



Test Report No.:
FCC2022-0078-RF3/R2

TEST REPORT

FCC ID : 2A9GO-XS1-32DISPLAY
Applicant : Jiangsu TSD Electronics Technology Co., Ltd
Product Name : XS1 32 inches Display
Mode No. : IDS320

CVC Testing Technology Co., Ltd.



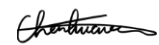
Applicant		Name: Jiangsu TSD Electronics Technology Co., Ltd Address: No.198, East ChenFeng Road, Yushan Town	
Manufacturer		Name: Jiangsu TSD Electronics Technology Co., Ltd Address: No.198, East ChenFeng Road, Yushan Town	
Equipment Under Test		Product Name : XS1 32 inches Display Model No. : IDS320 Trade mark : TSD Serial no. : — Sampling : 1-1	
Date of Receipt.	2022.12.28	Date of Testing	2023.3.8
Test Specification		Test Result	
FCC CFR47 Part 15E (2020) ANSI C63.10 (2013) KDB 789033 D02 General UNII Test Procedures New Rules v01r04 KDB 662911 D01 Multiple Transmitter Output v02r01 KDB905462 D02 UNII DFS Compliance Procedures New Rules v02 KDB 905462 D03 UNII Clients Without Radar Detection New Rules v01r02		PASS	
Evaluation of Test Result		The equipment under test was found to comply with the requirements of the standards applied.  Issue Date: 2023.5.31	
Approved by:  Chen Huawen	Reviewed by:  Xu Zhenfei	Tested by:  Lu Wei Ji	
Other Aspects: NONE.			
Abbreviations:OK, Pass= passed Fail = failed N/A= not applicable EUT= equipment, sample(s) under tested			
Note 1: This test report relates only to the EUT, and shall not be reproduced except in full, without written approval of CVC. Note 2: After the release of this report, it replaces the report numbered FCC2022-0078-RF3/R1.			

TABLE OF CONTENTS

1.	GENERAL PRODUCT INFORMATION.....	4
1.1	GENERAL INFORMATION	4
2.	TEST SITES	6
2.1	TEST FACILITIES	6
2.2	DESCRIPTION OF NON-STANDARD METHOD AND DEVIATIONS.....	6
2.3	LIST OF TEST AND MEASUREMENT INSTRUMENTS	6
3.	TEST CONFIGURATION	7
3.1	TEST MODE	7
3.2	DUTY CYCLE	11
4.	SUMMARY OF MEASUREMENT RESULTS.....	12
5.	MEASUREMENT PROCEDURE	13
5.1	CONDUCTED EMISSION	13
5.2	UNWANTED EMISSION	16
5.3	MAXIMUM CONDUCTED OUTPUT POWER	67
5.4	MIN EMISSION BANDWIDTH AND EMISSION BANDWIDTH AND OCCUPIED BANDWIDTH	70
5.5	MAXIMUM POWER SPECTRAL DENSITY	74
5.6	FREQUENCY STABILITY	77
5.7	DYNAMIC FREQUENCY SELECTION (DFS).....	91
6.	APPENDIX A.....	100

1. General Product Information

1.1 General information

Product Name	XS1 32 inches Display
Model No.	IDS320
Additional model	N/A
Power Supply	AC 100-240V,50/60Hz
Serial Number(SN)	TM23C002814
HVIN	IDS320
firmware	XMA311D.B-2
software	20220620
specific power settings	IEEE 802.11a: 50 IEEE 802.11n(20MHz): 51 IEEE 802.11n(40MHz): 51 IEEE 802.11ac(20MHz): 51 IEEE 802. 11ac (40MHz): 51 IEEE 802. 11ac (80MHz): 51
Antenna Type	External Antenna
Antenna Connector	A detachable antenna
Antenna Gain	2.0 dBi (provided by client)
Beamforming gain	Unsupported
Frequency Range	U-NII-1: For 20MHz:5180-5240MHz For 40MHz:5190-5230MHz For 80MHz:5210MHz U-NII-2A: For 20MHz:5260-5320MHz For 40MHz:5270-5310MHz For 80MHz:5290MHz U-NII-2C: For 20MHz:5500-5700MHz(without 5600~5640MHz) For 40MHz:5510-5670MHz(without 5590-5630MHz) For 80MHz:5530MHz U-NII-3: For 20MHz:5745-5825MHz For 40MHz:5755-5795MHz For 80MHz:5775MHz
Modulation Type	802.11a/n(HT20/HT40) : 64QAM, 16QAM, QPSK, BPSK for OFDM 802.11ac(VHT20/VHT40/VHT80): 256QAM, 64QAM, 16QAM, QPSK, BPSK for OFDM

Max. Conducted Power	U-NII-1: 16.40 dBm U-NII-2A: 16.14 dBm U-NII-2C: 14.96 dBm U-NII-3: 13.95 dBm
DFS device type	☐ Master ☒ Slave
TPC Function	☐ Support ☒ Not support
TDWR Band	☐ Support ☒ Not support
Operate Temp.Range	0~40°C
Note: 1. The information of the EUT is declared by the manufacturer. 2. The laboratory is not responsible for the product technical specification provided by the client.	

2. Test Sites

2.1 Test Facilities

The tests and measurements refer to this report were performed by RF testing Lab of CVC Testing Technology Co., Ltd.

Add.: No.3, Tiantaiyi Road, Kaitai Avenue, Science City, Guangzhou,Guangdong,510663, People's Republic of China

Telephone : +86-20-32293888

Fax : +86-20-32293889

FCC(Test firm designation number: CN1282)

IC(Test firm CAB identifier number: CN0103)

2.2 Description of Non-standard Method and Deviations

The testing and measurement methods used in this report are applied by all standard methods. Not any non-standard method or deviation from the used standards was used.

2.3 List of Test and Measurement Instruments

Refer to **Appendix A**.

3. Test Configuration

3.1 Test Mode

The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application.

Test Mode	Antenna Delivery	Test Channel
IEEE 802.11A	1TX / 1RX	36,44,48,52,60,64,100,116,140,149,157,165
IEEE 802.11N 20 SISO	1TX / 1RX	36,44,48,52,60,64,100,116,140,149,157,165
IEEE 802.11N 40 SISO	1TX / 1RX	38,46,54,62,102,110,134,151,159
IEEE 802.11AC 20 SISO	1TX / 1RX	36,44,48,52,60,64,100,116,140,149,157,165
IEEE 802.11AC 40 SISO	1TX / 1RX	38,46,54,62,102,110,134,151,159
IEEE 802.11AC 80 SISO	1TX / 1RX	42,58,106,155

The radiated emission was measured in the following position: EUT stand-up position (Z axis), lie-down position (X, Y axis). The worst emission was found in lie-down position (X axis) and the worst case was recorded.

In order to find the worst case condition, Pre-tests are needed at the presence of different data rate and different channels.. Preliminary tests have been done on all the configuration for confirming worst case.

Data rate below means worst-case rate of each test item.

Worst-case data rates and channels are shown as following table.

Test Mode	Antenna Delivery	Data Rate		
		Antenna 1	Antenna 2	MIMO
IEEE 802.11A	1TX / 1RX	6	/	/
IEEE 802.11N 20MHz	1TX / 1RX	MCS 0	/	/
IEEE 802.11N 40MHz	1TX / 1RX	MCS 0	/	/
IEEE 802.11AC 20MHz	1TX / 1RX	MCS 0	/	/
IEEE 802.11AC 40MHz	1TX / 1RX	MCS 0	/	/
IEEE 802.11AC 80MHz	1TX / 1RX	MCS 0	/	/

Test Items	Test Antennas	Test Modes	Test Channels
Conducted Emissions	Antenna 1	IEEE 802.11A	36
Maximum conducted output power	Antenna 1	IEEE 802.11A/ IEEE 802.11N 20/ IEEE 802.11N 40/ IEEE 802.11AC 20/ IEEE 802.11AC 40/ IEEE 802.11AC 80	36,44,48,52,60,64,100,116,140,149,157,165/ 36,44,48,52,60,64,100,116,140,149,157,165/ 38,46,54,62,102,110,134,151,159/ 36,44,48,52,60,64,100,116,140,149,157,165/ 38,46,54,62,102,110,134,151,159/ 42,58,106,155
Maximum Power spectral density	Antenna 1	IEEE 802.11A/ IEEE 802.11N 20/ IEEE 802.11N 40/ IEEE 802.11AC 20/ IEEE 802.11AC 40/ IEEE 802.11AC 80	36,44,48,52,60,64,100,116,140,149,157,165/ 36,44,48,52,60,64,100,116,140,149,157,165/ 38,46,54,62,102,110,134,151,159/ 36,44,48,52,60,64,100,116,140,149,157,165/ 38,46,54,62,102,110,134,151,159/ 42,58,106,155
Unwanted Emissions (Band Edge Measurement)	Antenna 1	IEEE 802.11AC 20	36,64,100,140,149,165
Unwanted Emissions (Spurious Emissions)	Antenna 1	IEEE 802.11AC 20	36,52,100,149
Min Emission Bandwidth and Emission Bandwidth and Occupied Bandwidth	Antenna 1	IEEE 802.11A/ IEEE 802.11N 20/ IEEE 802.11N 40/ IEEE 802.11AC 20/ IEEE 802.11AC 40/ IEEE 802.11AC 80	36,44,48,52,60,64,100,116,140,149,157,165/ 36,44,48,52,60,64,100,116,140,149,157,165/ 38,46,54,62,102,110,134,151,159/ 36,44,48,52,60,64,100,116,140,149,157,165/ 38,46,54,62,102,110,134,151,159/ 42,58,106,155
Frequency stability	Antenna 1	IEEE 802.11A/ IEEE 802.11N 20/ IEEE 802.11N 40/ IEEE 802.11AC 20/ IEEE 802.11AC 40/ IEEE 802.11AC 80	36,44,48,52,60,64,100,116,140,149,157,165/ 36,44,48,52,60,64,100,116,140,149,157,165/ 38,46,54,62,102,110,134,151,159/ 36,44,48,52,60,64,100,116,140,149,157,165/ 38,46,54,62,102,110,134,151,159/ 42,58,106,155

Dynamic Frequency Selection (DFS)	Antenna 1	IEEE 802.11AC 80	58,106
--	-----------	------------------	--------

3.2 Duty cycle

TestMode	Antenna	Channel	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	Limit	Verdict
11A	Ant1	5180	2.07	2.16	95.83	---	---
		5220	2.06	2.21	93.21	---	---
		5240	2.07	2.23	92.83	---	---
		5260	2.06	2.14	96.26	---	---
		5300	2.07	2.20	94.09	---	---
		5320	2.06	2.22	92.79	---	---
		5500	2.06	2.23	92.38	---	---
		5580	2.07	2.16	95.83	---	---
		5700	2.07	2.24	92.41	---	---
		5745	2.06	2.22	92.79	---	---
		5785	2.06	2.24	91.96	---	---
		5825	2.07	2.20	94.09	---	---
11N20SISO	Ant1	5180	1.92	2.02	95.05	---	---
		5220	1.91	2.09	91.39	---	---
		5240	1.93	2.02	95.54	---	---
		5260	1.92	2.07	92.75	---	---
		5300	1.92	2.09	91.87	---	---
		5320	1.92	2.04	94.12	---	---
		5500	1.92	2.04	94.12	---	---
		5580	1.91	2.09	91.39	---	---
		5700	1.92	2.06	93.20	---	---
		5745	1.92	2.03	94.58	---	---
		5785	1.92	2.04	94.12	---	---
		5825	1.92	2.01	95.52	---	---
11N40SISO	Ant1	5190	0.95	1.06	89.62	---	---
		5230	0.95	1.12	84.82	---	---
		5270	0.95	1.03	92.23	---	---
		5310	0.94	1.03	91.26	---	---
		5510	0.95	1.03	92.23	---	---
		5550	0.94	1.00	94.00	---	---
		5670	0.94	1.07	87.85	---	---
		5755	0.95	1.12	84.82	---	---
		5795	0.94	1.11	84.68	---	---
11AC20SISO	Ant1	5180	1.93	2.07	93.24	---	---
		5220	1.94	2.10	92.38	---	---
		5240	1.93	2.03	95.07	---	---
		5260	1.93	2.06	93.69	---	---
		5300	1.94	2.05	94.63	---	---
		5320	1.93	1.98	97.47	---	---
		5500	1.94	2.08	93.27	---	---
		5580	1.93	2.06	93.69	---	---
		5700	1.93	2.10	91.90	---	---
		5745	1.93	2.02	95.54	---	---
		5785	1.93	2.03	95.07	---	---
		5825	1.94	2.09	92.82	---	---
11AC40SISO	Ant1	5190	0.95	1.11	85.59	---	---
		5230	0.96	0.99	96.97	---	---
		5270	0.96	1.05	91.43	---	---
		5310	0.95	1.08	87.96	---	---
		5510	0.96	1.05	91.43	---	---
		5550	0.95	1.06	89.62	---	---
		5670	0.96	1.13	84.96	---	---
		5755	0.96	1.03	93.20	---	---
		5795	0.95	1.06	89.62	---	---
11AC80SISO	Ant1	5210	0.46	0.59	77.97	---	---
		5290	0.46	0.52	88.46	---	---
		5530	0.46	0.58	79.31	---	---
		5775	0.46	0.58	79.31	---	---

4. Summary of measurement results

Summary of measurements of results	Clause in FCC rules	Verdict	Note
Conducted Emissions	15.207	PASS	/
Maximum conducted output power	15.407(a)	PASS	/
Maximum Power spectral density	15.407(a)	PASS	/
Unwanted Emissions	15.407(b)	PASS	/
Min Emission Bandwidth and Emission Bandwidth and Occupied Bandwidth	15.407(e)	PASS	/
Frequency stability	15.407(g)	PASS	/
Dynamic Frequency Selection (DFS)	15.407(h)	PASS	/
Antenna Requirement	15.203	PASS	See note 1

Note 1: According to 15.203, it is considered sufficient to comply with the provisions of this section.

5. Measurement procedure

5.1 Conducted Emission

Ambient condition:

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

Method of Measurement:

The EUT IS placed on a non-metallic table of 80cm height above the horizontal metal reference ground plane. During the test, the EUT was operating in its typical mode. The test method is according to ANSI C63.10-2013. Connect the AC power line of the EUT to the LISN Use EMI receiver to detect the average and Quasi-peak value. RBW is set to 9kHz, VBW is set to 30kHz The measurement result should include both L line and N line.

The test is in transmitting mode.

Limits:

Frequency (MHz)	Conducted Limits(dBμV)	
	Quasi-peak	Average
0.15 - 0.5	66 to 56 *	56 to 46*
0.5 - 5	56	46
5 - 30	60	50

Note 1: The lower limit shall apply at the transition frequencies.

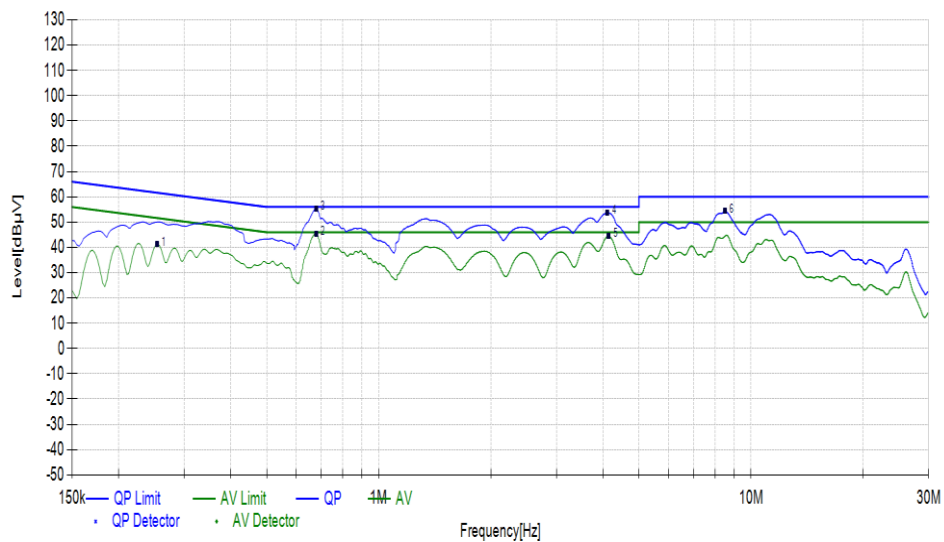
Note 2: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.

Test Results:

During the test, the Conducted Emission from 150KHz to 30MHz was performed in all modes with all channels, and all antennas. 802.11a, Channel 36, Antenna1 are selected as the worst condition. The test data of the worst-case condition was recorded in this report.

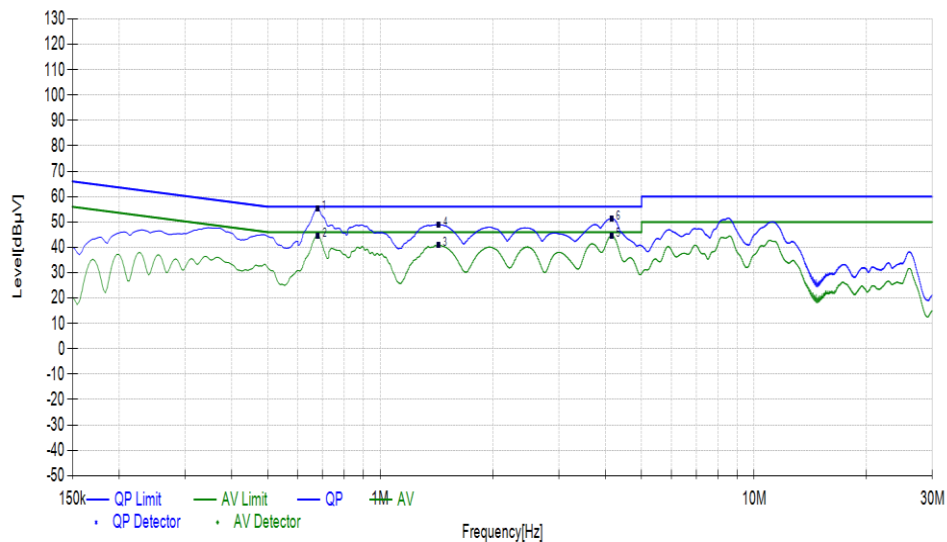
Power Line	L
Test channel	Worst-Case

Suspected List								
NO.	Freq. [MHz]	Factor [dB]	Reading [dBμV]	Level [dBμV]	Limit [dBμV]	Margin [dB]	Detector	Pass/Fail
6	8.5043	10.53	43.82	54.35	60.00	5.65	QP	PASS
4	4.1100	10.40	43.40	53.80	56.00	2.20	QP	PASS
3	0.6788	10.31	44.87	55.18	56.00	0.82	QP	PASS
2	0.6788	10.31	35.00	45.31	46.00	0.69	AV	PASS
5	4.1483	10.40	34.13	44.53	46.00	1.47	AV	PASS
1	0.2535	10.29	30.89	41.18	51.64	10.46	AV	PASS



Power Line	N
Test channel	Worst-Case

Suspected List								
NO.	Freq. [MHz]	Factor [dB]	Reading [dBμV]	Level [dBμV]	Limit [dBμV]	Margin [dB]	Detector	Pass/Fail
6	4.1550	10.41	41.03	51.44	56.00	4.56	QP	PASS
4	1.4325	10.34	38.66	49.00	56.00	7.00	QP	PASS
1	0.6788	10.31	44.88	55.19	56.00	0.81	QP	PASS
2	0.6810	10.31	34.26	44.57	46.00	1.43	AV	PASS
5	4.1528	10.41	34.27	44.68	46.00	1.32	AV	PASS
3	1.4303	10.34	30.54	40.88	46.00	5.12	AV	PASS



5.2 Unwanted Emission

Ambient condition:

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

Method of Measurement:

The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.

The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable was turned from 0 degrees to 360 degrees to find the maximum reading.

The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

Above 1GHz test procedure as below:

Different between above is the test site, change from Semi- Anechoic Chamber to fully Anechoic Chamber and change form table 0.8 meter to 1.5 meter(Above 18GHz the distance is 1 meter and table is 1.5 meter)..

Test the EUT in the lowest channel ,the middle channel ,the Highest channel

The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is worse case.

Repeat above procedures until all frequencies measured was complete.

Limits:

1. For transmitters operating in the 5725-5850 MHz band: All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.
2. For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz(68.2dBμV/m).
3. For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz(68.2dBμV/m).
4. For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz(68.2dBμV/m).

Note: the following formula is used to convert the EIRP to field strength

§1、 $E[\text{dB}\mu\text{V/m}] = \text{EIRP}[\text{dBm}] - 20 \log(d[\text{meters}]) + 104.77$, where E = field strength and

d = distance at which field strength limit is specified in the rules;

§2、 $E[\text{dB}\mu\text{V/m}] = \text{EIRP}[\text{dBm}] + 95.2$, for d = 3 meters

5. Unwanted spurious emissions fallen in restricted bands per FCC Part15.205 shall comply with the general field strength limits set forth in § 15.209 as below table.

Frequency	Limit ($\mu\text{V/m}$)	Limit ($\text{dB}\mu\text{V/m}$ @3m)	Remark
0.009MHz-0.490MHz	2400/F(kHz)@300m	$20\lg(240000/F(\text{kHz}))$	Quasi-peak Level
0.490MHz~1.705MHz	24000/F(kHz)@30m	$20\lg(240000/F(\text{kHz}))$	Quasi-peak Level
1.705MHz~30.0MHz	30@30m	49.54	Quasi-peak Level
30MHz-88MHz	100@3m	40.0	Quasi-peak Level
88MHz-216MHz	150@3m	43.5	Quasi-peak Level
216MHz-960MHz	200@3m	46.0	Quasi-peak Level
960MHz-1GHz	500@3m	54.0	Quasi-peak Level
Above 1GHz	500@3m	54.0	Average Level
	5000@3m	74.0	Peak Level

Measurement Data

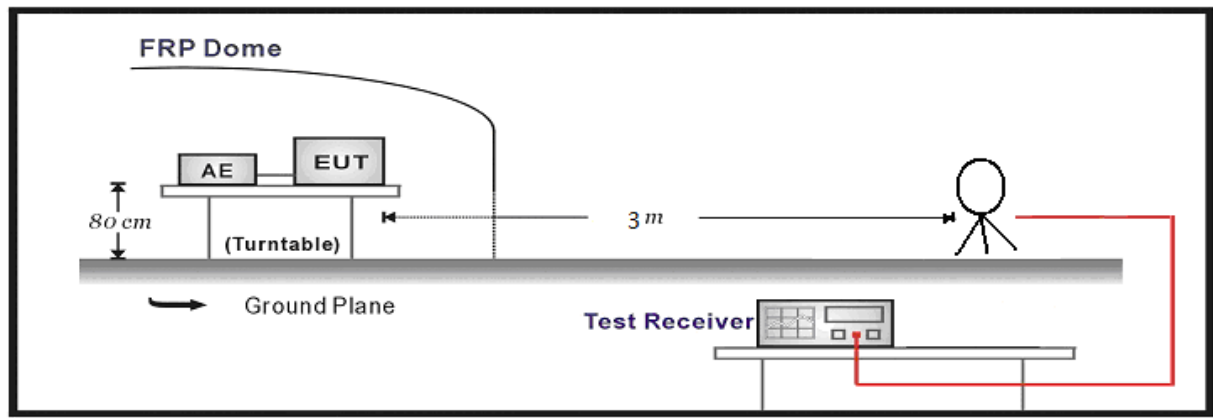
The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level = Receiver Reading - Correct Factor

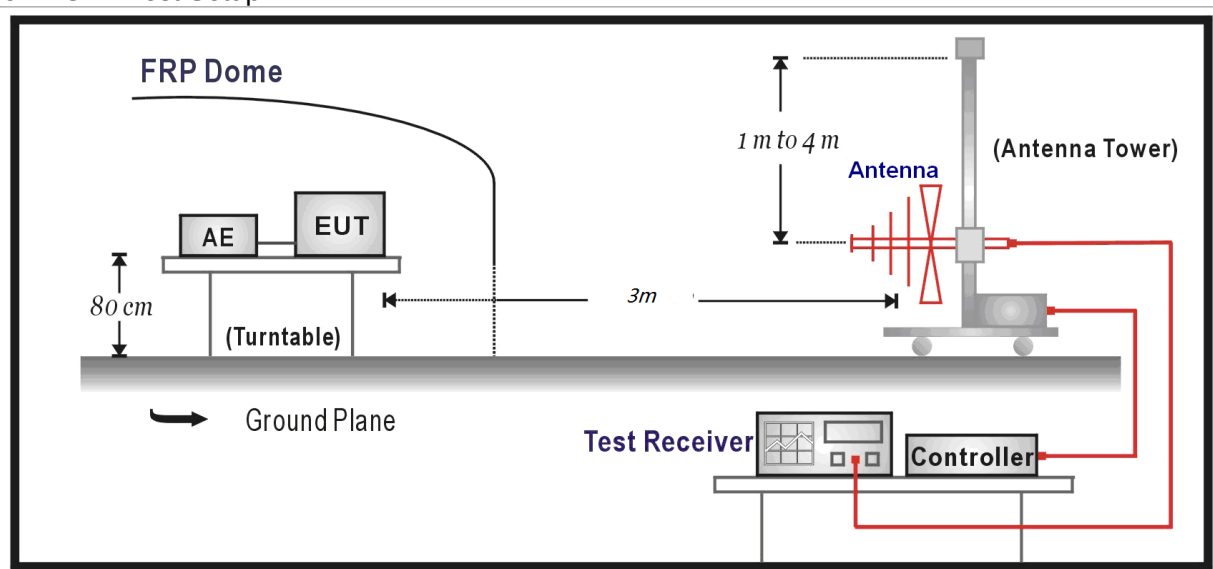
Correct Factor = Preamplifier Factor - Antenna Factor - Cable Factor

Test Setup:

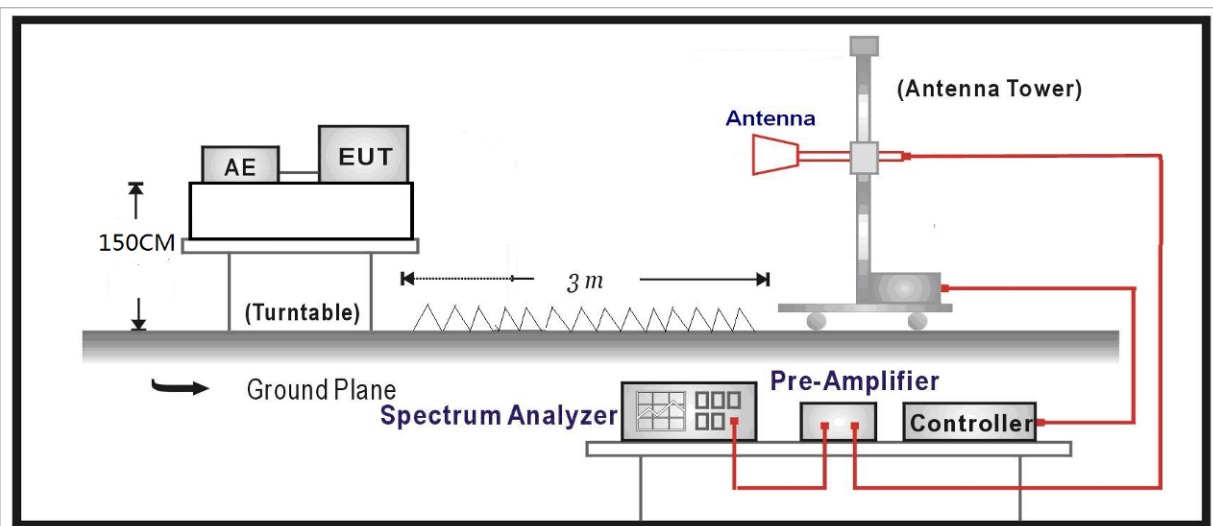
Below 30MHz Test Setup:



Below 1GHz Test Setup:



Above 1GHz Test Setup:



Measurement Uncertainty:

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor $k = 1.96$.

Frequency	Uncertainty
9KHz-30MHz	3.55 dB
30MHz-200MHz	4.19 dB
200MHz-1GHz	3.63 dB
1GHz-26.5G	3.68 dB
26.5G-40GHz	4.76dB

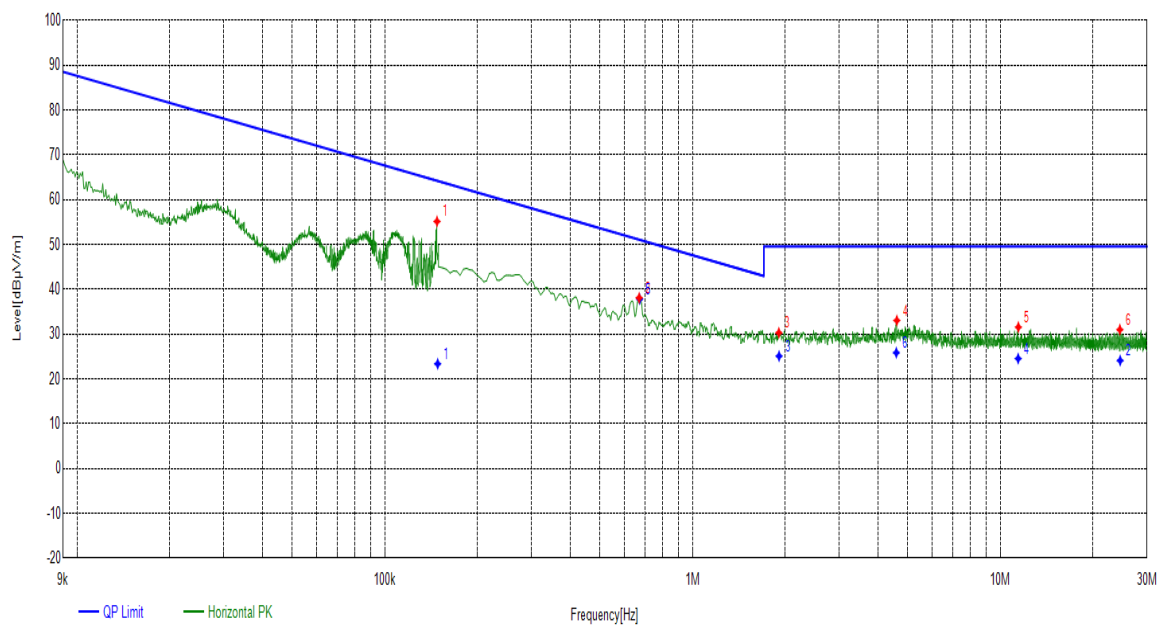
5.2.1 SPURIOUS EMISSIONS:

5.2.1.1 Below 30M:

During the test, the Radiates Emission from 9KHz to 30MHz was performed in all modes with all channels and all antennas, 802.11ac20, Channel 36, Antenna1, X axis are selected as the worst condition. The test data of the worst-case condition was recorded in this report.

Radiated Emission	9KHz-30MHz
Polarity	X axis
Test channel	Worst-Case

Final Data List								
Frequency [MHz]	Polarity	Factor [dB]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Pass/Fail
0.1484	X axis	19.60	23.36	64.18	40.82	100	200	PASS
0.6731	X axis	19.68	37.81	51.04	13.23	100	113	PASS
1.9101	X axis	19.92	25.09	49.54	24.45	100	240	PASS
4.5935	X axis	19.68	25.85	49.54	23.69	100	64	PASS
11.4346	X axis	19.92	24.54	49.54	25.00	100	350	PASS
24.5305	X axis	20.43	24.10	49.54	25.44	100	215	PASS

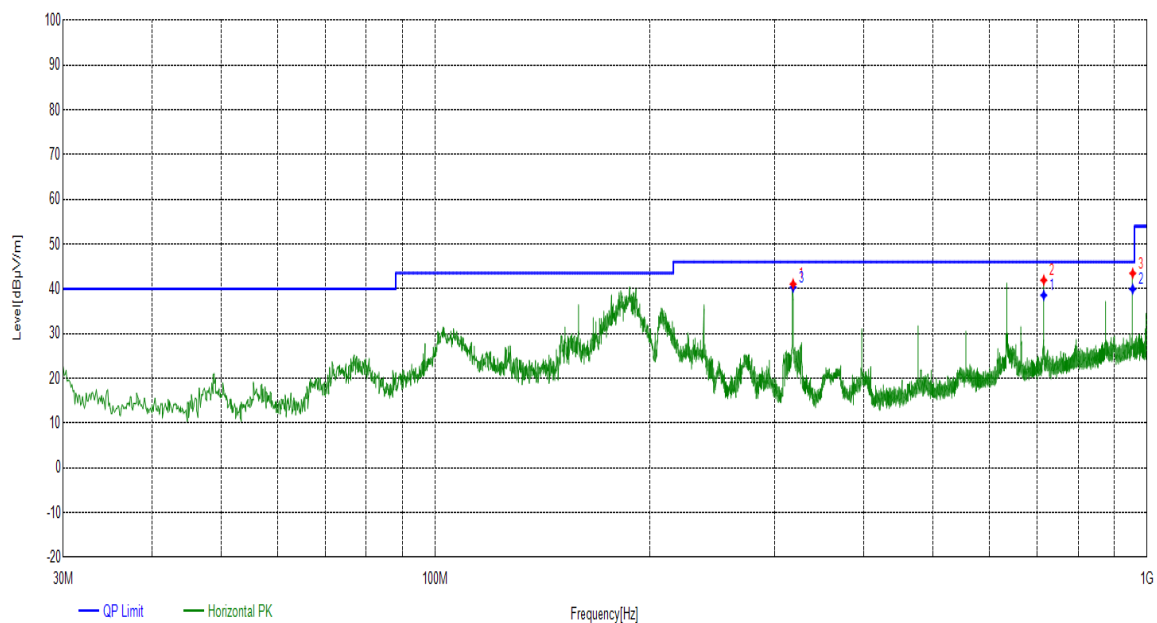


5.2.1.2 30MHz~1GHz:

During the test, the Radiates Emission from 30MHz to 1GHz was performed in all modes with all channels and all antennas, 802.11ac20, Channel 36, Antenna1 are selected as the worst condition. The test data of the worst-case condition was recorded in this report.

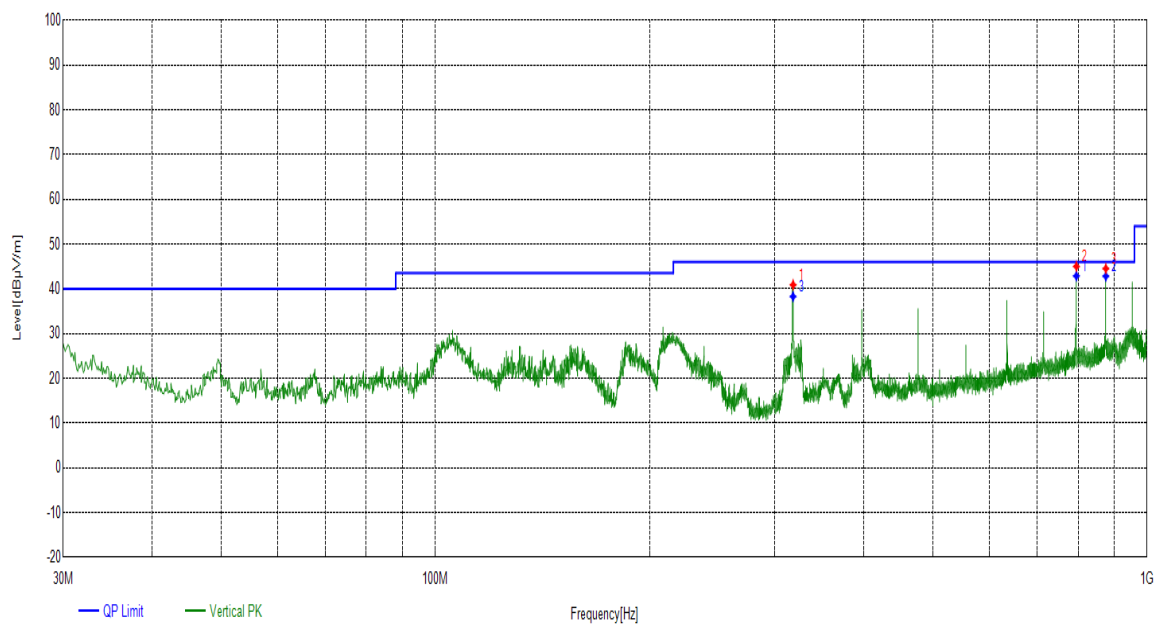
Radiates Emission			30M~1G							
Test channel			Worst-Case							
Suspected List										
Frequency [MHz]	Polarity	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detect or	Height [cm]	Angle deg	Pass/ Fail
318.2158	Horizontal	15.53	25.54	41.07	46.01	4.94	PK	100	270	PASS
715.9556	Horizontal	24.87	17.06	41.93	46.00	4.07	PK	100	30	PASS
954.6965	Horizontal	28.28	15.18	43.46	46.00	2.54	PK	100	160	PASS

Final Data List									
Frequency [MHz]	Polarity	Factor [dB]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Pass/Fail	
715.9348	Horizontal	24.87	38.57	46.00	7.43	130	30	PASS	
954.6000	Horizontal	28.28	39.95	46.00	6.05	260	160	PASS	
318.2342	Horizontal	15.54	40.33	46.01	5.68	110	270	PASS	



Radiates Emission			30M~1G							
Test channel			Worst-Case							
Suspected List										
Frequency [MHz]	Polarity	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detect or	Height [cm]	Angle deg	Pass/ Fail
318.2158	Vertical	15.53	25.36	40.89	46.02	5.13	PK	100	360	PASS
795.6006	Vertical	26.68	18.32	45.00	46.02	1.02	PK	100	90	PASS
875.1485	Vertical	27.35	17.17	44.52	46.02	1.50	PK	100	310	PASS

Final Data List								
Frequency [MHz]	Polarity	Factor [dB]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Pass/Fail
795.4966	Vertical	26.68	42.87	46.02	3.15	120	90	PASS
875.1108	Vertical	27.36	42.82	46.02	3.20	200	310	PASS
318.1375	Vertical	15.54	38.28	46.02	7.74	150	220	PASS

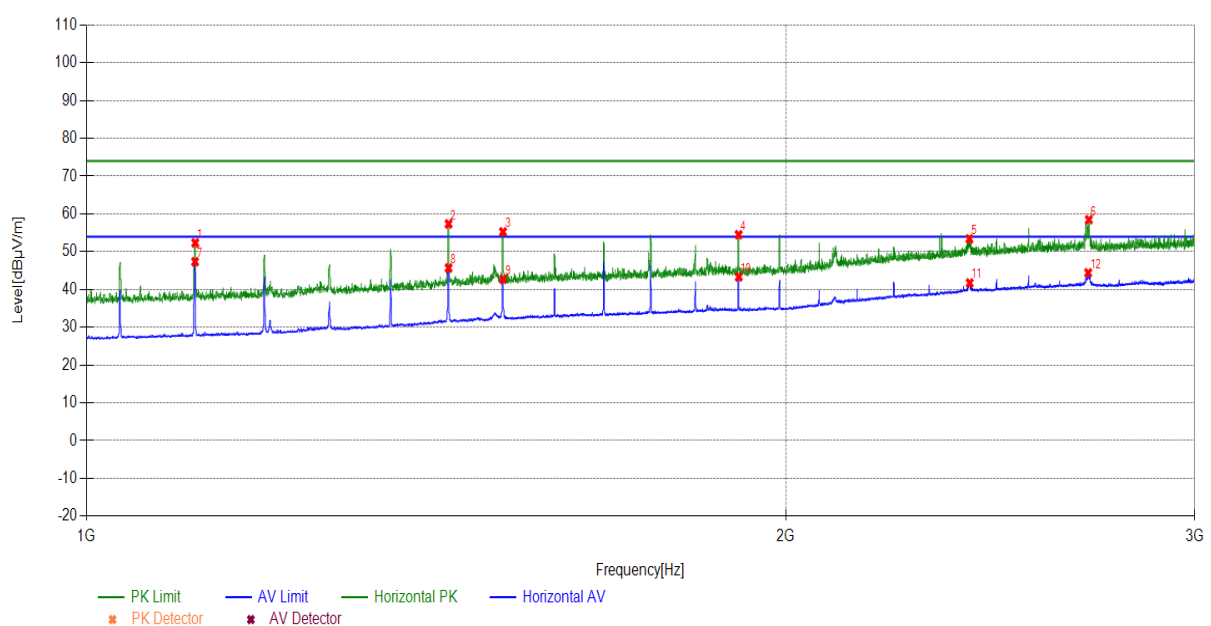


5.2.1.3 Above 1GHz:

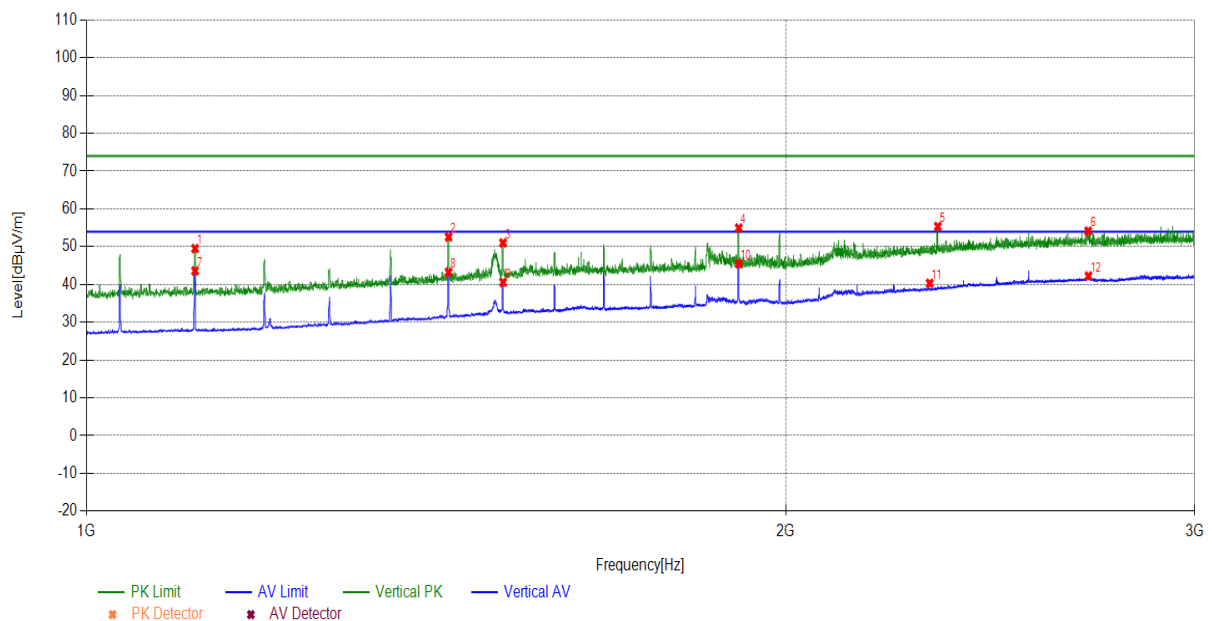
5.2.1.3.1 U-NII-1:

During the test, the Radiates Emission from 1GHz to 40GHz was performed in all modes with all channels and all antennas, 802.11ac20, Channel 36, Antenna1 are selected as the worst condition. The test data of the worst-case condition was recorded in this report.

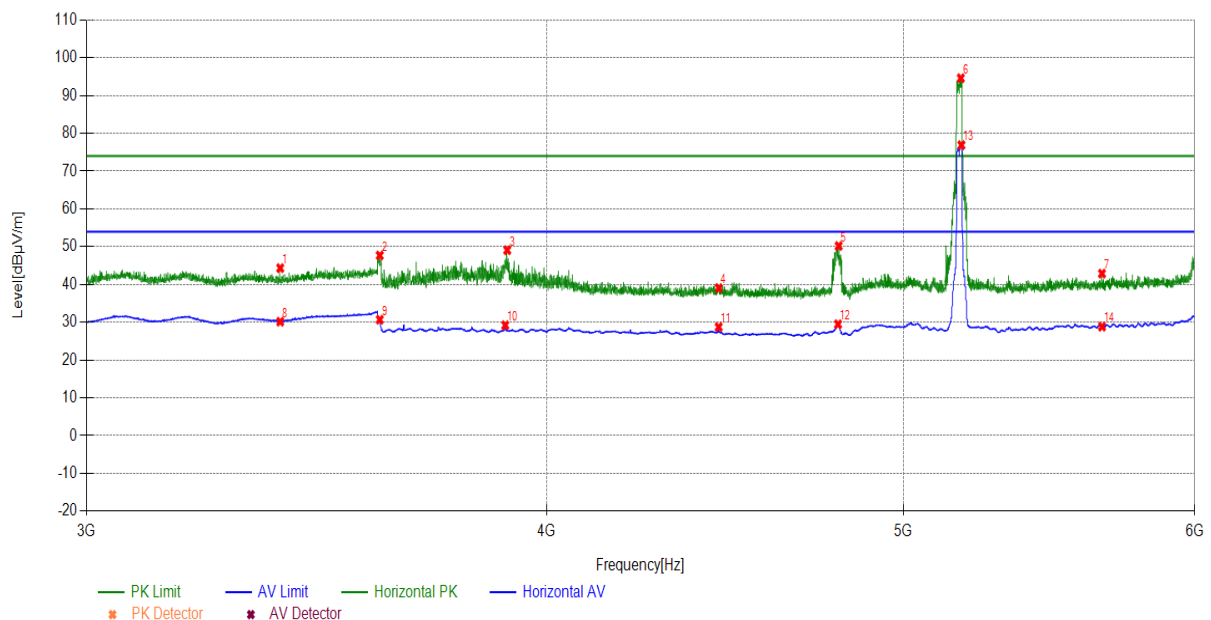
Radiates Emission		1G~3G							
Test channel		Worst-Case							
polarization		Horizontal							
Suspected List									
Frequency[MHz]	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detect or	Height [cm]	Angle deg	Pass/ Fail
1113.8114	26.89	25.44	52.33	74.00	21.67	PK	150	180	PASS
1431.8432	30.07	27.30	57.37	74.00	16.63	PK	150	222	PASS
1511.2511	30.89	24.38	55.27	74.00	18.73	PK	150	81	PASS
1908.8909	32.75	21.75	54.50	74.00	19.50	PK	150	95	PASS
2399.74	37.16	16.23	53.39	74.00	20.61	PK	150	180	PASS
2701.3701	38.31	20.14	58.45	74.00	15.55	PK	150	137	PASS
1113.6114	26.88	20.47	47.35	54.00	6.65	AV	150	165	PASS
1431.8432	30.07	15.63	45.70	54.00	8.30	AV	150	222	PASS
1511.2511	30.89	11.83	42.72	54.00	11.28	AV	150	81	PASS
1909.0909	32.75	10.58	43.33	54.00	10.67	AV	150	81	PASS
2400.34	37.16	4.58	41.74	54.00	12.26	AV	150	180	PASS
2699.57	38.30	6.11	44.41	54.00	9.59	AV	150	123	PASS



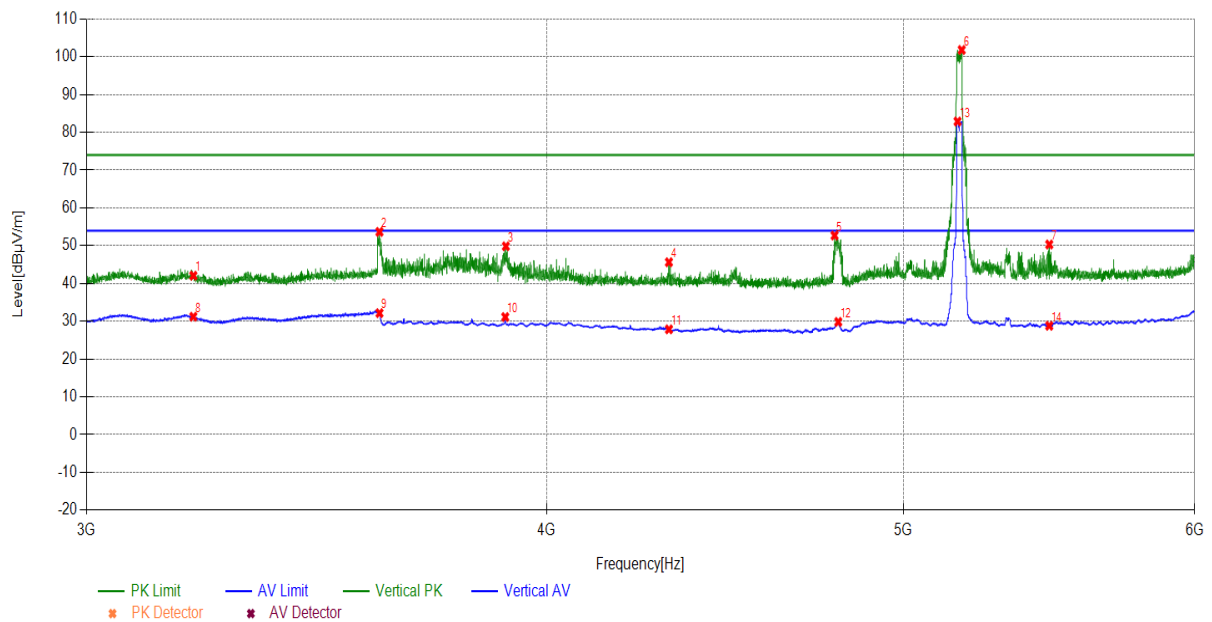
Radiates Emission		1G~3G							
Test channel		Worst-Case							
polarization		Vertical							
Suspected List									
Frequency[MHz]	Factor [dB]	Reading [dBμV/m]	Level [dBμV/ m]	Limit [dBμV/ m]	Margin [dB]	Detect or	Height [cm]	Angle deg	Pass/ Fail
1113.6114	26.88	22.63	49.51	74.00	24.49	PK	150	192	PASS
1431.8432	30.07	22.51	52.58	74.00	21.42	PK	150	235	PASS
1511.2511	30.89	20.12	51.01	74.00	22.99	PK	150	220	PASS
1909.0909	32.75	22.20	54.95	74.00	19.05	PK	150	192	PASS
2325.7326	36.49	18.87	55.36	74.00	18.64	PK	150	235	PASS
2699.77	38.30	15.83	54.13	74.00	19.87	PK	150	135	PASS
1113.6114	26.88	16.73	43.61	54.00	10.39	AV	150	192	PASS
1431.8432	30.07	13.18	43.25	54.00	10.75	AV	150	235	PASS
1511.2511	30.89	9.71	40.60	54.00	13.40	AV	150	164	PASS
1909.0909	32.75	12.76	45.51	54.00	8.49	AV	150	192	PASS
2306.9307	36.32	3.98	40.30	54.00	13.70	AV	150	164	PASS
2700.37	38.31	3.95	42.26	54.00	11.74	AV	150	135	PASS



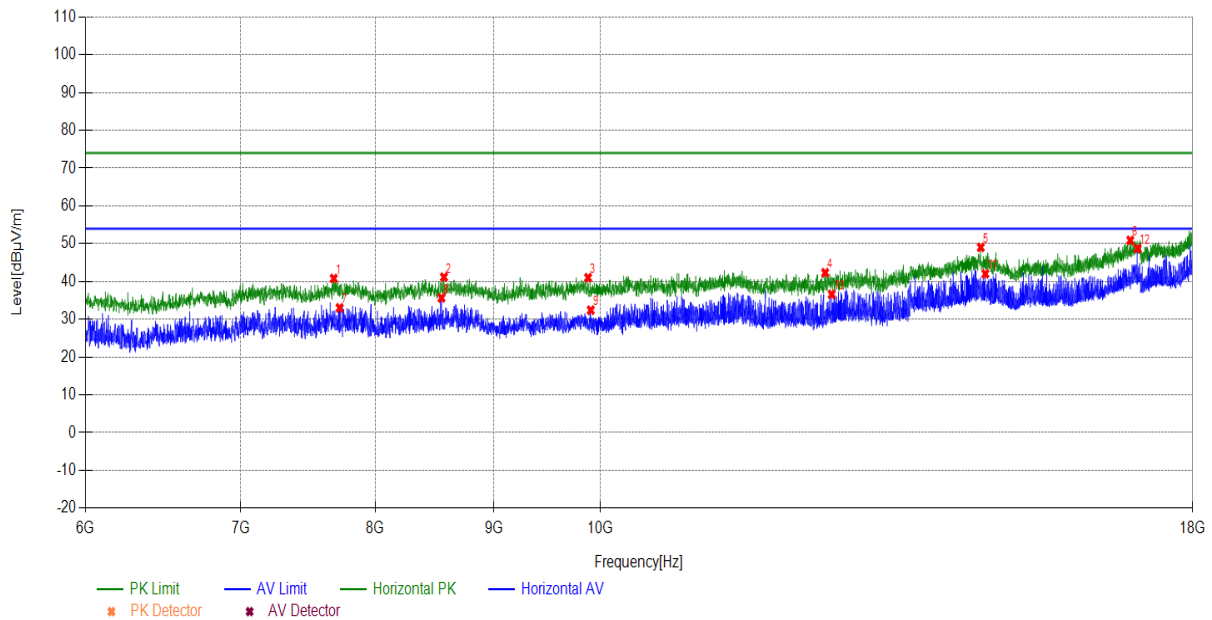
Radiates Emission		3G~6G							
Test channel		Worst-Case							
polarization		Horizontal							
Suspected List									
Frequency[MHz]	Factor [dB]	Reading [dBμV/m]	Level [dBμV/ m]	Limit [dBμV/ m]	Margin [dB]	Detect or	Height [cm]	Angle deg	Pass/ Fail
3386.4386	-1.56	45.90	44.34	74.00	29.66	PK	150	251	PASS
3603.9604	-0.83	48.52	47.69	74.00	26.31	PK	150	145	PASS
3903.0903	-0.33	49.42	49.09	74.00	24.91	PK	150	109	PASS
4455.1455	-0.61	39.67	39.06	74.00	34.94	PK	150	180	PASS
4802.2802	0.61	49.59	50.20	74.00	23.80	PK	150	133	PASS
5183.6184	2.04	92.57	94.61	74.00	-20.61	PK	150	97	---
5662.1662	3.48	39.41	42.89	74.00	31.11	PK	150	133	PASS
3386.4386	-1.56	31.72	30.16	54.00	23.84	AV	150	121	PASS
3603.9604	-0.83	31.52	30.69	54.00	23.31	AV	150	192	PASS
3898.2898	-0.34	29.57	29.23	54.00	24.77	AV	150	192	PASS
4455.1455	-0.61	29.35	28.74	54.00	25.26	AV	150	192	PASS
4800.48	0.60	28.90	29.50	54.00	24.50	AV	150	145	PASS
5185.7186	2.05	74.84	76.89	54.00	-22.89	AV	150	216	---
5662.1662	3.48	25.36	28.84	54.00	25.16	AV	150	299	PASS



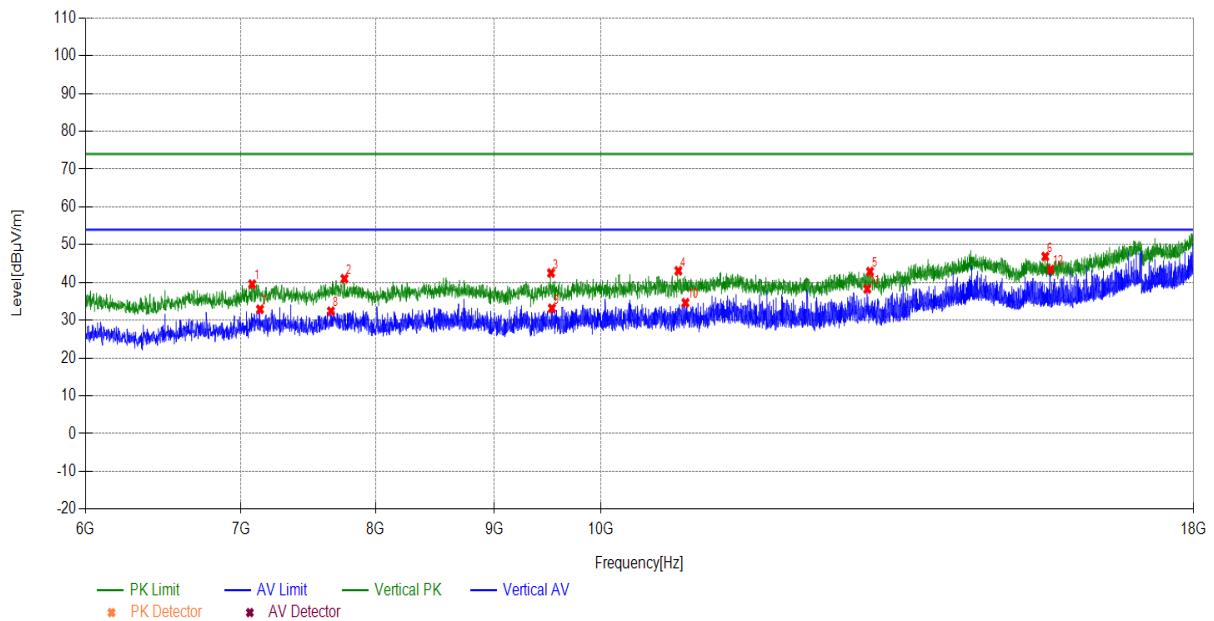
Radiates Emission		3G~6G							
Test channel		Worst-Case							
polarization		Vertical							
Suspected List									
Frequency[MHz]	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detect or	Height [cm]	Angle deg	Pass/ Fail
3207.3207	-2.30	44.37	42.07	74.00	31.93	PK	150	5	PASS
3603.3603	-0.83	54.50	53.67	74.00	20.33	PK	150	193	PASS
3899.79	-0.34	50.20	49.86	74.00	24.14	PK	150	145	PASS
4318.6319	-0.48	46.12	45.64	74.00	28.36	PK	150	157	PASS
4789.979	0.56	52.14	52.70	74.00	21.30	PK	150	133	PASS
5186.6187	2.05	99.76	101.81	74.00	-27.81	PK	150	157	---
5478.5479	2.71	47.61	50.32	74.00	23.68	PK	150	133	PASS
3207.3207	-2.30	33.52	31.22	54.00	22.78	AV	150	5	PASS
3603.3603	-0.83	33.00	32.17	54.00	21.83	AV	150	204	PASS
3898.2898	-0.34	31.47	31.13	54.00	22.87	AV	150	204	PASS
4318.6319	-0.48	28.35	27.87	54.00	26.13	AV	150	62	PASS
4801.0801	0.60	29.24	29.84	54.00	24.16	AV	150	133	PASS
5173.1173	2.01	80.87	82.88	54.00	-28.88	AV	150	228	---
5478.5479	2.71	26.11	28.82	54.00	25.18	AV	150	74	PASS



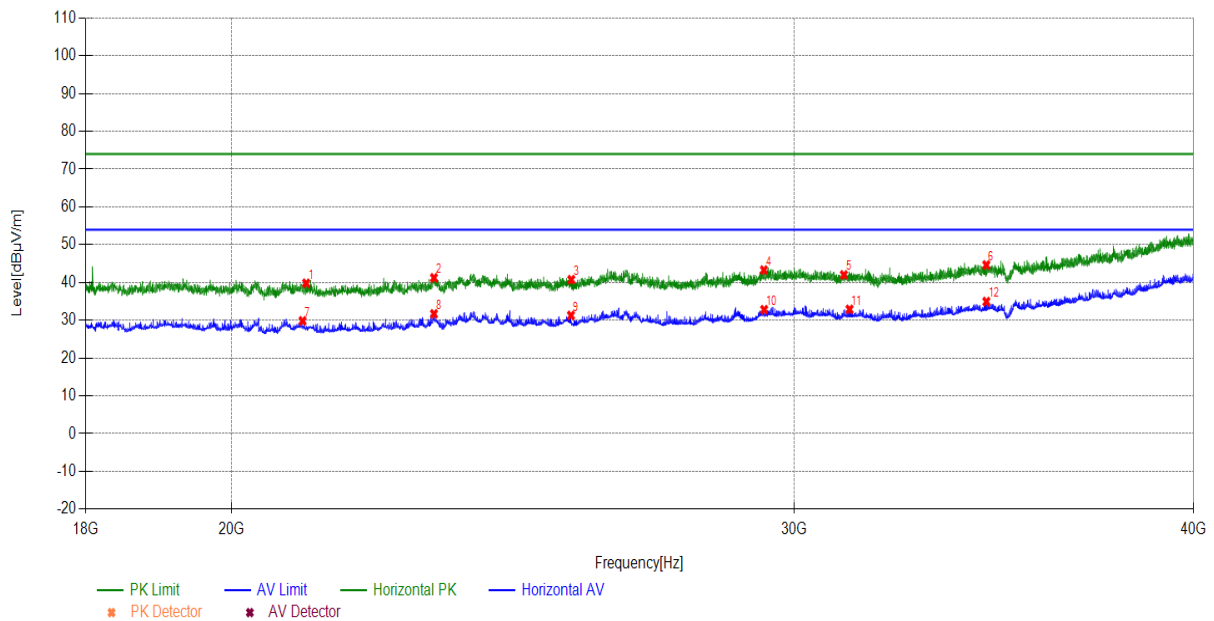
Radiates Emission		6G~18G							
Test channel		Worst-Case							
polarization		Horizontal							
Suspected List									
Frequency[MHz]	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detect or	Height [cm]	Angle deg	Pass/ Fail
7676.5677	8.38	32.43	40.81	74.00	33.19	PK	150	320	PASS
8563.4563	9.16	31.99	41.15	74.00	32.85	PK	150	280	PASS
9879.988	11.54	29.48	41.02	74.00	32.98	PK	150	320	PASS
12499.85	11.86	30.46	42.32	74.00	31.68	PK	150	300	PASS
14586.8587	17.16	31.88	49.04	74.00	24.96	PK	150	40	PASS
16919.892	20.17	30.73	50.90	74.00	23.10	PK	150	310	PASS
7720.9721	8.39	24.62	33.01	54.00	20.99	AV	150	10	PASS
8541.8542	9.15	26.50	35.65	54.00	18.35	AV	150	10	PASS
9906.3906	11.54	20.89	32.43	54.00	21.57	AV	150	20	PASS
12581.4581	12.11	24.49	36.60	54.00	17.40	AV	150	10	PASS
14652.8653	17.07	24.97	42.04	54.00	11.96	AV	150	10	PASS
17043.5044	20.90	27.82	48.72	54.00	5.28	AV	150	10	PASS



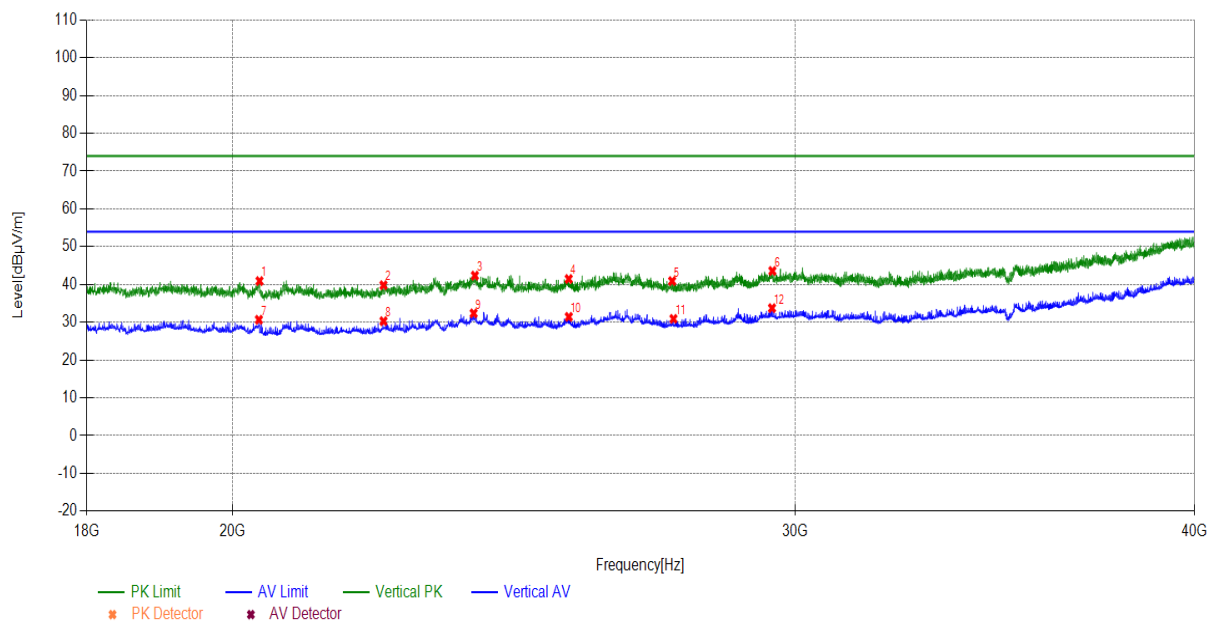
Radiates Emission		6G~18G							
Test channel		Worst-Case							
polarization		Vertical							
Suspected List									
Frequency[MHz]	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detect or	Height [cm]	Angle deg	Pass/ Fail
7077.7078	8.03	31.53	39.56	74.00	34.44	PK	150	230	PASS
7755.7756	8.40	32.61	41.01	74.00	32.99	PK	150	80	PASS
9518.7519	11.51	31.01	42.52	74.00	31.48	PK	150	300	PASS
10799.2799	11.81	31.29	43.10	74.00	30.90	PK	150	300	PASS
13059.1059	13.28	29.61	42.89	74.00	31.11	PK	150	130	PASS
15538.5539	15.24	31.64	46.88	74.00	27.12	PK	150	210	PASS
7132.9133	8.05	24.86	32.91	54.00	21.09	AV	150	10	PASS
7652.5653	8.37	24.03	32.40	54.00	21.60	AV	150	10	PASS
9527.1527	11.52	21.65	33.17	54.00	20.83	AV	150	10	PASS
10876.0876	11.74	22.91	34.65	54.00	19.35	AV	150	10	PASS
13024.3024	13.29	25.00	38.29	54.00	15.71	AV	150	10	PASS
15620.162	15.47	27.97	43.44	54.00	10.56	AV	150	10	PASS



Radiates Emission		18G~40G							
Test channel		Worst-Case							
polarization		Horizontal							
Suspected List									
Frequency[MHz]	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detect or	Height [cm]	Angle deg	Pass/ Fail
21102.3102	1.68	38.12	39.80	74.00	34.20	PK	150	30	PASS
23137.5138	3.01	38.22	41.23	74.00	32.77	PK	150	270	PASS
25544.5545	4.32	36.42	40.74	74.00	33.26	PK	150	180	PASS
29346.5347	6.24	37.04	43.28	74.00	30.72	PK	150	40	PASS
31089.1089	6.22	35.79	42.01	74.00	31.99	PK	150	70	PASS
34448.8449	6.69	37.95	44.64	74.00	29.36	PK	150	310	PASS
21047.3047	1.66	28.18	29.84	54.00	24.16	AV	150	10	PASS
23137.5138	3.01	28.68	31.69	54.00	22.31	AV	150	10	PASS
25537.9538	4.32	26.97	31.29	54.00	22.71	AV	150	10	PASS
29353.1353	6.25	26.55	32.80	54.00	21.20	AV	150	10	PASS
31216.7217	6.17	26.71	32.88	54.00	21.12	AV	150	10	PASS
34451.0451	6.69	28.26	34.95	54.00	19.05	AV	150	10	PASS



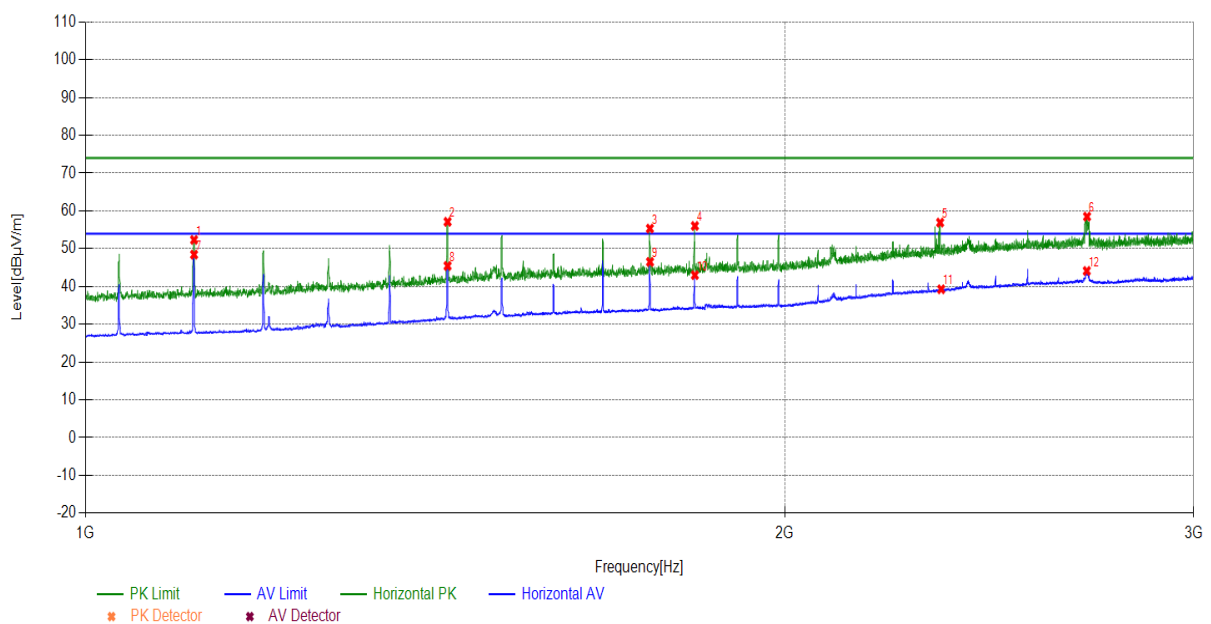
Radiates Emission		18G~40G							
Test channel		Worst-Case							
polarization		Vertical							
Suspected List									
Frequency[MHz]	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detect or	Height [cm]	Angle deg	Pass/ Fail
20389.4389	1.44	39.48	40.92	74.00	33.08	PK	150	70	PASS
22294.8295	2.19	37.62	39.81	74.00	34.19	PK	150	200	PASS
23812.9813	3.55	38.80	42.35	74.00	31.65	PK	150	310	PASS
25478.5479	4.29	37.17	41.46	74.00	32.54	PK	150	150	PASS
27449.945	5.12	35.78	40.90	74.00	33.10	PK	150	210	PASS
29507.1507	6.36	37.23	43.59	74.00	30.41	PK	150	200	PASS
20380.6381	1.43	29.24	30.67	54.00	23.33	AV	150	10	PASS
22294.8295	2.19	28.10	30.29	54.00	23.71	AV	150	10	PASS
23790.9791	3.53	28.84	32.37	54.00	21.63	AV	150	10	PASS
25480.7481	4.29	27.15	31.44	54.00	22.56	AV	150	10	PASS
27476.3476	5.14	25.77	30.91	54.00	23.09	AV	150	10	PASS
29498.3498	6.35	27.40	33.75	54.00	20.25	AV	150	10	PASS



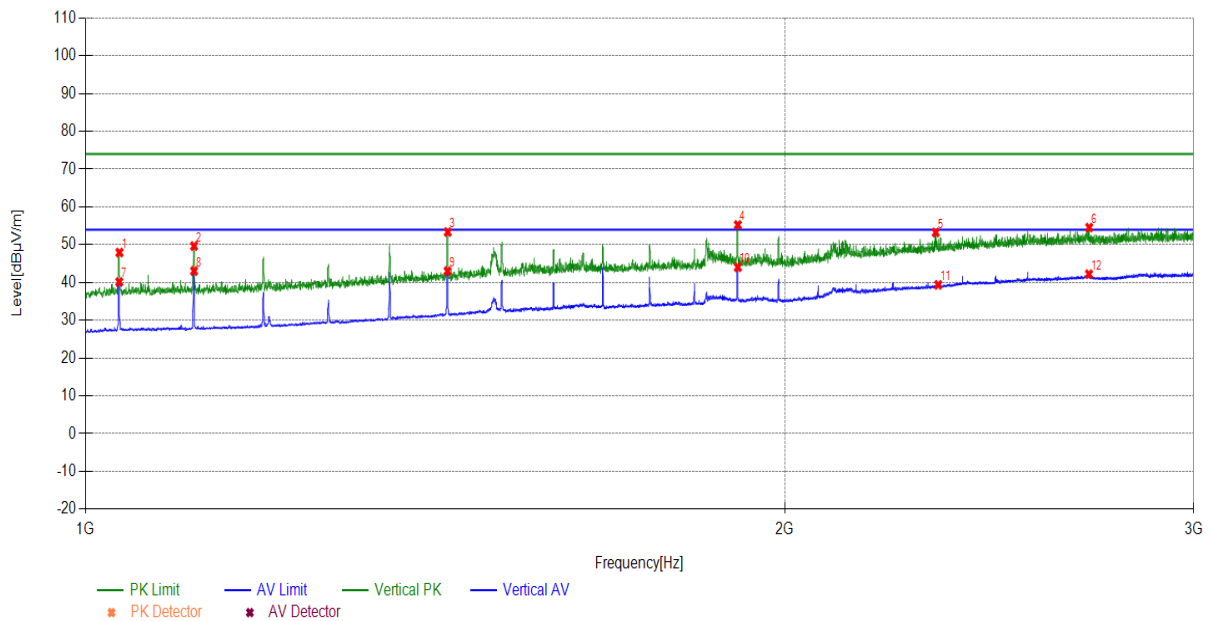
5.2.1.3.2 U-NII-2A:

During the test, the Radiates Emission from 1GHz to 40GHz was performed in all modes with all channels and all antennas, 802.11ac20, Channel 64, Antenna1 are selected as the worst condition. The test data of the worst-case condition was recorded in this report.

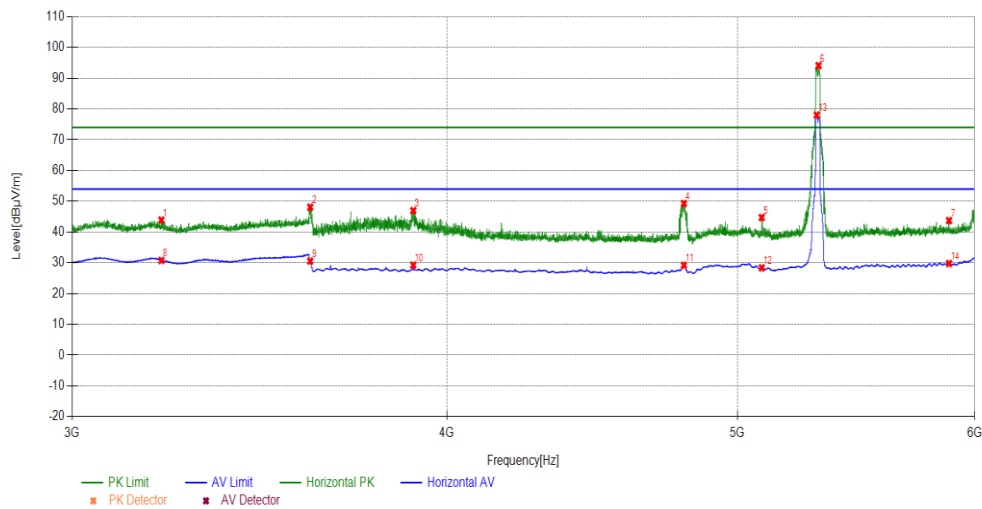
Radiates Emission		1G~3G							
Test channel		Worst-Case							
polarization		Horizontal							
Suspected List									
Frequency[MHz]	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detect or	Height [cm]	Angle deg	Pass/ Fail
1113.6114	26.88	25.46	52.34	74.00	21.66	PK	150	178	PASS
1431.8432	30.07	27.06	57.13	74.00	16.87	PK	150	234	PASS
1749.875	32.22	23.12	55.34	74.00	18.66	PK	150	234	PASS
1829.683	32.57	23.46	56.03	74.00	17.97	PK	150	234	PASS
2333.3333	36.56	20.36	56.92	74.00	17.08	PK	150	106	PASS
2699.1699	38.30	20.20	58.50	74.00	15.50	PK	150	135	PASS
1113.6114	26.88	21.56	48.44	54.00	5.56	AV	150	178	PASS
1431.8432	30.07	15.38	45.45	54.00	8.55	AV	150	234	PASS
1750.075	32.22	14.28	46.50	54.00	7.50	AV	150	234	PASS
1829.683	32.57	10.45	43.02	54.00	10.98	AV	150	234	PASS
2335.7336	36.58	2.68	39.26	54.00	14.74	AV	150	220	PASS
2698.5699	38.30	5.83	44.13	54.00	9.87	AV	150	135	PASS



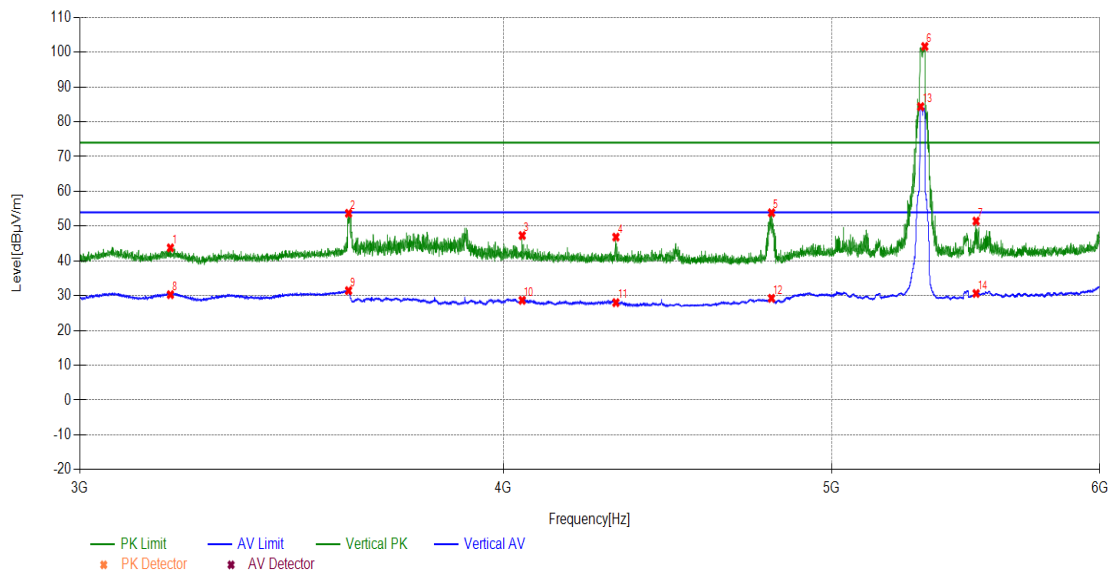
Radiates Emission		1G~3G							
Test channel		Worst-Case							
polarization		Vertical							
Suspected List									
Frequency[MHz]	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detect or	Height [cm]	Angle deg	Pass/ Fail
1034.2034	26.26	21.68	47.94	74.00	26.06	PK	150	191	PASS
1113.6114	26.88	22.78	49.66	74.00	24.34	PK	150	191	PASS
1432.0432	30.07	23.30	53.37	74.00	20.63	PK	150	134	PASS
1909.2909	32.75	22.49	55.24	74.00	18.76	PK	150	176	PASS
2323.1323	36.46	16.79	53.25	74.00	20.75	PK	150	134	PASS
2704.9705	38.32	16.24	54.56	74.00	19.44	PK	150	120	PASS
1034.0034	26.26	13.88	40.14	54.00	13.86	AV	150	191	PASS
1113.6114	26.88	16.18	43.06	54.00	10.94	AV	150	191	PASS
1431.8432	30.07	12.95	43.02	54.00	10.98	AV	150	191	PASS
1909.2909	32.75	11.30	44.05	54.00	9.95	AV	150	162	PASS
2328.7329	36.51	2.87	39.38	54.00	14.62	AV	150	106	PASS
2704.3704	38.32	3.90	42.22	54.00	11.78	AV	150	120	PASS



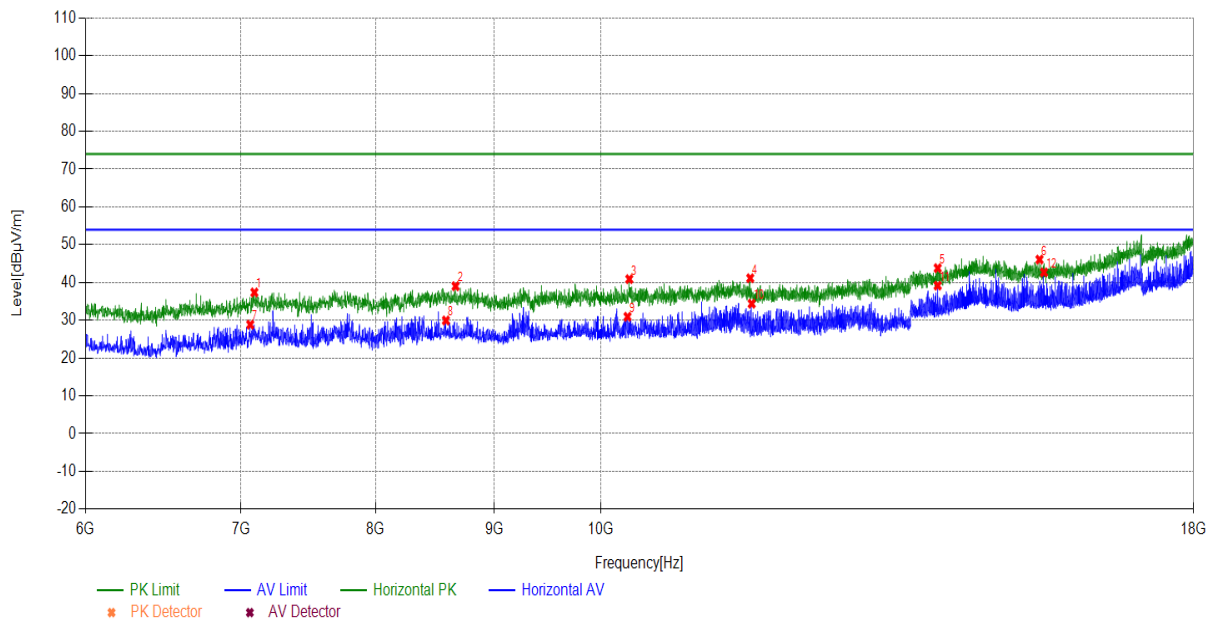
Radiates Emission		3G~6G							
Test channel		Worst-Case							
polarization		Horizontal							
Suspected List									
Frequency[MHz]	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detect or	Height [cm]	Angle deg	Pass/ Fail
3212.7213	-2.28	46.17	43.89	74.00	30.11	PK	150	358	PASS
3601.8602	-0.84	48.92	48.08	74.00	25.92	PK	150	172	PASS
3898.5899	-0.34	47.31	46.97	74.00	27.03	PK	150	89	PASS
4799.2799	0.60	48.66	49.26	74.00	24.74	PK	150	125	PASS
5095.1095	1.76	42.96	44.72	74.00	29.28	PK	150	101	PASS
5322.2322	2.34	91.73	94.07	74.00	-20.07	PK	150	89	---
5883.5884	4.46	39.27	43.73	74.00	30.27	PK	150	184	PASS
3212.7213	-2.28	33.06	30.78	54.00	23.22	AV	150	89	PASS
3601.8602	-0.84	31.42	30.58	54.00	23.42	AV	150	77	PASS
3898.5899	-0.34	29.60	29.26	54.00	24.74	AV	150	65	PASS
4799.2799	0.60	28.59	29.19	54.00	24.81	AV	150	113	PASS
5095.1095	1.76	26.60	28.36	54.00	25.64	AV	150	53	PASS
5314.7315	2.33	75.69	78.02	54.00	-24.02	AV	150	65	---
5883.5884	4.46	25.32	29.78	54.00	24.22	AV	150	1	PASS



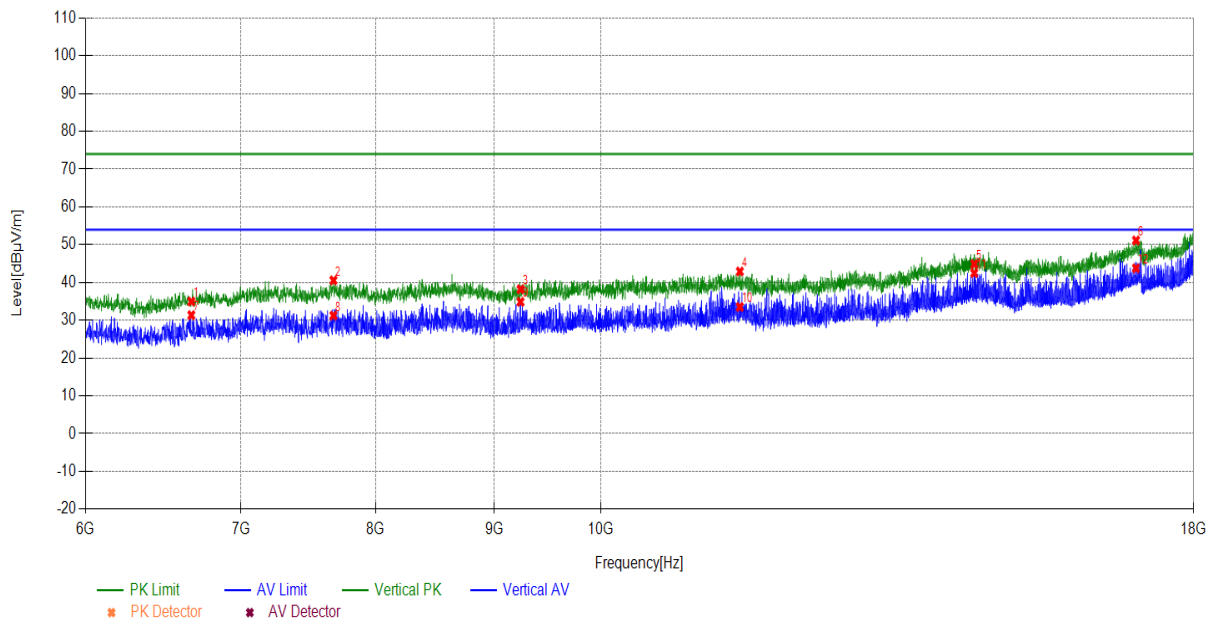
Radiates Emission		3G~6G							
Test channel		Worst-Case							
polarization		Vertical							
Suspected List									
Frequency[MHz]	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detect or	Height [cm]	Angle deg	Pass/ Fail
3190.5191	-2.37	46.13	43.76	74.00	30.24	PK	150	46	PASS
3601.2601	-0.84	54.53	53.69	74.00	20.31	PK	150	189	PASS
4052.2052	-0.19	47.50	47.31	74.00	26.69	PK	150	117	PASS
4318.6319	-0.48	47.33	46.85	74.00	27.15	PK	150	153	PASS
4800.48	0.60	53.25	53.85	74.00	20.15	PK	150	117	PASS
5327.3327	2.35	99.29	101.64	74.00	-27.64	PK	150	165	---
5516.3516	2.84	48.60	51.44	74.00	22.56	PK	150	141	PASS
3190.5191	-2.37	32.68	30.31	54.00	23.69	AV	150	359	PASS
3601.2601	-0.84	32.31	31.47	54.00	22.53	AV	150	141	PASS
4052.2052	-0.19	28.88	28.69	54.00	25.31	AV	150	359	PASS
4318.6319	-0.48	28.50	28.02	54.00	25.98	AV	150	359	PASS
4800.48	0.60	28.67	29.27	54.00	24.73	AV	150	105	PASS
5312.6313	2.32	82.03	84.35	54.00	-30.35	AV	150	105	---
5516.3516	2.84	27.82	30.66	54.00	23.34	AV	150	129	PASS



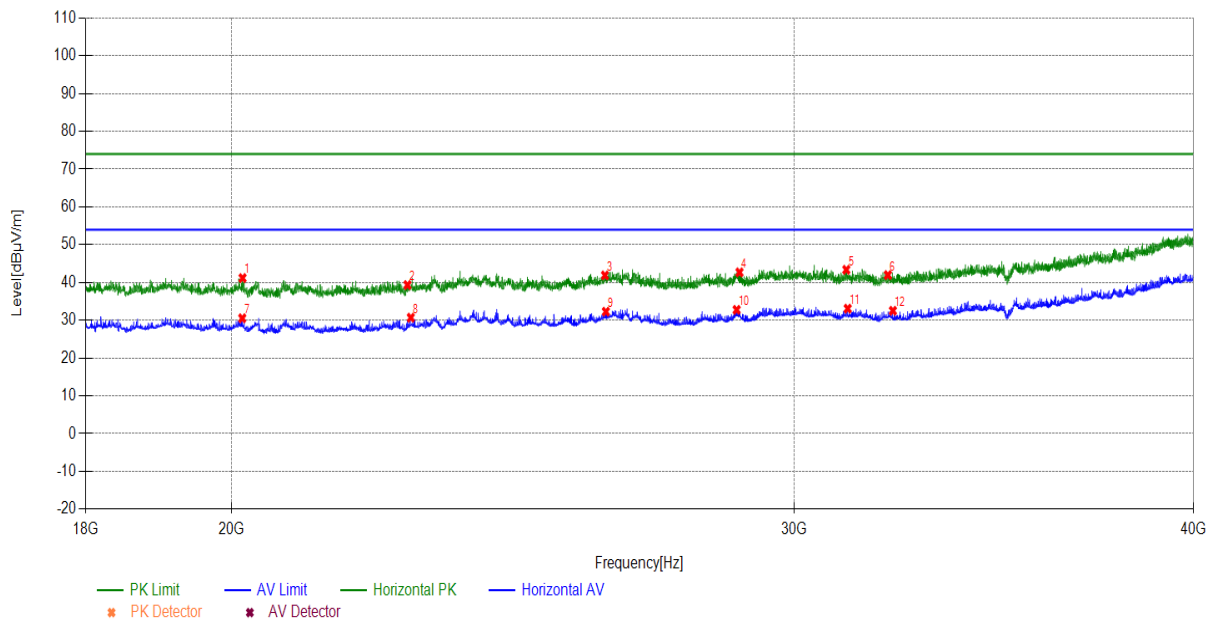
Radiates Emission		6G~18G							
Test channel		Worst-Case							
polarization		Horizontal							
Suspected List									
Frequency[MHz]	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detect or	Height [cm]	Angle deg	Pass/ Fail
7093.3093	8.04	29.34	37.38	74.00	36.62	PK	150	90	PASS
8659.4659	9.24	29.78	39.02	74.00	34.98	PK	150	170	PASS
10286.8287	11.84	29.06	40.90	74.00	33.10	PK	150	280	PASS
11597.3597	11.11	30.02	41.13	74.00	32.87	PK	150	340	PASS
13966.3966	14.53	29.27	43.80	74.00	30.20	PK	150	300	PASS
15449.745	15.23	30.83	46.06	74.00	27.94	PK	150	90	PASS
7064.5065	8.03	20.82	28.85	54.00	25.15	AV	150	30	PASS
8576.6577	9.17	20.78	29.95	54.00	24.05	AV	150	10	PASS
10268.8269	11.82	19.12	30.94	54.00	23.06	AV	150	30	PASS
11614.1614	11.08	23.31	34.39	54.00	19.61	AV	150	10	PASS
13966.3966	14.53	24.65	39.18	54.00	14.82	AV	150	20	PASS
15518.1518	15.18	27.52	42.70	54.00	11.30	AV	150	10	PASS



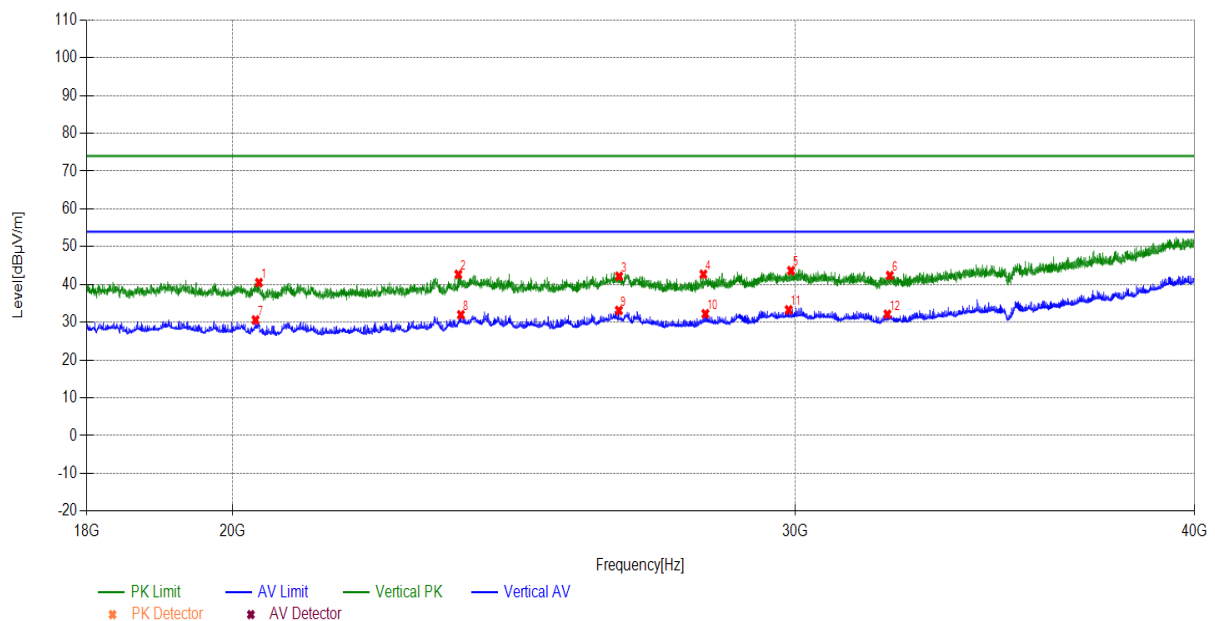
Radiates Emission		6G~18G							
Test channel		Worst-Case							
polarization		Vertical							
Suspected List									
Frequency[MHz]	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detect or	Height [cm]	Angle deg	Pass/ Fail
6663.6664	6.31	28.66	34.97	74.00	39.03	PK	150	190	PASS
7671.7672	8.38	32.18	40.56	74.00	33.44	PK	150	210	PASS
9235.5236	10.44	27.77	38.21	74.00	35.79	PK	150	10	PASS
11478.5479	11.22	31.70	42.92	74.00	31.08	PK	150	250	PASS
14481.2481	17.31	27.57	44.88	74.00	29.12	PK	150	10	PASS
17000.3	20.67	30.46	51.13	74.00	22.87	PK	150	230	PASS
6663.6664	6.31	25.04	31.35	54.00	22.65	AV	150	10	PASS
7671.7672	8.38	22.86	31.24	54.00	22.76	AV	150	20	PASS
9235.5236	10.44	24.43	34.87	54.00	19.13	AV	150	10	PASS
11478.5479	11.22	22.31	33.53	54.00	20.47	AV	150	30	PASS
14481.2481	17.31	25.20	42.51	54.00	11.49	AV	150	10	PASS
17000.3	20.67	23.09	43.76	54.00	10.24	AV	150	10	PASS



Radiates Emission		18G~40G							
Test channel		Worst-Case							
polarization		Horizontal							
Suspected List									
Frequency[MHz]	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detect or	Height [cm]	Angle deg	Pass/ Fail
20156.2156	1.35	39.83	41.18	74.00	32.82	PK	150	70	PASS
22699.67	2.60	36.73	39.33	74.00	34.67	PK	150	240	PASS
26171.6172	4.57	37.33	41.90	74.00	32.10	PK	150	320	PASS
28836.0836	5.90	36.79	42.69	74.00	31.31	PK	150	110	PASS
31144.1144	6.20	37.17	43.37	74.00	30.63	PK	150	60	PASS
32090.209	5.94	36.03	41.97	74.00	32.03	PK	150	130	PASS
20151.8152	1.35	29.18	30.53	54.00	23.47	AV	150	10	PASS
22754.6755	2.65	28.05	30.70	54.00	23.30	AV	150	10	PASS
26189.2189	4.58	27.70	32.28	54.00	21.72	AV	150	10	PASS
28776.6777	5.87	26.89	32.76	54.00	21.24	AV	150	10	PASS
31174.9175	6.19	26.90	33.09	54.00	20.91	AV	150	10	PASS
32206.8207	5.98	26.55	32.53	54.00	21.47	AV	150	10	PASS



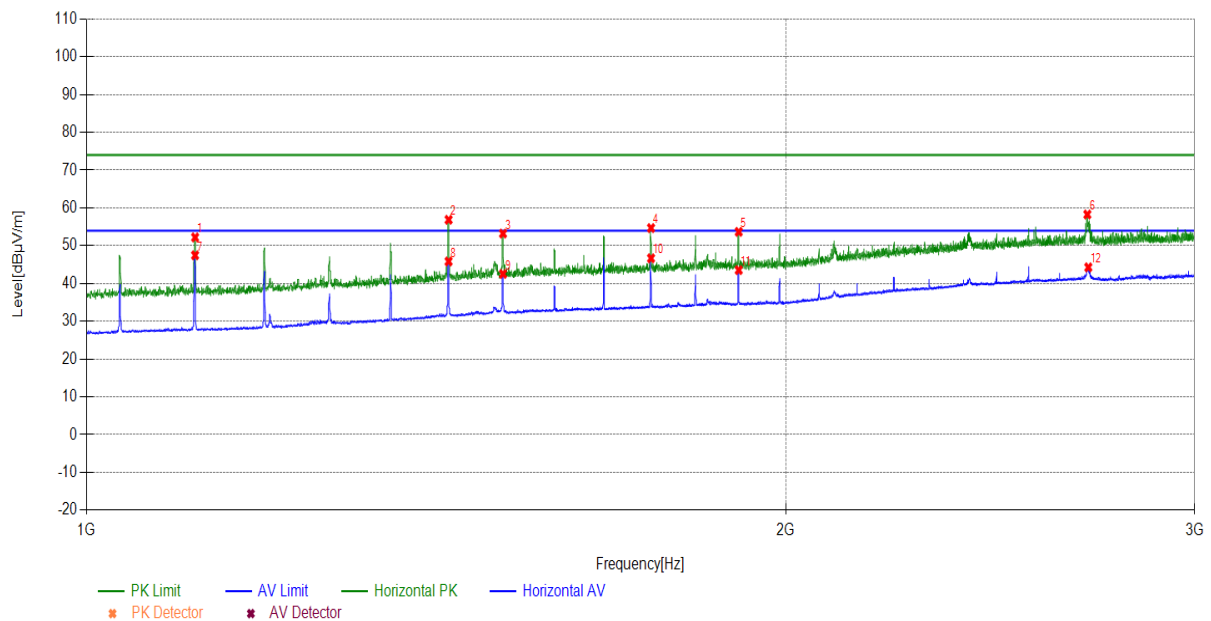
Radiates Emission		18G~40G							
Test channel		Worst-Case							
polarization		Vertical							
Suspected List									
Frequency[MHz]	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detect or	Height [cm]	Angle deg	Pass/ Fail
20380.6381	1.43	39.08	40.51	74.00	33.49	PK	150	140	PASS
23531.3531	3.33	39.33	42.66	74.00	31.34	PK	150	110	PASS
26420.242	4.67	37.50	42.17	74.00	31.83	PK	150	20	PASS
28074.8075	5.44	37.27	42.71	74.00	31.29	PK	150	320	PASS
29905.3905	6.63	37.03	43.66	74.00	30.34	PK	150	120	PASS
32112.2112	5.94	36.44	42.38	74.00	31.62	PK	150	160	PASS
20330.033	1.42	29.20	30.62	54.00	23.38	AV	150	10	PASS
23573.1573	3.36	28.61	31.97	54.00	22.03	AV	150	10	PASS
26415.8416	4.67	28.47	33.14	54.00	20.86	AV	150	10	PASS
28116.6117	5.47	26.79	32.26	54.00	21.74	AV	150	10	PASS
29854.7855	6.60	26.69	33.29	54.00	20.71	AV	150	10	PASS
32057.2057	5.92	26.20	32.12	54.00	21.88	AV	150	10	PASS



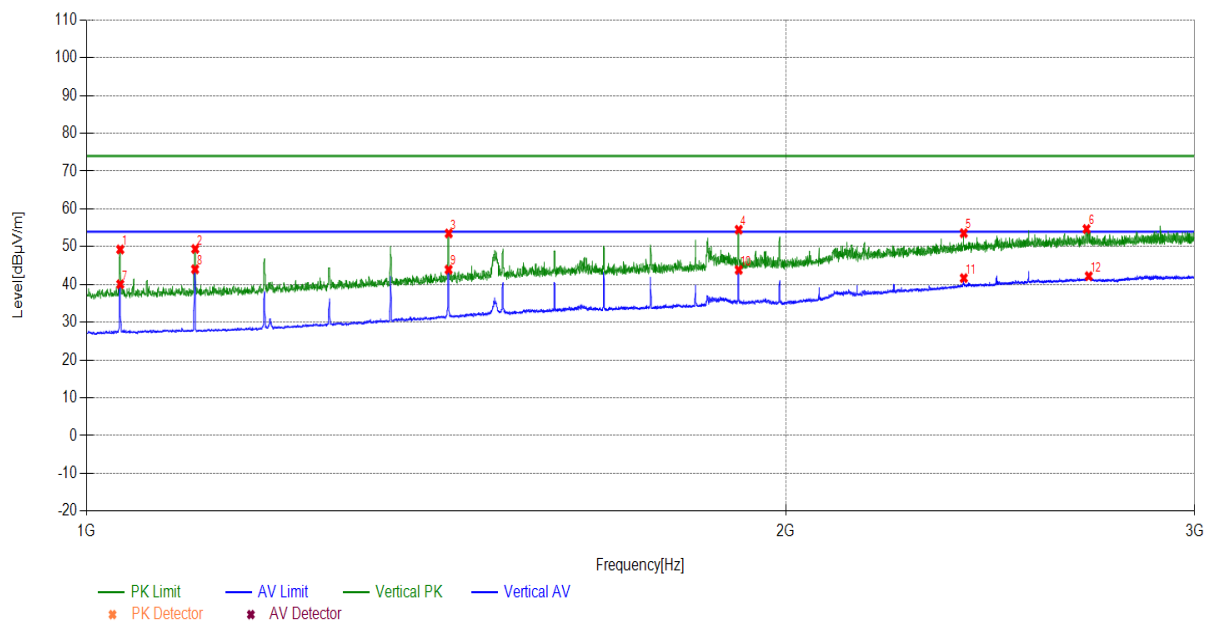
5.2.1.3.3 U-NII-2C:

During the test, the Radiates Emission from 1GHz to 40GHz was performed in all modes with all channels and all antennas, 802.11ac20, Channel 100, Antenna1 are selected as the worst condition. The test data of the worst-case condition was recorded in this report.

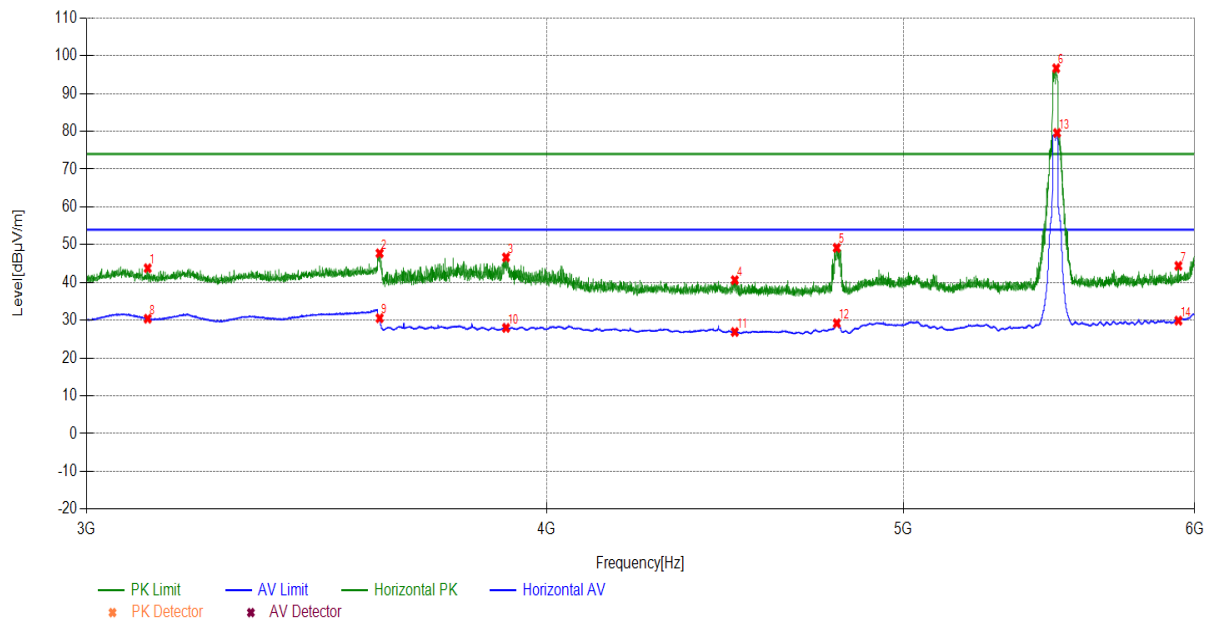
Radiates Emission		1G~3G							
Test channel		Worst-Case							
polarization		Horizontal							
Suspected List									
Frequency[MHz]	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detect or	Height [cm]	Angle deg	Pass/ Fail
1113.6114	26.88	25.33	52.21	74.00	21.79	PK	150	163	PASS
1431.8432	30.07	26.80	56.87	74.00	17.13	PK	150	220	PASS
1511.2511	30.89	22.32	53.21	74.00	20.79	PK	150	79	PASS
1750.075	32.22	22.46	54.68	74.00	19.32	PK	150	220	PASS
1909.0909	32.75	20.93	53.68	74.00	20.32	PK	150	79	PASS
2697.3697	38.30	19.98	58.28	74.00	15.72	PK	150	121	PASS
1113.6114	26.88	20.59	47.47	54.00	6.53	AV	150	163	PASS
1431.8432	30.07	15.77	45.84	54.00	8.16	AV	150	220	PASS
1511.2511	30.89	11.64	42.53	54.00	11.47	AV	150	79	PASS
1750.075	32.22	14.46	46.68	54.00	7.32	AV	150	220	PASS
1909.0909	32.75	10.80	43.55	54.00	10.45	AV	150	135	PASS
2699.97	38.30	5.98	44.28	54.00	9.72	AV	150	121	PASS



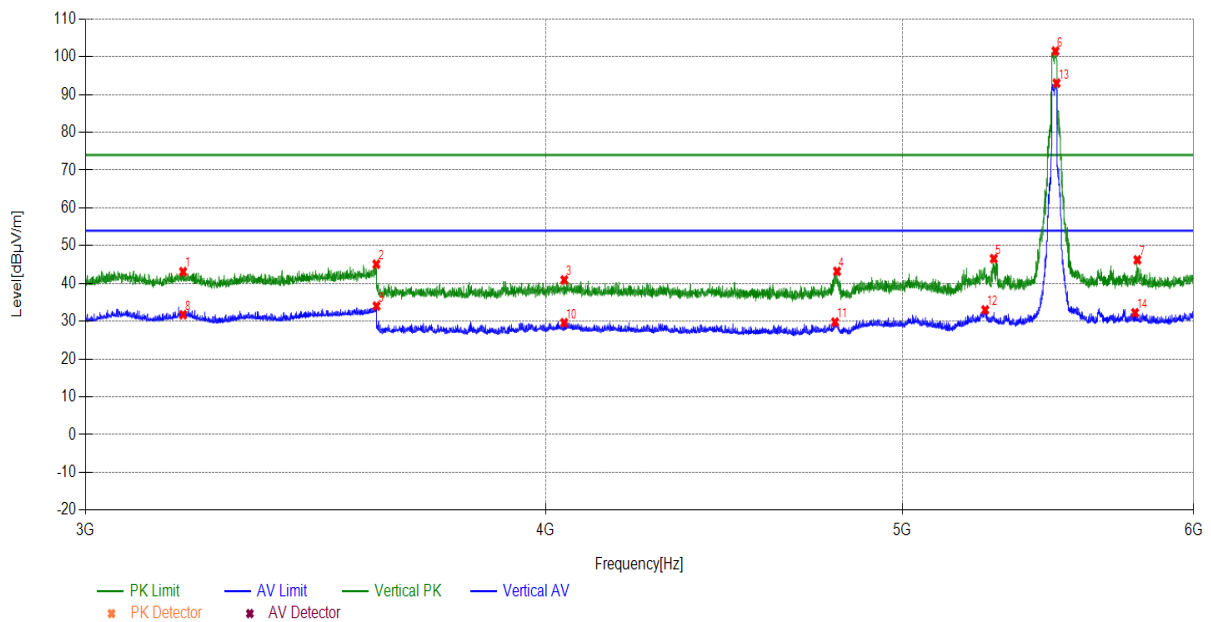
Radiates Emission		1G~3G							
Test channel		Worst-Case							
polarization		Vertical							
Suspected List									
Frequency[MHz]	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detect or	Height [cm]	Angle deg	Pass/ Fail
1034.0034	26.26	23.02	49.28	74.00	24.72	PK	150	199	PASS
1113.8114	26.89	22.51	49.40	74.00	24.60	PK	150	199	PASS
1432.0432	30.07	23.44	53.51	74.00	20.49	PK	150	227	PASS
1909.0909	32.75	21.76	54.51	74.00	19.49	PK	150	199	PASS
2386.1386	37.04	16.54	53.58	74.00	20.42	PK	150	157	PASS
2695.1695	38.29	16.40	54.69	74.00	19.31	PK	150	143	PASS
1034.0034	26.26	13.80	40.06	54.00	13.94	AV	150	199	PASS
1113.6114	26.88	17.15	44.03	54.00	9.97	AV	150	199	PASS
1431.8432	30.07	13.86	43.93	54.00	10.07	AV	150	227	PASS
1909.0909	32.75	11.12	43.87	54.00	10.13	AV	150	199	PASS
2386.3386	37.04	4.65	41.69	54.00	12.31	AV	150	128	PASS
2701.1701	38.31	3.90	42.21	54.00	11.79	AV	150	128	PASS



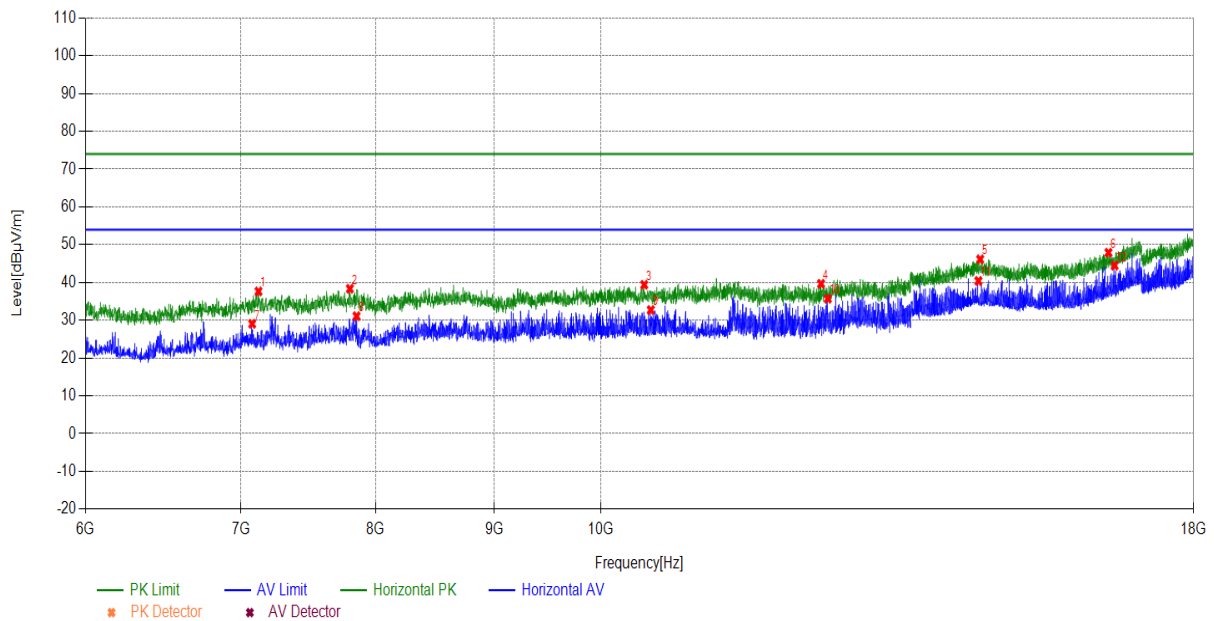
Radiates Emission		3G~6G							
Test channel		Worst-Case							
polarization		Horizontal							
Suspected List									
Frequency[MHz]	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detect or	Height [cm]	Angle deg	Pass/ Fail
3117.0117	-2.65	46.44	43.79	74.00	30.21	PK	150	191	PASS
3603.6604	-0.83	48.56	47.73	74.00	26.27	PK	150	179	PASS
3900.09	-0.34	46.99	46.65	74.00	27.35	PK	150	120	PASS
4500.15	-0.64	41.27	40.63	74.00	33.37	PK	150	120	PASS
4796.5797	0.58	48.59	49.17	74.00	24.83	PK	150	131	PASS
5502.2502	2.77	93.92	96.69	74.00	-22.69	PK	150	108	---
5939.3939	4.70	39.72	44.42	74.00	29.58	PK	150	191	PASS
3117.0117	-2.65	33.06	30.41	54.00	23.59	AV	150	4	PASS
3603.6604	-0.83	31.39	30.56	54.00	23.44	AV	150	203	PASS
3900.09	-0.34	28.33	27.99	54.00	26.01	AV	150	120	PASS
4500.15	-0.64	27.54	26.90	54.00	27.10	AV	150	191	PASS
4796.5797	0.58	28.63	29.21	54.00	24.79	AV	150	144	PASS
5505.2505	2.79	76.80	79.59	54.00	-25.59	AV	150	215	---
5939.3939	4.70	25.21	29.91	54.00	24.09	AV	150	286	PASS



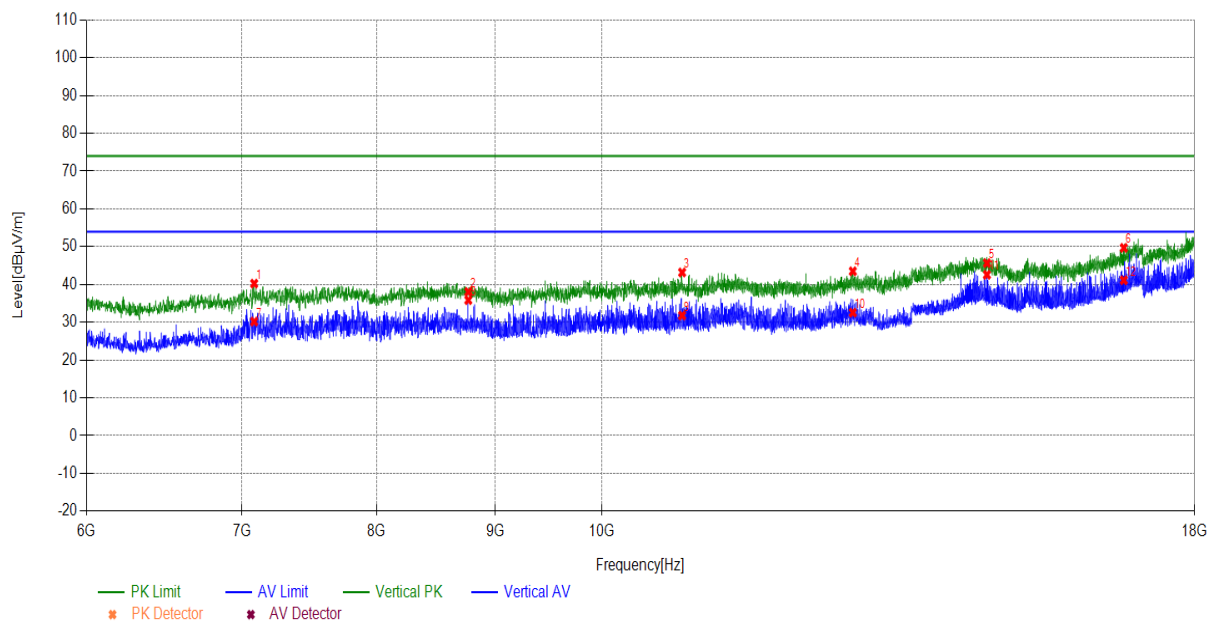
Radiates Emission		3G~6G							
Test channel		Worst-Case							
polarization		Vertical							
Suspected List									
Frequency[MHz]	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detect or	Height [cm]	Angle deg	Pass/ Fail
3188.7189	-2.38	45.50	43.12	74.00	30.88	PK	150	240	PASS
3598.5599	-0.84	45.94	45.10	74.00	28.90	PK	150	180	PASS
4047.4047	-0.18	41.11	40.93	74.00	33.07	PK	150	260	PASS
4800.48	0.60	42.63	43.23	74.00	30.77	PK	150	70	PASS
5294.9295	2.29	44.28	46.57	74.00	27.43	PK	150	150	PASS
5503.1503	2.78	98.73	101.51	74.00	-27.51	PK	150	260	---
5792.3792	4.07	42.18	46.25	74.00	27.75	PK	150	160	PASS
3188.7189	-2.38	34.10	31.72	54.00	22.28	AV	150	40	PASS
3598.8599	-0.84	34.88	34.04	54.00	19.96	AV	150	20	PASS
4047.1047	-0.18	29.80	29.62	54.00	24.38	AV	150	10	PASS
4794.4794	0.58	29.20	29.78	54.00	24.22	AV	150	10	PASS
5266.4266	2.23	30.77	33.00	54.00	21.00	AV	150	10	PASS
5507.0507	2.80	90.24	93.04	54.00	-39.04	AV	150	20	---
5784.2784	4.04	28.21	32.25	54.00	21.75	AV	150	10	PASS



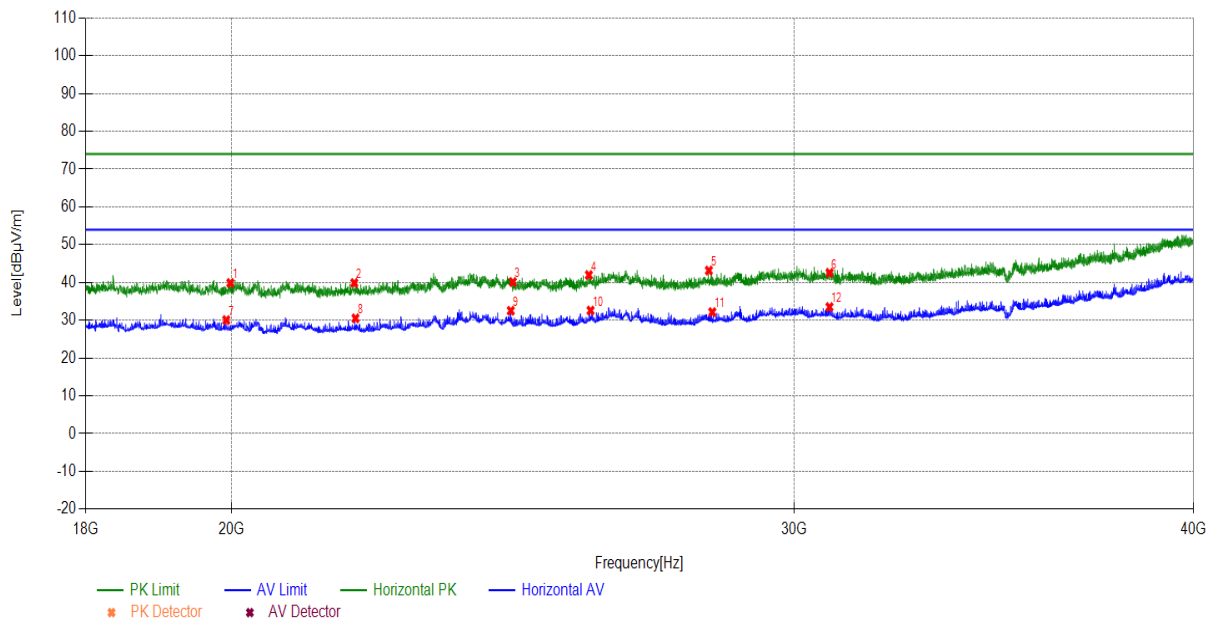
Radiates Emission		6G~18G							
Test channel		Worst-Case							
polarization		Horizontal							
Suspected List									
Frequency[MHz]	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detect or	Height [cm]	Angle deg	Pass/ Fail
7122.1122	8.05	29.59	37.64	74.00	36.36	PK	150	320	PASS
7797.7798	8.42	29.94	38.36	74.00	35.64	PK	150	30	PASS
10440.444	11.93	27.47	39.40	74.00	34.60	PK	150	290	PASS
12441.0441	11.67	28.00	39.67	74.00	34.33	PK	150	160	PASS
14566.4566	17.22	28.92	46.14	74.00	27.86	PK	150	320	PASS
16543.0543	17.84	30.06	47.90	74.00	26.10	PK	150	150	PASS
7077.7078	8.03	21.04	29.07	54.00	24.93	AV	150	10	PASS
7849.3849	8.43	22.65	31.08	54.00	22.92	AV	150	10	PASS
10508.8509	11.93	20.79	32.72	54.00	21.28	AV	150	10	PASS
12523.8524	11.94	23.78	35.72	54.00	18.28	AV	150	10	PASS
14541.2541	17.29	23.12	40.41	54.00	13.59	AV	150	10	PASS
16643.8644	18.40	26.06	44.46	54.00	9.54	AV	150	10	PASS



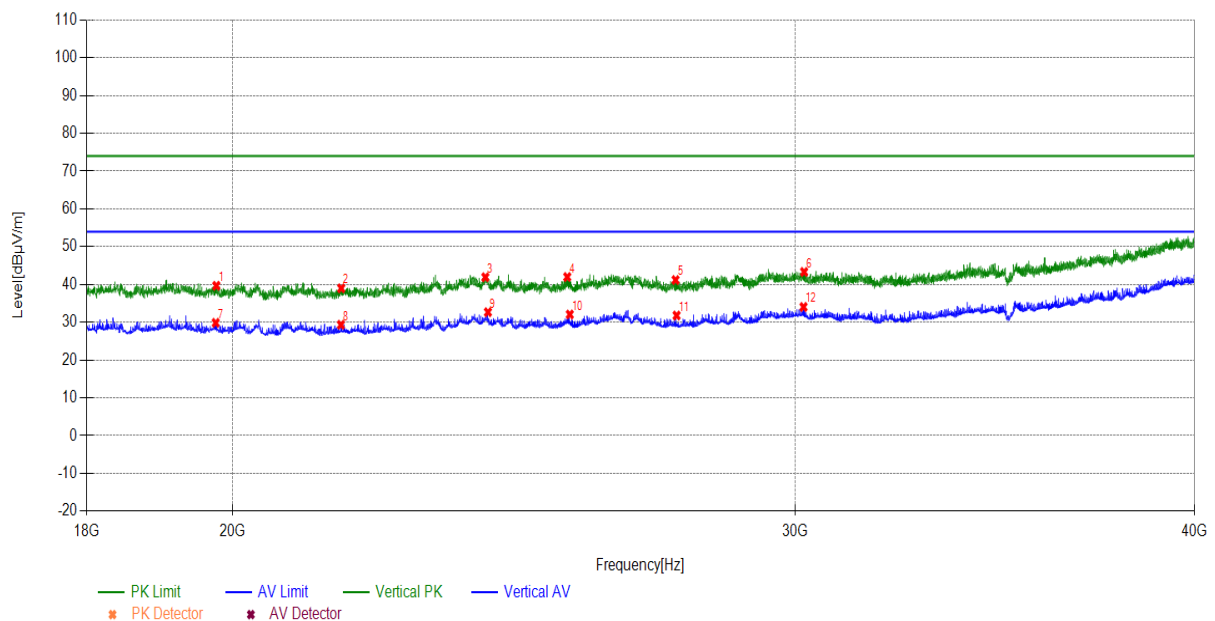
Radiates Emission		6G~18G							
Test channel		Worst-Case							
polarization		Vertical							
Suspected List									
Frequency[MHz]	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detect or	Height [cm]	Angle deg	Pass/ Fail
7084.9085	8.03	32.22	40.25	74.00	33.75	PK	150	290	PASS
8760.276	9.34	28.71	38.05	74.00	35.95	PK	150	10	PASS
10829.2829	11.78	31.42	43.20	74.00	30.80	PK	150	330	PASS
12826.2826	12.85	30.65	43.50	74.00	30.50	PK	150	60	PASS
14650.465	17.07	28.58	45.65	74.00	28.35	PK	150	310	PASS
16779.4779	19.29	30.41	49.70	74.00	24.30	PK	150	190	PASS
7084.9085	8.03	22.17	30.20	54.00	23.80	AV	150	10	PASS
8760.276	9.34	26.54	35.88	54.00	18.12	AV	150	10	PASS
10829.2829	11.78	20.01	31.79	54.00	22.21	AV	150	10	PASS
12826.2826	12.85	19.71	32.56	54.00	21.44	AV	150	10	PASS
14650.465	17.07	25.51	42.58	54.00	11.42	AV	150	10	PASS
16779.4779	19.29	21.84	41.13	54.00	12.87	AV	150	10	PASS



Radiates Emission		18G~40G							
Test channel		Worst-Case							
polarization		Horizontal							
Suspected List									
Frequency[MHz]	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detect or	Height [cm]	Angle deg	Pass/ Fail
19980.198	1.30	38.58	39.88	74.00	34.12	PK	150	190	PASS
21845.9846	1.86	38.02	39.88	74.00	34.12	PK	150	150	PASS
24490.6491	3.90	36.25	40.15	74.00	33.85	PK	150	90	PASS
25870.187	4.45	37.54	41.99	74.00	32.01	PK	150	50	PASS
28206.8207	5.52	37.66	43.18	74.00	30.82	PK	150	360	PASS
30770.077	6.35	36.20	42.55	74.00	31.45	PK	150	280	PASS
19920.7921	1.30	28.76	30.06	54.00	23.94	AV	150	10	PASS
21865.7866	1.87	28.65	30.52	54.00	23.48	AV	150	10	PASS
24455.4455	3.88	28.65	32.53	54.00	21.47	AV	150	10	PASS
25900.9901	4.46	28.13	32.59	54.00	21.41	AV	150	10	PASS
28277.2277	5.57	26.59	32.16	54.00	21.84	AV	150	10	PASS
30767.8768	6.35	27.17	33.52	54.00	20.48	AV	150	10	PASS



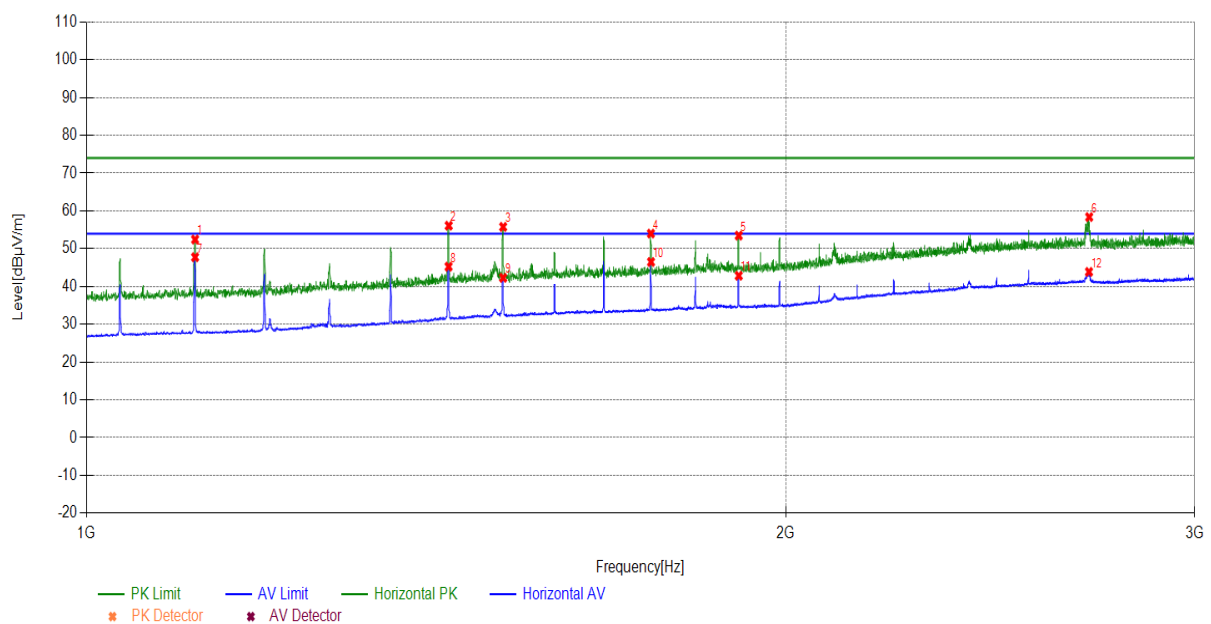
Radiates Emission		18G~40G							
Test channel		Worst-Case							
polarization		Vertical							
Suspected List									
Frequency[MHz]	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detect or	Height [cm]	Angle deg	Pass/ Fail
19764.5765	1.31	38.36	39.67	74.00	34.33	PK	150	170	PASS
21625.9626	1.81	37.18	38.99	74.00	35.01	PK	150	240	PASS
23993.3993	3.69	38.23	41.92	74.00	32.08	PK	150	180	PASS
25452.1452	4.28	37.71	41.99	74.00	32.01	PK	150	270	PASS
27518.1518	5.16	36.03	41.19	74.00	32.81	PK	150	180	PASS
30189.2189	6.61	36.72	43.33	74.00	30.67	PK	150	340	PASS
19755.7756	1.31	28.56	29.87	54.00	24.13	AV	150	10	PASS
21621.5622	1.81	27.54	29.35	54.00	24.65	AV	150	10	PASS
24037.4037	3.71	28.96	32.67	54.00	21.33	AV	150	10	PASS
25498.3498	4.30	27.77	32.07	54.00	21.93	AV	150	10	PASS
27537.9538	5.17	26.63	31.80	54.00	22.20	AV	150	10	PASS
30176.0176	6.62	27.44	34.06	54.00	19.94	AV	150	10	PASS



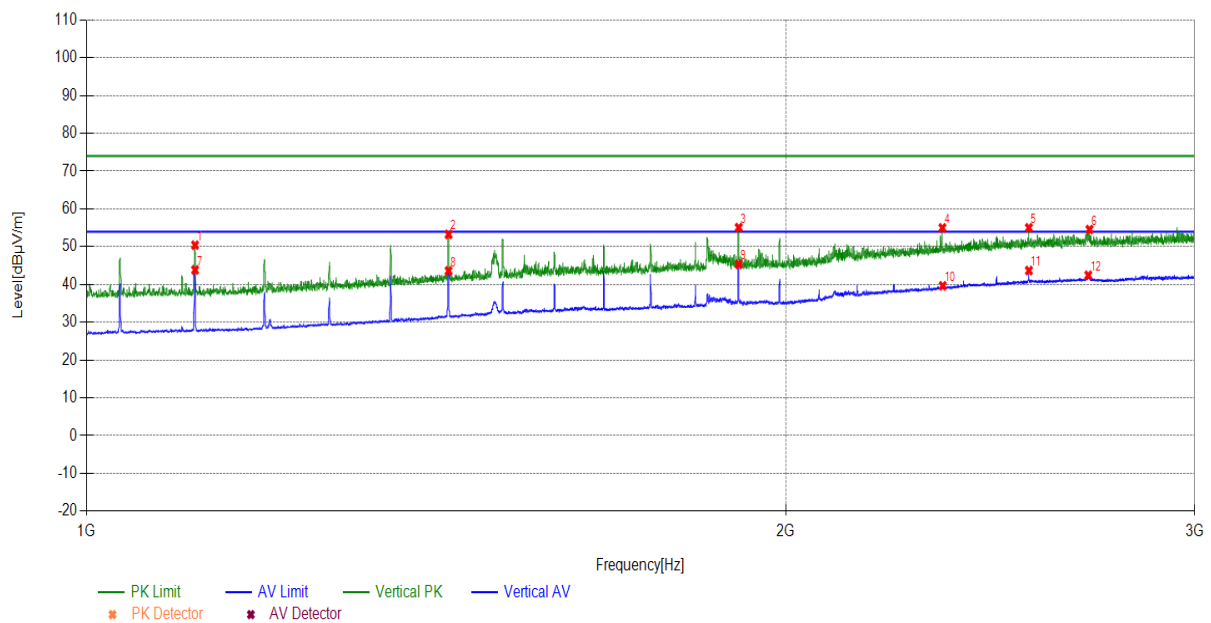
5.2.1.3.4 U-NII-3:

During the test, the Radiates Emission from 1GHz to 40GHz was performed in all modes with all channels and all antennas, 802.11ac20, Channel 149, Antenna1 are selected as the worst condition. The test data of the worst-case condition was recorded in this report.

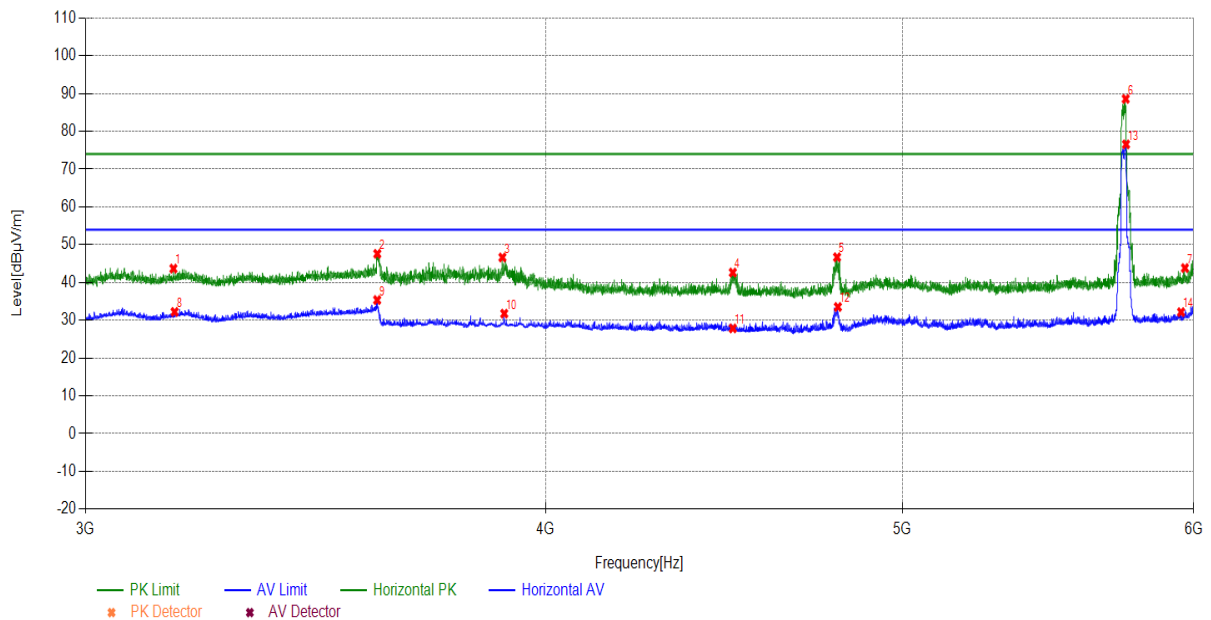
Radiates Emission		1G~3G							
Test channel		Worst-Case							
polarization		Horizontal							
Suspected List									
Frequency[MHz]	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detect or	Height [cm]	Angle deg	Pass/ Fail
1113.6114	26.88	25.56	52.44	74.00	21.56	PK	150	181	PASS
1432.0432	30.07	26.03	56.10	74.00	17.90	PK	150	238	PASS
1511.4511	30.89	24.89	55.78	74.00	18.22	PK	150	94	PASS
1749.875	32.22	21.80	54.02	74.00	19.98	PK	150	223	PASS
1909.0909	32.75	20.72	53.47	74.00	20.53	PK	150	94	PASS
2702.1702	38.31	20.07	58.38	74.00	15.62	PK	150	138	PASS
1113.6114	26.88	20.88	47.76	54.00	6.24	AV	150	181	PASS
1431.8432	30.07	15.17	45.24	54.00	8.76	AV	150	238	PASS
1511.4511	30.89	11.41	42.30	54.00	11.70	AV	150	94	PASS
1750.075	32.22	14.27	46.49	54.00	7.51	AV	150	223	PASS
1909.0909	32.75	10.11	42.86	54.00	11.14	AV	150	153	PASS
2701.7702	38.31	5.56	43.87	54.00	10.13	AV	150	138	PASS



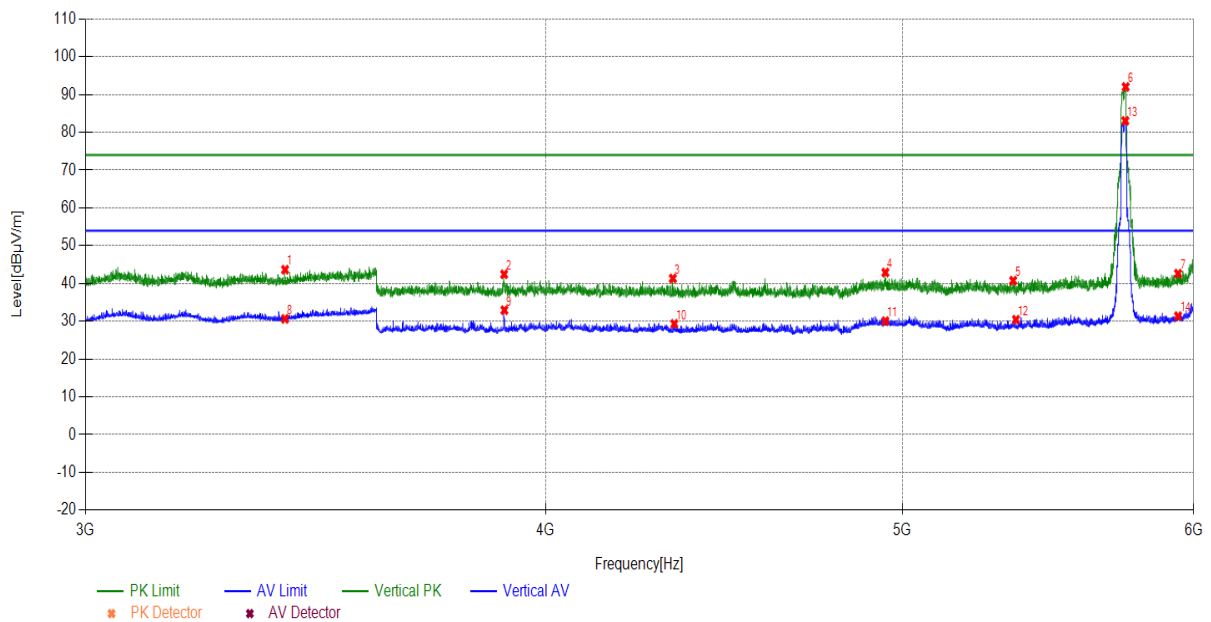
Radiates Emission		1G~3G							
Test channel		Worst-Case							
polarization		Vertical							
Suspected List									
Frequency[MHz]	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detect or	Height [cm]	Angle deg	Pass/ Fail
1113.6114	26.88	23.54	50.42	74.00	23.58	PK	150	194	PASS
1431.8432	30.07	23.19	53.26	74.00	20.74	PK	150	96	PASS
1909.0909	32.75	22.32	55.07	74.00	18.93	PK	150	194	PASS
2336.3336	36.58	18.41	54.99	74.00	19.01	PK	150	82	PASS
2545.3545	37.79	17.22	55.01	74.00	18.99	PK	150	152	PASS
2703.1703	38.31	16.24	54.55	74.00	19.45	PK	150	138	PASS
1113.6114	26.88	16.99	43.87	54.00	10.13	AV	150	194	PASS
1431.8432	30.07	13.54	43.61	54.00	10.39	AV	150	223	PASS
1909.0909	32.75	12.61	45.36	54.00	8.64	AV	150	194	PASS
2337.1337	36.59	3.05	39.64	54.00	14.36	AV	150	152	PASS
2545.5546	37.79	5.90	43.69	54.00	10.31	AV	150	180	PASS
2699.77	38.30	4.15	42.45	54.00	11.55	AV	150	138	PASS



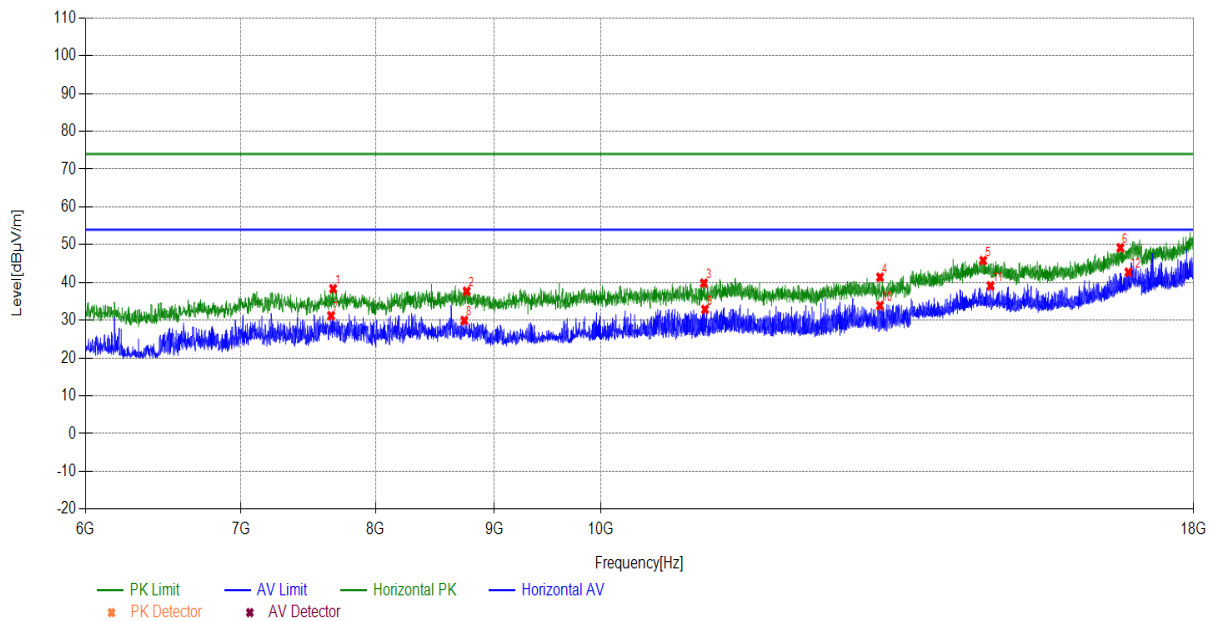
Radiates Emission		3G~6G							
Test channel		Worst-Case							
polarization		Horizontal							
Suspected List									
Frequency[MHz]	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detect or	Height [cm]	Angle deg	Pass/ Fail
3169.517	-2.45	46.13	43.68	74.00	30.32	PK	150	350	PASS
3600.6601	-0.84	48.43	47.59	74.00	26.41	PK	150	300	PASS
3893.7894	-0.35	46.99	46.64	74.00	27.36	PK	150	150	PASS
4497.4497	-0.64	43.28	42.64	74.00	31.36	PK	150	270	PASS
4800.48	0.60	46.09	46.69	74.00	27.31	PK	150	20	PASS
5750.375	3.88	84.71	88.59	74.00	-14.59	PK	150	40	---
5967.2967	4.82	39.01	43.83	74.00	30.17	PK	150	320	PASS
3171.9172	-2.44	34.66	32.22	54.00	21.78	AV	150	10	PASS
3600.36	-0.84	36.21	35.37	54.00	18.63	AV	150	10	PASS
3898.2898	-0.34	32.11	31.77	54.00	22.23	AV	150	350	PASS
4497.4497	-0.64	28.50	27.86	54.00	26.14	AV	150	350	PASS
4802.8803	0.61	32.92	33.53	54.00	20.47	AV	150	10	PASS
5751.5752	3.89	72.68	76.57	54.00	-22.57	AV	150	60	---
5952.8953	4.76	27.40	32.16	54.00	21.84	AV	150	10	PASS



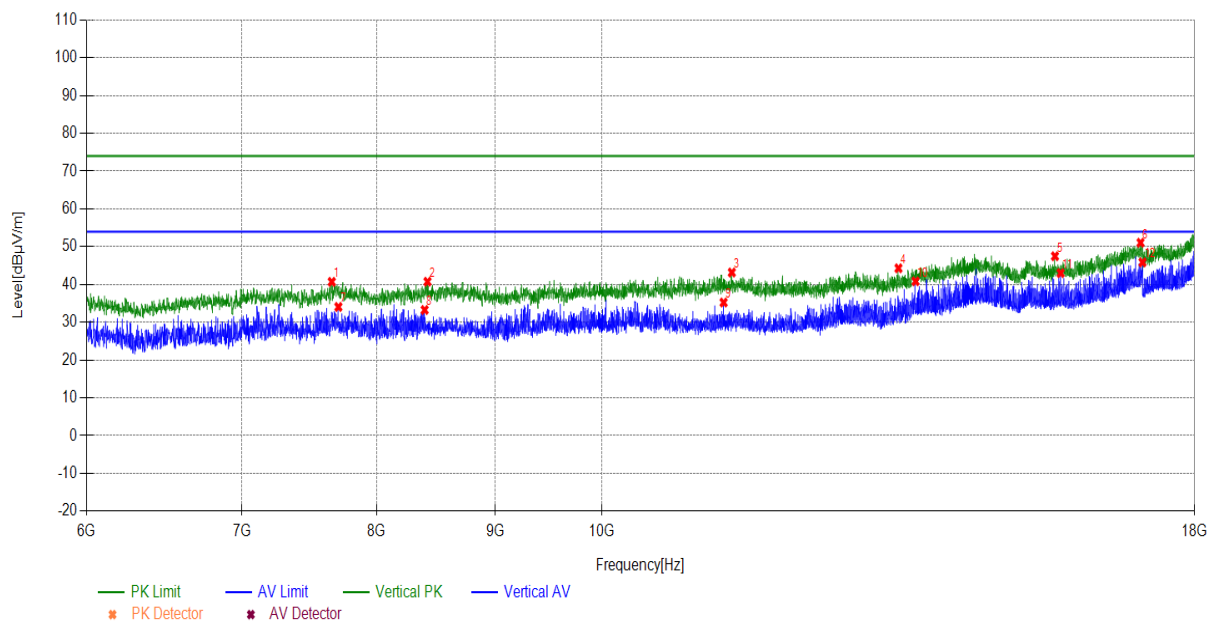
Radiates Emission		3G~6G							
Test channel		Worst-Case							
polarization		Vertical							
Suspected List									
Frequency[MHz]	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detect or	Height [cm]	Angle deg	Pass/ Fail
3398.7399	-1.51	45.17	43.66	74.00	30.34	PK	150	156	PASS
3897.9898	-0.34	42.78	42.44	74.00	31.56	PK	150	156	PASS
4331.8332	-0.49	41.84	41.35	74.00	32.65	PK	150	156	PASS
4947.7948	1.23	41.70	42.93	74.00	31.07	PK	150	132	PASS
5359.4359	2.42	38.34	40.76	74.00	33.24	PK	150	156	PASS
5750.375	3.88	88.15	92.03	74.00	-18.03	PK	150	192	---
5941.7942	4.71	37.92	42.63	74.00	31.37	PK	150	144	PASS
3398.7399	-1.51	32.15	30.64	54.00	23.36	AV	150	204	PASS
3898.5899	-0.34	33.28	32.94	54.00	21.06	AV	150	192	PASS
4335.7336	-0.50	29.83	29.33	54.00	24.67	AV	150	192	PASS
4947.7948	1.23	28.83	30.06	54.00	23.94	AV	150	156	PASS
5369.0369	2.44	28.00	30.44	54.00	23.56	AV	150	14	PASS
5749.1749	3.88	79.17	83.05	54.00	-29.05	AV	150	204	---
5941.7942	4.71	26.66	31.37	54.00	22.63	AV	150	144	PASS



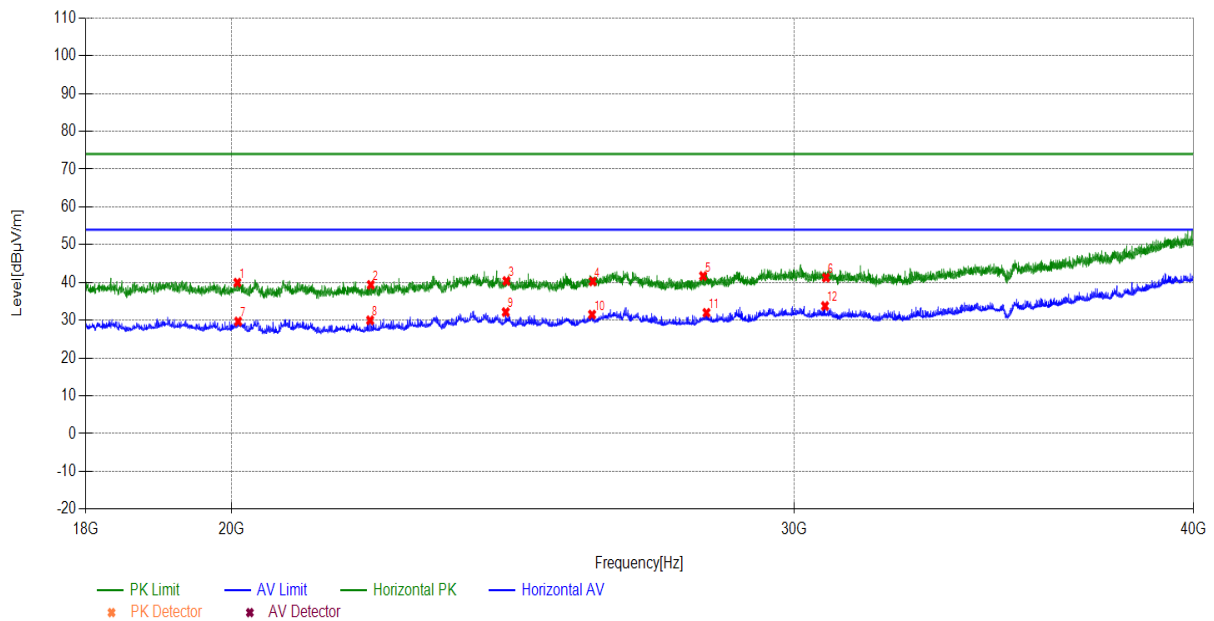
Radiates Emission		6G~18G							
Test channel		Worst-Case							
polarization		Horizontal							
Suspected List									
Frequency[MHz]	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detect or	Height [cm]	Angle deg	Pass/ Fail
7669.3669	8.37	29.98	38.35	74.00	35.65	PK	150	100	PASS
8755.4755	9.34	28.35	37.69	74.00	36.31	PK	150	100	PASS
11076.5077	11.60	28.23	39.83	74.00	34.17	PK	150	210	PASS
13189.919	13.23	28.19	41.42	74.00	32.58	PK	150	260	PASS
14610.8611	17.11	28.70	45.81	74.00	28.19	PK	150	60	PASS
16739.874	19.03	30.17	49.20	74.00	24.80	PK	150	20	PASS
7653.7654	8.37	22.83	31.20	54.00	22.80	AV	150	10	PASS
8733.8734	9.31	20.64	29.95	54.00	24.05	AV	150	10	PASS
11088.5089	11.59	21.30	32.89	54.00	21.11	AV	150	10	PASS
13188.7189	13.23	20.68	33.91	54.00	20.09	AV	150	20	PASS
14716.4716	17.00	22.12	39.12	54.00	14.88	AV	150	10	PASS
16873.0873	19.88	22.83	42.71	54.00	11.29	AV	150	20	PASS



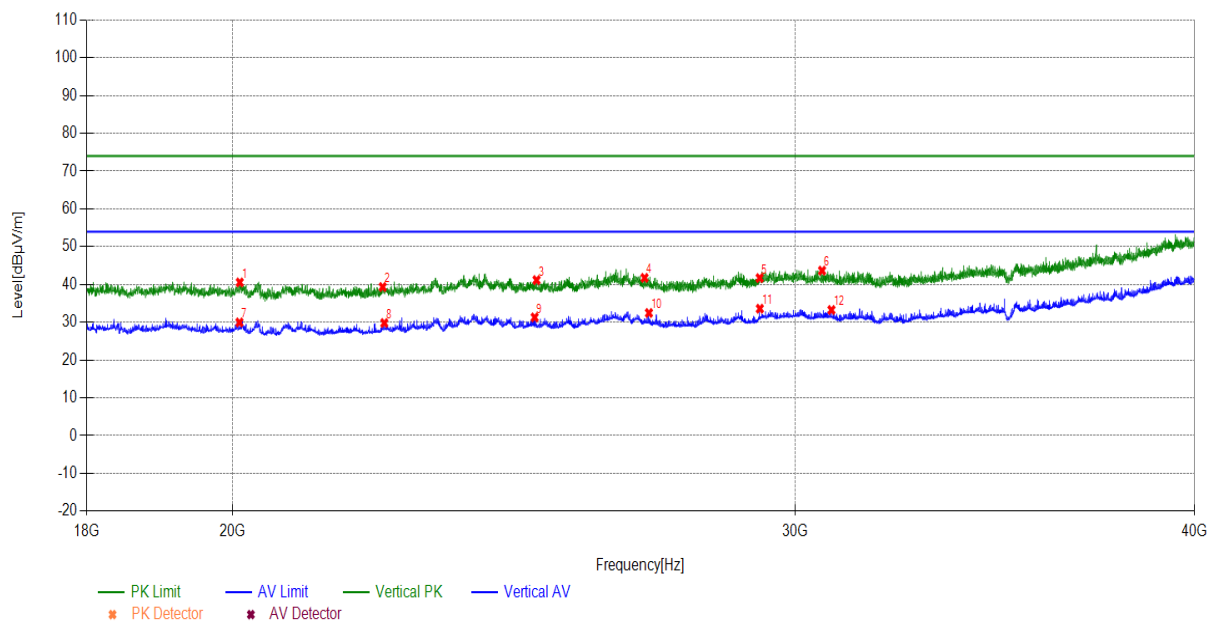
Radiates Emission		6G~18G							
Test channel		Worst-Case							
polarization		Vertical							
Suspected List									
Frequency[MHz]	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detect or	Height [cm]	Angle deg	Pass/ Fail
7651.3651	8.37	32.33	40.70	74.00	33.30	PK	150	50	PASS
8413.4413	9.04	31.70	40.74	74.00	33.26	PK	150	80	PASS
11376.5377	11.34	31.84	43.18	74.00	30.82	PK	150	90	PASS
13420.342	13.44	30.86	44.30	74.00	29.70	PK	150	30	PASS
15672.9673	15.62	31.87	47.49	74.00	26.51	PK	150	30	PASS
17060.306	20.99	30.07	51.06	74.00	22.94	PK	150	240	PASS
7701.7702	8.39	25.68	34.07	54.00	19.93	AV	150	10	PASS
8389.4389	9.01	24.26	33.27	54.00	20.73	AV	150	10	PASS
11284.1284	11.44	23.79	35.23	54.00	18.77	AV	150	10	PASS
13649.565	13.85	26.99	40.84	54.00	13.16	AV	150	10	PASS
15760.5761	15.86	27.15	43.01	54.00	10.99	AV	150	10	PASS
17093.9094	21.16	24.71	45.87	54.00	8.13	AV	150	10	PASS



Radiates Emission		18G~40G							
Test channel		Worst-Case							
polarization		Horizontal							
Suspected List									
Frequency[MHz]	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detect or	Height [cm]	Angle deg	Pass/ Fail
20081.4081	1.33	38.65	39.98	74.00	34.02	PK	150	30	PASS
22107.8108	2.01	37.37	39.38	74.00	34.62	PK	150	320	PASS
24378.4378	3.85	36.55	40.40	74.00	33.60	PK	150	340	PASS
25942.7943	4.48	35.81	40.29	74.00	33.71	PK	150	120	PASS
28090.209	5.45	36.27	41.72	74.00	32.28	PK	150	40	PASS
30690.8691	6.39	34.89	41.28	74.00	32.72	PK	150	330	PASS
20092.4092	1.33	28.35	29.68	54.00	24.32	AV	150	10	PASS
22096.8097	2.00	28.01	30.01	54.00	23.99	AV	150	10	PASS
24365.2365	3.85	28.32	32.17	54.00	21.83	AV	150	10	PASS
25929.593	4.47	27.05	31.52	54.00	22.48	AV	150	10	PASS
28158.4158	5.50	26.49	31.99	54.00	22.01	AV	150	10	PASS
30668.8669	6.40	27.39	33.79	54.00	20.21	AV	150	10	PASS



Radiates Emission		18G~40G							
Test channel		Worst-Case							
polarization		Vertical							
Suspected List									
Frequency[MHz]	Factor [dB]	Reading [dBμV/m]	Level [dBμV/ m]	Limit [dBμV/ m]	Margin [dB]	Detect or	Height [cm]	Angle deg	Pass/ Fail
20101.2101	1.34	39.22	40.56	74.00	33.44	PK	150	270	PASS
22281.6282	2.18	37.16	39.34	74.00	34.66	PK	150	330	PASS
24895.4895	4.06	37.11	41.17	74.00	32.83	PK	150	230	PASS
26908.6909	4.86	36.90	41.76	74.00	32.24	PK	150	220	PASS
29236.5237	6.17	35.53	41.70	74.00	32.30	PK	150	350	PASS
30580.8581	6.44	37.23	43.67	74.00	30.33	PK	150	110	PASS
20096.8097	1.33	28.64	29.97	54.00	24.03	AV	150	10	PASS
22308.0308	2.21	27.60	29.81	54.00	24.19	AV	150	10	PASS
24860.286	4.04	27.25	31.29	54.00	22.71	AV	150	10	PASS
26994.4994	4.90	27.58	32.48	54.00	21.52	AV	150	10	PASS
29240.9241	6.17	27.44	33.61	54.00	20.39	AV	150	10	PASS
30789.879	6.34	26.92	33.26	54.00	20.74	AV	150	10	PASS



5.2.2 Band edge measurements (Radiates):

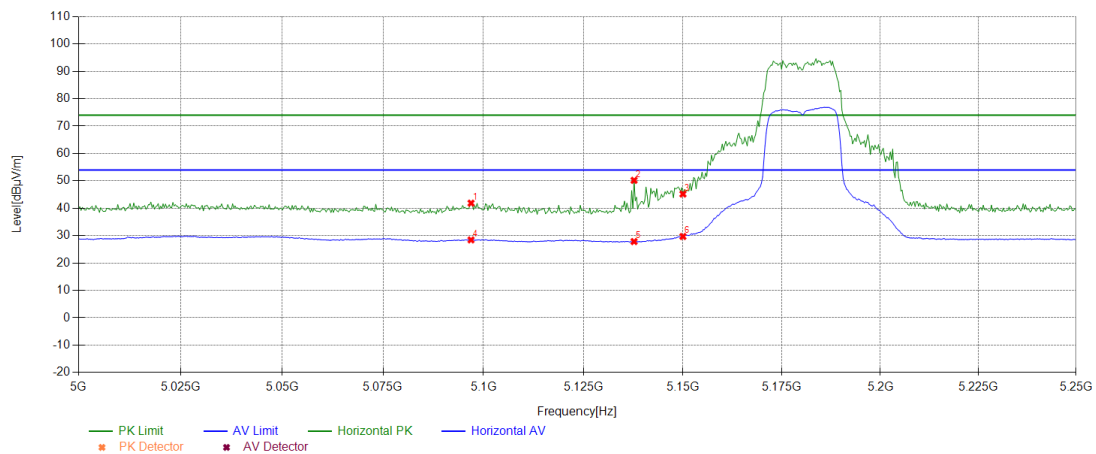
Test Results:

U-NII-1, U-NII-2A: 5150-5350MHz:

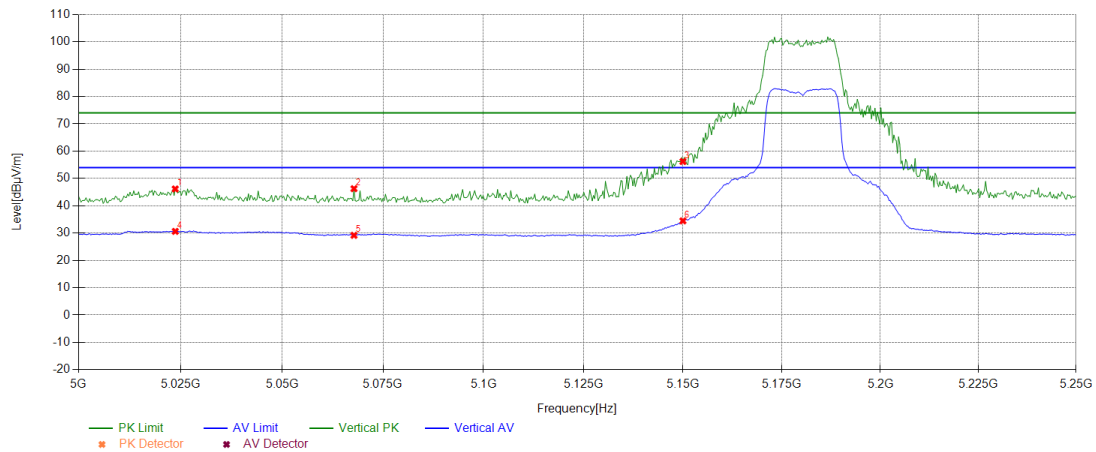
During the test, the Band Edge was performed in WIFI all modes with all channels and all antennas.

802.11ac20, Antenna1 are selected as the worst condition. The test data of the worst-case condition was recorded in this report.

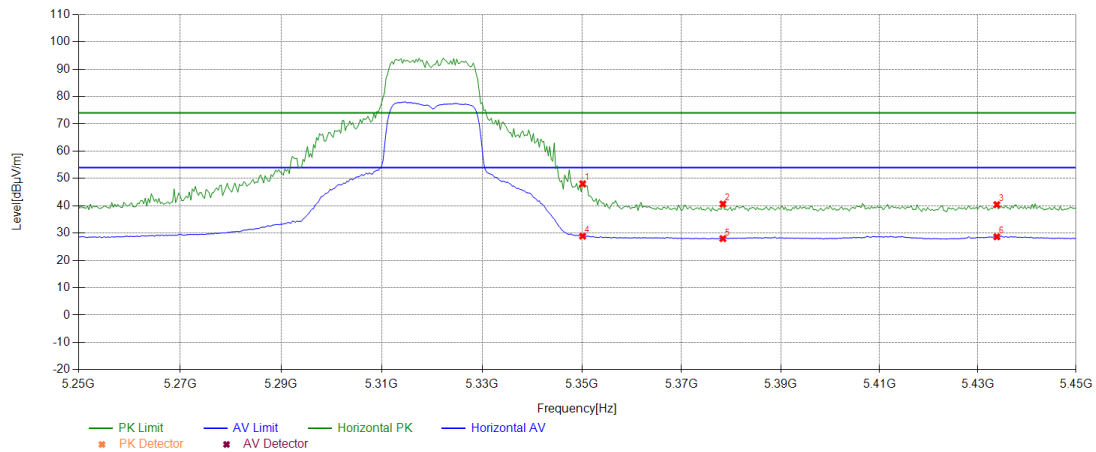
Test mode			802.11ac20						
Test channel			Lowest channel						
polarization			Horizontal						
Suspected List									
Frequency [MHz]	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Height [cm]	Angle deg	Pass/ Fail
5096.9097	1.77	40.10	41.87	74.00	32.13	PK	150	109	PASS
5137.7138	1.90	48.31	50.21	74.00	23.79	PK	150	145	PASS
5150.015	1.93	43.26	45.19	74.00	28.81	PK	150	145	PASS
5096.9097	1.77	26.67	28.44	54.00	25.56	AV	150	180	PASS
5137.7138	1.90	25.94	27.84	54.00	26.16	AV	150	145	PASS
5150.015	1.93	27.77	29.70	54.00	24.30	AV	150	145	PASS



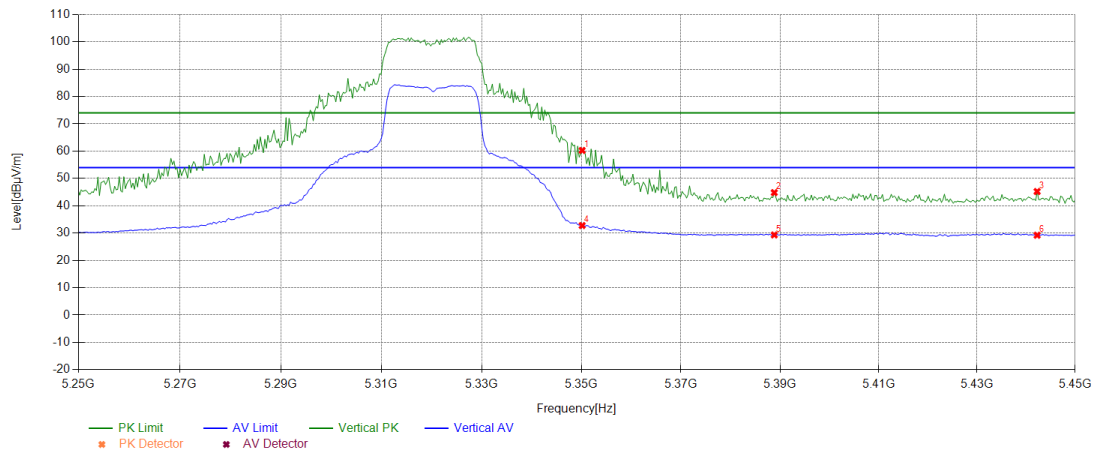
Test mode			802.11ac20						
Test channel			Lowest channel						
polarization			Vertical						
Suspected List									
Frequency [MHz]	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Height [cm]	Angle deg	Pass/ Fail
5023.7024	1.53	44.63	46.16	74.00	27.84	PK	150	157	PASS
5067.8068	1.67	44.60	46.27	74.00	27.73	PK	150	157	PASS
5150.015	1.93	54.27	56.20	74.00	17.80	PK	150	169	PASS
5023.7024	1.53	29.11	30.64	54.00	23.36	AV	150	121	PASS
5067.8068	1.67	27.52	29.19	54.00	24.81	AV	150	121	PASS
5150.015	1.93	32.57	34.50	54.00	19.50	AV	150	193	PASS



Test mode			802.11ac20						
Test channel			Highest channel						
polarization			Horizontal						
Suspected List									
Frequency [MHz]	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Height [cm]	Angle deg	Pass/ Fail
5350.135	2.40	45.65	48.05	74.00	25.95	PK	150	65	PASS
5378.3378	2.46	38.19	40.65	74.00	33.35	PK	150	125	PASS
5433.8434	2.59	37.83	40.42	74.00	33.58	PK	150	125	PASS
5350.135	2.40	26.51	28.91	54.00	25.09	AV	150	65	PASS
5378.3378	2.46	25.54	28.00	54.00	26.00	AV	150	137	PASS
5433.8434	2.59	26.07	28.66	54.00	25.34	AV	150	30	PASS



Test mode			802.11ac20						
Test channel			Highest channel						
polarization			Vertical						
Suspected List									
Frequency [MHz]	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Height [cm]	Angle deg	Pass/ Fail
5350.135	2.40	57.87	60.27	74.00	13.73	PK	150	177	PASS
5388.8389	2.48	42.34	44.82	74.00	29.18	PK	150	165	PASS
5442.2442	2.61	42.62	45.23	74.00	28.77	PK	150	165	PASS
5350.135	2.40	30.37	32.77	54.00	21.23	AV	150	129	PASS
5388.8389	2.48	26.85	29.33	54.00	24.67	AV	150	141	PASS
5442.2442	2.61	26.63	29.24	54.00	24.76	AV	150	129	PASS

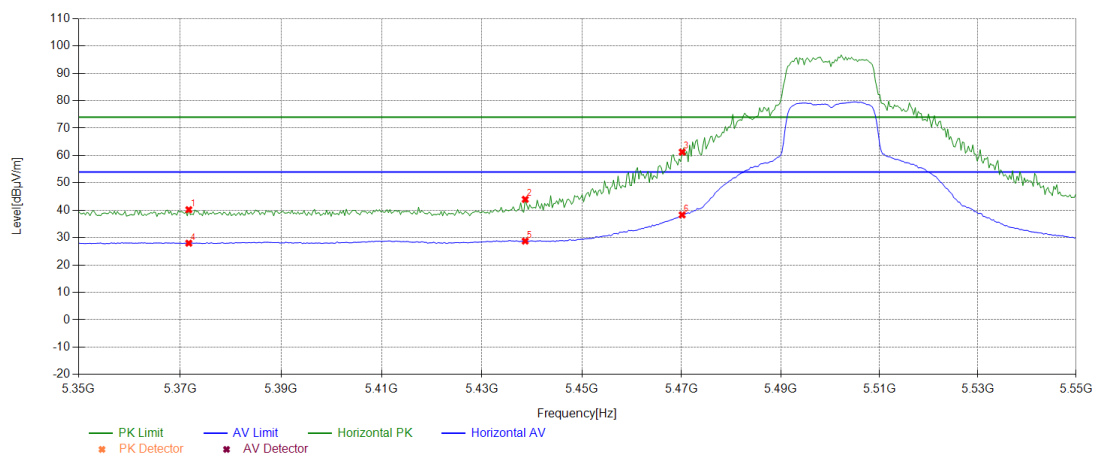


U-NII-2C:5470-5725MHz:

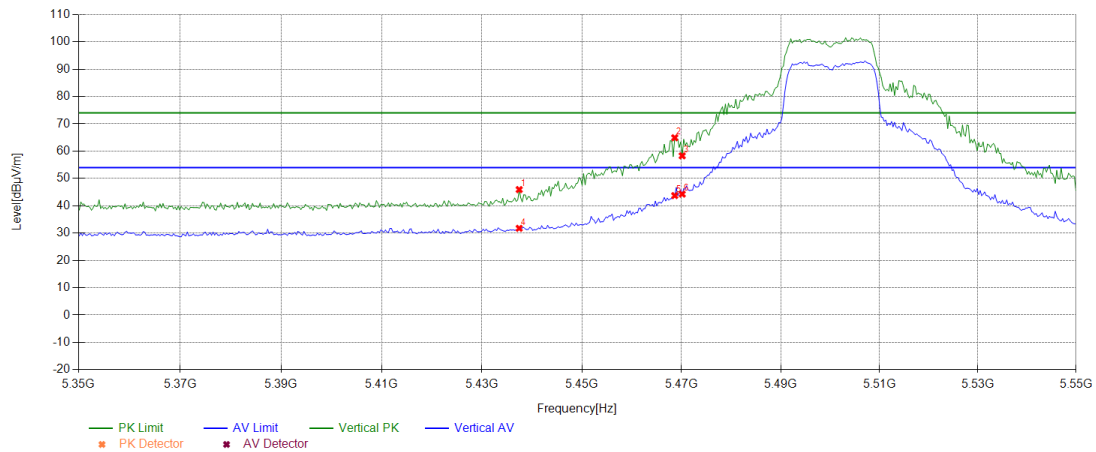
During the test, the Band Edge was performed in WIFI all modes with all channels and all antennas.

802.11ac20, Antenna1 are selected as the worst condition. The test data of the worst-case condition was recorded in this report.

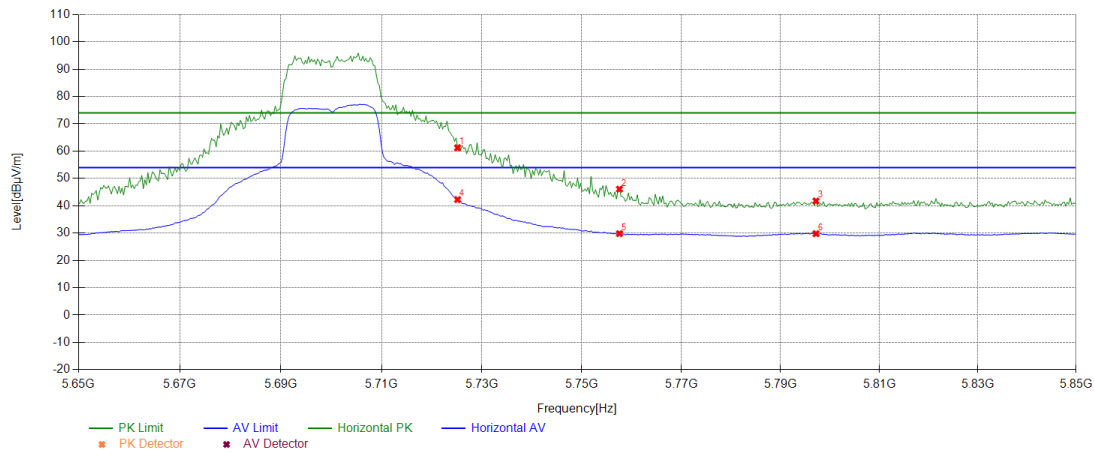
Test mode			802.11ac20						
Test channel			Lowest channel						
polarization			Horizontal						
Suspected List									
Frequency [MHz]	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Height [cm]	Angle deg	Pass/ Fail
5371.7372	2.45	37.77	40.22	74.00	33.78	PK	150	131	PASS
5438.6439	2.60	41.37	43.97	74.00	30.03	PK	150	191	PASS
5470.147	2.69	58.56	61.25	74.00	12.75	PK	150	191	PASS
5371.7372	2.45	25.53	27.98	54.00	26.02	AV	150	215	PASS
5438.6439	2.60	26.15	28.75	54.00	25.25	AV	150	167	PASS
5470.147	2.69	35.62	38.31	54.00	15.69	AV	150	215	PASS



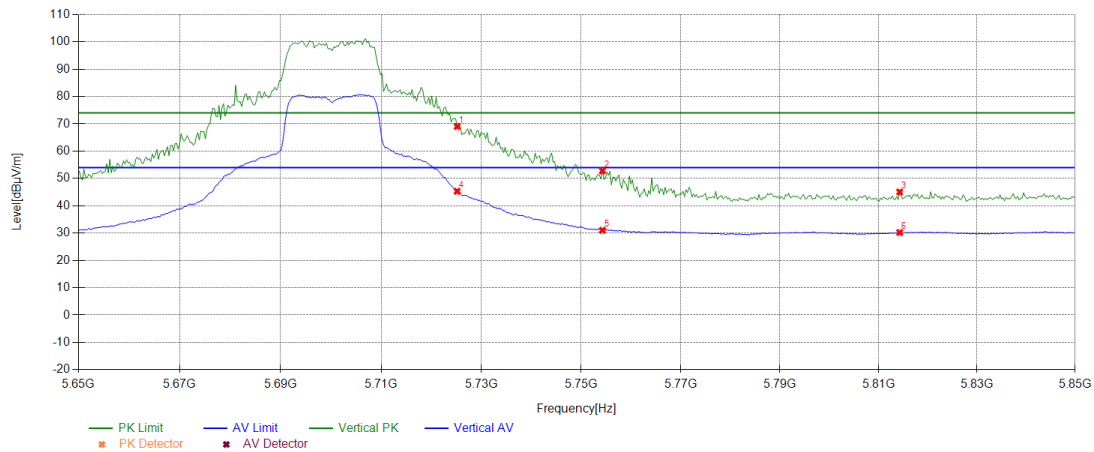
Test mode			802.11ac20						
Test channel			Lowest channel						
polarization			Vertical						
Suspected List									
Frequency [MHz]	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Height [cm]	Angle deg	Pass/ Fail
5437.4437	2.60	43.33	45.93	74.00	28.07	PK	150	230	PASS
5468.6469	2.68	62.23	64.91	74.00	9.09	PK	150	280	PASS
5470.147	2.69	55.61	58.30	74.00	15.70	PK	150	200	PASS
5437.4437	2.60	29.17	31.77	54.00	22.23	AV	150	20	PASS
5468.6469	2.68	41.06	43.74	54.00	10.26	AV	150	10	PASS
5470.147	2.69	41.60	44.29	54.00	9.71	AV	150	30	PASS



Test mode			802.11ac20						
Test channel			Highest channel						
polarization			Horizontal						
Suspected List									
Frequency [MHz]	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Height [cm]	Angle deg	Pass/ Fail
5725.1725	3.77	57.45	61.22	74.00	12.78	PK	150	135	PASS
5757.5758	3.91	42.17	46.08	74.00	27.92	PK	150	88	PASS
5797.1797	4.10	37.66	41.76	74.00	32.24	PK	150	76	PASS
5725.1725	3.77	38.51	42.28	54.00	11.72	AV	150	88	PASS
5757.5758	3.91	25.91	29.82	54.00	24.18	AV	150	65	PASS
5797.1797	4.10	25.69	29.79	54.00	24.21	AV	150	40	PASS



Test mode			802.11ac20						
Test channel			Highest channel						
polarization			Vertical						
Suspected List									
Frequency [MHz]	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Height [cm]	Angle deg	Pass/ Fail
5725.1725	3.77	65.27	69.04	74.00	4.96	PK	150	160	PASS
5754.2754	3.90	48.90	52.80	74.00	21.20	PK	150	137	PASS
5814.2814	4.17	40.89	45.06	74.00	28.94	PK	150	172	PASS
5725.1725	3.77	41.56	45.33	54.00	8.67	AV	150	113	PASS
5754.2754	3.90	27.14	31.04	54.00	22.96	AV	150	113	PASS
5814.2814	4.17	26.08	30.25	54.00	23.75	AV	150	160	PASS

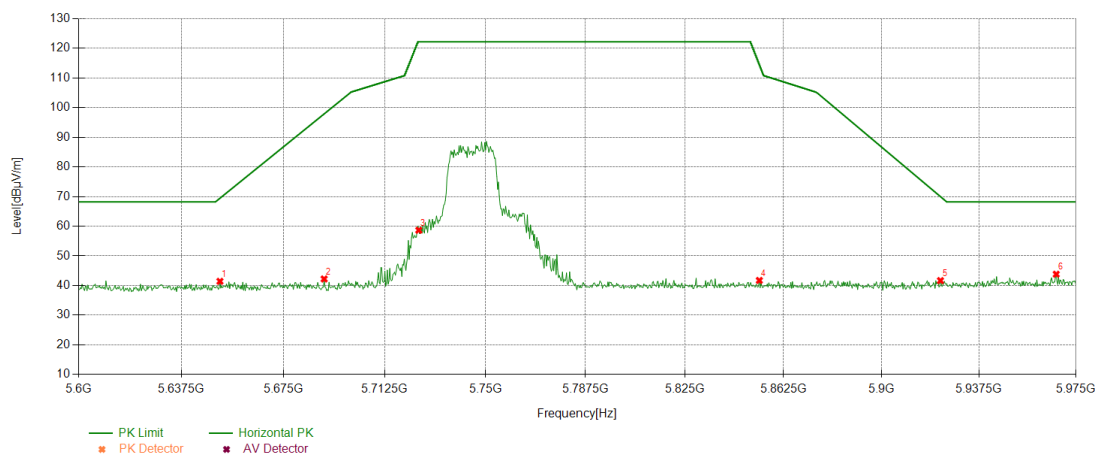


U-NII-3 5725-5850MHz:

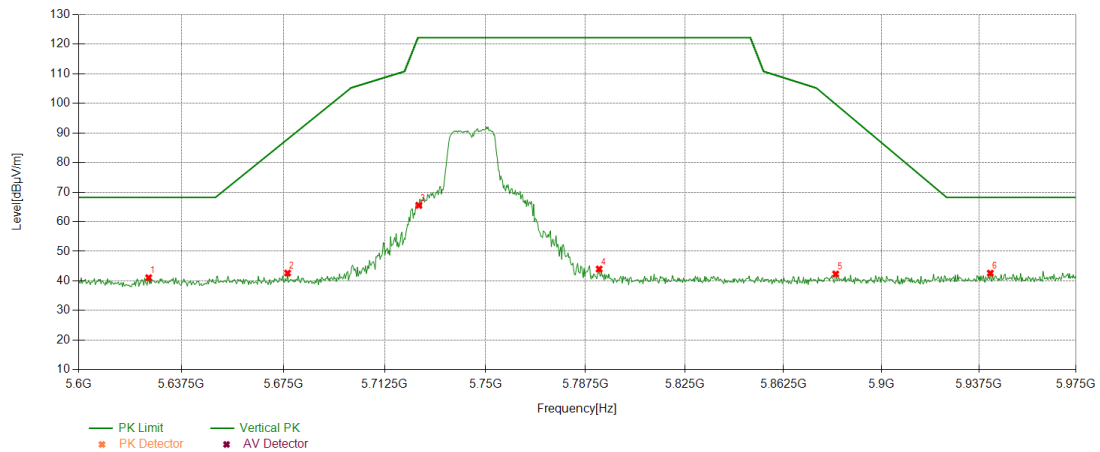
During the test, the Band Edge was performed in WIFI all modes with all channels and all antennas.

802.11ac20, Antenna1 are selected as the worst condition. The test data of the worst-case condition was recorded in this report.

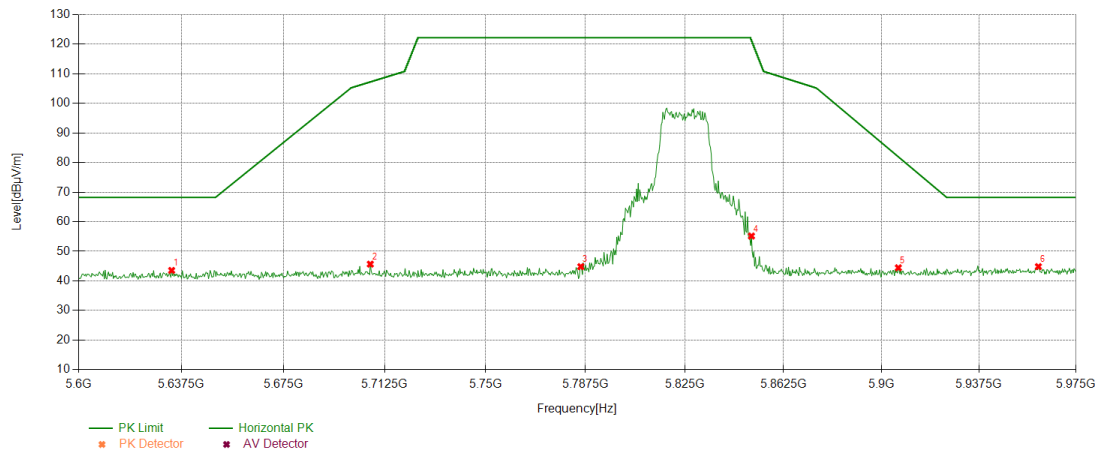
Test mode			802.11ac20						
Test channel			Lowest channel						
polarization			Horizontal						
Suspected List									
Frequency [MHz]	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Height [cm]	Angle deg	Pass/ Fail
5651.6652	3.43	38.00	41.43	69.44	28.01	PK	150	240	PASS
5690.069	3.61	38.61	42.22	97.88	55.66	PK	150	330	PASS
5725.1725	3.77	54.89	58.66	122.20	63.54	PK	150	60	PASS
5853.2853	4.33	37.40	41.73	114.71	72.98	PK	150	320	PASS
5922.5923	4.63	37.04	41.67	69.97	28.30	PK	150	50	PASS
5967.2967	4.82	39.01	43.83	68.20	24.37	PK	150	320	PASS



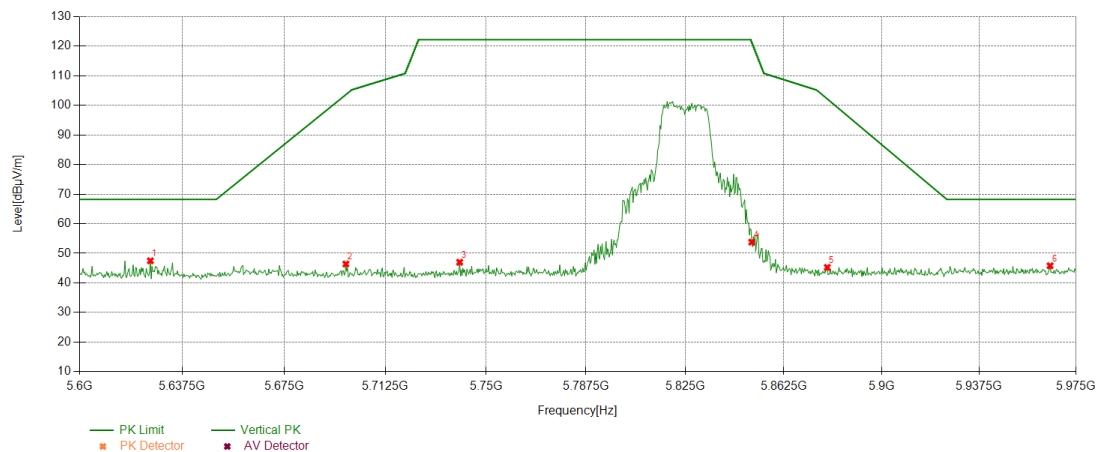
Test mode			802.11ac20						
Test channel			Lowest channel						
polarization			Vertical						
Suspected List									
Frequency [MHz]	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Height [cm]	Angle deg	Pass/ Fail
5625.5626	3.31	37.78	41.09	68.20	27.11	PK	150	250	PASS
5676.5677	3.55	39.10	42.65	87.90	45.25	PK	150	280	PASS
5725.1725	3.77	61.74	65.51	122.20	56.69	PK	150	40	PASS
5792.6793	4.07	39.96	44.03	122.20	78.17	PK	150	90	PASS
5882.3882	4.46	37.89	42.35	99.71	57.36	PK	150	320	PASS
5941.7942	4.71	37.92	42.63	68.20	25.57	PK	150	360	PASS



Test mode			802.11ac20						
Test channel			Highest channel						
polarization			Horizontal						
Suspected List									
Frequency [MHz]	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Height [cm]	Angle deg	Pass/ Fail
5633.9634	3.35	40.20	43.55	68.20	24.65	PK	150	98	PASS
5707.1707	3.68	42.00	45.68	107.21	61.53	PK	150	122	PASS
5785.7786	4.04	40.80	44.84	122.20	77.36	PK	150	134	PASS
5850.285	4.32	50.86	55.18	121.55	66.37	PK	150	134	PASS
5906.3906	4.56	39.88	44.44	81.93	37.49	PK	150	110	PASS
5960.396	4.79	40.06	44.85	68.20	23.35	PK	150	170	PASS



Test mode			802.11ac20						
Test channel			Highest channel						
polarization			Vertical						
Suspected List									
Frequency [MHz]	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Height [cm]	Angle deg	Pass/ Fail
5625.8626	3.31	44.17	47.48	68.20	20.72	PK	150	147	PASS
5697.8698	3.64	42.76	46.40	103.63	57.23	PK	150	124	PASS
5740.174	3.84	43.16	47.00	122.20	75.20	PK	150	147	PASS
5850.285	4.32	49.46	53.78	121.55	67.77	PK	150	124	PASS
5879.0879	4.44	40.81	45.25	102.16	56.91	PK	150	135	PASS
5964.8965	4.81	41.00	45.81	68.20	22.39	PK	150	99	PASS



5.3 Maximum conducted output power

Ambient condition:

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

Method of Measurement:

During the process of the testing, The EUT was connected to spectrum analyzer through an external attenuator and a known loss cable. The EUT is max power transmission with proper modulation. We use Maximum average Conducted Output Power Level Method in KDB789033 for this test

The conducted Power is measured at each antenna port. The measured results at the various antenna ports are then summed mathematically.

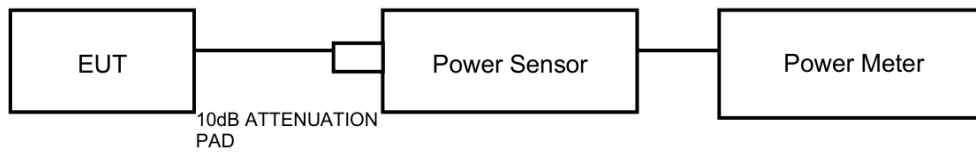
Limits:

For client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or $11 \text{ dBm} + 10 \log B$, where B is the 26 dB emission bandwidth in megahertz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Test Setup:



Measurement Uncertainty:

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor $k = 2$, $U = 0.44$ dB.

Test Results:

TestMode	Antenna	Channel	Output Power[dBm]	Limit[dBm]	Verdict
11A	Ant1	5180	15.32	≤ 23.98	PASS
	Ant1	5220	15.80	≤ 23.98	PASS
	Ant1	5240	16.40	≤ 23.98	PASS
	Ant1	5260	16.00	≤ 23.98	PASS
	Ant1	5300	15.80	≤ 23.98	PASS
	Ant1	5320	16.14	≤ 23.98	PASS
	Ant1	5500	14.09	≤ 23.98	PASS
	Ant1	5580	14.77	≤ 23.98	PASS
	Ant1	5700	13.89	≤ 23.98	PASS
	Ant1	5745	13.95	≤ 30.00	PASS
	Ant1	5785	13.34	≤ 30.00	PASS
	Ant1	5825	13.86	≤ 30.00	PASS
11N20SISO	Ant1	5180	14.99	≤ 23.98	PASS
	Ant1	5220	15.65	≤ 23.98	PASS
	Ant1	5240	15.96	≤ 23.98	PASS
	Ant1	5260	15.97	≤ 23.98	PASS
	Ant1	5300	15.79	≤ 23.98	PASS
	Ant1	5320	15.79	≤ 23.98	PASS
	Ant1	5500	13.72	≤ 23.98	PASS
	Ant1	5580	14.96	≤ 23.98	PASS
	Ant1	5700	13.52	≤ 23.98	PASS
	Ant1	5745	13.79	≤ 30.00	PASS
	Ant1	5785	13.15	≤ 30.00	PASS
	Ant1	5825	13.66	≤ 30.00	PASS
11N40SISO	Ant1	5190	14.70	≤ 23.98	PASS
	Ant1	5230	15.29	≤ 23.98	PASS
	Ant1	5270	15.42	≤ 23.98	PASS
	Ant1	5310	15.59	≤ 23.98	PASS
	Ant1	5510	13.26	≤ 23.98	PASS
	Ant1	5550	13.64	≤ 23.98	PASS
	Ant1	5670	12.92	≤ 23.98	PASS
	Ant1	5755	13.69	≤ 30.00	PASS
	Ant1	5795	13.84	≤ 30.00	PASS
11AC20SISO	Ant1	5180	13.28	≤ 23.98	PASS
	Ant1	5220	14.27	≤ 23.98	PASS

	Ant1	5240	14.72	≤ 23.98	PASS
	Ant1	5260	14.73	≤ 23.98	PASS
	Ant1	5300	14.53	≤ 23.98	PASS
	Ant1	5320	14.41	≤ 23.98	PASS
	Ant1	5500	12.67	≤ 23.98	PASS
	Ant1	5580	12.87	≤ 23.98	PASS
	Ant1	5700	12.79	≤ 23.98	PASS
	Ant1	5745	12.90	≤ 30.00	PASS
	Ant1	5785	13.00	≤ 30.00	PASS
	Ant1	5825	13.39	≤ 30.00	PASS
11AC40SISO	Ant1	5190	13.66	≤ 23.98	PASS
	Ant1	5230	14.31	≤ 23.98	PASS
	Ant1	5270	14.63	≤ 23.98	PASS
	Ant1	5310	15.01	≤ 23.98	PASS
	Ant1	5510	13.18	≤ 23.98	PASS
	Ant1	5550	13.80	≤ 23.98	PASS
	Ant1	5670	13.17	≤ 23.98	PASS
	Ant1	5755	13.23	≤ 30.00	PASS
11AC80SISO	Ant1	5795	13.42	≤ 30.00	PASS
	Ant1	5210	13.55	≤ 23.98	PASS
	Ant1	5290	13.76	≤ 23.98	PASS
	Ant1	5530	12.64	≤ 23.98	PASS
	Ant1	5775	12.94	≤ 30.00	PASS

5.4 Min Emission Bandwidth and Emission Bandwidth and Occupied Bandwidth

Ambient condition:

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

Method of Measurement:

The EUT was connected to the spectrum analyzer through an external attenuator (20dB) and a known loss cable.

For U-NII-1, set RBW $\approx 1\%$ OCB kHz, VBW $\geq 3 \times$ RBW, measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 26 dB relative to the maximum level measured in the fundamental emission.

For U-NII-3, Set RBW = 100 kHz, VBW $\geq 3 \times$ RBW, measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

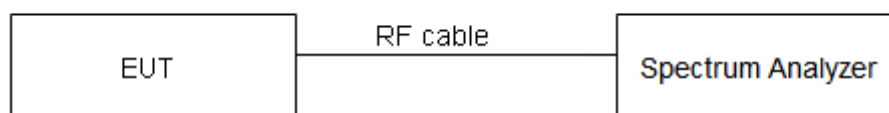
Note: The automatic bandwidth measurement capability of a spectrum analyzer or EMI receiver may be employed if it implements the functionality described above.

Use the 99 % power bandwidth function of the instrument.

Limits:

Within the 5.725-5.85 GHz band, the minimum 6 dB bandwidth of U-NII devices shall be at least 500 kHz.

Test Setup:



Measurement Uncertainty:

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor $k = 2$, $U = 936$ Hz.

Test Results: Min emission bandwidth

TestMode	Antenna	Channel	6db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5745	16.32	5736.84	5753.16	≥0.5	PASS
		5785	16.32	5776.84	5793.16	≥0.5	PASS
		5825	16.28	5816.84	5833.12	≥0.5	PASS
11N20SISO	Ant1	5745	17.28	5736.48	5753.76	≥0.5	PASS
		5785	16.64	5776.84	5793.48	≥0.5	PASS
		5825	16.96	5816.44	5833.40	≥0.5	PASS
11N40SISO	Ant1	5755	35.20	5737.40	5772.60	≥0.5	PASS
		5795	35.52	5777.40	5812.92	≥0.5	PASS
11AC20SISO	Ant1	5745	17.16	5736.60	5753.76	≥0.5	PASS
		5785	17.00	5776.48	5793.48	≥0.5	PASS
		5825	17.00	5816.48	5833.48	≥0.5	PASS
11AC40SISO	Ant1	5755	35.20	5737.40	5772.60	≥0.5	PASS
		5795	35.20	5777.40	5812.60	≥0.5	PASS
11AC80SISO	Ant1	5775	75.20	5737.40	5812.60	≥0.5	PASS

Test Results: Emission Bandwidth

TestMode	Antenna	Channel	26db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5180	37.68	5161.28	5198.96	---	---
	Ant1	5220	36.80	5201.76	5238.56	---	---
	Ant1	5240	39.36	5222.08	5261.44	---	---
	Ant1	5260	37.28	5242.32	5279.60	---	---
	Ant1	5300	37.92	5281.20	5319.12	---	---
	Ant1	5320	34.24	5303.36	5337.60	---	---
	Ant1	5500	21.76	5489.36	5511.12	---	---
	Ant1	5580	21.84	5569.44	5591.28	---	---
	Ant1	5700	31.04	5685.04	5716.08	---	---
	Ant1	5745	36.32	5728.36	5764.68	---	---
	Ant1	5785	39.52	5764.84	5804.36	---	---
11N20SISO	Ant1	5180	27.60	5166.80	5194.40	---	---
	Ant1	5220	34.88	5202.32	5237.20	---	---
	Ant1	5240	37.68	5222.72	5260.40	---	---
	Ant1	5260	35.12	5242.72	5277.84	---	---
	Ant1	5300	38.72	5280.72	5319.44	---	---
	Ant1	5320	31.44	5304.72	5336.16	---	---
	Ant1	5500	22.16	5489.48	5511.64	---	---
	Ant1	5580	23.04	5568.72	5591.76	---	---
	Ant1	5700	34.00	5684.52	5718.52	---	---
	Ant1	5745	37.60	5726.60	5764.20	---	---
	Ant1	5785	39.92	5766.68	5806.60	---	---
11N40SISO	Ant1	5190	79.84	5150.16	5230.00	---	---
	Ant1	5230	85.80	5189.92	5275.72	---	---
	Ant1	5270	88.20	5226.80	5315.00	---	---
	Ant1	5310	87.00	5264.52	5351.52	---	---
	Ant1	5510	43.08	5488.40	5531.48	---	---
	Ant1	5550	42.96	5528.52	5571.48	---	---
	Ant1	5670	56.04	5646.00	5702.04	---	---
	Ant1	5755	81.48	5715.16	5796.64	---	---
11AC20SISO	Ant1	5180	27.36	5166.32	5193.68	---	---
	Ant1	5220	32.28	5204.88	5237.16	---	---
	Ant1	5240	40.80	5220.56	5261.36	---	---
	Ant1	5260	36.60	5241.64	5278.24	---	---
	Ant1	5300	39.96	5280.44	5320.40	---	---
	Ant1	5320	33.84	5302.96	5336.80	---	---
	Ant1	5500	21.24	5489.44	5510.68	---	---
	Ant1	5580	21.12	5569.28	5590.40	---	---
	Ant1	5700	23.84	5688.08	5711.92	---	---
	Ant1	5745	38.64	5727.60	5766.24	---	---
	Ant1	5785	40.20	5765.56	5805.76	---	---
11AC40SISO	Ant1	5190	65.40	5164.80	5230.20	---	---
	Ant1	5230	90.96	5185.96	5276.92	---	---
	Ant1	5270	81.24	5232.92	5314.16	---	---
	Ant1	5310	87.96	5265.24	5353.20	---	---
	Ant1	5510	42.96	5488.52	5531.48	---	---
	Ant1	5550	42.84	5529.00	5571.84	---	---
	Ant1	5670	60.96	5645.28	5706.24	---	---
	Ant1	5755	88.80	5711.68	5800.48	---	---
11AC80SISO	Ant1	5795	89.64	5749.40	5839.04	---	---
	Ant1	5210	106.75	5169.00	5275.75	---	---
	Ant1	5290	119.25	5233.00	5352.25	---	---
	Ant1	5530	82.50	5489.00	5571.50	---	---
	Ant1	5775	149.75	5711.75	5861.50	---	---

Test Results: Occupied channel bandwidth

TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5180	19.061	5170.649	5189.710	---	---
	Ant1	5220	21.339	5209.890	5231.229	---	---
	Ant1	5240	24.376	5228.771	5253.147	---	---
	Ant1	5260	21.658	5249.291	5270.949	---	---
	Ant1	5300	24.655	5287.812	5312.468	---	---
	Ant1	5320	19.421	5310.250	5329.670	---	---
	Ant1	5500	17.542	5491.209	5508.751	---	---
	Ant1	5580	17.782	5571.089	5588.871	---	---
	Ant1	5700	18.302	5691.009	5709.311	---	---
	Ant1	5745	22.178	5734.970	5757.148	---	---
	Ant1	5785	23.656	5773.731	5797.388	---	---
11N20SISO	Ant1	5825	23.137	5813.571	5836.708	---	---
	Ant1	5180	19.141	5170.450	5189.590	---	---
	Ant1	5220	21.379	5209.730	5231.109	---	---
	Ant1	5240	25.095	5228.492	5253.586	---	---
	Ant1	5260	20.899	5249.570	5270.470	---	---
	Ant1	5300	24.655	5287.572	5312.228	---	---
	Ant1	5320	19.74	5310.210	5329.950	---	---
	Ant1	5500	18.302	5490.849	5509.151	---	---
	Ant1	5580	18.422	5570.769	5589.191	---	---
	Ant1	5700	19.021	5690.609	5709.630	---	---
	Ant1	5745	21.419	5734.850	5756.269	---	---
11N40SISO	Ant1	5785	24.336	5773.532	5797.867	---	---
	Ant1	5825	22.537	5813.691	5836.229	---	---
	Ant1	5190	41.079	5171.219	5212.298	---	---
	Ant1	5230	43.876	5210.739	5254.615	---	---
	Ant1	5270	39.88	5250.819	5290.699	---	---
	Ant1	5310	40.28	5289.141	5329.421	---	---
	Ant1	5510	36.603	5491.778	5528.382	---	---
	Ant1	5550	36.683	5531.618	5568.302	---	---
11AC20SISO	Ant1	5670	36.923	5651.618	5688.542	---	---
	Ant1	5755	38.362	5736.299	5774.660	---	---
	Ant1	5795	43.556	5774.461	5818.017	---	---
	Ant1	5180	18.621	5170.649	5189.271	---	---
	Ant1	5220	19.101	5210.609	5229.710	---	---
	Ant1	5240	22.418	5230.290	5252.707	---	---
	Ant1	5260	19.62	5250.330	5269.950	---	---
	Ant1	5300	21.459	5289.211	5310.669	---	---
	Ant1	5320	18.901	5310.609	5329.511	---	---
	Ant1	5500	18.182	5490.929	5509.111	---	---
	Ant1	5580	18.222	5570.849	5589.071	---	---
11AC40SISO	Ant1	5700	18.621	5690.689	5709.311	---	---
	Ant1	5745	19.7	5735.410	5755.110	---	---
	Ant1	5785	22.897	5774.411	5797.308	---	---
	Ant1	5825	20.939	5814.690	5835.629	---	---
	Ant1	5190	38.601	5171.459	5210.060	---	---
	Ant1	5230	42.358	5211.139	5253.497	---	---
	Ant1	5270	38.282	5251.219	5289.501	---	---
	Ant1	5310	38.282	5290.739	5329.021	---	---
11AC80SISO	Ant1	5510	36.523	5491.698	5528.222	---	---
	Ant1	5550	36.523	5531.778	5568.302	---	---
	Ant1	5670	37.083	5651.539	5688.621	---	---
	Ant1	5755	38.042	5736.379	5774.421	---	---
	Ant1	5795	42.038	5775.420	5817.458	---	---
	Ant1	5210	76.563	5172.118	5248.681	---	---
	Ant1	5290	76.723	5251.638	5328.362	---	---
	Ant1	5530	75.604	5492.278	5567.882	---	---
	Ant1	5775	77.682	5736.798	5814.481	---	---

5.5 Maximum Power Spectral Density

Ambient condition:

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

Method of Measurement:

The EUT was connected to the spectrum analyzer through an external attenuator (20dB) and a known loss cable.

Set RBW = 500 kHz, VBW =1.5MHz for the band 5.725-5.85 GHz

Set RBW = 1 MHz, VBW =3MHz for the band 5.150-5.250 GHz

The conducted PSD is measured at each antenna port. The measured results at the various antenna ports are then summed mathematically.

Limits:

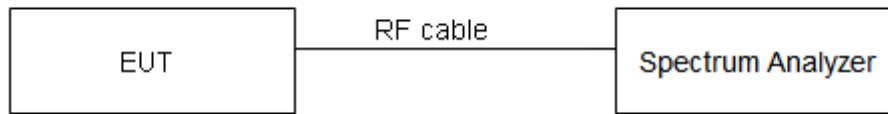
For client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For the band 5.725-5.85 GHz, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Frequency Bands/MHz	Limits
5150-5250	11dBm/MHz
5.25-5.35 GHz and 5.47-5.725 GHz	11dBm/MHz
5725-5850	30dBm/500kHz

Test Setup:



Measurement Uncertainty:

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor $k = 2$, $U = 0.75\text{dB}$.

Test Results:

TestMode	Antenna	Channel	Result[dBm/MHz]	Limit[dBm/MHz]	Verdict
11A	Ant1	5180	4.12	≤ 11	PASS
		5220	4.47	≤ 11	PASS
		5240	5.13	≤ 11	PASS
		5260	4.73	≤ 11	PASS
		5300	4.51	≤ 11	PASS
		5320	4.83	≤ 11	PASS
		5500	2.95	≤ 11	PASS
		5580	3.69	≤ 11	PASS
		5700	2.54	≤ 11	PASS
11N20SISO	Ant1	5180	3.59	≤ 11	PASS
		5220	4.05	≤ 11	PASS
		5240	4.47	≤ 11	PASS
		5260	4.44	≤ 11	PASS
		5300	4.32	≤ 11	PASS
		5320	4.29	≤ 11	PASS
		5500	2.35	≤ 11	PASS
		5580	3.57	≤ 11	PASS
		5700	1.92	≤ 11	PASS
11N40SISO	Ant1	5190	0.23	≤ 11	PASS
		5230	1.13	≤ 11	PASS
		5270	0.81	≤ 11	PASS
		5310	0.95	≤ 11	PASS
		5510	-1.16	≤ 11	PASS
		5550	-0.78	≤ 11	PASS
		5670	-1.61	≤ 11	PASS
11AC20SISO	Ant1	5180	1.93	≤ 11	PASS
		5220	2.79	≤ 11	PASS
		5240	3.25	≤ 11	PASS
		5260	3.23	≤ 11	PASS
		5300	3.13	≤ 11	PASS
		5320	2.88	≤ 11	PASS
		5500	1.35	≤ 11	PASS
		5580	1.51	≤ 11	PASS
		5700	1.26	≤ 11	PASS
11AC40SISO	Ant1	5190	-0.69	≤ 11	PASS
		5230	-0.35	≤ 11	PASS
		5270	0.09	≤ 11	PASS

		5310	0.5	≤11	PASS
		5510	-1.12	≤11	PASS
		5550	-0.58	≤11	PASS
		5670	-1.38	≤11	PASS
11AC80SISO	Ant1	5210	-2.35	≤11	PASS
		5290	-2.32	≤11	PASS
		5530	-3.33	≤11	PASS

TestMode	Antenna	Channel	Result[dBm/ 500KHz]	Limit[dBm/ 500KHz]	Verdict
11A	Ant1	5745	-0.04	≤30	PASS
		5785	-0.73	≤30	PASS
		5825	-0.39	≤30	PASS
11N20SISO	Ant1	5745	-0.36	≤30	PASS
		5785	-1.12	≤30	PASS
		5825	-0.84	≤30	PASS
11N40SISO	Ant1	5755	-3.71	≤30	PASS
		5795	-3.43	≤30	PASS
11AC20SISO	Ant1	5745	-1.28	≤30	PASS
		5785	-1.55	≤30	PASS
		5825	-1.1	≤30	PASS
11AC40SISO	Ant1	5755	-4.04	≤30	PASS
		5795	-3.8	≤30	PASS
11AC80SISO	Ant1	5775	-5.93	≤30	PASS

5.6 Frequency Stability

Ambient condition:

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

Method of Measurement:

1. Frequency stability with respect to ambient temperature

- a) Supply the EUT with a nominal ac voltage or install a new or fully charged battery in the EUT. If possible, a dummy load shall be connected to the EUT because an antenna near the metallic walls of an environmental test chamber could affect the output frequency of the EUT. If the EUT is equipped with a permanently attached, adjustable-length antenna, then the EUT shall be placed in the center of the chamber with the antenna adjusted to the shortest length possible. Turn ON the EUT and tune it to one of the number of frequencies shown in 5.6.
 - b) Couple the unlicensed wireless device output to the measuring instrument by connecting an antenna to the measuring instrument with a suitable length of coaxial cable and placing the measuring antenna near the EUT (e.g., 15 cm away), or by connecting a dummy load to the measuring instrument, through an attenuator if necessary.
 - c) Adjust the location of the measurement antenna and the controls on the measurement instrument to obtain a suitable signal level (i.e., a level that will not overload the measurement instrument but is strong enough to allow measurement of the operating or fundamental frequency of the EUT).
 - d) Turn the EUT OFF and place it inside the environmental temperature chamber. For devices that have oscillator heaters, energize only the heater circuit.
 - e) Set the temperature control on the chamber to the highest specified in the regulatory requirements for the type of device and allow the oscillator heater and the chamber temperature to stabilize.
 - f) While maintaining a constant temperature inside the environmental chamber, turn the EUT ON and record the operating frequency at startup, and at 2 minutes, 5 minutes, and 10 minutes after the EUT is energized. Four measurements in total are made.
 - g) Measure the frequency at each of frequencies specified in 5.6.
 - h) Switch OFF the EUT but do not switch OFF the oscillator heater.
 - i) Lower the chamber temperature by not more than 10 C, and allow the temperature inside the chamber to stabilize.
 - j) Repeat step f) through step i) down to the lowest specified temperature.
- #### 2. Frequency stability when varying supply voltage

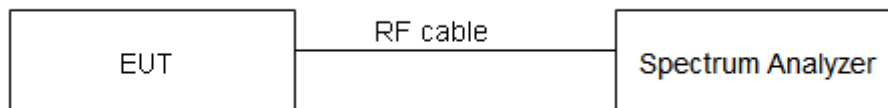
Unless otherwise specified, these tests shall be made at ambient room temperature (+15 °C to +25 °C). An antenna shall be connected to the antenna output terminals of the EUT if possible. If the EUT is equipped with or uses an adjustable-length antenna, then it shall be fully extended.

- a) Supply the EUT with nominal voltage or install a new or fully charged battery in the EUT. Turn ON the EUT and couple its output to a frequency counter or other frequency-measuring instrument.
- b) Tune the EUT to one of the number of frequencies required in 5.6. Adjust the location of the measurement antenna and the controls on the measurement instrument to obtain a suitable signal level (i.e., a level that will not overload the measurement instrument but is strong enough to allow measurement of the operating or fundamental frequency of the EUT).
- c) Measure the frequency at each of the frequencies specified in 5.6.
- d) Repeat the above procedure at 85% and 115% of the nominal supply voltage.

Limits:

Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.

Test Setup:



Measurement Uncertainty:

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor $k = 2$, $U = 936$ Hz.

Test Results:

TestMode	Antenna	Channel	Voltage					Verdict
			Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	
11A	Ant1	5180	NV	NT	-20000.00	-3.861004	---	---
			LV	NT	-20000.00	-3.861004	---	---
			HV	NT	-20000.00	-3.861004	---	---
	Ant1	5220	NV	NT	-20000.00	-3.831418	---	---
			LV	NT	-20000.00	-3.831418	---	---
			HV	NT	-20000.00	-3.831418	---	---
	Ant1	5240	NV	NT	-20000.00	-3.816794	---	---
			LV	NT	-20000.00	-3.816794	---	---
			HV	NT	-20000.00	-3.816794	---	---
	Ant1	5260	NV	NT	0.00	0.000000	---	---
			LV	NT	0.00	0.000000	---	---
			HV	NT	0.00	0.000000	---	---
	Ant1	5300	NV	NT	-20000.00	-3.773585	---	---
			LV	NT	-20000.00	-3.773585	---	---
			HV	NT	-20000.00	-3.773585	---	---
	Ant1	5320	NV	NT	0.00	0.000000	---	---
			LV	NT	-40000.00	-7.518797	---	---
			HV	NT	-40000.00	-7.518797	---	---
	Ant1	5500	NV	NT	-20000.00	-3.636364	---	---
			LV	NT	-20000.00	-3.636364	---	---
			HV	NT	0.00	0.000000	---	---
	Ant1	5580	NV	NT	-20000.00	-3.584229	---	---
			LV	NT	-20000.00	-3.584229	---	---
			HV	NT	-20000.00	-3.584229	---	---
	Ant1	5700	NV	NT	-20000.00	-3.508772	---	---
			LV	NT	0.00	0.000000	---	---
			HV	NT	-20000.00	-3.508772	---	---
	Ant1	5745	NV	NT	0.00	0.000000	---	---
			LV	NT	-20000.00	-3.481288	---	---
			HV	NT	0.00	0.000000	---	---
	Ant1	5785	NV	NT	-20000.00	-3.457217	---	---
			LV	NT	-20000.00	-3.457217	---	---
			HV	NT	-20000.00	-3.457217	---	---
	Ant1	5825	NV	NT	-20000.00	-3.433476	---	---
			LV	NT	-20000.00	-3.433476	---	---
			HV	NT	-20000.00	-3.433476	---	---
11N20SISO	Ant1	5180	NV	NT	-20000.00	-3.861004	---	---
			LV	NT	-20000.00	-3.861004	---	---
			HV	NT	-20000.00	-3.861004	---	---
	Ant1	5220	NV	NT	-40000.00	-7.662835	---	---
			LV	NT	0.00	0.000000	---	---
			HV	NT	-40000.00	-7.662835	---	---
	Ant1	5240	NV	NT	0.00	0.000000	---	---
			LV	NT	-20000.00	-3.816794	---	---
			HV	NT	-20000.00	-3.816794	---	---
	Ant1	5260	NV	NT	-20000.00	-3.802281	---	---
			LV	NT	0.00	0.000000	---	---
			HV	NT	0.00	0.000000	---	---
	Ant1	5300	NV	NT	0.00	0.000000	---	---
			LV	NT	0.00	0.000000	---	---
			HV	NT	0.00	0.000000	---	---
	Ant1	5320	NV	NT	-20000.00	-3.759398	---	---
			LV	NT	-20000.00	-3.759398	---	---
			HV	NT	-20000.00	-3.759398	---	---
	Ant1	5500	NV	NT	-20000.00	-3.636364	---	---
			LV	NT	-20000.00	-3.636364	---	---
			HV	NT	-20000.00	-3.636364	---	---
	Ant1	5580	NV	NT	-20000.00	-3.584229	---	---

	Ant1	5700	LV	NT	-20000.00	-3.584229	---	---
			HV	NT	-20000.00	-3.584229	---	---
			NV	NT	-20000.00	-3.508772	---	---
	Ant1	5745	LV	NT	-20000.00	-3.508772	---	---
			HV	NT	-20000.00	-3.508772	---	---
			NV	NT	-20000.00	-3.481288	---	---
	Ant1	5785	LV	NT	-20000.00	-3.481288	---	---
			HV	NT	-20000.00	-3.481288	---	---
			NV	NT	-20000.00	-3.457217	---	---
	Ant1	5825	LV	NT	-20000.00	-3.457217	---	---
			HV	NT	-20000.00	-3.457217	---	---
			NV	NT	-20000.00	-3.433476	---	---
11N40SISO	Ant1	5190	LV	NT	-20000.00	-3.433476	---	---
			HV	NT	-20000.00	-3.433476	---	---
			NV	NT	-40000.00	-7.707129	---	---
	Ant1	5230	LV	NT	-40000.00	-7.707129	---	---
			HV	NT	-40000.00	-7.707129	---	---
			NV	NT	-40000.00	-7.648184	---	---
	Ant1	5270	LV	NT	0.00	0.000000	---	---
			HV	NT	0.00	0.000000	---	---
			NV	NT	-40000.00	-7.590133	---	---
	Ant1	5310	LV	NT	-40000.00	-7.590133	---	---
			HV	NT	-40000.00	-7.590133	---	---
			NV	NT	-40000.00	-7.532957	---	---
	Ant1	5510	LV	NT	-40000.00	-7.532957	---	---
			HV	NT	-40000.00	-7.532957	---	---
			NV	NT	0.00	0.000000	---	---
	Ant1	5550	LV	NT	0.00	0.000000	---	---
			HV	NT	0.00	0.000000	---	---
			NV	NT	0.00	0.000000	---	---
	Ant1	5670	LV	NT	0.00	0.000000	---	---
			HV	NT	0.00	0.000000	---	---
			NV	NT	0.00	0.000000	---	---
	Ant1	5755	LV	NT	-40000.00	-6.950478	---	---
			HV	NT	-40000.00	-6.950478	---	---
			NV	NT	-40000.00	-6.950478	---	---
	Ant1	5795	LV	NT	0.00	0.000000	---	---
			HV	NT	0.00	0.000000	---	---
			NV	NT	0.00	0.000000	---	---
11AC20SISO	Ant1	5180	LV	NT	0.00	0.000000	---	---
			HV	NT	-20000.00	-3.861004	---	---
			NV	NT	-20000.00	-3.861004	---	---
	Ant1	5220	LV	NT	0.00	0.000000	---	---
			HV	NT	-20000.00	-3.831418	---	---
			NV	NT	-20000.00	-3.831418	---	---
	Ant1	5240	LV	NT	-20000.00	-3.816794	---	---
			HV	NT	0.00	0.000000	---	---
			NV	NT	0.00	0.000000	---	---
	Ant1	5260	LV	NT	-20000.00	-3.802281	---	---
			HV	NT	-20000.00	-3.802281	---	---
			NV	NT	0.00	0.000000	---	---
	Ant1	5300	LV	NT	-20000.00	-3.773585	---	---
			HV	NT	0.00	0.000000	---	---
			NV	NT	-20000.00	-3.773585	---	---
	Ant1	5320	LV	NT	0.00	0.000000	---	---
			HV	NT	0.00	0.000000	---	---
			NV	NT	0.00	0.000000	---	---
	Ant1	5500	LV	NT	-20000.00	-3.636364	---	---
			HV	NT	-20000.00	-3.636364	---	---
			NV	NT	-20000.00	-3.636364	---	---
	Ant1	5580	LV	NT	-20000.00	-3.584229	---	---
			NV	NT	-20000.00	-3.584229	---	---

	Ant1	5700	HV	NT	0.00	0.000000	---	---
			NV	NT	0.00	0.000000	---	---
			LV	NT	0.00	0.000000	---	---
			HV	NT	-20000.00	-3.508772	---	---
	Ant1	5745	NV	NT	0.00	0.000000	---	---
			LV	NT	-20000.00	-3.481288	---	---
			HV	NT	-20000.00	-3.481288	---	---
	Ant1	5785	NV	NT	-20000.00	-3.457217	---	---
			LV	NT	0.00	0.000000	---	---
			HV	NT	0.00	0.000000	---	---
	Ant1	5825	NV	NT	-20000.00	-3.433476	---	---
			LV	NT	-20000.00	-3.433476	---	---
			HV	NT	-20000.00	-3.433476	---	---
11AC40SIS O	Ant1	5190	NV	NT	0.00	0.000000	---	---
			LV	NT	0.00	0.000000	---	---
			HV	NT	0.00	0.000000	---	---
	Ant1	5230	NV	NT	-40000.00	-7.648184	---	---
			LV	NT	-40000.00	-7.648184	---	---
			HV	NT	-40000.00	-7.648184	---	---
	Ant1	5270	NV	NT	0.00	0.000000	---	---
			LV	NT	0.00	0.000000	---	---
			HV	NT	0.00	0.000000	---	---
	Ant1	5310	NV	NT	-40000.00	-7.532957	---	---
			LV	NT	0.00	0.000000	---	---
			HV	NT	-40000.00	-7.532957	---	---
	Ant1	5510	NV	NT	0.00	0.000000	---	---
			LV	NT	0.00	0.000000	---	---
			HV	NT	0.00	0.000000	---	---
	Ant1	5550	NV	NT	-40000.00	-7.207207	---	---
			LV	NT	-40000.00	-7.207207	---	---
			HV	NT	-40000.00	-7.207207	---	---
	Ant1	5670	NV	NT	0.00	0.000000	---	---
			LV	NT	-40000.00	-7.054674	---	---
			HV	NT	0.00	0.000000	---	---
	Ant1	5755	NV	NT	0.00	0.000000	---	---
			LV	NT	0.00	0.000000	---	---
			HV	NT	0.00	0.000000	---	---
	Ant1	5795	NV	NT	-40000.00	-6.902502	---	---
			LV	NT	-40000.00	-6.902502	---	---
			HV	NT	-40000.00	-6.902502	---	---
11AC80SIS O	Ant1	5210	NV	NT	0.00	0.000000	---	---
			LV	NT	0.00	0.000000	---	---
			HV	NT	0.00	0.000000	---	---
	Ant1	5290	NV	NT	-80000.00	-15.122873	---	---
			LV	NT	0.00	0.000000	---	---
			HV	NT	0.00	0.000000	---	---
	Ant1	5530	NV	NT	80000.00	14.466546	---	---
			LV	NT	80000.00	14.466546	---	---
			HV	NT	0.00	0.000000	---	---
	Ant1	5775	NV	NT	0.00	0.000000	---	---
			LV	NT	0.00	0.000000	---	---
			HV	NT	0.00	0.000000	---	---

Temperature								
TestMode	Antenna	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
11A	Ant1	5180	NV	-30	-20000.00	-3.861004	---	---
			NV	-20	-20000.00	-3.861004	---	---
			NV	-10	-20000.00	-3.861004	---	---
			NV	0	-20000.00	-3.861004	---	---
			NV	10	-20000.00	-3.861004	---	---
			NV	20	-20000.00	-3.861004	---	---

			NV	30	-20000.00	-3.861004	---	---
			NV	40	-20000.00	-3.861004	---	---
			NV	50	-20000.00	-3.861004	---	---
	Ant1	5220	NV	-30	0.00	0.000000	---	---
			NV	-20	-20000.00	-3.831418	---	---
			NV	-10	-20000.00	-3.831418	---	---
			NV	0	-20000.00	-3.831418	---	---
			NV	10	0.00	0.000000	---	---
			NV	20	-40000.00	-7.662835	---	---
			NV	30	-20000.00	-3.831418	---	---
			NV	40	0.00	0.000000	---	---
			NV	50	-20000.00	-3.831418	---	---
			NV	-30	-20000.00	-3.816794	---	---
	Ant1	5240	NV	-20	0.00	0.000000	---	---
			NV	-10	-20000.00	-3.816794	---	---
			NV	0	-20000.00	-3.816794	---	---
			NV	10	-20000.00	-3.816794	---	---
			NV	20	-20000.00	-3.816794	---	---
			NV	30	-20000.00	-3.816794	---	---
			NV	40	-20000.00	-3.816794	---	---
			NV	50	-20000.00	-3.816794	---	---
			NV	-30	0.00	0.000000	---	---
			NV	-20	0.00	0.000000	---	---
	Ant1	5260	NV	-10	0.00	0.000000	---	---
			NV	0	0.00	0.000000	---	---
			NV	10	0.00	0.000000	---	---
			NV	20	0.00	0.000000	---	---
			NV	30	0.00	0.000000	---	---
			NV	40	0.00	0.000000	---	---
			NV	50	0.00	0.000000	---	---
			NV	-30	-20000.00	-3.773585	---	---
			NV	-20	-20000.00	-3.773585	---	---
			NV	-10	-20000.00	-3.773585	---	---
	Ant1	5300	NV	0	0.00	0.000000	---	---
			NV	10	0.00	0.000000	---	---
			NV	20	-20000.00	-3.773585	---	---
			NV	30	-20000.00	-3.773585	---	---
			NV	40	-20000.00	-3.773585	---	---
			NV	50	-20000.00	-3.773585	---	---
			NV	-30	-20000.00	-3.759398	---	---
			NV	-20	-40000.00	-7.518797	---	---
			NV	-10	-40000.00	-7.518797	---	---
			NV	0	-20000.00	-3.759398	---	---
	Ant1	5320	NV	10	-20000.00	-3.759398	---	---
			NV	20	-40000.00	-7.518797	---	---
			NV	30	-40000.00	-7.518797	---	---
			NV	40	-20000.00	-3.759398	---	---
			NV	50	-20000.00	-3.759398	---	---
			NV	-30	0.00	0.000000	---	---
			NV	-20	-20000.00	-3.636364	---	---
			NV	-10	0.00	0.000000	---	---
			NV	0	0.00	0.000000	---	---
			NV	10	0.00	0.000000	---	---
	Ant1	5500	NV	20	0.00	0.000000	---	---
			NV	30	0.00	0.000000	---	---
			NV	40	0.00	0.000000	---	---
			NV	50	0.00	0.000000	---	---
			NV	-30	-20000.00	-3.584229	---	---
			NV	-20	-20000.00	-3.584229	---	---
			NV	-10	-20000.00	-3.584229	---	---
			NV	0	-40000.00	-7.168459	---	---
			NV	10	-20000.00	-3.584229	---	---
			NV	20	-20000.00	-3.584229	---	---
	Ant1	5580	NV	30	-20000.00	-3.584229	---	---

	Ant1	5700	NV	40	0.00	0.000000	---	---
			NV	50	-20000.00	-3.584229	---	---
			NV	-30	0.00	0.000000	---	---
			NV	-20	-20000.00	-3.508772	---	---
			NV	-10	0.00	0.000000	---	---
			NV	0	-20000.00	-3.508772	---	---
			NV	10	-20000.00	-3.508772	---	---
			NV	20	-20000.00	-3.508772	---	---
			NV	30	0.00	0.000000	---	---
			NV	40	0.00	0.000000	---	---
	Ant1	5745	NV	50	-20000.00	-3.508772	---	---
			NV	-30	-20000.00	-3.481288	---	---
			NV	-20	-20000.00	-3.481288	---	---
			NV	-10	-20000.00	-3.481288	---	---
			NV	0	-20000.00	-3.481288	---	---
			NV	10	0.00	0.000000	---	---
			NV	20	-20000.00	-3.481288	---	---
			NV	30	0.00	0.000000	---	---
			NV	40	-20000.00	-3.481288	---	---
			NV	50	-20000.00	-3.481288	---	---
	Ant1	5785	NV	-30	-20000.00	-3.457217	---	---
			NV	-20	0.00	0.000000	---	---
			NV	-10	-20000.00	-3.457217	---	---
			NV	0	0.00	0.000000	---	---
			NV	10	0.00	0.000000	---	---
			NV	20	-20000.00	-3.457217	---	---
			NV	30	0.00	0.000000	---	---
			NV	40	-20000.00	-3.457217	---	---
	Ant1	5825	NV	50	0.00	0.000000	---	---
			NV	-30	-20000.00	-3.433476	---	---
			NV	-20	-20000.00	-3.433476	---	---
			NV	-10	-20000.00	-3.433476	---	---
			NV	0	-20000.00	-3.433476	---	---
			NV	10	-20000.00	-3.433476	---	---
			NV	20	-20000.00	-3.433476	---	---
			NV	30	-20000.00	-3.433476	---	---
11N20SISO	Ant1	5180	NV	40	-20000.00	-3.433476	---	---
			NV	50	-20000.00	-3.433476	---	---
			NV	-30	-20000.00	-3.861004	---	---
			NV	-20	-20000.00	-3.861004	---	---
			NV	-10	-20000.00	-3.861004	---	---
			NV	0	-20000.00	-3.861004	---	---
			NV	10	-20000.00	-3.861004	---	---
			NV	20	-20000.00	-3.861004	---	---
	Ant1	5220	NV	30	-20000.00	-3.861004	---	---
			NV	40	-20000.00	-3.861004	---	---
			NV	50	-20000.00	-3.861004	---	---
			NV	-30	-40000.00	-7.662835	---	---
			NV	-20	-40000.00	-7.662835	---	---
			NV	-10	-40000.00	-7.662835	---	---
			NV	0	-40000.00	-7.662835	---	---
			NV	10	-20000.00	-3.831418	---	---
	Ant1	5240	NV	20	-40000.00	-7.662835	---	---
			NV	30	-20000.00	-3.831418	---	---
			NV	40	-20000.00	-3.831418	---	---
			NV	50	-20000.00	-3.831418	---	---
			NV	-30	-20000.00	-3.816794	---	---
			NV	-20	-20000.00	-3.816794	---	---
			NV	-10	-20000.00	-3.816794	---	---
			NV	0	-20000.00	-3.816794	---	---
			NV	10	-20000.00	-3.816794	---	---
			NV	20	0.00	0.000000	---	---
			NV	30	-20000.00	-3.816794	---	---
			NV	40	0.00	0.000000	---	---

Ant1	5260	NV	50	-20000.00	-3.816794	---	---
		NV	-30	0.00	0.000000	---	---
		NV	-20	0.00	0.000000	---	---
		NV	-10	0.00	0.000000	---	---
		NV	0	-20000.00	-3.802281	---	---
		NV	10	-20000.00	-3.802281	---	---
		NV	20	0.00	0.000000	---	---
		NV	30	0.00	0.000000	---	---
Ant1	5300	NV	40	0.00	0.000000	---	---
		NV	50	-20000.00	-3.802281	---	---
		NV	-30	0.00	0.000000	---	---
		NV	-20	0.00	0.000000	---	---
		NV	-10	0.00	0.000000	---	---
		NV	0	0.00	0.000000	---	---
		NV	10	0.00	0.000000	---	---
		NV	20	0.00	0.000000	---	---
Ant1	5320	NV	30	0.00	0.000000	---	---
		NV	40	0.00	0.000000	---	---
		NV	50	0.00	0.000000	---	---
		NV	-30	-20000.00	-3.759398	---	---
		NV	-20	-20000.00	-3.759398	---	---
		NV	-10	-20000.00	-3.759398	---	---
		NV	0	-20000.00	-3.759398	---	---
		NV	10	-20000.00	-3.759398	---	---
Ant1	5500	NV	20	-20000.00	-3.759398	---	---
		NV	30	-20000.00	-3.759398	---	---
		NV	40	-20000.00	-3.759398	---	---
		NV	50	-20000.00	-3.759398	---	---
		NV	-30	-20000.00	-3.636364	---	---
		NV	-20	-20000.00	-3.636364	---	---
		NV	-10	-20000.00	-3.636364	---	---
		NV	0	-20000.00	-3.636364	---	---
Ant1	5580	NV	10	-20000.00	-3.636364	---	---
		NV	20	-20000.00	-3.636364	---	---
		NV	30	-20000.00	-3.636364	---	---
		NV	40	-20000.00	-3.636364	---	---
		NV	50	-20000.00	-3.636364	---	---
		NV	-30	-20000.00	-3.584229	---	---
		NV	-20	-20000.00	-3.584229	---	---
		NV	-10	-20000.00	-3.584229	---	---
Ant1	5700	NV	0	-20000.00	-3.584229	---	---
		NV	10	-20000.00	-3.584229	---	---
		NV	20	-20000.00	-3.584229	---	---
		NV	30	-20000.00	-3.584229	---	---
		NV	40	-20000.00	-3.584229	---	---
		NV	50	-20000.00	-3.584229	---	---
		NV	-30	-20000.00	-3.508772	---	---
		NV	-20	-20000.00	-3.508772	---	---
Ant1	5745	NV	-10	-20000.00	-3.508772	---	---
		NV	0	-20000.00	-3.508772	---	---
		NV	10	-20000.00	-3.508772	---	---
		NV	20	-20000.00	-3.508772	---	---
		NV	30	-20000.00	-3.508772	---	---
		NV	40	0.00	0.000000	---	---
		NV	50	-20000.00	-3.508772	---	---
		NV	-30	-20000.00	-3.481288	---	---
Ant1	5745	NV	-20	-20000.00	-3.481288	---	---
		NV	-10	-20000.00	-3.481288	---	---
		NV	0	-20000.00	-3.481288	---	---
		NV	10	-20000.00	-3.481288	---	---
		NV	20	0.00	0.000000	---	---
		NV	30	-20000.00	-3.481288	---	---
		NV	40	-20000.00	-3.481288	---	---
		NV	50	-20000.00	-3.481288	---	---

	Ant1	5785	NV	-30	-20000.00	-3.457217	---	---
			NV	-20	0.00	0.000000	---	---
			NV	-10	-20000.00	-3.457217	---	---
			NV	0	-20000.00	-3.457217	---	---
			NV	10	-20000.00	-3.457217	---	---
			NV	20	-20000.00	-3.457217	---	---
			NV	30	-20000.00	-3.457217	---	---
			NV	40	-20000.00	-3.457217	---	---
	Ant1	5825	NV	50	-20000.00	-3.457217	---	---
			NV	-30	-20000.00	-3.433476	---	---
			NV	-20	-20000.00	-3.433476	---	---
			NV	-10	-20000.00	-3.433476	---	---
			NV	0	-20000.00	-3.433476	---	---
			NV	10	-20000.00	-3.433476	---	---
			NV	20	-20000.00	-3.433476	---	---
			NV	30	-20000.00	-3.433476	---	---
11N40SISO	Ant1	5190	NV	40	-20000.00	-3.433476	---	---
			NV	50	-20000.00	-3.433476	---	---
			NV	-30	-40000.00	-7.707129	---	---
			NV	-20	-40000.00	-7.707129	---	---
			NV	-10	-40000.00	-7.707129	---	---
			NV	0	-40000.00	-7.707129	---	---
			NV	10	-40000.00	-7.707129	---	---
			NV	20	-40000.00	-7.707129	---	---
	Ant1	5230	NV	30	-40000.00	-7.707129	---	---
			NV	40	-40000.00	-7.707129	---	---
			NV	50	-40000.00	-7.707129	---	---
			NV	-30	-40000.00	-7.648184	---	---
			NV	-20	-40000.00	-7.648184	---	---
			NV	-10	0.00	0.000000	---	---
			NV	0	-40000.00	-7.648184	---	---
			NV	10	0.00	0.000000	---	---
Ant1	5270	NV	20	-40000.00	-7.648184	---	---	
		NV	30	-40000.00	-7.648184	---	---	
11N40SISO	Ant1	5310	NV	40	-40000.00	-7.648184	---	---
			NV	50	0.00	0.000000	---	---
			NV	-30	-40000.00	-7.590133	---	---
			NV	-20	-40000.00	-7.590133	---	---
			NV	-30	-40000.00	-7.590133	---	---
			NV	-20	0.00	0.000000	---	---
			NV	-10	-40000.00	-7.590133	---	---
			NV	0	0.00	0.000000	---	---
	Ant1	5510	NV	10	-40000.00	-7.590133	---	---
			NV	20	-40000.00	-7.590133	---	---
			NV	30	-40000.00	-7.590133	---	---
			NV	40	-40000.00	-7.532957	---	---
			NV	50	-40000.00	-7.532957	---	---
			NV	-30	-40000.00	-7.532957	---	---
			NV	-20	-40000.00	-7.532957	---	---
			NV	-10	-40000.00	-7.532957	---	---
Ant1	5550	NV	0	-40000.00	-7.532957	---	---	
		NV	10	-40000.00	-7.532957	---	---	
		NV	20	-40000.00	-7.532957	---	---	
		NV	30	-40000.00	-7.532957	---	---	
		NV	40	0.00	0.000000	---	---	
		NV	50	0.00	0.000000	---	---	
		NV	-30	0.00	0.000000	---	---	
		NV	-20	0.00	0.000000	---	---	

	Ant1	5670	NV	50	0.00	0.000000	---	---
			NV	-30	0.00	0.000000	---	---
			NV	-20	0.00	0.000000	---	---
			NV	-10	0.00	0.000000	---	---
			NV	0	0.00	0.000000	---	---
			NV	10	0.00	0.000000	---	---
			NV	20	0.00	0.000000	---	---
			NV	30	0.00	0.000000	---	---
			NV	40	0.00	0.000000	---	---
	Ant1	5755	NV	50	0.00	0.000000	---	---
			NV	-30	0.00	0.000000	---	---
			NV	-20	0.00	0.000000	---	---
			NV	-10	-40000.00	-7.054674	---	---
			NV	0	0.00	0.000000	---	---
			NV	10	0.00	0.000000	---	---
			NV	20	0.00	0.000000	---	---
			NV	30	0.00	0.000000	---	---
			NV	40	-40000.00	-6.950478	---	---
			NV	50	-40000.00	-6.950478	---	---
	Ant1	5795	NV	-30	-40000.00	-6.950478	---	---
			NV	-20	-40000.00	-6.950478	---	---
			NV	-10	-40000.00	-6.950478	---	---
			NV	0	-40000.00	-6.950478	---	---
			NV	10	-40000.00	-6.950478	---	---
			NV	20	-40000.00	-6.950478	---	---
			NV	30	-40000.00	-6.950478	---	---
			NV	40	0.00	0.000000	---	---
			NV	50	0.00	0.000000	---	---
11AC20SIS O	Ant1	5180	NV	-30	0.00	0.000000	---	---
			NV	-20	0.00	0.000000	---	---
			NV	-10	0.00	0.000000	---	---
			NV	0	0.00	0.000000	---	---
			NV	10	0.00	0.000000	---	---
			NV	20	0.00	0.000000	---	---
			NV	30	0.00	0.000000	---	---
			NV	40	0.00	0.000000	---	---
			NV	50	-20000.00	-3.861004	---	---
	Ant1	5220	NV	-30	0.00	0.000000	---	---
			NV	-20	-20000.00	-3.861004	---	---
			NV	-10	0.00	0.000000	---	---
			NV	0	0.00	0.000000	---	---
			NV	10	-20000.00	-3.861004	---	---
			NV	20	0.00	0.000000	---	---
			NV	30	0.00	0.000000	---	---
			NV	40	0.00	0.000000	---	---
			NV	50	0.00	0.000000	---	---
	Ant1	5240	NV	-30	-20000.00	-3.831418	---	---
			NV	-20	-20000.00	-3.831418	---	---
			NV	-10	0.00	0.000000	---	---
			NV	0	-20000.00	-3.831418	---	---
			NV	10	-20000.00	-3.831418	---	---
			NV	20	0.00	0.000000	---	---
			NV	30	-20000.00	-3.831418	---	---
			NV	40	20000.00	3.816794	---	---
			NV	50	-20000.00	-3.816794	---	---
	Ant1	5260	NV	-30	-20000.00	-3.816794	---	---
			NV	-20	0.00	0.000000	---	---
			NV	-10	-20000.00	-3.816794	---	---
			NV	0	-20000.00	-3.816794	---	---
			NV	10	-20000.00	-3.816794	---	---
			NV	20	-20000.00	-3.816794	---	---
			NV	30	-40000.00	-7.633588	---	---
			NV	40	-20000.00	-3.802281	---	---
			NV	50	-40000.00	-7.604563	---	---

	Ant1	5300	NV	-30	-20000.00	-3.802281	---	---
			NV	-20	-20000.00	-3.802281	---	---
			NV	-10	-20000.00	-3.802281	---	---
			NV	0	-40000.00	-7.604563	---	---
			NV	10	0.00	0.000000	---	---
			NV	20	-20000.00	-3.802281	---	---
			NV	30	-20000.00	-3.802281	---	---
			NV	40	-20000.00	-3.773585	---	---
			NV	50	0.00	0.000000	---	---
	Ant1	5320	NV	-30	-20000.00	-3.773585	---	---
			NV	-20	0.00	0.000000	---	---
			NV	-10	-20000.00	-3.773585	---	---
			NV	0	-20000.00	-3.773585	---	---
			NV	10	-20000.00	-3.773585	---	---
			NV	20	0.00	0.000000	---	---
			NV	30	0.00	0.000000	---	---
			NV	40	0.00	0.000000	---	---
			NV	50	0.00	0.000000	---	---
	Ant1	5500	NV	-30	0.00	0.000000	---	---
			NV	-20	0.00	0.000000	---	---
			NV	-10	0.00	0.000000	---	---
			NV	0	0.00	0.000000	---	---
			NV	10	0.00	0.000000	---	---
			NV	20	0.00	0.000000	---	---
			NV	30	0.00	0.000000	---	---
			NV	40	-20000.00	-3.636364	---	---
			NV	50	0.00	0.000000	---	---
	Ant1	5580	NV	-30	-20000.00	-3.636364	---	---
			NV	-20	-20000.00	-3.636364	---	---
			NV	-10	-20000.00	-3.636364	---	---
			NV	0	0.00	0.000000	---	---
			NV	10	-20000.00	-3.636364	---	---
			NV	20	-20000.00	-3.636364	---	---
			NV	30	-20000.00	-3.636364	---	---
			NV	40	0.00	0.000000	---	---
			NV	50	-20000.00	-3.584229	---	---
	Ant1	5700	NV	-30	-20000.00	-3.584229	---	---
			NV	-20	-40000.00	-7.168459	---	---
			NV	-10	0.00	0.000000	---	---
			NV	0	-20000.00	-3.584229	---	---
			NV	10	-20000.00	-3.584229	---	---
			NV	20	0.00	0.000000	---	---
			NV	30	-20000.00	-3.584229	---	---
			NV	40	0.00	0.000000	---	---
			NV	50	0.00	0.000000	---	---
	Ant1	5745	NV	-30	0.00	0.000000	---	---
			NV	-20	0.00	0.000000	---	---
			NV	-10	0.00	0.000000	---	---
			NV	0	0.00	0.000000	---	---
			NV	10	0.00	0.000000	---	---
			NV	20	0.00	0.000000	---	---
			NV	30	0.00	0.000000	---	---
			NV	40	-40000.00	-6.962576	---	---
			NV	50	-40000.00	-6.962576	---	---
	Ant1	5785	NV	-30	-20000.00	-3.481288	---	---
			NV	-20	-40000.00	-6.962576	---	---
			NV	-10	-20000.00	-3.481288	---	---
			NV	0	0.00	0.000000	---	---
			NV	10	-20000.00	-3.481288	---	---
			NV	20	-20000.00	-3.481288	---	---
			NV	30	-20000.00	-3.481288	---	---
			NV	40	-20000.00	-3.457217	---	---
			NV	50	0.00	0.000000	---	---
	Ant1	5825	NV	-30	0.00	0.000000	---	---

			NV	-20	0.00	0.000000	---	---
			NV	-10	0.00	0.000000	---	---
11AC40SIS O	Ant1	5190	NV	0	-20000.00	-3.457217	---	---
			NV	10	-20000.00	-3.457217	---	---
			NV	20	-20000.00	-3.457217	---	---
			NV	30	0.00	0.000000	---	---
			NV	40	-20000.00	-3.433476	---	---
			NV	50	-20000.00	-3.433476	---	---
			NV	-30	-20000.00	-3.433476	---	---
			NV	-20	-20000.00	-3.433476	---	---
			NV	-10	-20000.00	-3.433476	---	---
			NV	0	-20000.00	-3.433476	---	---
			NV	10	-20000.00	-3.433476	---	---
			NV	20	-20000.00	-3.433476	---	---
			NV	30	-20000.00	-3.433476	---	---
			NV	40	0.00	0.000000	---	---
			NV	50	0.00	0.000000	---	---
			NV	-30	0.00	0.000000	---	---
			NV	-20	0.00	0.000000	---	---
			NV	-10	0.00	0.000000	---	---
			NV	0	0.00	0.000000	---	---
			NV	10	0.00	0.000000	---	---
			NV	20	0.00	0.000000	---	---
			NV	30	0.00	0.000000	---	---
			NV	40	0.00	0.000000	---	---
			NV	50	-40000.00	-7.648184	---	---
	Ant1	5230	NV	-30	-40000.00	-7.648184	---	---
			NV	-20	-40000.00	-7.648184	---	---
			NV	-10	-40000.00	-7.648184	---	---
			NV	0	-40000.00	-7.648184	---	---
			NV	10	-40000.00	-7.648184	---	---
			NV	20	-40000.00	-7.648184	---	---
			NV	30	-40000.00	-7.648184	---	---
			NV	40	0.00	0.000000	---	---
			NV	50	0.00	0.000000	---	---
			NV	-30	0.00	0.000000	---	---
			NV	-20	0.00	0.000000	---	---
			NV	-10	0.00	0.000000	---	---
			NV	0	-40000.00	-7.590133	---	---
			NV	10	0.00	0.000000	---	---
			NV	20	0.00	0.000000	---	---
			NV	30	0.00	0.000000	---	---
			NV	40	0.00	0.000000	---	---
			NV	50	-40000.00	-7.532957	---	---
			NV	-30	-40000.00	-7.532957	---	---
			NV	-20	0.00	0.000000	---	---
			NV	-10	0.00	0.000000	---	---
			NV	0	-40000.00	-7.532957	---	---
			NV	10	0.00	0.000000	---	---
			NV	20	-40000.00	-7.532957	---	---
			NV	30	-40000.00	-7.532957	---	---
			NV	40	0.00	0.000000	---	---
			NV	50	0.00	0.000000	---	---
	Ant1	5310	NV	-30	0.00	0.000000	---	---
			NV	-20	0.00	0.000000	---	---
			NV	-10	0.00	0.000000	---	---
			NV	0	-40000.00	-7.590133	---	---
			NV	10	0.00	0.000000	---	---
			NV	20	0.00	0.000000	---	---
			NV	30	0.00	0.000000	---	---
			NV	40	0.00	0.000000	---	---
			NV	50	-40000.00	-7.532957	---	---
			NV	-30	-40000.00	-7.532957	---	---
			NV	-20	0.00	0.000000	---	---
			NV	-10	0.00	0.000000	---	---
			NV	0	-40000.00	-7.532957	---	---
			NV	10	0.00	0.000000	---	---
			NV	20	-40000.00	-7.532957	---	---
			NV	30	-40000.00	-7.532957	---	---
			NV	40	0.00	0.000000	---	---
			NV	50	0.00	0.000000	---	---
			NV	-30	0.00	0.000000	---	---
			NV	-20	0.00	0.000000	---	---
			NV	-10	0.00	0.000000	---	---
			NV	0	0.00	0.000000	---	---
			NV	10	0.00	0.000000	---	---
			NV	20	0.00	0.000000	---	---
			NV	30	0.00	0.000000	---	---
			NV	40	-40000.00	-7.207207	---	---
			NV	50	-40000.00	-7.207207	---	---
	Ant1	5550	NV	-30	-40000.00	-7.207207	---	---
			NV	-20	-40000.00	-7.207207	---	---
	Ant1	5670	NV	-30	-40000.00	-7.207207	---	---
			NV	-20	-40000.00	-7.207207	---	---

			NV	-10	-40000.00	-7.207207	---	---		
			NV	0	-40000.00	-7.207207	---	---		
			NV	10	0.00	0.000000	---	---		
			NV	20	-40000.00	-7.207207	---	---		
			NV	30	0.00	0.000000	---	---		
			NV	40	0.00	0.000000	---	---		
			NV	50	0.00	0.000000	---	---		
			Ant1	5755	NV	-30	0.00	0.000000	---	---
					NV	-20	0.00	0.000000	---	---
					NV	-10	0.00	0.000000	---	---
					NV	0	0.00	0.000000	---	---
					NV	10	0.00	0.000000	---	---
	NV	20			0.00	0.000000	---	---		
	NV	30			0.00	0.000000	---	---		
	NV	40			-40000.00	-6.950478	---	---		
	NV	50	-40000.00	-6.950478	---	---				
	Ant1	5795	NV	-30	0.00	0.000000	---	---		
			NV	-20	0.00	0.000000	---	---		
			NV	-10	-40000.00	-6.950478	---	---		
			NV	0	0.00	0.000000	---	---		
			NV	10	0.00	0.000000	---	---		
			NV	20	-40000.00	-6.950478	---	---		
			NV	30	0.00	0.000000	---	---		
			NV	40	0.00	0.000000	---	---		
11AC80SIS O		5210	NV	50	-40000.00	-6.902502	---	---		
			NV	-30	-40000.00	-6.902502	---	---		
			NV	-20	-40000.00	-6.902502	---	---		
			NV	-10	-40000.00	-6.902502	---	---		
			NV	0	-40000.00	-6.902502	---	---		
			NV	10	-40000.00	-6.902502	---	---		
			NV	20	-40000.00	-6.902502	---	---		
			NV	30	-40000.00	-6.902502	---	---		
			NV	40	0.00	0.000000	---	---		
			NV	50	0.00	0.000000	---	---		
			Ant1	5290	NV	-30	0.00	0.000000	---	---
					NV	-20	0.00	0.000000	---	---
	NV	-10			0.00	0.000000	---	---		
	NV	0			0.00	0.000000	---	---		
	NV	10			0.00	0.000000	---	---		
	NV	20			0.00	0.000000	---	---		
	NV	30			0.00	0.000000	---	---		
	NV	40			0.00	0.000000	---	---		
	Ant1	5530	NV	50	0.00	0.000000	---	---		
			NV	-30	0.00	0.000000	---	---		
			NV	-20	0.00	0.000000	---	---		
			NV	-10	0.00	0.000000	---	---		
			NV	0	0.00	0.000000	---	---		
			NV	10	-80000.00	-15.122873	---	---		
NV			20	0.00	0.000000	---	---			
NV			30	0.00	0.000000	---	---			
Ant1	5775	NV	40	80000.00	14.466546	---	---			
		NV	50	0.00	0.000000	---	---			
		NV	-30	80000.00	14.466546	---	---			
		NV	-20	0.00	0.000000	---	---			
		NV	-10	0.00	0.000000	---	---			
		NV	0	0.00	0.000000	---	---			
		NV	10	0.00	0.000000	---	---			
		NV	20	80000.00	14.466546	---	---			
		NV	30	0.00	0.000000	---	---			
		NV	40	0.00	0.000000	---	---			
		NV	50	0.00	0.000000	---	---			
		NV	-10	0.00	0.000000	---	---			
NV	0	0.00	0.000000	---	---					
NV	10	0.00	0.000000	---	---					

			NV	20	0.00	0.000000	---	---
			NV	30	0.00	0.000000	---	---
			NV	40	0.00	0.000000	---	---
			NV	50	0.00	0.000000	---	---

5.7 Dynamic Frequency Selection (DFS)

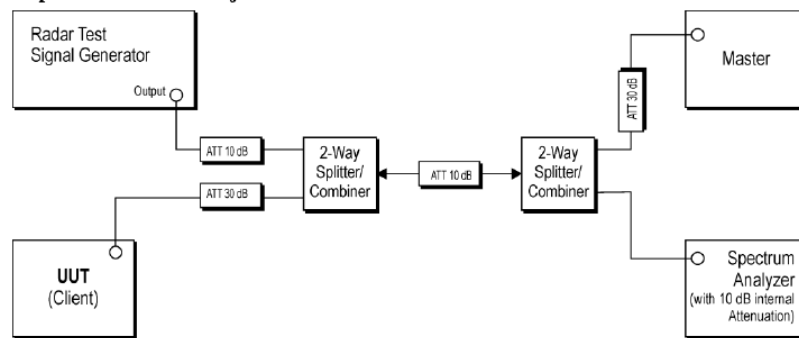
Ambient condition:

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

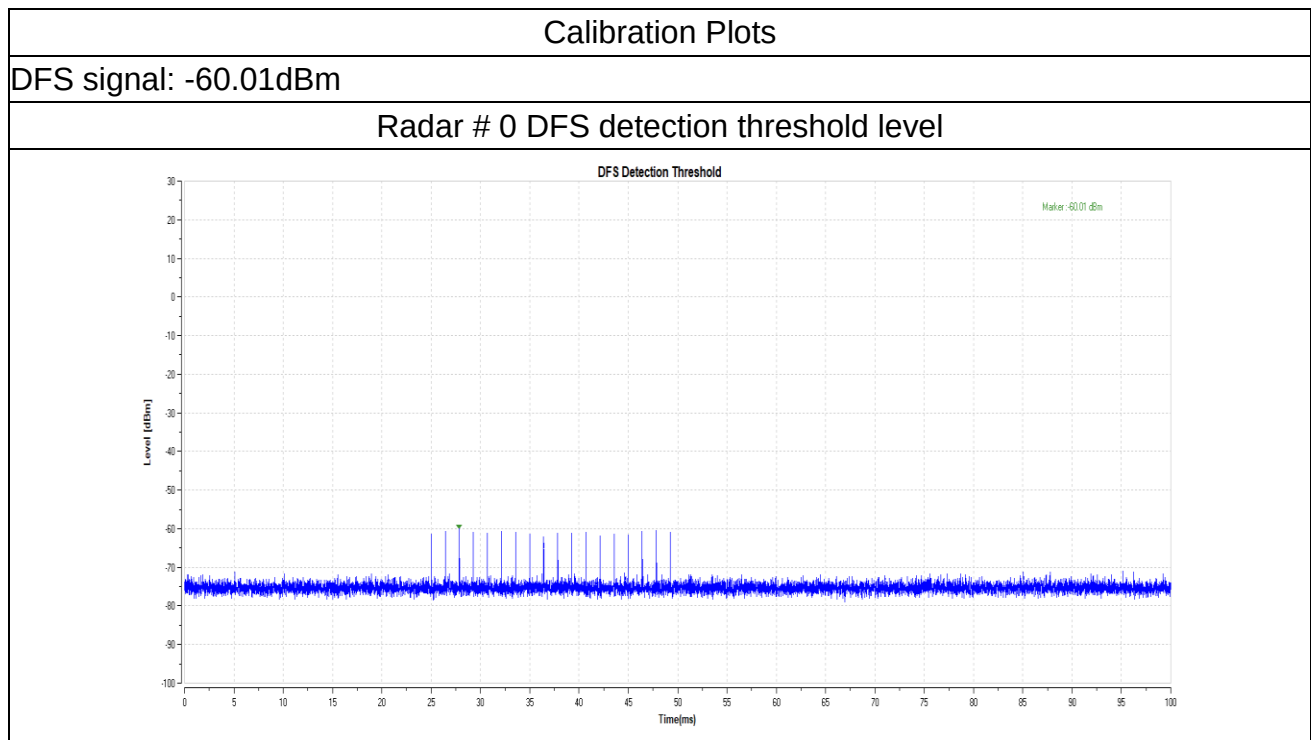
5.7.1 DFS detection threshold level

Test Setup:

Setup for Client with injection at the Master



Test Results:



5.7.2 UNII Detection Bandwidth

Method of Measurement:

Refer as KDB905462 D02 UNII DFS Compliance Procedures New Rules v02, clause 7.8.1 for UNII Detection Bandwidth test. During the U-NII Detection Bandwidth detection test, radar type 1 is used and for each frequency step the minimum percentage of detection is 90 percent. Measurements are performed with no data traffic. The EUT is set up as a standalone device (no associated Client and no traffic). The radar frequency is increased in 1 MHz steps, repeating the above test sequence, until the detection rate falls below 90%. The highest frequency at which detection is greater than or equal to 90% is denoted as FH. The radar frequency is decreased in 1 MHz steps, repeating the above test sequence, until the detection rate falls below 90%. The lowest frequency at which detection is greater than or equal to 90% is denoted as FL. UNII Detection Bandwidth = FH -FL

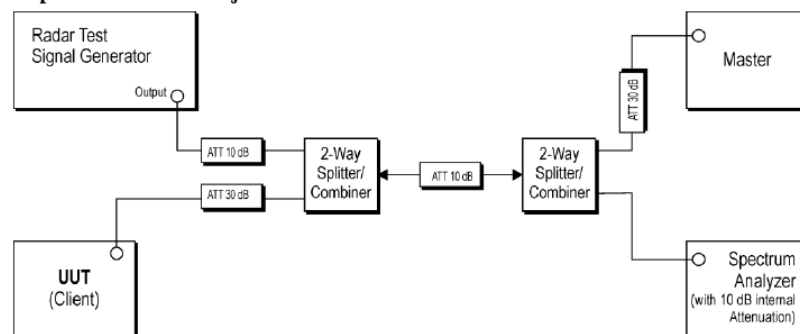
Limits:

Channel Bandwidth (MHz)	99% Power Bandwidth (MHz)	UNII Detection Bandwidth (MHz)
20	N/A	N/A
40	N/A	N/A
80	N/A	N/A

UNII Detection Bandwidth is minimum 100% of the 99% power bandwidth. A single radar Burst is generated for a minimum of 10 trials, and the response of the UUT is noted. The UUT must detect the Radar Waveform 90% or more of the time.

Test Setup:

Setup for Client with injection at the Master



Test Results:

Not required

5.7.3 Channel Availability Check (CAC)

Method of Measurement:

Refer as KDB905462 D02 UNII DFS Compliance Procedures New Rules v02, clause 7.8.2.1 for Initial Channel Availability Check Time. The EUT does not emit beacon, control, or data signals on the test Channel until the power-up sequence has been completed and the UNII device checks for Radar Waveforms for one minute on the test Channel. This test does not use any Radar Waveforms.

Refer as FCC 06-96 Appendix, clause 7.8.2.2 for Radar Burst at the Beginning of the Channel Availability Check Time. To verify successful radar detection on the selected Channel during a period equal to the Beginning of the Channel Availability Check Time.

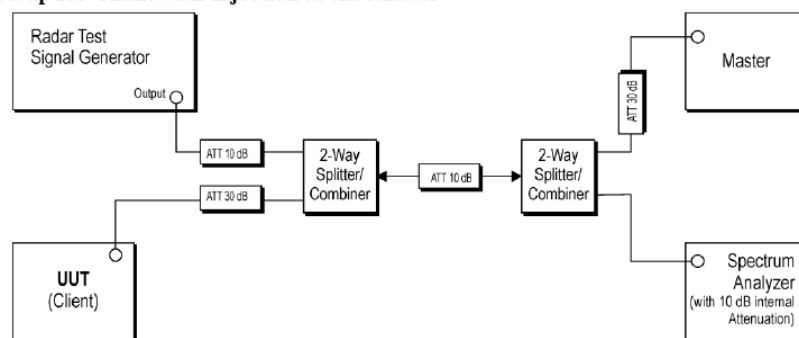
Refer as FCC 06-96 Appendix, clause 7.8.2.3 for Radar Burst at the End of the Channel Availability Check Time. To verify successful radar detection on the selected Channel during a period equal to the End of the Channel Availability Check Time.

Limits:

Channel Availability Check Limit
☒ The EUT shall perform a Channel Availability Check to ensure that there is no radar operating on the channel. After power-up sequence, receive at least 1 minute (60 sec) on the intended operating frequency.

Test Setup:

Setup for Client with injection at the Master



Test Results:

Not required

5.7.4 In-service Monitoring

Method of Measurement:

Refer as KDB905462 D02 UNII DFS Compliance Procedures New Rules v02, clause 7.8.3 verified during In-Service Monitoring; Channel Closing Transmission Time, Channel Move Time. Client Device will associate with the EUT. Observe the transmissions of the EUT at the end of the radar Burst on the Operating Channel for duration greater than 10 seconds. Measure and record the transmissions from the EUT during the observation time (Channel Move Time). Compare the Channel Move Time and Channel Closing Transmission Time limits.

Refer as KDB905462 D02 UNII DFS Compliance Procedures New Rules v02, clause 8.3 verified during In-Service Monitoring; Channel Closing Transmission Time, Channel Move Time. One 10 sec plot needs to be reported for the Short Pulse Radar Types 1-4 and one for the Long Pulse Radar Type in a 22 sec plot. And zoom-in a 600 ms plot verified channel closing time for the aggregate transmission time starting from 200ms after the end of the radar signal to the completion of the channel move.

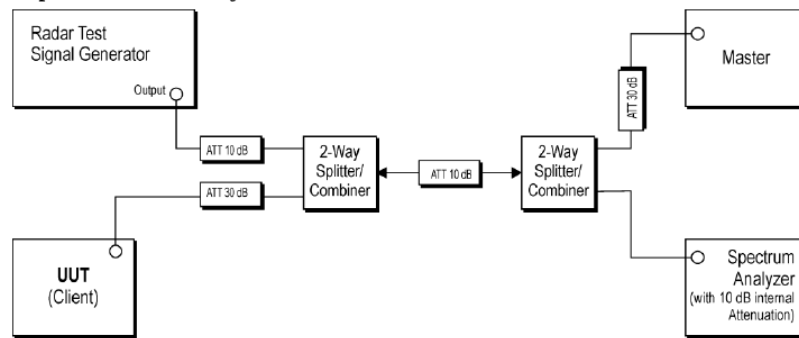
Refer as KDB905462 D02 UNII DFS Compliance Procedures New Rules v02, clause 7.8.3 verified during In-Service Monitoring; Non-Occupancy Period. Client Device will associate with the EUT. Observe the transmissions of the EUT at the end of the radar Burst on the Operating Channel for duration greater than 10 seconds. Measure and record the transmissions from the EUT during the observation time (Non-Occupancy Period). Compare the Non-Occupancy Period limits.

Limits:

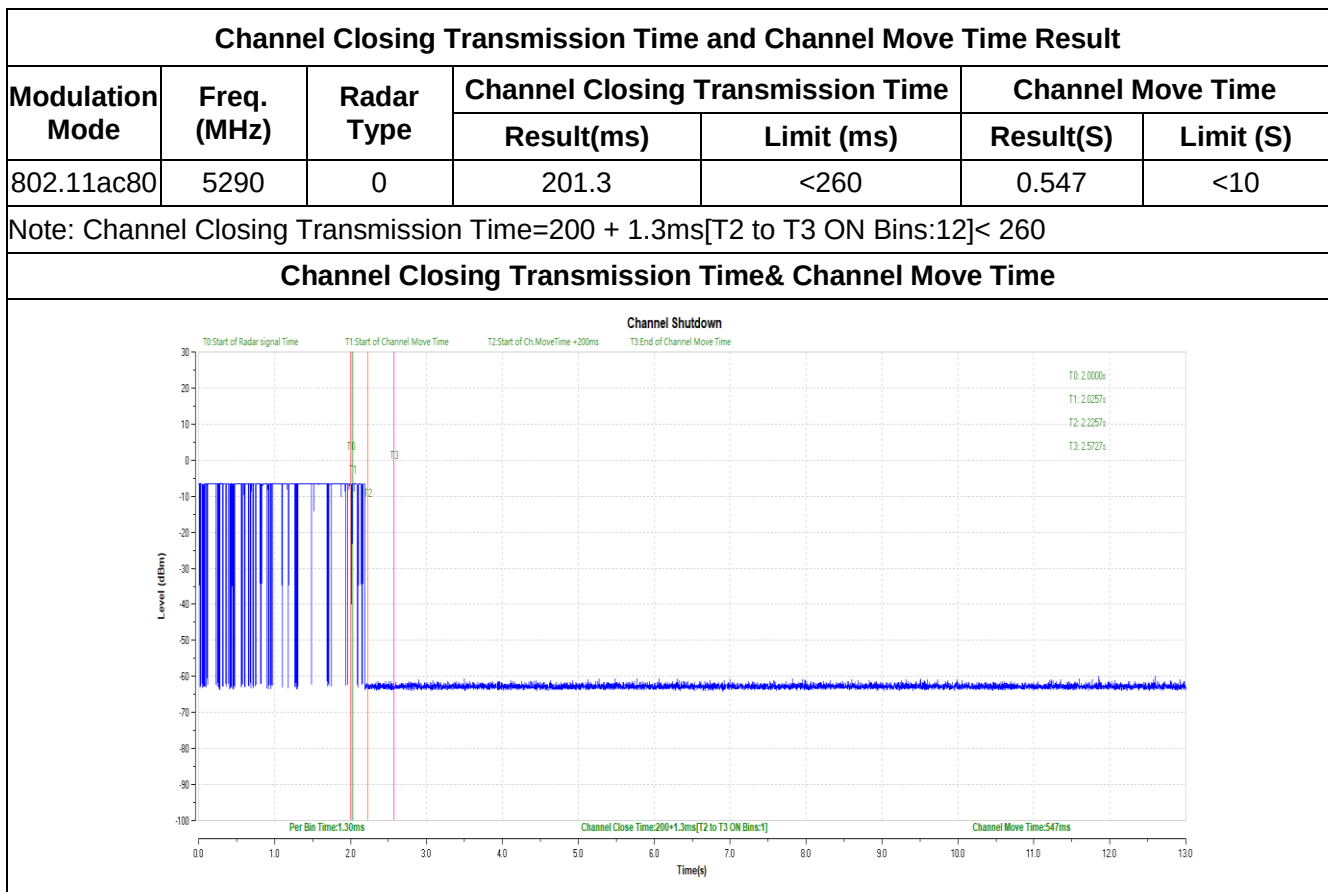
In-service Monitoring Limit	
Channel Move Time	10 sec
Channel Closing Transmission Time	200 ms + an aggregate of 60 ms over remaining 10 sec periods.
Non-occupancy period	Minimum 30 minutes

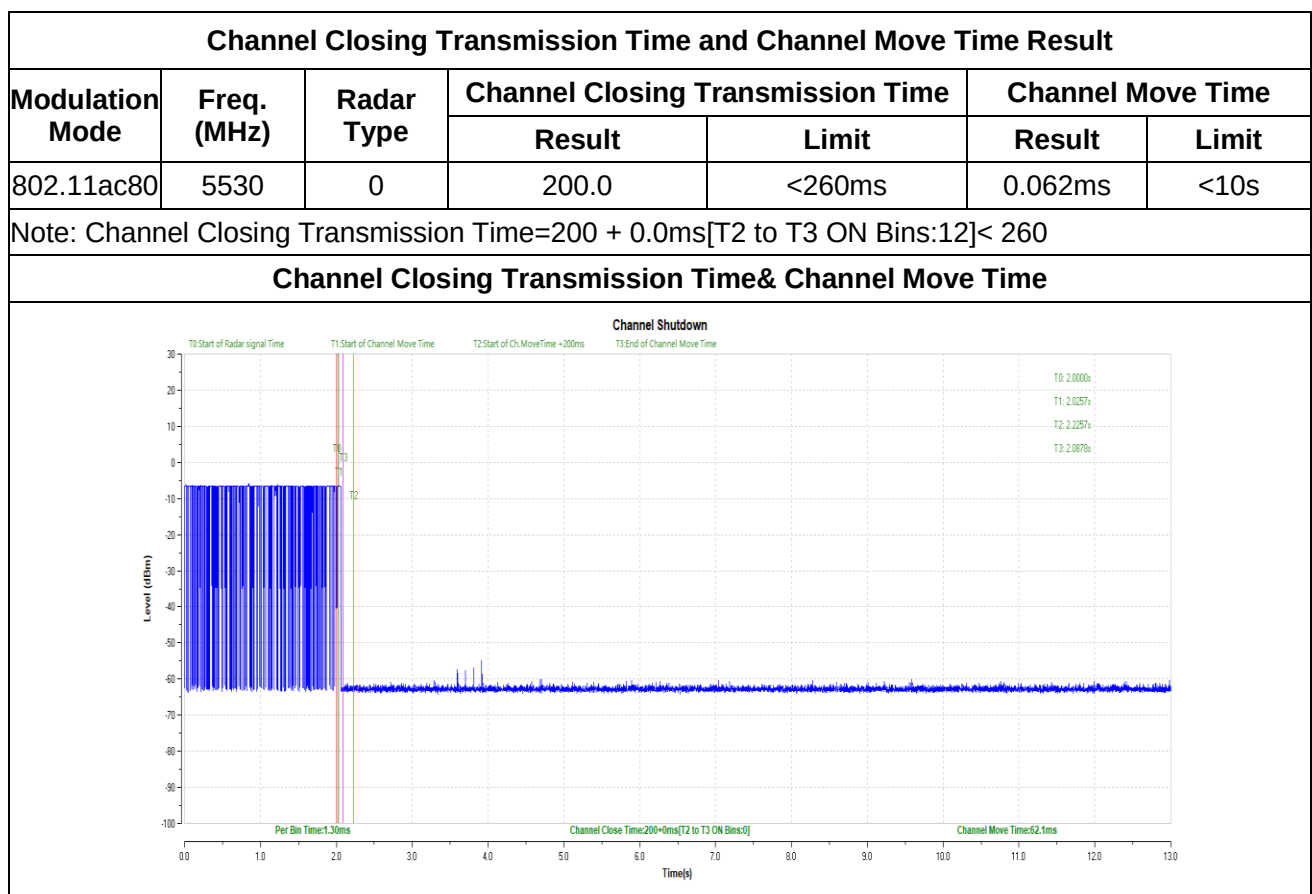
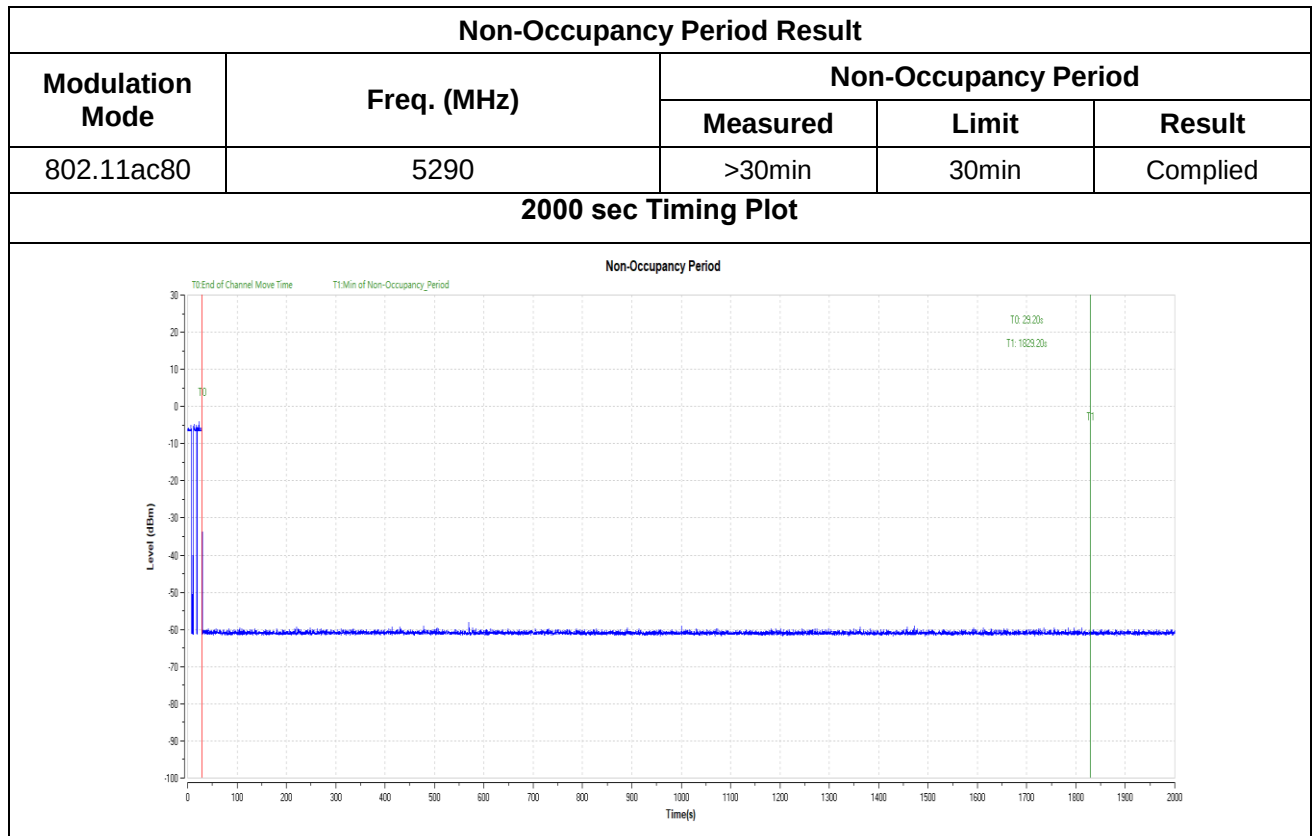
Test Setup:

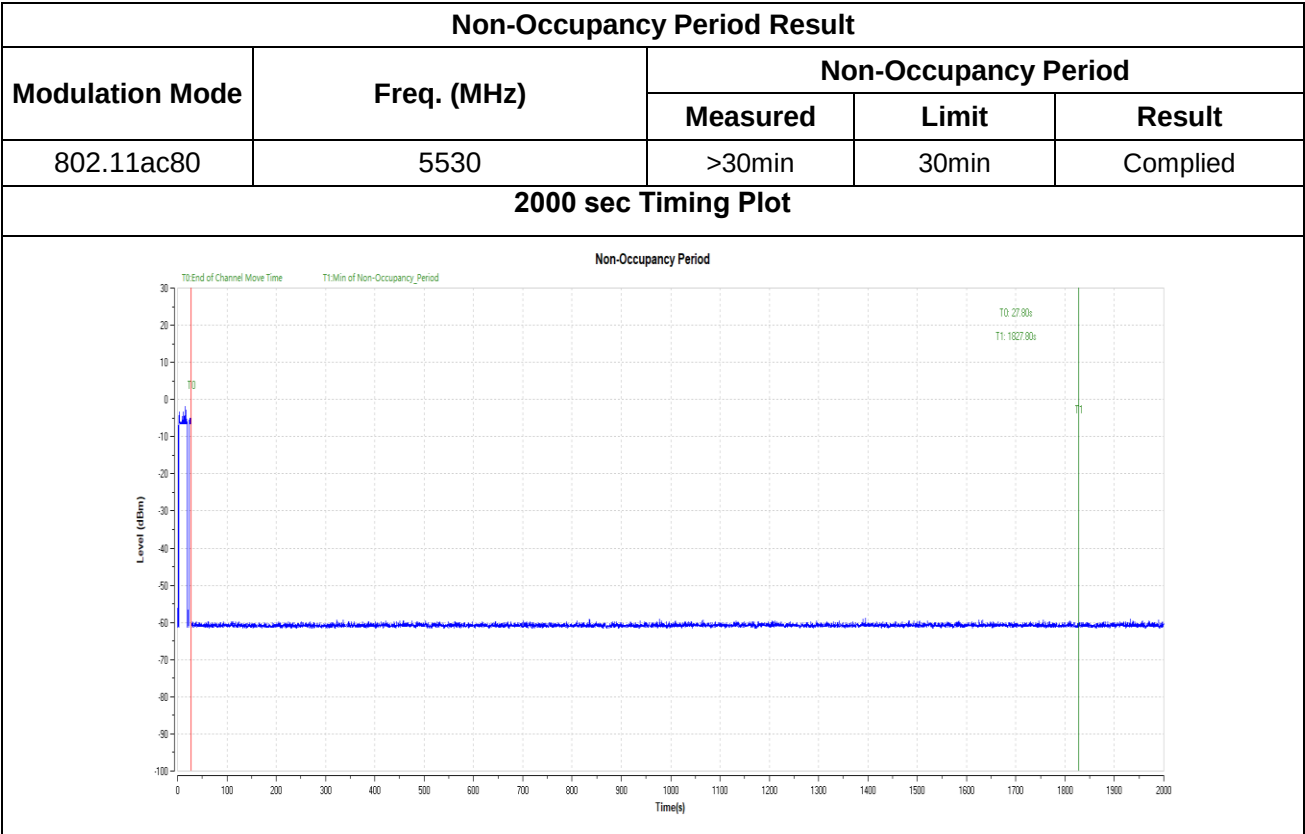
Setup for Client with injection at the Master



Test Results:







5.7.5 Statistical Performance Check

Method of Measurement:

Refer as KDB905462 D02 UNII DFS Compliance Procedures New Rules v02, clause 7.8.4 for Statistical Performance Check test. Stream the MPEG test file from the Master Device to the Client Device on the test Channel for the entire period of the test. Observe the transmissions of the UUT at the end of the Burst on the Operating Channel for duration greater than 10 seconds for Short Pulse Radar Types 1-4 and 6 to ensure detection occurs. Then Observe the transmissions of the UUT at the end of the Burst on the Operating Channel for duration greater than 22 seconds for Long Pulse Radar Type 5 to ensure detection occurs. The device can utilize a test mode to demonstrate when detection occurs to prevent the need to reset the device between trial runs.

Limits:

Radar Type	Minimum Percentage of Successful Detection (Pd)	Minimum Trials
1	60%	30
2	60%	30
3	60%	30
4	60%	30
Aggregate (Radar Types 1-4)	80%	120
5	80%	30
6	70%	30

The percentage of successful detection is calculated by:

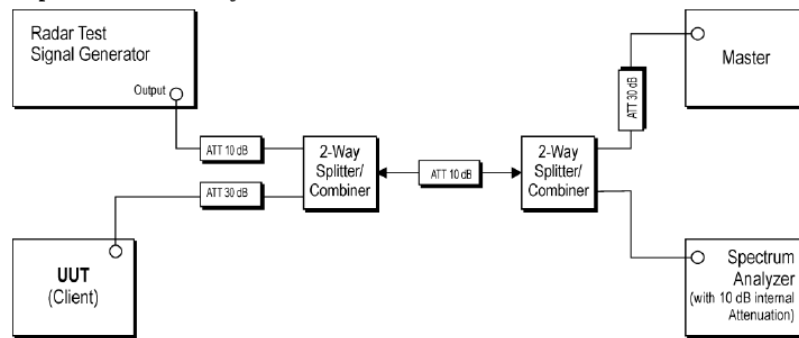
$$\frac{\text{Total Waveform Detections}}{\text{Total Waveform Trails}} \times 100 = \text{Probability of Detection Radar Waveform}$$

In addition an aggregate minimum percentage of successful detection across all Short Pulse Radar Types 1-4 is required and is calculated as follows:

$$\frac{Pd1+Pd2+Pd3+Pd4}{4}$$

Test Setup:

Setup for Client with injection at the Master



Test Results:

Not required

6. Appendix A

Test Equipment	Type/Mode	SERIAL NO.	Equipment No.	Manufacturer	Cal. Due
Spectrum Analyzer	FSV40	101580	DZ-000238-3	R&S	2023/06/05
Comprehensive Test Instrument	CMW270	100304	DZ-000240-1	R&S	2023/12/06
Analog Signal Generator	SMB100A	181858	DZ-000238-2	R&S	2023/06/05
Vector Signal Generator	SGT100A	111661	DZ-000238-1	R&S	2023/06/05
RF Radio Frequency Switch	JS0806-2	19H9080187	DZ-000241	Tonscend	2023/06/06
Programmable DC Power Supply	E3644A	MY58036222	DZ-000178	KEYSIGHT	2024/04/12
3m Semi-Anechoic Chamber	FACT-4	ST08035	WKNA-0024	ETS	2024/12/12
5m Semi-Anechoic Chamber	SAC-5	SAC-5-2.0	EM-000557	COMTEST	2024/11/02
Spectrum Analyzer	N9010B	MY57470323	DZ-000174	KEYSIGHT	2024/02/22
EMI Test Receiver	N9038A-508	MY532290079	EM-000397	Agilent	2024/02/22
EMI Test Receiver	ESR7	102235	VGDY-0956	R&S	2024/02/22
loop antenna	HLA 6121	540046	EM-000546	TESEQ	2023/06/06
Broadband Antenna	VULB 9163	9163-676	EM-000382	SCHWARZBECK	2023/07/01
Broadband Antenna	VULB 9163	9163-530	EM-000342	SCHWARZBECK	2023/06/25
Waveguide Horn Antenna	HF906	360306/008	EM-000093	R&S	2024/02/24
Waveguide Horn Antenna	BBHA9170	00949	EM-000383	SCHWARZBECK	2023/08/26
Bandstop Filters	SW-BSF-2400-100-7-A1	/	EM-000495	/	2023/08/30
5G Bandstop Filters	WRCJV12-4900-5100-5900-6100-50EE	1	DZ-000186	WI	2023/12/06
Preamplifier	BBV 9721	9721-050	DZ-000209-1	SCHWARZBECK	2023/06/05
EMI Test Receiver (#1)	ESW44	103123	EM-000698	R&S	2023/06/18
LISN	NSLK 8128	8128-316	VGDY-0149	SCHWARZBECK	2023/09/04
Plus Limiter (#1)	VTSD 9561 F-N	00515	VGDY-0808	SCHWARZBECK	2024/03/04
Shielding Room(#1)	GP1A	001	WKNF-0001	LEINING	2024/08/08

The End

Important

1. The test report is invalid without the official stamp of CVC;
2. Any part photocopies of the test report are forbidden without the written permission from CVC;
3. The test report is invalid without the signatures of Author and Reviewer;
4. The test report is invalid if altered;
5. Objections to the test report must be submitted to CVC within 15 days;
6. Generally, commission test is responsible for the tested samples only;
7. As for the test result, “—” or “N/A” means “not applicable”, “/” means “not testing”, “P” means “pass” and “F” means “fail”.

The test data and test results given in this test report should only be used for purposes of scientific research, teaching and internal quality control when the CMA symbol is not presented.

Address: No.3, Tiantaiyi Road, Kaitai Avenue, Science City, Guangzhou, China (Test location)

Post Code: 510663 Tel: 020-32293888

FAX: 020 32293889 E-mail: office@cvc.org.cn