

TOROID CORES AND RFC WINDING EASY BITX

No	Coil No Type	Stage	Bifilar	Trifilar	Band Mt	Wire SWG
1 	T 1: T37-43	BM/PD	-----	8 Turns	20/40/80	28 SWG
2 	T2: T37-43	VFO Mixer	-----	8 Turns	20/40/80	28 SWG
3 	T3: T37-43	VFO Mixer	-----	8 Turns	20/40/80	28 SWG
4 	T7: T37-43	RF TX Amp	10 Turns	-----	20/40/80	28 SWG
5 	RFC – 1 Ferrite Bead	Bias Control 25 Turns	-----	-----	20/40/80	34-36 SWG
6 	RFC-2 Balun Binocular / T37-43	Linear PA Fill Balun	-----	-----	20/40/80	28 SWG
7 	T8: T37-43	Driver TX	8 Turns	-----	20/40/80	28 SWG
8  <small>T9: 3 Turns Bifilar #28 SWG Magnetic Wire</small>	T9: T37-43	Linear Amp	3 Turns	-----	20 Mt	28 SWG
8	T9: 37-43	Linear Amp	6 Turns	-----	40 Mt	28 SWG
8	T9 :27-43	Linear Amp	8 Turns	-----	80 Mt	28 SWG

LOW PASS FILTERS FOR 20/40/80 MT

LOW PASS FILTER 20 MT BAND

L3 and L4 will take 8" of wire and should measure .55uh. Wind 13 turns of #28 gauge magnet wire on an FT37-6 core (yellow). Be sure to spread out the turns over the whole core. If they bunch together it will raise the inductance. Strip and tin the leads.



No	Torroid	Turns	SWG	Inductance
L1	T37-6	13	#28	0.55uh
L2	T37-6	13	#28	0.55uh

C74	220 PF	100v	Disc	Silver Mica Optional
C75	560 PF	100v	Disc	Silver Mica Optional
C76	220 PF	100v	Disc	Silver Mica Optional

LOW PASS FILTER 40 MT BAND

No	Torroid	Turns	SWG	Inductance
L1	T50-2	16	# 28	1.30uh
L2	T50-2	16	#28	1.30uh

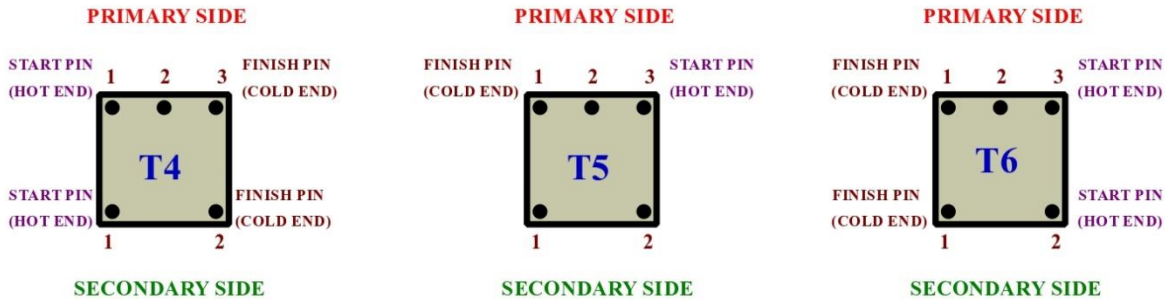
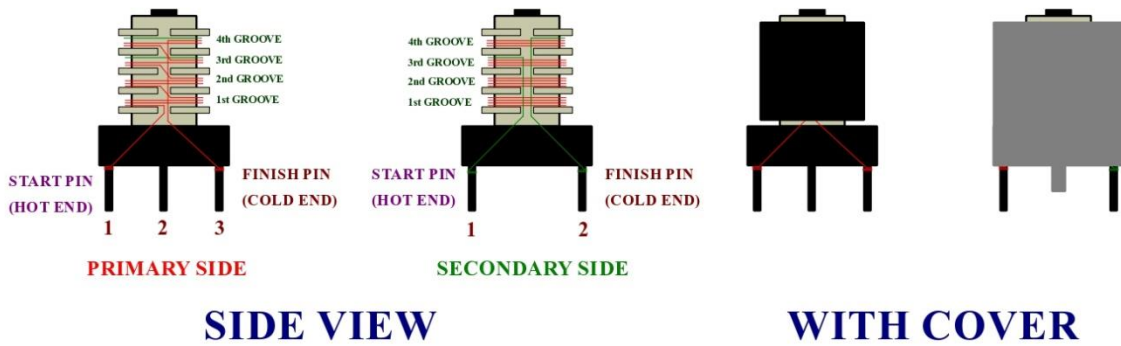
C74	430 PF	100v	Disc	Silver Mica Optional
C75	820 PF	100v	Disc	Silver Mica Optional
C76	430 PF	100v	Disc	Silver Mica Optional

LOW PASS FILTER 80 MT BAND

No	Torroid	Turns	SWG	Inductance
L1	T50-2	24	#28	2.48uh
L2	T50-2	24	#28	2.48uh

C74	820 PF	100v	Disc	Silver Mica Optional
C75	1500 PF	100v	Disc	Silver Mica Optional
C76	820PF	100v	Disc	Silver Mica Optional

DRAWING BAND PASS FILTER COILS WINDING



Keep Core at Top groove level while winding and taking measurement for coil wind 2 to 3 turns extra, after taking measurement as per table remove extra turns.



FOR 20/40 COILS USE 36 #SWG

FOR 80 MT COILS USE 38 #SWG

Band	Inductance	Primary	Secondary	Groove 1: Turns	Groove 2: Turns	Groove 3: Turns	Groove 4: Turns
20	2uh	14	2	5 Pr	5Pr	4Pr	2 Sec
40	5uh	22	3	6Pr	6Pr	6Pr	4 Pr + 3 Sec
80	7uh	32	4	10	10	6 Pr +2 Sec	6 Pr Z+ 2 Sec

BAND PASS FILTERS FOR 20/40/80 MT



BAND PASS FILTER 20 MT BAND

No	Coil	Primary T	Secondary T	SWG	Inductance
T4	Toko Type	14 Turns	2 Turns	36	2 uh
T5	Toko Type	14 Turns	0 Turns	36	2 uh
T6	Toko Type	14 Turns	2 Turns	36	2 uh

C45	43 PF	DISC NPO	50V
C46	3 PF Or 2.2 PF	DISC NPO	50V
C47	43 PF	DISC NPO	50V
C48	3 PF Or 2.2 PF	DISC NPO	50V
C49	43 PF	DISC NPO	50V

BAND PASS FILTER 40 MT BAND

No	Coil	Primary T	Secondary T	SWG	Inductance
T4	Toko Type	22 Turns	3 Turns	36	5 uh
T5	Toko Type	22 Turns	0 Turns	36	5 uh
T6	Toko Type	22 Turns	3 Turns	36	5 uh

C45	100 PF	DISC NPO	50V
C46	5.6 PF	DISC NPO	50V
C47	100 PF	DISC NPO	50V
C48	5.6 PF	DISC NPO	50V
C49	100 PF	DISC NPO	50V

BAND PASS FILTER 80 MT BAND

No	Coil	Primary T	Secondary T	SWG	Inductance
T4	Toko Type	Turns 32	Turns 4	36	7 uh
T5	Toko Type	Turns 32	Turns 0	36	7uh
T6	Toko Type	Turns 32	Turns 4	36	7uh

C45	PF 270 PF	DISC NPO	50V
C46	PF 22 PF	DISC NPO	50V
C47	PF 270 PF	DISC NPO	50V
C48	PF 22 PF	DISC NPO	50V
C49	PF 270 PF	DISC NPO	50V

Note:

For builders who may have difficulty in winding band pass filter coils on toko coil, they could buy ready available bpf from qrp labs and mount them on the bitx easy board relevant section.

Link

<https://www.qrp-labs.com/bpfkit.html>

An inductance meter would be very useful in calculating the inductance. If you do not have then just follow the number of turns as we have calculated for you.

One important point about inductance meters is that there are several ones available but very few will give correct reading.

If possible try to build a inductance meter from open source design of Vk3BHR.

Link <https://sites.google.com/site/vk3bhr/home/index2-html>

We are using the same design for our test the measurement is just about perfect.