TAOGLAS

Datasheet

T-Bar 4G Antenna with 3M Adhesive

Part No:
GSA.8822.B.301111

Features:

- Covers worldwide 4G bands from 600-4000MHz
- Low profile antenna, 106*13*6.7 mm
- 3M adhesive for ease of installation
- IP67 Waterproof
- 3 meter RG174 cable
- SMA(M) connector
- Cable and Connector Fully Customizable
- RoHS & Reach Compliant

1. Introduction

The GSA.8822.B.301111 T-Bar antenna is an external adhesive mount solution for covert and convenient installation in the automotive and telematics industry, making it ideal for tracking systems and cellular car kits. It covers 600-4000MHz and is designed to be mounted on glass or plastic, also it has exceptional performance characteristics considering its low profile at 6.7mm and has a compact size of 106*13mm.

Typical applications include:

- Vehicle tracking and telematics
- Metering
- Internet of Things

GSA8822.B T bar is a fully over molding with strain relief for IP67 waterproof external antenna, Strain relief provides the greatest amount of bend relief , protecting the electrical terminations to connect with cable coaxial. It comes with strong 3M double-sided adhesive for a permanent and secure fix to your vehicle interior.

Cable lengths and connectors are fully customizable, for further information please contact your regional Taoglas customer support team.

2. Specifications

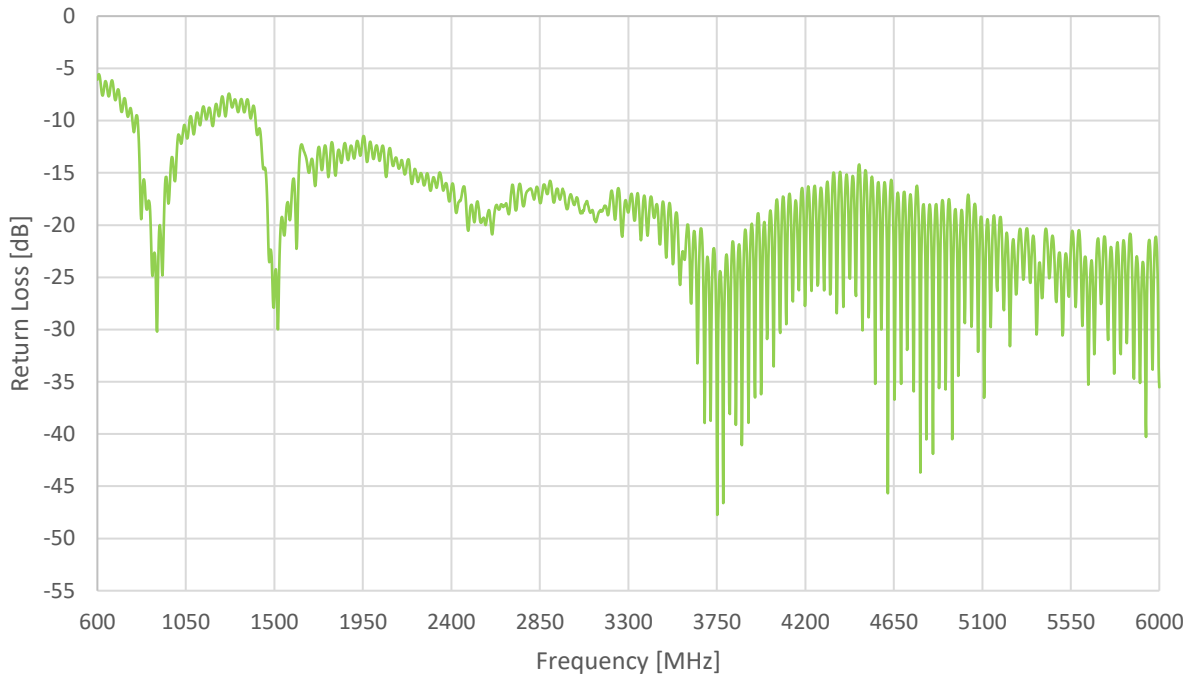
Electrical						
Band	**Frequency (MHz)**	**Efficiency (%)**	**Average Gain (dB)**	**Peak Gain (dBi)**	**Impedance**	**Polarization**
5GNR/4G Band 5,8,12,13,14,17,18,20, 26,27,28, 29,71	617~960	39	-4.4	2.8	50Ω	Linear
5GNR/4G Band 21,32,74,75,76	1427~1518	32	-5.1	0.7		
4G/3G Band 1,2,3,4,9,23,25,35,39,66	1710~2200	23	-6.3	1.3		
Wi-Fi	2400~2500	23	-6.3	1.9		
4G/3G Band 7,38,41	2490~2690	23	-6.5	2.3		
5GNR/4G Band 22,42,43,48,77,78,79	3300~5000	16	-8.1	4.3		
LTE5200/ Wi-Fi 5800	5150~5925	10	-10.5	-1.7		

Mechanical	
Dimensions	106 mm x 13 mm x 6.7 mm
Weight	40g
Cable	3 meters RG174 standard, fully customizable
Connector	SMA(M) standard, fully customizable
Housing	PVC
Environmental	
Waterproof	IP67
Temperature Range	-40°C to +85°C

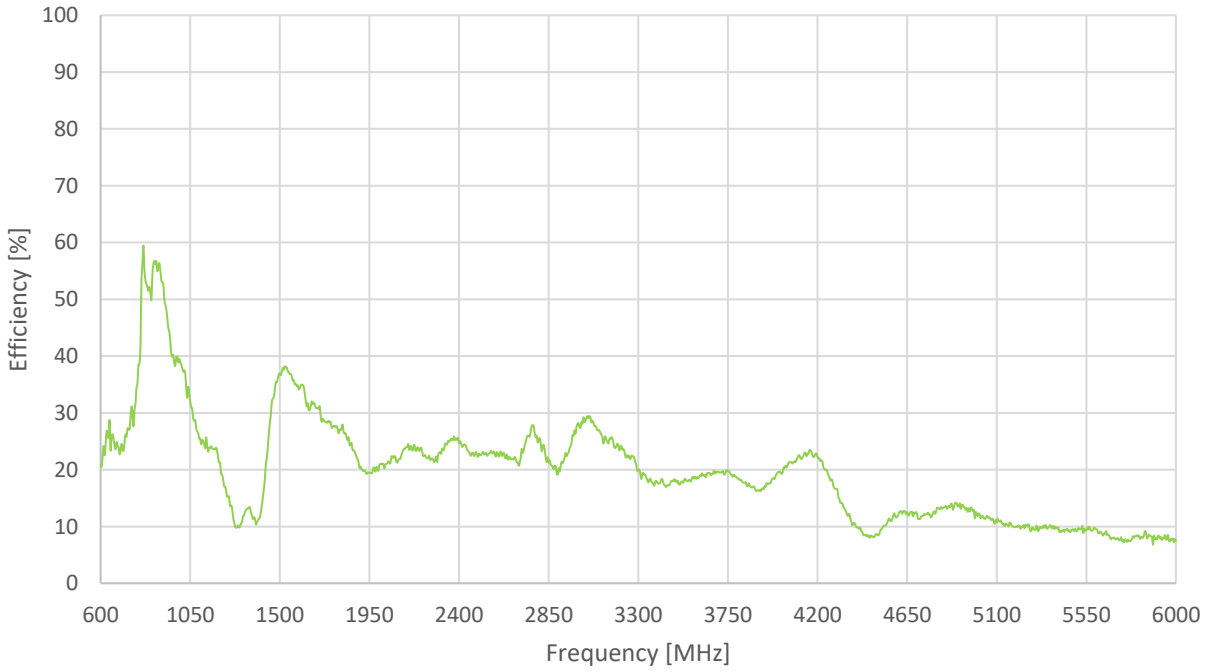
5G/4G Bands			
Band Number	5GNR / FR1 / LTE / LTE-Advanced / WCDMA / HSPA / HSPA+ / TD-SCDMA		
	Uplink	**Downlink**	**Covered**
1	UL: 1920 to 1980	DL: 2110 to 2170	✓
2	UL: 1850 to 1910	DL: 1930 to 1990	✓
3	UL: 1710 to 1785	DL: 1805 to 1880	✓
4	UL: 1710 to 1755	DL: 2110 to 2155	✓
5	UL: 824 to 849	DL: 869 to 894	✓
7	UL: 2500 to 2570	DL:2620 to 2690	✓
8	UL: 880 to 915	DL: 925 to 960	✓
9	UL: 1749.9 to 1784.9	DL: 1844.9 to 1879.9	✓
11	UL: 1427.9 to 1447.9	DL: 1475.9 to 1495.9	✓
12	UL: 699 to 716	DL: 729 to 746	✓
13	UL: 777 to 787	DL: 746 to 756	✓
14	UL: 788 to 798	DL: 758 to 768	✓
17	UL: 704 to 716	DL: 734 to 746	✓
18	UL: 815 to 830	DL: 860 to 875	✓
19	UL: 830 to 845	DL: 875 to 890	✓
20	UL: 832 to 862	DL: 791 to 821	✓
21	UL: 1447.9 to 1462.9	DL: 1495.9 to 1510.9	✓
22	UL: 3410 to 3490	DL: 3510 to 3590	✓
23	UL:2000 to 2020	DL: 2180 to 2200	✓
24	UL:1625.5 to 1660.5	DL: 1525 to 1559	✓
25	UL: 1850 to 1915	DL: 1930 to 1995	✓
26	UL: 814 to 849	DL: 859 to 894	✓
27	UL: 807 to 824	DL: 852 to 869	✓
28	UL: 703 to 748	DL: 758 to 803	✓
29	UL: -	DL: 717 to 728	✓
30	UL: 2305 to 2315	DL: 2350 to 2360	✓
31	UL: 452.5 to 457.5	DL: 462.5 to 467.5	✗
32	UL: -	DL: 1452 - 1496	✓
35	1850 to 1910		✓
38	2570 to 2620		✓
39	1880 to 1920		✓
40	2300 to 2400		✓
41	2496 to 2690		✓
42	3400 to 3600		✓
43	3600 to 3800		✓
48	3550 to 3700		✓
66	UL: 1710-1780	DL: 2110-2200	✓
71	617 to 698		✓
74/75/76	1427 to 1518		✓
78	3300 to 3800		✓
79	4400 to 5000		✗
85	698-716	728-746	✓

3. Antenna Characteristics

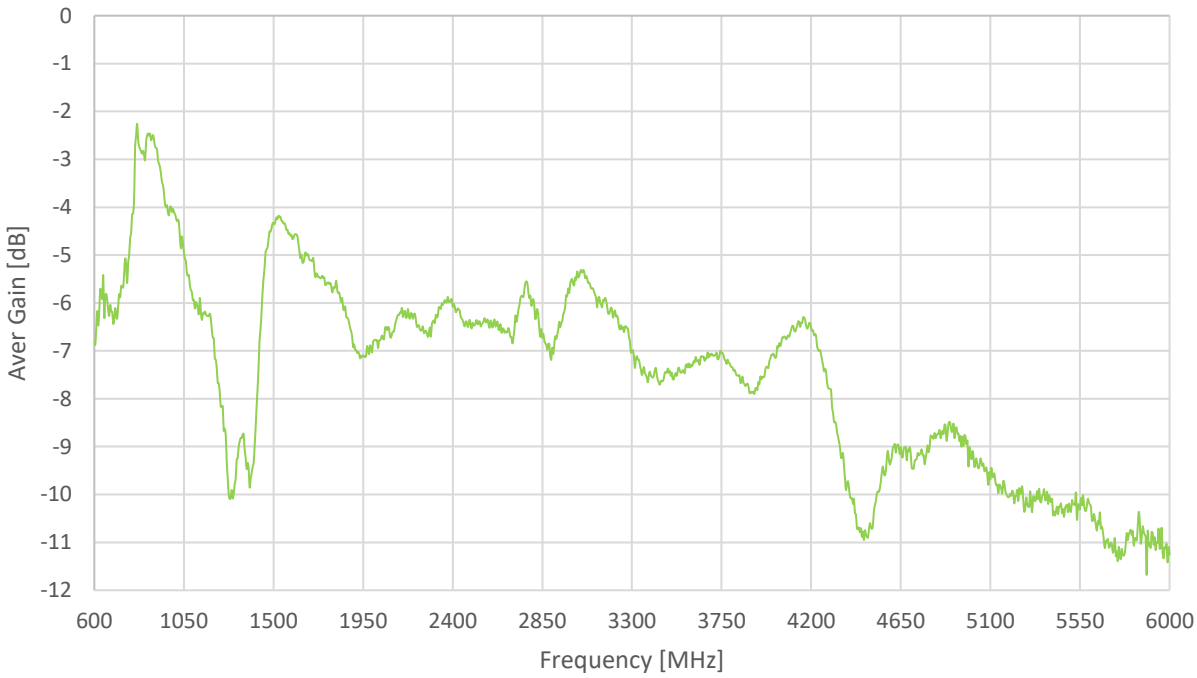
3.1 Return Loss



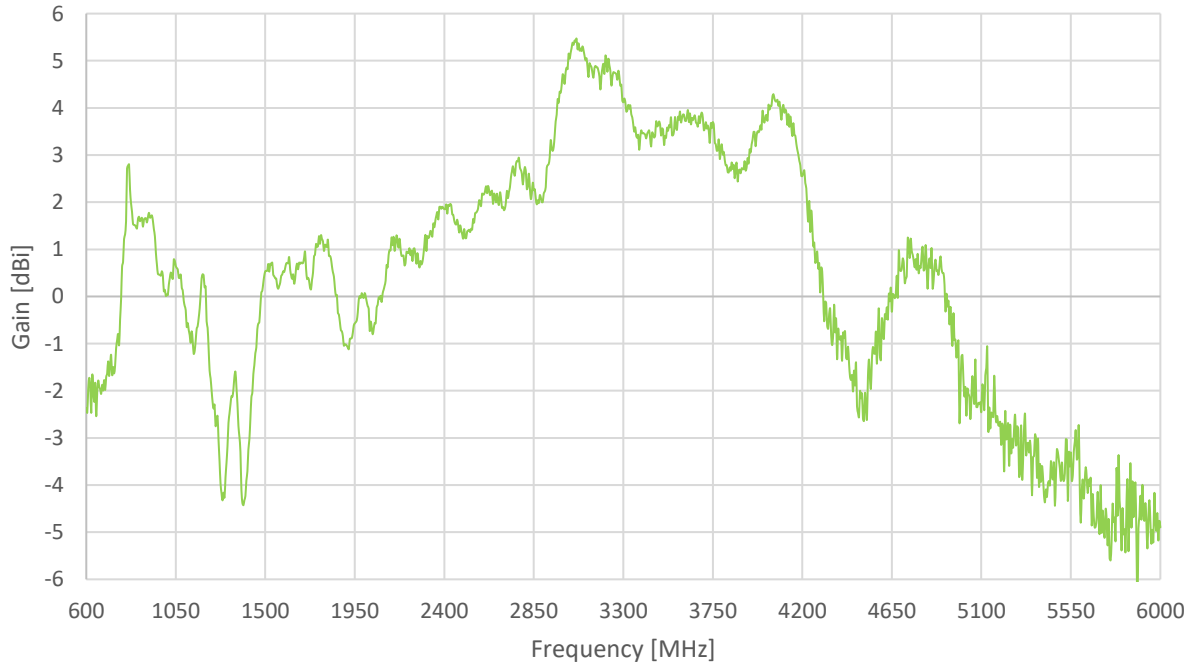
3.2 Efficiency



3.3 Average Gain

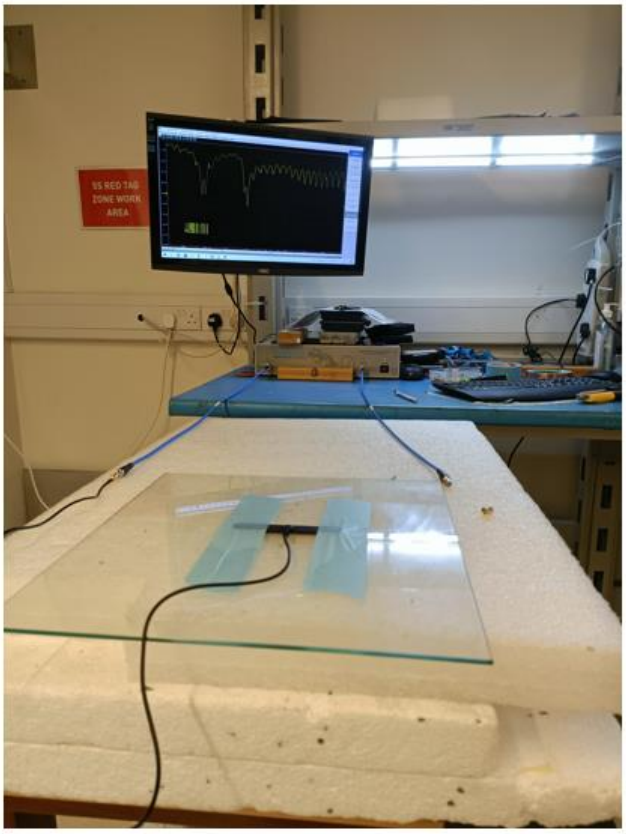


3.4 Peak Gain



4. Radiation Patterns

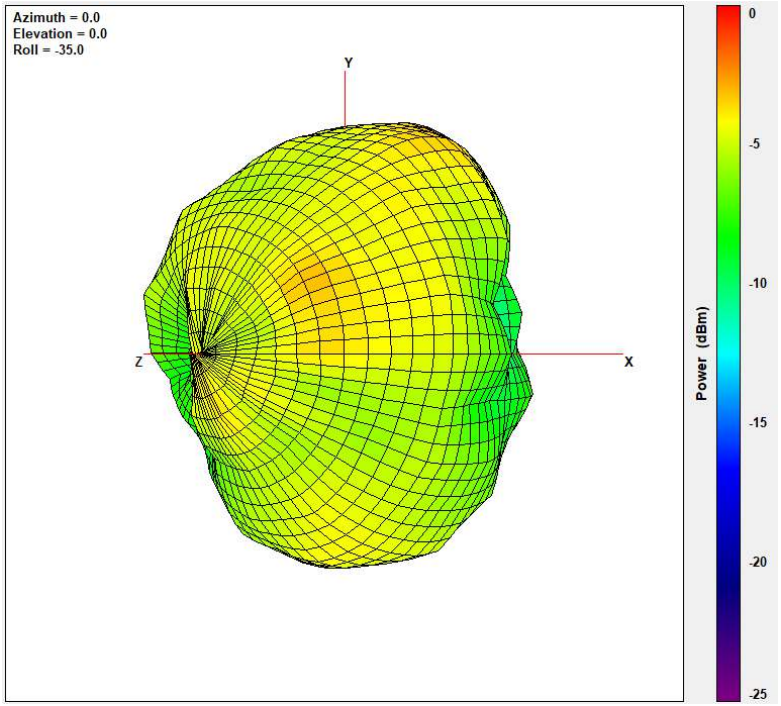
4.1 Test Setup



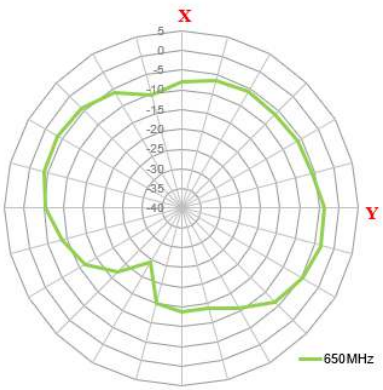
VNA setup on Glass

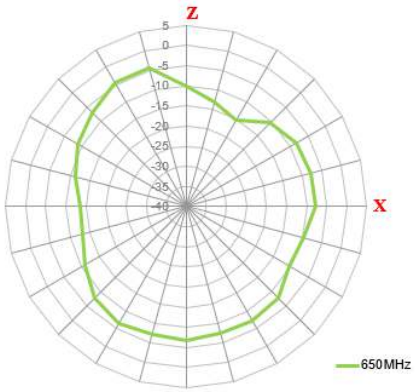
Chamber setup on Glass

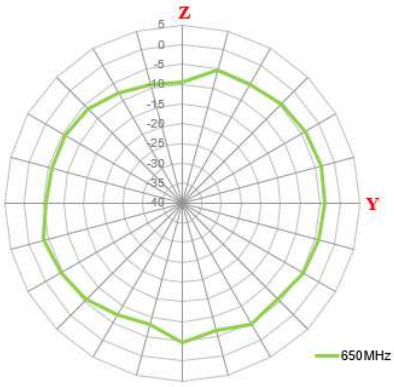
4.2 650MHz - 2D & 3D Radiation Patterns



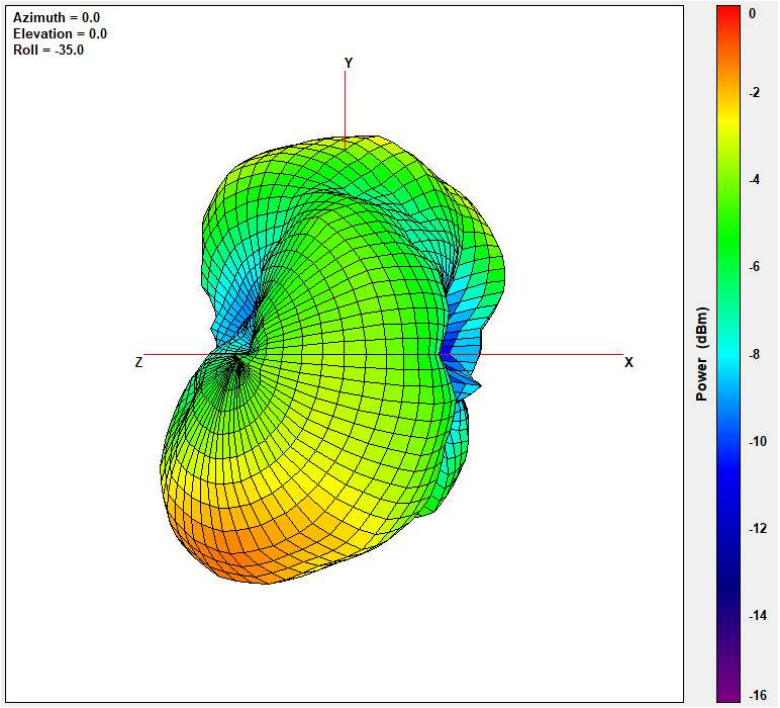
XY Plane	XZ Plane	YZ Plane



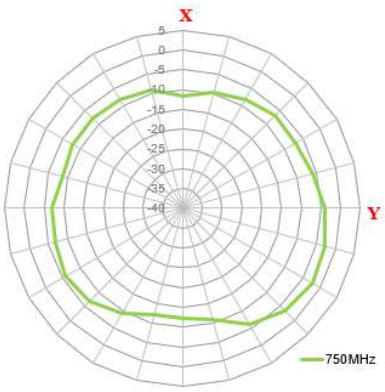


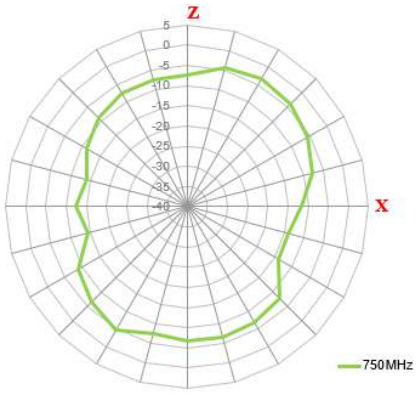


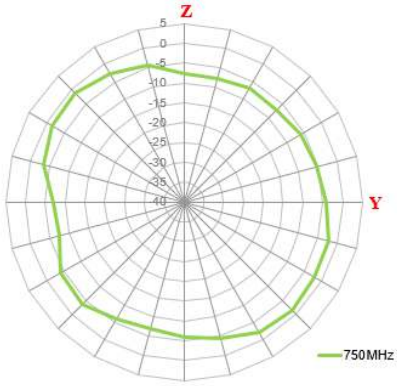
750MHz



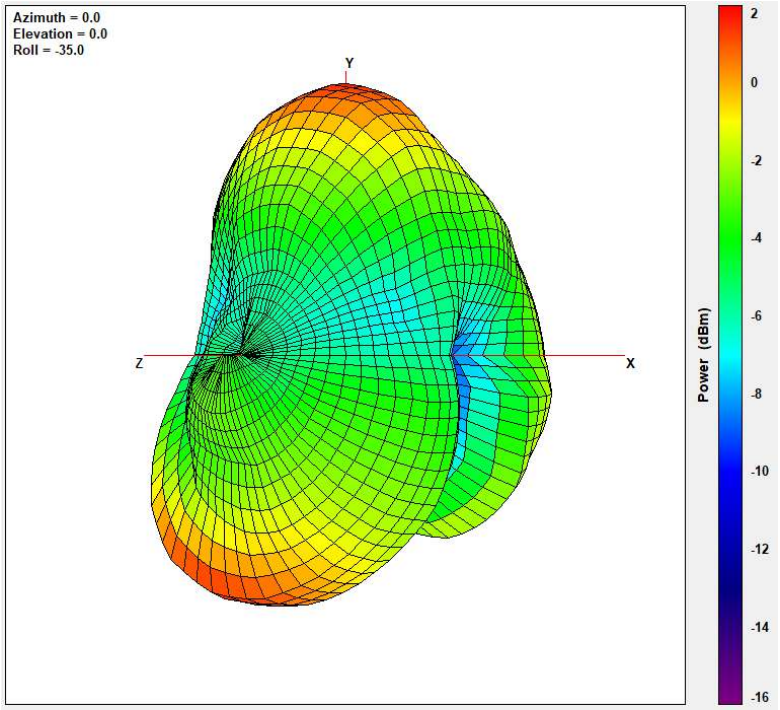
XY Plane	XZ Plane	YZ Plane



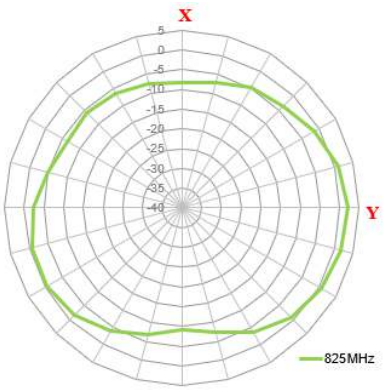


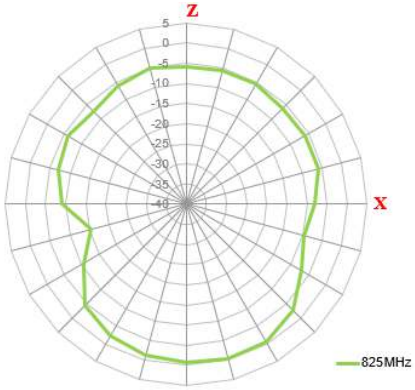


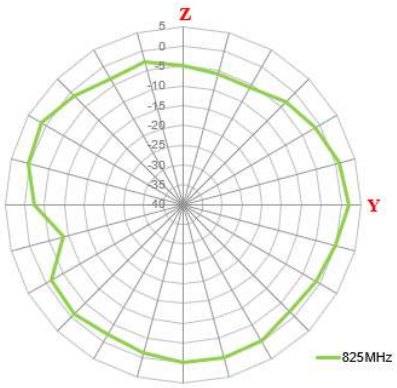
825MHz



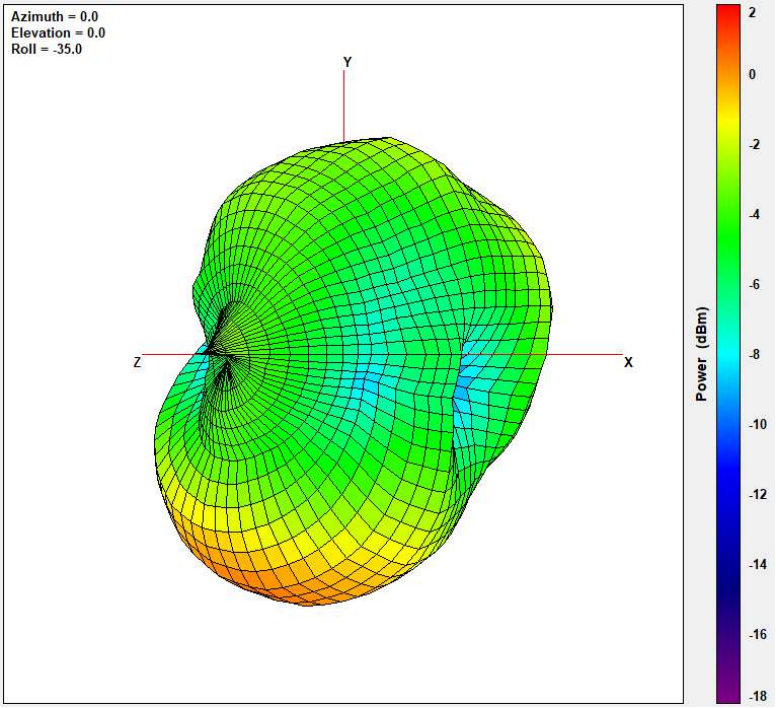
XY Plane	XZ Plane	YZ Plane



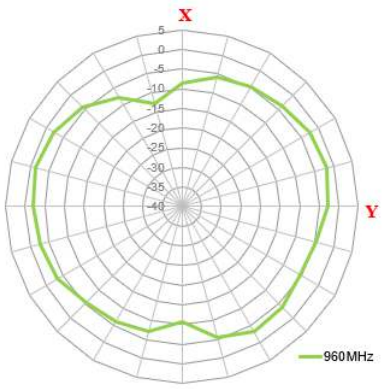


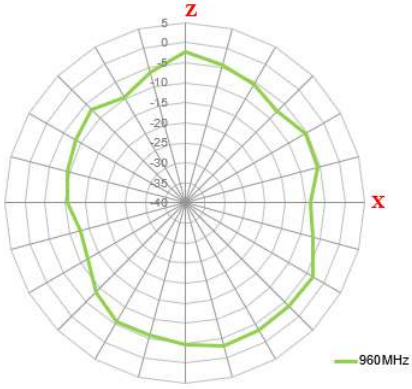


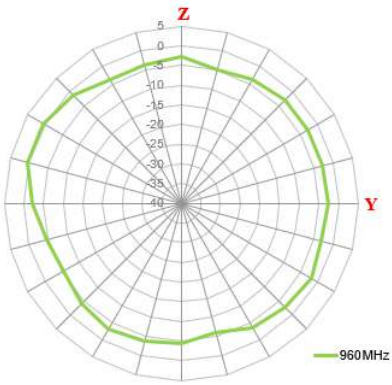
960MHz



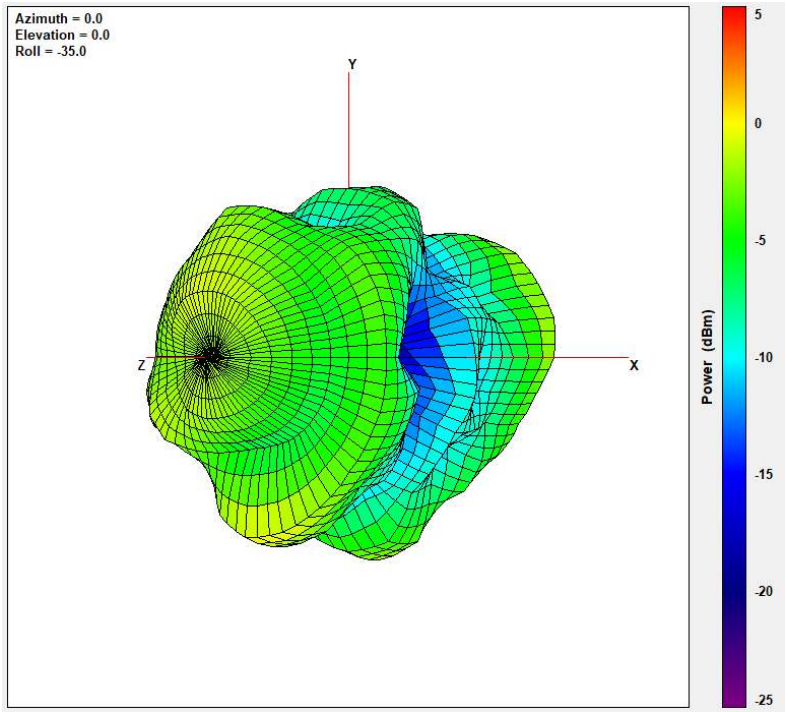
XY Plane	XZ Plane	YZ Plane

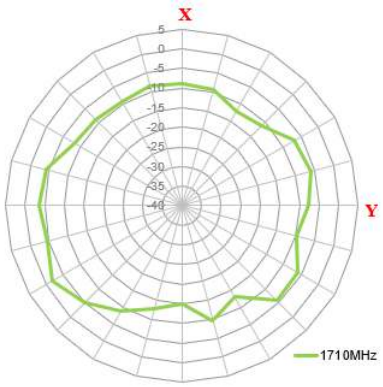
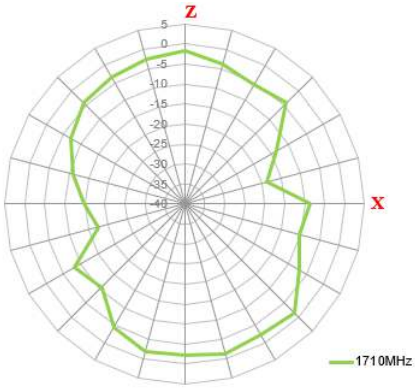
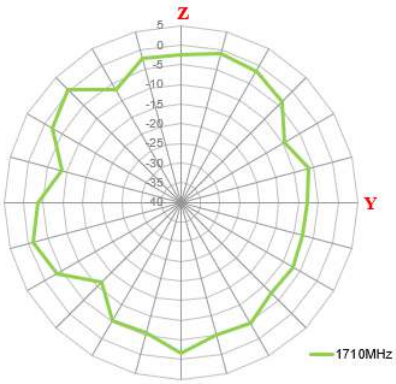




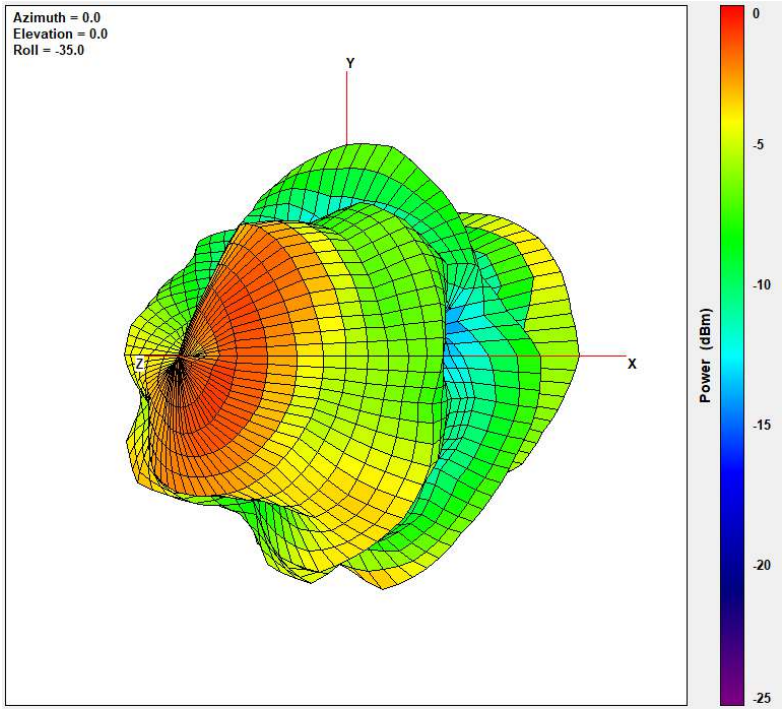


1710MHz

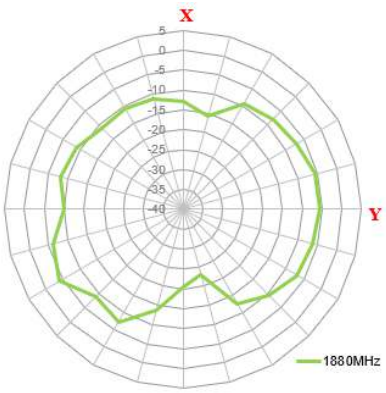


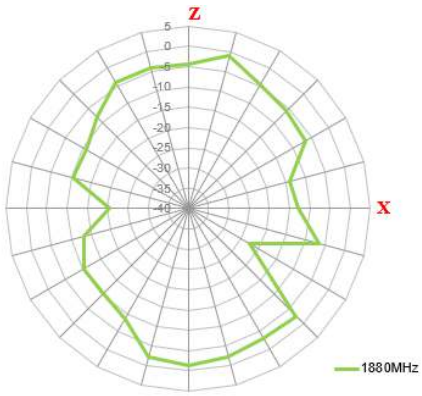
XY Plane	XZ Plane	YZ Plane
		

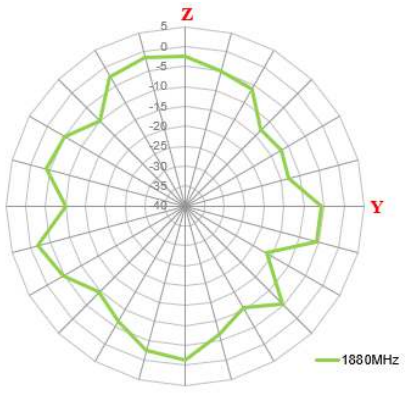
1880MHz



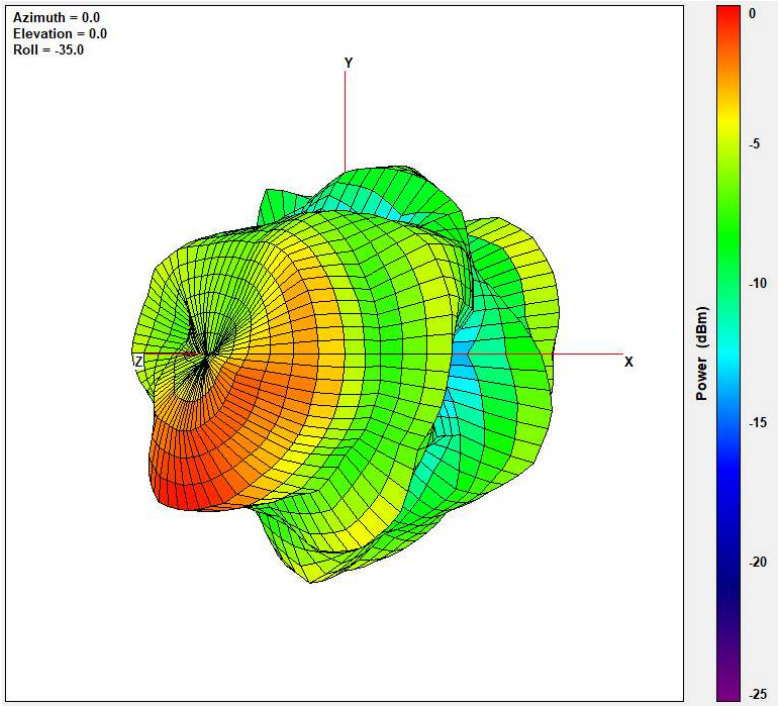
XY Plane	XZ Plane	YZ Plane



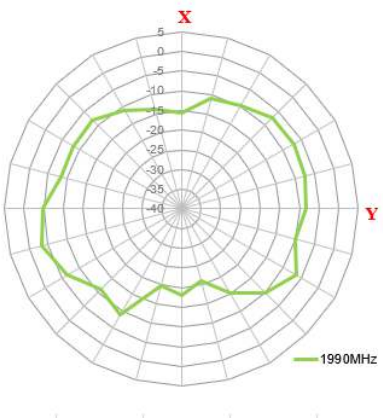


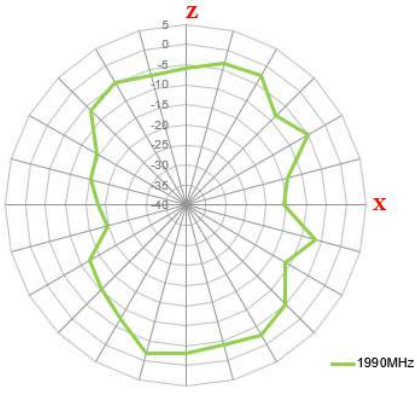


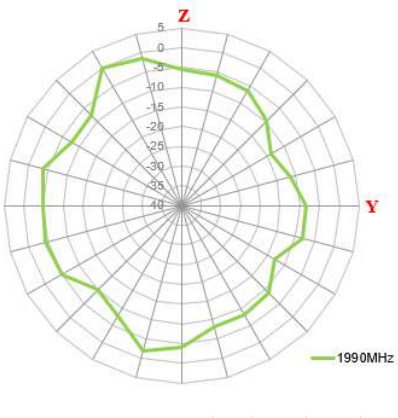
1990MHz



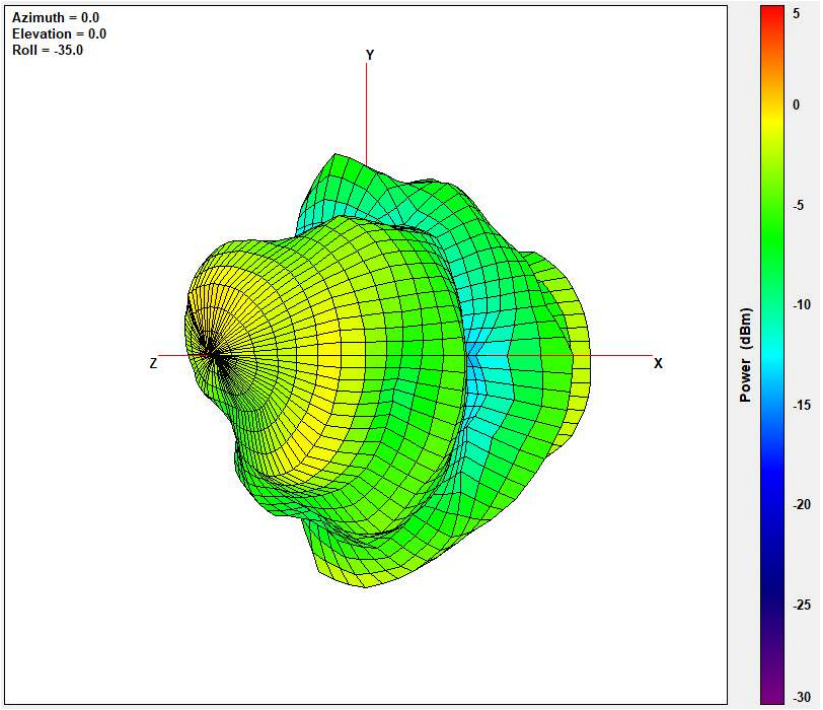
XY Plane	XZ Plane	YZ Plane

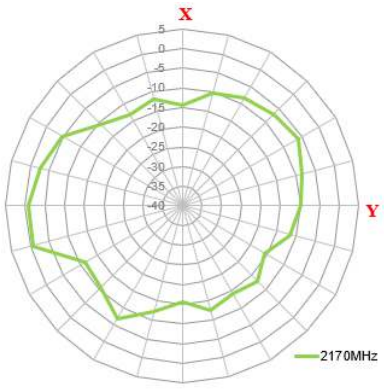
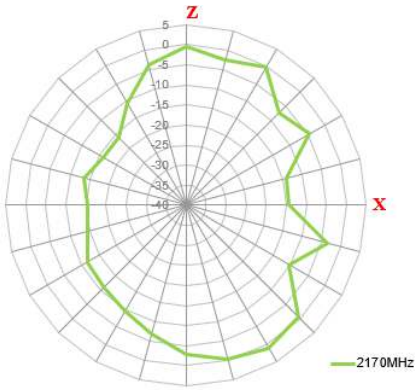
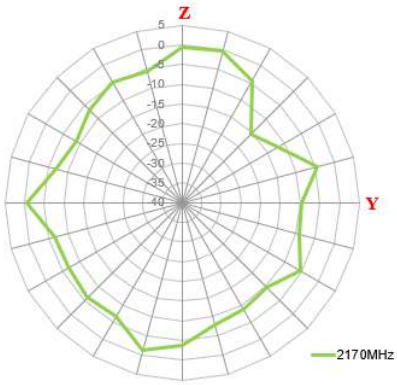




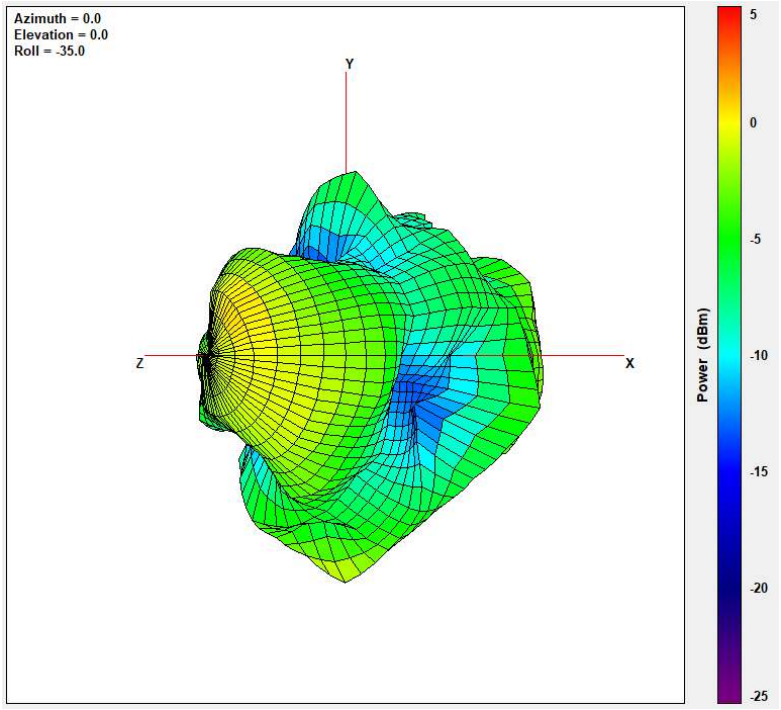


2170MHz

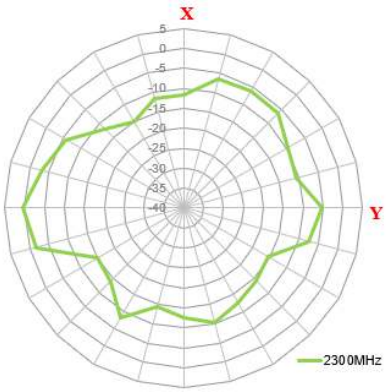


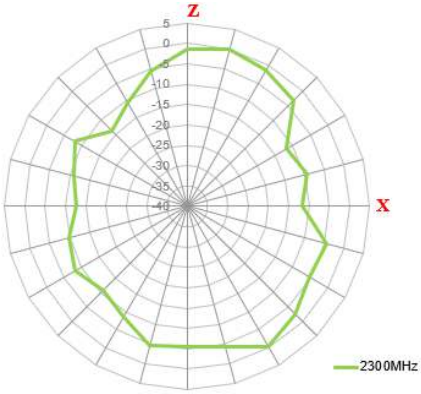
XY Plane	XZ Plane	YZ Plane
		

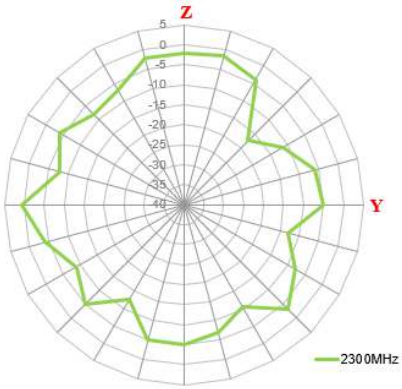
2300MHz



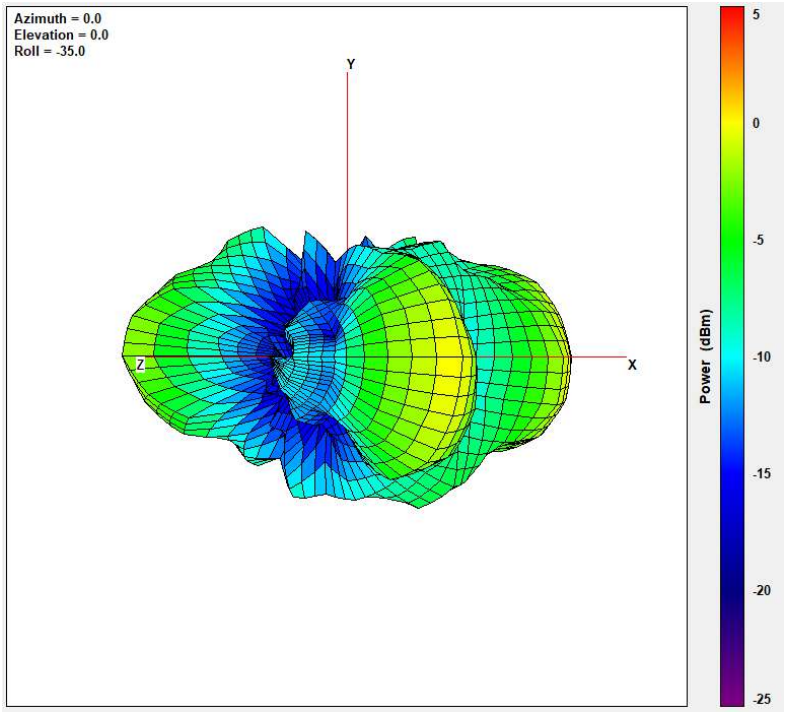
XY Plane	XZ Plane	YZ Plane



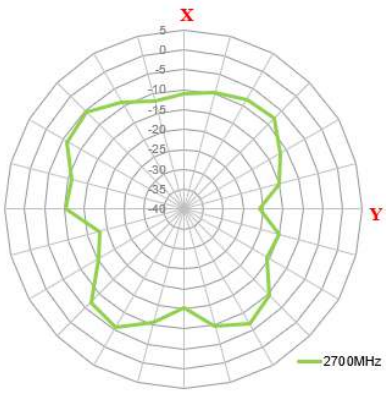


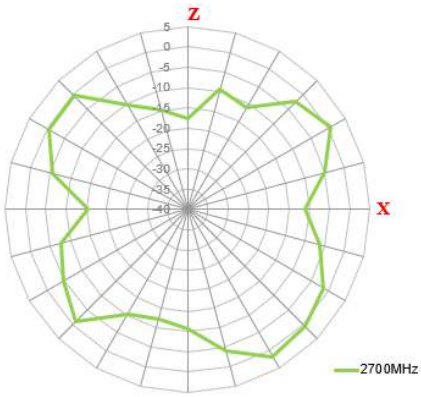


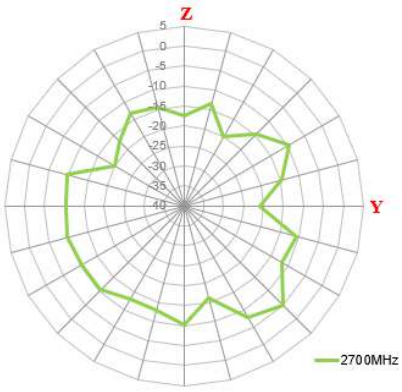
2700MHz



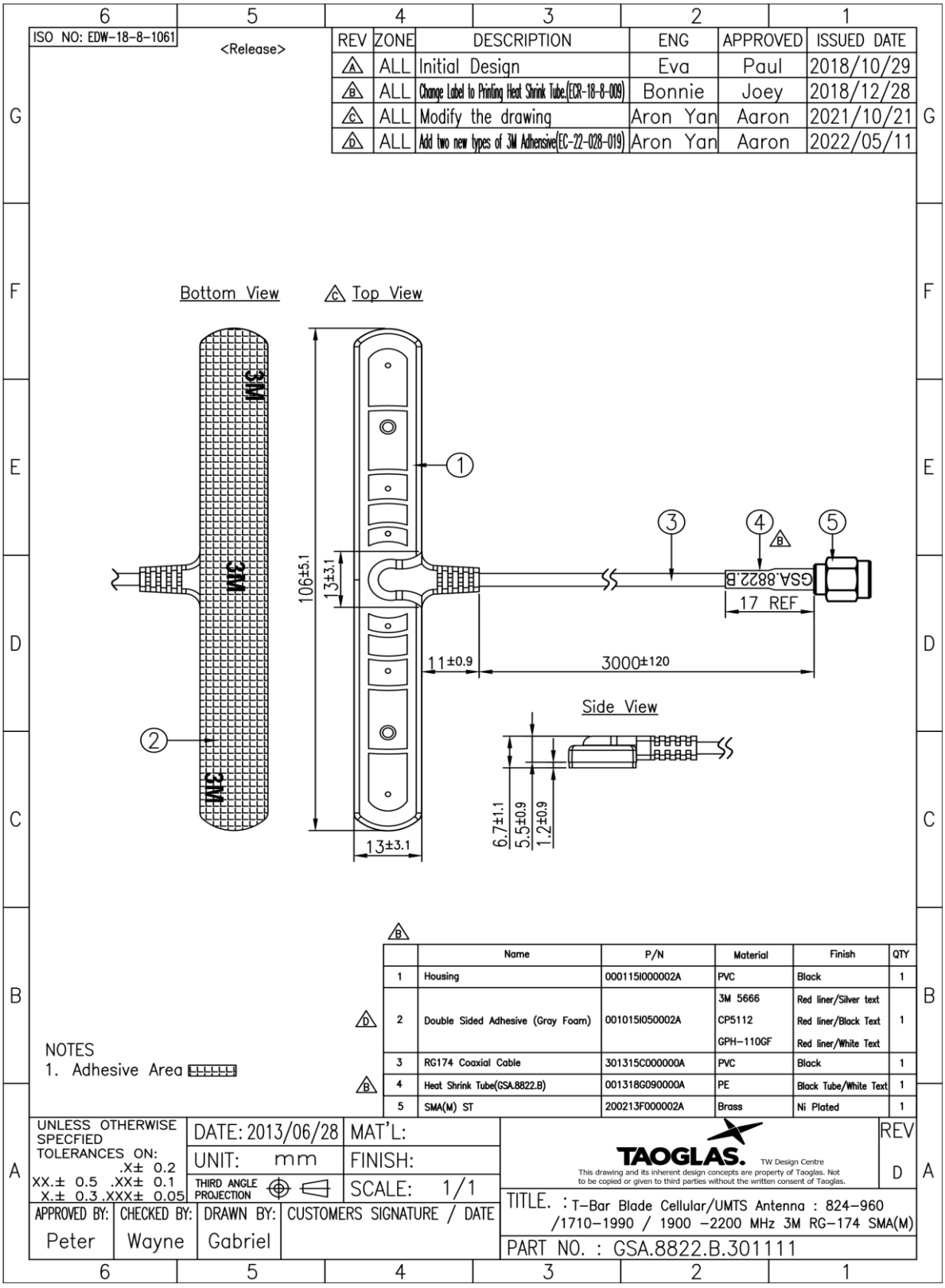
XY Plane	XZ Plane	YZ Plane





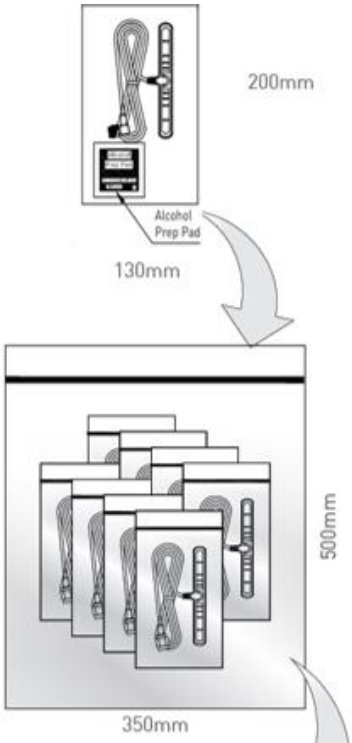


5. Mechanical Drawing (Units: mm)



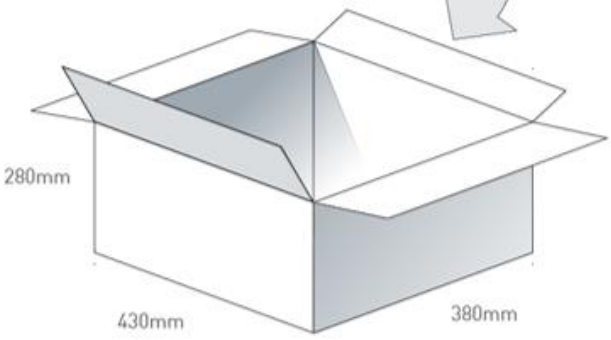
6. Packaging

1pc GSA.8822.B.301111 per small PE bag
Bag Dimensions – 130*200mm
Weight – 40g

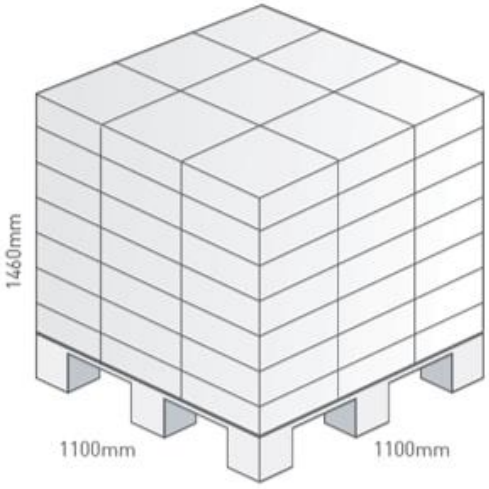


50pcs GSA.8822.B.301111 per large PE bag
Bag Dimensions – 350*500mm
Weight – 2.5kg

200pcs GSA.8822.B.301111 per carton
Carton Dimensions – 430*280mm
Weight – 12.1kg



Pallet Dimensions 1200mm*1000mm*1460mm
63 Cartons per pallet
9 Cartons per layer
7 Layers



Changelog for the datasheet

SPE-13-8-085 – GSA.8822.B.301111

Revision: I (Current Version)	
Date:	2022-05-13
Changes:	Mech drawing changed per EC-22-028-019
Changes Made by:	Gary West

Previous Revisions

Revision: H	
Date:	2020-10-30
Changes:	Drawing updated - Carton quantity increased from 100 to 200pcs
Changes Made by:	Dan Cantwell

Revision: G	
Date:	2020-03-24
Changes:	Updated packaging
Changes Made by:	Jack Conroy

Revision: F	
Date:	
Changes:	
Changes Made by:	

Revision: E	
Date:	2017-06-26
Changes:	Updated drawing as per PCN-17-8-055
Changes Made by:	Andy Mahoney

Revision: D	
Date:	2017-04-04
Changes:	Added LTE Band Table
Changes Made by:	Peter Monahan

Revision: C	
Date:	2016-05-16
Changes:	Added packaging
Changes Made by:	Aine Doyle

Revision: B	
Date:	2015-09-15
Changes:	Updated for 4G data
Changes Made by:	Aine Doyle

Revision: A (Original First Release)	
Date:	2023-10-22
Notes:	
Author:	Technical Writer

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