

SMD Chip Inductor High Power Type

SIM-24 Series

MERITEK

FEATURE

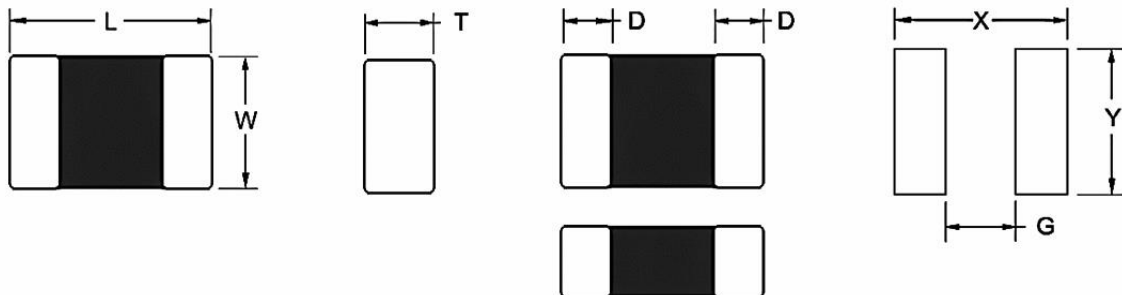
- High Saturation Current, Low DCR, High Efficiency
- Magnetically Shielded Construction
- Application: DC/DC Converters, Smart Phone, PAD, Power Supply



ELECTRICAL CHARACTERISTICS

| Part Series | Size (Code) | Inductance (μH) | Tolerance (%) | DCR Max ($\text{m}\Omega$) | Isat Max (A) | Irms Max (A) |
|-------------|-------------|------------------------------|----------------|------------------------------|--------------|--------------|
| SIM06-24 | 0806 (06) | 0.47~3.3 | $\pm 20\%$ (M) | 26~235 | 2.1~5.8 | 1.4~4.5 |
| SIM08-24 | 1008 (08) | 0.24~4.7 | $\pm 20\%$ (M) | 15~240 | 2.0~9.0 | 1.5~7.2 |
| SIM10-24 | 1210 (10) | 0.47~6.8 | $\pm 20\%$ (M) | 22~276 | 2.2~8.0 | 1.5~5.2 |

DIMENSIONS



| Size Code | L ± 0.3 | W ± 0.3 | T ± 0.2 | D ± 0.3 | X | Y | G |
|-----------|-------------|-------------|-------------|-------------|-----|-----|-----|
| 0806 (06) | 2.0 | 1.6 | 0.8, 1.0 | 0.5 | 2.3 | 1.8 | 0.7 |
| 1008 (08) | 2.5 | 2.0 | 0.8, 1.0 | 0.6 | 2.8 | 2.3 | 1.2 |
| 1210 (10) | 3.2 | 2.5 | 1.0, 1.8 | 0.6 | 3.5 | 2.8 | 1.7 |

Unit: mm

PART NUMBERING SYSTEM

SIM 06 1R0M 10 24
(1) (2) (3) (4) (5)

| No. | Item | Code | Description | |
|-----|--------------|------|---|-------------------------|
| (1) | Product Code | SIM | SMD Chip Inductor Series | |
| (2) | Size Code | 06 | 0806: 2.0x1.6mm (W x L) | See dimensions table |
| (3) | Inductance | 1R0M | 1.0 μH $\pm 20\%$ (M) | R denotes decimal point |
| (4) | Thickness | 10 | Maximum 1.0mm | 12: 1.2mm, 20: 2.0mm |
| (5) | Series Code | 24 | Chip Inductor, High Power Type, Internal control or project reference | |

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ELECTRICAL CHARACTERISTICS

| Size (Code) | Part Number | Inductance (μH) | DCR (mΩ) | | Isat (A) | | Irms (A) | |
|---------------|---------------|-----------------|--------------|-----|----------|-----|----------|-----|
| | | | Typ | Max | Typ | Max | Typ | Max |
| 0806 (06) | SIM06R47M1024 | 0.47±20% (M) | 25 | 32 | 5.4 | 4.8 | 4.4 | 4.0 |
| | SIM061R0M1024 | 1.0±20% (M) | 54 | 65 | 3.8 | 3.6 | 3.2 | 2.8 |
| | SIM061R5M1024 | 1.5±20% (M) | 84 | 91 | 3.0 | 2.6 | 2.1 | 1.8 |
| | SIM062R2M1024 | 2.2±20% (M) | 125 | 140 | 2.8 | 2.4 | 1.9 | 1.6 |
| | SIM063R3M1024 | 3.3±20% (M) | 205 | 235 | 2.1 | 1.8 | 1.5 | 1.3 |
| | SIM06R47M1224 | 0.47±20% (M) | 22 | 26 | 5.8 | 5.1 | 4.5 | 4.2 |
| | SIM061R0M1224 | 1.0±20% (M) | 41 | 48 | 4.0 | 3.5 | 3.2 | 2.8 |
| | SIM061R5M1224 | 1.5±20% (M) | 63 | 72 | 3.2 | 2.8 | 2.5 | 2.2 |
| | SIM062R2M1224 | 2.2±20% (M) | 95 | 116 | 2.8 | 2.4 | 1.9 | 1.6 |
| | SIM063R3M1224 | 3.3±20% (M) | 175 | 210 | 2.2 | 1.9 | 1.4 | 1.2 |
| 1008 (08) | SIM08R47M1024 | 0.47±20% (M) | 21 | 27 | 6.5 | 5.6 | 5.2 | 4.6 |
| | SIM081R0M1024 | 1.0±20% (M) | 38 | 48 | 4.7 | 4.3 | 4.2 | 4.0 |
| | SIM081R5M1024 | 1.5±20% (M) | 62 | 72 | 3.5 | 3.0 | 2.5 | 2.2 |
| | SIM082R2M1024 | 2.2±20% (M) | 81 | 97 | 3.1 | 2.6 | 2.3 | 2.1 |
| | SIM083R3M1024 | 3.3±20% (M) | 140 | 170 | 2.5 | 2.1 | 1.8 | 1.6 |
| | SIM084R7M1024 | 4.7±20% (M) | 215 | 240 | 2.2 | 1.8 | 1.6 | 1.4 |
| | SIM08R24M1224 | 0.24±20% (M) | 11 | 15 | 9.0 | 8.0 | 7.2 | 6.8 |
| | SIM08R47M1224 | 0.47±20% (M) | 18 | 22 | 8.0 | 7.2 | 5.0 | 4.6 |
| | SIM081R0M1224 | 1.0±20% (M) | 35 | 40 | 5.5 | 4.7 | 4.2 | 3.8 |
| | SIM081R5M1224 | 1.5±20% (M) | 51 | 58 | 4.6 | 4.0 | 3.3 | 3.0 |
| | SIM082R2M1224 | 2.2±20% (M) | 70 | 82 | 3.6 | 3.3 | 2.8 | 2.5 |
| | SIM083R3M1224 | 3.3±20% (M) | 120 | 135 | 2.8 | 2.5 | 2.0 | 1.6 |
| | SIM084R7M1224 | 4.7±20% (M) | 150 | 180 | 2.0 | 1.8 | 1.5 | 1.2 |
| | 1210 (10) | SIM10R47M1224 | 0.47±20% (M) | 17 | 22 | 6.8 | 6.2 | 5.2 |
| SIM101R0M1224 | | 1.0±20% (M) | 36 | 40 | 6.0 | 5.5 | 4.5 | 4.1 |
| SIM101R5M1224 | | 1.5±20% (M) | 40 | 48 | 4.8 | 4.2 | 3.7 | 3.2 |
| SIM102R2M1224 | | 2.2±20% (M) | 58 | 66 | 4.0 | 3.6 | 2.9 | 2.6 |
| SIM103R3M1224 | | 3.3±20% (M) | 96 | 108 | 3.0 | 2.6 | 2.2 | 2.0 |
| SIM104R7M1224 | | 4.7±20% (M) | 140 | 157 | 2.8 | 2.4 | 1.9 | 1.6 |
| SIM106R8M1224 | | 6.8±20% (M) | 220 | 276 | 2.2 | 1.9 | 1.5 | 1.2 |
| SIM101R0M2024 | | 1.0±20% (M) | 22 | 25 | 8.0 | 7.0 | 4.5 | 4.0 |
| SIM101R5M2024 | | 1.5±20% (M) | 30 | 35 | 6.0 | 5.2 | 3.5 | 3.1 |
| SIM102R2M2024 | | 2.2±20% (M) | 33 | 46 | 5.0 | 4.3 | 3.0 | 2.6 |
| SIM103R3M2024 | | 3.3±20% (M) | 50 | 65 | 4.2 | 3.6 | 2.4 | 2.1 |
| SIM104R7M2024 | | 4.7±20% (M) | 86 | 98 | 3.4 | 2.9 | 2.2 | 1.9 |

Note:

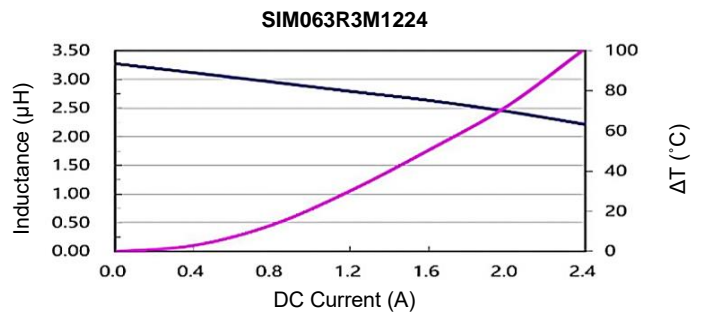
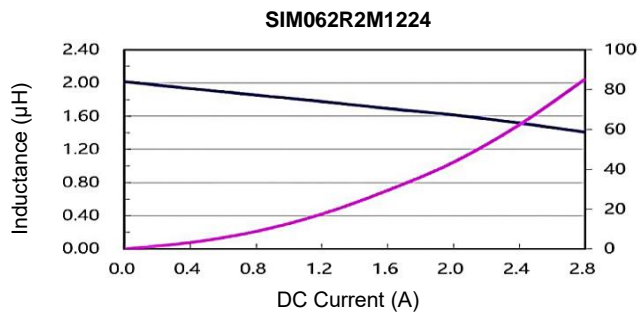
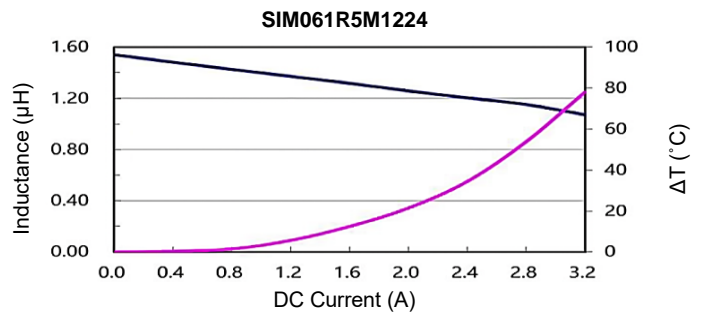
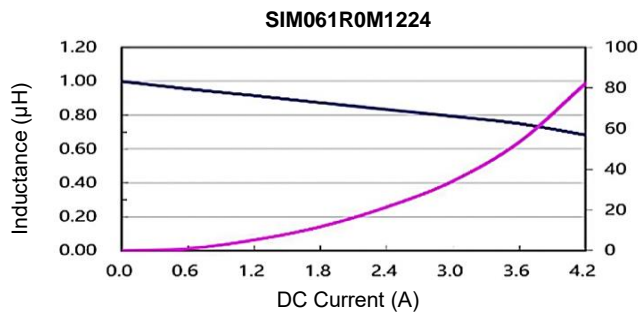
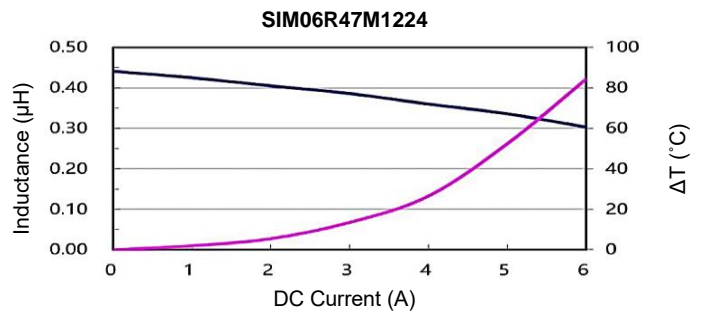
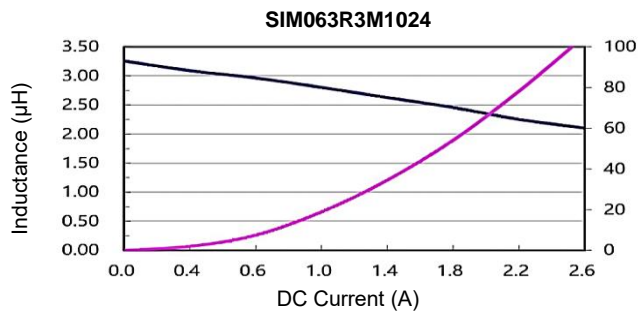
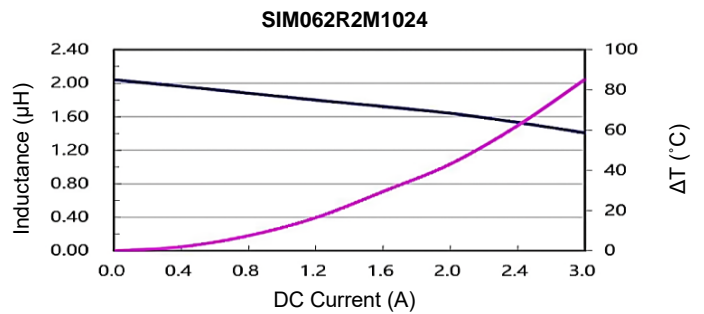
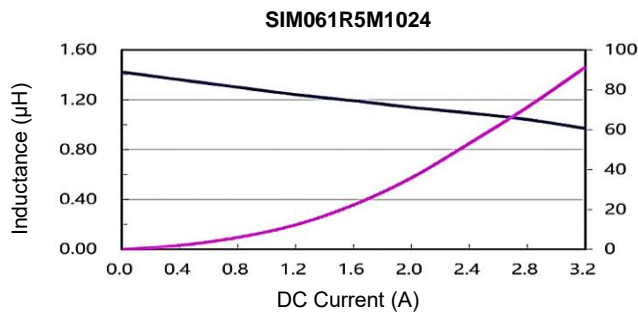
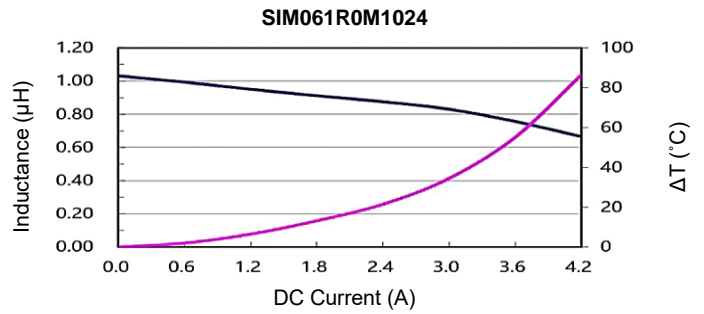
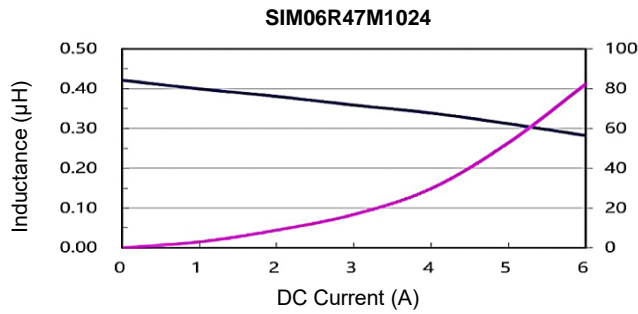
1. Inductance test under 1MHz, 1.0V
2. All test data referenced to 25°C ambient
3. Isat based on inductance drop ($\Delta L/L0$: $\leq 30\%$) approximately.
4. Irms based on temperature rise (ΔT : 40°C) approximately.
5. Operating temperature: -55°C ~ +125°C (Including self-temperature rise)

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CHARACTERISTIC CURVES

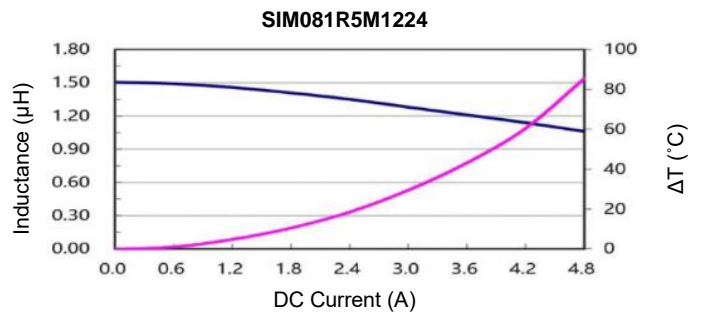
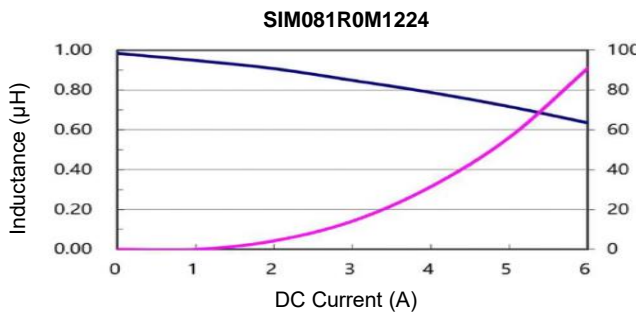
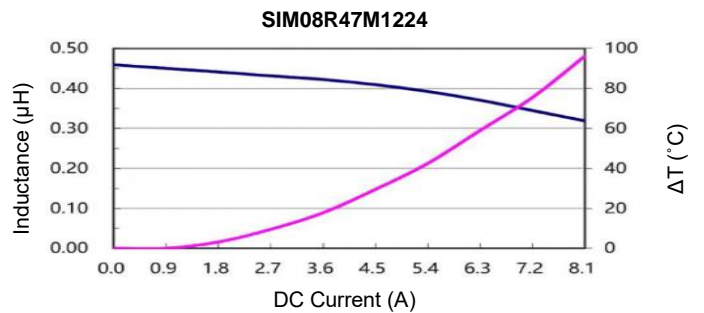
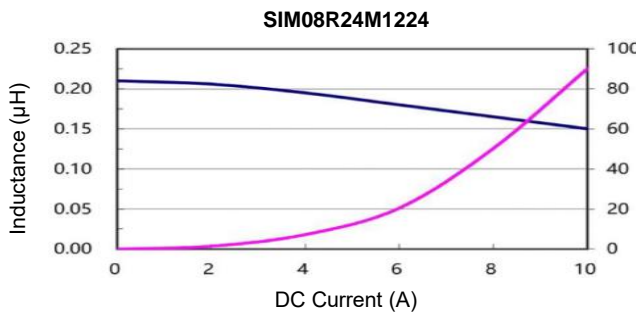
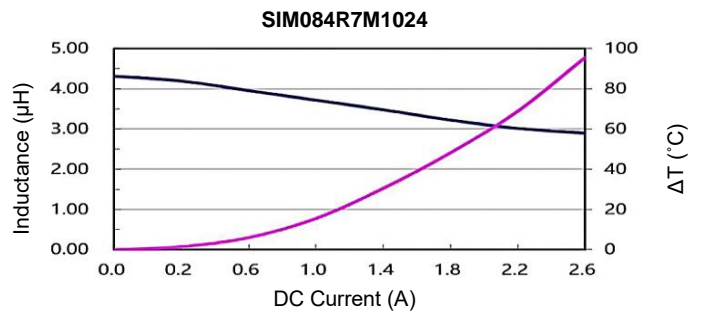
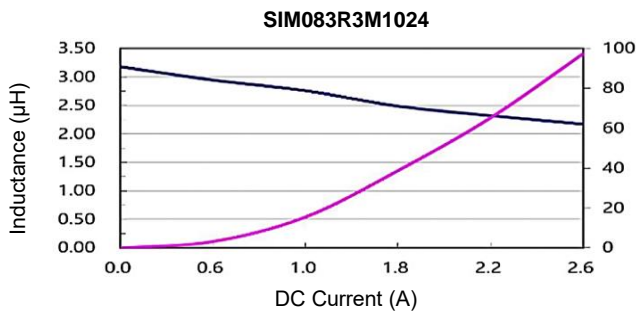
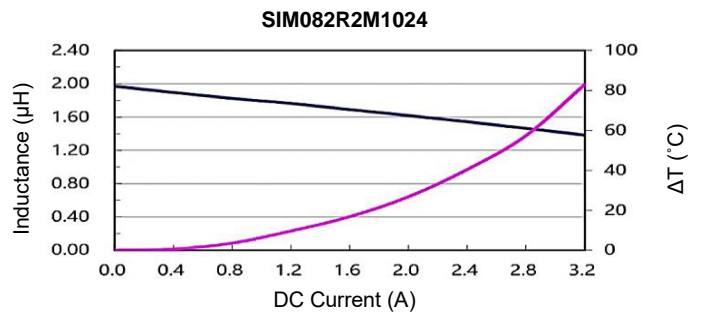
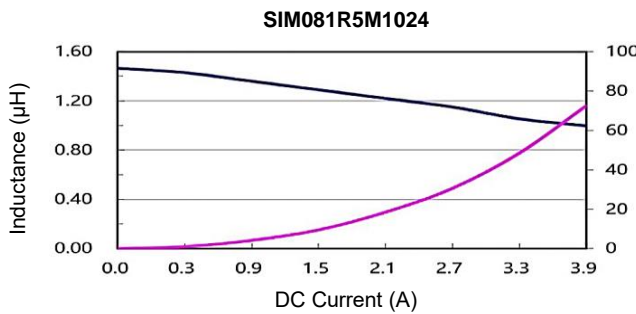
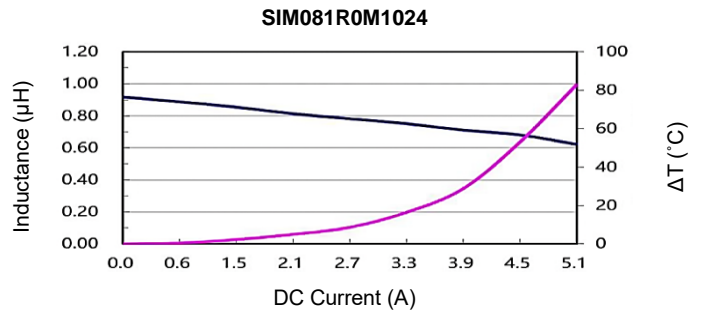
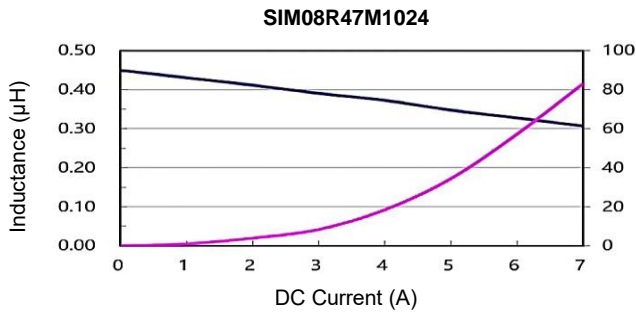


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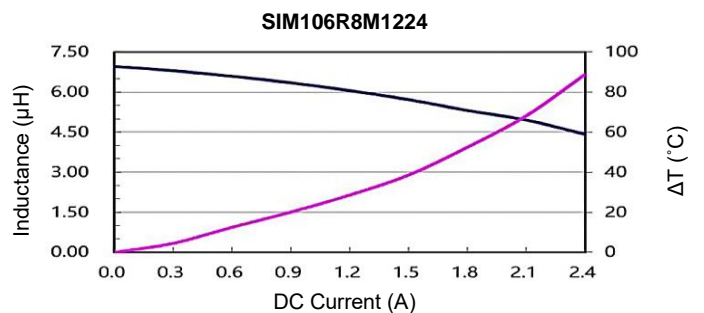
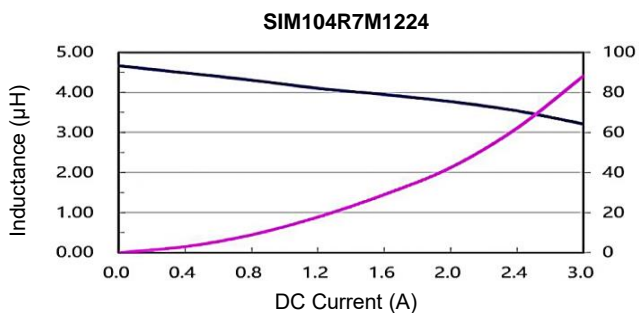
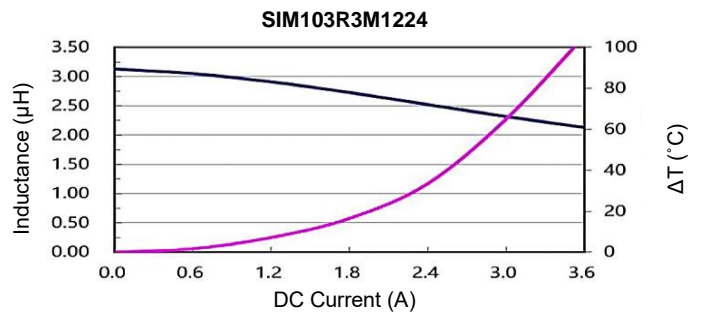
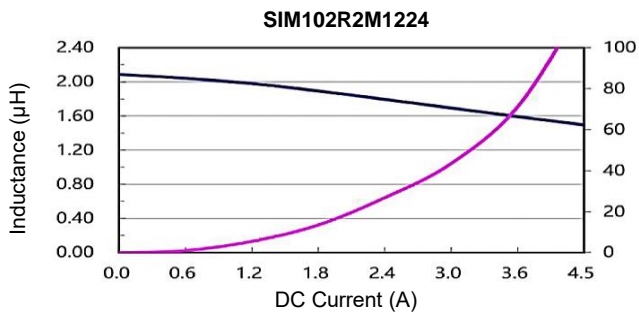
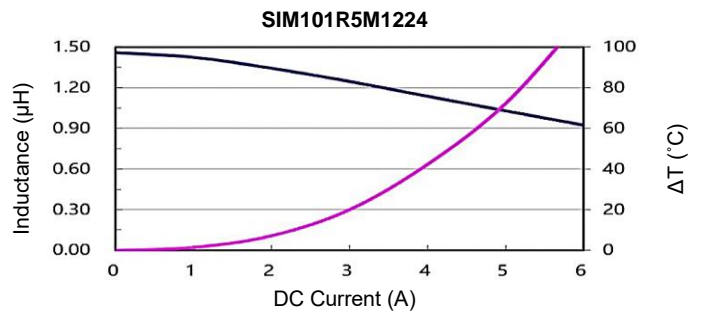
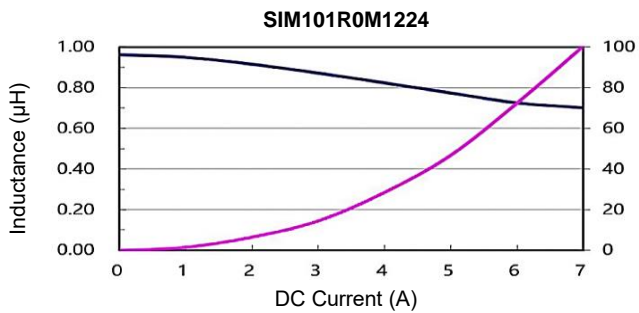
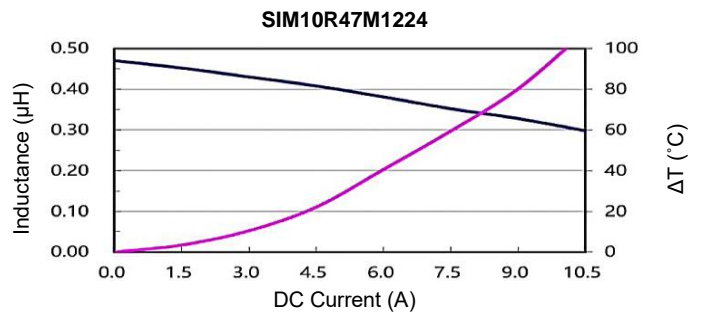
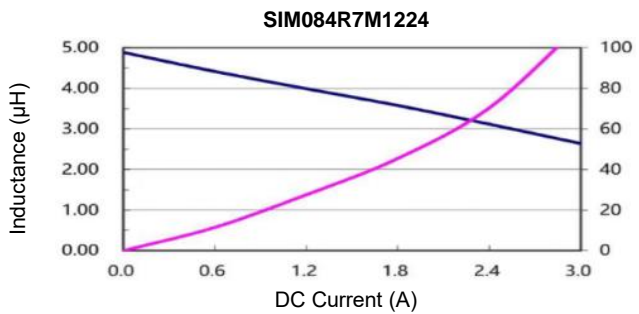
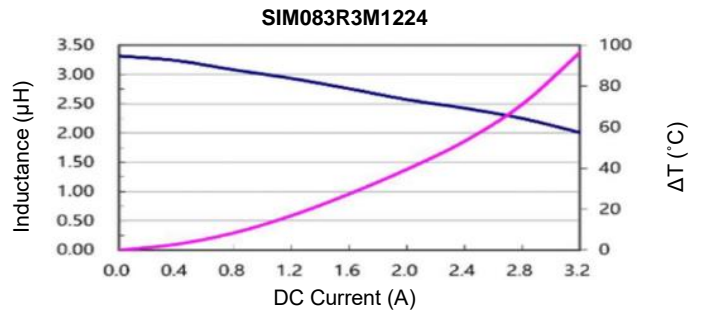
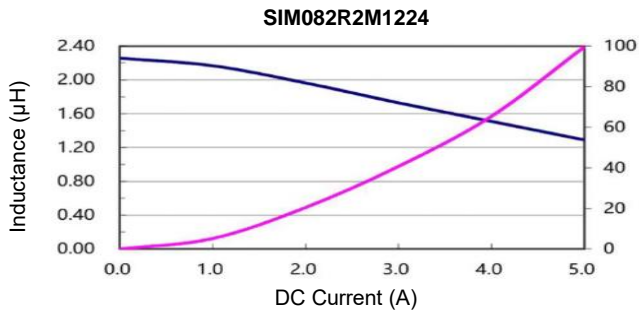
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CHARACTERISTIC CURVES



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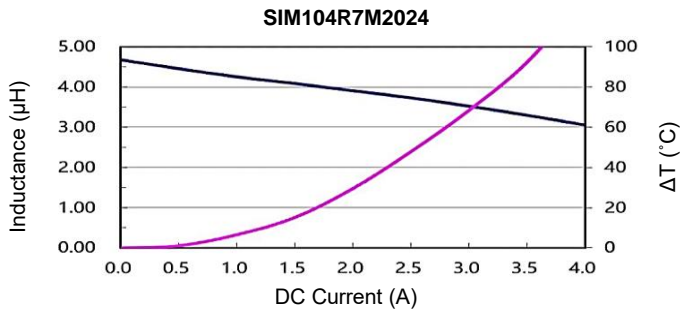
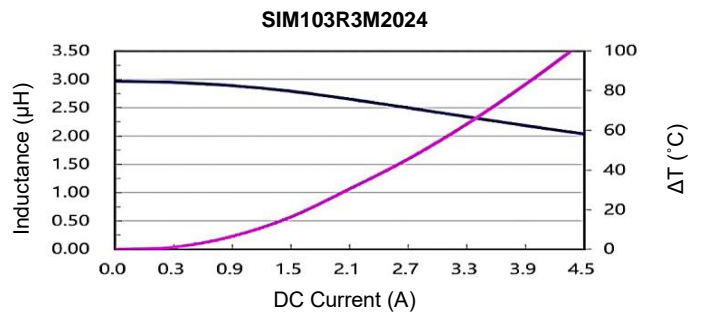
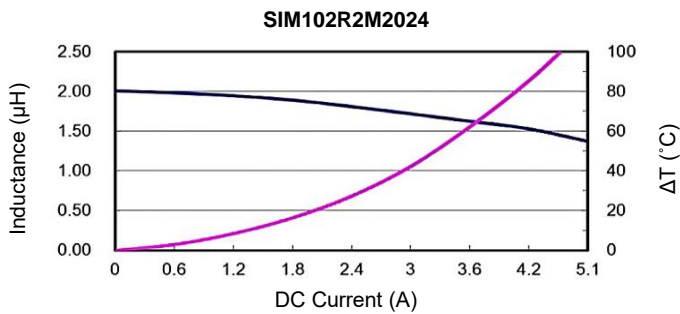
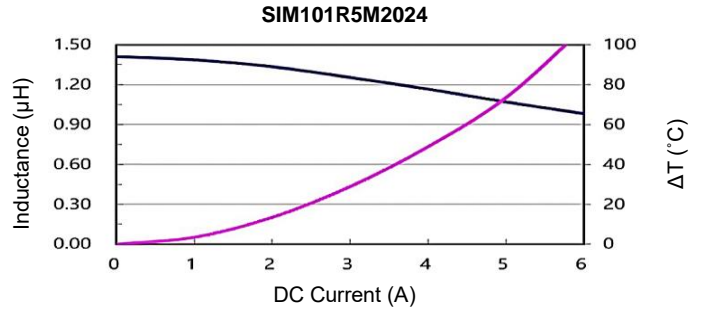
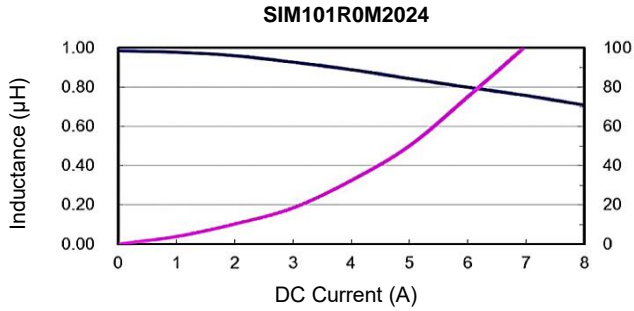


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*Specifications subject to change without notice.