

WNC *Wistron NeWeb Corp.*

Address : 20 Park Avenue II (or Yuanchiu 2nd Rd.), Hsinchu Science Park, Hsinchu 300, Taiwan

Vivint Magellan Antenna Specifications

2023.03.23



Smarter Solutions for a Smarter Future

Agenda

- Sample Picture
- Antenna specifications
 - Antenna Information
 - Antenna Peak Gain
- Antenna Outline
- Radiation Pattern
 - WLAN Chain 0/1
 - 345 / Z-Wave



Antenna specifications

- Antenna Information :

Antenna Number	Type	Polarization	Brand	Model	Cable length	Connector type
Z-Wave	PIFA	Linear	WNC	48XKAB2C.0GAFHYE	N/A	None
345MHz	Dipole	Linear	WNC	3S.004KJ.111	N/A	None
WLAN (chain 0)	Dipole	Linear	WNC	95XKAB15.GA4	66mm	IPEX MHF
WLAN (chain 1)	Dipole	Linear	WNC	95XKAB15.GA5	147mm	IPEX MHF



Antenna specifications

- Antenna Peak Gain :

Z-Wave	Peak Gain (dBi)
915 MHz	0.77

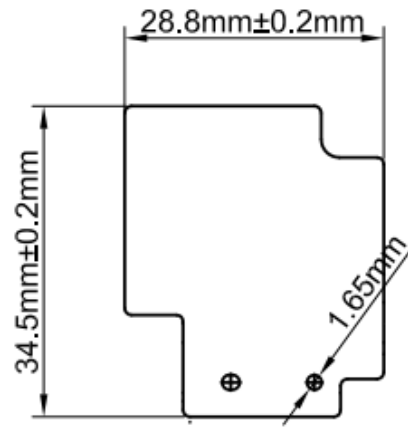
WLAN (Chain 1)	Peak Gain (dBi)
2.4 G	2.90
5 G	2.06

345	Peak Gain (dBi)
345 MHz	1.02

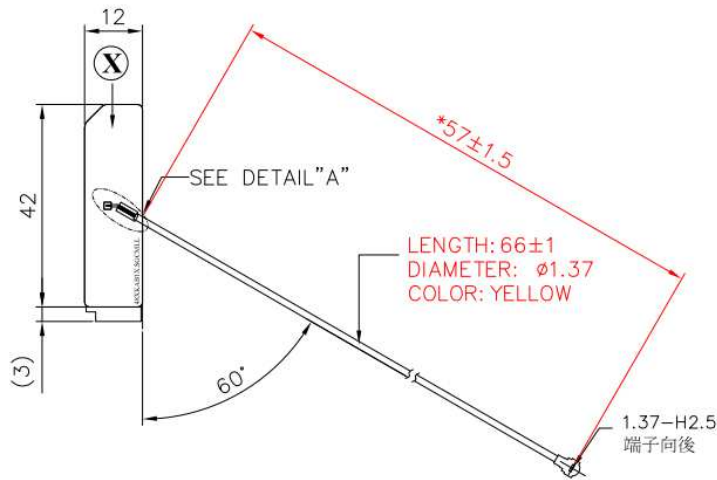
WLAN (Chain 0)	Peak Gain (dBi)
2.4 G	2.76
5 G	2.65



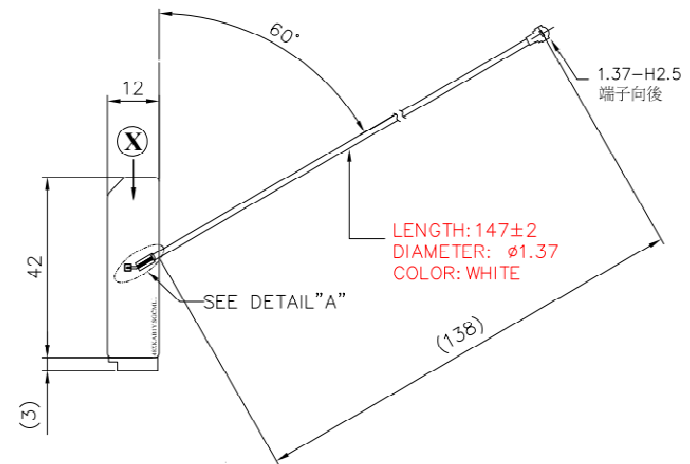
Antenna Outline



Z-Wave Antenna FPC outline (with cable)



WLAN Chain 0 outline (With cable)

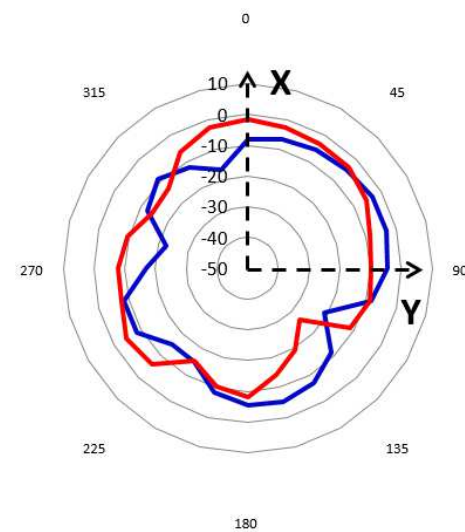
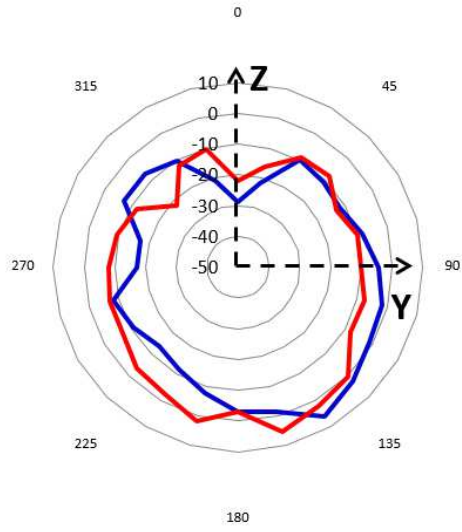
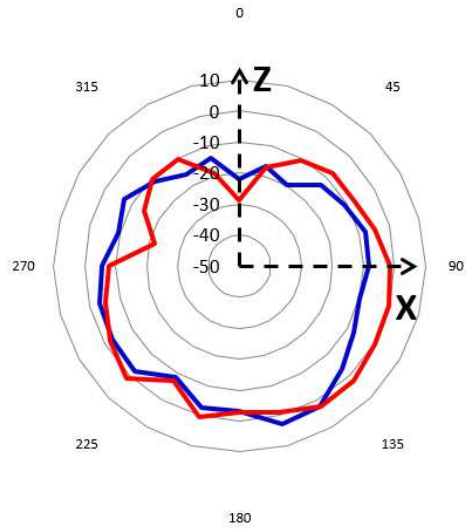


WLAN Chain 1 outline (With cable)



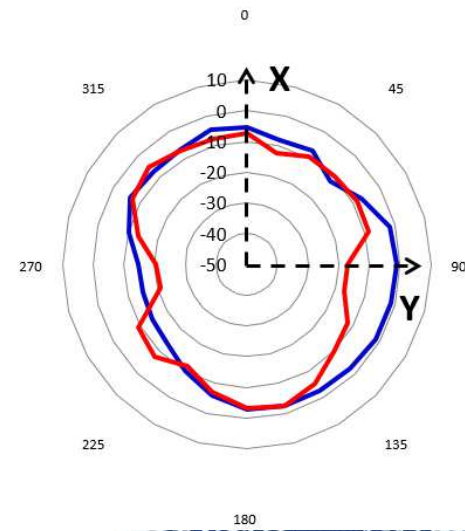
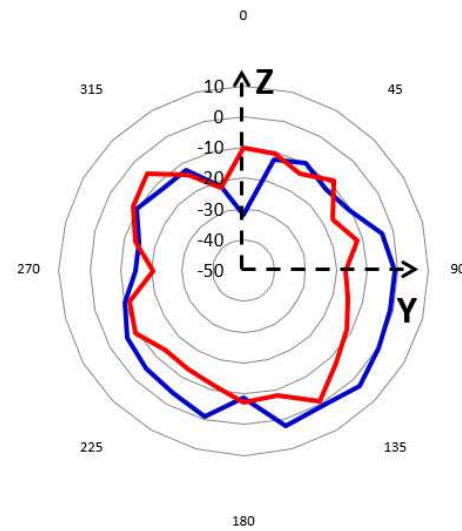
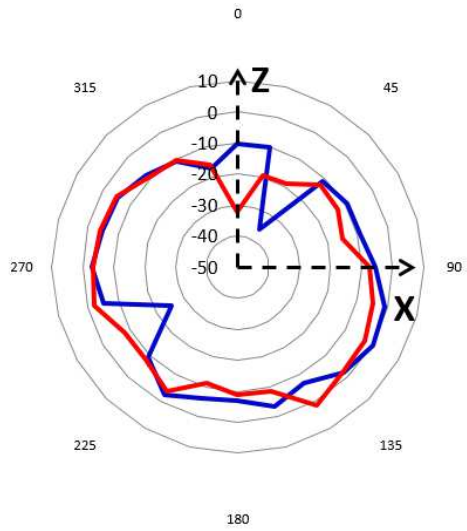
Antenna Radiation Pattern – WLAN antenna_2400 MHz

WLAN
Chain 0



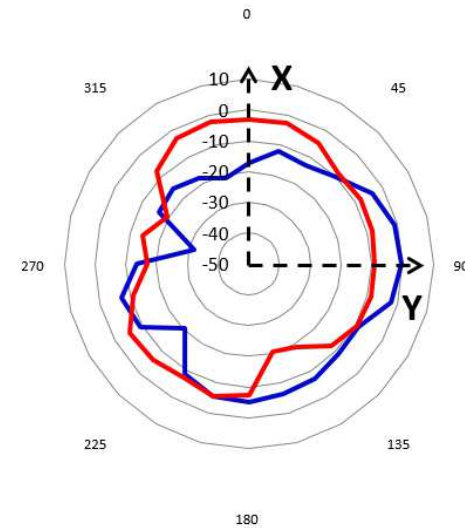
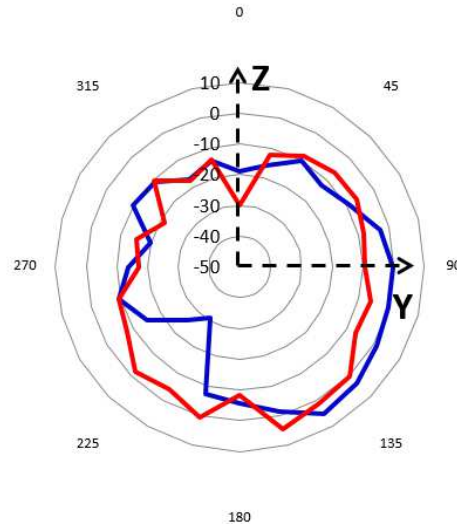
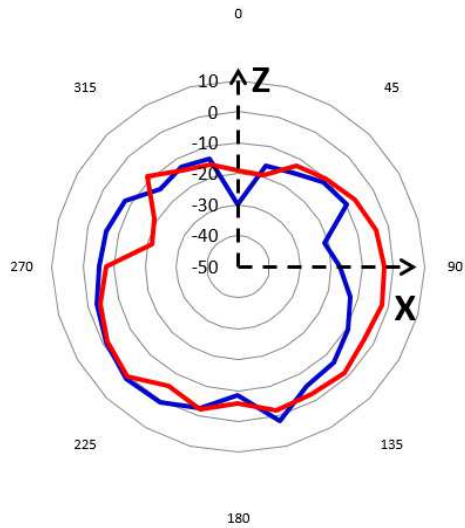
— V-Pol.
— H-Pol.

WLAN
Chain 1



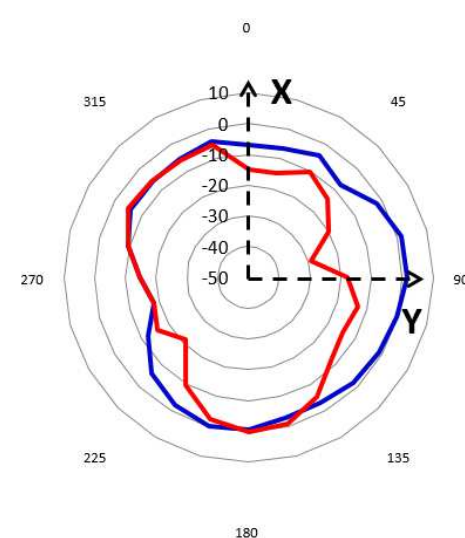
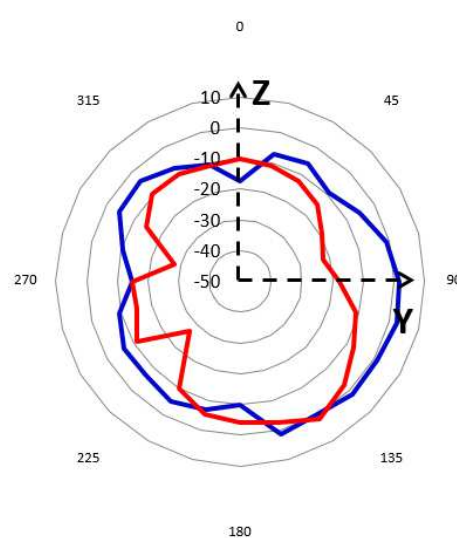
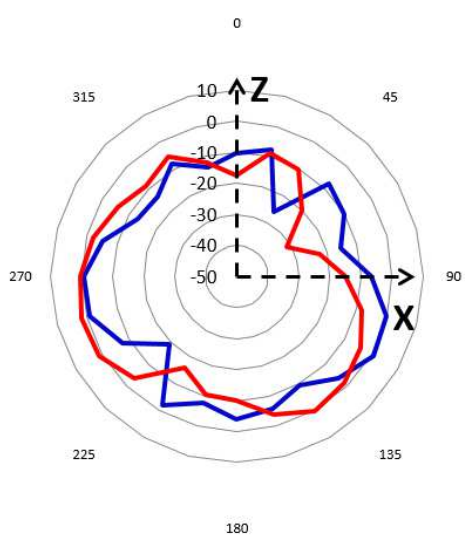
Antenna Radiation Pattern – WLAN antenna_2500 MHz

WLAN
Chain 0



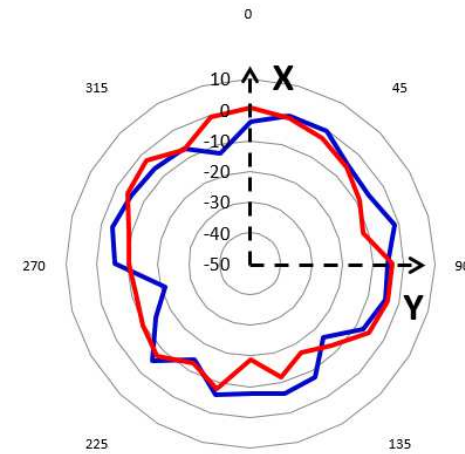
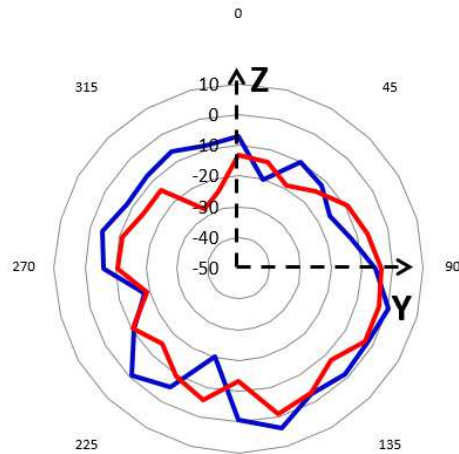
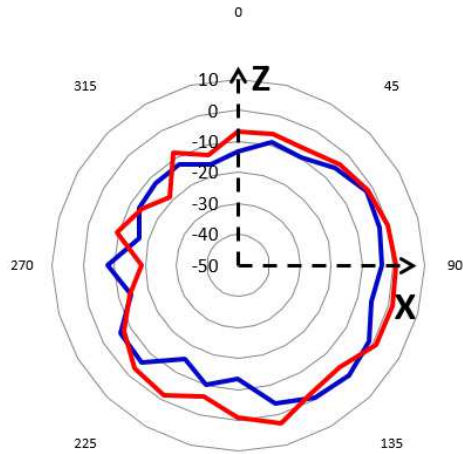
— V-Pol.
— H-Pol.

WLAN
Chain 1



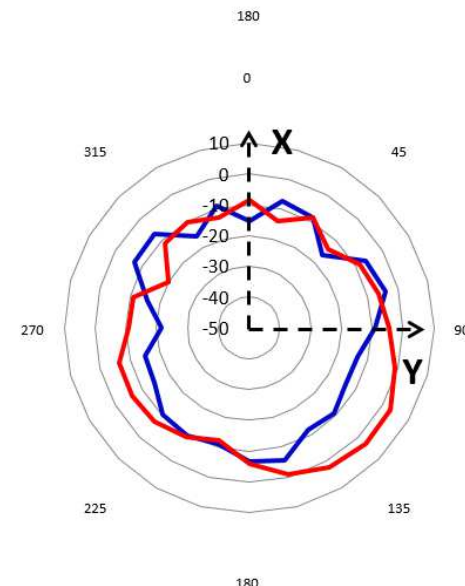
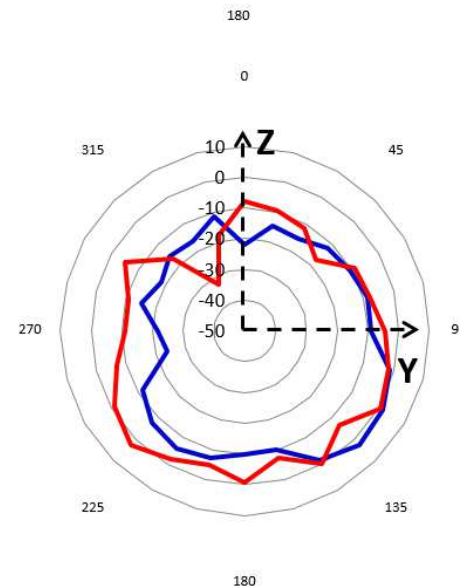
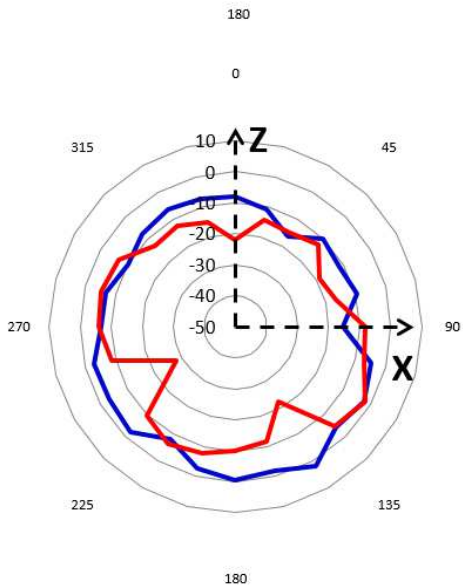
Antenna Radiation Pattern – WLAN antenna_5150 MHz

WLAN
Chain 0



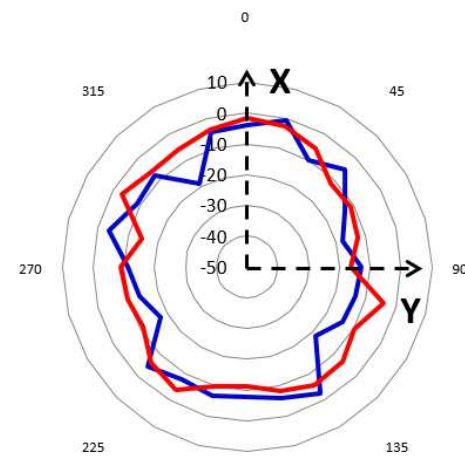
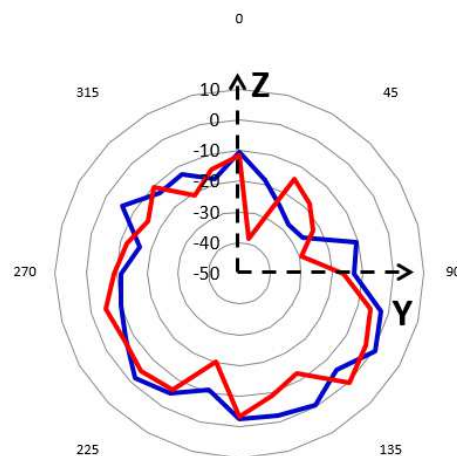
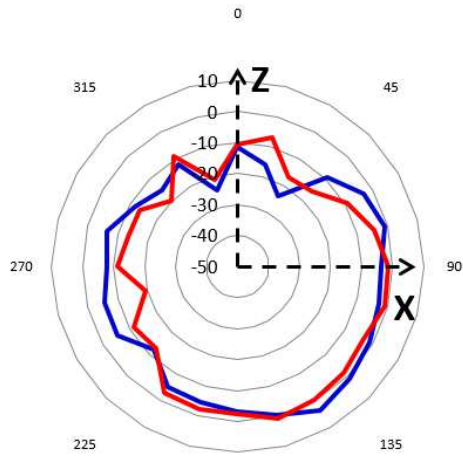
WLAN
Chain 1

— V-Pol.
— H-Pol.



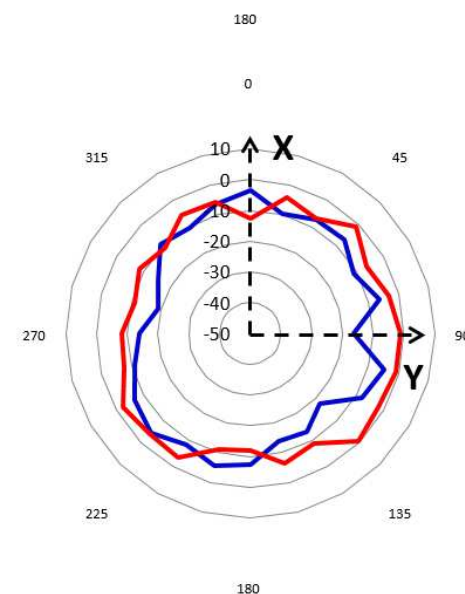
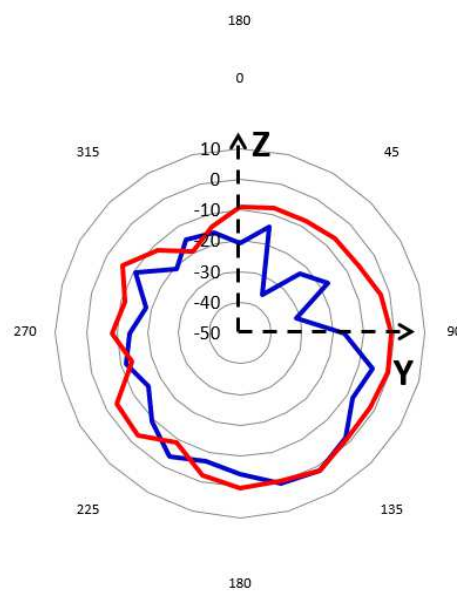
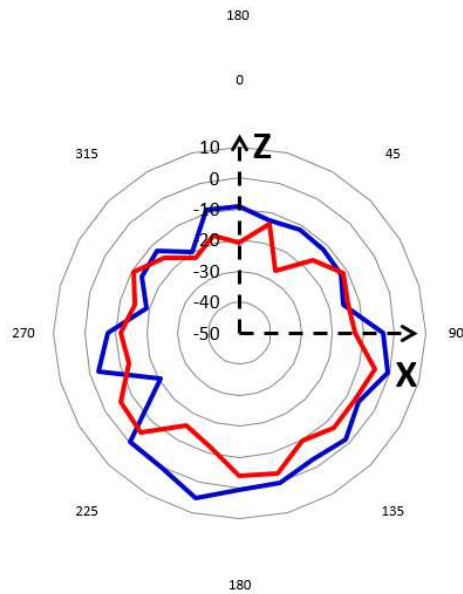
Antenna Radiation Pattern – WLAN antenna_5850 MHz

WLAN
Chain 0



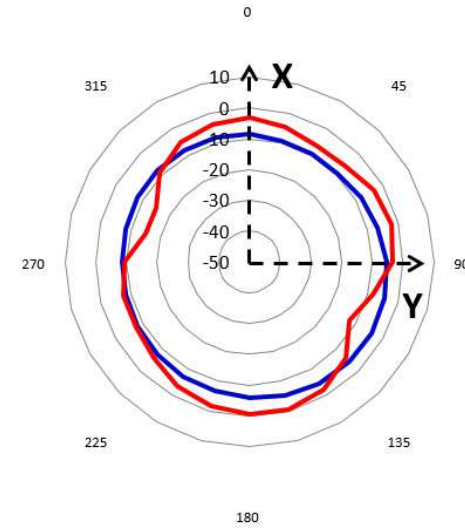
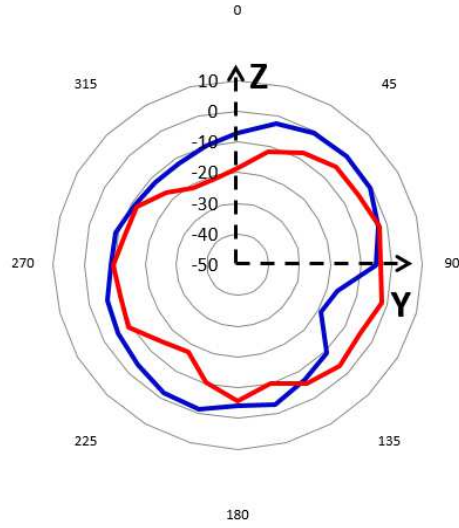
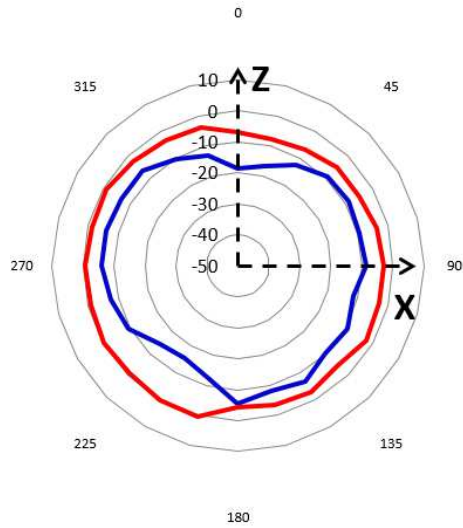
— V-Pol.
— H-Pol.

WLAN
Chain 1



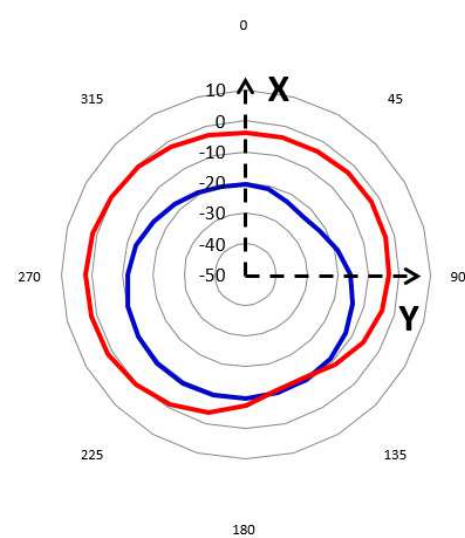
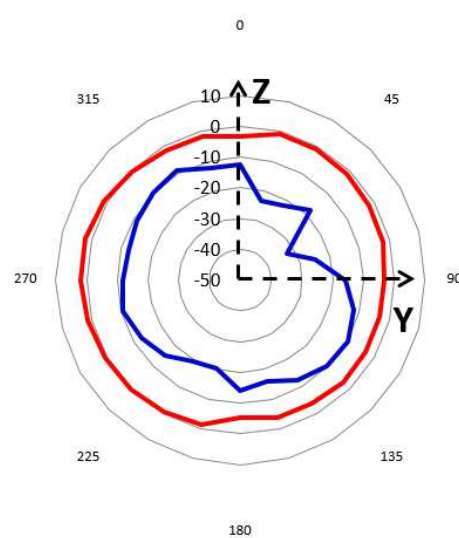
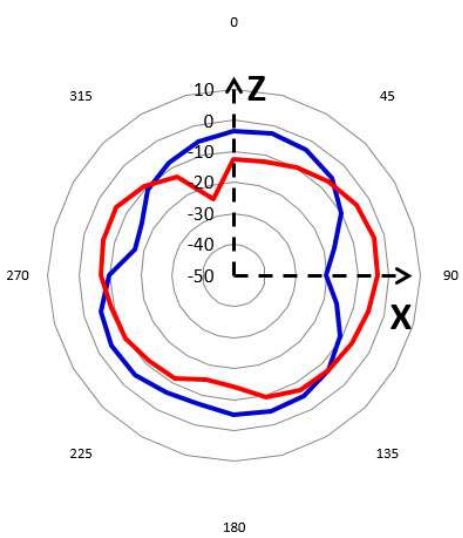
Antenna Radiation Pattern – 345MHz & Z-wave antenna

Z-wave



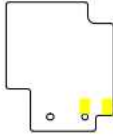



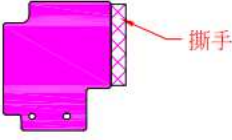


— V-Pol.
— H-Pol.

345MHz

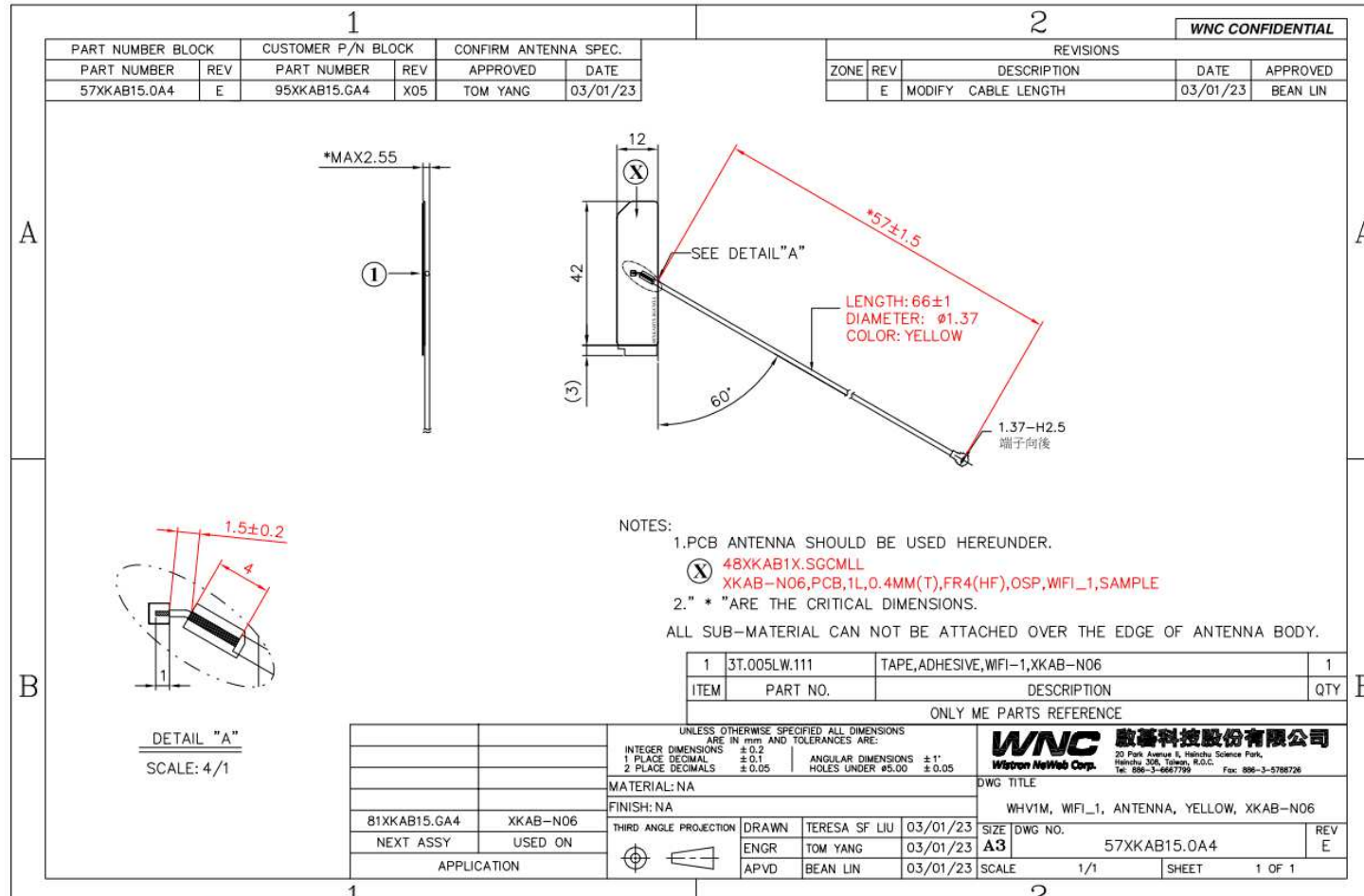


Appendix – Z wave

1	2																																								
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="2">PART NUMBER BLOCK</th> </tr> <tr> <td>PART NUMBER</td> <td>REV</td> </tr> <tr> <td>48XKAB2C.SGBFHYE</td> <td>A</td> </tr> </table>	PART NUMBER BLOCK		PART NUMBER	REV	48XKAB2C.SGBFHYE	A	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="4">WNC PROPRIETARY</th> </tr> <tr> <th colspan="4">REVISIONS</th> </tr> <tr> <th>ZONE</th> <th>REV</th> <th>DESCRIPTION</th> <th>DATE</th> </tr> <tr> <td></td> <td>4</td> <td>Performance Optimize</td> <td>11/14/22</td> </tr> <tr> <td></td> <td></td> <td></td> <td>Tom Yang</td> </tr> </table>	WNC PROPRIETARY				REVISIONS				ZONE	REV	DESCRIPTION	DATE		4	Performance Optimize	11/14/22				Tom Yang														
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 <p>PI Layer (Top Side)</p>	 <p>Copper Layer (Top Side)</p>	 <p>Gold Layer (Top Side)</p>	 <p>Solder Mask (Top Side)</p>	 <p>Text Layer (Top Side)</p>																																					
B	B																																								
 <p>Adhesive Layer (Bottom Side)</p>	 <p>Release Paper (Bottom Side)</p>	<p>NOTES: 1.BASE MATERIAL: 1 MIL PI / 0.5 OZ ED CU. 2.ELECTORPLATE: Ni 3um, GOLD:0.05um(MIN). 3.SOLDER MASK: BLACK. 4.ADHESIVE:TESA 68532 5.TOTAL THICKNESS:0.15 +/- 0.03 mm</p>																																							
<p>TOP Side</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Text Layer</td></tr> <tr><td>Solder Mask</td></tr> <tr><td>Copper Layer</td></tr> <tr><td>PI Layer</td></tr> <tr><td>Adhesive Layer</td></tr> <tr><td>Release Paper</td></tr> </table> <p>Bottom Side</p> <p>FPC Stack Graphs</p>	Text Layer	Solder Mask	Copper Layer	PI Layer	Adhesive Layer	Release Paper	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>NEXT ASSY</td> <td>USED ON</td> </tr> <tr> <td></td> <td></td> </tr> <tr> <td colspan="2" style="text-align: center;">APPLICATION</td> </tr> </table>	NEXT ASSY	USED ON			APPLICATION		<p>UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN mm AND TOLERANCES ARE:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>INTEGRAL DIMENSIONS ± 1 PLACE DECIMAL</td> <td>± 0.1</td> <td>ANGULAR DIMENSIONS</td> <td>± 0.05</td> </tr> <tr> <td>2 PLACE DECIMALS</td> <td>± 0.05</td> <td>HOLES UNDER #5.00</td> <td>± 0.05</td> </tr> </table> <p>MATERIAL: N1A FINISH: N3</p> <p>THIRD ANGLE PROJECTION</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>DRAWN</td> <td>Tom Yang</td> <td>11/14/22</td> </tr> <tr> <td>ENGR</td> <td>Tom Yang</td> <td>11/14/22</td> </tr> <tr> <td>APVD</td> <td>Tom Yang</td> <td>11/14/22</td> </tr> </table>	INTEGRAL DIMENSIONS ± 1 PLACE DECIMAL	± 0.1	ANGULAR DIMENSIONS	± 0.05	2 PLACE DECIMALS	± 0.05	HOLES UNDER #5.00	± 0.05	DRAWN	Tom Yang	11/14/22	ENGR	Tom Yang	11/14/22	APVD	Tom Yang	11/14/22	<p>WNC 威盛科技股份有限公司 <small>Wipron NetWeb Corp.</small> 20 Park Avenue I, Hsinchu Science Park, Hsinchu 300, Taiwan, R.O.C. Tel: 886-3-6667799 Fax: 886-3-6667321</p> <p>DWG TITLE: 48XAB-N08 48XAB-N08_FPC_U3.13MM(T)PLENG.2 WAVE SAMPLE</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>SIZE</td> <td>DWG NO.</td> <td>REV</td> </tr> <tr> <td>A3</td> <td>48XKAB2C.SGBFHYE</td> <td>A</td> </tr> <tr> <td>SCALE</td> <td>1/A</td> <td>SHEET 1 of 1</td> </tr> </table>	SIZE	DWG NO.	REV	A3	48XKAB2C.SGBFHYE	A	SCALE	1/A	SHEET 1 of 1
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Appendix – WiFi 1



Appendix – 345MHz

