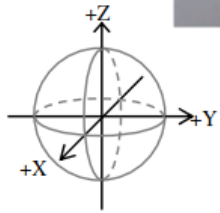
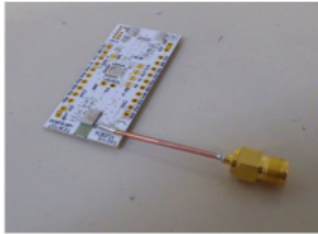


# ES2820 Antenna Description

Confidential

Measured in Satimo Stargate system at TAIYO YUDEN R&D CENTER.

## Appearance and coordinates definition



## Measurement data of antenna

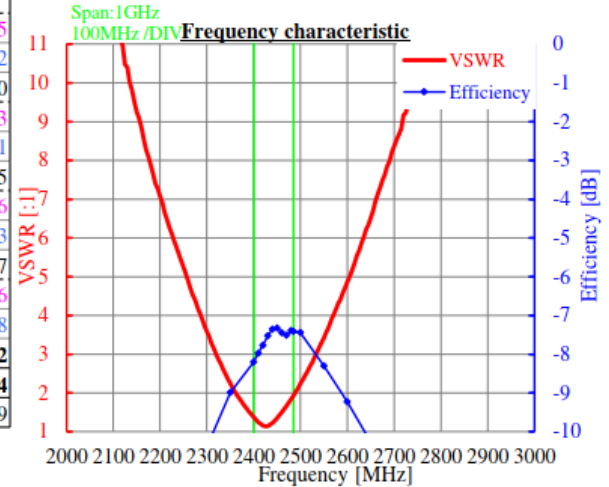
12.May.2017

Frequency [MHz]		@ 2400	@ 2442	@ 2484
<b>Peak gain [dBi]</b>				
3-plane	TX-H	-5.3	-4.4	-4.8
	TX-V	-4.9	-4.0	-3.7
		-4.9	-4.0	-3.7
<b>Average gain [dBi]</b>				
XY-plane	TX-H	-10.4	-9.7	-9.5
	TX-V	-21.7	-20.2	-19.2
	Plus(H,V)	-10.1	-9.3	-9.0
YZ-plane	TX-H	-15.3	-14.5	-14.3
	TX-V	-7.1	-6.2	-6.1
	Plus(H,V)	-6.5	-5.6	-5.5
ZX-plane	TX-H	-9.9	-9.2	-9.6
	TX-V	-13.5	-12.6	-12.3
	Plus(H,V)	-8.4	-7.6	-7.7
3-plane	TX-H	-11.3	-10.6	-10.6
	TX-V	-10.8	-9.9	-9.8
		-8.1	-7.2	-7.2
<b>Efficiency [dB]</b>		-8.2	-7.4	-7.4
<b>VSWR [ :1 ]</b>		1.4	1.2	1.9

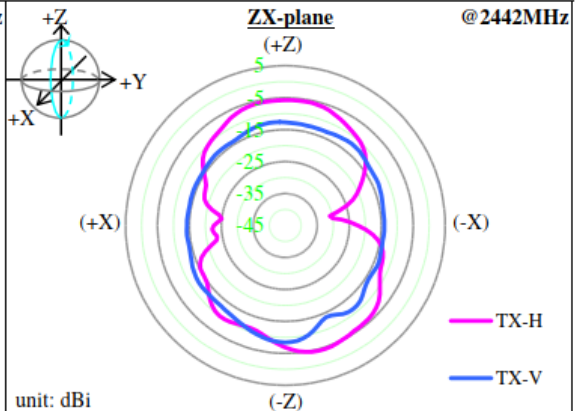
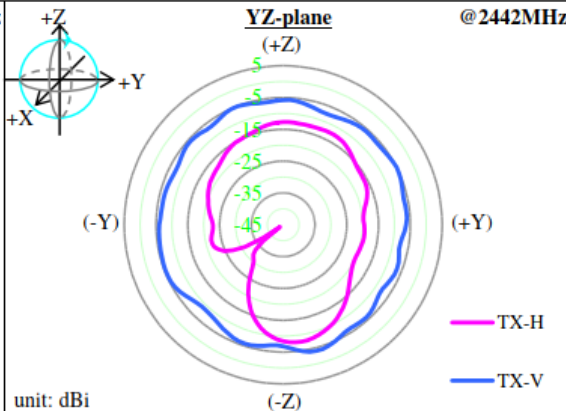
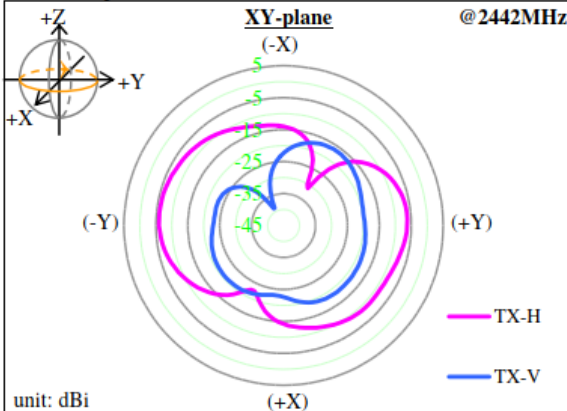
\*Note: Peak gain(3-plane)=Peak(XY[H],XY[V],YZ[H],YZ[V],ZX[H],ZX[V])

\*Note:The value is average value in 1 round of each inclination direction angle.

\*Note: Average gain(3-plane)=Average(XY[Plus(H,V)],YZ[Plus(H,V)],ZX[Plus(H,V)])



## Radiation pattern



20170512M1042