



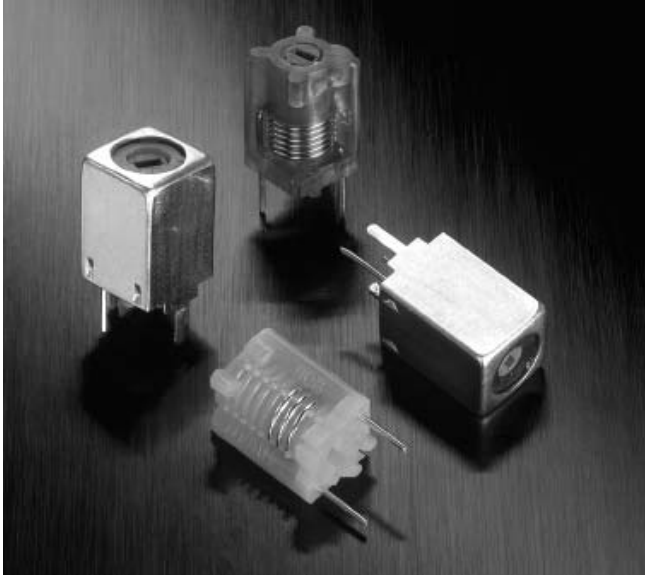
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**C O M P O N E N T S**

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# 7 mm Tunable RF Coils – 146, 150 Series



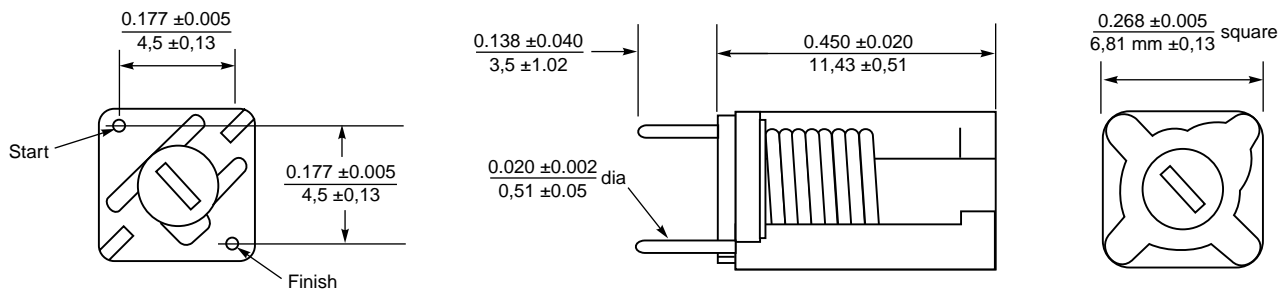
Coilcraft tunable coils provide the compactness of a 7 mm coil and the low drift reliability of an insert molded coil.

Standard inductance values range from less than  $0.05 \mu\text{H}$  to over  $0.5 \mu\text{H}$ . 150 Series coils with a tap are also available to meet specific requirements.

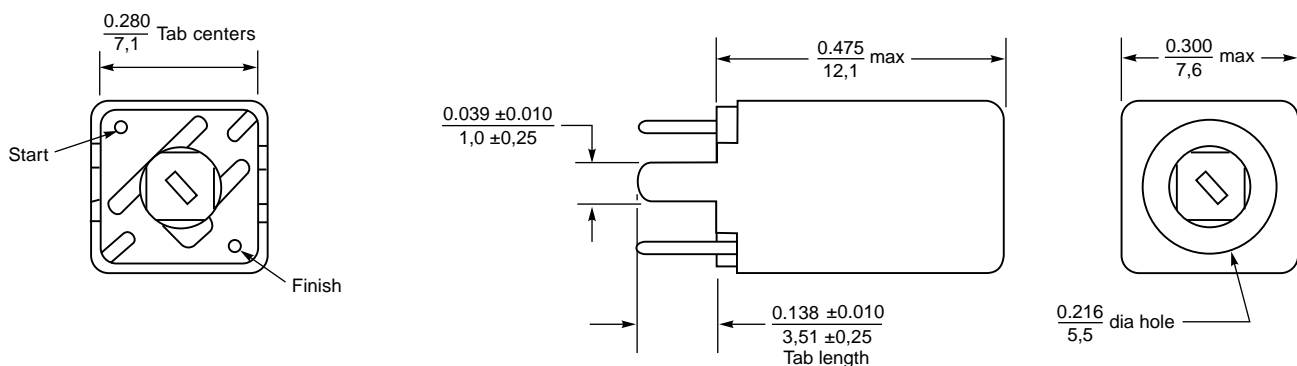
The windings of these economical coils are precision molded into a single piece of polypropylene for mechanical and electrical stability. Optional plated brass shield cans with solderable tabs provide integral shielding and additional mounting stability.

Coilcraft **Designer's Kit M102** contains samples of all standard 7 mm and 10 mm tunable inductors. To order, contact Coilcraft or visit <http://order.coilcraft.com>.

## Unshielded Styles



## With Shield Can



**Coilcraft**<sup>®</sup>

Specifications subject to change without notice. Document 109-1 Revised 11/27/02

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# 7 mm Tunable RF Coils – 146, 150 Series

## Unshielded



Part number	Color	Turns	No core L <sup>1</sup> ref (µH)	L min <sup>2</sup> (µH)	L nom (µH)	L max (µH)	Q min @ L nom	No core SRF min (MHz)	DCR max (mOhm)	Irms <sup>3</sup>
150-01J08	Brown	1½	0.0445	0.046	0.049	0.052	88 @ 50 MHz	2000	8.0	11.0
150-02J08	Red	2½	0.0585	0.062	0.070	0.078	100 @ 50 MHz	1300	9.0	10.5
150-03J08	Orange	3½	0.0775	0.082	0.098	0.114	108 @ 50 MHz	1000	10.5	9.8
150-04J08	Yellow	4½	0.0945	0.108	0.130	0.154	114 @ 50 MHz	780	11.6	9.3
150-05J08	Green	5½	0.116	0.137	0.165	0.193	114 @ 50 MHz	650	13.2	8.7
150-06J08	Blue	6½	0.138	0.176	0.205	0.234	112 @ 50 MHz	550	14.7	8.2
150-07J08	Violet	7½	0.156	0.222	0.245	0.268	108 @ 50 MHz	510	16.0	7.9
146-01J08	Brown	1½	0.045	0.047	0.050	0.053	90 @ 50 MHz	1300	8.0	11.0
146-02J08	Red	2½	0.065	0.068	0.078	0.088	100 @ 50 MHz	780	9.0	10.5
146-03J08	Orange	3½	0.086	0.090	0.108	0.126	100 @ 50 MHz	560	10.5	9.8
146-04J08	Yellow	4½	0.111	0.117	0.146	0.175	94 @ 50 MHz	475	11.6	9.3
146-05J08	Green	5½	0.140	0.148	0.190	0.232	88 @ 50 MHz	430	13.0	8.8
146-06J08	Blue	6½	0.167	0.188	0.240	0.292	78 @ 50 MHz	390	14.5	8.3
146-07J08	Violet	7½	0.198	0.231	0.292	0.350	72 @ 50 MHz	350	15.6	8.0
146-08J08	Gray	8½	0.228	0.272	0.342	0.412	68 @ 50 MHz	330	18.0	7.5
146-09J08	White	9½	0.264	0.330	0.405	0.480	66 @ 40 MHz	320	19.4	7.2
146-10J08	Black	10½	0.292	0.390	0.465	0.540	60 @ 40 MHz	290	21.0	6.8

## Shielded

Part number	Color	Turns	No core L <sup>1</sup> ref (µH)	L min <sup>2</sup> (µH)	L nom (µH)	L max (µH)	Q min @ L nom	No core SRF min (MHz)	DCR max (mOhm)	Irms <sup>3</sup>
150-01J08S	Brown	1½	0.0425	0.0435	0.0445	0.0445	72 @ 50 MHz	1900	8.0	11.0
150-02J08S	Red	2½	0.054	0.056	0.060	0.064	80 @ 50 MHz	1450	9.0	10.5
150-03J08S	Orange	3½	0.068	0.071	0.076	0.081	84 @ 50 MHz	1100	10.5	9.8
150-04J08S	Yellow	4½	0.0825	0.086	0.095	0.104	85 @ 50 MHz	900	11.6	9.3
150-05J08S	Green	5½	0.0955	0.107	0.115	0.123	84 @ 50 MHz	750	13.2	8.7
150-06J08S	Blue	6½	0.109	0.125	0.134	0.143	82 @ 50 MHz	620	14.7	8.2
150-07J08S	Violet	7½	0.123	0.150	0.156	0.162	80 @ 50 MHz	560	16.0	7.9
146-01J08S	Brown	1½	0.044	0.045	0.046	0.047	76 @ 50 MHz	1550	8.0	11.0
146-02J08S	Red	2½	0.059	0.062	0.065	0.068	78 @ 50 MHz	850	9.0	10.5
146-03J08S	Orange	3½	0.075	0.080	0.085	0.090	78 @ 50 MHz	660	10.5	9.8
146-04J08S	Yellow	4½	0.095	0.100	0.110	0.120	78 @ 50 MHz	570	11.6	9.3
146-05J08S	Green	5½	0.115	0.120	0.135	0.150	76 @ 50 MHz	510	13.0	8.8
146-06J08S	Blue	6½	0.136	0.142	0.163	0.184	72 @ 50 MHz	470	14.5	8.3
146-07J08S	Violet	7½	0.155	0.172	0.194	0.216	68 @ 50 MHz	430	15.6	8.0
146-08J08S	Gray	8½	0.176	0.200	0.224	0.248	66 @ 50 MHz	400	18.0	7.5
146-09J08S	White	9½	0.202	0.234	0.260	0.284	60 @ 50 MHz	360	19.4	7.2
146-10J08S	Black	10½	0.224	0.260	0.288	0.315	56 @ 50 MHz	330	21.0	6.8

1. Inductance and Q readings taken on Boonton 260-A Q meter with 16 AWG tinned copper 1/2" long soldered along leads and bent at 90° 1/4" down from standoffs.

All inductance values greater than 0.1 µH read at recommended Q meter frequency.

All inductance values below 0.1 µH calculated from readings taken at 50 MHz.

2. L min measured with core halfway out top of form.

3. Average current for a 40°C rise above 25°C ambient.

4. Core material: Carbonyl J; Core length: 1/4"

5. Taps available in 150 series parts at 1/8, 3/8, 5/8 and 7/8 turns.

6. Operating temperature range -40°C to +85°C.

7. Electrical specifications at 25°C.

**COILCRAFT** ACCURATE  
**PRECISION** REPEATABLE  
MEASUREMENTS  
SEE INDEX **TEST FIXTURES**

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