

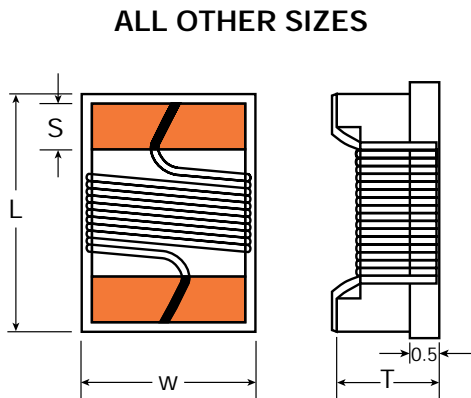


Miniature RF Chip Inductors

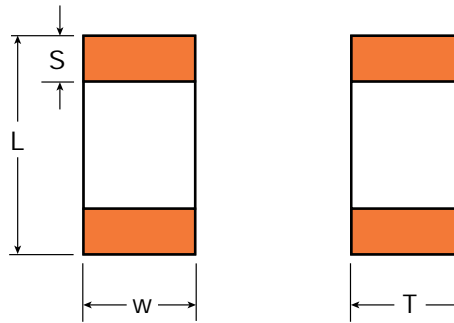
Features

- High Q values.
- High SRF.
- Wide inductance range, 1nH to 3.3 μ H
- Excellent solderability and resistance to soldering heat suitable for flow or reflow soldering.
- High reliability and high speed surface mount assembly.

Dimensions



0402 and 0603 SIZE



Unit: mm (inch)

SERIES	L	W	T	S	QTY/REEL
MRFI 0402 (1005)	1.0 \pm 0.10 (0.040 \pm .004)	0.5 \pm 0.10 (0.020 \pm .004)	0.5 \pm 0.15 (0.020 \pm .006)	0.25 \pm 0.1 (0.010 \pm .004)	5,000
MRFI 0603 (1608)	1.6 \pm 0.2 (0.064 \pm .008)	0.8 \pm 0.2 (0.032 \pm .008)	0.8 \pm 0.2 (0.032 \pm .008)	0.3 \pm 0.2 (0.012 \pm .008)	3,000
MRFI 0805 (2012)	2.0 \pm 0.2 (0.080 \pm .008)	1.25 \pm 0.2 (0.050 \pm .008)	1.2 \pm 0.2 (0.048 \pm .008)	0.4 \pm 0.2 (0.016 \pm .008)	2,000
MRFI 1008 (2520)	2.5 \pm 0.2 (0.098 \pm .008)	2.0 \pm 0.2 (0.080 \pm .008)	1.6 \pm 0.2 (0.064 \pm .008)	0.5 \pm 0.2 (0.020 \pm .008)	2,000
MRFI 1210 (3225)	3.2 \pm 0.2 (0.126 \pm .008)	2.5 \pm 0.2 (0.098 \pm .008)	2.2 \pm 0.2 (0.087 \pm .008)	0.5 \pm 0.2 (0.020 \pm .008)	2,000

How To Order

MRFI0603

Series

- 3N3

Inductance Value
 3N3: 3.3nH
 33N: 33nH
 R33: 330nH
 3R3: 3.3 μ H
 330: 33 μ H

S

Tolerance
 S: \pm 0.3nH
 G: \pm 2%
 J: \pm 5%
 K: \pm 10%
 M: \pm 20%

T

Packaging
 B: Bulk
 T: Tape

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MRFI 0402 SERIES (1005) - Electrical Characteristics

Part Number	Inductance (nH)	Tolerance	Q Typ. min.	S.R.F. (MHz) min.	R _{dc} (Ω) max.	I _{dc} (mA) max.
MRFI 0402 – 1N0S □	1.0 @ 100 MHz	S : ±0.3 nH	21 @ 800 MHz	6,000	0.05	400
MRFI 0402 – 1N2S □	1.2 @ 100 MHz	S : ±0.3 nH	21 @ 800 MHz	6,000	0.06	400
MRFI 0402 – 1N5S □	1.5 @ 100 MHz	S : ±0.3 nH	21 @ 800 MHz	6,000	0.07	400
MRFI 0402 – 1N8S □	1.8 @ 100 MHz	S : ±0.3 nH	21 @ 800 MHz	6,000	0.08	400
MRFI 0402 – 2N2S □	2.2 @ 100 MHz	S : ±0.3 nH	21 @ 800 MHz	6,000	0.09	400
MRFI 0402 – 2N7S □	2.7 @ 100 MHz	S : ±0.3 nH	21 @ 800 MHz	5,500	0.10	400
MRFI 0402 – 3N3S □	3.3 @ 100 MHz	S : ±0.3 nH	21 @ 800 MHz	5,500	0.12	400
MRFI 0402 – 3N9S □	3.9 @ 100 MHz	S : ±0.3 nH	21 @ 800 MHz	5,200	0.15	360
MRFI 0402 – 4N7S □	4.7 @ 100 MHz	S : ±0.3 nH	21 @ 800 MHz	4,800	0.17	360
MRFI 0402 – 5N6S □	5.6 @ 100 MHz	S : ±0.3 nH	21 @ 800 MHz	4,600	0.19	340
MRFI 0402 – 6N8J □	6.8 @ 100 MHz	J : ±5 (%)	19 @ 800 MHz	4,000	0.30	320
MRFI 0402 – 8N2J □	8.2 @ 100 MHz	J : ±5 (%)	19 @ 800 MHz	3,500	0.35	320
MRFI 0402 – 10NJ □	10 @ 100 MHz	J : ±5 (%)	19 @ 800 MHz	2,800	0.41	320
MRFI 0402 – 12NJ □	12 @ 100 MHz	J : ±5 (%)	19 @ 800 MHz	2,800	0.45	320
MRFI 0402 – 15NJ □	15 @ 100 MHz	J : ±5 (%)	19 @ 800 MHz	2,500	0.60	240
MRFI 0402 – 18NJ □	18 @ 100 MHz	J : ±5 (%)	19 @ 800 MHz	2,200	0.70	240
MRFI 0402 – 22NJ □	22 @ 100 MHz	J : ±5 (%)	19 @ 800 MHz	2,000	0.80	200
MRFI 0402 – 27NJ □	27 @ 100 MHz	J : ±5 (%)	19 @ 800 MHz	1,800	1.20	200
MRFI 0402 – 33NJ □	33 @ 100 MHz	J : ±5 (%)	18 @ 800 MHz	1,800	1.40	170
MRFI 0402 – 39NJ □	39 @ 100 MHz	J : ±5 (%)	18 @ 800 MHz	1,800	1.70	150
MRFI 0402 – 47NJ □	47 @ 100 MHz	J : ±5 (%)	18 @ 800 MHz	1,800	2.00	140
MRFI 0402 – 56NJ □	56 @ 100 MHz	J : ±5 (%)	18 @ 800 MHz	1,500	2.50	130
MRFI 0402 – 68NJ □	68 @ 100 MHz	J : ±5 (%)	18 @ 800 MHz	1,500	4.00	120
MRFI 0402 – 82NJ □	82 @ 100 MHz	J : ±5 (%)	18 @ 800 MHz	1,400	4.50	110
MRFI 0402 – R10J □	100 @ 100 MHz	J : ±5 (%)	18 @ 800 MHz	1,200	5.50	90

- NOTE**
- L, Q: HP4291A at 100MHz (Test fixture: HP16092A)
 - S.R.F: Self-resonance Frequency; HP8719C (Test fixture: HP16091A)
 - R_{dc}: DC Resistance; HP-4286A
 - I_{pc}: Allowable Current
 - □ Inductance Tolerance (S = ±0.3nH, J = ±5%, K = ± 10%, M = ±20%)

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Miniature RF Chip Inductors

MRFI 0603 SERIES (1608) - Electrical Characteristics

Part Number	Inductance (nH)	Tolerance	Q Typ. min.	S.R.F. (MHz) min.	R _{DC} (Ω) max.	I _{DC} (mA) max.
MRFI 0603 – 1N2S □	1.2 @ 100 MHz	S : ±0.3 nH	30 @ 1000 MHz	6,000	0.06	500
MRFI 0603 – 1N5S □	1.5 @ 100 MHz	S : ±0.3 nH	30 @ 1000 MHz	6,000	0.07	500
MRFI 0603 – 1N8S □	1.8 @ 100 MHz	S : ±0.3 nH	30 @ 1000 MHz	6,000	0.08	500
MRFI 0603 – 2N2S □	2.2 @ 100 MHz	S : ±0.3 nH	30 @ 1000 MHz	6,000	0.09	500
MRFI 0603 – 2N7S □	2.7 @ 100 MHz	S : ±0.3 nH	30 @ 1000 MHz	6,000	0.10	500
MRFI 0603 – 3N3S □	3.3 @ 100 MHz	S : ±0.3 nH	30 @ 1000 MHz	5,500	0.12	500
MRFI 0603 – 3N9J □	3.9 @ 100 MHz	J : ±5 (%)	30 @ 1000 MHz	5,500	0.15	450
MRFI 0603 – 4N7J □	4.7 @ 100 MHz	J : ±5 (%)	30 @ 1000 MHz	4,800	0.17	450
MRFI 0603 – 5N6J □	5.6 @ 100 MHz	J : ±5 (%)	30 @ 1000 MHz	4,600	0.18	430
MRFI 0603 – 6N8J □	6.8 @ 100 MHz	J : ±5 (%)	30 @ 1000 MHz	3,550	0.20	430
MRFI 0603 – 8N2J □	8.2 @ 100 MHz	J : ±5 (%)	30 @ 1000 MHz	3,500	0.28	400
MRFI 0603 – 10NJ □	10 @ 100 MHz	J : ±5 (%)	30 @ 500 MHz	2,800	0.32	400
MRFI 0603 – 12NJ □	12 @ 100 MHz	J : ±5 (%)	30 @ 500 MHz	2,800	0.35	400
MRFI 0603 – 15NJ □	15 @ 100 MHz	J : ±5 (%)	30 @ 500 MHz	2,500	0.41	350
MRFI 0603 – 18NJ □	18 @ 100 MHz	J : ±5 (%)	30 @ 500 MHz	2,300	0.45	350
MRFI 0603 – 22NJ □	22 @ 100 MHz	J : ±5 (%)	30 @ 500 MHz	2,000	0.50	300
MRFI 0603 – 27NJ □	27 @ 100 MHz	J : ±5 (%)	30 @ 500 MHz	2,000	0.55	300
MRFI 0603 – 33NJ □	33 @ 100 MHz	J : ±5 (%)	30 @ 500 MHz	1,800	0.60	300
MRFI 0603 – 39NS □	39 @ 100 MHz	S : ±0.3 nH	30 @ 500 MHz	1,800	0.80	300
MRFI 0603 – 47NS □	47 @ 100 MHz	S : ±0.3 nH	30 @ 500 MHz	1,800	0.95	250
MRFI 0603 – 56NJ □	56 @ 100 MHz	J : ±5 (%)	30 @ 500 MHz	1,800	1.20	250
MRFI 0603 – 68NJ □	68 @ 100 MHz	J : ±5 (%)	30 @ 500 MHz	1,500	1.30	250
MRFI 0603 – 82NJ □	82 @ 100 MHz	J : ±5 (%)	30 @ 500 MHz	1,500	1.50	250
MRFI 0603 – R10J □	100 @ 100 MHz	J : ±5 (%)	30 @ 500 MHz	1,300	1.80	200
MRFI 0603 – R12J □	120 @ 100 MHz	J : ±5 (%)	30 @ 500 MHz	1,200	2.80	130
MRFI 0603 – R15J □	150 @ 100 MHz	J : ±5 (%)	30 @ 500 MHz	1,100	4.10	100
MRFI 0603 – R18J □	180 @ 100MHz	J : ±5 (%)	30 @ 500 MHz	1,000	5.90	80
MRFI 0603 – R22J □	220 @ 100 MHz	J : ±5 (%)	30 @ 500 MHz	900	6.80	70

NOTE

- L, Q: HP4291A at 100MHz (Test fixture: HP16092A)
- S.R.F: Self-resonance Frequency; HP8719C (Test fixture: HP16091A)
- R_{DC}: DC Resistance; HP-4286A
- I_{pc}: Allowable Current
- □ Inductance Tolerance (S = ±0.3nH, J = ±5%, K = ± 10%, M = ±20%)

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MRFI 0805 SERIES (2012) - Electrical Characteristics

Part Number	Inductance (nH)	Tolerance	Q Typ. min.	S.R.F. (MHz) min.	R _{dc} (Ω) max.	I _{dc} (mA) max.
MRFI 0805 – 2N2S □	2.2 @ 250 MHz	S : ±0.3 nH	50 @ 1000 MHz	6,000	0.01	600
MRFI 0805 – 3N9S □	3.9 @ 250 MHz	S : ±0.3 nH	60 @ 1000 MHz	6,000	0.06	600
MRFI 0805 – 4N7S □	4.7 @ 250 MHz	S : ±0.3 nH	60 @ 1000 MHz	6,000	0.03	600
MRFI 0805 – 6N8 □□	6.8 @ 250 MHz	20, 10	60 @ 1000 MHz	5,500	0.26	600
MRFI 0805 – 8N2 □□	8.2 @ 250 MHz	10, 5	60 @ 1000 MHz	5,500	0.03	600
MRFI 0805 – 10N □□	10 @ 250 MHz	10, 5	60 @ 500 MHz	4,800	0.05	600
MRFI 0805 – 12N □□	12 @ 250 MHz	10, 5	60 @ 500 MHz	4,100	0.04	600
MRFI 0805 – 15N □□	15 @ 250 MHz	10, 5	60 @ 500 MHz	3,600	0.05	600
MRFI 0805 – 18N □□	18 @ 250 MHz	10, 5	60 @ 500 MHz	3,400	0.05	600
MRFI 0805 – 22N □□	22 @ 250 MHz	10, 5	60 @ 500 MHz	3,300	0.07	600
MRFI 0805 – 27N □□	27 @ 250 MHz	10, 5	60 @ 500 MHz	2,600	0.08	600
MRFI 0805 – 33N □□	33 @ 250 MHz	10, 5, 2	60 @ 500 MHz	2,400	0.08	500
MRFI 0805 – 39N □□	39 @ 250 MHz	10, 5, 2	60 @ 500 MHz	2,100	0.08	500
MRFI 0805 – 47N □□	47 @ 200 MHz	10, 5, 2	60 @ 500 MHz	1,700	0.09	500
MRFI 0805 – 56N □□	56 @ 200 MHz	10, 5, 2	60 @ 500 MHz	1,600	0.16	500
MRFI 0805 – 68N □□	68 @ 200 MHz	10, 5, 2	60 @ 500 MHz	1,450	0.17	500
MRFI 0805 – 82N □□	82 @ 150 MHz	10, 5, 2	60 @ 500 MHz	1,350	0.23	500
MRFI 0805 – R10 □□	100 @ 150 MHz	10, 5, 2	60 @ 500 MHz	1,200	0.35	500
MRFI 0805 – R12 □□	120 @ 150 MHz	10, 5, 2	50 @ 250 MHz	1,100	0.42	500
MRFI 0805 – R15 □□	150 @ 100 MHz	10, 5, 2	50 @ 250 MHz	950	0.61	400
MRFI 0805 – R18 □□	180 @ 100 MHz	10, 5, 2	50 @ 250 MHz	920	1.03	350
MRFI 0805 – R22 □□	220 @ 100 MHz	10, 5, 2	50 @ 250 MHz	860	1.14	300
MRFI 0805 – R27 □□	270 @ 25 MHz	10, 5, 2	45 @ 100 MHz	730	0.44	500
MRFI 0805 – R33 □□	330 @ 25 MHz	10, 5, 2	45 @ 100 MHz	800	0.52	400
MRFI 0805 – R39 □□	390 @ 25 MHz	10, 5, 2	45 @ 100 MHz	780	0.87	350
MRFI 0805 – R47 □□	470 @ 25 MHz	10, 5, 2	45 @ 100 MHz	750	0.99	330
MRFI 0805 – R56 □□	560 @ 25 MHz	10, 5, 2	45 @ 100 MHz	730	1.08	300
MRFI 0805 – R68 □□	680 @ 25 MHz	10, 5, 2	45 @ 100 MHz	650	1.20	280
MRFI 0805 – R82 □□	820 @ 25 MHz	10, 5, 2	45 @ 100 MHz	550	2.21	150
MRFI 0805 – R100 □□	1000 @ 25 MHz	10, 5, 2	35 @ 50 MHz	480	2.50	120
MRFI 0805 – R120 □□	1200 @ 7.9 MHz	10, 5, 2	35 @ 50 MHz	400	2.76	100

- NOTE**
- L, Q: HP4291A at 100MHz (Test fixture: HP16092A)
 - S.R.F: Self-resonance Frequency; HP8719C (Test fixture: HP16091A)
 - R_{dc}: DC Resistance; HP-4286A
 - I_{pc}: Allowable Current
 - □ Inductance Tolerance (G = ±2%, J = ±5%, K = ± 10%, M = ±20%)

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Miniature RF Chip Inductors

MRFI 1008 SERIES (2520) - Electrical Characteristics

Part Number	Inductance (nH)	Tolerance	Q Typ. min.	S.R.F. (MHz) min.	R _{dc} (Ω) max.	I _{dc} (mA) max.
MRFI 1008 - 3N3S □	3.3 @ 100 MHz	S : ±0.3 nH	50 @ 1000 MHz	6,000	0.06	600
MRFI 1008 - 6N8 □□	6.8 @ 100 MHz	20, 10	50 @ 1000 MHz	5,500	0.06	600
MRFI 1008 - 8N2 □□	8.2 @ 100 MHz	10, 5	50 @ 500 MHz	5,500	0.06	600
MRFI 1008 - 10N □□	10 @ 100 MHz	10, 5	50 @ 500 MHz	4,300	0.08	600
MRFI 1008 - 12N □□	12 @ 100 MHz	10, 5	50 @ 500 MHz	3,600	0.08	600
MRFI 1008 - 15N □□	15 @ 100 MHz	10, 5	50 @ 350 MHz	2,700	0.08	600
MRFI 1008 - 18N □□	18 @ 100 MHz	10, 5	50 @ 350 MHz	2,700	0.08	600
MRFI 1008 - 22N □□	22 @ 100 MHz	10, 5	60 @ 350 MHz	2,500	0.08	600
MRFI 1008 - 27N □□	27 @ 100 MHz	10, 5	60 @ 350 MHz	1,800	0.10	600
MRFI 1008 - 33N □□	33 @ 100 MHz	10, 5, 2	60 @ 350 MHz	1,700	0.10	600
MRFI 1008 - 39N □□	39 @ 100 MHz	10, 5, 2	60 @ 350 MHz	1,500	0.10	600
MRFI 1008 - 47N □□	47 @ 100 MHz	10, 5, 2	60 @ 350 MHz	1,500	0.10	600
MRFI 1008 - 56N □□	56 @ 100 MHz	10, 5, 2	60 @ 350 MHz	1,350	0.12	600
MRFI 1008 - 62N □□	62 @ 100 MHz	10, 5, 2	60 @ 350 MHz	1,300	0.15	600
MRFI 1008 - 68N □□	68 @ 100 MHz	10, 5, 2	60 @ 350 MHz	1,300	0.15	600
MRFI 1008 - 82N □□	82 @ 100 MHz	10, 5, 2	60 @ 350 MHz	1,100	0.18	600
MRFI 1008 - R10 □□	100 @ 100 MHz	10, 5, 2	60 @ 350 MHz	1,100	0.18	500
MRFI 1008 - R12 □□	120 @ 25 MHz	10, 5, 2	50 @ 100 MHz	950	0.20	500
MRFI 1008 - R15 □□	150 @ 25 MHz	10, 5, 2	50 @ 100 MHz	880	0.22	500
MRFI 1008 - R18 □□	180 @ 25 MHz	10, 5, 2	50 @ 100 MHz	800	0.33	500
MRFI 1008 - R22 □□	220 @ 25 MHz	10, 5, 2	50 @ 100 MHz	730	0.45	500
MRFI 1008 - R27 □□	270 @ 25 MHz	10, 5, 2	50 @ 100 MHz	650	0.75	500
MRFI 1008 - R33 □□	330 @ 25 MHz	10, 5, 2	50 @ 100 MHz	570	0.90	500
MRFI 1008 - R39 □□	390 @ 25 MHz	10, 5, 2	50 @ 100 MHz	530	1.20	500
MRFI 1008 - R47 □□	470 @ 25 MHz	10, 5, 2	45 @ 100 MHz	480	1.30	400
MRFI 1008 - R56 □□	560 @ 25 MHz	10, 5, 2	45 @ 100 MHz	430	1.45	400
MRFI 1008 - R62 □□	620 @ 25 MHz	10, 5, 2	45 @ 100 MHz	390	1.90	360
MRFI 1008 - R68 □□	680 @ 25 MHz	10, 5, 2	45 @ 100 MHz	380	0.80	500
MRFI 1008 - R75 □□	750 @ 25 MHz	10, 5, 2	45 @ 100 MHz	360	0.85	500
MRFI 1008 - R82 □□	820 @ 25 MHz	10, 5, 2	45 @ 100 MHz	350	1.05	500
MRFI 1008 - R91 □□	910 @ 25 MHz	10, 5, 2	45 @ 100 MHz	330	1.20	500
MRFI 1008 - 1R0 □□	1000 @ 25 MHz	10, 5, 2	35 @ 50 MHz	310	1.25	430
MRFI 1008 - 1R2 □□	1200 @ 7.96 MHz	10, 5, 2	35 @ 50 MHz	270	1.38	380
MRFI 1008 - 1R5 □□	1500 @ 7.96 MHz	10, 5, 2	35 @ 50 MHz	250	2.20	320
MRFI 1008 - 1R8 □□	1800 @ 7.96 MHz	10, 5, 2	35 @ 50 MHz	200	2.40	280
MRFI 1008 - 2R2 □□	2200 @ 7.96 MHz	10, 5, 2	35 @ 50 MHz	180	2.60	260
MRFI 1008 - 2R7 □□	2700 @ 7.96 MHz	10, 5, 2	35 @ 25 MHz	160	2.90	245
MRFI 1008 - 3R3 □□	3300 @ 7.96 MHz	10, 5, 2	30 @ 7.96 MHz	58	1.70	230
MRFI 1008 - 3R9 □□	3900 @ 7.96 MHz	10, 5, 2	30 @ 7.96 MHz	50	1.80	200
MRFI 1008 - 4R7 □□	4700 @ 7.96 MHz	10, 5, 2	30 @ 7.96 MHz	45	2.20	190
MRFI 1008 - 5R6 □□	5600 @ 7.96 MHz	10, 5, 2	25 @ 7.96 MHz	42	2.40	180
MRFI 1008 - 6R8 □□	6800 @ 7.96 MHz	10, 5, 2	25 @ 7.96 MHz	38	2.70	170
MRFI 1008 - 8R2 □□	8200 @ 7.96 MHz	10, 5, 2	25 @ 7.96 MHz	36	2.95	160
MRFI 1008 - 100 □□	10000 @ 2.52 MHz	10, 5, 2	25 @ 2.52 MHz	33	3.40	150

NOTE

- L, Q: HP4291A at 100MHz (Test fixture: HP16092A)
- S.R.F.: Self-resonance Frequency; HP8719C (Test fixture: HP16091A)
- R_{dc}: DC Resistance; HP-4286A
- I_{pc}: Allowable Current
- □ Inductance Tolerance (G = ±2%, J = ±5%, K = ± 10%, M = ±20%)

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MRFI 1210 SERIES (3225) - Electrical Characteristics

Part Number	Inductance (nH)	Tolerance	Q Typ. min.	S.R.F. (MHz) min.	R _{dc} (Ω) max.	I _{dc} (mA) max.
MRFI 1210 – 3N9S □	3.9 @ 100 MHz	S : ±0.3 nH	50 @ 1000 MHz	6,000	0.06	600
MRFI 1210 – 4N7S □	4.7 @ 100 MHz	S : ±0.3 nH	50 @ 1000 MHz	6,000	0.06	600
MRFI 1210 – 5N6 □□	5.6 @ 100 MHz	20, 10	50 @ 1000 MHz	5,500	0.06	600
MRFI 1210 – 10N □□	10 @ 100 MHz	10, 5	60 @ 500 MHz	4,000	0.06	600
MRFI 1210 – 12N □□	12 @ 100 MHz	10, 5	60 @ 500 MHz	3,400	0.06	600
MRFI 1210 – 15N □□	15 @ 100 MHz	10, 5	60 @ 500 MHz	3,200	0.06	600
MRFI 1210 – 18N □□	18 @ 100 MHz	10, 5	60 @ 300 MHz	2,800	0.06	600
MRFI 1210 – 22N □□	22 @ 100 MHz	10, 5	60 @ 300 MHz	2,300	0.06	600
MRFI 1210 – 27N □□	27 @ 100 MHz	10, 5	60 @ 300 MHz	2,000	0.06	600
MRFI 1210 – 33N □□	33 @ 100 MHz	10, 5, 2	60 @ 300 MHz	1,800	0.06	600
MRFI 1210 – 39N □□	39 @ 100 MHz	10, 5, 2	60 @ 300 MHz	1,800	0.06	600
MRFI 1210 – 47N □□	47 @ 100 MHz	10, 5, 2	60 @ 300 MHz	1,600	0.06	600
MRFI 1210 – 56N □□	56 @ 100 MHz	10, 5, 2	60 @ 300 MHz	1,500	0.09	600
MRFI 1210 – 68N □□	68 @ 100 MHz	10, 5, 2	60 @ 300 MHz	1,300	0.09	600
MRFI 1210 – 82N □□	82 @ 100 MHz	10, 5, 2	60 @ 300 MHz	1,200	0.09	600
MRFI 1210 – R10 □□	100 @ 100 MHz	10, 5, 2	60 @ 300 MHz	1,100	0.09	500
MRFI 1210 – R12 □□	120 @ 50 MHz	10, 5, 2	60 @ 300 MHz	1,000	0.12	500
MRFI 1210 – R15 □□	150 @ 50 MHz	10, 5, 2	60 @ 300 MHz	900	0.15	500
MRFI 1210 – R18 □□	180 @ 50 MHz	10, 5, 2	60 @ 300 MHz	850	0.21	500
MRFI 1210 – R22 □□	220 @ 50 MHz	10, 5, 2	60 @ 300 MHz	760	0.27	500
MRFI 1210 – R27 □□	270 @ 50 MHz	10, 5, 2	60 @ 300 MHz	700	0.33	500
MRFI 1210 – R33 □□	330 @ 50 MHz	10, 5, 2	50 @ 100 MHz	650	0.37	500
MRFI 1210 – R39 □□	390 @ 50 MHz	10, 5, 2	50 @ 100 MHz	600	0.63	500
MRFI 1210 – R47 □□	470 @ 50 MHz	10, 5, 2	50 @ 100 MHz	550	0.69	400
MRFI 1210 – R56 □□	560 @ 50 MHz	10, 5, 2	50 @ 100 MHz	450	0.90	400
MRFI 1210 – R68 □□	680 @ 35 MHz	10, 5, 2	50 @ 100 MHz	450	1.05	400
MRFI 1210 – R82 □□	820 @ 35 MHz	10, 5, 2	50 @ 100 MHz	420	1.45	400
MRFI 1210 – 1R0 □□	1000 @ 35 MHz	10, 5, 2	45 @ 100 MHz	350	2.20	320
MRFI 1210 – 1R2 □□	1200 @ 7.96 MHz	10, 5, 2	30 @ 7.96 MHz	330	1.10	480
MRFI 1210 – 1R5 □□	1500 @ 7.96 MHz	10, 5, 2	30 @ 7.96 MHz	300	1.65	400
MRFI 1210 – 1R8 □□	1800 @ 7.96 MHz	10, 5, 2	30 @ 7.96 MHz	250	1.83	350
MRFI 1210 – 2R2 □□	2200 @ 7.96 MHz	10, 5, 2	30 @ 7.96 MHz	200	2.20	290
MRFI 1210 – 2R7 □□	2700 @ 7.96 MHz	10, 5, 2	30 @ 7.96 MHz	180	2.40	260
MRFI 1210 – 3R3 □□	3300 @ 7.96 MHz	10, 5, 2	30 @ 7.96 MHz	160	2.63	240
MRFI 1210 – 3R9 □□	3900 @ 7.96 MHz	10, 5, 2	30 @ 7.96 MHz	55	1.60	220
MRFI 1210 – 4R7 □□	4700 @ 7.96 MHz	10, 5, 2	30 @ 7.96 MHz	51	1.70	200
MRFI 1210 – 5R6 □□	5600 @ 7.96 MHz	10, 5, 2	30 @ 7.96 MHz	45	1.90	180
MRFI 1210 – 6R8 □□	6800 @ 7.96 MHz	10, 5, 2	30 @ 7.96 MHz	42	2.05	175
MRFI 1210 – 8R2 □□	8200 @ 7.96 MHz	10, 5, 2	30 @ 7.96 MHz	35	2.30	160
MRFI 1210 – 100 □□	10000 @ 2.52 MHz	10, 5, 2	30 @ 2.52 MHz	31	2.60	150

- NOTE**
- L, Q: HP4291A at 100MHz (Test fixture: HP16092A)
 - S.R.F: Self-resonance Frequency; HP8719C (Test fixture: HP16091A)
 - R_{dc}: DC Resistance; HP-4286A
 - I_{pc}: Allowable Current
 - □ Inductance Tolerance (G = ±2%, J = ±5%, K = ± 10%, M = ±20%)

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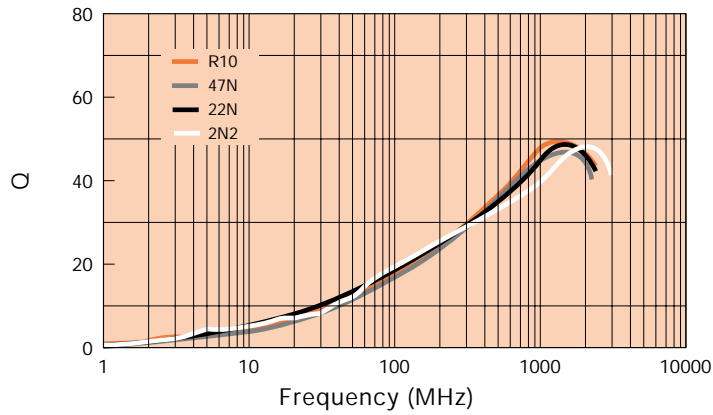
Phone: 512 / 794-0081
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 Toll Free: 800 / 950-8365
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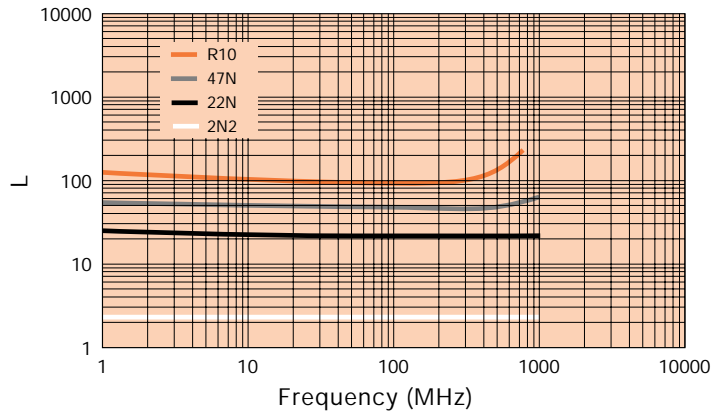
Miniature RF Chip Inductors

0402 & 0603

Q vs. Freq Plot

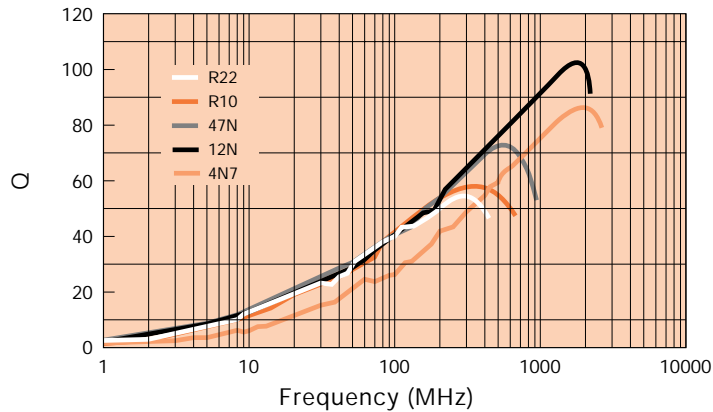


L vs. Freq Plot

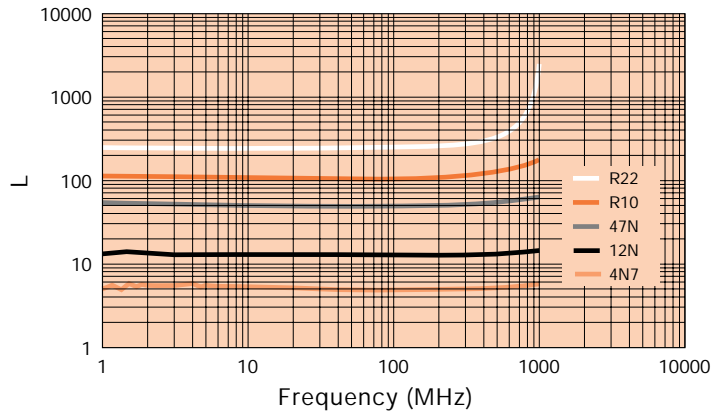


0805

Q vs. Freq Plot



L vs. Freq Plot



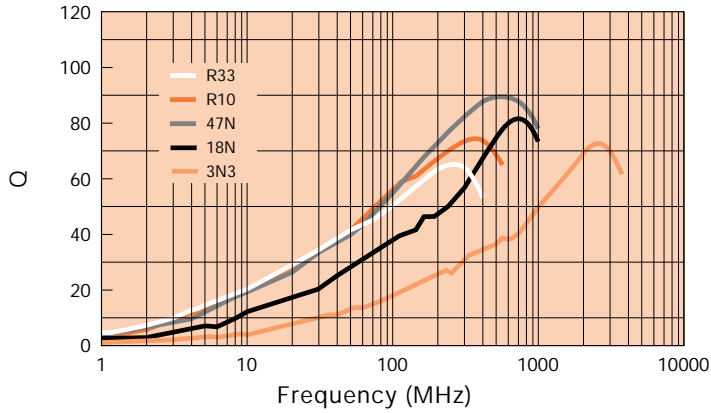
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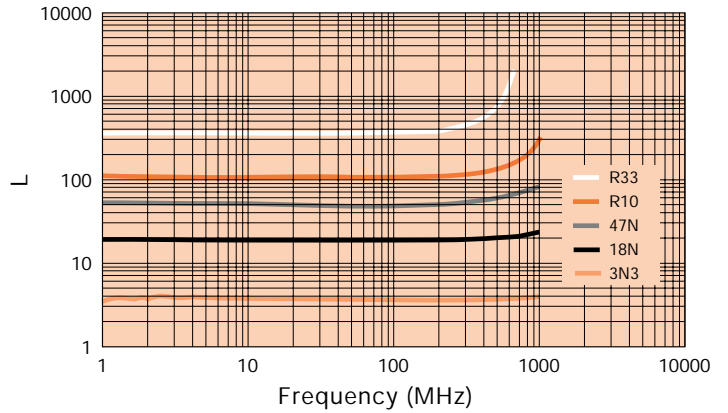


1008

Q vs. Freq Plot

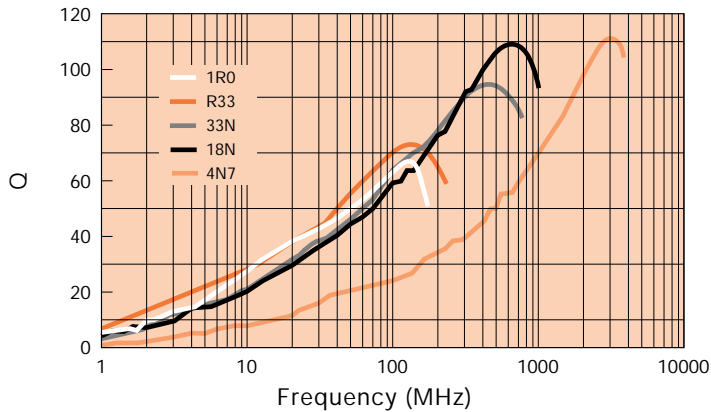


L vs. Freq Plot

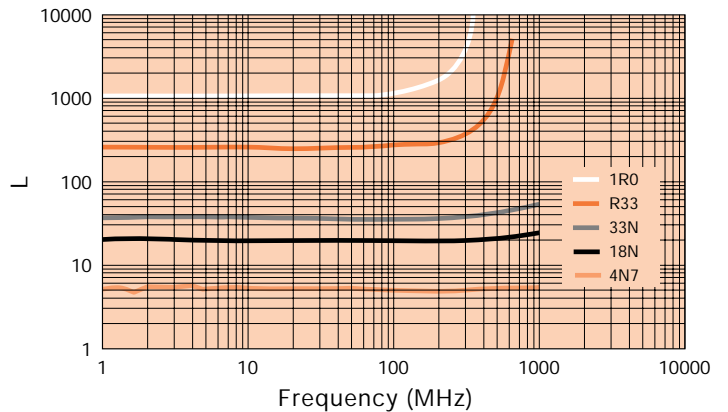


1210

Q vs. Freq Plot



L vs. Freq Plot





Miniature RF Chip Inductors

General Characteristics

Operating Temperature Range

Operating Temperature Range is the range of ambient temperature at which the inductor can be operated continuously at rated current.

Temp. Range: -30°C to + 125°C

Characteristics

Standards Atmospheric Conditions

Unless otherwise specified, the standard range of atmospheric conditions for making measurements and tests are as follows:

Ambient Temperature: 25°C (20°C) ± 2°C

Relative Humidity: 60% to 70%

Air Pressure: 86 Kpa to 106 Kpa

Item	Condition	Specification
Inductance and Tolerance	Measuring frequency: As shown in Product Table Measuring temperature: 25°C	Within specified tolerance
Quality Factor	Measuring frequency: As shown in Product Table Measuring temperature: 25°C	Within specified tolerance
Insulation Resistance	Measured at 100 VDC between inductor terminal and enclosure.	1000 megaohms minimum
Dielectric Withstanding Voltage	Measured at 500 VAC between terminal and enclosure for a maximum of 1 minute.	No damage occurs when the test voltage is applied.
Temperature Coefficient of Inductance (TCL)	Over -40°C to +85°C at frequency specified in Product Table.	+25 to 500 PPM/°C $TCL = \frac{L1 - L2}{L1 (T1-T2)} \times 10^6$ (PPM/°C)
Component Adhesion (PUSH TEST)	The component should be reflow soldered onto a P.C. Board (230°C 20 seconds) using a dynameter force gauge apply force to any side of the component.	The component must withstand a minimum force of 1 Kg for Pt / Ag termination and 2 Kg for Mo / Mn termination without any failure of the termination to component attachment.
Thermal Shock Test	Each cycle should consist of 30 minutes at -40°C followed by 30 minutes at +85°C with a 20 second maximum transition time between temperature extremes. Test duration is 10 cycles.	<i>Change In Inductance:</i> No more than 5% <i>Change in Q:</i> No more than 10%
Solderability	Dip pads in flux and dip in solder pot (63Sn/37Pb) at 230°C ±5°C for 5 seconds.	A minimum of 95% of the metalized area being covered with solder.
Resistance to Soldering Heat	Dip the components into flux and dip into solder pot containing 63Sn/37Pb at 260°C ±5°C for 5 seconds ± 1 second.	<i>Change In Inductance:</i> No more than 5% <i>Change In Q:</i> No more than 10%
Vibration (Random)	Inductors should be randomly vibrated per NAVMAT P9492 profile. Sample should be subjected to 10-2,000 Hz: 0.04 G/Hz for a minimum of 15 minutes per axis for each of three axes.	<i>Change In Inductance:</i> No more than 5% <i>Change In Q:</i> No more than 10%
Moisture Resistance	Inductors should be stored in the chamber at 45°C at 90 - 95% R.H. for 240 hours, and then the inductors are to be tested after 2 hours at room temperature.	<i>Change In Inductance:</i> No more than 5% <i>Change In Q:</i> No more than 10%
Cold Temperature Storage	Inductors should be stored at a temperature of -40°C for ±2 hours. Then it should be subjected to standard atmospheric conditions for 1 hour. After that, measurement should be made.	<i>Change In Inductance:</i> No more than 5% <i>Change In Q:</i> No more than 10%.
High Temperature Storage	Inductors should be stored at a temperature of 125°C ± 2°C for 48 ± 2 hours. Then it should be subjected to standard atmospheric conditions for 1 hour. After that, measurement should be made.	<i>Change In Inductance:</i> No more than 5% <i>Change In Q:</i> No more than 10%.
High Temperature with Load	Inductors should be stored in the chamber at 85°C for 1000 hours with rated current applied. Inductors should be tested at the beginning test for 500 hours, 1000 hours, and then Inductors are to be tested after 2 hours at room temperature.	<i>Change In Inductance:</i> No more than 5% <i>Change In Q:</i> No more than 10%.

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