

Antenna Specification Sheet

Product Part Number: WA146 Ant

Authorized Signatory: Dave.li

Date: 2025.1.9

PRODUCT SPECIFICATION	Rev.: v1.0
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AMENDMENT RECORDS

Revision	Description	Originator	Date
V1.0	First version	Cao HH	2024.12.24

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1 Basic Specifications

Antenna Name: WA146 Ant 0, Ant 1, Ant 2, and Ant 3

Operation Frequency: 2.4~2.483GHz, 5.15~5.25GHz, and 5.725~5.875GHz

Gain: 1dBi (2.4~2.483GHz), 1 dBi (5.15~5.25GHz), 1.5dBi (5.725~5.875GHz)

Antenna type: Dipole

Connector Type: Ipex-4

Impedance: 50ohm

Efficiency: $\geq 50\%$

VSWR: ≤ 2

Polarization type: Linear

3dB Beamwidth: Omnidirectional horizon

Manufacturer: Shenzhen ZTX Communication Technology Co., LTD.

Address: No.34 Shilong Road, Bao'an District, Shenzhen, Guangdong Province

2 Gain Specifications

LF antenna (ANT0)

Frequency	Efficiency	Gain(dBi)
2400MHz	66%	0.76119
2420MHz	63%	0.81233
2450MHz	65%	0.99091
2470MHz	59%	0.80206

Frequency	Efficiency	Gain(dBi)
5150MHz	43%	0.45847
5200MHz	40%	0.79302
5250MHz	44%	0.95313
Frequency	Efficiency	Gain(dBi)
5725MHz	55%	1.25112
5775MHz	52%	1.32950
5800MHz	53%	1.45854
5850MHz	52%	1.46515

RF antenna (ANT1)

Frequency	Efficiency	Gain(dBi)
2400MHz	65%	0.72509
2420MHz	62%	0.86527

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2450MHz	64%	0.92478
2470MHz	59%	0.65424
Frequency	Efficiency	Gain(dBi)
5150MHz	40%	0.88512
5200MHz	43%	0.73425
5250MHz	44%	0.23541

Frequency	Efficiency	Gain(dBi)
5725MHz	47%	1.41496
5775MHz	49%	1.47157
5800MHz	51%	1.44765
5850MHz	52%	1.41186

LB antenna (ANT2)

Frequency	Efficiency	Gain(dBi)
2400MHz	51%	0.82512
2420MHz	53%	0.54125
2450MHz	53%	0.82478
2470MHz	57%	0.65424
Frequency	Efficiency	Gain(dBi)
5150MHz	46%	0.89154
5200MHz	44%	0.98452

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5250MHz	43%	0.74511
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Frequency	Efficiency	Gain(dBi)
5725MHz	50%	1.31871
5775MHz	51%	1.46891
5800MHz	51%	1.26812
5850MHz	52%	1.36540

RB antenna (ANT3)

Frequency	Efficiency	Gain(dBi)
2400MHz	59%	0.81125
2420MHz	57%	0.91545
2450MHz	55%	0.91181
2470MHz	52%	0.75831
Frequency	Efficiency	Gain(dBi)
5150MHz	43%	0.86483
5200MHz	46%	0.98185
5250MHz	44%	0.69710

Frequency	Efficiency	Gain(dBi)
5725MHz	55%	1.48807
5775MHz	59%	1.25999

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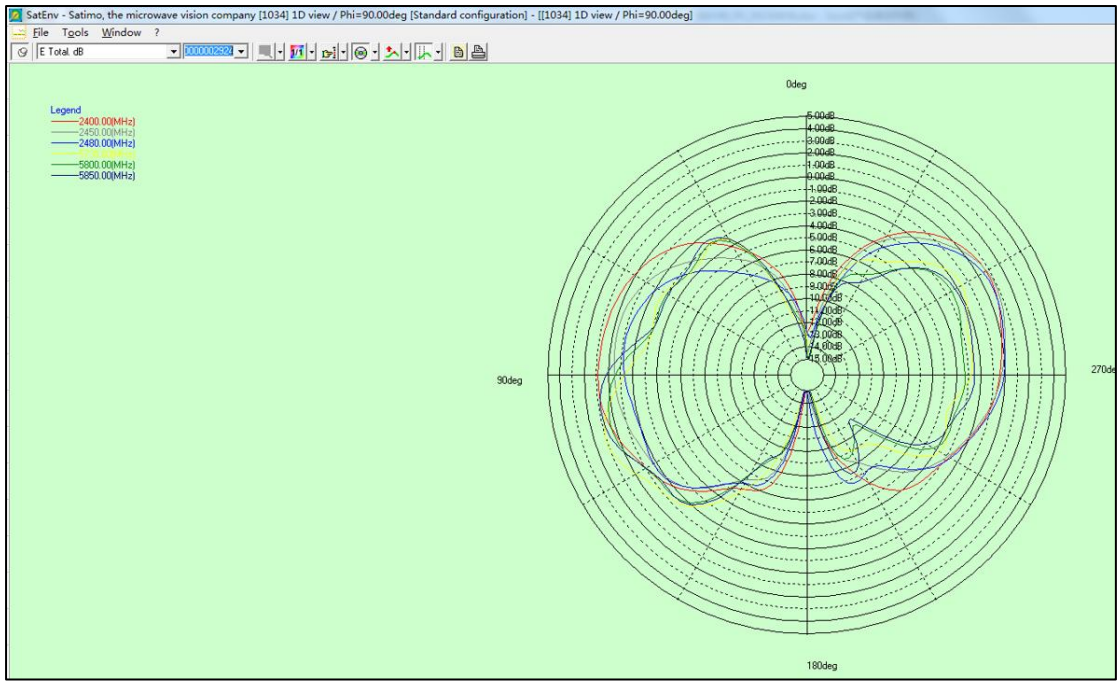
5800MHz	52%	1.44145
5850MHz	53%	1.33584

3 Detailed Radiation Pattern

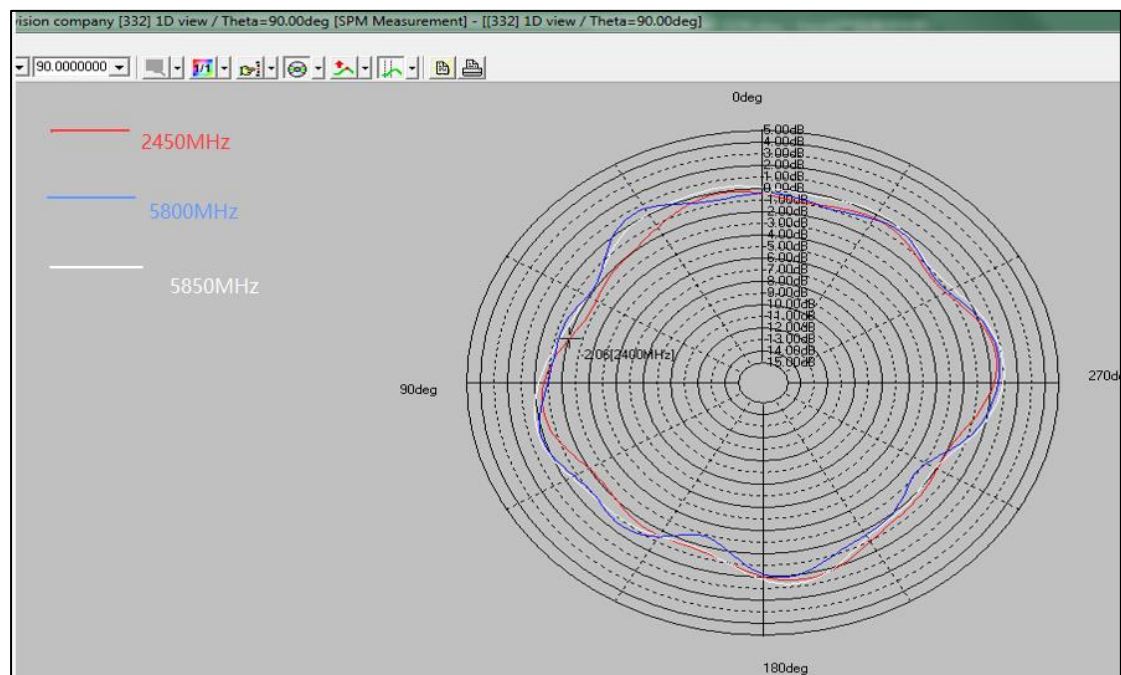
Test lab	Satimo SG24
Test date	2024/12/10

2.4G radiation pattern_Phi=0

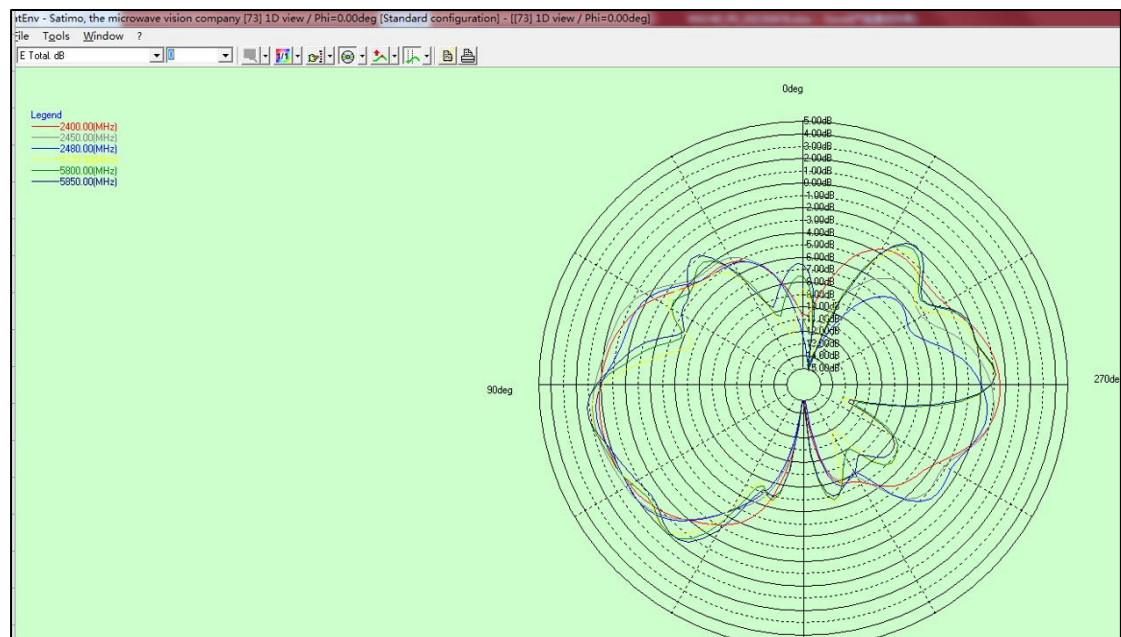
LF Phi 90 (ANT0)



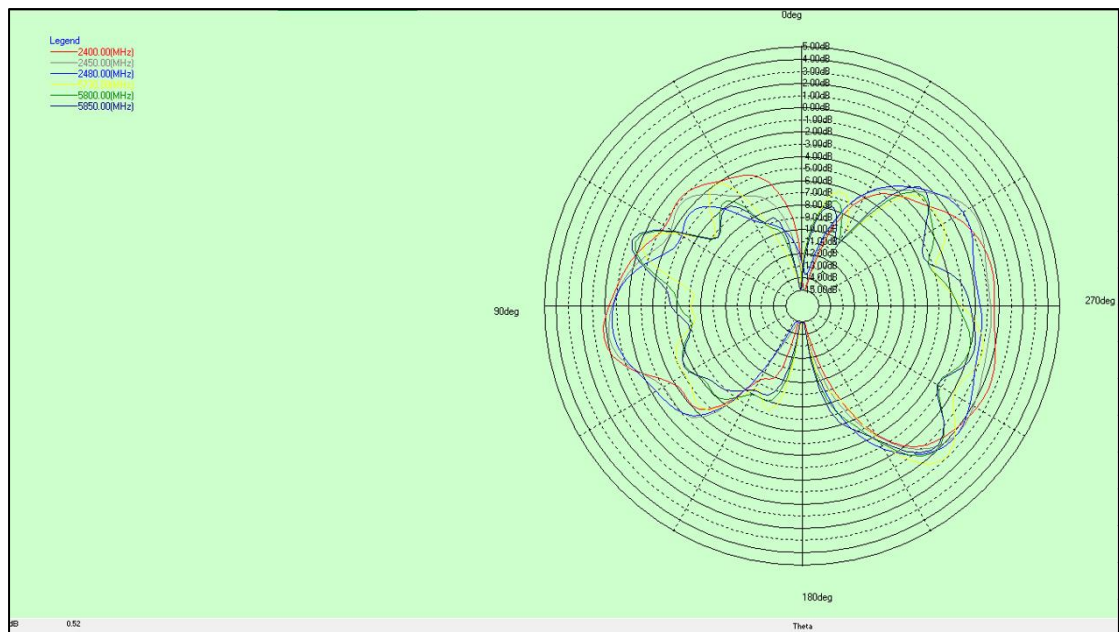
LF Theta90 (ANT0)



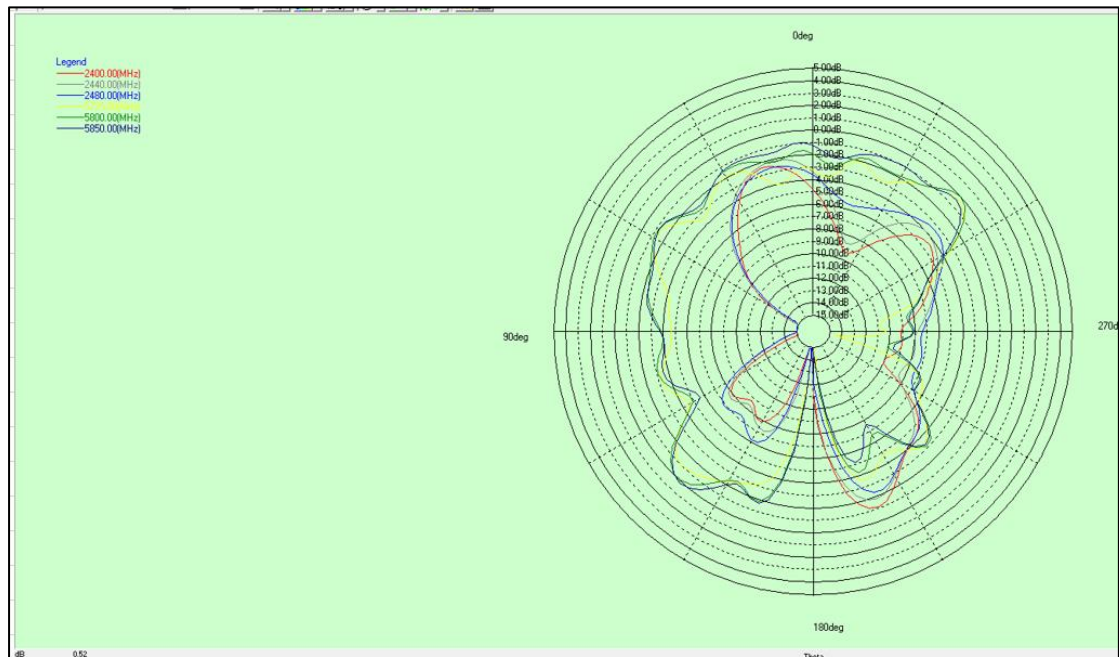
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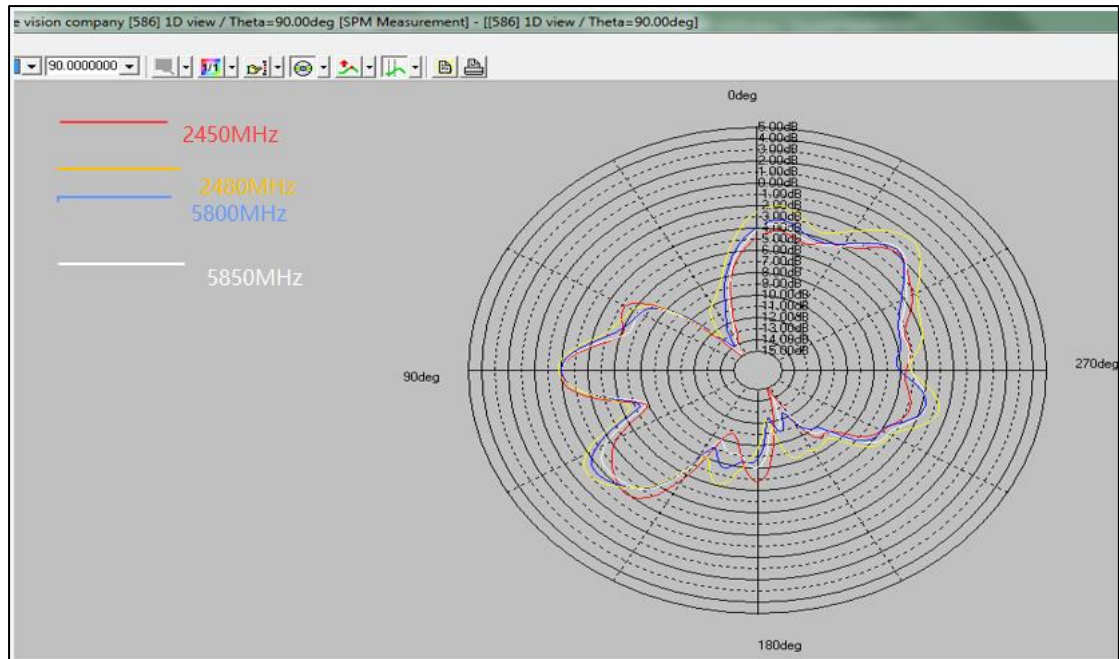
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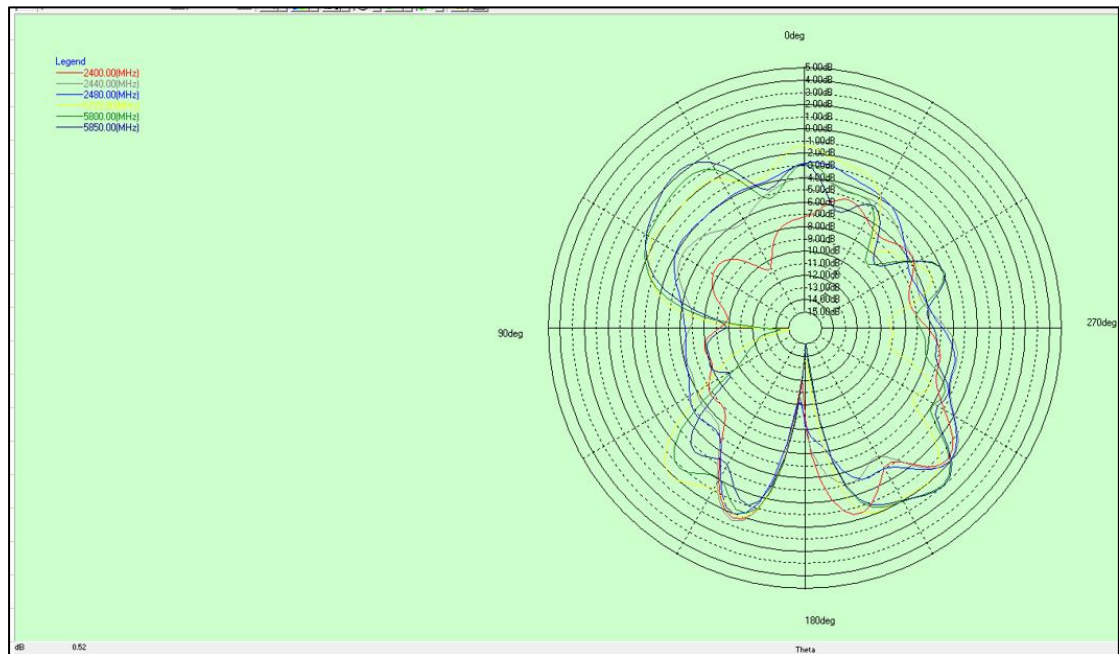
LB Phi90 (ANT2)



LB Theta 90 (ANT2)



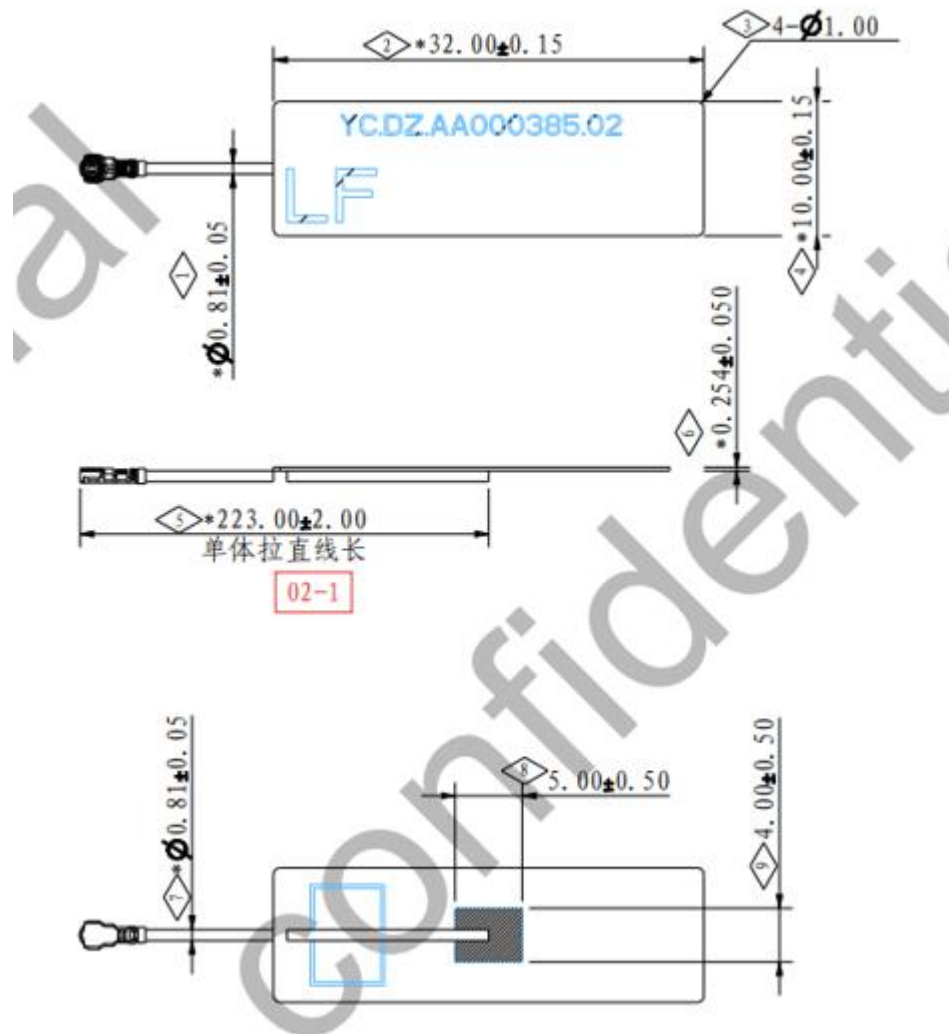
RB Phi90 (ANT3)

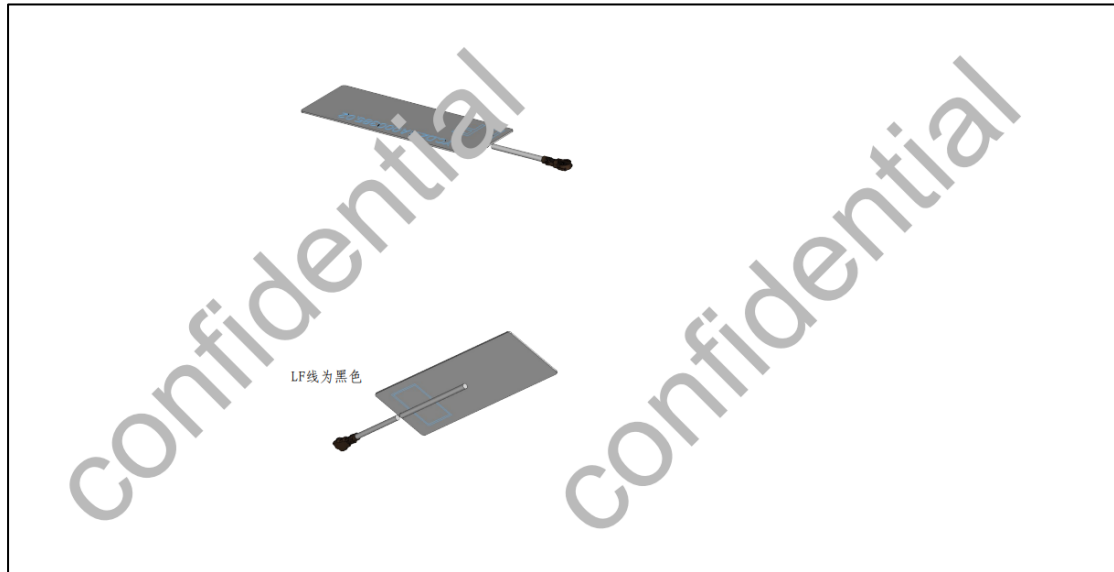


RB Theta90 (ANT3)

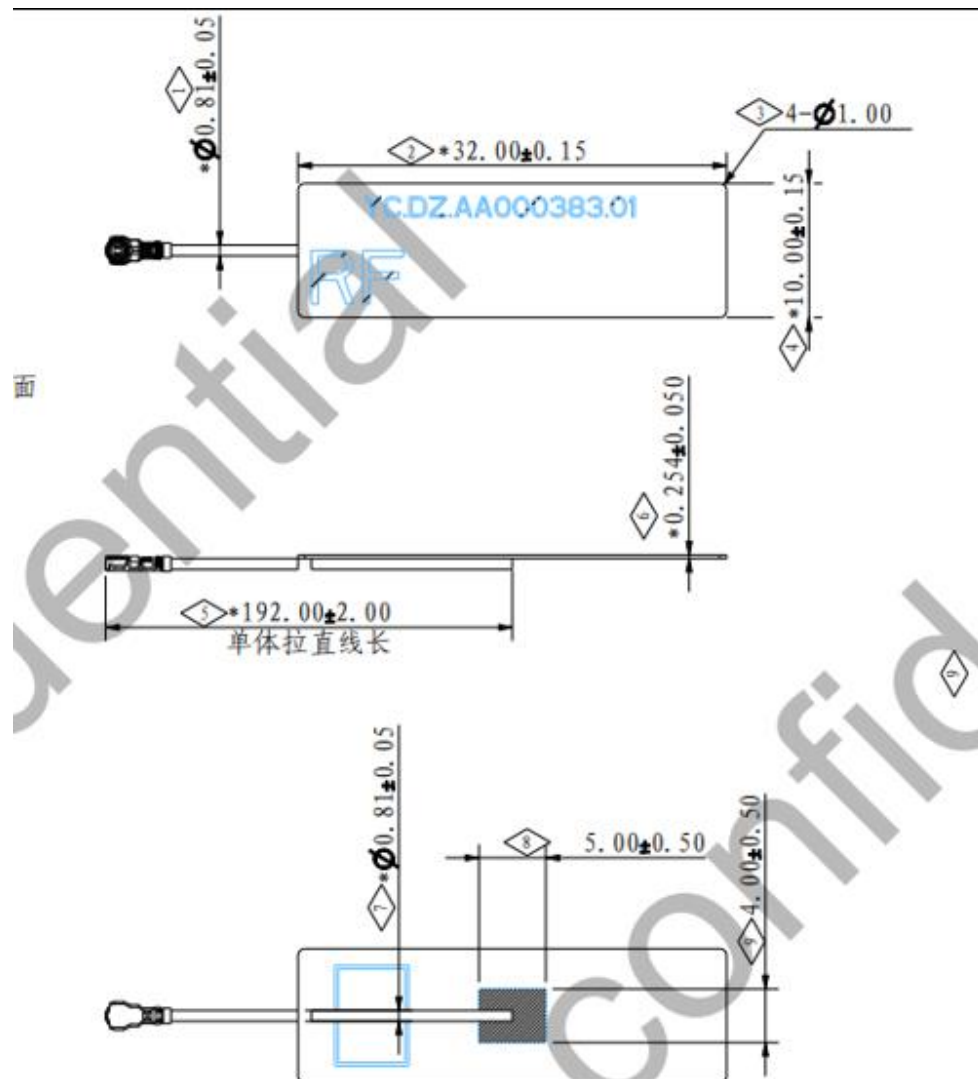
4 Structure drawing

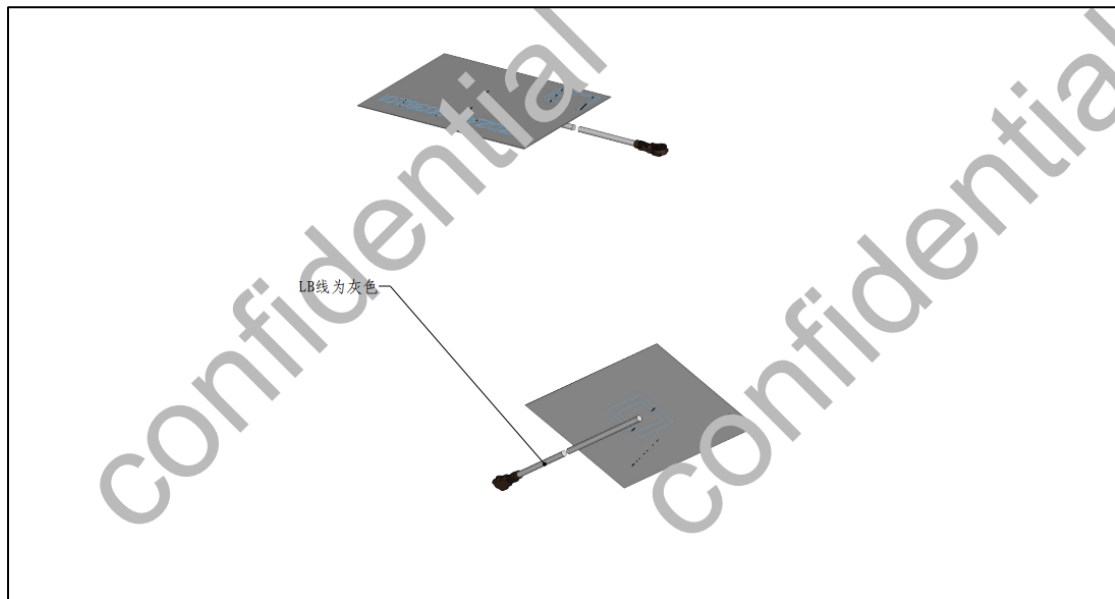
LF antenna (ANT0)



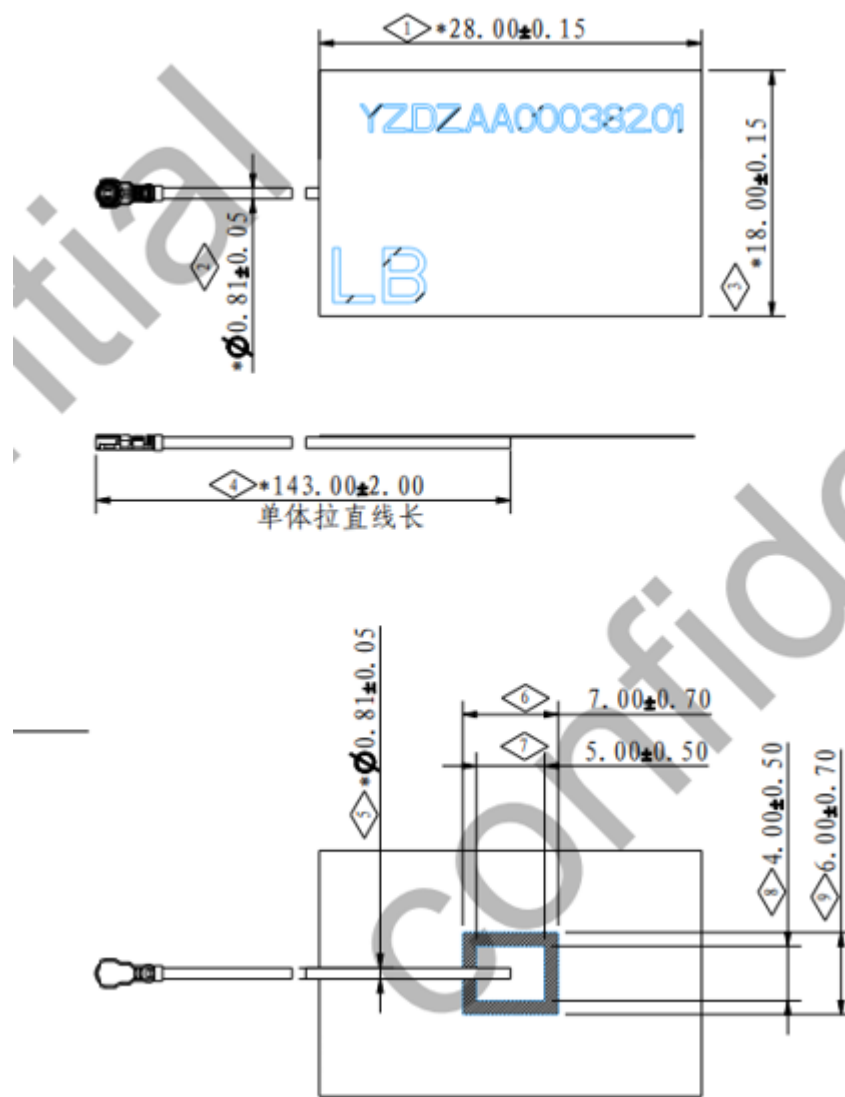


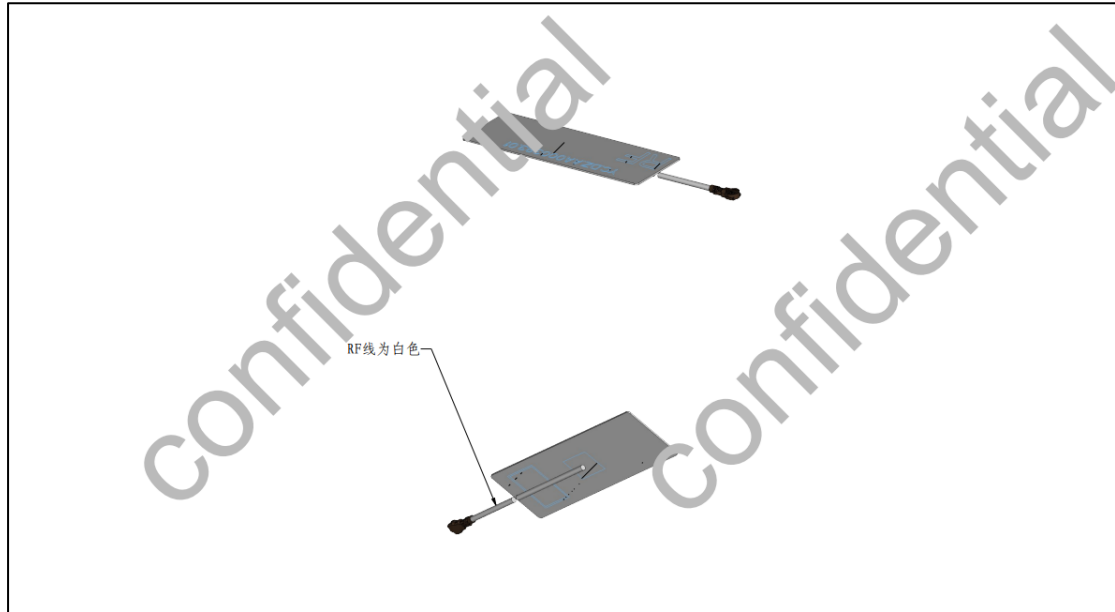
RF antenna (ANT1)





LB antenna (ANT2)





RB antenna (ANT3)

