RADIO TEST REPORT

Report No.:STS2007352W16

Issued for

Shanghai Unihertz E-Commerce Co., Ltd

Room 302, No. 5, Lane 59, Shennan Rd, Minhang district，
Shanghai, China 201108

Product Name:	Smart phone
Brand Name:	Unihertz
Model Name:	Jelly2
Series Model:	N/A
FCC ID:	2AK6CJELLY2
Test Standard:	FCC Part 15.407

Shenzhen STS Test Services Co., Ltd.
A 1/F, Building B, Zhuoke Science Park, No.190 Chongqing Road, HepingShequ,
Fuyong Sub-District, Bao'an District, Shenzhen, Guang Dong, China
TEL: +86-755 3688 6288 FAX: +86-755 3688 6277 E-mail:sts@stsapp.com

TEST RESULT CERTIFICATION

Applicant's Name	:	Shanghai Unihertz E-Commerce Co., Ltd
Address	:	Room 302, No. 5, Lane 59, Shennan Rd, Minhang district，Shanghai, China 201108
Manufacturer's Name	:	OBLUE Communication Technology Co., Ltd.
Address	:	7th floor, building B, dayou industrial and trade industrial park, heping yonghe road, fuyong street, baoan district, shenzhen, China.

Product Description

Product Name	:	Smart phone
Brand Name	:	Unihertz
Model Name	:	Jelly2
Series Model	:	N/A
Test Standards	:	FCC Part15.407
Test Procedure		ANSI C63.10-2013

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.
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Date of Test	:	
Date of receipt of test item	:	30 July 2020
Date (s) of performance of tests	:	30 July 2020 ~ 20 Aug. 2020
Date of Issue	:	20 Aug. 2020
Test Result	:	**Pass**

Testing Engineer : Chris Chen

(Chris Chen)

Technical Manager : Sean She

(Sean she)

Authorized Signatory : Vita Li

(Vita Li)

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Revision History

Rev.	Issue Date	Report NO.	Effect Page	Contents
00	20 Aug. 2020	STS2007352W16	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

FCC Part 15.407		
FCC standard	Test Item	Results
15.207	AC Conducted Emission	PASS
15.407 (a) /15.407 (e)	26dB/6dB &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(a)	Power Spectral Density	PASS
15.407(c)	Automatically Discontinue Transmission	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 C63.10-2013.

1.1 TEST FACTORY

SHENZHEN STS TEST SERVICES CO., LTD
Add. : A 1/F, Building B, Zhuoke Science Park, No.190 Chongqing Road, HepingShequ, Fuyong 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	±0.68dB
2	Unwanted Emissions, conducted	±2.988dB
3	All emissions, radiated 30-1GHz	±5.6dB
4	All emissions, radiated 1G-6GHz	±5.5dB
5	All emissions, radiated>6G	±5.8dB
6	Conducted Emission (9KHz-150KHz)	±3.37dB
7	Conducted Emission (150KHz-30MHz)	±3.83dB

2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF THE EUT

<table>
<tr><td>Product Name</td><td>Smart phone</td></tr>
<tr><td>Trade Name</td><td>Unihertz</td></tr>
<tr><td>Model Name</td><td>Jelly2</td></tr>
<tr><td>Series Model</td><td>N/A</td></tr>
<tr><td>Model Difference</td><td>N/A</td></tr>
<tr><td>Product Description</td><td>The EUT is a Smart phone
<table>
<tr><td rowspan="3">Operation Frequency:</td><td>IEEE 802.11a/ n(HT20)/ac(VHT20): 5.180GHz-5.240GHz
IEEE 802.11n(HT40)/ac(VHT40): 5.190GHz-5.310GHz
IEEE 802.11ac(VHT80): 5.210GHz</td></tr>
<tr><td>IEEE 802.11a/ n(HT20)/ac(VHT20): 5.260GHz-5.320GHz
IEEE 802.11n(HT40)/ac(VHT40): 5.270GHz-5.310GHz
IEEE 802.11ac(VHT80): 5.290GHz</td></tr>
<tr><td>IEEE 802.11a/ n(HT20)/ac(VHT20): 5.745GHz-5.825GHz
IEEE 802.11n(HT40)/ac(VHT40): 5.755GHz-5.795GHz
IEEE 802.11ac(VHT80): 5.775GHz</td></tr>
<tr><td>Modulation Type:</td><td>802.11a(OFDM): BPSK,QPSK,16-QAM,64-QAM
802.11n(OFDM): BPSK,QPSK,16-QAM,64-QAM
802.11ac(OFDM): BPSK,QPSK,16-QAM,64-QAM,256-QAM</td></tr>
<tr><td>Antenna Designation:</td><td>Please refer to the Note 3.</td></tr>
<tr><td>Max.Output Power(Conducted):</td><td>12.48 dBm</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 2.</td></tr>
<tr><td>Adapter</td><td>Input: 100-240V-50/60HZ 0.3A
Output: 5.0V-1.5A 7.5W</td></tr>
<tr><td>Battery</td><td>Rated Voltage: 3.85V
Charge Limit: 4.4V
Capacity: 2000MAH</td></tr>
<tr><td>Hardware version number</td><td>G55_V1.1</td></tr>
<tr><td>Software version number</td><td>Unihertz_Jelly2_20200506</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.

Operation Frequency of channel			
5.180GHz-5.240GHz		5.745GHz-5.825GHz	
Channel	Frequency	Channel	Frequency
36	5180	149	5745
38	5190	151	5755
40	5200	153	5765
42	5210	157	5785
44	5220	159	5795
46	5230	161	5805
48	5240	165	5825
5.260GHz-5.320GHz			
Channel	Frequency		
52	5260		
54	5270		
56	5280		
58	5290		
60	5300		
62	5310		
64	5320		

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:
Carrier Frequency Channel

5GHz:

For 802.11a/n(HT20) /ac (VHT20)			
Channel	Freq.(MHz)	Channel	Freq.(MHz)
36	5180	52	5260
40	5200	60	5300
48	5240	64	5320

For 802.11a/n(HT20) /ac (VHT20)			
Channel	Freq.(MHz)	Channel	Freq.(MHz)
149	5745	157	5785
165	5825		

For 802.11n(HT40) /ac (VHT40)			
Channel	Freq.(MHz)	Channel	Freq.(MHz)
38	5190	54	5270
46	5230	62	5310

For 802.11n(HT40) /ac (VHT40)			
Channel	Freq.(MHz)	Channel	Freq.(MHz)
151	5755	159	5795

For 802.11ac (VHT80)			
Channel	Freq.(MHz)	Channel	Freq.(MHz)
42	5210	155	5775

For 802.11ac (VHT80)			
Channel	Freq.(MHz)	Channel	Freq.(MHz)
155	5775		

3.

Ant	Brand	Model Name	Ant Type	Connector	Gain (dBi)	NOTE
A	Unihertz	Jelly2	PIFA	N/A	0.61dBi	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 802.11a HT20 CH36&CH40&CH48	6 Mbps
Mode 2	TX IEEE 802.11a HT20 CH52&CH60&CH64	6 Mbps
Mode 3	TX IEEE 802.11a HT20 CH149&CH157&CH165	6 Mbps
Mode 4	TX IEEE 802.11n HT20 CH36&CH40&CH48	MCS 0
Mode 5	TX IEEE 802.11ac HT20 CH36&CH40&CH48	NSS1 MCS0
Mode 6	TX IEEE 802.11n HT20 CH52&CH60&CH64	MCS 0
Mode 7	TX IEEE 802.11ac HT20 CH52&CH60&CH64	NSS1 MCS0
Mode 8	TX IEEE 802.11n HT20 CH149&CH157&CH165	MCS 0
Mode 9	TX IEEE 802.11ac HT20 CH149&CH157&CH165	NSS1 MCS0
Mode 10	TX IEEE 802.11n HT40 CH38&CH46	MCS 0
Mode 11	TX IEEE 802.11ac HT40 CH38&CH46	NSS1 MCS0
Mode 12	TX IEEE 802.11n HT40 CH54 &CH62	MCS 0
Mode 13	TX IEEE 802.11ac HT40 CH54 &CH62	NSS1 MCS0
Mode 14	TX IEEE 802.11n HT40 CH151&CH159	MCS 0
Mode 15	TX IEEE 802.11ac HT40 CH151&CH159	NSS1 MCS0
Mode 16	TX IEEE 802.11ac HT80 CH42	NSS1 MCS0
Mode 17	TX IEEE 802.11ac HT80 CH58	NSS1 MCS0
Mode 18	TX IEEE 802.11ac HT80 CH155	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.

(4) The battery is fully-charged during the radited and RF conducted test.

AC Conducted Emission

Test Case	
AC Conducted Emission	Mode 19: Keeping TX + WLAN Link

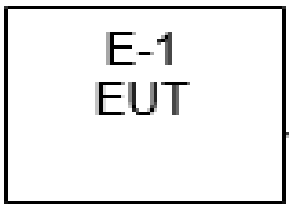
2.3 TEST SOFTWARE AND POWER LEVEL

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

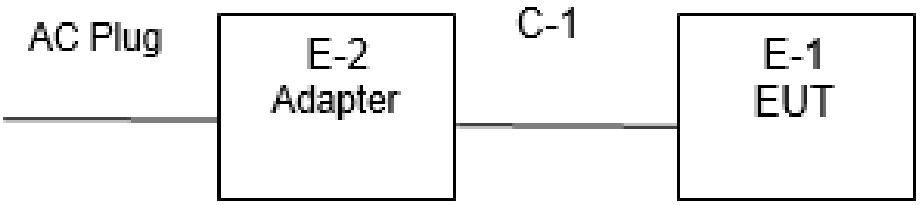
RF Function	Type	Mode Or Modulation type	Ant Gain(dBi)	Power Class	Software For Testing
WIFI(5G)	5G WIFI Band1 (5150MHz-5250MHz)	802.11a	0.16	17	Engineering Mode
		802.11n(HT20)		17	
		802.11n(HT40)		17	
		802.11ac(VHT20)		16	
		802.11ac(VHT40)		16	
		802.11ac(VHT80)		16	
RF Function	Type	Mode Or Modulation type	Ant Gain(dBi)	Power Class	Software For Testing
WIFI(5G)	5G WIFI Band2 (5250MHz-5350MHz)	802.11a	0.16	17	Engineering Mode
		802.11n(HT20)		17	
		802.11n(HT40)		17	
		802.11ac(VHT20)		16	
		802.11ac(VHT40)		16	
		802.11ac(VHT80)		16	
RF Function	Type	Mode Or Modulation type	Ant Gain(dBi)	Power Class	Software For Testing
WIFI(5G)	5G WIFI Band4 (5725MHz-5875MHz)	802.11a	0.16	17	Engineering Mode
		802.11n(HT20)		17	
		802.11n(HT40)		17	
		802.11ac(VHT20)		15	
		802.11ac(VHT40)		15	
		802.11ac(VHT80)		15	

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
E-2	Adapter	Unihertz	HJ-0501500W2-US	N/A	N/A
C-1	DC Cable	N/A	N/A	110cm	N/A

Support units

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

Radiation Test equipment

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
Test Receiver	R&S	ESCI	101427	2019.10.09	2020.10.08
Signal Analyzer	Agilent	N9020A	MY51110105	2020.03.05	2021.03.04
Active loop Antenna	ZHINAN	ZN30900C	16035	2018.03.11	2021.03.10
Bilog Antenna	TESEQ	CBL6111D	34678	2017.11.02	2020.11.01
Horn Antenna	SCHWARZBECK	BBHA 9120D(1201)	9120D-1343	2018.10.19	2021.10.18
SHF-EHF Horn Antenna (18G-40GHz)	A-INFO	LB-180400-KF	J211020657	2018.03.11	2021.03.10
Pre-Amplifier (0.1M-3GHz)	EM	EM330	060665	2019.10.09	2020.10.08
Pre-Amplifier (1G-18GHz)	SKET	LNPA-01018G-45	SK2018080901	2019.10.12	2020.10.11
Pre-Amplifier (18G-40GHz)	SKET	LNPA-1840-50	SK2018101801	2019.10.12	2020.10.11
Temperature & Humidity	HH660	Mieo	N/A	2019.10.17	2020.10.16
turn table	EM	SC100_1	60531	N/A	N/A
Antenna mast	EM	SC100	N/A	N/A	N/A
Test SW	FARAD	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	2019.10.09	2020.10.08
LISN	R&S	ENV216	101242	2019.10.09	2020.10.08
LISN	EMCO	3810/2NM	23625	2019.10.09	2020.10.08
Temperature & Humidity	HH660	Mieo	N/A	2019.10.12	2020.10.11
Test SW	FARAD	EZ-EMC(Ver.STSLAB-03A1 CE)			

RF Connected Test

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
USB RF power sensor	DARE	RPR3006W	15I00041SNO03	2019.10.09	2020.10.08
Signal Analyzer	Agilent	N9020A	MY49100060	2019.10.09	2020.10.08
Temperature & Humidity	HH660	Mieo	N/A	2019.10.12	2020.10.11
Test SW	FARAD	LZ-RF /LzRf-3A3			

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

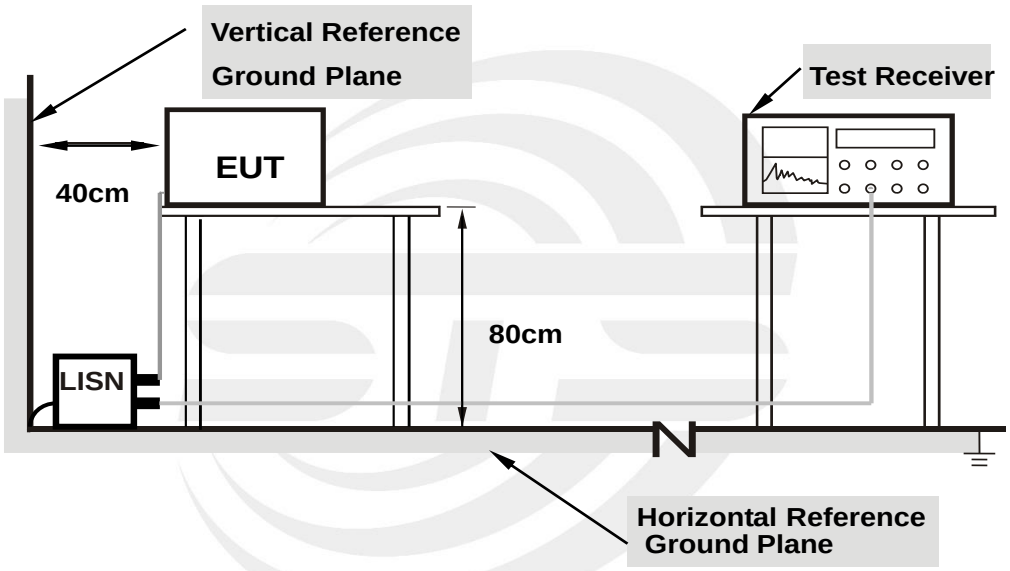
3.1.2 TEST PROCEDURE

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.

3.1.5 EUT OPERATING CONDITIONS

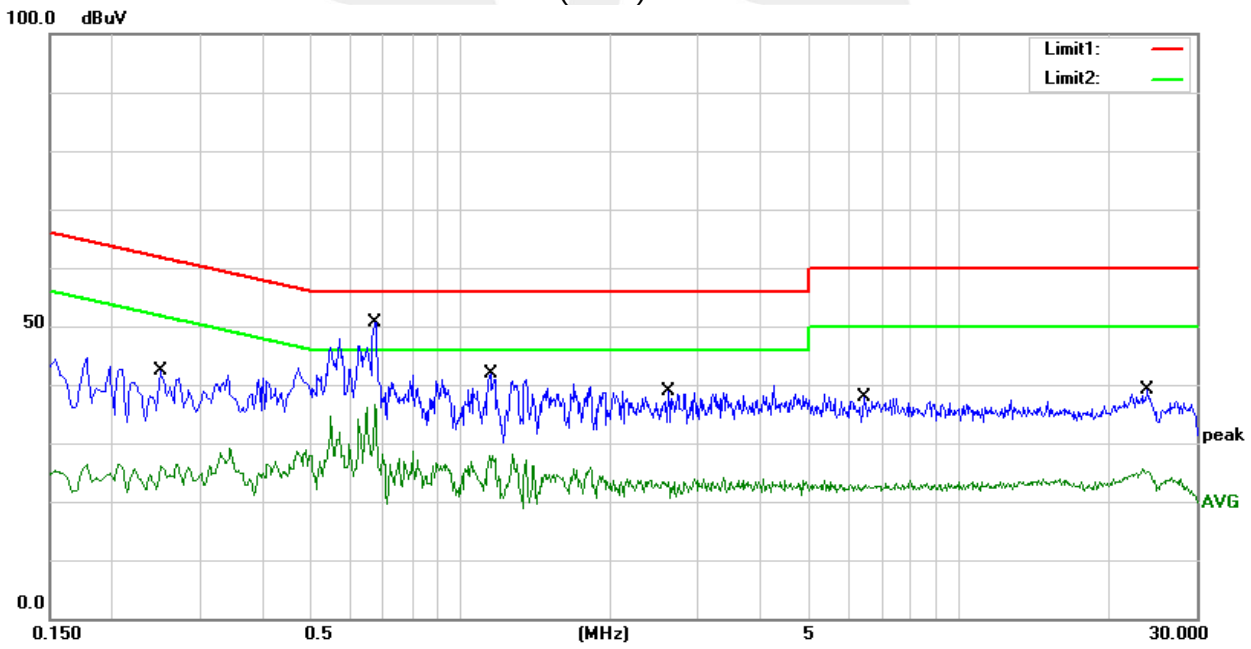
The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

3.1.6 TEST RESULTS

Temperature:	27.4(C)	Relative Humidity:	69%RH
Test Voltage:	AC 120V/60Hz	Phase:	L
Test Mode：	Mode 19		

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.2500	21.82	20.54	42.36	61.76	-19.40	QP
2	0.2500	5.50	20.54	26.04	51.76	-25.72	AVG
3	0.6740	30.40	20.30	50.70	56.00	-5.30	QP
4	0.6740	16.38	20.30	36.68	46.00	-9.32	AVG
5	1.1500	21.71	20.16	41.87	56.00	-14.13	QP
6	1.1500	7.71	20.16	27.87	46.00	-18.13	AVG
7	2.6180	18.76	20.11	38.87	56.00	-17.13	QP
8	2.6180	3.38	20.11	23.49	46.00	-22.51	AVG
9	6.4740	18.00	19.91	37.91	60.00	-22.09	QP
10	6.4740	2.95	19.91	22.86	50.00	-27.14	AVG
11	24.0140	18.48	20.68	39.16	60.00	-20.84	QP
12	24.0140	4.34	20.68	25.02	50.00	-24.98	AVG

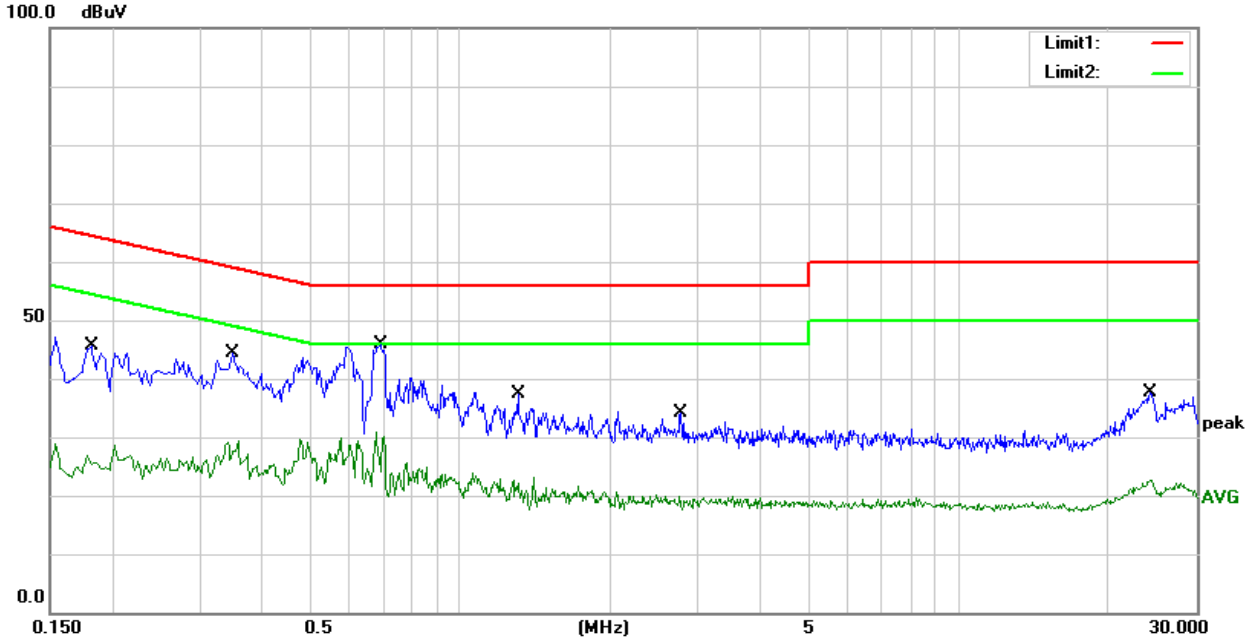
Remark:
1. All readings are Quasi-Peak and Average values
2. Margin = Result (Result =Reading + Factor)–Limit
3. Factor=LISN factor+Cable loss+Limiter (10dB)



Temperature:	27.4(C)	Relative Humidity:	69%RH
Test Voltage	AC 120V/60Hz	Phase:	N
Test Mode	Mode 19		

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1820	25.29	20.28	45.57	64.39	-18.82	QP
2	0.1820	5.95	20.28	26.23	54.39	-28.16	AVG
3	0.3500	23.66	20.64	44.30	58.96	-14.66	QP
4	0.3500	8.78	20.64	29.42	48.96	-19.54	AVG
5	0.6900	25.62	20.29	45.91	56.00	-10.09	QP
6	0.6900	10.65	20.29	30.94	46.00	-15.06	AVG
7	1.3060	17.20	20.16	37.36	56.00	-18.64	QP
8	1.3060	2.38	20.16	22.54	46.00	-23.46	AVG
9	2.7700	13.99	20.09	34.08	56.00	-21.92	QP
10	2.7700	-0.53	20.09	19.56	46.00	-26.44	AVG
11	24.2260	16.90	20.68	37.58	60.00	-22.42	QP
12	24.2260	1.97	20.68	22.65	50.00	-27.35	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.

Frequencies (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)	Class B (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

Undesirable emission limits. Except as shown in paragraph (b)(7) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:

(1) 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.

(2) 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.

(3) 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.

(4) For transmitters operating in the 5.725-5.85 GHz band:

(i) 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.

Note: dBuV/m(at 3M) = EIRP(dBm) + 95.3.

Peak Limit = -27dBm/MHz + 95.3 = 68.3 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:

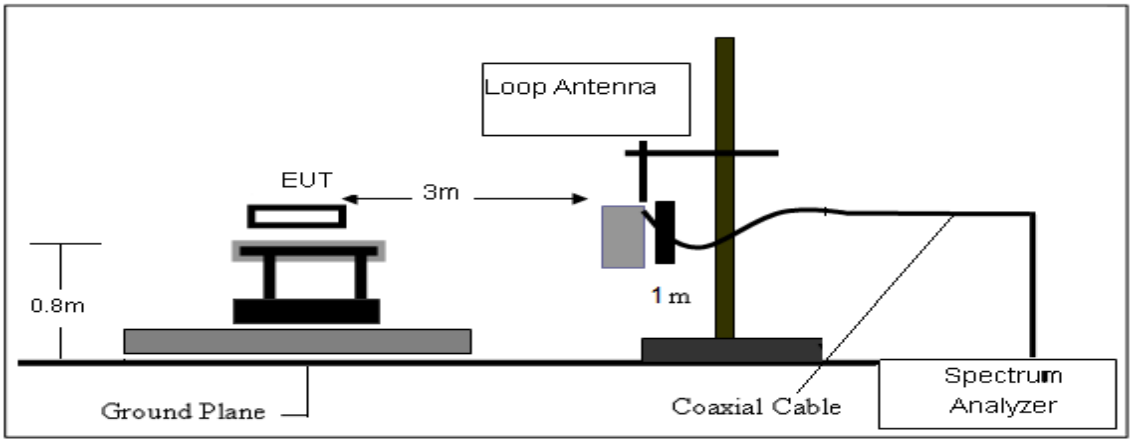
Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported.

3.2.2 DEVIATION FROM TEST STANDARD

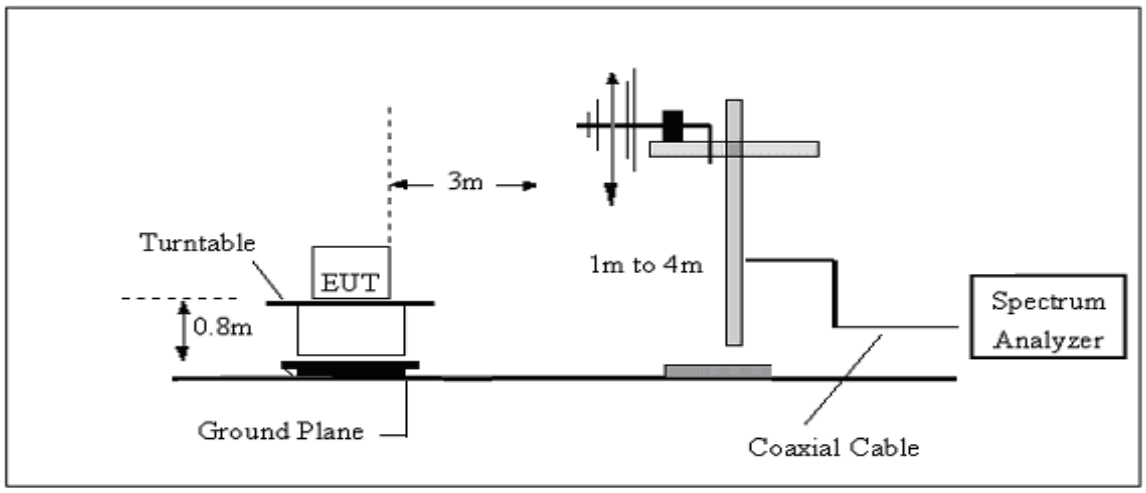
No deviation

3.2.3 TEST SETUP

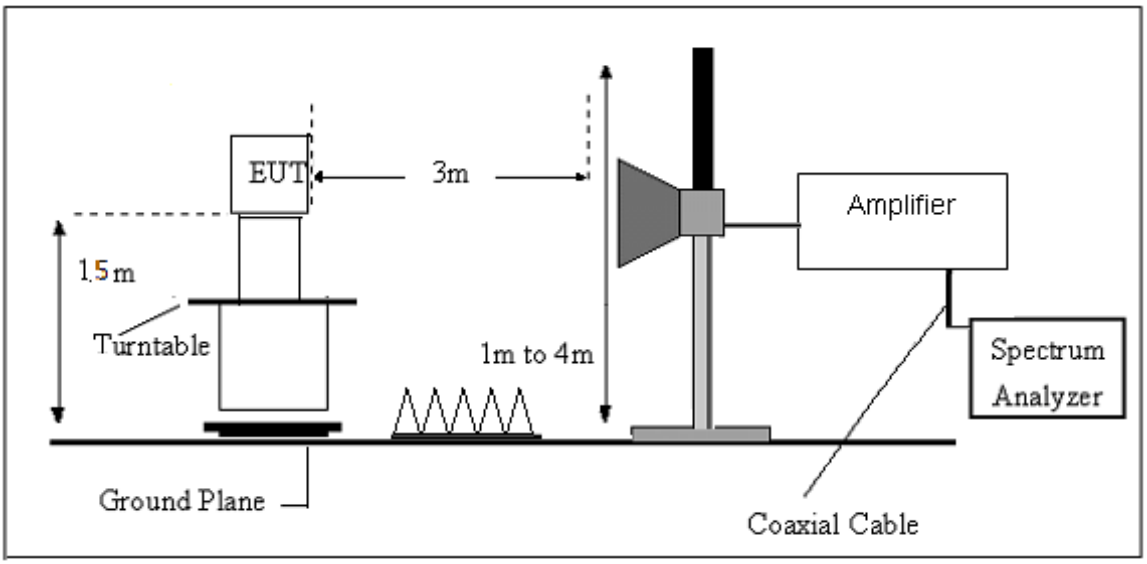
(A) Radiated Emission Test-Up Frequency Below 30MHz



(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：	23.5(C)	Relative Humidtity:	63%RH
Test Voltage ：	DC 3.85V	Polarization :	--
Test Mode ：	TX Mode		

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

Note:

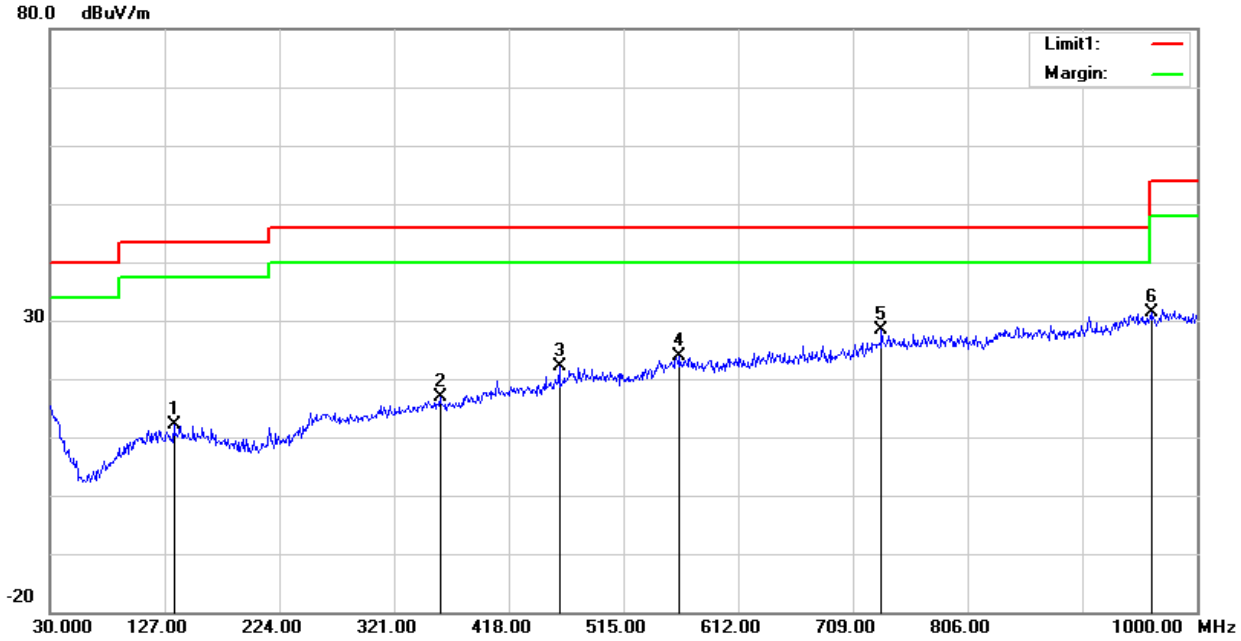
The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.
Distance extrapolation factor =40 log (specific distance/test distance)(dB);
Limit line = specific limits(dBuv) + distance extrapolation factor.

3.2.7 TEST RESULTS (Between 30MHz – 1GHz)

Temperature	23.5(C)	Relative Humidtity:	63%RH
Test Voltage	DC 3.85V	Polarization:	Horizontal
Test Mode	Mode 1~18(Mode 1 worst mode)		

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	134.7600	30.32	-18.11	12.21	43.50	-31.29	QP
2	359.8000	29.63	-12.87	16.76	46.00	-29.24	QP
3	460.6800	31.50	-9.43	22.07	46.00	-23.93	QP
4	562.5300	29.51	-5.52	23.99	46.00	-22.01	QP
5	733.2500	30.74	-2.35	28.39	46.00	-17.61	QP
6	962.1700	29.47	1.81	31.28	54.00	-22.72	QP

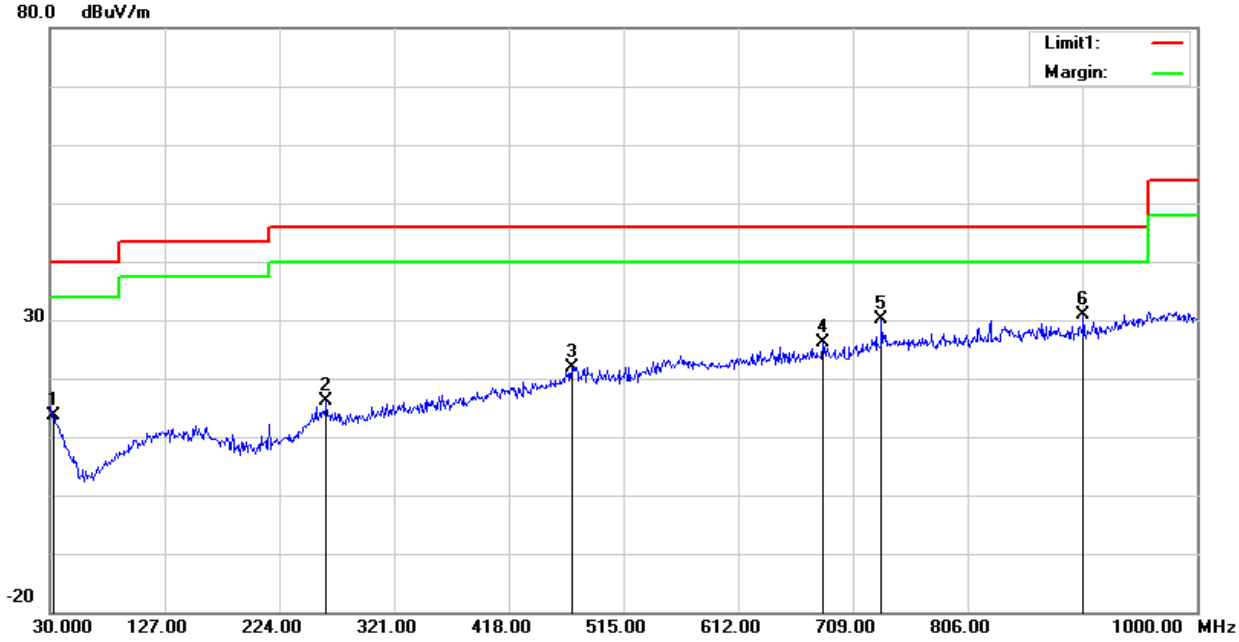
Remark:
1. Margin = Result (Result =Reading + Factor)–Limit
2. Factor= Antenna factor+Cable attenuation factor(cable loss)-Amplifier gain



Temperature	23.5(C)	Relative Humidtity:	63%RH
Test Voltage	DC 3.85V	Polarization:	Vertical
Test Mode	Mode 1~18(Mode 1 worst mode)		

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	32.9100	27.92	-14.33	13.59	40.00	-26.41	QP
2	263.7700	31.00	-14.75	16.25	46.00	-29.75	QP
3	471.3500	30.95	-8.95	22.00	46.00	-24.00	QP
4	683.7800	30.37	-4.31	26.06	46.00	-19.94	QP
5	733.2500	32.45	-2.35	30.10	46.00	-15.90	QP
6	903.9700	31.25	-0.34	30.91	46.00	-15.09	QP

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



3.2.8 TEST RESULTS (Above 1000 MHz)

Band I 5150-5250MHz

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 (802.11a/ 5180 MHz)										
3249.73	44.07	44.70	6.70	28.20	-9.80	34.27	68.20	-33.93	Pk	Vertical
3249.73	41.28	44.70	6.70	28.20	-9.80	31.48	54.00	-22.52	AV	Vertical
3250.12	44.23	44.70	6.70	28.20	-9.80	34.43	68.20	-33.77	Pk	Horizontal
3250.12	41.62	44.70	6.70	28.20	-9.80	31.82	54.00	-22.18	AV	Horizontal
3988.30	39.08	44.20	7.90	29.70	-6.60	32.48	68.20	-35.72	Pk	Vertical
3988.30	36.60	44.20	7.90	29.70	-6.60	30.00	54.00	-24.00	AV	Vertical
3992.67	39.27	44.20	7.90	29.70	-6.60	32.67	68.20	-35.53	Pk	Horizontal
3992.67	36.99	44.20	7.90	29.70	-6.60	30.39	54.00	-23.61	AV	Horizontal
7218.04	37.75	43.50	11.40	35.50	3.40	41.15	68.20	-27.05	Pk	Vertical
7218.04	34.01	43.50	11.40	35.50	3.40	37.41	54.00	-16.59	AV	Vertical
7223.35	36.79	43.50	11.40	35.50	3.40	40.19	68.20	-28.01	Pk	Horizontal
7223.35	33.52	43.50	11.40	35.50	3.40	36.92	54.00	-17.08	AV	Horizontal
10359.95	39.38	44.50	13.80	38.80	8.10	47.48	68.20	-20.72	Pk	Vertical
10359.95	35.78	44.50	13.80	38.80	8.10	43.88	54.00	-10.12	AV	Vertical
10360.31	39.76	44.50	13.80	38.80	8.10	47.86	68.20	-20.34	Pk	Horizontal
10360.31	36.69	44.50	13.80	38.80	8.10	44.79	54.00	-9.21	AV	Horizontal
11028.03	33.57	43.60	14.30	39.50	10.20	43.77	68.20	-24.43	Pk	Vertical
11028.03	29.82	43.60	14.30	39.50	10.20	40.02	54.00	-13.98	AV	Vertical
11023.10	33.21	43.60	14.30	39.50	10.20	43.41	68.20	-24.79	Pk	Horizontal
11023.10	30.62	43.60	14.30	39.50	10.20	40.82	54.00	-13.18	AV	Horizontal
13298.67	31.87	42.60	15.90	38.90	12.20	44.07	68.20	-24.13	Pk	Vertical
13298.67	29.82	42.60	15.90	38.90	12.20	42.02	54.00	-11.98	AV	Vertical
13283.14	31.77	42.60	15.90	38.90	12.20	43.97	68.20	-24.23	Pk	Horizontal
13283.14	29.81	42.60	15.90	38.90	12.20	42.01	54.00	-11.99	AV	Horizontal
Mid Channel (802.11a/ 5200 MHz)										
3245.58	44.73	44.70	6.70	28.20	-9.80	34.93	68.20	-33.27	Pk	Vertical
3245.58	41.44	44.70	6.70	28.20	-9.80	31.64	54.00	-22.36	AV	Vertical
3250.38	44.51	44.70	6.70	28.20	-9.80	34.71	68.20	-33.49	Pk	Horizontal
3250.38	41.94	44.70	6.70	28.20	-9.80	32.14	54.00	-21.86	AV	Horizontal
3982.41	39.99	44.20	7.90	29.70	-6.60	33.39	68.20	-34.81	Pk	Vertical
3982.41	36.76	44.20	7.90	29.70	-6.60	30.16	54.00	-23.84	AV	Vertical
3997.10	39.07	44.20	7.90	29.70	-6.60	32.47	68.20	-35.73	Pk	Horizontal
3997.10	36.81	44.20	7.90	29.70	-6.60	30.21	54.00	-23.79	AV	Horizontal
7227.48	36.58	43.50	11.40	35.50	3.40	39.98	68.20	-28.22	Pk	Vertical
7227.48	33.93	43.50	11.40	35.50	3.40	37.33	54.00	-16.67	AV	Vertical
7226.18	37.36	43.50	11.40	35.50	3.40	40.76	68.20	-27.44	Pk	Horizontal
7226.18	34.04	43.50	11.40	35.50	3.40	37.44	54.00	-16.56	AV	Horizontal
10400.27	39.22	44.50	13.80	38.80	8.10	47.32	68.20	-20.88	Pk	Vertical
10400.27	37.06	44.50	13.80	38.80	8.10	45.16	54.00	-8.84	AV	Vertical
10400.11	38.94	44.50	13.80	38.80	8.10	47.04	68.20	-21.16	Pk	Horizontal
10400.11	36.81	44.50	13.80	38.80	8.10	44.91	54.00	-9.09	AV	Horizontal
11019.14	33.82	43.60	14.30	39.50	10.20	44.02	68.20	-24.18	Pk	Vertical
11019.14	30.77	43.60	14.30	39.50	10.20	40.97	54.00	-13.03	AV	Vertical
11033.31	33.56	43.60	14.30	39.50	10.20	43.76	68.20	-24.44	Pk	Horizontal
11033.31	30.47	43.60	14.30	39.50	10.20	40.67	54.00	-13.33	AV	Horizontal
13290.16	32.45	42.60	15.90	38.90	12.20	44.65	68.20	-23.55	Pk	Vertical
13290.16	29.63	42.60	15.90	38.90	12.20	41.83	54.00	-12.17	AV	Vertical
13280.99	32.82	42.60	15.90	38.90	12.20	45.02	68.20	-23.18	Pk	Horizontal
13280.99	29.41	42.60	15.90	38.90	12.20	41.61	54.00	-12.39	AV	Horizontal

High Channel (802.11a/ 5240 MHz)										
3264.92	44.75	44.70	6.70	28.20	-9.80	34.95	68.20	-33.25	Pk	Vertical
3264.92	42.19	44.70	6.70	28.20	-9.80	32.39	54.00	-21.61	AV	Vertical
3248.85	44.17	44.70	6.70	28.20	-9.80	34.37	68.20	-33.83	Pk	Horizontal
3248.85	40.74	44.70	6.70	28.20	-9.80	30.94	54.00	-23.06	AV	Horizontal
3994.99	39.14	44.20	7.90	29.70	-6.60	32.54	68.20	-35.66	Pk	Vertical
3994.99	36.66	44.20	7.90	29.70	-6.60	30.06	54.00	-23.94	AV	Vertical
3994.73	38.98	44.20	7.90	29.70	-6.60	32.38	68.20	-35.82	Pk	Horizontal
3994.73	36.00	44.20	7.90	29.70	-6.60	29.40	54.00	-24.60	AV	Horizontal
7224.84	37.53	43.50	11.40	35.50	3.40	40.93	68.20	-27.27	Pk	Vertical
7224.84	34.02	43.50	11.40	35.50	3.40	37.42	54.00	-16.58	AV	Vertical
7216.64	37.05	43.50	11.40	35.50	3.40	40.45	68.20	-27.75	Pk	Horizontal
7216.64	33.81	43.50	11.40	35.50	3.40	37.21	54.00	-16.79	AV	Horizontal
10480.07	40.16	44.50	13.80	38.80	8.10	48.26	68.20	-19.94	Pk	Vertical
10480.07	36.28	44.50	13.80	38.80	8.10	44.38	54.00	-9.62	AV	Vertical
10480.09	38.84	44.50	13.80	38.80	8.10	46.94	68.20	-21.26	Pk	Horizontal
10480.09	36.00	44.50	13.80	38.80	8.10	44.10	54.00	-9.90	AV	Horizontal
11034.07	32.72	43.60	14.30	39.50	10.20	42.92	68.20	-25.28	Pk	Vertical
11034.07	30.86	43.60	14.30	39.50	10.20	41.06	54.00	-12.94	AV	Vertical
11020.01	33.73	43.60	14.30	39.50	10.20	43.93	68.20	-24.27	Pk	Horizontal
11020.01	30.86	43.60	14.30	39.50	10.20	41.06	54.00	-12.94	AV	Horizontal
13282.89	32.13	42.60	15.90	38.90	12.20	44.33	68.20	-23.87	Pk	Vertical
13282.89	28.77	42.60	15.90	38.90	12.20	40.97	54.00	-13.03	AV	Vertical
13292.83	32.11	42.60	15.90	38.90	12.20	44.31	68.20	-23.89	Pk	Horizontal
13292.83	28.73	42.60	15.90	38.90	12.20	40.93	54.00	-13.07	AV	Horizontal

Remark:

1. Factor = Antenna Factor + Cable Loss – Pre-amplifier.
2. Scan with 802.11a,802.11n (HT-20),802.11n (HT-40), 802.11ac (VHT-20),802.11ac (VHT-40), 802.11ac (VHT-80) the worst case is 802.11n a.
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.

Band II 5250-5350MHz

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 (802.11a/ 5260 MHz)										
3264.91	44.05	44.70	6.70	28.20	-9.80	34.25	68.20	-33.95	Pk	Vertical
3264.91	41.42	44.70	6.70	28.20	-9.80	31.62	54.00	-22.38	AV	Vertical
3253.44	44.40	44.70	6.70	28.20	-9.80	34.60	68.20	-33.60	Pk	Horizontal
3253.44	41.85	44.70	6.70	28.20	-9.80	32.05	54.00	-21.95	AV	Horizontal
3989.15	38.66	44.20	7.90	29.70	-6.60	32.06	68.20	-36.14	Pk	Vertical
3989.15	36.67	44.20	7.90	29.70	-6.60	30.07	54.00	-23.93	AV	Vertical
3998.18	39.96	44.20	7.90	29.70	-6.60	33.36	68.20	-34.84	Pk	Horizontal
3998.18	37.05	44.20	7.90	29.70	-6.60	30.45	54.00	-23.55	AV	Horizontal
7226.40	36.56	43.50	11.40	35.50	3.40	39.96	68.20	-28.24	Pk	Vertical
7226.40	33.99	43.50	11.40	35.50	3.40	37.39	54.00	-16.61	AV	Vertical
7221.27	36.59	43.50	11.40	35.50	3.40	39.99	68.20	-28.21	Pk	Horizontal
7221.27	34.17	43.50	11.40	35.50	3.40	37.57	54.00	-16.43	AV	Horizontal
10519.96	38.94	44.50	13.90	38.80	8.20	47.14	68.20	-21.06	Pk	Vertical
10519.96	36.54	44.50	13.90	38.80	8.20	44.74	54.00	-9.26	AV	Vertical
10520.07	38.81	44.50	13.90	38.80	8.20	47.01	68.20	-21.19	Pk	Horizontal
10520.07	36.01	44.50	13.90	38.80	8.20	44.21	54.00	-9.79	AV	Horizontal
11031.51	33.71	43.60	14.30	39.50	10.20	43.91	68.20	-24.29	Pk	Vertical
11031.51	30.21	43.60	14.30	39.50	10.20	40.41	54.00	-13.59	AV	Vertical
11018.39	33.42	43.60	14.30	39.50	10.20	43.62	68.20	-24.58	Pk	Horizontal
11018.39	30.84	43.60	14.30	39.50	10.20	41.04	54.00	-12.96	AV	Horizontal
13281.31	31.88	42.60	15.90	38.90	12.20	44.08	68.20	-24.12	Pk	Vertical
13281.31	29.11	42.60	15.90	38.90	12.20	41.31	54.00	-12.69	AV	Vertical
13280.08	32.72	42.60	15.90	38.90	12.20	44.92	68.20	-23.28	Pk	Horizontal
13280.08	29.02	42.60	15.90	38.90	12.20	41.22	54.00	-12.78	AV	Horizontal
Mid Channel (802.11a/ 5300 MHz)										
3260.28	44.47	44.70	6.70	28.20	-9.80	34.67	68.20	-33.53	Pk	Vertical
3260.28	41.01	44.70	6.70	28.20	-9.80	31.21	54.00	-22.79	AV	Vertical
3260.64	44.37	44.70	6.70	28.20	-9.80	34.57	68.20	-33.63	Pk	Horizontal
3260.64	41.46	44.70	6.70	28.20	-9.80	31.66	54.00	-22.34	AV	Horizontal
3998.11	38.90	44.20	7.90	29.70	-6.60	32.30	68.20	-35.90	Pk	Vertical
3998.11	37.01	44.20	7.90	29.70	-6.60	30.41	54.00	-23.59	AV	Vertical
3990.61	39.31	44.20	7.90	29.70	-6.60	32.71	68.20	-35.49	Pk	Horizontal
3990.61	36.40	44.20	7.90	29.70	-6.60	29.80	54.00	-24.20	AV	Horizontal
7228.72	37.39	43.50	11.40	35.50	3.40	40.79	68.20	-27.41	Pk	Vertical
7228.72	34.89	43.50	11.40	35.50	3.40	38.29	54.00	-15.71	AV	Vertical
7231.25	37.53	43.50	11.40	35.50	3.40	40.93	68.20	-27.27	Pk	Horizontal
7231.25	34.85	43.50	11.40	35.50	3.40	38.25	54.00	-15.75	AV	Horizontal
10600.15	38.71	44.50	13.80	38.80	8.10	46.81	68.20	-21.39	Pk	Vertical
10600.15	36.35	44.50	13.80	38.80	8.10	44.45	54.00	-9.55	AV	Vertical
10600.19	39.97	44.50	13.80	38.80	8.10	48.07	68.20	-20.13	Pk	Horizontal
10600.19	36.62	44.50	13.80	38.80	8.10	44.72	54.00	-9.28	AV	Horizontal
11033.45	33.31	43.60	14.30	39.50	10.20	43.51	68.20	-24.69	Pk	Vertical
11033.45	29.80	43.60	14.30	39.50	10.20	40.00	54.00	-14.00	AV	Vertical
11033.54	34.01	43.60	14.30	39.50	10.20	44.21	68.20	-23.99	Pk	Horizontal
11033.54	29.93	43.60	14.30	39.50	10.20	40.13	54.00	-13.87	AV	Horizontal
13283.15	32.15	42.60	15.90	38.90	12.20	44.35	68.20	-23.85	Pk	Vertical
13283.15	29.71	42.60	15.90	38.90	12.20	41.91	54.00	-12.09	AV	Vertical
13282.75	32.63	42.60	15.90	38.90	12.20	44.83	68.20	-23.37	Pk	Horizontal
13282.75	29.77	42.60	15.90	38.90	12.20	41.97	54.00	-12.03	AV	Horizontal

High Channel (802.11a/ 5320 MHz)										
3251.74	44.65	44.70	6.70	28.20	-9.80	34.85	68.20	-33.35	Pk	Vertical
3251.74	41.05	44.70	6.70	28.20	-9.80	31.25	54.00	-22.75	AV	Vertical
3260.94	44.81	44.70	6.70	28.20	-9.80	35.01	68.20	-33.19	Pk	Horizontal
3260.94	40.99	44.70	6.70	28.20	-9.80	31.19	54.00	-22.81	AV	Horizontal
3991.81	39.98	44.20	7.90	29.70	-6.60	33.38	68.20	-34.82	Pk	Vertical
3991.81	36.07	44.20	7.90	29.70	-6.60	29.47	54.00	-24.53	AV	Vertical
3982.54	39.95	44.20	7.90	29.70	-6.60	33.35	68.20	-34.85	Pk	Horizontal
3982.54	36.07	44.20	7.90	29.70	-6.60	29.47	54.00	-24.53	AV	Horizontal
7217.14	36.50	43.50	11.40	35.50	3.40	39.90	68.20	-28.30	Pk	Vertical
7217.14	34.76	43.50	11.40	35.50	3.40	38.16	54.00	-15.84	AV	Vertical
7235.37	37.10	43.50	11.40	35.50	3.40	40.50	68.20	-27.70	Pk	Horizontal
7235.37	33.59	43.50	11.40	35.50	3.40	36.99	54.00	-17.01	AV	Horizontal
10640.16	39.43	44.50	13.80	38.80	8.10	47.53	68.20	-20.67	Pk	Vertical
10640.16	37.12	44.50	13.80	38.80	8.10	45.22	54.00	-8.78	AV	Vertical
10640.43	39.35	44.50	13.80	38.80	8.10	47.45	68.20	-20.75	Pk	Horizontal
10640.43	36.52	44.50	13.80	38.80	8.10	44.62	54.00	-9.38	AV	Horizontal
11016.99	33.17	43.60	14.30	39.50	10.20	43.37	68.20	-24.83	Pk	Vertical
11016.99	30.89	43.60	14.30	39.50	10.20	41.09	54.00	-12.91	AV	Vertical
11031.07	33.80	43.60	14.30	39.50	10.20	44.00	68.20	-24.20	Pk	Horizontal
11031.07	30.09	43.60	14.30	39.50	10.20	40.29	54.00	-13.71	AV	Horizontal
13282.38	31.85	42.70	18.00	37.10	12.40	44.25	68.20	-23.95	Pk	Vertical
13282.38	29.24	42.70	18.00	37.10	12.40	41.64	54.00	-12.36	AV	Vertical
13296.73	32.46	42.70	18.00	37.10	12.40	44.86	68.20	-23.34	Pk	Horizontal
13296.73	29.66	42.70	18.00	37.10	12.40	42.06	54.00	-11.94	AV	Horizontal

Remark:
1. Factor = Antenna Factor + Cable Loss – Pre-amplifier.
2. Scan with 802.11a,802.11n (HT-20),802.11n (HT-40), 802.11ac (VHT-20),802.11ac (VHT-40), 802.11ac (VHT-80) the worst case is 802.11a.
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.

Band IV(5.725-5.850) GHz

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 (802.11a/ 5745 MHz)										
3262.42	44.23	44.70	6.70	28.20	-9.80	34.43	68.20	-33.77	Pk	Vertical
3262.42	41.99	44.70	6.70	28.20	-9.80	32.19	54.00	-21.81	AV	Vertical
3259.36	44.75	44.70	6.70	28.20	-9.80	34.95	68.20	-33.25	Pk	Horizontal
3259.36	41.74	44.70	6.70	28.20	-9.80	31.94	54.00	-22.06	AV	Horizontal
3999.39	38.67	44.20	7.90	29.70	-6.60	32.07	68.20	-36.13	Pk	Vertical
3999.39	36.65	44.20	7.90	29.70	-6.60	30.05	54.00	-23.95	AV	Vertical
3997.89	39.79	44.20	7.90	29.70	-6.60	33.19	68.20	-35.01	Pk	Horizontal
3997.89	36.39	44.20	7.90	29.70	-6.60	29.79	54.00	-24.21	AV	Horizontal
7233.12	36.59	43.50	11.40	35.50	3.40	39.99	68.20	-28.21	Pk	Vertical
7233.12	33.65	43.50	11.40	35.50	3.40	37.05	54.00	-16.95	AV	Vertical
7217.14	36.72	43.50	11.40	35.50	3.40	40.12	68.20	-28.08	Pk	Horizontal
7217.14	34.78	43.50	11.40	35.50	3.40	38.18	54.00	-15.82	AV	Horizontal
10512.13	38.87	44.50	13.90	38.80	8.20	47.07	68.20	-21.13	Pk	Vertical
10512.13	35.76	44.50	13.90	38.80	8.20	43.96	54.00	-10.04	AV	Vertical
10518.99	39.93	44.50	13.90	38.80	8.20	48.13	68.20	-20.07	Pk	Horizontal
10518.99	37.16	44.50	13.90	38.80	8.20	45.36	54.00	-8.64	AV	Horizontal
11489.97	33.63	43.60	14.30	39.50	10.20	43.83	68.20	-24.37	Pk	Vertical
11489.97	30.76	43.60	14.30	39.50	10.20	40.96	54.00	-13.04	AV	Vertical
11490.22	33.78	43.60	14.30	39.50	10.20	43.98	68.20	-24.22	Pk	Horizontal
11490.22	29.81	43.60	14.30	39.50	10.20	40.01	54.00	-13.99	AV	Horizontal
13299.63	31.95	42.60	15.90	38.90	12.20	44.15	68.20	-24.05	Pk	Vertical
13299.63	29.90	42.60	15.90	38.90	12.20	42.10	54.00	-11.90	AV	Vertical
13285.33	31.79	42.60	15.90	38.90	12.20	43.99	68.20	-24.21	Pk	Horizontal
13285.33	29.03	42.60	15.90	38.90	12.20	41.23	54.00	-12.77	AV	Horizontal
Mid Channel (802.11a/ 5785 MHz)										
3264.55	44.91	44.70	6.70	28.20	-9.80	35.11	68.20	-33.09	Pk	Vertical
3264.55	40.87	44.70	6.70	28.20	-9.80	31.07	54.00	-22.93	AV	Vertical
3263.70	45.16	44.70	6.70	28.20	-9.80	35.36	68.20	-32.84	Pk	Horizontal
3263.70	41.26	44.70	6.70	28.20	-9.80	31.46	54.00	-22.54	AV	Horizontal
3988.41	39.95	44.20	7.90	29.70	-6.60	33.35	68.20	-34.85	Pk	Vertical
3988.41	36.78	44.20	7.90	29.70	-6.60	30.18	54.00	-23.82	AV	Vertical
3996.81	38.70	44.20	7.90	29.70	-6.60	32.10	68.20	-36.10	Pk	Horizontal
3996.81	37.10	44.20	7.90	29.70	-6.60	30.50	54.00	-23.50	AV	Horizontal
7224.77	37.42	43.50	11.40	35.50	3.40	40.82	68.20	-27.38	Pk	Vertical
7224.77	34.67	43.50	11.40	35.50	3.40	38.07	54.00	-15.93	AV	Vertical
7216.42	37.04	43.50	11.40	35.50	3.40	40.44	68.20	-27.76	Pk	Horizontal
7216.42	34.52	43.50	11.40	35.50	3.40	37.92	54.00	-16.08	AV	Horizontal
10593.90	39.05	44.50	13.80	38.80	8.10	47.15	68.20	-21.05	Pk	Vertical
10593.90	35.81	44.50	13.80	38.80	8.10	43.91	54.00	-10.09	AV	Vertical
10596.55	39.15	44.50	13.80	38.80	8.10	47.25	68.20	-20.95	Pk	Horizontal
10596.55	36.52	44.50	13.80	38.80	8.10	44.62	54.00	-9.38	AV	Horizontal
11570.11	34.03	43.60	14.30	39.50	10.20	44.23	68.20	-23.97	Pk	Vertical
11570.11	30.63	43.60	14.30	39.50	10.20	40.83	54.00	-13.17	AV	Vertical
11570.24	32.95	43.60	14.30	39.50	10.20	43.15	68.20	-25.05	Pk	Horizontal
11570.24	30.52	43.60	14.30	39.50	10.20	40.72	54.00	-13.28	AV	Horizontal
13281.61	31.56	42.60	15.90	38.90	12.20	43.76	68.20	-24.44	Pk	Vertical
13281.61	28.89	42.60	15.90	38.90	12.20	41.09	54.00	-12.91	AV	Vertical
13282.21	31.67	42.60	15.90	38.90	12.20	43.87	68.20	-24.33	Pk	Horizontal
13282.21	28.97	42.60	15.90	38.90	12.20	41.17	54.00	-12.83	AV	Horizontal

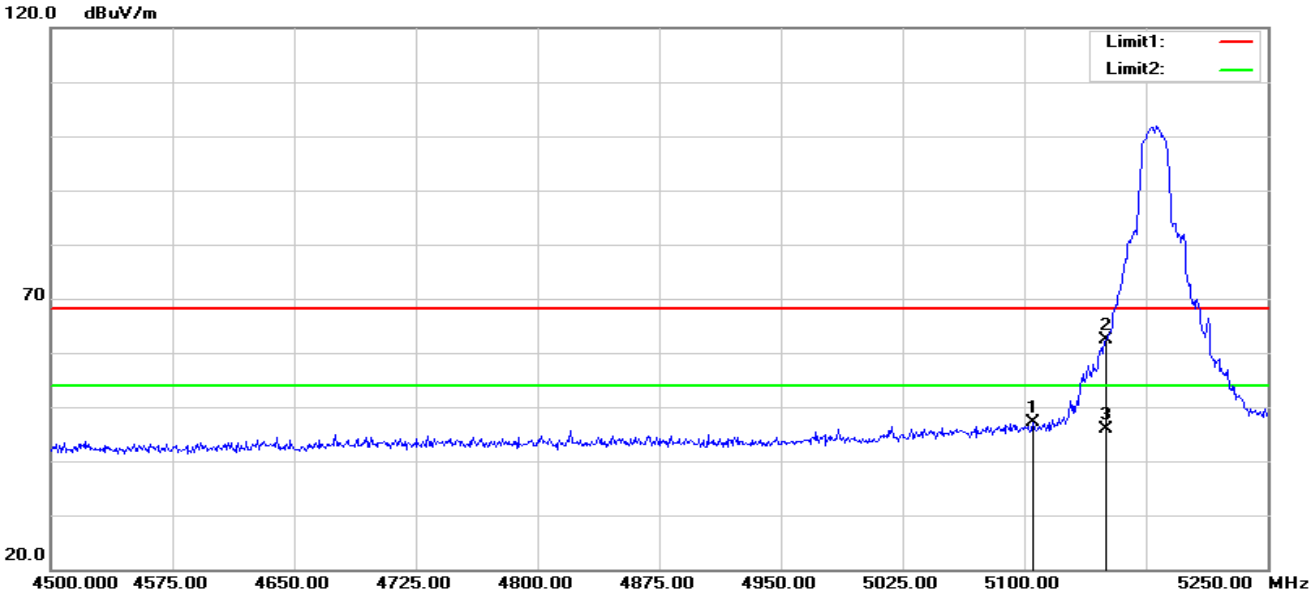
High Channel (802.11a/ 5825 MHz)										
3263.99	45.02	44.70	6.70	28.20	-9.80	35.22	68.20	-32.98	Pk	Vertical
3263.99	40.76	44.70	6.70	28.20	-9.80	30.96	54.00	-23.04	AV	Vertical
3260.21	43.76	44.70	6.70	28.20	-9.80	33.96	68.20	-34.24	Pk	Horizontal
3260.21	41.03	44.70	6.70	28.20	-9.80	31.23	54.00	-22.77	AV	Horizontal
3985.99	39.38	44.20	7.90	29.70	-6.60	32.78	68.20	-35.42	Pk	Vertical
3985.99	36.60	44.20	7.90	29.70	-6.60	30.00	54.00	-24.00	AV	Vertical
3997.82	38.68	44.20	7.90	29.70	-6.60	32.08	68.20	-36.12	Pk	Horizontal
3997.82	37.08	44.20	7.90	29.70	-6.60	30.48	54.00	-23.52	AV	Horizontal
7218.51	37.10	43.50	11.40	35.50	3.40	40.50	68.20	-27.70	Pk	Vertical
7218.51	33.68	43.50	11.40	35.50	3.40	37.08	54.00	-16.92	AV	Vertical
7221.49	37.69	43.50	11.40	35.50	3.40	41.09	68.20	-27.11	Pk	Horizontal
7221.49	34.82	43.50	11.40	35.50	3.40	38.22	54.00	-15.78	AV	Horizontal
10630.12	40.06	44.50	13.80	38.80	8.10	48.16	68.20	-20.04	Pk	Vertical
10630.12	36.65	44.50	13.80	38.80	8.10	44.75	54.00	-9.25	AV	Vertical
10640.40	39.42	44.50	13.80	38.80	8.10	47.52	68.20	-20.68	Pk	Horizontal
10640.40	36.73	44.50	13.80	38.80	8.10	44.83	54.00	-9.17	AV	Horizontal
11650.09	33.95	43.60	14.30	39.50	10.20	44.15	68.20	-24.05	Pk	Vertical
11650.09	30.71	43.60	14.30	39.50	10.20	40.91	54.00	-13.09	AV	Vertical
11650.24	33.95	43.60	14.30	39.50	10.20	44.15	68.20	-24.05	Pk	Horizontal
11650.24	30.09	43.60	14.30	39.50	10.20	40.29	54.00	-13.71	AV	Horizontal
13286.32	32.10	42.70	18.00	37.10	12.40	44.50	68.20	-23.70	Pk	Vertical
13286.32	28.88	42.70	18.00	37.10	12.40	41.28	54.00	-12.72	AV	Vertical
13280.53	31.62	42.70	18.00	37.10	12.40	44.02	68.20	-24.18	Pk	Horizontal
13280.53	29.23	42.70	18.00	37.10	12.40	41.63	54.00	-12.37	AV	Horizontal

Remark:
1. Factor = Antenna Factor + Cable Loss – Pre-amplifier.
2. Scan with 802.11a,802.11n (HT-20),802.11n (HT-40), 802.11ac (VHT-20),802.11ac (VHT-40), 802.11ac (VHT-80) the worst case is 802.11a.
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

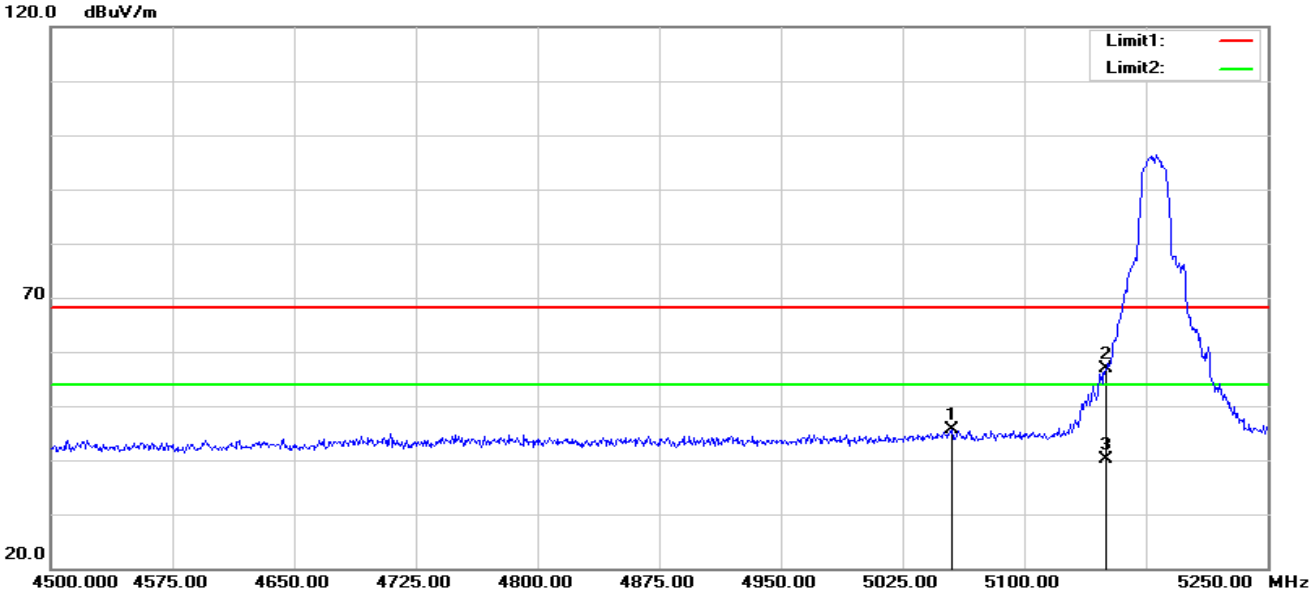
Band I 5150-5250MHz

802.11a-L-H



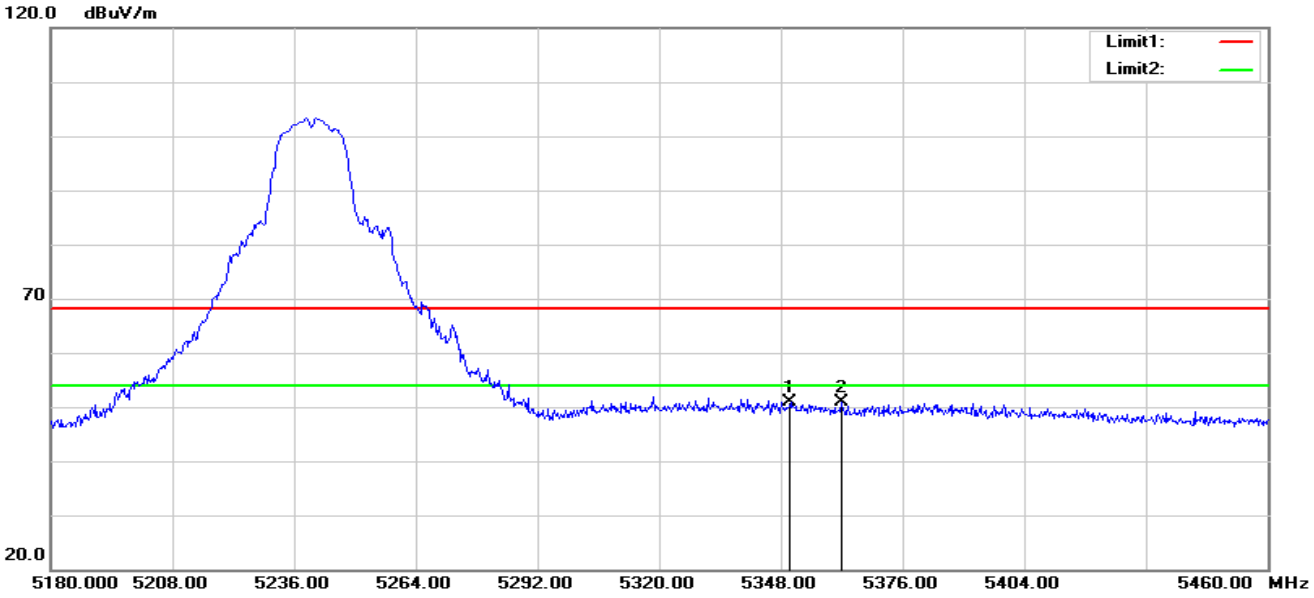
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5105.250	52.85	-5.74	47.11	68.20	-21.09	peak
2	5150.000	68.08	-5.73	62.35	68.20	-5.85	peak
3	5150.000	51.63	-5.73	45.90	54.00	-8.10	AVG

802.11a-L-V



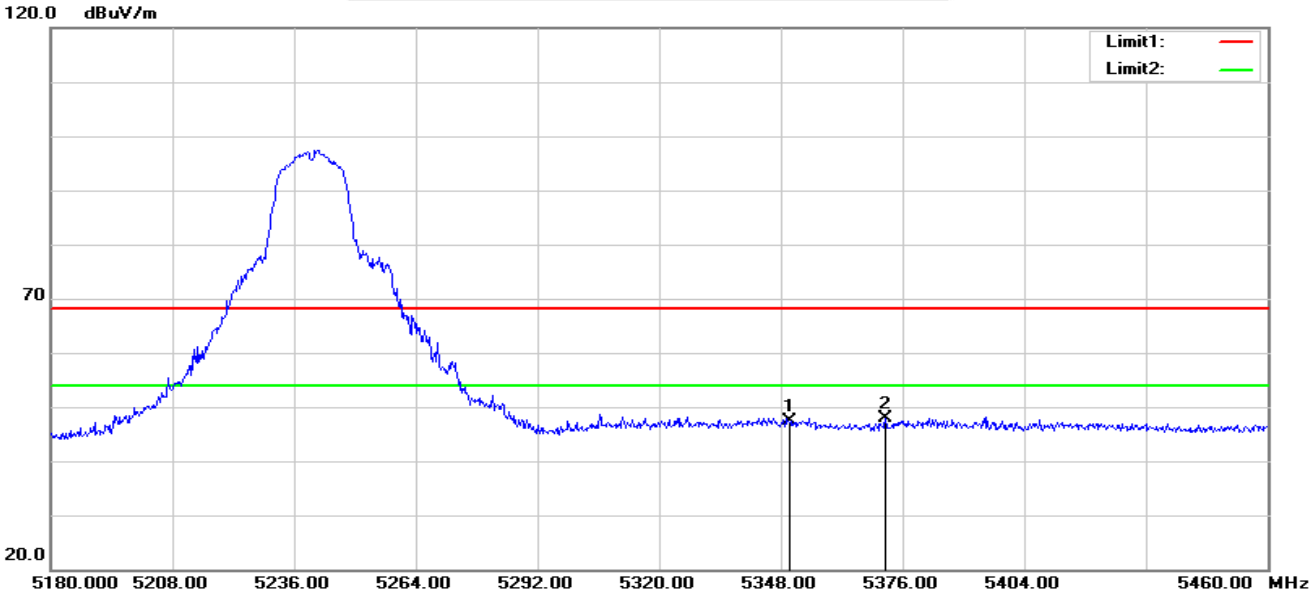
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5055.750	51.47	-5.94	45.53	68.20	-22.67	peak
2	5150.000	62.60	-5.73	56.87	68.20	-11.33	peak
3	5150.000	45.77	-5.73	40.04	54.00	-13.96	AVG

802.11a-H-H



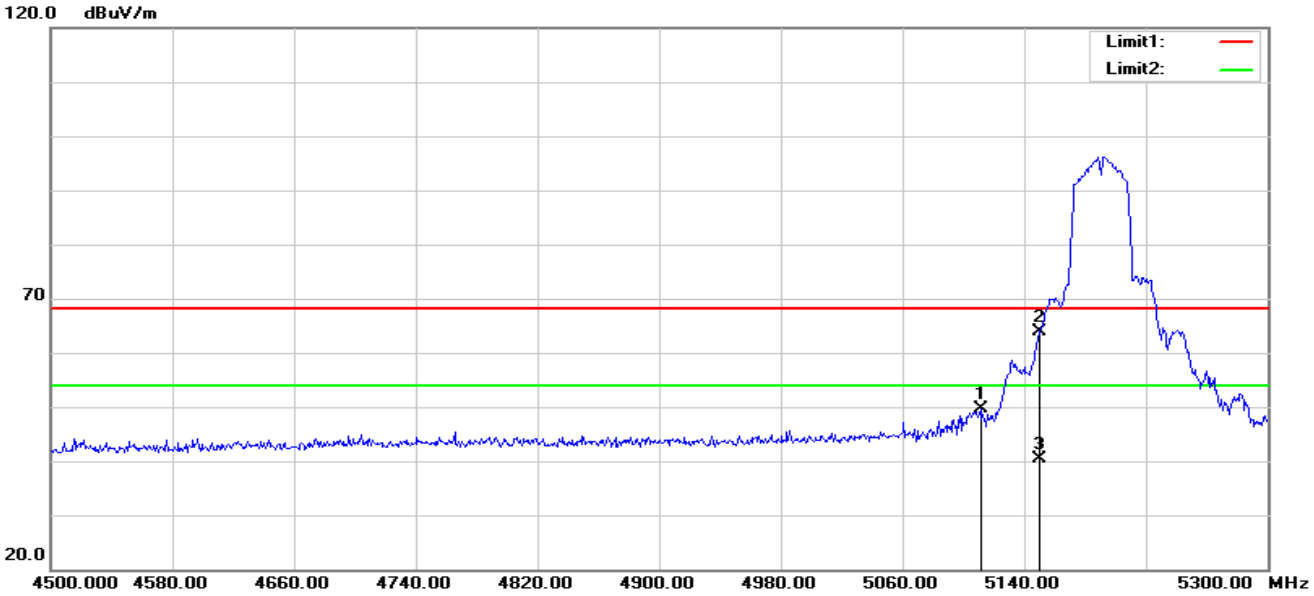
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	5350.000	56.08	-5.23	50.85	68.20	-17.35	peak
2	5362.000	56.00	-5.23	50.77	68.20	-17.43	peak

802.11a-H-V



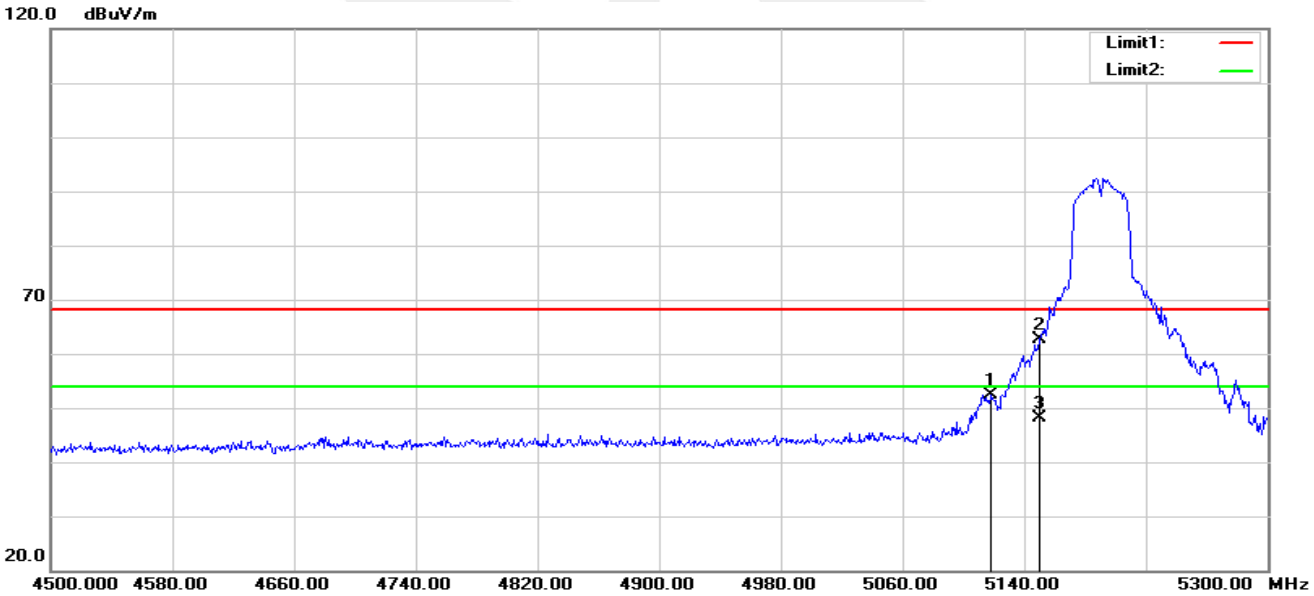
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	5350.000	52.63	-5.23	47.40	68.20	-20.80	peak
2	5372.080	53.18	-5.24	47.94	68.20	-20.26	peak

802.11n40-L-H



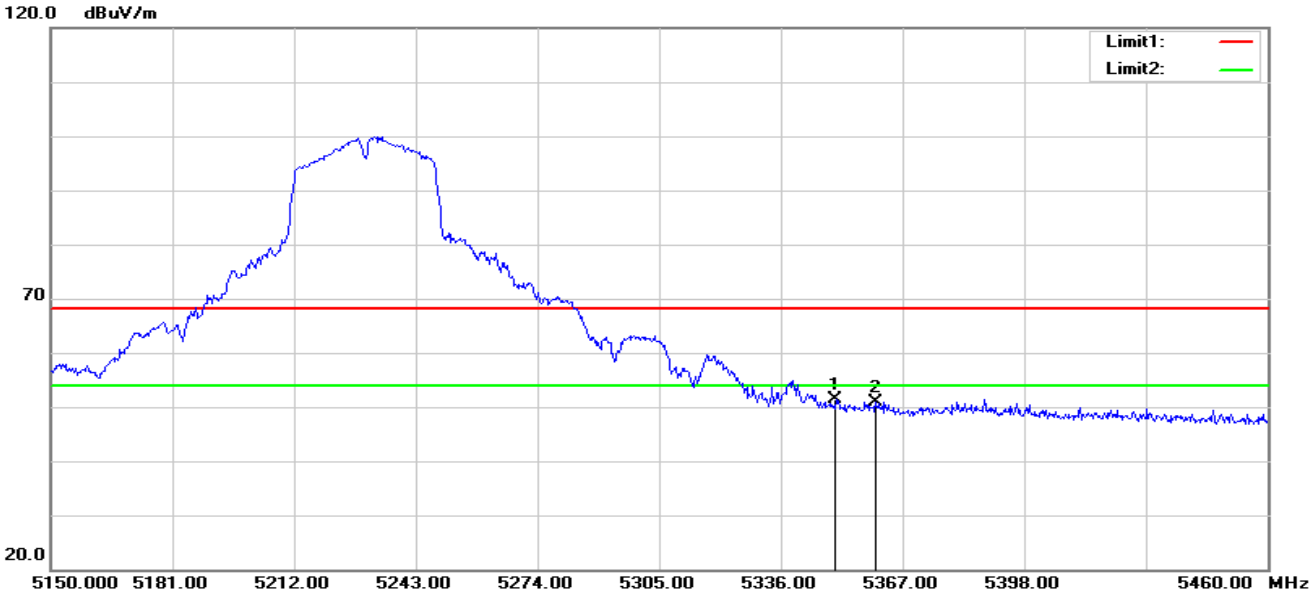
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	5111.200	55.28	-5.74	49.54	68.20	-18.66	peak
2	5150.000	69.72	-5.73	63.99	68.20	-4.21	peak
3	5150.000	46.05	-5.73	40.32	54.00	-13.68	AVG

802.11n40-L-V



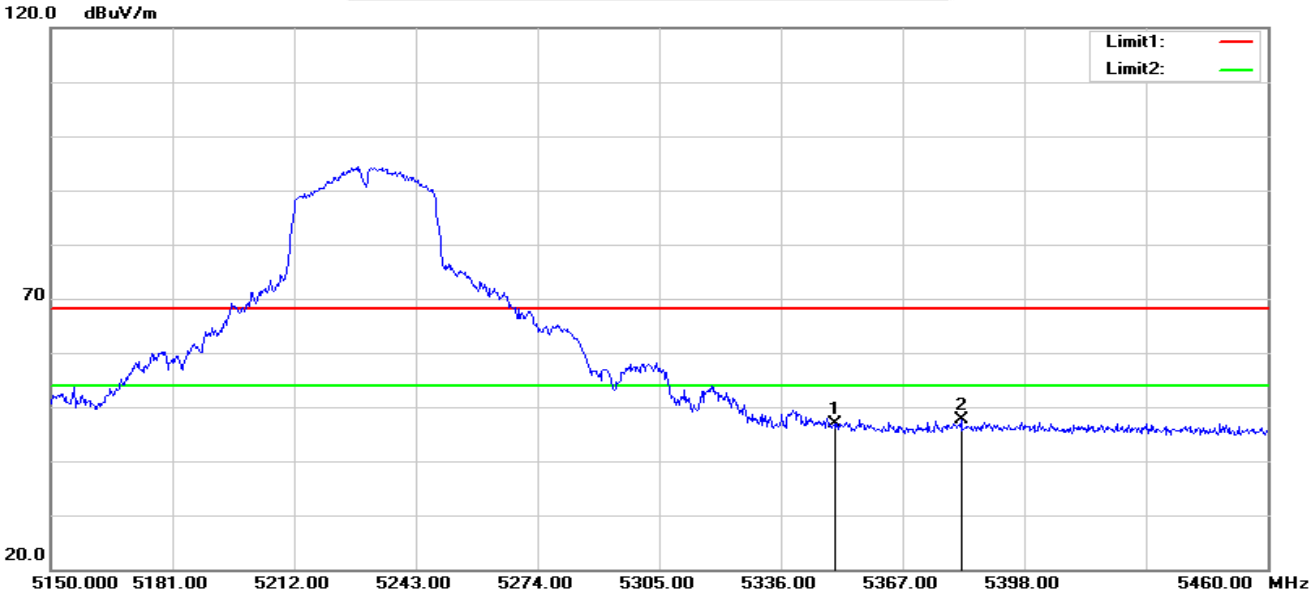
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	5118.400	58.10	-5.74	52.36	68.20	-15.84	peak
2	5150.000	68.31	-5.73	62.58	68.20	-5.62	peak
3	5150.000	53.96	-5.73	48.23	54.00	-5.77	AVG

802.11n40-H-H



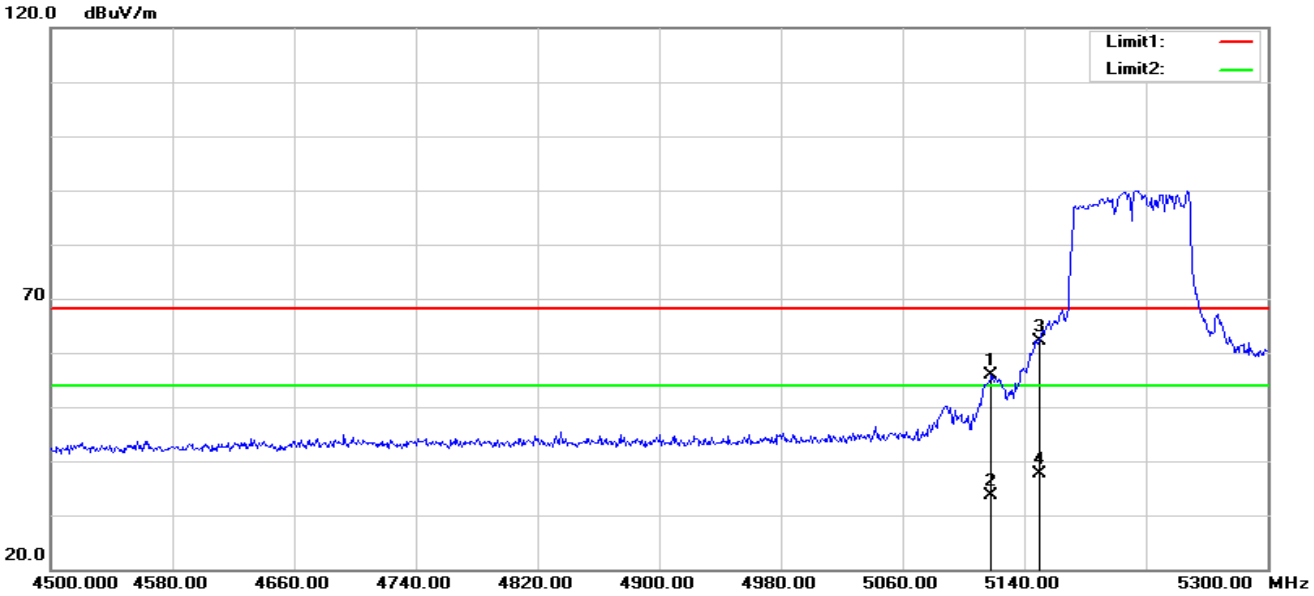
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	5350.000	56.72	-5.23	51.49	68.20	-16.71	peak
2	5360.180	56.18	-5.23	50.95	68.20	-17.25	peak

802.11n40-H-V



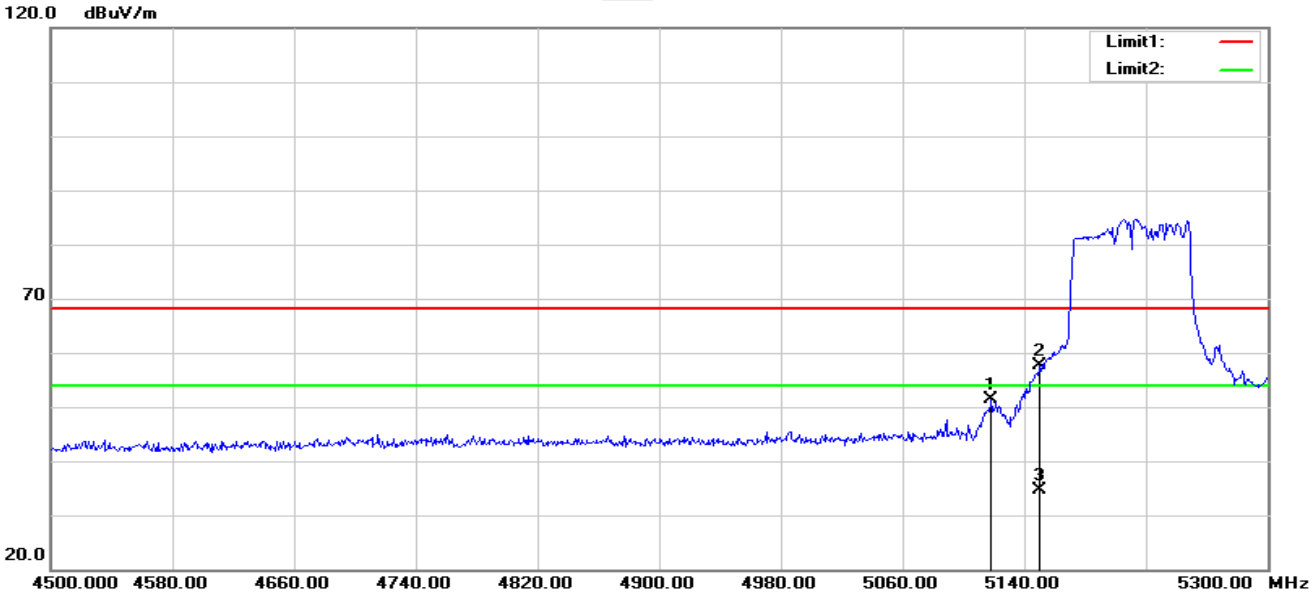
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	5350.000	52.11	-5.23	46.88	68.20	-21.32	peak
2	5381.880	52.92	-5.24	47.68	68.20	-20.52	peak

802.11ac80-L-H



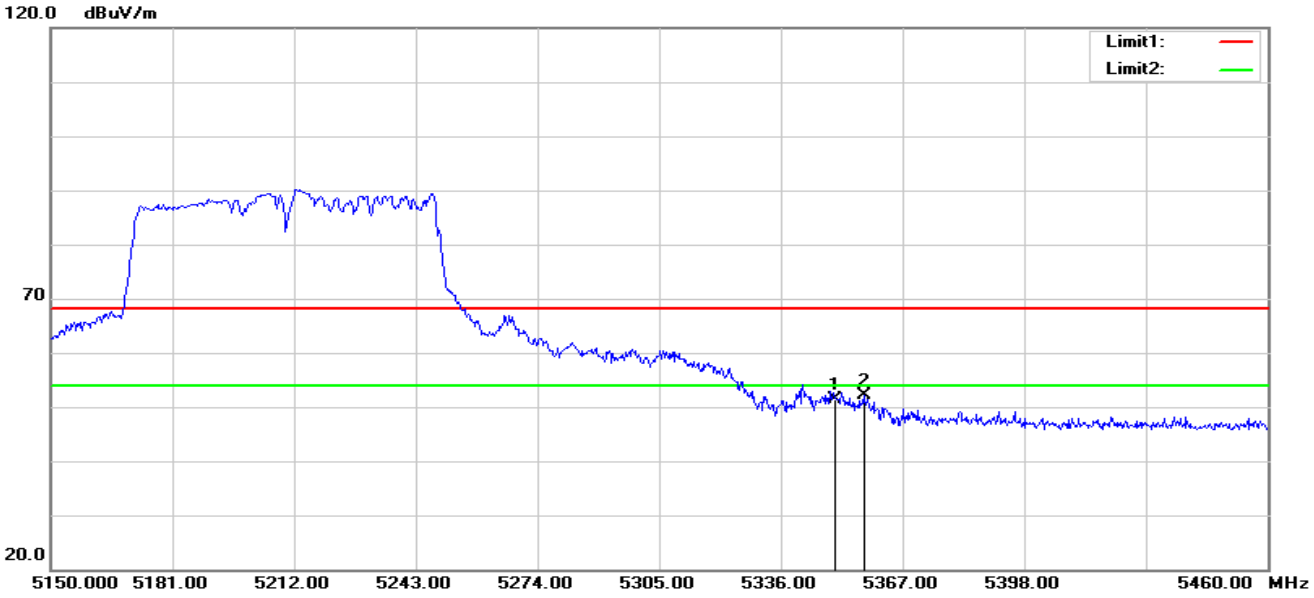
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5118.400	61.70	-5.74	55.96	68.20	-12.24	peak
2	5118.400	39.46	-5.74	33.72	54.00	-20.28	AVG
3	5150.000	67.84	-5.73	62.11	68.20	-6.09	peak
4	5150.000	43.30	-5.73	37.57	54.00	-16.43	AVG

802.11ac80-L-V



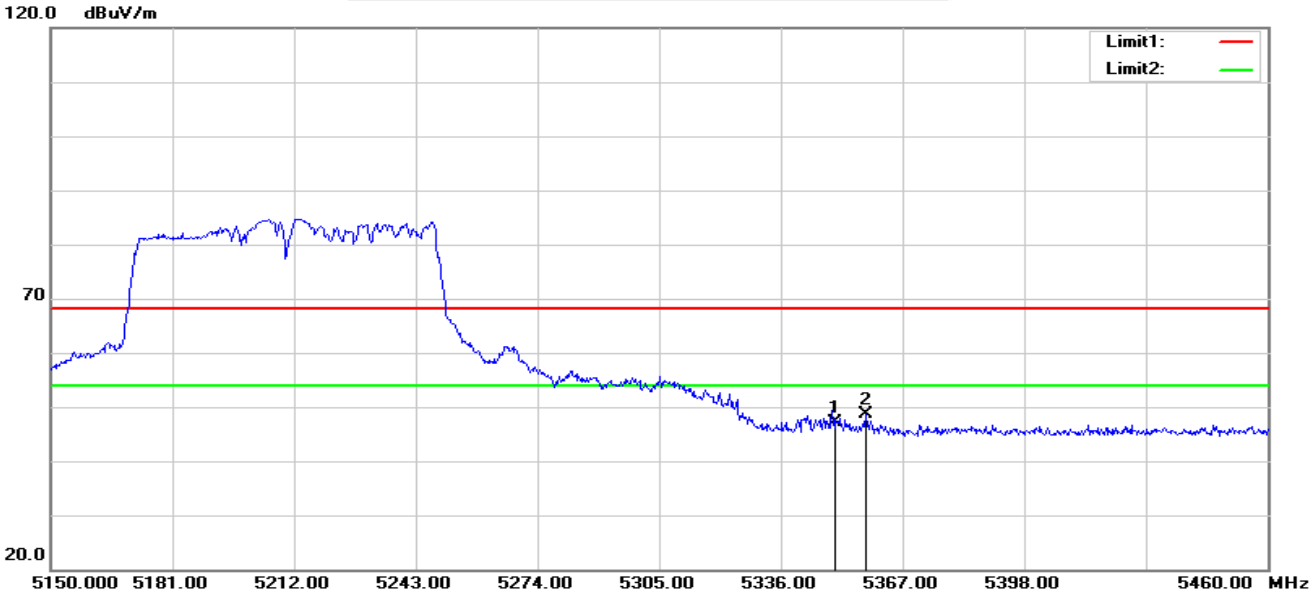
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5118.400	57.21	-5.74	51.47	68.20	-16.73	peak
2	5150.000	63.28	-5.73	57.55	68.20	-10.65	peak
3	5150.000	40.24	-5.73	34.51	54.00	-19.49	AVG

802.11ac80-H-H



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	5350.000	56.53	-5.23	51.30	68.20	-16.90	peak
2	5357.080	57.42	-5.23	52.19	68.20	-16.01	peak

802.11ac80-H-V

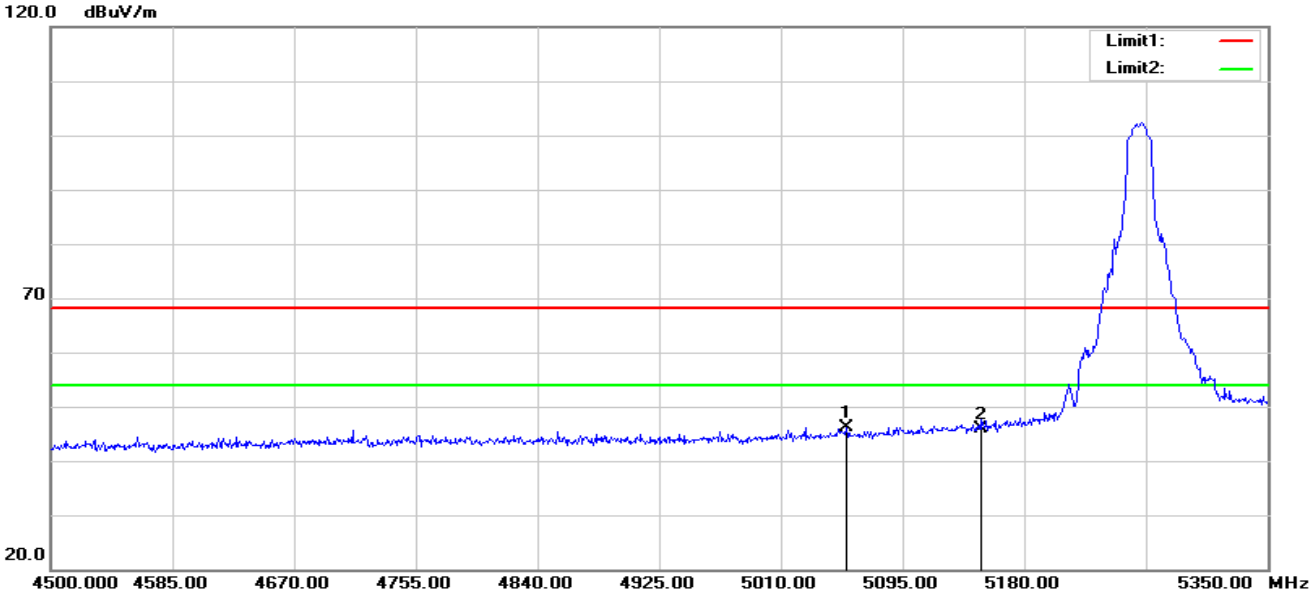


No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	5350.000	52.38	-5.23	47.15	68.20	-21.05	peak
2	5357.700	53.80	-5.23	48.57	68.20	-19.63	peak

Note: All modes have been tested. Only the worst mode shown in the report.

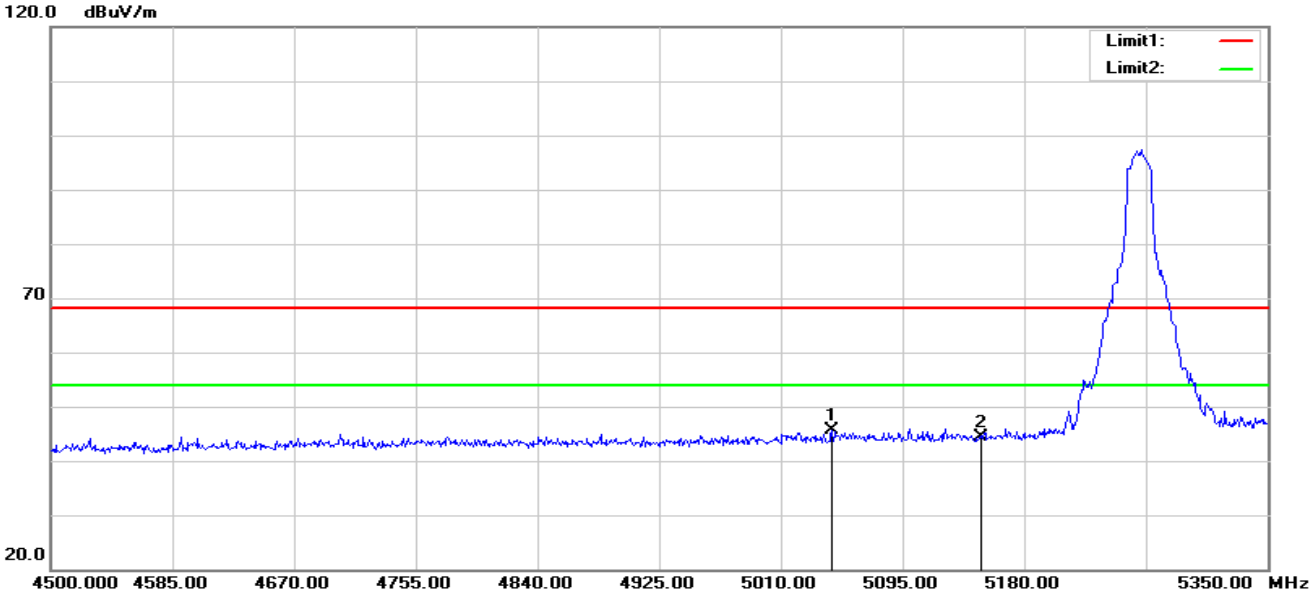
Band II 5250-5350MHz

802.11a-L-H



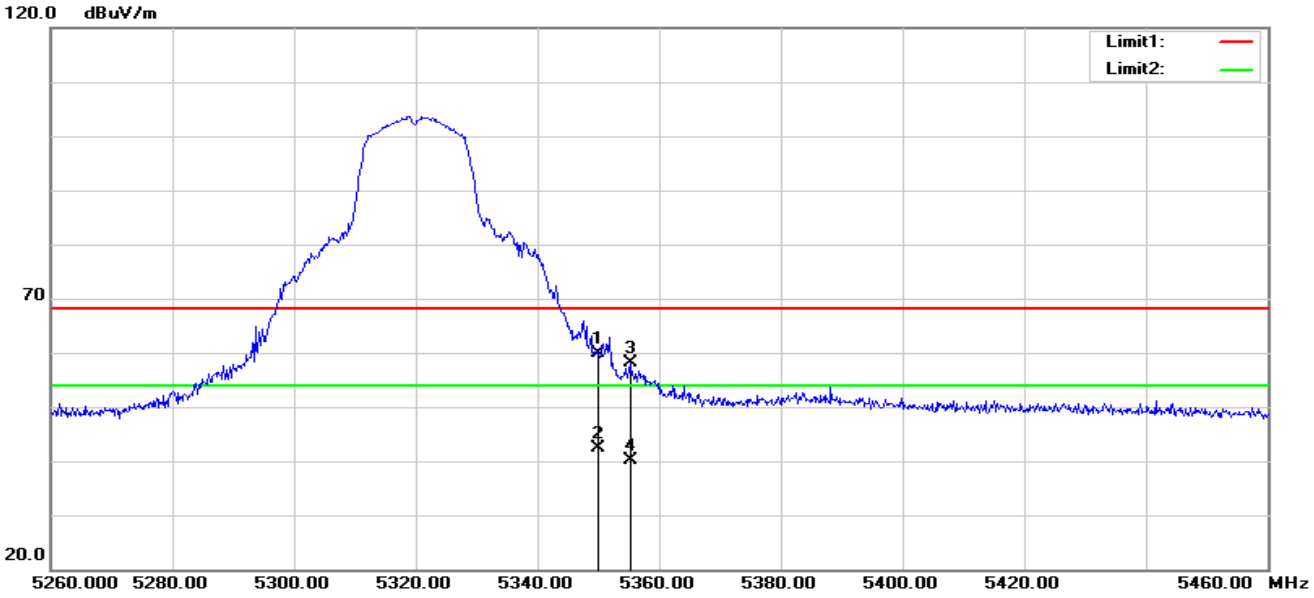
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	5055.900	52.08	-5.94	46.14	68.20	-22.06	peak
2	5150.000	51.66	-5.73	45.93	68.20	-22.27	peak

802.11a-L-V



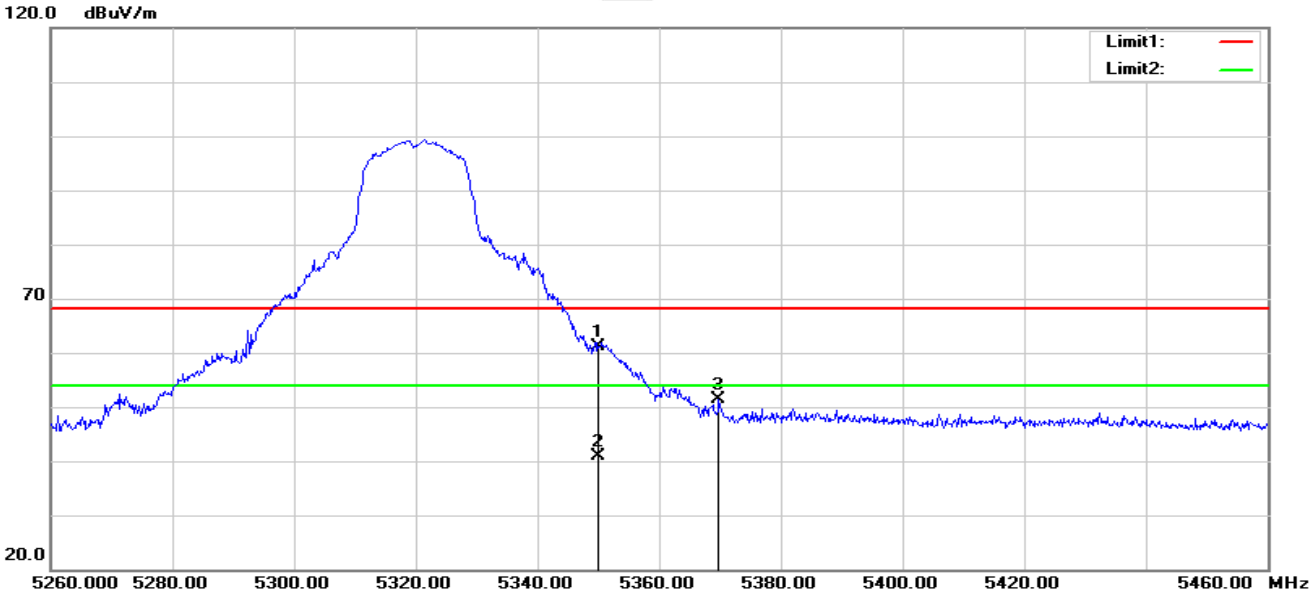
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	5045.700	51.66	-5.98	45.68	68.20	-22.52	peak
2	5150.000	50.19	-5.73	44.46	68.20	-23.74	peak

802.11a-H-H



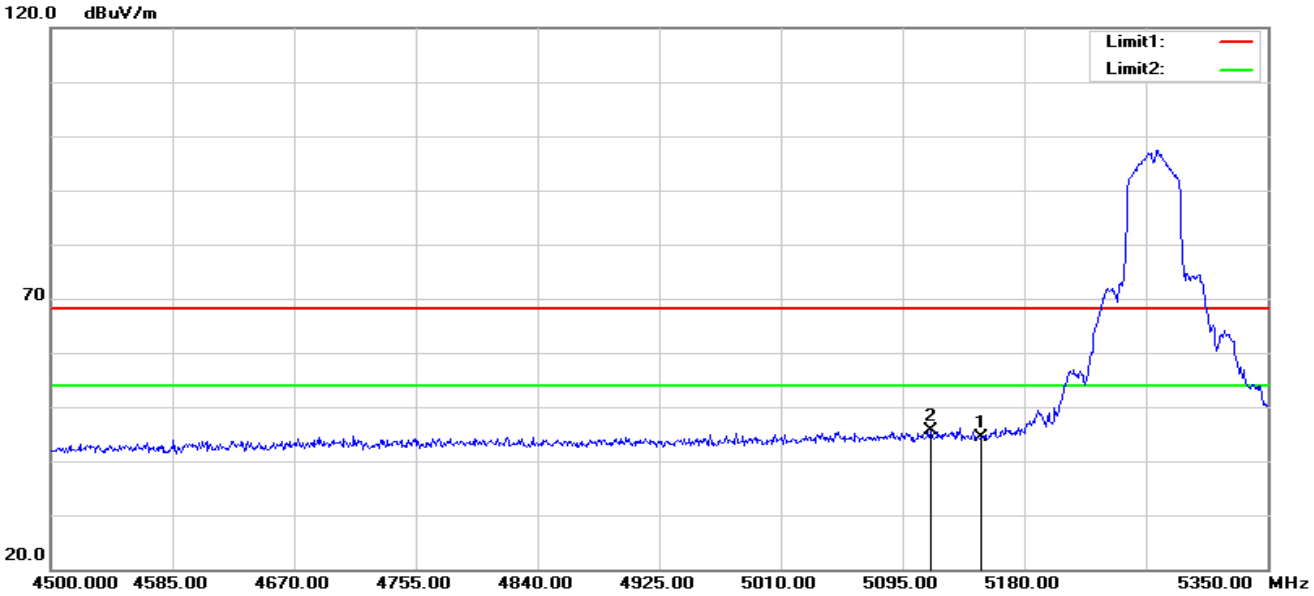
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	5350.000	65.10	-5.23	59.87	68.20	-8.33	peak
2	5350.000	47.53	-5.23	42.30	54.00	-11.70	AVG
3	5355.200	63.39	-5.24	58.15	68.20	-10.05	peak
4	5355.200	45.27	-5.24	40.03	54.00	-13.97	AVG

802.11a-H-V



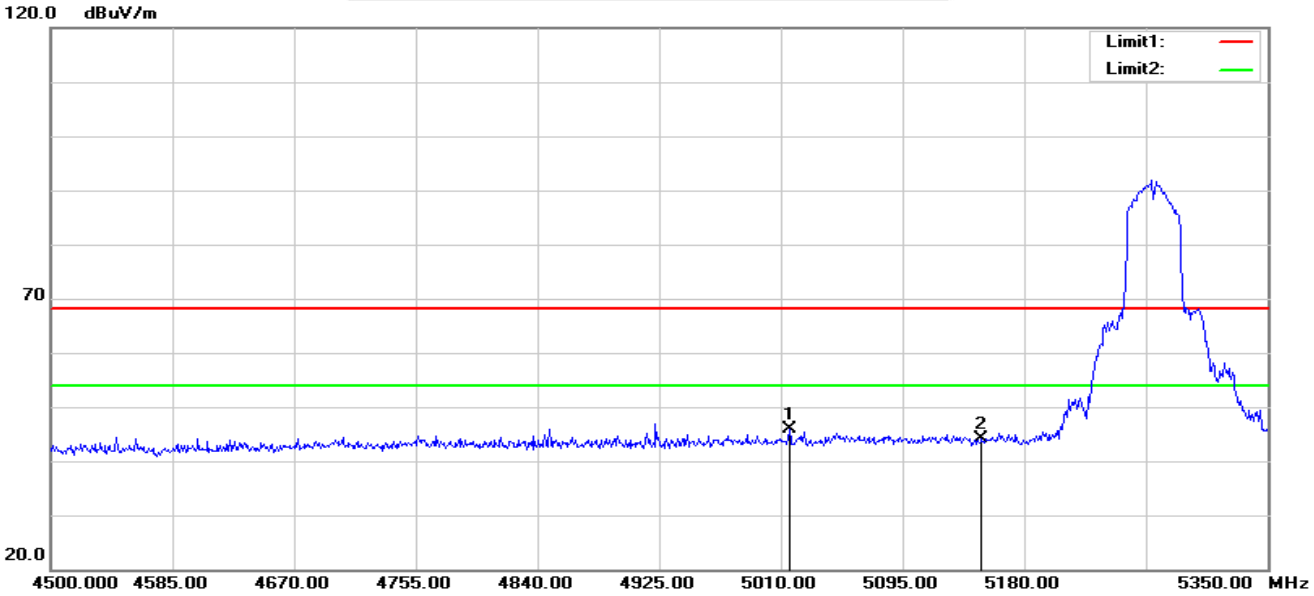
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	5350.000	66.45	-5.23	61.22	68.20	-6.98	peak
2	5350.000	46.12	-5.23	40.89	54.00	-13.11	AVG
3	5369.800	56.54	-5.23	51.31	68.20	-16.89	peak

802.11n40-L-H



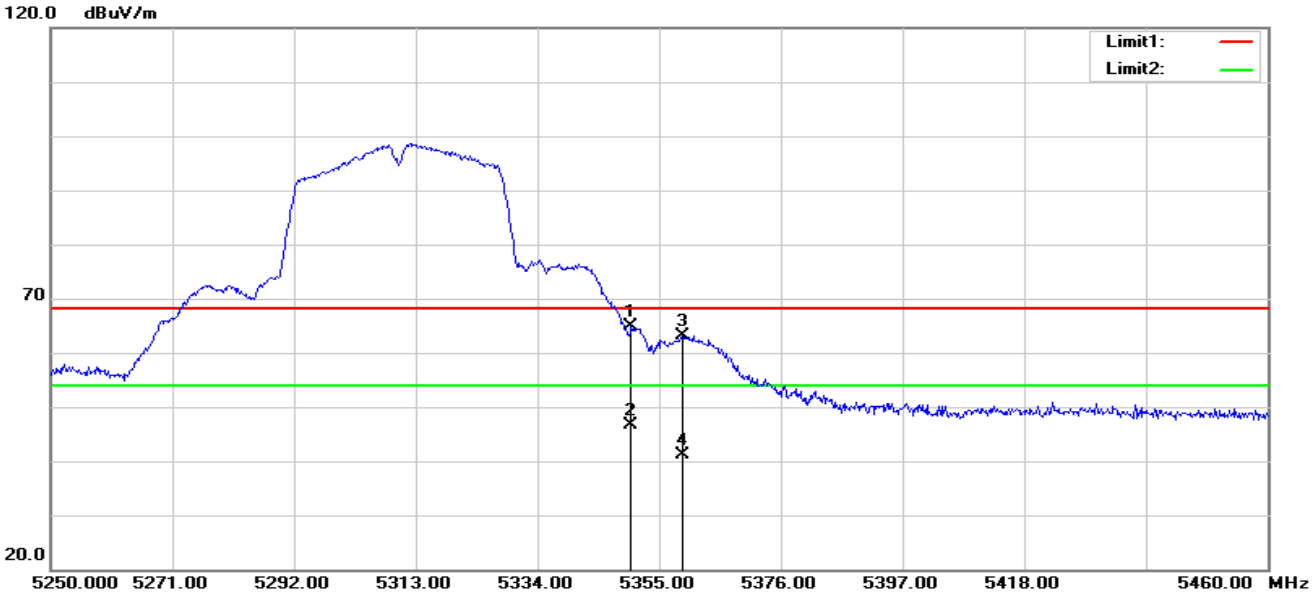
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	5150.000	50.21	-5.73	44.48	68.20	-23.72	peak
2	5114.550	51.38	-5.74	45.64	68.20	-22.56	peak

802.11n40-L-V



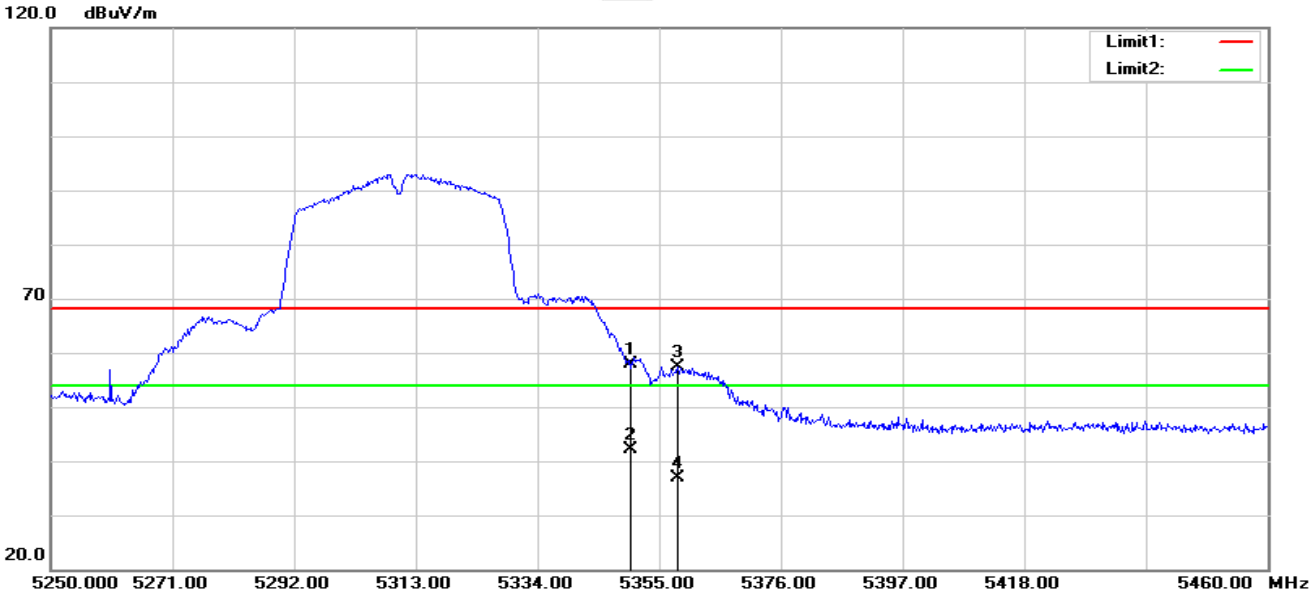
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	5015.950	52.01	-6.12	45.89	68.20	-22.31	peak
2	5150.000	49.94	-5.73	44.21	68.20	-23.99	peak

802.11n40-H-H



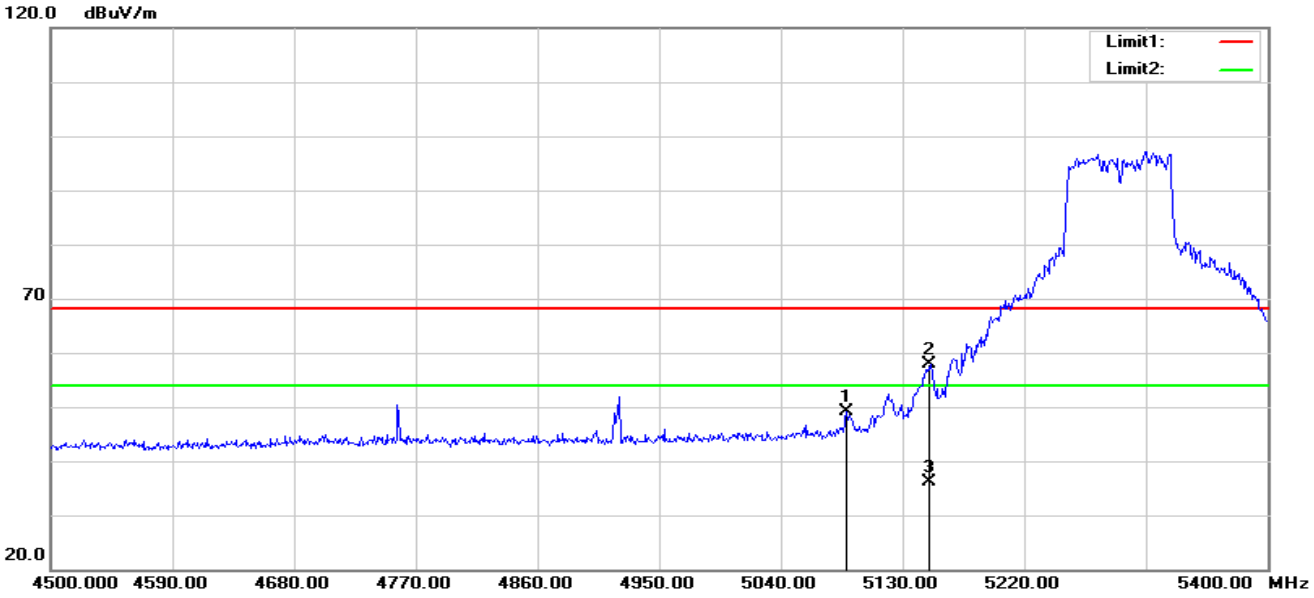
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5350.000	70.14	-5.23	64.91	68.20	-3.29	peak
2	5350.000	51.92	-5.23	46.69	54.00	-7.31	AVG
3	5358.990	68.47	-5.23	63.24	68.20	-4.96	peak
4	5358.990	46.25	-5.23	41.02	54.00	-12.98	AVG

802.11n40-H-V



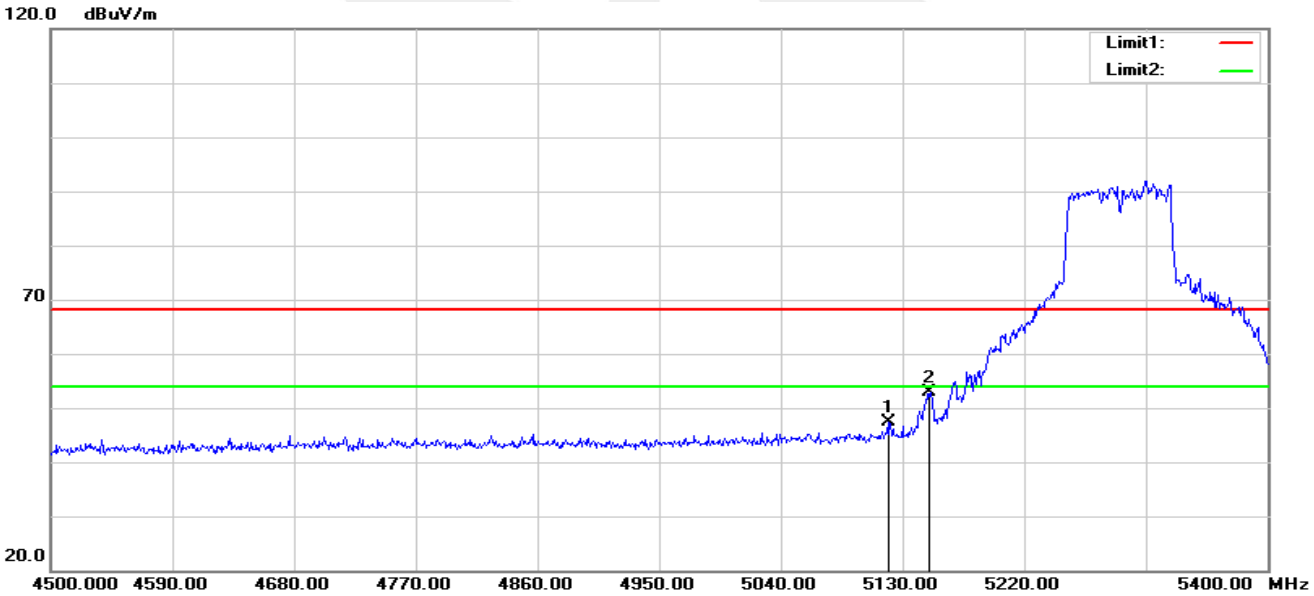
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5350.000	63.10	-5.23	57.87	68.20	-10.33	peak
2	5350.000	47.26	-5.23	42.03	54.00	-11.97	AVG
3	5358.150	62.65	-5.23	57.42	68.20	-10.78	peak
4	5358.150	42.13	-5.23	36.90	54.00	-17.10	AVG

802.11ac80-L-H



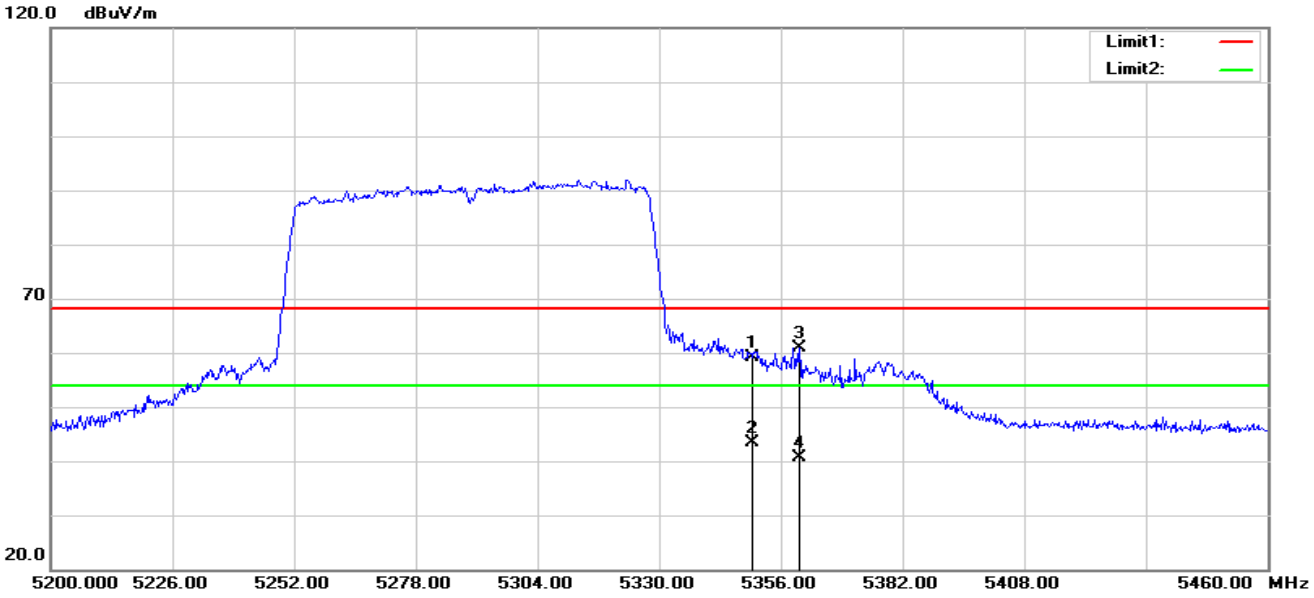
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	5088.600	54.99	-5.79	49.20	68.20	-19.00	peak
2	5150.000	63.51	-5.73	57.78	68.20	-10.42	peak
3	5150.000	41.75	-5.73	36.02	54.00	-17.98	AVG

802.11ac80-L-V



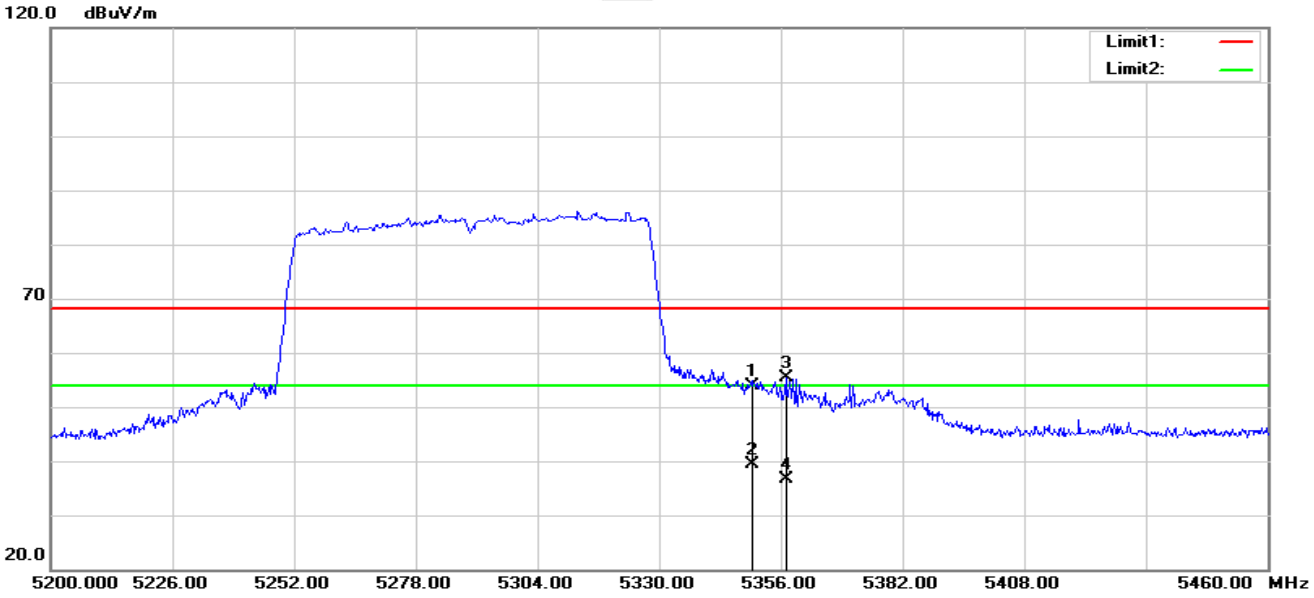
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	5119.200	53.21	-5.73	47.48	68.20	-20.72	peak
2	5150.000	58.73	-5.73	53.00	68.20	-15.20	peak

802.11ac80-H-H



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5350.000	64.30	-5.23	59.07	68.20	-9.13	peak
2	5350.000	48.57	-5.23	43.34	54.00	-10.66	AVG
3	5359.900	66.16	-5.23	60.93	68.20	-7.27	peak
4	5359.900	45.83	-5.23	40.60	54.00	-13.40	AVG

802.11ac80-H-V

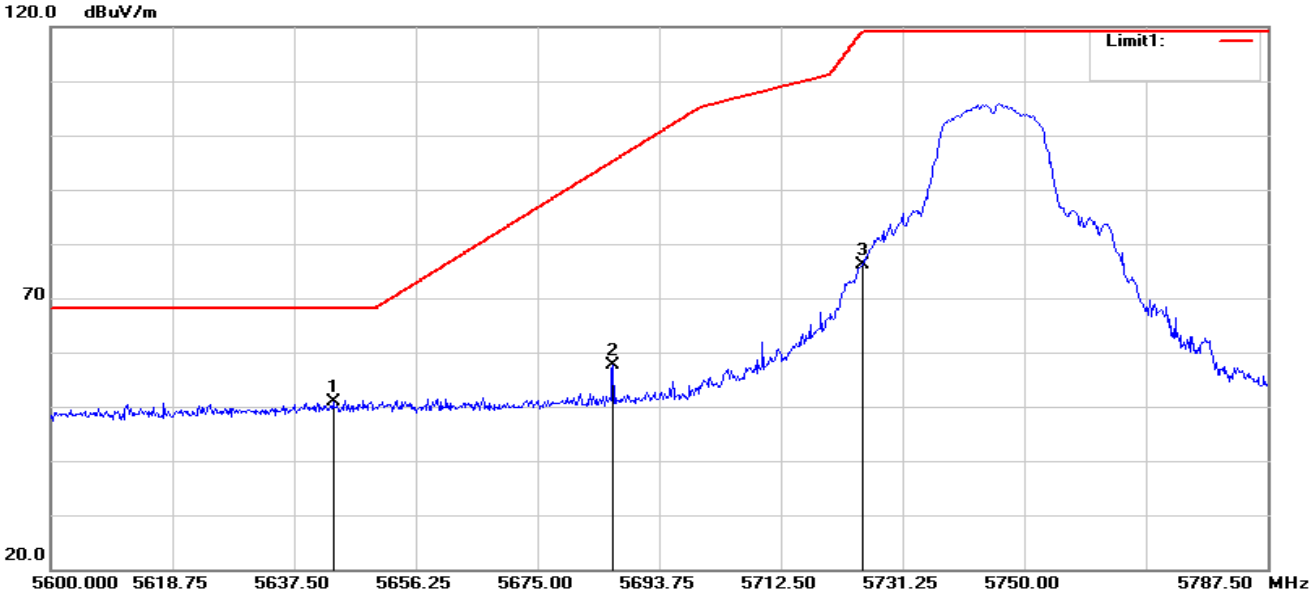


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5350.000	59.05	-5.23	53.82	68.20	-14.38	peak
2	5350.000	44.68	-5.23	39.45	54.00	-14.55	AVG
3	5357.040	60.50	-5.23	55.27	68.20	-12.93	peak
4	5357.040	41.83	-5.23	36.60	54.00	-17.40	AVG

Note: All modes have been tested. Only the worst mode shown in the report.

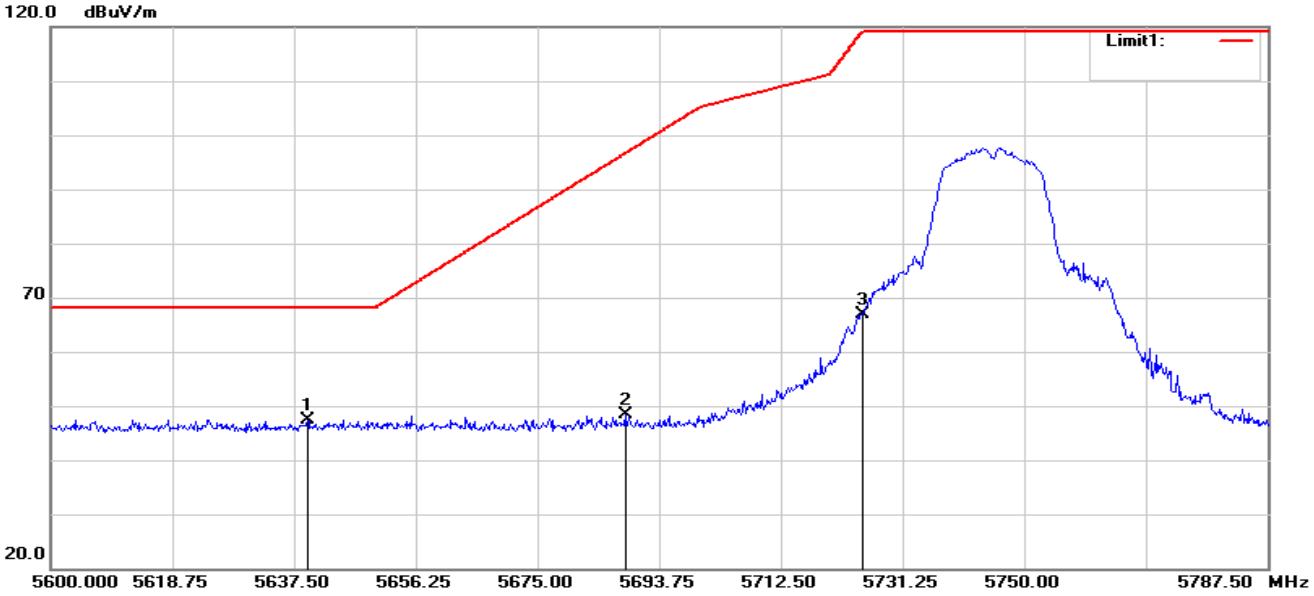
Band IV(5.725-5.85 GHz)

802.11a-L-H



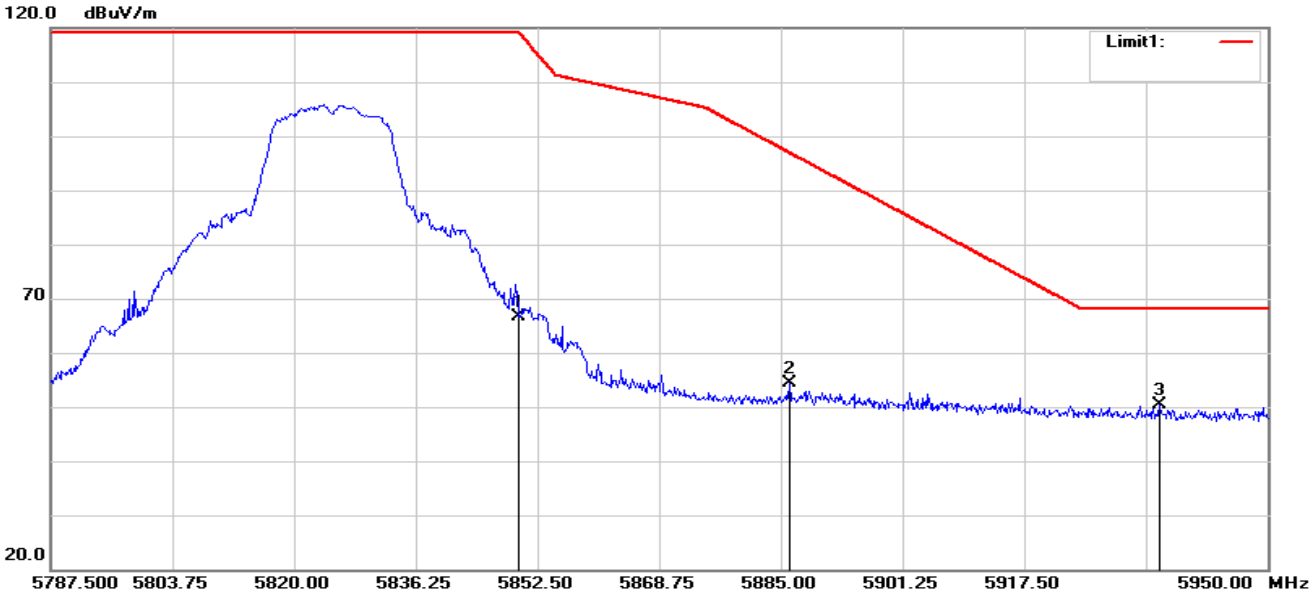
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5643.500	55.56	-4.68	50.88	68.20	-17.32	peak
2	5686.625	62.25	-4.66	57.59	95.30	-37.71	peak
3	5725.000	80.73	-4.57	76.16	119.20	-43.04	peak

802.11a-L-V



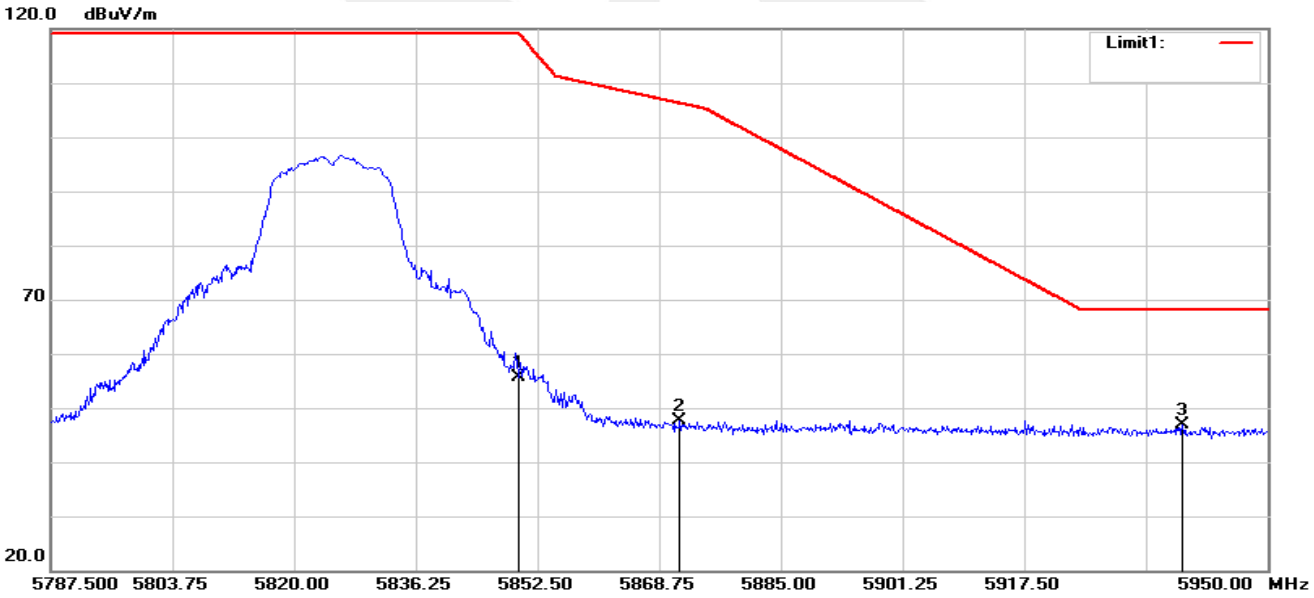
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5639.563	52.07	-4.69	47.38	68.20	-20.82	peak
2	5688.500	53.07	-4.67	48.40	96.69	-48.29	peak
3	5725.000	71.50	-4.57	66.93	119.20	-52.27	peak

802.11a-H-H



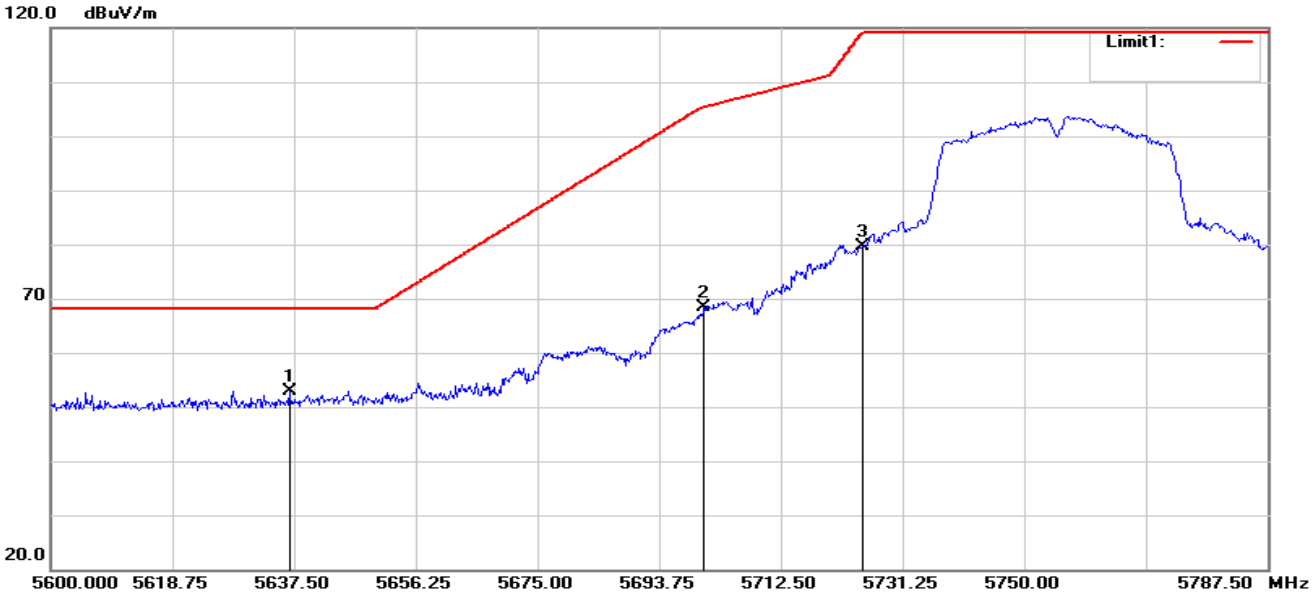
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	5850.000	70.72	-4.10	66.62	119.20	-52.58	peak
2	5886.137	58.20	-3.94	54.26	96.96	-42.70	peak
3	5935.538	54.25	-3.94	50.31	68.20	-17.89	peak

802.11a-H-V



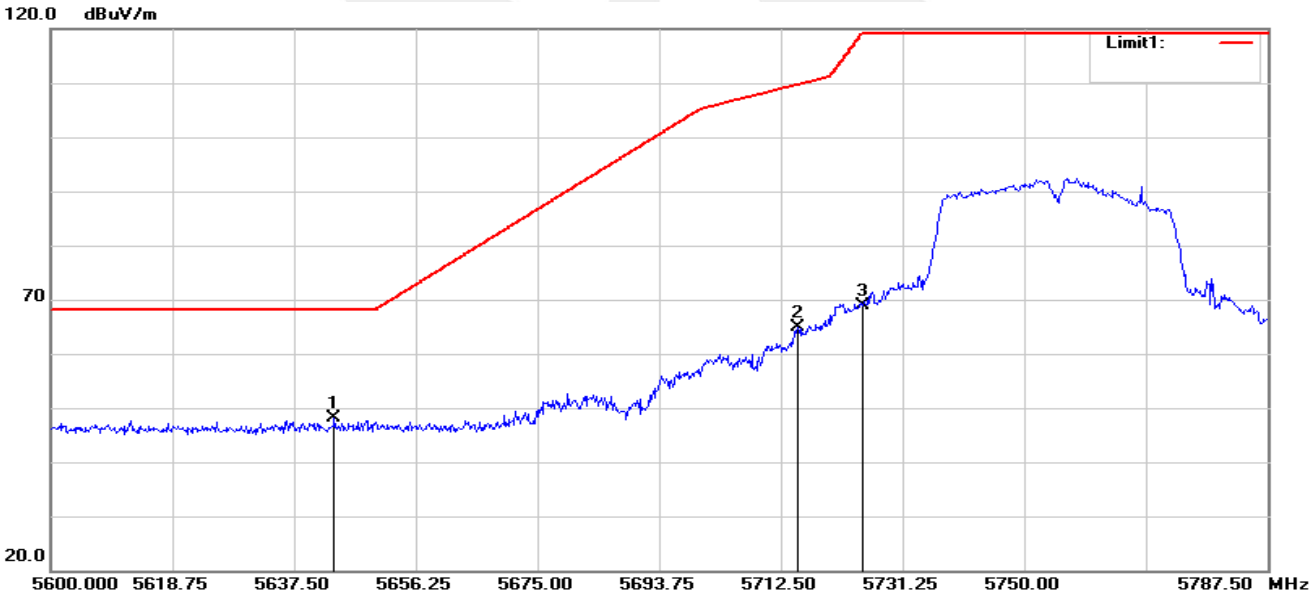
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	5850.000	59.61	-4.10	55.51	119.20	-63.69	peak
2	5871.512	51.62	-4.01	47.61	106.25	-58.64	peak
3	5938.625	50.90	-3.95	46.95	68.20	-21.25	peak

802.11n40-L-H



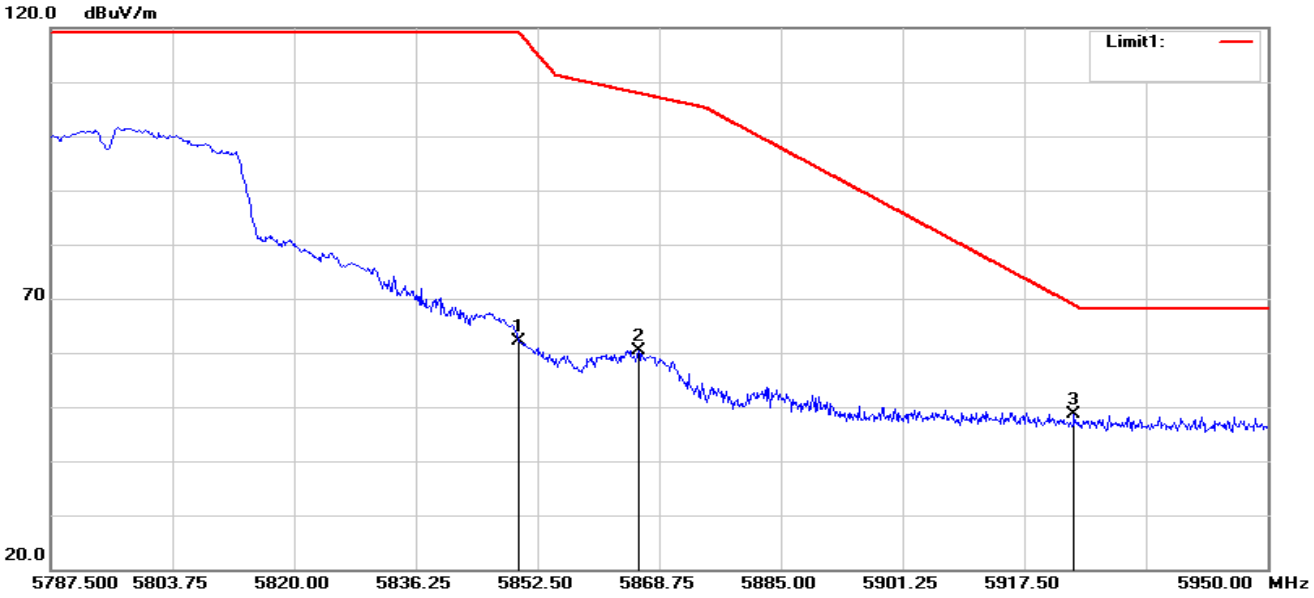
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	5636.750	57.63	-4.68	52.95	68.20	-15.25	peak
2	5700.688	72.96	-4.66	68.30	105.41	-37.11	peak
3	5725.000	84.27	-4.57	79.70	119.20	-39.50	peak

802.11n40-L-V



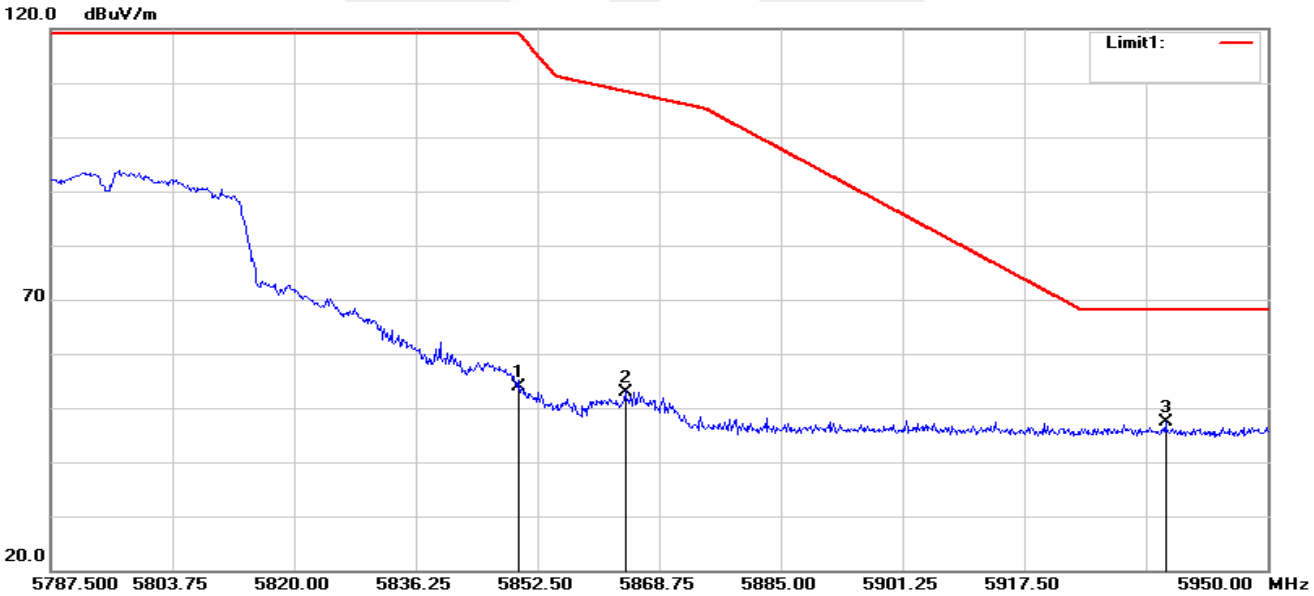
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	5643.688	52.74	-4.68	48.06	68.20	-20.14	peak
2	5715.125	69.42	-4.61	64.81	109.74	-44.93	peak
3	5725.000	73.38	-4.57	68.81	119.20	-50.39	peak

802.11n40-H-H



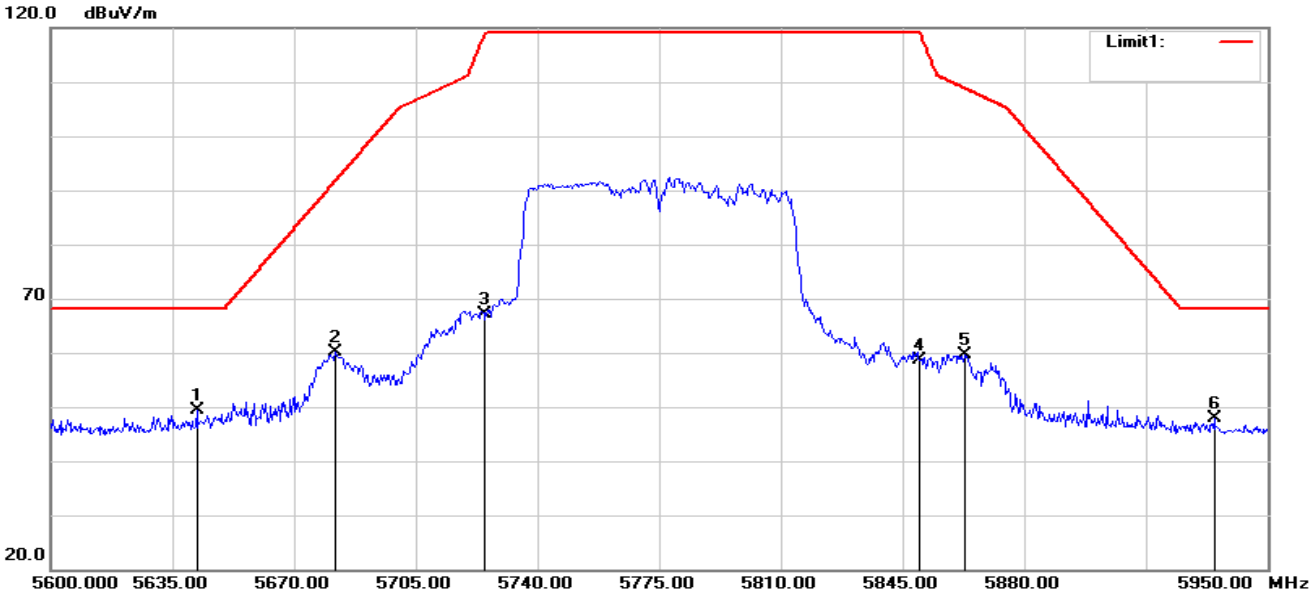
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	5850.000	66.30	-4.10	62.20	119.20	-57.00	peak
2	5865.988	64.40	-4.03	60.37	107.90	-47.53	peak
3	5924.163	52.46	-3.92	48.54	68.82	-20.28	peak

802.11n40-H-V



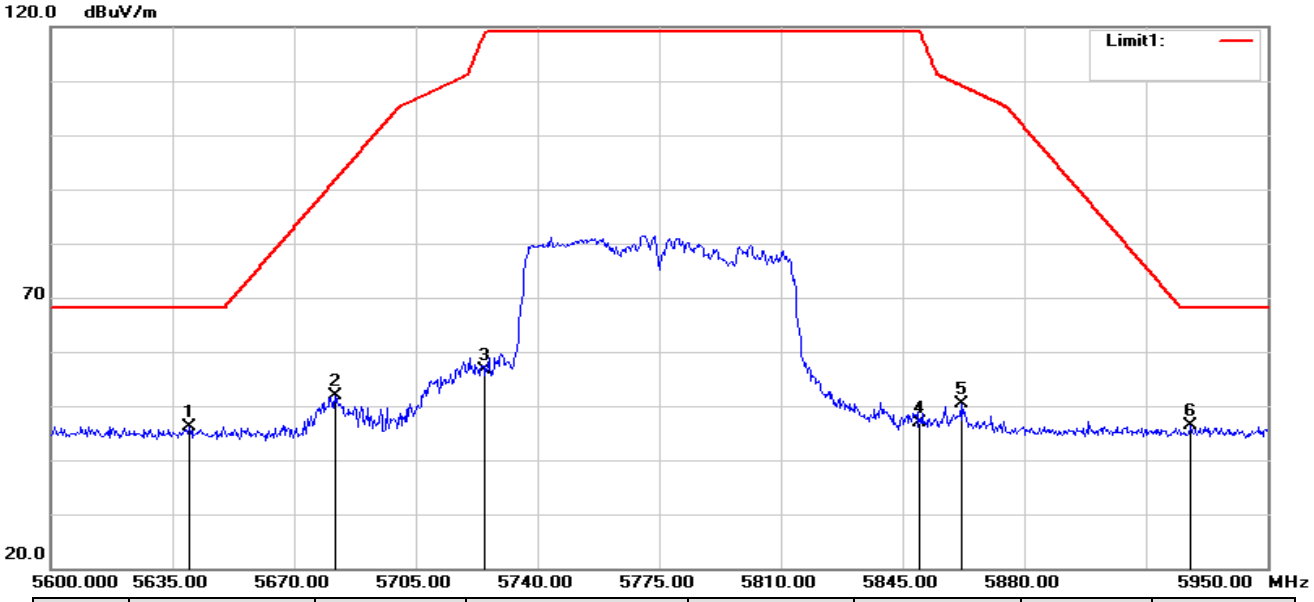
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	5850.000	57.91	-4.10	53.81	119.20	-65.39	peak
2	5864.200	57.04	-4.04	53.00	108.44	-55.44	peak
3	5936.350	51.35	-3.94	47.41	68.20	-20.79	peak

802.11ac80-H



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	5642.000	53.96	-4.68	49.28	68.20	-18.92	peak
2	5681.900	64.80	-4.67	60.13	91.81	-31.68	peak
3	5725.000	71.77	-4.57	67.20	119.20	-52.00	peak
4	5850.000	62.73	-4.10	58.63	119.20	-60.57	peak
5	5862.850	63.59	-4.04	59.55	108.84	-49.29	peak
6	5934.600	51.77	-3.93	47.84	68.20	-20.36	peak

802.11ac80-V



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	5639.900	50.75	-4.69	46.06	68.20	-22.14	peak
2	5681.900	56.46	-4.67	51.79	91.81	-40.02	peak
3	5725.000	61.09	-4.57	56.52	119.20	-62.68	peak
4	5850.000	51.08	-4.10	46.98	119.20	-72.22	peak
5	5861.800	54.34	-4.05	50.29	109.16	-58.87	peak
6	5927.950	50.20	-3.93	46.27	68.20	-21.93	peak

Note: All modes have been tested. Only the worst mode shown in the report.

4. POWER SPECTRAL DENSITY TEST

4.1 LIMIT

1. For mobile and portable client devices in the 5.15-5.25 GHz band, , 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.
2. 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.
3. For the band 5.725-5.850 GHz, the peak power spectral density shall not exceed 30 dBm in any 500KHz band. If transmitting antenna directional gain is greater than 6 dBi, both the maximum conducted output power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

4.2 TEST PROCEDURE

1. The setting follows Method SA-1 of FCC KDB D02 General UNII Test Procedures New Rules v01r03.

For devices operating in the band, the rules specify a measurement bandwidth of 500 kHz. Many spectrum analyzers do not have 500 kHz RBW, thus a narrower RBW may need to be used. The rules permit the use of a RBWs less than 1 MHz, or 500 kHz, “provided that the measured power is integrated over the full reference bandwidth” to show the total power over the specified measurement bandwidth (*i.e.,* 1 MHz, or 500 kHz). If measurements are performed using a reduced resolution bandwidth (< 1 MHz, or < 500 kHz) and integrated over 1 MHz, or 500 KHz bandwidth, the following adjustments to the procedures apply:

a) Set RBW ≥ 1/*T*, where *T* is defined in section II.B.I.a).

b) Set VBW ≥ 3 RBW.

c) If measurement bandwidth of Maximum PSD is specified in 500 kHz, add 10 log (500kHz/RBW) to the measured result, whereas RBW (< 500 kHz) is the reduced resolution bandwidth of the spectrum analyzer set during measurement.

d) If measurement bandwidth of Maximum PSD is specified in 1 MHz, add 10 log (1MHz/RBW) to the measured result, whereas RBW (< 1 MHz) is the reduced resolution bandwidth of spectrum analyzer set during measurement.

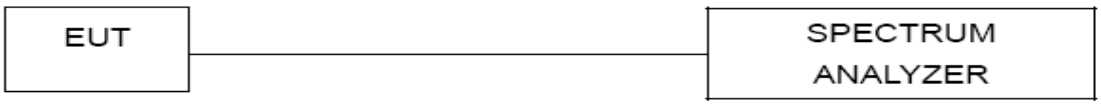
e) Care must be taken to ensure that the measurements are performed during a period of continuous transmission or are corrected upward for duty cycle.

Note: As a practical matter, it is recommended to use reduced RBW of 100 kHz for the sections5.c) and 5.d) above, since RBW=100 KHZ is available on nearly all spectrum analyzers.

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

5150-5250MHz					
Frequency	Direct measurement Power Density (dBm)	Duty cycle factor (dB)	Final Power Density (dBm)	Limit (dBm)	Result
802.11a					
5180	2.484	0.086	2.570	11	PASS
5200	1.852	0.086	1.938	11	PASS
5240	1.993	0.086	2.079	11	PASS
802.11n20					
5180	2.420	0.092	2.512	11	PASS
5200	2.401	0.092	2.493	11	PASS
5240	1.592	0.092	1.684	11	PASS
802.11n40					
5190	-0.987	0.180	-0.807	11	PASS
5230	-1.515	0.180	-1.335	11	PASS
802.11ac20					
5180	1.443	0.091	1.534	11	PASS
5200	1.191	0.091	1.282	11	PASS
5240	1.046	0.091	1.137	11	PASS
802.11ac40					
5190	-1.673	0.180	-1.493	11	PASS
5230	-2.352	0.180	-2.172	11	PASS
802.11ac80					
5210	-11.595	0.390	-11.205	11	PASS

5250-5350MHz					
Frequency	Direct measurement Power Density (dBm)	Duty cycle factor (dB)	Final Power Density (dBm)	Limit (dBm)	Result
802.11a					
5260	2.076	0.074	2.150	11	PASS
5300	1.694	0.074	1.768	11	PASS
5320	1.934	0.074	2.008	11	PASS
802.11n20					
5260	1.654	0.079	1.733	11	PASS
5300	1.006	0.079	1.085	11	PASS
5320	1.149	0.079	1.228	11	PASS
802.11n40					
5270	-1.453	0.165	-1.288	11	PASS
5310	-1.991	0.165	-1.826	11	PASS
802.11ac20					
5260	0.618	0.078	0.696	11	PASS
5300	0.343	0.078	0.421	11	PASS
5320	0.620	0.078	0.698	11	PASS
802.11ac40					
5270	-2.481	0.196	-2.285	11	PASS
5310	-2.749	0.196	-2.553	11	PASS
802.11ac80					
5290	-11.809	0.404	-11.405	11	PASS

5725-5850MHz						
Frequency	Use RBW 510KHz direct measurement Direct measurement Power Density (dBm)	Convert to RBW 500KHz direct measurement Power Density (dBm)	Duty cycle factor (dB)	Final Power Density (dBm)	Limit (dBm)	Result
802.11a						
5745	-1.770	-1.856	0.086	-1.770	30	PASS
5785	-1.667	-1.753	0.086	-1.667	30	PASS
5825	-1.829	-1.915	0.086	-1.829	30	PASS
802.11n20						
5745	-1.314	-1.400	0.079	-1.321	30	PASS
5785	-2.192	-2.278	0.079	-2.199	30	PASS
5825	-1.751	-1.837	0.079	-1.758	30	PASS
802.11n40						
5755	-4.945	-5.031	0.182	-4.849	30	PASS
5795	-4.909	-4.995	0.182	-4.813	30	PASS
802.11ac20						
5745	-3.361	-3.447	0.091	-3.356	30	PASS
5785	-3.679	-3.765	0.091	-3.674	30	PASS
5825	-3.084	-3.170	0.091	-3.079	30	PASS
802.11ac40						
5755	-6.051	-6.137	0.196	-5.941	30	PASS
5795	-7.124	-7.210	0.196	-7.014	30	PASS
802.11ac80						
5775	-14.863	-14.949	0.385	-14.564	30	PASS

Note: 1. RB conversion formula: 10*LOG(500KHz/RBW)
2. Test plots see Attachment A.

5. BANDWIDTH MEASUREMENT

5.1 EMISSION BANDWIDTH (EBW) 26 BANDWID PROCEDURES / LIMIT

The following procedure shall be used for measuring 26 bandwidth.

5.1.1 TEST PROCEDURE

1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01
2. Set RBW = approximately 1% of the emission bandwidth.
3. Set the VBW > =RBW.
4. Detector = Peak.
5. Trace mode = max hold.
6. Measure the maximum width of the emission that is 26 dB down from the peak of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

5.1.2 DEVIATION FROM STANDARD

No deviation.

5.1.3 TEST SETUP

5.1.4 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.

5.1.5 TEST RESULTS

Frequency (MHz)	26dB Bandwidth (MHz)	Pass/Fail
802.11a		
5180	25.66	Pass
5200	23.48	Pass
5240	25.71	Pass
802.11n(HT20)		
5180	24.61	Pass
5200	25.00	Pass
5240	25.28	Pass
802.11n(HT40)		
5190	55.03	Pass
5230	55.20	Pass
802.11ac(VHT20)		
5180	20.55	Pass
5200	21.92	Pass
5240	24.92	Pass
802.11ac(VHT40)		
5190	50.08	Pass
5230	48.59	Pass
802.11ac(VHT80)		
5210	81.20	Pass

Frequency (MHz)	26dB Bandwidth (MHz)	Pass/Fail
802.11a		
5260	25.87	Pass
5300	25.87	Pass
5320	25.98	Pass
802.11n(HT20)		
5260	25.89	Pass
5300	25.22	Pass
5320	25.83	Pass
802.11n(HT40)		
5270	55.91	Pass
5310	55.96	Pass
802.11ac(VHT20)		
5260	24.12	Pass
5300	24.88	Pass
5320	24.44	Pass
802.11ac(VHT40)		
5270	51.21	Pass
5310	51.77	Pass
802.11ac(VHT80)		
5290	81.32	Pass

Frequency (MHz)	26dB Bandwidth (MHz)	Pass/Fail
802.11a		
5745	24.74	Pass
5785	21.56	Pass
5825	20.00	Pass
802.11n(HT20)		
5745	24.84	Pass
5785	20.71	Pass
5825	20.71	Pass
802.11n(HT40)		
5755	52.64	Pass
5795	46.87	Pass
802.11ac(VHT20)		
5745	19.97	Pass
5785	19.94	Pass
5825	19.86	Pass
802.11ac(VHT40)		
5755	46.00	Pass
5795	40.39	Pass
802.11ac(VHT80)		
5775	81.21	Pass

Test plots see Attachment B.

5.2 OCCUPIED BANDWIDTH (99%) TEST APPLIED PROCEDURES / LIMIT

The following procedure shall be used for measuring (99 %) power bandwidth.

5.2.1 TEST PROCEDURE

1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures v02r01.
The following procedure shall be used for measuring (99 %) power bandwidth:

1. Set center frequency to the nominal EUT channel center frequency.

2. Set span = 1.5 times to 5.0 times the OBW.

3. Set RBW = 1 % to 5 % of the OBW

4. Set VBW ≥ 3 · RBW

5. Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max hold mode (until the trace stabilizes) shall be used.

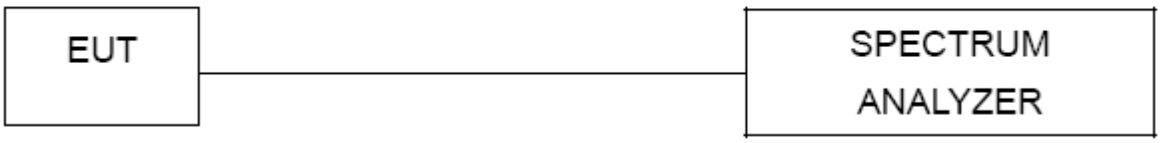
6. Use the 99 % power bandwidth function of the instrument (if available).

7. If the instrument does not have a 99 % power bandwidth function, the trace data points are recovered and directly summed in power units. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5 % of the total is reached; that frequency is recorded as the lower frequency. The process is repeated until 99.5 % of the total is reached; that frequency is recorded as the upper frequency. The 99% occupied bandwidth is the difference between these two frequencies.

5.2.2 DEVIATION FROM STANDARD

No deviation.

5.2.3 TEST SETUP



5.2.4 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.

5.2.5 TEST RESULTS

Frequency (MHz)	99% Bandwidth (MHz)	Pass/Fail
802.11a		
5180	16.60	Pass
5200	16.60	Pass
5240	16.63	Pass
802.11n(HT20)		
5180	17.64	Pass
5200	17.67	Pass
5240	17.68	Pass
802.11n(HT40)		
5190	36.15	Pass
5230	36.22	Pass
802.11ac(VHT20)		
5180	17.59	Pass
5200	17.57	Pass
5240	17.64	Pass
802.11ac(VHT40)		
5190	36.05	Pass
5230	36.06	Pass
802.11ac(VHT80)		
5210	75.75	Pass

Frequency (MHz)	99% Bandwidth (MHz)	Pass/Fail
802.11a		
5260	16.69	Pass
5300	16.72	Pass
5320	16.84	Pass
802.11n(HT20)		
5260	17.72	Pass
5300	17.73	Pass
5320	17.74	Pass
802.11n(HT40)		
5270	36.25	Pass
5310	36.32	Pass
802.11ac(VHT20)		
5260	17.62	Pass
5300	17.62	Pass
5320	17.64	Pass
802.11ac(VHT40)		
5270	36.10	Pass
5310	36.14	Pass
802.11ac(VHT80)		
5290	75.82	Pass

Frequency (MHz)	99% Bandwidth (MHz)	Pass/Fail
802.11a		
5745	16.53	Pass
5785	16.46	Pass
5825	16.42	Pass
802.11n(HT20)		
5745	17.60	Pass
5785	17.55	Pass
5825	17.54	Pass
802.11n(HT40)		
5755	36.03	Pass
5795	36.06	Pass
802.11ac(VHT20)		
5745	17.53	Pass
5785	17.51	Pass
5825	17.49	Pass
802.11ac(VHT40)		
5755	35.95	Pass
5795	35.94	Pass
802.11ac(VHT80)		
5775	75.77	Pass

Test plots See Attachment B.

5.3 MINIMUM EMISSION BANDWIDTH(6 DB) PROCEDURES / LIMIT

Section 15.407(e) specifies the minimum 6 dB emission bandwidth of at least 500 KHz for the band 5.725-5.85 GHz. The following procedure shall be used for measuring this bandwidth:

5.3.1 TEST PROCEDURE

1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures v02r01.

a) Set RBW = 100 kHz.

b) Set the video bandwidth (VBW) ≥ 3 × RBW.

c) Detector = Peak.

d) Trace mode = max hold.

e) Sweep = auto couple.

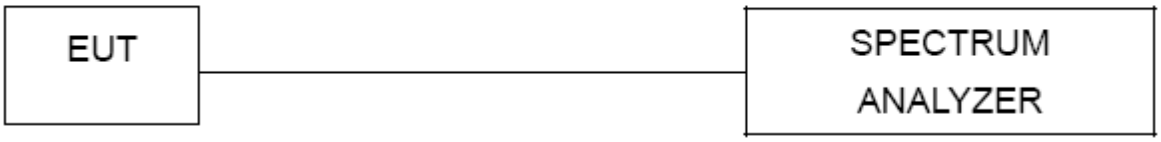
f) Allow the trace to stabilize.

g) 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.

5.3.2 DEVIATION FROM STANDARD

No deviation.

5.3.3 TEST SETUP



5.3.4 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.

5.3.5 TEST RESULTS

Frequency (MHz)	6dB Bandwidth (MHz)	Pass/Fail
802.11a		
5745	15.08	Pass
5785	15.30	Pass
5825	15.09	Pass
802.11n(HT20)		
5745	15.10	Pass
5785	15.12	Pass
5825	15.10	Pass
802.11n(HT40)		
5755	35.07	Pass
5795	35.07	Pass
802.11ac(VHT20)		
5745	15.09	Pass
5785	15.12	Pass
5825	15.11	Pass
802.11ac(VHT40)		
5755	35.07	Pass
5795	35.08	Pass
802.11ac(VHT80)		
5775	75.79	Pass

Test plots see Attachment C.

6. MAXIMUM CONDUCTED OUTPUT POWER

6.1 LIMIT

For mobile and portable 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. 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 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz,If transmitting antennas of directional gain greater than 6 dBi are used.

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. If transmitting antennas of directional gain greater than 6 dBi are used.

<table>
<tr><td colspan="5">FCC Part15 (15.407) , Subpart E</td></tr>
<tr><td>Section</td><td>Test Item</td><td>Limit</td><td>Frequency Range (MHz)</td><td>Result</td></tr>
<tr><td rowspan="2">15.407(a) (1) (iv)</td><td rowspan="3">Peak Output Power</td><td>0.25 watt</td><td>5150-5250</td><td rowspan="3">PASS</td></tr>
<tr><td>The lesser of 250 mW or 11 dBm + 10 log (26 dB emission bandwidth)</td><td>5250-5350
5470-5725</td></tr>
<tr><td>15.407(a) (3)</td><td>1 watt</td><td>5725-5825</td></tr>
</table>

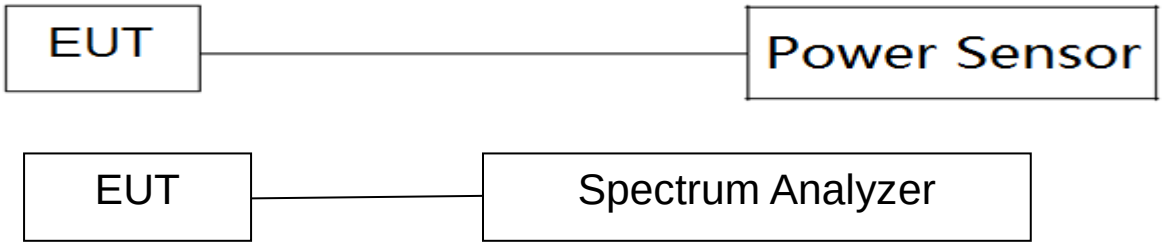
6.2 TEST PROCEDURE

The EUT was directly connected to the Power Sensor&PC

6.3 DEVIATION FROM STANDARD

No deviation.

6.4 TEST SETUP



6.5 EUT OPERATION CONDITIONS

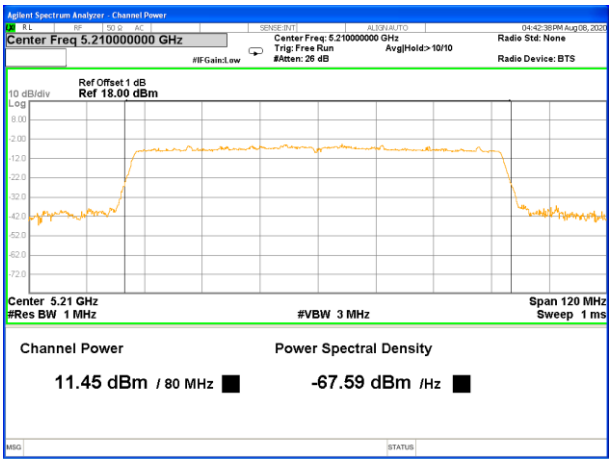
The EUT tested system was configured as the statements of 5 Unless otherwise a special operating condition is specified in the follows during the testing.

6.6 TEST RESULTS

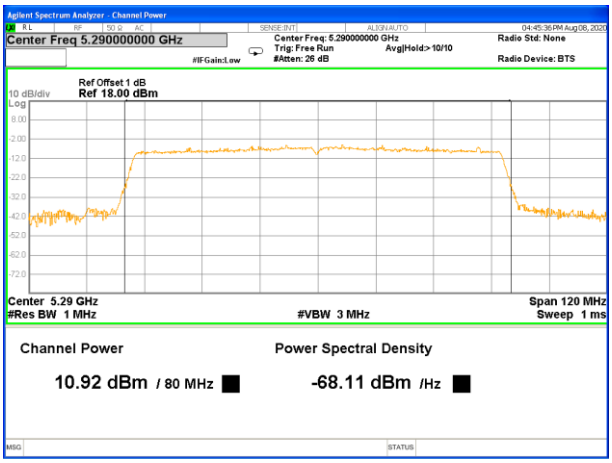
Band I (5.15-5.25GHz)					
Test Channel	Frequency (MHz)	Direct measurement AV Power (dBm)	Duty cycle factor (dB)	Final AV Power (dBm)	LIMIT (dBm)
802.11a					
36	5180	12.39	0.086	12.48	23.98
40	5200	11.97	0.086	12.06	23.98
48	5240	11.61	0.086	11.70	23.98
802.11n(HT20)					
36	5180	12.20	0.092	12.29	23.98
40	5200	11.76	0.092	11.85	23.98
48	5240	11.92	0.092	12.01	23.98
802.11n(HT40)					
38	5190	7.61	0.180	7.79	23.98
46	5230	7.41	0.180	7.59	23.98
802.11ac(VHT20)					
36	5180	11.34	0.091	11.43	23.98
40	5200	10.81	0.091	10.90	23.98
48	5240	10.94	0.091	11.03	23.98
802.11ac(VHT40)					
38	5190	7.56	0.180	7.74	23.98
46	5230	7.39	0.180	7.57	23.98
802.11ac(VHT80)					
42	5210	11.45	0.390	11.84	23.98

Band II(5.25-5.35GHz)					
Test Channel	Frequency (MHz)	Direct measurement AV Power (dBm)	Duty cycle factor (dB)	Final AV Power (dBm)	LIMIT (dBm)
802.11a					
52	5260	11.91	0.074	11.98	23.98
60	5300	11.42	0.074	11.49	23.98
64	5320	11.68	0.074	11.75	23.98
802.11n(HT20)					
52	5260	11.79	0.079	11.87	23.98
60	5300	11.20	0.079	11.28	23.98
64	5320	11.08	0.079	11.16	23.98
802.11n(HT40)					
54	5270	7.38	0.165	7.54	23.98
62	5310	7.25	0.165	7.41	23.98
802.11ac(VHT20)					
52	5260	10.94	0.078	11.02	23.98
60	5300	10.72	0.078	10.80	23.98
64	5320	10.60	0.078	10.68	23.98
802.11ac(VHT40)					
54	5270	7.32	0.196	7.52	23.98
62	5310	7.17	0.196	7.37	23.98
802.11ac(VHT80)					
58	5290	10.92	0.404	11.32	23.98

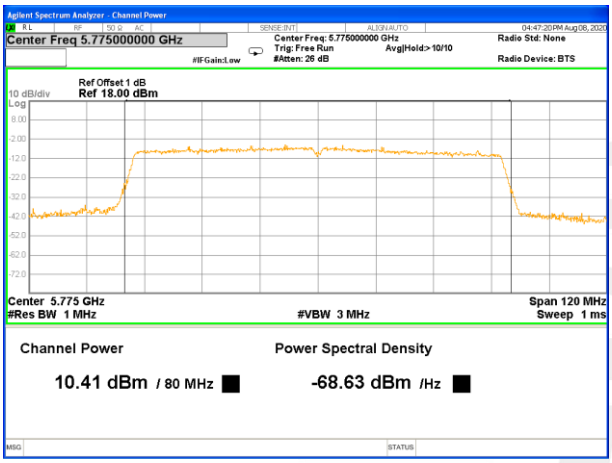
Band IV (5.725-5.85GHz)					
Test Channel	Frequency (MHz)	Direct measurement AV Power (dBm)	Duty cycle factor (dB)	Final AV Power (dBm)	LIMIT (dBm)
802.11a					
149	5745	11.29	0.086	11.38	30.00
157	5785	10.78	0.086	10.87	30.00
165	5825	11.50	0.086	11.59	30.00
802.11n(HT20)					
149	5745	10.54	0.079	10.62	30.00
157	5785	11.20	0.079	11.28	30.00
165	5825	10.71	0.079	10.79	30.00
802.11n(HT40)					
151	5755	10.50	0.182	10.68	30.00
159	5795	11.05	0.182	11.23	30.00
802.11ac(VHT20)					
149	5745	9.22	0.091	9.31	30.00
157	5785	9.30	0.091	9.39	30.00
165	5825	9.06	0.091	9.15	30.00
802.11ac(VHT40)					
151	5755	9.16	0.196	9.36	30.00
159	5795	9.20	0.196	9.40	30.00
802.11ac(VHT80)					
155	5775	10.41	0.385	10.80	30.00



5210MHz



5290MHz



5775MHz

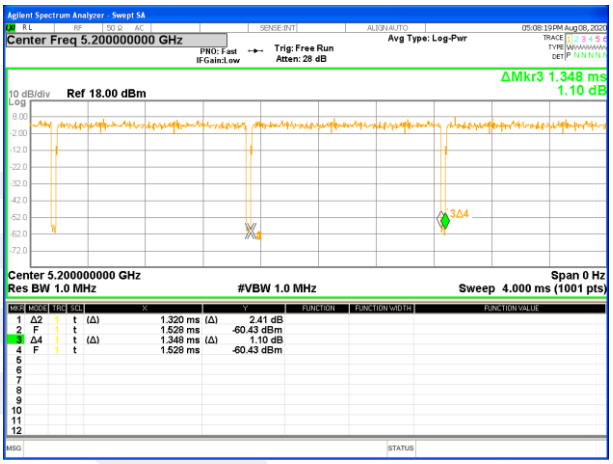
Duty cycle

Band1				
Mode	Ton(ms)	Tp(ms)	Duty cycle(%)	Duty factor(dB)
a	1.400	1.428	98.04%	0.086
n20	1.308	1.336	97.90%	0.092
n40	0.659	0.687	95.95%	0.180
ac20	1.320	1.348	97.92%	0.091
ac40	0.659	0.687	95.95%	0.180
ac80	0.330	0.361	91.41%	0.390
Band2				
Mode	Ton(ms)	Tp(ms)	Duty cycle(%)	Duty factor(dB)
a	1.404	1.428	98.32%	0.074
n20	1.312	1.336	98.20%	0.079
n40	0.654	0.679	96.27%	0.165
ac20	1.324	1.348	98.22%	0.078
ac40	0.659	0.689	95.59%	0.196
ac80	0.328	0.360	91.11%	0.404
Band4				
Mode	Ton(ms)	Tp(ms)	Duty cycle(%)	Duty factor(dB)
a	1.404	1.432	98.04%	0.086
n20	1.312	1.336	98.20%	0.079
n40	0.654	0.682	95.91%	0.182
ac20	1.320	1.348	97.92%	0.091
ac40	0.659	0.689	95.59%	0.196
ac80	0.330	0.360	91.51%	0.385

Band 1-a20

Band 1-n20

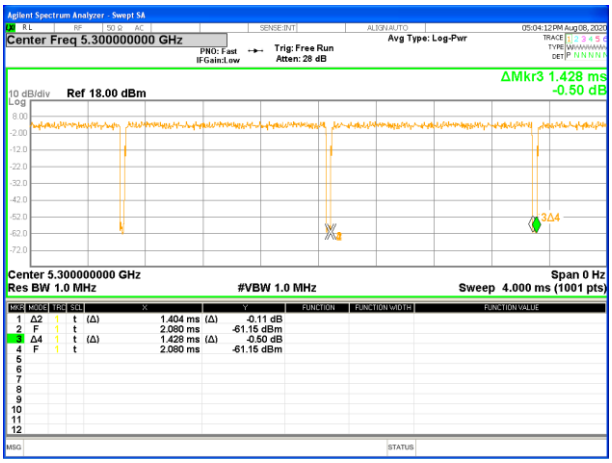
Band 1-n40



Band 1-ac20

Band 1-ac40

Band 1-ac80



Band 2-a20

Band 2-n20

Band 2-n40

Band 2-ac20

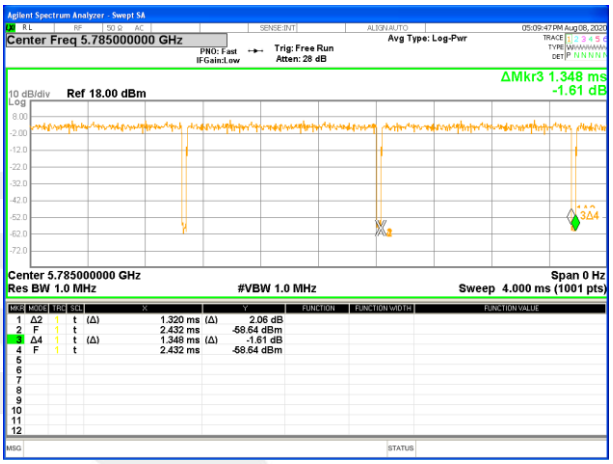
Band 2-ac40

Band 2-ac80

Band 4-a20

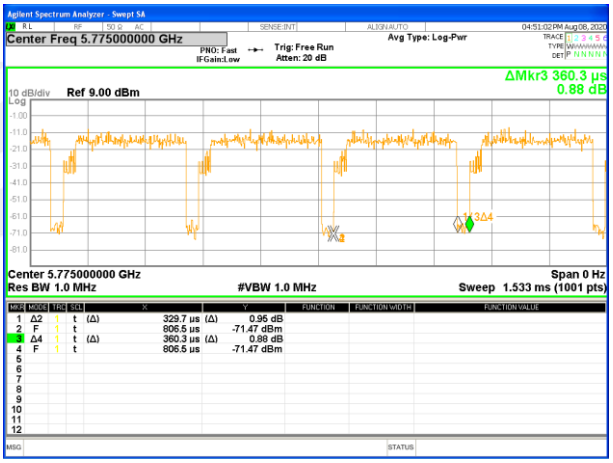
Band 4-n20

Band 4-n40



Band 4-ac20

Band 4-ac40



Band 4-ac80

7. AUTOMATICALLY DISCONTINUE TRANSMISSION

7.1 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.

7.2 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

8. ANTENNA REQUIREMENT

8.1 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.

8.2 EUT ANTENNA

The EUT antenna is PIFA 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※※※※※