Regulatory WWAN Antenna Information

Platform information				
Brand	**ODM**	**Platform model name**	**Platform type (ex: regular NB, convertible PC, AIO…etc)**	**SAR minimum separation (mm)**
Multinarity	Wistron	SPEA001	NB	N/A

Antenna information					
Vendor	**Type**	**Antenna Part number (Ant0 TX/RX)**	**Maximum TX Peak gain (Ant0 TX/RX)**	**Antenna Part number (Ant1 TX/RX)**	**Maximum TX Peak gain (Ant1 TX/RX)**
High-Tek Electronics Co., Ltd	**PIFA**	**025.9022G.0001 (0ACAR021031N)**	1.49 dBi	**025.9022H.0001 (0ACAR021032N)**	2.68 dBi
Vendor	**Type**	**Antenna Part number (Ant2 TX/RX)**	**Maximum TX Peak gain (Ant2 TX/RX)**	**Antenna Part number (Ant3 RX)**	**N/A**
High-Tek Electronics Co., Ltd	**PIFA**	**025.9022I.0001 (0ACAR021033N)**	2.47 dBi	**025.9022J.0001 (0ACAR021034N)**	1.03 dBi

Module information	
Model	**Form factor and suffixes (NGW/ HMW AND AN/ NB/ BN….)**

Antenna Sample / Antenna Data
Requirements for worldwide regulatory approval

Section	Description of Required OEM / ODM Antenna Information	US / IC
1A	Part Number for Antenna Assembly	Required
1B	Antenna Manufacturer Name	Required
1C	Description of Antenna Type	Required
1D	Tx antenna Gain(Peak Gain W/ cable loss) *	Required
2	Dimensioned Photographs and Drawings of Tx and Rx antennas	Required
3	Radiation patterns of antennas loaded in the host platform.	N/A
4	Platform model name / number - correlated to antenna manufacturer and antenna part number	Required
5	Photograph(s) or Drawings showing location of antennas in platform. (S. Korea requires photographs of antennas for approval submission). Taiwan requires pictures of each antenna type shown in the system.	Required
6	Mech. drawings / photos with dimensions of antenna locations and distance from end-user (For evaluation of SAR testing requirement).	Required
7	Photograph(s) or Drawings showing the location of all antennas (WLAN, other) and distance between those transmitting antennas. Information will be used to evaluate whether co-location testing is required.	Required
8	Local representative contact information for LMA/ PARS process.	Required

Antenna Information

Section 1. Antenna Assembly Specifications

- **Antenna Peak Gain required being test in system basis.**

Ant0 P/N: 025.9022G.0001(0ACAR021031N) Ant Type: PIFA

Communication System	Band	Frequency(MHz) from low to high spectrum		*Peak Gain w/ Cable loss (dBi)	Avg. Gain w/ Cable Loss (dBi)	Max VSWR	Transmit Band
LTE/5GNR	2	1850	1910	0.25	-4.63	4	Yes
LTE	4	1710	1755	1.47	-4.90	4	Yes
LTE/5GNR	5	824	849				No
LTE/5GNR	7	2500	2570	0.55	-3.90	4	Yes
LTE/5GNR	12	699	716				No
LTE	13	777	787				No
LTE	14	788	798				No
LTE	17	704	716				No
LTE/5GNR	25	1850	1915	0.25	-4.63	4	Yes
LTE	26	814	849				No
LTE	30	2305	2315	-3.06	-5.38	4	Yes
LTE	38	2570	2620	0.78	-3.77	4	Yes
LTE/5GNR	41	2496	2690	0.78	-3.77	4	Yes
LTE	42	3400	3600		-2.52	3	No
LTE	43	3600	3800		-3.04	3	No
LTE	48	3550	3700		-3.04	3	No
LTE/5GNR	66	1710	1780	1.47	-4.83	4	Yes
LTE/5GNR	71	663	698				No
5GNR	77	3700	3980		-3.10	3	No

Ant1 P/N: 025.9022H.0001(0ACAR021032N) Ant Type: PIFA

Communication System	Band	Frequency(MHz) from low to high spectrum		*Peak Gain w/ Cable loss (dBi)	Avg. Gain w/ Cable Loss (dBi)	Max VSWR	Transmit Band
LTE/5GNR	2	1850	1910		-3.77	3	No
LTE	4	1710	1755		-4.52	3	No
LTE/5GNR	5	824	849	2.68	-4.50	4	Yes
LTE/5GNR	7	2500	2570		-4.50	3	No
LTE/5GNR	12	699	716	-0.2	-3.62	4.5	Yes
LTE	13	777	787	1.54	-3.42	4.5	Yes
LTE	14	788	798	2.42	-4.12	4	Yes
LTE	17	704	716	-0.2	-3.69	4.5	Yes
LTE/5GNR	25	1850	1915		-3.77	3	No
LTE	26	814	849	2.68	-4.50	4	Yes
LTE	30	2305	2315		-4.49	3	No
LTE	38	2570	2620		-3.57	3	No
LTE/5GNR	41	2496	2690		-3.47	3	No
LTE	42	3400	3600		-3.74	3	No
LTE	43	3600	3800		-4.54	3	No
LTE	48	3550	3700		-4.54	3	No
LTE/5GNR	66	1710	1780		-4.52	3	No
LTE/5GNR	71	663	698	1.22	-3.32	4.5	Yes
5GNR	77	3700	3980		-4.43	3	No

Ant2 P/N: 025.9022I.0001(0ACAR021033N) Ant Type: PIFA

Communication System	Band	Frequency(MHz) from low to high spectrum		*Peak Gain w/ Cable loss (dBi)	Avg. Gain w/ Cable Loss (dBi)	Max VSWR	Transmit Band
LTE/5GNR	2	1850	1910		-4.15	3	No
LTE	4	1710	1755		-4.82	3	No
LTE/5GNR	5	824	849		-4.21	3	No
LTE/5GNR	7	2500	2570		-4.61	3	No
LTE/5GNR	12	699	716		-3.70	3	No
LTE	13	777	787		-4.50	3	No
LTE	14	788	798		-4.33	3	No
LTE	17	704	716		-3.70	3	No
LTE/5GNR	25	1850	1915		-4.15	3	No
LTE	26	814	849		-4.21	3	No
LTE	30	2305	2315		-3.63	3	No
LTE	38	2570	2620		-4.61	3	No
LTE/5GNR	41	2496	2690	0.78	-4.61	3	Yes
LTE	42	3400	3600		-5.92	4.5	No
LTE	43	3600	3800		-6.28	4.5	No
LTE	48	3550	3700	-4.29	-6.25	4.5	Yes
LTE/5GNR	66	1710	1780		-3.99	3	No
LTE/5GNR	71	663	698		-4.06	4.5	No
5GNR	77	3700	3980	-4.11	-5.40	4.5	Yes

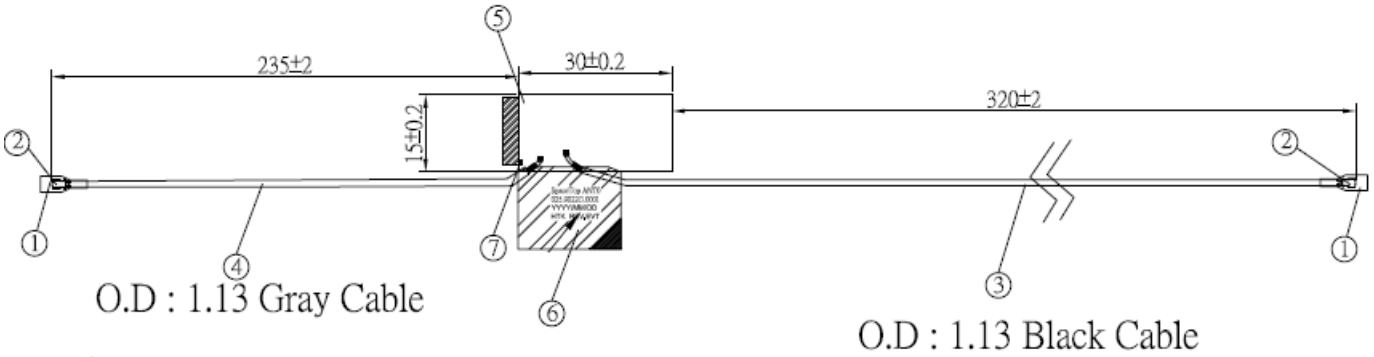
Ant3 025.9022J.0001(0ACAR021034N) Ant Type: PIFA

Communication System	Band	Frequency(MHz) from low to high spectrum		*Peak Gain w/ Cable loss (dBi)	Avg. Gain w/ Cable Loss (dBi)	Max VSWR	Transmit Band
LTE/5GNR	2	1850	1910		-4.13	3	No
LTE	4	1710	1755		-3.72	3	No
LTE/5GNR	5	824	849				No
LTE/5GNR	7	2500	2570		-4.35	3	No
LTE/5GNR	12	699	716				No
LTE	13	777	787				No
LTE	14	788	798				No
LTE	17	704	716				No
LTE/5GNR	25	1850	1915		-4.13	3	No
LTE	26	814	849				No
LTE	30	2305	2315		-3.81	3	No
LTE	38	2570	2620		-4.06	3	No
LTE/5GNR	41	2496	2690		-4.06	3	No
LTE	42	3400	3600		-4.01	3	No
LTE	43	3600	3800		-4.09	3	No
LTE	48	3550	3700		-4.21	3	No
LTE/5GNR	66	1710	1780		-3.72	3	No
LTE/5GNR	71	663	698				No
5GNR	77	3700	3980		-3.90	3	No

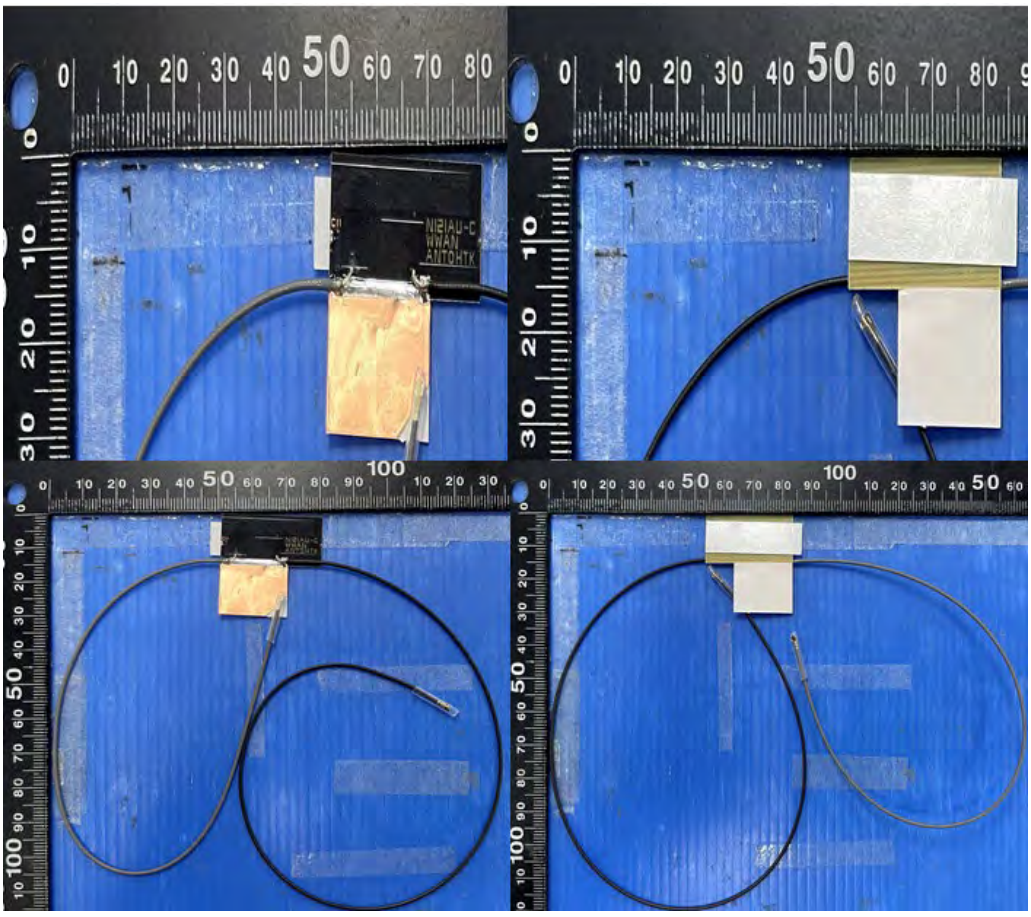
Section 2. Dimensioned Photos or Drawings of Antennas

	Ant supplier	Part number	Drawing	Photo
Ant0	High-Tek Electronics Co., Ltd	025.9022G.0001 (0ACAR021031N)	V	V
Ant1	High-Tek Electronics Co., Ltd	025.9022H.0001 (0ACAR021032N)	V	V
Ant2	High-Tek Electronics Co., Ltd	025.9022I.0001 (0ACAR021033N)	V	V
Ant3	High-Tek Electronics Co., Ltd	025.9022J.0001 (0ACAR021034N)	V	V

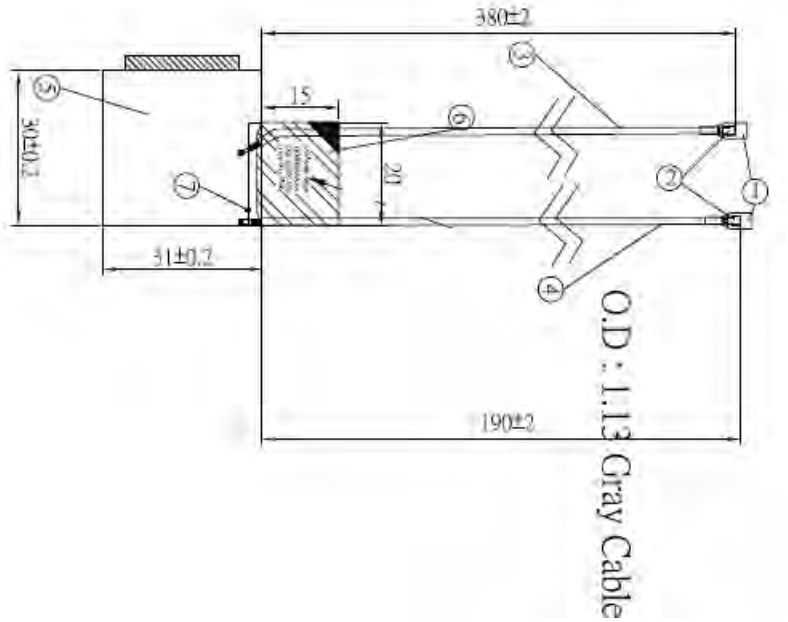
Ant0 Dimensioned Drawing:



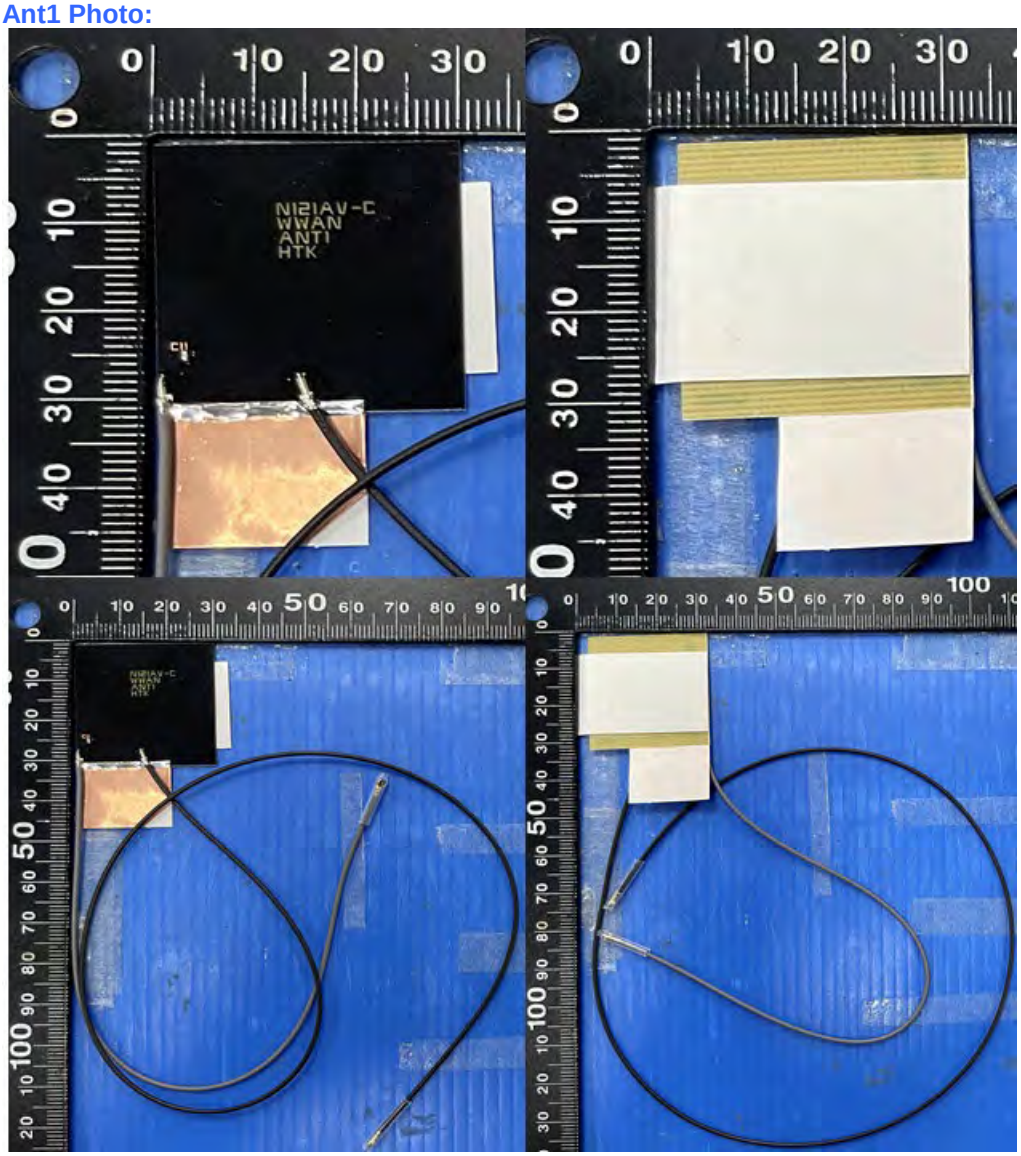
Ant0 Photo:



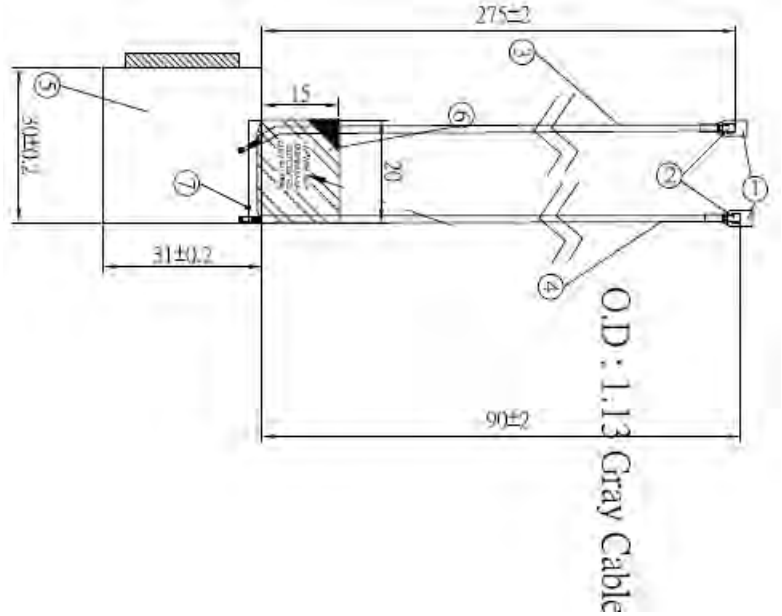
Ant1 Dimensioned Drawing:



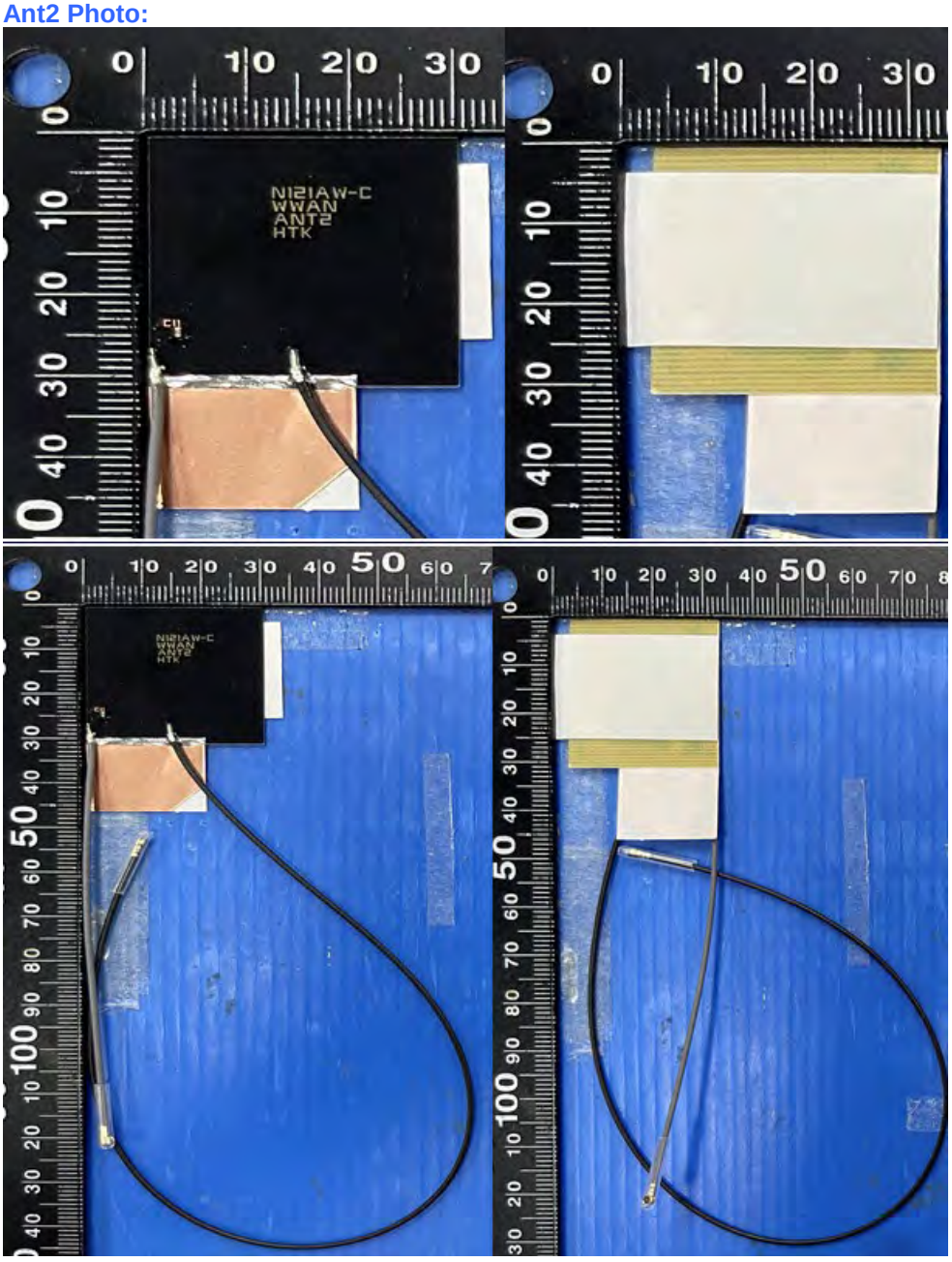
Ant1 Photo:



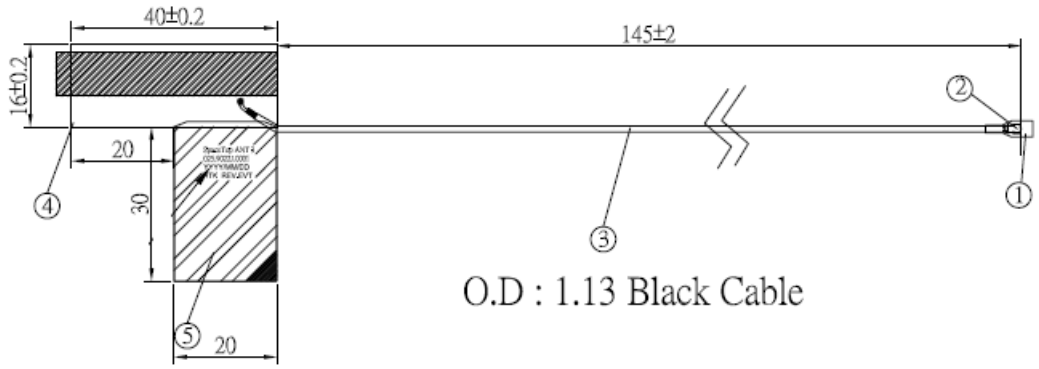
Ant2 Dimensioned Drawing:



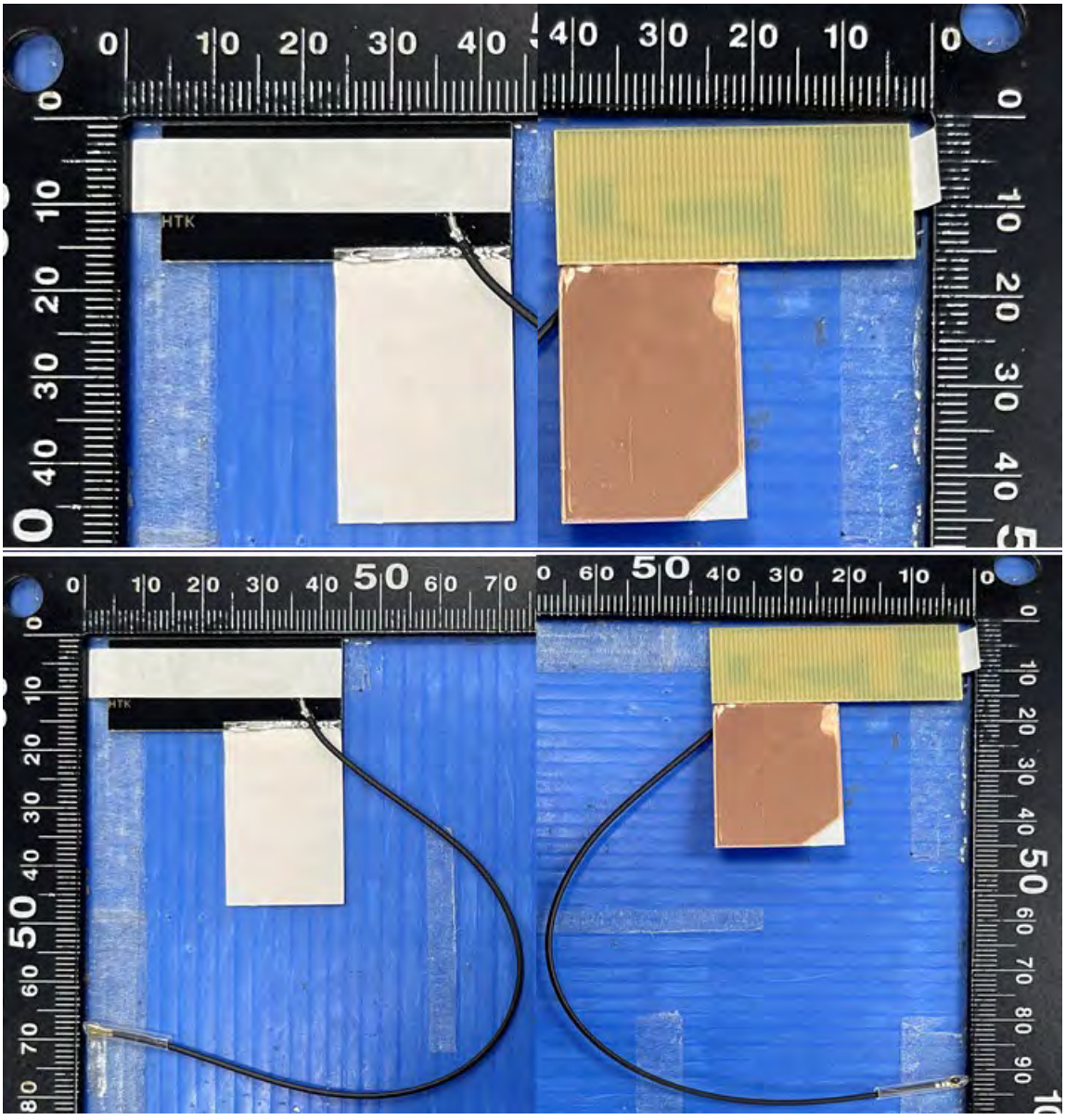
Ant2 Photo:

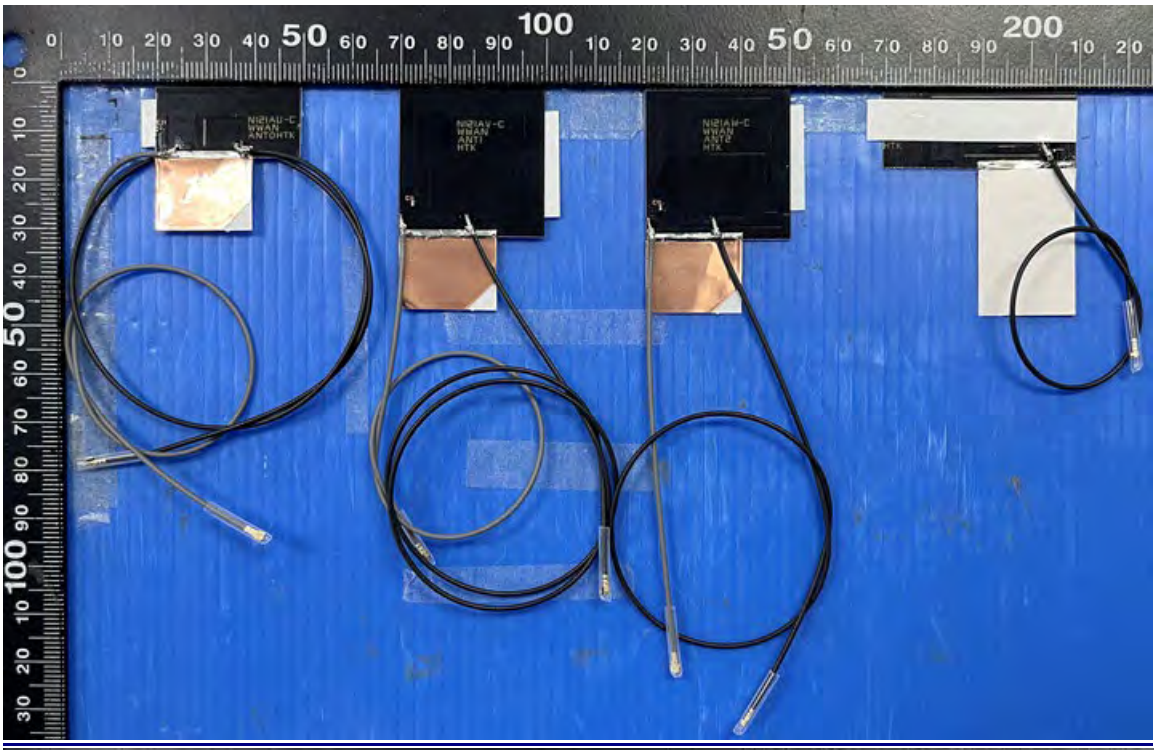


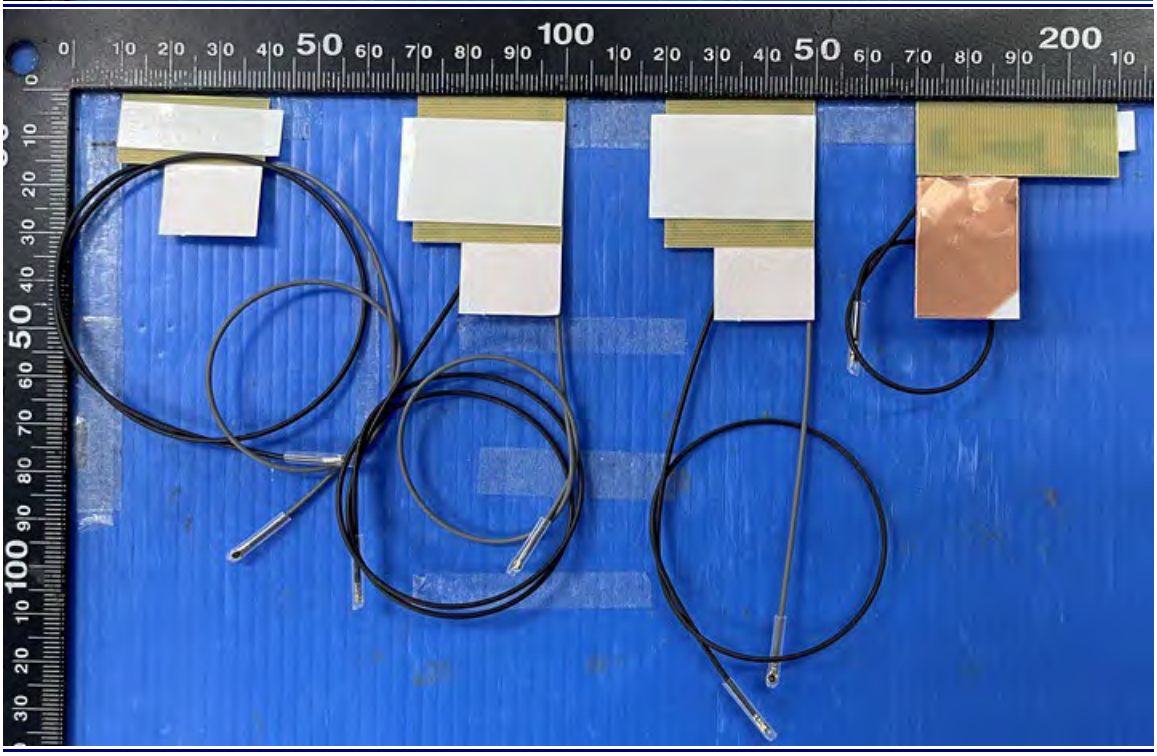
Ant3 Dimensioned Drawing:



Ant3 Photo:







Section 3. Radiation characteristics of antennae Loaded in Host Platform

ANT 0		
Band	Frequency(MHz)	H+V
2	1880(TX)	0.25
	1960(RX)	-0.92
4	1732.5(TX)	1.47
	2132.5(RX)	-1.6
5	836.5(TX)	
	881.5(RX)	
7	2535(TX)	0.55
	2655(RX)	-0.52
12	707.5(TX)	
	737.5(RX)	
13	751(TX)	
	782(RX)	
14	763(TX)	
	793(RX)	
17	710(TX)	
	740(RX)	
25	1882.5(TX)	0.25
	1962.5(RX)	-0.9
26	831.5(TX)	
	876.5(RX)	
30	2310(TX)	-3.06
	2355(RX)	-3.35
38	2595	0.78
41	2593	0.78
42	3500	0.55
43	3700	1.49
48	3625	1.19
66	1745(TX)	1.47
	2155(RX)	-1.7
71	634.5(TX)	
	680.5(RX)	
77	3750	1.08

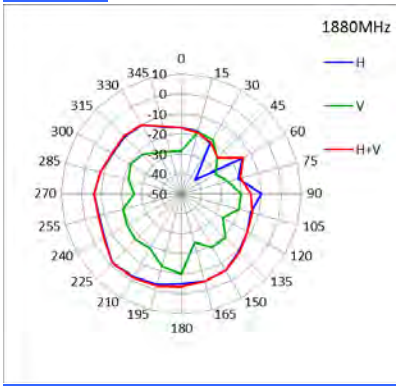
ANT 1		
Band	Frequency(MHz)	H+V
2	1880(TX)	0.91
	1960(RX)	1.25
4	1732.5(TX)	0.96
	2132.5(RX)	1.03
5	836.5(TX)	2.68
	881.5(RX)	-2.18
7	2535(TX)	-0.09
	2655(RX)	0.39
12	707.5(TX)	-0.2
	737.5(RX)	-1.63
13	751(TX)	1.54
	782(RX)	-0.5
14	763(TX)	2.42
	793(RX)	-0.76
17	710(TX)	-0.2
	740(RX)	-1.54
25	1882.5(TX)	1.02
	1962.5(RX)	1.19
26	831.5(TX)	2.68
	876.5(RX)	-2.34
30	2310(TX)	1.12
	2355(RX)	1.29
38	2595	0.66
41	2593	0.5
42	3500	-0.1
43	3700	-1.02
48	3625	-0.05
66	1745(TX)	1.02
	2155(RX)	0.91
71	634.5(TX)	1.22
	680.5(RX)	-0.05
77	3750	-1.11

ANT 2		
Band	Frequency(MHz)	H+V
2	1880(TX)	0.38
	1960(RX)	1.26
4	1732.5(TX)	0.67
	2132.5(RX)	2.4
5	836.5(TX)	-0.24
	881.5(RX)	0.61
7	2535(TX)	-1.79
	2655(RX)	-1.85
12	707.5(TX)	0.39
	737.5(RX)	0.74
13	751(TX)	0.18
	782(RX)	-0.03
14	763(TX)	-0.84
	793(RX)	0.46
17	710(TX)	0.45
	740(RX)	0.66
25	1882.5(TX)	0.43
	1962.5(RX)	1.29
26	831.5(TX)	0.01
	876.5(RX)	0.61
30	2310(TX)	2.47
	2355(RX)	2.39
38	2595	-2.11
41	2593	0.78
42	3500	-5.29
43	3700	-4.38
48	3625	-4.29
66	1745(TX)	0.83
	2155(RX)	2.44
71	634.5(TX)	0.38
	680.5(RX)	0.45
77	3750	-4.11

ANT 3		
Band	Frequency(MHz)	H+V
2	1880(TX)	0.64
	1960(RX)	-1.37
4	1732.5(TX)	-0.61
	2132.5(RX)	-2.24
5	836.5(TX)	
	881.5(RX)	
7	2535(TX)	0.41
	2655(RX)	0.9
12	707.5(TX)	
	737.5(RX)	
13	751(TX)	
	782(RX)	
14	763(TX)	
	793(RX)	
17	710(TX)	
	740(RX)	
25	1882.5(TX)	0.66
	1962.5(RX)	-1.38
26	831.5(TX)	
	876.5(RX)	
30	2310(TX)	-0.29
	2355(RX)	0.34
38	2595	0.29
41	2593	0.07
42	3500	0.49
43	3700	1.03
48	3625	0.98
66	1745(TX)	-0.51
	2155(RX)	-1.87
71	634.5(TX)	
	680.5(RX)	
77	3750	0.92

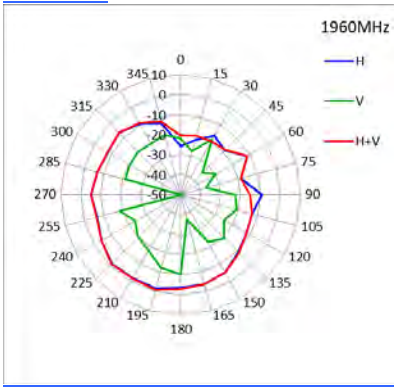
- **The listed frequency 2D radiation pattern is required**
- **Ant 0 :**

1880MHz



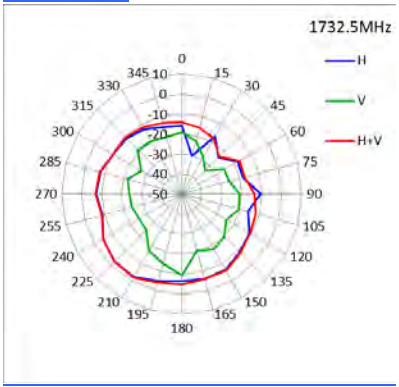
B2	1880MHz
Horizontal+ Vertical (dBi) peak	0.25

1960MHz



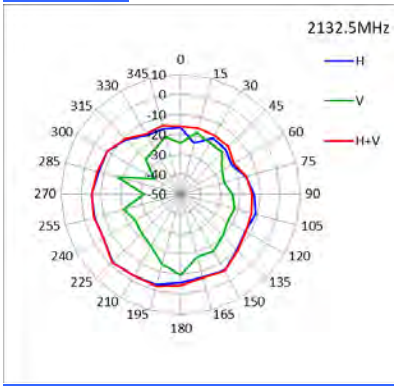
B2	1960MHz
Horizontal+ Vertical (dBi) peak	-0.92

1732.5MHz



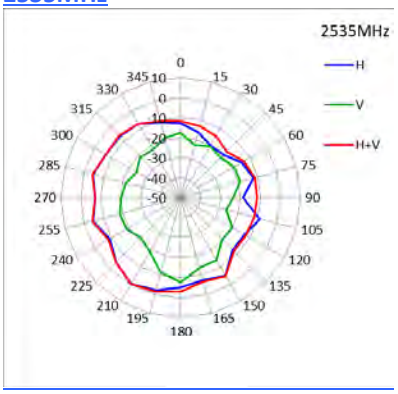
B4	1732.5MHz
Horizontal+ Vertical (dBi) peak	1.47

2132.5MHz



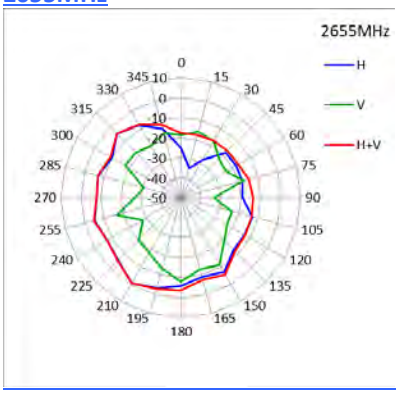
B4	2132.5MHz
Horizontal+ Vertical (dBi) peak	-1.6

2535MHz



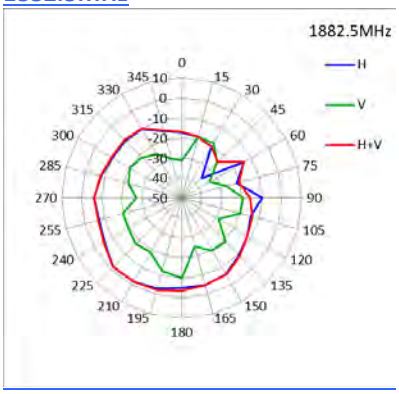
B7	**2535MHz**
Horizontal+ Vertical (dBi) peak	**0.55**

2655MHz



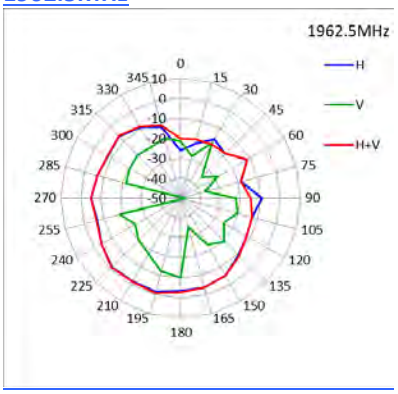
B7	**2655MHz**
Horizontal+ Vertical (dBi) peak	**-0.52**

1882.5MHz



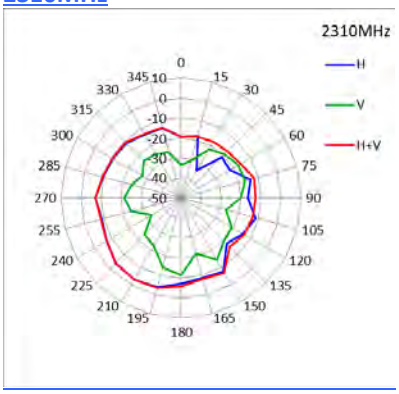
B25	**1882.5MHz**
Horizontal+ Vertical (dBi) peak	**0.25**

1962.5MHz



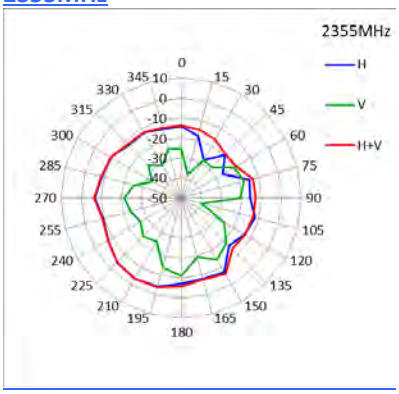
B25	**1962.5MHz**
Horizontal+ Vertical (dBi) peak	**-0.9**

2310MHz



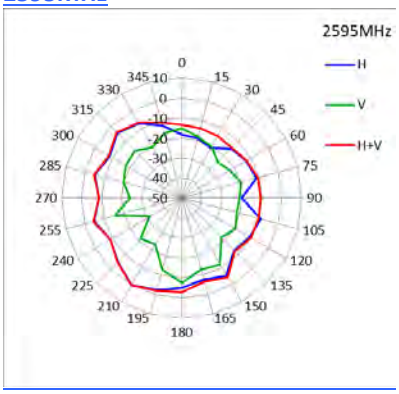
B30	**2310MHz**
Horizontal+ Vertical (dBi) peak	**-3.06**

2355MHz



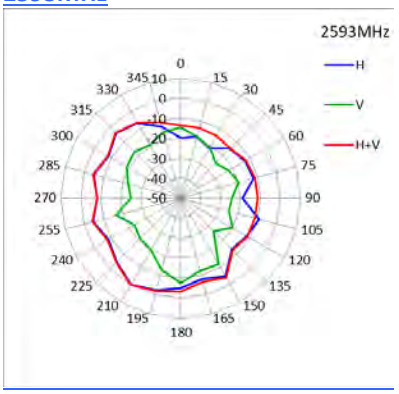
B30	**2355MHz**
Horizontal+ Vertical (dBi) peak	**-3.35**

2595MHz



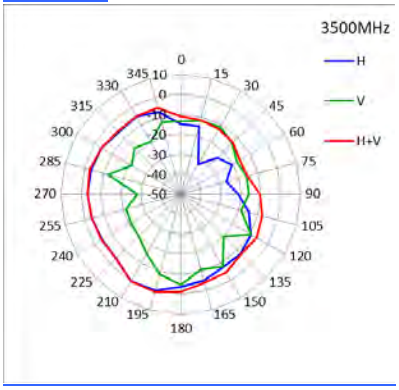
B38	**2595MHz**
Horizontal+ Vertical (dBi) peak	**0.78**

2593MHz



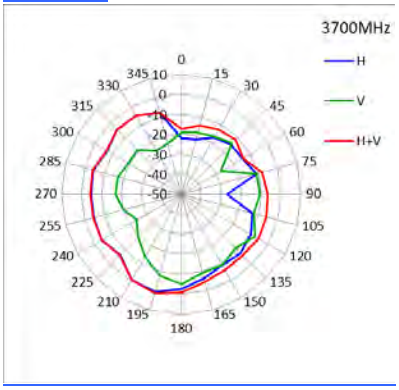
B41	**2593MHz**
Horizontal+ Vertical (dBi) peak	**0.78**

3500MHz



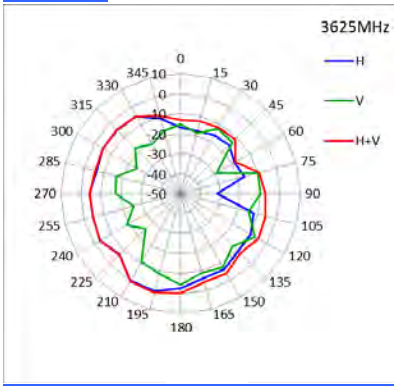
B42	**3500MHz**
Horizontal+ Vertical (dBi) peak	**0.55**

3700MHz



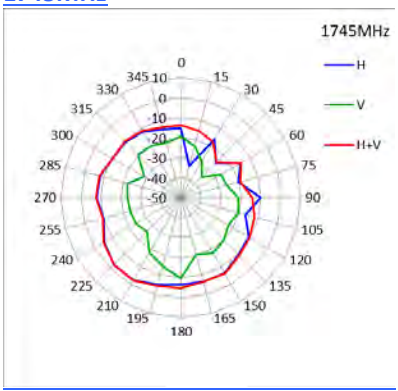
B43	**3700MHz**
Horizontal+ Vertical (dBi) peak	**1.49**

3625MHz



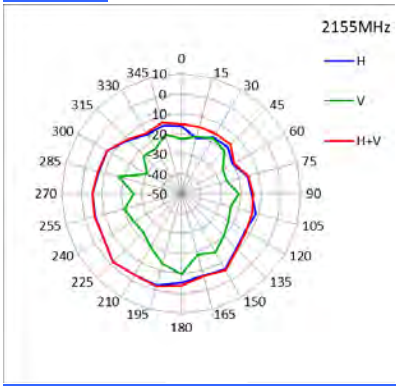
B48	**3625MHz**
Horizontal+ Vertical (dBi) peak	**1.19**

1745MHz



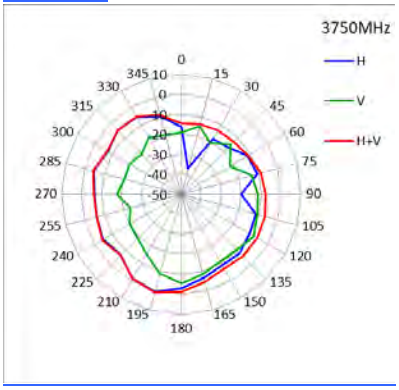
B66	**1745MHz**
Horizontal+ Vertical (dBi) peak	**1.47**

2155MHz



B66	**2155MHz**
Horizontal+ Vertical (dBi) peak	**-1.7**

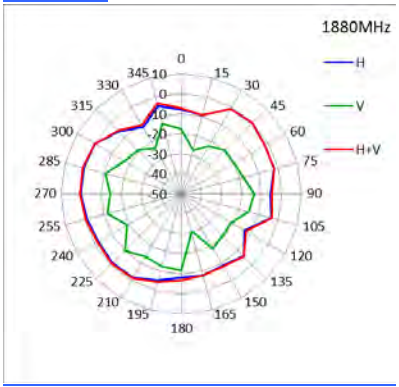
3750MHz



B77	**3750MHz**
Horizontal+ Vertical (dBi) peak	**1.08**

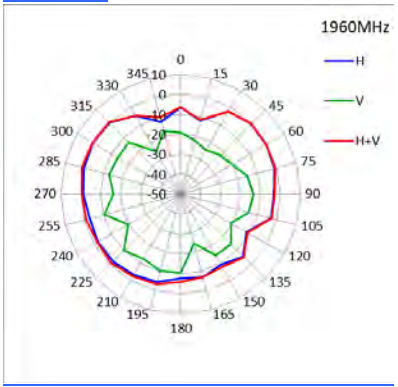
- **Ant 1 :**

1880MHz



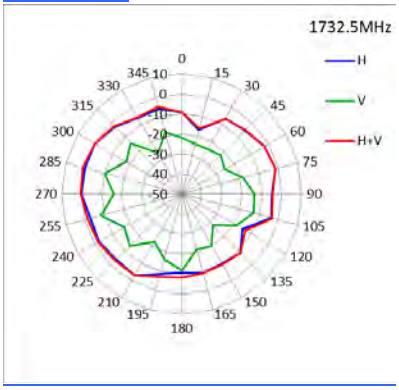
B2	1880MHz
Horizontal+ Vertical (dBi) peak	0.91

1960MHz



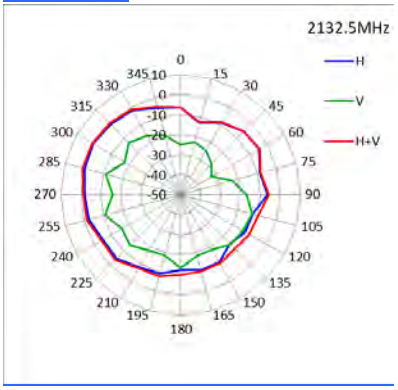
B2	1960MHz
Horizontal+ Vertical (dBi) peak	1.25

1732.5MHz



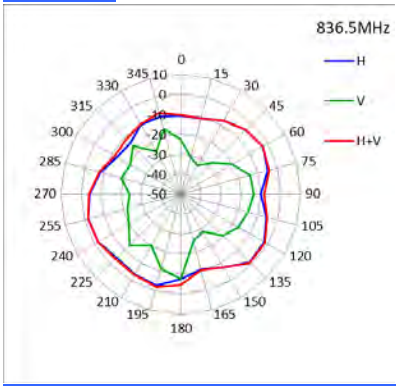
B4	1732.5MHz
Horizontal+ Vertical (dBi) peak	0.96

2132.5MHz



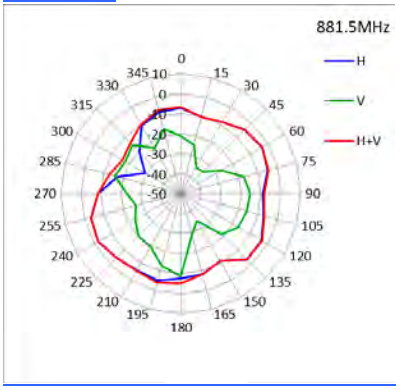
B4	2132.5MHz
Horizontal+ Vertical (dBi) peak	1.03

836.5MHz



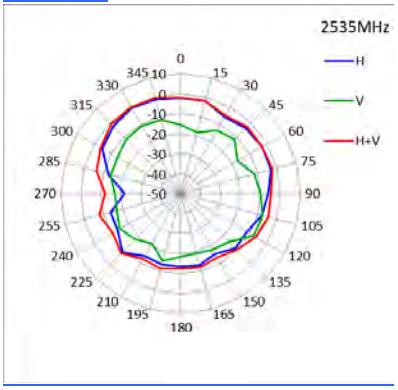
B5	836.5MHz
Horizontal+ Vertical (dBi) peak	2.68

881.5MHz



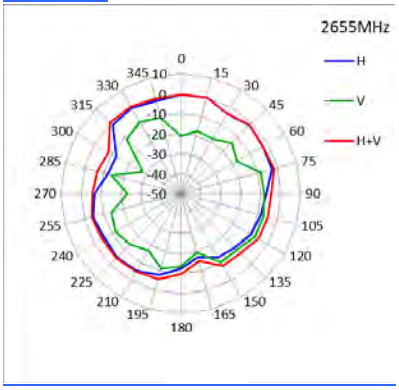
B5	881.5MHz
Horizontal+ Vertical (dBi) peak	-2.18

2535MHz



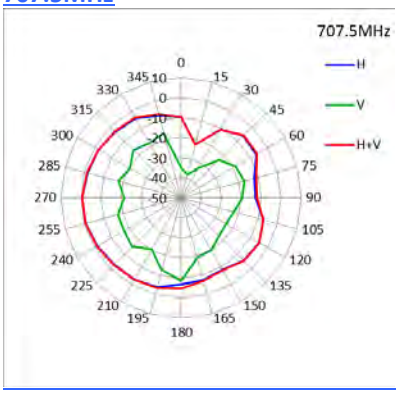
B7	2535MHz
Horizontal+ Vertical (dBi) peak	-0.09

2655MHz



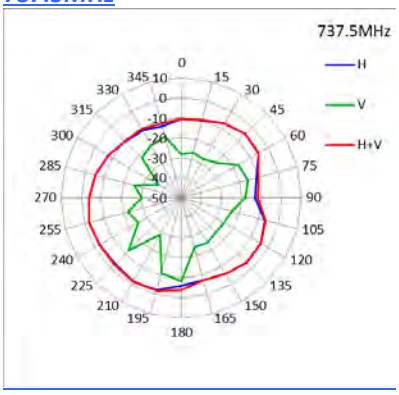
B7	2655MHz
Horizontal+ Vertical (dBi) peak	0.39

707.5MHz



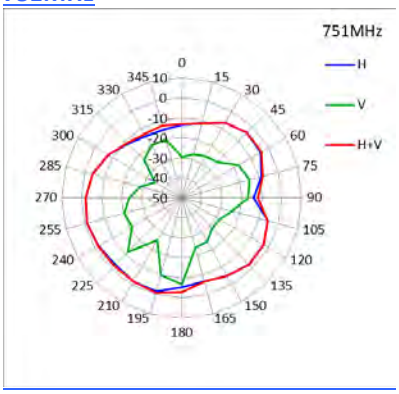
B12	707.5MHz
Horizontal+ Vertical (dBi) peak	-0.2

737.5MHz



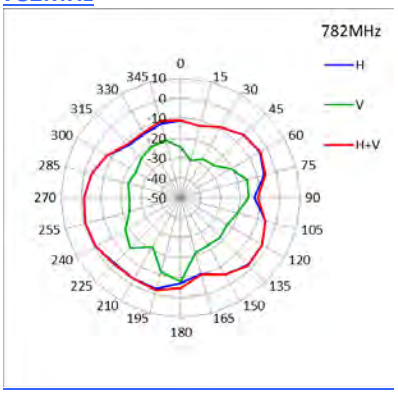
B12	737.5MHz
Horizontal+ Vertical (dBi) peak	-1.63

751MHz



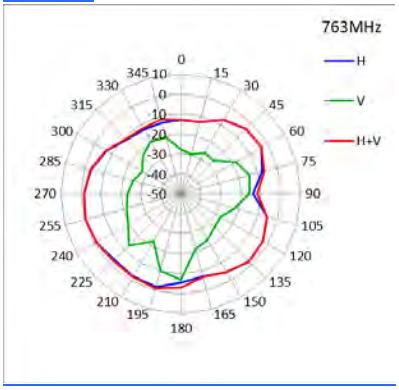
B13	751MHz
Horizontal+ Vertical (dBi) peak	1.54

782MHz



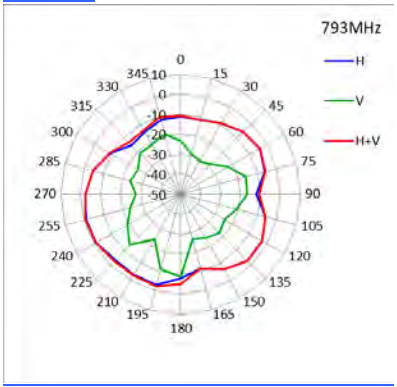
B13	782MHz
Horizontal+ Vertical (dBi) peak	-0.5

763MHz



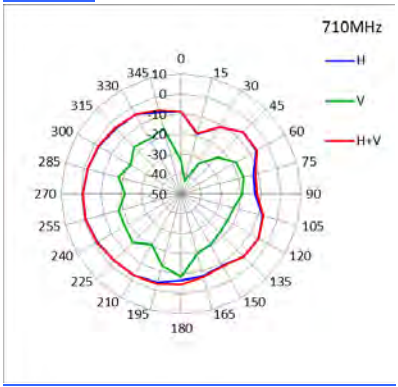
B14	763MHz
Horizontal+ Vertical (dBi) peak	2.42

793MHz



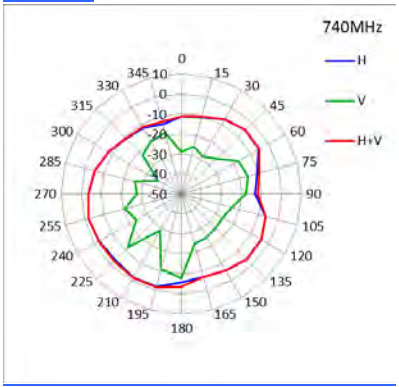
B14	793MHz
Horizontal+ Vertical (dBi) peak	-0.76

710MHz



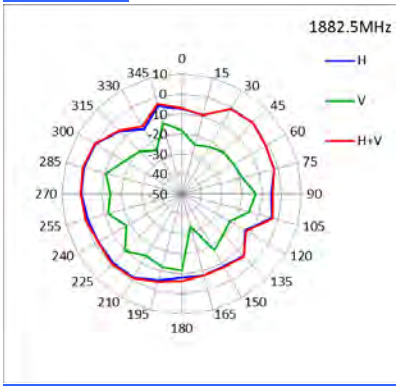
B17	710MHz
Horizontal+ Vertical (dBi) peak	-0.2

740MHz



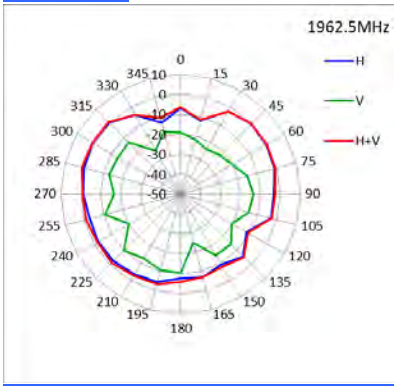
B17	740MHz
Horizontal+ Vertical (dBi) peak	-1.54

1882.5MHz



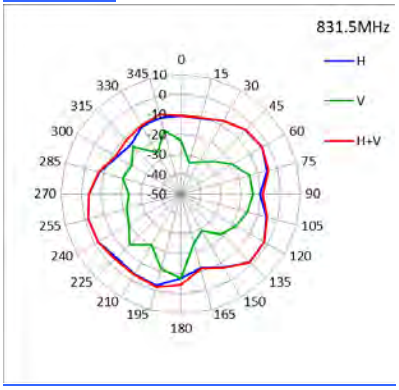
B25	**1882.5MHz**
Horizontal+ Vertical (dBi) peak	**1.02**

1962.5MHz



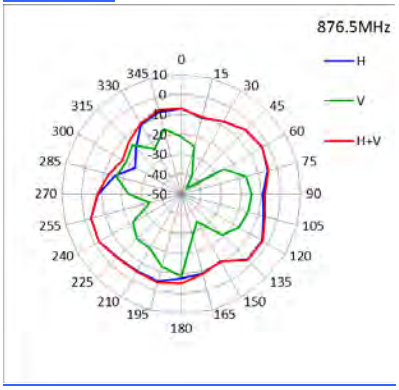
B25	**1962.5MHz**
Horizontal+ Vertical (dBi) peak	**1.19**

831.5MHz



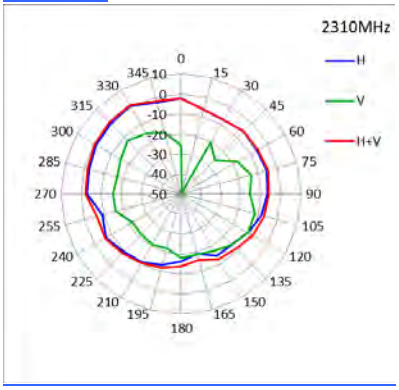
B26	**831.5MHz**
Horizontal+ Vertical (dBi) peak	**2.68**

876.5MHz



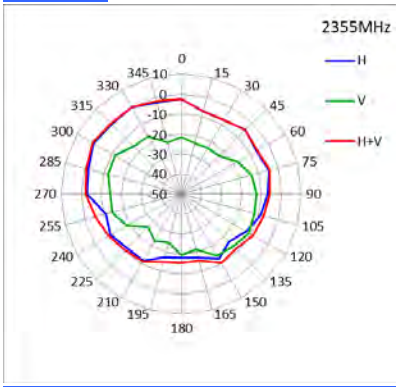
B26	**876.5MHz**
Horizontal+ Vertical (dBi) peak	**-2.34**

2310MHz



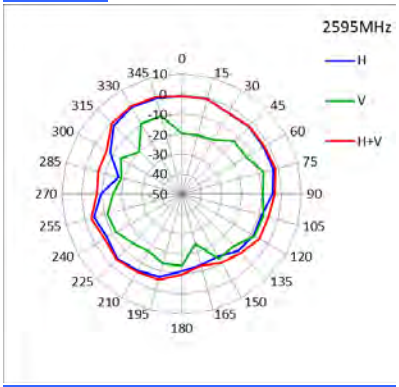
B30	**2310MHz**
Horizontal+ Vertical (dBi) peak	**1.12**

2355MHz



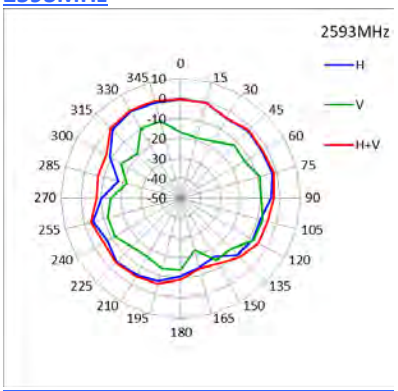
B30	**2355MHz**
Horizontal+ Vertical (dBi) peak	**1.29**

2595MHz



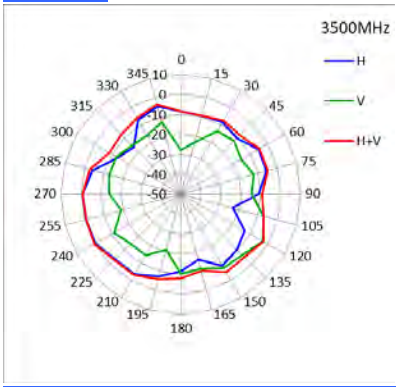
B38	**2595MHz**
Horizontal+ Vertical (dBi) peak	**0.66**

2593MHz



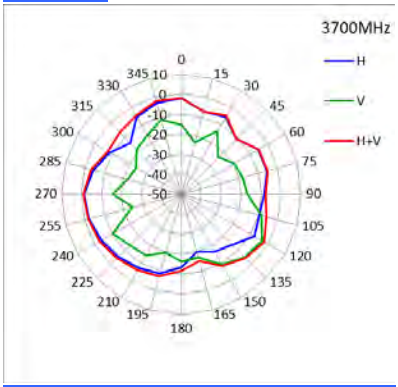
B41	**2593MHz**
Horizontal+ Vertical (dBi) peak	**0.5**

3500MHz



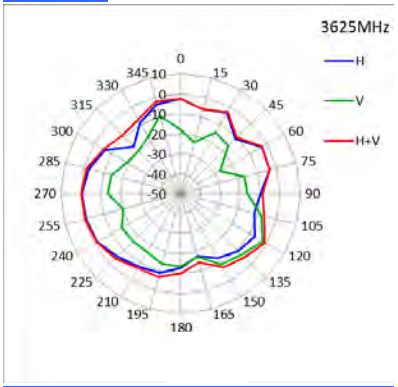
B42	**3500MHz**
Horizontal+ Vertical (dBi) peak	**-0.1**

3700MHz



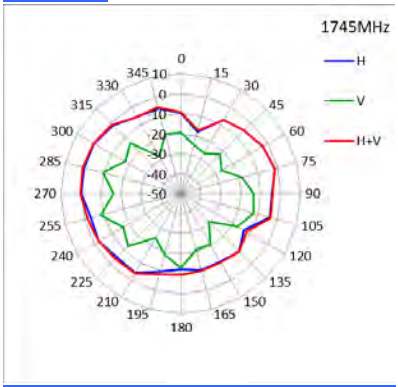
B43	**3700MHz**
Horizontal+ Vertical (dBi) peak	**-1.02**

3625MHz



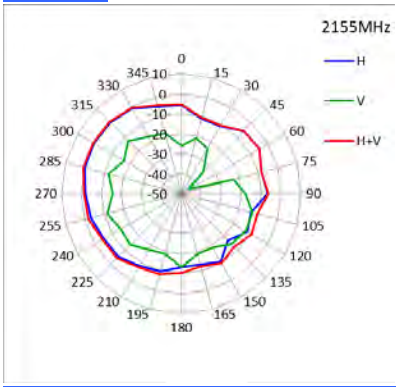
B48	**3625MHz**
Horizontal+ Vertical (dBi) peak	**-0.05**

1745MHz



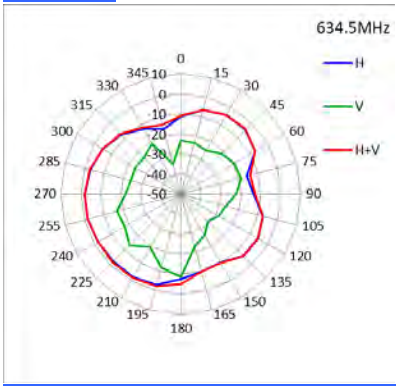
B66	**1745MHz**
Horizontal+ Vertical (dBi) peak	**1.02**

2155MHz



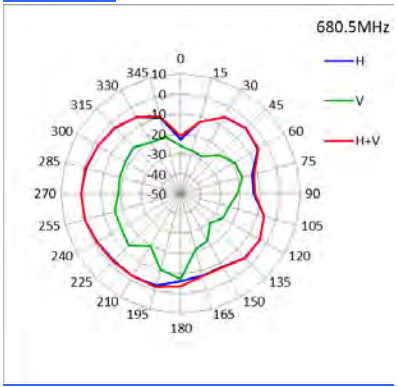
B66	2155MHz
Horizontal+ Vertical (dBi) peak	0.91

634.5MHz



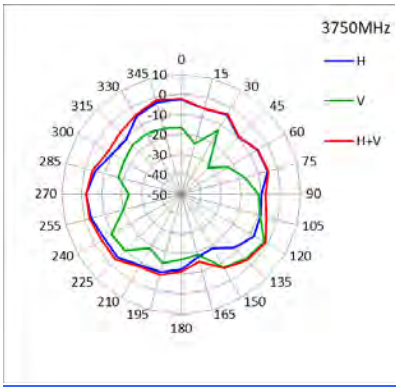
B71	634.5MHz
Horizontal+ Vertical (dBi) peak	1.22

680.5MHz



B71	680.5MHz
Horizontal+ Vertical (dBi) peak	-0.05

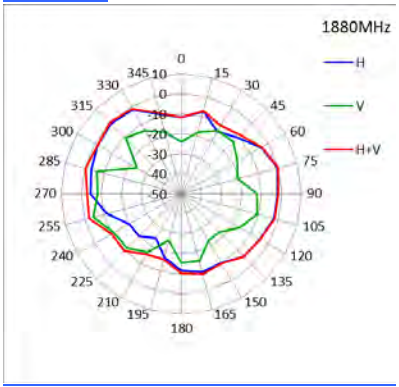
3750MHz



B77	3750MHz
Horizontal+ Vertical (dBi) peak	-1.11

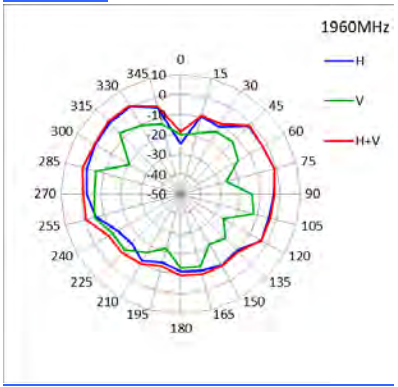
- **Ant 2 :**

1880MHz



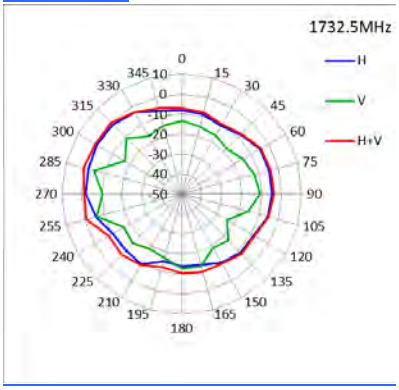
B2	**1880MHz**
Horizontal+ Vertical (dBi) peak	**0.38**

1960MHz



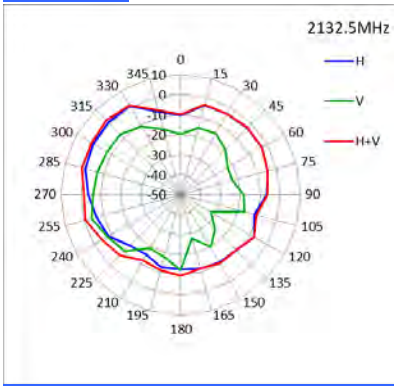
B2	**1960MHz**
Horizontal+ Vertical (dBi) peak	**1.26**

1732.5MHz



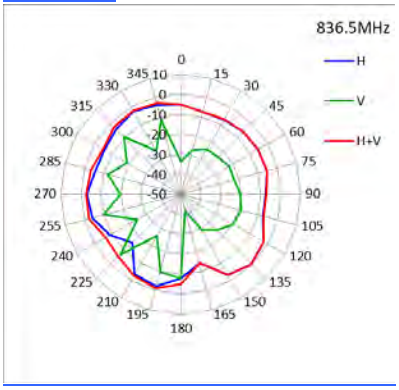
B4	**1732.5MHz**
Horizontal+ Vertical (dBi) peak	**0.67**

2132.5MHz



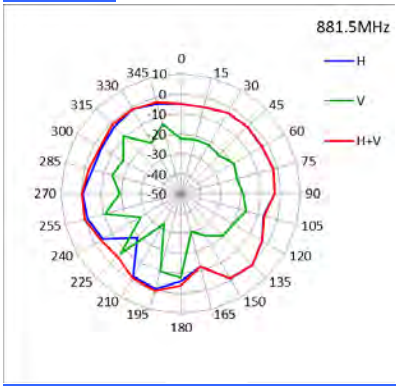
B4	**2132.5MHz**
Horizontal+ Vertical (dBi) peak	**2.4**

836.5MHz



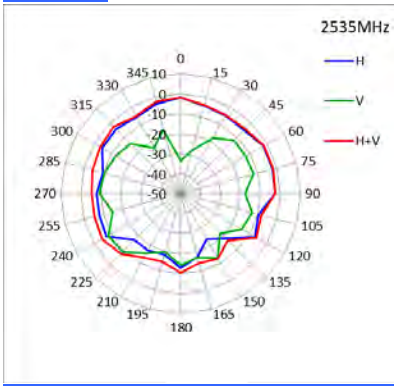
B5	836.5MHz
Horizontal+ Vertical (dBi) peak	-0.24

881.5MHz



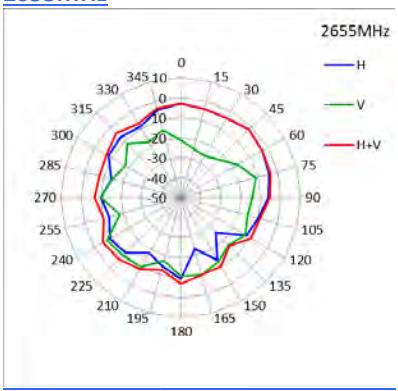
B5	881.5MHz
Horizontal+ Vertical (dBi) peak	0.61

2535MHz



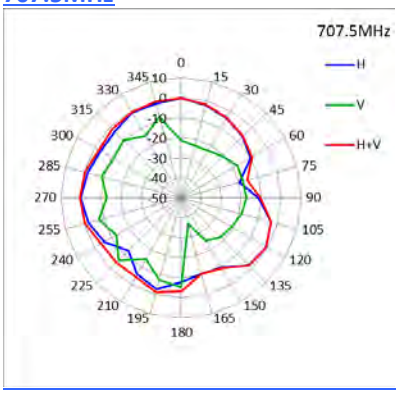
B7	2535MHz
Horizontal+ Vertical (dBi) peak	-1.79

2655MHz



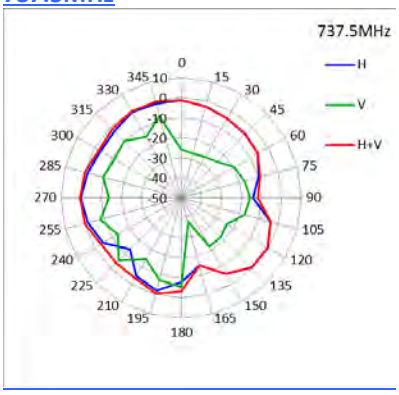
B7	2655MHz
Horizontal+ Vertical (dBi) peak	-1.85

707.5MHz



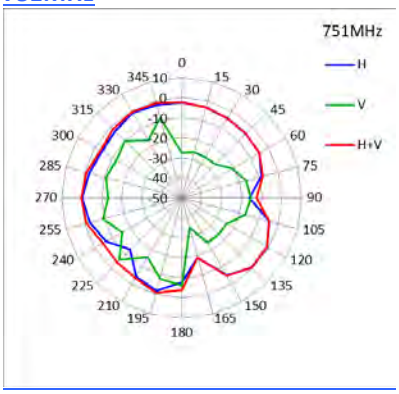
B12	707.5MHz
Horizontal+ Vertical (dBi) peak	0.39

737.5MHz



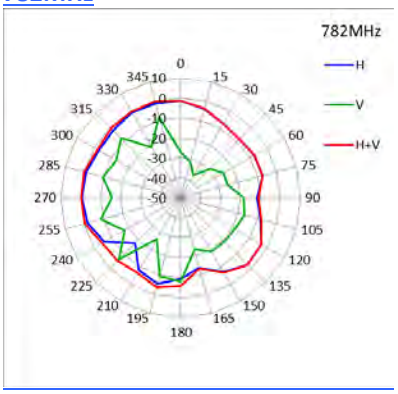
B12	737.5MHz
Horizontal+ Vertical (dBi) peak	0.74

751MHz



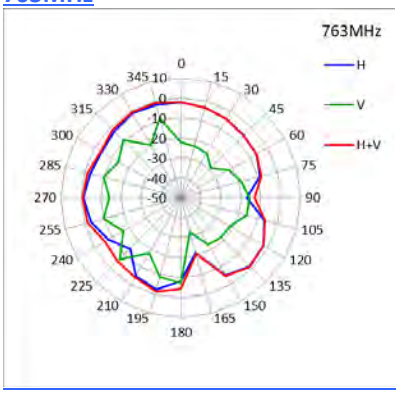
B13	751MHz
Horizontal+ Vertical (dBi) peak	0.18

782MHz



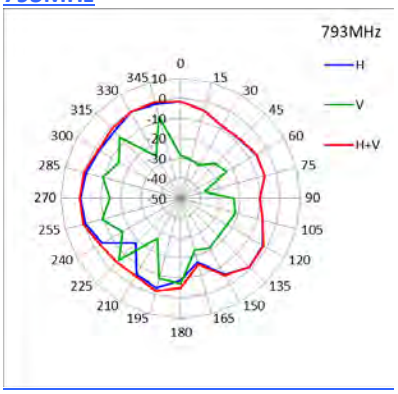
B13	782MHz
Horizontal+ Vertical (dBi) peak	-0.03

763MHz



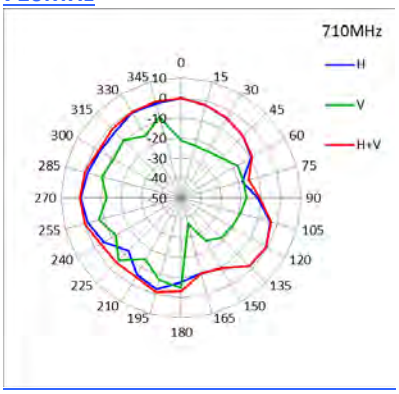
B14	763MHz
Horizontal+ Vertical (dBi) peak	-0.84

793MHz



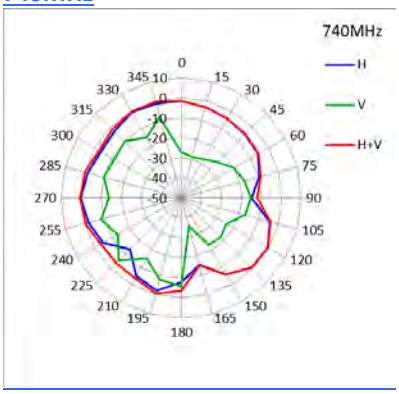
B14	793MHz
Horizontal+ Vertical (dBi) peak	0.46

710MHz



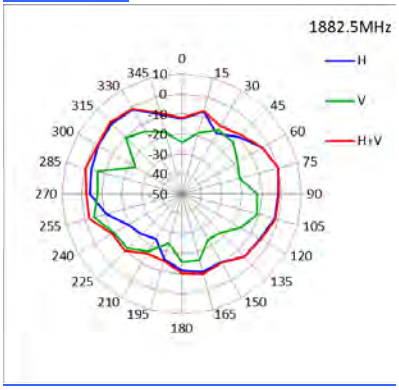
B17	710MHz
Horizontal+ Vertical (dBi) peak	0.45

740MHz



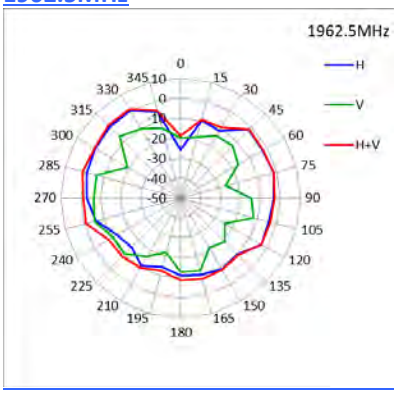
B17	740MHz
Horizontal+ Vertical (dBi) peak	0.66

1882.5MHz



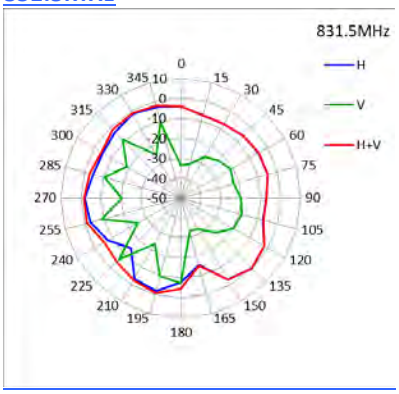
B25	**1882.5MHz**
Horizontal+ Vertical (dBi) peak	**0.43**

1962.5MHz



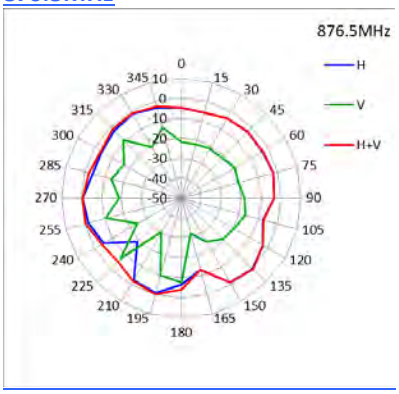
B25	**1962.5MHz**
Horizontal+ Vertical (dBi) peak	**1.29**

831.5MHz



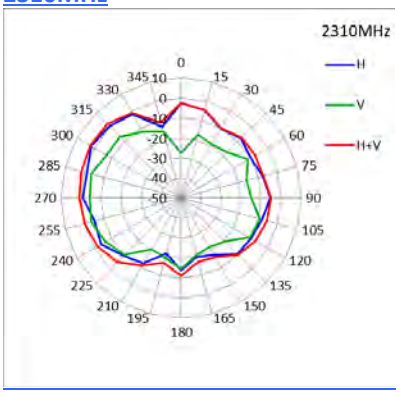
B26	**831.5MHz**
Horizontal+ Vertical (dBi) peak	**0.01**

876.5MHz



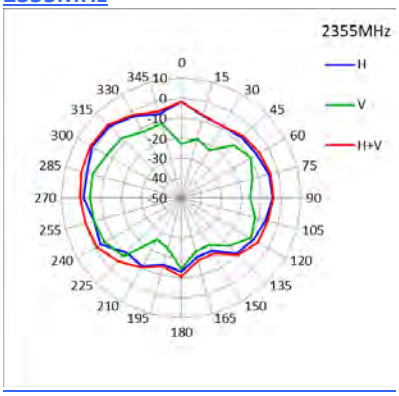
B26	**876.5MHz**
Horizontal+ Vertical (dBi) peak	**0.61**

2310MHz



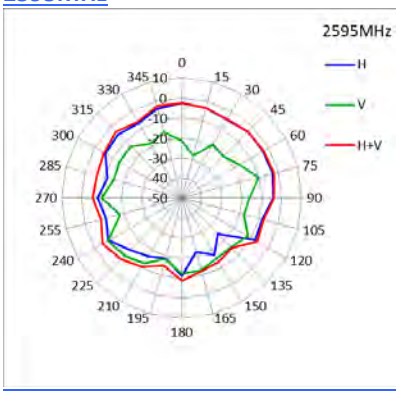
B30	**2310MHz**
Horizontal+ Vertical (dBi) peak	**2.47**

2355MHz



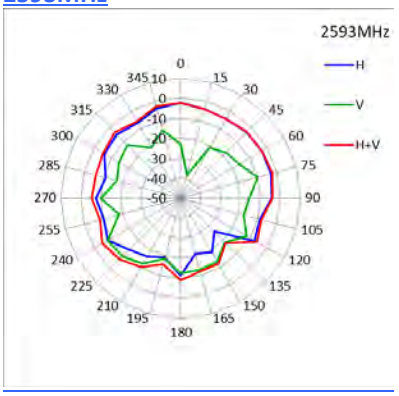
B30	**2355MHz**
Horizontal+ Vertical (dBi) peak	**2.39**

2595MHz



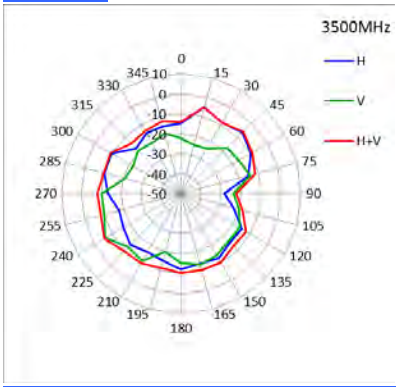
B38	**2595MHz**
Horizontal+ Vertical (dBi) peak	**-2.11**

2593MHz



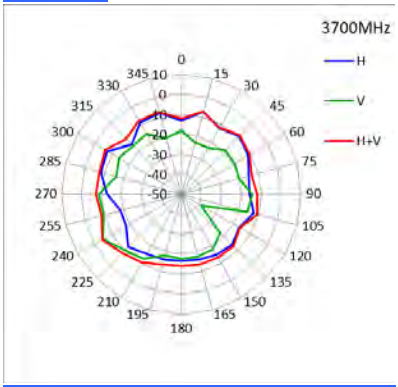
B41	**2593MHz**
Horizontal+ Vertical (dBi) peak	**0.78**

3500MHz



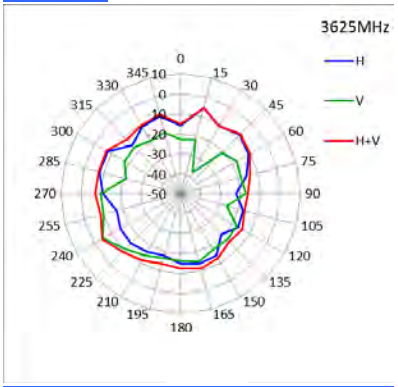
B42	3500MHz
Horizontal+ Vertical (dBi) peak	-5.29

3700MHz



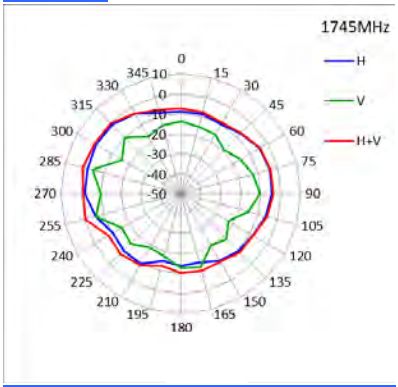
B43	3700MHz
Horizontal+ Vertical (dBi) peak	-4.38

3625MHz



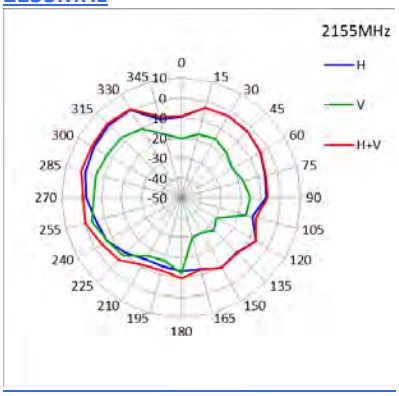
B48	3625MHz
Horizontal+ Vertical (dBi) peak	-4.29

1745MHz



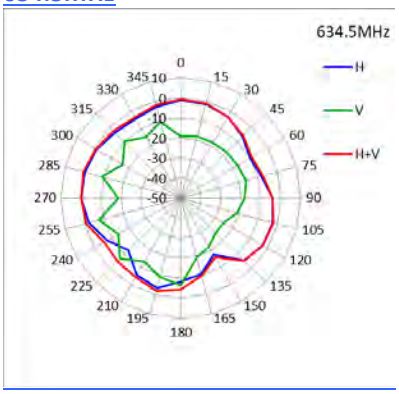
B66	1745MHz
Horizontal+ Vertical (dBi) peak	0.83

2155MHz



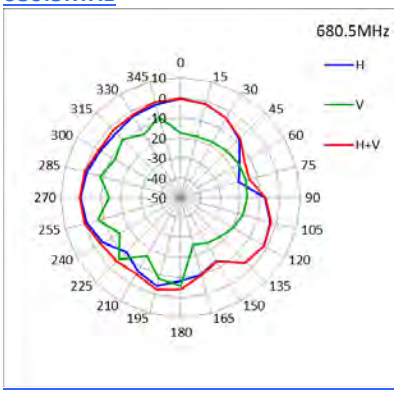
B66	2155MHz
Horizontal+ Vertical (dBi) peak	2.44

634.5MHz



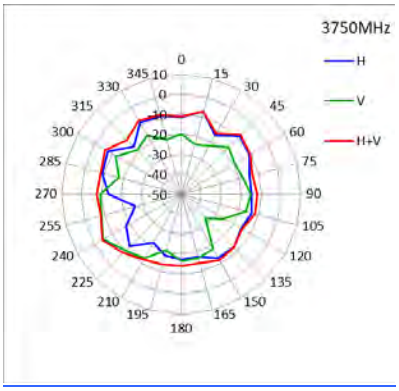
B71	634.5MHz
Horizontal+ Vertical (dBi) peak	0.38

680.5MHz



B71	680.5MHz
Horizontal+ Vertical (dBi) peak	0.45

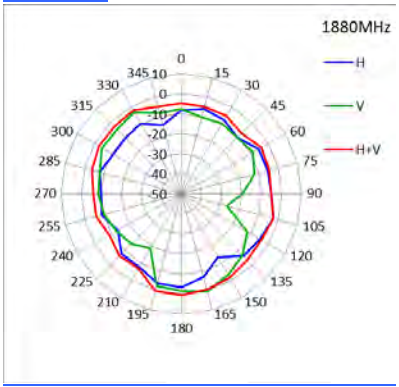
3750MHz



B77	3750MHz
Horizontal+ Vertical (dBi) peak	-4.11

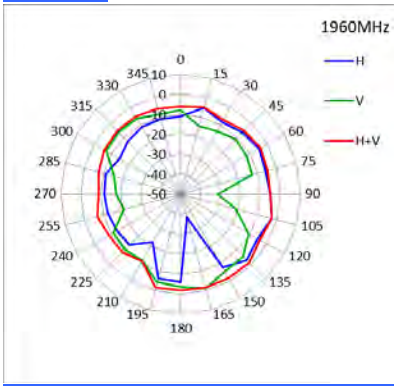
- **Ant 3 :**

1880MHz



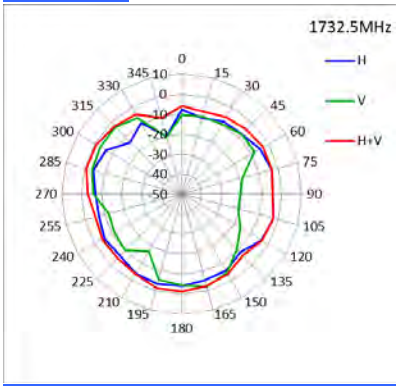
B2	1880MHz
Horizontal+ Vertical (dBi) peak	0.64

1960MHz



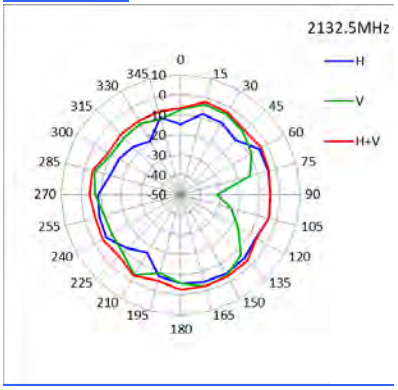
B2	1960MHz
Horizontal+ Vertical (dBi) peak	-1.37

1732.5MHz



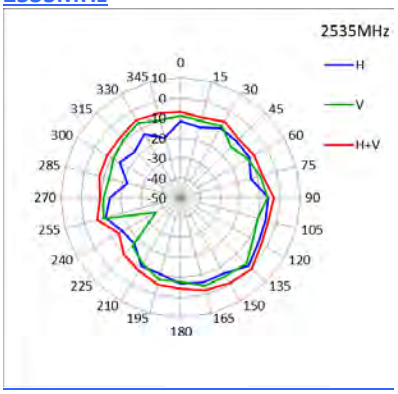
B4	1732.5MHz
Horizontal+ Vertical (dBi) peak	-0.61

2132.5MHz



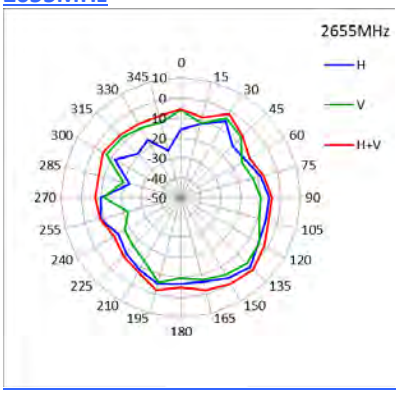
B4	2132.5MHz
Horizontal+ Vertical (dBi) peak	-2.24

2535MHz



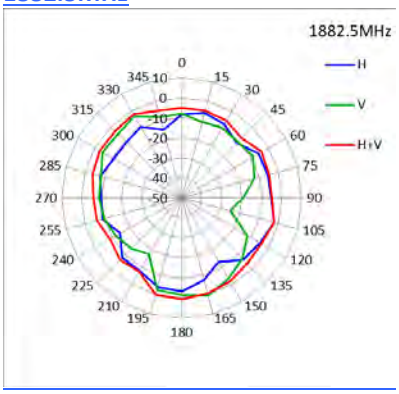
B7	2535MHz
Horizontal+ Vertical (dBi) peak	0.41

2655MHz



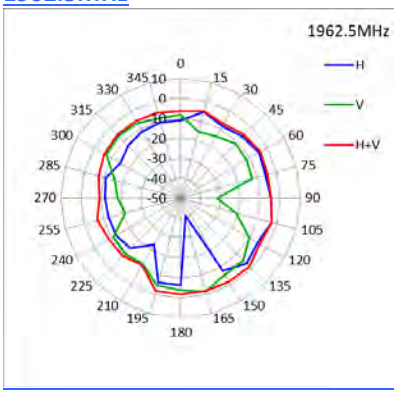
B7	2655MHz
Horizontal+ Vertical (dBi) peak	0.9

1882.5MHz



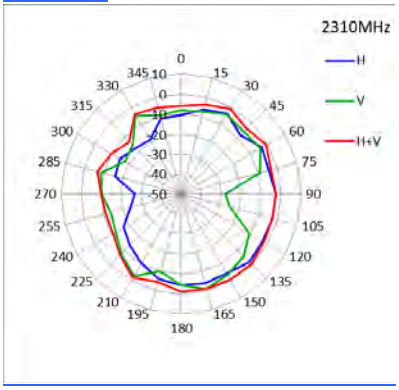
B25	1882.5MHz
Horizontal+ Vertical (dBi) peak	0.66

1962.5MHz



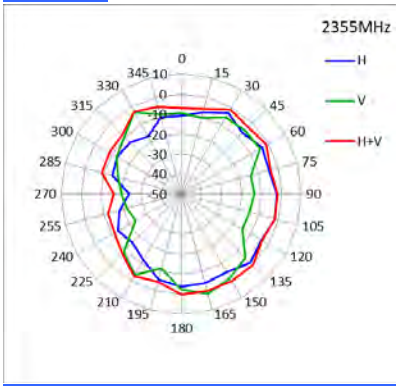
B25	1962.5MHz
Horizontal+ Vertical (dBi) peak	-1.38

2310MHz



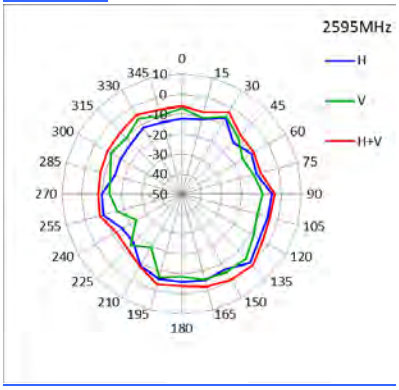
B30	**2310MHz**
Horizontal+ Vertical (dBi) peak	**-0.29**

2355MHz



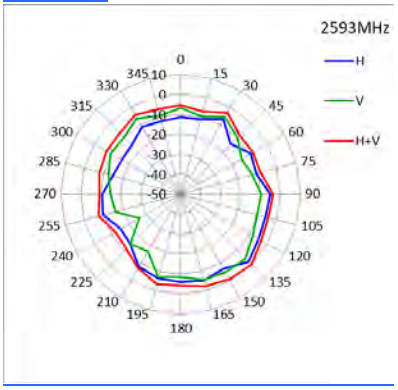
B30	**2355MHz**
Horizontal+ Vertical (dBi) peak	**0.34**

2595MHz



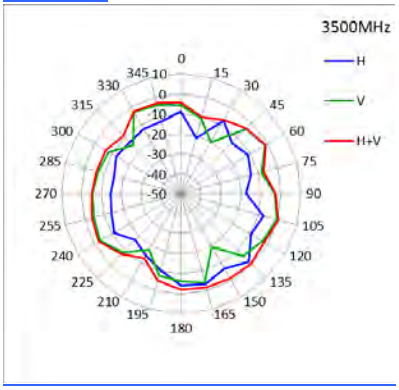
B38	**2595MHz**
Horizontal+ Vertical (dBi) peak	**0.29**

2593MHz



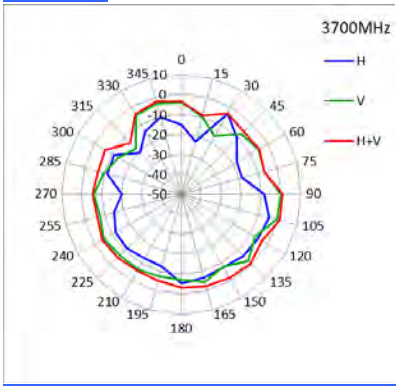
B41	**2593MHz**
Horizontal+ Vertical (dBi) peak	**0.07**

3500MHz



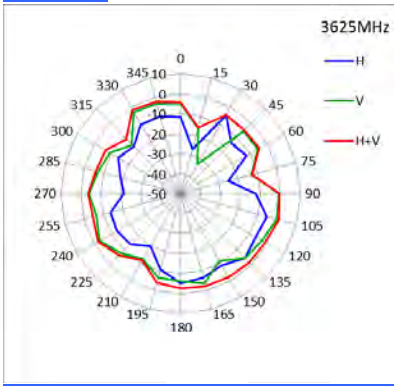
B42	**3500MHz**
Horizontal+ Vertical (dBi) peak	**0.49**

3700MHz



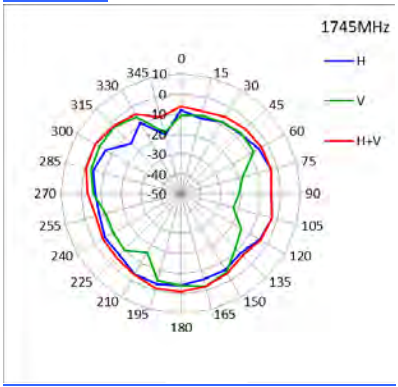
B43	**3700MHz**
Horizontal+ Vertical (dBi) peak	**1.03**

3625MHz



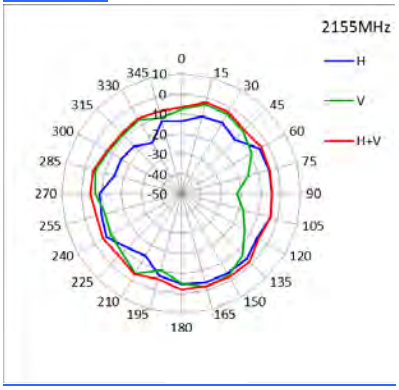
B48	**3625MHz**
Horizontal+ Vertical (dBi) peak	**0.98**

1745MHz



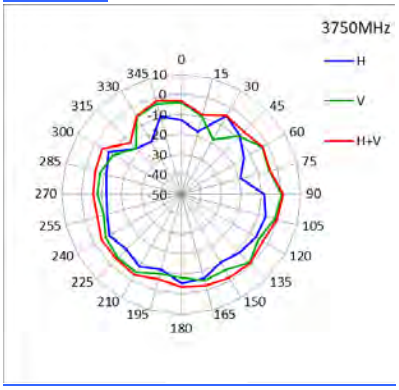
B66	**1745MHz**
Horizontal+ Vertical (dBi) peak	**-0.51**

2155MHz



B66	**2155MHz**
Horizontal+ Vertical (dBi) peak	**-1.87**

3750MHz

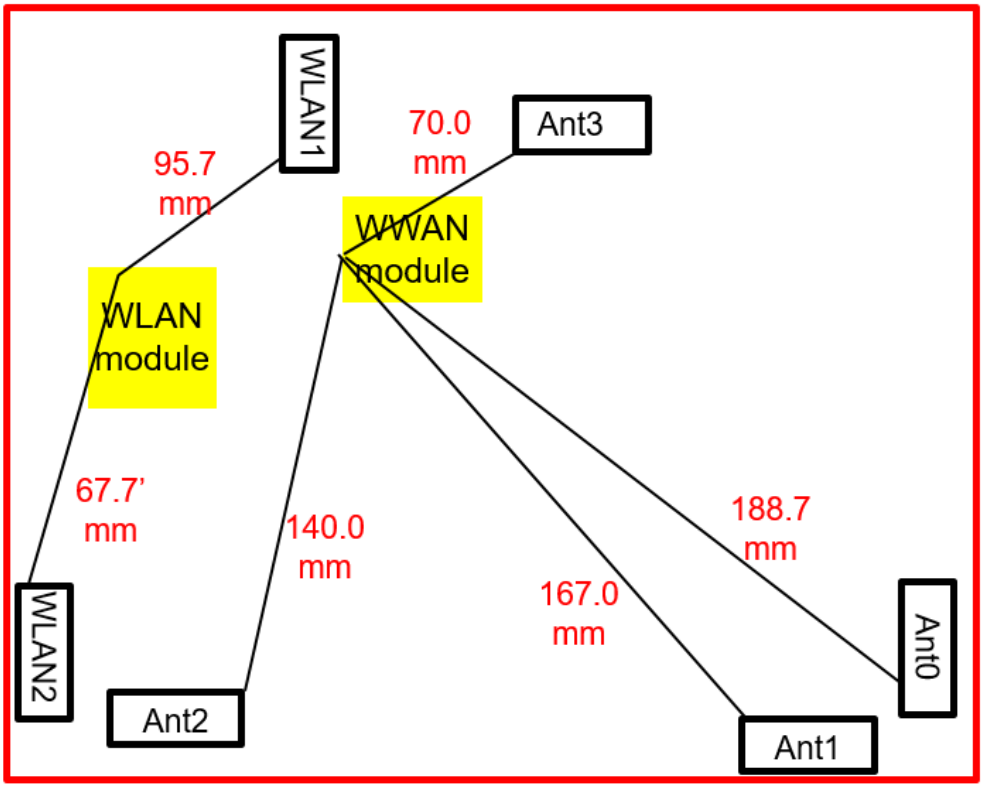


B77	**3750MHz**
Horizontal+ Vertical (dBi) peak	**0.92**

Section 4. Host Platform Information

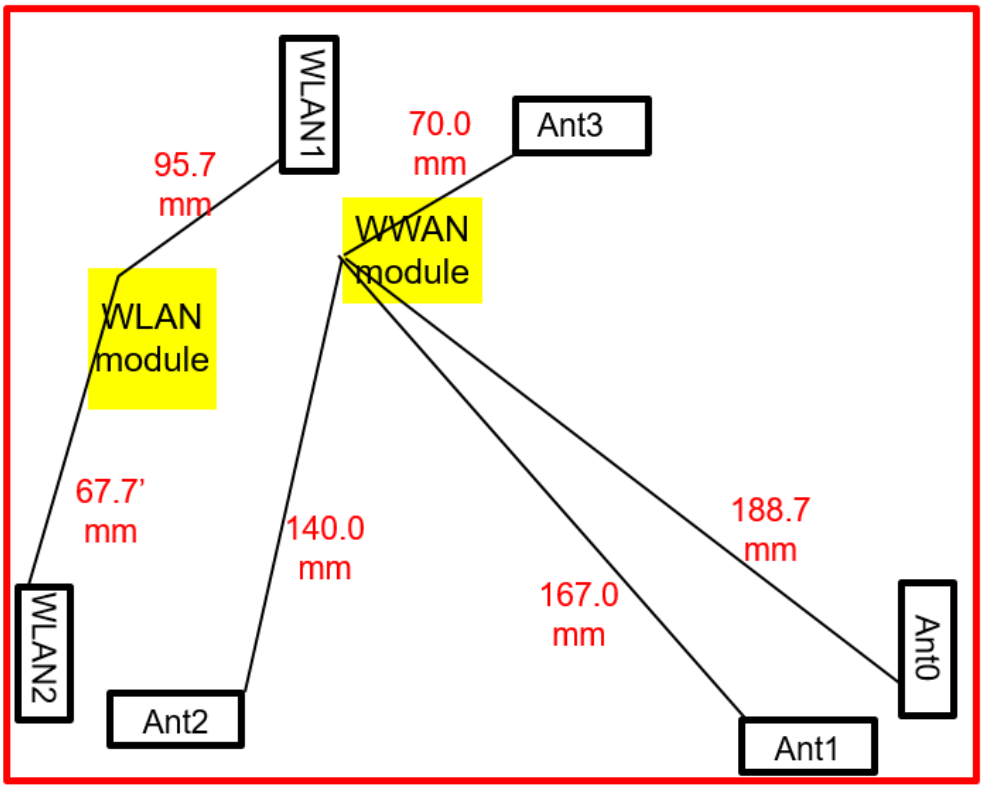
OEM / ODM Host platform: Example platform correlated to antenna data

Rating Label Photo:



Section 5. Antenna Host Platform Location Information

Include a **dimensioned photo(s) or dimensioned drawing(s)** of Ant0,Ant1,Ant2,Ant3 placements (measurements are not required for receive-only antenna).
Any antenna that transmits must show dimensions to bottom of laptop. Provide a description of the materials that are used for supporting or surrounding transmit antennas; for example, non-conductive plastics vs. conductive coated plastic or metallic materials.
Example:

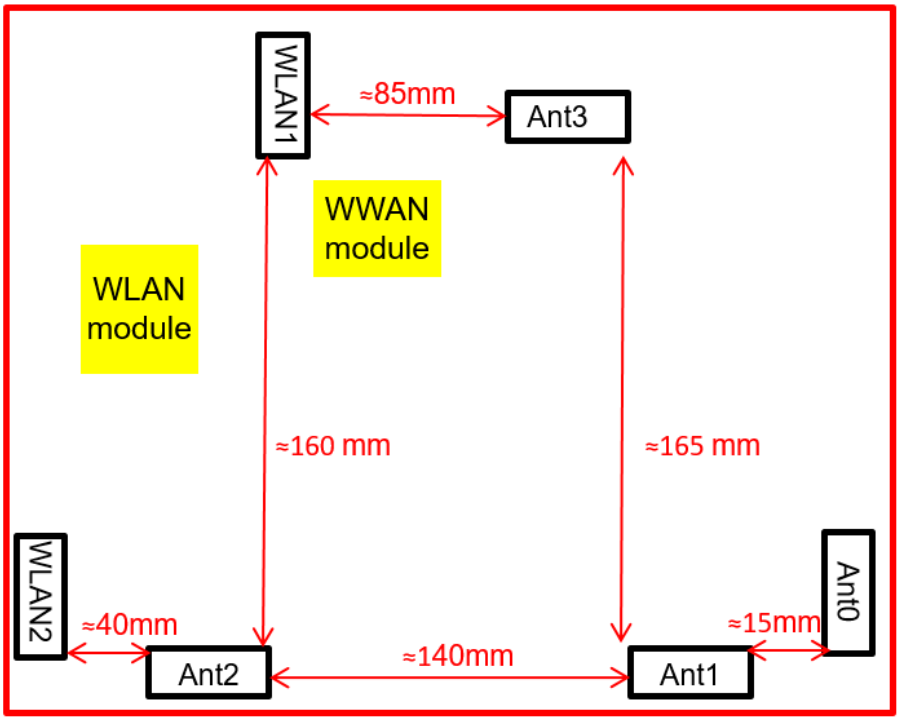


Section 7. Diagram Example of Co-Location Antenna Separation

Include a **dimensioned photo or dimensioned drawing** showing the distance (mm) between **all WWAN transmit antennas** and other co-located radiator transmit antenna such as Bluetooth, WLAN,..

Example:

(Note: Due to the evolving rules regarding co-location, each platform will need to be reviewed on a case by case basis)



Section 8. Local representative contact information

Local representative contact information is required for regulatory support for target countries below.