



## Chip EMI Filters Capacitor Type



**NFM21CC Series:** The chip EMIFIL NFM21C series is a chip type 3-terminal EMI suppression filter. It can reduce residual inductance to an extremely low level making it excellent for noise suppression at high frequencies.

**NFM21PC Series:** NFM21P is a 3-terminal structure component. This product can be applied to large current DC power lines. NFM21P is suitable for noise suppression of DC power lines where relatively large current operates.

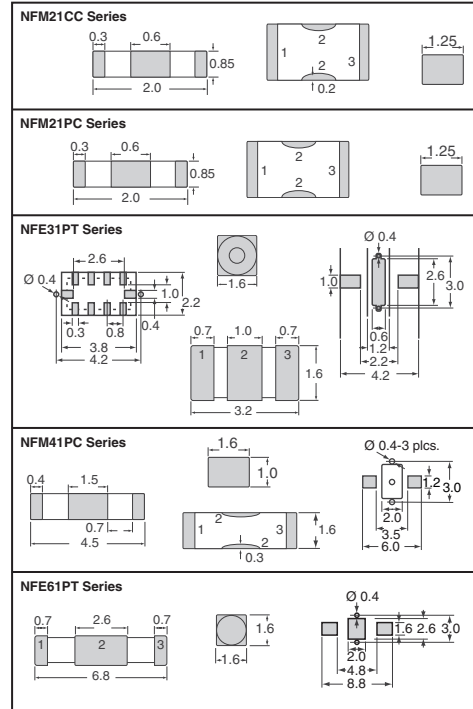
**NFE31PT Series:** Its large rated current of 6A and low voltage drop due to small DC resistance are suitable for DC power line use. The feedthrough capacitor realizes excellent high frequency characteristics. The structure incorporates built-in ferrite beads which minimize resonance with surrounding circuits.

**NFM41PC Series:** The chip EMIFIL NFM41P series consists of 3-terminal structure. These components are able to be applied to large current DC power lines. NFM41P series are suitable in noise suppression in DC lines where relatively large currents operate.

**NFE61PT Series:** Its large rated current of 2A and low voltage drop due to small DC resistance are suitable for DC power line use. The feedthrough capacitor realizes excellent high frequency characteristics.

Capacitance	Rated Voltage (Vdc)	Rated Current (mA)	Digi-Key Part No.	Cut Tape Pricing				Tape and Reel†		Murata Part No.
				1	10	50	100	Qty.	Pricing	
<b>NFM21CC Series — 0805 Case Size</b>										
22pF	50	700	490-2532-1-ND	.28	2.41	11.11	18.52	4,000	129.61/M	NFM21CC220U1H3D
47pF	50	700	490-2533-1-ND	.28	2.41	11.11	18.52	4,000	129.61/M	NFM21CC470U1H3D
100pF	50	700	490-2534-1-ND	.28	2.41	11.11	18.52	4,000	129.61/M	NFM21CC101U1H3D
2200pF	50	1000	490-2535-1-ND	.27	2.29	10.57	17.62	4,000	123.33/M	NFM21CC222R1H3D
<b>NFM21PC Series — 0805 Case Size</b>										
0.10µF	25	2000	490-2536-1-ND	.21	1.82	8.40	14.00	4,000	98.00/M	NFM21PC104R1E3D
0.47µF	16	2000	490-2537-1-ND	.25	2.17	10.00	16.66	4,000	116.65/M	NFM21PC474R1C3D
1.0µF	16	4000	490-3912-1-ND	.27	2.29	10.56	17.60	4,000	123.44/M	NFM21PC105B1C3D
<b>NFE31PT Series — 1206 Case Size</b>										
22pF	25	6000	490-2544-1-ND	.61	5.23	24.16	40.26	2,000	281.80/M	NFE31PT220R1E9L
100pF	25	6000	490-2545-1-ND	.61	5.23	24.16	40.26	2,000	281.80/M	NFE31PT101C1E9L
470pF	25	6000	490-2546-1-ND	.61	5.23	24.16	40.26	2,000	281.80/M	NFE31PT471F1E9L
2200pF	25	6000	490-2547-1-ND	.61	5.23	24.16	40.26	2,000	281.80/M	NFE31PT222Z1E9L
<b>NFM41PC Series — 1806 Case Size</b>										
0.20µF	50	2000	490-2550-1-ND	.94	8.14	37.54	62.56	4,000	437.93/M	NFM41PC204F1H3L
<b>NFE61PT Series — 2606 Case Size</b>										
33pF	50	2000	490-2551-1-ND	.79	6.82	31.50	52.49	2,500	367.43/M	NFE61PT330B1H9L
680pF	50	2000	490-2552-1-ND	.79	6.82	31.50	52.49	2,500	367.43/M	NFE61PT681B1H9L
1000pF	50	2000	490-2553-1-ND	.79	6.82	31.50	52.49	2,500	367.43/M	NFE61PT102E1H9L
4700pF	50	2000	490-2554-1-ND	.95	8.29	38.30	63.83	2,500	446.76/M	NFE61PT472C1H9L

† For Tape and Reel part number, change 1-ND to 2-ND.



## LC Combined Chip EMIFIL®



**NFL18ST Series:** The NFL18ST series is an EMI suppression filter for high speed signal lines, achieving T-type structure in 1.6 x 0.8mm size with Murata's multilayer technology. Noise suppression for video signal lines (RGB lines) and high speed clock lines.

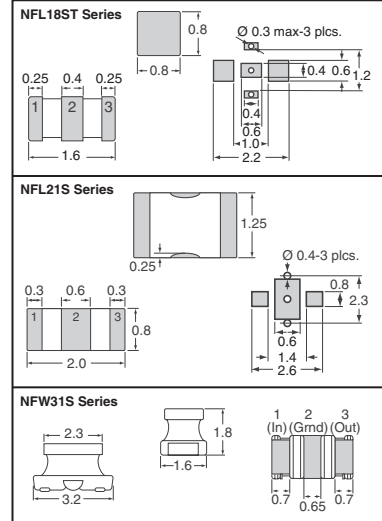
**NFL21S Series:** Murata's original internal structure design enables excellent noise suppression up to high frequencies. Available in five different values of cut off frequency ranging from 20MHz up to 500MHz.

**NFW31S Series:** The signal line chip EMI filter NFW31S series consists of high performance EMI suppression filters LC combined wound type. They are designed for noise suppression in high speed signal digital circuits in which the signal harmonics are prone to becoming noise sources. These filters achieve a 100dB/dec. (typical) damping characteristic with Murata's innovative circuit design. This makes these chips effective in applications where the signal and noise frequencies are close to each other.

Cut-off Freq. (MHz)	Cap. (pF)	Inductance (nH)	Rated Voltage (Vdc)	Rated Current (mA)	Digi-Key Part No.	Cut Tape Pricing				Tape and Reel†		Murata Part No.
						1	10	50	100	Pricing 4,000		
<b>NFL18ST Series</b>												
150	32	140	16	100	490-2531-1-ND	.56	4.90	22.66	37.76	264.33/M		NFL18ST157X1C3D
200	25	110	16	150	490-4014-1-ND	.56	4.90	22.66	37.76	264.83/M		NFL18ST207X1C3D
300	18	62	16	200	490-2530-1-ND	.56	4.90	22.66	37.76	264.33/M		NFL18ST307X1C3D
500	10	43	16	200	490-4015-1-ND	.56	4.90	22.66	37.76	264.83/M		NFL18ST507X1C3D
<b>NFL21S Series</b>												
10	670	680	16	100	490-4016-1-ND	.45	3.85	17.78	29.63	207.60/M		NFL21SP106X1C3D
20	240	700	16	100	490-4540-1-ND	.45	3.85	17.78	29.63	207.60/M		NFL21SP206X1C7D
50	84	305	16	150	490-2542-1-ND	.45	3.85	17.78	29.63	207.38/M		NFL21SP506X1C3D
70	76	185	16	150	490-2541-1-ND	.42	3.61	16.70	27.83	194.81/M		NFL21SP706X1C3D
100	44	135	16	200	490-2540-1-ND	.33	2.85	13.15	21.92	153.37/M		NFL21SP107X1C3D
300	19	45	16	300	490-2539-1-ND	.31	2.69	12.42	20.70	144.93/M		NFL21SP307X1C3D

Nominal Cut-off Freq. (MHz)	Attenuation @ 10 MHz (dB)	Attenuation @ 400 MHz (dB)	Digi-Key Part No.	Pricing				Tape and Reel†		Murata Part No.
				1	10	50	100	Pricing 2,000		
<b>NFW31S Series</b>										
10	6 maximum	—	490-2548-1-ND	.89	7.70	35.52	59.19	414.08/M		NFW31SP106X1E4L
400	—	6 maximum	490-2549-1-ND	.89	7.70	35.52	59.19	414.08/M		NFW31SP407X1E4L

† For Tape and Reel part number, change 1-ND to 2-ND.



## Block Type EMIFIL® LC Combined Type Filters



The block type EMIFIL BNX series incorporates through-type, monolithic chip and bead capacitors. The BNX capacitors are high performance capacitors, for use in DC power circuits.

**Features:**

- Enables obtaining high insertion loss in wide frequency ranges from 0.5MHz - 1GHz
- Effective for impulse noise such as electrostatic discharge or spike noise

**Applications:**

- Displays
- Digital AV equipment
- Amusement equipment
- PC peripheral equipment
- Industry equipment

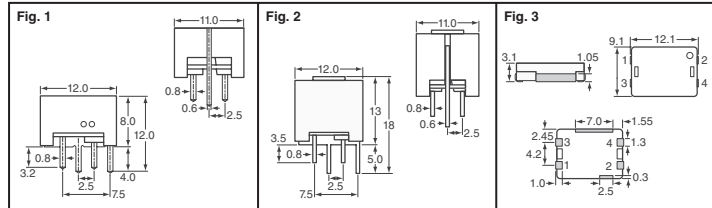


Fig.	Rated Voltage (Vdc)	Rated Current (A)	Insulation Resistance Min. (Ohm)	Digi-Key Part No.	Pricing			Digi-Key Part No.	Tape and Reel Pricing 400	Murata Part No.
					1	10	50			
1	25	15	50M	490-5055-ND	6.65	57.66	266.09	—	—	BNX016-01
	50	15	500M	490-5054-ND	6.65	57.66	266.09	—	—	BNX012-01
2	50	10	100M	490-5053-ND	13.35	115.68	533.92	—	—	BNX002-01
3	50	10	500M	490-5052-1-ND†	7.13	61.76	285.04	—	1329.98	BNX022-01L

† Cut Tape

Digi-Reel® Most SMT cutdown parts are available on a Digi-Reel®. For Digi-Reel part number, change 1-ND to 6-ND or CT-ND to DKR-ND. See Digi-Key® Services on page 2 for additional information.

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