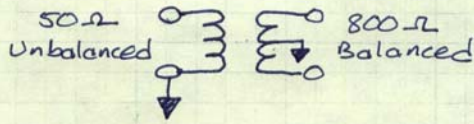


AJ4CO 16:1 BALUN TEST

8/10/13

Dave Typinski

New design using MCL TC16-161TX+ transformer



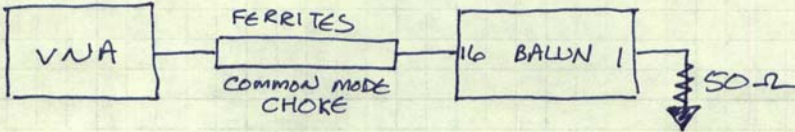
S_{11} test, 50-ohm end



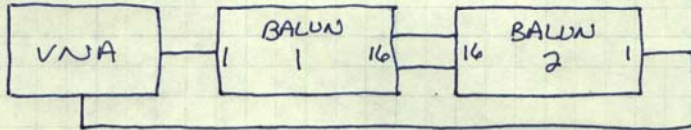
S_{11} test, 800-ohm end



S_{11} test, 800-ohm end, version 2



S_{21} test



Insertion loss per balun = 0.6 dB at 25 MHz



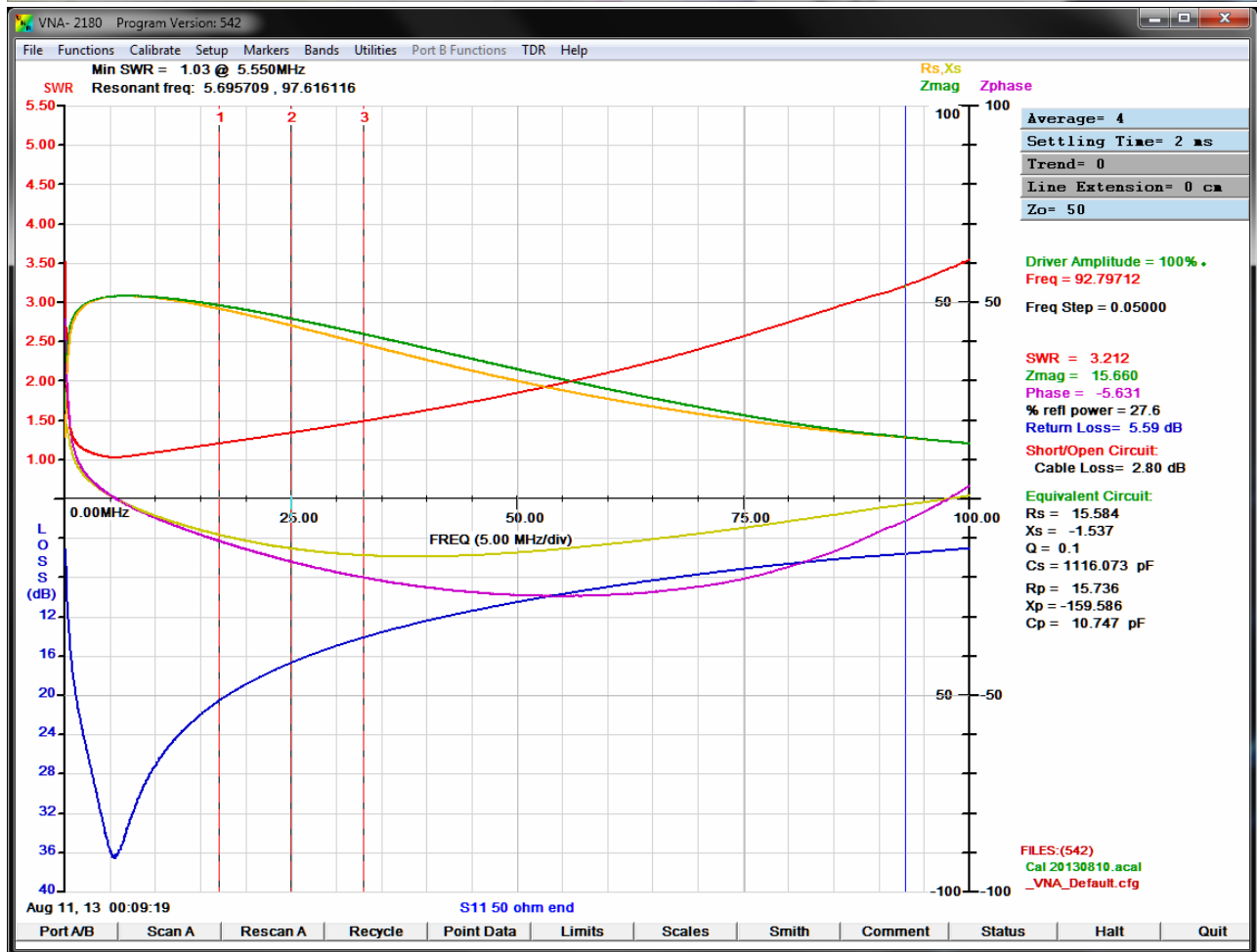
S11 50 ohm end

Port A Marker Data

Aug 11, 13 00:09:19
Reference Z = 50 + j 0

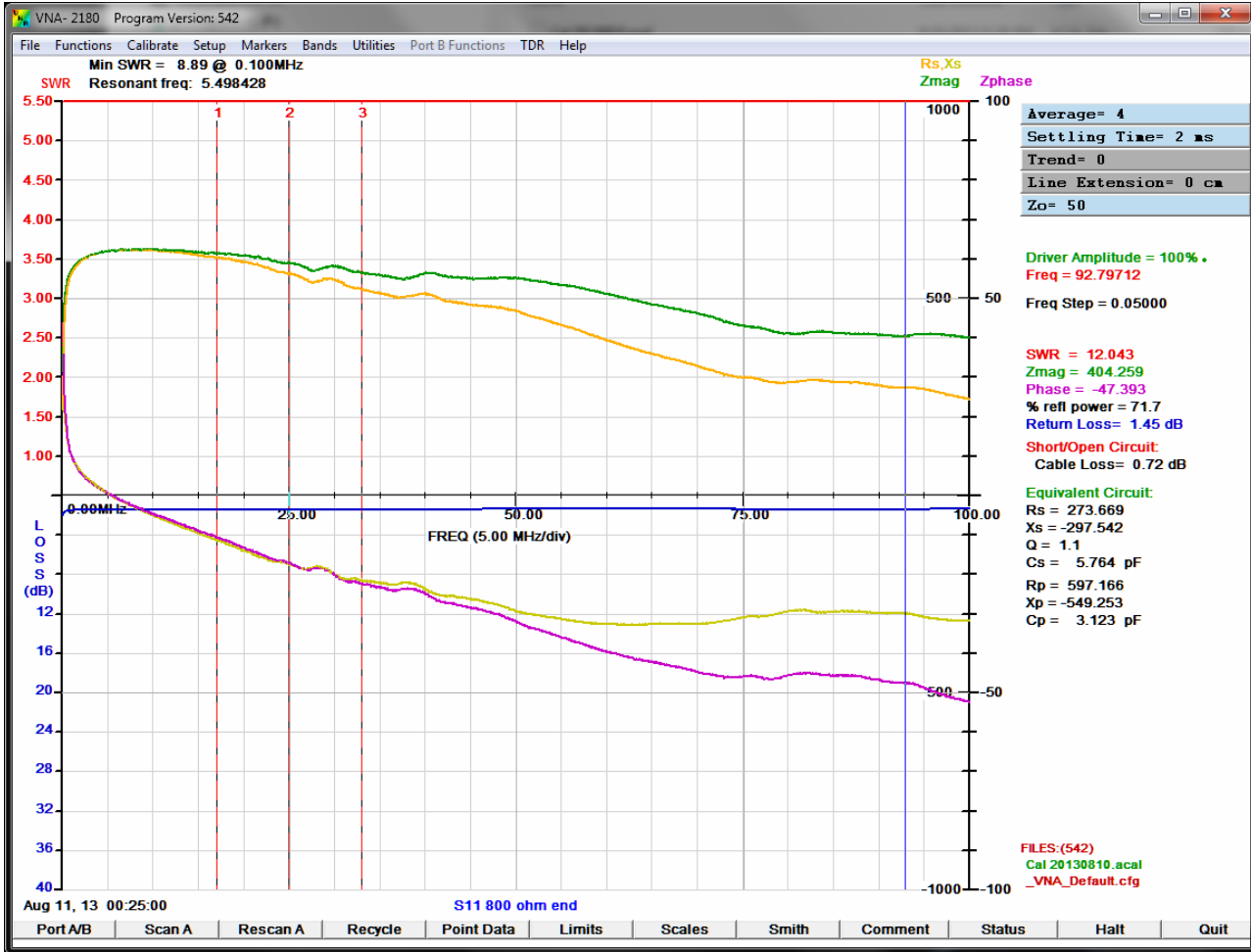
Refresh Recycle Save Recall Print Exit

Marker	Freq	SWR	Rs	Xs	Zmag	Phase
[1]	17.000000	1.2060	48.402	-9.087	49.248	-10.633
[2]	25.000000	1.3443	44.111	-12.640	45.887	-15.990
[3]	33.000000	1.4924	39.371	-14.381	41.915	-20.066



S11 800 ohm end

Marker	Freq	SWR	Rs	Xs	Zmag	Phase
[1]	17.000000	12.5249	604.019	-115.476	614.959	-10.823
[2]	25.000000	12.5392	569.409	-180.389	597.300	-17.578
[3]	33.000000	11.3188	489.440	-192.623	525.980	-21.483



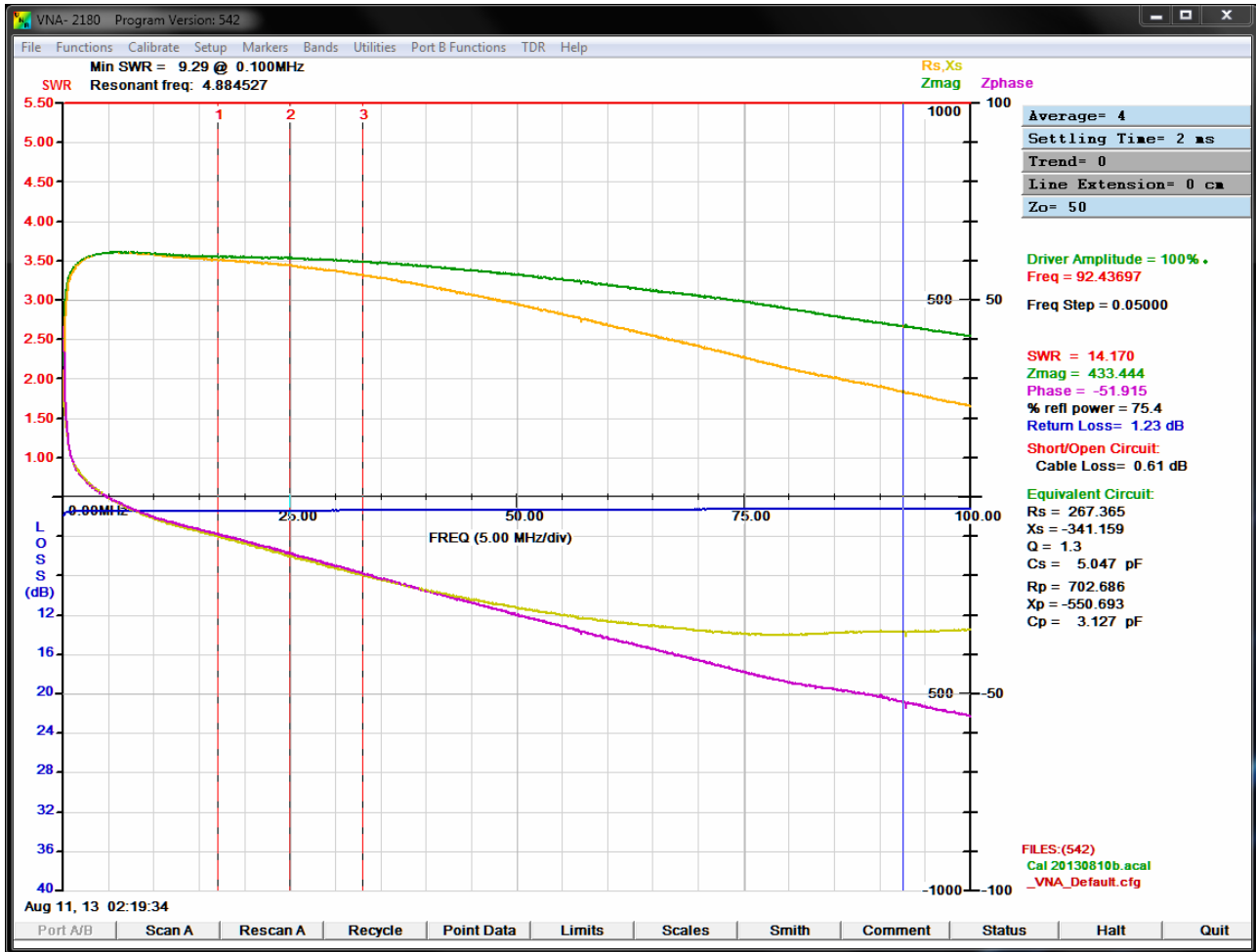
S11 800 ohm end, with common mode choke between balun and VNA

Port A Marker Data

Aug 11, 13 02:19:34

Reference Z = 50 + j 0

Marker	Freq	SWR	Rs	Xs	Zmag	Phase
[1]	17.000000	12.3407	600.911	-98.095	608.865	-9.271
[2]	25.000000	12.5361	589.281	-148.200	607.631	-14.117
[3]	33.000000	12.6502	563.103	-197.000	596.568	-19.282



S21 two baluns in series

Port B Marker Data

Aug 11, 13 00:28:25

Reference Z = 50 + j 0

Marker	Freq	S21 [dB]	S21_phase
[1]	17.000000	-1.0606	-20.28
[2]	25.000000	-1.1750	-30.03
[3]	33.000000	-1.2549	-39.98

NOTE: two baluns in series; divide S21 by two for individual balun insertion loss.

Print Exit

