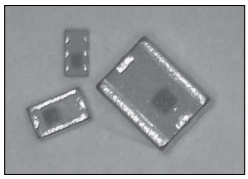
Multilayer Chip Band Pass Filters

NGFP Series

FEATURES
- LOW INSERTION LOSS
- HIGH ATTENTUATION
- 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)			
	A	B	C	Pin Layout and Dimensions
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

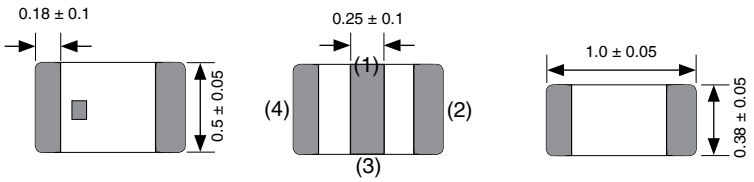
- F — RoHS Compliant
- TR — Packaging: TR = Tape & Reel
- 050 — Bandwidth Code
- 2R450G — Frequency Code (Ghz): "R" indicates decimal
- 0805AB — Style & Performance Codes (see dimensions and part number tables for details)
- NGFP — Series

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	f0 ± 50.0	1.4	25dB Min. at 880~960MHz 8dB Min. at 1710~1970MHz 23dB Min. at 4800~5000MHz 32dB Min. at 7200~7500MHz	0.38 ± 0.05

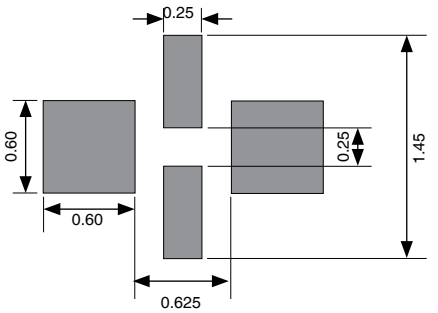
(Customization Available. Please contact NIC for any center frequency and response customizations)

COMPONENT LAYOUT (in mm)



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

LAND PATTERNS (in mm)

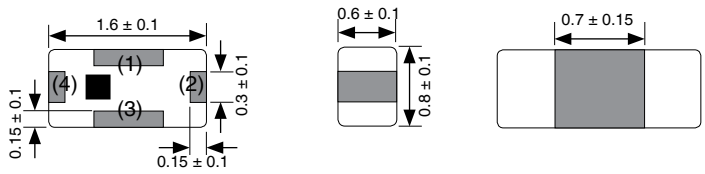


NGFP0603 Size

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	f0 ± 50.0	1.6	24dB min. at 880~960MHz 20dB min. at 1710~1990MHz 25dB min. at 4800~5000MHz 25dB min. at 7200~7500MHz	0.60 ± 0.10
NGFP0603AH2R450G050TRF	2,450	f0 ± 50.0	2.5	30dB min. at 880~960MHz 25dB min. at 1710~1990MHz 25dB min. at 4800~5000MHz 20dB min. at 7200~7500MHz	

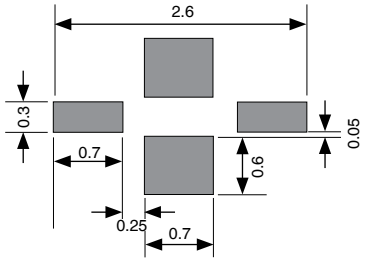
(Customization Available. Please contact NIC for any center frequency and response customizations)

COMPONENT LAYOUT



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

LAND PATTERNS



NGFP0805 Size

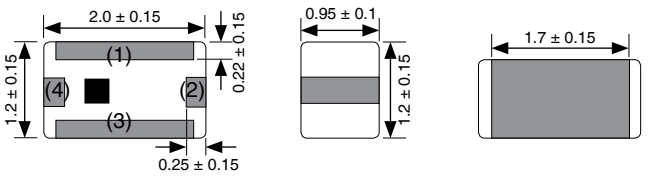
Part Number	Standard Values - Case Size 0603 (1.6 x 0.8 x 0.6mm)				
	Center Frequency (MHz)	Bandwidth (MHz)	Max. IL in BW @ 25°C (dB)	Attenuation (dB)	Component Thickness (C - mm)
NGFP0805AG2R450G050TRF	2,450	f0 ± 50.0	2.6	40dB Min. at 880~960MHz	0.95 ± 0.10
				38dB Min. at 1710~1990MHz	
				16dB Min. at 2110~2170MHz	
				30dB Min. at 4800~5000MHz	
NGFP0805AH2R450G050TRF	2,450	f0 ± 50.0	1.7	30dB Min. at 900MHz	
				20dB Min. at 1850MHz	
				30dB Min. at 4800MHz	
NGFP0805AJ2R450G050TRF	2,450	f0 ± 50.0	1.2	15dB Min. at 1600MHz	
				20dB Min. at 3200MHz	
				40dB Min. at 4800~5000MHz	
NGFP0805AK2R450G050TRF	2,450	f0 ± 50.0	2.8	20dB Min. at 700~800MHz	
				25dB Min. at 1710~1880MHz	
				35dB Min. at 3200MHz	
				20dB Min. at 4800~5000MHz	
				20dB Min. at 7200~7500MHz	
NGFP0805BG2R450G050TRF	2,450	f0 ± 50.0	1.5	35dB min. at 880~960MHz	
				20dB min. at 1710~1990MHz	
				30dB min. at 4800~5000MHz	
NGFP0805CG2R450G050TRF	2,450	f0 ± 50.0	1.8	30dB Min. at 824~915MHz	0.80 ± 0.10
				28dB Min. at 1545~1605MHz	
				35dB Min. at 1710~1990MHz	
				30dB Min. at 2170MHz	
				30dB Min. at 4800~5000MHz	
				25dB min. at 7200~7500MHz	
NGFP0805CH2R450G050TRF	2,450	f0 ± 50.0	2.7	30dB Min. at 746~960MHz	0.45 ± 0.05
				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	f0 ± 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)

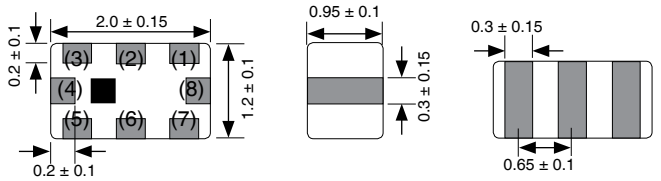
NGFP0805 Size

COMPONENT LAYOUT

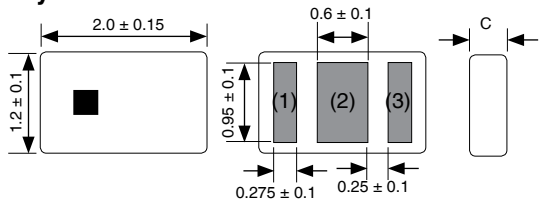
Style "A"



Style "B"

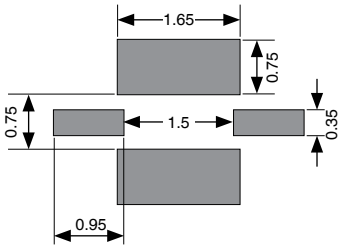


Style "C"

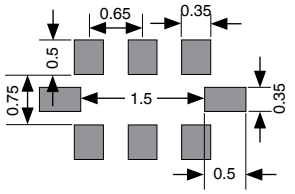


LAND PATTERNS

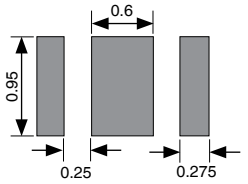
Style "A"



Style "B"



Style "C"



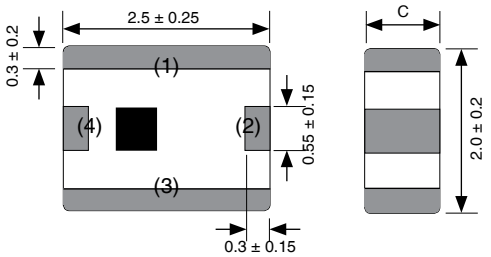
NGFP0805 Style Code	(1)	(2)	(3)	(4)
Style A	Ground	Out	Ground	In
Style B	In	NC	NC	Ground
	(5)	(6)	(7)	(8)
	Out	Ground	NC	Ground
Style C	In	Ground	Out	-

NGFP1008 Size

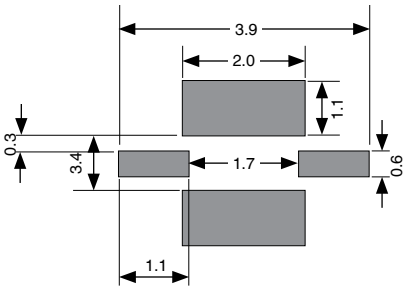
Part Number	Standard Values - Case Size 1008 (2.5 x 2.0mm)				
	Center Frequency (MHz)	Bandwidth (MHz)	Max. IL in BW @ 25°C (dB)	Attenuation (dB)	Component Thickness (C - mm)
NGFP1008AH2R450G050TRF	2,450	f0 ± 50.0	1.7	25dB Min. at 1750MHz	0.90 ± 0.10
				6dB min. at 2100MHz	
				22dB Min. at 4800~5000MHz	
				20dB Min. at 7200~7500MHz	
NGFP1008AG1R917G005TRF	1,917	f0 ± 5.0	1.9	50dB Min. at 956~961MHz	
				24dB Min. at 2868~2883MHz	
				29dB Min. at 3824~3844MHz	
				33dB Min. at 4780~4805MHz	
				32dB Min. at 5736~5766MHz	
NGFP1008AG3R275G225TRF	3,275	f0 ± 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



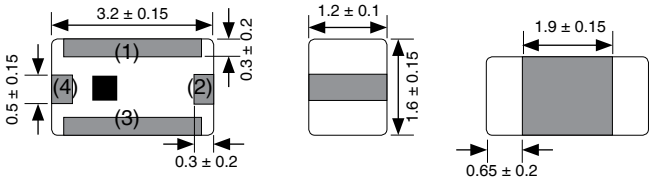
NGFP1008 Style Code	(1)	(2)	(3)	(4)
All Styles	Ground	Out	Ground	In

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	f0 ± 50.0	2.5	40dB Min. at 900~928MHz 30dB Min. at 1200~1800MHz 25dB Min. at 2100MHz 35dB Min. at 4800~5000MHz 40dB Min. at 7200~7500MHz	1.20 ± 0.10

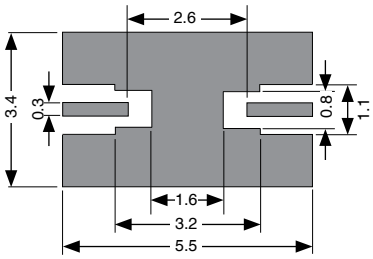
(Customization Available. Please contact NIC for any center frequency and response customizations

COMPONENT LAYOUT



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

LAND PATTERNS

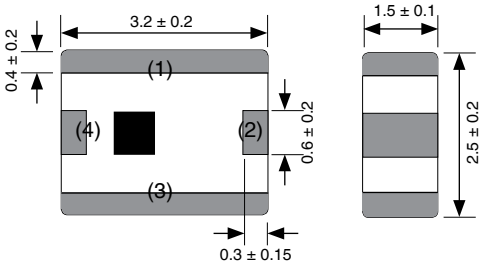


NGFP1210 Size

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	f0 ± 50.0	1.8	48dB Min. at 902~928MHz 50dB Min. at 1500~1550MHz 12dB Min. at 2150~2200MHz 30dB Min. at 4800~5000MHz	1.50 ± 0.10

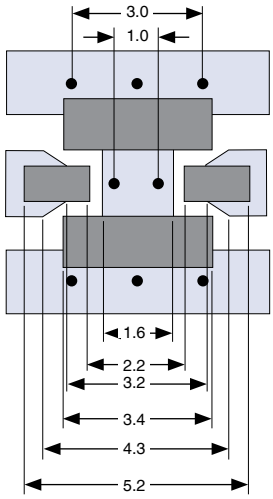
(Customization Available. Please contact NIC for any center frequency and response customizations)

COMPONENT LAYOUT

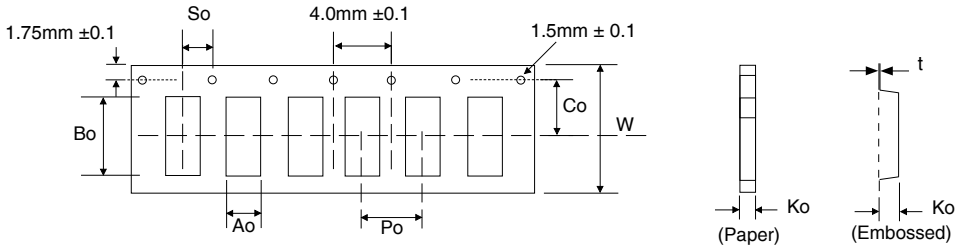


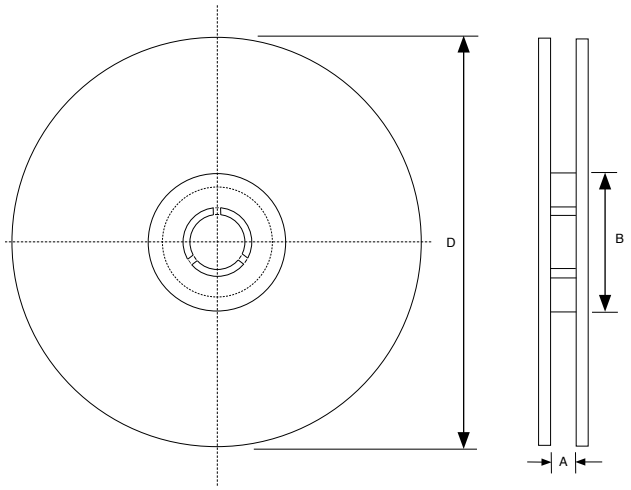
NGFP1210 Style Code	(1)	(2)	(3)	(4)
All Styles	Ground	Out	Ground	In

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	4.0			0.75 max.	-		4,000
NGFP0805	Embossed	1.42	2.25				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

