

IQ-171BT Antenna Test Report

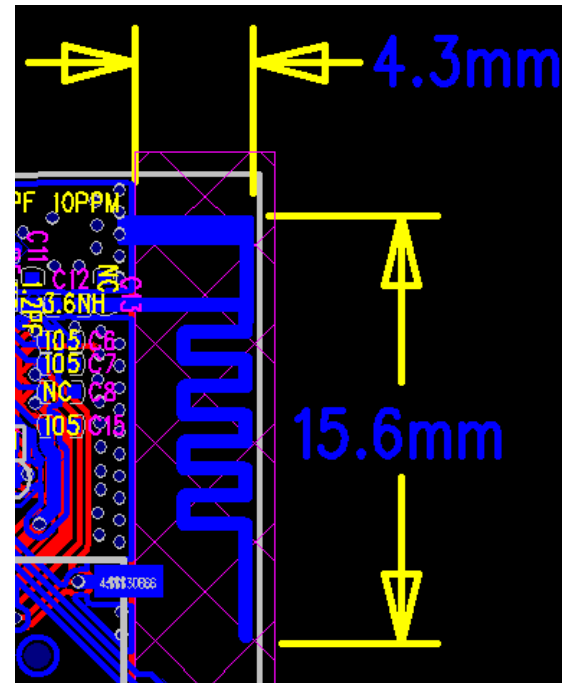
Customer	优程
Project	IQ-171BT
Antenna Revision	A1
Product Description	PCB
Gain Max	-2.0dBi
DATE	2024. 1. 17

Product Overview & Dimension

Front



Size



Purpose

This report is to measure the performance of BT antenna for **IQ-171BT**. The antenna operating frequency at **2.4~2.5GHz**, All test data are showed as below.

Content

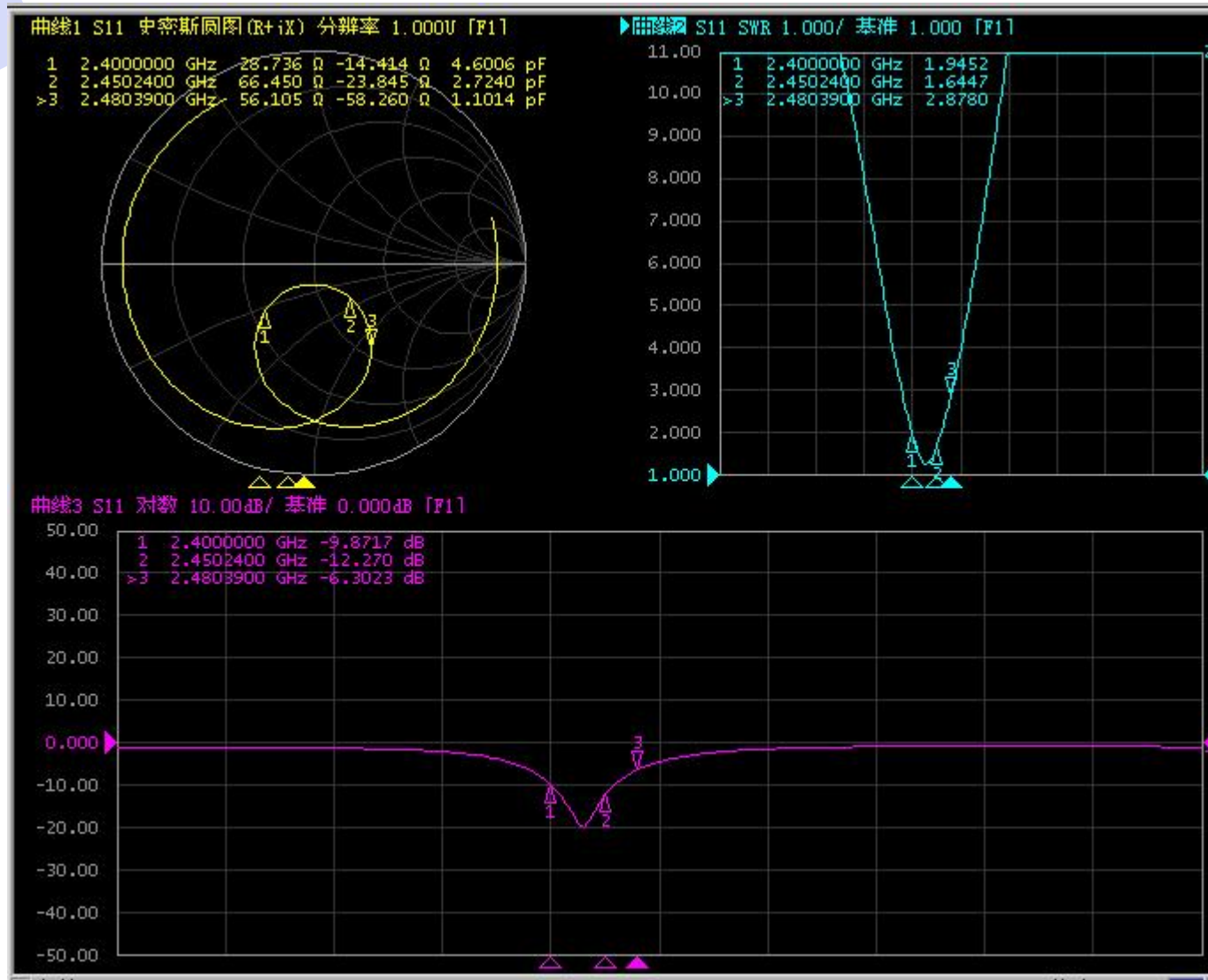
1. Product Overview & Dimension
2. Test system
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4. Test Result
 - 4.1 S11 Parameter
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 - 4.3 2D Pattern
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 - 4.5 BT Boot measured
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2. Test System

Sequence Number	Test Item	equipment
S parameter	VSWR	Agilent 5071C & Agilent 5062A
OTA Test	TRP&TIS	CMW500 & CMW270 ETS&SATIMO
Gain & Efficiency	Gain & Efficiency	ETS&SATIMO Agilent 5071C



S11—(BT ANT)



Test Result

Gain & Efficiency—**BT- ANT**



深圳市合拓科技有限公司

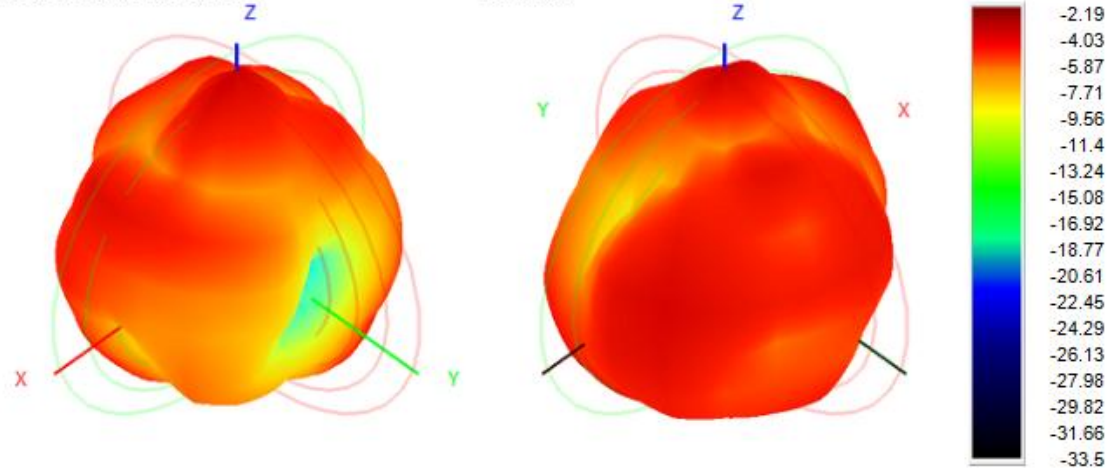
Frequency ID	1	2	3	4	5	6	7	8	9	10	11
Frequency (MHz)	2400.0	2410.0	2420.0	2430.0	2440.0	2450.0	2460.0	2470.0	2480.0	2490.0	2500.0
Efficiency (dBi)	-9.09	-8.91	-8.95	-8.85	-8.73	-8.71	-8.73	-8.62	-8.85	-8.69	-8.63
Gain (dBi)	-2.19	-2.39	-2.70	-2.75	-2.65	-2.57	-2.20	-2.00	-2.09	-2.15	-2.14
Efficiency (%)	12.33	12.85	12.73	13.02	13.38	13.46	13.40	13.74	13.04	13.52	13.71
Directivity (dB)	6.90	6.52	6.25	6.11	6.08	6.14	6.53	6.62	6.76	6.54	6.49
Peak Gain Position (Theta)	135.00	135.00	135.00	0.00	0.00	135.00	135.00	135.00	135.00	135.00	135.00
Peak Gain Position (Phi)	150.00	150.00	150.00	0.00	150.00	135.00	135.00	135.00	135.00	135.00	150.00
Efficiency ThetaPol (%)	4.89	5.11	5.03	5.19	5.55	5.58	5.75	6.12	5.77	6.17	6.27
Efficiency PhiPol (%)	7.44	7.75	7.70	7.82	7.84	7.88	7.65	7.62	7.27	7.35	7.44
Upper Hem. Efficiency (%)	5.68	5.81	5.78	5.91	6.22	6.18	6.23	6.31	6.07	6.33	6.36
Lower Hem. Efficiency (%)	6.65	7.04	6.94	7.11	7.17	7.28	7.17	7.43	6.97	7.20	7.35

Test Result

2D&3D—BT- ANT

2400.0MHz H+V, Eff: 12.3%

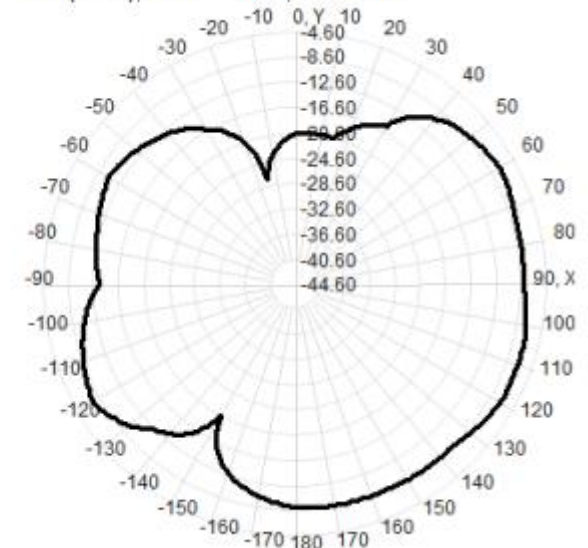
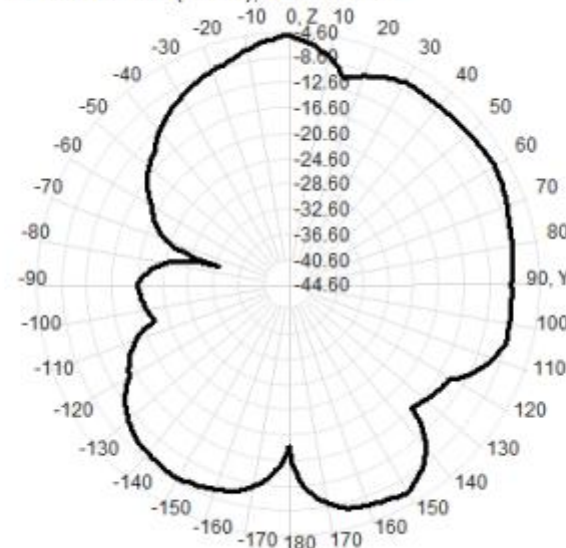
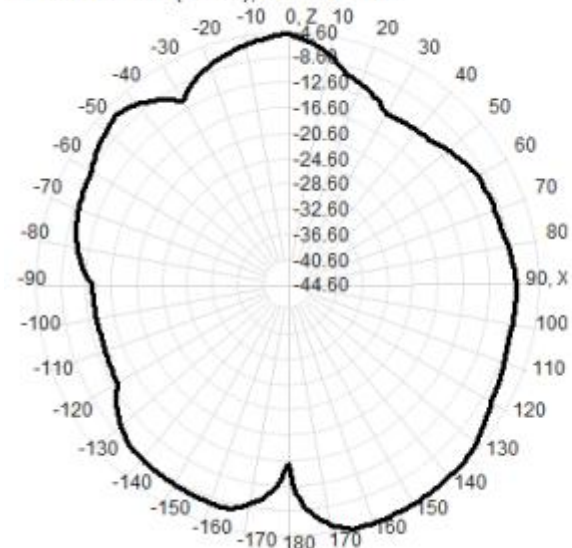
Back View



2400.0MHz Total(E1-XZ), Max= -4.60dBi

2400.0MHz Total(E2-YZ), Max= -5.09dBi

Total(H-XY), Max= -7.14dBi, CirD=20.38

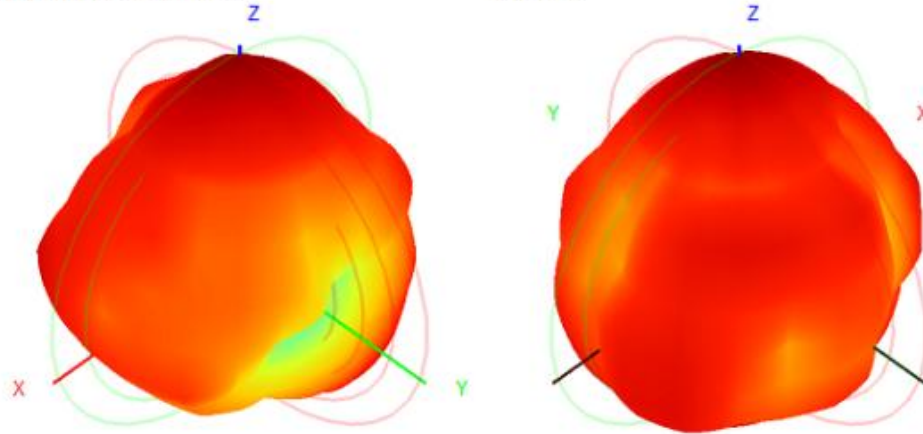


Test Result

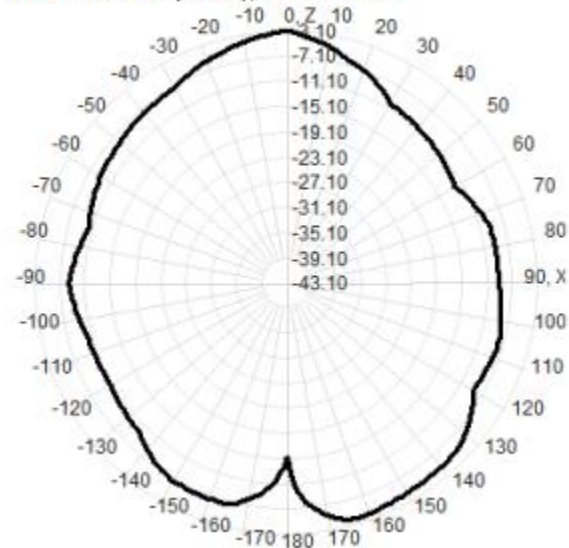
2D&3D — BT-ANT

2450.0MHz H+V, Eff: 13.5%

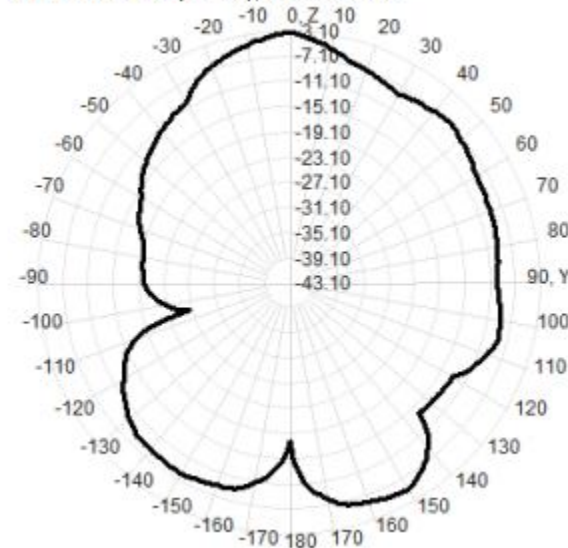
Back View



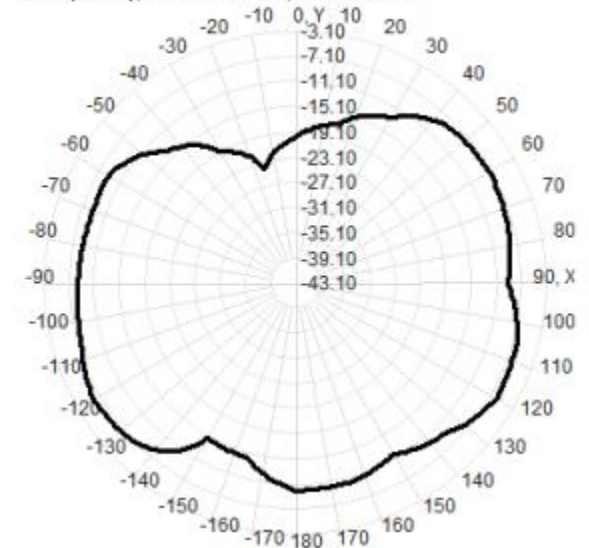
2450.0MHz Total(E1-XZ), Max= -3.10dBi



2450.0MHz Total(E2-YZ), Max= -3.36dBi



Total(H-XY), Max= -6.11dBi, CirD=18.12

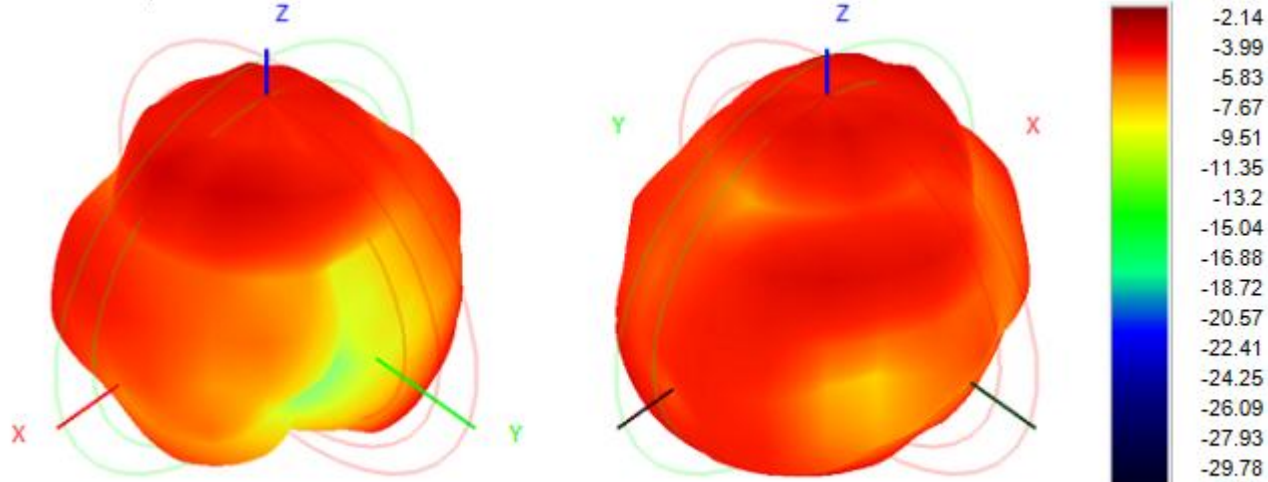


Test Result

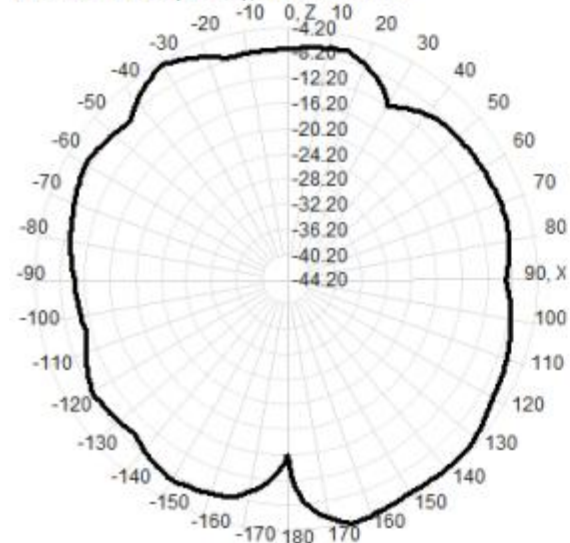
2D&3D — BT-ANT

2500.0MHz H+V, Eff: 13.7%

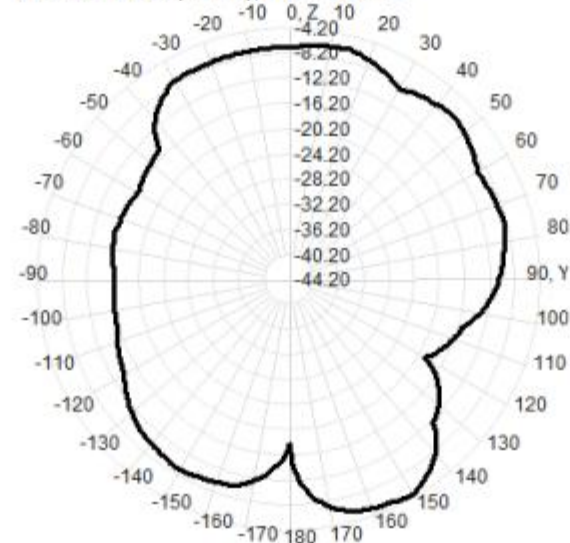
Back View



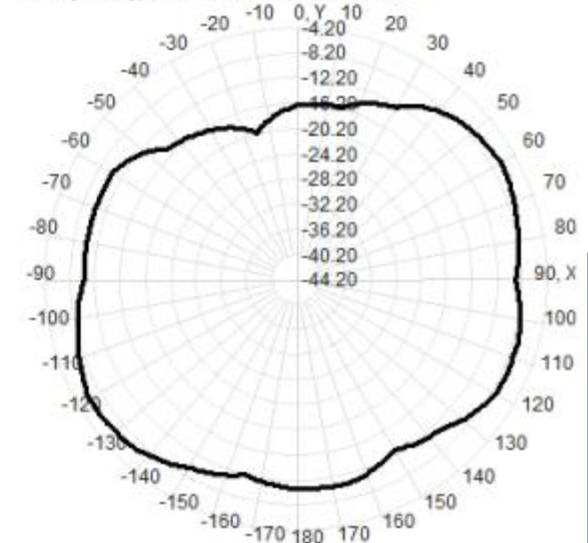
2500.0MHz Total(E1-XZ), Max= -4.20dBi



2500.0MHz Total(E2-YZ), Max= -4.94dBi



Total(H-XY), Max= -6.35dBi, CirD=13.70



Whole Band TRP (dBm)	<u>-0.81</u>
Whole Band TIS (dBm)	<u>-87.47</u>

[illegible]

OTA DATA--头模

Whole Band TRP (dBm)	<u>-2.39</u>
Whole Band TIS (dBm)	<u>-85.44</u>

[illegible]

Thanks for your comment!

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