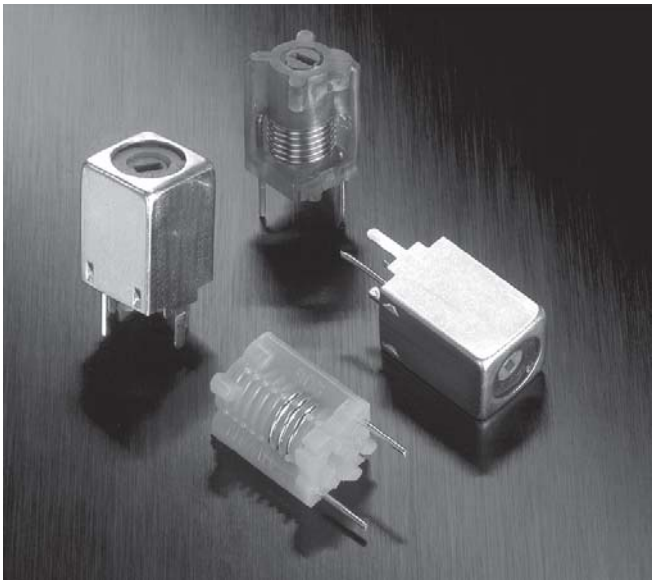
7 mm Tunable RF Coils – 146, 150 Series



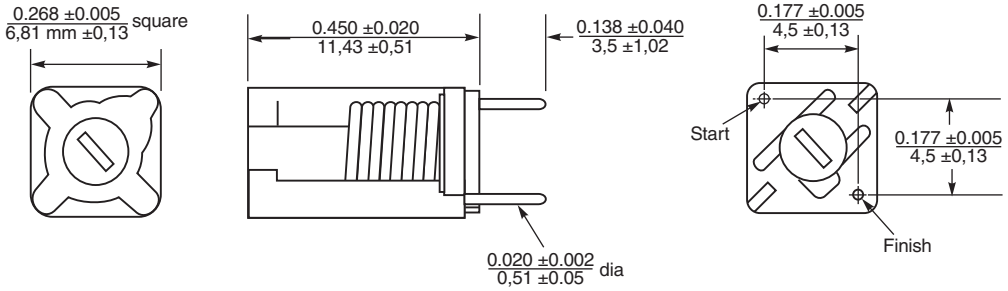
Coilcraft tunable coils provide the compactness of a 7 mm coil and the low drift reliability of an insert molded coil.

Standard inductance values range from less than 0.05 µH to over 0.5 µH. 150 Series coils with a tap are also available to meet specific requirements.

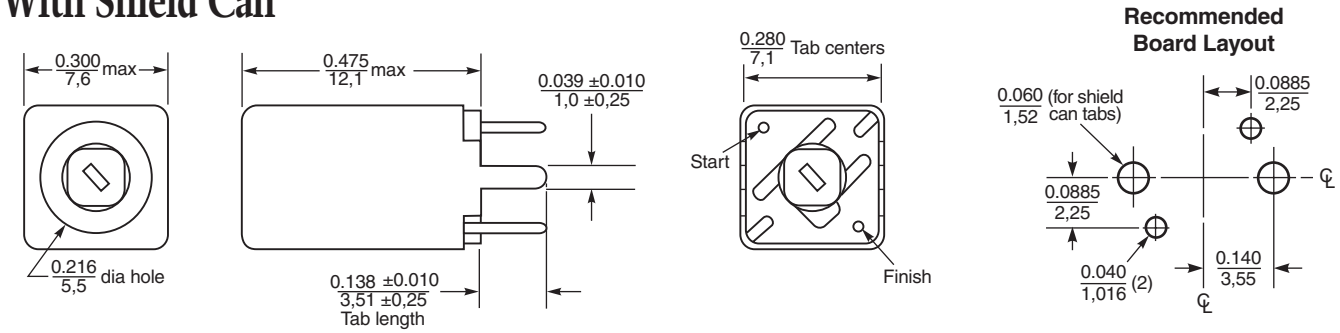
The windings of these economical coils are precision molded into a single piece of polypropylene for mechanical and electrical stability. Optional plated brass shield cans with solderable tabs provide integral shielding and additional mounting stability.

These parts can be odered without cores for use as fixed inductors.

Unshielded Styles



With Shield Can



Terminations Series 146 leads: Tin-silver over copper
Series 150 leads: Tin over copper
Shield can tabs: Tin-silver over nickel over brass

Weight:		Unshielded	With shield can
	146 series	0.44 – 0.70 g	0.91 – 1.12 g
	150 series	0.45 – 0.61 g	0.88 – 1.08 g

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Specifications subject to change without notice.
Please check our website for latest information. Document 109-1 Revised 08/15/05

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7 mm Tunable RF Coils – 146, 150 Series

RoHS COMPLIANT

Unshielded

Part number[1]	Color	Turns	No core L[2] ref (µH)	L min[3] (µH)	L nom (µH)	L max (µH)	Q min @ L nom	No core SRF min (MHz)	DCR max (mOhm)	Irms[4]
150-01J08L	Brown	1½	0.0445	0.046	0.049	0.052	88 @ 50 MHz	2000	8.0	11.0
150-02J08L	Red	2½	0.0585	0.062	0.070	0.078	100 @ 50 MHz	1300	9.0	10.5
150-03J08L	Orange	3½	0.0775	0.082	0.098	0.114	108 @ 50 MHz	1000	10.5	9.8
150-04J08L	Yellow	4½	0.0945	0.108	0.130	0.154	114 @ 50 MHz	780	11.6	9.3
150-05J08L	Green	5½	0.116	0.137	0.165	0.193	114 @ 50 MHz	650	13.2	8.7
150-06J08L	Blue	6½	0.138	0.176	0.205	0.234	112 @ 50 MHz	550	14.7	8.2
150-07J08L	Violet	7½	0.156	0.222	0.245	0.268	108 @ 50 MHz	510	16.0	7.9
146-01J08L	Brown	1½	0.045	0.047	0.050	0.053	90 @ 50 MHz	1300	8.0	11.0
146-02J08L	Red	2½	0.065	0.068	0.078	0.088	100 @ 50 MHz	780	9.0	10.5
146-03J08L	Orange	3½	0.086	0.090	0.108	0.126	100 @ 50 MHz	560	10.5	9.8
146-04J08L	Yellow	4½	0.111	0.117	0.146	0.175	94 @ 50 MHz	475	11.6	9.3
146-05J08L	Green	5½	0.140	0.148	0.190	0.232	88 @ 50 MHz	430	13.0	8.8
146-06J08L	Blue	6½	0.167	0.188	0.240	0.292	78 @ 50 MHz	390	14.5	8.3
146-07J08L	Violet	7½	0.198	0.231	0.292	0.350	72 @ 50 MHz	350	15.6	8.0
146-08J08L	Gray	8½	0.228	0.272	0.342	0.412	68 @ 50 MHz	330	18.0	7.5
146-09J08L	White	9½	0.264	0.330	0.405	0.480	66 @ 40 MHz	320	19.4	7.2
146-10J08L	Black	10½	0.292	0.390	0.465	0.540	60 @ 40 MHz	290	21.0	6.8

Shielded

Part number[1]	Color	Turns	No core L[2] ref (µH)	L min[3] (µH)	L nom (µH)	L max (µH)	Q min @ L nom	No core SRF min (MHz)	DCR max (mOhm)	Irms[4]
150-01J08SL	Brown	1½	0.0425	0.0435	0.0445	0.0445	72 @ 50 MHz	1900	8.0	11.0
150-02J08SL	Red	2½	0.054	0.056	0.060	0.064	80 @ 50 MHz	1450	9.0	10.5
150-03J08SL	Orange	3½	0.068	0.071	0.076	0.081	84 @ 50 MHz	1100	10.5	9.8
150-04J08SL	Yellow	4½	0.0825	0.086	0.095	0.104	85 @ 50 MHz	900	11.6	9.3
150-05J08SL	Green	5½	0.0955	0.107	0.115	0.123	84 @ 50 MHz	750	13.2	8.7
150-06J08SL	Blue	6½	0.109	0.125	0.134	0.143	82 @ 50 MHz	620	14.7	8.2
150-07J08SL	Violet	7½	0.123	0.150	0.156	0.162	80 @ 50 MHz	560	16.0	7.9
146-01J08SL	Brown	1½	0.044	0.045	0.046	0.047	76 @ 50 MHz	1550	8.0	11.0
146-02J08SL	Red	2½	0.059	0.062	0.065	0.068	78 @ 50 MHz	850	9.0	10.5
146-03J08SL	Orange	3½	0.075	0.080	0.085	0.090	78 @ 50 MHz	660	10.5	9.8
146-04J08SL	Yellow	4½	0.095	0.100	0.110	0.120	78 @ 50 MHz	570	11.6	9.3
146-05J08SL	Green	5½	0.115	0.120	0.135	0.150	76 @ 50 MHz	510	13.0	8.8
146-06J08SL	Blue	6½	0.136	0.142	0.163	0.184	72 @ 50 MHz	470	14.5	8.3
146-07J08SL	Violet	7½	0.155	0.172	0.194	0.216	68 @ 50 MHz	430	15.6	8.0
146-08J08SL	Gray	8½	0.176	0.200	0.224	0.248	66 @ 50 MHz	400	18.0	7.5
146-09J08SL	White	9½	0.202	0.234	0.260	0.284	60 @ 50 MHz	360	19.4	7.2
146-10J08SL	Black	10½	0.224	0.260	0.288	0.315	56 @ 50 MHz	330	21.0	6.8

1. To order fixed inductance parts without cores, eliminate the "J08", e.g. 150-01L or 150-01SL
2. 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.
3. L min measured with core halfway out top of form.
4. Average current for a 40°C rise above 25°C ambient.
5. Core material: Carbonyl J; Core length: 1/4″
6. Taps available in 150 series parts at 1/8, 3/8, 5/8 and 7/8 turns.
7. Operating temperature range –40°C to +85°C.
8. Electrical specifications at 25°C.

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