



FCC RF Test Report

APPLICANT : Motorola Solutions Inc.
EQUIPMENT : WAVE PTX TWO-WAY RADIO
BRAND NAME : MOTOROLA
MODEL NAME : TLK 110
MODEL NUMBER : HK2183A
FCC ID : AZ489FT7166
STANDARD : FCC Part 15 Subpart E §15.407
CLASSIFICATION : (NII) Unlicensed National Information Infrastructure
TEST DATE(S) : Oct. 13, 2022 ~ Nov. 02, 2022

We, Sporton International Inc. (Kunshan), would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of Sporton International Inc. (Kunshan), the test report shall not be reproduced except in full.

Jason Jia

Approved by: Jason Jia



Sporton International Inc. (Kunshan)

**No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300
People's Republic of China**



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SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.1	15.403(i)	6dB, 26dB and 99% Occupied Bandwidth	> 500kHz	Pass	-
3.2	15.407(a)	Maximum Conducted Output Power	≤ 30 dBm	Pass	-
3.3	15.407(a)	Power Spectral Density	≤ 30 dBm/500kHz	Pass	-
3.4	15.407(b)	Radiated Band Edge and Radiated Spurious Emission	15.407(b)(4)(i) & 15.209(a)	Pass	Under limit 6.45 dB at 42.61 MHz
3.5	15.207	AC Conducted Emission	15.207(a)	Pass	Under limit 13.43 dB at 21.147 MHz
3.6	15.203 & 15.407(a)	Antenna Requirement	15.203 & 15.407(a)	Pass	-

Declaration of Conformity:
The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.
Comments and Explanations:
The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.



1 General Description

1.1 Applicant

Motorola Solutions Inc.
8000 West Sunrise Boulevard, Fort Lauderdale, Florida

1.2 Manufacturer

Motorola Solutions Inc.
8000 West Sunrise Boulevard, Fort Lauderdale, Florida

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	WAVE PTX TWO-WAY RADIO
Brand Name	MOTOROLA
Model Name	TLK 110
Model Number	HK2183A
FCC ID	AZ489FT7166
SN	Conducted: 642QYQ0108 Conduction: 642QYQ0061 Radiation: 642QYQ0066
HW Version	REV1
SW Version	TAURUS_BASE_D00.00.02_APP_D00.01.63
EUT Stage	Identical Prototype

Remark: The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

1.4 Product Specification of Equipment Under Test

Standards-related Product Specification	
Tx/Rx Channel Frequency Range	5745 MHz ~ 5825 MHz
Maximum Output Power	<5745 MHz ~ 5825 MHz> 802.11a : 18.18 dBm / 0.0658 W 802.11n HT20 : 16.55 dBm / 0.0452 W 802.11n HT40 : 15.39 dBm / 0.0346 W 802.11ac VHT20: 16.60 dBm / 0.0457 W 802.11ac VHT40: 15.45 dBm / 0.0351 W 802.11ac VHT80: 13.18 dBm / 0.0208 W
99% Occupied Bandwidth	802.11a : 17.33 MHz 802.11ac VHT20 : 18.08 MHz 802.11ac VHT40 : 36.86 MHz 802.11ac VHT80 : 74.57 MHz
Type of Modulation	802.11a/n : OFDM (BPSK / QPSK / 16QAM / 64QAM) 802.11ac : OFDM (BPSK / QPSK / 16QAM / 64QAM / 256QAM)
Antenna Type / Gain	FPC Antenna with gain 4.10 dBi



Note: For 802.11n HT20 / ac VHT20 and 802.11n HT40 / ac VHT40 mode, the whole testing have assessed only 802.11 ac VHT20/ VHT40 by referring to their maximum conducted power.

1.5 Specification of Accessory

Accessories Information				
AC Adapter	Brand Name	MOTOROLA	Model Name	PS000150A31
Battery	Brand Name	MOTOROLA	Model Name	PMNN4578A
USB Cable	Brand Name	MOTOROLA	Model Name	PMKN4294A
Swivel Carry Holster	Brand Name	MOTOROLA	Model Name	PMLN8439A
Antenna	Brand Name	MOTOROLA	Model Name	HKAN4005A

1.6 Modification of EUT

No modifications are made to the EUT during all test items.

1.7 Testing Location

Sporton International Inc. (Kunshan) is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.02.

Test Firm	Sporton International Inc. (Kunshan)		
Test Site Location	No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300 People’s Republic of China TEL : +86-512-57900158 FAX : +86-512-57900958		
Test Site No.	Sporton Site No.	FCC Designation No.	FCC Test Firm Registration No.
	03CH06-KS CO01-KS TH01-KS	CN1257	314309

1.8 Test Software

Item	Site	Manufacturer	Name	Version
1.	03CH06-KS	AUDIX	E3	6.2009-8-24a1
2.	CO01-KS	AUDIX	E3	6.2009-8-24



1.9 Applicable Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- ♦ 47 CFR Part 15 Subpart E
- ♦ FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.
- ♦ ANSI C63.10-2013

Remark:

1. All test items were verified and recorded according to the standards and without any deviation during the test.
2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.



2 Test Configuration of Equipment Under Test

- a. The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: conduction emission (150 kHz to 30 MHz), radiation emission (9 kHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower). For radiated measurement, pre-scanned in three orthogonal panels, X, Y, Z. The worst cases (X plane) were recorded in this report.
- b. AC power line Conducted Emission was tested under maximum output power.

2.1 Carrier Frequency and Channel

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
5745-5825 MHz U-NII-3	149	5745	157	5785
	151*	5755	159*	5795
	153	5765	161	5805
	155#	5775	165	5825

Note:

- 1. The above Frequency and Channel in "*" were 802.11n HT40 and 802.11ac VHT40.
- 2. The above Frequency and Channel in "#n" were 802.11ac VHT80.

2.2 Test Mode

Final test modes are considering the modulation and worse data rates as below table.

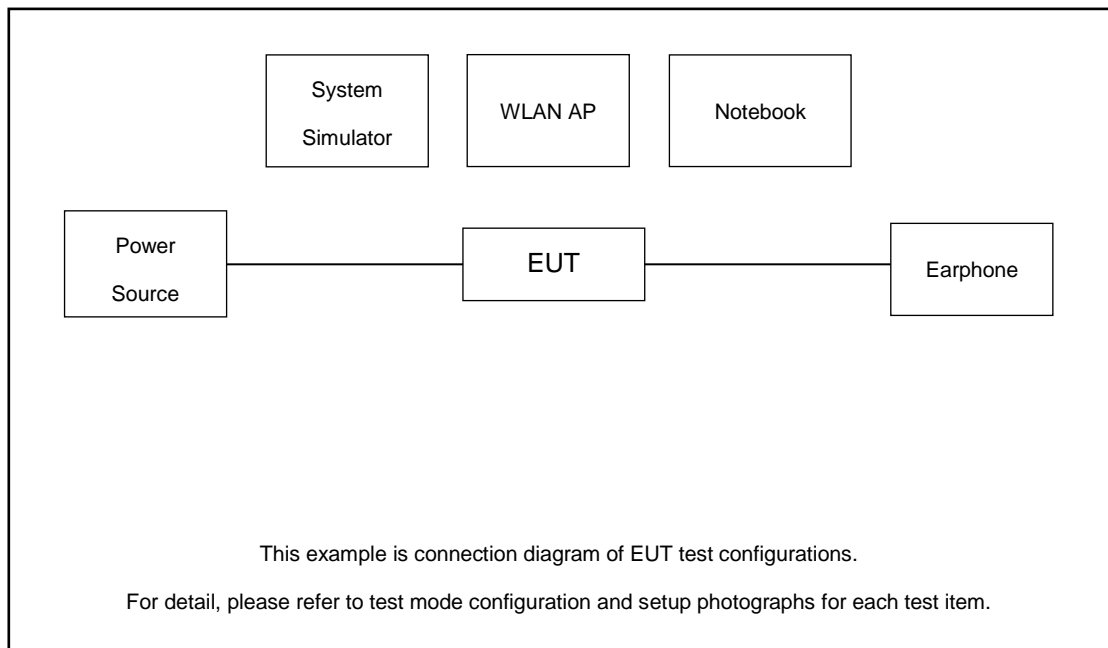
Modulation	Data Rate
802.11a	6 Mbps
802.11ac VHT20	MCS0
802.11ac VHT40	MCS0
802.11ac VHT80	MCS0

Test Cases	
AC Conducted Emission	Mode 1 : WCDMA Band II Idle + BT Link + WLAN Link(5G) + Earphone 5 + USB Cable (Charging From Adapter)
Remark:	
1. For Conducted Emission, the accessories are chosen from Part 15B worst case. 2. For Radiated Test Cases, The tests were performance with Adapter, Battery, Earphone 1 and USB Cable.	

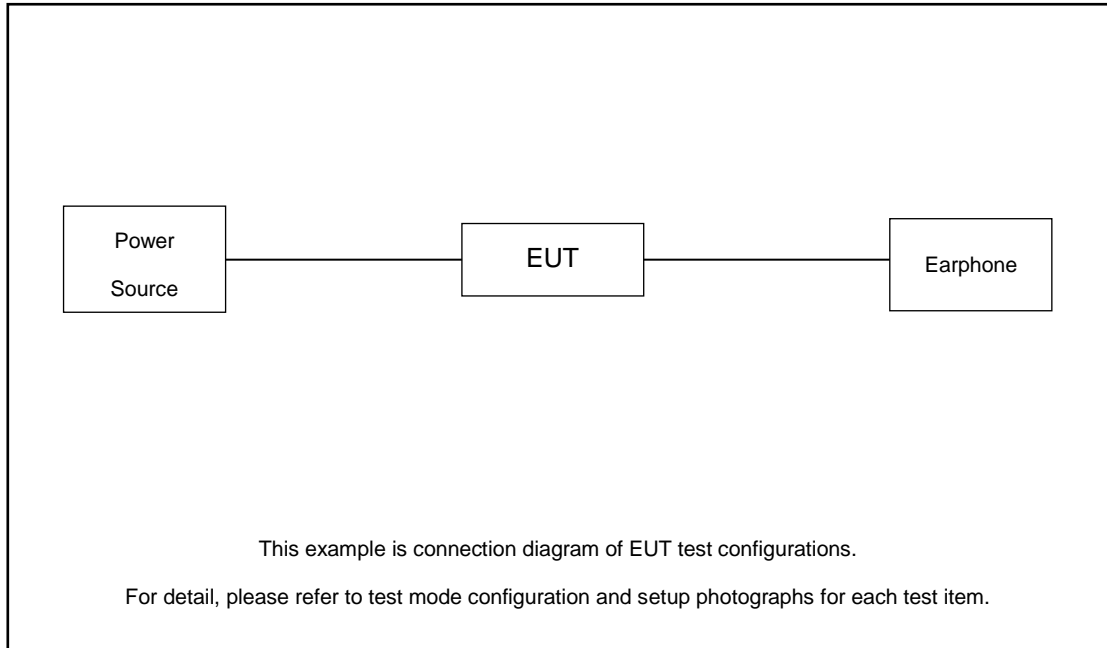
Ch. #		U-NII-3 : 5745-5825 MHz			
		802.11a	802.11ac VHT20	802.11ac VHT40	802.11ac VHT80
L	Low	149	149	151	-
M	Middle	157	157	-	155
H	High	165	165	159	-

2.3 Connection Diagram of Test System

For Conducted Emission:



For Radiated Emission:



2.4 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	System Simulator	Anritus	MT8821C	N/A	N/A	Unshielded,1.8m
2.	WLAN AP	D-link	DIR-655	KA21R655B1	N/A	Unshielded,1.8m
3.	Notebook	Lenovo	V130-15IKB005	N/A	N/A	AC I/P: Unshielded, 1.8 m DC O/P: Shielded, 1.8 m
4.	Earphone 1	MOTOROLA	PMLN7156A	N/A	N/A	N/A
5.	Earphone 5	MOTOROLA	PMLN7158A	N/A	N/A	N/A

2.5 EUT Operation Test Setup

For WLAN RF test items, an engineering test program was provided and enabled to make EUT continuous transmit.

For AC power line conducted emissions, the EUT was set to connect with the WLAN AP under large package sizes transmission.



2.6 Measurement Results Explanation Example

For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss between EUT conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly the EUT RF output level.

Example :

The spectrum analyzer offset is derived from RF cable loss.

Offset = RF cable loss.

Following shows an offset computation example with cable loss 7.2 dB.

$$\begin{aligned} \text{Offset(dB)} &= \text{RF cable loss(dB)}. \\ &= 7.2 \text{ (dB)} \end{aligned}$$

3 Test Result

3.1 6dB and 26dB and 99% Occupied Bandwidth Measurement

3.1.1 Description of 6dB and 26dB and 99% Occupied Bandwidth

The minimum 6 dB bandwidth shall be at least 500 kHz.

26dB and 99% Occupied bandwidth are reporting only.

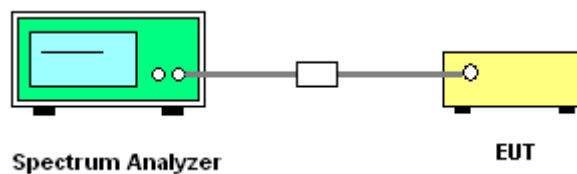
3.1.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.1.3 Test Procedures

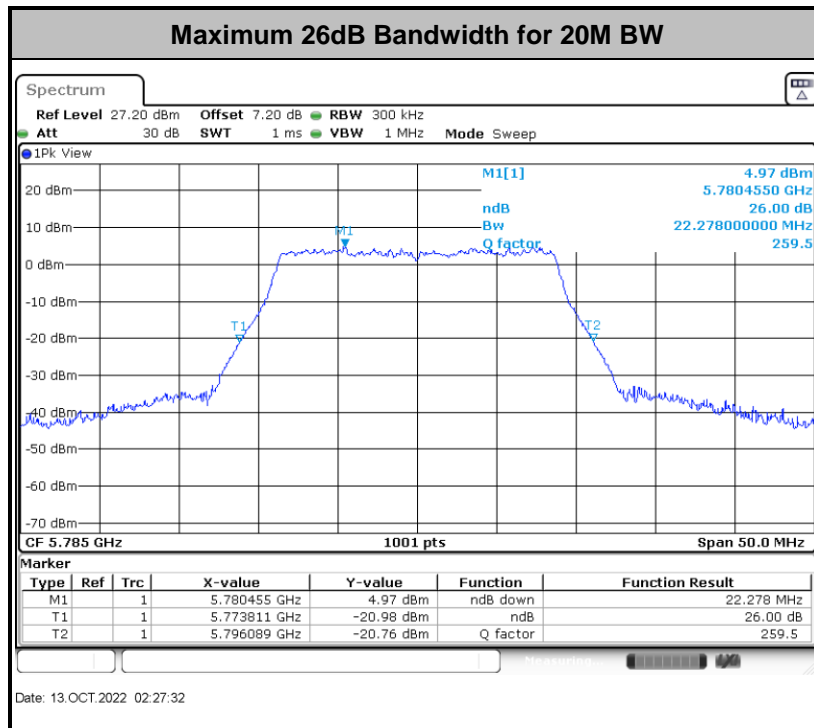
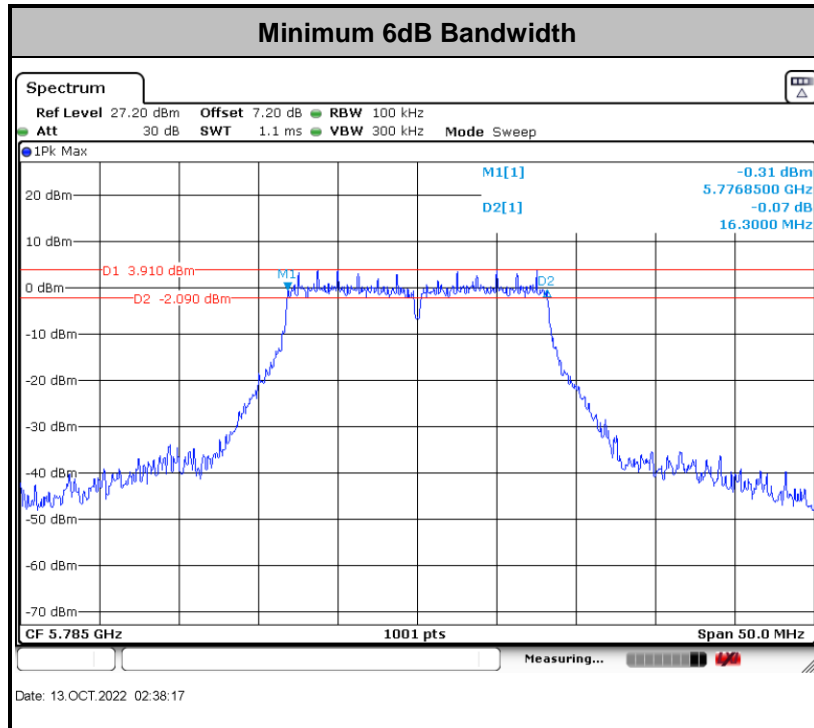
1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01. Section C) Emission bandwidth for the band 5.725-5.85GHz
2. For 6dB BW, Set RBW = 100kHz.
For 26dB BW, Set RBW = approximately 1% of the emission bandwidth.
For 99% OBW, Set RBW = 1% to 5% of the OBW.
3. For 26dB BW, Set the VBW > RBW.
For 6dB BW & 99% OBW, Set the VBW $\geq 3 \times$ RBW.
4. Detector = Peak.
5. Trace mode = max hold
6. Measure the maximum width of the emission that is 6 dB down from the peak of the emission.
7. Measure and record the results in the test report.

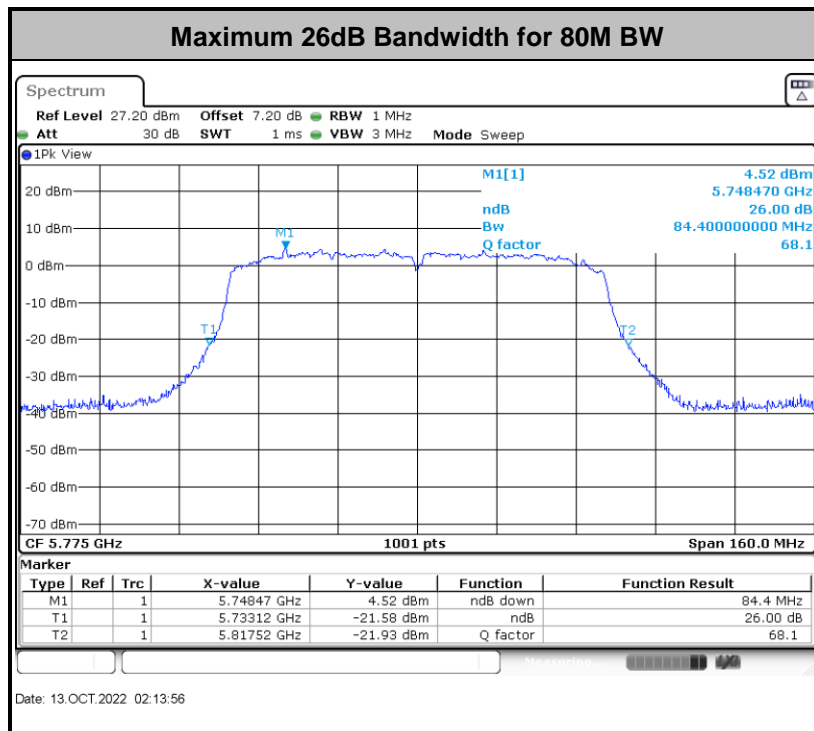
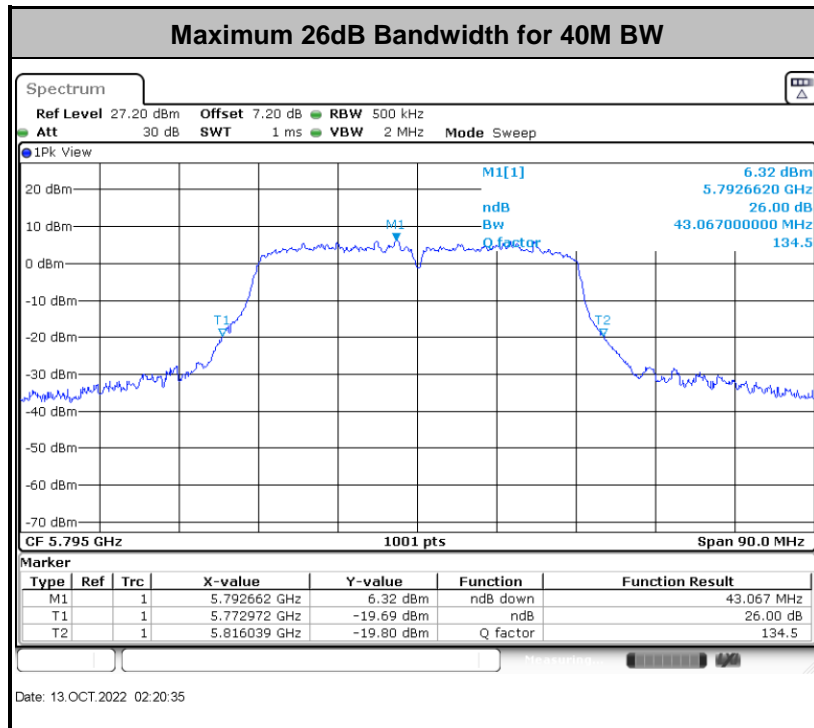
3.1.4 Test Setup

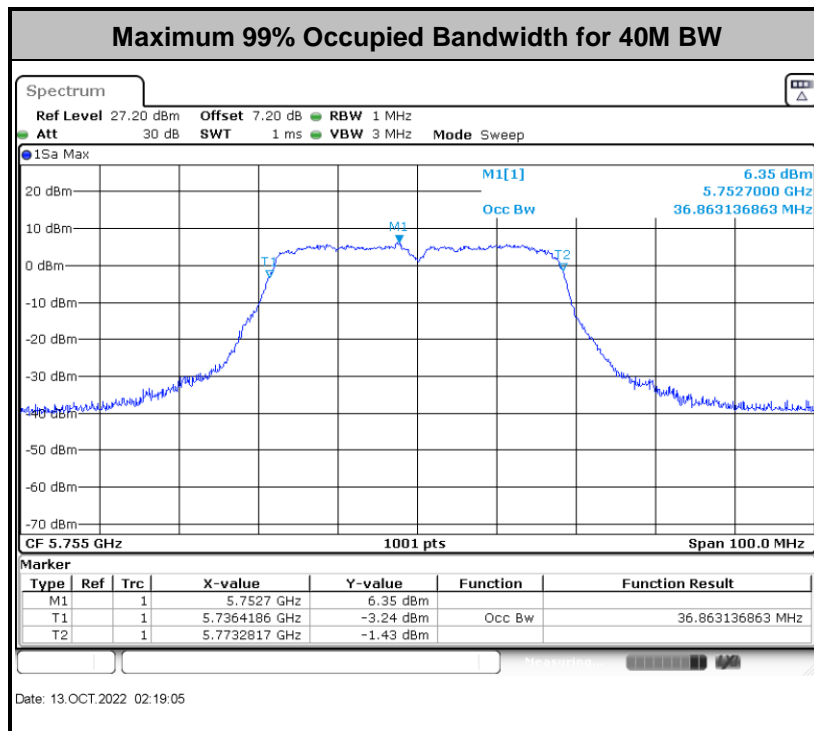
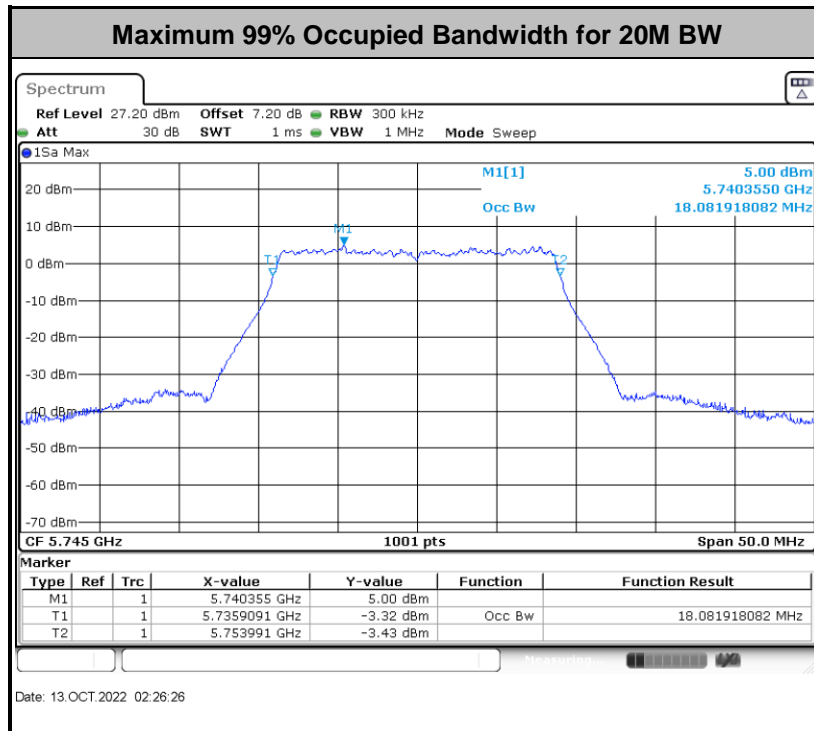


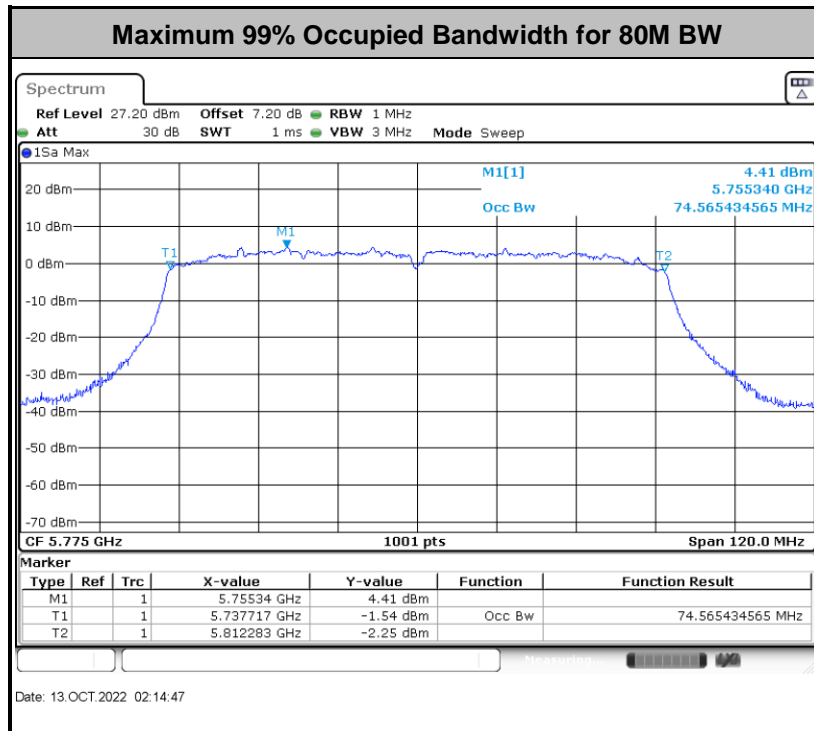
3.1.5 Test Result of 6dB Bandwidth

Please refer to Appendix A.









Note: The occupied channel bandwidth is maintained within the band of operation for all of the modulations.

3.2 Maximum Conducted Output Power Measurement

3.2.1 Limit of Maximum Conducted Output Power

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, the peak output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

3.2.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

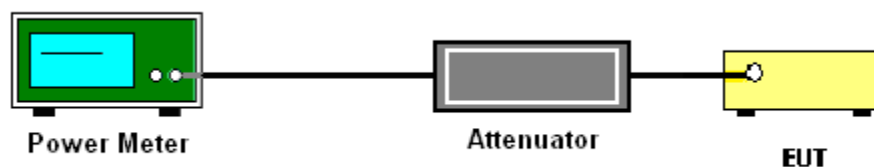
3.2.3 Test Procedures

The testing follows Method PM of FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.

Method PM (Measurement using an RF average power meter):

1. Measurement is performed using a wideband RF power meter.
2. The EUT is configured to transmit continuously with a consistent duty cycle at its maximum power control level.
3. Measure the average power of the transmitter, and the average power is corrected with duty factor, $10 \log(1/x)$, where x is the duty cycle.

3.2.4 Test Setup



3.2.5 Test Result of Maximum Conducted Output Power

Please refer to Appendix A.



3.3 Power Spectral Density Measurement

3.3.1 Limit of Power Spectral Density

For the band 5.725–5.85 GHz, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band.

If transmitting antennas of directional gain greater than 6 dBi are used, the peak output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

3.3.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.3.3 Test Procedures

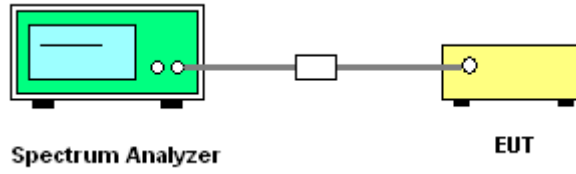
The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01. Section F) Maximum power spectral density.

Method SA-2

(trace averaging across on and off times of the EUT transmissions, followed by duty cycle correction).

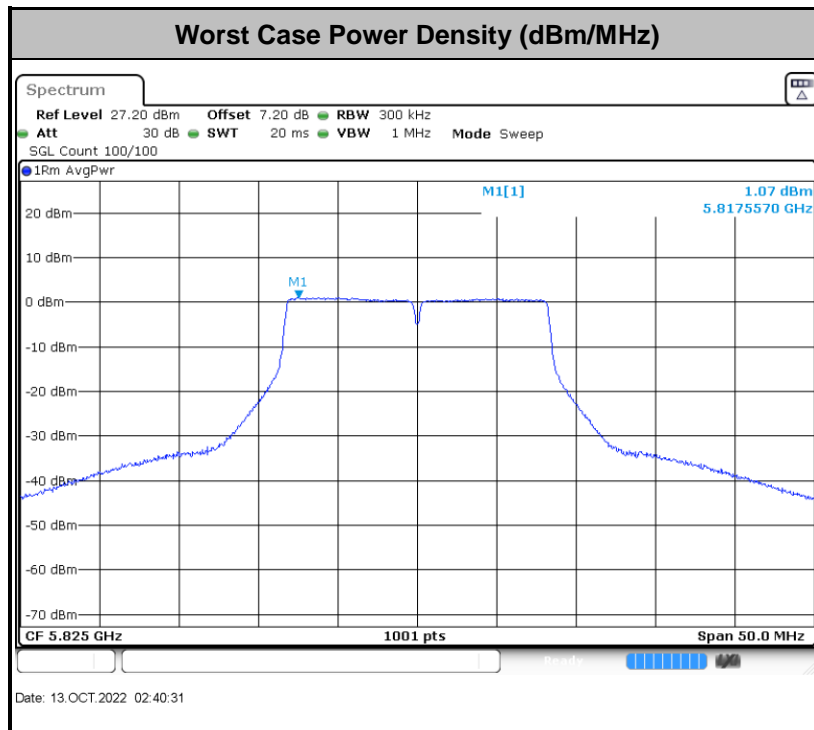
- Measure the duty cycle.
 - Set span to encompass the entire emission bandwidth (EBW) of the signal.
 - Set RBW = 500KHz (or 300 kHz if the SA can't set RBW=500KHz).
 - Set VBW \geq 1 MHz.
 - Number of points in sweep \geq 2 Span / RBW.
 - Sweep time = auto.
 - Detector = RMS
 - Trace average at least 100 traces in power averaging mode.
 - If the SA can't set RBW=500KHz, then add $10 \log(500\text{kHz}/\text{RBW})$ to the test result
 - Add $10 \log(1/x)$, where x is the duty cycle, to the measured power in order to compute the average power during the actual transmission times. For example, add $10 \log(1/0.25) = 6$ dB if the duty cycle is 25 percent.
1. The RF output of EUT was connected to the spectrum analyzer by a low loss cable.
 2. Each plot has already offset with cable loss, and attenuator loss. Measure the PPSD and record it.

3.3.4 Test Setup



3.3.5 Test Result of Power Spectral Density

Please refer to Appendix A.



Note: Average Power Density (dB) = Measured value+ Duty Factor



3.4 Unwanted Emissions Measurement

This section is to measure unwanted emissions through radiated measurement for band edge spurious emissions and out of band emissions measurement.

3.4.1 Limit of Unwanted Emissions

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

15.407(b)(4)(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.

(2) Unwanted spurious emissions fallen in restricted bands shall comply with the general field strength limits as below table,

Frequency (MHz)	Field Strength (microvolts/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

EIRP (dBm)	Field Strength at 3m (dBµV/m)
- 27	68.3

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

$$EIRP = E_{Meas} + 20\log (d_{Meas}) -104.7$$

where

EIRP is the equivalent isotropically radiated power, in dBm

E_{Meas} is the field strength of the emission at the measurement distance, in dBµV/m

d_{Meas} is the measurement distance, in m



3.4.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

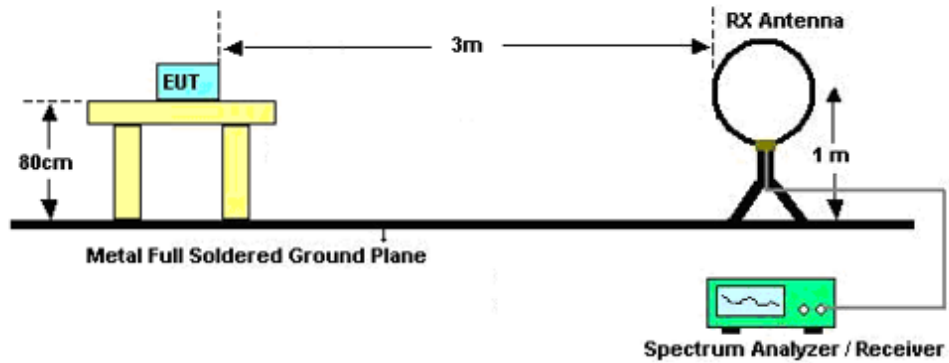
3.4.3 Test Procedures

1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01. Section G) Unwanted emissions measurement.
 - (1) Procedure for Unwanted Emissions Measurements Below 1000MHz
 - RBW = 120 kHz
 - VBW = 300 kHz
 - Detector = Peak
 - Trace mode = max hold
 - (2) Procedure for Peak Unwanted Emissions Measurements Above 1000 MHz
 - RBW = 1 MHz
 - VBW \geq 3 MHz
 - Detector = Peak
 - Sweep time = auto
 - Trace mode = max hold
 - (3) Procedures for Average Unwanted Emissions Measurements Above 1000MHz
 - RBW = 1 MHz
 - VBW = 10 Hz, when duty cycle is no less than 98 percent.
 - VBW \geq 1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.
2. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
3. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
4. The antenna is a broadband antenna and its height is adjusted between one meter and four meters above ground to find the maximum value of the field strength for both horizontal polarization and vertical polarization of the antenna.
5. For each suspected emission, the EUT was arranged to its worst case and then adjust the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading.
6. For testing below 1GHz, if the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then peak values of EUT will be reported, otherwise, the emissions will be repeated one by one using the CISPR quasi-peak method and reported.
7. For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than peak

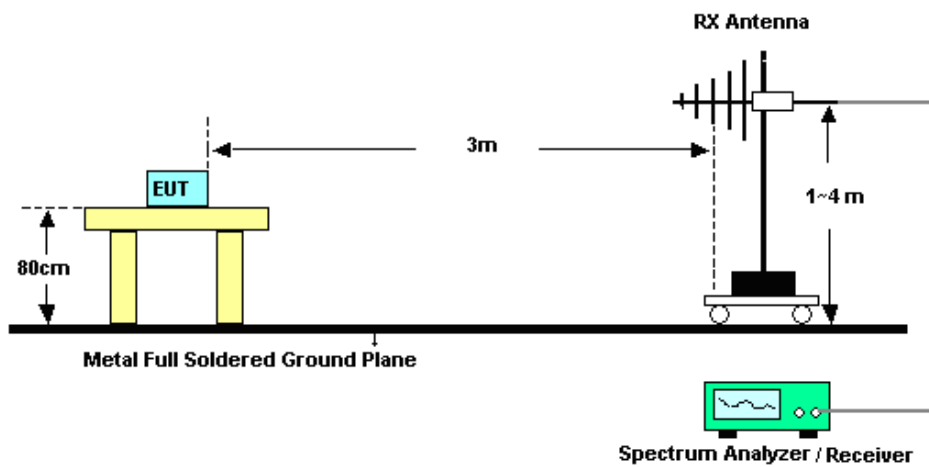
limit (that means the emission level in average mode also complies with the limit in average mode), then peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.

3.4.4 Test Setup

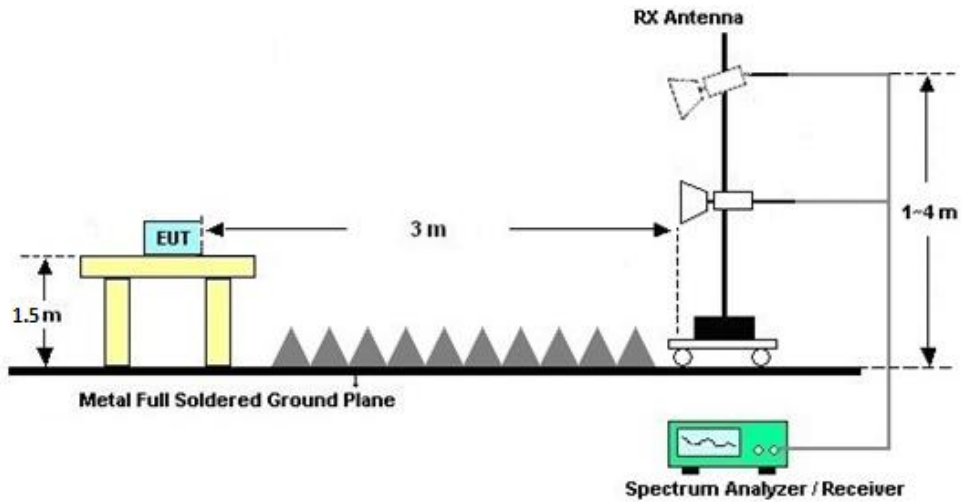
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



3.4.5 Test Results of Radiated Emissions (9 kHz ~ 30 MHz)

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line was not reported.

There is a comparison data of both open-field test site and semi-Anechoic chamber, and the result came out very similar.

3.4.6 Test Result of Radiated Band Edges

Please refer to Appendix C.

3.4.7 Duty Cycle

Please refer to Appendix D.

3.4.8 Test Result of Unwanted Radiated Emission (30MHz ~ 10th Harmonic or 40GHz, whichever is lower)

Please refer to Appendix C.



3.5 AC Conducted Emission Measurement

3.5.1 Limit of AC Conducted Emission

For equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table.

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

*Decreases with the logarithm of the frequency.

3.5.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.5.3 Test Procedures

1. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other LISN.
4. The LISN provides 50 ohm coupling impedance for the measuring instrument.
5. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
6. Both sides of AC line were checked for maximum conducted interference.
7. The frequency range from 150 kHz to 30 MHz was searched.
8. Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode.

3.5.4 Test Setup



3.5.5 Test Result of AC Conducted Emission

Please refer to Appendix B.



3.6 Antenna Requirements

3.6.1 Standard Applicable

If transmitting antenna directional gain is greater than 6 dBi, both the peak transmit 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.

3.6.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.

3.6.3 Antenna Gain

The antenna peak gain of EUT is less than 6 dBi. Therefore, it is not necessary to reduce maximum peak output power limit.



4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSV40	101040	10Hz~40GHz	Oct. 12, 2022	Oct. 13, 2022	Oct. 11, 2023	Conducted (TH01-KS)
Pulse Power Sensor	Anritsu	MA2411B	0917070	300MHz~40GHz	Jan. 05, 2022	Oct. 13, 2022	Jan. 04, 2023	Conducted (TH01-KS)
Power Meter	Anritsu	ML2495A	1005002	50MHz Bandwidth	Jan. 05, 2022	Oct. 13, 2022	Jan. 04, 2023	Conducted (TH01-KS)
EMI Test Receiver	Keysight	N9038A	MY56400004	3Hz~8.5GHz;Max 30dBm	Oct. 13, 2022	Nov. 01, 2022	Oct. 12, 2023	Radiation (03CH06-KS)
EXA Spectrum Analyzer	Keysight	N9010B	MY60242126	10Hz~44GHz	Oct. 13, 2022	Nov. 01, 2022	Oct. 12, 2023	Radiation (03CH06-KS)
Loop Antenna	R&S	HFH2-Z2	100321	9kHz~30MHz	Oct. 16, 2022	Nov. 01, 2022	Oct. 15, 2023	Radiation (03CH06-KS)
Bilog Antenna	TeseQ	CBL6111D	49921	30MHz~1GHz	May 24, 2022	Nov. 01, 2022	May 23, 2023	Radiation (03CH06-KS)
Double Ridge Horn Antenna	ETS-Lindgren	3117	00218642	1GHz~18GHz	Apr. 18, 2022	Nov. 01, 2022	Apr. 17, 2023	Radiation (03CH06-KS)
SHF-EHF Horn	Com-power	AH-840	101093	18GHz~40GHz	Jan. 05, 2022	Nov. 01, 2022	Jan. 04, 2023	Radiation (03CH06-KS)
Amplifier	SONOMA	310N	380827	9KHz ~1GHZ	Jul. 11, 2022	Nov. 01, 2022	Jul. 10, 2023	Radiation (03CH06-KS)
Amplifier	MITEQ	EM18G40GGA	060728	18~40GHz	Jan. 05, 2022	Nov. 01, 2022	Jan. 04, 2023	Radiation (03CH06-KS)
high gain Amplifier	MITEQ	AMF-7D-00101800-30-10P	2082395	1Ghz-18Ghz	Jan. 05, 2022	Nov. 01, 2022	Jan. 04, 2023	Radiation (03CH06-KS)
Amplifier	Keysight	83017A	MY53270319	500MHz~26.5GHz	Oct. 13, 2022	Nov. 01, 2022	Oct. 12, 2023	Radiation (03CH06-KS)
AC Power Source	Chroma	61601	F104090004	N/A	NCR	Nov. 01, 2022	NCR	Radiation (03CH06-KS)
Turn Table	ChamPro	EM 1000-T	060762-T	0~360 degree	NCR	Nov. 01, 2022	NCR	Radiation (03CH06-KS)
Antenna Mast	ChamPro	EM 1000-A	060762-A	1 m~4 m	NCR	Nov. 01, 2022	NCR	Radiation (03CH06-KS)
EMI Receiver	R&S	ESCI7	100768	9kHz~7GHz;	May 24, 2022	Nov. 02, 2022	May 23, 2023	Conduction (CO01-KS)
AC LISN (for auxiliary equipment)	MessTec	AN3016	060103	9kHz~30MHz	Oct. 13, 2022	Nov. 02, 2022	Oct. 12, 2023	Conduction (CO01-KS)
AC LISN	MessTec	AN3016	060105	9kHz~30MHz	May 24, 2022	Nov. 02, 2022	May 23, 2023	Conduction (CO01-KS)
AC Power Source	Chroma	61602	ABP000000811	AC 0V~300V, 45Hz~1000Hz	Oct. 12, 2022	Nov. 02, 2022	Oct. 11, 2023	Conduction (CO01-KS)

NCR: No Calibration Required



5 Uncertainty of Evaluation

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI 63.10-2013. All the measurement uncertainty value were shown with a coverage K=2 to indicate 95% level of confidence. The measurement data show herein meets or exceeds the CISPR measurement uncertainty values specified in CISPR 16-4-2 and can be compared directly to specified limit to determine compliance.

Uncertainty of Conducted Measurement

Test Item	Uncertainty
Conducted Power	±0.46 dB
Conducted Emissions	±0.48 dB
Occupied Channel Bandwidth	±0.10 %
Conducted Power Spectral Density	±0.40 dB

Uncertainty of Conducted Emission Measurement (150kHz ~ 30MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	2.78dB
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Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	5.0dB
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Uncertainty of Radiated Emission Measurement (1000 MHz ~ 18000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	5.0dB
---	-------

Uncertainty of Radiated Emission Measurement (18000 MHz ~ 40000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	5.0dB
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----- THE END -----



Appendix A. Conducted Test Results

Test Engineer:	Jacob Zhang	Temperature:	21~25	°C
Test Date:	2022/10/13	Relative Humidity:	51~54	%

TEST RESULTS DATA
6dB and 26dB EBW and 99% OBW

U-NII-3 single antenna												
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	99% Bandwidth (MHz)		26dB Bandwidth (MHz)		6 dB Bandwidth (MHz)		6 dB Bandwidth Min. Limit (MHz)	Pass/Fail
					Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2		
11a	6Mbps	1	149	5745	17.18	-	22.18	-	16.40	-	0.5	Pass
11a	6Mbps	1	157	5785	17.13	-	22.08	-	16.30	-	0.5	Pass
11a	6Mbps	1	165	5825	17.33	-	22.13	-	16.35	-	0.5	Pass
VHT20	MCS0	1	149	5745	18.08	-	22.18	-	17.60	-	0.5	Pass
VHT20	MCS0	1	157	5785	18.08	-	22.28	-	17.55	-	0.5	Pass
VHT20	MCS0	1	165	5825	18.08	-	22.03	-	17.60	-	0.5	Pass
VHT40	MCS0	1	151	5755	36.86	-	42.98	-	35.37	-	0.5	Pass
VHT40	MCS0	1	159	5795	36.86	-	43.07	-	35.19	-	0.5	Pass
VHT80	MCS0	1	155	5775	74.57	-	84.40	-	75.20	-	0.5	Pass

TEST RESULTS DATA
Average Power Table

U-NII-3 single antenna												
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Average Conducted Power with duty factor (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)		Pass/Fail
					Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2	
11a	6Mbps	1	149	5745	15.82	-		30.00	-	4.10	-	Pass
11a	6Mbps	1	157	5785	15.69	-		30.00	-	4.10	-	Pass
11a	6Mbps	1	165	5825	18.18	-		30.00	-	4.10	-	Pass
HT20	MCS0	1	149	5745	13.76	-		30.00	-	4.10	-	Pass
HT20	MCS0	1	157	5785	13.72	-		30.00	-	4.10	-	Pass
HT20	MCS0	1	165	5825	16.55	-		30.00	-	4.10	-	Pass
HT40	MCS0	1	151	5755	12.27	-		30.00	-	4.10	-	Pass
HT40	MCS0	1	159	5795	15.39	-		30.00	-	4.10	-	Pass
VHT20	MCS0	1	149	5745	14.16	-		30.00	-	4.10	-	Pass
VHT20	MCS0	1	157	5785	14.11	-		30.00	-	4.10	-	Pass
VHT20	MCS0	1	165	5825	16.60	-		30.00	-	4.10	-	Pass
VHT40	MCS0	1	151	5755	12.34	-		30.00	-	4.10	-	Pass
VHT40	MCS0	1	159	5795	15.45	-		30.00	-	4.10	-	Pass
VHT80	MCS0	1	155	5775	13.18	-		30.00	-	4.10	-	Pass

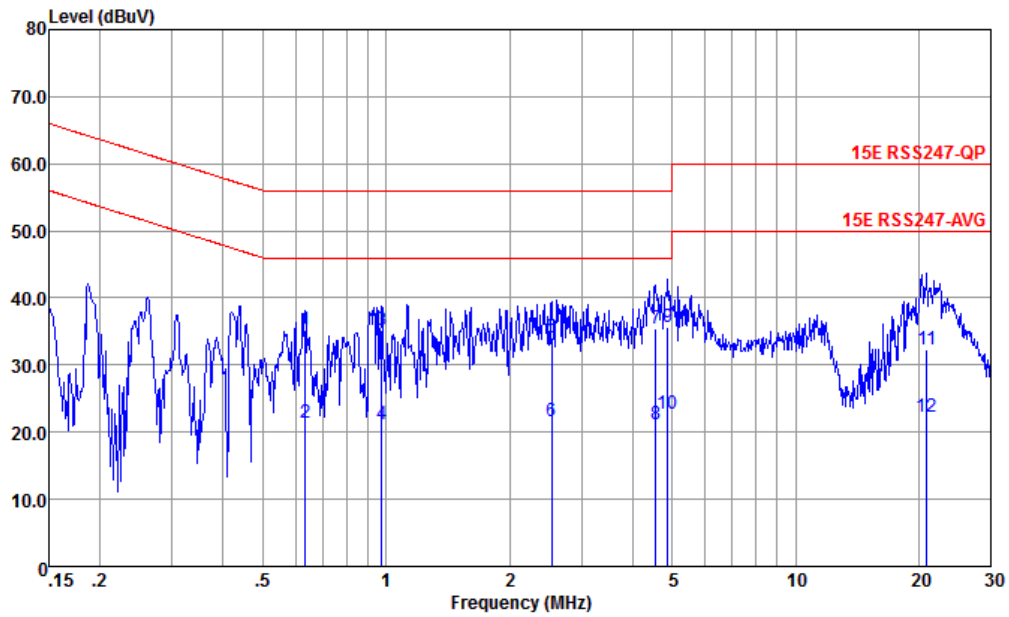
TEST RESULTS DATA
Power Spectral Density

U-NII-3 single antenna														
Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	10log (500kHz /RBW) Factor (dB)		Average Power Density (dBm/500kHz)			Average PSD Limit (dBm/500kHz)		DG (dBi)		Pass /Fail
					Ant 1	Ant 2	Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2	
11a	6Mbps	1	149	5745	2.22	-	0.84	-		30.00	-	4.10	-	Pass
11a	6Mbps	1	157	5785	2.22	-	0.71	-		30.00	-	4.10	-	Pass
11a	6Mbps	1	165	5825	2.22	-	3.29	-		30.00	-	4.10	-	Pass
VHT20	MCS0	1	149	5745	2.22	-	-0.99	-		30.00	-	4.10	-	Pass
VHT20	MCS0	1	157	5785	2.22	-	-0.69	-		30.00	-	4.10	-	Pass
VHT20	MCS0	1	165	5825	2.22	-	1.42	-		30.00	-	4.10	-	Pass
VHT40	MCS0	1	151	5755	2.22	-	-5.16	-		30.00	-	4.10	-	Pass
VHT40	MCS0	1	159	5795	2.22	-	-2.25	-		30.00	-	4.10	-	Pass
VHT80	MCS0	1	155	5775	2.22	-	-6.86	-		30.00	-	4.10	-	Pass



Appendix B. AC Conducted Emission Test Results

Test Engineer :	Amos Zhang	Temperature :	24.2~25.6°C
		Relative Humidity :	37~39%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		

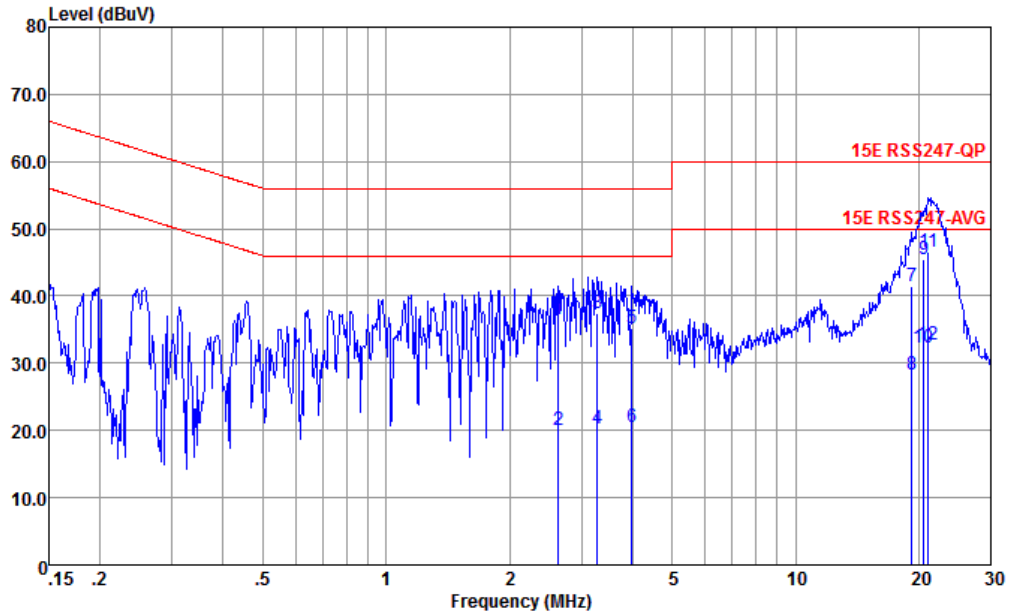


Site : CO01-KS
 Condition : 15E RSS247-QP LISN-060105-LINE LINE

	Freq	Level	Over	Limit	Read	LISN	Cable	Remark
	MHz	dBuV	Limit	Line	Level	Factor	Loss	
			dB	dBuV	dBuV	dB	dB	
1	0.634	35.30	-20.70	56.00	25.20	-0.07	10.17	QP
2	0.634	21.40	-34.60	56.00	11.30	-0.07	10.17	Average
3	0.974	35.21	-20.79	56.00	25.20	-0.10	10.11	QP
4	0.974	21.21	-34.79	56.00	11.20	-0.10	10.11	Average
5	2.540	34.15	-21.85	56.00	24.20	-0.11	10.06	QP
6	2.540	21.55	-34.45	56.00	11.60	-0.11	10.06	Average
7	4.549	35.53	-20.47	56.00	25.59	-0.12	10.06	QP
8	4.549	21.24	-34.76	56.00	11.30	-0.12	10.06	Average
9 *	4.874	35.73	-20.27	56.00	25.80	-0.13	10.06	QP
10	4.874	22.83	-33.17	56.00	12.90	-0.13	10.06	Average
11	20.924	32.24	-27.76	60.00	21.20	-0.32	11.36	QP
12	20.924	22.34	-37.66	60.00	11.30	-0.32	11.36	Average



Test Engineer :	Amos Zhang	Temperature :	24.2~25.6°C
		Relative Humidity :	37~39%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



Site : CO01-KS
 Condition : 15E RSS247-QP LISN-060105-NEUTRAL NEUTRAL

	Freq	Level	Over	Limit	Read	LISN	Cable	
	MHz	dBuV	Limit	Line	Level	Factor	Loss	Remark
			dB	dBuV	dBuV	dB	dB	
1	2.636	36.53	-19.47	56.00	26.60	-0.13	10.06	QP
2	2.636	20.13	-35.87	56.00	10.20	-0.13	10.06	Average
3	3.276	37.43	-18.57	56.00	27.50	-0.13	10.06	QP
4	3.276	20.23	-35.77	56.00	10.30	-0.13	10.06	Average
5	3.985	35.14	-20.86	56.00	25.20	-0.12	10.06	QP
6	3.985	20.54	-35.46	56.00	10.60	-0.12	10.06	Average
7	19.224	41.54	-18.46	60.00	30.50	-0.27	11.31	QP
8	19.224	28.34	-31.66	60.00	17.30	-0.27	11.31	Average
9	20.594	45.36	-14.64	60.00	34.31	-0.30	11.35	QP
10	20.594	32.26	-27.74	60.00	21.21	-0.30	11.35	Average
11 *	21.147	46.57	-13.43	60.00	35.50	-0.30	11.37	QP
12	21.147	32.67	-27.33	60.00	21.60	-0.30	11.37	Average

Note:

- Level(dBμV) = Read Level(dBμV) + LISN Factor(dB) + Cable Loss(dB)
- Over Limit(dB) = Level(dBμV) – Limit Line(dBμV)



Appendix C. Radiated Spurious Emission

Test Engineer :	Carry Xu	Temperature :	22~23°C
		Relative Humidity :	41~42%

UNII-3 - 5725~5850MHz

WIFI 802.11a (Band Edge @ 3m)

WIFI Ant.	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 165 5825MHz		5818	108.87	-	-	95.74	34.67	10.41	31.95	102	339	P	H
		5818	102.54	-	-	89.41	34.67	10.41	31.95	102	339	A	H
		5850.4	67.35	-54.04	121.39	54.04	34.8	10.44	31.93	102	339	P	H
		5862	62.38	-46.56	108.94	49	34.87	10.46	31.95	102	339	P	H
		5877.2	55.21	-48.46	103.67	41.76	34.93	10.47	31.95	102	339	P	H
		5950	53.43	-14.87	68.3	39.71	35.2	10.53	32.01	102	339	P	H
		5818	109.72	-	-	96.59	34.67	10.41	31.95	108	296	P	V
		5818	103.56	-	-	90.43	34.67	10.41	31.95	108	296	A	V
		5852.8	68.51	-47.41	115.92	55.2	34.8	10.44	31.93	108	296	P	V
		5855.2	64.73	-46.11	110.84	51.33	34.87	10.46	31.93	108	296	P	V
		5876.8	56.76	-47.2	103.96	43.31	34.93	10.47	31.95	108	296	P	V
	5925.8	53.74	-14.56	68.3	40.08	35.13	10.52	31.99	108	296	P	V	
Remark	<ol style="list-style-type: none"> No other spurious found. All results are PASS against Peak and Average limit line. 												



WIFI 802.11a (Harmonic @ 3m)

WIFI Ant.	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a		11653	45.65	-28.35	74	53.63	38.46	15.03	61.47	300	0	P	H
CH 165		11653	44.42	-29.58	74	52.4	38.46	15.03	61.47	100	0	P	V
5825MHz													
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



UNII-3 5725~5850MHz

WIFI 802.11ac VHT20 (Band Edge @ 3m)

WIFI Ant.	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT20 CH 165 5825MHz		5818	107.46	-	-	94.33	34.67	10.41	31.95	101	343	P	H
		5818	100.61	-	-	87.48	34.67	10.41	31.95	101	343	A	H
		5850	65.33	-56.97	122.3	52.02	34.8	10.44	31.93	101	343	P	H
		5855.6	60.96	-49.77	110.73	47.56	34.87	10.46	31.93	101	343	P	H
		5876.8	55.45	-48.51	103.96	42	34.93	10.47	31.95	101	343	P	H
		5948	53	-15.3	68.3	39.28	35.2	10.53	32.01	101	343	P	H
		5830	108.03	-	-	94.82	34.73	10.43	31.95	111	303	P	V
		5830	101.67	-	-	88.46	34.73	10.43	31.95	111	303	A	V
		5853.2	66.78	-48.22	115	53.47	34.8	10.44	31.93	111	303	P	V
		5859.6	62.05	-47.56	109.61	48.67	34.87	10.46	31.95	111	303	P	V
		5876.8	57.47	-46.49	103.96	44.02	34.93	10.47	31.95	111	303	P	V
	5970.8	53.23	-15.07	68.3	39.44	35.27	10.55	32.03	111	303	P	V	
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

WIFI 802.11ac VHT20 (Harmonic @ 3m)

WIFI Ant.	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT20 CH 165 5825MHz		11653	46.06	-27.94	74	54.04	38.46	15.03	61.47	300	0	P	H
		11653	45.89	-28.11	74	53.87	38.46	15.03	61.47	100	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



UNII-3 5725~5850MHz

WIFI 802.11ac VHT40 (Band Edge @ 3m)

WIFI Ant.	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT40 CH 159 5795MHz		5615.6	52.15	-16.15	68.3	39.39	34.58	10.26	32.08	116	339	P	H
		5690	53.91	-44.02	97.93	41.15	34.5	10.32	32.06	116	339	P	H
		5706.8	53	-54.21	107.21	40.19	34.52	10.33	32.04	116	339	P	H
		5720	52.09	-58.81	110.9	39.25	34.53	10.35	32.04	116	339	P	H
		5794	104.69	-	-	91.66	34.6	10.4	31.97	116	339	P	H
		5794	97.56	-	-	84.53	34.6	10.4	31.97	116	339	A	H
		5852.8	58.46	-57.46	115.92	45.15	34.8	10.44	31.93	116	339	P	H
		5855.6	55.69	-55.04	110.73	42.29	34.87	10.46	31.93	116	339	P	H
		5898.4	53.51	-34.44	87.95	39.99	35	10.49	31.97	116	339	P	H
		5953.6	55.25	-13.05	68.3	41.53	35.2	10.53	32.01	116	339	P	H
		5612	53.47	-14.83	68.3	40.7	34.6	10.25	32.08	114	302	P	V
		5680.8	53.89	-37.24	91.13	41.13	34.52	10.3	32.06	114	302	P	V
		5716.8	52.41	-57.6	110.01	39.6	34.52	10.33	32.04	114	302	P	V
		5724	53.66	-66.36	120.02	40.82	34.53	10.35	32.04	114	302	P	V
		5794	106.39	-	-	93.36	34.6	10.4	31.97	114	302	P	V
		5794	98.89	-	-	85.86	34.6	10.4	31.97	114	302	A	V
		5854.8	55.52	-55.84	111.36	42.12	34.87	10.46	31.93	114	302	P	V
		5860.8	54.69	-54.58	109.27	41.31	34.87	10.46	31.95	114	302	P	V
		5899.2	53.96	-33.39	87.35	40.44	35	10.49	31.97	114	302	P	V
	5964.8	53.62	-14.68	68.3	39.83	35.27	10.55	32.03	114	302	P	V	
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



WIFI 802.11ac VHT40 (Harmonic @ 3m)

WIFI Ant.	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT40		11587	45.33	-28.67	74	53.45	38.39	14.98	61.49	300	0	P	H
CH 159 5795MHz		11587	46.05	-27.95	74	54.17	38.39	14.98	61.49	100	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



UNII-3 5725~5850MHz

WIFI 802.11ac VHT80 (Band Edge @ 3m)

WIFI Ant.	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT80 CH 155 5775MHz		5639.2	51.97	-16.33	68.3	39.23	34.56	10.28	32.1	117	347	P	H
		5699.2	55.06	-49.65	104.71	42.3	34.5	10.32	32.06	117	347	P	H
		5720	59.92	-50.98	110.9	47.08	34.53	10.35	32.04	117	347	P	H
		5724.4	60.56	-60.37	120.93	47.72	34.53	10.35	32.04	117	347	P	H
		5788	98.82	-	-	85.79	34.6	10.4	31.97	117	347	P	H
		5788	92.58	-	-	79.55	34.6	10.4	31.97	117	347	A	H
		5850	53.1	-69.2	122.3	39.79	34.8	10.44	31.93	117	347	P	H
		5858.8	53.68	-56.15	109.83	40.3	34.87	10.46	31.95	117	347	P	H
		5891.2	54.11	-39.17	93.28	40.59	35	10.49	31.97	117	347	P	H
		5988.8	53.23	-15.07	68.3	39.39	35.33	10.56	32.05	117	347	P	H
		5609.6	52.19	-16.11	68.3	39.42	34.6	10.25	32.08	110	303	P	V
		5699.6	56.92	-48.09	105.01	44.16	34.5	10.32	32.06	110	303	P	V
		5717.6	60.9	-49.33	110.23	48.06	34.53	10.35	32.04	110	303	P	V
		5724.4	61.73	-59.2	120.93	48.89	34.53	10.35	32.04	110	303	P	V
		5746	101.64	-	-	88.74	34.55	10.36	32.01	110	303	P	V
		5746	94.1	-	-	81.2	34.55	10.36	32.01	110	303	A	V
		5854	54.77	-58.41	113.18	41.37	34.87	10.46	31.93	110	303	P	V
		5855.6	54.74	-55.99	110.73	41.34	34.87	10.46	31.93	110	303	P	V
	5916.8	53.52	-20.83	74.35	39.93	35.07	10.51	31.99	110	303	P	V	
	5999.6	53.36	-14.94	68.3	39.43	35.4	10.58	32.05	110	303	P	V	
Remark	<ol style="list-style-type: none"> No other spurious found. All results are PASS against Peak and Average limit line. 												



WIFI 802.11ac VHT80 (Harmonic @ 3m)

WIFI Ant.	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT80		11554	45.66	-28.34	74	53.85	38.35	14.96	61.5	300	0	P	H
CH 155 5775MHz		11554	46.39	-27.61	74	54.58	38.35	14.96	61.5	100	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Emission below 1GHz

5GHz WIFI 802.11ac VHT40 (LF)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Path Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
5GHz 802.11ac VHT40 LF		52.31	29.19	-10.81	40	47.76	13.68	1.03	33.28	-	-	P	H
		71.71	26	-14	40	45.5	12.49	1.21	33.2	-	-	P	H
		94.99	29.39	-14.11	43.5	45.88	15.24	1.47	33.2	-	-	P	H
		384.05	27.6	-18.4	46	35.12	21.47	2.87	31.86	-	-	P	H
		462.62	27.24	-18.76	46	32.15	23.34	3.16	31.41	-	-	P	H
		607.15	30.08	-15.92	46	30.89	26.02	3.62	30.45	-	-	P	H
		42.61	33.55	-6.45	40	47.72	18.2	0.93	33.3	-	-	P	V
		78.5	29.99	-10.01	40	48.75	13.17	1.27	33.2	-	-	P	V
		96.93	30.17	-13.33	43.5	46.42	15.49	1.46	33.2	-	-	P	V
		167.74	23.77	-19.73	43.5	39.49	15.26	1.88	32.86	-	-	P	V
		474.26	29.15	-16.85	46	33.69	23.6	3.2	31.34	-	-	P	V
	709.97	36.7	-9.3	46	35.61	26.93	3.91	29.75	-	-	P	V	
Remark	1. No other spurious found. 2. All results are PASS against limit line.												



Note symbol

*	Fundamental Frequency which can be ignored. However, the level of any unwanted emissions shall not exceed the level of the fundamental frequency.
!	Test result is over limit line.
P/A	Peak or Average
H/V	Horizontal or Vertical



A calculation example for radiated spurious emission is shown as below:

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11b		2390	55.45	-18.55	74	54.51	32.22	4.58	35.86	103	308	P	H
CH 01		2390	43.54	-10.46	54	42.6	32.22	4.58	35.86	103	308	A	H
2412MHz													

1. Path Loss(dB) = Cable loss(dB) + Filter loss(dB) + Attenuator loss(dB)
2. Level(dBμV/m) = Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)
3. Over Limit(dB) = Level(dBμV/m) – Limit Line(dBμV/m)

For Peak Limit @ 2390MHz:

1. Level(dBμV/m)
= Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)
= 32.22(dB/m) + 4.58(dB) + 54.51(dBμV) – 35.86 (dB)
= 55.45 (dBμV/m)
2. Over Limit(dB)
= Level(dBμV/m) – Limit Line(dBμV/m)
= 55.45(dBμV/m) – 74(dBμV/m)
= -18.55(dB)

For Average Limit @ 2390MHz:

1. Level(dBμV/m)
= Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)
= 32.22(dB/m) + 4.58(dB) + 42.6(dBμV) – 35.86 (dB)
= 43.54 (dBμV/m)
2. Over Limit(dB) = Level(dBμV/m) – Limit Line(dBμV/m)
= 43.54(dBμV/m) – 54(dBμV/m)
= -10.46(dB)

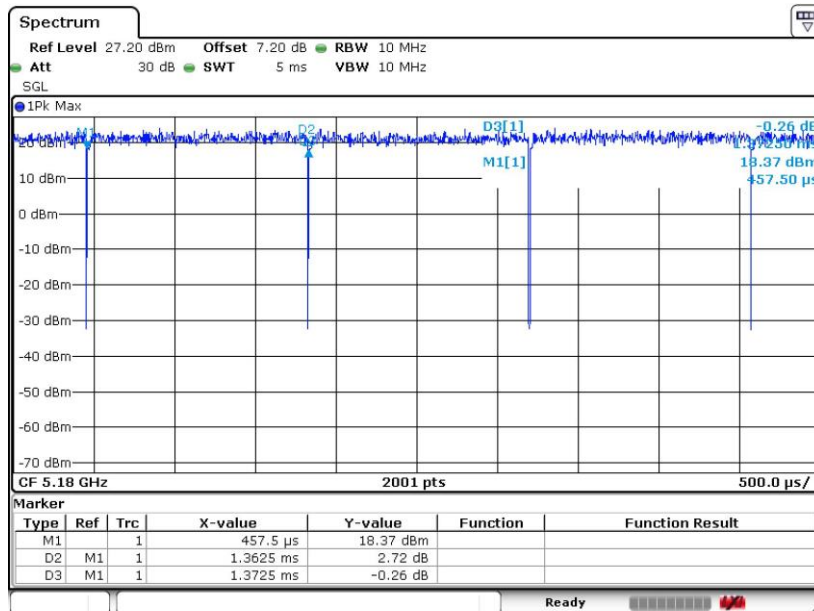
Both peak and average measured complies with the limit line, so test result is “PASS”.



Appendix D. Duty Cycle Plots

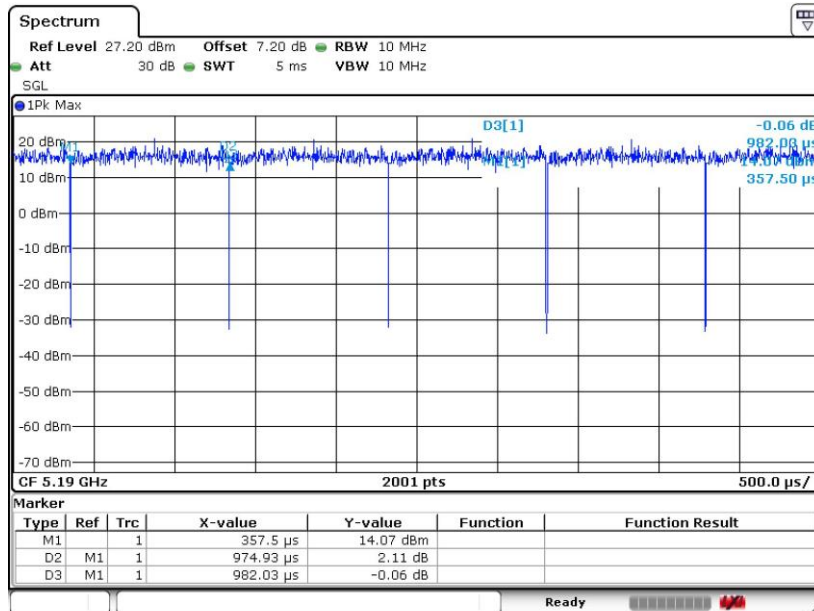
Band	Duty Cycle(%)	T(ms)	1/T(kHz)	VBW Setting
802.11a	99.27	-	-	10Hz
802.11ac VHT20	99.28	-	-	10Hz
802.11ac VHT40	98.00	-	-	10Hz
802.11ac VHT80	96.11	0.2474	4.0422	4.3kHz

802.11a

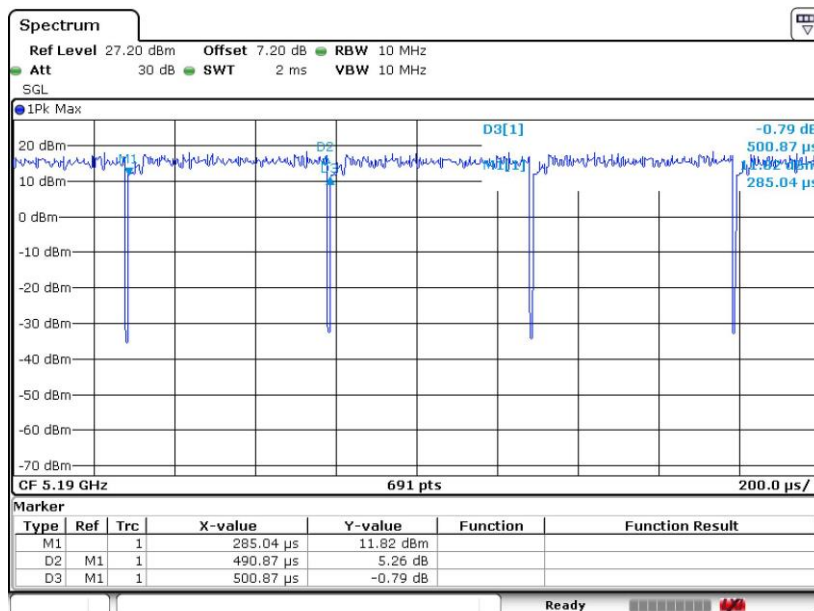




802.11ac VHT20



802.11ac VHT40





802.11ac VHT80

