

Power Inductors – RFC1010 Series



- Low cost, high current power inductors
- 30 inductance values; 68 μ 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 3.2 – 3.7 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 $+80^{\circ}\text{C}$

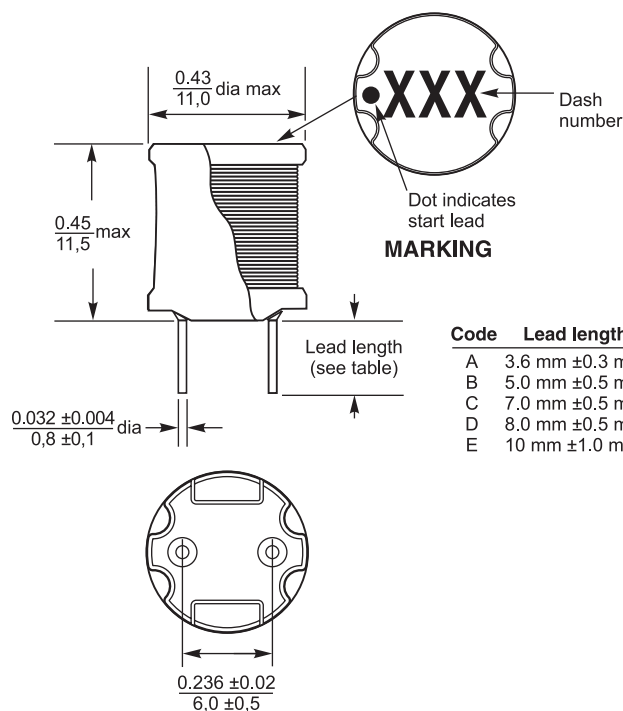
Moisture Sensitivity Level (MSL) 1 (unlimited floor life at $<30^{\circ}\text{C}$ / 85% relative humidity)

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

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
RFC1010B-683KE	68	0.100	0.115	5.6	3.20	3.67	3.94	1.80	2.40
RFC1010B-823KE	82	0.110	0.125	5.4	2.95	3.40	3.67	1.70	2.30
RFC1010B-104KE	100	0.130	0.150	4.7	2.65	3.03	3.27	1.60	2.15
RFC1010B-124KE	120	0.170	0.195	4.3	2.40	2.78	2.98	1.40	1.90
RFC1010B-154KE	150	0.200	0.230	4.0	2.20	2.50	2.70	1.30	1.75
RFC1010B-184KE	180	0.255	0.295	3.4	2.00	2.28	2.44	1.10	1.55
RFC1010B-224KE	220	0.290	0.335	3.1	1.85	2.08	2.25	1.05	1.45
RFC1010B-274KE	270	0.380	0.440	2.8	1.65	1.88	2.04	0.90	1.27
RFC1010B-334KE	330	0.435	0.500	2.6	1.50	1.72	1.84	0.85	1.18
RFC1010B-394KE	390	0.485	0.560	2.4	1.40	1.60	1.72	0.82	1.12
RFC1010B-474KE	470	0.630	0.725	2.1	1.25	1.42	1.53	0.72	1.00
RFC1010B-564KE	560	0.700	0.805	1.9	1.15	1.32	1.42	0.68	0.92
RFC1010B-684KE	680	0.965	1.11	1.7	1.05	1.18	1.26	0.58	0.78
RFC1010B-824KE	820	1.07	1.20	1.6	0.95	1.10	1.18	0.54	0.74
RFC1010B-105KE	1000	1.24	1.40	1.5	0.90	1.00	1.07	0.50	0.70
RFC1010B-125KE	1200	1.61	1.85	1.3	0.75	0.90	0.96	0.43	0.61
RFC1010B-155KE	1500	1.78	2.05	1.2	0.70	0.81	0.86	0.41	0.58
RFC1010B-185KE	1800	2.40	2.75	1.1	0.64	0.71	0.77	0.36	0.50
RFC1010B-225KE	2200	2.80	3.20	0.99	0.58	0.65	0.70	0.33	0.47
RFC1010B-275KE	2700	3.65	4.20	0.82	0.53	0.59	0.63	0.29	0.41
RFC1010B-335KE	3300	4.15	4.75	0.75	0.48	0.53	0.57	0.28	0.38
RFC1010B-395KE	3900	4.65	5.30	0.71	0.45	0.49	0.53	0.26	0.36
RFC1010B-475KE	4700	6.05	6.95	0.61	0.41	0.45	0.48	0.22	0.32
RFC1010B-565KE	5600	6.75	7.75	0.57	0.37	0.41	0.44	0.21	0.30
RFC1010B-685KE	6800	8.90	10.0	0.49	0.34	0.38	0.40	0.180	0.260
RFC1010B-825KE	8200	10.0	11.0	0.46	0.32	0.35	0.37	0.170	0.245
RFC1010B-106KE	10,000	14.0	15.5	0.43	0.29	0.31	0.33	0.150	0.210
RFC1010B-126KE	12,000	16.0	17.5	0.41	0.25	0.28	0.30	0.135	0.180
RFC1010B-156KE	15,000	18.0	19.5	0.38	0.23	0.26	0.28	0.130	0.170
RFC1010B-186KE	18,000	23.0	25.0	0.33	0.21	0.23	0.24	0.115	0.150

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

RFC1010B-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)

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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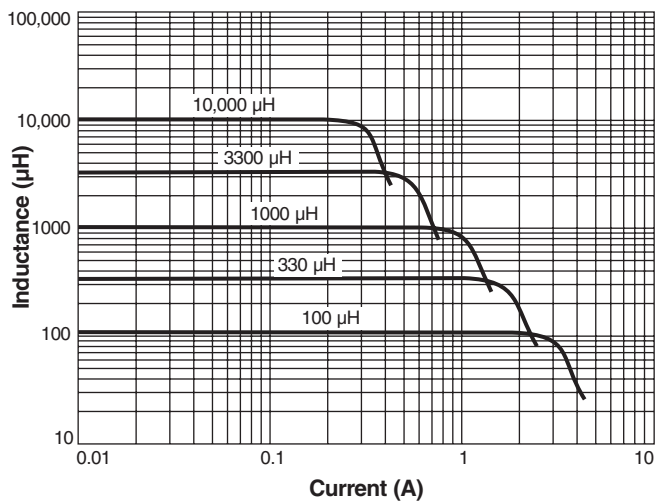
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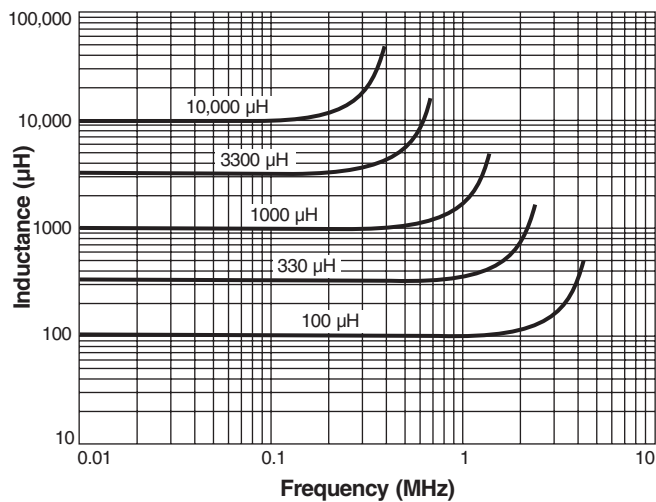


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Typical L vs Current



Typical L vs Frequency



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Mouser Electronics

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RFC1010B-825KE	RFC1010B-126KE	RFC1010B-334KE	RFC1010B-824KE	RFC1010B-395KE	RFC1010B-225KE
RFC1010B-394KE	RFC1010B-185KE	RFC1010B-124KE	RFC1010B-685KE	RFC1010B-475KE	RFC1010B-683KE
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RFC1010B-275KE	RFC1010B-184KE	RFC1010B-274KE	RFC1010B-224KE	RFC1010B-186KE	RFC1010B-154KE