Thin Film Chip Inductors

Features

- Photolithographic single layer ceramic chip
- High SRF, superior Q, and excellent temperature stability
- Precision within ± 1% or ± 0.1 nH

Applications

- Cellular telephone, digital camera and GPS products
- VCO,TCXO Circuits and RF transceiver modules
- Wireless LANs, bluetooth modules, communication appliances

Operating Temperature

-40ºC — +85ºC

Product Identification

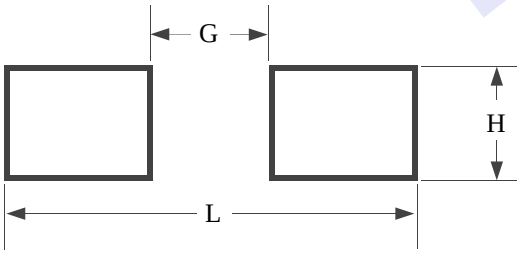
TFI	0402	C	1N8	S	T - T
(1)	(2)	(3)	(4)	(5)	(6) (7)

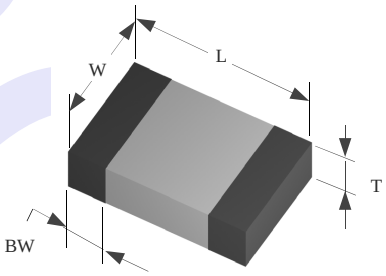
(1) Series code :
TFI: Thin Film Inductor
(2) Dimensions: L x W inches
The first two digits: L (length)
The last two digits: W (width)
(3) Characteristic code: C
(4) Value code: Inductance
N — decimal point for nH
Example: 1N8 = 1.8 nH
R — decimal point for µH (1000 nH)
Example: R10 = 0.10 µH = 100 nH
(5) Tolerance code:
F = ±1% B = ±0.1 nH
G = ±2% C = ±0.2 nH
H = ±3% S = ±0.3 nH
J = ±5%
(6) Package code:
T = Tape & Reel
(7) Termination type code:
T = 100% Sn plating

Recommended PC Board Land Patterns

CHIP SIZE EIA/EIAJ	L INCH (mm)	G INCH (mm)	H INCH (mm)
0201(0502)	0.033 (0.85)	0.010 (0.25)	0.016 (0.40)
0402(1005)	0.063 (1.60)	0.016 (0.40)	0.024 (0.60)
0603(1608)	0.102 (2.60)	0.022 (0.55)	0.037 (0.94)

Shape and Dimensions





SIZE EIA/EIAJ	LENGTH (L) INCH (mm)	WIDTH (W) INCH (mm)	THICKNESS (T) INCH (mm)	TERMINATION (BW) INCH (mm)
0201/0502	0.024 ± 0.002 (0.60 ± 0.05)	0.012 ± 0.002 (0.30 ± 0.05)	0.009 ± 0.002 (0.23 ± 0.05)	0.006± 0.002 (0.15 ± 0.05)
0402/1005	0.039 ± 0.004 (1.00 ± 0.10)	0.020 ± 0.004 (0.50 ± 0.10)	0.013 ± 0.004 (0.32 ± 0.10)	0.008± 0.004 (0.20 ± 0.10)
0603/1608	0.063 ± 0.006 (1.60 ± 0.15)	0.031 ± 0.006 (0.80 ± 0.15)	0.018 ± 0.004 (0.45 ± 0.10)	0.012 ± 0.008 (0.30 ± 0.20)

TFI Series

AEM Part Number	L, nH	Tolerance	Min. Q	Test Frequency MHz	Min. SRF GHz	Max. R_{DC} Ω	Max. I A
TFI0201C0N1	0.1	B, C, S	8	500	9	0.2	0.40
TFI0201C0N2	0.2	B, C, S	8	500	9	0.2	0.40
TFI0201C0N3	0.3	B, C, S	8	500	9	0.2	0.40
TFI0201C0N4	0.4	B, C, S	8	500	9	0.25	0.35
TFI0201C0N5	0.5	B, C, S	8	500	9	0.25	0.35
TFI0201C0N6	0.6	B, C, S	8	500	9	0.25	0.35
TFI0201C0N7	0.7	B, C, S	8	500	9	0.3	0.30
TFI0201C0N8	0.8	B, C, S	8	500	9	0.3	0.30
TFI0201C0N9	0.9	B, C, S	8	500	9	0.3	0.30
TFI0201C1N0	1.0	B, C, S	8	500	9	0.3	0.30
TFI0201C1N1	1.1	B, C, S	8	500	9	0.35	0.30
TFI0201C1N2	1.2	B, C, S	8	500	9	0.35	0.30
TFI0201C1N3	1.3	B, C, S	8	500	9	0.45	0.25
TFI0201C1N4	1.4	B, C, S	8	500	9	0.45	0.25
TFI0201C1N5	1.5	B, C, S	8	500	9	0.45	0.25
TFI0201C1N6	1.6	B, C, S	8	500	9	0.55	0.20
TFI0201C1N7	1.7	B, C, S	8	500	9	0.55	0.20
TFI0201C1N8	1.8	B, C, S	8	500	9	0.55	0.20
TFI0201C1N9	1.9	B, C, S	8	500	9	0.55	0.20
TFI0201C2N0	2.0	B, C, S	8	500	8	0.7	0.20
TFI0201C2N1	2.1	B, C, S	8	500	8	0.7	0.20
TFI0201C2N2	2.2	B, C, S	8	500	8	0.7	0.20
TFI0201C2N3	2.3	B, C, S	8	500	8	0.8	0.15
TFI0201C2N4	2.4	B, C, S	8	500	8	0.8	0.15
TFI0201C2N5	2.5	B, C, S	8	500	8	0.8	0.15
TFI0201C2N6	2.6	B, C, S	8	500	8	0.8	0.15
TFI0201C2N7	2.7	B, C, S	8	500	8	0.8	0.15
TFI0201C2N8	2.8	B, C, S	8	500	6	1	0.15
TFI0201C2N9	2.9	B, C, S	8	500	6	1	0.15
TFI0201C3N0	3.0	B, C, S	8	500	6	1	0.15
TFI0201C3N1	3.1	B, C, S	8	500	6	1	0.15
TFI0201C3N2	3.2	B, C, S	8	500	6	1	0.15
TFI0201C3N3	3.3	B, C, S	8	500	6	1	0.15
TFI0201C3N4	3.4	B, C, S	8	500	6	1.2	0.15
TFI0201C3N5	3.5	B, C, S	8	500	6	1.2	0.15
TFI0201C3N6	3.6	B, C, S	8	500	6	1.2	0.15
TFI0201C3N7	3.7	B, C, S	8	500	6	1.2	0.15
TFI0201C3N9	3.9	B, C, S	8	500	6	1.2	0.15
TFI0201C4N7	4.7	B, C, S	8	500	6	1.4	0.13
TFI0201C5N6	5.6	G, J	8	500	4	1.8	0.13
TFI0201C6N8	6.8	G, J	8	500	4	2.3	0.11
TFI0201C8N2	8.2	G, J	8	500	3	3	0.11
TFI0201C10N	10	G, J	8	500	2	3.5	0.08

Other values may be available upon request.

TFI Series

AEM Part Number	L, nH	Tolerance	Min. Q	Test Frequency MHz	Min. SRF GHz	Max. R_{DC} Ω	Max. I A
TFI0402C0N2	0.2	B, C, S	13	500	14	0.10	0.80
TFI0402C0N4	0.4	B, C, S	13	500	14	0.10	0.80
TFI0402C0N8	0.8	B, C, S	13	500	14	0.15	0.70
TFI0402C1N0	1.0	B, C, S	13	500	12	0.15	0.70
TFI0402C1N1	1.1	B, C, S	13	500	12	0.15	0.70
TFI0402C1N2	1.2	B, C, S	13	500	12	0.15	0.70
TFI0402C1N3	1.3	B, C, S	13	500	10	0.25	0.70
TFI0402C1N4	1.4	B, C, S	13	500	10	0.25	0.70
TFI0402C1N5	1.5	B, C, S	13	500	10	0.25	0.70
TFI0402C1N6	1.6	B, C, S	13	500	10	0.25	0.56
TFI0402C1N7	1.7	B, C, S	13	500	10	0.25	0.56
TFI0402C1N8	1.8	B, C, S	13	500	10	0.25	0.56
TFI0402C1N9	1.9	B, C, S	13	500	8	0.35	0.56
TFI0402C2N0	2.0	B, C, S	13	500	8	0.35	0.56
TFI0402C2N1	2.1	B, C, S	13	500	8	0.35	0.44
TFI0402C2N2	2.2	B, C, S	13	500	8	0.35	0.44
TFI0402C2N3	2.3	B, C, S	13	500	8	0.35	0.44
TFI0402C2N4	2.4	B, C, S	13	500	8	0.35	0.44
TFI0402C2N5	2.5	B, C, S	13	500	8	0.35	0.44
TFI0402C2N6	2.6	B, C, S	13	500	8	0.35	0.44
TFI0402C2N7	2.7	B, C, S	13	500	8	0.35	0.44
TFI0402C2N8	2.8	B, C, S	13	500	6	0.45	0.38
TFI0402C2N9	2.9	B, C, S	13	500	6	0.45	0.38
TFI0402C3N0	3.0	B, C, S	13	500	6	0.45	0.38
TFI0402C3N1	3.1	B, C, S	13	500	6	0.45	0.38
TFI0402C3N2	3.2	B, C, S	13	500	6	0.45	0.38
TFI0402C3N3	3.3	B, C, S	13	500	6	0.45	0.38
TFI0402C3N4	3.4	B, C, S	13	500	6	0.55	0.38
TFI0402C3N5	3.5	B, C, S	13	500	6	0.55	0.38
TFI0402C3N6	3.6	B, C, S	13	500	6	0.55	0.38
TFI0402C3N7	3.7	B, C, S	13	500	6	0.55	0.34
TFI0402C3N8	3.8	B, C, S	13	500	6	0.55	0.34
TFI0402C3N9	3.9	B, C, S	13	500	6	0.55	0.34
TFI0402C4N7	4.7	B, C, S	13	500	6	0.65	0.32
TFI0402C5N6	5.6	B, C, S	13	500	6	0.85	0.28
TFI0402C6N2	6.2	B, C, S	13	500	6	0.85	0.28
TFI0402C6N8	6.8	B, C, S	13	500	6	1.05	0.26
TFI0402C7N2	7.2	B, C, S	13	500	6	1.05	0.26
TFI0402C8N0	8.0	B, C, S	13	500	5.5	1.25	0.22
TFI0402C8N2	8.2	B, C, S	13	500	5.5	1.25	0.22
TFI0402C9N1	9.1	B, C, S	13	500	5.5	1.25	0.22
TFI0402C10N	10	F, G, H, J	13	500	4.5	1.35	0.20
TFI0402C12N	12	F, G, H, J	13	500	3.7	1.55	0.18
TFI0402C14N	14	F, G, H, J	13	500	3.7	1.75	0.18
TFI0402C15N	15	F, G, H, J	13	500	3.3	1.75	0.13
TFI0402C17N	17	F, G, H, J	13	500	3.1	1.95	0.10
TFI0402C18N	18	F, G, H, J	13	500	3.1	2.15	0.10
TFI0402C20N	20	F, G, H, J	13	500	2.8	2.55	0.09
TFI0402C22N	22	F, G, H, J	13	500	2.8	2.65	0.09
TFI0402C27N	27	F, G, H, J	13	500	2.5	3.25	0.075
TFI0402C33N	33	F, G, H, J	13	500	2.5	4.50	0.075

Other values may be available upon request.

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TFI Series

AEM Part Number	L, nH	Tolerance	Min. Q	Test Frequency MHz	Min. SRF GHz	Max. R_{DC} Ω	Max. I A
TFI0603C1N0	1.0	B, C, S	15	300	13	0.35	0.80
TFI0603C1N2	1.2	B, C, S	15	300	13	0.35	0.80
TFI0603C1N5	1.5	B, C, S	15	300	10	0.35	0.80
TFI0603C1N8	1.8	B, C, S	15	300	10	0.35	0.30
TFI0603C2N2	2.2	B, C, S	15	300	8	0.35	0.30
TFI0603C2N7	2.7	B, C, S	15	300	6	0.45	0.30
TFI0603C3N3	3.3	B, C, S	15	300	6	0.45	0.30
TFI0603C3N9	3.9	B, C, S	15	300	6	0.45	0.30
TFI0603C4N7	4.7	B, C, S	15	300	5	0.55	0.30
TFI0603C5N6	5.6	B, C, S	15	300	5	0.65	0.30
TFI0603C6N8	6.8	B, C, S	15	300	5	0.75	0.30
TFI0603C8N2	8.2	B, C, S	15	300	4	0.95	0.30
TFI0603C10N	10	F, G, H, J	15	300	4	0.95	0.30
TFI0603C12N	12	F, G, H, J	15	300	3	1.05	0.30
TFI0603C15N	15	F, G, H, J	15	300	3	1.35	0.30
TFI0603C18N	18	F, G, H, J	15	300	2	1.65	0.30
TFI0603C22N	22	F, G, H, J	15	300	2	1.95	0.25
TFI0603C27N	27	F, G, H, J	15	300	2	2.35	0.25
TFI0603C33N	33	F, G, H, J	15	300	1.5	2.75	0.25
TFI0603C39N	39	F, G, H, J	15	300	1.5	3.00	0.20
TFI0603C47N	47	F, G, H, J	15	300	1.5	3.00	0.20
TFI0603C56N	56	F, G, H, J	15	300	1	5.00	0.15
TFI0603C68N	68	F, G, H, J	15	300	1	5.00	0.15
TFI0603CR10	100	G, H, J	15	300	1	7.50	0.10

Other values may be available upon request.

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