

## ACPDZC5V0BU-HF

RoHS Device  
Halogen Free



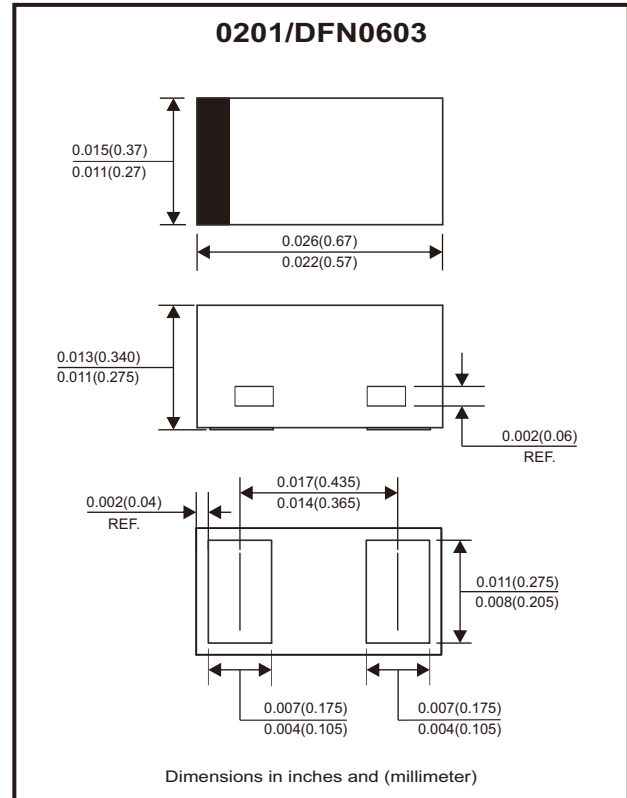
### Features

- Uni-directional ESD protection.
- IEC 61000-4-5 (surge) ; Ipp=4A
- IEC 61000-4-2 (ESD) ; ±20KV(contact)
- Low clamping voltage.
- Low leakage current.
- 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.
- Weight: 0.0004 grams (approx.).

### Circuit Diagram



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

Parameter	Conditions	Symbol	Value	Unit
Peak pulse power	T <sub>P</sub> = 8/20μs	P <sub>PP</sub>	56	W
Peak pulse current	T <sub>P</sub> = 8/20μs	I <sub>PP</sub>	4	A
ESD capability	IEC 61000-4-2(air)	ESD	±20	kV
	IEC 61000-4-2(contact)	ESD	±20	
Operating temperature range		T <sub>J</sub>	-55 ~ +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>	5.8			V
Forward voltage	I <sub>F</sub> = 15mA	V <sub>F</sub>			1.2	V
Reverse leakage current	V <sub>RWM</sub> = 5V	I <sub>R</sub>			0.1	μA
Clamping voltage	I <sub>PP</sub> = 1A, T <sub>P</sub> = 8/20μs	V <sub>C</sub>			10	V
	I <sub>PP</sub> = 4A, T <sub>P</sub> = 8/20μs	V <sub>C</sub>		12	14	V
Junction capacitance	V <sub>R</sub> = 0V, f = 1MHz	C <sub>J</sub>		0.45	0.60	pF

## Rating and Characteristic Curves (ACPDZC5V0BU-HF)

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

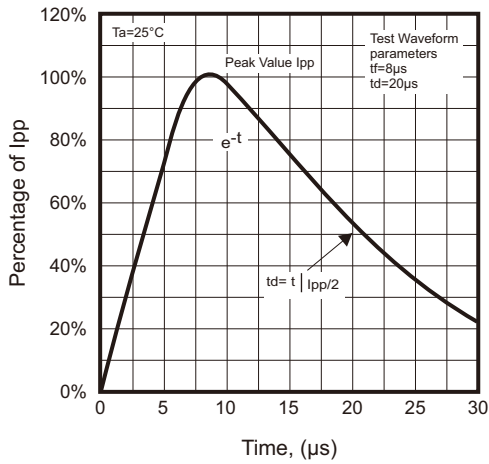


Fig.2 - Power Rating Derating Curve

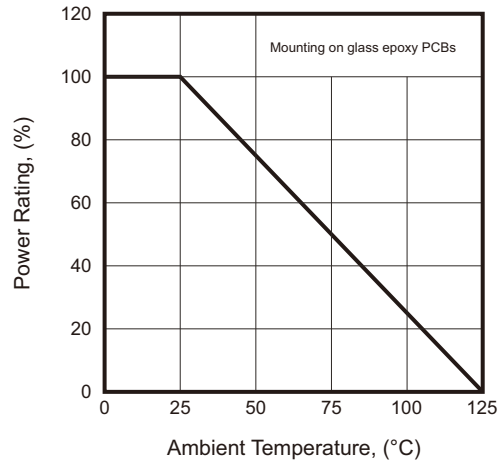


Fig.3 - Typical Clamping Voltage vs. Peak Pulse Current

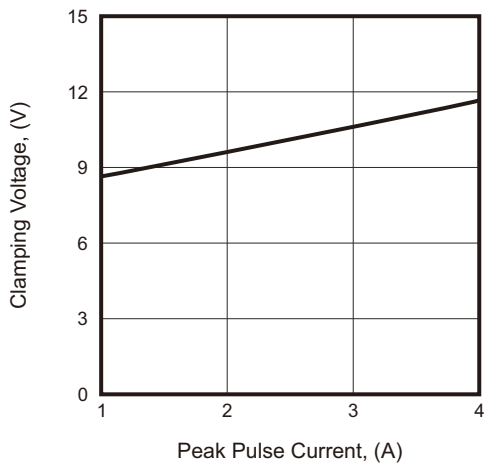
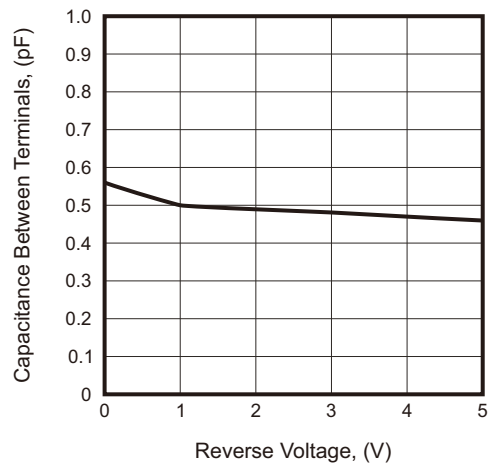
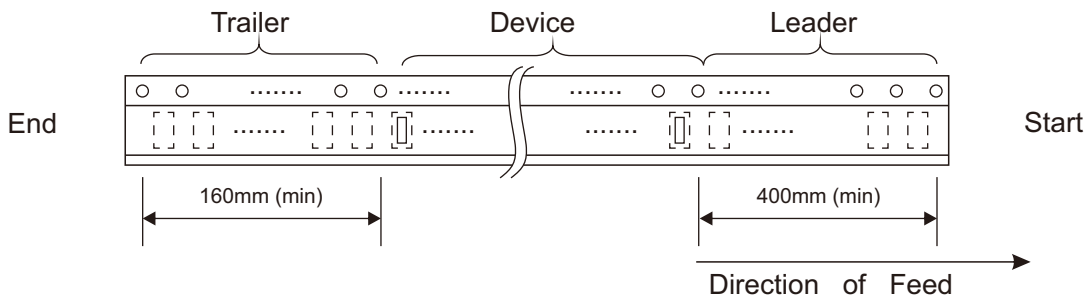
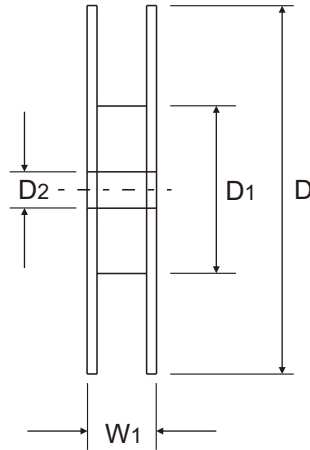
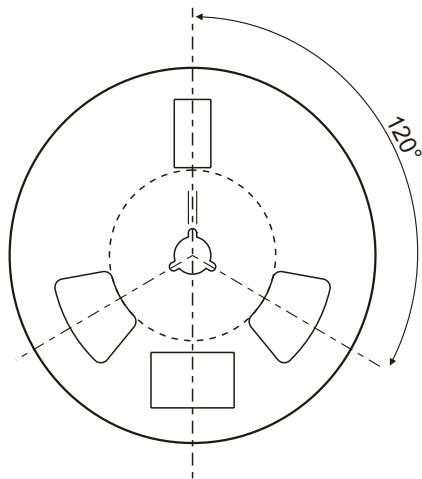
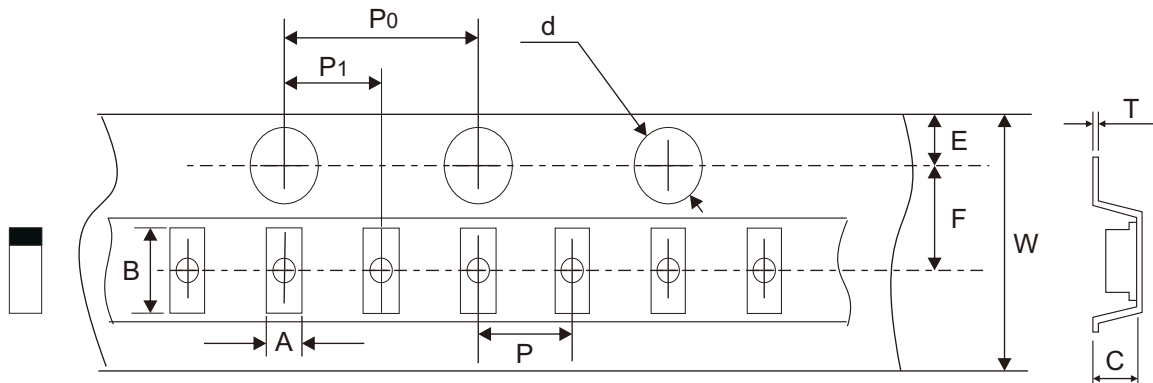


Fig.4 - Typical Capacitance Between Terminals Characteristics



## 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)	$0.069 \pm 0.004$	$0.138 \pm 0.002$	$0.079 \pm 0.002$	$0.157 \pm 0.004$	$0.079 \pm 0.002$	$0.008 \pm 0.001$	$0.315 + 0.012 - 0.004$	$0.472 + 0.020 - 0.000$

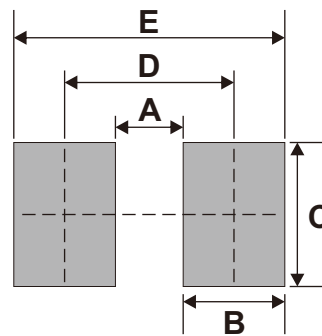
## Marking Code

Part Number	Marking Code
ACPDZC5V0BU-HF	E5B



## 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