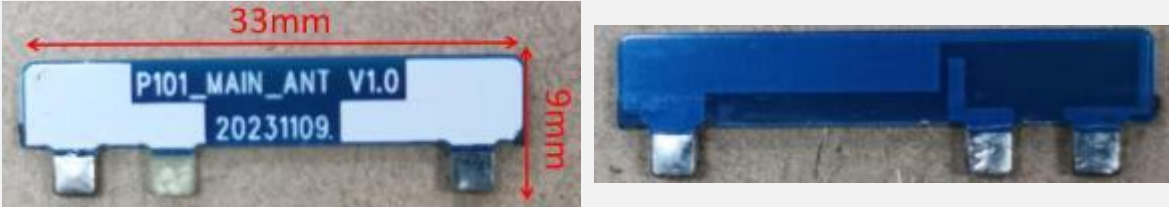
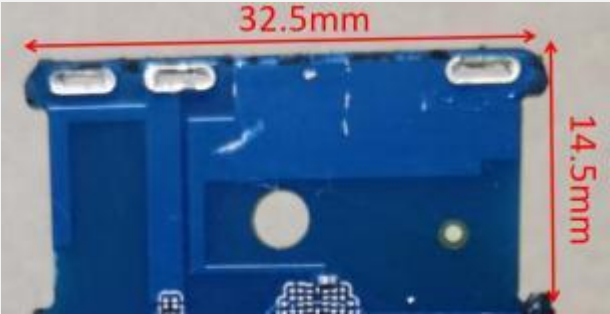


PioneerX 101 Antenna Report

Antenna Name	LTE Antenna-part 1
Antenna Model	P101_MAIN_ANT_V1.0
Antenna Type	PCB Antenna Board
Antenna Size	33x9x0.8mm
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/B7/B12/B13/B17/B25/B26/B38/B40/B41/B66
Antenna Photo	

Antenna Name	LTE Antenna-part 2
Antenna Model	/
Antenna Type	PCB Printed Antenna
Antenna Size	32.5x14.5mm
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/B7/B12/B13/B17/B25/B26/B38/B40/B41/B66
Antenna Photo	

BT Antenna Information

Antenna Name	BT Antenna
Antenna Model	P101_GPS_BT_ANT_V1.1
Antenna Type	PCB Antenna Board
Antenna Size	21.7x8.5mm
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	2402~2480MHz
Antenna Photo	

GPS Antenna Information

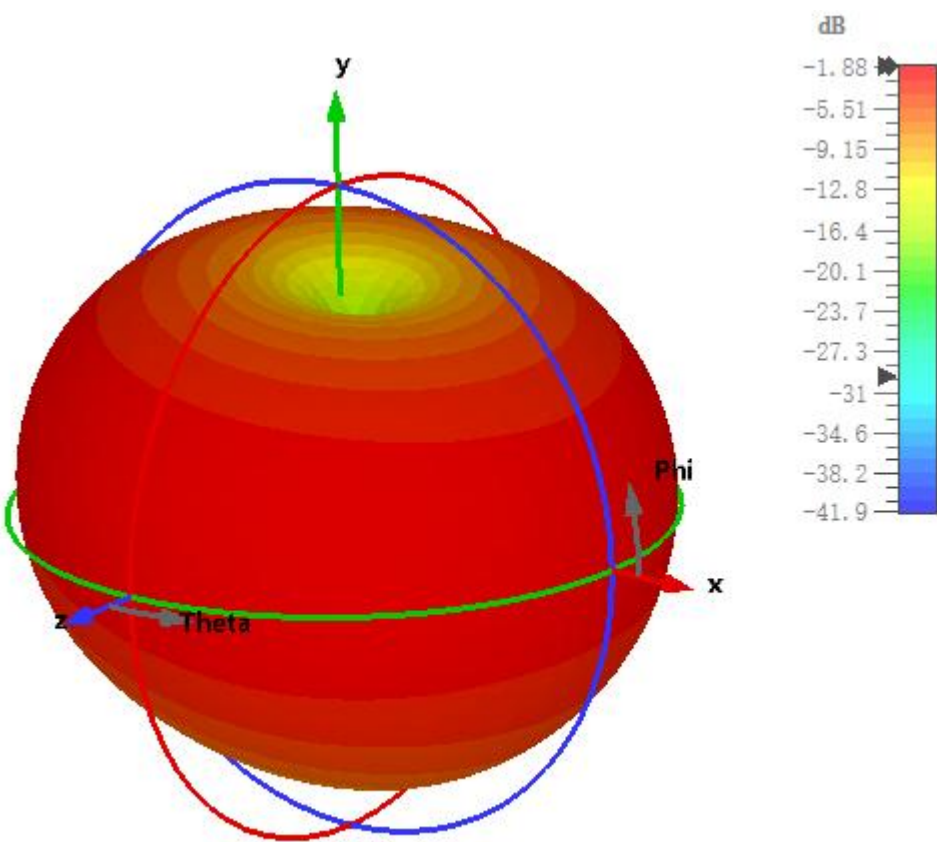
Antenna Name	GPS Antenna
Antenna Model	P101_GPS_BT_ANT_V1.1
Antenna Type	PCB Printed Antenna
Antenna Size	29.4x8.5mm
Antenna Manufacturer	Shenzhen TOPFLYTech Co.,Limited
Manufacturer Address	4th-5th floor,Scientific Research Building,Tsinghua Info Hub,Nanshan Hi-Tech Park,Shenzhen,Guangdong,China
Band & Frequency	1559~1610MHz
Antenna Photo	

Frequency (MHz)	Efficiency (%)	Efficiency (dB)	Gain (dBi)
1559	40.5%	-3.92	3.05
1562	44.7%	-3.50	3.37
1566	49.5%	-3.06	3.65
1570	53.4%	-2.73	3.85
1574	55.3%	-2.57	3.68
1578	57.0%	-2.44	3.59
1582	56.1%	-2.51	3.56
1586	53.8%	-2.69	3.46
1590	53.3%	-2.73	3.74
1594	54.0%	-2.68	3.69
1598	55.0%	-2.60	3.97
1602	55.5%	-2.56	4.15
1606	55.5%	-2.56	4.26
1610	54.9%	-2.61	4.33

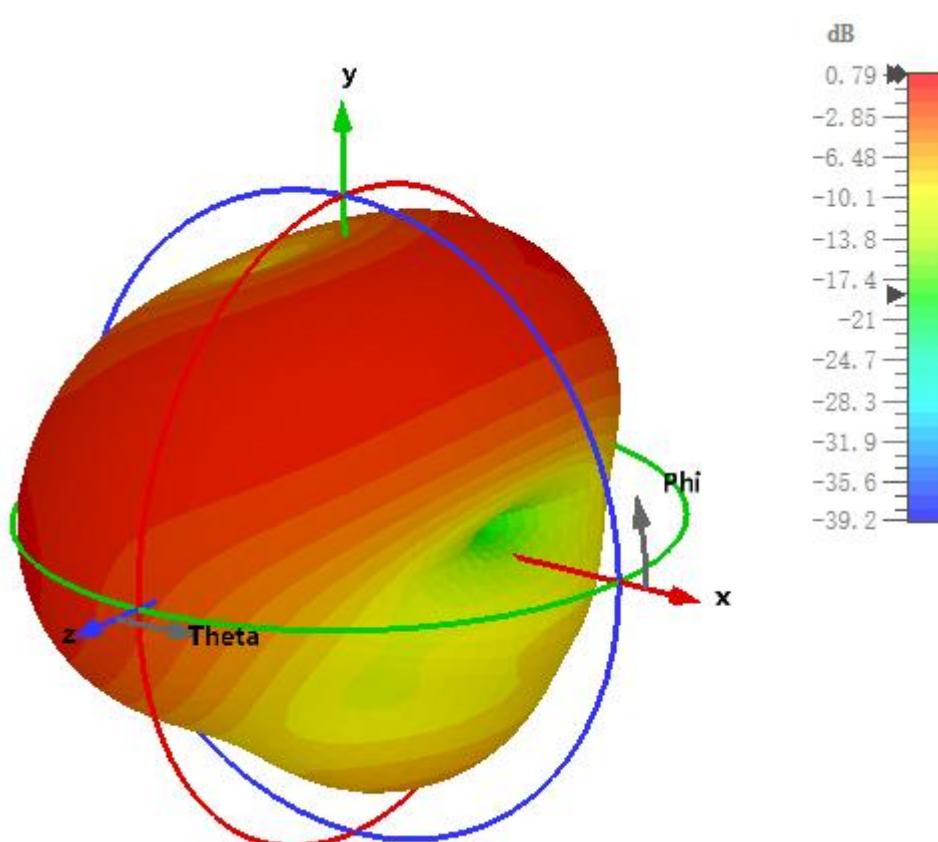
LTE&BT Antenna Performance —— Band with Peak Gain

Mode	Frequency(MHz)	Peak Gain (dBi)	Antenna Type
BT-LE	2402 ~ 2480	2.17	PCB Antenna
GSM850	824 ~ 849	-1.88	PCB Antenna
GSM1900	1850 ~ 1910	0.79	PCB Antenna
LTE B2	1850 ~ 1910	0.79	PCB Antenna
LTE B4	1710 ~ 1755	0.63	PCB Antenna
LTE B5	824 ~ 849	-1.88	PCB Antenna
LTE B7	2500 ~ 2570	0.61	PCB Antenna
LTE B12	699 ~ 716	-2.34	PCB Antenna
LTE B13	777 ~ 787	-2.18	PCB Antenna
LTE B17	704 ~ 716	-2.84	PCB Antenna
LTE B25	1850 ~ 1915	0.75	PCB Antenna
LTE B26	814~ 849	-1.88	PCB Antenna
LTE B38	2570 ~ 2620	-0.46	PCB Antenna
LTE B40	2305 ~ 2315	-0.20	PCB Antenna
	2350 ~ 2360	-0.17	PCB Antenna
LTE B41	2496 ~ 2690	0.61	PCB Antenna
LTE B66	1710 ~ 1780	0.63	PCB Antenna

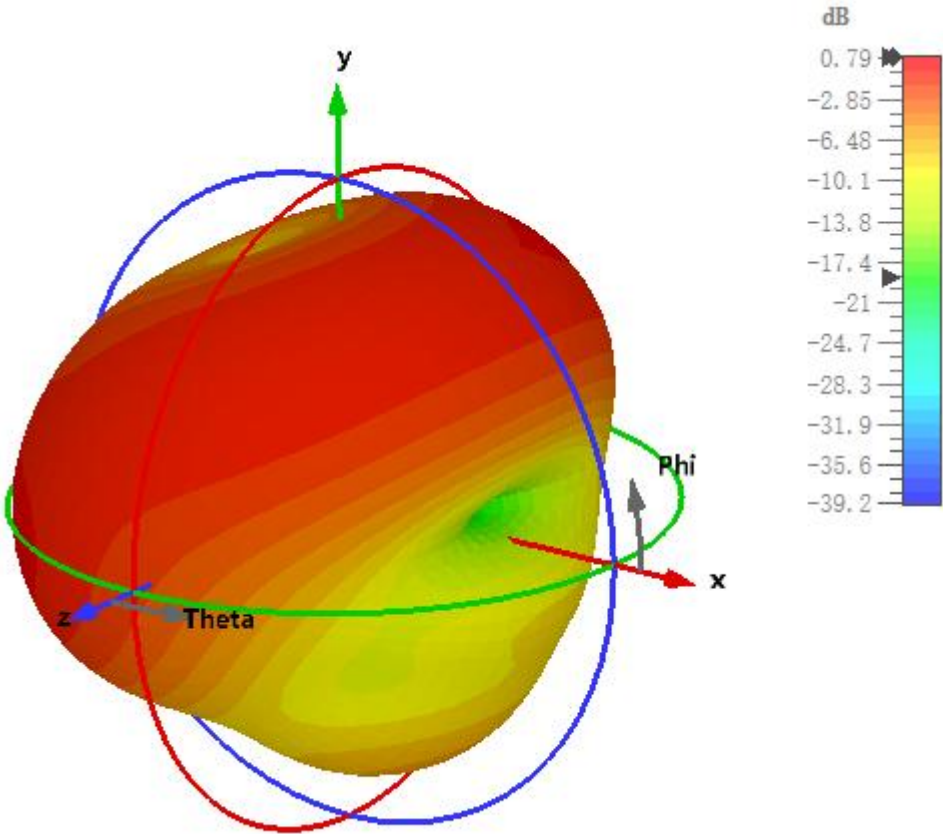
GSM850@-1.88dBi



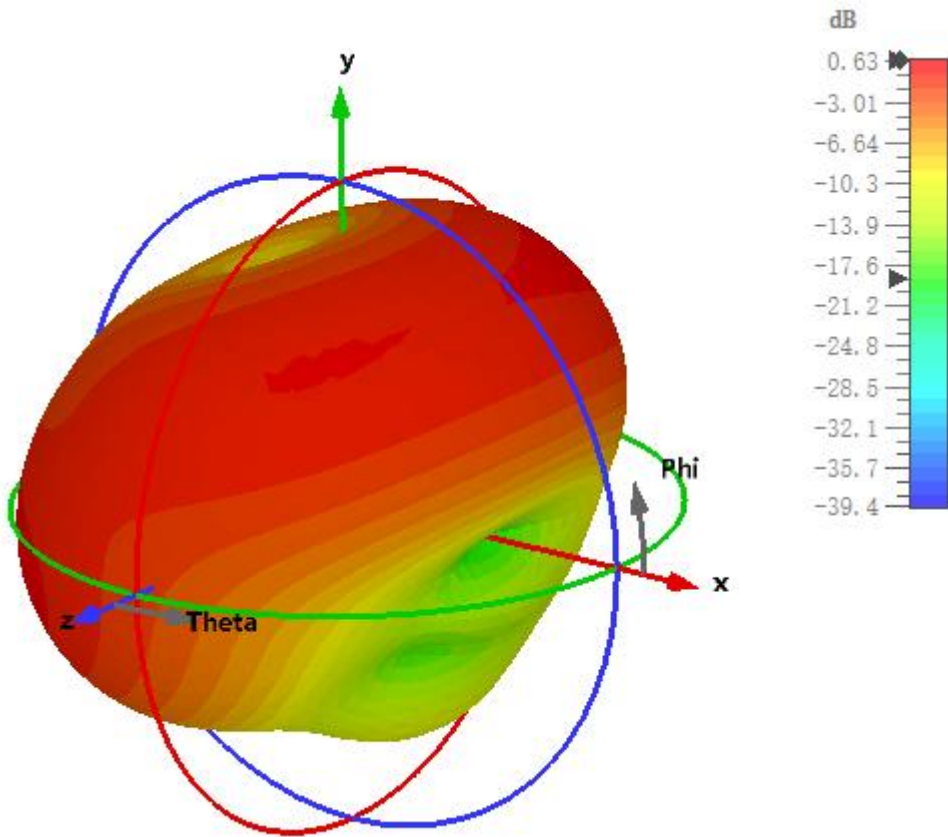
GSM1900@0.79dBi



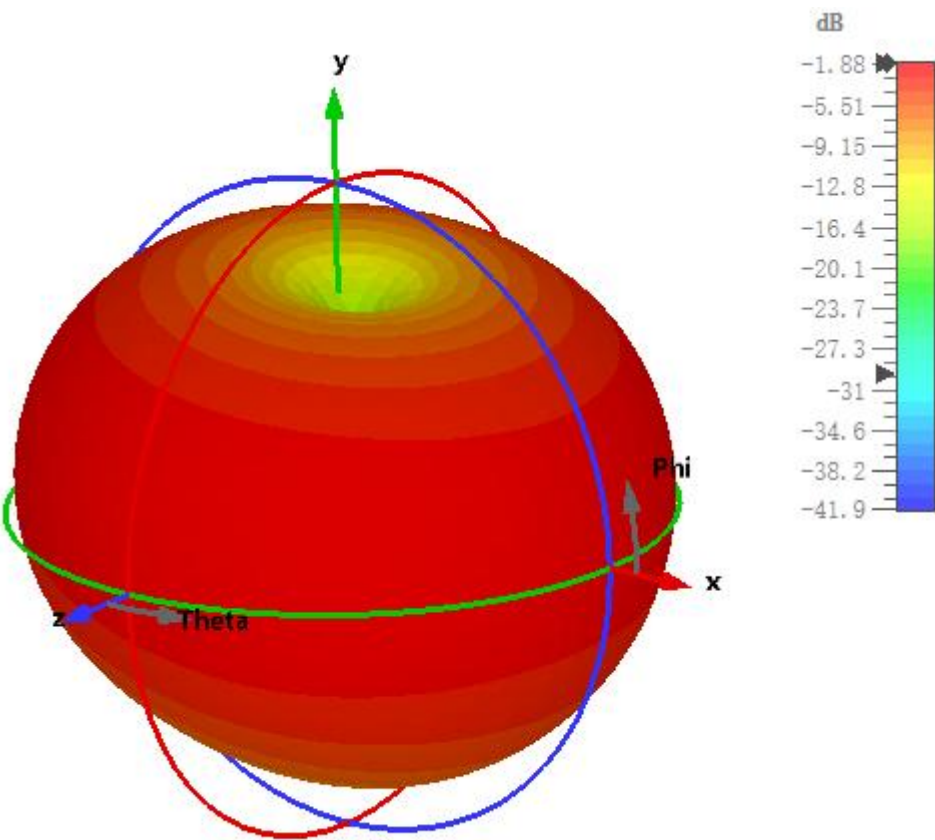
Band 2@0.79dBi



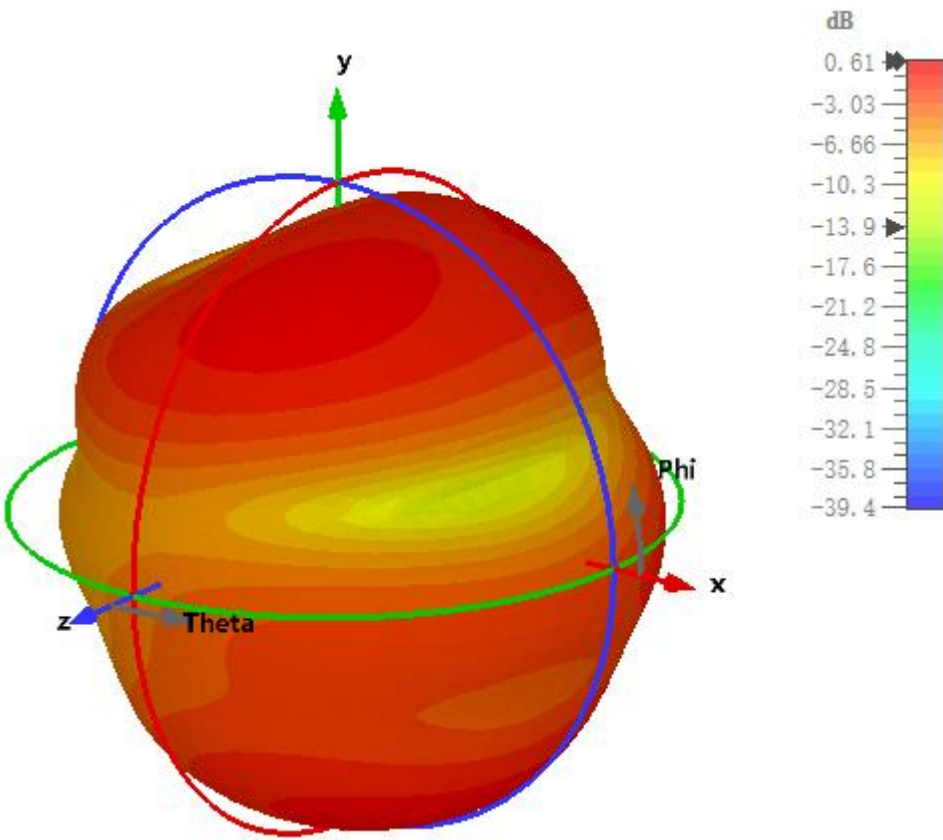
Band 4@0.63dBi



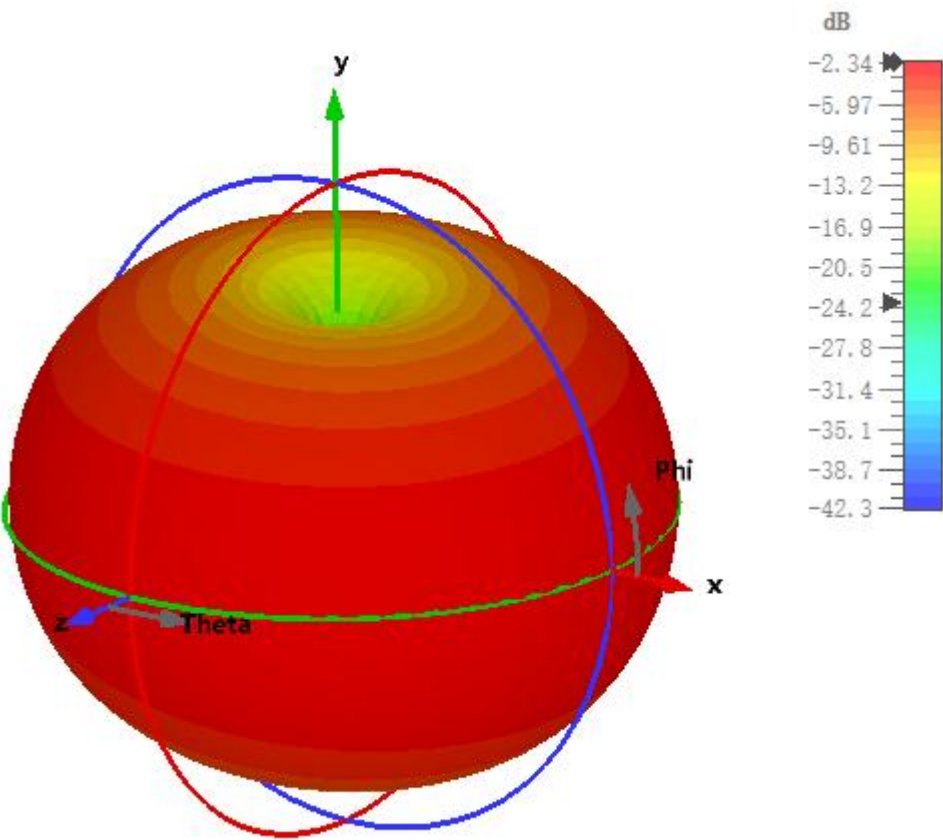
Band 5@-1.88dBi



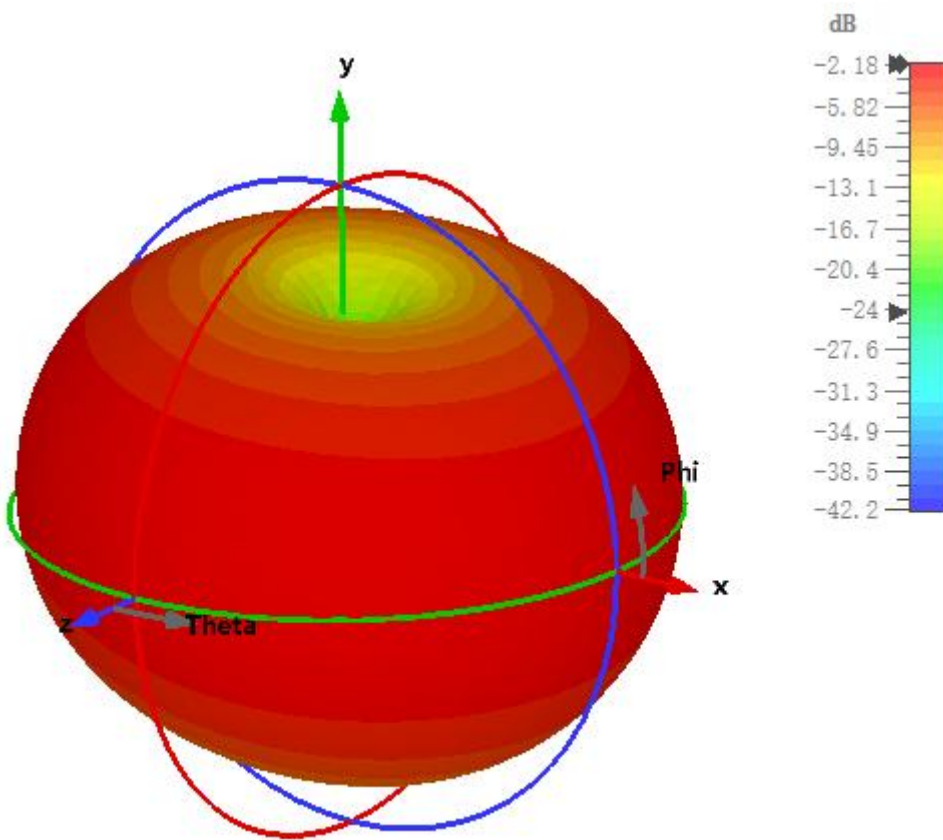
Band 7@0.61dBi



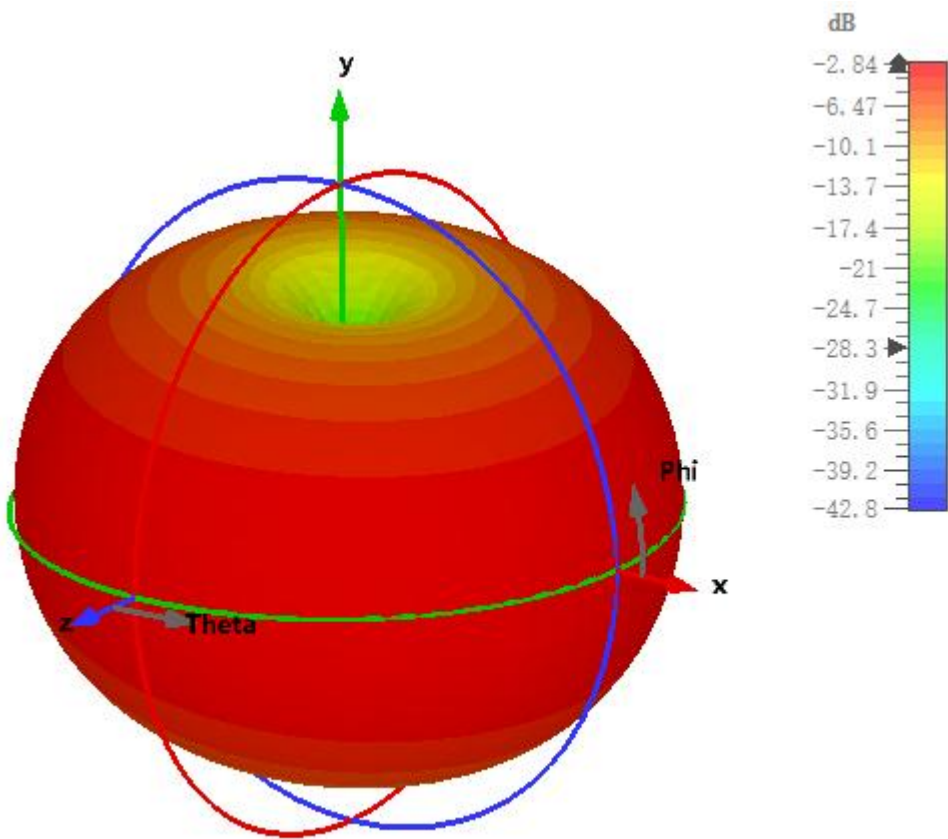
Band 12@-2.34dBi



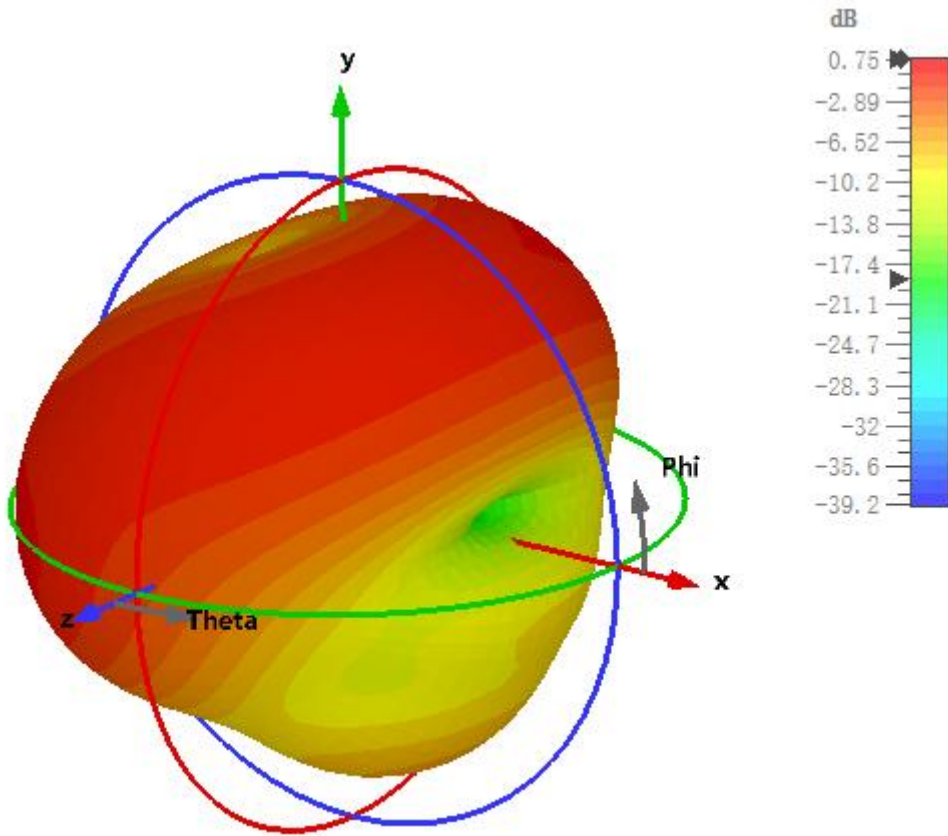
Band 13@-2.18dBi



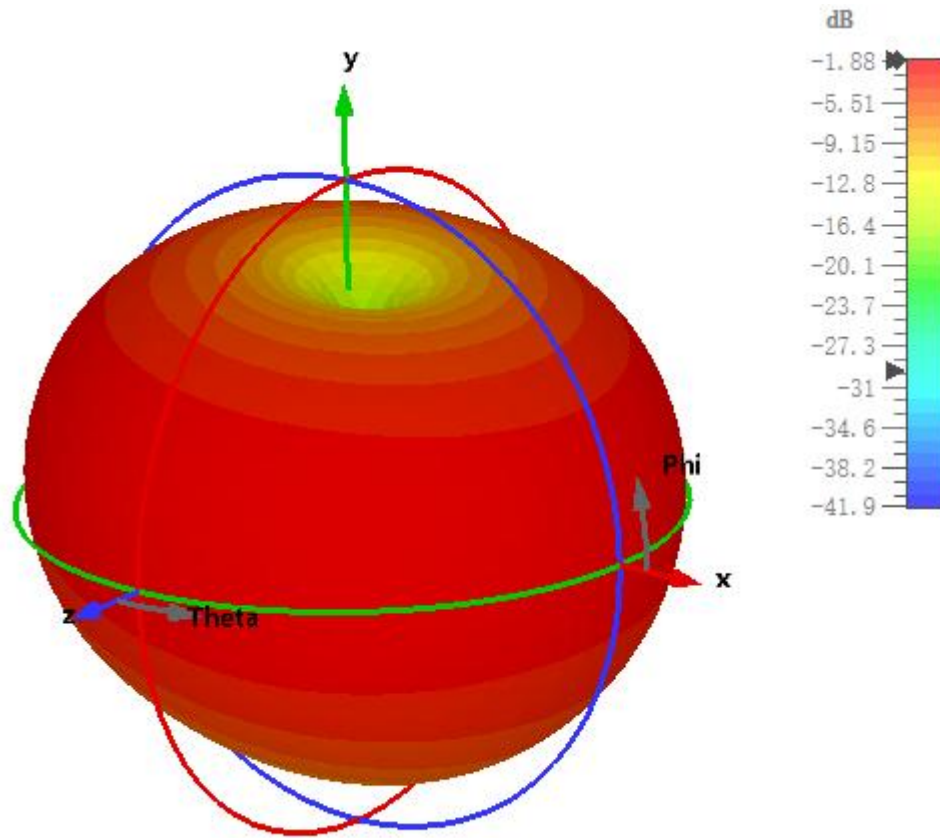
Band 17@-2.84dBi



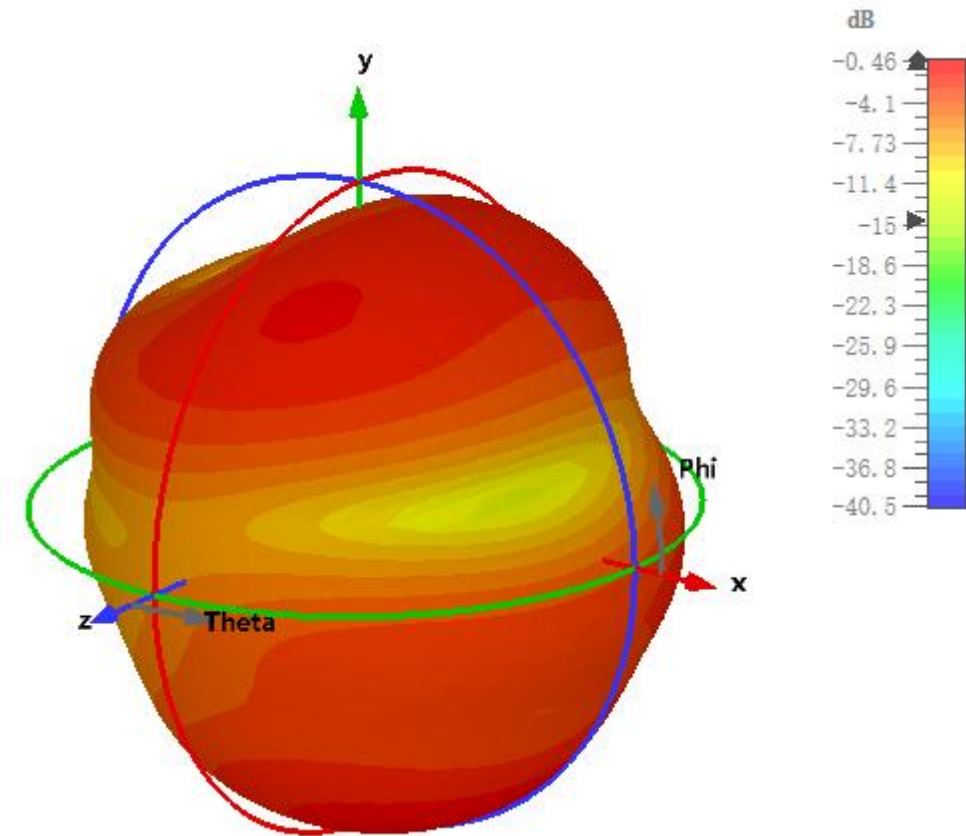
Band 25@0.75dBi



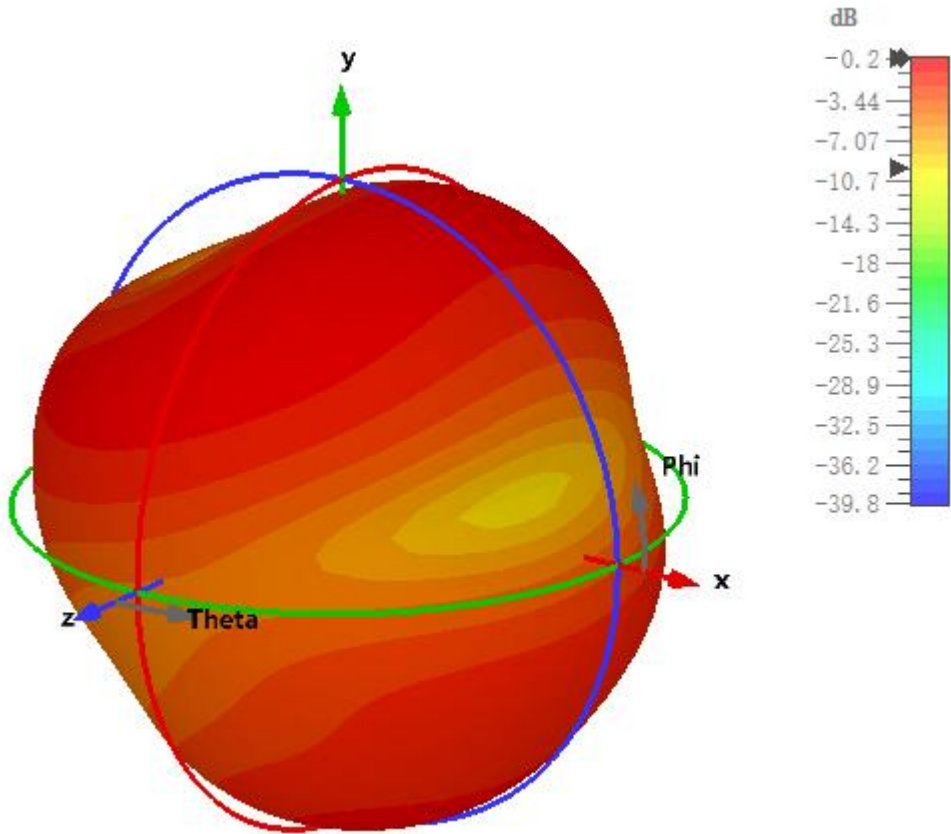
Band 26@-1.88dBi



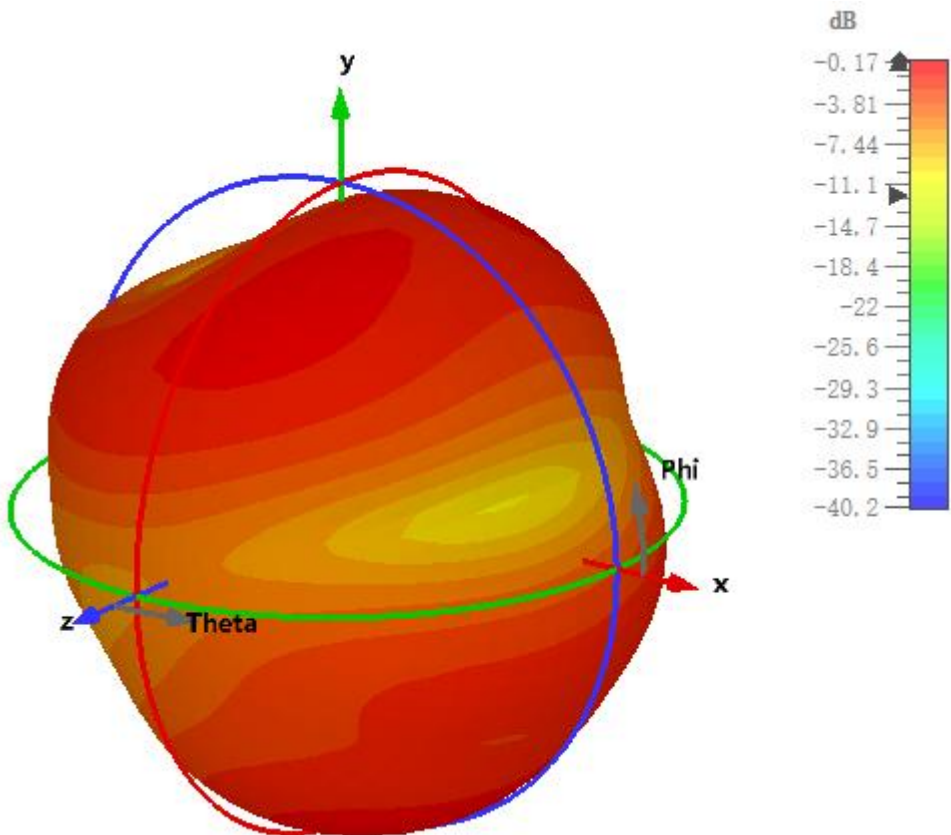
Band 38@-0.46dBi



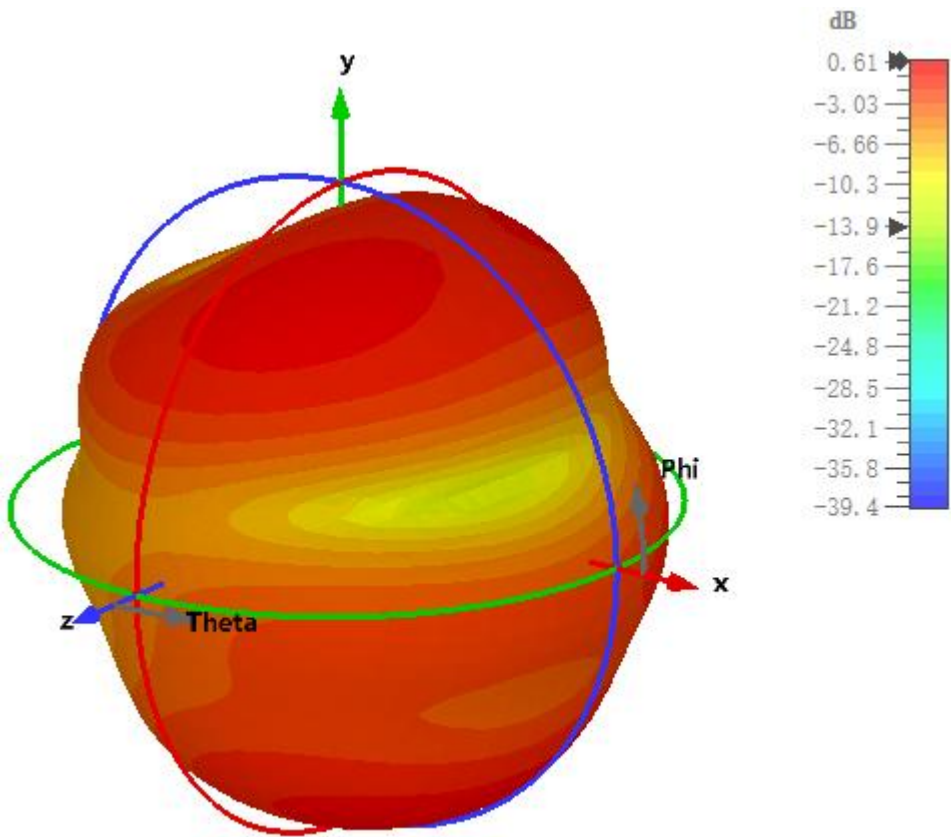
Band 40@-0.20dBi



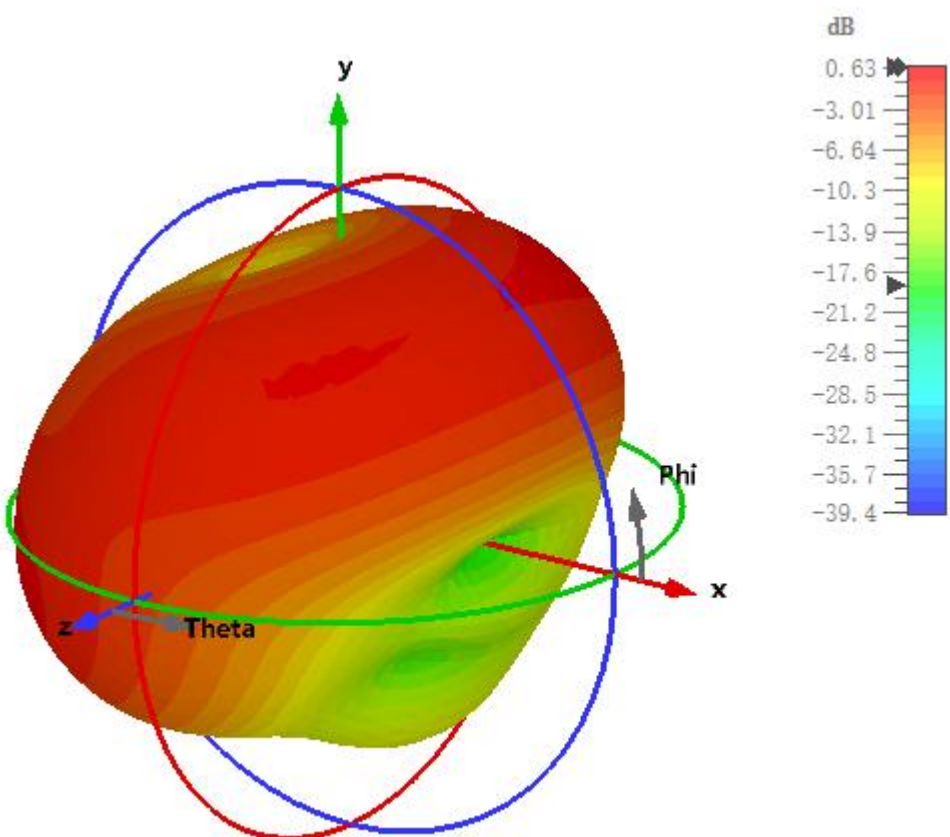
Band 40@-0.17dBi



Band 41@0.61dBi



Band 66@0.63dBi



BT-LE@2.17dBi

