SWF011

PN: SW20273IB77

Features:

- Frequency bands from 600~ 6000MHz.
- 5G / 4G / 3G/ 2G MIMO.
- GNSS (GPS, Glonass, Galileo).
- Foldable for tight spaces.
- Impedance 50 Ohm.

Applications:

- Application of 5G/4G/3G/2G equipment.
- Portable Devices.
- Remote monitoring.
- Network Devices.
- Wearable devices.

Sunnyway Technology
Add: 1F, Building 4, No.215-99, GaoGuang Road, QingPu District, Shanghai, China
Tel: +86-021-6083 5368 Fax: +86-021-6484 2328
Email: info@sunny-way.com Web: www.sunny-way.com

1. Electrical Specifications

Cable 1 Parameters

Standards	5G&4G&3G&2G		
Frequency range (MHz)	600~960MHz	1400~2700MHz	3000~6000MHz
Peak Gain (dBi)	-0.5~3.5	3.0~5.0	2.0~5.0
Average Gain (dB)	-4.5~-1.2	-3.0~-1.4	-4.3~-1.5
VSWR	< 3.0	< 2.5	< 2.5
Return Loss(dB)	< -6.0	< -7.0	< -7.0
Efficiency (%)	35~75	50~72	37~70
Polarization mode	Linear	Linear	Linear
Radiation pattern	Omni-Directional	Omni-Directional	Omni-Directional
Output impedance (Ω)	50	50	50
Max. Input Power(W)	25	25	25

Cable 2 Parameters

Standards	GPS & Glonass & Galileo	
Frequency range (MHz)	1575MHz	1602MHz
Peak Gain (dBi)	3.0	3.1
Average Gain (dB)	-2.0	-1.8
VSWR	1.2	1.1
Return Loss (dB)	-20.9	-25.1
Efficiency (%)	62.5	65.5
Polarization mode	Linear	Linear

Radiation pattern	Omni-Directional	Omni-Directional
Output impedance (Ω)	50	50
Max. Input Power(W)	25	25

Cable 3 Parameters

Standards	5G&4G&3G&2G		
Frequency range (MHz)	600~960MHz	1400~2700MHz	3000~6000MHz
Peak Gain (dBi)	0~4.0	2.5~4.5	2.0~5.0
Average Gain (dB)	-4.2~-1.4	-3.5~-1.4	-4.0~-1.9
VSWR	< 3.0	< 2.5	< 2.5
Return Loss(dB)	< -6.0	< -7.0	< -7.0
Efficiency (%)	38~72	45~72	40~65
Polarization mode	Linear	Linear	Linear
Radiation pattern	Omni-Directional	Omni-Directional	Omni-Directional
Output impedance (Ω)	50	50	50
Max. Input Power(W)	25	25	25

2. Mechanical and Environmental Specification

Mounting Type	Adhesive
Adhesive Type	3M467
Connector Type	U.FL Standard
Antenna size(mm)	289.50mm (L) x 25.00mm (W) x0.12mm (H)
Material	FPC
Cable length(mm)	100mm
Operating Temperature (˚C)	- 40 ˚C ~ 85 ˚C
Storage Temperature(˚C)	- 40 ˚C ~ 85 ˚C

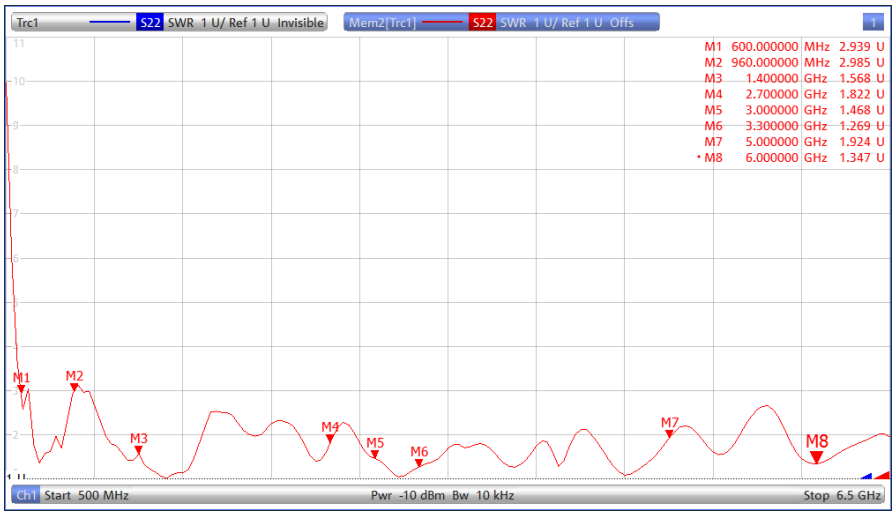
3. Antenna parameters

3.1 Cable 1: 5G&4G&3G&2G

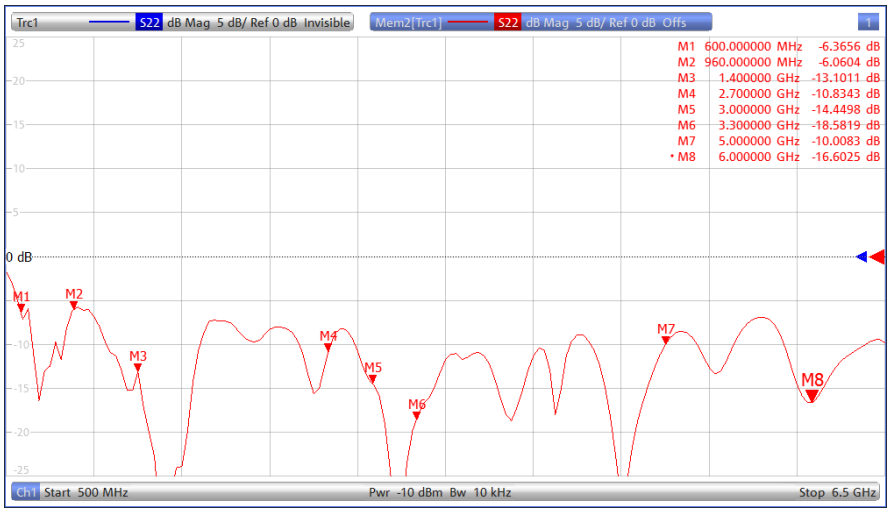
3.1.1 General Data

FRE (MHz)	600	960	1400	2700	3000	3300	5000	6000
VSWR	2.9	2.9	1.5	1.8	1.4	1.2	1.9	1.3
Return Loss	-6.3	-6.0	-13.1	-10.8	-14.4	-18.5	-10.0	-16.6
Eff (%)	41.5	71.7	50.5	50.3	61.3	48.8	60.0	53.3
Average	-3.8	-1.4	-3.0	-3.0	-2.1	-3.1	-2.2	-2.7

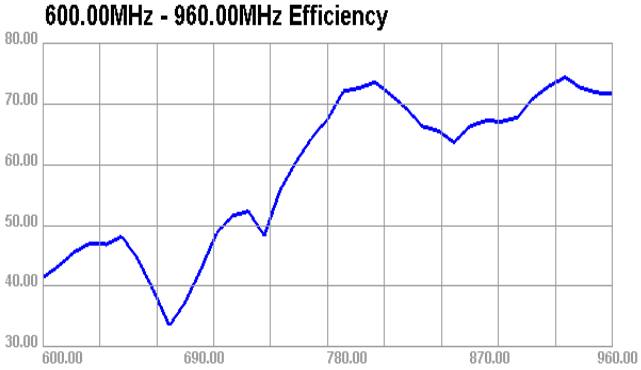
3.1.2 VSWR

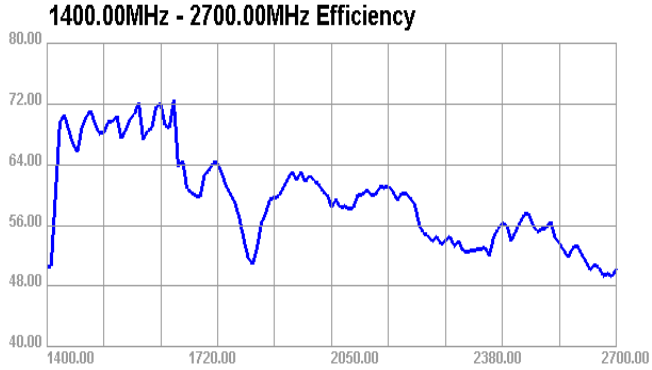


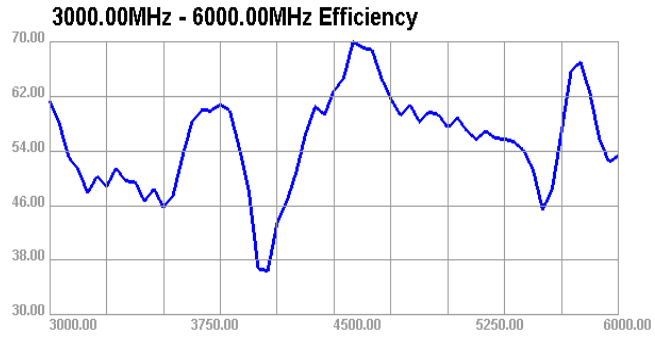
3.1.3 Return Loss



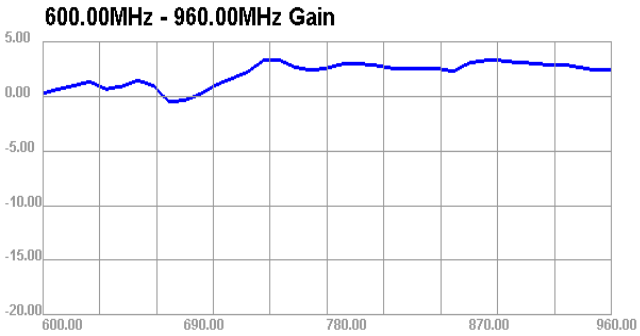
3.1.4 Efficiency

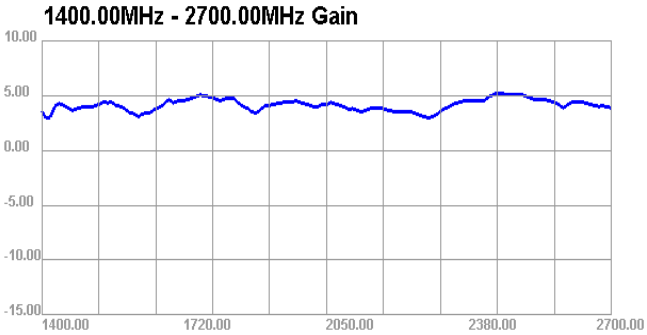


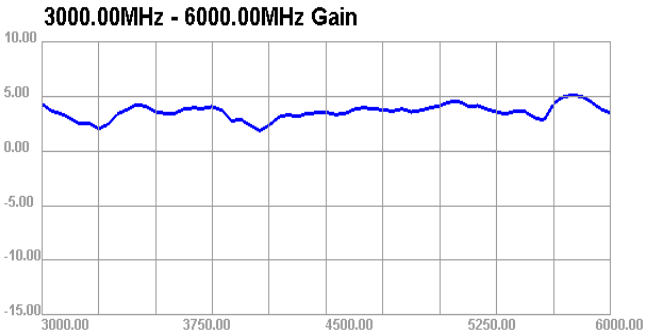




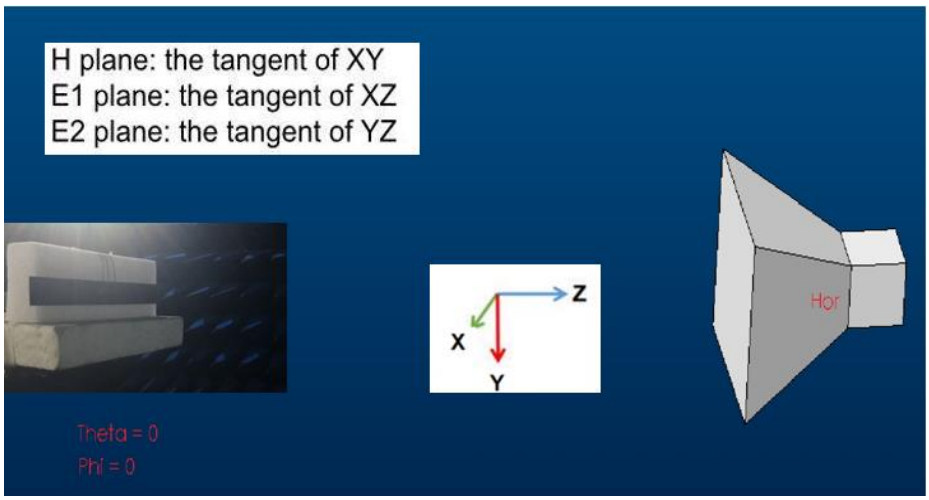
3.1.5 Gain

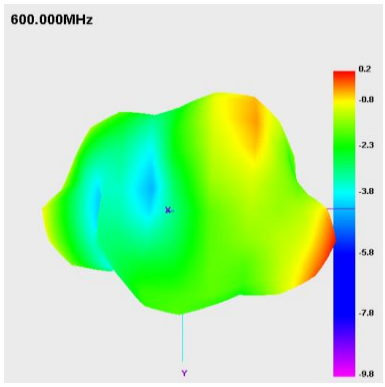


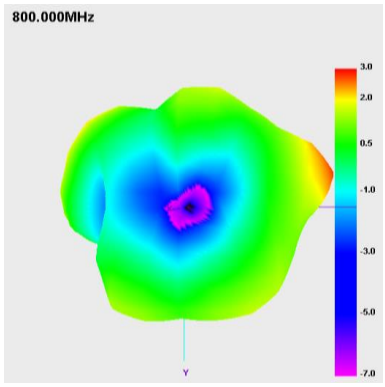


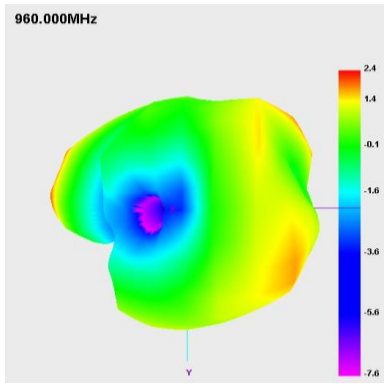


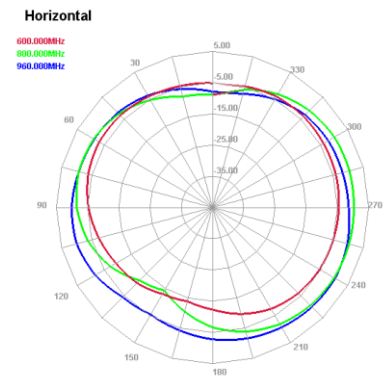
3.1.6 Directional pattern

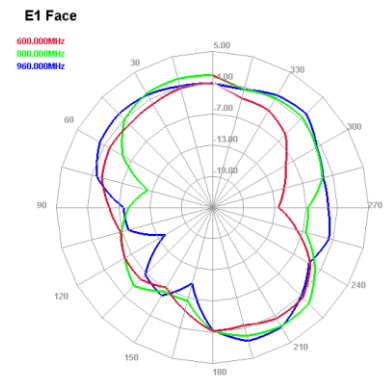


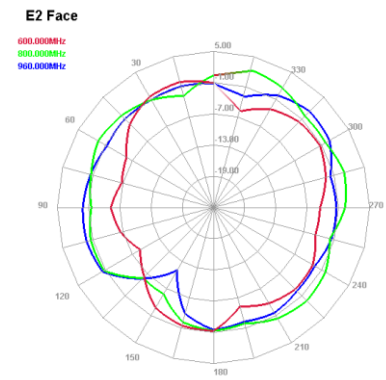

600.000MHz
0.2
-0.8
-2.3
-3.8
-5.8
-7.8
-9.8

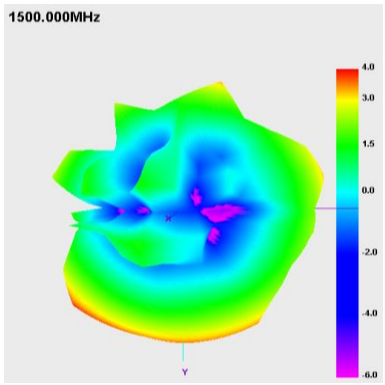

800.000MHz
3.0
2.0
0.5
-1.0
-3.0
-5.0
-7.0

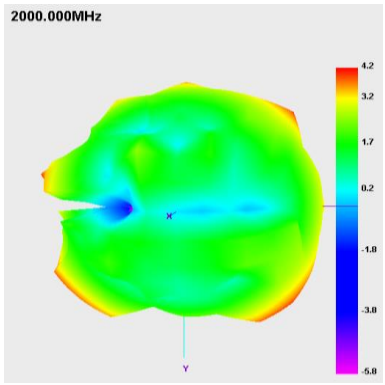

960.000MHz
2.4
1.4
-0.1
-1.6
-3.6
-5.6
-7.6

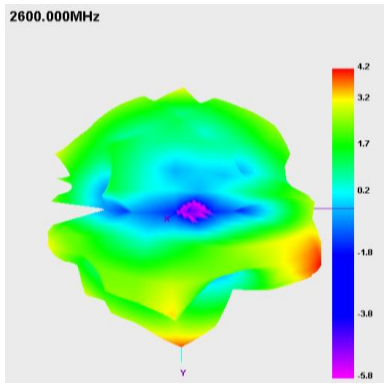

Horizontal
600.000MHz
800.000MHz
960.000MHz

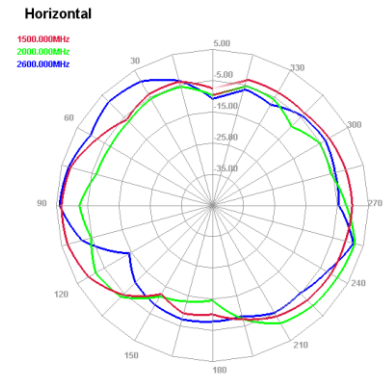

E1 Face
600.000MHz
800.000MHz
960.000MHz

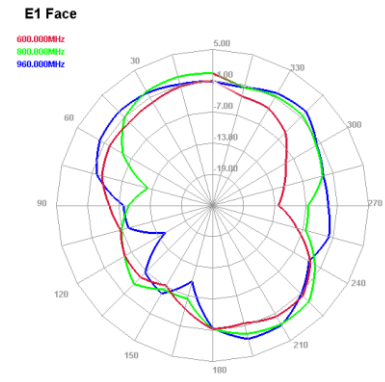

E2 Face
600.000MHz
800.000MHz
960.000MHz

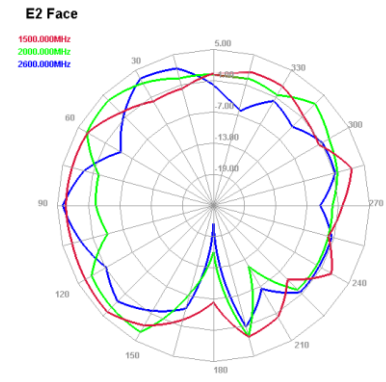

1500.000MHz
4.0
3.0
1.5
0.0
-2.0
-4.0
-6.0

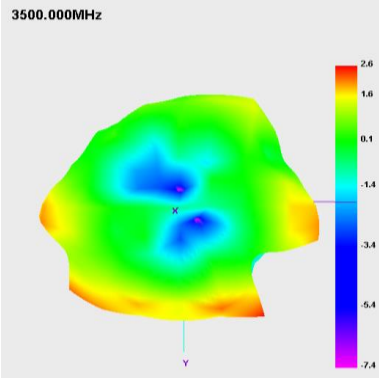

2000.000MHz
4.2
3.2
1.7
0.2
-1.8
-3.8
-5.8

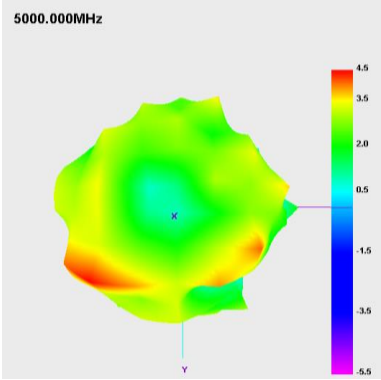

2600.000MHz
4.2
3.2
1.7
0.2
-1.8
-3.8
-5.8

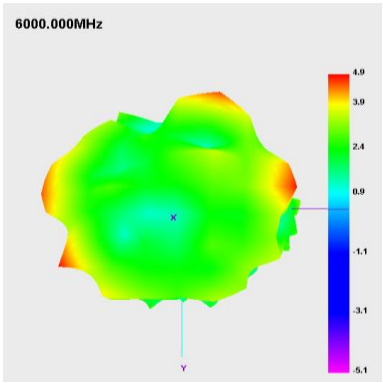

Horizontal
1500.000MHz
2000.000MHz
2600.000MHz

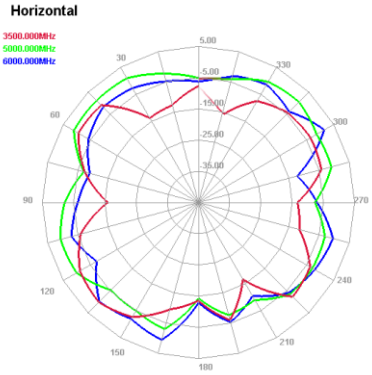

E1 Face
600.000MHz
800.000MHz
960.000MHz

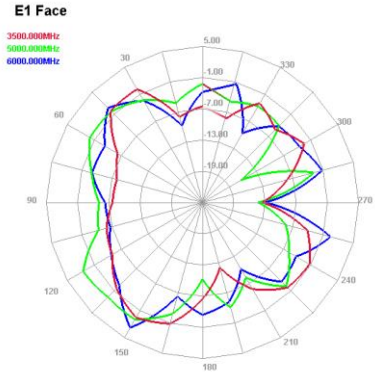

E2 Face
1500.000MHz
2000.000MHz
2600.000MHz

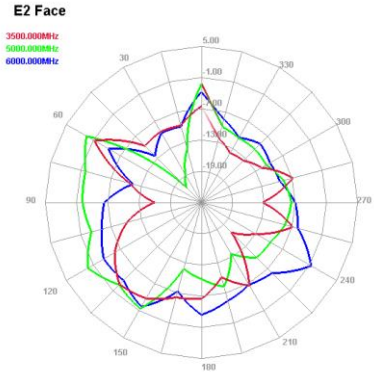

3500.000MHz
2.6
1.6
0.1
-1.4
-3.4
-5.4
-7.4
X
Y


5000.000MHz
4.5
3.5
2.0
0.5
-1.5
-3.5
-5.5
X
Y


6000.000MHz
4.9
3.9
2.4
0.9
-1.1
-3.1
-5.1
X
Y


Horizontal
3500.000MHz
5000.000MHz
6000.000MHz


E1 Face
3500.000MHz
5000.000MHz
6000.000MHz

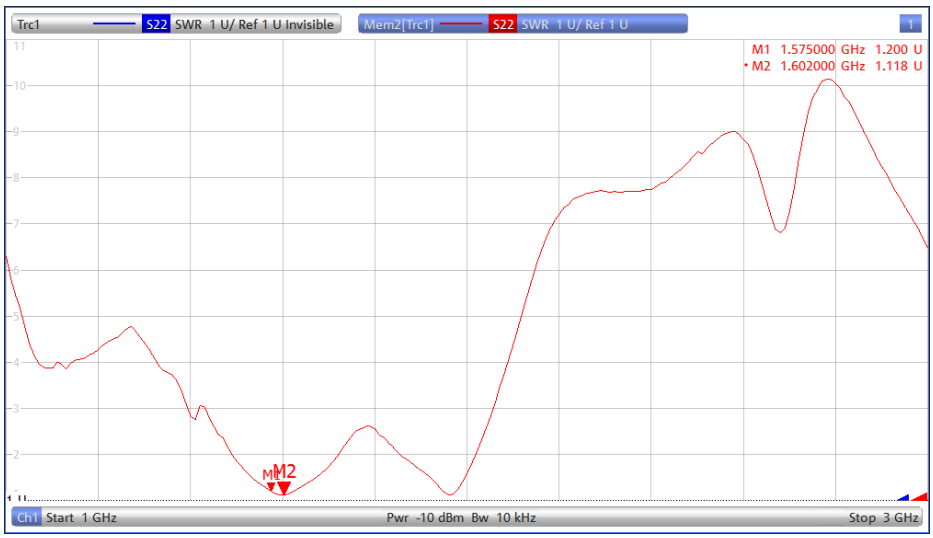

E2 Face
3500.000MHz
5000.000MHz
6000.000MHz

3.2 Cable 2: GPS&Glonass&Galileo

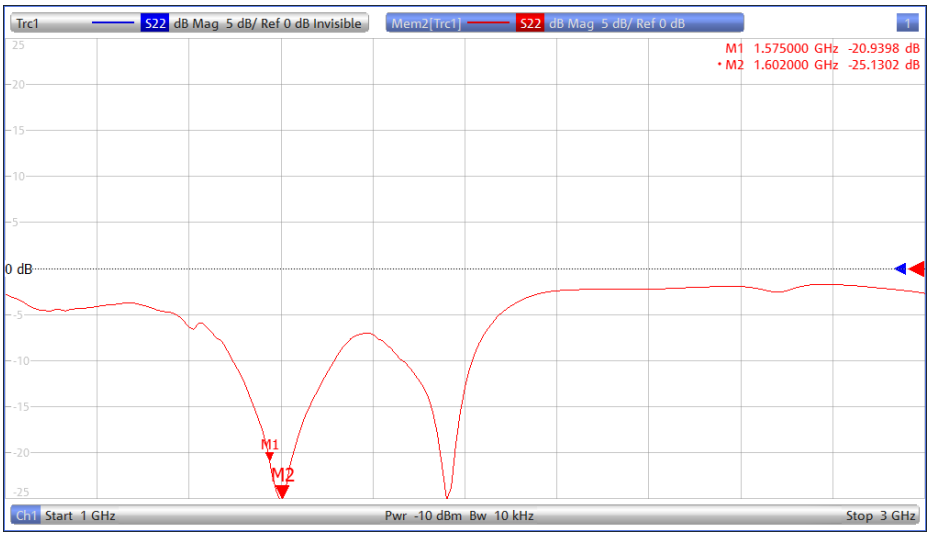
3.2.1 General Data

FRE (MHz)	1575	1602
VSWR	1.2	1.1
Return Loss	-20.9	-25.1
Eff (%)	62.5	65.5
Average Gain (dB)	-2.0	-1.8

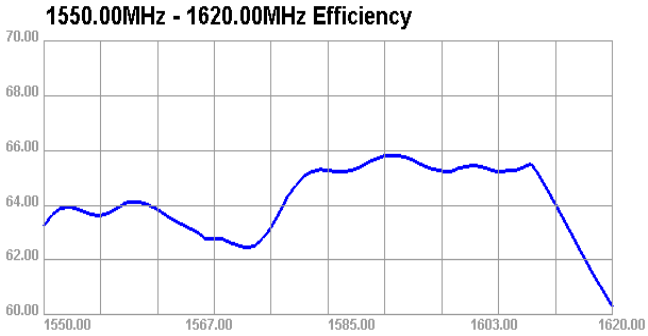
3.2.2 VSWR



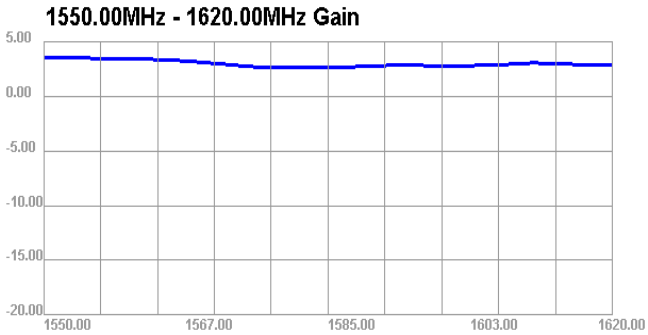
3.2.3 Return Loss



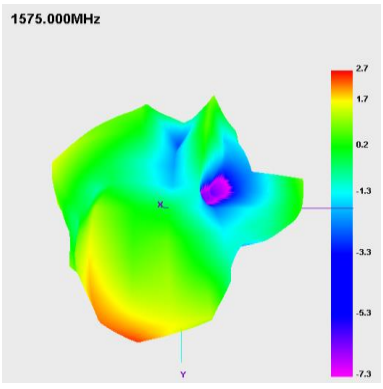
3.2.4 Efficiency

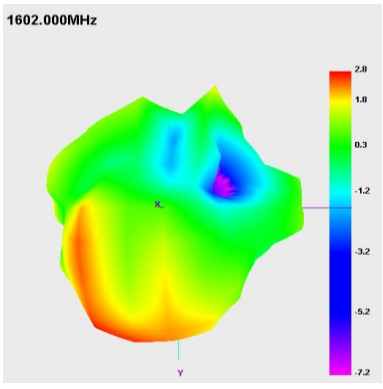


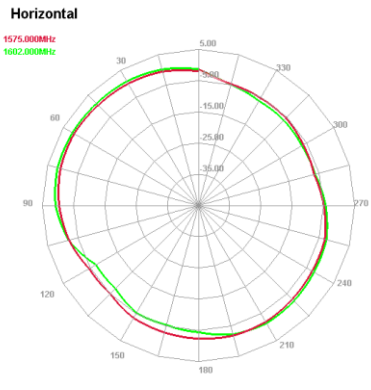
3.2.5 Gain

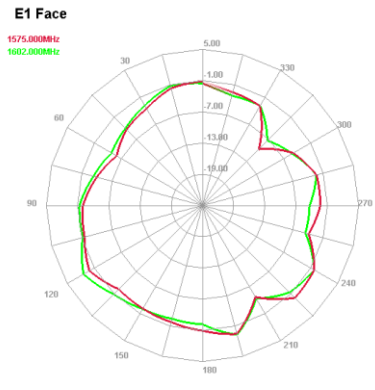


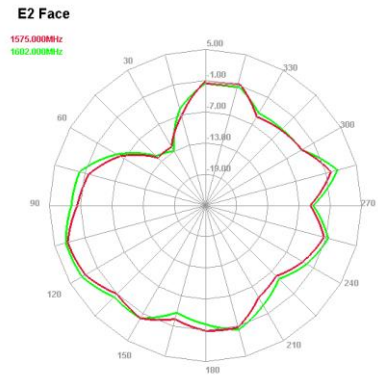
3.2.6 Directional pattern









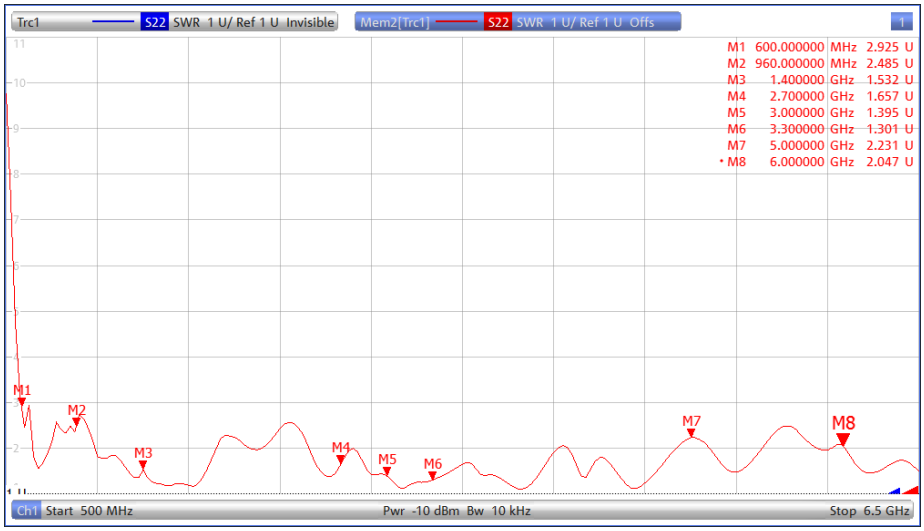


3.3 Cable 3: 5G&4G&3G&2G

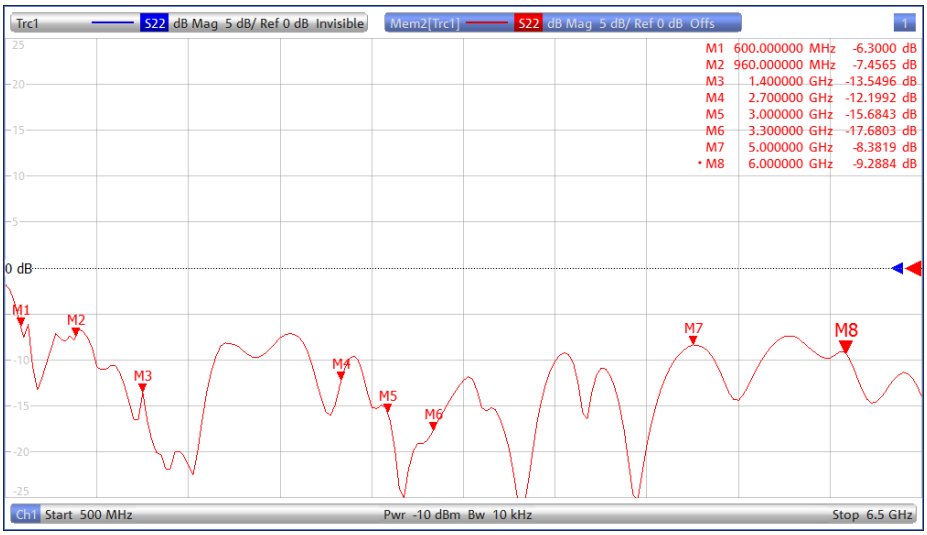
3.3.1 General Data

FRE (MHz)	600	960	1400	2700	3000	3300	5000	6000
VSWR	2.9	2.4	1.5	1.6	1.3	1.3	2.2	2.0
Return Loss	-6.3	-7.4	-13.5	-12.1	-15.6	-17.6	-8.3	-9.2
Eff (%)	38.0	57.5	59.3	51.3	58.5	49.5	54.2	50.5
Average	-4.2	-2.4	-2.3	-2.9	-2.3	-3.1	-2.7	-3.0

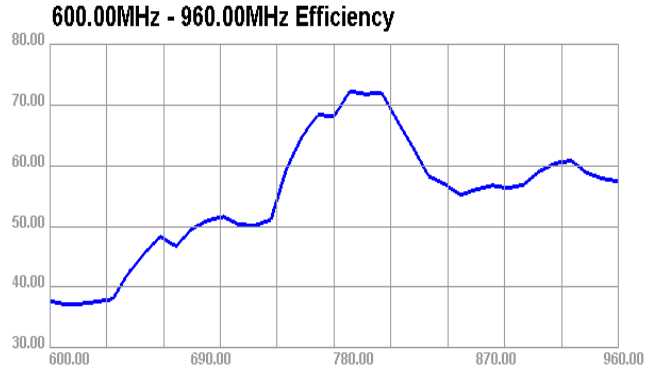
3.3.2 VSWR

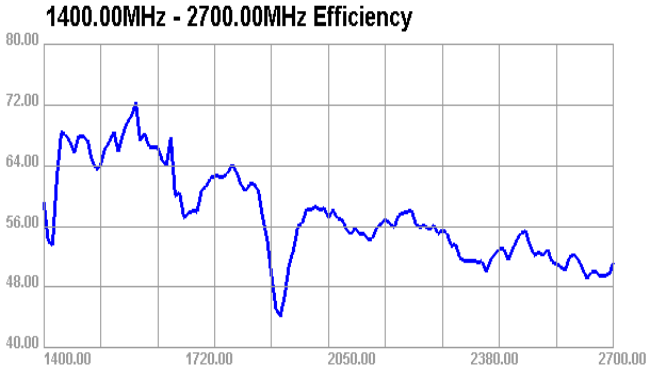


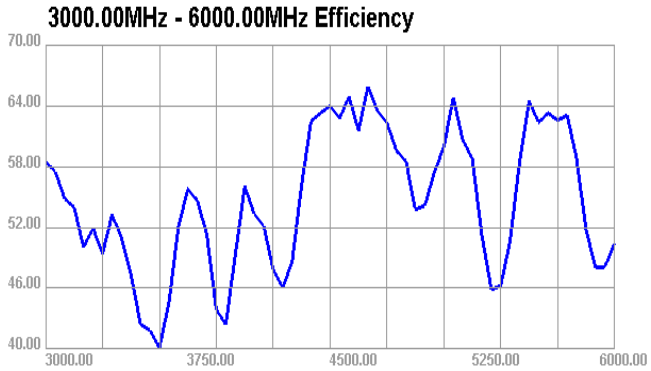
3.3.3 Return Loss



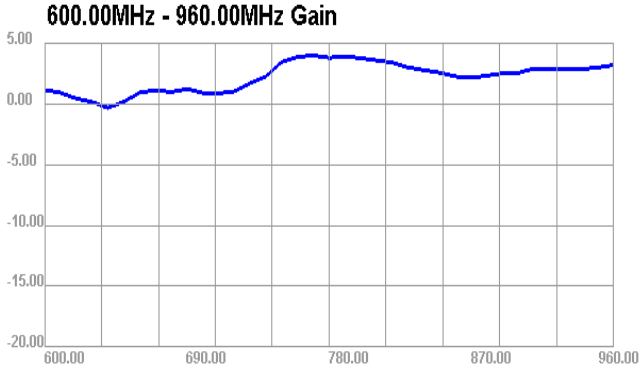
3.3.4 Efficiency

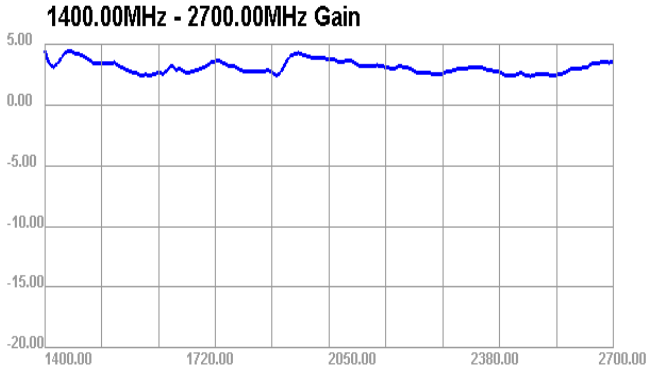


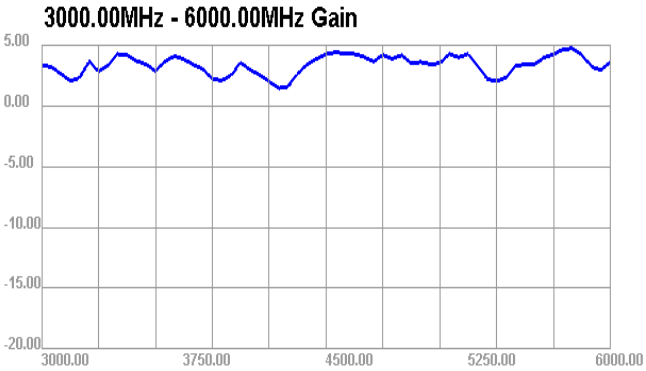




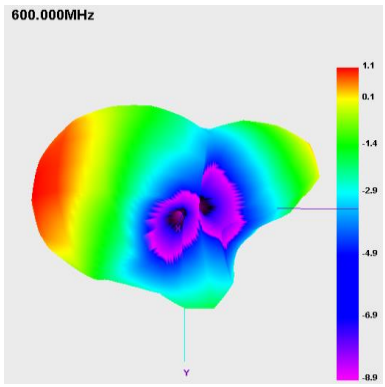
3.3.5 Gain

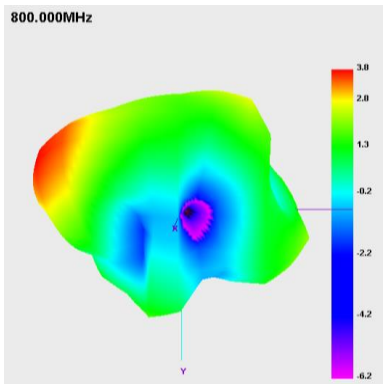


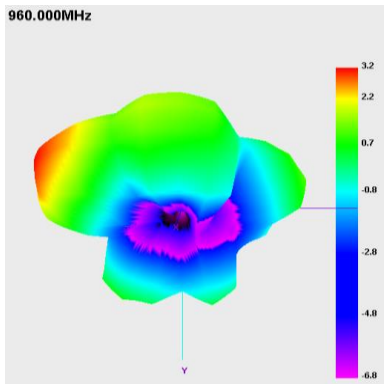


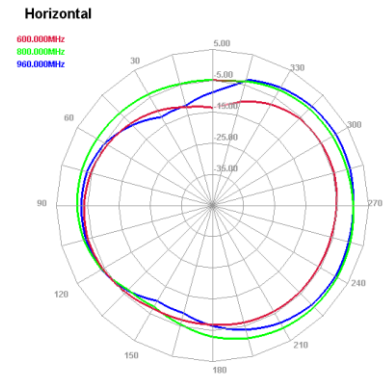


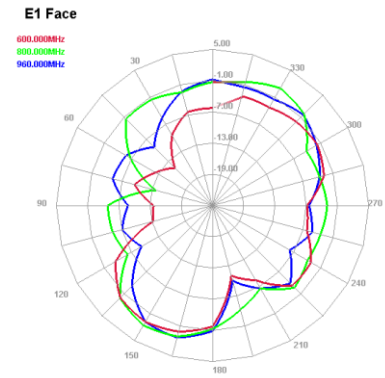
3.3.6 Directional pattern

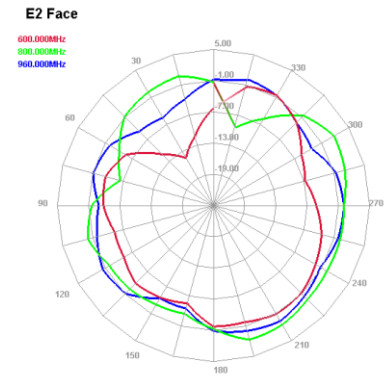


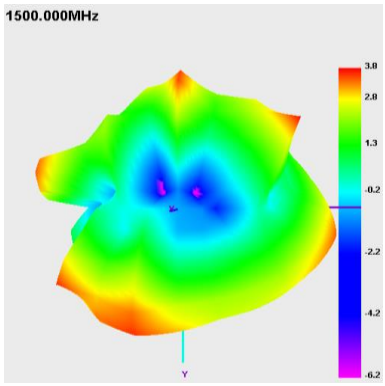


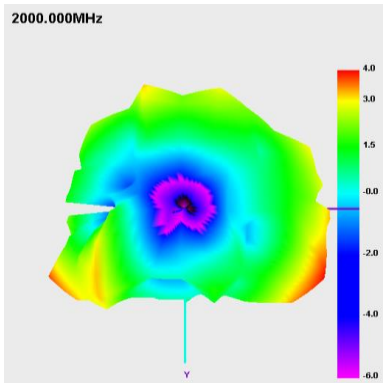


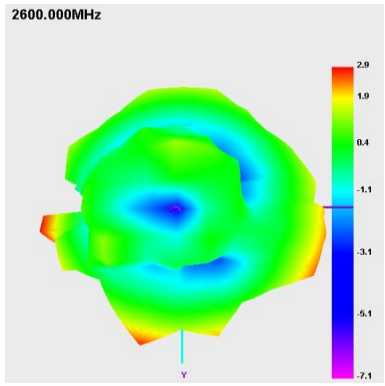


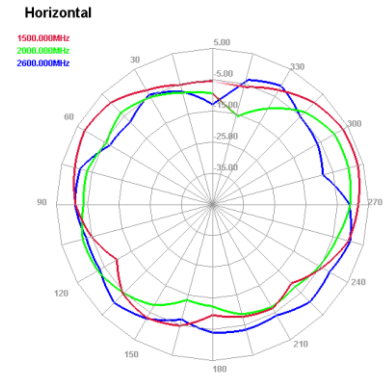


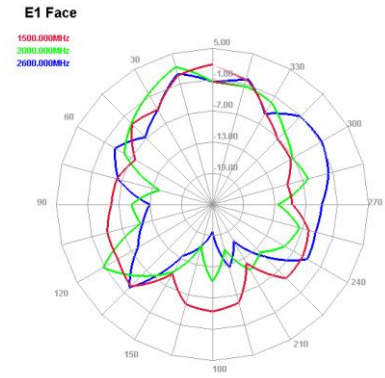


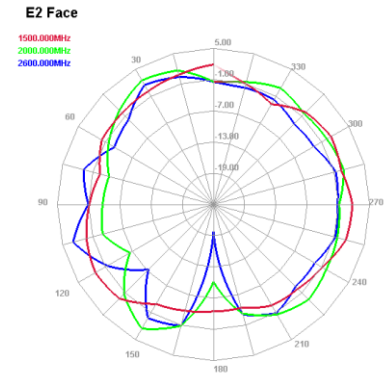


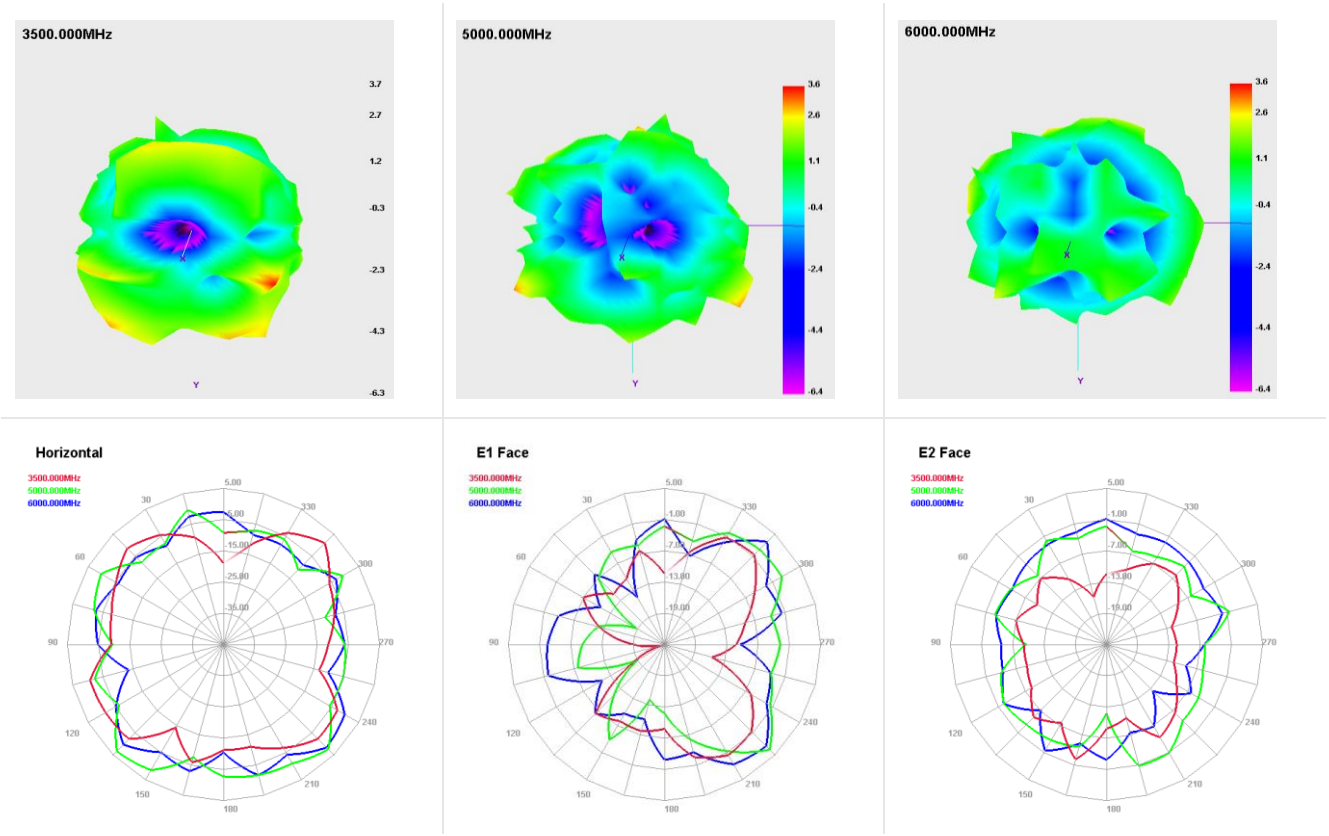






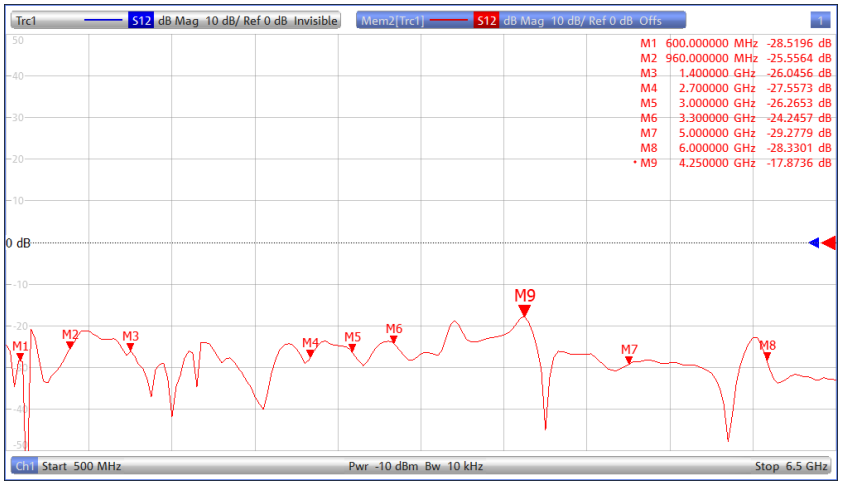






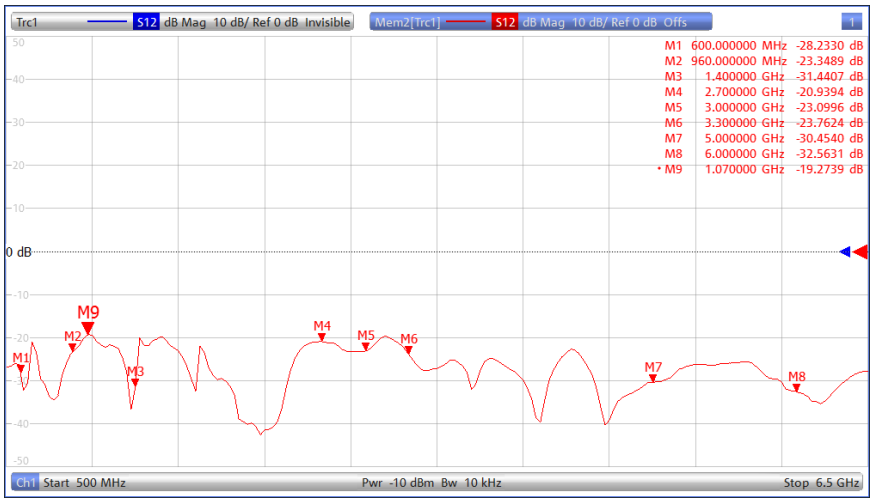
3.4 Isolation

3.4.1 Isolation of cables 1 and 2



3.4.2 Lsolation of cables 1 and 3

3.4.3 Lsolation of cables 2 and 3



4. Antenna Drawings