

# Power Inductors – RFC0810 Series



- Low cost, high current power inductors
- 34 inductance values; 33  $\mu\text{H}$  to 18 mH
- Flame retardant polyolefin wrap to protect the winding.

**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** 2.0 – 2.3 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  $+80^{\circ}\text{C}$

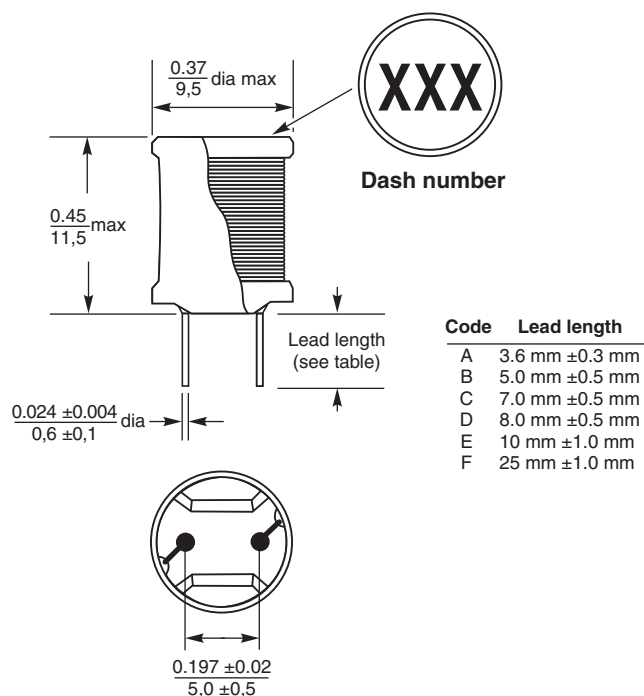
**Moisture Sensitivity Level (MSL)** 1 (unlimited floor life at  $<30^{\circ}\text{C}$  / 85% relative humidity)

**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  $\frac{\text{inches}}{\text{mm}}$



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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
RFC0810B-333KE	33	0.065	0.075	9.0	3.50	3.96	4.25	2.10	3.00
RFC0810B-393KE	39	0.070	0.085	8.7	3.20	3.66	3.95	2.00	2.75
RFC0810B-473KE	47	0.080	0.095	7.5	2.90	3.33	3.60	1.85	2.60
RFC0810B-563KE	56	0.110	0.125	7.3	2.65	3.05	3.27	1.55	2.15
RFC0810B-683KE	68	0.120	0.140	6.3	2.45	2.80	3.02	1.50	2.10
RFC0810B-823KE	82	0.160	0.185	5.2	2.20	2.52	2.72	1.30	1.80
RFC0810B-104KE	100	0.185	0.210	5.0	2.00	2.27	2.43	1.20	1.70
RFC0810B-124KE	120	0.210	0.240	4.9	1.80	2.08	2.24	1.15	1.60
RFC0810B-154KE	150	0.280	0.325	4.1	1.60	1.86	2.01	1.00	1.40
RFC0810B-184KE	180	0.310	0.355	3.8	1.50	1.75	1.88	0.95	1.30
RFC0810B-224KE	220	0.400	0.460	3.0	1.30	1.55	1.67	0.82	1.15
RFC0810B-274KE	270	0.460	0.530	2.9	1.20	1.40	1.51	0.75	1.05
RFC0810B-334KE	330	0.520	0.600	2.6	1.10	1.27	1.40	0.70	1.00
RFC0810B-394KE	390	0.705	0.810	2.4	1.03	1.18	1.28	0.60	0.85
RFC0810B-474KE	470	0.795	0.915	2.2	0.93	1.06	1.15	0.58	0.80
RFC0810B-564KE	560	0.895	1.05	2.0	0.84	0.97	1.06	0.55	0.75
RFC0810B-684KE	680	1.15	1.30	1.7	0.78	0.90	0.96	0.48	0.66
RFC0810B-824KE	820	1.55	1.80	1.6	0.70	0.82	0.87	0.40	0.57
RFC0810B-105KE	1000	1.70	1.95	1.5	0.64	0.73	0.78	0.38	0.54
RFC0810B-125KE	1200	2.35	2.70	1.2	0.58	0.66	0.71	0.33	0.46
RFC0810B-155KE	1500	2.70	3.10	1.1	0.53	0.59	0.64	0.31	0.43
RFC0810B-185KE	1800	3.00	3.45	1.0	0.48	0.55	0.59	0.29	0.41
RFC0810B-225KE	2200	4.10	4.70	0.93	0.43	0.49	0.52	0.25	0.35
RFC0810B-275KE	2700	4.70	5.40	0.89	0.39	0.45	0.48	0.23	0.33
RFC0810B-335KE	3300	6.15	7.10	0.88	0.36	0.40	0.43	0.20	0.29
RFC0810B-395KE	3900	7.10	8.15	0.84	0.33	0.37	0.40	0.185	0.26
RFC0810B-475KE	4700	8.05	9.25	0.78	0.31	0.35	0.37	0.180	0.25
RFC0810B-565KE	5600	9.90	11.5	0.59	0.28	0.31	0.33	0.150	0.22
RFC0810B-685KE	6800	11.5	13.0	0.55	0.26	0.28	0.31	0.145	0.205
RFC0810B-825KE	8200	15.0	17.0	0.48	0.23	0.26	0.28	0.130	0.180
RFC0810B-106KE	10,000	17.0	19.5	0.45	0.21	0.23	0.25	0.122	0.170
RFC0810B-126KE	12,000	21.5	24.5	0.40	0.19	0.22	0.23	0.108	0.150
RFC0810B-156KE	15,000	24.5	27.0	0.36	0.17	0.20	0.21	0.100	0.142
RFC0810B-186KE	18,000	27.5	30.0	0.34	0.16	0.18	0.20	0.097	0.135

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

## RFC0810B-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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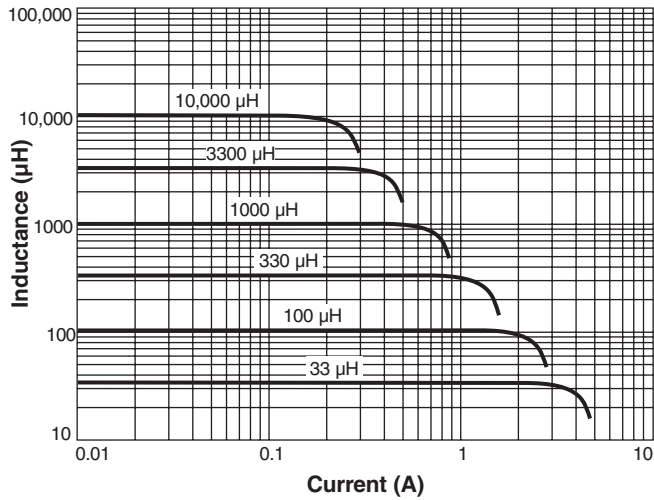
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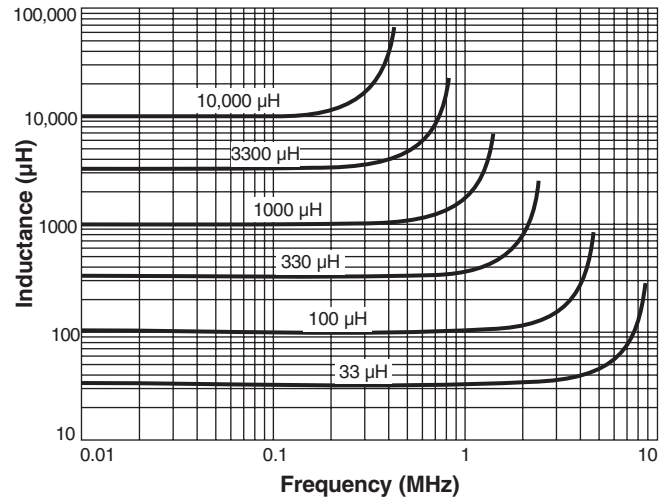


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## Typical L vs Current



## Typical L vs Frequency



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