# SMD Power Inductors - MSR Series

Meisongbei




### Features

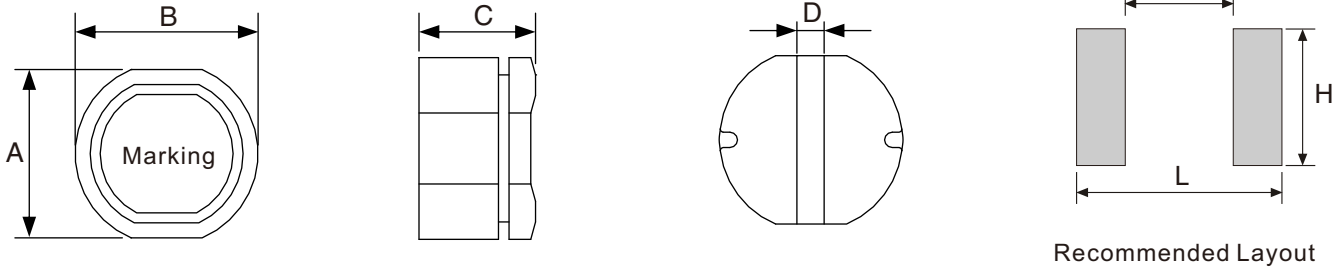
- Ferrite drum core construction.
- Magnetically shielded
- Suitable for large currents.

### General Specifications

- Storage temp range: -40°C to +125°C
- Operating temp range: -40°C to +125°C

RoHS COMPLIANT | REACH COMPLIANT | Halogen Free

## Shape and Dimensions (Unit:mm)




Recommended Layout

| Type | A (±0.5) | B (±0.5) | C (max) | D (±0.3) | G (Ref) | H (Ref) | L (Ref) |
|---|---|---|---|---|---|---|---|
| MSRB0603 | 5.6±0.3 | 6.2±0.3 | 3.5 | 1.7 | 1.5 | 6 | 8.5 |
| MSRB0704 | 7.0±0.3 | 7.8±0.3 | 4.9 | 1.9 | 1.5 | 7.5 | 8.5 |
| MSRB1005 | 9.0±0.5 | 10.0±0.5 | 5.9 | 2.5 | 2 | 9 | 10 |
| MSRB1205 | 11.5±0.5 | 12.5±0.5 | 5.9 | 3.0 | 2.5 | 12 | 12.5 |

## Electrical Characteristics For MSRB0603 Series

| Part Number | Inductance [μH] | DCR(max) [Ω] | Isat(max) [A] | Irms(max) [A] |
|---|---|---|---|---|
| MSRB0603-100M | 10±20% | 0.14 | 1.00 | 1.80 |
| MSRB0603-120M | 12±20% | 0.16 | 0.94 | 1.53 |
| MSRB0603-150M | 15±20% | 0.18 | 0.86 | 1.37 |
| MSRB0603-180M | 18±20% | 0.25 | 0.78 | 1.23 |
| MSRB0603-220M | 22±20% | 0.32 | 0.76 | 1.10 |
| MSRB0603-270M | 27±20% | 0.36 | 0.64 | 0.99 |
| MSRB0603-330M | 33±20% | 0.41 | 0.61 | 0.89 |
| MSRB0603-390M | 39±20% | 0.47 | 0.53 | 0.80 |
| MSRB0603-470M | 47±20% | 0.51 | 0.50 | 0.72 |
| MSRB0603-560M | 56±20% | 0.72 | 0.46 | 0.64 |
| MSRB0603-680M | 68±20% | 0.82 | 0.42 | 0.57 |

## Electrical Characteristics For MSRB0704 Series

| Part Number | Inductance [μH] | DCR(max) [Ω] | Isat(max) [A] | Irms(max) [A] |
|---|---|---|---|---|
| MSRB0704-100M | 10 ±20% | 0.07 | 1.65 | 3.30 |
| MSRB0704-120M | 12 ±20% | 0.07 | 1.57 | 3.00 |
| MSRB0704-150M | 15 ±20% | 0.08 | 1.39 | 2.70 |
| MSRB0704-180M | 18 ±20% | 0.10 | 1.29 | 2.43 |
| MSRB0704-220M | 22 ±20% | 0.13 | 1.12 | 2.18 |
| MSRB0704-270M | 27 ±20% | 0.16 | 1.06 | 1.96 |
| MSRB0704-330L | 33 ±15% | 0.18 | 0.97 | 1.74 |
| MSRB0704-390L | 39 ±15% | 0.18 | 0.91 | 1.64 |
| MSRB0704-470L | 47 ±15% | 0.27 | 0.80 | 1.55 |
| MSRB0704-560L | 56 ±15% | 0.29 | 0.76 | 1.47 |
| MSRB0704-680L | 68 ±15% | 0.33 | 0.68 | 1.32 |
| MSRB0704-820L | 82 ±15% | 0.43 | 0.62 | 1.20 |
| MSRB0704-101K | 100 ±10% | 0.49 | 0.55 | 1.14 |
| MSRB0704-121K | 120 ±10% | 0.68 | 0.49 | 1.08 |
| MSRB0704-151K | 150 ±10% | 0.94 | 0.44 | 0.97 |
| MSRB0704-181K | 180 ±10% | 1.00 | 0.40 | 0.87 |
| MSRB0704-221K | 220 ±10% | 1.18 | 0.36 | 0.78 |
| MSRB0704-271K | 270 ±10% | 1.30 | 0.33 | 0.70 |

## Electrical Characteristics For MSRB1005 Series

| Part Number | Inductance [μH] | DCR(max) [Ω] | Isat(max) [A] | Irms(max) [A] |
|---|---|---|---|---|
| MSRB1005-100M | 10 ±20% | 0.06 | 2.06 | 4.40 |
| MSRB1005-120M | 12 ±20% | 0.07 | 1.94 | 4.00 |
| MSRB1005-150M | 15 ±20% | 0.07 | 1.72 | 3.60 |
| MSRB1005-180M | 18 ±20% | 0.08 | 1.58 | 3.24 |
| MSRB1005-220M | 22 ±20% | 0.08 | 1.42 | 2.92 |
| MSRB1005-270M | 27 ±20% | 0.10 | 1.32 | 2.63 |
| MSRB1005-330L | 33 ±15% | 0.11 | 1.16 | 2.37 |
| MSRB1005-390L | 39 ±15% | 0.12 | 1.10 | 2.14 |
| MSRB1005-470L | 47 ±15% | 0.14 | 1.00 | 1.93 |
| MSRB1005-560L | 56 ±15% | 0.19 | 0.93 | 1.74 |
| MSRB1005-680L | 68 ±15% | 0.21 | 0.85 | 1.66 |
| MSRB1005-820L | 82 ±15% | 0.28 | 0.79 | 1.57 |
| MSRB1005-101K | 100 ±10% | 0.34 | 0.72 | 1.42 |
| MSRB1005-121K | 120 ±10% | 0.37 | 0.63 | 1.28 |
| MSRB1005-151K | 150 ±10% | 0.54 | 0.55 | 1.16 |
| MSRB1005-181K | 180 ±10% | 0.57 | 0.50 | 1.05 |
| MSRB1005-221K | 220 ±10% | 0.78 | 0.47 | 0.90 |
| MSRB1005-271K | 270 ±10% | 0.87 | 0.41 | 0.86 |
| MSRB1005-331K | 330 ±10% | 1.20 | 0.37 | 0.78 |
| MSRB1005-391K | 390 ±10% | 1.34 | 0.35 | 0.70 |
| MSRB1005-471K | 470 ±10% | 1.50 | 0.33 | 0.63 |

## Electrical Characteristics For MSRB1205 Series

| Part Number | Inductance [μH] | DCR(max) [Ω] | Isat(max) [A] | Irms(max) [A] |
|---|---|---|---|---|
| MSR1205-100M | 10 ±20% | 0.05 | 2.65 | 6.00 |
| MSR1205-120M | 12 ±20% | 0.05 | 2.50 | 5.40 |
| MSR1205-150M | 15 ±20% | 0.06 | 2.45 | 5.10 |
| MSR1205-180M | 18 ±20% | 0.06 | 2.40 | 4.80 |
| MSR1205-220M | 22 ±20% | 0.07 | 2.20 | 4.32 |
| MSR1205-270M | 27 ±20% | 0.08 | 2.00 | 3.88 |
| MSR1205-330M | 33 ±20% | 0.10 | 1.80 | 3.49 |
| MSR1205-390M | 39 ±20% | 0.11 | 1.65 | 3.14 |
| MSR1205-470M | 47 ±20% | 0.12 | 1.50 | 2.82 |
| MSR1205-560M | 56 ±20% | 0.15 | 1.38 | 2.67 |
| MSR1205-680M | 68 ±20% | 0.17 | 1.26 | 2.53 |
| MSR1205-820M | 82 ±20% | 0.20 | 1.14 | 2.40 |
| MSR1205-101M | 100 ±20% | 0.25 | 1.05 | 2.28 |
| MSR1205-121M | 120 ±20% | 0.28 | 0.95 | 2.17 |
| MSR1205-151M | 150 ±20% | 0.40 | 0.85 | 2.05 |
| MSR1205-181M | 180 ±20% | 0.48 | 0.77 | 1.95 |
| MSR1205-221M | 220 ±20% | 0.52 | 0.70 | 1.75 |
| MSR1205-271M | 270 ±20% | 0.70 | 0.63 | 1.57 |
| MSR1205-331M | 330 ±20% | 0.80 | 0.57 | 1.33 |
| MSR1205-391M | 390 ±20% | 1.08 | 0.52 | 1.13 |
| MSR1205-471M | 470 ±20% | 1.20 | 0.48 | 1.01 |
| MSR1205-561M | 560 ±20% | 1.34 | 0.44 | 0.91 |
| MSR1205-681M | 680 ±20% | 1.78 | 0.40 | 0.81 |
| MSR1205-821M | 820 ±20% | 2.00 | 0.36 | 0.74 |

- Inductance tested at 100kHz
- Heat Rating Current (Irms): Current that cause the temperature 40°C rise from 25°C
- Saturation Current (Isat): DC current at which the inductance drops 10% from its value without current