

## FEATURES

- SURFACE MOUNT CASE SIZES (0402 ~ 1206)
- DURABLE MULTILAYER CONSTRUCTION
- MAGNETICALLY SHEILDDED
- TAPE & REEL PACKAGING FOR AUTOMATIC INSERTION \*See Part Number System for Details
- BOTH FLOW AND REFLOW SOLDERABLE
- Pb-FREE/ROHS COMPLIANT

**RoHS Compliant**  
includes all homogeneous materials



## SPECIFICATIONS

Case Size	NFI04	NFI06	NFI08	NFI12
	0402	0603	0805	1206
Inductance Range	0.047μH ~ 3.3μH	0.047μH ~ 10μH	0.047μH ~ 33μH	0.12μH ~ 33μH
Available Tolerance*	7% (I)**, 10% (K), 15% (L), 20% (M)			
Temperature Range	-40°C ~ +85°C			
Resistance to Solder Heat	260°C for 10 seconds			
Temperature Rise	Delta T at IDC +30°C max.			

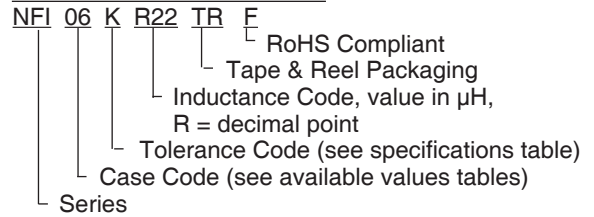
\*10% (K) tolerance is standard. Minimum order requirement may apply for optional tolerances.

\*\*7% (I) tolerance is special order. Contact NIC for availability.

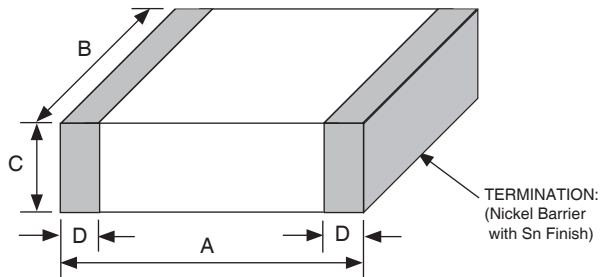
## CASE SIZE DIMENSIONS (mm)

Type	Case Size	A	B	C	D
NFI04	0402	1.0 ± 0.15	0.5 ± 0.15	0.5 ± 0.15	0.25 ± 0.1
NFI06	0603	1.6 ± 0.15	0.8 ± 0.15	0.8 ± 0.15	0.3 ± 0.2
NFI08	0805	2.0 +0.3/-0.1	1.25 ± 0.20	0.85 ± 0.20	0.5 ± 0.3
				1.25 ± 0.20	
NFI12	1206	3.2 ± 0.20	1.6 ± 0.20	0.85 ± 0.20	0.5 ± 0.3
				1.1 ± 0.20	

## PART NUMBER SYSTEM



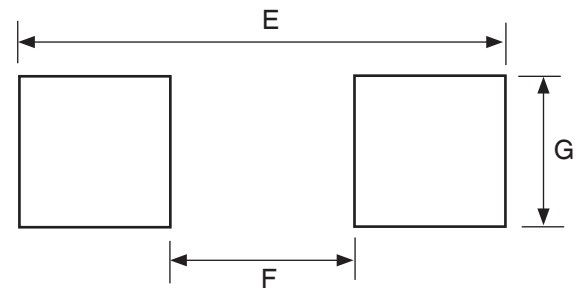
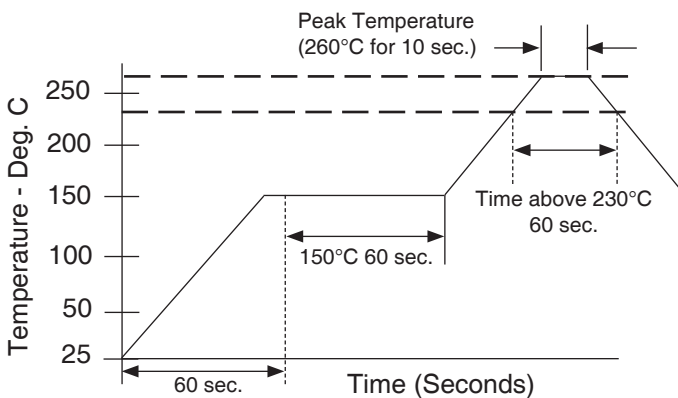
## DIMENSIONS (mm)



## LAND PATTERN DIMENSIONS (mm)

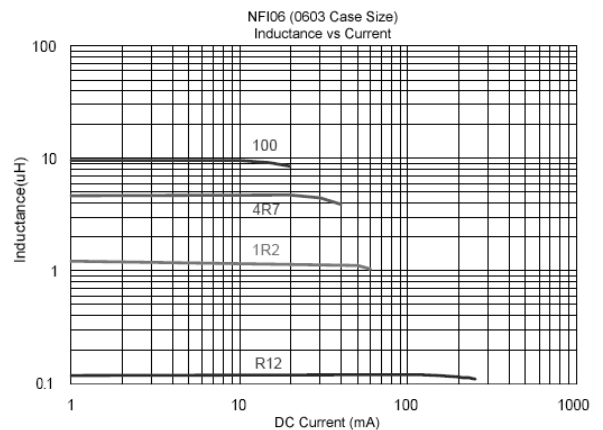
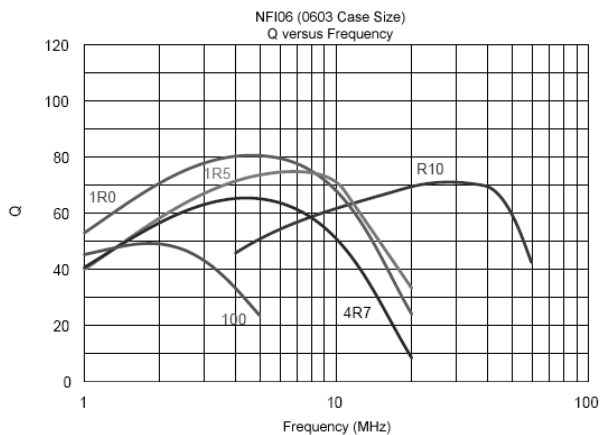
Case Size	E	F	G
0402	1.4	0.45	0.5
0603	2.6	0.6	0.8
0805	3.0	1.0	1.0
1206	4.4	2.2	1.4

## RECOMMENDED REFLOW SOLDERING PROFILE



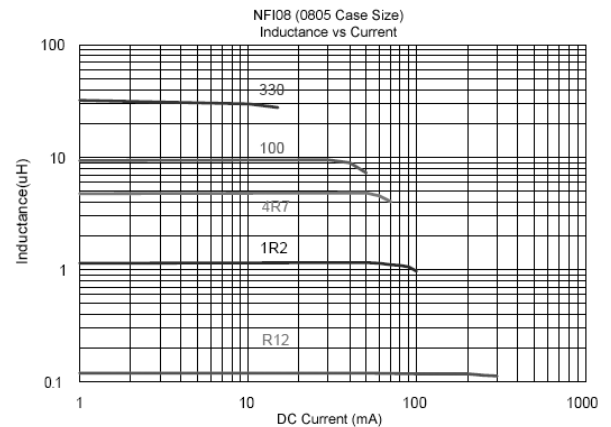
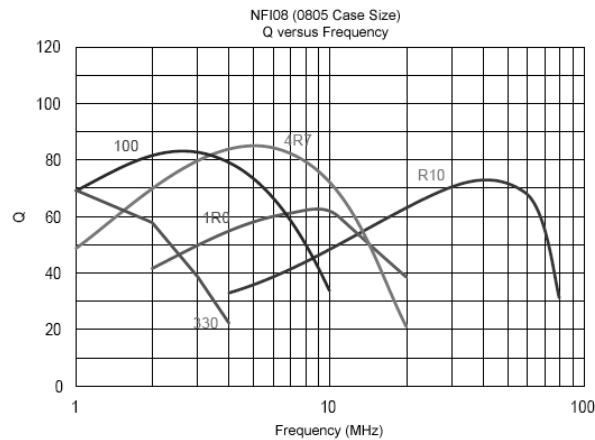
NFI06 (1.6mm X 0.8mm)							
EIA Size	NIC P/N	Inductance (μH)	Q Min.	L & Q Test Frequency (MHz)	DC Resistance Max. (Ω)	DC Current Max. (mA)	SRF Min. (MHz)
0402	NFI0402_47NTRF	0.047	10	50	0.45	25	220
	NFI0402_68NTRF	0.068		50	0.45	25	210
	NFI0402_82NTRF	0.082		50	0.45	25	200
	NFI0402_R10TRF	0.10		25	0.80	25	200
	NFI0402_R12TRF	0.12		25	0.80	25	165
	NFI0402_R15TRF	0.15		25	0.90	25	140
	NFI0402_R18TRF	0.18		25	0.90	25	120
	NFI0402_R22TRF	0.22		25	1.20	25	110
	NFI0402_R27TRF	0.27	15	25	1.20	25	95
	NFI0402_R33TRF	0.33		25	1.25	18	85
	NFI0402_R39TRF	0.39	20	10	0.60	15	85
	NFI0402_R47TRF	0.47		10	0.70	15	80
	NFI0402_R56TRF	0.56		10	0.80	15	75
	NFI0402_R68TRF	0.68		10	0.90	15	70
	NFI0402_R82TRF	0.82		10	0.90	15	65
	NFI0402_1R0TRF	1.0		10	1.00	15	60
	NFI0402_1R2TRF	1.2		10	1.25	15	55
	NFI0402_1R5TRF	1.5		10	1.40	15	50
	NFI0402_1R8TRF	1.8		10	1.55	15	45
	NFI0402_2R2TRF	2.2		10	1.70	10	40
	NFI0402_1R0TRF	1.0		10	0.90	15	40
	NFI0402_1R2TRF	1.2		10	1.20	15	35
	NFI0402_1R5TRF	1.5	10	1.20	15	30	
	NFI0402_1R8TRF	1.8	10	1.45	15	30	
	NFI0402_2R2TRF	2.2	10	1.70	10	28	
	NFI0402_2R7TRF	2.7	10	2.40	10	28	
	NFI0402_3R3TRF	3.3	10	2.70	10	28	

NFI06 (1.6mm X 0.8mm)							
EIA Size	NIC P/N	Inductance (μH)	Q Min.	L & Q Test Frequency (MHz)	DC Resistance Max. (Ω)	DC Current Max. (mA)	SRF Min. (MHz)
0603	NFI06_47NTRF	0.047	10	50	0.30	50	260
	NFI06_68NTRF	0.068			0.30	50	250
	NFI06_82NTRF	0.082			0.30	50	245
	NFI06_R10TRF	0.10	15	25	0.50	50	240
	NFI06_R12TRF	0.12			0.50	50	205
	NFI06_R15TRF	0.15			0.60	50	180
	NFI06_R18TRF	0.18			0.60	50	165
	NFI06_R22TRF	0.22			0.80	50	150
	NFI06_R27TRF	0.27			0.80	50	135
	NFI06_R33TRF	0.33			0.85	35	125
	NFI06_R39TRF	0.39			1.00	35	110
	NFI06_R47TRF	0.47			1.35	35	105
	NFI06_R56TRF	0.56			1.55	35	95
	NFI06_R68TRF	0.68			1.70	35	90
	NFI06_R82TRF	0.82			2.10	35	85
	NFI06_1R0TRF	1.0	35	10	0.60	25	90
	NFI06_1R2TRF	1.2			0.80	25	85
	NFI06_1R5TRF	1.5			0.80	25	80
	NFI06_1R8TRF	1.8			0.95	25	75
	NFI06_2R2TRF	2.2			1.15	15	70
	NFI06_2R7TRF	2.7			1.35	15	45
	NFI06_3R3TRF	3.3			1.55	15	40
	NFI06_3R9TRF	3.9			1.70	15	35
	NFI06_4R7TRF	4.7			2.10	15	33
	NFI06_5R6TRF	5.6			1.55	15	22
	NFI06_6R8TRF	6.8			1.70	5	20
	NFI06_8R2TRF	8.2			2.10	5	18
	NFI06_100TRF	10	30	2	1.85	3	17
	NFI06_120TRF	12			2.10	3	15
	NFI06_150TRF	15	20	1	1.70	1	14
	NFI06_180TRF	18			1.85	1	13
	NFI06_220TRF	22			2.10	1	11
	NFI06_270TRF	27			2.75	1	10
NFI06_330TRF	33	2.95			1	9	



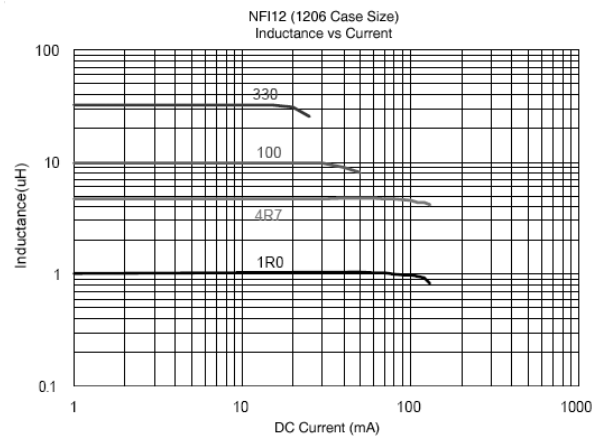
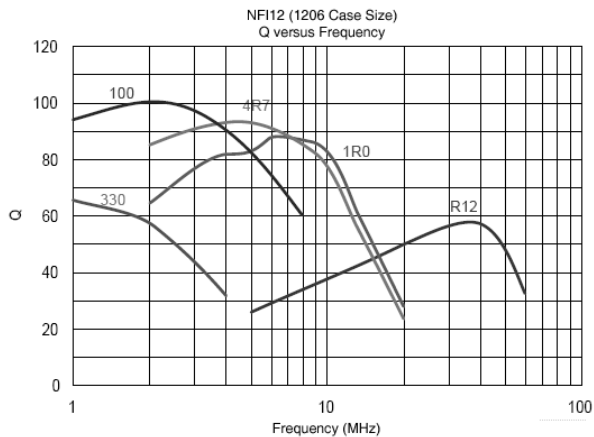
NFI08 (2.0mm X 1.25mm)							
EIA Size	NIC P/N	Inductance (μH)	Q Min.	L & Q Test Frequency (MHz)	DC Resistance Max. (Ω)	DC Current Max. (mA)	SRF Min. (MHz)
0805	NFI08_47NTRF	0.047	15	50	0.20	300	320
	NFI08_68NTRF	0.068			0.20	300	280
	NFI08_82NTRF	0.082			0.20	300	255
	NFI08_R10TRF	0.10	20	25	0.30	250	235
	NFI08_R12TRF	0.12			0.30	250	220
	NFI08_R15TRF	0.15			0.40	250	200
	NFI08_R18TRF	0.18			0.40	250	185
	NFI08_R22TRF	0.22			0.50	250	170
	NFI08_R27TRF	0.27			0.50	250	150
	NFI08_R33TRF	0.33	25	25	0.55	250	145
	NFI08_R39TRF	0.39			0.65	200	135
	NFI08_R47TRF	0.47*			0.65	200	125
	NFI08_R56TRF	0.56*			0.75	150	115
	NFI08_R68TRF	0.68*			0.80	150	105
	NFI08_R82TRF	0.82*			1.00	150	100
	NFI08_1R0TRF	1.0	45	10	0.40	50	95
	NFI08_1R2TRF	1.2			0.50	50	85
	NFI08_1R5TRF	1.5			0.50	50	80
	NFI08_1R8TRF	1.8			0.60	50	75
	NFI08_2R2TRF	2.2			0.65	30	70
	NFI08_2R7TRF	2.7*			0.75	30	45
	NFI08_3R3TRF	3.3*	50	4	0.80	30	41
	NFI08_3R9TRF	3.9*			0.90	30	38
	NFI08_4R7TRF	4.7*			1.00	30	35
	NFI08_5R6TRF	5.6*			0.90	15	32
	NFI08_6R8TRF	6.8*			1.00	15	29
	NFI08_8R2TRF	8.2*			1.10	15	26
	NFI08_100TRF	10*	30	1	1.15	15	24
	NFI08_120TRF	12*			1.25	15	22
	NFI08_150TRF	15*			0.80	5	19
NFI08_180TRF	18*	0.90			5	18	
NFI08_220TRF	22*	1.10			5	16	
NFI08_270TRF	27*	1.15			5	14	
NFI08_330TRF	33*	35	2	1.25	5	13	
NFI08_390TRF	39			2.9	4	8.0	
NFI08_470TRF	47			3.0	4	7.5	

\*Values marked with an asterisk have a maximum thickness of 1.45mm



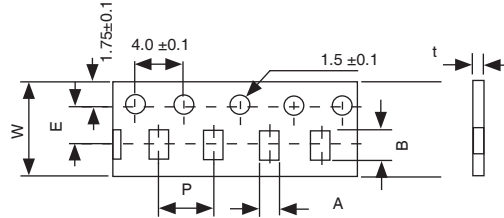
NFI12 (3.2mm X 1.6mm)								
EIA Size	NIC P/N	Inductance (μH)	Q Min.	L & Q Test Frequency (MHz)	DC Resistance Max. (Ω)	DC Current Max. (mA)	SRF Min. (MHz)	
1206	NFI12_47NTRF	0.047	20	50	0.15	300	320	
	NFI12_68NTRF	0.068			0.25	300	280	
	NFI12_R10TRF	0.10			25.2	0.25	250	235
	NFI12_R12TRF	0.12				0.30	250	220
	NFI12_R15TRF	0.15				0.30	250	200
	NFI12_R18TRF	0.18				0.40	250	185
	NFI12_R22TRF	0.22				0.40	250	170
	NFI12_R27TRF	0.27				0.50	250	150
	NFI12_R33TRF	0.33				0.60	250	145
	NFI12_R39TRF	0.39				25	0.50	250
	NFI12_R47TRF	0.47	0.60	200	125			
	NFI12_R56TRF	0.56	0.70	150	115			
	NFI12_R68TRF	0.68	0.80	150	105			
	NFI12_R82TRF	0.82	0.90	150	100			
	NFI12_1R0TRF	1.0	45	10	0.40		100	75
	NFI12_1R2TRF	1.2			0.50	100	65	
	NFI12_1R5TRF	1.5			0.50	50	60	
	NFI12_1R8TRF	1.8			0.50	50	55	
	NFI12_2R2TRF	2.2			0.60	50	50	
	NFI12_2R7TRF	2.7			0.60	50	45	
	NFI12_3R3TRF	3.3			0.70	50	41	
	NFI12_3R9TRF	3.9			0.80	50	38	
	NFI12_4R7TRF	4.7			0.90	50	35	
	NFI12_5R6TRF	5.6			50	4	0.70	25
	NFI12_6R8TRF	6.8	0.80	25			29	
	NFI12_8R2TRF	8.2	0.90	25			26	
	NFI12_100TRF	10	2	1.00			25	24
	NFI12_120TRF	12		1.05			15	22
	NFI12_150TRF	15	35	1			0.70	5
	NFI12_180TRF	18			0.70	5	18	
	NFI12_220TRF	22			0.90	5	16	
	NFI12_270TRF	27			0.90	5	14	
NFI12_330TRF	33*	40			2	1.05	5	13
NFI12_390TRF	39*					3.00	5	11
NFI12_470TRF	47*			3.40	5	10		

\*Values marked with an asterisk have a maximum thickness of 1.30mm



## PRESSED PAPER CARRIER TAPE DIMENSIONS (mm)

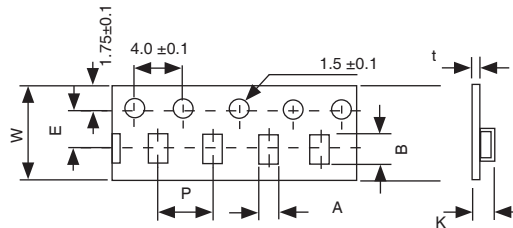
Size	A	B	E	P	t	W
NFI04	0.65±0.10	1.15±0.10	3.5±0.05	2.0±0.05	0.8 max.	8.0±0.03
NFI06	1.00±0.20	1.80±0.20		4.0±0.10	1.1 max.	
NFI08	1.50±0.20	2.30±0.20				



## EMBOSED PLASTIC CARRIER TAPE DIMENSIONS (mm)

Size	A(mm)	B(mm)	K(mm)	E(mm)	P(mm)	t(mm)	W
NFI08*	1.55±0.20	2.25±0.20	1.45 max.	3.5±0.05	4.0±0.10	0.30 max.	8.0±0.3
NFI12	1.88±0.20	3.50±0.20	1.27 max.				

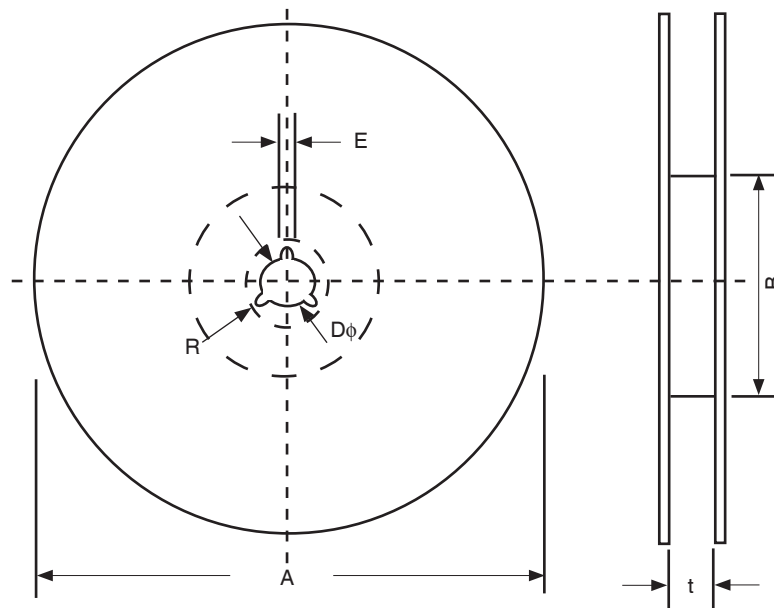
\*Parts with 1.25mm thickness



## REEL DIMENSIONS (mm)

Series	A ± 2.0	B ± 2.0	D ± 0.5	E ± 0.2	t ± 1.5/-0	Quantity/Reel
NFI04	178	58	13.5	2.45	8.4	10,000
NFI06						4,000
NFI08						4,000
NFI08*						3,000
NFI12						3,000

\*Parts with 1.25mm thickness on embossed carrier



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[CGA3E1X7R1C474K](#)