Product specification

（ Structural part ）

SPECIFICATION FOR APPROVAL

DESCRIBE: FPC antenna black + 2 Four generations terminals 0.81coaxial cable Black/Grey

PROJECT NAME: DY-7D01-V3

PART NO: BY-DY-7D01-V3-B01

CUSTOMER NAME: Shenzhen De Yi Technology Co., LTD

CUSTOMER (P/N):

DATE: 2024 年 4 月 24 日

Supplier confirmation:

Customer confirmation			
verify	proofread	examine	ratify

CATALOGUE

一. Cover……

二. Catalogue……

三. Change resume……

四. Antenna picture……

五. Antenna matching……

六. Antenna performance……

七. Antenna structure drawing……

八. Full scale measurement repor……

九. Bill of materials……

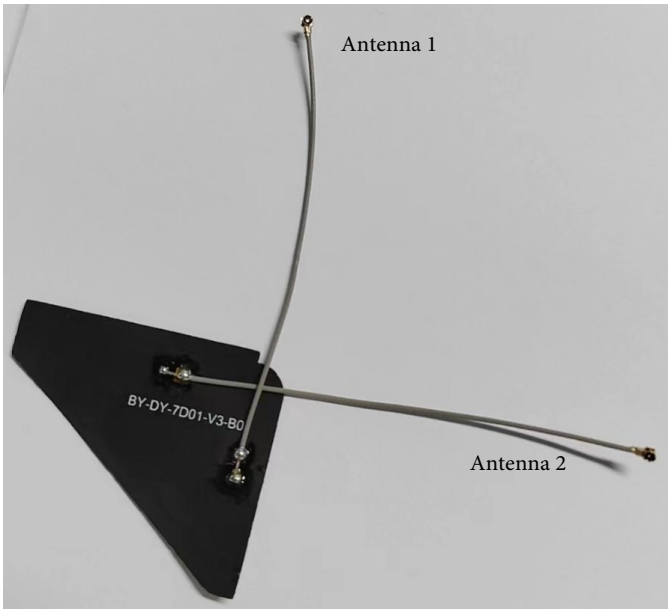
十. Antenna assembly position……

三. Change the resume

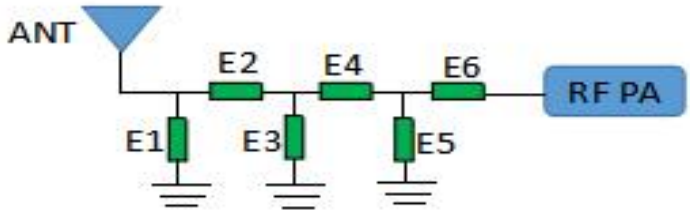
Number	Change date	Project name	edition	Change content	remarks
1	2024.4.24	FPC antenna	B01	no	New edition issue

四．天线图片

1.Antenna Structure



五．天线匹配



主路匹配		
Element	Value	
E1	N/A	
E2	0 欧姆	
E3	N/A	
E4	0 欧姆	
E5	N/A	
E6	N/A	

天线匹配无更改

六. 天线性能

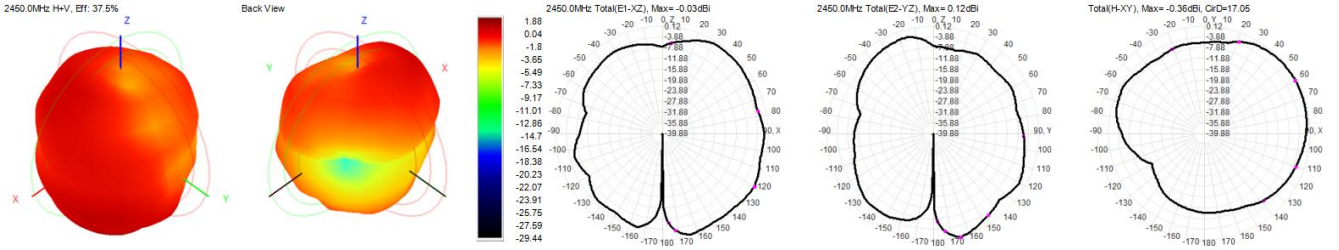
Electrical Specificatiom/电气特性	
Freq.Range/频段范围（MHz）	2400-2500MHz；5150-5850MHz
impedance/阻抗（Ω）	50Ω
VSWR/驻波比	≤2.0
Directional/辐射方向	全向
Polarization/极化方式	线极化
Mechanical Specification/机械指标	
Material/材质	FPC
RF Cable/射频线规格	RF0.81线
Connector Type/连接器类型	IPEX 四代端子
Environmental Specification/环境指标	
Operation temp/工作温度	-20℃～+85℃

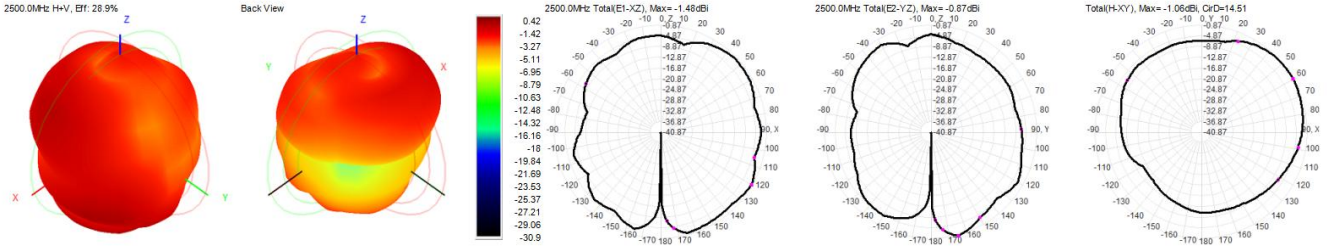
2.4G Antenna 1

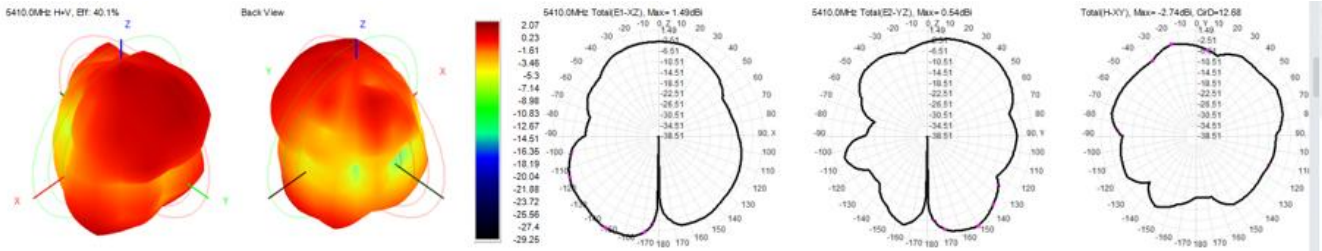
Frequency (MHz)	2400.0	2410.0	2420.0	2430.0	2440.0	2450.0	2460.0	2470.0	2480.0	2490.0	2500.0
Gain (dBi)	-0.05	-0.13	-0.20	-0.29	-0.30	-0.34	-0.33	-0.14	0.13	0.26	0.24
Efficiency (%)	33.29	33.36	32.45	32.46	32.12	32.86	32.99	32.14	33.95	33.18	33.40

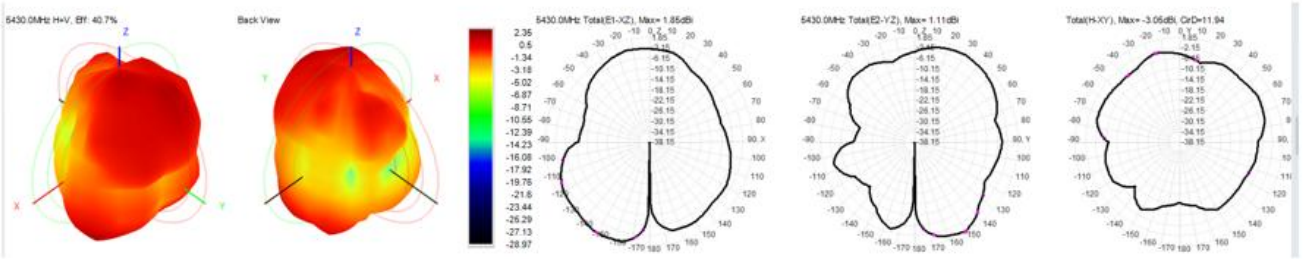
2.4G Antenna 2

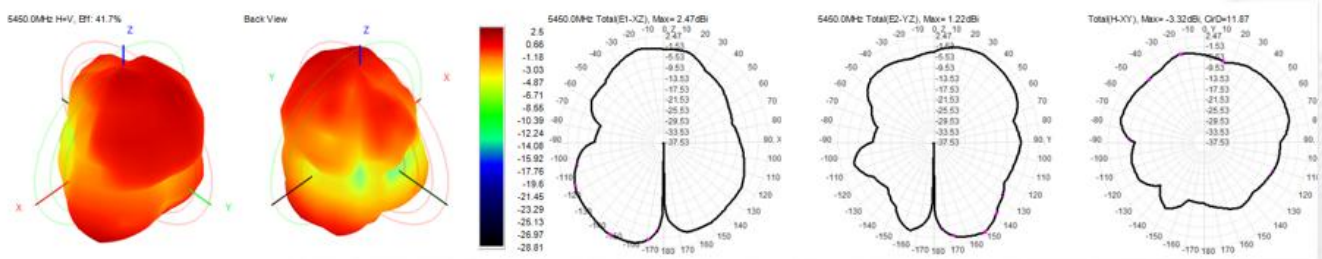
Frequency (MHz)	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
Efficiency (dBi)	-4.26	-4.21	-4.17	-4.15	-4.25	-4.26	-4.42	-4.48	-4.85	-5.02	-5.39
Gain (dBi)	-1.59	-1.59	-1.76	-1.91	-1.86	-1.88	-1.70	0.26	-1.16	-0.90	-0.42
Efficiency (%)	37.47	37.95	38.29	38.48	37.59	37.46	36.13	35.62	32.75	31.47	28.92


2450.0MHz H+V, Eff: 37.5%
Back View
2450.0MHz Total(E1-XZ), Max= -0.03dBi
2450.0MHz Total(E2-YZ), Max= 0.12dBi
Total(H-XY), Max= -0.36dBi, CirD=17.05

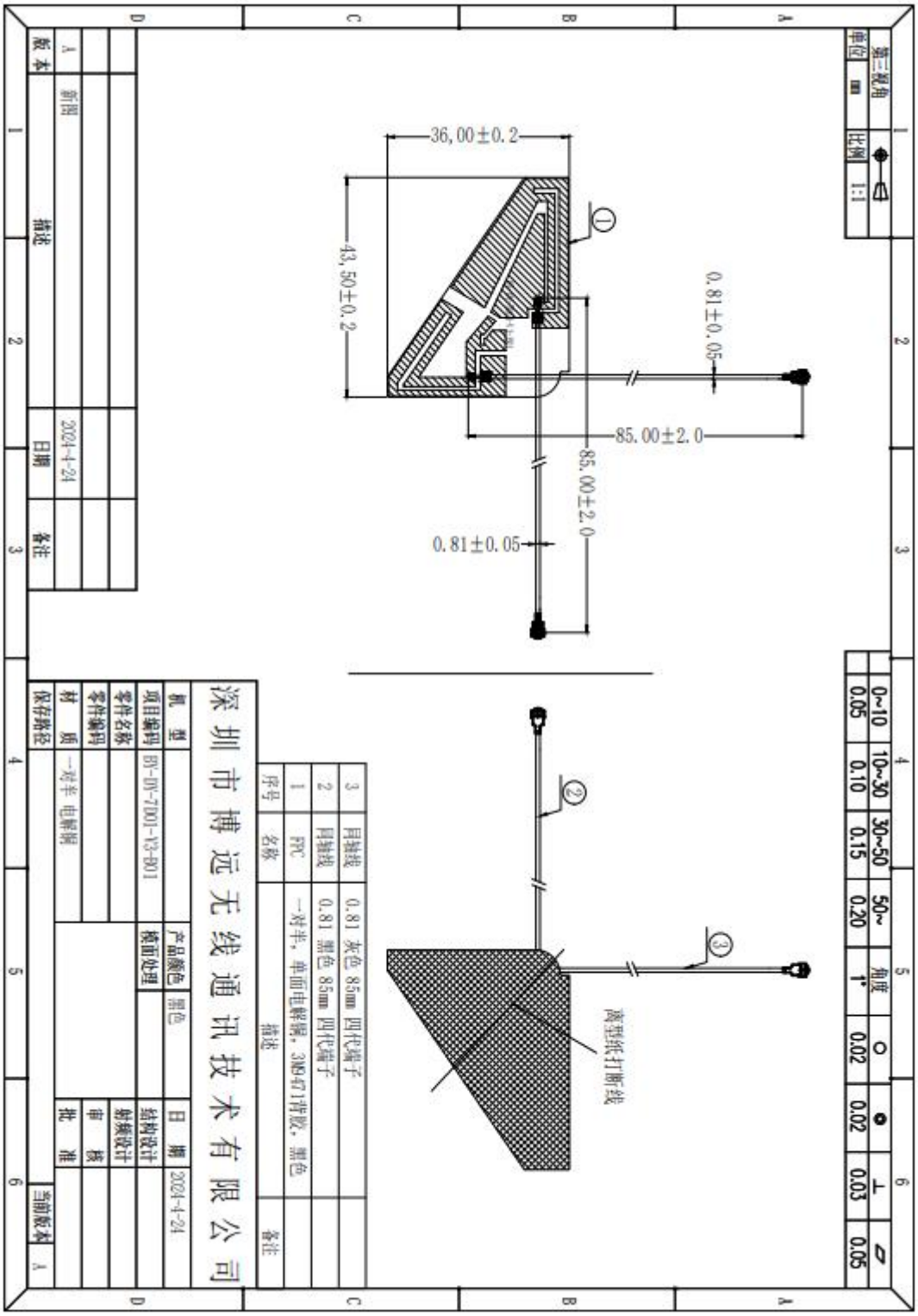

2500.0MHz H+V, Eff: 28.9%
Back View
2500.0MHz Total(E1-XZ), Max= -1.48dBi
2500.0MHz Total(E2-YZ), Max= -0.87dBi
Total(H-XY), Max= -1.06dBi, CirD=14.51


5410.0MHz H+V, Eff: 40.1%
Back View
5410.0MHz Total(E1-XZ), Max= 1.49dBi
5410.0MHz Total(E2-YZ), Max= 0.54dBi
Total(H-XY), Max= -2.74dBi, CirD=12.68


5430.0MHz H+V, Eff: 40.7%
Back View
5430.0MHz Total(E1-XZ), Max= 1.85dBi
5430.0MHz Total(E2-YZ), Max= 1.11dBi
Total(H-XY), Max= -3.05dBi, CirD=11.94


5450.0MHz H+V, Eff: 41.7%
Back View
5450.0MHz Total(E1-XZ), Max= 2.47dBi
5450.0MHz Total(E2-YZ), Max= 1.22dBi
Total(H-XY), Max= -3.32dBi, CirD=11.87

七．天线结构图纸


36.00±0.2
43.50±0.2
0.81±0.05
85.00±2.0
85.00±2.0
0.81±0.05
离型纸打断线
深圳市博远无线通讯技术有限公司

八. Full scale measurement report

NO	size	Actual measurement					Dimensional tolerance	determine
1	36.00	36.02	36.05	35.97	36.01	36.04	±0.2	√
2	43.50	43.53	43.46	43.51	43.55	43.52	±0.2	√
3	0.81	0.81	0.80	0.79	0.82	0.78	±0.05	√
4	85.00	85.26	85.49	85.38	85.52	85.43	±2.0	√
5	0.81	0.79	0.81	0.80	0.78	0.81	±0.05	√
6	85.00	85.56	85.28	85.47	85.39	85.42	±2.0	√
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九.BOM

NO	Name	Material specification	dosage
1	FPC	Material: one-half, single-side electrolytic copper, black, 3M9471 adhesive	1
2	coaxial cable	0.81 Black 85mm fourth generation terminal	1
3	coaxial cable	0.81 grey 85mm fourth generation terminal	1
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十. 天线装配位置

WiFi 天线位置