



[RTL8821CS] module antenna test report

Jeany Ling

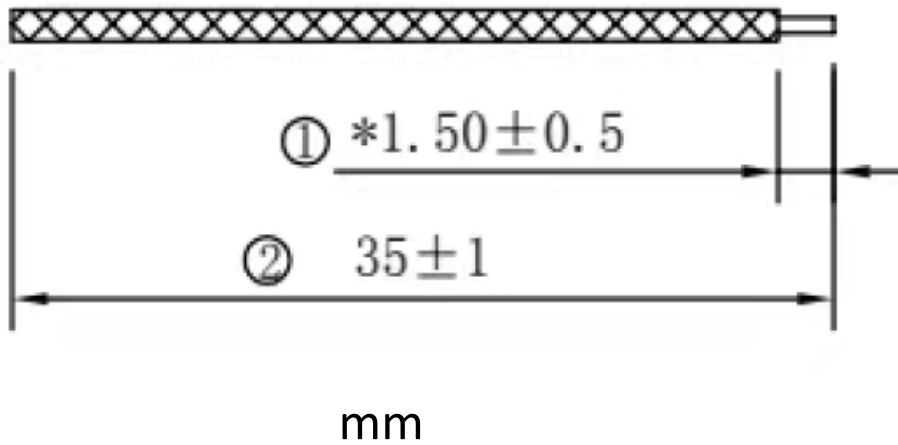
Nov. 23, 2022





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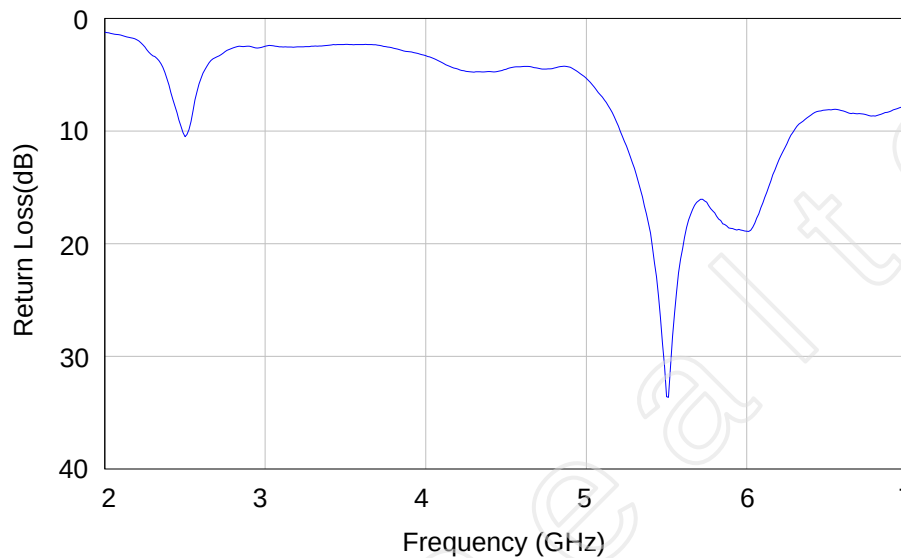
- Antenna structure
- Photo





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- Return Loss



* C4=C5=NC, L1=0ohm

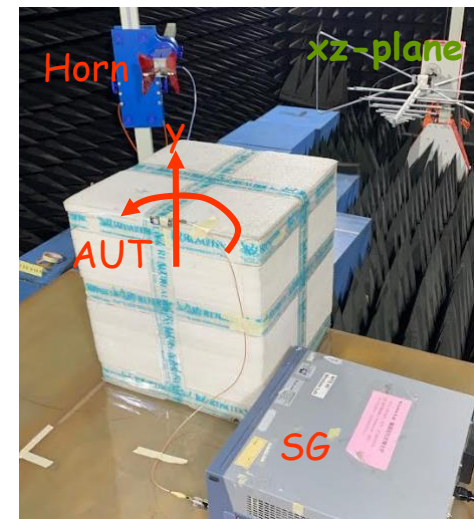
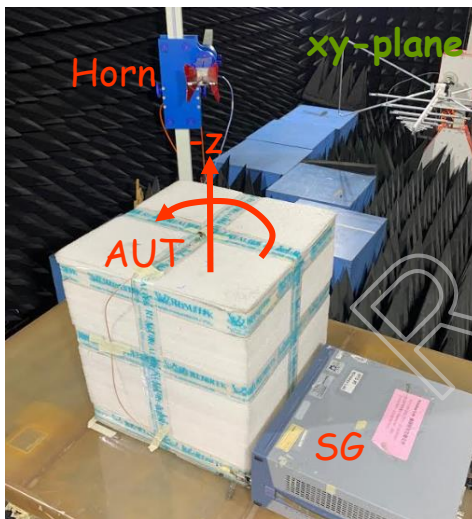
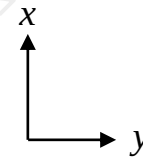




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• Radiation Patterns

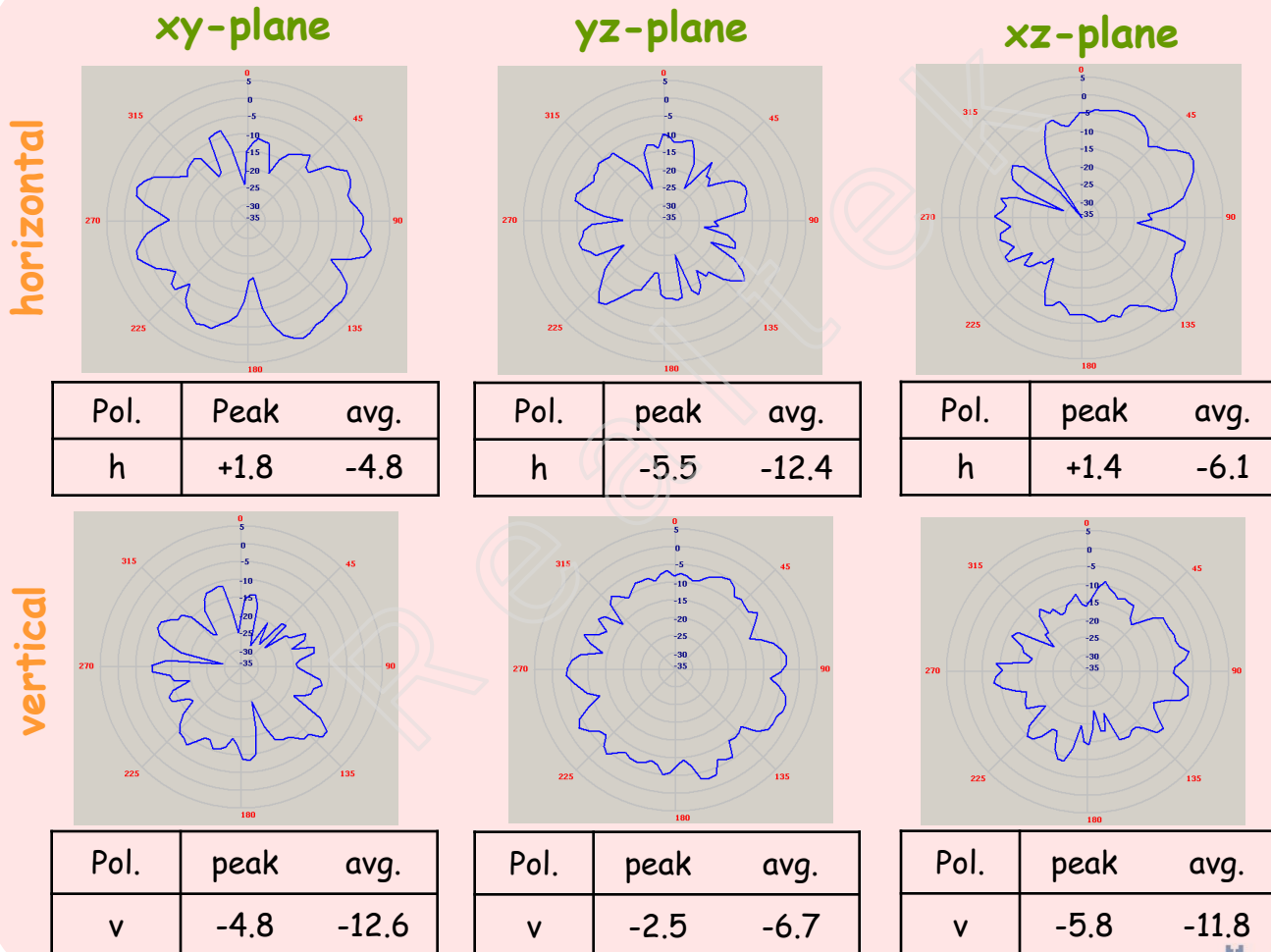
- Frequency : 2400MHz, 2450MHz, 2480MHz, 5150MHz, 5500MHz, 5850MHz and 5925MHz
- Test plane : xy-plane, xz-plane and yz-plane
- Input power : SG 0dBm
- Place: RTK 4F chamber
- Horn h: horizontal polarization
- Horn v: vertical polarization





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- Radiation Patterns – 2400 MHz



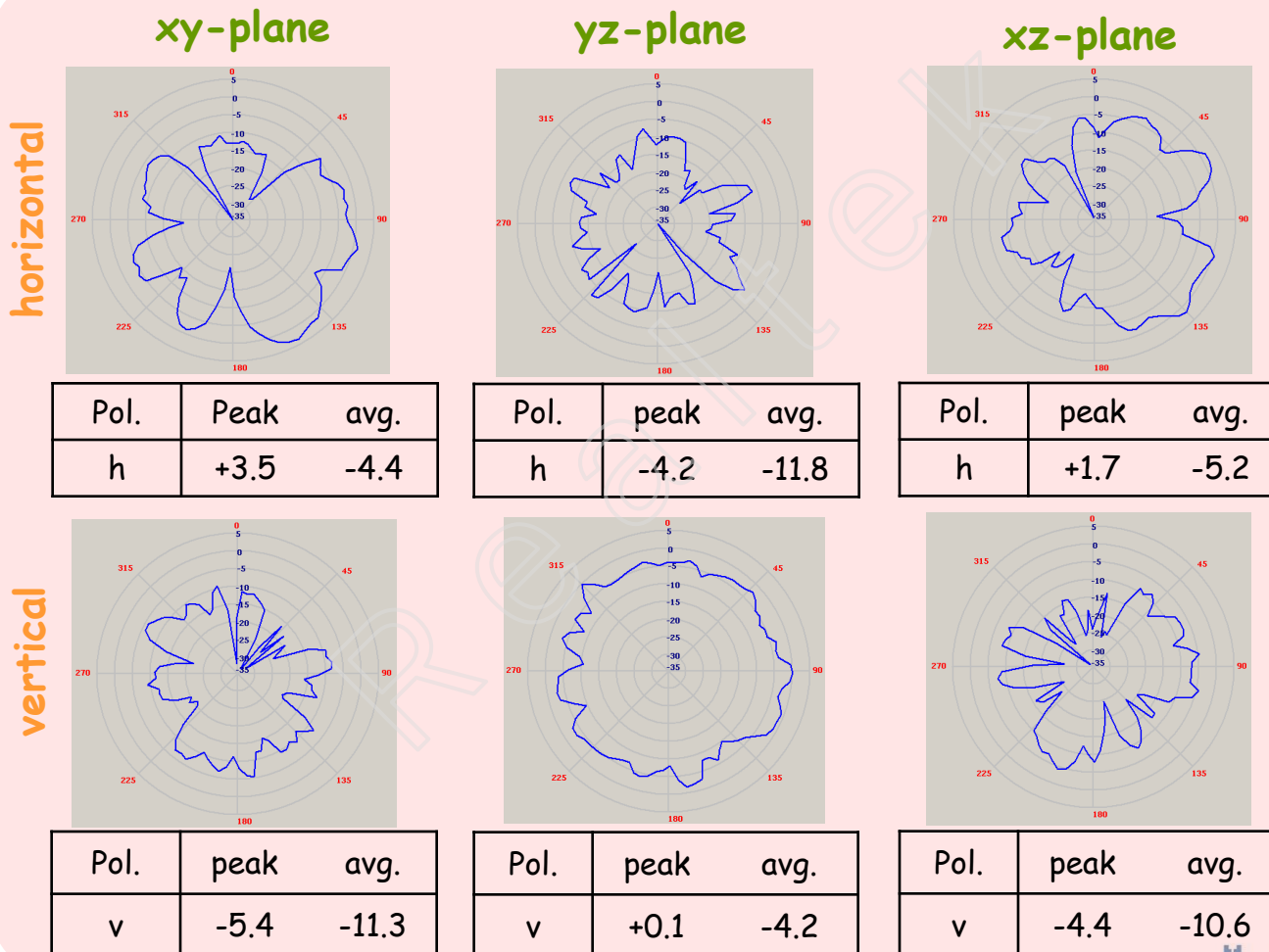
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- Radiation Patterns – 2450 MHz



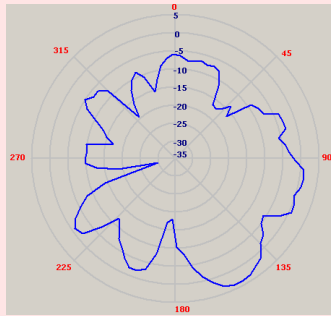


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- Radiation Patterns – 2480 MHz

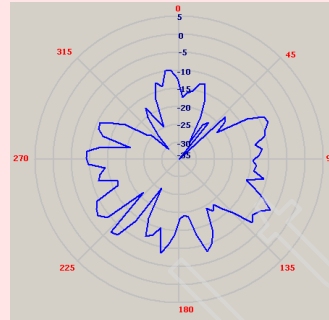
xy-plane

horizontal



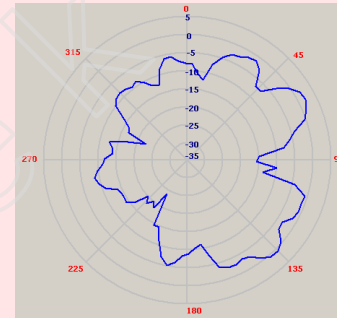
Pol.	Peak	avg.
h	+3.7	-3.9

yz-plane



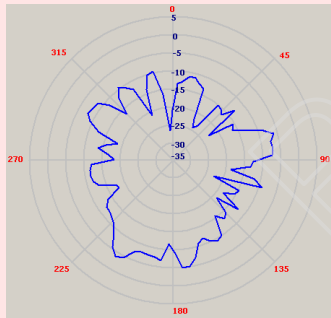
Pol.	peak	avg.
h	-6.2	-12.5

xz-plane

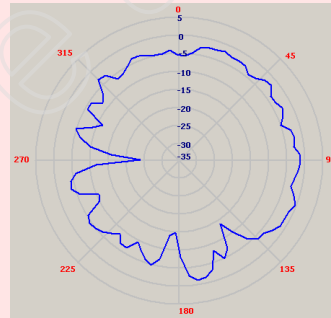


Pol.	peak	avg.
h	+1.8	-5.3

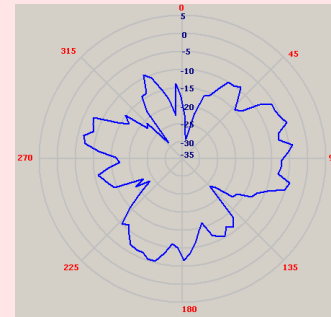
vertical



Pol.	peak	avg.
v	-4.0	-10.8



Pol.	peak	avg.
v	-0.5	-4.5



Pol.	peak	avg.
v	-4.1	-10.2



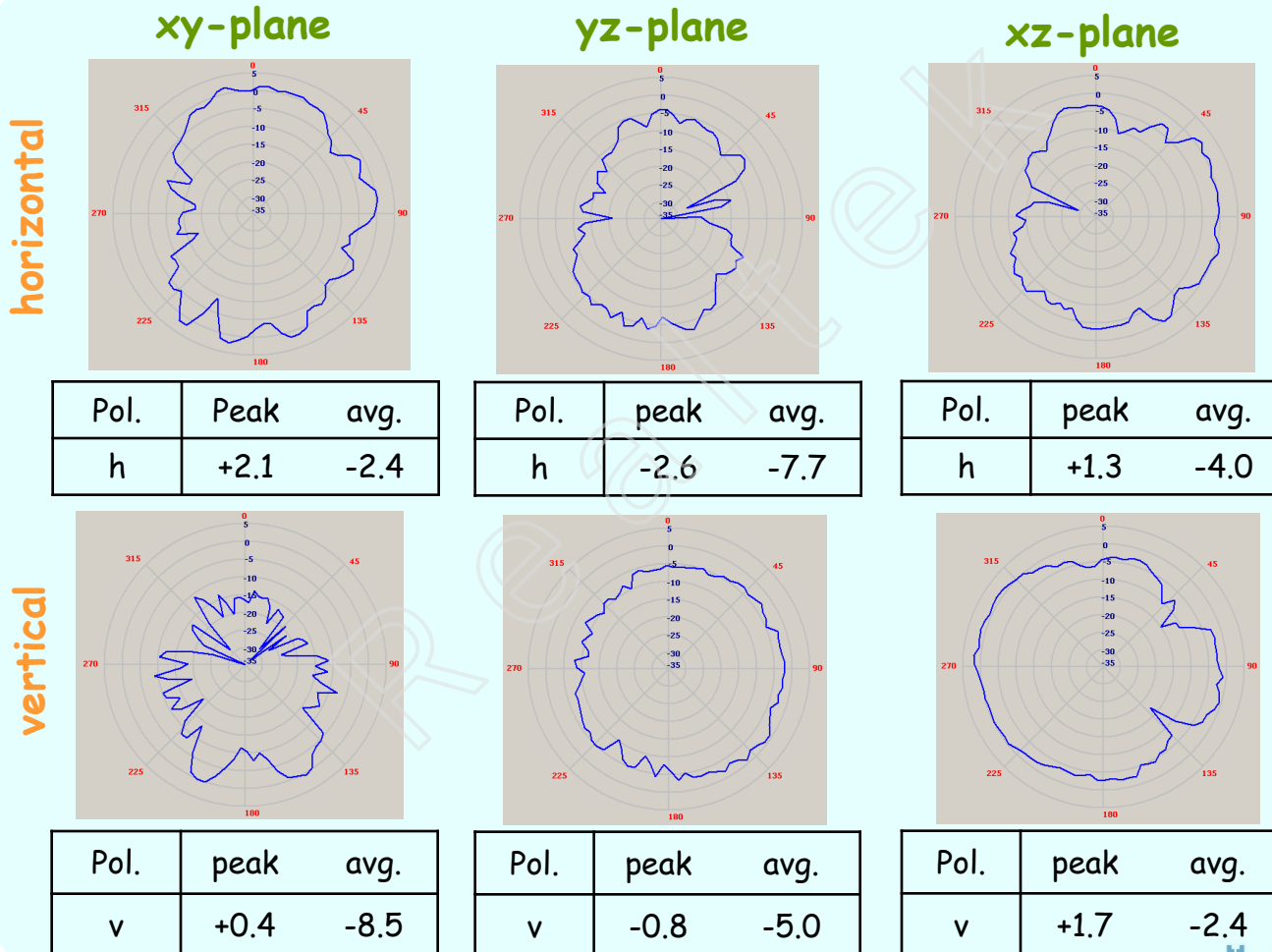
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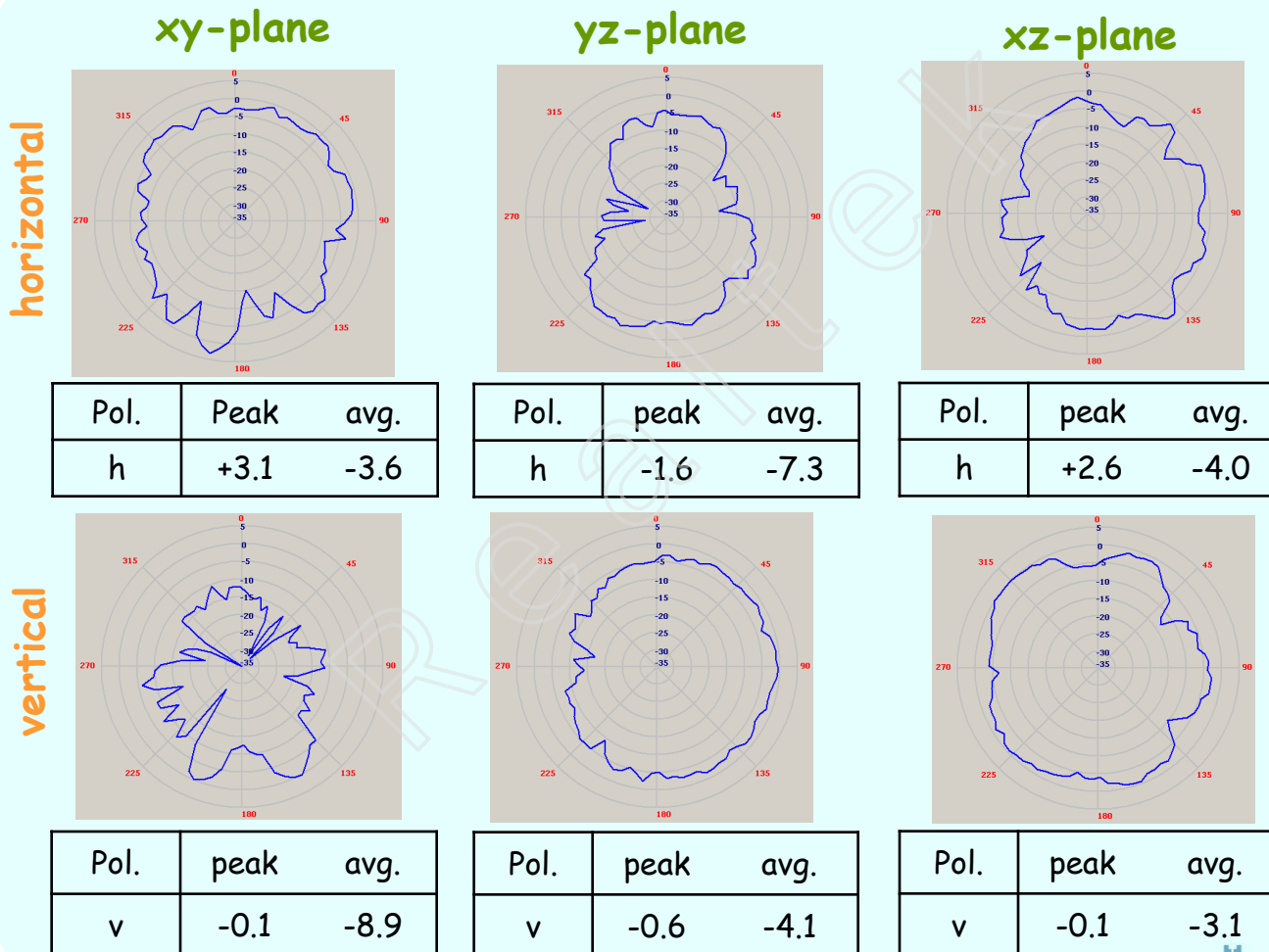
- Radiation Patterns – 5150 MHz





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- Radiation Patterns – 5500 MHz



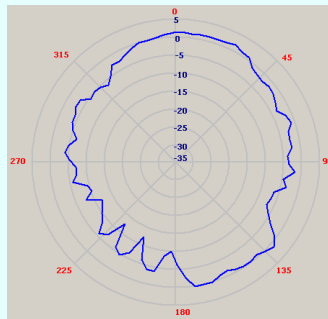


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- Radiation Patterns – 5850 MHz

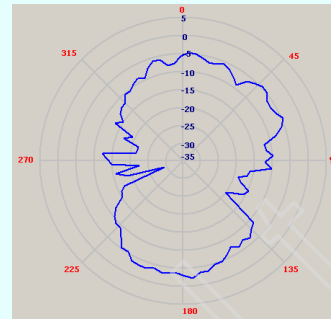
xy-plane

horizontal



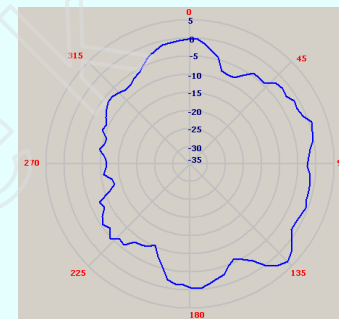
Pol.	Peak	avg.
h	+1.5	-2.5

yz-plane



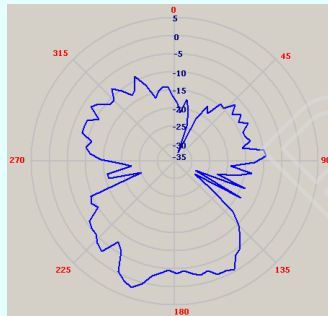
Pol.	peak	avg.
h	-2.3	-7.7

xz-plane

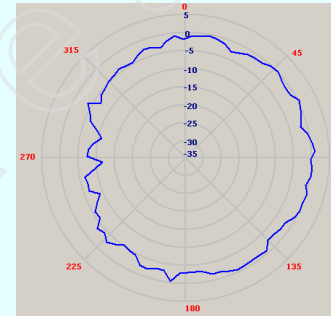


Pol.	peak	avg.
h	+3.1	-3.2

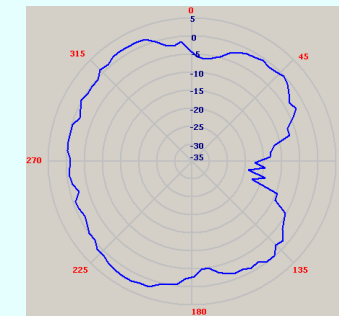
vertical



Pol.	peak	avg.
v	+2.1	-7.2



Pol.	peak	avg.
v	+0.9	-2.5



Pol.	peak	avg.
v	+2.2	-1.5



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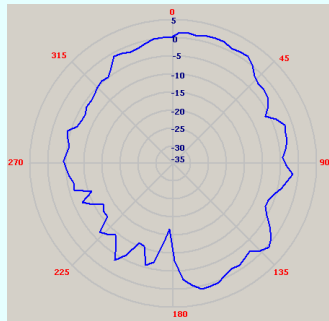


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- Radiation Patterns – 5925 MHz

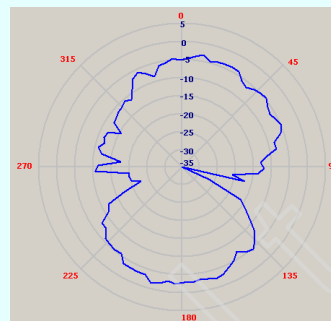
xy-plane

horizontal



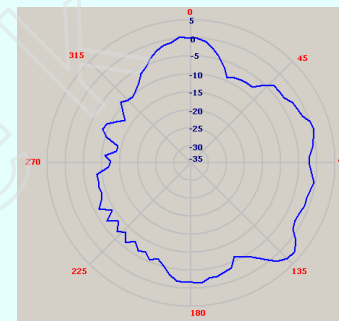
Pol.	Peak	avg.
h	+1.5	-2.8

yz-plane



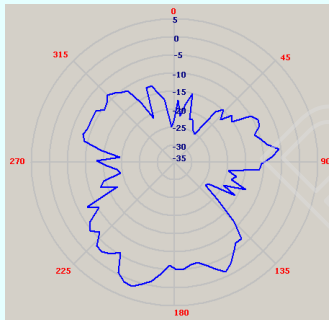
Pol.	peak	avg.
h	-1.6	-6.6

xz-plane

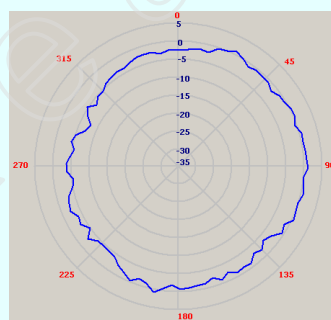


Pol.	peak	avg.
h	+2.9	-3.5

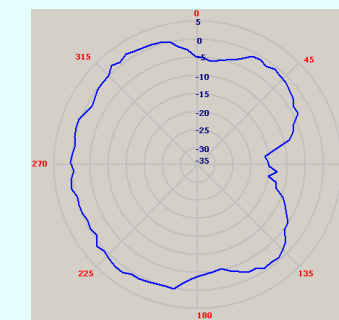
vertical



Pol.	peak	avg.
v	+1.3	-7.6



Pol.	peak	avg.
v	+1.0	-1.9



Pol.	peak	avg.
v	+1.4	-1.7



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- Antenna Gain Table

Frequency (MHz)	Peak gain (dBi)
2400	+1.8
2450	+3.5
2480	+3.7

Frequency (MHz)	Peak gain (dBi)
5150	+2.1
5500	+3.1
5850	+3.1
5925	+2.9

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