

# “SLOT TEN” 10 mm Tunable Inductors



This product is not RoHS-compliant. Contact Coilcraft for current status or possible alternatives.

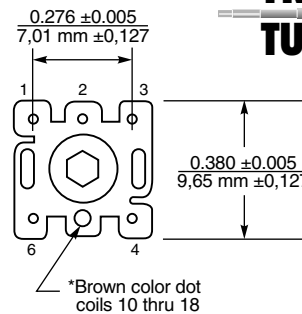
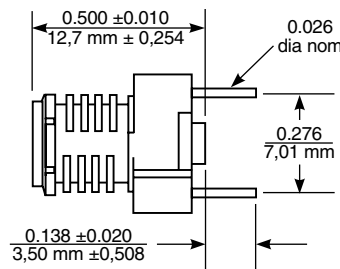
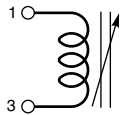
These versatile Coilcraft variable inductors operate over a wide range of frequencies. Standard inductance values are available from less than 1  $\mu\text{H}$  to over 1 mH.

Coilcraft “SLOT TEN” RF coils come in an international 10 mm package. Their precision-molded slotted bobbins ensure tight tolerances and high stability.

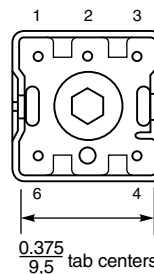
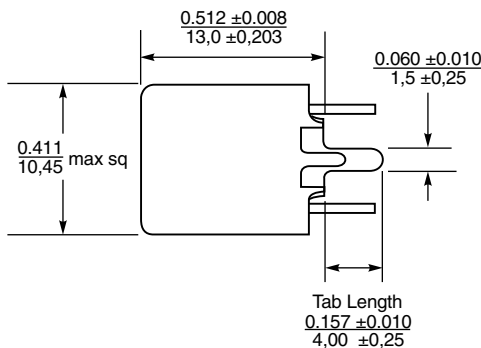
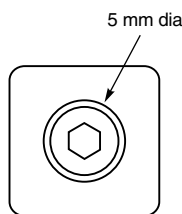
A variety of magnetic and electrostatic shielding options are offered. “SLOT TEN” coils are tuned by means of ferrite or powdered iron tuning cores.

Coilcraft **Designer’s Kit M100** contains 18 shielded and 18 unshielded coils (3 each) plus extra cores and sleeves to create all of the standard values shown. To order, please contact Coilcraft or purchase online at <http://order.coilcraft.com>.

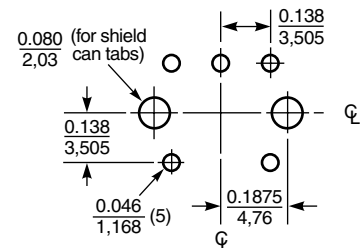
## Unshielded (Styles 1 and 2)



## With Shielded Cans (Styles 3, 4 and 5)



### Recommended Board Layout



Specifications subject to change without notice. Please check our website for latest information.

Document 113-1 Revised 12/08/08

# Selection Guide

Coilcraft "SLOT TEN" coils come in five different styles. Consult this table for the inductance range, relative Q and shielding options of each style. Then use the appropriate specification chart to pick a specific part number.

Style	L (μH)	Electrostatic shield	Magnetic shield	Recommended frequency	Tuning core	Relative Q	Relative cost
Style 1	0.8 – 624	No	No	Higher	Iron	Hi	Low
Style 2	0.8 – 927	No	No	↑ ↓	Ferrite	Hi	Low
Style 3	0.7 – 450	Yes	No		Iron	Low	Med
Style 4	0.8 – 624	Yes	Yes (Iron)	Lower	Iron	Med	Hi
Style 5	0.9 – 1143	Yes	Yes (Ferrite)		Ferrite	Med	Hi

## Notes:

- All readings taken on Agilent/HP 4342-A Q Meter.
- L min is achieved at maximum extension of the core toward PC board.  
Complete tuning range is reached within the boundaries of the coil form.
- All specifications are at standard "Q" meter frequencies. L and Q readings change with frequency.
- Unshielded parts are coated with lacquer to protect the winding.
- Shielded parts have a sleeve insert to protect the winding.
- Operating temperature range –40°C to +85°C.
- Electrical specifications at 25°C.

## Style 1 — Unshielded with Carbonyl E Core

Part number	Color	L min (μH)	L max (μH)	L nom (μH)	Q min @ L nom	Test frequency
SLOT TEN-1-01	Brown	0.800	1.2	1.0	48	7.9 MHz
SLOT TEN-1-02	Red	1.2	1.8	1.5	50	7.9 MHz
SLOT TEN-1-03	Orange	1.76	2.64	2.2	56	7.9 MHz
SLOT TEN-1-04	Yellow	2.56	3.84	3.2	54	7.9 MHz
SLOT TEN-1-05	Green	3.6	5.4	4.5	54	7.9 MHz
SLOT TEN-1-06	Blue	5.2	7.8	6.5	51	7.9 MHz
SLOT TEN-1-07	Violet	7.6	11.4	9.5	48	7.9 MHz
SLOT TEN-1-08	Gray	11.2	16.8	14.0	38	2.5 MHz
SLOT TEN-1-09	White	16.0	24.0	20.0	38	2.5 MHz
SLOT TEN-1-10	Black*	22.4	33.6	28.0	38	2.5 MHz
SLOT TEN-1-11	Brown*	32.0	48.0	40.0	38	2.5 MHz
SLOT TEN-1-12	Red*	46.4	69.6	58.0	47	2.5 MHz
SLOT TEN-1-13	Orange*	67.2	100.2	84.0	48	2.5 MHz
SLOT TEN-1-14	Yellow*	96	144	120.0	40	790 KHz
SLOT TEN-1-15	Green*	137.6	206.4	172.0	34	790 KHz
SLOT TEN-1-16	Blue*	200	300	250.0	39	790 KHz
SLOT TEN-1-17	Violet*	280	432	360.0	30	790 KHz
SLOT TEN-1-18	Gray*	416	624	520.0	35	790 KHz

\* Coils 10 thru 18 have a brown color dot on bottom of coil base.

## Style 2 — Unshielded with Ferrite Core

Part number	Color	L min (μH)	L max (μH)	L nom (μH)	Q min @ L nom	Test frequency
SLOT TEN-2-01	Brown	0.80	1.7	1.2	47	7.9 MHz
SLOT TEN-2-02	Red	1.25	2.75	2.0	48	7.9 MHz
SLOT TEN-2-03	Orange	1.75	4.0	2.9	48	7.9 MHz
SLOT TEN-2-04	Yellow	2.4	5.4	3.9	47	7.9 MHz
SLOT TEN-2-05	Green	3.5	7.8	5.6	47	7.9 MHz
SLOT TEN-2-06	Blue	4.7	10.6	7.6	46	7.9 MHz
SLOT TEN-2-07	Violet	7.4	15.6	11.5	38	2.5 MHz
SLOT TEN-2-08	Gray	11	25	18.2	40	2.5 MHz
SLOT TEN-2-09	White	16	35	25.3	40	2.5 MHz
SLOT TEN-2-10	Black*	22	50	36.5	40	2.5 MHz
SLOT TEN-2-11	Brown*	33	72	52.5	39	2.5 MHz
SLOT TEN-2-12	Red*	46	103	74.8	51	2.5 MHz
SLOT TEN-2-13	Orange*	66	136	100	40	790 KHz
SLOT TEN-2-14	Yellow*	95	198	146	44	790 KHz
SLOT TEN-2-15	Green*	136	297	216	40	790 KHz
SLOT TEN-2-16	Blue*	198	426	312	45	790 KHz
SLOT TEN-2-17	Violet*	286	630	530	33	790 KHz
SLOT TEN-2-18	Gray*	418	927	790	38	790 KHz

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Document 113-2 Revised 12/08/08

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## Style 3 — Shielded with Carbonyl E Core and Plastic Sleeve

Part number	Color	L min ( $\mu\text{H}$ )	L max ( $\mu\text{H}$ )	L nom ( $\mu\text{H}$ )	Q min @ L nom	Test frequency
SLOT TEN-3-01	Brown	0.70	0.94	0.82	65	7.9 MHz
SLOT TEN-3-02	Red	1.05	1.41	1.23	37	7.9 MHz
SLOT TEN-3-03	Orange	1.5	2.0	1.75	40	7.9 MHz
SLOT TEN-3-04	Yellow	2.04	2.76	2.4	40	7.9 MHz
SLOT TEN-3-05	Green	2.9	3.9	3.4	39	7.9 MHz
SLOT TEN-3-06	Blue	4.25	5.75	5.0	38	7.9 MHz
SLOT TEN-3-07	Violet	6	8.2	7.1	35	7.9 MHz
SLOT TEN-3-08	Gray	9.4	12.6	11.0	25	2.5 MHz
SLOT TEN-3-09	White	12.8	17.2	15.0	25	2.5 MHz
SLOT TEN-3-10	Black*	18.7	25.3	22.0	26	2.5 MHz
SLOT TEN-3-11	Brown*	26.4	35.6	31.0	25	2.5 MHz
SLOT TEN-3-12	Red*	37.4	50.6	44	29	2.5 MHz
SLOT TEN-3-13	Orange*	52.7	71.3	62	30	2.5 MHz
SLOT TEN-3-14	Yellow*	79	105	92	28	2.5 MHz
SLOT TEN-3-15	Green*	108.8	147.2	128	18	790 KHz
SLOT TEN-3-16	Blue*	155	208	182	20	790 KHz
SLOT TEN-3-17	Violet*	230	310	270	16	790 KHz
SLOT TEN-3-18	Gray*	336	450	390	18	790 KHz

\* Coils 10 thru 18 have a brown color dot on bottom of coil base.

## Style 4 — Shielded with Carbonyl E Core and Sleeve

Part number	Color	L min ( $\mu\text{H}$ )	L max ( $\mu\text{H}$ )	L nom ( $\mu\text{H}$ )	Q min @ L nom	Test frequency
SLOT TEN-4-01	Brown	0.80	1.2	1.0	44	7.9 MHz
SLOT TEN-4-02	Red	1.2	1.8	1.5	45	7.9 MHz
SLOT TEN-4-03	Orange	1.76	2.64	2.2	48	7.9 MHz
SLOT TEN-4-04	Yellow	2.56	3.84	3.2	48	7.9 MHz
SLOT TEN-4-05	Green	3.6	5.4	4.5	46	7.9 MHz
SLOT TEN-4-06	Blue	5.2	7.8	6.5	43	7.9 MHz
SLOT TEN-4-07	Violet	7.6	11.4	9.5	40	7.9 MHz
SLOT TEN-4-08	Gray	11.2	16.8	14	32	2.5 MHz
SLOT TEN-4-09	White	16.0	24.0	20	33	2.5 MHz
SLOT TEN-4-10	Black*	22.4	33.6	28	32	2.5 MHz
SLOT TEN-4-11	Brown*	32.0	48.0	40	32	2.5 MHz
SLOT TEN-4-12	Red*	46.4	69.6	58	40	2.5 MHz
SLOT TEN-4-13	Orange*	67.2	100.8	85	40	2.5 MHz
SLOT TEN-4-14	Yellow*	96	144	120	33	790 KHz
SLOT TEN-4-15	Green*	137.6	206.4	172	28	790 KHz
SLOT TEN-4-16	Blue*	200	300	250	32	790 KHz
SLOT TEN-4-17	Violet*	288	432	360	26	790 KHz
SLOT TEN-4-18	Gray*	416	624	520	29	790 KHz

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## Style 5 — Shielded with Ferrite Core and Sleeve

Part number	Color	L min ( $\mu\text{H}$ )	L max ( $\mu\text{H}$ )	L nom ( $\mu\text{H}$ )	Q min @ L nom	Test frequency
SLOT TEN-5-01	Brown	0.86	2.0	1.4	43	7.9 MHz
SLOT TEN-5-02	Red	1.27	3.25	2.25	44	7.9 MHz
SLOT TEN-5-03	Orange	1.83	4.6	3.25	41	7.9 MHz
SLOT TEN-5-04	Yellow	2.48	6.4	4.5	40	7.9 MHz
SLOT TEN-5-05	Green	3.58	9.3	6.5	40	7.9 MHz
SLOT TEN-5-06	Blue	5.0	12.7	8.8	38	7.9 MHz
SLOT TEN-5-07	Violet	7.7	18.4	13.0	30	2.5 MHz
SLOT TEN-5-08	Gray	12.0	30.0	20.9	35	2.5 MHz
SLOT TEN-5-09	White	16	42	29.4	34	2.5 MHz
SLOT TEN-5-10	Black*	25	60	42.3	32	2.5 MHz
SLOT TEN-5-11	Brown*	36	90	62.8	30	2.5 MHz
SLOT TEN-5-12	Red*	48	126	87.2	42	2.5 MHz
SLOT TEN-5-13	Orange*	72	163	116	35	790 KHz
SLOT TEN-5-14	Yellow*	102	238	168	36	790 KHz
SLOT TEN-5-15	Green*	147	360	252	36	790 KHz
SLOT TEN-5-16	Blue*	215	522	312	45	790 KHz
SLOT TEN-5-17	Violet*	303	765	530	33	790 KHz
SLOT TEN-5-18	Gray*	440	1143	790	38	790 KHz

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