

## FEATURES

- SHIELDED POWER INDUCTOR
- HIGH CURRENT (UP TO 12 AMPS)
- SURFACE MOUNTABLE CONSTRUCTION
- HIGH INDUCTANCE (UP TO 1000μH)
- TAPED AND REELED FOR AUTOMATIC INSERTION
- FOR USE IN DC/DC CONVERTERS

**RoHS**  
**Compliant**  
includes all homogeneous materials

\*See Part Number System for Details



## CHARACTERISTICS

| Case Size                           | NPIS62H                                     | NPIS64H      | NPIS73H      | NPIS74H      | NPIS14H     |
|-------------------------------------|---|--------------|--------------|--------------|-------------|
| Inductance Range                    | 3.3 ~ 330μH                                 | 10 ~ 1,000μH | 10 ~ 1,000μH | 10 ~ 1,000μH | 4.7 ~ 470μH |
| Ambient Operating Temperature Range | -40°C ~ +125°C (including temperature rise) |              |              |              |             |
| Temperature Rise at Irms            | +40°C max.                                  |              |              |              |             |
| Inductance Change at Isat           | -25% typical                                |              |              |              |             |
| Inductance Tolerance                | 20% (M)                                     |              |              |              |             |
| Resistance to Solder Heat           | 260°C for 10 seconds                        |              |              |              |             |

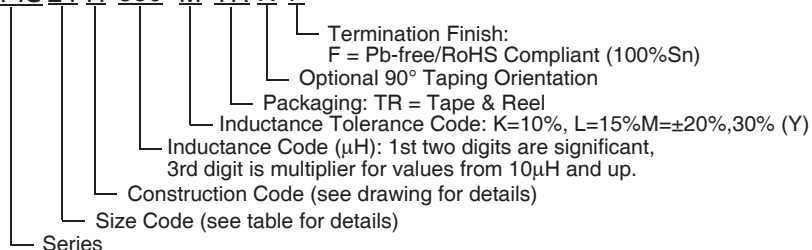
| Case Size                           | NPIS24H                                     | NPIS25H       | NPIS27H       |
|-------------------------------------|---|---------------|---------------|
| Inductance Range                    | 1.0 ~ 330μH                                 | 1.0 ~ 1,000μH | 1.0 ~ 1,000μH |
| Ambient Operating Temperature Range | -40°C ~ +125°C (including temperature rise) |               |               |
| Temperature Rise at Irms            | +40°C max.                                  |               |               |
| Inductance Change at Isat           | -25% typical                                |               |               |
| Inductance Tolerance                | 20% (M)                                     |               |               |
| Resistance to Solder Heat           | 260°C for 10 seconds                        |               |               |

## DIMENSIONS (mm)

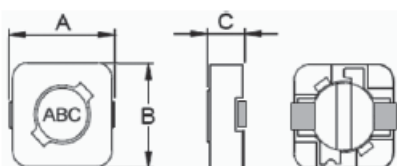
| Series  | A    | B    | C   |
|---------|------|------|-----|
| NPIS62H | 6.8  | 7.0  | 3.0 |
| NPIS64H | 6.8  | 7.0  | 5.0 |
| NPIS73H | 7.8  | 7.8  | 4.0 |
| NPIS74H | 7.8  | 7.8  | 5.0 |
| NPIS14H | 10.5 | 10.5 | 5.0 |
| NPIS24H | 12.5 | 12.5 | 5.0 |
| NPIS25H | 12.5 | 12.5 | 6.0 |
| NPIS27H | 12.5 | 12.5 | 8.0 |

## PART NUMBER SYSTEM

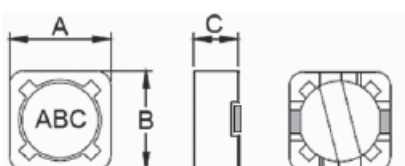
NPIS 24 H 560 M TR N F



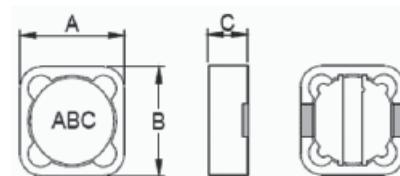
NPIS62, 64H



NPIS73, 74H



NPIS14, 24, 25, & 27H



| Part Number    | Standard Values - Case Size 62 (6.8 x 7.0 x 3.0) |                 |                            |                             |
|----------------|--|-----------------|----------------------------|-----------------------------|
|                | Inductance Value ( $\mu$ H)                      | Test Conditions | DC Resistance ( $\Omega$ ) | DC Current Isat/Irms (Amps) |
| NPIS62H3R3MTRF | 3.3 $\pm$ 20%                                    | 100k, 0.3V      | 0.068                      | 1.94                        |
| NPIS62H4R7MTRF | 4.7 $\pm$ 20%                                    | 100k, 0.3V      | 0.08                       | 1.63                        |
| NPIS62H5R6MTRF | 5.6 $\pm$ 20%                                    | 100k, 0.3V      | 0.096                      | 1.4                         |
| NPIS62H100MTRF | 10 $\pm$ 20%                                     | 1k, 0.3V        | 0.015                      | 1.1                         |
| NPIS62H120MTRF | 12 $\pm$ 20%                                     | 1k, 0.3V        | 0.2                        | 1                           |
| NPIS62H150MTRF | 15 $\pm$ 20%                                     | 1k, 0.3V        | 0.23                       | 0.9                         |
| NPIS62H180MTRF | 18 $\pm$ 20%                                     | 1k, 0.3V        | 0.27                       | 0.8                         |
| NPIS62H220MTRF | 22 $\pm$ 20%                                     | 1k, 0.3V        | 0.34                       | 0.74                        |
| NPIS62H270MTRF | 27 $\pm$ 20%                                     | 1k, 0.3V        | 0.38                       | 0.66                        |
| NPIS62H330MTRF | 33 $\pm$ 20%                                     | 1k, 0.3V        | 0.45                       | 0.59                        |
| NPIS62H390MTRF | 39 $\pm$ 20%                                     | 1k, 0.3V        | 0.49                       | 0.54                        |
| NPIS62H470MTRF | 47 $\pm$ 20%                                     | 1k, 0.3V        | 0.69                       | 0.5                         |
| NPIS62H560MTRF | 56 $\pm$ 20%                                     | 1k, 0.3V        | 0.78                       | 0.46                        |
| NPIS62H680MTRF | 68 $\pm$ 20%                                     | 1k, 0.3V        | 1.07                       | 0.42                        |
| NPIS62H820MTRF | 82 $\pm$ 20%                                     | 1k, 0.3V        | 1.21                       | 0.38                        |
| NPIS62H101MTRF | 100 $\pm$ 20%                                    | 1k, 0.3V        | 1.39                       | 0.34                        |
| NPIS62H121MTRF | 120 $\pm$ 20%                                    | 1k, 0.3V        | 1.9                        | 0.31                        |
| NPIS62H151MTRF | 150 $\pm$ 20%                                    | 1k, 0.3V        | 2.18                       | 0.28                        |
| NPIS62H181MTRF | 180 $\pm$ 20%                                    | 1k, 0.3V        | 2.77                       | 0.26                        |
| NPIS62H221MTRF | 220 $\pm$ 20%                                    | 1k, 0.3V        | 3.12                       | 0.23                        |
| NPIS62H271MTRF | 270 $\pm$ 20%                                    | 1k, 0.3V        | 4.38                       | 0.22                        |
| NPIS62H331MTRF | 330 $\pm$ 20%                                    | 1k, 0.3V        | 4.94                       | 0.19                        |

Irms/Isat specification is based on +40°C temperature rise or -25% inductance change whichever is less.

| Part Number    | Standard Values - Case Size 64 (6.8 x 7.0 x 5.0) |                 |                            |                             |
|----------------|--|-----------------|----------------------------|-----------------------------|
|                | Inductance Value ( $\mu$ H)                      | Test Conditions | DC Resistance ( $\Omega$ ) | DC Current Isat/Irms (Amps) |
| NPIS64H100MTRF | 10 $\pm$ 20%                                     | 1k, 0.3V        | 0.12                       | 1.35                        |
| NPIS64H120MTRF | 12 $\pm$ 20%                                     | 1k, 0.3V        | 0.13                       | 1.2                         |
| NPIS64H150MTRF | 15 $\pm$ 20%                                     | 1k, 0.3V        | 0.18                       | 1.1                         |
| NPIS64H180MTRF | 18 $\pm$ 20%                                     | 1k, 0.3V        | 0.24                       | 1                           |
| NPIS64H220MTRF | 22 $\pm$ 20%                                     | 1k, 0.3V        | 0.27                       | 0.91                        |
| NPIS64H270MTRF | 27 $\pm$ 20%                                     | 1k, 0.3V        | 0.3                        | 0.82                        |
| NPIS64H330MTRF | 33 $\pm$ 20%                                     | 1k, 0.3V        | 0.33                       | 0.75                        |
| NPIS64H390MTRF | 39 $\pm$ 20%                                     | 1k, 0.3V        | 0.37                       | 0.69                        |
| NPIS64H470MTRF | 47 $\pm$ 20%                                     | 1k, 0.3V        | 0.52                       | 0.62                        |
| NPIS64H560MTRF | 56 $\pm$ 20%                                     | 1k, 0.3V        | 0.56                       | 0.58                        |
| NPIS64H680MTRF | 68 $\pm$ 20%                                     | 1k, 0.3V        | 0.63                       | 0.52                        |
| NPIS64H820MTRF | 82 $\pm$ 20%                                     | 1k, 0.3V        | 0.71                       | 0.47                        |
| NPIS64H101MTRF | 100 $\pm$ 20%                                    | 1k, 0.3V        | 1.03                       | 0.43                        |
| NPIS64H121MTRF | 120 $\pm$ 20%                                    | 1k, 0.3V        | 1.15                       | 0.39                        |
| NPIS64H151MTRF | 150 $\pm$ 20%                                    | 1k, 0.3V        | 1.68                       | 0.35                        |
| NPIS64H181MTRF | 180 $\pm$ 20%                                    | 1k, 0.3V        | 1.87                       | 0.32                        |
| NPIS64H221MTRF | 220 $\pm$ 20%                                    | 1k, 0.3V        | 2.08                       | 0.29                        |
| NPIS64H271MTRF | 270 $\pm$ 20%                                    | 1k, 0.3V        | 2.37                       | 0.26                        |
| NPIS64H331MTRF | 330 $\pm$ 20%                                    | 1k, 0.3V        | 2.67                       | 0.25                        |
| NPIS64H391MTRF | 390 $\pm$ 20%                                    | 1k, 0.3V        | 2.94                       | 0.22                        |
| NPIS64H471MTRF | 470 $\pm$ 20%                                    | 1k, 0.3V        | 3.93                       | 0.2                         |
| NPIS64H561MTRF | 560 $\pm$ 20%                                    | 1k, 0.3V        | 5.43                       | 0.18                        |
| NPIS64H681MTRF | 680 $\pm$ 20%                                    | 1k, 0.3V        | 7.32                       | 0.17                        |
| NPIS64H821MTRF | 820 $\pm$ 20%                                    | 1k, 0.3V        | 8.24                       | 0.15                        |
| NPIS64H102MTRF | 1000 $\pm$ 20%                                   | 1k, 0.3V        | 9.26                       | 0.14                        |

Irms/Isat specification is based on +40°C temperature rise or -25% inductance change whichever is less.



| Part Number    | Standard Values - Case Size 73 (7.8 x 7.8 x 4.0) |                 |                            |                             |
|----------------|--|-----------------|----------------------------|-----------------------------|
|                | Inductance Value ( $\mu$ H)                      | Test Conditions | DC Resistance ( $\Omega$ ) | DC Current Isat/Irms (Amps) |
| NPIS73H100MTRF | 10 $\pm$ 20%                                     | 1k, 0.3V        | 0.072                      | 1.68                        |
| NPIS73H120MTRF | 12 $\pm$ 20%                                     | 1k, 0.3V        | 0.098                      | 1.52                        |
| NPIS73H150MTRF | 15 $\pm$ 20%                                     | 1k, 0.3V        | 0.13                       | 1.33                        |
| NPIS73H180MTRF | 18 $\pm$ 20%                                     | 1k, 0.3V        | 0.14                       | 1.2                         |
| NPIS73H220MTRF | 22 $\pm$ 20%                                     | 1k, 0.3V        | 0.19                       | 1.07                        |
| NPIS73H270MTRF | 27 $\pm$ 20%                                     | 1k, 0.3V        | 0.21                       | 0.96                        |
| NPIS73H330MTRF | 33 $\pm$ 20%                                     | 1k, 0.3V        | 0.24                       | 0.91                        |
| NPIS73H390MTRF | 39 $\pm$ 20%                                     | 1k, 0.3V        | 0.32                       | 0.77                        |
| NPIS73H470MTRF | 47 $\pm$ 20%                                     | 1k, 0.3V        | 0.36                       | 0.76                        |
| NPIS73H560MTRF | 56 $\pm$ 20%                                     | 1k, 0.3V        | 0.47                       | 0.68                        |
| NPIS73H680MTRF | 68 $\pm$ 20%                                     | 1k, 0.3V        | 0.52                       | 0.61                        |
| NPIS73H820MTRF | 82 $\pm$ 20%                                     | 1k, 0.3V        | 0.69                       | 0.57                        |
| NPIS73H101MTRF | 100 $\pm$ 20%                                    | 1k, 0.3V        | 0.79                       | 0.5                         |
| NPIS73H121MTRF | 120 $\pm$ 20%                                    | 1k, 0.3V        | 0.89                       | 0.49                        |
| NPIS73H151MTRF | 150 $\pm$ 20%                                    | 1k, 0.3V        | 1.27                       | 0.43                        |
| NPIS73H181MTRF | 180 $\pm$ 20%                                    | 1k, 0.3V        | 1.45                       | 0.39                        |
| NPIS73H221MTRF | 220 $\pm$ 20%                                    | 1k, 0.3V        | 1.65                       | 0.35                        |
| NPIS73H271MTRF | 270 $\pm$ 20%                                    | 1k, 0.3V        | 2.31                       | 0.32                        |
| NPIS73H331MTRF | 330 $\pm$ 20%                                    | 1k, 0.3V        | 2.62                       | 0.28                        |
| NPIS73H391MTRF | 390 $\pm$ 20%                                    | 1k, 0.3V        | 2.94                       | 0.26                        |
| NPIS73H471MTRF | 470 $\pm$ 20%                                    | 1k, 0.3V        | 4.18                       | 0.24                        |
| NPIS73H561MTRF | 560 $\pm$ 20%                                    | 1k, 0.3V        | 4.67                       | 0.22                        |
| NPIS73H681MTRF | 680 $\pm$ 20%                                    | 1k, 0.3V        | 5.73                       | 0.19                        |
| NPIS73H821MTRF | 820 $\pm$ 20%                                    | 1k, 0.3V        | 6.54                       | 0.18                        |
| NPIS73H102MTRF | 1000 $\pm$ 20%                                   | 1k, 0.3V        | 9.44                       | 0.16                        |

Irms/Isat specification is based on +40°C temperature rise or -25% inductance change whichever is less.

| Part Number    | Standard Values - Case Size 74 (7.8 x 7.8 x 5.0) |                 |                            |                             |
|----------------|--|-----------------|----------------------------|-----------------------------|
|                | Inductance Value ( $\mu$ H)                      | Test Conditions | DC Resistance ( $\Omega$ ) | DC Current Isat/Irms (Amps) |
| NPIS74H100MTRF | 10 $\pm$ 20%                                     | 1k, 0.3V        | 0.049                      | 1.84                        |
| NPIS74H120MTRF | 12 $\pm$ 20%                                     | 1k, 0.3V        | 0.058                      | 1.71                        |
| NPIS74H150MTRF | 15 $\pm$ 20%                                     | 1k, 0.3V        | 0.081                      | 1.47                        |
| NPIS74H180MTRF | 18 $\pm$ 20%                                     | 1k, 0.3V        | 0.091                      | 1.31                        |
| NPIS74H220MTRF | 22 $\pm$ 20%                                     | 1k, 0.3V        | 0.11                       | 1.23                        |
| NPIS74H270MTRF | 27 $\pm$ 20%                                     | 1k, 0.3V        | 0.15                       | 1.12                        |
| NPIS74H330MTRF | 33 $\pm$ 20%                                     | 1k, 0.3V        | 0.17                       | 0.96                        |
| NPIS74H390MTRF | 39 $\pm$ 20%                                     | 1k, 0.3V        | 0.23                       | 0.91                        |
| NPIS74H470MTRF | 47 $\pm$ 20%                                     | 1k, 0.3V        | 0.26                       | 0.88                        |
| NPIS74H560MTRF | 56 $\pm$ 20%                                     | 1k, 0.3V        | 0.35                       | 0.75                        |
| NPIS74H680MTRF | 68 $\pm$ 20%                                     | 1k, 0.3V        | 0.38                       | 0.69                        |
| NPIS74H820MTRF | 82 $\pm$ 20%                                     | 1k, 0.3V        | 0.43                       | 0.61                        |
| NPIS74H101MTRF | 100 $\pm$ 20%                                    | 1k, 0.3V        | 0.61                       | 0.6                         |
| NPIS74H121MTRF | 120 $\pm$ 20%                                    | 1k, 0.3V        | 0.66                       | 0.52                        |
| NPIS74H151MTRF | 150 $\pm$ 20%                                    | 1k, 0.3V        | 0.88                       | 0.46                        |
| NPIS74H181MTRF | 180 $\pm$ 20%                                    | 1k, 0.3V        | 0.98                       | 0.42                        |
| NPIS74H221MTRF | 220 $\pm$ 20%                                    | 1k, 0.3V        | 1.17                       | 0.36                        |
| NPIS74H271MTRF | 270 $\pm$ 20%                                    | 1k, 0.3V        | 1.64                       | 0.34                        |
| NPIS74H331MTRF | 330 $\pm$ 20%                                    | 1k, 0.3V        | 1.86                       | 0.32                        |
| NPIS74H391MTRF | 390 $\pm$ 20%                                    | 1k, 0.3V        | 2.85                       | 0.29                        |
| NPIS74H471MTRF | 470 $\pm$ 20%                                    | 1k, 0.3V        | 3.01                       | 0.26                        |
| NPIS74H561MTRF | 560 $\pm$ 20%                                    | 1k, 0.3V        | 3.62                       | 0.23                        |
| NPIS74H681MTRF | 680 $\pm$ 20%                                    | 1k, 0.3V        | 4.63                       | 0.22                        |
| NPIS74H821MTRF | 820 $\pm$ 20%                                    | 1k, 0.3V        | 5.2                        | 0.2                         |
| NPIS74H102MTRF | 1000 $\pm$ 20%                                   | 1k, 0.3V        | 6                          | 0.18                        |

Irms/Isat specification is based on +40°C temperature rise or -25% inductance change whichever is less.



| Part Number    | Standard Values - Case Size 14 (10.5 x 10.5 x 5.0) |                 |                            |                             |
|----------------|--|-----------------|----------------------------|-----------------------------|
|                | Inductance Value ( $\mu$ H)                        | Test Conditions | DC Resistance ( $\Omega$ ) | DC Current Isat/Irms (Amps) |
| NPIS14H4R7MTRF | 4.7 $\pm$ 20%                                      | 100k, 0.3V      | 0.035                      | 3.2                         |
| NPIS14H6R8MTRF | 6.8 $\pm$ 20%                                      | 100k, 0.3V      | 0.044                      | 2.8                         |
| NPIS14H100MTRF | 10 $\pm$ 20%                                       | 1k, 0.3V        | 0.05                       | 2.4                         |
| NPIS14H120MTRF | 12 $\pm$ 20%                                       | 1k, 0.3V        | 0.054                      | 2.25                        |
| NPIS14H150MTRF | 15 $\pm$ 20%                                       | 1k, 0.3V        | 0.061                      | 2                           |
| NPIS14H180MTRF | 18 $\pm$ 20%                                       | 1k, 0.3V        | 0.084                      | 1.8                         |
| NPIS14H220MTRF | 22 $\pm$ 20%                                       | 1k, 0.3V        | 0.094                      | 1.65                        |
| NPIS14H270MTRF | 27 $\pm$ 20%                                       | 1k, 0.3V        | 0.11                       | 1.45                        |
| NPIS14H330MTRF | 33 $\pm$ 20%                                       | 1k, 0.3V        | 0.15                       | 1.35                        |
| NPIS14H390MTRF | 39 $\pm$ 20%                                       | 1k, 0.3V        | 0.17                       | 1.2                         |
| NPIS14H470MTRF | 47 $\pm$ 20%                                       | 1k, 0.3V        | 0.21                       | 1.1                         |
| NPIS14H560MTRF | 56 $\pm$ 20%                                       | 1k, 0.3V        | 0.23                       | 1                           |
| NPIS14H680MTRF | 68 $\pm$ 20%                                       | 1k, 0.3V        | 0.26                       | 0.93                        |
| NPIS14H820MTRF | 82 $\pm$ 20%                                       | 1k, 0.3V        | 0.36                       | 0.84                        |
| NPIS14H101MTRF | 100 $\pm$ 20%                                      | 1k, 0.3V        | 0.41                       | 0.76                        |
| NPIS14H151MTRF | 150 $\pm$ 20%                                      | 1k, 0.3V        | 0.64                       | 0.63                        |
| NPIS14H181MTRF | 180 $\pm$ 20%                                      | 1k, 0.3V        | 0.84                       | 0.57                        |
| NPIS14H221MTRF | 220 $\pm$ 20%                                      | 1k, 0.3V        | 0.96                       | 0.52                        |
| NPIS14H271MTRF | 270 $\pm$ 20%                                      | 1k, 0.3V        | 1.07                       | 0.47                        |
| NPIS14H331MTRF | 330 $\pm$ 20%                                      | 1k, 0.3V        | 1.37                       | 0.43                        |
| NPIS14H391MTRF | 390 $\pm$ 20%                                      | 1k, 0.3V        | 1.55                       | 0.39                        |
| NPIS14H471MTRF | 470 $\pm$ 20%                                      | 1k, 0.3V        | 1.74                       | 0.36                        |

Irms/Isat specification is based on +40°C temperature rise or -25% inductance change whichever is less.

| Part Number    | Standard Values - Case Size 24 (12.5 x 12.5 x 5.0) |                 |                            |                             |
|----------------|--|-----------------|----------------------------|-----------------------------|
|                | Inductance Value ( $\mu$ H)                        | Test Conditions | DC Resistance ( $\Omega$ ) | DC Current Isat/Irms (Amps) |
| NPIS24H1R0MTRF | 1.0 $\pm$ 20%                                      | 100k, 0.3V      | 0.010                      | 8.0                         |
| NPIS24H2R2MTRF | 2.2 $\pm$ 20%                                      | 100k, 0.3V      | 0.014                      | 4.9                         |
| NPIS24H3R3MTRF | 3.3 $\pm$ 20%                                      | 100k, 0.3V      | 0.015                      | 4.5                         |
| NPIS24H4R7MTRF | 4.7 $\pm$ 20%                                      | 100k, 0.3V      | 0.018                      | 5.7                         |
| NPIS24H5R6MTRF | 5.6 $\pm$ 20%                                      | 100k, 0.3V      | 0.020                      | 5.2                         |
| NPIS24H6R8MTRF | 6.8 $\pm$ 20%                                      | 100k, 0.3V      | 0.023                      | 4.9                         |
| NPIS24H8R2MTRF | 8.2 $\pm$ 20%                                      | 100k, 0.3V      | 0.026                      | 4.6                         |
| NPIS24H100MTRF | 10 $\pm$ 20%                                       | 1k, 0.3V        | 0.028                      | 4.5                         |
| NPIS24H120MTRF | 12 $\pm$ 20%                                       | 1k, 0.3V        | 0.038                      | 4.0                         |
| NPIS24H150MTRF | 15 $\pm$ 20%                                       | 1k, 0.3V        | 0.050                      | 3.2                         |
| NPIS24H180MTRF | 18 $\pm$ 20%                                       | 1k, 0.3V        | 0.057                      | 3.1                         |
| NPIS24H220MTRF | 22 $\pm$ 20%                                       | 1k, 0.3V        | 0.066                      | 2.9                         |
| NPIS24H270MTRF | 27 $\pm$ 20%                                       | 1k, 0.3V        | 0.080                      | 2.8                         |
| NPIS24H330MTRF | 33 $\pm$ 20%                                       | 1k, 0.3V        | 0.097                      | 2.7                         |
| NPIS24H390MTRF | 39 $\pm$ 20%                                       | 1k, 0.3V        | 0.132                      | 2.1                         |
| NPIS24H470MTRF | 47 $\pm$ 20%                                       | 1k, 0.3V        | 0.16                       | 1.9                         |
| NPIS24H560MTRF | 56 $\pm$ 20%                                       | 1k, 0.3V        | 0.19                       | 1.8                         |
| NPIS24H680MTRF | 68 $\pm$ 20%                                       | 1k, 0.3V        | 0.22                       | 1.5                         |
| NPIS24H820MTRF | 82 $\pm$ 20%                                       | 1k, 0.3V        | 0.26                       | 1.3                         |
| NPIS24H101MTRF | 100 $\pm$ 20%                                      | 1k, 0.3V        | 0.31                       | 1.2                         |
| NPIS24H121MTRF | 120 $\pm$ 20%                                      | 1k, 0.3V        | 0.38                       | 1.1                         |
| NPIS24H151MTRF | 150 $\pm$ 20%                                      | 1k, 0.3V        | 0.53                       | 0.95                        |
| NPIS24H181MTRF | 180 $\pm$ 20%                                      | 1k, 0.3V        | 0.62                       | 0.85                        |
| NPIS24H221MTRF | 220 $\pm$ 20%                                      | 1k, 0.3V        | 0.70                       | 0.80                        |
| NPIS24H271MTRF | 270 $\pm$ 20%                                      | 1k, 0.3V        | 0.87                       | 0.60                        |
| NPIS24H331MTRF | 330 $\pm$ 20%                                      | 1k, 0.3V        | 0.99                       | 0.50                        |

Irms/Isat specification is based on +40°C temperature rise or -25% inductance change whichever is less.



| Part Number    | Standard Values - Case Size 25 (12.5 x 12.5 x 6.0) |                 |                            |                                     |
|----------------|--|-----------------|----------------------------|-------------------------------------|
|                | Inductance Value ( $\mu$ H)                        | Test Conditions | DC Resistance ( $\Omega$ ) | DC Current $I_{sat}/I_{rms}$ (Amps) |
| NPIS25H1R0MTRF | 1.0 $\pm$ 20%                                      | 100k, 0.3V      | 0.01                       | 8                                   |
| NPIS25H2R2MTRF | 2.2 $\pm$ 20%                                      | 100k, 0.3V      | 0.014                      | 7.8                                 |
| NPIS25H3R3MTRF | 3.3 $\pm$ 20%                                      | 100k, 0.3V      | 0.014                      | 8                                   |
| NPIS25H8R2MTRF | 8.2 $\pm$ 20%                                      | 100k, 0.3V      | 0.021                      | 4.4                                 |
| NPIS25H100MTRF | 10 $\pm$ 20%                                       | 1k, 0.3V        | 0.025                      | 4                                   |
| NPIS25H120MTRF | 12 $\pm$ 20%                                       | 1k, 0.3V        | 0.027                      | 3.5                                 |
| NPIS25H150MTRF | 15 $\pm$ 20%                                       | 1k, 0.3V        | 0.03                       | 3.3                                 |
| NPIS25H180MTRF | 18 $\pm$ 20%                                       | 1k, 0.3V        | 0.034                      | 3                                   |
| NPIS25H220MTRF | 22 $\pm$ 20%                                       | 1k, 0.3V        | 0.036                      | 2.8                                 |
| NPIS25H270MTRF | 27 $\pm$ 20%                                       | 1k, 0.3V        | 0.051                      | 2.3                                 |
| NPIS25H330MTRF | 33 $\pm$ 20%                                       | 1k, 0.3V        | 0.057                      | 2.1                                 |
| NPIS25H390MTRF | 39 $\pm$ 20%                                       | 1k, 0.3V        | 0.068                      | 2                                   |
| NPIS25H470MTRF | 47 $\pm$ 20%                                       | 1k, 0.3V        | 0.075                      | 1.8                                 |
| NPIS25H560MTRF | 56 $\pm$ 20%                                       | 1k, 0.3V        | 0.11                       | 1.7                                 |
| NPIS25H680MTRF | 68 $\pm$ 20%                                       | 1k, 0.3V        | 0.12                       | 1.5                                 |
| NPIS25H820MTRF | 82 $\pm$ 20%                                       | 1k, 0.3V        | 0.14                       | 1.4                                 |
| NPIS25H101MTRF | 100 $\pm$ 20%                                      | 1k, 0.3V        | 0.16                       | 1.3                                 |
| NPIS25H121MTRF | 120 $\pm$ 20%                                      | 1k, 0.3V        | 0.17                       | 1.1                                 |
| NPIS25H151MTRF | 150 $\pm$ 20%                                      | 1k, 0.3V        | 0.23                       | 1                                   |
| NPIS25H181MTRF | 180 $\pm$ 20%                                      | 1k, 0.3V        | 0.29                       | 0.9                                 |
| NPIS25H221MTRF | 220 $\pm$ 20%                                      | 1k, 0.3V        | 0.4                        | 0.8                                 |
| NPIS25H271MTRF | 270 $\pm$ 20%                                      | 1k, 0.3V        | 0.46                       | 0.75                                |
| NPIS25H331MTRF | 330 $\pm$ 20%                                      | 1k, 0.3V        | 0.51                       | 0.68                                |
| NPIS25H391MTRF | 390 $\pm$ 20%                                      | 1k, 0.3V        | 0.69                       | 0.65                                |
| NPIS25H471MTRF | 470 $\pm$ 20%                                      | 1k, 0.3V        | 0.77                       | 0.58                                |
| NPIS25H561MTRF | 560 $\pm$ 20%                                      | 1k, 0.3V        | 0.86                       | 0.54                                |
| NPIS25H681MTRF | 680 $\pm$ 20%                                      | 1k, 0.3V        | 1.2                        | 0.48                                |
| NPIS25H821MTRF | 820 $\pm$ 20%                                      | 1k, 0.3V        | 1.34                       | 0.43                                |
| NPIS25H102MTRF | 1000 $\pm$ 20%                                     | 1k, 0.3V        | 1.53                       | 0.40                                |

$I_{rms}/I_{sat}$  specification is based on +40°C temperature rise or -25% inductance change whichever is less.



| Part Number    | Standard Values - Case Size 27 (12.5 x 12.5 x 8.0) |                 |                            |   |
|----------------|--|-----------------|----------------------------|---|
|                | Inductance Value ( $\mu\text{H}$ )                 | Test Conditions | DC Resistance ( $\Omega$ ) | DC Current $I_{\text{sat}}/I_{\text{rms}}$ (Amps) |
| NPIS27H1R0MTRF | 1.0 $\pm$ 20%                                      | 100k, 0.3V      | 0.006                      | 12  |
| NPIS27H2R2MTRF | 2.2 $\pm$ 20%                                      | 100k, 0.3V      | 0.0115                     | 8   |
| NPIS27H3R3MTRF | 3.3 $\pm$ 20%                                      | 100k, 0.3V      | 0.013                      | 8   |
| NPIS27H4R7MTRF | 4.7 $\pm$ 20%                                      | 100k, 0.3V      | 0.0158                     | 6.8   |
| NPIS27H6R8MTRF | 6.8 $\pm$ 20%                                      | 100k, 0.3V      | 0.019                      | 6.6   |
| NPIS27H8R2MTRF | 8.2 $\pm$ 20%                                      | 100k, 0.3V      | 0.02                       | 5.6   |
| NPIS27H100MTRF | 10 $\pm$ 20%                                       | 1k, 0.3V        | 0.0216                     | 5.4   |
| NPIS27H120MTRF | 12 $\pm$ 20%                                       | 1k, 0.3V        | 0.0243                     | 4.9   |
| NPIS27H150MTRF | 15 $\pm$ 20%                                       | 1k, 0.3V        | 0.027                      | 4.5   |
| NPIS27H180MTRF | 18 $\pm$ 20%                                       | 1k, 0.3V        | 0.0392                     | 3.9   |
| NPIS27H220MTRF | 22 $\pm$ 20%                                       | 1k, 0.3V        | 0.0432                     | 3.6   |
| NPIS27H270MTRF | 27 $\pm$ 20%                                       | 1k, 0.3V        | 0.0459                     | 3.4   |
| NPIS27H330MTRF | 33 $\pm$ 20%                                       | 1k, 0.3V        | 0.0648                     | 3   |
| NPIS27H390MTRF | 39 $\pm$ 20%                                       | 1k, 0.3V        | 0.0729                     | 2.75  |
| NPIS27H470MTRF | 47 $\pm$ 20%                                       | 1k, 0.3V        | 0.1                        | 2.5   |
| NPIS27H560MTRF | 56 $\pm$ 20%                                       | 1k, 0.3V        | 0.11                       | 2.35  |
| NPIS27H680MTRF | 68 $\pm$ 20%                                       | 1k, 0.3V        | 0.14                       | 2.1   |
| NPIS27H820MTRF | 82 $\pm$ 20%                                       | 1k, 0.3V        | 0.16                       | 1.95  |
| NPIS27H101MTRF | 100 $\pm$ 20%                                      | 1k, 0.3V        | 0.22                       | 1.7   |
| NPIS27H121MTRF | 120 $\pm$ 20%                                      | 1k, 0.3V        | 0.25                       | 1.6   |
| NPIS27H151MTRF | 150 $\pm$ 20%                                      | 1k, 0.3V        | 0.28                       | 1.42  |
| NPIS27H181MTRF | 180 $\pm$ 20%                                      | 1k, 0.3V        | 0.35                       | 1.3   |
| NPIS27H221MTRF | 220 $\pm$ 20%                                      | 1k, 0.3V        | 0.39                       | 1.16  |
| NPIS27H271MTRF | 270 $\pm$ 20%                                      | 1k, 0.3V        | 0.56                       | 1.06  |
| NPIS27H331MTRF | 330 $\pm$ 20%                                      | 1k, 0.3V        | 0.64                       | 0.95  |
| NPIS27H391MTRF | 390 $\pm$ 20%                                      | 1k, 0.3V        | 0.7                        | 0.88  |
| NPIS27H471MTRF | 470 $\pm$ 20%                                      | 1k, 0.3V        | 0.98                       | 0.79  |
| NPIS27H561MTRF | 560 $\pm$ 20%                                      | 1k, 0.3V        | 1.07                       | 0.73  |
| NPIS27H681MTRF | 680 $\pm$ 20%                                      | 1k, 0.3V        | 1.46                       | 0.67  |
| NPIS27H821MTRF | 820 $\pm$ 20%                                      | 1k, 0.3V        | 1.64                       | 0.6   |
| NPIS27H102MTRF | 1000 $\pm$ 20%                                     | 1k, 0.3V        | 1.82                       | 0.55  |

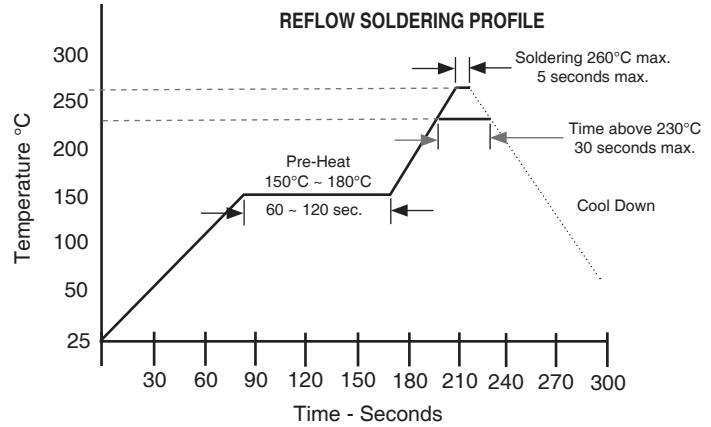
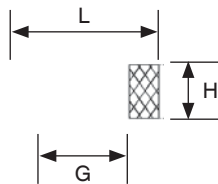
$I_{\text{rms}}/I_{\text{sat}}$  specification is based on +40°C temperature rise or -25% inductance change whichever is less.



### RECOMMENDED LAND PATTERN DIMENSIONS

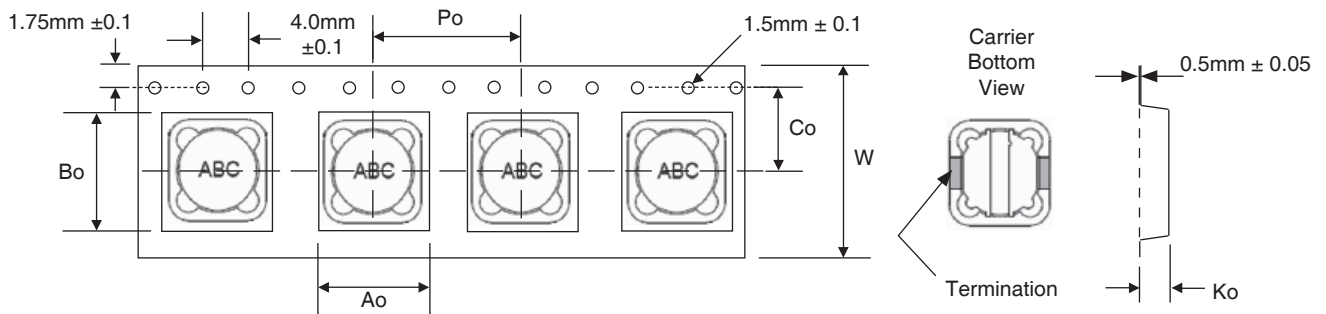
| Series  | G   | H   | L    |
|---------|-----|-----|------|
| NPIS62H | 4.6 | 1.9 | 7.4  |
| NPIS64H | 4.6 | 1.9 | 7.4  |
| NPIS73H | 4.8 | 2.2 | 8.0  |
| NPIS74H | 4.8 | 2.2 | 8.0  |
| NPIS14H | 6.8 | 4.4 | 10.8 |
| NPIS24H | 7.0 | 5.4 | 12.8 |
| NPIS25H | 7.0 | 5.4 | 12.8 |
| NPIS27H | 7.0 | 5.4 | 12.8 |

### LAND PATTERN

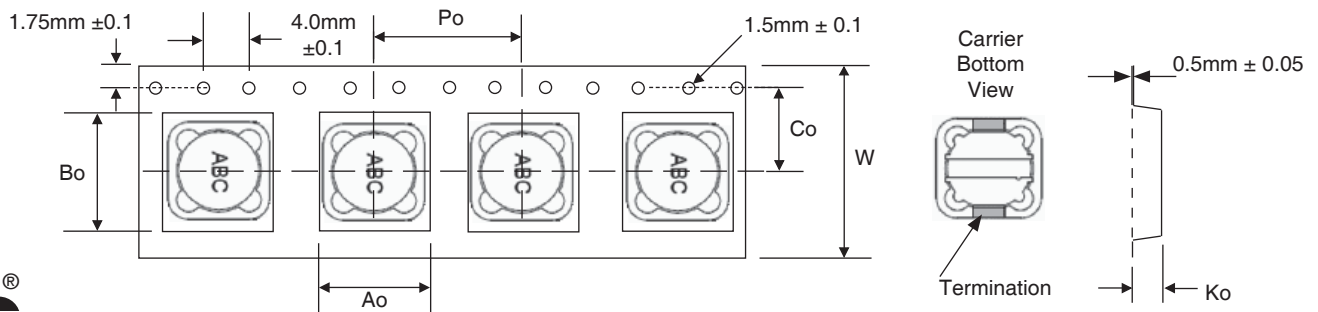


| Case Size | TAPING DIMENSIONS (mm) |      |     |      |    |      |
|-----------|------------------------|------|-----|------|----|------|
|           | Ao                     | Bo   | Ko  | Co   | W  | Po   |
| NPIS62H   | 7.0                    | 6.6  | 3.2 | 7.5  | 16 | 12   |
| NPIS64H   | 7.0                    | 6.6  | 5.2 | 7.5  | 16 | 12   |
| NPIS73H   | 7.6                    | 7.6  | 4.2 | 7.5  | 16 | 12   |
| NPIS74H   |                        |      | 5.2 |      |    |      |
| NPIS14H   | 10.3                   | 10.3 | 5.2 | 11.5 | 24 | 16   |
| NPIS24H   | 12.9                   | 12.9 | 4.9 | 11.5 | 24 | 16.0 |
| NPIS25H   |                        |      | 6.2 |      |    |      |
| NPIS27H   |                        |      | 8.2 |      |    |      |

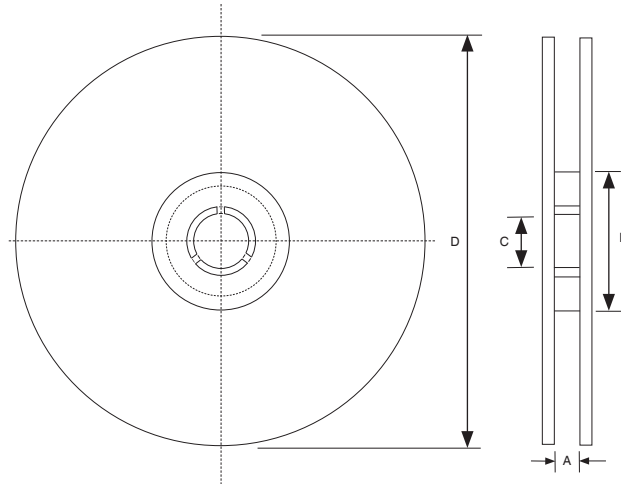
### STANDARD COMPONENT ORIENTATION ON TAPE (TRF)



### OPTIONAL COMPONENT ORIENTATION ON TAPE (TRNF)



| Tape Width | REEL DIMENSIONS (mm) |           |          |       |
|------------|----------------------|-----------|----------|-------|
|            | A(mm)                | B(mm)     | C(mm)    | D(mm) |
| 16mm       | 16.5 ± 0.5           | 100 ± 2.0 | 13 ± 0.5 | 330   |
| 24mm       | 24.5 ± 0.1           | 100 ± 2.0 | 13 ± 0.5 | 330   |



| Size              | REEL QUANTITY PER CASE SIZE |         |         |         |         |         |         |         |
|-------------------|-----------------------------|---------|---------|---------|---------|---------|---------|---------|
|                   | NPIS62H                     | NPIS64H | NPIS73H | NPIS74H | NPIS14H | NPIS24H | NPIS25H | NPIS27H |
| Quantity per reel | 1,500                       | 1,000   | 1,000   | 1,000   | 1,000   | 600     | 600     | 400     |
| Tape Width        | 16mm                        |         |         |         | 24mm    |         |         |         |

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[NACZ221M35V8X10.5TR13F](#) [NRWA101M10V5X11F](#) [NTC-T336K16TRCF](#) [NRWP102M16V10X12.5F](#) [NRLM822M50V30X35F](#)  
[NACE470M63V8X10.5TR13F](#) [NCD4R7C1KVNPOF](#) [NRSZ152M35V 16X25F](#) [NRSH222M63V18X40F](#) [NRLM123M16V25X25F](#)