



New High Speed Decoupling Device Proadlizer® PF/A Series

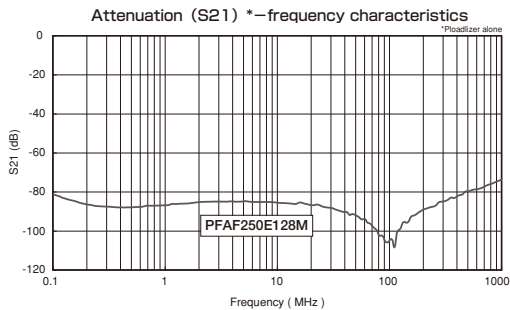
APPLICATION

- 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

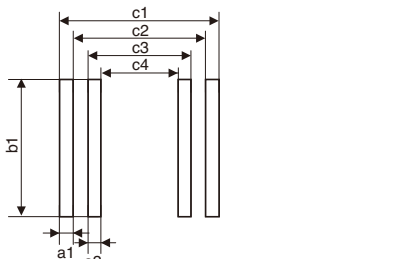
FEATURES

- 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

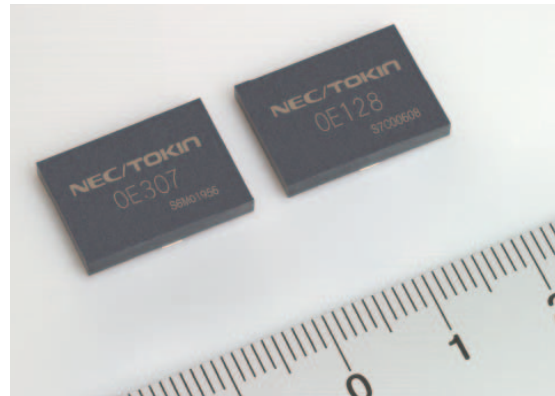
PERFORMANCE (reference)



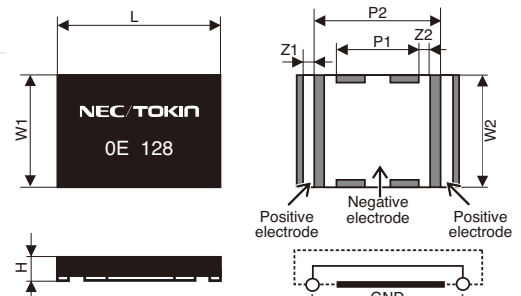
LAYOUT LAND PATTERN (Tentative)



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



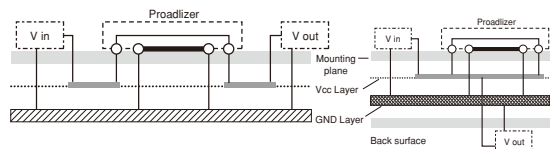
DIMENSIONS [mm]



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 Filter circuit design ex.2 Decoupling circuit design

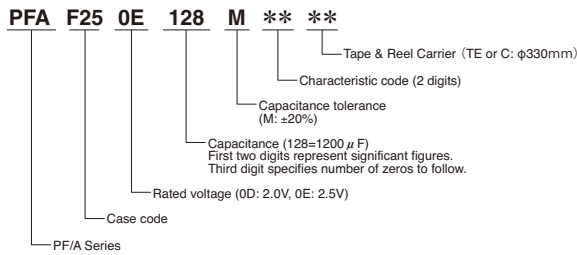


- ex.1 An effective filtering performance can be achieved by separating input and output in the VCC layer.
- ex.2 An effective decoupling performance can be achieved by not separating Vcc layer. This method also makes surface mounting of loads(CPU etc.) efficient.

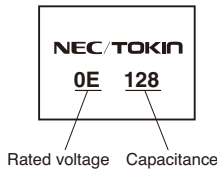


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PART NUMBER SYSTEM



MARKING



RATINGS (Initial specification)

Rated voltage (V)	Capacitance (μF)	Dissipation Factor (%)	DC Leakage Current (μA)	ESR (mΩ) at 100kHz	Case code	Part Number
2.0	1000	10	300	1.0	121220	PFA1212200D108MCCD
2.5	900	10	250	1.5	F25	PF2509007MCBTE
2.5	1200	10	300	2.0	F25	PF2509128MTE
2.5	1200	10	300	1.5	F25	PF2509128MNSTE
2.5	1500	10	375	2.0	F25	PF2509158MTE
2.0	1000	10	200	1.0	F20	PF2000108MCDTE ★
2.0	1800	10	360	1.0	F20	PF2000188MNRTE ★
2.0	2400	10	480	1.0	F25	PF2500248MNRTE ★

★ : 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		
4	Capacitance Tolerance	M: ±20%	at 120Hz	
5	DC Leakage Current	Refer Rating table	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 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

NEC/TOKIN NEC TOKIN Corporation

2nd Sales Unit

Chiyoda First Bldg., 8-1, Nishi-Kanda 3-chome, Chiyoda-ku, Tokyo 101-8362, Japan

1st Overseas Sales Dept.

Phone: 81-3-3515-9222 Fax: 81-3-3515-9223

2nd Overseas Sales Dept.

Phone: 81-3-3515-9224 Fax: 81-3-3515-9223

3rd Overseas Sales Dept.

Phone: 81-3-3515-9228 Fax: 81-3-3515-9223

NEC TOKIN Korea Co., Ltd.

518, Korea City AIR-Terminal B/D, 159-6, Samsung-dong, Kangnam-gu, Seoul 135-728, Korea

Phone: 82-2-551-3651 Fax: 82-2-551-3650

NEC TOKIN America Inc.

(Headquarters & Western Area Sales)

2460 North First Street, Suite 220, San Jose, California 95131, U.S.A.

Phone: 1-408-324-1790 Fax: 1-408-324-1497

Chicago Branch (Northeast Sales Office)

1600 Golf Road, Corporate Center-Suite 1228, Rolling Meadows, Illinois 60008 U.S.A.

Phone: 1-847-981-5047 Fax: 1-847-981-5051

Austin Branch (Southeast Sales Office)

11782 Jollyville Road, Suite 208, Austin, Texas 78759, U.S.A.

Phone: 1-512-219-4040 Fax: 1-512-219-4007

NEC TOKIN Hong Kong Ltd.

Unit Nos. 1512-1517, Level 15, Tower II, Grand Central Plaza,

138 Shatin Rural Committee Road, Shatin, New Territories, Hong Kong

Phone: 852-2730-0028 Fax: 852-2375-2508

For inquiry, Please call Sales Promotion Department(Japan)

Phone: 81-3-3515-9220 Fax: 81-3-3515-9223

NEC TOKIN Shanghai Co., Ltd.

Room 301-302, Metro Plaza, No.555 Loushanguan Road, Changning District, Shanghai, China 200051

Phone: 86-21-6228-0606 Fax: 86-21-6228-6862

NEC TOKIN Singapore Pte Ltd.

180 Cecil Street, #14-02/03 Bangkok Bank Building, Singapore 069546

Phone: 65-6223-7076 Fax: 65-6223-6093

NEC TOKIN Taiwan Co., Ltd.

Room 411, No.9, Lane 3, Minsheng W.Road, Taipei 104, Taiwan

Phone: 886-2-2521-3998 Fax: 886-2-2521-3993

NEC TOKIN Europe GmbH

Hellersbergstrasse 14, D-41460 Neuss, Germany

Phone: 49-2131-1866-0 Fax: 49-2131-1866-18

Munich Office

Sigmund-Riefler-Bogen 8, D-81829 Muenchen, Germany

Phone: 49-89-944-197-0 Fax: 49-89-944-197-10

France Branch

9, Rue Paul Dauter, 78142 Velizy-Villacoublay, France

Phone: 33-1-39-452011 Fax: 33-1-39-451209

Sweden Representative Office

Solkraftsvaegen 25, 13570 Stockholm, Sweden

Phone: 46-8-712-91-05 Fax: 46-8-712-91-10

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Technical support

NEC TOKIN Global Marketing Division(Japan)

Phone: 81-3-3515-9264 Fax: 81-3-3515-9263

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