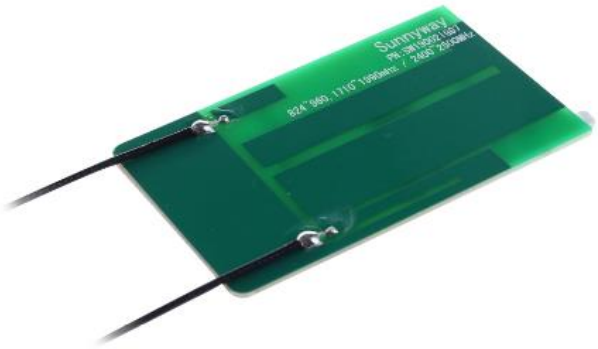
SUNNYWAY

SWP002

PN: SW19002IG97



Sunnyway Technology

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1. Electrical Specifications

Cable 1 Parameters

Standards	3G&2G	
Frequency range (MHz)	824~960MHz	1710~1990MHz
Peak Gain (dBi)	-2.8~1.2dBi	-1.2~4.8dBi
Average Gain (dB)	-6.9~-2.2dB	-4.5~-1.4dB
VSWR	<4.0	<3.0
Return Loss	<-4.4	<-6.8
Efficiency (%)	20~60%	35~72%
Polarization mode	Linear	Linear
Radiation pattern	Omni-Directional	Omni-Directional
Output impedance (Ω)	50	50
Max. Input Power(W)	25	25

Cable 2 Parameters

Standards	WiFi
Frequency range (MHz)	2400~2500MHz
Peak Gain (dBi)	2.0~3.5dBi
Average Gain (dB)	-5.5~-4.3dB

VSWR	<2.5
Return Loss	<-7.6
Efficiency (%)	28~37%
Polarization mode	Linear
Radiation pattern	Omni-Directional
Output impedance (Ω)	50
Max. Input Power(W)	25

2. Mechanical and Environmental Specification

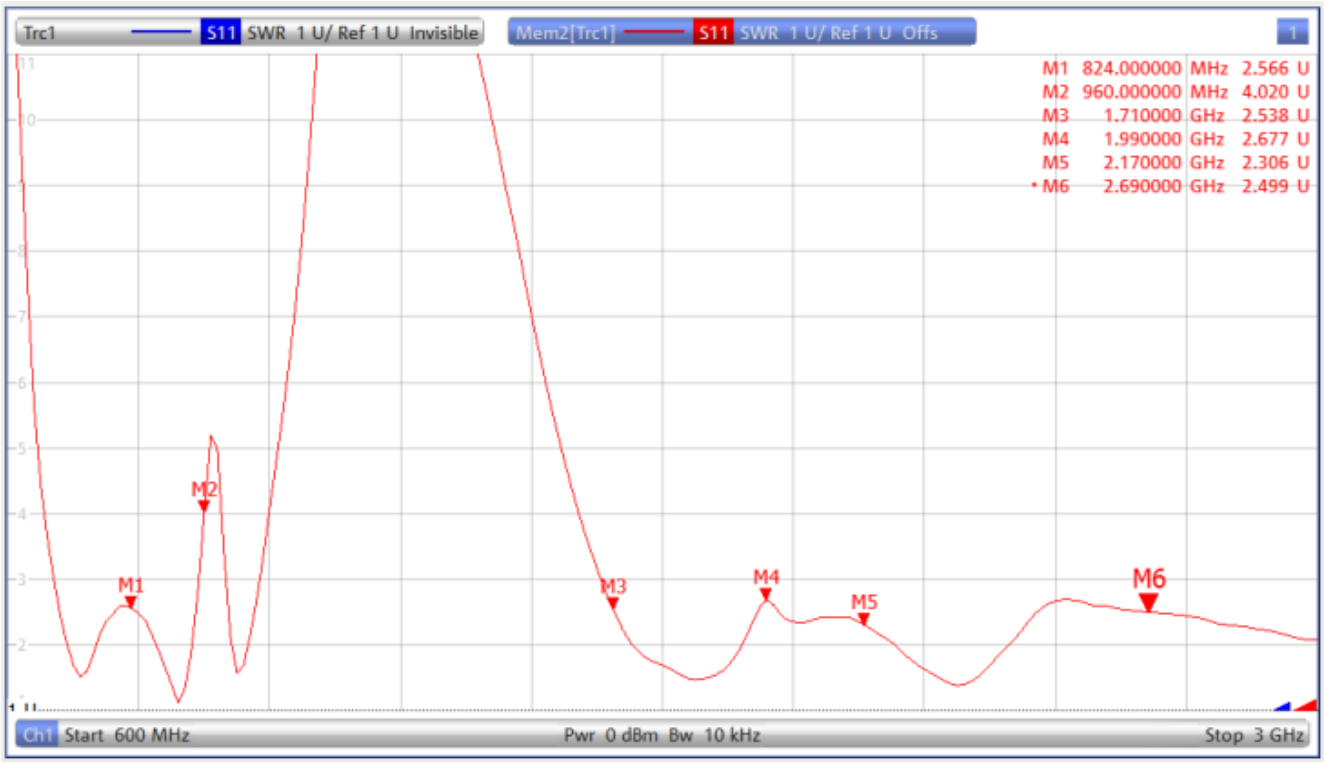
Mounting Type	Adhesive
Adhesive Type	3M9448A
Connector Type	U.FL Standard
Antenna size(mm)	54.5mm (L) x34.7mm (W) x 1.0mm (H)
Material	PCB
Cable length(mm)	101mm
Operating Temperature (˚C)	- 40 ˚C ~ + 85 ˚C
Storage Temperature(˚C)	- 40 ˚C ~ + 85 ˚C

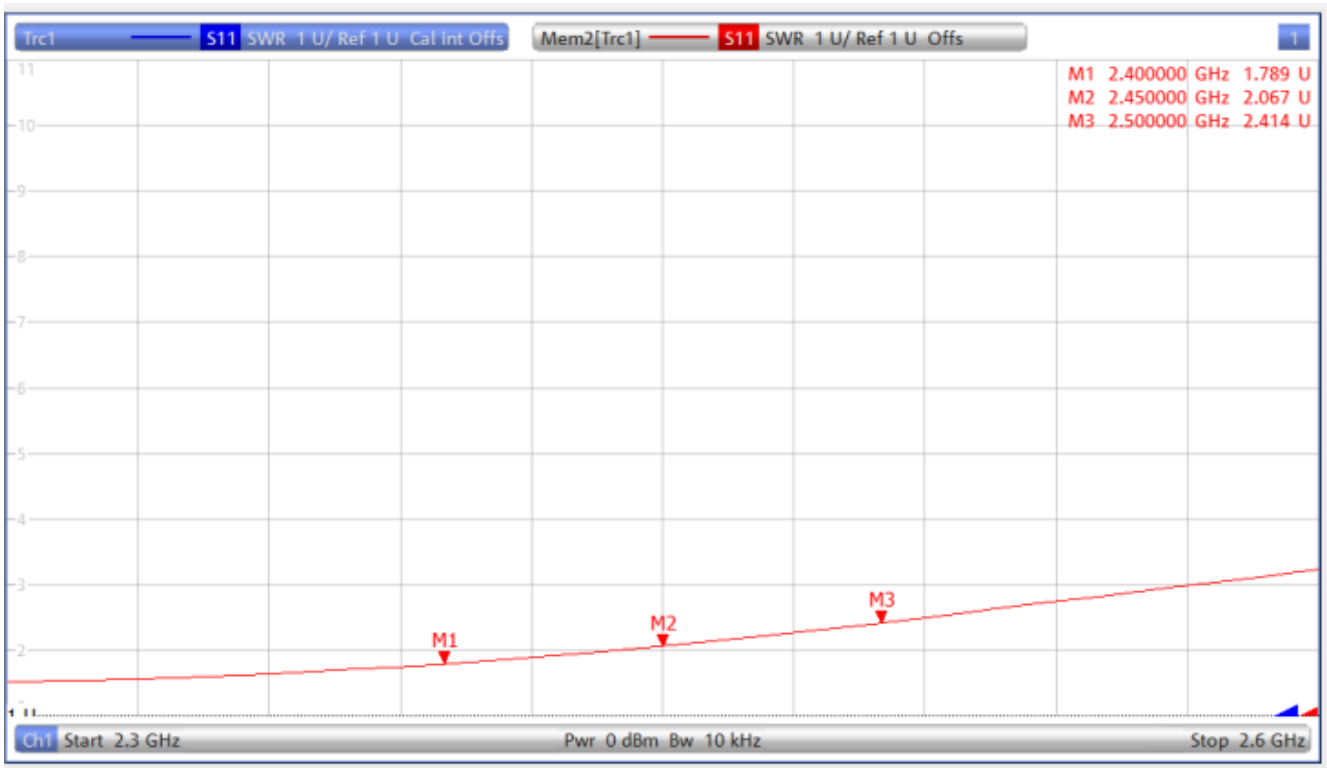
Cable 1 Parameters

FRE (MHz)	824	960	1710	1990	2170
VSWR	2.56	4.02	2.53	2.67	2.30
Return Loss	-7.14	-4.41	-7.25	-6.82	-8.06
Eff (%)	59.4	20.4	41.6	38.4	54.4
Average Gain(dB)	-2.26	-6.89	-3.80	--4.15	-2.64

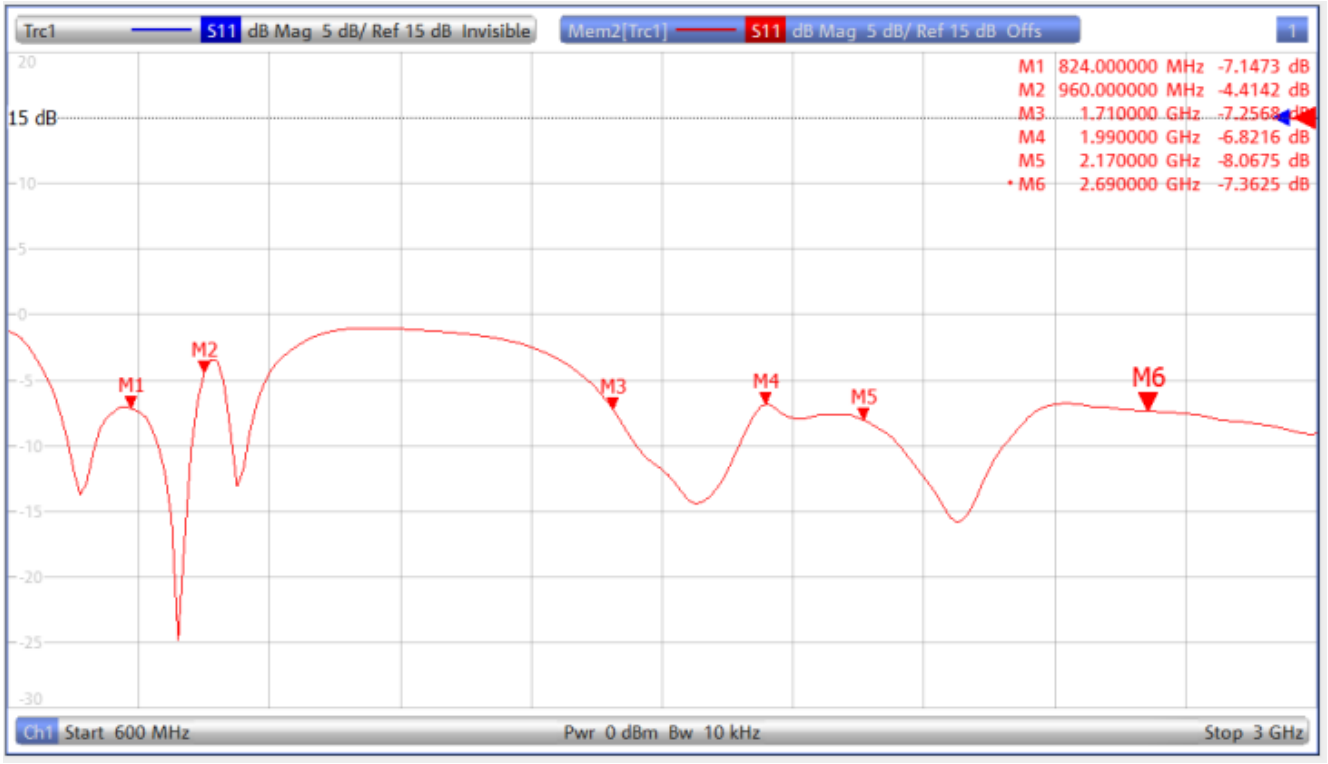
Cable 2 Parameters

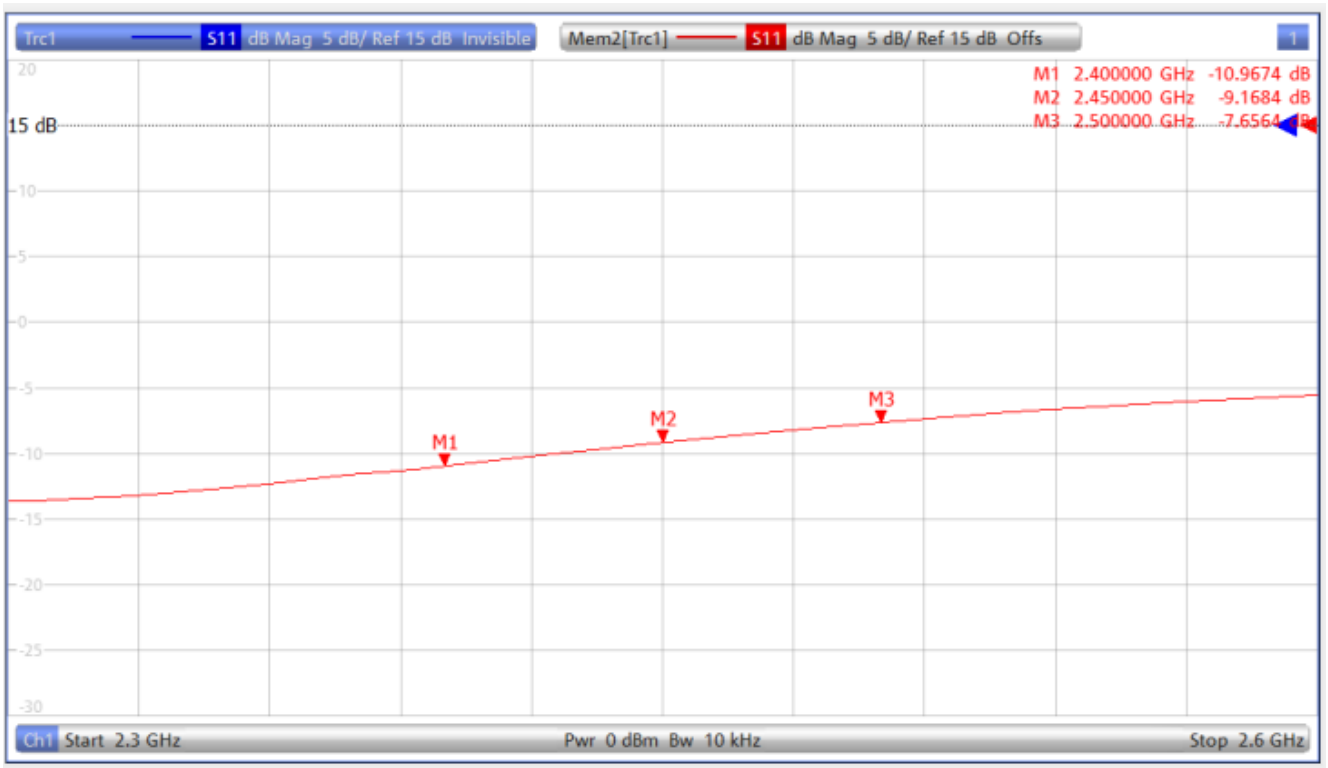
FRE（MHz）	2400	2500
VSWR	5.2	5.3
Return Loss	-3.3	-3.2
Eff (%)	36.1	28.0
Average Gain(dB)	--4.42	-5.54


Trc1 S11 SWR 1 U/ Ref 1 U Invisible
Mem2[Trc1] S11 SWR 1 U/ Ref 1 U Offs
M1 824.000000 MHz 2.566 U
M2 960.000000 MHz 4.020 U
M3 1.710000 GHz 2.538 U
M4 1.990000 GHz 2.677 U
M5 2.170000 GHz 2.306 U
M6 2.690000 GHz 2.499 U
Ch1 Start 600 MHz
Pwr 0 dBm Bw 10 kHz
Stop 3 GHz

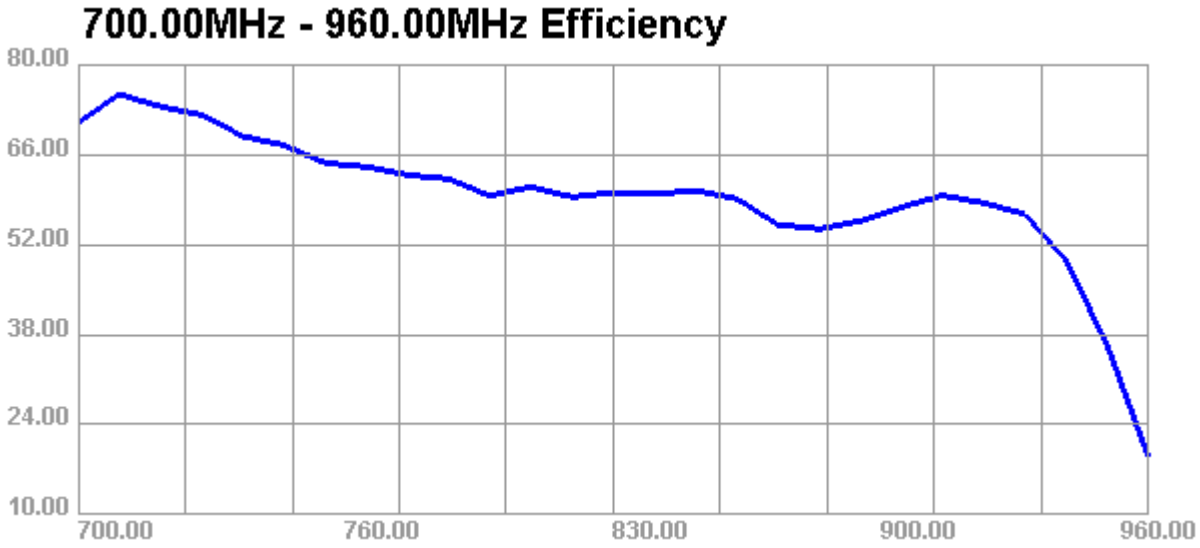

Trc1 S11 SWR 1 U/ Ref 1 U Cal int Offs
Mem2[Trc1] S11 SWR 1 U/ Ref 1 U Offs
M1 2.400000 GHz 1.789 U
M2 2.450000 GHz 2.067 U
M3 2.500000 GHz 2.414 U
Ch1 Start 2.3 GHz
Pwr 0 dBm Bw 10 kHz
Stop 2.6 GHz

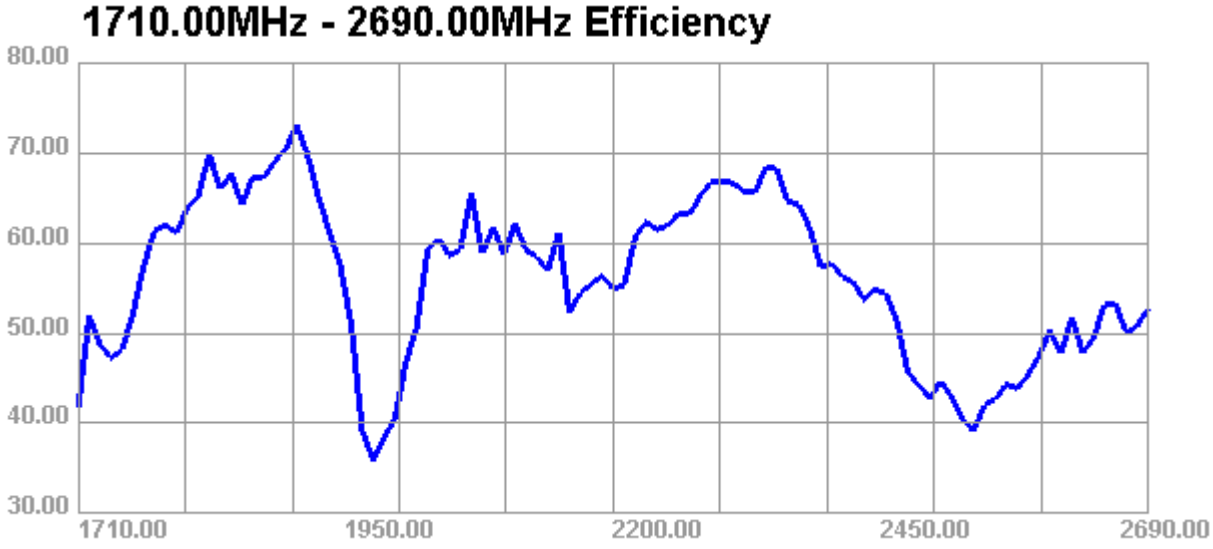
VSWR

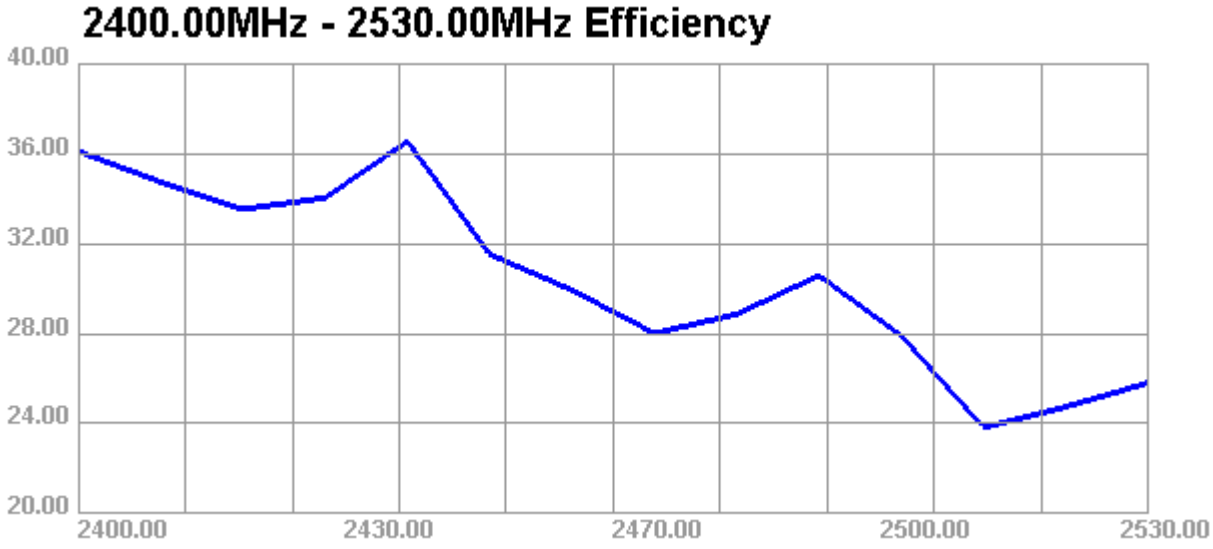

Trc1 S11 dB Mag 5 dB/ Ref 15 dB Invisible
Mem2[Trc1] S11 dB Mag 5 dB/ Ref 15 dB Offs
M1 824.000000 MHz -7.1473 dB
M2 960.000000 MHz -4.4142 dB
M3 1.710000 GHz -7.2568 dB
M4 1.990000 GHz -6.8216 dB
M5 2.170000 GHz -8.0675 dB
M6 2.690000 GHz -7.3625 dB
15 dB
Ch1 Start 600 MHz
Pwr 0 dBm Bw 10 kHz
Stop 3 GHz

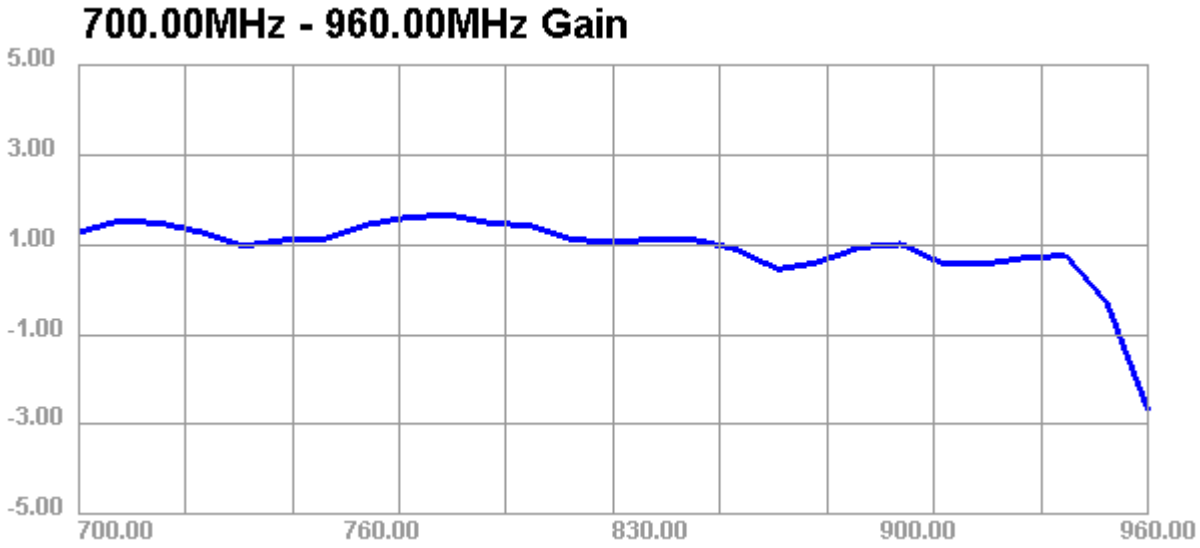

Trc1 S11 dB Mag 5 dB/ Ref 15 dB Invisible
Mem2[Trc1] S11 dB Mag 5 dB/ Ref 15 dB Offs
M1 2.400000 GHz -10.9674 dB
M2 2.450000 GHz -9.1684 dB
M3 2.500000 GHz -7.6564 dB
15 dB
Ch1 Start 2.3 GHz
Pwr 0 dBm Bw 10 kHz
Stop 2.6 GHz

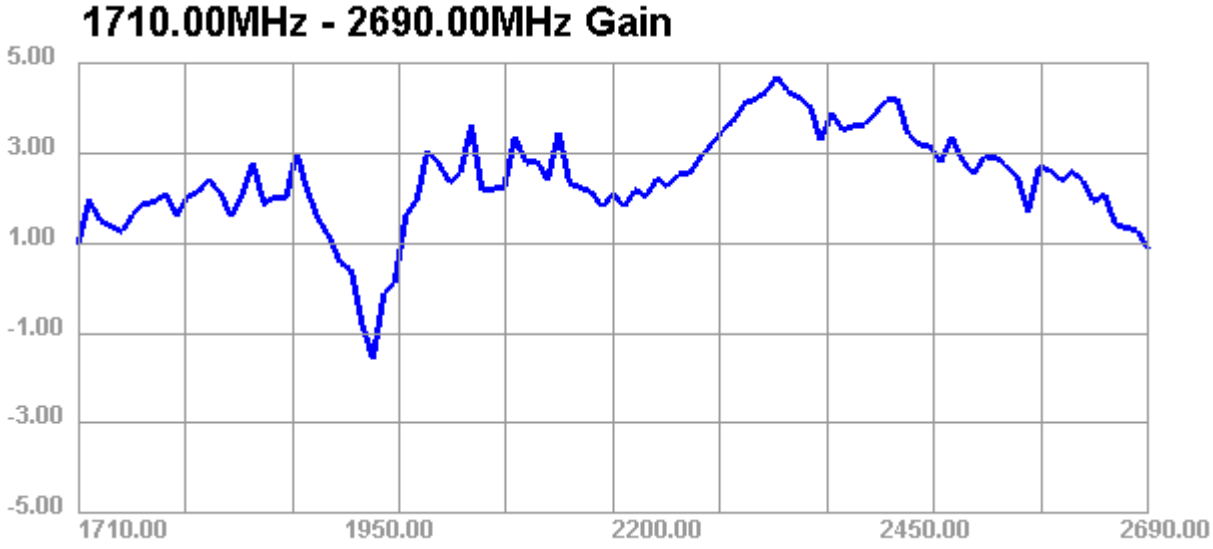
Return Loss

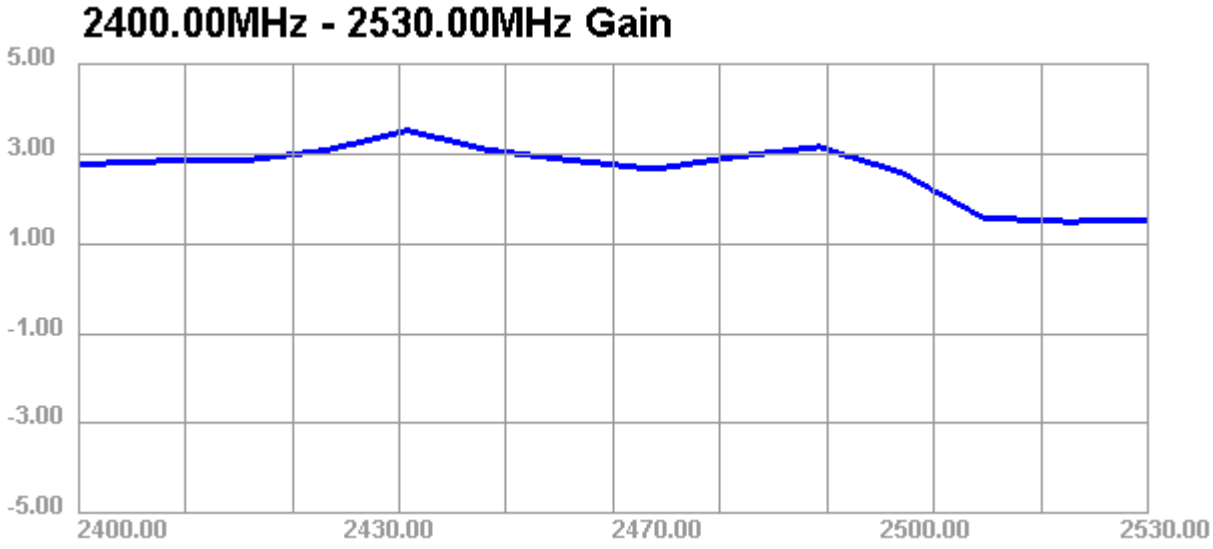

700.00MHz - 960.00MHz Efficiency
80.00
66.00
52.00
38.00
24.00
10.00
700.00
760.00
830.00
900.00
960.00


1710.00MHz - 2690.00MHz Efficiency
80.00
70.00
60.00
50.00
40.00
30.00
1710.00
1950.00
2200.00
2450.00
2690.00

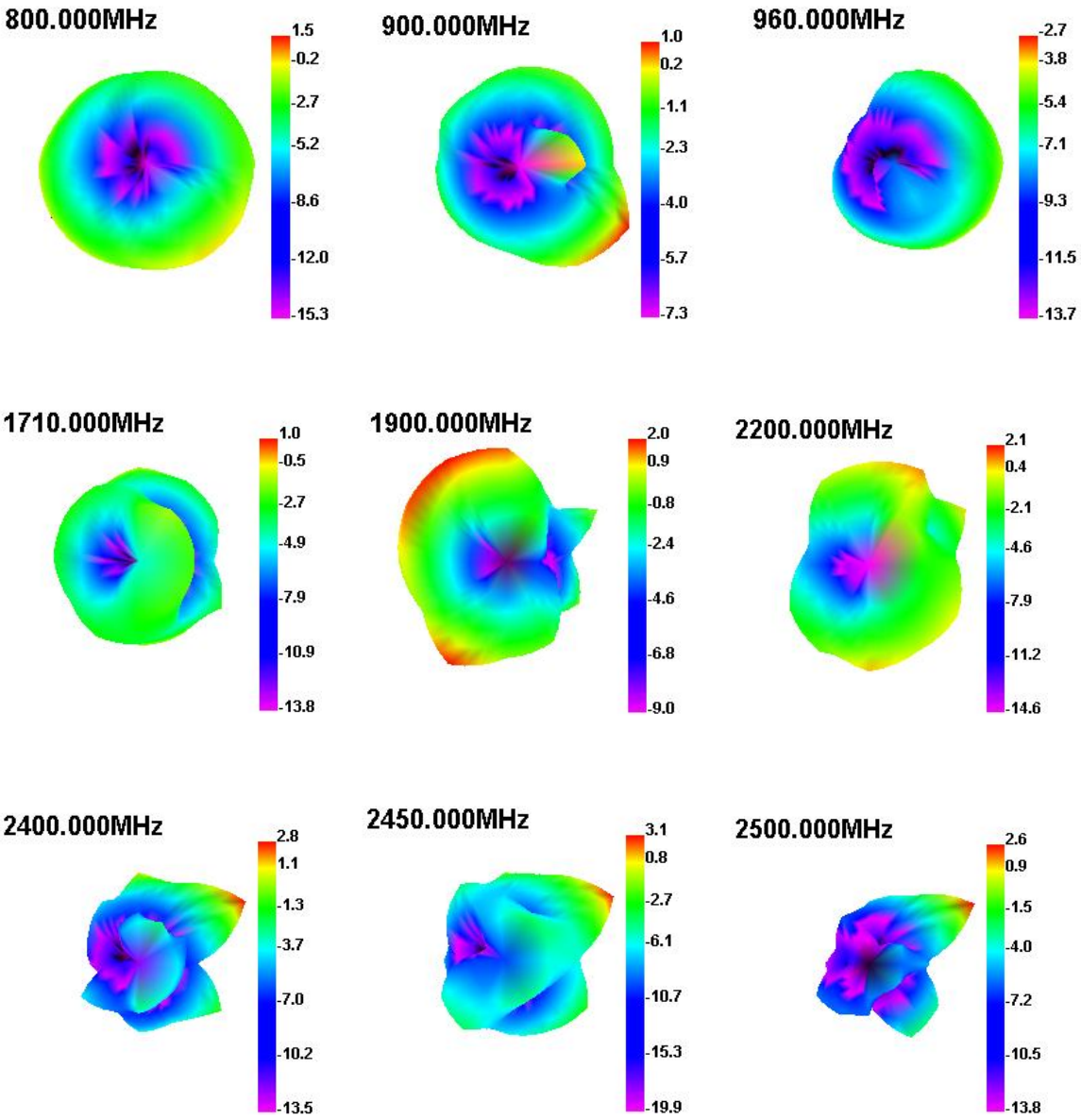

2400.00MHz - 2530.00MHz Efficiency
40.00
36.00
32.00
28.00
24.00
20.00
2400.00
2430.00
2470.00
2500.00
2530.00


700.00MHz - 960.00MHz Gain
5.00
3.00
1.00
-1.00
-3.00
-5.00
700.00
760.00
830.00
900.00
960.00


1710.00MHz - 2690.00MHz Gain
5.00
3.00
1.00
-1.00
-3.00
-5.00
1710.00
1950.00
2200.00
2450.00
2690.00


2400.00MHz - 2530.00MHz Gain
5.00
3.00
1.00
-1.00
-3.00
-5.00
2400.00
2430.00
2470.00
2500.00
2530.00

Directional pattern



4. Antenna Drawings

