Radio Test Report

Report No.:STS2406116W12

Issued for

Chengdu Accsoon Technology Co., LTD.

Rm. 708, Bld. 1, Xiongchuan Center, No.166, Tianfu 2nd St., High-tech Zone, Chengdu, 610000, China.

Product Name:	CineView Master 4K
Brand Name:	ACCSOON
Model Name:	WIT07
Series Model(s):	WIT07-H, WIT07-M
FCC ID:	2AOH407WITTR
Test Standards:	FCC Part15.407

TEST REPORT

Applicant's Name ..... :	Chengdu Accsoon Technology Co., LTD.
Address ..... :	Rm. 708, Bld. 1, Xiongchuan Center, No.166, Tianfu 2nd St., High-tech Zone, Chengdu, 610000, China.
Manufacturer's Name ..... :	Shenzhen Accsoon Technology Co., LTD.
Address ..... :	Room 302, BLDG D, Zhiyuanyungu, 73 Guanlan Blvd, Longhua District, Shenzhen 518110, China.

Product Description

Product Name ..... :	CineView Master 4K
Brand Name ..... :	ACCSOON
Model Name ..... :	WIT07
Series Model(s) ..... :	WIT07-H, WIT07-M
Test Standards ..... :	FCC Part15.407
Test Procedure	ANSI C63.10-2020

This device described above has been tested by STS, the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.
The test results presented in this report relate only to the object tested. This report shall not be reproduced, except in full, without the written approval of the Shenzhen STS Test Services Co., Ltd.

Date of Test ..... :	
Date of receipt of test item ..... :	24 June 2024
Date (s) of performance of tests ..... :	24 June 2024~ 09 Oct. 2024
Date of Issue ..... :	09 Oct. 2024
Test Result ..... :	**Pass**

Testing Engineer : Aaron Bu

(Aaron Bu)

Technical Manager : Tony Liu

(Tony Liu)

Authorized Signatory : Bovey Yang

(Bovey Yang)

SHENZHEN STS TEST SERVICES CO.,LTD. TESTING APPROVAL

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Revision History

Rev.	Issue Date	Report No.	Effect Page	Contents
00	09 Oct. 2024	STS2406116W12	ALL	Initial Issue

1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:
§ 15.407,KDB 789033 D02 General U-NII Test Procedures New Rules v02r01.
KDB 98794 D02 U-NII 6GHz EMC Measurement v02r01.

FCC Part 15.407		
FCC standard	Test Item	Results
15.207	AC Conducted Emission	PASS
15.407 (a) /15.407 (e)	26dB & 99% Bandwidth	PASS
15.407(a)	Maximum Conducted Output Power	PASS
15.407(b)/15.205/15.209	Radiated Emission And (bandedge Emissions) Measurement	PASS
15.407(b)	In-Band Emission(Mask)	PASS
15.407(a)	Power Spectral Density	PASS
15.407(c)	Automatically Discontinue Transmission	PASS
15.407(d)	Contention Based Protocol	PASS
15.203/15.204	Antenna Requirement	PASS

NOTE:

(1) 'N/A' denotes test is not applicable in this Test Report.

(2) All tests are according to ANSI C63.10-2020.

1.1 TEST FACTORY

SHENZHEN STS TEST SERVICES CO., LTD
Add. : 101, Building B, Zhuoke Science Park, No.190 Chongqing Road, ZhanChengShequ, Fuhai Sub-District, Bao'an District, Shenzhen, Guang Dong, China
FCC test Firm Registration Number: 625569
IC test Firm Registration Number: 12108A
A2LA Certificate No.: 4338.01

1.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement **y ± U**, where expended uncertainty **U** is based on a standard uncertainty multiplied by a coverage factor of **k=2**, providing a level of confidence of approximately **95** %.

No.	Item	Uncertainty
1	RF output power, conducted	±0.755dB
2	Unwanted Emissions, conducted	±2.874dB
3	All emissions, radiated 9K-30MHz	±3.80dB
4	All emissions, radiated 30M-1GHz	±4.18dB
5	All emissions, radiated 1G-6GHz	±4.90dB
6	All emissions, radiated>6G	±5.24dB
7	Conducted Emission (9KHz-150KHz)	±2.19dB
8	Conducted Emission (150KHz-30MHz)	±2.53dB
9	Occupied Channel Bandwidth	±3.5%
10	Power Spectral Density, conducted	±1.245dB
11	Duty Cycle	±3.2%

2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF THE EUT

<table>
<tr><td>Product Name</td><td>CineView Master 4K</td></tr>
<tr><td>Brand Name</td><td>ACCSOON</td></tr>
<tr><td>Model Name</td><td>WIT07</td></tr>
<tr><td>Series Model(s)</td><td>WIT07-H, WIT07-M</td></tr>
<tr><td>Model Difference</td><td>Only differences in model name.</td></tr>
<tr><td>Product Description</td><td>The EUT is a CineView Master 4K
<table>
<tr><td>Radio Technology</td><td>IEEE 802.11 ax(HE20)/ ax(HE40)/ ax(HE80)</td></tr>
<tr><td>Operation Frequency:</td><td>UNII-5 Band: 5955-6415MHz
UNII-7 Band: 6535-6855MHz</td></tr>
<tr><td>Modulation Type:</td><td>802.11ax(OFDM, OFDMA):
BPSK,QPSK,16-QAM,64-QAM,256-QAM</td></tr>
<tr><td>Antenna Type:</td><td>Dipole</td></tr>
<tr><td>Antenna Gain (dBi):</td><td>ANT 1：2.5 dBi
ANT 2：2.5 dBi
MIMO：5.51 dBi</td></tr>
</table>
More details of EUT technical specification, please refer to the User Manual.</td></tr>
<tr><td>Test Channel</td><td>Please refer to the Note 3.</td></tr>
<tr><td>Rating</td><td>Input: DC 7.4-16.8V</td></tr>
<tr><td>Hardware version number</td><td>V1.00</td></tr>
<tr><td>Software version number</td><td>V1.00</td></tr>
<tr><td>Connecting I/O Port(s)</td><td>Please refer to the Note 1.</td></tr>
</table>

Note

1. For a more detailed features description, please refer to the manufacturer’s specifications or the User Manual.
2. The antenna information refer the manufacturer provide report, applicable only to the tested sample identified in the report. Due to the incorrect antenna information, a series of problems such as the accuracy of the test results will be borne by the customer.

3. Operation Frequency of channel

802.11ax HE20			
UNII-5		UNII-7	
Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	5955	117	6535
5	5975	121	6555
9	5995	125	6575
13	6015	129	6595
17	6035	133	6615
21	6055	137	6635
25	6075	141	6655
29	6095	145	6675
33	6115	149	6695
37	6135	153	6715
41	6155	157	6735
45	6175	161	6755
49	6195	165	6775
53	6215	169	6795
57	6235	173	6815
61	6255	177	6835
65	6275	181	6855
69	6295		
73	6315	-	-
77	6335	-	-
81	6355	-	-
85	6375	-	-
89	6395	-	-
93	6415	-	-

802.11ax HE40			
UNII-5		UNII-7	
Channel	Frequency (MHz)	Channel	Frequency (MHz)
3	5965	123	6565
11	6005	131	6605
19	6045	139	6645
27	6085	147	6685
35	6125	155	6725
43	6165	163	6765
51	6205	171	6805
59	6245	179	6845
67	6285	-	-
75	6325	-	-
83	6365	-	-
91	6405	-	-

802.11ax HE80			
UNII-5		UNII-7	
Channel	Frequency (MHz)	Channel	Frequency (MHz)
7	5985	135	6625
23	6065	151	6705
39	6145	167	6785
55	6225	-	-
71	6305	-	-
87	6385	-	-

Note:
In section 15.31(m), regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:

4. 6GHz: Test Frequency Channel

802.11ax HE20			
UNII-5		UNII-7	
Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	5955	117	6535
45	6175	149	6695
93	6415	181	6855

802.11ax HE40			
UNII-5		UNII-7	
Channel	Frequency (MHz)	Channel	Frequency (MHz)
3	5965	123	6565
43	6165	147	6685
91	6405	179	6845

802.11ax HE80			
UNII-5		UNII-7	
Channel	Frequency (MHz)	Channel	Frequency (MHz)
7	5985	135	6625
39	6145	151	6705
87	6385	167	6785

5. KDB 662911 D01 Multiple Transmitter Output v02r01
2) Directional Gain Calculations for In-Band Measurements
a) Basic methodology with NANT transmit antennas, each with the same directional gain GANT dBi, being driven by NANT transmitter outputs of equal power. Directional gain is to be computed as follows:
(i) If any transmit signals are correlated with each other,
Directional gain = GANT + 10 log(NANT) dBi
(ii) If all transmit signals are completely uncorrelated with each other,
Directional gain = GANT

Ant	Brand	Model Name	Ant Type	Connector	Gain (dBi)	NOTE
A	ACCSOON	WIT07	Dipole	N/A	ANT 1：2.5 ANT 2：2.5 MIMO 1+2：5.51	WLAN Ant

2.2 DESCRIPTION OF TEST MODES

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

Worst Mode	Description	Data Rate
Mode 1	TX IEEE 802.11ax HE20 CH01&CH45&CH93	NSS1 MCS0
Mode 2	TX IEEE 802.11 ax HE20 CH117&CH149&CH181	NSS1 MCS0
Mode 3	TX IEEE 802.11 ax HE40 CH03&CH43&CH91	NSS1 MCS0
Mode 4	TX IEEE 802.11 ax HE40 CH123&CH147&CH179	NSS1 MCS0
Mode 5	TX IEEE 802.11 ax HE80 CH7&CH39&CH87	NSS1 MCS0
Mode 6	TX IEEE 802.11 ax HE80 CH135&CH151&CH167	NSS1 MCS0

Note: (1) The measurements are performed at the highest, middle, lowest available channels.
(2) The measurements are performed at all Bit Rate of Transmitter, the worst data was reported.
(3) We have be tested for all avaiable U.S. voltage and frequencies(For 120V,50/60Hz and 240V, 50/60Hz) for which the device is capable of operation.

AC Conducted Emission

Test Case	
AC Conducted Emission	Mode 7: Keeping TX + WLAN Link

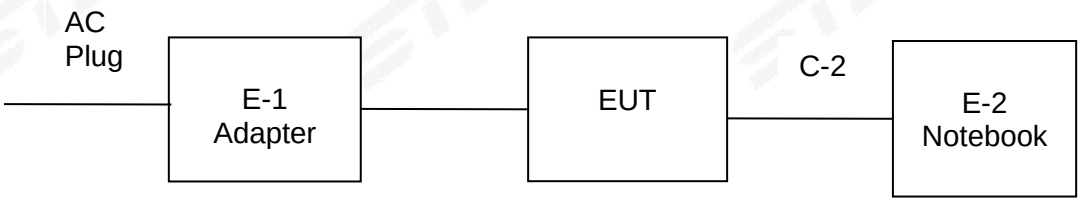
2.3 TEST SOFTWARE AND POWER LEVEL

During testing channel & power controlling software provided by the customer was used to control the operating channel as well as the output power level.

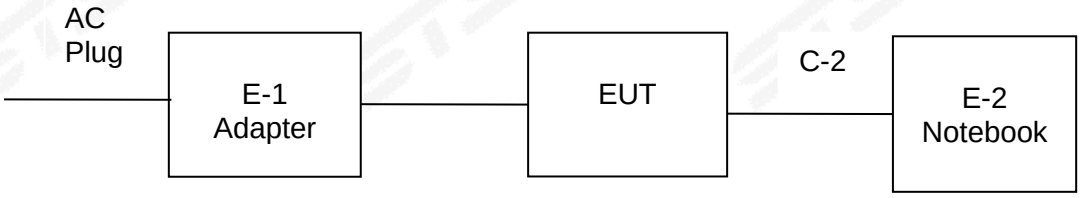
RF Function	Type	Mode Or Modulation type	ANT Gain(dBi)	ANT_1 Power Class	ANT_2 Power Class	Software For Testing
WIFI 6E	U-NII-5 (5925MHz-6425MHz)	802.11ax(HE20)	ANT 1：2.5 ANT 2：2.5 MIMO 1+2：5.51	-3	-3	QATool_Dbg
		802.11ax(HE40)		-3	-3	
		802.11ax(HE80)		1	1	
RF Function	Type	Mode Or Modulation type	ANT Gain(dBi)	ANT_1 Power Class	ANT_2 Power Class	Software For Testing
WIFI 6E	U-NII-7 (6525MHz-6875MHz)	802.11ax(HE20)	ANT 1：2.5 ANT 2：2.5 MIMO 1+2：5.51	-4	-4	QATool_Dbg
		802.11ax(HE40)		-3	-3	
		802.11ax(HE80)		1	1	

2.4 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

Radiated Spurious EmissionTest



Conducted Emission Test



2.5 DESCRIPTION OF NECESSARY ACCESSORIES AND SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Necessary accessories

Item	Equipment	Mfr/Brand	Model/Type No.	Length	Note
N/A	N/A	N/A	N/A	N/A	N/A

Support units

Item	Equipment	Mfr/Brand	Model/Type No.	Length	Note
E-1	Adapter	HUAWEI	HW-050450C00	N/A	N/A
E-2	Notebook	LENOVO	Think Pad E470	N/A	N/A
C-2	USB Cable	N/A	N/A	150cm	N/A

Note:

(1) For detachable type I/O cable should be specified the length in cm in『Length』column.

2.6 EQUIPMENTS LIST FOR ALL TEST ITEMS

RF Radiation Test Equipment					
Kind of Equipment	Manufacturer	Type No.	Serial No.	Last Calibration	Calibrated Until
Temperature & Humidity	SW-108	SuWei	N/A	2024.03.15	2025.03.14
Pre-Amplifier(0.1M-3GHz)	EM	EM330	060665	2024.02.23	2025.02.22
Pre-Amplifier(1G-18GHz)	SKET	LNPA-01018G-45	SK2018080901	2024.09.23	2025.09.22
Pre-Amplifier(18G-40GHz)	SKET	LNPA_1840-50	SK2018101801	2024.02.23	2025.02.22
Active loop Antenna	ZHINAN	ZN30900C	16035	2023.02.28	2025.02.27
Bilog Antenna	TESEQ	CBL6111D	34678	2024.09.30	2025.09.29
Horn Antenna	SCHWARZBECK	BBHA 9120D	02014	2023.09.24	2025.09.23
Horn Antenna	A-INFOMW	LB-180400-KF	J211020657	2023.10.10	2025.10.09
Positioning Controller	MF	MF-7802	MF-780208587	N/A	N/A
Signal Analyzer	R&S	FSV 40-N	101823	2024.09.23	2025.09.22
Switch Control Box	N/A	N/A	N/A	N/A	N/A
Filter Box	BALUN Technology	SU319E	BL-SZ1530051	N/A	N/A
Antenna Mast	MF	MFA-440H	N/A	N/A	N/A
Turn Table	MF	SC100_1	60531	N/A	N/A
AC Power Source	APC	KDF-11010G	F214050035	N/A	N/A
DC power supply	HONGSHENGFENG	DPS-305AF	17064939	2024.09.23	2025.09.22
Test SW	EZ-EMC	Ver.STSLAB-03A1 RE			
Conduction Test equipment					
Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
Test Receiver	R&S	ESCI	101427	2024.09.24	2025.09.23
Limtter	CYBERTEK	EM5010	N/A	2024.09.24	2025.09.23
LISN	R&S	ENV216	101242	2024.09.24	2025.09.23
LISN	EMCO	3810/2NM	23625	2024.09.24	2025.09.23
Temperature & Humidity	SW-108	SuWei	N/A	2024.03.15	2025.03.14
Test SW	EZ-EMC	Ver.STSLAB-03A1 CE			
RF Connected Test					
Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
Signal Analyzer	Agilent	N9020A	MY51510623	2024.02.23	2025.02.22
Switch control box	MW	MW100-RFCB	N/A	N/A	N/A
Temperature & Humidity	SW-108	SuWei	N/A	2024.03.15	2025.03.14
Test SW	MW	MTS 8310_2.0.0.0			

3. EMC EMISSION TEST

3.1 CONDUCTED EMISSION MEASUREMENT

3.1.1 POWER LINE CONDUCTED EMISSION Limits (Frequency Range 150KHz-30MHz)

FREQUENCY (MHz)	Class B (dBuV)		Standard
	Quasi-peak	Average	
0.15 -0.5	66 - 56 *	56 - 46 *	CISPR
0.50 -5.0	56.00	46.00	CISPR
5.0 -30.0	60.00	50.00	CISPR

0.15 -0.5	66 - 56 *	56 - 46 *	FCC
0.50 -5.0	56.00	46.00	FCC
5.0 -30.0	60.00	50.00	FCC

Note:

(1) The tighter limit applies at the band edges.

(2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

The following table is the setting of the receiver

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

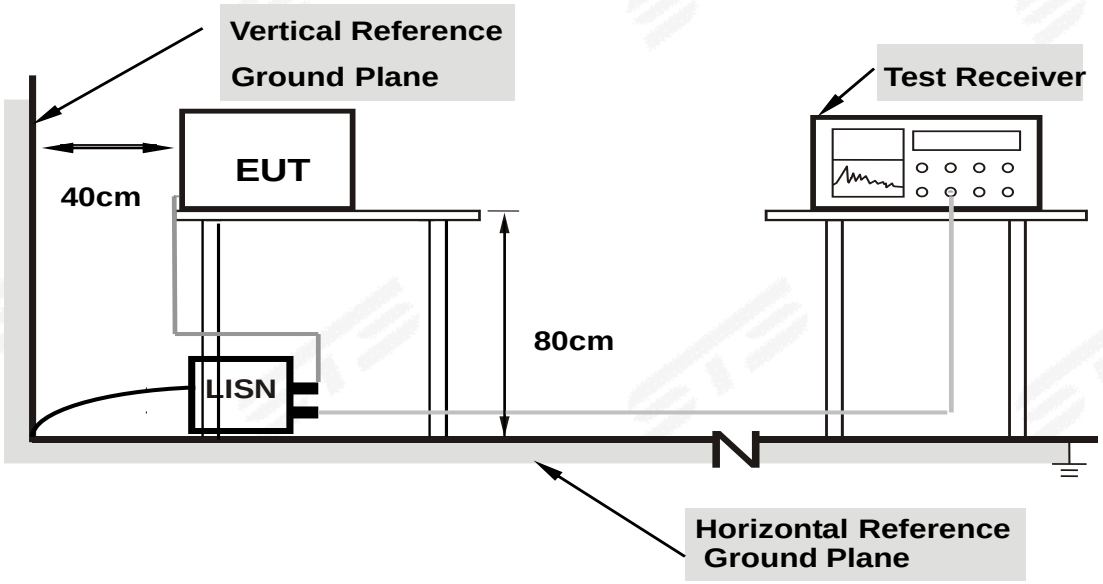
3.1.2 TEST PROCEDURE

a. The EUT is 0.8 m from the horizontal ground plane and 0.4 m from the vertical ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments are powered from additional LISN(s). The LISN provides 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
c. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
d. LISN is at least 80 cm from the nearest part of EUT chassis.
e. For the actual test configuration, please refer to the related Item –EUT Test Photos.

3.1.3 DEVIATION FROM TEST STANDARD

No deviation

3.1.4 TEST SETUP



Note: 1. Support units were connected to second LISN.

2. Both of LISNs (AMN) are 80 cm from EUT and at least 80 cm from other units and other metal planes support units.

3.1.5 EUT OPERATING CONDITIONS

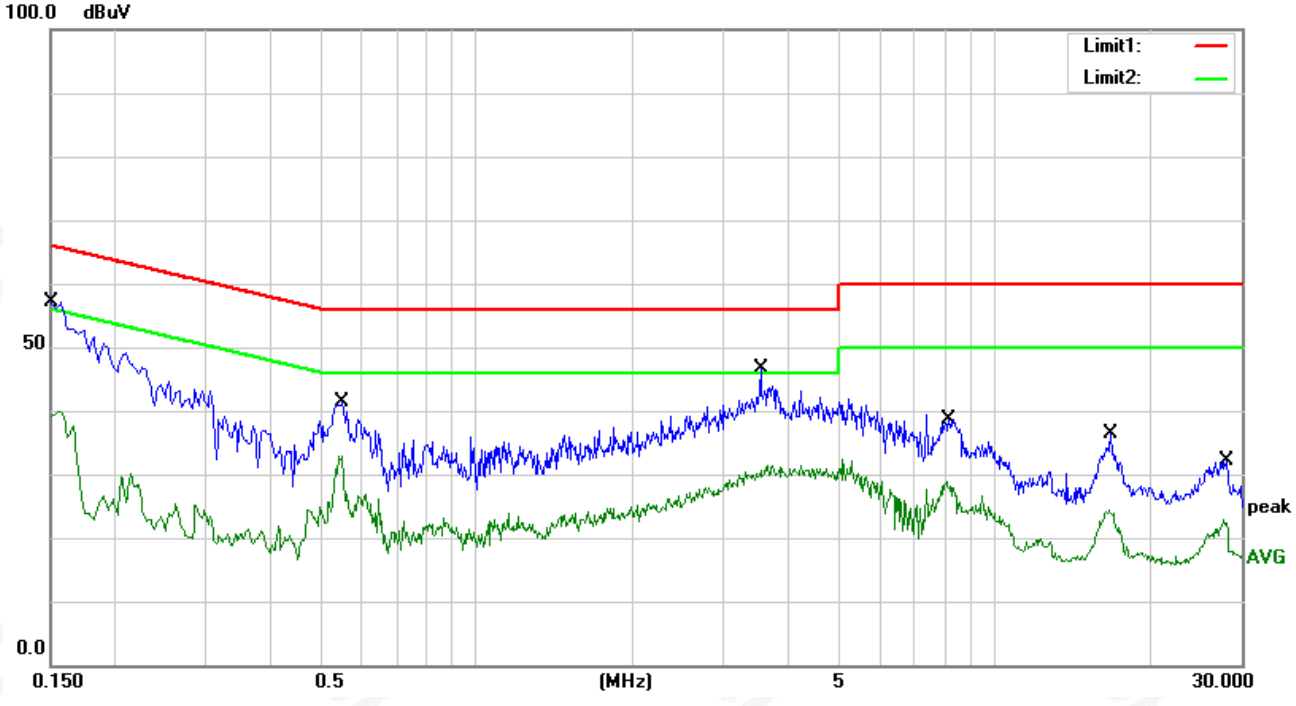
The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

3.1.6 TEST RESULTS

Temperature:	25.1(C)	Relative Humidity:	59%RH
Test Voltage:	AC 120V/60Hz	Phase:	L
Test Mode：	Mode 7		

No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB)	(dBuV)	(dBuV)	(dB)	
1	0.1500	37.33	19.78	57.11	66.00	-8.89	QP
2	0.1500	20.14	19.78	39.92	56.00	-16.08	AVG
3	0.5500	21.30	19.96	41.26	56.00	-14.74	QP
4	0.5500	12.95	19.96	32.91	46.00	-13.09	AVG
5	3.5340	26.70	19.83	46.53	56.00	-9.47	QP
6	3.5340	11.61	19.83	31.44	46.00	-14.56	AVG
7	8.1860	18.57	20.03	38.60	60.00	-21.40	QP
8	8.1860	8.73	20.03	28.76	50.00	-21.24	AVG
9	16.8100	15.99	20.44	36.43	60.00	-23.57	QP
10	16.8100	4.00	20.44	24.44	50.00	-25.56	AVG
11	28.0620	11.94	20.17	32.11	60.00	-27.89	QP
12	28.0620	2.63	20.17	22.80	50.00	-27.20	AVG

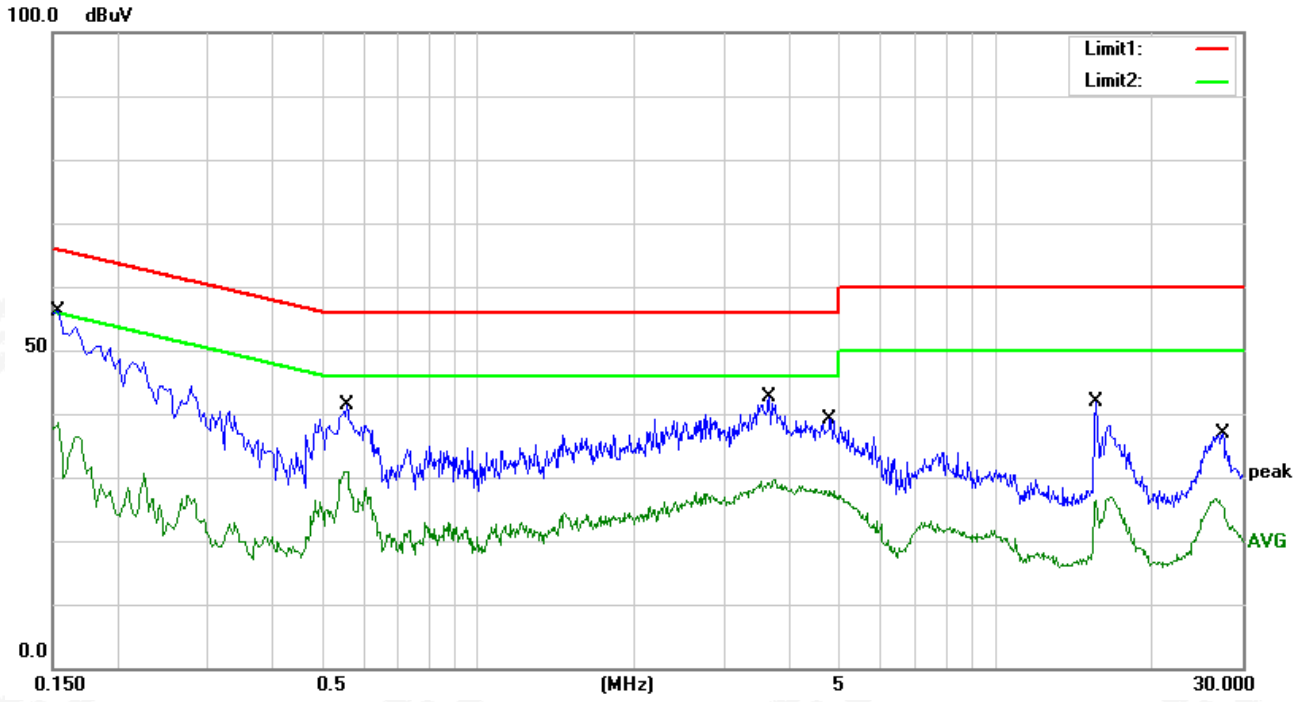
Remark:
1. All readings are Quasi-Peak and Average values
2. Margin = Result (Result =Reading + Factor)–Limit
3. Factor=LISN factor+Cable loss+Limiter (10dB)



Temperature:	25.1(C)	Relative Humidity:	59%RH
Test Voltage	AC 120V/60Hz	Phase:	N
Test Mode	Mode 7		

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1540	36.44	19.78	56.22	65.78	-9.56	QP
2	0.1540	18.77	19.78	38.55	55.78	-17.23	AVG
3	0.5580	21.32	19.95	41.27	56.00	-14.73	QP
4	0.5580	10.99	19.95	30.94	46.00	-15.06	AVG
5	3.6420	22.80	19.83	42.63	56.00	-13.37	QP
6	3.6420	9.90	19.83	29.73	46.00	-16.27	AVG
7	4.7740	19.37	19.83	39.20	56.00	-16.80	QP
8	4.7740	8.15	19.83	27.98	46.00	-18.02	AVG
9	15.6340	21.43	20.39	41.82	60.00	-18.18	QP
10	15.6340	6.47	20.39	26.86	50.00	-23.14	AVG
11	27.4180	16.78	20.16	36.94	60.00	-23.06	QP
12	27.4180	6.49	20.16	26.65	50.00	-23.35	AVG

Remark:
1. All readings are Quasi-Peak and Average values
2. Margin = Result (Result =Reading + Factor)–Limit
3. Factor=LISN factor+Cable loss+Limiter (10dB)



3.2 RADIATED EMISSION AND (BANDEDGE) MEASUREMENT

3.2.1 RADIATED EMISSION LIMITS (Frequency Range 9kHz-1000MHz)

In case the emission fall within the restricted band specified on 15.407(b)7&15.205/209(a), then the limit in the table below has to be followed.

Frequency (MHz)	Field Strength (micorvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

Frequency (MHz)	Limit (dBuV/m) (at 3M)	
	PEAK	AVERAGE
Above 1000	68.2	54

Notes:

(1) The limit for radiated test was performed according to FCC PART 15E.

(2) The tighter limit applies at the band edges.

(3) Emission level (dBuV/m)=20log Emission level (uV/m).

LIMITS OF RESTRICTED FREQUENCY BANDS

FREQUENCY (MHz)	FREQUENCY (MHz)	FREQUENCY (MHz)	FREQUENCY (GHz)
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	Above 38.6
13.36-13.41			

Note: In case the emission radiated emission above 1000MHz fall within the restricted band the restricted frequency bands, the peak limit is 74 dBuV/m.

LIMITS OF EMISSIONS OUTSIDE OF THE FREQUENCY BANDS

For transmitters operating within the 5.925-7.125 GHz band: Any emissions outside of the 5.925-7.125 GHz band must not exceed an e.i.r.p. of −27 dBm/MHz.
For transmitters operating within the 5.925-7.125 GHz bands: Power spectral density must be suppressed by 20 dB at 1 MHz outside of channel edge, by 28 dB at one channel bandwidth from the channel center, and by 40 dB at one- and one-half times the channel bandwidth away from channel center. At frequencies between one megahertz outside an unlicensed device's channel edge and one channel bandwidth from the center of the channel, the limits must be linearly interpolated between 20 dB and 28 dB suppression, and at frequencies between one and one- and one-half times an unlicensed device's channel bandwidth, the limits must be linearly interpolated between 28 dB and 40 dB suppression. Emissions removed from the channel center by more than one- and one-half times the channel bandwidth must be suppressed by at least 40 dB.

Note: dBuV/m(at 3M) = EIRP(dBm) + 95.2.

Peak Limit = -27dBm/MHz + 95.2 = 68.2 dBuV/m.

Spectrum Parameter	**Setting**
Attenuation	Auto
Detector	Peak
Start Frequency	1000 MHz(Peak/AV)
Stop Frequency	10th carrier harmonic (Peak/AV)
RB / VB (emission in restricted band)	1 MHz / 1 MHz, AV=1 MHz /3 MHz

For Band edge

Spectrum Parameter	Setting
Detector	Peak
RB / VB (emission in restricted band)	1 MHz / 1 MHz, AV=1 MHz /3 MHz

Receiver Parameter	**Setting**
Attenuation	Auto
Start ~ Stop Frequency	9kHz~90kHz / RB 200Hz for PK & AV
Start ~ Stop Frequency	90kHz~110kHz / RB 200Hz for QP
Start ~ Stop Frequency	110kHz~490kHz / RB 200Hz for PK & AV
Start ~ Stop Frequency	490kHz~30MHz / RB 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RB 120kHz for QP

3.2.2 TEST PROCEDURE

a. The measuring distance at 3 m shall be used for measurements at frequency 0.009MHz up to 1GHz, and above 1GHz.
b. The EUT was placed on the top of a rotating table 0.8 m (above 1GHz is 1.5 m) above the ground at a 3 m anechoic chamber test site. The table was rotated 360 degree to determine the position of the highest radiation.
c. The height of the equipment shall be 0.8 m (above 1GHz is 1.5 m); the height of the test antenna shall vary between 1 m to 4 m. Horizontal and vertical polarization of the antenna are set to make the measurement.
d. The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and QuasiPeak detector mode will be re-measured.
e. If the Peak Mode measured value is compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and no additional QP Mode measurement was performed.
f. For the actual test configuration, please refer to the related Item –EUT Test Photos.

Note:

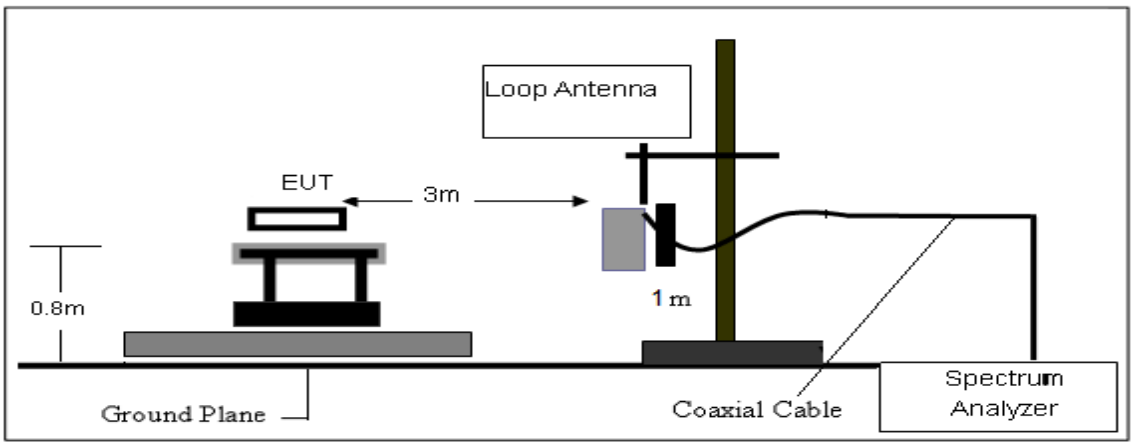
Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported.

3.2.2 DEVIATION FROM TEST STANDARD

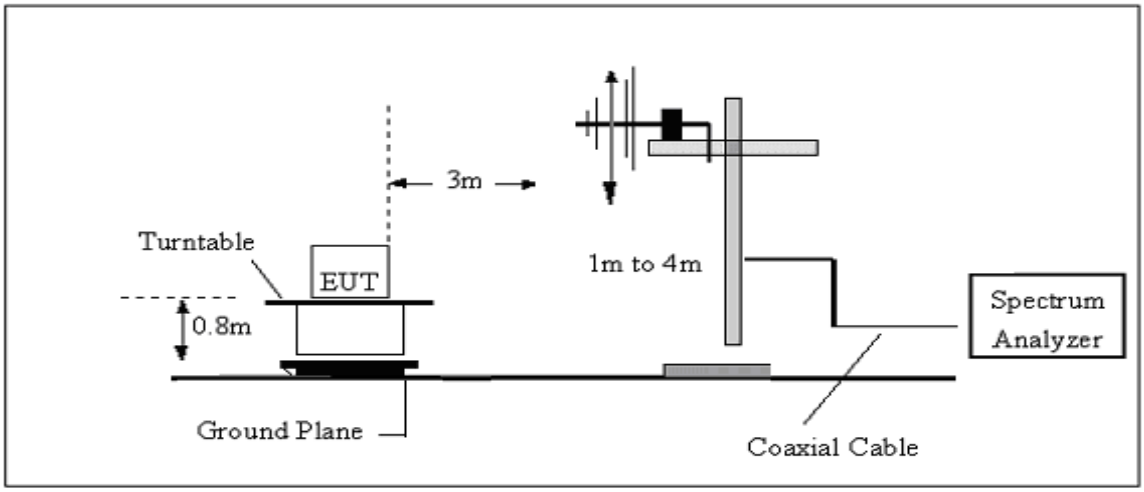
No deviation

3.2.3 TEST SETUP

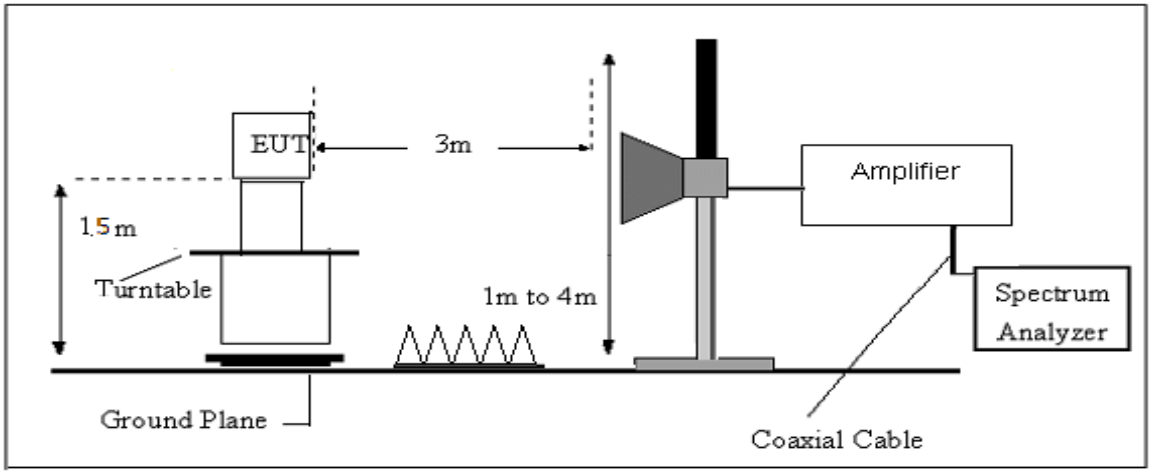
(A) Radiated Emission Test-Up Frequency Below 30MHz



(B) Radiated Emission Test-Up Frequency 30MHz~1GHz



(C) Radiated Emission Test-Up Frequency Above 1GHz



3.2.4 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

3.2.5 FIELD STRENGTH CALCULATION

The field strength is calculated by adding the Antenna Factor and Cable Factor and subtracting the Amplifier Gain and Duty Cycle Correction Factor (if any) from the measured reading. The basic equation with a sample calculation is as follows:
FS = RA + AF + CL - AG
Where
FS = Field Strength
CL = Cable Attenuation Factor (Cable Loss)
RA = Reading Amplitude
AG = Amplifier Gain
AF = Antenna Factor
For example

Frequency	FS	RA	AF	CL	AG	Factor
(MHz)	(dBμV/m)	(dBμV/m)	(dB)	(dB)	(dB)	(dB)
300	40	58.1	12.2	1.6	31.9	-18.1

Factor=AF+CL-AG

3.2.6 TEST RESULTS (Between 9KHz – 30 MHz)

Temperature:	23.1(C)	Relative Humidtity:	60%RH
Test Voltage:	DC 12V	Polarization:	--
Test Mode:	TX Mode		

Freq.	Reading	Limit	Margin	State
(MHz)	(dBuV/m)	(dBuV/m)	(dB)	P/F
--	--	--	--	PASS
--	--	--	--	PASS

Note:

The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.
Distance extrapolation factor =40 log (specific distance/test distance)(dB);
Limit line = specific limits(dBuv) + distance extrapolation factor.

3.2.7 TEST RESULTS (Between 30MHz – 1GHz)

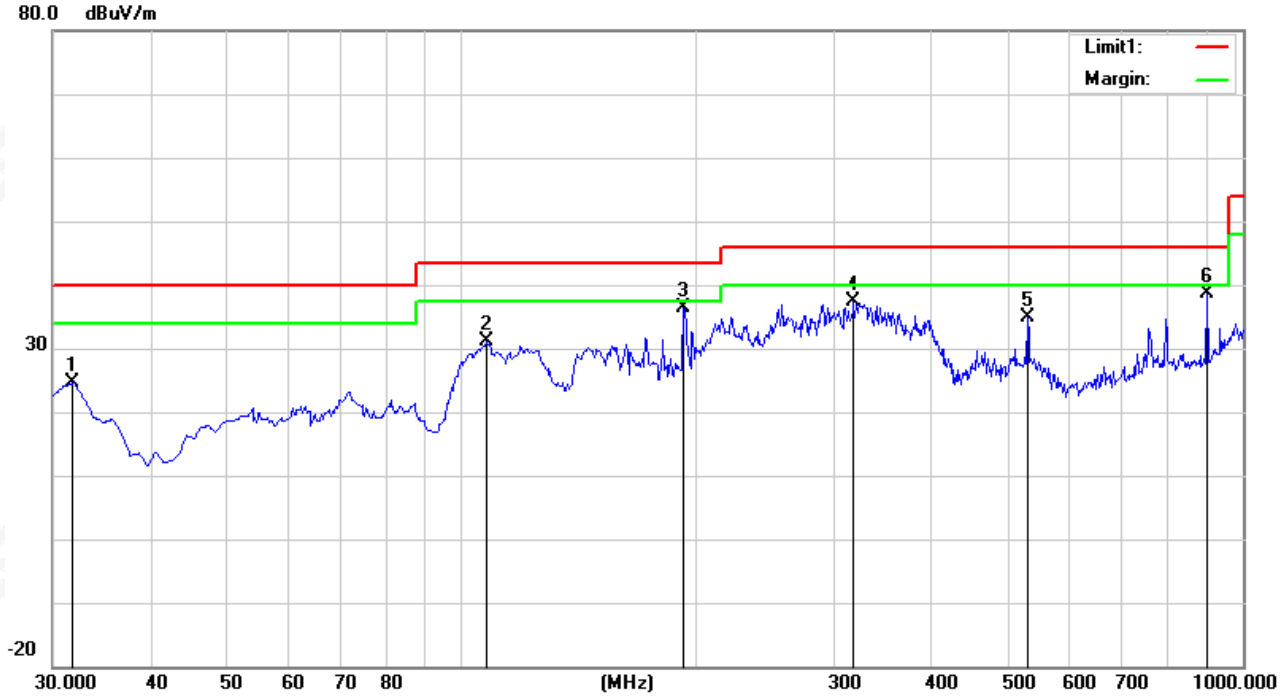
U-NII-5

Temperature	23.4C)	Relative Humidtity:	60%RH
Test Voltage	DC 12V	Phase:	Horizontal
Test Mode:	Mode 1/2/3/4/5/6 (Mode 6 worst mode)		

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	31.9400	38.45	-13.86	24.59	40.00	-15.41	peak
2	107.6000	50.48	-19.32	31.16	43.50	-12.34	peak
3	192.9600	57.50	-21.08	36.42	43.50	-7.08	peak
4	318.0900	51.37	-14.09	37.28	46.00	-8.72	peak
5	531.4900	42.16	-7.37	34.79	46.00	-11.21	peak
6	901.0600	39.00	-0.43	38.57	46.00	-7.43	peak

Remark:

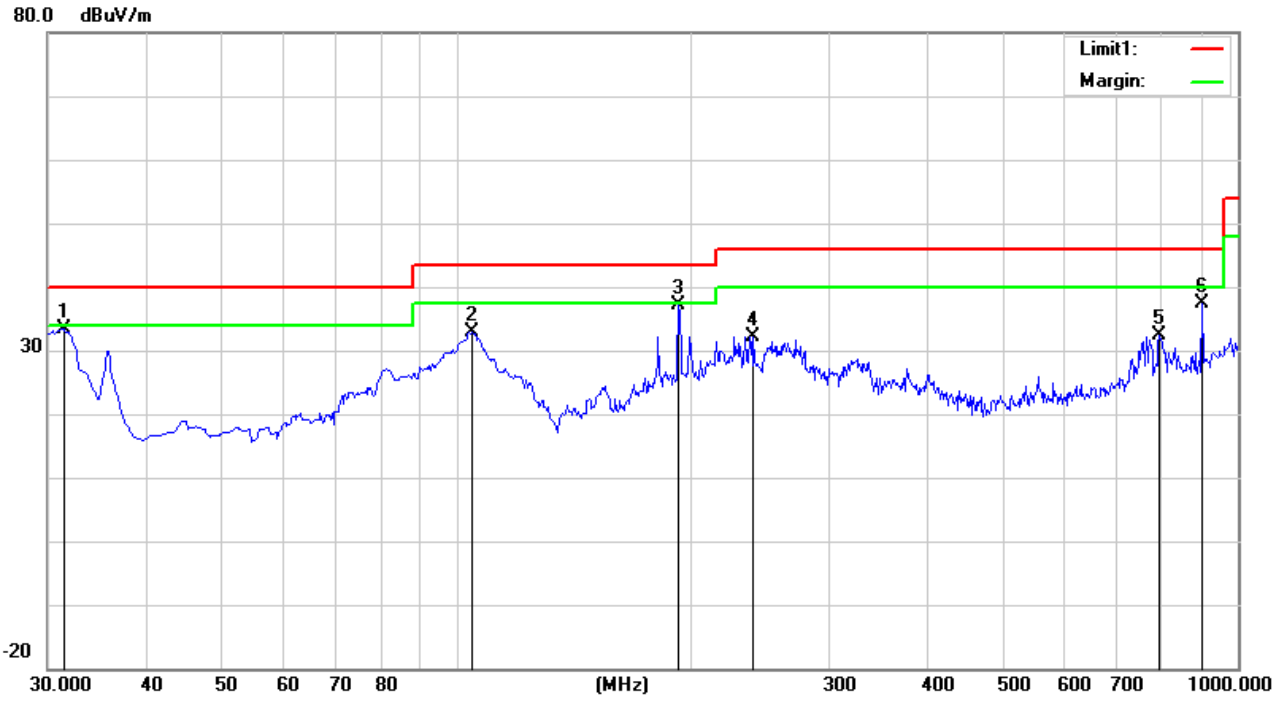
1. Margin = Result (Result =Reading + Factor)–Limit
2. Factor= Antenna factor+Cable attenuation factor(cable loss)-Amplifier gain



Temperature	23.4C)	Relative Humidtity:	60%RH
Test Voltage	AC 120V/60Hz	Polarization:	Vertical
Test Mode:	Mode 1/2/3/4/5/6 (Mode 6 worst mode)		

No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	31.5095	46.99	-13.63	33.36	40.00	-6.64	peak
2	104.6900	52.62	-19.63	32.99	43.50	-10.51	peak
3	192.9600	58.13	-21.08	37.05	43.50	-6.45	peak
4	240.4900	50.05	-17.93	32.12	46.00	-13.88	peak
5	794.3600	34.28	-2.00	32.28	46.00	-13.72	peak
6	903.0000	37.86	-0.37	37.49	46.00	-8.51	peak

Remark:
1. Margin = Result (Result =Reading + Factor)–Limit
2. Factor= Antenna factor+Cable attenuation factor(cable loss)-Amplifier gain



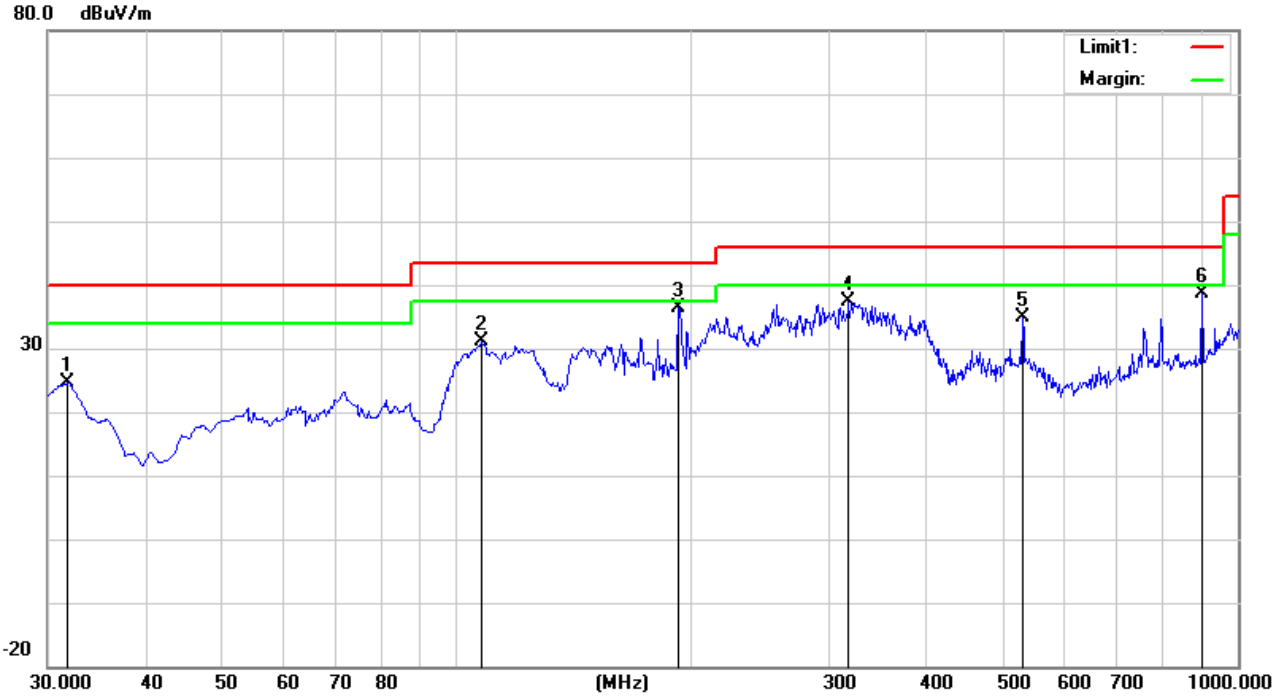
U-NII-7

Temperature	23.4C)	Relative Humidtity:	60%RH
Test Voltage	DC 12V	Phase:	Horizontal
Test Mode:	Mode 1/2/3/4/5/6 (Mode 6 worst mode)		

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	31.9400	38.45	-13.86	24.59	40.00	-15.41	peak
2	107.6000	50.48	-19.32	31.16	43.50	-12.34	peak
3	192.9600	57.50	-21.08	36.42	43.50	-7.08	peak
4	318.0900	51.37	-14.09	37.28	46.00	-8.72	peak
5	531.4900	42.16	-7.37	34.79	46.00	-11.21	peak
6	901.0600	39.00	-0.43	38.57	46.00	-7.43	peak

Remark:

3. Margin = Result (Result =Reading + Factor)–Limit
4. Factor= Antenna factor+Cable attenuation factor(cable loss)-Amplifier gain

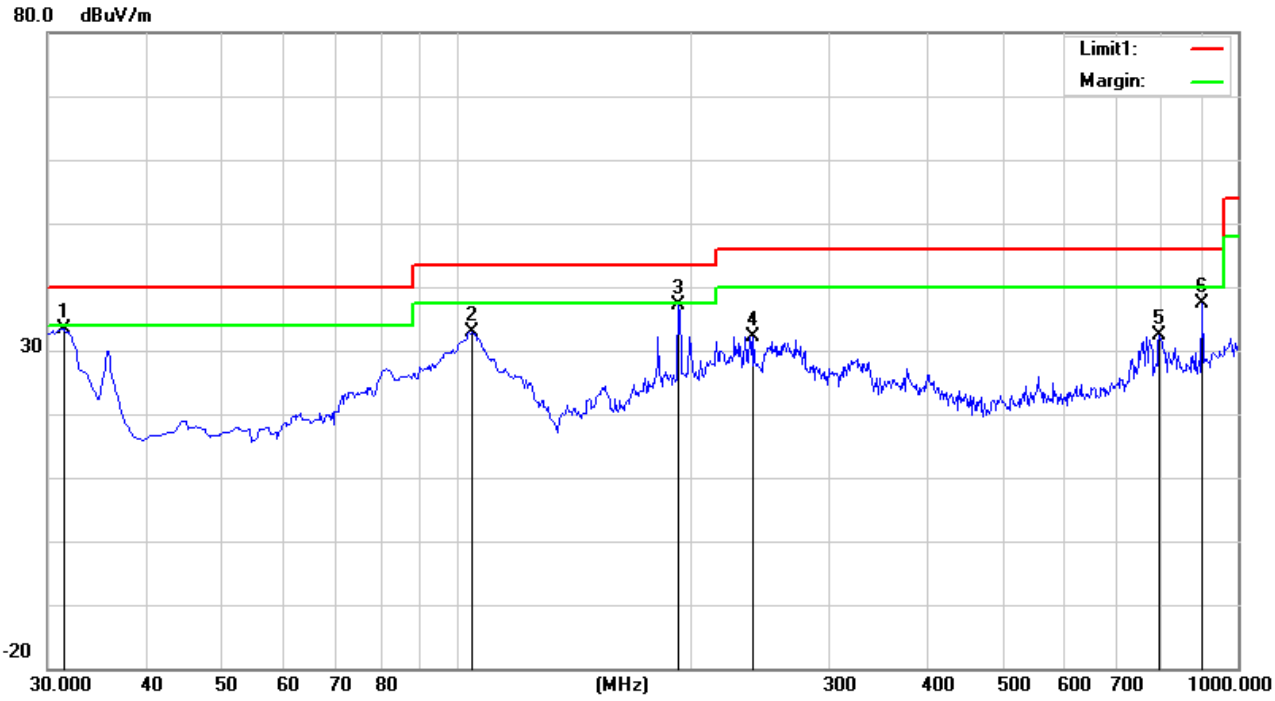


Temperature	23.4C)	Relative Humidtity:	60%RH
Test Voltage	AC 120V/60Hz	Polarization:	Vertical
Test Mode:	Mode 1/2/3/4/5/6 (Mode 6 worst mode)		

No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	31.5095	46.99	-13.63	33.36	40.00	-6.64	peak
2	104.6900	52.62	-19.63	32.99	43.50	-10.51	peak
3	192.9600	58.13	-21.08	37.05	43.50	-6.45	peak
4	240.4900	50.05	-17.93	32.12	46.00	-13.88	peak
5	794.3600	34.28	-2.00	32.28	46.00	-13.72	peak
6	903.0000	37.86	-0.37	37.49	46.00	-8.51	peak

Remark:

3. Margin = Result (Result =Reading + Factor)–Limit
4. Factor= Antenna factor+Cable attenuation factor(cable loss)-Amplifier gain



3.2.8 TEST RESULTS (Above 1000 MHz)

U-NII-5

Frequency (MHz)	Reading (dBuV)	Amplifier (dB)	Loss (dB)	Antenna Factor (dB/m)	Orrected Factor (dB)	Emission Level (dBμV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Comment
Low Channel (802.11ax80/ 5985 MHz)										
3260.72	45.07	44.70	6.70	28.20	-9.80	35.27	74.00	-38.73	Pk	Vertical
3260.72	41.21	44.70	6.70	28.20	-9.80	31.41	54.00	-22.59	AV	Vertical
3252.14	44.09	44.70	6.70	28.20	-9.80	34.29	68.20	-33.91	Pk	Horizontal
3252.14	41.13	44.70	6.70	28.20	-9.80	31.33	54.00	-22.67	AV	Horizontal
3984.61	39.39	44.20	7.90	29.70	-6.60	32.79	74.00	-41.21	Pk	Vertical
3984.61	35.90	44.20	7.90	29.70	-6.60	29.30	54.00	-24.70	AV	Vertical
3986.00	39.91	44.20	7.90	29.70	-6.60	33.31	74.00	-40.69	Pk	Horizontal
3986.00	36.21	44.20	7.90	29.70	-6.60	29.61	54.00	-24.39	AV	Horizontal
7226.38	37.67	43.50	11.40	35.50	3.40	41.07	68.20	-27.13	Pk	Vertical
7226.38	33.58	43.50	11.40	35.50	3.40	36.98	54.00	-17.02	AV	Vertical
7226.69	36.98	43.50	11.40	35.50	3.40	40.38	68.20	-27.82	Pk	Horizontal
7226.69	34.54	43.50	11.40	35.50	3.40	37.94	54.00	-16.06	AV	Horizontal
11969.87	38.96	44.50	13.80	38.80	8.10	47.06	74.00	-26.94	Pk	Vertical
11969.87	36.10	44.50	13.80	38.80	8.10	44.20	54.00	-9.80	AV	Vertical
11969.77	39.96	44.50	13.80	38.80	8.10	48.06	74.00	-25.94	Pk	Horizontal
11969.77	36.46	44.50	13.80	38.80	8.10	44.56	54.00	-9.44	AV	Horizontal
14957.75	34.05	43.60	14.30	39.50	10.20	44.25	68.20	-23.95	Pk	Vertical
14957.75	29.70	43.60	14.30	39.50	10.20	39.90	54.00	-14.10	AV	Vertical
14944.47	34.12	43.60	14.30	39.50	10.20	44.32	68.20	-23.88	Pk	Horizontal
14944.47	29.96	43.60	14.30	39.50	10.20	40.16	54.00	-13.84	AV	Horizontal
17950.92	31.58	42.60	15.90	38.90	12.20	43.78	68.20	-24.42	Pk	Vertical
17950.92	29.58	42.60	15.90	38.90	12.20	41.78	54.00	-12.22	AV	Vertical
17940.24	31.79	42.60	15.90	38.90	12.20	43.99	68.20	-24.21	Pk	Horizontal
17940.24	28.56	42.60	15.90	38.90	12.20	40.76	54.00	-13.24	AV	Horizontal
Mid Channel (802.11ax80/6145 MHz)										
3258.22	45.24	44.70	6.70	28.20	-9.80	35.44	68.20	-32.76	Pk	Vertical
3258.22	41.21	44.70	6.70	28.20	-9.80	31.41	54.00	-22.59	AV	Vertical
3248.20	44.10	44.70	6.70	28.20	-9.80	34.30	68.20	-33.90	Pk	Horizontal
3248.20	42.08	44.70	6.70	28.20	-9.80	32.28	54.00	-21.72	AV	Horizontal
3988.71	40.03	44.20	7.90	29.70	-6.60	33.43	74.00	-40.57	Pk	Vertical
3988.71	37.06	44.20	7.90	29.70	-6.60	30.46	54.00	-23.54	AV	Vertical
3983.56	40.04	44.20	7.90	29.70	-6.60	33.44	74.00	-40.56	Pk	Horizontal
3983.56	37.11	44.20	7.90	29.70	-6.60	30.51	54.00	-23.49	AV	Horizontal
7227.76	36.50	43.50	11.40	35.50	3.40	39.90	68.20	-28.30	Pk	Vertical
7227.76	33.53	43.50	11.40	35.50	3.40	36.93	54.00	-17.07	AV	Vertical
7223.35	37.92	43.50	11.40	35.50	3.40	41.32	68.20	-26.88	Pk	Horizontal
7223.35	34.30	43.50	11.40	35.50	3.40	37.70	54.00	-16.30	AV	Horizontal
12289.66	38.88	44.50	13.80	38.80	8.10	46.98	74.00	-27.02	Pk	Vertical
12289.66	36.11	44.50	13.80	38.80	8.10	44.21	54.00	-9.79	AV	Vertical
12289.90	38.85	44.50	13.80	38.80	8.10	46.95	74.00	-27.05	Pk	Horizontal
12289.90	35.92	44.50	13.80	38.80	8.10	44.02	54.00	-9.98	AV	Horizontal
15349.59	32.98	43.60	14.30	39.50	10.20	43.18	68.20	-25.02	Pk	Vertical
15349.59	30.76	43.60	14.30	39.50	10.20	40.96	54.00	-13.04	AV	Vertical
15351.93	33.00	43.60	14.30	39.50	10.20	43.20	68.20	-25.00	Pk	Horizontal
15351.93	30.83	43.60	14.30	39.50	10.20	41.03	54.00	-12.97	AV	Horizontal
18426.92	32.82	42.60	15.90	38.90	12.20	45.02	68.20	-23.18	Pk	Vertical
18426.92	29.05	42.60	15.90	38.90	12.20	41.25	54.00	-12.75	AV	Vertical
18426.81	32.64	42.60	15.90	38.90	12.20	44.84	68.20	-23.36	Pk	Horizontal
18426.81	29.58	42.60	15.90	38.90	12.20	41.78	54.00	-12.22	AV	Horizontal

High Channel (802.11ax80/ 6385 MHz)										
3256.65	43.87	44.70	6.70	28.20	-9.80	34.07	68.20	-34.13	Pk	Vertical
3256.65	41.42	44.70	6.70	28.20	-9.80	31.62	54.00	-22.38	AV	Vertical
3248.78	45.05	44.70	6.70	28.20	-9.80	35.25	68.20	-32.95	Pk	Horizontal
3248.78	41.78	44.70	6.70	28.20	-9.80	31.98	54.00	-22.02	AV	Horizontal
3989.77	39.08	44.20	7.90	29.70	-6.60	32.48	74.00	-41.52	Pk	Vertical
3989.77	36.38	44.20	7.90	29.70	-6.60	29.78	54.00	-24.22	AV	Vertical
3997.65	38.97	44.20	7.90	29.70	-6.60	32.37	74.00	-41.63	Pk	Horizontal
3997.65	36.79	44.20	7.90	29.70	-6.60	30.19	54.00	-23.81	AV	Horizontal
7224.42	37.46	43.50	11.40	35.50	3.40	40.86	68.20	-27.34	Pk	Vertical
7224.42	33.87	43.50	11.40	35.50	3.40	37.27	54.00	-16.73	AV	Vertical
7233.70	37.24	43.50	11.40	35.50	3.40	40.64	68.20	-27.56	Pk	Horizontal
7233.70	34.31	43.50	11.40	35.50	3.40	37.71	54.00	-16.29	AV	Horizontal
12769.71	39.42	44.50	13.80	38.80	8.10	47.52	68.20	-20.68	Pk	Vertical
12769.71	36.79	44.50	13.80	38.80	8.10	44.89	54.00	-9.11	AV	Vertical
12769.65	39.06	44.50	13.80	38.80	8.10	47.16	68.20	-21.04	Pk	Horizontal
12769.65	36.06	44.50	13.80	38.80	8.10	44.16	54.00	-9.84	AV	Horizontal
15942.56	33.34	43.60	14.30	39.50	10.20	43.54	68.20	-24.66	Pk	Vertical
15942.56	31.07	43.60	14.30	39.50	10.20	41.27	54.00	-12.73	AV	Vertical
15948.41	34.13	43.60	14.30	39.50	10.20	44.33	68.20	-23.87	Pk	Horizontal
15948.41	29.84	43.60	14.30	39.50	10.20	40.04	54.00	-13.96	AV	Horizontal
19150.17	32.65	42.60	15.90	38.90	12.20	44.85	68.20	-23.35	Pk	Vertical
19150.17	29.47	42.60	15.90	38.90	12.20	41.67	54.00	-12.33	AV	Vertical
19141.48	32.40	42.60	15.90	38.90	12.20	44.60	68.20	-23.60	Pk	Horizontal
19141.48	28.58	42.60	15.90	38.90	12.20	40.78	54.00	-13.22	AV	Horizontal

Remark:
1.Factor = Antenna Factor + Cable Loss – Pre-amplifier.
2. All modes have been tested. Only the worst mode shown in the report.
3. The frequency emission of peak points that did not show above the forms are at least 20dB below the limit, the frequency emission is mainly from the environment noise.

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Frequency (MHz)	Reading (dBuV)	Amplifier (dB)	Loss (dB)	Antenna Factor (dB/m)	Orrected Factor (dB)	Emission Level (dBμV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Comment
Low Channel (802.11ax40/ 6565 MHz)										
3253.08	44.74	44.70	6.70	28.20	-9.80	34.94	68.20	-33.26	Pk	Vertical
3253.08	41.87	44.70	6.70	28.20	-9.80	32.07	54.00	-21.93	AV	Vertical
3256.18	44.54	44.70	6.70	28.20	-9.80	34.74	68.20	-33.46	Pk	Horizontal
3256.18	41.70	44.70	6.70	28.20	-9.80	31.90	54.00	-22.10	AV	Horizontal
3992.36	39.54	44.20	7.90	29.70	-6.60	32.94	74.00	-41.06	Pk	Vertical
3992.36	35.65	44.20	7.90	29.70	-6.60	29.05	54.00	-24.95	AV	Vertical
3981.43	39.64	44.20	7.90	29.70	-6.60	33.04	74.00	-40.96	Pk	Horizontal
3981.43	35.64	44.20	7.90	29.70	-6.60	29.04	54.00	-24.96	AV	Horizontal
7235.26	37.58	43.50	11.40	35.50	3.40	40.98	68.20	-27.22	Pk	Vertical
7235.26	33.81	43.50	11.40	35.50	3.40	37.21	54.00	-16.79	AV	Vertical
7225.76	36.81	43.50	11.40	35.50	3.40	40.21	68.20	-27.99	Pk	Horizontal
7225.76	33.95	43.50	11.40	35.50	3.40	37.35	54.00	-16.65	AV	Horizontal
13129.52	39.79	44.50	13.80	38.80	8.10	47.89	68.20	-20.31	Pk	Vertical
13129.52	37.17	44.50	13.80	38.80	8.10	45.27	54.00	-8.73	AV	Vertical
13129.98	39.82	44.50	13.80	38.80	8.10	47.92	68.20	-20.28	Pk	Horizontal
13129.98	36.03	44.50	13.80	38.80	8.10	44.13	54.00	-9.87	AV	Horizontal
16410.16	33.10	43.60	14.30	39.50	10.20	43.30	68.20	-24.90	Pk	Vertical
16410.16	30.50	43.60	14.30	39.50	10.20	40.70	54.00	-13.30	AV	Vertical
16407.55	33.17	43.60	14.30	39.50	10.20	43.37	68.20	-24.83	Pk	Horizontal
16407.55	29.68	43.60	14.30	39.50	10.20	39.88	54.00	-14.12	AV	Horizontal
19676.36	31.61	42.60	15.90	38.90	12.20	43.81	68.20	-24.39	Pk	Vertical
19676.36	29.34	42.60	15.90	38.90	12.20	41.54	54.00	-12.46	AV	Vertical
19694.66	31.71	42.60	15.90	38.90	12.20	43.91	68.20	-24.29	Pk	Horizontal
19694.66	29.21	42.60	15.90	38.90	12.20	41.41	54.00	-12.59	AV	Horizontal
Mid Channel (802.11ax40/ 6685MHz)										
3255.74	44.42	44.70	6.70	28.20	-9.80	34.62	68.20	-33.58	Pk	Vertical
3255.74	40.83	44.70	6.70	28.20	-9.80	31.03	54.00	-22.97	AV	Vertical
3247.19	44.31	44.70	6.70	28.20	-9.80	34.51	68.20	-33.69	Pk	Horizontal
3247.19	41.44	44.70	6.70	28.20	-9.80	31.64	54.00	-22.36	AV	Horizontal
3998.05	39.31	44.20	7.90	29.70	-6.60	32.71	74.00	-41.29	Pk	Vertical
3998.05	36.79	44.20	7.90	29.70	-6.60	30.19	54.00	-23.81	AV	Vertical
3983.69	39.47	44.20	7.90	29.70	-6.60	32.87	74.00	-41.13	Pk	Horizontal
3983.69	36.71	44.20	7.90	29.70	-6.60	30.11	54.00	-23.89	AV	Horizontal
7234.61	36.87	43.50	11.40	35.50	3.40	40.27	68.20	-27.93	Pk	Vertical
7234.61	33.61	43.50	11.40	35.50	3.40	37.01	54.00	-16.99	AV	Vertical
7216.84	37.90	43.50	11.40	35.50	3.40	41.30	68.20	-26.90	Pk	Horizontal
7216.84	33.85	43.50	11.40	35.50	3.40	37.25	54.00	-16.75	AV	Horizontal
13369.77	39.86	44.50	13.80	38.80	8.10	47.96	68.20	-20.24	Pk	Vertical
13369.77	36.12	44.50	13.80	38.80	8.10	44.22	54.00	-9.78	AV	Vertical
13369.83	40.09	44.50	13.80	38.80	8.10	48.19	68.20	-20.01	Pk	Horizontal
13369.83	36.46	44.50	13.80	38.80	8.10	44.56	54.00	-9.44	AV	Horizontal
16707.32	33.25	43.60	14.30	39.50	10.20	43.45	68.20	-24.75	Pk	Vertical
16707.32	30.10	43.60	14.30	39.50	10.20	40.30	54.00	-13.70	AV	Vertical
16710.58	33.91	43.60	14.30	39.50	10.20	44.11	68.20	-24.09	Pk	Horizontal
16710.58	29.78	43.60	14.30	39.50	10.20	39.98	54.00	-14.02	AV	Horizontal
20052.09	32.04	42.60	15.90	38.90	12.20	44.24	68.20	-23.96	Pk	Vertical
20052.09	29.91	42.60	15.90	38.90	12.20	42.11	54.00	-11.89	AV	Vertical
20052.54	31.63	42.60	15.90	38.90	12.20	43.83	68.20	-24.37	Pk	Horizontal
20052.54	29.72	42.60	15.90	38.90	12.20	41.92	54.00	-12.08	AV	Horizontal

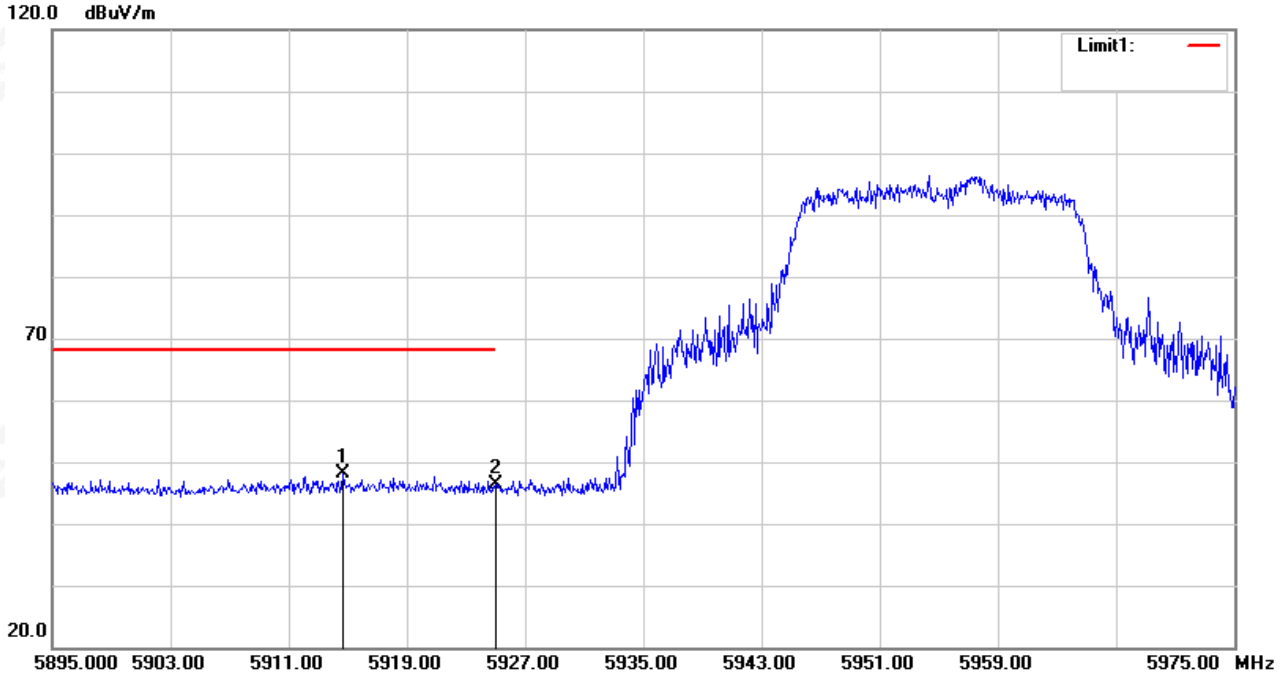
High Channel (802.11ax40/ 6845MHz)										
3261.38	44.06	44.70	6.70	28.20	-9.80	34.26	74.00	-39.74	Pk	Vertical
3261.38	41.54	44.70	6.70	28.20	-9.80	31.74	54.00	-22.26	AV	Vertical
3250.21	44.46	44.70	6.70	28.20	-9.80	34.66	68.20	-33.54	Pk	Horizontal
3250.21	41.80	44.70	6.70	28.20	-9.80	32.00	54.00	-22.00	AV	Horizontal
3993.35	38.84	44.20	7.90	29.70	-6.60	32.24	74.00	-41.76	Pk	Vertical
3993.35	36.50	44.20	7.90	29.70	-6.60	29.90	54.00	-24.10	AV	Vertical
3983.92	39.84	44.20	7.90	29.70	-6.60	33.24	74.00	-40.76	Pk	Horizontal
3983.92	36.78	44.20	7.90	29.70	-6.60	30.18	54.00	-23.82	AV	Horizontal
7222.44	37.16	43.50	11.40	35.50	3.40	40.56	68.20	-27.64	Pk	Vertical
7222.44	33.54	43.50	11.40	35.50	3.40	36.94	54.00	-17.06	AV	Vertical
7217.61	37.51	43.50	11.40	35.50	3.40	40.91	68.20	-27.29	Pk	Horizontal
7217.61	34.50	43.50	11.40	35.50	3.40	37.90	54.00	-16.10	AV	Horizontal
13689.69	39.80	44.50	13.80	38.80	8.10	47.90	68.20	-20.30	Pk	Vertical
13689.69	35.69	44.50	13.80	38.80	8.10	43.79	54.00	-10.21	AV	Vertical
13689.97	39.89	44.50	13.80	38.80	8.10	47.99	68.20	-20.21	Pk	Horizontal
13689.97	36.86	44.50	13.80	38.80	8.10	44.96	54.00	-9.04	AV	Horizontal
17107.35	33.11	43.60	14.30	39.50	10.20	43.31	68.20	-24.89	Pk	Vertical
17107.35	29.89	43.60	14.30	39.50	10.20	40.09	54.00	-13.91	AV	Vertical
17094.56	34.08	43.60	14.30	39.50	10.20	44.28	68.20	-23.92	Pk	Horizontal
17094.56	29.95	43.60	14.30	39.50	10.20	40.15	54.00	-13.85	AV	Horizontal
20527.32	31.85	42.60	15.90	38.90	12.20	44.05	68.20	-24.15	Pk	Vertical
20527.32	29.42	42.60	15.90	38.90	12.20	41.62	54.00	-12.38	AV	Vertical
20518.87	32.54	42.60	15.90	38.90	12.20	44.74	68.20	-23.46	Pk	Horizontal
20518.87	29.27	42.60	15.90	38.90	12.20	41.47	54.00	-12.53	AV	Horizontal

Remark:
1.Factor = Antenna Factor + Cable Loss – Pre-amplifier.
2. All modes have been tested. Only the worst mode shown in the report.
3. The frequency emission of peak points that did not show above the forms are at least 20dB below the limit, the frequency emission is mainly from the environment noise.

3.2.9 RESTRICTED FREQUENCY BANDS AND BAND EDGE

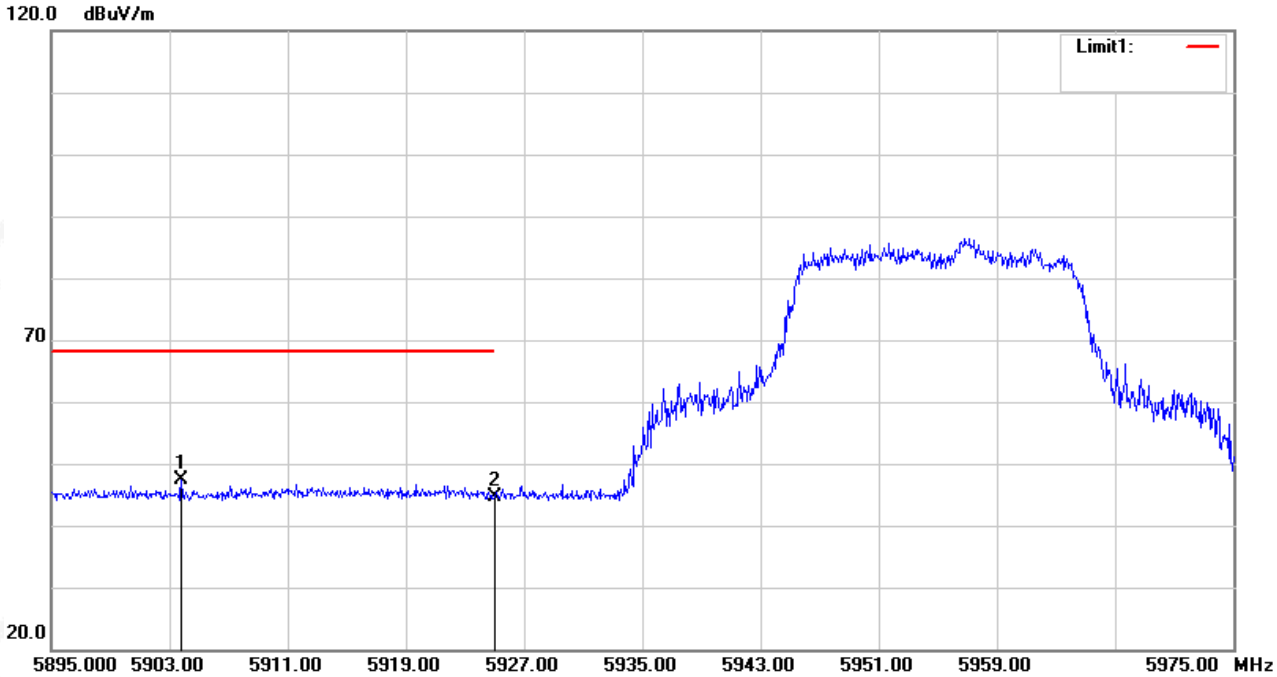
U-NII-5

802.11ax20-L-H



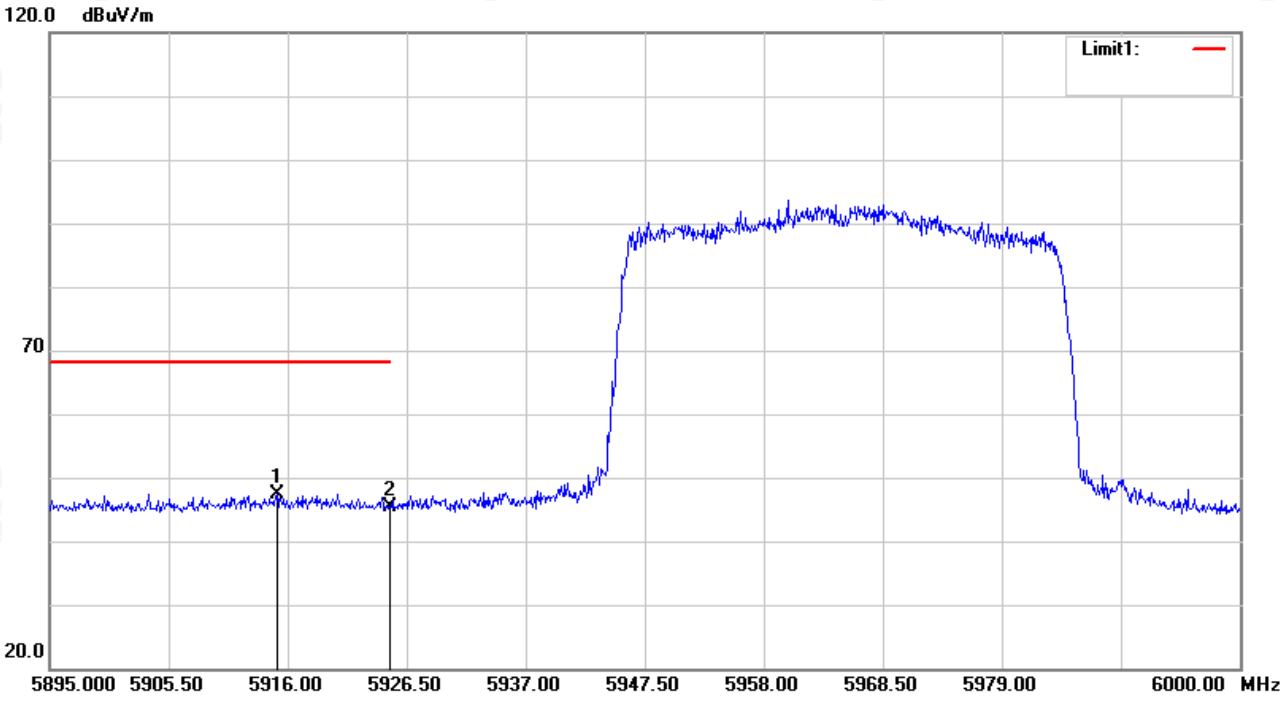
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	5914.680	52.00	-3.91	48.09	68.20	-20.11	peak
2	5925.000	50.37	-3.92	46.45	68.20	-21.75	peak

802.11ax20-L-V



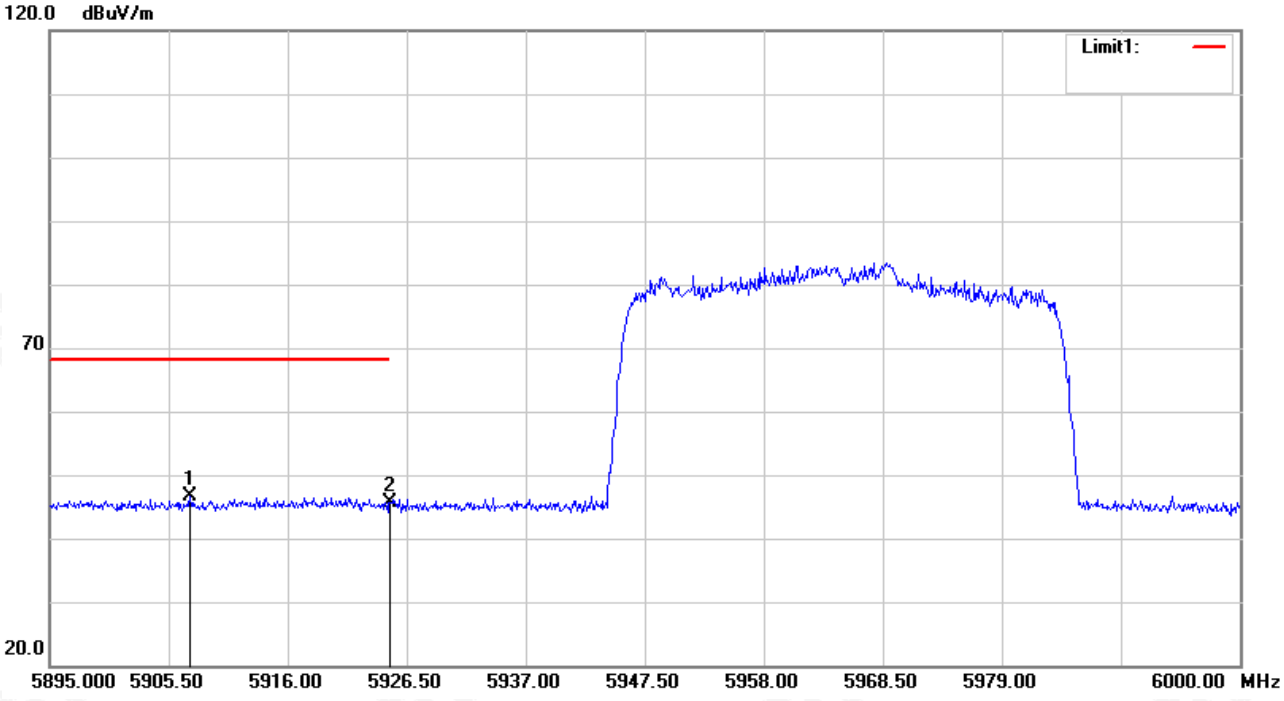
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	5903.800	51.18	-3.88	47.30	68.20	-20.90	peak
2	5925.000	48.45	-3.92	44.53	68.20	-23.67	peak

802.11ax40-L-H



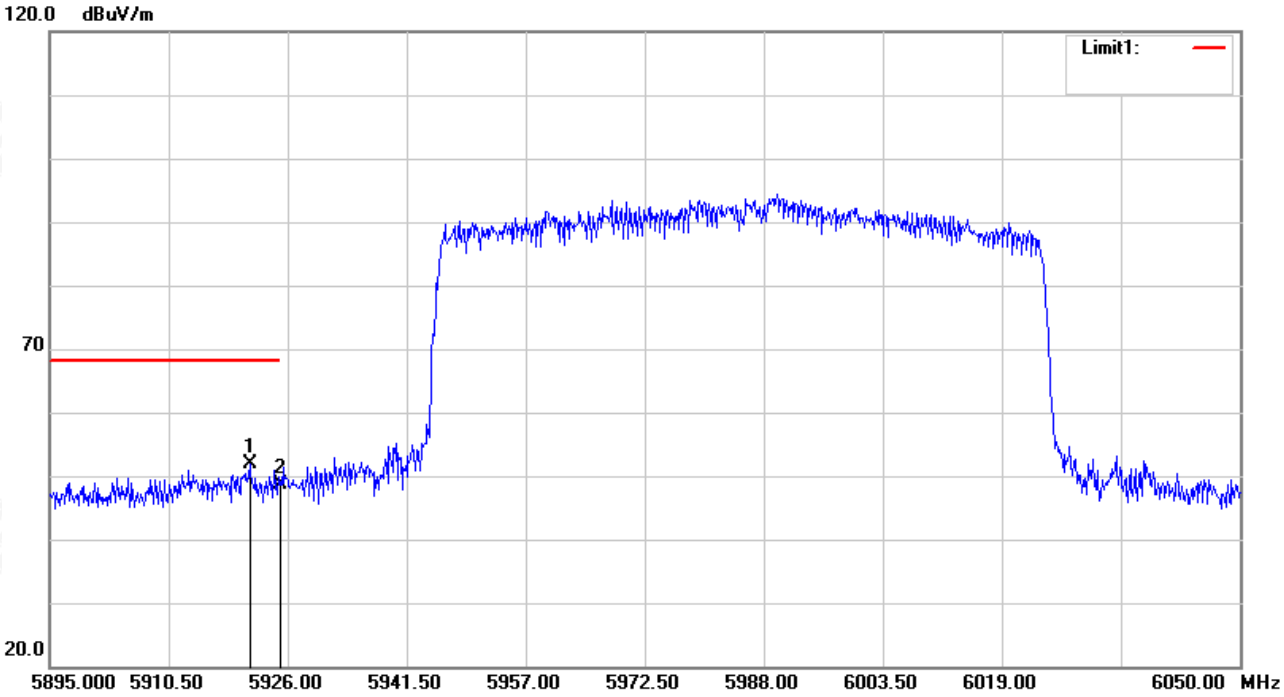
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5915.055	51.27	-3.91	47.36	68.20	-20.84	peak
2	5925.000	49.41	-3.92	45.49	68.20	-22.71	peak

802.11ax40-L-V



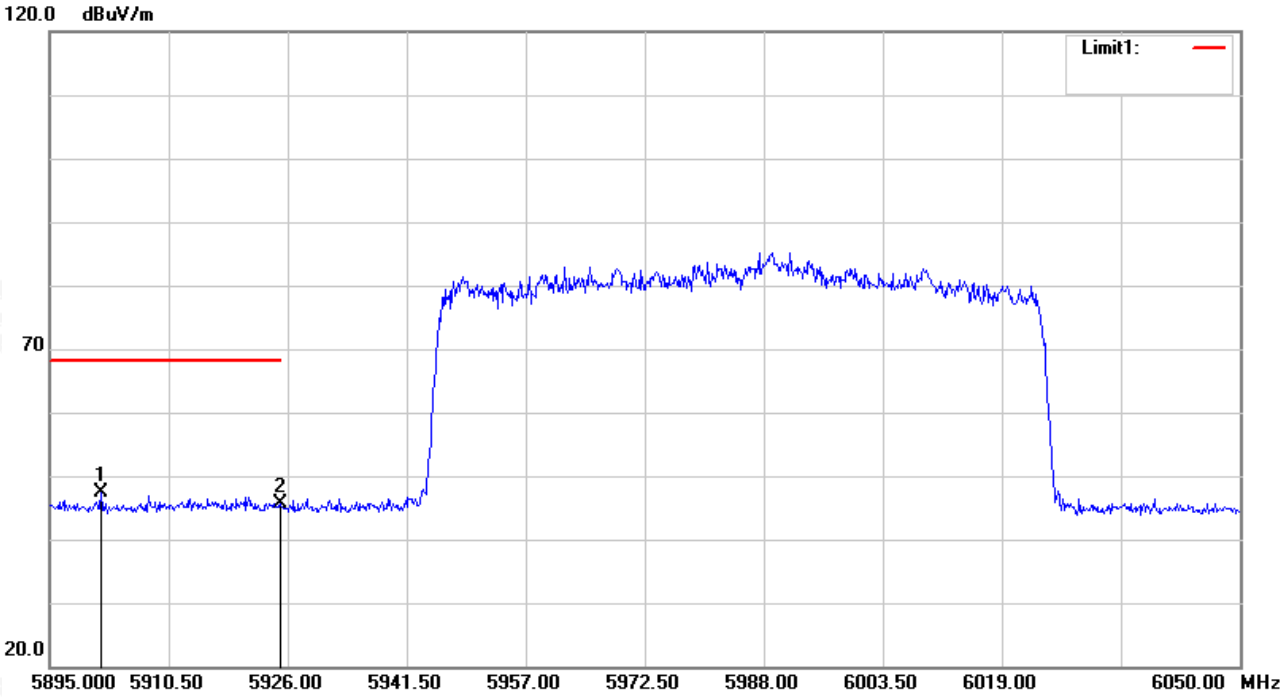
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5907.390	50.44	-3.89	46.55	68.20	-21.65	peak
2	5925.000	49.49	-3.92	45.57	68.20	-22.63	peak

802.11ax80-L-H



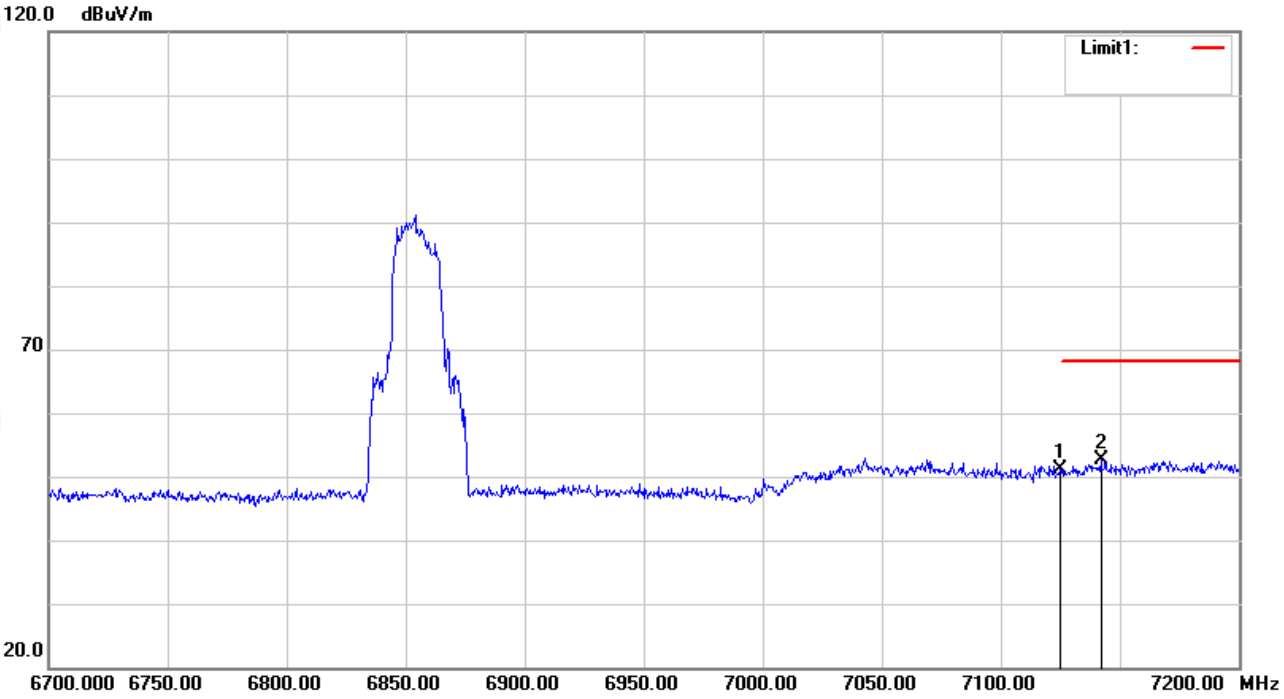
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	5921.040	55.81	-3.92	51.89	68.20	-16.31	peak
2	5925.000	52.58	-3.92	48.66	68.20	-19.54	peak

802.11ax80-L-V



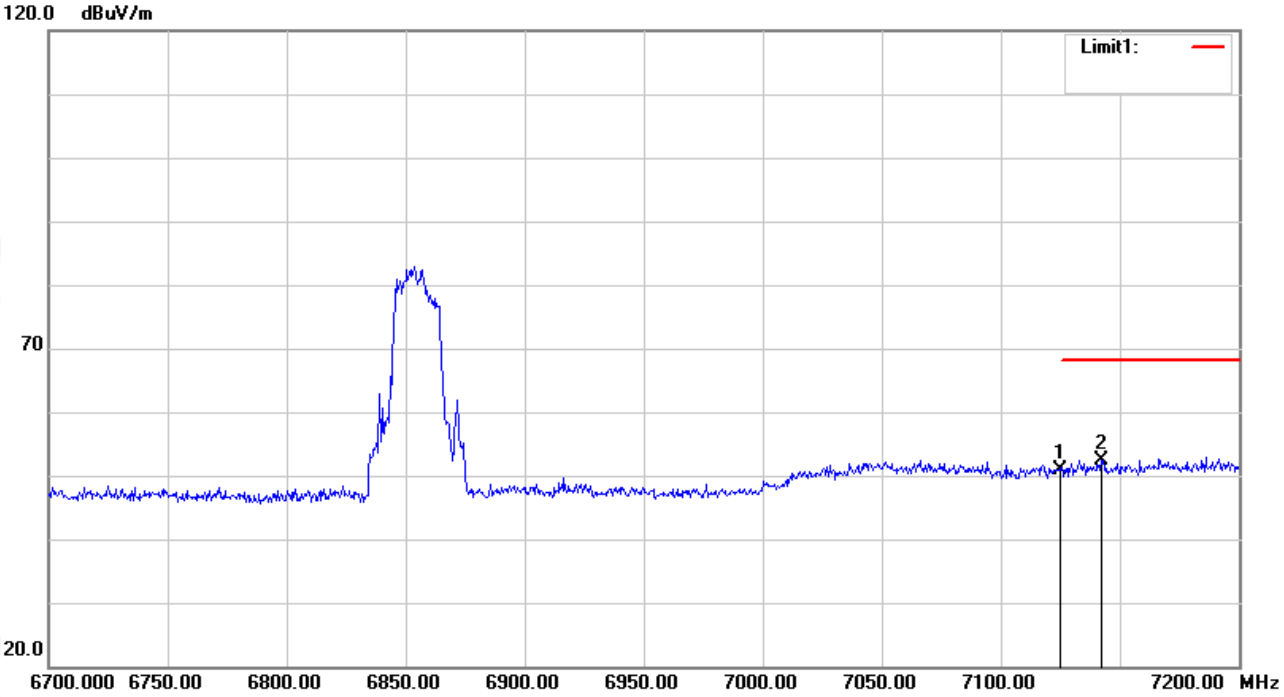
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	5901.665	51.28	-3.89	47.39	68.20	-20.81	peak
2	5925.000	49.53	-3.92	45.61	68.20	-22.59	peak

802.11ax20-H-H



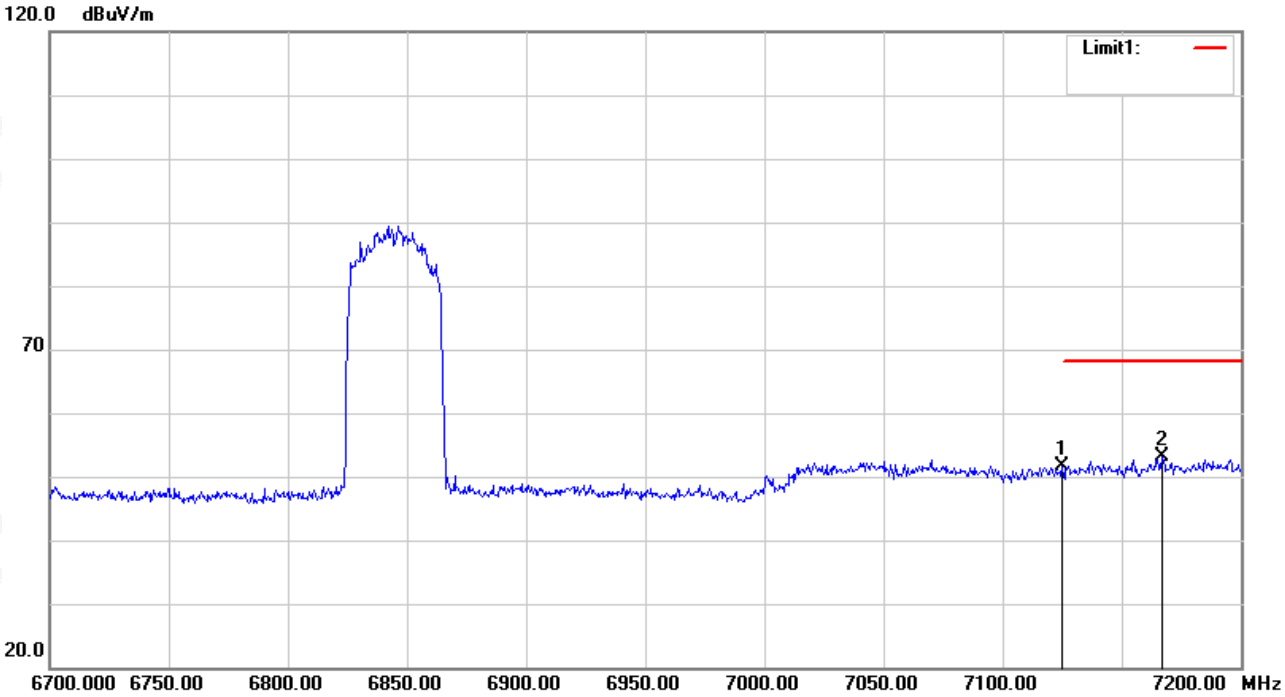
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	7125.000	50.62	0.26	50.88	68.20	-17.32	peak
2	7142.000	51.96	0.32	52.28	68.20	-15.92	peak

802.11ax20-H-V



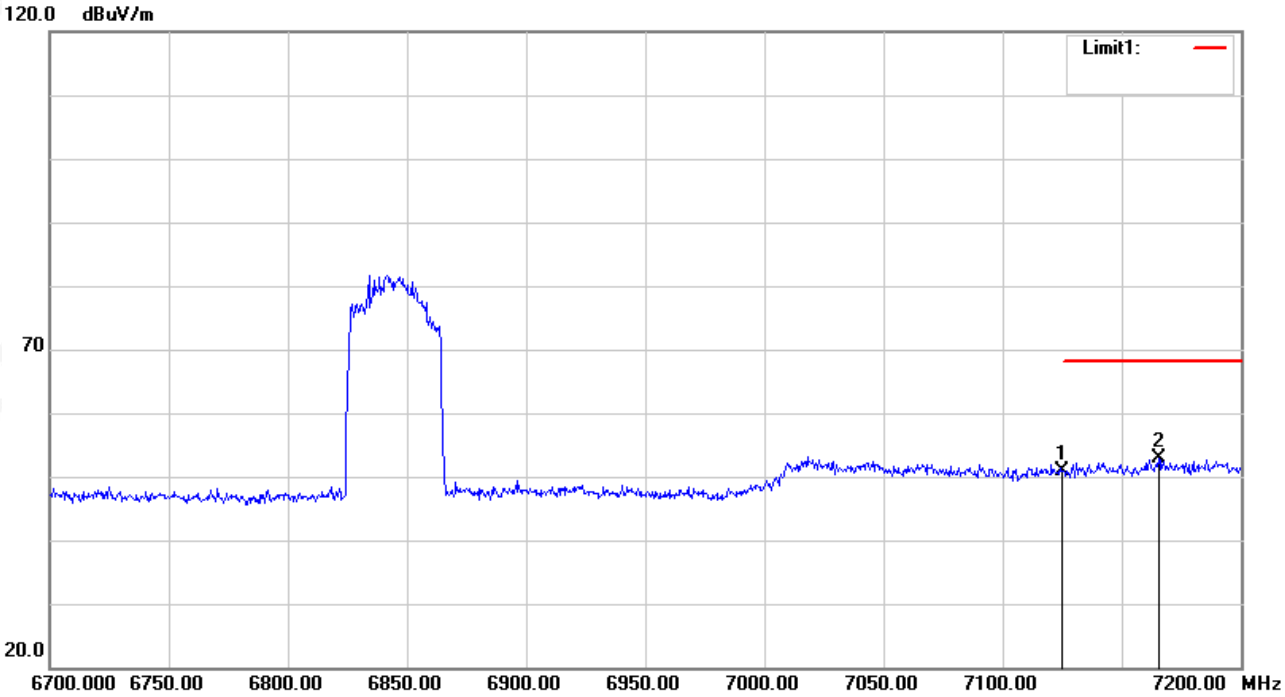
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	7125.000	50.77	0.26	51.03	68.20	-17.17	peak
2	7142.000	52.25	0.32	52.57	68.20	-15.63	peak

802.11ax40-H-H



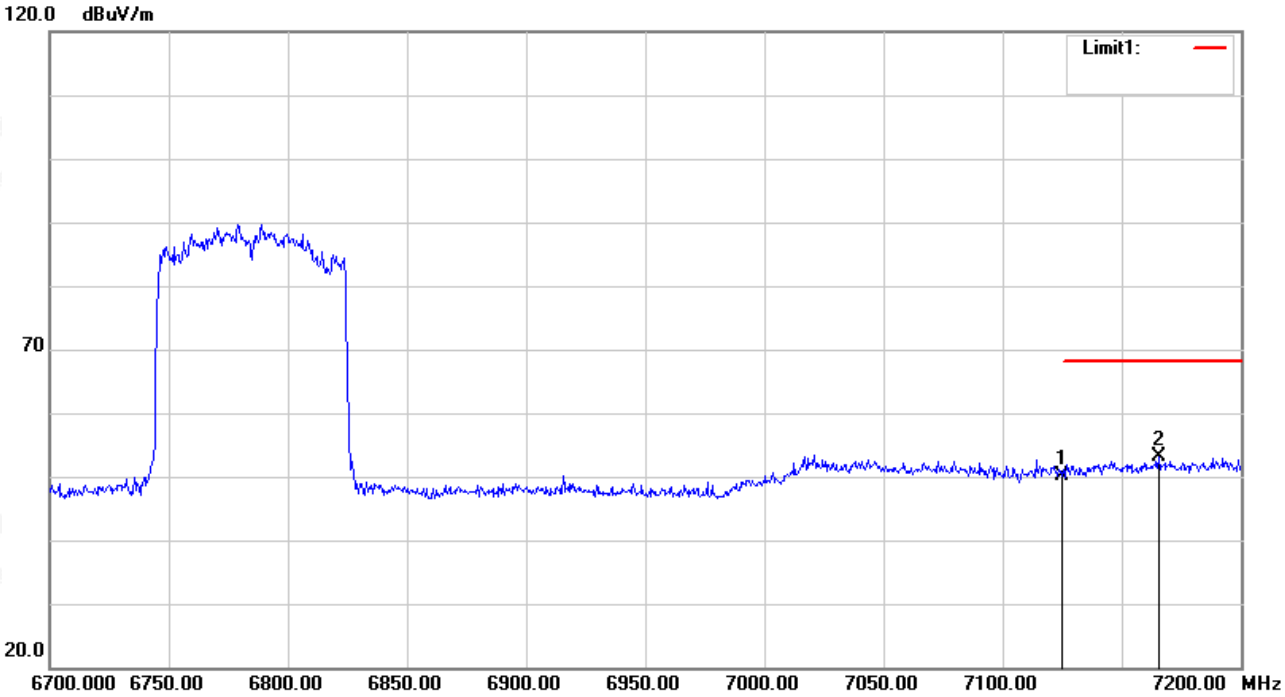
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	7125.000	51.29	0.26	51.55	68.20	-16.65	peak
2	7167.000	52.82	0.41	53.23	68.20	-14.97	peak

802.11ax40-H-V



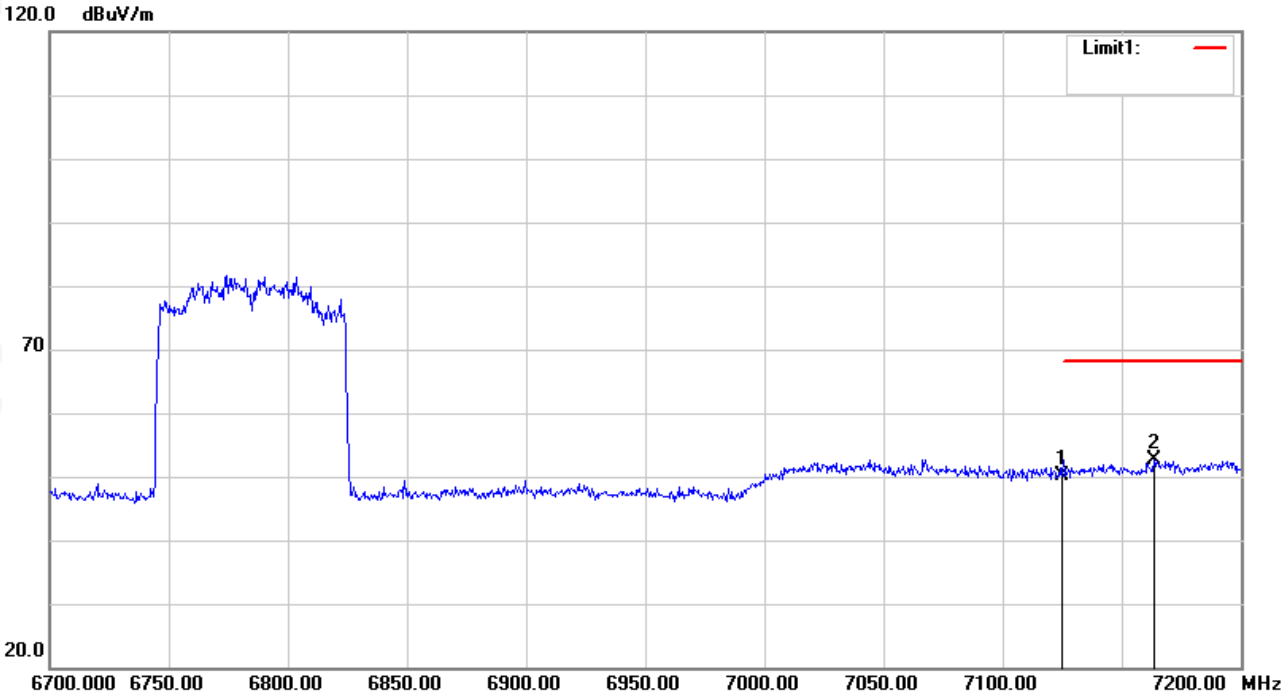
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	7125.000	50.52	0.26	50.78	68.20	-17.42	peak
2	7165.500	52.49	0.41	52.90	68.20	-15.30	peak

802.11ax80-H-H



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	7125.000	49.85	0.26	50.11	68.20	-18.09	peak
2	7165.500	52.80	0.41	53.21	68.20	-14.99	peak

802.11ax80-H-V



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	7125.000	49.81	0.26	50.07	68.20	-18.13	peak
2	7163.500	52.17	0.40	52.57	68.20	-15.63	peak

Note:All modes have been measurement, only worst mode was reported.

4. POWER SPECTRAL DENSITY TEST

4.1 LIMIT

For very low power devices operating in the 5.925-6.425 GHz and 6.525-6.875 GHz bands, the maximum power spectral density must not exceed −5 dBm e.i.r.p in any 1-megahertz band and the maximum e.i.r.p must not exceed 14 dBm.

4.2 TEST PROCEDURE

Duty cycle ≥ 98 %

1. Set RBW=1MHz/VBW=3MHz, Sweeptime=auto Detector=RMS
2. Trace average 100 traces.
3. Use the peak marker function to determine the maximumamplitudelevel
4. EIRPPSD=Measured conducted power density+Antenna gain

Duty cycle < 98%

1. Set RBW=1MHzVBW=3MHz Detector=RMS
2. Set sweep time≥10*(number of pointsin sweep)*(total on/off period of the transmitted signal)
3. Perform a single sweep.
4. Use the peak marker function to determine the maximum amplitude level
5. Add 10log(1/x)where xis the duty cycle.
6. EIRP PSD=Measuredconducted power density+Antenna gain.

4.3 DEVIATION FROM STANDARD

No deviation.

4.4 TEST SETUP

4.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.1 Unless otherwise a special operating condition is specified in the follows during the testing.

4.6 TEST RESULTS

Note: The test data please reference to attachment “STS2406116W12_Appendix 6G WIFI”.

5. VLP TPC

5.1 LIMIT

FCC §15.407 (d) (10) (10) Very low power devices operating in the 5.925-6.425 and 6.525-6.875 GHz bands shall employ a transmit power control (TPC) mechanism. A very low power device is required to have the capability to operate at least 6 dB below the maximum EIRP power spectral density (PSD) value of −5 dBm/MHz.

5.2 TEST PROCEDURE

This test demonstrates the ability of the device to increase and decrease power by the required 6dB as the RSSI is decreased and increased.

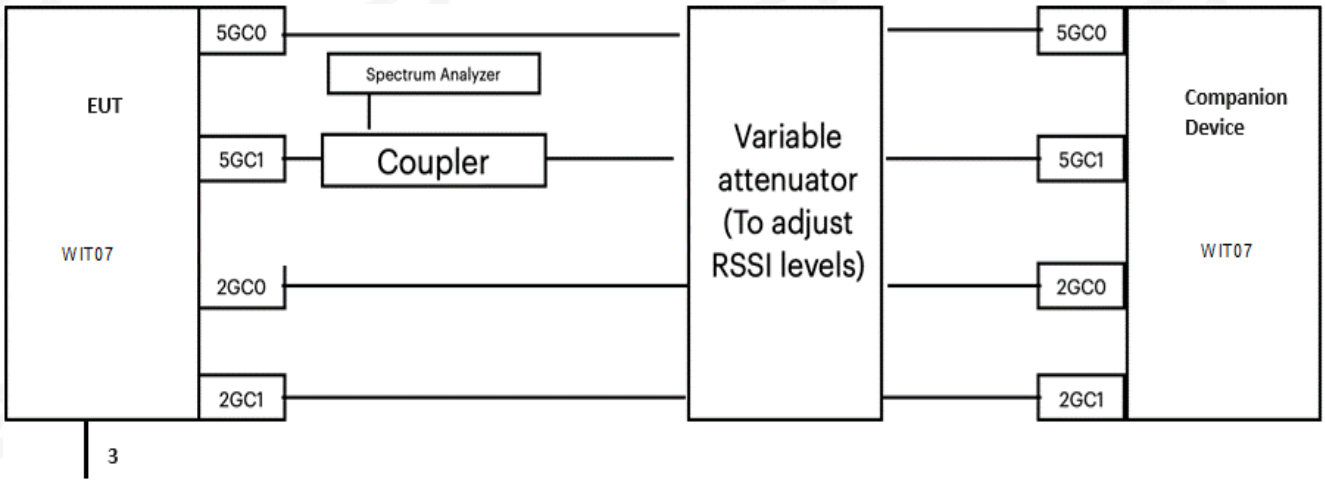
1. Configure EUT and companion device for peer-to-peer communication (refer to section 6.4)
2. Set variable attenuator to 0dB (noise free spectral environment, high RSSI simulation)
3. Establish a link and start communication between EUT and companion device
4. Capture PSD spectrum analyzer trace (1)
5. Set variable attenuator to 25dB (noisy spectral environment, low RSSI simulation)
6. Capture PSD spectrum analyzer trace (2)
7. Compare the highest PSD from trace (1) to the highest PSD on trace (2) and determine the delta. For MIMO operations use the sum of the highest PSD from each individual antenna

SA Settings: 1MHz RBW/ 3MHz VBW
Span: 100MHz
Sweep: 1ms, trace averaging enabled for 100 sweeps with rms detector enabled.

5.3 DEVIATION FROM STANDARD

No deviation.

5.4 TEST SETUP

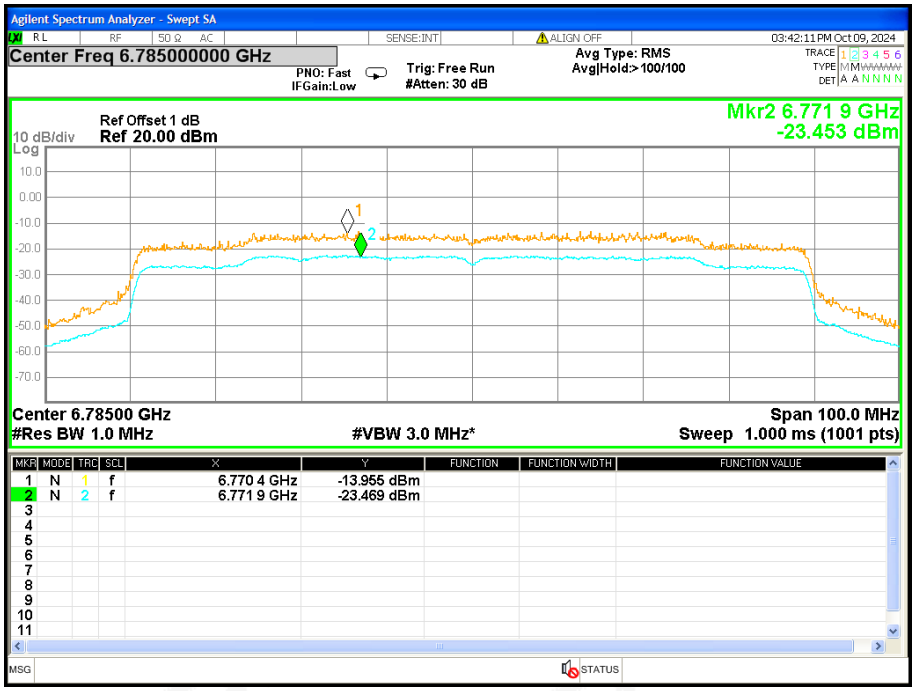


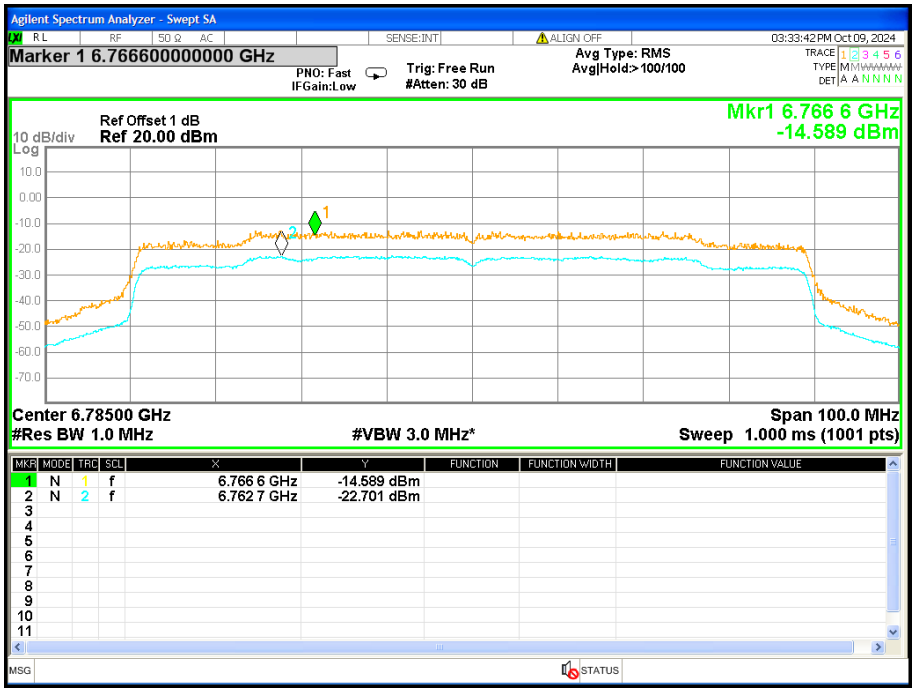
5.5 TEST RESULTS

The purpose of this test is to verify the relative power drop as the RSSI is increased. These values do not include antenna gain or other corrections to show the eirp.

2TX	UNII-7 band	Antenna 1		Antenna 2		Antenna 1+2		
BW (MHz)	Frequency (MHz)	Trace 1 High RSSI PSD (dBm/MHz)	Trace 2 High RSSI PSD (dBm/MHz)	Trace 1 High RSSI PSD (dBm/MHz)	Trace 2 High RSSI PSD (dBm/MHz)	Trace 1 High RSSI PSD (dBm/MHz)	Trace 2 High RSSI PSD (dBm/MHz)	**Pass/Fail (Delta≥6Db)**
80	6785	-13.955	-23.469	-14.589	-22.701	-11.250	-20.058	8.808 Pass

VLP TPC POWER LEVEL REDUCTION




Agilent Spectrum Analyzer - Swept SA
RL
RF
50 Ω AC
SENSE:INT
ALIGN OFF
03:33:42 PM Oct 09, 2024
Marker 1 6.766600000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: RMS
Avg|Hold:>100/100
TRACE 1 2 3 4 5 6
TYPE M WWWWW
DET A A N N N N
Ref Offset 1 dB
10 dB/div
Ref 20.00 dBm
Log
Mkr1 6.766 6 GHz
-14.589 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
Center 6.78500 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Span 100.0 MHz
Sweep 1.000 ms (1001 pts)
MKR MODE TRC SCL X Y FUNCTION FUNCTION WIDTH FUNCTION VALUE
1 N 1 f 6.766 6 GHz -14.589 dBm
2 N 2 f 6.762 7 GHz -22.701 dBm
3
4
5
6
7
8
9
10
11
MSG
STATUS

6. BANDWIDTH MEASUREMENT

6.1 LIMIT

The maximum transmitter channel bandwidth for U-NII devices in the 5.925-7.125 GHz band is 320MHz.

6.2 TEST PROCEDURE

26dB Bandwidth

1. Set RBW=approximately 1% of the emission bandwidth.
2. Set the VBW ≥ =RBW.
3. Trace mode = max hold.
4. Measure the maximum width of the emission that is 26 dB down from the peak of the emission.

Occupied Bandwidth

1.Set RBW=1% to 5% of the OBW.
2 Set VBW≥3RBW
3.Sample detection and single sweep modes shall be used
4.Use the 99% power bandwidth function of the instrument.

6.3 DEVIATION FROM STANDARD

No deviation.

6.4 TEST SETUP

6.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

6.6 TEST RESULTS

Note: The test data please reference to attachment “STS2406116W12_Appendix 6G WIFI”.

7. MAXIMUM CONDUCTED OUTPUT POWER

7.1 LIMIT

For very low power devices operating in the 5.925-6.425 GHz and 6.525-6.875 GHz bands, the maximum power spectral density must not exceed −5 dBm e.i.r.p in any 1-megahertz band and the maximum e.i.r.p must not exceed 14 dBm.

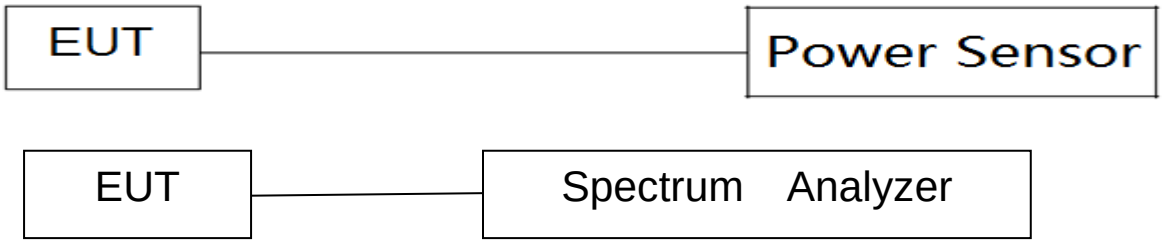
7.2 TEST PROCEDURE

The EUT was directly connected to the Power Sensor&PC .

7.3 DEVIATION FROM STANDARD

No deviation.

7.4 TEST SETUP



7.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 5 Unless otherwise a special operating condition is specified in the follows during the testing.

7.6 TEST RESULTS

Note: The test data please reference to attachment “STS2406116W12_Appendix 6G WIFI”.

8. IN-BAND EMISSIONS

8.1 LIMIT

For transmitters operating within the 5.925-7.125 GHz bands: Power spectral density must be suppressed by 20 dB at 1 MHz outside of channel edge, by 28 dB at one channel bandwidth from the channel center, and by 40 dB at one- and one-half times the channel bandwidth away from channel center. At frequencies between one megahertz outside an unlicensed device's channel edge and one channel bandwidth from the center of the channel, the limits must be linearly interpolated between 20 dB and 28 dB suppression, and at frequencies between one and one- and one-half times an unlicensed device's channel bandwidth, the limits must be linearly interpolated between 28 dB and 40 dB suppression. Emissions removed from the channel center by more than one- and one-half times the channel bandwidth must be suppressed by at least 40 dB.

8.2 TEST PROCEDURE

1. Take nominal bandwidth as reference channel bandwidth provided that 26 dB emission bandwidth is always larger than nominal bandwidth
2. Measure the power spectral density (which will be used for emissions mask reference) using the following procedure:
a) Set the span to encompass the entire 26 dB EBW of the signal.
b) Set RBW = same RBW used for 26 dB EBW measurement.
c) Set VBW ≥ 3 X RBW
d) Number of points in sweep ≥ [2 X span / RBW].
e) Sweep time = auto.
f) Detector = RMS (i.e., power averaging)
g) Trace average at least 100 traces in power averaging (rms) mode.
h) Use the peak search function on the instrument to find the peak of the spectrum.

8.3 DEVIATION FROM STANDARD

No deviation.

8.4 TEST SETUP

8.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 5 Unless otherwise a special operating condition is specified in the follows during the testing.

8.6 TEST RESULTS

Note: The test data please reference to attachment “STS2406116W12_Appendix 6G WIFI”.

9. AUTOMATICALLY DISCONTINUE TRANSMISSION

9.1 LIMIT OF AUTOMATICALLY DISCONTINUE TRANSMISSION

The device shall automatically discontinue transmission in case of either absence of information to transmit or operational failure. These provisions are not intended to preclude the transmission of control or signaling information or the use of repetitive codes used by certain digital technologies to complete frame or burst intervals. Applicants shall include in their application for equipment authorization to describe how this requirement is met.

9.2 TEST RESULT OF AUTOMATICALLY DISCONTINUE TRANSMISSION

During no any information transmission, the EUT can automatically discontinue transmission and become standby mode for power saving. The EUT can detect the controlling signal of ACK message transmitting from remote device and verify whether it shall resend or discontinue transmission.

10. CONTENTION BASED PROTOCOL

10.1 LIMIT

Unlicensed low-power indoor devices must detect co-channel radio frequency power that is at least -62dBm or lower. Upon detection of energy in the band, unlicensed low power indoor devices must vacate the channel (in which incumbent signal is transmitted) and stay off the incumbent channel as long as detected radio frequency power is equal to or greater than the threshold (-62dBm). The -62 dBm (or lower) threshold is referenced to a 0 dBi antenna gain.

To ensure incumbent operations are reliably detected in the band, low power indoor devices must detect RF energy throughout their intended operating channel. For example, an 802.11 device that plans to transmit a 40 MHz- wide signal (on a primary 20 MHz channel and a secondary 20 MHz channel) must detect energy throughout the entire 40 MHz channel. Additionally, low-power indoor devices must detect co-channel energy with 90% or greater certainty.

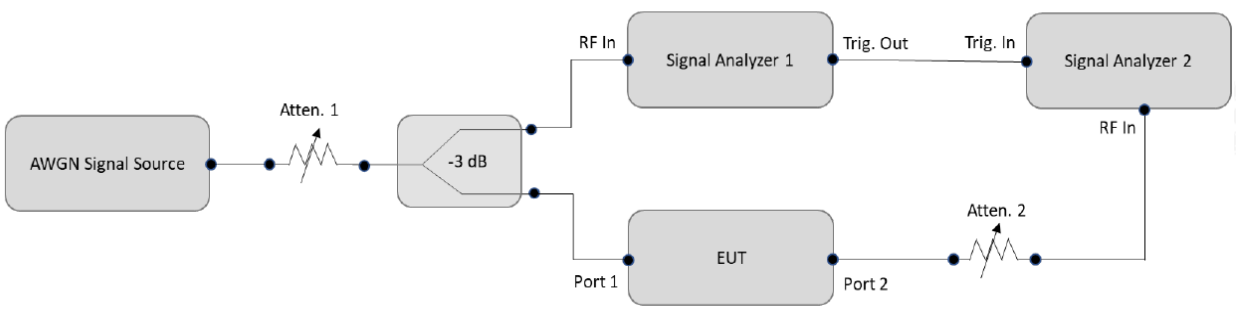
10.2 TEST PROCEDURE

1. Configure the EUT to transmit with a constant duty cycle.
2. Set the operating parameters of the EUT including power level, operating frequency, modulation and bandwidth.
3. Set the signal analyzer center frequency to the nominal EEUT channel center frequency. The span range of the signal analyzer shall be between two times and five times the OBW of the EUT. Connect the output port of the EUT to the signal analyzer 2, as shown in Figure 2. Ensure that the attenuator 2 provides enough attenuation to not overload the signal analyzer 2 receiver.
4. Monitoring the signal analyzer 2, verify the EUT is operating and transmitting with the parameters set at step two.
5. Using an AWGN signal source, generate (but do not transmit, i.e., RF OFF) a 10 MHz-wide AWGN signal. Use Table 1 to determine the center frequency of the 10 MHz AWGN signal relative to the EUT's channel bandwidth and center frequency.
6. Set the AWGN signal power to an extremely low level (more than 20 dB below the -62 dBm threshold). Connect the AWGN signal source, via a 3-dB splitter, to the signal analyzer 1 and the EUT as shown in Figure 2.
7. Transmit the AWGN signal (RF ON) and verify its characteristics on the signal analyzer 1.
8. Monitor the signal analyzer 2 to verify if the AWGN signal has been detected and the EUT has ceased transmission. If the EUT continues to transmit, then incrementally increase the AWGN signal power level until the EUT stops transmitting.
9. (Including all losses in the RF paths) Determine and record the AWGN signal power level (at the EUT's antenna port) at which the EUT ceased transmission. Repeat the procedure at least 10 times to verify the EUT can detect an AWGN signal with 90% (or better) level of certainty.
10. Refer to Table 1 to determine number of times the detection threshold testing needs to be repeated. If testing is required more than once, then go back to step 5, choose a different center frequency for the AWGN signal and repeat the process.

10.3 DEVIATION FROM STANDARD

No deviation.

10.4 TEST SETUP

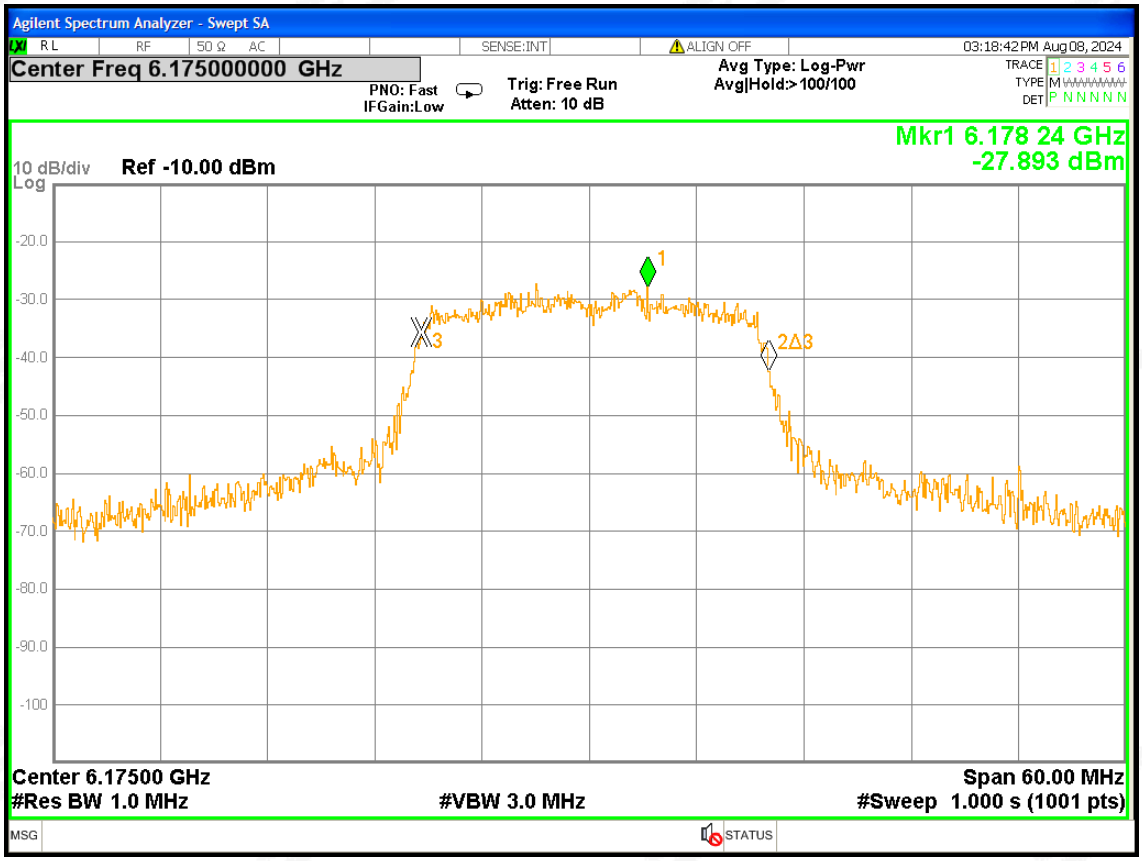
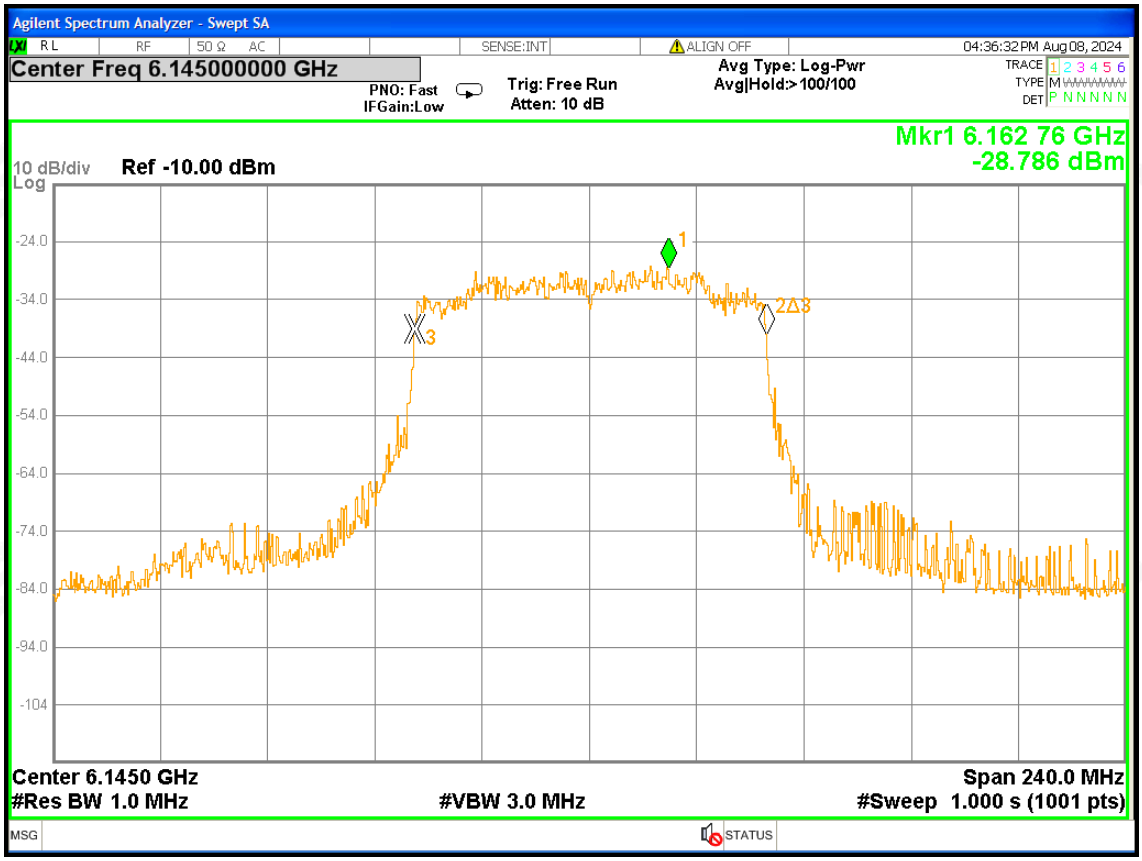


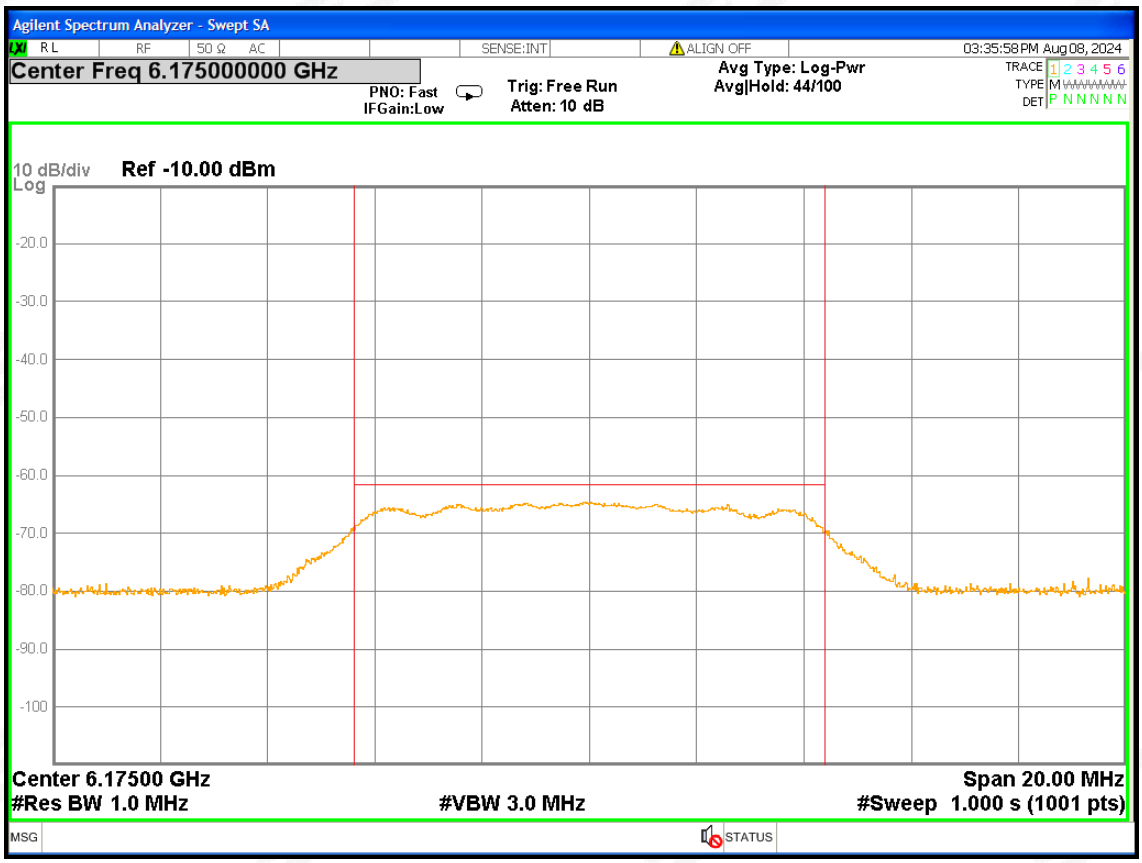
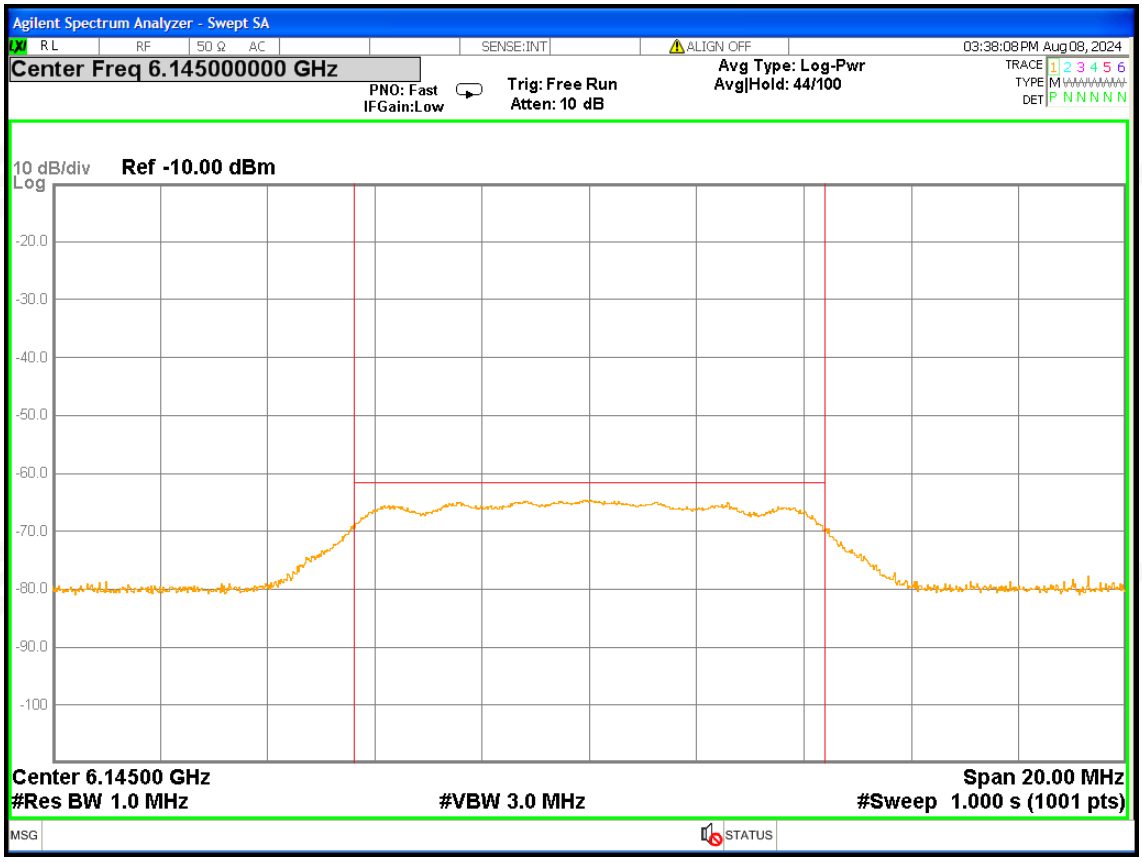
10.5 TEST RESULTS

<Normal mode – WLAN Ant.1+2>

Bnad	Channel Freq. (MHz)	Channel BW (MHz)	Incumbent Freq. (MHz)	Measured Detection level (dBm)	Detection Rate (%)	Regulated Threshold level (dBm)	Limit (%)	Result
UNII Band 5	6175	20	6175	-62.36	100	-59.5	90	PASS
	6145	80	6110	-62.53	100	-59.5	90	PASS
			6145	-62.44	100	-59.5	90	PASS
			6180	-63.43	100	-59.5	90	PASS
UNII Band 7	6535	20	6535	-62.92	100	-59.5	90	PASS
	6705	80	6670	-64.64	100	-59.5	90	PASS
			6705	-62.59	100	-59.5	90	PASS
			6740	-62.73	100	-59.5	90	PASS

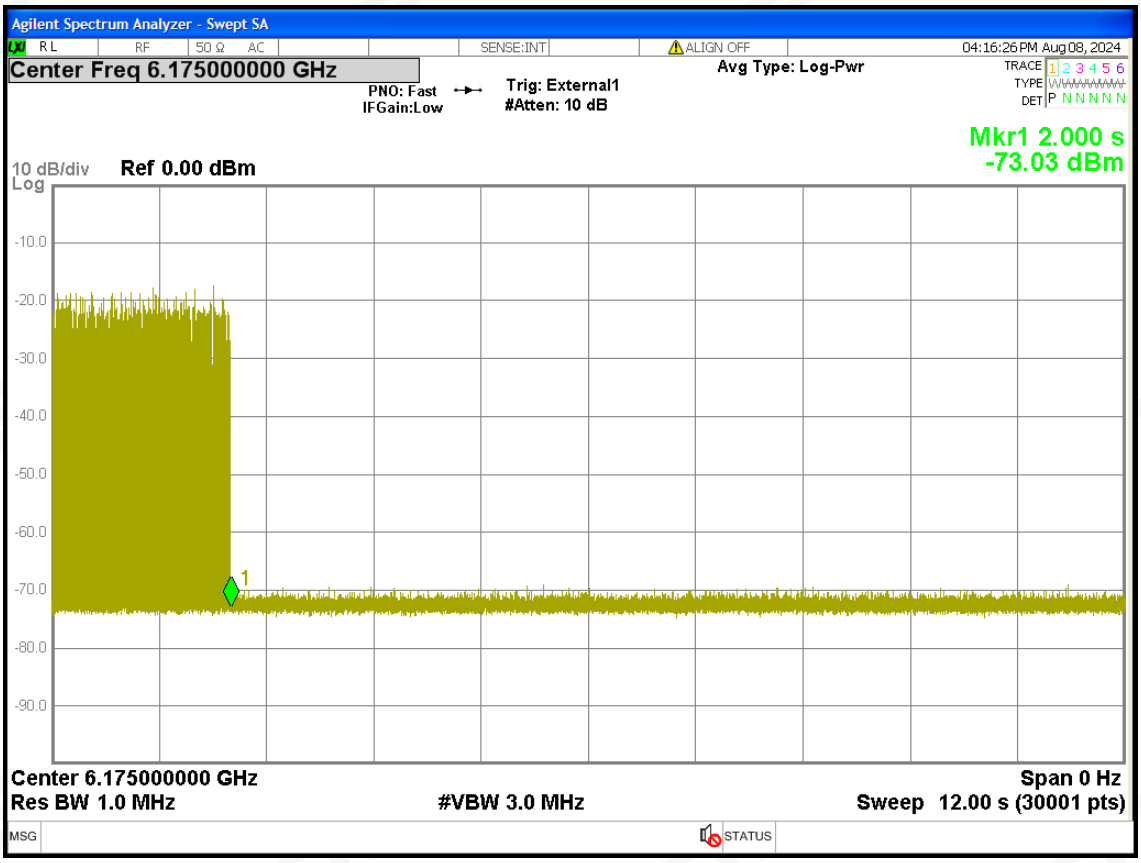
Bnad	Channel Freq. (MHz)	Channel BW (MHz)	AWGN Signal Freq. (MHz)	Threshold level (dBm)	EUT Starus
UNII Band 5	6175	20	6175	-63	Start transmitting
	6145	80	6110	-63	Start
			6145	-63	transmitting
			6180	-63	Start

Plots of EUT Tx waveform
802.11ax 20

802.11ax 80


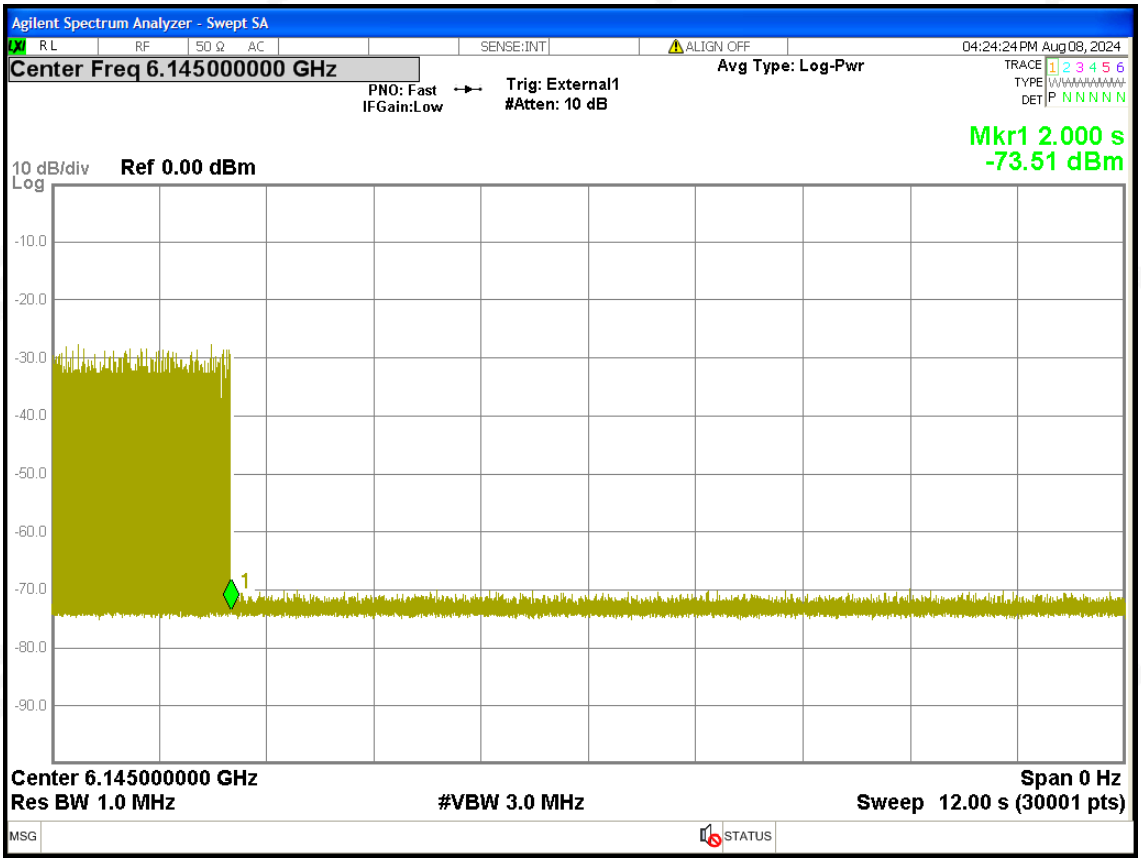
Plots of shows Incumbent signal level
802.11ax 20

802.11ax 80


Plots of EUT ceased transmission in the time domain

802.11ax 20



802.11ax 80



Note: Threshold Level (TL) = -62dBm + minimum antenna gain

11. ANTENNA REQUIREMENT

11.1 STANDARD REQUIREMENT

15.203 requirement: For intentional device, according to 15.203: an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

11.2 EUT ANTENNA

The EUT antenna is Dipole Antenna. It comply with the standard requirement.

APPENDIX - PHOTOS OF TEST SETUP

Note: See test photos in setup photo document for the actual connections between Product and support equipment.

※※※※※END OF THE REPORT※※※※※