		$T_J$	-40~+125	°C
Storage temperature range		$T_{STG}$	-55~+150	°C

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

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Working peak reverse voltage		$V_{RWM}$			5	V
Breakdown voltage	$I_T = 1mA$	$V_{BR}$	5.5		9.5	V
Reverse leakage current	$V_{RWM} = 5V$	$I_R$			100	nA
Clamping voltage	$I_{PP} = 1A, T_P = 8/20\mu s$ $I_{PP} = 2A, T_P = 8/20\mu s$	$V_C$			12 15	V
Junction capacitance	$V_R = 0V, f = 1MHz$	$C_J$		3		pF

## Rating and Characteristic Curves (ACPDZC5V0C-HF)

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

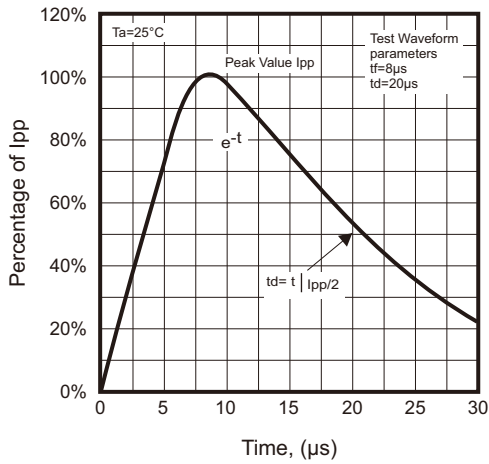


Fig.2 - Power Rating Derating Curve

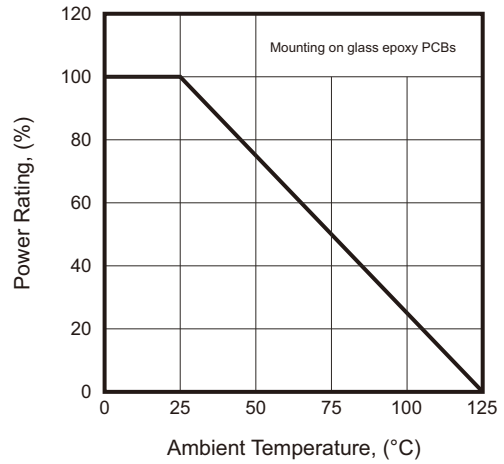


Fig.3 - Clamping Voltage vs. Peak Pulse Current

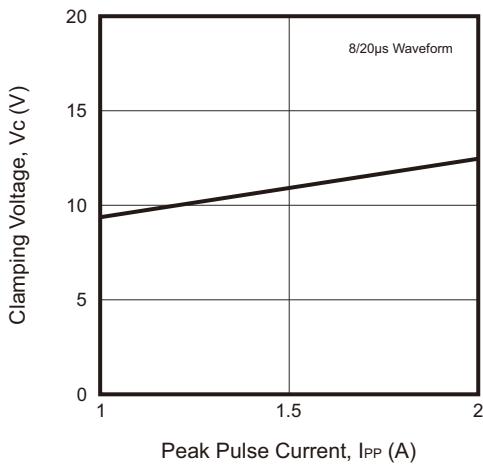
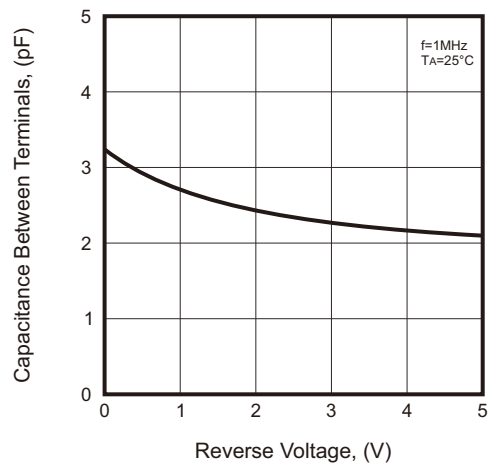
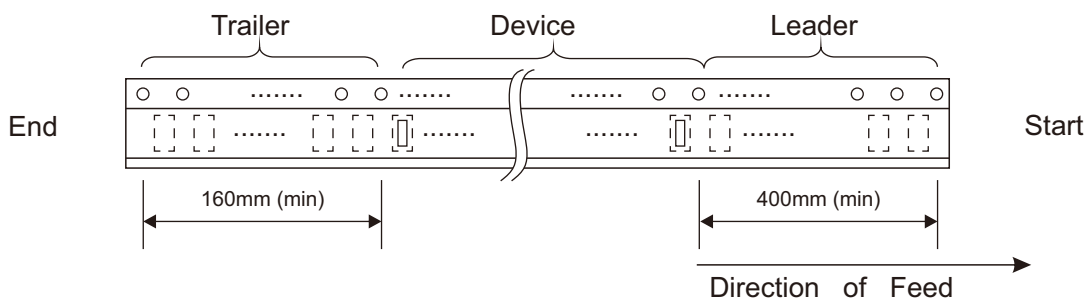
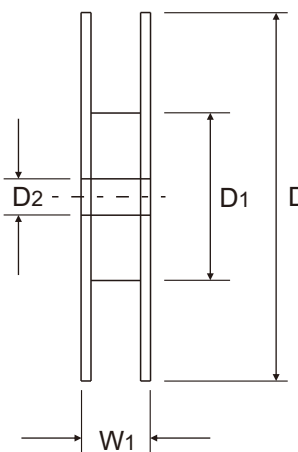
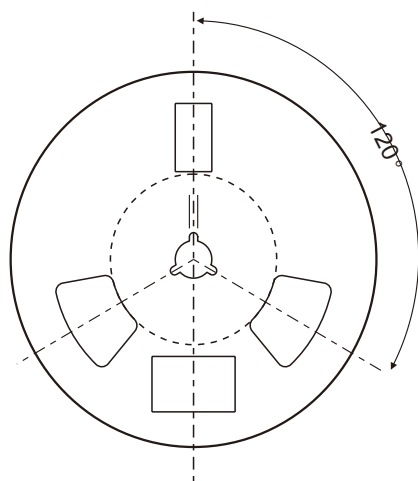
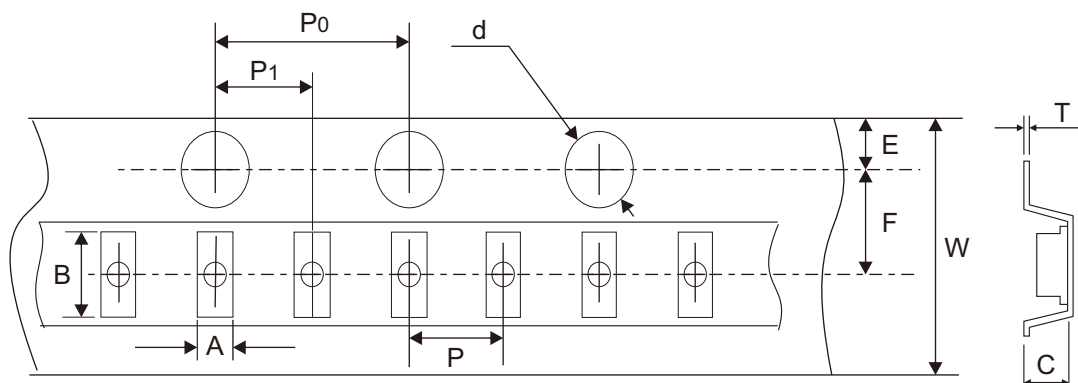


Fig.4 - Capacitance Between Terminals Characteristics



## Reel Taping Specification



0201 (DFN0603)	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	$0.44 \pm 0.03$	$0.74 \pm 0.03$	$0.40 \pm 0.03$	$1.50 + 0.10$ $- 0.00$	$178.00 \pm 1.00$	$60.00 \pm 0.50$	$13.50 \pm 0.20$
	(inch)	$0.017 \pm 0.001$	$0.029 \pm 0.001$	$0.016 \pm 0.001$	$0.059 + 0.004$ $- 0.000$	$7.008 \pm 0.039$	$2.362 \pm 0.020$	$0.531 \pm 0.008$

0201 (DFN0603)	SYMBOL	E	F	P	P0	P1	T	W	W1
	(mm)	$1.75 \pm 0.10$	$3.50 \pm 0.05$	$2.00 \pm 0.05$	$4.00 \pm 0.10$	$2.00 \pm 0.05$	$0.20 \pm 0.03$	$8.00 + 0.30$ $- 0.10$	$12.00 + 0.50$ $- 0.00$
	(inch)	$0.069 \pm 0.004$	$0.138 \pm 0.002$	$0.079 \pm 0.002$	$0.157 \pm 0.004$	$0.079 \pm 0.002$	$0.008 \pm 0.001$	$0.315 + 0.012$ $- 0.004$	$0.472 + 0.020$ $- 0.000$

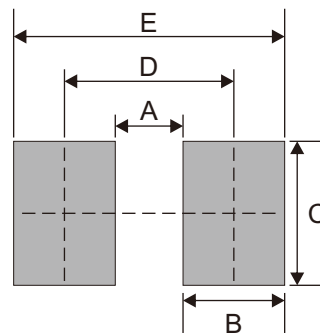
## Marking Code

Part Number	Marking Code
ACPDZC5V0C-HF	5



## Suggested P.C.B. 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	REEL PACK	
	REEL (pcs)	Reel Size (inch)
0201 (DFN0603)	10,000	7

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