

# Power Inductors – RFC0807 Series



- Low cost, high current power inductors
- 39 inductance values; 12  $\mu$ 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**  $-40^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$  with ( $40^{\circ}\text{C}$  rise) Irms current.

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

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

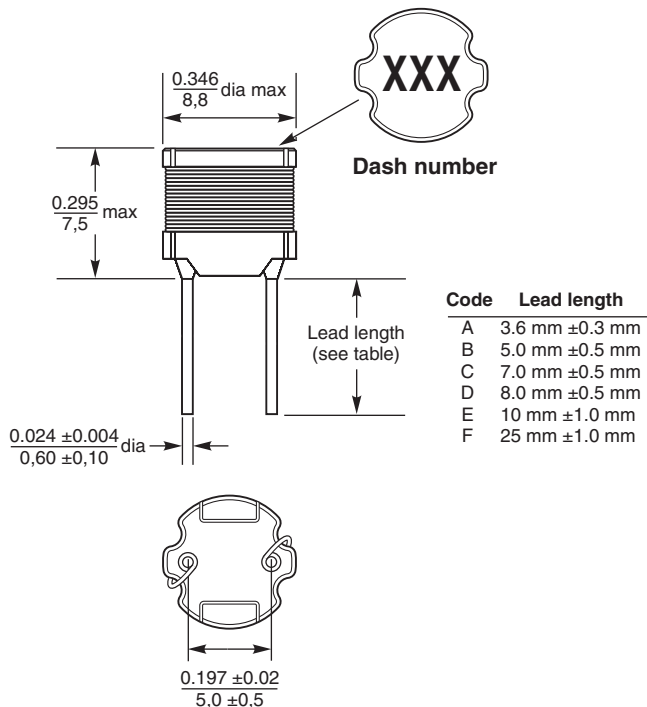
**Moisture Sensitivity Level (MSL)** 1 (unlimited floor life at  $<30^{\circ}\text{C}$  / 85% relative humidity)

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

38 per billion hours / 26,315,789 hours, calculated per Telcordia 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  $\frac{\text{inches}}{\text{mm}}$



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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# Power Inductors – RFC0807 Series



Part number <sup>1</sup>	Inductance <sup>2</sup> ±10% (µH)	DCR (Ohms)		SRF typ <sup>3</sup> (MHz)	Isat (A) <sup>4</sup>			Irms (A) <sup>5</sup>	
		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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**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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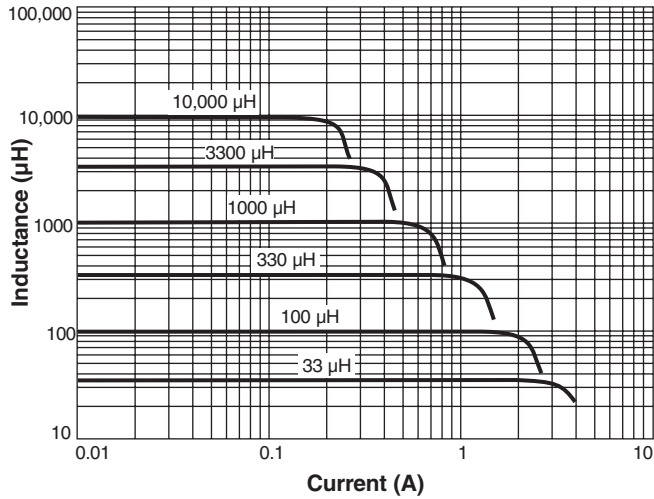
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## Typical L vs Current



## Typical L vs Frequency

