

NEW PRODUCT
 INFORMATION

New High Speed Decoupling Device Proadlizer® PF/A Series

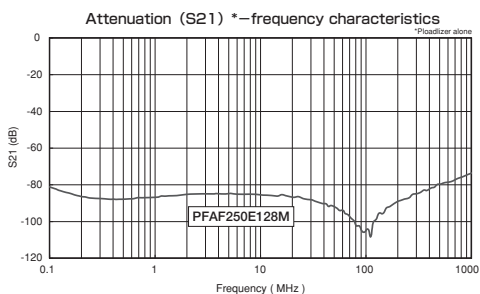
APPLICATION

- High speed and high power CPU and Gbps backplane decoupling
- EMI solution for 10 MHz range or above
- High switching frequency DC/DC converter output capacitor

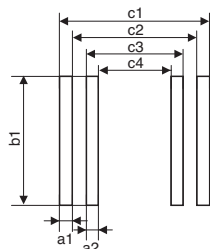
FEATURES

- Excellent noise absorption performance at GHz frequency
- Extreme low ESL and high current capability
- High Capacitance and very low ESR based on our Conductive Polymer technology
- Distributed capacitance architecture and transmission-line structure

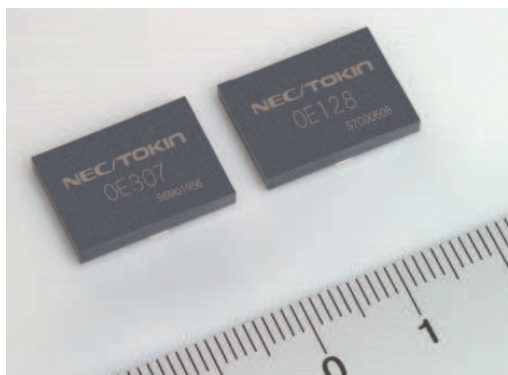
PERFORMANCE (reference)



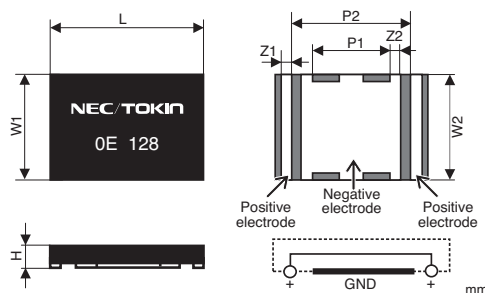
LAYOUT LAND PATTERN (Tentative)



Case Code	a1	a2	b1	c1	c2	c3	c4
F25, F20	1.6	1.8	14.2	16.4	13.2	10.2	6.6
1212	1.6	1.8	14.2	11.9	8.7	6.7	3.1

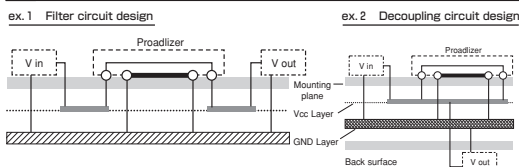


DIMENSIONS [mm]



Case Code	L	W1	W2	H	P1	P2	Z1	Z2
F25	16.7±0.2	12.1±0.2	11.9±0.2	2.5Max	8.0±0.2	13.0±0.2	1.0±0.2	1.2±0.2
F20	16.7±0.2	12.1±0.2	11.9±0.2	2.0Max	8.0±0.2	13.0±0.2	1.0±0.2	1.2±0.2
121220	12.0±0.2	12.0±0.2	11.9±0.2	2.0Max	5.1±0.2	8.7±0.2	0.9±0.2	0.8±0.2

NOTE (reference)

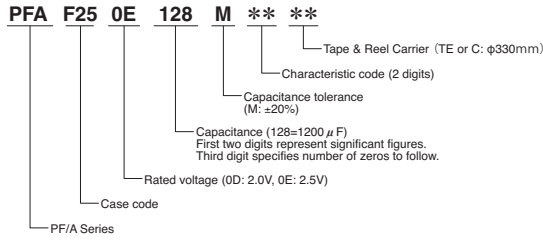


- ex.1 An effective filtering performance can be achieved by separating input and output in the VCC layer.
- ex.2 An effective decoupling performance can be achieved by not separating Vcc layer. This method also makes surface mounting of loads(CPU etc.) efficient.

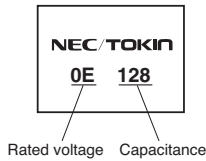


- All specifications in this catalog and production status of products are subject to change without notice. Prior to the purchase, please contact NEC TOKIN for updated product data.
- Please request for a specification sheet for detailed product data prior to the purchase.
- Before using the product in this catalog, please read "Precautions" and other safety precautions listed in the printed version catalog.

PART NUMBER SYSTEM



MARKING



RATINGS (Initial specification)

Rated voltage (V)	Capacitance (μF)	Disipation Factor (%)	DC Leakage Current (μA)	ESR (mΩ) at 100kHz	Case code	Part Number
2.0	1000	10	300	1.0	121220	PFA121220OD10BMCDC
2.5	900	10	250	1.5	F25	PFAF250E907MCBTE
2.5	1200	10	300	2.0	F25	PFAF250E128MTE
2.5	1200	10	300	1.5	F25	PFAF250E128MNSTE
2.5	1500	10	375	2.0	F25	PFAF250E158MTE
2.0	1000	10	200	1.0	F20	PFAF200D10BMCDE
2.0	1800	10	360	1.0	F20	PFAF200D18BMNRE
2.0	2400	10	480	1.0	F25	PFAF250D248MNRE

* : Under development

PERFORMANCE

NO	Test Item	Performance	Test Condition	
1	Operating Temperature	-55°C to +105°C		
2	Rated Voltage	2.0V, 2.5V		
3	Capacitance	900μF~2400μF	at 120Hz	
4	Capacitance Tolerance	M: ±20%		
5	DC Leakage Current	Refer Rating table	Applied Rating Voltage, 5min	
6	Dispipation 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 Scycles	
11	Resistance to Soldering Heat	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.	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.	40°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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- Descriptions in this catalog regarding product characteristics and quality are based solely on discrete components. When using these components, be sure to check the specifications with the component in question mounted on the products.
- The manufacturer's warranty will not cover any disadvantage or damage caused by improper use of the products that deviates from the characteristics, specifications, or conditions for use described in this catalog.
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