

# Radial Lead Inductors—RI Series



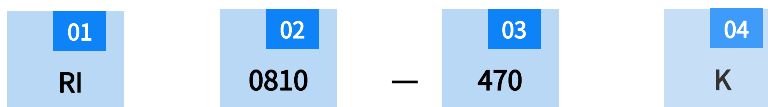
## FEATURES

- Ideal as a choke coil for noise filtering.
- Small size radial lead type, With a special base for uniform lead wire.
- Available with or without heat shrink.
- High Q with high rate current.

## APPLICATIONS

TVs and Audio equipment and Switching power supplies. Buzzers and Alarm systems, Notebook computer, DC - DC converters and air-conditions, etc

## PRODUCT IDENTIFICATION



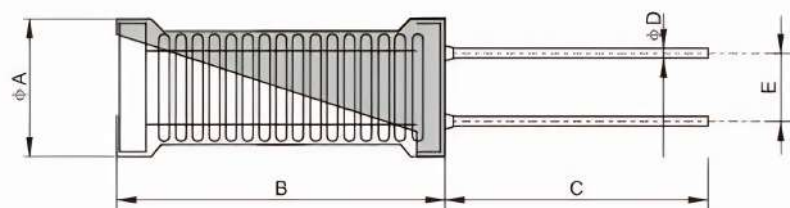
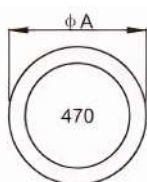
01 Type	
RI	Radial Lead Inductor

02 External Dimensions (ΦAxB)(mm)	
0304	5.0x 7.5
0406	6.0x 9.5
0507	7.0x 12.0
0608	8.0x 13.5
0810	9.0x 15.5
0812	9.0x 17.5
0912	11.5x 17.5
1012	12.0x 18.0
1016	12.0x 20.0
1214	15.0x 17.5
1216	15.0x 20.0

03 Nominal Inductance	
Example	Nominal value
4R7	4.7uH
470	47uH
471	470uH

04 Tolerance	
K	±10%
M	±20%
N	±30%

## SHAPE AND DIMENSIONS



Part Number	Dimensions(mm)				
	ΦA(MAX)	B(MAX)	C(MAX)	D	E
RI0304	5	7.5	According to customer demand	0.50±0.1	1.5±0.5
RI0406	6	9.5		0.50±0.1	1.75±0.5
RI0507	7	12.0		0.60±0.1	2.5±0.5
RI0608	8	13.5		0.65±0.1	3.0±0.5
RI0810	9.5	15.5		0.65±0.1	5.0±0.5
RI0812	9.5	17.5		0.80±0.1	5.0±0.5
RI0912	11.0	17.5		0.80±0.1	5.0±0.5
RI1012	12.5	18.0		0.80±0.1	5.0±0.5
RI1016	12.5	20.0		0.80±0.1	7.5±0.5
RI1214	15.0	17.5		0.80±0.1	7.5±0.5
RI1216	15.0	20.0		0.80±0.1	7.5±0.5

## SPECIFICATIONS

### ● RI0304 TYPE

Part Number	Inductance (uH)	Tolerance	Test condition (KHz/V)	DCR Max(Ω)	Rated Current Max (mA)
RI0304-1R0	1.0	K、M	1/0.25	0.03	2100
RI0304-1R5	1.5		1/0.25	0.04	1700
RI0304-2R2	2.2		1/0.25	0.05	1400
RI0304-2R7	2.7		1/0.25	0.06	1250
RI0304-3R3	3.3		1/0.25	0.08	1100
RI0304-3R9	3.9		1/0.25	0.09	1000
RI0304-4R7	4.7		1/0.25	0.11	950
RI0304-5R6	5.6		1/0.25	0.14	850
RI0304-6R8	6.8		1/0.25	0.17	750
RI0304-8R2	8.2		1/0.25	0.19	700
RI0304-100	10		1/0.25	0.23	650
RI0304-120	12		1/0.25	0.29	550
RI0304-150	15		1/0.25	0.33	500
RI0304-180	18		1/0.25	0.42	480
RI0304-220	22		1/0.25	0.52	440
RI0304-270	27		1/0.25	0.68	400



Part Number	Inductance (uH)	Tolerance	Test condition (KHz/V)	DCR Max(Ω)	Rated Current Max (mA)
RI0304-330	33	K、M	1/0.25	0.75	360
RI0304-390	39		1/0.25	0.95	330
RI0304-470	47		1/0.25	1.35	300
RI0304-560	56		1/0.25	1.45	270
RI0304-680	68		1/0.25	2.00	250
RI0304-820	82		1/0.25	2.20	230
RI0304-101	100		1/0.25	3.10	210
RI0304-121	120		1/0.25	3.50	190
RI0304-151	150		1/0.25	4.05	170
RI0304-181	180		1/0.25	4.50	150
RI0304-221	220		1/0.25	6.75	140

**Note: When ordering, please specify tolerance code. Tolerance: K: ±10%, M: ±20%;**

1. Operating temperature range -40 -125°C

2. Isat for Inductance drop 30% from its value without current

3. The products can be customized according to customer requiremen.

● **RI0406 TYPE**

Part Number	Inductance (uH)	Tolerance	Test condition (KHz/V)	DCR Max(Ω)	Rated Current Max (mA)
RI0406-1R0	1.0	K、M	1/0.25	0.022	3200
RI0406-1R2	1.2		1/0.25	0.026	3000
RI0406-1R5	1.5		1/0.25	0.032	2650
RI0406-1R8	1.8		1/0.25	0.035	2400
RI0406-2R2	2.2		1/0.25	0.040	2200
RI0406-2R7	2.7		1/0.25	0.045	2000
RI0406-3R3	3.3		1/0.25	0.050	1850
RI0406-3R9	3.9		1/0.25	0.055	1750
RI0406-4R7	4.7		1/0.25	0.065	1550
RI0406-5R6	5.6		1/0.25	0.070	1450
RI0406-6R8	6.8		1/0.25	0.080	1350
RI0406-8R2	8.2		1/0.25	0.095	1150
RI0406-100	10		1/0.25	0.100	1050
RI0406-120	12		1/0.25	0.120	1000



Part Number	Inductance (uH)	Tolerance	Test condition (KHz/V)	DCR Max(Ω)	Rated Current Max (mA)
RI0406-150	15	K、M	1/0.25	0.140	900
RI0406-180	18		1/0.25	0.160	800
RI0406-220	22		1/0.25	0.220	700
RI0406-270	27		1/0.25	0.240	650
RI0406-330	33		1/0.25	0.280	600
RI0406-390	39		1/0.25	0.350	550
RI0406-470	47		1/0.25	0.430	500
RI0406-560	56		1/0.25	0.510	450
RI0406-680	68		1/0.25	0.650	420
RI0406-820	82		1/0.25	0.800	380
RI0406-101	100		1/0.25	1.00	340
RI0406-121	120		1/0.25	1.25	310
RI0406-151	150		1/0.25	1.45	280
RI0406-181	180		1/0.25	1.90	250
RI0406-221	220		1/0.25	2.45	230
RI0406-271	270		1/0.25	2.75	210
RI0406-331	330		1/0.25	3.60	190
RI0406-391	390		1/0.25	4.00	170
RI0406-471	470		1/0.25	5.35	150

**Note: When ordering, please specify tolerance code. Tolerance: K: ±10%, M: ±20%;**

1. Operating temperature range -40 -125°C
2. Isat for Inductance drop 30% from its value without current
3. The products can be customized according to customer requiremen.

● **RI0507 TYPE**

Part Number	Inductance (uH)	Tolerance	Test condition (KHz/V)	DCR Max(Ω)	Rated Current Max (mA)
RI0507-1R5	1.5	K、M	1/0.25	0.018	3500
RI0507-1R8	1.8		1/0.25	0.020	3100
RI0507-2R2	2.2		1/0.25	0.026	2800
RI0507-2R7	2.7		1/0.25	0.031	2500
RI0507-3R3	3.3		1/0.25	0.040	2300
RI0507-3R9	3.9		1/0.25	0.045	2100



Part Number	Inductance (uH)	Tolerance	Test condition (KHz/V)	DCR Max(Ω)	Rated Current Max (mA)
RI0507-4R7	4.7	K、M	1/0.25	0.048	1950
RI0507-5R6	5.6		1/0.25	0.058	1700
RI0507-6R8	6.8		1/0.25	0.066	1600
RI0507-8R2	8.2		1/0.25	0.082	1450
RI0507-100	10		1/0.25	0.090	1300
RI0507-120	12		1/0.25	0.097	1150
RI0507-150	15		1/0.25	0.110	1050
RI0507-180	18		1/0.25	0.130	1000
RI0507-220	22		1/0.25	0.150	900
RI0507-270	27		1/0.25	0.190	790
RI0507-330	33		1/0.25	0.230	730
RI0507-390	39		1/0.25	0.260	670
RI0507-470	47		1/0.25	0.330	610
RI0507-560	56		1/0.25	0.390	560
RI0507-680	68		1/0.25	0.480	510
RI0507-820	82		1/0.25	0.580	460
RI0507-101	100		1/0.25	0.750	420
RI0507-121	120		1/0.25	0.900	380
RI0507-151	150		1/0.25	1.15	340
RI0507-181	180		1/0.25	1.50	310
RI0507-221	220		1/0.25	1.90	280
RI0507-271	270		1/0.25	2.15	260
RI0507-331	330		1/0.25	2.75	230
RI0507-391	390		1/0.25	3.05	210
RI0507-471	470		1/0.25	4.00	190
RI0507-561	560		1/0.25	4.45	180
RI0507-681	680		1/0.25	5.05	160
RI0507-821	820		1/0.25	6.75	150
RI0507-102	1000		1/0.25	7.55	130

**Note: When ordering, please specify tolerance code. Tolerance: K: ±10%, M: ±20%;**

1. Operating temperature range -40 -125°C
2. Isat for Inductance drop 30% from its value without current
3. The products can be customized according to customer requiremen.



● RI0507 TYPE

Part Number	Inductance (uH)	Tolerance	Test condition (KHz/V)	DCR Max( $\Omega$ )	Rated Current Max (mA)
RI0608-1R2	1.2	K、M	1/0.25	0.014	4500
RI0608-1R5	1.5		1/0.25	0.016	4100
RI0608-2R2	2.2		1/0.25	0.021	3200
RI0608-2R7	2.7		1/0.25	0.023	2930
RI0608-3R3	3.3		1/0.25	0.025	2700
RI0608-3R9	3.9		1/0.25	0.029	2500
RI0608-4R7	4.7		1/0.25	0.031	2300
RI0608-5R6	5.6		1/0.25	0.033	2150
RI0608-6R8	6.8		1/0.25	0.035	2000
RI0608-8R2	8.2		1/0.25	0.040	1750
RI0608-100	10		1/0.25	0.046	1600
RI0608-120	12		1/0.25	0.058	1450
RI0608-150	15		1/0.25	0.066	1300
RI0608-180	18		1/0.25	0.079	1200
RI0608-220	22		1/0.25	0.088	1100
RI0608-270	27		1/0.25	0.110	950
RI0608-330	33		1/0.25	0.130	900
RI0608-390	39		1/0.25	0.160	850
RI0608-470	47		1/0.25	0.190	750
RI0608-560	56		1/0.25	0.220	690
RI0608-680	68		1/0.25	0.260	620
RI0608-820	82		1/0.25	0.310	570
RI0608-101	100		1/0.25	0.370	520
RI0608-121	120		1/0.25	0.460	470
RI0608-151	150		1/0.25	0.600	420
RI0608-181	180		1/0.25	0.700	380
RI0608-221	220		1/0.25	0.850	350
RI0608-271	270		1/0.25	1.00	310
RI0608-331	330		1/0.25	1.14	280
RI0608-391	390		1/0.25	1.35	260



Part Number	Inductance (uH)	Tolerance	Test condition (KHz/V)	DCR Max(Ω)	Rated Current Max (mA)
RI0608-471	470	K、M	1/0.25	1.65	240
RI0608-561	560		1/0.25	2.00	220
RI0608-681	680		1/0.25	2.50	200
RI0608-821	820		1/0.25	3.10	180
RI0608-102	1000		1/0.25	3.90	160
RI0608-103	10000		1/0.25	39.0	40

**Note: When ordering, please specify tolerance code. Tolerance: K: ±10%, M: ±20%;**

1. Operating temperature range -40 -125°C

2. Isat for Inductance drop 30% from its value without current

3. The products can be customized according to customer requirements.

● **RI0810 TYPE**

Part Number	Inductance (uH)	Tolerance	Test condition (KHz/V)	DCR Max(Ω)	Rated Current Max (mA)
RI0810-2R2	2.2	K、M	1/0.25	0.018	4800
RI0810-3R3	3.3		1/0.25	0.020	4300
RI0810-3R9	3.9		1/0.25	0.022	3850
RI0810-4R7	4.7		1/0.25	0.024	3500
RI0810-5R6	5.6		1/0.25	0.027	3250
RI0810-6R8	6.8		1/0.25	0.031	2800
RI0810-8R2	8.2		1/0.25	0.033	2600
RI0810-100	10		1/0.25	0.037	2350
RI0810-120	12		1/0.25	0.041	2250
RI0810-150	15		1/0.25	0.047	1900
RI0810-180	18		1/0.25	0.052	1750
RI0810-220	22		1/0.25	0.059	1600
RI0810-270	27		1/0.25	0.065	1430
RI0810-330	33		1/0.25	0.075	1300
RI0810-390	39		1/0.25	0.100	1180
RI0810-470	47		1/0.25	0.110	1090
RI0810-560	56		1/0.25	0.120	1000
RI0810-680	68		1/0.25	0.160	920
RI0810-820	82	1/0.25	0.170	820	



Part Number	Inductance (uH)	Tolerance	Test condition (KHz/V)	DCR Max(Ω)	Rated Current Max (mA)
RI0810-101	100	K、M	1/0.25	0.200	750
RI0810-121	120		1/0.25	0.240	690
RI0810-151	150		1/0.25	0.320	610
RI0810-181	180		1/0.25	0.360	560
RI0810-221	220		1/0.25	0.450	510
RI0810-271	270		1/0.25	0.550	560
RI0810-331	330		1/0.25	0.650	410
RI0810-391	390		1/0.25	0.800	380
RI0810-471	470		1/0.25	0.900	350
RI0810-561	560		1/0.25	1.150	320
RI0810-681	680		1/0.25	1.360	290
RI0810-821	820		1/0.25	1.650	260
RI0810-102	1000		1/0.25	2.000	240

**Note: When ordering, please specify tolerance code. Tolerance: K: ±10%, M: ±20%;**

1. Operating temperature range -40 -125°C

2. Isat for Inductance drop 30% from its value without current

3. The products can be customized according to customer requiremen.

● **RI0812 TYPE**

Part Number	Inductance (uH)	Tolerance	Test condition (KHz/V)	DCR Max(Ω)	Rated Current Max (mA)
RI0812-2R2	2.2	K、M	1/0.25	0.021	7500
RI0812-3R3	3.3		1/0.25	0.023	7000
RI0812-3R9	3.9		1/0.25	0.026	6500
RI0812-4R7	4.7		1/0.25	0.028	6000
RI0812-5R	5.6		1/0.25	0.030	5600
RI0812-6R8	6.8		1/0.25	0.037	4800
RI0812-8R2	8.2		1/0.25	0.039	4500
RI0812-100	10		1/0.25	0.044	4000
RI0812-120	12		1/0.25	0.047	3750
RI0812-150	15		1/0.25	0.055	3250
RI0812-180	18		1/0.25	0.060	2950
RI0812-220	22		1/0.25	0.065	2750





Part Number	Inductance (uH)	Tolerance	Test condition (KHz/V)	DCR Max(Ω)	Rated Current Max (mA)
RI0812-270	27	K、M	1/0.25	0.076	2450
RI0812-330	33		1/0.25	0.083	2200
RI0812-390	39		1/0.25	0.095	2000
RI0812-470	47		1/0.25	0.120	1850
RI0812-560	56		1/0.25	0.140	1700
RI0812-680	68		1/0.25	0.170	1550
RI0812-820	82		1/0.25	0.190	1400
RI0812-101	100		1/0.25	0.220	1250
RI0812-121	120		1/0.25	0.260	1180
RI0812-151	150		1/0.25	0.350	1050
RI0812-181	180		1/0.25	0.390	950
RI0812-221	220		1/0.25	0.600	850
RI0812-271	270		1/0.25	0.620	750
RI0812-331	330		1/0.25	0.750	700
RI0812-391	390		1/0.25	0.900	650
RI0812-471	470		1/0.25	1.000	600
RI0812-561	560		1/0.25	1.250	550
RI0812-681	680		1/0.25	1.500	500
RI0812-821	820		1/0.25	1.850	450
RI0812-102	1000		1/0.25	2.25	400

● RI0912 TYPE

Part Number	Inductance (uH)	Tolerance	Test condition (KHz/V)	DCR Max(Ω)	Rated Current Max (mA)
RI0912-102	1000	K	1/0.25	1.20	400
RI0912-332	3300		1/0.25	5.000	250
RI0912-502	5000		1/0.25	7.000	200
RI0912-602	6000		1/0.25	7.700	200
RI0912-902	9000		1/0.25	10.000	100
RI0912-103	10000		1/0.25	11.000	95
RI0912-113	11000		1/0.25	12.000	90



● RI1012 TYPE

Part Number	Inductance (uH)	Tolerance	Test condition (KHz/V)	DCR Max(Ω)	Rated Current Max (mA)
RI1012-330	33	K、M	1/0.25	0.065	3000
RI1012-560	56		1/0.25	0.060	2500
RI1012-680	68		1/0.25	0.120	1750
RI1012-101	100		1/0.25	0.180	1500
RI1012-221	220		1/0.25	0.400	1500
RI1012-331	330		1/0.25	0.550	800
RI1012-102	1000		1/0.25	1.5	450
RI1012-152	1500		1/0.25	3.2	320
RI1012-252	2500		1/0.25	4.0	270
RI1012-302	3000		1/0.25	6.0	280
RI1012-104	100000		1/0.25	225	50
RI1012-504	500000		1/0.25	770	10

**Note: When ordering, please specify tolerance code. Tolerance: K: ±10%, M: ±20%;**

1. Operating temperature range -40 -125°C
2. Isat for Inductance drop 30% from its value without current
3. The products can be customized according to customer requiremen.

● RI1016 TYPE

Part Number	Inductance (uH)	Tolerance	Test condition (KHz/V)	DCR Max(Ω)	Rated Current Max (mA)
RI1016-9R0	9.0	K、M	1/0.25	0.020	4000
RI1016-330	33		1/0.25	0.075	3000
RI1016-161	160		1/0.25	0.220	2000
RI1016-441	440		1/0.25	0.600	1000
RI1016-142	1400		1/0.25	1.2	600
RI1016-152	1500		1/0.25	1.8	400
RI1016-252	2500		1/0.25	2.4	385
RI1016-302	3000		1/0.25	3.5	300
RI1016-682	6800		1/0.25	7.0	250

**Note: When ordering, please specify tolerance code. Tolerance: K: ±10%, M: ±20%;**

1. Operating temperature range -40 -125°C
2. Isat for Inductance drop 30% from its value without current
3. The products can be customized according to customer requiremen.



● RI1214 TYPE

Part Number	Inductance (uH)	Tolerance	Test condition (KHz/V)	DCR Max(Ω)	Rated Current Max (mA)
RI1214-101	100	K、M	1/0.25	0.250	3500
RI1214-151	150		1/0.25	0.231	3500
RI1214-471	470		1/0.25	0.750	2000

**Note: When ordering, please specify tolerance code. Tolerance: K: ±10%、M: ±20%;**

1. Operating temperature range -40 -125°C
2. Isat for Inductance drop 30% from its value without current
3. The products can be customized according to customer requiremen.

● RI1216 TYPE

Part Number	Inductance (uH)	Tolerance	Test condition (KHz/V)	DCR Max(Ω)	Rated Current Max (mA)
RI1216-101	100	K、M	1/0.25	0.020	4000
RI1216-221	220		1/0.25	0.075	3000
RI1216-681	680		1/0.25	0.220	2000

**Note: When ordering, please specify tolerance code. Tolerance: K: ±10%、M: ±20%;**

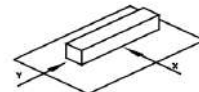
1. Operating temperature range -40 -125°C
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## DETAIL ELECTRICAL CHARACTERISTICS

1. Operating temperature range: -40 to + 105°C(Includes temperature when the coil is heated) .
2. External appearance: On visual inspection, the coil has no external defects.
3. Terminal strength: After soldering. Between copper plate and terminals of coil. Push in two directions of X.Y

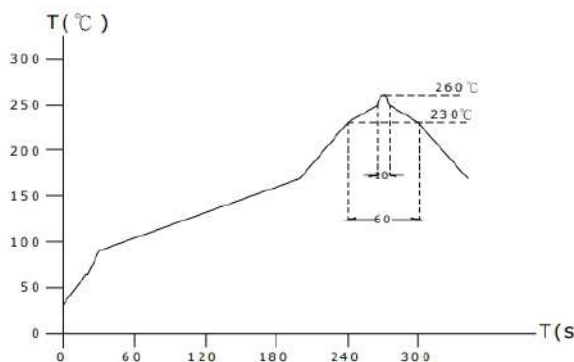
withstanding at below conditions.



Terminal should not peel off. (refer to figure at right) 5. 0N 60 sec.

4. Insulating resistance: Over 100MΩ at 100V D.C. between coil and core.
5. Dielectric strength: No dielectric breakdown at 100V D.C. for 1 minute between coil and core.
6. Temperature characteristics: Inductance coefficient  $(0\sim 2,000)\times 10^{-6}/^{\circ}\text{C}$  (-25~+80°C degree Celsius), inductance deviation within  $\pm 5.0\%$ , after 96 hours.
7. Humidity characteristics(Moisture Resistance): Inductance deviation within  $\pm 5\%$ , after 96 hours in 90~95% relative humidity at  $40 \pm 2^{\circ}\text{C}$  and 1 hour drying under normal condition.
8. Vibration resistance: Inductance deviation within  $\pm 5\%$ , after vibration for 1 hour. In each of three orientations at sweep vibration (10~55~10 Hz) with 1.5mm P-P amplitudes.
9. Shock resistance: Inductance deviation within  $\pm 5\%$ , after being dropped once with 981m/s<sup>2</sup> (100G) shock attitude upon a rubber block method shock testing machine, in three different orientations.
10. Resistance to Soldering Heat: 260°C, 10 seconds(See attached recommend reflow) .
11. Storage condition: Temperature Range: 0°C ~ 35°C; -40°C ~ 105°C (after PCB), Humidity Range: 50% ~ 70% RH.
12. Use components within 12 months. If 12 months or more have elapsed, check solderability before use.
13. Reflow profile recommend:

Lead-free heat endurance test



Lead-free the recommended reflow condition

