



Right Antenna Links for the Smart Ant

FIC LM

WLAN Antenna Test Report



SmartAnt Telecom

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Specimen Information



FIC LM

Antenna	Left Antenna	Right Antenna
Connector	IPX	
Cable	RF - $\phi 1.13$ mm	
Cable Length	780 mm	610 mm
Cable Color	gray	black
Placement	Left-up side of LCD panel	Right-up side of LCD panel

Note: (1) The insertion loss of 1m $\phi 1.13$ mm-Nissie-like cable at 2.4 GHz is around 2.9 dB.

(2) The insertion loss of 1m $\phi 1.13$ mm-Nissie-like cable at 5.9 GHz is around 4.9 dB.



Right Antenna Links for the Smart Ant

Antenna Placement

Left Antenna



Right Antenna





Specifications: Spec. for 2.4 GHz Band

Frequency (MHz)	2400 - 2500
VSWR	2.0 : 1 max.
Average Gain	≥ -4 dBi
Peak Gain	NA.
Ripple	NA.

Note: (1) The gain spec. is under the limitation of at most 1.5 dB cable loss.

(2) The insertion loss of 1m ϕ 1.13mm-Nissie-like cable at 2.5 GHz is around 2.9 dB.



Specifications: Spec. for 5 GHz Band

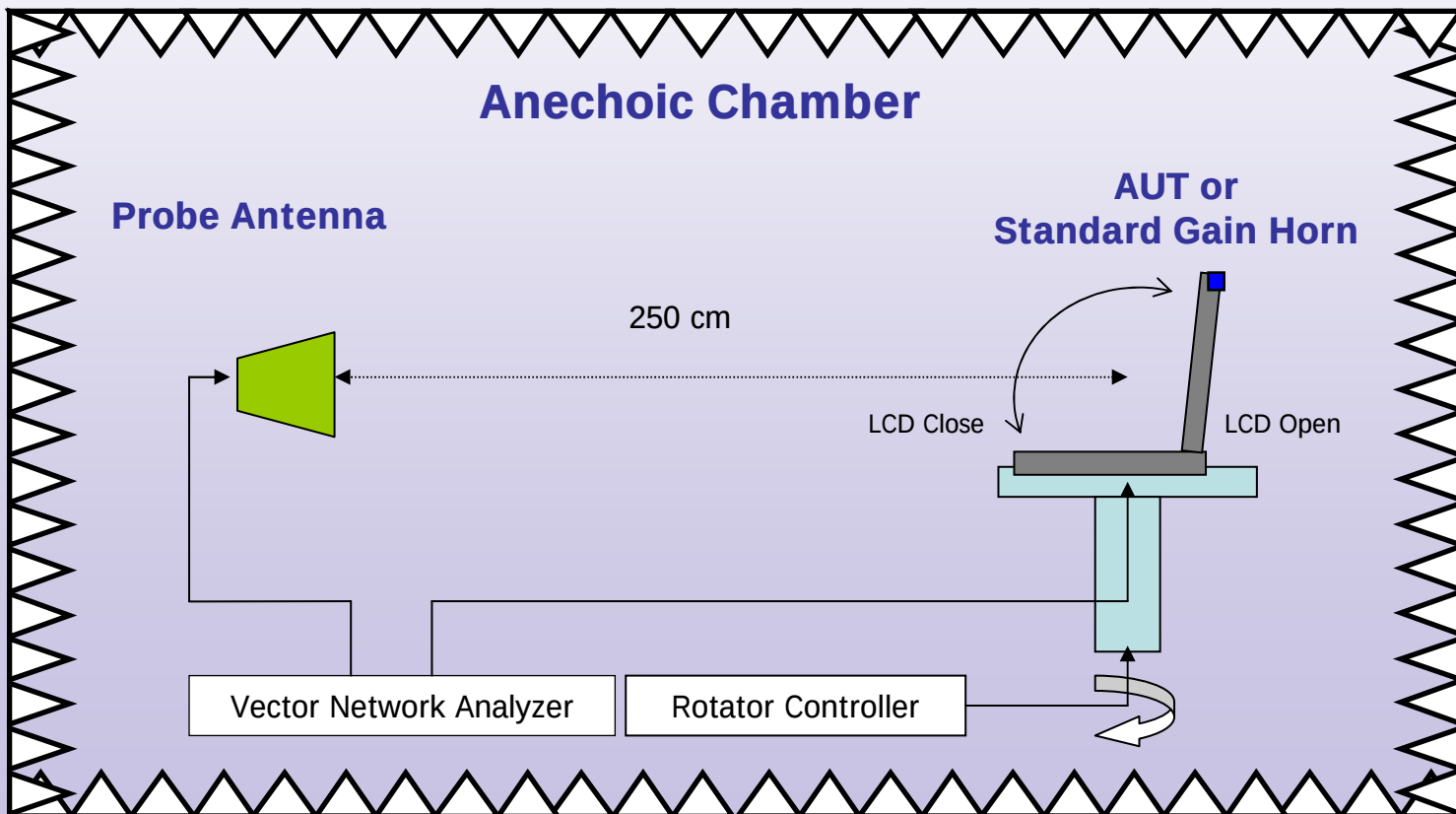
Frequency (MHz)	5150 – 5350	5475 – 5725	5725 – 5875
VSWR	2.0 : 1 max.		
Average Gain	≥ -4.8 dBi	≥ -4.8 dBi	≥ -4.8 dBi
Peak Gain	NA.	NA.	NA.
Ripple	NA.	NA.	NA.

Note: (1) The gain spec. is under the limitation of at most 2.5 dB cable loss.

(2) The insertion loss of 1m ϕ 1.13mm-Nissie-like cable at 5.9 GHz is around 4.9 dB.

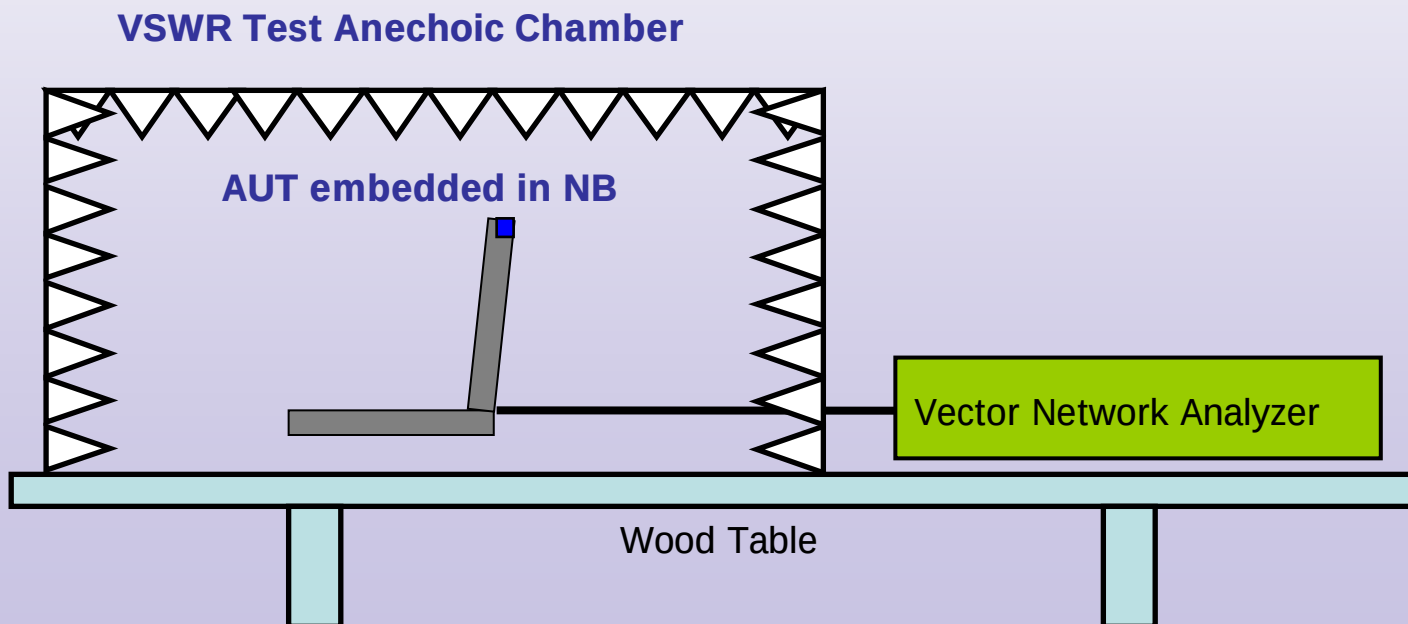


Test Setup: Radiation Pattern and Gain Test Setup





Test Setup: VSWR Test Setup





360° Pattern Definition

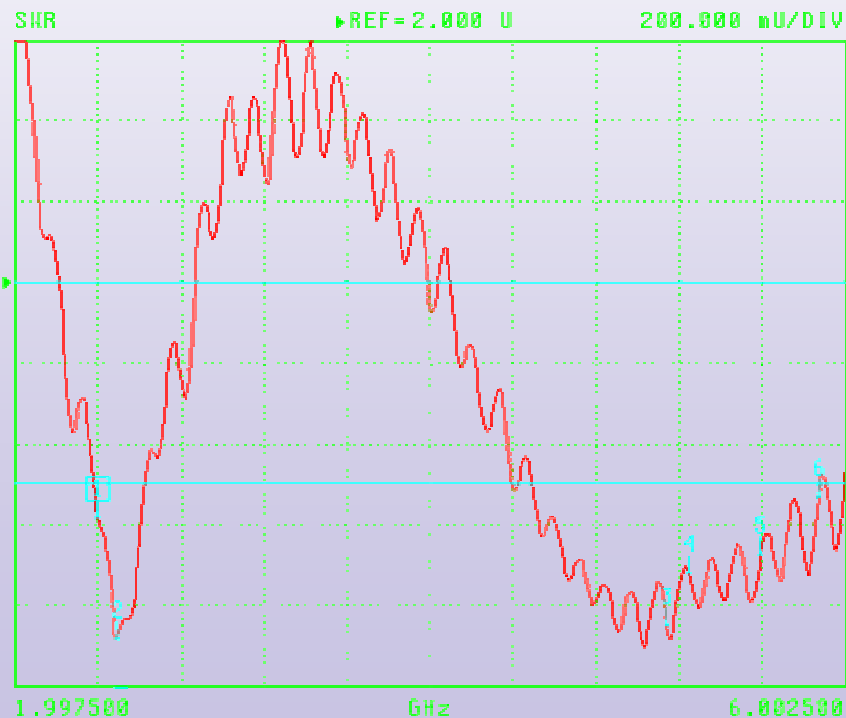




VSWR Test Result: Left Antenna

Frequency (MHz)	VSWR
2400	1.42
2450	1.32
2500	1.12
5150	1.15
5250	1.28
5350	1.31
5475	1.34
5600	1.32
5725	1.37
5800	1.35
5875	1.47

S11 FORWARD REFLECTION



CH 1 - S11
REFERENCE PLANE
0.0000 mm

MARKER 1
2.402500 GHz
1.418 U

MARKER TO MAX
MARKER TO MIN

2 2.500000 GHz
1.116 U

3 5.147500 GHz
1.158 U

4 5.252500 GHz
1.278 U

5 5.597500 GHz
1.324 U

6 5.875000 GHz
1.466 U

MARKER READOUT
FUNCTIONS



Gain Test: Left Antenna

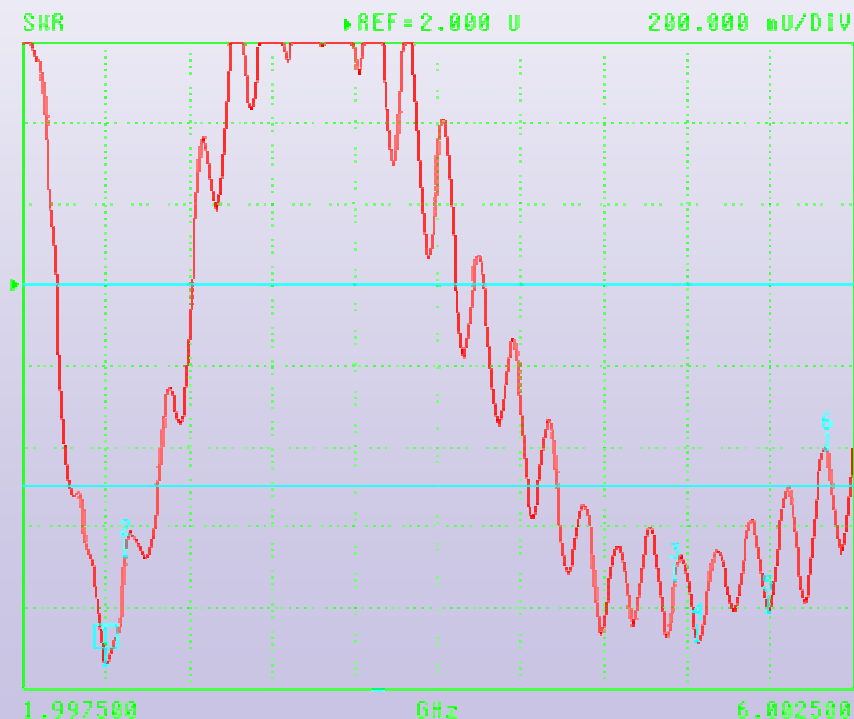
Frequency (MHz)	Peak Gain (dBi)	Average Gain (dBi)
2400	2.26	-2.58
2450	1.93	-2.31
2500	1.68	-2.98
5150	-0.80	-4.66
5250	-0.33	-4.82
5350	-1.37	-5.22
5475	-0.67	-5.03
5600	-1.93	-4.97
5725	-1.88	-5.25
5800	-2.13	-5.33
5875	-2.16	-5.22



VSWR Test Result: Right Antenna

Frequency (MHz)	VSWR
2400	1.06
2450	1.12
2500	1.33
5150	1.27
5250	1.12
5350	1.34
5475	1.33
5600	1.18
5725	1.40
5800	1.30
5875	1.59

S11 FORWARD REFLECTION



CH 1 - S11
REFERENCE PLANE
0.0000 mm

MARKER 1
2.402500 GHz
1.055 U

MARKER TO MAX
MARKER TO MIN

2 2.500000 GHz
1.326 U

3 5.147500 GHz
1.266 U

4 5.252500 GHz
1.117 U

5 5.597500 GHz
1.104 U

6 5.875000 GHz
1.589 U

MARKER READOUT
FUNCTIONS



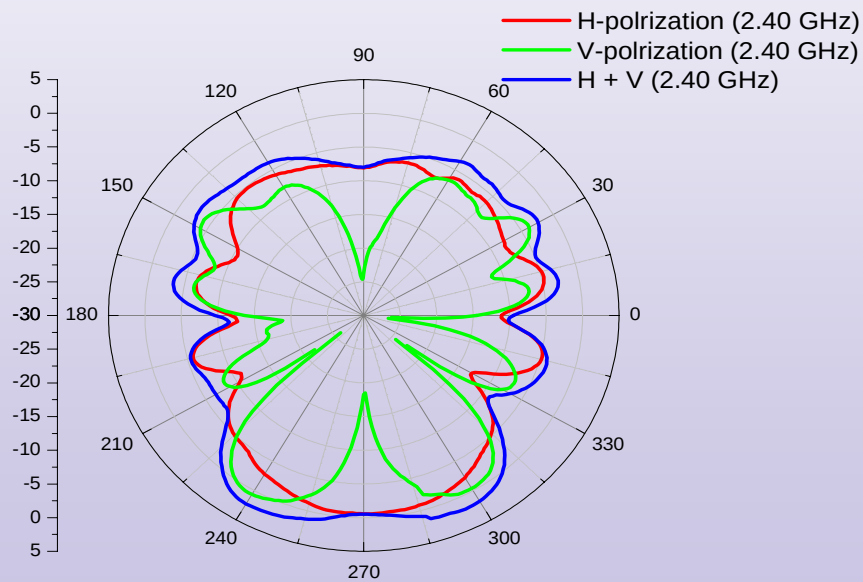
Gain Test: Right Antenna

Frequency (MHz)	Peak Gain (dBi)	Average Gain (dBi)
2400	2.30	-2.13
2450	2.00	-2.09
2500	1.95	-2.41
5150	0.59	-4.56
5250	0.46	-4.67
5350	-0.53	-4.88
5475	-1.16	-5.04
5600	-1.31	-4.80
5725	0.11	-4.78
5800	-1.69	-4.91
5875	-1.52	-4.78

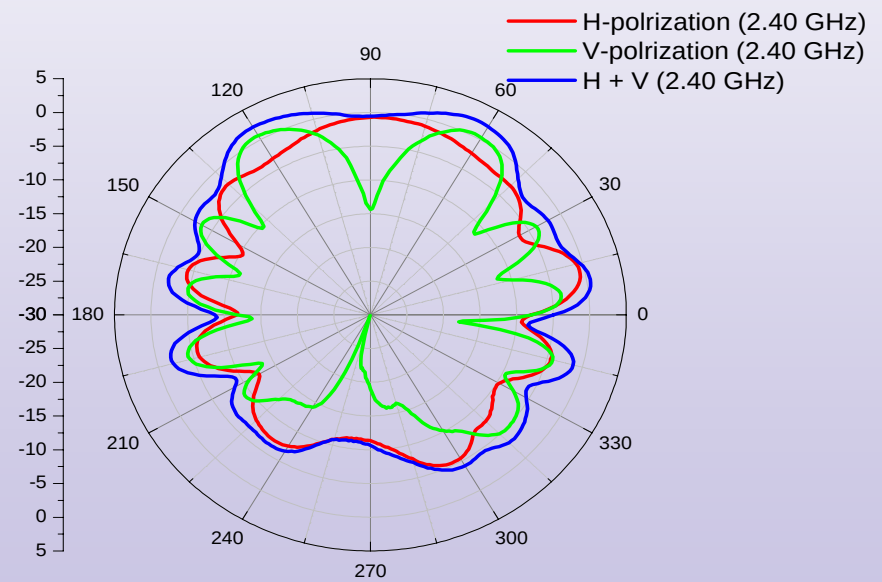


Radiation Pattern Test Result: 2400 MHz

Left Antenna



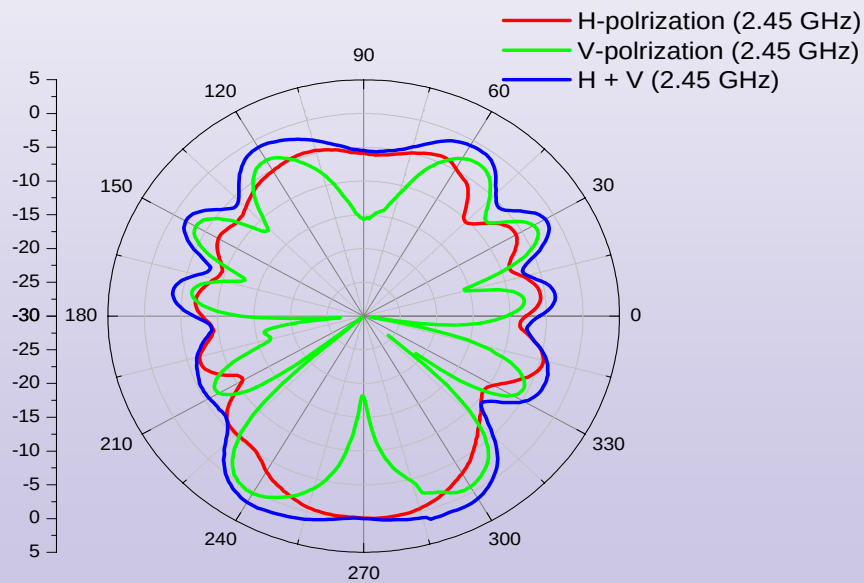
Right Antenna



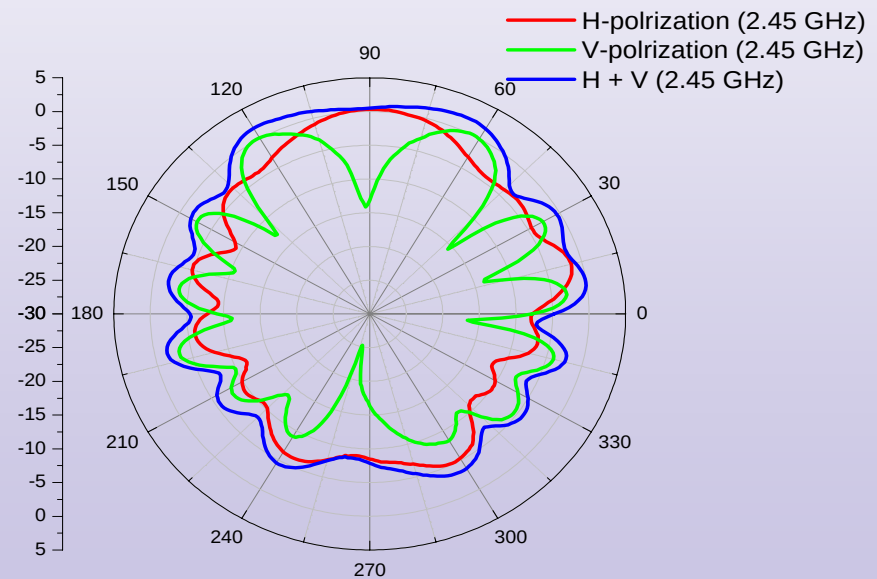


Radiation Pattern Test Result: 2450 MHz

Left Antenna



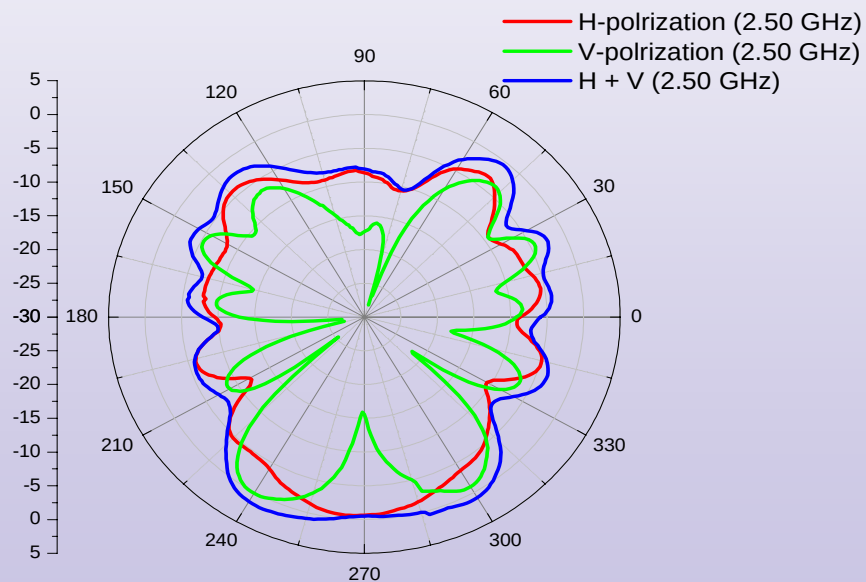
Right Antenna



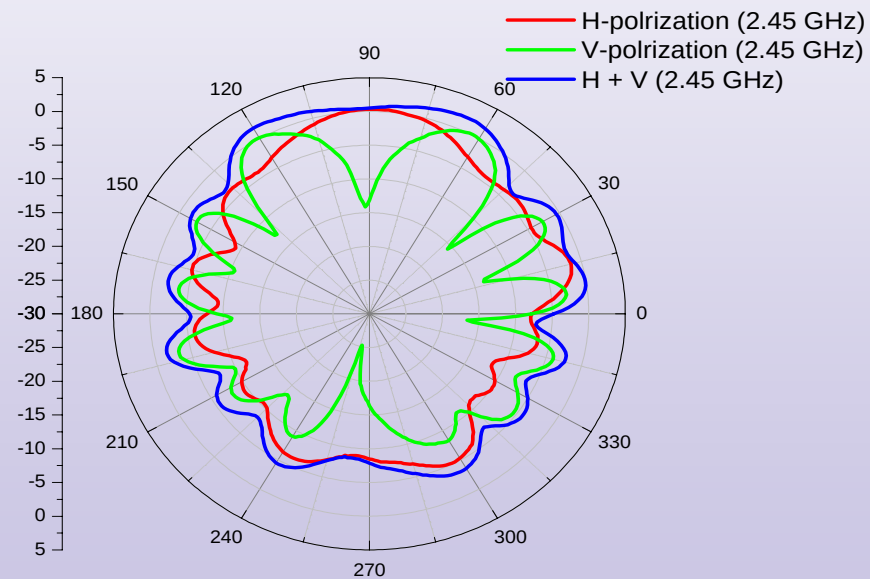


Radiation Pattern Test Result: 2500 MHz

Left Antenna



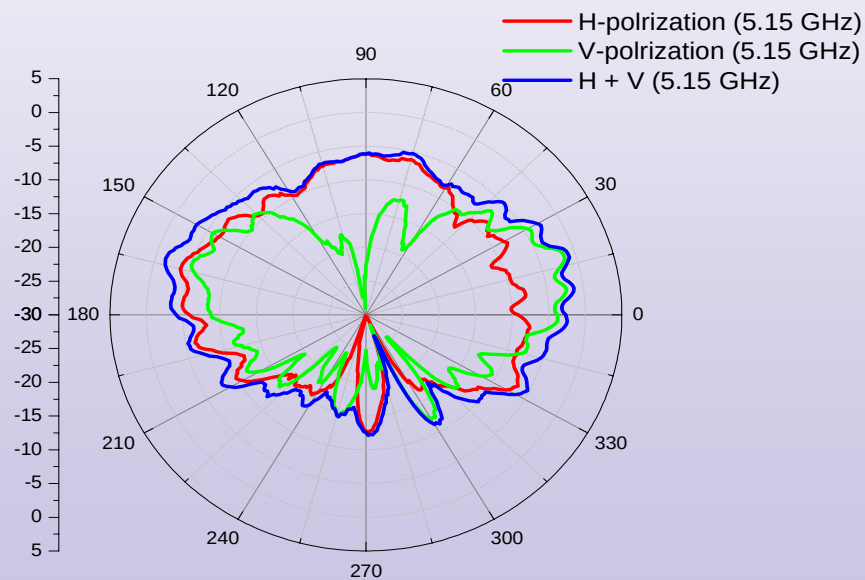
Right Antenna



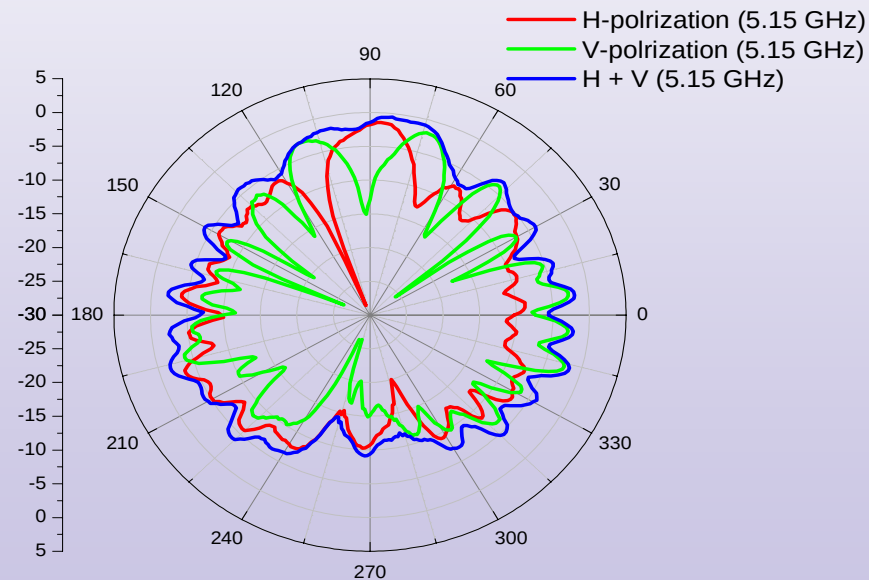


Radiation Pattern Test Result: 5150 MHz

Left Antenna



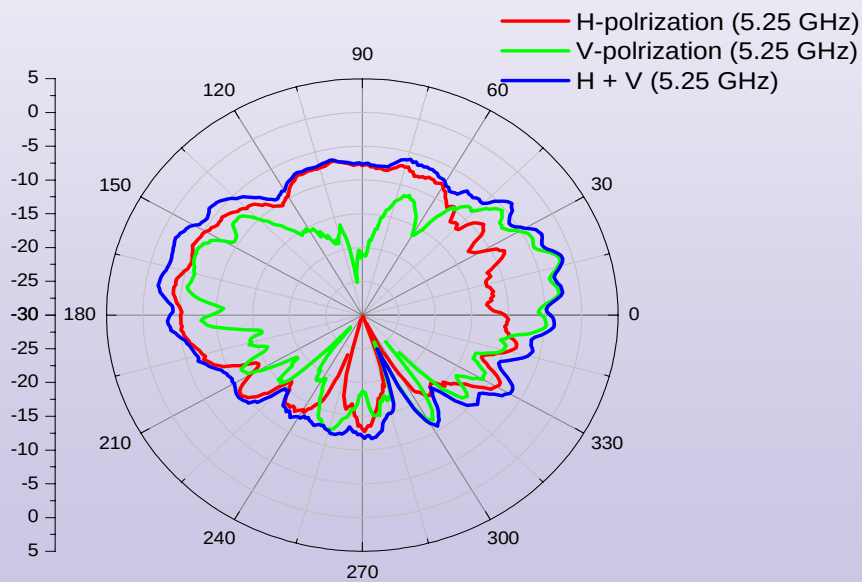
Right Antenna



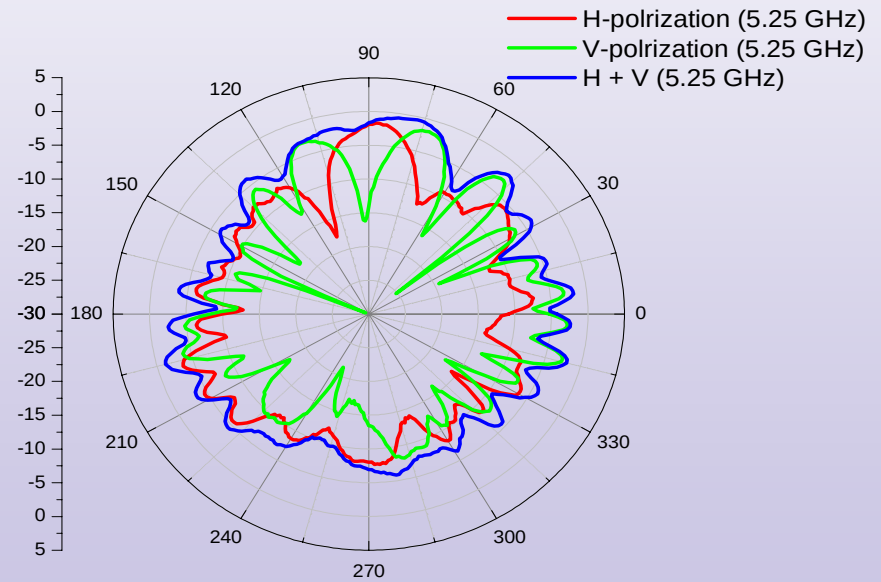


Radiation Pattern Test Result: 5250 MHz

Left Antenna



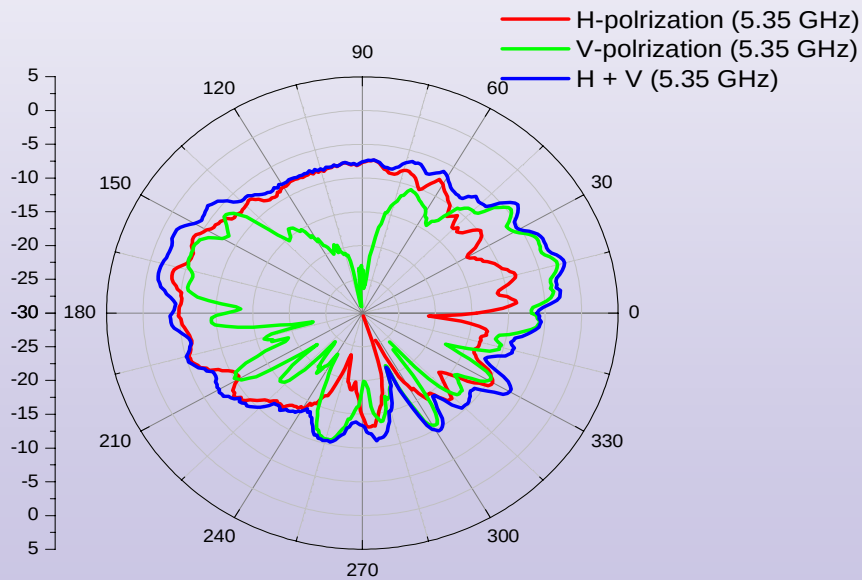
Right Antenna



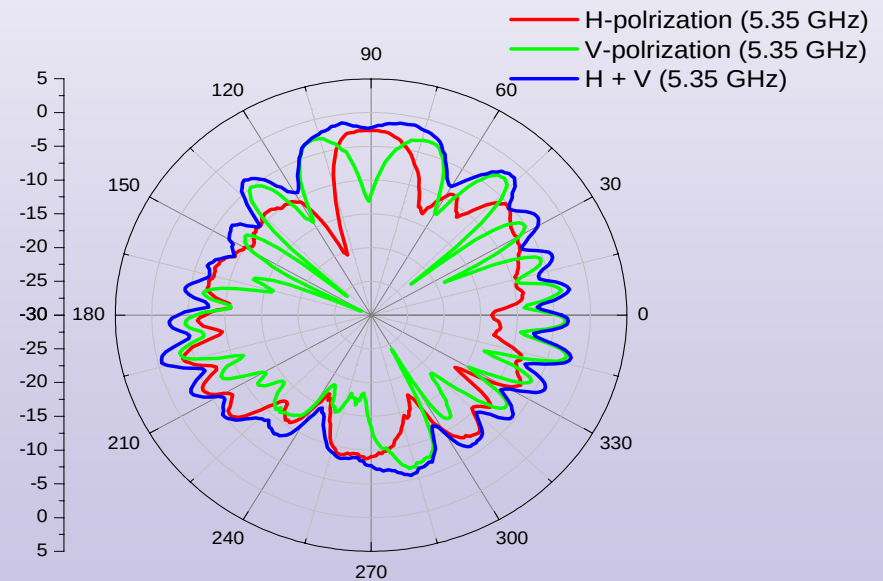


Radiation Pattern Test Result: 5350 MHz

Left Antenna



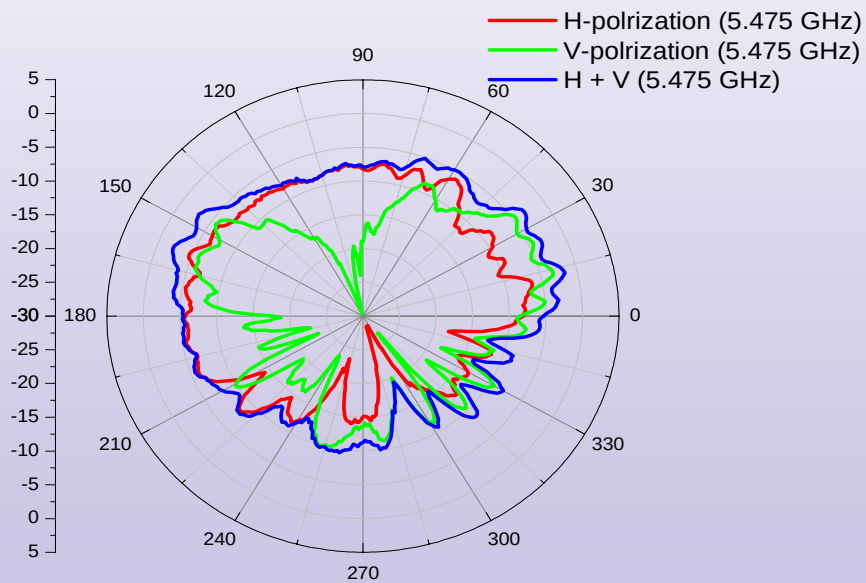
Right Antenna



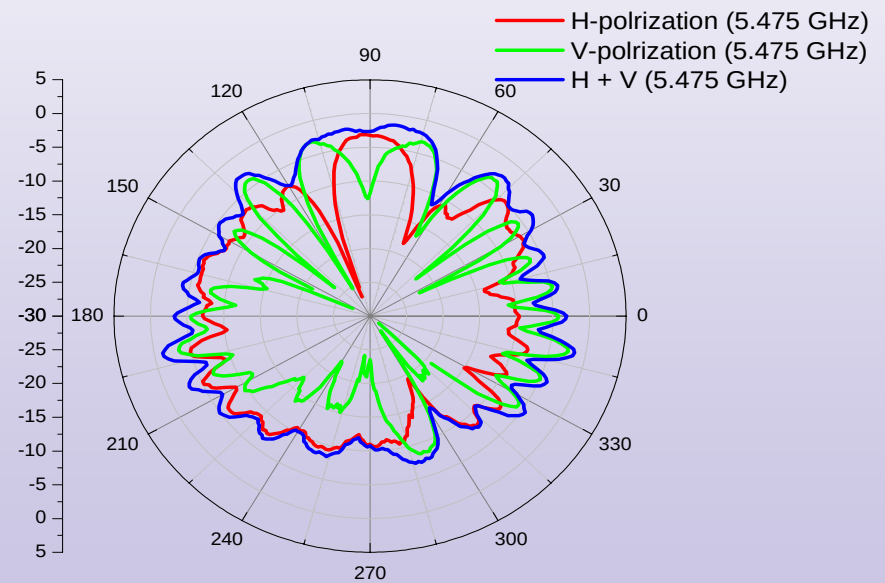


Radiation Pattern Test Result: 5475 MHz

Left Antenna



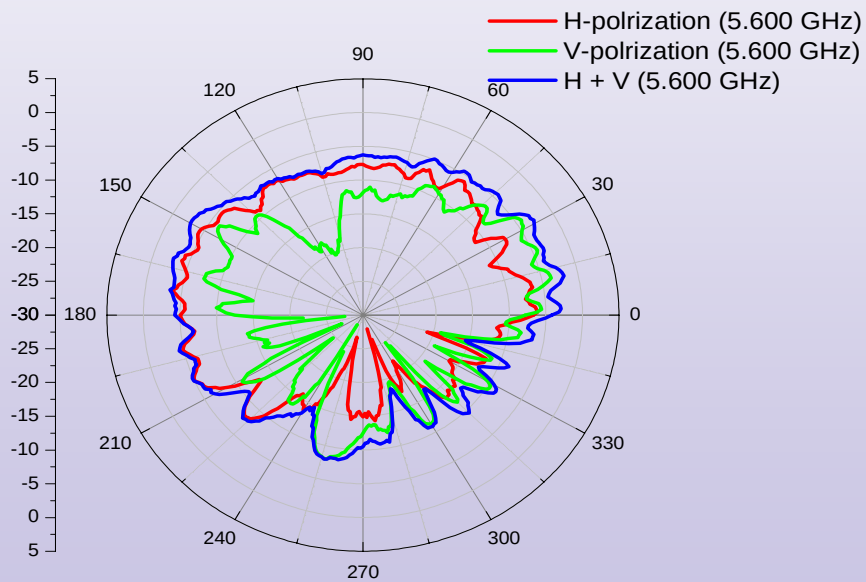
Right Antenna



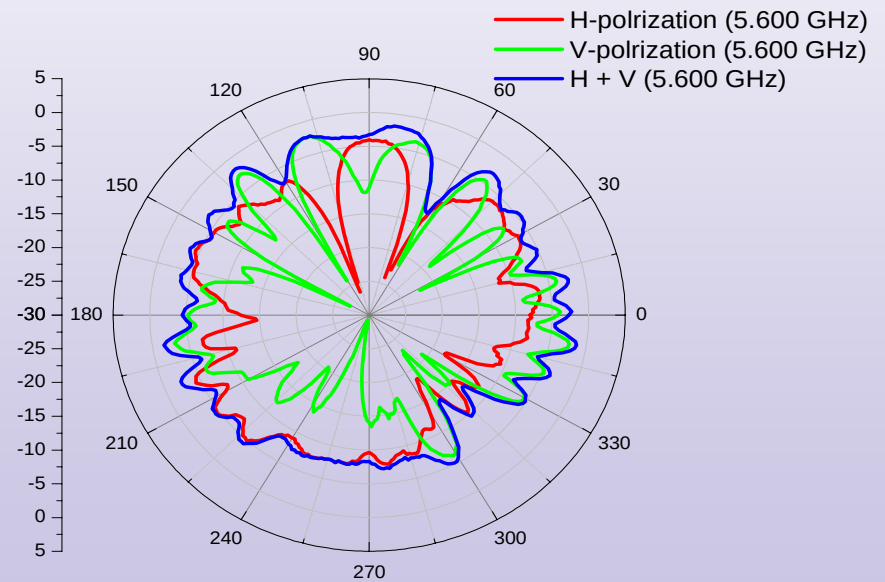


Radiation Pattern Test Result: 5600 MHz

Left Antenna



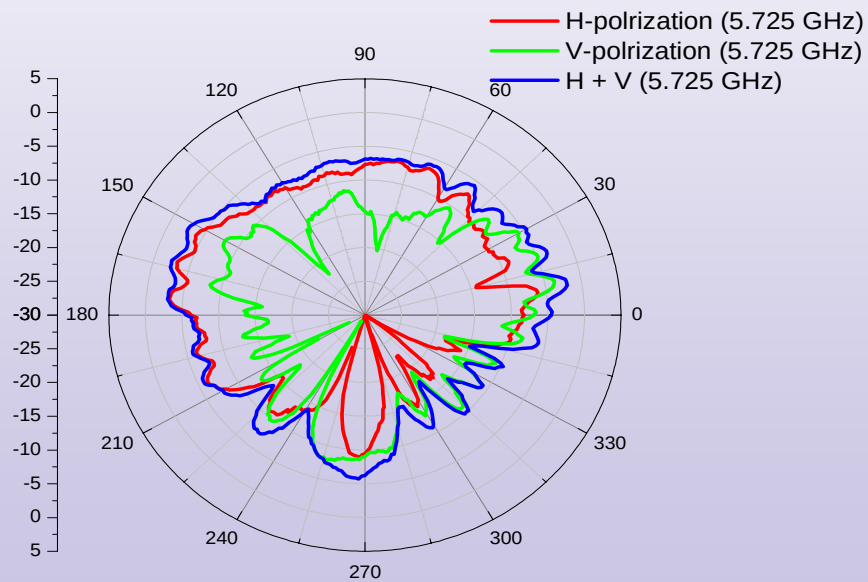
Right Antenna



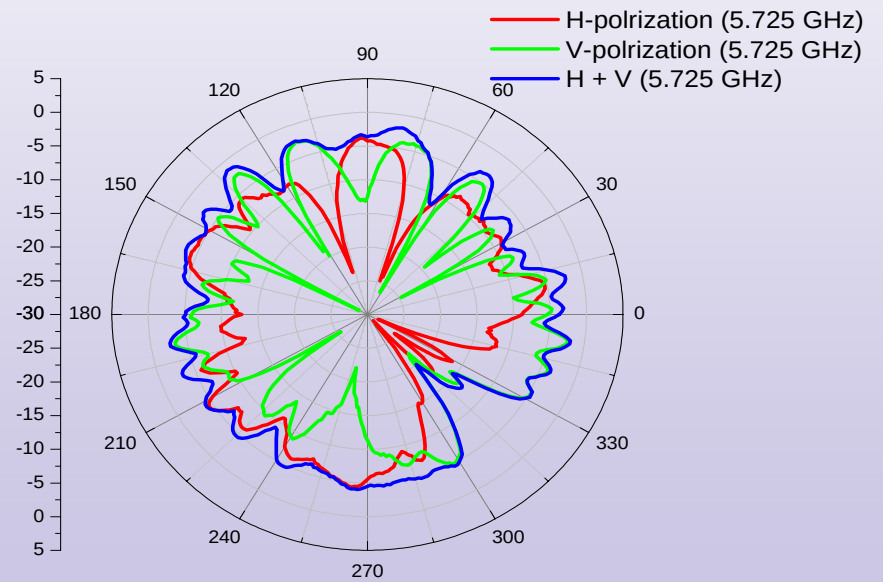


Radiation Pattern Test Result: 5725 MHz

Left Antenna



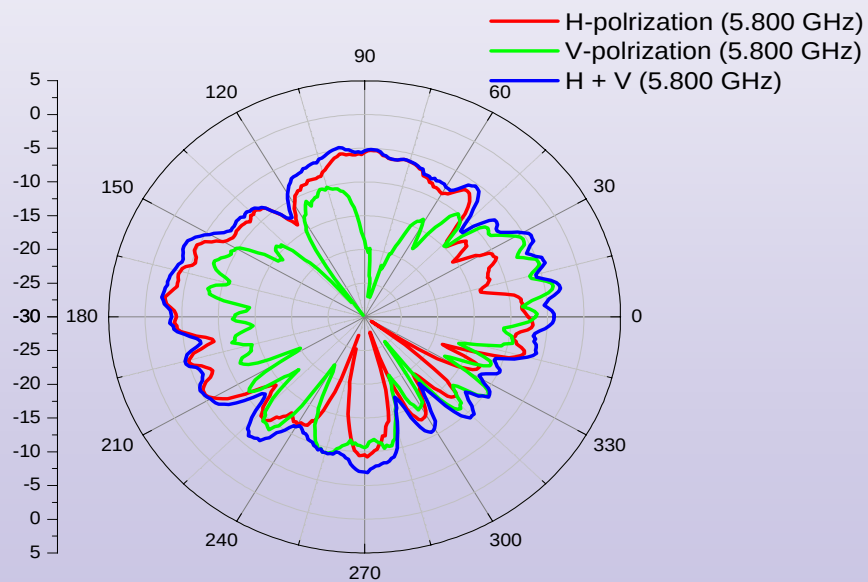
Right Antenna



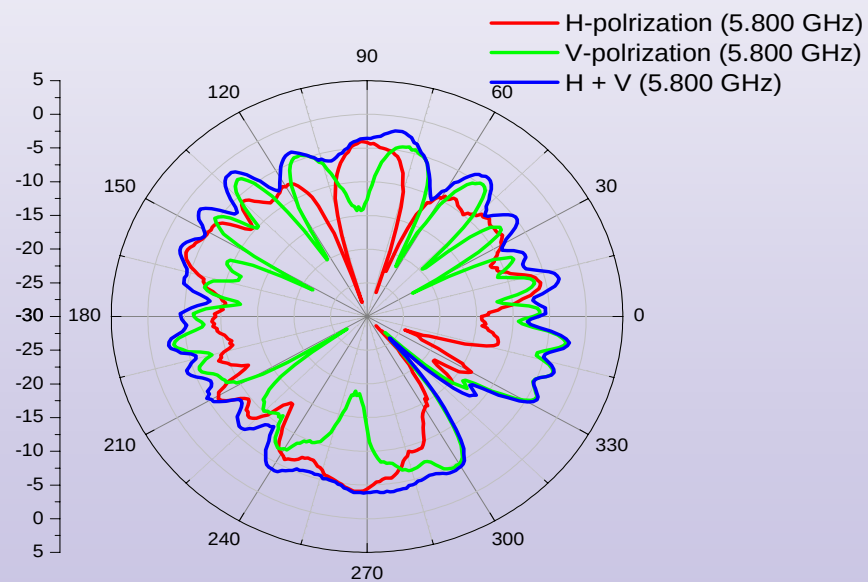


Radiation Pattern Test Result: 5800 MHz

Left Antenna



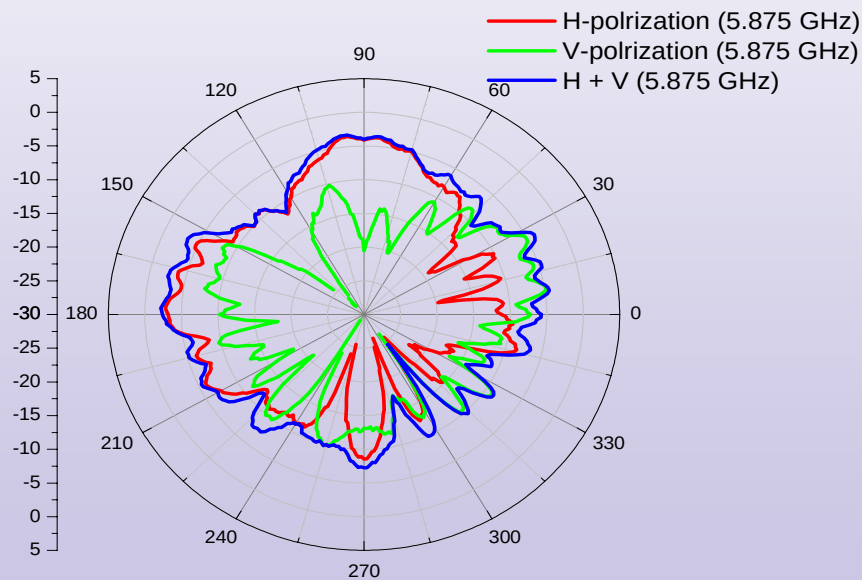
Right Antenna



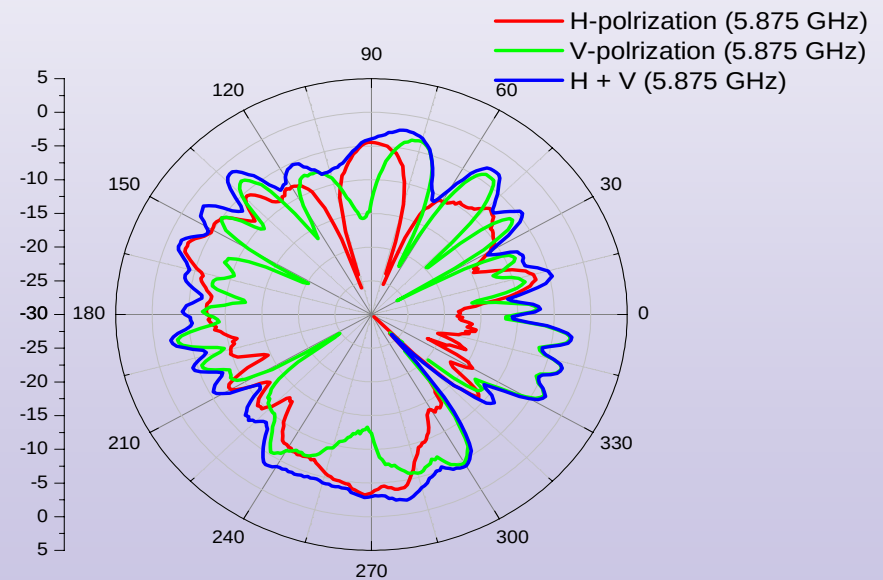


Radiation Pattern Test Result: 5875 MHz

Left Antenna



Right Antenna





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