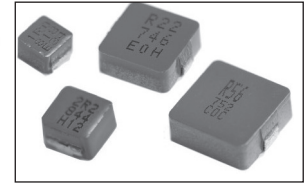


FEATURES

- SHIELDED POWER INDUCTOR
- MOLDED METAL COMPOSITE CONSTRUCTION
- HIGH SATURATION CURRENT CHARACTERISTICS (~ 75A)
- HIGH EFFICIENCY (2X IMPROVEMENT OVER FERRITE CORE INDUCTORS)
- LOW PROFILE (1.2mm ~ 7.0mm)

Expanded Value Range

RoHS Compliant
includes all homogeneous materials



CHARACTERISTICS (42B ~ 74B)

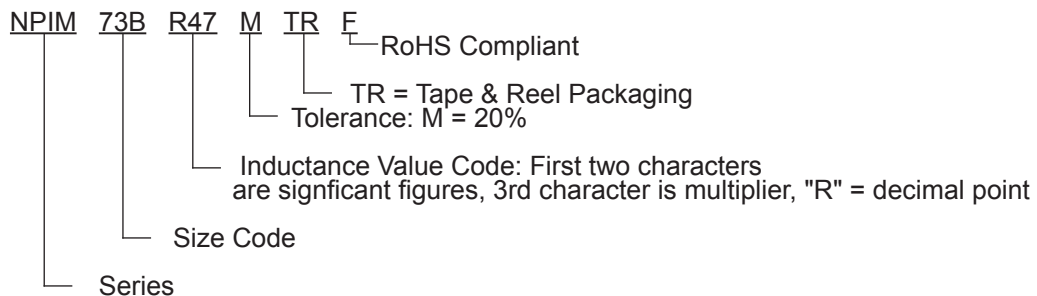
*See Part Number System for Details

| Case Code | 41B | 42B | 51B | 52B | 53B | 72B | 73B | 74B |
|--|---------------------------|-----------|-----------|-----------|-----------|----------|----------|----------|
| Inductance Range (μH) | 0.33 ~ 4.7 | 0.1 ~ 4.7 | 2.2 ~ 6.8 | 0.47 ~ 10 | 0.1 ~ 6.8 | 0.1 ~ 15 | 0.1 ~ 15 | 0.1 ~ 22 |
| Ambient Operating Temperature Range | -55°C ~ +85°C | | | | | | | |
| Maximum Component Temperature (Ambient + Self-Heating) | +125°C | | | | | | | |
| Temperature Rise at Irms | +40°C | | | | | | | |
| Inductance Change at Isat | -30% | | | | | | | |
| Inductance Tolerance | ±20% | | | | | | | |
| Resistance to Solder Heat | 260°C ±5°C for 10 seconds | | | | | | | |

CHARACTERISTICS (75B ~ 105B)

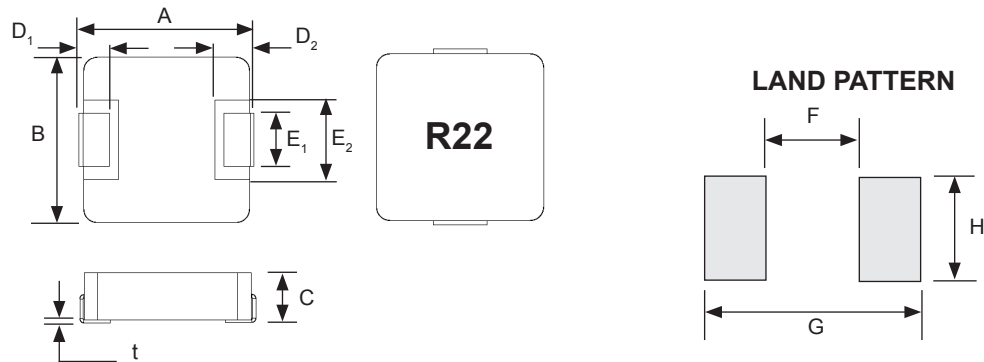
| Case Code | 75B | 101B | 103B | 104B | 105B | 133B | 135B | 136B | 187B |
|--|---------------------------|------------|-----------|-----------|-----------|------------|-----------|-----------|----------|
| Inductance Range (μH) | 0.13 ~ 22 | 0.68 ~ 4.7 | 0.22 ~ 22 | 0.15 ~ 68 | 1.0 ~ 6.8 | 0.22 ~ 3.3 | 0.36 ~ 47 | 8.2 ~ 150 | 1.5 ~ 68 |
| Ambient Operating Temperature Range | -55°C ~ +85°C | | | | | | | | |
| Maximum Component Temperature (Ambient + Self-Heating) | +125°C | | | | | | | | |
| Temperature Rise at Irms | +40°C | | | | | | | | |
| Inductance Change at Isat | -30% | | | | | | | | |
| Inductance Tolerance | ±20% | | | | | | | | |
| Resistance to Solder Heat | 260°C ±5°C for 10 seconds | | | | | | | | |

PART NUMBER SYSTEM

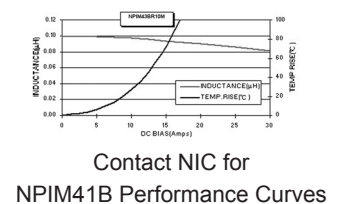


DIMENSIONS (mm)

| Series | A | B | C | D ₁ | D ₂ | E ₁ | E ₂ | t | F | G | H |
|------------------------------|---|------------|-----------|----------------|----------------|----------------|----------------|-----------|------|-----|-----|
| NPIM41B | 4.40 ± 0.35 | 4.2 ± 0.25 | 1.0 ± 0.2 | 0.8 ± 0.3 | 1.0 ± 0.1 | 2.0 ± 0.3 | 2.5 ± 0.2 | 0 ~ +0.15 | 2.2 | 5.2 | 2.5 |
| NPIM42B | 4.15 ± 0.35 | 4.0 ± 0.3 | 1.8 ± 0.2 | 0.8 ± 0.3 | 1.0 ± 0.1 | 1.5 ± 0.3 | 2.2 ± 0.2 | 0 ~ +0.15 | 2.2 | 5.2 | 2.5 |
| NPIM51B | 5.40 ± 0.35 | 5.2 ± 0.2 | 1.0 ± 0.2 | 0.81 ± 0.18 | 1.0 ± 0.1 | 2.5 ± 0.08 | 2.8 ± 0.08 | 0 ~ +0.15 | 2.2 | 6.0 | 2.5 |
| NPIM52B | 5.40 ± 0.35 | 5.2 ± 0.2 | 1.6 ± 0.2 | 1.0 ± 0.3 | 1.5 ± 0.1 | 2.0 ± 0.3 | 2.5 ± 0.2 | 0 ~ +0.15 | 2.2 | 6.0 | 2.5 |
| NPIM53B | 4.85 ± 0.35 | 4.7 ± 0.2 | 2.8 ± 0.2 | 1.0 ± 0.3 | 1.5 ± 0.1 | 1.5 ± 0.3 | 2.2 ± 0.2 | 0 ~ +0.15 | 3.0 | 7.0 | 2.5 |
| NPIM72B | 7.05 ± 0.35 | 6.6 ± 0.2 | 1.6 ± 0.2 | 1.6 ± 0.3 | 2.0 ± 0.1 | 3.0 ± 0.3 | 3.6 ± 0.2 | 0 ~ +0.15 | 3.7 | 8.4 | 3.5 |
| NPIM73B | 6.95 ± 0.35 | 6.6 ± 0.2 | 2.2 ± 0.2 | 1.6 ± 0.3 | 2.0 ± 0.1 | 3.0 ± 0.3 | 3.6 ± 0.2 | 0 ~ +0.15 | 3.7 | 8.4 | 3.5 |
| NPIM74B | 6.95 ± 0.35 | 6.6 ± 0.2 | 2.8 ± 0.2 | 1.6 ± 0.3 | 2.0 ± 0.1 | 3.0 ± 0.3 | 3.6 ± 0.2 | 0 ~ +0.15 | 3.7 | 8.4 | 3.5 |
| NPIM75B | 7.05 ± 0.35 | 6.6 ± 0.2 | 4.8 ± 0.2 | 1.6 ± 0.3 | 2.0 ± 0.1 | 3.0 ± 0.3 | 3.6 ± 0.2 | 0 ~ +0.15 | 3.7 | 8.4 | 3.5 |
| NPIM101B | 10.85 ± 0.35 | 10.0 ± 0.3 | 1.3 ± 0.2 | 2.0 ± 0.5 | 2.5 ± 0.1 | 3.0 ± 0.5 | 5.0 ± 0.2 | 0 ~ +0.15 | 13.6 | 5.4 | 4.1 |
| NPIM103B thru NPIM187B | See Individual Case Sizes Tables for These Case Sizes | | | | | | | | | | |



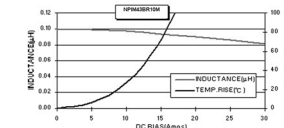
| Part Number | STANDARD VALUES - CASE SIZE 41B (4.40 X 4.2 X 1.0mm) | | | | |
|----------------|---|-------------------------|------------------------------------|------------------------------------|----------------|
| | Inductance Value (μH) | DC Resistance (mΩ) max. | DC Current I _{rms} (Amps) | DC Current I _{sat} (Amps) | Test Frequency |
| NPIM41BR33MTRF | 0.33 | 19 | 6.5 | 8.4 | 100KHz |
| NPIM41BR47MTRF | 0.47 | 21 | 6.0 | 6.8 | |
| NPIM41BR68MTRF | 0.68 | 36 | 4.5 | 6.0 | |
| NPIM41B1R0MTRF | 1.0 | 47 | 4.2 | 5.2 | |
| NPIM41B1R5MTRF | 1.5 | 75 | 3.25 | 4.0 | |
| NPIM41B2R2MTRF | 2.2 | 83.5 | 2.75 | 3.5 | |
| NPIM41B4R7MTRF | 4.7 | 195 | 1.8 | 2.8 | |



Maximum +40°C temperature rise at I_{rms}. Typical -30% inductance change at I_{sat}. Additional values are available outside the standard offering above. Please contact NIC for more details.

| Part Number | STANDARD VALUES - CASE SIZE 42B (4.15 X 4.0 X 1.8mm) | | | | Test Frequency |
|----------------|---|-------------------------|------------------------|------------------------|----------------|
| | Inductance Value (μH) | DC Resistance (mΩ) max. | DC Current Irms (Amps) | DC Current Isat (Amps) | |
| NPIM42BR10MTRF | 0.1 | 4.0 | 12 | 22 | 100KHz |
| NPIM42BR22MTRF | 0.22 | 6.6 | 9.0 | 12.5 | |
| NPIM42BR47MTRF | 0.47 | 14 | 7.0 | 9.5 | |
| NPIM42BR56MTRF | 0.56 | 16 | 6.5 | 10 | |
| NPIM42BR68MTRF | 0.68 | 18 | 6.0 | 9.0 | |
| NPIM42B1R0MTRF | 1.0 | 27 | 4.5 | 7.0 | |
| NPIM42B1R2MTRF | 1.2 | 27 | 4.5 | 7.0 | |
| NPIM42B1R5MTRF | 1.5 | 46 | 4.0 | 6.0 | |
| NPIM42B2R2MTRF | 2.2 | 58 | 3.0 | 5.0 | |
| NPIM42B3R3MTRF | 3.3 | 87 | 2.5 | 4.0 | |
| NPIM42B4R7MTRF | 4.7 | 105 | 2.2 | 3.0 | |

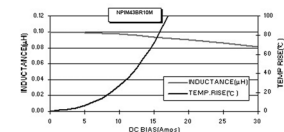
Maximum +40°C temperature rise at Irms. Typical -30% inductance change at Isat. Additional values are available outside the standard offering above. Please contact NIC for more details.



Contact NIC for NPIM42B Performance Curves

| Part Number | STANDARD VALUES - CASE SIZE 51B (5.4 X 5.2 X 1.0mm) | | | | Test Frequency |
|----------------|--|-------------------------|------------------------|------------------------|----------------|
| | Inductance Value (μH) | DC Resistance (mΩ) max. | DC Current Irms (Amps) | DC Current Isat (Amps) | |
| NPIM51B2R2MTRF | 2.2 | 76 | 3.5 | 4.0 | 100KHz |
| NPIM51B3R3MTRF | 3.3 | 98 | 3.0 | 3.7 | |
| NPIM51B4R7MTRF | 4.7 | 163 | 2.3 | 3.4 | |
| NPIM51B6R8MTRF | 6.8 | 250 | 2.0 | 2.3 | |

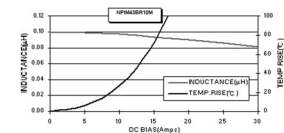
Maximum +40°C temperature rise at Irms. Typical -30% inductance change at Isat. Additional values are available outside the standard offering above. Please contact NIC for more details.



Contact NIC for NPIM51B Performance Curves

| Part Number | STANDARD VALUES - CASE SIZE 52B (5.4 X 5.2 X 1.6mm) | | | | Test Frequency |
|----------------|--|-------------------------|------------------------|------------------------|----------------|
| | Inductance Value (μH) | DC Resistance (mΩ) max. | DC Current Irms (Amps) | DC Current Isat (Amps) | |
| NPIM52BR47MTRF | 0.47 | 9 | 10.5 | 15.5 | 100KHz |
| NPIM52BR56MTRF | 0.56 | 10 | 9.5 | 15 | |
| NPIM52B1R0MTRF | 1.0 | 17 | 8.0 | 9.0 | |
| NPIM52B1R2MTRF | 1.2 | 20 | 7.5 | 8.0 | |
| NPIM52B2R2MTRF | 2.2 | 35 | 5.0 | 6.5 | |
| NPIM52B3R3MTRF | 3.3 | 58 | 4.5 | 5.0 | |
| NPIM52B4R7MTRF | 4.7 | 85 | 3.5 | 4.0 | |
| NPIM52B6R8MTRF | 6.8 | 120 | 2.8 | 3.4 | |
| NPIM52B8R2MTRF | 8.2 | 145 | 2.6 | 3.1 | |
| NPIM52B10MTRF | 10 | 155 | 2.5 | 3.0 | |

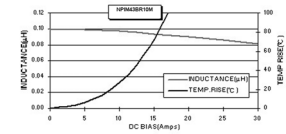
Maximum +40°C temperature rise at Irms. Typical -30% inductance change at Isat. Additional values are available outside the standard offering above. Please contact NIC for more details.



Contact NIC for NPIM52B Performance Curves

| Part Number | STANDARD VALUES - CASE SIZE 53B (4.85 X 4.7 X 2.8mm) | | | | Test Frequency |
|----------------|--|-------------------------|------------------------|------------------------|----------------|
| | Inductance Value (μH) | DC Resistance (mΩ) max. | DC Current Irms (Amps) | DC Current Isat (Amps) | |
| NPIM53BR10MTRF | 0.10 | 2.5 | 32 | 34 | 100KHz |
| NPIM53BR12MTRF | 0.12 | 2.6 | 30 | 32 | |
| NPIM53BR20MTRF | 0.20 | 3.9 | 21 | 14.5 | |
| NPIM53BR68MTRF | 0.68 | 12 | 8.5 | 14 | |
| NPIM53B1R0MTRF | 1.0 | 14 | 7 | 11 | |
| NPIM53B1R2MTRF | 1.2 | 16 | 6.5 | 11 | |
| NPIM53B1R5MTRF | 1.5 | 20 | 6.0 | 10 | |
| NPIM53B2R2MTRF | 2.2 | 35 | 5.5 | 9.0 | |
| NPIM53B3R3MTRF | 3.3 | 38 | 5.0 | 7.0 | |
| NPIM53B4R7MTRF | 4.7 | 60 | 4.0 | 5.0 | |

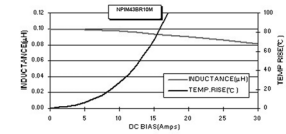
Maximum +40°C temperature rise at Irms. Typical -30% inductance change at Isat. Additional values are available outside the standard offering above. Please contact NIC for more details.



Contact NIC for NPIM53B Performance Curves

| Part Number | STANDARD VALUES - CASE SIZE 72B (7.05 X 6.6 X 1.6mm) | | | | Test Frequency |
|----------------|--|-------------------------|------------------------|------------------------|----------------|
| | Inductance Value (μH) | DC Resistance (mΩ) max. | DC Current Irms (Amps) | DC Current Isat (Amps) | |
| NPIM72BR10MTRF | 0.10 | 2.5 | 18 | 45 | 100KHz |
| NPIM72BR22MTRF | 0.22 | 5.2 | 14 | 29 | |
| NPIM72BR33MTRF | 0.33 | 6.8 | 12 | 22 | |
| NPIM72BR47MTRF | 0.47 | 8.4 | 11 | 18 | |
| NPIM72BR68MTRF | 0.68 | 12.7 | 9.0 | 17 | |
| NPIM72B1R0MTRF | 1.0 | 17 | 7.0 | 14 | |
| NPIM72B1R5MTRF | 1.5 | 26 | 6.5 | 12 | |
| NPIM72B2R0MTRF | 2.0 | 32 | 6.0 | 13 | |
| NPIM72B2R2MTRF | 2.2 | 35 | 6.0 | 13 | |
| NPIM72B3R3MTRF | 3.3 | 60 | 3.5 | 10 | |
| NPIM72B4R7MTRF | 4.7 | 70 | 3.5 | 5.0 | |
| NPIM72B6R8MTRF | 6.8 | 110 | 2.8 | 3.5 | |
| NPIM72B8R2MTRF | 8.2 | 135 | 2.5 | 3.0 | |
| NPIM72B100MTRF | 10 | 155 | 2.3 | 2.5 | |
| NPIM72B150MTRF | 15 | 250 | 1.8 | 2.2 | |

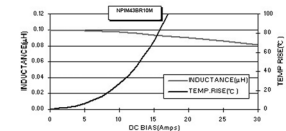
Maximum +40°C temperature rise at Irms. Typical -30% inductance change at Isat. Additional values are available outside the standard offering above. Please contact NIC for more details.



Contact NIC for NPIM72B Performance Curves

| Part Number | STANDARD VALUES - CASE SIZE 73B (6.95 X 6.6 X 2.2mm) | | | | |
|----------------|---|-------------------------|------------------------|------------------------|----------------|
| | Inductance Value (μH) | DC Resistance (mΩ) max. | DC Current Irms (Amps) | DC Current Isat (Amps) | Test Frequency |
| NPIM73BR10MTRF | 0.10 | 1.7 | 30 | 70 | 100KHz |
| NPIM73BR20MTRF | 0.20 | 2.8 | 25 | 50 | |
| NPIM73BR22MTRF | 0.22 | 3.2 | 21 | 34 | |
| NPIM73BR33MTRF | 0.33 | 4.1 | 18 | 24.5 | |
| NPIM73BR47MTRF | 0.47 | 5.1 | 15 | 22 | |
| NPIM73BR56MTRF | 0.56 | 6.5 | 13 | 17 | |
| NPIM73BR68MTRF | 0.68 | 7.2 | 12 | 16 | |
| NPIM73B1R0MTRF | 1.0 | 13.5 | 9.0 | 16 | |
| NPIM73B1R5MTRF | 1.5 | 20 | 9.0 | 15 | |
| NPIM73B2R2MTRF | 2.2 | 28 | 7.0 | 14 | |
| NPIM73B3R3MTRF | 3.3 | 39 | 5.5 | 13 | |
| NPIM73B4R7MTRF | 4.7 | 50 | 5.0 | 10 | |
| NPIM73B5R6MTRF | 5.6 | 60 | 5.0 | 6.5 | |
| NPIM73B6R8MTRF | 6.8 | 70 | 4.0 | 6.0 | |
| NPIM73B100MTRF | 10 | 101 | 3.1 | 4.0 | |
| NPIM73B150MTRF | 15 | 160 | 2.5 | 3.3 | |

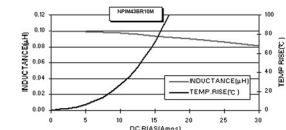
Maximum +40°C temperature rise at Irms. Typical -30% inductance change at Isat. Additional values are available outside the standard offering above. Please contact NIC for more details.



Contact NIC for NPIM73B Performance Curves

| Part Number | STANDARD VALUES - CASE SIZE 74B (6.95 X 6.6 X 2.8mm) | | | | |
|----------------|---|-------------------------|------------------------|------------------------|----------------|
| | Inductance Value (μH) | DC Resistance (mΩ) max. | DC Current Irms (Amps) | DC Current Isat (Amps) | Test Frequency |
| NPIM74BR10MTRF | 0.10 | 1.7 | 32.5 | 60 | 100KHz |
| NPIM74BR15MTRF | 0.15 | 2.5 | 30 | 40 | |
| NPIM74BR20MTRF | 0.20 | 3.0 | 24 | 34 | |
| NPIM74BR22MTRF | 0.22 | 3.0 | 23 | 34 | |
| NPIM74BR33MTRF | 0.33 | 3.5 | 21 | 25 | |
| NPIM74BR36MTRF | 0.36 | 3.9 | 20 | 24 | |
| NPIM74BR47MTRF | 0.47 | 4.1 | 18 | 20 | |
| NPIM74BR56MTRF | 0.56 | 4.5 | 16.5 | 18 | |
| NPIM74BR68MTRF | 0.68 | 5.3 | 16 | 17 | |
| NPIM74BR82MTRF | 0.82 | 6.0 | 14 | 16 | |
| NPIM74B1R0MTRF | 1.0 | 7.4 | 12 | 15 | |
| NPIM74B1R2MTRF | 1.2 | 10 | 10 | 14 | |
| NPIM74B1R5MTRF | 1.5 | 12.1 | 10 | 14 | |
| NPIM74B2R2MTRF | 2.2 | 15 | 8.0 | 10 | |
| NPIM74B3R3MTRF | 3.3 | 22 | 6.5 | 9.5 | |
| NPIM74B4R7MTRF | 4.7 | 33 | 5.5 | 6.5 | |
| NPIM74B5R6MTRF | 5.6 | 42 | 5.5 | 6.0 | |
| NPIM74B6R8MTRF | 6.8 | 50 | 4.5 | 6.0 | |
| NPIM74B8R2MTRF | 8.2 | 60 | 4.5 | 6.0 | |
| NPIM74B100MTRF | 10 | 68 | 4.0 | 5.5 | |
| NPIM74B220MTRF | 22 | 200 | 2.3 | 3.0 | |

Maximum +40°C temperature rise at Irms. Typical -30% inductance change at Isat. Additional values are available outside the standard offering above. Please contact NIC for more details.

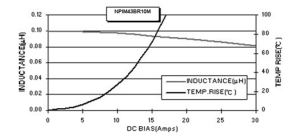


Contact NIC for NPIM74B Performance Curves



| Part Number | STANDARD VALUES - CASE SIZE 75B (7.05 X 6.6 X 4.8mm) | | | | |
|----------------|---|-------------------------|------------------------------------|------------------------------------|----------------|
| | Inductance Value (μH) | DC Resistance (mΩ) max. | DC Current I _{rms} (Amps) | DC Current I _{sat} (Amps) | Test Frequency |
| NPIM75BR13MTRF | 0.13 | 1.2 | 42 | 48 | 100KHz |
| NPIM75BR22MTRF | 0.22 | 1.3 | 30 | 35 | |
| NPIM75BR36MTRF | 0.36 | 3.1 | 21 | 25 | |
| NPIM75BR40MTRF | 0.40 | 3.5 | 20 | 23 | |
| NPIM75BR47MTRF | 0.47 | 3.75 | 20 | 21 | |
| NPIM75BR56MTRF | 0.56 | 3.6 | 20 | 18 | |
| NPIM75BR68MTRF | 0.68 | 4.2 | 18 | 16 | |
| NPIM75BR82MTRF | 0.82 | 4.9 | 16.5 | 17 | |
| NPIM75B1R0MTRF | 1.0 | 6.5 | 13 | 15 | |
| NPIM75B1R2MTRF | 1.2 | 7.5 | 12 | 13 | |
| NPIM75B1R5MTRF | 1.5 | 7.5 | 11 | 12 | |
| NPIM75B2R2MTRF | 2.2 | 12.5 | 10.5 | 12 | |
| NPIM75B3R3MTRF | 3.3 | 20.9 | 8.5 | 9.0 | |
| NPIM75B4R7MTRF | 4.7 | 25 | 6.5 | 7.0 | |
| NPIM75B5R6MTRF | 5.6 | 34.4 | 6.0 | 7.0 | |
| NPIM75B6R8MTRF | 6.8 | 41 | 5.5 | 6.0 | |
| NPIM75B8R2MTRF | 8.2 | 43 | 5.5 | 5.5 | |
| NPIM75B100MTRF | 10 | 55 | 4.5 | 5.3 | |
| NPIM75B150MTRF | 15 | 127 | 3.1 | 3.4 | |
| NPIM75B220MTRF | 22 | 190 | 2.6 | 2.8 | |

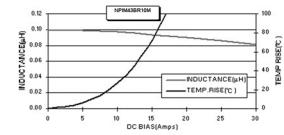
Maximum +40°C temperature rise at I_{rms}. Typical -30% inductance change at I_{sat}. Additional values are available outside the standard offering above. Please contact NIC for more details.



Contact NIC for NPIM75B Performance Curves

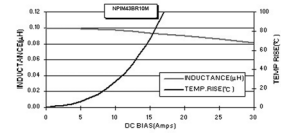
| Part Number | STANDARD VALUES - CASE SIZE 101B (10.85 X 10.3 X 1.3mm) | | | | |
|-----------------|--|-------------------------|------------------------------------|------------------------------------|----------------|
| | Inductance Value (μH) | DC Resistance (mΩ) max. | DC Current I _{rms} (Amps) | DC Current I _{sat} (Amps) | Test Frequency |
| NPIM101BR68MTRF | 0.68 | 16 | 7.5 | 16 | 100KHz |
| NPIM101BR82MTRF | 0.82 | 18 | 6.0 | 14 | |
| NPIM101B1R0MTRF | 1.0 | 21 | 5.5 | 12 | |

Maximum +40°C temperature rise at I_{rms}. Typical -30% inductance change at I_{sat}. Additional values are available outside the standard offering above. Please contact NIC for more details.



Contact NIC for NPIM101B Performance Curves

| Part Number | STANDARD VALUES - CASE SIZE 103B (see size table below) | | | | Test Frequency |
|-----------------|---|-------------------------|------------------------|------------------------|----------------|
| | Inductance Value (μH) | DC Resistance (mΩ) max. | DC Current Irms (Amps) | DC Current Isat (Amps) | |
| NPIM103BR22MTRF | 0.22 | 1.2 | 30 | 50 | 100KHz |
| NPIM103BR24MTRF | 0.24 | 1.3 | 30 | 50 | |
| NPIM103BR33MTRF | 0.33 | 1.6 | 23 | 32 | |
| NPIM103BR36MTRF | 0.36 | 1.6 | 23 | 28 | |
| NPIM103BR47MTRF | 0.47 | 2.5 | 23 | 26 | |
| NPIM103BR56MTRF | 0.56 | 3 | 22 | 24 | |
| NPIM103BR68MTRF | 0.68 | 3.4 | 21 | 23 | |
| NPIM103B1R0MTRF | 1.0 | 6 | 15 | 21 | |
| NPIM103B1R5MTRF | 1.5 | 7.5 | 13.5 | 20 | |
| NPIM103B2R2MTRF | 2.2 | 9.0 | 13 | 16 | |
| NPIM103B3R3MTRF | 3.3 | 16 | 9.0 | 14 | |
| NPIM103B4R7MTRF | 4.7 | 22.5 | 7.0 | 13 | |
| NPIM103B8R2MTRF | 8.2 | 45 | 5.0 | 8.5 | |
| NPIM103B100MTRF | 10 | 55 | 5.0 | 7.5 | |
| NPIM103B150MTRF | 15 | 65 | 4.0 | 6.0 | |
| NPIM103B220MTRF | 22 | 99 | 3.0 | 5.0 | |

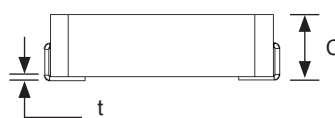
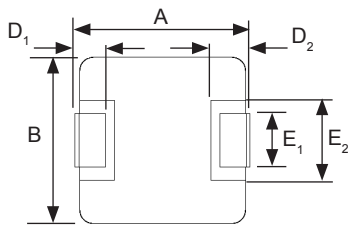


Contact NIC for NPIM103B Performance Curves

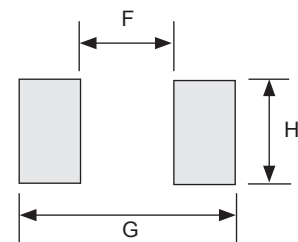
Maximum +40°C temperature rise at Irms. Typical -30% inductance change at Isat. Additional values are available outside the standard offering above. Please contact NIC for more details.

NPIM103B CASE AND LAND PATTERN DIMENSIONS

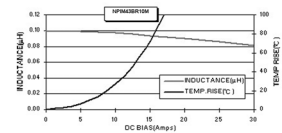
| Series | Value | A | B | C | D ₁ | D ₂ | E ₁ | E ₂ | t | F | G | H |
|----------|-----------|--------------|------------|-----------|----------------|----------------|----------------|----------------|-----------|-----|------|-----|
| NPIM103B | R22 ~ R68 | 11.15 ± 0.35 | 10.0 ± 0.3 | 2.8 ± 0.2 | 2.0 ± 0.5 | 2.5 ± 0.1 | 3.0 ± 0.5 | 5.0 ± 0.2 | 0 ~ +0.15 | 5.4 | 13.6 | 4.1 |
| | R82 ~ 220 | 10.85 ± 0.35 | 10.0 ± 0.3 | 2.8 ± 0.2 | 2.0 ± 0.5 | 2.5 ± 0.1 | 3.0 ± 0.5 | 5.0 ± 0.2 | 0 ~ +0.15 | 5.4 | 13.6 | 4.1 |



LAND PATTERN



| Part Number | STANDARD VALUES - CASE SIZE 104B (see size table below) | | | | Test Frequency |
|-----------------|---|-------------------------|------------------------|------------------------|----------------|
| | Inductance Value (μH) | DC Resistance (mΩ) max. | DC Current Irms (Amps) | DC Current Isat (Amps) | |
| NPIM104BR15MTRF | 0.15 | 0.65 | 40 | 75 | 100KHz |
| NPIM104BR22MTRF | 0.22 | 1.0 | 35 | 60 | |
| NPIM104BR36MTRF | 0.36 | 1.2 | 30 | 50 | |
| NPIM104BR39MTRF | 0.39 | 1.2 | 31 | 45 | |
| NPIM104BR45MTRF | 0.45 | 1.3 | 25 | 27 | |
| NPIM104BR47MTRF | 0.47 | 1.68 | 30 | 40 | |
| NPIM104BR56MTRF | 0.56 | 1.8 | 25 | 33 | |
| NPIM104BR68MTRF | 0.68 | 2.4 | 23 | 30 | |
| NPIM104BR88MTRF | 0.88 | 3.0 | 20 | 29 | |
| NPIM104B1R0MTRF | 1.0 | 3.3 | 18 | 28 | |
| NPIM104B1R5MTRF | 1.5 | 4.2 | 16 | 32 | |
| NPIM104B1R8MTRF | 1.8 | 5 | 15 | 15 | |
| NPIM104B2R0MTRF | 2.0 | 5.8 | 14 | 14 | |
| NPIM104B2R2MTRF | 2.2 | 7.0 | 12 | 18 | |
| NPIM104B3R3MTRF | 3.3 | 11.8 | 10 | 16 | |
| NPIM104B4R7MTRF | 4.7 | 20 | 8.5 | 15 | |
| NPIM104B5R6MTRF | 5.6 | 23 | 8.0 | 14 | |
| NPIM104B6R8MTRF | 6.8 | 25 | 7.0 | 12 | |
| NPIM104B8R2MTRF | 8.2 | 27 | 6.0 | 9.0 | |
| NPIM104B100MTRF | 10 | 30 | 7.5 | 8.5 | |
| NPIM104B150MTRF | 15 | 45 | 6.25 | 7.0 | |
| NPIM104B220MTRF | 22 | 66 | 5.0 | 5.5 | |
| NPIM104B330MTRF | 33 | 92 | 4.4 | 5.0 | |
| NPIM104B470MTRF | 47 | 145 | 3.3 | 3.5 | |
| NPIM104B680MTRF | 68 | 195 | 2.3 | 3.0 | |

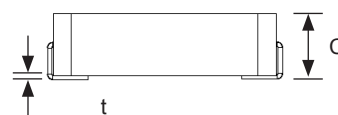
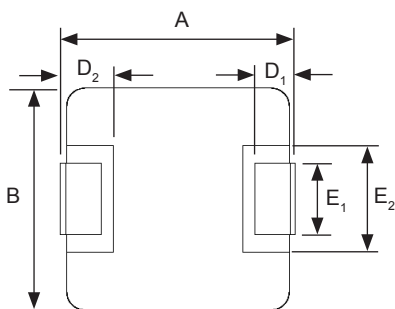


Contact NIC for NPIM104B Performance Curves

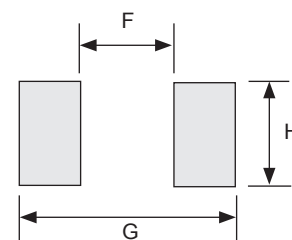
Maximum +40°C temperature rise at Irms. Typical -30% inductance change at Isat. Additional values are available outside the standard offering above. Please contact NIC for more details.

NPIM104S CASE AND LAND PATTERN DIMENSIONS

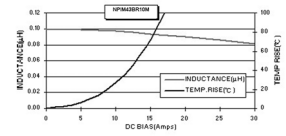
| Series | Value | A | B | C | D ₁ | D ₂ | E ₁ | E ₂ | t | F | G | H |
|----------|-----------|--------------|------------|-----------|----------------|----------------|----------------|----------------|-----------|-----|------|-----|
| NPIM104B | R15 ~ 1R5 | 11.15 ± 0.35 | 10.0 ± 0.3 | 3.8 ± 0.2 | 2.0 ± 0.5 | 2.5 ± 0.1 | 3.0 ± 0.5 | 5.0 ± 0.2 | 0 ~ +0.15 | 5.4 | 13.6 | 4.1 |
| | 1R8 ~ 680 | 10.85 ± 0.35 | 10.0 ± 0.3 | 3.8 ± 0.2 | 2.0 ± 0.5 | 2.5 ± 0.1 | 3.0 ± 0.5 | 5.0 ± 0.2 | 0 ~ +0.15 | 5.4 | 13.6 | 4.1 |



LAND PATTERN



| Part Number | STANDARD VALUES - CASE SIZE 105B (see size table below) | | | | |
|-----------------|---|-------------------------|------------------------|------------------------|----------------|
| | Inductance Value (μH) | DC Resistance (mΩ) max. | DC Current Irms (Amps) | DC Current Isat (Amps) | Test Frequency |
| NPIM105B1R0MTRF | 1.0 | 3.2 | 22 | 34 | 100KHz |
| NPIM105B2R2MTRF | 2.2 | 7.0 | 14.0 | 16.0 | |
| NPIM105B3R3MTRF | 3.3 | 13.2 | 11.0 | 14.5 | |
| NPIM105B4R7MTRF | 4.7 | 15.0 | 10.0 | 13.0 | |
| NPIM105B5R6MTRF | 5.6 | 18.5 | 8.5 | 10.5 | |
| NPIM105B6R8MTRF | 6.8 | 24.0 | 7.5 | 9.5 | |

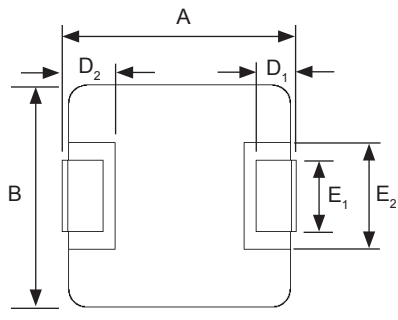


Contact NIC for NPIM105B Performance Curves

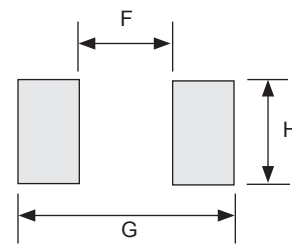
Maximum +40°C temperature rise at Irms. Typical -30% inductance change at Isat. Additional values are available outside the standard offering above. Please contact NIC for more details.

NPIM105B CASE AND LAND PATTERN DIMENSIONS

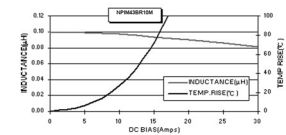
| Series | Value | A | B | C | D ₁ | D ₂ | E ₁ | E ₂ | t | F | G | H |
|----------|-----------|--------------|------------|-----------|----------------|----------------|----------------|----------------|-----------|-----|------|-----|
| NPIM105B | 1.0 | 11.15 ± 0.35 | 10.0 ± 0.3 | 4.3 ± 0.2 | 2.0 ± 0.5 | 2.5 ± 0.1 | 3.0 ± 0.5 | 5.0 ± 0.2 | 0 ~ +0.15 | 5.4 | 13.6 | 4.1 |
| | 2.2 ~ 6.8 | 10.85 ± 0.35 | 10.0 ± 0.3 | 4.3 ± 0.2 | 2.0 ± 0.5 | 2.5 ± 0.1 | 3.0 ± 0.5 | 5.0 ± 0.2 | 0 ~ +0.15 | 5.4 | 13.6 | 4.1 |



LAND PATTERN



| Part Number | STANDARD VALUES - CASE SIZE 133B (see size table below) | | | | |
|-----------------|---|-------------------------|------------------------|------------------------|----------------|
| | Inductance Value (μH) | DC Resistance (mΩ) max. | DC Current Irms (Amps) | DC Current Isat (Amps) | Test Frequency |
| NPIM133BR22MTRF | 0.22 | 1.2 | 38 | 55 | 100KHz |
| NPIM133BR56MTRF | 0.56 | 2.0 | 29 | 44 | |
| NPIM133BR68MTRF | 0.68 | 2.4 | 28 | 42 | |
| NPIM133BR82MTRF | 0.82 | 2.9 | 25 | 37 | |
| NPIM133B1R0MTRF | 1.0 | 3.4 | 24 | 34 | |
| NPIM133B1R2MTRF | 1.2 | 3.8 | 20 | 27 | |
| NPIM133B1R5MTRF | 1.5 | 4.7 | 18 | 26 | |
| NPIM133B2R2MTRF | 2.2 | 6.9 | 14 | 20 | |
| NPIM133B3R3MTRF | 3.3 | 9.5 | 13 | 16 | |

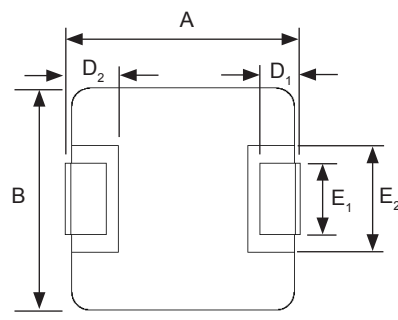


Contact NIC for NPIM133B Performance Curves

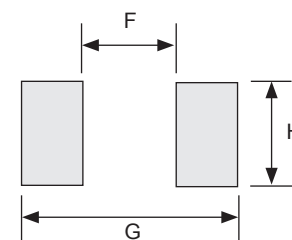
Maximum +40°C temperature rise at Irms. Typical -30% inductance change at Isat. Additional values are available outside the standard offering above. Please contact NIC for more details.

NPIM133B CASE AND LAND PATTERN DIMENSIONS

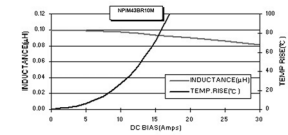
| Series | Value | A | B | C | D ₁ | D ₂ | E ₁ | E ₂ | t | F | G | H |
|----------|-------------|--------------|------------|-----------|----------------|----------------|----------------|----------------|----------|-----|------|-----|
| NPIM133B | 0.22 ~ 0.68 | 13.45 ± 0.35 | 12.6 ± 0.2 | 3.3 ± 0.2 | 2.0 ± 0.5 | 2.5 ± 0.1 | 4.0 ± 0.5 | 6.0 ± 0.2 | 0 ~ 0.15 | 8.0 | 14.5 | 5.0 |
| | 0.82 ~ 3.3 | 13.45 ± 0.35 | 12.6 ± 0.2 | 3.3 ± 0.2 | 2.0 ± 0.5 | 2.5 ± 0.1 | 3.0 ± 0.5 | 6.0 ± 0.2 | 0 ~ 0.15 | 8.0 | 14.5 | 5.0 |



LAND PATTERN



| Part Number | STANDARD VALUES - CASE SIZE 135B (see size table below) | | | | Test Frequency |
|-----------------|---|-------------------------|------------------------------------|------------------------------------|----------------|
| | Inductance Value (μH) | DC Resistance (mΩ) max. | DC Current I _{rms} (Amps) | DC Current I _{sat} (Amps) | |
| NPIM135BR36MTRF | 0.36 | 0.85 | 42 | 50 | 100KHz |
| NPIM135BR50MTRF | 0.50 | 1.15 | 38 | 48 | |
| NPIM135BR68MTRF | 0.68 | 1.55 | 33 | 46 | |
| NPIM135BR82MTRF | 0.82 | 1.67 | 30 | 39 | |
| NPIM135B1R0MTRF | 1.0 | 2.2 | 26 | 35 | |
| NPIM135B1R5MTRF | 1.5 | 3.2 | 23 | 33 | |
| NPIM135B1R8MTRF | 1.8 | 3.2 | 23 | 27 | |
| NPIM135B2R2MTRF | 2.2 | 5.0 | 15 | 24 | |
| NPIM135B3R3MTRF | 3.3 | 7.0 | 14 | 22 | |
| NPIM135B100MTRF | 10 | 22 | 9.0 | 12 | |
| NPIM135B220MTRF | 22 | 58 | 4.5 | 6.5 | |
| NPIM135B270MTRF | 27 | 66 | 4.0 | 6.3 | |
| NPIM135B330MTRF | 33 | 84 | 3.5 | 6.0 | |
| NPIM135B470MTRF | 47 | 130 | 3.0 | 5.0 | |

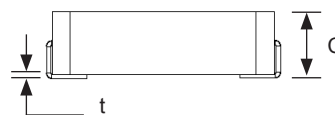
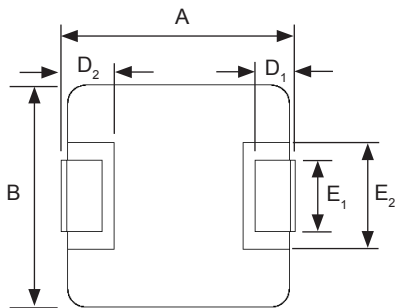


Contact NIC for NPIM135B Performance Curves

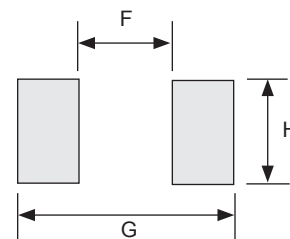
Maximum +40°C temperature rise at I_{rms}. Typical -30% inductance change at I_{sat}. Additional values are available outside the standard offering above. Please contact NIC for more details.

NPIM133B CASE AND LAND PATTERN DIMENSIONS

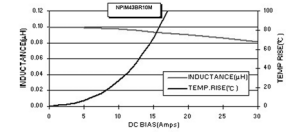
| Series | Value | A | B | C | D ₁ | D ₂ | E ₁ | E ₂ | t | F | G | H |
|----------|------------|--------------|------------|-----------|----------------|----------------|----------------|----------------|----------|-----|------|-----|
| NPIM135B | 0.36 ~ 1R8 | 13.45 ± 0.35 | 12.6 ± 0.2 | 4.8 ± 0.2 | 2.0 ± 0.5 | 2.5 ± 0.1 | 4.0 ± 0.5 | 6.0 ± 0.2 | 0 ~ 0.15 | 8.0 | 14.5 | 5.0 |
| | 2R2 ~ 47 | 13.45 ± 0.35 | 12.6 ± 0.2 | 4.8 ± 0.2 | 2.0 ± 0.5 | 2.5 ± 0.1 | 3.0 ± 0.5 | 6.0 ± 0.2 | 0 ~ 0.15 | 8.0 | 14.5 | 5.0 |



LAND PATTERN



| Part Number | STANDARD VALUES - CASE SIZE 136B (13.45 x 12.6 x 5.8mm) | | | | Test Frequency |
|-----------------|---|-------------------------|------------------------------------|------------------------------------|----------------|
| | Inductance Value (μH) | DC Resistance (mΩ) max. | DC Current I _{rms} (Amps) | DC Current I _{sat} (Amps) | |
| NPIM136B120MTRF | 12 | 23 | 7.0 | 10 | 100KHz |
| NPIM136B150MTRF | 15 | 29 | 6.0 | 9.0 | |
| NPIM136B180MTRF | 18 | 35 | 5.0 | 8.0 | |
| NPIM136B220MTRF | 22 | 39.5 | 5.0 | 7.5 | |
| NPIM136B270MTRF | 27 | 56 | 4.0 | 6.5 | |
| NPIM136B330MTRF | 33 | 75 | 4.0 | 6.0 | |
| NPIM136B470MTRF | 47 | 90 | 3.5 | 5.5 | |
| NPIM136B680MTRF | 68 | 140 | 3.0 | 4.5 | |
| NPIM136B101MTRF | 100 | 200 | 2.5 | 3.5 | |
| NPIM136B121MTRF | 120 | 235 | 2.3 | 3.2 | |
| NPIM136B151MTRF | 150 | 350 | 2.0 | 2.7 | |

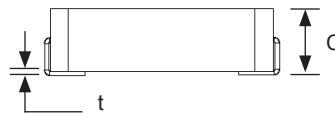
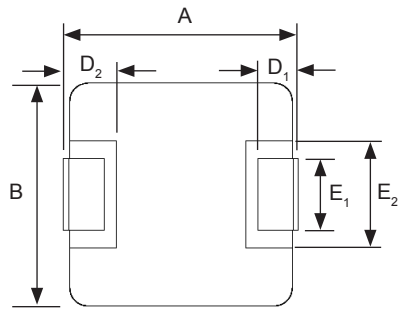


Contact NIC for NPIM136B Performance Curves

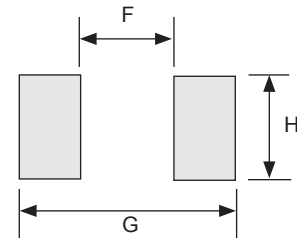
Maximum +40°C temperature rise at I_{rms}. Typical -30% inductance change at I_{sat}. Additional values are available outside the standard offering above. Please contact NIC for more details.

NPIM136B CASE AND LAND PATTERN DIMENSIONS

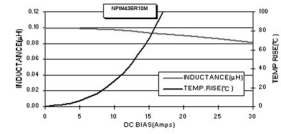
| Series | A | B | C | D ₁ | D ₂ | E ₁ | E ₂ | t | F | G | H |
|----------|--------------|------------|-----------|----------------|----------------|----------------|----------------|----------|-----|------|-----|
| NPIM136B | 13.45 ± 0.35 | 12.6 ± 0.2 | 5.8 ± 0.2 | 2.0 ± 0.5 | 2.5 ± 0.1 | 5.0 ± 0.5 | 6.0 ± 0.2 | 0 ~ 0.15 | 8.0 | 14.5 | 5.5 |



LAND PATTERN



| Part Number | STANDARD VALUES - CASE SIZE 187B (17.15 x 17.15 x 6.8mm) | | | | |
|-----------------|--|-------------------------|------------------------|------------------------|----------------|
| | Inductance Value (μH) | DC Resistance (mΩ) max. | DC Current Irms (Amps) | DC Current Isat (Amps) | Test Frequency |
| NPIM187B1R5MTRF | 1.5 | 2.15 | 40 | 40 | 100KHz |
| NPIM187B2R2MTRF | 2.2 | 2.5 | 37 | 34 | |
| NPIM187B4R7MTRF | 4.7 | 4.72 | 27 | 24 | |
| NPIM187B6R8MTRF | 6.8 | 7.55 | 20 | 22 | |
| NPIM187B8R2MTRF | 8.2 | 8.7 | 16 | 20 | |
| NPIM187B100MTRF | 10 | 10 | 14 | 18 | |
| NPIM187B150MTRF | 15 | 15.5 | 12 | 13 | |
| NPIM187B200MTRF | 20 | 21.9 | 9.7 | 12 | |
| NPIM187B220MTRF | 22 | 23 | 9.5 | 11 | |
| NPIM187B330MTRF | 33 | 37 | 9.0 | 10 | |
| NPIM187B470MTRF | 47 | 47 | 6.8 | 7.5 | |
| NPIM187B680MTRF | 68 | 85 | 5.2 | 6.5 | |

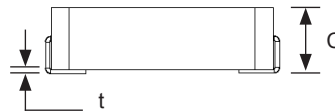
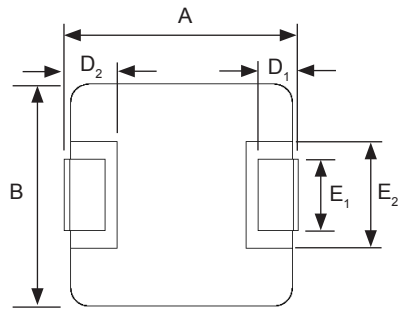


Contact NIC for NPIM187B Performance Curves

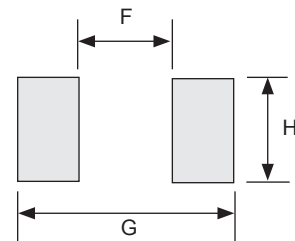
Maximum +40°C temperature rise at Irms. Typical -30% inductance change at Isat. Additional values are available outside the standard offering above. Please contact NIC for more details.

NPIM136B CASE AND LAND PATTERN DIMENSIONS

| Series | A | B | C | D ₁ | D ₂ | E ₁ | E ₂ | t | F | G | H |
|----------|--------------|------------|-----------|----------------|----------------|----------------|----------------|----------|------|------|------|
| NPIM187B | 17.15 ± 0.35 | 17.15 max. | 6.8 ± 0.2 | 2.5 ± 0.5 | 3.5 ± 0.1 | 12.0 ± 0.3 | 13.0 ± 0.5 | 0 ~ 0.30 | 11.2 | 18.2 | 12.8 |

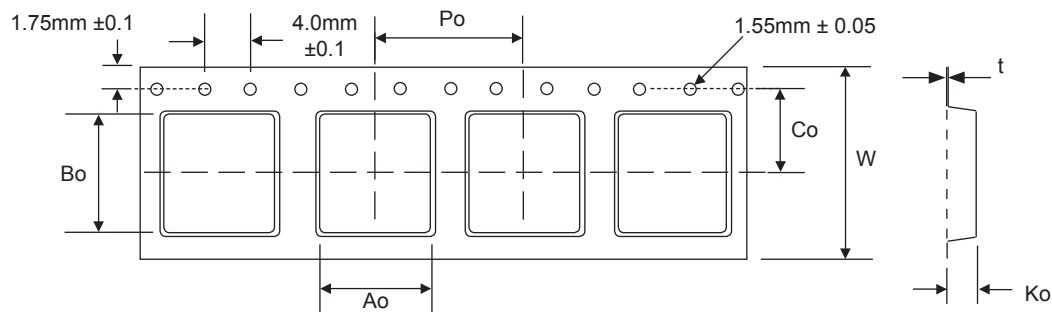


LAND PATTERN



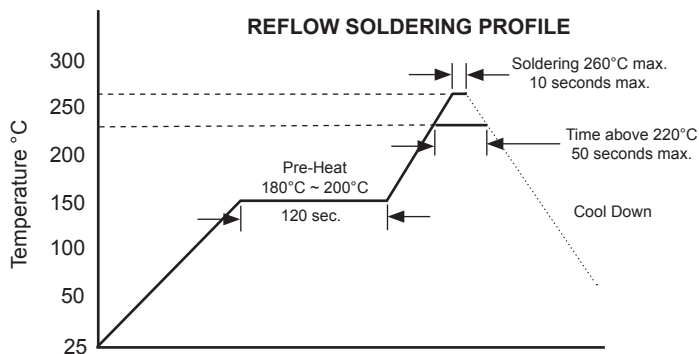
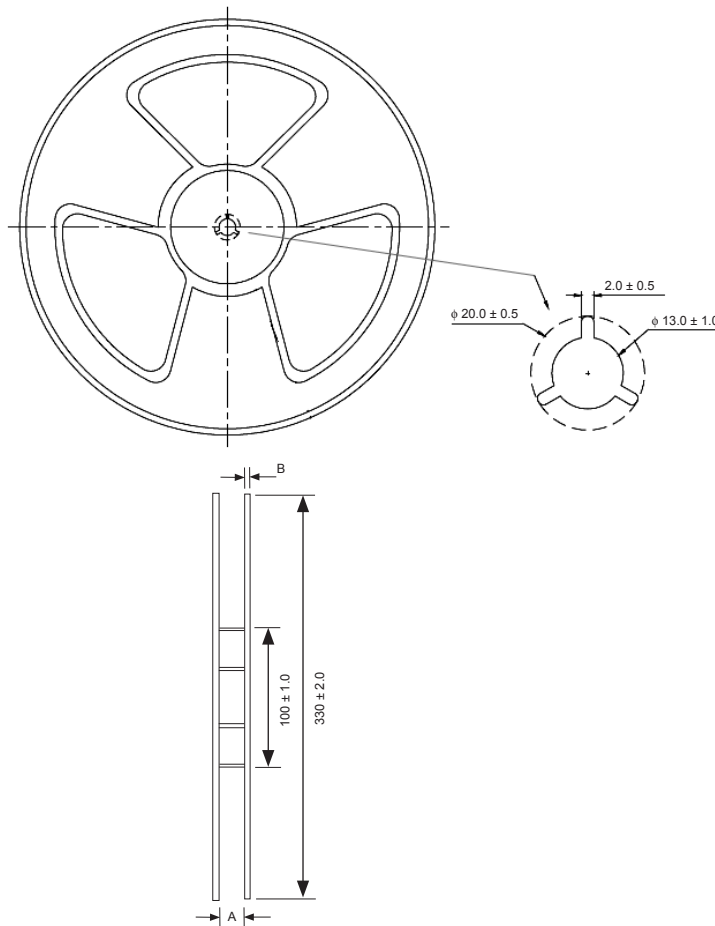
CARRIER TAPE DIMENSIONS (mm)

| Series | Part Thickness | Ao | Bo | Co | Po | Ko | t | W |
|----------|----------------|--------------|-------------|-------------|-------------|------------|-------------|-------------|
| NPIM41B | All | 4.5 ± 0.10 | 4.8 ± 0.10 | 5.5 ± 0.10 | 8.0 ± 0.10 | 1.4 ± 0.15 | 0.35 ± 0.05 | 12.0 ± 0.30 |
| NPIM42B | All | 4.4 ± 0.10 | 4.7 ± 0.10 | 5.5 ± 0.10 | 8.0 ± 0.10 | 2.5 ± 0.15 | 0.30 ± 0.05 | 12.0 ± 0.30 |
| NPIM51B | All | 5.6 ± 0.10 | 5.9 ± 0.10 | 5.5 ± 0.10 | 8.0 ± 0.10 | 1.5 ± 0.15 | 0.35 ± 0.05 | 12.0 ± 0.30 |
| NPIM52B | All | 5.6 ± 0.10 | 5.9 ± 0.10 | 5.5 ± 0.10 | 8.0 ± 0.10 | 2.3 ± 0.15 | 0.35 ± 0.05 | 12.0 ± 0.30 |
| NPIM53B | All | 5.2 ± 0.10 | 5.4 ± 0.10 | 7.5 ± 0.10 | 12.0 ± 0.10 | 3.6 ± 0.15 | 0.35 ± 0.05 | 16.0 ± 0.30 |
| NPIM72B | All | 7.2 ± 0.10 | 7.5 ± 0.10 | 7.5 ± 0.10 | 12.0 ± 0.10 | 2.3 ± 0.10 | 0.30 ± 0.10 | 16.0 ± 0.30 |
| NPIM73B | All | 7.2 ± 0.10 | 7.5 ± 0.10 | 7.5 ± 0.10 | 12.0 ± 0.10 | 3.6 ± 0.15 | 0.30 ± 0.10 | 16.0 ± 0.30 |
| NPIM74B | All | 7.2 ± 0.10 | 7.5 ± 0.10 | 7.5 ± 0.10 | 12.0 ± 0.10 | 3.6 ± 0.15 | 0.30 ± 0.10 | 16.0 ± 0.30 |
| NPIM75B | All | 7.2 ± 0.10 | 7.8 ± 0.10 | 7.5 ± 0.10 | 12.0 ± 0.10 | 5.5 ± 0.10 | 0.35 ± 0.10 | 16.0 ± 0.30 |
| NPIM101B | All | 10.7 ± 0.10 | 12.0 ± 0.10 | 11.5 ± 0.10 | 16.0 ± 0.10 | 2.0 ± 0.10 | 0.35 ± 0.10 | 24.0 ± 0.30 |
| NPIM103B | All | 10.7 ± 0.10 | 12.0 ± 0.10 | 11.5 ± 0.10 | 16.0 ± 0.10 | 4.0 ± 0.10 | 0.30 ± 0.05 | 24.0 ± 0.30 |
| NPIM104B | All | 10.7 ± 0.10 | 12.0 ± 0.10 | 11.5 ± 0.10 | 16.0 ± 0.10 | 4.5 ± 0.10 | 0.35 ± 0.05 | 24.0 ± 0.30 |
| NPIM105B | All | 10.7 ± 0.10 | 12.0 ± 0.10 | 11.5 ± 0.10 | 16.0 ± 0.10 | 5.0 ± 0.15 | 0.35 ± 0.05 | 24.0 ± 0.30 |
| NPIM133B | All | 13.4 ± 0.10 | 14.1 ± 0.10 | 11.5 ± 0.10 | 16.0 ± 0.10 | 3.7 ± 0.15 | 0.35 ± 0.05 | 24.0 ± 0.30 |
| NPIM135B | All | 13.4 ± 0.10 | 14.1 ± 0.10 | 11.5 ± 0.10 | 16.0 ± 0.10 | 5.1 ± 0.15 | 0.35 ± 0.05 | 24.0 ± 0.30 |
| NPIM136B | All | 13.4 ± 0.10 | 14.1 ± 0.10 | 11.5 ± 0.10 | 16.0 ± 0.10 | 6.1 ± 0.15 | 0.50 ± 0.05 | 24.0 ± 0.30 |
| NPIM187B | All | 17.45 ± 0.10 | 17.8 ± 0.10 | 11.5 ± 0.10 | 24.0 ± 0.10 | 7.3 ± 0.15 | 0.50 ± 0.05 | 24.0 ± 0.30 |



REEL DIMENSIONS (mm)

| Series | A | B | Qty/Reel |
|----------|------------|-----------|----------|
| NPIM41B | 12.5 ± 0.5 | 2.0 ± 0.2 | 3,000 |
| NPIM42B | 12.5 ± 0.5 | 2.0 ± 0.2 | 2,000 |
| NPIM51B | 12.5 ± 0.5 | 2.0 ± 0.2 | 3,000 |
| NPIM52B | 12.5 ± 0.5 | 2.0 ± 0.2 | 3,000 |
| NPIM53B | 16.0 ± 0.5 | 2.0 ± 0.2 | 1,000 |
| NPIM72B | 16.0 ± 0.5 | 2.0 ± 0.2 | 1,000 |
| NPIM73B | 16.0 ± 0.5 | 2.0 ± 0.2 | 1,000 |
| NPIM74B | 16.0 ± 0.5 | 2.0 ± 0.2 | 1,000 |
| NPIM75B | 16.0 ± 0.5 | 2.0 ± 0.2 | 500 |
| NPIM101B | 24.5 ± 0.5 | 2.0 ± 0.2 | 1,000 |
| NPIM103B | 24.5 ± 0.5 | 2.0 ± 0.2 | 500 |
| NPIM104B | 24.5 ± 0.5 | 2.0 ± 0.2 | 500 |
| NPIM105B | 24.5 ± 0.5 | 2.0 ± 0.2 | 500 |
| NPIM133B | 24.5 ± 0.5 | 2.0 ± 0.2 | 500 |
| NPIM135B | 24.5 ± 0.5 | 2.0 ± 0.2 | 500 |
| NPIM136B | 24.5 ± 0.5 | 2.0 ± 0.2 | 500 |
| NPIM187B | 24.5 ± 0.5 | 2.0 ± 0.2 | 200 |



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