SUNNYWAY

SWB003

PN: SW19078EB56



Sunnyway Technology

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1. Electrical Specifications

Cable 1 Parameters

Standards	**2G/3G/4G**
Frequency range (MHz)	698~960MHz 1710~2170MHz 2300~2690MHz
Peak Gain (dBi)	-0.5~2.5dBi(698~960MHz) -0.4~3.0dBi(1710~2170MHz) 0.6~3.2dBi(2300~2690MHz)
Average Gain (dB)	-4.2~-1.8dB(698~960MHz) -3.5~-2.1dB(1710~2170MHz) -3.6~-2.5dB(2300~2690MHz)
Polarization mode	Linear
VSWR	<3.0
Return Loss	<-6.0
Efficiency (%)	38~65%(698~960MHz) 45~60%(1710~2170MHz) 45~55%(2300~2690MHz)
Radiation pattern	Omni-Directional
Output impedance (Ω)	50
Max. Input Power(W)	25

Cable 2 Parameters

Standards	**GPS/Galileo**	**GLONASS**
Band (MHz)	1575MHz	1602MHz
Frequency range (MHz)	1575.42MHz	1598--1610MHz
Peak Gain (dBi)	0.4dBi	0.3~0.9dBi
Average Gain (dB)	-3.1dB	-3.4~-2.6dB

VSWR	<2.0
Return Loss	<-15.0
Impedance(Ω)	50
Polarization	RHCP
Radiation Pattern	Hemispherical
Saw Filter	Pre-Filter
Active Gain (dB)	28dB
Noise-Figure(dB)	1dB(+25°C±10°C)
Supply Current(mA)	15mA
Supply Voltage(V)	1.5v-5.5v

2. Mechanical and Environmental Specification

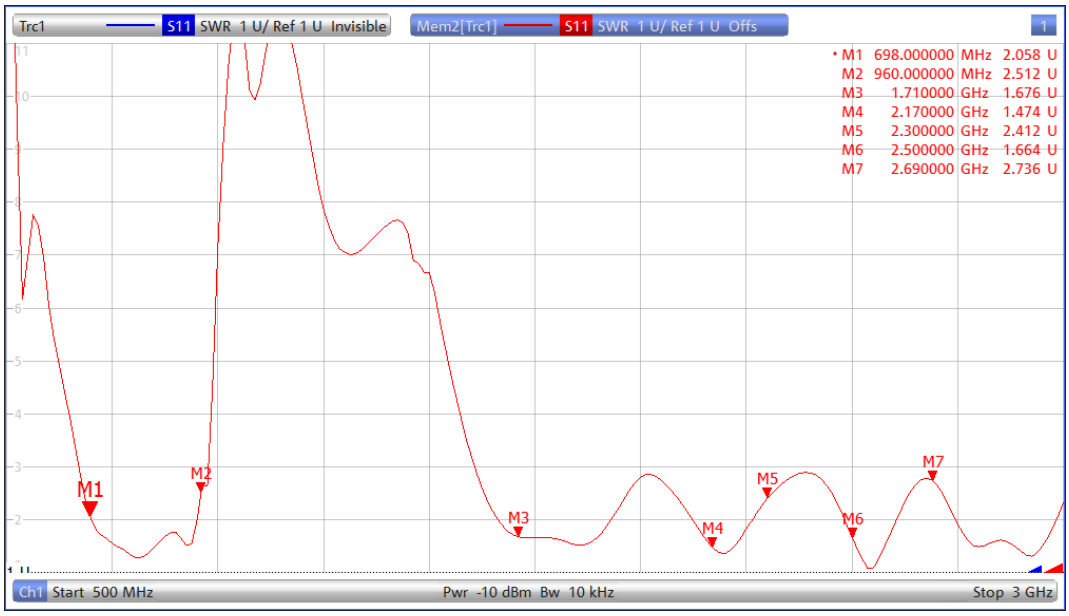
Mounting Type	Magnets
Connector Type	RG174
Antenna size(mm)	81.0 (φ) x 14.32 (L)
Material	External
Cable length(mm)	3000 (can be customized)
Operating Temperature (˚C)	- 40 ˚C ~ + 80 ˚C
Storage Temperature(˚C)	- 40 ˚C ~ + 80 ˚C

3. Antenna parameters

Cable 1: CELLULAR/LTE Tested with 50cm cable length - RG174 with C20N

FRE（MHz）	698	960	1710	2170	2300	2500	2690
VSWR	2.05	2.51	1.67	1.47	2.41	1.66	2.73
Return Loss	-9.26	-7.46	-11.94	-14.41	-7.66	-12.06	-6.65
Eff (%)	41.5	43.4	54.1	46.6	49.8	49.5	46.3
Average Gain(dB)	-3.82	-3.62	-2.67	-3.31	-3.03	-3.05	-3.34

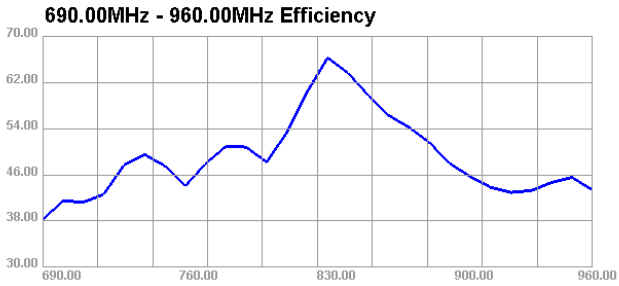
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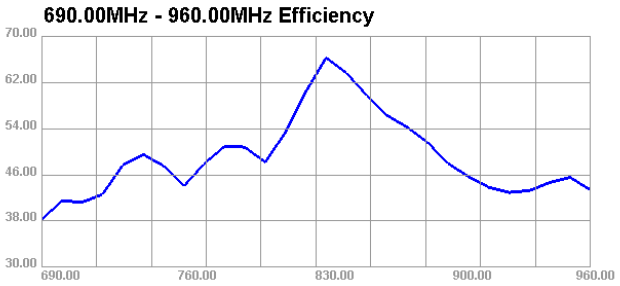


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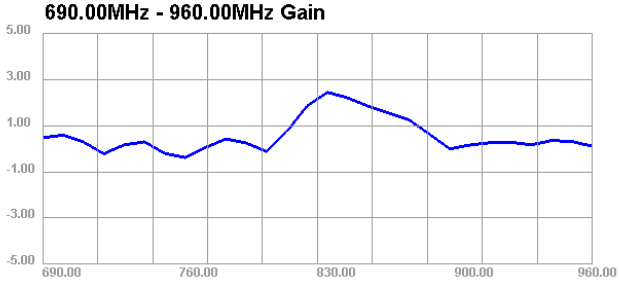


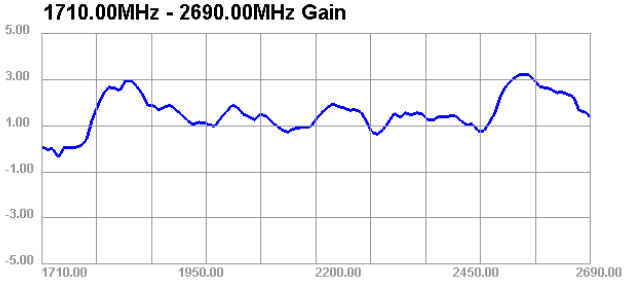
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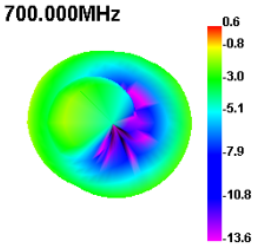


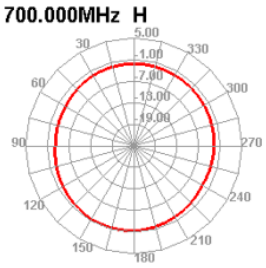
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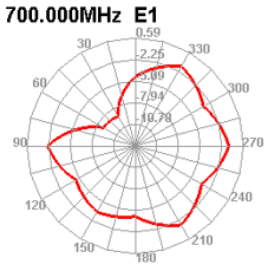


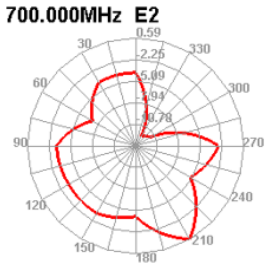


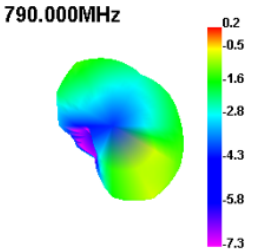
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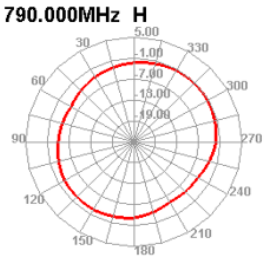


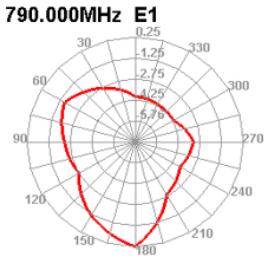


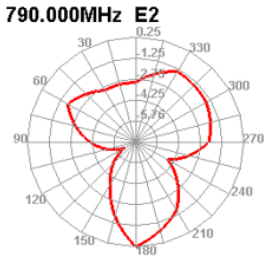


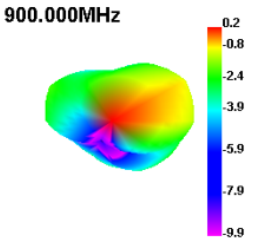


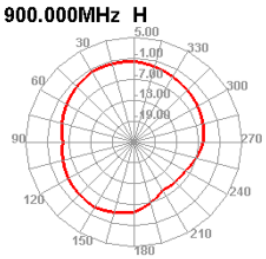


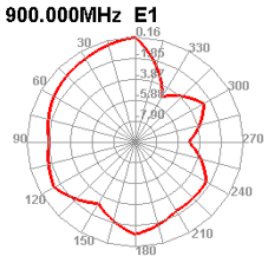


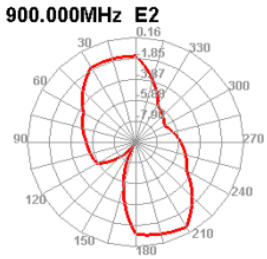


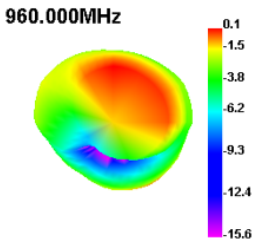


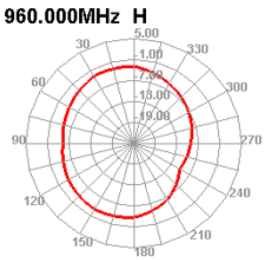


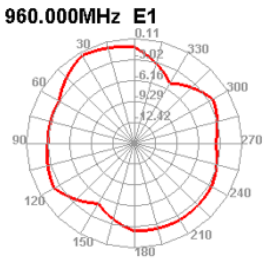


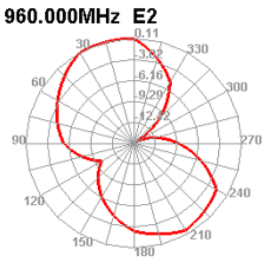




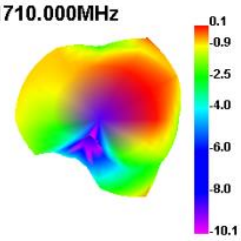




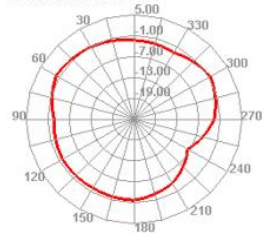




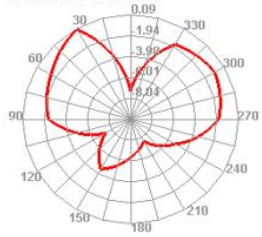
1710.000MHz



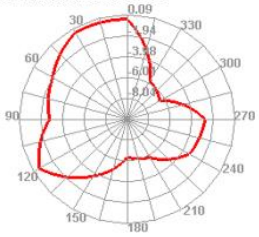
1710.000MHz H



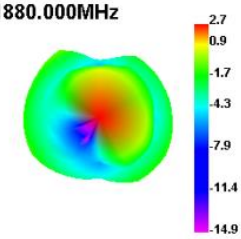
1710.000MHz E1



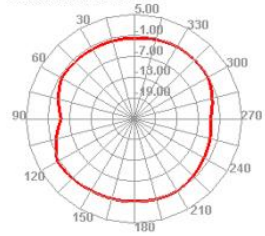
1710.000MHz E2



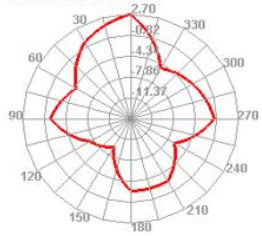
1880.000MHz



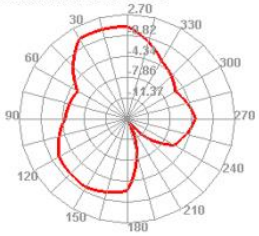
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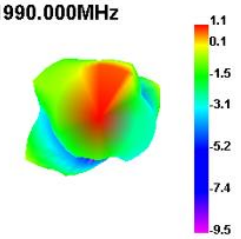
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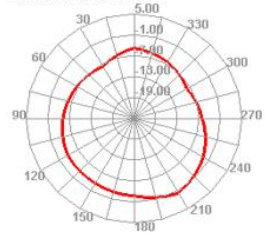
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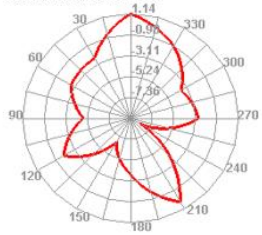
1990.000MHz



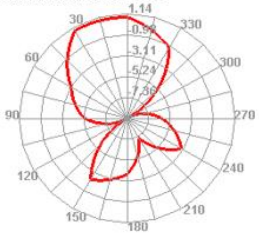
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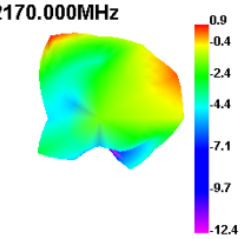
1990.000MHz E1



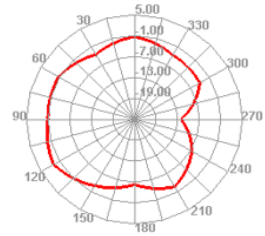
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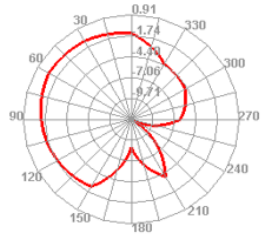
2170.000MHz



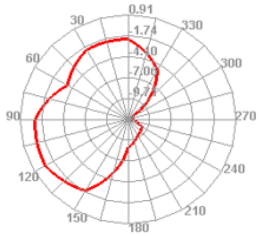
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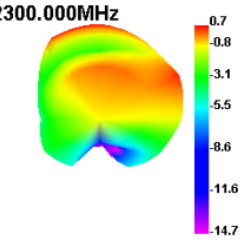
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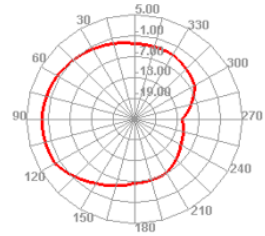
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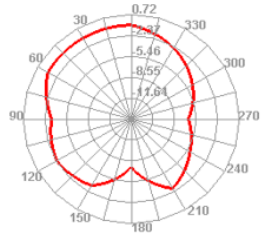
2300.000MHz



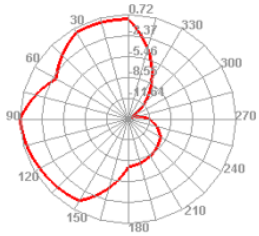
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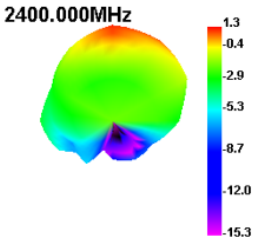


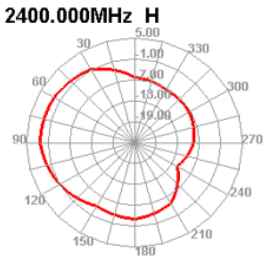
2300.000MHz E1

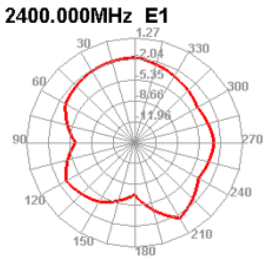


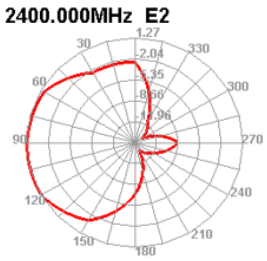
2300.000MHz E2

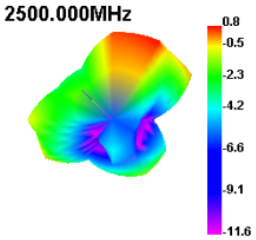


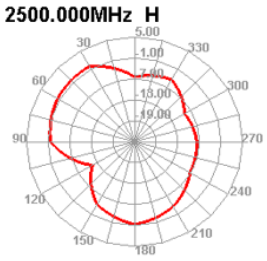

2400.000MHz
1.3
-0.4
-2.9
-5.3
-8.7
-12.0
-15.3

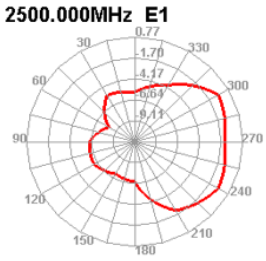

2400.000MHz H
5.00
1.00
-3.00
-13.00
-19.00

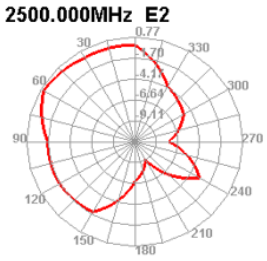

2400.000MHz E1
1.27
-2.04
-5.35
-8.66
-11.96

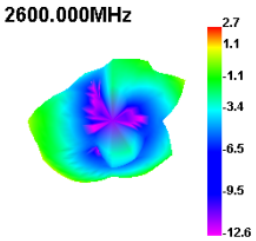

2400.000MHz E2
1.27
-2.04
-5.35
-8.66
-11.96

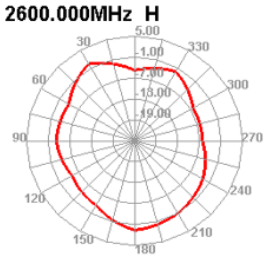

2500.000MHz
0.8
-0.5
-2.3
-4.2
-6.6
-9.1
-11.6

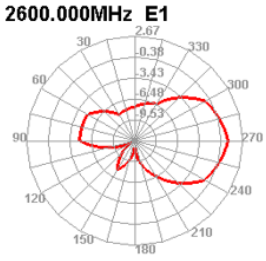

2500.000MHz H
5.00
1.00
-3.00
-13.00
-19.00

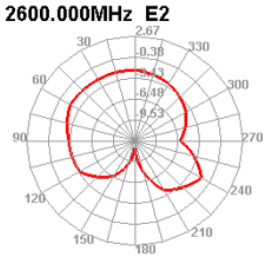

2500.000MHz E1
0.77
-1.70
-4.17
-6.64
-9.11

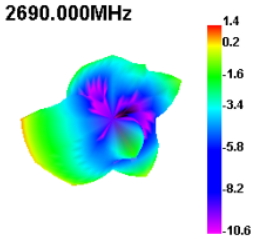

2500.000MHz E2
0.77
-1.70
-4.17
-6.64
-9.11

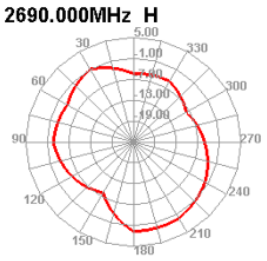

2600.000MHz
2.7
1.1
-1.1
-3.4
-6.5
-9.5
-12.6

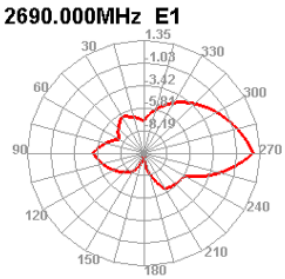

2600.000MHz H
5.00
1.00
-3.00
-13.00
-19.00

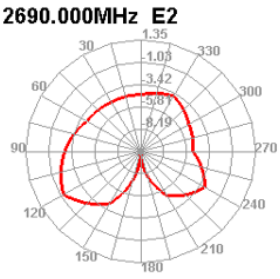

2600.000MHz E1
2.67
-0.38
-3.43
-6.48
-9.53


2600.000MHz E2
2.67
-0.38
-3.43
-6.48
-9.53


2690.000MHz
1.4
0.2
-1.6
-3.4
-5.8
-8.2
-10.6


2690.000MHz H
5.00
1.00
-3.00
-13.00
-19.00

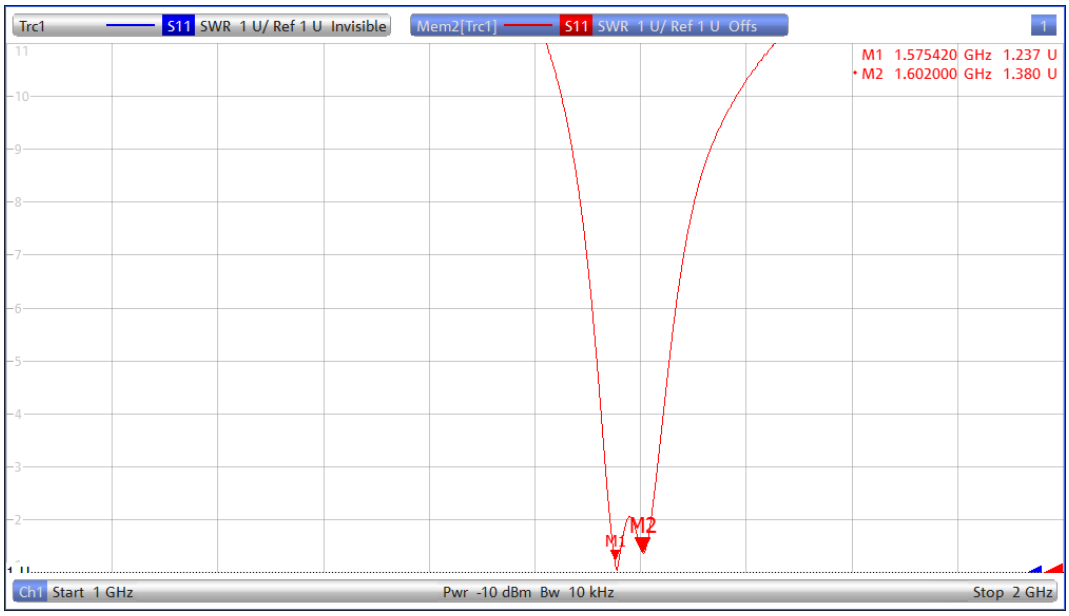

2690.000MHz E1
1.35
-1.03
-3.42
-5.81
-8.19


2690.000MHz E2
1.35
-1.03
-3.42
-5.81
-8.19

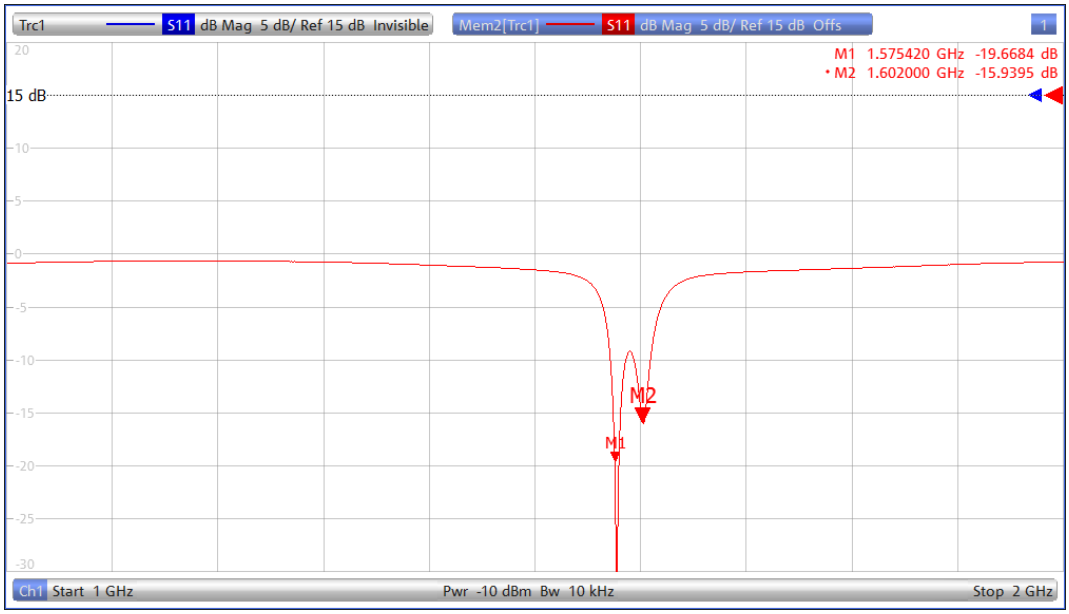
Cable 2: GNSS Tested with 50cm cable length - RG174 with C20N

FRE（MHz）	1575.42	1602
VSWR	1.23	1.38
Return Loss	-19.66	-15.93
Eff (%)	48.5	53.7
Average Gain(dB)	-3.1	-2.7

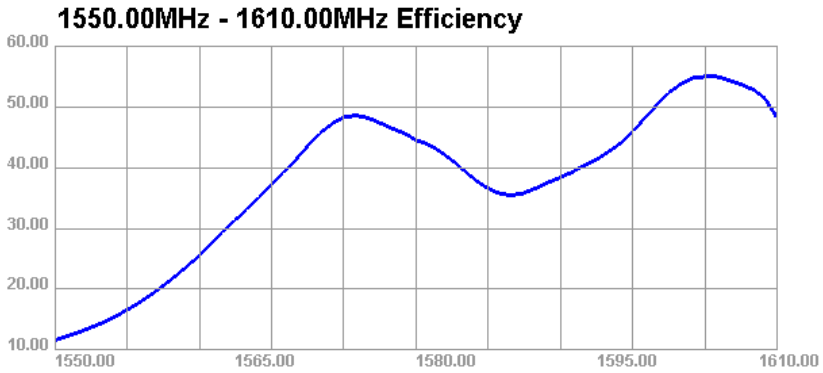
3.2.1 VSWR



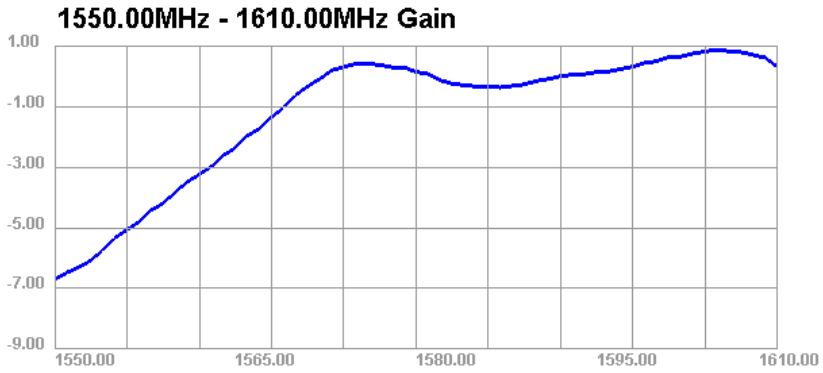
3.2.2 Return Loss



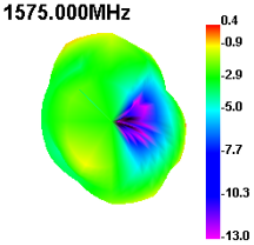
3.2.3 Efficiency

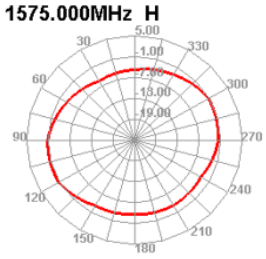


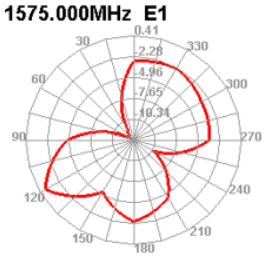
3.2.4 Gain

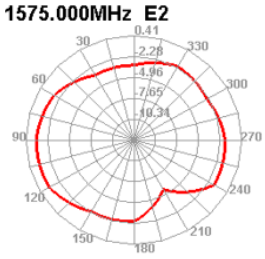


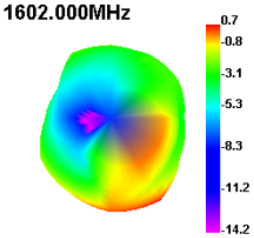
3.2.5 Directional pattern

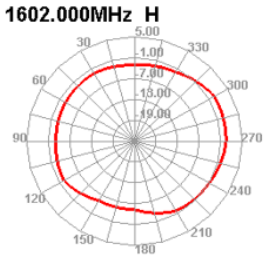


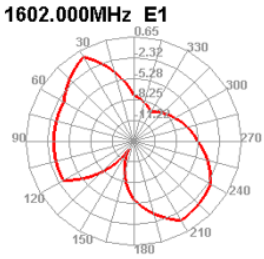


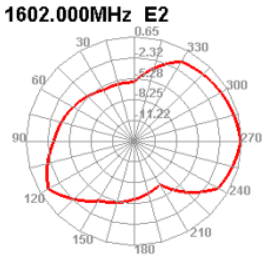




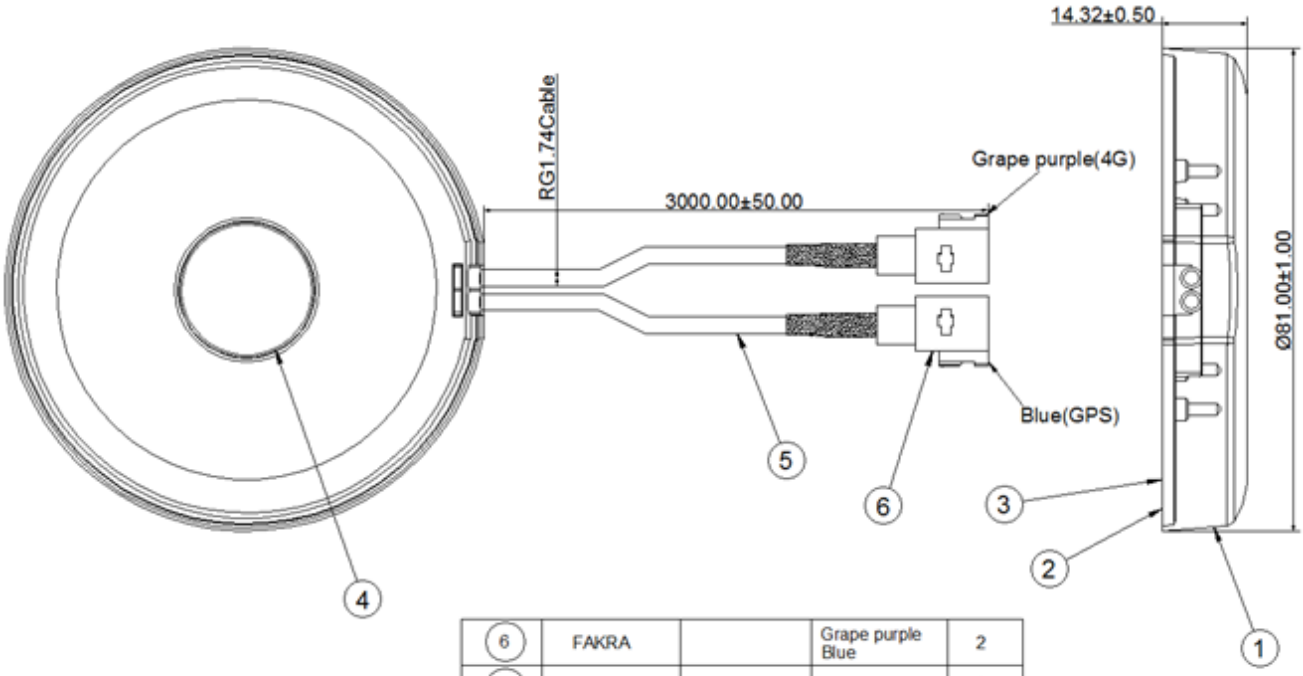








4. Antenna Drawing



6	FAKRA		Grape purple Blue	2
5	Cable	RG174	black	2
4	Magnets		Silver White	1
3	Tags	pvc	black	1
2	Lower Shell	ABS	black	1
1	Upper Shell	ABS	black	1
Series	Component name	Material	Color	Quantity