# Metal Composite Power Inductors MPX

## Overview

The KEMET MPX metal composite inductors are ideal for use in DC to DC switching power supplies, as power inductors as well as EMI filter inductors. The metal composite core has high saturation characteristics maintaining function in rush current mode and characterized by temperature stable inductance.

## Applications

Consumer and commercial power applications such as:

- High frequency DC-DC converters, including WBG GaN applications
- PCs and servers
- Points of loads (POL)
- Field-programmable gate arrays (FPGA)
- Battery powered regulators

## Benefits

- Metal composite powder
- Shielded construction, SMD configuration
- Inductance range from 0.10 – 100.00 µH
- Operating temperature up to +155°C
- Low acoustic noise
- Low magnetic flux leakage

## Part Number System

| MPX | Version | D0520 | | L | 1R5 |
|---|---|---|---|---|---|
| Series | | Size Code | | Inductor | Inductance Code µH |
| MPX | 1 | D0520 = 5x5x2.0 mm<br>D0530 = 5x5x3.0 mm<br>D0618 = 6x6x1.8 mm<br>D0624 = 6x6x2.4 mm<br>D0630 = 6x6x3.0 mm<br>D0650 = 6x6x5.0 mm<br>D0830 = 8x8x3.0 mm<br>D0840 = 8x8x4.0 mm | D1040 = 10x10x4.0 mm<br>D1235 = 12x12x3.5 mm<br>D1250 = 12x12x5.0 mm<br>D1264 = 12x12x6.4 mm<br>D1740 = 17x17x4.0 mm<br>D1770 = 17x17x7.0 mm<br>D2213 = 22x22x13.0 mm | | The first two digits represent the inductance value. The third digit inidcates the number of zeros to be added.<br>R = decimal point<br><br>Examples:<br>100 = 10.00 µH<br>R68 = 0.68 µH<br>1R5 = 1.50 µH<br>101 = 100.00 µH |


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## Performance Characteristics

| Item | Performance Characteristics |
|---|---|
| Operating Temperature | −55°C to +155°C (including self-temperature rise) |
| Rated Inductance Range | 0.10 – 100.00 µH at 100 kHz, 1 mA |
| Inductance Tolerance | ±20% |
| Rated DC Resistance Range | 0.52 - 341.2 mΩ maximum |
| Rated Current Range | 2 – 92 A |

## Table 1 – Ratings & Part Number Reference

| Part Number | Inductance (µH) at 100 kHz, 1 mA | Inductance Tolerance | DC Resistance (mΩ) Typical | DC Resistance (mΩ) Maximum | Rated Current (A) | | | Self-Resonance Frequency (MHz) | Weight (g) |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | Irms[1] (Reference) | Isat[2] (Reference) | Isat[3] (Reference) | | |
| MPX1D0520LR15 | 0.15 | ±20% | 3.4 | 3.9 | 16.9 | 15.5 | 22.0 | 190.0 | 0.23 |
| MPX1D0520LR22 | 0.22 | ±20% | 4.3 | 5.0 | 15.0 | 14.5 | 19.0 | 150.0 | 0.23 |
| MPX1D0520LR33 | 0.33 | ±20% | 5.3 | 6.2 | 13.4 | 11.0 | 16.0 | 110.0 | 0.23 |
| MPX1D0520LR47 | 0.47 | ±20% | 6.7 | 7.8 | 12.0 | 9.0 | 14.0 | 87.0 | 0.23 |
| MPX1D0520LR68 | 0.68 | ±20% | 10.6 | 12.2 | 9.5 | 7.5 | 11.0 | 74.0 | 0.23 |
| MPX1D0520L1R0 | 1.00 | ±20% | 16.4 | 18.9 | 7.6 | 7.0 | 9.0 | 62.0 | 0.23 |
| MPX1D0520L1R5 | 1.50 | ±20% | 30.9 | 35.6 | 5.6 | 4.5 | 7.0 | 44.0 | 0.23 |
| MPX1D0520L2R2 | 2.20 | ±20% | 35.1 | 40.4 | 5.2 | 4.5 | 6.5 | 39.0 | 0.23 |
| MPX1D0520L3R3 | 3.30 | ±20% | 55.8 | 64.2 | 4.1 | 3.5 | 5.5 | 34.0 | 0.23 |
| MPX1D0520L4R7 | 4.70 | ±20% | 84.0 | 96.6 | 3.4 | 3.5 | 4.5 | 26.0 | 0.23 |
| MPX1D0520L6R8 | 6.80 | ±20% | 113.4 | 130.5 | 2.9 | 2.5 | 4.0 | 22.0 | 0.23 |
| MPX1D0520L100 | 10.00 | ±20% | 193.7 | 222.8 | 2.2 | 2.5 | 3.5 | 20.0 | 0.23 |
| MPX1D0530LR15 | 0.15 | ±20% | 2.4 | 2.8 | 22.0 | 15.0 | 21.0 | 180.0 | 0.33 |
| MPX1D0530LR22 | 0.22 | ±20% | 3.4 | 3.9 | 18.4 | 11.0 | 16.0 | 140.0 | 0.33 |
| MPX1D0530LR33 | 0.33 | ±20% | 4.5 | 5.2 | 16.0 | 10.5 | 15.0 | 110.0 | 0.33 |
| MPX1D0530LR47 | 0.47 | ±20% | 6.0 | 6.9 | 13.8 | 9.0 | 13.0 | 91.0 | 0.33 |
| MPX1D0530LR68 | 0.68 | ±20% | 7.1 | 8.2 | 12.6 | 8.0 | 12.0 | 70.0 | 0.33 |
| MPX1D0530L1R0 | 1.00 | ±20% | 10.0 | 11.5 | 10.7 | 7.5 | 10.5 | 52.0 | 0.33 |
| MPX1D0530L1R5 | 1.50 | ±20% | 15.3 | 17.7 | 8.6 | 5.5 | 8.0 | 45.0 | 0.33 |
| MPX1D0530L2R2 | 2.20 | ±20% | 21.4 | 24.6 | 7.3 | 4.5 | 6.5 | 35.0 | 0.33 |
| MPX1D0530L3R3 | 3.30 | ±20% | 37.2 | 42.8 | 5.5 | 4.0 | 5.5 | 29.0 | 0.33 |
| MPX1D0530L4R7 | 4.70 | ±20% | 54.1 | 62.2 | 4.6 | 3.0 | 4.5 | 26.0 | 0.33 |
| MPX1D0530L6R8 | 6.80 | ±20% | 93.7 | 107.8 | 3.5 | 2.5 | 4.0 | 23.0 | 0.33 |
| MPX1D0530L100 | 10.00 | ±20% | 121.8 | 140.1 | 3.1 | 2.5 | 3.5 | 18.0 | 0.33 |
| MPX1D0530L150 | 15.00 | ±20% | 186.5 | 214.6 | 2.5 | 2.0 | 3.0 | 15.0 | 0.33 |
| MPX1D0530L220 | 22.00 | ±20% | 296.6 | 341.2 | 2.0 | 1.8 | 2.5 | 12.0 | 0.33 |
| **Part Number** | **Inductance (µH) at 100 kHz, 1 mA** | **Inductance Tolerance** | **DC Resistance (mΩ) Typical** | **DC Resistance (mΩ) Maximum** | **Irms[1]** | **Isat[2]** | **Isat[3]** | **Self-Resonance Frequency (MHz)** | **Weight (g)** |
| | | | | | **Rated Current (A)** | | | | |

*[1] T = 40 K rise at rated current*
*[2] Inductance drop 20% at rated current*
*[3] Inductance drop 30% at rated current*
*All electrical characteristics data is referenced to 25°C.*

## Table 1 – Ratings & Part Number Reference cont.

| Part Number | Inductance (µH) at 100 kHz, 1 mA | Inductance Tolerance | DC Resistance (mΩ) Typical | DC Resistance (mΩ) Maximum | Rated Current (A) | | | Self-Resonance Frequency (MHz) | Weight (g) |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | Irms[1] (Reference) | Isat[2] (Reference) | Isat[3] (Reference) | | |
| MPX1D0618LR10 | 0.10 | ±20% | 2.4 | 2.8 | 18.9 | 22.5 | 40.0 | 230.0 | 0.37 |
| MPX1D0618LR15 | 0.15 | ±20% | 3.2 | 3.8 | 16.2 | 20.0 | 30.0 | 170.0 | 0.37 |
| MPX1D0618LR22 | 0.22 | ±20% | 4.6 | 5.3 | 13.7 | 16.0 | 26.0 | 140.0 | 0.37 |
| MPX1D0618LR33 | 0.33 | ±20% | 5.3 | 6.1 | 12.7 | 15.0 | 20.0 | 96.0 | 0.37 |
| MPX1D0618LR47 | 0.47 | ±20% | 7.4 | 8.5 | 10.7 | 11.0 | 17.0 | 95.0 | 0.37 |
| MPX1D0618LR68 | 0.68 | ±20% | 11.0 | 12.7 | 8.8 | 9.0 | 13.0 | 95.0 | 0.37 |
| MPX1D0618L1R0 | 1.00 | ±20% | 16.7 | 19.3 | 7.1 | 8.0 | 11.0 | 55.0 | 0.37 |
| MPX1D0618L1R5 | 1.50 | ±20% | 22.4 | 25.8 | 6.2 | 6.5 | 10.5 | 40.0 | 0.37 |
| MPX1D0618L2R2 | 2.20 | ±20% | 29.4 | 33.8 | 5.4 | 6.0 | 9.0 | 39.0 | 0.37 |
| MPX1D0618L3R3 | 3.30 | ±20% | 53.4 | 61.5 | 4.0 | 4.5 | 6.5 | 30.0 | 0.37 |
| MPX1D0618L4R7 | 4.70 | ±20% | 72.5 | 83.4 | 3.4 | 4.0 | 6.0 | 26.0 | 0.37 |
| MPX1D0624LR10 | 0.10 | ±20% | 1.5 | 1.8 | 26.6 | 25.0 | 42.0 | 210.0 | 0.50 |
| MPX1D0624LR15 | 0.15 | ±20% | 2.0 | 2.3 | 23.2 | 20.5 | 37.0 | 130.0 | 0.50 |
| MPX1D0624LR22 | 0.22 | ±20% | 2.8 | 3.3 | 19.4 | 19.5 | 29.0 | 120.0 | 0.50 |
| MPX1D0624LR33 | 0.33 | ±20% | 3.6 | 4.2 | 17.2 | 17.5 | 22.5 | 91.0 | 0.50 |
| MPX1D0624LR47 | 0.47 | ±20% | 4.5 | 5.2 | 15.4 | 14.5 | 20.0 | 71.0 | 0.50 |
| MPX1D0624LR68 | 0.68 | ±20% | 6.7 | 7.8 | 12.6 | 11.5 | 16.0 | 57.0 | 0.50 |
| MPX1D0624L1R0 | 1.00 | ±20% | 9.1 | 10.5 | 10.8 | 9.0 | 13.0 | 46.0 | 0.50 |
| MPX1D0624L1R5 | 1.50 | ±20% | 16.1 | 18.5 | 8.1 | 7.0 | 10.0 | 43.0 | 0.50 |
| MPX1D0624L2R2 | 2.20 | ±20% | 26.6 | 30.7 | 6.3 | 6.0 | 9.0 | 34.0 | 0.50 |
| MPX1D0624L3R3 | 3.30 | ±20% | 29.4 | 33.8 | 6.0 | 5.0 | 8.0 | 27.0 | 0.50 |
| MPX1D0624L4R7 | 4.70 | ±20% | 44.0 | 50.6 | 4.9 | 5.5 | 6.5 | 22.0 | 0.50 |
| MPX1D0624L6R8 | 6.80 | ±20% | 58.6 | 67.4 | 4.3 | 4.5 | 5.5 | 18.0 | 0.50 |
| MPX1D0624L100 | 10.00 | ±20% | 98.4 | 113.2 | 3.3 | 3.5 | 4.5 | 16.0 | 0.50 |
| MPX1D0630LR10 | 0.10 | ±20% | 1.3 | 1.5 | 31.1 | 35.0 | 50.0 | 200.0 | 0.62 |
| MPX1D0630LR15 | 0.15 | ±20% | 1.6 | 1.9 | 27.6 | 24.0 | 40.0 | 130.0 | 0.62 |
| MPX1D0630LR22 | 0.22 | ±20% | 2.2 | 2.6 | 23.3 | 22.0 | 33.0 | 110.0 | 0.62 |
| MPX1D0630LR33 | 0.33 | ±20% | 2.7 | 3.2 | 21.1 | 17.0 | 25.0 | 84.0 | 0.62 |
| MPX1D0630LR47 | 0.47 | ±20% | 3.5 | 4.0 | 18.7 | 15.0 | 21.0 | 70.0 | 0.62 |
| MPX1D0630LR68 | 0.68 | ±20% | 5.3 | 6.2 | 15.1 | 11.5 | 17.0 | 55.0 | 0.62 |
| MPX1D0630L1R0 | 1.00 | ±20% | 7.1 | 8.2 | 13.1 | 9.0 | 13.0 | 43.0 | 0.62 |
| MPX1D0630L1R5 | 1.50 | ±20% | 11.0 | 12.7 | 10.5 | 7.0 | 11.0 | 38.0 | 0.62 |
| MPX1D0630L2R2 | 2.20 | ±20% | 15.9 | 18.3 | 8.7 | 6.5 | 9.0 | 30.0 | 0.62 |
| MPX1D0630L3R3 | 3.30 | ±20% | 26.3 | 30.3 | 6.8 | 5.0 | 7.0 | 26.0 | 0.62 |
| MPX1D0630L4R7 | 4.70 | ±20% | 31.8 | 36.7 | 6.2 | 4.5 | 6.5 | 21.0 | 0.62 |
| MPX1D0630L6R8 | 6.80 | ±20% | 44.2 | 50.9 | 5.2 | 4.0 | 5.5 | 16.0 | 0.62 |
| MPX1D0630L100 | 10.00 | ±20% | 67.8 | 78.0 | 4.2 | 3.5 | 4.5 | 15.0 | 0.62 |
| MPX1D0630L150 | 15.00 | ±20% | 113.2 | 130.2 | 3.3 | 3.0 | 4.0 | 13.0 | 0.62 |
| MPX1D0630L220 | 22.00 | ±20% | 162.0 | 186.3 | 2.7 | 2.5 | 3.5 | 9.6 | 0.62 |
| Part Number | Inductance (µH) at 100 kHz, 1 mA | Inductance Tolerance | DC Resistance (mΩ) Typical | DC Resistance (mΩ) Maximum | Irms[1] | Isat[2] | Isat[3] | Self-Resonance Frequency (MHz) | Weight (g) |
| | | | | | Rated Current (A) | | | | |

*[1] T = 40 K rise at rated current*
*[2] Inductance drop 20% at rated current*
*[3] Inductance drop 30% at rated current*
*All electrical characteristics data is referenced to 25°C*

## Table 1 – Ratings & Part Number Reference cont.

| Part Number | Inductance (µH) at 100 kHz, 1 mA | Inductance Tolerance | DC Resistance (mΩ) Typical | DC Resistance (mΩ) Maximum | Rated Current (A) | | | Self-Resonance Frequency (MHz) | Weight (g) |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | Irms[1] (Reference) | Isat[2] (Reference) | Isat[3] (Reference) | | |
| MPX1D0650LR68 | 0.68 | ±20% | 3.6 | 4.1 | 18.8 | 12.0 | 17.0 | 54.0 | 1.05 |
| MPX1D0650L1R0 | 1.00 | ±20% | 5.1 | 6.0 | 15.6 | 9.0 | 13.0 | 42.0 | 1.05 |
| MPX1D0650L1R5 | 1.50 | ±20% | 7.2 | 8.3 | 13.2 | 7.5 | 12.0 | 35.0 | 1.05 |
| MPX1D0650L2R2 | 2.20 | ±20% | 10.0 | 11.6 | 11.2 | 7.0 | 10.0 | 30.0 | 1.05 |
| MPX1D0650L3R3 | 3.30 | ±20% | 16.4 | 18.9 | 8.7 | 5.0 | 8.0 | 26.0 | 1.05 |
| MPX1D0650L4R7 | 4.70 | ±20% | 27.8 | 32.0 | 6.7 | 4.5 | 6.5 | 19.0 | 1.05 |
| MPX1D0650L6R8 | 6.80 | ±20% | 38.4 | 44.2 | 5.7 | 4.0 | 5.5 | 17.0 | 1.05 |
| MPX1D0650L100 | 10.00 | ±20% | 53.4 | 61.4 | 4.8 | 3.5 | 4.5 | 13.0 | 1.05 |
| MPX1D0830LR22 | 0.22 | ±20% | 1.6 | 1.9 | 30.7 | 27.0 | 43.0 | 140.0 | 1.07 |
| MPX1D0830LR33 | 0.33 | ±20% | 2.3 | 2.7 | 25.8 | 22.5 | 35.0 | 83.0 | 1.07 |
| MPX1D0830LR47 | 0.47 | ±20% | 2.7 | 3.1 | 24.0 | 20.5 | 30.0 | 80.0 | 1.07 |
| MPX1D0830LR68 | 0.68 | ±20% | 3.8 | 4.4 | 20.1 | 20.0 | 28.0 | 55.0 | 1.07 |
| MPX1D0830L1R0 | 1.00 | ±20% | 5.0 | 5.7 | 17.6 | 16.0 | 23.0 | 46.0 | 1.07 |
| MPX1D0830L1R5 | 1.50 | ±20% | 7.9 | 9.1 | 14.0 | 13.0 | 18.0 | 37.0 | 1.07 |
| MPX1D0830L2R2 | 2.20 | ±20% | 11.8 | 13.6 | 11.4 | 11.0 | 14.0 | 30.0 | 1.07 |
| MPX1D0830L3R3 | 3.30 | ±20% | 19.4 | 22.3 | 8.9 | 9.0 | 12.5 | 24.0 | 1.07 |
| MPX1D0830L4R7 | 4.70 | ±20% | 25.8 | 29.7 | 7.7 | 7.5 | 10.5 | 18.0 | 1.07 |
| MPX1D0830L6R8 | 6.80 | ±20% | 32.9 | 37.9 | 6.8 | 7.5 | 10.0 | 16.0 | 1.07 |
| MPX1D0830L100 | 10.00 | ±20% | 53.6 | 61.7 | 5.4 | 5.5 | 8.0 | 12.0 | 1.07 |
| MPX1D0830L150 | 15.00 | ±20% | 82.3 | 94.6 | 4.3 | 4.5 | 6.5 | 11.0 | 1.07 |
| MPX1D0830L220 | 22.00 | ±20% | 116.9 | 134.5 | 3.6 | 3.5 | 5.0 | 8.1 | 1.07 |
| MPX1D0830L330 | 33.00 | ±20% | 199.6 | 229.5 | 2.8 | 3.0 | 4.0 | 6.9 | 1.07 |
| MPX1D0840LR22 | 0.22 | ±20% | 1.2 | 1.5 | 35.4 | 35.0 | 53.0 | 100.0 | 1.45 |
| MPX1D0840LR33 | 0.33 | ±20% | 2.0 | 2.4 | 27.7 | 30.0 | 45.0 | 77.0 | 1.45 |
| MPX1D0840LR47 | 0.47 | ±20% | 2.3 | 2.7 | 25.8 | 26.0 | 38.0 | 59.0 | 1.45 |
| MPX1D0840LR68 | 0.68 | ±20% | 3.1 | 3.6 | 22.4 | 20.5 | 30.0 | 46.0 | 1.45 |
| MPX1D0840L1R0 | 1.00 | ±20% | 3.6 | 4.2 | 20.8 | 19.5 | 28.0 | 40.0 | 1.45 |
| MPX1D0840L1R5 | 1.50 | ±20% | 5.8 | 6.8 | 16.2 | 14.0 | 19.0 | 29.0 | 1.45 |
| MPX1D0840L2R2 | 2.20 | ±20% | 7.5 | 8.7 | 14.3 | 13.0 | 17.0 | 27.0 | 1.45 |
| MPX1D0840L3R3 | 3.30 | ±20% | 12.1 | 14.0 | 11.3 | 11.0 | 15.0 | 22.0 | 1.45 |
| MPX1D0840L4R7 | 4.70 | ±20% | 20.4 | 23.5 | 8.7 | 7.5 | 11.0 | 17.0 | 1.45 |
| MPX1D0840L6R8 | 6.80 | ±20% | 29.0 | 33.4 | 7.3 | 6.5 | 9.0 | 13.0 | 1.45 |
| MPX1D0840L100 | 10.00 | ±20% | 43.1 | 49.6 | 6.0 | 5.5 | 7.5 | 12.0 | 1.45 |
| MPX1D0840L150 | 15.00 | ±20% | 56.5 | 65.0 | 5.2 | 4.5 | 6.5 | 9.0 | 1.45 |
| MPX1D0840L220 | 22.00 | ±20% | 85.4 | 98.3 | 4.2 | 4.0 | 5.5 | 7.7 | 1.45 |
| MPX1D0840L330 | 33.00 | ±20% | 134.1 | 154.2 | 3.4 | 3.5 | 4.5 | 6.2 | 1.45 |
| MPX1D0840L470 | 47.00 | ±20% | 197.1 | 226.7 | 2.8 | 2.5 | 3.5 | 5.7 | 1.45 |
| **Part Number** | **Inductance (µH) at 100 kHz, 1 mA** | **Inductance Tolerance** | **DC Resistance (mΩ) Typical** | **DC Resistance (mΩ) Maximum** | **Irms[1]** | **Isat[2]** | **Isat[3]** | **Self-Resonance Frequency (MHz)** | **Weight (g)** |
| | | | | | **Rated Current (A)** | | | | |

*[1] T = 40 K rise at rated current*
*[2] Inductance drop 20% at rated current*
*[3] Inductance drop 30% at rated current*
*All electrical characteristics data is referenced to 25°C*

## Table 1 – Ratings & Part Number Reference cont.

| Part Number | Inductance (µH) at 100 kHz, 1 mA | Inductance Tolerance | DC Resistance (mΩ) Typical | DC Resistance (mΩ) Maximum | Rated Current (A) | | | Self-Resonance Frequency (MHz) | Weight (g) |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | Irms[1] (Reference) | Isat[2] (Reference) | Isat[3] (Reference) | | |
| MPX1D1040LR22 | 0.22 | ±20% | 1.4 | 1.6 | 32.7 | 40.0 | 60.0 | 108.0 | 2.20 |
| MPX1D1040LR33 | 0.33 | ±20% | 1.6 | 1.9 | 29.7 | 31.0 | 47.0 | 75.0 | 2.20 |
| MPX1D1040LR47 | 0.47 | ±20% | 2.1 | 2.4 | 26.4 | 29.0 | 42.0 | 65.0 | 2.20 |
| MPX1D1040LR68 | 0.68 | ±20% | 2.7 | 3.2 | 23.1 | 23.0 | 34.5 | 47.0 | 2.20 |
| MPX1D1040L1R0 | 1.00 | ±20% | 3.3 | 3.8 | 21.1 | 19.5 | 29.0 | 35.0 | 2.20 |
| MPX1D1040L1R5 | 1.50 | ±20% | 4.6 | 5.4 | 17.7 | 18.0 | 26.0 | 30.0 | 2.20 |
| MPX1D1040L2R2 | 2.20 | ±20% | 6.8 | 7.9 | 14.6 | 13.0 | 18.5 | 23.0 | 2.20 |
| MPX1D1040L3R3 | 3.30 | ±20% | 11.1 | 12.8 | 11.4 | 11.0 | 15.0 | 18.0 | 2.20 |
| MPX1D1040L4R7 | 4.70 | ±20% | 13.8 | 15.9 | 10.3 | 10.0 | 14.0 | 17.0 | 2.20 |
| MPX1D1040L6R8 | 6.80 | ±20% | 20.9 | 24.1 | 8.3 | 8.0 | 11.5 | 14.0 | 2.20 |
| MPX1D1040L100 | 10.00 | ±20% | 29.6 | 34.1 | 7.0 | 7.5 | 10.5 | 11.0 | 2.20 |
| MPX1D1040L150 | 15.00 | ±20% | 44.5 | 51.2 | 5.7 | 5.5 | 8.5 | 8.0 | 2.20 |
| MPX1D1040L220 | 22.00 | ±20% | 66.2 | 76.1 | 4.7 | 5.0 | 7.0 | 7.0 | 2.20 |
| MPX1D1040L330 | 33.00 | ±20% | 104.1 | 119.7 | 3.7 | 3.5 | 5.0 | 5.0 | 2.20 |
| MPX1D1040L470 | 47.00 | ±20% | 158.8 | 182.6 | 3.0 | 3.0 | 4.0 | 4.5 | 2.20 |
| MPX1D1235LR15 | 0.15 | ±20% | 1.1 | 1.3 | 39.9 | 54.0 | 85.0 | 128.0 | 2.90 |
| MPX1D1235LR22 | 0.22 | ±20% | 1.3 | 1.6 | 35.2 | 50.0 | 75.0 | 100.0 | 2.90 |
| MPX1D1235LR33 | 0.33 | ±20% | 1.5 | 1.8 | 33.4 | 40.0 | 55.0 | 63.0 | 2.90 |
| MPX1D1235LR47 | 0.47 | ±20% | 2.0 | 2.3 | 28.9 | 31.0 | 45.0 | 58.0 | 2.90 |
| MPX1D1235LR68 | 0.68 | ±20% | 2.5 | 2.9 | 25.9 | 28.0 | 40.0 | 46.0 | 2.90 |
| MPX1D1235L1R0 | 1.00 | ±20% | 3.6 | 4.2 | 21.5 | 22.0 | 32.5 | 33.0 | 2.90 |
| MPX1D1235L1R5 | 1.50 | ±20% | 5.2 | 6.0 | 17.9 | 19.0 | 28.0 | 29.0 | 2.90 |
| MPX1D1235L2R2 | 2.20 | ±20% | 7.3 | 8.4 | 15.2 | 15.5 | 23.0 | 21.0 | 2.90 |
| MPX1D1235L3R3 | 3.30 | ±20% | 10.6 | 12.2 | 12.5 | 12.0 | 18.0 | 18.0 | 2.90 |
| MPX1D1235L4R7 | 4.70 | ±20% | 14.2 | 16.4 | 10.9 | 11.5 | 17.5 | 14.0 | 2.90 |
| MPX1D1235L6R8 | 6.80 | ±20% | 18.8 | 21.7 | 9.4 | 9.5 | 14.0 | 12.0 | 2.90 |
| MPX1D1235L100 | 10.00 | ±20% | 30.4 | 35.0 | 7.4 | 8.5 | 12.0 | 9.5 | 2.90 |
| MPX1D1250LR22 | 0.22 | ±20% | 1.0 | 1.2 | 42.7 | 55.0 | 85.0 | 95.0 | 4.20 |
| MPX1D1250LR33 | 0.33 | ±20% | 1.1 | 1.3 | 41.6 | 45.0 | 65.0 | 68.0 | 4.20 |
| MPX1D1250LR47 | 0.47 | ±20% | 1.5 | 1.8 | 34.8 | 37.0 | 55.0 | 54.0 | 4.20 |
| MPX1D1250LR68 | 0.68 | ±20% | 1.7 | 2.0 | 32.7 | 30.0 | 45.0 | 45.0 | 4.20 |
| MPX1D1250L1R0 | 1.00 | ±20% | 2.2 | 2.6 | 28.8 | 30.5 | 43.0 | 34.0 | 4.20 |
| MPX1D1250L1R5 | 1.50 | ±20% | 3.1 | 3.6 | 24.2 | 22.0 | 32.0 | 25.0 | 4.20 |
| MPX1D1250L2R2 | 2.20 | ±20% | 4.1 | 4.8 | 21.0 | 20.0 | 28.5 | 21.0 | 4.20 |
| MPX1D1250L3R3 | 3.30 | ±20% | 6.4 | 7.4 | 16.8 | 15.0 | 22.0 | 17.0 | 4.20 |
| MPX1D1250L4R7 | 4.70 | ±20% | 8.8 | 10.1 | 14.4 | 12.0 | 17.5 | 13.0 | 4.20 |
| MPX1D1250L6R8 | 6.80 | ±20% | 13.4 | 15.5 | 11.6 | 10.0 | 14.0 | 10.0 | 4.20 |
| MPX1D1250L100 | 10.00 | ±20% | 17.9 | 20.6 | 10.1 | 9.0 | 13.5 | 8.5 | 4.20 |
| **Part Number** | **Inductance (µH) at 100 kHz, 1 mA** | **Inductance Tolerance** | **DC Resistance (mΩ) Typical** | **DC Resistance (mΩ) Maximum** | **Irms[1]** | **Isat[2]** | **Isat[3]** | **Self-Resonance Frequency (MHz)** | **Weight (g)** |
| | | | | | **Rated Current (A)** | | | | |

*[1] T = 40 K rise at rated current*
*[2] Inductance drop 20% at rated current*
*[3] Inductance drop 30% at rated current*
*All electrical characteristics data is referenced to 25°C*

## Table 1 – Ratings & Part Number Reference cont.

| Part Number | Inductance (µH) at 100 kHz, 1 mA | Inductance Tolerance | DC Resistance (mΩ) Typical | DC Resistance (mΩ) Maximum | Rated Current (A) | | | Self-Resonance Frequency (MHz) | Weight (g) |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | Irms[1] (Reference) | Isat[2] (Reference) | Isat[3] (Reference) | | |
| MPX1D1250L150 | 15.00 | ±20% | 26.8 | 30.8 | 8.2 | 7.5 | 11.0 | 7.0 | 4.20 |
| MPX1D1250L220 | 22.00 | ±20% | 40.1 | 46.2 | 6.7 | 6.5 | 9.0 | 6.5 | 4.20 |
| MPX1D1250L330 | 33.00 | ±20% | 62.6 | 72.0 | 5.4 | 5.0 | 7.5 | 5.0 | 4.20 |
| MPX1D1250L470 | 47.00 | ±20% | 91.6 | 105.4 | 4.5 | 4.0 | 5.5 | 4.0 | 4.20 |
| MPX1D1250L680 | 68.00 | ±20% | 141.7 | 163.0 | 3.6 | 3.0 | 4.5 | 3.0 | 4.20 |
| MPX1D1264LR22 | 0.22 | ±20% | 0.9 | 1.1 | 53.0 | 68.0 | 100.0 | 90.0 | 5.50 |
| MPX1D1264LR33 | 0.33 | ±20% | 1.0 | 1.2 | 45.6 | 48.0 | 70.0 | 61.0 | 5.50 |
| MPX1D1264LR47 | 0.47 | ±20% | 1.4 | 1.7 | 38.2 | 40.0 | 58.0 | 53.0 | 5.50 |
| MPX1D1264LR68 | 0.68 | ±20% | 1.7 | 1.9 | 35.4 | 34.0 | 50.0 | 45.0 | 5.50 |
| MPX1D1264L1R0 | 1.00 | ±20% | 2.0 | 2.3 | 32.2 | 30.0 | 45.0 | 30.0 | 5.50 |
| MPX1D1264L1R5 | 1.50 | ±20% | 2.5 | 2.9 | 28.8 | 25.0 | 35.5 | 24.0 | 5.50 |
| MPX1D1264L2R2 | 2.20 | ±20% | 3.2 | 3.7 | 25.4 | 23.0 | 32.0 | 20.0 | 5.50 |
| MPX1D1264L3R3 | 3.30 | ±20% | 5.3 | 6.2 | 19.7 | 16.5 | 22.5 | 16.0 | 5.50 |
| MPX1D1264L4R7 | 4.70 | ±20% | 7.1 | 8.2 | 17.1 | 14.0 | 19.5 | 13.0 | 5.50 |
| MPX1D1264L6R8 | 6.80 | ±20% | 10.6 | 12.3 | 14.0 | 11.5 | 16.0 | 10.0 | 5.50 |
| MPX1D1264L100 | 10.00 | ±20% | 14.0 | 16.1 | 12.2 | 10.0 | 14.0 | 8.5 | 5.50 |
| MPX1D1264L150 | 15.00 | ±20% | 21.6 | 24.9 | 9.8 | 8.0 | 11.5 | 6.5 | 5.50 |
| MPX1D1264L220 | 22.00 | ±20% | 30.5 | 35.1 | 8.2 | 7.0 | 9.5 | 5.5 | 5.50 |
| MPX1D1740LR47 | 0.47 | ±20% | 1.5 | 1.8 | 34.0 | 52.0 | 75.0 | 46.0 | 6.30 |
| MPX1D1740LR68 | 0.68 | ±20% | 1.7 | 2.0 | 32.0 | 37.0 | 55.0 | 38.0 | 6.30 |
| MPX1D1740L1R0 | 1.00 | ±20% | 2.0 | 2.3 | 30.0 | 28.0 | 43.0 | 30.0 | 6.30 |
| MPX1D1740L1R5 | 1.50 | ±20% | 3.3 | 3.8 | 23.5 | 19.5 | 28.0 | 24.0 | 6.30 |
| MPX1D1740L2R2 | 2.20 | ±20% | 4.3 | 5.0 | 20.5 | 19.5 | 28.0 | 17.0 | 6.30 |
| MPX1D1740L3R3 | 3.30 | ±20% | 7.0 | 8.1 | 16.5 | 18.0 | 27.5 | 14.0 | 6.30 |
| MPX1D1740L4R7 | 4.70 | ±20% | 9.0 | 10.4 | 14.5 | 13.0 | 18.5 | 12.0 | 6.30 |
| MPX1D1740L6R8 | 6.80 | ±20% | 13.8 | 15.9 | 11.5 | 12.0 | 17.0 | 9.0 | 6.30 |
| MPX1D1740L100 | 10.00 | ±20% | 18.8 | 21.7 | 9.5 | 10.0 | 14.5 | 6.8 | 6.30 |
| MPX1D1740L150 | 15.00 | ±20% | 30.6 | 35.2 | 7.5 | 9.0 | 13.0 | 6.0 | 6.30 |
| MPX1D1740L220 | 22.00 | ±20% | 40.3 | 46.4 | 6.5 | 7.0 | 10.0 | 5.0 | 6.30 |
| MPX1D1740L330 | 33.00 | ±20% | 71.5 | 82.3 | 5.0 | 5.5 | 8.0 | 4.0 | 6.30 |
| MPX1D1740L470 | 47.00 | ±20% | 109.3 | 125.7 | 4.0 | 4.4 | 6.5 | 2.5 | 6.30 |
| MPX1D1770LR47 | 0.47 | ±20% | 0.87 | 1.0 | 52.5 | 72.0 | 108.0 | 45.0 | 11.0 |
| MPX1D1770LR68 | 0.68 | ±20% | 0.91 | 1.05 | 50.0 | 46.0 | 68.0 | 37.0 | 11.0 |
| MPX1D1770L1R0 | 1.00 | ±20% | 1.5 | 1.8 | 38.0 | 42.0 | 62.0 | 27.0 | 11.0 |
| MPX1D1770L1R5 | 1.50 | ±20% | 1.5 | 1.8 | 38.0 | 31.0 | 45.0 | 18.0 | 11.0 |
| MPX1D1770L2R2 | 2.20 | ±20% | 2.2 | 2.6 | 31.0 | 25.0 | 34.0 | 15.0 | 11.0 |
| MPX1D1770L3R3 | 3.30 | ±20% | 2.9 | 3.4 | 28.0 | 24.0 | 30.5 | 13.0 | 11.0 |
| MPX1D1770L4R7 | 4.70 | ±20% | 4.1 | 4.8 | 23.5 | 24.0 | 33.5 | 10.0 | 11.0 |
| **Part Number** | **Inductance (µH) at 100 kHz, 1 mA** | **Inductance Tolerance** | **DC Resistance (mΩ) Typical** | **DC Resistance (mΩ) Maximum** | **Irms[1]** | **Isat[2]** | **Isat[3]** | **Self-Resonance Frequency (MHz)** | **Weight (g)** |
| | | | | | **Rated Current (A)** | | | | |

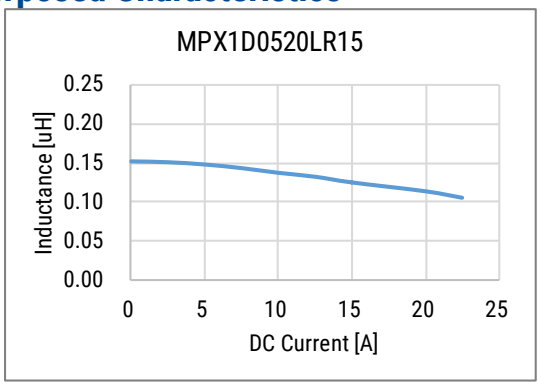
*[1] T = 40 K rise at rated current*
*[2] Inductance drop 20% at rated current*
*[3] Inductance drop 30% at rated current*
*All electrical characteristics data is referenced to 25°C*

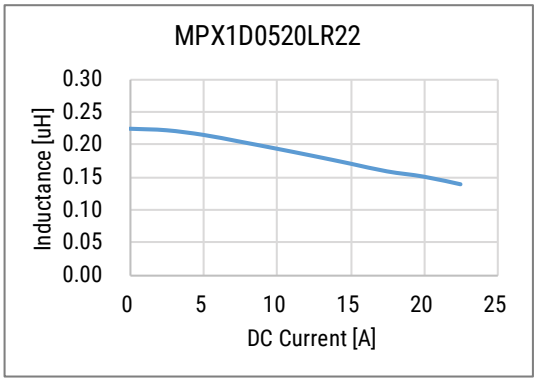
## Table 1 – Ratings & Part Number Reference cont.

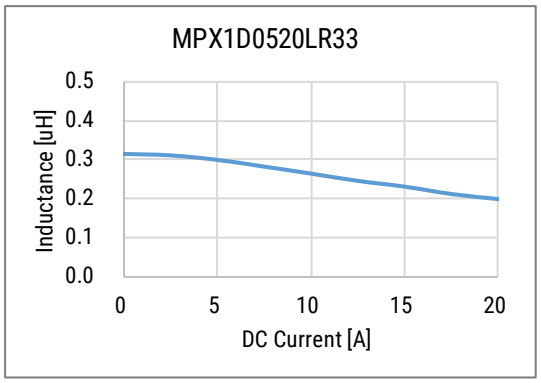
| Part Number | Inductance (µH) at 100 kHz, 1 mA | Inductance Tolerance | DC Resistance (mΩ) Typical | DC Resistance (mΩ) Maximum | Rated Current (A) | | | Self-Resonance Frequency (MHz) | Weight (g) |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | Irms[1] (Reference) | Isat[2] (Reference) | Isat[3] (Reference) | | |
| MPX1D1770L6R8 | 6.80 | ±20% | 5.9 | 6.8 | 19.5 | 18.0 | 26.0 | 8.0 | 11.0 |
| MPX1D1770L100 | 10.00 | ±20% | 10.6 | 12.2 | 14.5 | 11.5 | 16.5 | 7.0 | 11.0 |
| MPX1D1770L150 | 15.00 | ±20% | 15.4 | 17.8 | 12.0 | 10.5 | 14.0 | 5.5 | 11.0 |
| MPX1D1770L220 | 22.00 | ±20% | 19.9 | 22.9 | 10.5 | 8.5 | 12.0 | 4.5 | 11.0 |
| MPX1D1770L330 | 33.00 | ±20% | 41.1 | 47.3 | 7.5 | 8.5 | 12.0 | 3.5 | 11.0 |
| MPX1D1770L470 | 47.00 | ±20% | 54.6 | 62.8 | 6.5 | 7.5 | 10.5 | 2.8 | 11.0 |
| MPX1D1770L680 | 68.00 | ±20% | 69.1 | 79.5 | 5.5 | 6.0 | 8.5 | 2.3 | 11.0 |
| MPX1D1770L101 | 100.00 | ±20% | 95.9 | 110.3 | 4.5 | 5.6 | 7.5 | 1.8 | 11.0 |
| MPX1D2213LR47 | 0.47 | ±20% | 0.42 | 0.48 | 90.0 | 96.0 | 140.0 | 45.0 | 37.0 |
| MPX1D2213LR68 | 0.68 | ±20% | 0.72 | 0.83 | 78.0 | 80.0 | 115.0 | 34.0 | 37.0 |
| MPX1D2213L1R0 | 1.00 | ±20% | 0.8 | 1.0 | 74.0 | 58.0 | 84.0 | 22.0 | 37.0 |
| MPX1D2213L1R5 | 1.50 | ±20% | 0.96 | 1.2 | 68.0 | 42.0 | 60.0 | 17.0 | 37.0 |
| MPX1D2213L2R2 | 2.20 | ±20% | 1.2 | 1.4 | 59.0 | 38.0 | 56.0 | 14.0 | 37.0 |
| MPX1D2213L3R3 | 3.30 | ±20% | 1.5 | 1.8 | 54.0 | 34.0 | 48.0 | 11.0 | 37.0 |
| MPX1D2213L4R7 | 4.70 | ±20% | 1.9 | 2.2 | 48.0 | 28.0 | 40.0 | 9.0 | 37.0 |
| MPX1D2213L6R8 | 6.80 | ±20% | 2.8 | 3.3 | 39.0 | 30.0 | 42.0 | 6.5 | 37.0 |
| MPX1D2213L100 | 10.00 | ±20% | 3.8 | 4.4 | 34.0 | 26.0 | 36.0 | 5.2 | 37.0 |
| MPX1D2213L150 | 15.00 | ±20% | 5.9 | 6.8 | 27.5 | 22.0 | 30.0 | 4.0 | 37.0 |
| MPX1D2213L220 | 22.00 | ±20% | 11.4 | 13.2 | 19.5 | 15.0 | 20.5 | 3.7 | 37.0 |
| MPX1D2213L330 | 33.00 | ±20% | 13.9 | 16.0 | 17.5 | 15.0 | 20.5 | 2.9 | 37.0 |
| MPX1D2213L470 | 47.00 | ±20% | 17.8 | 20.5 | 15.5 | 13.5 | 19.0 | 2.5 | 37.0 |
| MPX1D2213L680 | 68.00 | ±20% | 26.7 | 30.8 | 12.5 | 10.0 | 14.0 | 2.1 | 37.0 |
| MPX1D2213L101 | 100.00 | ±20% | 41.2 | 47.4 | 10.0 | 8.0 | 10.5 | 1.6 | 37.0 |
| **Part Number** | **Inductance (µH) at 100 kHz, 1 mA** | **Inductance Tolerance** | **DC Resistance (mΩ) Typical** | **DC Resistance (mΩ) Maximum** | **Irms[1]** | **Isat[2]** | **Isat[3]** | **Self-Resonance Frequency (MHz)** | **Weight (g)** |
| | | | | | **Rated Current (A)** | | | | |

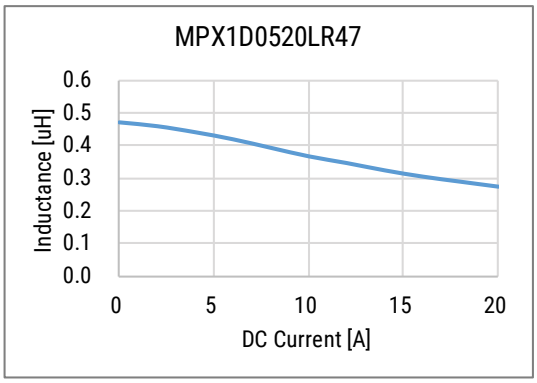
*[1] T = 40 K rise at rated current*
*[2] Inductance drop 20% at rated current*
*[3] Inductance drop 30% at rated current*
*All electrical characteristics data is referenced to 25°C*

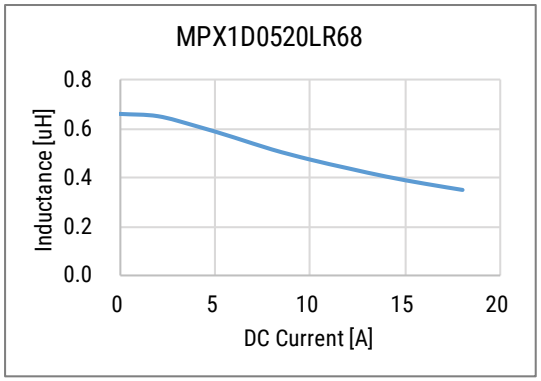
## DC-Superposed Characteristics

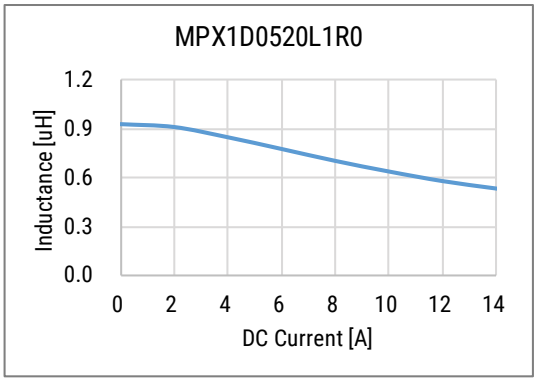


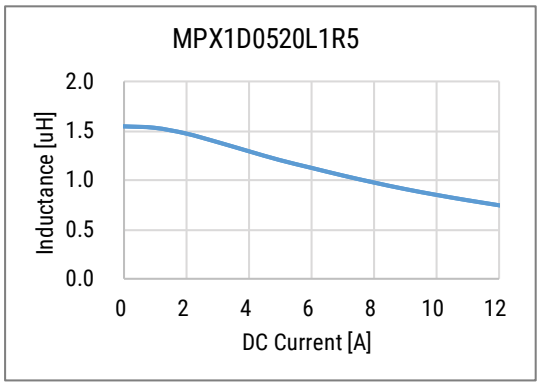



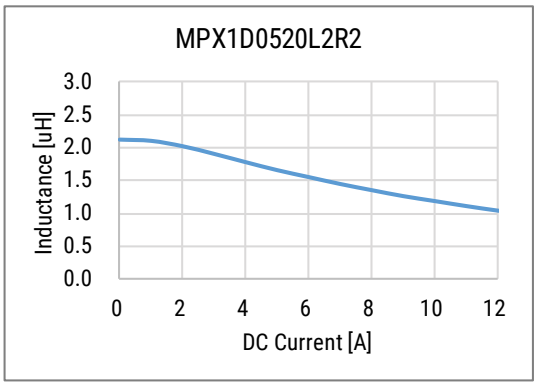



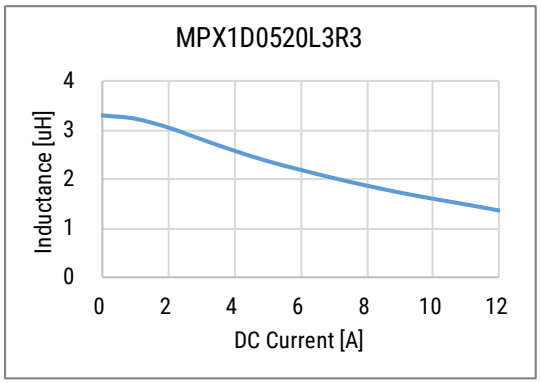



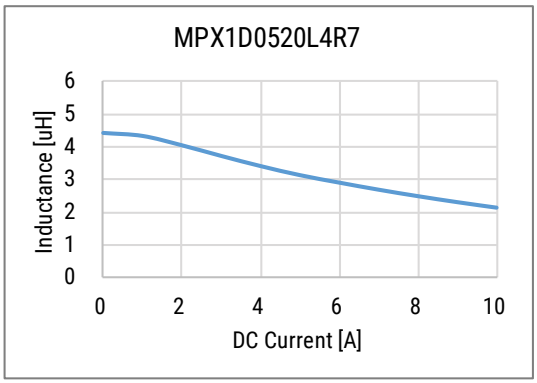



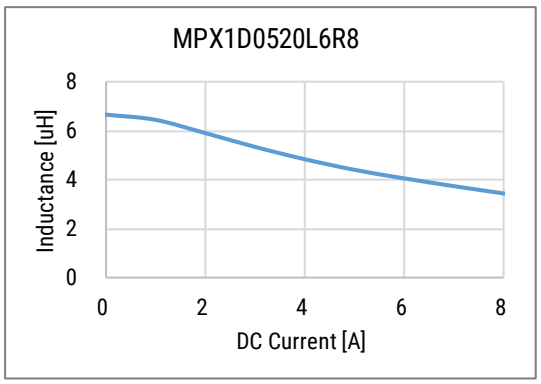



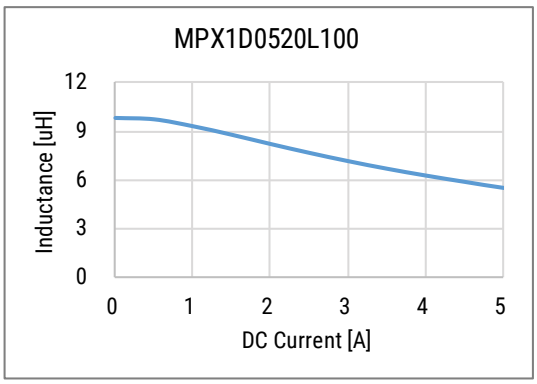



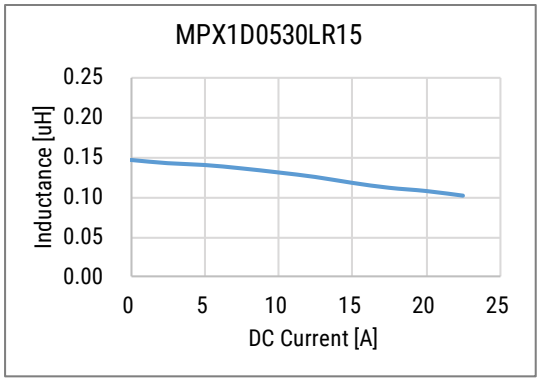
## DC-Superposed Characteristics cont.

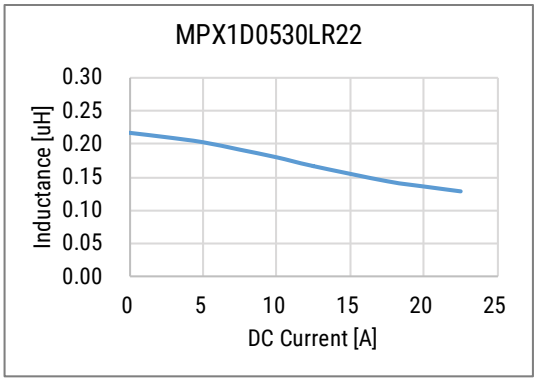


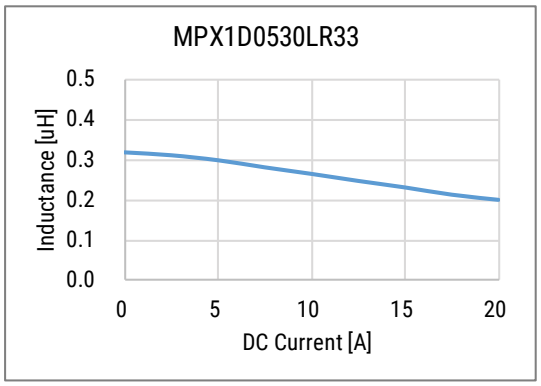



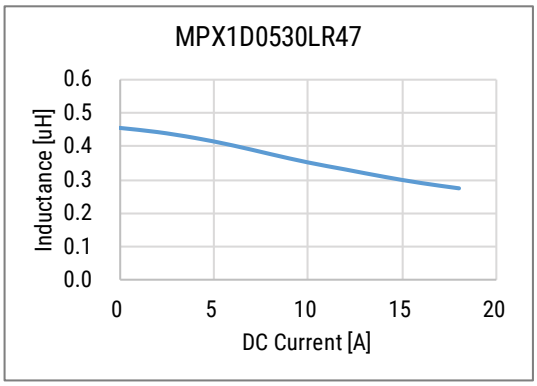



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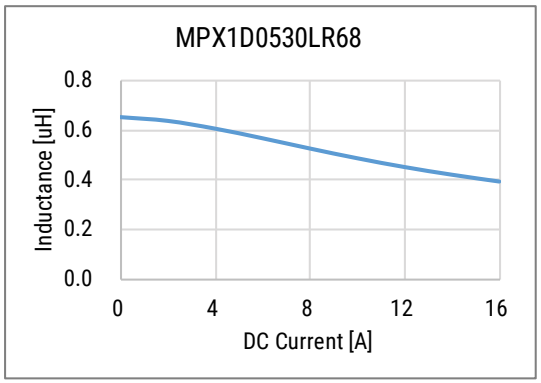


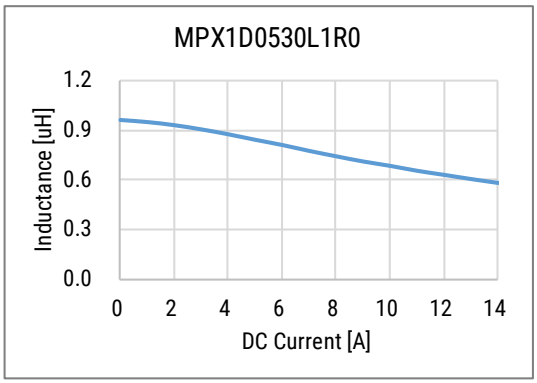


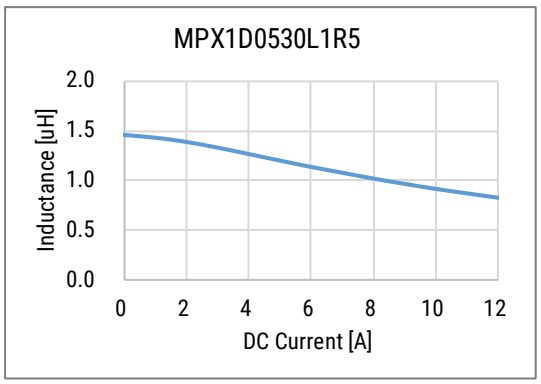


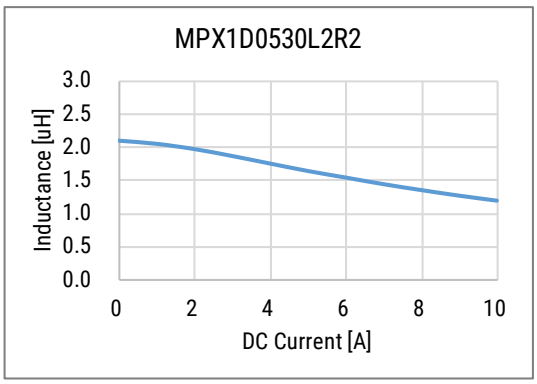


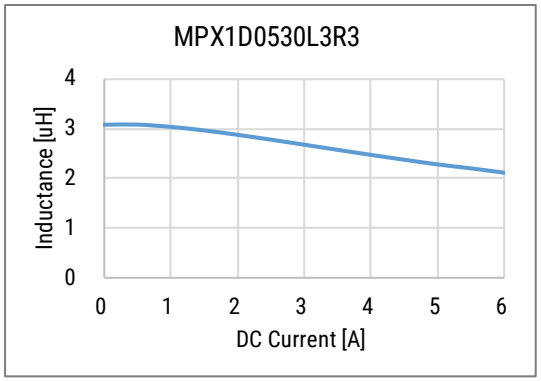


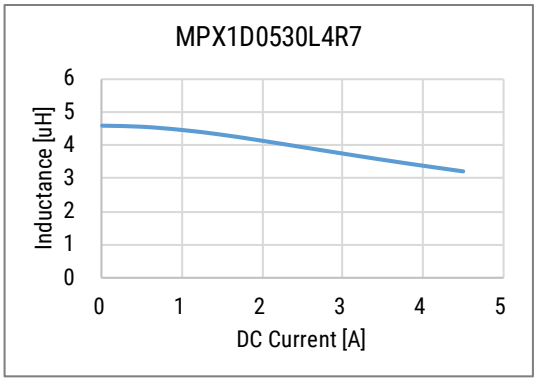


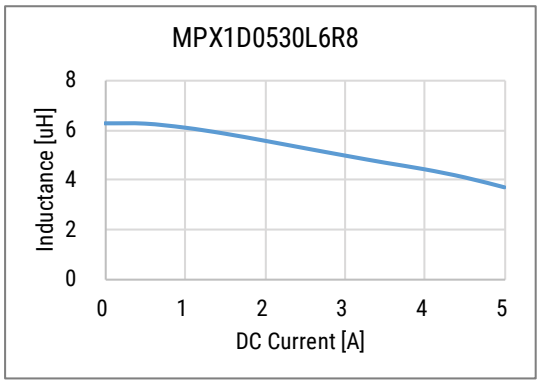


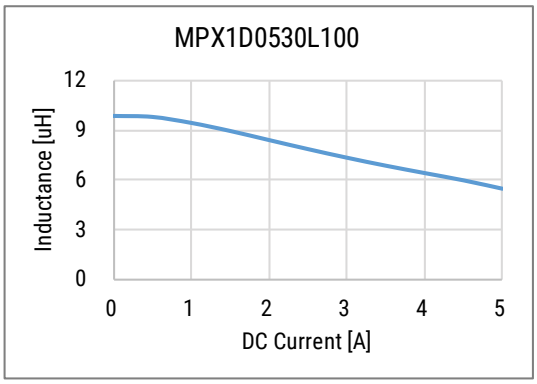

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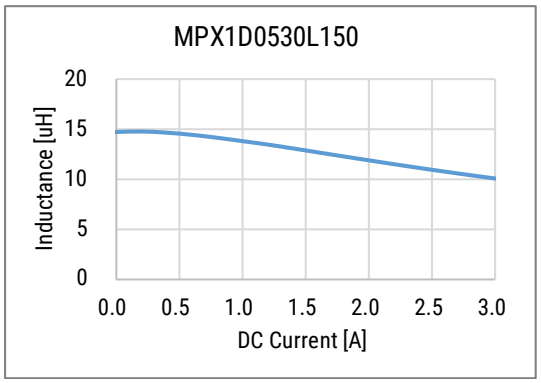


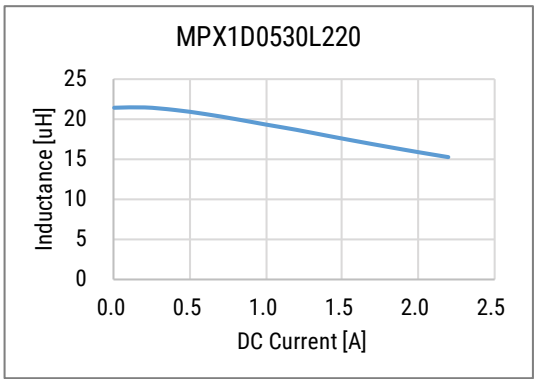


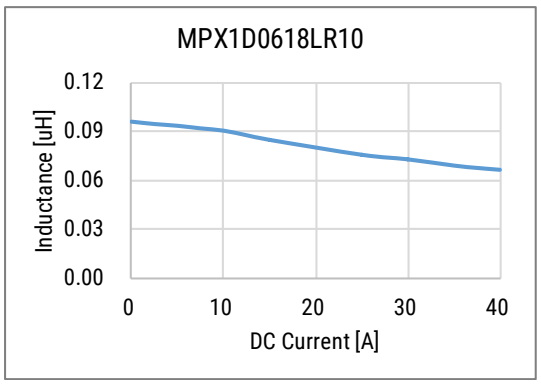


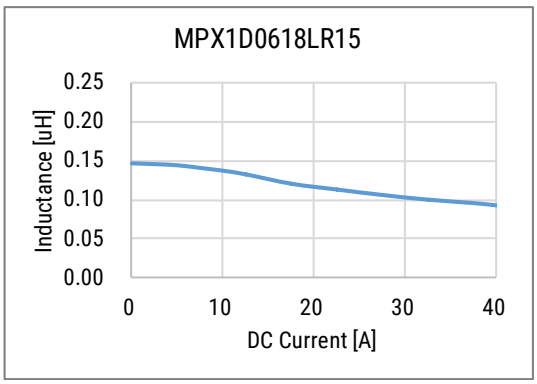


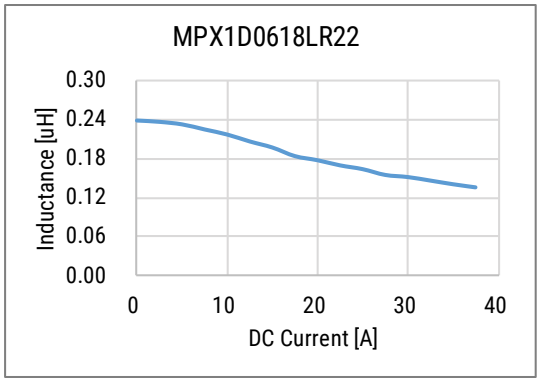


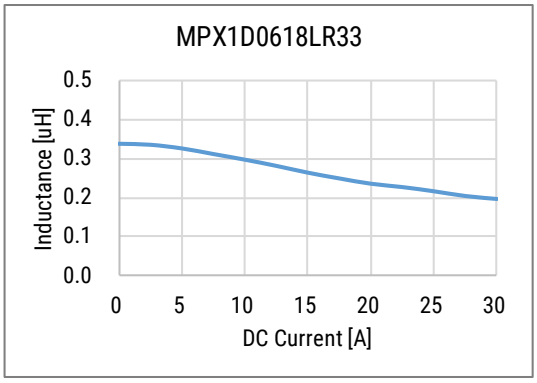


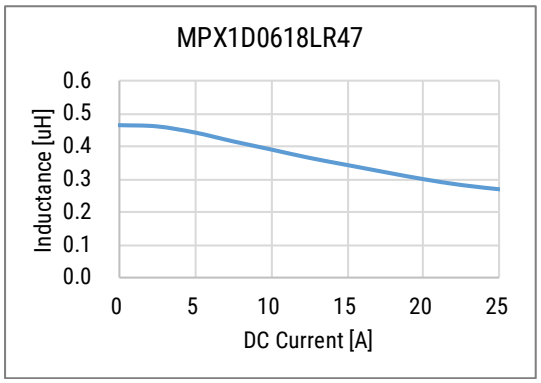


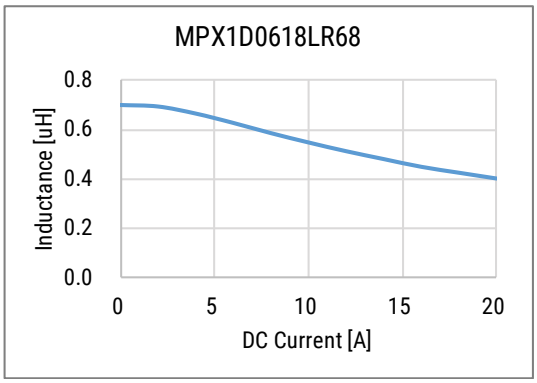

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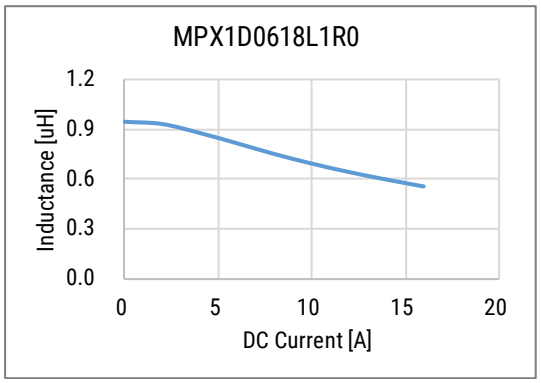


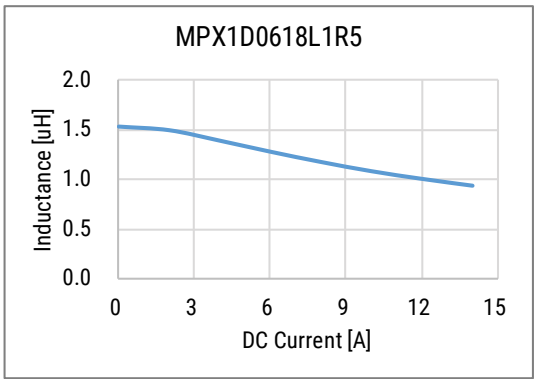


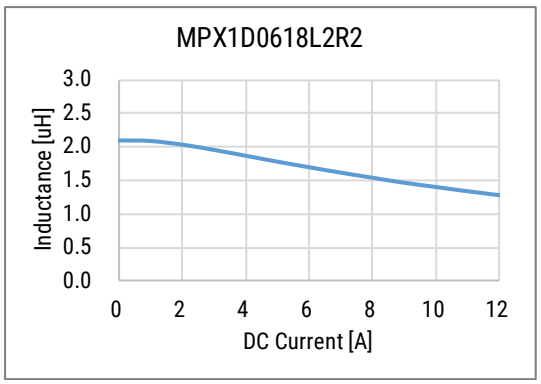


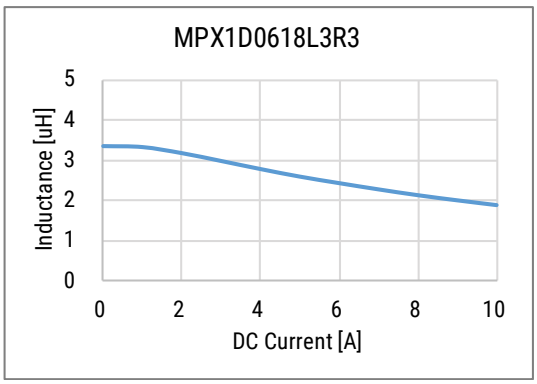


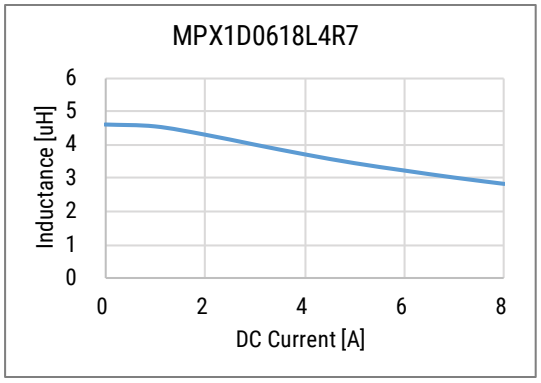


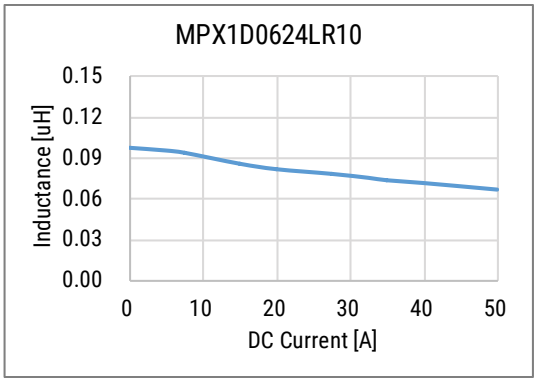


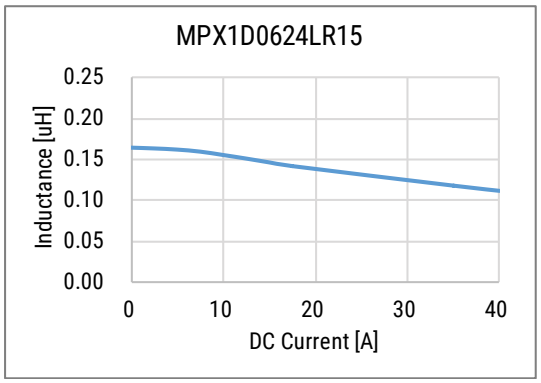


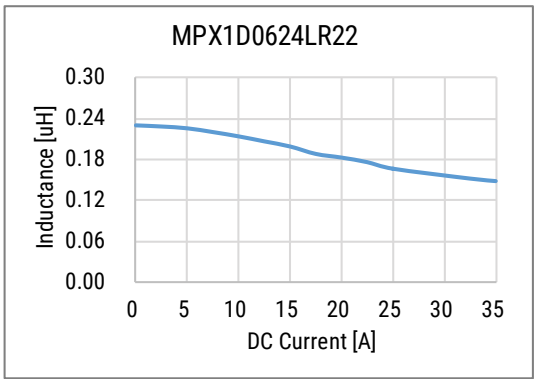

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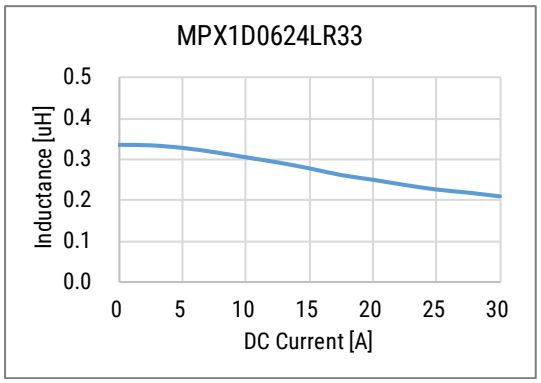


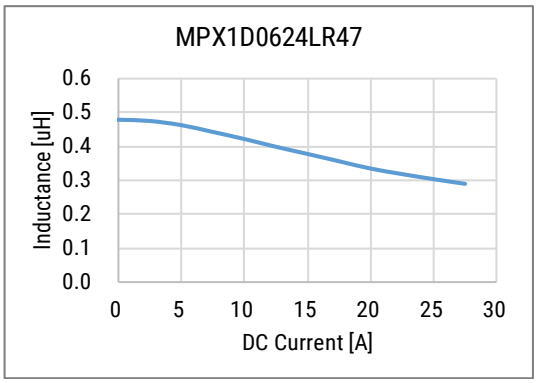


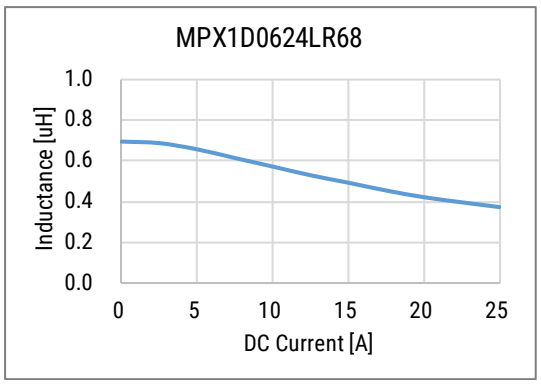


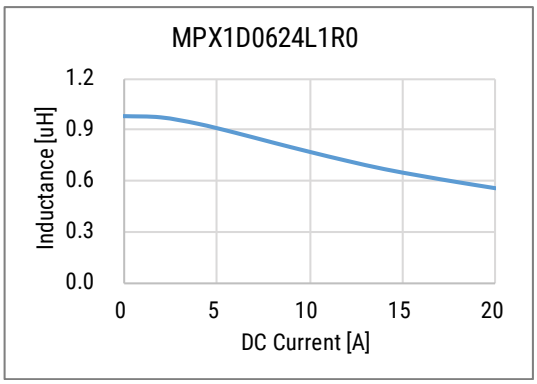


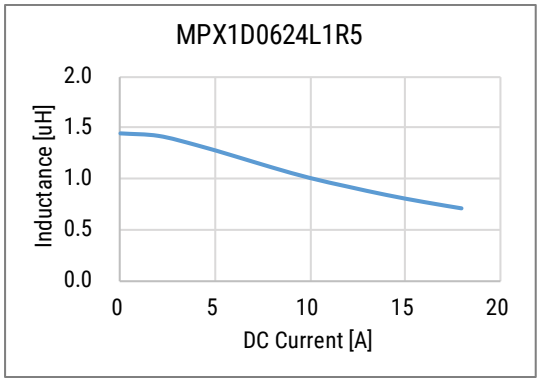


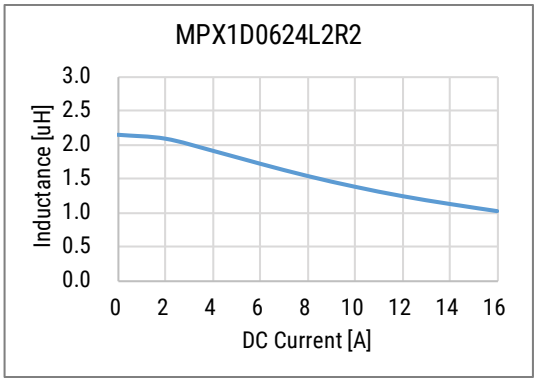


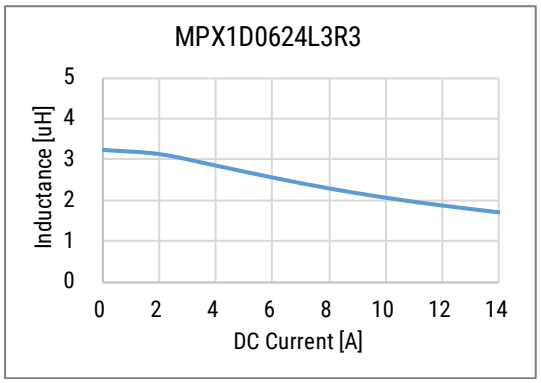


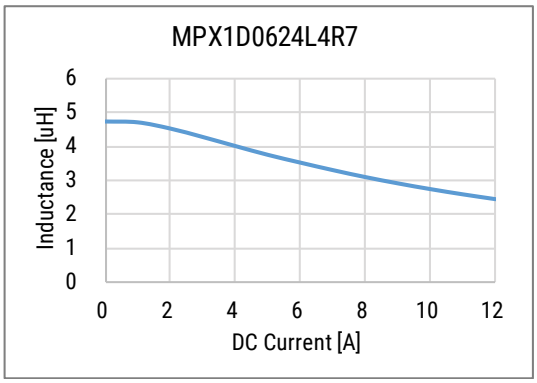

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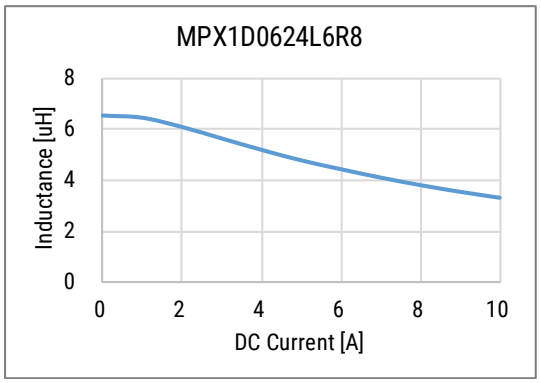


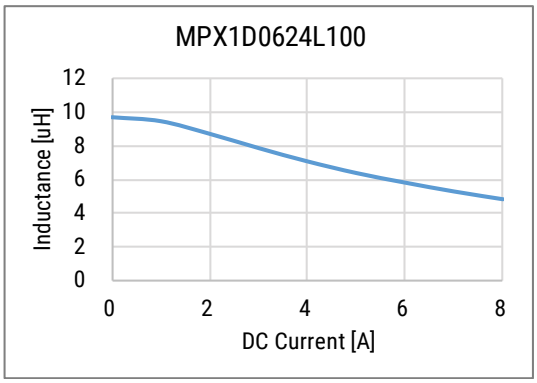


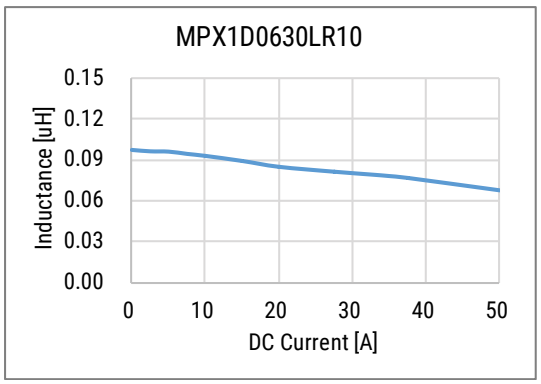


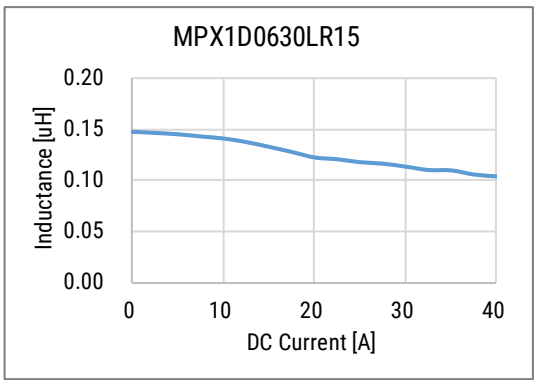


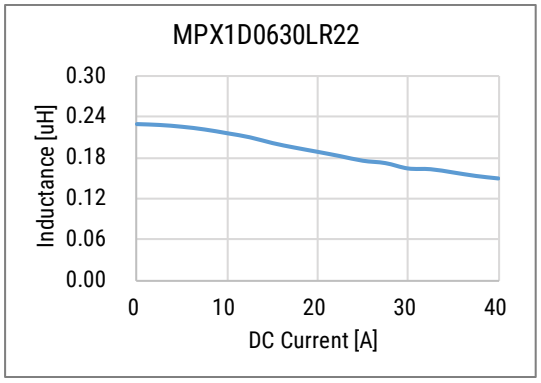


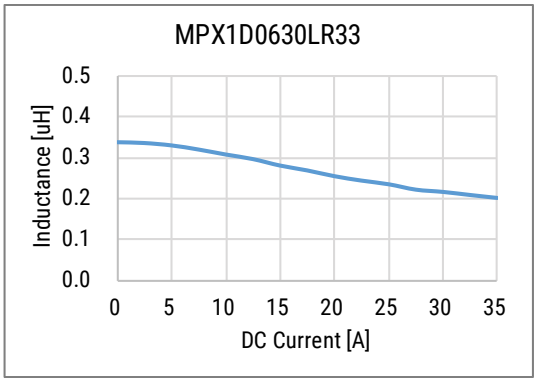


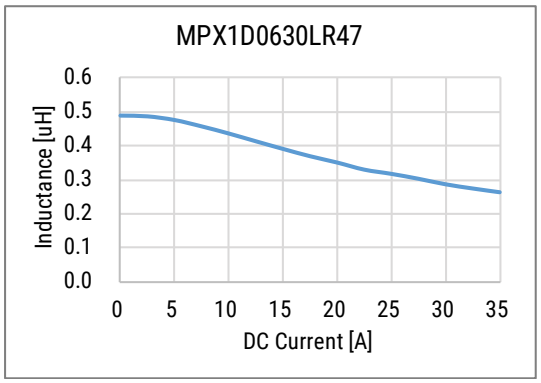


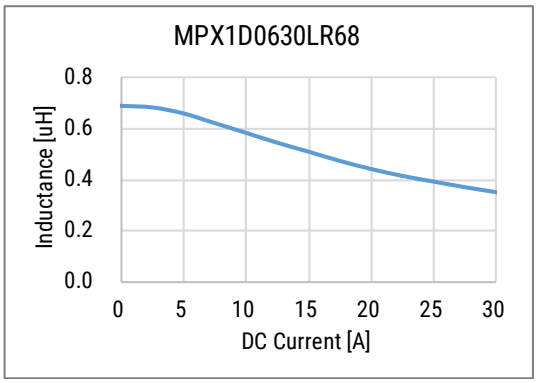

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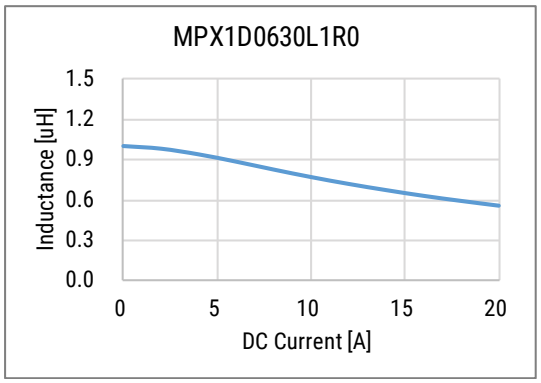


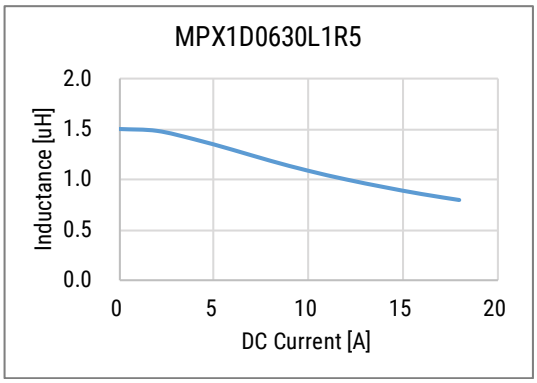


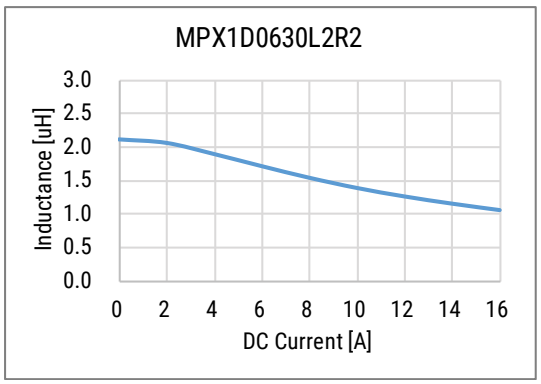


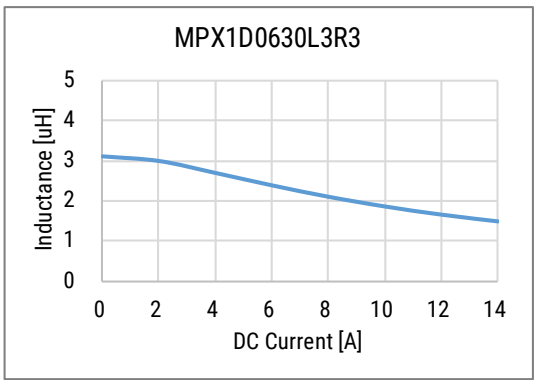


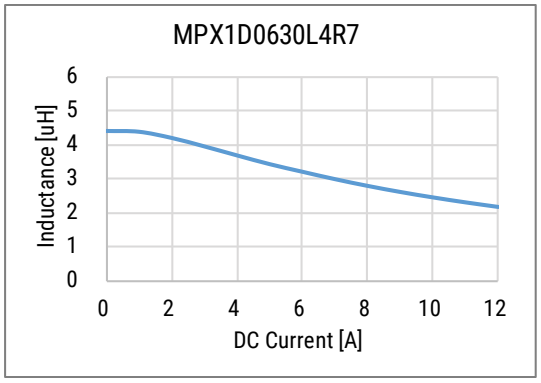


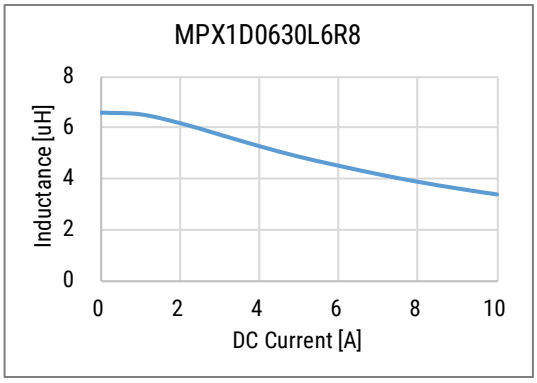


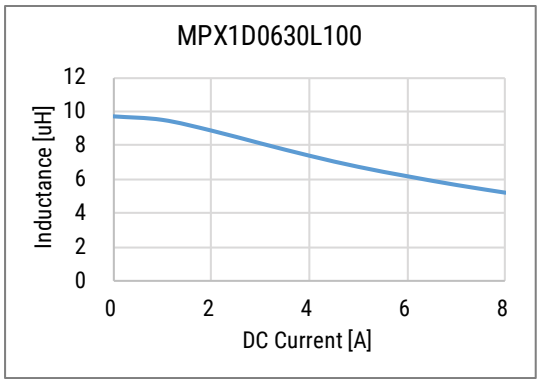


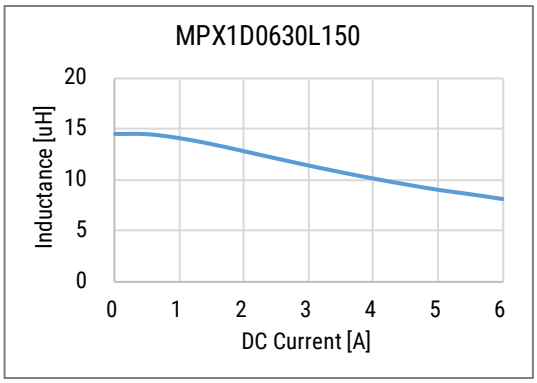

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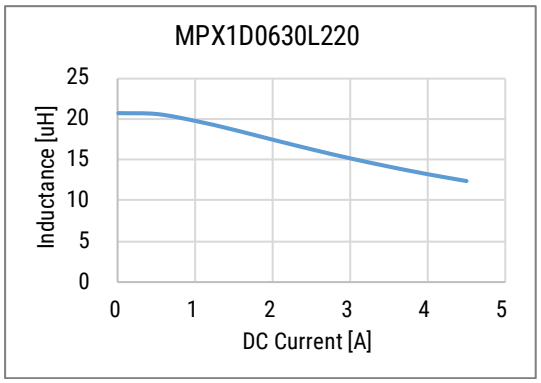


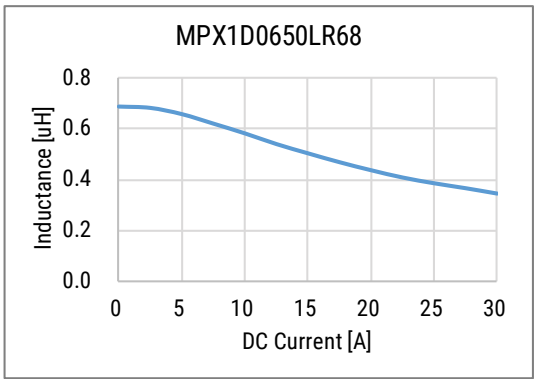


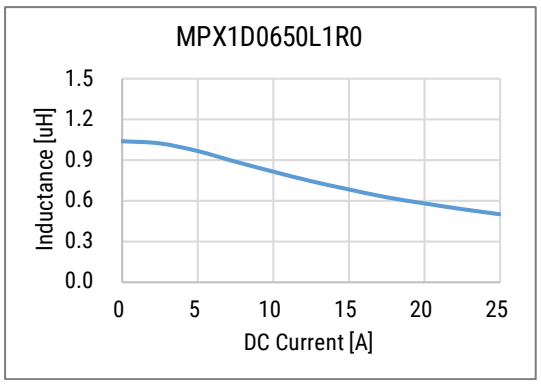


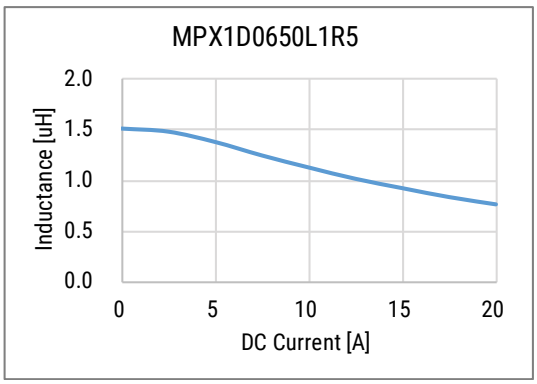


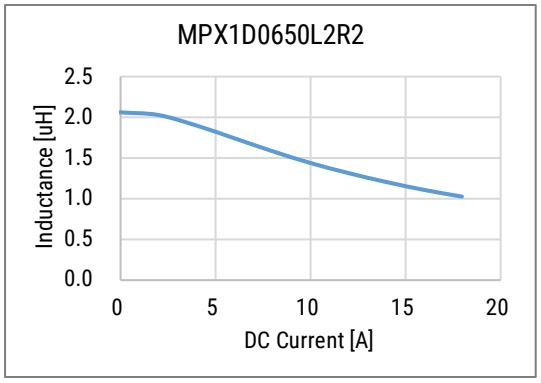


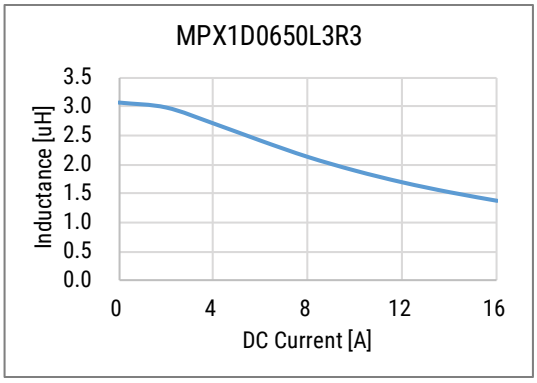


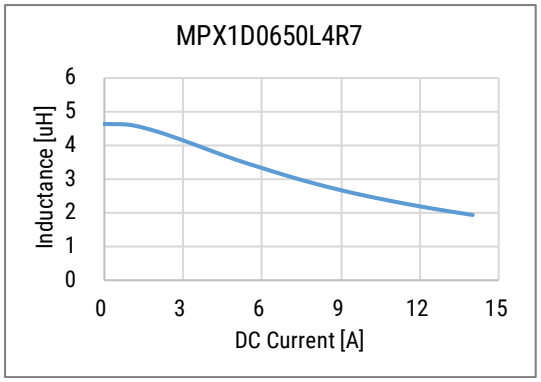


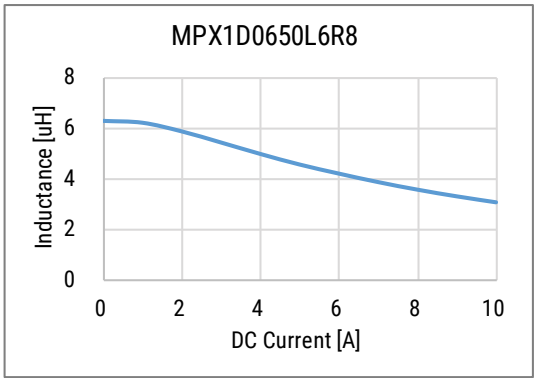

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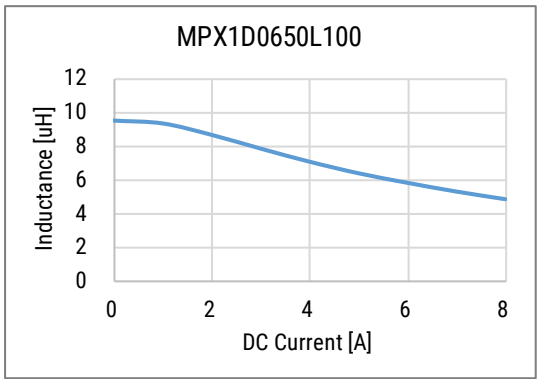


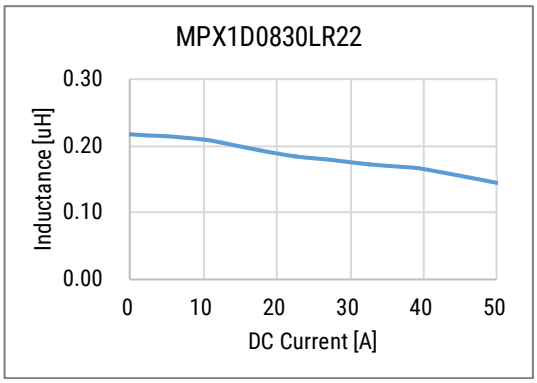


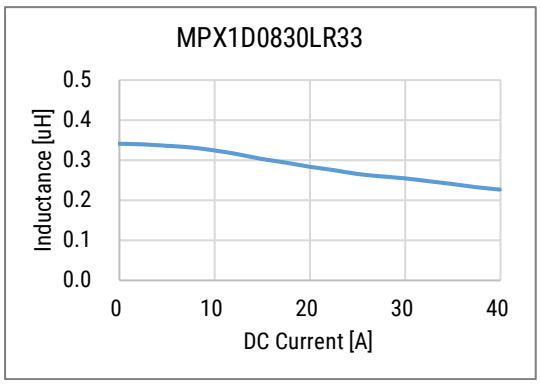


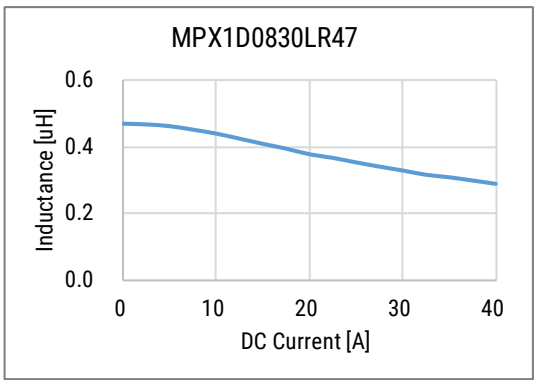


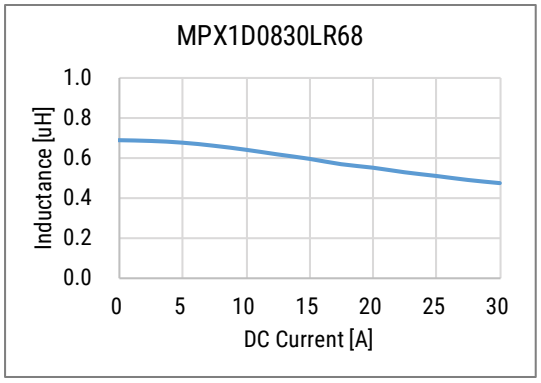


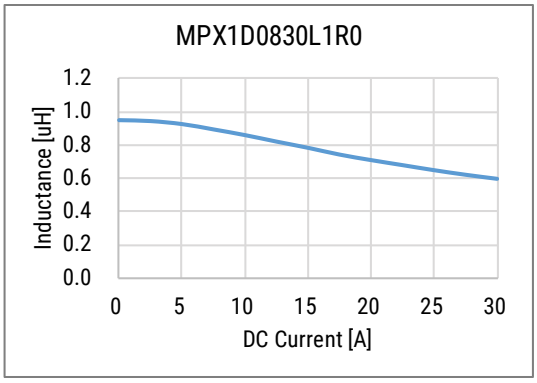


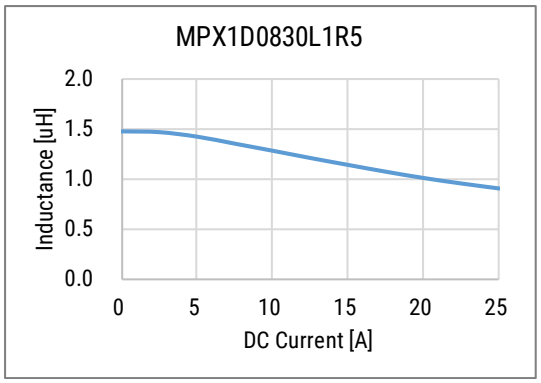


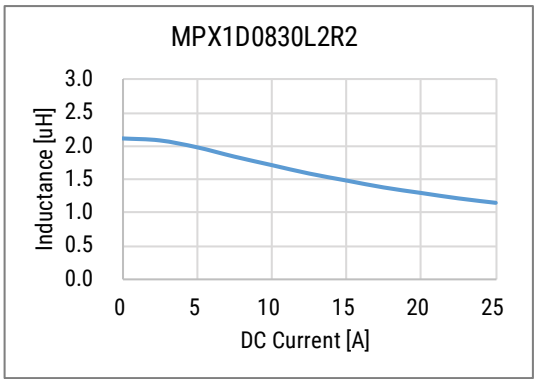

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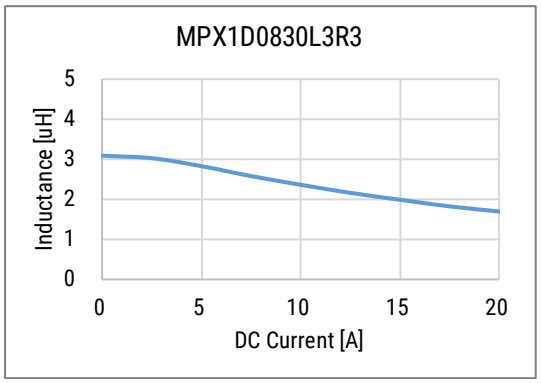


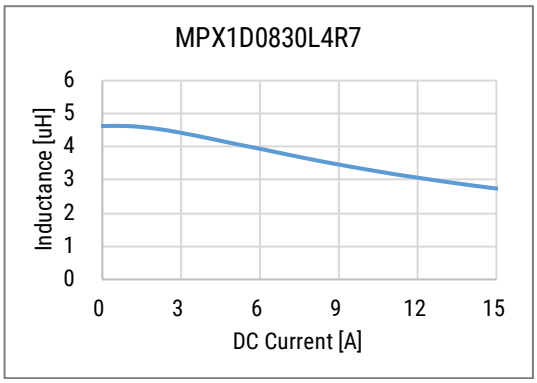


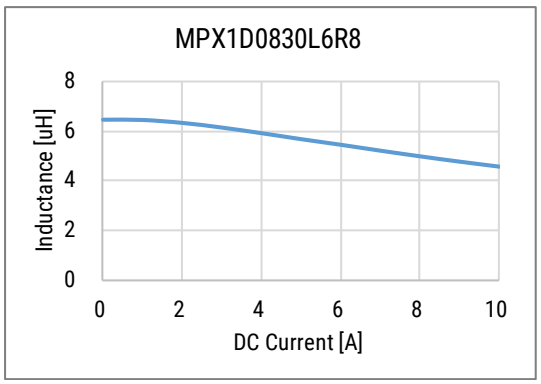


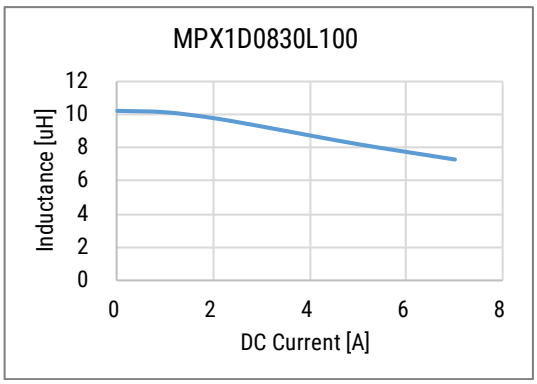


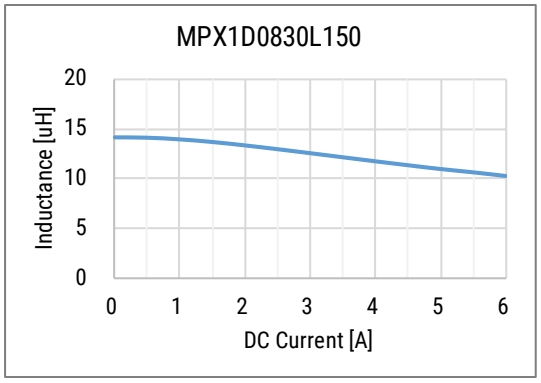


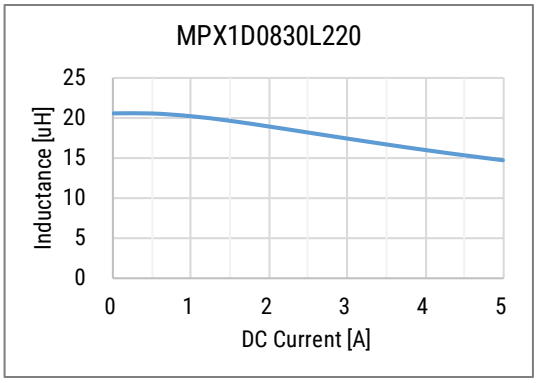


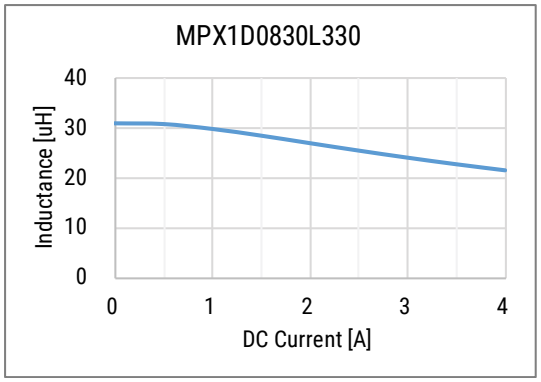


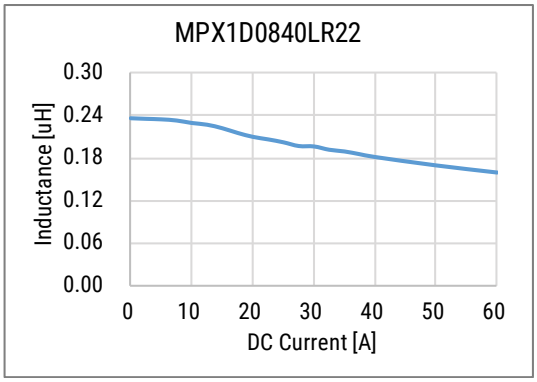

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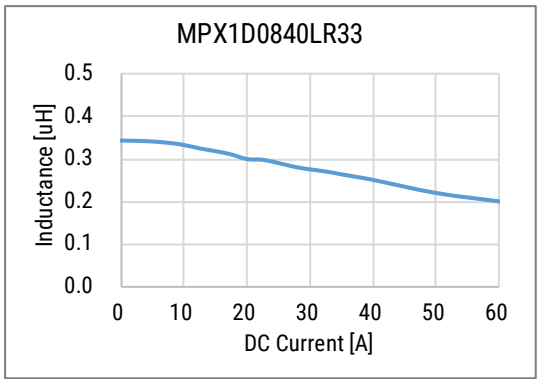


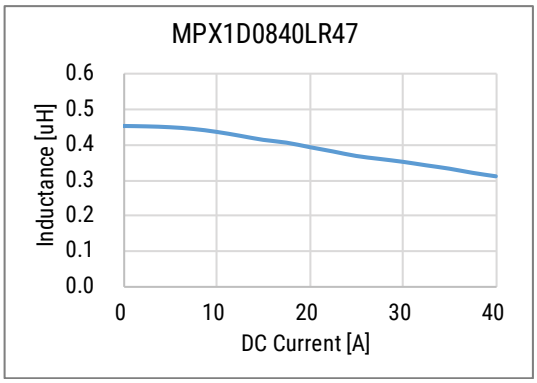


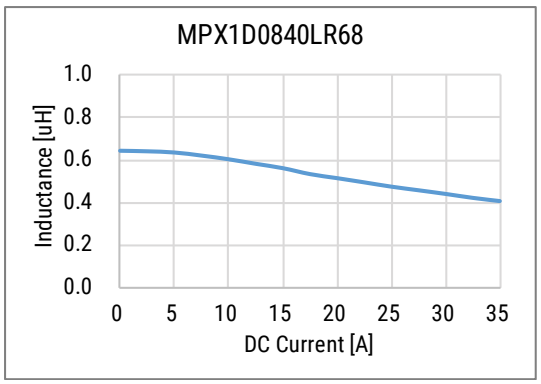


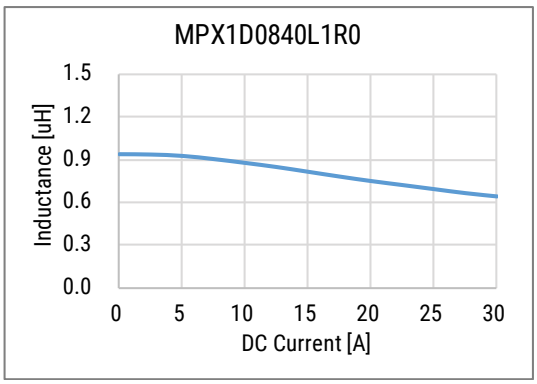


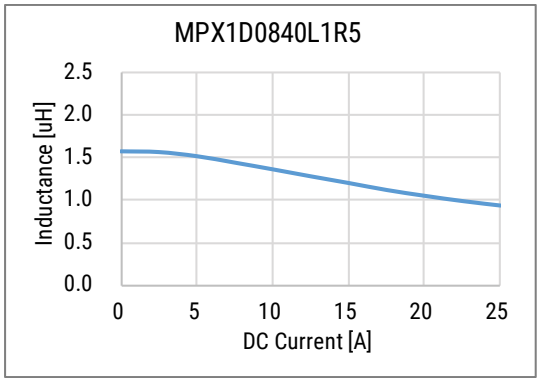


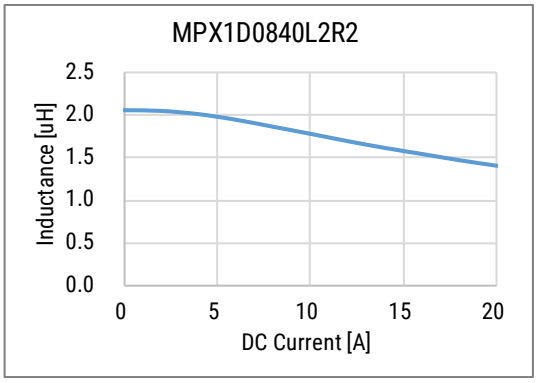


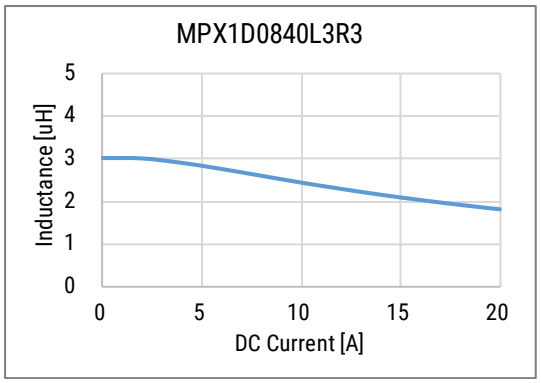


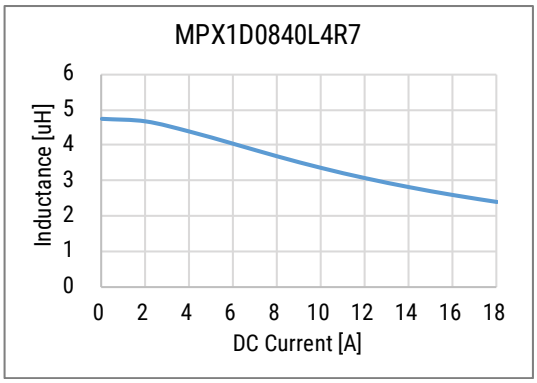

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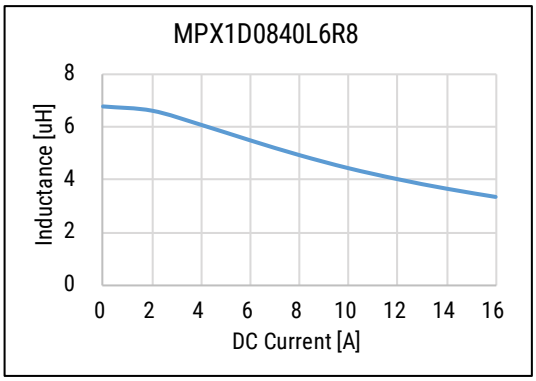


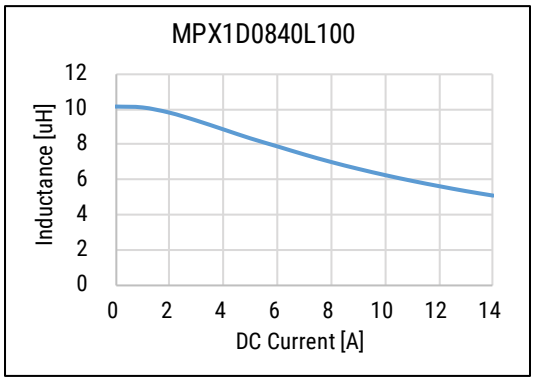


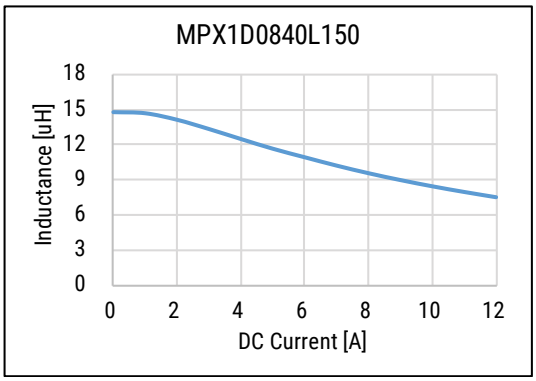


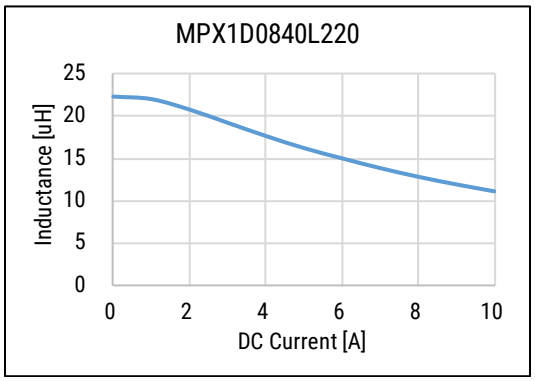


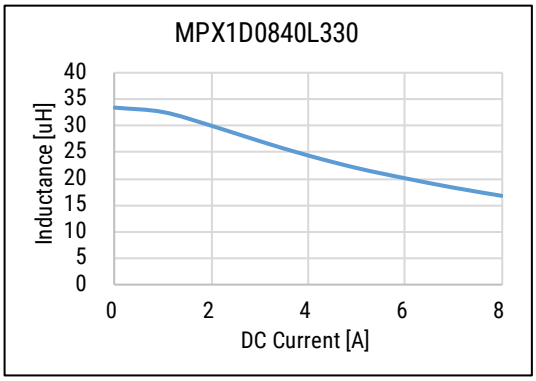


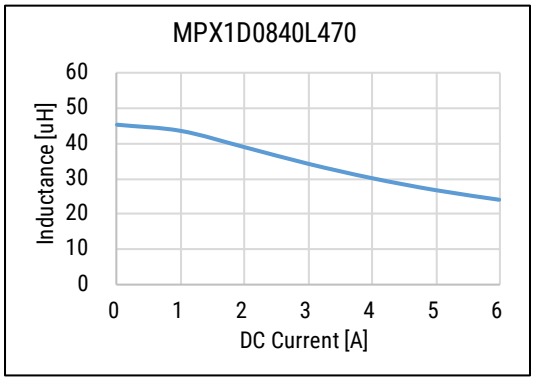


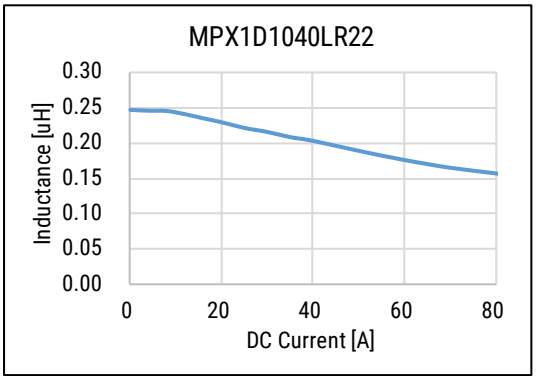


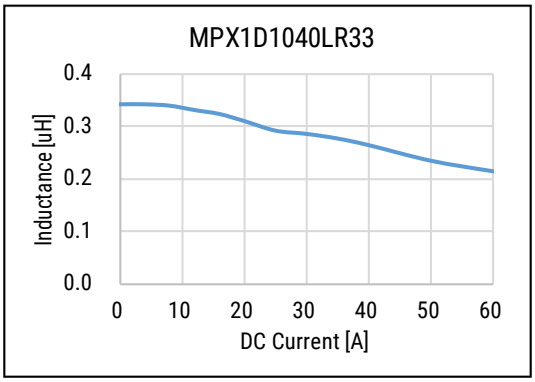

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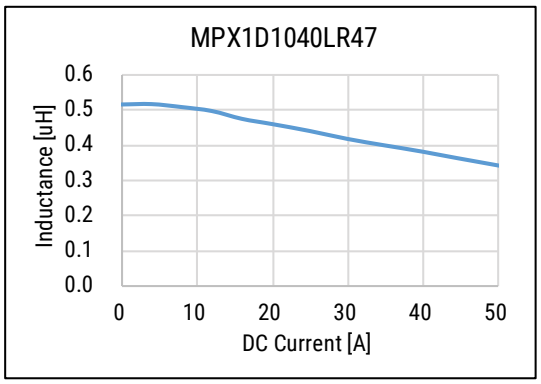


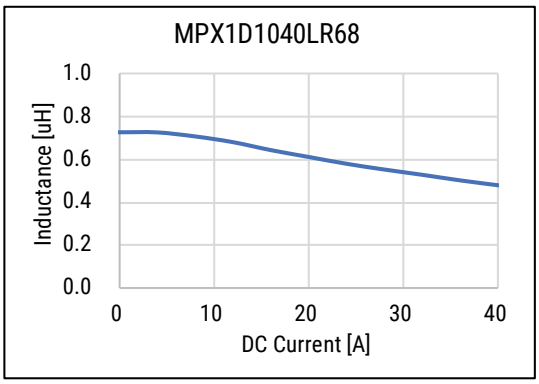


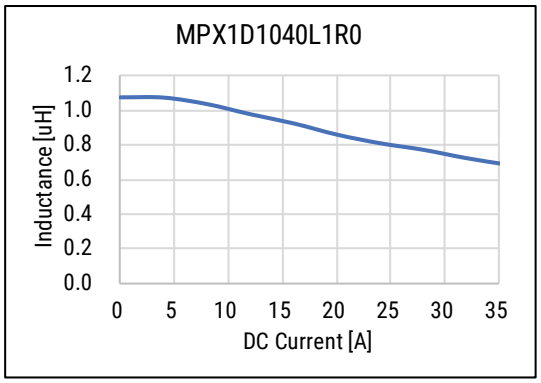


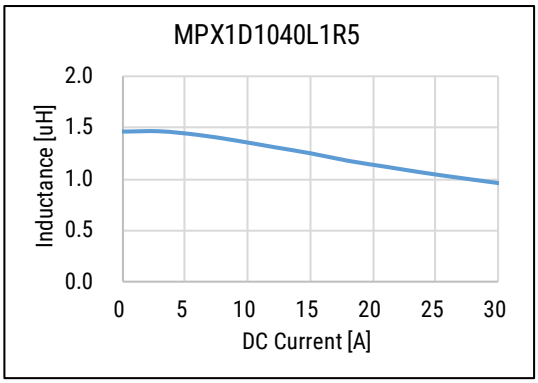


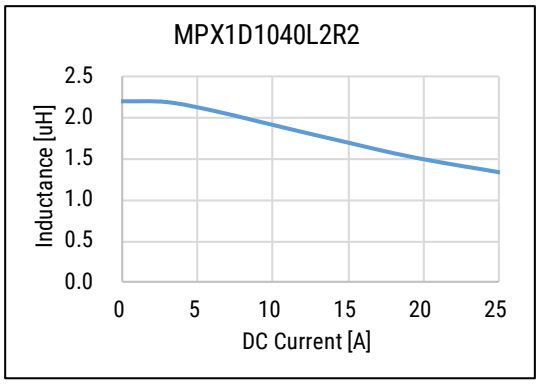


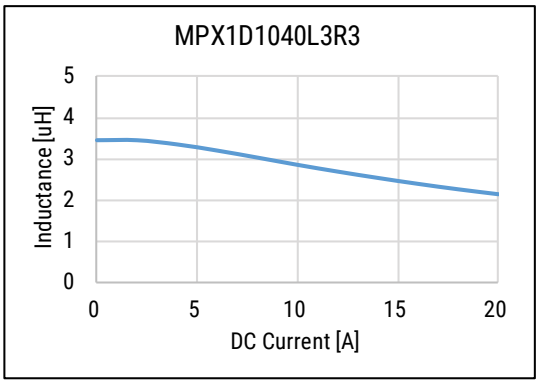


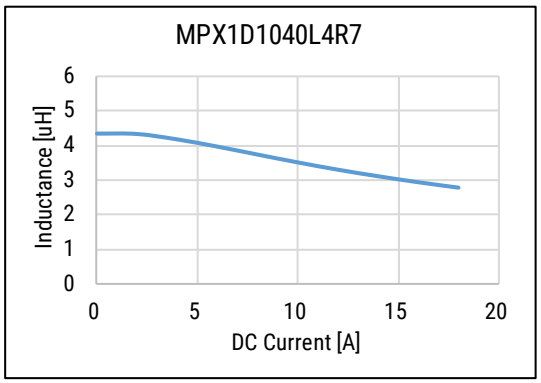


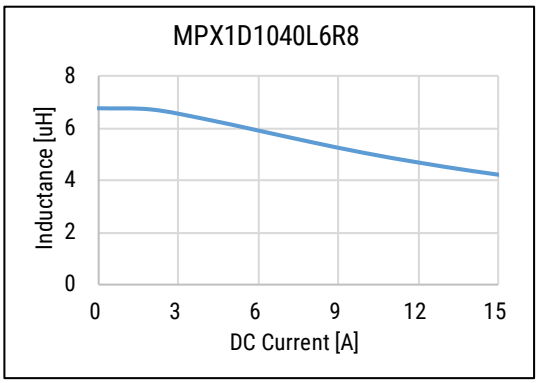

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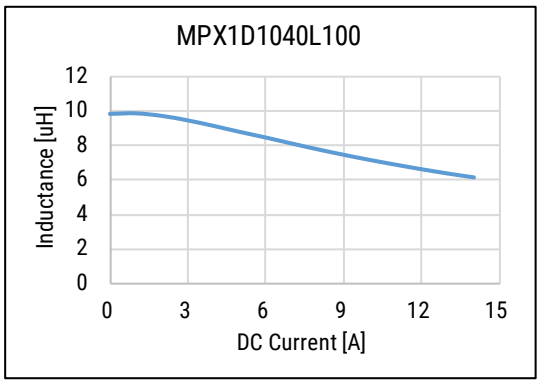


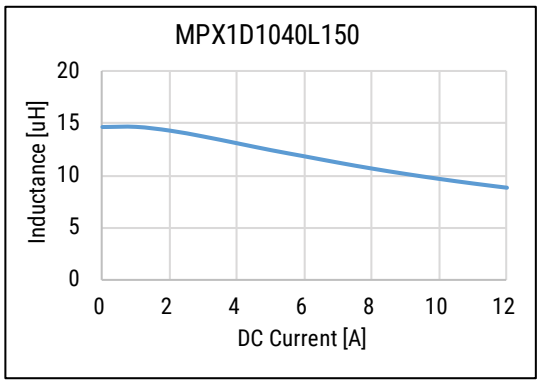


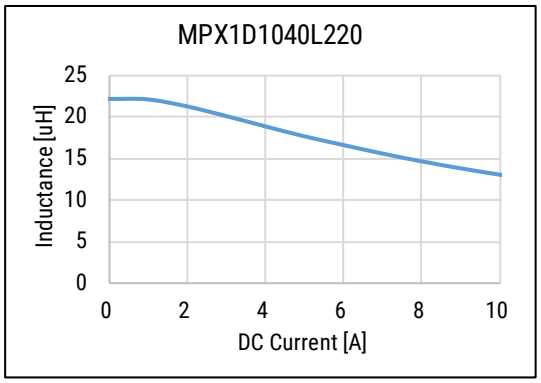


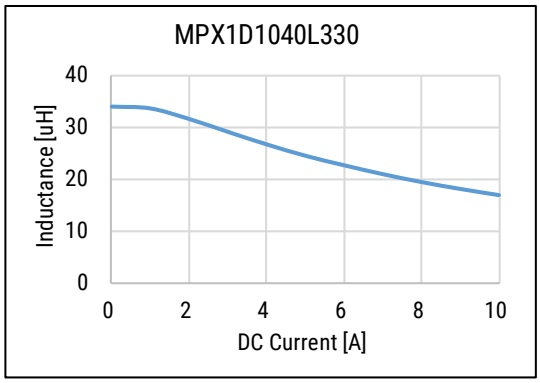


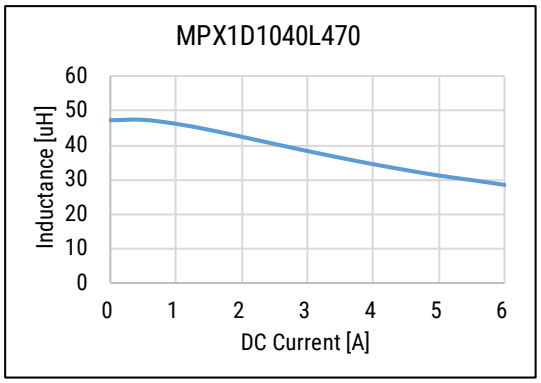


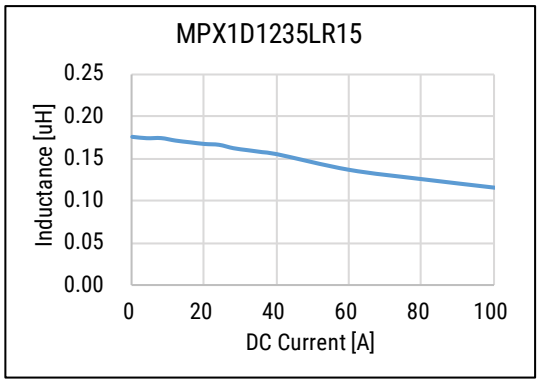


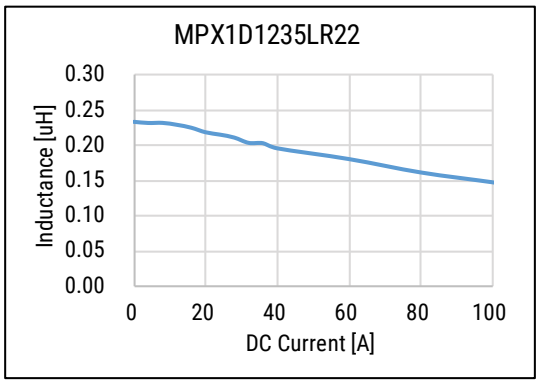


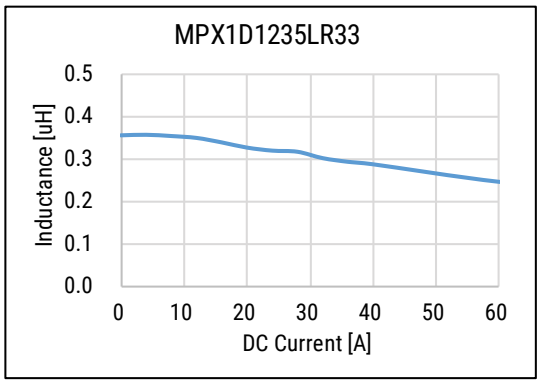

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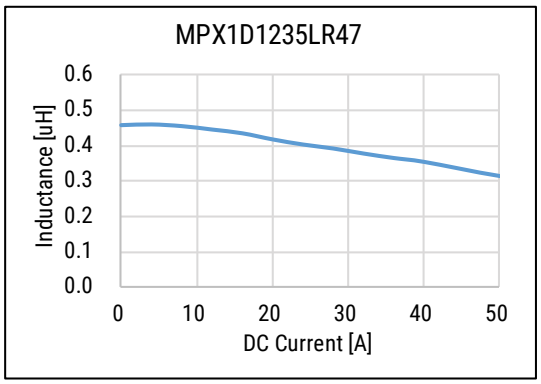


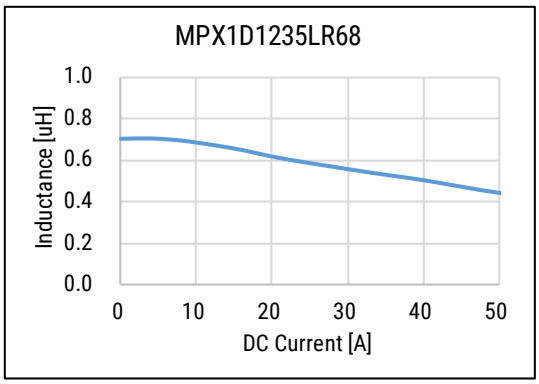


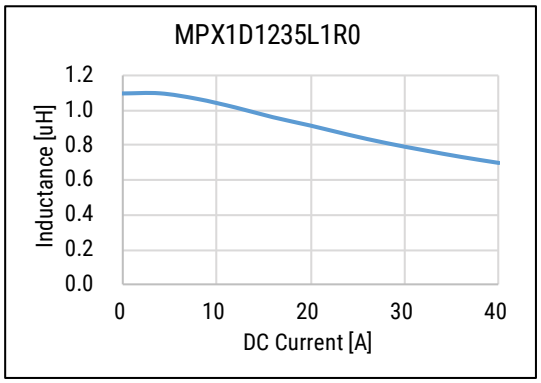


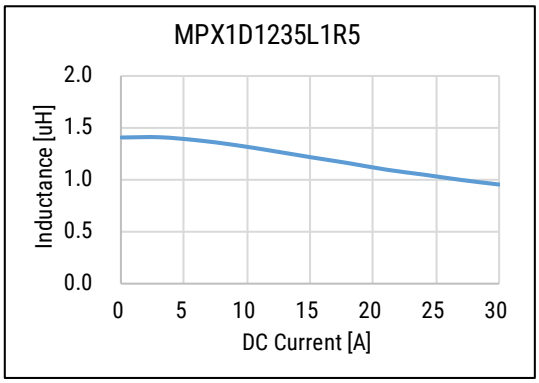


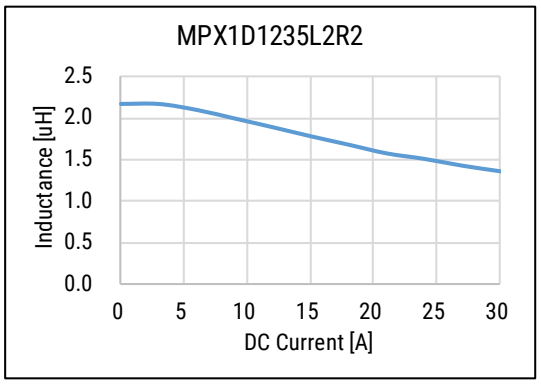


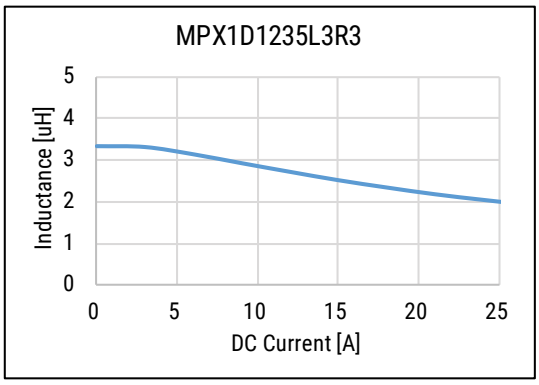


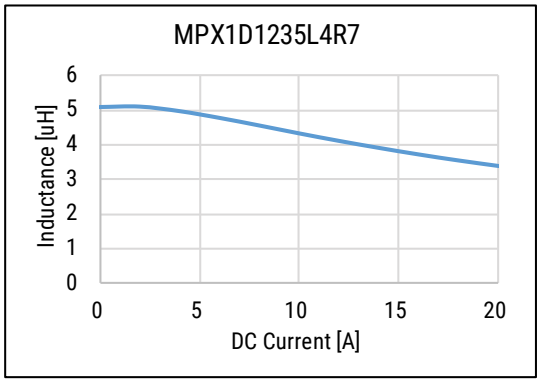


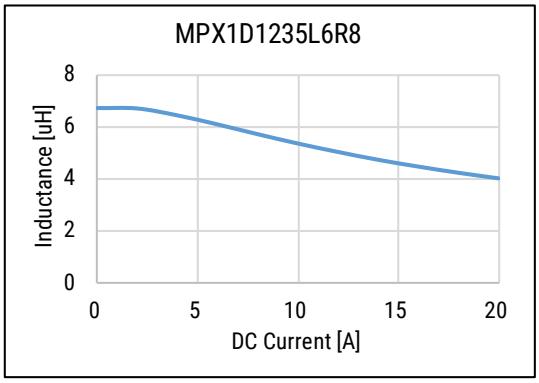

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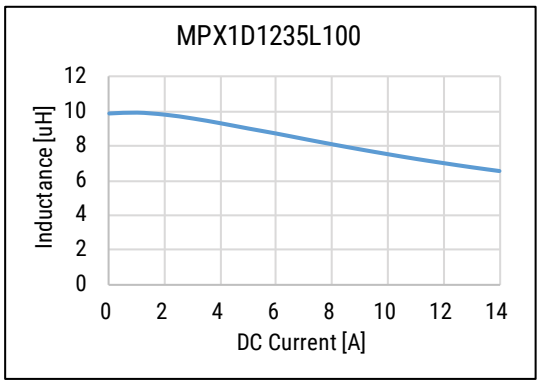


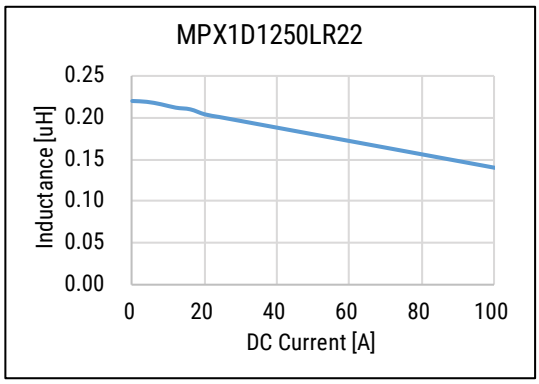


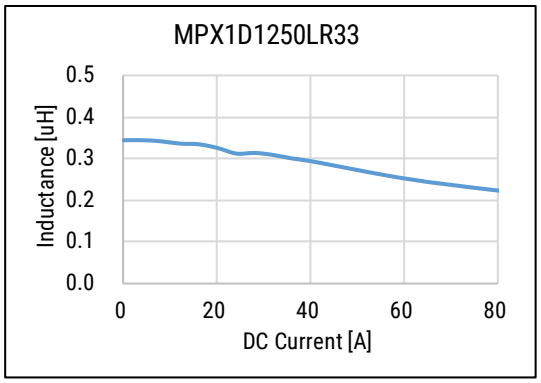


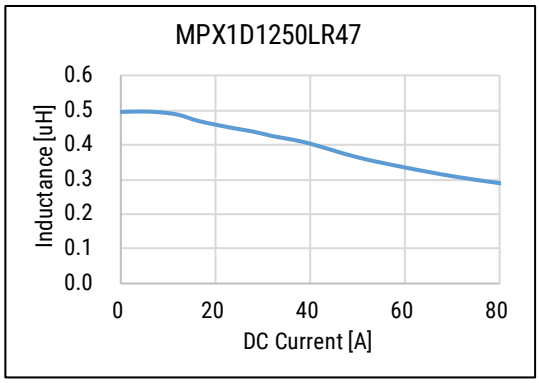


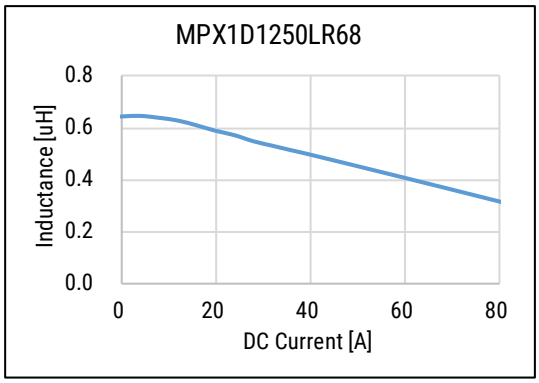


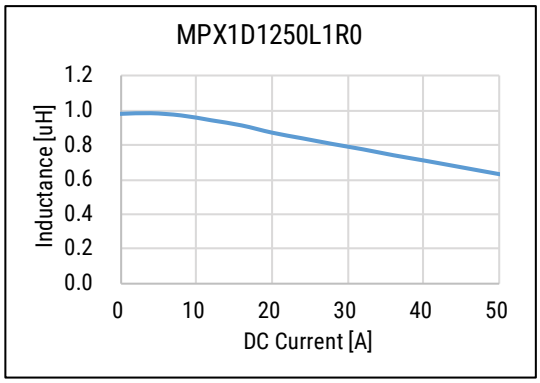


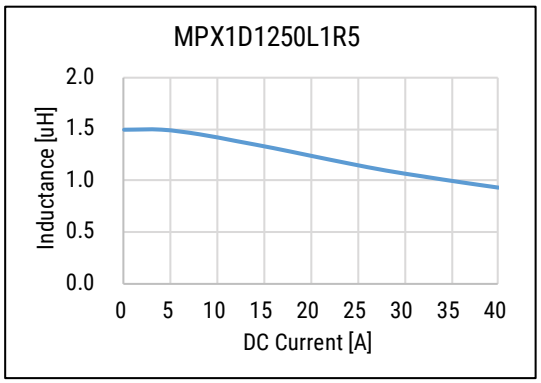


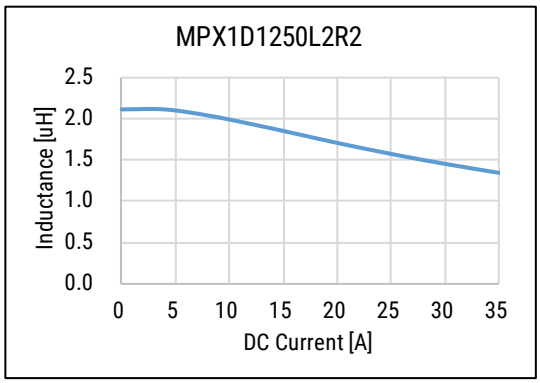

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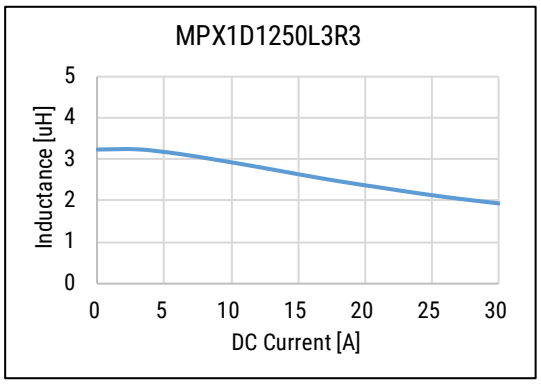


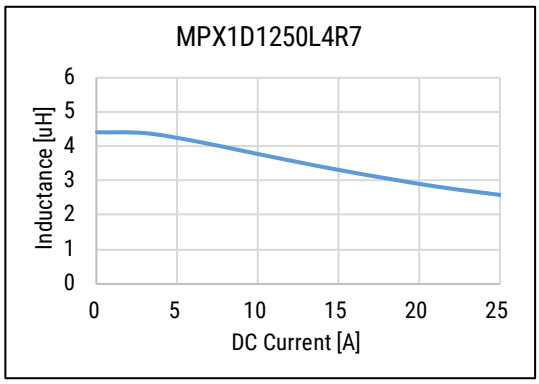


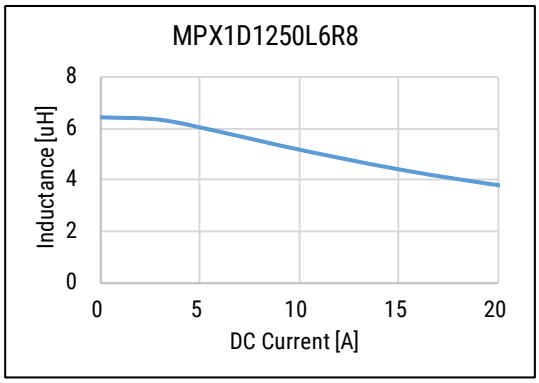


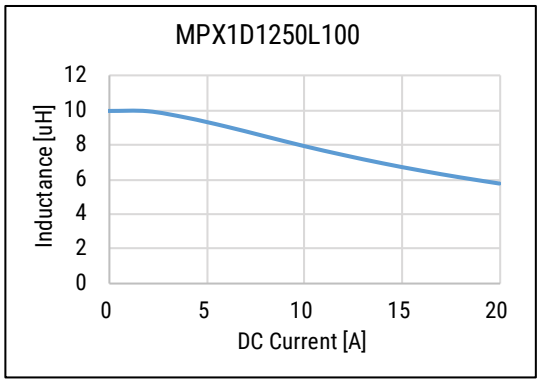


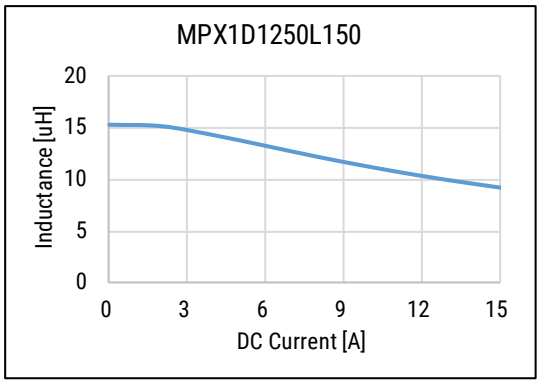


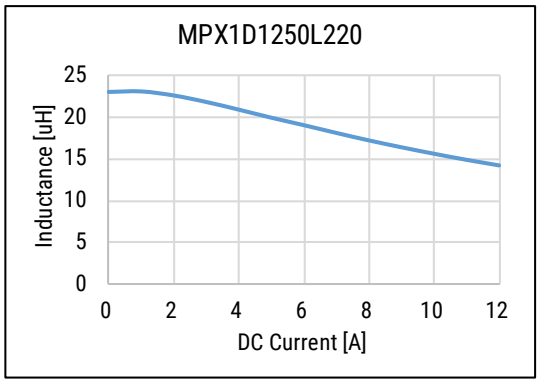


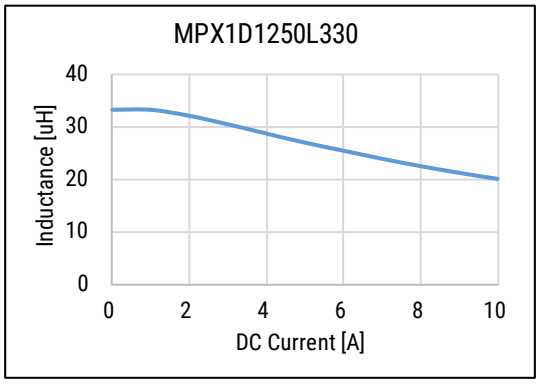


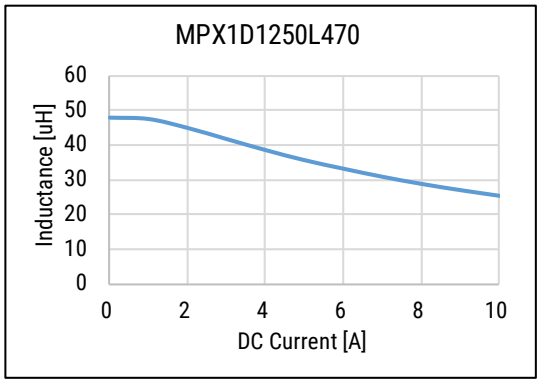

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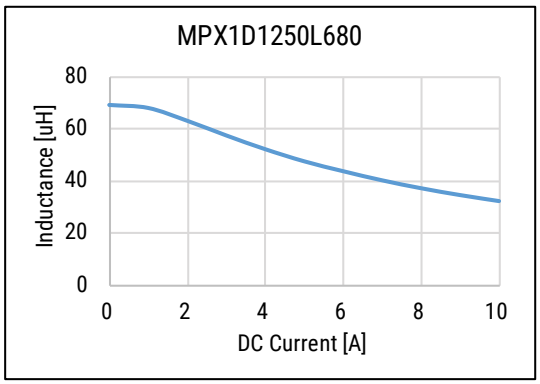


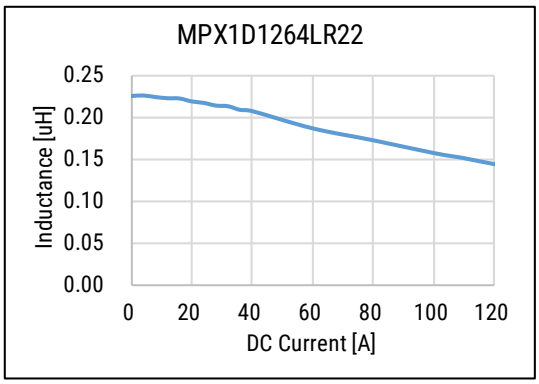


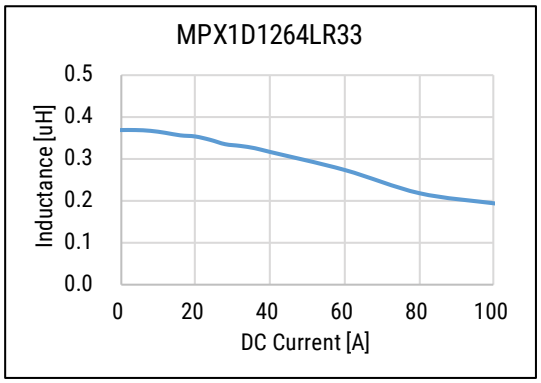


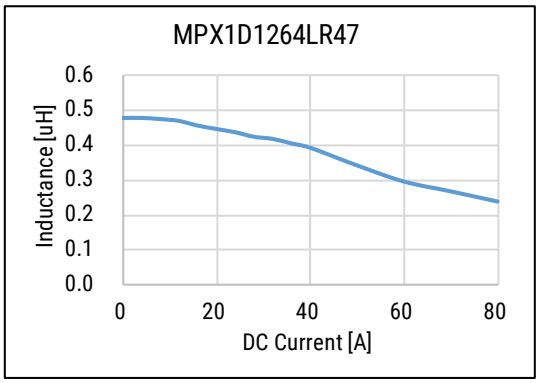


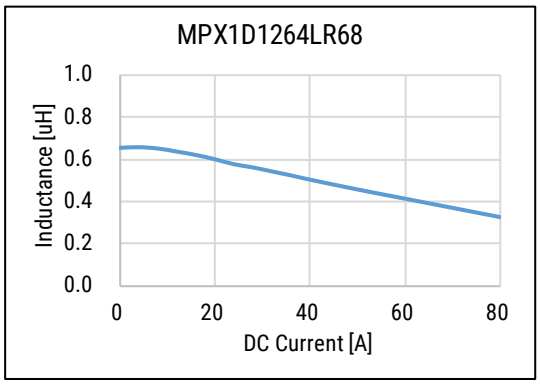


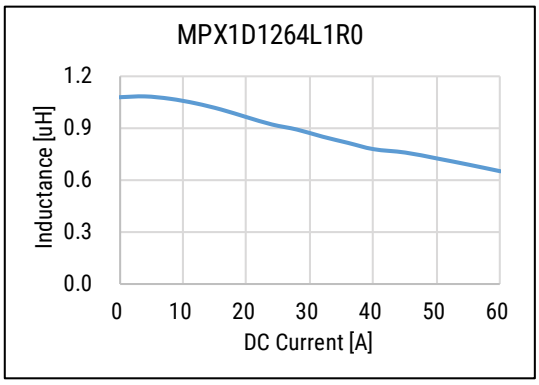


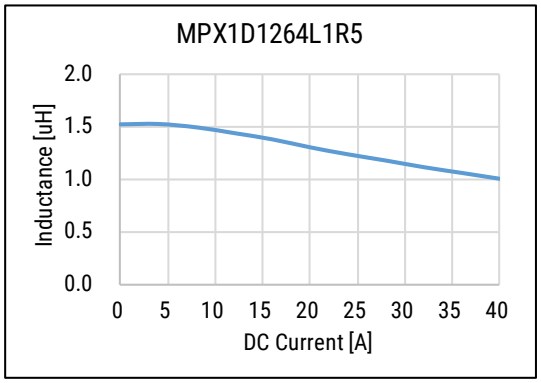


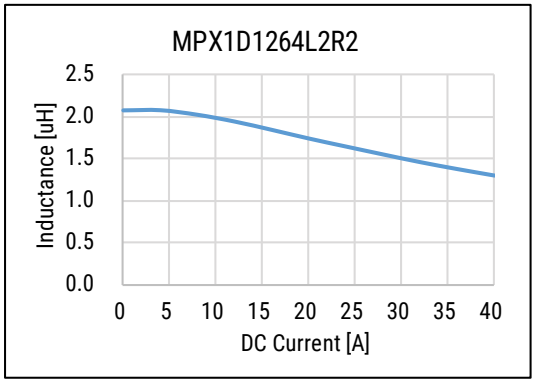

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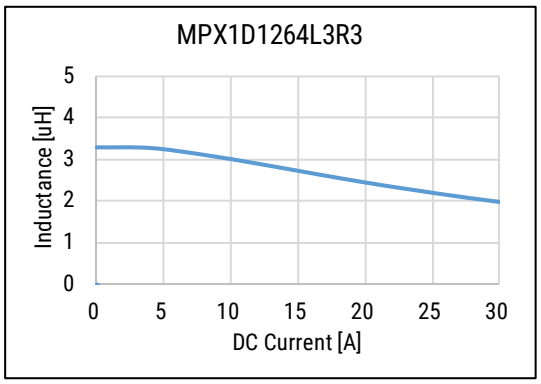


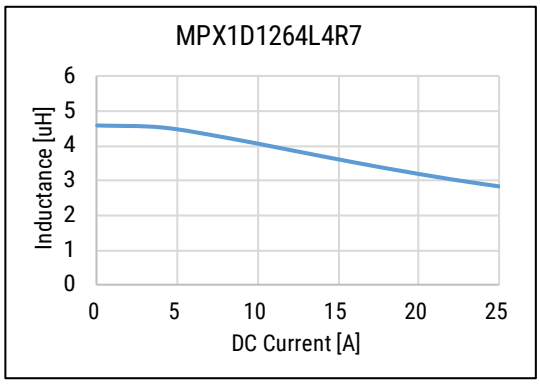


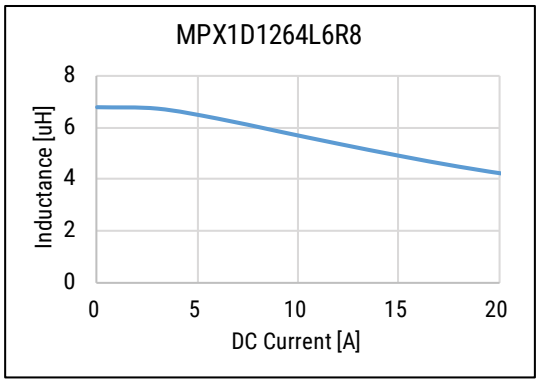


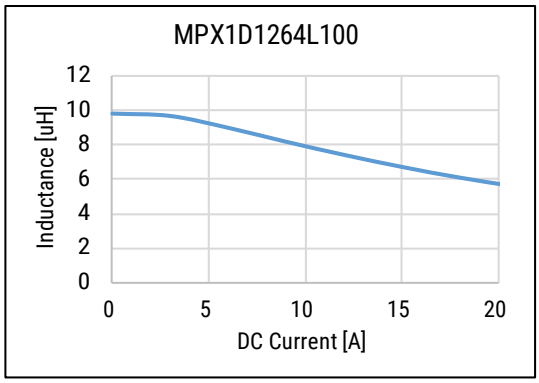


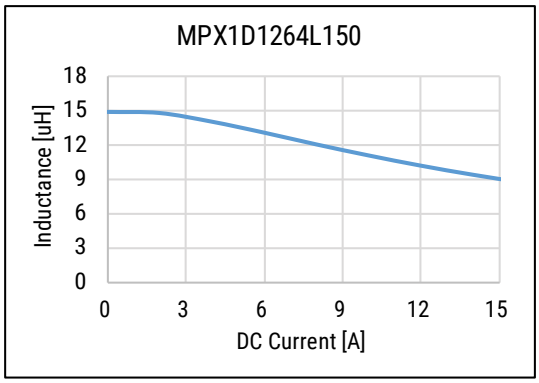


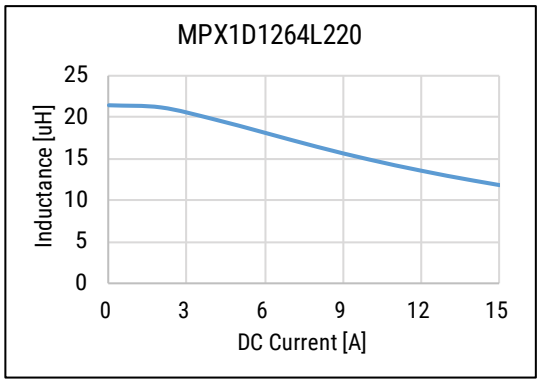


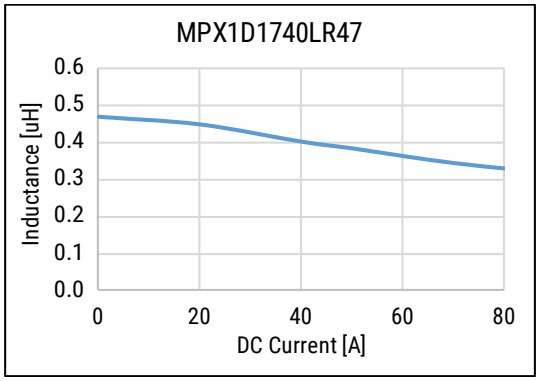


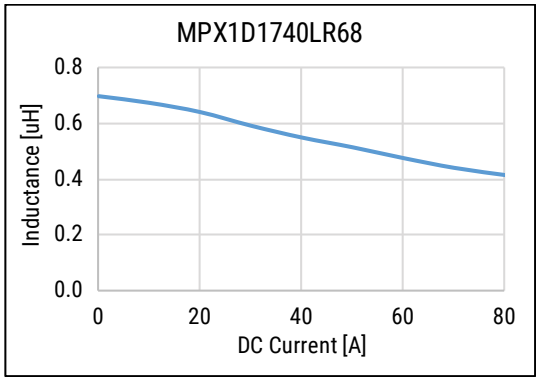

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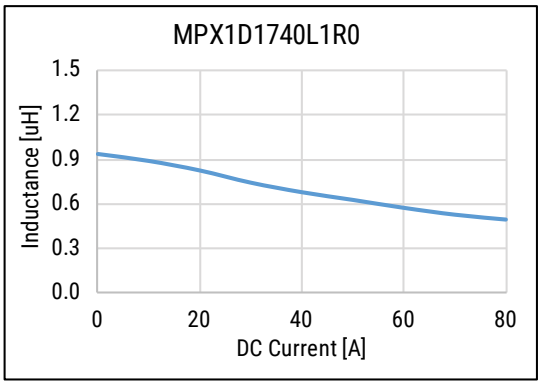


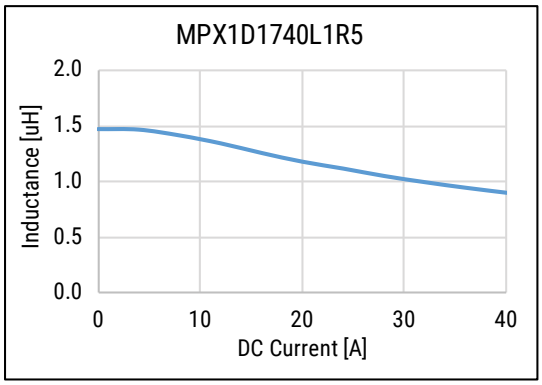


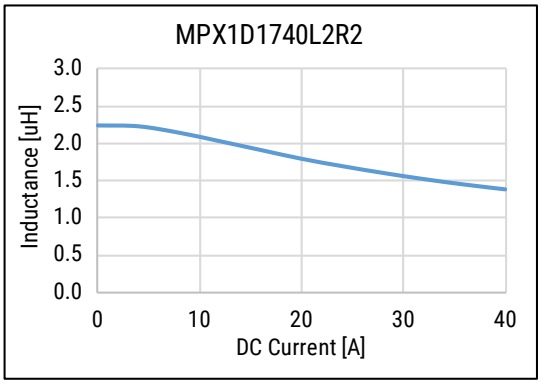


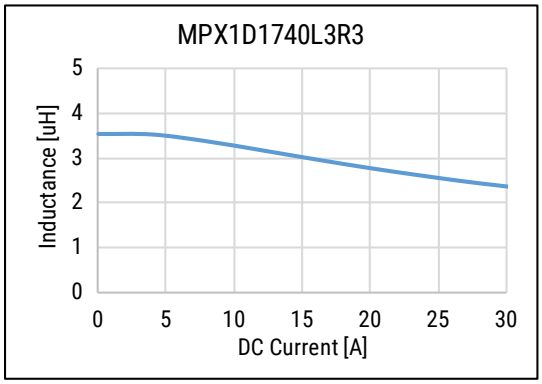


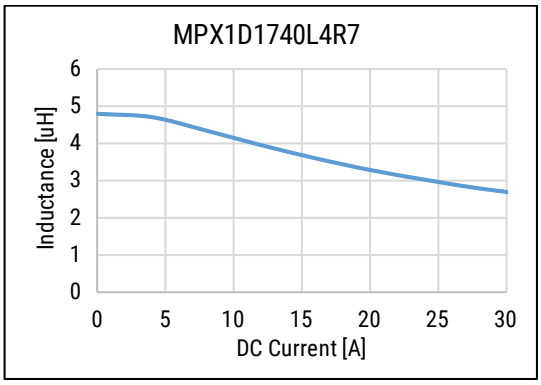


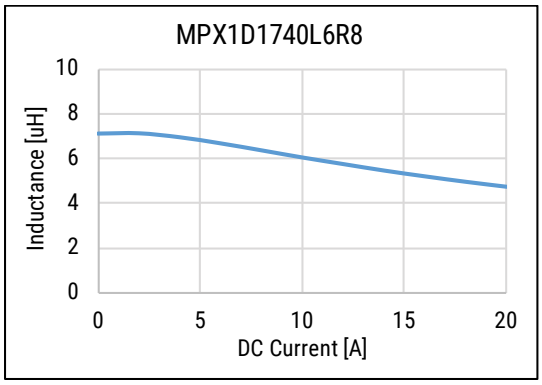


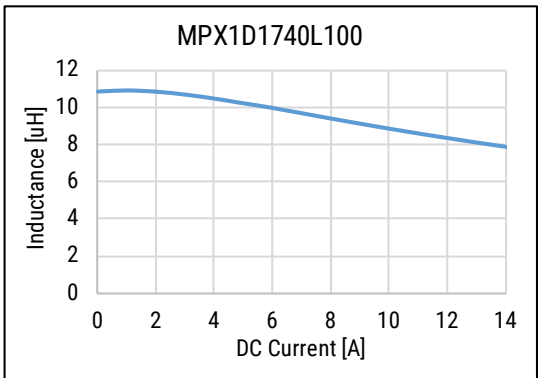


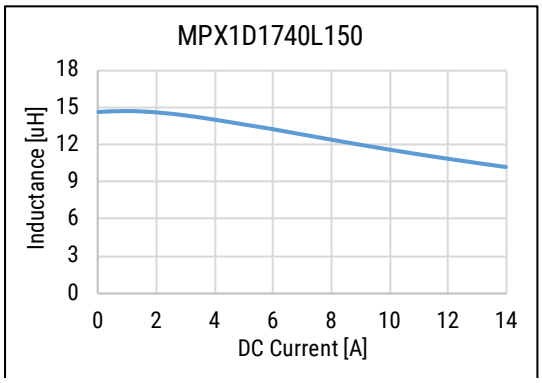

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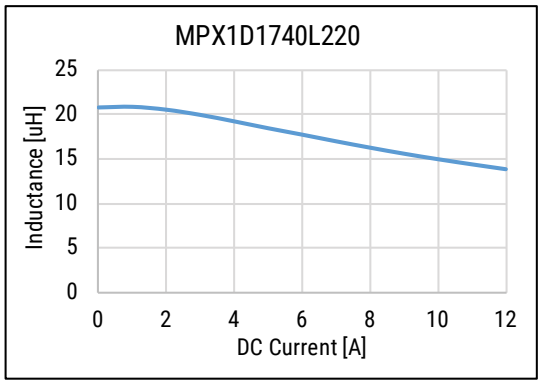


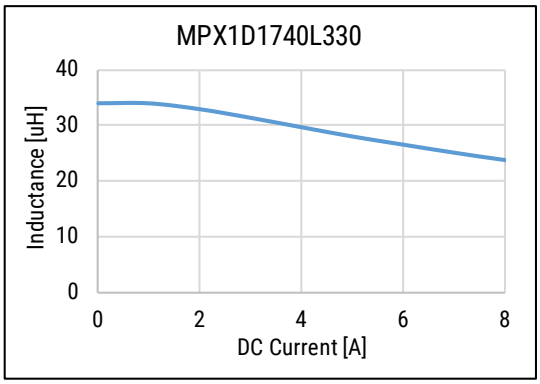


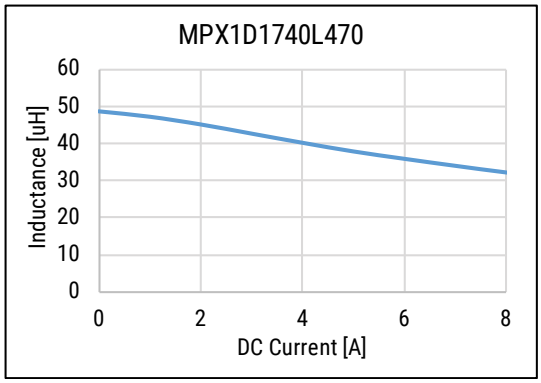


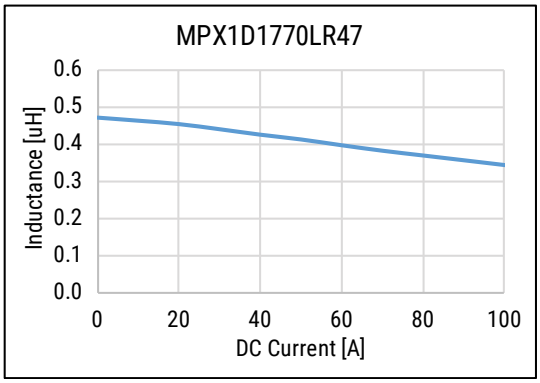


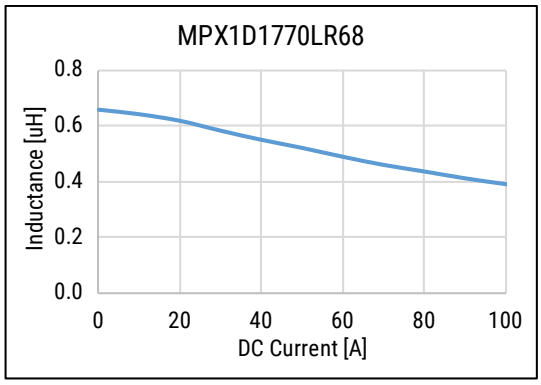


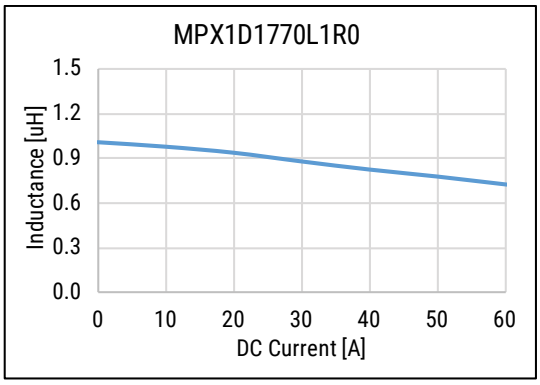


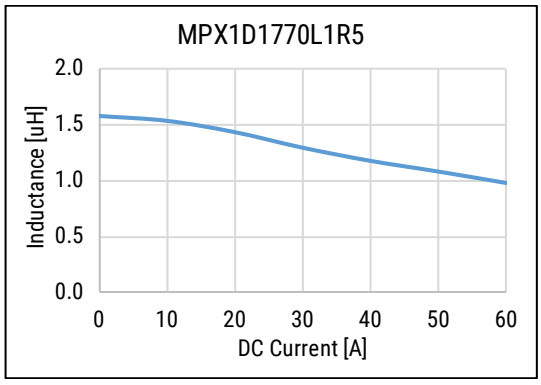


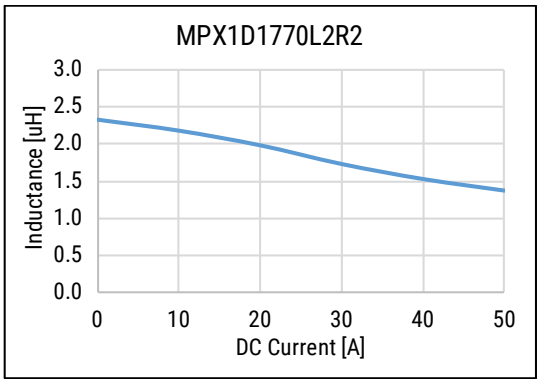

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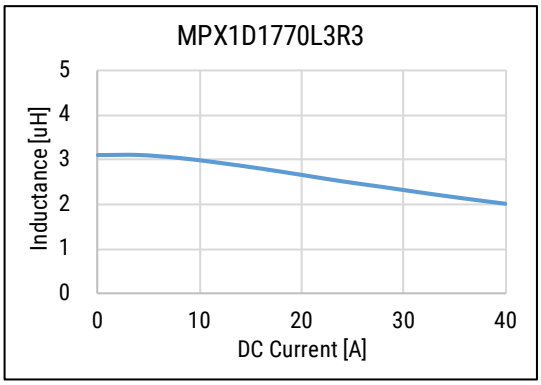


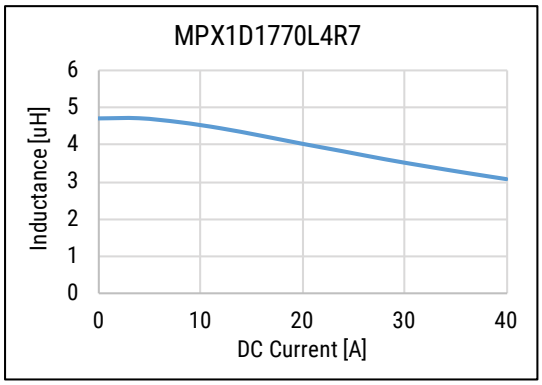


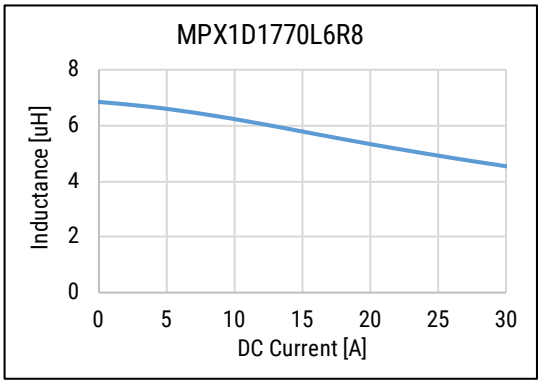


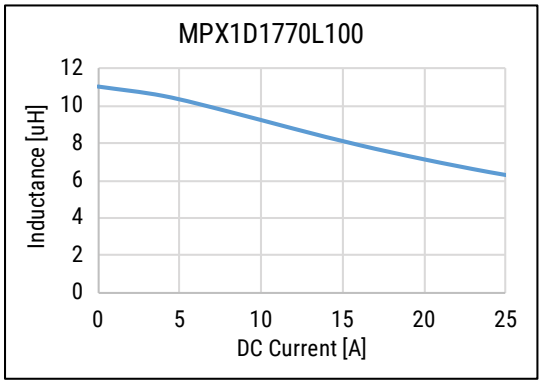


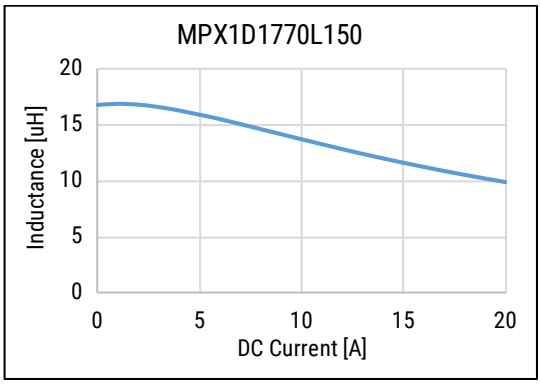


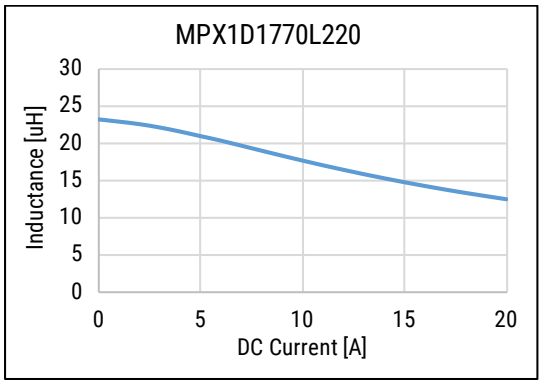


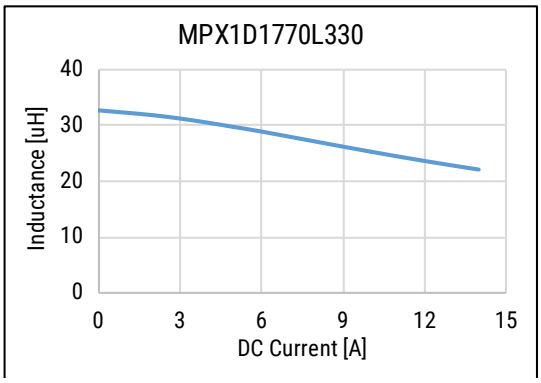


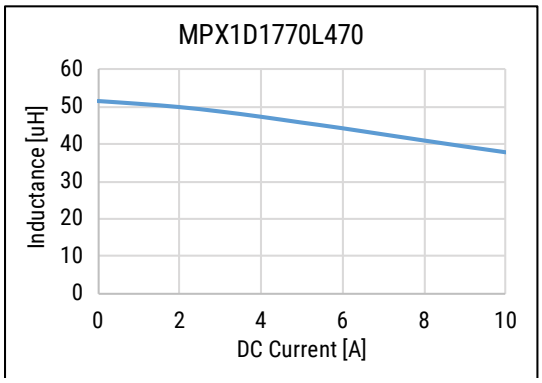

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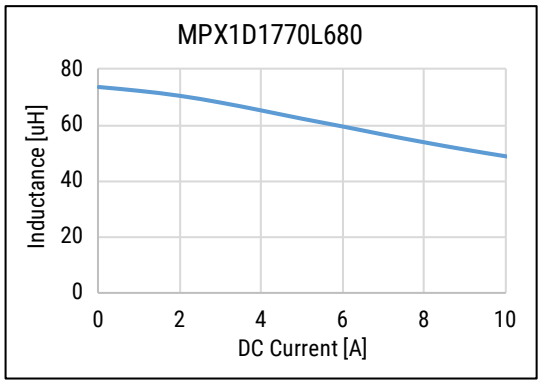


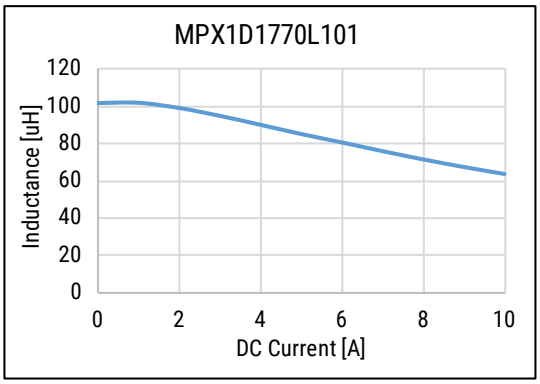


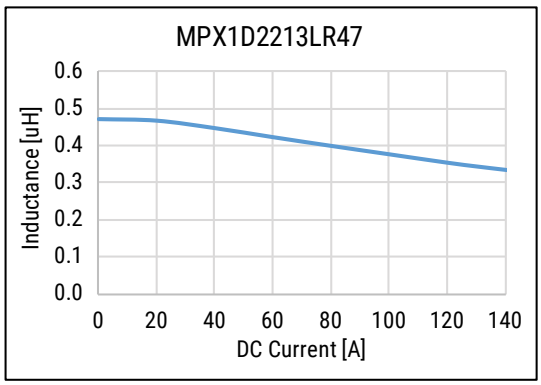


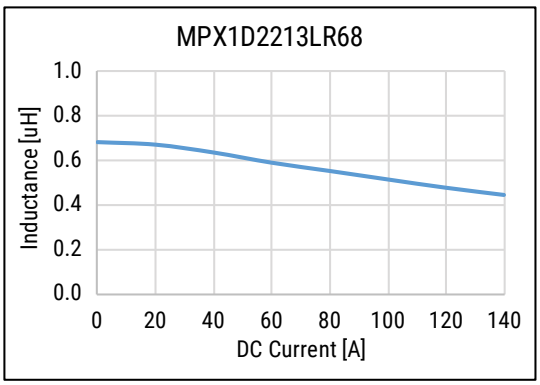


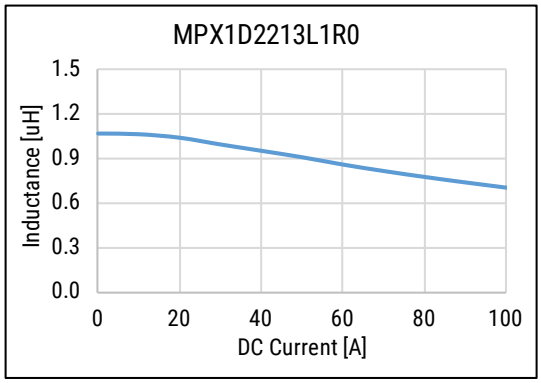


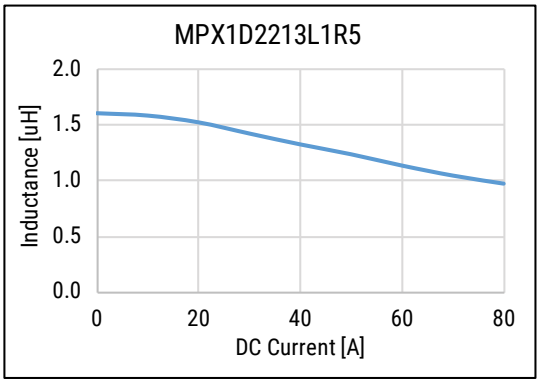


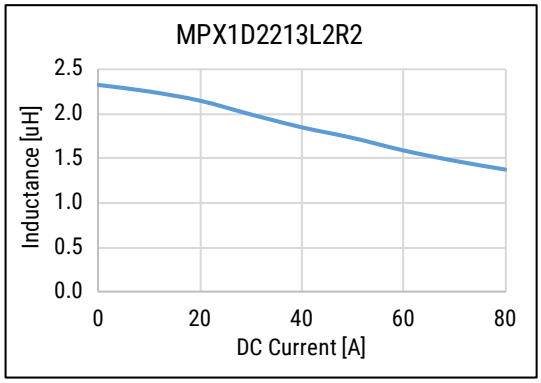


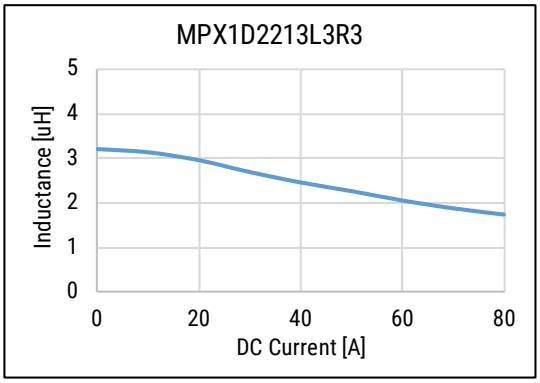

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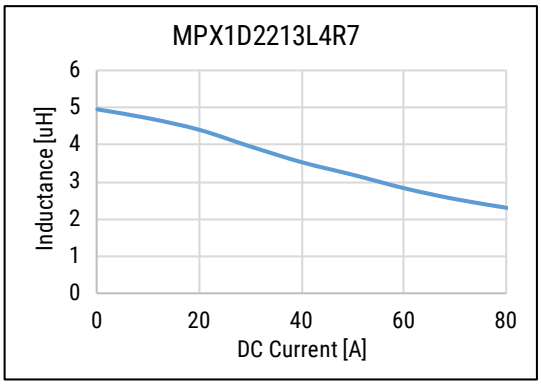
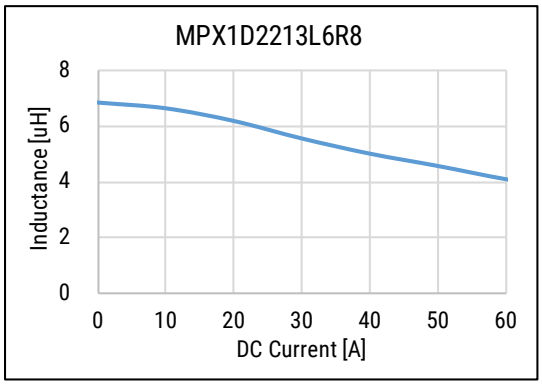
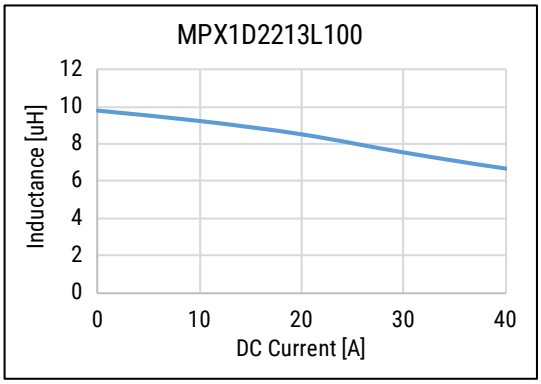
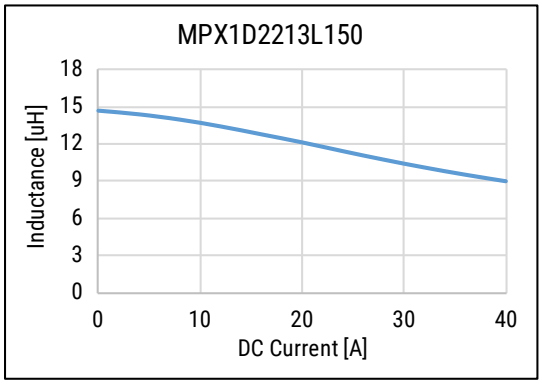
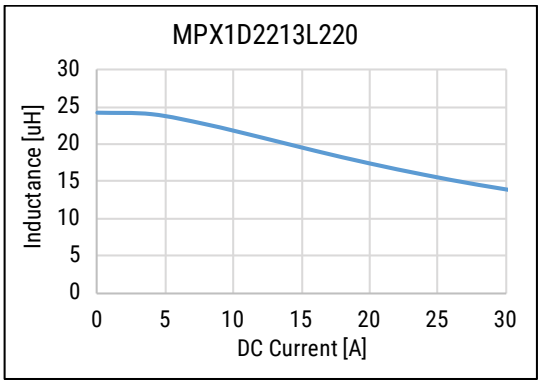
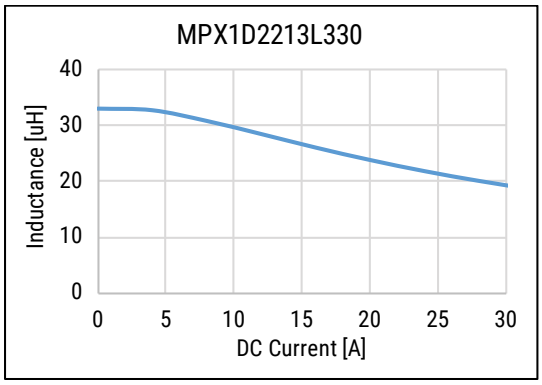


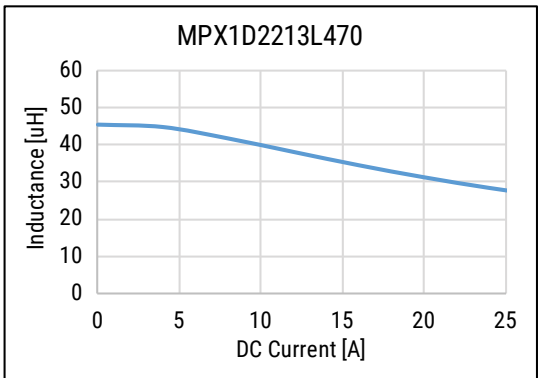



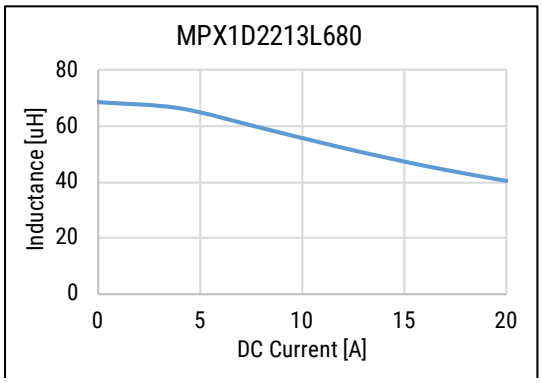



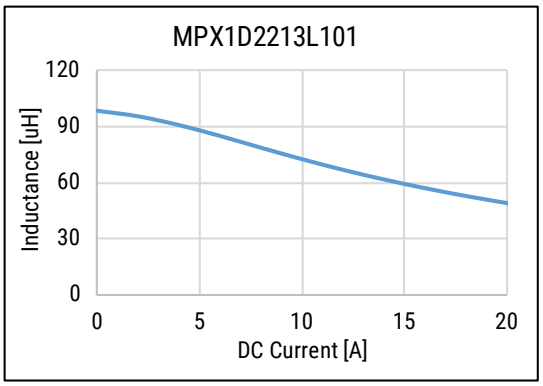



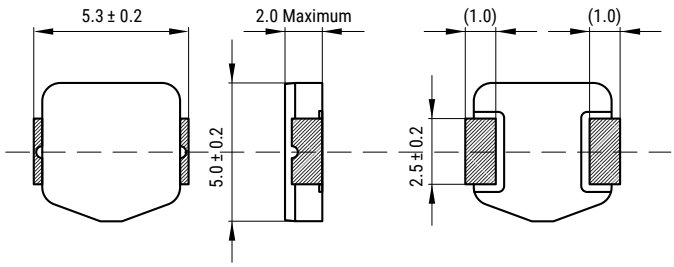
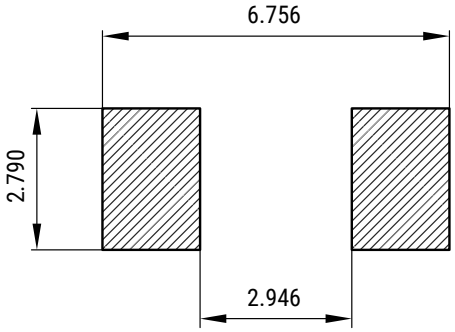
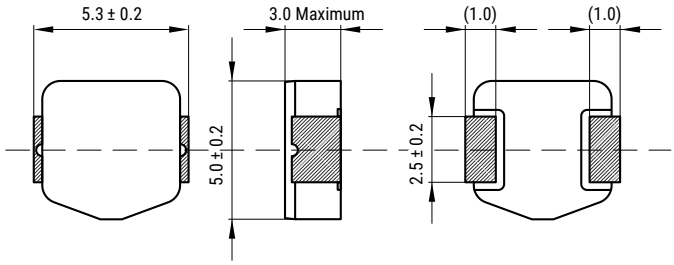
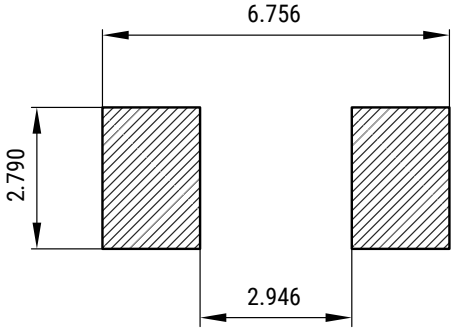



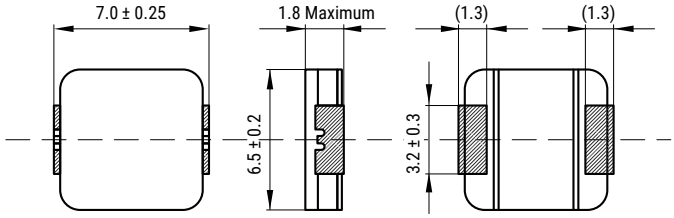
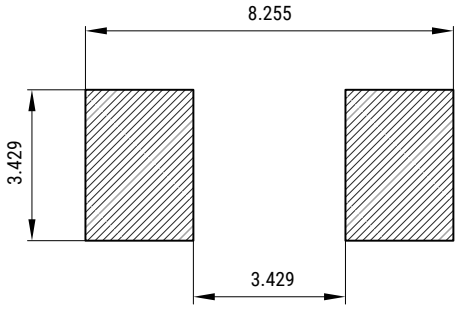
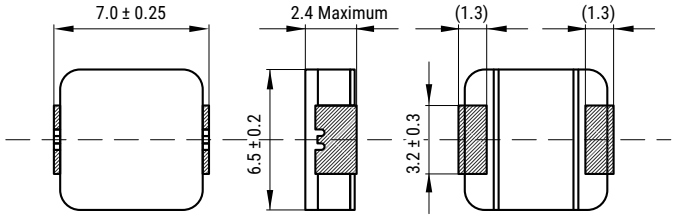
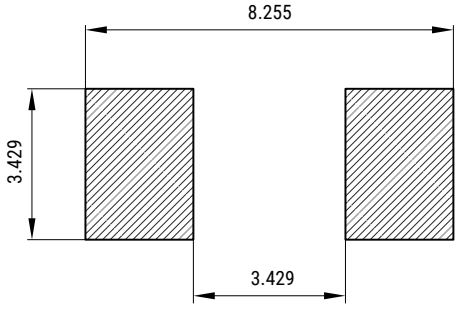
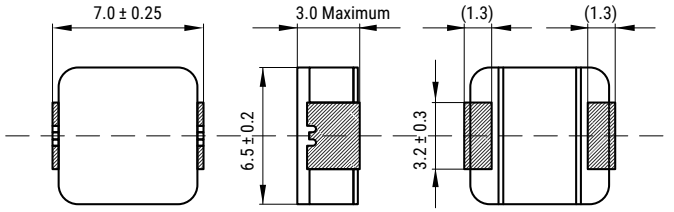
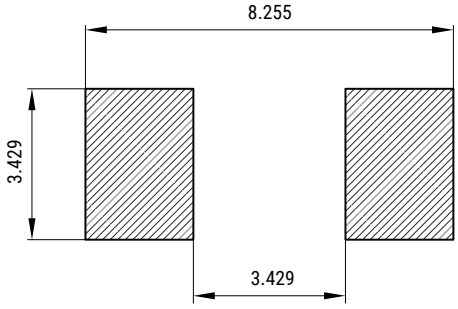
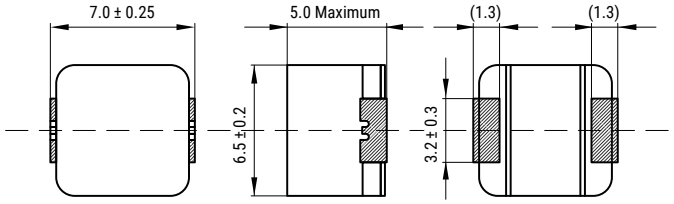
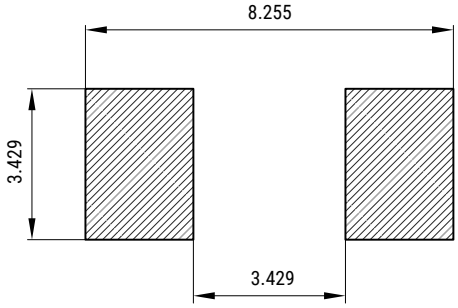
## DC-Superposed Characteristics cont.



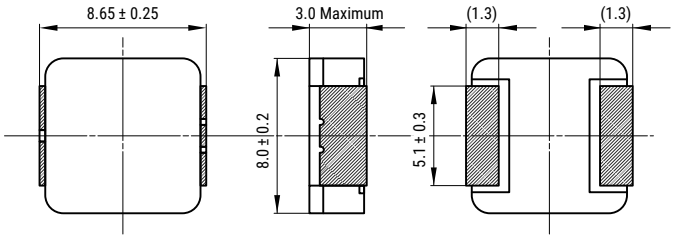
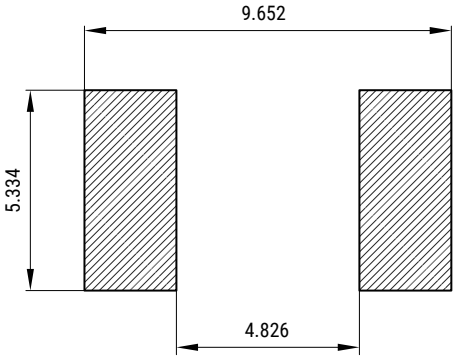
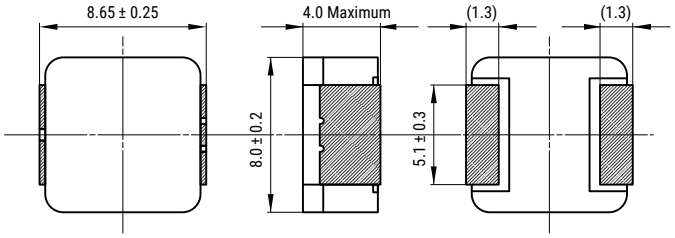
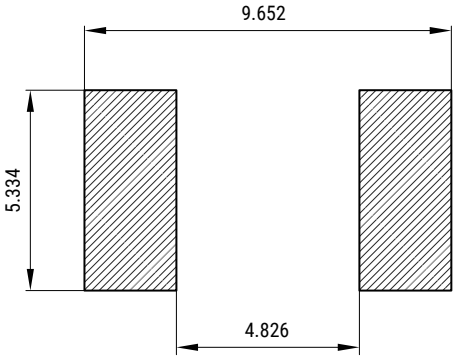
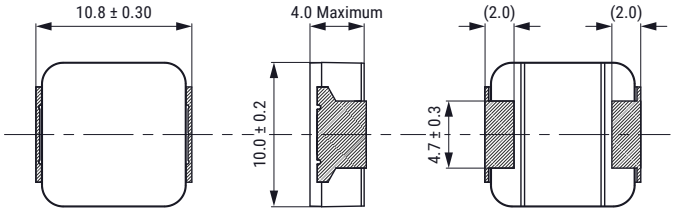
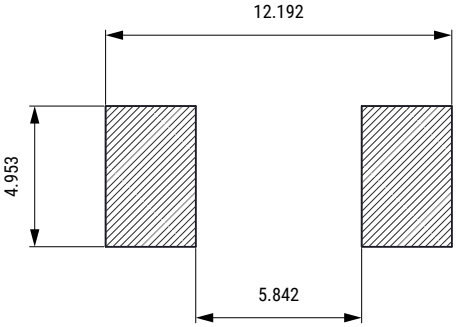
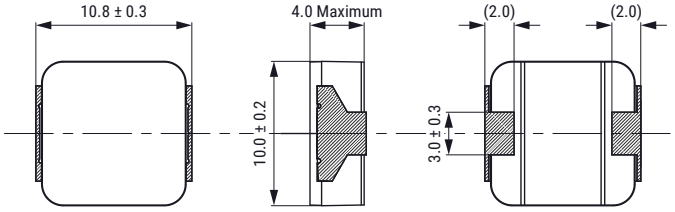
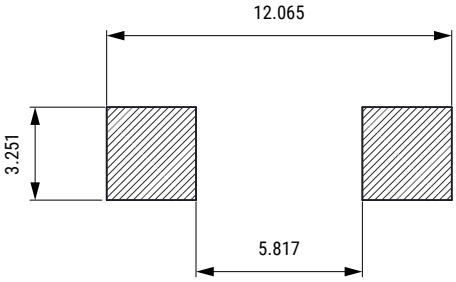

## Dimensions

| Case Size | Dimensions (mm) | Land Pattern (mm) |
|---|---|---|
| MPX1D0520 |   |   |
| MPX1D0530 |   |   |

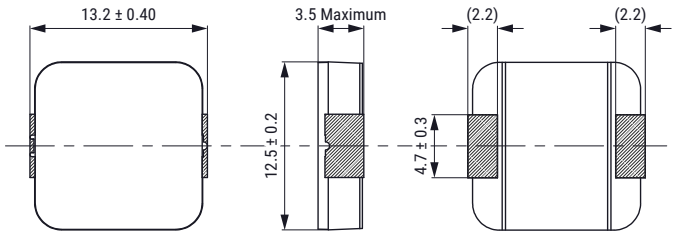
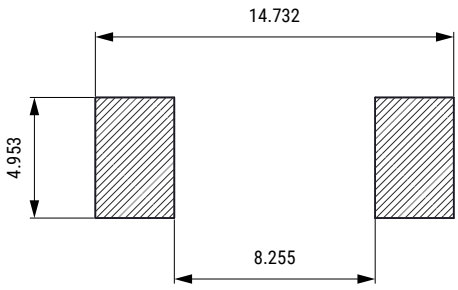
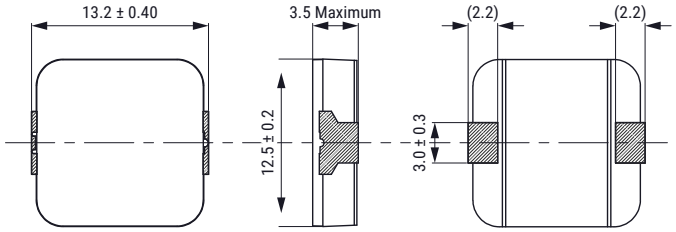
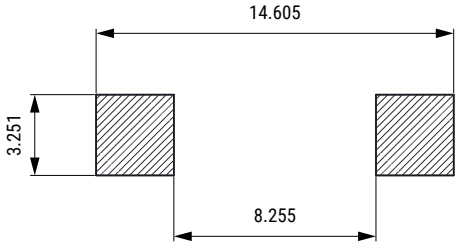
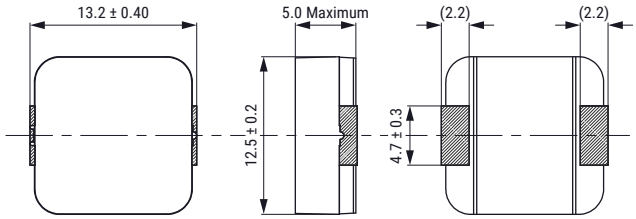
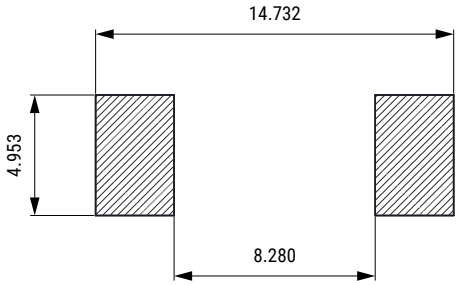
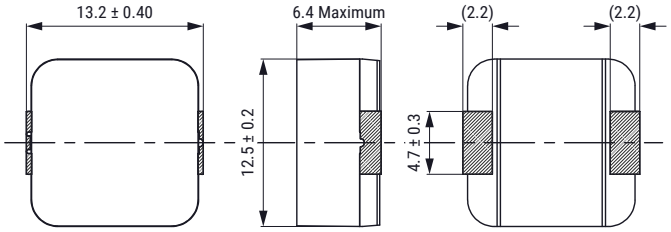
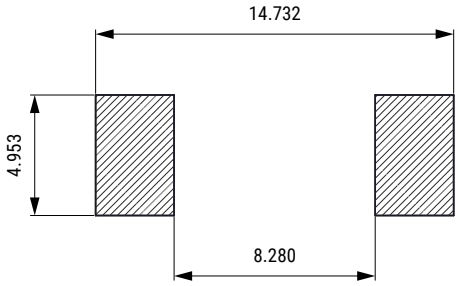
## Dimensions cont.

| Case Size | Dimensions (mm) | Land Pattern (mm) |
|---|---|---|
| MPX1D0618 |  |  |
| MPX1D0624 |  |  |
| MPX1D0630 |  |  |
| MPX1D0650 |  |  |

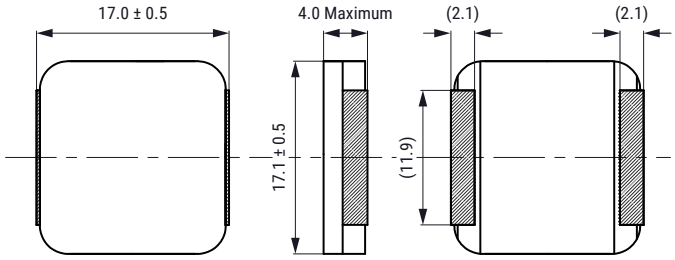
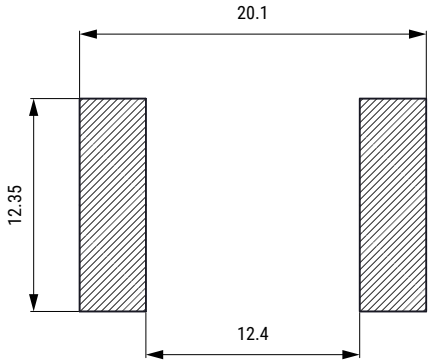
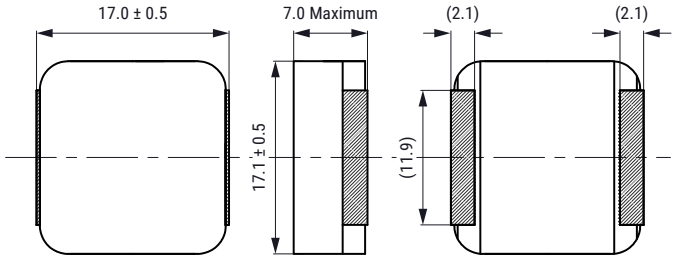
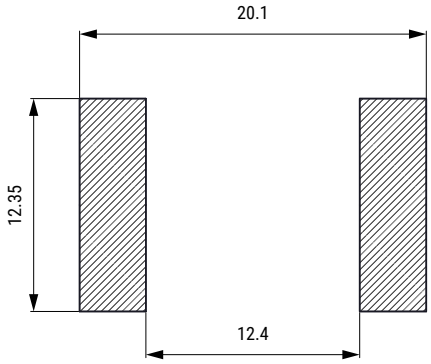
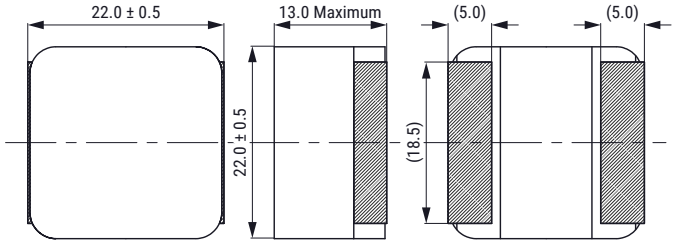
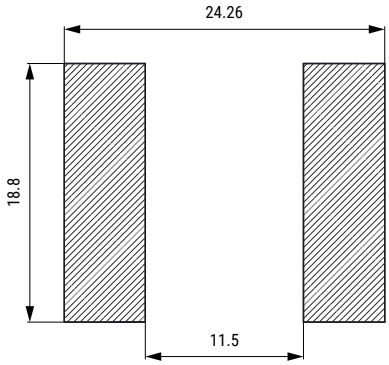
## Dimensions cont.

| Case Size | Dimensions (mm) | Land Pattern (mm) |
|---|---|---|
| MPX1D0830 |  |  |
| MPX1D0840 |  |  |
| MPX1D1040<br>For values up to<br>1.5 µH or below |  |  |
| MPX1D1040<br>For values from<br>2.2 µH or above |  |  |

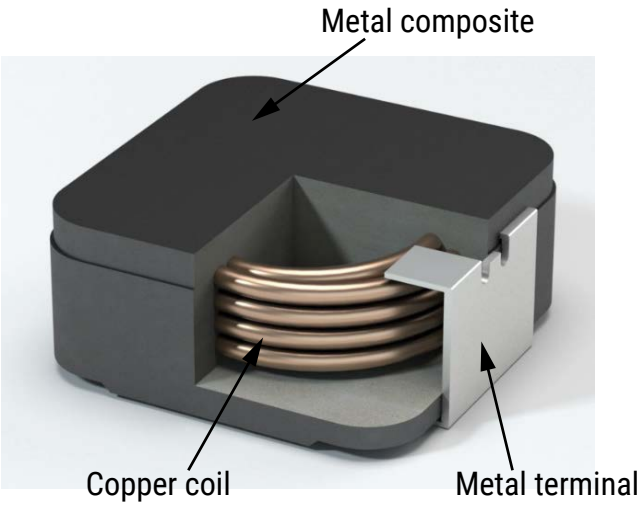
## Dimensions cont.

| Case Size | Dimensions (mm) | Land Pattern (mm) |
|---|---|---|
| MPX1D1235<br>For values up to<br>0.47 µH or below |  |  |
| MPX1D1235<br>For values from<br>0.68 µH or above |  |  |
| MPX1D1250 |  |  |
| MPX1D1264 |  |  |

## Dimensions cont.

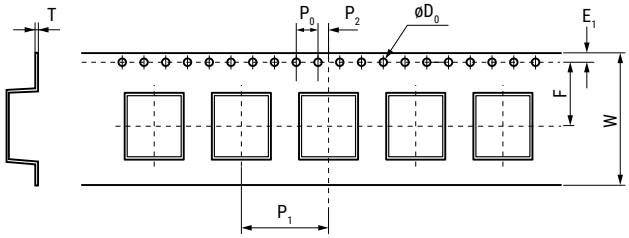
| Case Size | Dimensions (mm) | Land Pattern (mm) |
|---|---|---|
| MPX1D1740 |   |   |
| MPX1D1770 |   |   |
| MPX1D2213 |   |   |

## Construction




## Taping Specification

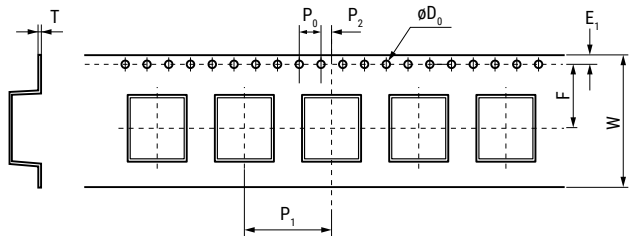
**Dimensions of Indented Square Hole Plastic Tape**




| Case Size | Reel Quantity | | Dimensions (mm) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | W | F | E | $P_1$ | $P_2$ | $P_0$ | $øD_0$ | T |
| MPX1D0520 | 3,500 | Tolerance | ±0.30 | ±0.10 | ±0.10 | ±0.10 | ±0.10 | ±0.10 | ±0.10 | ±0.05 |
| | | Nominal | 12.00 | 5.50 | 1.75 | 8.00 | 2.00 | 4.00 | 1.50 | 0.40 |
| MPX1D0530 | 2,500 | Tolerance | ±0.30 | ±0.10 | ±0.10 | ±0.10 | ±0.10 | ±0.10 | ±0.10 | ±0.05 |
| | | Nominal | 12.00 | 5.50 | 1.75 | 8.00 | 2.00 | 4.00 | 1.50 | 0.40 |
| MPX1D0618 | 2,500 | Tolerance | ±0.30 | ±0.10 | ±0.10 | ±0.10 | ±0.10 | ±0.10 | ±0.10 | ±0.05 |
| | | Nominal | 16.00 | 7.50 | 1.75 | 12.00 | 2.00 | 4.00 | 1.50 | 0.40 |
| MPX1D0624 | 1,500 | Tolerance | ±0.30 | ±0.10 | ±0.10 | ±0.10 | ±0.10 | ±0.10 | ±0.10 | ±0.05 |
| | | Nominal | 16.00 | 7.50 | 1.75 | 12.00 | 2.00 | 4.00 | 1.55 | 0.40 |
| MPX1D0630 | 1,500 | Tolerance | ±0.30 | ±0.10 | ±0.10 | ±0.10 | ±0.10 | ±0.10 | ±0.10 | ±0.05 |
| | | Nominal | 16.00 | 7.50 | 1.75 | 12.00 | 2.00 | 4.00 | 1.55 | 0.40 |
| MPX1D0650 | 1,000 | Tolerance | ±0.30 | ±0.10 | ±0.10 | ±0.10 | ±0.10 | ±0.10 | ±0.05 | ±0.05 |
| | | Nominal | 16.00 | 7.50 | 1.75 | 12.00 | 2.00 | 4.00 | 1.55 | 0.40 |
| MPX1D0830 | 1,500 | Tolerance | ±0.30 | ±0.10 | ±0.10 | ±0.10 | ±0.10 | ±0.10 | ±0.05 | ±0.05 |
| | | Nominal | 16.00 | 7.50 | 1.75 | 12.00 | 2.00 | 4.00 | 1.55 | 0.40 |
| MPX1D0840 | 1,000 | Tolerance | ±0.30 | ±0.10 | ±0.10 | ±0.10 | ±0.10 | ±0.10 | ±0.05 | ±0.05 |
| | | Nominal | 16.00 | 7.50 | 1.75 | 12.00 | 2.00 | 4.00 | 1.50 | 0.40 |

# Taping Specification cont.

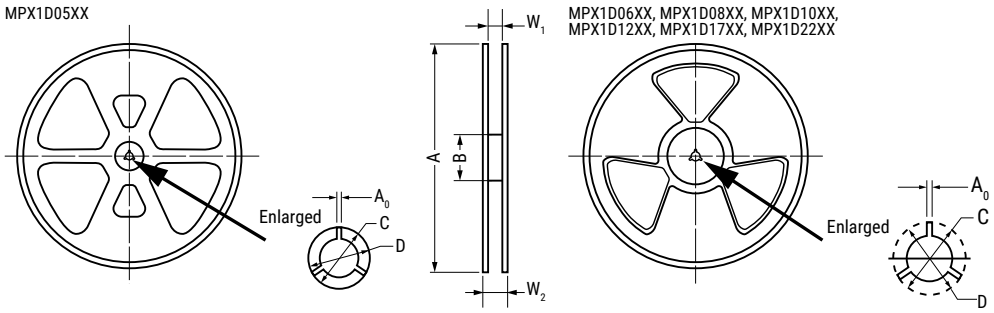
### Dimensions of Indented Square Hole Plastic Tape




| Case Size | Reel Quantity | | Dimensions (mm) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | W | F | E | $P_1$ | $P_2$ | $P_0$ | $øD_0$ | T |
| MPX1D1040 | 500 | Tolerance | ±0.3 | ±0.1 | ±0.1 | ±0.1 | ±0.1 | ±0.1 | ±0.05 | ±0.05 |
| | | Nominal | 24.0 | 11.5 | 1.75 | 16.0 | 2.0 | 4.0 | 1.55 | 0.4 |
| MPX1D1235 | 500 | Tolerance | ±0.3 | ±0.1 | ±0.1 | ±0.1 | ±0.1 | ±0.1 | ±0.05 | ±0.05 |
| | | Nominal | 24.0 | 11.5 | 1.75 | 24.0 | 2.0 | 4.0 | 1.55 | 0.4 |
| MPX1D1250 | 250 | Tolerance | ±0.3 | ±0.1 | ±0.1 | ±0.1 | ±0.1 | ±0.1 | ±0.05 | ±0.05 |
| | | Nominal | 24.0 | 11.5 | 1.75 | 24.0 | 2.0 | 4.0 | 1.55 | 0.4 |
| MPX1D1264 | 250 | Tolerance | ±0.3 | ±0.1 | ±0.1 | ±0.1 | ±0.1 | ±0.1 | ±0.05 | ±0.05 |
| | | Nominal | 24.0 | 11.5 | 1.75 | 24.0 | 2.0 | 4.0 | 1.55 | 0.4 |
| MPX1D1740 | 100 | Tolerance | ±0.3 | ±0.1 | ±0.1 | ±0.1 | ±0.1 | ±0.1 | ±0.1 | ±0.05 |
| | | Nominal | 32.0 | 14.2 | 1.75 | 24.0 | 2.0 | 4.0 | 1.50 | 0.5 |
| MPX1D1770 | 100 | Tolerance | ±0.3 | ±0.1 | ±0.1 | ±0.1 | ±0.1 | ±0.1 | ±0.1 | ±0.05 |
| | | Nominal | 32.0 | 14.2 | 1.75 | 24.0 | 2.0 | 4.0 | 1.50 | 0.5 |
| MPX1D2213 | 50 | Tolerance | ±0.3 | ±0.1 | ±0.1 | ±0.1 | ±0.1 | ±0.1 | ±0.1 | ±0.05 |
| | | Nominal | 44.0 | 20.2 | 1.75 | 32.0 | 2.0 | 4.0 | 1.50 | 0.5 |

# Reel Specifications

### Reel Dimensions

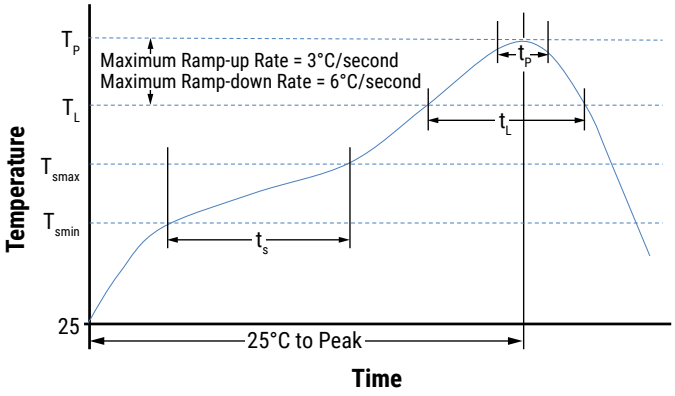



| Case Size | | Dimensions (mm) | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | $A_0$ | $W_1$ | $W_2$ |
| MPX1D0520 | Tolerance | ±2.0 | ±2.0 | ±0.2 | ±0.8 | ±0.5 | | |
| | Nominal | ø330 | ø80 | ø13.0 | ø21.0 | 2.0 | 13.5 | 17.5 |
| MPX1D0530 | Tolerance | ±2.0 | ±2.0 | ±0.2 | ±0.8 | ±0.5 | | |
| | Nominal | ø330 | ø80 | ø13.0 | ø21.0 | 2.0 | 13.5 | 17.5 |
| MPX1D0618 | Tolerance | ±2.0 | ±2.0 | ±0.2 | ±0.8 | ±0.5 | | |
| | Nominal | ø330 | ø100 | ø13.2 | ø21.5 | 2.5 | 16.9 | 21.3 |
| MPX1D0624 | Tolerance | ±2.0 | ±2.0 | ±0.2 | ±0.8 | ±0.5 | | |
| | Nominal | ø330 | ø100 | ø13.2 | ø21.5 | 2.5 | 16.9 | 21.3 |
| MPX1D0630 | Tolerance | ±2.0 | ±2.0 | ±0.2 | ±0.8 | ±0.5 | | |
| | Nominal | ø330 | ø100 | ø13.2 | ø21.5 | 2.5 | 16.9 | 21.3 |
| MPX1D0650 | Tolerance | ±2.0 | ±2.0 | ±0.2 | ±0.8 | ±0.5 | | |
| | Nominal | ø330 | ø100 | ø13.2 | ø21.5 | 2.5 | 16.9 | 21.3 |
| MPX1D0830 | Tolerance | ±2.0 | ±2.0 | ±0.2 | ±0.8 | ±0.5 | | |
| | Nominal | ø330 | ø100 | ø13.2 | ø21.5 | 2.5 | 16.9 | 21.3 |
| MPX1D0840 | Tolerance | ±2.0 | ±2.0 | ±0.2 | ±0.8 | ±0.5 | | |
| | Nominal | ø330 | ø100 | ø13.2 | ø21.5 | 2.5 | 16.9 | 21.3 |
| MPX1D1040 | Tolerance | ±3.0 | ±2.0 | ±0.5 | ±0.8 | ±0.5 | | |
| | Nominal | ø330 | ø100 | ø13.0 | ø21.5 | 2.6 | 17.0 | 20.6 |
| MPX1D1235 | Tolerance | ±3.0 | ±2.0 | ±0.5 | ±0.8 | ±0.5 | | |
| | Nominal | ø330 | ø100 | ø13.0 | ø21.5 | 2.6 | 17.0 | 20.6 |
| MPX1D1250 | Tolerance | ±3.0 | ±2.0 | ±0.5 | ±0.8 | ±0.5 | | |
| | Nominal | ø330 | ø100 | ø13.0 | ø21.5 | 2.6 | 17.0 | 20.6 |
| MPX1D1264 | Tolerance | ±3.0 | ±2.0 | ±0.5 | ±0.8 | ±0.5 | | |
| | Nominal | ø330 | ø100 | ø13.0 | ø21.5 | 2.6 | 17.0 | 20.6 |
| MPX1D1740 | Tolerance | ±3.0 | ±2.0 | ±0.2 | ±0.8 | ±0.5 | | |
| | Nominal | ø330 | ø100 | ø13.0 | ø21.0 | 2.0 | 32.4 | 38.4 |
| MPX1D1770 | Tolerance | ±3.0 | ±2.0 | ±0.2 | ±0.8 | ±0.5 | | |
| | Nominal | ø330 | ø100 | ø13.0 | ø21.0 | 2.0 | 32.4 | 38.4 |
| MPX1D2213 | Tolerance | ±3.0 | ±2.0 | ±0.2 | ±0.8 | ±0.5 | | |
| | Nominal | ø330 | ø100 | ø13.0 | ø21.0 | 2.0 | 44.4 | 50.4 |

## Soldering Process

**Recommended Reflow Soldering Profile**
Reference ICP/JEDEC J-STD-020E

| Profile Feature | Pb-Free Assembly |
|---|---|
| **Preheat/Soak** | |
| Temperature Minimum ($T_{Smin}$) | 150°C |
| Temperature Maximum ($T_{Smax}$) | 200°C |
| Time ($t_s$) from $T_{smin}$ to $T_{smax}$ | 60 – 120 seconds |
| Ramp-Up Rate ($T_L$ to $T_P$) | 3°C/second maximum |
| Liquidous Temperature ($T_L$) | 217°C |
| Time Above Liquidous ($t_L$) | 60 – 150 seconds |
| Peak Temperature ($T_P$) | 260°C for MPX1D0520, 0618, 0624<br>250°C for MPX1D0530, 0630, 0650, 0830, 0840<br>245°C for MPX1D1040, 1235, 1250, 1264, 1740, 1770, 2213 |
| Time within 5°C of Maximum Peak Temperature ($t_P$) | 30 seconds maximum |
| Ramp-Down Rate ($T_P$ to $T_L$) | 6°C/second maximum |
| Time 25°C to Peak Temperature | 8 minutes maximum |




## Environmental Compliance

All KEMET SMD Inductors are RoHS compliant.

## Handling Precautions

Inductors should be stored in normal working environments. While the inductors themselves are quite robust in other environments, solderability will be degraded by exposure to high temperatures, high humidity, corrosive atmospheres, and long term storage.

KEMET recommends that maximum storage temperature not exceed 40°C and maximum storage humidity not exceed 70% relative humidity. Atmospheres should be free of chlorine and sulfur bearing compounds. Temperature fluctuations should be minimized to avoid condensation on the parts.

For optimized solderability, inductors' stock should be used promptly, preferably within six months of receipt.

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