Thin Film Chip Inductors

NTI Series

FEATURES

- ULTRA-SMALL LOW PROFILE 0201, 0402 & 0603 SIZES
- HIGH CURRENT & HIGH SRF
- COMPATIBLE WITH Pb-FREE SOLDERING
- RoHS COMPLIANT

RoHS Compliant
includes all homogeneous materials

*See Part Number System for Details

CHARACTERISTICS

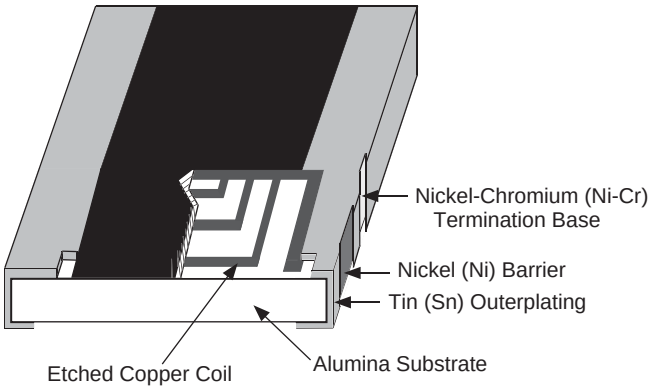
Case Size	0201	0402	0603
Inductance Range	0.1nH ~ 10nH	0.2nH ~ 33nH	1.0nH ~ 100nH
Available Tolerance	±0.1nH (B), ±0.2nH (C), ±0.3nH (D), ±1% (F), ±2% (G) & ±5% (J)		
Temperature Range	-40°C ~ +85°C		
Resistance to Solder Heat	260°C ±5°C for 5 seconds		
Temperature Cycling	ΔL ≤10% after 10 cycles -40°C/+20°C/+85°C/+20°C		

PART NUMBER SYSTEM

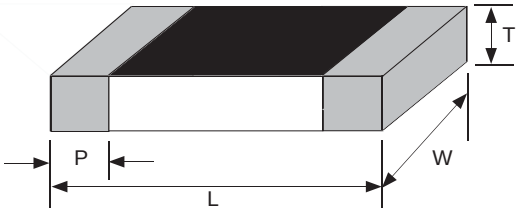
NTI 02 F 10N TR F

- F — Pb-free/RoHS compliant
- TR — Tape & Reel Packaging
- 10N — Inductance Value in nano-henries, "N" indicates decimal point
- F — Inductance Tolerance (see values tables)
- 02 — Case Code
- NTI — Series

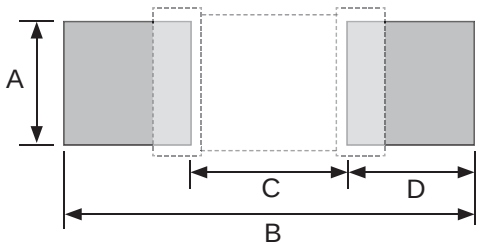
CONSTRUCTION



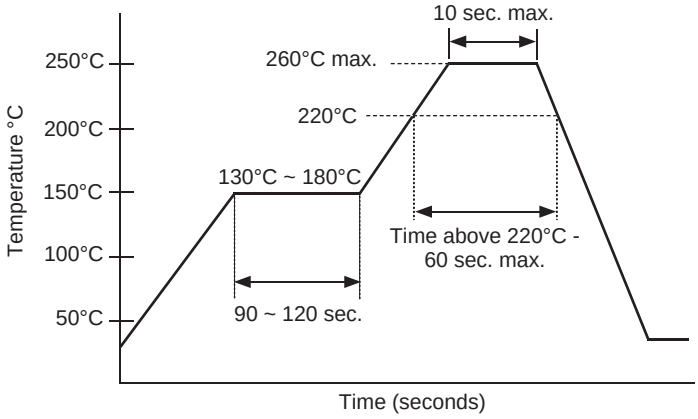
CASE DIMENSIONS (mm)				
Case Sixe	L	W	T	P
0201	0.60 ± 0.05	0.30 ± 0.05	0.23 ± 0.05	0.15 ± 0.05
0402	1.0 ± 0.05	0.5 ± 0.05	0.32 ± 0.05	0.20 ± 0.10
0603	1.6 ± 0.10	0.8 ± 0.10	0.45 ± 0.10	0.30 ± 0.20



LAND PATTERN DIMENSIONS (mm)				
Case Sixe	A	B	C	D
0201	0.2 ~ 0.3	0.8 ~ 0.9	0.2 ~ 0.3	0.3 ~ 0.4
0402	0.5 ~ 0.6	1.5 ~ 1.8	0.5 ~ 0.6	0.5 ~ 0.6
0603	0.6 ~ 1.0	2.4 ~ 2.8	0.7 ~ 0.9	0.9 ~ 1.1



REFLOW SOLDERING PROFILE



Available Values - 0201 Case Size						
Inductance Value (nH)	Part Number	DC Resistance Max. (Ω)	DC Current Max. (mA)	Available Tolerances & Tolerance Codes	Q Factor Min. & Test Frequency	SRF Min. (GHz)
0.1	NTI02_0N1TRF	0.20	400	±0.1nH (B), ±0.2nH (C), ±0.3nH (D)	8 min. @ 500MHz	9
0.2	NTI02_0N2TRF					
0.3	NTI02_0N3TRF					
0.4	NTI02_0N4TRF	0.25	350			
0.5	NTI02_0N5TRF					
0.6	NTI02_0N6TRF					
0.7	NTI02_0N7TRF	0.30	300			
0.8	NTI02_0N8TRF					
0.9	NTI02_0N9TRF					
1.0	NTI02_1N0TRF					
1.1	NTI02_1N1TRF	0.35				
1.2	NTI02_1N2TRF					
1.3	NTI02_1N3TRF	0.45	250			
1.4	NTI02_1N4TRF					
1.5	NTI02_1N5TRF					
1.6	NTI02_1N6TRF	0.55	200			
1.7	NTI02_1N7TRF					
1.8	NTI02_1N8TRF					
1.9	NTI02_1N9TRF					
2.0	NTI02_2N0TRF	0.70	200			8
2.1	NTI02_2N1TRF					
2.2	NTI02_2N2TRF					
2.3	NTI02_2N3TRF	0.80	150			
2.4	NTI02_2N4TRF					
2.5	NTI02_2N5TRF					
2.6	NTI02_2N6TRF					
2.7	NTI02_2N7TRF					
2.8	NTI02_2N8TRF	1.00				6
2.9	NTI02_2N9TRF					
3.0	NTI02_3N0TRF					
3.1	NTI02_3N1TRF					
3.2	NTI02_3N2TRF					
3.3	NTI02_3N3TRF					
3.4	NTI02_3N4TRF	1.20				
3.5	NTI02_3N5TRF					
3.6	NTI02_3N6TRF					
3.7	NTI02_3N7TRF					
3.8	NTI02_3N8TRF					
3.9	NTI02_3N9TRF					
4.0	NTI02_4N0TRF					
4.4	NTI02_4N4TRF	1.30	140			
4.7	NTI02_4N7TRF	1.40	130			
4.9	NTI02_4N9TRF	1.60				
5.6	NTI02_5N6TRF	1.80		±2% (G), ±5% (J)		4
6.1	NTI02_6N1TRF	2.00	120			
6.8	NTI02_6N8TRF	2.30	110			
7.4	NTI02_7N4TRF	2.80				
8.2	NTI02_8N2TRF	3.00				3
9.1	NTI02_9N1TRF	3.25	100			
9.2	NTI02_9N2TRF					
10	NTI02_10NTRF	3.50	80			2

Available Values - 0402 Case Size						
Inductance Value (nH)	Part Number	DC Resistance Max. (Ω)	DC Current Max. (mA)	Available Tolerances & Tolerance Codes	Q Factor Min. & Test Frequency	SRF Min. (GHz)
0.2	NTI04_0N2TRF	0.10	800	±0.1nH (B), ±0.2nH (C), ±0.3nH (D)	13 min. @ 500MHz	14
0.3	NTI04_0N3TRF					
0.4	NTI04_0N4TRF					
0.5	NTI04_0N5TRF	0.15	700			
0.8	NTI04_0N8TRF					
0.9	NTI04_0N9TRF					
1.0	NTI04_1N0TRF					12
1.1	NTI04_1N1TRF					
1.2	NTI04_1N2TRF					
1.3	NTI04_1N3TRF	0.25				10
1.4	NTI04_1N4TRF					
1.5	NTI04_1N5TRF					
1.6	NTI04_1N6TRF		560			
1.7	NTI04_1N7TRF					
1.8	NTI04_1N8TRF					
1.9	NTI04_1N9TRF	0.35				8
2.0	NTI04_2N0TRF					
2.1	NTI04_2N1TRF		440			
2.2	NTI04_2N2TRF					
2.3	NTI04_2N3TRF					
2.4	NTI04_2N4TRF					
2.5	NTI04_2N5TRF					
2.6	NTI04_2N6TRF					
2.7	NTI04_2N7TRF					
2.8	NTI04_2N8TRF	0.45	380			6
2.9	NTI04_2N9TRF					
3.0	NTI04_3N0TRF					
3.1	NTI04_3N1TRF					
3.2	NTI04_3N2TRF					
3.3	NTI04_3N3TRF					
3.4	NTI04_3N4TRF	0.55				
3.5	NTI04_3N5TRF					
3.6	NTI04_3N6TRF					
3.7	NTI04_3N7TRF		340			
3.8	NTI04_3N8TRF					
3.9	NTI04_3N9TRF					
4.3	NTI04_4N3TRF	0.65	320			
4.7	NTI04_4N7TRF					
5.4	NTI04_5N4TRF	0.85	280			
5.6	NTI04_5N6TRF					
5.9	NTI04_5N9TRF					
6.5	NTI04_6N5TRF	1.05	260			
6.8	NTI04_6N8TRF					
7.2	NTI04_7N2TRF					
8.0	NTI04_8N0TRF	1.25	220			5.5
8.1	NTI04_8N1TRF					
8.2	NTI04_8N2TRF					
9.1	NTI04_9N1TRF					
10	NTI04_10NTRF	1.35	200	±1% (F), ±2% (G) & ±5% (J)		4.5
10.8	NTI04_10N8TRF					
12	NTI04_12NTRF	1.55	180			3.7
13.8	NTI04_13N8TRF	1.75				
15	NTI04_15NTRF		130			3.3
17	NTI04_17NTRF	1.95	100			3.1
18	NTI04_18NTRF	2.15				
20.8	NTI04_20N8TRF	2.55	90			2.8
22	NTI04_22NTRF	2.65				
27	NTI04_27NTRF	3.25	75			2.5
33	NTI04_33NTRF	4.50		±5% (J)		

Available Values - 0603 Case Size						
Inductance Value (nH)	Part Number	DC Resistance Max. (Ω)	DC Current Max. (mA)	Available Tolerances & Tolerance Codes	Q Factor Min. & Test Frequency	SRF Min. (GHz)
1.0	NTI06_1N0TRF	0.35	800	±0.1nH (B), ±0.2nH (C), ±0.3nH (D)	15 @ 300MHz	13
1.2	NTI06_1N2TRF					
1.5	NTI06_1N5TRF					10
1.8	NTI06_1N8TRF		300			
2.2	NTI06_2N2TRF					8
2.7	NTI06_2N7TRF	0.45				6
3.3	NTI06_3N3TRF					
3.9	NTI06_3N9TRF					
4.7	NTI06_4N7TRF	0.55				5
5.6	NTI06_5N6TRF	0.65				
6.8	NTI06_6N8TRF	0.75				
8.2	NTI06_8N2TRF	0.95				4
10	NTI06_10NTRF			±1% (F), ±2% (G), ±5% (J)		
12	NTI06_12NTRF	1.05				3
15	NTI06_15NTRF	1.35				
18	NTI06_18NTRF	1.65				2
22	NTI06_22NTRF	1.95	250			
27	NTI06_27NTRF	2.35				
33	NTI06_33NTRF	2.75				1.5
39	NTI06_39NTRF	3.00	200			
47	NTI06_47NTRF					
56	NTI06_56NTRF	5.00	150			1
68	NTI06_68NTRF					
100	NTI06_R10TRF	7.50	100			

TAPE AND REEL DIMENSIONS (mm)

Type	A	B	E	F	W	P_0	P_1	P_2	t	Reel Quantity
NTI02	0.40 ± 0.05	0.70 ± 0.05	1.75 ± 0.05	3.5 ± 0.05	8.0 ± 0.10	4.0 ± 0.10	2.0 ± 0.05	2.0 ± 0.05	0.42 ± 0.02	10,000
NTI04	0.70 ± 0.05	1.16 ± 0.05							0.40 ± 0.03	10,000
NTI06	1.10 ± 0.10	1.90 ± 0.10					4.0 ± 0.10		0.60 ± 0.03	5,000