# High Current, Molding Power Inductors

## Description

- Halogen Free
- maximum operation temperature below 125°C
- Powder iron core material
- Magnetically shielded, low EMI
- High current carrying capacity, Low core loss
- Frequency range up to 5MHz
- RoHS compliant

## Applications

- Voltage Regulator Module (VRM)
- Multi-phase regulators
- Point-of-load modules
- Smart phone POL modules
- SSD modules
- Notebook regulators

## Environmental Data

- Storage temperature range: -55°C to +125 °C
- Operating temperature range: -55°C to +125°C (ambient plus self-temperature rise)
- Solder reflow temperature: J-STD-020D compliant

| Description | | |
|---|---|---|
| CMKD-1360A-8R2M | 8.2μH | ±20 % |
| Model | Inductance Value | Inductance Tolerance |

| Global Part Number | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| C | M | K | D | 1 | 3 | 6 | 0 | A(C,H) | 8 | R | 2 | M |
| Product Series | | | | Dimensions | | | | Material | Inductance Value | | | Tol. |

Material A:alloy iron powder ; Material C:carbonyl iron powder. Material H :hybrid iron powder.

Shape and Dimensions

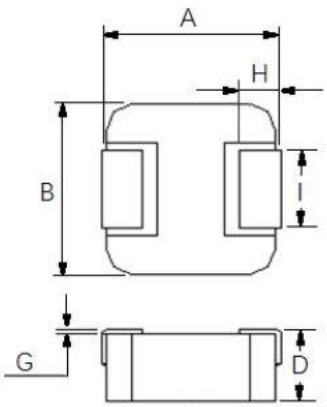
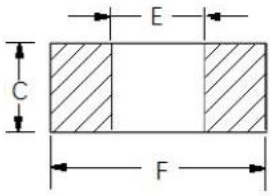


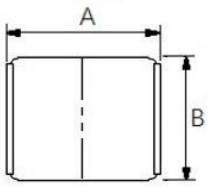

Fig.1

Recommended Pattern

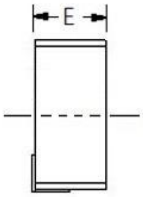



Shape and Dimensions

Top view




Side view




Bottom view

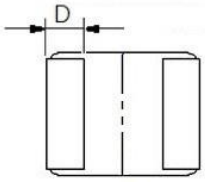
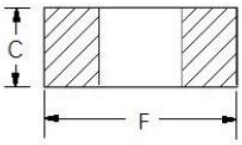



Fig.2

Recommended Pattern




Shape and Dimensions

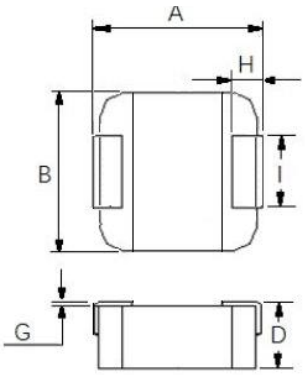
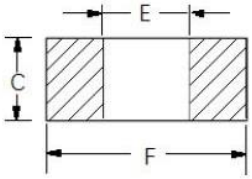



Fig.3

Recommended Pattern




Shape and Dimensions

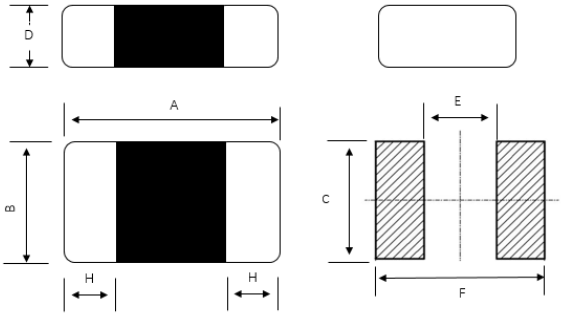



Fig.4

Unit:mm

| Part No. | Shape | A | B | C | D | E | F | G | H | I |
|---|---|---|---|---|---|---|---|---|---|---|
| **CMKD-252012A-***M** | Fig.4 | 2.5±0.2 | 2±0.2 | 2.0 | 1.2max | 1.2 | 2.8 | —— | —— | —— |
| **CMKD-0320A-***M** | Fig.1 | 3.5±0.2 | 3.2±0.2 | 1.2 | 1.8±0.2 | 1.2 | 4.2 | 0~0.15 | 0.7±0.2 | 1.2±0.2 |
| **CMKD-0410A-***M** | Fig.1 | 4.4±0.35 | 4.2±0.25 | 2.5 | 0.8±0.2 | 2.2 | 5.2 | 0~0.15 | 0.8±0.3 | 2±0.3 |
| **CMKD-0412A-***M** | Fig.1 | 4.4±0.35 | 4.2±0.25 | 2.5 | 1±0.2 | 2.2 | 5.2 | 0~0.15 | 0.8±0.3 | 2±0.3 |
| **CMKD-0420A-***M** | Fig.1 | 4.4±0.35 | 4.2±0.25 | 2.5 | 1.8±0.2 | 2.2 | 5.2 | 0~0.15 | 0.8±0.3 | 2±0.3 |
| **CMKD-0518A-***M** | Fig.1 | 5.4±0.3 | 5.2±0.2 | 2.5 | 1.6±0.2 | 2.2 | 6 | 0~0.15 | 1.2±0.2 | 2.2±0.3 |
| **CMKD-0530A-***M** | Fig.1 | 5.4±0.3 | 5.2±0.2 | 2.5 | 2.8±0.2 | 2.2 | 6 | 0~0.15 | 1.2±0.2 | 2.2±0.3 |
| **CMKD-0618A-***M** | Fig.1 | 7±0.3 | 6.6±0.2 | 3.5 | 1.6±0.2 | 3.7 | 8.4 | 0~0.15 | 1.6±0.3 | 3±0.3 |
| **CMKD-0624A-***M** | Fig.1 | 7±0.3 | 6.6±0.2 | 3.5 | 2.2±0.2 | 3.7 | 8.4 | 0~0.15 | 1.6±0.3 | 3±0.3 |
| **CMKD-0630A-***M** | Fig.1 | 7±0.3 | 6.6±0.2 | 3.5 | 2.8±0.2 | 3.7 | 8.4 | 0~0.15 | 1.6±0.3 | 3±0.3 |
| **CMKD-0630C-***M** | Fig.1 | 7±0.3 | 6.6±0.2 | 3.5 | 2.8±0.2 | 3.7 | 8.4 | 0~0.15 | 1.6±0.3 | 3±0.3 |
| **CMKD-0630H-***M** | Fig.1 | 7±0.3 | 6.6±0.2 | 3.5 | 2.8±0.2 | 3.7 | 8.4 | 0~0.15 | 1.6±0.3 | 3±0.3 |
| **CMKD-0830A-***M** | Fig.1 | 8.1±0.3 | 7.8±0.2 | 5.35 | 2.8±0.2 | 4.8 | 9.6 | 0~0.15 | 1.6±0.3 | 3±0.2 |
| **CMKD-1040A-***M** | Fig.1 | 11.5max | 10.0±0.3 | 4.1 | 3.8±0.2 | 5.4 | 13.6 | 0~0.15 | 2.0±0.5 | 3±0.5 |

| Part No. | Shape | A | B | C | D | E | F | G | H | I |
|---|---|---|---|---|---|---|---|---|---|---|
| **CMKD-1340A-***M** | Fig.1 | 13.8max | 12.8±0.5 | 6.0 | 4.0max | 8 | 14 | 0~0.15 | 2.5±0.5 | 5.0±0.3 |
| **CMKD-1350A-***M** | Fig.1 | 13.45±0.35 | 12.6±0.3 | 5 | 4.8±0.2 | 8 | 14.5 | 0~0.15 | 2±0.5 | * |
| **CMKD-1360A-***M** | Fig.1 | 13.45±0.35 | 12.6±0.3 | 5 | 5.8±0.2 | 8 | 14.5 | 0~0.15 | 2±0.5 | 5.0±0.5 |
| **CMKD-1770A-***M** | Fig.3 | 17.15±0.3 | 17.15max | 12.32 | 7.0max | 12.42 | 20.07 | 0~0.15 | 2.11±0.3 | 11.94±0.3 |

*： CMKD-1350A-R36(R50/R68/1R0/1R5/2R2)M，the size of I is 3.85±0.5mm.

CMKD-1350A-3R3 (100/220/330/470)M，the size of I is 5.0±0.5mm.

**Marking**

The inductor is marked with a 3-digit code

Example - -1.0→1R0

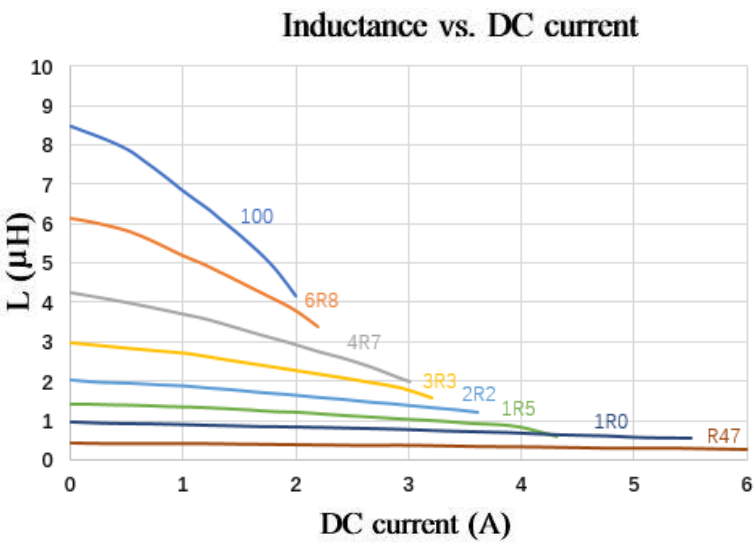
Note：Using ink for marking

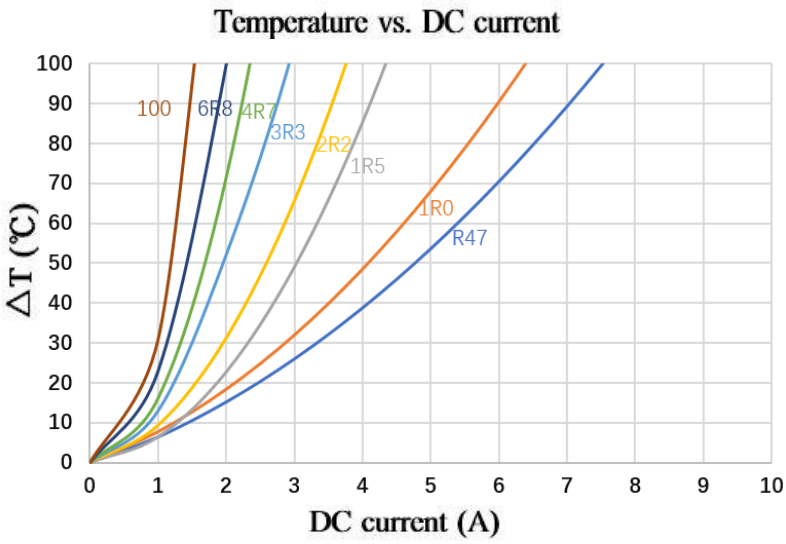
**Notes about electrical characteristics:**

1. All test data is referenced to 25 °C ambient.
2. Operating temperature range - 55 °C to + 125 °C.
3. Idc(A):DC current (A) that will cause an approximate ΔT of 40 °C (reference ambient temperature is 25 °C).
4. Isat(A):DC current (A) that will cause L0 to drop approximately 30 %.
5. The part temperature (ambient + temp rise) should not exceed 125 °C under worst case operating conditions. Circuit design, component placement, PWB trace size and thickness, airflow and other cooling provisions all affect the part temperature. Part temperature should be verified in the end application.

## Electrical Characteristics

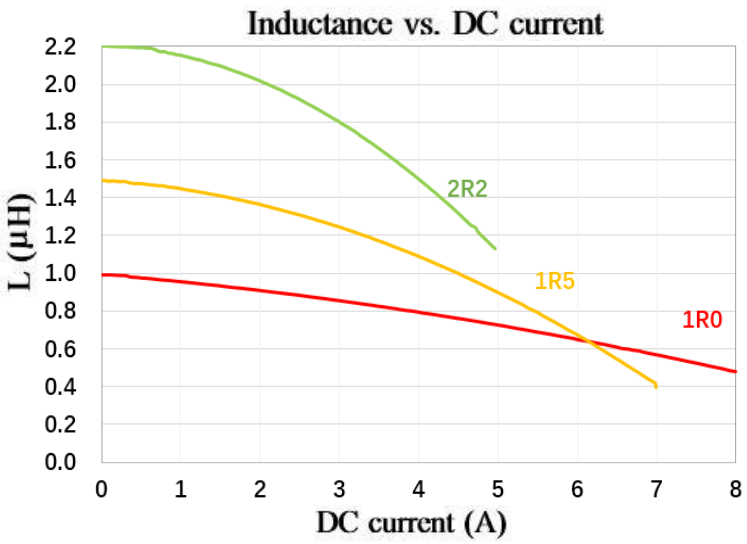
| Part No. | Inductance | DC Resistance | | Heating Rating Current | | Saturation Current | |
|---|---|---|---|---|---|---|---|
| | L0 (μH) | DCR(mΩ) | | Idc (A) | | Isat (A) | |
| | ±20 %, 1MHz, 1V | TYP. | MAX. | TYP. | MAX. | TYP. | MAX. |
| CMKD-252012A-R47M | 0.47 | 29 | 39 | 4.4 | 3.7 | 4.7 | 3.8 |
| CMKD-252012A-1R0M | 1.0 | 45 | 59 | 3.5 | 3.0 | 3.8 | 3.0 |
| CMKD-252012A-1R5M | 1.5 | 60 | 72 | 2.8 | 2.4 | 3.3 | 2.6 |
| CMKD-252012A-2R2M | 2.2 | 90 | 108 | 2.3 | 2.0 | 2.7 | 2.2 |
| CMKD-252012A-3R3M | 3.3 | 120 | 144 | 1.7 | 1.5 | 2.3 | 1.8 |
| CMKD-252012A-4R7M | 4.7 | 200 | 240 | 1.5 | 1.3 | 1.9 | 1.5 |
| CMKD-252012A-6R8M | 6.8 | 310 | 375 | 1.2 | 1.0 | 1.6 | 1.3 |
| CMKD-252012A-100M | 10.0 | 400 | 460 | 1.0 | 0.85 | 1.3 | 1.0 |

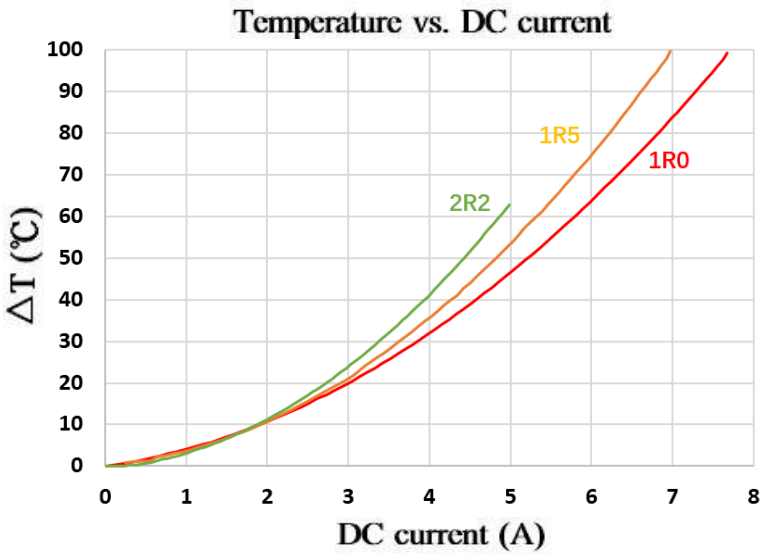


**Electrical Characteristics**

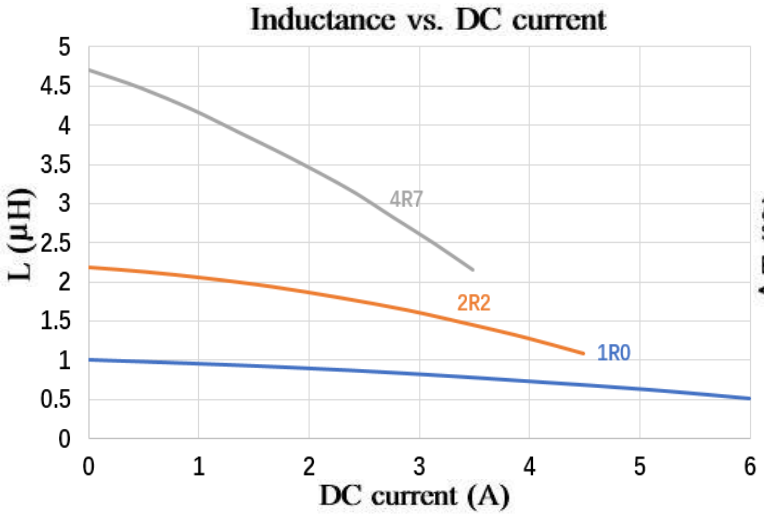
| Part No. | Inductance | DC Resistance | | Heating Rating Current | Saturation Current |
|---|---|---|---|---|---|
| | L0 (μH) | DCR (mΩ) | | Idc (A) | Isat (A) |
| | ±20 %, 100 kHz, 1V | TYP. | MAX. | TYP. | TYP. |
| **CMKD-0320A-1R0M** | 1.0 | 32.0 | 38.0 | 4.0 | 5.0 |
| **CMKD-0320A-1R5M** | 1.5 | 40.5 | 48.5 | 3.8 | 4.0 |
| **CMKD-0320A-2R2M** | 2.2 | 65.0 | 75.0 | 3.5 | 3.7 |

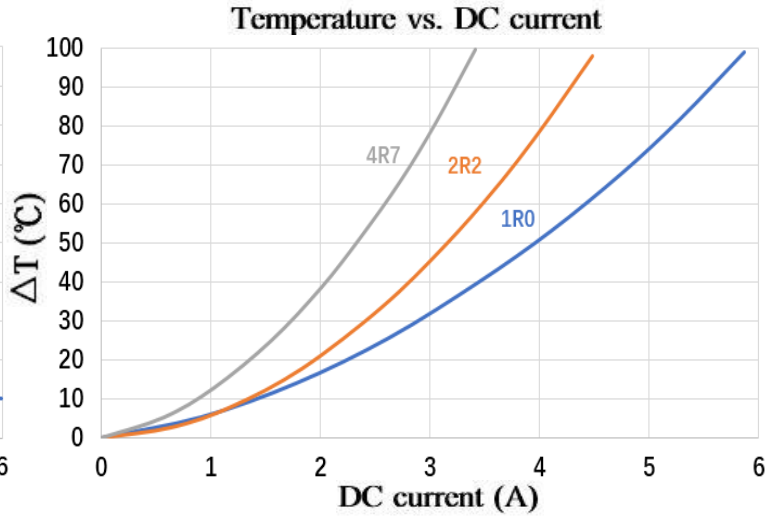


**Electrical Characteristics**

| Part No. | Inductance | DC Resistance | | Heating Rating Current | Saturation Current |
|---|---|---|---|---|---|
| | L0 (μH) | DCR (mΩ) | | Idc (A) | Isat (A) |
| | ±20 %, 100 kHz, 1V | TYP. | MAX. | TYP. | TYP. |
| **CMKD-0410A-1R0M** | 1.0 | 50.0 | 60.0 | 3.0 | 4.0 |
| **CMKD-0410A-2R2M** | 2.2 | 92.0 | 110.0 | 2.5 | 3.0 |
| **CMKD-0410A-4R7M** | 4.7 | 210.0 | 230.0 | 1.8 | 2.0 |
| **CMKD-0410A-6R8M** | 6.8 | 190.0 | 215.0 | 1.8 | 1.8 |
| **CMKD-0410A-100M** | 10.0 | 265.0 | 335.0 | 1.5 | 1.6 |

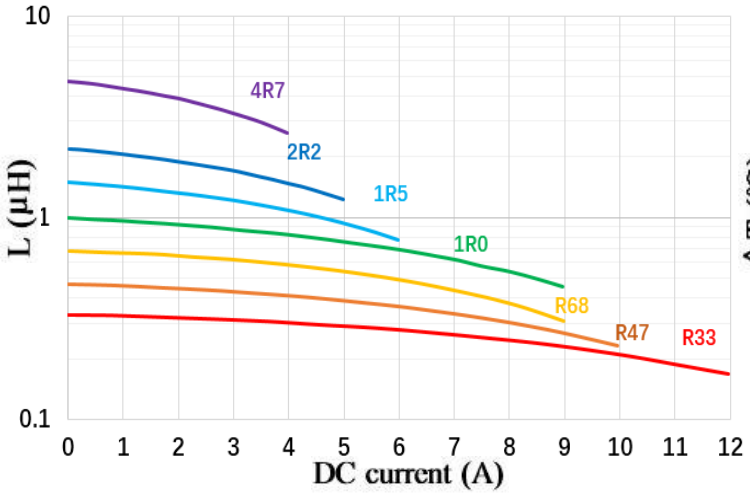


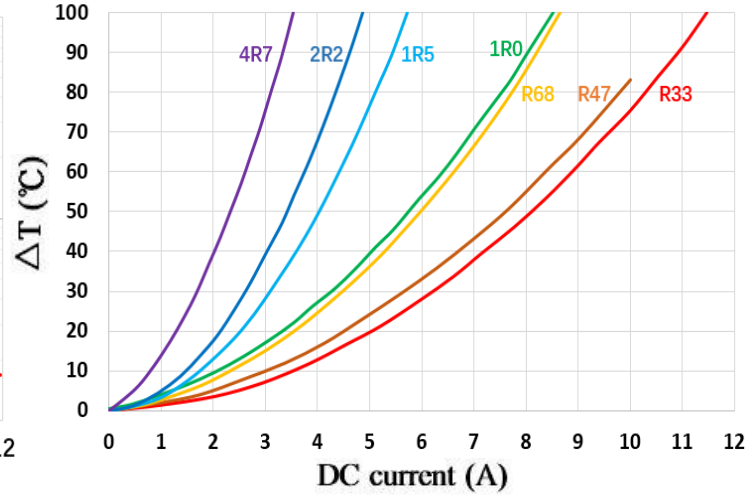
**Electrical Characteristics**

| Part No. | Inductance | DC Resistance | | Heating Rating Current | Saturation Current |
|---|---|---|---|---|---|
| | L0 (μH) | DCR (mΩ) | | Idc (A) | Isat (A) |
| | ±20 %, 100 kHz, 1V | TYP. | MAX. | TYP. | TYP. |
| **CMKD-0412A-R15M** | 0.15 | 8.0 | 9.0 | 7.5 | 15.0 |
| **CMKD-0412A-R22M** | 0.22 | 9.5 | 11.0 | 7.0 | 11.0 |
| **CMKD-0412A-R33M** | 0.33 | 17.0 | 19.0 | 6.5 | 8.4 |
| **CMKD-0412A-R47M** | 0.47 | 19.0 | 21.0 | 6.0 | 6.8 |
| **CMKD-0412A-R68M** | 0.68 | 32.0 | 36.0 | 4.7 | 6.0 |
| **CMKD-0412A-1R0M** | 1.0 | 43.0 | 47.0 | 4.5 | 5.5 |
| **CMKD-0412A-1R5M** | 1.5 | 68.0 | 75.0 | 3.25 | 4.0 |
| **CMKD-0412A-2R2M** | 2.2 | 79.4 | 83.5 | 2.75 | 3.5 |
| **CMKD-0412A-4R7M** | 4.7 | 175.0 | 195.0 | 1.8 | 2.8 |

Inductance vs. DC current

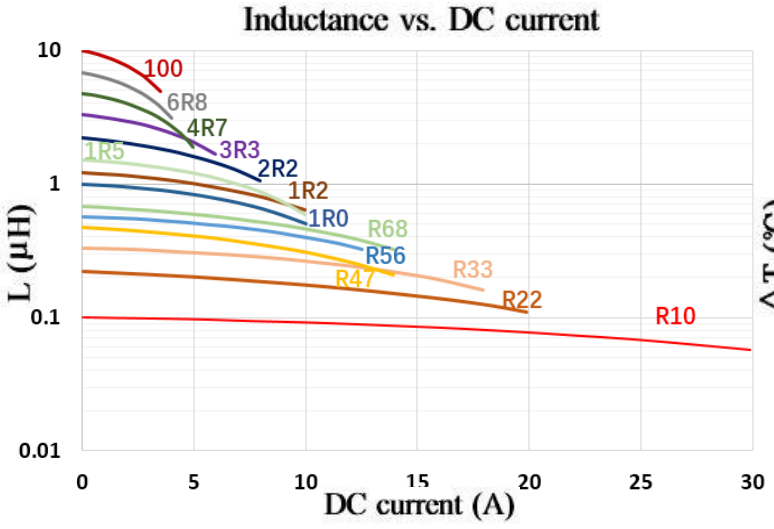


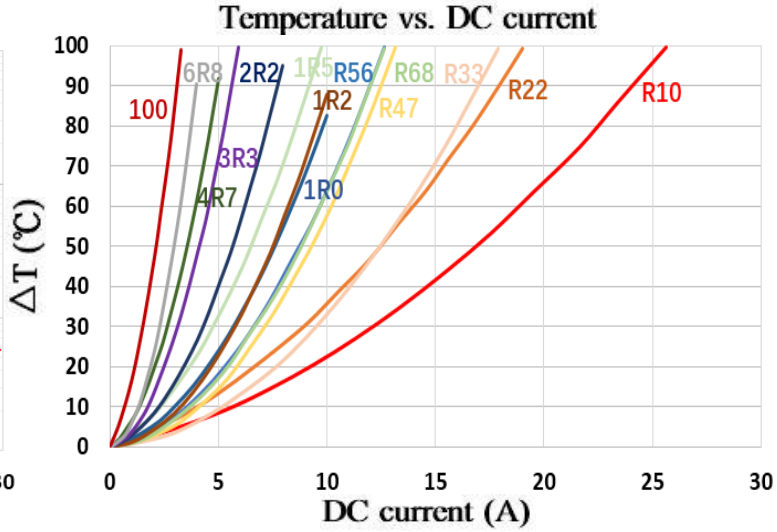

Temperature vs. DC current



**Electrical Characteristics**

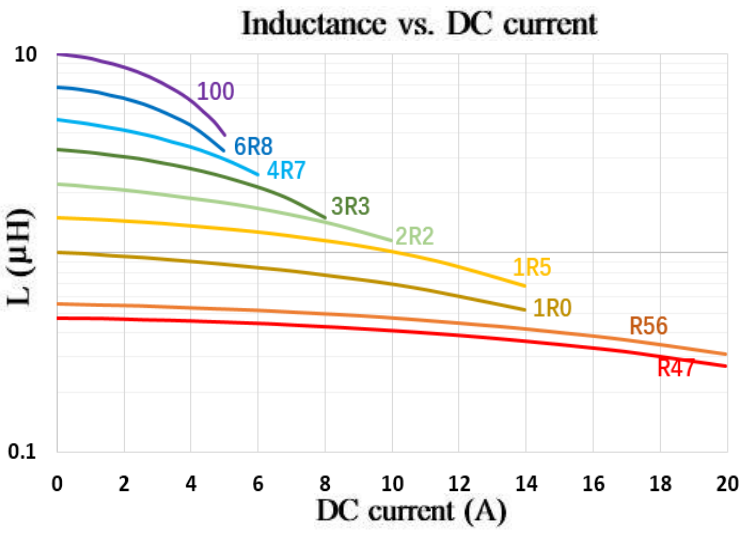
| Part No. | Inductance | DC Resistance | | Heating Rating Current | Saturation Current |
|---|---|---|---|---|---|
| | L0 (μH) | DCR (mΩ) | | Idc (A) | Isat (A) |
| | ±20 %, 100 kHz, 1V | TYP. | MAX. | TYP. | TYP. |
| **CMKD-0420A-R10M** | 0.10 | 3.5 | 4.0 | 13.0 | 27.0 |
| **CMKD-0420A-R22M** | 0.22 | 6.0 | 6.6 | 9.5 | 21.0 |
| **CMKD-0420A-R33M** | 0.33 | 9.0 | 11.0 | 10.0 | 12.0 |
| **CMKD-0420A-R47M** | 0.47 | 12.5 | 14.0 | 7.5 | 11.0 |
| **CMKD-0420A-R56M** | 0.56 | 14.0 | 16.0 | 7.0 | 11.0 |
| **CMKD-0420A-R68M** | 0.68 | 16.0 | 18.0 | 7.0 | 8.6 |
| **CMKD-0420A-1R0M** | 1.0 | 24.0 | 27.0 | 6.0 | 8.0 |
| **CMKD-0420A-1R2M** | 1.2 | 24.0 | 27.0 | 6.0 | 7.5 |
| **CMKD-0420A-1R5M** | 1.5 | 38.0 | 46.0 | 5.0 | 7.0 |
| **CMKD-0420A-2R2M** | 2.2 | 52.0 | 58.0 | 4.5 | 5.5 |
| **CMKD-0420A-3R3M** | 3.3 | 74.0 | 87.0 | 3.3 | 4.5 |
| **CMKD-0420A-4R7M** | 4.7 | 92.0 | 105.0 | 2.8 | 3.0 |
| **CMKD-0420A-6R8M** | 6.8 | 160.0 | 175.0 | 2.4 | 2.8 |
| **CMKD-0420A-100M** | 10.0 | 256.0 | 282.0 | 1.6 | 2.2 |

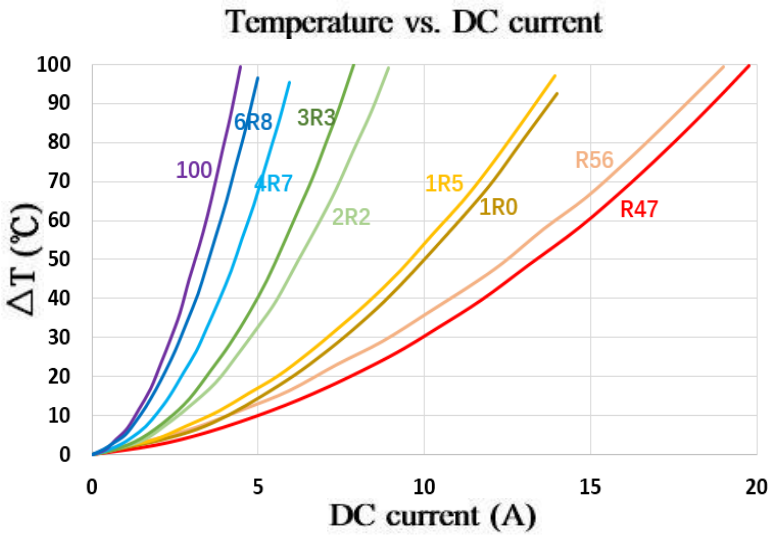


**Electrical Characteristics**

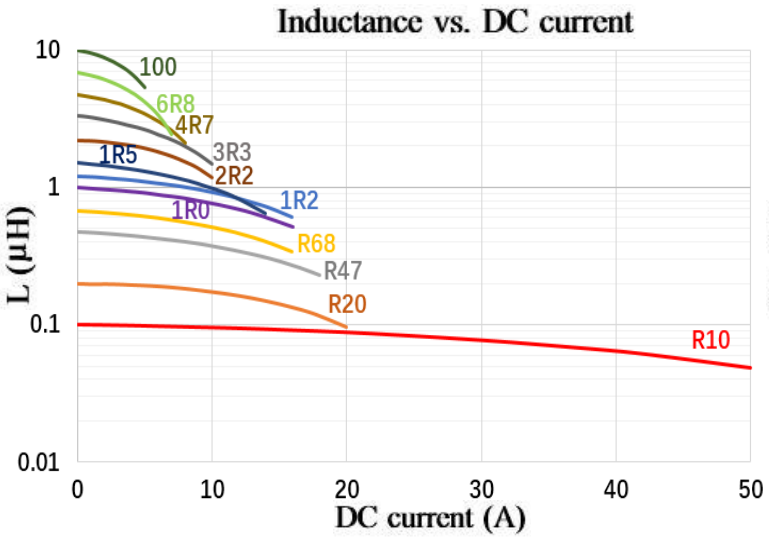
| Part No. | Inductance | DC Resistance | | Heating Rating Current | Saturation Current |
|---|---|---|---|---|---|
| | L0 (μH) | DCR (mΩ) | | Idc (A) | Isat (A) |
| | ±20 %, 100 kHz, 1V | TYP. | MAX. | TYP. | TYP. |
| **CMKD-0518A-R47M** | 0.47 | 7.7 | 9.0 | 10.5 | 15.5 |
| **CMKD-0518A-R56M** | 0.56 | 8.0 | 10.0 | 9.5 | 15.0 |
| **CMKD-0518A-1R0M** | 1.0 | 15.0 | 17.0 | 8.0 | 9.0 |
| **CMKD-0518A-1R5M** | 1.5 | 21.0 | 26.0 | 7.5 | 9.0 |
| **CMKD-0518A-2R2M** | 2.2 | 30.0 | 35.0 | 5.0 | 6.5 |
| **CMKD-0518A-3R3M** | 3.3 | 52.0 | 58.0 | 4.5 | 5.0 |
| **CMKD-0518A-4R7M** | 4.7 | 78.0 | 85.0 | 3.5 | 4.0 |
| **CMKD-0518A-6R8M** | 6.8 | 107.0 | 120.0 | 2.8 | 3.4 |
| **CMKD-0518A-100M** | 10.0 | 140.0 | 155.0 | 2.5 | 3.0 |

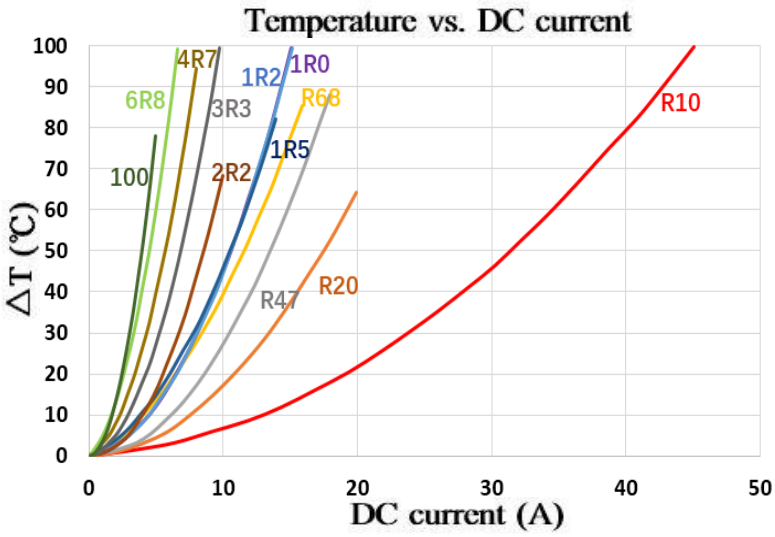


**Electrical Characteristics**

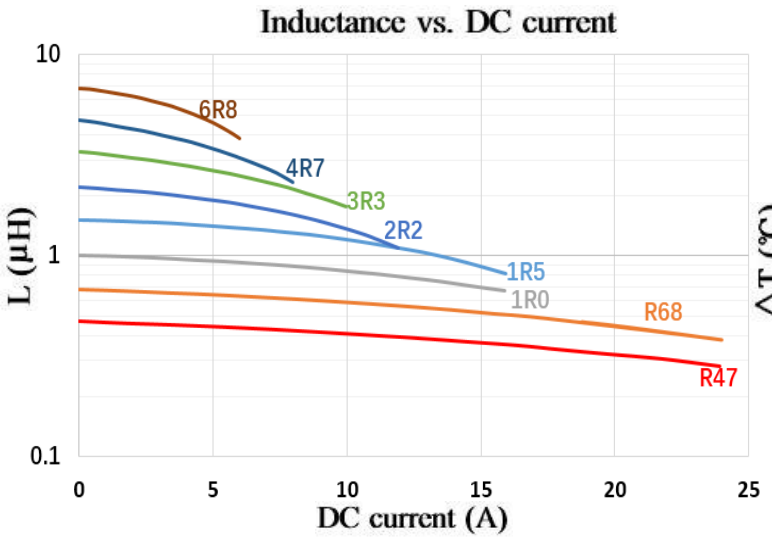
| Part No. | Inductance | DC Resistance | | Heating Rating Current | Saturation Current |
|---|---|---|---|---|---|
| | L0 (μH) | DCR (mΩ) | | Idc (A) | Isat (A) |
| | ±20 %, 100 kHz, 1V | TYP. | MAX. | TYP. | TYP. |
| **CMKD-0530A-R10M** | 0.10 | 2.4 | 3.0 | 25.0 | 33.0 |
| **CMKD-0530A-R20M** | 0.20 | 3.5 | 3.9 | 14.0 | 14.5 |
| **CMKD-0530A-R47M** | 0.47 | 7.4 | 8.5 | 11.0 | 12.0 |
| **CMKD-0530A-R68M** | 0.68 | 11.0 | 12.0 | 9.0 | 11.5 |
| **CMKD-0530A-1R0M** | 1.0 | 13.0 | 14.0 | 8.5 | 11.0 |
| **CMKD-0530A-1R2M** | 1.2 | 15.0 | 16.0 | 8.5 | 11.0 |
| **CMKD-0530A-1R5M** | 1.5 | 20.0 | 25.0 | 8.2 | 8.5 |
| **CMKD-0530A-2R2M** | 2.2 | 25.0 | 29.0 | 7.0 | 7.5 |
| **CMKD-0530A-3R3M** | 3.3 | 32.0 | 38.0 | 5.5 | 6.0 |
| **CMKD-0530A-4R7M** | 4.7 | 50.0 | 60.0 | 4.5 | 5.0 |
| **CMKD-0530A-6R8M** | 6.8 | 75.0 | 90.0 | 3.5 | 4.0 |
| **CMKD-0530A-100M** | 10.0 | 110.0 | 125.0 | 3.2 | 3.5 |

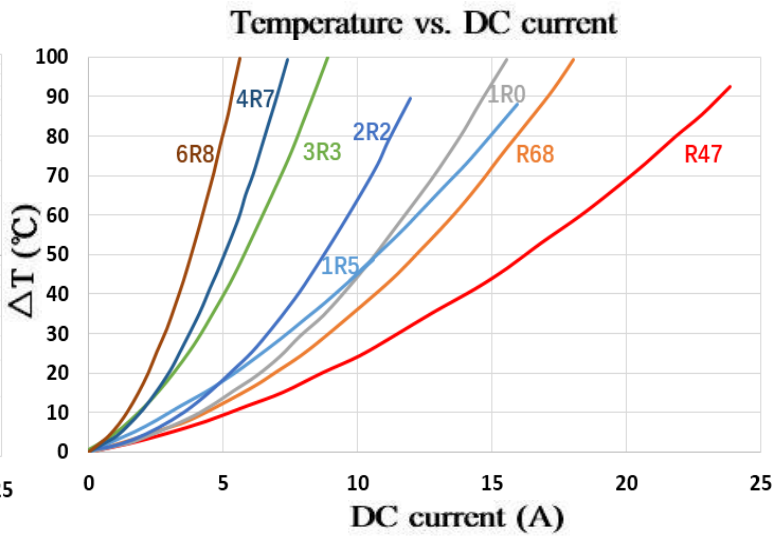


**Electrical Characteristics**

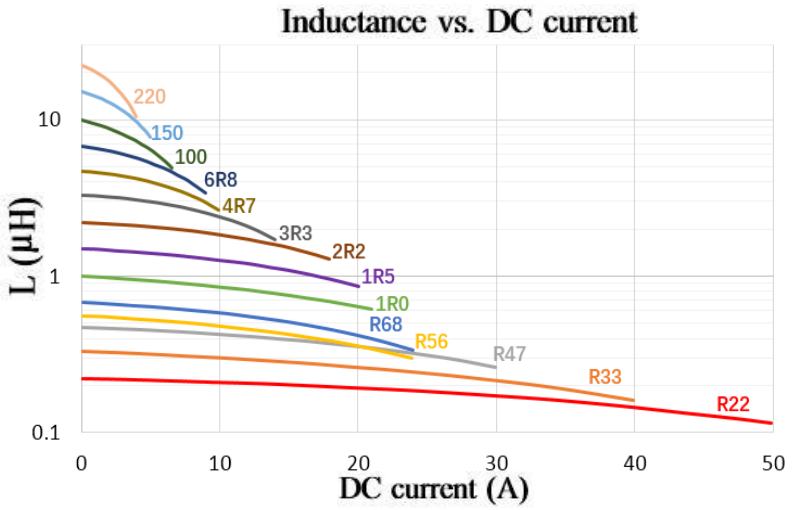
| Part No. | Inductance | DC Resistance | | Heating Rating Current | Saturation Current |
|---|---|---|---|---|---|
| | L0 (μH) | DCR (mΩ) | | Idc (A) | Isat (A) |
| | ±20 %, 100 kHz, 1V | TYP. | MAX. | TYP. | TYP. |
| **CMKD-0618A-R47M** | 0.47 | 8.0 | 8.4 | 11.5 | 18.0 |
| **CMKD-0618A-R68M** | 0.68 | 10.0 | 12.0 | 9.5 | 17.0 |
| **CMKD-0618A-1R0M** | 1.0 | 13.0 | 16.0 | 8.5 | 14.0 |
| **CMKD-0618A-1R5M** | 1.5 | 20.0 | 26.0 | 8.0 | 12.0 |
| **CMKD-0618A-2R2M** | 2.2 | 28.0 | 35.0 | 7.0 | 8.0 |
| **CMKD-0618A-3R3M** | 3.3 | 43.0 | 50.0 | 4.5 | 6.5 |
| **CMKD-0618A-4R7M** | 4.7 | 56.0 | 62.0 | 4.0 | 5.0 |
| **CMKD-0618A-6R8M** | 6.8 | 101.0 | 110.0 | 3.0 | 4.5 |

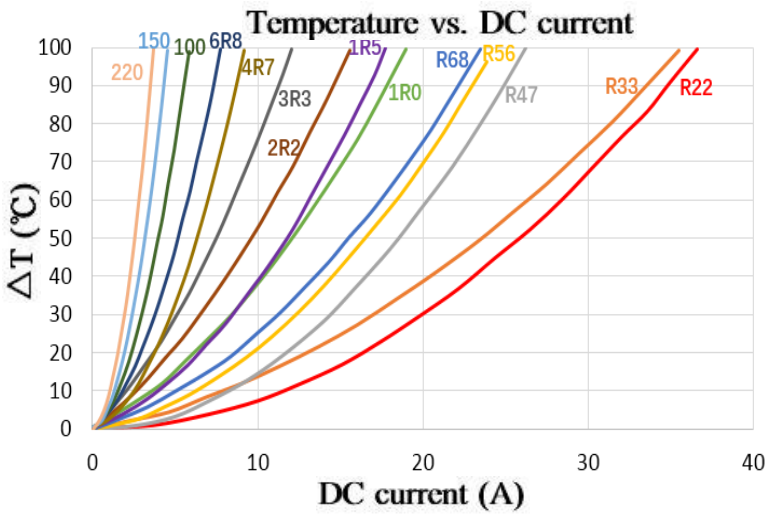


**Electrical Characteristics**

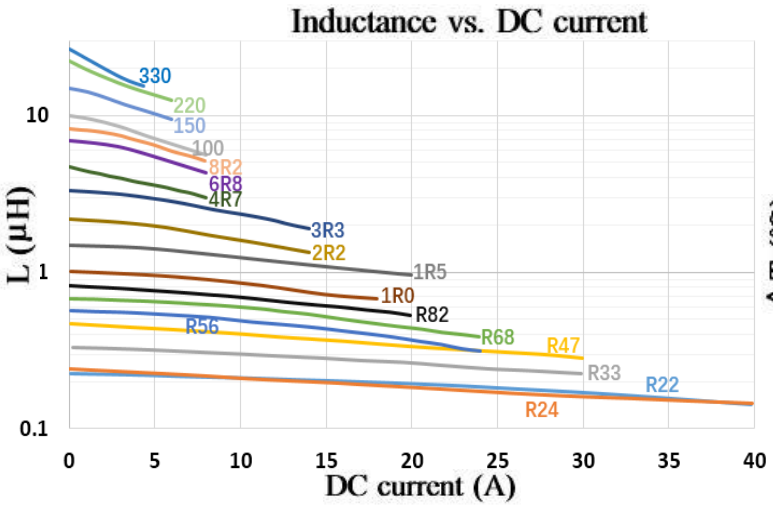
| Part No. | Inductance | DC Resistance | | Heating Rating Current | Saturation Current |
|---|---|---|---|---|---|
| | L0 (μH) | DCR (mΩ) | | Idc (A) | Isat (A) |
| | ±20 %, 100 kHz, 1V | TYP. | MAX. | TYP. | TYP. |
| **CMKD-0624A-R22M** | 0.22 | 2.5 | 3.0 | 21.0 | 34.0 |
| **CMKD-0624A-R33M** | 0.33 | 3.5 | 4.1 | 18.0 | 24.5 |
| **CMKD-0624A-R47M** | 0.47 | 4.5 | 5.1 | 15.0 | 22.0 |
| **CMKD-0624A-R56M** | 0.56 | 5.5 | 6.5 | 13.0 | 17.0 |
| **CMKD-0624A-R68M** | 0.68 | 6.2 | 7.0 | 12.0 | 16.0 |
| **CMKD-0624A-1R0M** | 1.0 | 11.0 | 13.5 | 9.0 | 16.0 |
| **CMKD-0624A-1R5M** | 1.5 | 17.0 | 20.0 | 9.0 | 15.0 |
| **CMKD-0624A-2R2M** | 2.2 | 23.0 | 28.0 | 7.0 | 14.0 |
| **CMKD-0624A-3R3M** | 3.3 | 31.0 | 39.0 | 5.5 | 10.0 |
| **CMKD-0624A-4R7M** | 4.7 | 41.0 | 50.0 | 5.0 | 7.5 |
| **CMKD-0624A-6R8M** | 6.8 | 57.0 | 70.0 | 4.0 | 6.0 |
| **CMKD-0624A-100M** | 10.0 | 92.0 | 101.0 | 3.1 | 4.0 |
| **CMKD-0624A-150M** | 15.0 | 145.0 | 160.0 | 2.5 | 3.3 |
| **CMKD-0624A-220M** | 22.0 | 220.0 | 230.0 | 2.0 | 2.5 |

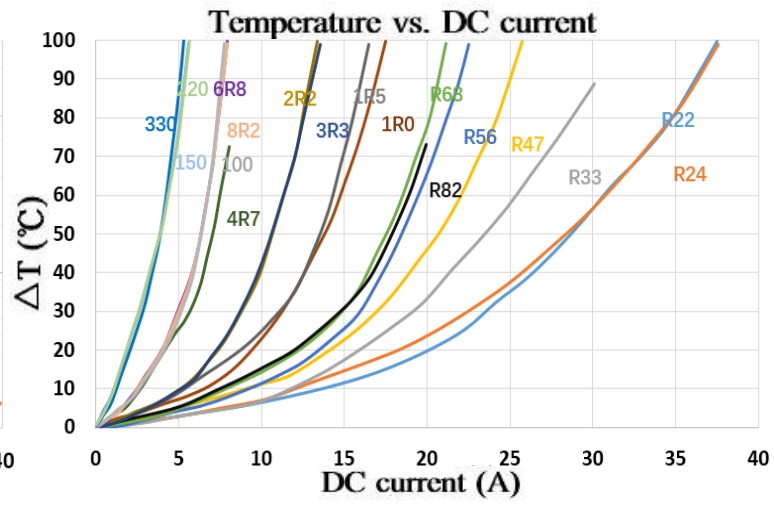


**Electrical Characteristics**

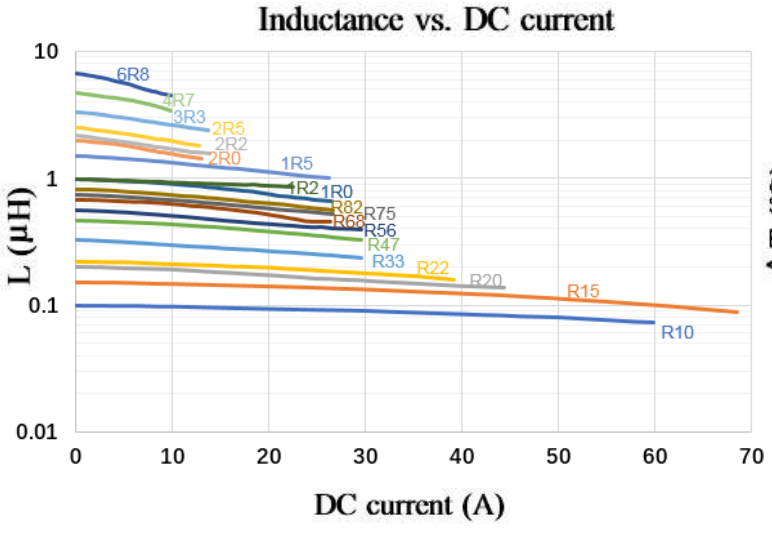
| Part No. | Inductance | DC Resistance | | Heating Rating Current | Saturation Current |
|---|---|---|---|---|---|
| | L0 (μH) | DCR (mΩ) | | Idc (A) | Isat (A) |
| | ±20 %, 100 kHz, 1V | TYP. | MAX. | TYP. | TYP. |
| **CMKD-0630A-R22M** | 0.22 | 2.5 | 3.0 | 24.0 | 34.0 |
| **CMKD-0630A-R24M** | 0.24 | 2.6 | 3.1 | 23.0 | 26.0 |
| **CMKD-0630A-R33M** | 0.33 | 3.0 | 3.5 | 21.0 | 25.0 |
| **CMKD-0630A-R47M** | 0.47 | 3.5 | 4.1 | 18.0 | 20.0 |
| **CMKD-0630A-R56M** | 0.56 | 3.9 | 4.5 | 16.5 | 18.0 |
| **CMKD-0630A-R68M** | 0.68 | 4.8 | 5.3 | 16.0 | 17.0 |
| **CMKD-0630A-R82M** | 0.82 | 5.4 | 6.0 | 14.0 | 16.0 |
| **CMKD-0630A-1R0M** | 1.0 | 6.7 | 7.4 | 12.0 | 15.0 |
| **CMKD-0630A-1R5M** | 1.5 | 10.6 | 12.1 | 12.0 | 14.0 |
| **CMKD-0630A-2R2M** | 2.2 | 13.5 | 15.0 | 9.5 | 10.0 |
| **CMKD-0630A-3R3M** | 3.3 | 18.0 | 22.0 | 8.5 | 9.5 |
| **CMKD-0630A-4R7M** | 4.7 | 28.0 | 33.0 | 6.0 | 6.5 |
| **CMKD-0630A-5R6M** | 5.6 | 37.0 | 42.0 | 5.4 | 6.0 |
| **CMKD-0630A-6R8M** | 6.8 | 42.5 | 48.0 | 5.0 | 6.0 |
| **CMKD-0630A-8R2M** | 8.2 | 54.0 | 60.0 | 5.0 | 6.0 |
| **CMKD-0630A-100M** | 10.0 | 62.0 | 67.0 | 4.5 | 5.5 |
| **CMKD-0630A-150M** | 15.0 | 104.0 | 115.0 | 3.0 | 4.5 |
| **CMKD-0630A-220M** | 22.0 | 180.0 | 200.0 | 2.3 | 3.0 |
| **CMKD-0630A-330M** | 33.0 | 280.0 | 310.0 | 2.0 | 2.5 |

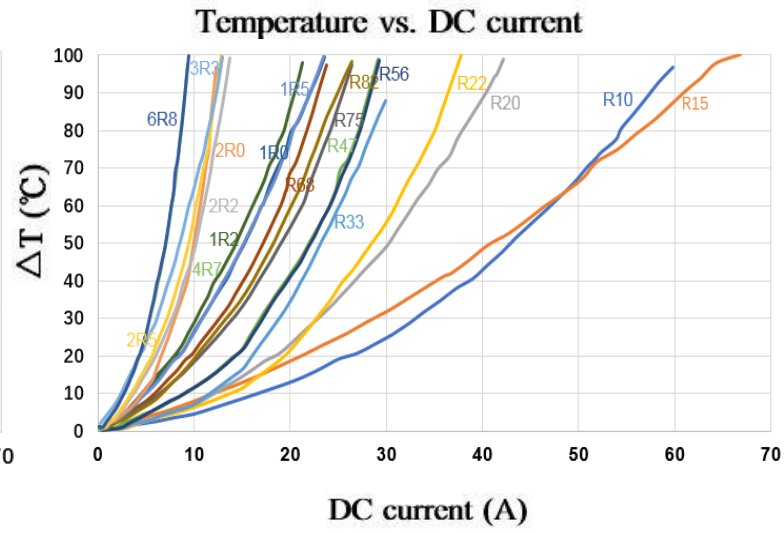


**Electrical Characteristics**

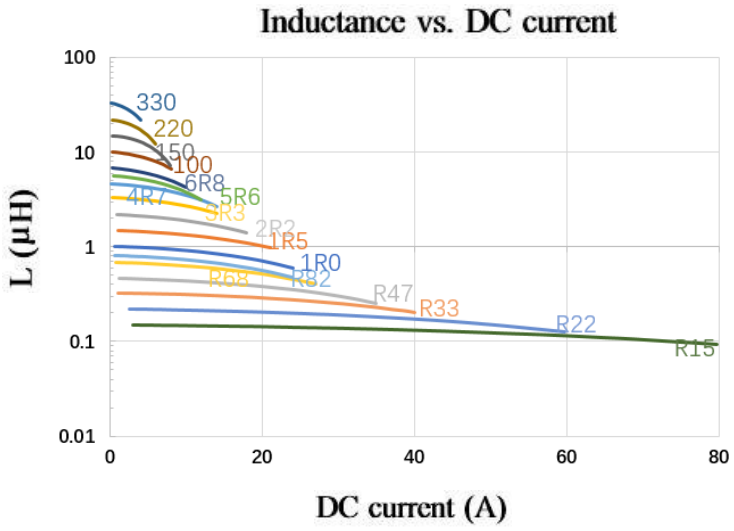
| Part No. | Inductance | DC Resistance | | Heating Rating Current | Saturation Current |
|---|---|---|---|---|---|
| | L0 (μH) | DCR (mΩ) | | Idc (A) | Isat (A) |
| | ±20 %, 100 kHz, 1V | TYP. | MAX. | TYP. | TYP. |
| **CMKD-0630C-R10M** | 0.10 | 1.5 | 1.7 | 32.5 | 60.0 |
| **CMKD-0630C-R15M** | 0.15 | 1.7 | 2.0 | 30.0 | 52.0 |
| **CMKD-0630C-R20M** | 0.20 | 2.4 | 3.0 | 24.0 | 41.0 |
| **CMKD-0630C-R22M** | 0.22 | 2.5 | 2.8 | 23.0 | 40.0 |
| **CMKD-0630C-R33M** | 0.33 | 3.5 | 3.9 | 20.0 | 30.0 |
| **CMKD-0630C-R47M** | 0.47 | 4.0 | 4.2 | 17.5 | 26.0 |
| **CMKD-0630C-R56M** | 0.56 | 4.7 | 5.0 | 16.5 | 25.5 |
| **CMKD-0630C-R68M** | 0.68 | 5.0 | 5.5 | 15.5 | 25.0 |
| **CMKD-0630C-R75M** | 0.75 | 5.4 | 6.2 | 14.0 | 24.5 |
| **CMKD-0630C-R82M** | 0.82 | 6.7 | 8.0 | 13.0 | 24.0 |
| **CMKD-0630C-1R0M** | 1.0 | 9.0 | 10.0 | 11.0 | 22.0 |
| **CMKD-0630C-1R2M** | 1.2 | 10.0 | 12.0 | 10.0 | 20.0 |
| **CMKD-0630C-1R5M** | 1.5 | 14.0 | 15.0 | 9.0 | 18.0 |
| **CMKD-0630C-2R0M** | 2.0 | 16.0 | 18.0 | 8.2 | 14.0 |
| **CMKD-0630C-2R2M** | 2.2 | 18.0 | 20.0 | 8.0 | 14.0 |
| **CMKD-0630C-2R5M** | 2.5 | 20.0 | 22.0 | 7.0 | 14.0 |
| **CMKD-0630C-3R3M** | 3.3 | 28.0 | 30.0 | 6.0 | 13.5 |
| **CMKD-0630C-4R7M** | 4.7 | 37.0 | 40.0 | 5.5 | 10.0 |
| **CMKD-0630C-6R8M** | 6.8 | 54.0 | 60.0 | 4.5 | 8.0 |

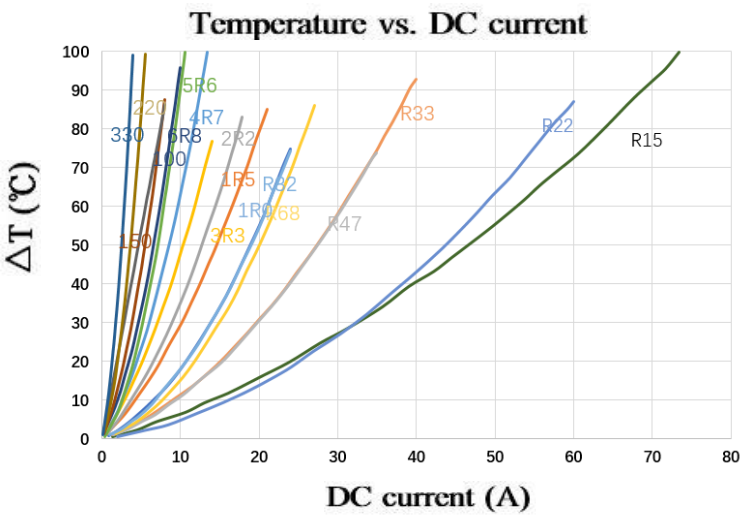


**Electrical Characteristics**

| Part No. | Inductance | DC Resistance | | Heating Rating Current | Saturation Current |
|---|---|---|---|---|---|
| | L0 (μH) | DCR (mΩ) | | Idc (A) | Isat (A) |
| | ±20 %, 100 kHz, 1V | TYP. | MAX. | TYP. | TYP. |
| **CMKD-0630H-R15M** | 0.15 | 0.85 | 0.98 | 33.0 | 62.0 |
| **CMKD-0630H-R22M** | 0.22 | 0.98 | 1.15 | 32.0 | 44.0 |
| **CMKD-0630H-R33M** | 0.33 | 2.6 | 3.0 | 21.0 | 36.0 |
| **CMKD-0630H-R47M** | 0.47 | 3.4 | 3.9 | 20.0 | 23.0 |
| **CMKD-0630H-R68M** | 0.68 | 3.8 | 4.4 | 16.0 | 19.0 |
| **CMKD-0630H-R82M** | 0.82 | 4.7 | 5.4 | 14.5 | 17.0 |
| **CMKD-0630H-1R0M** | 1.0 | 5.6 | 6.5 | 14.5 | 18.0 |
| **CMKD-0630H-1R5M** | 1.5 | 7.7 | 8.7 | 11.0 | 16.5 |
| **CMKD-0630H-2R2M** | 2.2 | 11.0 | 12.8 | 10.0 | 14.0 |
| **CMKD-0630H-3R3M** | 3.3 | 15.5 | 18.0 | 7.5 | 12.5 |
| **CMKD-0630H-4R7M** | 4.7 | 23.0 | 26.0 | 7.0 | 8.0 |
| **CMKD-0630H-5R6M** | 5.6 | 28.5 | 33.0 | 5.5 | 8.0 |
| **CMKD-0630H-6R8M** | 6.8 | 36.0 | 42.0 | 5.0 | 7.5 |
| **CMKD-0630H-100M** | 10.0 | 54.0 | 62.0 | 4.0 | 6.5 |
| **CMKD-0630H-150M** | 15.0 | 91.0 | 110.0 | 3.5 | 6.2 |
| **CMKD-0630H-220M** | 22.0 | 132.0 | 150.0 | 2.5 | 4.5 |
| **CMKD-0630H-330M** | 33.0 | 228.0 | 270.0 | 1.8 | 3.5 |

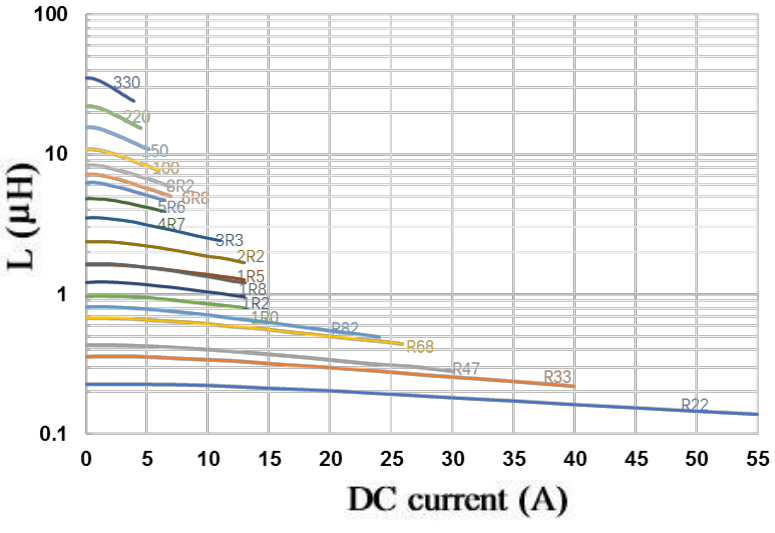


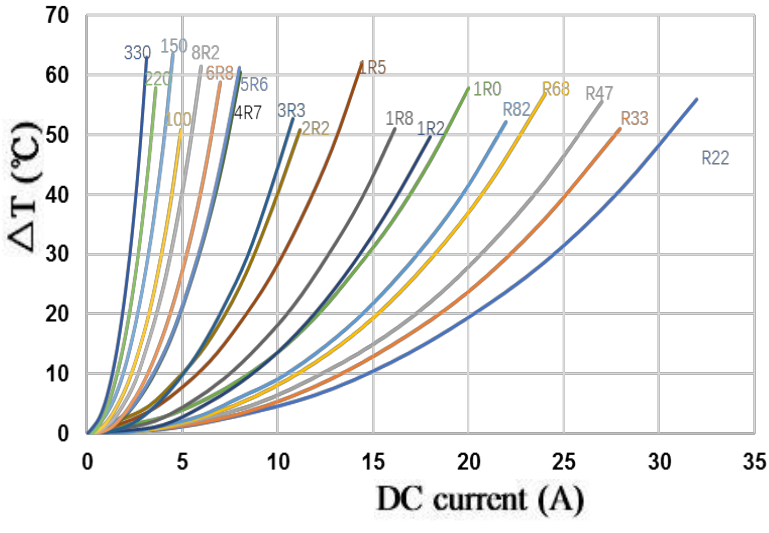
## Electrical Characteristics

| Part No. | Inductance | DC Resistance | | Heating Rating Current | Saturation Current |
|---|---|---|---|---|---|
| | L0 (μH) | DCR(mΩ) | | Idc (A) | Isat (A) |
| | ±20 %, 100 kHz, 1V | TYP. | MAX. | TYP. | TYP. |
| CMKD-0830A-R22M | 0.22 | 1.9 | 2.3 | 27.0 | 36.0 |
| CMKD-0830A-R33M | 0.33 | 2.2 | 2.6 | 25.0 | 28.0 |
| CMKD-0830A-R47M | 0.47 | 2.6 | 3.1 | 23.0 | 23.5 |
| CMKD-0830A-R68M | 0.68 | 3.6 | 4.3 | 20.0 | 20.7 |
| CMKD-0830A-R82M | 0.82 | 3.9 | 4.7 | 19.0 | 18.0 |
| CMKD-0830A-1R0M | 1.0 | 4.5 | 5.4 | 17.0 | 17.0 |
| CMKD-0830A-1R2M | 1.2 | 5.6 | 6.7 | 16.0 | 15.3 |
| CMKD-0830A-1R5M | 1.5 | 7.8 | 9.3 | 11.5 | 15.0 |
| CMKD-0830A-1R8M | 1.8 | 7.1 | 8.5 | 14.0 | 12.2 |
| CMKD-0830A-2R2M | 2.2 | 10.8 | 13.0 | 10.0 | 11.7 |
| CMKD-0830A-3R3M | 3.3 | 16.2 | 19.0 | 9.5 | 9.5 |
| CMKD-0830A-4R7M | 4.7 | 26.0 | 31.0 | 6.6 | 8.6 |
| CMKD-0830A-5R6M | 5.6 | 29.0 | 35.0 | 6.3 | 6.8 |
| CMKD-0830A-6R8M | 6.8 | 36.0 | 43.0 | 6.0 | 6.3 |
| CMKD-0830A-8R2M | 8.2 | 45.0 | 54.0 | 5.0 | 6.0 |
| CMKD-0830A-100M | 10.0 | 60.0 | 72.0 | 4.5 | 5.4 |
| CMKD-0830A-150M | 15.0 | 84.0 | 100.0 | 3.6 | 4.7 |
| CMKD-0830A-220M | 22.0 | 120.0 | 145.0 | 3.0 | 3.9 |
| CMKD-0830A-330M | 33.0 | 170.0 | 204.0 | 2.5 | 3.2 |

Inductance vs. DC current

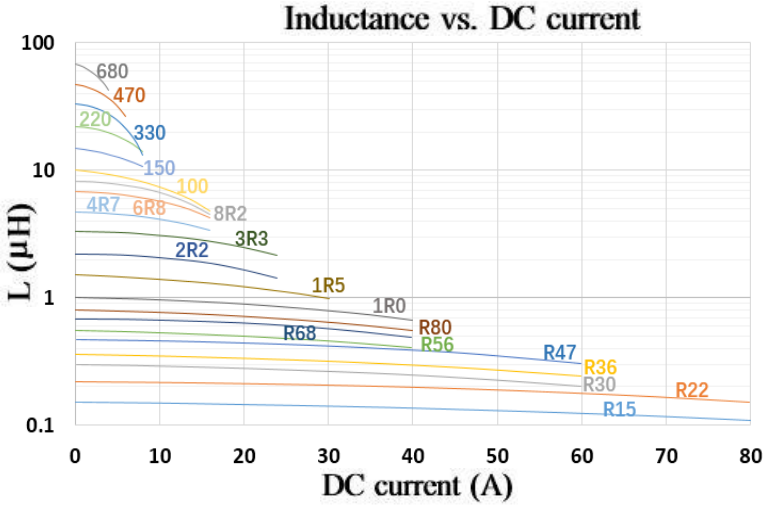


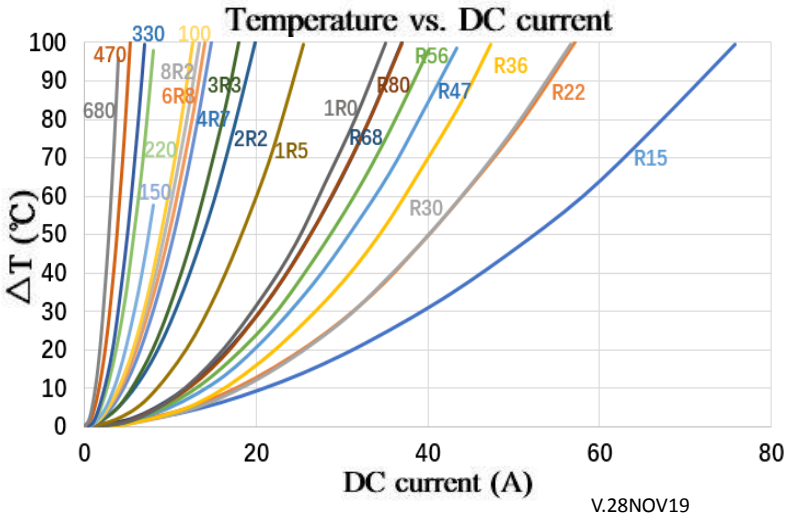

Temperature vs. DC current



## Electrical Characteristics

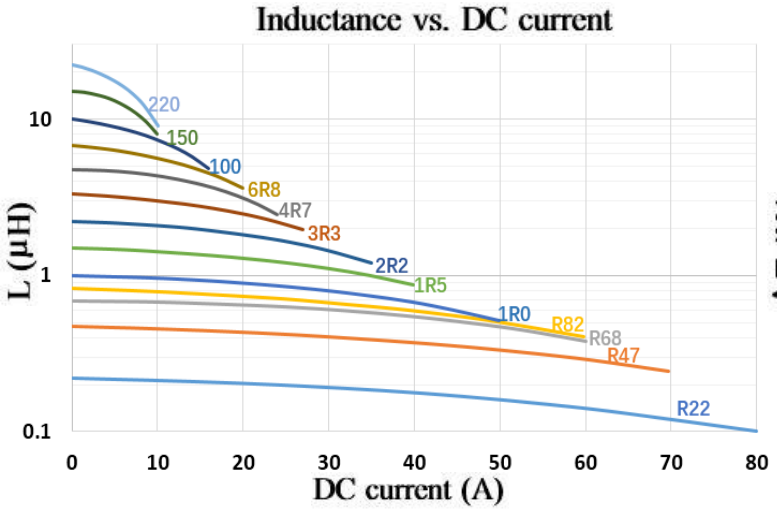
| Part No. | Inductance | DC Resistance | | Heating Rating Current | Saturation Current |
|---|---|---|---|---|---|
| | L0 (μH) | DCR (mΩ) | | Idc (A) | Isat (A) |
| | ±20 %, 100 kHz, 1V | TYP. | MAX. | TYP. | TYP. |
| CMKD-1040A-R15M | 0.15 | 0.5 | 0.65 | 45.0 | 75.0 |
| CMKD-1040A-R22M | 0.22 | 0.9 | 1.0 | 35.0 | 60.0 |
| CMKD-1040A-R30M | 0.30 | 0.95 | 1.1 | 35.0 | 50.0 |
| CMKD-1040A-R36M | 0.36 | 1.05 | 1.2 | 30.0 | 50.0 |
| CMKD-1040A-R47M | 0.47 | 1.5 | 1.7 | 30.0 | 40.0 |
| CMKD-1040A-R56M | 0.56 | 1.6 | 1.8 | 25.0 | 33.0 |
| CMKD-1040A-R68M | 0.68 | 2.1 | 2.4 | 23.0 | 30.0 |
| CMKD-1040A-R80M | 0.80 | 2.6 | 2.7 | 23.0 | 29.0 |
| CMKD-1040A-1R0M | 1.0 | 3.0 | 3.3 | 19.0 | 28.0 |
| CMKD-1040A-1R5M | 1.5 | 3.8 | 4.2 | 16.0 | 26.0 |
| CMKD-1040A-2R2M | 2.2 | 6.0 | 7.0 | 12.0 | 18.0 |
| CMKD-1040A-3R3M | 3.3 | 10.0 | 11.8 | 11.0 | 16.0 |
| CMKD-1040A-4R7M | 4.7 | 17.0 | 20.0 | 9.0 | 15.0 |
| CMKD-1040A-6R8M | 6.8 | 22.0 | 25.0 | 8.5 | 12.0 |
| CMKD-1040A-8R2M | 8.2 | 25.0 | 27.0 | 8.0 | 9.0 |
| CMKD-1040A-100M | 10.0 | 27.0 | 30.0 | 7.8 | 8.5 |
| CMKD-1040A-150M | 15.0 | 40.0 | 45.0 | 6.5 | 7.0 |
| CMKD-1040A-220M | 22.0 | 58.0 | 66.0 | 5.0 | 5.5 |
| CMKD-1040A-330M | 33.0 | 85.0 | 92.0 | 4.4 | 5.0 |
| CMKD-1040A-470M | 47.0 | 130.0 | 145.0 | 3.3 | 3.5 |
| CMKD-1040A-680M | 68.0 | 178.0 | 195.0 | 2.5 | 3.0 |
| CMKD-1040A-101M | 100 | 315.0 | 350.0 | 2.2 | 2.3 |

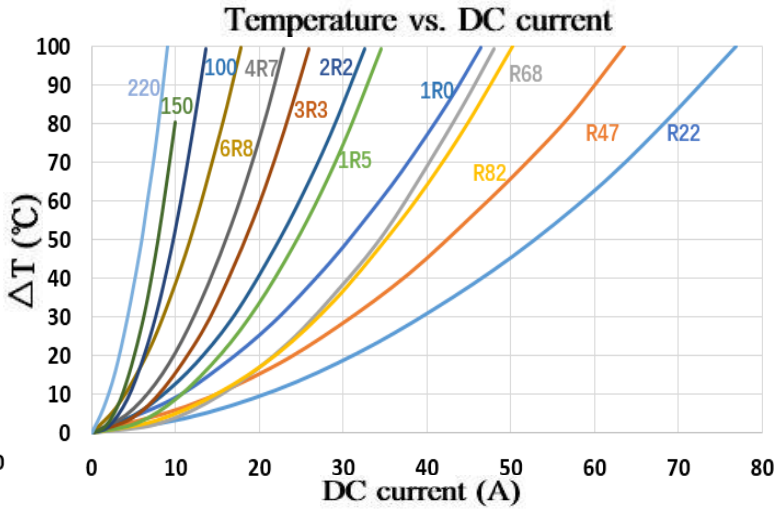


**Electrical Characteristics**

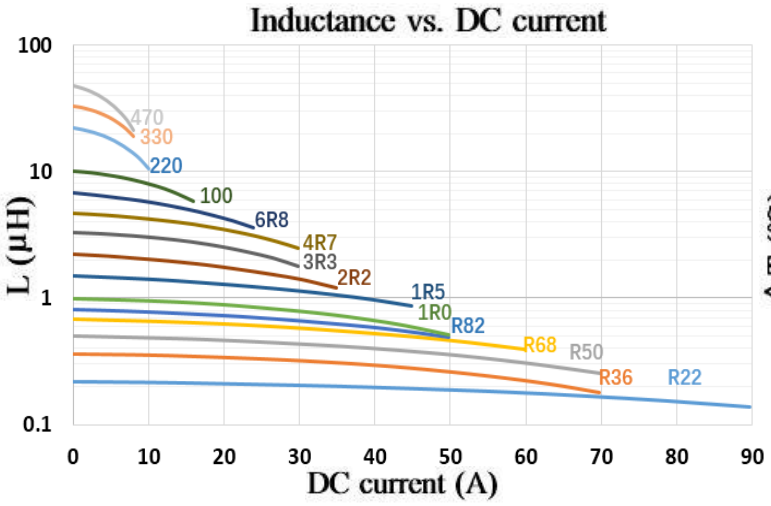
| Part No. | Inductance | DC Resistance | Heating Rating Current | Saturation Current |
|---|---|---|---|---|
| | L0 (μH) | DCR (mΩ) | Idc (A) | Isat (A) |
| | ±20 %, 100 kHz, 0.1V | MAX. | TYP. | MAX |
| CMKD-1340A-R22M | 0.22 | 0.9 | 42.0 | 50.0 |
| CMKD-1340A-R47M | 0.47 | 2.0 | 33.0 | 48.0 |
| CMKD-1340A-R68M | 0.68 | 3.5 | 28.0 | 47.0 |
| CMKD-1340A-R82M | 0.82 | 4.5 | 28.0 | 40.0 |
| CMKD-1340A-1R0M | 1.0 | 7.5 | 24.0 | 35.0 |
| CMKD-1340A-1R5M | 1.5 | 9.5 | 20.0 | 30.5 |
| CMKD-1340A-2R2M | 2.2 | 11.5 | 18.0 | 26.0 |
| CMKD-1340A-3R3M | 3.3 | 13.0 | 15.0 | 21.0 |
| CMKD-1340A-4R7M | 4.7 | 14.5 | 13.0 | 18.0 |
| CMKD-1340A-6R8M | 6.8 | 20.0 | 9.0 | 14.0 |
| CMKD-1340A-100M | 10.0 | 25.0 | 8.0 | 10.0 |
| CMKD-1340A-150M | 15.0 | 39.0 | 6.5 | 7.5 |
| CMKD-1340A-220M | 22.0 | 51.0 | 4.5 | 6.0 |

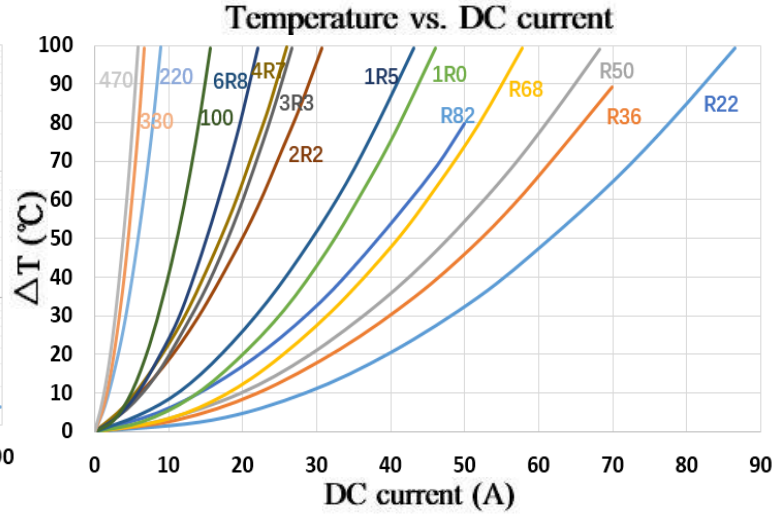


**Electrical Characteristics**

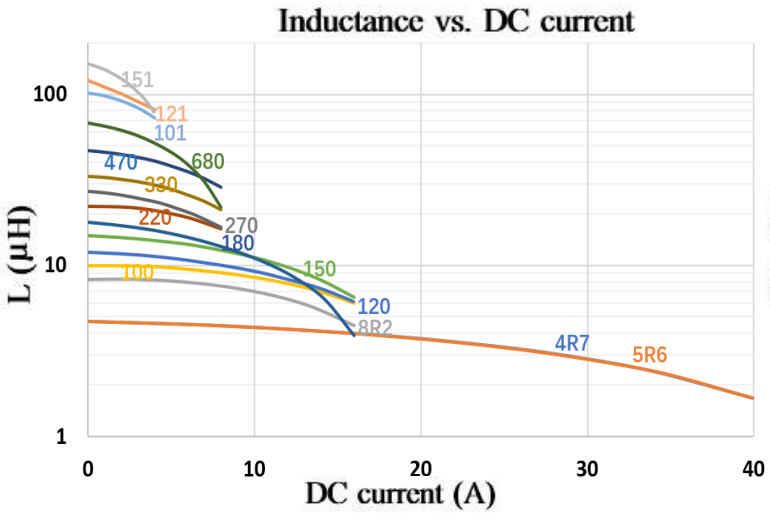
| Part No. | Inductance | DC Resistance | | Heating Rating Current | Saturation Current |
|---|---|---|---|---|---|
| | L0 (μH) | DCR (mΩ) | | Idc (A) | Isat (A) |
| | ±20 %, 100 kHz, 1V | TYP. | MAX. | TYP. | TYP. |
| **CMKD-1350A-R22M** | 0.22 | 0.5 | 0.7 | 50.0 | 75.0 |
| **CMKD-1350A-R36M** | 0.36 | 0.74 | 0.85 | 42.0 | 50.0 |
| **CMKD-1350A-R50M** | 0.5 | 1.1 | 1.15 | 38.0 | 48.0 |
| **CMKD-1350A-R68M** | 0.68 | 1.35 | 1.55 | 33.0 | 46.0 |
| **CMKD-1350A-R82M** | 0.82 | 1.45 | 1.67 | 30.0 | 39.0 |
| **CMKD-1350A-1R0M** | 1.0 | 1.9 | 2.2 | 26.0 | 35.0 |
| **CMKD-1350A-1R5M** | 1.5 | 2.8 | 3.2 | 23.0 | 33.0 |
| **CMKD-1350A-2R2M** | 2.2 | 4.0 | 5.0 | 15.0 | 24.0 |
| **CMKD-1350A-3R3M** | 3.3 | 5.9 | 7.0 | 14.0 | 22.0 |
| **CMKD-1350A-4R7M** | 4.7 | 8.2 | 9.0 | 13.0 | 21.0 |
| **CMKD-1350A-6R8M** | 6.8 | 14.5 | 18.0 | 12.0 | 16.0 |
| **CMKD-1350A-100M** | 10.0 | 19.0 | 22.0 | 9.0 | 12.0 |
| **CMKD-1350A-150M** | 15.0 | 23.0 | 30.0 | 8.0 | 10.0 |
| **CMKD-1350A-220M** | 22.0 | 51.0 | 58.0 | 4.5 | 6.5 |
| **CMKD-1350A-330M** | 33.0 | 75.0 | 84.0 | 3.5 | 6.0 |
| **CMKD-1350A-470M** | 47.0 | 116.0 | 130.0 | 3.0 | 5.0 |

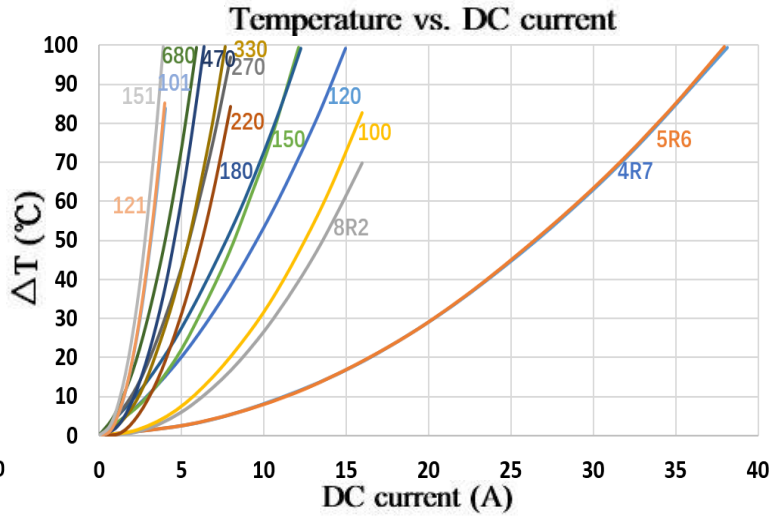


## Electrical Characteristics

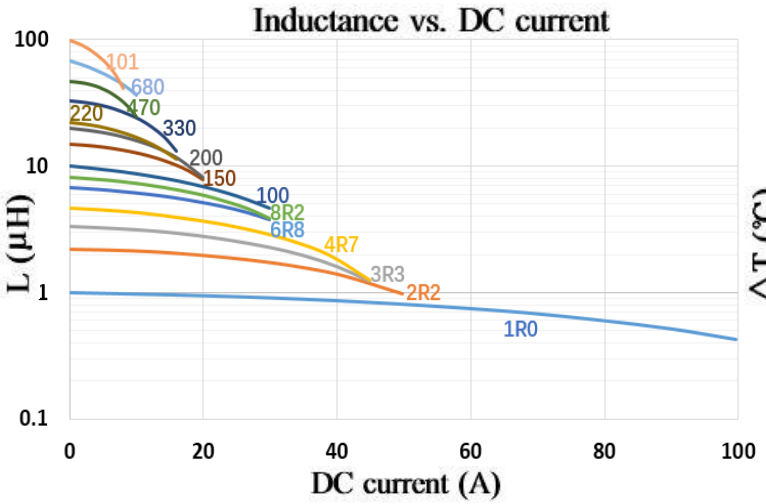
| Part No. | Inductance | DC Resistance | | Heating Rating Current | Saturation Current |
|---|---|---|---|---|---|
| | L0 (μH) | DCR (mΩ) | | Idc (A) | Isat (A) |
| | ±20 %, 100 kHz, 1V | TYP. | MAX. | TYP. | TYP. |
| CMKD-1360A-4R7M | 4.7 | 8.5 | 9.0 | 20.0 | 24.0 |
| CMKD-1360A-5R6M | 5.6 | 9.5 | 11.0 | 18.0 | 22.5 |
| CMKD-1360A-8R2M | 8.2 | 13.6 | 16 | 11.0 | 13.5 |
| CMKD-1360A-100M | 10.0 | 18.0 | 20.7 | 10.0 | 12.5 |
| CMKD-1360A-120M | 12.0 | 20 | 23 | 7.0 | 10.0 |
| CMKD-1360A-150M | 15.0 | 25 | 29 | 6.0 | 9.0 |
| CMKD-1360A-180M | 18.0 | 30 | 35 | 5.0 | 8.0 |
| CMKD-1360A-220M | 22.0 | 34 | 39.5 | 5.0 | 7.5 |
| CMKD-1360A-270M | 27.0 | 49 | 56 | 4.0 | 6.5 |
| CMKD-1360A-330M | 33.0 | 65 | 75 | 4.0 | 6.0 |
| CMKD-1360A-470M | 47.0 | 80 | 90 | 3.5 | 5.5 |
| CMKD-1360A-680M | 68.0 | 120 | 140 | 3.0 | 4.5 |
| CMKD-1360A-101M | 100.0 | 180 | 200 | 2.5 | 3.5 |
| CMKD-1360A-121M | 120.0 | 210 | 235 | 2.3 | 3.2 |
| CMKD-1360A-151M | 150.0 | 300 | 350 | 2.0 | 2.7 |

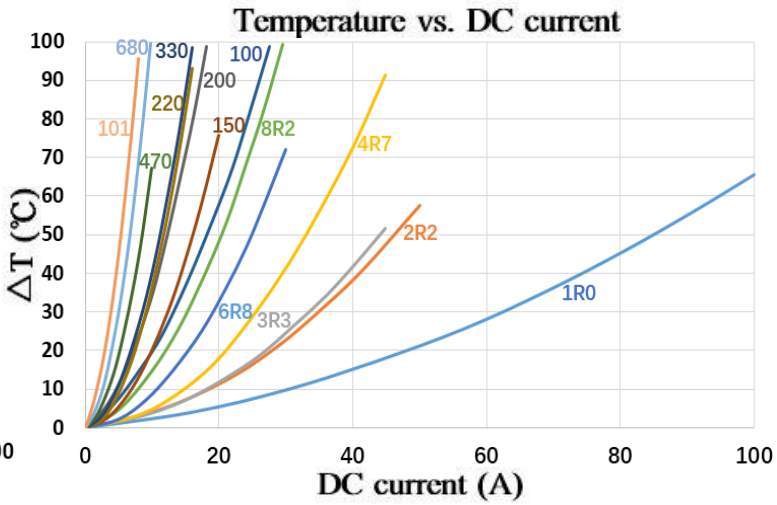


**Electrical Characteristics**

| Part No. | Inductance | DC Resistance | | Heating Rating Current | Saturation Current |
|---|---|---|---|---|---|
| | L0 (μH) | DCR (mΩ) | | Idc (A) | Isat (A) |
| | ±20 %, 100 kHz, 1V | TYP. | MAX. | TYP. | TYP. |
| **CMKD-1770A-R47M** | 0.47 | 0.78 | 0.9 | 57.0 | 85.5 |
| **CMKD-1770A-1R0M** | 1.0 | 1.3 | 1.5 | 44.6 | 60.8 |
| **CMKD-1770A-2R2M** | 2.2 | 2.15 | 2.5 | 37.0 | 34.0 |
| **CMKD-1770A-3R3M** | 3.3 | 2.79 | 2.93 | 35.0 | 27.0 |
| **CMKD-1770A-4R7M** | 4.7 | 4.12 | 4.72 | 27.0 | 24.0 |
| **CMKD-1770A-6R8M** | 6.8 | 6.55 | 7.55 | 20.0 | 22.0 |
| **CMKD-1770A-8R2M** | 8.2 | 8.1 | 8.7 | 16.0 | 20.0 |
| **CMKD-1770A-100M** | 10.0 | 9.3 | 10.0 | 14.0 | 18.0 |
| **CMKD-1770A-150M** | 15.0 | 16.5 | 17.5 | 13.0 | 14.5 |
| **CMKD-1770A-200M** | 20.0 | 19.5 | 21.9 | 9.7 | 12.0 |
| **CMKD-1770A-220M** | 22.0 | 20.5 | 23.0 | 9.5 | 11.0 |
| **CMKD-1770A-330M** | 33.0 | 35.1 | 37.0 | 9.0 | 10.0 |
| **CMKD-1770A-470M** | 47.0 | 41.0 | 47.0 | 6.8 | 7.5 |
| **CMKD-1770A-680M** | 68.0 | 74.0 | 85.0 | 5.2 | 6.5 |
| **CMKD-1770A-101M** | 100.0 | 100.0 | 120.0 | 4.0 | 4.5 |



| Mechanical Reliability | | |
|---|---|---|
| Item | Specification and Requirement | Test Method |
| Solderability | The surface of terminal immersed shall be minimum of 95% covered with a new coating of solder | Solder heat proof:<br>1. Preheating: 160 ± 10 ℃<br>2. Retention time: 245 ± 5 ℃ for 2 ± 0.5 seconds |
| Vibration | Inductance change: Within ± 10%<br>Without mechanical damage such as break | 1. Vibration frequency:<br>(10 Hz to 55 Hz to 10Hz) in 60 seconds as a period<br>2. Vibration time:<br>Period cycled for 2 hours in each of 3 mutual perpendicular directions.<br>3. Amplitude: 1.5 mm max. |
| Shock | Inductance change: Within ± 10%<br>Without mechanical damage such as break | 1. Peak value: 100 G<br>2. Duration of pulse: 11ms<br>3. 3 times in each positive and negative direction of 3 mutual perpendicular directions |
| Endurance Reliability | | |
| Item | Specification and Requirement | Test Method |
| Thermal Shock | Inductance change: Within ± 10%<br>Without distinct damage in appearance | 1. Repeat 100 cycles as follow:<br>(-55 ± 2 ℃; 30 ± 3 min)<br>→(Room temp., 5 min)<br>→ (+125 ± 2 ℃, 30 ± 3 min)<br>→ (Room temp., 5 min)<br>2. Recovery: 48 + 4 / -0 hours of recovery under the standard condition after the test. |
| High Temperature Resistance | Inductance change: Within ±10% Without distinct damage in appearance | 1. Environment condition: 85 ± 2 ℃<br>Applied Current: Rated current<br>2. Duration: 1000 + 4 / -0 hours |
| Humidity Resistance | Inductance change: Within ± 10%<br>Without distinct damage in appearance | 1. Environment condition: 60 ± 2 ℃<br>Humidity: 90–95%<br>Applied Current: Rated current<br>2. Duration: 1000 + 4 / -0 hours |
| Low Temperature Store | Inductance change: Within ± 10%<br>Without distinct damage in appearance | Store temperature:<br>-55 ± 2 ℃,1000 + 4 / -0 hours |
| High Temperature Store | Inductance change: Within ± 10%<br>Without distinct damage in appearance | Store temperature:<br>+125 ± 2 ℃,1000 + 4 / -0 hours |

## Packaging

| Series | Tape Width | Reel Diameter | Quantity(pcs) |
|---|---|---|---|
| CMKD-252012A-***M | 8mm | 180mm | 3000 |
| CMKD-0320A-***M | 12mm | 330mm | 3000 |
| CMKD-0410A-***M | 12mm | 330mm | 3000 |
| CMKD-0412A-***M | 12mm | 330mm | 3000 |
| CMKD-0420A-***M | 12mm | 330mm | 3000 |
| CMKD-0518A-***M | 12mm | 330mm | 2000 |
| CMKD-0530A-***M | 12mm | 330mm | 2000 |
| CMKD-0618A-***M | 16mm | 330mm | 1500 |
| CMKD-0624A-***M | 16mm | 330mm | 1500 |
| CMKD-0630A-***M | 16mm | 330mm | 1500 |
| CMKD-0630C-***M | 16mm | 330mm | 1500 |
| CMKD-0630H-***M | 16mm | 330mm | 1500 |
| CMKD-0830A-***M | 16mm | 330mm | 1000 |
| CMKD-1040A-***M | 24mm | 330mm | 500 |
| CMKD-1340A-***M | 24mm | 330mm | 500 |
| CMKD-1350A-***M | 24mm | 330mm | 500 |
| CMKD-1360A-***M | 24mm | 330mm | 500 |
| CMKD-1770A-***M | 24mm | 330mm | 200 |

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