

NFL21S Series

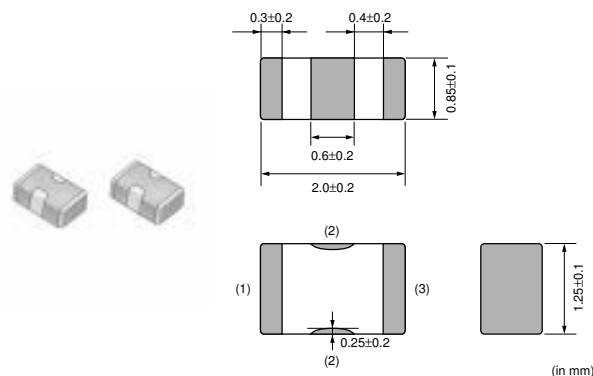
The chip "EMIFIL" NFL21S series is a high performance EMI suppression filter in 2.0x1.25mm size for high speed signal lines by using Murata's processing technology.

Features

1. Suppresses noise with little attenuation of the signal itself due to its steep filtering characteristics.
2. Murata's original internal structure design enables excellent noise suppression up to high frequencies.
3. Available in nine different values of cut-off frequency ranging from 10MHz up to 500MHz.

Applications

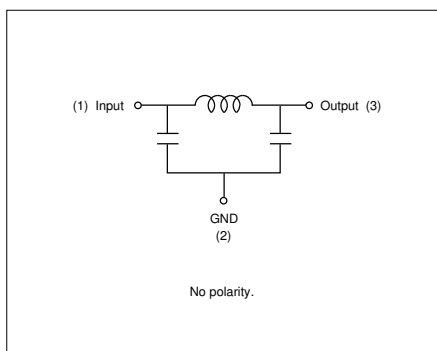
Suppression of high magnitude radiated noise generated by high speed digital circuits such as clock and RGB



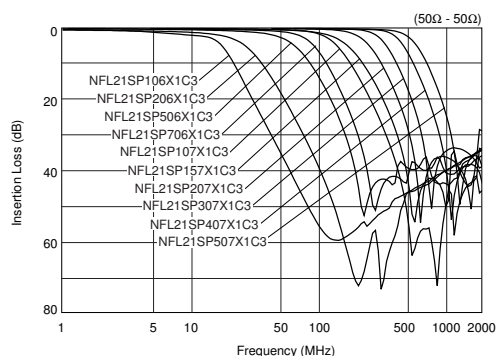
| Part Number | Cut-off Frequency (MHz) | Capacitance (pF) | Inductance (nH) | Rated Voltage (Vdc) | Rated Current (mA) | Insulation Resistance (M ohm) | Operating Temperature Range (°C) |
|----------------|-------------------------|------------------|-----------------|---------------------|--------------------|-------------------------------|----------------------------------|
| NFL21SP106X1C3 | 10 | 670 +20%, -20% | 680 +20%, -20% | 16 | 100 | 1000 | -55 to 125 |
| NFL21SP206X1C3 | 20 | 240 +20%, -20% | 700 +20%, -20% | 16 | 100 | 1000 | -55 to 125 |
| NFL21SP506X1C3 | 50 | 84 +20%, -20% | 305 +20%, -20% | 16 | 150 | 1000 | -55 to 125 |
| NFL21SP706X1C3 | 70 | 76 +20%, -20% | 185 +20%, -20% | 16 | 150 | 1000 | -55 to 125 |
| NFL21SP107X1C3 | 100 | 44 +20%, -20% | 135 +20%, -20% | 16 | 200 | 1000 | -55 to 125 |
| NFL21SP157X1C3 | 150 | 28 +20%, -20% | 128 +20%, -20% | 16 | 200 | 1000 | -55 to 125 |
| NFL21SP207X1C3 | 200 | 22 +20%, -20% | 72 +20%, -20% | 16 | 250 | 1000 | -55 to 125 |
| NFL21SP307X1C3 | 300 | 19 +10%, -10% | 45 +10%, -10% | 16 | 300 | 1000 | -55 to 125 |
| NFL21SP407X1C3 | 400 | 16 +10%, -10% | 34 +10%, -10% | 16 | 300 | 1000 | -55 to 125 |
| NFL21SP507X1C3 | 500 | 12 +10%, -10% | 31 +10%, -10% | 16 | 300 | 1000 | -55 to 125 |

Number of Circuits: 1

Equivalent Circuit



Insertion Loss Characteristics (Typical)



EMIFIL® (Soldering and Mounting)

Continued from the preceding page.

Land Pattern + Solder Resist
Land Pattern
Solder Resist (in mm)

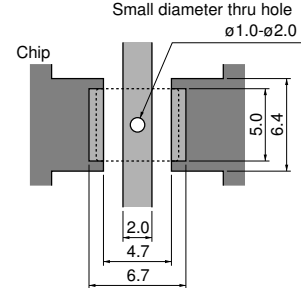
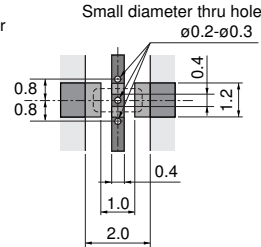
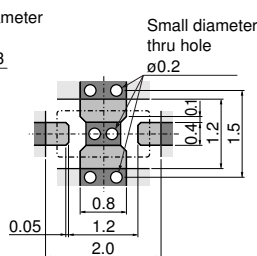
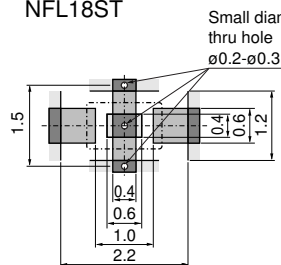
NFM18
NFL18
NFM55

Reflow Soldering
NFM18C/NFM18PC/
NFL18ST

NFL18PS

NFL18SP

NFM55P



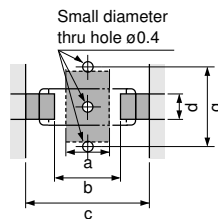
The chip EMI filter suppresses noise by conducting the high-frequency noise to ground. Therefore, to get enough noise reduction, feed through holes which are connected to ground-plane should be arranged according to the figure to reinforce the ground-pattern.

• NFM18, NFM21, NFM55 are specially adapted for reflow soldering.

Please contact us if using thinner land pad than 18 m.

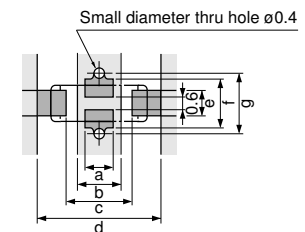
NFM21
NFM3D
NFM41
NFR21G
NFL21S

● Reflow Soldering
Chip mounting side



| Part Number | Size (mm) | | | | |
|---------------|-----------|-----|-----|-----|-----|
| | a | b | c | d | g |
| NFM21C/NFM21P | 0.6 | 1.4 | 2.6 | 0.8 | 2.3 |
| NFR21G/NFL21S | | | | | |
| NFM3DC | 1.4 | 2.5 | 4.4 | 1.0 | 2.4 |
| NFM3DP | | | | | |
| NFM41C | 2.0 | 3.5 | 6.0 | 1.2 | 3.0 |
| NFM41P | | | | | |

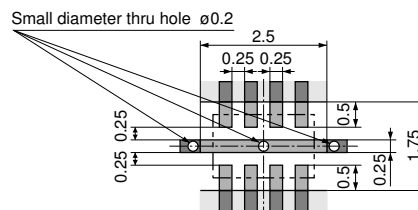
● Flow Soldering
Chip mounting side



| Part Number | Size (mm) | | | | | | |
|-------------|-----------|-----|-----|-----|-----|-----|-----|
| | a | b | c | d | e | f | g |
| NFM3DC | 1.0 | 1.4 | 2.5 | 4.4 | 1.0 | 2.0 | 2.4 |
| NFM3DP | | | | | | | |
| NFM41C | 1.5 | 2.0 | 3.5 | 6.0 | 1.2 | 2.6 | 3.0 |
| NFM41P | | | | | | | |

NFA21S

Reflow Soldering
Chip mounting side



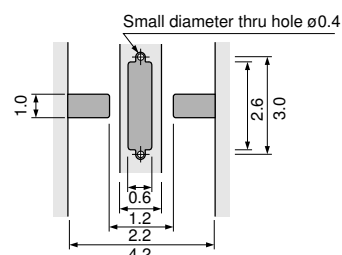
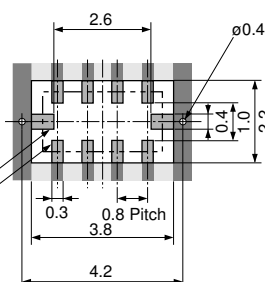
NFA31G
NFA31C
NFW31S
NFE31P

● Reflow Soldering NFA31G/31C

● Reflow and Flow NFW31S
● Reflow Soldering NFE31P

Chip mounting side

R0.1 to R0.2 is preferred to obtain high voltage withstanding



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