

Type 3680 Series

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The 3680 Series chip inductors are Tyco Electronics' range of high frequency ceramic chip inductors. These have been developed as highly reliable and versatile chip inductors that will meet your high frequency design requirements. These chip inductors have a ceramic material construction that extends the effective frequency range to 6 GHz. Due to the innovative construction these ceramic inductors exhibit higher Q at high frequency making them suitable for applications such as Communication equipment.

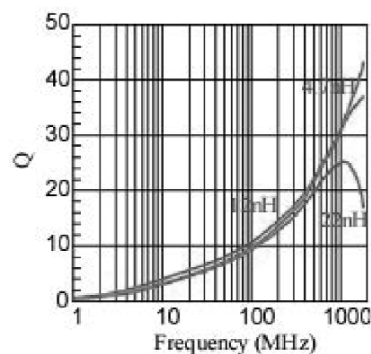
Key Features

- Down to 04:02 Case Size
- Up to 6 GHz Effective Frequency
- Low DC Resistance
- 0.3nH, 2% and 5% Tolerance
- High Q at High Frequency
- Suitable for Reflow Solder

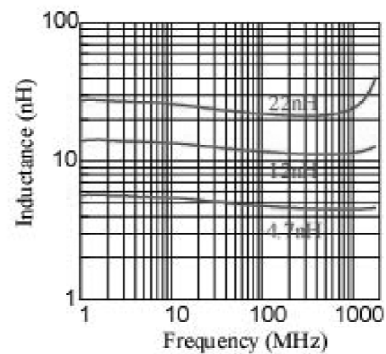
**Characteristics - Electrical
0402 Package**

Inductance Code	Inductance 100 MHz	Tolerance (±)	Q Min. @ 100MHz	Q Typical @ 800MHz	S.R.F. (MHz) Min.	Rdc Max. (ohms)	Idc Max. (mA)
1N0	1.0 nH	0.3nH/5%/10%	8	34	10000	0.12	300
1N2	1.2 nH	0.3nH/5%/10%	8	34	10000	0.12	300
1N5	1.5 nH	0.3nH/5%/10%	8	34	6000	0.13	300
1N8	1.8 nH	0.3nH/5%/10%	8	30	6000	0.14	300
2N2	2.2 nH	0.3nH/5%/10%	8	29	6000	0.16	300
2N7	2.7 nH	0.3nH/5%/10%	8	29	6000	0.17	300
3N3	3.3 nH	0.3nH/5%/10%	8	28	6000	0.19	300
3N9	3.9 nH	0.3nH/5%/10%	8	28	4000	0.22	300
4N7	4.7 nH	0.3nH/5%/10%	8	28	4000	0.24	300
5N6	5.6 nH	0.3nH/5%/10%	8	28	4000	0.27	300
6N8	6.8 nH	0.3nH/5%/10%	8	27	3900	0.32	250
8N2	8.2 nH	0.3nH/5%/10%	8	28	3600	0.37	250
10N	10.0 nH	0.3nH/5%/10%	8	30	3200	0.42	250
12N	12.0 nH	0.3nH/5%/10%	8	31	2700	0.50	250
15N	15.0 nH	0.3nH/5%/10%	8	30	2300	0.55	250
18N	18.0 nH	0.3nH/5%/10%	8	30	2100	0.65	200
22N	22.0 nH	0.3nH/5%/10%	8	30	1900	0.80	200
27N	27.0 nH	0.3nH/5%/10%	8	27	1600	0.90	200
33N	33.0 nH	0.3nH/5%/10%	8	25	1300	1.00	200
39N	39.0 nH	0.3nH/5%/10%	8	24	1200	1.20	150
47N	47.0 nH	0.3nH/5%/10%	8	23	1000	1.30	150
56N	56.0 nH	0.3nH/5%/10%	8	21	750	1.40	150
68N	68.0 nH	0.3nH/5%/10%	8	19	750	1.40	150
82N	82.0 nH	0.3nH/5%/10%	8	16	600	1.60	100
R10	100.0 nH	0.3nH/5%/10%	8	10	600	1.60	100
R15	150.0 nH	0.3nH/5%/10%	8	8	600	1.60	100

Q vs. Frequency Characteristics



Inductance vs. Frequency Characteristics

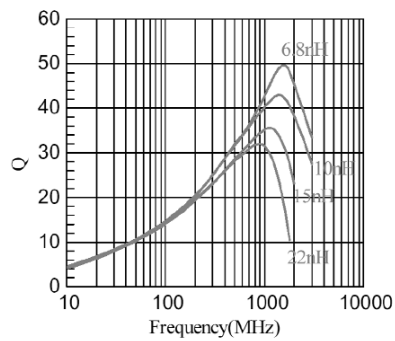


Type 3680 Series

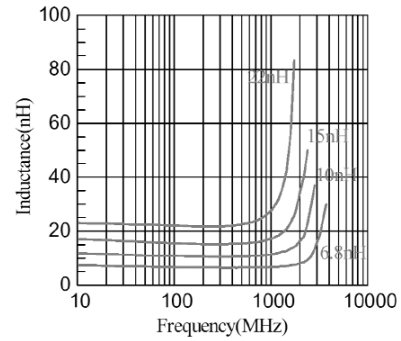
Characteristics - Electrical
0603 Package

Inductance Code	Inductance 100 MHz (*50MHz)	Tolerance (±)	Q Min. @ 100MHz (*50MHz)	Q Typical @ 800MHz	S.R.F. (MHz) Min.	Rdc Max. (ohms)	Idc Max. (mA)
1N2	1.2 nH	0.3nH/5%/10%	8	70	10000	0.05	300
1N5	1.5 nH	0.3nH/5%/10%	8	47	6000	0.10	300
1N8	1.8 nH	0.3nH/5%/10%	8	30	6000	0.10	300
2N2	2.2 nH	0.3nH/5%/10%	8	37	6000	0.10	300
2N7	2.7 nH	0.3nH/5%/10%	10	41	6000	0.10	300
3N3	3.3 nH	0.3nH/5%/10%	10	42	6000	0.12	300
3N9	3.9 nH	0.3nH/5%/10%	10	42	6000	0.14	300
4N7	4.7 nH	0.3nH/5%/10%	10	42	4000	0.16	300
5N6	5.6 nH	0.3nH/5%/10%	10	42	4000	0.18	300
6N8	6.8 nH	0.3nH/5%/10%	10	43	4000	0.22	300
8N2	8.2 nH	0.3nH/5%/10%	10	44	3500	0.24	300
10N	10.0 nH	0.3nH/5%/10%	12	43	3400	0.26	300
12N	12.0 nH	0.3nH/5%/10%	12	45	2600	0.28	300
15N	15.0 nH	0.3nH/5%/10%	12	46	2300	0.32	300
18N	18.0 nH	0.3nH/5%/10%	12	44	2000	0.35	300
22N	22.0 nH	0.3nH/5%/10%	12	44	1600	0.40	300
27N	27.0 nH	0.3nH/5%/10%	12	45	1400	0.45	300
33N	33.0 nH	0.3nH/5%/10%	12	46	1200	0.55	300
39N	39.0 nH	0.3nH/5%/10%	12	44	1100	0.60	300
47N	47.0 nH	0.3nH/5%/10%	12	35	900	0.70	300
56N	56.0 nH	0.3nH/5%/10%	12	34	900	0.75	300
68N	68.0 nH	0.3nH/5%/10%	12	30	700	0.85	300
82N	82.0 nH	0.3nH/5%/10%	12	27	600	0.95	300
R10	100.0 nH	0.3nH/5%/10%	12	16	600	1.00	300
R12	*120.0 nH	0.3nH/5%/10%	*8	-	500	1.20	300
R15	*150.0 nH	0.3nH/5%/10%	*8	-	500	1.20	300
R18	*180.0 nH	0.3nH/5%/10%	*8	-	400	1.30	300
R22	*220.0 nH	0.3nH/5%/10%	*8	-	400	1.50	300

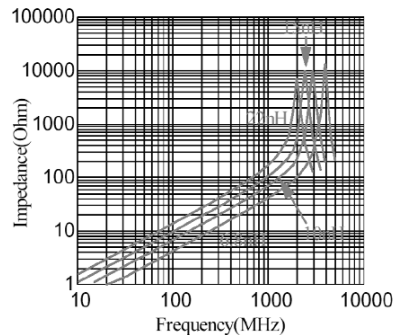
Q vs. Frequency Characteristics



Inductance vs. Frequency Characteristics



Impedance vs. Frequency Characteristics

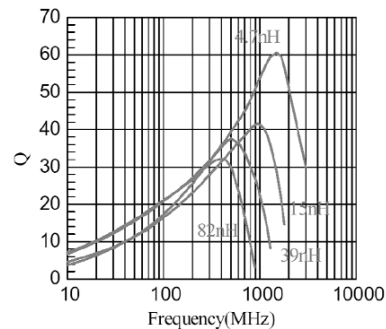


Type 3680 Series

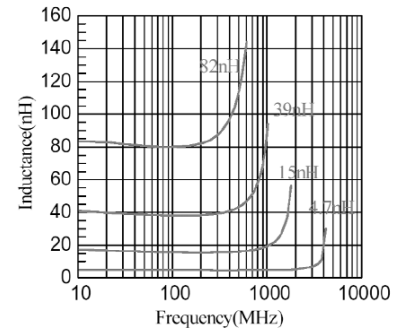
**Characteristics - Electrical
0805 Package**

Inductance Code	Inductance 100 MHz (*50MHz)	Tolerance (±)	Q Min.@ 100MHz (*50MHz)	Q Typical @ 800MHz	S.R.F. (MHz) Min.	Rdc Max. (ohms)	Idc Max. (mA)
1N5	1.5nH	0.3nH/5%/10%	10	61	4000	0.10	300
1N8	1.8 nH	0.3nH/5%/10%	10	55	4000	0.10	300
2N2	2.2 nH	0.3nH/5%/10%	10	53	4000	0.10	300
2N7	2.7 nH	0.3nH/5%/10%	12	56	4000	0.10	300
3N3	3.3 nH	0.3nH/5%/10%	12	47	4000	0.13	300
3N9	3.9 nH	0.3nH/5%/10%	12	54	4000	0.15	300
4N7	4.7 nH	0.3nH/5%/10%	12	55	3500	0.20	300
5N6	5.6 nH	0.3nH/5%/10%	15	60	3200	0.23	300
6N8	6.8 nH	0.3nH/5%/10%	15	63	2800	0.25	300
8N2	8.2 nH	0.3nH/5%/10%	15	-	2400	0.28	300
10N	10 nH	0.3nH/5%/10%	15	60	2100	0.30	300
12N	12 nH	0.3nH/5%/10%	15	-	1900	0.35	300
15N	15 nH	0.3nH/5%/10%	15	63	1600	0.40	300
18N	18 nH	0.3nH/5%/10%	15	-	1500	0.45	300
22N	22 nH	0.3nH/5%/10%	18	60	1400	0.50	300
27N	27 nH	0.3nH/5%/10%	18	58	1300	0.55	300
33N	33 nH	0.3nH/5%/10%	18	55	1200	0.60	300
39N	39 nH	0.3nH/5%/10%	18	47	1000	0.65	300
47N	47 nH	0.3nH/5%/10%	18	43	900	0.70	300
56N	56 nH	0.3nH/5%/10%	18	39	800	0.75	300
68N	68 nH	0.3nH/5%/10%	18	30	700	0.80	300
82N	82 nH	0.3nH/5%/10%	18	-	600	0.90	300
R10	100 nH	0.3nH/5%/10%	18	-	600	0.90	300
R12	*120 nH	0.3nH/5%/10%	*13	-	500	0.95	300
R15	*150 nH	0.3nH/5%/10%	*13	-	500	1.00	300
R18	*180 nH	0.3nH/5%/10%	*13	-	400	1.10	300
R22	*220 nH	0.3nH/5%/10%	*12	-	350	1.20	300
R27	*270 nH	0.3nH/5%/10%	*12	-	300	1.30	300
R33	*330 nH	0.3nH/5%/10%	*12	-	250	1.40	300
R39	*390 nH	0.3nH/5%/10%	*10	-	250	1.30	300
R47	*470 nH	0.3nH/5%/10%	*10	-	200	1.50	300

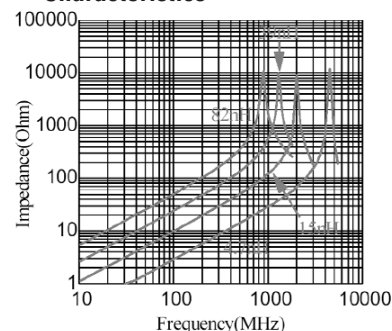
Q vs. Frequency Characteristics



Inductance vs. Frequency Characteristics

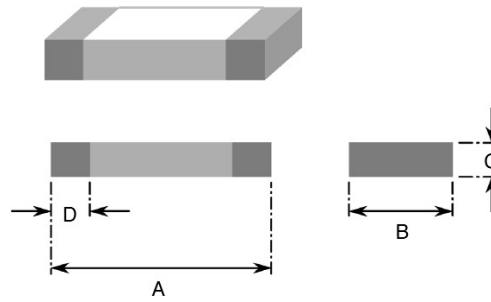


Impedance vs. Frequency Characteristics



Type 3680 Series

Dimensions



Case Size	A	B	C	D
0402 (1E)	1.00 ±0.10	0.50 ±0.10	0.50 ±0.10	0.25 ±0.10
0603 (1J)	1.60 ±0.15	0.80 ±0.15	0.80 ±0.15	0.30 ±0.20
0805 (2A)	2.00 ±0.20	1.20 ±0.20	0.90 ±0.20	0.50 ±0.30

Tape and Reel Specification

04:02 Size (1E) ~ 10000 pieces per 7" Reel
06:03 Size (1J) ~ 4000 pieces per 7" Reel
08:05 Size (2A) ~ 4000 pieces per 7" Reel

How to Order
3680

Common Part
3680

2A

Case Size
1E – 0402 Package
1J – 0603 Package
2A – 0805 Package

1N0

Inductance Code
See relevant table

J

Tolerance
S – 0.3nH
J – 5%
K – 10%