

### FEATURES

- SIZES K(0402), J (0603), D (0805), C (1008), E (1206), A (1210) and B (1812)
- HIGH Q, HIGH CURRENT AND HIGH SRF CHARACTERISTICS
- REFLOW SOLDERING APPLICABLE
- HIGH INDUCTANCE AVAILABLE IN SMALL SIZE
- EMBOSSED PLASTIC CARRIER PACKAGING FOR AUTOMATIC PICK-PLACE\*

\*0402 PUNCHED CARDBOARD CARRIER

| Specifications              | Case Size Code                                            |               |               |              |
|-----------------------------|-----------------------------------------------------------|---------------|---------------|--------------|
|                             | 0402 (K)                                                  | 0603 (J)      | 0805 (D)      | 1008 (C)     |
| Inductance Range            | 1.0nH ~ 68nH                                              | 1.8nH ~ 270nH | 2.2nH ~ 910nH | 10nH ~ 4.7μH |
| Inductance Tolerance        | ±0.3nH (S), ±5% (J), ±2% (G), ±5% (J), ±10% (K), ±20% (M) |               |               |              |
| Operating Temperature Range | -40°C ~ +125°C                                            |               |               |              |

| Specifications              | 1206 (E)                           | 1210 (A)      | 1812 (B)     |
|-----------------------------|------------------------------------|---------------|--------------|
|                             | 3.3nH ~ 1.2μH                      | 3.9nH ~ 8.6μH | 1.0μH ~ 33μH |
| Inductance Tolerance        | See Product Standard Values Tables |               |              |
| Operating Temperature Range | -40°C ~ +125°C                     |               |              |

### ENVIRONMENTAL CHARACTERISTICS

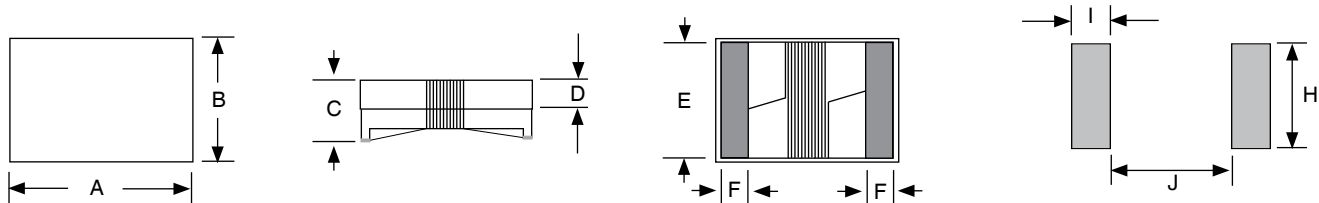
| Test                         | Specifications                                                                                                                                                                          | Test Method & Condition                                                                              |
|------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|
| Solderability                | 75% Min. Coverage                                                                                                                                                                       | After 3 sec. dip in +230°C soldering pot (post flux)                                                 |
| Resistance to Soldering Heat | (1) No evidence of damage<br>(2) Inductance change ±5% of initial value<br>(3) Q factor within ±10% of initial value<br>(±20% for 0402 & 0603 case sizes)                               | After 5 seconds at +260°C (with pre-conditioning)                                                    |
| Humidity                     | (1) No evidence of damage                                                                                                                                                               | After 500 hours at 60°C and 90 ~ 95% RH<br>(0402 case size - after 96 hours 50°C and 90 ~ 95% RH)    |
| Low Frequency Vibration      | (2) Inductance change ±5% of initial value<br>(±10% for 0402 case size)                                                                                                                 | After 2 hrs per axis, 10 ~ 55Hz, 1.5mm amplitude                                                     |
| Thermal Shock                | (3) Q factor within ±10% of initial value<br>(±20% for 0402 & 0603 case sizes)                                                                                                          | After 100 cycles (10 cycles 0402) at -40°C and +125°C<br>(30 minutes at each temperature)            |
| Low Temperature Storage      |                                                                                                                                                                                         | After 500 hrs at -40°C                                                                               |
| High Temperature Load Life   | (1) No evidence of damage<br>(2) Inductance change ±10% of initial value<br>(±20% for 0402 case size)<br>(3) Q factor within ±10% of initial value<br>(±20% for 0402 & 0603 case sizes) | After 500 hrs at +125°C with rated DC current<br>(0402 case size - after 1,000 hrs at +85°C)         |
| Humidity Load Life           | No evidence of short or open circuit                                                                                                                                                    | After 500 hrs at 60°C with 90 ~ 95% RH with rated DC current<br>(0402 case size- 1,000 hrs at +40°C) |

### COMPONENT DIMENSIONS (mm):

| Type   | Case Size | A max. | B max. | C max. | D typ. | E typ. | F typ. |
|--------|-----------|--------|--------|--------|--------|--------|--------|
| NIN-HK | 0402      | 1.19   | 0.64   | 0.66   | 0.20   | 0.523  | 0.215  |
| NIN-HJ | 0603      | 1.80   | 1.12   | 1.02   | 0.38   | 0.76   | 0.33   |
| NIN-HD | 0805      | 2.29   | 1.68   | 1.55   | 0.51   | 1.27   | 0.50   |
| NIN-HC | 1008      | 2.92   | 2.79   | 2.29   | 0.51   | 2.10   | 0.50   |
| NIN-HE | 1206      | 3.56   | 2.16   | 1.52   | 0.51   | 1.60   | 0.50   |
| NIN-HA | 1210      | 3.65   | 2.95   | 2.70   | 0.51   | 2.10   | 0.50   |
| NIN-HB | 1812      | 4.95   | 3.81   | 3.43   | 1.78   | 2.90   | 0.58   |

### RECOMMEND LAND PATTERN DIMENSIONS (mm)

| Type   | H typ. | I typ. | J typ. |
|--------|--------|--------|--------|
| NIN-HK | 0.65   | 0.35   | 0.50   |
| NIN-HJ | 1.02   | 0.36   | 0.46   |
| NIN-HD | 1.78   | 1.02   | 0.76   |
| NIN-HC | 2.54   | 1.02   | 1.27   |
| NIN-HE | 1.93   | 1.02   | 1.78   |
| NIN-HA | 3.02   | 1.02   | 1.78   |
| NIN-HB | 3.05   | 1.14   | 3.00   |

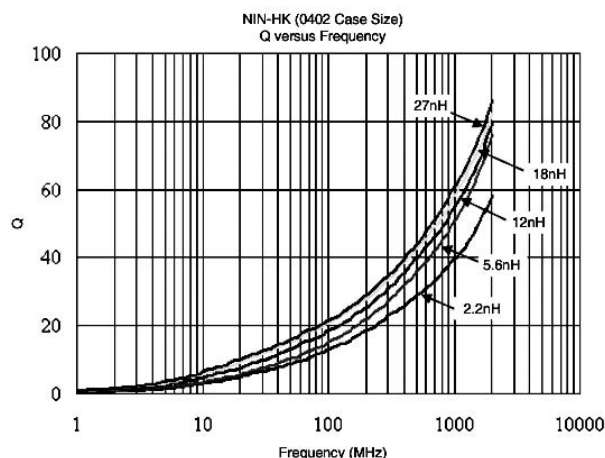
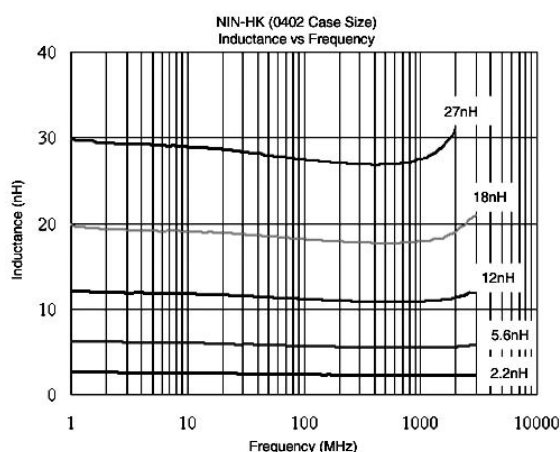


### NIN-HK SERIES

### K-SIZE (0402)

### STANDARD VALUES

| NIC P/N       | INDUCTANCE TOLERANCE | INDUCTANCE VALUE (nH) | FREQUENCY (MHz) | Q FACTOR  | SRF (MHz) Minimum | Rated DC Resistance (ohms) | Rated DC Current (mA) |
|---------------|----------------------|-----------------------|-----------------|-----------|-------------------|----------------------------|-----------------------|
| NIN-HK1N0STRF | S                    | 1.0                   | 250             | 16@250MHz | 7000              | 0.054                      | 1360                  |
| NIN-HK2N0STRF | S                    | 2.0                   | 250             | 19@250MHz | 7000              | 0.084                      | 1040                  |
| NIN-HK2N2STRF | S                    | 2.2                   | 250             | 19@250MHz | 7000              | 0.084                      | 960                   |
| NIN-HK2N7STRF | S                    | 2.7                   | 250             | 19@250MHz | 7000              | 0.095                      | 840                   |
| NIN-HK3N3STRF | S                    | 3.3                   | 250             | 19@250MHz | 7000              | 0.079                      | 840                   |
| NIN-HK3N9STRF | S                    | 3.9                   | 250             | 19@250MHz | 6000              | 0.079                      | 840                   |
| NIN-HK5N2JTRF | J                    | 5.2                   | 250             | 20@250MHz | 4800              | 0.120                      | 640                   |
| NIN-HK5N6JTRF | J                    | 5.6                   | 250             | 20@250MHz | 4700              | 0.099                      | 760                   |
| NIN-HK6N8JTRF | J                    | 6.8                   | 250             | 20@250MHz | 4800              | 0.099                      | 680                   |
| NIN-HK8N2JTRF | J                    | 8.2                   | 250             | 21@250MHz | 4400              | 0.136                      | 680                   |
| NIN-HK8N5JTRF | J                    | 8.5                   | 250             | 24@250MHz | 4400              | 0.150                      | 680                   |
| NIN-HK9N0JTRF | J                    | 9.0                   | 250             | 24@250MHz | 3900              | 0.170                      | 680                   |
| NIN-HK100JTRF | J                    | 10                    | 250             | 21@250MHz | 3900              | 0.240                      | 480                   |
| NIN-HK120JTRF | J                    | 12                    | 250             | 24@250MHz | 3600              | 0.168                      | 640                   |
| NIN-HK150JTRF | J                    | 15                    | 250             | 24@250MHz | 3300              | 0.204                      | 560                   |
| NIN-HK180JTRF | J                    | 18                    | 250             | 24@250MHz | 3100              | 0.276                      | 420                   |
| NIN-HK220JTRF | J                    | 22                    | 250             | 24@250MHz | 2800              | 0.360                      | 400                   |
| NIN-HK270JTRF | J                    | 27                    | 250             | 24@250MHz | 2500              | 0.360                      | 400                   |
| NIN-HK330JTRF | J                    | 33                    | 250             | 24@250MHz | 2400              | 0.450                      | 400                   |
| NIN-HK360JTRF | J                    | 36                    | 250             | 24@250MHz | 2320              | 0.440                      | 320                   |
| NIN-HK390JTRF | J                    | 39                    | 250             | 25@250MHz | 2100              | 0.660                      | 200                   |
| NIN-HK430JTRF | J                    | 43                    | 200             | 25@250MHz | 2000              | 0.744                      | 175                   |
| NIN-HK470JTRF | J                    | 47                    | 200             | 20@250MHz | 2100              | 0.792                      | 175                   |
| NIN-HK560JTRF | J                    | 56                    | 200             | 22@250MHz | 1800              | 0.780                      | 175                   |
| NIN-HK680JTRF | J                    | 68                    | 200             | 22@250MHz | 1600              | 0.912                      | 150                   |

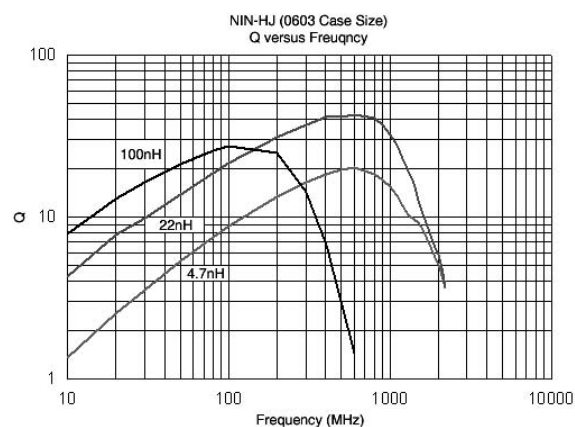
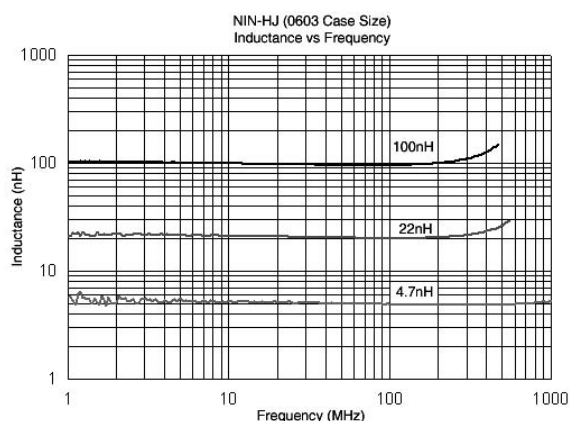


## NIN-HJ SERIES

## J-SIZE (0603)

## STANDARD VALUES

| NIC P/N       | INDUCTANCE TOLERANCE | INDUCTANCE VALUE (nH) | FREQUENCY (MHz) | Q FACTOR  | SRF (MHz) Minimum | Rated DC Resistance (ohms) | Rated DC Current (mA) |
|---------------|----------------------|-----------------------|-----------------|-----------|-------------------|----------------------------|-----------------------|
| NIN-HJ1N8_TRF | J,K,M                | 1.8                   | 250             | 16@250MHz | 6000              | 0.10                       | 700                   |
| NIN-HJ3N9_TRF | J,K,M                | 3.9                   | 250             | 20@250MHz | 6000              | 0.10                       | 700                   |
| NIN-HJ4N7_TRF | J,K,M                | 4.7                   | 250             | 10@250MHz | 5800              | 0.25                       | 700                   |
| NIN-HJ6N8_TRF | J,K,M                | 6.8                   | 250             | 25@250MHz | 5800              | 0.11                       | 700                   |
| NIN-HJ8N2_TRF | J,K,M                | 8.2                   | 250             | 30@250MHz | 4200              | 0.13                       | 700                   |
| NIN-HJ100_TRF | J,K,M                | 10                    | 250             | 30@250MHz | 4800              | 0.13                       | 700                   |
| NIN-HJ120_TRF | G,J,K,M              | 12                    | 250             | 30@250MHz | 4000              | 0.13                       | 700                   |
| NIN-HJ150_TRF | G,J,K,M              | 15                    | 250             | 30@250MHz | 4000              | 0.19                       | 700                   |
| NIN-HJ180_TRF | G,J,K,M              | 18                    | 250             | 30@250MHz | 3100              | 0.20                       | 700                   |
| NIN-HJ220_TRF | G,J,K,M              | 22                    | 250             | 35@250MHz | 3000              | 0.23                       | 700                   |
| NIN-HJ270_TRF | G,J,K,M              | 27                    | 250             | 35@250MHz | 2800              | 0.20                       | 600                   |
| NIN-HJ330_TRF | G,J,K,M              | 33                    | 250             | 35@250MHz | 2300              | 0.22                       | 600                   |
| NIN-HJ390_TRF | G,J,K,M              | 39                    | 250             | 35@250MHz | 2200              | 0.25                       | 600                   |
| NIN-HJ470_TRF | G,J,K,M              | 47                    | 200             | 35@250MHz | 2000              | 0.35                       | 600                   |
| NIN-HJ560_TRF | G,J,K,M              | 56                    | 200             | 35@250MHz | 1900              | 0.38                       | 600                   |
| NIN-HJ680_TRF | G,J,K,M              | 68                    | 200             | 35@250MHz | 1700              | 0.46                       | 600                   |
| NIN-HJ720_TRF | G,J,K,M              | 72                    | 150             | 34@250MHz | 1700              | 0.46                       | 400                   |
| NIN-HJ820_TRF | G,J,K,M              | 82                    | 150             | 34@250MHz | 1700              | 0.46                       | 400                   |
| NIN-HJR10_TRF | G,J,K,M              | 100                   | 150             | 34@250MHz | 1400              | 0.52                       | 400                   |
| NIN-HJR11_TRF | G,J,K,M              | 110                   | 150             | 32@250MHz | 1350              | 0.79                       | 300                   |
| NIN-HJR12_TRF | G,J,K,M              | 120                   | 150             | 32@250MHz | 1300              | 0.82                       | 300                   |
| NIN-HJR15_TRF | G,J,K,M              | 150                   | 150             | 28@150MHz | 990               | 1.00                       | 280                   |
| NIN-HJR18_TRF | G,J,K,M              | 180                   | 100             | 25@100MHz | 990               | 1.20                       | 240                   |
| NIN-HJR22_TRF | G,J,K,M              | 220                   | 100             | 25@100MHz | 990               | 2.00                       | 200                   |
| NIN-HJR27_TRF | G,J,K,M              | 270                   | 100             | 24@100MHz | 990               | 2.30                       | 170                   |

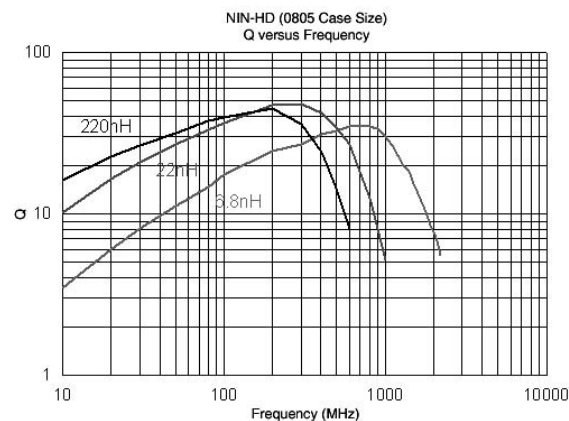
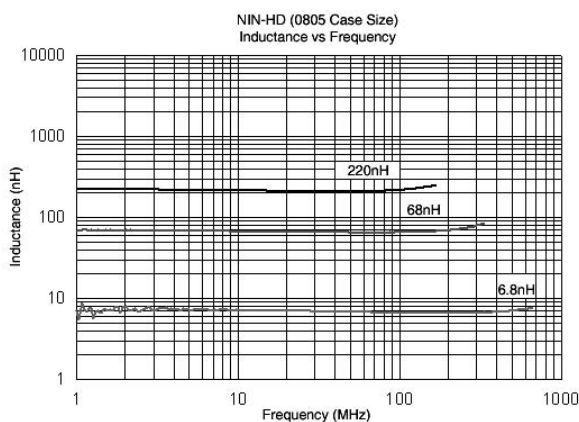


## NIN-HD SERIES

## D-SIZE (0805)

## STANDARD VALUES

| NIC P/N       | INDUCTANCE TOLERANCE | INDUCTANCE VALUE (nH) | FREQUENCY (MHz) | Q FACTOR   | SRF (MHz) Minimum | Rated DC Resistance (ohms) | Rated DC Current (mA) |
|---------------|----------------------|-----------------------|-----------------|------------|-------------------|----------------------------|-----------------------|
| NIN-HD2N2_TRF | J,K,M                | 2.2                   | 250             | 40@1500MHz | 6000              | 0.1                        | 600                   |
| NIN-HD3N3_TRF | J,K,M                | 3.3                   | 250             | 25@1500MHz | 6000              | 0.15                       | 600                   |
| NIN-HD4N7_TRF | J,K,M                | 4.7                   | 250             | 50@1000MHz | 5000              | 0.09                       | 600                   |
| NIN-HD6N8_TRF | J,K,M                | 6.8                   | 250             | 50@1000MHz | 5000              | 0.11                       | 600                   |
| NIN-HD8N2_TRF | J,K,M                | 8.2                   | 250             | 50@1000MHz | 4700              | 0.19                       | 600                   |
| NIN-HD100_TRF | J,K,M                | 10                    | 250             | 50@500MHz  | 4200              | 0.14                       | 600                   |
| NIN-HD120_TRF | G,J,K,M              | 12                    | 250             | 50@500MHz  | 4000              | 0.15                       | 600                   |
| NIN-HD150_TRF | G,J,K,M              | 15                    | 250             | 50@500MHz  | 2900              | 0.17                       | 600                   |
| NIN-HD180_TRF | G,J,K,M              | 18                    | 250             | 50@500MHz  | 3300              | 0.2                        | 600                   |
| NIN-HD220_TRF | G,J,K,M              | 22                    | 250             | 55@500MHz  | 2600              | 0.22                       | 500                   |
| NIN-HD270_TRF | G,J,K,M              | 27                    | 250             | 55@500MHz  | 2500              | 0.25                       | 500                   |
| NIN-HD330_TRF | G,J,K,M              | 33                    | 250             | 60@500MHz  | 2050              | 0.27                       | 500                   |
| NIN-HD390_TRF | G,J,K,M              | 39                    | 250             | 60@500MHz  | 2000              | 0.29                       | 500                   |
| NIN-HD470_TRF | G,J,K,M              | 47                    | 200             | 60@500MHz  | 1650              | 0.31                       | 500                   |
| NIN-HD560_TRF | G,J,K,M              | 56                    | 200             | 60@500MHz  | 1550              | 0.34                       | 500                   |
| NIN-HD680_TRF | G,J,K,M              | 68                    | 200             | 60@500MHz  | 1450              | 0.38                       | 500                   |
| NIN-HD820_TRF | G,J,K,M              | 82                    | 150             | 60@500MHz  | 1300              | 0.42                       | 400                   |
| NIN-HDR10_TRF | G,J,K,M              | 100                   | 150             | 60@500MHz  | 1200              | 0.46                       | 400                   |
| NIN-HDR12_TRF | G,J,K,M              | 120                   | 150             | 50@250MHz  | 1100              | 0.51                       | 400                   |
| NIN-HDR15_TRF | G,J,K,M              | 150                   | 100             | 50@250MHz  | 920               | 0.56                       | 400                   |
| NIN-HDR18_TRF | G,J,K,M              | 180                   | 100             | 50@250MHz  | 870               | 0.64                       | 400                   |
| NIN-HDR22_TRF | G,J,K,M              | 220                   | 100             | 45@250MHz  | 850               | 0.7                        | 400                   |
| NIN-HDR27_TRF | G,J,K,M              | 270                   | 100             | 40@250MHz  | 650               | 1                          | 350                   |
| NIN-HDR33_TRF | G,J,K,M              | 330                   | 100             | 40@250MHz  | 600               | 1.5                        | 310                   |
| NIN-HDR39_TRF | G,J,K,M              | 390                   | 100             | 35@250MHz  | 560               | 1.7                        | 290                   |
| NIN-HDR47_TRF | G,J,K,M              | 470                   | 50              | 33@100MHz  | 375               | 1.76                       | 250                   |
| NIN-HDR56_TRF | G,J,K,M              | 560                   | 25              | 23@50MHz   | 340               | 1.9                        | 230                   |
| NIN-HDR68_TRF | G,J,K,M              | 680                   | 25              | 23@50MHz   | 188               | 2.2                        | 190                   |
| NIN-HDR82_TRF | G,J,K,M              | 820                   | 25              | 23@50MHz   | 215               | 2.35                       | 180                   |
| NIN-HDR91_TRF | G,J,K,M              | 910                   | 25              | 22@50MHz   | 180               | 3                          | 160                   |

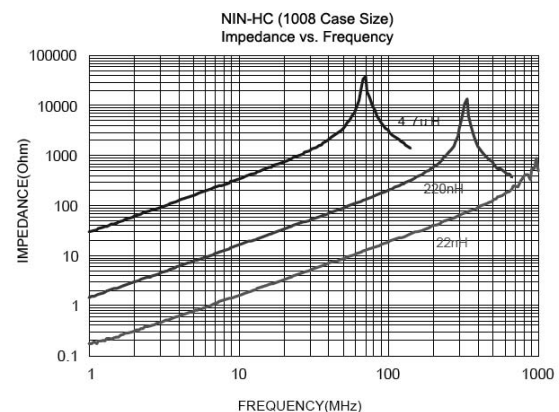
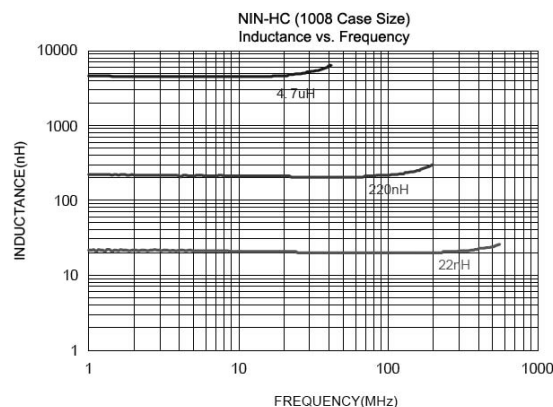


## NIN-HC SERIES

## C-SIZE (1008)

## STANDARD VALUES

| NIC P/N       | INDUCTANCE TOLERANCE | INDUCTANCE VALUE (nH) | FREQUENCY (MHz) | Q FACTOR  | SRF (MHz) Minimum | Rated DC Resistance (ohms) | Rated DC Current (mA) |
|---------------|----------------------|-----------------------|-----------------|-----------|-------------------|----------------------------|-----------------------|
| NIN-HC100_TRF | J,K,M                | 10                    | 50              | 50@500MHz | 4100              | 0.08                       | 1000                  |
| NIN-HC120_TRF | J,K,M                | 12                    | 50              | 50@500MHz | 3300              | 0.09                       | 1000                  |
| NIN-HC150_TRF | J,K,M                | 15                    | 50              | 40@500MHz | 2500              | 0.1                        | 500                   |
| NIN-HC180_TRF | J,K,M                | 18                    | 50              | 50@350MHz | 2500              | 0.11                       | 1000                  |
| NIN-HC220_TRF | J,K,M                | 22                    | 50              | 55@350MHz | 2400              | 0.12                       | 1000                  |
| NIN-HC270_TRF | J,K,M                | 27                    | 50              | 55@350MHz | 1600              | 0.13                       | 1000                  |
| NIN-HC330_TRF | G,J,K,M              | 33                    | 50              | 60@350MHz | 1600              | 0.14                       | 1000                  |
| NIN-HC390_TRF | G,J,K,M              | 39                    | 50              | 60@350MHz | 1500              | 0.15                       | 1000                  |
| NIN-HC470_TRF | G,J,K,M              | 47                    | 50              | 65@350MHz | 1500              | 0.16                       | 1000                  |
| NIN-HC560_TRF | G,J,K                | 56                    | 50              | 65@350MHz | 1300              | 0.18                       | 1000                  |
| NIN-HC680_TRF | G,J,K                | 68                    | 50              | 65@350MHz | 1300              | 0.2                        | 1000                  |
| NIN-HC820_TRF | G,J,K                | 82                    | 50              | 60@350MHz | 1000              | 0.22                       | 1000                  |
| NIN-HCR10_TRF | G,J,K                | 100                   | 25              | 60@350MHz | 1000              | 0.56                       | 650                   |
| NIN-HCR12_TRF | G,J,K                | 120                   | 25              | 60@350MHz | 950               | 0.63                       | 650                   |
| NIN-HCR15_TRF | G,J,K                | 150                   | 25              | 45@100MHz | 850               | 0.7                        | 580                   |
| NIN-HCR18_TRF | G,J,K                | 180                   | 25              | 45@100MHz | 750               | 0.77                       | 620                   |
| NIN-HCR22_TRF | G,J,K                | 220                   | 25              | 45@100MHz | 700               | 0.84                       | 500                   |
| NIN-HCR27_TRF | G,J,K                | 270                   | 25              | 45@100MHz | 600               | 0.91                       | 500                   |
| NIN-HCR33_TRF | G,J,K                | 330                   | 25              | 45@100MHz | 570               | 1.05                       | 450                   |
| NIN-HCR39_TRF | G,J,K                | 390                   | 25              | 45@100MHz | 500               | 1.12                       | 470                   |
| NIN-HCR47_TRF | G,J,K                | 470                   | 25              | 45@100MHz | 450               | 1.19                       | 470                   |
| NIN-HCR56_TRF | G,J,K                | 560                   | 25              | 45@100MHz | 415               | 1.33                       | 400                   |
| NIN-HCR62_TRF | G,J,K                | 620                   | 25              | 45@100MHz | 375               | 1.4                        | 400                   |
| NIN-HCR68_TRF | G,J,K                | 680                   | 25              | 45@100MHz | 375               | 1.47                       | 400                   |
| NIN-HCR75_TRF | G,J,K                | 750                   | 25              | 45@100MHz | 360               | 1.54                       | 360                   |
| NIN-HCR82_TRF | G,J,K                | 820                   | 25              | 45@100MHz | 350               | 1.61                       | 360                   |
| NIN-HCR91_TRF | G,J,K                | 910                   | 25              | 35@50MHz  | 320               | 1.68                       | 330                   |
| NIN-HC1R0_TRF | G,J,K                | 1000                  | 25              | 35@50MHz  | 290               | 1.75                       | 330                   |
| NIN-HC1R2_TRF | G,J,K                | 1200                  | 7.9             | 35@50MHz  | 250               | 2                          | 280                   |
| NIN-HC1R5_TRF | G,J,K                | 1500                  | 7.9             | 28@50MHz  | 200               | 2.3                        | 280                   |
| NIN-HC1R8_TRF | G,J,K                | 1800                  | 7.9             | 28@50MHz  | 160               | 2.6                        | 270                   |
| NIN-HC2R2_TRF | G,J,K                | 2200                  | 7.9             | 22@50MHz  | 160               | 2.8                        | 250                   |
| NIN-HC2R7_TRF | G,J,K                | 2700                  | 7.9             | 22@25MHz  | 140               | 4.78                       | 250                   |
| NIN-HC3R3_TRF | G,J,K                | 3300                  | 7.9             | 22@25MHz  | 110               | 5.26                       | 250                   |
| NIN-HC3R9_TRF | G,J,K                | 3900                  | 7.9             | 20@25MHz  | 100               | 5.75                       | 230                   |
| NIN-HC4R7_TRF | G,J,K                | 4700                  | 7.9             | 18@25MHz  | 90                | 6.3                        | 230                   |



## NIN-HE SERIES

## D-SIZE (1206)

## STANDARD VALUES

| NIC P/N       | INDUCTANCE VALUE (nH) | INDUCTANCE TOLERANCE | FREQUENCY L/Q(MHz) | Q FACTOR  | SRF (MHz) Minimum | Rated DC Resistance (ohms) | Rated DC Current (mA) |
|---------------|-----------------------|----------------------|--------------------|-----------|-------------------|----------------------------|-----------------------|
| NIN-HE3N3_TRF | 3.3                   | G, J, K              | 100/300            | 20@300MHz | 6200              | 0.07                       | 1000                  |
| NIN-HE6N8_TRF | 6.8                   | G, J, K              | 100/300            | 30@300MHz | 5500              | 0.07                       | 1000                  |
| NIN-HE100_TRF | 10                    | G, J, K              | 100/300            | 40@300MHz | 4000              | 0.09                       | 1000                  |
| NIN-HE120_TRF | 12                    | G, J, K              | 100/300            | 40@300MHz | 3200              | 0.09                       | 1000                  |
| NIN-HE150_TRF | 15                    | G, J, K              | 100/300            | 40@300MHz | 3200              | 0.12                       | 1000                  |
| NIN-HE180_TRF | 18                    | G, J, K              | 100/300            | 45@300MHz | 2800              | 0.12                       | 1000                  |
| NIN-HE220_TRF | 22                    | G, J, K              | 100/300            | 50@300MHz | 2200              | 0.12                       | 1000                  |
| NIN-HE270_TRF | 27                    | G, J, K              | 100/300            | 50@300MHz | 1800              | 0.12                       | 1000                  |
| NIN-HE330_TRF | 33                    | G, J, K              | 100/300            | 50@300MHz | 1800              | 0.12                       | 1000                  |
| NIN-HE390_TRF | 39                    | G, J, K              | 100/300            | 50@300MHz | 1800              | 0.12                       | 1000                  |
| NIN-HE470_TRF | 47                    | G, J, K              | 100/300            | 50@300MHz | 1500              | 0.13                       | 1000                  |
| NIN-HE560_TRF | 56                    | G, J, K              | 100/300            | 55@300MHz | 1450              | 0.14                       | 1000                  |
| NIN-HE680_TRF | 68                    | G, J, K              | 100/300            | 55@300MHz | 1200              | 0.26                       | 900                   |
| NIN-HE820_TRF | 82                    | G, J, K              | 100/300            | 55@300MHz | 1200              | 0.21                       | 900                   |
| NIN-HER10_TRF | 100                   | G, J, K              | 100/300            | 55@300MHz | 1100              | 0.3                        | 850                   |
| NIN-HER12_TRF | 120                   | G, J, K              | 100/300            | 60@300MHz | 1100              | 0.3                        | 800                   |
| NIN-HER15_TRF | 150                   | G, J, K              | 100/300            | 55@300MHz | 950               | 0.31                       | 750                   |
| NIN-HER18_TRF | 180                   | G, J, K              | 50/300             | 60@300MHz | 900               | 0.43                       | 700                   |
| NIN-HER22_TRF | 220                   | G, J, K              | 50/300             | 60@300MHz | 760               | 0.56                       | 670                   |
| NIN-HER27_TRF | 270                   | G, J, K              | 50/300             | 50@300MHz | 730               | 0.56                       | 630                   |
| NIN-HER33_TRF | 330                   | G, J, K              | 50/150             | 45@150MHz | 650               | 0.7                        | 590                   |
| NIN-HER39_TRF | 390                   | G, J, K              | 50/150             | 45@150MHz | 600               | 0.8                        | 530                   |
| NIN-HER47_TRF | 470                   | G, J, K              | 50/150             | 45@150MHz | 550               | 1.3                        | 490                   |
| NIN-HER56_TRF | 560                   | G, J, K              | 35/150             | 45@150MHz | 470               | 1.34                       | 460                   |
| NIN-HER68_TRF | 680                   | G, J, K              | 35/150             | 45@150MHz | 450               | 1.58                       | 430                   |
| NIN-HER82_TRF | 820                   | G, J, K              | 35/150             | 45@150MHz | 420               | 1.82                       | 400                   |
| NIN-HE1R0_TRF | 1000                  | G, J, K              | 35/150             | 45@150MHz | 400               | 2.8                        | 320                   |
| NIN-HE1R2_TRF | 1200                  | G, J, K              | 35/150             | 45@150MHz | 380               | 3.2                        | 300                   |

Note: Extended values, tolerances, and enhanced versions are available please contact NIC for more details.

## NIN-HA SERIES

## D-SIZE (1210)

## STANDARD VALUES

| NIC P/N       | INDUCTANCE VALUE (nH) | INDUCTANCE TOLERANCE | FREQUENCY L/Q(MHz) | Q FACTOR  | SRF (MHz) Minimum | Rated DC Resistance (ohms) | Rated DC Current (mA) |
|---------------|-----------------------|----------------------|--------------------|-----------|-------------------|----------------------------|-----------------------|
| NIN-HA3N9_TRF | 3.9                   | G, J, K              | 100/300            | 30@300MHz | 6000              | 0.05                       | 1000                  |
| NIN-HA4N7_TRF | 4.7                   | G, J, K              | 100/300            | 30@300MHz | 5800              | 0.065                      | 1000                  |
| NIN-HA8N2_TRF | 8.2                   | G, J, K              | 100/300            | 30@300MHz | 5500              | 0.07                       | 1000                  |
| NIN-HA100_TRF | 10                    | G, J, K              | 100/300            | 40@300MHz | 4000              | 0.08                       | 1000                  |
| NIN-HA120_TRF | 12                    | G, J, K              | 100/300            | 40@300MHz | 3200              | 0.08                       | 1000                  |
| NIN-HA150_TRF | 15                    | G, J, K              | 100/300            | 40@300MHz | 3200              | 0.1                        | 1000                  |
| NIN-HA180_TRF | 18                    | G, J, K              | 100/300            | 50@300MHz | 2800              | 0.1                        | 1000                  |
| NIN-HA220_TRF | 22                    | G, J, K              | 100/300            | 50@300MHz | 2200              | 0.1                        | 1000                  |
| NIN-HA270_TRF | 27                    | G, J, K              | 100/300            | 50@300MHz | 1800              | 0.11                       | 1000                  |
| NIN-HA330_TRF | 33                    | G, J, K              | 100/300            | 55@300MHz | 1800              | 0.11                       | 1000                  |
| NIN-HA390_TRF | 39                    | G, J, K              | 100/300            | 55@300MHz | 1500              | 0.12                       | 1000                  |
| NIN-HA430_TRF | 43                    | G, J, K              | 100/300            | 55@300MHz | 1500              | 0.12                       | 1000                  |
| NIN-HA470_TRF | 47                    | G, J, K              | 100/300            | 55@300MHz | 1500              | 0.13                       | 1000                  |
| NIN-HA560_TRF | 56                    | G, J, K              | 100/300            | 55@300MHz | 1450              | 0.14                       | 1000                  |
| NIN-HA680_TRF | 68                    | G, J, K              | 100/300            | 55@300MHz | 1200              | 0.15                       | 900                   |
| NIN-HA820_TRF | 82                    | G, J, K              | 100/300            | 55@300MHz | 1000              | 0.2                        | 900                   |
| NIN-HAR10_TRF | 100                   | G, J, K              | 100/300            | 55@300MHz | 900               | 0.2                        | 850                   |
| NIN-HAR12_TRF | 120                   | G, J, K              | 100/300            | 60@300MHz | 800               | 0.25                       | 800                   |
| NIN-HAR15_TRF | 150                   | G, J, K              | 100/300            | 60@300MHz | 700               | 0.25                       | 750                   |
| NIN-HAR18_TRF | 180                   | G, J, K              | 50/300             | 60@300MHz | 650               | 0.3                        | 700                   |
| NIN-HAR22_TRF | 220                   | G, J, K              | 50/300             | 60@300MHz | 650               | 0.4                        | 770                   |
| NIN-HAR27_TRF | 270                   | G, J, K              | 50/300             | 40@300MHz | 580               | 0.4                        | 630                   |
| NIN-HAR33_TRF | 330                   | G, J, K              | 50/150             | 45@150MHz | 580               | 0.58                       | 590                   |
| NIN-HAR39_TRF | 390                   | G, J, K              | 50/150             | 45@150MHz | 510               | 0.58                       | 530                   |
| NIN-HAR47_TRF | 470                   | G, J, K              | 50/150             | 45@150MHz | 480               | 0.8                        | 490                   |
| NIN-HAR56_TRF | 560                   | G, J, K              | 35/150             | 45@150MHz | 420               | 1.1                        | 460                   |
| NIN-HAR68_TRF | 680                   | G, J, K              | 35/150             | 45@150MHz | 400               | 1.2                        | 430                   |
| NIN-HAR82_TRF | 820                   | G, J, K              | 35/150             | 45@150MHz | 370               | 1.82                       | 400                   |
| NIN-HA1R0_TRF | 1000                  | G, J, K              | 35/150             | 45@150MHz | 340               | 1.85                       | 320                   |
| NIN-HA1R2_TRF | 1200                  | G, J, K              | 35/150             | 35@150MHz | 220               | 1.87                       | 300                   |
| NIN-HA1R5_TRF | 1500                  | G, J, K              | 7.9/50             | 20@50MHz  | 160               | 1.95                       | 310                   |
| NIN-HA1R8_TRF | 1800                  | G, J, K              | 7.9/50             | 30@50MHz  | 160               | 2.25                       | 310                   |
| NIN-HA2R2_TRF | 2200                  | G, J, K              | 7.9/50             | 25@50MHz  | 130               | 2.41                       | 310                   |
| NIN-HA2R7_TRF | 2700                  | G, J, K              | 7.9/50             | 25@50MHz  | 110               | 2.85                       | 300                   |
| NIN-HA3R0_TRF | 3000                  | G, J, K              | 7.9/25             | 20@25MHz  | 110               | 3.12                       | 300                   |
| NIN-HA3R9_TRF | 3900                  | G, J, K              | 7.9/25             | 20@25MHz  | 60                | 3.6                        | 290                   |
| NIN-HA4R7_TRF | 4700                  | G, J, K              | 7.9/25             | 20@25MHz  | 60                | 4                          | 280                   |
| NIN-HA5R6_TRF | 5600                  | G, J, K              | 7.9/25             | 15@25MHz  | 50                | 5                          | 250                   |
| NIN-HA6R8_TRF | 6800                  | G, J, K              | 7.9                | 15@7.9MHz | 40                | 8                          | 230                   |
| NIN-HA8R6_TRF | 8600                  | G, J, K              | 7.9                | 15@7.9MHz | 40                | 9                          | 200                   |

Note: Extended values, tolerances, and enhanced versions are available please contact NIC for more details.



### NIN-HB SERIES

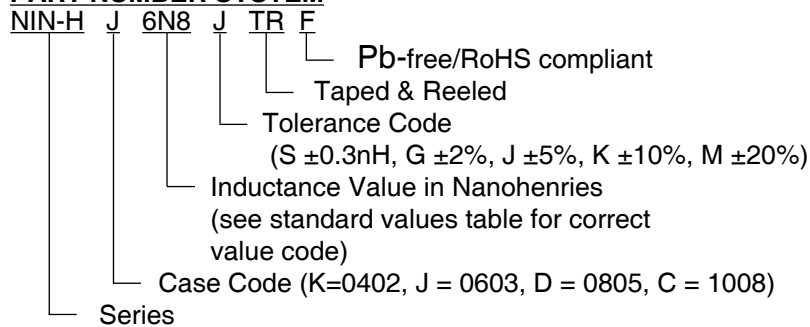
### D-SIZE (1812)

### STANDARD VALUES

| NIC P/N       | INDUCTANCE VALUE (μH) | INDUCTANCE TOLERANCE | FREQUENCY L/Q(MHz) | Q FACTOR | SRF (MHz) Minimum | Rated DC Resistance (ohms) | Rated DC Current (mA) |
|---------------|-----------------------|----------------------|--------------------|----------|-------------------|----------------------------|-----------------------|
| NIN-HB1R0_TRF | 1                     | G, J, K              | 7.9/50             | 60@50MHz | 250               | 1.2                        | 480                   |
| NIN-HB1R2_TRF | 1.2                   | G, J, K              | 7.9/50             | 60@50MHz | 230               | 1.2                        | 480                   |
| NIN-HB1R5_TRF | 1.5                   | G, J, K              | 7.9/50             | 60@50MHz | 210               | 1.6                        | 430                   |
| NIN-HB1R8_TRF | 1.8                   | G, J, K              | 7.9/50             | 55@50MHz | 150               | 2                          | 380                   |
| NIN-HB2R2_TRF | 2.2                   | G, J, K              | 7.9/50             | 55@50MHz | 150               | 2.2                        | 340                   |
| NIN-HB2R7_TRF | 2.7                   | G, J, K              | 7.9/50             | 55@50MHz | 150               | 3.2                        | 300                   |
| NIN-HB3R3_TRF | 3.3                   | G, J, K              | 7.9/50             | 55@50MHz | 130               | 3.8                        | 270                   |
| NIN-HB3R9_TRF | 3.9                   | G, J, K              | 7.9/50             | 55@50MHz | 120               | 5                          | 240                   |
| NIN-HB4R7_TRF | 4.7                   | G, J, K              | 7.9/50             | 55@50MHz | 90                | 5.4                        | 230                   |
| NIN-HB5R6_TRF | 5.6                   | G, J, K              | 7.9/50             | 45@50MHz | 90                | 5.7                        | 220                   |
| NIN-HB6R8_TRF | 6.8                   | G, J, K              | 7.9/50             | 30@50MHz | 80                | 6.6                        | 210                   |
| NIN-HB8R2_TRF | 8.2                   | G, J, K              | 7.9/50             | 20@50MHz | 70                | 7                          | 200                   |
| NIN-HB100_TRF | 10                    | G, J, K              | 7.9/50             | 15@50MHz | 60                | 7.7                        | 190                   |
| NIN-HB120_TRF | 12                    | G, J, K              | 2.5/10             | 30@10MHz | 50                | 8.7                        | 180                   |
| NIN-HB150_TRF | 15                    | G, J, K              | 2.5/10             | 30@10MHz | 30                | 9.6                        | 170                   |
| NIN-HB180_TRF | 18                    | G, J, K              | 2.5/10             | 25@10MHz | 30                | 10.5                       | 160                   |
| NIN-HB220_TRF | 22                    | G, J, K              | 2.5/10             | 25@10MHz | 20                | 11.5                       | 155                   |
| NIN-HB270_TRF | 27                    | G, J, K              | 2.5/10             | 25@10MHz | 20                | 12.5                       | 150                   |
| NIN-HB330_TRF | 33                    | G, J, K              | 2.5/10             | 10@10MHz | 10                | 13.5                       | 145                   |

Note: Extended values, tolerances, and enhanced versions are available please contact NIC for more details.

### PART NUMBER SYSTEM



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

| TYPE   | A          | B          | C          | W          | Carrier Type | QTY/REEL |
|--------|------------|------------|------------|------------|--------------|----------|
| NIN-HK | 0.67 ±0.05 | 0.66 ±0.05 | 1.20 ±0.05 | 8.0 ± 0.2  | Punched      | 3,000    |
| NIN-HJ | 1.25 ±0.1  | 1.05 ±0.1  | 1.80 ±0.1  | 8.0 ± 0.2  | Embossed     | 3,000    |
| NIN-HD | 1.60 ±0.1  | 1.25 ±0.1  | 2.50 ±0.1  | 8.0 ± 0.2  | Embossed     | 2,000    |
| NIN-HC | 2.35 ±0.1  | 2.10 ±0.1  | 2.85 ±0.1  | 8.0 ± 0.2  | Embossed     | 2,000    |
| NIN-HE | 2.40 ±0.1  | 1.90 max.  | 3.80 ±0.1  | 8.0 ± 0.2  | Embossed     | 2,000    |
| NIN-HA | 2.96 ±0.1  | 2.80 max.  | 3.60 ±0.1  | 8.0 ± 0.2  | Embossed     | 1,000    |
| NIN-HB | 3.61 ±0.1  | 3.81 max.  | 4.90 ±0.1  | 12.0 ± 0.2 | Embossed     | 500      |

### EMBOSSED PLASTIC CARRIER DIMENSIONS (mm)

