

Antenna matching report

HEK

Customer: 嘉实通讯

Model Name: Carol

Frequency: BT(2402~2480MHz)

Date: 2024.03.14

Number: 20240314002

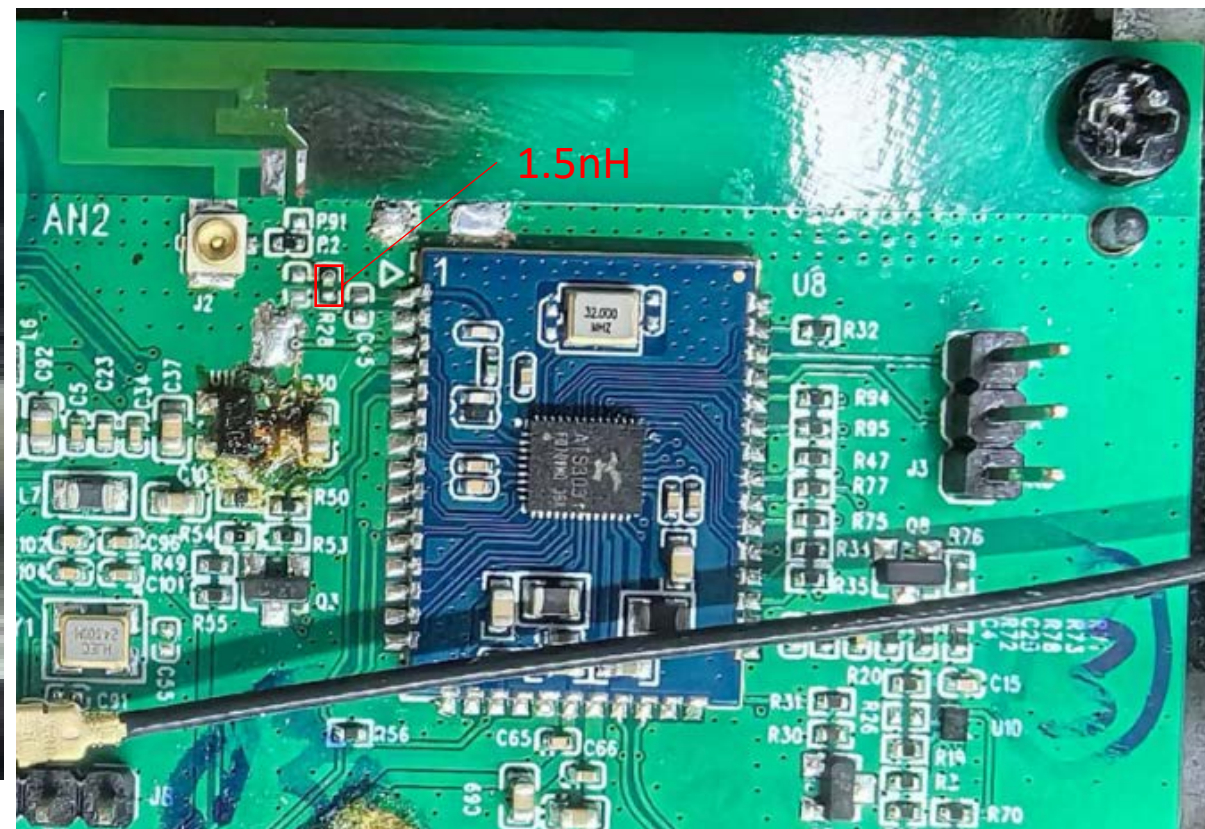
Producer: FAE

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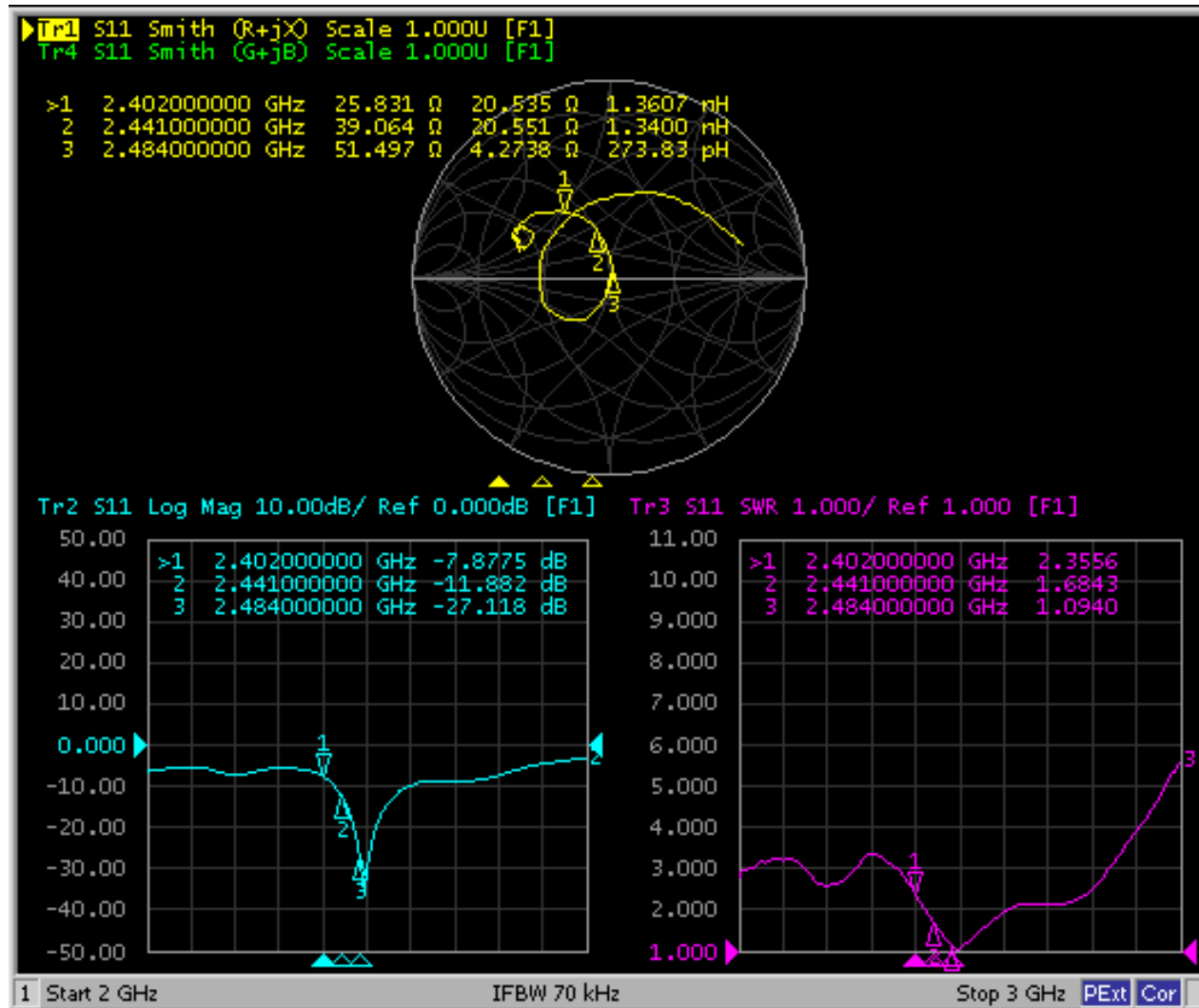
Appearance of customer Sample



Matching parameters-FPC

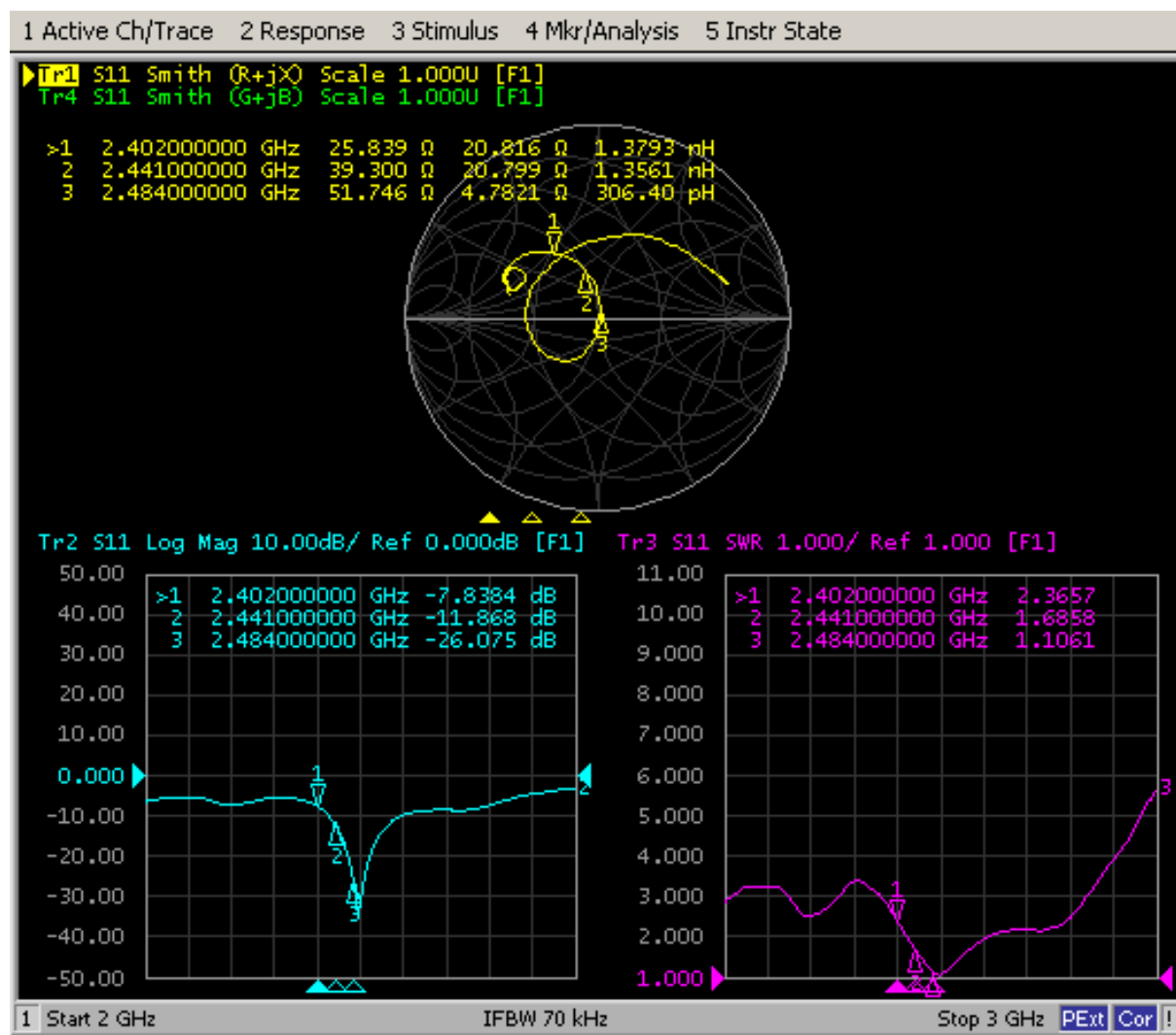


Antenna S parameters-PCB天线加头靠



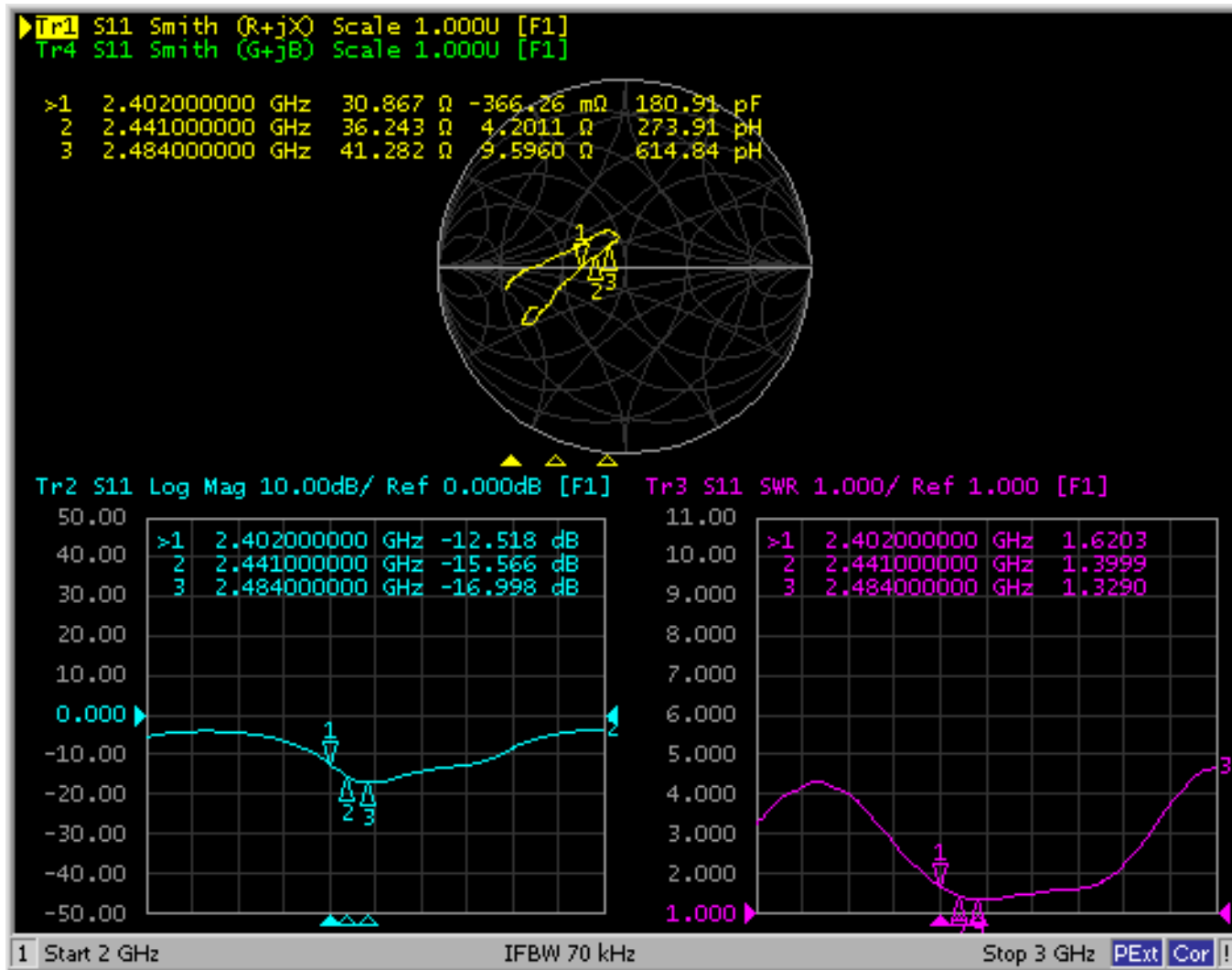
Item	Value		
	2402 (MHz)	2441(MHz)	2480(MHz)
Smith(Ω)	25.83	39.06	51.49
Return loss(dB)	-7.87	-11.88	-27.11
VSWR	2.35	1.68	1.09

Antenna S parameters-PCB天线不加头靠



Item	Value		
	2402 (MHz)	2441(MHz)	2480(MHz)
Smith(Ω)	25.83	39.30	51.74
Return loss(dB)	-7.83	-11.86	-26.07
VSWR	2.36	1.68	1.10

Antenna S parameters-FPC天线

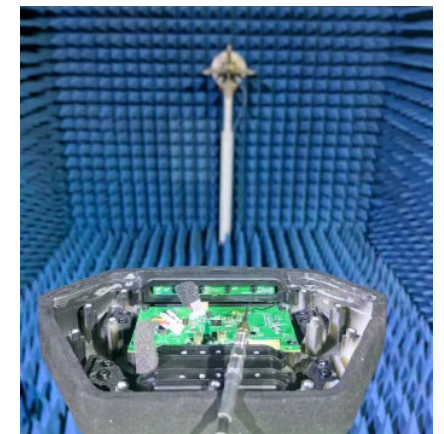


Item	Value		
	2402 (MHz)	2441(MHz)	2480(MHz)
Smith(Ω)	30.86	36.24	41.28
Return loss(dB)	12.51	-15.56	-16.99
VSWR	1.62	1.39	1.32

Antenna Passive parameter-PCB天线

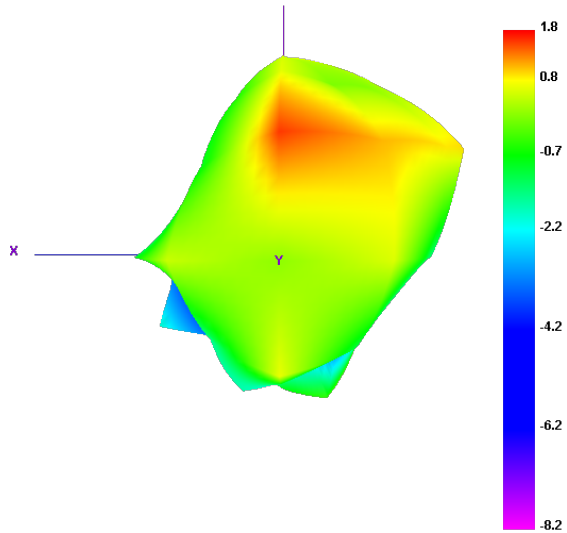


Frequency (MHz)	Efficiency (%)	Mean gain (dBi)	Peak Gain (dBi)
2400	45.03	-3.47	2.02
2440	43.09	-3.66	1.98
2480	41.51	-3.82	1.6



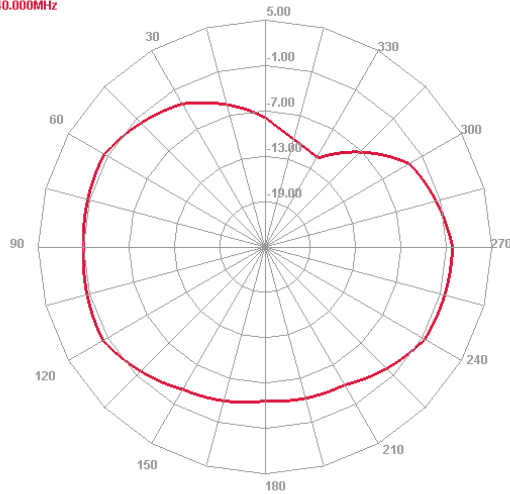
Antenna Passive parameter-FPC天线

2440.000MHz



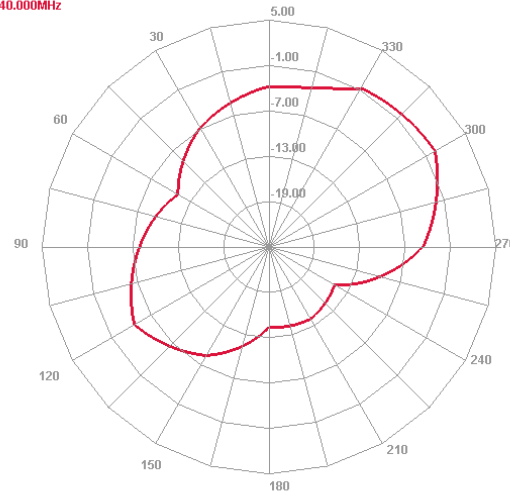
Horizontal

2440.000MHz



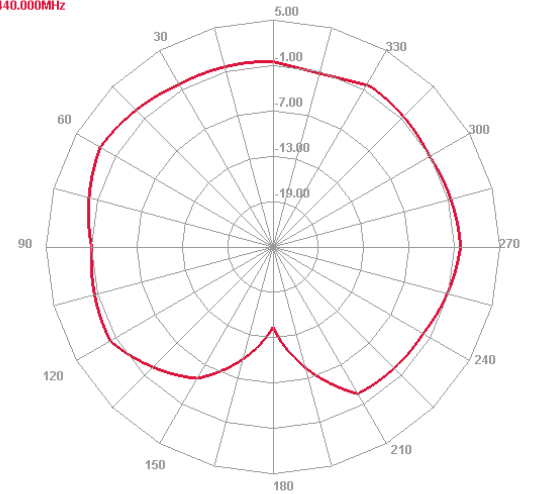
E1 Face

2440.000MHz

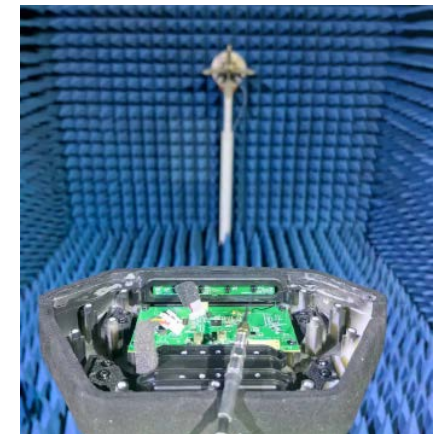


E2 Face

2440.000MHz

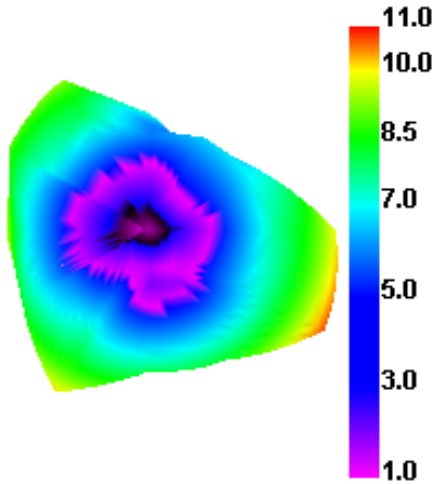


Frequency (MHz)	Efficiency (%)	Mean gain (dBi)	Peak Gain (dBi)
2400	54.72	-2.62	2
2440	54.03	-2.67	1.75
2480	56.47	-2.48	2.06

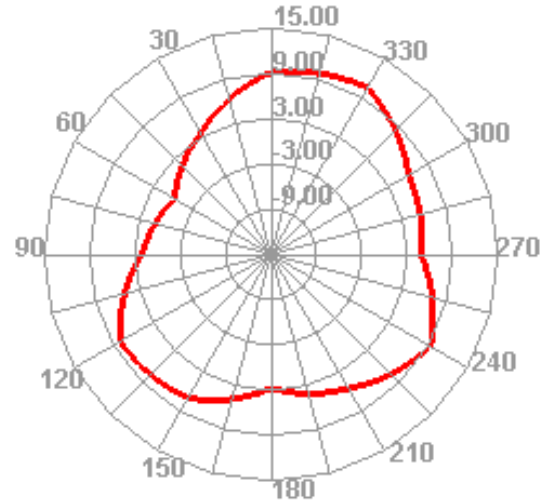


OTA Test data-PCB天线

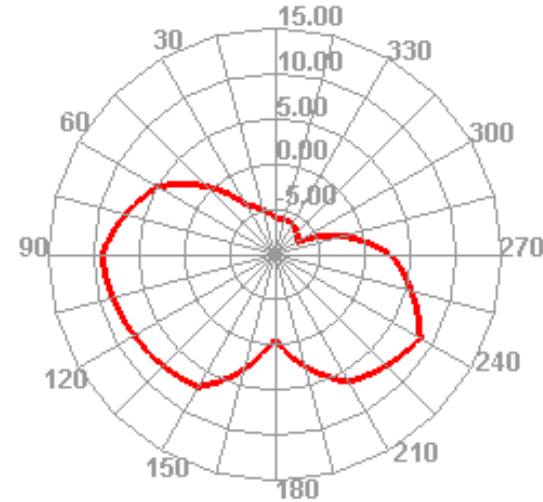
Bluetooth 39 TRP



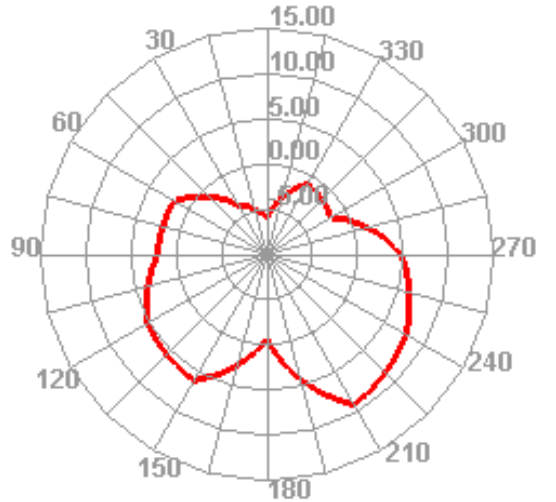
Bluetooth 39 TRP H



Bluetooth 39 TRP E1



Bluetooth 39 TRP E2

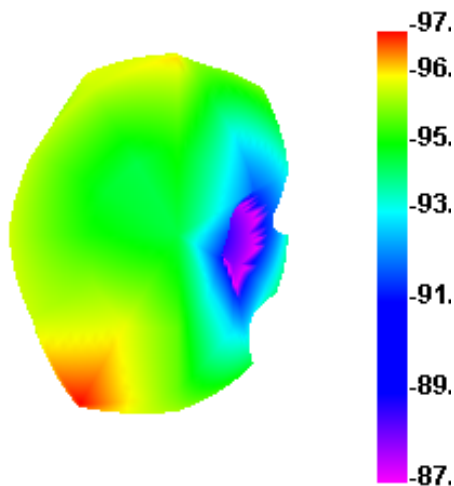


Channel	0	39	78
TRP (dBm)	5.4	5.95	7.31
TIS (dBm)	-88.64	-89.57	-90.77

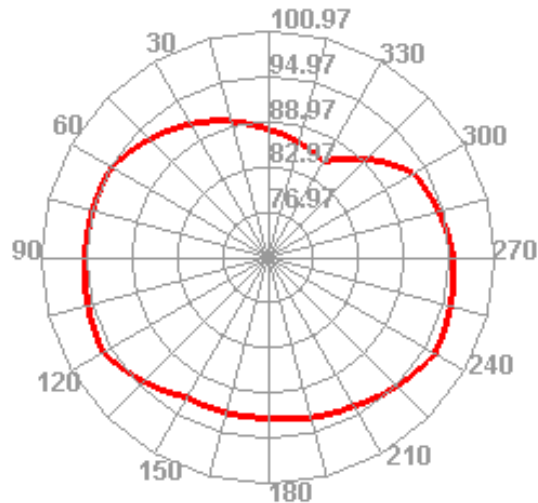


OTA Test data-FPC天线

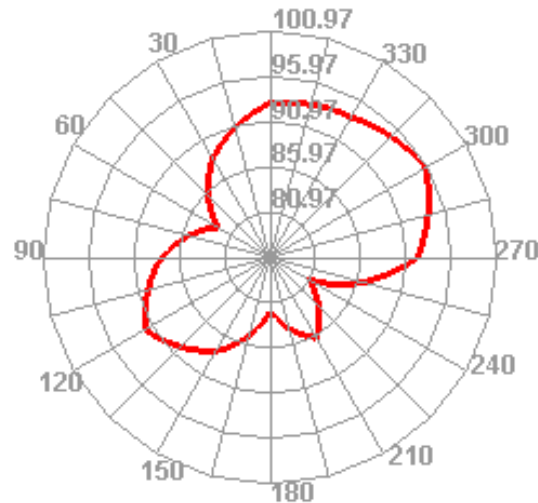
Bluetooth 39 TIS



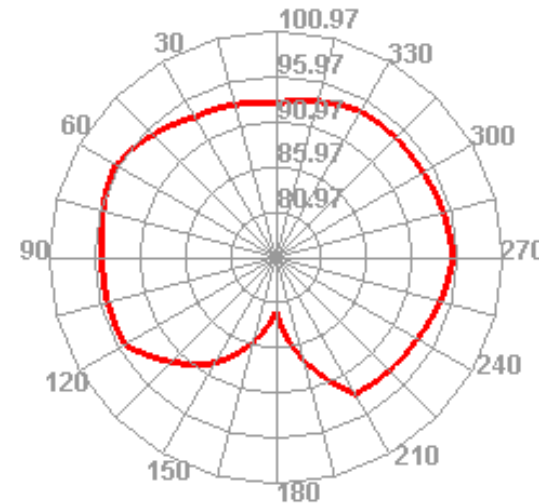
Bluetooth 39 TIS H



Bluetooth 39 TIS E1



Bluetooth 39 TIS E2



Channel	0	39	78
TRP (dBm)	6.18	6.31	7.01
TIS (dBm)	-89.96	-89.02	-90.48



Thanks

HEK