



FCC Part 15E Test Report

FCC ID: 2A900-U1441P

Applicant: Ultimea Technology (Shenzhen) Limited
Address: 20th Floor, Building 4, Tianan Cloud Park, Bantian St., Longgang District, Shenzhen, China
Manufacturer: Ultimea Technology (Shenzhen) Limited
Address: 20th Floor, Building 4, Tianan Cloud Park, Bantian St., Longgang District, Shenzhen, China
Production: Sichuan Changhong Electric Co.,Ltd.
Address: 35 Mianxing East Road, HI-Tech Development Zone, Mianyang City
EUT: Thor T60 Triple Laser TV
Trade Mark: ULTIMEA
Model Number: U1441
Date of Receipt: Jan. 06, 2024
Test Date: Jan. 06, 2024 - Feb. 28, 2024
Date of Report: Feb. 28, 2024
Prepared By: Shenzhen DL Testing Technology Co., Ltd.
Address: 101-201, Building C, Shuanghuan, No.8, Baoqing Road, Baolong Industrial Zone, Baolong Street, Longgang District, Shenzhen, Guangdong, China
Applicable Standards: FCC PART 15 E 15.407
ANSI C63.10:2013
Test Result: Pass
Report Number: DL-20240106045E

Prepared (Test Engineer): Alisa Song

Reviewer (Supervisor): Jack Bu

Approved (Manager): Jade Yang



This test report is based on a single evaluation of one sample of above mentioned products. It is not permitted to be duplicated in extracts without written approval of Shenzhen DL Testing Technology Co., Ltd.



Table of Contents	Page
1 . SUMMARY OF TEST RESULTS	4
1.1 MEASUREMENT UNCERTAINTY	4
2 . GENERAL INFORMATION	5
2.1 GENERAL DESCRIPTION OF EUT	5
2.2 DESCRIPTION OF TEST MODES	7
2.3 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED	8
2.4 DESCRIPTION OF SUPPORT UNITS(CONDUCTED MODE)	8
2.5 TABLE OF PARAMETERS OF TEST SOFTWARE SETTING	8
2.6 EQUIPMENTS LIST FOR ALL TEST ITEMS	9
3 . EMC EMISSION TEST	10
3.1 CONDUCTED EMISSION MEASUREMENT	10
3.1.1 POWER LINE CONDUCTED EMISSION LIMITS	10
3.1.2 TEST PROCEDURE	10
3.1.3 DEVIATION FROM TEST STANDARD	10
3.1.4 TEST SETUP	11
3.1.5 EUT OPERATING CONDITIONS	11
3.1.6 TEST RESULTS	11
3.2 RADIATED EMISSION MEASUREMENT	14
3.2.1 RADIATED EMISSION LIMITS	14
3.2.2 TEST PROCEDURE	14
3.2.3 DEVIATION FROM TEST STANDARD	15
3.2.4 TEST SETUP	15
3.2.5 EUT OPERATING CONDITIONS	16
3.2.6 TEST RESULTS (BETWEEN 9KHZ – 30 MHZ)	17
3.2.7 TEST RESULTS (BETWEEN 30MHZ – 1GHZ)	18
3.2.8 TEST RESULTS (1GHZ~40GHZ)	20
3.3 RADIATED BAND EMISSION MEASUREMENT	37
3.3.1 TEST REQUIREMENT:	37
3.3.2 TEST PROCEDURE	37
3.3.3 DEVIATION FROM TEST STANDARD	37
3.3.4 TEST SETUP	37
3.3.5 EUT OPERATING CONDITIONS	37
4 . PEAK OUTPUT POWER	42
4.1 APPLIED PROCEDURES / LIMIT	42
4.1.1 TEST PROCEDURE	42
4.1.2 DEVIATION FROM STANDARD	42
4.1.3 TEST SETUP	42
4.1.4 EUT OPERATION CONDITIONS	42
4.1.5 TEST RESULTS	43



Table of Contents	Page
5 . POWER SPECTRAL DENSITY TEST	50
5.1 APPLIED PROCEDURES / LIMIT	50
5.1.1 TEST PROCEDURE	50
5.1.2 DEVIATION FROM STANDARD	50
5.1.3 TEST SETUP	50
5.1.4 EUT OPERATION CONDITIONS	50
5.1.5 TEST RESULTS	51
6 . 6DB&26DB&99% BANDWIDTH TEST	58
6.1 APPLIED PROCEDURES / LIMIT	58
6.1.1 TEST PROCEDURE	58
6.1.2 DEVIATION FROM STANDARD	58
6.1.3 TEST SETUP	58
6.1.4 EUT OPERATION CONDITIONS	59
6.1.5 TEST RESULTS	59
7 . DUTY CYCLE TEST SIGNAL	66
7.1 APPLIED PROCEDURES / LIMIT	66
7.1.1 TEST PROCEDURE	66
7.1.2 DEVIATION FROM STANDARD	66
7.1.3 TEST SETUP	66
7.1.4 EUT OPERATION CONDITIONS	66
7.1.5 TEST RESULTS	67
8 . FREQUENCY STABILITY	70
8.1 APPLIED PROCEDURES / LIMIT	70
8.1.1 TEST PROCEDURE	70
8.1.2 DEVIATION FROM STANDARD	70
8.1.3 TEST SETUP	70
8.1.4 EUT OPERATION CONDITIONS	70
8.1.5 TEST RESULTS	71
9 . TRANSMISSION IN THE ABSENCE OF DATA	74
9.1 STANDARD REQUIREMENT	74
9.2 TEST RESULT	74
10 . ANTENNA REQUIREMENT	74
10.1 STANDARD REQUIREMENT	74
10.2 EUT ANTENNA	74
11 . TEST SEUUP PHOTO	75
12 . EUT PHOTO	75



1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

FCC Part15 (15.407) , Subpart E			
Standard Section	Test Item	Judgment	Remark
15.207	Conducted Emission	PASS	
15.407(b), 15.209	Radiated Spurious Emission	PASS	
15.407 (b)	Band Edge Emission	PASS	
15.407 (a)	Peak Output Power	PASS	
15.407 (a)	Power Spectral Density	PASS	
15.403(i) 15.407(e)	26dB bandwidth and 99%dB Bandwidth 6dB bandwidth and 99%dB Bandwidth	PASS	
15.407(g)	Frequency Stability	PASS	
15.407(c)	Transmission in case of Absence of Information	PASS	
15.203	Antenna Requirement	PASS	

NOTE:

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

Test lab: Shenzhen DL Testing Technology Co., Ltd.

Address: 101-201, Building C, Shuanghuan, No.8, Baoqing Road, Baolong Industrial Zone, Baolong Street, Longgang District, Shenzhen, Guangdong, China

FCC Test Firm Registration Number: 854456

Designation Number: CN1307

IC Registered No.: 27485

CAB ID.: CN0118

1.1 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement $y \pm U$, where expanded 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	Conducted Emission Test	$\pm 2.56\text{dB}$
2	RF power,conducted	$\pm 0.42\text{dB}$
3	Spurious emissions,conducted	$\pm 2.76\text{dB}$
4	All emissions,radiated(<1G)	$\pm 3.65\text{dB}$
5	All emissions,radiated(>1G)	$\pm 4.89\text{dB}$
6	Temperature	$\pm 0.5\text{C}$
7	Humidity	$\pm 2\%$
8	Bandwidth	$\pm 0.2\text{MHz}$



2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

Product Name:	Thor T60 Triple Laser TV
Trademark	ULTIMEA
Model No.:	U1441
Model Difference	N/A
Operation Frequency:	5180-5240, 5745-5825MHz(802.11a/n/ac(HT20)) 5190-5230, 5755-5795MHz(802.11n/ac(HT40)) 5210MHz , 5775MHz (802.11ac(HT80))
Channel numbers:	See channel list
Channel separation:	20MHz/40MHz/80MHz
Modulation technology:	64QAM, 16QAM, QPSK, BPSK for OFDM
Rate of Transmitter	802.11a: 6Mbps, 9Mbps, 12Mbps, 18Mbps, 24Mbps, 36Mbps, 48Mbps,54Mbps 802.11n: Up to 300Mbps 802.11ac: up to 867Mbps
Antenna Type:	Internal Antenna
Antenna gain:	2.86dBi
Power supply:	110-240V AC 50-60Hz 2.65A

Note:

- 1.For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.
- 2.The EUT's all information provided by client.



2. Channel List

Channel List for 802.11a/n(HT20)/ac(HT20)			
Channel	Frequency (MHz)	Channel	Frequency (MHz)
36	5180	44	5220
40	5200	48	5240

Channel List for 802.11n(HT40)/ac(HT40)			
Channel	Frequency (MHz)	Channel	Frequency (MHz)
38	5190	46	5230

Channel List for 802.11ac(HT80)			
Channel	Frequency (MHz)	Channel	Frequency (MHz)
42	5210	/	/

Channel List for 802.11a/n(HT20)/ac(HT20)			
Channel	Frequency (MHz)	Channel	Frequency (MHz)
149	5745	161	5805
153	5765	165	5825
157	5785		

Channel List for 802.11n(HT40)/ac(HT40)			
Channel	Frequency (MHz)	Channel	Frequency (MHz)
151	5755	159	5795

Channel List for 802.11ac(HT80)			
Channel	Frequency (MHz)	Channel	Frequency (MHz)
155	5775	/	/



2.2 DESCRIPTION OF TEST MODES

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

Description			
Pretest Mode	Channel	Band 1	Band 4
Mode 1	802.11a/n/acHT20	CH36, CH44, CH48	CH149, CH157, CH165
Mode 2	802.11n/acHT40	CH38, CH46	CH151, CH159
Mode 3	802.11acHT80	CH42	CH155
Mode 4	Link Mode		

For Radiated Emission			
Pretest Mode	Channel	Band 1	Band 4
Mode 1	802.11a/n/acHT20	CH36, CH44, CH48	CH149, CH157, CH165
Mode 2	802.11n/acHT40	CH38, CH46	CH151, CH159
Mode 3	802.11acHT80	CH42	CH155
Mode 4	Link Mode		

- Note: 1. The measurements are performed at the highest, middle, lowest available channels.
2. During the test, the test voltage was tuned from 85% to 115% of the nominal rated supply voltage, and found that the worst case was under the nominal rated supply condition. So the report just shows that condition's data.



2.3 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

Radiated Spurious Emission Test



Conducted Spurious Emission Test



2.4 DESCRIPTION OF SUPPORT UNITS(CONDUCTED MODE)

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.

Item	Equipment	Model/Type No.	Series No.	Note
E-1	Thor T60 Triple Laser TV	U1441	N/A	EUT
E-2	Notebook	310S-14AST	N/A	

Item	Shielded Type	Ferrite Core	Length	Note
C1	No	No	0.5m	HDMI Line

Note:

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

2.5 TABLE OF PARAMETERS OF TEST SOFTWARE SETTING

During testing, channel & power controlling software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the end product.

Max output power Setting				
Test software Version	Test program: 9629_7663_wifi_bt_documents			
Mode	802.11a	802.11n HT20	802.11n HT40	802.11ac HT20/HT40/HT80
Data Rate	6Mbps	MSC0	MSC0	MSC0
Power Setting of Software	60	60	66	66

**2.6 EQUIPMENTS LIST FOR ALL TEST ITEMS**

Radiation test, Band-edge test and 6db bandwidth test equipment

Item	Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
1	Spectrum Analyzer (9kHz-26.5GHz)	Agilent	E4408B	MY50140780	Nov. 04, 2023	Nov. 03, 2024
2	Test Receiver (9kHz-7GHz)	R&S	ESRP7	101393	Nov. 04, 2023	Nov. 03, 2024
3	Bilog Antenna (30MHz-1GHz)	R&S	VULB9162	00306	Nov. 04, 2023	Nov. 03, 2024
4	Horn Antenna (1GHz-18GHz)	Schwarzbeck	BBHA9120D	02139	Nov. 04, 2023	Nov. 03, 2024
5	Horn Antenna (18GHz-40GHz)	A.H. Systems	SAS-574	588	Nov. 04, 2023	Nov. 03, 2024
6	Amplifier (9KHz-6GHz)	Schwarzbeck	BBV9743B	00153	Nov. 04, 2023	Nov. 03, 2024
7	Amplifier (1GHz-18GHz)	EMEC	EM01G8GA	00270	Nov. 04, 2023	Nov. 03, 2024
8	Amplifier (18GHz-40GHz)	Quanjuda	DLE-161	97	Nov. 04, 2023	Nov. 03, 2024
9	Loop Antenna (9KHz-30MHz)	Schwarzbeck	FMZB1519B	00014	Nov. 04, 2023	Nov. 03, 2024
10	RF cables1 (9kHz-1GHz)	ChengYu	966	004	Nov. 04, 2023	Nov. 03, 2024
11	RF cables2 (1GHz-40GHz)	ChengYu	966	003	Nov. 04, 2023	Nov. 03, 2024
12	Antenna connector	Florida RF Labs	N/A	RF 01#	Nov. 04, 2023	Nov. 03, 2024
13	Power probe	KEYSIGHT	U2021XA	MY55210018	Nov. 04, 2023	Nov. 03, 2024
14	Signal Analyzer 9kHz-26.5GHz	Agilent	N9020A	MY55370280	Nov. 04, 2023	Nov. 03, 2024
15	Test Receiver 20kHz-40GHz	R&S	ESU 40	100376	Nov. 04, 2023	Nov. 03, 2024
16	D.C. Power Supply	LongWei	PS-305D	010964729	Nov. 04, 2023	Nov. 03, 2024

Conduction Test equipment

Item	Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
1	843 Shielded Room	ChengYu	843 Room	843	Sep. 20, 2022	Sep. 19, 2025
2	EMI Receiver	R&S	ESR	101421	Nov. 04, 2023	Nov. 03, 2024
3	LISN	R&S	ENV216	102417	Nov. 04, 2023	Nov. 03, 2024
4	843 Cable 1#	ChengYu	CE Cable	001	Nov. 04, 2023	Nov. 03, 2024

Other

Item	Name	Manufacturer	Model	Software version
1	EMC Conduction Test System	FALA	EZ_EMCC	EMC-CON 3A1.1
2	EMC radiation test system	FALA	EZ_EMCC	FA-03A2
3	RF test system	MAIWEI	MTS8310	2.0.0.0
4	RF communication test system	MAIWEI	MTS8200	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)	Limit (dBuV)		Standard
	Quasi-peak	Average	
0.15 -0.5	66 - 56 *	56 - 46 *	FCC
0.5 -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

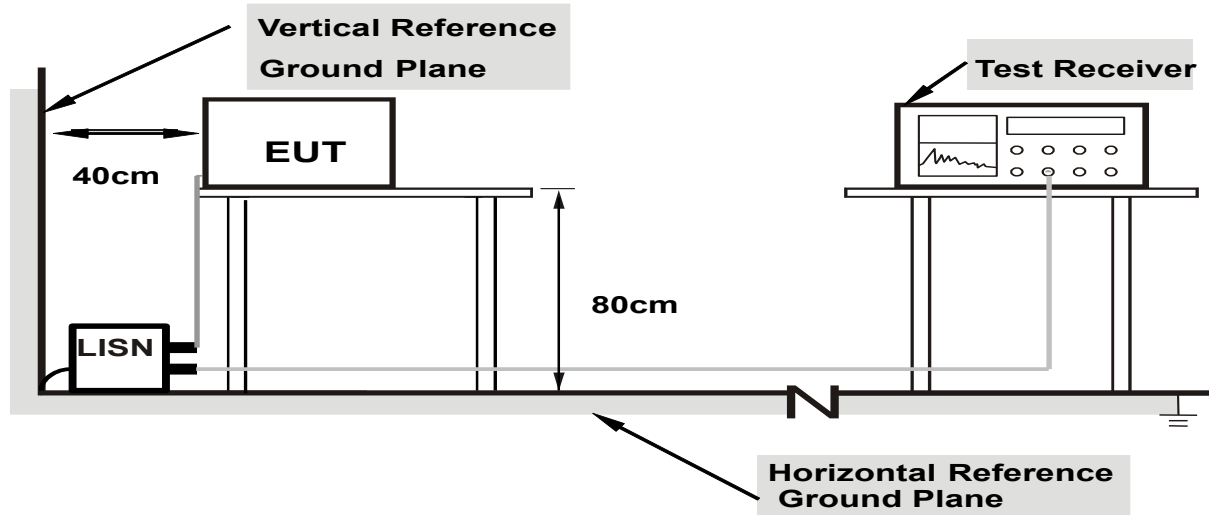
3.1.2 TEST PROCEDURE

- a. The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 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 at least 80 cm from 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 from other units and other metal planes

3.1.5 EUT OPERATING CONDITIONS

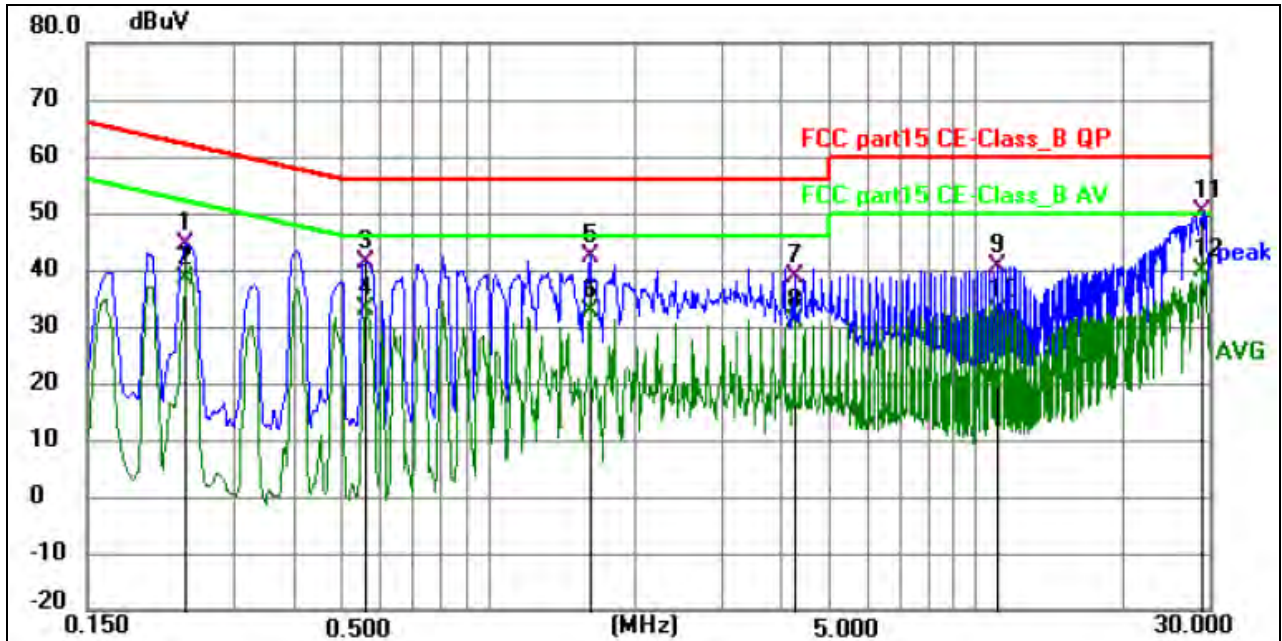
The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

We pretest AC 120V and AC 230V, the worst voltage was AC 120V and the data recording in the report.

3.1.6 TEST RESULTS



Temperature:	25 °C	Relative Humidity:	54%
Pressure:	1010hPa	Phase :	L
Test Voltage :	AC 120V/60Hz	Test Mode:	Mode 4



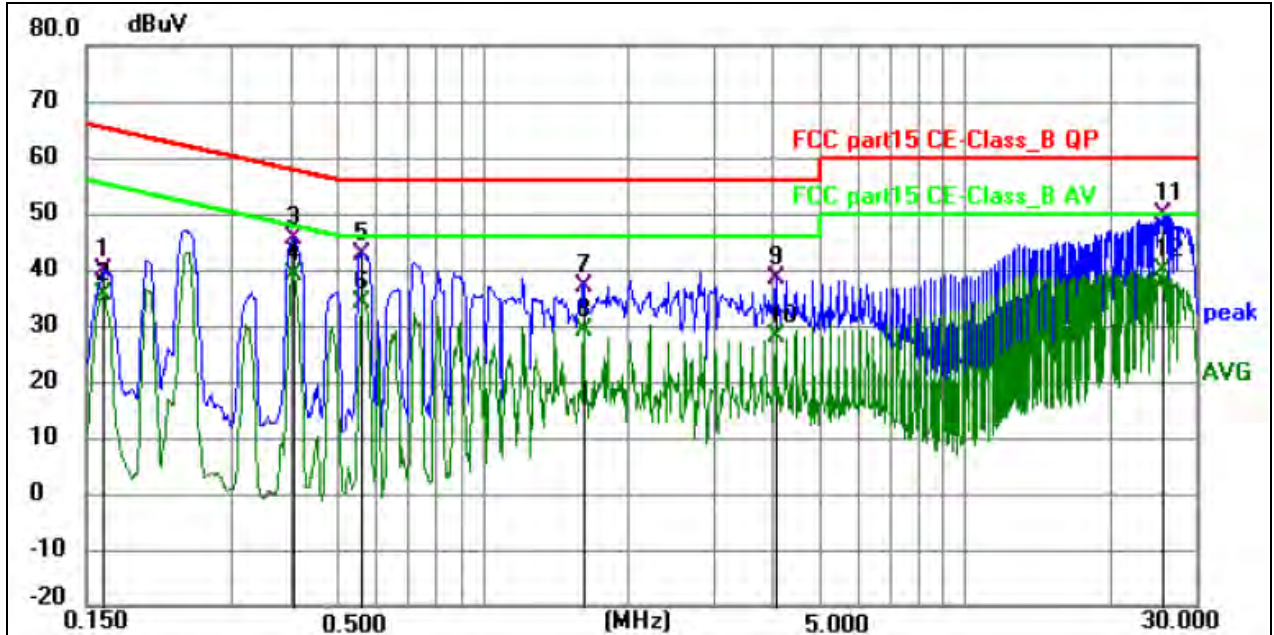
Remark:

Margin = Limit – Level, Correct Factor = Cable lose + LISN insertion loss, Level= Reading + Correct factor

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1	0.2400	34.99	9.41	44.40	62.10	-17.70	QP	P	
2	0.2400	29.08	9.41	38.49	52.10	-13.61	AVG	P	
3	0.5639	32.01	9.34	41.35	56.00	-14.65	QP	P	
4	0.5639	23.62	9.34	32.96	46.00	-13.04	AVG	P	
5	1.6125	32.58	9.72	42.30	56.00	-13.70	QP	P	
6	1.6125	22.79	9.72	32.51	46.00	-13.49	AVG	P	
7	4.2315	28.92	9.87	38.79	56.00	-17.21	QP	P	
8	4.2315	20.98	9.87	30.85	46.00	-15.15	AVG	P	
9	11.0805	30.54	10.14	40.68	60.00	-19.32	QP	P	
10	11.0805	22.70	10.14	32.84	50.00	-17.16	AVG	P	
11 *	29.2155	39.11	10.97	50.08	60.00	-9.92	QP	P	
12	29.2155	28.79	10.97	39.76	50.00	-10.24	AVG	P	



Temperature:	25 °C	Relative Humidity:	54%
Pressure:	1010hPa	Phase :	N
Test Voltage :	AC 120V/60Hz	Test Mode:	Mode 4



Remark:

Margin = Limit – Level, Correct Factor = Cable lose + LISN insertion loss, Level= Reading + Correct factor

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1	0.1635	29.70	9.99	39.69	65.28	-25.59	QP	P	
2	0.1635	25.57	9.99	35.56	55.28	-19.72	AVG	P	
3	0.4020	36.39	9.29	45.68	57.81	-12.13	QP	P	
4 *	0.4020	29.64	9.29	38.93	47.81	-8.88	AVG	P	
5	0.5595	33.40	9.37	42.77	56.00	-13.23	QP	P	
6	0.5595	24.86	9.37	34.23	46.00	-11.77	AVG	P	
7	1.6125	27.37	9.75	37.12	56.00	-18.88	QP	P	
8	1.6125	19.32	9.75	29.07	46.00	-16.93	AVG	P	
9	4.0290	28.35	10.02	38.37	56.00	-17.63	QP	P	
10	4.0290	17.95	10.02	27.97	46.00	-18.03	AVG	P	
11	25.7910	38.35	11.31	49.66	60.00	-10.34	QP	P	
12	25.7910	28.43	11.31	39.74	50.00	-10.26	AVG	P	



3.2 RADIATED EMISSION MEASUREMENT

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

In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.

Frequencies (MHz)	Field Strength (micovolts/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	74	54

Notes:

- (1) The limit for radiated test was performed according to FCC PART 15C.
- (2) The tighter limit applies at the band edges.
- (3) Emission level (dBuV/m)=20log Emission level (uV/m).

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	40GHz
RB / VB (emission in restricted band)	1 MHz / 1 MHz for Peak, 1 MHz / 10Hz for Average

Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~150kHz / RB 200Hz for QP
Start ~ Stop Frequency	150kHz~30MHz / RB 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RB 120kHz for QP

3.2.2 TEST PROCEDURE

Below 1GHz test procedure as below:

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

- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

Above 1GHz test procedure as below:

- g. Different between above is the test site, change from Semi- Anechoic Chamber to fully Anechoic Chamber and change form table 0.8 metre to 1.5 metre(Above 18GHz the distance is 1 meter and table is 1.5 metre).
- h. Test the EUT in the lowest channel, the middle channel, the Highest channel

Note:

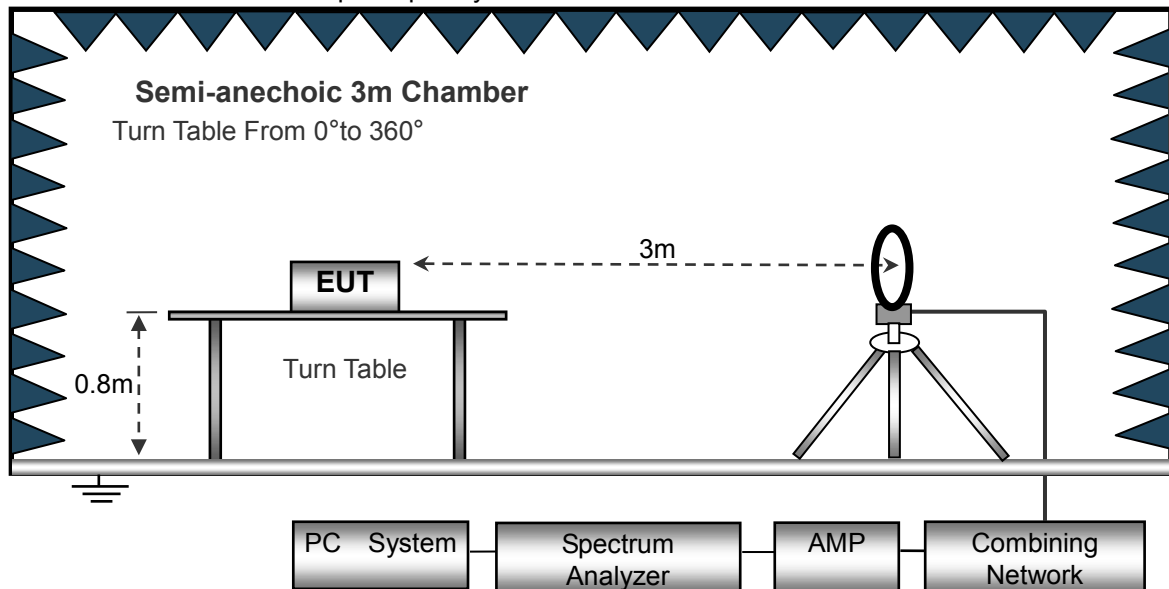
Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported

3.2.3 DEVIATION FROM TEST STANDARD

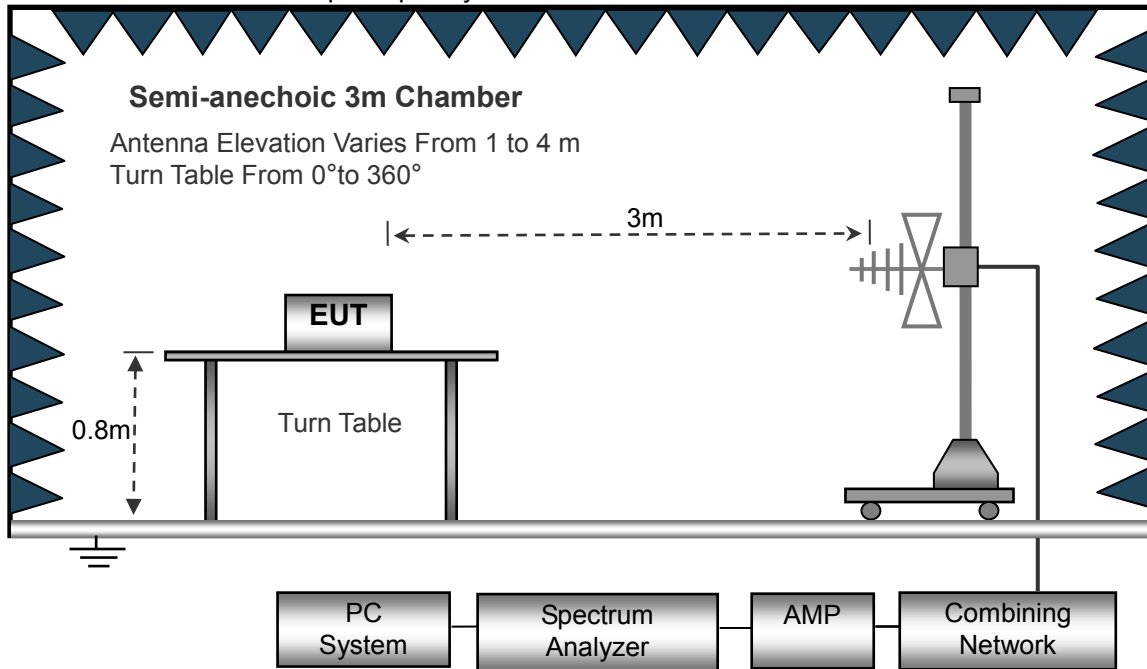
No deviation

3.2.4 TEST SETUP

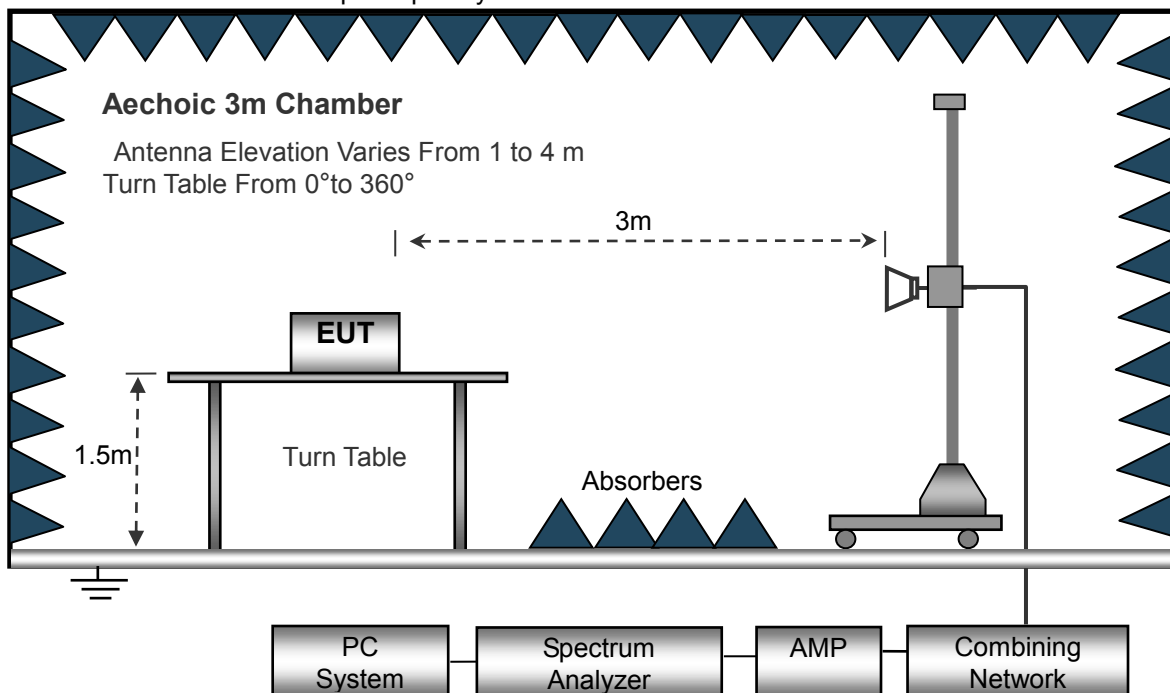
(A) Radiated Emission Test-Up Frequency Below 30MHz



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



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



3.2.5 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of 2.3 Unless otherwise a special operating condition is specified in the follows during the testing.

**3.2.6 TEST RESULTS (Between 9KHz – 30 MHz)**

Temperature:	20°C	Relative Humidity:	48%
Pressure:	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	Mode 4	Polarization :	--

Freq. (MHz)	Reading (dBuV/m)	Limit (dBuV/m)	Margin (dB)	State 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 = $40 \log(\text{specific distance}/\text{test distance})$ (dB);

Limit line = specific limits(dBuv) + distance extrapolation factor.



3.2.7 TEST RESULTS (Between 30MHz – 1GHz)

Temperature:	26°C	Relative Humidity:	54%
Pressure:	1010 hPa	Polarization :	Horizontal
Test Voltage :	AC 120V/60Hz		
Test Mode :	Mode 4		



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dB	Margin dB	Detector
1		32.9791	36.91	-15.39	21.52	40.00	-18.48	QP
2		56.9911	31.81	-12.85	18.96	40.00	-21.04	QP
3		86.8067	37.91	-17.17	20.74	40.00	-19.26	QP
4	*	169.0053	49.87	-16.61	33.26	43.50	-10.24	QP
5		362.9843	43.54	-10.39	33.15	46.00	-12.85	QP
6		665.8034	39.14	-4.64	34.50	46.00	-11.50	QP

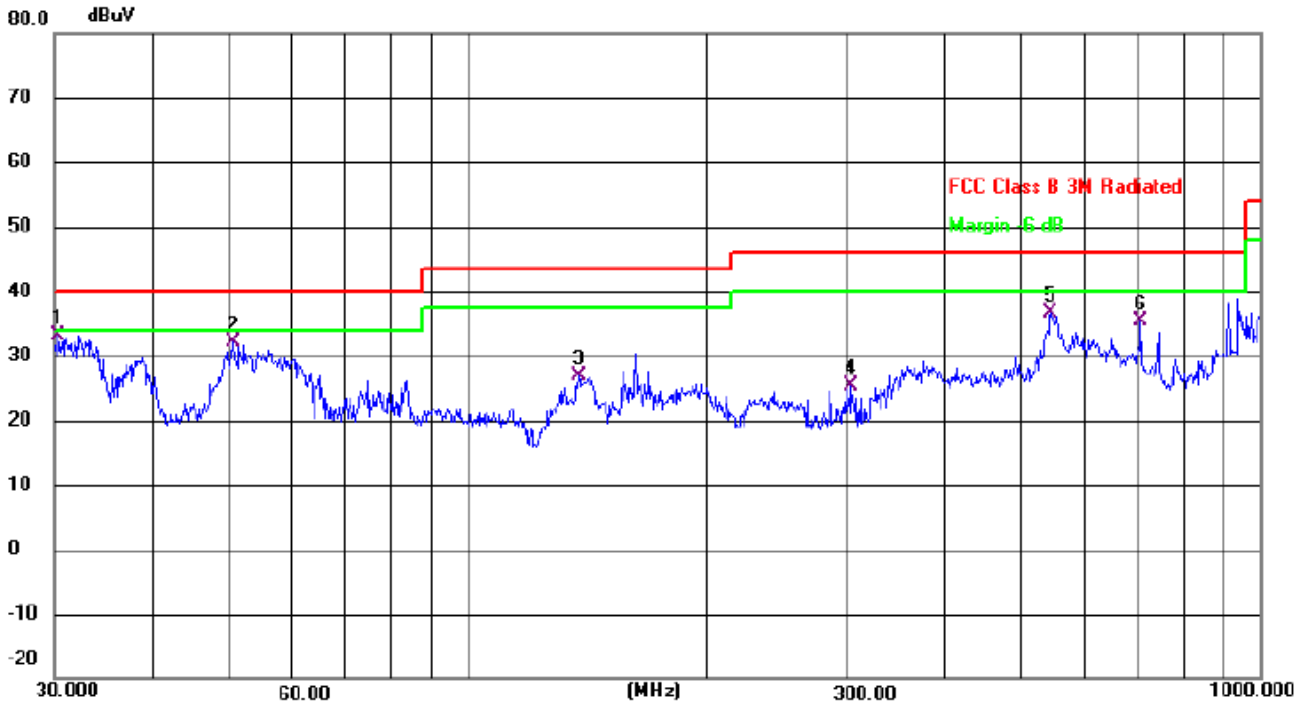
Remark:

Correct Factor = Cable loss + Antenna factor – Preamplifier;

Level = Reading Level + Correct Factor; Margin = Level - Limit;



Temperature:	26°C	Relative Humidity:	54%
Pressure:	1010 hPa	Polarization :	Vertical
test voltage :	AC 120V/60Hz		
Test Mode :	Mode 4		



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dB	Margin dB	Detector
1	*	30.3170	49.12	-15.98	33.14	40.00	-6.86	QP
2		50.5859	45.33	-13.18	32.15	40.00	-7.85	QP
3		137.9028	44.19	-17.30	26.89	43.50	-16.61	QP
4		304.6099	36.60	-11.34	25.26	46.00	-20.74	QP
5		543.2740	43.60	-6.92	36.68	46.00	-9.32	QP
6		706.6997	39.06	-3.78	35.28	46.00	-10.72	QP

Remark:

Correct Factor = Cable loss + Antenna factor – Preamplifier;

Level = Reading Level + Correct Factor; Margin = Level - Limit;

**3.2.8 TEST RESULTS (1ghz~40ghZ)**

802.11a band 1

Polar (H/V)	Frequency	Meter Reading	Pre-amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
operation frequency:5180									
V	10360	56.52	49.05	15.3	37.39	60.16	74	-13.84	PK
V	10360	41.29	49.05	15.3	37.39	44.93	54	-9.07	AV
V	15540	56.15	49.16	15.27	40.45	62.71	74	-11.29	PK
V	15540	39.17	49.16	15.27	40.45	45.73	54	-8.27	AV
H	10360	56.16	49.05	15.3	37.39	59.8	74	-14.20	PK
H	10360	40.43	49.05	15.3	37.39	44.07	54	-9.93	AV
H	15540	59.65	49.16	15.27	40.45	66.21	74	-7.79	PK
H	15540	38.29	49.16	15.27	40.45	44.85	54	-9.15	AV
operation frequency:5200									
V	10400	57.44	49.09	15.34	37.42	61.11	74	-12.89	PK
V	10400	39.38	49.09	15.34	37.42	43.05	54	-10.95	AV
V	15600	59.26	49.18	15.29	40.47	65.84	74	-8.16	PK
V	15600	38.47	49.18	15.29	40.47	45.05	54	-8.95	AV
H	10400	56.44	49.09	15.34	37.42	60.11	74	-13.89	PK
H	10400	39.79	49.09	15.34	37.42	43.46	54	-10.54	AV
H	15600	59.93	49.18	15.29	40.47	66.51	74	-7.49	PK
H	15600	38.47	49.18	15.29	40.47	45.05	54	-8.95	AV
operation frequency:5240									
V	10480	58.46	49.11	15.37	37.46	62.18	74	-11.82	PK
V	10480	39.37	49.11	15.37	37.46	43.09	54	-10.91	AV
V	15720	59.15	49.21	15.34	40.51	65.79	74	-8.21	PK
V	15720	38.23	49.21	15.34	40.51	44.87	54	-9.13	AV
H	10480	57.15	49.11	15.37	31.31	54.72	74	-19.28	PK
H	10480	45.54	49.11	15.37	31.31	43.11	54	-10.89	AV
H	15720	57.62	49.21	15.34	40.51	64.26	74	-9.74	PK
H	15720	37.86	49.21	15.34	40.51	44.5	54	-9.50	AV

Remark:

1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier, Margin= Emission Level - Limit
2. If peak below the average limit, the average emission was no test.
3. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.



802.11n HT20

Polar (H/V)	Frequency	Meter Reading	Pre-amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
operation frequency:5180									
V	10360	56.68	49.05	15.3	37.39	60.32	74	-13.68	PK
V	10360	38.84	49.05	15.3	37.39	42.48	54	-11.52	AV
V	15540	56.46	49.16	15.27	40.45	63.02	74	-10.98	PK
V	15540	38.27	49.16	15.27	40.45	44.83	54	-9.17	AV
H	10360	56.93	49.05	15.3	37.39	60.57	74	-13.43	PK
H	10360	39.83	49.05	15.3	37.39	43.47	54	-10.53	AV
H	15540	54.35	49.16	15.27	40.45	60.91	74	-13.09	PK
H	15540	38.63	49.16	15.27	40.45	45.19	54	-8.81	AV
operation frequency:5200									
V	10400	56.68	49.09	15.34	37.42	60.35	74	-13.65	PK
V	10400	39.34	49.09	15.34	37.42	43.01	54	-10.99	AV
V	15600	55.16	49.18	15.29	40.47	61.74	74	-12.26	PK
V	15600	38.33	49.18	15.29	40.47	44.91	54	-9.09	AV
H	10400	55.58	49.09	15.34	37.42	59.25	74	-14.75	PK
H	10400	40.65	49.09	15.34	37.42	44.32	54	-9.68	AV
H	15600	55.32	49.18	15.29	40.47	61.9	74	-12.10	PK
H	15600	39.98	49.18	15.29	40.47	46.56	54	-7.44	AV
operation frequency:5240									
V	10480	57.23	49.11	15.37	37.46	60.95	74	-13.05	PK
V	10480	40.58	49.11	15.37	37.46	44.3	54	-9.70	AV
V	15720	54.24	49.21	15.34	40.51	60.88	74	-13.12	PK
V	15720	38.23	49.21	15.34	40.51	44.87	54	-9.13	AV
H	10480	57.17	49.11	15.37	31.31	54.74	74	-19.26	PK
H	10480	44.56	49.11	15.37	31.31	42.13	54	-11.87	AV
H	15720	55.64	49.21	15.34	40.51	62.28	74	-11.72	PK
H	15720	39.68	49.21	15.34	40.51	46.32	54	-7.68	AV

Remark:

1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier,
Margin= Emission Level - Limit
2. If peak below the average limit, the average emission was no test.
3. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.



802.11n HT40

Polar (H/V)	Frequency	Meter Reading	Pre-amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
operation frequency:5190									
V	10380	56.56	49.07	15.33	37.41	60.23	74	-13.77	PK
V	10380	39.33	49.07	15.33	37.41	43	54	-11.00	AV
V	15570	56.67	49.17	15.28	40.46	63.24	74	-10.76	PK
V	15570	38.34	49.17	15.28	40.46	44.91	54	-9.09	AV
H	10380	56.26	49.07	15.33	37.41	59.93	74	-14.07	PK
H	10380	40.17	49.07	15.33	37.41	43.84	54	-10.16	AV
H	15570	54.63	49.17	15.28	40.46	61.2	74	-12.80	PK
H	15570	38.85	49.17	15.28	40.46	45.42	54	-8.58	AV
operation frequency:5230									
V	10460	57.66	49.11	15.37	37.46	61.38	74	-12.62	PK
V	10460	39.27	49.11	15.37	37.46	42.99	54	-11.01	AV
V	15690	54.35	49.21	15.34	40.51	60.99	74	-13.01	PK
V	15690	38.36	49.21	15.34	40.51	45	54	-9.00	AV
H	10460	57.44	49.11	15.37	31.31	55.01	74	-18.99	PK
H	10460	44.31	49.11	15.37	31.31	41.88	54	-12.12	AV
H	15690	55.43	49.21	15.34	40.51	62.07	74	-11.93	PK
H	15690	39.88	49.21	15.34	40.51	46.52	54	-7.48	AV

Remark:

1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier,
Margin= Emission Level - Limit
2. If peak below the average limit, the average emission was no test.
3. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.



802.11ac HT20

Polar (H/V)	Frequency	Meter Reading	Pre- amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBUV)	(dB)	(dB)	(dB/m)	(dBUV/m)	(dBUV/m)	(dB)	
operation frequency:5180									
V	10360	56.16	49.05	15.3	37.39	59.8	74	-14.20	PK
V	10360	39.97	49.05	15.3	37.39	43.61	54	-10.39	AV
V	15540	56.15	49.16	15.27	40.45	62.71	74	-11.29	PK
V	15540	38.33	49.16	15.27	40.45	44.89	54	-9.11	AV
H	10360	56.85	49.05	15.3	37.39	60.49	74	-13.51	PK
H	10360	38.24	49.05	15.3	37.39	41.88	54	-12.12	AV
H	15540	54.56	49.16	15.27	40.45	61.12	74	-12.88	PK
H	15540	39.87	49.16	15.27	40.45	46.43	54	-7.57	AV
operation frequency:5200									
V	10400	56.23	49.09	15.34	37.42	59.9	74	-14.10	PK
V	10400	41.85	49.09	15.34	37.42	45.52	54	-8.48	AV
V	15600	55.56	49.18	15.29	40.47	62.14	74	-11.86	PK
V	15600	40.17	49.18	15.29	40.47	46.75	54	-7.25	AV
H	10400	55.65	49.09	15.34	37.42	59.32	74	-14.68	PK
H	10400	40.53	49.09	15.34	37.42	44.2	54	-9.80	AV
H	15600	55.84	49.18	15.29	40.47	62.42	74	-11.58	PK
H	15600	41.26	49.18	15.29	40.47	47.84	54	-6.16	AV
operation frequency:5240									
V	10480	57.27	49.11	15.37	37.46	60.99	74	-13.01	PK
V	10480	40.66	49.11	15.37	37.46	44.38	54	-9.62	AV
V	15720	54.15	49.21	15.34	40.51	60.79	74	-13.21	PK
V	15720	39.83	49.21	15.34	40.51	46.47	54	-7.53	AV
H	10480	57.37	49.11	15.37	31.31	54.94	74	-19.06	PK
H	10480	44.94	49.11	15.37	31.31	42.51	54	-11.49	AV
H	15720	55.16	49.21	15.34	40.51	61.8	74	-12.20	PK
H	15720	40.66	49.21	15.34	40.51	47.3	54	-6.70	AV

Remark:

1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier,
Margin= Emission Level - Limit
2. If peak below the average limit, the average emission was no test.
3. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.



802.11ac 40

Polar (H/V)	Frequency	Meter Reading	Pre-amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
operation frequency:5190									
V	10380	56.68	49.07	15.33	37.41	60.35	74	-13.65	PK
V	10380	40.23	49.07	15.33	37.41	43.9	54	-10.10	AV
V	15570	56.65	49.17	15.28	40.46	63.22	74	-10.78	PK
V	15570	39.56	49.17	15.28	40.46	46.13	54	-7.87	AV
H	10380	56.48	49.07	15.33	37.41	60.15	74	-13.85	PK
H	10380	40.84	49.07	15.33	37.41	44.51	54	-9.49	AV
H	15570	54.26	49.17	15.28	40.46	60.83	74	-13.17	PK
H	15570	39.87	49.17	15.28	40.46	46.44	54	-7.56	AV
operation frequency:5230									
V	10460	57.46	49.11	15.37	37.46	61.18	74	-12.82	PK
V	10460	41.15	49.11	15.37	37.46	44.87	54	-9.13	AV
V	15690	54.93	49.21	15.34	40.51	61.57	74	-12.43	PK
V	15690	39.18	49.21	15.34	40.51	45.82	54	-8.18	AV
H	10460	57.84	49.11	15.37	31.31	55.41	74	-18.59	PK
H	10460	44.33	49.11	15.37	31.31	41.9	54	-12.10	AV
H	15690	55.38	49.21	15.34	40.51	62.02	74	-11.98	PK
H	15690	40.63	49.21	15.34	40.51	47.27	54	-6.73	AV

Remark:

- Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier, Margin= Emission Level - Limit
- If peak below the average limit, the average emission was no test.
- The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

802.11ac HT80

Polar (H/V)	Frequency	Meter Reading	Pre-amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
operation frequency:5210									
V	10420	56.27	49.07	15.33	37.41	59.94	74	-14.06	PK
V	10420	41.44	49.07	15.33	37.41	45.11	54	-8.89	AV
V	15630	56.26	49.17	15.28	40.46	62.83	74	-11.17	PK
V	15630	39.15	49.17	15.28	40.46	45.72	54	-8.28	AV
H	10420	56.86	49.07	15.33	37.41	60.53	74	-13.47	PK
H	10420	41.37	49.07	15.33	37.41	45.04	54	-8.96	AV
H	15630	54.93	49.17	15.28	40.46	61.5	74	-12.50	PK
H	15630	40.94	49.17	15.28	40.46	47.51	54	-6.49	AV

Remark:

- Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier, Margin= Emission Level - Limit
- If peak below the average limit, the average emission was no test.
- The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.



802.11a band 4

Polar (H/V)	Frequency	Meter Reading	Pre-amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
operation frequency:5745									
V	11490	54.57	49.05	15.3	37.39	58.21	74	-15.79	PK
V	11490	41.06	49.05	15.3	37.39	44.7	54	-9.30	AV
V	17235	55.37	49.16	15.27	40.45	61.93	68.2	-6.27	PK
V	17235	40.83	49.16	15.27	40.45	47.39	54	-6.61	AV
H	11490	52.34	49.05	15.3	37.39	55.98	74	-18.02	PK
H	11490	42.48	49.05	15.3	37.39	46.12	54	-7.88	AV
H	17235	51.36	49.16	15.27	40.45	57.92	68.2	-10.28	PK
H	17235	40.84	49.16	15.27	40.45	47.4	54	-6.60	AV
operation frequency:5785									
V	11570	51.78	49.09	15.34	37.42	55.45	74	-18.55	PK
V	11570	41.13	49.09	15.34	37.42	44.8	54	-9.20	AV
V	17355	50.34	49.18	15.29	40.47	56.92	68.2	-11.28	PK
V	17355	40.46	49.18	15.29	40.47	47.04	54	-6.96	AV
H	11570	50.87	49.09	15.34	37.42	54.54	74	-19.46	PK
H	11570	42.04	49.09	15.34	37.42	45.71	54	-8.29	AV
H	17355	48.76	49.18	15.29	40.47	55.34	68.2	-12.86	PK
H	17355	40.17	49.18	15.29	40.47	46.75	54	-7.25	AV
operation frequency:5825									
V	11650	52.43	49.11	15.37	37.46	56.15	74	-17.85	PK
V	11650	41.35	49.11	15.37	37.46	45.07	54	-8.93	AV
V	17475	49.23	49.21	15.34	40.51	55.87	68.2	-12.33	PK
V	17475	40.87	49.21	15.34	40.51	47.51	54	-6.49	AV
H	11650	57.95	49.11	15.37	31.31	55.52	74	-18.48	PK
H	11650	48.36	49.11	15.37	31.31	45.93	54	-8.07	AV
H	17475	49.34	49.21	15.34	40.51	55.98	68.2	-12.22	PK
H	17475	40.88	49.21	15.34	40.51	47.52	54	-6.48	AV
Remark:									
1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier, Margin= Emission Level - Limit									
2. If peak below the average limit, the average emission was no test.									
3. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.									



802.11n HT20

Polar (H/V)	Frequency	Meter Reading	Pre-amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
operation frequency:5745									
V	11490	49.26	49.05	15.3	37.39	52.9	74	-21.10	PK
V	11490	42.84	49.05	15.3	37.39	46.48	54	-7.52	AV
V	17235	48.83	49.16	15.27	40.45	55.39	68.2	-12.81	PK
V	17235	40.28	49.16	15.27	40.45	46.84	54	-7.16	AV
H	11490	49.41	49.05	15.3	37.39	53.05	74	-20.95	PK
H	11490	41.13	49.05	15.3	37.39	44.77	54	-9.23	AV
H	17235	48.48	49.16	15.27	40.45	55.04	68.2	-13.16	PK
H	17235	40.44	49.16	15.27	40.45	47	54	-7.00	AV
operation frequency:5785									
V	11570	52.63	49.09	15.34	37.42	56.3	74	-17.70	PK
V	11570	42.27	49.09	15.34	37.42	45.94	54	-8.06	AV
V	17355	49.96	49.18	15.29	40.47	56.54	68.2	-11.66	PK
V	17355	40.54	49.18	15.29	40.47	47.12	54	-6.88	AV
H	11570	49.38	49.09	15.34	37.42	53.05	74	-20.95	PK
H	11570	43.63	49.09	15.34	37.42	47.3	54	-6.70	AV
H	17355	49.74	49.18	15.29	40.47	56.32	68.2	-11.88	PK
H	17355	40.78	49.18	15.29	40.47	47.36	54	-6.64	AV
operation frequency:5825									
V	11650	51.36	49.11	15.37	37.46	55.08	74	-18.92	PK
V	11650	41.44	49.11	15.37	37.46	45.16	54	-8.84	AV
V	17475	48.47	49.21	15.34	40.51	55.11	68.2	-13.09	PK
V	17475	40.63	49.21	15.34	40.51	47.27	54	-6.73	AV
H	11650	57.75	49.11	15.37	31.31	55.32	74	-18.68	PK
H	11650	44.36	49.11	15.37	31.31	41.93	54	-12.07	AV
H	17475	49.28	49.21	15.34	40.51	55.92	68.2	-12.28	PK
H	17475	40.65	49.21	15.34	40.51	47.29	54	-6.71	AV

Remark:

1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier,
Margin= Emission Level - Limit
2. If peak below the average limit, the average emission was no test.
3. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.



802.11n HT40

Polar (H/V)	Frequency	Meter Reading	Pre-amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
operation frequency:5755									
V	11510	49.66	49.07	15.33	37.41	53.33	74	-20.67	PK
V	11510	41.57	49.07	15.33	37.41	45.24	54	-8.76	AV
V	17265	49.63	49.17	15.28	40.46	56.2	68.2	-12.00	PK
V	17265	40.24	49.17	15.28	40.46	46.81	54	-7.19	AV
H	11510	48.78	49.07	15.33	37.41	52.45	74	-21.55	PK
H	11510	41.16	49.07	15.33	37.41	44.83	54	-9.17	AV
H	17265	49.84	49.17	15.28	40.46	56.41	68.2	-11.79	PK
H	17265	40.47	49.17	15.28	40.46	47.04	54	-6.96	AV
operation frequency:5795									
V	11590	49.66	49.11	15.37	37.46	53.38	74	-20.62	PK
V	11590	41.24	49.11	15.37	37.46	44.96	54	-9.04	AV
V	17385	48.43	49.21	15.34	40.51	55.07	68.2	-13.13	PK
V	17385	40.28	49.21	15.34	40.51	46.92	54	-7.08	AV
H	11590	57.54	49.11	15.37	31.31	55.11	74	-18.89	PK
H	11590	44.32	49.11	15.37	31.31	41.89	54	-12.11	AV
H	17385	48.87	49.21	15.34	40.51	55.51	68.2	-12.69	PK
H	17385	40.63	49.21	15.34	40.51	47.27	54	-6.73	AV

Remark:

1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier,
Margin= Emission Level - Limit
2. If peak below the average limit, the average emission was no test.
3. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.



802.11ac HT20

Polar (H/V)	Frequency	Meter Reading	Pre-amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
operation frequency:5745									
V	11490	49.41	49.05	15.3	37.39	53.05	74	-20.95	PK
V	11490	42.47	49.05	15.3	37.39	46.11	54	-7.89	AV
V	17235	48.36	49.16	15.27	40.45	54.92	68.2	-13.28	PK
V	17235	40.65	49.16	15.27	40.45	47.21	54	-6.79	AV
H	11490	48.24	49.05	15.3	37.39	51.88	74	-22.12	PK
H	11490	41.67	49.05	15.3	37.39	45.31	54	-8.69	AV
H	17235	48.26	49.16	15.27	40.45	54.82	68.2	-13.38	PK
H	17235	40.47	49.16	15.27	40.45	47.03	54	-6.97	AV
operation frequency:5785									
V	11570	48.43	49.09	15.34	37.42	52.1	74	-21.90	PK
V	11570	41.14	49.09	15.34	37.42	44.81	54	-9.19	AV
V	17355	49.28	49.18	15.29	40.47	55.86	68.2	-12.34	PK
V	17355	40.43	49.18	15.29	40.47	47.01	54	-6.99	AV
H	11570	49.84	49.09	15.34	37.42	53.51	74	-20.49	PK
H	11570	43.47	49.09	15.34	37.42	47.14	54	-6.86	AV
H	17355	49.33	49.18	15.29	40.47	55.91	68.2	-12.29	PK
H	17355	40.48	49.18	15.29	40.47	47.06	54	-6.94	AV
operation frequency:5825									
V	11650	49.13	49.11	15.37	37.46	52.85	74	-21.15	PK
V	11650	41.64	49.11	15.37	37.46	45.36	54	-8.64	AV
V	17475	48.11	49.21	15.34	40.51	54.75	68.2	-13.45	PK
V	17475	40.29	49.21	15.34	40.51	46.93	54	-7.07	AV
H	11650	57.24	49.11	15.37	31.31	54.81	74	-19.19	PK
H	11650	44.28	49.11	15.37	31.31	41.85	54	-12.15	AV
H	17475	48.33	49.21	15.34	40.51	54.97	68.2	-13.23	PK
H	17475	40.57	49.21	15.34	40.51	47.21	54	-6.79	AV
Remark:									
1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier, Margin= Emission Level - Limit									
2. If peak below the average limit, the average emission was no test.									
3. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.									



802.11ac HT40

Polar (H/V)	Frequency	Meter Reading	Pre-amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
operation frequency:5755									
V	11510	49.83	49.07	15.33	37.41	53.5	74	-20.50	PK
V	11510	42.88	49.07	15.33	37.41	46.55	54	-7.45	AV
V	17265	48.63	49.17	15.28	40.46	55.2	68.2	-13.00	PK
V	17265	41.44	49.17	15.28	40.46	48.01	54	-5.99	AV
H	11510	48.48	49.07	15.33	37.41	52.15	74	-21.85	PK
H	11510	42.76	49.07	15.33	37.41	46.43	54	-7.57	AV
H	17265	48.87	49.17	15.28	40.46	55.44	68.2	-12.76	PK
H	17265	40.23	49.17	15.28	40.46	46.8	54	-7.20	AV
operation frequency:5795									
V	11590	49.44	49.11	15.37	37.46	53.16	74	-20.84	PK
V	11590	41.36	49.11	15.37	37.46	45.08	54	-8.92	AV
V	17385	48.18	49.21	15.34	40.51	54.82	68.2	-13.38	PK
V	17385	40.86	49.21	15.34	40.51	47.5	54	-6.50	AV
H	11590	57.24	49.11	15.37	31.31	54.81	74	-19.19	PK
H	11590	44.72	49.11	15.37	31.31	42.29	54	-11.71	AV
H	17385	48.48	49.21	15.34	40.51	55.12	68.2	-13.08	PK
H	17385	40.66	49.21	15.34	40.51	47.3	54	-6.70	AV

Remark:

1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier, Margin= Emission Level - Limit
2. If peak below the average limit, the average emission was no test.
3. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

802.11ac HT80

Polar (H/V)	Frequency	Meter Reading	Pre-amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
operation frequency:5775									
V	11550	48.34	49.07	15.33	37.41	52.01	74	-21.99	PK
V	11550	42.28	49.07	15.33	37.41	45.95	54	-8.05	AV
V	17325	49.63	49.17	15.28	40.46	56.2	68.2	-12.00	PK
V	17325	40.84	49.17	15.28	40.46	47.41	54	-6.59	AV
H	11550	48.38	49.07	15.33	37.41	52.05	74	-21.95	PK
H	11550	41.36	49.07	15.33	37.41	45.03	54	-8.97	AV
H	17325	48.97	49.17	15.28	40.46	55.54	68.2	-12.66	PK
H	17325	40.65	49.17	15.28	40.46	47.22	54	-6.78	AV

Remark:

1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier, Margin= Emission Level - Limit
2. If peak below the average limit, the average emission was no test.
3. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.



3.3 RADIATED BAND EMISSION MEASUREMENT

3.3.1 TEST REQUIREMENT:

RSS-247 Section 5.5

LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

FREQUENCY (MHz)	Limit (dBuV/m) (at 3M)	
	PEAK	AVERAGE
Above 1000	74	54

Notes:

- (1) The limit for radiated test was performed according to FCC PART 15C.
- (2) The tighter limit applies at the band edges.
- (3) Emission level (dBuV/m)=20log Emission level (uV/m).

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	5000MHz
Stop Frequency	5420MHz
RB / VB (emission in restricted band)	1 MHz / 1 MHz for Peak, 1 MHz / 10Hz for Average

3.3.2 TEST PROCEDURE

Above 1GHz test procedure as below:

- a. 1. The EUT was placed on the top of a rotating table 0.1 meters above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rota table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.
- g. Test the EUT in the lowest channel,the Highest channel

Note:

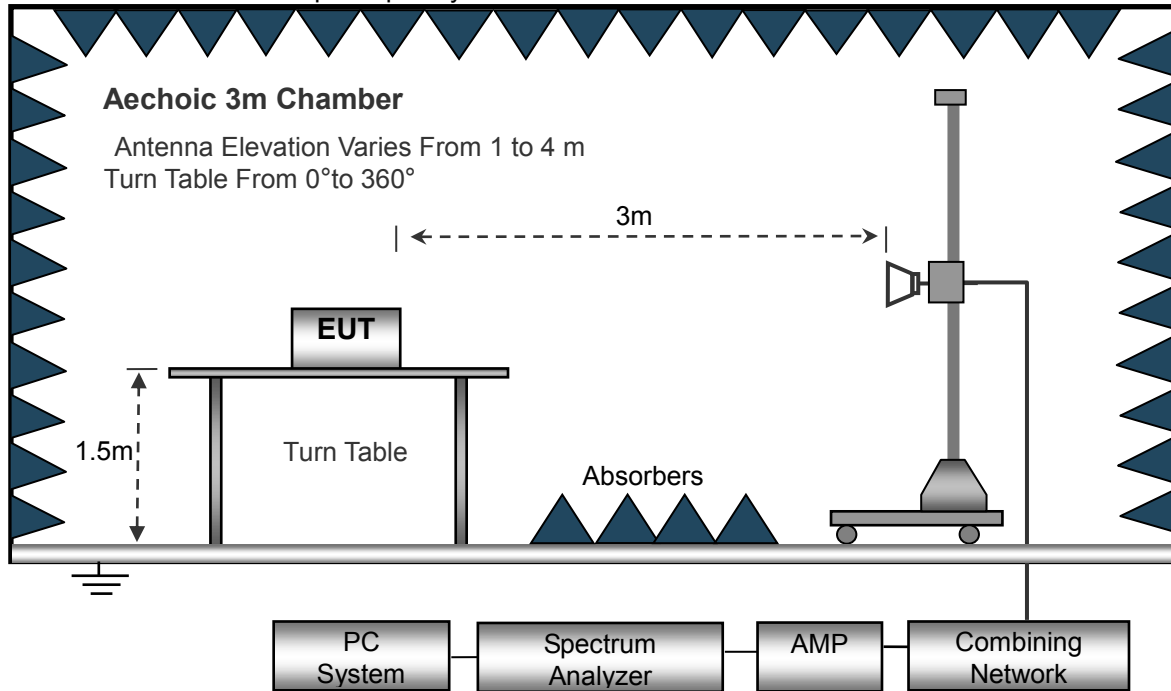
Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported

3.3.3 DEVIATION FROM TEST STANDARD

No deviation

3.3.4 TEST SETUP

Radiated Emission Test-Up Frequency Above 1GHz



3.3.5 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of 2.3 Unless otherwise a special operating condition is specified in the follows during the testing.

**3.3.6 TEST RESULT**

802.11a

Polar (H/V)	Frequency	Meter Reading	Pre-amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
operation frequency:5180									
V	5150	53.29	49.12	15.6	37.34	57.11	74	-16.89	PK
V	5150	39.54	49.12	15.6	37.34	43.36	54	-10.64	AV
V	5145	54.26	49.19	15.24	40.43	60.74	74	-13.26	PK
V	5145	36.97	49.19	15.24	40.43	43.45	54	-10.55	AV
H	5150	52.43	49.12	15.6	37.34	56.25	74	-17.75	PK
H	5150	37.88	49.12	15.6	37.34	41.7	54	-12.3	AV
H	5145	54.26	49.19	15.24	40.43	60.74	74	-13.26	PK
H	5145	33.44	49.19	15.24	40.43	39.92	54	-14.08	AV
operation frequency:5240									
V	5350	53.22	49.13	15.32	37.46	56.87	74	-17.13	PK
V	5350	35.13	49.13	15.32	37.46	38.78	54	-15.22	AV
V	5370	53.68	49.24	15.36	40.51	60.31	74	-13.69	PK
V	5370	32.26	49.24	15.36	40.51	38.89	54	-15.11	AV
H	5350	52.35	49.13	15.32	31.31	49.85	74	-24.15	PK
H	5350	40.93	49.13	15.32	31.31	38.43	54	-15.57	AV
H	5370	52.38	49.24	15.36	40.51	59.01	74	-14.99	PK
H	5370	32.96	49.24	15.36	40.51	39.59	54	-14.41	AV
Remark:									
1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier, Margin= Emission Level - Limit									
2. If peak below the average limit, the average emission was no test.									
3. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.									



802.11n HT20

Polar (H/V)	Frequency	Meter Reading	Pre-amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
operation frequency:5180									
V	5150	51.32	49.12	15.6	37.34	55.14	74	-18.86	PK
V	5150	33.27	49.12	15.6	37.34	37.09	54	-16.91	AV
V	5145	51.26	49.19	15.24	40.43	57.74	74	-16.26	PK
V	5145	33.94	49.19	15.24	40.43	40.42	54	-13.58	AV
H	5150	51.26	49.12	15.6	37.34	55.08	74	-18.92	PK
H	5150	33.39	49.12	15.6	37.34	37.21	54	-16.79	AV
H	5145	50.84	49.19	15.24	40.43	57.32	74	-16.68	PK
H	5145	32.89	49.19	15.24	40.43	39.37	54	-14.63	AV
operation frequency:5240									
V	5350	53.13	49.13	15.32	37.46	56.78	74	-17.22	PK
V	5350	34.84	49.13	15.32	37.46	38.49	54	-15.51	AV
V	5370	50.68	49.24	15.36	40.51	57.31	74	-16.69	PK
V	5370	33.63	49.24	15.36	40.51	40.26	54	-13.74	AV
H	5350	54.24	49.13	15.32	31.31	51.74	74	-22.26	PK
H	5350	36.52	49.13	15.32	31.31	34.02	54	-19.98	AV
H	5370	51.26	49.24	15.36	40.51	57.89	74	-16.11	PK
H	5370	33.87	49.24	15.36	40.51	40.5	54	-13.5	AV

Remark:

1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier,
Margin= Emission Level - Limit
2. If peak below the average limit, the average emission was no test.
3. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.



802.11ac HT20

Polar (H/V)	Frequency	Meter Reading	Pre- amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
operation frequency:5180									
V	5150	52.26	49.12	15.33	37.41	55.88	74	-18.12	PK
V	5150	34.84	49.12	15.33	37.41	38.46	54	-15.54	AV
V	5145	51.26	49.19	15.28	40.46	57.81	74	-16.19	PK
V	5145	33.37	49.19	15.28	40.46	39.92	54	-14.08	AV
H	5150	52.46	49.12	15.33	37.41	56.08	74	-17.92	PK
H	5150	34.13	49.12	15.33	37.41	37.75	54	-16.25	AV
H	5145	50.48	49.19	15.28	40.46	57.03	74	-16.97	PK
H	5145	33.46	49.19	15.28	40.46	40.01	54	-13.99	AV
operation frequency:5240									
V	5350	53.23	49.13	15.32	37.46	56.88	74	-17.12	PK
V	5350	36.34	49.13	15.32	37.46	39.99	54	-14.01	AV
V	5370	50.88	49.24	15.36	40.51	57.51	74	-16.49	PK
V	5370	33.63	49.24	15.36	40.51	40.26	54	-13.74	AV
H	5350	53.69	49.13	15.32	31.31	51.19	74	-22.81	PK
H	5350	40.94	49.13	15.32	31.31	38.44	54	-15.56	AV
H	5370	51.36	49.24	15.36	40.51	57.99	74	-16.01	PK
H	5370	35.53	49.24	15.36	40.51	42.16	54	-11.84	AV
Remark:									
1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier, Margin= Emission Level - Limit									
2. If peak below the average limit, the average emission was no test.									
3. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.									



802.11n HT40

Polar (H/V)	Frequency	Meter Reading	Pre-amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
operation frequency:5190									
V	5150	52.68	49.12	15.6	37.39	56.55	74	-17.45	PK
V	5150	35.76	49.12	15.6	37.39	39.63	54	-14.37	AV
V	5145	51.17	49.19	15.24	40.45	57.67	74	-16.33	PK
V	5145	34.34	49.19	15.24	40.45	40.84	54	-13.16	AV
H	5150	52.63	49.12	15.6	37.39	56.5	74	-17.5	PK
H	5150	34.18	49.12	15.6	37.39	38.05	54	-15.95	AV
H	5145	50.74	49.19	15.24	40.45	57.24	74	-16.76	PK
H	5145	35.79	49.19	15.24	40.45	42.29	54	-11.71	AV
operation frequency:5230									
V	5350	53.14	49.13	15.34	37.46	56.81	74	-17.19	PK
V	5350	37.93	49.13	15.34	37.46	41.6	54	-12.4	AV
V	5370	50.28	49.24	15.35	40.51	56.9	74	-17.1	PK
V	5370	36.63	49.24	15.35	40.51	43.25	54	-10.75	AV
H	5350	54.88	49.13	15.34	31.31	52.4	74	-21.6	PK
H	5350	41.64	49.13	15.34	31.31	39.16	54	-14.84	AV
H	5370	52.69	49.24	15.35	40.51	59.31	74	-14.69	PK
H	5370	36.12	49.24	15.35	40.51	42.74	54	-11.26	AV

Remark:

1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier,
Margin= Emission Level - Limit
2. If peak below the average limit, the average emission was no test.
3. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.



802.11ac HT40

Polar (H/V)	Frequency	Meter Reading	Pre-amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
operation frequency:5190									
V	5150	52.56	49.12	15.32	37.41	56.17	74	-17.83	PK
V	5150	37.68	49.12	15.32	37.41	41.29	54	-12.71	AV
V	5145	52.14	49.19	15.36	40.46	58.77	74	-15.23	PK
V	5145	36.66	49.19	15.36	40.46	43.29	54	-10.71	AV
H	5150	52.97	49.12	15.32	37.41	56.58	74	-17.42	PK
H	5150	37.63	49.12	15.32	37.41	41.24	54	-12.76	AV
H	5145	51.18	49.19	15.36	40.46	57.81	74	-16.19	PK
H	5145	36.56	49.19	15.36	40.46	43.19	54	-10.81	AV
operation frequency:5230									
V	5350	54.34	49.13	15.34	37.34	57.89	74	-16.11	PK
V	5350	36.83	49.13	15.34	37.34	40.38	54	-13.62	AV
V	5370	51.68	49.24	15.35	40.43	58.22	74	-15.78	PK
V	5370	36.93	49.24	15.35	40.43	43.47	54	-10.53	AV
H	5350	54.38	49.13	15.34	37.34	57.93	74	-16.07	PK
H	5350	41.49	49.13	15.34	37.34	45.04	54	-8.96	AV
H	5370	50.55	49.24	15.35	40.43	57.09	74	-16.91	PK
H	5370	35.73	49.24	15.35	40.43	42.27	54	-11.73	AV

Remark:

1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier, Margin= Emission Level - Limit
2. If peak below the average limit, the average emission was no test.
3. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

802.11ac HT80

Polar (H/V)	Frequency	Meter Reading	Pre-amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
operation frequency:5210									
V	5350	52.38	49.13	15.32	37.48	56.05	74	-17.95	PK
V	5350	35.84	49.13	15.32	37.48	39.51	54	-14.49	AV
V	5370	51.33	49.24	15.36	40.42	57.87	74	-16.13	PK
V	5370	35.65	49.24	15.36	40.42	42.19	54	-11.81	AV
H	5350	52.71	49.13	15.32	37.48	56.38	74	-17.62	PK
H	5350	36.26	49.13	15.32	37.48	39.93	54	-14.07	AV
H	5370	50.97	49.24	15.36	40.42	57.51	74	-16.49	PK
H	5370	35.86	49.24	15.36	40.42	42.4	54	-11.6	AV

Remark:

1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier, Margin= Emission Level - Limit
2. If peak below the average limit, the average emission was no test.
3. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.



3.3 CONDUCTED BAND EMISSION MEASUREMENT

3.3.1 TEST REQUIREMENT:

FCC Part15 C Section 15.209 and 15.407

(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.

(4) For transmitters operating in the 5.725-5.85 GHz band: All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10dBm/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.

Spectrum Parameter	Setting	
Attenuation	Auto	
Start Frequency	5150MHz	5725MHz
Stop Frequency	5250MHz	5850MHz
RB / VB (emission in restricted band)	1 MHz / 3 MHz for Peak, 1 MHz / 10Hz for Average	

3.3.2 TEST PROCEDURE

Test method: FCC KDB 789033 G)& Parts 15.407(b)(4) & 15.209(a)

3.3.3 DEVIATION FROM TEST STANDARD

No deviation

3.3.4 TEST SETUP



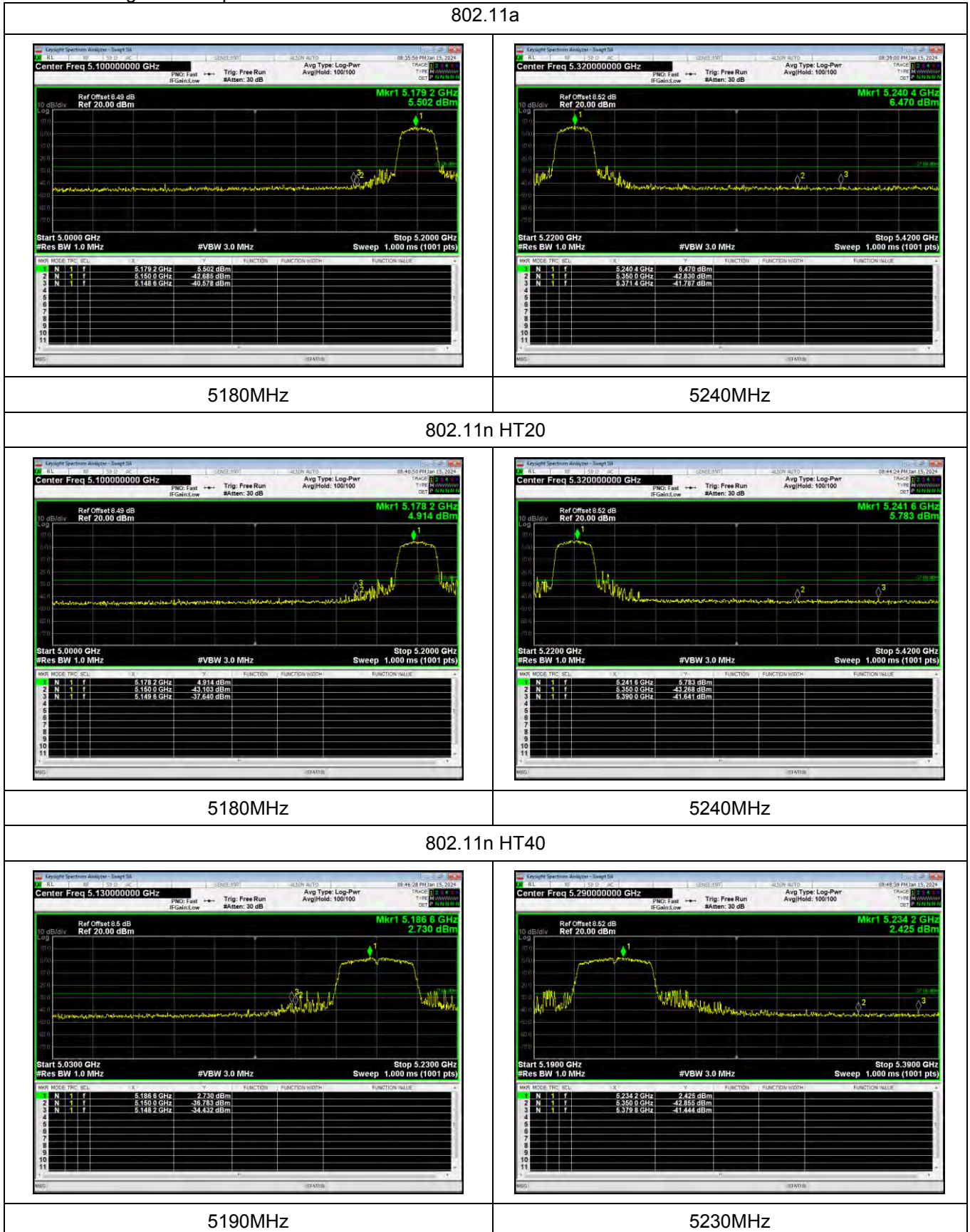
3.3.5 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of 2.3 Unless otherwise a special operating condition is specified in the follows during the testing.



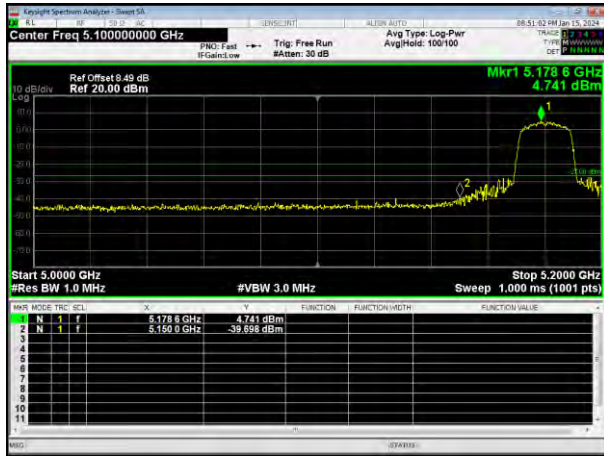
3.3.6 TEST RESULT

The antenna gain is compensated in the test data.

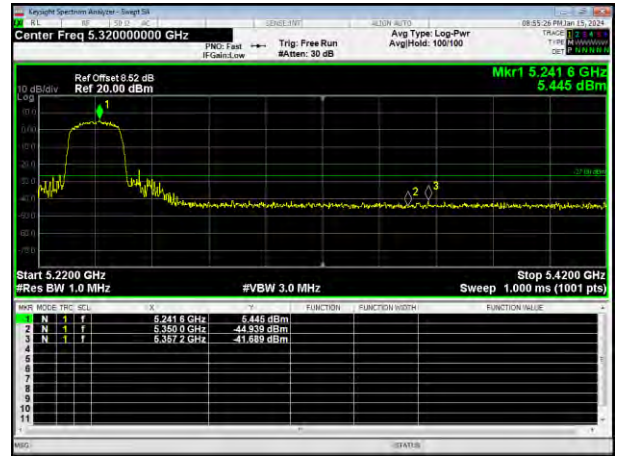




802.11ac HT20

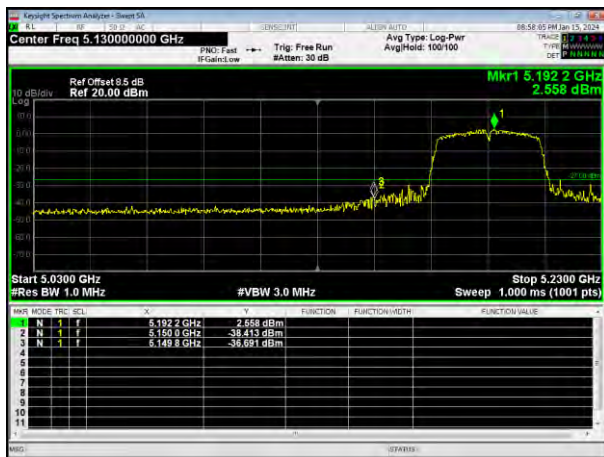


5180MHz

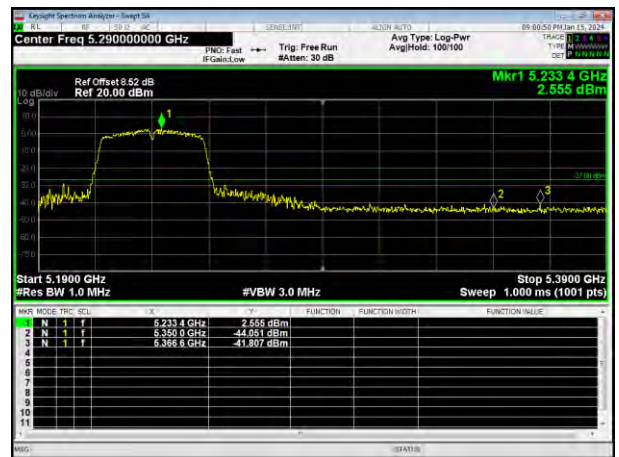


5240MHz

802.11ac HT40



5190MHz



5230MHz

802.11ac HT80



5210MHz



802.11a



5745MHz

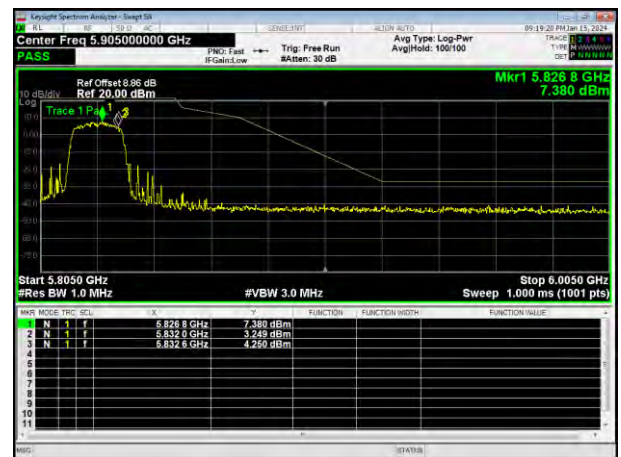


5825MHz

802.11n HT20



5745MHz



5825MHz

802.11n HT40



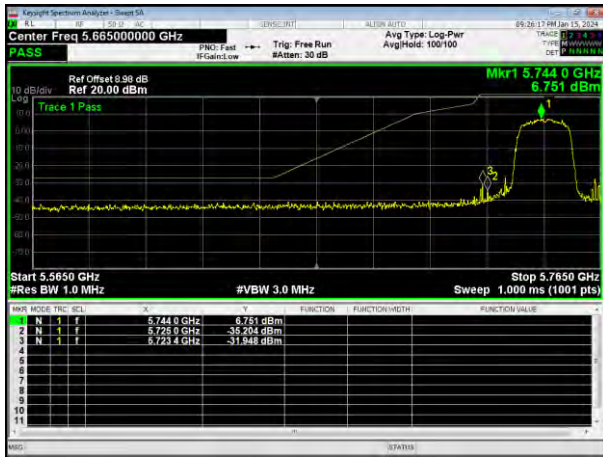
5755MHz



5795MHz



802.11ac HT20

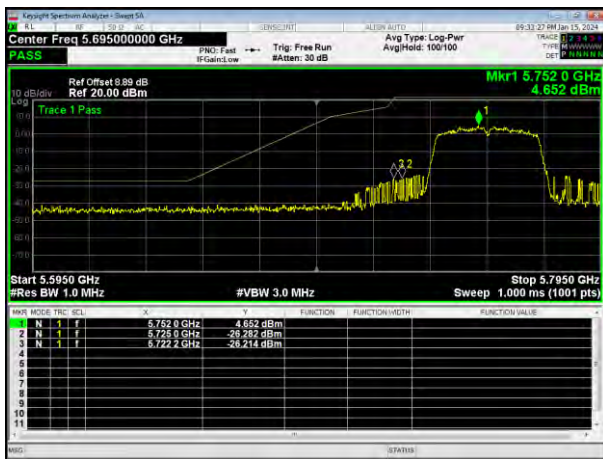


5745MHz

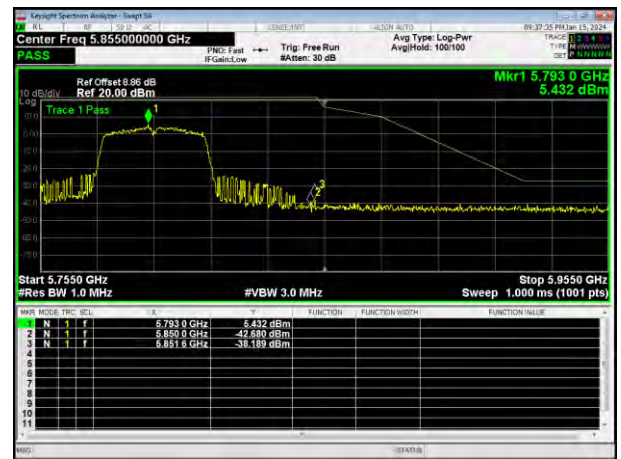


5825MHz

802.11ac HT40

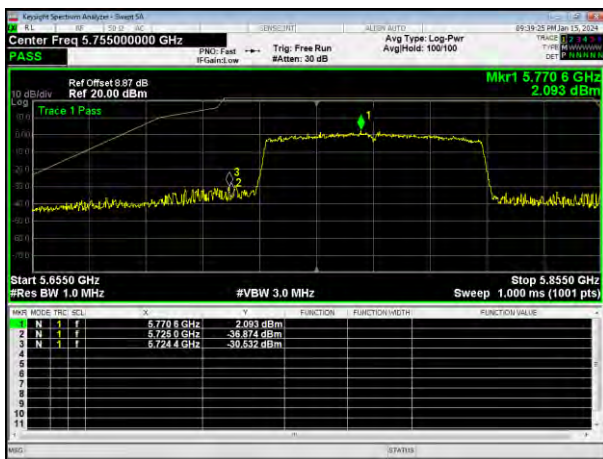


5755MHz



5795MHz

802.11ac HT80



5775MHz



4. AVERAGING OUTPUT POWER

4.1 APPLIED PROCEDURES / 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.

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W.

4.1.1 TEST PROCEDURE

- a. The EUT was directly connected to the power meter and antenna output port as show in the block diagram below,
- b. Spectrum Setting : RBW > the 20 dB bandwidth of the emission being measured
Span = approximately 5 times the 20 dB bandwidth, centered on a hopping channel
VBW \geq RBW
Sweep = auto
Detector function = RMS (i.e., power averaging), if available. Otherwise, use sample detector mode.
Trace = max hold

4.1.2 DEVIATION FROM STANDARD

No deviation.

4.1.3 TEST SETUP



4.1.4 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.

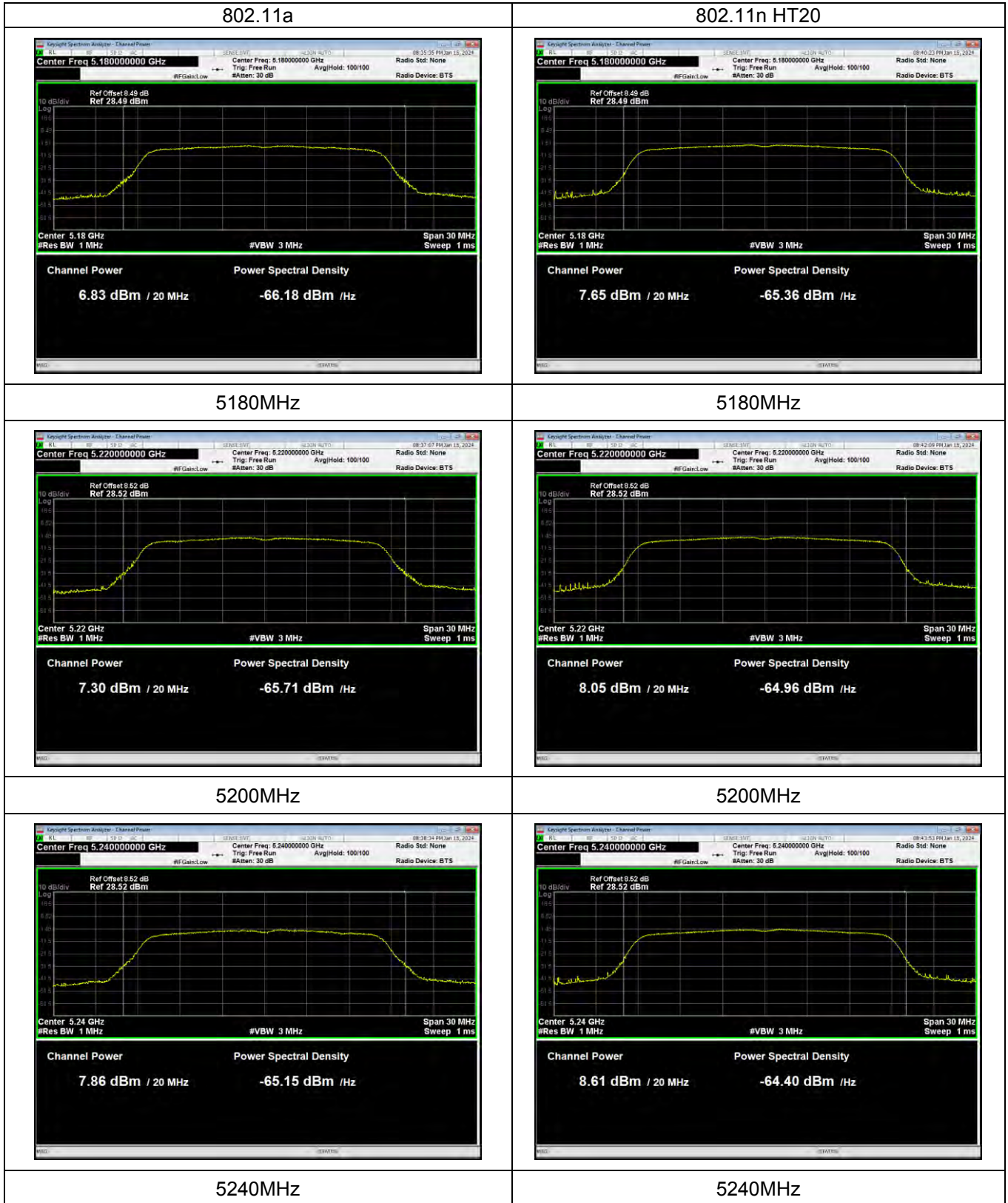


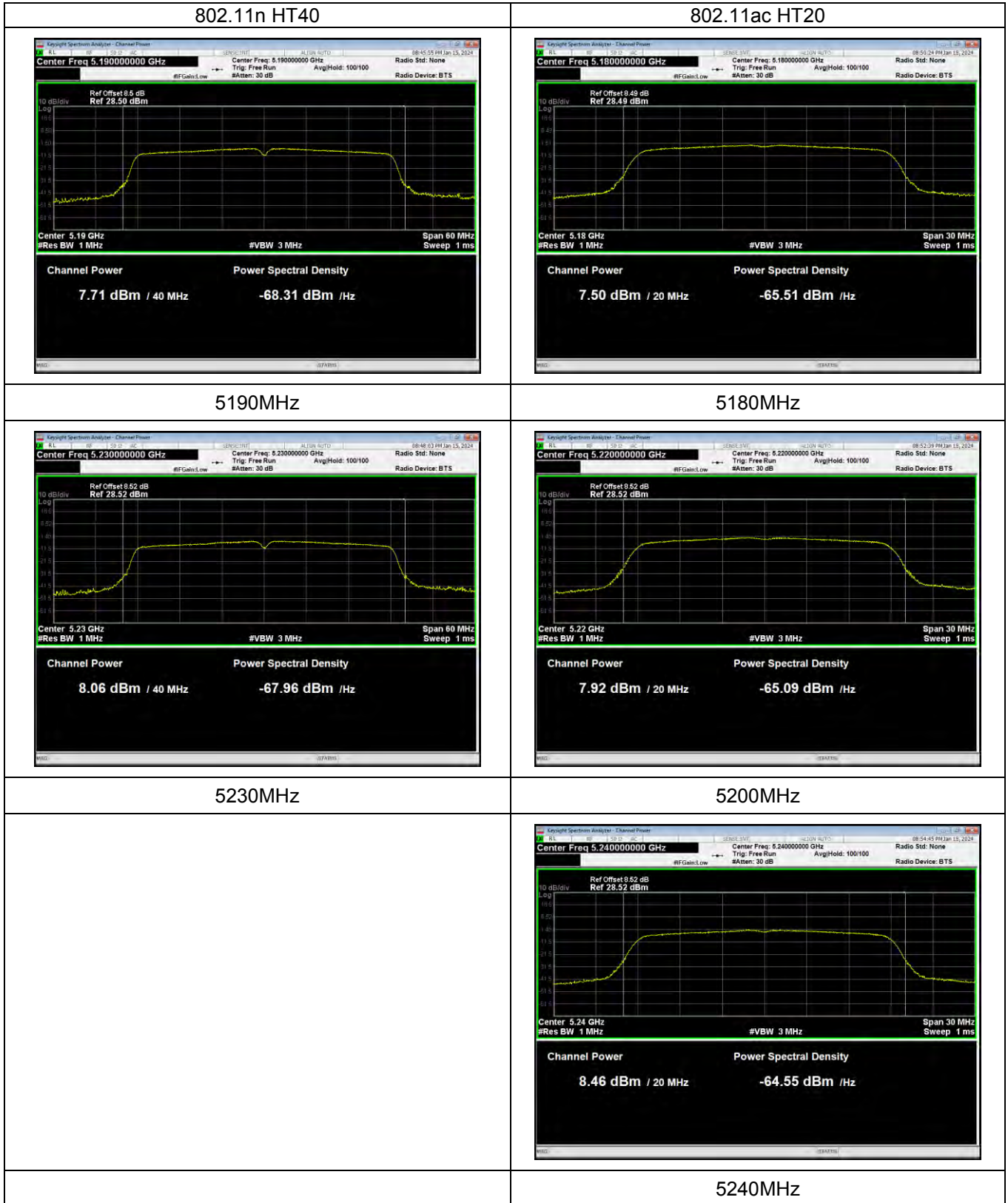
4.1.5 TEST RESULTS

Temperature:	25 °C	Relative Humidity:	60%
Pressure:	1012 hPa	Test Voltage :	AC 120V/60Hz

Band	Mode	Test Channel	Average Output Power (dBm)	Duty factor (dB)	Total Output Power(dB)	LIMIT (dBm)
Band 1	802.11a	Low	6.826	0.71	7.536	23.98
		Middle	7.3	0.71	8.01	23.98
		High	7.863	0.71	8.573	23.98
	802.11n HT20	Low	7.648	0.11	7.758	23.98
		Middle	8.05	0.11	8.16	23.98
		High	8.612	0.11	8.722	23.98
	802.11n HT40	Low	7.712	0.11	7.822	23.98
		High	8.056	0.11	8.166	23.98
	802.11ac HT20	Low	7.497	0.21	7.707	23.98
		Middle	7.925	0.21	8.135	23.98
		High	8.458	0.21	8.668	23.98
	802.11ac HT40	Low	7.728	0.21	7.938	23.98
		High	8.027	0.21	8.237	23.98
802.11ac HT80	/	7.814	0.4	8.214	23.98	

Band	Mode	Test Channel	Average Output Power (dBm)	Duty factor (dB)	Total Output Power(dB)	LIMIT (dBm)
Band 4	802.11a	Low	9.239	0.71	9.949	30
		Middle	8.878	0.71	9.588	30
		High	8.946	0.71	9.656	30
	802.11n HT20	Low	10.005	0.11	10.115	30
		Middle	9.789	0.11	9.899	30
		High	9.695	0.11	9.805	30
	802.11n HT40	Low	9.822	0.21	10.032	30
		High	9.667	0.21	9.877	30
	802.11ac HT20	Low	9.796	0.21	10.006	30
		Middle	9.647	0.21	9.857	30
		High	9.466	0.21	9.676	30
	802.11ac HT40	Low	9.338	0.38	9.718	30
		High	9.488	0.38	9.868	30
802.11ac HT80	/	9.261	0.68	9.941	30	







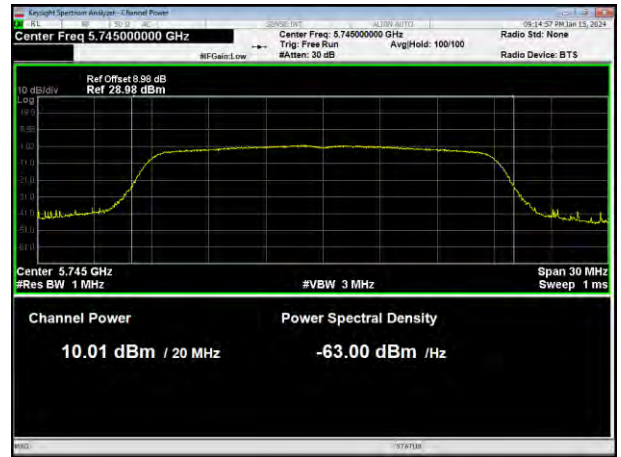
<p style="text-align: center;">802.11ac HT40</p> <p>Center Freq: 5.19000000 GHz Center Freq: 5.19000000 GHz Trig: Free Run #Acten: 30 dB Avg/Hold: 100/100 Radio Std: None Radio Device: BTS</p> <p>Ref Offset: 8.5 dB Ref: 28.50 dBm</p> <p>Center 5.19 GHz #Res BW 1 MHz #VBW 3 MHz Span 60 MHz Sweep 1 ms</p> <p>Channel Power Power Spectral Density 7.73 dBm / 40 MHz -68.29 dBm / Hz</p>	<p style="text-align: center;">802.11ac HT80</p> <p>Center Freq: 5.21000000 GHz Center Freq: 5.21000000 GHz Trig: Free Run #Acten: 30 dB Avg/Hold: 100/100 Radio Std: None Radio Device: BTS</p> <p>Ref Offset: 8.51 dB Ref: 28.51 dBm</p> <p>Center 5.21 GHz #Res BW 1 MHz #VBW 3 MHz Span 120 MHz Sweep 1 ms</p> <p>Channel Power Power Spectral Density 7.81 dBm / 80 MHz -71.22 dBm / Hz</p>
<p style="text-align: center;">5190MHz</p> <p>Center Freq: 5.23000000 GHz Center Freq: 5.23000000 GHz Trig: Free Run #Acten: 30 dB Avg/Hold: 100/100 Radio Std: None Radio Device: BTS</p> <p>Ref Offset: 8.52 dB Ref: 28.52 dBm</p> <p>Center 5.23 GHz #Res BW 1 MHz #VBW 3 MHz Span 60 MHz Sweep 1 ms</p> <p>Channel Power Power Spectral Density 8.03 dBm / 40 MHz -67.99 dBm / Hz</p>	<p style="text-align: center;">5210MHz</p>
<p style="text-align: center;">5230MHz</p>	



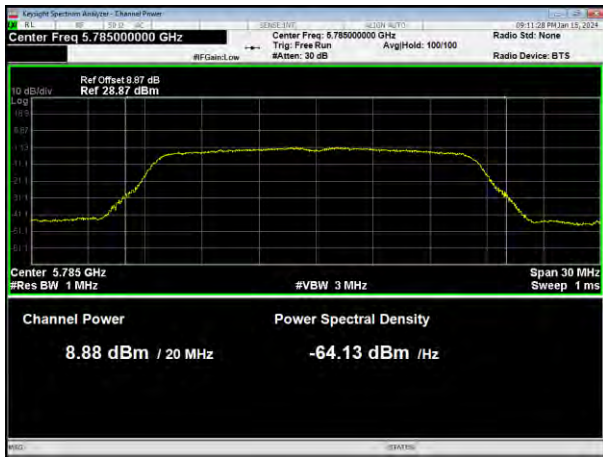
802.11a



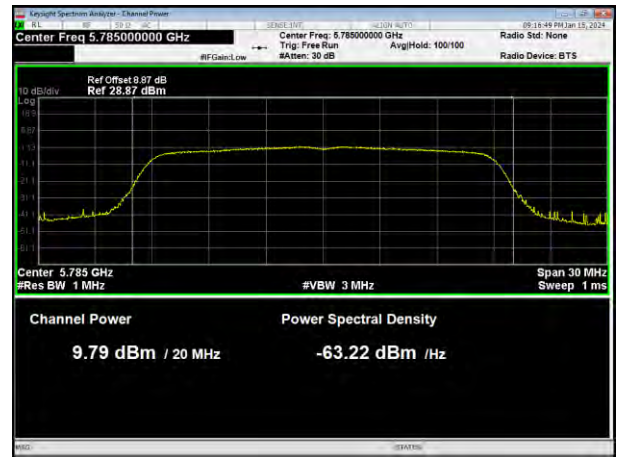
802.11n HT20



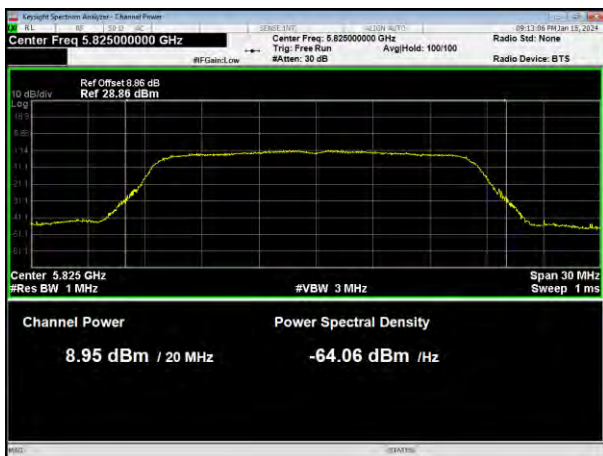
5745MHz



5745MHz



5785MHz



5785MHz

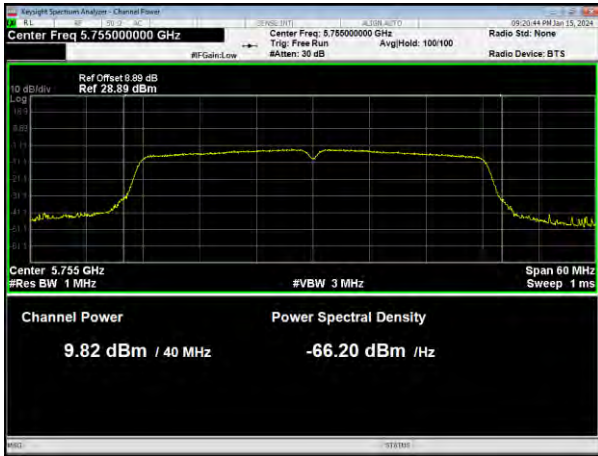


5825MHz

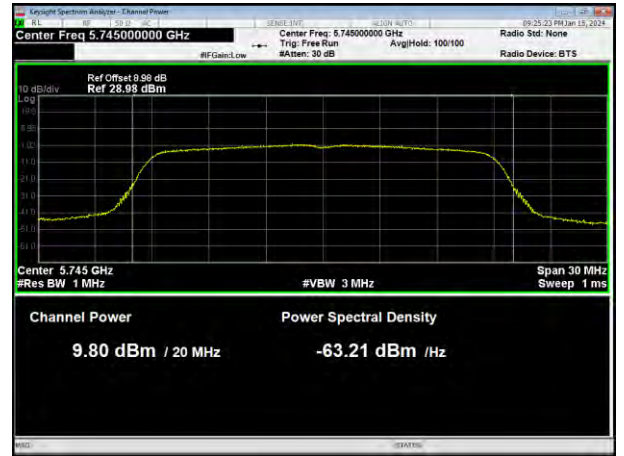
5825MHz



802.11n HT40



802.11ac HT20



5755MHz



5745MHz



5795MHz



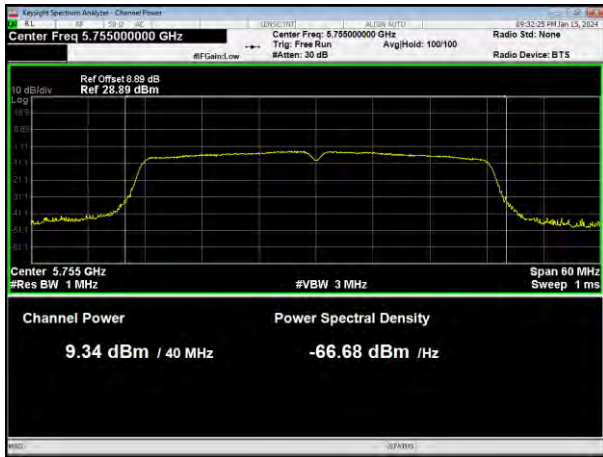
5785MHz



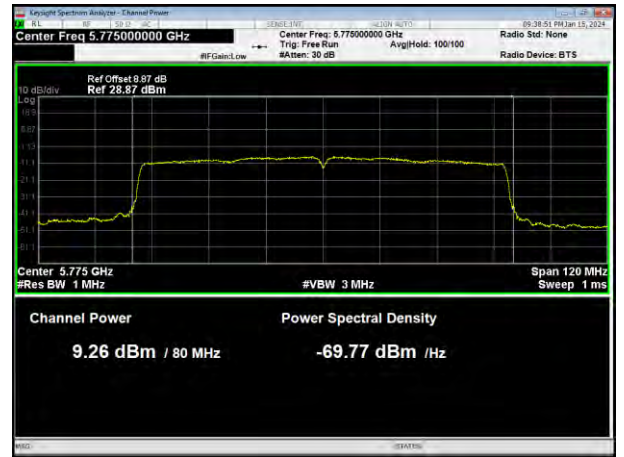
5825MHz



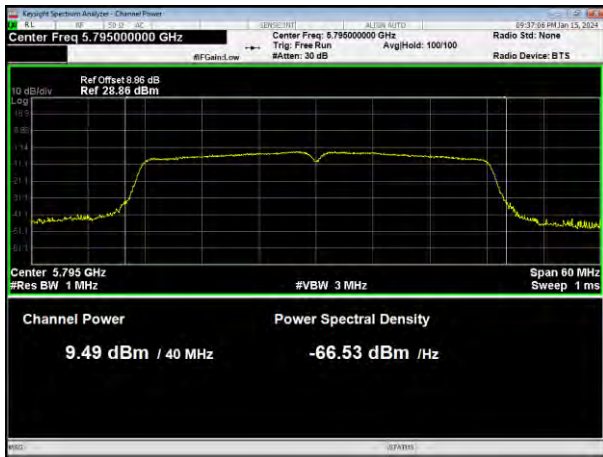
802.11ac HT40



802.11ac HT80



5755MHz



5775MHz

5795MHz



5. POWER SPECTRAL DENSITY TEST

5.1 APPLIED PROCEDURES / LIMIT

In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band.
In addition, the maximum power spectral density shall not exceed 30 dBm in any 500 kHz band.

Spectrum Parameters	Setting
Attenuation	Auto
Span Frequency	= the frequency band of operation
RB	RBW ≥ 1MHz for band 1 RBW ≥ 510KHz for band 4
VB	VBW ≥ 3RBW
Detector	RMS (i.e., power averaging).
Trace	Max Hold
Sweep Time	Auto

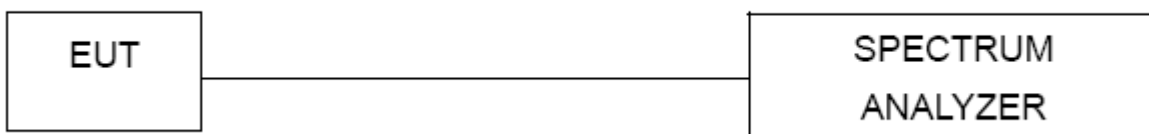
5.1.1 TEST PROCEDURE

- Place the EUT on the table and set it in transmitting mode.
- The testing follows FCC KDB 789033 D02.
- Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to Spectrum.
- For U-NII1, U-NII-2A, U-NII-2C Band:
Set RBW=1MHz, VBW=3MHz, where span is enough to capture the entire bandwidth, Sweep time = Auto (601 pts), detector = sample, traces 100 sweeps of video averaging. (SA-2 with the omission of procedure x, the integration with 26dB EBW bandwidth)
For U-NII-3 Band:
Set RBW=510 kHz, VBW=3*RBW, where span is enough to capture the entire bandwidth, Sweep time = Auto (601 pts), detector = sample, traces 100 sweeps of video averaging. (SA-2 with the omission of procedure x, the integration with 26dB EBW bandwidth)
- Use the cursor on spectrum to peak search the highest level of trace
- Record the max. reading and add 10 log(1/duty cycle).
we test all antennas, the antenna 1 was worst mode and the data recording in the report.
- Duty factor Reference is made to the test results in Section 7.1.5.

5.1.2 DEVIATION FROM STANDARD

No deviation.

5.1.3 TEST SETUP



5.1.4 EUT OPERATION CONDITIONS

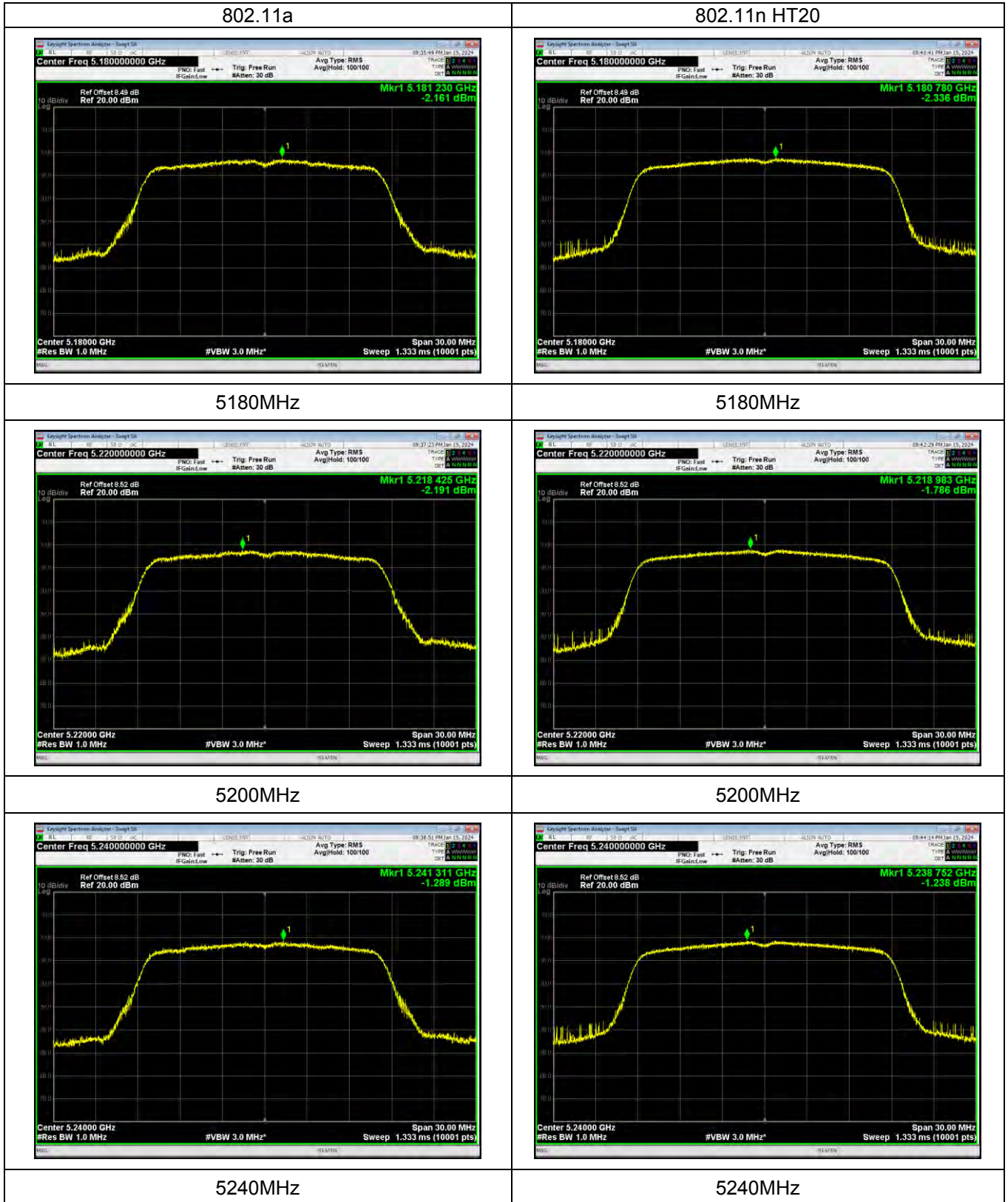
The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.



5.1.5 TEST RESULTS

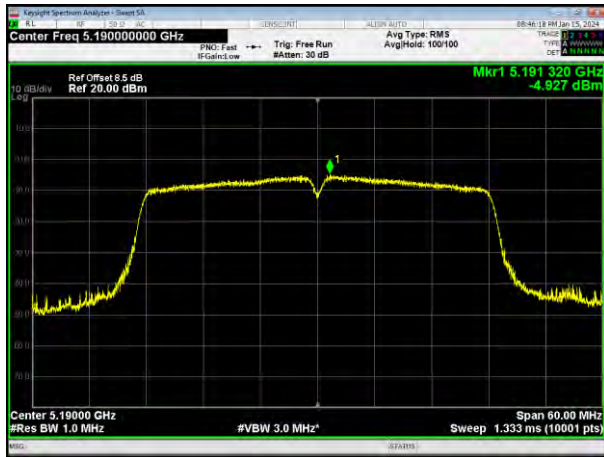
	Mode	Test Channel	Reading Level (dBm)	Duty factor (dB)	PSD (dBm/MHz)	Limit (dBm)	Result
Band1	802.11a	Low	-2.161	0.71	-1.451	11.00	PASS
		Middle	-2.191	0.71	-1.481	11.00	PASS
		High	-1.289	0.71	-0.579	11.00	PASS
	802.11n20	Low	-2.336	0.11	-2.226	11.00	PASS
		Middle	-1.786	0.11	-1.676	11.00	PASS
		High	-1.238	0.11	-1.128	11.00	PASS
	802.11n40	Low	-4.927	0.11	-4.817	11.00	PASS
		High	-4.755	0.11	-4.645	11.00	PASS
	802.11ac20	Low	-2.431	0.21	-2.221	11.00	PASS
		Middle	-1.606	0.21	-1.396	11.00	PASS
		High	-1.23	0.21	-1.02	11.00	PASS
	802.11ac40	Low	-4.849	0.21	-4.639	11.00	PASS
		High	-4.724	0.21	-4.514	11.00	PASS
802.11ac80	/	-7.96	0.4	-7.56	11.00	PASS	

	Mode	Test Channel	Reading Level (dBm)	Duty factor (dB)	PSD (dBm/500kHz)	Limit (dBm/500kHz)	Result
Band4	802.11a	Low	-2.954	0.71	-2.244	30.00	PASS
		Middle	-2.94	0.71	-2.23	30.00	PASS
		High	-3.139	0.71	-2.429	30.00	PASS
	802.11n20	Low	-2.591	0.11	-2.481	30.00	PASS
		Middle	-2.961	0.11	-2.851	30.00	PASS
		High	-2.831	0.11	-2.721	30.00	PASS
	802.11n40	Low	-6.165	0.21	-5.955	30.00	PASS
		High	-5.966	0.21	-5.756	30.00	PASS
	802.11ac20	Low	-2.996	0.21	-2.786	30.00	PASS
		Middle	-3.096	0.21	-2.886	30.00	PASS
		High	-3.439	0.21	-3.229	30.00	PASS
	802.11ac40	Low	-6.282	0.38	-5.902	30.00	PASS
		High	-5.964	0.38	-5.584	30.00	PASS
802.11ac80	/	-9.175	0.68	-8.495	30.00	PASS	

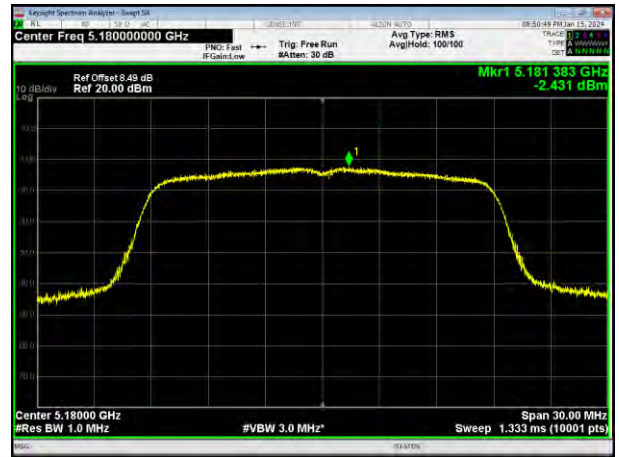




802.11n HT40



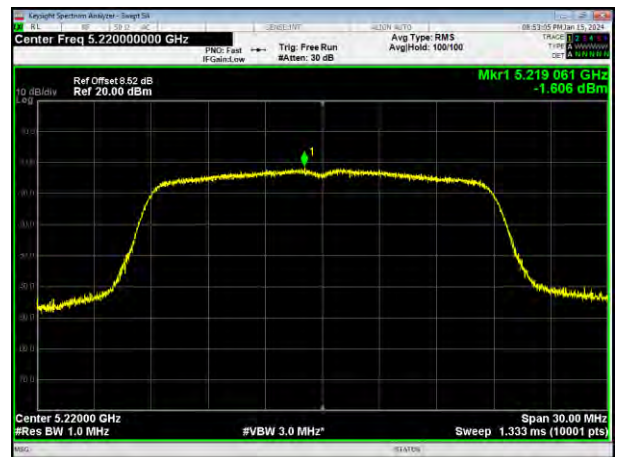
802.11ac HT20



5190MHz



5180MHz

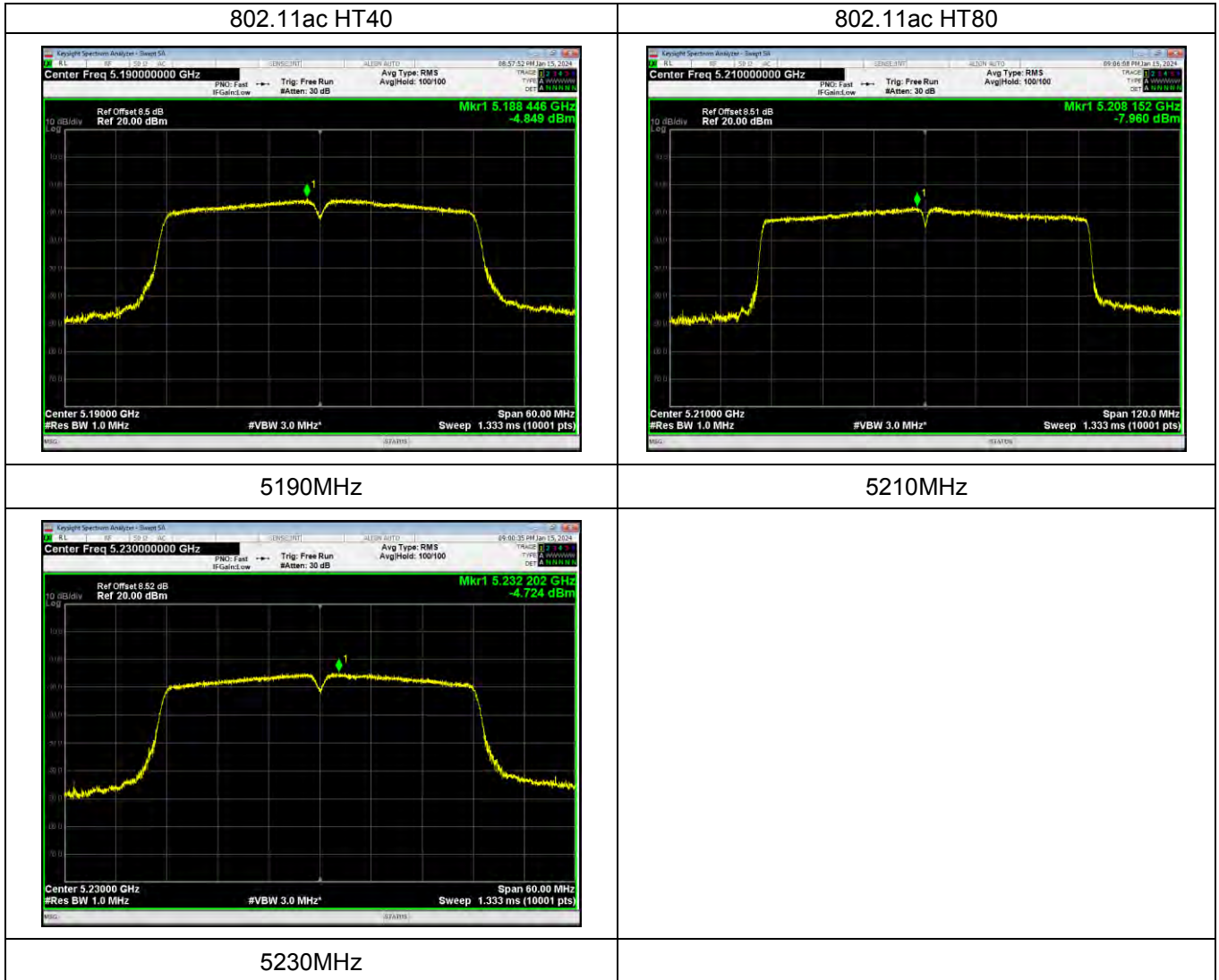


5230MHz



5200MHz

5240MHz





802.11a



802.11n HT20



5745MHz



5745MHz



5785MHz



5785MHz



5825MHz

5825MHz



802.11n HT40



802.11ac HT20



5755MHz



5745MHz



5795MHz



5785MHz



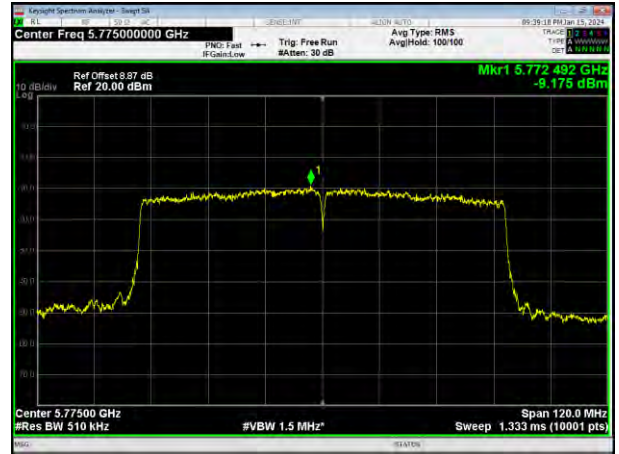
5825MHz



802.11ac HT40



802.11ac HT80



5755MHz



5775MHz

5795MHz



6. 6DB&26DB&99% BANDWIDTH TEST

6.1 APPLIED PROCEDURES / LIMIT

The 26 dB bandwidth is used to determine the conducted power limits.
 There is no limit bandwidth for U-NII-1, U-NII-2-A and U-NII-2-C.
 The minimum of 6dB Bandwidth measurement is 0.5 MHz for U-NII-3

6.1.1 TEST PROCEDURE

6dB Bandwidth	
Spectrum Parameters	Setting
RBW	100KHz
VBW	300KHz
Span	30MHz(20MHz Bandwidth mode) 60MHz(40MHz Bandwidth mode) 120MHz(80MHz Bandwidth mode)
Sweep Time	Auto
Detector	Peak
Trace Mode	Max Hold

26dB Bandwidth	
Spectrum Parameters	Setting
RBW	approximately 1% of the emission bandwidth
VBW	>RBW
Span	30MHz(20MHz Bandwidth mode) 60MHz(40MHz Bandwidth mode) 120MHz(80MHz Bandwidth mode)
Sweep Time	Auto
Detector	Peak
Trace Mode	Max Hold

99% Occupied Bandwidth	
Spectrum Parameters	Setting
RBW	1% to 5% of the OBW
VBW	Approximately three times the RBW
Span	between 1.5 times and 5.0 times the OBW
Sweep Time	Auto
Detector	Peak
Trace Mode	Max Hold

6.1.2 DEVIATION FROM STANDARD

No deviation.

6.1.3 TEST SETUP





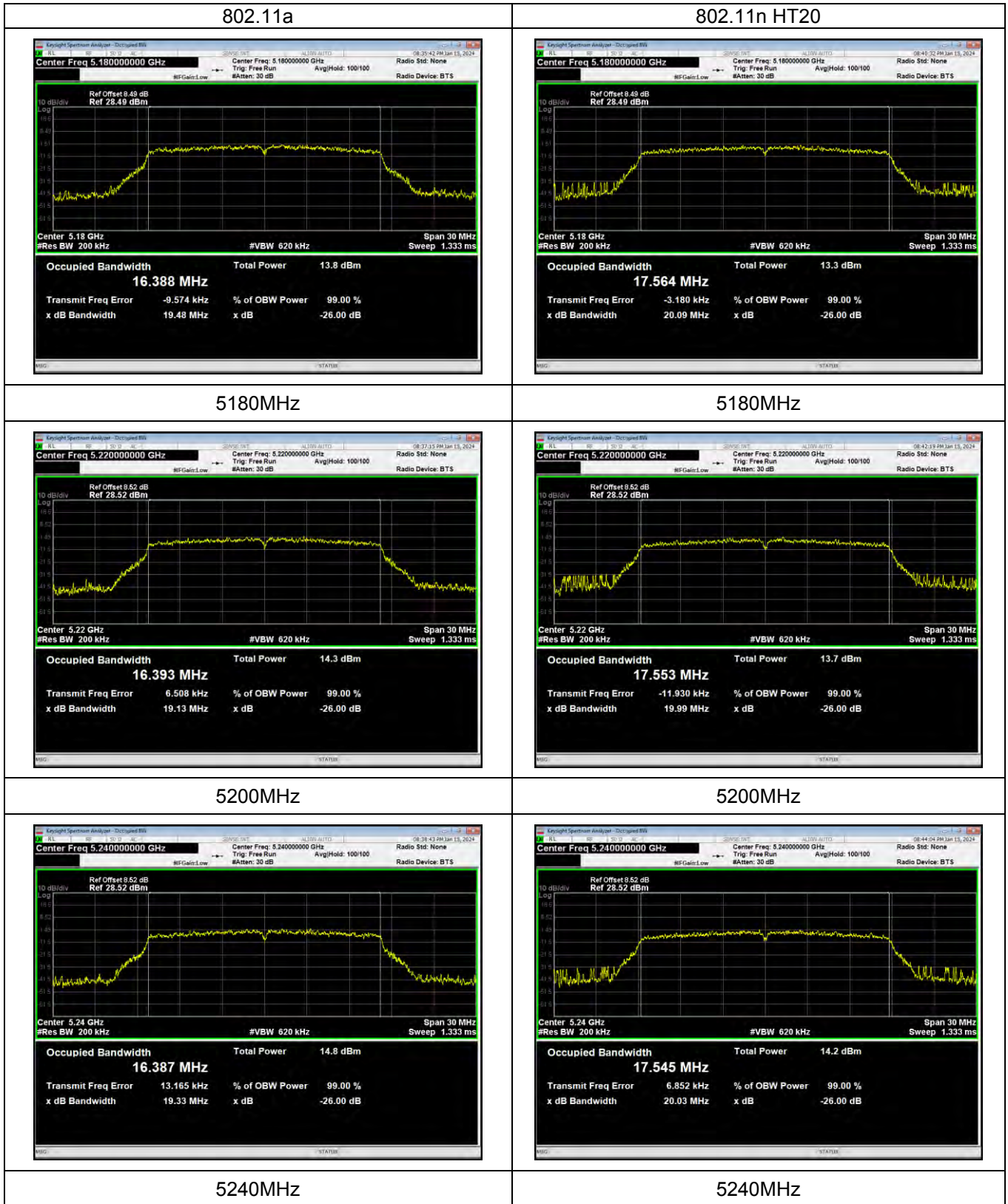
6.1.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.3 Unless otherwise a special operating condition is specified in the follows during the testing.

6.1.5 TEST RESULTS

		Test Channel	26dB Bandwidth (MHz)	99% Bandwidth (MHz)	Result
Band 1	802.11a	Low	19.48	16.388	Pass
		Middle	19.13	16.393	Pass
		High	19.33	16.387	Pass
	802.11n HT20	Low	20.09	17.564	Pass
		Middle	19.99	17.553	Pass
		High	20.03	17.545	Pass
	802.11n HT40	Low	40.27	35.984	Pass
		High	40.91	36.036	Pass
	802.11ac HT20	Low	20.06	17.541	Pass
		Middle	19.89	17.554	Pass
		High	19.80	17.508	Pass
	802.11ac HT40	Low	40.16	35.962	Pass
High		40.32	35.977	Pass	
802.11ac HT80	/	80.56	75.326	Pass	

		Test Channel	6dB Bandwidth (MHz)	6dB Bandwidth Limit (MHz)	Result
Band 4	802.11a	Low	15.984	>0.5	Pass
		Middle	16.28	>0.5	Pass
		High	15.512	>0.5	Pass
	802.11n HT20	Low	16.281	>0.5	Pass
		Middle	15.897	>0.5	Pass
		High	15.063	>0.5	Pass
	802.11n HT40	Low	35.036	>0.5	Pass
		High	32.534	>0.5	Pass
	802.11ac HT20	Low	15.077	>0.5	Pass
		Middle	15.082	>0.5	Pass
		High	15.061	>0.5	Pass
	802.11ac HT40	Low	35.065	>0.5	Pass
		High	35.101	>0.5	Pass
	802.11ac HT80	/	75.12	>0.5	Pass





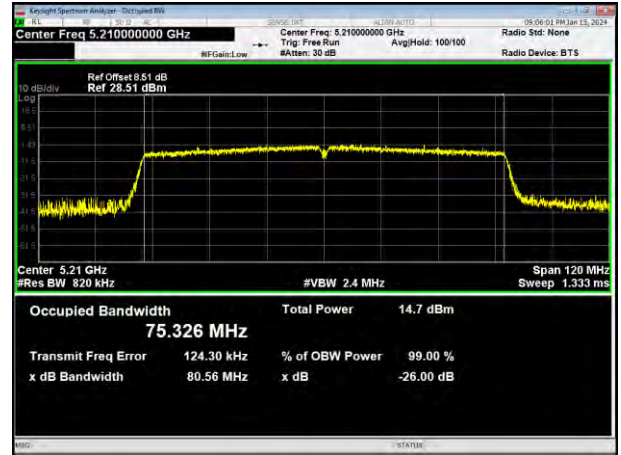
<p style="text-align: center;">802.11n HT40</p> <p>Center Freq 5.19000000 GHz Center Freq: 5.19000000 GHz Trig: Free Run #Att: 30 dB Avg/Hold: 100/100 Radio Std: None Radio Device: BTS</p> <p>Ref Offset 9.5 dB Ref 28.50 dBm</p> <p>Center 5.19 GHz #Res BW 430 kHz #VBW 1.2 MHz Span 60 MHz Sweep 1.333 ms</p> <table border="1"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>13.5 dBm</td> </tr> <tr> <td>35.984 MHz</td> <td></td> <td></td> </tr> <tr> <td>Transmit Freq Error</td> <td>26.696 kHz</td> <td>% of OBW Power 99.00 %</td> </tr> <tr> <td>x dB Bandwidth</td> <td>40.27 MHz</td> <td>x dB -26.00 dB</td> </tr> </table>	Occupied Bandwidth	Total Power	13.5 dBm	35.984 MHz			Transmit Freq Error	26.696 kHz	% of OBW Power 99.00 %	x dB Bandwidth	40.27 MHz	x dB -26.00 dB	<p style="text-align: center;">802.11ac HT20</p> <p>Center Freq 5.18000000 GHz Center Freq: 5.18000000 GHz Trig: Free Run #Att: 30 dB Avg/Hold: 100/100 Radio Std: None Radio Device: BTS</p> <p>Ref Offset 8.49 dB Ref 28.49 dBm</p> <p>Center 5.18 GHz #Res BW 200 kHz #VBW 620 kHz Span 30 MHz Sweep 1.333 ms</p> <table border="1"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>13.3 dBm</td> </tr> <tr> <td>17.541 MHz</td> <td></td> <td></td> </tr> <tr> <td>Transmit Freq Error</td> <td>-15.199 kHz</td> <td>% of OBW Power 99.00 %</td> </tr> <tr> <td>x dB Bandwidth</td> <td>20.06 MHz</td> <td>x dB -26.00 dB</td> </tr> </table>	Occupied Bandwidth	Total Power	13.3 dBm	17.541 MHz			Transmit Freq Error	-15.199 kHz	% of OBW Power 99.00 %	x dB Bandwidth	20.06 MHz	x dB -26.00 dB
Occupied Bandwidth	Total Power	13.5 dBm																							
35.984 MHz																									
Transmit Freq Error	26.696 kHz	% of OBW Power 99.00 %																							
x dB Bandwidth	40.27 MHz	x dB -26.00 dB																							
Occupied Bandwidth	Total Power	13.3 dBm																							
17.541 MHz																									
Transmit Freq Error	-15.199 kHz	% of OBW Power 99.00 %																							
x dB Bandwidth	20.06 MHz	x dB -26.00 dB																							
<p style="text-align: center;">5190MHz</p> <p>Center Freq 5.23000000 GHz Center Freq: 5.23000000 GHz Trig: Free Run #Att: 30 dB Avg/Hold: 100/100 Radio Std: None Radio Device: BTS</p> <p>Ref Offset 9.52 dB Ref 28.52 dBm</p> <p>Center 5.23 GHz #Res BW 430 kHz #VBW 1.2 MHz Span 60 MHz Sweep 1.333 ms</p> <table border="1"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>13.9 dBm</td> </tr> <tr> <td>36.036 MHz</td> <td></td> <td></td> </tr> <tr> <td>Transmit Freq Error</td> <td>19.234 kHz</td> <td>% of OBW Power 99.00 %</td> </tr> <tr> <td>x dB Bandwidth</td> <td>40.91 MHz</td> <td>x dB -26.00 dB</td> </tr> </table>	Occupied Bandwidth	Total Power	13.9 dBm	36.036 MHz			Transmit Freq Error	19.234 kHz	% of OBW Power 99.00 %	x dB Bandwidth	40.91 MHz	x dB -26.00 dB	<p style="text-align: center;">5180MHz</p> <p>Center Freq 5.22000000 GHz Center Freq: 5.22000000 GHz Trig: Free Run #Att: 30 dB Avg/Hold: 100/100 Radio Std: None Radio Device: BTS</p> <p>Ref Offset 8.52 dB Ref 28.52 dBm</p> <p>Center 5.22 GHz #Res BW 200 kHz #VBW 620 kHz Span 30 MHz Sweep 1.333 ms</p> <table border="1"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>13.8 dBm</td> </tr> <tr> <td>17.554 MHz</td> <td></td> <td></td> </tr> <tr> <td>Transmit Freq Error</td> <td>-2.371 kHz</td> <td>% of OBW Power 99.00 %</td> </tr> <tr> <td>x dB Bandwidth</td> <td>19.89 MHz</td> <td>x dB -26.00 dB</td> </tr> </table>	Occupied Bandwidth	Total Power	13.8 dBm	17.554 MHz			Transmit Freq Error	-2.371 kHz	% of OBW Power 99.00 %	x dB Bandwidth	19.89 MHz	x dB -26.00 dB
Occupied Bandwidth	Total Power	13.9 dBm																							
36.036 MHz																									
Transmit Freq Error	19.234 kHz	% of OBW Power 99.00 %																							
x dB Bandwidth	40.91 MHz	x dB -26.00 dB																							
Occupied Bandwidth	Total Power	13.8 dBm																							
17.554 MHz																									
Transmit Freq Error	-2.371 kHz	% of OBW Power 99.00 %																							
x dB Bandwidth	19.89 MHz	x dB -26.00 dB																							
<p style="text-align: center;">5230MHz</p> <p>Center Freq 5.24000000 GHz Center Freq: 5.24000000 GHz Trig: Free Run #Att: 30 dB Avg/Hold: 100/100 Radio Std: None Radio Device: BTS</p> <p>Ref Offset 9.52 dB Ref 28.52 dBm</p> <p>Center 5.24 GHz #Res BW 200 kHz #VBW 620 kHz Span 30 MHz Sweep 1.333 ms</p> <table border="1"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>14.4 dBm</td> </tr> <tr> <td>17.508 MHz</td> <td></td> <td></td> </tr> <tr> <td>Transmit Freq Error</td> <td>10.768 kHz</td> <td>% of OBW Power 99.00 %</td> </tr> <tr> <td>x dB Bandwidth</td> <td>19.80 MHz</td> <td>x dB -26.00 dB</td> </tr> </table>	Occupied Bandwidth	Total Power	14.4 dBm	17.508 MHz			Transmit Freq Error	10.768 kHz	% of OBW Power 99.00 %	x dB Bandwidth	19.80 MHz	x dB -26.00 dB	<p style="text-align: center;">5200MHz</p> <p>Center Freq 5.24000000 GHz Center Freq: 5.24000000 GHz Trig: Free Run #Att: 30 dB Avg/Hold: 100/100 Radio Std: None Radio Device: BTS</p> <p>Ref Offset 9.52 dB Ref 28.52 dBm</p> <p>Center 5.24 GHz #Res BW 200 kHz #VBW 620 kHz Span 30 MHz Sweep 1.333 ms</p> <table border="1"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>14.4 dBm</td> </tr> <tr> <td>17.508 MHz</td> <td></td> <td></td> </tr> <tr> <td>Transmit Freq Error</td> <td>10.768 kHz</td> <td>% of OBW Power 99.00 %</td> </tr> <tr> <td>x dB Bandwidth</td> <td>19.80 MHz</td> <td>x dB -26.00 dB</td> </tr> </table>	Occupied Bandwidth	Total Power	14.4 dBm	17.508 MHz			Transmit Freq Error	10.768 kHz	% of OBW Power 99.00 %	x dB Bandwidth	19.80 MHz	x dB -26.00 dB
Occupied Bandwidth	Total Power	14.4 dBm																							
17.508 MHz																									
Transmit Freq Error	10.768 kHz	% of OBW Power 99.00 %																							
x dB Bandwidth	19.80 MHz	x dB -26.00 dB																							
Occupied Bandwidth	Total Power	14.4 dBm																							
17.508 MHz																									
Transmit Freq Error	10.768 kHz	% of OBW Power 99.00 %																							
x dB Bandwidth	19.80 MHz	x dB -26.00 dB																							
	<p style="text-align: center;">5240MHz</p>																								



802.11ac HT40



802.11ac HT80



5190MHz

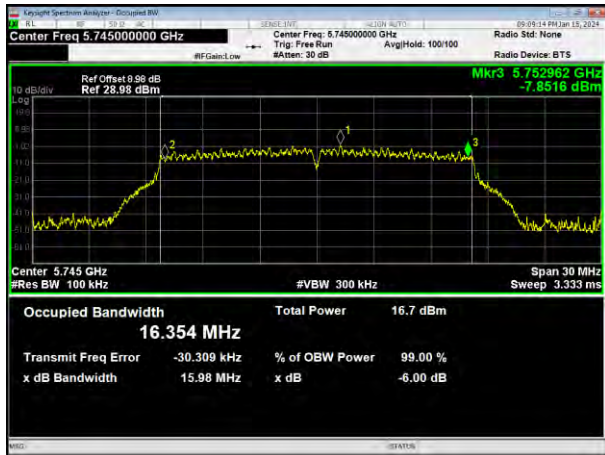


5210MHz

5230MHz



802.11a



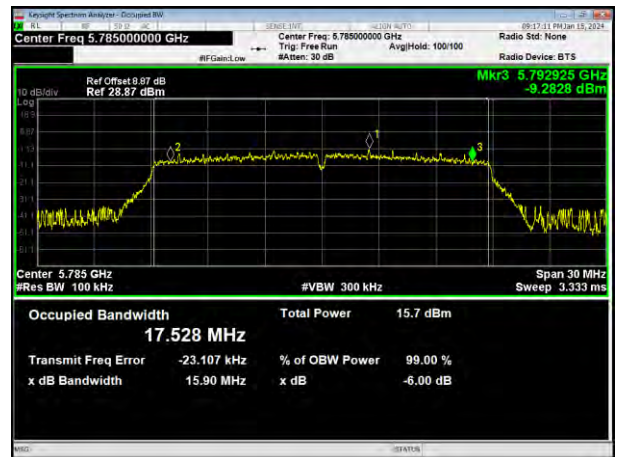
802.11n HT20



5745MHz



5745MHz



5785MHz



5785MHz



5825MHz

5825MHz



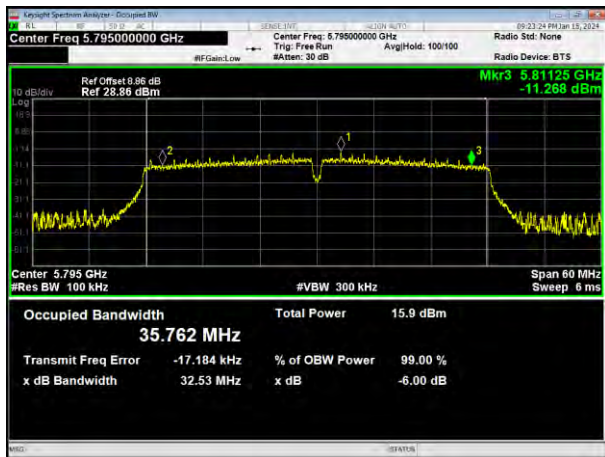
802.11n HT40



802.11ac HT20



5755MHz



5745MHz



5795MHz



5785MHz

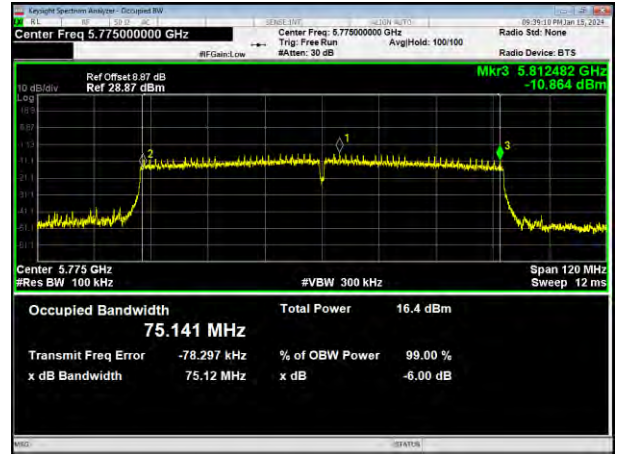
5825MHz



802.11ac HT40



802.11ac HT80



5755MHz



5775MHz

5795MHz



7. DUTY CYCLE TEST SIGNAL

7.1 APPLIED PROCEDURES / LIMIT

Pre-analysis Check: While conducting average power measurement, duty cycle of each mode shall be checked to ensure its duty cycle in order to compensate for the loss due to insufficient ratio of duty cycle. All duty cycle is pre-scanned, and result as obtained below shows only the most representative ones where duty cycle is conducted as the given transmission with given virtual operation that expresses the percentage.

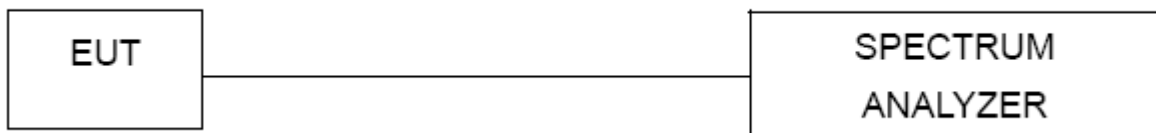
7.1.1 TEST PROCEDURE

1. Set RBW = 1 MHz.
2. Set the video bandwidth (VBW) \geq RBW.
3. Detector = Peak.
4. Sweep = auto couple.
5. Allow the trace to stabilize.
6. Span=0

7.1.2 DEVIATION FROM STANDARD

No deviation.

7.1.3 TEST SETUP



7.1.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.3 Unless otherwise a special operating condition is specified in the follows during the testing.

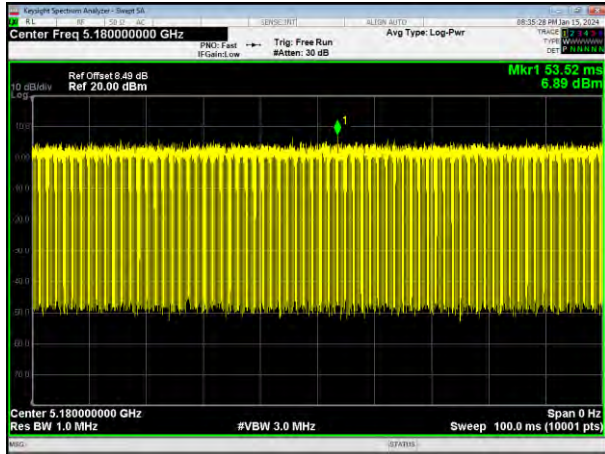
**7.1.5 TEST RESULTS**

Operation Mode		Duty Cycle(%)	Duty Fator (dB) $10 * \log (1/ \text{Duty cycle})$
Band 1	802.11a	84.84	0.71
	802.11n(HT20)	97.53	0.11
	802.11n(HT40)	97.59	0.11
	802.11ac(HT20)	95.38	0.21
	802.11ac(HT40)	95.29	0.21
	802.11ac(HT80)	91.2	0.4

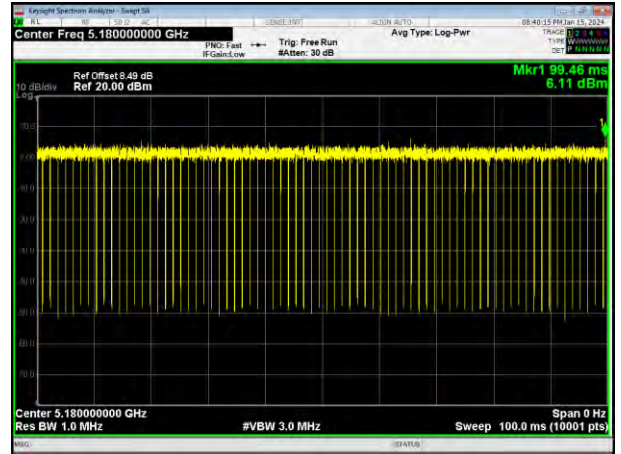
Operation Mode		Duty Cycle(%)	Duty Fator (dB) $10 * \log (1/ \text{Duty cycle})$
Band 4	802.11a	84.95	0.71
	802.11n(HT20)	97.55	0.11
	802.11n(HT40)	95.18	0.21
	802.11ac(HT20)	95.38	0.21
	802.11ac(HT40)	91.58	0.38
	802.11ac(HT80)	85.56	0.68



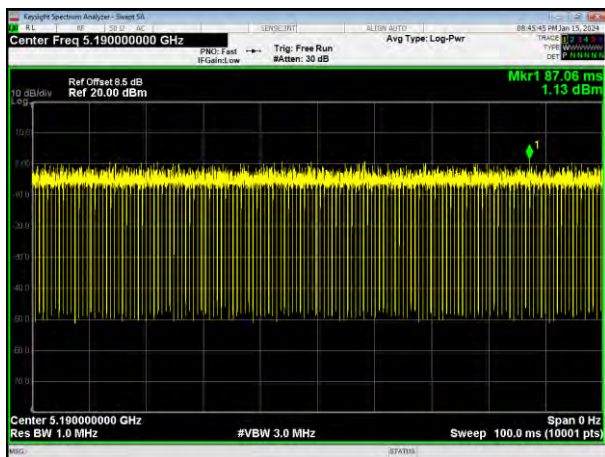
802.11a



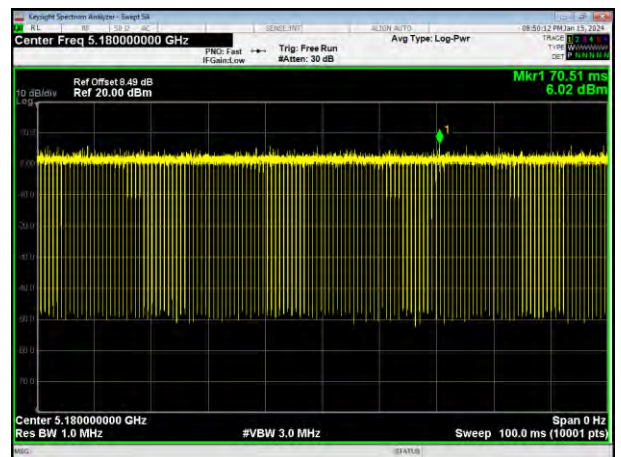
802.11n HT20



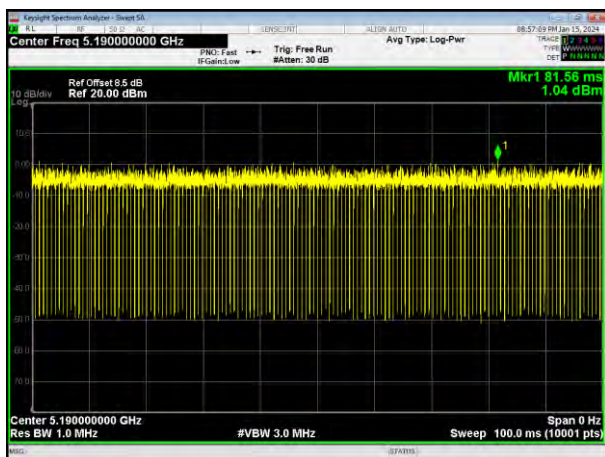
802.11n HT40



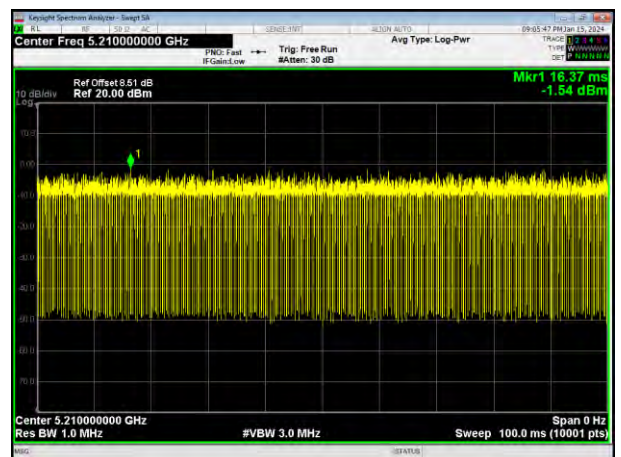
802.11ac HT20



802.11ac HT40

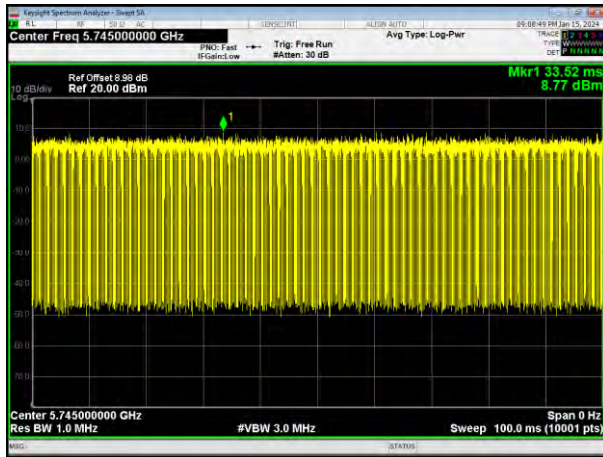


802.11ac HT80

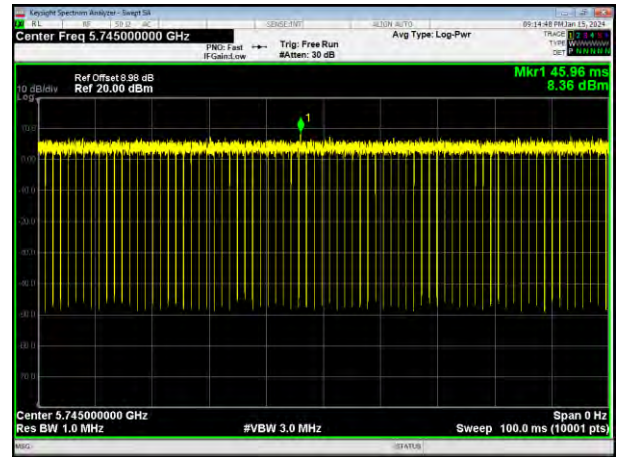




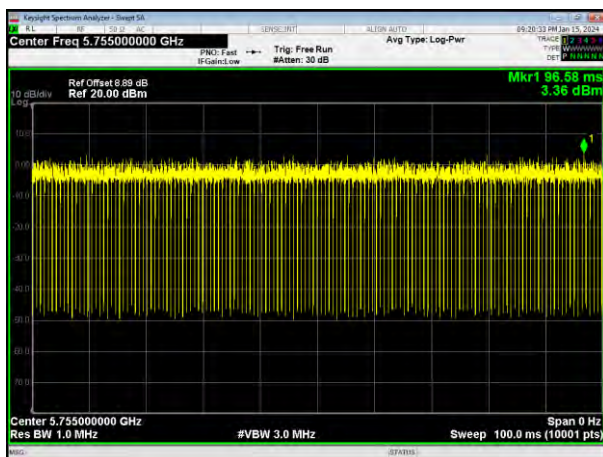
802.11a



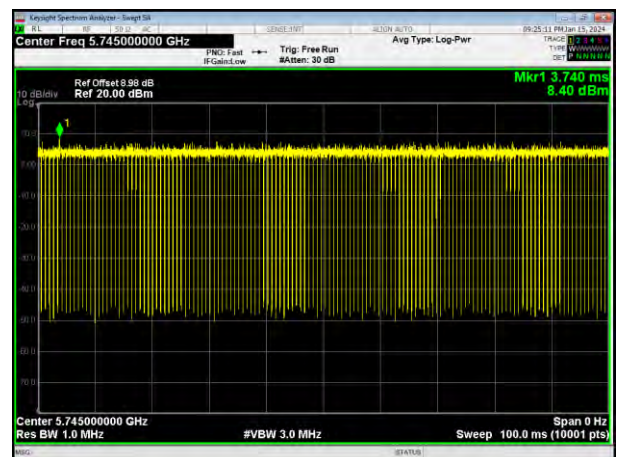
802.11n HT20



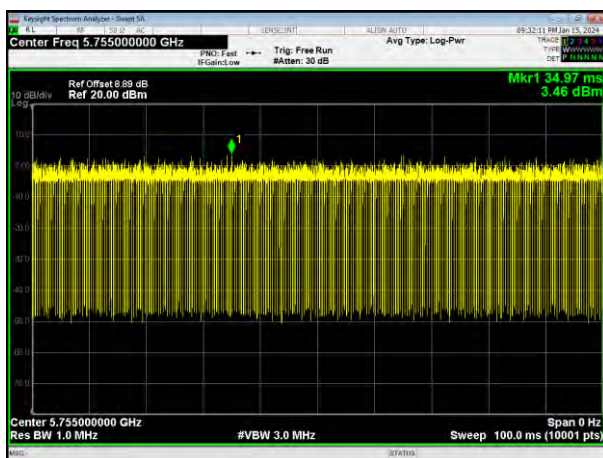
802.11n HT40



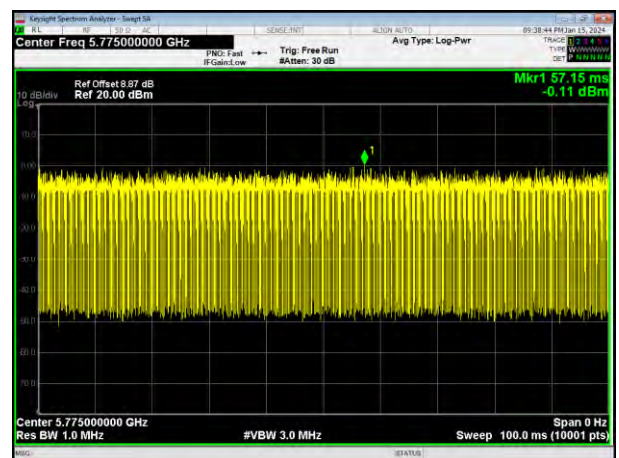
802.11ac HT20



802.11ac HT40



802.11ac HT80





8. FREQUENCY STABILITY

8.1 APPLIED PROCEDURES / LIMIT

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

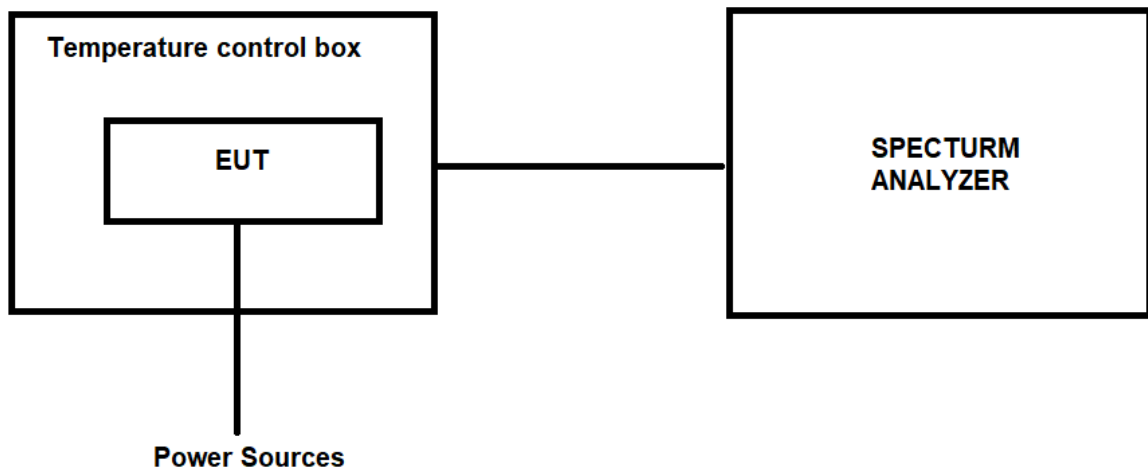
8.1.1 TEST PROCEDURE

1. The EUT was placed inside temperature chamber and powered and powered by nominal DC voltage.
2. Set EUT as normal operation.
3. Turn the EUT on and couple its output to spectrum.
4. Turn the EUT off and set the chamber to the highest temperature specified.
5. Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize, turn the EUT and measure the operating frequency.
6. Repeat step with the temperature chamber set to the lowest temperature.

8.1.2 DEVIATION FROM STANDARD

No deviation.

8.1.3 TEST SETUP



8.1.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.3 Unless otherwise a special operating condition is specified in the follows during the testing.



8.1.5 TEST RESULTS

Test Voltage	Test Temp.	Measured Frequency	Spectrum Frequency (MHz)			Δ Frequency (MHz)		
		(MHz)	802.11a	802.11n HT20	802.11ac HT20	802.11a	802.11n HT20	802.11ac HT20
132V	-20°C	5180	5180.0324	5180.0341	5180.0356	6.2548	6.5830	6.8726
		5220	5220.0336	5220.0352	5220.0334	6.4368	6.7433	6.3985
		5240	5240.0252	5240.0247	5240.0226	4.8092	4.7137	4.3130
		5745	5745.0333	5745.0323	5745.0325	5.7963	5.6223	5.6571
		5785	5785.0385	5785.0334	5785.0358	6.6551	5.7736	6.1884
		5825	5825.0337	5825.0336	5825.0366	5.7854	5.7682	6.2833
108V		5180	5180.0258	5180.0241	5180.0218	4.9807	4.6525	4.2085
		5220	5220.0364	5220.0341	5220.0365	6.9732	6.5326	6.9923
		5240	5240.0246	5240.0266	5240.0236	4.6947	5.0763	4.5038
		5745	5745.0266	5745.0268	5745.0293	4.6301	4.6649	5.1001
		5785	5785.0325	5785.0336	5785.0354	5.6180	5.8081	6.1193
		5825	5825.0413	5825.0454	5825.0418	7.0901	7.7940	7.1760
120V	25°C	5180	5180.0555	5180.0548	5180.0545	10.7143	10.5792	10.5212
		5220	5220.0248	5220.0256	5220.0226	4.7510	4.9042	4.3295
		5240	5240.0352	5240.0367	5240.0368	6.7176	7.0038	7.0229
		5745	5745.0354	5745.0323	5745.0346	6.1619	5.6223	6.0226
		5785	5785.0436	5785.0418	5785.0465	7.5367	7.2256	8.0380
		5825	5825.0218	5825.0225	5825.0224	3.7425	3.8627	3.8455
132V	50°C	5180	5180.0358	5180.0315	5180.0324	6.9112	6.0811	6.2548
		5220	5220.0251	5220.0236	5220.0226	4.8084	4.5211	4.3295
		5240	5240.0359	5240.0328	5240.0318	6.8511	6.2595	6.0687
		5745	5745.0664	5745.0656	5745.0684	11.5579	11.4186	11.9060
		5785	5785.0428	5785.0425	5785.0443	7.3984	7.3466	7.6577
		5825	5825.0643	5825.0623	5825.0668	11.0386	10.6953	11.4678
108V	50°C	5180	5180.0345	5180.0334	5180.0324	6.6602	6.4479	6.2548
		5220	5220.0254	5220.0246	5220.0245	4.8659	4.7126	4.6935
		5240	5240.0359	5240.0347	5240.0363	6.8511	6.6221	6.9275
		5745	5745.0467	5745.0438	5745.0431	8.1288	7.6240	7.5022
		5785	5785.0253	5785.0254	5785.0285	4.3734	4.3907	4.9265
		5825	5825.0727	5825.0733	5825.0764	12.4807	12.5837	13.1159



Test Voltage	Test Temp.	Measured Frequency (MHz)	Spectrum Frequency (MHz)		Δ Frequency (MHz)	
			802.11n HT40	802.11ac HT40	802.11n HT40	802.11ac HT40
132V	-20°C	5190	5190.0252	5190.0252	4.8555	4.8555
		5230	5230.0363	5230.0314	6.9407	6.0038
		5755	5755.0536	5755.0525	9.3136	9.1225
		5795	5795.0657	5795.0663	11.3374	11.4409
108V		5190	5190.0251	5190.0289	4.8362	5.5684
		5230	5230.0354	5230.0364	6.7686	6.9598
		5755	5755.0235	5755.0652	4.0834	11.3293
		5795	5795.0456	5795.0494	7.8689	8.5246
120V	25°C	5190	5190.0263	5190.0263	5.0674	5.0674
		5230	5230.0638	5230.0585	12.1989	11.1855
		5755	5755.0258	5755.0237	4.4831	4.1182
		5795	5795.0564	5795.0533	9.7325	9.1976
132V	50°C	5190	5190.0615	5190.0665	11.8497	12.8131
		5230	5230.0584	5230.0556	11.1663	10.6310
		5755	5755.0463	5755.0485	8.0452	8.4275
		5795	5795.0328	5795.0354	5.6601	6.1087
108V	50°C	5190	5190.0566	5190.0527	10.9056	10.1541
		5230	5230.0348	5230.0369	6.6539	7.0554
		5755	5755.0356	5755.0369	6.1859	6.4118
		5795	5795.0467	5795.0487	8.0587	8.4038



Test Voltage	Test Temp.	Measured Frequency (MHz)	Spectrum Frequency (MHz)	Δ Frequency (MHz)
			802.11ac HT80	802.11ac HT80
132V	-20°C	5210	5210.0152	2.9175
		5775	5775.0163	2.8225
108V		5210	5210.0226	4.3378
		5775	5775.0345	5.9740
120V	25°C	5210	5210.0465	8.9251
		5775	5775.0369	6.3896
132V	50°C	5210	5210.0314	6.0269
		5775	5775.0267	4.6234
108V	50°C	5210	5210.0328	6.2956
		5775	5775.0545	9.4372



9. TRANSMISSION IN THE ABSENCE OF DATA

9.1 STANDARD REQUIREMENT

According to §15.407(c)

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 a description of how this requirement is met.

9.2 TEST RESULT

No non-compliance noted:
Refer to the theory of operation.

10. ANTENNA REQUIREMENT

10.1 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.

10.2 EUT ANTENNA

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



11. TEST SEUUP PHOTO

Reference to the appendix I for details.

12. EUT PHOTO

Reference to the appendix II for details.

※※※※※ END OF REPORT ※※※※※