

FIX0 240K Antenna Debugging Report

1、Introduction to project debugging

type	dull and stereotyped			
template	motherboard			
Frequency band and antenna material	main antenna	frequency range		material quality
		2G	GSM850/900/1800/1900	FPC
		3G	WCDMA B 1/2/4/5	
		4G	/	
	Other antennas	GWB	1575.42MHz/2.450GHz	FPC
		DRX	/	FPC
performance requirement	According to the customer's requirements			

2、Active parameters of the main antenna

Test	GSM 850			EGSM 900		
Channel	128	190	251	1	62	124
TRP (dBm)	28.53	28.22	28.09	27.89	28.24	27.64
TIS (dBm)	-104.18	-103.65	-103.23	-104.25	-103.43	-103.41

Test	DCS 1800			PCS 1900		
Channel	512	698	885	512	661	810
TRP (dBm)	24.55	24.88	25.16	25.21	25.18	24.64
TIS (dBm)	-104.22	-103.87	-103.19	-104.15	-103.62	-103.06

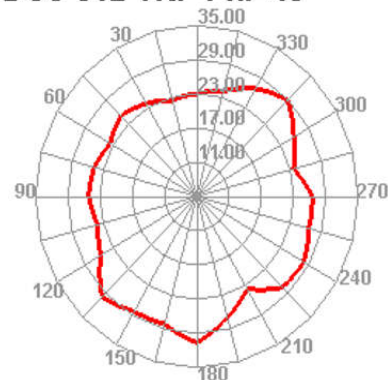
Active parameters of the main antenna

Test	WCDMA_I			WCDMA_II		
Channel	10562	10700	10838	9662	9800	9938
TRP (dBm)	17.68	17.25	17.46	18.13	17.57	17.42
TIS (dBm)	-104.11	-104.28	-103.67	-104.56	-103.61	-103.29

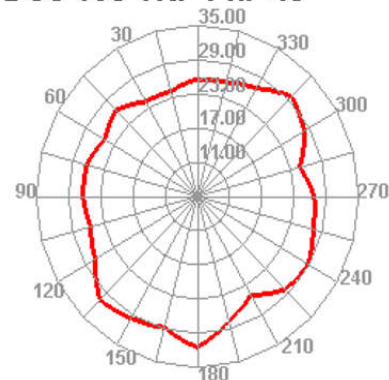
Test	WCDMA_V			WCDMA_IV		
IN	4357	4408	4458	1537	1638	1738
TRP (dBm)	18.55	18.18	18.12	17.32	17.51	17.07
TIS (dBm)	-103.88	-103.52	-103.04	-104.09	-103.38	-103.44

3、Apple chart

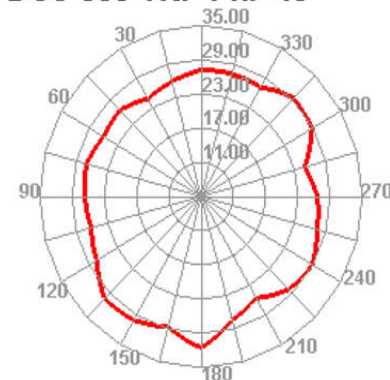
DCS 512 TRP Phi=45



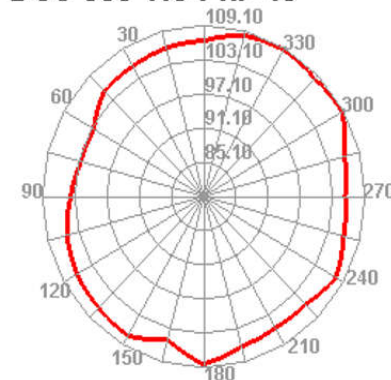
DCS 698 TRP Phi=45



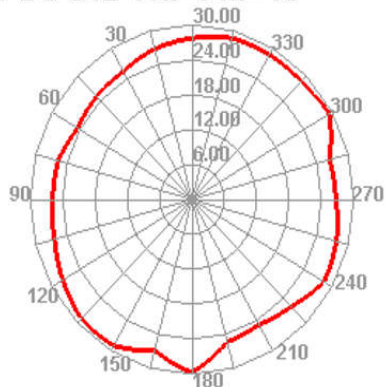
DCS 885 TRP Phi=45



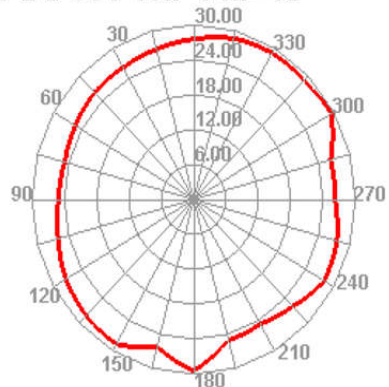
DCS 885 TIS Phi=45



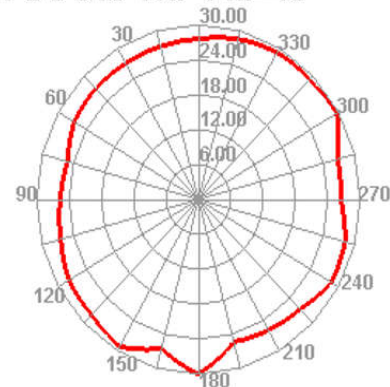
PCS 512 TRP Phi=45



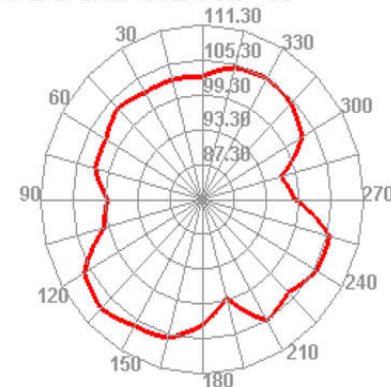
PCS 661 TRP Phi=45



PCS 810 TRP Phi=45

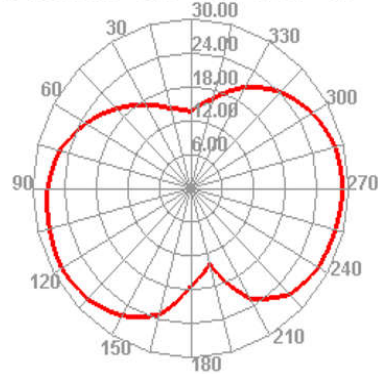


PCS 810 TIS Phi=45

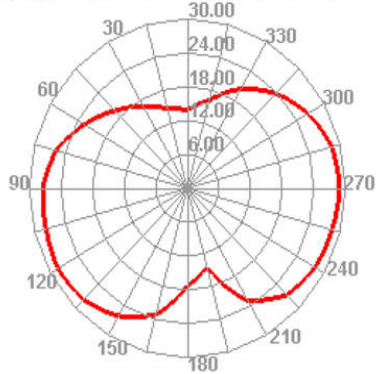


Apple chart

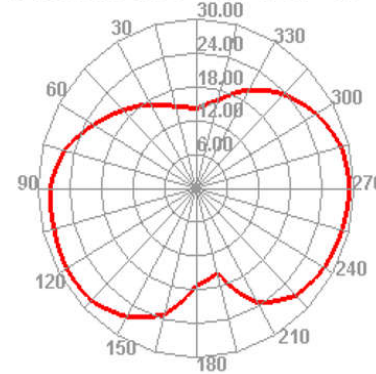
GSM850 128 TRP Phi=45



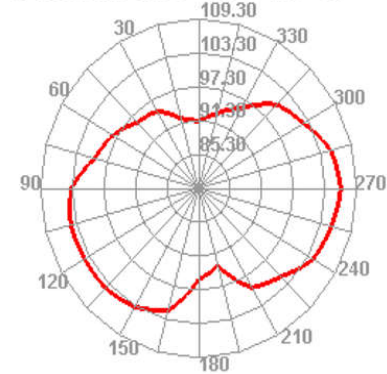
GSM850 190 TRP Phi=45



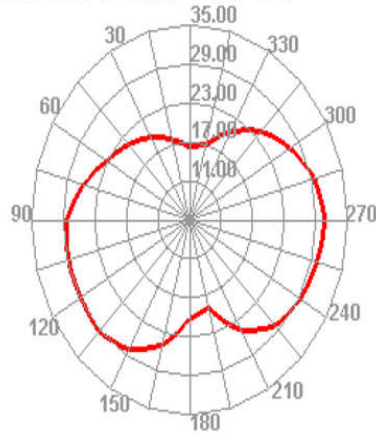
GSM850 251 TRP Phi=45



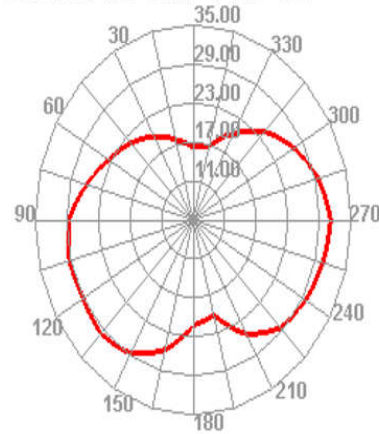
GSM850 251 TIS Phi=45



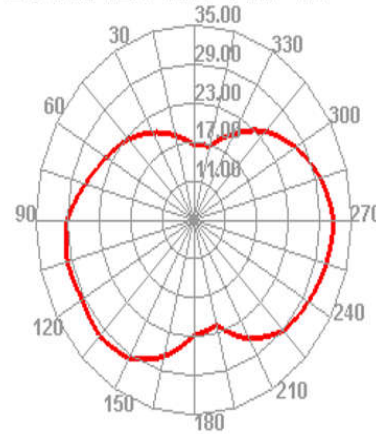
EGSM 1 TRP Phi=45



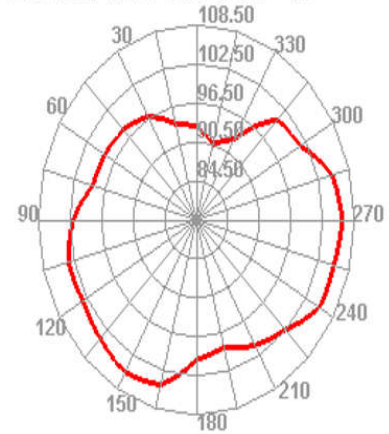
EGSM 62 TRP Phi=45



EGSM 124 TRP Phi=45

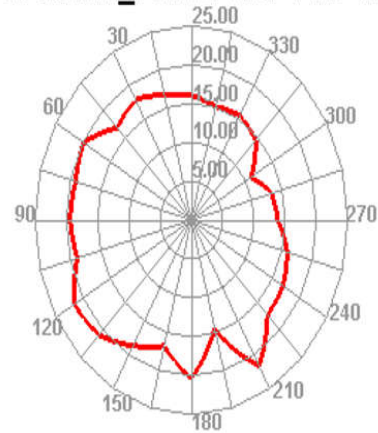


EGSM 124 TIS Phi=45

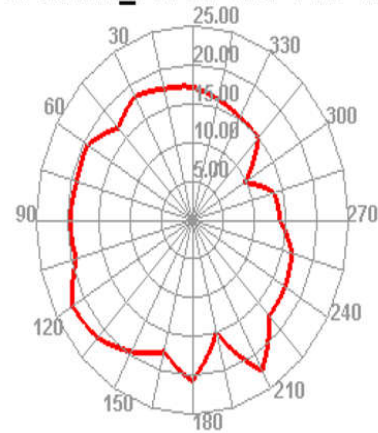


Apple chart

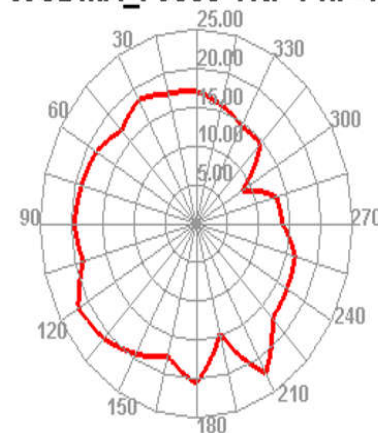
WCDMA_I 9612 TRP Phi=45



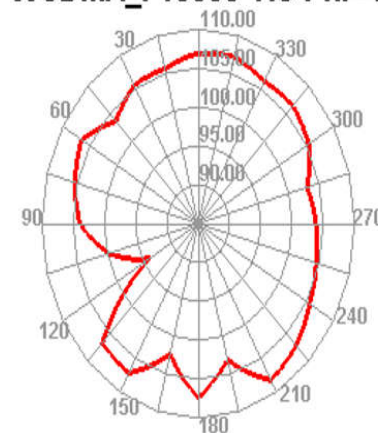
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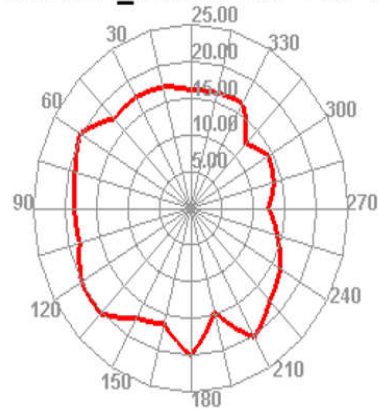
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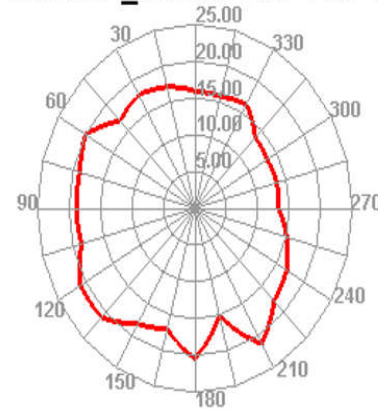
WCDMA_I 10838 TIS Phi=45



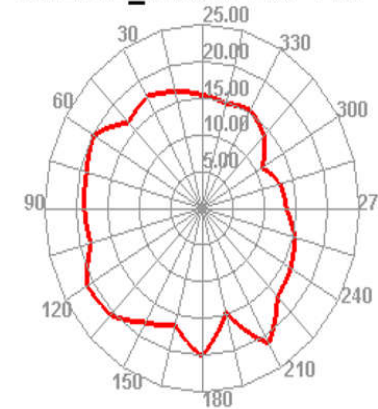
WCDMA_II 9262 TRP Phi=45



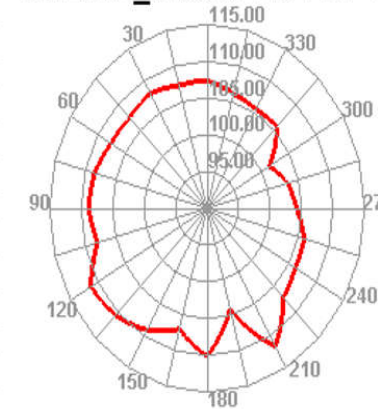
WCDMA_II 9400 TRP Phi=45



WCDMA_II 9538 TRP Phi=45

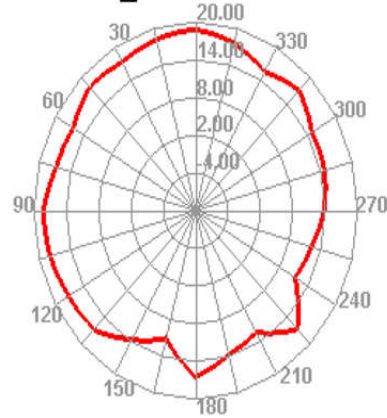


WCDMA_II 9938 TIS Phi=45

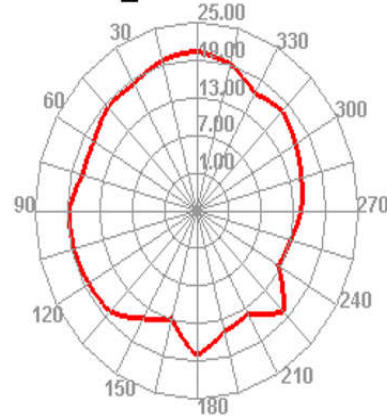


Apple chart

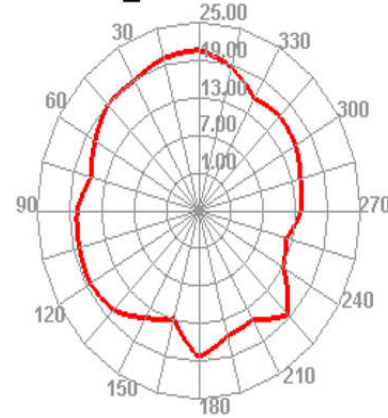
WCDMA_IV 1312 TRP Phi=45



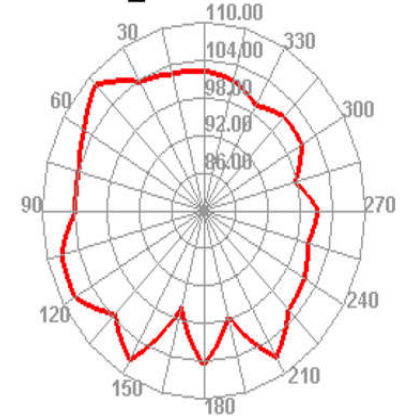
WCDMA_IV 1413 TRP Phi=45



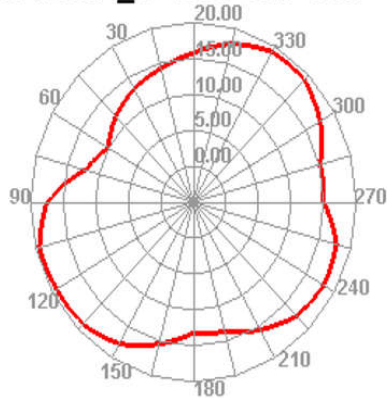
WCDMA_IV 1513 TRP Phi=45



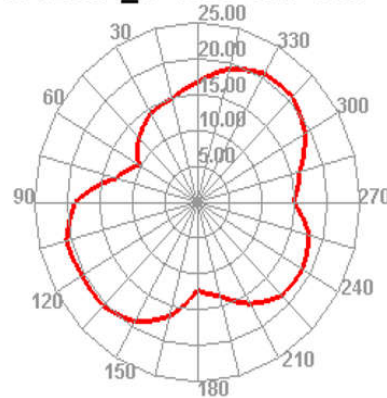
WCDMA_IV 1738 TIS Phi=45



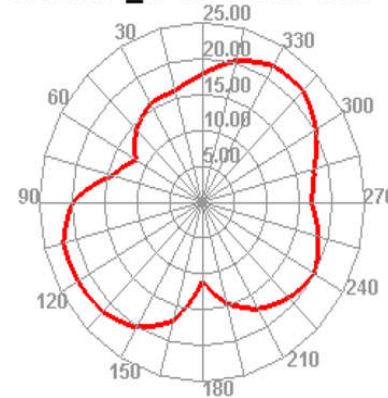
WCDMA_V 4132 TRP Phi=45



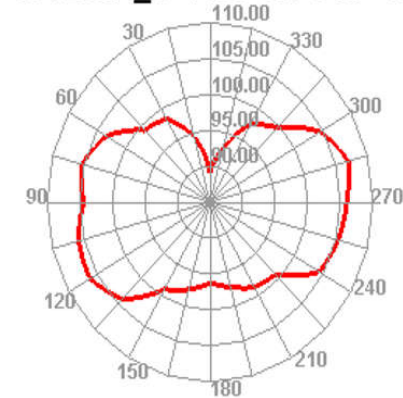
WCDMA_V 4185 TRP Phi=45



WCDMA_V 4233 TRP Phi=45

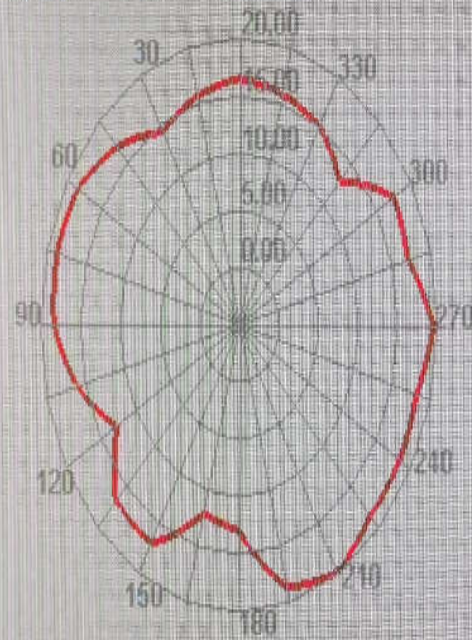


WCDMA_V 4458 TIS Phi=45

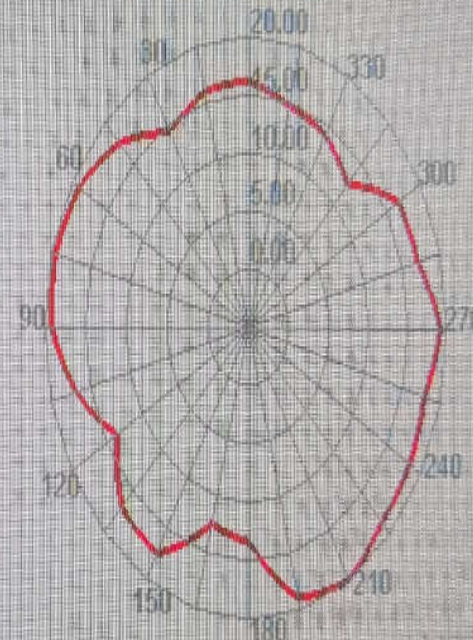


WIFI active diagram

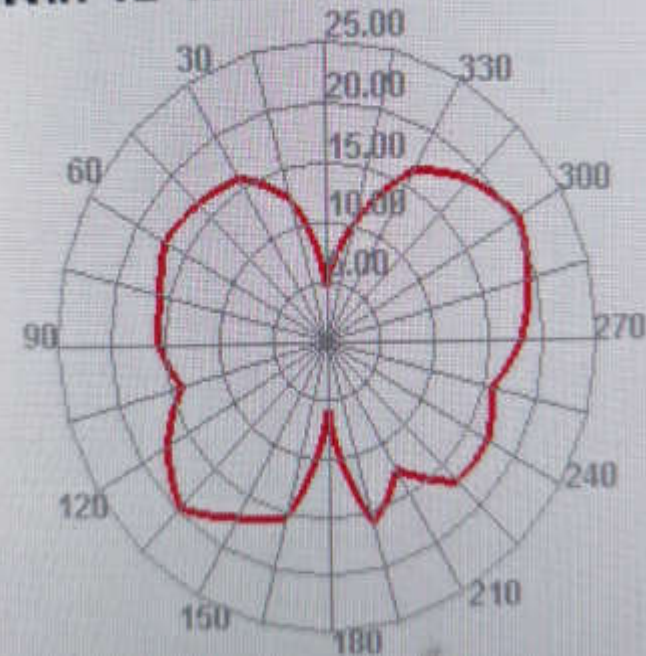
Wifi 1 TRP Phi=45



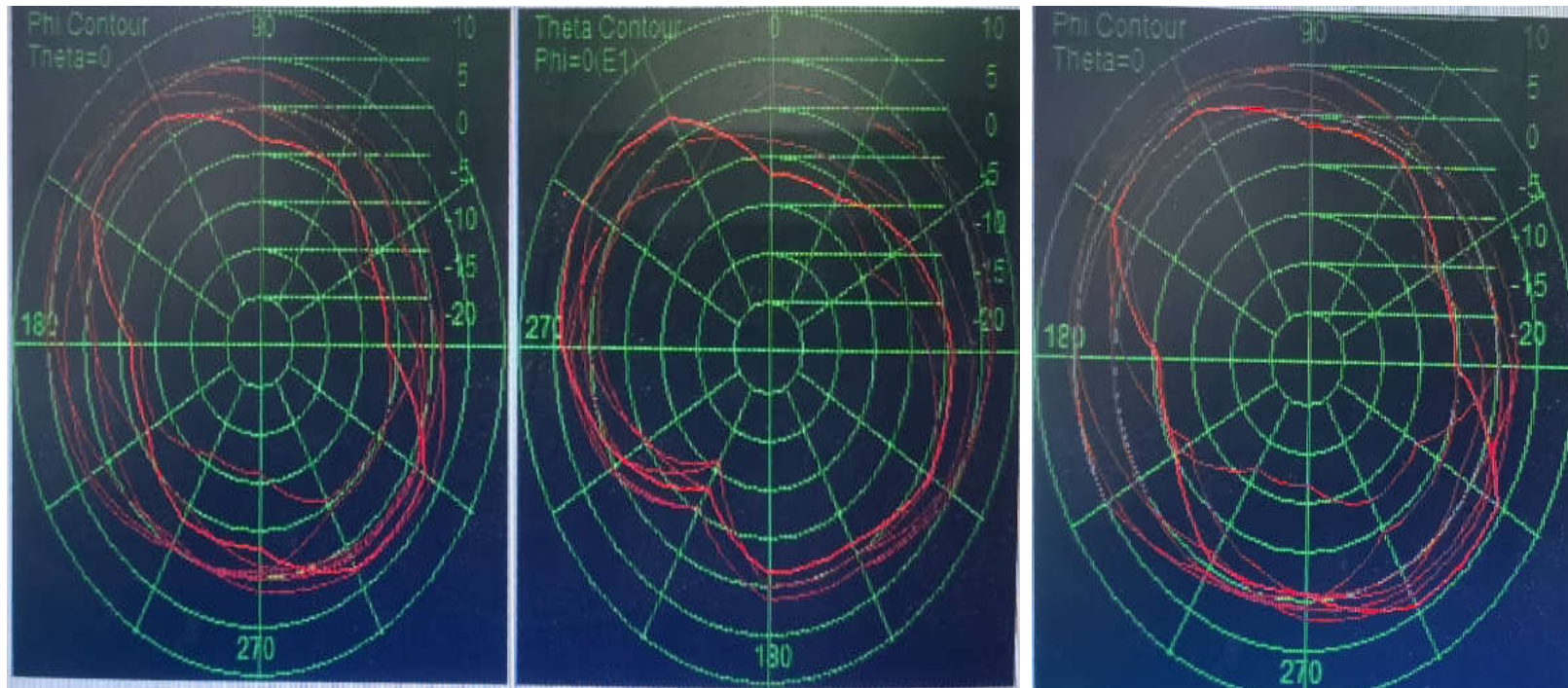
Wifi 6 TRP Phi=45



Wifi 12 TRP Phi=45



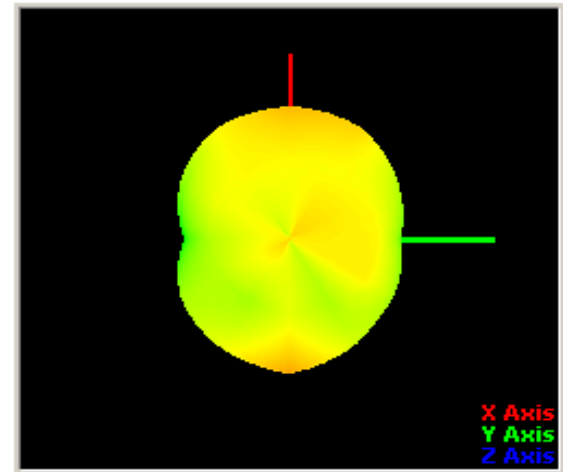
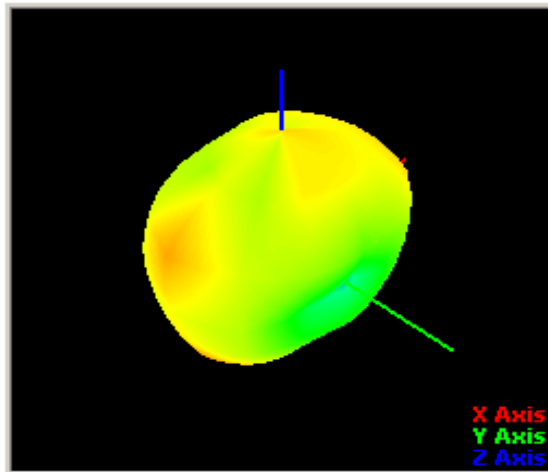
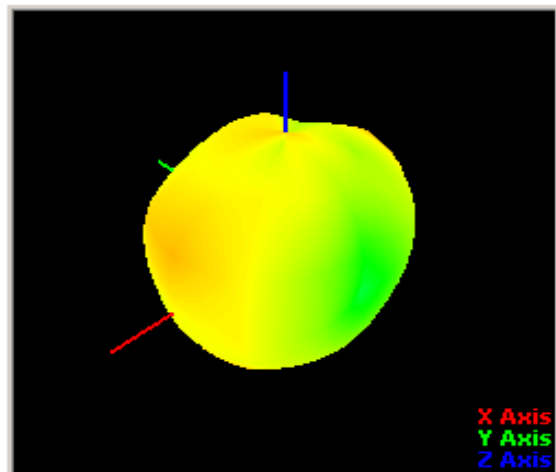
BT active diagram



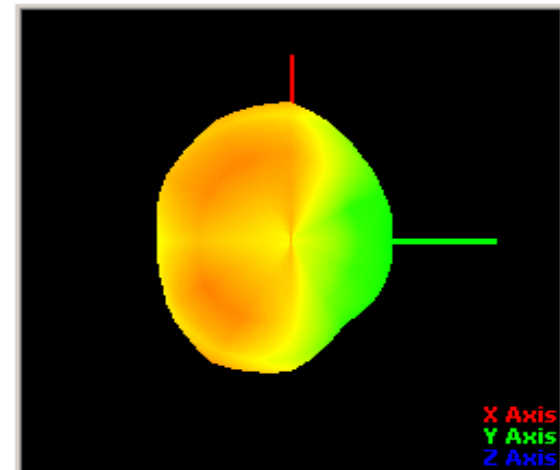
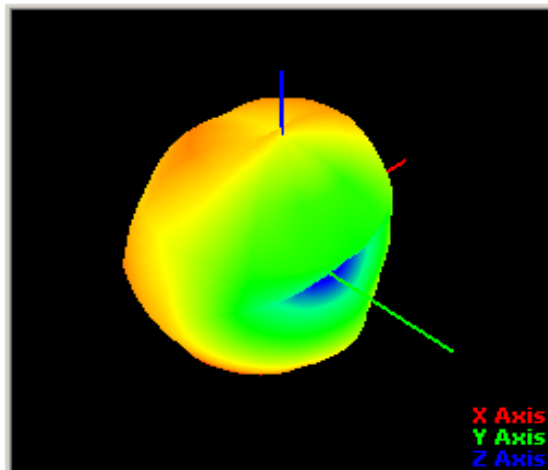
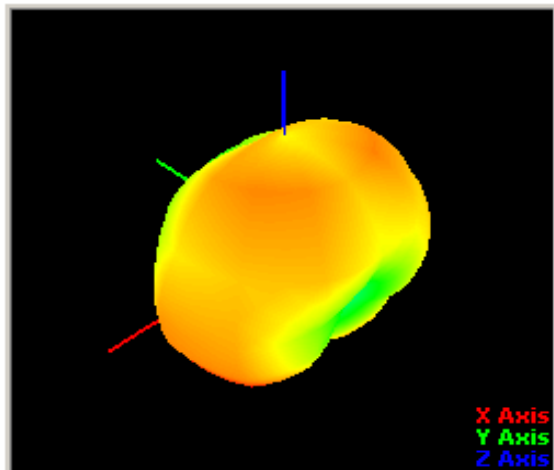
Antenna gain

Band		Gain (MAX)	
GSM850	0.71	GPS	1.19
EGSM900	0.65	WiFi	1.13
DCS1800	0.54	BT	1.13
PCS1900	0.53		
WCDMA B1	0.58		
WCDMA B2	0.53		
WCDMA B4	0.57		
WCDMA B5	0.71		

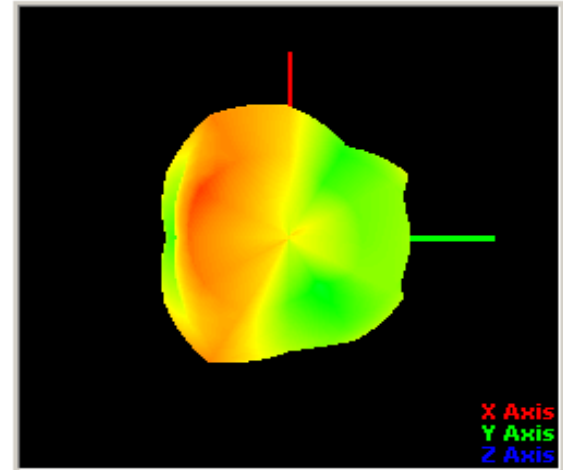
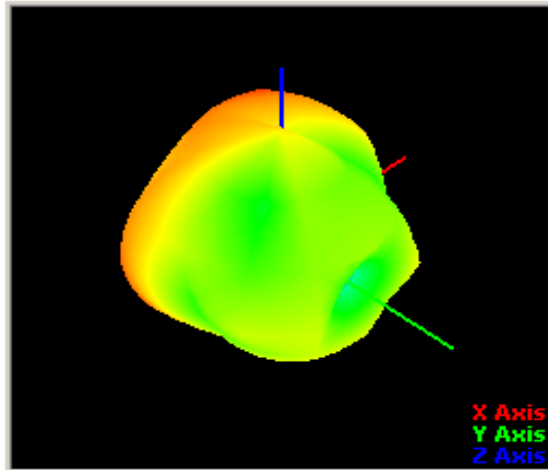
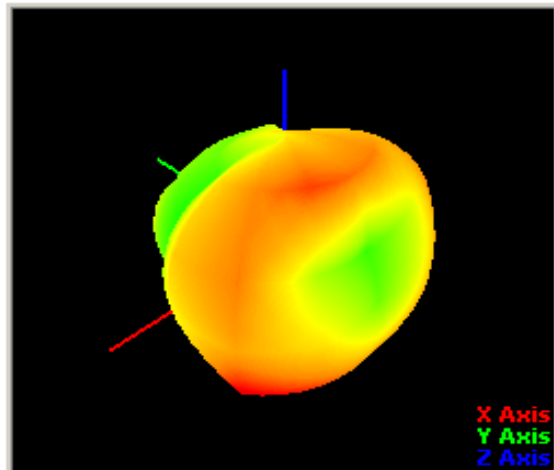
Antenna pattern – GSM850/WCDMA B5



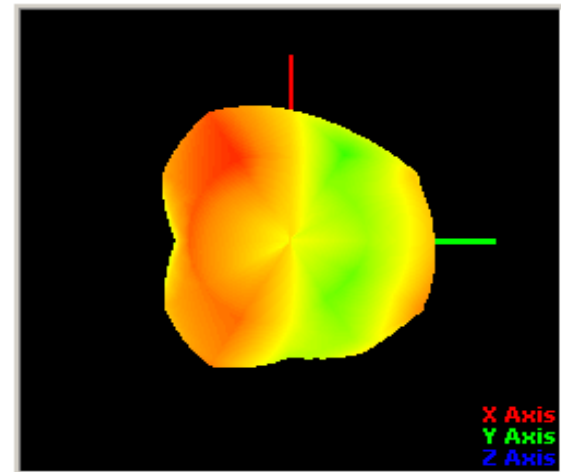
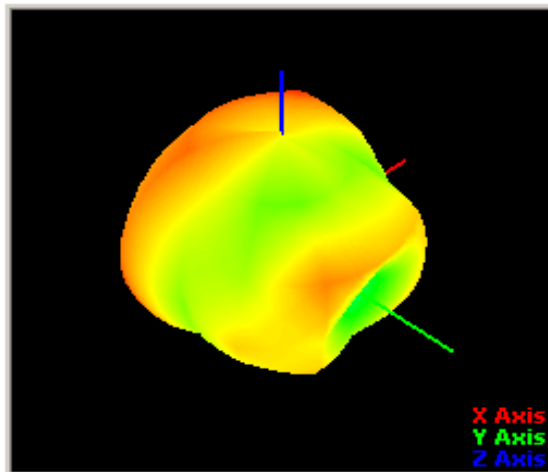
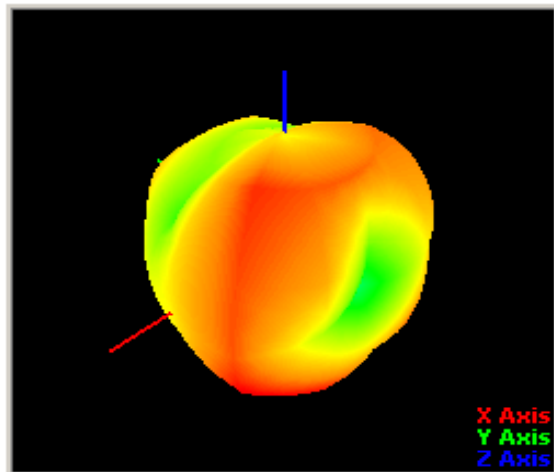
Antenna pattern – GSM900



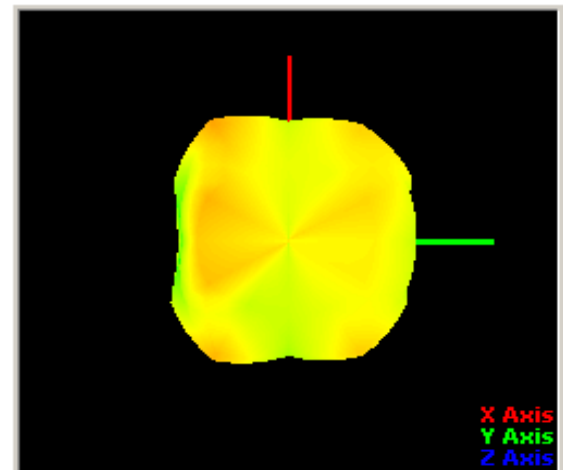
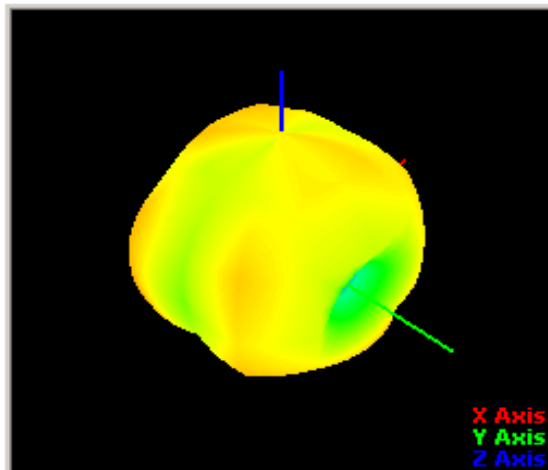
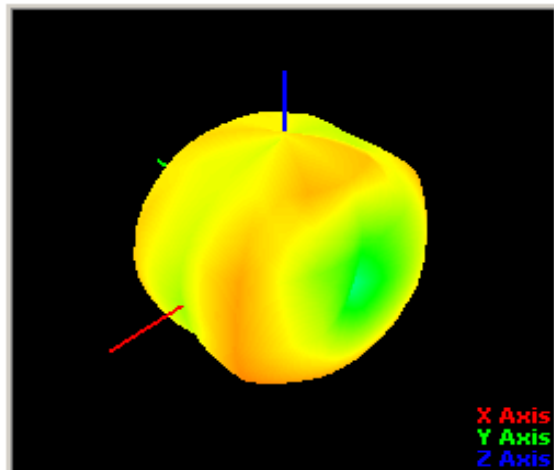
Antenna pattern – GSM1800



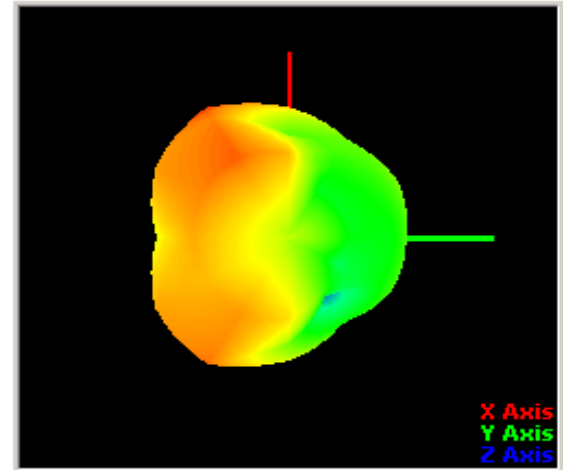
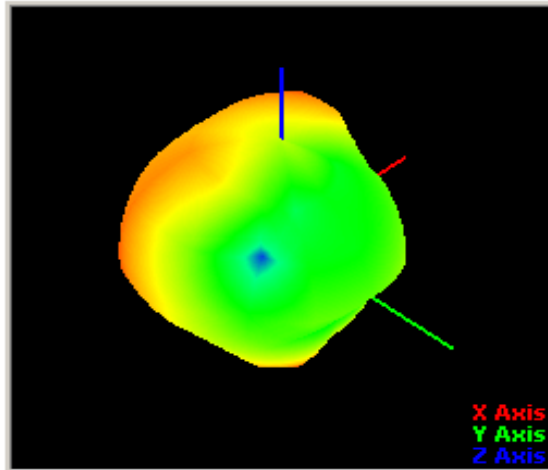
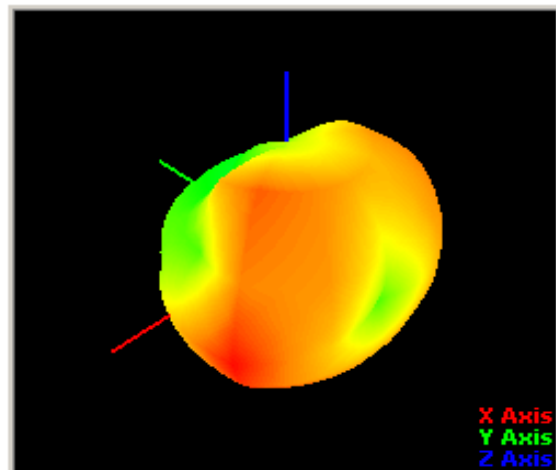
Antenna pattern – GSM1900/WCDMA B2



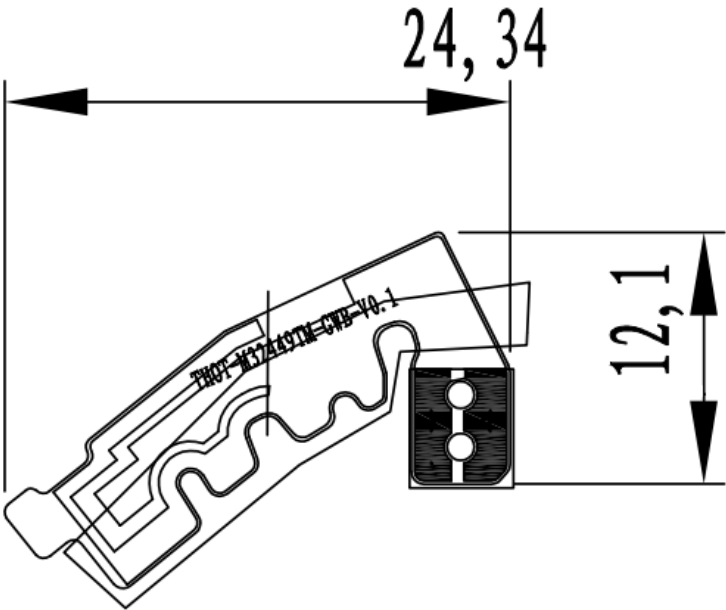
Antenna pattern – WCDMA B1



Antenna pattern – WCDMA B4

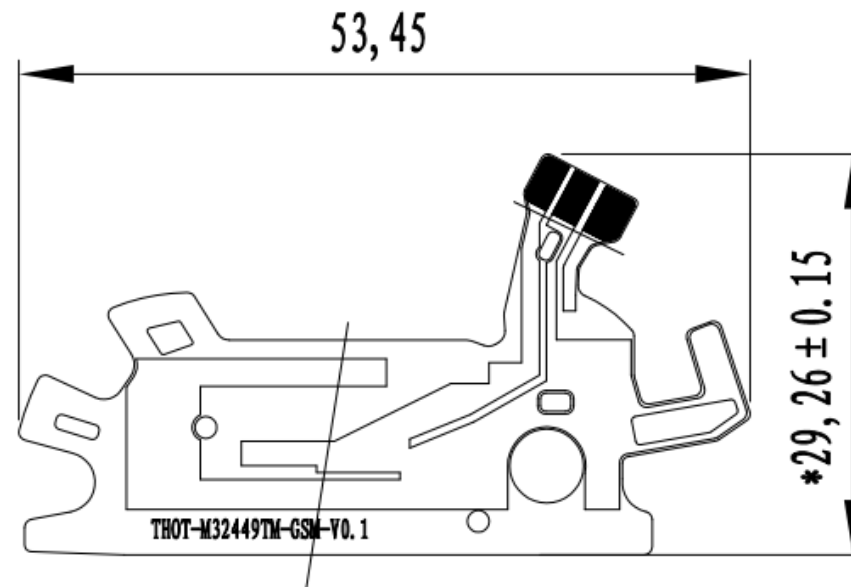


Antenna Drawing



Technical requirement		
FPC substrate specification	PI base material	0.5mil
	Electrolytic copper (single panel)	0.5oz (ED)
	Single-sided adhesive	3M-9471LE
Surface ink requirements	Ink color	black
	Font color	black
	Font height	Drawing requirements
RoHS requirement	Materials involved must comply with ROHS requirements	

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Thank you!

