

Antenna

YE0001BA Datasheet

Antenna Services

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Status: Released



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Quectel Wireless Solutions Co., Ltd.

Building 5, Shanghai Business Park Phase III (Area B), No.1016 Tianlin Road, Minhang District, Shanghai 200233, China

Tel: +86 21 5108 6236

Email: info@quectel.com

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About the Document

Revision History

Version	Date	Author	Note
-	2020-08-27	Kenny YIN	Creation of the document
1.0	2020-08-27	Kenny YIN	First official release
1.1	2020-12-16	Kenny YIN	Updated the antenna image in Chapter 2.
1.2	2021-01-27	Kenny YIN	Added IP rating description.

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1 Product Description

The antenna is designed for superior performance, and can be widely used for wireless applications.

We provide comprehensive antenna design support such as simulation, testing and manufacturing for custom antenna solutions to meet your specific application needs.

2 Product Features

- Cellular LTE 4G & 5G
- High efficiency
- Excellent performance



3 Product Specifications

Passive Electrical Specifications

Frequency Range	600–6000 MHz
Input Impedance	50 Ω
VSWR	≤ 3.0
Gain	≤ 5 dBi
Polarization Type	Linear

Mechanical Specifications

Antenna Size	221 mm × 26.95 mm × 13.5 mm
Casing	ABS
Connector Type	SMA Male (center pin)
Working Temperature	-20 °C to +80 °C
Radome Color	Black
IP rating	IP55

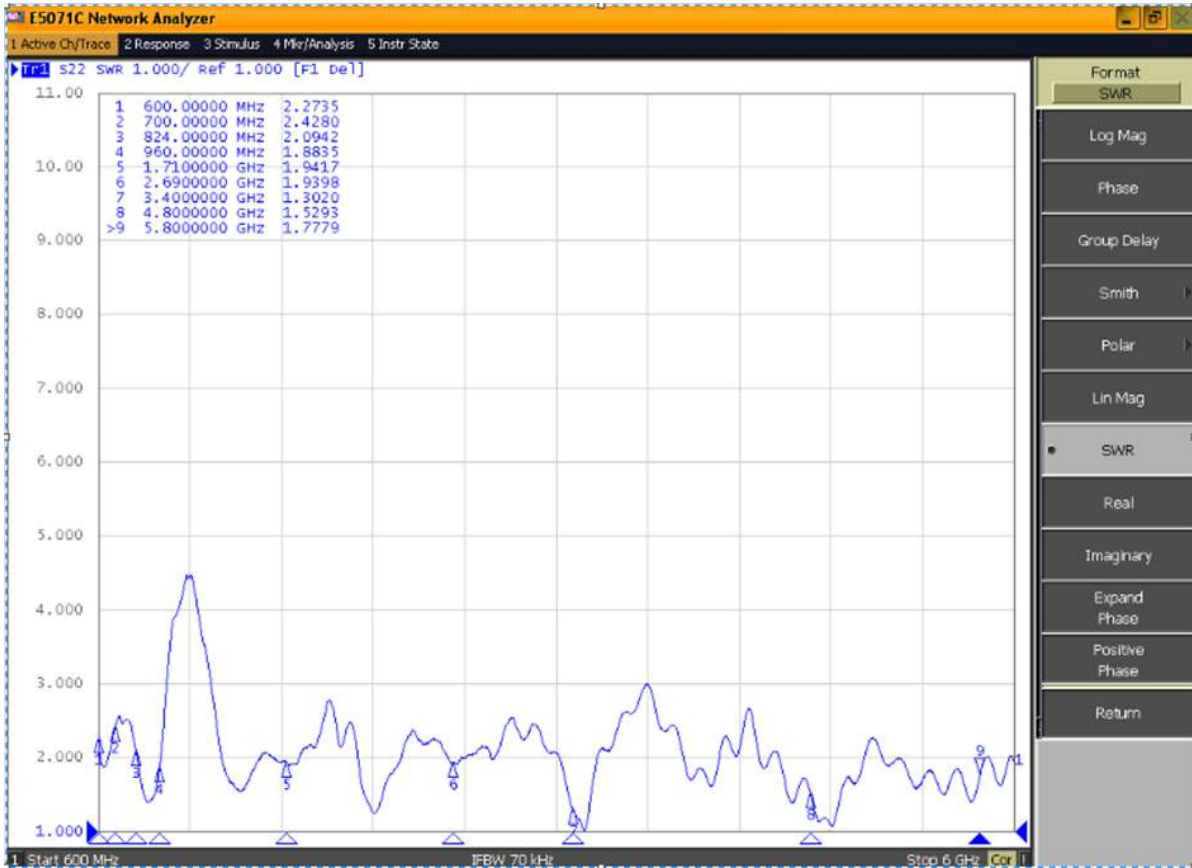
4 Overall Performance

4.1. Test Environment

- KEYSIGHT VNA Network Analyzer E5063A 100 kHz – 6.5 GHz.
- RayZone®2800 Chamber 5G (FR1) SISO/MIMO, 400 MHz – 6.0 GHz.



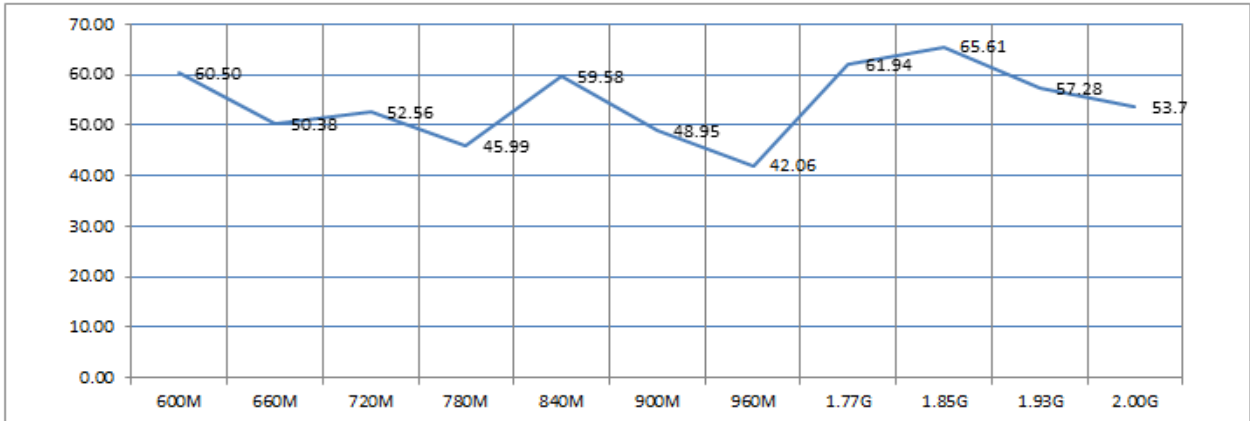
4.2. VSWR



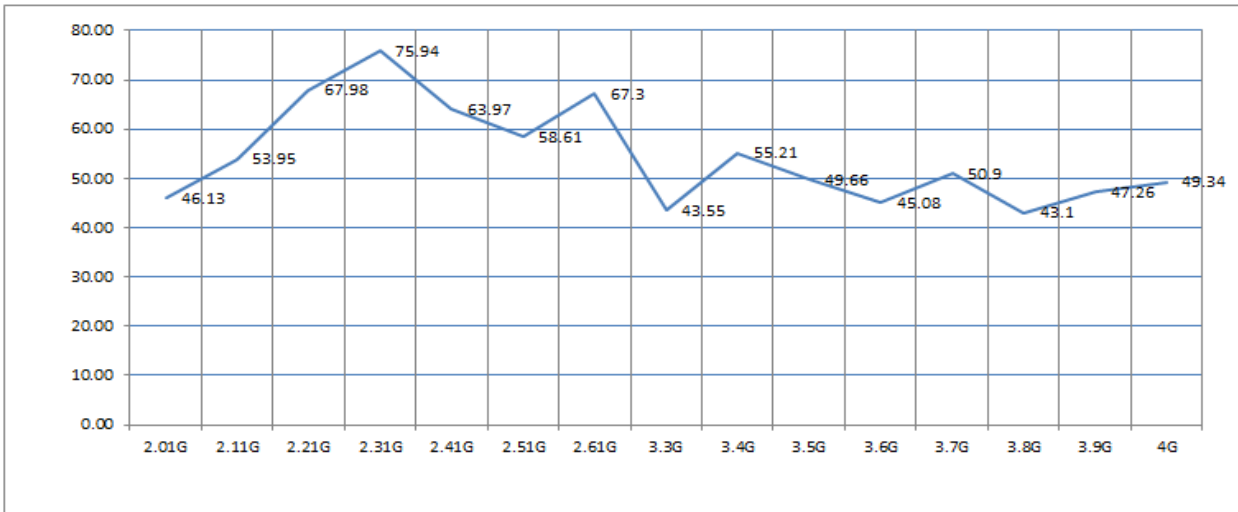
Frequency (MHz)	600	700	824	960	1710	2690	3400	4800	5800
VSWR	2.27	2.42	2.09	1.88	1.94	1.94	1.30	1.53	1.78

4.3. Efficiency

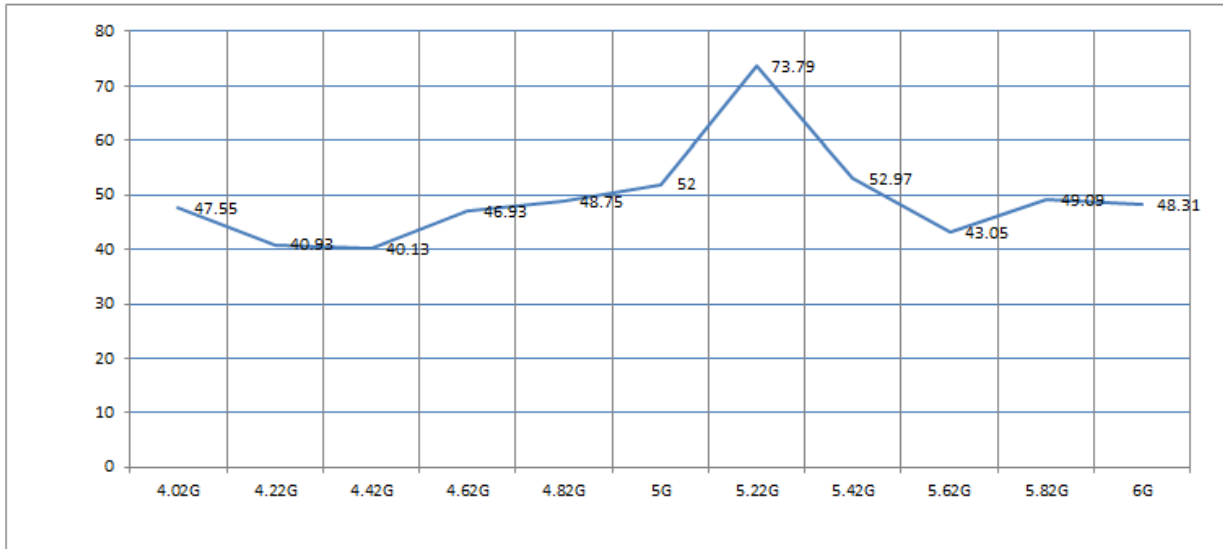
600.00MHZ-2000.000MHZ Efficiency



2000.00MHZ-4000.000MHZ Efficiency



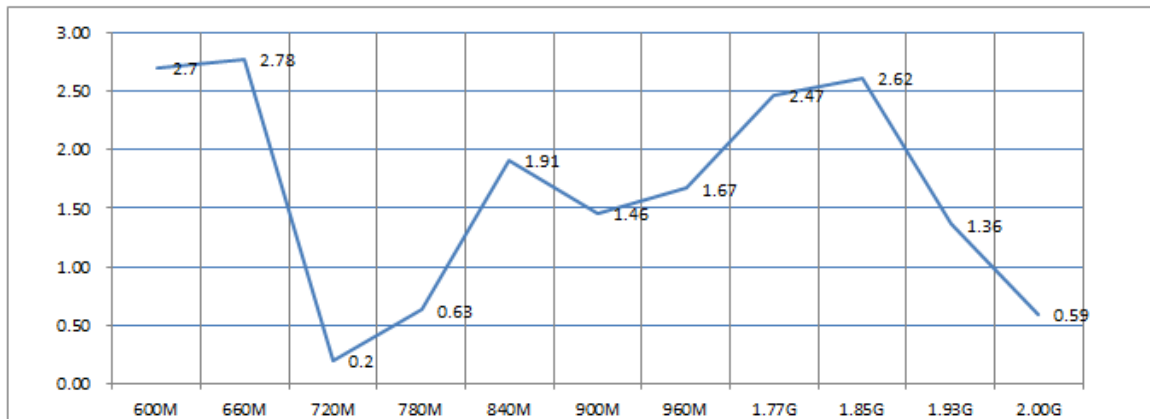
4000.00MHZ-6000.000MHZ Efficiency



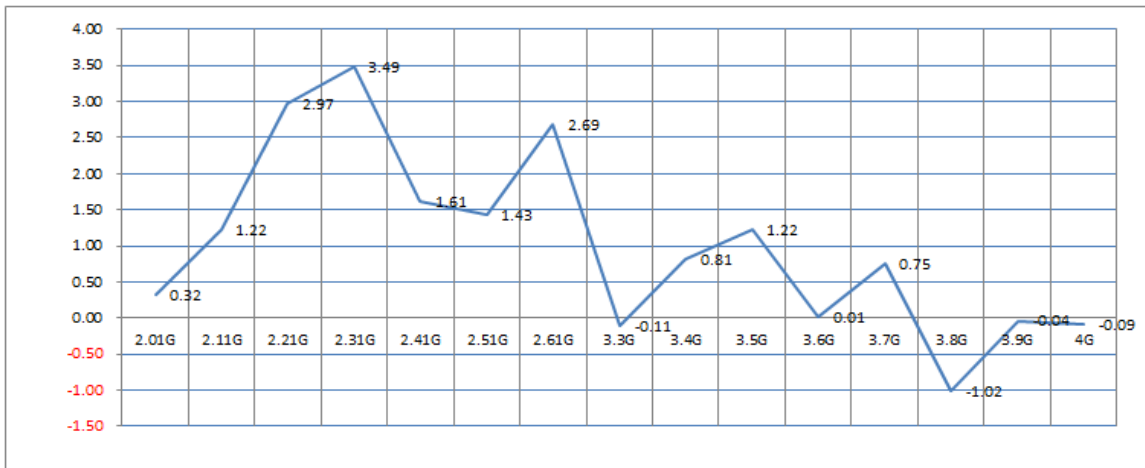
Frequency (MHz)	600	824	960	1710	1850	2150	2690	3500	5000	6000
Efficiency (%)	60.5	54.08	42.06	57.94	65.61	62.09	72.72	49.66	52.00	48.31

4.4. Gain

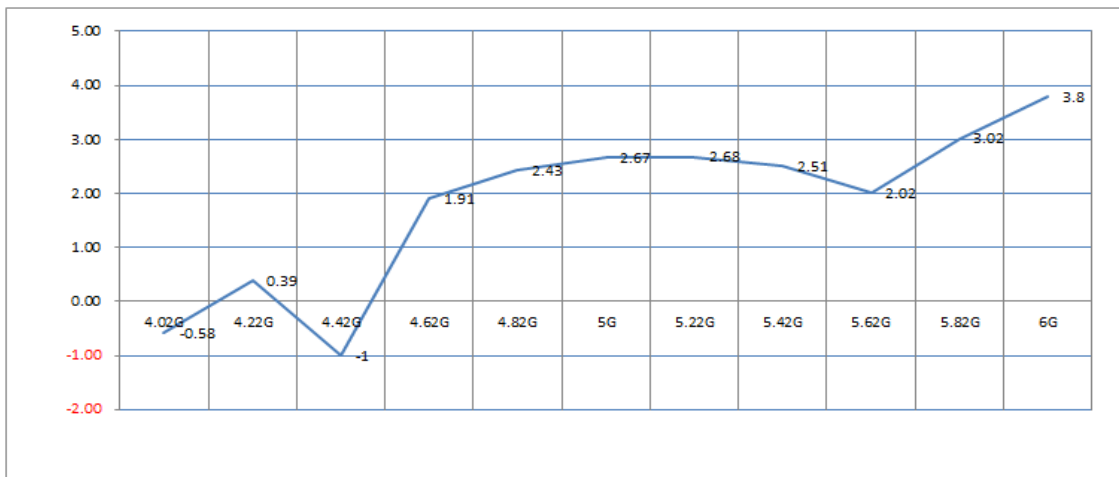
600.00MHZ-2000.000MHZ Gain



2000.00MHz-4000.00MHz Gain

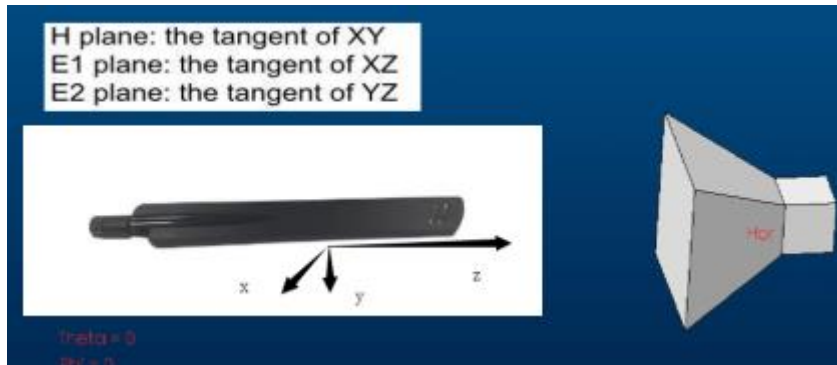


4000.00MHz-6000.00MHz Gain

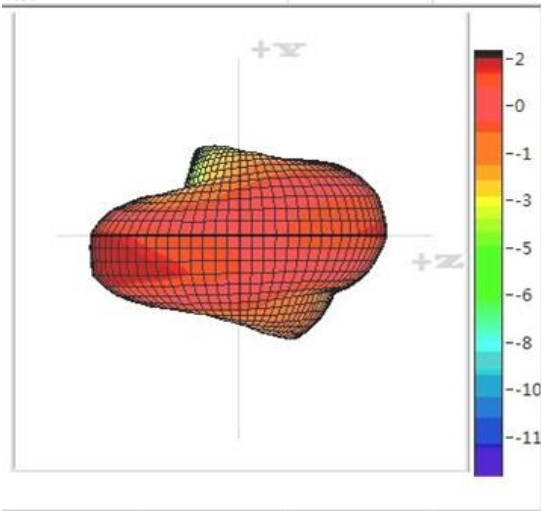


Frequency (MHz)	600	824	960	1710	1850	2150	2690	3500	5000	6000
Gain (dBi)	2.70	1.50	1.67	2.20	2.62	2.38	2.36	1.22	2.67	3.80

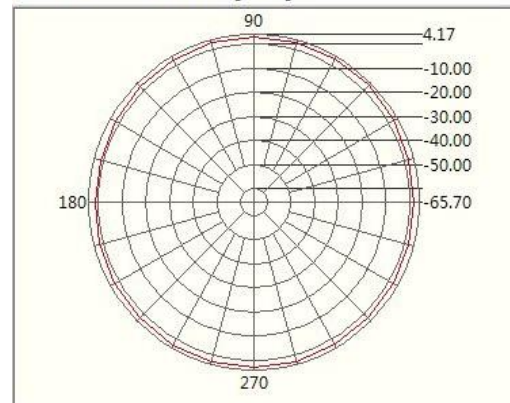
4.5. Radiation Patterns



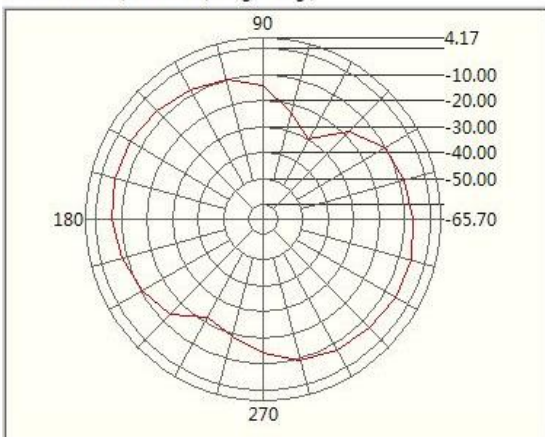
600MHzRight-Left
View



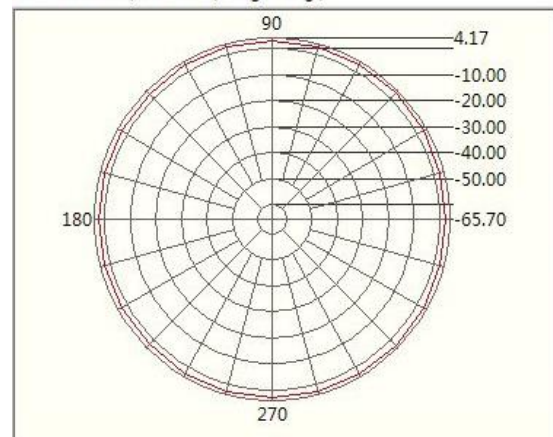
600MHz@Theta
90.0
Horizontal
Excel XY Plot (Value dB / Angle deg.)



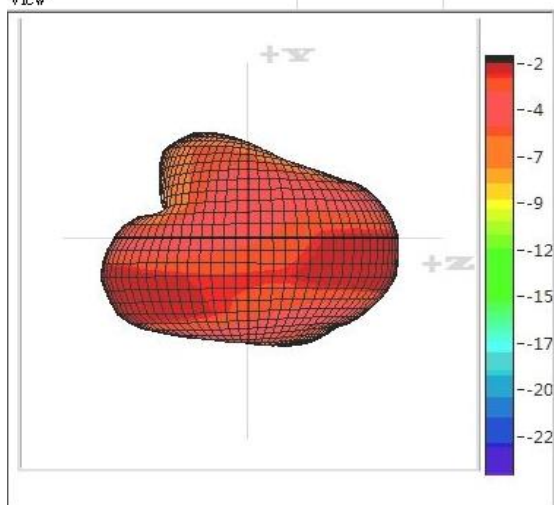
600MHz@Theta
90.0
Vertical
Excel XY Plot (Value dB / Angle deg.)



600MHz@Theta
90.0
Total
Excel XY Plot (Value dB / Angle deg.)



705MHzRight-Left
View

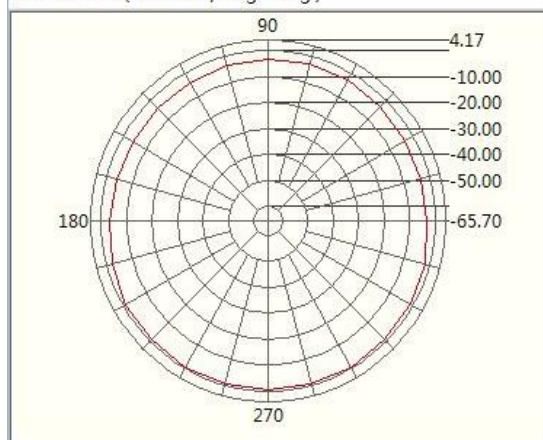


705MHz@Theta

90.0

Horizontal

Excel XY Plot (Value dB / Angle deg.)

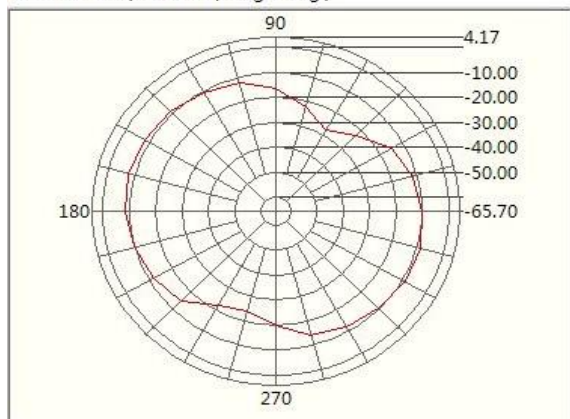


705MHz@Theta

90.0

Vertical

Excel XY Plot (Value dB / Angle deg.)

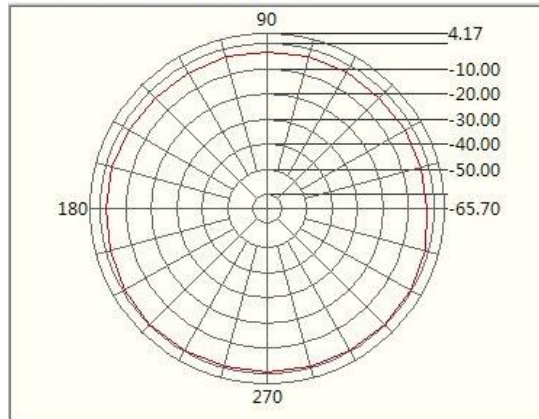


705MHz@Theta

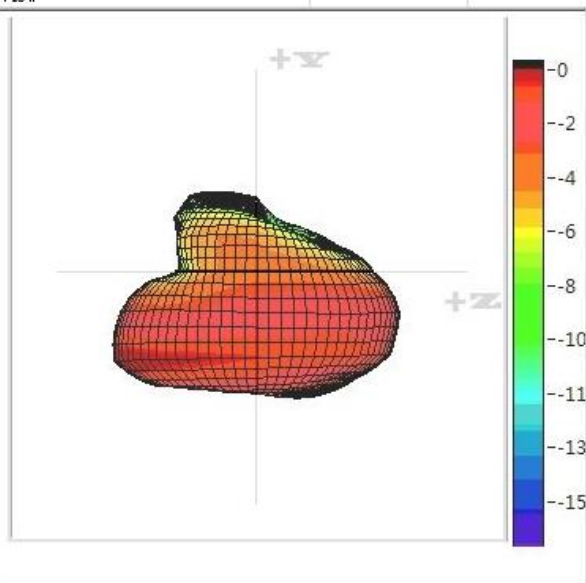
90.0

Total

Excel XY Plot (Value dB / Angle deg.)

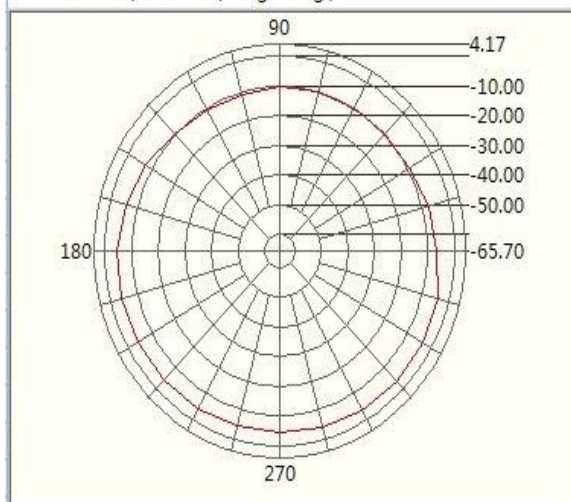


825MHzRight-Left
View



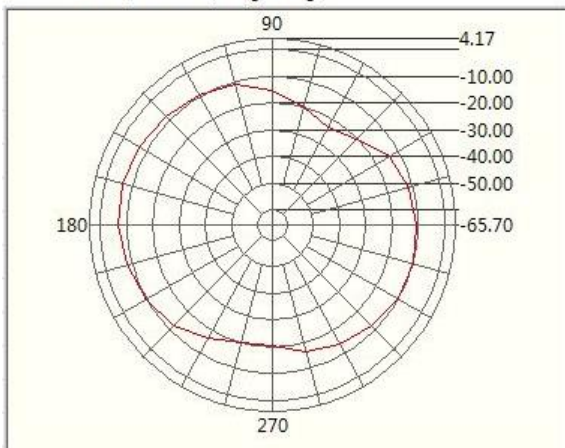
825MHz@Theta

90.0
Horizontal
Excel XY Plot (Value dB / Angle deg.)



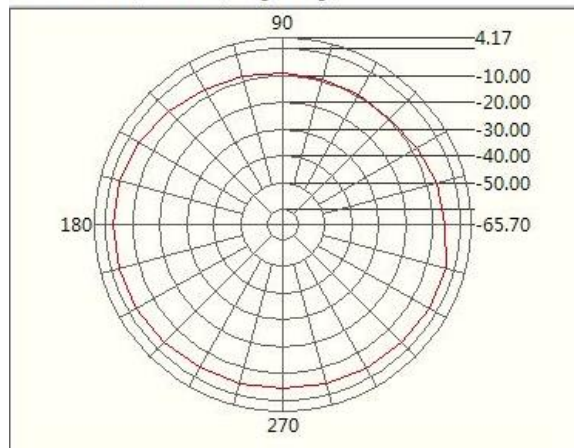
825MHz@Theta

90.0
Vertical
Excel XY Plot (Value dB / Angle deg.)

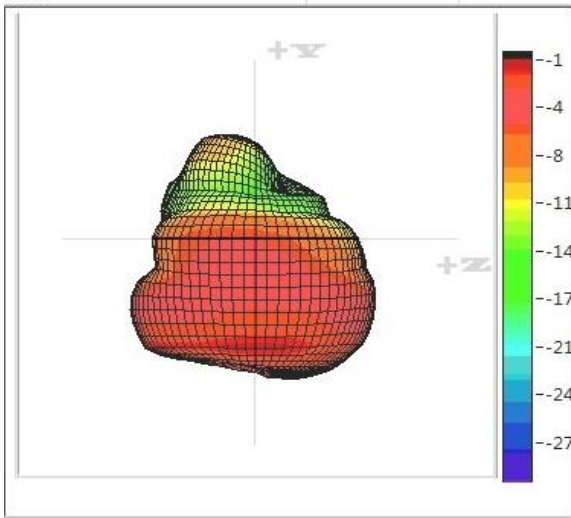


825MHz@Theta

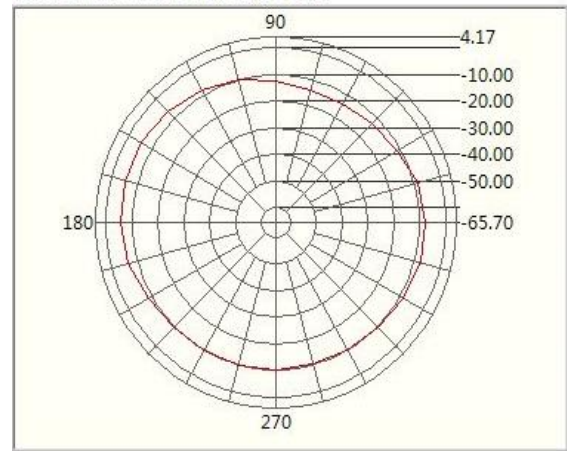
90.0
Total
Excel XY Plot (Value dB / Angle deg.)



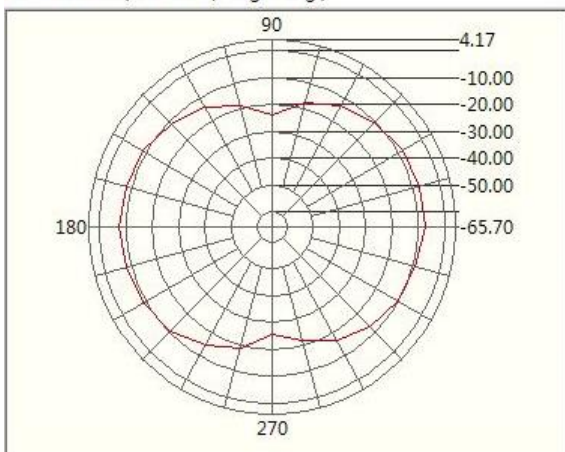
960MHzRight-Left
View



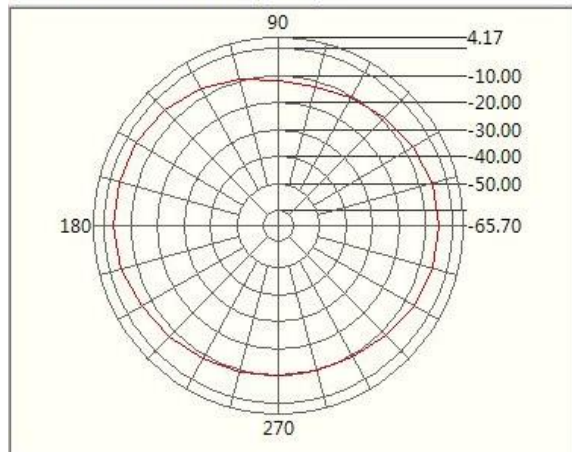
960MHz@Theta
90.0
Horizontal
Excel XY Plot (Value dB / Angle deg.)



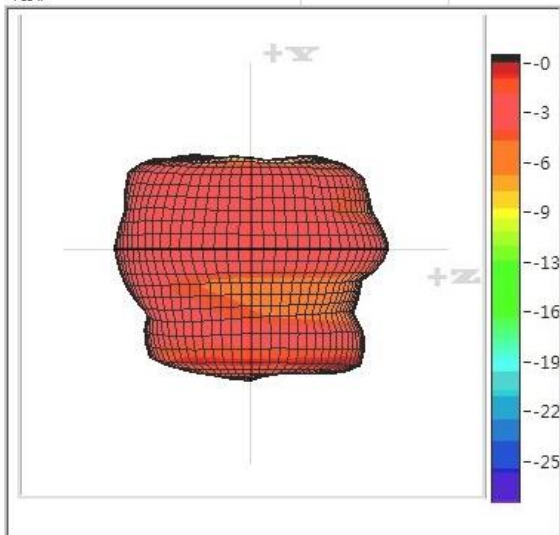
960MHz@Theta
90.0
Vertical
Excel XY Plot (Value dB / Angle deg.)



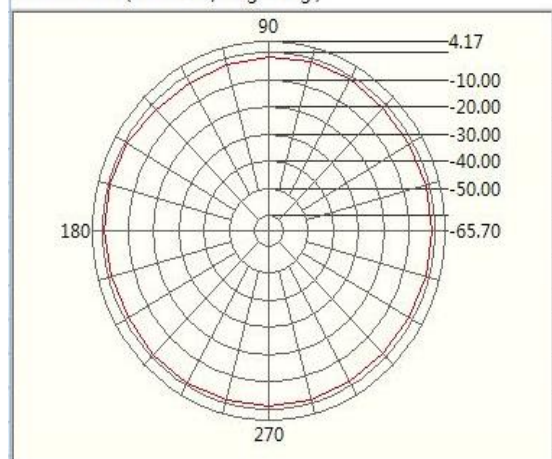
960MHz@Theta
90.0
Total
Excel XY Plot (Value dB / Angle deg.)



1.71GHzRight-Left
View



1.71GHz@Theta
90.0
Horizontal
Excel XY Plot (Value dB / Angle deg.)

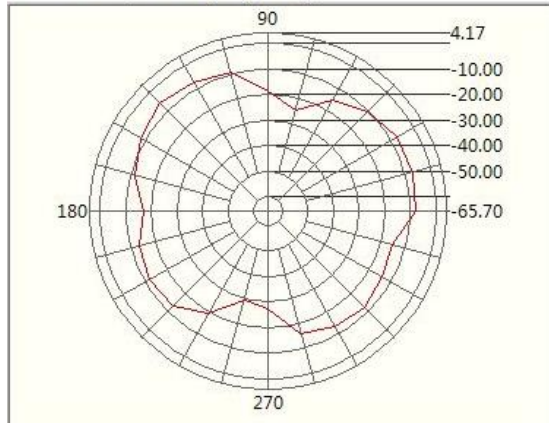


1.71GHz@Theta

90.0

Vertical

Excel XY Plot (Value dB / Angle deg.)

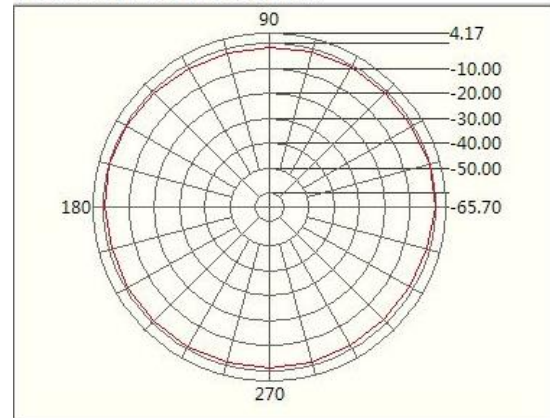


1.71GHz@Theta

90.0

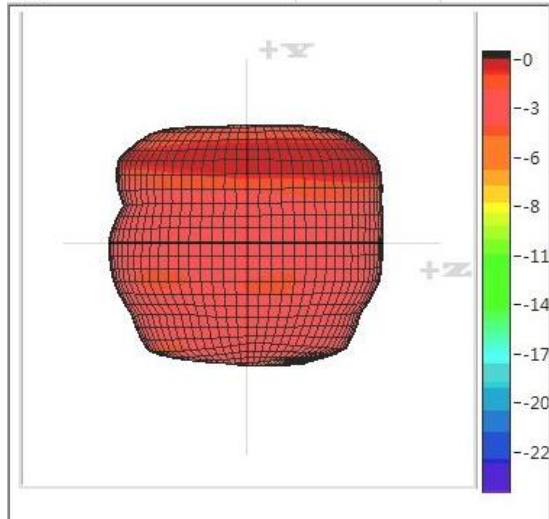
Total

Excel XY Plot (Value dB / Angle deg.)



2.69GHzRight-Left

View

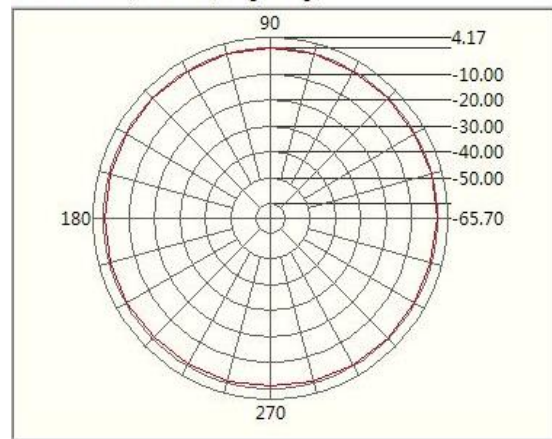


2.69GHz@Theta

90.0

Horizontal

Excel XY Plot (Value dB / Angle deg.)

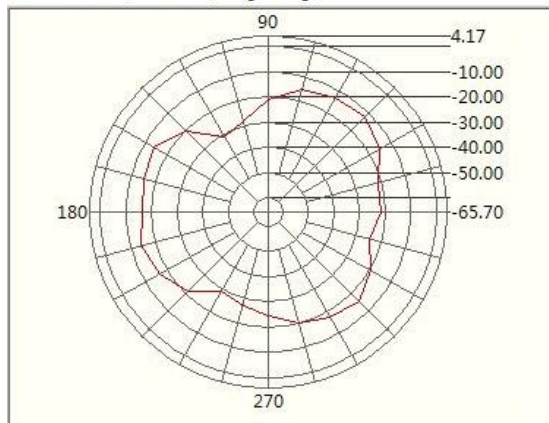


2.69GHz@Theta

90.0

Vertical

Excel XY Plot (Value dB / Angle deg.)

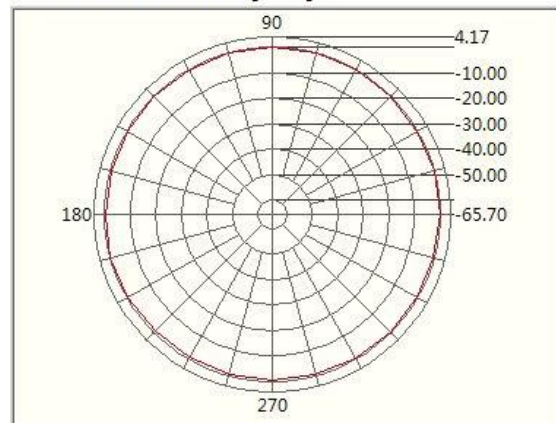


2.69GHz@Theta

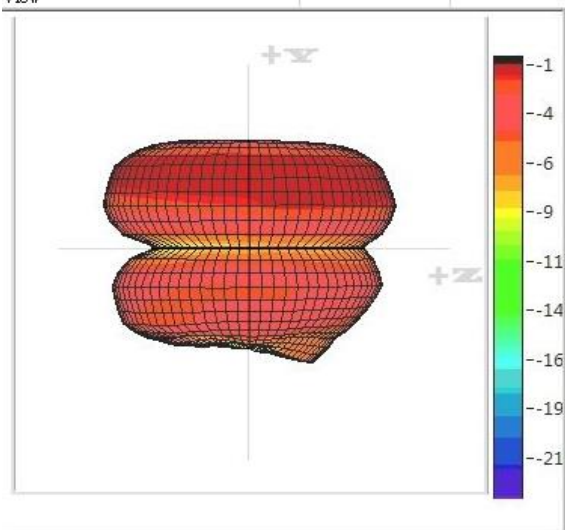
90.0

Total

Excel XY Plot (Value dB / Angle deg.)

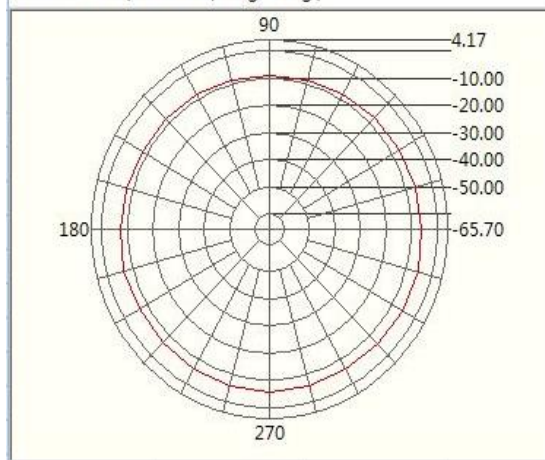


3.4GHzRight-Left
View



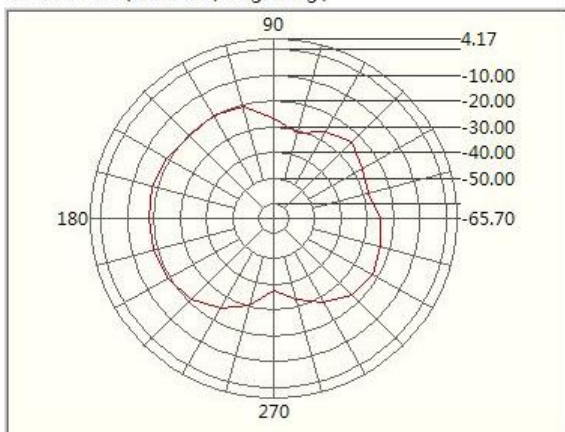
3.4GHz@Theta
90.0

Horizontal
Excel XY Plot (Value dB / Angle deg.)



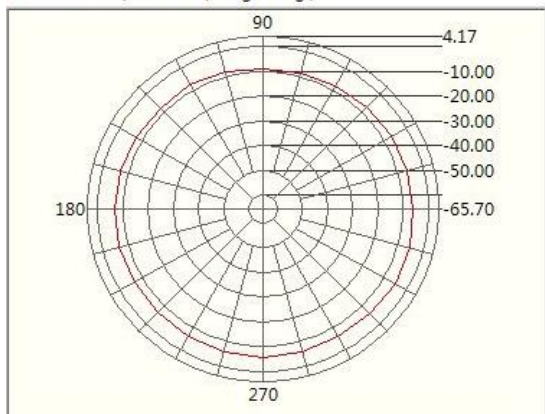
3.4GHz@Theta
90.0

Vertical
Excel XY Plot (Value dB / Angle deg.)

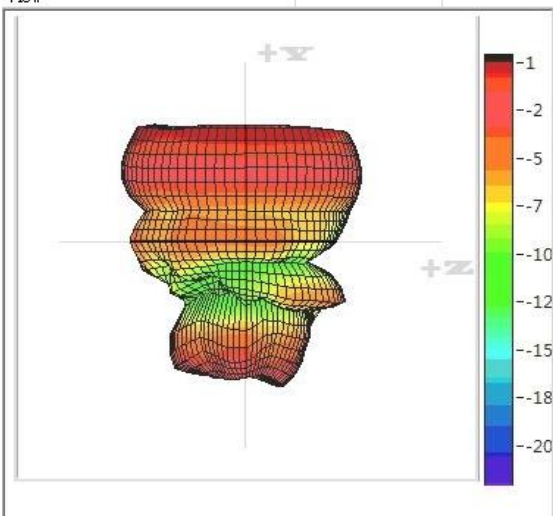


3.4GHz@Theta
90.0
Total

Excel XY Plot (Value dB / Angle deg.)

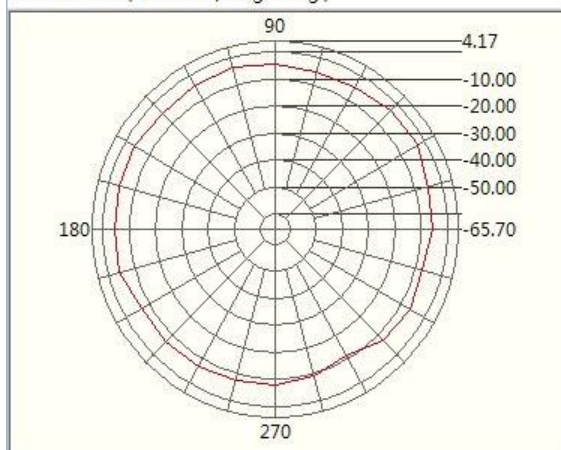


4.8GHzRight-Left
View

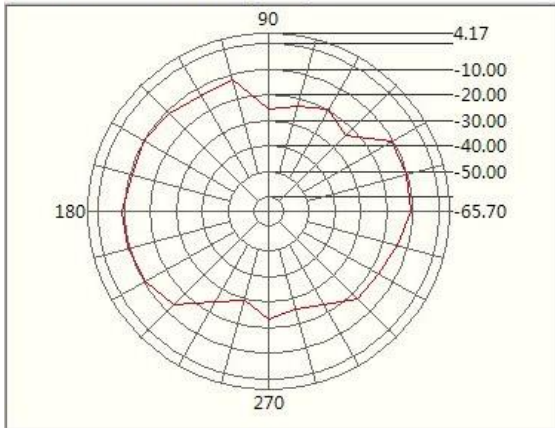


4.8GHz@Theta
90.0

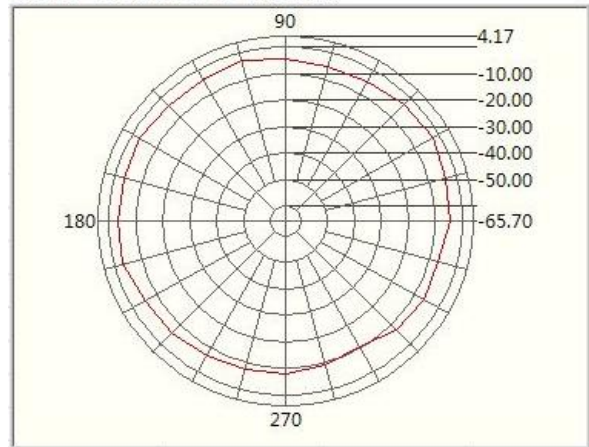
Horizontal
Excel XY Plot (Value dB / Angle deg.)



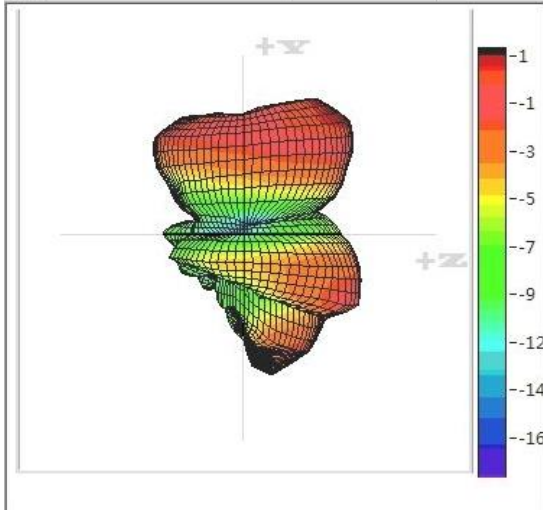
4.8GHz@Theta
90.0
Vertical
Excel XY Plot (Value dB / Angle deg.)



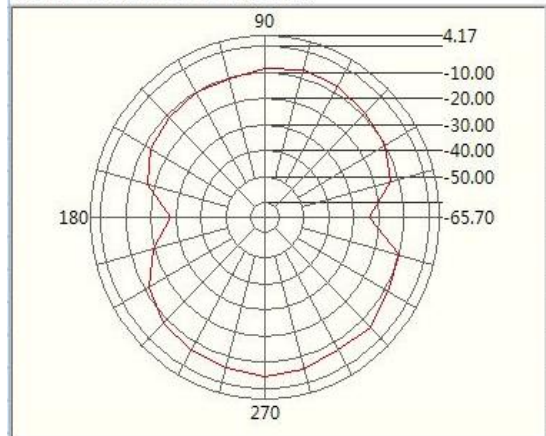
4.8GHz@Theta
90.0
Total
Excel XY Plot (Value dB / Angle deg.)



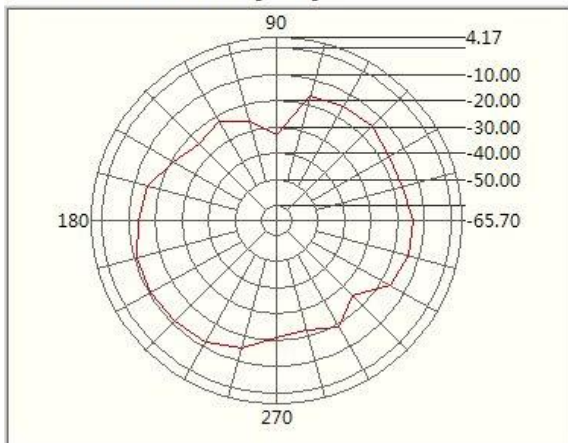
5.8GHzRight-Left
View



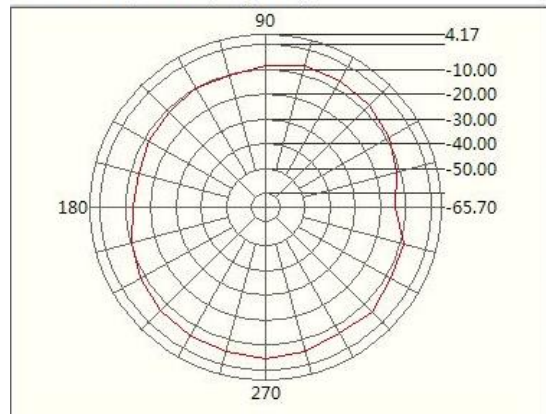
5.8GHz@Theta
90.0
Horizontal
Excel XY Plot (Value dB / Angle deg.)



5.8GHz@Theta
90.0
Vertical
Excel XY Plot (Value dB / Angle deg.)



5.8GHz@Theta
90.0
Total
Excel XY Plot (Value dB / Angle deg.)



5 Product Size

