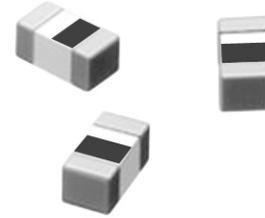


DESCRIPTION

The LLV0603-F Series is a multilayer ceramic chip inductor with high-Q characteristics in an EIA standard 0201 footprint (0.6mm x 0.3mm) and a low profile of only 0.33mm maximum. Manufactured with a proprietary ceramic material and process, these lead-free chip inductors are ideal for use in RF modules and embedded subassemblies where space is limited and printed stripline inductors are impractical.

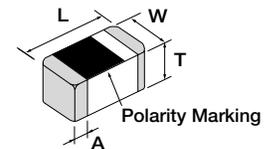


FEATURES

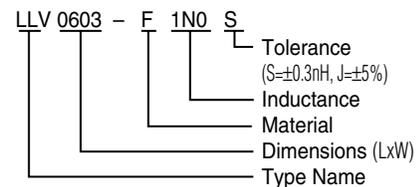
- Inductance range: 1.0-47nH
- Miniature size: 0201 footprint (0.6mm x 0.3mm)
- Inductance specified at 100MHz and 800MHz
- Self-resonant frequency specified at $\pm 20\%$
- Q: 22 ~ 30 typical (at 1800MHz)
- Temperature coefficient of inductance: +250ppm/°C
- Temperature range: -55°C to +125°C
- S-parameter data available upon request
- Packaged on tape and reel in 15,000 piece quantity
- Reflow solderable
- Lead-free terminations

DIMENSIONS

Length L (mm)	Width W (mm)	Thickness T (mm)	Electrode width A (mm)
0.6 \pm 0.03	0.3 \pm 0.03	0.3 \pm 0.03	0.1-0.2



PART NUMBERING



ELECTRICAL SPECIFICATIONS

TYPE LLV0603-F

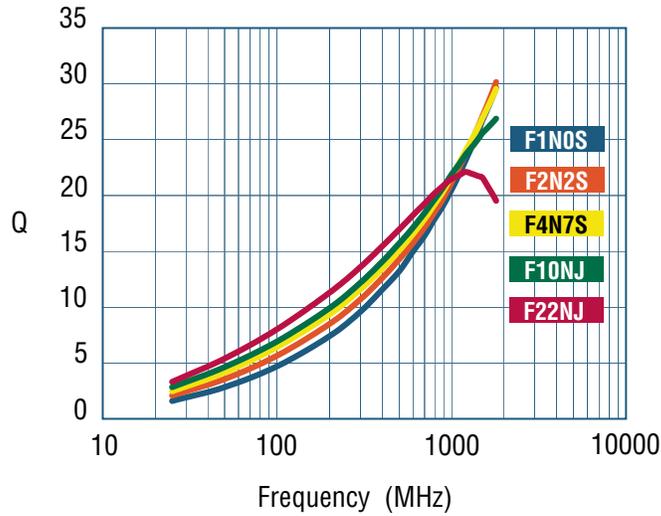
TOKO Part Number	Inductance & Tolerance				Q min.	Q (Typ.)						SRF (MHz)	RDC (Ω) max.	IDC (mA) max.	
	at 100MHz		at 800MHz			100 MHz	100 MHz	300 MHz	500 MHz	800 MHz	1 GHz				1.8 GHz
	Lo (nH)	L Tol.*	Lo (nH)	L Tol.*											
LLV0603-F1N0S	1.0	S	0.9	$\pm 0.5nH$	4	4.7	9.6	13.2	17.9	20.5	29.7	19000 \pm 20%	0.16	170	
LLV0603-F1N2S	1.2	S	1.1	$\pm 0.5nH$	4	4.9	9.7	13.3	17.7	20.4	29.5	19000 \pm 20%	0.2	170	
LLV0603-F1N5S	1.5	S	1.4	$\pm 0.5nH$	4	5.0	10.0	13.6	18.1	20.8	30.0	15000 \pm 20%	0.25	170	
LLV0603-F1N8S	1.8	S	1.7	$\pm 0.5nH$	4.5	5.4	10.4	13.9	18.1	20.8	29.8	12000 \pm 20%	0.3	170	
LLV0603-F2N2S	2.2	S	2.0	$\pm 0.5nH$	4.5	5.7	10.7	14.3	18.5	21.2	30.2	9300 \pm 20%	0.35	150	
LLV0603-F2N7S	2.7	S	2.5	$\pm 0.5nH$	4.5	5.7	10.6	13.9	18.0	20.5	28.9	9500 \pm 20%	0.4	150	
LLV0603-F3N3S	3.3	S	3.1	$\pm 0.5nH$	5	6.1	11.2	14.8	19.1	21.8	30.5	7400 \pm 20%	0.45	150	
LLV0603-F3N9S	3.9	S	3.6	$\pm 0.5nH$	5	6.1	11.3	14.8	19.0	21.5	29.5	6700 \pm 20%	0.5	150	
LLV0603-F4N7S	4.7	S	4.4	$\pm 0.5nH$	5	6.4	11.6	15.1	19.2	21.7	29.6	6600 \pm 20%	0.55	150	
LLV0603-F5N6S	5.6	S	5.3	$\pm 0.5nH$	5	6.5	11.8	15.3	19.4	21.9	29.2	5400 \pm 20%	0.6	150	
LLV0603-F6N8J	6.8	J	6.5	$\pm 7\%$	5.5	6.8	12.1	15.8	20.0	22.4	28.9	5100 \pm 20%	0.65	150	
LLV0603-F8N2J	8.2	J	7.7	$\pm 7\%$	5.5	6.8	12.1	15.7	19.8	22.2	28.8	4700 \pm 20%	0.7	150	
LLV0603-F10NJ	10	J	9.5	$\pm 7\%$	5.5	6.9	12.2	15.7	19.7	21.9	26.9	4100 \pm 20%	0.9	150	
LLV0603-F12NJ	12	J	12	$\pm 7\%$	6	7.0	12.9	16.5	20.4	22.5	27.2	4100 \pm 20%	1.1	100	
LLV0603-F15NJ	15	J	15	$\pm 7\%$	6	7.0	12.4	15.6	19.0	20.6	21.6	3700 \pm 20%	1.2	100	
LLV0603-F18NJ	18	J	18	$\pm 7\%$	6.5	7.5	12.9	16.2	19.6	21.2	22.2	3700 \pm 20%	1.4	100	
LLV0603-F22NJ	22	J	22	$\pm 7\%$	7	8.0	13.6	17.0	20.2	21.5	19.5	3100 \pm 20%	1.7	100	
LLV0603-F27NJ	27	J	28	$\pm 7\%$	7	8.0	13.6	16.8	19.6	20.4	14.8	2500 \pm 20%	1.8	50	
LLV0603-F33NJ	33	J	37	$\pm 7\%$	7	7.8	13.5	16.6	18.7	18.6	7.0	2000 \pm 20%	2	50	
LLV0603-F39NJ	39	J	46	$\pm 7\%$	6	7.6	12.2	14.4	15.0	13.9	—	1850 \pm 20%	2.3	50	
LLV0603-F47NJ	47	J	59	$\pm 7\%$	6	7.3	11.5	13.3	12.9	10.8	—	1650 \pm 20%	2.7	50	

* Add tolerance to part number: S= $\pm 0.3nH$, J = $\pm 5\%$

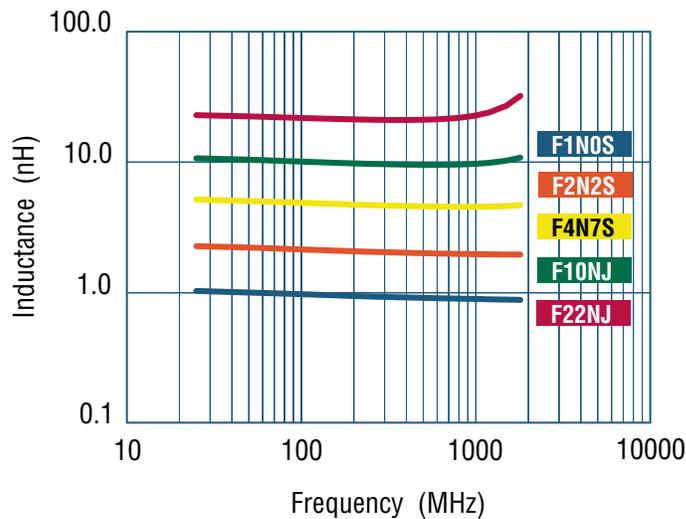
Testing Conditions: (1) L,Q: Agilent 4291A/B (Test fixture Agilent 16196C) (2) SRF: Agilent 8719D, 8720D (3) RDC: Agilent 4338A/B

TYPICAL CHARACTERISTICS

Q vs Frequency



Inductance vs Frequency



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