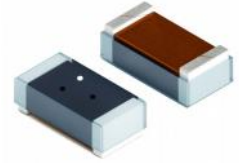


Ceramic Chip Inductor (1.19 x 0.65 x 0.66 mm)
FEATURES

- Ultra Miniature SMD Package
- High SRF
- High Frequency
- High Q value


SPECIFICATION

Part Number	L(nH)/@MHz	Inductance tolerance	Q min @250MHz	SRF(MHz) min.	DCR (Ω) Max	IDC (mA) Max
TCFL0402CF-1N0_	1.0 / 250	J, K	13	6000	0.045	1360
TCFL0402CF-1N8_	1.8 / 250	J, K	16	6000	0.070	1040
TCFL0402CF-1N9_	1.9 / 250	J, K	16	6000	0.070	1040
TCFL0402CF-2N0_	2.0 / 250	J, K	16	6000	0.070	1040
TCFL0402CF-2N2_	2.2 / 250	J, K	19	6000	0.070	960
TCFL0402CF-2N4_	2.4 / 250	J, K	15	6000	0.068	790
TCFL0402CF-2N7_	2.7 / 250	J, K	16	6000	0.120	640
TCFL0402CF-3N3_	3.3 / 250	J, K	19	6000	0.066	840
TCFL0402CF-3N6_	3.6 / 250	J, K	19	6000	0.066	840
TCFL0402CF-3N9_	3.9 / 250	J, K	19	6000	0.066	840
TCFL0402CF-4N3_	4.3 / 250	J, K	18	6000	0.091	700
TCFL0402CF-4N7_	4.7 / 250	J, K	15	4700	0.130	640
TCFL0402CF-5N1_	5.1 / 250	J, K	20	4800	0.083	800
TCFL0402CF-5N6_	5.6 / 250	J, K	20	4800	0.083	760
TCFL0402CF-6N2_	6.2 / 250	J, K	20	4800	0.083	760
TCFL0402CF-6N8_	6.8 / 250	G, J, K	20	4800	0.083	680
TCFL0402CF-7N5_	7.5 / 250	G, J, K	22	4800	0.100	680
TCFL0402CF-8N2_	8.2 / 250	G, J, K	22	4400	0.100	680
TCFL0402CF-8N7_	8.7 / 250	G, J, K	18	4100	0.200	480
TCFL0402CF-9N1_	9.1 / 250	G, J, K	22	4160	0.100	680
TCFL0402CF-9N5_	9.5 / 250	G, J, K	18	4000	0.200	480
TCFL0402CF-10N_	10 / 250	G, J, K	21	3900	0.200	480
TCFL0402CF-11N_	11 / 250	G, J, K	24	3680	0.120	640
TCFL0402CF-12N_	12 / 250	G, J, K	24	3600	0.120	640
TCFL0402CF-13N_	13 / 250	G, J, K	24	3450	0.210	440
TCFL0402CF-15N_	15 / 250	G, J, K	24	3280	0.170	560
TCFL0402CF-16N_	16 / 250	G, J, K	24	3100	0.220	560
TCFL0402CF-18N_	18 / 250	G, J, K	25	3100	0.230	420
TCFL0402CF-19N_	19 / 250	G, J, K	24	3040	0.200	480
TCFL0402CF-20N_	20 / 250	G, J, K	25	3000	0.250	420
TCFL0402CF-22N_	22 / 250	G, J, K	25	2800	0.300	400
TCFL0402CF-23N_	23 / 250	G, J, K	22	2720	0.300	400
TCFL0402CF-24N_	24 / 250	G, J, K	25	2700	0.300	400
TCFL0402CF-27N_	27 / 250	G, J, K	24	2480	0.300	400
TCFL0402CF-30N_	30 / 250	G, J, K	25	2350	0.300	400
TCFL0402CF-33N_	33 / 250	G, J, K	24	2350	0.440	400
TCFL0402CF-36N_	36 / 250	G, J, K	24	2350	0.440	320
TCFL0402CF-39N_	39 / 250	G, J, K	25	2100	0.550	200

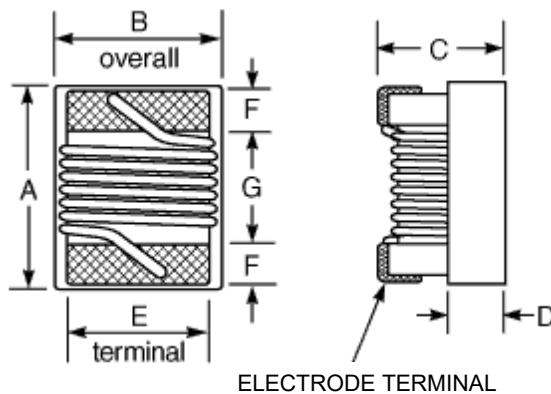
Part Number	L (nH)/@MHz	Inductance tolerance	Q min @250MHz	SRF(MHz) min.	DCR (Ω) Max	IDC (mA) Max
TCFL0402CF-40N_	40 / 250	G, J, K	24	2240	0.440	320
TCFL0402CF-43N_	43 / 250	G, J, K	25	2030	0.810	100
TCFL0402CF-47N_	47 / 200	G, J, K	20	2100	0.830	150
TCFL0402CF-51N_	51 / 200	G, J, K	25	1750	0.820	100
TCFL0402CF-56N_	56 / 200	G, J, K	22	1760	0.970	100
TCFL0402CF-68N_	68 / 200	G, J, K	22	1620	1.120	100
TCFL0402CF-82N_	82 / 150	J, K	20	1260	1.550	50
TCFL0402CF-R10_	100 / 150	G, J, K	20	1160	2.000	30
TCFL0402CF-R12_	120 / 150	G, J, K	20	1900	2.200	50

• Inductance tolerance: Letter at end of part number: G = $\pm 2\%$; J = $\pm 5\%$; K = $\pm 10\%$

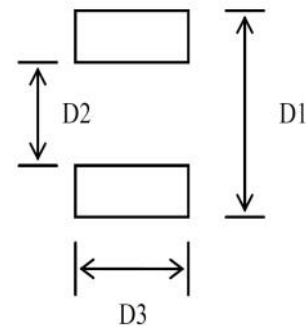
• Specifications are measured using HP E4991A

DIMENSIONS

SOLDER PATTERN



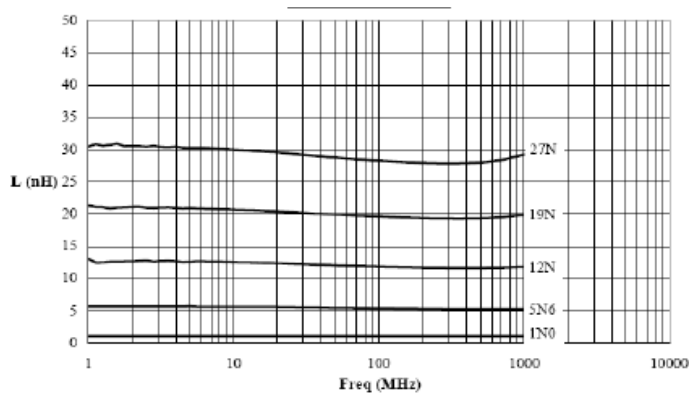
ELECTRODE TERMINAL



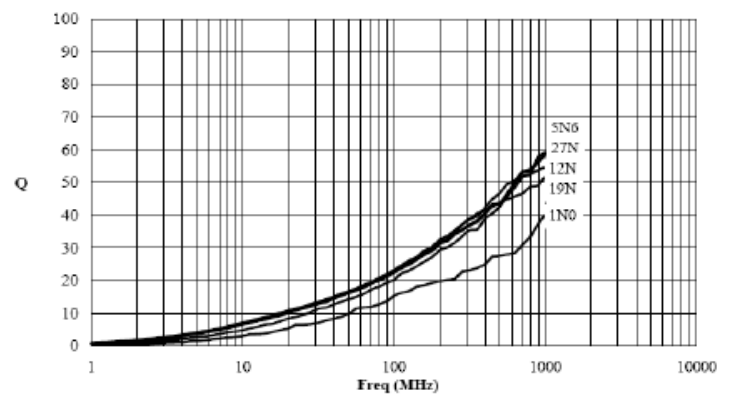
Unit: mm

	A	B	C	D	F	G	D1	D2	D3
mm	1.19 Max	0.65 Max	0.66 Max	0.20	0.20	0.64	1.20	0.46	0.68

L vs FREQUENCY

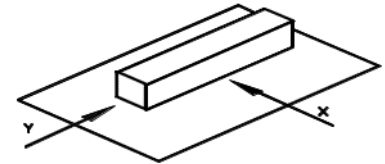


Q vs FREQUENCY

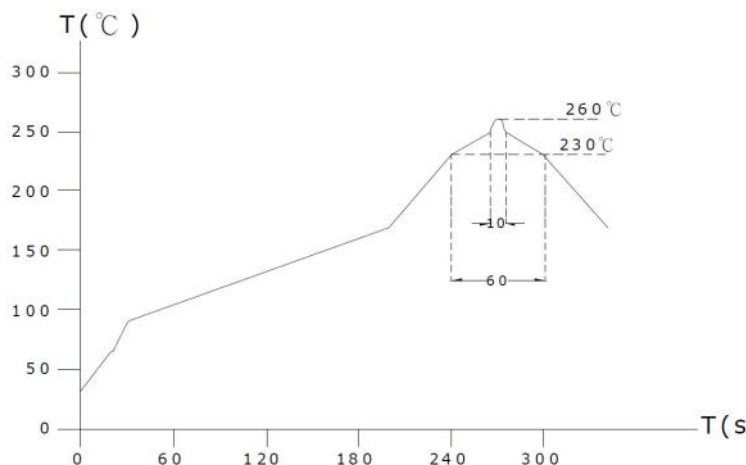


RELIABILITY TEST

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) 0.5kg
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)
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^2 (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 recommend reflow)
11. Storage environment
Temperature: 0°C~35°C; -40°C~105°C (after mounting on PCB)
Humidity Range: 50% ~ 80% RH
12. Use components within 12 months.
If 12 months or more have elapsed, check solderability before use.



LEAD-FREE HEAT ENDURANCE TEST



LEAD-FREE RECOMMENDED REFLOW

