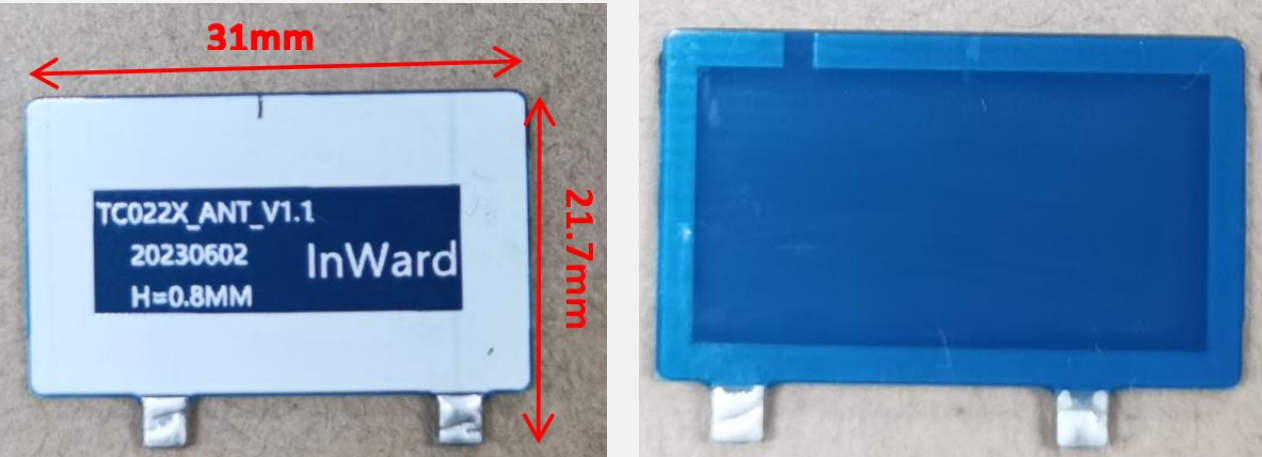
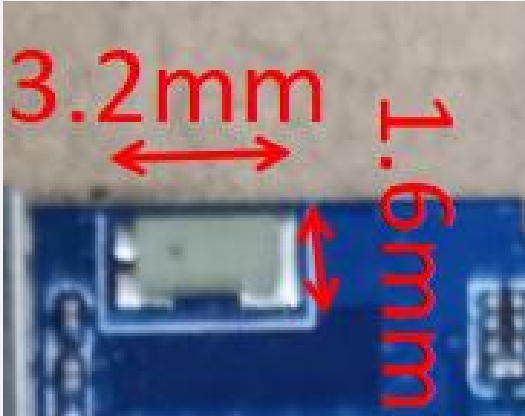


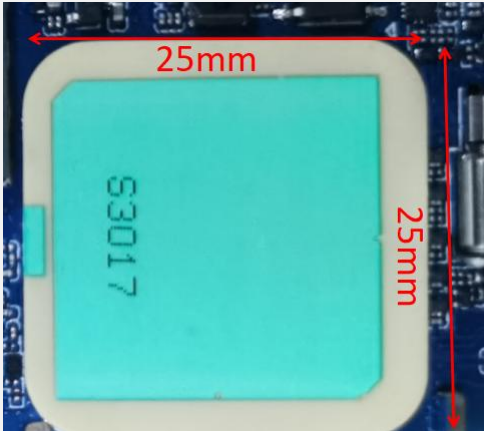
KnightX 300 Antenna Report

Antenna Name	LTE Antenna-part 1
Antenna Model	TC022X_ANT_V1.1
Antenna Type	PCB Antenna Board
Antenna Size	31x21.7x0.8mm
Antenna Manufacturer	Shenzhen TOPFLYTech Co.,Limited
Manufacturer Address	4th-5th floor,Scientific Research Building,Tsinghua Info Hub,Nanshan Hi-Tech Park,Shenzhen,Guangdong,China
Band & Frequency	GSM 850/GSM1900 LTE B2/B4/B5/B12/B13/B25/B26/B66/B71/B85
Antenna photo	

Antenna Name	LTE Antenna-part 2
Antenna Model	/
Antenna Type	PCB Printed Antenna
Antenna Size	2.6x5.2mm
Antenna Manufacturer	Shenzhen TOPFLYTech Co.,Limited
Manufacturer Address	4th-5th floor,Scientific Research Building,Tsinghua Info Hub,Nanshan Hi-Tech Park,Shenzhen,Guangdong,China
Band & Frequency	GSM 850/GSM1900 LTE B2/B4/B5/B12/B13/B25/B26/B66/B85
Antenna photo	

Antenna Name	BT Antenna
Antenna Model	SH19291IB54
Antenna Type	Ceramic antenna
Antenna Size	3.2x1.6x0.6mm
Antenna Manufacturer	Sunnyway Technology Co.,Limited
Manufacturer Address	1F, Building 4, No.215-99, GaoGuang Road, QingPu District, Shanghai, China
Band & Frequency	2402~2480MHz
Antenna Photo	

GPS Antenna Information

Antenna Name	GPS Antenna
Antenna Model	SZ23254 IA54
Antenna Type	Ceramic antenna
Antenna Size	25x25x2.0mm
Antenna Manufacturer	Sunnyway Technology Co.,Limited
Manufacturer Address	1F, Building 4, No.215-99, GaoGuang Road, QingPu District, Shanghai, China
Band & Frequency	1559~1610MHz
Antenna Photo	

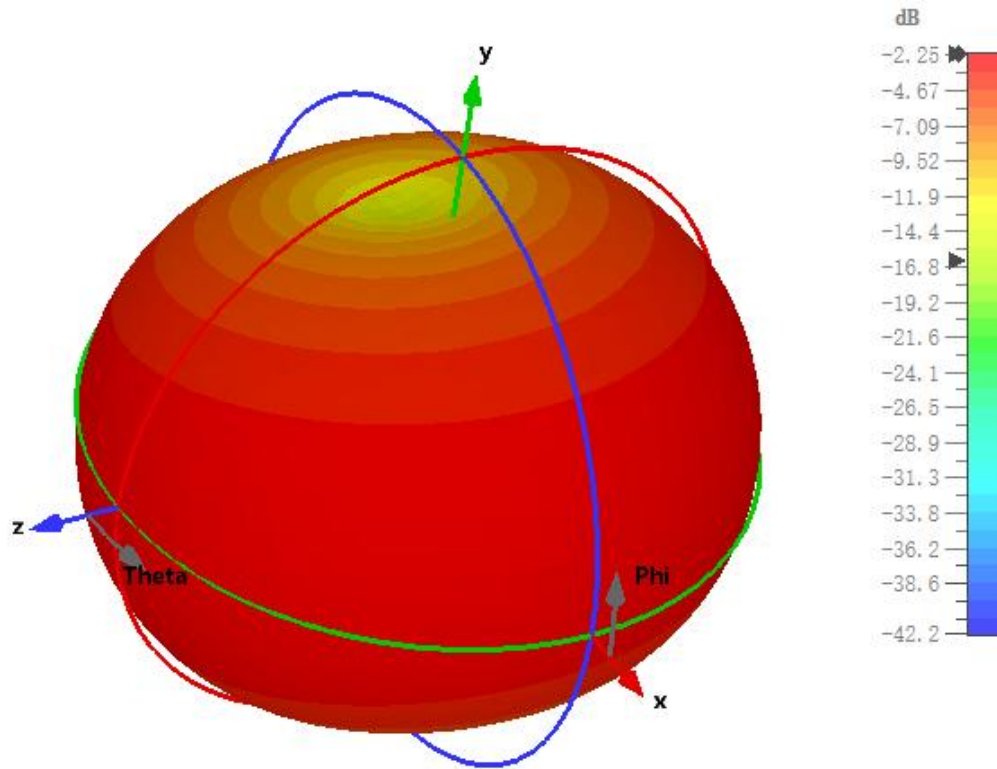
GPS Antenna Performance — Efficiency and Gain

Frequency (MHz)	Efficiency (%)	Efficiency (dB)	Gain (dBi)
1559	38.4%	-4.16	2.81
1562	42.3%	-3.73	3.14
1566	46.9%	-3.29	3.42
1570	47.3%	-3.25	3.38
1574	51.3%	-2.90	3.13
1578	51.8%	-2.85	3.22
1582	52.4%	-2.80	3.45
1586	52.1%	-2.83	3.74
1590	50.1%	-3.00	3.77
1594	42.6%	-3.71	3.09
1598	38.6%	-4.13	2.81
1602	33.7%	-4.73	2.23
1606	30.9%	-5.09	1.76
1610	27.8%	-5.56	1.11

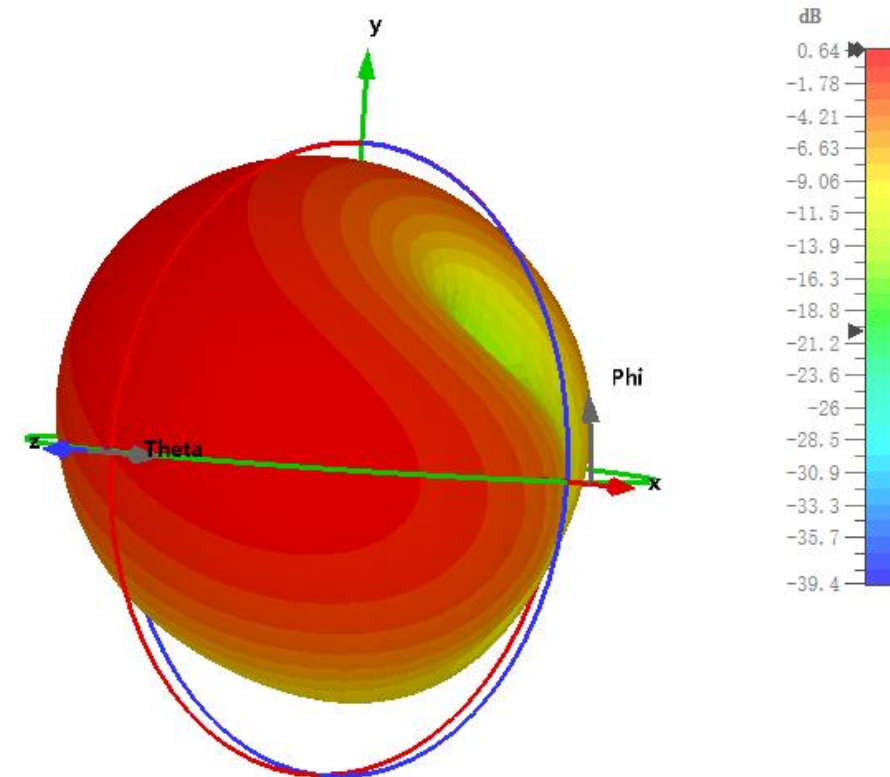
LTE&BT Antenna Performance —— Band with Peak Gain

Transmitter Circuit	Frequency(MHz)	Peak Gain (dBi)	Antenna Type
GSM850	824 ~ 849	-2.25	PCB Antenna
GSM1900	1850 ~ 1910	0.64	PCB Antenna
Band 2	1850 ~ 1910	0.64	PCB Antenna
Band 4	1710 ~ 1755	0.36	PCB Antenna
Band 5	824~849	-2.25	PCB Antenna
Band 12	699~ 716	-2.92	PCB Antenna
Band 13	777~ 787	-2.23	PCB Antenna
Band 25	1850~ 1915	0.64	PCB Antenna
Band 26	814~ 849	-2.25	PCB Antenna
Band 66	1710 ~ 1780	0.38	PCB Antenna
Band 71	663 ~ 698	-2.92	PCB Antenna
Band 85	698 ~ 716	-2.92	PCB Antenna
BT-LE	2402 ~ 2480	1.67	Ceramic Antenna

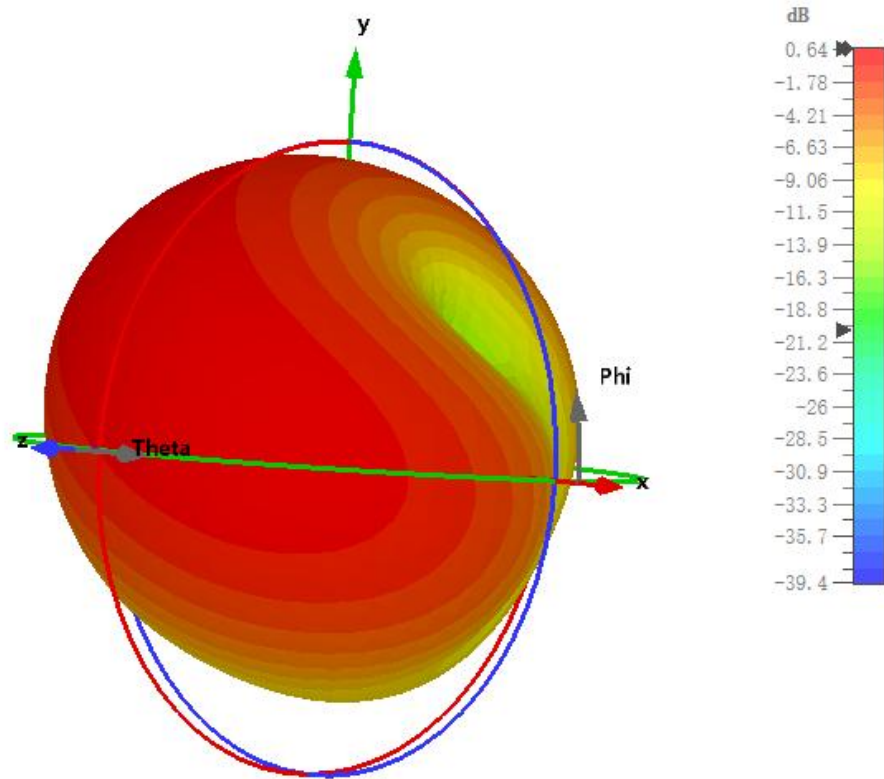
GSM850@-2.25dBi



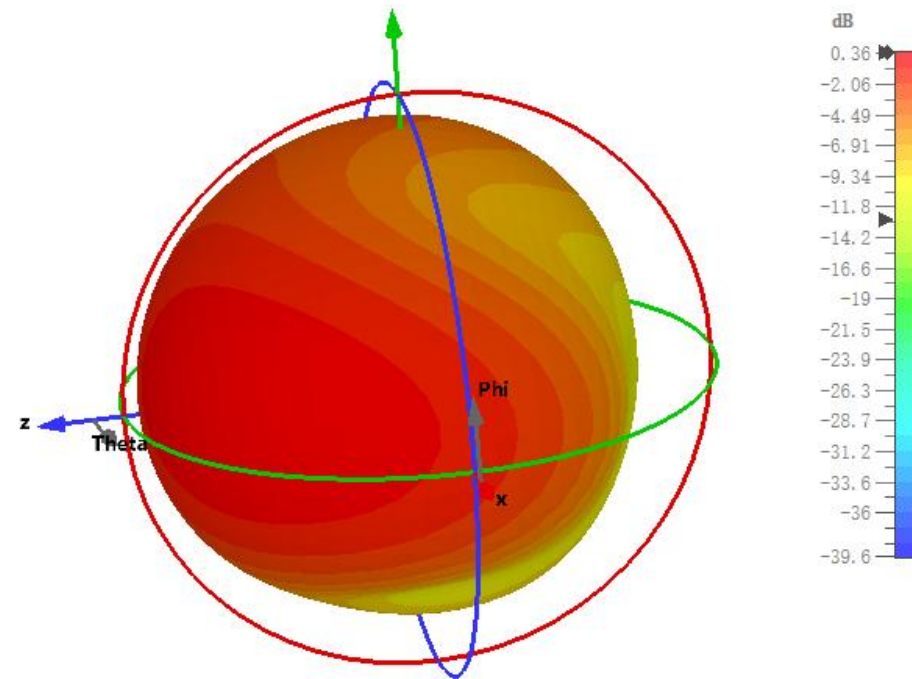
GSM1900@0.64dBi



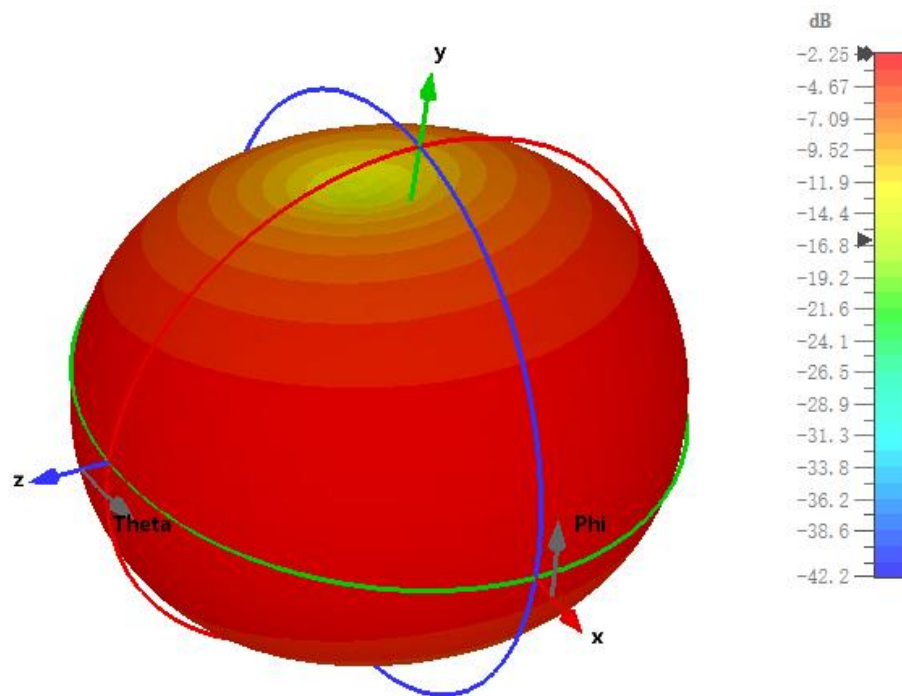
Band 2@0.64dBi



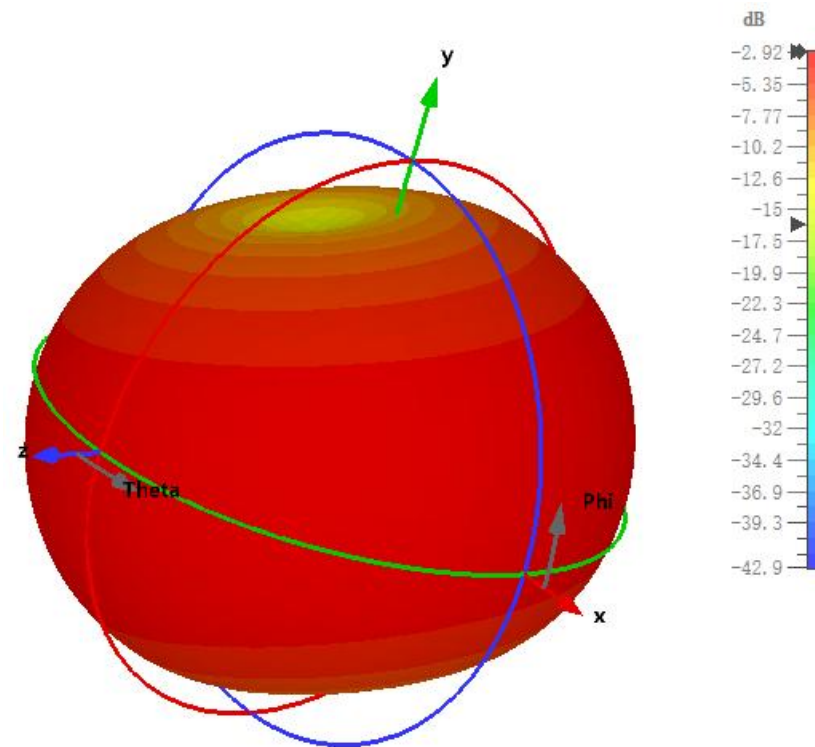
Band 4@0.36dBi



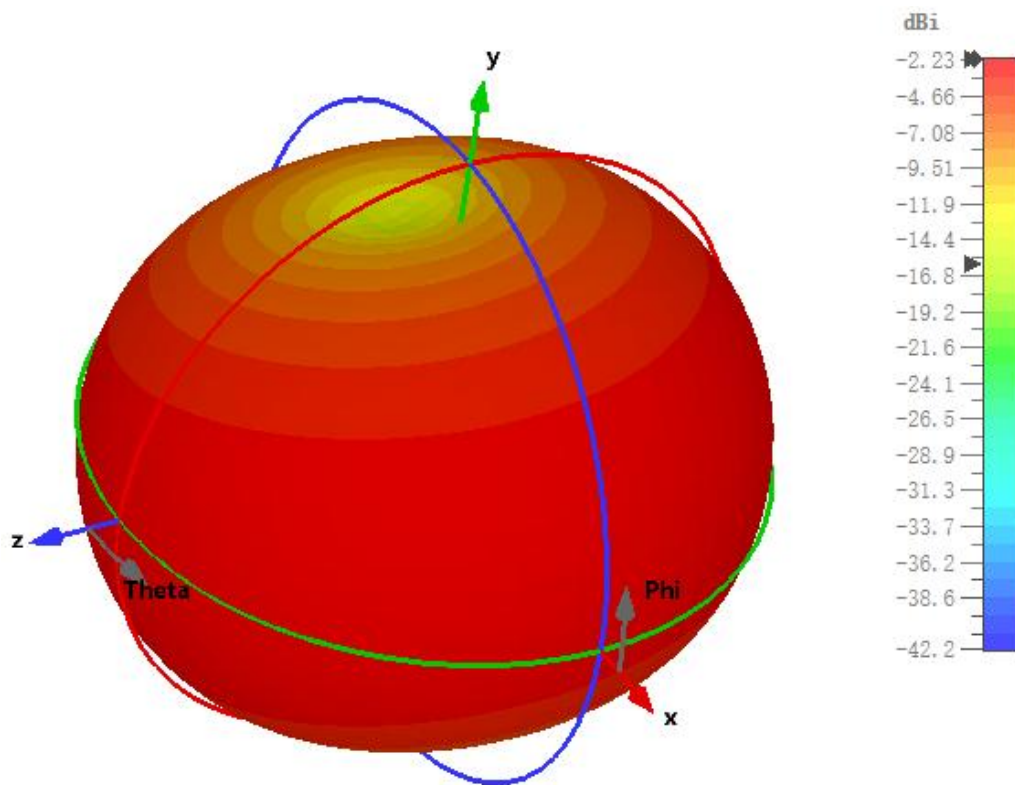
Band 5@-2.25dBi



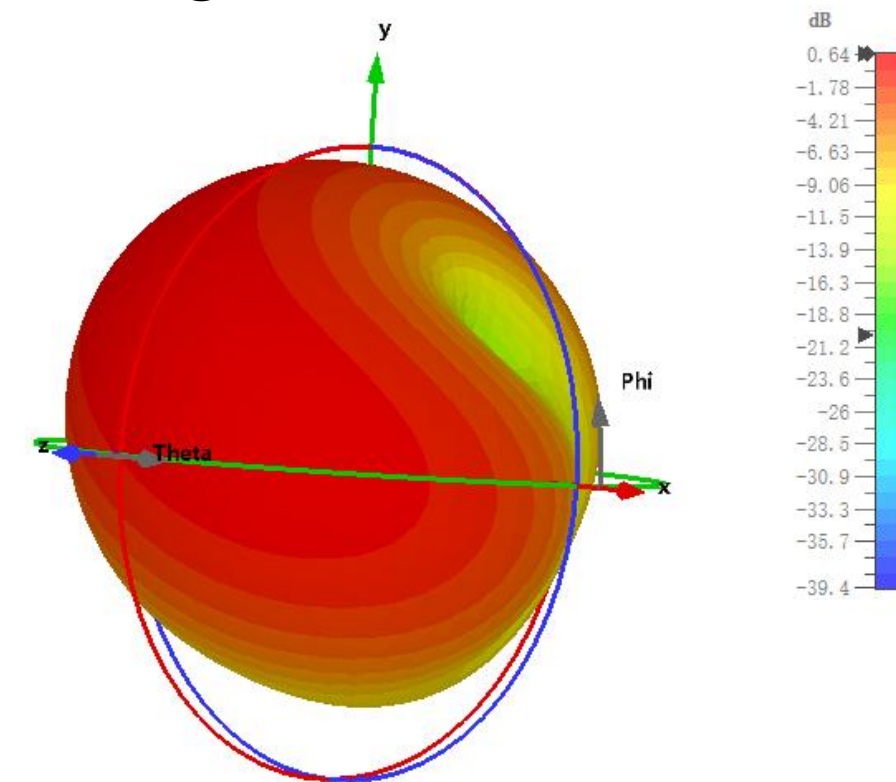
Band 12@-2.92dBi



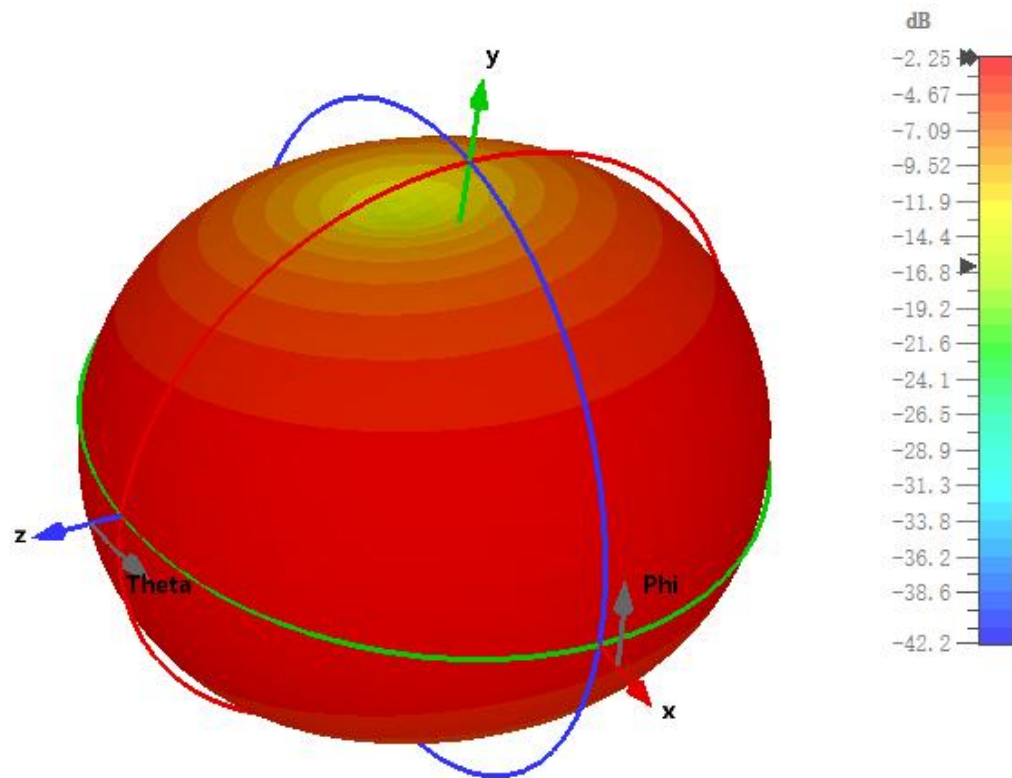
Band 13@-2.23dBi



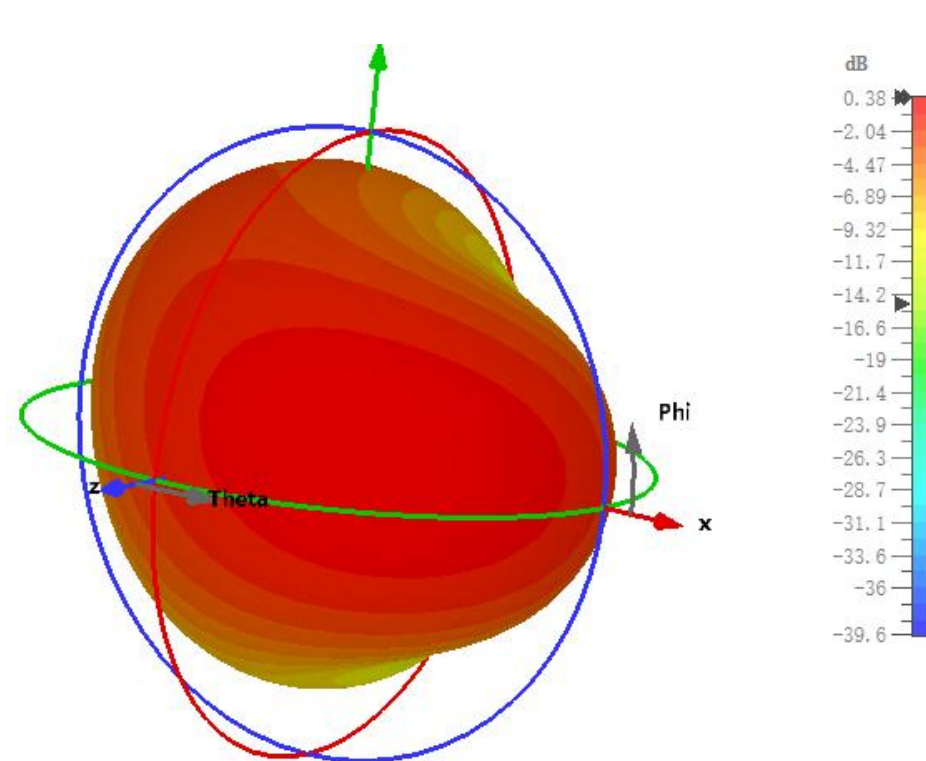
Band 25@0.64dBi



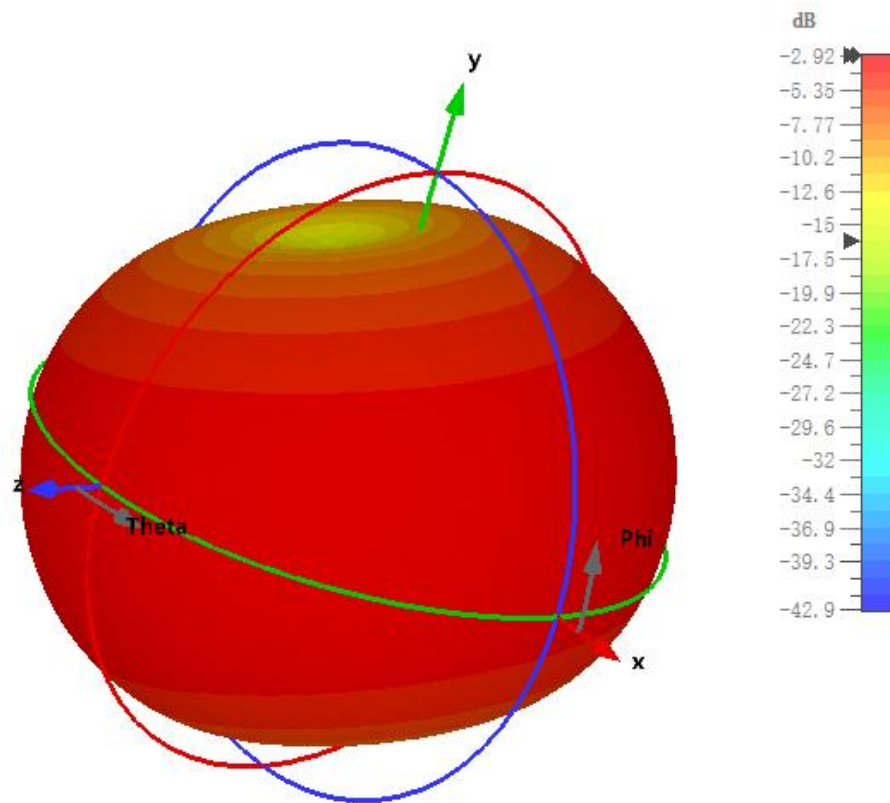
Band 26@-2.25dBi



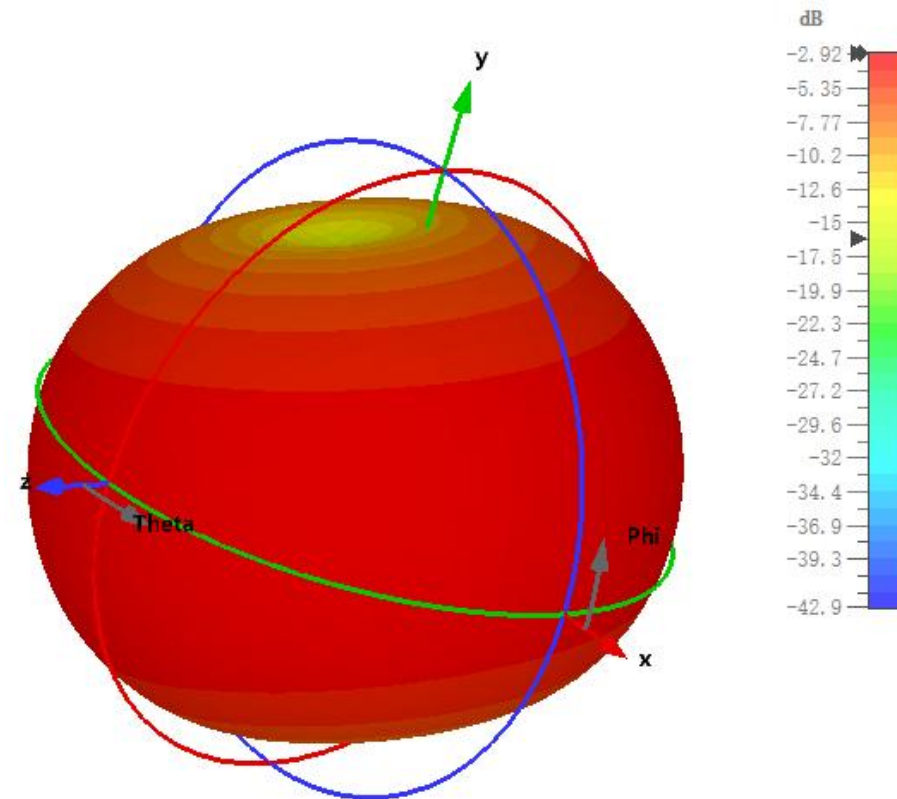
Band 66@0.38dBi



Band 71@-2.92dBi



Band 85@-2.92dBi



BT-LE@1.67dBi

