

Date

03-Nov-2012

Technician

Dave Typinski, AJ4CO

Test Equipment

Array Solutions VNA-2180 vector network analyzer, S/N 5249
Acer Aspire 5570Z laptop computer
VNA software version 530D

Device(s) Under Test

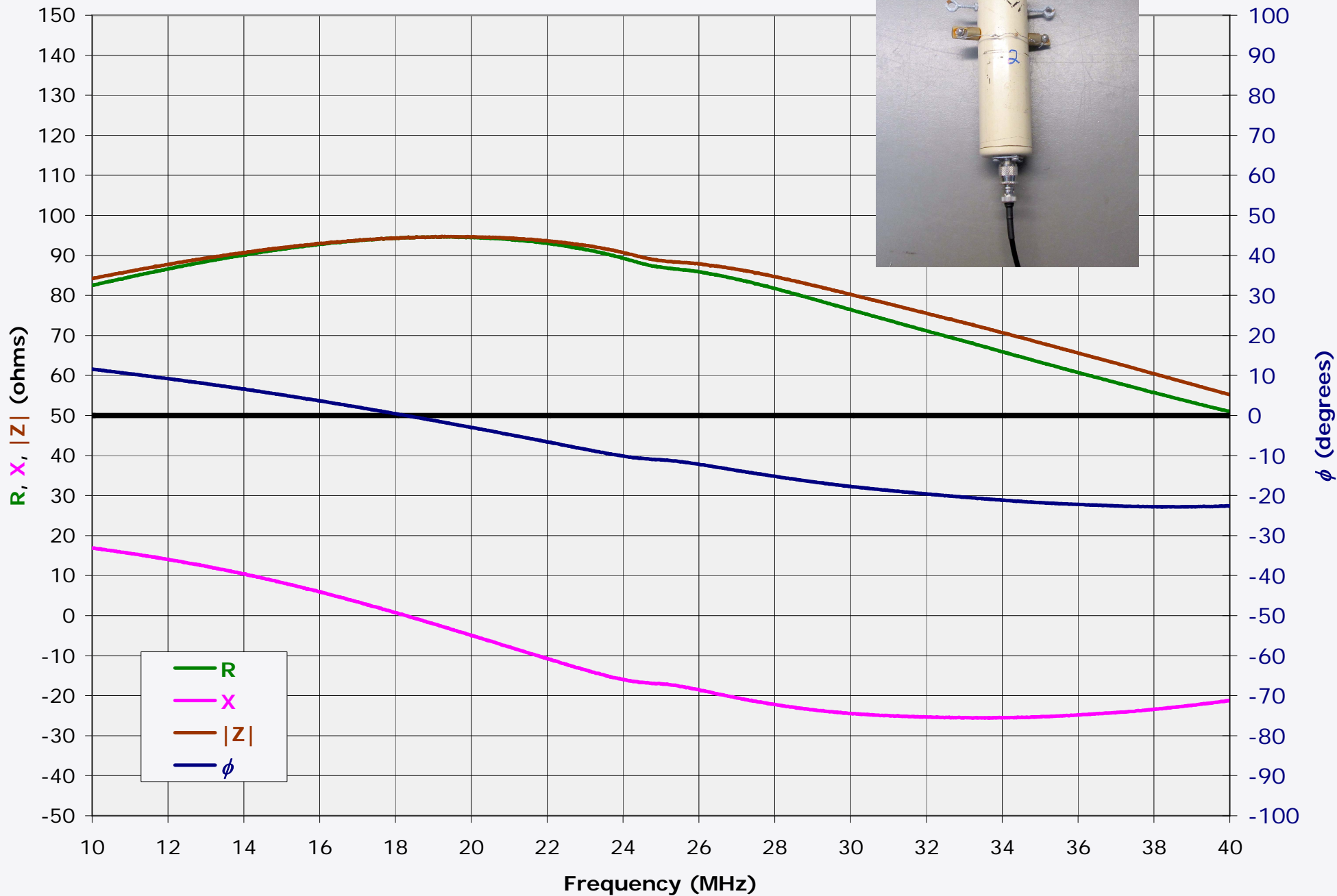
Balun #2 — Buxcomm 16:1 balun, P/N B15C161 (Beige cylindrical case)
Balun #3 — Buxcomm 16:1 balun, P/N B15C161 (Beige cylindrical case)
Balun #4 — Balun Designs custom dual 16:1 balun (Gray square case)
Balun #5 — Buxcomm 16:1 balun, P/N B1KC161 (Gray cylindrical case)
TFD Antenna, N-S orientation, top wire height 9'2", 30' length, 8" wire spacing, 800 Ω terminating resistor

Test Results Directory

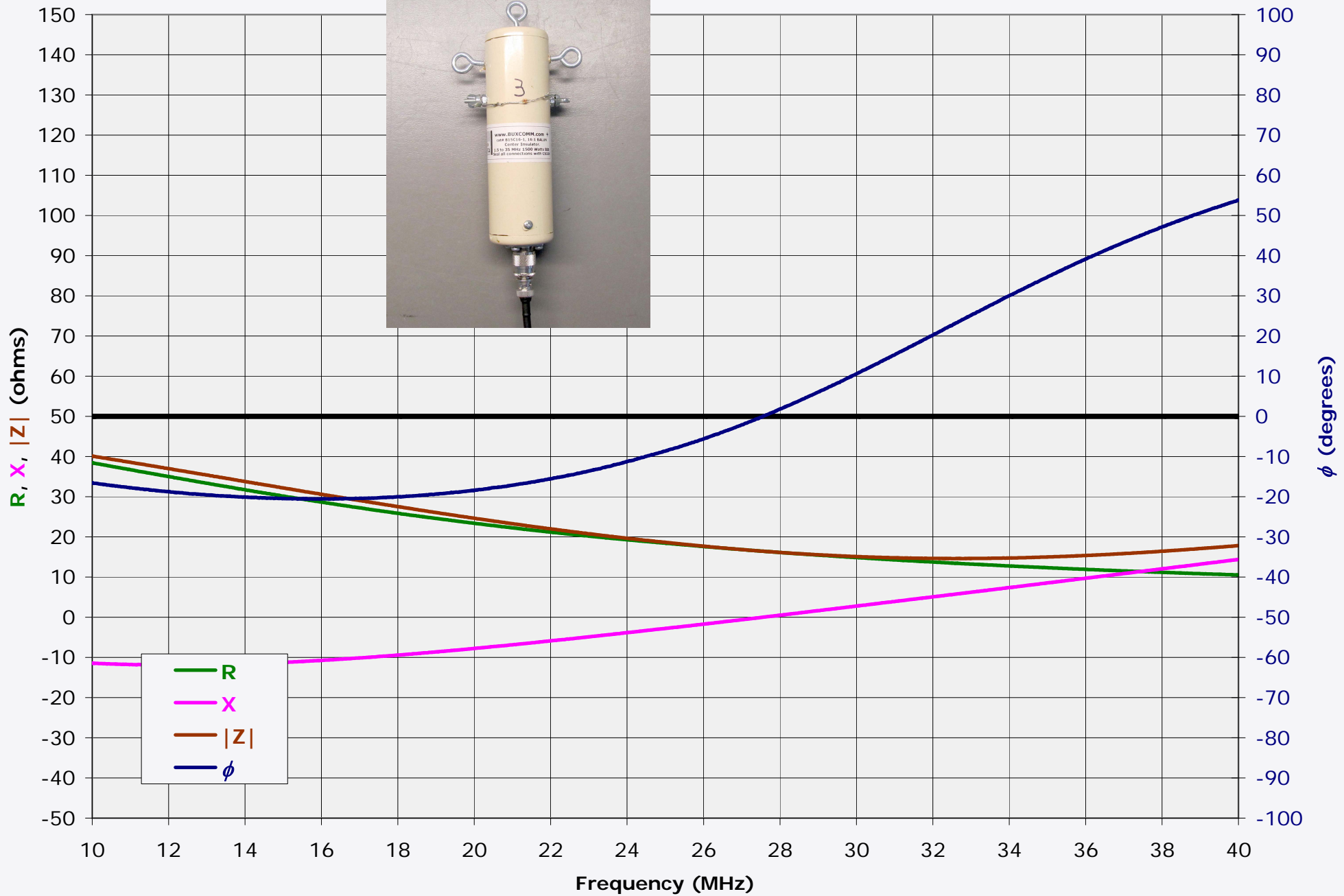
Test No.	Date	Calibration File	Data File	Calibration Plane	Notes
1	11/3/12	Cal 31.acal	Cal 31 check.csv	End of 28" RG-58	Calibration sweep
2	"	"	† 01 Balun 2 with 800 ohm resistive load.csv	"	
3	"	"	† 02 Balun 3 with 800 ohm resistive load.csv	"	
4	"	"	† 03 Balun 5 with 800 ohm resistive load.csv	"	
5	"	"	† 04 Balun 2 with balun 5 with 50 ohm load.csv	"	
6	"	"	† 05 Balun 5 with balun 2 with 50 ohm load.csv	"	
7	"	Cal 32.acal	Cal 32 check port A.csv	"	Calibration sweep
8	"	Cal 32.bcal	Cal 32 check Port B_B.csv	"	Calibration sweep
9	"	"	† S21, VNA Port A Balun 2, VNA Port B Balun 5_B.csv	"	
10	"	"	† S21, VNA Port A Balun 5, VNA Port B Balun 2_B.csv	"	
11	"	Cal 32.acal	† 06 Balun 4 Side A with 800 ohms on ant terms and 50 ohms on Side B.csv	"	
12	"	"	† 07 Balun 4 Side B with 800 ohms on ant terms and 50 ohms on Side A.csv	"	
13	"	"	08 Balun 4 Side A with 50 ohms on coax terms and 800 ohms on Side B.csv	"	did not use ferrites
14	"	"	09 Balun 4 Side B with 50 ohms on coax terms and 800 ohms on Side A.csv	"	did not use ferrites
15	"	Cal 32.bcal	† S21, Balun 4, VNA Port A on balun Side A, VNA Port B on balun Side B_B.csv	"	
16	"	"	† S21, Balun 4, VNA Port A on balun Side B, VNA Port B on balun Side A_B.csv	"	
17	"	Cal 32.acal	10 Balun 4 Side A with 800 ohms on ant terms Side A, no loads on Side 2.csv	"	No appreciable diff
18	"	"	11 Balun 4 Side B with 800 ohms on ant terms Side B, no loads on Side 1.csv	"	No appreciable diff
19	"	Cal 33.acal	Cal 33 check sweep.csv	End of 90' RG-58	Calibration sweep
20	"	"	† 13 TFD Balun 4 Side A.csv	"	
21	"	"	† 14 TFD Balun 4 Side B.csv	"	

† Indicates data plotted on following pages

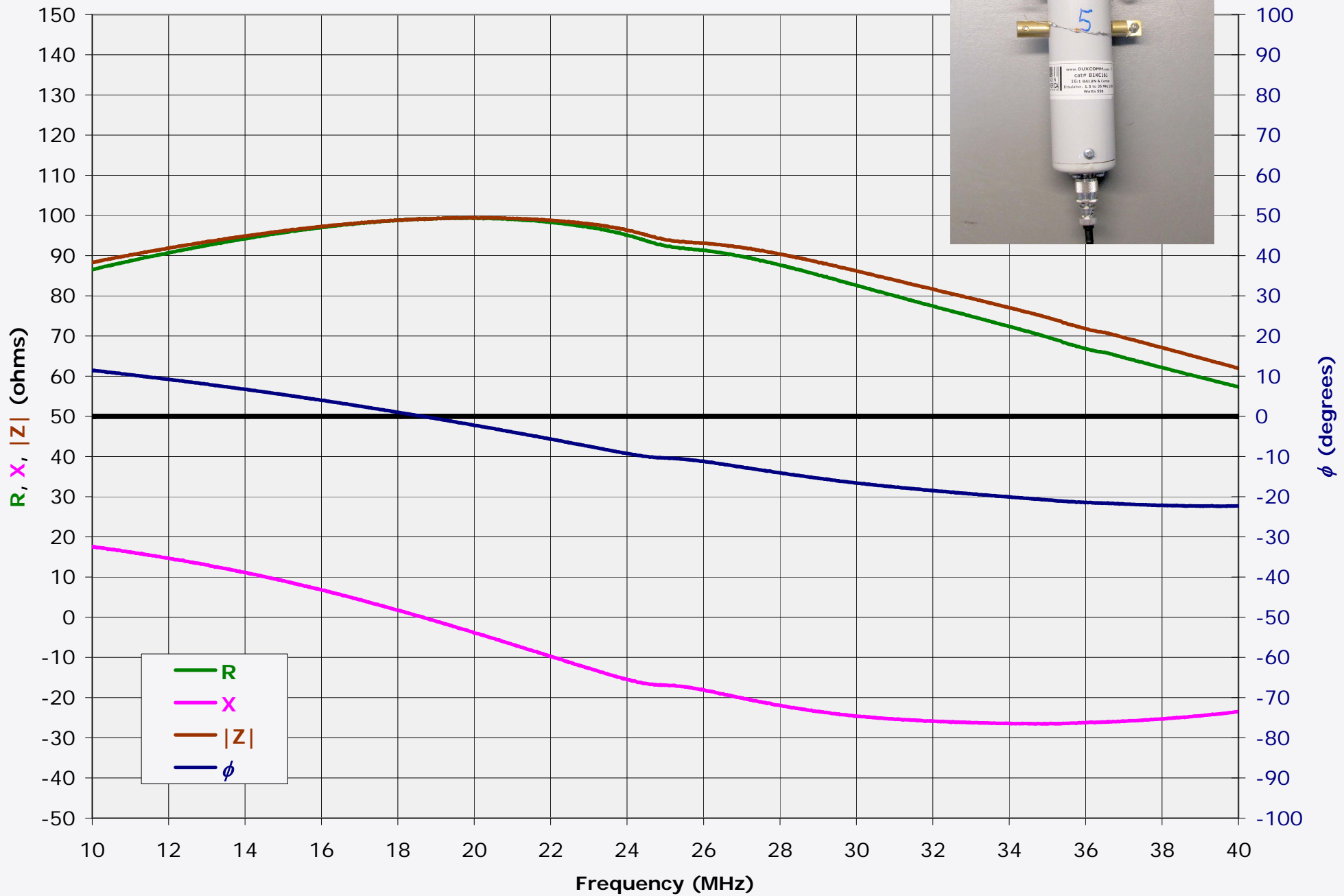
Balun 2 with 800 ohm resistive load



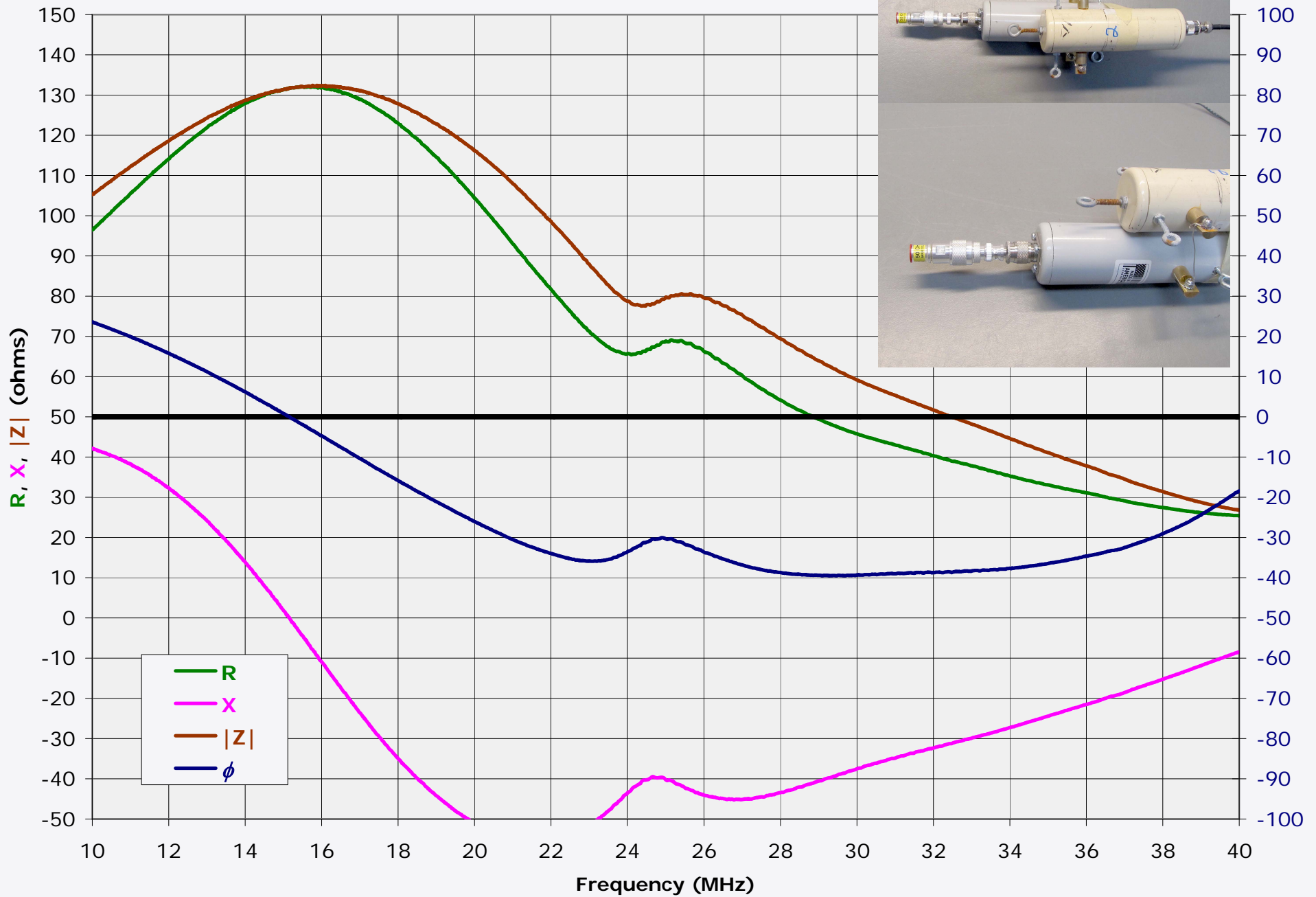
Balun 3 with 800 ohm resistive load



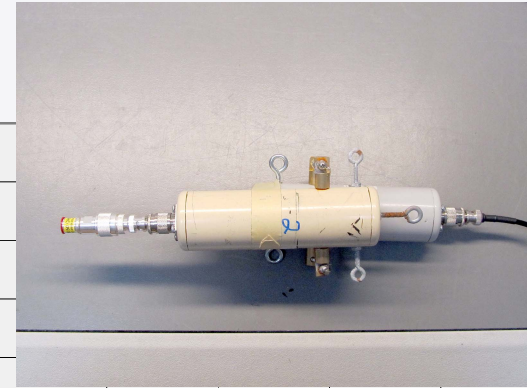
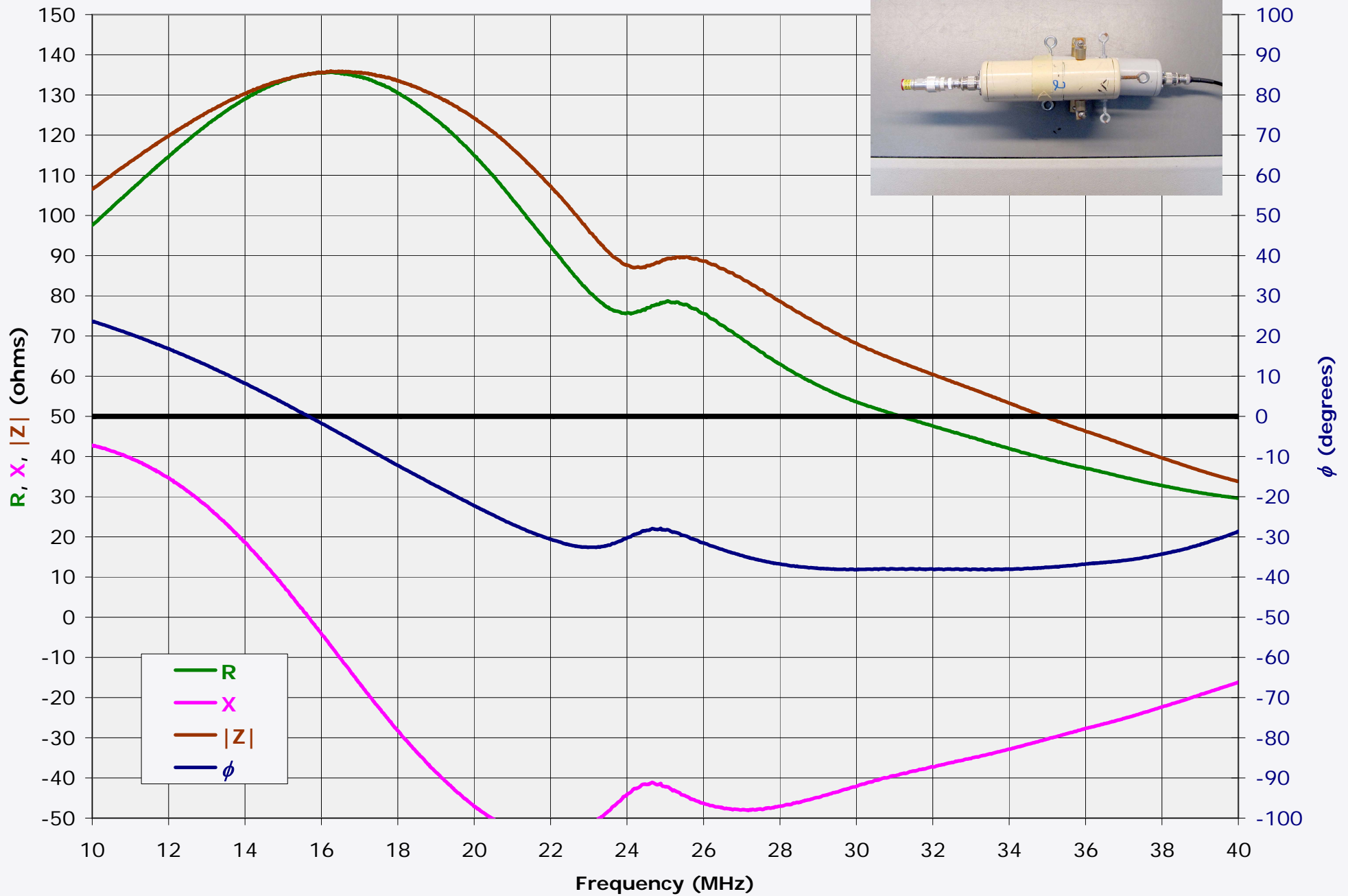
Balun 5 with 800 ohm resistive load



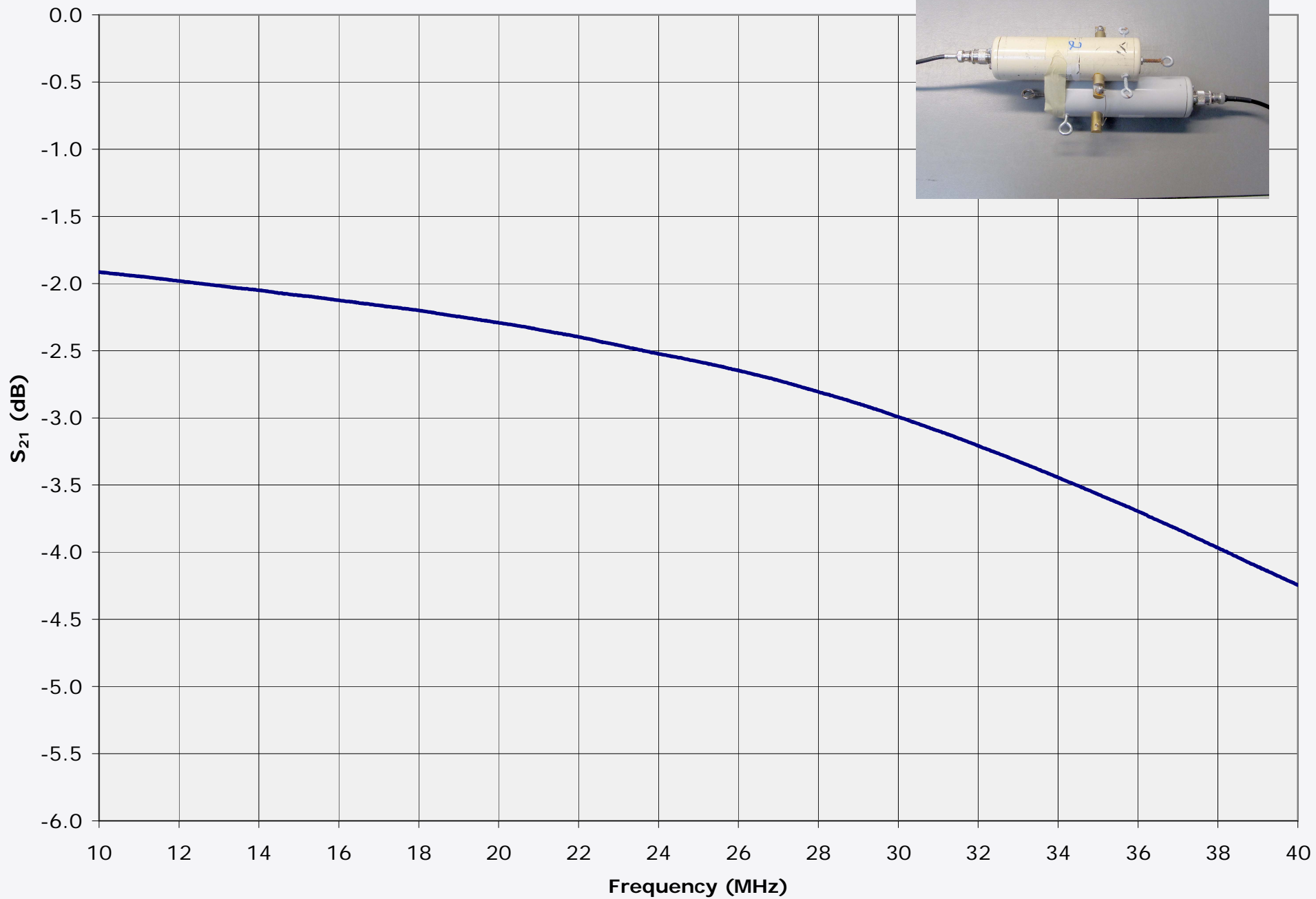
Balun 2 with balun 5 with 50 ohm load



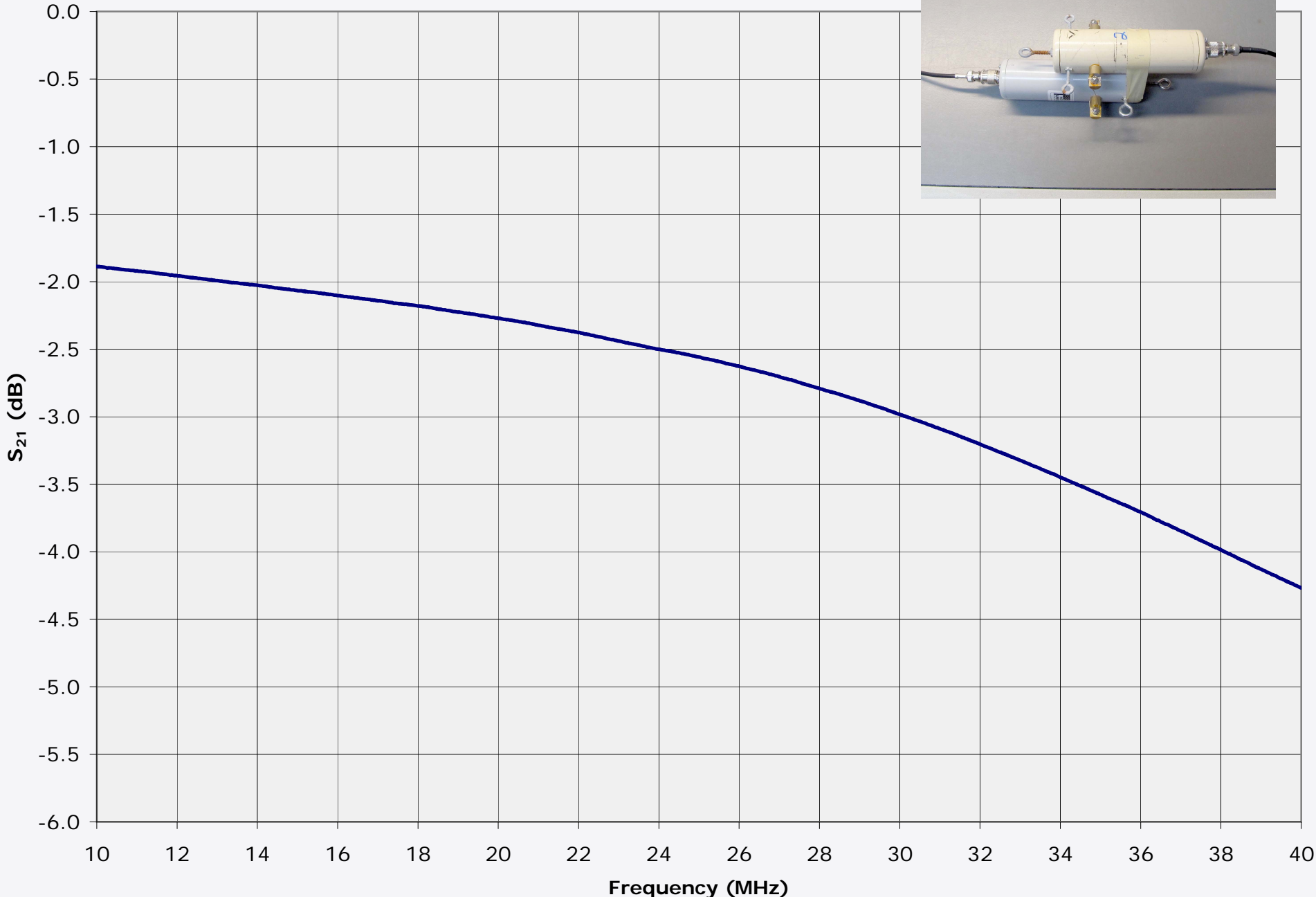
Balun 5 with balun 2 with 50 ohm load



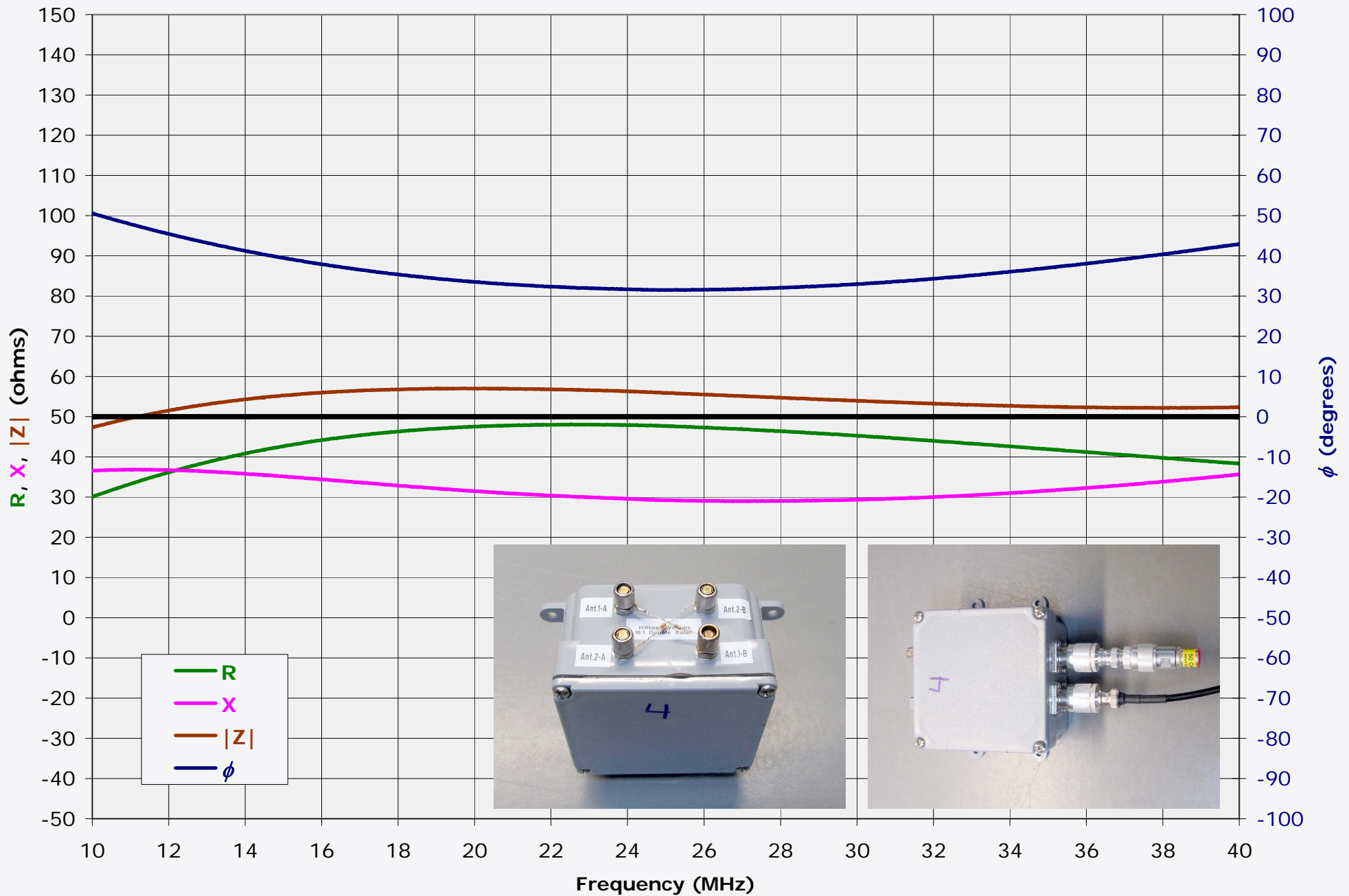
S_{21} , VNA Port A Balun 2, VNA Port B Balun 5



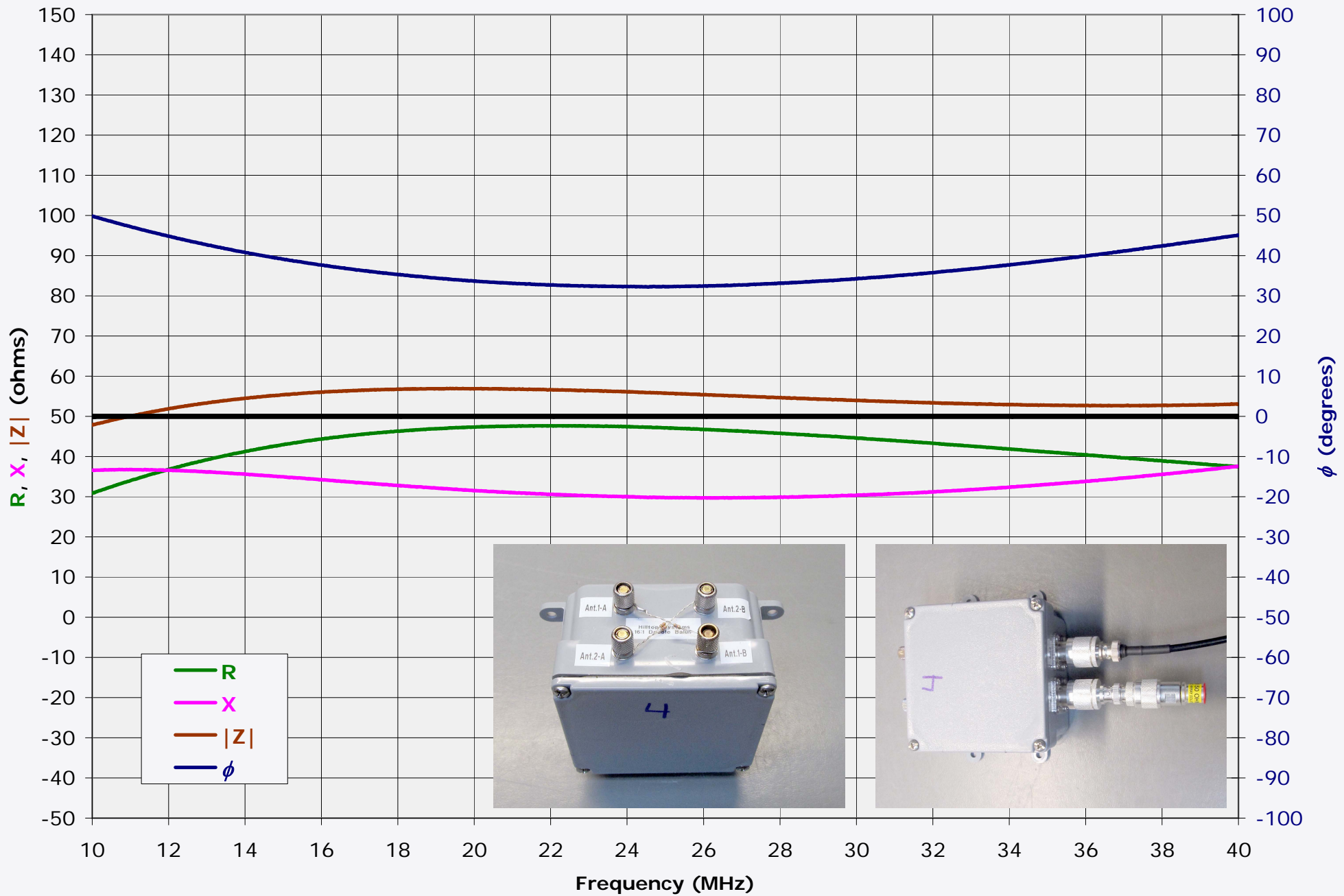
S_{21} , VNA Port A Balun 5, VNA Port B Balun 2



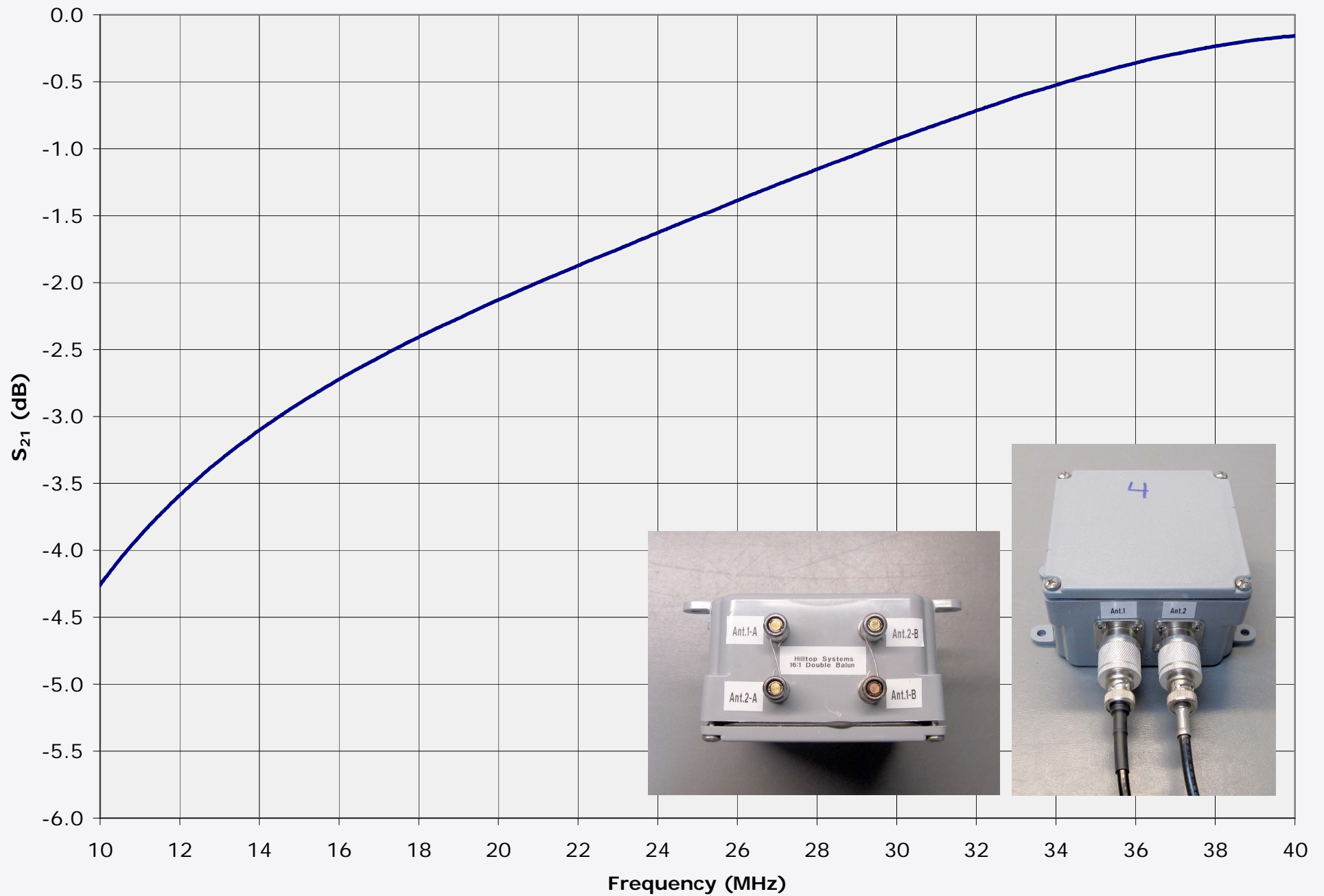
Balun 4 Side A with 800 ohms on ant terms and 50 ohms on Side B



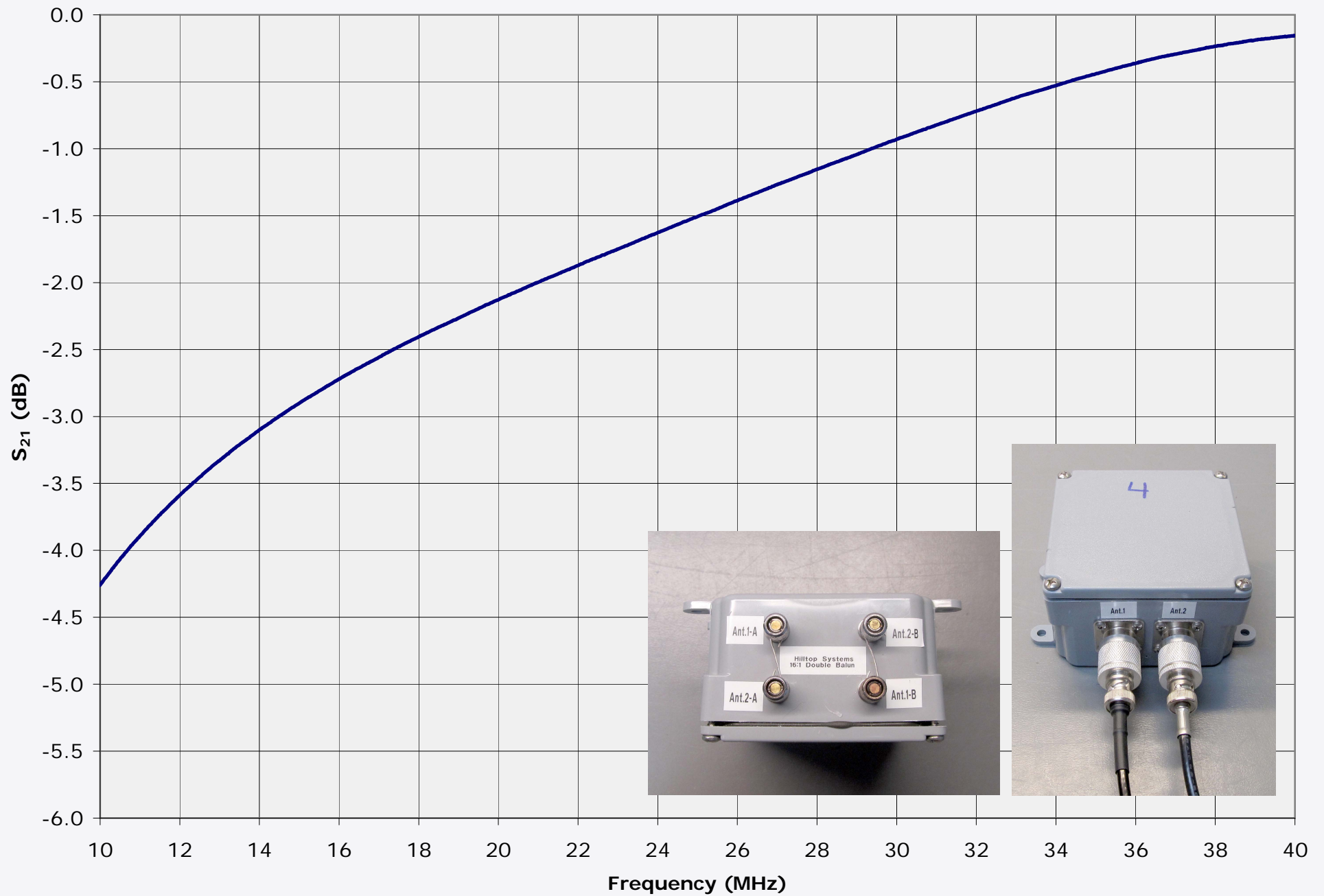
Balun 4 Side B with 800 ohms on ant terms and 50 ohms on Side A



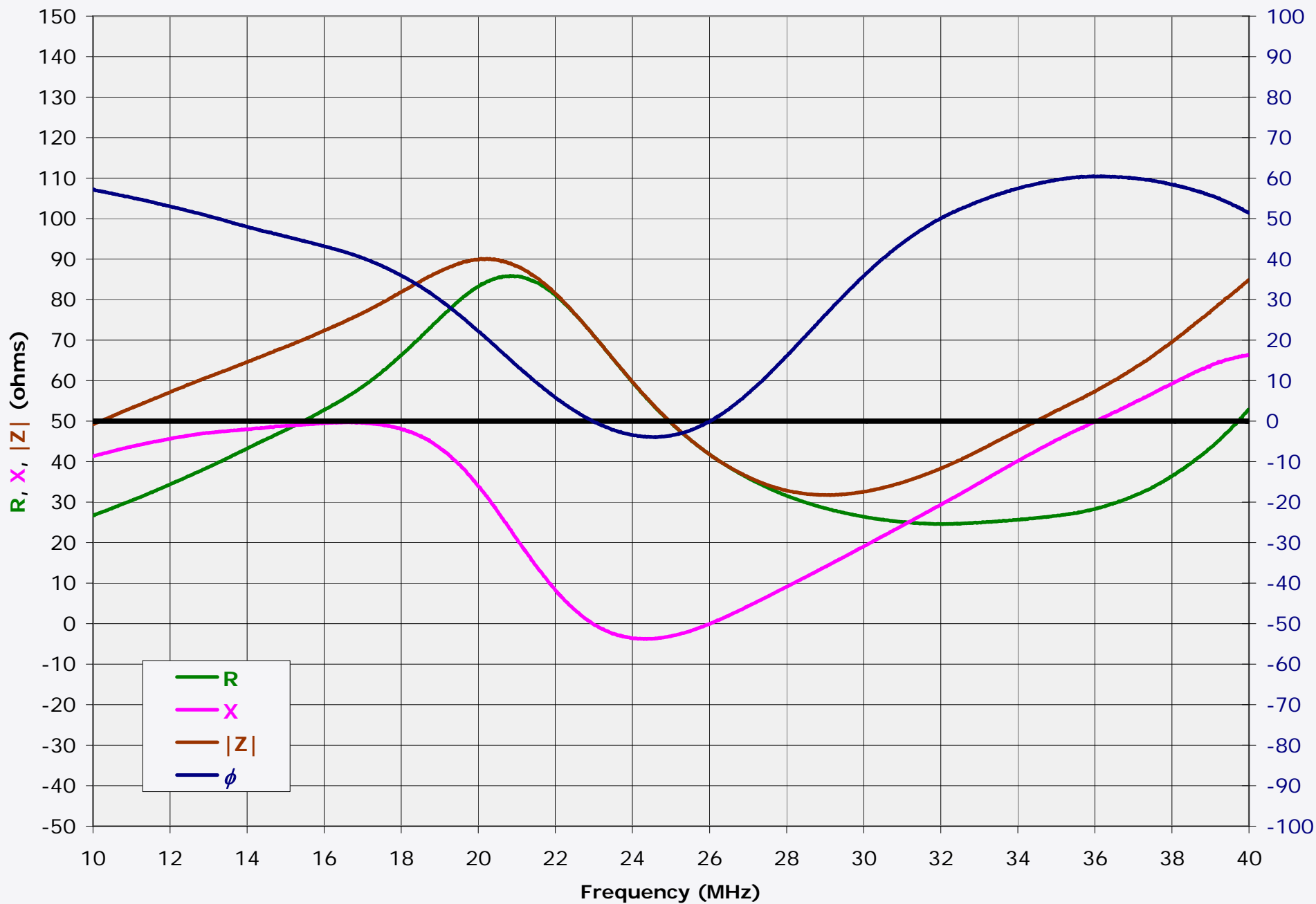
S_{21} , Balun 4, VNA Port A on balun Side A, VNA Port B on balun Side B



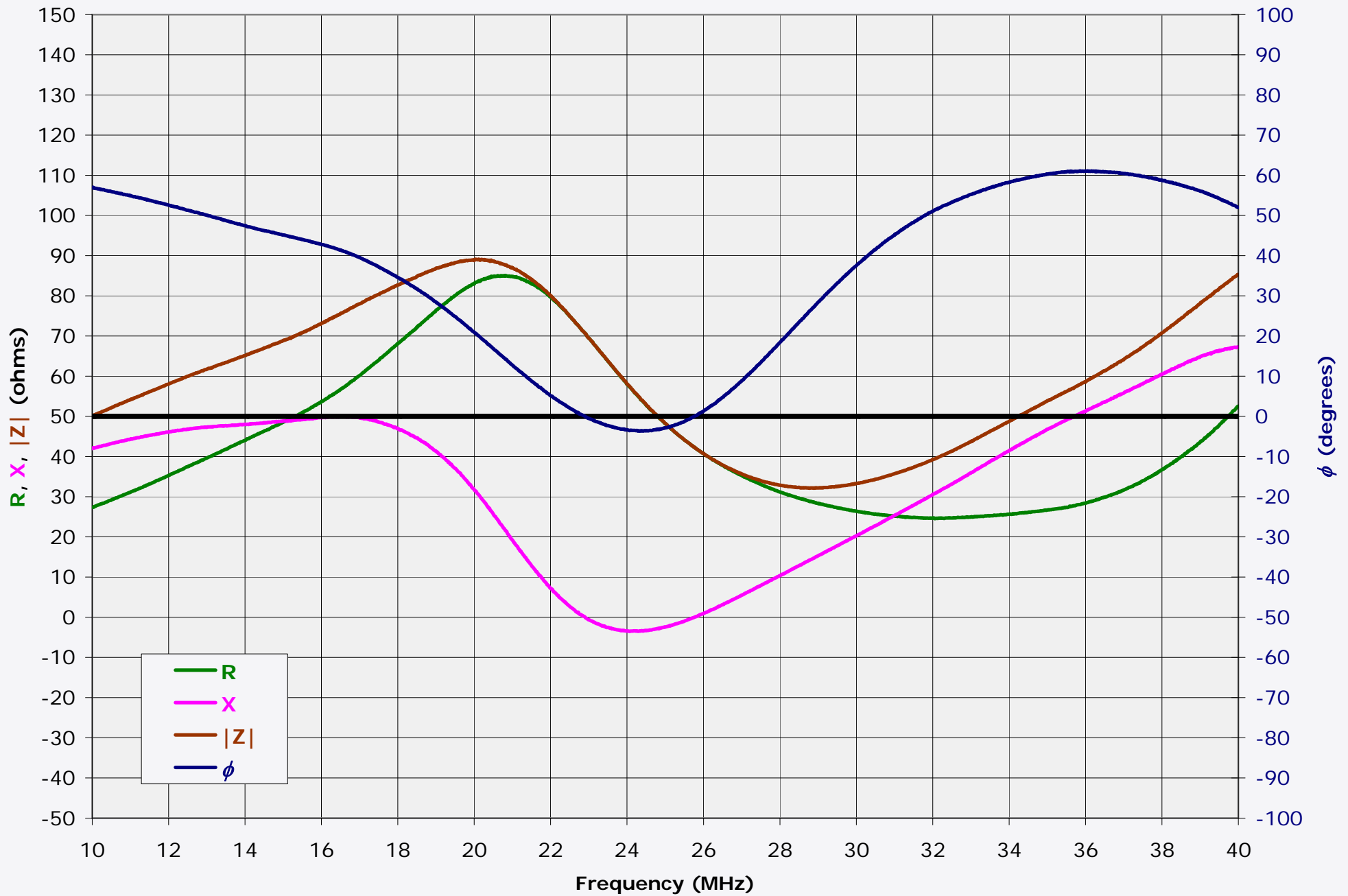
S_{21} , Balun 4, VNA Port A on balun Side B, VNA Port B on balun Side A



TFD #1 on Balun 4 Side A



TFD #1 on Balun 4 Side B



TFD Feed point, Balun, and Terminator — October, 2012

