

#### Multilayer Chip Inductors

#### DESCRIPTION

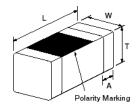
The LL2012-F Series is a miniature multilayer ceramic chip inductor in a standard 0805 package. Toko's proprietary laminated ceramic material provides high SRF, excellent Q, and superior reliability. These inductors are an ideal solution for signal shaping, or RF filtering for high frequency RF and wireless communication devices.

#### **DIMENSIONS**

Type

LL2012





T (mm)

 $0.60 \pm 0.2$ 

 $0.85 \pm 0.3$ 1.00±0.3

A (mm)

 $0.5 \pm 0.3$ 

#### **FEATURES**

Inductance range: 1.5-470nH

Temperature Coefficient: +250ppm/°C Temperature Range: -40°C +100°C

■ Miniature size: 0805 footprint (2.0mm x 1.2mm) Laminated ceramic allows high SRF over 6 GHz

Q: 50 Typical (at 800MHz)

■ S-parameter data available upon request

Packaged on tape and reel in 3,000 &

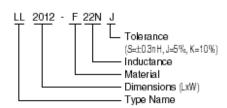
4,000 piece quantity

# 1.10±0.3

L (mm)

 $2.0\pm0.2$ 

PART NUMBERING



W (mm)

1.25±0.2

## STANDARD PART NUMBERS

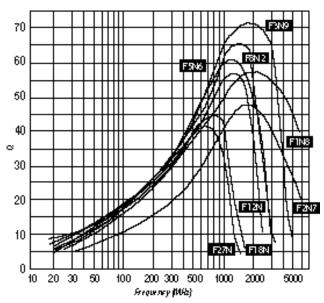
TOKO Part Number	Lo (nH)	L Tol. (1)	О 100МHz (Тур) (Т)	Q 800MHz (typ) (1)	SRF MHz (typ) (2)	RDCΩ (max) (3)	IDC m A (max)	Height T (mm)	Qty/reel
LL2012-F1N68	1.5	8	13	40	>8000	D.1D	300	0.60± 0.2	4000
LL2012-F1 NBS	1.8	8	13	45	>8000	0.10	300	D.ED± D2	4000
LL2012-F2N29	2.2	8	13	48	>-6000	0.10	300	0.50± 0.2	4000
LL2012-F2N78	2.7	8	12	36	>6000	D.1D	300	DBD± D2	4000
LL2012-F3N3L*	3.3	8.K	13	56	>-E000	0.13	300	0.60± 0.2	4000
LL2012-F3N9_"	3.0	8,6	15	64	5400	0.16	300	D.BD± D2	4000
LL2012-F4N7"	4.7	8K	15	50	4500	0.20	300	0.60± 0.2	4000
LL2D12-FBNBL*	5.6	8K	15	63:	4000	0.23	300	DB0± 02	4000
LL2012-F6N8"	5.8	J.K	15	5.1	3660	0.25	300	0.50± 0.2	4000
LL2012-F8N2_"	8.2	J.K.	15	63	3000	0.28	300	DE0± 02	4000
LL2012-F10N*	10.0	J.K	16	45	2500	0.30	300	D.85 ± D.3	4000
LL2012-F12N_"	12.D	3.6	16	48	2450	0.35	300	0.85 ± 0.8	4000
LL2012-F15N"	15.D	J.K	17	48	2000	0.40	300	0.85 ± 0.3	4000
LL2012-F18N_"	18.0	J.K	17	43	1750	0.48	300	D.85 ± D.3	4000
LL2012-F22N"	22 D	J.K	17	47	1700	0.50	300	D.85 ± D.3	4000
LL2012-F27N_"	27 D	J.K	18	38	1550	0.55	300	D.B5 ± 03	4000
LL2012-F33N"	33.D	J.K	18	35	1350	0.50	300	D.85 ± D.3	4000
LL2012-F30N_"	39.0	J.K.	18	40	1300	0.66	300	D.B5 ± D3	4000
LL2012-F47N"	47 D	J.K	18	33	1200	0.70	300	1.00 ± 0.3	3000
LL2012-F66N_"	56.D	J.K	19	3.1	1150	0.76	300	1.00 ± 0.3	3000
LL2012-F68N"	58.D	J.K	10:	28	1000	0.80	300	1.00± 0.3	3000
LL2012\F82N_"	82.D	J.K	20	Q-	860	0.90	300	1.00 ± 0.3	3000
LL2012-FR10*	100	J.K	18	100	730	1.00	300	1.00± 0.3	3000
LL2012-FR12_"	120	J.K	19	***	66D	1.30	250	""1.10 ± D.3	3000
LL2012-FB15"	150	J.K	20	10.	550	1.50	250	"1.10± 0.3	3000
LL2012-FR18_*	180	J.K	20	w	500	1.80	250	"1.1D± D3	3000
LL2012-FR22*	220	J.K	20	50.	450	2.00	200	""1.10± 0.3	3000
LL2012-FR27_"	270	J.K	10.	w	400	2.50	200	""1.1D± D3	3000
LL2012-FR33"	330	J.K	W	50	380	3.00	150	"1.10± 0.3	3000
LL2012\FR89_*	390	J.K	No.	100	330	3.50	150	""1.1D± D3	3000
LL2012-FR47*	470	J.K	W.	10	300	4.00	100	"1.10± 0.3	3000

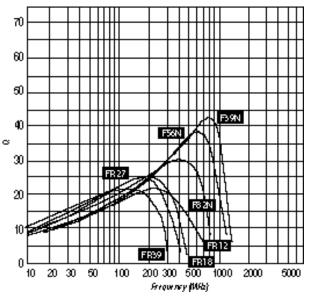
<sup>\*</sup> Add tolerance to part number:  $S=\pm0.3$ nH,  $J=\pm5\%$ ,  $K=\pm10\%$ Testing Conditions: (1.) L,Q: HP4191A at 100MHz (2.) SRF: HP8753C (Test fixture 16091A) (3.) RDC: VP-2811A Panasonic \*\* These parts have polarity/orientation marking

## LL2012-F Series

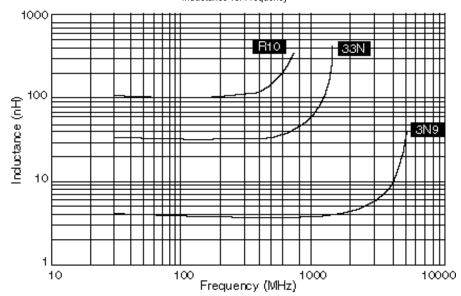
### **ELECTRICAL CHARACTERISTICS**







#### Inductance vs. Frequency



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