

# **APPROVAL SPECIFICATION**

**Product : Internal Antenna**

**Model Name : 24CY (LTE MAIN, LTE MIMO, GNSS Antenna)**

**Date : 2023. 09. 26.**



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## 1. Manufacturer

- LS Mtron Co. Ltd.
- LS Mtron Part Number: LS01-I-22009-A1

## 2. Model Name

- Basic Model: 24CY
- Variation Model: -

## 3. Antenna Type

- PIFA : Planar Inverted F Antenna

## 4. Electric Performance Data

### 4.1 Specification Sheet

#### 4.1.1 LTE Antenna (LB+MB+HB)

### Electronic Specification

Frequency Range (MHz)	LTE B5/8/12/14/17/18/19/20/26/28/71 WCDMA B5/8 GSM900							LTE B1/2/3/4/9/25/34/38/39/40/66 WCDMA B1/3 GSM1800					
	617	698	803	824	880	894	960	1710	1880	1920	2170	2300	2400
Peak Gain(dBi)	-1.74	0.02	-0.38	1.39	1.37	-0.44	-0.69	1.65	3.37	2.77	3.2	1.8	2.47
Average Gain(dBi)	-4.94	-3.37	-3.97	-3.15	-3.61	-4.35	-4.2	-2.89	-1.92	-2.73	-2.24	-2.72	-2.47

Frequency Range (MHz)	LTE B7/41		SUB6 n77/78/79 MIMO				
	2500	2690	3300	3800	4200	4400	5000
Peak Gain(dBi)	2.73	2.37	1.79	1.91	3.3	2.54	0.01
Average Gain(dBi)	-2.81	-2.68	-2.76	-3.47	-2.59	-2.21	-3.98

#### 4.1.2 GNSS Antenna (L1, L5)

Frequency Range	GNSS(L1, L5)			
	1166MHz	1189MHz	1559MHz	1607MHz
Peak Gain(dBi)	1.51	1.56	2.21	1.76
Average Gain(dBi)	-3.04	-2.74	-2.37	-3.01

#### 4.1.3 LTE Antenna (LB+MB+HB MIMO)

### Electronic Specification

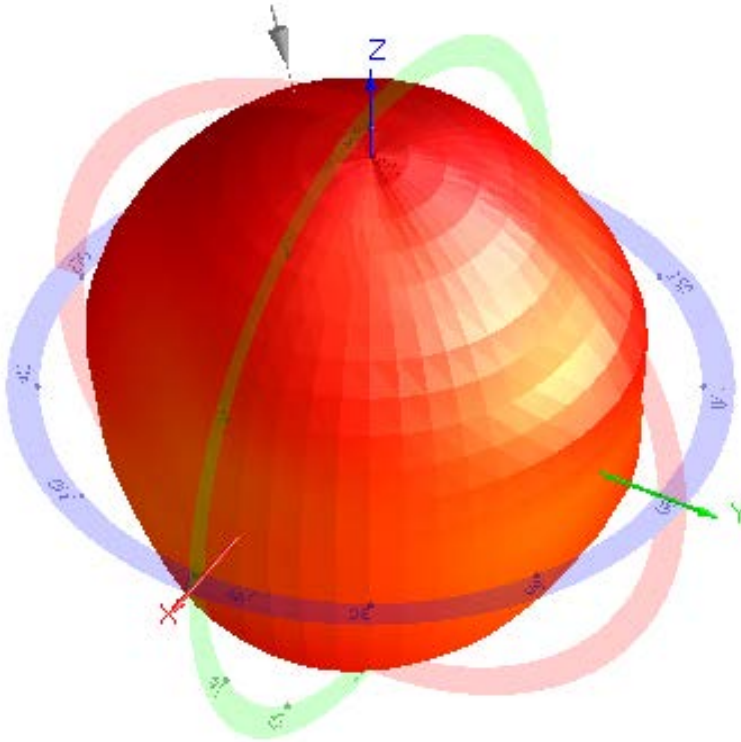
Frequency Range (MHz)	LTE B5/8/12/14/17/18/19/20/26/28/71 MIMO WCDMA B5/8 MIMO GSM900 MIMO							LTE B1/2/3/4/9/25/34/38/39/40/66 MIMO WCDMA B1/3 MIMO GSM1800 MIMO					
	617	698	803	824	880	894	960	1710	1880	1920	2170	2300	2400
Peak Gain(dBi)	-1.73	-0.68	0.18	0.57	-0.36	-0.83	0.68	-0.05	1.03	-0.24	0.15	1.47	1.85
Average Gain(dBi)	-5.64	-4.55	-4.01	-4.44	-5.26	-5.89	-5.47	-4.76	-4.03	-4.05	-3.13	-3.1	-3.11

Frequency Range (MHz)	LTE B7/41 MIMO		SUB6 n77/78/79				
	2500	2690	3300	3800	4200	4400	5000
Peak Gain(dBi)	0.85	0.91	1.34	2.95	1.75	2.19	0.16
Average Gain(dBi)	-3.47	-3.45	-2.95	-1.99	-2.38	-2.17	-4.57

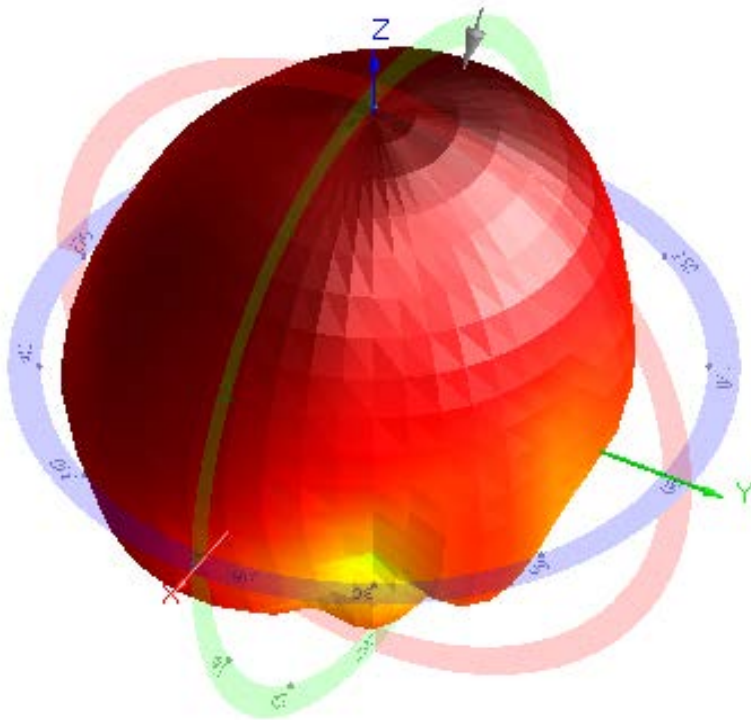
## 4.2 3D Radiation Pattern

### 4.2.1 LTE Antenna (LB+MB+HB)

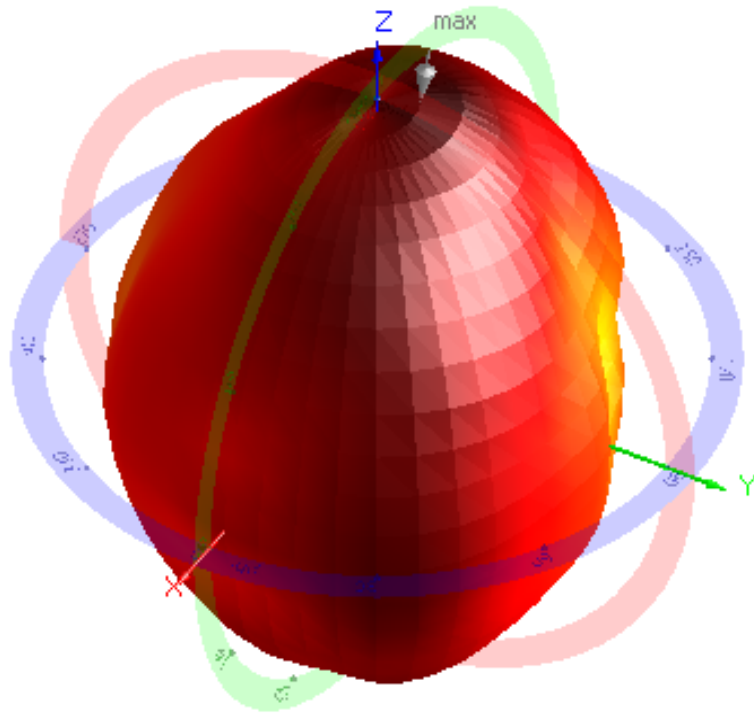
#### 4.2.1.1 LTE LB (LTE B5/8/12/14/17/18/19/20/26/28/71, WCDMA B5/8, GSM900)



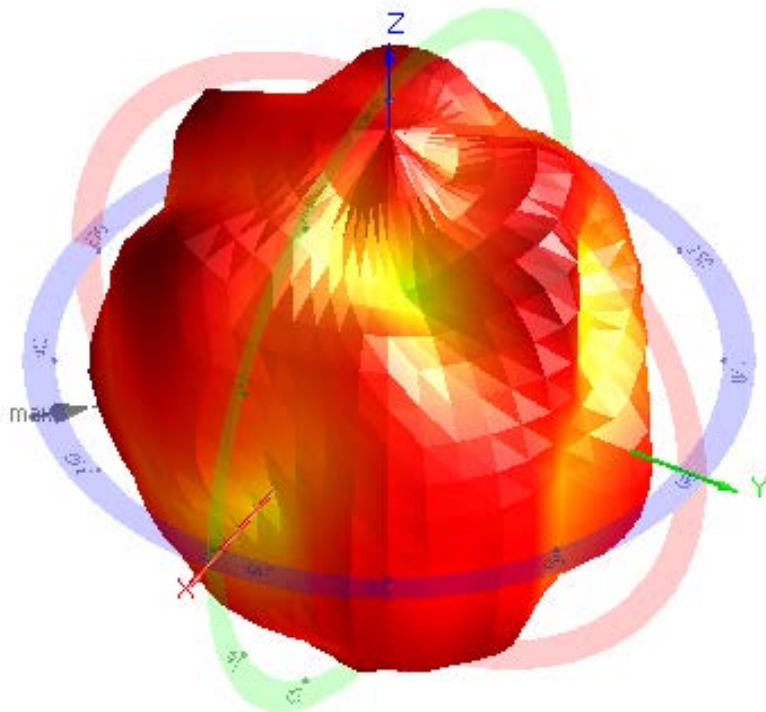
#### 4.2.1.2 LTE MB (LTE B1/2/3/4/9/25/34/38/39/40/66, WCDMA B1/3, GSM1800)



#### 4.2.1.3 LTE HB (B7/41)

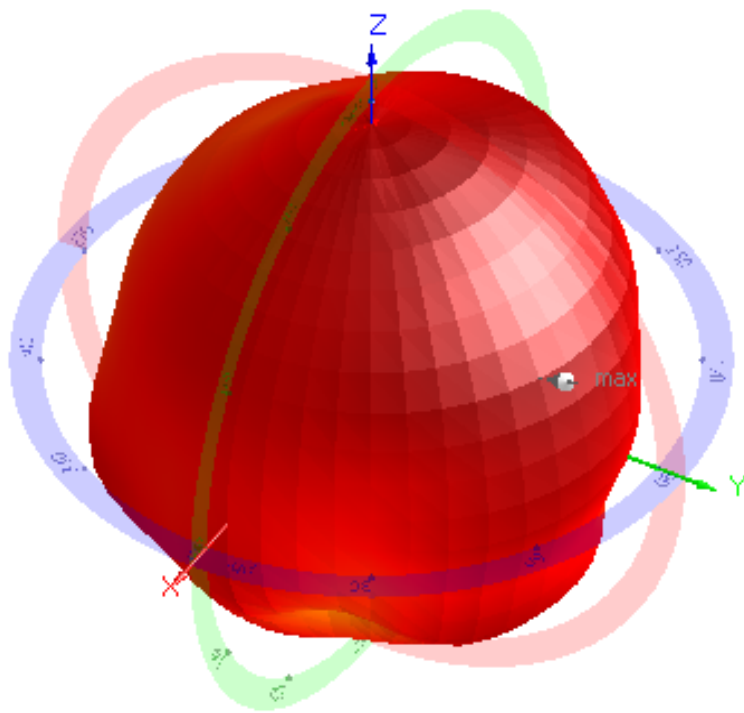


#### 4.2.1.4 LTE SUB6 (n77/78/79) MIMO

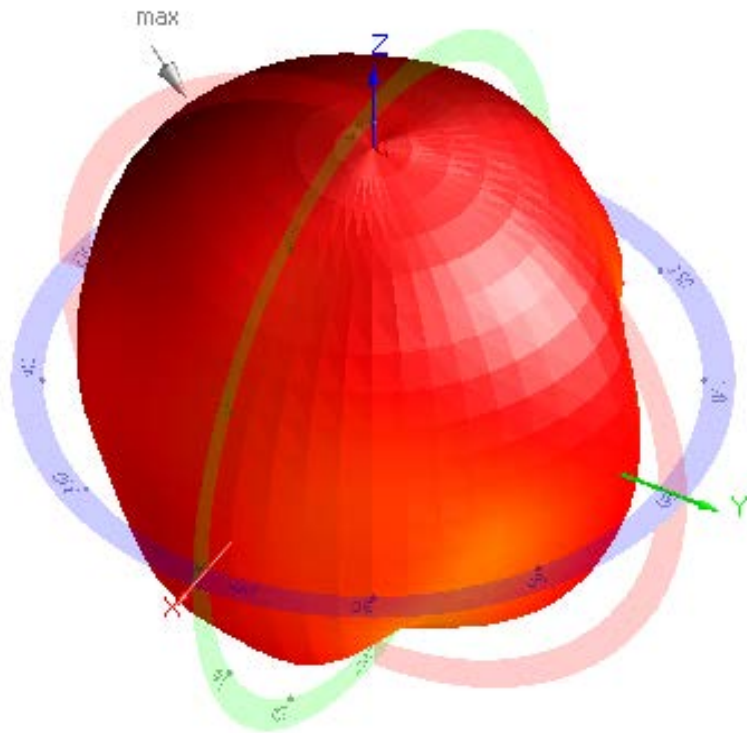


## 4.2.2 GNSS Antenna (L1, L5)

### 4.2.2.1 GPS Antenna (L5)

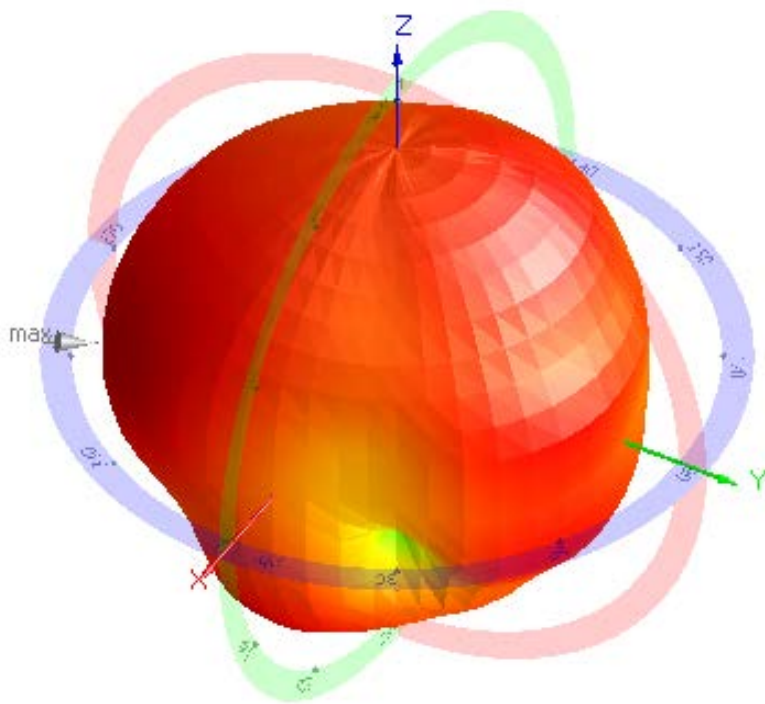


### 4.2.2.2 GPS Antenna (L1)

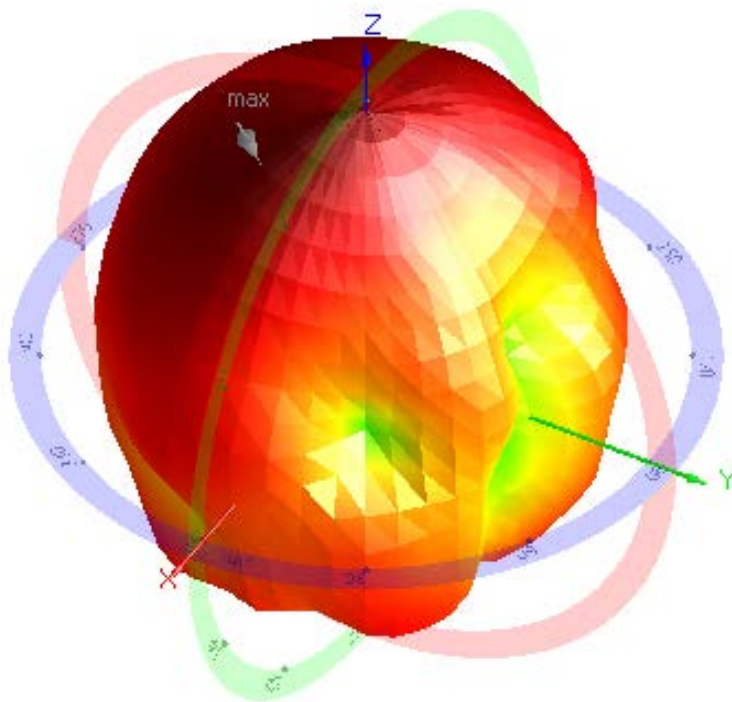


### 4.2.3 LTE Antenna (LB+MB+HB) MIMO

#### 4.2.3.1 LTE LB (LTE B5/8/12/14/17/18/19/20/26/28/71, WCDMA B5/8, GSM900) MIMO

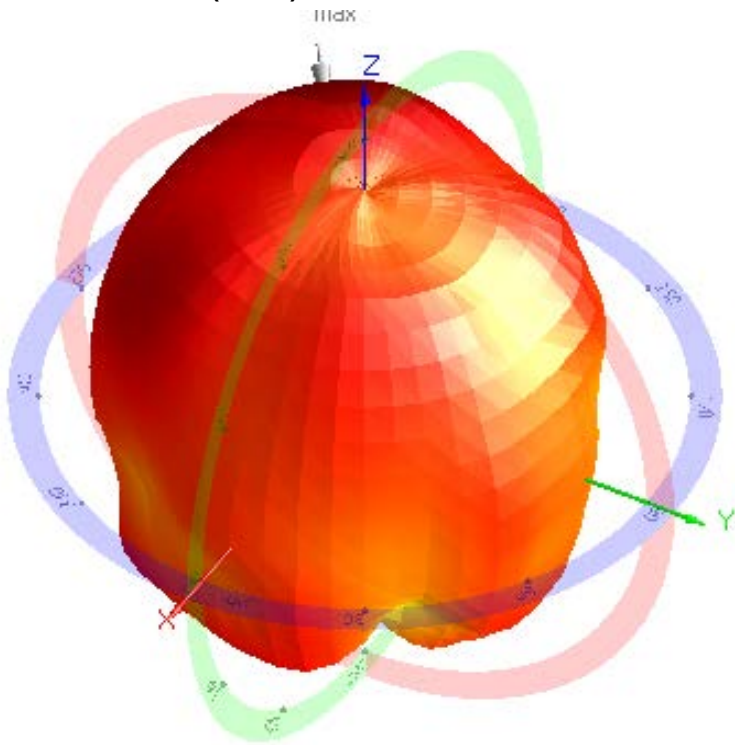


#### 4.2.3.2 LTE MB (LTE B1/2/3/4/9/25/34/38/39/40/66, WCDMA B1/3, GSM1800) MIMO

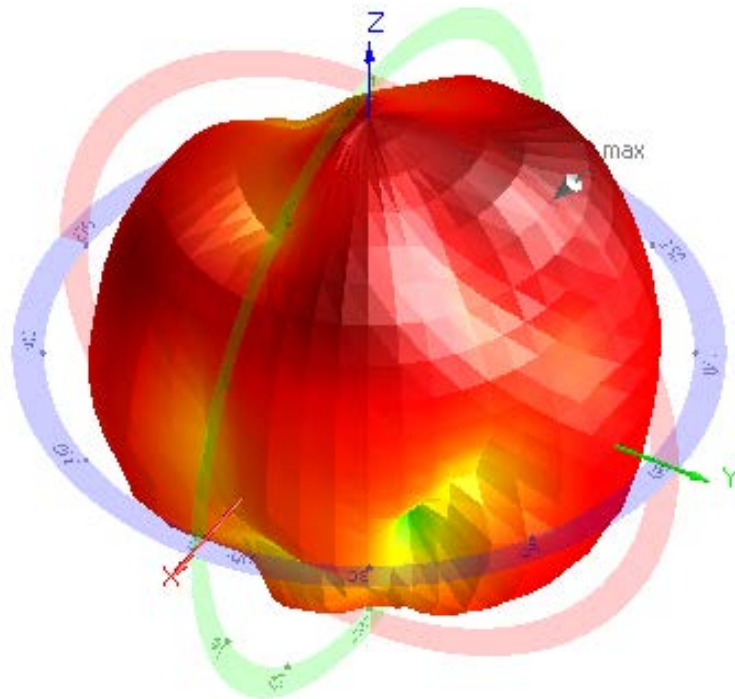




### 4.2.3.3 LTE HB (B7/41) MIMO



### 4.2.3.3 LTE SUB6 (n77/78/79)



# 5. External Drawing

