

Power Inductors – RFC0807 Series



- Low cost, high current power inductors
- 39 inductance values; 12 μ H to 18 mH

Core material Ferrite

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

Environmental RoHS compliant, halogen free

Weight 1.30 – 1.50 g

Ambient temperature -40°C to $+85^{\circ}\text{C}$ with (40°C rise) Irms current.

Maximum part temperature $+125^{\circ}\text{C}$ (ambient + temp rise). [Derating](#).

Storage temperature Component: -40°C to $+125^{\circ}\text{C}$.
Tray or tape packaging: -40°C to $+80^{\circ}\text{C}$

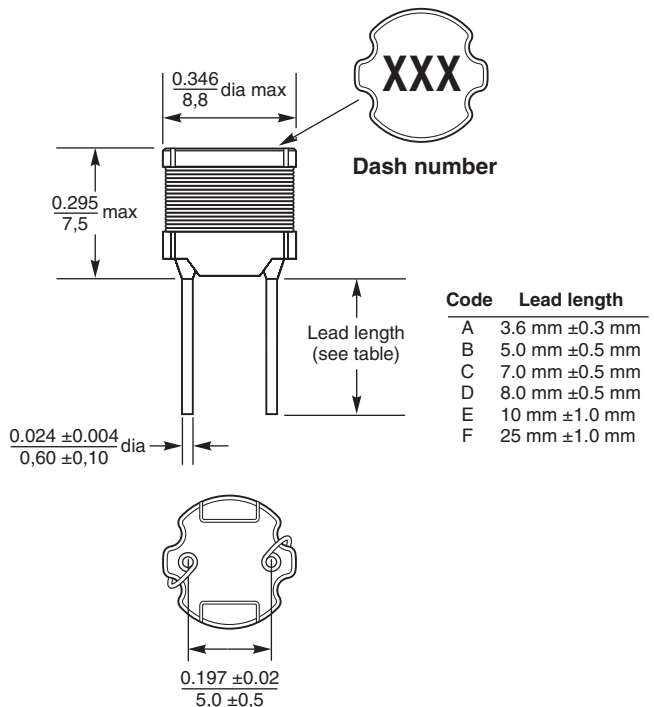
Moisture Sensitivity Level (MSL) 1 (unlimited floor life at $<30^{\circ}\text{C}$ / 85% relative humidity)

Failures in Time (FIT) / Mean Time Between Failures (MTBF)

38 per billion hours / 26,315,789 hours, calculated per Telcordia SRA-332

Packaging 150 parts per tray (except parts with 25 mm lead length);
Parts with 25 mm lead length: in fanfold tape, 800 parts per box

PCB washing Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See [Doc787_PCB_Washing.pdf](#).



Dimensions are in $\frac{\text{inches}}{\text{mm}}$

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| Part number ¹ | Inductance ² ±10% (µH) | DCR (Ohms) | | SRF typ ³ (MHz) | Isat (A) ⁴ | | | Irms (A) ⁵ | |
|--------------------------|--------------------------------------|------------|-------|-------------------------------|-----------------------|----------|----------|-----------------------|-----------|
| | | typ | max | | 10% drop | 20% drop | 30% drop | 20°C rise | 40°C rise |
| RFC0807B-123KE | 12 | 0.035 | 0.045 | 20 | 5.70 | 6.30 | 6.65 | 2.50 | 3.60 |
| RFC0807B-153KE | 15 | 0.050 | 0.060 | 19 | 4.95 | 5.53 | 5.85 | 2.15 | 3.10 |
| RFC0807B-183KE | 18 | 0.060 | 0.070 | 16 | 4.70 | 5.23 | 5.55 | 2.00 | 2.80 |
| RFC0807B-223KE | 22 | 0.075 | 0.090 | 13 | 4.10 | 4.60 | 4.85 | 1.75 | 2.50 |
| RFC0807B-273KE | 27 | 0.085 | 0.100 | 12 | 3.70 | 4.13 | 4.37 | 1.70 | 2.35 |
| RFC0807B-333KE | 33 | 0.100 | 0.115 | 12 | 3.15 | 3.53 | 3.74 | 1.50 | 2.15 |
| RFC0807B-393KE | 39 | 0.125 | 0.145 | 10 | 2.85 | 3.20 | 3.40 | 1.35 | 1.95 |
| RFC0807B-473KE | 47 | 0.145 | 0.165 | 9.2 | 2.55 | 2.87 | 3.04 | 1.25 | 1.80 |
| RFC0807B-563KE | 56 | 0.160 | 0.185 | 8.5 | 2.35 | 2.66 | 2.84 | 1.20 | 1.70 |
| RFC0807B-683KE | 68 | 0.210 | 0.240 | 7.2 | 2.30 | 2.60 | 2.74 | 1.10 | 1.50 |
| RFC0807B-823KE | 82 | 0.240 | 0.275 | 6.4 | 2.13 | 2.37 | 2.53 | 1.00 | 1.40 |
| RFC0807B-104KE | 100 | 0.310 | 0.355 | 6.1 | 1.98 | 2.22 | 2.34 | 0.85 | 1.25 |
| RFC0807B-124KE | 120 | 0.350 | 0.400 | 5.7 | 1.76 | 2.00 | 2.12 | 0.80 | 1.15 |
| RFC0807B-154KE | 150 | 0.410 | 0.470 | 5.3 | 1.62 | 1.82 | 1.93 | 0.75 | 1.05 |
| RFC0807B-184KE | 180 | 0.525 | 0.605 | 4.4 | 1.42 | 1.61 | 1.70 | 0.65 | 0.95 |
| RFC0807B-224KE | 220 | 0.600 | 0.690 | 4.1 | 1.32 | 1.48 | 1.57 | 0.60 | 0.85 |
| RFC0807B-274KE | 270 | 0.700 | 0.805 | 3.6 | 1.20 | 1.34 | 1.43 | 0.55 | 0.80 |
| RFC0807B-334KE | 330 | 0.910 | 1.05 | 3.4 | 1.08 | 1.21 | 1.30 | 0.50 | 0.72 |
| RFC0807B-394KE | 390 | 1.00 | 1.15 | 3.3 | 1.03 | 1.16 | 1.23 | 0.45 | 0.64 |
| RFC0807B-474KE | 470 | 1.35 | 1.55 | 2.9 | 0.90 | 1.02 | 1.10 | 0.40 | 0.55 |
| RFC0807B-564KE | 560 | 1.50 | 1.70 | 2.7 | 0.85 | 0.93 | 1.01 | 0.37 | 0.52 |
| RFC0807B-684KE | 680 | 1.75 | 2.00 | 2.5 | 0.77 | 0.83 | 0.92 | 0.34 | 0.48 |
| RFC0807B-824KE | 820 | 2.25 | 2.60 | 2.1 | 0.68 | 0.77 | 0.82 | 0.30 | 0.42 |
| RFC0807B-105KE | 1000 | 2.60 | 3.00 | 2.0 | 0.62 | 0.68 | 0.72 | 0.28 | 0.40 |
| RFC0807B-125KE | 1200 | 3.35 | 3.85 | 1.7 | 0.56 | 0.62 | 0.66 | 0.25 | 0.35 |
| RFC0807B-155KE | 1500 | 3.95 | 4.55 | 1.6 | 0.52 | 0.57 | 0.60 | 0.22 | 0.32 |
| RFC0807B-185KE | 1800 | 4.40 | 5.05 | 1.5 | 0.48 | 0.53 | 0.56 | 0.21 | 0.30 |
| RFC0807B-225KE | 2200 | 6.00 | 6.90 | 1.3 | 0.43 | 0.47 | 0.49 | 0.18 | 0.26 |
| RFC0807B-275KE | 2700 | 6.95 | 8.00 | 1.2 | 0.38 | 0.42 | 0.44 | 0.17 | 0.24 |
| RFC0807B-335KE | 3300 | 9.10 | 10.5 | 1.0 | 0.35 | 0.38 | 0.40 | 0.15 | 0.21 |
| RFC0807B-395KE | 3900 | 10.0 | 11.5 | 1.0 | 0.33 | 0.35 | 0.37 | 0.14 | 0.20 |
| RFC0807B-475KE | 4700 | 14.0 | 16.0 | 0.90 | 0.29 | 0.31 | 0.33 | 0.12 | 0.17 |
| RFC0807B-565KE | 5600 | 15.5 | 17.5 | 0.80 | 0.27 | 0.29 | 0.31 | 0.11 | 0.16 |
| RFC0807B-685KE | 6800 | 20.0 | 23.0 | 0.70 | 0.24 | 0.26 | 0.27 | 0.10 | 0.14 |
| RFC0807B-825KE | 8200 | 22.5 | 25.5 | 0.60 | 0.22 | 0.24 | 0.26 | 0.095 | 0.133 |
| RFC0807B-106KE | 10,000 | 25.5 | 28.0 | 0.60 | 0.21 | 0.22 | 0.24 | 0.090 | 0.125 |
| RFC0807B-126KE | 12,000 | 34.0 | 37.5 | 0.60 | 0.19 | 0.20 | 0.22 | 0.080 | 0.110 |
| RFC0807B-156KE | 15,000 | 41.5 | 45.5 | 0.50 | 0.16 | 0.18 | 0.20 | 0.070 | 0.100 |
| RFC0807B-186KE | 18,000 | 46.5 | 51.0 | 0.40 | 0.15 | 0.17 | 0.18 | 0.065 | 0.090 |

1. When ordering, specify **lead length** and **termination** codes:

RFC0807B-183KE

Lead length: A = 3.6 mm ±0.3 mm (special order)
 B = 5.0 mm ±0.5 mm
 C = 7.0 mm ±0.5 mm (special order)
 D = 8.0 mm ±0.5 mm (special order)
 E = 10.0 mm ±1.0 mm (special order)
 F = 25.0 mm ±1.0 mm, packaged in fanfold tape, 800 parts per box (special order)

Termination: E = RoHS compliant tin-silver over tin over copper over steel.
 Special order: S = non-RoHS tin-lead (63/37)

- 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 25°C that causes the specified inductance drop from its value without current.
[Click for temperature derating information.](#)
- Current that causes the specified temperature rise from 25°C ambient. This information is for reference only and does not represent absolute maximum ratings. [Click for temperature derating information.](#)
- Electrical specifications at 25°C.



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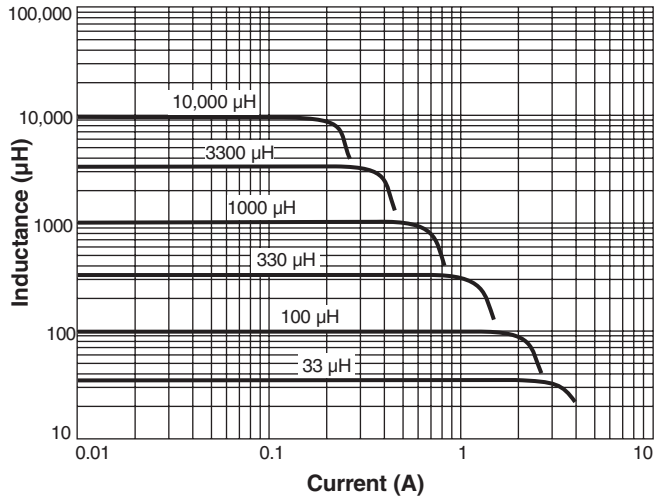
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This product may not be used in medical or high risk applications without prior Coilcraft approval. Specification subject to change without notice. Please check web site for latest information.

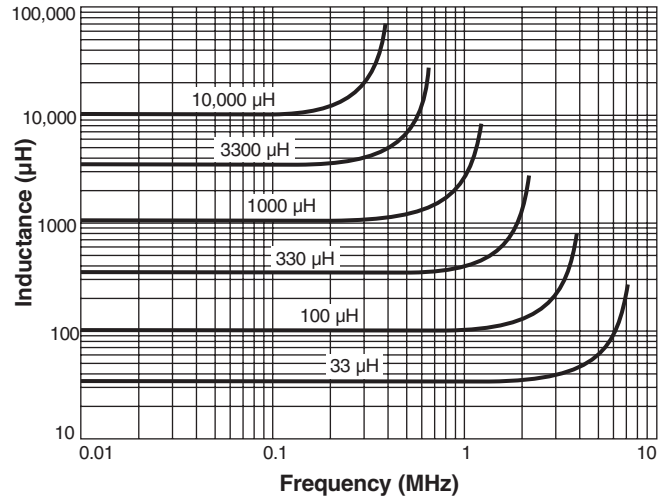


Power Inductors – RFC0807 Series

Typical L vs Current



Typical L vs Frequency



Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Coilcraft:

| | | | | | |
|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|
| <u>RFC0807B-124KE</u> | <u>RFC0807B-104KE</u> | <u>RFC0807B-564KE</u> | <u>RFC0807B-393KE</u> | <u>RFC0807B-273KE</u> | <u>RFC0807B-275KE</u> |
| <u>RFC0807B-185KE</u> | <u>RFC0807B-395KE</u> | <u>RFC0807B-183KE</u> | <u>RFC0807B-394KE</u> | <u>RFC0807B-106KE</u> | <u>RFC0807B-186KE</u> |
| <u>RFC0807B-156KE</u> | <u>RFC0807B-223KE</u> | <u>RFC0807B-153KE</u> | <u>RFC0807B-126KE</u> | <u>RFC0807B-473KE</u> | <u>RFC0807B-823KE</u> |
| <u>RFC0807B-335KE</u> | <u>RFC0807B-334KE</u> | <u>RFC0807B-684KE</u> | <u>RFC0807B-685KE</u> | <u>RFC0807B-123KE</u> | <u>RFC0807B-333KE</u> |
| <u>RFC0807B-824KE</u> | <u>RFC0807B-565KE</u> | <u>RFC0807B-563KE</u> | <u>RFC0807B-155KE</u> | <u>RFC0807B-474KE</u> | <u>RFC0807B-274KE</u> |
| <u>RFC0807B-224KE</u> | <u>RFC0807B-683KE</u> | <u>RFC0807B-184KE</u> | <u>RFC0807B-475KE</u> | <u>RFC0807B-105KE</u> | <u>RFC0807B-154KE</u> |
| <u>RFC0807B-225KE</u> | <u>RFC0807B-825KE</u> | <u>RFC0807B-125KE</u> | | | |