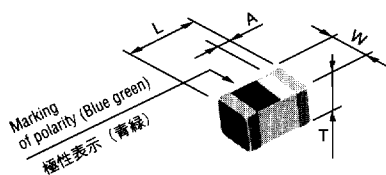


Multilayer chip inductors 積層チップインダクタ

LL1005-FH series



(Unit: mm)
L: 1.0 ± 0.15
W: 0.5 ± 0.15
A: 0.25 ± 0.1
T: 0.5 ± 0.15

Features

- Ultra Miniature and light ($1.0 \times 0.5 \times 0.5\text{mm}$: 1mg or lighter)
- Excellent high frequency performance: Up to 6GHz
- Q: 20~30 (for reference only) at 800MHz
- Operating Temperature: $-40^\circ\text{C} \sim +100^\circ\text{C}$
- Packaged on Tape and Reel

特長

- 超小形・最軽量 ($1.0 \times 0.5 \times 0.5\text{mm}$: 1mg 以下)
- 高周波適用性: 6GHz (Max.) まで適用可能
- Q 値 (参考値): 20~30 (800MHz の場合)
- 使用温度範囲: $-40^\circ\text{C} \sim +100^\circ\text{C}$
- テーピング梱包

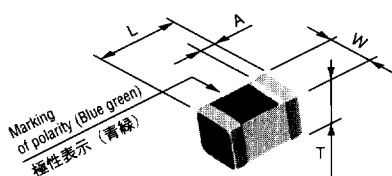
Specifications

Inductance range: 1.0~47nH (E-12)

TOKO part number	Inductance L (nH) 100MHz	Inductance tolerance	Q Typ. (MHz) 100 800	S.R.F. (MHz) (Typ.)	Ioc (mA) (Max.)	Pcs per tape
LL1005-FH1N0S	1.0	S	9 28	6,000<	300	10,000
LL1005-FH2N7S	2.7	S	11 30	6,000<	300	10,000
LL1005-FH3N3□	3.3	S, K	11 30	5,200	300	10,000
LL1005-FH5N6□	5.6	S, K	11 31	4,100	300	10,000
LL1005-FH6N8□	6.8	J, K	11 31	3,800	300	10,000
LL1005-FH47N□	47	J, K	9 22	1,300	200	10,000

□: Tolerance (S= $\pm 0.3\text{nH}$, J= $\pm 5\%$, K= $\pm 10\%$)

LL1608-FH series



(Unit: mm)
L: 1.6 ± 0.15
W: 0.8 ± 0.15
A: 0.3 ± 0.2
T: 0.8 ± 0.15

Features

- High Q: 35 (for reference only) at 800MHz
- High current capacity: (300mA~1000mA)
- Miniatures Size ($1.6 \times 0.8 \times 0.8\text{mm}$)
- Excellent high frequency performance: Up to 6GHz
- Operating Temperature: $-40^\circ\text{C} \sim +100^\circ\text{C}$
- Packaged on Tape and Reel

特長

- 高 Q 値 (参考値): 35 (800MHz の場合)
- 高許容電流化: (300mA~1000mA)
- 微小サイズ ($1.6 \times 0.8 \times 0.8\text{mm}$)
- 高周波適用性: 6GHz (Max.) まで適用可能
- 使用温度範囲: $-40^\circ\text{C} \sim +100^\circ\text{C}$
- テーピング梱包

Specifications

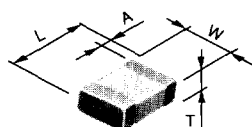
Inductance range: 1.2~100nH (E-12)

TOKO part number	Inductance L (nH) 100MHz	Inductance tolerance	Q (Typ.) (MHz) 100 500 800	S.R.F. (MHz) (Typ.)	Ioc (mA) (Max.)	Pcs per tape
LL1608-FH1N2S	1.2	S	13 — 60	6000<	1000	4000
LL1608-FH2N7S	2.7	S	12 — 38	6000<	1000	4000
LL1608-FH3N3□	3.3	S, K	12 — 41	5900	1000	4000
LL1608-FH5N6□	5.6	S, K	12 — 42	4350	600	4000
LL1608-FH6N8□	6.8	J, K	12 — 40	3750	600	4000
LL1608-FH33N□	33	J, K	18 — 39	1580	600	4000
LL1608-FH39N□	39	J, K	17 37 —	1400	500	4000
LL1608-FH100□	100	J, K	15 16 —	850	300	4000

□: Tolerance (S= $\pm 0.3\text{nH}$, J= $\pm 5\%$, K= $\pm 10\%$)

Multilayer chip inductors 積層チップインダクタ

LL2012-F series



(Unit: mm)
 L: 2.0±0.2
 W: 1.25±0.2
 A: 0.5±0.3
 T: 0.6±0.2 (1.5~8.2nH)
 0.85±0.3 (10~39nH)
 1.0±0.3 (47~100nH)
 1.1±0.3 (120~470nH)

Marking of polarity (Black) 極性表示 (黒)
 Only T=1.1 mm (L=120~470nH)
 to the marking



Features

- Excellent high frequency performance: Up to 6GHz
- Miniature Size (2×1.25×T mm)
- Q: 30 Typical (at 800MHz)
- Operating Temperature: -40°C~+100°C
- Packaged on Tape and Reel

特長

- 高周波適用性：6GHz (Max.) まで適用可能
- 微小サイズ (2×1.25×Tmm)
- Q値 (Typ.) : 30 (800MHzの場合)
- 使用温度範囲：-40°C~+100°C
- テーピング梱包

Specifications

Inductance range: 1.5~470nH (E-12)

TOKO part number	Inductance			Q (Typ.) (MHz)				S.R.F. (MHz) (Typ.)	Pcs per tape
	L (nH)	Freq. (MHz)	Tolerance	25	50	100	800		
LL2012-F1N5S ↓	1.5 ↓	100 ↓	S ↓	—	—	13	40	6000< ↓	4000 ↓
LL2012-F2N7S	2.7	100	S	—	—	12	36	6000<	4000
LL2012-F3N3□ ↓	3.3 ↓	100 ↓	S, K, M ↓	—	—	13	56	6000< ↓	4000 ↓
LL2012-F5N6□ ↓	5.6 ↓	100 ↓	S, K, M ↓	—	—	15	53	4000 ↓	4000 ↓
LL2012-F6N8□ ↓	6.8 ↓	100 ↓	J, K, M ↓	—	—	15	51	3650 ↓	4000 ↓
LL2012-F47N□ ↓	47 ↓	100 ↓	↓	—	—	18	33	1200 ↓	3000 ↓
LL2012-FR12□ ↓	120 ↓	50 ↓	J, K, M ↓	—	15	19	—	650 ↓	3000 ↓
LL2012-FR22□ ↓	220 ↓	50 ↓	J, K, M ↓	—	17	20	—	450 ↓	3000 ↓
LL2012-FR27□ ↓	270 ↓	25 ↓	J, K, M ↓	13	18	—	—	400 ↓	3000 ↓
LL2012-FR47□	470	25	J, K, M	13	16	—	—	300	3000

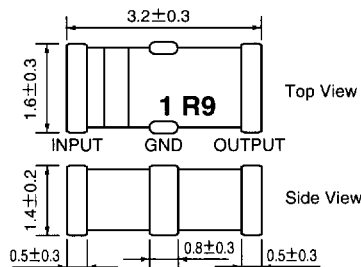
□: Tolerance (S=±0.3nH, J=±5%, K=±10%, M=±20%)

Multilayer chip low pass filters 積層チップローパスフィルタ

LTF3216L-F series



Dimensions (Unit: mm)



Features

- Miniature size (3.2×1.6×1.4mm)
- Carrier frequency range: 800MHz~2.5GHz
- Suitable for flow and reflow soldering
- Packaged on tape and reel
- Operating temperature range: -40°C~+85°C

特長

- 微小サイズ (3.2×1.6×1.4mm)
- 適用周波数範囲: 800MHz~2.5GHz
- フロー、リフロはんだ付け対応
- テーピング梱包
- 使用温度範囲: -40°C~+85°C

Specifications

Part number	Nominal Fo MHz	Bandwidth MHz	Insertion loss	Bandwidth VSNR	Attenuation @2 ×(fo±BW)	Attenuation @3 × (fo±BW)	Power capacity	Impedance
LTF3216L-FR80G	836.5MHz	25MHz	0.6dB Max. (0.35dB Typ.)	1.5 Max. (1.15 Typ.)	30dB Min. (37dB Typ.)	18dB Min. (27dB Typ.)	2W (Max.)	50
LTF3216L-FR90G	902.5MHz	25MHz						
LTF3216L-FR90C	968MHz	25MHz						
LTF3216L-FR90A	915MHz	26MHz						
LTF3216L-F1R3G	1311MHz	24MHz						
LTF3216L-F1R4G	1441MHz	24MHz						
LTF3216L-F1R4A	1489MHz	24MHz						
LTF3216L-F1R6G	1660MHz	25MHz						
LTF3216L-F1R7G	1747.5MHz	75MHz						
LTF3216L-F1R8G	1880MHz	60MHz						
LTF3216L-F1R9A	1890MHz	20MHz						
LTF3216L-F1R9G	1907.5MHz	25MHz						
LTF3216L-F2R4G	2450MHz	100MHz						

Low end version (Attenuation: 25dB at 2×Fo), identifiable with and L attached at the end of our product number, are also available.

For details, please refer to our LTF 3216L-F series catalog.

品番末尾に「L」のつくローエンドバージョン(Attenuation:25dB at 2×Fo)も用意しております。

詳しくは当社の個別カタログをご覧ください。

Variable capacitance diodes for AM tuning AM 用電圧可変容量ダイオード

Part number	V _R Max.	Capacitance (pF)				Capacitance ratio				Q Min. 1V 1MHz	Package	C Tolerance Δ C Max.	Pin layout.	Surface mounting	Taping
		Min.	Typ.	Max.	V _R (V)	Min.	Typ.	Max.	V _R (V)						
KV1235Z	20	445.0 22.5	487.0 26.0	535.0 30.5	1 8	16.5		22.0	1/8	200	CB3-6	2% (V _R =1V) 3% (V _R =4.5V) 0.3pF+3% (V _R =8V)			
KV1260	20	445.0 22.5	487.0 26.0	535.0 30.5	1 8	16.5		22.0	1/8	200	CB1-3	1% (V _R =1V) 2% (V _R =4.5, 8V)			
KV1276M	30	445.0 20.0	170.0	505.0 26.5	1 4 8	18.3	19.0		1/8	200	SOP-8	2.5% (V _R =1V) 3% (V _R =4.8V)		●	●
KV1296M	30	620.0 30.0	165.0	720.0 44.0	1 4.5 8	16.0	17.0		1/8	200	SOP-8	2.5% (V _R =1V) 3.3% (V _R =4.5, 8V)		●	●
KV1298BM	30	600.0 24.0		670.0 34.0	1 8	17.0			1/8		SSOP10	2.5% (V _R =1V) 3.5% (V _R =8V)		●	●
KV1520	20	335.0 14.0	360.0 100.0 15.9	395.0 17.8	1 3 6.5	20.0			1/6.5	200	SOT23L-3	1% (V _R =1V) 2% (V _R =3V) 2% (V _R =6.5V)		●	●
KV1520NT	20	335.0 14.0	360.0 100.0 15.9	395.0 17.8	1 3 6.5	20.0			1/6.5	200	TO92-3	1% (V _R =1V) 2% (V _R =3V) 2% (V _R =6.5V)			●
KV1530	35	450.0 150.0 30.0	490.0 175.0 39.0 24.0	530.0 200.0 48.0	1 3.5 7 9	3.5 12.0		6.3	3.5/7 1/9	250	SOT23-3			●	●
KV1555	30	400.0 21.0	429.0 65.0 23.5	458.0 26.0	1 3 4.5	16.5	18.3	20.0	1/4.5	200	SOT23L-3	2% (V _R =1V) 3% (V _R =3, 4.5V)		●	●
KV1555NT	30	400.0 21.0	429.0 65.0 23.5	458.0 26.0	1 3 4.5	16.5	18.3	20.0	1/4.5	200	TO92-3	2% (V _R =1V) 3% (V _R =3, 4.5V)			●
KV1556A-1	30	400.0 21.0	429.0 65.0 23.5	458.0 26.0	1 3 4.5	16.5	18.3	20.0	1/4.5	200	CB1-2	2% (V _R =1V) 3% (V _R =3, 4.5V)			
KV1560	16	428.0 20.0	100.0	506.0 27.5	1 4.5 8	17.0			1/8	200	SOT23L-3	1% (V _R =1V) 2% (V _R =4.5, 8V)		●	●
KV1560NT	16	428.0 20.0	100.0	506.0 27.5	1 4.5 8	17.0			1/8	200	TO92-3	1% (V _R =1V) 2% (V _R =4.5, 8V)			●
KV1561 A-1	16	410.0 20.0	100.0	506.0 27.5	1 4.5 8	17.0			1/8	200	CB1-2				
KV1561 A-2	16	410.0 20.0	100.0	506.0 27.5	1 4.5 8	17.0			1/8	200	CB2-4	1% (V _R =1V) 2% (V _R =4.5, 8V)			
KV1561 A-3	16	410.0 20.0	100.0	506.0 27.5	1 4.5 8	17.0			1/8	200	CB3-6	1.5% (V _R =1V) 2.5% (V _R =4.5, 8V)			
KV1562M	20	428.0 20.0	100.0	506.0 27.0	1 4.5 8	17.0			1/8	200	SOP-8	1.2% (V _R =1V) 2.2% (V _R =4.5, 8V)		●	●
KV1563M	20	428.0 20.0	100.0	506.0 27.0	1 4.5 8	17.0			1/8	200	SOP-8	1.1% (V _R =1V) 2.1% (V _R =4.5, 8V)		●	●
KV1563BM	20	428.0 20.0	100.0	506.0 27.0	1 4.5 8	17.0			1/8	200	SOP-8	2% (V _R =1V) 3% (V _R =4.5, 8V)		●	●
KV1590	30	433.0 150.0 45.0 21.0	470.0 150.0 45.0 24.0	511.0 27.0	1 3 5 6.5	17.0	17.5		1/6.5	200	SOT23L-3	1% (V _R =1V) 2% (V _R =3, 6.5V)		●	●

Variable capacitance diodes for AM tuning AM 用電圧可変容量ダイオード

Part number	V _R Max.	Capacitance (pF)				Capacitance ratio				Q Min. 1V 1MHz	Package	C tolerance Δ C Max.	Pin layout.	Surface mounting	Taping
		Min.	Typ.	Max.	V _R (V)	Min.	Typ.	Max.	V _R (V)						
KV1590NT	30	433.0 24.0	470.0 150.0 45.0 24.0	511.0 27.0	1 3 5 6.5	17.0	17.5		1/6.5	200	TO92-3	1% (V _R =1V) 2% (V _R =3,6.5V)			●
KV1591 A-2	30	433.0 24.0	470.0 150.0 45.0 24.0	511.0 27.0	1 3 5 6.5	17.0	17.5		1/6.5	200	CB2-4	1% (V _R =1V) 2% (V _R =3,6.5V)			
KV1591 A-3	30	433.0 24.0	470.0 150.0 45.0 24.0	511.0 27.0	1 3 5 6.5	17.0	17.5		1/6.5	200	CB3-6	1% (V _R =1V) 2% (V _R =3,6.5V)			
KV1593BM	30	433.0 24.0	470.0 150.0 45.0 24.0	511.0 27.0	1 3 5 6.5	17.0	17.5		1/6.5	200	SOP-8	2% (V _R =1V) 3% (V _R =3,6.5V)		●	●

Variable capacitance diodes for FM tuning FM 用電圧可変容量ダイオード

Part number	V _R Max.	Capacitance (pF)				Capacitance ratio				R _s Max. (Ω)	Package	C tolerance Δ C Max.	Pin layout.	Surface mounting	Taping
		Min.	Typ.	Max.	V _R (V)	Min.	Typ.	Max.	V _R (V)						
KV1300NT	18	69.13 57.71 33.56 23.38	74.37	79.61 64.63 39.18 27.29	2 3 6 8	2.1	2.35	2.6	3/8	0.5 3V 100MHz	TO92-3				●
KV1310A-2	18	41.40 26.26 19.13 16.01		46.16 34.99 25.48 21.32	2 4 6 8	2.0		2.6	2/8	0.5 2V 70MHz	CB2-6	3% (V _R =2,4,6,8V)			
KV1310A-3	18	41.40 26.26 19.13 16.01		46.16 34.99 25.48 21.32	2 4 6 8	2.0		2.6	2/8	0.5 2V 70MHz	CB3-9	3% (V _R =2,4,6,8V)			
KV1310NT	18	41.33 26.49 19.24 16.05		46.29 35.06 25.46 21.25	2 4 6 8	2.2		2.42	2/8	0.5 2V 70MHz	TO92-3				●
KV1320N	30	39.79 24.25 17.32 13.93		46.16 28.70 20.50 16.49	7 13 19 25	2.57	2.8	3.03	7/25	0.5 7V 70MHz	TO92-3				
KV1330A-1	18	69.30 43.05 25.20 15.35		78.80 56.30 34.30 20.10	2 4 6 9	3.7		5.0	2/9	0.5 2V 70MHz	CB1-3				
KV1330A-2	18	69.30 43.05 25.20 15.35		78.80 56.30 34.30 20.10	2 4 6 9	3.7		5.0	2/9	0.5 2V 70MHz	CB2-6	3% (V _R =2,4,6,9V)			
KV1330NT	18	69.14 43.09 25.05 15.44		77.43 56.24 34.57 20.10	2 4 6 9	3.7		5.0	2/9	0.5 2V 70MHz	TO92-3				●

Variable capacitance diodes for FM tuning FM 用電圧可変容量ダイオード

Part number	V _R Max.	Capacitance (pF)				Capacitance ratio				Rs Max. (Ω)	Package	C tolerance Δ C Max.	Pin layout.	Surface mounting	Taping
		Min.	Typ.	Max.	V _R (V)	Min.	Typ.	Max.	V _R (V)						
KV1350NT	18	59.15 17.67 10.77	62.50	65.90 23.54 13.26	1 6 9	4.6			1/9	Q Min:60 3V 100MHz	TO92-3			●	
KV1360NT	18	86.10 58.00 35.00 23.00 13.90	92.00	98.00 23.54 13.26	1 2 3 4.5 6.5	4.7			1/6.5	0.6 1.5V 100MHz	TO92-3			●	
KV1362A-1	18	86.10 58.00 35.00 23.00 13.90	92.00	98.00 23.54 13.26	1 2 3 4.5 6.5	4.7			1/6.5	0.6 1.5V 100MHz	CB1-2				
KV1370NT	18	65.80 43.00 24.00 12.00	70.00	74.20 23.54 13.26	1 2 3 4.5 5	5.0			1/5	0.5 1.5V 100MHz	TO92-3			●	
KV1372A-1	18	65.80 43.00 24.00 12.00	70.00	74.20 23.54 13.26	1 2 3 4.5 5	5.0			1/5	0.5 1.5V 100MHz	CB1-2				
KV1382A-1	18	131.00 69.00 16.00		171.00 101.00 23.00	2 4 8	6.5		9.5	2/8	1.0 3V 70MHz	CB1-2				
KV1400	18	69.13 57.71 33.56 23.38	74.37	79.61 64.63 39.18 27.29	2 3 6 8	2.1	2.35	2.6	3/8	0.5 3V 100MHz	SOT23-3			●	●
KV1405	17	132.00 46.00	148.00 52.00	164.00 58.00	2 8					0.5 3V 100MHz	SOT23-3			●	●
KV1410	18	41.33 26.46 19.24 16.05		46.29 35.06 25.46 21.25	2 4 6 8	2.0		2.6	2/8	0.5 2V 70MHz	SOT23-3			●	●
KV1420	30	39.79 24.25 17.32 13.93		46.16 28.70 20.50 16.49	7 13 19 25	2.57	2.8	3.03	7/25	0.5 7V 70MHz	SOT23-3			●	●
KV1430	18	69.14 43.09 25.05 15.44		77.43 56.24 34.57 20.10	2 4 6 9	3.7		5.0	2/9	0.5 2V 70MHz	SOT23-3			●	●
KV1435	16	68.86 42.93 26.39 16.91		77.74 56.46 36.69 22.25	2 4 6 9	3.3		4.6	2/9	0.4 2V 70MHz	SOT23-3			●	●
KV1440	18	43.00	35.40 26.60	47.60	2 4 8	1.23 1.65		1.33 1.75	2/4 2/8	Q Min:100 3V 100MHz	SOT23-3			●	●
KV1450	18	59.15 17.67 10.77	62.50	65.90 23.54 13.26	1 6 9	4.6			1/9	Q Min:60 3V 100MHz	SOT23-3			●	●
KV1460	18	86.10 58.00 35.00 23.00 13.90	92.00	98.00 23.54 13.26	1 2 3 4.5 6.5	4.7			1/6.5	0.6 1.5V 100MHz	SOT23-3			●	●

Variable capacitance diodes for FM tuning FM 用電圧可変容量ダイオード

Part number	V _R Max.	Capacitance (pF)				Capacitance ratio				Rs Max. (Ω)	Package	C tolerance Δ C Max.	Pin layout.	Surface mounting	Taping
		Min.	Typ.	Max.	V _R (V)	Min.	Typ.	Max.	V _R (V)						
KV1470	18	65.80	70.00	74.20	1	5.0			1/5	0.5	SOT23-3			●	●
			43.00		2										
			24.00		3										
		12.00	13.50	14.80	4.5										
KV1471	18	32.65	35.30	37.87	1	5.0			1/5	1.0	SOT23-3			●	●
			22.00		2										
			12.00		3										
		6.20	7.70	9.20	4.5										
KV1471E	18	30.16	35.60	40.99	1	5.0			1/5	1	URD			●	●
			22.00		2										
			12.00		3										
		6.20	7.70	9.20	4.5										
KV1488	18	131.00		161.50	2	6.5			2/8	1.0	SOT23-3			●	●
		64.00		101.00	4										
		16.00		23.00	8										

Variable capacitance diodes for communications equipment 通信機用電圧可変容量ダイオード

Part number	V _R Max.	Capacitance (pF)				Capacitance ratio				Rs Max. (Ω)	Package	C tolerance Δ C Max.	Pin layout.	Surface mounting	Taping
		Min.	Typ.	Max.	V _R (V)	Min.	Typ.	Max.	V _R (V)						
KV1811E	25	19.51	21.50	23.55	1		7.8		1/8	1.8	URD			●	●
			12.00		2										
			4.00		4										
		2.14	2.50	2.92	8										
KV1812	25	14.50	16.00	17.50	1	7.4			1/8	2.1	SOT23-3			●	●
			9.00		2										
			3.00		4										
		1.64	1.94	2.24	8										
KV1823	29	7.50	10.50	8.60	1	4.2			1/25	1.0	SOT23-3			●	●
			8.05		2										
			5.40		4										
			3.60		8										
KV1832C	28	12.50	16.50	20.50	1					0.7	SRD			●	●
		5.95	10.20	14.45	2										
		3.20	4.30	5.45	4										
KV1832E	28	15.40	16.60	17.90	1	3.4			1/4	0.7	URD			●	●
		8.50	10.20	11.90	2										
		3.60	4.30	5.05	4										
KV1841E	18	13.50	14.50	15.5	2	1.66			1/6	0.3	URD			●	●
		6.80	7.50	8.30	6										
KV1851	18	20.00	28.00	36.00	1	6.0			1/10		SOT23-3			●	●
		4.90		9.10	4										
		2.10		3.90	10										
KV1851A-1	18	20.00	28.00	36.00	1	6.0			1/10		CB1-2			●	●
		4.90		9.10	4										
		2.10		3.90	10										

NOTE: ● The value in "VR (Max.)" is absolute maximum range.

● Do not use NC terminal for any purpose.

※ ここでの逆方向電圧は、絶対最大定格のそれを示す。

※ NC 端子は内部で接続されている場合があります。中継等に使用しないでください。