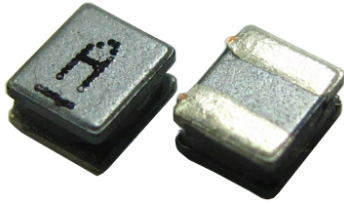


LVT Series



LVT series, an automatic assembly constructed power inductor, is shielded with magnetic resin and suitable for portable DC-DC converter applications.

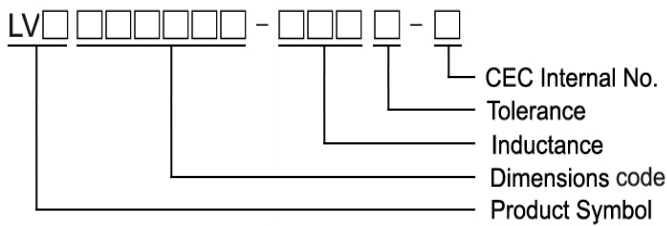
Features

- RoHS, Halogen Free and REACH Compliance
- Shielded with magnetic resin
- Various package size and wide inductance range
- Optimize electrical characteristics by using different ferrite core figures

Applications

- Smartphones, tablets and wearable devices
- DSC, camcorders
- AP Routers
- STBs
- LCD TVs, monitors and panels
- Game consoles
- DC/DC converters

Product Identification



Shape and Dimensions

Figure 1

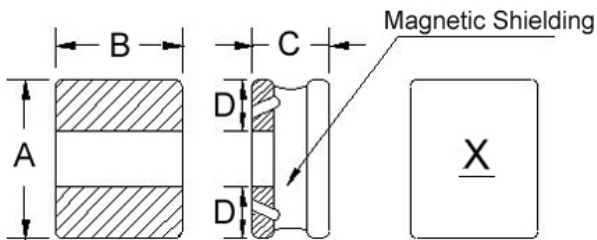
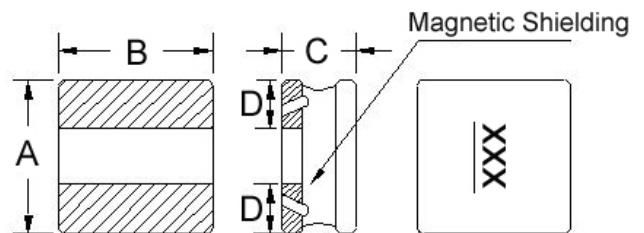


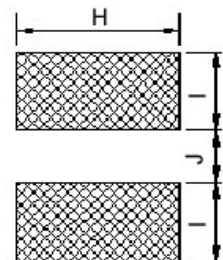
Figure 2



Recommended Pattern

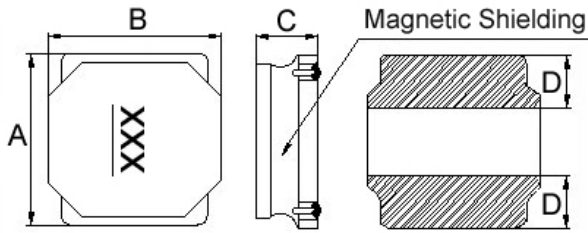
Dimensions in mm

| TYPE | FIG | A | B | C | D | H | I | J |
|-----------|-----|----------|----------|----------|-----|-----|------|-----|
| LVT201B10 | 1 | 2.0±0.25 | 1.6±0.25 | 1.00Max | 0.6 | 1.8 | 0.80 | 0.8 |
| LVT252A10 | 1 | 2.5±0.25 | 2.0±0.25 | 1.02 Max | 0.8 | 2.2 | 0.85 | 0.8 |
| LVT252A12 | 1 | 2.5±0.25 | 2.0±0.25 | 1.2±0.05 | 0.8 | 2.2 | 0.85 | 0.8 |
| LVT303010 | 2 | 3.0±0.20 | 3.0±0.20 | 1.02 Max | 1.0 | 3.2 | 1.1 | 1.0 |
| LVT303012 | 2 | 3.0±0.20 | 3.0±0.20 | 1.20 Max | 1.0 | 3.2 | 1.1 | 1.0 |
| LVT404012 | 2 | 4.0±0.20 | 4.0±0.20 | 1.2±0.1 | 1.5 | 4.2 | 1.5 | 1.2 |



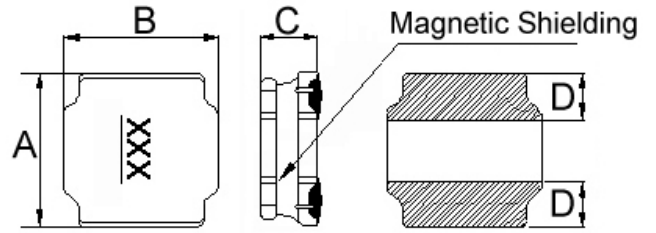
Shape and Dimensions

Figure 3



Recommended Pattern

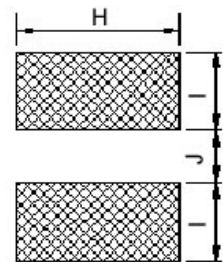
Figure 4



Dimensions in mm

| TYPE | FIG | A | B | C | D | H | I | J |
|-----------|-----|----------|----------|--------------------------------------|---------|-----|-----|-----|
| LVT404015 | 3 | 4.0±0.25 | 4.0±0.25 | 1.5±0.2 | 1.3 | 3.7 | 1.5 | 1.2 |
| LVT404026 | 3 | 4.0±0.20 | 4.0±0.20 | 2.6±0.2 | 1.4 | 3.7 | 1.6 | 1.2 |
| LVT505020 | 4 | 5.0±0.2 | 5.0±0.2 | 2.0±0.2 | 1.8±0.3 | 4.2 | 1.6 | 2.0 |
| LVT606020 | 4 | 6.0±0.2 | 6.0±0.2 | 2.0±0.2 | 1.7±0.3 | 5.7 | 1.7 | 2.8 |
| LVT808040 | 4 | 8.0±0.2 | 8.0±0.2 | 4.0 ^{+0.2} _{-0.30} | 2.3±0.3 | 7.5 | 2.5 | 3.4 |

Recommended Pattern



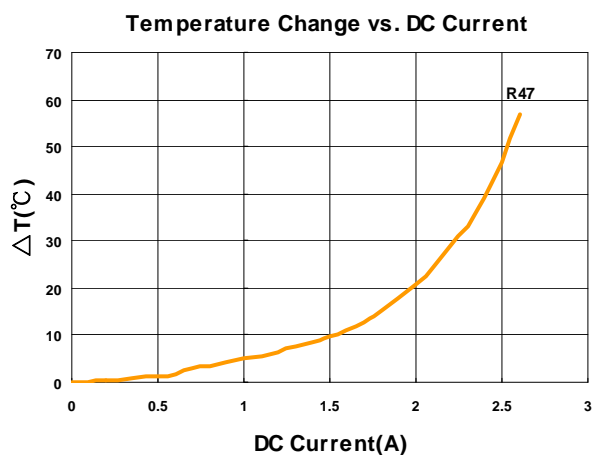
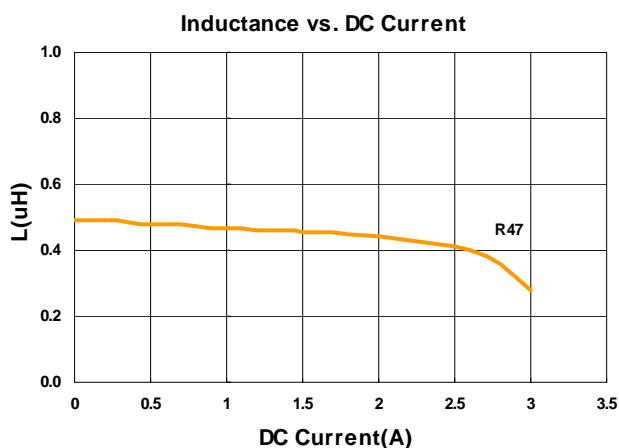
Electrical Characteristics

| Part Number | Inductance (uH) | Tolerance (±%) | Test Frequency (MHz) | RDC (mΩ) ±30% | Isat (A) Typ. (Max) | Irms (A) Typ. (Max) | Marking |
|------------------|-----------------|----------------|----------------------|---------------|---------------------|---------------------|---------|
| LVT201B10-R47□-N | 0.47 | 20, 30 | 1 | 72 | 2.4(2.16) | 2.4(2.16) | A |

Note: When ordering, please specify tolerance code. Tolerance: M=±20% , T =±30%

- Operating temperature range - 55°C ~ 125°C(Including self - temperature rise)
- Isat for Inductance drop 30% from its value with current
- Irms for a 40°C temperature rise from 25°C ambient with current
- Measure Equipment :
- L : Agilent HP4287A+Agilent HP16197A, 1MHz 200mV
- RDC : DIGITAL MILLINHM METER CHROMA 16502, or equivalent
- Isat & Irms : Agilent HP4284A

Test Instruments : HP4284A Material/Impedance Analyzer



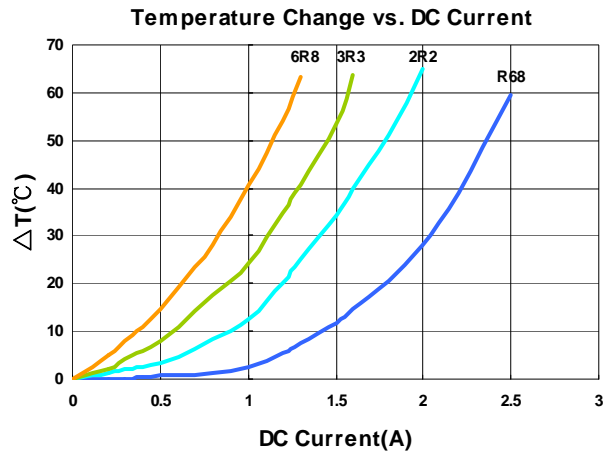
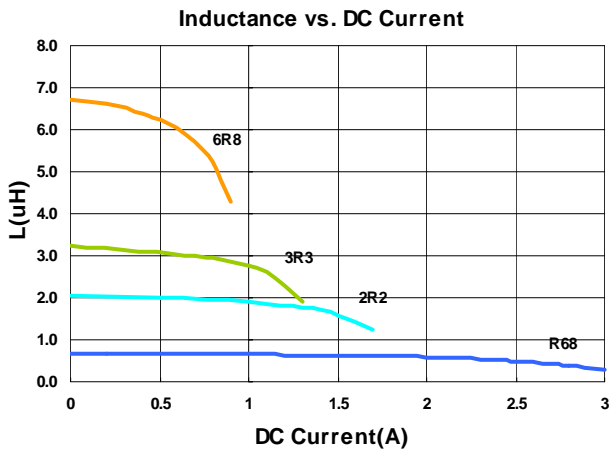
Electrical Characteristics

| Part Number | Inductance (uH) | Tolerance (±%) | Test Frequency (MHz) | RDC (Ω) ±30% | Isat (A) Typ. (Max) | Irms (A) Typ. (Max) | Marking |
|------------------|-----------------|----------------|----------------------|--------------|---------------------|---------------------|---------|
| LVT252A10-R68□-N | 0.68 | 20, 30 | 1 | 0.050 | 2.40(2.160) | 2.20(1.980) | K |
| LVT252A10-2R2□-N | 2.2 | 20, 30 | 1 | 0.135 | 1.42(1.278) | 1.55(1.395) | D |
| LVT252A10-3R3□-N | 3.3 | 20, 30 | 1 | 0.220 | 1.12(1.008) | 1.20(1.080) | E |
| LVT252A10-6R8□-N | 6.8 | 20, 30 | 1 | 0.435 | 0.78(0.702) | 0.84(0.756) | G |

Note: When ordering, please specify tolerance code. Tolerance: M=±20% , T =±30%

- Operating temperature range - 55°C ~ 125°C(Including self - temperature rise)
- Isat for Inductance drop 30% from its value with current
- Irms for a 40°C temperature rise from 25°C ambient with current
- Measure Equipment :
- L : Agilent HP4287A+Agilent HP16197A, 1MHz 200mV
- RDC : DIGITAL MILLINHM METER CHROMA 16502, or equivalent
- Isat & Irms : Agilent HP4284A

Test Instruments : HP4284A Material/Impedance Analyzer



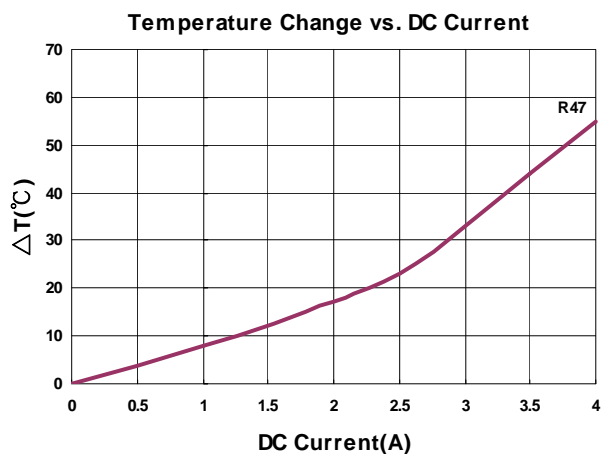
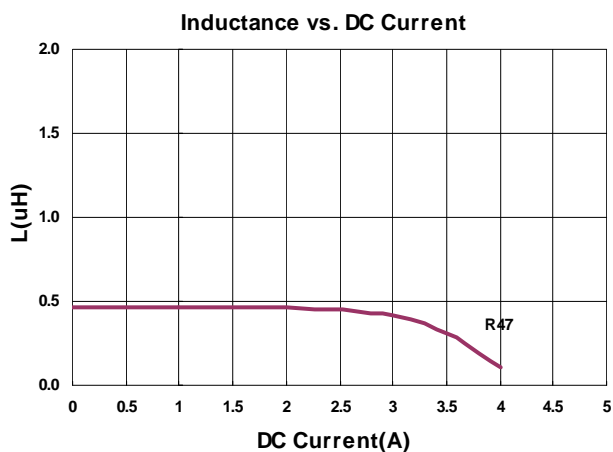
Electrical Characteristics

| Part Number | Inductance (uH) | Tolerance (±%) | Test Frequency (MHz) | RDC (Ω) ±30% | Isat (A) Typ. (Max) | Irms (A) Typ. (Max) | Marking |
|------------------|-----------------|----------------|----------------------|--------------|---------------------|---------------------|---------|
| LVT252A12-R47□-N | 0.47 | 20, 30 | 1 | 0.027 | 3.70(3.330) | 3.10(2.790) | A |

Note: When ordering, please specify tolerance code. Tolerance: M=±20% , T =±30%

- Operating temperature range - 55°C ~ 125°C(Including self - temperature rise)
- Isat for Inductance drop 30% from its value with current
- Irms for a 40°C temperature rise from 25°C ambient with current
- Measure Equipment :
- L : Agilent HP4287A+Agilent HP16197A, 1MHz 200mV
- RDC : DIGITAL MILLINHM METER CHROMA 16502, or equivalent
- Isat & Irms : Agilent HP4284A

Test Instruments : HP4284A Material/Impedance Analyzer



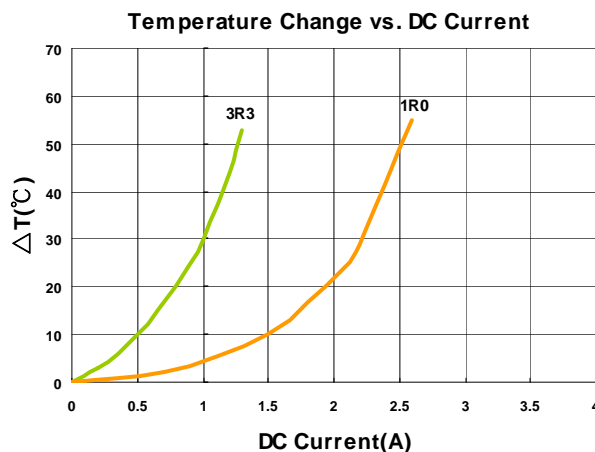
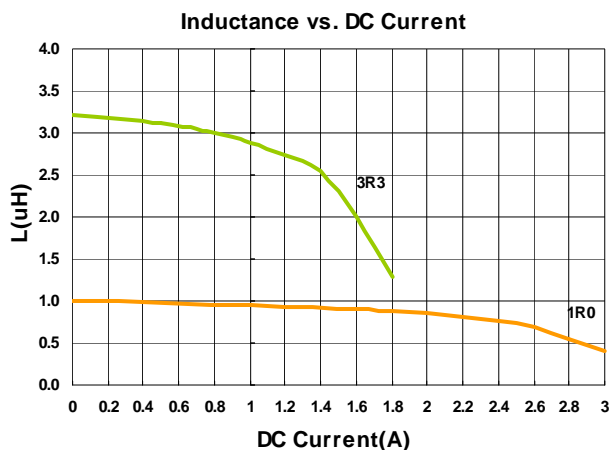
Electrical Characteristics

| Part Number | Inductance (uH) | Tolerance (±%) | Test Frequency (MHz) | RDC (Ω) ±30% | Isat (A) Typ. (Max) | Irms (A) Typ. (Max) | Marking |
|------------------|-----------------|----------------|----------------------|--------------|---------------------|---------------------|---------|
| LVT303010-1R0□-N | 1.0 | 20, 30 | 1 | 0.063 | 2.4(2.16) | 2.3(2.07) | 1R0 |
| LVT303010-3R3□-N | 3.3 | 20, 30 | 1 | 0.165 | 1.2(1.08) | 1.1(0.99) | 3R3 |

Note: When ordering, please specify tolerance code. Tolerance: M=±20% , T =±30%

- Operating temperature range - 55°C ~ 125°C(Including self - temperature rise)
- Isat for Inductance drop 30% from its value with current
- I rms for a 40°C temperature rise from 25°C ambient with current
- Measure Equipment :
- L : Agilent HP4287A+Agilent/HP16197A, 1MHz 200mV
- RDC : DIGITAL MILLINHM METER CHROMA 16502, or equivalent
- Isat & I rms : Agilent HP4284A

Test Instruments : HP4284A Material/Impedance Analyzer



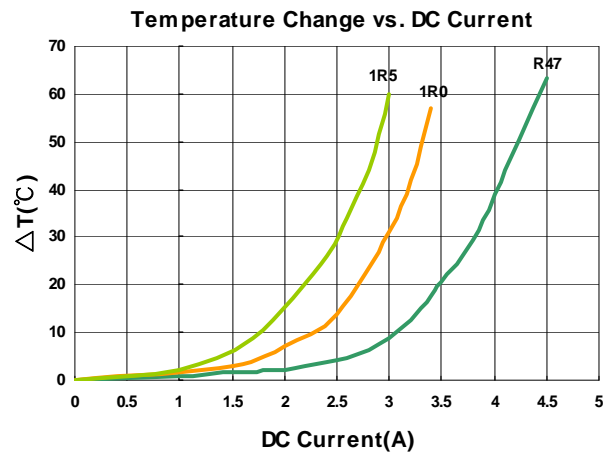
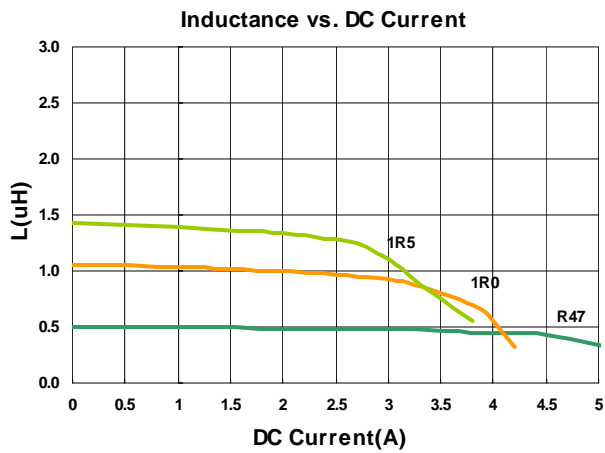
Electrical Characteristics

| Part Number | Inductance (uH) | Tolerance (±%) | Test Frequency (MHz) | RDC (Ω) ±30% | Isat (A) Typ. (Max) | Irms (A) Typ. (Max) | Marking |
|------------------|-----------------|----------------|----------------------|--------------|---------------------|---------------------|---------|
| LVT303012-R47□-N | 0.47 | 20, 30 | 1 | 0.032 | 4.3(3.87) | 4.0(3.60) | R47 |
| LVT303012-1R0□-N | 1.0 | 20, 30 | 1 | 0.060 | 3.1(2.79) | 3.0(2.70) | 1R0 |
| LVT303012-1R5□-N | 1.5 | 20, 30 | 1 | 0.072 | 2.7(2.43) | 2.6(2.34) | 1R5 |

Note: When ordering, please specify tolerance code. Tolerance: M=±20% , T =±30%

- Operating temperature range - 55°C ~ 125°C(Including self - temperature rise)
- Isat for Inductance drop 30% from its value with current
- Irms for a 40°C temperature rise from 25°C ambient with current
- Measure Equipment :
- L : Agilent HP4287A+Agilent HP16197A, 1MHz 200mV
- RDC : DIGITAL MILLINHM METER CHROMA 16502, or equivalent
- Isat & Irms : Agilent HP4284A

Test Instruments : HP4284A Material/Impedance Analyzer



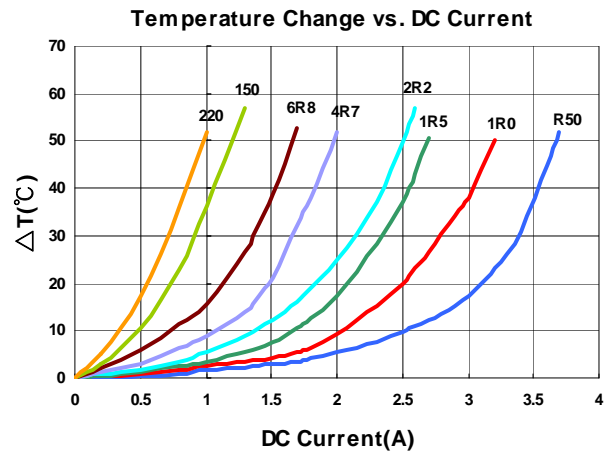
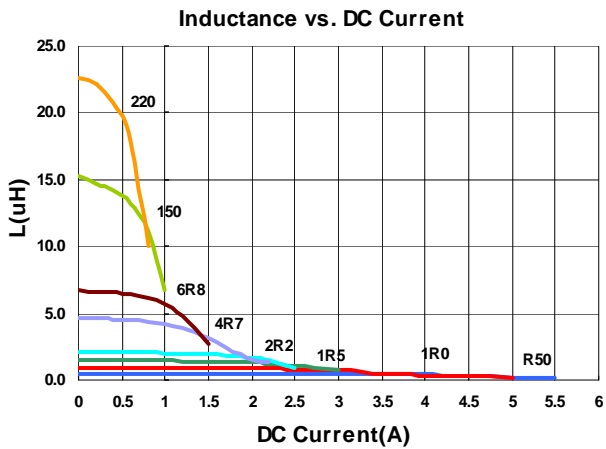
Electrical Characteristics

| Part Number | Inductance (uH) | Tolerance (±%) | Test Frequency (MHz) | RDC (Ω) ±30% | Isat (A) Typ. (Max) | Irms (A) Typ. (Max) | Marking |
|------------------|-----------------|----------------|----------------------|--------------|---------------------|---------------------|---------|
| LVT404012-R50□-N | 0.5 | 20, 30 | 1 | 0.030 | 3.90(3.51) | 3.50(3.15) | R50 |
| LVT404012-1R0□-N | 1.0 | 20, 30 | 1 | 0.040 | 2.90(2.61) | 3.00(2.70) | 1R0 |
| LVT404012-1R5□-N | 1.5 | 20, 30 | 1 | 0.051 | 2.30(2.07) | 2.50(2.25) | 1R5 |
| LVT404012-2R2□-N | 2.2 | 20, 30 | 1 | 0.060 | 1.90(1.71) | 2.30(2.07) | 2R2 |
| LVT404012-4R7□-N | 4.7 | 20, 30 | 1 | 0.094 | 1.32(1.18) | 1.80(1.62) | 4R7 |
| LVT404012-6R8□-N | 6.8 | 20, 30 | 1 | 0.135 | 1.08(0.97) | 1.50(1.35) | 6R8 |
| LVT404012-150□-N | 15 | 20, 30 | 1 | 0.260 | 0.78(0.70) | 1.00(0.90) | 150 |
| LVT404012-220□-N | 22 | 20, 30 | 1 | 0.390 | 0.62(0.55) | 0.80(0.72) | 220 |

Note: When ordering, please specify tolerance code. Tolerance: M=±20% , T =±30%

- Operating temperature range - 55°C ~ 125°C(Including self - temperature rise)
- Isat for Inductance drop 30% from its value with current
- I rms for a 40°C temperature rise from 25°C ambient with current
- Measure Equipment :
- L : Agilent HP4284A+Agilent HP42841A, 100kHz 1V
RDC : DIGITAL MILLINHM METER CHROMA 16502, or equivalent
Isat & I rms : Agilent HP4284A

Test Instruments : HP4284A Material/Impedance Analyzer



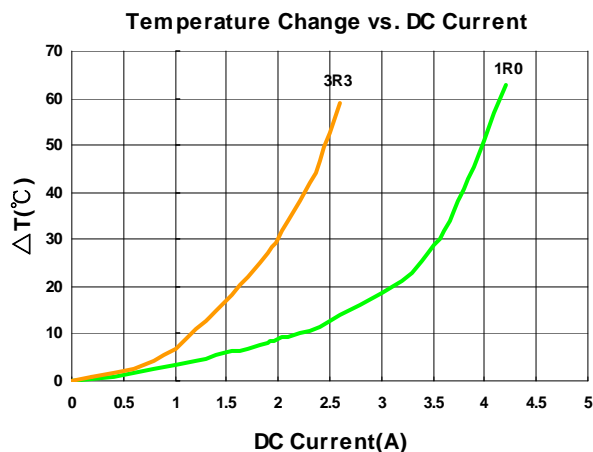
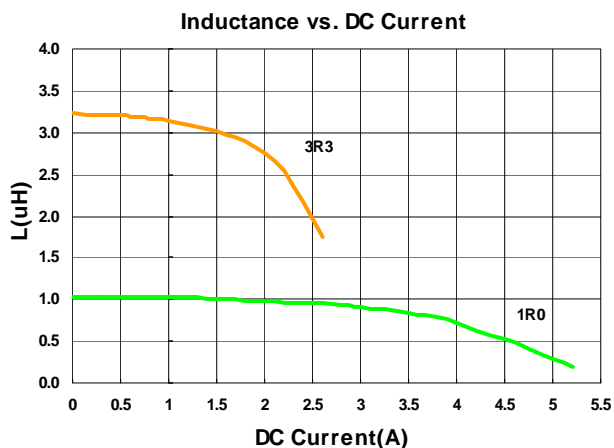
Electrical Characteristics

| Part Number | Inductance (uH) | Tolerance (±%) | Test Frequency (MHz) | RDC (Ω) ±30% | Isat (A) Typ. (Max) | Irms (A) Typ. (Max) | Marking |
|------------------|-----------------|----------------|----------------------|--------------|---------------------|---------------------|---------|
| LVT404015-1R0□-N | 1.0 | 20, 30 | 1 | 0.034 | 3.60(3.24) | 3.70(3.33) | 1R0 |
| LVT404015-3R3□-N | 3.3 | 20, 30 | 1 | 0.080 | 2.00(1.80) | 2.20(1.98) | 3R3 |

Note: When ordering, please specify tolerance code. Tolerance: M=±20% , T =±30%

- Operating temperature range - 55°C ~ 125°C(Including self - temperature rise)
- Isat for Inductance drop 30% from its value with current
- Irms for a 40°C temperature rise from 25°C ambient with current
- Measure Equipment :
- L : Agilent HP4284A+Agilent HP42841A, 100kHz 1V
- RDC : DIGITAL MILLINHM METER CHROMA 16502, or equivalent
- Isat & Irms : Agilent HP4284A

Test Instruments : HP4284A Material/Impedance Analyzer



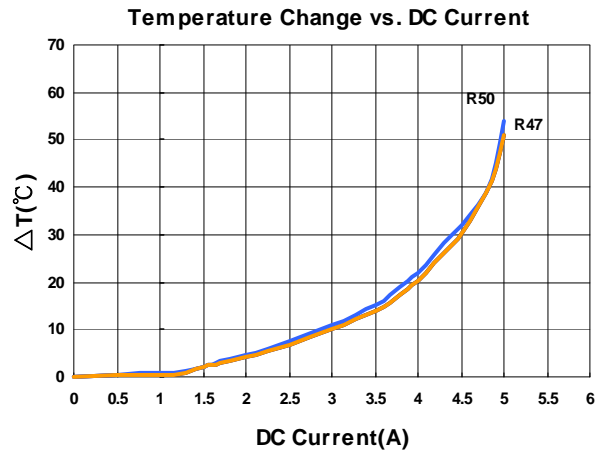
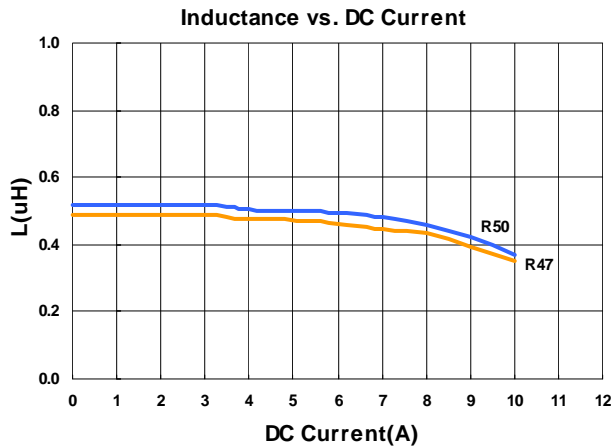
Electrical Characteristics

| Part Number | Inductance (uH) | Tolerance (±%) | Test Frequency (kHz) | RDC (Ω) ±30% | Isat (A) Typ. (Max) | Irms (A) Typ. (Max) | Marking |
|------------------|-----------------|----------------|----------------------|--------------|---------------------|---------------------|---------|
| LVT404026-R47□-N | 0.47 | 20, 30 | 100 | 0.024 | 7.20(6.48) | 4.80(4.32) | R47 |
| LVT404026-R50□-N | 0.50 | 20, 30 | 100 | 0.024 | 7.20(6.48) | 4.80(4.32) | R50 |

Note: When ordering, please specify tolerance code. Tolerance: M=±20% , T =±30%

- Operating temperature range - 55°C ~ 125°C(Including self - temperature rise)
- Isat for Inductance drop 30% from its value with current
- I rms for a 40°C temperature rise from 25°C ambient with current
- Measure Equipment :
- L : Agilent HP4284A+Agilent HP42841A, 100kHz 1V
- RDC : DIGITAL MILLINHM METER CHROMA 16502, or equivalent
- Isat & I rms : Agilent HP4284A

Test Instruments : HP4284A Material/Impedance Analyzer



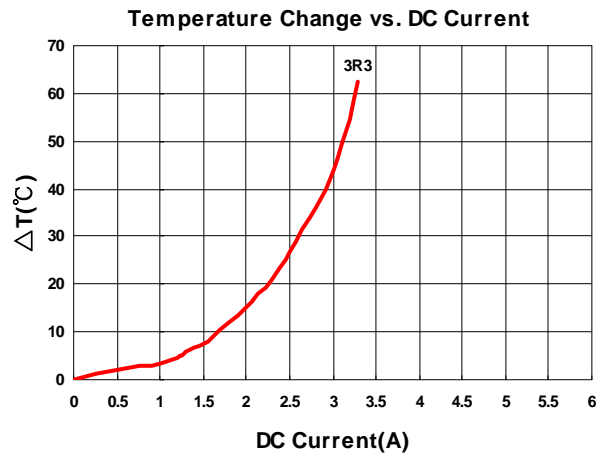
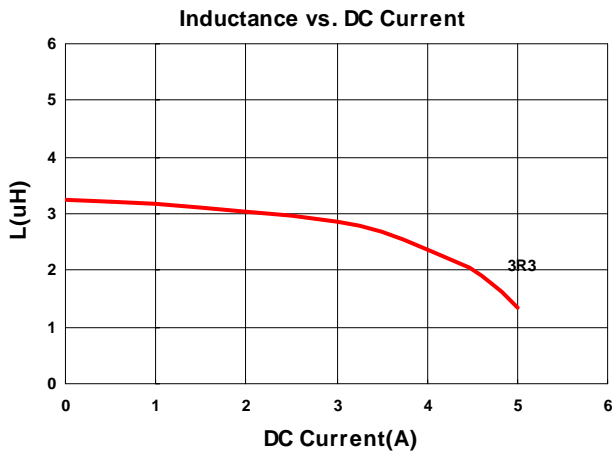
Electrical Characteristics

| Part Number | Inductance (uH) | Tolerance (±%) | Test Frequency (kHz) | RDC (Ω) ±30% | Isat (A) Typ. (Max) | Irms (A) Typ. (Max) | Marking |
|------------------|-----------------|----------------|----------------------|--------------|---------------------|---------------------|---------|
| LVT505020-3R3□-N | 3.3 | 20, 30 | 100 | 0.050 | 3.4(3.06) | 2.7(2.43) | 3R3 |

Note: When ordering, please specify tolerance code. Tolerance: M=±20% , T =±30%

- Operating temperature range - 55°C ~ 125°C(Including self - temperature rise)
- Isat for Inductance drop 30% from its value with current
- Irms for a 40°C temperature rise from 25°C ambient with current
- Measure Equipment :
- L : Agilent HP4284A+Agilent HP42841A, 100kHz 1V
RDC : DIGITAL MILLINHM METER CHROMA 16502, or equivalent
Isat & Irms : Agilent HP4284A

Test Instruments : HP4284A Material/Impedance Analyzer



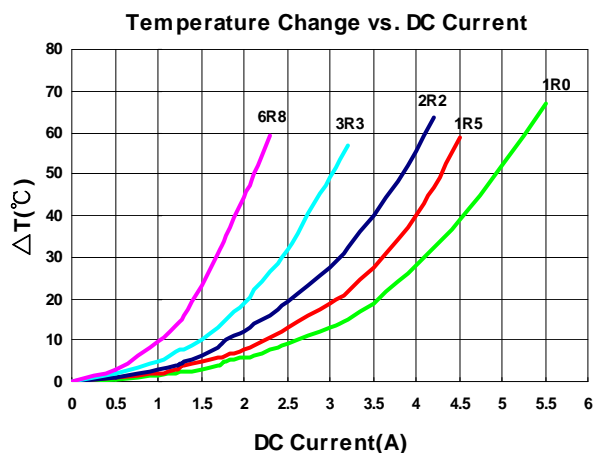
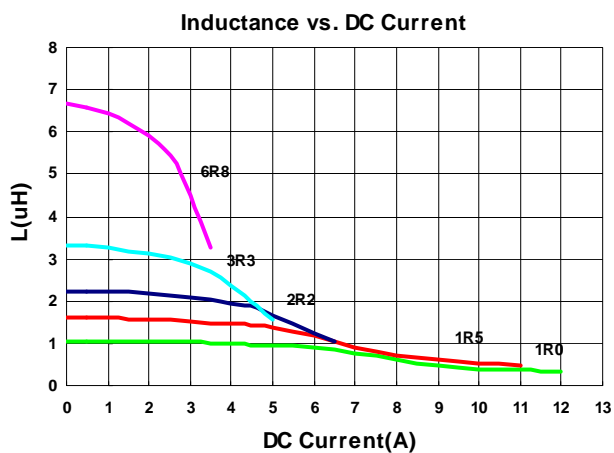
Electrical Characteristics

| Part Number | Inductance (uH) | Tolerance (±%) | Test Frequency (kHz) | RDC (Ω) ±30% | Isat (A) Typ. (Max) | Irms (A) Typ. (Max) | Marking |
|------------------|-----------------|----------------|----------------------|--------------|---------------------|---------------------|---------|
| LVT606020-1R0□-N | 1.0 | 20, 30 | 100 | 0.019 | 6.4(5.76) | 4.2(3.78) | 1R0 |
| LVT606020-1R5□-N | 1.5 | 20, 30 | 100 | 0.026 | 5.4(4.86) | 3.7(3.33) | 1R5 |
| LVT606020-2R2□-N | 2.2 | 20, 30 | 100 | 0.034 | 4.5(4.05) | 3.3(2.97) | 2R2 |
| LVT606020-3R3□-N | 3.3 | 20, 30 | 100 | 0.045 | 3.6(3.24) | 2.8(2.52) | 3R3 |
| LVT606020-6R8□-N | 6.8 | 20, 30 | 100 | 0.085 | 2.6(2.34) | 1.9(1.71) | 6R8 |

Note: When ordering, please specify tolerance code. Tolerance: M=±20% , T =±30%

- Operating temperature range - 55°C ~ 125°C(Including self - temperature rise)
- Isat for Inductance drop 30% from its value with current
- Irms for a 40°C temperature rise from 25°C ambient with current
- Measure Equipment :
- L : Agilent HP4284A+Agilent HP42841A, 100kHz 1V
- RDC : DIGITAL MILLINHM METER CHROMA 16502, or equivalent
- Isat & Irms : Agilent HP4284A

Test Instruments : HP4284A Material/Impedance Analyzer



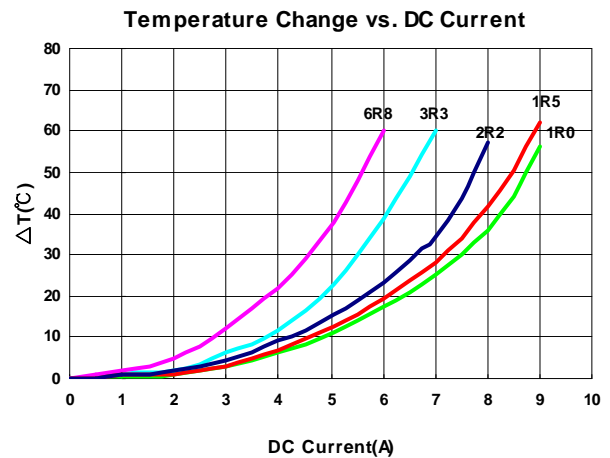
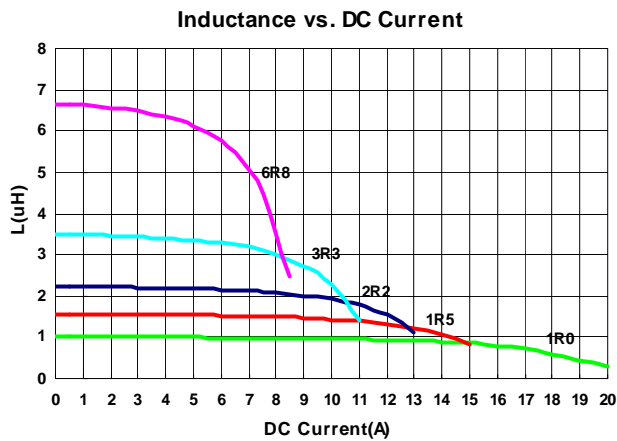
Electrical Characteristics

| Part Number | Inductance (uH) | Tolerance (±%) | Test Frequency (kHz) | RDC (Ω) ±30% | Isat (A) Typ. (Max) | Irms (A) Typ. (Max) | Marking |
|------------------|-----------------|----------------|----------------------|--------------|---------------------|---------------------|---------|
| LVT808040-1R0□-N | 1.0 | 20, 30 | 100 | 0.0075 | 13.5(12.15) | 8.1(7.29) | 1R0 |
| LVT808040-1R5□-N | 1.5 | 20, 30 | 100 | 0.0097 | 10.5(9.45) | 7.7(6.93) | 1R5 |
| LVT808040-2R2□-N | 2.2 | 20, 30 | 100 | 0.012 | 9.7(8.73) | 7.2(6.48) | 2R2 |
| LVT808040-3R3□-N | 3.3 | 20, 30 | 100 | 0.047 | 8.0(7.20) | 5.9(5.31) | 3R3 |
| LVT808040-6R8□-N | 6.8 | 20, 30 | 100 | 0.029 | 5.8(5.22) | 4.9(4.41) | 6R8 |

Note: When ordering, please specify tolerance code. Tolerance: M=±20% , T =±30%

- Operating temperature range - 55°C ~ 125°C(Including self - temperature rise)
- Isat for Inductance drop 30% from its value with current
- Irms for a 40°C temperature rise from 25°C ambient with current
- Measure Equipment :
- L : Agilent HP4284A+Agilent HP42841A, 100kHz 1V
- RDC : DIGITAL MILLINHM METER CHROMA 16502, or equivalent
- Isat & Irms : Agilent HP4284A

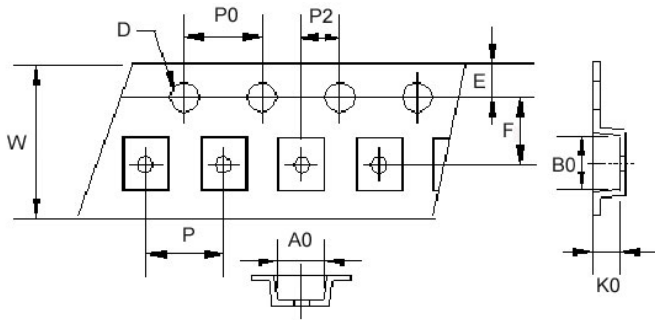
Test Instruments : HP4284A Material/Impedance Analyzer



Packaging Specifications

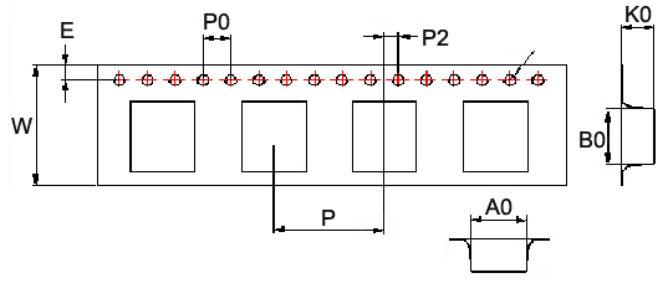
Tape Dimensions

Figure 1



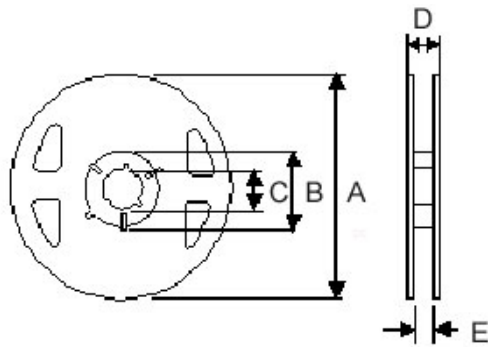
Tape Dimensions

Figure 2



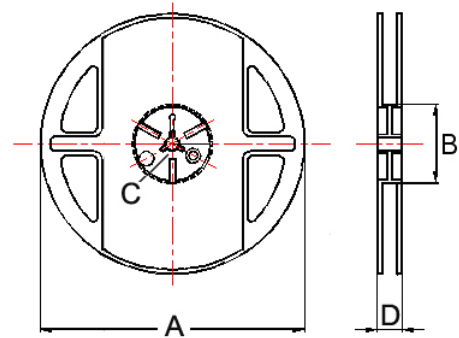
Reel Dimensions

Figure 1



Reel Dimensions

Figure 2



Dimensions in mm

| TYPE | Fig | Tape Dimensions | | | | | | | | | | Reel Dimensions | | | | | Quantity PCS / Reel |
|-----------|-----|-----------------|------|------|------|------|-----|-----|----|----|----|-----------------|-----|----|------|-----|------------------------|
| | | A0 | B0 | K0 | D | E | F | W | P | P0 | P2 | A | B | C | D | E | |
| LVT201B10 | 1 | 1.90 | 2.20 | 1.15 | 1.55 | 1.75 | 3.5 | 8.1 | 4 | 4 | 2 | 180 | 60 | 13 | 14.4 | 8.4 | 2000 |
| LVT252A10 | 1 | 2.40 | 2.70 | 1.15 | 1.55 | 1.75 | 3.5 | 8.1 | 4 | 4 | 2 | 180 | 60 | 13 | 14.4 | 8.4 | 2000 |
| LVT252A12 | 1 | 2.40 | 2.70 | 1.35 | 1.55 | 1.75 | 3.5 | 8.1 | 4 | 4 | 2 | 180 | 60 | 13 | 14.4 | 8.4 | 2000 |
| LVT303010 | 1 | 3.20 | 3.20 | 1.40 | 1.55 | 1.75 | 3.5 | 8.1 | 4 | 4 | 2 | 180 | 60 | 13 | 14.4 | 8.4 | 2000 |
| LVT303012 | 1 | 3.20 | 3.20 | 1.40 | 1.55 | 1.75 | 3.5 | 8.1 | 4 | 4 | 2 | 180 | 60 | 13 | 14.4 | 8.4 | 2000 |
| LVT404012 | 2 | 4.25 | 4.25 | 1.30 | 1.55 | 1.75 | 5.5 | 12 | 8 | 4 | 2 | 178 | 60 | 13 | 13.2 | - | 1000 |
| LVT404015 | 2 | 4.25 | 4.25 | 1.70 | 1.55 | 1.75 | 5.5 | 12 | 8 | 4 | 2 | 178 | 60 | 13 | 13.2 | - | 1000 |
| LVT404026 | 2 | 4.25 | 4.25 | 3.00 | 1.55 | 1.75 | 5.5 | 12 | 8 | 4 | 2 | 178 | 60 | 13 | 13.2 | - | 500 |
| LVT505020 | 2 | 5.25 | 5.25 | 2.20 | 1.55 | 1.75 | 5.5 | 12 | 8 | 4 | 2 | 330 | 100 | 13 | 13.4 | - | 2000 |
| LVT606020 | 2 | 6.25 | 6.25 | 2.20 | 1.55 | 1.75 | 7.5 | 16 | 12 | 4 | 2 | 330 | 100 | 13 | 16.0 | - | 2000 |
| LVT808040 | 2 | 8.25 | 8.25 | 4.15 | 1.55 | 1.75 | 7.5 | 16 | 12 | 4 | 2 | 330 | 100 | 13 | 16.0 | - | 1000 |