

# LF Series High Frequency Fixed Inductors



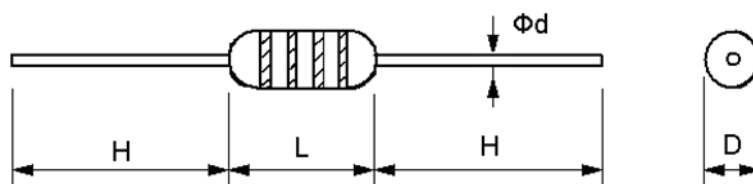
## FEATURES

- Suitable for general high-frequency circuits such as audio-video equipment
- Automatic insertion is applicable with axial or radial tapping
- Flame retardant coating
- Various types of forming are available

## APPLICATIONS

- PDA, notebook, desktop, and server application power supplies.
- Switches and servers
- Audio-video equipment

## SHAPE AND DIMENSIONS



Part Number	Dimensions (mm)			
	L(mm)	Φ D(mm)	H(mm)	Φ d(mm)
LF0204	Max 3.4	Max 2.3	Min 22	0.45
LF0307	Max 7.0	Max 3.0	Min 28	0.50
LF0410	Max 10.5	Max 4.0	Min 26	0.55

## PRODUCT IDENTIFICATION

L	F	-4R7
①	②	③

- ① Symbol for high-frequency inductor
- ② Symbol for fixed inductor
- ③ Inductance: R47-0.47uH 4R7-4.7uH 470-47uH

## SPECIFICATIONS

### ● LF0204 TYPE

Part Number	Inductance (uH)	Tolerance	Q Min	Test Frequency (MHz/V)	SRF(Mhz) min	Resistance Max(Ω)	Rated Current Max (mA)			
LF0204-R10□	0.1	K、M	35	25.2	300	0.18	700			
LF0204-R12□	0.12					0.20	660			
LF0204-R15□	0.15					0.22	620			
LF0204-R18□	0.18					0.24	600			
LF0204-R22□	0.22				150	0.40	400			
LF0204-R27□	0.27					0.43	380			
LF0204-R33□	0.33					0.48	370			
LF0204-R39□	0.39					0.51	350			
LF0204-R47□	0.47					0.56	330			
LF0204-R56□	0.56					0.61	320			
LF0204-R68□	0.68					0.67	310			
LF0204-R82□	0.82					0.74	290			
LF0204-1R0□	1.0					0.80	270			
LF0204-1R2□	1.2					40	7.96	110	0.90	260
LF0204-1R5□	1.5							80	1.0	250



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Part Number	Inductance (uH)	Tolerance	Q Min	Test Frequency (MHz/V)	SRF(Mhz) min	Resistance Max(Ω)	Rated Current Max (mA)
LF0204-1R8□	1.8	K、M	40	7.96	60	1.1	240
LF0204-2R2□	2.2				45	1.2	230
LF0204-2R7□	2.7				40	1.3	220
LF0204-3R3□	3.3				38	1.4	210
LF0204-3R9□	3.9				35	1.6	200
LF0204-4R7□	4.7				32	1.7	190
LF0204-5R6□	5.6				30	1.9	180
LF0204-6R8□	6.8				28	2.0	175
LF0204-8R2□	8.2				26	2.2	165
LF0204-100□	10				24	2.5	160
LF0204-120□	12				2.52	22	2.5
LF0204-150□	15			20		2.8	145
LF0204-180□	18			18		3.1	140
LF0204-220□	22			17		3.4	130
LF0204-270□	27			16		4.3	80
LF0204-330□	33			14		4.7	76
LF0204-390□	39			13		5.2	74
LF0204-470□	47			12		5.8	70
LF0204-560□	56			11		6.4	68
LF0204-680□	68			10		7.2	64
LF0204-820□	82			9.5		11	46
LF0204-101□	100			9.0	12	44	
LF0204-121□	120			0.796	8.0	13	42
LF0204-151□	150				6.0	16	39
LF0204-181□	180				5.5	18	37
LF0204-221□	220				5.0	20	35
LF0204-271□	270				4.6	26	28
LF0204-331□	330				4.2	30	26
LF0204-391□	390				3.8	34	25
LF0204-471□	470				3.5	38	24



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● LH0307 TYPE

Part Number	Inductance (uH)	Tolerance	Q Min	Test Frequency (MHz/V)	SRF(Mhz) min	Resistance Max(Ω)	Rated Current Max (mA)
LF0307-R22□	0.22	J.K.M	45	25.2	380	0.08	1150
LF0307-R27□	0.27				360	0.09	1100
LF0307-R33□	0.33				320	0.10	1100
LF0307-R39□	0.39				310	0.12	1000
LF0307-R47□	0.47				300	0.15	1000
LF0307-R56□	0.56				280	0.18	950
LF0307-R68□	0.68				240	0.20	900
LF0307-R82□	0.82				200	0.22	900
LF0307-1R0□	1.0				180	0.25	815
LF0307-1R0□	1.0				180	0.25	815
LF0307-1R2□	1.2		50	7.96	160	0.28	740
LF0307-1R5□	1.5				140	0.30	700
LF0307-1R8□	1.8				120	0.35	655
LF0307-2R2□	2.2				110	0.40	630
LF0307-2R7□	2.7				85	0.45	595
LF0307-3R3□	3.3				74	0.50	575
LF0307-3R9□	3.9				62	0.55	555
LF0307-4R7□	4.7				48	0.60	530
LF0307-5R6□	5.6				35	0.65	500
LF0307-6R8□	6.8				28	0.70	470
LF0307-8R2□	8.2				20	0.80	425
LF0307-100□	10	18			0.85	370	
LF0307-120□	12	2.52			16	0.90	350
LF0307-150□	15				14	1.00	335
LF0307-180□	18				12	1.20	315
LF0307-220□	22				10	1.35	285
LF0307-270□	27				9.0	1.80	270
LF0307-330□	33		8.0	2.10	255		
LF0307-390□	39		7.5	2.30	240		
LF0307-470□	47		7.0	2.60	205		



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Part Number	Inductance (uH)	Tolerance	Q Min	Test Frequency (MHz/V)	SRF(Mhz) min	Resistance Max(Ω)	Rated Current Max (mA)
LF0307-560□	56	J.K.M	50	2.52	6.5	2.90	195
LF0307-680□	68				6.0	3.20	185
LF0307-820□	82				5.5	3.80	175
LF0307-101□	100				5.0	4.20	165
LF0307-121□	120			0.796	4.8	4.50	160
LF0307-151□	150				4.5	5.00	150
LF0307-181□	180				4.0	6.00	140
LF0307-221□	220				3.5	7.00	130
LF0307-271□	270				3.0	7.50	120
LF0307-331□	330				2.8	8.00	100
LF0307-391□	390				2.6	10	95
LF0307-471□	470				2.4	13	90
LF0307-561□	560				2.0	15	85
LF0307-681□	680				1.8	16	75
LF0307-821□	820				1.6	23	65
LF0307-102□	1000				1.4	26	60

● LF0410 TYPE

Part Number	Inductance (uH)	Tolerance	Q Min	Test Frequency (MHz/V)	SRF(Mhz) min	Resistance Max(Ω)	Rated Current Max (mA)		
LF0410-R10□	0.10	J.K.M	20	25.2	300	0.09	1400		
LF0410-R12□	0.12				300	0.09	1400		
LF0410-R15□	0.15				300	0.09	1400		
LF0410-R18□	0.18				300	0.09	1400		
LF0410-R22□	0.22				270	0.10	1400		
LF0410-R33□	0.33		45		250	0.11	1320		
LF0410-R47□	0.47				220	0.12	1280		
LF0410-R56□	0.56				200	0.13	1200		
LF0410-R68□	0.68				190	0.14	1150		
LF0410-R82□	0.82				172	0.15	980		
LF0410-1R0□	1.0		50		55	7.96	157	0.21	980
LF0410-1R2□	1.2						144	0.23	930
LF0410-1R5□	1.5						131	0.24	920



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Part Number	Inductance (uH)	Tolerance	Q Min	Test Frequency (MHz/V)	SRF(Mhz) min	Resistance Max(Ω )	Rated Current Max (mA)
LF0410-1R8□	1.8	J.K.M	55	7.96	121	0.25	900
LF0410-2R2□	2.2		55		110	0.27	880
LF0410-2R7□	2.7		60		100	0.28	860
LF0410-3R3□	3.3		65		94	0.30	840
LF0410-3R9□	3.9		65		86	0.32	830
LF0410-4R7□	4.7		70		80	0.36	780
LF0410-5R6□	5.6		70		74	0.38	760
LF0410-6R8□	6.8		75		68	0.42	730
LF0410-8R2□	8.2		80		48	0.46	700
LF0410-100□	10		75		38	0.49	500
LF00410-120□	12		75	25	0.63	480	
LF00410-150□	15		70	16	0.72	460	
LF0410-180□	18		65	14	0.77	430	
LF0410-220□	22		60	9.9	0.84	410	
LF0410-270□	27		55	7.6	0.94	390	
LF0410-330□	33		55	6.3	1.03	370	
LF0410-390□	39		50	6.3	1.12	350	
LF0410-470□	47		45	6.3	1.22	340	
LF0410-560□	56		40	6.2	1.34	320	
LF0410-680□	68		40	5.7	1.47	305	
LF0410-820□	82		35	5.3	1.62	290	
LF0410-101□	100		30	4.8	1.80	275	
LF0410-121□	120		70	3.8	3.70	185	
LF0410-151□	150		70	3.5	4.20	175	
LF0410-181□	180		70	3.3	4.60	165	
LF0410-221□	220		70	3.0	5.10	155	
LF0410-271□	270		65	2.8	5.80	145	
LF0410-331□	330		65	2.6	6.40	137	
LF0410-391□	390		65	2.4	7.00	133	
LF0410-471□	470		60	2.25	7.70	126	
LF0410-561□	560	60	2.10	9.00	120		
LF0410-681□	680	55	1.95	9.40	113		

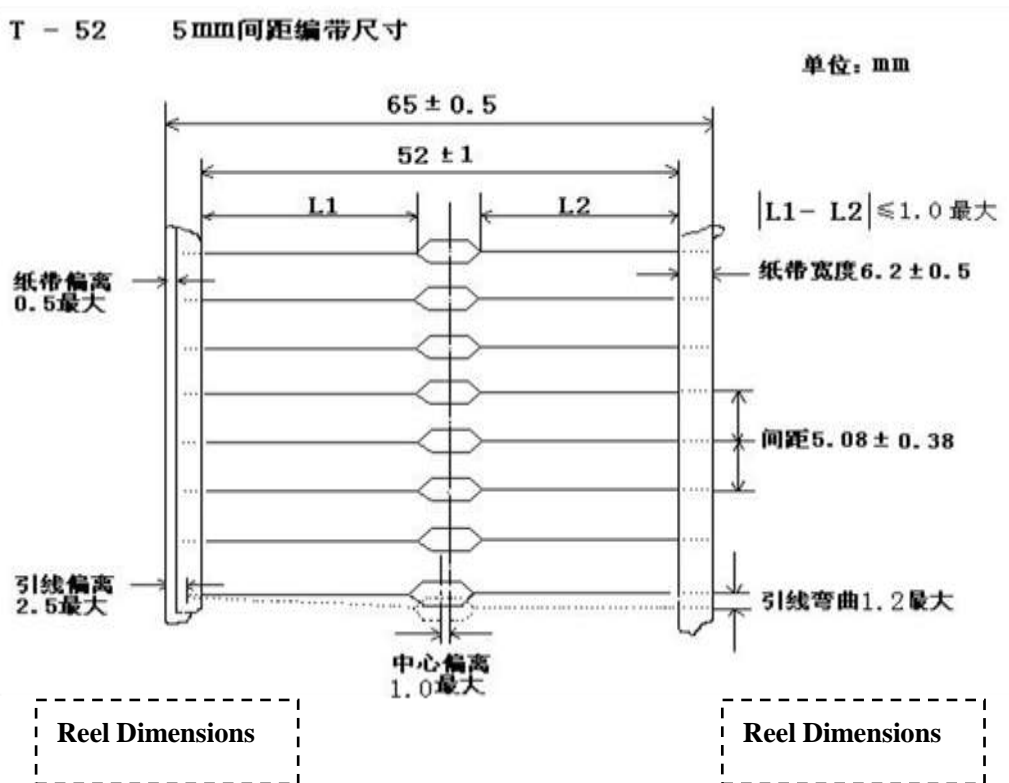


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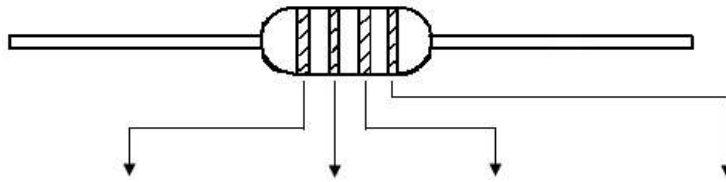
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Part Number	Inductance (uH)	Tolerance	Q Min	Test Frequency (MHz/V)	SRF(Mhz) min	Resistance Max(Ω)	Rated Current Max (mA)
LF0410-821□	820	J.K.M	55	0.796	1.85	10.50	105
LF0410-102□	1000		50		1.40	14.00	100
LF0410-122□	1200			0.252	1.30	16.00	90
LF0410-152□	1500				1.00	20.00	85
LF0410-182□	1800				0.90	32.00	80
LF0410-222□	2200				0.85	35.00	75
LF0410-272□	2700			40	0.80	60.00	70
LF0410-332□	3300		0.75		65.00	65	
LF0410-392□	3900		0.75		71.00	50	
LF0410-472□	4700		0.70		78.00	50	

## ● Packaging Specifications



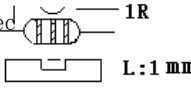
● Color for each numeral



Color	1 <sup>st</sup> color band	2 <sup>nd</sup> color band	3 <sup>th</sup> color band	4 <sup>th</sup> color band
Black	0	0	$10^0$	-
Brown	1	1	$10^1$	-
Red	2	2	$10^2$	-
Orange	3	3	$10^3$	-
Yellow	4	4	$10^4$	-
Green	5	5	$10^5$	-
Bule	6	6	$10^6$	-
Purple	7	7	$10^7$	-
Gray	8	8	$10^8$	-
White	9	9	$10^9$	-
Gold	10	10	$10^{10}$	-



## ● Performance

Item	Performance	Test Method
DC superimposition	$\Delta L/L \leq -10\%$	Inductance when the allowable current is applied, to be measured by LCR-METER
Rise in temperature	Within 20°C	A rise in temperature, when the allowable current is applied for 10 min., to be measured by thermoelectric thermometer.
Over current test	No evidence of shining or flaming	The current twice the allowable current to be applied for 5 min.
Resistance to soldering heat	No evidence of outer damage. $\Delta L/L \leq \pm 5\%$ , $\Delta Q/Q \leq \pm 20\%$	Immerse in the solder of 260±5°C for 10±1 sec
Solder ability	More than 90% surface to be covered with new soldering.	245±5°C for 2±0.5 sec
Dielectric with standing voltage	No evidence of breakdown	DC 500V 1 min
Insulation esistance	No evidence of breakdown., Resistor 1000Mohm and over.	DC 500V 1 min
Terminal strength	No evidence of damage.	Terminals shall withstand a pull of 2.5Kgf in a horizoninal direction , 5 sec
Terminal strength(BEND)	No evidence of damage.	Terminals withstand a return bend of 250gf for 5 sec at a right angle to the axis, while being repeated the same to the opposed direction.
Body strength	No evidence of damage.	A load of 5Kgf 10 sec 
Vibration	$\Delta L/L \leq \pm 5\%$ , $\Delta Q/Q \leq \pm 20\%$	2 hours in each direction of X,Y,Z on p-Board at a frequency range of 10-55-10Hz with 1.5mm amplitude.
Dropping	No evidence of outer damage. $\Delta L/L \leq \pm 5\%$ , $\Delta Q/Q \leq \pm 20\%$	Dropping 1 m over the ground of conctete or cement.

LOW TEMP Characteristics		TEMP. -25±2℃, 96±2hrs
High TEMP Overload Characteristics	$\Delta L/L \leq \pm 10\%$ , $\Delta Q/Q \leq \pm 20\%$	Leave for 96±2hrs in TEMP. 85±2℃, 96±2hrs
TEMP. Cycling		Keep for 30 min. at TEMP. of -25℃~+85℃ at 5 cycle case of TEMP.
Temperature		$\Delta L/L \leq \pm 5\%$ $\Delta L/L$ to be measured at the temperature of between -25℃ and +85℃.
Moisture load Characteristics	$\Delta L/L \leq \pm 10\%$ , $\Delta Q/Q \leq \pm 30\%$	TEMP. -40±2℃, Humidity 90~95% 1000hrs
Endurance(Moistuer)		TEMP. 40±2℃, Humidity 90~95%, Load allowable DC current for 1000hrs
High TEMP Overload Characteristics		TEMP. 85±2℃, Load allowable DC current for 1000hrs



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