

NEW PRODUCT  
 INFORMATION

# New High Speed Decoupling Device Proadlizer® PF/A Series

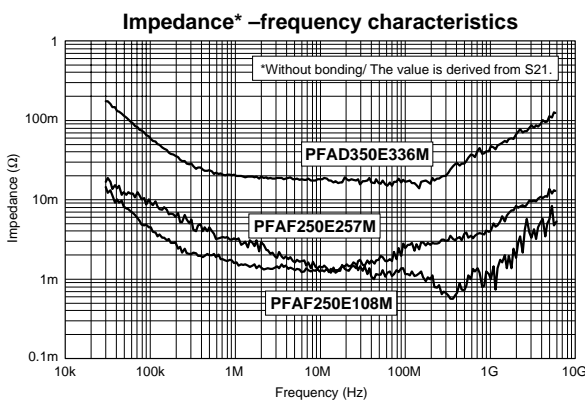
## APPLICATION

- High speed and high power CPU and Gbps backplane decoupling
- EMI solution for 1 MHz range or above
- High switching frequency DC/DC converter output capacitor

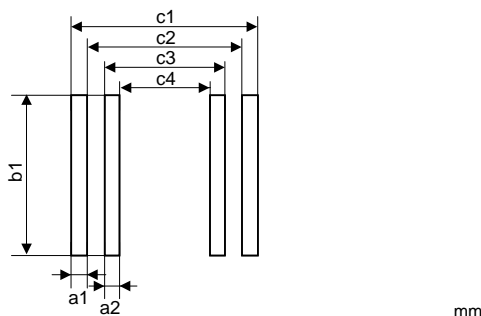
## FEATURES

- Excellent noise absorption performance at GHz frequency
- Extreme low ESL (single digit pH range) and high current capability (10A)
- High Capacitance and very low ESR based on our Conductive Polymer technology
- Distributed capacitance architecture and transmission-line structure

## PERFORMANCE (reference)



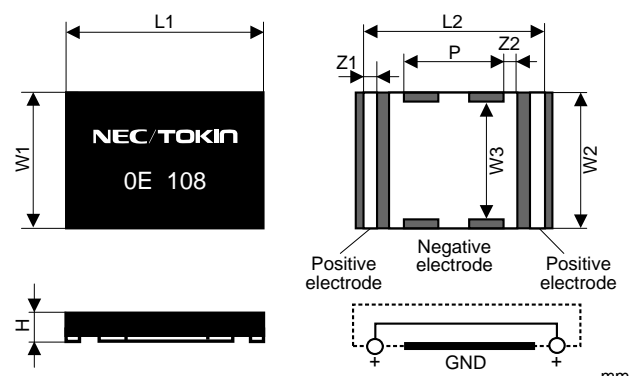
## LAYOUT LAND PATTERN (Tentative)



Case Code	a1	a2	b1	c1	c2	c3	c4
F25	1.6	1.8	14.2	16.4	13.2	10.2	6.6
D35	1.6	1.2	5.5	8.5	5.3	4.3	1.9

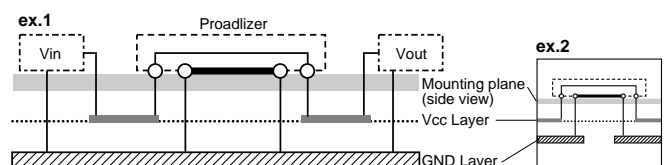


## DIMENSIONS [mm]



Case Code	L1	L2	W1	W2	W3	H	Z1	Z2	P
F25	16.7±0.2	15.3±0.2	12.1±0.2	11.9±0.2	10.7±0.2	2.5Max	1.0±0.2	1.2±0.2	8.0±0.2
D35	8.5±0.2	7.3±0.2	5.3±0.2	5.2±0.2	4.0±0.2	3.5Max	0.9±0.2	0.5±0.2	3.3±0.2

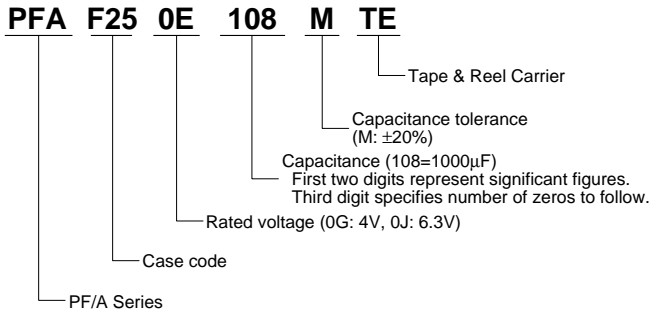
## NOTE (reference)



(ex.1) Per the figure above, a gap in the Vcc area would produce optimal performance.

(ex.2) A gap in the GND layer plus a Vcc gap would produce more optimal performance.

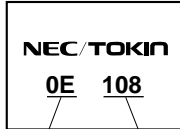
## PART NUMBER SYSTEM



## MARKING

[F25 case]

[D35 case]



Rated voltage Capacitance



Rated voltage Capacitance

## RATINGS (Initial specification)

Rated voltage (V)	Capacitance (μF)	Dissipation Factor (%)	DC Leakage Current (μA)	ESR (mΩ) at 100kHz	Case Code	Part Number	Reference Case Code	ESL*1 (pH)
2.5	33	5	8.3	50	D35	PFAD350E336MTE ★	D35	10
2.5	100	5	25	30	D35	PFAD350E107MTE ★	F25	1
2.5	220	5	55	10	D35	PFAD350E227MTE ★		
2.5	250	30	62.5	10	F25	PFAD250E257MTE		
2.5	1000	10	250	5	F25	PFAD250E108MTE		

★Under development

\*1: Values derived from the attenuation measured by the network analyzer.

## PERFORMANCE

NO	Test Item	Performance	Test Condition	
1	Operating Temperature	-55°C to +105°C		
2	Rated Voltage	2.5V		
3	Capacitance	33μF-1000μF		
4	Capacitance Tolerance	M: ±20%	at 120Hz	
5	DC Leakage Current	under 0.1CV	Applied Rating Voltage, 5min	
6	Dissipation Factor (DF)	Refer Rating table	at 120Hz	
7	ESR*	Refer Rating table	at 100kHz	
8	Surge Voltage	Capacitance Change: Within ±20% of initial specification. LC: Lower than initial specification. DF: Lower than 2 times initial specification. ESR: Lower than 2 times initial specification.	Applied 115% of Rating Voltage at 105°C 1000cycles	
9	Temperature Stability		Capacitance: same as No.3 LC: same as No.5 DF: same as No.6 ESR: same as No.7	
		at -55°C		at +105°C
	Capacitance Change	Within 0% to -20%		Within +50% to 0%
	LC	Lower than initial specification.		Lower than 10 times initial specification.
	tan δ	Lower than initial specification.		Lower than 1.5 times initial specification.
ESR	Lower than initial specification.	Lower than 1.5 times initial specification.		
10	Temperature Cycling	Capacitance Change: Within ±20% of initial specification. LC: Lower than initial specification. DF: Lower than 2 times initial specification. ESR: Lower than 2 times initial specification.	-55°C to 105°C 5cycles	
11	Resistance to Soldering Heat	Capacitance Change: Within ±20% of initial specification. LC: Lower than initial specification. DF: Lower than initial specification. ESR: Lower than initial specification.	Reflow soldering 240°C, 10sec. Peak	
12	Damp Heat	Capacitance: Within +30% to -20% of initial specification. LC: Lower than initial specification. DF: Lower than 2 times initial specification. ESR: Lower than 2 times initial specification.	65°C, 90 to 95%RH Duration is 500Hr	
13	Endurance	Capacitance Change: Within ±20% of initial specification. LC: Lower than initial specification. DF: Lower than 2 times initial specification. ESR: Lower than 2 times initial specification.	105°C, Applied Rating Voltage Duration is 1000Hr	

\*ESR: Preliminary specification

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## Precautions



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