

EA230 UAV SDR & Bluetooth Antenna Datasheet



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Revision history

Version	Change notes	Modifier	Date
V1.0		Alaan.he	2024.11.1



1.UAV SDR Antenna0 ~ Antenna 7

DJI Antenna Datasheet Ant1

1、 Basic Specifications

No.	Specification	Descriptions	Notes	
1	Antenna Name	<u>EA230 SDR Ant1</u>		
2	Brand	<u>DJI</u>		
3	Operation Frequency	<u>2.4~2.483GHz;</u> <u>5.125-5.25GHz;</u> <u>5.725~5.85GHz</u>		
4	Connector Type	lpex-1		
5	Impedance	50ohm		
6	Gain	2.7dBi@2.4~2.483GHz 1.3dBi@5.2GHz 2.0dBi@5.725~5.875GHz		
7	Efficiency	$\geq 45\%$		
8	VSWR	≤ 2.5		
9	Polarization type	Linear		
10	3dB Beamwidth	-		



11	Weight	-		
12	Antenna type	Dipole		
13	Manufacturer	睿翔		

2、 Antenna Gain

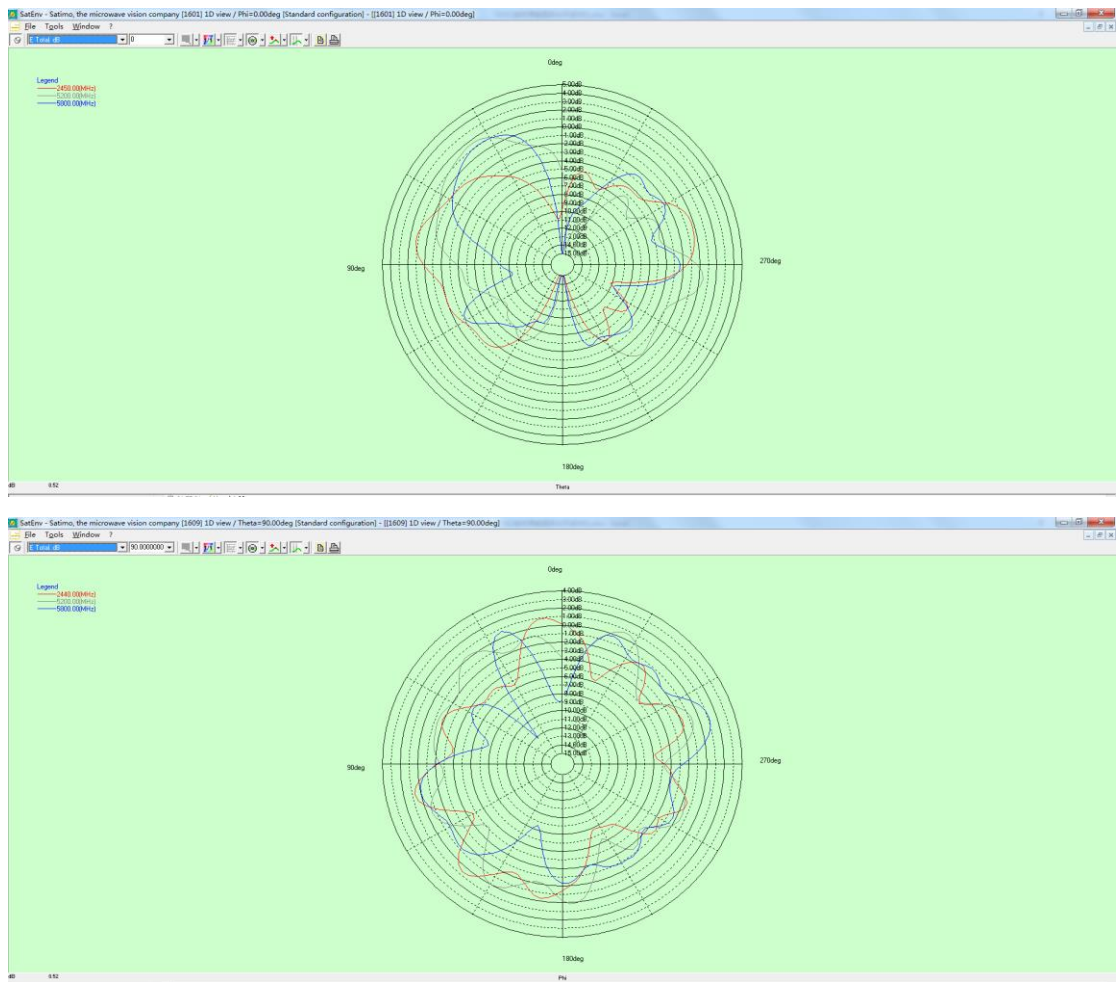
Frequency	Efficiency()	E Total. dB(dB)
2400MHz	47%	2.7
2410MHz	45%	2.3
2420MHz	45%	2.4
2430MHz	48%	2.3
2440MHz	51%	2.1
2450MHz	50%	1.8
2460MHz	50%	1.7
2470MHz	53%	1.6
2480MHz	56%	1.5
5150MHz	55%	1.3
5200MHz	46%	0.6
5250MHz	43%	1.1
5725MHz	44%	0.6
5750MHz	45%	0.7
5775MHz	46%	1.1
5800MHz	49%	1.6
5825MHz	51%	2
5850MHz	51%	1.8

3、 Antenna Pattern

Measurement System: Satimo

Reference Position

Antenna Pattern:



4、 Antenna drawing



DJI Antenna Datasheet Ant4

1、 Basic Specifications

No.	Specification	Descriptions	Notes	
1	Antenna Name	<u>EA230 SDR Ant4</u>		
2	Brand	<u>DJI</u>		
3	Operation Frequency	<u>2.4~2.483GHz;</u> <u>5.125-5.25GHz;</u> <u>5.725~5.85GHz</u>		
4	Connector Type	lpex-1		
5	Impedance	50ohm		
6	Gain	2.0 dBi@2.4~2.483GHz 2.5 dBi@5.2GHz 2.7 dBi@5.725~5.875GHz		
7	Efficiency	≥45 % SDR		
8	VSWR	≤2.5		
9	Polarization type	Linear		
10	3dB Beamwidth	-		
11	Weight	-		



12	Antenna type	Dipole		
13	Manufacturer	睿翔		

2、 Antenna Gain

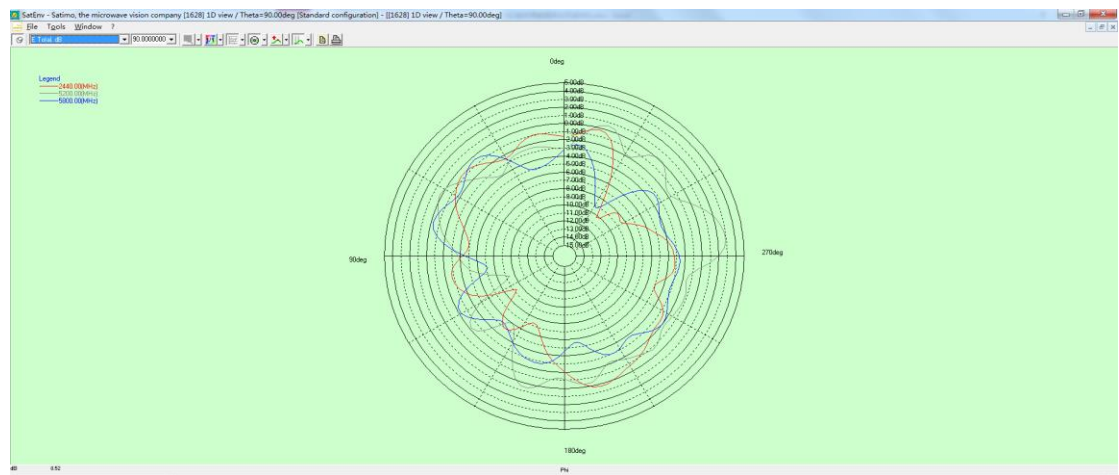
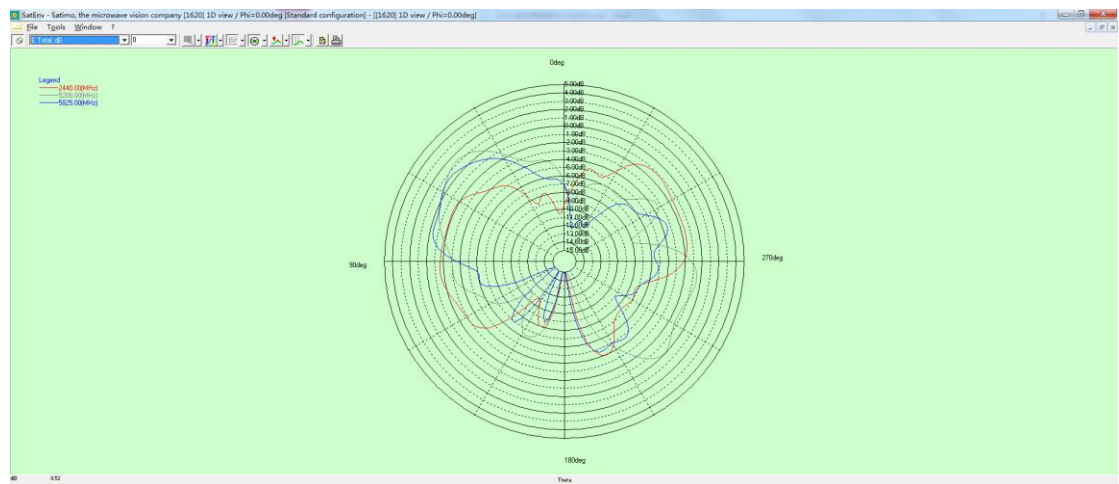
Frequency	Efficiency()	E Total. dB(dB)
2400MHz	36%	1. 1
2410MHz	37%	0. 6
2420MHz	38%	0. 4
2430MHz	41%	0. 8
2440MHz	45%	1. 2
2450MHz	45%	1. 6
2460MHz	44%	1. 7
2470MHz	45%	2
2480MHz	46%	2. 4
5150MHz	49%	2. 5
5200MHz	44%	2. 3
5250MHz	44%	1. 6
5725MHz	47%	2. 2
5750MHz	48%	2. 7
5775MHz	46%	2. 6
5800MHz	45%	2. 6
5825MHz	43%	2. 5
5850MHz	43%	2. 5

3、 Antenna Pattern

Measurement System: Satimo

Reference Position

Antenna Pattern:



4、 Antenna drawing



DJI Antenna Datasheet Ant5

1、 Basic Specifications

No.	Specification	Descriptions	Notes	
1	Antenna Name	<u>EA230 SDR Ant5</u>		
2	Brand	<u>DJI</u>		
3	Operation Frequency	<u>2.4~2.483GHz;</u> <u>5.125-5.25GHz;</u> <u>5.725~5.85GHz</u>		
4	Connector Type	lpex-1		
5	Impedance	50ohm		
6	Gain	2.8dBi@2.4~2.483GHz 1.7dBi@5.2GHz 2.0dBi@5.725~5.875GHz		
7	Efficiency	≥45% SDR		
8	VSWR	≤2.5		
9	Polarization type	Linear		
10	3dB Beamwidth	-		
11	Weight	-		



12	Antenna type	Dipole		
13	Manufacturer	睿翔		

2、 Antenna Gain

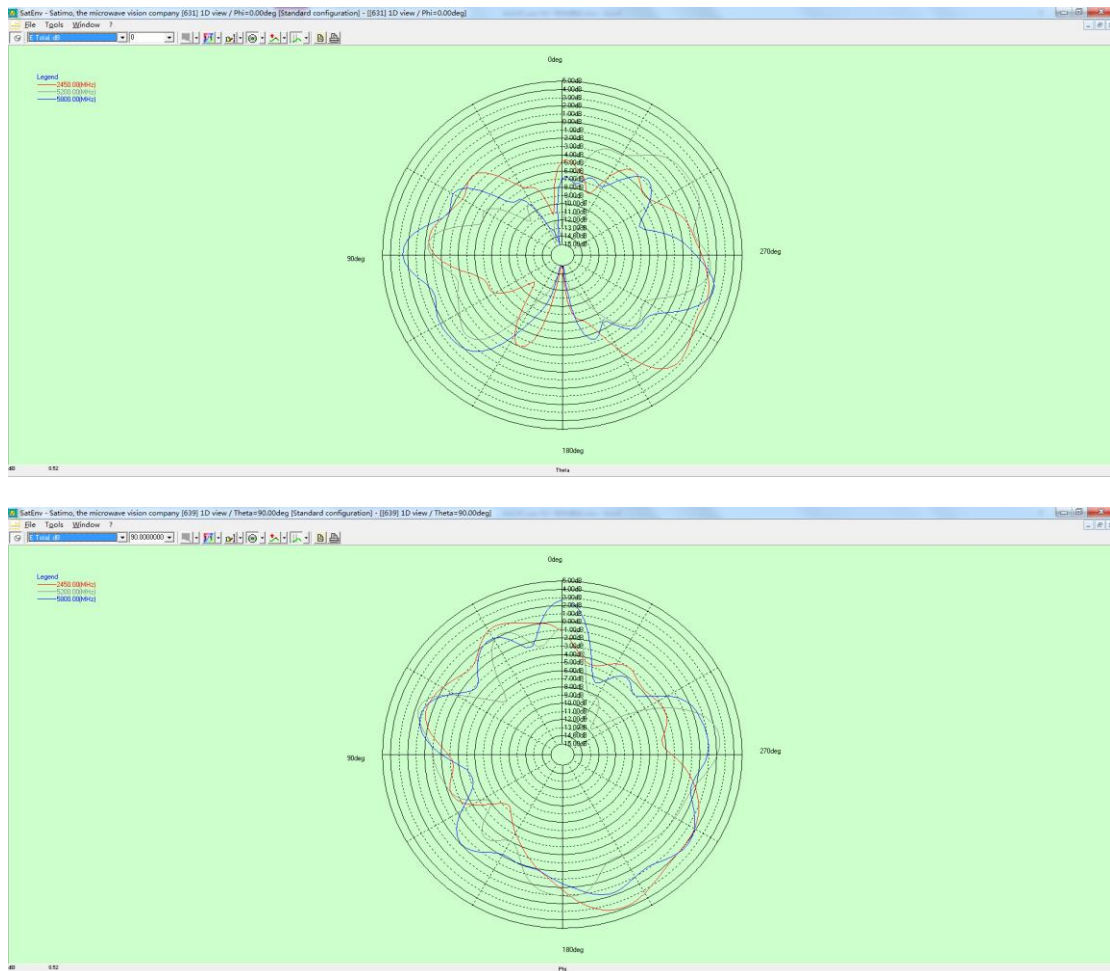
Frequency	Efficiency()	E Total. dB(dB)
2400MHz	65%	2.3
2410MHz	63%	2.5
2420MHz	61%	2.5
2430MHz	64%	2.8
2440MHz	66%	2.5
2450MHz	63%	2.8
2460MHz	60%	2.5
2470MHz	64%	2.7
2480MHz	66%	3.2
5150MHz	56%	1.6
5200MHz	51%	1.5
5250MHz	55%	1.7
5725MHz	56%	1.8
5750MHz	56%	2.1
5775MHz	56%	2
5800MHz	57%	1.8
5825MHz	56%	1.7
5850MHz	55%	1.7

3、 Antenna Pattern

Measurement System: Satimo

Reference Position

Antenna Pattern:



4、 Antenna drawing



DJI Antenna Datasheet Ant2

1、 Basic Specifications

No.	Specification	Descriptions	Notes	
1	Antenna Name	<u>EA230 SDR Ant2</u>		
2	Brand	<u>DJI</u>		
3	Operation Frequency	<u>2.4~2.483GHz;</u> <u>5.125-5.25GHz;</u> <u>5.725~5.85GHz</u>		
4	Connector Type	lpex-1		
5	Impedance	50ohm		
6	Gain	2.2dBi@2.4~2.483GHz 2.5dBi@5.2GHz 1.7dBi@5.725~5.875GHz		
7	Efficiency	≥45 % SDR		
8	VSWR	≤2.5		
9	Polarization type	Linear		
10	3dB Beamwidth	-		
11	Weight	-		



12	Antenna type	Dipole		
13	Manufacturer	睿翔		

2、 Antenna Gain

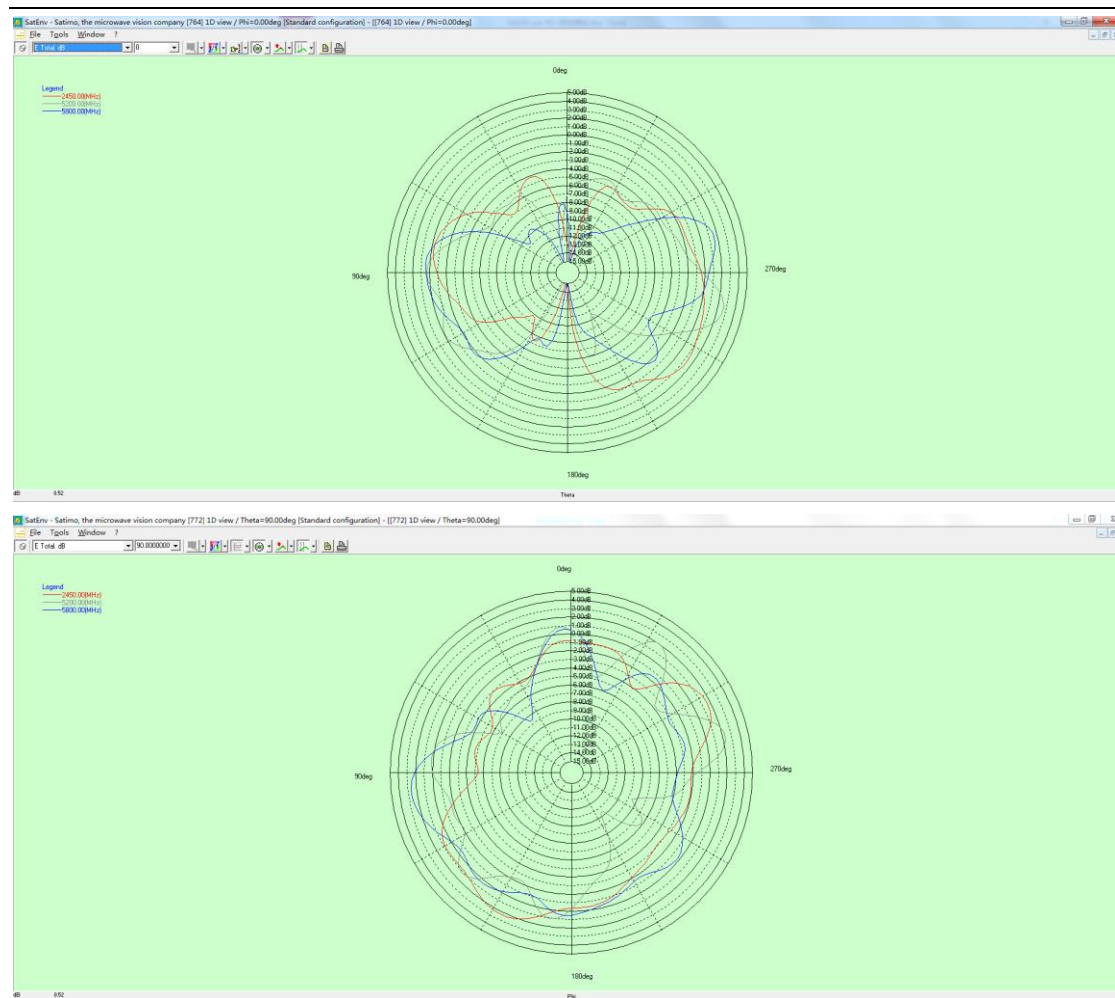
Frequency	Efficiency()	E Total. dB(dB)
2400MHz	65%	2.2
2410MHz	61%	1.8
2420MHz	58%	1.4
2430MHz	60%	1.7
2440MHz	62%	2.2
2450MHz	59%	2
2460MHz	57%	1.8
2470MHz	60%	2.1
2480MHz	60%	2.1
5150MHz	57%	2.5
5200MHz	52%	1.7
5250MHz	53%	2.3
5725MHz	49%	1.5
5750MHz	49%	1.7
5775MHz	49%	1.7
5800MHz	49%	1.7
5825MHz	48%	1.5
5850MHz	47%	1.4

3、 Antenna Pattern

Measurement System: Satimo

Reference Position

Antenna Pattern:



4、 Antenna drawing



DJI Antenna Datasheet Ant3

1、 Basic Specifications

No.	Specification	Descriptions	Notes	
1	Antenna Name	<u>EA230 SDR Ant3</u>		
2	Brand	<u>DJI</u>		
3	Operation Frequency	<u>2.4~2.483GHz;</u> <u>5.125-5.25GHz;</u> <u>5.725~5.85GHz</u>		
4	Connector Type	lpex-1		
5	Impedance	50ohm		
6	Gain	2.5dBi@2.4~2.483GHz 2.5dbi@5.2GHz 3.5dBi@5.725~5.875GHz		
7	Efficiency	≥50% SDR		
8	VSWR	≤2.5		
9	Polarization type	Linear		
10	3dB Beamwidth	-		
11	Weight	-		



12	Antenna type	Dipole		
13	Manufacturer	睿翔		

2、 Antenna Gain

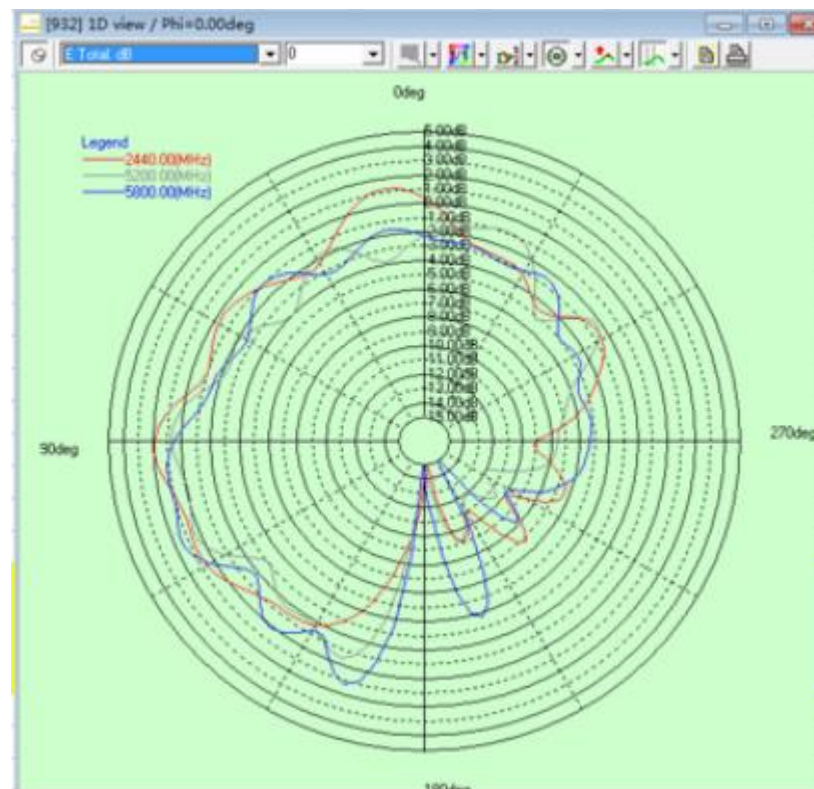
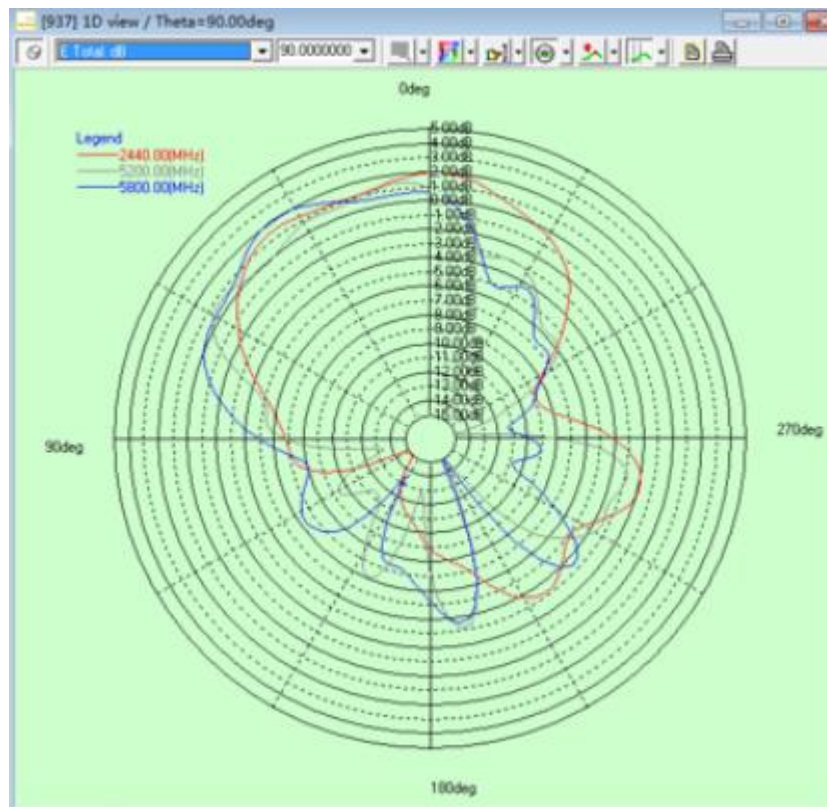
Frequency	Efficiency	Gain(dBi)
2400MHz	49%	2.5
2410MHz	50%	2.2
2420MHz	50%	2.1
2450MHz	51%	2.4
2470MHz	50%	2.5
2483MHz	49%	2.4
5150MHz	48%	2.5
5200MHz	49%	2.5
5725MHz	55%	3.5
5775MHz	57%	3.3
5800MHz	55%	3.1
5825MHz	53%	3
5850MHz	52%	3

3、 Antenna Pattern

Measurement System: Satimo

Reference Position

Antenna Pattern:





4、 Antenna drawing



DJI Antenna Datasheet Ant6

1、 Basic Specifications

No.	Specification	Descriptions	Notes	
1	Antenna Name	<u>EA230 SDR Ant6</u>		
2	Brand	<u>DJI</u>		
3	Operation Frequency	<u>2.4~2.483GHz;</u> <u>5.125-5.25GHz;</u> <u>5.725~5.85GHz</u>		
4	Connector Type	lpex-1		
5	Impedance	50ohm		
6	Gain	2.8dBi@2.4~2.483GHz 2.4dbi@5.2GHz 3.8dBi@5.725~5.875GHz		
7	Efficiency	≥48% SDR		
8	VSWR	≤2.5		
9	Polarization type	Linear		
10	3dB Beamwidth	Omnidirectional horizon		
11	Weight			



12	Antenna type	Dipole		
13	Manufacturer	睿翔		

2、 Antenna Gain

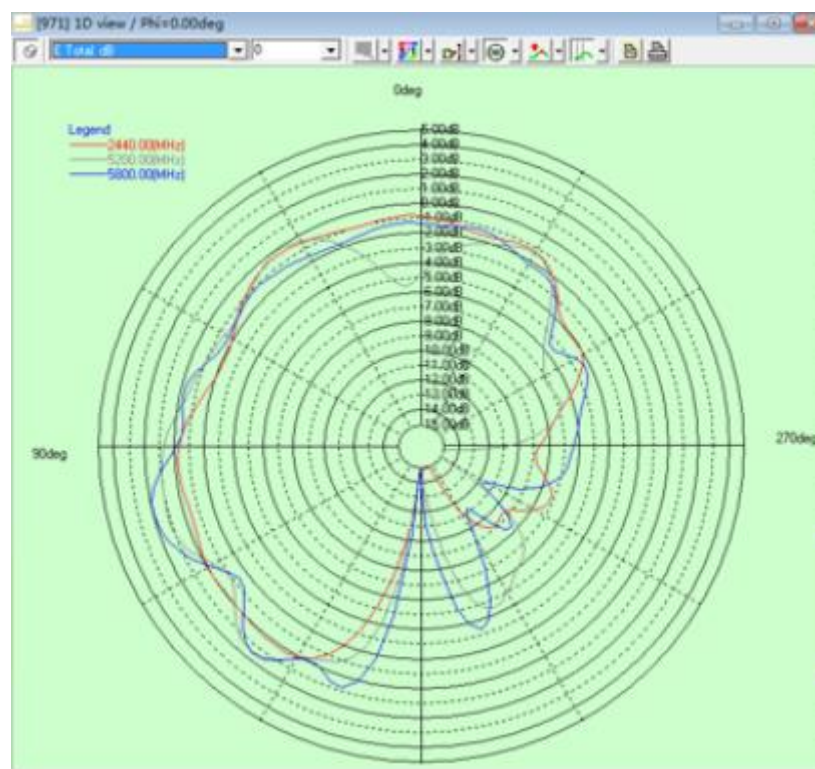
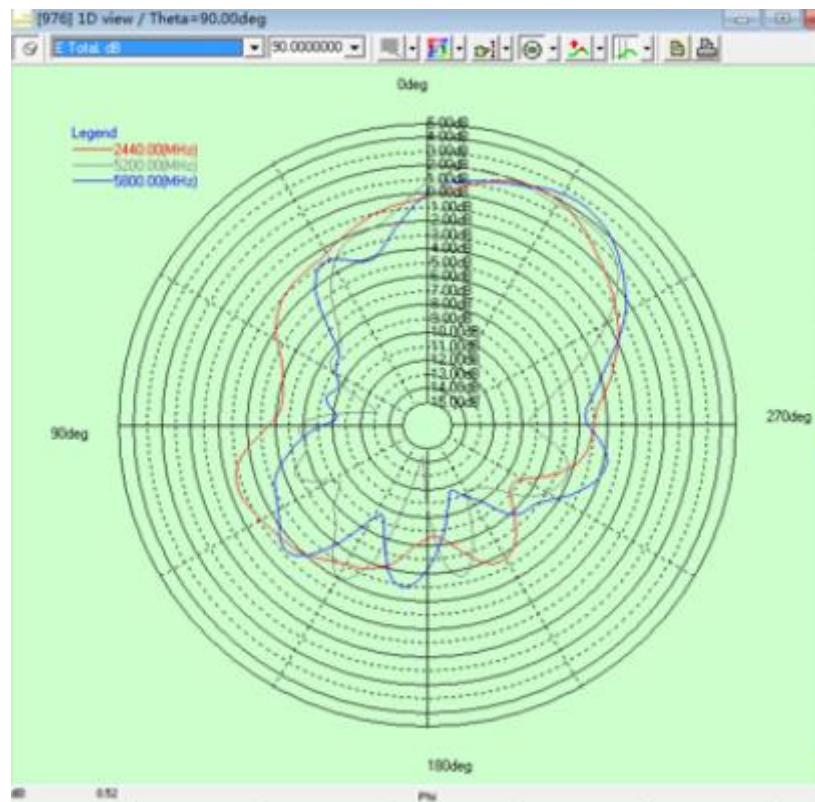
Frequency	Efficiency	Gain(dBi)
2400MHz	55%	2.8
2410MHz	54%	2.7
2420MHz	52%	2.5
2450MHz	54%	2.6
2470MHz	53%	2.4
2483MHz	52%	2.3
5150MHz	47%	1.4
5200MHz	48%	1.7
5725MHz	53%	3.5
5775MHz	54%	3.5
5800MHz	55%	3.7
5825MHz	57%	3.8
5850MHz	55%	3.7

3、 Antenna Pattern

Measurement System: Satimo

Reference Position

Antenna Pattern:





4、 Antenna drawing



DJI Antenna Datasheet Ant7

1、 Basic Specifications

No.	Specification	Descriptions	Notes	
1	Antenna Name	<u>EA230 SDR Ant7</u>		
2	Brand	<u>DJI</u>		
3	Operation Frequency	<u>2.4~2.483GHz;</u> <u>5.125-5.25GHz;</u> <u>5.725~5.85GHz</u>		
4	Connector Type	lpex-1		
5	Impedance	50ohm		
6	Gain	2.5dBi@2.4~2.483GHz 3.5dbi@5.2GHz 4dBi@5.725~5.875GHz		
7	Efficiency	≥55% SDR		
8	VSWR	≤2.5		
9	Polarization type	Linear		
10	3dB Beamwidth	Omnidirectional horizon		
11	Weight			



12	Antenna type	Dipole		
13	Manufacturer	睿翔		

2、 Antenna Gain

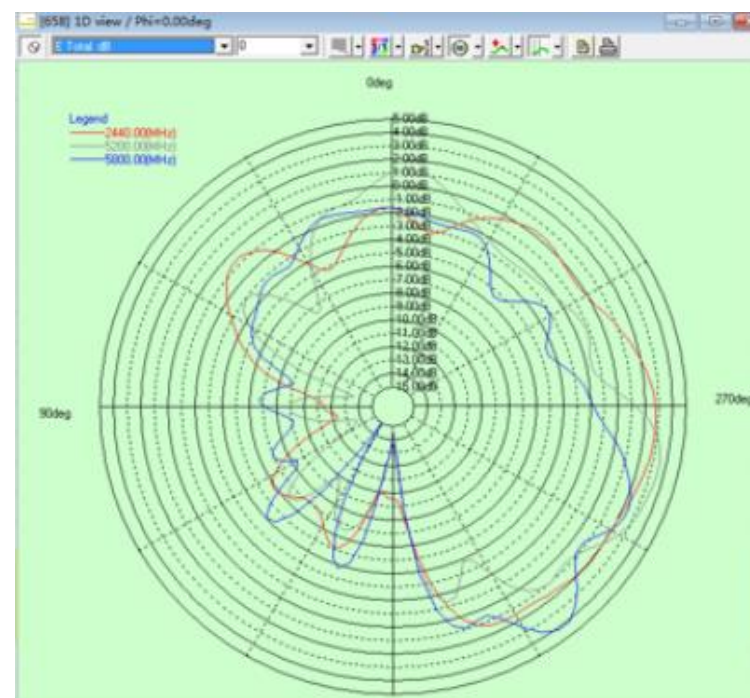
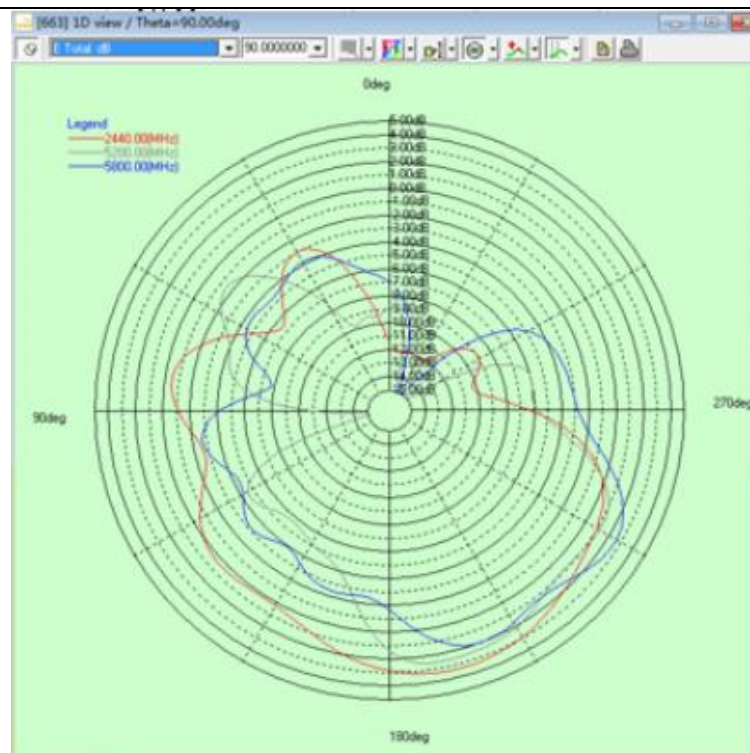
Frequency	Efficiency	Gain(dBi)
2400MHz	62%	2.4
2410MHz	64%	2.2
2420MHz	62%	2.4
2450MHz	58%	2.4
2470MHz	60%	2.5
2483MHz	61%	2.4
5150MHz	64%	3.4
5200MHz	62%	3.5
5725MHz	66%	3.8
5775MHz	67%	3.7
5800MHz	66%	4
5825MHz	65%	3.9
5850MHz	65%	3.8

3、 Antenna Pattern

Measurement System: Satimo

Reference Position

Antenna Pattern:





4、 Antenna drawing



DJI Antenna Datasheet Ant0

1、 Basic Specifications

No.	Specification	Descriptions	Notes	
1	Antenna Name	<u>EA230 SDR Ant0</u>		
2	Brand	<u>DJI</u>		
3	Operation Frequency	<u>2.4~2.483GHz;</u> <u>5.125-5.25GHz;</u> <u>5.725~5.85GHz</u>		
4	Connector Type	lpex-1		
5	Impedance	50ohm		
6	Gain	3dbi@2.4~2.483GHz 4dbi@5.2GHz 4dbi@5.725~5.875GHz		
7	Efficiency	≥55% SDR		
8	VSWR	≤2.5		
9	Polarization type	Linear		
10	3dB Beamwidth	Omnidirectional horizon		
11	Weight			



12	Antenna type	Dipole		
13	Manufacturer	睿翔		

2、 Antenna Gain

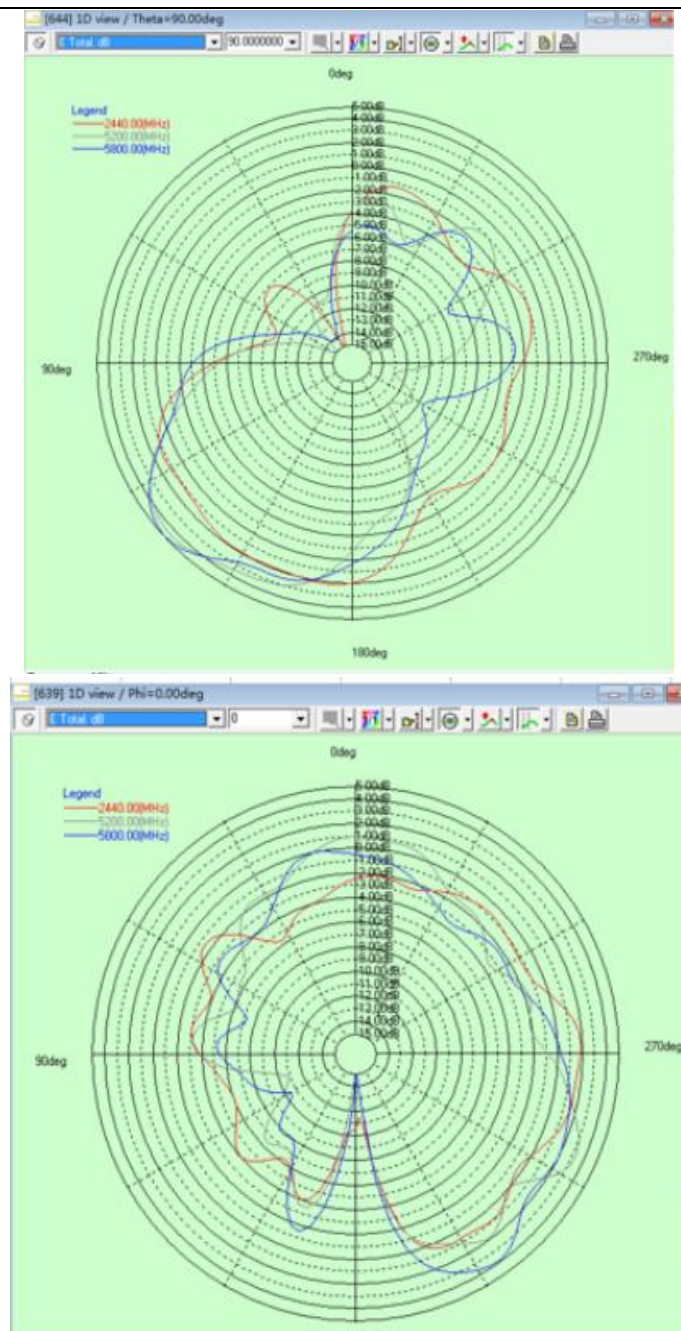
Frequency	Efficiency	Gain(dBi)
2400MHz	53%	2.8
2410MHz	51%	2.7
2420MHz	51%	3
2450MHz	53%	2.8
2470MHz	52%	2.6
2483MHz	50%	2.4
5150MHz	46%	4
5200MHz	48%	4
5725MHz	52%	3.9
5775MHz	53%	3.9
5800MHz	51%	4
5825MHz	50%	4
5850MHz	50%	4

3、 Antenna Pattern

Measurement System: Satimo

Reference Position

Antenna Pattern:



4、 Antenna Structure



2. Bluetooth Antenna

2.1 Basic Specifications

No.	Specification	Descriptions	Notes
1	Antenna Name	EA230 uav BT	
2	Manufacturer	睿翔	
3	Operation Frequency	2.4~2.483GHz;	
4	Connector Type	IpexI	
5	Impedance	50ohm	

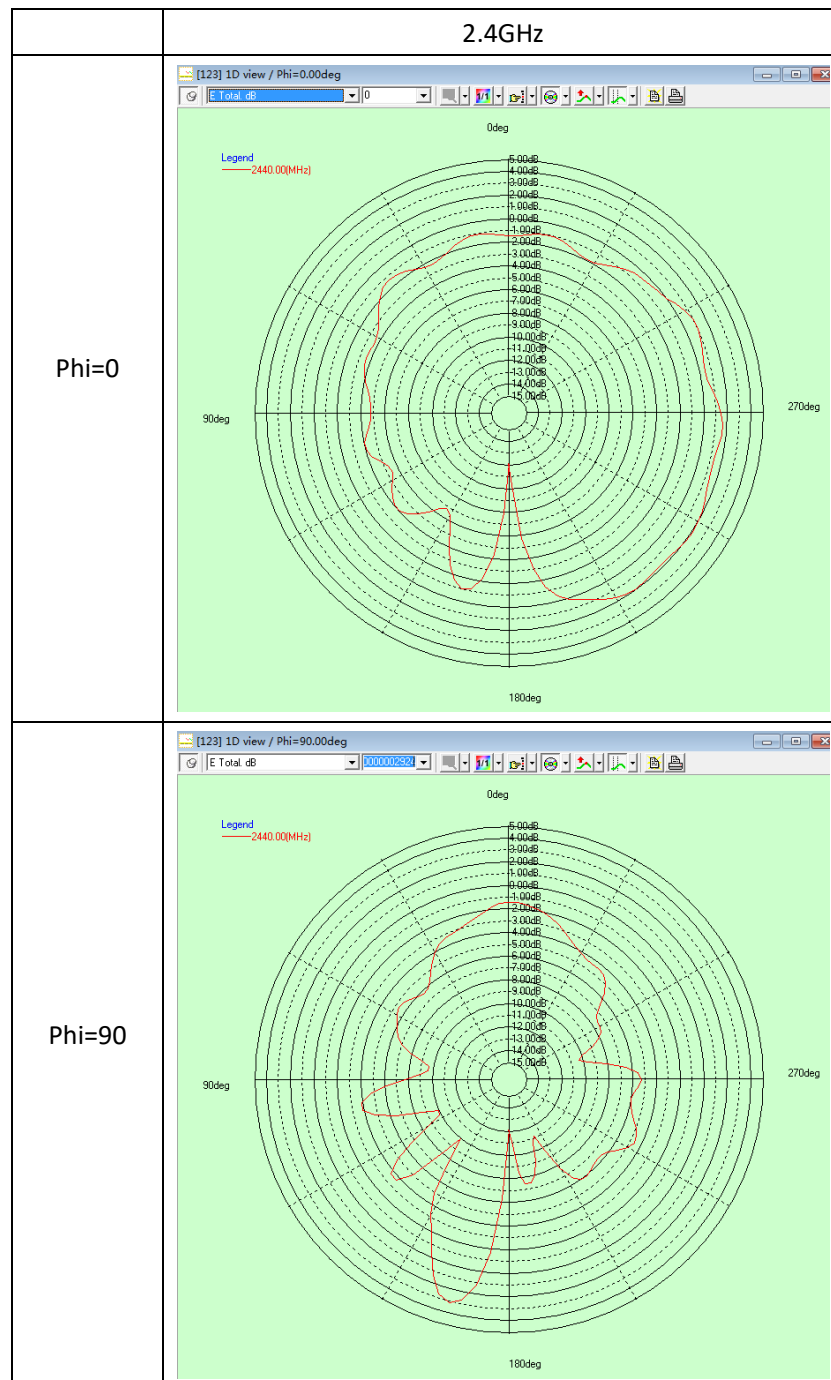


6	Gain (MAX)	3.3dBi@2.4~2.483GHz	
7	Efficiency	$\geq 40\%$	
8	VSWR	≤ 2	
9	Antenna Type	Linear polarization Dipole	
10	3dB Beamwidth	Omnidirectional horizon	
11	Weight (with cable)	1g	

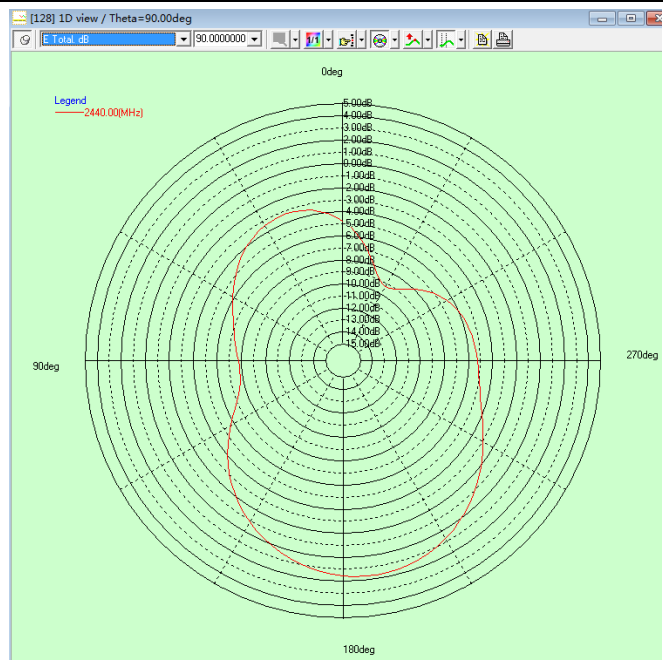
2.2 Antenna Gain

Frequency	E Total. dB(dBm)
2400MHz	3
2440MHz	3.3
2480MHz	2.9
2500MHz	2.8

2.3 radiation pattern



Theta=90



2.4 Structure drawing