TAOGLAS



Datasheet

Gooseneck Series

Part No:
GSK.67.A.1E1

Description

Gooseneck Series Wideband Cellular 600-7125MHz Terminal Mount Antenna with Waterproof SMA M

Features:

Gooseneck Series Antenna
Covering: Wideband Cellular & WiFi6E/7: 617~7125 MHz
IP68 Waterproof Capability
Rugged Flexible Gooseneck Structure
Dims: Ø18.05 x 450.0 mm
Connector: SMA(M)
RoHS & Reach Compliant

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1. Introduction



The **Taoglas GSK.67.A.1E1 brings rugged mechanical design and wideband RF performance together in a flexible gooseneck antenna engineered for demanding field environments.** Its integrated semi-rigid gooseneck allows the antenna to be quickly repositioned and held at the required orientation, helping maintain effective antenna positioning and polarisation where equipment orientation can change during deployment.

Covering an ultra-wide frequency range from **617 MHz to 7125 MHz**, the GSK.67.A.1E1 provides a versatile antenna solution supporting **5G, 4G LTE, 3G, LTE-M, NB-IoT and Wi-Fi**, including the 2.4 GHz, 5 GHz and 6 GHz bands used by Wi-Fi 6E and Wi-Fi 7. This broad coverage makes it well suited to cellular, broadband and multi-radio communication equipment where a single rugged antenna solution is required.

The carbon-steel gooseneck combines flexibility with mechanical durability and also provides natural strain relief, helping reduce impact forces transferred to the RF connector and radio equipment. Tested to withstand **over 1,000 bending cycles and a 1.5 m drop**, and offering **IP68 protection and up to 15 W input power**, the GSK.67.A.1E1 is built for repeated deployment in challenging operational environments.
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Typical Applications:

- Manpack, MOLLE-mounted and dismounted communication systems
- Unmanned Ground Vehicles (UGVs) and robotic platforms
- Field command and control systems
- Government and public safety communications
- Mobile and deployable broadband communication systems
- Industrial IoT, gateways and remote monitoring

For integration support, testing services, or additional technical assistance, please contact your regional Taoglas customer support team.

2. Specification

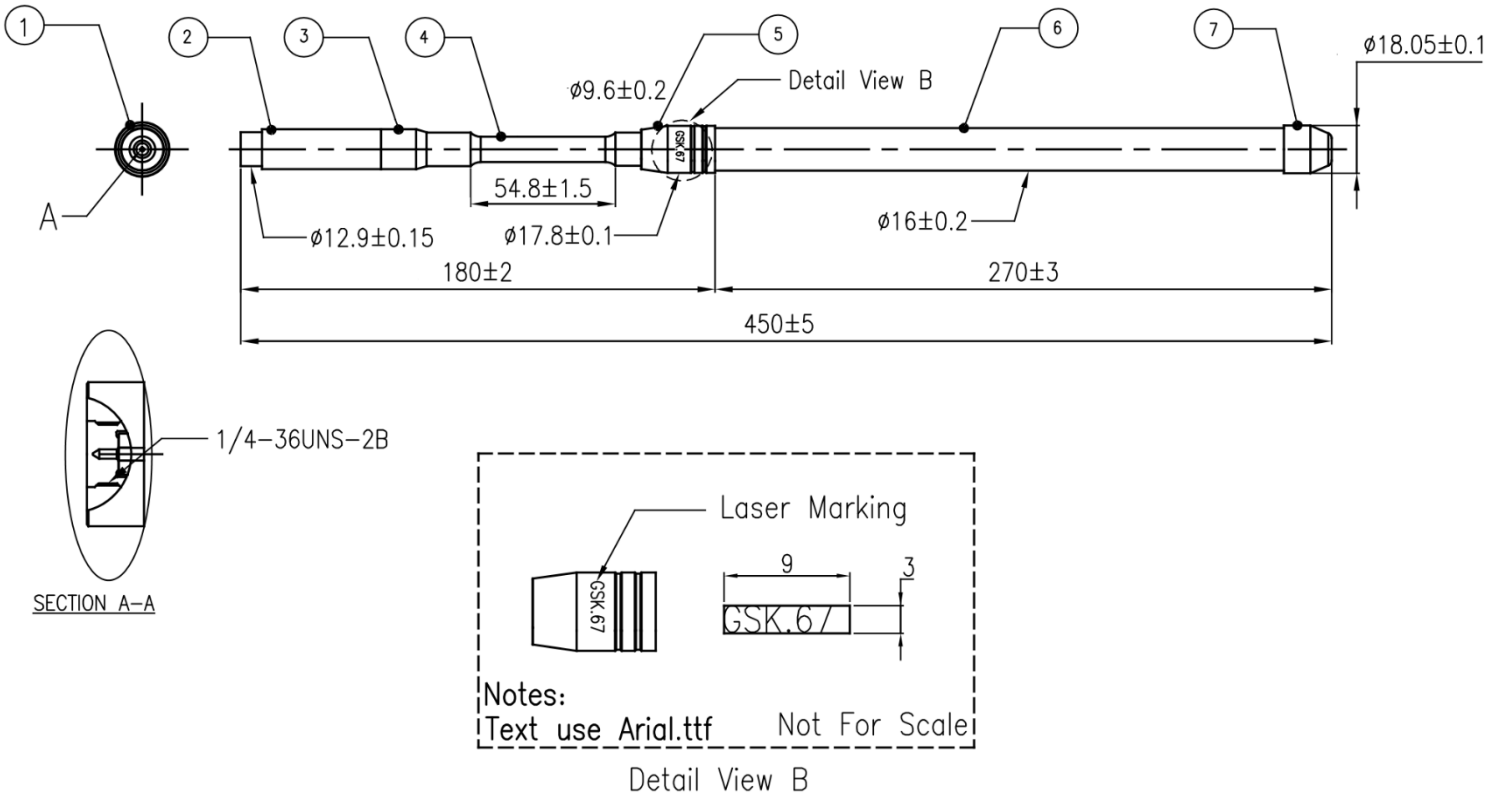
Electrical								
Band	**Frequency (MHz)**	**Efficiency (%)**	**Average Gain (dB)**	**Peak Gain (dBi)**	**Impedance**	**Polarization**	**Radiation Pattern**	**Max. input power**
5GNR/4G Band71	617-698	62.1	-2.07	1.49	50 Ω	Linear	Omni directional	15W
4G/3G Band 12,13,14,17,28,29	698-806	50.4	-2.98	2.61				
4G/3G/NB-IoT/Cat M Band 5,8,18,19,20,26,27	824-960	45.8	-3.39	3.75				
5GNR/4G Band 21,32,74,75,76	1427-1518	58.6	-2.32	2.42				
4G/3G Band 1,2,3,4,9,23,25,35,39,66	1710-2200	65.4	-1.85	1.94				
4G/3G Band 7,30,38,40,41	2300-2690	53.6	-2.71	2.54				
5GNR/4G Band 22,42,48,77,78,79	3300-5000	59.1	-2.28	3.94				
LTE5200/Wi-Fi5800	5150-5925	52.2	-2.82	5.61				
Wi-Fi - 6GHz	5925-7125	58.1	-2.36	4.68				

Mechanical	
Dimensions	Ø18.05 mm x 450.0 mm
Weight	149g
Material	Enclosure: FRP Gooseneck: Carbon steel Other: Brass/ Silicon
Connector	SMA(M)
Repetitive Bending Cycle	1000

Environmental	
Waterproof Rating	IP68 w/o mating
Operation Temperature	-40°C to 85°C
Storage Temperature	-40°C to 85°C
Relative Humidity	Non-condensing 65°C 95% RH

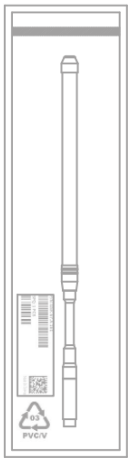
5G/4G Bands			
Band Number	**5GNR / FR1 / LTE / LTE-Advanced / WCDMA / HSPA / HSPA+ / TD-SCDMA / NTN**		
	Uplink	**Downlink**	**Covered**
B1	1920 to 1980	2110 to 2170	✓
B2	1850 to 1910	1930 to 1990	✓
B3	1710 to 1785	1805 to 1880	✓
B4	1710 to 1755	2110 to 2155	✓
B5	824 to 849	869 to 894	✓
B7	2500 to 2570	2620 to 2690	✓
B8	880 to 915	925 to 960	✓
B9*	1749.9 to 1784.9	1844.9 to 1879.9	✓
B11	1427.9 to 1447.9	1475.9 to 1495.9	✓
B12	699 to 716	729 to 746	✓
B13	777 to 787	746 to 756	✓
B14	788 to 798	758 to 768	✓
B17	704 to 716	734 to 746	✓
B18	815 to 830	860 to 875	✓
B19	830 to 845	875 to 890	✓
B20	832 to 862	791 to 821	✓
B21	1447.9 to 1462.9	1495.9 to 1510.9	✓
B22*	3410 to 3490	3510 to 3590	✓
B23 / n23	2000 to 2020	2180 to 2200	✓
B24 / n255	1626.5 to 1660.5	1525 to 1559	✓
B25	1850 to 1915	1930 to 1995	✓
B26	814 to 849	859 to 894	✓
B27*	807 to 824	852 to 869	✓
B28	703 to 748	758 to 803	✓
B29	717 to 728		✓
B30	2305 to 2315	2350 to 2360	✓
B31	452.5 to 457.5	462.5 to 467.5	✗
B32	1452 to 1496		✓
B34	2010 to 2025		✓
B35	1850 to 1910		✓
B36	1930 to 1990		✓
B37	1910 to 1930		✓
B38	2570 to 2620		✓
B39	1880 to 1920		✓
B40	2300 to 2400		✓
B41	2496 to 2690		✓
B42	3400 to 3600		✓
B43	3600 to 3800		✓
B45	1447 to 1467		✓
B46	5150 to 5925		✓
B47	5855 to 5925		✓
B48	3550 to 3700		✓
B49	3550 to 3700		✓
B50	1432 to 1517		✓
B51	1427 to 1432		✓
B52	3300 to 3400		✓
B53	2483.5 to 2495		✓
B65	1920 to 2010	2110 to 2200	✓
B66	1710 to 1780	2110 to 2200	✓
B68	698 to 728	753 to 783	✓
B69	2570 to 2620		✓
B70	1695 to 1710	1995 to 2020	✓
B71	663 to 698	617 to 652	✓
B72	451 to 456	461 to 466	✗
B73	450 to 455	460 to 465	✗
B74	1427 to 1470	1475 to 1518	✓
B75	1432 to 1517		✓
B76	1427 to 1432		✓
B77	3300 to 4200		✓
B78	3300 to 3800		✓
B79	4400 to 5000		✓
B85	698 to 716	728 to 746	✓
B87	410 to 415	420 to 425	✗
B88	412 to 417	422 to 427	✗
n256	1980 to 2010	2170 to 2200	✓

3. Mechanical Drawing



	Name	Material	Finish	QTY
1	SMA Male	Bras C3604	Black chrom	1
2	Ring-01	Bras C3604	Black chrom	1
3	Ring-02	Bras C3604	Black chrom	1
4	Gooseneck Tube	Carbon Steel	Black	1
5	Screw cap	Bras C3604	Black chrom	1
6	Tube	FRP	Black	1
7	Head	Bras C3604	Black chrom	1

4. Packaging



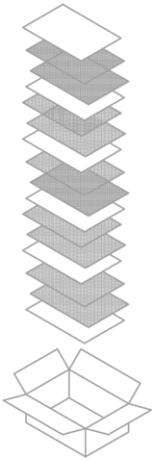
☑ 1 PCS / PVC Bag

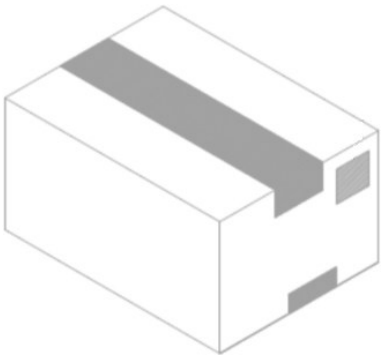
☑ PE bag (mm): 560x45

☑ Weight (g): 161 ±3%

weight without packaging (g): 149 ±3%

☑ SPQ Label





☑ 50 PCS / Carton

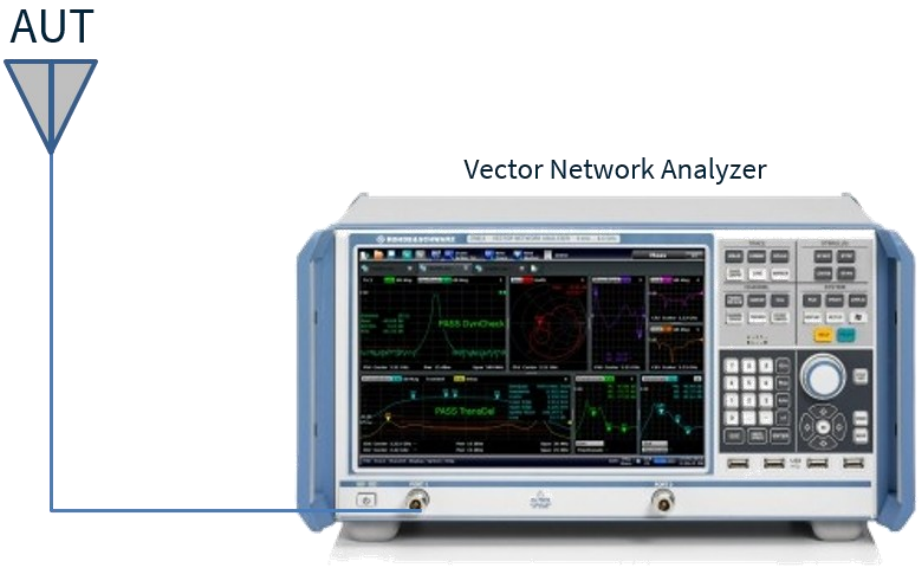
☑ Carton (mm): 710x210x160

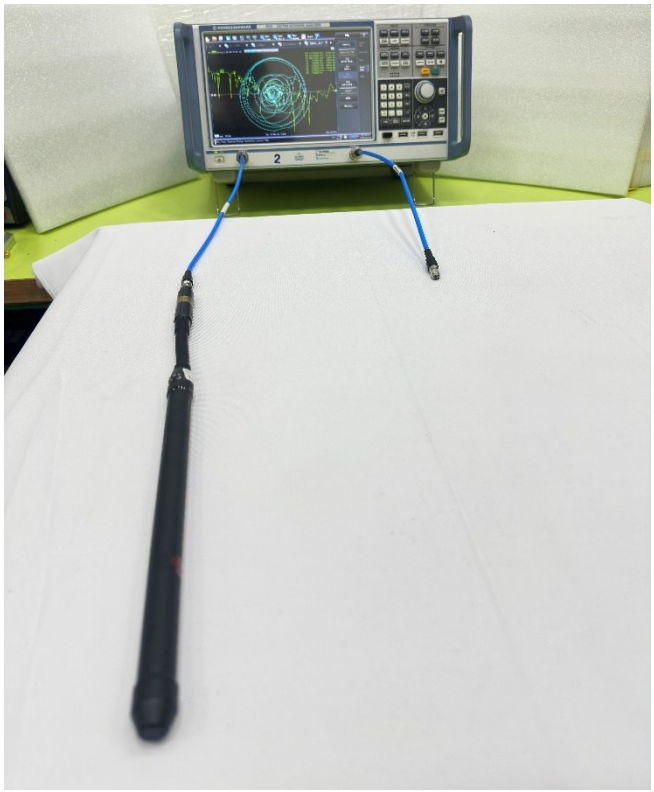
☑ Weight (Kg): 8.93 ±3%

☑ Carton Label

5. Antenna Characteristics

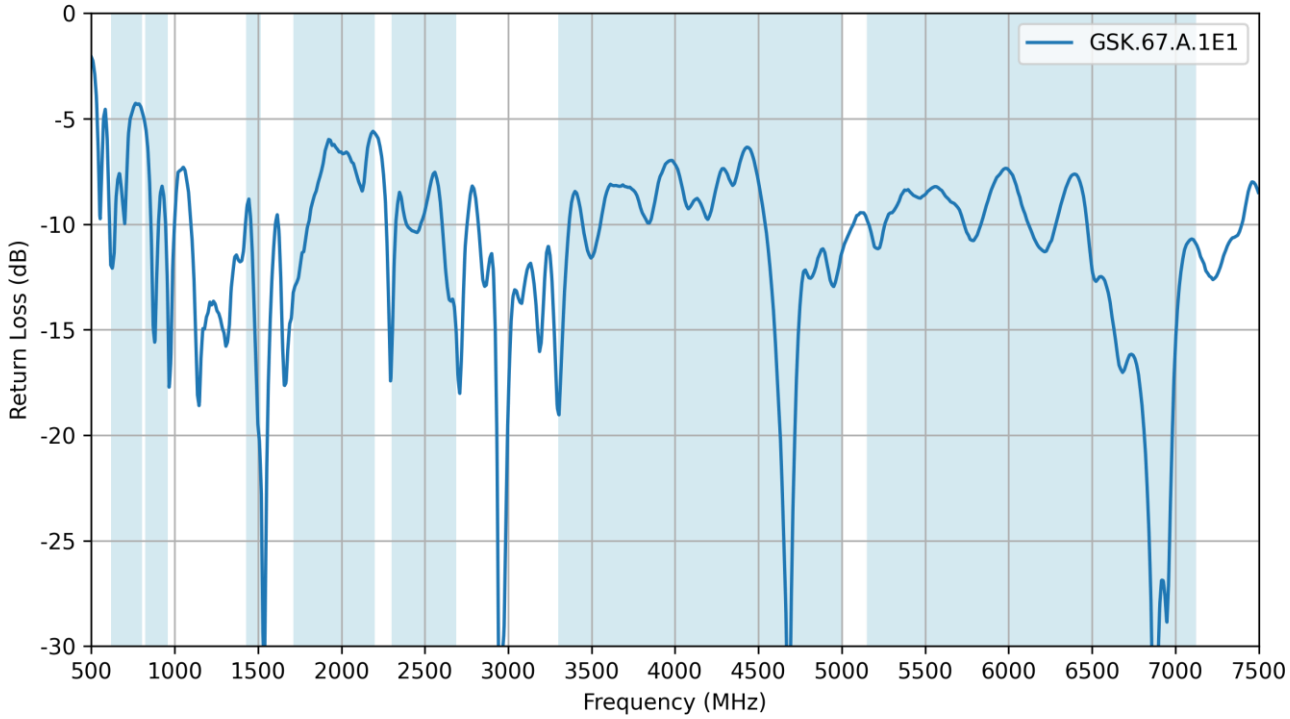
5.1 Test Setup



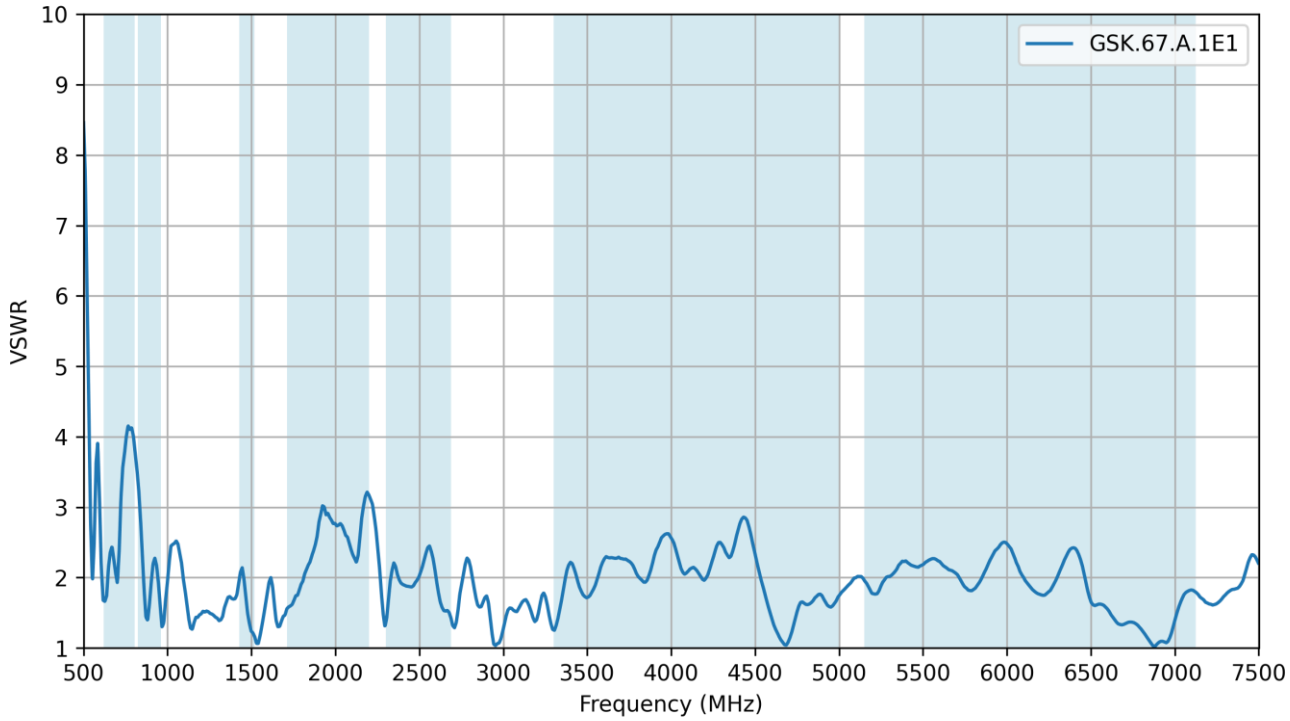


VNA Test Set-up

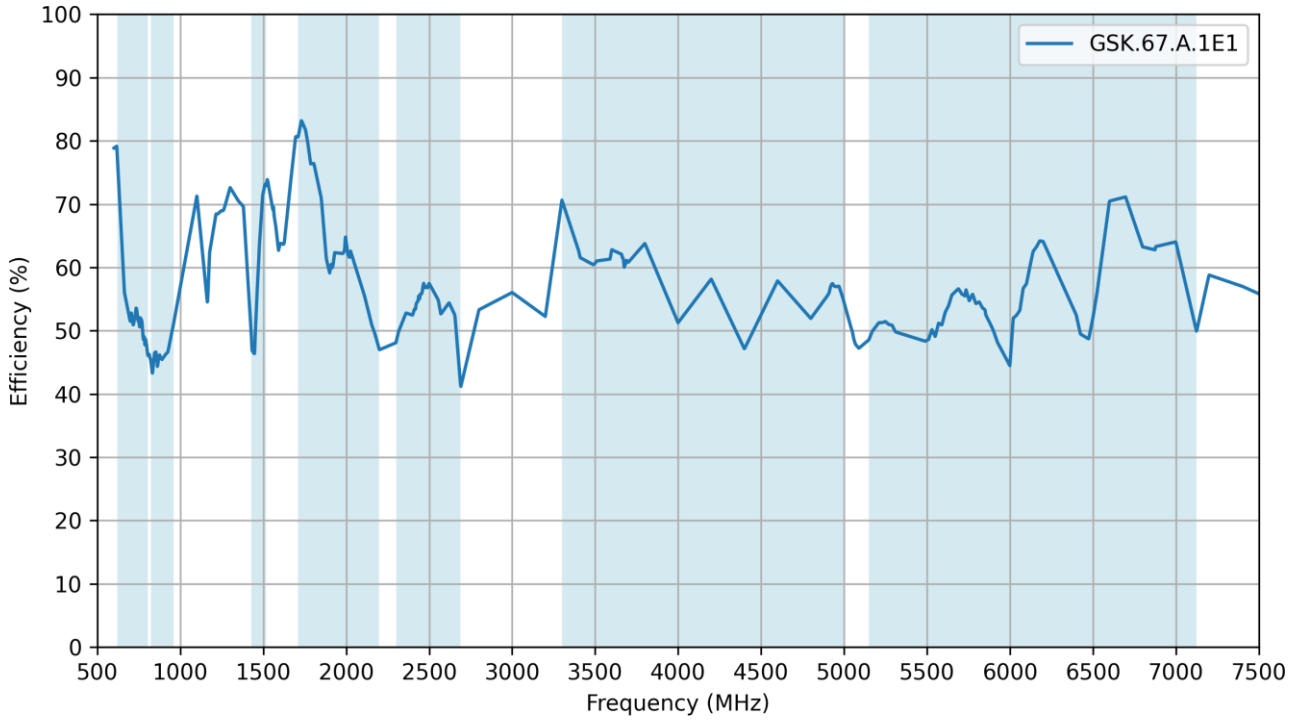
5.2 Return Loss



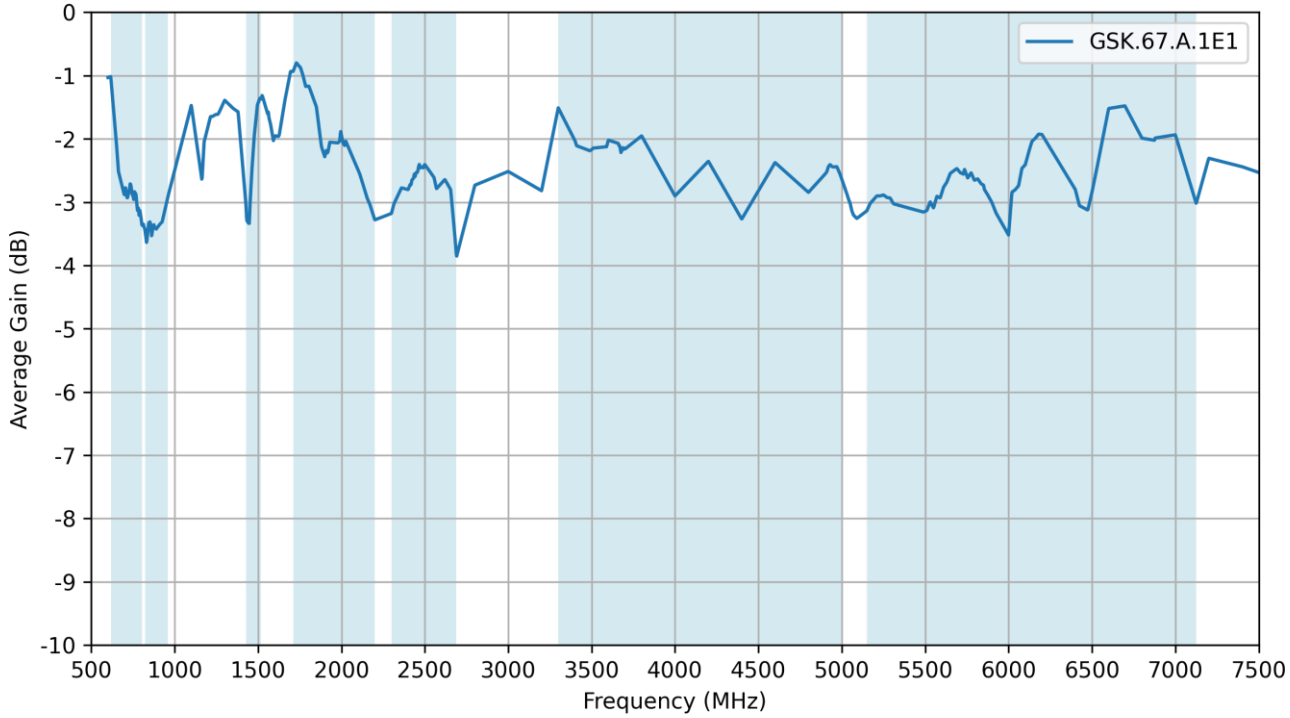
5.3 VSWR



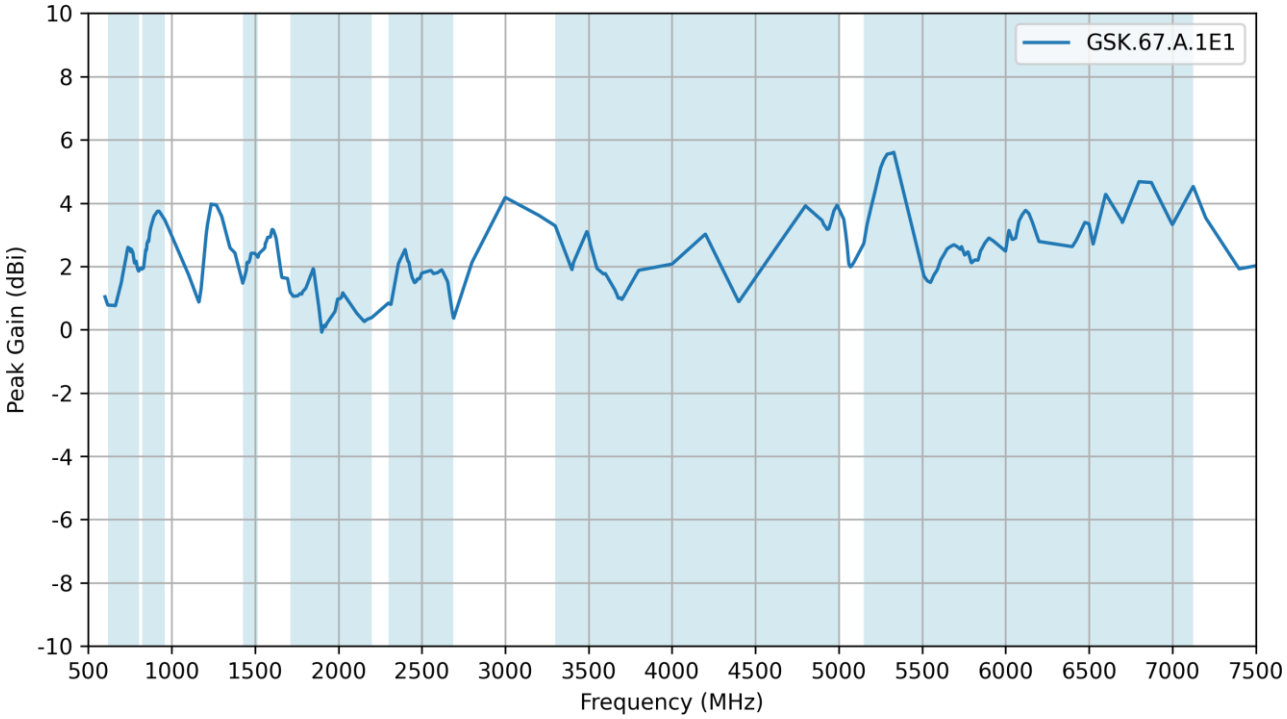
5.4 Efficiency



5.5 Average Gain

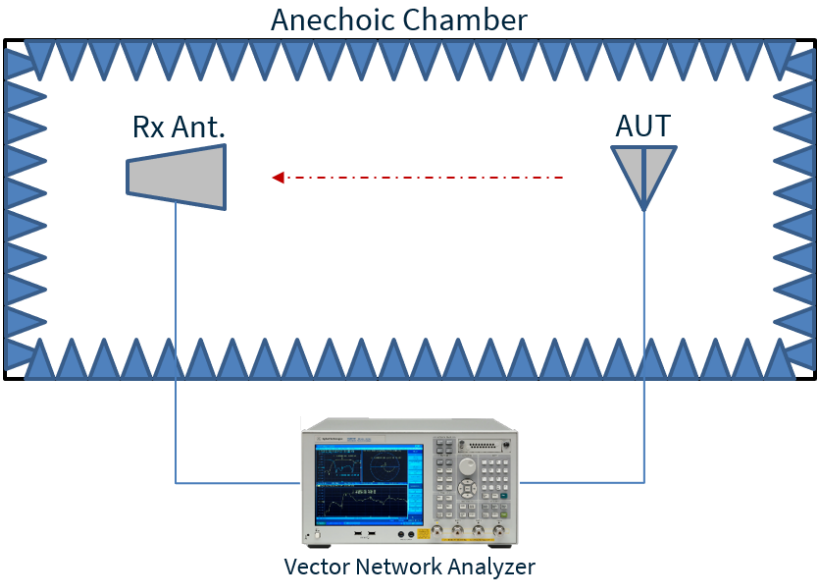


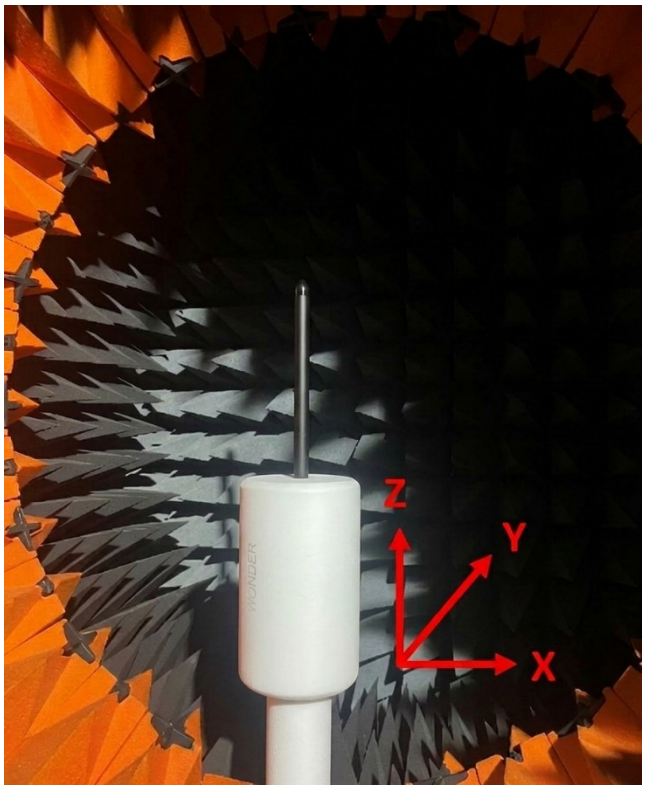
5.6 Peak Gain


GSK.67.A.1E1
Peak Gain (dBi)
Frequency (MHz)
10
8
6
4
2
0
-2
-4
-6
-8
-10
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
6500
7000
7500

6. Radiation Patterns

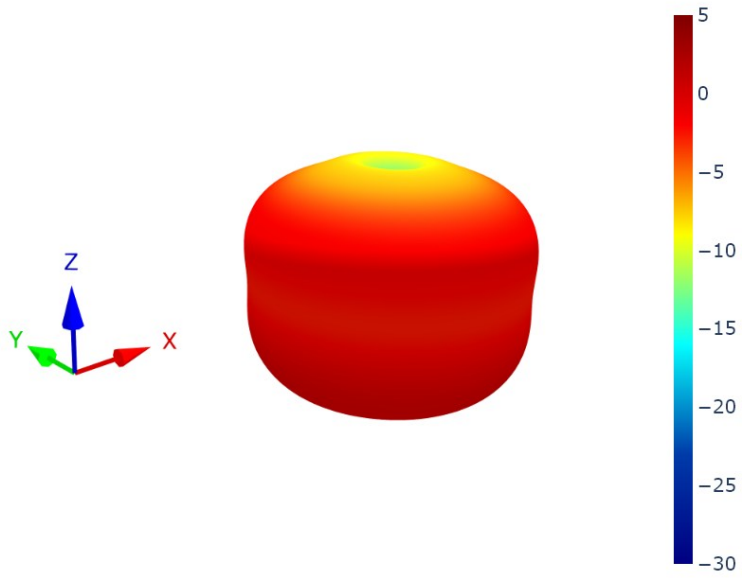
6.1 Test Setup

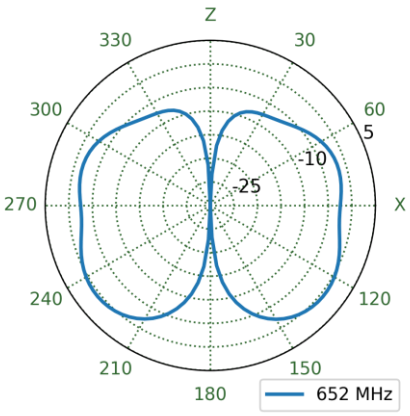
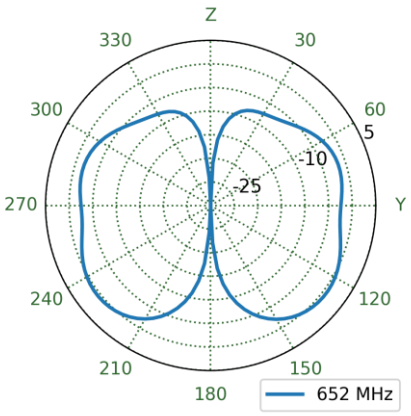
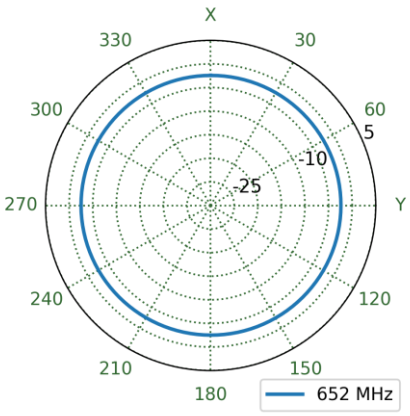




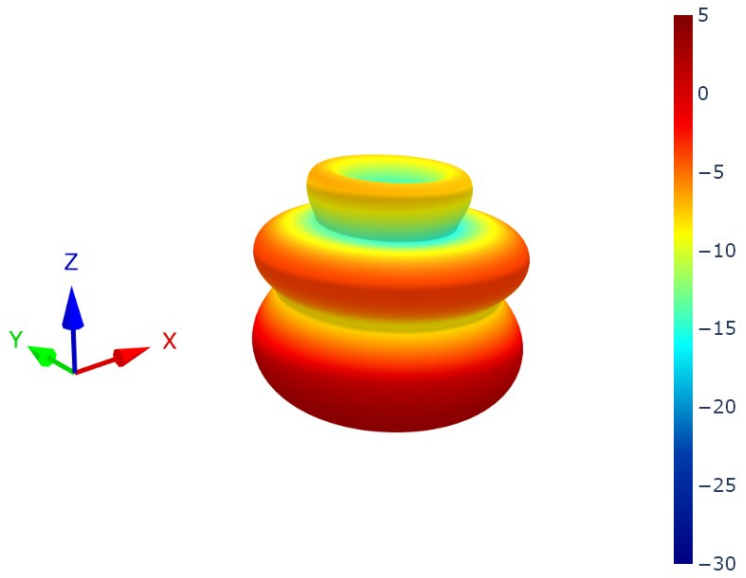
Chamber Test Set-up

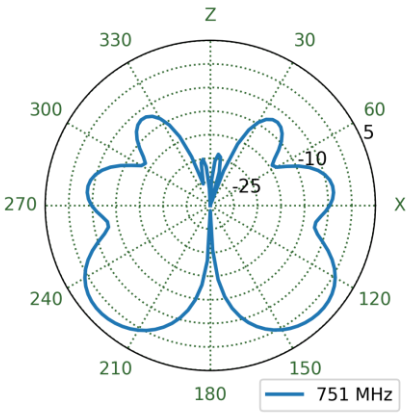
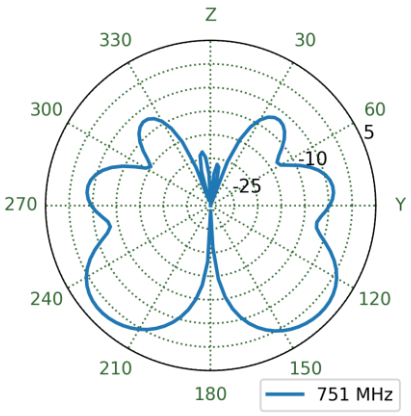
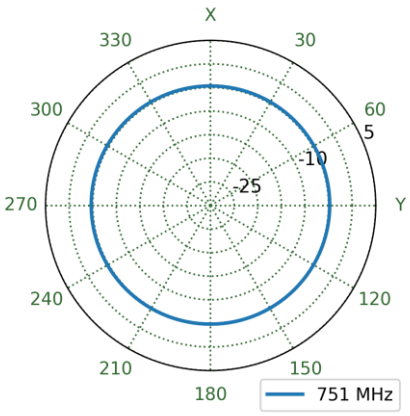
6.2 Patterns at 652 MHz



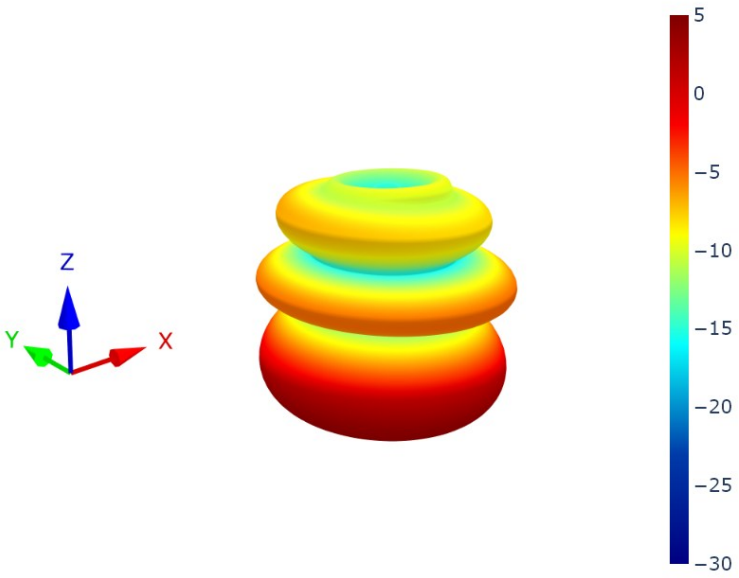
XZ Plane	YZ Plane	XY Plane
		

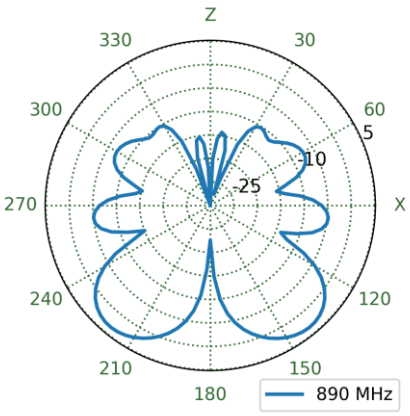
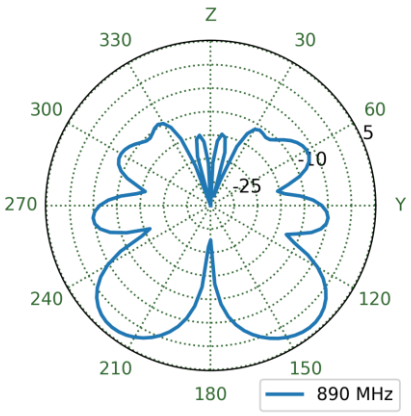
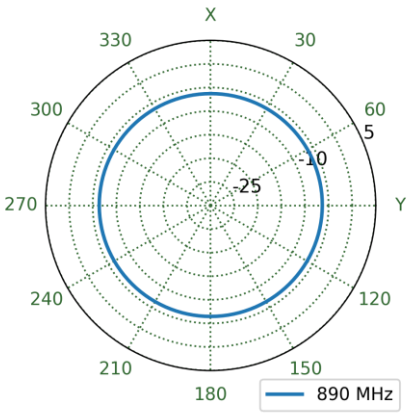
6.3 Patterns at 751 MHz



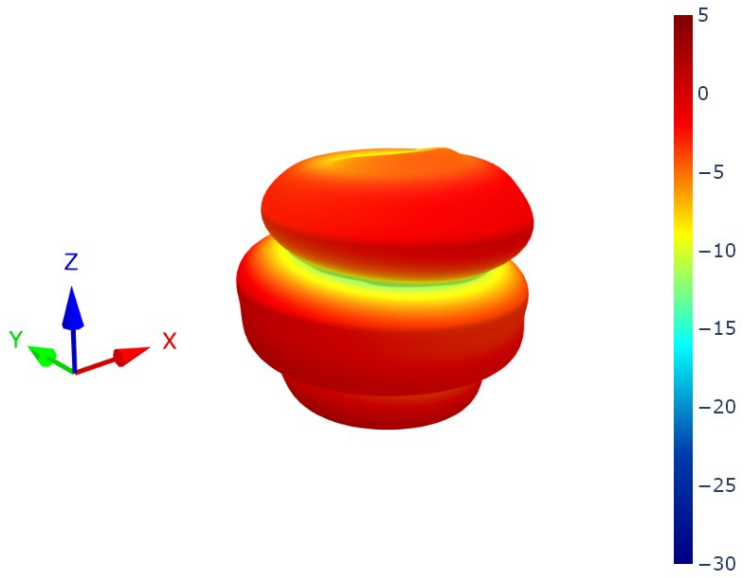
XZ Plane	YZ Plane	XY Plane
		

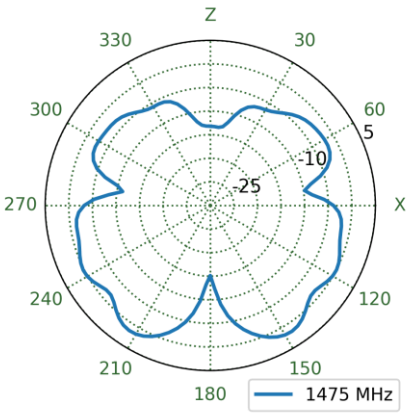
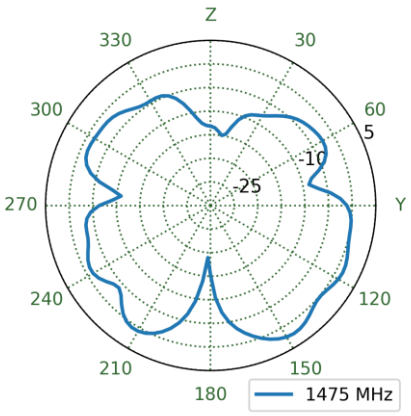
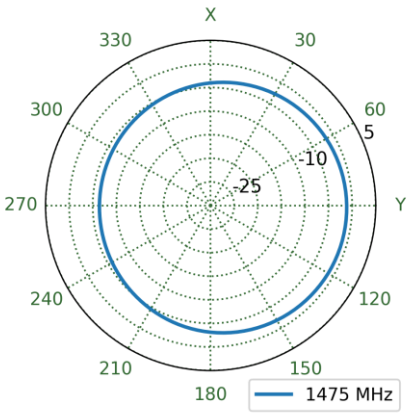
6.4 Patterns at 890 MHz



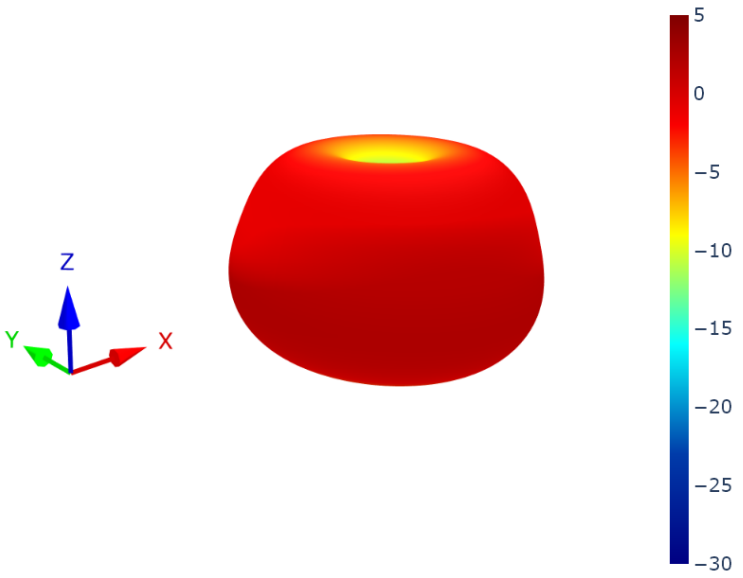
XZ Plane	YZ Plane	XY Plane
		

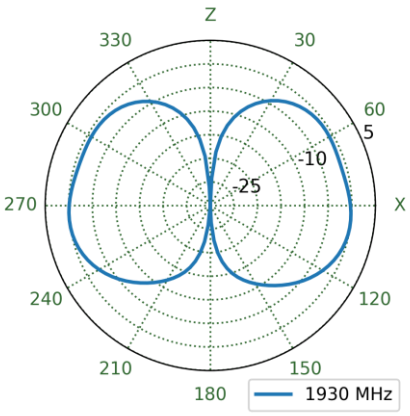
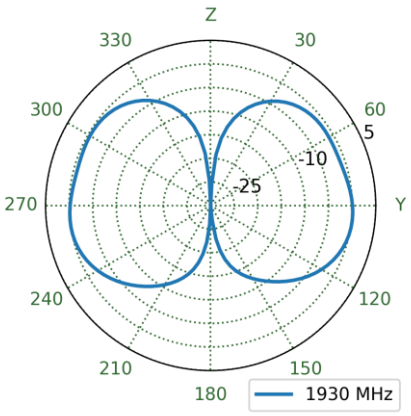
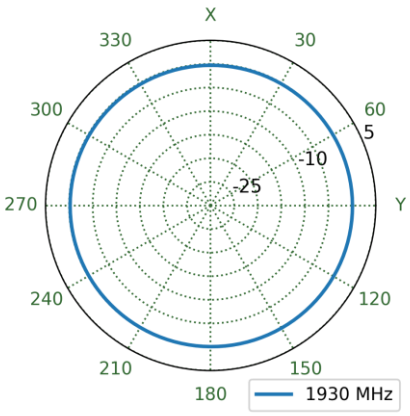
6.5 Patterns at 1475 MHz



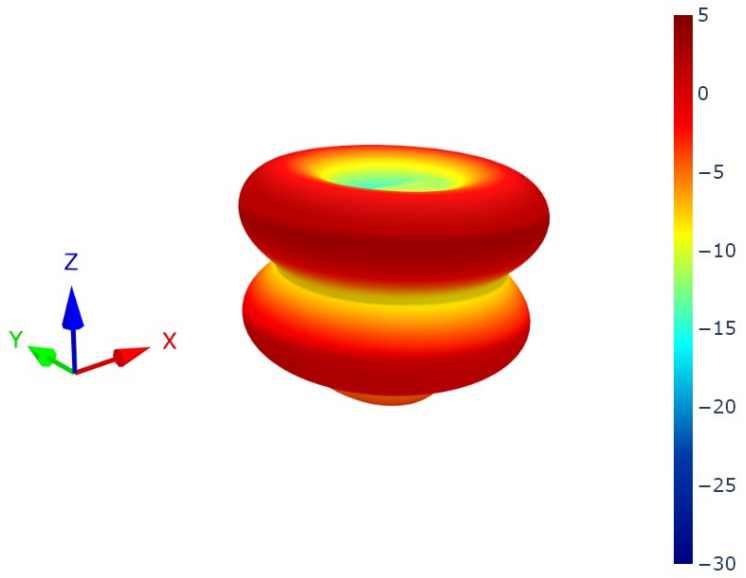
XZ Plane	YZ Plane	XY Plane
		

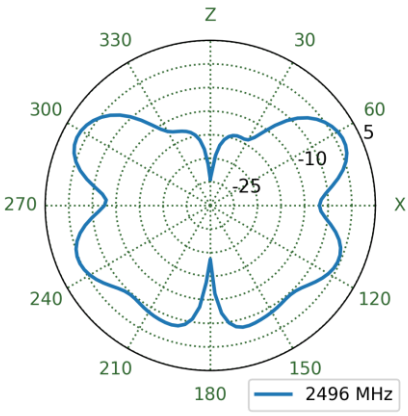
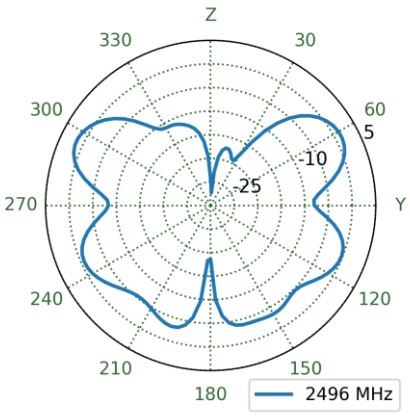
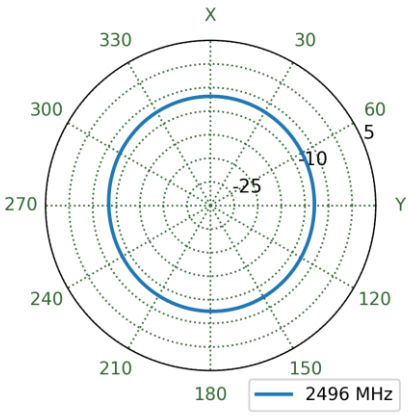
6.6 Patterns at 1930 MHz



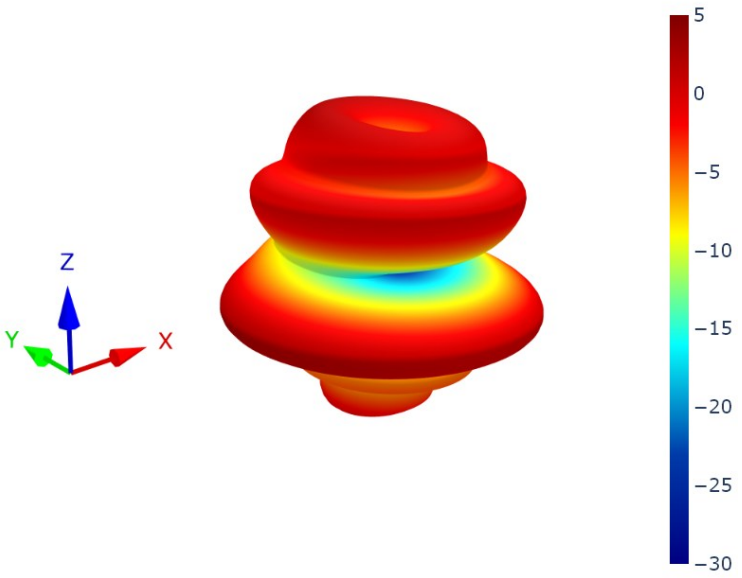
XZ Plane	YZ Plane	XY Plane
		

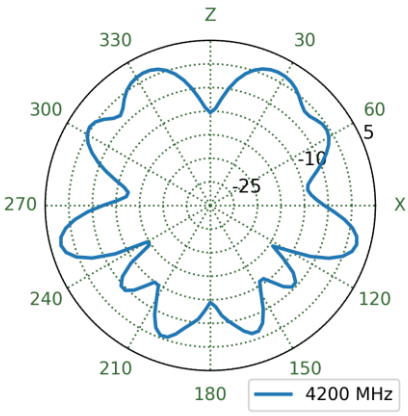
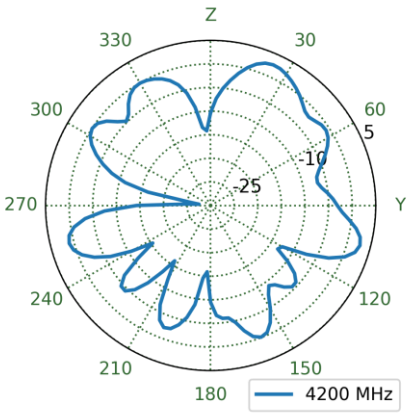
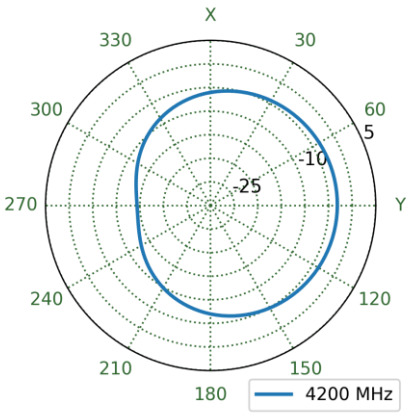
6.7 Patterns at 2496 MHz



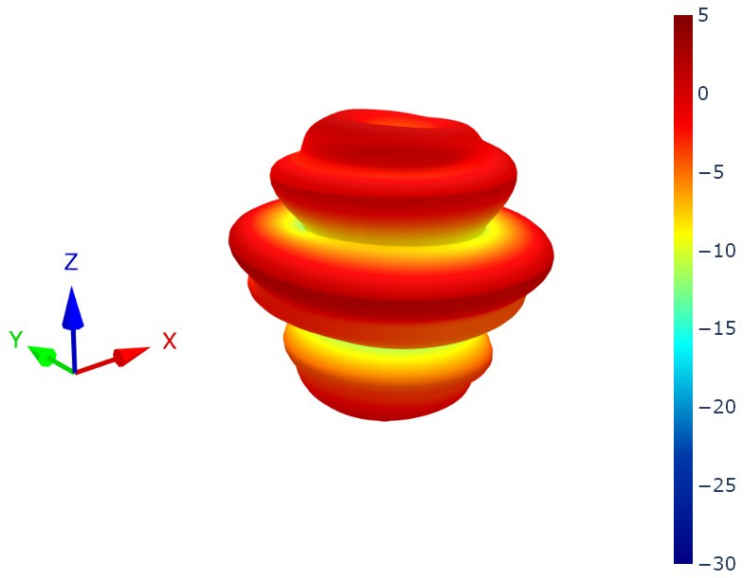
XZ Plane	YZ Plane	XY Plane
		

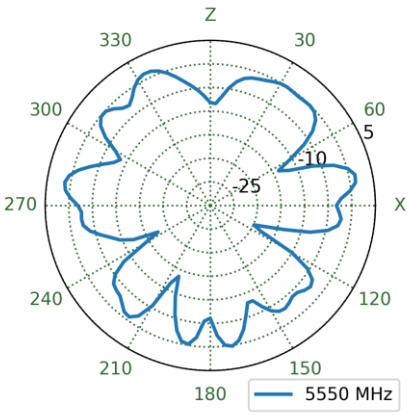
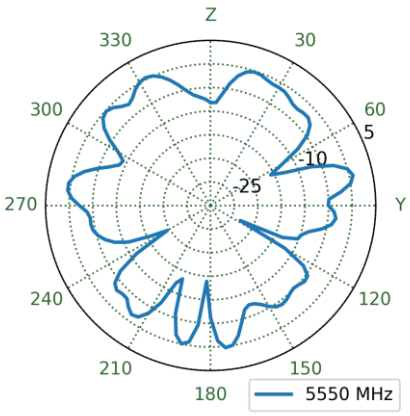
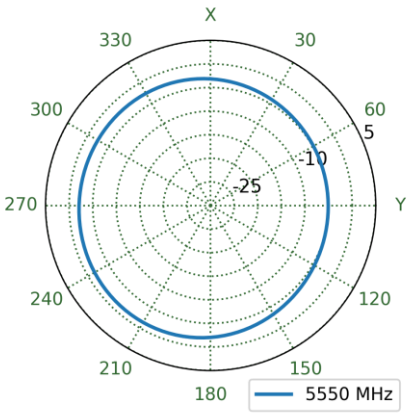
6.8 Patterns at 4200 MHz



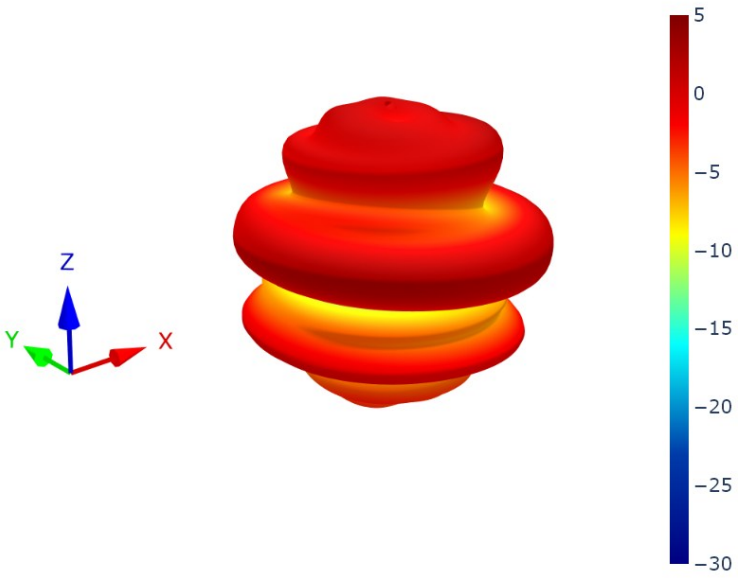
XZ Plane	YZ Plane	XY Plane
		

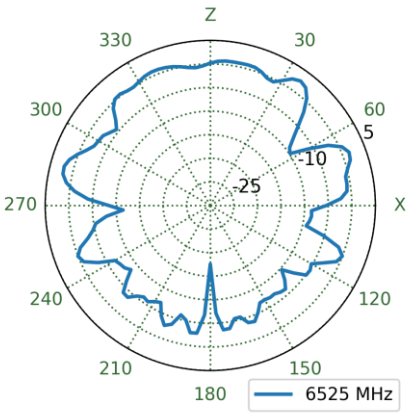
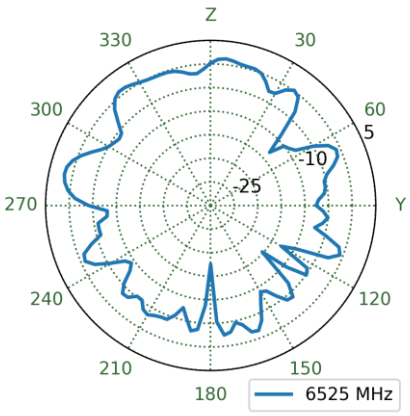
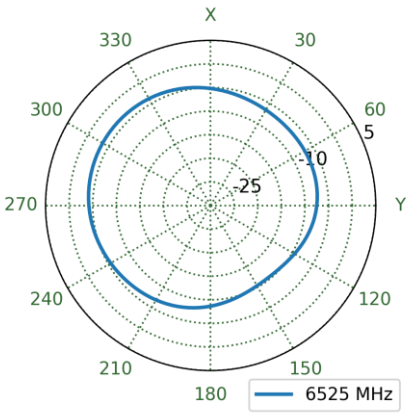
6.9 Patterns at 5550 MHz



XZ Plane	YZ Plane	XY Plane
		

6.10 Patterns at 6525 MHz



XZ Plane	YZ Plane	XY Plane
		

Changelog for the datasheet

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Author:	Gary West

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