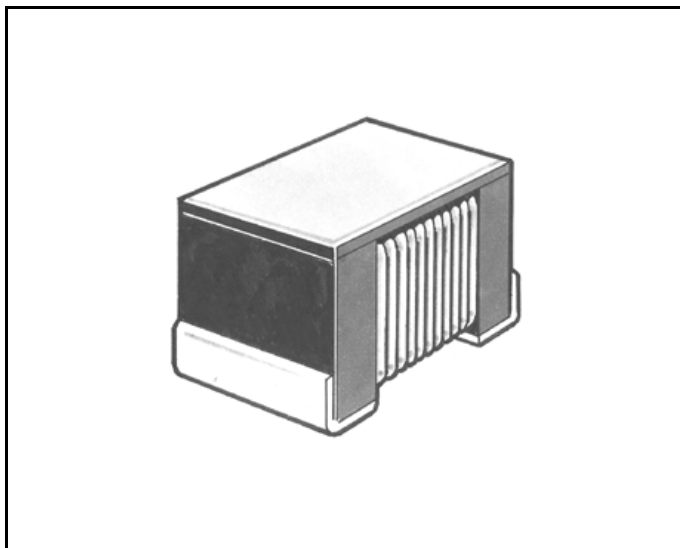


TYPE 3650 SERIES

1st April 2003
ISSUE 3

Low Inductance, High Frequency Chip Inductor



TYPE 3650 SERIES

The 3650 Series is a new concept from Tyco, a range of inductors in values from 1.0 nanohenry to 4.7 microhenries. The 3650 is available in four package sizes and is designed for automatic placement.

KEY FEATURES

- Choice of Four Package Sizes
- Wire Wound Construction
- Smooth Top Aids Placement
- 1.0NH to 4.7 μ H Value Range
- Laboratory Design Kits Available
- High Q Factor
- High S.R.F.
- Standard Tolerances

STOCKISTS:

This product is not available in Distribution.

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ELECTRICAL 0402 Package

Inductance Code	Inductance (nH)	Tolerance (± %)	Q Min	Measuring Freq. (Mhz)	S.R.F. (MHz)	Rdc Max (ohms)	Idc (mA) Max
1N0	1.0	5/10	16	250	6000	0.045	1360
2N0	2.0	5/10	16	250	6000	0.070	1040
2N2	2.2	5/10	19	250	6000	0.070	960
3N3	3.3	5/10	19	250	6000	0.066	840
3N6	3.6	5/10	19	250	6000	0.066	840
3N9	3.9	5/10	19	250	5800	0.066	840
5N1	5.1	5/10	20	250	5800	0.083	800
5N6	5.6	5/10	20	250	5800	0.083	760
6N2	6.2	5/10	20	250	5800	0.083	760
7N5	7.5	5/10	22	250	5800	0.104	680
8N2	8.2	5/10	22	250	4400	0.104	680
9N0	9.0	5/10	22	250	4160	0.104	680
10N	10.0	5/10	21	250	3900	0.195	480
11N	11.0	5/10	24	250	3680	0.120	640
12N	12.0	5/10	24	250	3600	0.120	640
15N	15.0	5/10	24	250	3280	0.172	560
19N	19.0	5/10	24	250	3040	0.202	480
23N	23.0	5/10	24	250	2720	0.214	400
27N	27.0	5/10	24	250	2480	0.298	400
36N	36.0	5/10	24	250	2320	0.403	320
40N	40.0	5/10	24	250	2240	0.438	320
47N	47.0	5/10	20	250	2200	0.830	150

0603 Package

Inductance Code	Inductance (nH)	Tolerance (± %)	Q Min	Measuring Freq. (Mhz)	S.R.F. (MHz)	Rdc Max (ohms)	Idc (mA) Max
1N6	1.6	5/10	24	250	12500	0.030	700
1N8	1.8	5/10	16	250	12500	0.045	700
3N6	3.6	5/10	22	250	6900	0.063	700
3N9	3.9	5/10	22	250	6900	0.080	700
4N3	4.3	5/10	22	250	5900	0.063	700
4N7	4.7	5/10	20	250	5800	0.116	700
6N8	6.8	2/5/10	27	250	5800	0.110	700
7N5	7.5	2/5/10	28	250	4800	0.106	700
8N7	8.7	2/5	28	250	4600	0.109	700
10N	10.0	2/5	31	250	4800	0.130	700
11N	11.0	2/5	33	250	4000	0.086	700
12N	12.0	2/5	35	250	4000	0.130	700
15N	15.0	2/5	35	250	4000	0.170	700
16N	16.0	2/5	34	250	3300	0.104	700
18N	18.0	2/5	35	250	3100	0.170	700
22N	22.0	2/5	38	250	3000	0.190	700
24N	24.0	2/5	37	250	2650	0.135	700
27N	27.0	2/5	40	250	2800	0.220	600
30N	30.0	2/5	37	250	2250	0.144	600
33N	33.0	2/5	40	250	2300	0.220	600
36N	36.0	2/5	38	250	2080	0.250	600
39N	39.0	2/5	40	250	2200	0.250	600
43N	43.0	2/5	39	250	2000	0.280	600
47N	47.0	2/5	38	200	2000	0.280	600
56N	56.0	2/5	38	200	1900	0.310	600
68N	68.0	2/5	37	200	1700	0.340	600
72N	72.0	2/5	34	150	1700	0.490	400
82N	82.0	2/5	34	150	1700	0.540	400
R10	100.0	2/5	34	150	1400	0.580	400
R11	110.0	2/5	32	150	1350	0.610	300
R12	120.0	2/5	32	150	1300	0.650	300
R15	150.0	2/5	32	150	1400	1.400	160
R18	180.0	2/5	25	100	1300	2.200	140
R22	220.0	2/5	25	100	1200	2.500	120
R27	270.0	2/5	24	100	900	2.300	170
R33	330.0	2/5	30	100	800	3.000	100
R39	390.0	2/5	30	100	700	3.700	80

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ELECTRICAL (CONT'D)

0805 Package

Inductance Code	Inductance (n H)	Tolerance (± %)	Q Min	Measuring Freq. (Mhz)	S.R.F. (MHz)	Rdc Max (ohms)	Idc (mA) Max
3N3	3.3	5/10/20	50	1500	6000	0.08	600
6N8	6.8	5/10/20	50	1000	5500	0.11	600
8N2	8.2	5/10/20	50	1000	4700	0.12	600
12N	12.0	5/10/20	50	500	4000	0.15	600
15N	15.0	5/10/20	50	500	3400	0.17	600
18N	18.0	5/10/20	50	500	3300	0.20	600
22N	22.0	5/10/20	55	500	2600	0.22	500
27N	27.0	5/10/20	55	500	2500	0.25	500
33N	33.0	5/10/20	60	500	2050	0.27	500
39N	39.0	5/10/20	60	500	2000	0.29	500
47N	47.0	5/10/20	60	500	1650	0.31	500
56N	56.0	2/5/10	60	500	1550	0.34	500
68N	68.0	2/5/10	60	500	1450	0.38	500
82N	82.0	2/5/10	65	500	1300	0.42	400
R10	100.0	2/5/10	65	500	1200	0.46	400
R12	120.0	2/5/10	50	250	1100	0.51	400
R15	150.0	2/5/10	50	250	920	0.56	400
R18	180.0	2/5/10	50	250	870	0.64	400
R22	220.0	2/5/10	50	250	850	0.70	400
R27	270.0	2/5/10	48	250	650	1.00	350
R33	330.0	2/5/10	48	250	600	1.40	310
R39	390.0	2/5/10	48	250	560	1.50	290

1008 Package

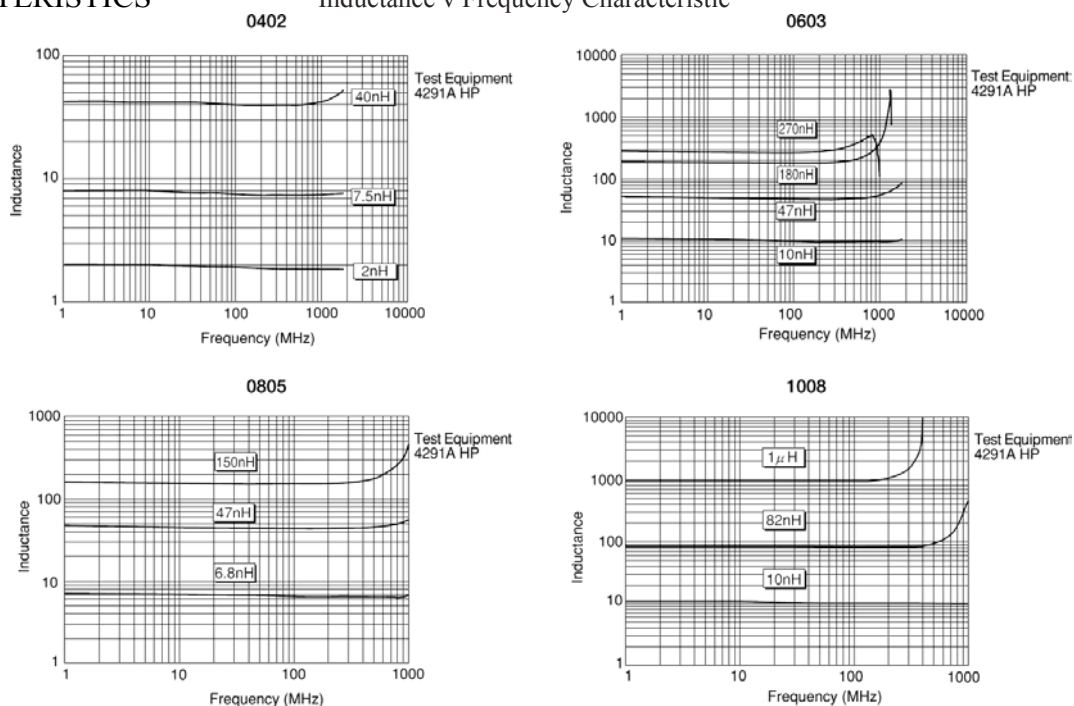
Inductance Code	Inductance (n H)	Tolerance (± %)	Q Min	Measuring Freq. (Mhz)	S.R.F. (MHz)	Rdc Max (ohms)	Idc (mA) Max
10N	10.0	5/10/20	50	500	4100	0.08	1000
12N	12.0	5/10/20	50	500	3300	0.09	1000
15N	15.0	5/10/20	50	500	3000	0.10	1000
18N	18.0	5/10/20	50	350	2500	0.11	1000
22N	22.0	5/10/20	55	350	2400	0.12	1000
27N	27.0	5/10/20	55	350	1600	0.13	1000
33N	33.0	5/10/20	60	350	1600	0.14	1000
39N	39.0	5/10/20	60	350	1500	0.15	1000
47N	47.0	5/10/20	65	350	1500	0.16	1000
56N	56.0	2/5/10	65	350	1300	0.18	1000
68N	68.0	2/5/10	65	350	1300	0.20	1000
82N	82.0	2/5/10	60	350	1000	0.22	1000
R10	100.0	2/5/10	60	350	1000	0.56	800
R12	120.0	2/5/10	60	350	950	0.63	800
R15	150.0	2/5/10	45	100	850	0.70	800
R18	180.0	2/5/10	45	100	750	0.77	750
R22	220.0	2/5/10	45	100	700	0.84	720
R27	270.0	2/5/10	45	100	600	0.91	690
R33	330.0	2/5/10	45	100	570	1.05	660
R39	390.0	2/5/10	45	100	500	1.12	630
R47	470.0	2/5/10	45	100	450	1.19	600
R56	560.0	2/5/10	45	100	415	1.33	580
R62	620.0	2/5/10	45	100	375	1.40	560
R68	680.0	2/5/10	45	100	375	1.47	540
R75	750.0	2/5/10	45	100	360	1.54	520
R82	820.0	2/5/10	45	100	350	1.61	500
R91	910.0	2/5/10	35	50	320	1.68	480
1R0	1000.0	2/5/10	35	50	290	1.75	460
1R2	1200.0	2/5/10	35	50	250	2.00	440
1R5	1500.0	2/5/10	28	50	200	2.30	420
1R8	1800.0	2/5/10	28	50	160	2.60	400
2R2	2200.0	2/5/10	28	50	160	2.80	380
2R7	2700.0	2/5/10	22	25	140	3.20	360
3R3	3300.0	2/5/10	22	25	110	3.40	350
3R9	3900.0	2/5/10	20	25	100	3.60	340
4R7	4700.0	2/5/10	20	25	90	4.00	330
5R6	5600.00	2/5/10	15	7.9	80	2.20	150
6R8	6800.00	2/5/10	15	7.9	70	2.50	150
8R2	8200.00	2/5/10	15	7.9	65	2.80	150
10R	10000.00	2/5/10	15	7.9	60	3.20	150

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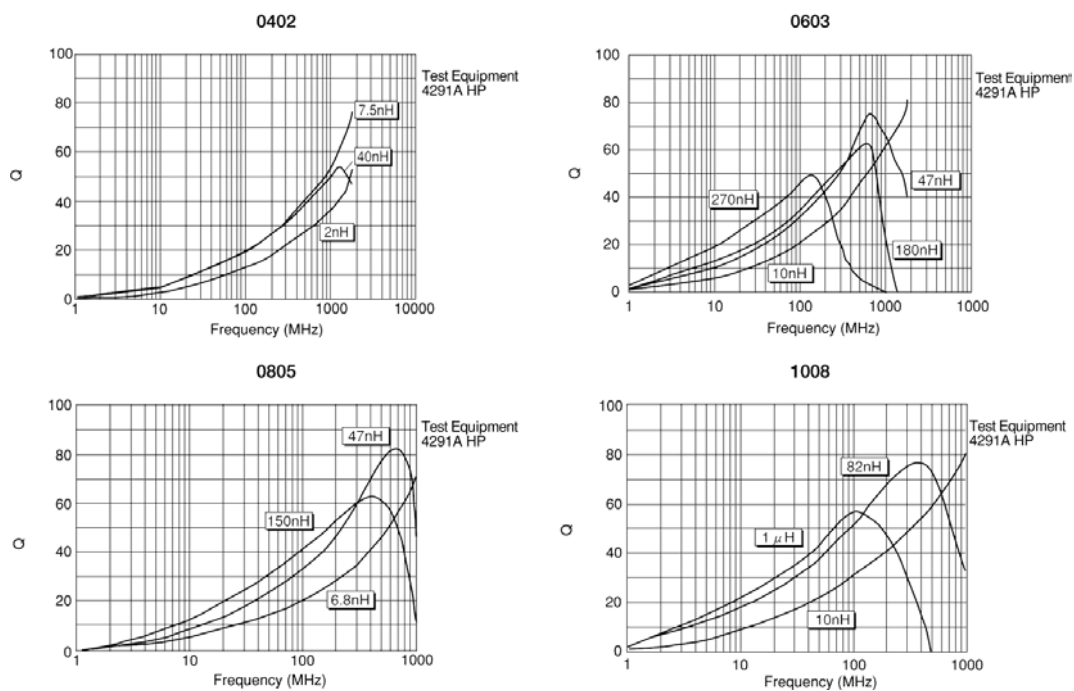
CHARACTERISTICS

Inductance v Frequency Characteristic



Q v Frequency Characteristic

Q—Frequency Characteristics

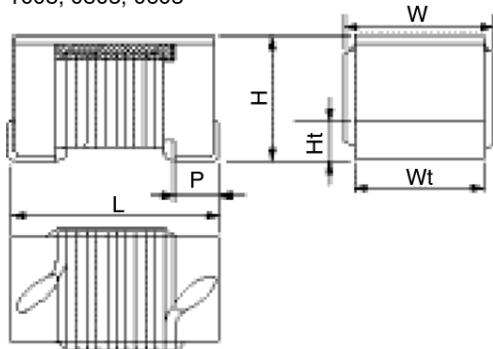


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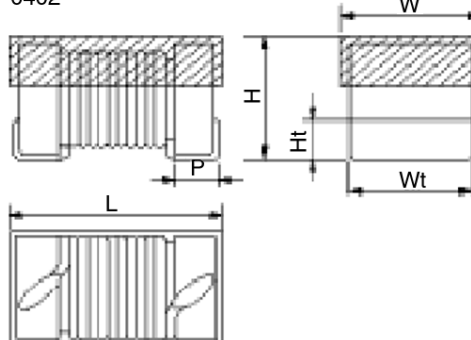
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DIMENSIONS

1008, 0805, 0603



0402



	Dimensions (mm)						Weight (g) (1000pcs)
	L	W	H	Wt	Ht	P	
0402	1.1 ± 0.1	0.55 ± 0.1	0.55 ± 0.1	0.5 ± 0.1	0.15 ± 0.1	0.25 ± 0.1	1
0603	1.6 ± 0.1	1.0 ± 0.1	0.9 ± 0.1	0.85 ± 0.1	0.25 ± 0.15	0.35 ± 0.1	4
0805	2.0 ± 0.2	1.5 ± 0.2	1.3 ± 0.2	1.35 ± 0.1	0.4 ± 0.15	0.45 ± 0.1	12
1008	2.5 ± 0.2	2.2 ± 0.2	1.8 ± 0.2	2.0 ± 0.1	0.45 ± 0.15	0.45 ± 0.1	30

PACKAGING

0402 Size (1E) ~ 2000 pieces per 7" Reel

0603 Size (1J) ~ 2000 pieces per 7" Reel

0805 Size (2A) ~ 2000 pieces per 7" Reel

1008 Size (2C) ~ 2000 pieces per 7" Reel

HOW TO ORDER

3650	1E	R10	J
COMMON PART	PACKAGE SIZE	INDUCTANCE VALUE	TOLERANCE
3650 Series	1E - 0402 1J - 0603 2A - 0805 2C - 1008	See relevant table for inductance code	G - ± 2% J - ± 5% K - ± 10% M - ± 20%

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