

Type 3640 Series

Key Features

- Low Inductor Values
- Low DC Resistance
- High Q Factor
- High Self Resonant Frequency
- Suitable for Reflow Solder
- Lab Kits Available



The 3640 series is an innovative thin film chip inductor designed for high frequency application in the communications industry. This inductor combines very small size (to 02:01) with a robustness and durability only previously seen in moulded parts.

Available in values down to 0.2 nanohenry and packaged in 5 standard sizes, this is the perfect solution for your design requirements. Available via our distribution network.

Characteristics - Electrical - 0201 Package

Inductance (nH)	Inductance Tolerance (% or nH)	Quality Factor (Min)	Measuring Frequency (MHz)	Resistance DC/Max. (Ohm)	Current DC/Max. (mA)	Self Resonant Frequency/Min. (GHz)
0.1	±0.1/0.2/0.3 nH	8	500	0.20	400	9
0.2	±0.1/0.2/0.3 nH	8	500	0.20	400	9
0.3	±0.1/0.2/0.3 nH	8	500	0.20	400	9
0.4	±0.1/0.2/0.3 nH	8	500	0.25	350	9
0.5	±0.1/0.2/0.3 nH	8	500	0.25	350	9
0.6	±0.1/0.2/0.3 nH	8	500	0.25	350	9
0.7	±0.1/0.2/0.3 nH	8	500	0.30	300	9
0.8	±0.1/0.2/0.3 nH	8	500	0.30	300	9
0.9	±0.1/0.2/0.3 nH	8	500	0.30	300	9
1	0.1/0.2/0.3 nH	8	500	0.3	300	9
1.1	0.1/0.2/0.3 nH	8	500	0.35	300	9
1.2	0.1/0.2/0.3 nH	8	500	0.35	300	9
1.3	0.1/0.2/0.3 nH	8	500	0.45	250	9
1.4	0.1/0.2/0.3 nH	8	500	0.45	250	9
1.5	0.1/0.2/0.3 nH	8	500	0.45	250	9
1.6	0.1/0.2/0.3 nH	8	500	0.55	200	9
1.7	0.1/0.2/0.3 nH	8	500	0.55	200	9
1.8	0.1/0.2/0.3 nH	8	500	0.55	200	9
1.9	0.1/0.2/0.3 nH	8	500	0.55	200	9
2	0.1/0.2/0.3 nH	8	500	0.7	200	8
2.1	0.1/0.2/0.3 nH	8	500	0.7	200	8
2.2	0.1/0.2/0.3 nH	8	500	0.7	200	8
2.3	0.1/0.2/0.3 nH	8	500	0.8	150	8
2.4	0.1/0.2/0.3 nH	8	500	0.8	150	8
2.5	0.1/0.2/0.3 nH	8	500	0.8	150	8
2.6	0.1/0.2/0.3 nH	8	500	0.8	150	8
2.7	0.1/0.2/0.3 nH	8	500	0.8	150	8
2.8	0.1/0.2/0.3 nH	8	500	1	150	6
2.9	0.1/0.2/0.3 nH	8	500	1	150	6
3	0.1/0.2/0.3 nH	8	500	1	150	6
3.1	0.1/0.2/0.3 nH	8	500	1	150	6
3.2	0.1/0.2/0.3 nH	8	500	1	150	6
3.3	0.1/0.2/0.3 nH	8	500	1	150	6
3.4	0.1/0.2/0.3 nH	8	500	1.2	150	6

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Characteristics - Electrical - 0201 Package (continued)

Inductance (nH)	Inductance Tolerance (% or nH)	Quality Factor (Min)	Measuring Frequency (MHz)	Resistance DC/Max. (Ohm)	Current DC/Max. (mA)	Self Resonant Frequency/Min. (GHz)
3.5	0.1/0.2/0.3 nH	8	500	1.2	150	6
3.6	0.1/0.2/0.3 nH	8	500	1.2	150	6
3.7	0.1/0.2/0.3 nH	8	500	1.2	150	6
3.9	0.1/0.2/0.3 nH	8	500	1.2	150	6
4.7	0.1/0.2/0.3 nH	8	500	1.4	130	6
5.6	2 / 5 %	8	500	1.8	130	4
6.8	2 / 5 %	8	500	2.3	110	4
8.2	2 / 5 %	8	500	3	110	3
10	2 / 5 %	8	500	3.5	80	2

Characteristics - Electrical - 0402 Package

Inductance (nH)	Inductance Tolerance (% or nH)	Quality Factor (Min)	Measuring Frequency (MHz)	Resistance DC/Max. (Ohm)	Current DC/Max. (mA)	Self Resonant Frequency/Min. (GHz)
0.2	0.1/0.2/0.3nH	13	500	0.1	800	14
0.4	0.1/0.2/0.3nH	13	500	0.1	800	14
0.8	0.1/0.2/0.3nH	13	500	0.15	700	14
1	0.1/0.2/0.3nH	13	500	0.15	700	12
1.1	0.1/0.2/0.3nH	13	500	0.15	700	12
1.2	0.1/0.2/0.3nH	13	500	0.15	700	12
1.3	0.1/0.2/0.3nH	13	500	0.25	700	10
1.4	0.1/0.2/0.3nH	13	500	0.25	700	10
1.5	0.1/0.2/0.3nH	13	500	0.25	700	10
1.6	0.1/0.2/0.3nH	13	500	0.25	560	10
1.7	0.1/0.2/0.3nH	13	500	0.25	560	10
1.8	0.1/0.2/0.3nH	13	500	0.25	560	10
1.9	0.1/0.2/0.3nH	13	500	0.35	560	8
2	0.1/0.2/0.3nH	13	500	0.35	560	8
2.1	0.1/0.2/0.3nH	13	500	0.35	440	8
2.2	0.1/0.2/0.3nH	13	500	0.35	440	8
2.3	0.1/0.2/0.3nH	13	500	0.35	440	8
2.4	0.1/0.2/0.3nH	13	500	0.35	440	8
2.5	0.1/0.2/0.3nH	13	500	0.35	440	8
2.6	0.1/0.2/0.3nH	13	500	0.35	440	8
2.7	0.1/0.2/0.3nH	13	500	0.35	440	8
2.8	0.1/0.2/0.3nH	13	500	0.45	380	6
2.9	0.1/0.2/0.3nH	13	500	0.45	380	6
3	0.1/0.2/0.3nH	13	500	0.45	380	6
3.1	0.1/0.2/0.3nH	13	500	0.45	380	6
3.2	0.1/0.2/0.3nH	13	500	0.45	380	6
3.3	0.1/0.2/0.3nH	13	500	0.45	380	6
3.4	0.1/0.2/0.3nH	13	500	0.55	380	6
3.5	0.1/0.2/0.3nH	13	500	0.55	380	6
3.6	0.1/0.2/0.3nH	13	500	0.55	380	6
3.7	0.1/0.2/0.3nH	13	500	0.55	340	6
3.8	0.1/0.2/0.3nH	13	500	0.55	340	6
3.9	0.1/0.2/0.3nH	13	500	0.55	340	6
4.7	0.1/0.2/0.3nH	13	500	0.65	320	6
5.6	0.1/0.2/0.3nH	13	500	0.85	280	6
5.9	0.1/0.2/0.3nH	13	500	0.85	280	6
6.8	0.1/0.2/0.3nH	13	500	1.05	260	6
7.2	0.1/0.2/0.3nH	13	500	1.05	260	6
8	0.1/0.2/0.3nH	13	500	1.25	220	5.5
8.2	0.1/0.2/0.3nH	13	500	1.25	220	5.5
9.1	0.1/0.2/0.3nH	13	500	1.25	220	5.5
10	1/2/3/5%	13	500	1.35	200	4.5
12	1/2/3/5%	13	500	1.55	180	3.7
13.8	1/2/3/5%	13	500	1.75	180	3.7
15	1/2/3/5%	13	500	1.75	130	3.3
17	1/2/3/5%	13	500	1.95	100	3.1
18	1/2/3/5%	13	500	2.15	100	3.1
20.8	1/2/3/5%	13	500	2.55	90	2.8
22	1/2/3/5%	13	500	2.65	90	2.8
27	1/2/3/5%	13	500	3.25	75	2.5
33	5%	13	500	4.5	75	2.5

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Characteristics - Electrical 0603 Package

Inductance (nH)	Inductance Tolerance (% or nH)	Quality Factor Min @ 500MHz	Measuring Frequency (MHz)	Resistance DC/Max. (Ohm)	Current DC/Max. (mA)	Self Resonant Frequency/Min. (GHz)
1	0.1/0.2/0.3nH	15	300	0.35	800	13
1.2	0.1/0.2/0.3nH	15	300	0.35	800	13
1.5	0.1/0.2/0.3nH	15	300	0.35	800	10
1.8	0.1/0.2/0.3nH	15	300	0.35	300	10
2.2	0.1/0.2/0.3nH	15	300	0.35	300	8
2.7	0.1/0.2/0.3nH	15	300	0.45	300	6
3.3	0.1/0.2/0.3nH	15	300	0.45	300	6
3.9	0.1/0.2/0.3nH	15	300	0.45	300	6
4.7	0.1/0.2/0.3nH	15	300	0.55	300	5
5.6	0.1/0.2/0.3nH	15	300	0.65	300	5
6.8	0.1/0.2/0.3nH	15	300	0.75	300	5
8.2	0.1/0.2/0.3nH	15	300	0.95	300	4
10	1/2/3/5%	15	300	0.95	300	4
12	1/2/3/5%	15	300	1.05	300	3
15	1/2/3/5%	15	300	1.35	300	3
18	1/2/3/5%	15	300	1.65	300	2
22	1/2/3/5%	15	300	1.95	250	2
27	1/2/3/5%	15	300	2.35	250	2
33	1/2/3/5%	15	300	2.75	250	1.5
39	1/2/3/5%	15	300	3	200	1.5
47	1/2/3/5%	15	300	3	200	1.5
56	1/2/3/5%	15	300	5	150	1
68	1/2/3/5%	15	300	5	150	1
100	2/3/5%	15	300	7.5	100	1

Characteristics - Electrical 0805 Package

Inductance (nH)	Inductance Tolerance (% or nH)	Quality Factor (Min)	Measuring Frequency (MHz)	Resistance DC/Max. (Ohm)	Current DC/Max. (mA)	Self Resonant Frequency/Min. (GHz)
1	±0.2 nH	20	500	0.25	900	13
1.2	±0.2 nH	20	500	0.25	900	13
1.5	±0.2 nH	20	500	0.25	900	10
1.8	±0.2 nH	25	500	0.25	900	9
2.2	±0.2 nH	25	500	0.25	800	8
2.7	±0.2 nH	25	500	0.25	800	8
3.3	±0.2 nH	25	500	0.25	800	6
3.9	±0.2 nH	25	500	0.25	800	6
4.7	±0.2 nH	25	500	0.50	700	5
5.6	±2% / ±5%	25	500	0.50	700	4.5
6.8	±2% / ±5%	25	500	0.50	500	4
8.2	±2% / ±5%	25	500	0.50	500	3
10	±2% / ±5%	25	500	1.00	400	2.5
12	±2% / ±5%	25	500	1.00	400	2.5
15	±2% / ±5%	25	500	1.00	300	2
18	±2% / ±5%	20	500	1.00	300	1.5
22	±2% / ±5%	20	500	1.50	250	1
27	±2% / ±5%	15	200	1.50	250	1
33	±2% / ±5%	15	200	1.50	200	1
39	±2% / ±5%	15	200	1.50	200	0.8
47	±2% / ±5%	15	200	1.50	200	0.8
56	±2% / ±5%	10	200	4.00	150	0.7
68	±2% / ±5%	10	200	5.00	150	0.7
82	±2% / ±5%	10	200	5.00	150	0.6

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Characteristics - Electrical 1206 Package

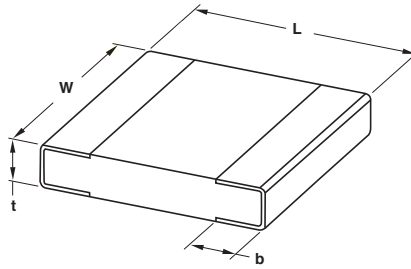
Inductance (nH)	Inductance Tolerance (% or nH)	Quality Factor (Min)	Measuring Frequency (MHz)	Resistance DC/Max. (Ohm)	Current DC/Max. (mA)	Self Resonant Frequency/Min. (GHz)
2.2	±0.2 nH	25	500	0.25	1000	9
2.7	±0.2 nH	25	500	0.25	1000	7
3.3	±0.2 nH	25	500	0.25	1000	6
3.9	±0.2 nH	35	500	0.25	900	5
4.7	±0.2 nH	35	500	0.5	900	4.5
5.6	±2% / ±5%	35	500	0.5	900	4
6.8	±2% / ±5%	35	500	0.5	800	3.5
8.2	±2% / ±5%	35	500	0.5	800	3
10	±2% / ±5%	40	500	0.5	800	2.5
12	±2% / ±5%	40	500	0.5	800	2.5
15	±2% / ±5%	40	500	1	500	2
18	±2% / ±5%	40	500	1	500	2
22	±2% / ±5%	40	500	1	500	1.5
27	±2% / ±5%	25	200	1	500	1.5
33	±2% / ±5%	25	200	2	400	1
39	±2% / ±5%	25	200	2	400	1
47	±2% / ±5%	25	200	2	400	1
56	±2% / ±5%	15	200	2	400	0.5
68	±2% / ±5%	15	200	2	200	0.5
82	±2% / ±5%	15	200	2	200	0.4
100	±2% / ±5%	15	200	2	200	0.4

Environmental Characteristics -

Item	Specification	Test Method
Dielectric Withstand Voltage:	>100V	100VAC(rms) for 1minute.
Insulation Resistance:	>1000MΩ	100VDC for 1minute
Resistance to Soldering Heat:	ΔL ≤10%	270±5°C, 10±1 second
High Temperature Exposure:	ΔL ≤10%	+85±2°C, 1000 +48/-0 hours
Moisture Resistance:	ΔL ≤10%	40±2°C, 90~95%RH, 1000 +48/-0 hours
Low Temperature Storage:	ΔL ≤10%	-40±3°C, 1000 +48/-0 hours
Temperature Cycle:	ΔL ≤10%	-40°C/RT/85°C/RT, 10 cycles
Solderability:	95%min coverage	MIL-STE-202F Method 208GH, 260°C ±5°C, 2±0.5 (sec)
Storage Temperature:		25 ±3°C;
Humidity:		<75%RH

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Dimensions



Series	L	W	t	b
0201	0.6±0.05	0.3±0.05	0.23±0.05	0.15±0.05
0402	1.0±0.05	0.5±0.05	0.32±0.05	0.2±0.1
0603	1.6±0.1	0.8±0.1	0.45±0.1	0.3±0.2
0805	2.0±0.2	1.25±0.2	0.5±0.1	0.3±0.2
1206	3.2±0.2	1.6±0.2	0.6±0.1	0.4±0.2

How to Order

3640	2A	1N0	G	TD
Common Part	Case Size	Inductance Value	Tolerance	Packaging
3640	1H – 0201 Package 1E – 0402 Package 1J – 0603 Package 2A – 0805 Package 3A – 1206 Package	See relevant table for Inductance Code	F - ±1% G - ±2% H - ±3% J - ±5% B - ±0.1nH A - ±0.2nH S - ±0.3nH	TD - 5000 pcs/reel TDF - 1000pcs/reel

Mouser Electronics

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