

Power Inductor AMRx Series

**Automotive
AEC-Q200**

RoHS Compliant
Halogen Free
REACH Compliant

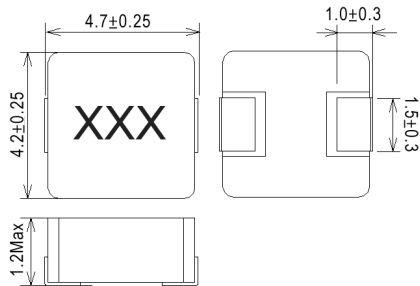


- Power Circuit
- Shield
- Wire Wound
- Metal
- Ultra High Current

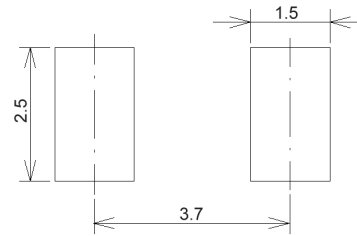
Part Numbering

| A | MRU | 00 | 040420 | 1R0 | M | A1 |
|-------|-------------|--------------|----------------------|-----------------|-----------|---------------|
| Grade | Series Name | Control Code | Dimensions Code (mm) | Inductance (uH) | Tolerance | Internal Code |
| | | | 040412 4.2x4.7x1.2 | R22 0.22 | M ±20% | |
| | | | 040420 4.2x4.7x1.8 | 1R0 1.0 | | |
| | | | 060630 6.8x7.3x2.8 | 3R3 3.3 | | |
| | | | 101040 10.2x11.6x3.8 | | | |
| | | | 131365 12.8x13.8x6.5 | | | |

Please be sure to request approval specifications that provide further details of the products. Kindly note that the content of these specifications are subject to change or may be discontinued without prior notice. This product may not be designed/used in medical or high risk applications without Chilisin approval. Please contact our sales department before ordering.

AMRU00040412 Type
■ Dimensions


unit:mm

■ Recommended Land Pattern


unit:mm

■ Electrical Characteristics

| Part No. | Inductance (uH) | Test Freq. | RDC(mΩ) Max(Typ) | Isat (A)Typ. | Irms (A)Typ. | Tolerance (±%) | Marking |
|--------------------|-----------------|-------------|---------------------|--------------|--------------|----------------|---------|
| AMRU00040412R22MA1 | 0.22 | 100kHz/0.5V | 12(11) | 15 | 8.5 | 20 | R22 |
| AMRU00040412R47MA1 | 0.47 | 100kHz/0.5V | 20(18) | 9 | 5 | 20 | R47 |
| AMRU000404121R0MA1 | 1.0 | 100kHz/0.5V | 43(39) | 6 | 4 | 20 | 1R0 |

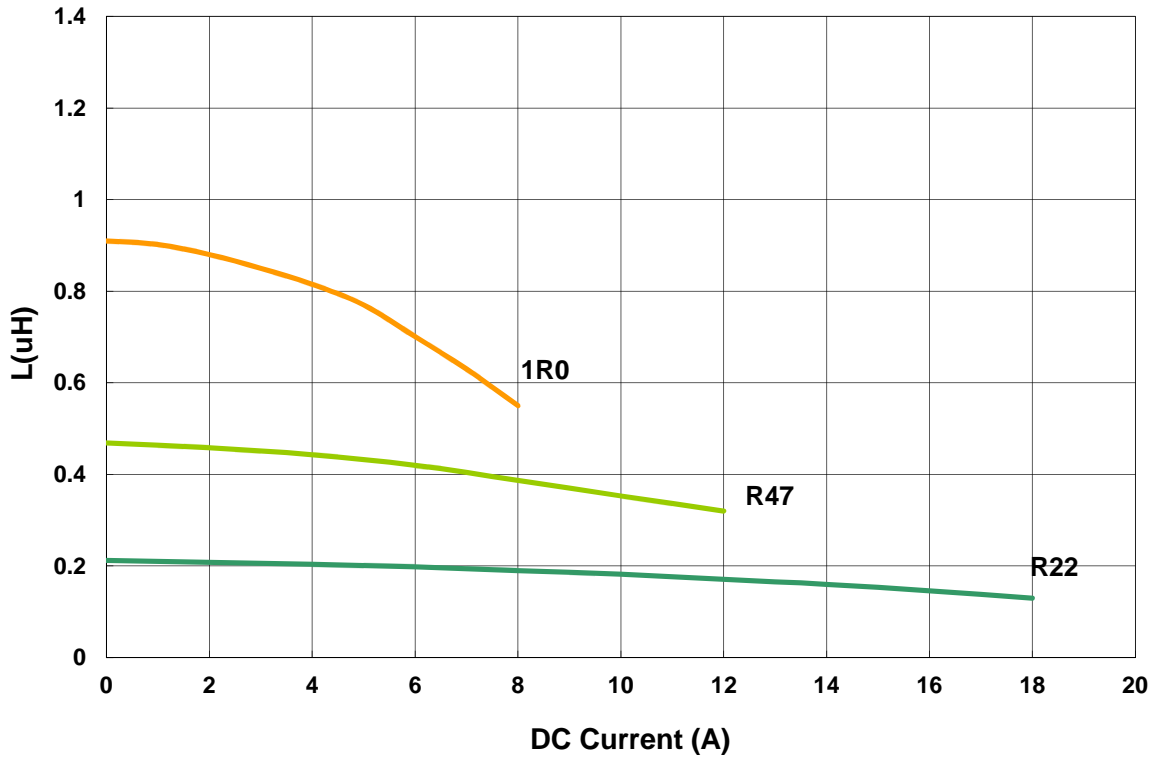
Note: When ordering, please specify tolerance code. Tolerance: M=±20%

1. Operating temperature range - 40°C ~ 125°C
2. Isat for Inductance drop 30% from its value without current
3. I rms for a 40°C temprature rise from 25°C ambient with current
4. Absolute maximum voltage 30VDC
5. Measure Equipment:
 - L: WK3260B or WK6500P
 - RDC: CHEN HWA502 or 16502
 - Isat: WK3260B+WK3265B
 - I rms: CHROMA 1810

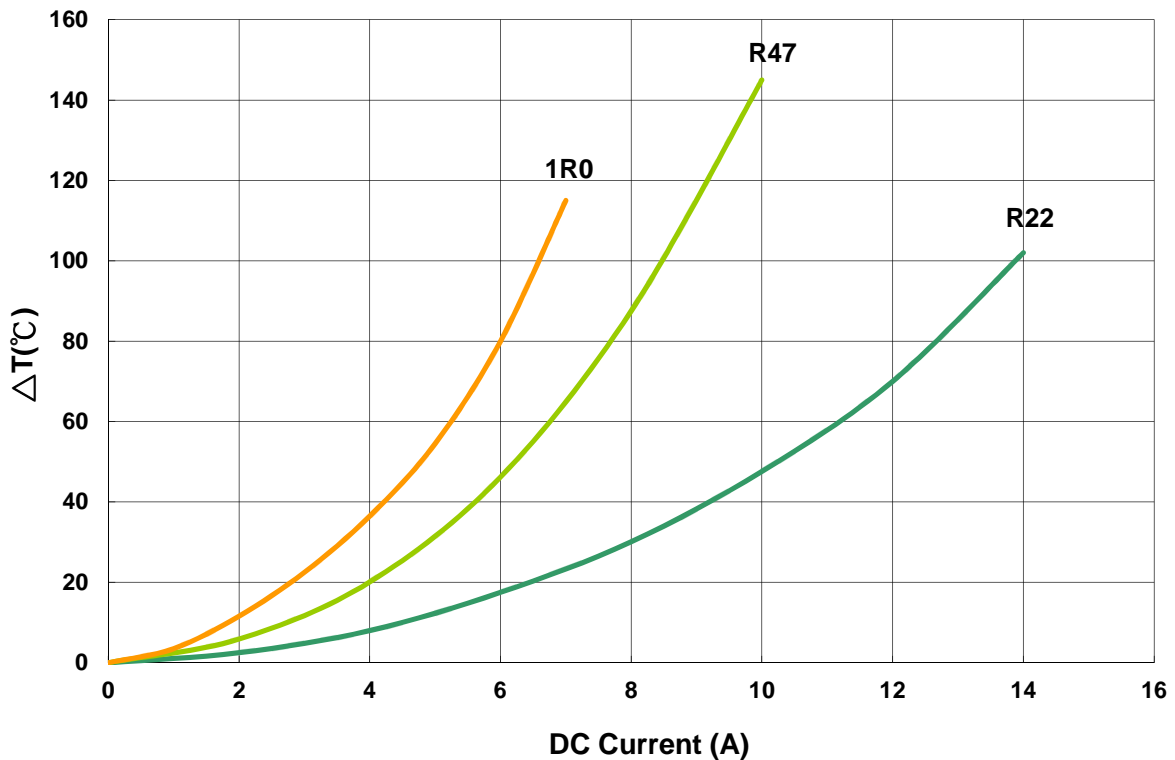
AMRU00040412 Type

Characteristics Graph

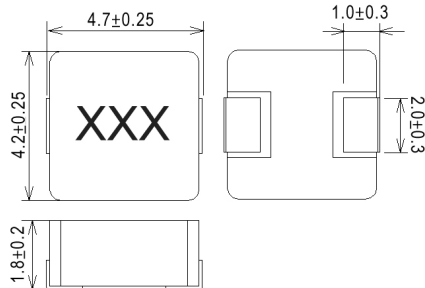
Inductance vs. DC Current



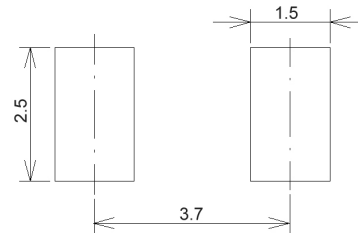
Temperature Change vs. DC Current



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AMRU00040420 Type
■ Dimensions


unit:mm

■ Recommended Land Pattern


unit:mm

■ Electrical Characteristics

| Part No. | Inductance (uH) | Test Freq. | RDC(mΩ) Max(Typ) | Isat (A)Typ. | Irms (A)Typ. | Tolerance (±%) | Marking |
|--------------------|-----------------|-------------|------------------|--------------|--------------|----------------|---------|
| AMRU00040420R47MB1 | 0.47 | 100kHz/0.5V | 14(12) | 10 | 7 | 20 | R47 |
| AMRU000404201R0MB1 | 1 | 100kHz/0.5V | 27(24) | 7 | 4.5 | 20 | 1R0 |
| AMRU000404201R5MB1 | 1.5 | 100kHz/0.5V | 46(38) | 6 | 4 | 20 | 1R5 |
| AMRU000404202R2MB1 | 2.2 | 100kHz/0.5V | 55(50) | 5 | 3 | 20 | 2R2 |
| AMRU000404204R7MB1 | 4.7 | 100kHz/0.5V | 105(95) | 3.5 | 2.2 | 20 | 4R7 |

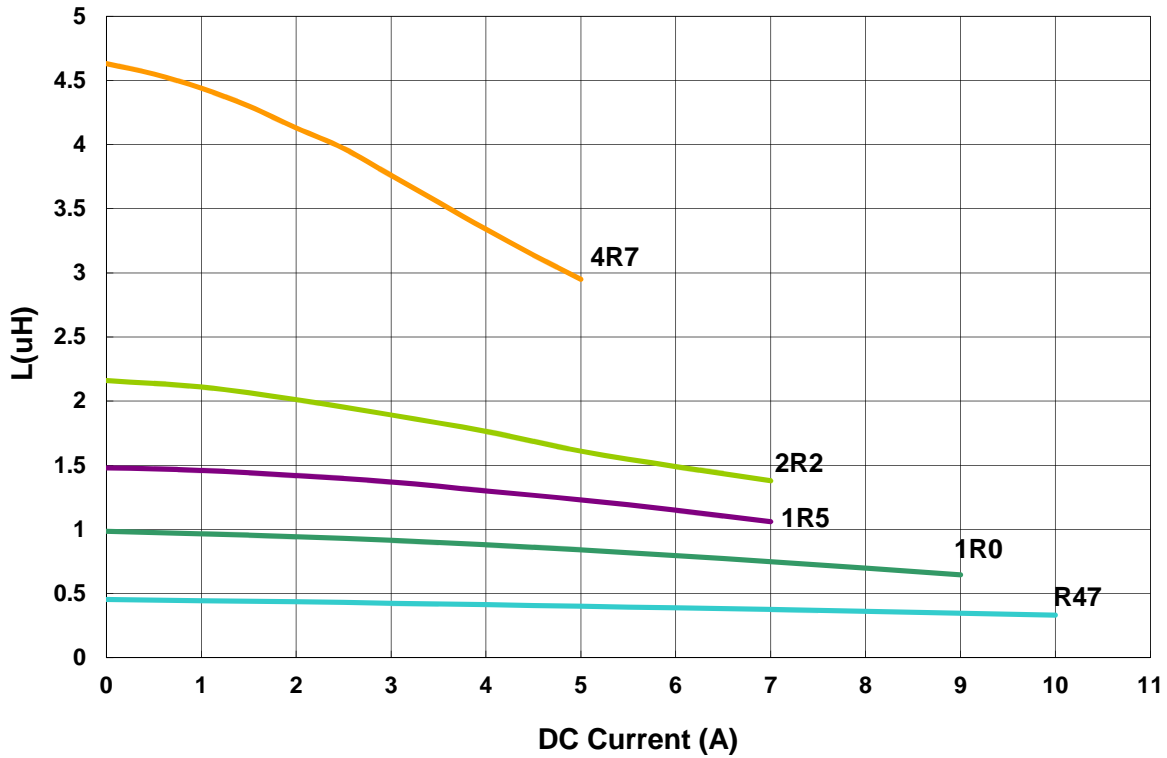
Note: When ordering, please specify tolerance code. Tolerance: M=±20%

1. Operating temperature range - 40°C ~ 125°C
2. Isat for Inductance drop 30% from its value without current
3. I rms for a 40°C temprature rise from 25°C ambient with current
4. Absolute maximum voltage 30VDC
5. Measure Equipment:
 L: WK3260B or WK6500P
 RDC: CHEN HWA502 or 16502
 Isat: WK3260B+WK3265B
 I rms: CHROMA 1810

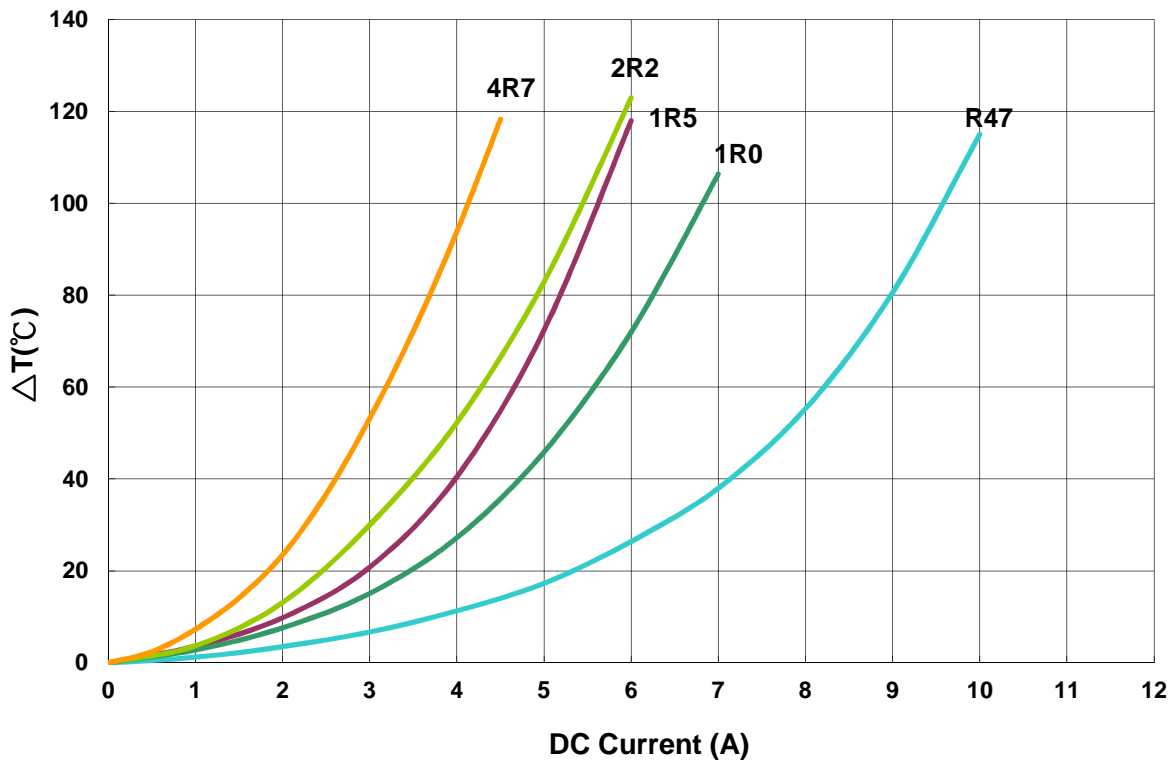
AMRU00040420 Type

Characteristics Graph

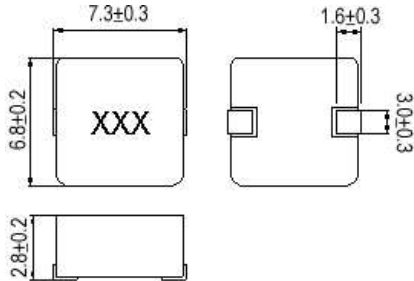
Inductance vs. DC Current



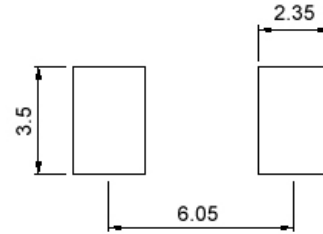
Temperature Change vs. DC Current



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AMRU00060630 Type
■ Dimensions


unit:mm

■ Recommended Land Pattern


unit:mm

■ Electrical Characteristics

| Part No. | Inductance (uH) | Test Freq. | RDC(mΩ) Max(Typ) | Isat (A)Typ. | Irms (A)Typ. | Tolerance (±%) | Marking |
|--------------------|-----------------|-------------|---------------------|--------------|--------------|----------------|---------|
| AMRU00060630R47MA1 | 0.47 | 100kHz,0.5V | 4.3(3.9) | 20 | 16.5 | 20 | R47 |
| AMRU000606301R0MA1 | 1 | 100kHz,0.5V | 10(9) | 18 | 10 | 20 | 1R0 |
| AMRU000606301R5MA1 | 1.5 | 100kHz,0.5V | 14(13) | 13 | 9 | 20 | 1R5 |
| AMRU000606302R2MA1 | 2.2 | 100kHz,0.5V | 20(18) | 10 | 8 | 20 | 2R2 |
| AMRU000606303R3MA1 | 3.3 | 100kHz,0.5V | 28(25) | 9 | 6.5 | 20 | 3R3 |
| AMRU000606304R7MA1 | 4.7 | 100kHz,0.5V | 40(35) | 8 | 5.5 | 20 | 4R7 |
| AMRU000606305R6MA1 | 5.6 | 100kHz,0.5V | 45(38) | 7 | 5 | 20 | 5R6 |
| AMRU000606306R8MA1 | 6.8 | 100kHz,0.5V | 49.5(45) | 6 | 4.5 | 20 | 6R8 |
| AMRU000606308R2MA1 | 8.2 | 100kHz,0.5V | 55(50) | 5.2 | 4.3 | 20 | 8R2 |
| AMRU00060630100MA1 | 10 | 100kHz,0.5V | 68(62) | 5 | 4 | 20 | 100 |
| AMRU00060630150MA1 | 15 | 100kHz,0.5V | 125(110) | 4.5 | 3.2 | 20 | 150 |
| AMRU00060630220MA1 | 22 | 100kHz,0.5V | 145(130) | 3.5 | 3 | 20 | 220 |

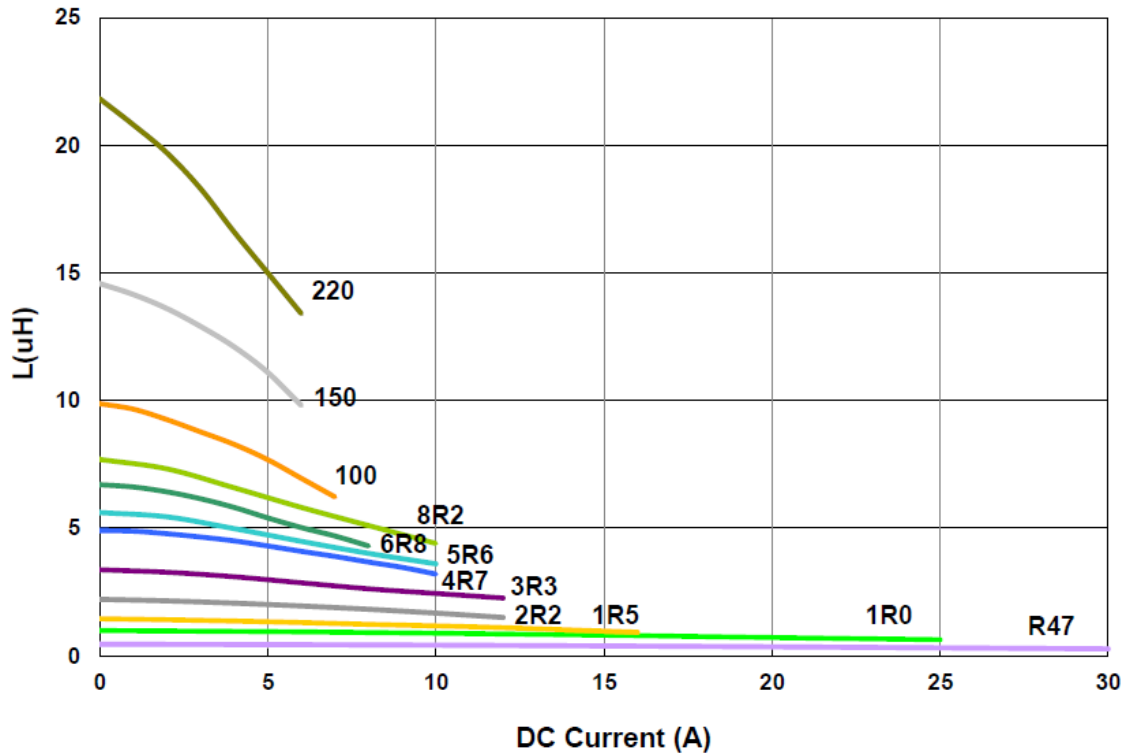
Note: When ordering, please specify tolerance code. Tolerance: M=±20%

- Operating temperature range - 40°C ~ 125°C
- Isat for Inductance drop 30% from its value without current
- Irms for a 40°C temperature rise from 25°C ambient with current
- Absolute maximum voltage 30VDC
- Measure Equipment:
 L: WK3260B or WK6500P
 RDC: CHEN HWA502 or 16502
 Isat: WK3260B+WK3265B
 Irms: CHROMA 1810

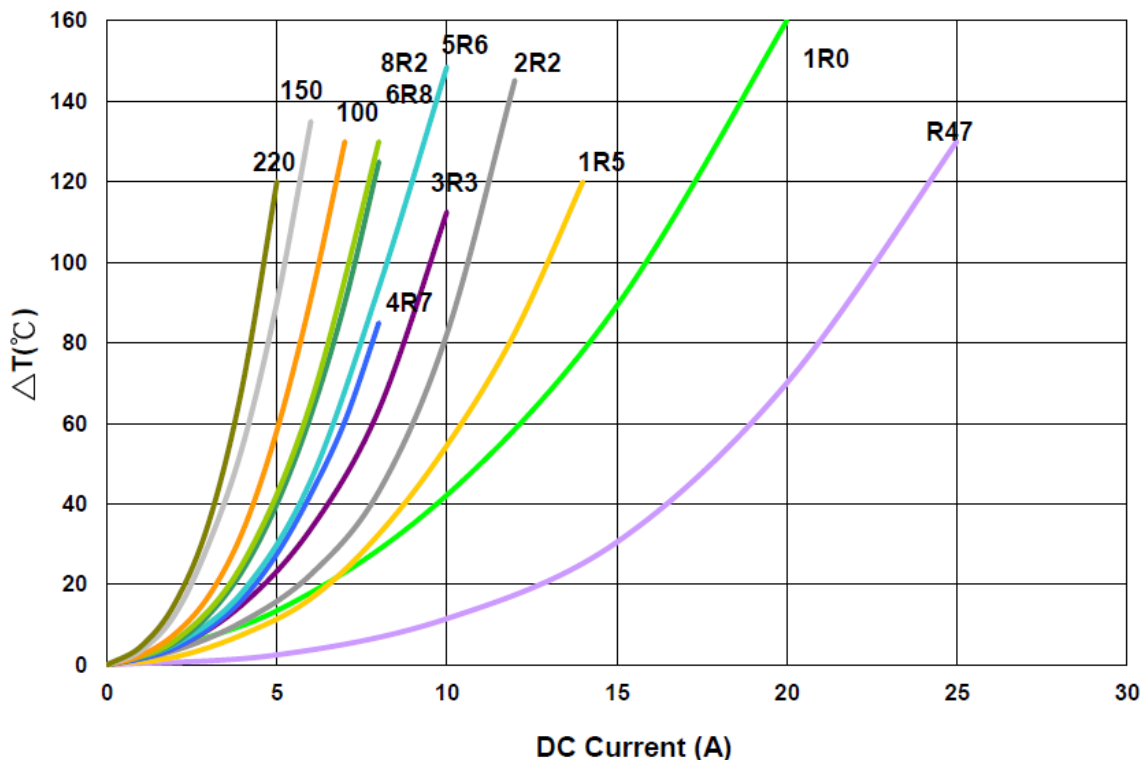
AMRU00060630 Type

Characteristics Graph

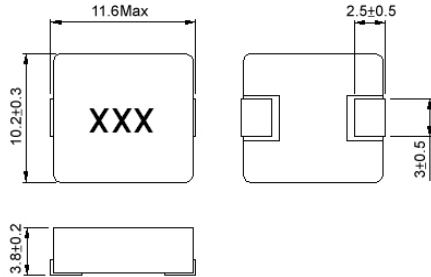
Inductance vs. DC Current



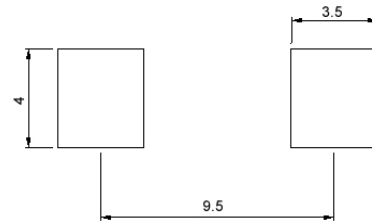
Temperature Change vs. DC Current



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AMRU00101040 Type
■ Dimensions


unit:mm

■ Recommended Land Pattern


unit:mm

■ Electrical Characteristics

| Part No. | Inductance (uH) | Test Freq. | RDC(mΩ) Max(Typ) | Isat (A)Typ. | Irms (A)Typ. | Tolerance (±%) | Marking |
|--------------------|-----------------|-------------|------------------|--------------|--------------|----------------|---------|
| AMRU001010401R0MA1 | 1 | 100kHz/0.5V | 3.3(3.0) | 20 | 18 | 20 | 1R0 |
| AMRU001010402R2MA1 | 2.2 | 100kHz/0.5V | 6.8(6.0) | 16 | 14 | 20 | 2R2 |
| AMRU001010403R3MA1 | 3.3 | 100kHz/0.5V | 11(10) | 13 | 11 | 20 | 3R3 |
| AMRU001010404R7MA1 | 4.7 | 100kHz/0.5V | 16(14.5) | 11 | 9 | 20 | 4R7 |
| AMRU001010406R8MA1 | 6.8 | 100kHz/0.5V | 24(20) | 9 | 8 | 20 | 6R8 |
| AMRU00101040100MA1 | 10 | 100kHz/0.5V | 30(27) | 7 | 6.5 | 20 | 100 |
| AMRU00101040150MA1 | 15 | 100kHz/0.5V | 45(40) | 6.25 | 6 | 20 | 150 |
| AMRU00101040220MA1 | 22 | 100kHz/0.5V | 66(60) | 5 | 4.5 | 20 | 220 |
| AMRU00101040330MA1 | 33 | 100kHz/0.5V | 100(90) | 4 | 3.5 | 20 | 330 |
| AMRU00101040470MA1 | 47 | 100kHz/0.5V | 165(150) | 3.5 | 3 | 20 | 470 |

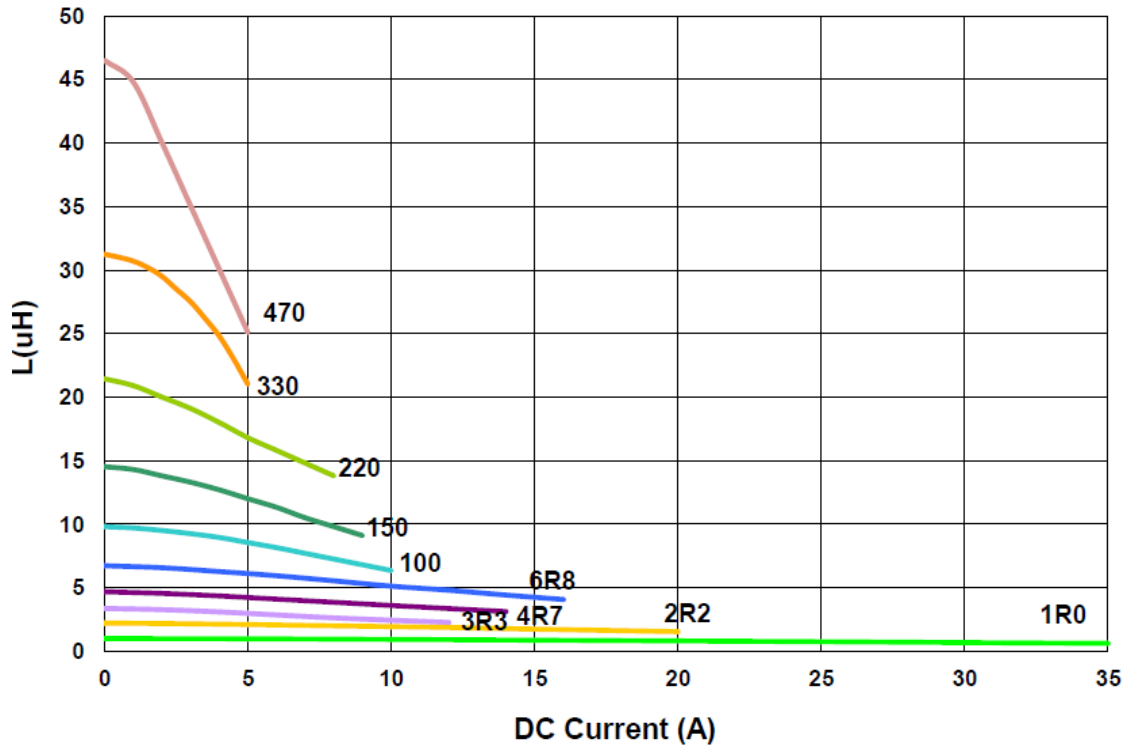
Note: When ordering, please specify tolerance code. Tolerance: M=±20%

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5. Measure Equipment:
 L: WK3260B or WK6500P
 RDC: CHEN HWA502 or 16502
 Isat: WK3260B+WK3265B
 I rms: CHROMA 1810

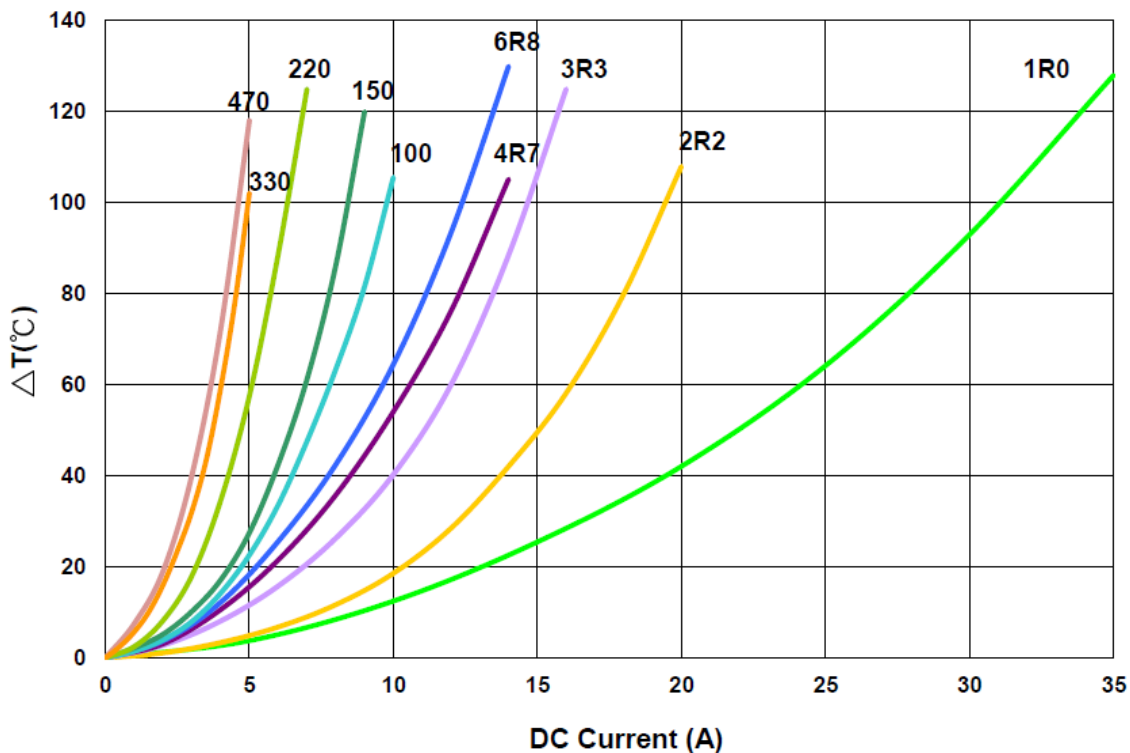
AMRU00101040 Type

Characteristics Graph

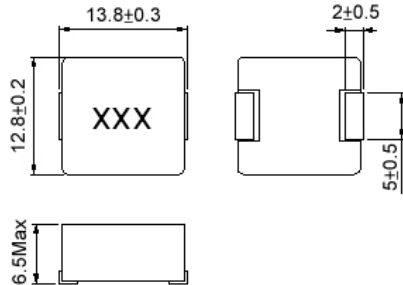
Inductance vs. DC Current



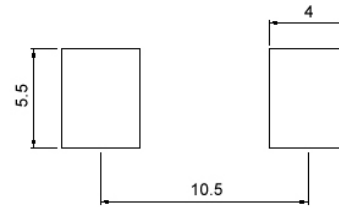
Temperature Change vs. DC Current



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AMRU00131365 Type
■ Dimensions


unit:mm

■ Recommended Land Pattern


unit:mm

■ Electrical Characteristics

| Part No. | Inductance (uH) | Test Freq. | RDC(mΩ) Max(Typ) | Isat (A)Typ. | I _{rms} (A)Typ. | Tolerance (±%) | Marking |
|--------------------|-----------------|-------------|------------------|--------------|--------------------------|----------------|---------|
| AMRU001313651R0MA1 | 1 | 100kHz/0.5V | 2.1(1.9) | 30 | 28 | 20 | 1R0 |
| AMRU001313651R5MA1 | 1.5 | 100kHz/0.5V | 3.0(2.7) | 28 | 23 | 20 | 1R5 |
| AMRU001313652R2MA1 | 2.2 | 100kHz/0.5V | 4.4(3.7) | 25 | 18 | 20 | 2R2 |
| AMRU001313653R3MA1 | 3.3 | 100kHz/0.5V | 6.8(5.7) | 22 | 16 | 20 | 3R3 |
| AMRU001313654R7MA1 | 4.7 | 100kHz/0.5V | 7.7(7.0) | 18 | 14 | 20 | 4R7 |
| AMRU00131365100MA1 | 10 | 100kHz/0.5V | 18(16.5) | 12 | 10 | 20 | 100 |
| AMRU00131365220MA1 | 22 | 100kHz/0.5V | 40(35) | 7 | 6 | 20 | 220 |
| AMRU00131365330MA1 | 33 | 100kHz/0.5V | 55(50) | 6 | 5 | 20 | 330 |
| AMRU00131365470MA1 | 47 | 100kHz/0.5V | 100(80) | 5 | 4 | 20 | 470 |

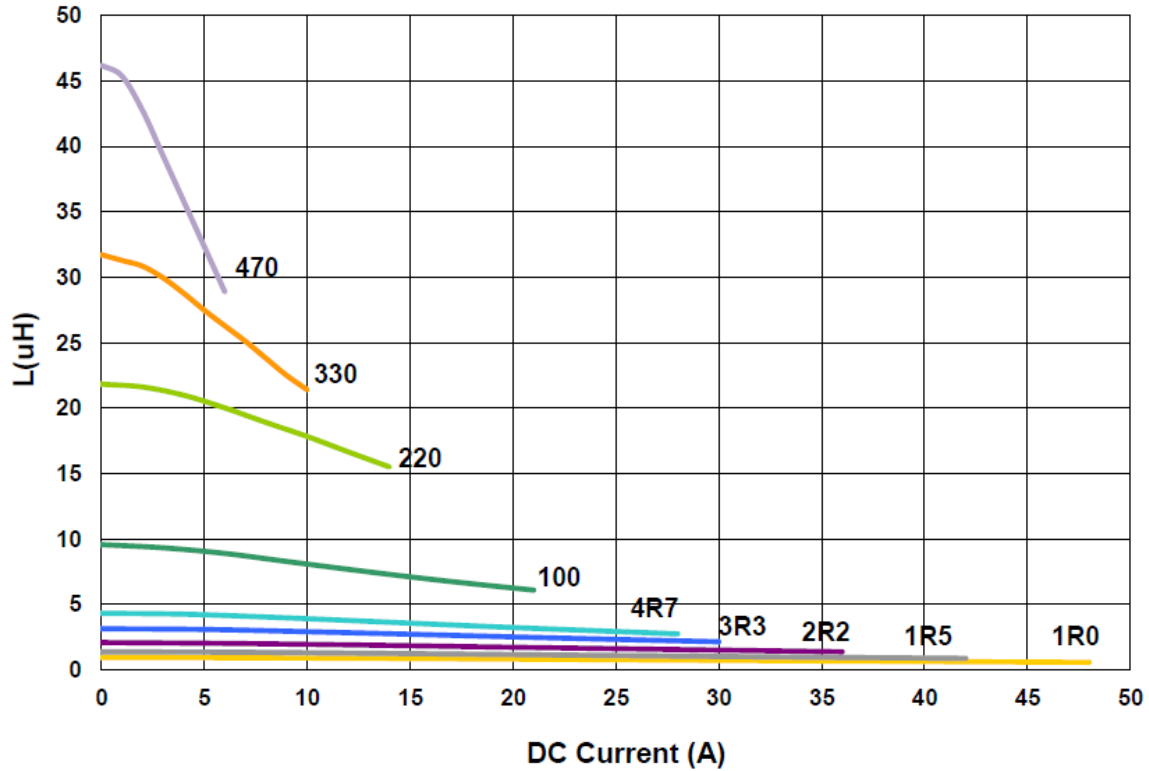
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- I_{rms} for a 40°C temperature rise from 25°C ambient with current
- Absolute maximum voltage 30VDC
- Measure Equipment:
 L: WK3260B or WK6500P
 RDC: CHEN HWA502 or 16502
 Isat: WK3260B+WK3265B
 I_{rms}: CHROMA 1810

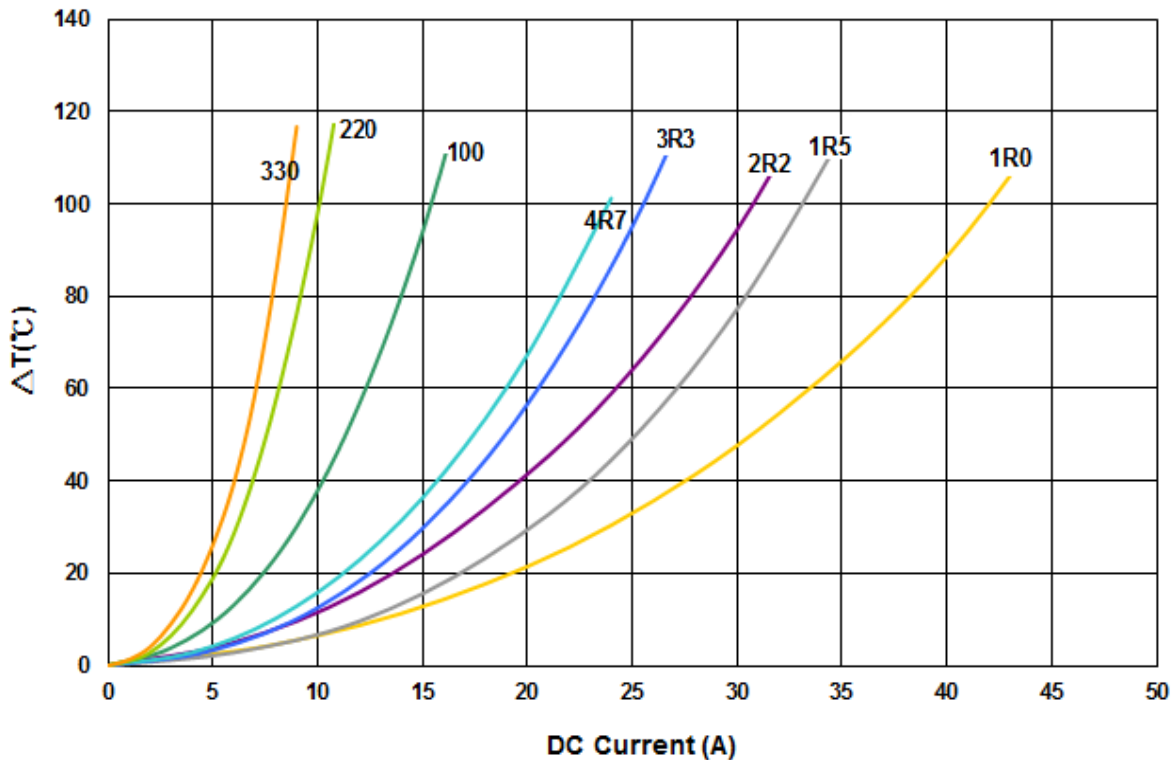
AMRU00131365 Type

Characteristics Graph

Inductance vs. DC Current



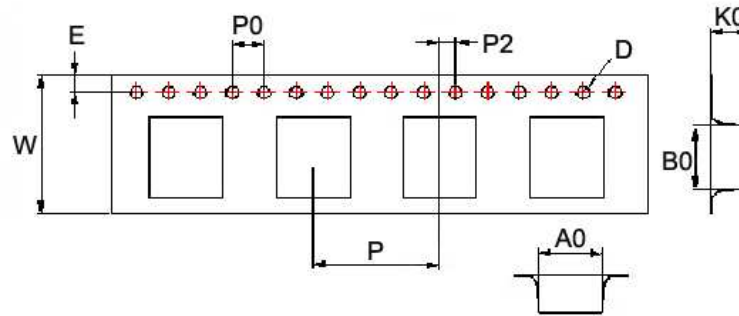
Temperature Change vs. DC Current



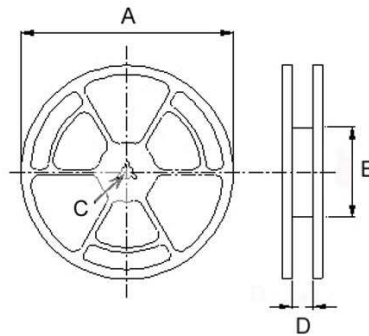
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■ Packaging

Tape Dimensions



Reel Dimensions



Dimensions in mm

| TYPE | Tape Dimensions | | | | | | | | | Reel Dimensions | | | | Quantity |
|--------------|-----------------|------|------|------|------|----|----|----|----|-----------------|-----|----|------|------------|
| | A0 | B0 | K0 | D | E | W | P | P0 | P2 | A | B | C | D | PCS / REEL |
| AMRU00040412 | 4.4 | 4.9 | 1.5 | 1.55 | 1.75 | 12 | 8 | 4 | 2 | 330 | 100 | 13 | 13.4 | 2000 |
| AMRU00040420 | 4.3 | 4.9 | 2.4 | 1.55 | 1.75 | 12 | 8 | 4 | 2 | 330 | 100 | 13 | 13.4 | 2000 |
| AMRU00060630 | 7.1 | 7.6 | 3.4 | 1.55 | 1.75 | 16 | 12 | 4 | 2 | 330 | 100 | 13 | 16 | 1000 |
| AMRU00101040 | 10.6 | 11.7 | 4.25 | 1.55 | 1.75 | 24 | 16 | 4 | 2 | 330 | 100 | 13 | 24.4 | 500 |
| AMRU00131365 | 13.1 | 14.6 | 6.75 | 1.55 | 1.75 | 24 | 16 | 4 | 2 | 330 | 100 | 13 | 24.4 | 500 |

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