

Power Inductors – RFB Series



- Low cost, high current power inductors
- 0.9 μ H to 18 mH inductance range
- RFB0810 and RFB1010 have a flame retardant polyolefin wrap to protect the winding.

Core material Ferrite

Terminations Tin-silver over tin over copper over steel. Other terminations available at additional cost.

Ambient temperature -40°C to $+85^{\circ}\text{C}$ with I_{rms} current, $+85^{\circ}\text{C}$ to $+125^{\circ}\text{C}$ with derated current

Storage temperature Component: -40°C to $+85^{\circ}\text{C}$.
Tray packaging: -40°C to $+80^{\circ}\text{C}$

Moisture Sensitivity Level (MSL) 1 (unlimited floor life at $<30^{\circ}\text{C}$ / 85% relative humidity)

Failures in Time (FIT) / Mean Time Between Failures (MTBF)
38 per billion hours / 26,315,789 hours, calculated per Telcordia SR-332

Packaging 150 parts per tray; optional fanfold tape for RFB0807 and RFB0810

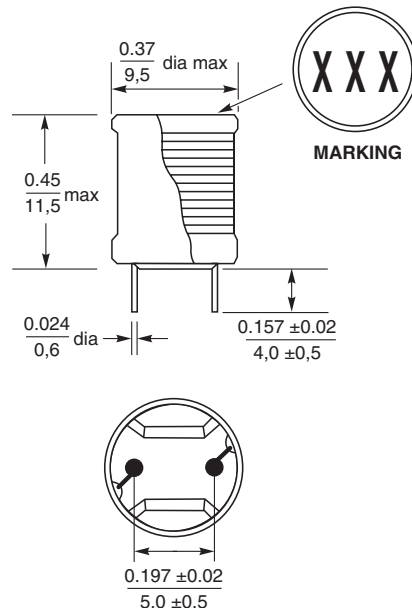
PCB washing Tested with pure water or alcohol only. For other solvents, see Doc787_PCB_Washing.pdf

RFB0807



Weight: 1.22 – 1.46 g

RFB0810



Weight: 1.97 – 2.25 g

RFB1010



Weight: 3.04 – 3.32 g



Power Inductors – RFB0807 Series

| Part number ¹ | Inductance ² | DCR max (Ohms) | SRF typ ³ (MHz) | Isat ⁴ (A) | Irms (A) ⁵ | |
|--------------------------|-------------------------|----------------|----------------------------|-----------------------|-----------------------|-----------|
| | | | | | 20°C rise | 40°C rise |
| RFB0807-1R0L | 0.9 μ H \pm 20% | 0.008 | 180 | 10.0 | 6.00 | 8.50 |
| RFB0807-2R2L | 2.2 μ H \pm 20% | 0.012 | 80 | 6.00 | 5.00 | 7.50 |
| RFB0807-2R7L | 2.7 μ H \pm 20% | 0.014 | 40 | 5.50 | 4.60 | 6.54 |
| RFB0807-3R3L | 3.3 μ H \pm 20% | 0.017 | 40 | 5.00 | 4.20 | 5.97 |
| RFB0807-3R9L | 3.9 μ H \pm 20% | 0.020 | 40 | 4.50 | 3.70 | 5.26 |
| RFB0807-4R7L | 4.7 μ H \pm 20% | 0.024 | 40 | 4.20 | 3.50 | 4.98 |
| RFB0807-5R6L | 5.6 μ H \pm 20% | 0.028 | 40 | 4.00 | 3.40 | 4.83 |
| RFB0807-6R8L | 6.8 μ H \pm 20% | 0.033 | 30 | 3.60 | 3.20 | 4.55 |
| RFB0807-8R2L | 8.2 μ H \pm 20% | 0.035 | 30 | 3.30 | 3.00 | 4.27 |
| RFB0807-100L | 10 μ H \pm 10% | 0.040 | 30 | 3.10 | 3.00 | 4.20 |
| RFB0807-120L | 12 μ H \pm 10% | 0.050 | 30 | 2.80 | 2.50 | 3.56 |
| RFB0807-150L | 15 μ H \pm 10% | 0.065 | 25 | 2.50 | 2.25 | 3.20 |
| RFB0807-180L | 18 μ H \pm 10% | 0.078 | 20 | 2.30 | 2.07 | 2.94 |
| RFB0807-220L | 22 μ H \pm 10% | 0.100 | 20 | 2.10 | 1.90 | 2.70 |
| RFB0807-270L | 27 μ H \pm 10% | 0.110 | 17 | 1.90 | 1.70 | 2.42 |
| RFB0807-330L | 33 μ H \pm 10% | 0.120 | 15 | 1.70 | 1.50 | 2.13 |
| RFB0807-390L | 39 μ H \pm 10% | 0.160 | 13 | 1.60 | 1.45 | 2.06 |
| RFB0807-470L | 47 μ H \pm 10% | 0.190 | 12 | 1.45 | 1.30 | 1.85 |
| RFB0807-560L | 56 μ H \pm 10% | 0.210 | 11 | 1.30 | 1.20 | 1.71 |
| RFB0807-680L | 68 μ H \pm 10% | 0.280 | 10 | 1.20 | 1.10 | 1.56 |
| RFB0807-820L | 82 μ H \pm 10% | 0.330 | 9 | 1.10 | 1.00 | 1.42 |
| RFB0807-101L | 100 μ H \pm 10% | 0.400 | 8 | 1.00 | 0.90 | 1.30 |
| RFB0807-121L | 120 μ H \pm 10% | 0.450 | 7 | 0.90 | 0.80 | 1.14 |
| RFB0807-151L | 150 μ H \pm 10% | 0.510 | 6 | 0.80 | 0.72 | 1.02 |
| RFB0807-181L | 180 μ H \pm 10% | 0.700 | 5 | 0.70 | 0.63 | 0.90 |
| RFB0807-221L | 220 μ H \pm 10% | 0.800 | 5 | 0.65 | 0.60 | 0.85 |
| RFB0807-271L | 270 μ H \pm 10% | 0.900 | 4.5 | 0.60 | 0.55 | 0.78 |
| RFB0807-331L | 330 μ H \pm 10% | 1.16 | 4.5 | 0.55 | 0.50 | 0.71 |
| RFB0807-391L | 390 μ H \pm 10% | 1.31 | 3.5 | 0.45 | 0.40 | 0.57 |
| RFB0807-471L | 470 μ H \pm 10% | 1.75 | 2.9 | 0.40 | 0.36 | 0.51 |
| RFB0807-561L | 560 μ H \pm 10% | 1.95 | 2.7 | 0.38 | 0.35 | 0.50 |
| RFB0807-681L | 680 μ H \pm 10% | 2.20 | 2.6 | 0.35 | 0.31 | 0.44 |
| RFB0807-821L | 820 μ H \pm 10% | 3.00 | 2.6 | 0.32 | 0.29 | 0.41 |
| RFB0807-102L | 1.0 mH \pm 10% | 3.40 | 2.6 | 0.30 | 0.25 | 0.40 |
| RFB0807-122L | 1.2 mH \pm 10% | 4.50 | 2.3 | 0.28 | 0.24 | 0.34 |
| RFB0807-152L | 1.5 mH \pm 10% | 5.20 | 2.1 | 0.25 | 0.21 | 0.30 |
| RFB0807-182L | 1.8 mH \pm 10% | 5.80 | 1.8 | 0.22 | 0.20 | 0.28 |
| RFB0807-222L | 2.2 mH \pm 10% | 8.00 | 1.5 | 0.20 | 0.18 | 0.26 |
| RFB0807-272L | 2.7 mH \pm 10% | 8.90 | 1.2 | 0.18 | 0.17 | 0.24 |
| RFB0807-332L | 3.3 mH \pm 10% | 11.8 | 1.1 | 0.15 | 0.14 | 0.19 |
| RFB0807-392L | 3.9 mH \pm 10% | 13.1 | 1.0 | 0.12 | 0.11 | 0.16 |
| RFB0807-472L | 4.7 mH \pm 10% | 17.6 | 1.0 | 0.10 | 0.10 | 0.15 |
| RFB0807-562L | 5.6 mH \pm 10% | 19.6 | 0.9 | 0.10 | 0.10 | 0.15 |
| RFB0807-682L | 6.8 mH \pm 10% | 27 | 0.8 | 0.10 | 0.10 | 0.14 |
| RFB0807-822L | 8.2 mH \pm 10% | 30 | 0.7 | 0.10 | 0.10 | 0.14 |
| RFB0807-103L | 10 mH \pm 10% | 34 | 0.7 | 0.10 | 0.10 | 0.13 |
| RFB0807-123L | 12 mH \pm 10% | 46 | 0.6 | 0.08 | 0.10 | 0.13 |
| RFB0807-153L | 15 mH \pm 10% | 53 | 0.5 | 0.06 | 0.08 | 0.11 |
| RFB0807-183L | 18 mH \pm 10% | 56 | 0.5 | 0.05 | 0.08 | 0.10 |

Typical L vs Current



Typical L vs Frequency



1. When ordering, please specify **termination** code:

RFB0807-183L

Termination: L = Tin-silver over tin over copper over steel.

Special order: T = RoHS tin-silver-copper (95.5/4/0.5)

or **S** = non-RoHS tin-lead (63/37).

To order parts packaged in fanfold tape (800 parts per box), add the letter "F" at the end of the part number.

- Inductance tested at 100 kHz, 0.1 Vrms, 0 Adc on an Agilent/HP 4284A LCR-meter or equivalent.
- SRF measured using Agilent/HP 4191A or equivalent.
- DC current at which the inductance drops 10% (typ) from its value without current.
- Current that causes the specified temperature rise from 25°C ambient.
- Electrical specifications at 25°C.



www.coilcraft.com

US +1-847-639-6400 sales@coilcraft.com
UK +44-1236-730595 sales@coilcraft-europe.com
Taiwan +886-2-2264 3646 sales@coilcraft.com.tw
China +86-21-6218 8074 sales@coilcraft.com.cn
Singapore +65-6484 8412 sales@coilcraft.com.sg

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This product may not be used in medical or high risk applications without prior Coilcraft approval. Specification subject to change without notice. Please check web site for latest information.



Power Inductors – RFB0810 Series

| Part number ¹ | Inductance ² ±10% | DCR max (Ohms) | SRF typ ³ (MHz) | Isat ⁴ (A) | Irms(A) ⁵ | |
|--------------------------|---------------------------------|----------------------|----------------------------------|--------------------------|----------------------|--------------|
| | | | | | 20°C rise | 40°C rise |
| RFB0810-100L | 10 µH | 0.030 | 22 | 4.20 | 4.00 | 5.30 |
| RFB0810-120L | 12 µH | 0.035 | 20 | 3.90 | 3.75 | 5.10 |
| RFB0810-150L | 15 µH | 0.040 | 17 | 3.60 | 3.52 | 4.80 |
| RFB0810-180L | 18 µH | 0.040 | 15 | 3.30 | 3.30 | 4.50 |
| RFB0810-220L | 22 µH | 0.050 | 12 | 2.90 | 3.20 | 4.20 |
| RFB0810-270L | 27 µH | 0.055 | 12 | 2.60 | 2.87 | 3.90 |
| RFB0810-330L | 33 µH | 0.075 | 11 | 2.40 | 2.65 | 3.60 |
| RFB0810-390L | 39 µH | 0.085 | 10.3 | 2.20 | 2.44 | 3.30 |
| RFB0810-470L | 47 µH | 0.100 | 9.5 | 2.00 | 2.22 | 3.00 |
| RFB0810-560L | 56 µH | 0.120 | 8.6 | 1.80 | 2.00 | 2.70 |
| RFB0810-680L | 68 µH | 0.150 | 7.5 | 1.60 | 1.77 | 2.40 |
| RFB0810-820L | 82 µH | 0.190 | 6.6 | 1.50 | 1.54 | 2.10 |
| RFB0810-101L | 100 µH | 0.200 | 5.5 | 1.40 | 1.30 | 1.80 |
| RFB0810-121L | 120 µH | 0.240 | 5.3 | 1.20 | 1.22 | 1.70 |
| RFB0810-151L | 150 µH | 0.340 | 4.5 | 1.10 | 1.14 | 1.60 |
| RFB0810-181L | 180 µH | 0.360 | 4.4 | 1.00 | 1.06 | 1.50 |
| RFB0810-221L | 220 µH | 0.480 | 4.4 | 0.92 | 0.98 | 1.40 |
| RFB0810-271L | 270 µH | 0.550 | 4.0 | 0.84 | 0.90 | 1.30 |
| RFB0810-331L | 330 µH | 0.650 | 3.5 | 0.75 | 0.82 | 1.10 |
| RFB0810-391L | 390 µH | 0.850 | 3.0 | 0.70 | 0.85 | 1.00 |
| RFB0810-471L | 470 µH | 1.00 | 2.5 | 0.63 | 0.67 | 0.90 |
| RFB0810-561L | 560 µH | 1.10 | 2.3 | 0.58 | 0.59 | 0.80 |
| RFB0810-681L | 680 µH | 1.40 | 2.0 | 0.52 | 0.51 | 0.70 |
| RFB0810-821L | 820 µH | 1.90 | 2.0 | 0.48 | 0.43 | 0.60 |
| RFB0810-102L | 1.0 mH | 2.20 | 2.0 | 0.43 | 0.35 | 0.50 |
| RFB0810-122L | 1.2 mH | 2.80 | 1.6 | 0.40 | 0.33 | 0.47 |
| RFB0810-152L | 1.5 mH | 3.20 | 1.3 | 0.35 | 0.31 | 0.45 |
| RFB0810-182L | 1.8 mH | 3.60 | 1.3 | 0.32 | 0.29 | 0.42 |
| RFB0810-222L | 2.2 mH | 4.80 | 1.3 | 0.29 | 0.27 | 0.39 |
| RFB0810-272L | 2.7 mH | 5.60 | 1.2 | 0.26 | 0.25 | 0.36 |
| RFB0810-332L | 3.3 mH | 7.60 | 1.0 | 0.24 | 0.23 | 0.33 |
| RFB0810-392L | 3.9 mH | 8.90 | 0.9 | 0.22 | 0.21 | 0.31 |
| RFB0810-472L | 4.7 mH | 9.60 | 0.9 | 0.20 | 0.20 | 0.28 |
| RFB0810-562L | 5.6 mH | 12.0 | 0.8 | 0.18 | 0.18 | 0.25 |
| RFB0810-682L | 6.8 mH | 14.0 | 0.7 | 0.16 | 0.16 | 0.23 |
| RFB0810-822L | 8.2 mH | 17.5 | 0.6 | 0.15 | 0.14 | 0.20 |
| RFB0810-103L | 10 mH | 21 | 0.6 | 0.13 | 0.12 | 0.17 |
| RFB0810-123L | 12 mH | 28 | 0.5 | 0.12 | 0.11 | 0.15 |
| RFB0810-153L | 15 mH | 32 | 0.5 | 0.11 | 0.10 | 0.14 |
| RFB0810-183L | 18 mH | 36 | 0.4 | 0.10 | 0.09 | 0.12 |

1. When ordering, please specify **termination** code:

RFB0810-183L

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Special order: T = RoHS tin-silver-copper (95.5/4/0.5)
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To order parts packaged in fanfold tape (800 parts per box), add the letter "F" at the end of the part number.

- Inductance tested at 100 kHz, 0.1 Vrms, 0 Adc on an Agilent/HP 4284A LCR-meter or equivalent.
- SRF measured using Agilent/HP 4191A or equivalent.
- DC current at which the inductance drops 10% (typ) from its value without current.
- Current that causes the specified temperature rise from 25°C ambient.
- Electrical specifications at 25°C.

Typical L vs Current



Typical L vs Frequency





Power Inductors – RFB1010 Series

| Part number ¹ | Inductance ² ±10% | DCR max (Ohms) | SRF typ ³ (MHz) | Isat ⁴ (A) | Irms(A) ⁵ | |
|--------------------------|---------------------------------|----------------------|----------------------------------|--------------------------|----------------------|--------------|
| | | | | | 20°C rise | 40°C rise |
| RFB1010-100L | 10 µH | 0.023 | 23 | 6.10 | 4.20 | 6.00 |
| RFB1010-120L | 12 µH | 0.025 | 20 | 5.60 | 4.00 | 5.70 |
| RFB1010-150L | 15 µH | 0.028 | 19 | 5.00 | 3.75 | 5.40 |
| RFB1010-180L | 18 µH | 0.030 | 16 | 4.60 | 3.50 | 5.00 |
| RFB1010-220L | 22 µH | 0.042 | 15 | 4.10 | 3.30 | 4.70 |
| RFB1010-270L | 27 µH | 0.046 | 12 | 3.70 | 3.00 | 4.40 |
| RFB1010-330L | 33 µH | 0.055 | 11 | 3.40 | 2.80 | 4.10 |
| RFB1010-390L | 39 µH | 0.075 | 10.3 | 3.10 | 2.60 | 3.80 |
| RFB1010-470L | 47 µH | 0.082 | 9.5 | 2.80 | 2.40 | 3.50 |
| RFB1010-560L | 56 µH | 0.090 | 8.6 | 2.60 | 2.20 | 3.20 |
| RFB1010-680L | 68 µH | 0.120 | 7.5 | 2.30 | 2.00 | 2.80 |
| RFB1010-820L | 82 µH | 0.140 | 7.0 | 2.10 | 1.90 | 2.50 |
| RFB1010-101L | 100 µH | 0.150 | 7.0 | 1.90 | 1.70 | 2.20 |
| RFB1010-121L | 120 µH | 0.210 | 6.0 | 1.75 | 1.60 | 2.10 |
| RFB1010-151L | 150 µH | 0.245 | 5.0 | 1.60 | 1.50 | 1.90 |
| RFB1010-181L | 180 µH | 0.30 | 5.0 | 1.45 | 1.40 | 1.80 |
| RFB1010-221L | 220 µH | 0.36 | 4.3 | 1.30 | 1.30 | 1.70 |
| RFB1010-271L | 270 µH | 0.49 | 4.0 | 1.20 | 1.20 | 1.60 |
| RFB1010-331L | 330 µH | 0.57 | 3.5 | 1.10 | 1.00 | 1.40 |
| RFB1010-391L | 390 µH | 0.62 | 3.0 | 1.00 | 0.90 | 1.30 |
| RFB1010-471L | 470 µH | 0.81 | 3.0 | 0.90 | 0.80 | 1.20 |
| RFB1010-561L | 560 µH | 0.92 | 2.3 | 0.80 | 0.70 | 1.05 |
| RFB1010-681L | 680 µH | 1.20 | 2.0 | 0.75 | 0.60 | 0.93 |
| RFB1010-821L | 820 µH | 1.35 | 2.0 | 0.68 | 0.55 | 0.80 |
| RFB1010-102L | 1.0 mH | 1.45 | 2.0 | 0.60 | 0.50 | 0.67 |
| RFB1010-122L | 1.2 mH | 2.10 | 1.6 | 0.55 | 0.47 | 0.63 |
| RFB1010-152L | 1.5 mH | 2.40 | 1.4 | 0.50 | 0.44 | 0.59 |
| RFB1010-182L | 1.8 mH | 3.50 | 1.3 | 0.45 | 0.41 | 0.55 |
| RFB1010-222L | 2.2 mH | 4.10 | 1.3 | 0.41 | 0.38 | 0.50 |
| RFB1010-272L | 2.7 mH | 5.20 | 1.2 | 0.37 | 0.35 | 0.47 |
| RFB1010-332L | 3.3 mH | 6.00 | 1.0 | 0.34 | 0.32 | 0.43 |
| RFB1010-392L | 3.9 mH | 7.00 | 0.9 | 0.31 | 0.29 | 0.39 |
| RFB1010-472L | 4.7 mH | 8.50 | 0.8 | 0.28 | 0.25 | 0.35 |
| RFB1010-562L | 5.6 mH | 10.0 | 0.8 | 0.26 | 0.23 | 0.30 |
| RFB1010-682L | 6.8 mH | 13.0 | 0.7 | 0.23 | 0.19 | 0.26 |
| RFB1010-822L | 8.2 mH | 15.8 | 0.6 | 0.21 | 0.16 | 0.22 |
| RFB1010-103L | 10 mH | 19 | 0.6 | 0.19 | 0.13 | 0.18 |
| RFB1010-123L | 12 mH | 22 | 0.5 | 0.17 | 0.12 | 0.17 |
| RFB1010-153L | 15 mH | 29 | 0.5 | 0.16 | 0.11 | 0.15 |
| RFB1010-183L | 18 mH | 33 | 0.4 | 0.14 | 0.10 | 0.13 |

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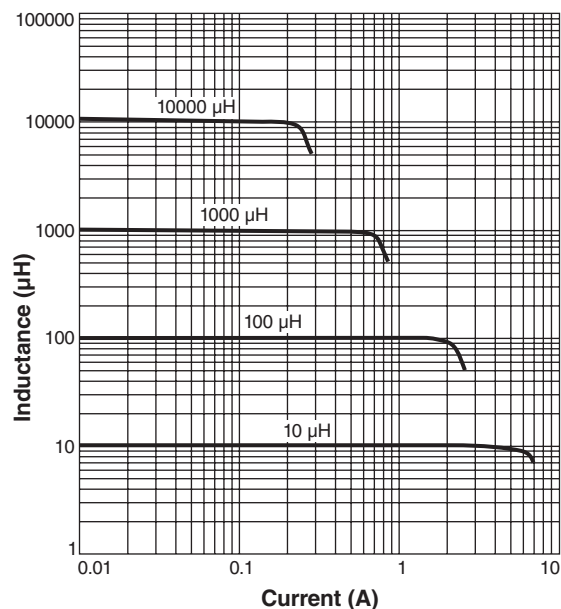
RFB1010-183L

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