



5 mm Tunable Inductor - 164, 165 Series



- These tunables offer the compactness of a 5 mm coil and the low drift reliability of an insert molded coil.
- Inductance values from 9 to over 280 nH
- Optional plated brass cans provide integral shielding.
- Can be ordered without cores for use as fixed inductors.

Designer's Kit M305 contains 2 each of all parts

Core material Aluminum, 0.187" (4.75 mm) long.

Terminations Leads: RoHS compliant tin-silver over copper. Other terminations available at additional cost. Shield can tabs: Tin-silver over nickel over brass

Weight

164 series unshielded: 0.16 – 0.31 g; with shield can: 0.45 – 0.60 g
165 series unshielded: 0.15 – 0.25 g; with shield can: 0.43 – 0.54 g

Ambient temperature –40°C to +85°C

Storage temperature Component: –40°C to +85°C.

Packaging tubes: –40°C to +80°C

Resistance to soldering heat: Wave solder only. Recommended maximum board surface temperature of 168°C (334°F) for no more than three seconds. Pre-heating is recommended to minimize time over the solder nozzle.

Moisture Sensitivity Level (MSL) 1 (unlimited floor life at <30°C / 85% relative humidity)

Failures in Time (FIT) / Mean Time Between Failures (MTBF)

Two per billion hours / 1/2 billion hours, calculated per Telcordia SR-332

Packaging 50 parts per tube

PCB washing Tested with pure water or alcohol only. For other solvents, see Doc787_PCB_Washing.pdf.

TRITUNER 3 TOOLS IN 1
SEE INDEX
TUNING WRENCH

Unshielded Styles



Shielded Styles



Coilcraft
www.coilcraft.com

US +1-847-639-6400 sales@coilcraft.com
UK +44-1236-730595 sales@coilcraft-europe.com
Taiwan +886-2-2264 3646 sales@coilcraft.com.tw
China +86-21-6218 8074 sales@coilcraft.com.cn
Singapore + 65-6484 8412 sales@coilcraft.com.sg

Document 110-1 Revised 08/31/09

© Coilcraft Inc. 2013

This product may not be used in medical or high risk applications without prior Coilcraft approval. Specification subject to change without notice. Please check web site for latest information.



5 mm Tunable Inductor–Unshielded

Part number ¹	Color	Turns	No core		at L max ³		at L min ⁴		Freq (MHz)	No core SRF min (MHz)	Irms ⁶ (A)
			L (nH) ²	Q min ⁵	L (nH) ²	Q min ⁵	L (nH) ²	Q min ⁵			
164-01A06L	Brown	1½	19	145	19	145	16	112	150	2000	7.2
164-02A06L	Red	2½	34	138	34	138	26	96	150	1260	5.1
164-03A06L	Orange	3½	55	130	55	130	38	79	150	960	4.4
164-04A06L	Yellow	4½	77	119	77	119	52	72	150	850	3.7
164-05A06L	Green	5½	101	108	99	86	65	64	150	770	3.6
164-06A06L	Blue	6½	128	107	126	75	83	60	100	730	3.3
164-07A06L	Violet	7½	156	106	150	68	97	57	100	640	3.1
164-08A06L	Gray	8½	183	100	178	62	112	53	100	570	2.9
164-09A06L	White	9½	216	100	190	62	131	53	100	540	2.7
164-10A06L	Black	10½	248	92	223	55	148	51	100	490	2.5
164-11A06L	Brown	11½	281	92	246	55	170	51	100	360	2.3
165-00A06L	Black	½	9	147	9	147	9	131	150	6000	8.1
165-01A06L	Brown	1½	18	145	18	145	15	112	150	2850	6.5
165-02A06L	Red	2½	32	143	32	143	25	92	150	1860	4.9
165-03A06L	Orange	3½	48	138	45	135	33	84	150	1410	4.2
165-04A06L	Yellow	4½	64	133	60	114	43	76	150	1130	3.8
165-05A06L	Green	5½	83	125	78	110	54	73	150	820	3.6
165-06A06L	Blue	6½	103	120	90	94	68	70	150	800	3.4
165-07A06L	Violet	7½	122	115	105	92	79	69	150	770	3.1

Notes:

- To order fixed inductance parts without cores, eliminate the "A06", e.g. 164-01.
- Inductance measured on Agilent/HP 4286A Impedance Analyzer with 16092A Spring Clip Fixture.
- L max measured with core halfway out top of form.
- L min measured with core centered in winding.
- Q measured on Agilent/HP 4286A with 16092A fixture, direct connect to Agilent/HP 4342A Q-Meter and Meguro MQ-171 Q-Meter with 0.5" bus bars.
- Current that causes a 15°C rise above 25°C ambient.
- Electrical specifications 25°C.

Typical Q vs Frequency

164 Series No Core



164 Series Al Core



165 Series No Core



165 Series Al Core



COILCRAFT ACCURATE
PRECISION REPEATABLE
MEASUREMENTS
SEE WEB SITE TEST FIXTURES

Coilcraft

www.coilcraft.com

US +1-847-639-6400 sales@coilcraft.com
UK +44-1236-730595 sales@coilcraft-europe.com
Taiwan +886-2-2264 3646 sales@coilcraft.com.tw
China +86-21-6218 8074 sales@coilcraft.com.cn
Singapore +65-6484 8412 sales@coilcraft.com.sg

Document 110-2 Revised 08/31/09

© Coilcraft Inc. 2013

This product may not be used in medical or high risk applications without prior Coilcraft approval. Specification subject to change without notice. Please check web site for latest information.



5 mm Tunable Inductor–Shielded

TRITUNER 3 TOOLS IN 1
SEE INDEX
TUNING WRENCH

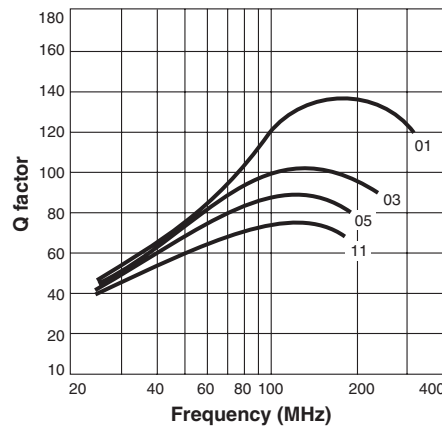
Part number ¹	Color	Turns	No core		at L max ³		at L min ⁴		Freq (MHz)	No core SRF min (MHz)	Irms ⁶ (A)
			L (nH) ²	Q min ⁵	L (nH) ²	Q min ⁵	L (nH) ²	Q min ⁵			
164-01A06SL	Brown	1 1/2	16	124	16	124	14	106	150	2100	7.2
164-02A06SL	Red	2 1/2	27	108	27	108	22	89	150	1300	5.1
164-03A06SL	Orange	3 1/2	41	92	41	92	32	72	150	1100	4.4
164-04A06SL	Yellow	4 1/2	56	86	56	84	43	66	150	940	3.7
164-05A06SL	Green	5 1/2	71	80	71	79	53	60	150	980	3.6
164-06A06SL	Blue	6 1/2	88	79	80	77	65	59	150	800	3.3
164-07A06SL	Violet	7 1/2	105	75	101	70	76	54	100	750	3.1
164-08A06SL	Gray	8 1/2	122	74	117	64	87	54	100	580	2.9
164-09A06SL	White	9 1/2	141	71	134	62	100	53	100	550	2.7
164-10A06SL	Black	10 1/2	160	69	150	60	113	51	100	490	2.5
164-11A06SL	Brown	11 1/2	179	69	164	60	127	51	100	400	2.3
165-00A06SL	Black	1/2	9	138	9	138	9	121	150	6000	8.1
165-01A06SL	Brown	1 1/2	16	124	16	124	14	104	150	2570	6.5
165-02A06SL	Red	2 1/2	25	110	25	110	21	87	150	1670	4.9
165-03A06SL	Orange	3 1/2	35	104	33	102	28	78	150	1230	4.2
165-04A06SL	Yellow	4 1/2	46	97	41	90	35	69	150	1150	3.8
165-05A06SL	Green	5 1/2	57	92	50	82	43	67	150	820	3.6
165-06A06SL	Blue	6 1/2	68	86	59	75	52	65	150	800	3.4
165-07A06SL	Violet	7 1/2	80	85	70	74	60	64	150	770	3.1

Notes:

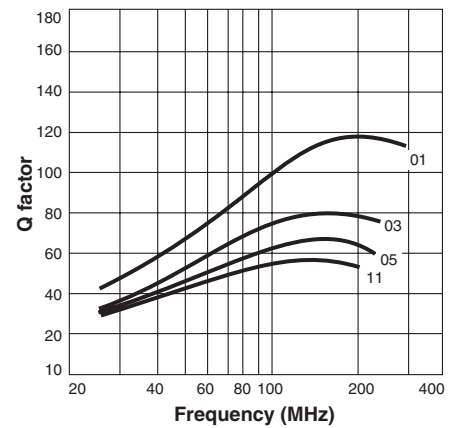
- To order fixed inductance parts without cores, eliminate the "A06", e.g. 164-01S.
- Inductance measured on Agilent/HP 4286A Impedance Analyzer with 16092A Spring Clip Fixture.
- L max measured with core halfway out top of form.
- L min measured with core centered in winding.
- Q measured on Agilent/HP 4286A with 16092A fixture, direct connect to Agilent/HP 4342A Q-Meter and Meguro MQ-171 Q-Meter with 0.5" bus bars.
- Current that causes a 15°C rise above 25°C ambient.
- Electrical specifications 25°C.

Typical Q vs Frequency

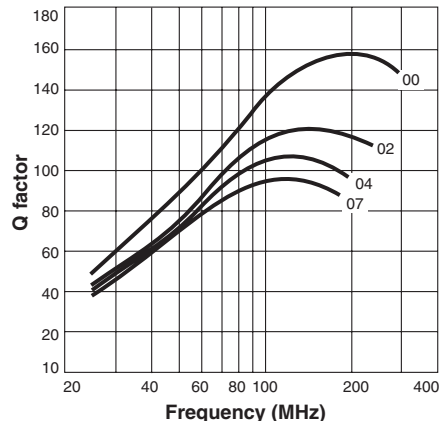
164 Series No Core



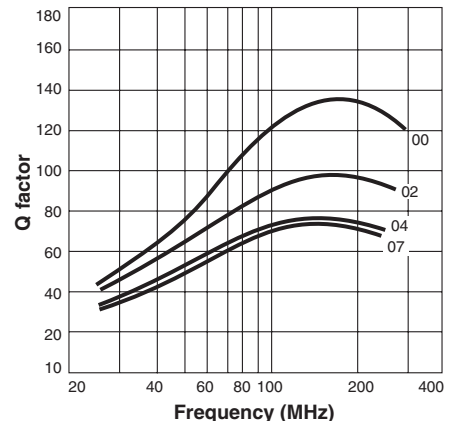
164 Series Al Core



165 Series No Core



165 Series Al Core



COILCRAFT ACCURATE REPEATABLE PRECISION MEASUREMENTS TEST FIXTURES
SEE WEB SITE



US +1-847-639-6400 sales@coilcraft.com
UK +44-1236-730595 sales@coilcraft-europe.com
Taiwan +886-2-2264 3646 sales@coilcraft.com.tw
China +86-21-6218 8074 sales@coilcraft.com.cn
Singapore + 65-6484 8412 sales@coilcraft.com.sg

Document 110-3 Revised 08/31/09

© Coilcraft Inc. 2013

This product may not be used in medical or high risk applications without prior Coilcraft approval. Specification subject to change without notice. Please check web site for latest information.