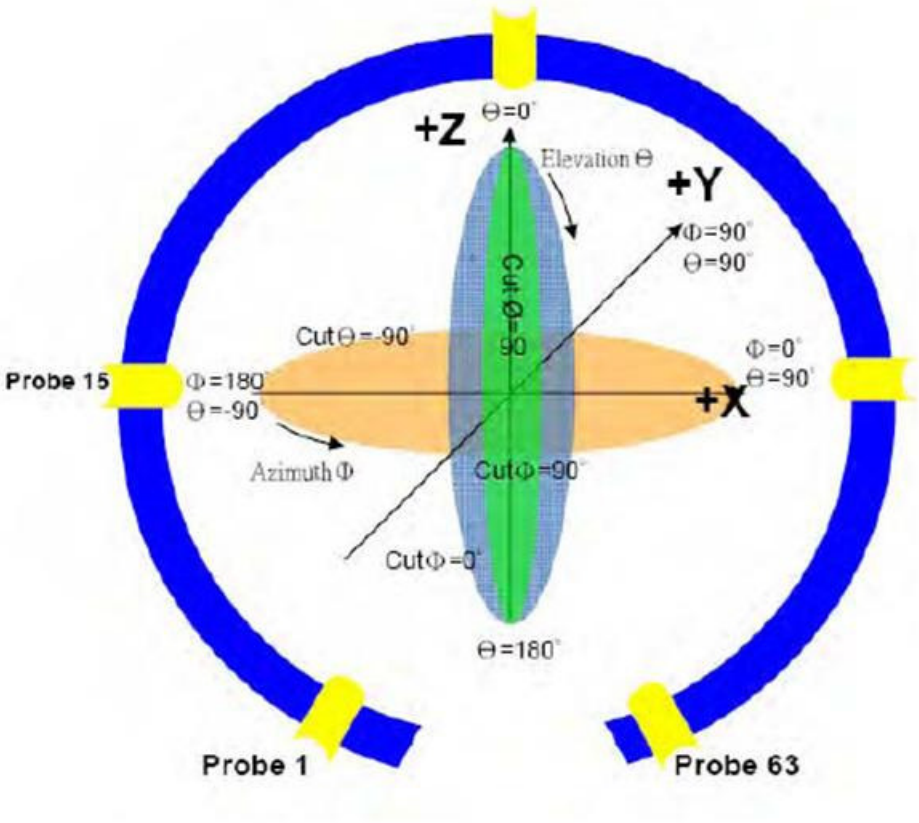
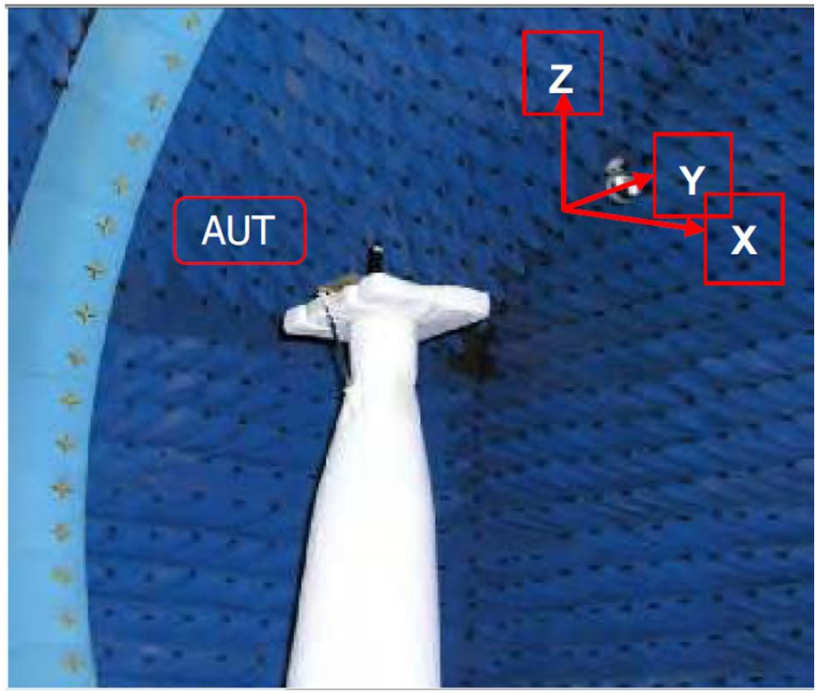
Antenna Report

Outline

- Satimo chamber 3D Chamber
- DUT direction definition
- Antenna with metal frame
- Conclusion

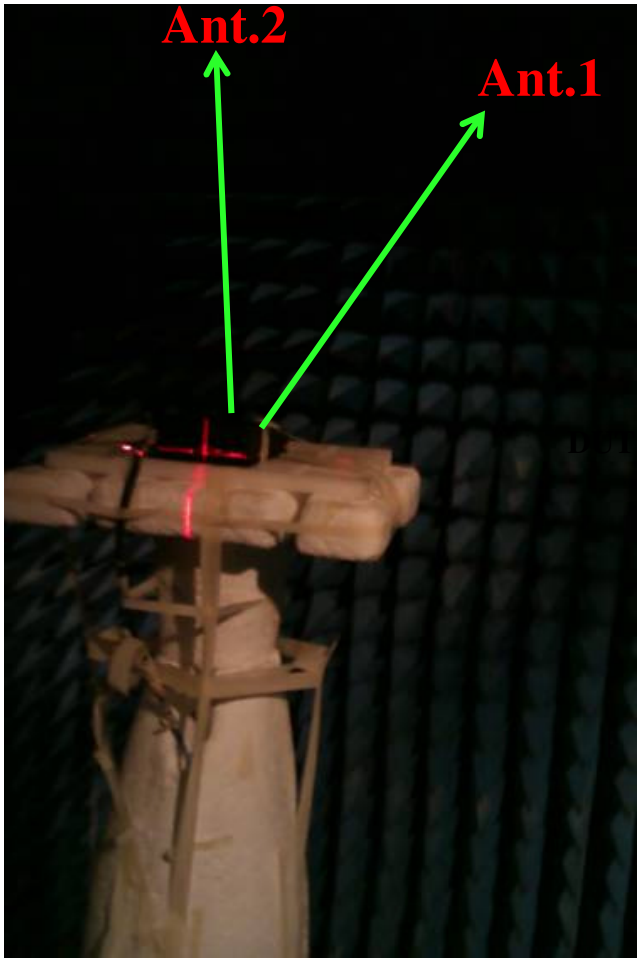
Satimo 3D Chamber :





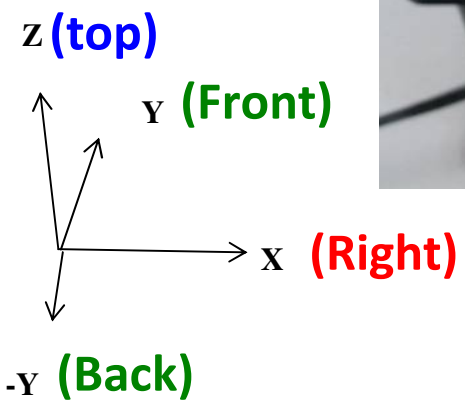
	θ	φ
Total angle	175°	360°
How many angle scan one point	5°	5°
Total scan point	36	73

DUT direction definition :



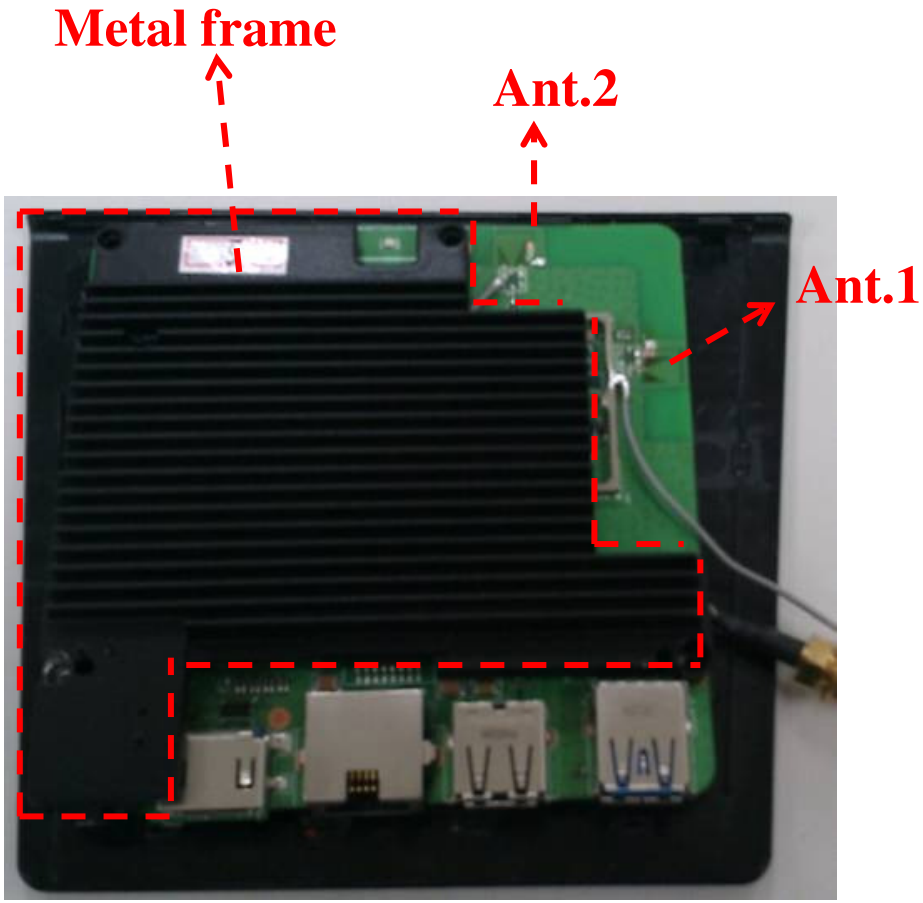
Measurement
(side view)

DUT direction definition :



The X-Y plane and Y-Z plane are the user direction .

DUT definition :



Measurement Antenna S-Parameter Matching 0 ohm

Antenna with metal frame

	S12-isolation
Ant.1& Ant.2	-8.85dB@2400MHz
	-9.02dB@2500MHz
	-11.19dB@5150MHz
	-11.85dB@5350MHz
	-15.42dB@5850MHz

	S11
Ant.1	-10.30dB@2400MHz
	-11.07dB@2500MHz
	-13.67dB@5150MHz
	-15.58dB@5350MHz
	-19.49dB@5850MHz

	S22
Ant.2	-9.52dB@2400MHz
	-9.29dB@2500MHz
	-14.88dB@5150MHz
	-10.89dB@5350MHz
	-10.95dB@5850MHz

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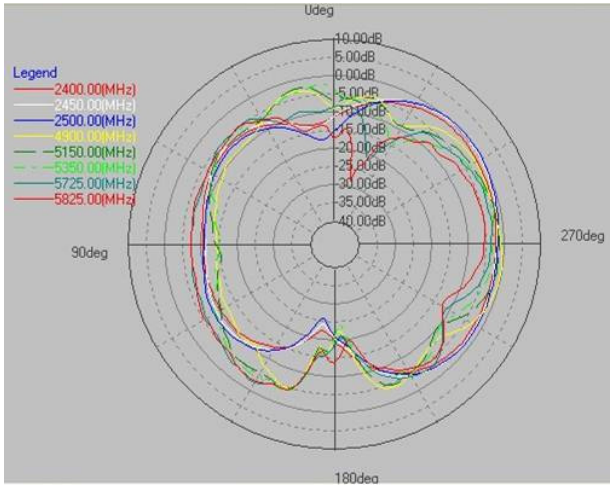
Measurement Ant.1 Radiation Patterns

Antenna with metal frame

X-Z Plane

Z

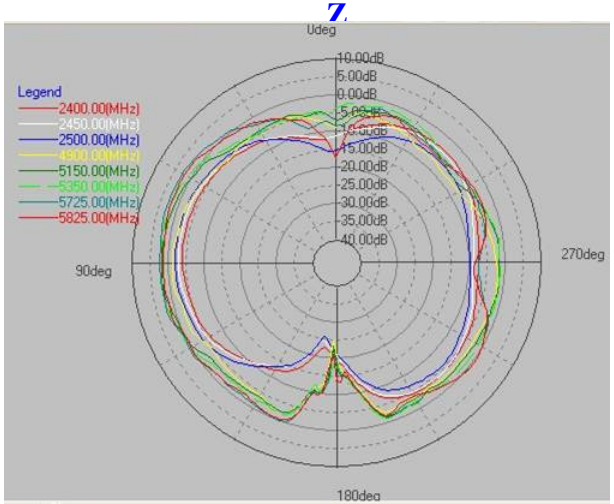
X



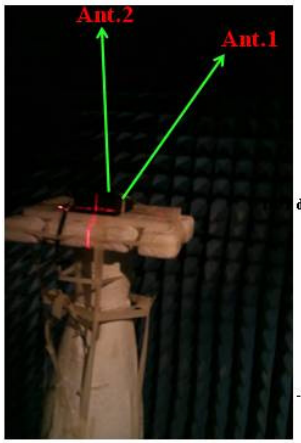
Y-Z Plane

Z

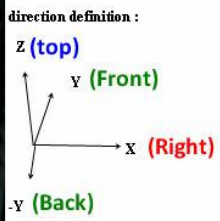
Y



DUT direction definition :



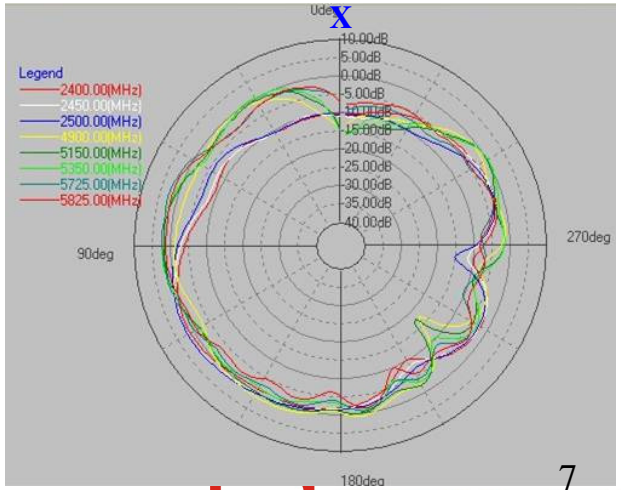
Measurement (side view)



X-Y Plane

X

Y



The X-Y plane and Y-Z plane are the user direction .

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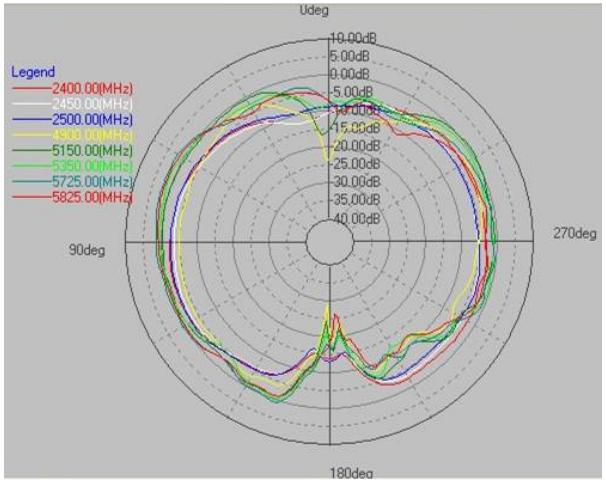
Measurement Ant.2 Radiation Patterns

Antenna with metal frame

X-Z Plane

Z

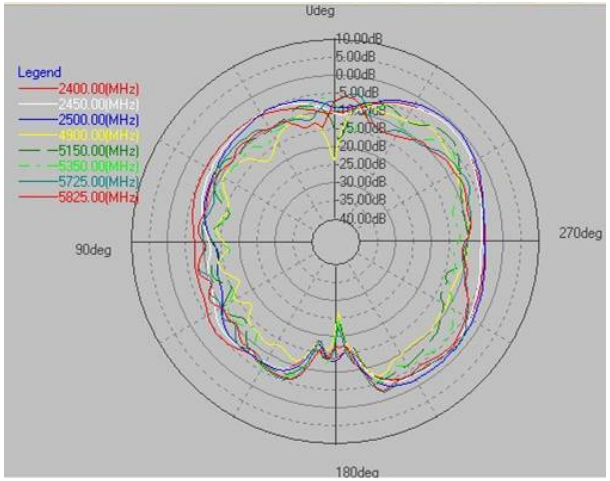
X



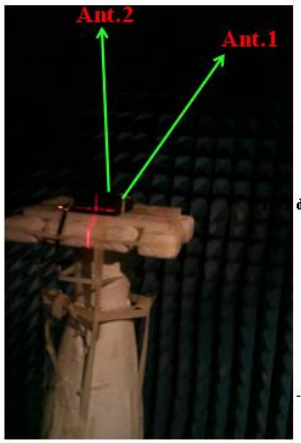
Y-Z Plane

Z

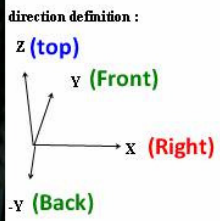
Y



DUT direction definition :



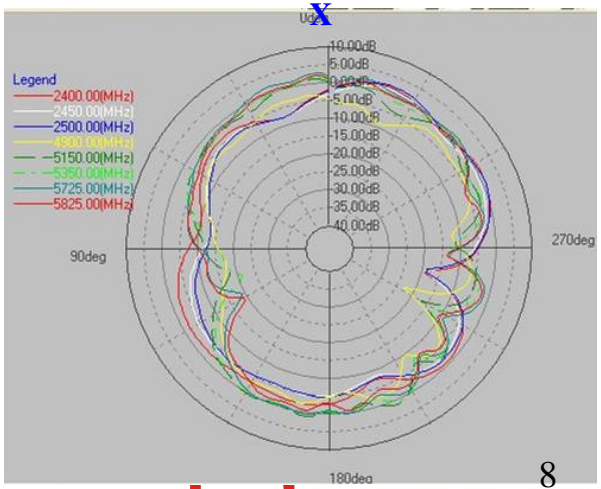
Measurement (side view)



X-Y Plane

X

Y



The X-Y plane and Y-Z plane are the user direction .

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Conclusion

	Frequency	Ant. 1 & Ant. 2 : isolation	Ant. 1 : S11 ,Efficiency (%), Peak Gain(dBi)	Ant. 2 :S11,Efficiency (%), Peak Gain(dBi)
Ant. With metal frame	2.40GHz	-8.85dB	S11:-10.3dB, Eff.: 45% , 1.75dBi	S11:-9.52dB, Eff.: 55% , 2.05dBi
	2.50GHz	-9.02dB	S11:-11.0dB, Eff.: 49% , 2.77dBi	S11:-9.29dB, Eff.: 51% , 2.72dBi
	5.15GHz	-11.19dB	S11:-13.6dB, Eff.: 61% , 2.73dBi	S11:-14.8dB, Eff.: 55% , 2.57dBi
	5.35GHz	-11.85dB	S11:-15.5dB, Eff.: 62% , 3.20dBi	S11:-10.8dB, Eff.: 57% , 3.00dBi
	5.825GHz	-15.42dB	S11:-19.4dB, Eff.: 57% , 2.92dBi	S11:-10.9dB, Eff.: 52% , 3.17dBi

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