UHF WHIP ANTENNA

Model : TH900Q

FOR RFID UHF & ISM & ZigBee

1. GENERAL DESCRIPTION

P/N
TH900Q-SMA(F)

1.1Electrica Properties

Parameter	Description
Frequency Band	860~930MHz
Nominal Impedance	50 ohm
Polarization	Vertical
Return Loss	Please See Data-1
V.S.W.R	2.0:1

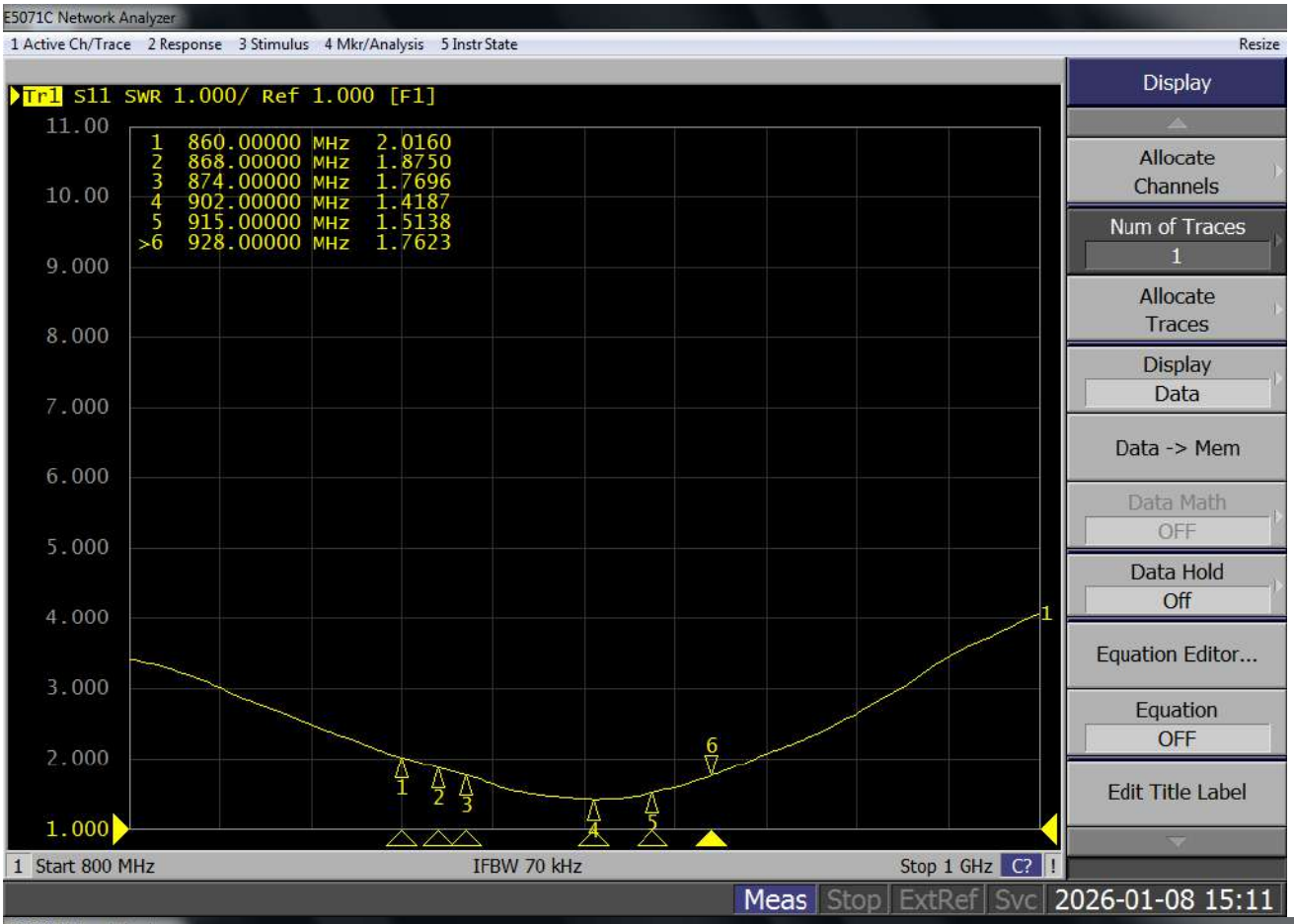
1.2 Mechanical Properties

Parameter	Description
Antenna Type	External Antenna
Touch Type	Screw Type
Connector Type	SMA (Female)
Antenna Dimensions	OD14.1 x182mm±2
Color	Black
Operating Temperature Range	-30°C~+70°C
Storage Temperature Range	-30°C~+70°C
Waterproof	IPX6

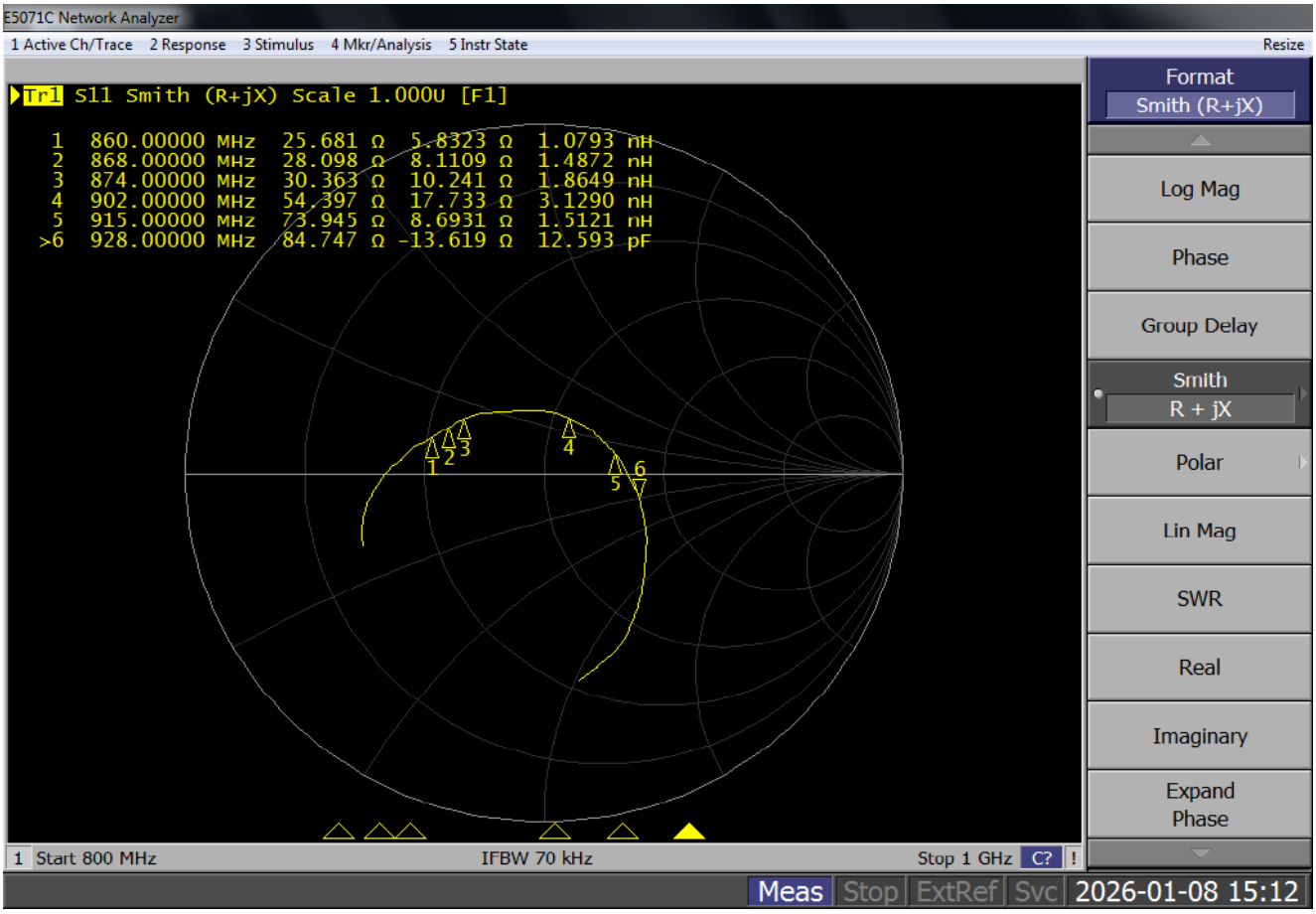
2. Appearance

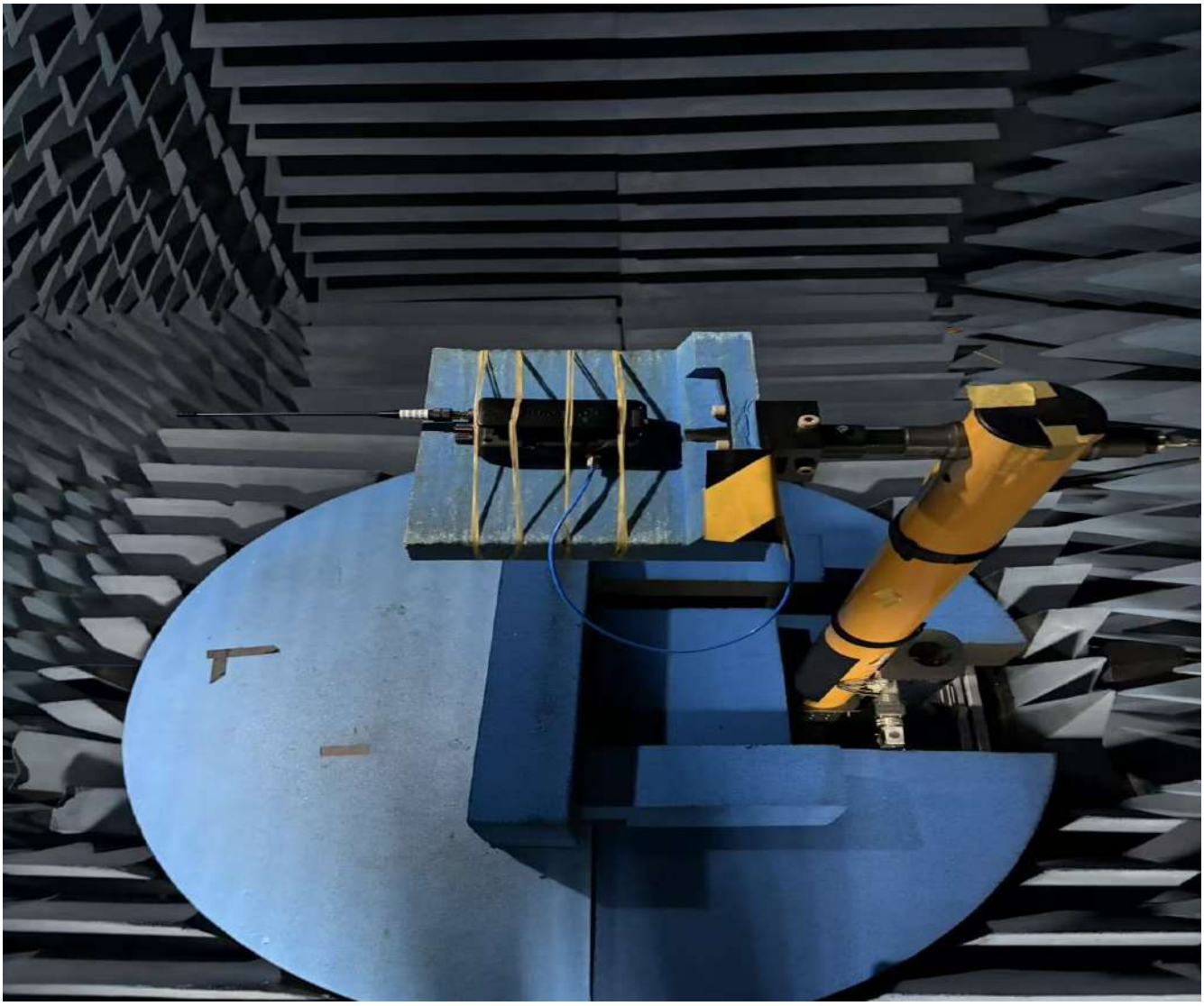
3. FREQUENCY


Marker 6
928.0000000 MHz
More Markers
Marker 5
Marker 6
Marker 7
Marker 8
Marker 9
Return
Meas
2026-01-08 15:11


E5071C Network Analyzer
1 Active Ch/Trace 2 Response 3 Stimulus 4 Mkr/Analysis 5 Instr State
Resize
Tr1 S11 SWR 1.000/ Ref 1.000 [F1]
1 860.00000 MHz 2.0160
2 868.00000 MHz 1.8750
3 874.00000 MHz 1.7696
4 902.00000 MHz 1.4187
5 915.00000 MHz 1.5138
>6 928.00000 MHz 1.7623
11.00
10.00
9.000
8.000
7.000
6.000
5.000
4.000
3.000
2.000
1.000
1 Start 800 MHz
IFBW 70 kHz
Stop 1 GHz
C?
!
Display
Allocate Channels
Num of Traces
1
Allocate Traces
Display
Data
Data -> Mem
Data Math
OFF
Data Hold
Off
Equation Editor...
Equation
OFF
Edit Title Label
Meas
Stop
ExtRef
Svc
2026-01-08 15:11


E5071C Network Analyzer
1 Active Ch/Trace 2 Response 3 Stimulus 4 Mkr/Analysis 5 Instr State
Resize
Tr1 S11 Log Mag 10.00dB/ Ref 0.000dB [F1]
1 860.00000 MHz -9.8548 dB
2 868.00000 MHz -10.732 dB
3 874.00000 MHz -11.595 dB
4 902.00000 MHz -15.890 dB
5 915.00000 MHz -14.269 dB
>6 928.00000 MHz -11.551 dB
50.00
40.00
30.00
20.00
10.00
0.000
-10.00
-20.00
-30.00
-40.00
-50.00
1 Start 800 MHz
IFBW 70 kHz
Stop 1 GHz
C?
!
Format
Log Mag
Log Mag
Phase
Group Delay
Smith
Polar
Lin Mag
SWR
Real
Imaginary
Expand Phase
Meas
Stop
ExtRef
Svc
2026-01-08 15:11

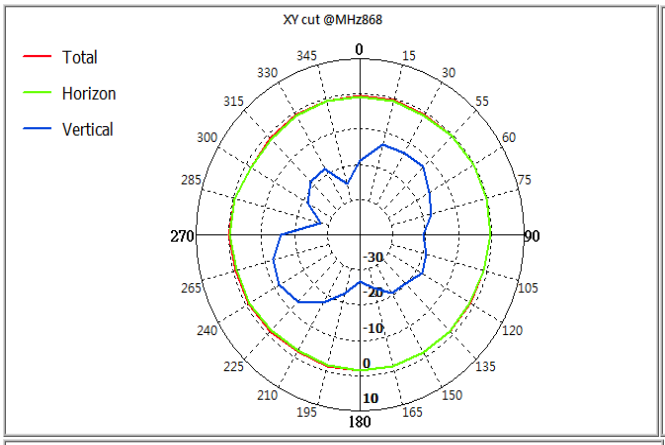

E5071C Network Analyzer
1 Active Ch/Trace 2 Response 3 Stimulus 4 Mkr/Analysis 5 Instr State
Resize
Tr1 S11 Smith (R+jX) Scale 1.000U [F1]
1 860.00000 MHz 25.681 Ω 5.8323 Ω 1.0793 nH
2 868.00000 MHz 28.098 Ω 8.1109 Ω 1.4872 nH
3 874.00000 MHz 30.363 Ω 10.241 Ω 1.8649 nH
4 902.00000 MHz 54.397 Ω 17.733 Ω 3.1290 nH
5 915.00000 MHz 73.945 Ω 8.6931 Ω 1.5121 nH
>6 928.00000 MHz 84.747 Ω -13.619 Ω 12.593 pF
1
2
3
4
5
6
1 Start 800 MHz
IFBW 70 kHz
Stop 1 GHz
C?
!
Format
Smith (R+jX)
Log Mag
Phase
Group Delay
Smith
R + jX
Polar
Lin Mag
SWR
Real
Imaginary
Expand
Phase
Meas
Stop
ExtRef
Svc
2026-01-08 15:12

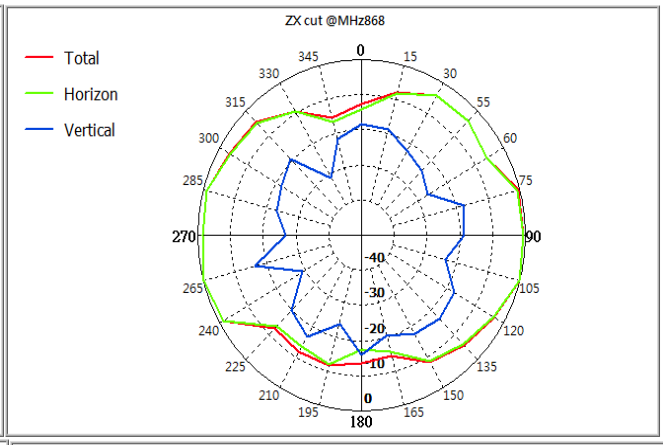


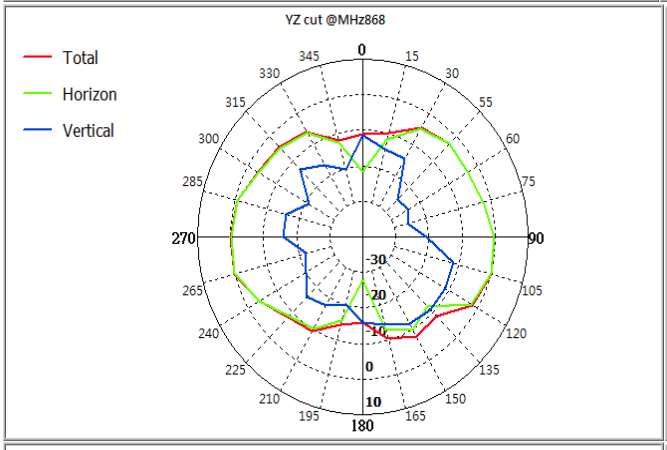
3D Total

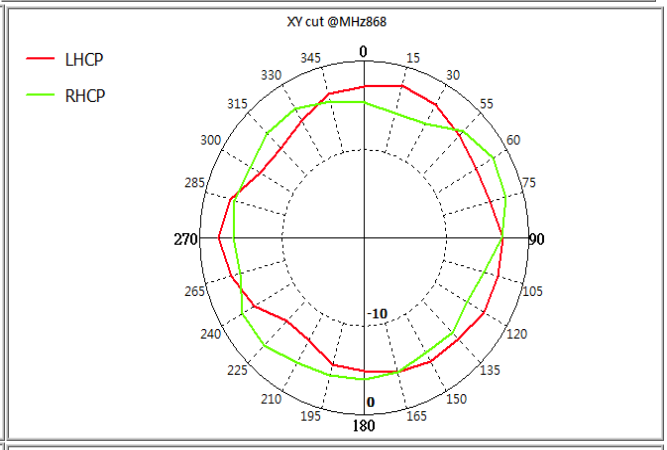
Frequency (MHz)	Upper Hem. PRP (dBm)	Lower HEM. PRP (dBm)	Efficiency (dB)	Efficiency (%)	Gain (dBi)	Tot. Rad.Pwr. (dBm)
850 MHz	-7.16	-6.10	-3.59	43.79	0.85	-3.59
860 MHz	-6.30	-5.59	-2.92	51.07	1.43	-2.92
868 MHz	-6.24	-5.94	-3.08	49.25	1.10	-3.08
874 MHz	-6.18	-6.30	-3.23	47.55	0.58	-3.23
902 MHz	-4.02	-5.93	-1.86	65.20	1.83	-1.86
915 MHz	-3.90	-6.52	-2.00	63.07	1.81	-2.00
928 MHz	-4.08	-7.12	-2.33	58.51	1.62	-2.33
930 MHz	-4.23	-7.37	-2.51	56.13	1.59	-2.51
960 MHz	-5.65	-8.94	-3.98	40.02	0.51	-3.98

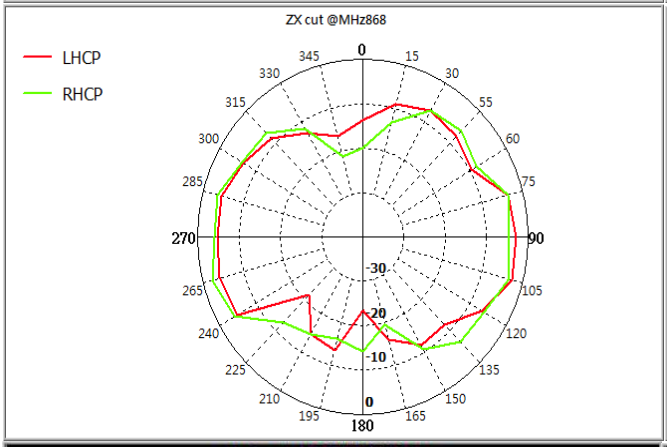
868Mhz:

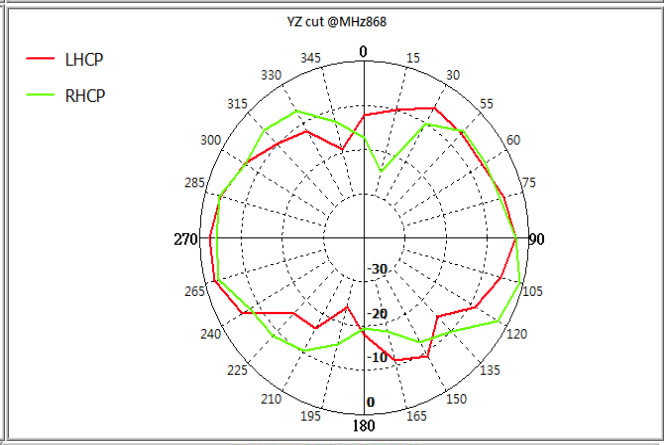

XY cut @MHz868
Total
Horizon
Vertical

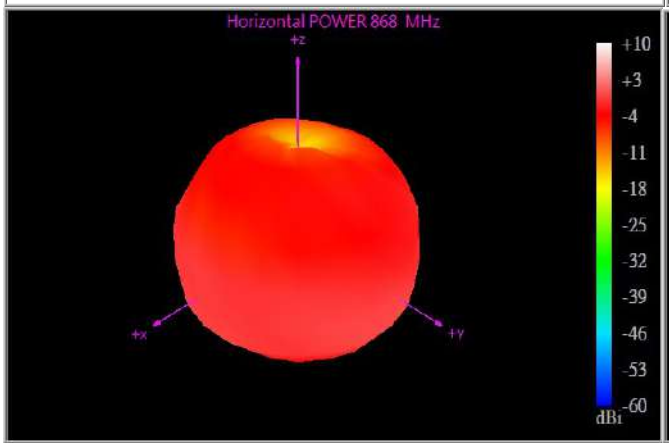

ZX cut @MHz868
Total
Horizon
Vertical

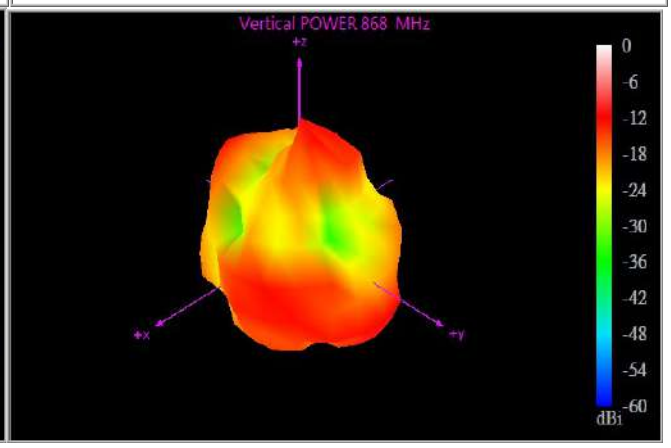

YZ cut @MHz868
Total
Horizon
Vertical

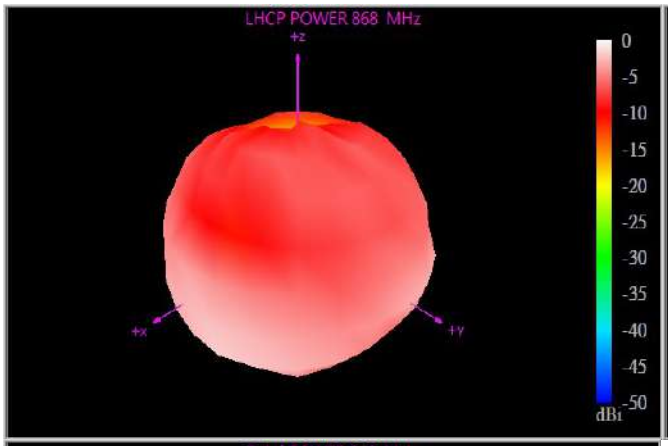

XY cut @MHz868
LHCP
RHCP

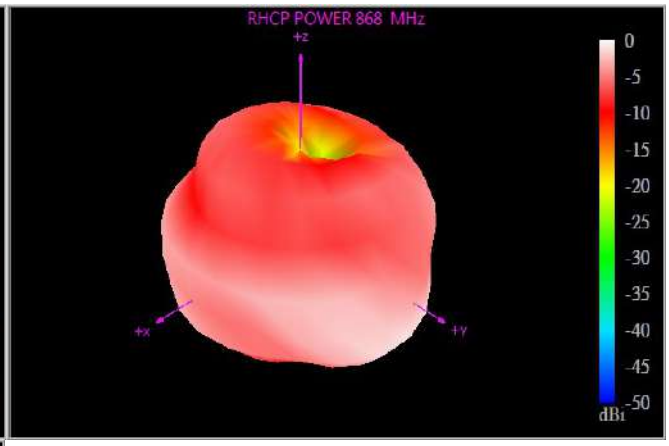

ZX cut @MHz868
LHCP
RHCP

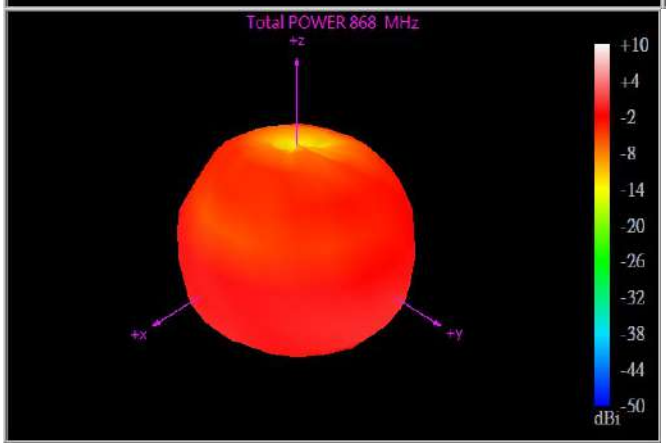

YZ cut @MHz868
LHCP
RHCP


Horizontal POWER 868 MHz
+z
+x
+y
+10
+3
-4
-11
-18
-25
-32
-39
-46
-53
-60
dBi

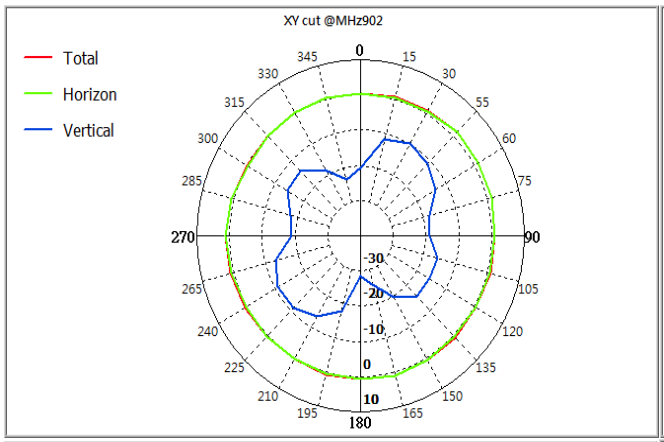

Vertical POWER 868 MHz
+z
+x
+y
0
-6
-12
-18
-24
-30
-36
-42
-48
-54
-60
dBi

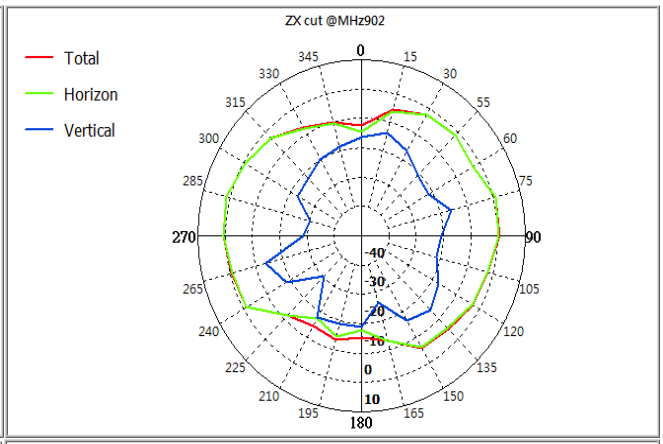

LHCP POWER 868 MHz
+z
+x
+y
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
-50
dBi

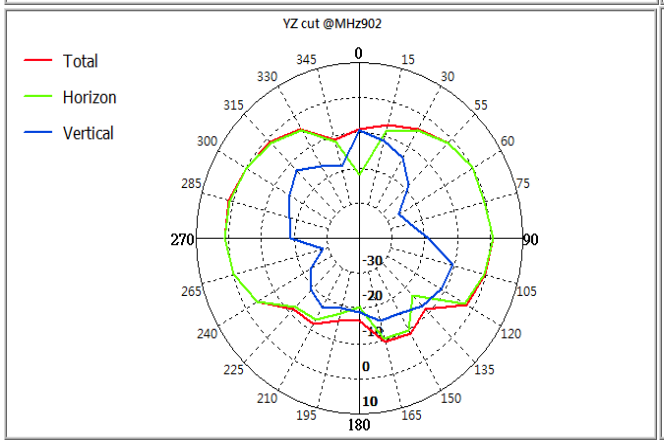

RHCP POWER 868 MHz
+z
+x
+y
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
-50
dBi

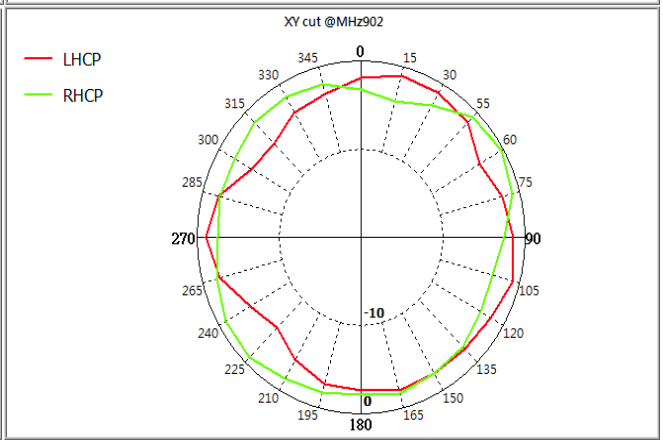

Total POWER 868 MHz
+z
+x
+y
+10
+4
-2
-8
-14
-20
-26
-32
-38
-44
-50
dBi

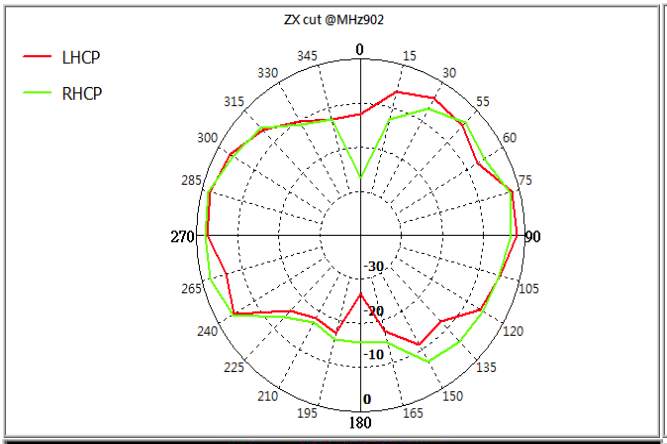
902Mhz:

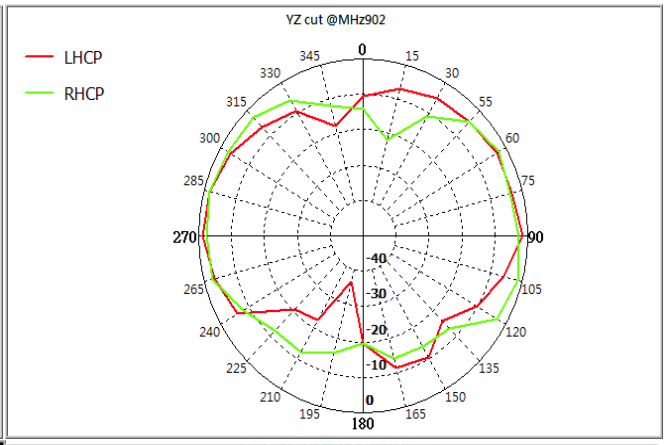

XY cut @MHz902
Total
Horizon
Vertical

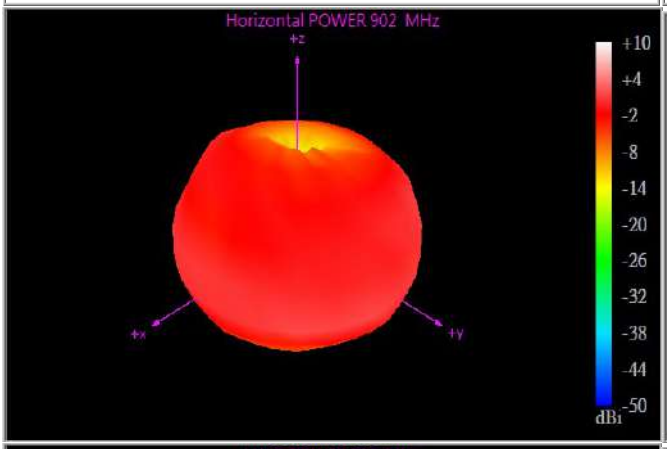

ZX cut @MHz902
Total
Horizon
Vertical

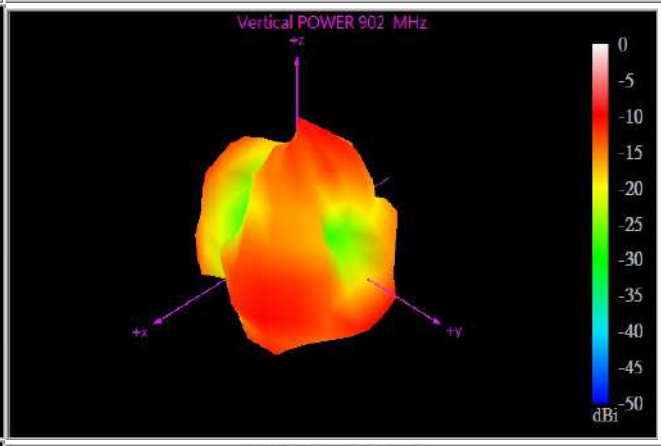

YZ cut @MHz902
Total
Horizon
Vertical

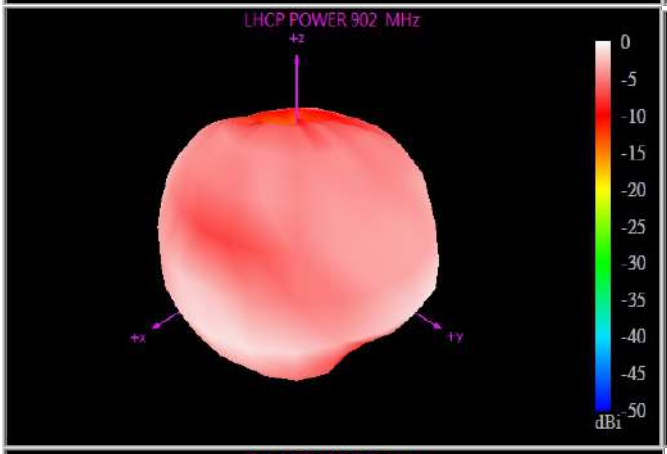

XY cut @MHz902
LHCP
RHCP

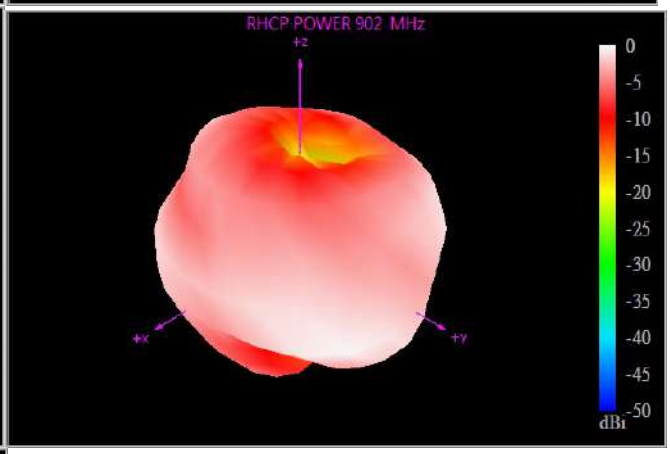

ZX cut @MHz902
LHCP
RHCP
0
15
30
55
60
75
90
105
120
135
150
165
180
195
210
225
240
265
270
285
300
315
330
345
-30
-20
-10
0

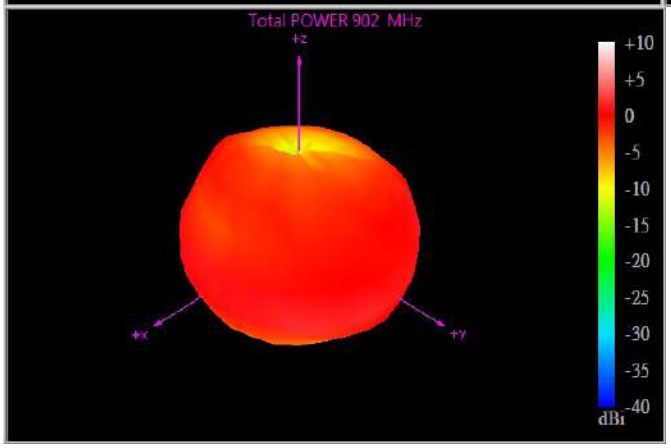

YZ cut @MHz902
LHCP
RHCP
0
15
30
55
60
75
90
105
120
135
150
165
180
195
210
225
240
265
270
285
300
315
330
345
-40
-30
-20
-10
0


Horizontal POWER 902 MHz
+z
+x
+y
+10
+4
-2
-8
-14
-20
-26
-32
-38
-44
-50
dBi

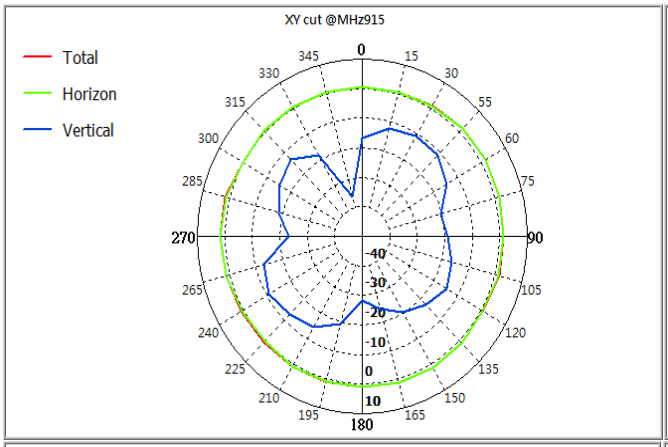

Vertical POWER 902 MHz
+z
+x
+y
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
-50
dBi

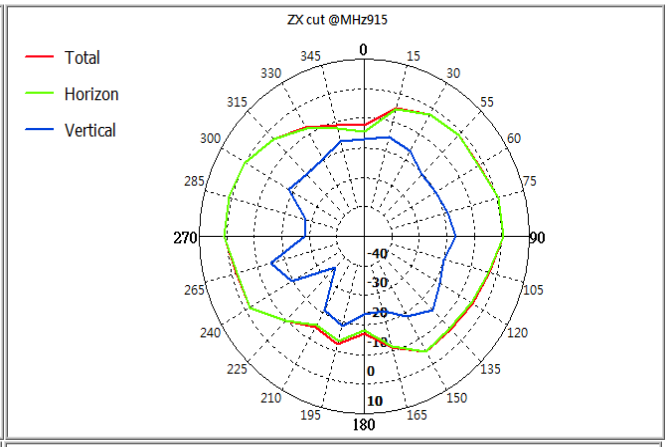

LHCP POWER 902 MHz
+z
+x
+y
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
-50
dBi

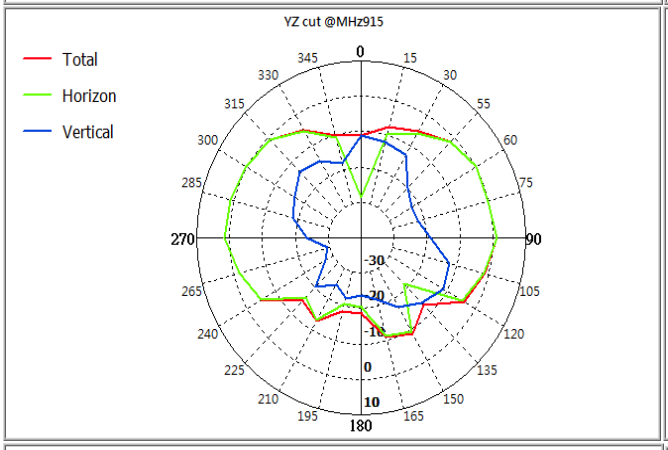

RHCP POWER 902 MHz
+z
+x
+y
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
-50
dBi

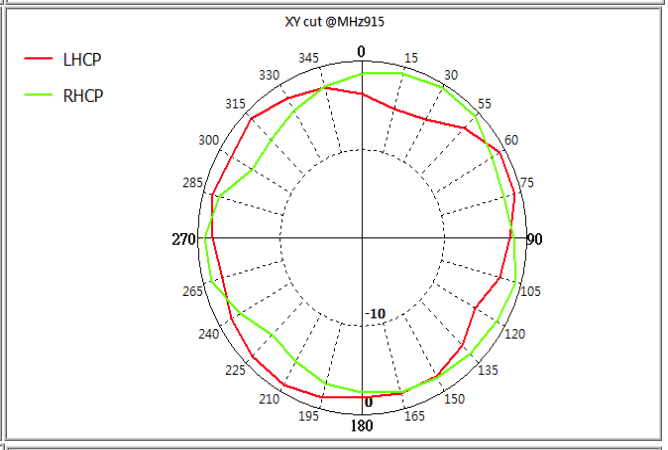

Total POWER 902 MHz
+z
+x
+y
+10
+5
0
-5
-10
-15
-20
-25
-30
-35
-40
dBi

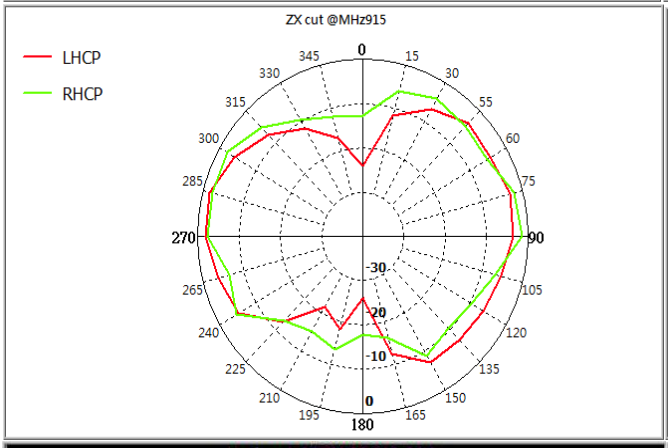
915Mhz:


XY cut @MHz915
Total
Horizon
Vertical


ZX cut @MHz915
Total
Horizon
Vertical


YZ cut @MHz915
Total
Horizon
Vertical


XY cut @MHz915
LHCP
RHCP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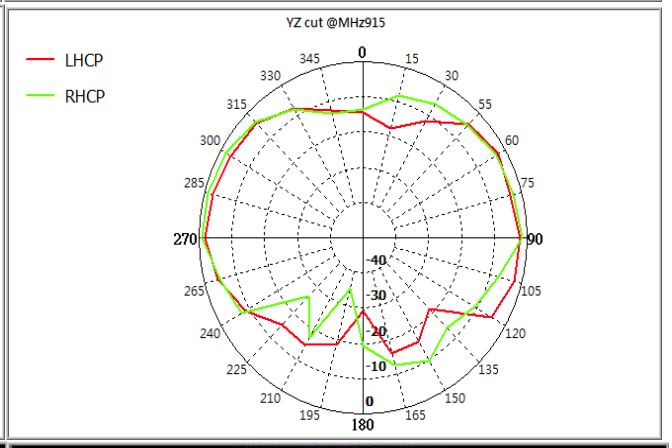
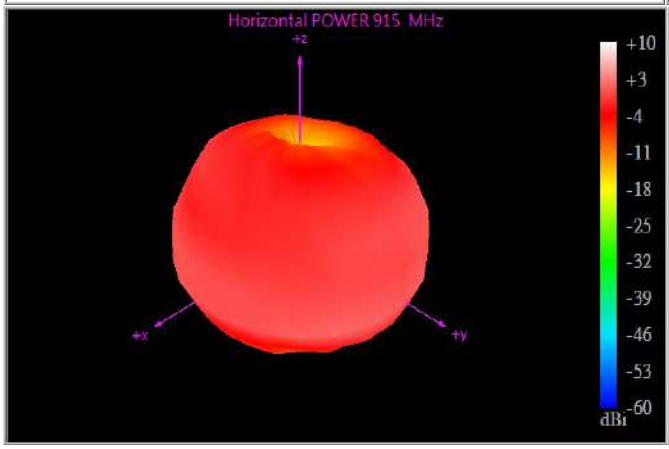
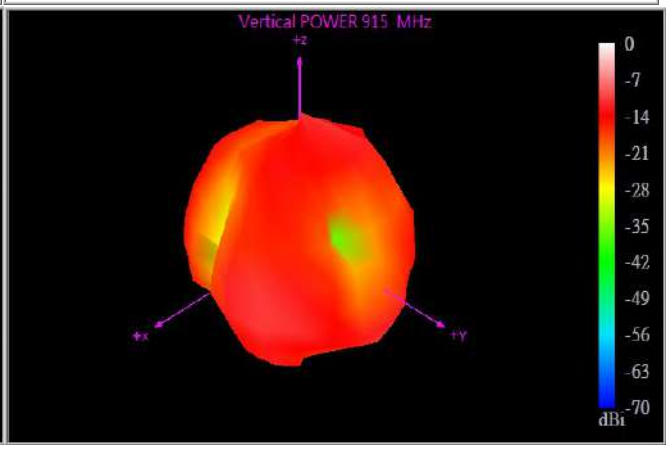
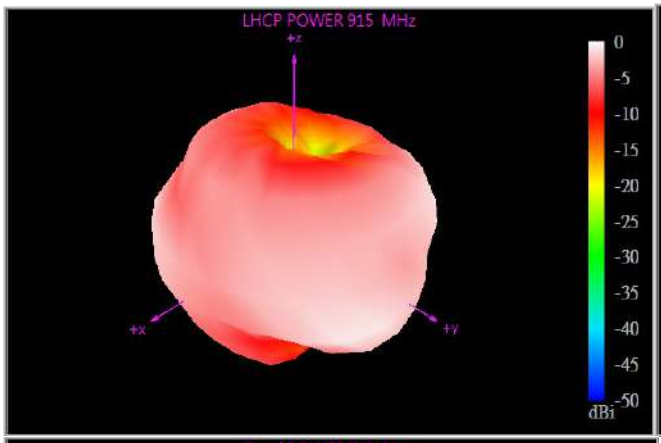
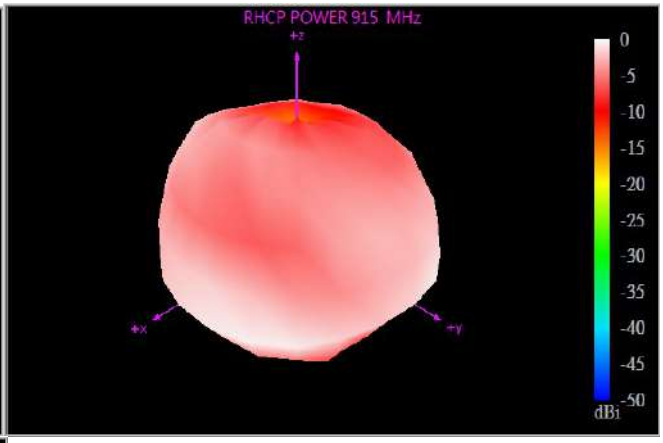
LHCP
RHCP

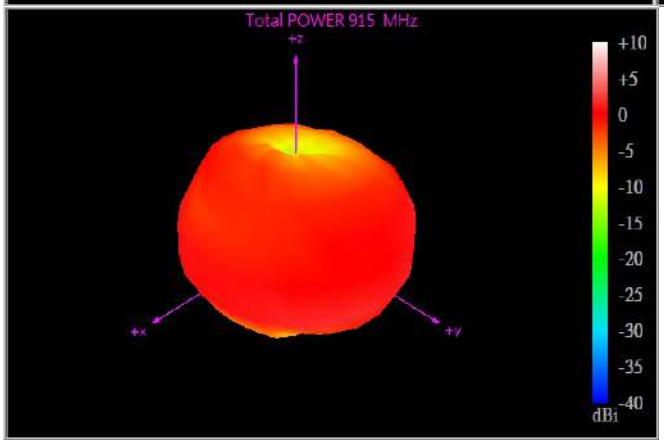

YZ cut @MHz915
LHCP
RHCP


Horizontal POWER 915 MHz
+10
+3
-4
-11
-18
-25
-32
-39
-46
-53
-60
dBi

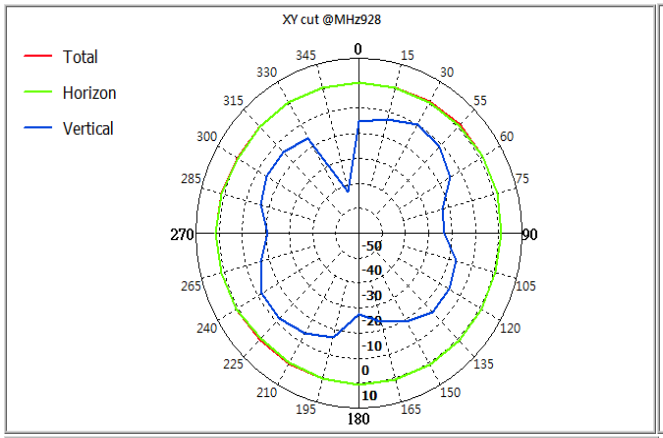

Vertical POWER 915 MHz
0
-7
-14
-21
-28
-35
-42
-49
-56
-63
-70
dBi

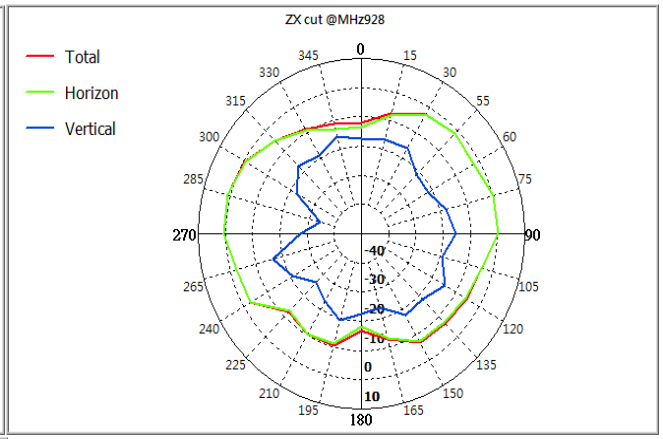

LHCP POWER 915 MHz
+z
+x
+y
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
-50
dBi

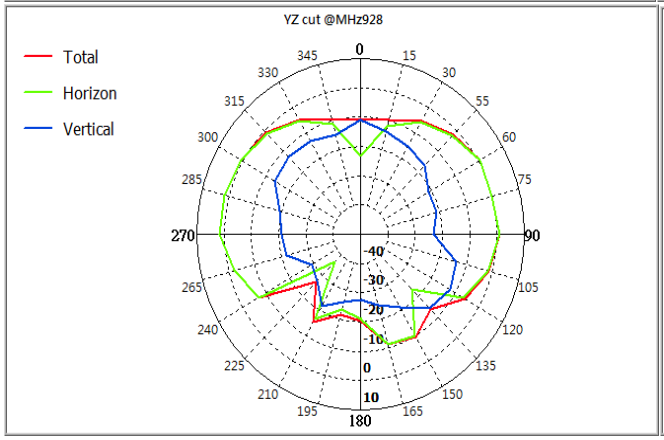

RHCP POWER 915 MHz
+z
+x
+y
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
-50
dBi

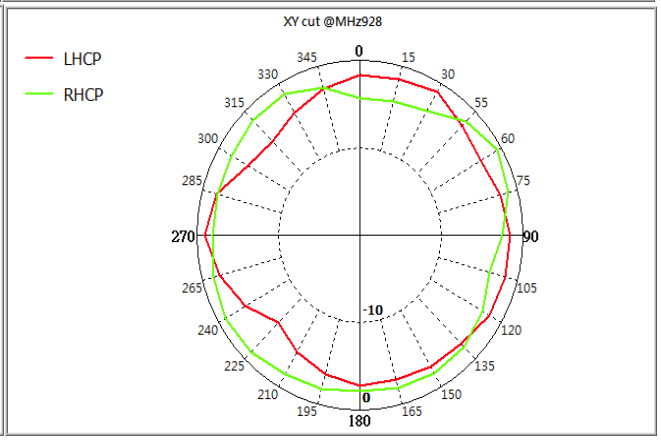

Total POWER 915 MHz
+z
+x
+y
+10
+5
0
-5
-10
-15
-20
-25
-30
-35
-40
dBi

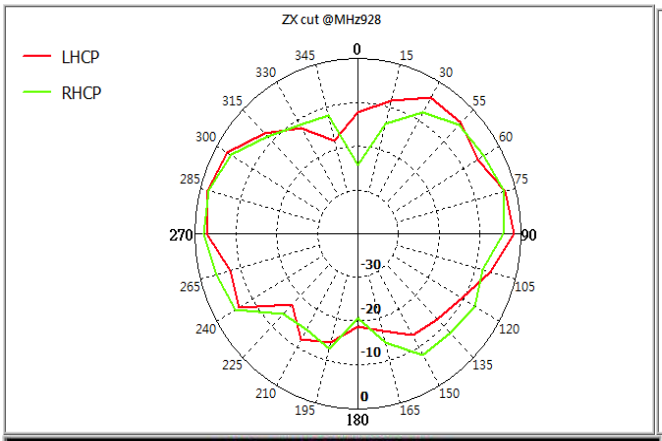
928Mhz:

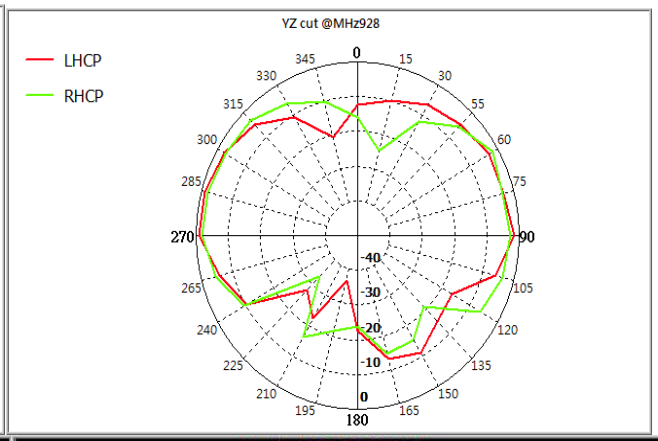

XY cut @MHz928
Total
Horizon
Vertical

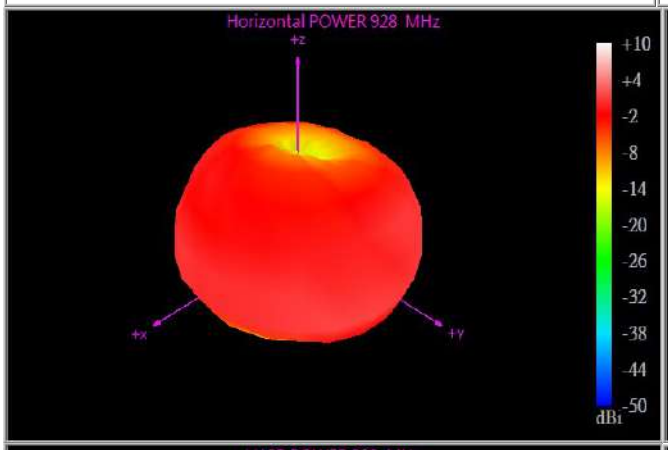

ZX cut @MHz928
Total
Horizon
Vertical

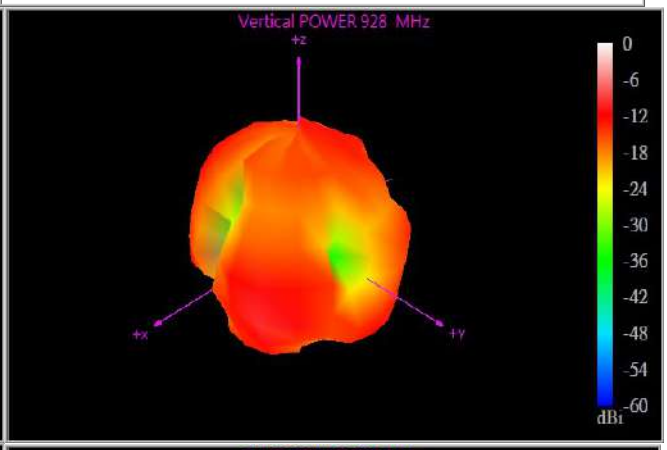

YZ cut @MHz928
Total
Horizon
Vertical

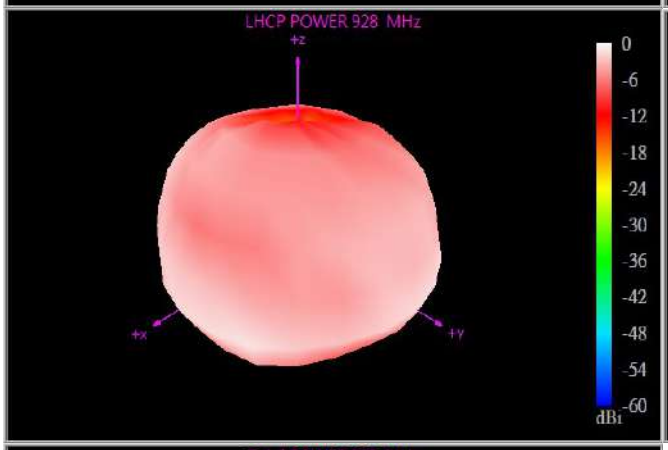

XY cut @MHz928
LHCP
RHCP

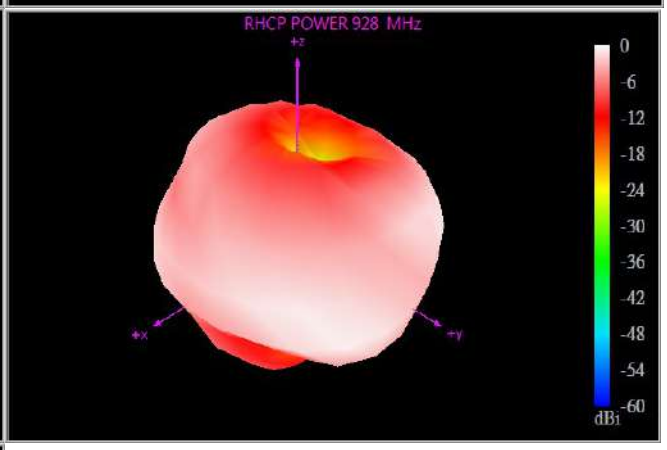

ZX cut @MHz928
LHCP
RHCP
0
15
30
55
60
75
90
105
120
135
150
165
180
195
210
225
240
265
270
285
300
315
330
345
-10
-20
-30

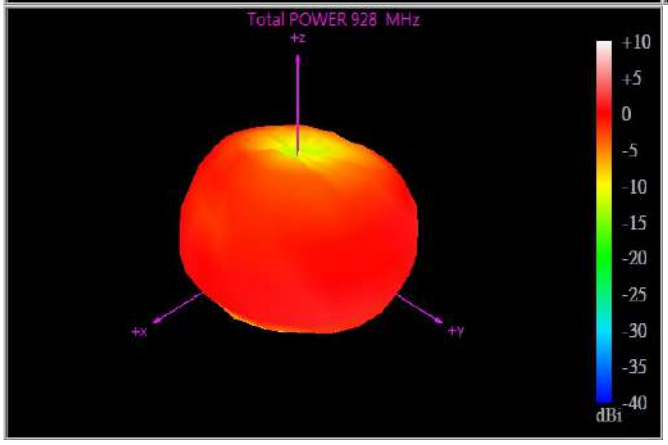

YZ cut @MHz928
LHCP
RHCP
0
15
30
55
60
75
90
105
120
135
150
165
180
195
210
225
240
265
270
285
300
315
330
345
-10
-20
-30
-40


Horizontal POWER 928 MHz
+z
+x
+y
+10
+4
-2
-8
-14
-20
-26
-32
-38
-44
-50
dBi


Vertical POWER 928 MHz
+z
+x
+y
0
-6
-12
-18
-24
-30
-36
-42
-48
-54
-60
dBi


LHCP POWER 928 MHz
+z
+x
+y
0
-6
-12
-18
-24
-30
-36
-42
-48
-54
-60
dBi


RHCP POWER 928 MHz
+z
+x
+y
0
-6
-12
-18
-24
-30
-36
-42
-48
-54
-60
dBi


Total POWER 928 MHz
+z
+x
+y
+10
+5
0
-5
-10
-15
-20
-25
-30
-35
-40
dBi