



FCC RF Test Report

(FHSS)

Report No.: JYTSZ-R12-2301720
Applicant: Hangzhou Roombanker Technology Co., Ltd.
Address of Applicant: A#801 Wantong center, Hangzhou, China

Equipment Under Test (EUT)

Product Name: Home Security Hub (Pico)
Model No.: RBGW-101-915(US), RBGW-101-915(LA), RBGW-101-915(AU), RBGW-101-915(XX)/YYY:(X:0~9 or X:A~Z)/(Y:0~9 or Y:A~Z), RBGW-101-915(XX)/YYY:(X:0~9 or X:A~Z)/(Y:0~9 or Y:A~Z or blank)
Trade Mark: Roombanker
FCC ID: 2AUXBRBGW-101
Applicable Standards: FCC CFR Title 47 Part 15C (§15.247)
Date of Sample Receipt: 23 Nov., 2023
Date of Test: 24 Nov., 2023 to 23 Jan., 2024
Date of Report Issued: 29 Jan., 2024
Test Result: PASS

Tested by:

vieta.zhang

Project Engineer

Date:

29 Jan., 2024

Reviewed by:

Senior Engineer

Date:

29 Jan., 2024

Approved by:

Janet. Wei

Manager

Date:

29 Jan., 2024

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in above the application standard version. Test results reported herein relate only to the item(s) tested.

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1 Version

Version No.	Date	Description
00	24 Jan., 2024	Original
01	29 Jan., 2024	Update Page 4 25

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3 General Information

3.1 Client Information

Applicant:	Hangzhou Roombanker Technology Co., Ltd.
Address:	A#801 Wantong center, Hangzhou, China
Manufacturer/ Factory:	Zhejiang dusun electron co., ltd
Address:	No.640 Feng Qing St, DeQing Zhejiang China

3.2 General Description of E.U.T.

Product Name:	Home Security Hub (Pico)
Model No.:	RBGW-101-915(US), RBGW-101-915(LA), RBGW-101-915(AU), RBGW-101-915(XX)/YYY:(X:0~9 or X:A~Z)/(Y:0~9 or Y:A~Z), RBGW-101-915(XX)/YYY:(X:0~9 or X:A~Z)/(Y:0~9 or Y:A~Z or blank)
Operation Frequency:	903 MHz - 927MHz
Number of Channel:	241
Modulation Technology:	FSK
Antenna Type:	Internal Antenna
Antenna Gain:	ANT0: 0.54 dBi (declare by applicant) ANT1: -0.46 dBi (declare by applicant)
Antenna Transmit Mode:	SISO (1TX, 1RX) (with ANT 0 and ANT 1, and they stand alone to transmit)
Power Supply:	DC 5V 2A
Remark:	Model No.: RBGW-101-915(US), RBGW-101-915(LA), RBGW-101-915(AU), RBGW-101-915(XX)/YYY:(X:0~9 or X:A~Z)/(Y:0~9 or Y:A~Z), RBGW-101-915(XX)/YYY:(X:0~9 or X:A~Z)/(Y:0~9 or Y:A~Z or blank) were identical inside, the electrical circuit design, layout, components used and internal wiring, with only difference being model name.
Test Sample Condition:	The test samples were provided in good working order with no visible defects.

3.3 Test Mode and Test Environment

Test Modes:	
Non-hopping mode:	Keep the EUT in continuous transmitting mode.
Hopping mode:	Keep the EUT in hopping mode.
Remark: For spurious emission of below 1GHz, pre-scan lowest, middle and highest channel, found lowest channel was worse case mode. The report only reflects the test data of worst mode.	
Operating Environment:	
Temperature:	15°C ~ 35°C
Humidity:	20 % ~ 75 % RH
Atmospheric Pressure:	1008 mbar
Voltage:	Nominal: 5.0 Vdc
Test Engineer:	Vieta (Conducted measurement) Kiran (Radiated measurement)

3.4 Description of Test Auxiliary Equipment

The EUT has been tested as an independent unit.

3.5 Measurement Uncertainty

Parameter	Expanded Uncertainty (Confidence of 95%(U = 2Uc(y)))
Conducted Emission for LISN (9kHz ~ 150kHz)	3.57 dB
Conducted Emission for LISN (150kHz ~ 30MHz)	3.14 dB
Radiated Emission (30MHz ~ 200MHz) (3m SAC)	4.6 dB
Radiated Emission (200MHz ~ 1000MHz) (3m SAC)	5.8 dB
Radiated Emission (1GHz ~ 6GHz) (3m FAR)	4.95 dB
Radiated Emission (6GHz ~ 18GHz) (3m FAR)	5.23 dB
Radiated Emission (18GHz ~ 40GHz) (3m FAR)	5.32 dB
Note: All the measurement uncertainty value were shown with a coverage k=2 to indicate 95% level of confidence. The measurement data show herein meets or exceeds the CISPR measurement uncertainty values specified in CISPR 16-4-2 and can be compared directly to specified limit to determine compliance.	

3.6 Additions to, Deviations, or Exclusions From the Method

No

3.7 Laboratory Facility

The test facility is recognized, certified, or accredited by the following organizations: ● FCC - Designation No.: CN1211 JianYan Testing Group Shenzhen Co., Ltd. has been accredited as a testing laboratory by FCC(Federal Communications Commission). The test firm Registration No. is 727551. ● ISED – CAB identifier.: CN0021 The 3m Semi-anechoic chamber and 10m Semi-anechoic chamber of JianYan Testing Group Shenzhen Co., Ltd. has been Registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 10106A-1. ● CNAS - Registration No.: CNAS L15527 JianYan Testing Group Shenzhen Co., Ltd. is accredited to ISO/IEC 17025:2017 General Requirements for the Competence of Testing and Calibration laboratories for the competence of testing. The Registration No. is CNAS L15527. ● A2LA - Registration No.: 4346.01 This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 General requirements for the competence of testing and calibration laboratories. The test scope can be found as below link: https://portal.a2la.org/scopepdf/4346-01.pdf
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3.8 Laboratory Location

JianYan Testing Group Shenzhen Co., Ltd.

Address: No.101, Building 8, Innovation Wisdom Port, No.155 Hongtian Road, Huangpu Community, Xinqiao Street, Bao'an District, Shenzhen, Guangdong, People's Republic of China.

Tel: +86-755-23118282, Fax: +86-755-23116366

Email: info-JYTee@lets.com, Website: <http://jyt.lets.com>

3.9 Test Instruments List

Radiated Emission(3m FAR):					
Test Equipment	Manufacturer	Model No.	Manage No.	Cal. Date (mm-dd-yy)	Cal. Due date (mm-dd-yy)
3m FAR	YUNYI	9m*6m*6m	WXJ097	06-15-2023	06-14-2028
BiConiLog Antenna	Schwarzbeck	VULB9163	WXJ097-2	07-13-2023	07-12-2024
Biconical Antenna	Schwarzbeck	VUBA9117	WXJ002-1	07-02-2021	07-01-2024
Horn Antenna	Schwarzbeck	BBHA9120D	WXJ097-3	07-14-2023	07-13-2024
Horn Antenna	Schwarzbeck	BBHA9120D	WXJ002-3	01-09-2023	01-08-2024
				12-28-2023	12-27-2024
Horn Antenna	Schwarzbeck	BBHA9170	WXJ002-5	01-09-2023	01-08-2024
				12-28-2023	12-27-2024
Horn Antenna	Schwarzbeck	BBHA9170	WXJ002-6	01-09-2023	01-08-2024
				12-28-2023	12-27-2024
Pre-amplifier (30MHz ~ 1GHz)	YUNYI	PAM-310N	WXJ097-5	05-14-2023	05-13-2024
Pre-amplifier (1GHz ~ 18GHz)	YUNYI	PAM-118N	WXJ097-6	05-14-2023	05-13-2024
Pre-amplifier (18GHz ~ 40GHz)	RF System	TRLA-180400G45B	WXJ002-7	01-11-2023	01-10-2024
				12-27-2023	12-26-2024
EMI Test Receiver	Rohde & Schwarz	ESCI3	WXJ003	01-10-2023	01-09-2024
				12-27-2023	12-26-2024
Spectrum Analyzer	Rohde & Schwarz	FSP 30	WXJ004	01-10-2023	01-09-2024
				12-27-2023	12-26-2024
Spectrum Analyzer	KEYSIGHT	N9010B	WXJ081-1	06-13-2023	06-12-2024
Coaxial Cable (30MHz ~ 1GHz)	JYTSZ	JYT3M-1G-NN-13M	WXG097-1	08-01-2023	07-31-2024
Coaxial Cable (1GHz ~ 18GHz)	JYTSZ	JYT3M-18G-NN-8M	WXG097-2	08-01-2023	07-31-2024
Coaxial Cable (18GHz ~ 40GHz)	JYTSZ	JYT3M-40G-SS-8M	WXG097-3	08-01-2023	07-31-2024
High Band Reject Filter Group	Tonscend	JS0806-F	WXJ089	N/A	
Low Band Reject Filter Group	Tonscend	JS0806-F	WXJ097-4	N/A	
Test Software	Tonscend	TS+	Version: 5.0.0		

Radiated Emission(10m SAC):					
Test Equipment	Manufacturer	Model No.	Manage No.	Cal. Date (mm-dd-yy)	Cal. Due date (mm-dd-yy)
10m SAC	ETS	RFSD-100-F/A	WXJ090	04-28-2021	04-27-2024
BiConiLog Antenna	SCHWARZBECK	VULB 9168	WXJ090-1	01-17-2023	01-16-2024
				12-28-2023	12-27-2024
BiConiLog Antenna	SCHWARZBECK	VULB 9168	WXJ090-2	01-10-2023	01-09-2024
				12-28-2023	12-27-2024
EMI Test Receiver	R&S	ESR 3	WXJ090-3	01-10-2023	01-09-2024
				12-27-2023	12-26-2024
EMI Test Receiver	R&S	ESR 3	WXJ090-4	01-11-2023	01-09-2024
				12-27-2023	12-26-2024
Low Pre-amplifier	Bost	LNA 0920N	WXJ090-6	01-10-2023	01-09-2024
				12-27-2023	12-26-2024
Low Pre-amplifier	Bost	LNA 0920N	WXJ090-7	01-10-2023	01-09-2024
				12-27-2023	12-26-2024
Cable	Bost	JYT10M-1G-NN-10M	WXG002-7	01-18-2023	01-17-2024
				01-17-2024	01-16-2025
Cable	Bost	JYT10M-1G-NN-10M	WXG002-8	01-18-2023	01-17-2024
				01-17-2024	01-16-2025
Test Software	R&S	EMC32	Version: 10.50.40		

Conducted Emission:					
Test Equipment	Manufacturer	Model No.	Manage No.	Cal. Date (mm-dd-yy)	Cal. Due date (mm-dd-yy)
EMI Test Receiver	Rohde & Schwarz	ESR3	WXJ003-2	07-05-2023	07-04-2024
LISN	Schwarzbeck	NSLK 8127	QCJ001-13	01-10-2023	01-09-2024
				12-27-2023	12-26-2024
LISN	Rohde & Schwarz	ESH3-Z5	WXJ005-1	01-11-2023	01-10-2024
				12-27-2023	12-26-2024
LISN Coaxial Cable (9kHz ~ 30MHz)	JYTSZ	JYTCE-1G-NN-2M	WXG003-1	02-22-2023	02-21-2024
RF Switch	TOP PRECISION	RSU0301	WXG003	N/A	
Test Software	AUDIX	E3	Version: 6.110919b		

Conducted Method:					
Test Equipment	Manufacturer	Model No.	Manage No.	Cal. Date (mm-dd-yy)	Cal. Due date (mm-dd-yy)
Spectrum Analyzer	Keysight	N9010B	WXJ004-3	11-01-2023	10-31-2024
Temperature Humidity Chamber	ZHONG ZHI	CZ-A-80D	WXJ032-3	01-09-2023	01-08-2025
Power Detector Box	MWRFTTEST	MW100-PSB	WXJ007-4	09-25-2023	09-24-2024
DC Power Supply	Keysight	E3642A	WXJ025-2	N/A	
RF Control Unit	MWRFTTEST	MW100-RFCB	WXG006	N/A	
Test Software	MWRFTTEST	MTS 8310	Version: 2.0.0.0		

4 Measurement Setup and Procedure

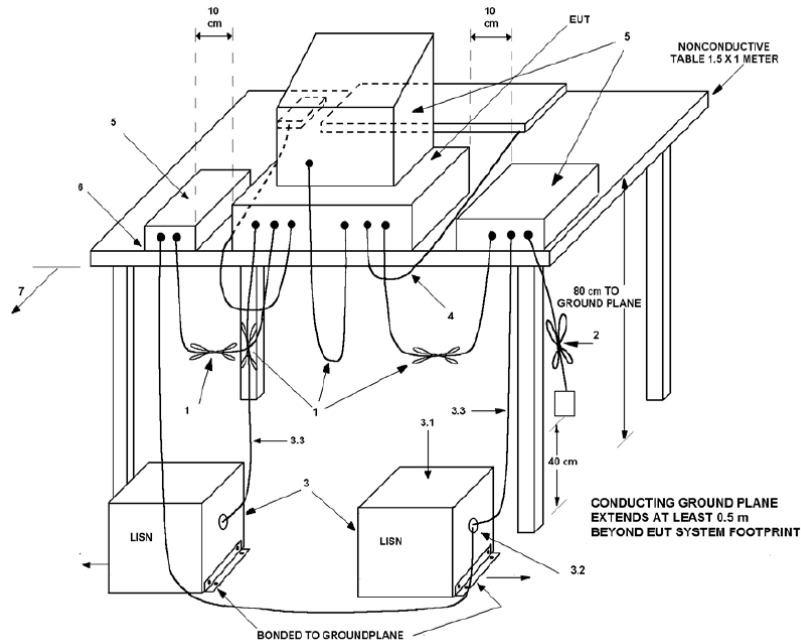
4.1 Test Channel

According to ANSI C63.10-2013 chapter 5.6.1 Table 4 requirement, select lowest channel, middle channel, and highest channel in the frequency range in which device operates for testing. The detailed frequency points are as follows:

Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)
0	903	110	914	220	925
1	903.1	111	914.1	221	925.1
2	903.2	112	914.2	222	925.2
3	903.3	113	914.3	223	925.3
4	903.4	114	914.4	224	925.4
5	903.5	115	914.5	225	925.5
6	903.6	116	914.6	226	925.6
7	903.7	117	914.7	227	925.7
8	903.8	118	914.8	228	925.8
9	903.9	119	914.9	229	925.9
10	904	120	915	230	926
11	904.1	121	915.1	231	926.1
12	904.2	122	915.2	232	926.2
13	904.3	123	915.3	233	926.3
14	904.4	124	915.4	234	926.4
15	904.5	125	915.5	235	926.5
16	904.6	126	915.6	236	926.6
17	904.7	127	915.7	237	926.7
18	904.8	128	915.8	238	926.8
19	904.9	129	915.9	239	926.9
20	905	130	916	240	927
...	...	...	...	/	/
Lowest channel		Middle channel		Highest channel	
Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)
0	903	120	915	240	927

4.2 Test Setup

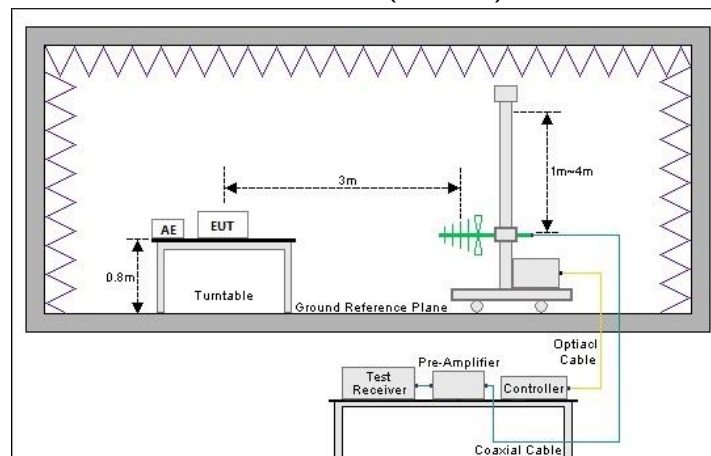
1) Conducted emission measurement:

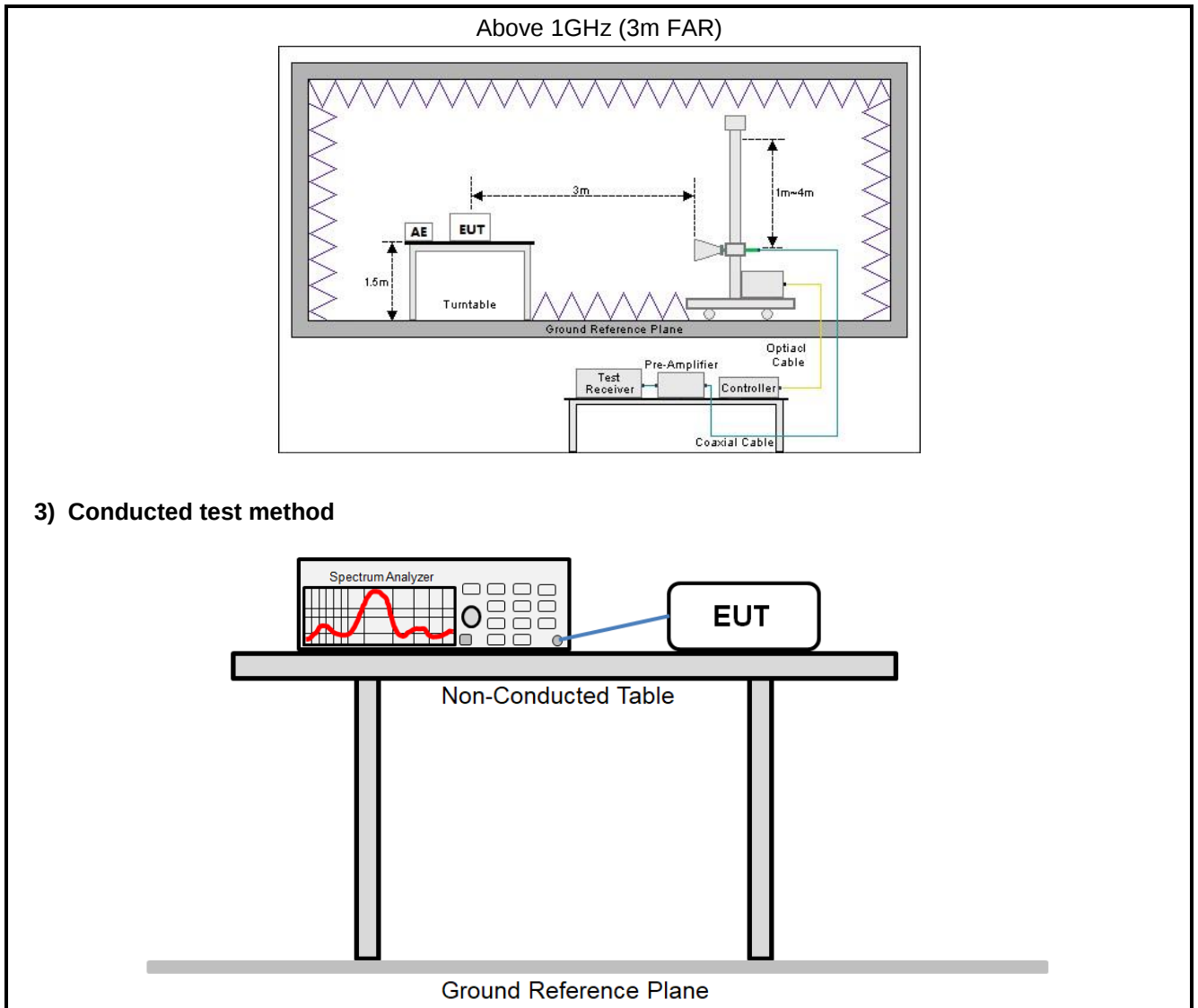


Note: The detailed descriptions please refer to Figure 8 of ANSI C63.4:2014.

2) Radiated emission measurement:

Below 1GHz (3m SAC)





4.3 Test Procedure

Test method	Test step
Conducted emission	1. The E.U.T and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm/50uH coupling impedance for the measuring equipment. 2. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination. (Please refer to the block diagram of the test setup and photographs). 3. Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10 on conducted measurement.
Radiated emission	For below 1GHz: 1. The EUT was placed on the tabletop of a rotating table 0.8 m the ground at a 3 m semi anechoic chamber. The measurement distance from the EUT to the receiving antenna is 3 m. 2. EUT works in each mode of operation that needs to be tested, and having the EUT continuously working, respectively on 3 axis (X, Y & Z) and considered typical configuration to obtain worst position. The highest signal levels relative to the limit shall be determined by rotating the EUT from 0° to 360° and with varying the measurement antenna height between 1 m and 4 m in vertical and horizontal polarizations. 3. Open the test software to control the test antenna and test turntable. Perform the test, save the test results, and export the test data. For above 1GHz: 1. The EUT was placed on the tabletop of a rotating table 1.5 m the ground at a 3 m fully anechoic room. The measurement distance from the EUT to the receiving antenna is 3 m. 2. EUT works in each mode of operation that needs to be tested, and having the EUT continuously working, respectively on 3 axis (X, Y & Z) and considered typical configuration to obtain worst position. The highest signal levels relative to the limit shall be determined by rotating the EUT from 0° to 360° and with varying the measurement antenna height between 1 m and 4 m in vertical and horizontal polarizations. 3. Open the test software to control the test antenna and test turntable. Perform the test, save the test results, and export the test data.
Conducted test method	1. The antenna port of EUT was connected to the test port of the test system through an RF cable. 2. The EUT is keeping in continuous transmission mode and tested in all modulation modes. 3. Open the test software, prepare a test plan, and control the system through the software. After the test is completed, the test report is exported through the test software.

5 Test Results

5.1 Summary

5.1.1 Clause and data summary

Test items	Standard clause	Test data	Result
Antenna Requirement	15.203 15.247 (b)(4)	See Section 5.2	Pass
AC Power Line Conducted Emission	15.207	See Section 5.3	Pass
Conducted Output Power	15.247 (b)(2)	See Section 5.4	Pass
20dB Occupied Bandwidth	15.247 (a)(1)(i)	See Section 5.5	Pass
Carrier Frequencies Separation	15.247 (a)(1)	See Section 5.6	Pass
Hopping Channel Number	5.247 (a)(1)(i)	See Section 5.7	Pass
Dwell Time	15.247 (a)(1)(i)	See Section 5.8	Pass
Spurious Emission	15.205 15.209 15.247 (d)	See Section 5.9	Pass
Remark: 1. Pass: The EUT complies with the essential requirements in the standard. 2. N/A: Not Applicable. 3. The cable insertion loss used by "RF Output Power" and other conduction measurement items is 0.5dB (provided by the customer).			
Test Method:	ANSI C63.10-2013 KDB 558074 D01 15.247 Meas Guidance v05r02		

5.1.2 Test Limit

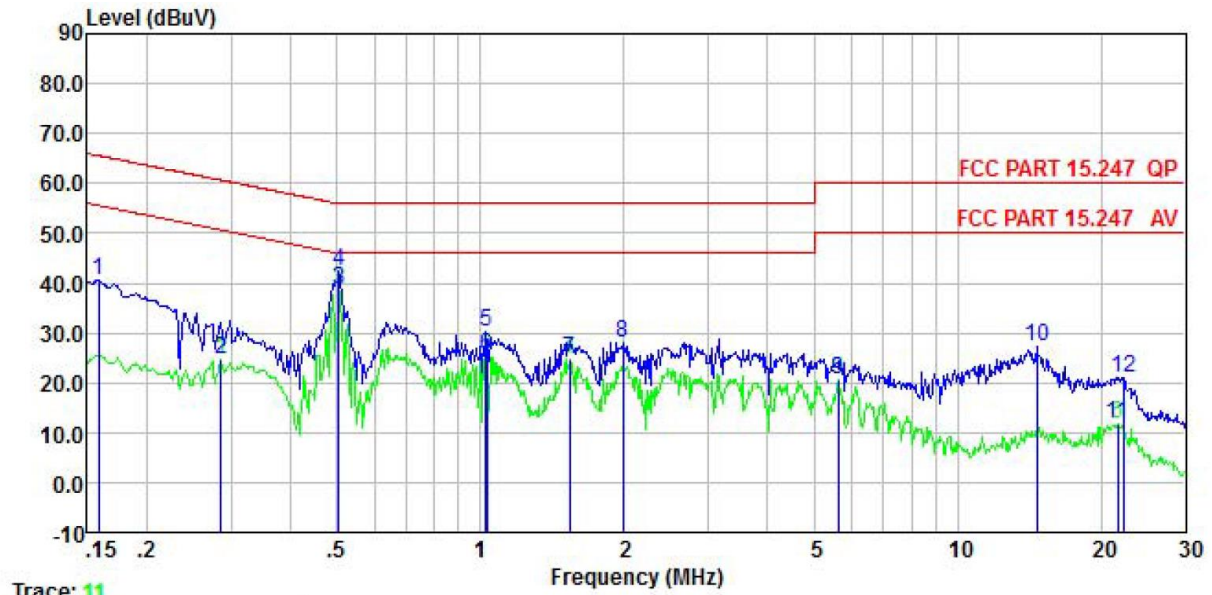
Test items	Limit																														
AC Power Line Conducted Emission	<table><tr><th rowspan="2">Frequency (MHz)</th><th colspan="2">Limit (dBµV)</th></tr><tr><th>Quasi-Peak</th><th>Average</th></tr><tr><td>0.15 – 0.5</td><td>66 to 56 Note 1</td><td>56 to 46 Note 1</td></tr><tr><td>0.5 – 5</td><td>56</td><td>46</td></tr><tr><td>5 – 30</td><td>60</td><td>50</td></tr></table> Note 1: The limit level in dBµV decreases linearly with the logarithm of frequency. Note 2: The more stringent limit applies at transition frequencies.	Frequency (MHz)	Limit (dBµV)		Quasi-Peak	Average	0.15 – 0.5	66 to 56 Note 1	56 to 46 Note 1	0.5 – 5	56	46	5 – 30	60	50																
Frequency (MHz)	Limit (dBµV)																														
	Quasi-Peak	Average																													
0.15 – 0.5	66 to 56 Note 1	56 to 46 Note 1																													
0.5 – 5	56	46																													
5 – 30	60	50																													
Conducted Output Power	For frequency hopping systems operating in the 902-928 MHz band: 1 watt for systems employing at least 50 hopping channels; and, 0.25 watts for systems employing less than 50 hopping channels, but at least 25 hopping channels, as permitted under paragraph (a)(1)(i) of this section.																														
20dB Occupied Bandwidth Hopping Channel Number Dwell Time	For frequency hopping systems operating in the 902-928 MHz band: if the 20 dB bandwidth of the hopping channel is less than 250 kHz, the system shall use at least 50 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 20 second period; if the 20 dB bandwidth of the hopping channel is 250 kHz or greater, the system shall use at least 25 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 10 second period. The maximum allowed 20 dB bandwidth of the hopping channel is 500 kHz.																														
Carrier Frequencies Separation	Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater																														
Spurious Emission	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)): <table><tr><th rowspan="2">Frequency (MHz)</th><th colspan="2">Limit (dBµV/m)</th><th rowspan="2">Detector</th></tr><tr><th>@ 3m</th><th>@ 10m</th></tr><tr><td>30 – 88</td><td>40.0</td><td>30.0</td><td>Quasi-peak</td></tr><tr><td>88 – 216</td><td>43.5</td><td>33.5</td><td>Quasi-peak</td></tr><tr><td>216 – 960</td><td>46.0</td><td>36.0</td><td>Quasi-peak</td></tr><tr><td>960 – 1000</td><td>54.0</td><td>44.0</td><td>Quasi-peak</td></tr></table> Note: The more stringent limit applies at transition frequencies. <table><tr><th rowspan="2">Frequency</th><th colspan="2">Limit (dBµV/m) @ 3m</th></tr><tr><th>Average</th><th>Peake</th></tr><tr><td>Above 1 GHz</td><td>54.0</td><td>74.0</td></tr></table> Note: The measurement bandwidth shall be 1 MHz or greater.	Frequency (MHz)	Limit (dBµV/m)		Detector	@ 3m	@ 10m	30 – 88	40.0	30.0	Quasi-peak	88 – 216	43.5	33.5	Quasi-peak	216 – 960	46.0	36.0	Quasi-peak	960 – 1000	54.0	44.0	Quasi-peak	Frequency	Limit (dBµV/m) @ 3m		Average	Peake	Above 1 GHz	54.0	74.0
Frequency (MHz)	Limit (dBµV/m)		Detector																												
	@ 3m	@ 10m																													
30 – 88	40.0	30.0	Quasi-peak																												
88 – 216	43.5	33.5	Quasi-peak																												
216 – 960	46.0	36.0	Quasi-peak																												
960 – 1000	54.0	44.0	Quasi-peak																												
Frequency	Limit (dBµV/m) @ 3m																														
	Average	Peake																													
Above 1 GHz	54.0	74.0																													

5.2 Antenna Requirement

Standard requirement:	FCC Part 15 C Section 15.203 & 247(b)
15.203 requirement: An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. 15.247(b) (4) requirement: (4) The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.	
E.U.T Antenna:	
The EUT antenna is an Internal antenna which permanently attached, and the best case gain of the antenna 0 is 0.54 dBi and the best case gain of the antenna 1 is -0.46 dBi. See product internal photos for details.	

5.3 AC Power Line Conducted Emission

Product name:	Home Security Hub (Pico)	Product model:	RBGW-101-915(US)
Test by:	Asher	Test mode:	Tx mode
Test frequency:	150 kHz ~ 30 MHz	Phase:	Line
Test voltage:	AC 120 V/60 Hz		

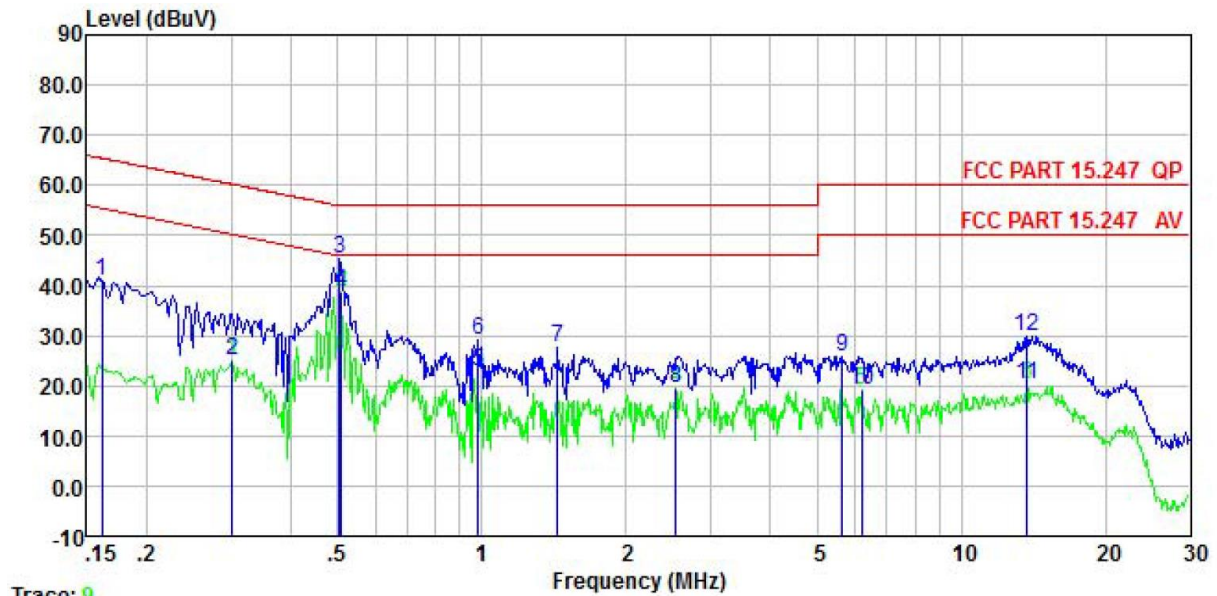


	Freq	Read Level	LISN Factor	Aux2 Factor	Cable Loss	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dB	dB	dBuV	dBuV	dB	
1	0.158	30.61	0.20	9.88	0.01	40.70	65.56	-24.86	QP
2	0.286	14.44	0.20	9.88	0.03	24.55	50.63	-26.08	Average
3	0.505	28.76	0.20	9.88	0.03	38.87	46.00	-7.13	Average
4	0.505	32.37	0.20	9.88	0.03	42.48	56.00	-13.52	QP
5	1.027	20.17	0.20	9.88	0.06	30.31	56.00	-25.69	QP
6	1.032	15.15	0.20	9.88	0.06	25.29	46.00	-20.71	Average
7	1.535	14.59	0.20	9.88	0.15	24.82	46.00	-21.18	Average
8	1.991	17.85	0.20	9.88	0.21	28.14	56.00	-27.86	QP
9	5.623	10.37	0.20	9.90	0.09	20.56	50.00	-29.44	Average
10	14.672	16.96	0.20	9.93	0.13	27.22	60.00	-32.78	QP
11	21.715	1.40	0.30	9.98	0.16	11.84	50.00	-38.16	Average
12	22.298	10.73	0.30	9.98	0.16	21.17	60.00	-38.83	QP

Remark:

1. Level = Read level + LISN Factor + Cable Loss.

Product name:	Home Security Hub (Pico)	Product model:	RBGW-101-915(US)
Test by:	Asher	Test mode:	Tx mode
Test frequency:	150 kHz ~ 30 MHz	Phase:	Neutral
Test voltage:	AC 120 V/60 Hz		



	Freq	Read Level	LISN Factor	Aux2 Factor	Cable Loss	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dB	dB	dBuV	dBuV	dB	
1	0.162	30.71	0.20	9.88	0.01	40.80	65.38	-24.58	QP
2	0.302	14.83	0.20	9.88	0.03	24.94	50.19	-25.25	Average
3	0.505	35.19	0.20	9.88	0.03	45.30	56.00	-10.70	QP
4	0.510	28.77	0.20	9.88	0.03	38.88	46.00	-7.12	Average
5	0.984	12.83	0.20	9.88	0.05	22.96	46.00	-23.04	Average
6	0.984	19.11	0.20	9.88	0.05	29.24	56.00	-26.76	QP
7	1.441	17.21	0.25	9.88	0.13	27.47	56.00	-28.53	QP
8	2.540	9.19	0.30	9.88	0.13	19.50	46.00	-26.50	Average
9	5.653	15.66	0.30	9.90	0.09	25.95	60.00	-34.05	QP
10	6.186	8.69	0.30	9.90	0.09	18.98	50.00	-31.02	Average
11	13.695	9.68	0.40	9.93	0.12	20.13	50.00	-29.87	Average
12	13.695	19.45	0.40	9.93	0.12	29.90	60.00	-30.10	QP

Remark:

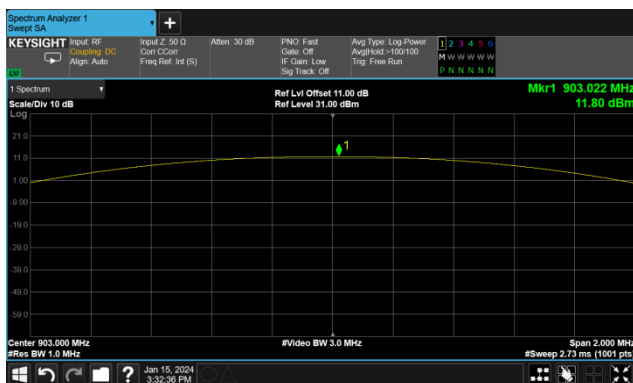
1. Level = Read level + LISN Factor + Cable Loss.

5.4 Conducted Output Power

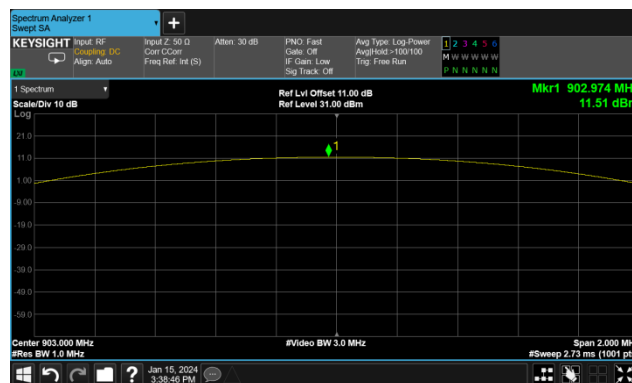
Test Channel	ANT Port	Maximum Output Power (dBm)	Limit(dBm)	Result
Lowest channel	ANT0	11.80	30.00	Pass
	ANT1	11.51		
Middle channel	ANT0	11.74		
	ANT1	11.29		
Highest channel	ANT0	11.63		
	ANT1	11.02		

Test plot as follows:

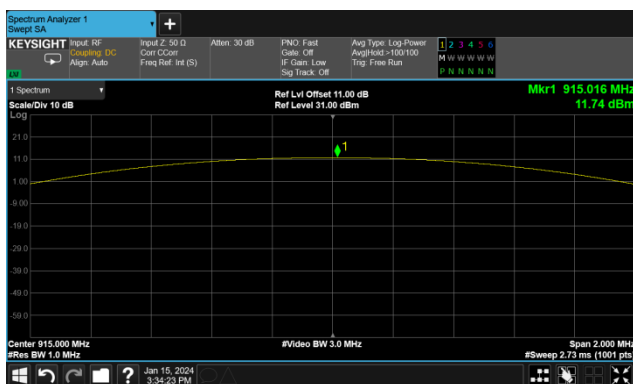
ANT0
Lowest channel



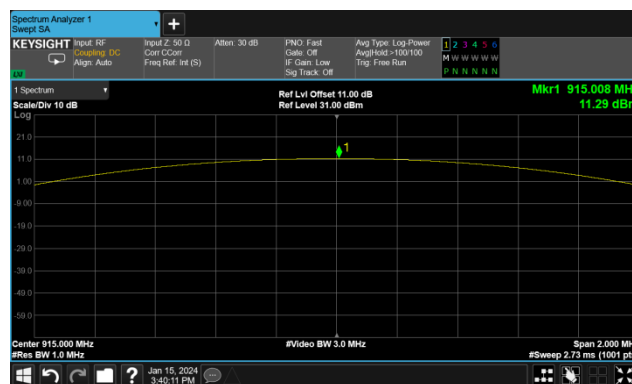
ANT1
Lowest channel



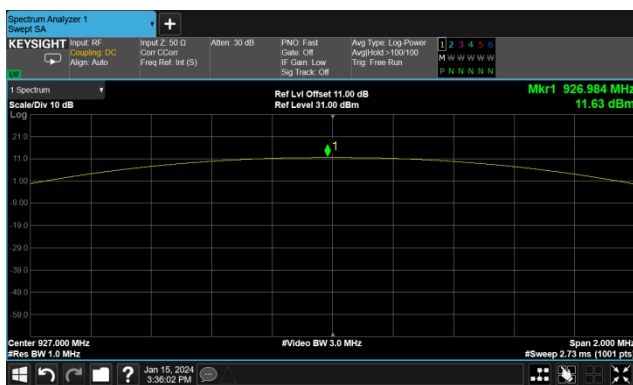
ANT0
Middle channel



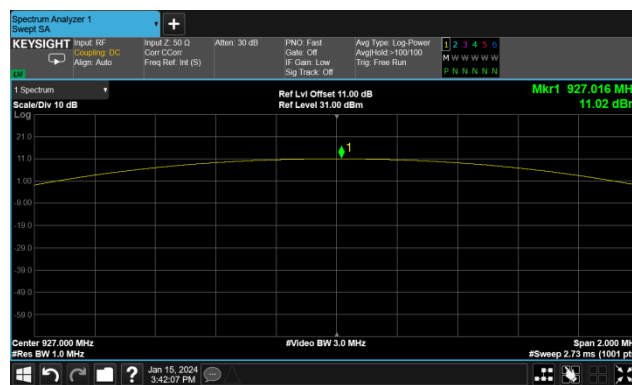
ANT1
Middle channel



ANT0
Highest channel



ANT1
Highest channel

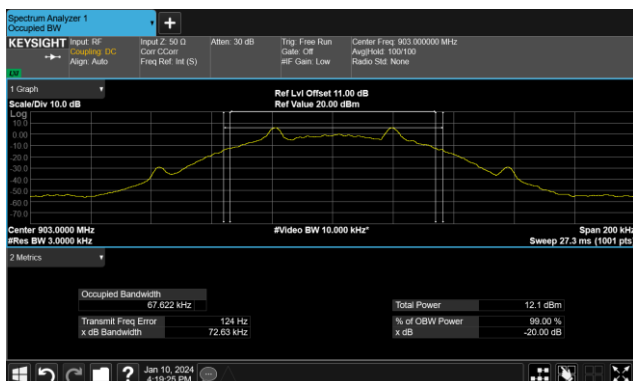


5.5 20dB Occupied Bandwidth

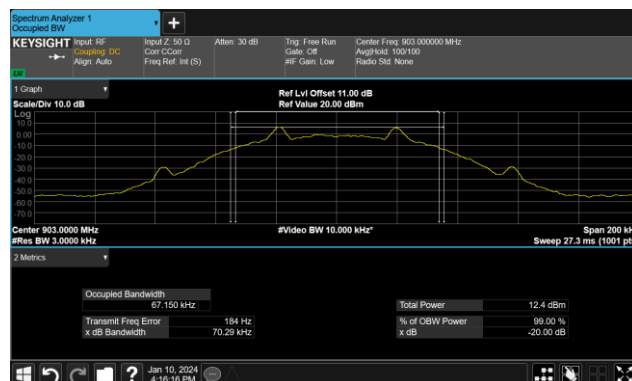
Test channel	ANT Port	20dB Occupy Bandwidth (kHz)	Limit (kHz)	Result
Lowest channel	ANT0	72.63	250	Pass
	ANT1	70.29		
Middle channel	ANT0	71.68	250	Pass
	ANT1	71.16		
Highest channel	ANT0	71.18	250	Pass
	ANT1	71.39		

Test plot as follows:

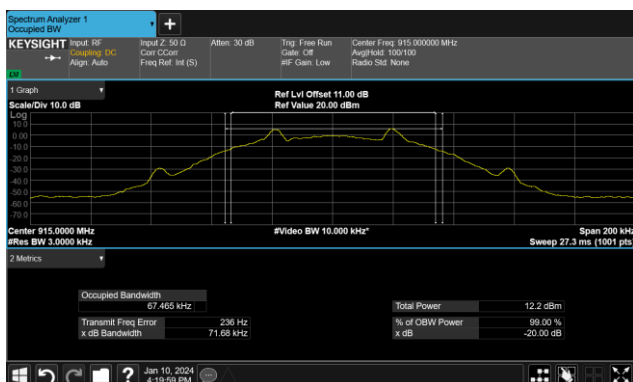
ANT0
Lowest channel



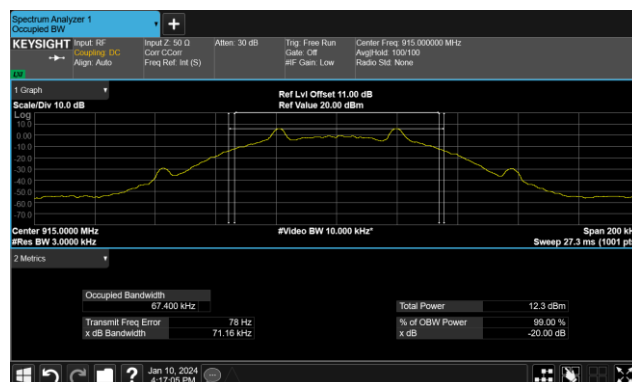
ANT1
Lowest channel



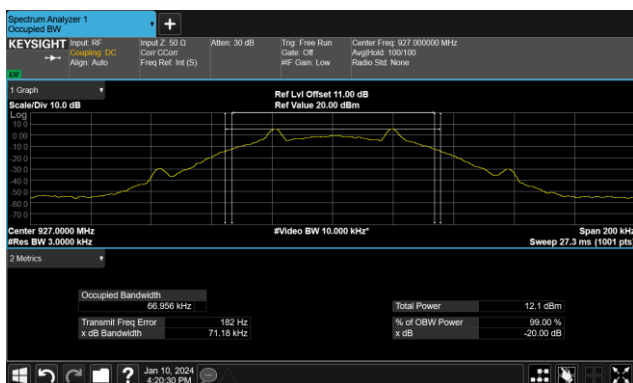
ANT0
Middle channel



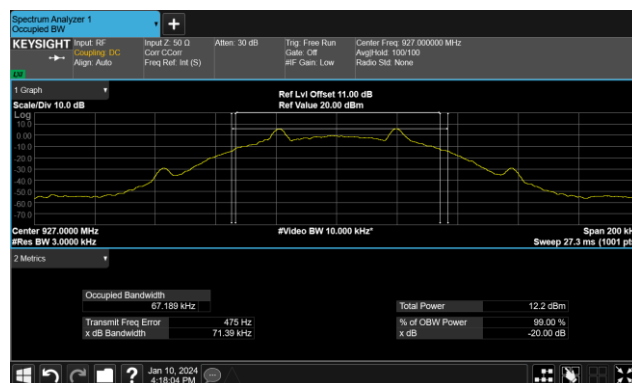
ANT1
Middle channel



ANT0
Highest channel



ANT1
Highest channel

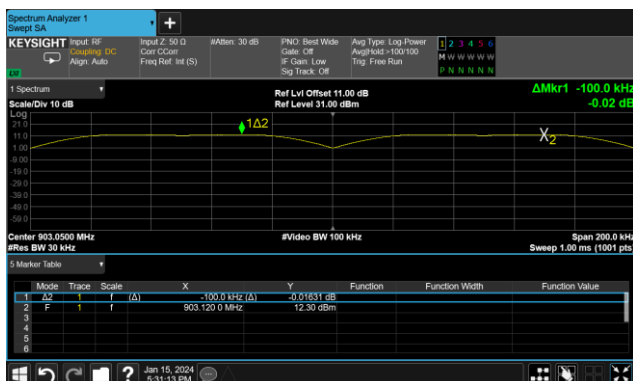


5.6 Carrier Frequencies Separation

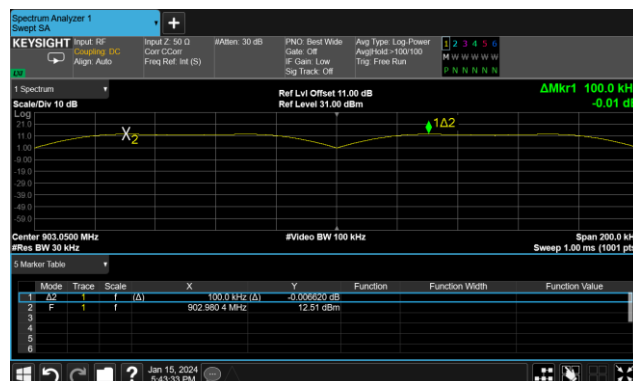
Test channel	ANT Port	Carrier Frequencies Separation (kHz)	Limit (kHz)	Result
Lowest channel	ANT0	100	72.63	Pass
	ANT1	100	70.29	
Middle channel	ANT0	100	71.68	Pass
	ANT1	100	71.16	
Highest channel	ANT0	100	71.18	Pass
	ANT1	100	71.39	

Test plot as follows:

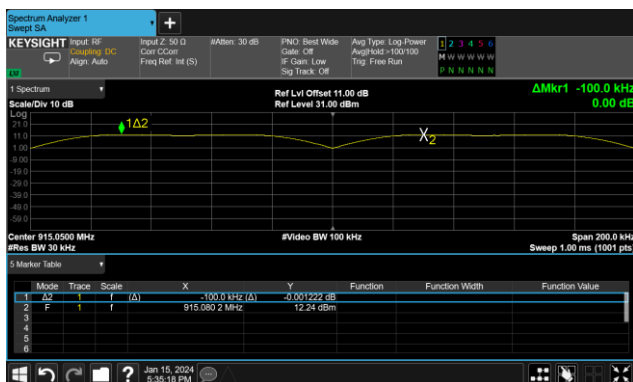
ANT0
Lowest channel



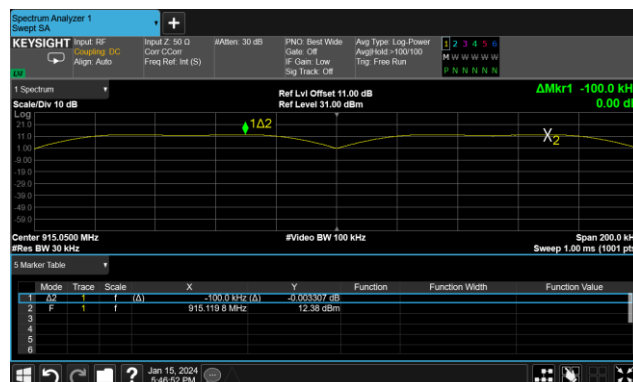
ANT1
Lowest channel



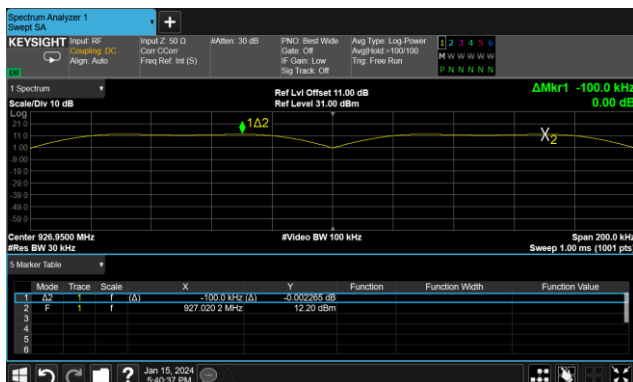
Middle channel



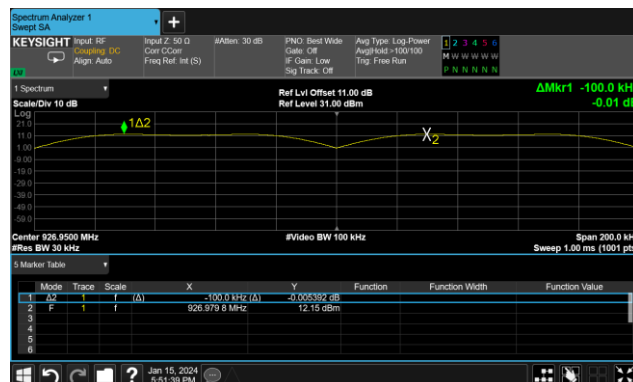
Middle channel



Highest channel



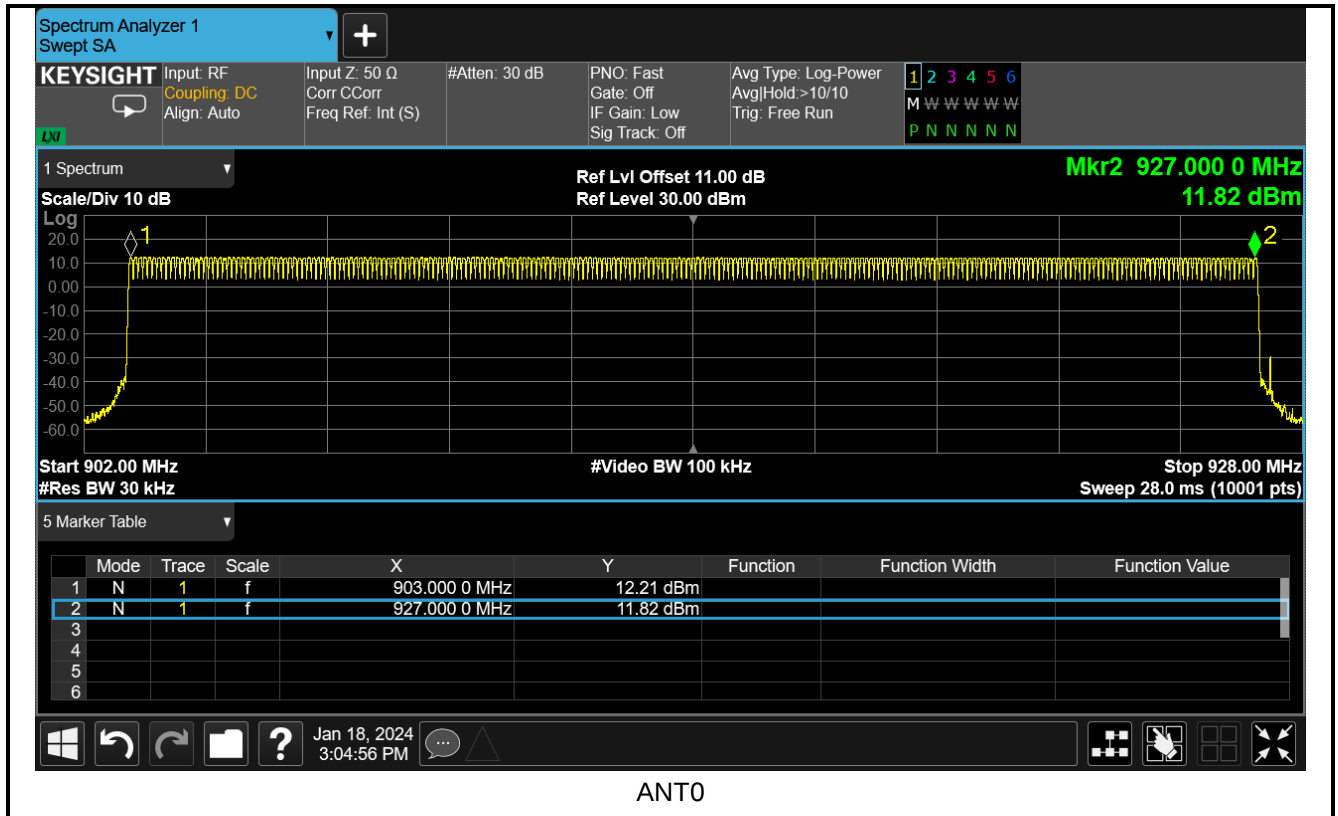
Highest channel



5.7 Hopping Channel Number

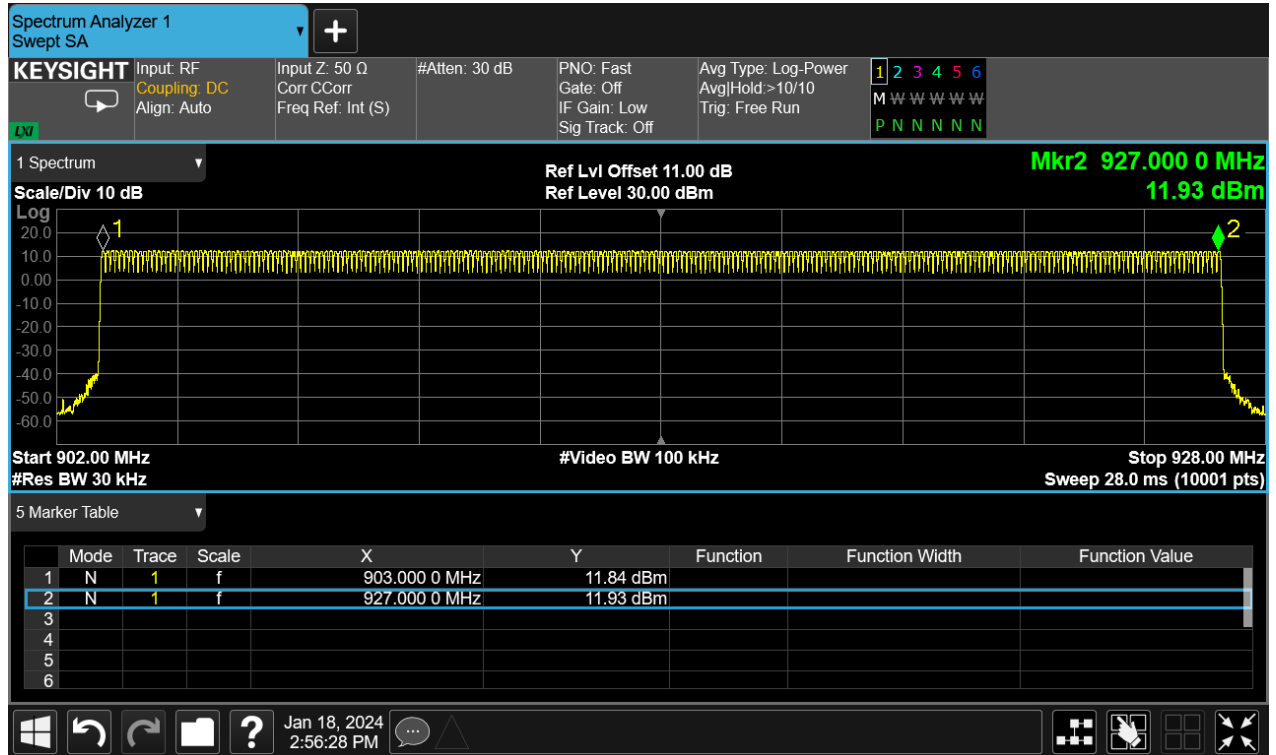
Hopping channel numbers	ANT Port	Limit	Result
241	ANT0	$N_{ch} \geq 50$	Pass

Test plot as follows:



Hopping channel numbers	ANT Port	Limit	Result
241	ANT1	$N_{ch} \geq 50$	Pass

Test plot as follows:



ANT1

5.8 Dwell Time

ANT Port	T_{on} (s)	Hopping numbers (20 s period)	Dwell time (s)	Limit (s)	Result
ANT0	0.319	1	0.317	0.4	Pass
ANT1	0.317	1	0.319		

Note:

- T_{on} is time per hop.
- Dwell time = T_{on} * Hopping numbers.

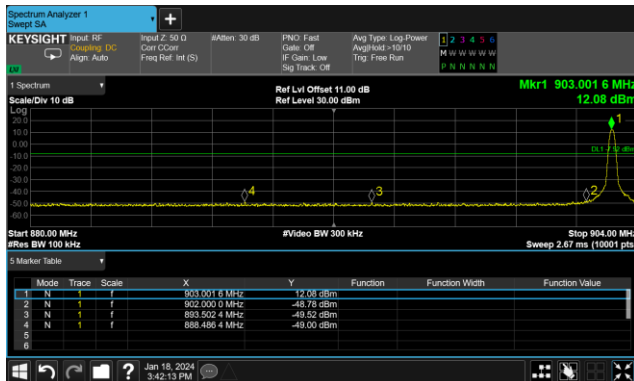
Test plot as follows:



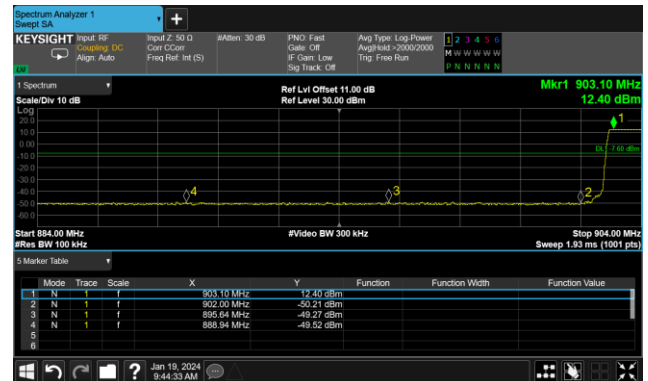
5.9 Spurious Emission

5.9.1 Band-edge Emission

ANT0 Lowest Channel

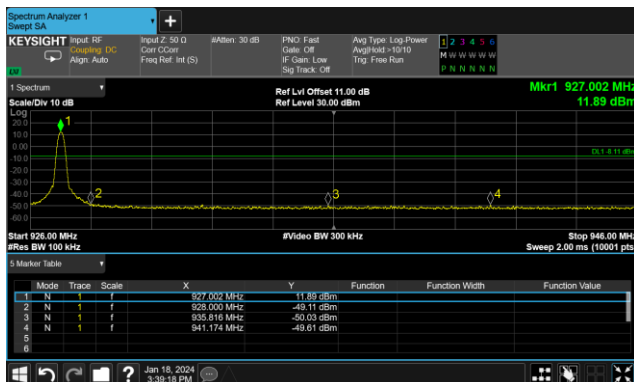


No-hopping mode

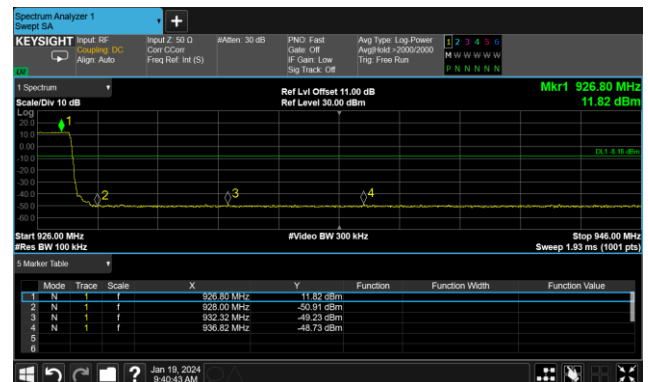


Hopping mode

Highest Channel

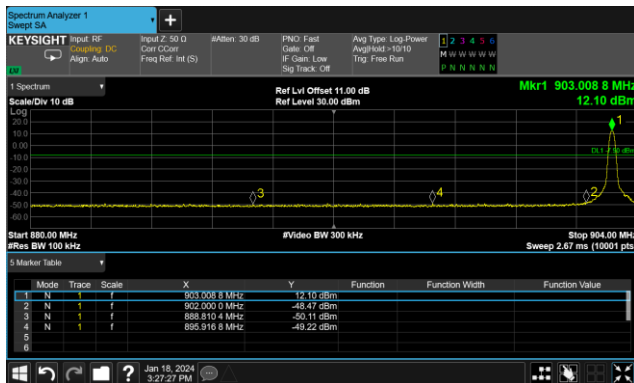


No-hopping mode

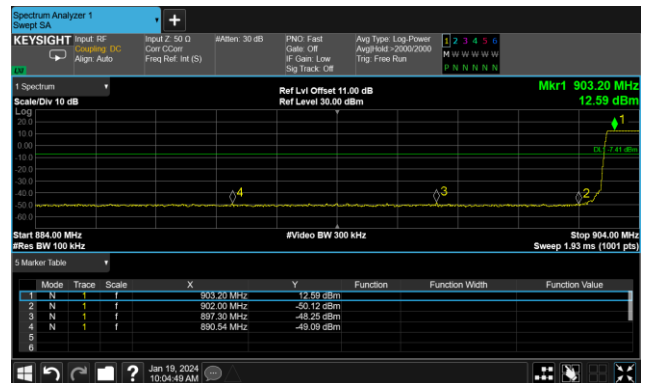


Hopping mode

ANT1
Lowest Channel

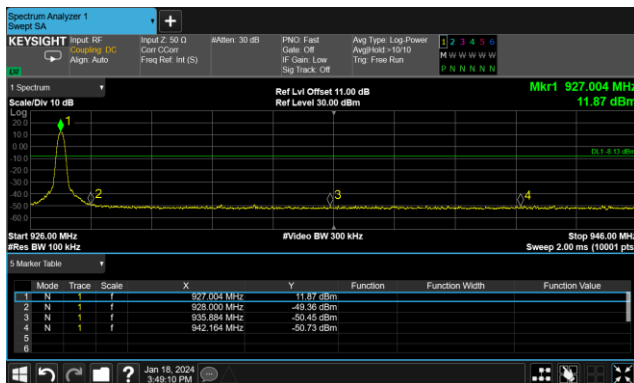


No-hopping mode

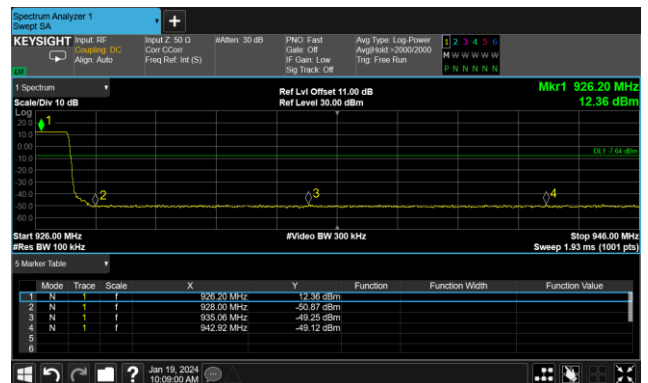


Hopping mode

Highest Channel



No-hopping mode

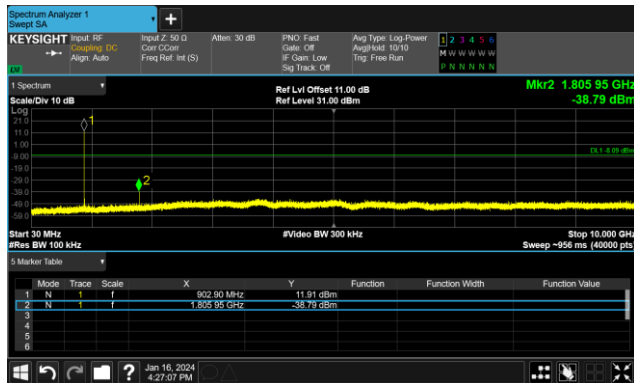


Hopping mode

5.9.2 Conducted Spurious Emission

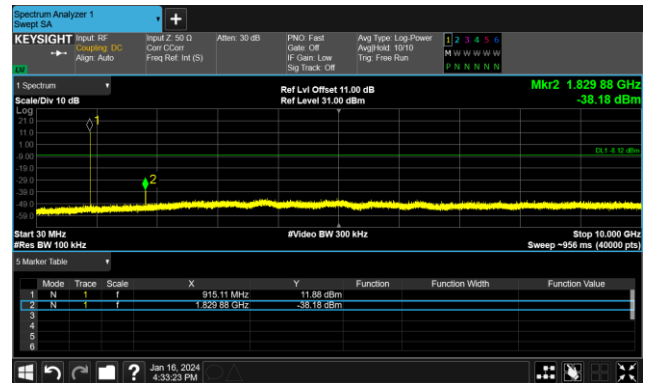
ANT0

Lowest channel



30MHz~10GHz

Middle channel



30MHz~10GHz

Highest channel



30MHz~10GHz

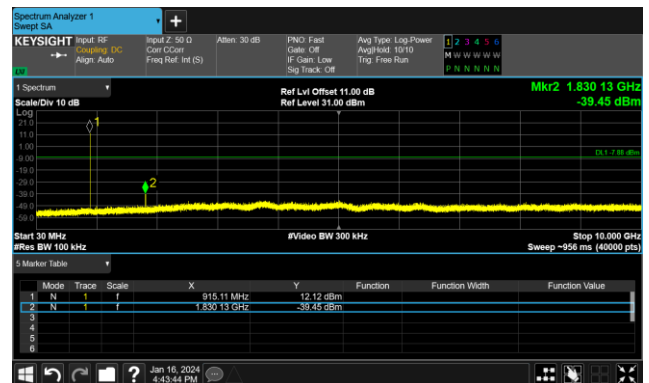
ANT1

Lowest channel



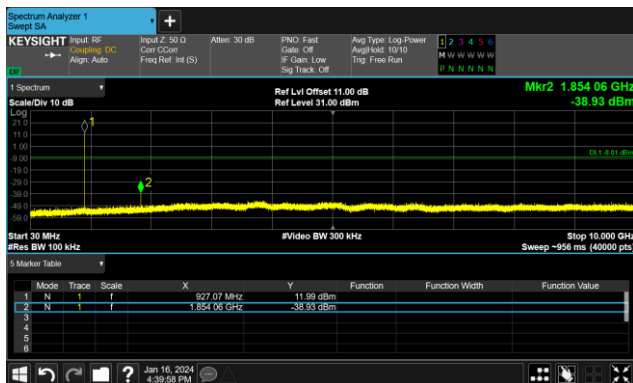
30MHz~10GHz

Middle channel



30MHz~10GHz

Highest channel



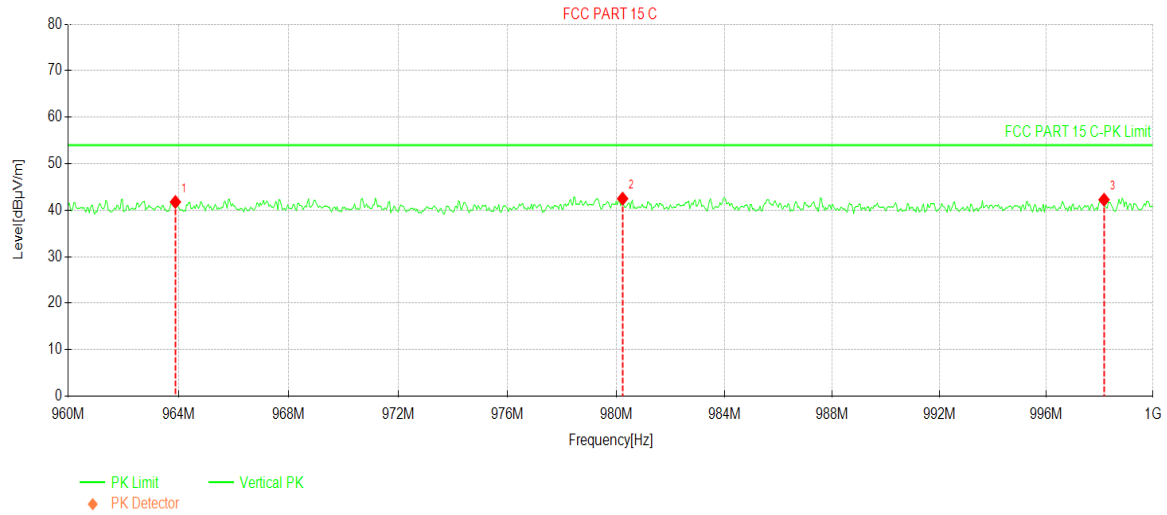
30MHz~10GHz

5.9.3 Emissions in Restricted Frequency Bands

ANT 0:

903MHz:

Product Name:	Home Security Hub (Pico)	Product Model:	RBGW-101-915(US)
Test By:	Kiran	Test mode:	Tx mode
Test Channel:	Lowest channel	Polarization:	Vertical
Test Voltage:	AC 120/60Hz		



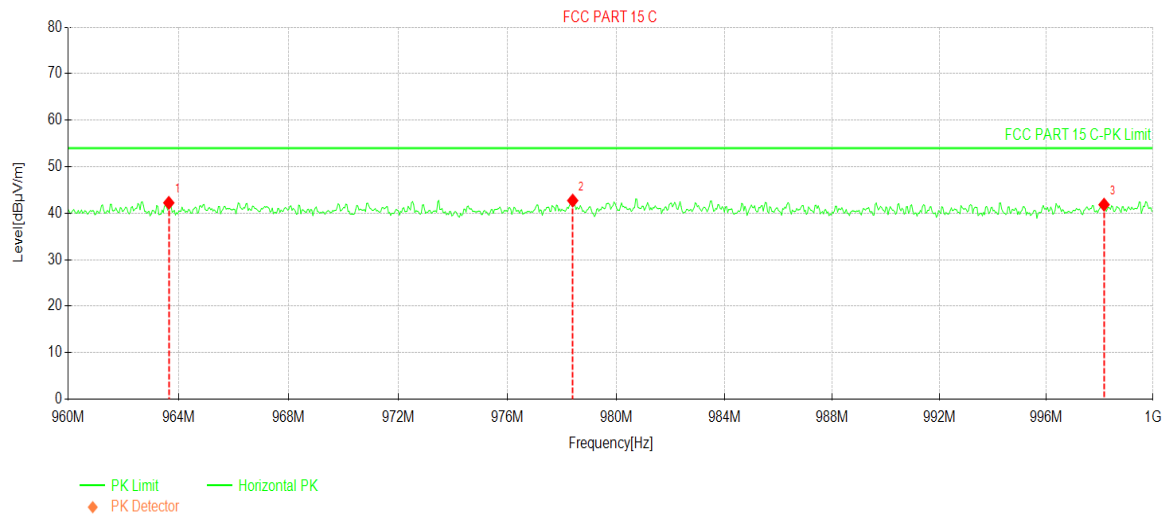
Suspected Data List

NO.	Freq. [MHz]	Reading[dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Trace	Polarity
1	963.880	14.80	26.96	41.76	54.00	12.24	PK	Vertical
2	980.240	15.29	27.18	42.47	54.00	11.53	PK	Vertical
3	998.160	15.07	27.17	42.24	54.00	11.76	PK	Vertical

Remark:

1. Level = Reading + FactorAntenna Factor + Cable Loss – Preamplifier Factor).

Product Name:	Home Security Hub (Pico)	Product Model:	RBGW-101-915(US)
Test By:	Kiran	Test mode:	Tx mode
Test Channel:	Lowest channel	Polarization:	Horizontal
Test Voltage:	AC 120/60Hz		



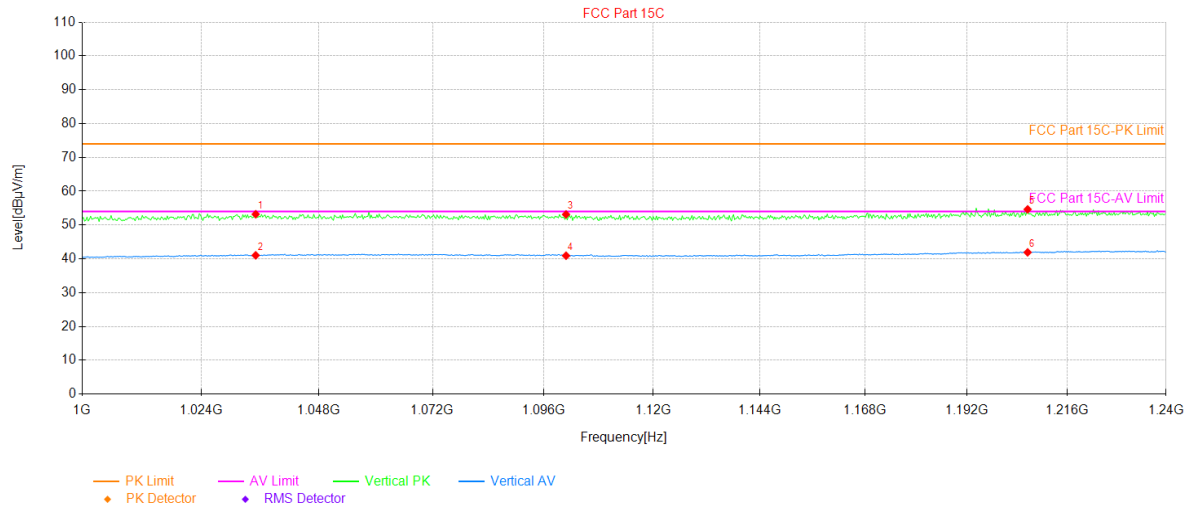
Suspected Data List

NO.	Freq. [MHz]	Reading[dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Trace	Polarity
1	963.640	15.26	26.96	42.22	54.00	11.78	PK	Horizontal
2	978.400	15.54	27.16	42.70	54.00	11.30	PK	Horizontal
3	998.160	14.65	27.17	41.82	54.00	12.18	PK	Horizontal

Remark:

1. Level = Reading + FactorAntenna Factor + Cable Loss – Preamplifier Factor).

Product Name:	Home Security Hub (Pico)	Product Model:	RBGW-101-915(US)
Test By:	Kiran	Test mode:	Tx mode
Test Channel:	Highest channel	Polarization:	Vertical
Test Voltage:	AC 120/60Hz		



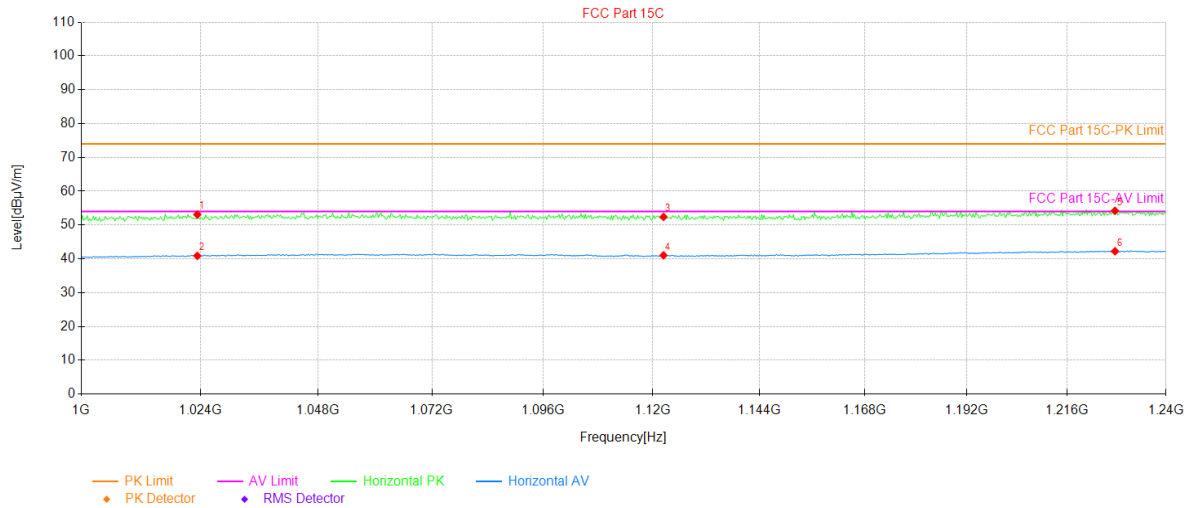
Suspected Data List

NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Verdict	Polarity
1	1035.04	23.49	29.71	53.20	74.00	20.80	104	PK	PASS	Vertical
2	1035.04	11.33	29.71	41.04	54.00	12.96	191	AV	PASS	Vertical
3	1100.80	23.43	29.71	53.14	74.00	20.86	136	PK	PASS	Vertical
4	1100.80	11.22	29.71	40.93	54.00	13.07	210	AV	PASS	Vertical
5	1206.40	24.22	30.42	54.64	74.00	19.36	4	PK	PASS	Vertical
6	1206.40	11.50	30.42	41.92	54.00	12.08	347	AV	PASS	Vertical

Remark:

1. Level = Reading + FactorAntenna Factor + Cable Loss – Preamplifier Factor).

Product Name:	Home Security Hub (Pico)	Product Model:	RBGW-101-915(US)
Test By:	Kiran	Test mode:	Tx mode
Test Channel:	Highest channel	Polarization:	Horizontal
Test Voltage:	AC 120/60Hz		



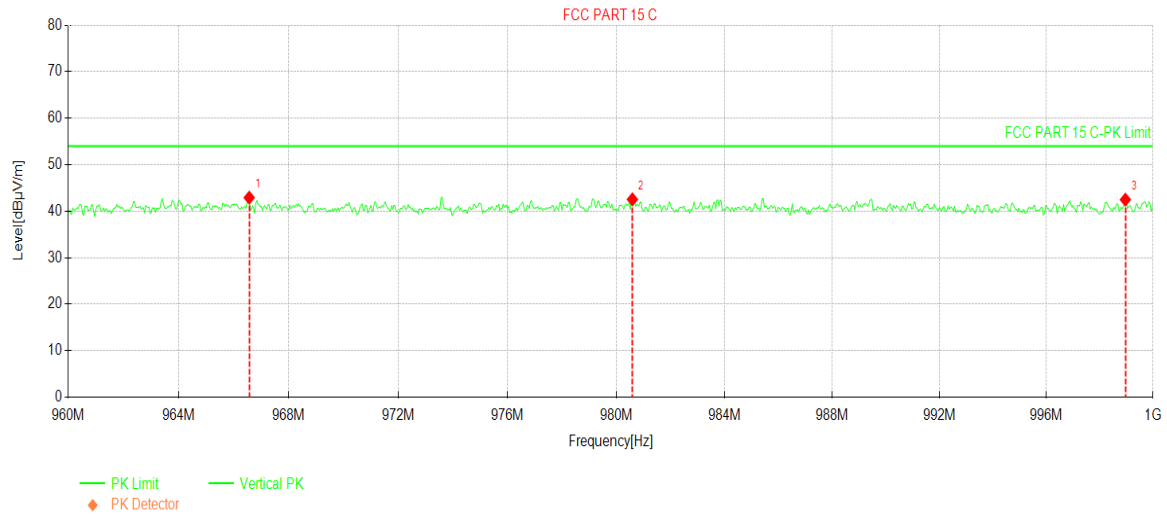
Suspected Data List										
NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Verdict	Polarity
1	1023.28	23.44	29.66	53.10	74.00	20.90	356	PK	PASS	Horizontal
2	1023.28	11.23	29.66	40.89	54.00	13.11	240	AV	PASS	Horizontal
3	1122.40	22.59	29.81	52.40	74.00	21.60	76	PK	PASS	Horizontal
4	1122.40	11.24	29.81	41.05	54.00	12.95	154	AV	PASS	Horizontal
5	1227.52	23.79	30.43	54.22	74.00	19.78	76	PK	PASS	Horizontal
6	1227.52	11.82	30.43	42.25	54.00	11.75	267	AV	PASS	Horizontal

Remark:

1. Level = Reading + FactorAntenna Factor + Cable Loss – Preamplifier Factor).

915MHz:

Product Name:	Home Security Hub (Pico)	Product Model:	RBGW-101-915(US)
Test By:	Kiran	Test mode:	Tx mode
Test Channel:	Lowest channel	Polarization:	Vertical
Test Voltage:	AC 120/60Hz		

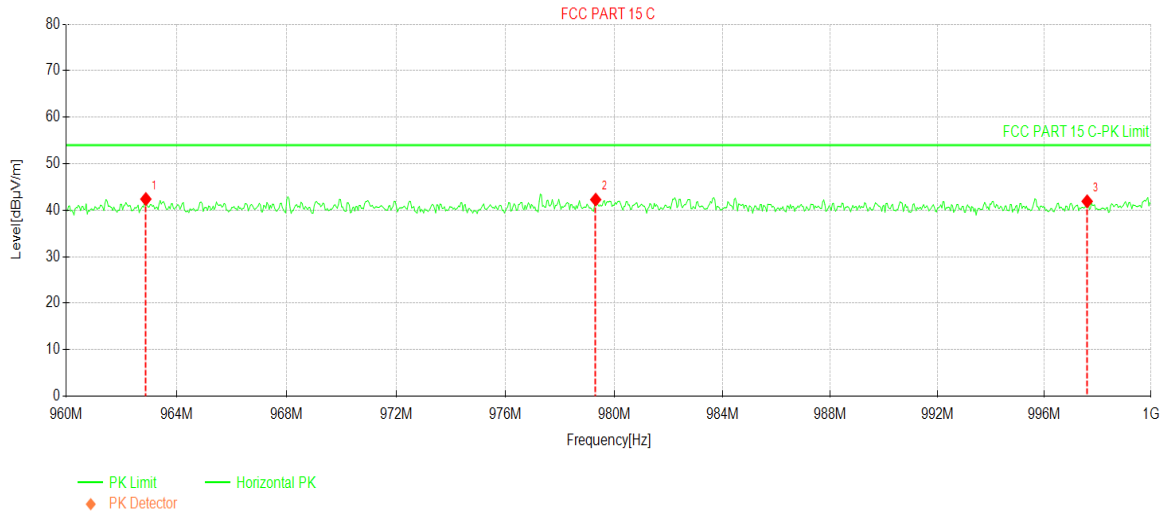

Suspected Data List

NO.	Freq. [MHz]	Reading[dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Trace	Polarity
1	966.560	15.91	27.00	42.91	54.00	11.09	PK	Vertical
2	980.600	15.35	27.18	42.53	54.00	11.47	PK	Vertical
3	998.960	15.32	27.16	42.48	54.00	11.52	PK	Vertical

Remark:

1. Level = Reading + FactorAntenna Factor + Cable Loss – Preamplifier Factor).

Product Name:	Home Security Hub (Pico)	Product Model:	RBGW-101-915(US)
Test By:	Kiran	Test mode:	Tx mode
Test Channel:	Lowest channel	Polarization:	Horizontal
Test Voltage:	AC 120/60Hz		



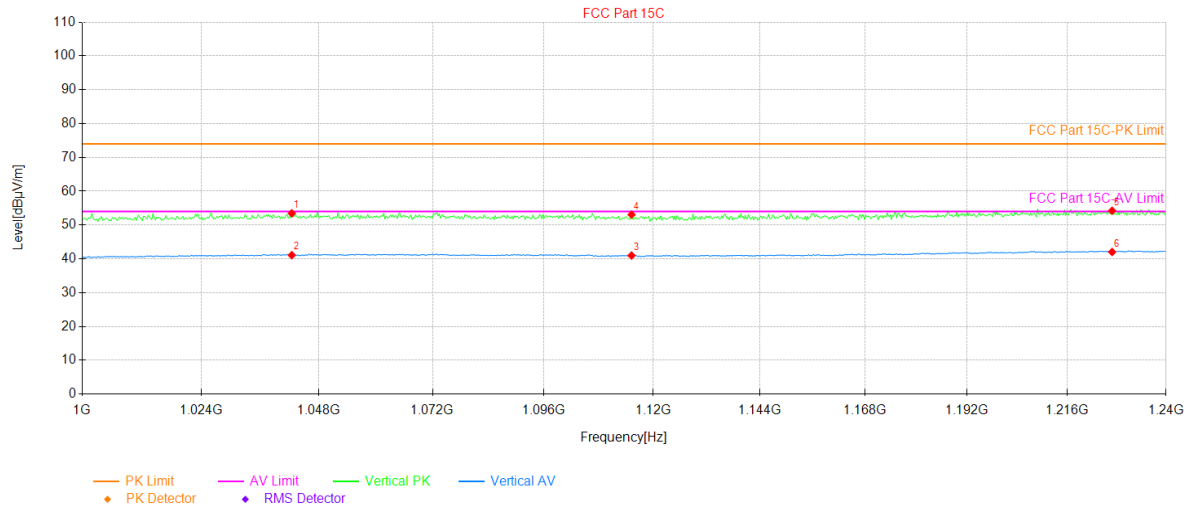
Suspected Data List

NO.	Freq. [MHz]	Reading[dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Trace	Polarity
1	962.880	15.43	26.95	42.38	54.00	11.62	PK	Horizontal
2	979.320	15.09	27.17	42.26	54.00	11.74	PK	Horizontal
3	997.600	14.72	27.18	41.90	54.00	12.10	PK	Horizontal

Remark:

1. Level = Reading + FactorAntenna Factor + Cable Loss – Preamplifier Factor).

Product Name:	Home Security Hub (Pico)	Product Model:	RBGW-101-915(US)
Test By:	Kiran	Test mode:	Tx mode
Test Channel:	Highest channel	Polarization:	Vertical
Test Voltage:	AC 120/60Hz		



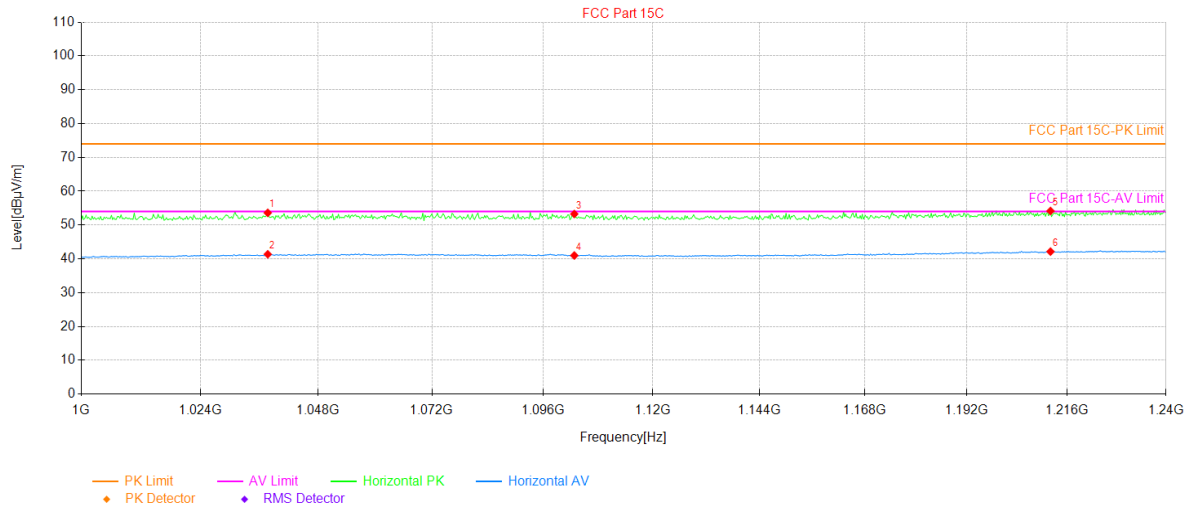
Suspected Data List

NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Verdict	Polarity
1	1042.48	23.73	29.73	53.46	74.00	20.54	55	PK	PASS	Vertical
2	1042.48	11.36	29.73	41.09	54.00	12.91	110	AV	PASS	Vertical
3	1115.20	11.21	29.78	40.99	54.00	13.01	279	AV	PASS	Vertical
4	1115.20	23.29	29.78	53.07	74.00	20.93	32	PK	PASS	Vertical
5	1226.80	23.81	30.42	54.23	74.00	19.77	96	PK	PASS	Vertical
6	1226.80	11.61	30.42	42.03	54.00	11.97	279	AV	PASS	Vertical

Remark:

1. Level = Reading + FactorAntenna Factor + Cable Loss – Preamplifier Factor).

Product Name:	Home Security Hub (Pico)	Product Model:	RBGW-101-915(US)
Test By:	Kiran	Test mode:	Tx mode
Test Channel:	Highest channel	Polarization:	Horizontal
Test Voltage:	AC 120/60Hz		



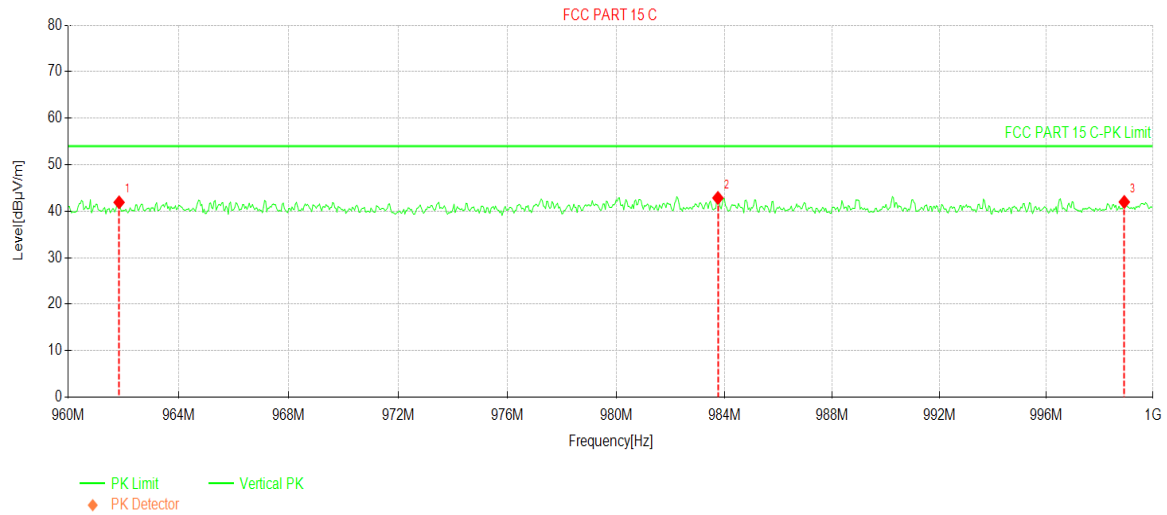
Suspected Data List										
NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Verdict	Polarity
1	1037.68	23.89	29.72	53.61	74.00	20.39	109	PK	PASS	Horizontal
2	1037.68	11.64	29.72	41.36	54.00	12.64	294	AV	PASS	Horizontal
3	1102.72	23.55	29.72	53.27	74.00	20.73	145	PK	PASS	Horizontal
4	1102.72	11.27	29.72	40.99	54.00	13.01	336	AV	PASS	Horizontal
5	1211.92	23.73	30.43	54.16	74.00	19.84	286	PK	PASS	Horizontal
6	1211.92	11.71	30.43	42.14	54.00	11.86	190	AV	PASS	Horizontal

Remark:

1. Level = Reading + FactorAntenna Factor + Cable Loss – Preamplifier Factor).

927MHz:

Product Name:	Home Security Hub (Pico)	Product Model:	RBGW-101-915(US)
Test By:	Kiran	Test mode:	Tx mode
Test Channel:	Lowest channel	Polarization:	Vertical
Test Voltage:	AC 120/60Hz		



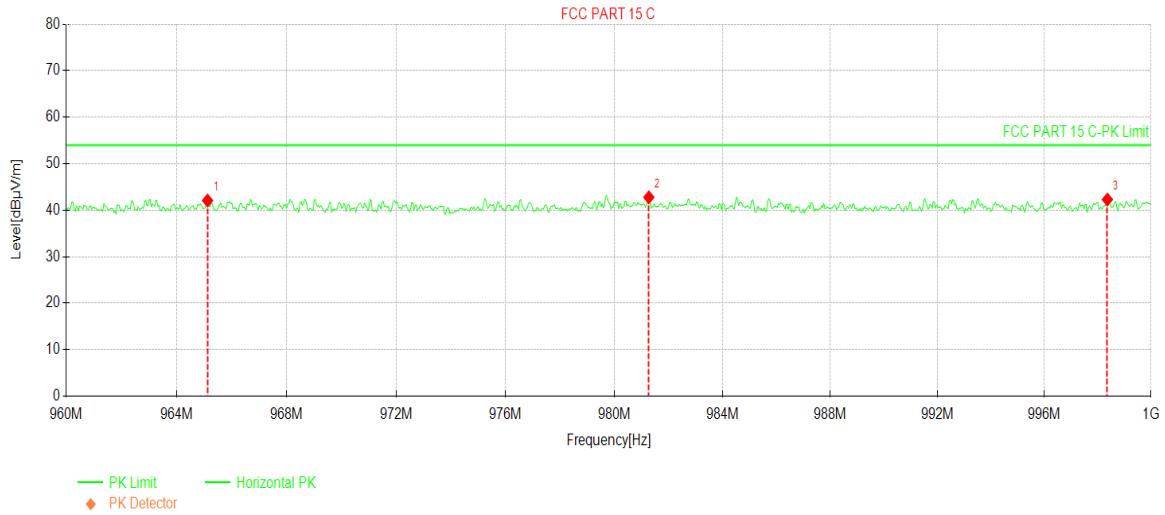
Suspected Data List

NO.	Freq. [MHz]	Reading[dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Trace	Polarity
1	961.840	14.97	26.93	41.90	54.00	12.10	PK	Vertical
2	983.760	15.61	27.22	42.83	54.00	11.17	PK	Vertical
3	998.920	14.81	27.16	41.97	54.00	12.03	PK	Vertical

Remark:

1. Level = Reading + FactorAntenna Factor + Cable Loss – Preamplifier Factor).

Product Name:	Home Security Hub (Pico)	Product Model:	RBGW-101-915(US)
Test By:	Kiran	Test mode:	Tx mode
Test Channel:	Lowest channel	Polarization:	Horizontal
Test Voltage:	AC 120/60Hz		

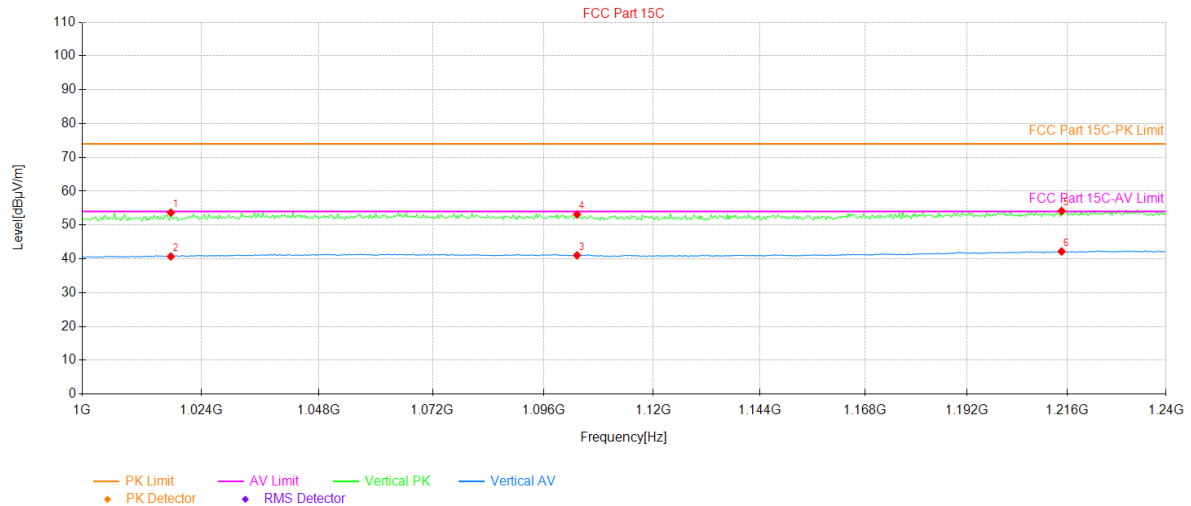


Suspected Data List								
NO.	Freq. [MHz]	Reading[dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Trace	Polarity
1	965.120	15.09	26.98	42.07	54.00	11.93	PK	Horizontal
2	981.280	15.57	27.19	42.76	54.00	11.24	PK	Horizontal
3	998.360	15.12	27.16	42.28	54.00	11.72	PK	Horizontal

Remark:

1. Level = Reading + FactorAntenna Factor + Cable Loss – Preamplifier Factor).

Product Name:	Home Security Hub (Pico)	Product Model:	RBGW-101-915(US)
Test By:	Kiran	Test mode:	Tx mode
Test Channel:	Highest channel	Polarization:	Vertical
Test Voltage:	AC 120/60Hz		

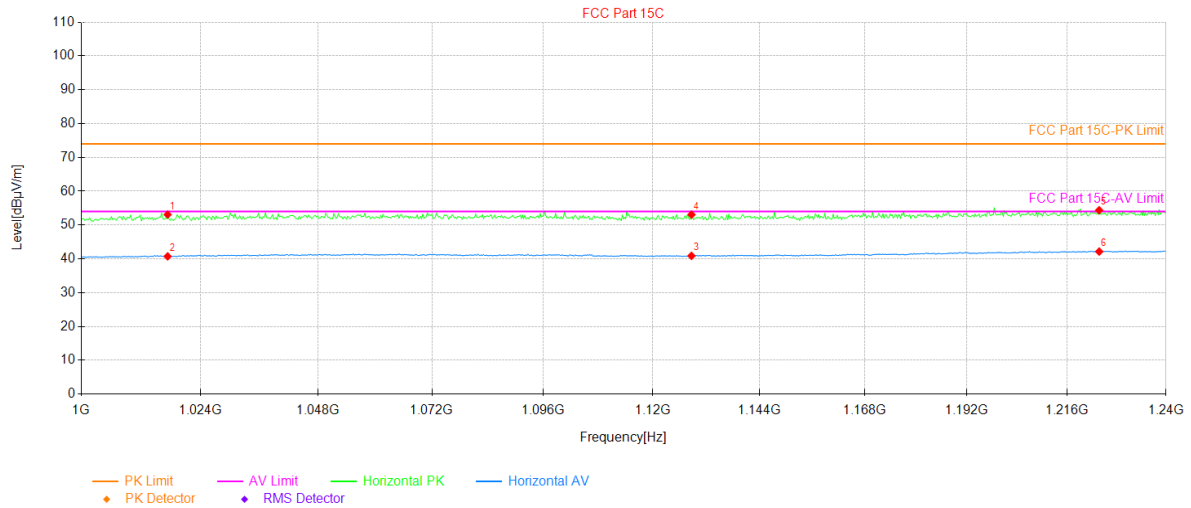


Suspected Data List										
NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Verdict	Polarity
1	1017.76	24.03	29.63	53.66	74.00	20.34	356	PK	PASS	Vertical
2	1017.76	11.08	29.63	40.71	54.00	13.29	0	AV	PASS	Vertical
3	1103.20	11.34	29.72	41.06	54.00	12.94	156	AV	PASS	Vertical
4	1103.20	23.43	29.72	53.15	74.00	20.85	79	PK	PASS	Vertical
5	1214.56	23.73	30.44	54.17	74.00	19.83	0	PK	PASS	Vertical
6	1214.56	11.75	30.44	42.19	54.00	11.81	174	AV	PASS	Vertical

Remark:

1. Level = Reading + FactorAntenna Factor + Cable Loss – Preamplifier Factor).

Product Name:	Home Security Hub (Pico)	Product Model:	RBGW-101-915(US)
Test By:	Kiran	Test mode:	Tx mode
Test Channel:	Highest channel	Polarization:	Horizontal
Test Voltage:	AC 120/60Hz		



Suspected Data List										
NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Verdict	Polarity
1	1017.28	23.46	29.62	53.08	74.00	20.92	249	PK	PASS	Horizontal
2	1017.28	11.12	29.62	40.74	54.00	13.26	240	AV	PASS	Horizontal
3	1128.64	11.05	29.85	40.90	54.00	13.10	126	AV	PASS	Horizontal
4	1128.64	23.22	29.85	53.07	74.00	20.93	154	PK	PASS	Horizontal
5	1223.68	23.94	30.43	54.37	74.00	19.63	322	PK	PASS	Horizontal
6	1223.68	11.73	30.43	42.16	54.00	11.84	290	AV	PASS	Horizontal

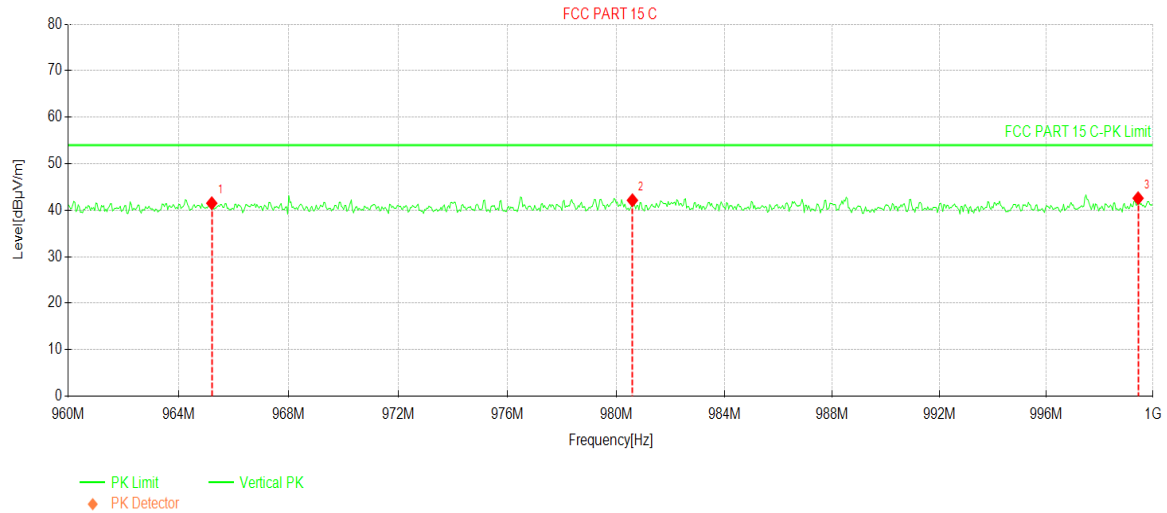
Remark:

1. Level = Reading + FactorAntenna Factor + Cable Loss – Preamplifier Factor).

ANT 1:

903MHz:

Product Name:	Home Security Hub (Pico)	Product Model:	RBGW-101-915(US)
Test By:	Kiran	Test mode:	Tx mode
Test Channel:	Lowest channel	Polarization:	Vertical
Test Voltage:	AC 120/60Hz		



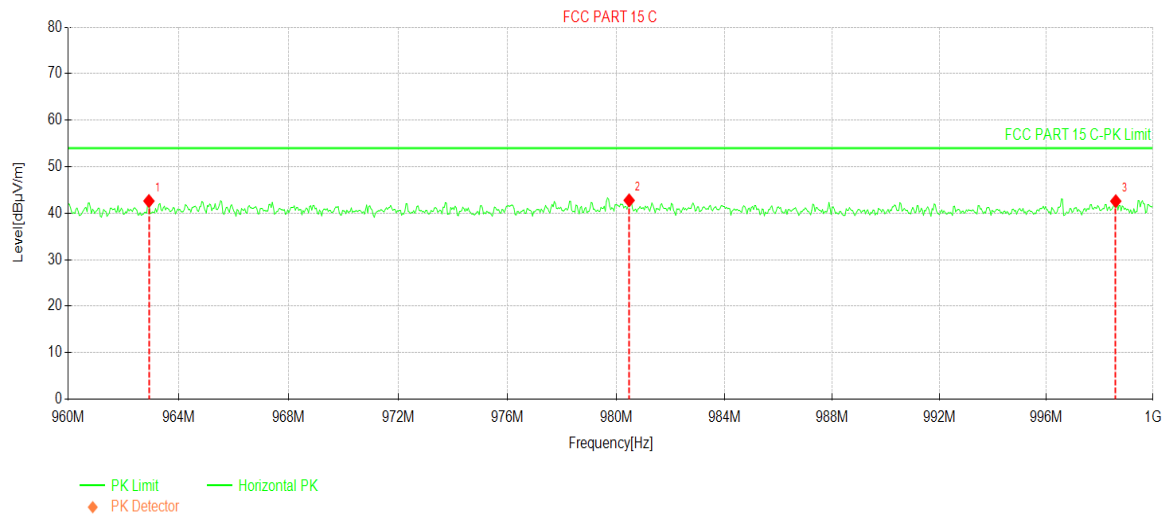
Suspected Data List

NO.	Freq. [MHz]	Reading[dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Trace	Polarity
1	965.200	14.51	26.98	41.49	54.00	12.51	PK	Vertical
2	980.600	14.94	27.18	42.12	54.00	11.88	PK	Vertical
3	999.440	15.41	27.15	42.56	54.00	11.44	PK	Vertical

Remark:

1. Level = Reading + FactorAntenna Factor + Cable Loss – Preamplifier Factor).

Product Name:	Home Security Hub (Pico)	Product Model:	RBGW-101-915(US)
Test By:	Kiran	Test mode:	Tx mode
Test Channel:	Lowest channel	Polarization:	Horizontal
Test Voltage:	AC 120/60Hz		

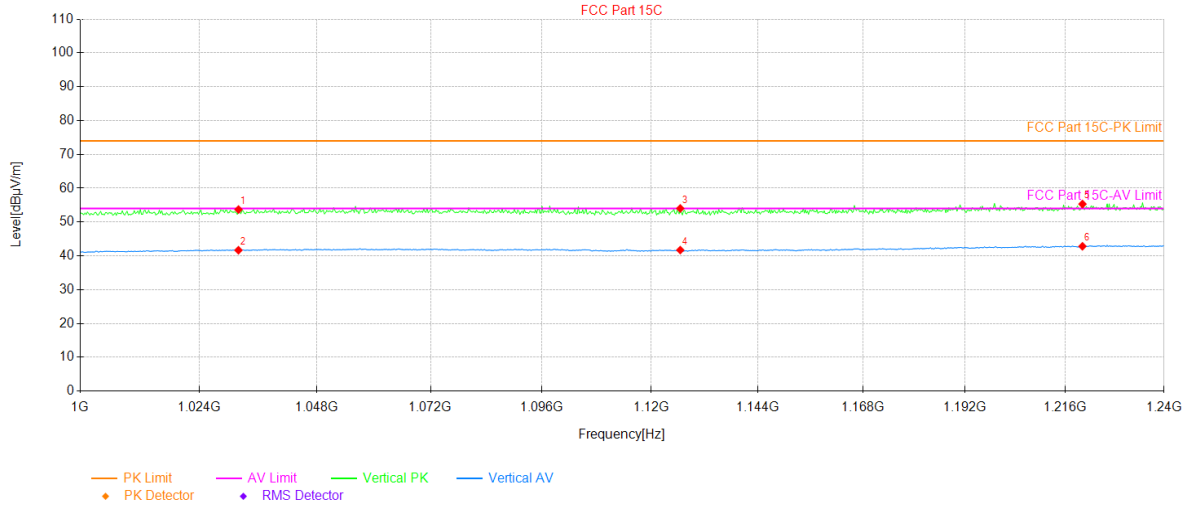


Suspected Data List								
NO.	Freq. [MHz]	Reading[dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Trace	Polarity
1	962.920	15.66	26.95	42.61	54.00	11.39	PK	Horizontal
2	980.480	15.57	27.18	42.75	54.00	11.25	PK	Horizontal
3	998.600	15.42	27.16	42.58	54.00	11.42	PK	Horizontal

Remark:

1. Level = Reading + FactorAntenna Factor + Cable Loss – Preamplifier Factor).

Product Name:	Home Security Hub (Pico)	Product Model:	RBGW-101-915(US)
Test By:	Kiran	Test mode:	Tx mode
Test Channel:	Highest channel	Polarization:	Vertical
Test Voltage:	AC 120/60Hz		

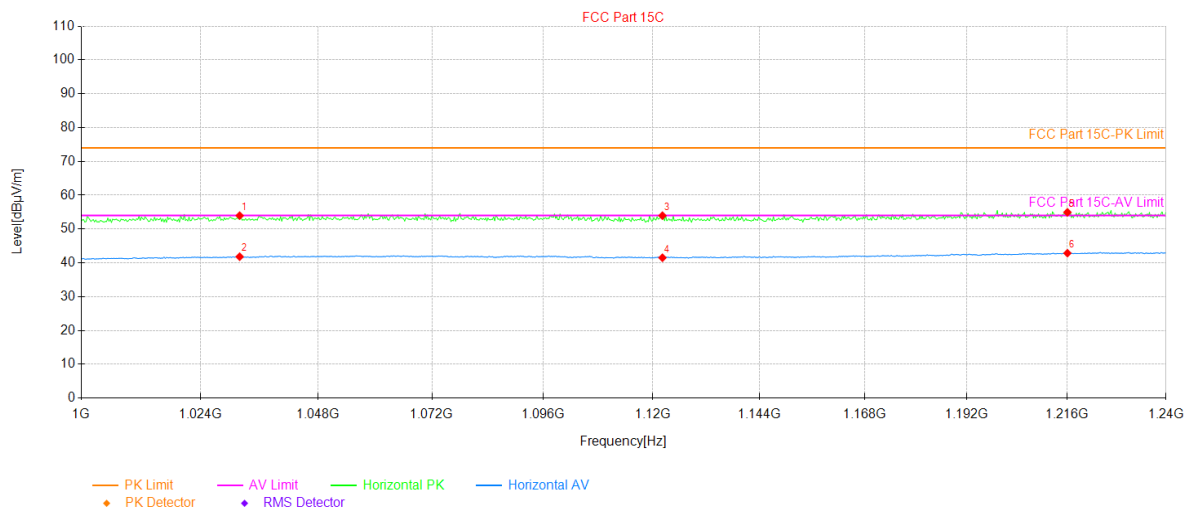


Suspected Data List										
NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Verdict	Polarity
1	1031.92	24.01	29.69	53.70	74.00	20.30	272	PK	PASS	Vertical
2	1031.92	11.98	29.69	41.67	54.00	12.33	272	AV	PASS	Vertical
3	1126.48	24.19	29.83	54.02	74.00	19.98	95	PK	PASS	Vertical
4	1126.48	11.89	29.83	41.72	54.00	12.28	108	AV	PASS	Vertical
5	1220.08	24.89	30.43	55.32	74.00	18.68	158	PK	PASS	Vertical
6	1220.08	12.40	30.43	42.83	54.00	11.17	158	AV	PASS	Vertical

Remark:

1. Level = Reading + FactorAntenna Factor + Cable Loss – Preamplifier Factor).

Product Name:	Home Security Hub (Pico)	Product Model:	RBGW-101-915(US)
Test By:	Kiran	Test mode:	Tx mode
Test Channel:	Highest channel	Polarization:	Horizontal
Test Voltage:	AC 120/60Hz		



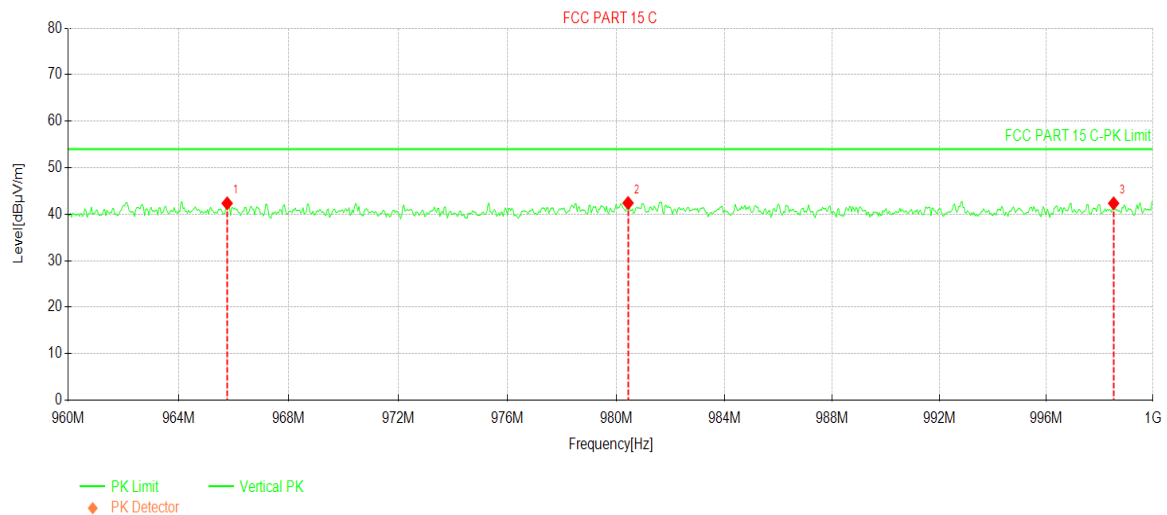
Suspected Data List										
NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Verdict	Polarity
1	1031.92	24.27	29.69	53.96	74.00	20.04	8	PK	PASS	Horizontal
2	1031.92	12.13	29.69	41.82	54.00	12.18	217	AV	PASS	Horizontal
3	1122.16	24.15	29.81	53.96	74.00	20.04	230	PK	PASS	Horizontal
4	1122.16	11.70	29.81	41.51	54.00	12.49	325	AV	PASS	Horizontal
5	1216.00	24.52	30.43	54.95	74.00	19.05	190	PK	PASS	Horizontal
6	1216.00	12.44	30.43	42.87	54.00	11.13	289	AV	PASS	Horizontal

Remark:

1. Level = Reading + FactorAntenna Factor + Cable Loss – Preamplifier Factor).

915MHz:

Product Name:	Home Security Hub (Pico)	Product Model:	RBGW-101-915(US)
Test By:	Kiran	Test mode:	Tx mode
Test Channel:	Lowest channel	Polarization:	Vertical
Test Voltage:	AC 120/60Hz		

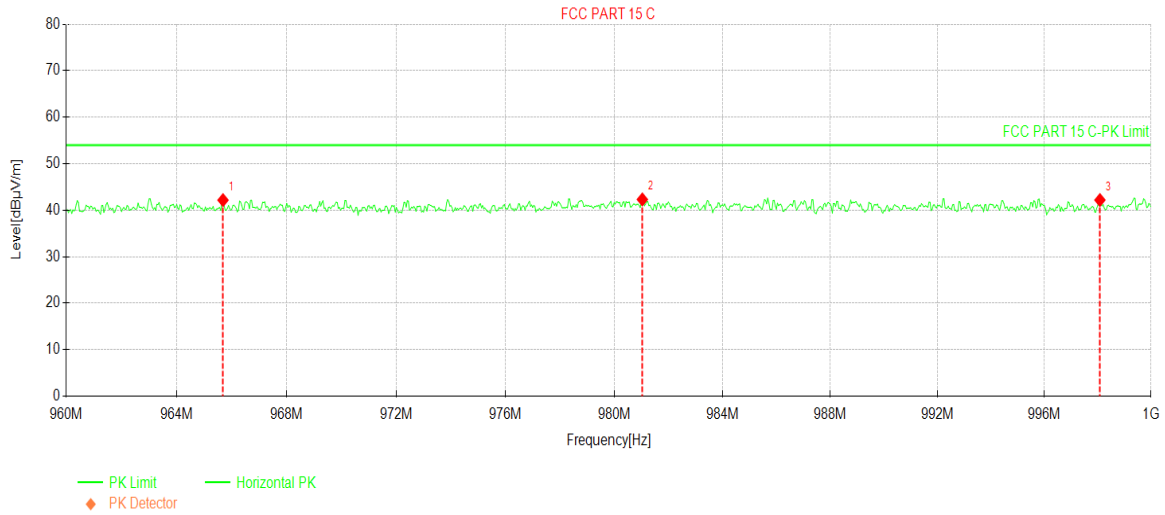

Suspected Data List

NO.	Freq. [MHz]	Reading[dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Trace	Polarity
1	965.760	15.34	26.99	42.33	54.00	11.67	PK	Vertical
2	980.440	15.21	27.18	42.39	54.00	11.61	PK	Vertical
3	998.520	15.16	27.16	42.32	54.00	11.68	PK	Vertical

Remark:

1. Level = Reading + FactorAntenna Factor + Cable Loss – Preamplifier Factor).

Product Name:	Home Security Hub (Pico)	Product Model:	RBGW-101-915(US)
Test By:	Kiran	Test mode:	Tx mode
Test Channel:	Lowest channel	Polarization:	Horizontal
Test Voltage:	AC 120/60Hz		



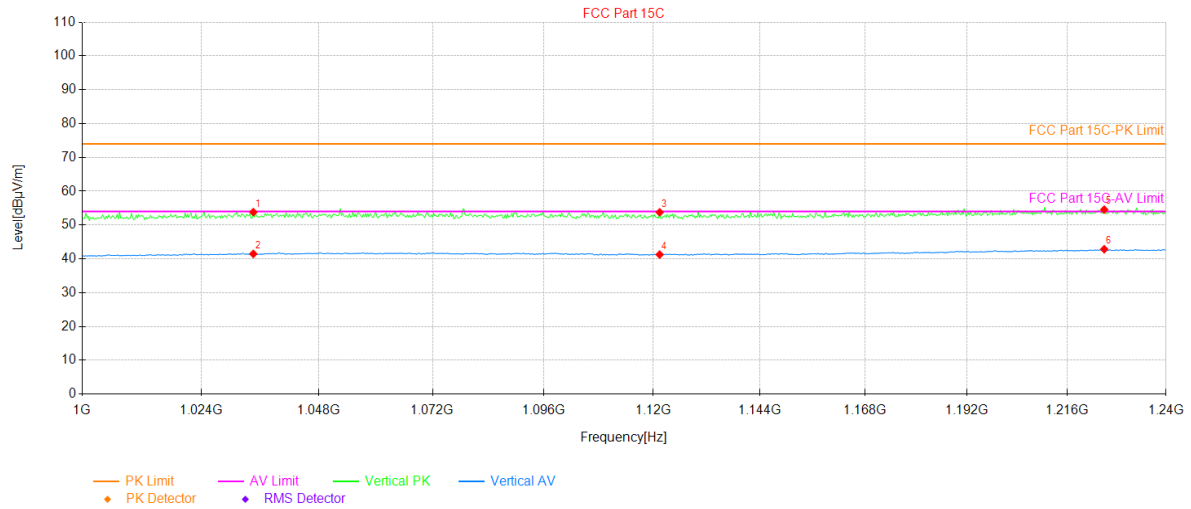
Suspected Data List

NO.	Freq. [MHz]	Reading[dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Trace	Polarity
1	965.680	15.17	26.99	42.16	54.00	11.84	PK	Horizontal
2	981.040	15.11	27.19	42.30	54.00	11.70	PK	Horizontal
3	998.080	15.01	27.17	42.18	54.00	11.82	PK	Horizontal

Remark:

1. Level = Reading + FactorAntenna Factor + Cable Loss – Preamplifier Factor).

Product Name:	Home Security Hub (Pico)	Product Model:	RBGW-101-915(US)
Test By:	Kiran	Test mode:	Tx mode
Test Channel:	Highest channel	Polarization:	Vertical
Test Voltage:	AC 120/60Hz		

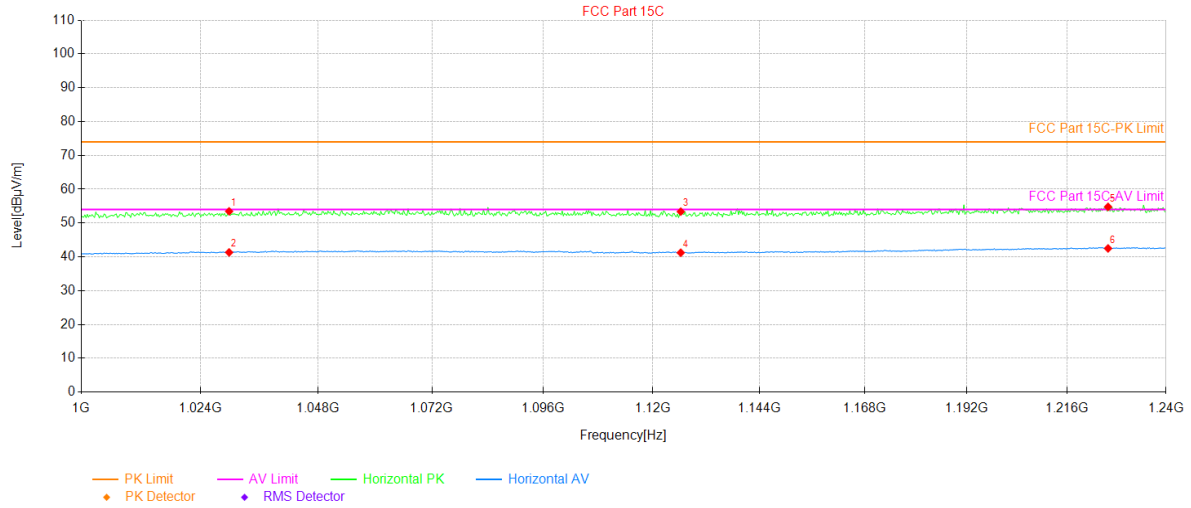


Suspected Data List										
NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Verdict	Polarity
1	1034.56	24.12	29.70	53.82	74.00	20.18	139	PK	PASS	Vertical
2	1034.56	11.77	29.70	41.47	54.00	12.53	319	AV	PASS	Vertical
3	1121.44	23.95	29.81	53.76	74.00	20.24	53	PK	PASS	Vertical
4	1121.44	11.46	29.81	41.27	54.00	12.73	120	AV	PASS	Vertical
5	1224.88	24.13	30.43	54.56	74.00	19.44	148	PK	PASS	Vertical
6	1224.88	12.42	30.43	42.85	54.00	11.15	292	AV	PASS	Vertical

Remark:

1. Level = Reading + FactorAntenna Factor + Cable Loss – Preamplifier Factor).

Product Name:	Home Security Hub (Pico)	Product Model:	RBGW-101-915(US)
Test By:	Kiran	Test mode:	Tx mode
Test Channel:	Highest channel	Polarization:	Horizontal
Test Voltage:	AC 120/60Hz		



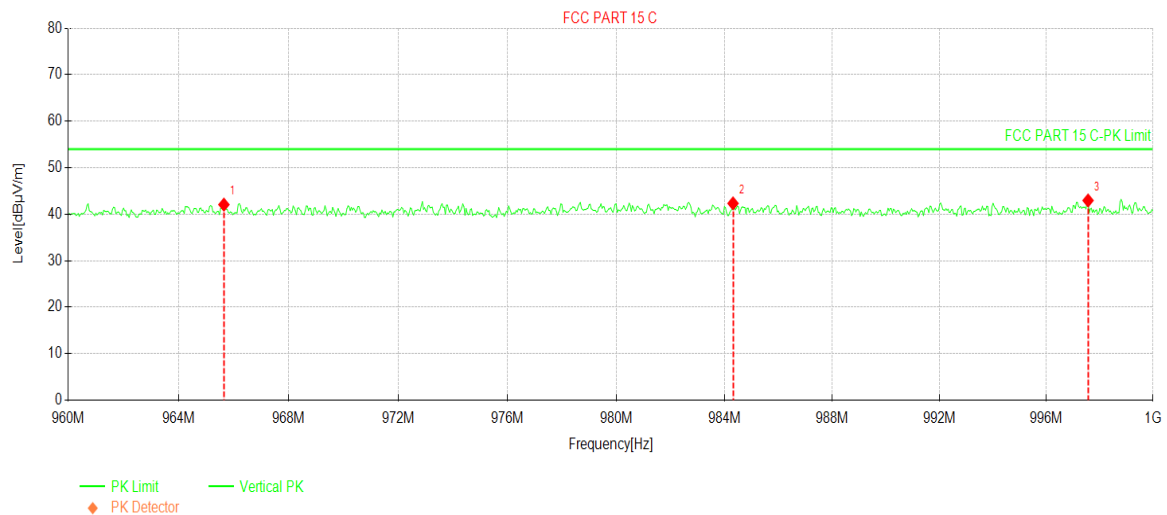
Suspected Data List										
NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Verdict	Polarity
1	1029.76	23.78	29.68	53.46	74.00	20.54	311	PK	PASS	Horizontal
2	1029.76	11.64	29.68	41.32	54.00	12.68	74	AV	PASS	Horizontal
3	1126.24	23.55	29.83	53.38	74.00	20.62	192	PK	PASS	Horizontal
4	1126.24	11.40	29.83	41.23	54.00	12.77	60	AV	PASS	Horizontal
5	1225.84	24.36	30.42	54.78	74.00	19.22	137	PK	PASS	Horizontal
6	1225.84	12.07	30.42	42.49	54.00	11.51	187	AV	PASS	Horizontal

Remark:

1. Level = Reading + FactorAntenna Factor + Cable Loss – Preamplifier Factor).

927MHz:

Product Name:	Home Security Hub (Pico)	Product Model:	RBGW-101-915(US)
Test By:	Kiran	Test mode:	Tx mode
Test Channel:	Lowest channel	Polarization:	Vertical
Test Voltage:	AC 120/60Hz		

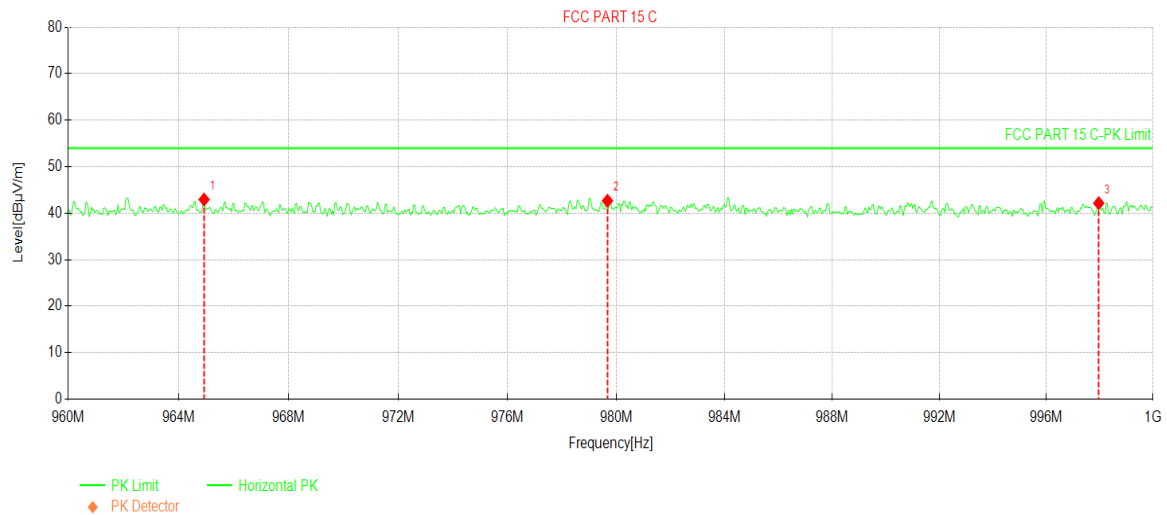

Suspected Data List

NO.	Freq. [MHz]	Reading[dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Trace	Polarity
1	965.640	15.06	26.99	42.05	54.00	11.95	PK	Vertical
2	984.320	15.09	27.22	42.31	54.00	11.69	PK	Vertical
3	997.560	15.76	27.18	42.94	54.00	11.06	PK	Vertical

Remark:

1. Level = Reading + FactorAntenna Factor + Cable Loss – Preamplifier Factor).

Product Name:	Home Security Hub (Pico)	Product Model:	RBGW-101-915(US)
Test By:	Kiran	Test mode:	Tx mode
Test Channel:	Lowest channel	Polarization:	Horizontal
Test Voltage:	AC 120/60Hz		



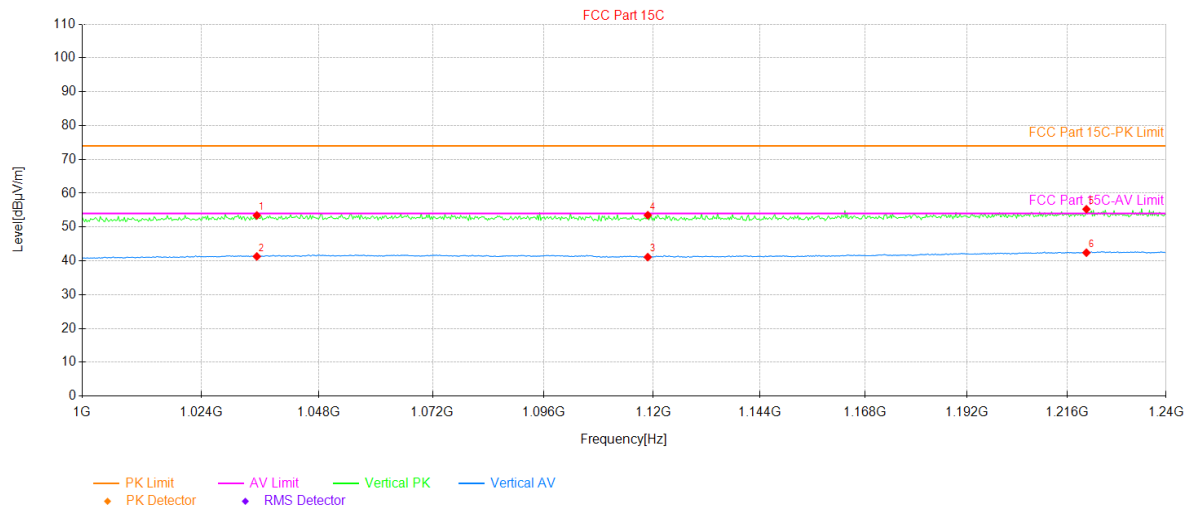
Suspected Data List

NO.	Freq. [MHz]	Reading[dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Trace	Polarity
1	964.920	15.96	26.98	42.94	54.00	11.06	PK	Horizontal
2	979.680	15.49	27.17	42.66	54.00	11.34	PK	Horizontal
3	997.960	14.98	27.17	42.15	54.00	11.85	PK	Horizontal

Remark:

1. Level = Reading + FactorAntenna Factor + Cable Loss – Preamplifier Factor).

Product Name:	Home Security Hub (Pico)	Product Model:	RBGW-101-915(US)
Test By:	Kiran	Test mode:	Tx mode
Test Channel:	Highest channel	Polarization:	Vertical
Test Voltage:	AC 120/60Hz		

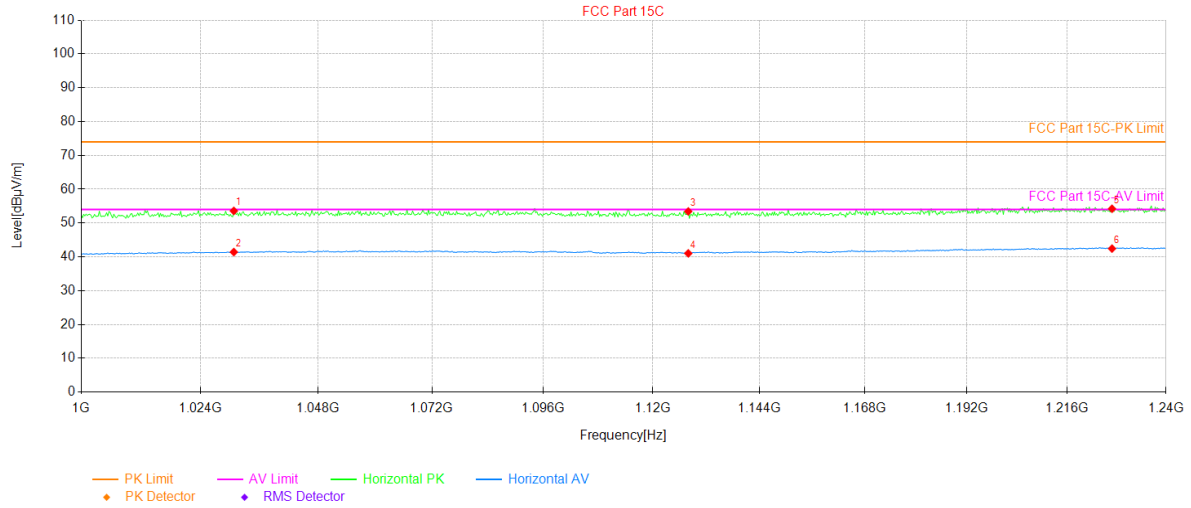


Suspected Data List										
NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Verdict	Polarity
1	1035.28	23.72	29.71	53.43	74.00	20.57	180	PK	PASS	Vertical
2	1035.28	11.59	29.71	41.30	54.00	12.70	326	AV	PASS	Vertical
3	1118.80	11.30	29.80	41.10	54.00	12.90	303	AV	PASS	Vertical
4	1118.80	23.71	29.80	53.51	74.00	20.49	44	PK	PASS	Vertical
5	1220.56	24.84	30.43	55.27	74.00	18.73	53	PK	PASS	Vertical
6	1220.56	11.99	30.43	42.42	54.00	11.58	58	AV	PASS	Vertical

Remark:

1. Level = Reading + FactorAntenna Factor + Cable Loss – Preamplifier Factor).

Product Name:	Home Security Hub (Pico)	Product Model:	RBGW-101-915(US)
Test By:	Kiran	Test mode:	Tx mode
Test Channel:	Highest channel	Polarization:	Horizontal
Test Voltage:	AC 120/60Hz		



Suspected Data List										
NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Verdict	Polarity
1	1030.72	23.91	29.68	53.59	74.00	20.41	230	PK	PASS	Horizontal
2	1030.72	11.74	29.68	41.42	54.00	12.58	199	AV	PASS	Horizontal
3	1127.92	23.58	29.85	53.43	74.00	20.57	36	PK	PASS	Horizontal
4	1127.92	11.18	29.85	41.03	54.00	12.97	36	AV	PASS	Horizontal
5	1226.80	23.81	30.42	54.23	74.00	19.77	91	PK	PASS	Horizontal
6	1226.80	12.02	30.42	42.44	54.00	11.56	284	AV	PASS	Horizontal

Remark:

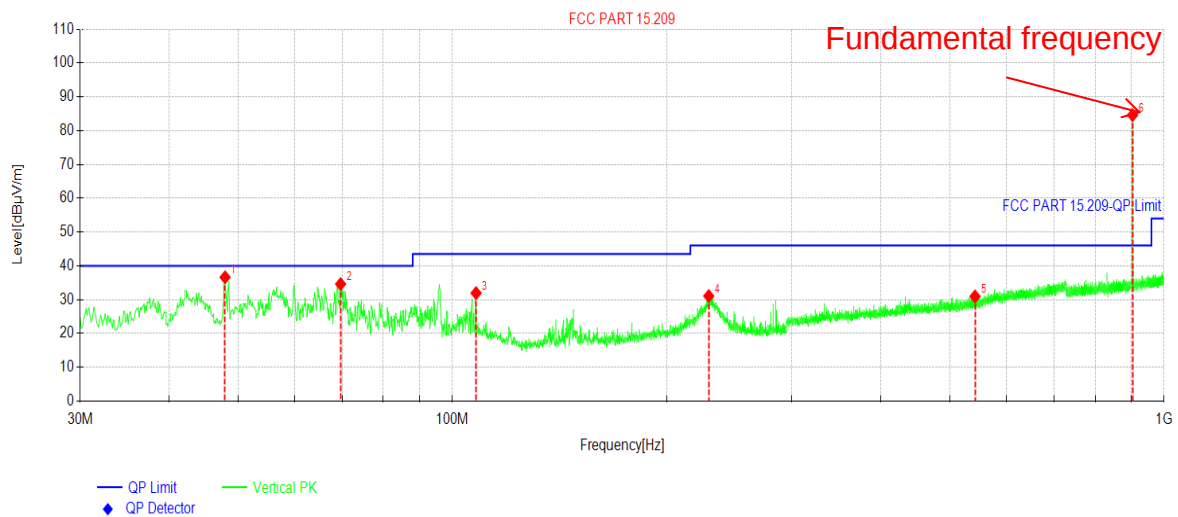
1. Level = Reading + FactorAntenna Factor + Cable Loss – Preamplifier Factor).

5.9.4 Emissions in Non-restricted Frequency Bands

Below 1GHz:

ANT0:

Product Name:	Home Security Hub (Pico)	Product Model:	RBGW-101-915(US)
Test By:	Kiran	Test mode:	Tx mode
Test Frequency:	30 MHz ~ 1 GHz	Polarization:	Vertical
Test Voltage:	AC 120/60Hz		



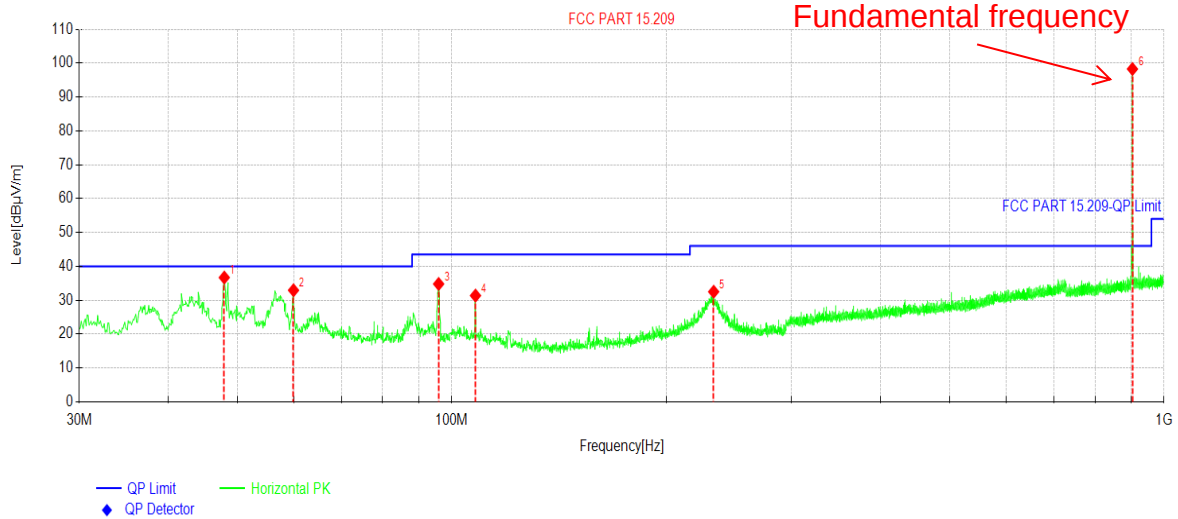
Suspected Data List

NO.	Freq. [MHz]	Reading[dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Trace	Polarity
1	47.9468	49.33	-12.70	36.63	40.00	3.37	PK	Vertical
2	69.6770	51.60	-16.98	34.62	40.00	5.38	PK	Vertical
3	107.995	46.59	-14.64	31.95	43.50	11.55	PK	Vertical
4	229.257	45.43	-14.36	31.07	46.00	14.93	PK	Vertical
5	542.502	39.27	-8.31	30.96	46.00	15.04	PK	Vertical
6	903.087	87.35	-2.75	84.60	46.00	-38.60	PK	Vertical

Remark:

1. Level = Reading + FactorAntenna Factor + Cable Loss – Preamplifier Factor).

Product Name:	Home Security Hub (Pico)	Product Model:	RBGW-101-915(US)
Test By:	Kiran	Test mode:	Tx mode
Test Frequency:	30 MHz ~ 1 GHz	Polarization:	Horizontal
Test Voltage:	AC 120/60Hz		



Suspected Data List

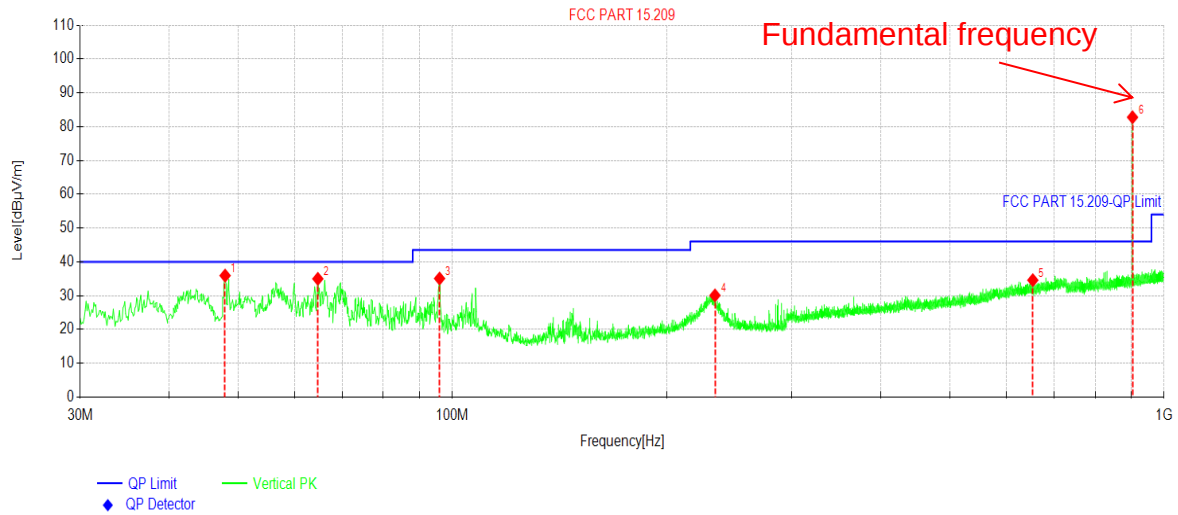
NO.	Freq. [MHz]	Reading[dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Trace	Polarity
1	47.9468	49.40	-12.70	36.70	40.00	3.30	PK	Horizontal
2	59.9760	47.25	-14.31	32.94	40.00	7.06	PK	Horizontal
3	95.8696	50.09	-15.28	34.81	43.50	8.69	PK	Horizontal
4	107.995	46.01	-14.64	31.37	43.50	12.13	PK	Horizontal
5	233.235	46.68	-14.17	32.51	46.00	13.49	PK	Horizontal
6	903.087	101.02	-2.75	98.27	46.00	-52.27	PK	Horizontal

Remark:

1. Level = Reading + FactorAntenna Factor + Cable Loss – Preamplifier Factor).

ANT1:

Product Name:	Home Security Hub (Pico)	Product Model:	RBGW-101-915(US)
Test By:	Kiran	Test mode:	Tx mode
Test Frequency:	30 MHz ~ 1 GHz	Polarization:	Vertical
Test Voltage:	AC 120/60Hz		

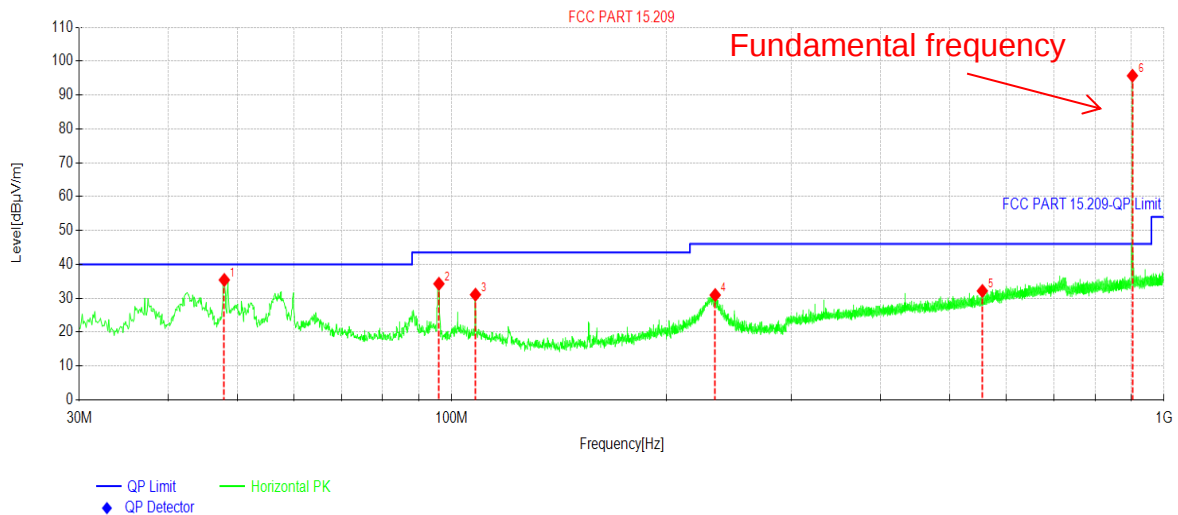

Suspected Data List

NO.	Freq. [MHz]	Reading[dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Trace	Polarity
1	47.9468	48.64	-12.70	35.94	40.00	4.06	PK	Vertical
2	64.7295	49.69	-14.71	34.98	40.00	5.02	PK	Vertical
3	95.9666	50.34	-15.26	35.08	43.50	8.42	PK	Vertical
4	233.914	44.21	-14.14	30.07	46.00	15.93	PK	Vertical
5	654.063	40.35	-5.75	34.60	46.00	11.40	PK	Vertical
6	903.087	85.52	-2.75	82.77	46.00	-36.77	PK	Vertical

Remark:

1. Level = Reading + FactorAntenna Factor + Cable Loss – Preamplifier Factor).

Product Name:	Home Security Hub (Pico)	Product Model:	RBGW-101-915(US)
Test By:	Kiran	Test mode:	Tx mode
Test Frequency:	30 MHz ~ 1 GHz	Polarization:	Horizontal
Test Voltage:	AC 120/60Hz		



Suspected Data List

NO.	Freq. [MHz]	Reading[dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Trace	Polarity
1	47.9468	48.10	-12.70	35.40	40.00	4.60	PK	Horizontal
2	95.9666	49.53	-15.26	34.27	43.50	9.23	PK	Horizontal
3	107.995	45.70	-14.64	31.06	43.50	12.44	PK	Horizontal
4	234.399	45.05	-14.11	30.94	46.00	15.06	PK	Horizontal
5	555.889	40.21	-8.06	32.15	46.00	13.85	PK	Horizontal
6	903.087	98.45	-2.75	95.70	46.00	-49.70	PK	Horizontal

Remark:

1. Level = Reading + FactorAntenna Factor + Cable Loss – Preamplifier Factor).

Above 1GHz:

ANT0:

Lowest channel						
Peak Value						
Frequency (MHz)	Read Level (dBuV)	Factor(dB)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Polarization
1806.00	68.35	-19.21	49.14	74.00	24.86	Vertical
1806.00	78.28	-19.21	59.07	74.00	14.93	Horizontal
Average Value						
Frequency (MHz)	Read Level (dBuV)	Factor(dB)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Polarization
1806.00	63.81	-19.21	44.60	54.00	9.40	Vertical
1806.00	70.85	-19.21	51.64	54.00	2.36	Horizontal
Middle channel						
Peak Value						
Frequency (MHz)	Read Level (dBuV)	Factor(dB)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Polarization
1830.00	67.46	-19.20	48.26	74.00	25.74	Vertical
1830.00	77.56	-19.20	58.36	74.00	15.64	Horizontal
Average Value						
Frequency (MHz)	Read Level (dBuV)	Factor(dB)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Polarization
1830.00	62.06	-19.20	42.86	54.00	11.14	Vertical
1830.00	70.87	-19.20	51.67	54.00	2.33	Horizontal
Highest channel						
Peak Value						
Frequency (MHz)	Read Level (dBuV)	Factor(dB)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Polarization
1854.00	63.37	-19.18	44.19	74.00	29.81	Vertical
1854.00	72.89	-19.18	53.71	74.00	20.29	Horizontal
Average Value						
Frequency (MHz)	Read Level (dBuV)	Factor(dB)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Polarization
1854.00	56.79	-19.18	37.61	54.00	16.39	Vertical
1854.00	68.66	-19.18	49.48	54.00	4.52	Horizontal
Remark:						
1. Level = Read level + Factor.						

ANT1:

Lowest channel						
Peak Value						
Frequency (MHz)	Read Level (dBuV)	Factor(dB)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Polarization
1806.00	63.27	-19.21	44.06	74.00	29.94	Vertical
1806.00	71.31	-19.21	52.10	74.00	21.90	Horizontal
Average Value						
Frequency (MHz)	Read Level (dBuV)	Factor(dB)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Polarization
1806.00	57.68	-19.21	38.47	54.00	15.53	Vertical
1806.00	66.37	-19.21	47.16	54.00	6.84	Horizontal
Middle channel						
Peak Value						
Frequency (MHz)	Read Level (dBuV)	Factor(dB)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Polarization
1830.00	67.57	-19.20	48.37	74.00	25.63	Vertical
1830.00	74.28	-19.20	55.08	74.00	18.92	Horizontal
Average Value						
Frequency (MHz)	Read Level (dBuV)	Factor(dB)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Polarization
1830.00	61.69	-19.20	42.49	54.00	11.51	Vertical
1830.00	70.00	-19.20	50.80	54.00	3.20	Horizontal
Highest channel						
Peak Value						
Frequency (MHz)	Read Level (dBuV)	Factor(dB)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Polarization
1854.00	63.20	-19.18	44.02	74.00	29.98	Vertical
1854.00	69.78	-19.18	50.60	74.00	23.40	Horizontal
Average Value						
Frequency (MHz)	Read Level (dBuV)	Factor(dB)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Polarization
1854.00	56.89	-19.18	37.71	54.00	16.29	Vertical
1854.00	64.64	-19.18	45.46	54.00	8.54	Horizontal
Remark:						
1. Level = Read level + Factor.						

-----End of report-----