

### FEATURES

- SIZES K (0402), J (0603), D (0805) AND C (1008)
- EXCELLENT HIGH Q, HIGH CURRENT AND HIGH SRF CHARACTERISTICS
- BOTH FLOW AND REFLOW SOLDERING APPLICABLE\*
- HIGH INDUCTANCE AVAILABLE IN SMALL SIZE
- EMBOSSED PLASTIC TAPE PACKAGE FOR AUTOMATIC PICK-PLACE

\*FLOW & REFLOW SOLDERING 0805 & 1008 SIZES, 0402 & 0603 REFLOW SOLDERING ONLY

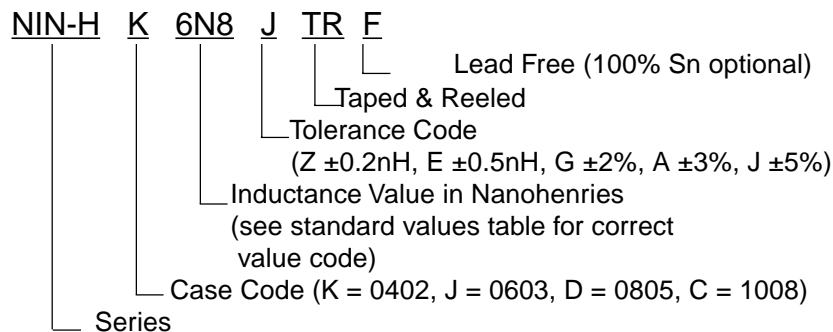


Specifications	Size (Case Code)			
	0402 (K)	0603 (J)	0805 (D)	1008 (C)
Inductance Range	6.8nH ~ 56nH	3.3nH ~ 220nH	3.3nH ~ 820nH	10nH ~ 4.7μH
Inductance Tolerance	±5% (J), ±3% (A), ±2% (G), ±0.5nH (E), ±0.2nH (Z)		±20% (M), ±10% (K), ±5% (J), ±2% (G)	
Operating Temperature Range	-40°C ~ +85°C		-40°C ~ +125°C	
Q-Factor, Self Resonant Frequency DC Resistance, Rated DC Current and Inductance Tolerance	See Individual Product Listings			

SURFACE MOUNT

### ENVIRONMENTAL CHARACTERISTICS

Test	Specification	Test Method & Condition
Solderability	75% Min. Coverage	After 3 Sec. Dip in +230 °C Solder Pot (Post Flux)
Humidity	(1) No Evidence of Damage (2) Inductance Shall Be Within ±5% of initial Value (3) Q Factor Shall Be Within ±10 of initial Value (±20% for 0402 & 603 case sizes)	After 500 Hrs at 60 °C and 90 ~ 95% RH
Soldering Effect		After 5 Seconds at +260 °C (after pre-conditioning)
Low Frequency Vibration		After 2 Hrs per Axis, 10 ~ 55Hz, 1.5 mm Amplitude
Thermal Shock		After 100 cycles over rated temp. range (30 min. each)
Low Temperature Storage		After 500 Hrs at -40°C
High Temperature Load Life	(1) No Evidence of Damage (2) Inductance Shall Be Within ±10% of Initial Value (±20% for 0402 & 0603 case sizes)	After 500 Hrs at max. rated temperature with rated DC Current
Humidity Load Life	(3) Q Factor Shall Be Within ±10% of Initial Value (±20% for 0402 & 0603 case sizes)	After 500 Hrs at 60°C with 90 ~ 95% RH with Rated DC Current



**SURFACE MOUNT**
**NIN-HK**
**K-SIZE (0402)**
**STANDARD VALUES**

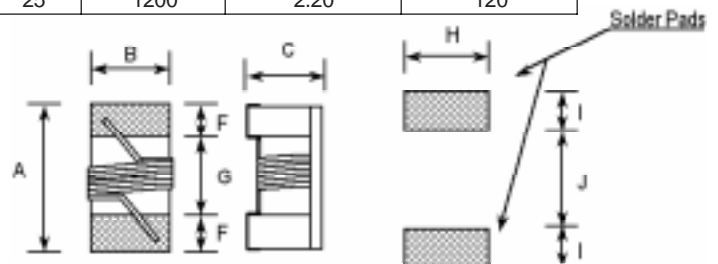
NIC P/N	'L' Inductance (nH)	'L' Test Freq (Mhz)	Tolerance	'Q' Factor (min.)	'Q' Test Freq (Mhz)	SRF Mhz (min.)	DC Resistance (ohms) Max.	Rated DC Current (mA) Max.
NIN-HK2R2XTR	2.2	250	0.5nH or 0.2nH	20	250	15000	0.05	900
NIN-HK2R7XTR	2.7	250	0.5nH or 0.2nH	20	250	15000	0.05	900
NIN-HK3R3XTR	3.3	250	0.5nH or 0.2nH	25	250	12000	0.07	850
NIN-HK3R9XTR	3.9	250	0.5nH or 0.2nH	25	250	10000	0.07	850
NIN-HK4R3XTR	4.3	250	0.5nH or 0.2nH	25	250	10000	0.07	850
NIN-HK4R7XTR	4.7	250	0.5nH or 0.2nH	25	250	8000	0.07	850
NIN-HK5R1XTR	5.1	250	0.5nH or 0.2nH	25	250	8000	0.12	680
NIN-HK5R6XTR	5.6	250	0.5nH or 0.2nH	25	250	8000	0.09	750
NIN-HK6R2XTR	6.2	250	0.5nH or 0.2nH	25	250	8000	0.09	750
NIN-HK6R8XTR	6.8	250	5% or 3%	26	250	6500	0.09	750
NIN-HK8R2XTR	8.2	250	5% or 3%	26	250	6500	0.12	680
NIN-HK100XTR	10	250	5% or 3%	26	250	5500	0.14	640
NIN-HK120XTR	12	250	5% or 3%	30	250	5500	0.14	640
NIN-HK150XTR	15	250	5% or 3%	30	250	5200	0.16	560
NIN-HK180XTR	18	250	5% or 3%	27	250	4800	0.27	430
NIN-HK220XTR	22	250	5% or 3%	27	250	4100	0.30	410
NIN-HK270XTR	27	250	5% or 3%	27	250	4000	0.47	350
NIN-HK330XTR	33	250	5% or 3%	27	250	3500	0.53	310
NIN-HK390XTR	39	250	5% or 3%	27	250	3200	0.70	270
NIN-HK470XTR	47	200	5% or 3%	25	200	3000	1.05	220
NIN-HK560XTR	56	200	5% or 3%	25	200	2800	1.10	210

**NIN-HJ**
**C-SIZE (0603)**
**STANDARD VALUES**

NIC P/N	'L' Inductance (nH)	'L & Q' Test Freq (Mhz)	Tolerance	'Q' Factor (min.)	SRF Mhz (min.)	DC Resistance (ohms) Max.	Rated DC Current (mA) Max.
NIN-HJ3R3XTR	3.3	250	±0.5nH or 0.2nH	26	6000	0.06	850
NIN-HJ3R9XTR	3.9	250	±0.5nH or 0.2nH	35	6000	0.06	850
NIN-HJ4R7XTR	4.7	250	±0.5nH or 0.2nH	35	6000	0.06	850
NIN-HJ5R6XTR	5.6	250	±0.5nH or 0.2nH	35	6000	0.08	750
NIN-HJ6R8XTR	6.8	250	±0.5nH or 0.2nH	35	6000	0.08	700
NIN-HJ8R2XTR	8.2	250	±0.5nH or 0.2nH	35	6000	0.10	630
NIN-HJ10NXTR	10	250	5% or 3%	35	6000	0.10	630
NIN-HJ12NXTR	12	250	5% or 3%	35	6000	0.13	550
NIN-HJ15NXTR	15	250	5% or 3%	40	5000	0.13	550
NIN-HJ18NXTR	18	250	5% or 3%	40	5000	0.15	510
NIN-HJ22NXTR	22	250	5% or 3%	40	4600	0.17	480
NIN-HJ27NXTR	27	250	5% or 3%	40	3800	0.20	440
NIN-HJ33NXTR	33	250	5% or 3%	40	3500	0.23	420
NIN-HJ39NXTR	39	250	5% or 3%	40	3200	0.25	400
NIN-HJ47NXTR	47	200	5% or 3%	38	3000	0.28	380
NIN-HJ56NXTR	56	200	5% or 3%	38	2700	0.30	360
NIN-HJ68NXTR	68	200	5% or 3%	34	2300	0.35	340
NIN-HJ82NXTR	82	150	5% or 3%	34	2200	0.48	290
NIN-HJR10TR	100	150	5% or 3%	34	2000	0.62	250
NIN-HJR12TR	120	150	5% or 3%	32	1700	0.90	210
NIN-HJR15TR	150	150	5% or 3%	32	1400	1.30	160
NIN-HJR18TR	180	100	5% or 3%	25	1300	2.00	140
NIN-HJR22TR	220	100	5% or 3%	25	1200	2.20	120

**COMPONENT AND LAND PATTERN DIMENSIONS (mm):**

Type	A	B	C	F	G	H	I	J
NIN-HK	1.0±0.2	0.5±0.1	0.6±0.1	0.2±0.1	0.6±0.2	0.6~0.7	0.4	0.76
NIN-HJ	1.6±0.2	0.8±0.2	0.8±0.2	0.3±0.1	1.0±0.2	0.7~0.9	0.7	1.27



For Quality Factor (**Q**) and Inductance (**L**)  
over Frequency curves  
see [www.RFpassives.com](http://www.RFpassives.com)

## NIN-HD

## D-SIZE (0805)

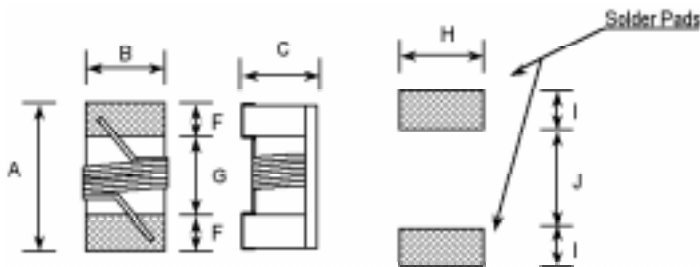
## STANDARD VALUES

NIC P/N	'L' Inductance (nH)	'L' Test Freq (Mhz)	Tolerance	'Q' Factor (min.)	'Q' Test Freq (Mhz)	SRF Mhz (min.)	DC Resistance (ohms) Max.	Rated DC Current (mA) Max.
NIN-HD3R3XTR	3.3	250	20%	50	1500	7900	0.08	600
NIN-HD6R8XTR	6.8	250	20%	50	1000	5500	0.11	600
NIN-HD8R2XTR	8.2	250	20%	50	1000	4700	0.12	600
NIN-HD100XTR	10	250	20%	60	500	4200	0.10	600
NIN-HD120XTR	12	250	20%	50	500	4000	0.15	600
NIN-HD150XTR	15	250	20%	50	500	3400	0.17	600
NIN-HD180XTR	18	250	20%	50	500	3300	0.20	600
NIN-HD220XTR	22	250	20%	55	500	2600	0.22	500
NIN-HD270XTR	27	250	20%	55	500	2500	0.25	500
NIN-HD330XTR	33	250	20%	60	500	2050	0.27	500
NIN-HD390XTR	39	250	20%	60	500	2000	0.29	500
NIN-HD470XTR	47	200	20%	60	500	1650	0.31	500
NIN-HD560XTR	56	200	10%	60	500	1550	0.34	500
NIN-HD680XTR	68	200	10%	60	500	1450	0.38	500
NIN-HD820XTR	82	150	10%	65	500	1300	0.42	400
NIN-HD101XTR	100	150	10%	65	500	1200	0.46	400
NIN-HD121XTR	120	150	10%	50	250	1100	0.51	400
NIN-HD151XTR	150	100	10%	50	250	920	0.56	400
NIN-HD181XTR	180	100	10%	50	250	870	0.64	400
NIN-HD221XTR	220	100	10%	50	250	850	0.70	400
NIN-HD271XTR	270	100	10%	48	250	650	1.30	350
NIN-HD331XTR	330	100	10%	48	250	600	1.45	310
NIN-HD391XTR	390	100	10%	48	250	560	1.80	290
NIN-HD471XTR	470	50	10%	33	100	375	2.00	250
NIN-HD561XTR	560	25	10%	23	50	340	2.10	230
NIN-HD681XTR	680	25	10%	23	50	188	2.30	190
NIN-HD821XTR	820	25	10%	23	50	215	2.50	180

SURFACE MOUNT

## COMPONENT AND LAND PATTERN DIMENSIONS (mm):

Type	A max.	B max.	C max.	D	E	F	G	H	I	J
NIN-HD	2.29	1.73	1.52	0.51	1.27	0.51	1.02	1.78	1.02	0.76
NIN-HC	2.92	2.79	2.10	0.51	2.03	0.51	1.52	2.54	1.02	1.27



For Quality Factor (**Q**) and Inductance (**L**)  
over Frequency curves  
see [www.RFpassives.com](http://www.RFpassives.com)

## NIN-HC

## C-SIZE (1008)

## STANDARD VALUES

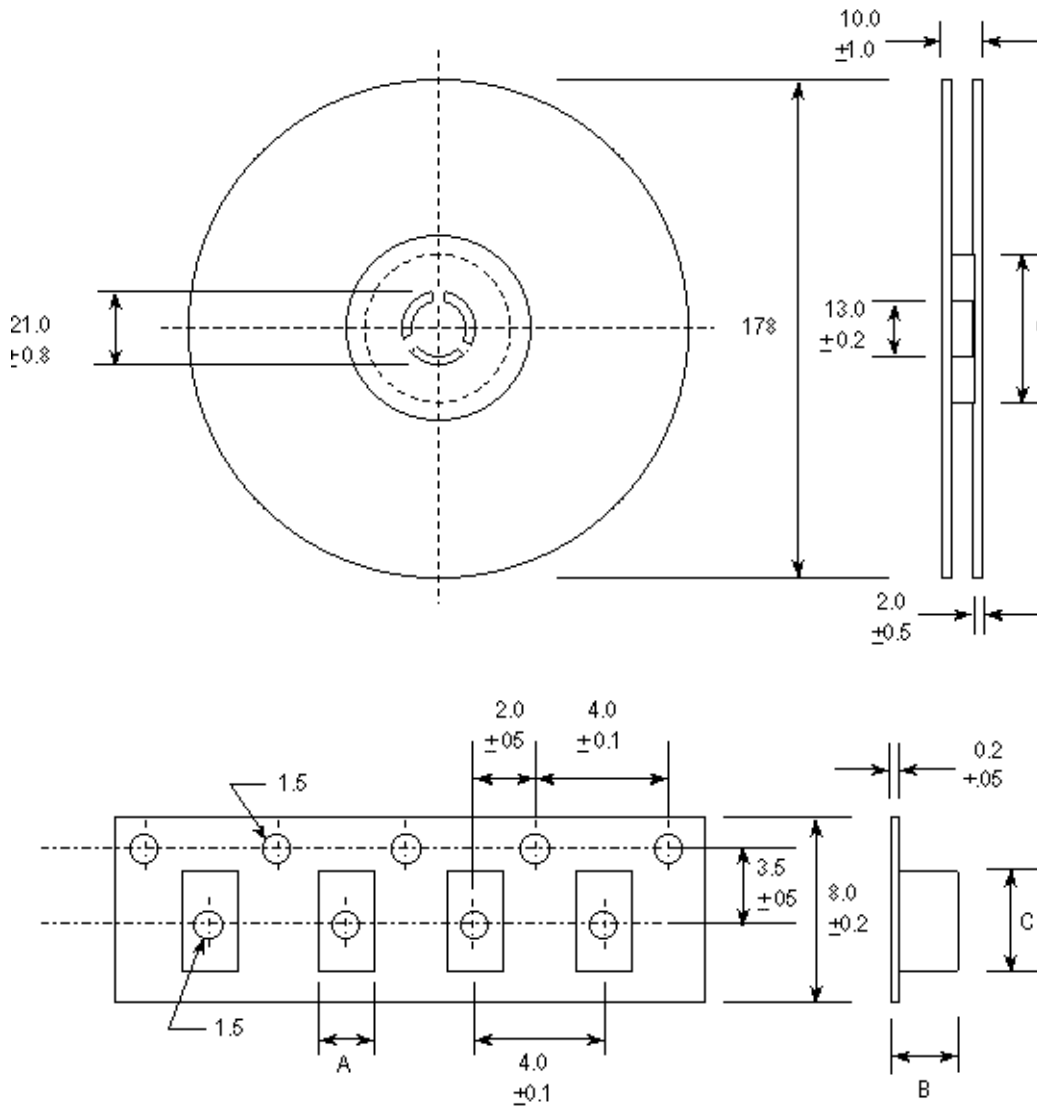
NIC P/N	'L' Inductance (nH)	'L' Test Freq (Mhz)	Tolerance	'Q' Factor (min.)	'Q' Test Freq (Mhz)	SRF Mhz (min.)	DC Resistance (ohms) Max.	Rated DC Current (mA) Max.
NIN-HC100XTR	10	50	20%	50	500	4100	0.08	1000
NIN-HC120XTR	12	50	20%	50	500	3300	0.09	1000
NIN-HC150XTR	15	50	20%	50	500	2500	0.10	1000
NIN-HC180XTR	18	50	20%	50	350	2500	0.11	1000
NIN-HC220XTR	22	50	20%	55	350	2400	0.12	1000
NIN-HC270XTR	27	50	20%	55	350	1600	0.13	1000
NIN-HC330XTR	33	50	20%	60	350	1650	0.14	1000
NIN-HC390XTR	39	50	20%	60	350	1500	0.15	1000
NIN-HC470XTR	47	50	20%	65	350	1500	0.16	1000
NIN-HC560XTR	56	50	10%	65	350	1300	0.18	1000
NIN-HC680XTR	68	50	10%	65	350	1300	0.20	1000
NIN-HC820XTR	82	50	10%	60	350	1000	0.22	1000
NIN-HC101XTR	100	25	10%	60	350	1000	0.56	650
NIN-HC121XTR	120	25	10%	45	350	950	0.63	650
NIN-HC151XTR	150	25	10%	45	100	850	0.70	580
NIN-HC181XTR	180	25	10%	45	100	750	0.77	620
NIN-HC221XTR	220	25	10%	45	100	700	0.84	500
NIN-HC271XTR	270	25	10%	45	100	600	0.91	500
NIN-HC331XTR	330	25	10%	45	100	570	1.05	450
NIN-HC391XTR	390	25	10%	45	100	500	1.12	470
NIN-HC471XTR	470	25	10%	45	100	450	1.19	470
NIN-HC561XTR	560	25	10%	45	100	410	1.33	400
NIN-HC621XTR	620	25	10%	45	100	375	1.40	300
NIN-HC681XTR	680	25	10%	45	100	375	1.47	400
NIN-HC751XTR	750	25	10%	45	100	360	1.54	360
NIN-HC821XTR	820	25	10%	45	100	350	1.61	400
NIN-HC911XTR	910	25	10%	45	50	320	1.68	380
NIN-HC102XTR	1000	25	10%	35	50	290	1.75	370
NIN-HC122XTR	1200	7.9	10%	35	50	250	2.00	310
NIN-HC152XTR	1500	7.9	10%	28	50	200	2.30	330
NIN-HC182XTR	1800	7.9	10%	28	50	160	2.60	300
NIN-HC222XTR	2200	7.9	10%	28	50	160	2.80	280
NIN-HC272XTR	2700	7.9	10%	22	25	140	3.20	290
NIN-HC332XTR	3300	7.9	10%	22	25	110	3.40	290
NIN-HC392XTR	3900	7.9	10%	20	25	100	3.60	260
NIN-HC472XTR	4700	7.9	10%	20	25	90	4.00	260

SURFACE MOUNT



**TAPE & REEL DIMENSIONS (mm):**

TYPE	A	B	C	Qty/Reel
NIN-HK	0.72 ± 0.05	1.25 ± 0.1	N/A	10,000
NIN-HJ	1.15 ± 0.2	1.95 ± 0.2	1.3 max.	3,000
NIN-HD	1.88 ± 0.1	1.48 ± 0.05	2.5 max.	2,500
NIN-HC	2.73 ± 0.1	2.33 ± 0.05	3.0 max	2,000



SURFACE MOUNT