



MC345A/MC345B Antenna SPECIFICATION

Antenna Manufacturer Name	Universal Global Scientific Industrial Co., Ltd.
Address	No.141, Lane 351, Sec.1, Taiping Road, Tsaotuen, Nantou County 542007, Taiwan
ODM P/N:	46-500587-01
Test DATE	2024/10/31
DATASHEET REVISION	V1
Ant. Type (Monopole)	Ant-7
Ant. Type (PIFA)	Ant-6
Ant. Type (Loop)	NFC

Test Engineer: Star Chen



Description of Antenna

Antenna 6 Structure	
Frequency Range	1560-1610MHz, 2400-2500MHz, 5150-5850MHz and 5925-7125MHz
Impedance	50 ohm
Antenna type	PIFA
Manufacturing Process	LDS

Antenna Ant-6 Peak Gain

Brick SKU	
Frequency (MHz)	Peak gain (dBi)
2400	1.77
2450	1.81
2500	1.59
5150	0.99
5250	1.34
5350	1.06
5450	0.83
5550	0.89
5650	1.26
5750	1.31
5850	1.05
5925	1.02
6425	0.93
6525	0.81
6875	0.55
7125	0.57

Antenna Ant-6 UHIS

Brick SKU↵	
Frequency (MHz)↵	UHIS ↵
1560↵	-6.26↵
1570↵	-6.17↵
1580↵	-5.83↵
1590↵	-5.88↵
1600↵	-5.8↵
1610↵	-6.03↵

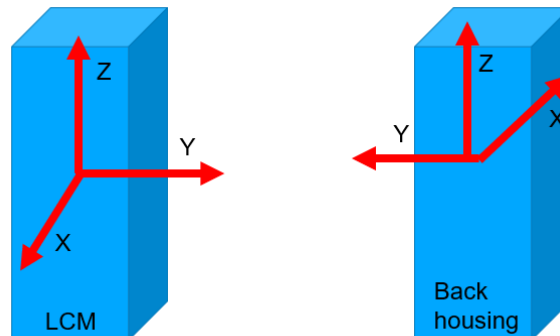


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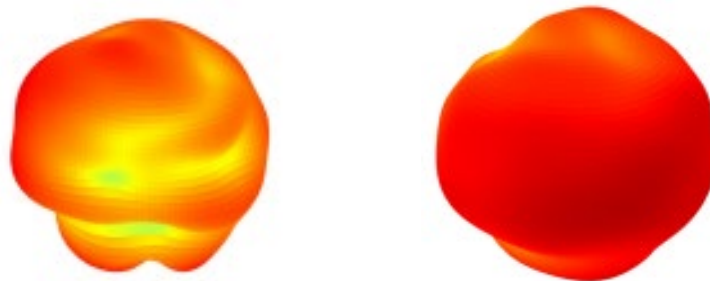
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Antenna Radiation Patterns

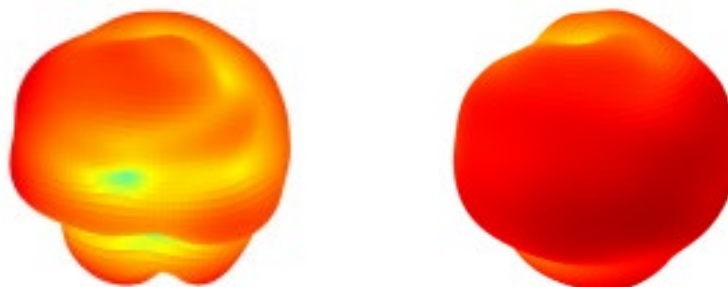
DUT Axis Reference



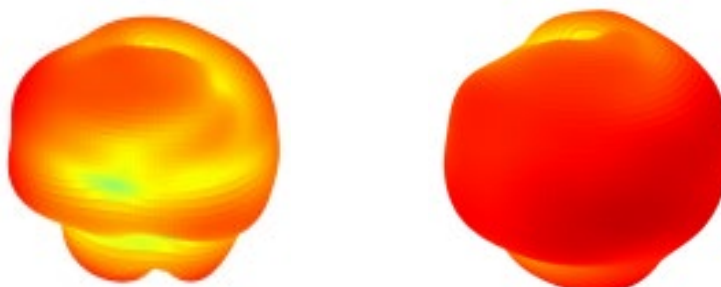
- 2400 MHz



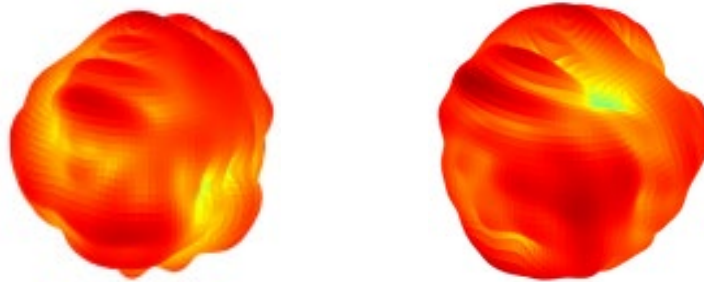
- 2450 MHz



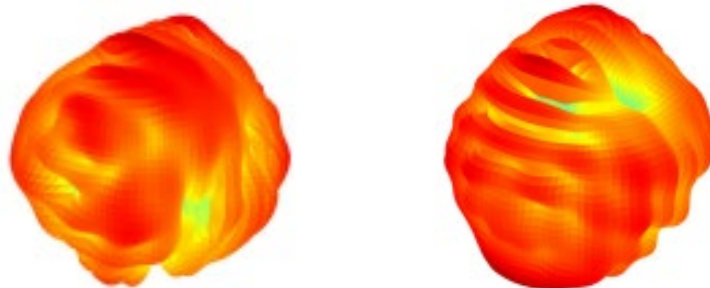
- 2500 MHz



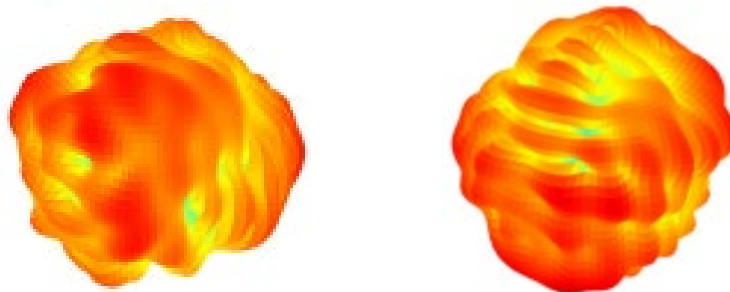
- 5150 MHz



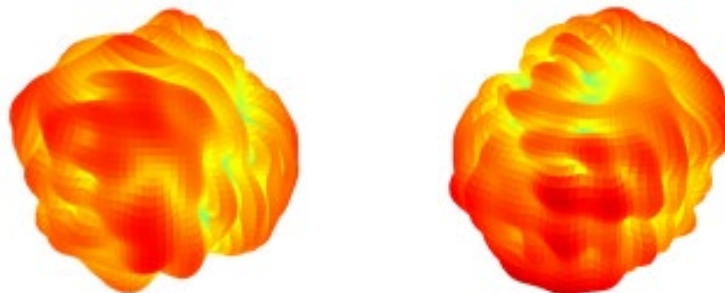
- 5450 MHz



- 5850 MHz

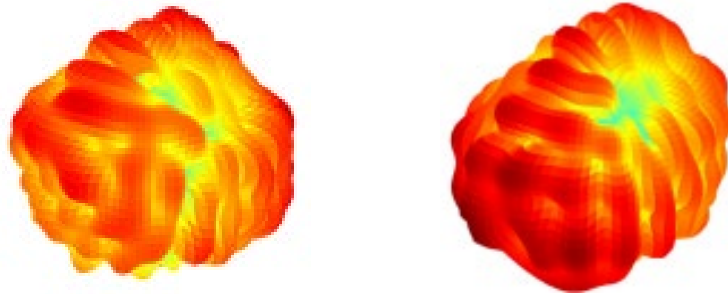


- 5925 MHz

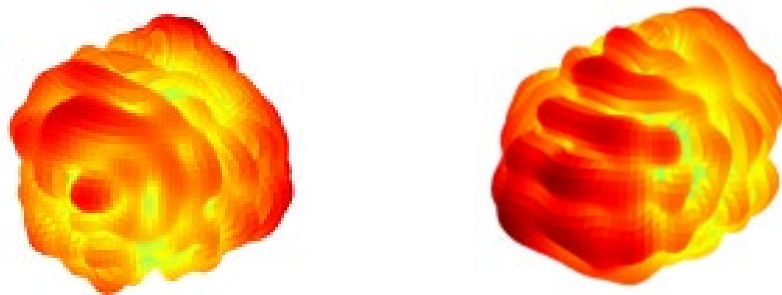




- 6525 MHz



- 7125 MHz



Antenna Ant-6 Peak Gain

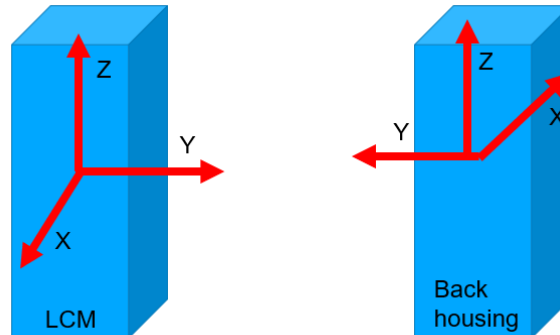
Gun SKU	
Frequency (MHz)	Peak gain (dBi)
2400	1.68
2450	1.72
2500	1.43
5150	0.85
5250	1.19
5350	0.95
5450	0.74
5550	0.78
5650	1.09
5750	1.13
5850	0.88
5925	0.85
6425	0.81
6525	0.71
6875	0.48
7125	0.47

Antenna Ant-6 UHIS

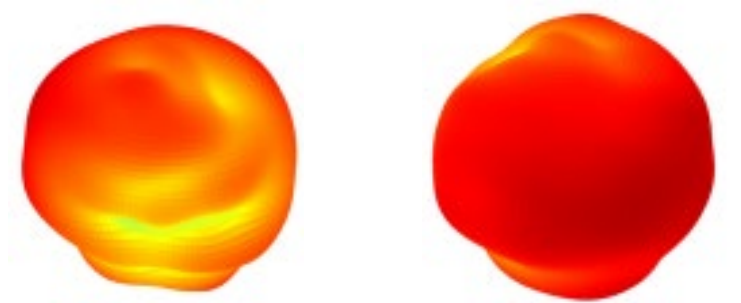
Gun SKU	
Frequency (MHz)	UHIS
1560	-6.15
1570	-6.03
1580	-5.85
1590	-5.91
1600	-5.67
1610	-5.97

Antenna Radiation Patterns

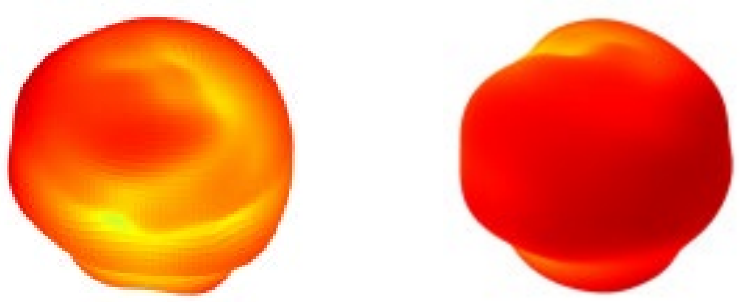
DUT Axis Reference



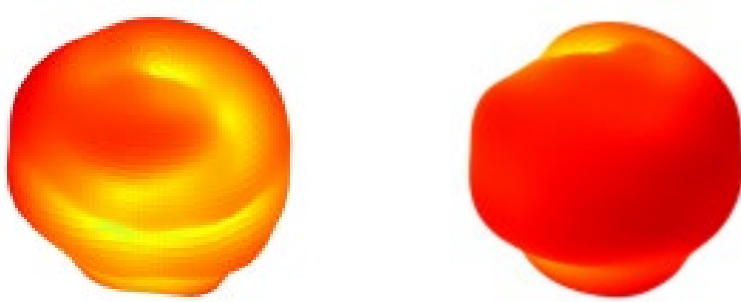
- 2400 MHz



- 2450 MHz



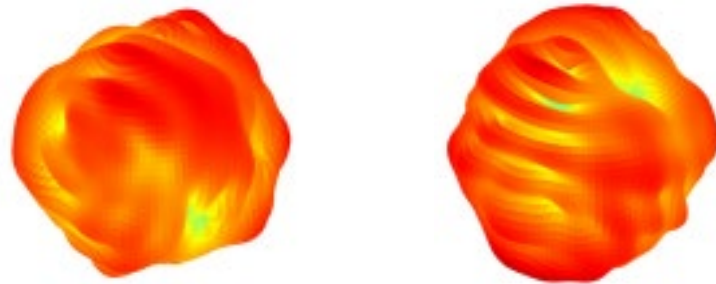
- 2500 MHz



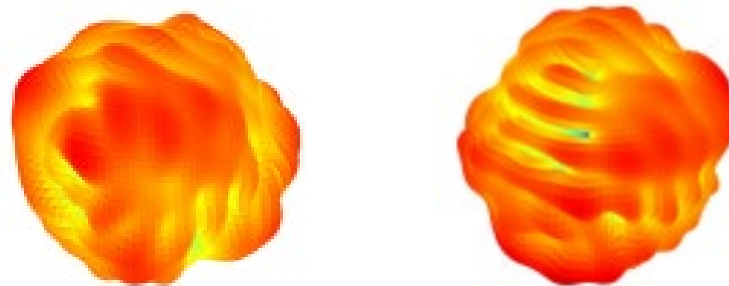
- 5150 MHz



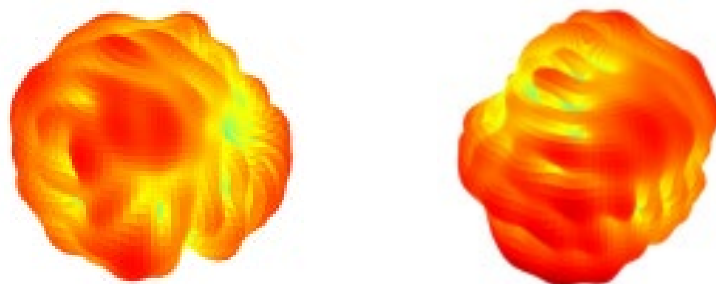
- 5450 MHz



- 5850 MHz



- 5925 MHz

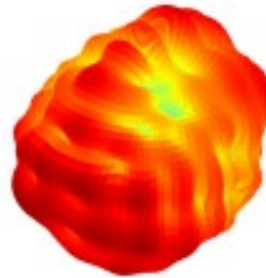
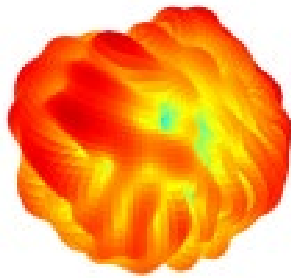




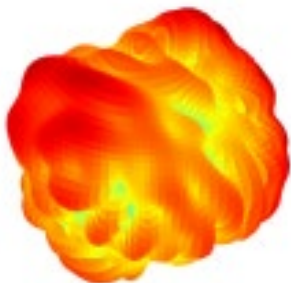
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- 6525 MHz



- 7125 MHz





Antenna 7 Structure	
Frequency Range	1160-1190MHz, 2400-2500MHz, 5150-5850MHz and 5925-7125MHz
Impedance	50 ohm
Antenna type	Monopole
Manufacturing Process	LDS

Antenna Ant-7 Peak Gain

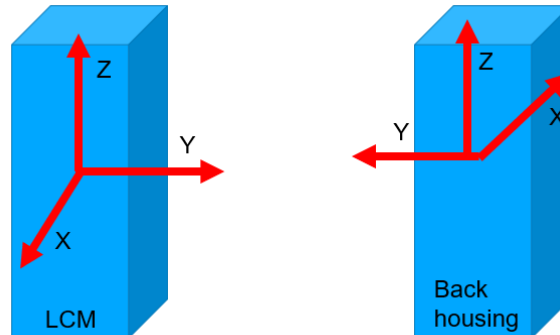
Brick SKU	
Frequency (MHz)	Peak gain (dBi)
2400	0.50
2450	0.47
2500	-0.17
5150	0.85
5250	1.02
5350	0.68
5450	0.74
5550	0.61
5650	0.64
5750	0.83
5850	0.98
5925	0.91
6425	1.23
6525	1.19
6875	0.64
7125	0.88

Antenna Ant-7 UHIS

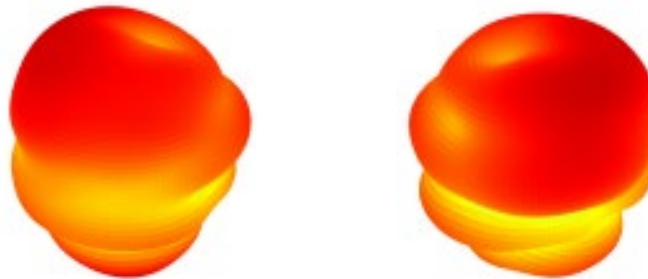
Brick SKU	
Frequency (MHz)	UHIS
1160	-8.04
1170	-7.83
1180	-7.94
1190	-8.03

Antenna Radiation Patterns

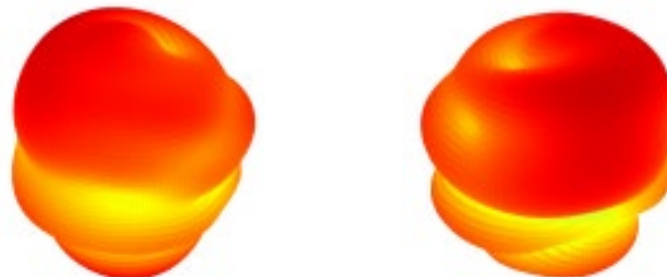
DUT Axis Reference



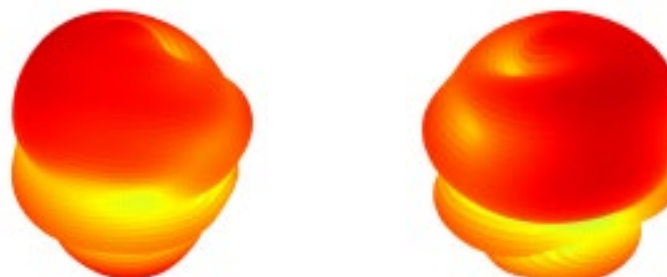
- 2400 MHz



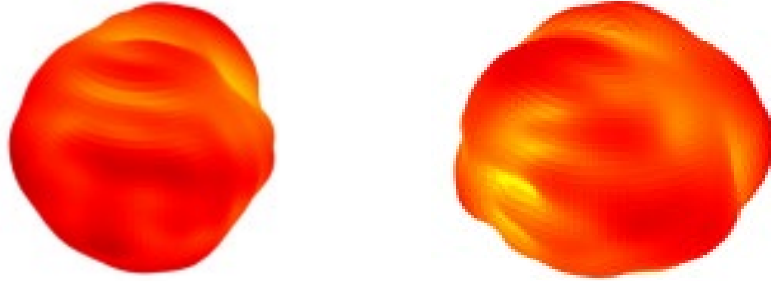
- 2450 MHz



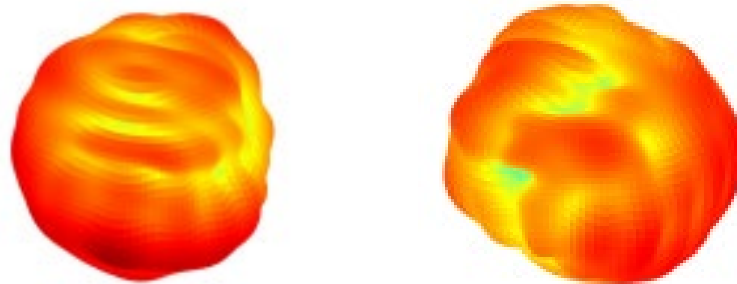
- 2500 MHz



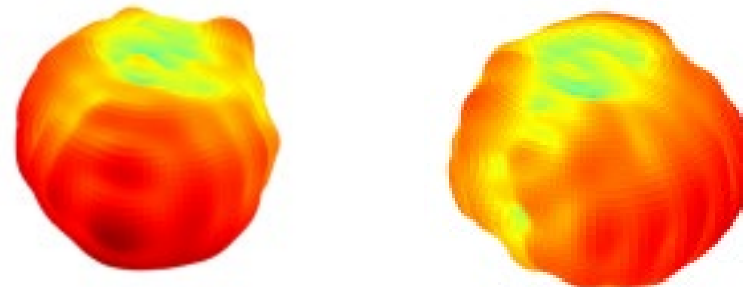
- 5150 MHz



- 5450 MHz



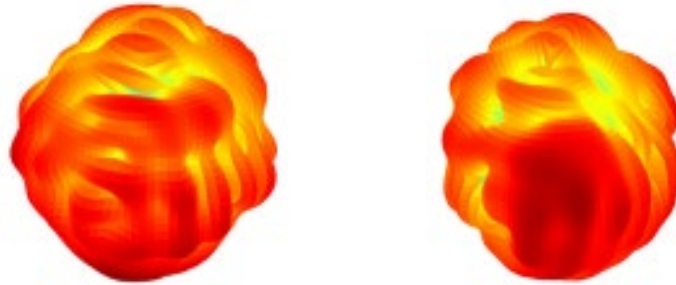
- 5850 MHz



- 5925 MHz



- 6525 MHz



- 7125 MHz



Antenna Ant-7 Peak Gain

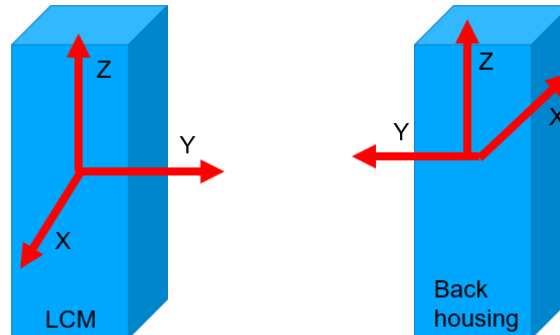
Gun SKU	
Frequency (MHz)	Peak gain (dBi)
2400	0.46
2450	0.44
2500	-0.25
5150	0.77
5250	0.96
5350	0.60
5450	0.70
5550	0.59
5650	0.57
5750	0.74
5850	0.91
5925	0.86
6425	1.18
6525	1.15
6875	0.59
7125	0.85

Antenna Ant-7 UHIS

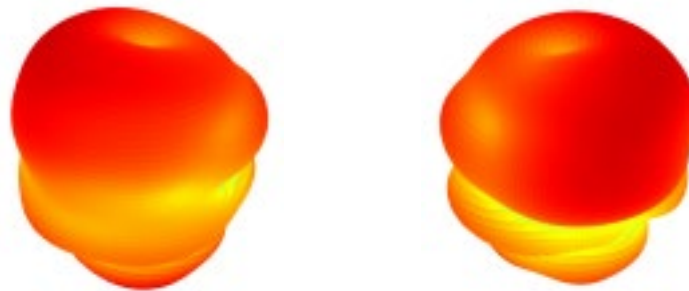
Gun SKU	
Frequency (MHz)	UHIS
1160	-7.96
1170	-7.85
1180	-7.98
1190	-8

Antenna Radiation Patterns

DUT Axis Reference



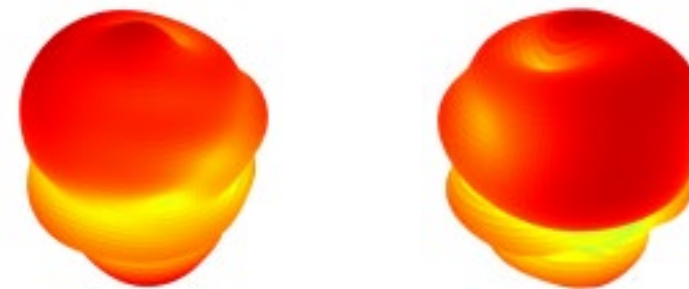
- 2400 MHz



- 2450 MHz



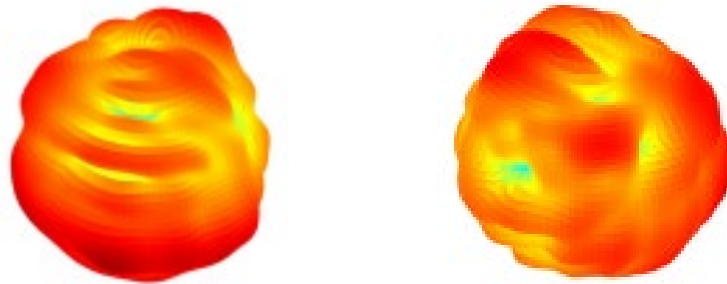
- 2500 MHz



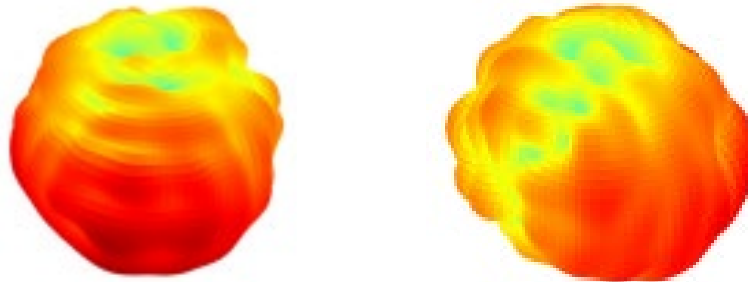
- 5150 MHz



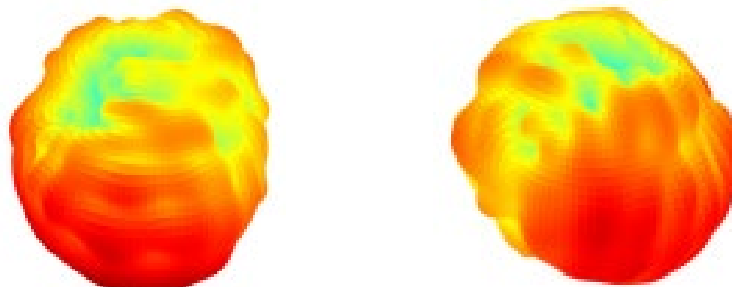
- 5450 MHz



- 5850 MHz



- 5925 MHz

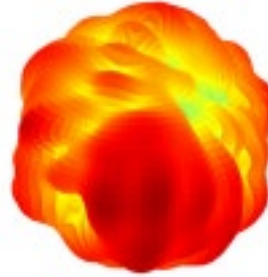




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- 6525 MHz



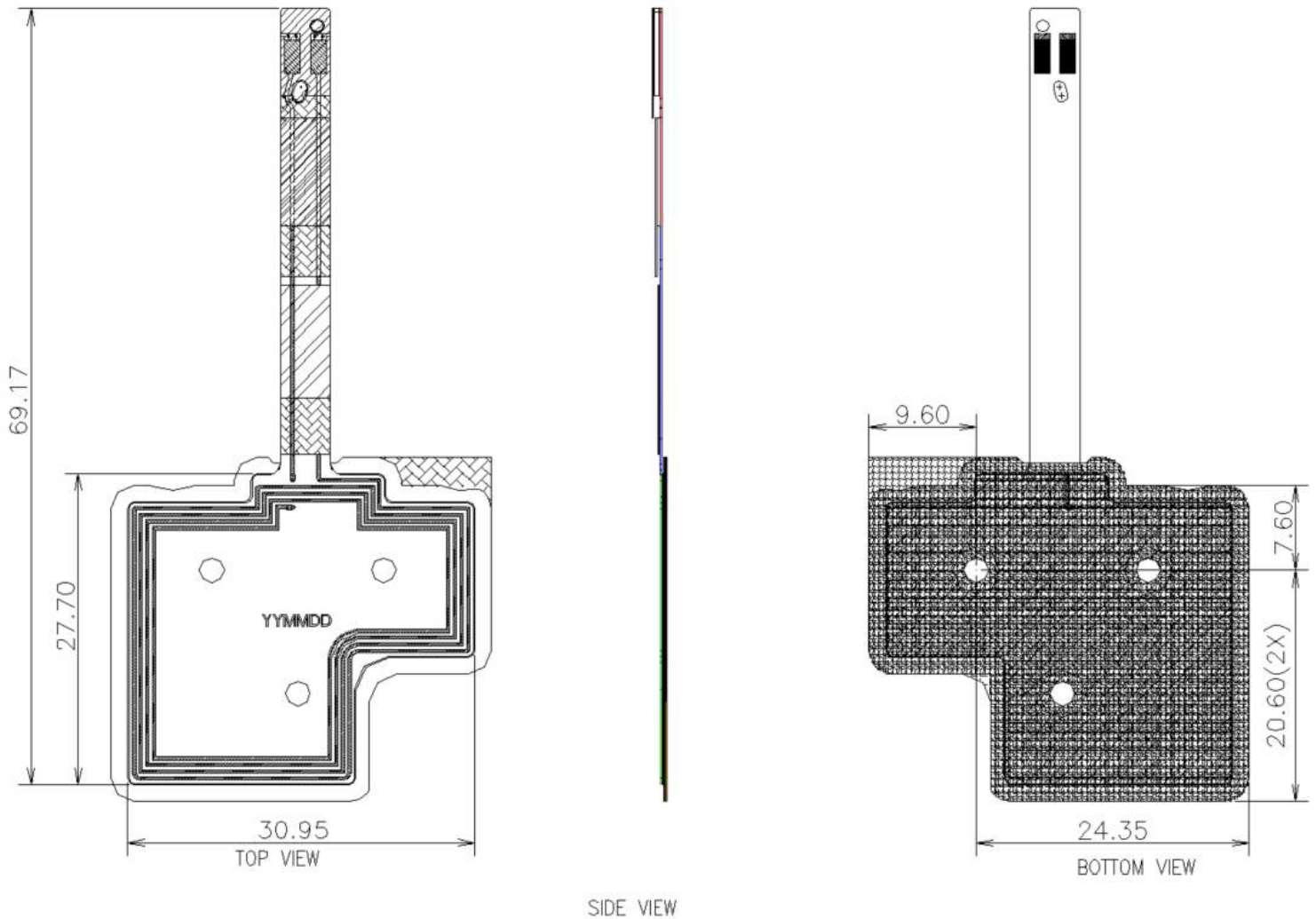
- 7125 MHz





NFC Antenna

FPCB Dimensions



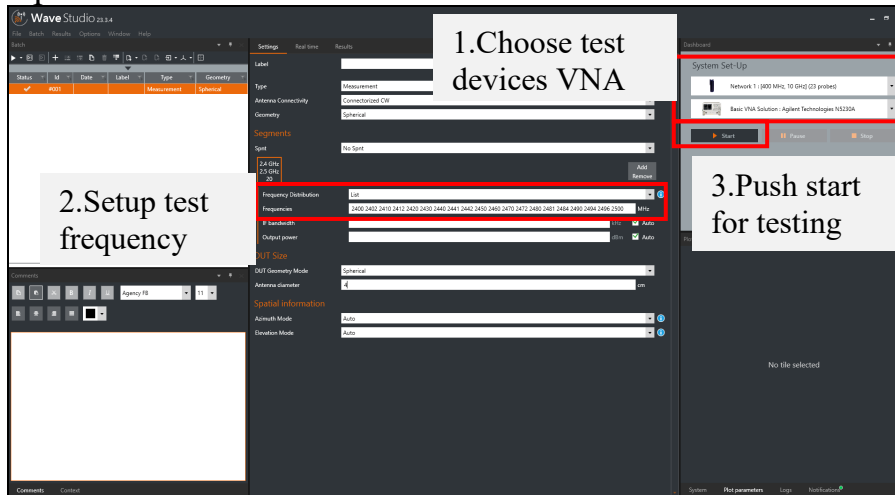


The Device Under Test (DUT) is positioned on fixture constructed from styrofoam turntable. One of the DUT's antennas is connected to the network analyzer, while the input port of the other antenna is properly terminated.

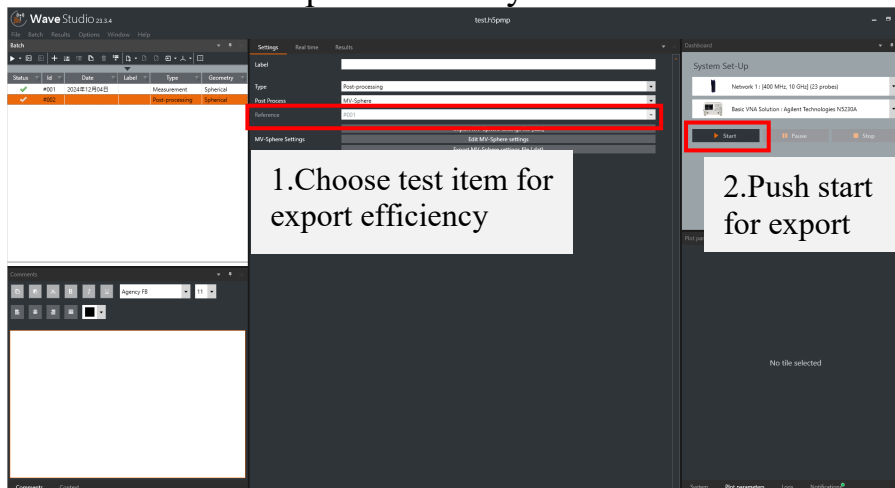


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Open WaveStudio23.3test software



Add test item for export efficiency



Result will show efficiency number

