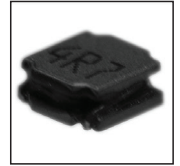


### FEATURES

- SHIELDED POWER INDUCTOR
- HIGH CURRENT (UP TO 13.8 AMPS)
- SURFACE MOUNTABLE CONSTRUCTION
- HIGH INDUCTANCE (UP TO 330μH)
- TAPED AND REELED FOR AUTOMATIC INSERTION

**RoHS  
Compliant**  
includes all homogeneous materials

\*See Part Number System for Details

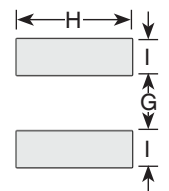
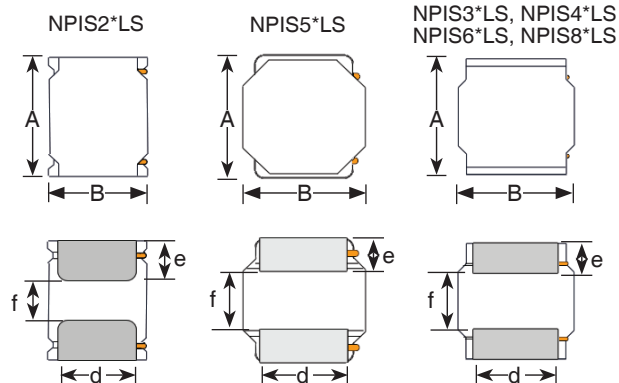


### CHARACTERISTICS

|                                     |                                                          |             |             |              |              |
|-------------------------------------|----------------------------------------------------------|-------------|-------------|--------------|--------------|
| Case Size                           | NPIS20LS                                                 | NPIS21LS    | NPIS31LS    | NPIS32LS     | NPIS35LS     |
| Inductance Range                    | 0.47 ~ 10μH                                              | 0.47 ~ 22μH | 1.0 ~ 62μH  | 0.82 ~ 100μH | 1.0 ~ 68μH   |
| Case Size                           | NPIS41LS                                                 | NPIS48LS    | NPIS42LS    | NPIS43LS     | NPIS52LS     |
| Inductance Range                    | 0.82 ~ 100μH                                             | 1.0 ~ 220μH | 1.0 ~ 100μH | 0.91 ~ 120μH | 0.47 ~ 100μH |
| Case Size                           | NPIS54LS                                                 | NPIS62LS    | NPIS63LS    | NPIS65LS     | NPIS84LS     |
| Inductance Range                    | 1.0 ~ 100μH                                              | 0.5 ~ 22μH  | 1.5 ~ 100μH | 0.82 ~ 330μH | 0.82 ~ 330μH |
| Ambient Operating Temperature Range | -40°C ~ +125°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                | ±20% (M), ±30% (Y)                                       |             |             |              |              |
| Resistance to Solder Heat           | +260°C for 10 seconds                                    |             |             |              |              |

### DIMENSIONS (mm)

| Series   | A         | B         | C        | d         | e          | f          | G   | I    | H   |
|----------|-----------|-----------|----------|-----------|------------|------------|-----|------|-----|
| NPIS20LS | 2.5 ± 0.1 | 2.0 ± 0.1 | 1.0 Max. | 1.5 ± 0.2 | 0.80 ± 0.2 | 0.80 ± 0.2 | 0.8 | 0.85 | 2   |
| NPIS21LS | 2.5 ± 0.1 | 2.0 ± 0.1 | 1.2 Max. | 1.5 ± 0.2 | 0.80 ± 0.2 | 0.80 ± 0.2 |     |      |     |
| NPIS31LS | 3.0 ± 0.2 | 3.0 ± 0.2 | 1.0 Max. | 2.5 ± 0.2 | 0.75 ± 0.2 | 1.5 ± 0.2  |     |      |     |
| NPIS32LS | 3.0 ± 0.2 | 3.0 ± 0.2 | 1.2 Max. | 2.5 ± 0.2 | 0.75 ± 0.2 | 1.5 ± 0.2  | 1.5 | 0.8  | 2.7 |
| NPIS35LS | 3.0 ± 0.2 | 3.0 ± 0.2 | 1.5 Max. | 2.5 ± 0.2 | 0.75 ± 0.2 | 1.5 ± 0.2  |     |      |     |
| NPIS41LS | 4.0 ± 0.2 | 4.0 ± 0.2 | 1.2 Max. | 3.3 ± 0.2 | 0.95 ± 0.2 | 2.1 ± 0.2  |     |      |     |
| NPIS48LS | 4.0 ± 0.2 | 4.0 ± 0.2 | 1.8 Max. | 3.3 ± 0.2 | 0.95 ± 0.2 | 2.1 ± 0.2  | 1.9 | 1.1  | 3.4 |
| NPIS42LS | 4.0 ± 0.2 | 4.0 ± 0.2 | 2.0 Max. | 3.3 ± 0.2 | 0.95 ± 0.2 | 2.1 ± 0.2  |     |      |     |
| NPIS43LS | 4.0 ± 0.2 | 4.0 ± 0.2 | 3.0 Max. | 3.3 ± 0.2 | 0.95 ± 0.2 | 2.1 ± 0.2  |     |      |     |
| NPIS52LS | 5.0 ± 0.2 | 5.0 ± 0.2 | 2.0 Max. | 4.0 ± 0.2 | 1.25 ± 0.2 | 2.5 ± 0.2  | 2.3 | 1.4  | 4.2 |
| NPIS54LS | 5.0 ± 0.2 | 5.0 ± 0.2 | 4.0 Max. | 4.0 ± 0.2 | 1.25 ± 0.2 | 2.5 ± 0.2  |     |      |     |
| NPIS62LS | 6.0 ± 0.3 | 6.0 ± 0.3 | 2.0 Max. | 4.9 ± 0.3 | 1.55 ± 0.3 | 2.9 ± 0.3  |     |      |     |
| NPIS63LS | 6.0 ± 0.3 | 6.0 ± 0.3 | 2.8 Max. | 4.9 ± 0.3 | 1.55 ± 0.3 | 2.9 ± 0.3  | 2.8 | 1.7  | 5.7 |
| NPIS65LS | 6.0 ± 0.3 | 6.0 ± 0.3 | 4.5 Max. | 4.9 ± 0.3 | 1.55 ± 0.3 | 2.9 ± 0.3  |     |      |     |
| NPIS84LS | 8.0 ± 0.3 | 8.0 ± 0.3 | 4.2 Max. | 6.3 ± 0.3 | 2.00 ± 0.3 | 4.0 ± 0.3  |     |      |     |



REFLOW SOLDERING  
LAND PATTERN (ALL SIZES)

### PART NUMBER SYSTEM

NPIS 31 LS 470 M TR E

RoHS Compliant

Packaging: TR = Tape & Reel  
Inductance Tolerance Code: M=±20%  
Inductance Code (μH): 1st two digits are significant, 3rd digit is multiplier.  
Construction Code (see drawing for details)  
Size Code (see table for details)

Series



\*Specifications reflect recent product changes. For more information refer to PCN announcement [Link]

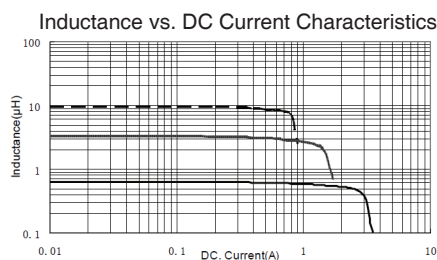
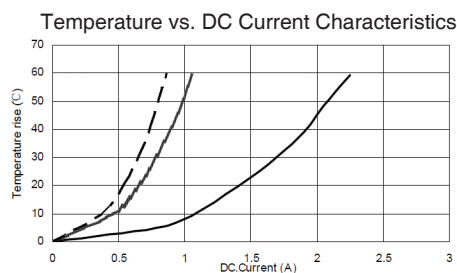
NIC COMPONENTS CORP. www.niccomp.com | www.lowESR.com | www.RFpassives.com | www.SMTmagnetics.com

Specifications are subject to change

## NPIS20LS Size

| Series          | Standard Values - Case Size 20 (2.0 x 2.5 x 1.0mm) |           |                 |                   |                  |                  |             |
|-----------------|----------------------------------------------------|-----------|-----------------|-------------------|------------------|------------------|-------------|
|                 | Inductance (μH)                                    | Tolerance | Test Conditions | Max. DCR (Ω) ±30% | Max. Isat (Amps) | Typ. Isat (Amps) | Irms (Amps) |
| NPIS20LSR47YTRF | 0.47                                               | ±30%      | 100KHz, 1V      | 0.061             | 2.5              | 3.35             | 2.35        |
| NPIS20LSR68YTRF | 0.68                                               | ±30%      | 100KHz, 1V      | 0.081             | 2.2              | 2.75             | 2           |
| NPIS20LS1R0YTRF | 1.0                                                | ±30%      | 100KHz, 1V      | 0.117             | 1.85             | 2.2              | 1.65        |
| NPIS20LS1R5YTRF | 1.5                                                | ±30%      | 100KHz, 1V      | 0.198             | 1.8              | 2.1              | 1.3         |
| NPIS20LS2R2YTRF | 2.2                                                | ±30%      | 100KHz, 1V      | 0.226             | 1.2              | 1.6              | 1.2         |
| NPIS20LS3R3MTRF | 3.3                                                | ±20%      | 100KHz, 1V      | 0.355             | 1.05             | 1.3              | 0.9         |
| NPIS20LS4R7MTRF | 4.7                                                | ±20%      | 100KHz, 1V      | 0.61              | 0.95             | 1.15             | 0.7         |
| NPIS20LS6R8MTRF | 6.8                                                | ±20%      | 100KHz, 1V      | 0.971             | 0.78             | 0.92             | 0.59        |
| NPIS20LS100MTRF | 10                                                 | ±20%      | 100KHz, 1V      | 1.183             | 0.65             | 0.78             | 0.5         |

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



## NPIS21LS Size

| Series          | Standard Values - Case Size 21 (2.0 x 2.5 x 1.2mm) |           |                 |                   |                  |                  |             |
|-----------------|----------------------------------------------------|-----------|-----------------|-------------------|------------------|------------------|-------------|
|                 | Inductance (μH)                                    | Tolerance | Test Conditions | Max. DCR (Ω) ±30% | Max. Isat (Amps) | Typ. Isat (Amps) | Irms (Amps) |
| NPIS21LSR47YTRF | 0.47                                               | ±30%      | 100KHz, 1V      | 0.05              | 3.6              | 4.03             | 2.27        |
| NPIS21LSR68YTRF | 0.68                                               | ±30%      | 100KHz, 1V      | 0.088             | 3.06             | 3.43             | 1.73        |
| NPIS21LS1R0YTRF | 1.0                                                | ±30%      | 100KHz, 1V      | 0.102             | 2.68             | 3                | 1.58        |
| NPIS21LS1R2YTRF | 1.2                                                | ±30%      | 100KHz, 1V      | 0.119             | 2.38             | 2.67             | 1.46        |
| NPIS21LS1R5_TRF | 1.5                                                | ±20%, 30% | 100KHz, 1V      | 0.136             | 2.24             | 2.51             | 1.4         |
| NPIS21LS2R2MTRF | 2.2                                                | ±20%      | 100KHz, 1V      | 0.198             | 1.85             | 2.07             | 1.15        |
| NPIS21LS2R7MTRF | 2.7                                                | ±20%      | 100KHz, 1V      | 0.222             | 1.71             | 1.92             | 1.09        |
| NPIS21LS3R3MTRF | 3.3                                                | ±20%      | 100KHz, 1V      | 0.24              | 1.61             | 1.8              | 1.04        |
| NPIS21LS3R6MTRF | 3.6                                                | ±20%      | 100KHz, 1V      | 0.322             | 1.48             | 1.66             | 0.9         |
| NPIS21LS4R3MTRF | 4.3                                                | ±20%      | 100KHz, 1V      | 0.348             | 1.37             | 1.53             | 0.87        |
| NPIS21LS4R7MTRF | 4.7                                                | ±20%      | 100KHz, 1V      | 0.378             | 1.18             | 1.32             | 0.84        |
| NPIS21LS5R1MTRF | 5.1                                                | ±20%      | 100KHz, 1V      | 0.378             | 1.18             | 1.32             | 0.84        |
| NPIS21LS5R6MTRF | 5.6                                                | ±20%      | 100KHz, 1V      | 0.401             | 1.13             | 1.26             | 0.81        |
| NPIS21LS6R2MTRF | 6.2                                                | ±20%      | 100KHz, 1V      | 0.5               | 1.03             | 1.16             | 0.73        |
| NPIS21LS6R8MTRF | 6.8                                                | ±20%      | 100KHz, 1V      | 0.536             | 0.98             | 1.09             | 0.69        |
| NPIS21LS7R5MTRF | 7.5                                                | ±20%      | 100KHz, 1V      | 0.564             | 0.97             | 1.09             | 0.68        |
| NPIS21LS8R2MTRF | 8.2                                                | ±20%      | 100KHz, 1V      | 0.607             | 0.98             | 1.1              | 0.65        |
| NPIS21LS9R1MTRF | 9.1                                                | ±20%      | 100KHz, 1V      | 0.667             | 0.95             | 1.06             | 0.62        |

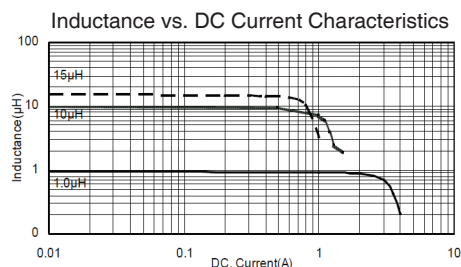
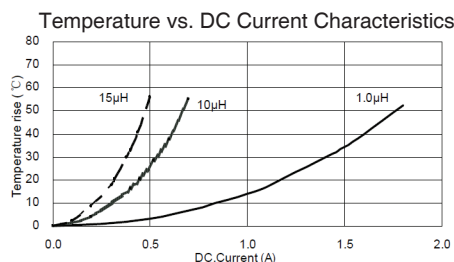
Maximum +40°C temperature rise at Irms. Maximum -30% inductance drop from initial measured value at Isat.



## NPIS21LS Size (Continued)

| Series          | Standard Values - Case Size 21 (2.0 x 2.5 x 1.2mm) |           |                 |                   |                  |                  |             |
|-----------------|----------------------------------------------------|-----------|-----------------|-------------------|------------------|------------------|-------------|
|                 | Inductance (μH)                                    | Tolerance | Test Conditions | Max. DCR (Ω) ±30% | Max. Isat (Amps) | Typ. Isat (Amps) | Irms (Amps) |
| NPIS21LS100MTRF | 10                                                 | ±20%      | 100KHz, 1V      | 0.69              | 0.88             | 0.97             | 0.62        |
| NPIS21LS120MTRF | 12                                                 | ±20%      | 100KHz, 1V      | 0.992             | 0.78             | 0.87             | 0.51        |
| NPIS21LS150MTRF | 15                                                 | ±20%      | 100KHz, 1V      | 1.469             | 0.68             | 0.76             | 0.42        |
| NPIS21LS220MTRF | 22                                                 | ±20%      | 100KHz, 1V      | 1.824             | 0.53             | 0.59             | 0.38        |

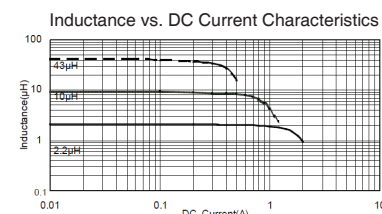
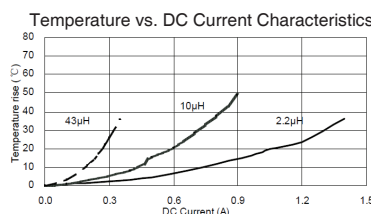
Maximum +40°C temperature rise at Irms. Maximum -30% inductance drop from initial measured value at Isat.



## NPIS31LS Size

| Series          | Standard Values - Case Size 31 (3.0 x 3.0 x 1.0mm) |           |                 |              |                  |                  |           |
|-----------------|----------------------------------------------------|-----------|-----------------|--------------|------------------|------------------|-----------|
|                 | Inductance (μH)                                    | Tolerance | Test Conditions | DCR (Ω) ±30% | Max. Isat (Amps) | Max. 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                | 1.02             | 90        |
| NPIS31LS3R3YTRF | 3.3                                                | ±30%      | 100KHz, 1V      | 0.145        | 0.97             | 0.96             | 74        |
| NPIS31LS3R6MTRF | 3.6                                                | ±20%      | 100KHz, 1V      | 0.165        | 0.95             | 0.9              | 67        |
| 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        |
| NPIS31LS430MTRF | 43                                                 | ±20%      | 100KHz, 1V      | 1.8          | 0.23             | 0.27             | 18        |
| NPIS31LS470MTRF | 47                                                 | ±20%      | 100KHz, 1V      | 1.95         | 0.22             | 0.26             | 18        |
| NPIS31LS510MTRF | 51                                                 | ±20%      | 100KHz, 1V      | 2.2          | 0.21             | 0.25             | 18        |
| NPIS31LS560MTRF | 56                                                 | ±20%      | 100KHz, 1V      | 2.32         | 0.21             | 0.24             | 16        |
| NPIS31LS620MTRF | 62                                                 | ±20%      | 100KHz, 1V      | 2.45         | 0.2              | 0.23             | 16        |

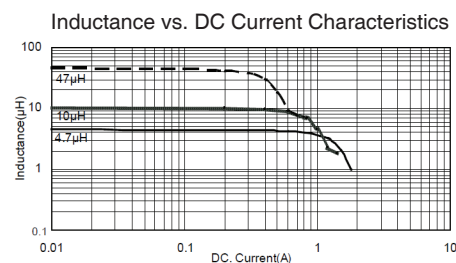
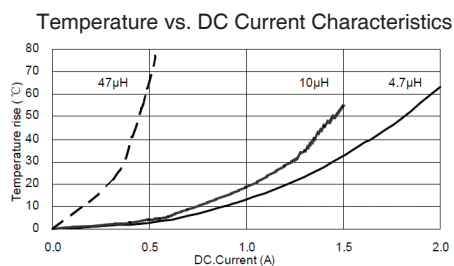
Maximum +40°C temperature rise at Irms. Maximum -30% inductance drop from initial measured value at Isat.



## NPIS32LS Size

| Series          | Standard Values - Case Size 32 (3.0 x 3.0 x 1.2mm) |            |                 |                             |                  |                  |           |
|-----------------|----------------------------------------------------|------------|-----------------|-----------------------------|------------------|------------------|-----------|
|                 | Inductance ( $\mu$ H)                              | Tolerance  | Test Conditions | DCR ( $\Omega$ ) $\pm 30\%$ | Max. Isat (Amps) | Max. Irms (Amps) | SRF (MHz) |
| NPIS32LSR82YTRF | 0.82                                               | $\pm 30\%$ | 100KHz, 1V      | 0.03                        | 2.05             | 2.47             | 180       |
| NPIS32LS1R0YTRF | 1.0                                                | $\pm 30\%$ | 100KHz, 1V      | 0.04                        | 1.87             | 2.2              | 120       |
| NPIS32LS1R2YTRF | 1.2                                                | $\pm 30\%$ | 100KHz, 1V      | 0.045                       | 2.22             | 2.01             | 120       |
| NPIS32LS1R5YTRF | 1.5                                                | $\pm 30\%$ | 100KHz, 1V      | 0.045                       | 1.62             | 2.01             | 110       |
| NPIS32LS1R8YTRF | 1.8                                                | $\pm 30\%$ | 100KHz, 1V      | 0.055                       | 1.51             | 1.84             | 90        |
| NPIS32LS2R2YTRF | 2.2                                                | $\pm 30\%$ | 100KHz, 1V      | 0.075                       | 1.2              | 1.55             | 84        |
| NPIS32LS2R4YTRF | 2.4                                                | $\pm 30\%$ | 100KHz, 1V      | 0.068                       | 1.15             | 1.5              | 100       |
| NPIS32LS2R7YTRF | 2.7                                                | $\pm 30\%$ | 100KHz, 1V      | 0.085                       | 1.14             | 1.48             | 65        |
| NPIS32LS3R3MTRF | 3.3                                                | $\pm 20\%$ | 100KHz, 1V      | 0.1                         | 1.05             | 1.36             | 64        |
| NPIS32LS4R7MTRF | 4.7                                                | $\pm 20\%$ | 100KHz, 1V      | 0.12                        | 0.9              | 1.24             | 61        |
| NPIS32LS6R8MTRF | 6.8                                                | $\pm 20\%$ | 100KHz, 1V      | 0.19                        | 0.75             | 0.98             | 61        |
| NPIS32LS100MTRF | 10                                                 | $\pm 20\%$ | 100KHz, 1V      | 0.265                       | 0.6              | 0.83             | 42        |
| NPIS32LS120MTRF | 12                                                 | $\pm 20\%$ | 100KHz, 1V      | 0.345                       | 0.48             | 0.73             | 32        |
| NPIS32LS150MTRF | 15                                                 | $\pm 20\%$ | 100KHz, 1V      | 0.36                        | 0.45             | 0.71             | 27        |
| NPIS32LS180MTRF | 18                                                 | $\pm 20\%$ | 100KHz, 1V      | 0.545                       | 0.43             | 0.58             | 25        |
| NPIS32LS220MTRF | 22                                                 | $\pm 20\%$ | 100KHz, 1V      | 0.645                       | 0.42             | 0.53             | 23        |
| NPIS32LS270MTRF | 27                                                 | $\pm 20\%$ | 100KHz, 1V      | 0.77                        | 0.4              | 0.49             | 21        |
| NPIS32LS330MTRF | 33                                                 | $\pm 20\%$ | 100KHz, 1V      | 0.875                       | 0.36             | 0.46             | 18        |
| NPIS32LS360MTRF | 36                                                 | $\pm 20\%$ | 100KHz, 1V      | 0.95                        | 0.34             | 0.44             | 18        |
| NPIS32LS390MTRF | 39                                                 | $\pm 20\%$ | 100KHz, 1V      | 1.33                        | 0.3              | 0.37             | 18        |
| NPIS32LS470MTRF | 47                                                 | $\pm 20\%$ | 100KHz, 1V      | 1.36                        | 0.27             | 0.36             | 14        |
| NPIS32LS560MTRF | 56                                                 | $\pm 20\%$ | 100KHz, 1V      | 1.38                        | 0.26             | 0.36             | 14        |
| NPIS32LS620MTRF | 62                                                 | $\pm 20\%$ | 100KHz, 1V      | 1.53                        | 0.25             | 0.35             | 12        |
| NPIS32LS680MTRF | 68                                                 | $\pm 20\%$ | 100KHz, 1V      | 1.67                        | 0.24             | 0.33             | 12        |
| NPIS32LS820MTRF | 82                                                 | $\pm 20\%$ | 100KHz, 1V      | 2.54                        | 0.22             | 0.27             | 12        |
| NPIS32LS101MTRF | 100                                                | $\pm 20\%$ | 100KHz, 1V      | 2.86                        | 0.21             | 0.25             | 12        |

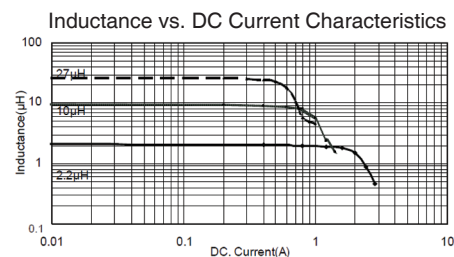
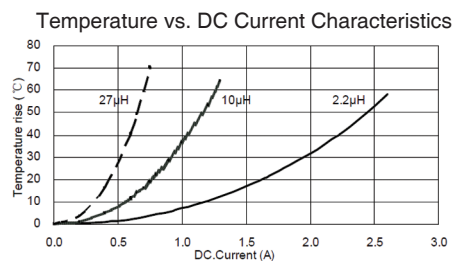
Maximum +40°C temperature rise at Irms. Maximum -30% inductance drop from initial measured value at Isat.



## NPIS35LS Size

| Series          | Standard Values - Case Size 35 (3.0 x 3.0 x 1.5mm) |            |                 |                             |                  |                  |           |
|-----------------|----------------------------------------------------|------------|-----------------|-----------------------------|------------------|------------------|-----------|
|                 | Inductance ( $\mu\text{H}$ )                       | Tolerance  | Test Conditions | DCR ( $\Omega$ ) $\pm 30\%$ | Max. Isat (Amps) | Max. Irms (Amps) | SRF (MHz) |
| NPIS35LS1R0YTRF | 1.0                                                | $\pm 30\%$ | 100KHz, 1V      | 0.037                       | 2.3              | 2.1              | 150       |
| NPIS35LS1R2YTRF | 1.2                                                | $\pm 30\%$ | 100KHz, 1V      | 0.04                        | 2.21             | 1.95             | 110       |
| NPIS35LS1R5YTRF | 1.5                                                | $\pm 30\%$ | 100KHz, 1V      | 0.05                        | 2.3              | 1.7              | 100       |
| NPIS35LS1R8YTRF | 1.8                                                | $\pm 30\%$ | 100KHz, 1V      | 0.05                        | 1.75             | 1.7              | 92        |
| NPIS35LS2R2YTRF | 2.2                                                | $\pm 30\%$ | 100KHz, 1V      | 0.06                        | 1.6              | 1.6              | 86        |
| NPIS35LS2R7YTRF | 2.7                                                | $\pm 30\%$ | 100KHz, 1V      | 0.075                       | 1.52             | 1.43             | 64        |
| NPIS35LS3R3MTRF | 3.3                                                | $\pm 20\%$ | 100KHz, 1V      | 0.08                        | 1.32             | 1.36             | 68        |
| NPIS35LS3R6MTRF | 3.6                                                | $\pm 20\%$ | 100KHz, 1V      | 0.105                       | 1.28             | 1.2              | 59        |
| NPIS35LS4R3MTRF | 4.3                                                | $\pm 20\%$ | 100KHz, 1V      | 0.115                       | 1.2              | 1.14             | 53        |
| NPIS35LS4R7MTRF | 4.7                                                | $\pm 20\%$ | 100KHz, 1V      | 0.125                       | 1.1              | 1.09             | 46        |
| NPIS35LS5R1MTRF | 5.1                                                | $\pm 20\%$ | 100KHz, 1V      | 0.125                       | 1.08             | 1.09             | 49        |
| NPIS35LS6R2MTRF | 6.2                                                | $\pm 20\%$ | 100KHz, 1V      | 0.195                       | 1                | 0.86             | 46        |
| NPIS35LS6R8MTRF | 6.8                                                | $\pm 20\%$ | 100KHz, 1V      | 0.2                         | 0.85             | 0.85             | 39        |
| NPIS35LS100MTRF | 10                                                 | $\pm 20\%$ | 100KHz, 1V      | 0.25                        | 0.72             | 0.77             | 41        |
| NPIS35LS120MTRF | 12                                                 | $\pm 20\%$ | 100KHz, 1V      | 0.32                        | 0.7              | 0.68             | 32        |
| NPIS35LS150MTRF | 15                                                 | $\pm 20\%$ | 100KHz, 1V      | 0.35                        | 0.66             | 0.65             | 30        |
| NPIS35LS180MTRF | 18                                                 | $\pm 20\%$ | 100KHz, 1V      | 0.43                        | 0.56             | 0.59             | 23        |
| NPIS35LS220MTRF | 22                                                 | $\pm 20\%$ | 100KHz, 1V      | 0.46                        | 0.52             | 0.57             | 23        |
| NPIS35LS270MTRF | 27                                                 | $\pm 20\%$ | 100KHz, 1V      | 0.73                        | 0.48             | 0.45             | 22        |
| NPIS35LS330MTRF | 33                                                 | $\pm 20\%$ | 100KHz, 1V      | 0.82                        | 0.44             | 0.43             | 20        |
| NPIS35LS390MTRF | 39                                                 | $\pm 20\%$ | 100KHz, 1V      | 0.995                       | 0.41             | 0.39             | 14        |
| NPIS35LS430MTRF | 43                                                 | $\pm 20\%$ | 100KHz, 1V      | 1.06                        | 0.37             | 0.37             | 16        |
| NPIS35LS470MTRF | 47                                                 | $\pm 20\%$ | 100KHz, 1V      | 1.25                        | 0.35             | 0.35             | 14        |
| NPIS35LS560MTRF | 56                                                 | $\pm 20\%$ | 100KHz, 1V      | 1.28                        | 0.33             | 0.34             | 13        |
| NPIS35LS620MTRF | 62                                                 | $\pm 20\%$ | 100KHz, 1V      | 1.43                        | 0.33             | 0.32             | 13        |
| NPIS35LS680MTRF | 68                                                 | $\pm 20\%$ | 100KHz, 1V      | 2.7                         | 0.28             | 0.23             | 11        |

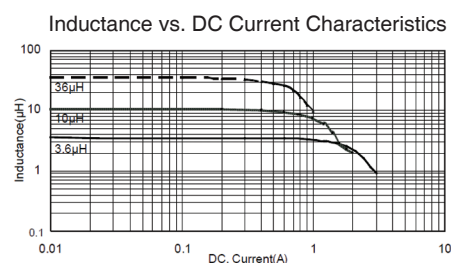
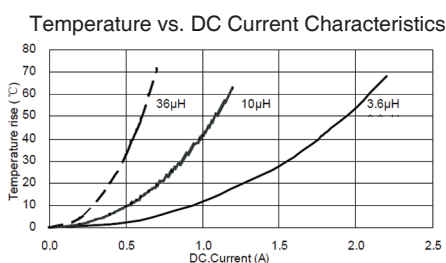
Maximum +40°C temperature rise at Irms. Maximum -30% inductance drop from initial measured value at Isat.



## NPIS41LS Size

| Series          | Standard Values - Case Size 41 (4.0 x 4.0 x 1.2mm) |            |                 |                             |                  |                  |           |
|-----------------|----------------------------------------------------|------------|-----------------|-----------------------------|------------------|------------------|-----------|
|                 | Inductance ( $\mu$ H)                              | Tolerance  | Test Conditions | DCR ( $\Omega$ ) $\pm 30\%$ | Max. Isat (Amps) | Max. Irms (Amps) | SRF (MHz) |
| NPIS41LSR82YTRF | 0.82                                               | $\pm 30\%$ | 100KHz, 1V      | 0.05                        | 3.53             | 1.65             | 150       |
| NPIS41LS1R0YTRF | 1.0                                                | $\pm 30\%$ | 100KHz, 1V      | 0.05                        | 2.61             | 1.65             | 120       |
| NPIS41LS1R2YTRF | 1.2                                                | $\pm 30\%$ | 100KHz, 1V      | 0.065                       | 2.83             | 1.46             | 100       |
| NPIS41LS1R5YTRF | 1.5                                                | $\pm 30\%$ | 100KHz, 1V      | 0.065                       | 2.1              | 1.46             | 90        |
| NPIS41LS1R8YTRF | 1.8                                                | $\pm 30\%$ | 100KHz, 1V      | 0.08                        | 2.47             | 1.32             | 88        |
| NPIS41LS2R2YTRF | 2.2                                                | $\pm 30\%$ | 100KHz, 1V      | 0.08                        | 1.76             | 1.32             | 74        |
| NPIS41LS2R7YTRF | 2.7                                                | $\pm 30\%$ | 100KHz, 1V      | 0.09                        | 1.9              | 1.25             | 71        |
| NPIS41LS3R3YTRF | 3.3                                                | $\pm 30\%$ | 100KHz, 1V      | 0.113                       | 1.25             | 1.12             | 60        |
| NPIS41LS3R6YTRF | 3.6                                                | $\pm 30\%$ | 100KHz, 1V      | 0.11                        | 1.2              | 1.12             | 57        |
| NPIS41LS4R3YTRF | 4.3                                                | $\pm 30\%$ | 100KHz, 1V      | 0.14                        | 1.75             | 1                | 54        |
| NPIS41LS4R7YTRF | 4.7                                                | $\pm 30\%$ | 100KHz, 1V      | 0.125                       | 1.15             | 1.05             | 50        |
| NPIS41LS5R1YTRF | 5.1                                                | $\pm 30\%$ | 100KHz, 1V      | 0.155                       | 1.21             | 0.95             | 50        |
| NPIS41LS5R6YTRF | 5.6                                                | $\pm 30\%$ | 100KHz, 1V      | 0.14                        | 1.0              | 1.0              | 42        |
| NPIS41LS6R8MTRF | 6.8                                                | $\pm 20\%$ | 100KHz, 1V      | 0.198                       | 0.95             | 0.84             | 40        |
| NPIS41LS100MTRF | 10                                                 | $\pm 20\%$ | 100KHz, 1V      | 0.265                       | 0.8              | 0.77             | 33        |
| NPIS41LS120MTRF | 12                                                 | $\pm 20\%$ | 100KHz, 1V      | 0.29                        | 0.66             | 0.7              | 32        |
| NPIS41LS150MTRF | 15                                                 | $\pm 20\%$ | 100KHz, 1V      | 0.34                        | 0.56             | 0.64             | 25        |
| NPIS41LS180MTRF | 18                                                 | $\pm 20\%$ | 100KHz, 1V      | 0.47                        | 0.55             | 0.55             | 23        |
| NPIS41LS220MTRF | 22                                                 | $\pm 20\%$ | 100KHz, 1V      | 0.47                        | 0.54             | 0.55             | 20        |
| NPIS41LS270MTRF | 27                                                 | $\pm 20\%$ | 100KHz, 1V      | 0.72                        | 0.5              | 0.45             | 18        |
| NPIS41LS330MTRF | 33                                                 | $\pm 20\%$ | 100KHz, 1V      | 0.81                        | 0.42             | 0.42             | 17        |
| NPIS41LS360MTRF | 36                                                 | $\pm 20\%$ | 100KHz, 1V      | 0.9                         | 0.4              | 0.4              | 14        |
| NPIS41LS390MTRF | 39                                                 | $\pm 20\%$ | 100KHz, 1V      | 1.1                         | 0.55             | 0.37             | 16        |
| NPIS41LS470MTRF | 47                                                 | $\pm 20\%$ | 100KHz, 1V      | 1.1                         | 0.35             | 0.37             | 12        |
| NPIS41LS560MTRF | 56                                                 | $\pm 20\%$ | 100KHz, 1V      | 1.25                        | 0.33             | 0.33             | 11        |
| NPIS41LS680MTRF | 68                                                 | $\pm 20\%$ | 100KHz, 1V      | 1.46                        | 0.3              | 0.31             | 11        |
| NPIS41LS820MTRF | 82                                                 | $\pm 20\%$ | 100KHz, 1V      | 2.14                        | 0.28             | 0.26             | 11        |
| NPIS41LS101MTRF | 100                                                | $\pm 20\%$ | 100KHz, 1V      | 2.21                        | 0.25             | 0.25             | 9.4       |

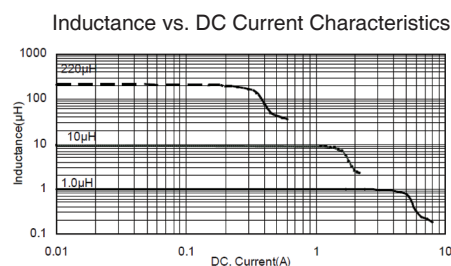
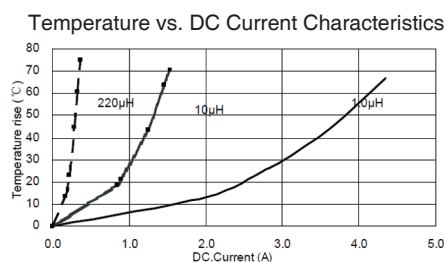
Maximum +40°C temperature rise at Irms. Maximum -30% inductance drop from initial measured value at Isat.



## NPIS48LS Size

| Series          | Standard Values - Case Size 48 (4.0 x 4.0 x 1.8mm) |           |                 |              |                  |                  |           |
|-----------------|----------------------------------------------------|-----------|-----------------|--------------|------------------|------------------|-----------|
|                 | Inductance (μH)                                    | Tolerance | Test Conditions | DCR (Ω) ±30% | Max. Isat (Amps) | Max. Irms (Amps) | SRF (MHz) |
| NPIS48LS1R0YTRF | 1.0                                                | ±30%      | 100KHz, 1V      | 0.025        | 4.8              | 2                | 80        |
| NPIS48LS2R2MTRF | 2.2                                                | ±20%      | 100KHz, 1V      | 0.045        | 2.7              | 1.65             | 52        |
| NPIS48LS3R3MTRF | 3.3                                                | ±20%      | 100KHz, 1V      | 0.07         | 2.45             | 1.23             | 44        |
| NPIS48LS4R7MTRF | 4.7                                                | ±20%      | 100KHz, 1V      | 0.09         | 1.7              | 1.2              | 34        |
| NPIS48LS6R8MTRF | 6.8                                                | ±20%      | 100KHz, 1V      | 0.11         | 1.45             | 1.06             | 29        |
| NPIS48LS100MTRF | 10                                                 | ±20%      | 100KHz, 1V      | 0.18         | 1.3              | 0.84             | 24        |
| NPIS48LS150MTRF | 15                                                 | ±20%      | 100KHz, 1V      | 0.25         | 0.94             | 0.65             | 19        |
| NPIS48LS220MTRF | 22                                                 | ±20%      | 100KHz, 1V      | 0.36         | 0.8              | 0.59             | 16        |
| NPIS48LS330MTRF | 33                                                 | ±20%      | 100KHz, 1V      | 0.53         | 0.65             | 0.49             | 12        |
| NPIS48LS470MTRF | 47                                                 | ±20%      | 100KHz, 1V      | 0.65         | 0.57             | 0.42             | 10        |
| NPIS48LS680MTRF | 68                                                 | ±20%      | 100KHz, 1V      | 1            | 0.47             | 0.32             | 8.3       |
| NPIS48LS101MTRF | 100                                                | ±20%      | 100KHz, 1V      | 1.75         | 0.4              | 0.25             | 6.5       |
| NPIS48LS151MTRF | 150                                                | ±20%      | 100KHz, 1V      | 2.5          | 0.31             | 0.22             | 5.5       |
| NPIS48LS221MTRF | 220                                                | ±20%      | 100KHz, 1V      | 4            | 0.27             | 0.17             | 4         |

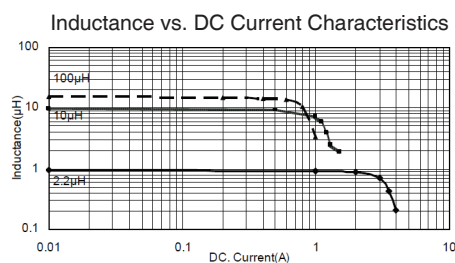
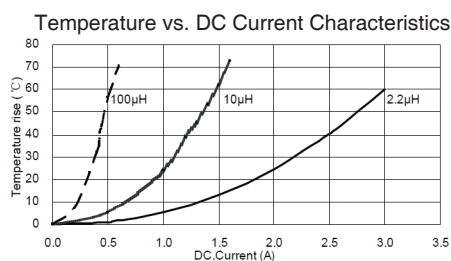
Maximum +40°C temperature rise at Irms. Maximum -30% inductance drop from initial measured value at Isat.



## NPIS42LS Size

| Series          | Standard Values - Case Size 42 (4.0 x 4.0 x 2.0mm) |            |                 |                             |                  |                  |           |
|-----------------|----------------------------------------------------|------------|-----------------|-----------------------------|------------------|------------------|-----------|
|                 | Inductance ( $\mu$ H)                              | Tolerance  | Test Conditions | DCR ( $\Omega$ ) $\pm 30\%$ | Max. Isat (Amps) | Max. Irms (Amps) | SRF (MHz) |
| NPIS42LS1R0YTRF | 1.0                                                | $\pm 30\%$ | 100KHz, 1V      | 0.029                       | 4.85             | 2.15             | 75        |
| NPIS42LS1R2YTRF | 1.2                                                | $\pm 30\%$ | 100KHz, 1V      | 0.029                       | 5.1              | 2.15             | 72        |
| NPIS42LS1R5YTRF | 1.5                                                | $\pm 30\%$ | 100KHz, 1V      | 0.035                       | 4.45             | 1.98             | 71        |
| NPIS42LS2R2YTRF | 2.2                                                | $\pm 30\%$ | 100KHz, 1V      | 0.04                        | 3.4              | 1.85             | 49        |
| NPIS42LS3R3MTRF | 3.3                                                | $\pm 20\%$ | 100KHz, 1V      | 0.07                        | 3.2              | 1.4              | 44        |
| NPIS42LS3R6MTRF | 3.6                                                | $\pm 20\%$ | 100KHz, 1V      | 0.055                       | 2.8              | 1.54             | 49        |
| NPIS42LS4R7MTRF | 4.7                                                | $\pm 20\%$ | 100KHz, 1V      | 0.075                       | 2.35             | 1.34             | 42        |
| NPIS42LS5R1MTRF | 5.1                                                | $\pm 20\%$ | 100KHz, 1V      | 0.085                       | 2.3              | 1.27             | 42        |
| NPIS42LS5R6MTRF | 5.6                                                | $\pm 20\%$ | 100KHz, 1V      | 0.09                        | 2.2              | 1.22             | 30        |
| NPIS42LS6R2MTRF | 6.2                                                | $\pm 20\%$ | 100KHz, 1V      | 0.115                       | 2.15             | 1.08             | 36        |
| NPIS42LS6R8MTRF | 6.8                                                | $\pm 20\%$ | 100KHz, 1V      | 0.125                       | 2.2              | 1.04             | 33        |
| NPIS42LS7R5MTRF | 7.5                                                | $\pm 20\%$ | 100KHz, 1V      | 0.115                       | 1.85             | 1.08             | 30        |
| NPIS42LS8R2MTRF | 8.2                                                | $\pm 20\%$ | 100KHz, 1V      | 0.125                       | 1.75             | 1.04             | 27        |
| NPIS42LS100MTRF | 10                                                 | $\pm 20\%$ | 100KHz, 1V      | 0.165                       | 1.6              | 0.9              | 26        |
| NPIS42LS120MTRF | 12                                                 | $\pm 20\%$ | 100KHz, 1V      | 0.175                       | 1.5              | 0.88             | 26        |
| NPIS42LS150MTRF | 15                                                 | $\pm 20\%$ | 100KHz, 1V      | 0.23                        | 1.35             | 0.77             | 24        |
| NPIS42LS220MTRF | 22                                                 | $\pm 20\%$ | 100KHz, 1V      | 0.35                        | 1.05             | 0.62             | 15        |
| NPIS42LS270MTRF | 27                                                 | $\pm 20\%$ | 100KHz, 1V      | 0.545                       | 1.02             | 0.5              | 14        |
| NPIS42LS330MTRF | 33                                                 | $\pm 20\%$ | 100KHz, 1V      | 0.55                        | 0.85             | 0.49             | 11        |
| NPIS42LS390MTRF | 39                                                 | $\pm 20\%$ | 100KHz, 1V      | 0.65                        | 0.82             | 0.46             | 11        |
| NPIS42LS430MTRF | 43                                                 | $\pm 20\%$ | 100KHz, 1V      | 0.66                        | 0.77             | 0.45             | 10        |
| NPIS42LS470MTRF | 47                                                 | $\pm 20\%$ | 100KHz, 1V      | 0.71                        | 0.74             | 0.44             | 10        |
| NPIS42LS510MTRF | 51                                                 | $\pm 20\%$ | 100KHz, 1V      | 0.75                        | 0.7              | 0.42             | 10        |
| NPIS42LS560MTRF | 56                                                 | $\pm 20\%$ | 100KHz, 1V      | 0.8                         | 0.66             | 0.41             | 10        |
| NPIS42LS620MTRF | 62                                                 | $\pm 20\%$ | 100KHz, 1V      | 0.9                         | 0.65             | 0.39             | 9.6       |
| NPIS42LS680MTRF | 68                                                 | $\pm 20\%$ | 100KHz, 1V      | 1.06                        | 0.61             | 0.36             | 7.7       |
| NPIS42LS750MTRF | 75                                                 | $\pm 20\%$ | 100KHz, 1V      | 1.12                        | 0.6              | 0.35             | 7.7       |
| NPIS42LS820MTRF | 82                                                 | $\pm 20\%$ | 100KHz, 1V      | 1.17                        | 0.56             | 0.34             | 7.2       |
| NPIS42LS101MTRF | 100                                                | $\pm 20\%$ | 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.

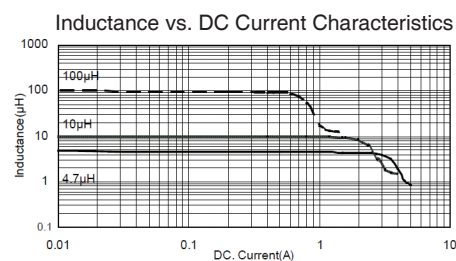
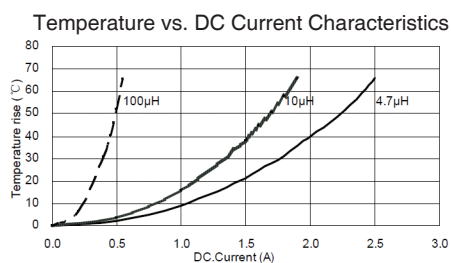




## NPIS43LS Size

| Series          | Standard Values - Case Size 43 (4.0 x 4.0 x 3.0mm) |            |                 |                             |                  |                  |           |
|-----------------|----------------------------------------------------|------------|-----------------|-----------------------------|------------------|------------------|-----------|
|                 | Inductance ( $\mu\text{H}$ )                       | Tolerance  | Test Conditions | DCR ( $\Omega$ ) $\pm 30\%$ | Max. Isat (Amps) | Max. Irms (Amps) | SRF (MHz) |
| NPIS43LSR91YTRF | 0.91                                               | $\pm 30\%$ | 100KHz, 1V      | 0.022                       | 6.25             | 3.15             | 100       |
| NPIS43LS1R2YTRF | 1.2                                                | $\pm 30\%$ | 100KHz, 1V      | 0.025                       | 5.8              | 2.96             | 80        |
| NPIS43LS1R5YTRF | 1.5                                                | $\pm 30\%$ | 100KHz, 1V      | 0.03                        | 4.84             | 2.92             | 62        |
| NPIS43LS1R8YTRF | 1.8                                                | $\pm 30\%$ | 100KHz, 1V      | 0.03                        | 5.4              | 2.92             | 60        |
| NPIS43LS2R2YTRF | 2.2                                                | $\pm 30\%$ | 100KHz, 1V      | 0.035                       | 4.9              | 2.57             | 52        |
| NPIS43LS3R3MTRF | 3.3                                                | $\pm 20\%$ | 100KHz, 1V      | 0.04                        | 3.3              | 2.4              | 38        |
| NPIS43LS4R3MTRF | 4.3                                                | $\pm 20\%$ | 100KHz, 1V      | 0.055                       | 2.95             | 2.1              | 37        |
| NPIS43LS4R7MTRF | 4.7                                                | $\pm 20\%$ | 100KHz, 1V      | 0.06                        | 2.9              | 2                | 31        |
| NPIS43LS5R6MTRF | 5.6                                                | $\pm 20\%$ | 100KHz, 1V      | 0.065                       | 2.6              | 1.95             | 30        |
| NPIS43LS6R2MTRF | 6.2                                                | $\pm 20\%$ | 100KHz, 1V      | 0.07                        | 2.5              | 1.85             | 29        |
| NPIS43LS6R8MTRF | 6.8                                                | $\pm 20\%$ | 100KHz, 1V      | 0.09                        | 2.75             | 1.6              | 24        |
| NPIS43LS7R5MTRF | 7.5                                                | $\pm 20\%$ | 100KHz, 1V      | 0.085                       | 2.2              | 1.65             | 26        |
| NPIS43LS8R2MTRF | 8.2                                                | $\pm 20\%$ | 100KHz, 1V      | 0.09                        | 2.1              | 1.6              | 26        |
| NPIS43LS9R1MTRF | 9.1                                                | $\pm 20\%$ | 100KHz, 1V      | 0.095                       | 2                | 1.55             | 23        |
| NPIS43LS100MTRF | 10                                                 | $\pm 20\%$ | 100KHz, 1V      | 0.1                         | 1.95             | 1.5              | 21        |
| NPIS43LS120MTRF | 12                                                 | $\pm 20\%$ | 100KHz, 1V      | 0.135                       | 1.7              | 1.3              | 18        |
| NPIS43LS150MTRF | 15                                                 | $\pm 20\%$ | 100KHz, 1V      | 0.19                        | 1.65             | 1.11             | 16        |
| NPIS43LS180MTRF | 18                                                 | $\pm 20\%$ | 100KHz, 1V      | 0.2                         | 1.4              | 1.1              | 10        |
| NPIS43LS220MTRF | 22                                                 | $\pm 20\%$ | 100KHz, 1V      | 0.225                       | 1.3              | 1                | 10        |
| NPIS43LS330MTRF | 33                                                 | $\pm 20\%$ | 100KHz, 1V      | 0.33                        | 1.1              | 0.84             | 10        |
| NPIS43LS360MTRF | 36                                                 | $\pm 20\%$ | 100KHz, 1V      | 0.335                       | 1.05             | 0.83             | 9.8       |
| NPIS43LS390MTRF | 39                                                 | $\pm 20\%$ | 100KHz, 1V      | 0.435                       | 1.03             | 0.73             | 10        |
| NPIS43LS430MTRF | 43                                                 | $\pm 20\%$ | 100KHz, 1V      | 0.44                        | 1                | 0.73             | 9.2       |
| NPIS43LS470MTRF | 47                                                 | $\pm 20\%$ | 100KHz, 1V      | 0.445                       | 0.95             | 0.72             | 8.4       |
| NPIS43LS510MTRF | 51                                                 | $\pm 20\%$ | 100KHz, 1V      | 0.47                        | 0.9              | 0.7              | 8.4       |
| NPIS43LS560MTRF | 56                                                 | $\pm 20\%$ | 100KHz, 1V      | 0.555                       | 0.85             | 0.65             | 8.4       |
| NPIS43LS620MTRF | 62                                                 | $\pm 20\%$ | 100KHz, 1V      | 0.829                       | 0.8              | 0.53             | 7         |
| NPIS43LS680MTRF | 68                                                 | $\pm 20\%$ | 100KHz, 1V      | 0.868                       | 0.75             | 0.52             | 7         |
| NPIS43LS750MTRF | 75                                                 | $\pm 20\%$ | 100KHz, 1V      | 1.02                        | 0.7              | 0.48             | 6.3       |
| NPIS43LS820MTRF | 82                                                 | $\pm 20\%$ | 100KHz, 1V      | 1.06                        | 0.66             | 0.47             | 5.6       |
| NPIS43LS910MTRF | 91                                                 | $\pm 20\%$ | 100KHz, 1V      | 1.1                         | 0.65             | 0.46             | 5.6       |
| NPIS43LS101MTRF | 100                                                | $\pm 20\%$ | 100KHz, 1V      | 1.15                        | 0.6              | 0.45             | 5.6       |
| NPIS43LS121MTRF | 120                                                | $\pm 20\%$ | 100KHz, 1V      | 1.35                        | 0.55             | 0.42             | 5.4       |

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

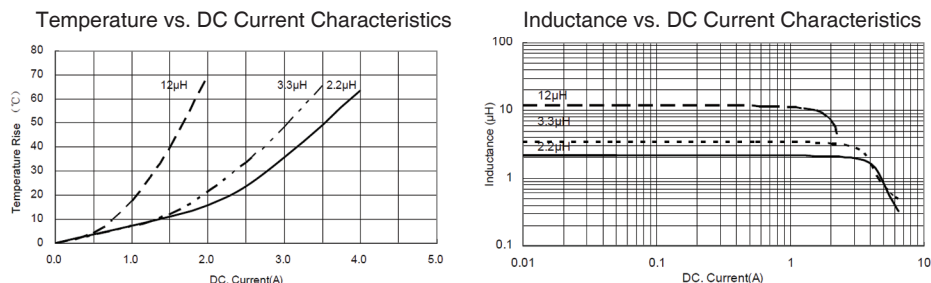


## NPIS52LS Size

| Series          | Standard Values - Case Size 52 (5.0 x 5.0 x 2.0mm) |           |                 |              |                  |                  |           |
|-----------------|----------------------------------------------------|-----------|-----------------|--------------|------------------|------------------|-----------|
|                 | Inductance (μH)                                    | Tolerance | Test Conditions | DCR (Ω) ±30% | Max. Isat (Amps) | Max. Irms (Amps) | SRF (MHz) |
| NPIS52LSR47YTRF | 0.47                                               | ±30%      | 100KHz, 1V      | 0.013        | 6.15             | 4.6              | 160       |
| NPIS52LSR75YTRF | 0.75                                               | ±30%      | 100KHz, 1V      | 0.017        | 5.5              | 4                | 117       |
| NPIS52LS1R0YTRF | 1.0                                                | ±30%      | 100KHz, 1V      | 0.02         | 4.1              | 3.8              | 114       |
| NPIS52LS1R2YTRF | 1.2                                                | ±30%      | 100KHz, 1V      | 0.022        | 4.5              | 3.55             | 83        |
| NPIS52LS1R5YTRF | 1.5                                                | ±30%      | 100KHz, 1V      | 0.026        | 4.1              | 3.2              | 68        |
| NPIS52LS2R2YTRF | 2.2                                                | ±30%      | 100KHz, 1V      | 0.032        | 3.2              | 2.9              | 57        |
| NPIS52LS2R7YTRF | 2.7                                                | ±30%      | 100KHz, 1V      | 0.038        | 2.9              | 2.7              | 52        |
| NPIS52LS3R0YTRF | 3.0                                                | ±30%      | 100KHz, 1V      | 0.038        | 2.55             | 2.7              | 49        |
| NPIS52LS3R3YTRF | 3.3                                                | ±30%      | 100KHz, 1V      | 0.043        | 2.55             | 2.5              | 46        |
| NPIS52LS3R6YTRF | 3.6                                                | ±30%      | 100KHz, 1V      | 0.043        | 2.8              | 2.5              | 43        |
| NPIS52LS3R9YTRF | 3.9                                                | ±30%      | 100KHz, 1V      | 0.043        | 2.3              | 2.5              | 40        |
| NPIS52LS4R3MTRF | 4.3                                                | ±20%      | 100KHz, 1V      | 0.057        | 2.5              | 2.2              | 37        |
| NPIS52LS4R7MTRF | 4.7                                                | ±20%      | 100KHz, 1V      | 0.057        | 2.5              | 2.2              | 37        |
| NPIS52LS5R1MTRF | 5.1                                                | ±20%      | 100KHz, 1V      | 0.064        | 2.25             | 2.05             | 32        |
| NPIS52LS5R6MTRF | 5.6                                                | ±20%      | 100KHz, 1V      | 0.064        | 2.3              | 2.05             | 32        |
| NPIS52LS6R8MTRF | 6.8                                                | ±20%      | 100KHz, 1V      | 0.083        | 2.05             | 1.8              | 30        |
| NPIS52LS7R5MTRF | 7.5                                                | ±20%      | 100KHz, 1V      | 0.09         | 1.85             | 1.75             | 26        |
| NPIS52LS8R2MTRF | 8.2                                                | ±20%      | 100KHz, 1V      | 0.098        | 1.85             | 1.65             | 26        |
| NPIS52LS9R1MTRF | 9.1                                                | ±20%      | 100KHz, 1V      | 0.11         | 1.7              | 1.55             | 24        |
| NPIS52LS100MTRF | 10                                                 | ±20%      | 100KHz, 1V      | 0.11         | 1.7              | 1.55             | 24        |
| NPIS52LS120MTRF | 12                                                 | ±20%      | 100KHz, 1V      | 0.14         | 1.5              | 1.4              | 22        |
| NPIS52LS150MTRF | 15                                                 | ±20%      | 100KHz, 1V      | 0.165        | 1.35             | 1.25             | 20        |
| NPIS52LS180MTRF | 18                                                 | ±20%      | 100KHz, 1V      | 0.2          | 1.25             | 1.15             | 16        |
| NPIS52LS220MTRF | 22                                                 | ±20%      | 100KHz, 1V      | 0.226        | 1.15             | 1.1              | 14        |
| 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            | 0.61             | 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.

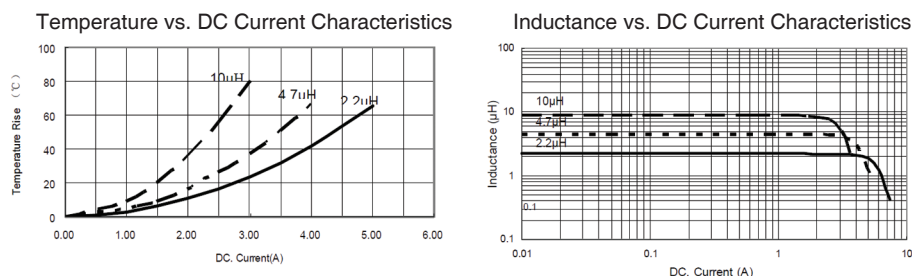
## NPIS52LS Size (Continued)



## NPIS54LS Size

| Series          | Standard Values - Case Size 54 (5.0 x 5.0 x 4.0mm) |           |                 |              |                  |                  |           |
|-----------------|----------------------------------------------------|-----------|-----------------|--------------|------------------|------------------|-----------|
|                 | Inductance (µH)                                    | Tolerance | Test Conditions | DCR (Ω) ±30% | Max. Isat (Amps) | Max. Irms (Amps) | SRF (MHz) |
| NPIS54LS1R0YTRF | 1.0                                                | ±30%      | 100KHz, 1V      | 0.012        | 7.35             | 4.9              | 117       |
| NPIS54LS1R5YTRF | 1.5                                                | ±30%      | 100KHz, 1V      | 0.015        | 6.3              | 4.3              | 86        |
| NPIS54LS2R2YTRF | 2.2                                                | ±30%      | 100KHz, 1V      | 0.019        | 4.9              | 3.8              | 50        |
| NPIS54LS2R7YTRF | 2.7                                                | ±30%      | 100KHz, 1V      | 0.022        | 4.3              | 3.6              | 37        |
| NPIS54LS3R3YTRF | 3.3                                                | ±30%      | 100KHz, 1V      | 0.024        | 3.95             | 3.4              | 32        |
| NPIS54LS3R9YTRF | 3.9                                                | ±30%      | 100KHz, 1V      | 0.027        | 3.55             | 3.2              | 29        |
| NPIS54LS4R7YTRF | 4.7                                                | ±30%      | 100KHz, 1V      | 0.03         | 3.5              | 3                | 28        |
| NPIS54LS6R8MTRF | 6.8                                                | ±20%      | 100KHz, 1V      | 0.043        | 2.9              | 2.5              | 21        |
| NPIS54LS100MTRF | 10                                                 | ±20%      | 100KHz, 1V      | 0.064        | 2.35             | 2.1              | 18        |
| NPIS54LS150MTRF | 15                                                 | ±20%      | 100KHz, 1V      | 0.086        | 2                | 2                | 13        |
| NPIS54LS220MTRF | 22                                                 | ±20%      | 100KHz, 1V      | 0.129        | 1.6              | 1.5              | 11        |
| NPIS54LS330MTRF | 33                                                 | ±20%      | 100KHz, 1V      | 0.188        | 1.3              | 1.2              | 9.1       |
| NPIS54LS470MTRF | 47                                                 | ±20%      | 100KHz, 1V      | 0.272        | 1.1              | 1                | 6.7       |
| NPIS54LS680MTRF | 68                                                 | ±20%      | 100KHz, 1V      | 0.4          | 0.9              | 0.8              | 5.7       |
| NPIS54LS101MTRF | 100                                                | ±20%      | 100KHz, 1V      | 0.56         | 0.75             | 0.7              | 4.7       |

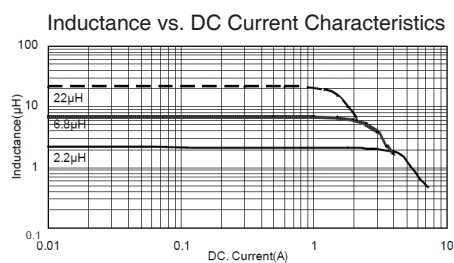
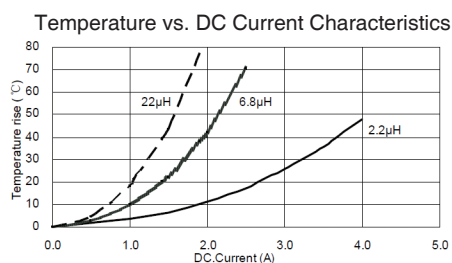
Maximum +40°C temperature rise at Irms. Maximum -30% inductance drop from initial measured value at Isat.



## NPIS62LS Size

| Series          | Standard Values - Case Size 62 (6.0 x 6.0 x 2.0mm) |           |                 |              |                  |                  |           |
|-----------------|----------------------------------------------------|-----------|-----------------|--------------|------------------|------------------|-----------|
|                 | Inductance (μH)                                    | Tolerance | Test Conditions | DCR (Ω) ±30% | Max. Isat (Amps) | Max. Irms (Amps) | SRF (MHz) |
| NPIS62LSR50YTRF | 0.5                                                | ±30%      | 100KHz, 1V      | 0.013        | 4.9              | 4.05             | 130       |
| NPIS62LSR68YTRF | 0.68                                               | ±30%      | 100KHz, 1V      | 0.017        | 7.5              | 3.8              | 120       |
| NPIS62LSR82YTRF | 0.82                                               | ±30%      | 100KHz, 1V      | 0.017        | 6.6              | 3.8              | 110       |
| NPIS62LS1R0YTRF | 1.0                                                | ±30%      | 100KHz, 1V      | 0.02         | 4.15             | 3.25             | 94        |
| 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        |
| NPIS62LS2R0YTRF | 2                                                  | ±30%      | 100KHz, 1V      | 0.035        | 4.3              | 2.45             | 64        |
| 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        |
| NPIS62LS3R9YTRF | 3.9                                                | ±30%      | 100KHz, 1V      | 0.049        | 3.25             | 2.1              | 46        |
| NPIS62LS4R3YTRF | 4.3                                                | ±30%      | 100KHz, 1V      | 0.049        | 2.7              | 2.1              | 44        |
| NPIS62LS4R7YTRF | 4.7                                                | ±30%      | 100KHz, 1V      | 0.058        | 3                | 2                | 41        |
| NPIS62LS5R6YTRF | 5.6                                                | ±30%      | 100KHz, 1V      | 0.058        | 2.4              | 1.9              | 36        |
| NPIS62LS6R2YTRF | 6.2                                                | ±30%      | 100KHz, 1V      | 0.079        | 2.3              | 1.8              | 35        |
| NPIS62LS6R8YTRF | 6.8                                                | ±30%      | 100KHz, 1V      | 0.079        | 2.2              | 1.8              | 31        |
| NPIS62LS8R2YTRF | 8.2                                                | ±20%      | 100KHz, 1V      | 0.105        | 2.1              | 1.4              | 28        |
| NPIS62LS100MTRF | 10                                                 | ±20%      | 100KHz, 1V      | 0.105        | 1.75             | 1.4              | 27        |
| NPIS62LS120MTRF | 12                                                 | ±20%      | 100KHz, 1V      | 0.12         | 1.7              | 1.35             | 23        |
| NPIS62LS150MTRF | 15                                                 | ±20%      | 100KHz, 1V      | 0.145        | 1.5              | 1.2              | 21        |
| NPIS62LS180MTRF | 18                                                 | ±20%      | 100KHz, 1V      | 0.175        | 1.23             | 1.1              | 19        |
| NPIS62LS220MTRF | 22                                                 | ±20%      | 100KHz, 1V      | 0.204        | 1.25             | 1                | 16        |

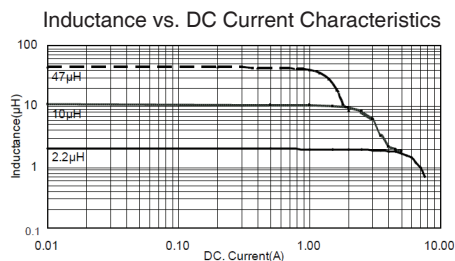
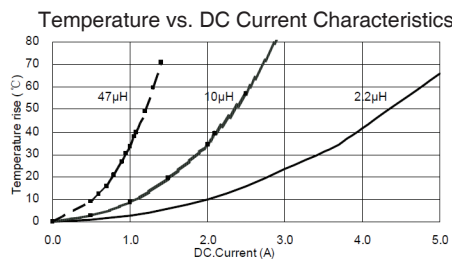
Maximum +40°C temperature rise at Irms. Maximum -30% inductance drop from initial measured value at Isat.



## NPIS63LS Size

| Series          | Standard Values - Case Size 63 (6.0 x 6.0 x 2.8mm) |           |                 |              |                  |                  |           |
|-----------------|----------------------------------------------------|-----------|-----------------|--------------|------------------|------------------|-----------|
|                 | Inductance (μH)                                    | Tolerance | Test Conditions | DCR (Ω) ±30% | Max. Isat (Amps) | Max. Irms (Amps) | SRF (MHz) |
| NPIS63LS1R5YTRF | 1.5                                                | ±30%      | 100KHz, 1V      | 0.013        | 6                | 4.58             | 65        |
| NPIS63LS2R2YTRF | 2.2                                                | ±30%      | 100KHz, 1V      | 0.015        | 5.1              | 4.09             | 56        |
| NPIS63LS2R7YTRF | 2.7                                                | ±30%      | 100KHz, 1V      | 0.02         | 3.8              | 3.75             | 48        |
| NPIS63LS3R3YTRF | 3.3                                                | ±30%      | 100KHz, 1V      | 0.025        | 3.63             | 3.48             | 41        |
| NPIS63LS4R7YTRF | 4.7                                                | ±30%      | 100KHz, 1V      | 0.03         | 3                | 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        |
| NPIS63LS6R8MTRF | 6.8                                                | ±20%      | 100KHz, 1V      | 0.047        | 2.85             | 2.4              | 27        |
| 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      | 0.072        | 2.04             | 1.95             | 23        |
| NPIS63LS120MTRF | 12                                                 | ±20%      | 100KHz, 1V      | 0.08         | 1.8              | 1.85             | 18        |
| NPIS63LS150MTRF | 15                                                 | ±20%      | 100KHz, 1V      | 0.125        | 1.75             | 1.45             | 18        |
| NPIS63LS180MTRF | 18                                                 | ±20%      | 100KHz, 1V      | 0.12         | 1.52             | 1.45             | 15        |
| 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.



## NPIS65LS Size

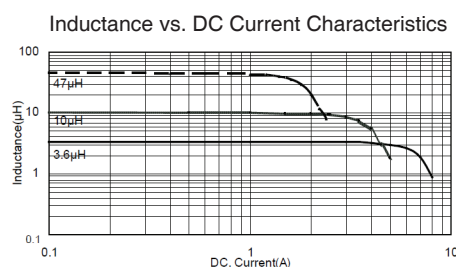
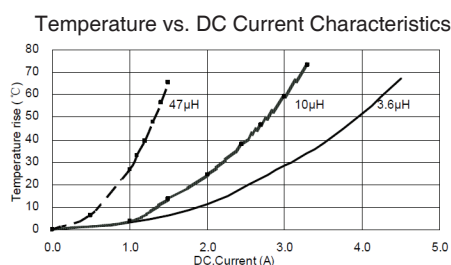
| Series          | Standard Values - Case Size 65 (6.0 x 6.0 x 4.5mm) |            |                 |                                |                     |                     |              |
|-----------------|----------------------------------------------------|------------|-----------------|--------------------------------|---------------------|---------------------|--------------|
|                 | Inductance<br>( $\mu$ H)                           | Tolerance  | Test Conditions | DCR<br>( $\Omega$ ) $\pm 30\%$ | Max. Isat<br>(Amps) | Max. Irms<br>(Amps) | SRF<br>(MHz) |
| NPIS65LSR82YTRF | 0.82                                               | $\pm 30\%$ | 100KHz, 1V      | 0.008                          | 10.4                | 5.9                 | 140          |
| NPIS65LS1R0YTRF | 1                                                  | $\pm 30\%$ | 100KHz, 1V      | 0.011                          | 9.85                | 5.14                | 100          |
| NPIS65LS1R2YTRF | 1.2                                                | $\pm 30\%$ | 100KHz, 1V      | 0.01                           | 8.35                | 5.4                 | 100          |
| NPIS65LS1R5YTRF | 1.5                                                | $\pm 30\%$ | 100KHz, 1V      | 0.012                          | 8.8                 | 4.95                | 65           |
| NPIS65LS1R8YTRF | 1.8                                                | $\pm 30\%$ | 100KHz, 1V      | 0.012                          | 7.6                 | 4.95                | 74           |
| NPIS65LS2R2YTRF | 2.2                                                | $\pm 30\%$ | 100KHz, 1V      | 0.014                          | 6.75                | 4.6                 | 52           |
| NPIS65LS2R3YTRF | 2.3                                                | $\pm 30\%$ | 100KHz, 1V      | 0.021                          | 6                   | 3.5                 | 60           |
| NPIS65LS2R7YTRF | 2.7                                                | $\pm 30\%$ | 100KHz, 1V      | 0.015                          | 5.75                | 4.3                 | 38           |
| NPIS65LS3R0YTRF | 3                                                  | $\pm 30\%$ | 100KHz, 1V      | 0.02                           | 5.6                 | 3.8                 | 35           |
| NPIS65LS3R3YTRF | 3.3                                                | $\pm 30\%$ | 100KHz, 1V      | 0.021                          | 5.9                 | 3.7                 | 32           |
| NPIS65LS3R6YTRF | 3.6                                                | $\pm 30\%$ | 100KHz, 1V      | 0.021                          | 5.25                | 3.7                 | 28           |
| NPIS65LS4R3MTRF | 4.3                                                | $\pm 20\%$ | 100KHz, 1V      | 0.023                          | 4.45                | 3.5                 | 23           |
| NPIS65LS4R7MTRF | 4.7                                                | $\pm 20\%$ | 100KHz, 1V      | 0.026                          | 4.97                | 3.3                 | 24           |
| NPIS65LS5R1MTRF | 5.1                                                | $\pm 20\%$ | 100KHz, 1V      | 0.026                          | 4.4                 | 3.3                 | 23           |
| NPIS65LS5R6MTRF | 5.6                                                | $\pm 20\%$ | 100KHz, 1V      | 0.029                          | 4.15                | 3.15                | 23           |
| NPIS65LS6R2MTRF | 6.2                                                | $\pm 20\%$ | 100KHz, 1V      | 0.031                          | 4.43                | 3                   | 26           |
| NPIS65LS6R8MTRF | 6.8                                                | $\pm 20\%$ | 100KHz, 1V      | 0.031                          | 3.9                 | 3                   | 20           |
| NPIS65LS7R5MTRF | 7.5                                                | $\pm 20\%$ | 100KHz, 1V      | 0.034                          | 3.5                 | 2.9                 | 18           |
| NPIS65LS8R2MTRF | 8.2                                                | $\pm 20\%$ | 100KHz, 1V      | 0.043                          | 3.9                 | 2.6                 | 21           |
| NPIS65LS9R1MTRF | 9.1                                                | $\pm 20\%$ | 100KHz, 1V      | 0.043                          | 3.35                | 2.6                 | 17           |
| NPIS65LS100MTRF | 10                                                 | $\pm 20\%$ | 100KHz, 1V      | 0.048                          | 3.2                 | 2.45                | 15           |
| NPIS65LS120MTRF | 12                                                 | $\pm 20\%$ | 100KHz, 1V      | 0.058                          | 2.8                 | 2.2                 | 13           |
| NPIS65LS150MTRF | 15                                                 | $\pm 20\%$ | 100KHz, 1V      | 0.068                          | 2.5                 | 2.05                | 12           |
| NPIS65LS180MTRF | 18                                                 | $\pm 20\%$ | 100KHz, 1V      | 0.081                          | 2.2                 | 1.85                | 10           |
| NPIS65LS220MTRF | 22                                                 | $\pm 20\%$ | 100KHz, 1V      | 0.089                          | 2.05                | 1.8                 | 10           |
| NPIS65LS270MTRF | 27                                                 | $\pm 20\%$ | 100KHz, 1V      | 0.102                          | 1.9                 | 1.65                | 9.2          |
| NPIS65LS300MTRF | 30                                                 | $\pm 20\%$ | 100KHz, 1V      | 0.132                          | 1.7                 | 1.5                 | 7.8          |
| NPIS65LS330MTRF | 33                                                 | $\pm 20\%$ | 100KHz, 1V      | 0.137                          | 1.65                | 1.45                | 7.8          |
| NPIS65LS360MTRF | 36                                                 | $\pm 20\%$ | 100KHz, 1V      | 0.173                          | 1.62                | 1.4                 | 7.8          |
| NPIS65LS390MTRF | 39                                                 | $\pm 20\%$ | 100KHz, 1V      | 0.18                           | 1.5                 | 1.25                | 7.8          |
| NPIS65LS430MTRF | 43                                                 | $\pm 20\%$ | 100KHz, 1V      | 0.2                            | 1.63                | 1.2                 | 7.7          |
| NPIS65LS470MTRF | 47                                                 | $\pm 20\%$ | 100KHz, 1V      | 0.2                            | 1.4                 | 1.2                 | 6.4          |
| NPIS65LS510MTRF | 51                                                 | $\pm 20\%$ | 100KHz, 1V      | 0.207                          | 1.35                | 1.15                | 6.4          |
| NPIS65LS560MTRF | 56                                                 | $\pm 20\%$ | 100KHz, 1V      | 0.221                          | 1.3                 | 1.1                 | 6.4          |
| NPIS65LS620MTRF | 62                                                 | $\pm 20\%$ | 100KHz, 1V      | 0.235                          | 1.25                | 1.1                 | 6.4          |
| NPIS65LS680MTRF | 68                                                 | $\pm 20\%$ | 100KHz, 1V      | 0.289                          | 1.2                 | 1                   | 6.4          |

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

## NPIS65LS Size (Continued)

| Series          | Standard Values - Case Size 65 (6.0 x 6.0 x 4.5mm) |           |                 |              |                  |                  |           |
|-----------------|----------------------------------------------------|-----------|-----------------|--------------|------------------|------------------|-----------|
|                 | Inductance (μH)                                    | Tolerance | Test Conditions | DCR (Ω) ±30% | Max. Isat (Amps) | Max. Irms (Amps) | SRF (MHz) |
| 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                | 0.85             | 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 Irms. Maximum -30% inductance drop from initial measured value at Isat.



## NPIS84LS Size

| Series           | Standard Values - Case Size 84 (8.0 x 8.0 x 4.0mm) |           |                 |              |                  |                  |           |
|------------------|----------------------------------------------------|-----------|-----------------|--------------|------------------|------------------|-----------|
|                  | Inductance (μH)                                    | Tolerance | Test Conditions | DCR (Ω) ±30% | Max. Isat (Amps) | Max. Irms (Amps) | SRF (MHz) |
| NPIS84LSR82YTFRF | 0.82                                               | ±30%      | 100KHz, 1V      | 0.008        | 13.8             | 6.3              | 94        |
| NPIS84LS1R0YTFRF | 1                                                  | ±30%      | 100KHz, 1V      | 0.008        | 9.85             | 6.3              | 89        |
| NPIS84LS1R5YTFRF | 1.5                                                | ±30%      | 100KHz, 1V      | 0.01         | 8.15             | 5.65             | 67        |
| NPIS84LS2R0YTFRF | 2                                                  | ±30%      | 100KHz, 1V      | 0.012        | 9.25             | 5.15             | 43        |
| NPIS84LS2R2YTFRF | 2.2                                                | ±30%      | 100KHz, 1V      | 0.012        | 7.1              | 5.15             | 41        |
| NPIS84LS3R0YTFRF | 3                                                  | ±30%      | 100KHz, 1V      | 0.014        | 6.1              | 4.7              | 32        |
| NPIS84LS3R3YTFRF | 3.3                                                | ±30%      | 100KHz, 1V      | 0.017        | 6.5              | 4.4              | 27        |
| NPIS84LS3R6YTFRF | 3.6                                                | ±30%      | 100KHz, 1V      | 0.017        | 7.52             | 4.35             | 30        |
| NPIS84LS3R9YTFRF | 3.9                                                | ±30%      | 100KHz, 1V      | 0.017        | 5.75             | 4.35             | 26        |
| NPIS84LS4R7YTFRF | 4.7                                                | ±30%      | 100KHz, 1V      | 0.019        | 5.9              | 4.1              | 24        |
| NPIS84LS5R1YTFRF | 5.1                                                | ±30%      | 100KHz, 1V      | 0.019        | 4.7              | 4.05             | 22        |
| NPIS84LS5R6YTFRF | 5.6                                                | ±30%      | 100KHz, 1V      | 0.021        | 6                | 3.85             | 24        |
| NPIS84LS6R2YTFRF | 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        |

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

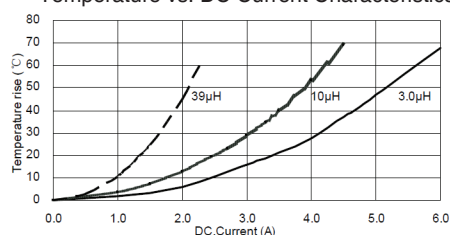


## NPIS84LS Size (Continued)

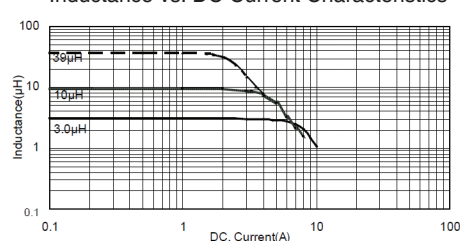
| Series          | Standard Values - Case Size 84 (8.0 x 8.0 x 4.0mm) |           |                 |                 |                  |                  |           |
|-----------------|----------------------------------------------------|-----------|-----------------|-----------------|------------------|------------------|-----------|
|                 | Inductance (μH)                                    | Tolerance | Test Conditions | DCR (Ω)<br>±30% | Max. Isat (Amps) | Max. Irms (Amps) | SRF (MHz) |
| 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                | 9.2       |
| NPIS84LS330MTRF | 33                                                 | ±20%      | 100KHz, 1V      | 0.097           | 2.05             | 1.8              | 7.8       |
| NPIS84LS360MTRF | 36                                                 | ±20%      | 100KHz, 1V      | 0.102           | 2                | 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                | 4.2       |
| NPIS84LS121MTRF | 120                                                | ±20%      | 100KHz, 1V      | 0.334           | 1.05             | 0.95             | 3.5       |
| NPIS84LS151MTRF | 150                                                | ±20%      | 100KHz, 1V      | 0.41            | 1.1              | 0.85             | 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 Irms. Maximum -30% inductance drop from initial measured value at Isat.

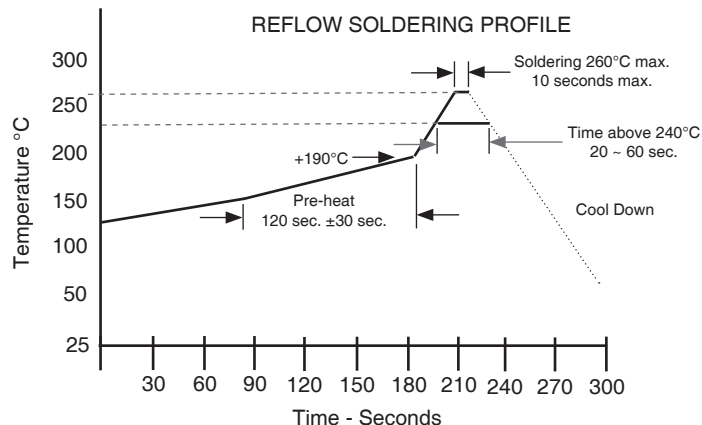
Temperature vs. DC Current Characteristics



Inductance vs. DC Current Characteristics

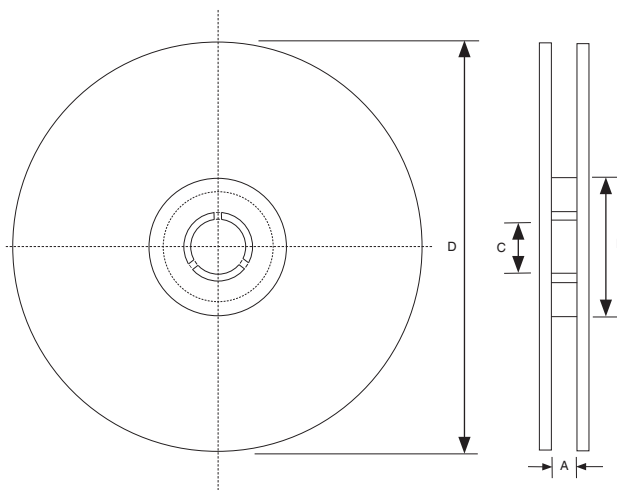
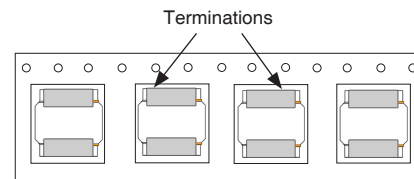
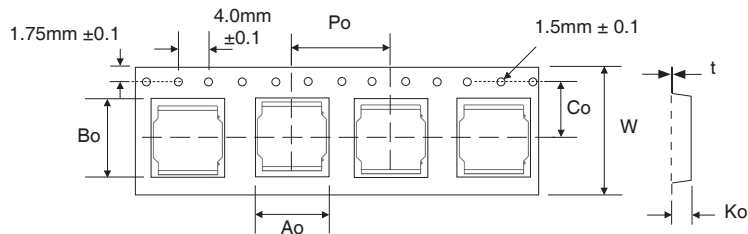


REFLOW SOLDERING PROFILE





| Case Size | CARRIER TAPING DIMENSIONS (mm) AND REEL QUANTITY |             |            |            |            |            |             |          |
|-----------|--------------------------------------------------|-------------|------------|------------|------------|------------|-------------|----------|
|           | Ao                                               | Bo          | Ko         | Co         | W          | Po         | t           | Quantity |
| NPIS20LS  | 2.35 ± 0.05                                      | 2.65 ± 0.05 | 1.2 ± 0.05 | 3.5 ± 0.05 | 8.0 ± 0.1  | 4.0 ± 0.1  | 0.25 ± 0.03 | 2,000    |
| 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  | 5.5 ± 0.1  | 12.0 ± 0.3 | 8.0 ± 0.1  | 0.3 ± 0.03  | 4,500    |
| NPIS48LS  |                                                  |             | 2.4 ± 0.1  |            |            |            |             | 3,000    |
| NPIS42LS  |                                                  |             | 2.4 ± 0.1  |            |            |            |             | 3,000    |
| NPIS43LS  |                                                  |             | 3.4 ± 0.1  |            |            |            |             | 2,000    |
| NPIS52LS  | 5.3 ± 0.1                                        | 5.3 ± 0.1   | 3.0 ± 0.15 | 5.5 ± 0.1  | 12.0 ± 0.3 | 8.0 ± 0.1  | 0.3 ± 0.05  | 2,500    |
| NPIS54LS  |                                                  |             | 4.4 ± 0.1  |            |            |            |             | 1,500    |
| 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    |
| NPIS65LS  |                                                  |             | 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)     |
| NPIS20LS   | 9.0 ± 1.5            | 58 ± 2.0  | 13.5 ± 0.2 | 178 ± 2.0 |
| NPIS21LS   |                      |           |            |           |
| 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 |
| NPIS48LS   |                      |           |            |           |
| NPIS42LS   |                      |           |            |           |
| NPIS43LS   |                      |           |            |           |
| NPIS52LS   | 16.4 +0.2/-0         | 100 ± 2.0 | 13.0 +2/-0 | 330 ± 2.0 |
| NPIS54LS   |                      |           |            |           |
| NPIS62LS   |                      |           |            |           |
| NPIS63LS   | 12.4 +0.2/-0         | 100 ± 2.0 | 13.0 +2/-0 | 330 ± 2.0 |
| NPIS65LS   |                      |           |            |           |
| NPIS84LS   | 16.4 +0.2/-0         | 100 ± 2.0 | 13.0 +2/-0 | 330 ± 2.0 |