

Whip

GA.110.101111

Specification

Part No.	GA.110.101111
Product Name	Whip 2G/3G/4G High Gain Magnetic Mount Ultra-Wideband Antenna
Feature	LTE / GSM / CDMA / DCS / PCS / WCDMA / UMTS / HSDPA / GPRS / EDGE / GPS / Wi-Fi 698MHz to 960MHz, 1575.42MHz, 1710MHz to 2700MHz, 3500MHz 1M RG174 Cable, SMA(M) Connector Typical 40% Efficiency and 3dBi Peak Gain Robust High Strength Super Magnet Mount Custom cables and connectors available RoHS Compliant

1. Introduction

The GA.110 magnetic ultra-wideband cellular antenna delivers stable high omni-directional gain and efficiencies across all common 2G, 3G and 4G global cellular bands from 700 MHz to 3.5 GHz.

This high performing antenna can be used for all cellular devices and will not require changing antennas when deploying from country to country or technology to

technology like CDMA to GSM or 3G to 4G. Being magnetic mount it is designed to be mounted on a ground plane for optimal performance.

A reliable return loss of <10dB when mounted on a metal plate ensures it complies with the industry standards set by module makers and networks worldwide. Taoglas recommends using the antenna

with 1m cable length or less and can provide customized connectors and cable lengths upon customer requirements.

The strong magnet base is extremely stable and robust, using only high quality neodymium magnets for a secure magnetic mount to ensure a high pull force to disengage.

2. Specification

Electrical

Frequency (MHz)	698~800	824~960	1575.42	1710~1880	1850~1990	1710~2170	2400~2700	3500
Peak Gain (dBi)								
30x30cm GP (1m RG174)	1.8	2.6	1.3	2.5	2.3	3.9	2.9	0.6
30x30cm GP (2m RG174)	-1.0	0.9	0.9	3.9	2.8	2.5	2.2	-0.6
30x30cm GP (3m RG174)	-2.5	-0.1	-1.3	1.2	0.1	1.2	-0.5	-1.6
Average Gain (dBi)								
30x30cm GP (1m RG174)	-4.9	-2.4	-3.4	-2.7	-3.8	-3.3	-4.4	-7.2
30x30cm GP (2m RG174)	-6.3	-3.1	-4.4	-3.9	-4.3	-4.1	-5.4	-5.5
30x30cm GP (3m RG174)	-7.2	-4.4	-6.2	-5.5	-6.3	-6.1	-7.4	-8.9
Efficiency (%)								
30x30cm GP (1m RG174)	33.6	57.1	46.2	55.0	41.8	47.8	36.9	19.0
30x30cm GP (2m RG174)	23.9	48.7	36.5	41.3	37.3	39.5	29.0	28.0
30x30cm GP (3m RG174)	19.7	36.2	24.0	28.5	21.8	25.0	19.0	13.0

2. Specification

Electrical

Impedance	50 Ω
Polarization	Linear
Radiation Pattern	Omni
Input Power	50 W

Mechanical

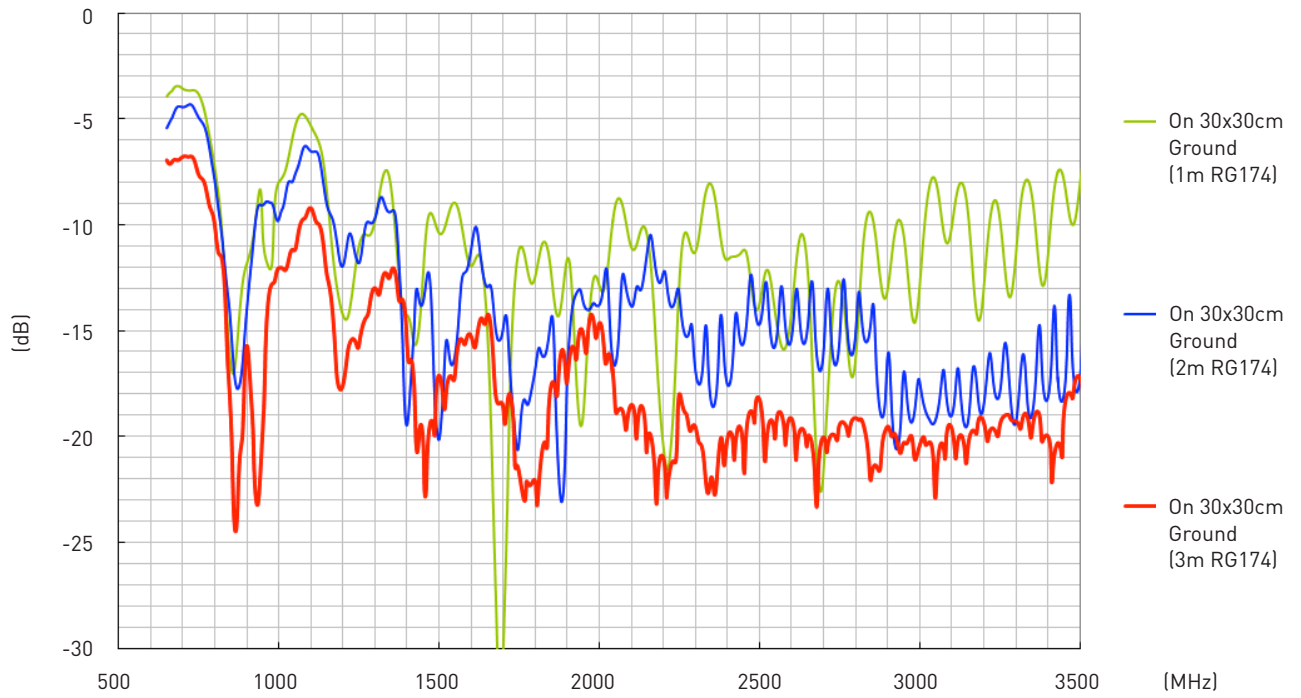
Base Diameter	50mm
Whip Diameter	298mm
Whip Material	Coated Brass
Connector	SMA Male

Environmental

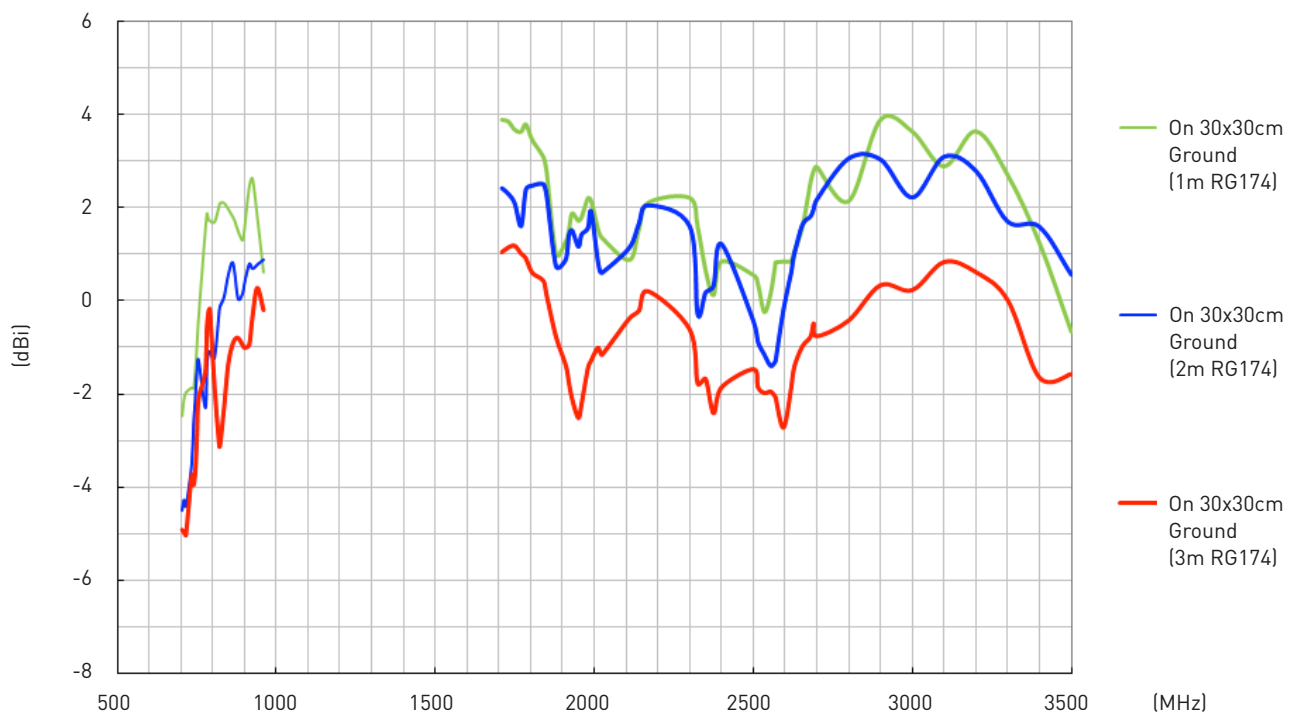
Temperature Range	-40°C to 85°C
Humidity	Non-condensing 65°C 95% RH

3. Antenna Characteristics

3.1 Return Loss

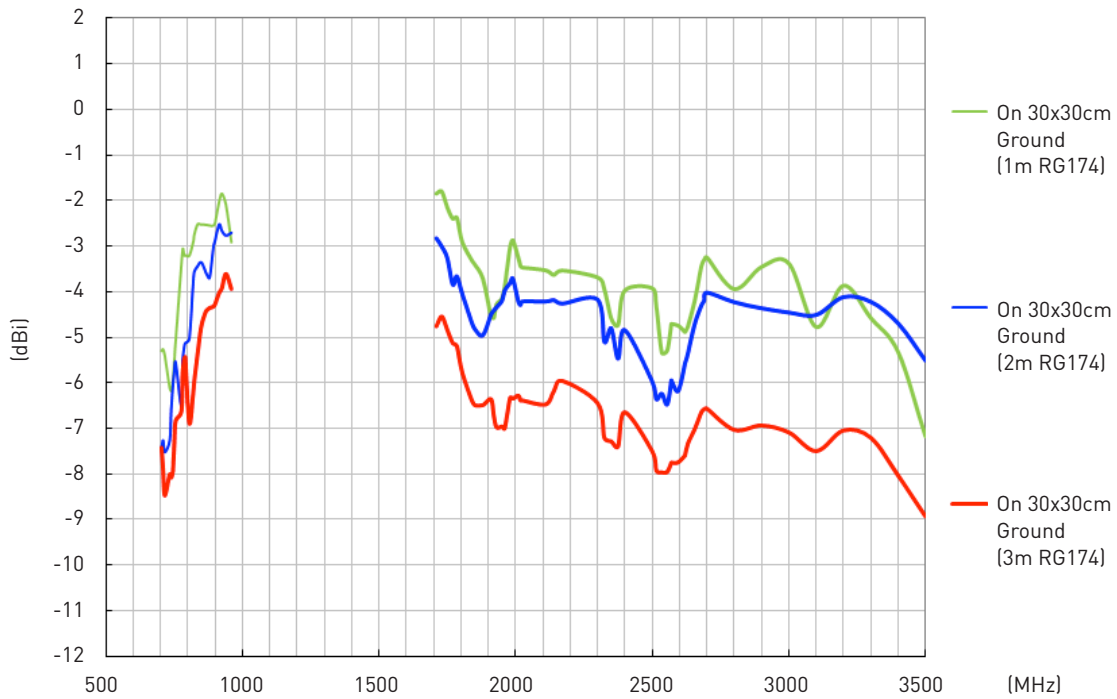


3.2 Maximum Gain

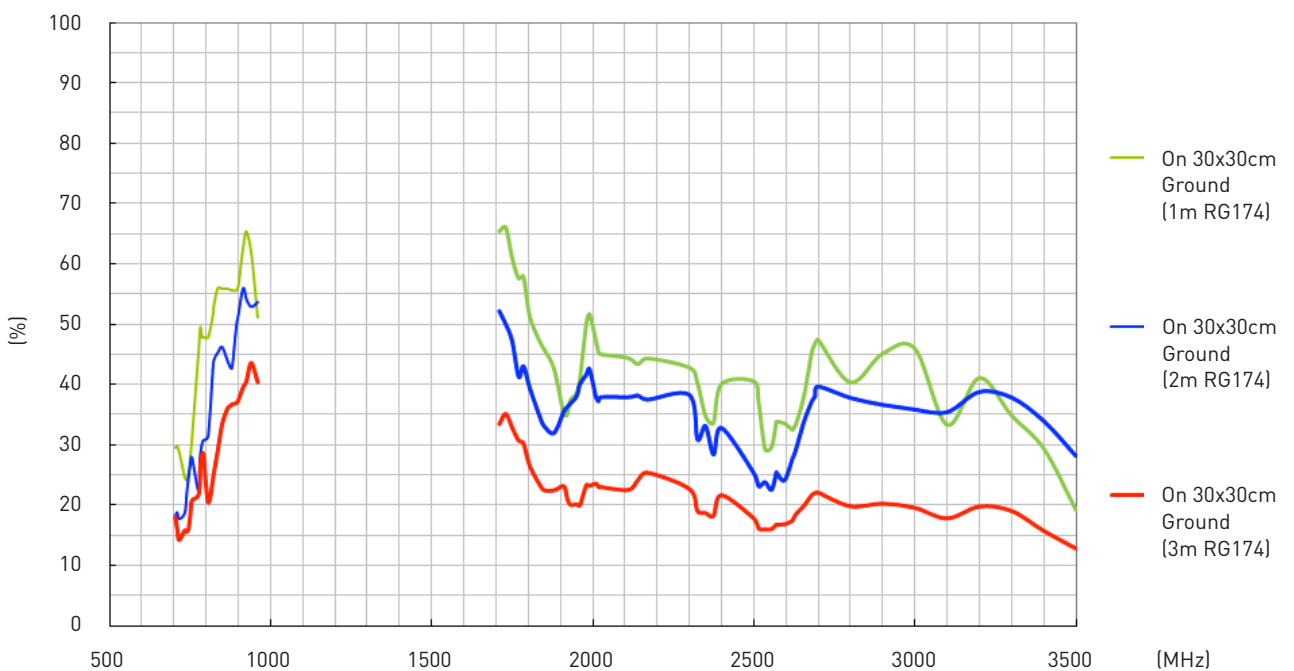


3. Antenna Characteristics

3.3 Average Gain

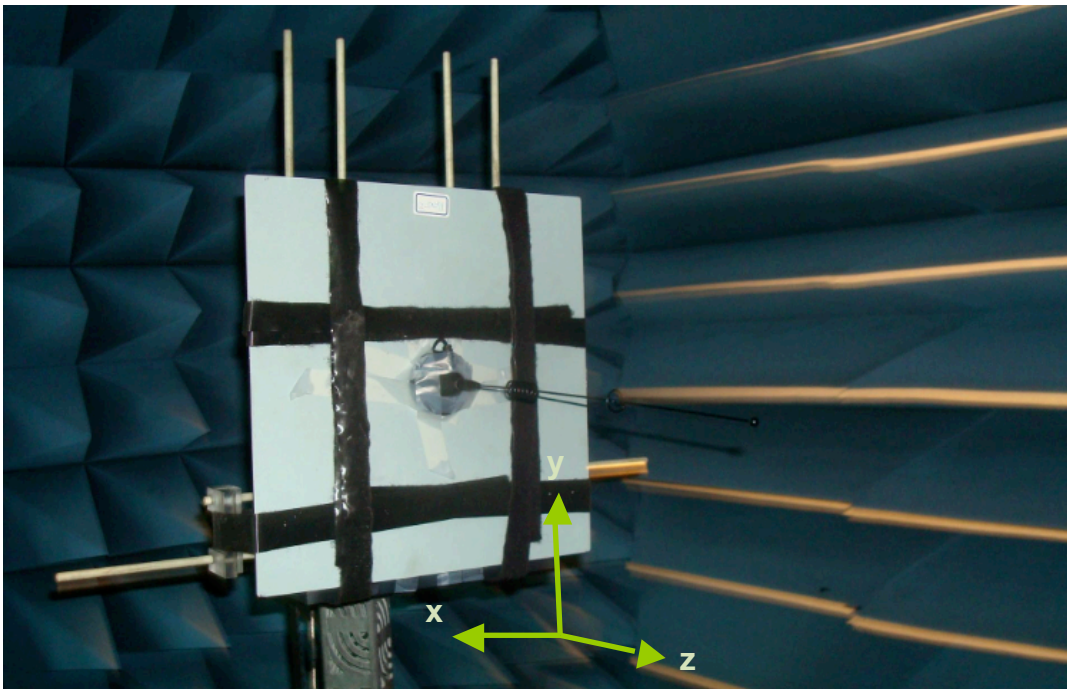


3.4 Efficiency



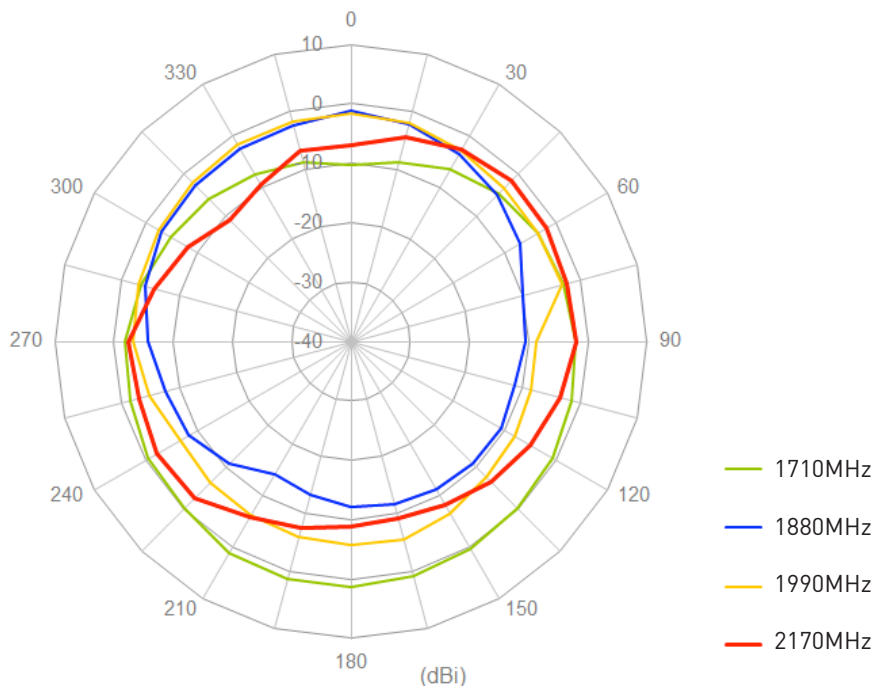
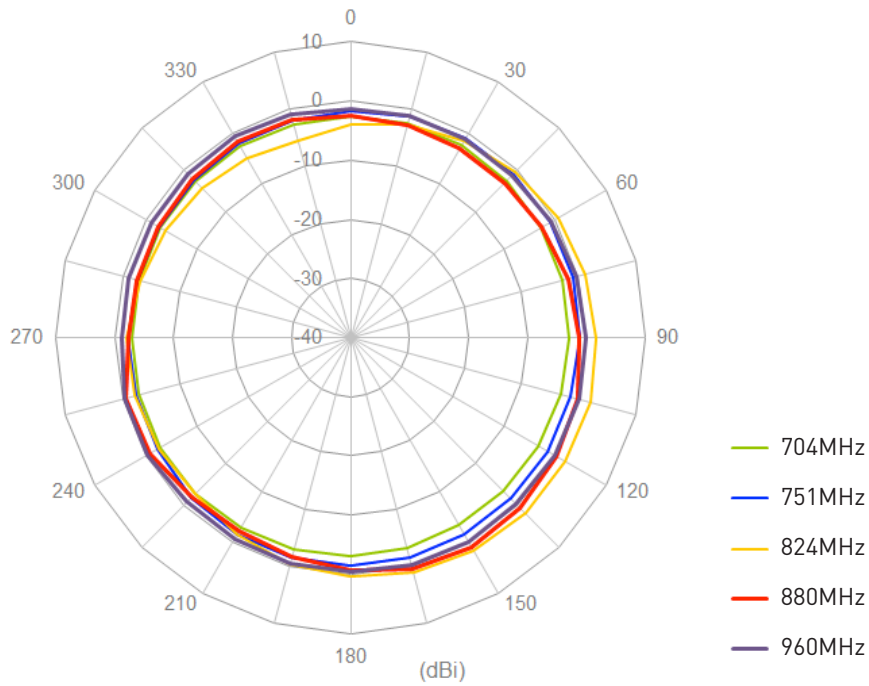
4. Antenna Radiation Patterns

4.1 Antenna setup (On 300x300mm ground plane with 1m RG174 cable)



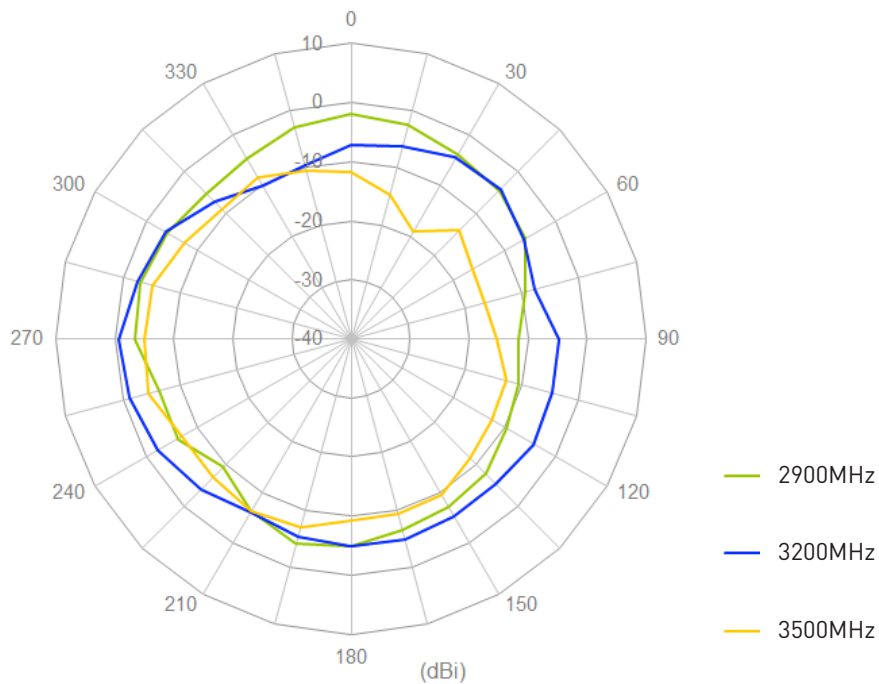
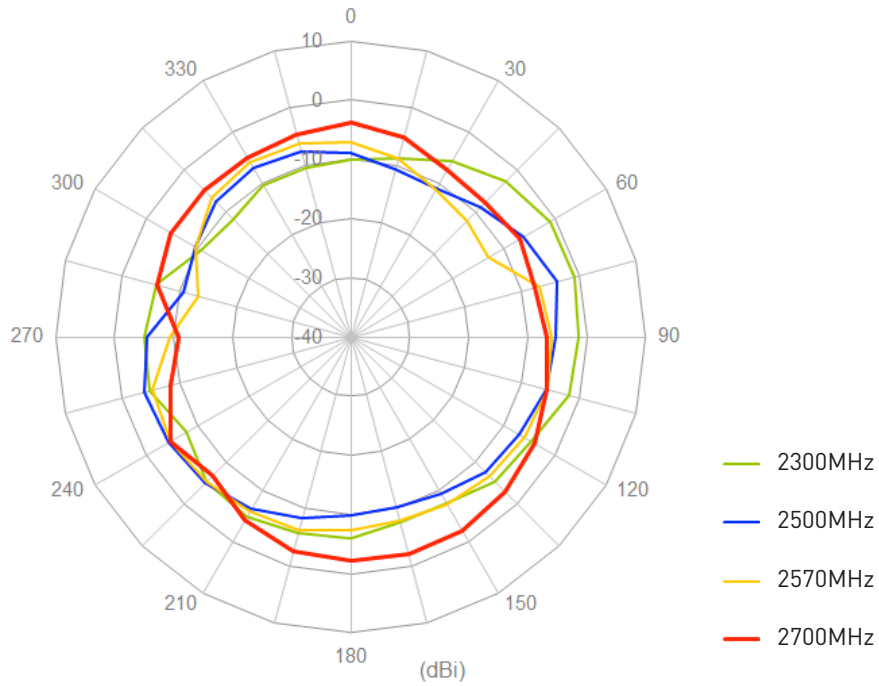
4. Radiation Patterns

XY Plane



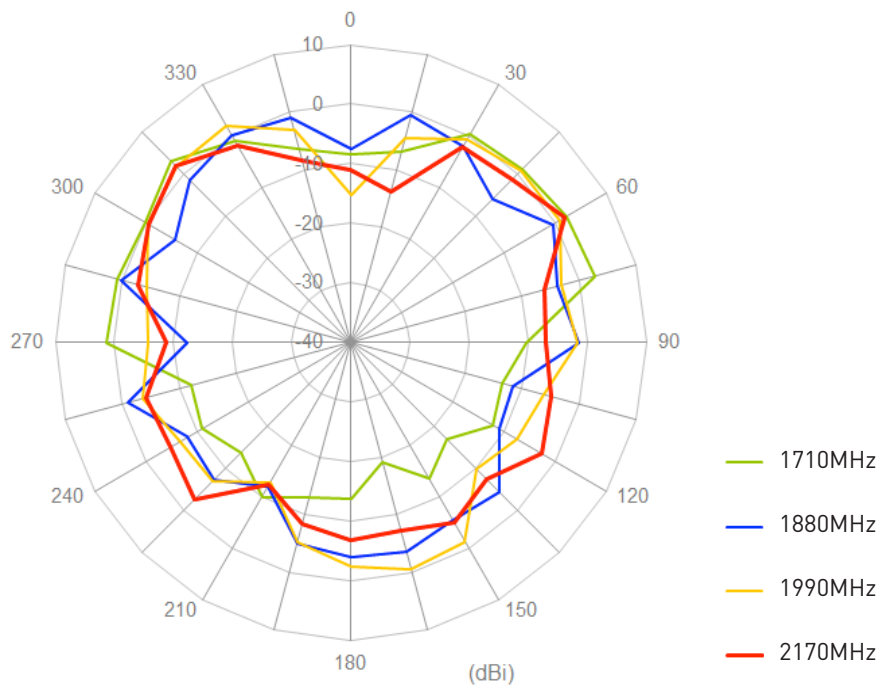
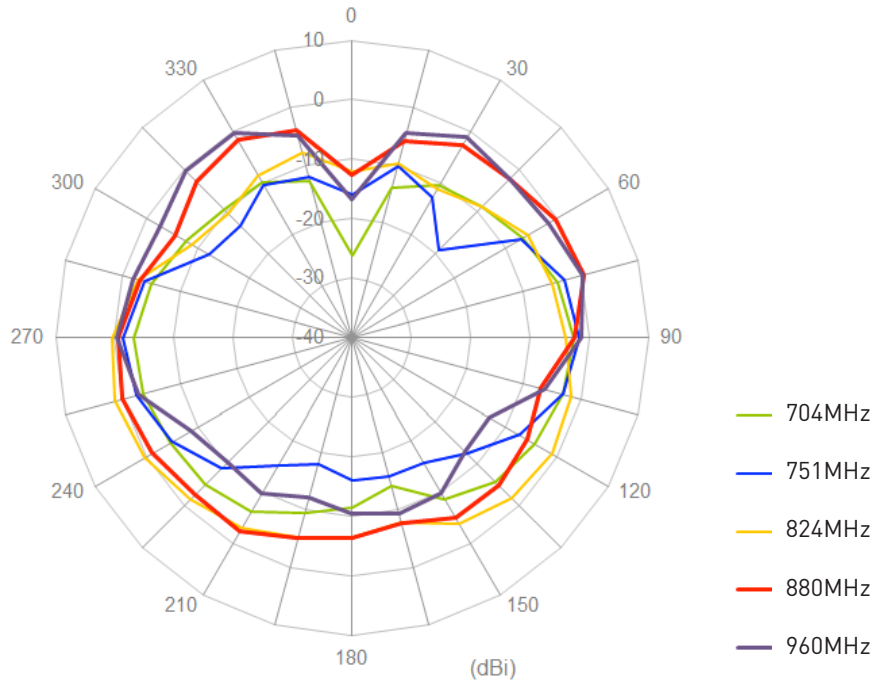
4. Radiation Patterns

XY Plane



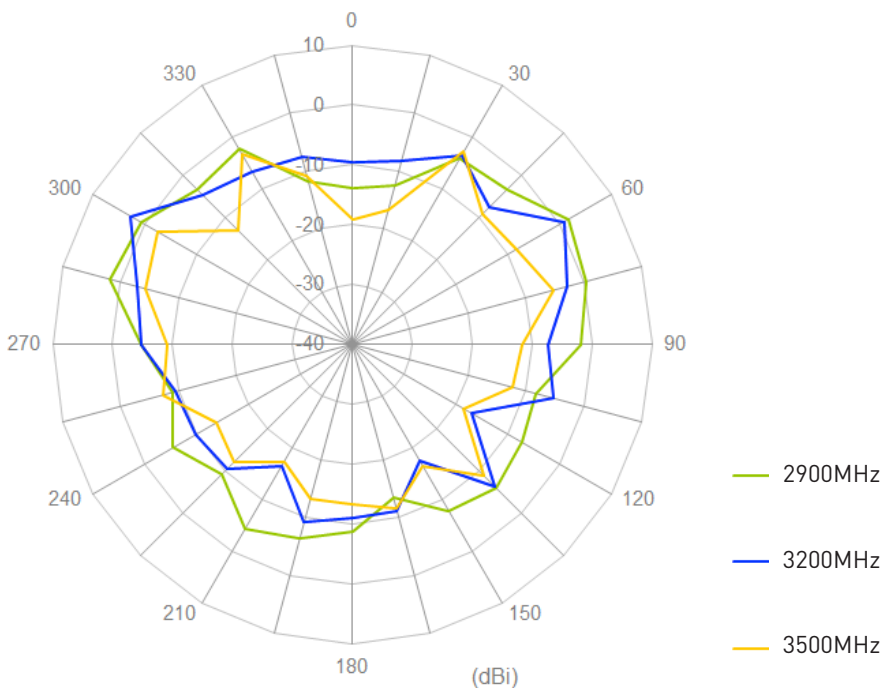
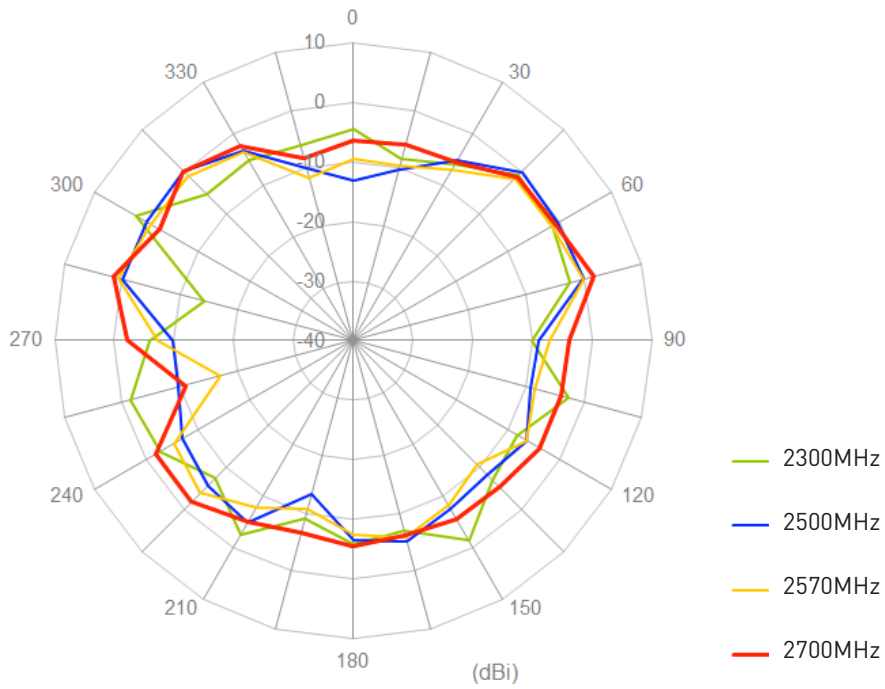
4. Radiation Patterns

XZ Plane



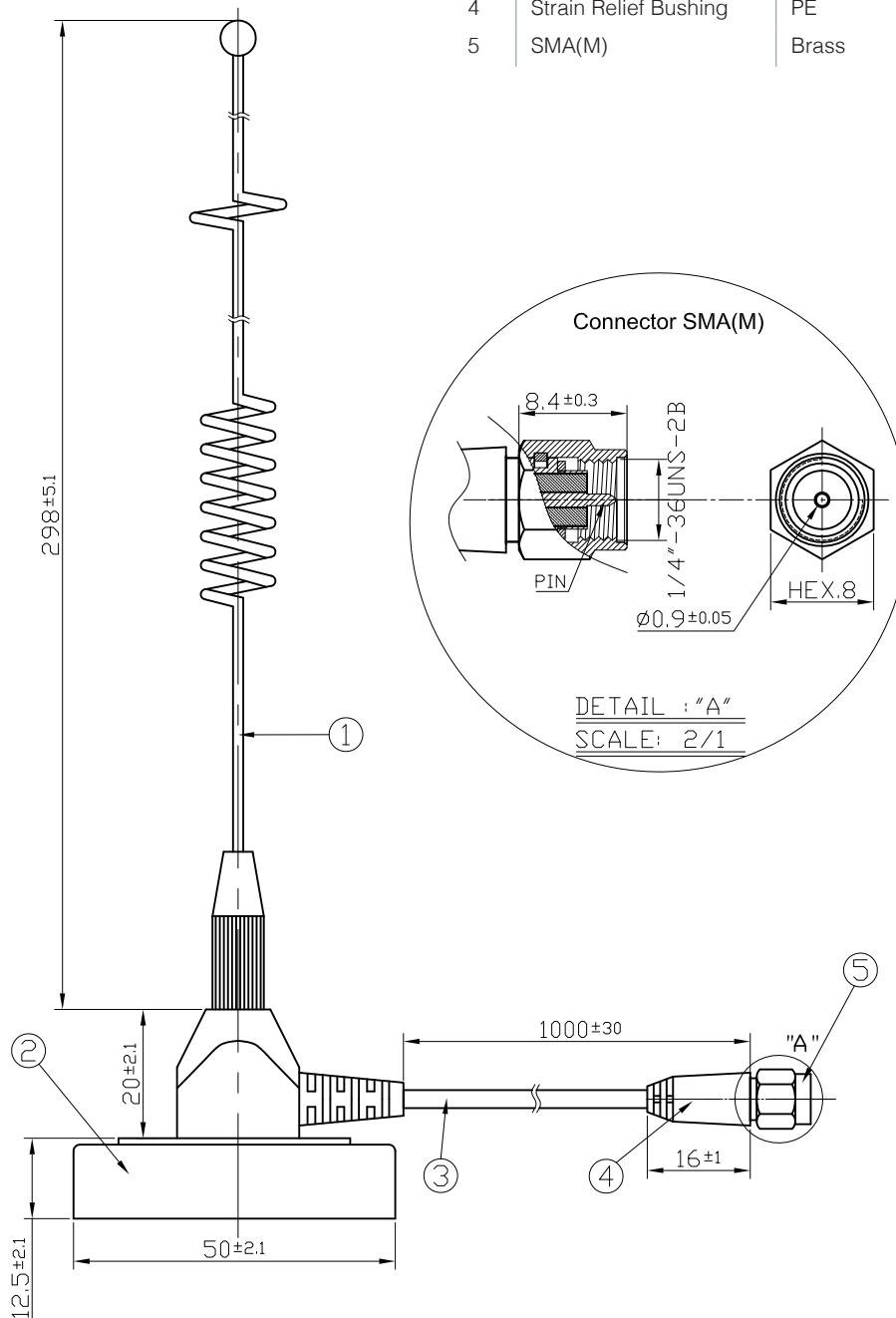
4. Radiation Patterns

XZ Plane



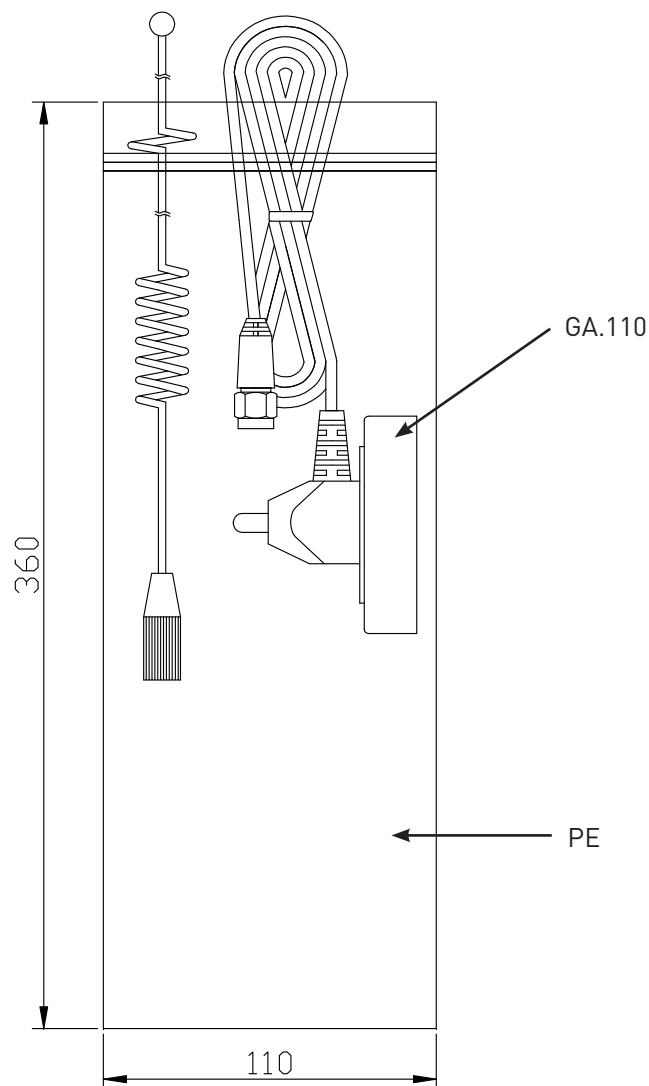
5. Drawing

	Name	Material	Finish	QTY
1	GA.110 Antenna Stick	Brass	Black	1
2	Cover	ABS	Black	1
3	RG174	PVC	Black	1
4	Strain Relief Bushing	PE	Black	1
5	SMA(M)	Brass	Gold	1



6. Packaging

1pcs antenna per small PE bag



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