

### FEATURES

- RADIAL LEADED POWER INDUCTOR
- WIRE WOUND CONSTRUCTION
- WIDE VALUE RANGE 1.0 $\mu$ H ~ 330 $\mu$ H
- AVAILABLE WITH HIGH TEMPERATURE SLEEVE
- FIVE CASE SIZES (6.5X6.5mm ~ 11X15.5mm)
- BULK PACKAGING ONLY

**RoHS  
Compliant**  
includes all homogeneous materials

\*See Part Number System for Details

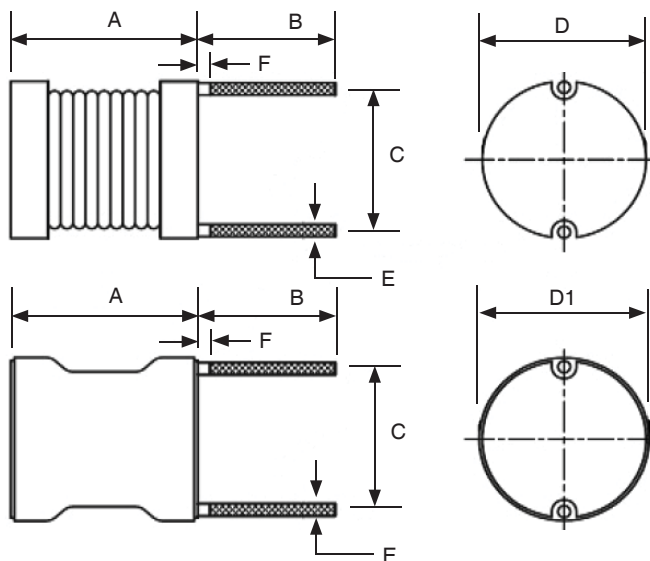


### CHARACTERISTICS

| Case Code                                              | NLI66H                         | NLI77H                   | NLI87H                   | NLI101H                   | NLI121H                  |
|--------------------------------------------------------|--------------------------------|--------------------------|--------------------------|---------------------------|--------------------------|
| Inductance Range ( $\mu$ H)                            | 1.0 $\mu$ H ~ 4.7 $\mu$ H      | 1.0 $\mu$ H ~ 22 $\mu$ H | 2.2 $\mu$ H ~ 22 $\mu$ H | 3.3 $\mu$ H ~ 100 $\mu$ H | 10 $\mu$ H ~ 330 $\mu$ H |
| Ambient Operating Temperature Range                    | -20°C ~ +80°C                  |                          |                          |                           |                          |
| Maximum Component Temperature (Ambient + Self-Heating) | +105°C                         |                          |                          |                           |                          |
| Temperature Rise at Irms                               | +20°C                          |                          |                          |                           |                          |
| Inductance Change at Isat                              | -20%                           |                          |                          |                           |                          |
| Inductance Tolerance                                   | K ( $\pm$ 10%), M ( $\pm$ 20%) |                          |                          |                           |                          |

### DIMENSIONS (mm)

| Series  | A max. | B              | C              | D max.<br>(Without Sleeve) | D1 max.<br>(With Sleeve) | E                         | F max. |
|---------|--------|----------------|----------------|----------------------------|--------------------------|---------------------------|--------|
| NLI66H  | 6.5    | 5.0 $\pm$ 1.0  | 5.0 $\pm$ 1.0  | 6.5                        | 7.0                      | See Specifications Tables | 1.5    |
| NLI77H  | 7.5    | 5.0 $\pm$ 1.0  | 6.0 $\pm$ 1.0  | 7.5                        | 8.0                      |                           | 1.5    |
| NLI87H  | 7.5    | 5.0 $\pm$ 1.0  | 6.0 $\pm$ 1.0  | 8.5                        | 9.0                      |                           | 1.5    |
| NLI101H | 10.5   | 10.0 $\pm$ 2.0 | 8.0 $\pm$ 1.0  | 11.0                       | 11.5                     |                           | 1.5    |
| NLI121H | 15.5   | 10.0 $\pm$ 2.0 | 11.0 $\pm$ 1.0 | 15.0                       | 15.5                     |                           | 1.5    |



### PART NUMBER SYSTEM

NLI 66 H 4R7 K U F

- NLI: Series
- 66: Size Code (see table for details)
- H: Construction Code (see drawing for details)
- 4R7: Inductance Code ( $\mu$ H): 1st two digits are significant, 3rd digit is multiplier for values from 10 $\mu$ H and up.
- K: Inductance Tolerance Code: K =  $\pm$ 10%, M =  $\pm$ 20%
- U: U = Optional Black UL Sleeveing (blank for no sleeveing)
- F: RoHS Compliant



| NLI66H STANDARD VALUES (H = 6.5mm x D = 6.5mm) |                 |                       |        |         |                |              |           |           |               |
|------------------------------------------------|-----------------|-----------------------|--------|---------|----------------|--------------|-----------|-----------|---------------|
| Part Number                                    | Inductance (μH) | Inductance Tolerance* | Q min. | Q Freq. | SRF (MHz) min. | DCR (Ω) max. | I sat (A) | I rms (A) | Dim. E (ref.) |
| NLI66H1R0M _ F                                 | 1               | ±20%                  | 20     | 7.96MHz | 100            | 0.008        | 6         | 4.3       | 0.6           |
| NLI66H1R5M _ F                                 | 1.5             | ±20%                  | 20     | 7.96MHz | 70             | 0.009        | 5         | 3.7       | 0.55          |
| NLI66H2R2M _ F                                 | 2.2             | ±20%                  | 20     | 7.96MHz | 60             | 0.013        | 4         | 3.2       | 0.55          |
| NLI66H3R3M _ F                                 | 3.3             | ±20%                  | 20     | 7.96MHz | 50             | 0.018        | 3.2       | 2.7       | 0.5           |
| NLI66H4R7M _ F                                 | 4.7             | ±20%                  | 20     | 7.96MHz | 40             | 0.024        | 2.7       | 2.4       | 0.5           |

DC I maximum +25°C temperature rise, ΔL -20% max.

\* Contact NIC for other tolerance options. \_ Add the letter "U" if sleeving is required.

| NLI77H STANDARD VALUES (H = 7.5mm x D = 7.5mm) |                 |                       |        |         |                |              |           |           |               |
|------------------------------------------------|-----------------|-----------------------|--------|---------|----------------|--------------|-----------|-----------|---------------|
| Part Number                                    | Inductance (μH) | Inductance Tolerance* | Q min. | Q Freq. | SRF (MHz) min. | DCR (Ω) max. | I sat (A) | I rms (A) | Dim. E (ref.) |
| NLI77H1R0M _ F                                 | 1               | ±20%                  | 10     | 7.96MHz | 70             | 0.006        | 6.6       | 5         | 0.7           |
| NLI77H1R5M _ F                                 | 1.5             | ±20%                  | 10     | 7.96MHz | 56             | 0.008        | 5.4       | 4.3       | 0.7           |
| NLI77H2R2M _ F                                 | 2.2             | ±20%                  | 10     | 7.96MHz | 45             | 0.011        | 4         | 3.7       | 0.7           |
| NLI77H3R3M _ F                                 | 3.3             | ±20%                  | 10     | 7.96MHz | 36             | 0.018        | 3.6       | 2.9       | 0.55          |
| NLI77H4R7M _ F                                 | 4.7             | ±20%                  | 10     | 7.96MHz | 29             | 0.022        | 3.1       | 2.6       | 0.5           |
| NLI77H6R8M _ F                                 | 6.8             | ±20%                  | 10     | 7.96MHz | 24             | 0.028        | 2.5       | 2.3       | 0.5           |
| NLI77H100K _ F                                 | 10              | ±10%                  | 20     | 2.52MHz | 19             | 0.043        | 2.1       | 1.9       | 0.45          |
| NLI77H150K _ F                                 | 15              | ±10%                  | 20     | 2.52MHz | 15             | 0.056        | 1.7       | 1.6       | 0.45          |
| NLI77H220K _ F                                 | 22              | ±10%                  | 20     | 2.52MHz | 12             | 0.086        | 1.4       | 1.3       | 0.4           |

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| NLI87H STANDARD VALUES (H = 7.5mm x D = 8.5mm) |                 |                       |        |         |                |              |           |           |               |
|------------------------------------------------|-----------------|-----------------------|--------|---------|----------------|--------------|-----------|-----------|---------------|
| Part Number                                    | Inductance (μH) | Inductance Tolerance* | Q min. | Q Freq. | SRF (MHz) min. | DCR (Ω) max. | I sat (A) | I rms (A) | Dim. E (ref.) |
| NLI87H2R2M _ F                                 | 2.2             | ±20%                  | 10     | 7.96MHz | 60             | 0.011        | 5.5       | 4         | 0.7           |
| NLI87H3R3M _ F                                 | 3.3             | ±20%                  | 10     | 7.96MHz | 38             | 0.013        | 3.8       | 3.4       | 0.7           |
| NLI87H4R7M _ F                                 | 4.7             | ±20%                  | 10     | 7.96MHz | 30             | 0.017        | 3.7       | 3         | 0.6           |
| NLI87H6R8M _ F                                 | 6.8             | ±20%                  | 10     | 7.96MHz | 24             | 0.023        | 2.8       | 2.6       | 0.55          |
| NLI87H100K _ F                                 | 10              | ±10%                  | 20     | 2.52MHz | 19             | 0.031        | 2.5       | 2.2       | 0.55          |
| NLI87H150K _ F                                 | 15              | ±10%                  | 20     | 2.52MHz | 15             | 0.042        | 2         | 1.9       | 0.5           |
| NLI87H220K _ F                                 | 22              | ±10%                  | 20     | 2.52MHz | 12             | 0.07         | 1.6       | 1.5       | 0.45          |

DC I maximum +25°C temperature rise, ΔL -20% max.

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| NLI101H STANDARD VALUES (H = 10.5mm x D = 11.0mm) |                 |                       |        |         |                |              |           |           |               |
|---------------------------------------------------|-----------------|-----------------------|--------|---------|----------------|--------------|-----------|-----------|---------------|
| Part Number                                       | Inductance (μH) | Inductance Tolerance* | Q min. | Q Freq. | SRF (MHz) min. | DCR (Ω) max. | I sat (A) | I rms (A) | Dim. E (ref.) |
| NLI101H3R3M _ F                                   | 3.3             | ±20%                  | 10     | 7.96MHz | 36             | 0.01         | 8.8       | 5.9       | 0.8           |
| NLI101H4R7M _ F                                   | 4.7             | ±20%                  | 10     | 7.96MHz | 28             | 0.015        | 7.2       | 4.8       | 0.8           |
| NLI101H6R8M _ F                                   | 6.8             | ±20%                  | 10     | 7.96MHz | 18             | 0.016        | 6.1       | 4.6       | 0.8           |
| NLI101H100M _ F                                   | 10              | ±20%                  | 20     | 2.52MHz | 16             | 0.025        | 5         | 3.7       | 0.8           |
| NLI101H150K _ F                                   | 15              | ±10%                  | 20     | 2.52MHz | 12             | 0.029        | 4.2       | 3.4       | 0.8           |
| NLI101H220K _ F                                   | 22              | ±10%                  | 20     | 2.52MHz | 9.5            | 0.04         | 3.4       | 2.9       | 0.7           |
| NLI101H330K _ F                                   | 33              | ±10%                  | 30     | 2.52MHz | 7              | 0.062        | 2.8       | 2.3       | 0.6           |
| NLI101H470K _ F                                   | 47              | ±10%                  | 30     | 2.52MHz | 5.8            | 0.075        | 2.3       | 2.1       | 0.6           |
| NLI101H680K _ F                                   | 68              | ±10%                  | 20     | 2.52MHz | 4.7            | 0.13         | 1.9       | 1.6       | 0.5           |
| NLI101H101K _ F                                   | 100             | ±10%                  | 20     | 796KHz  | 3.8            | 0.16         | 1.6       | 1.4       | 0.5           |

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| NLI121H STANDARD VALUES (H = 15.5mm x D = 15.0mm) |                 |                       |        |         |                |              |           |           |               |
|---------------------------------------------------|-----------------|-----------------------|--------|---------|----------------|--------------|-----------|-----------|---------------|
| Part Number                                       | Inductance (μH) | Inductance Tolerance* | Q min. | Q Freq. | SRF (MHz) min. | DCR (Ω) max. | I sat (A) | I rms (A) | Dim. E (ref.) |
| NLI121H100M _ F                                   | 10              | ±20%                  | 20     | 2.52MHz | 19             | 0.023        | 8         | 5.1       | 0.9           |
| NLI121H150K _ F                                   | 15              | ±10%                  | 20     | 2.52MHz | 12             | 0.028        | 6.5       | 4.5       | 0.9           |
| NLI121H220K _ F                                   | 22              | ±10%                  | 20     | 2.52MHz | 7.6            | 0.035        | 5.5       | 4.2       | 0.8           |
| NLI121H330K _ F                                   | 33              | ±10%                  | 20     | 2.52MHz | 6.9            | 0.043        | 4.5       | 3.7       | 0.7           |
| NLI121H470K _ F                                   | 47              | ±10%                  | 20     | 2.52MHz | 5.6            | 0.052        | 3.6       | 3.4       | 0.7           |
| NLI121H680K _ F                                   | 68              | ±10%                  | 20     | 2.52MHz | 4.4            | 0.068        | 3.1       | 3         | 0.7           |
| NLI121H101K _ F                                   | 100             | ±10%                  | 20     | 796KHz  | 3.3            | 0.097        | 2.6       | 2.5       | 0.6           |
| NLI121H151K _ F                                   | 150             | ±10%                  | 20     | 796KHz  | 2.6            | 0.14         | 2.1       | 2.1       | 0.55          |
| NLI121H221K _ F                                   | 220             | ±10%                  | 20     | 796KHz  | 2.2            | 0.2          | 1.7       | 1.7       | 0.5           |
| NLI121H331K _ F                                   | 330             | ±10%                  | 20     | 796KHz  | 1.8            | 0.3          | 1.4       | 1.4       | 0.45          |

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### PACKAGING QUANTITIY

| Series  | Bulk (per bag) |
|---------|----------------|
| NLI66H  | 100            |
| NLI77H  | 100            |
| NLI87H  | 100            |
| NLI101H | 100            |
| NLI121H | 80             |

