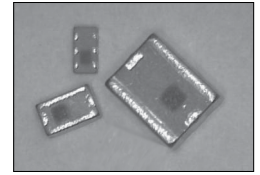


FEATURES

- LOW INSERTION LOSS
- HIGH ATTENUATION
- INTERNAL SHIELDING
- SMALL SIZE & LOW PROFILE LTCC CONSTRUCTION
- TAPED AND REELED FOR AUTOMATIC INSERTION

**RoHS
Compliant**
includes all homogeneous materials
*See Part Number System for Details



CHARACTERISTICS

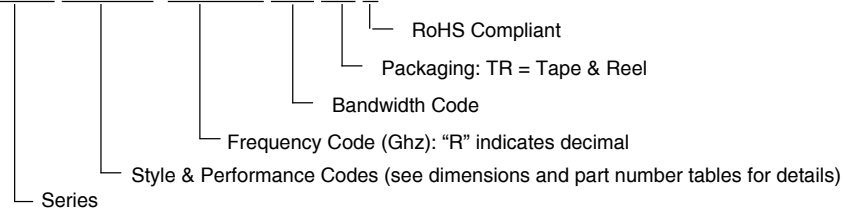
| | | | | | | |
|-----------------------------|--|----------|----------|---------------------|----------|----------|
| Case Code | 0402 | 0603 | 0805 | 1008 | 1206 | 1210 |
| Center Frequency Ranges | 2450 MHz | 2450 MHz | 2450 MHz | 2450 MHz ~ 3275 MHz | 2450 MHz | 2450 MHz |
| Operating Temperature Range | -40°C ~ +85°C | | | | | |
| Bandwidth | ±5MHz ~ ±225Mhz (Refer to Individual Part Numbers for Specific Values) | | | | | |
| Resistance to Solder Heat | +260°C for 10 seconds | | | | | |

DIMENSIONS (mm)

| Case Code | DIMENSIONS (mm) | | | Pin Layout and Dimensions |
|-----------|-----------------|------------|-------------|---------------------------------------|
| | A | B | C | |
| NGFP0402 | 1.0 ± 0.05 | 0.5 ± 0.05 | 0.38 ± 0.05 | Refer to Individual Part Number Table |
| NGFP0603 | 1.6 ± 0.10 | 0.8 ± 0.10 | 0.6 ± 0.10 | |
| NGFP0805 | 2.0 ± 0.15 | 1.2 ± 0.15 | 0.45 ± 0.05 | |
| | | | 0.80 ± 0.10 | |
| | | | 0.95 ± 0.10 | |
| NGFP1008 | 2.5 ± 0.20 | 2.0 ± 0.20 | 0.95 ± 0.10 | |
| | | | 1.2 ± 0.10 | |
| NGFP1206 | 3.2 ± 0.15 | 1.6 ± 0.15 | 1.2 ± 0.10 | |
| NGFP1210 | 3.2 ± 0.20 | 2.5 ± 0.20 | 1.5 ± 0.10 | |

PART NUMBER SYSTEM

NGFP 0805AB 2R450G 050 TR F

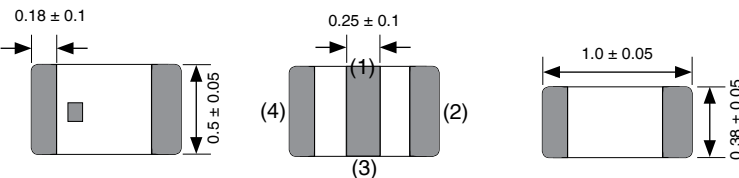


NGFP0402 Size

| Part Number | Standard Values - Case Size 0402 (1.0 x 0.5 x 0.38mm) | | | | |
|------------------------|---|-----------------|---------------------------|---------------------------|---------------------|
| | Center Frequency (MHz) | Bandwidth (MHz) | Max. IL in BW @ 25°C (dB) | Attenuation (dB) | Component Thickness |
| NGFP0402AG2R450G050TRF | 2,450 | $f_0 \pm 50.0$ | 1.4 | 25dB Min. at 880~960MHz | 0.38 ± 0.05 |
| | | | | 8dB Min. at 1710~1970MHz | |
| | | | | 23dB Min. at 4800~5000MHz | |
| | | | | 32dB Min. at 7200~7500MHz | |

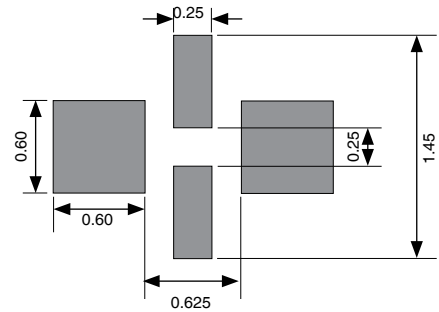
(Customization Available. Please contact NIC for any center frequency and response customizations)

COMPONENT LAYOUT (in mm)



| NGFP0402 Style Code | (1) | (2) | (3) | (4) |
|---------------------|--------|-----|--------|-----|
| All Styles | Ground | Out | Ground | In |

LAND PATTERNS (in mm)

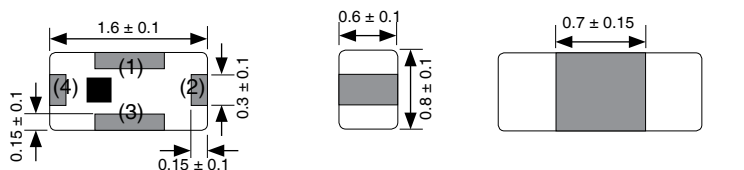


NGFP0603 Size

| Part Number | Standard Values - Case Size 0603 (1.6 x 0.8 x 0.6mm) | | | | |
|------------------------|--|-----------------|---------------------------|---------------------------|---------------------|
| | Center Frequency (MHz) | Bandwidth (MHz) | Max. IL in BW @ 25°C (dB) | Attenuation (dB) | Component Thickness |
| NGFP0603AG2R450G050TRF | 2,450 | $f_0 \pm 50.0$ | 1.6 | 24dB min. at 880~960MHz | 0.60 ± 0.10 |
| | | | | 20dB min. at 1710~1990MHz | |
| | | | | 25dB min. at 4800~5000MHz | |
| | | | | 25dB min. at 7200~7500MHz | |
| NGFP0603AH2R450G050TRF | 2,450 | $f_0 \pm 50.0$ | 2.5 | 30dB min. at 880~960MHz | 0.60 ± 0.10 |
| | | | | 25dB min. at 1710~1990MHz | |
| | | | | 25dB min. at 4800~5000MHz | |
| | | | | 20dB min. at 7200~7500MHz | |

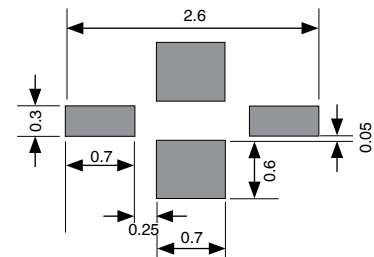
(Customization Available. Please contact NIC for any center frequency and response customizations)

COMPONENT LAYOUT



| NGFP0603 Style Code | (1) | (2) | (3) | (4) |
|---------------------|--------|-----|--------|-----|
| Style A | Ground | Out | Ground | In |

LAND PATTERNS



NGFP0805 Size

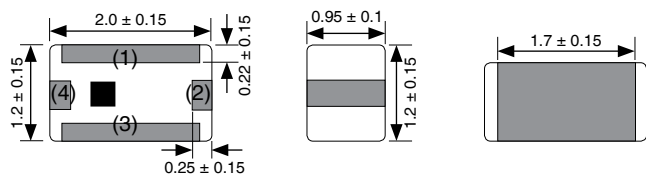
| Part Number | Standard Values - Case Size 0603 (1.6 x 0.8 x 0.6mm) | | | | Component Thickness (C - mm) |
|---------------------------|--|-----------------|---------------------------|---------------------------|------------------------------|
| | Center Frequency (MHz) | Bandwidth (MHz) | Max. IL in BW @ 25°C (dB) | Attenuation (dB) | |
| NGFP0805AG2R450G050TRF | 2,450 | $f_0 \pm 50.0$ | 2.6 | 40dB Min. at 880~960MHz | 0.95 ± 0.10 |
| | | | | 38dB Min. at 1710~1990MHz | |
| | | | | 16dB Min. at 2110~2170MHz | |
| | | | | 30dB Min. at 4800~5000MHz | |
| NGFP0805AH2R450G050TRF | 2,450 | $f_0 \pm 50.0$ | 1.7 | 30dB Min. at 900MHz | |
| | | | | 20dB Min. at 1850MHz | |
| | | | | 30dB Min. at 4800MHz | |
| NGFP0805AJ2R450G050TRF | 2,450 | $f_0 \pm 50.0$ | 1.2 | 15dB Min. at 1600MHz | |
| | | | | 20dB Min. at 3200MHz | |
| | | | | 40dB Min. at 4800~5000MHz | |
| NGFP0805AK2R450G050TRF | 2,450 | $f_0 \pm 50.0$ | 2.8 | 20dB Min. at 700~800MHz | |
| | | | | 25dB Min. at 1710~1880MHz | |
| | | | | 35dB Min. at 3200MHz | |
| | | | | 20dB Min. at 4800~5000MHz | |
| NGFP0805BG2R450G050TRF | 2,450 | $f_0 \pm 50.0$ | 1.5 | 20dB Min. at 7200~7500MHz | |
| | | | | 35dB min. at 880~960MHz | |
| | | | | 20dB min. at 1710~1990MHz | |
| NGFP0805CG2R450G050TRF | 2,450 | $f_0 \pm 50.0$ | 1.8 | 30dB min. at 4800~5000MHz | 0.80 ± 0.10 |
| | | | | 30dB Min. at 824~915MHz | |
| | | | | 28dB Min. at 1545~1605MHz | |
| | | | | 35dB Min. at 1710~1990MHz | |
| | | | | 30dB Min. at 2170MHz | |
| 25dB min. at 7200~7500MHz | | | | | |
| NGFP0805CH2R450G050TRF | 2,450 | $f_0 \pm 50.0$ | 2.7 | 30dB Min. at 4800~5000MHz | 0.45 ± 0.05 |
| | | | | 30dB Min. at 746~960MHz | |
| | | | | 28dB Min. at 1570~1580MHz | |
| | | | | 35dB Min. at 1710~1990MHz | |
| | | | | 30dB Min. at 2110~2170MHz | |
| | | | | 15dB Min. at 3300~3800MHz | |
| | | | | 20dB Min. at 4800~5000MHz | |
| 20dB Min. at 7200~7500MHz | | | | | |
| NGFP0805CJ2R450G050TRF | 2,450 | $f_0 \pm 50.0$ | 1.5 | 30dB min. at 880~960MHz | |
| | | | | 30dB min. at 1710~1990MHz | |
| | | | | 6dB min. at 2110~2170MHz | |
| | | | | 30dB min. at 4800~5000MHz | |
| | | | | 20dB min. at 7200~7500MHz | |

(Customization Available. Please contact NIC for any center frequency and response customizations)

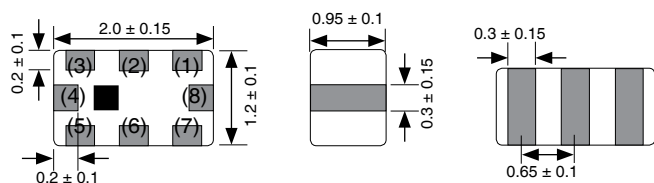


NGFP0805 Size COMPONENT LAYOUT

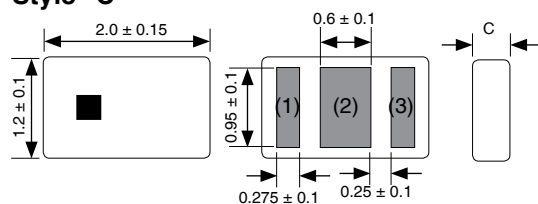
Style "A"



Style "B"

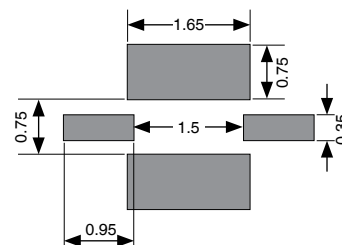


Style "C"

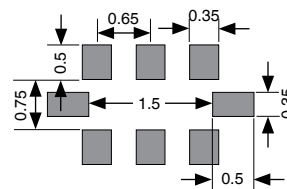


LAND PATTERNS

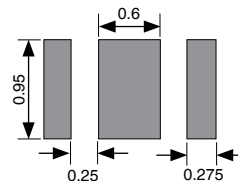
Style "A"



Style "B"



Style "C"



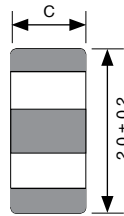
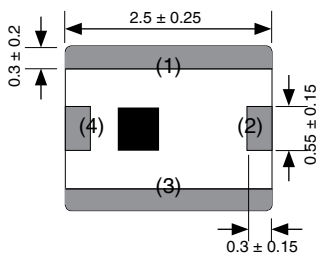
| NGFP0805 Style Code | (1) | (2) | (3) | (4) |
|---------------------|--------|--------|--------|--------|
| Style A | Ground | Out | Ground | In |
| Style B | In | NC | NC | Ground |
| | (5) | (6) | (7) | (8) |
| | Out | Ground | NC | Ground |
| Style C | In | Ground | Out | - |

NGFP1008 Size

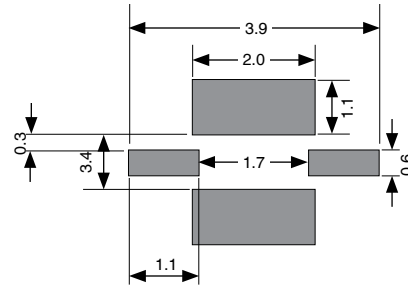
| Part Number | Standard Values - Case Size 1008 (2.5 x 2.0mm) | | | | |
|------------------------|--|-----------------|---------------------------|---------------------------|------------------------------|
| | Center Frequency (MHz) | Bandwidth (MHz) | Max. IL in BW @ 25°C (dB) | Attenuation (dB) | Component Thickness (C - mm) |
| NGFP1008AH2R450G050TRF | 2,450 | $f_0 \pm 50.0$ | 1.7 | 25dB Min. at 1750MHz | 0.90 ± 0.10 |
| | | | | 6dB min. at 2100MHz | |
| | | | | 22dB Min. at 4800~5000MHz | |
| | | | | 20dB Min. at 7200~7500MHz | |
| NGFP1008AG1R917G005TRF | 1,917 | $f_0 \pm 5.0$ | 1.9 | 50dB Min. at 956~961MHz | 0.90 ± 0.10 |
| | | | | 24dB Min. at 2868~2883MHz | |
| | | | | 29dB Min. at 3824~3844MHz | |
| | | | | 33dB Min. at 4780~4805MHz | |
| | | | | 32dB Min. at 5736~5766MHz | |
| NGFP1008AG3R275G225TRF | 3,275 | $f_0 \pm 225.0$ | 1.5 | 25dB Min. at 1000~2300MHz | 1.20 ± 0.10 |
| | | | | 25dB Min. at 4380~8000MHz | |

[Customization Available. Please contact NIC for any center frequency and response customizations]

COMPONENT LAYOUT



LAND PATTERNS



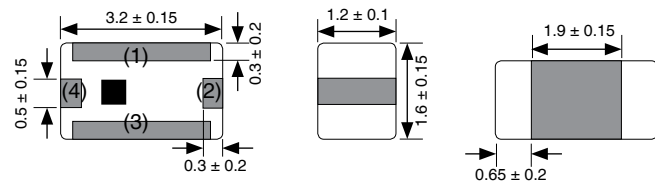
| NGFP1008 Style Code | (1) | (2) | (3) | (4) |
|---------------------|--------|-----|--------|-----|
| All Styles | Ground | Out | Ground | In |

NGFP1206 Size

| Part Number | Standard Values - Case Size 0603 (3.2 x 1.6 x 1.2mm) | | | | |
|------------------------|--|-----------------|---------------------------|---------------------------|---------------------|
| | Center Frequency (MHz) | Bandwidth (MHz) | Max. IL in BW @ 25°C (dB) | Attenuation (dB) | Component Thickness |
| NGFP1206AG2R450G050TRF | 2,450 | $f_0 \pm 50.0$ | 2.5 | 40dB Min. at 900~928MHz | 1.20 ± 0.10 |
| | | | | 30dB Min. at 1200~1800MHz | |
| | | | | 25dB Min. at 2100MHz | |
| | | | | 35dB Min. at 4800~5000MHz | |
| | | | | 40dB Min. at 7200~7500MHz | |

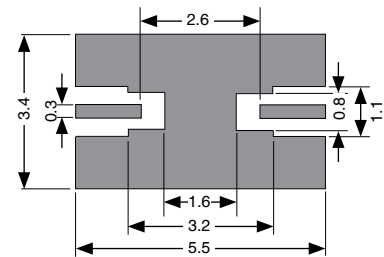
[Customization Available. Please contact NIC for any center frequency and response customizations]

COMPONENT LAYOUT



| NGFP1206 Style Code | (1) | (2) | (3) | (4) |
|---------------------|--------|-----|--------|-----|
| All Styles | Ground | Out | Ground | In |

LAND PATTERNS

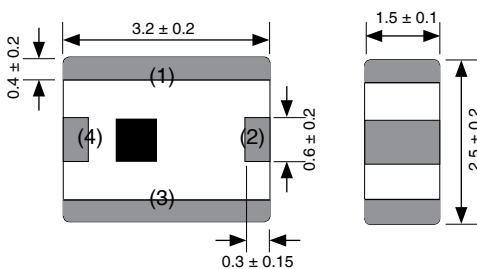


NGFP1210 Size

| Part Number | Standard Values - Case Size 0603 (3.2 x 2.5 x 1.5mm) | | | | |
|------------------------|--|-----------------|---------------------------|---------------------------|---------------------|
| | Center Frequency (MHz) | Bandwidth (MHz) | Max. IL in BW @ 25°C (dB) | Attenuation (dB) | Component Thickness |
| NGFP1210AG2R450G050TRF | 2,450 | $f_0 \pm 50.0$ | 1.8 | 48dB Min. at 902~928MHz | 1.50 ± 0.10 |
| | | | | 50dB Min. at 1500~1550MHz | |
| | | | | 12dB Min. at 2150~2200MHz | |
| | | | | 30dB Min. at 4800~5000MHz | |

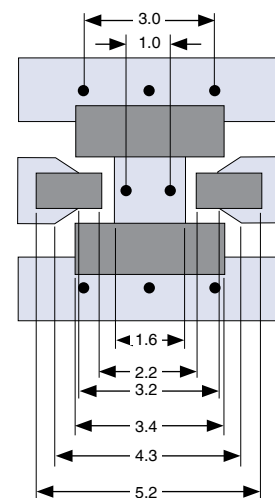
[Customization Available. Please contact NIC for any center frequency and response customizations]

COMPONENT LAYOUT

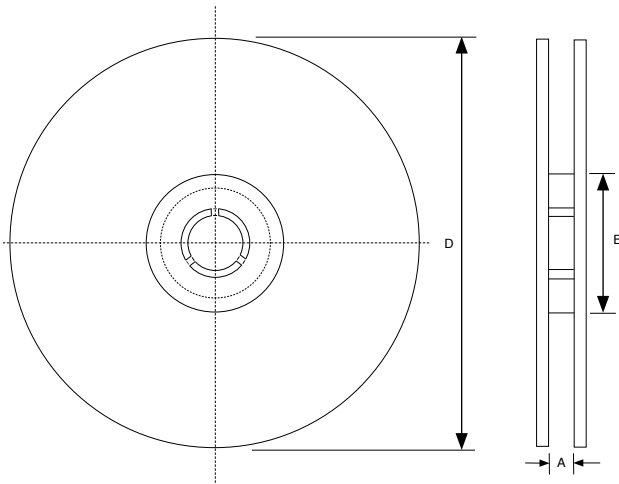
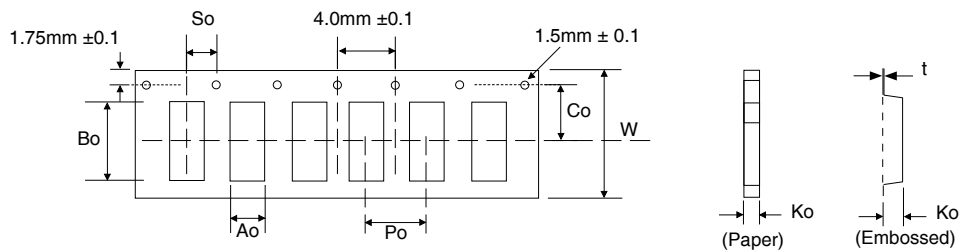


| NGFP1210 Style Code | (1) | (2) | (3) | (4) |
|---------------------|--------|-----|--------|-----|
| All Styles | Ground | Out | Ground | In |

LAND PATTERNS



| Case Size | CARRIER TAPING DIMENSIONS (mm) AND REEL QUANTITY | | | | | | | | | |
|-----------|--|------|------|-----|-----------|-----------|-----------|-----------|-----------|--------|
| | Tape | Ao | Bo | Po | So | Co | Ko | t | W | Qty |
| NGFP0402 | Paper | 0.62 | 1.12 | 2.0 | 2.0 ±0.05 | 3.5 ± 0.1 | 0.45 max. | - | 8.0 ± 0.3 | 10,000 |
| NGFP0603 | | 1.00 | 1.80 | | | | 0.75 max. | - | | 4,000 |
| NGFP0805 | Embossed | 1.42 | 2.25 | 4.0 | | | 1.14 max. | 0.27 max. | | 4,000 |
| NGFP1008 | | 2.30 | 2.80 | | | | 1.25 max. | | | 3,000 |
| NGFP1206 | | 1.80 | 3.50 | | | | 1.60 max. | | | 3,000 |
| NGFP1210 | | 2.75 | 3.45 | | | | 1.80 max. | | | 2,000 |



| Tape Width | REEL DIMENSIONS (mm) | | |
|------------|----------------------|----------|-----------|
| | A(mm) | B(mm) | D(mm) |
| NGFP0402 | 9.0 ± 1.5 | 58 ± 2.0 | 178 ± 2.0 |
| NGFP0603 | | | |
| NGFP0805 | | | |
| NGFP1008 | | | |
| NGFP1206 | | | |
| NGFP1210 | | | |

REFLOW SOLDERING PROFILE

