

# Power Inductors – RFB Series



- Low cost, high current power inductors
- 0.9  $\mu$ 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**  $-40^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$  with  $I_{\text{rms}}$  current,  $+85^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$  with derated current

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

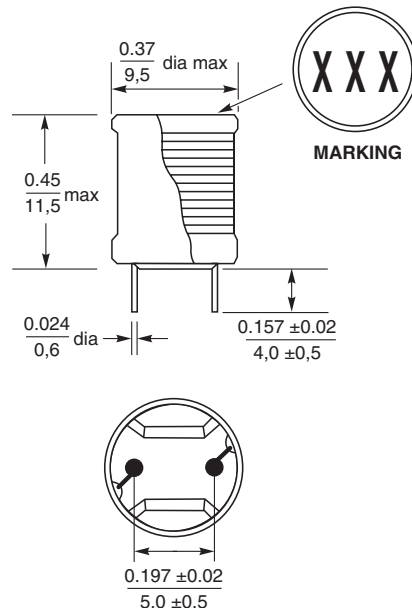
**PCB washing** Tested with pure water or alcohol only. For other solvents, see Doc787\_PCB\_Washing.pdf

## 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 <sup>1</sup>	Inductance <sup>2</sup>	DCR max (Ohms)	SRF typ <sup>3</sup> (MHz)	Isat <sup>4</sup> (A)	Irms (A) <sup>5</sup>	
					20°C rise	40°C rise
RFB0807-1R0L	0.9 $\mu$ H $\pm$ 20%	0.008	180	10.0	6.00	8.50
RFB0807-2R2L	2.2 $\mu$ H $\pm$ 20%	0.012	80	6.00	5.00	7.50
RFB0807-2R7L	2.7 $\mu$ H $\pm$ 20%	0.014	40	5.50	4.60	6.54
RFB0807-3R3L	3.3 $\mu$ H $\pm$ 20%	0.017	40	5.00	4.20	5.97
RFB0807-3R9L	3.9 $\mu$ H $\pm$ 20%	0.020	40	4.50	3.70	5.26
RFB0807-4R7L	4.7 $\mu$ H $\pm$ 20%	0.024	40	4.20	3.50	4.98
RFB0807-5R6L	5.6 $\mu$ H $\pm$ 20%	0.028	40	4.00	3.40	4.83
RFB0807-6R8L	6.8 $\mu$ H $\pm$ 20%	0.033	30	3.60	3.20	4.55
RFB0807-8R2L	8.2 $\mu$ H $\pm$ 20%	0.035	30	3.30	3.00	4.27
RFB0807-100L	10 $\mu$ H $\pm$ 10%	0.040	30	3.10	3.00	4.20
RFB0807-120L	12 $\mu$ H $\pm$ 10%	0.050	30	2.80	2.50	3.56
RFB0807-150L	15 $\mu$ H $\pm$ 10%	0.065	25	2.50	2.25	3.20
RFB0807-180L	18 $\mu$ H $\pm$ 10%	0.078	20	2.30	2.07	2.94
RFB0807-220L	22 $\mu$ H $\pm$ 10%	0.100	20	2.10	1.90	2.70
RFB0807-270L	27 $\mu$ H $\pm$ 10%	0.110	17	1.90	1.70	2.42
RFB0807-330L	33 $\mu$ H $\pm$ 10%	0.120	15	1.70	1.50	2.13
RFB0807-390L	39 $\mu$ H $\pm$ 10%	0.160	13	1.60	1.45	2.06
RFB0807-470L	47 $\mu$ H $\pm$ 10%	0.190	12	1.45	1.30	1.85
RFB0807-560L	56 $\mu$ H $\pm$ 10%	0.210	11	1.30	1.20	1.71
RFB0807-680L	68 $\mu$ H $\pm$ 10%	0.280	10	1.20	1.10	1.56
RFB0807-820L	82 $\mu$ H $\pm$ 10%	0.330	9	1.10	1.00	1.42
RFB0807-101L	100 $\mu$ H $\pm$ 10%	0.400	8	1.00	0.90	1.30
RFB0807-121L	120 $\mu$ H $\pm$ 10%	0.450	7	0.90	0.80	1.14
RFB0807-151L	150 $\mu$ H $\pm$ 10%	0.510	6	0.80	0.72	1.02
RFB0807-181L	180 $\mu$ H $\pm$ 10%	0.700	5	0.70	0.63	0.90
RFB0807-221L	220 $\mu$ H $\pm$ 10%	0.800	5	0.65	0.60	0.85
RFB0807-271L	270 $\mu$ H $\pm$ 10%	0.900	4.5	0.60	0.55	0.78
RFB0807-331L	330 $\mu$ H $\pm$ 10%	1.16	4.5	0.55	0.50	0.71
RFB0807-391L	390 $\mu$ H $\pm$ 10%	1.31	3.5	0.45	0.40	0.57
RFB0807-471L	470 $\mu$ H $\pm$ 10%	1.75	2.9	0.40	0.36	0.51
RFB0807-561L	560 $\mu$ H $\pm$ 10%	1.95	2.7	0.38	0.35	0.50
RFB0807-681L	680 $\mu$ H $\pm$ 10%	2.20	2.6	0.35	0.31	0.44
RFB0807-821L	820 $\mu$ 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.



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# Power Inductors – RFB0810 Series

Part number <sup>1</sup>	Inductance <sup>2</sup> ±10%	DCR max (Ohms)	SRF typ <sup>3</sup> (MHz)	Isat <sup>4</sup> (A)	Irms(A) <sup>5</sup>	
					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**

**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.

## Typical L vs Current



## Typical L vs Frequency





# Power Inductors – RFB1010 Series

Part number <sup>1</sup>	Inductance <sup>2</sup> ±10%	DCR max (Ohms)	SRF typ <sup>3</sup> (MHz)	Isat <sup>4</sup> (A)	Irms(A) <sup>5</sup>	
					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

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

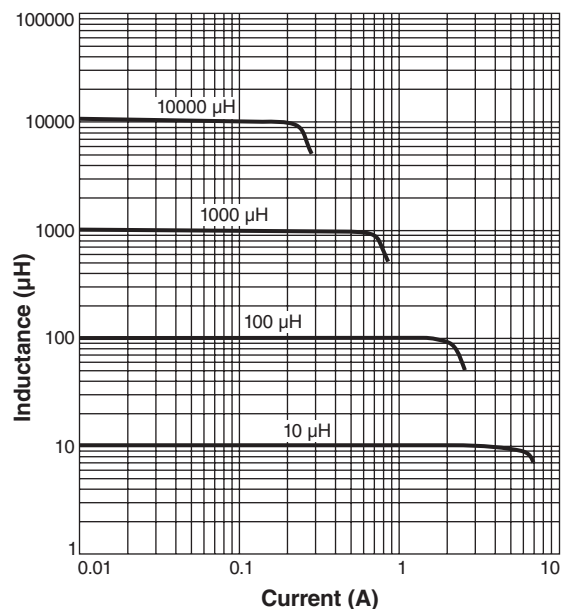
**RFB1010-183L**

**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).

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## Typical L vs Current



## Typical L vs Frequency

