

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 $+80^{\circ}\text{C}$

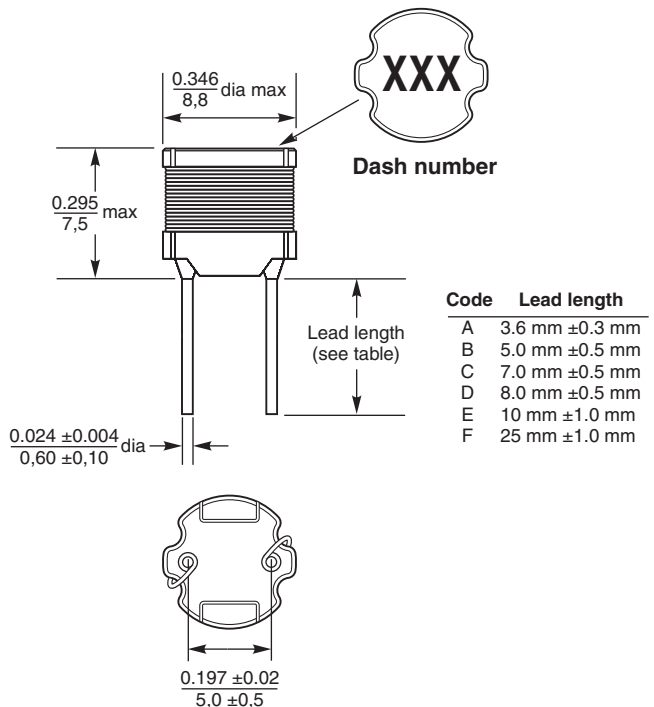
Moisture Sensitivity Level (MSL) 1 (unlimited floor life at $<30^{\circ}\text{C}$ / 85% relative humidity)

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.



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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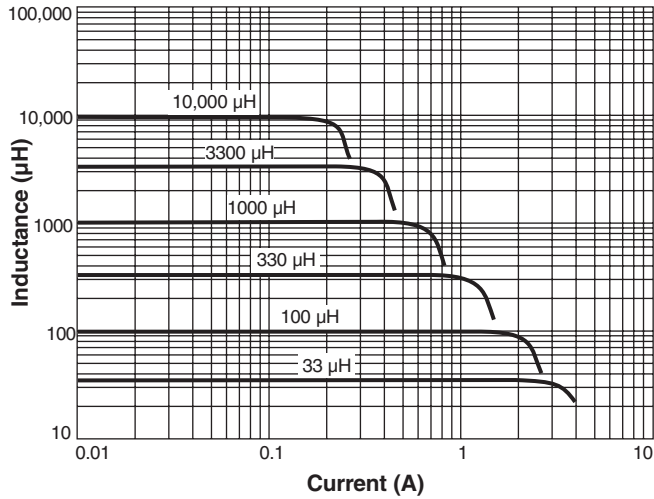
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Power Inductors – RFC0807 Series

Typical L vs Current



Typical L vs Frequency

