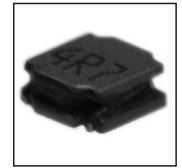


## FEATURES

- SHIELDED POWER INDUCTOR
- HIGH CURRENT (UP TO 10.35 AMPS)
- SURFACE MOUNTABLE CONSTRUCTION
- HIGH INDUCTANCE (UP TO 330 $\mu$ H)
- TAPED AND REELED FOR AUTOMATIC INSERTION
- FOR USE IN DC/DC CONVERTERS

**RoHS Compliant**  
includes all homogeneous materials



\*See Part Number System for Details

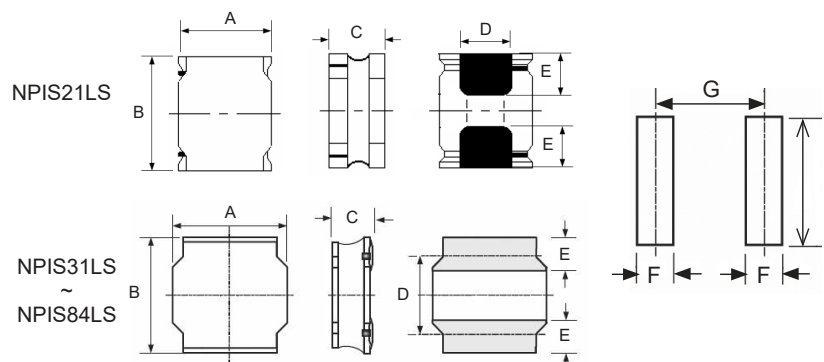
## CHARACTERISTICS

| Case Size                           | NPIS21LS   | NPIS31LS         | NPIS32LS           | NPIS35LS         | NPIS41LS           | NPIS42LS          |
|-------------------------------------|--|------------------|--------------------|------------------|--------------------|-------------------|
| Inductance Range                    | 0.68 ~ 15 $\mu$ H  | 1.0 ~ 62 $\mu$ H | 0.82 ~ 100 $\mu$ H | 1.0 ~ 62 $\mu$ H | 0.82 ~ 100 $\mu$ H | 1.0 ~ 100 $\mu$ H |
| Ambient Operating Temperature Range | -25°C ~ +120°C (including self-heating)                  |                  |                    |                  |                    |                   |
| Temperature Rise at Irms            | Maximum +40°C Temperature Rise                           |                  |                    |                  |                    |                   |
| Inductance Change at Isat           | Maximum -30% Inductance Drop From Initial Measured Value |                  |                    |                  |                    |                   |
| Inductance Tolerance                | $\pm$ 20% (M), $\pm$ 30% (Y)                             |                  |                    |                  |                    |                   |
| Resistance to Solder Heat           | +260°C for 10 seconds                                    |                  |                    |                  |                    |                   |

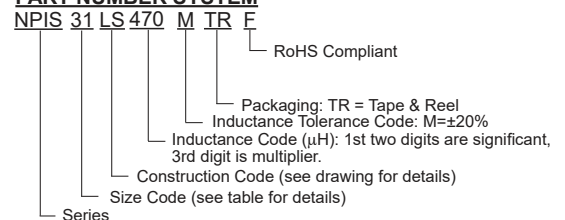
| Case Size                           | NPIS43LS   | NPIS52LS           | NPIS62LS          | NPIS63LS          | NPIS65LS           | NPIS84LS           |
|-------------------------------------|--|--------------------|-------------------|-------------------|--------------------|--------------------|
| Inductance Range                    | 0.91 ~ 120 $\mu$ H                                       | 0.75 ~ 100 $\mu$ H | 0.82 ~ 22 $\mu$ H | 1.5 ~ 100 $\mu$ H | 0.82 ~ 330 $\mu$ H | 0.82 ~ 330 $\mu$ H |
| Ambient Operating Temperature Range | -25°C ~ +120°C (including self-heating)                  |                    |                   |                   |                    |                    |
| Temperature Rise at Irms            | Maximum +40°C Temperature Rise                           |                    |                   |                   |                    |                    |
| Inductance Change at Isat           | Maximum -30% Inductance Drop From Initial Measured Value |                    |                   |                   |                    |                    |
| Inductance Tolerance                | $\pm$ 20% (M), $\pm$ 30% (Y)                             |                    |                   |                   |                    |                    |
| Resistance to Solder Heat           | +260°C for 10 seconds                                    |                    |                   |                   |                    |                    |

## DIMENSIONS (mm)

| Series   | A $\pm$ 0.3 | B $\pm$ 0.3 | C max. | D $\pm$ 0.3 | E $\pm$ 0.3 | F   | G    | I   |
|----------|-------------|-------------|--------|-------------|-------------|-----|------|-----|
| NPIS21LS | 2.0         | 2.5         | 1.2    | 1.5         | 0.8         | .85 | 1.65 | 2.5 |
| NPIS31LS | 3.0         | 3.0         | 1.2    | 1.5         | 0.75        | 0.8 | 2.3  | 2.7 |
| NPIS32LS | 3.0         | 3.0         | 1.4    | 1.5         | 0.75        |     |      |     |
| NPIS35LS | 3.0         | 3.0         | 1.7    | 1.5         | 0.75        |     |      |     |
| NPIS41LS | 4.0         | 4.0         | 1.4    | 2.1         | 0.95        | 1.2 | 3.0  | 3.7 |
| NPIS42LS | 4.0         | 4.0         | 2.2    | 2.1         | 0.95        |     |      |     |
| NPIS43LS | 4.0         | 4.0         | 3.0    | 2.1         | 0.95        |     |      |     |
| NPIS52LS | 5.0         | 5.0         | 2.0    | 2.5         | 1.25        | 1.5 | 3.6  | 4.0 |
| NPIS62LS | 6.0         | 6.0         | 2.2    | 2.9         | 1.55        | 1.6 | 4.7  | 5.7 |
| NPIS63LS | 6.0         | 6.0         | 2.8    | 2.9         | 1.55        |     |      |     |
| NPIS65LS | 6.0         | 6.0         | 4.5    | 2.9         | 1.55        |     |      |     |
| NPIS84LS | 8.0         | 8.0         | 4.2    | 4.0         | 2.0         | 2.2 | 6.0  | 7.5 |



### PART NUMBER SYSTEM



| Series          | Standard Values - Case Size 31 (3.0 x 3.0 x 1.2mm) |           |                 |         |             |             |           |
|-----------------|--|-----------|-----------------|---------|-------------|-------------|-----------|
|                 | Inductance (μH)                                    | Tolerance | Test Conditions | DCR (Ω) | Isat (Amps) | Irms (Amps) | SRF (MHz) |
| NPIS21LSR68YTRF | 0.68   | ±30%      | 100KHz, 1V      | 0.065   | 3.06        | 1.55        | 140       |
| NPIS21LS1R0YTRF | 1.0  | ±30%      | 100KHz, 1V      | 0.075   | 2.68        | 1.45        | 110       |
| NPIS21LS1R2YTRF | 1.2  | ±30%      | 100KHz, 1V      | 0.095   | 2.52        | 1.3         | 100       |
| NPIS21LS1R5YTRF | 1.5  | ±30%      | 100KHz, 1V      | 0.11    | 2.22        | 1.2         | 97        |
| NPIS21LS2R2MTRF | 2.2  | ±20%      | 100KHz, 1V      | 0.165   | 1.78        | 0.99        | 69        |
| NPIS21LS2R7MTRF | 2.7  | ±20%      | 100KHz, 1V      | 0.18    | 1.65        | 0.95        | 63        |
| NPIS21LS3R3MTRF | 3.3  | ±20%      | 100KHz, 1V      | 0.215   | 1.72        | 0.87        | 62        |
| NPIS21LS3R6MTRF | 3.6  | ±20%      | 100KHz, 1V      | 0.215   | 1.48        | 0.87        | 53        |
| NPIS21LS4R3MTRF | 4.3  | ±20%      | 100KHz, 1V      | 0.28    | 1.33        | 0.76        | 51        |
| NPIS21LS4R7MTRF | 4.7  | ±20%      | 100KHz, 1V      | 0.305   | 1.27        | 0.72        | 47        |
| NPIS21LS5R1MTRF | 5.1  | ±20%      | 100KHz, 1V      | 0.33    | 1.2         | 0.7         | 44        |
| NPIS21LS5R6MTRF | 5.6  | ±20%      | 100KHz, 1V      | 0.435   | 1.23        | 0.61        | 46        |
| NPIS21LS6R2MTRF | 6.2  | ±20%      | 100KHz, 1V      | 0.435   | 1.09        | 0.61        | 38        |
| NPIS21LS6R8MTRF | 6.8  | ±20%      | 100KHz, 1V      | 0.46    | 1.03        | 0.59        | 38        |
| NPIS21LS7R5MTRF | 7.5  | ±20%      | 100KHz, 1V      | 0.49    | 1.0         | 0.57        | 35        |
| NPIS21LS8R2MTRF | 8.2  | ±20%      | 100KHz, 1V      | 0.52    | 0.99        | 0.55        | 36        |
| NPIS21LS9R1MTRF | 9.1  | ±20%      | 100KHz, 1V      | 0.55    | 0.97        | 0.54        | 34        |
| NPIS21LS100MTRF | 10   | ±20%      | 100KHz, 1V      | 0.575   | 0.88        | 0.53        | 34        |
| NPIS21LS120MTRF | 12   | ±20%      | 100KHz, 1V      | 0.85    | 0.8         | 0.43        | 28        |
| NPIS21LS150MTRF | 15   | ±20%      | 100KHz, 1V      | 1.25    | 0.67        | 0.35        | 25        |

Maximum +40°C temperature rise at I<sub>rms</sub>. Maximum -30% inductance drop from initial measured value at I<sub>sat</sub>.

| Series          | Standard Values - Case Size 31 (3.0 x 3.0 x 1.2mm) |           |                 |         |             |             |           |
|-----------------|--|-----------|-----------------|---------|-------------|-------------|-----------|
|                 | Inductance (μH)                                    | Tolerance | Test Conditions | DCR (Ω) | Isat (Amps) | Irms (Amps) | SRF (MHz) |
| NPIS31LS1R0YTRF | 1.0  | ±30%      | 100KHz, 1V      | 0.065   | 1.4         | 1.45        | 180       |
| NPIS31LS1R5YTRF | 1.5  | ±30%      | 100KHz, 1V      | 0.08    | 1.27        | 1.3         | 120       |
| NPIS31LS2R2YTRF | 2.2  | ±30%      | 100KHz, 1V      | 0.11    | 1.15        | 1.09        | 100       |
| NPIS31LS2R7YTRF | 2.7  | ±30%      | 100KHz, 1V      | 0.13    | 1.0         | 1.02        | 90        |
| NPIS31LS3R3YTRF | 3.3  | ±30%      | 100KHz, 1V      | 0.145   | 0.97        | 0.96        | 74        |
| NPIS31LS4R7MTRF | 4.7  | ±20%      | 100KHz, 1V      | 0.225   | 0.75        | 0.77        | 59        |
| NPIS31LS6R8MTRF | 6.8  | ±20%      | 100KHz, 1V      | 0.305   | 0.55        | 0.66        | 42        |
| NPIS31LS100MTRF | 10   | ±20%      | 100KHz, 1V      | 0.4     | 0.55        | 0.58        | 39        |
| NPIS31LS120MTRF | 12   | ±20%      | 100KHz, 1V      | 0.505   | 0.43        | 0.52        | 36        |
| NPIS31LS150MTRF | 15   | ±20%      | 100KHz, 1V      | 0.61    | 0.42        | 0.47        | 30        |
| NPIS31LS180MTRF | 18   | ±20%      | 100KHz, 1V      | 0.68    | 0.4         | 0.44        | 29        |
| NPIS31LS220MTRF | 22   | ±20%      | 100KHz, 1V      | 0.93    | 0.35        | 0.38        | 28        |
| NPIS31LS270MTRF | 27   | ±20%      | 100KHz, 1V      | 1.08    | 0.3         | 0.35        | 25        |
| NPIS31LS330MTRF | 33   | ±20%      | 100KHz, 1V      | 1.55    | 0.29        | 0.3         | 18        |
| NPIS31LS390MTRF | 39   | ±20%      | 100KHz, 1V      | 1.75    | 0.28        | 0.28        | 18        |
| NPIS31LS470MTRF | 47   | ±20%      | 100KHz, 1V      | 1.95    | 0.22        | 0.26        | 18        |
| NPIS31LS560MTRF | 56   | ±20%      | 100KHz, 1V      | 2.32    | 0.21        | 0.24        | 18        |
| NPIS31LS620MTRF | 62   | ±20%      | 100KHz, 1V      | 2.45    | 0.2         | 0.23        | 16        |

Maximum +40°C temperature rise at I<sub>rms</sub>. Maximum -30% inductance drop from initial measured value at I<sub>sat</sub>.



| Series          | Standard Values - Case Size 84 (3.2 x 3.2 x 1.4mm) |           |                 |         |             |             |           |
|-----------------|--|-----------|-----------------|---------|-------------|-------------|-----------|
|                 | Inductance (μH)                                    | Tolerance | Test Conditions | DCR (Ω) | Isat (Amps) | Irms (Amps) | SRF (MHz) |
| NPIS32LSR82YTRF | 0.82   | ±30%      | 100KHz, 1V      | 0.03    | 2.05        | 2.47        | 180       |
| NPIS32LS1R0YTRF | 1.0  | ±30%      | 100KHz, 1V      | 0.04    | 1.87        | 2.2         | 120       |
| NPIS32LS1R2YTRF | 1.2  | ±30%      | 100KHz, 1V      | 0.045   | 2.22        | 2.01        | 120       |
| NPIS32LS1R5YTRF | 1.5  | ±30%      | 100KHz, 1V      | 0.045   | 1.62        | 2.01        | 110       |
| NPIS32LS1R8YTRF | 1.8  | ±30%      | 100KHz, 1V      | 0.055   | 1.51        | 1.84        | 90        |
| NPIS32LS2R2YTRF | 2.2  | ±30%      | 100KHz, 1V      | 0.075   | 1.2         | 1.55        | 84        |
| NPIS32LS2R7YTRF | 2.7  | ±30%      | 100KHz, 1V      | 0.085   | 1.14        | 1.48        | 65        |
| NPIS32LS3R3MTRF | 3.3  | ±20%      | 100KHz, 1V      | 0.1     | 1.05        | 1.36        | 64        |
| NPIS32LS4R7MTRF | 4.7  | ±20%      | 100KHz, 1V      | 0.12    | 0.9         | 1.24        | 61        |
| NPIS32LS6R8MTRF | 6.8  | ±20%      | 100KHz, 1V      | 0.19    | 0.75        | 0.98        | 61        |
| NPIS32LS100MTRF | 10   | ±20%      | 100KHz, 1V      | 0.265   | 0.6         | 0.83        | 42        |
| NPIS32LS120MTRF | 12   | ±20%      | 100KHz, 1V      | 0.345   | 0.48        | 0.73        | 32        |
| NPIS32LS150MTRF | 15   | ±20%      | 100KHz, 1V      | 0.36    | 0.45        | 0.71        | 27        |
| NPIS32LS180MTRF | 18   | ±20%      | 100KHz, 1V      | 0.545   | 0.43        | 0.58        | 25        |
| NPIS32LS220MTRF | 22   | ±20%      | 100KHz, 1V      | 0.645   | 0.42        | 0.53        | 23        |
| NPIS32LS270MTRF | 27   | ±20%      | 100KHz, 1V      | 0.77    | 0.4         | 0.49        | 21        |
| NPIS32LS330MTRF | 33   | ±20%      | 100KHz, 1V      | 0.875   | 0.36        | 0.46        | 18        |
| NPIS32LS360MTRF | 36   | ±20%      | 100KHz, 1V      | 0.95    | 0.34        | 0.44        | 18        |
| NPIS32LS390MTRF | 39   | ±20%      | 100KHz, 1V      | 1.08    | 0.3         | 0.41        | 18        |
| NPIS32LS470MTRF | 47   | ±20%      | 100KHz, 1V      | 1.1     | 0.27        | 0.41        | 14        |
| NPIS32LS560MTRF | 56   | ±20%      | 100KHz, 1V      | 1.38    | 0.26        | 0.36        | 14        |
| NPIS32LS620MTRF | 62   | ±20%      | 100KHz, 1V      | 1.53    | 0.25        | 0.35        | 12        |
| NPIS32LS680MTRF | 68   | ±20%      | 100KHz, 1V      | 1.67    | 0.24        | 0.33        | 12        |
| NPIS32LS820MTRF | 82   | ±20%      | 100KHz, 1V      | 1.9     | 0.22        | 0.31        | 12        |
| NPIS32LS101MTRF | 100  | ±20%      | 100KHz, 1V      | 2.86    | 0.21        | 0.25        | 12        |

Maximum +40°C temperature rise at I<sub>rms</sub>. Maximum -30% inductance drop from initial measured value at I<sub>sat</sub>.

| Series          | Standard Values - Case Size 35 (3.0 x 3.0 x 1.7mm) |           |                 |         |             |             |           |
|-----------------|--|-----------|-----------------|---------|-------------|-------------|-----------|
|                 | Inductance (μH)                                    | Tolerance | Test Conditions | DCR (Ω) | Isat (Amps) | Irms (Amps) | SRF (MHz) |
| NPIS35LS1R0YTRF | 1.0  | ±30%      | 100KHz, 1V      | 0.03    | 2.3         | 2.35        | 150       |
| NPIS35LS1R5YTRF | 1.5  | ±30%      | 100KHz, 1V      | 0.05    | 2.3         | 1.7         | 100       |
| NPIS35LS1R8YTRF | 1.8  | ±30%      | 100KHz, 1V      | 0.05    | 1.75        | 1.7         | 92        |
| NPIS35LS2R2YTRF | 2.2  | ±30%      | 100KHz, 1V      | 0.06    | 1.6         | 1.6         | 86        |
| NPIS35LS2R7YTRF | 2.7  | ±30%      | 100KHz, 1V      | 0.075   | 1.52        | 1.43        | 64        |
| NPIS35LS3R3MTRF | 3.3  | ±20%      | 100KHz, 1V      | 0.08    | 1.32        | 1.36        | 68        |
| NPIS35LS3R6MTRF | 3.6  | ±20%      | 100KHz, 1V      | 0.105   | 1.28        | 1.2         | 59        |
| NPIS35LS4R3MTRF | 4.3  | ±20%      | 100KHz, 1V      | 0.115   | 1.2         | 1.14        | 53        |
| NPIS35LS4R7MTRF | 4.7  | ±20%      | 100KHz, 1V      | 0.125   | 1.1         | 1.09        | 46        |
| NPIS35LS5R1MTRF | 5.1  | ±20%      | 100KHz, 1V      | 0.125   | 1.08        | 1.09        | 49        |
| NPIS35LS6R2MTRF | 6.2  | ±20%      | 100KHz, 1V      | 0.15    | 1.0         | 0.98        | 46        |
| NPIS35LS6R8MTRF | 6.8  | ±20%      | 100KHz, 1V      | 0.2     | 0.85        | 0.85        | 39        |
| NPIS35LS100MTRF | 10   | ±20%      | 100KHz, 1V      | 0.25    | 0.72        | 0.77        | 41        |
| NPIS35LS120MTRF | 12   | ±20%      | 100KHz, 1V      | 0.32    | 0.7         | 0.68        | 32        |
| NPIS35LS150MTRF | 15   | ±20%      | 100KHz, 1V      | 0.35    | 0.66        | 0.65        | 30        |
| NPIS35LS180MTRF | 18   | ±20%      | 100KHz, 1V      | 0.43    | 0.56        | 0.59        | 23        |
| NPIS35LS220MTRF | 22   | ±20%      | 100KHz, 1V      | 0.46    | 0.52        | 0.57        | 23        |
| NPIS35LS270MTRF | 27   | ±20%      | 100KHz, 1V      | 0.73    | 0.48        | 0.45        | 22        |
| NPIS35LS330MTRF | 33   | ±20%      | 100KHz, 1V      | 0.82    | 0.44        | 0.43        | 20        |
| NPIS35LS390MTRF | 39   | ±20%      | 100KHz, 1V      | 0.995   | 0.41        | 0.39        | 14        |
| NPIS35LS430MTRF | 43   | ±20%      | 100KHz, 1V      | 1.06    | 0.37        | 0.37        | 16        |
| NPIS35LS470MTRF | 47   | ±20%      | 100KHz, 1V      | 1.25    | 0.35        | 0.35        | 14        |
| NPIS35LS560MTRF | 56   | ±20%      | 100KHz, 1V      | 1.28    | 0.33        | 0.34        | 13        |
| NPIS35LS620MTRF | 62   | ±20%      | 100KHz, 1V      | 1.43    | 0.33        | 0.32        | 13        |

Maximum +40°C temperature rise at I<sub>rms</sub>. Maximum -30% inductance drop from initial measured value at I<sub>sat</sub>.

| Series          | Standard Values - Case Size 41 (4.0 x 4.0 x 1.4mm) |           |                 |         |             |             |           |
|-----------------|--|-----------|-----------------|---------|-------------|-------------|-----------|
|                 | Inductance (μH)                                    | Tolerance | Test Conditions | DCR (Ω) | Isat (Amps) | Irms (Amps) | SRF (MHz) |
| NPIS41LSR82YTRF | 0.82   | ±30%      | 100KHz, 1V      | 0.05    | 3.53        | 1.65        | 150       |
| NPIS41LS1R0YTRF | 1.0  | ±30%      | 100KHz, 1V      | 0.05    | 2.61        | 1.65        | 120       |
| NPIS41LS1R2YTRF | 1.2  | ±30%      | 100KHz, 1V      | 0.065   | 2.83        | 1.46        | 100       |
| NPIS41LS1R5YTRF | 1.5  | ±30%      | 100KHz, 1V      | 0.065   | 2.1         | 1.46        | 90        |
| NPIS41LS1R8YTRF | 1.8  | ±30%      | 100KHz, 1V      | 0.08    | 2.47        | 1.32        | 88        |
| NPIS41LS2R2YTRF | 2.2  | ±30%      | 100KHz, 1V      | 0.08    | 1.76        | 1.32        | 74        |
| NPIS41LS2R7YTRF | 2.7  | ±30%      | 100KHz, 1V      | 0.09    | 1.9         | 1.25        | 71        |
| NPIS41LS3R3YTRF | 3.3  | ±30%      | 100KHz, 1V      | 0.09    | 1.25        | 1.25        | 60        |
| NPIS41LS3R6YTRF | 3.6  | ±30%      | 100KHz, 1V      | 0.11    | 1.2         | 1.12        | 57        |
| NPIS41LS4R3YTRF | 4.3  | ±30%      | 100KHz, 1V      | 0.14    | 1.75        | 1.0         | 54        |
| NPIS41LS4R7YTRF | 4.7  | ±30%      | 100KHz, 1V      | 0.125   | 1.15        | 1.05        | 50        |
| NPIS41LS5R1YTRF | 5.1  | ±30%      | 100KHz, 1V      | 0.155   | 1.55        | 0.95        | 50        |
| NPIS41LS5R6YTRF | 5.6  | ±30%      | 100KHz, 1V      | 0.14    | 1.0         | 1.0         | 42        |
| NPIS41LS6R8MTRF | 6.8  | ±20%      | 100KHz, 1V      | 0.155   | 0.95        | 0.95        | 40        |
| NPIS41LS100MTRF | 10   | ±20%      | 100KHz, 1V      | 0.265   | 0.8         | 0.77        | 33        |
| NPIS41LS120MTRF | 12   | ±20%      | 100KHz, 1V      | 0.29    | 0.66        | 0.7         | 32        |
| NPIS41LS150MTRF | 15   | ±20%      | 100KHz, 1V      | 0.34    | 0.56        | 0.64        | 25        |
| NPIS41LS180MTRF | 18   | ±20%      | 100KHz, 1V      | 0.47    | 0.55        | 0.55        | 23        |
| NPIS41LS220MTRF | 22   | ±20%      | 100KHz, 1V      | 0.47    | 0.54        | 0.55        | 20        |
| NPIS41LS270MTRF | 27   | ±20%      | 100KHz, 1V      | 0.72    | 0.5         | 0.45        | 18        |
| NPIS41LS330MTRF | 33   | ±20%      | 100KHz, 1V      | 0.81    | 0.42        | 0.42        | 17        |
| NPIS41LS360MTRF | 36   | ±20%      | 100KHz, 1V      | 0.9     | 0.4         | 0.4         | 14        |
| NPIS41LS390MTRF | 39   | ±20%      | 100KHz, 1V      | 1.1     | 0.55        | 0.37        | 16        |
| NPIS41LS470MTRF | 47   | ±20%      | 100KHz, 1V      | 1.1     | 0.35        | 0.37        | 12        |
| NPIS41LS560MTRF | 56   | ±20%      | 100KHz, 1V      | 1.25    | 0.33        | 0.33        | 11        |
| NPIS41LS680MTRF | 68   | ±20%      | 100KHz, 1V      | 1.46    | 0.3         | 0.31        | 11        |
| NPIS41LS820MTRF | 82   | ±20%      | 100KHz, 1V      | 2.14    | 0.28        | 0.26        | 11        |
| NPIS41LS101MTRF | 100  | ±20%      | 100KHz, 1V      | 2.21    | 0.25        | 0.25        | 9.4       |

Maximum +40°C temperature rise at I<sub>rms</sub>. Maximum -30% inductance drop from initial measured value at I<sub>sat</sub>.

| Series          | Standard Values - Case Size 42 (4.0 x 4.0 x 2.2mm) |           |                 |         |             |             |           |
|-----------------|--|-----------|-----------------|---------|-------------|-------------|-----------|
|                 | Inductance (μH)                                    | Tolerance | Test Conditions | DCR (Ω) | Isat (Amps) | Irms (Amps) | SRF (MHz) |
| NPIS42LS1R0YTRF | 1.0  | ±30%      | 100KHz, 1V      | 0.029   | 6.1         | 2.15        | 75        |
| NPIS42LS1R2YTRF | 1.2  | ±30%      | 100KHz, 1V      | 0.029   | 5.1         | 2.15        | 72        |
| NPIS42LS1R5YTRF | 1.5  | ±30%      | 100KHz, 1V      | 0.035   | 4.45        | 1.98        | 71        |
| NPIS42LS2R2YTRF | 2.2  | ±30%      | 100KHz, 1V      | 0.04    | 3.4         | 1.85        | 49        |
| NPIS42LS3R3MTRF | 3.3  | ±20%      | 100KHz, 1V      | 0.07    | 3.2         | 1.4         | 44        |
| NPIS42LS3R6MTRF | 3.6  | ±20%      | 100KHz, 1V      | 0.055   | 2.8         | 1.54        | 49        |
| NPIS42LS4R7MTRF | 4.7  | ±20%      | 100KHz, 1V      | 0.075   | 2.35        | 1.34        | 42        |
| NPIS42LS5R1MTRF | 5.1  | ±20%      | 100KHz, 1V      | 0.085   | 2.3         | 1.27        | 42        |
| NPIS42LS5R6MTRF | 5.6  | ±20%      | 100KHz, 1V      | 0.09    | 2.2         | 1.22        | 30        |
| NPIS42LS6R2MTRF | 6.2  | ±20%      | 100KHz, 1V      | 0.115   | 2.15        | 1.08        | 36        |
| NPIS42LS6R8MTRF | 6.8  | ±20%      | 100KHz, 1V      | 0.125   | 2.2         | 1.04        | 33        |
| NPIS42LS7R5MTRF | 7.5  | ±20%      | 100KHz, 1V      | 0.115   | 1.85        | 1.08        | 30        |
| NPIS42LS8R2MTRF | 8.2  | ±20%      | 100KHz, 1V      | 0.125   | 1.75        | 1.04        | 27        |
| NPIS42LS100MTRF | 10   | ±20%      | 100KHz, 1V      | 0.165   | 1.6         | 0.9         | 26        |
| NPIS42LS120MTRF | 12   | ±20%      | 100KHz, 1V      | 0.175   | 1.5         | 0.88        | 26        |
| NPIS42LS150MTRF | 15   | ±20%      | 100KHz, 1V      | 0.23    | 1.35        | 0.77        | 24        |
| NPIS42LS220MTRF | 22   | ±20%      | 100KHz, 1V      | 0.35    | 1.05        | 0.62        | 15        |
| NPIS42LS270MTRF | 27   | ±20%      | 100KHz, 1V      | 0.545   | 1.02        | 0.5         | 14        |
| NPIS42LS330MTRF | 33   | ±20%      | 100KHz, 1V      | 0.55    | 0.85        | 0.49        | 11        |
| NPIS42LS390MTRF | 39   | ±20%      | 100KHz, 1V      | 0.65    | 0.82        | 0.46        | 11        |
| NPIS42LS430MTRF | 43   | ±20%      | 100KHz, 1V      | 0.66    | 0.77        | 0.45        | 10        |
| NPIS42LS470MTRF | 47   | ±20%      | 100KHz, 1V      | 0.71    | 0.74        | 0.44        | 10        |
| NPIS42LS510MTRF | 51   | ±20%      | 100KHz, 1V      | 0.75    | 0.7         | 0.42        | 10        |
| NPIS42LS560MTRF | 56   | ±20%      | 100KHz, 1V      | 0.8     | 0.66        | 0.41        | 10        |
| NPIS42LS620MTRF | 62   | ±20%      | 100KHz, 1V      | 0.9     | 0.65        | 0.39        | 9.6       |
| NPIS42LS680MTRF | 68   | ±20%      | 100KHz, 1V      | 1.06    | 0.61        | 0.36        | 7.7       |
| NPIS42LS750MTRF | 75   | ±20%      | 100KHz, 1V      | 1.12    | 0.6         | 0.35        | 7.7       |
| NPIS42LS820MTRF | 82   | ±20%      | 100KHz, 1V      | 1.17    | 0.56        | 0.34        | 7.2       |
| NPIS42LS101MTRF | 100  | ±20%      | 100KHz, 1V      | 1.35    | 0.52        | 0.31        | 6.3       |

Maximum +40°C temperature rise at Irms. Maximum -30% inductance drop from initial measured value at Isat.

| Series          | Standard Values - Case Size 43 (4.0 x 4.0 x 3.0mm) |           |                 |         |             |             |           |
|-----------------|--|-----------|-----------------|---------|-------------|-------------|-----------|
|                 | Inductance (μH)                                    | Tolerance | Test Conditions | DCR (Ω) | Isat (Amps) | Irms (Amps) | SRF (MHz) |
| NPIS43LSR91YTRF | 0.91   | ±30%      | 100KHz, 1V      | 0.01    | 6.25        | 4.15        | 100       |
| NPIS43LS1R2YTRF | 1.2  | ±30%      | 100KHz, 1V      | 0.015   | 5.8         | 3.82        | 80        |
| NPIS43LS1R5YTRF | 1.5  | ±30%      | 100KHz, 1V      | 0.02    | 4.84        | 3.34        | 62        |
| NPIS43LS1R8YTRF | 1.8  | ±30%      | 100KHz, 1V      | 0.025   | 5.4         | 3.2         | 60        |
| NPIS43LS2R2YTRF | 2.2  | ±30%      | 100KHz, 1V      | 0.03    | 4.9         | 2.95        | 52        |
| NPIS43LS3R3MTRF | 3.3  | ±20%      | 100KHz, 1V      | 0.04    | 3.3         | 2.4         | 38        |
| NPIS43LS4R3MTRF | 4.3  | ±20%      | 100KHz, 1V      | 0.055   | 2.95        | 2.1         | 37        |
| NPIS43LS4R7MTRF | 4.7  | ±20%      | 100KHz, 1V      | 0.06    | 2.9         | 2.0         | 31        |
| NPIS43LS5R6MTRF | 5.6  | ±20%      | 100KHz, 1V      | 0.065   | 2.6         | 1.95        | 30        |
| NPIS43LS6R2MTRF | 6.2  | ±20%      | 100KHz, 1V      | 0.07    | 2.5         | 1.85        | 29        |
| NPIS43LS6R8MTRF | 6.8  | ±20%      | 100KHz, 1V      | 0.09    | 2.75        | 1.6         | 24        |
| NPIS43LS7R5MTRF | 7.5  | ±20%      | 100KHz, 1V      | 0.085   | 2.2         | 1.65        | 26        |
| NPIS43LS8R2MTRF | 8.2  | ±20%      | 100KHz, 1V      | 0.09    | 2.1         | 1.6         | 26        |
| NPIS43LS9R1MTRF | 9.1  | ±20%      | 100KHz, 1V      | 0.095   | 2.0         | 1.55        | 23        |
| NPIS43LS100MTRF | 10   | ±20%      | 100KHz, 1V      | 0.1     | 1.95        | 1.5         | 21        |
| NPIS43LS120MTRF | 12   | ±20%      | 100KHz, 1V      | 0.135   | 1.7         | 1.3         | 18        |
| NPIS43LS150MTRF | 15   | ±20%      | 100KHz, 1V      | 0.19    | 1.65        | 1.11        | 16        |
| NPIS43LS180MTRF | 18   | ±20%      | 100KHz, 1V      | 0.2     | 1.4         | 1.1         | 10        |
| NPIS43LS220MTRF | 22   | ±20%      | 100KHz, 1V      | 0.225   | 1.3         | 1.0         | 10        |
| NPIS43LS330MTRF | 33   | ±20%      | 100KHz, 1V      | 0.33    | 1.1         | 0.84        | 10        |
| NPIS43LS360MTRF | 36   | ±20%      | 100KHz, 1V      | 0.335   | 1.05        | 0.83        | 9.8       |
| NPIS43LS390MTRF | 39   | ±20%      | 100KHz, 1V      | 0.435   | 1.03        | 0.73        | 10        |
| NPIS43LS430MTRF | 43   | ±20%      | 100KHz, 1V      | 0.44    | 1.0         | 0.73        | 9.2       |
| NPIS43LS470MTRF | 47   | ±20%      | 100KHz, 1V      | 0.445   | 0.95        | 0.72        | 8.4       |
| NPIS43LS510MTRF | 51   | ±20%      | 100KHz, 1V      | 0.47    | 0.9         | 0.7         | 8.4       |
| NPIS43LS560MTRF | 56   | ±20%      | 100KHz, 1V      | 0.555   | 0.85        | 0.65        | 8.4       |
| NPIS43LS620MTRF | 62   | ±20%      | 100KHz, 1V      | 0.585   | 0.8         | 0.63        | 7.0       |
| NPIS43LS680MTRF | 68   | ±20%      | 100KHz, 1V      | 0.7     | 0.75        | 0.58        | 7.0       |
| NPIS43LS750MTRF | 75   | ±20%      | 100KHz, 1V      | 1.02    | 0.7         | 0.48        | 6.3       |
| NPIS43LS820MTRF | 82   | ±20%      | 100KHz, 1V      | 1.06    | 0.66        | 0.47        | 5.6       |
| NPIS43LS910MTRF | 91   | ±20%      | 100KHz, 1V      | 1.1     | 0.65        | 0.46        | 5.6       |
| NPIS43LS101MTRF | 100  | ±20%      | 100KHz, 1V      | 1.15    | 0.6         | 0.45        | 5.6       |
| NPIS43LS121MTRF | 120  | ±20%      | 100KHz, 1V      | 1.35    | 0.55        | 0.42        | 5.4       |

Maximum +40°C temperature rise at I<sub>rms</sub>. Maximum -30% inductance drop from initial measured value at I<sub>sat</sub>.

| Series          | Standard Values - Case Size 52 (5.0 x 5.0 x 2.0mm) |           |                 |         |             |             |           |
|-----------------|--|-----------|-----------------|---------|-------------|-------------|-----------|
|                 | Inductance (μH)                                    | Tolerance | Test Conditions | DCR (Ω) | Isat (Amps) | Irms (Amps) | SRF (MHz) |
| NPIS52LSR75YTRF | 0.75   | ±30%      | 100KHz, 1V      | 0.014   | 6.32        | 4.2         | 110       |
| NPIS52LS1R0YTRF | 1.0  | ±30%      | 100KHz, 1V      | 0.018   | 5.72        | 3.7         | 97        |
| NPIS52LS1R2YTRF | 1.2  | ±30%      | 100KHz, 1V      | 0.018   | 4.94        | 3.7         | 84        |
| NPIS52LS1R5YTRF | 1.5  | ±30%      | 100KHz, 1V      | 0.023   | 4.95        | 3.34        | 80        |
| NPIS52LS2R2YTRF | 2.2  | ±30%      | 100KHz, 1V      | 0.027   | 3.85        | 3.05        | 61        |
| NPIS52LS2R7YTRF | 2.7  | ±30%      | 100KHz, 1V      | 0.038   | 3.58        | 2.55        | 54        |
| NPIS52LS3R3YTRF | 3.3  | ±30%      | 100KHz, 1V      | 0.044   | 3.25        | 2.4         | 46        |
| NPIS52LS3R6YTRF | 3.6  | ±30%      | 100KHz, 1V      | 0.044   | 2.89        | 2.4         | 44        |
| NPIS52LS3R9YTRF | 3.9  | ±30%      | 100KHz, 1V      | 0.05    | 2.99        | 2.25        | 40        |
| NPIS52LS4R7YTRF | 4.7  | ±30%      | 100KHz, 1V      | 0.059   | 2.4         | 2.05        | 33        |
| NPIS52LS5R1MTRF | 5.1  | ±20%      | 100KHz, 1V      | 0.066   | 2.68        | 1.95        | 32        |
| NPIS52LS5R6MTRF | 5.6  | ±20%      | 100KHz, 1V      | 0.066   | 2.37        | 1.95        | 30        |
| NPIS52LS6R8MTRF | 6.8  | ±20%      | 100KHz, 1V      | 0.087   | 2.1         | 1.7         | 30        |
| NPIS52LS8R2MTRF | 8.2  | ±20%      | 100KHz, 1V      | 0.093   | 1.98        | 1.65        | 30        |
| NPIS52LS9R1MTRF | 9.1  | ±20%      | 100KHz, 1V      | 0.105   | 1.86        | 1.55        | 27        |
| NPIS52LS100MTRF | 10   | ±20%      | 100KHz, 1V      | 0.11    | 1.79        | 1.5         | 24        |
| NPIS52LS120MTRF | 12   | ±20%      | 100KHz, 1V      | 0.145   | 1.61        | 1.3         | 23        |
| NPIS52LS150MTRF | 15   | ±20%      | 100KHz, 1V      | 0.165   | 1.44        | 1.25        | 20        |
| NPIS52LS180MTRF | 18   | ±20%      | 100KHz, 1V      | 0.2     | 1.35        | 1.2         | 18        |
| NPIS52LS220MTRF | 22   | ±20%      | 100KHz, 1V      | 0.235   | 1.18        | 1.05        | 16        |
| NPIS52LS270MTRF | 27   | ±20%      | 100KHz, 1V      | 0.285   | 1.09        | 0.95        | 14        |
| NPIS52LS330MTRF | 33   | ±20%      | 100KHz, 1V      | 0.37    | 0.97        | 0.83        | 13        |
| NPIS52LS360MTRF | 36   | ±20%      | 100KHz, 1V      | 0.38    | 0.93        | 0.8         | 12        |
| NPIS52LS390MTRF | 39   | ±20%      | 100KHz, 1V      | 0.415   | 0.93        | 0.78        | 12        |
| NPIS52LS430MTRF | 43   | ±20%      | 100KHz, 1V      | 0.45    | 0.88        | 0.75        | 11        |
| NPIS52LS470MTRF | 47   | ±20%      | 100KHz, 1V      | 0.525   | 0.81        | 0.7         | 11        |
| NPIS52LS510MTRF | 51   | ±20%      | 100KHz, 1V      | 0.545   | 0.76        | 0.68        | 10        |
| NPIS52LS560MTRF | 56   | ±20%      | 100KHz, 1V      | 0.56    | 0.76        | 0.67        | 9.7       |
| NPIS52LS620MTRF | 62   | ±20%      | 100KHz, 1V      | 0.625   | 0.72        | 0.63        | 9.2       |
| NPIS52LS680MTRF | 68   | ±20%      | 100KHz, 1V      | 0.885   | 0.7         | 0.53        | 8.8       |
| NPIS52LS750MTRF | 75   | ±20%      | 100KHz, 1V      | 0.89    | 0.63        | 0.53        | 8.3       |
| NPIS52LS820MTRF | 82   | ±20%      | 100KHz, 1V      | 0.945   | 0.62        | 0.52        | 8.3       |
| NPIS52LS910MTRF | 91   | ±20%      | 100KHz, 1V      | 1.0     | 0.61        | 0.5         | 7.9       |
| NPIS52LS101MTRF | 100  | ±20%      | 100KHz, 1V      | 1.06    | 0.57        | 0.49        | 7.6       |

Maximum +40°C temperature rise at Irms. Maximum -30% inductance drop from initial measured value at Isat.



| Series          | Standard Values - Case Size 62 (6.0 x 6.0 x 2.2mm) |           |                 |         |             |             |           |
|-----------------|--|-----------|-----------------|---------|-------------|-------------|-----------|
|                 | Inductance (μH)                                    | Tolerance | Test Conditions | DCR (Ω) | Isat (Amps) | Irms (Amps) | SRF (MHz) |
| NPIS62LSR82YTRF | 0.82   | ±30%      | 100KHz, 1V      | 0.017   | 6.6         | 3.8         | 110       |
| NPIS62LS1R2YTRF | 1.2  | ±30%      | 100KHz, 1V      | 0.022   | 5.9         | 3.2         | 88        |
| NPIS62LS1R5YTRF | 1.5  | ±30%      | 100KHz, 1V      | 0.022   | 4.25        | 3.2         | 79        |
| NPIS62LS1R8YTRF | 1.8  | ±30%      | 100KHz, 1V      | 0.028   | 4.85        | 2.75        | 68        |
| NPIS62LS2R2YTRF | 2.2  | ±30%      | 100KHz, 1V      | 0.028   | 3.75        | 2.75        | 61        |
| NPIS62LS2R7YTRF | 2.7  | ±30%      | 100KHz, 1V      | 0.035   | 3.9         | 2.6         | 56        |
| NPIS62LS3R3YTRF | 3.3  | ±30%      | 100KHz, 1V      | 0.035   | 3.15        | 2.6         | 51        |
| NPIS62LS4R3YTRF | 4.3  | ±30%      | 100KHz, 1V      | 0.049   | 2.7         | 2.1         | 44        |
| NPIS62LS4R7YTRF | 4.7  | ±30%      | 100KHz, 1V      | 0.058   | 3.0         | 2.0         | 41        |
| NPIS62LS5R6YTRF | 5.6  | ±30%      | 100KHz, 1V      | 0.058   | 2.4         | 1.9         | 36        |
| NPIS62LS6R8YTRF | 6.8  | ±30%      | 100KHz, 1V      | 0.079   | 2.2         | 1.8         | 31        |
| NPIS62LS100MTRF | 10   | ±20%      | 100KHz, 1V      | 0.105   | 1.75        | 1.4         | 27        |
| NPIS62LS150MTRF | 15   | ±20%      | 100KHz, 1V      | 0.145   | 1.5         | 1.2         | 21        |
| NPIS62LS220MTRF | 22   | ±20%      | 100KHz, 1V      | 0.204   | 1.25        | 1.0         | 16        |

Maximum +40°C temperature rise at Irms. Maximum -30% inductance drop from initial measured value at Isat.

| Series          | Standard Values - Case Size 63 (6.0 x 6.0 x 2.8mm) |           |                 |         |             |             |           |
|-----------------|--|-----------|-----------------|---------|-------------|-------------|-----------|
|                 | Inductance (μH)                                    | Tolerance | Test Conditions | DCR (Ω) | Isat (Amps) | Irms (Amps) | SRF (MHz) |
| NPIS63LS1R5YTRF | 1.5  | ±30%      | 100KHz, 1V      | 0.013   | 6.0         | 4.58        | 65        |
| NPIS63LS2R2YTRF | 2.2  | ±30%      | 100KHz, 1V      | 0.015   | 5.1         | 4.09        | 56        |
| NPIS63LS2R7YTRF | 2.7  | ±30%      | 100KHz, 1V      | 0.02    | 4.5         | 3.75        | 48        |
| NPIS63LS3R3YTRF | 3.3  | ±30%      | 100KHz, 1V      | 0.025   | 4.15        | 3.48        | 41        |
| NPIS63LS4R7YTRF | 4.7  | ±30%      | 100KHz, 1V      | 0.03    | 3.6         | 3.08        | 35        |
| NPIS63LS5R1YTRF | 5.1  | ±30%      | 100KHz, 1V      | 0.035   | 3.55        | 2.89        | 33        |
| NPIS63LS6R2MTRF | 6.2  | ±20%      | 100KHz, 1V      | 0.04    | 3.05        | 2.58        | 30        |
| NPIS63LS8R2MTRF | 8.2  | ±20%      | 100KHz, 1V      | 0.055   | 2.6         | 2.25        | 24        |
| NPIS63LS9R1MTRF | 9.1  | ±20%      | 100KHz, 1V      | 0.06    | 2.55        | 2.15        | 24        |
| NPIS63LS100MTRF | 10   | ±20%      | 100KHz, 1V      | 0.065   | 2.35        | 2.05        | 23        |
| NPIS63LS150MTRF | 15   | ±20%      | 100KHz, 1V      | 0.09    | 2.0         | 1.72        | 18        |
| NPIS63LS220MTRF | 22   | ±20%      | 100KHz, 1V      | 0.14    | 1.6         | 1.4         | 14        |
| NPIS63LS270MTRF | 27   | ±20%      | 100KHz, 1V      | 0.155   | 1.5         | 1.32        | 13        |
| NPIS63LS330MTRF | 33   | ±20%      | 100KHz, 1V      | 0.185   | 1.35        | 1.22        | 12        |
| NPIS63LS360MTRF | 36   | ±20%      | 100KHz, 1V      | 0.215   | 1.25        | 1.13        | 11        |
| NPIS63LS390MTRF | 39   | ±20%      | 100KHz, 1V      | 0.225   | 1.25        | 1.1         | 11        |
| NPIS63LS430MTRF | 43   | ±20%      | 100KHz, 1V      | 0.235   | 1.2         | 1.07        | 11        |
| NPIS63LS470MTRF | 47   | ±20%      | 100KHz, 1V      | 0.245   | 1.15        | 1.06        | 9.5       |
| NPIS63LS510MTRF | 51   | ±20%      | 100KHz, 1V      | 0.265   | 1.05        | 1.01        | 9.5       |
| NPIS63LS620MTRF | 62   | ±20%      | 100KHz, 1V      | 0.345   | 0.95        | 0.89        | 7.7       |
| NPIS63LS680MTRF | 68   | ±20%      | 100KHz, 1V      | 0.36    | 0.95        | 0.86        | 7.7       |
| NPIS63LS750MTRF | 75   | ±20%      | 100KHz, 1V      | 0.41    | 0.9         | 0.81        | 7.7       |
| NPIS63LS820MTRF | 82   | ±20%      | 100KHz, 1V      | 0.445   | 0.9         | 0.78        | 7.7       |
| NPIS63LS910MTRF | 91   | ±20%      | 100KHz, 1V      | 0.505   | 0.8         | 0.73        | 7.7       |
| NPIS63LS101MTRF | 100  | ±20%      | 100KHz, 1V      | 0.545   | 0.75        | 0.7         | 7.1       |

Maximum +40°C temperature rise at Irms. Maximum -30% inductance drop from initial measured value at Isat.



| Series          | Standard Values - Case Size 65 (6.0 x 6.0 x 4.5mm) |           |                 |         |             |             |           |
|-----------------|--|-----------|-----------------|---------|-------------|-------------|-----------|
|                 | Inductance (μH)                                    | Tolerance | Test Conditions | DCR (Ω) | Isat (Amps) | Irms (Amps) | SRF (MHz) |
| NPIS65LSR82YTRF | 0.82   | ±30%      | 100KHz, 1V      | 0.008   | 10.35       | 5.9         | 140       |
| NPIS65LS1R0YTRF | 1.0  | ±30%      | 100KHz, 1V      | 0.011   | 9.85        | 5.14        | 100       |
| NPIS65LS1R2YTRF | 1.2  | ±30%      | 100KHz, 1V      | 0.01    | 8.35        | 5.4         | 100       |
| NPIS65LS1R5YTRF | 1.5  | ±30%      | 100KHz, 1V      | 0.012   | 8.8         | 4.95        | 65        |
| NPIS65LS1R8YTRF | 1.8  | ±30%      | 100KHz, 1V      | 0.012   | 7.6         | 4.95        | 74        |
| NPIS65LS2R2YTRF | 2.2  | ±30%      | 100KHz, 1V      | 0.014   | 6.75        | 4.6         | 52        |
| NPIS65LS2R7YTRF | 2.7  | ±30%      | 100KHz, 1V      | 0.015   | 5.75        | 4.3         | 38        |
| NPIS65LS3R6YTRF | 3.6  | ±30%      | 100KHz, 1V      | 0.021   | 5.25        | 3.7         | 28        |
| NPIS65LS4R3MTRF | 4.3  | ±20%      | 100KHz, 1V      | 0.023   | 4.45        | 3.5         | 23        |
| NPIS65LS4R7MTRF | 4.7  | ±20%      | 100KHz, 1V      | 0.026   | 4.97        | 3.3         | 24        |
| NPIS65LS5R1MTRF | 5.1  | ±20%      | 100KHz, 1V      | 0.026   | 4.4         | 3.3         | 23        |
| NPIS65LS5R6MTRF | 5.6  | ±20%      | 100KHz, 1V      | 0.029   | 4.15        | 3.15        | 23        |
| NPIS65LS6R2MTRF | 6.2  | ±20%      | 100KHz, 1V      | 0.031   | 4.43        | 3.0         | 26        |
| NPIS65LS6R8MTRF | 6.8  | ±20%      | 100KHz, 1V      | 0.031   | 3.9         | 3.0         | 20        |
| NPIS65LS7R5MTRF | 7.5  | ±20%      | 100KHz, 1V      | 0.034   | 3.5         | 2.9         | 18        |
| NPIS65LS8R2MTRF | 8.2  | ±20%      | 100KHz, 1V      | 0.043   | 3.9         | 2.6         | 21        |
| NPIS65LS9R1MTRF | 9.1  | ±20%      | 100KHz, 1V      | 0.043   | 3.35        | 2.6         | 17        |
| NPIS65LS100MTRF | 10   | ±20%      | 100KHz, 1V      | 0.048   | 3.2         | 2.45        | 15        |
| NPIS65LS120MTRF | 12   | ±20%      | 100KHz, 1V      | 0.058   | 2.8         | 2.2         | 13        |
| NPIS65LS150MTRF | 15   | ±20%      | 100KHz, 1V      | 0.068   | 2.5         | 2.05        | 12        |
| NPIS65LS180MTRF | 18   | ±20%      | 100KHz, 1V      | 0.081   | 2.2         | 1.85        | 10        |
| NPIS65LS220MTRF | 22   | ±20%      | 100KHz, 1V      | 0.089   | 2.05        | 1.8         | 10        |
| NPIS65LS270MTRF | 27   | ±20%      | 100KHz, 1V      | 0.102   | 1.9         | 1.65        | 9.2       |
| NPIS65LS300MTRF | 30   | ±20%      | 100KHz, 1V      | 0.132   | 1.7         | 1.5         | 7.8       |
| NPIS65LS330MTRF | 33   | ±20%      | 100KHz, 1V      | 0.137   | 1.65        | 1.45        | 7.8       |
| NPIS65LS390MTRF | 39   | ±20%      | 100KHz, 1V      | 0.18    | 1.5         | 1.25        | 7.8       |
| NPIS65LS430MTRF | 43   | ±20%      | 100KHz, 1V      | 0.2     | 1.63        | 1.2         | 7.7       |
| NPIS65LS470MTRF | 47   | ±20%      | 100KHz, 1V      | 0.2     | 1.4         | 1.2         | 6.4       |
| NPIS65LS510MTRF | 51   | ±20%      | 100KHz, 1V      | 0.207   | 1.35        | 1.15        | 6.4       |
| NPIS65LS560MTRF | 56   | ±20%      | 100KHz, 1V      | 0.221   | 1.3         | 1.1         | 6.4       |
| NPIS65LS620MTRF | 62   | ±20%      | 100KHz, 1V      | 0.235   | 1.25        | 1.1         | 6.4       |
| NPIS65LS680MTRF | 68   | ±20%      | 100KHz, 1V      | 0.289   | 1.2         | 1.0         | 6.4       |
| NPIS65LS750MTRF | 75   | ±20%      | 100KHz, 1V      | 0.305   | 1.15        | 0.95        | 5         |
| NPIS65LS820MTRF | 82   | ±20%      | 100KHz, 1V      | 0.341   | 1.05        | 0.9         | 4.9       |
| NPIS65LS910MTRF | 91   | ±20%      | 100KHz, 1V      | 0.359   | 1.0         | 0.85        | 4.9       |
| NPIS65LS101MTRF | 100  | ±20%      | 100KHz, 1V      | 0.433   | 0.95        | 0.8         | 4.2       |
| NPIS65LS121MTRF | 120  | ±20%      | 100KHz, 1V      | 0.484   | 0.85        | 0.77        | 4.2       |
| NPIS65LS151MTRF | 150  | ±20%      | 100KHz, 1V      | 0.58    | 0.8         | 0.7         | 4.2       |
| NPIS65LS221MTRF | 220  | ±20%      | 100KHz, 1V      | 0.834   | 0.7         | 0.59        | 3.5       |
| NPIS65LS331MTRF | 330  | ±20%      | 100KHz, 1V      | 1.27    | 0.57        | 0.57        | 2.8       |

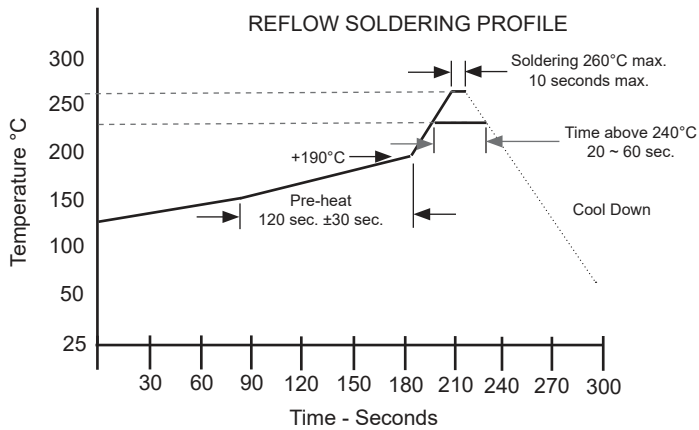
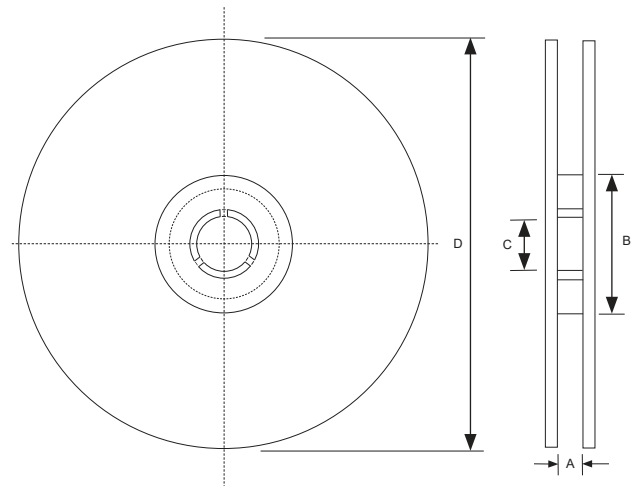
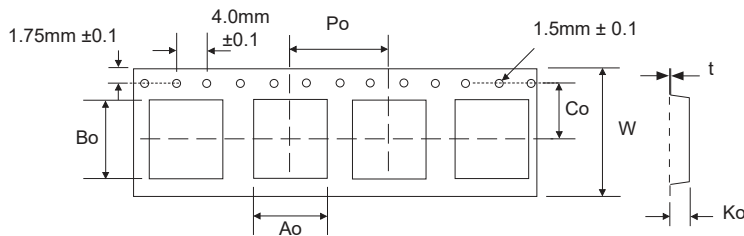
Maximum +40°C temperature rise at I<sub>rms</sub>. Maximum -30% inductance drop from initial measured value at I<sub>sat</sub>.



| Series          | Standard Values - Case Size 84 (8.0 x 8.0 x 4.2mm) |           |                 |         |             |             |           |
|-----------------|--|-----------|-----------------|---------|-------------|-------------|-----------|
|                 | Inductance (μH)                                    | Tolerance | Test Conditions | DCR (Ω) | Isat (Amps) | Irms (Amps) | SRF (MHz) |
| NPIS84LSR82YTRF | 0.82   | ±30%      | 100KHz, 1V      | 0.008   | 13.8        | 6.3         | 94        |
| NPIS84LS1R0YTRF | 1.0  | ±30%      | 100KHz, 1V      | 0.008   | 9.85        | 6.3         | 89        |
| NPIS84LS1R5YTRF | 1.5  | ±30%      | 100KHz, 1V      | 0.01    | 8.15        | 5.65        | 67        |
| NPIS84LS2R0YTRF | 2.0  | ±30%      | 100KHz, 1V      | 0.012   | 9.25        | 5.15        | 43        |
| NPIS84LS2R2YTRF | 2.2  | ±30%      | 100KHz, 1V      | 0.012   | 7.1         | 5.15        | 41        |
| NPIS84LS3R0YTRF | 3.0  | ±30%      | 100KHz, 1V      | 0.014   | 6.1         | 4.7         | 32        |
| NPIS84LS3R3YTRF | 3.3  | ±30%      | 100KHz, 1V      | 0.017   | 6.5         | 4.4         | 27        |
| NPIS84LS3R9YTRF | 3.9  | ±30%      | 100KHz, 1V      | 0.017   | 5.75        | 4.35        | 26        |
| NPIS84LS4R7YTRF | 4.7  | ±30%      | 100KHz, 1V      | 0.019   | 5.9         | 4.1         | 24        |
| NPIS84LS5R1YTRF | 5.1  | ±30%      | 100KHz, 1V      | 0.019   | 4.7         | 4.05        | 22        |
| NPIS84LS5R6YTRF | 5.6  | ±30%      | 100KHz, 1V      | 0.021   | 6.0         | 3.85        | 24        |
| NPIS84LS6R2YTRF | 6.2  | ±30%      | 100KHz, 1V      | 0.021   | 4.45        | 3.85        | 20        |
| NPIS84LS6R8MTRF | 6.8  | ±20%      | 100KHz, 1V      | 0.024   | 4.55        | 3.6         | 20        |
| NPIS84LS8R2MTRF | 8.2  | ±20%      | 100KHz, 1V      | 0.026   | 4.2         | 3.45        | 17        |
| NPIS84LS100MTRF | 10   | ±20%      | 100KHz, 1V      | 0.029   | 3.6         | 3.3         | 15        |
| NPIS84LS150MTRF | 15   | ±20%      | 100KHz, 1V      | 0.047   | 2.95        | 2.6         | 12        |
| NPIS84LS180MTRF | 18   | ±20%      | 100KHz, 1V      | 0.053   | 2.7         | 2.4         | 11        |
| NPIS84LS220MTRF | 22   | ±20%      | 100KHz, 1V      | 0.069   | 2.4         | 2.1         | 9.5       |
| NPIS84LS270MTRF | 27   | ±20%      | 100KHz, 1V      | 0.078   | 2.15        | 2.0         | 9.2       |
| NPIS84LS330MTRF | 33   | ±20%      | 100KHz, 1V      | 0.097   | 2.05        | 1.8         | 7.8       |
| NPIS84LS360MTRF | 36   | ±20%      | 100KHz, 1V      | 0.102   | 2.0         | 1.75        | 7.8       |
| NPIS84LS390MTRF | 39   | ±20%      | 100KHz, 1V      | 0.107   | 1.95        | 1.7         | 7.8       |
| NPIS84LS430MTRF | 43   | ±20%      | 100KHz, 1V      | 0.113   | 1.9         | 1.65        | 7.8       |
| NPIS84LS470MTRF | 47   | ±20%      | 100KHz, 1V      | 0.136   | 1.75        | 1.55        | 6.4       |
| NPIS84LS510MTRF | 51   | ±20%      | 100KHz, 1V      | 0.142   | 1.7         | 1.5         | 6.4       |
| NPIS84LS560MTRF | 56   | ±20%      | 100KHz, 1V      | 0.148   | 1.55        | 1.45        | 6.4       |
| NPIS84LS620MTRF | 62   | ±20%      | 100KHz, 1V      | 0.182   | 1.5         | 1.3         | 6.4       |
| NPIS84LS680MTRF | 68   | ±20%      | 100KHz, 1V      | 0.196   | 1.45        | 1.25        | 4.9       |
| NPIS84LS750MTRF | 75   | ±20%      | 100KHz, 1V      | 0.211   | 1.35        | 1.2         | 4.9       |
| NPIS84LS820MTRF | 82   | ±20%      | 100KHz, 1V      | 0.225   | 1.3         | 1.15        | 5.9       |
| NPIS84LS910MTRF | 91   | ±20%      | 100KHz, 1V      | 0.272   | 1.2         | 1.05        | 4.9       |
| NPIS84LS101MTRF | 100  | ±20%      | 100KHz, 1V      | 0.29    | 1.15        | 1.0         | 4.2       |
| NPIS84LS121MTRF | 120  | ±20%      | 100KHz, 1V      | 0.334   | 1.05        | 0.95        | 3.5       |
| NPIS84LS221MTRF | 220  | ±20%      | 100KHz, 1V      | 0.599   | 0.85        | 0.8         | 3.5       |
| NPIS84LS331MTRF | 330  | ±20%      | 100KHz, 1V      | 0.889   | 0.68        | 0.64        | 2.8       |

Maximum +40°C temperature rise at I<sub>rms</sub>. Maximum -30% inductance drop from initial measured value at I<sub>sat</sub>.

| Case Size | CARRIER TAPING DIMENSIONS (mm) AND REEL QUANTITY |            |            |           |            |            |            |          |
|-----------|--|------------|------------|-----------|------------|------------|------------|----------|
|           | Ao   | Bo         | Ko         | Co        | W          | Po         | t          | Quantity |
| NPIS21LS  | 2.2 ± 0.1  | 2.6 ± 0.1  | 1.4 ± 0.1  | 3.5 ± 0.1 | 8.0 ± 0.3  | 4.0 ± 0.1  | 0.3 ± 0.03 | 2,000    |
| NPIS31LS  | 3.3 ± 0.1  | 3.3 ± 0.1  | 1.4 ± 0.1  | 3.5 ± 0.1 | 8.0 ± 0.3  | 4.0 ± 0.1  | 0.3 ± 0.03 | 2,000    |
| NPIS32LS  |  |            | 1.6 ± 0.1  |           |            |            |            | 2,000    |
| NPIS35LS  |  |            | 1.9 ± 0.1  |           |            |            |            | 2,000    |
| NPIS41LS  | 4.4 ± 0.1  | 4.4 ± 0.1  | 1.6 ± 0.1  | 3.5 ± 0.1 | 8.0 ± 0.3  | 8.0 ± 0.1  | 0.3 ± 0.03 | 4,500    |
| NPIS42LS  |  |            | 2.4 ± 0.1  |           |            |            |            | 3,000    |
| NPIS43LS  |  |            | 3.4 ± 0.1  |           |            |            |            | 2,000    |
| NPIS52LS  | 5.5 ± 0.1  | 5.5 ± 0.1  | 3.0 ± 0.15 | 7.5 ± 0.1 | 16.0 ± 0.3 | 8.0 ± 0.1  | 0.3 ± 0.03 | 2,500    |
| NPIS62LS  | 6.4 ± 0.1  | 6.4 ± 0.1  | 2.5 ± 0.1  | 7.5 ± 0.1 | 16.0 ± 0.3 | 8.0 ± 0.1  | 0.4 ± 0.03 | 2,500    |
| NPIS63LS  |  |            | 3.3 ± 0.1  |           |            |            |            | 2,000    |
| NPIS64LS  |  |            | 4.7 ± 0.1  |           |            |            |            | 1,500    |
| NPIS84LS  | 8.35 ± 0.1                                       | 8.35 ± 0.1 | 4.4 ± 0.1  | 7.5 ± 0.1 | 16.0 ± 0.3 | 12.0 ± 0.1 | 0.4 ± 0.03 | 1,000    |



| Tape Width | REEL DIMENSIONS (mm) |           |            |           |
|------------|----------------------|-----------|------------|-----------|
|            | A(mm)                | B(mm)     | C(mm)      | D(mm)     |
| NPIS21LS   | 9.0 ± 1.5            | 58 ± 2.0  | 13.5 ± 0.2 | 178 ± 2.0 |
| NPIS31LS   | 9.0 ± 1.5            | 58 ± 2.0  | 13.5 ± 0.2 | 178 ± 2.0 |
| NPIS32LS   |                      |           |            |           |
| NPIS35LS   |                      |           |            |           |
| NPIS41LS   | 12.4 +0.2/-0         | 100 ± 2.0 | 13.0 +2/-0 | 330 ± 2.0 |
| NPIS42LS   |                      |           |            |           |
| NPIS43LS   |                      |           |            |           |
| NPIS52LS   | 16.4 +0.2/-0         | 100 ± 2.0 | 13.0 +2/-0 | 330 ± 2.0 |
| NPIS62LS   |                      |           |            |           |
| NPIS63LS   | 12.4 +0.2/-0         | 100 ± 2.0 | 13.0 +2/-0 | 330 ± 2.0 |
| NPIS64LS   |                      |           |            |           |
| NPIS84LS   | 16.4 +0.2/-0         | 100 ± 2.0 | 13.0 +2/-0 | 330 ± 2.0 |