

# Type TFC1008CH, F

## 10nH to 10 $\mu$ H

- # Standard EIA1008 package
- # Moulded wirewound construction
- # Reflow or wave soldering
- # Ceramic core type CH
- # Ferrite core type F
- # High self resonant frequency

High quality subminiature inductors exhibiting excellent mechanical and electrical characteristics supplied on 8mm tape and reel or bulk packed. TFC1008 inductors are wound on ceramic or ferrite formers producing stable, high Q chip inductors suitable for high frequency applications.

Electrodes are gold plated to achieve ideal solderability using reflow or solder bath techniques.

### Electrical specification

Case style	EIA 1008 subminiature
Inductance range	10nH to 10 $\mu$ H
Marking	Epoxy ink
Working temp. range	(-55 +125) $^{\circ}$ C ceramic case (-55 +85) $^{\circ}$ C ferrite case
Storage temp. range	(-55 +125) $^{\circ}$ C
Insulation resistance	1000 Meg. $\Omega$ min., 100Vd.c.
Dielectric strength	250Va.c. applied between terminal and case, one minute max.

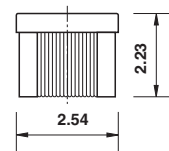
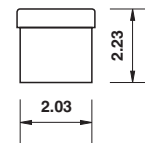
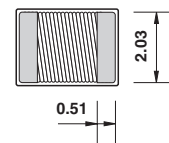
### Environmental specification

High temp.	$\mu$ H $\pm$ 10% max., Q $\pm$ 20% max., +85 $^{\circ}$ C for 500 hours with rated d.c. current
Humidity load life	$\mu$ H $\pm$ 5% max., Q $\pm$ 20% max., relative humidity 90% ~ 95%, +60 $^{\circ}$ C for 500 hours with rated d.c. current
Low temp. storage	$\mu$ H $\pm$ 5% max., Q $\pm$ 20% max., -40 $^{\circ}$ C for 500 hours
Thermal shock	$\mu$ H $\pm$ 5% max., Q $\pm$ 20% max., 100 cycles; 30 minutes @ +40 $^{\circ}$ C, 30 minutes @ +85 $^{\circ}$ C
Resistance to solvents	Resistant to freon, TF, TE, or TMS for 5 minutes

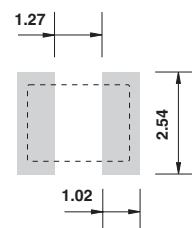
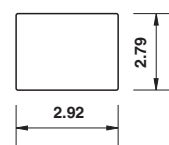
### Mechanical specification

Vibration	$\mu$ H $\pm$ 5% max., Q $\pm$ 20% max., frequency sweep (10 ~ 55)Hz in one minute, amplitude 1.5mm, each of three mutually perpendicular planes, two hours each plane
Shock	$\mu$ H $\pm$ 5% max., Q $\pm$ 20% max., 100G, 6 milli. secs., half sine wave each of three mutually perpendicular planes, three shocks each plane
Solderability	90% uniform coating min. with precoating of flux, and dip into solder at +230 $^{\circ}$ C, 3 secs.
Solder heat resistance	$\mu$ H $\pm$ 5% max., Q $\pm$ 20% max., 5 minutes preheating at +120 $^{\circ}$ C, 5 secs. at +260 $^{\circ}$ C
Terminal pull test	1kg load in horizontal direction for 1 minute

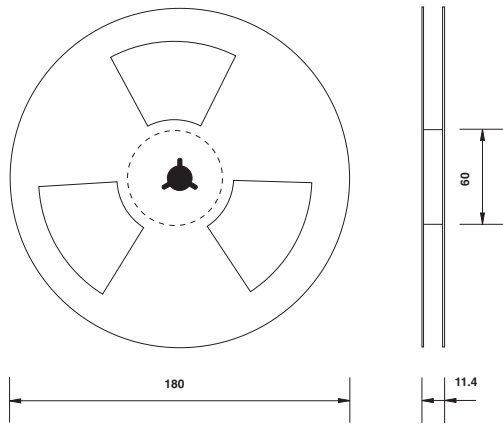
### Dimensions(mm) shown x5



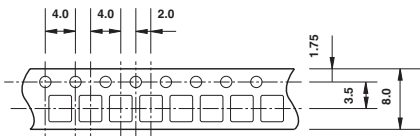
Suggested pad layout  
Suitable for reflow or wave soldering



## TFC1008 tape and reel dimensions



Centre hole diameter 13.0mm, slot width 2mm spaced at 120°  
Reel quantity 2000 pieces, leader tape 400mm minimum  
Trailer tape: 160mm minimum.



Tape transport hole diameter 1.5mm  
Compartment size 2.35mm x 2.7mm, depth 2.1mm

## Standard values

TFC Part No.	$\mu\text{H}$	Q min.	Test Freq. MHz	S.R.F. min. MHz	$\Omega$ d.c. max.	I d.c. max. mA
TFC1008 CH GR 10N	0.010	50	500	4100	0.08	1000
TFC1008 CH GR 12N	0.012	50	500	3300	0.09	1000
TFC1008 CH GR 15N	0.015	50	500	2500	0.10	1000
TFC1008 CH GR 18N	0.018	50	350	2500	0.11	1000
TFC1008 CH GR 22N	0.022	55	350	2400	0.12	1000
TFC1008 CH GR 27N	0.027	55	350	1600	0.13	1000
TFC1008 CH GR 33N	0.033	60	350	1600	0.14	1000
TFC1008 CH GR 39N	0.039	60	350	1500	0.15	1000
TFC1008 CH GR 47N	0.047	65	350	1500	0.16	1000
TFC1008 CH GR 56N	0.056	65	350	1300	0.18	1000
TFC1008 CH GR 68N	0.068	65	350	1300	0.20	1000
TFC1008 CH GR 82N	0.082	60	350	1000	0.22	1000
TFC1008 CH GR R10	0.10	60	350	1000	0.56	650
TFC1008 CH GR R12	0.12	60	350	950	0.63	650
TFC1008 CH GR R15	0.15	45	100	850	0.70	580
TFC1008 CH GR R18	0.18	45	100	750	0.77	620
TFC1008 CH GR R22	0.22	45	100	700	0.84	500
TFC1008 CH GR R27	0.27	45	100	600	0.91	500
TFC1008 CH GR R33	0.33	45	100	570	1.05	450
TFC1008 CH GR R39	0.39	45	100	500	1.12	470
TFC1008 CH GR R47	0.47	45	100	450	1.19	470
TFC1008 CH GR R56	0.56	45	100	415	1.33	400
TFC1008 CH GR R62	0.62	45	100	375	1.40	300
TFC1008 CH GR R68	0.68	45	100	375	1.47	400
TFC1008 CH GR R75	0.75	45	100	360	1.54	360
TFC1008 CH GR R82	0.82	45	100	350	1.61	400
TFC1008 CH GR R91	0.91	45	50	320	1.68	380
TFC1008 CH GR 1R0	1.00	35	50	290	1.75	370
TFC1008 CH GR 1R2	1.20	35	50	250	2.0	310
TFC1008 CH GR 1R5	1.50	28	50	200	2.3	330
TFC1008 CH GR 1R8	1.80	28	50	160	2.6	300
TFC1008 CH GR 2R2	2.20	28	50	160	2.8	280
TFC1008 CH GR 2R7	2.70	22	25	140	3.2	290
TFC1008 CH GR 3R3	3.30	22	25	110	3.4	290
TFC1008 CH GR 3R9	3.90	20	25	100	3.6	260
TFC1008 CH GR 4R7	4.70	20	25	90	4.0	260
TFC1008 CH GR 5R6	5.60	20	7.9	80	6.8	190
TFC1008 CH GR 6R8	6.80	20	7.9	70	7.5	180
TFC1008 CH GR 8R2	8.20	20	7.9	60	8.2	170
TFC1008 CH GR 100	10.0	20	7.9	55	9.1	160
TFC1008 F GR 1R2	1.20	48	7.9	210	0.68	650
TFC1008 F GR 1R5	1.50	41	7.9	190	0.76	630
TFC1008 F GR 1R8	1.80	39	7.9	170	0.84	600
TFC1008 F GR 2R2	2.20	34	7.9	150	1.10	520
TFC1008 F GR 2R7	2.70	34	7.9	135	1.28	490
TFC1008 F GR 3R3	3.30	32	7.9	120	1.46	450
TFC1008 F GR 3R9	3.90	32	7.9	105	1.56	420
TFC1008 F GR 4R7	4.70	31	7.9	90	1.68	400
TFC1008 F GR 5R6	5.60	31	7.9	80	1.82	380
TFC1008 F GR 6R8	6.80	31	7.9	70	2.00	360
TFC1008 F GR 8R2	8.20	23	7.9	65	2.65	330
TFC1008 F GR 100	10.0	31	7.9	60	2.95	300

## Ordering information

Order the type TFC1008 chip inductors using the following standard part numbers to indicate value, tolerance and packaging:

TFC Part No ----- TFC1008 CH GR R82 K

TFC1008 ----- Type No.

CH ----- Core material:

----- CH = ceramic, F = ferrite

G ----- Gold plated electrodes

R ----- Tape and reel

R82 ----- Inductance value code

K ----- Tolerance:

----- M =  $\pm 20\%$ , K =  $\pm 10\%$ ,

----- J =  $\pm 5\%$ , G =  $\pm 2\%$