



FCC RF Test Report

APPLICANT : Telrad Networks Ltd
EQUIPMENT : CPE12350
BRAND NAME : Telrad
MODEL NAME : 775300
FCC ID : ARA-CPE12350
STANDARD : 47 CFR Part 15 Subpart E §15.407
CLASSIFICATION : (NII) Unlicensed National Information Infrastructure

The product was received on May 25, 2020 and testing was completed on Jan. 09, 2021. We, Sporton International (Kunshan) Inc., 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 (Kunshan) Inc., the test report shall not be reproduced except in full.

Jason Jia

Reviewed by: Jason Jia / Supervisor

James Huang

Approved by: James Huang / Manager



Sporton International (Kunshan) Inc.

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



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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR052507	Rev. 01	Initial issue of report	Feb. 03, 2021



SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.1	2.1049 15.403(i)	6dB, 26dB and 99% Occupied Bandwidth	> 500kHz	Pass	-
3.2	15.407(a)	Maximum Conducted Output Power	15.407(a)(1)(iii) 15.407(a)(3)	Pass	-
3.3	15.407(a)	Power Spectral Density	15.407(a)(1)(iii) 15.407(a)(3)	Pass	-
3.4	15.407(b)	Unwanted Emissions	15.407(b)(4)(i) &15.209(a)	Pass	Under limit 0.87 dB at 5149.987 MHz
3.5	15.207	AC Conducted Emission	15.207(a)	Pass	Under limit 17.39 dB at 18.92 MHz
3.6	15.407(c)	Automatically Discontinue Transmission	Discontinue Transmission	Pass	-
3.7	15.203 & 15.407(a)	Antenna Requirement	N/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

Telrad Networks Ltd
Industrial Center PO Box 6118 Lod, 711600 Israel

1.2 Manufacturer

Asiatelco
No.68 Huatuo Road, Building-8, Zhangjiang Hi-Tech Park, Pudong, Shanghai, PRC

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	CPE12350
Brand Name	Telrad
Model Name	775300
FCC ID	ARA-CPE12350
EUT supports Radios application	LTE Band 46
HW Version	P2
SW Version	KT2A_OTE7863_TRD_US_1.0.0.9
EUT Stage	Identical Prototype



1.4 Product Specification of Equipment Under Test

Standards-related Product Specification	
Tx/Rx Frequency Range	LTE Band 46: 5157.5 MHz ~ 5247.5 MHz 5727.5 MHz ~ 5847.5 MHz
Maximum Output Power to Antenna	<5157.5 MHz ~ 5247.5 MHz > 5M: 14.13 dBm / 0.0259 W 10M: 14.18 dBm / 0.0262 W 15M: 14.15 dBm / 0.0260 W 20M: 14.19 dBm / 0.0262 W <5727.5 MHz ~ 5847.5 MHz > 5M: 14.95 dBm / 0.0313 W 10M: 14.96 dBm / 0.0313 W 15M: 14.88 dBm / 0.0308 W 20M: 14.85 dBm / 0.0305 W
99% Occupied Bandwidth	<5157.5 MHz ~ 5247.5 MHz > 5M : 5.75 MHz 10M : 9.80 MHz 15M : 14.06 MHz 20M : 18.38 MHz <5727.5 MHz ~ 5847.5 MHz > 5M : 5.73 MHz 10M : 9.80 MHz 15M : 14.06 MHz 20M : 18.38 MHz
Support Bandwidth	5MHz / 10MHz / 15MHz / 20MHz
Type of Modulation	QPSK / 16QAM / 64QAM / 256QAM (Downlink Only)
Antenna Type / Gain	Fixed Internal Antenna <5157.5 MHz ~ 5247.5 MHz > gain 21.0 dBi <5727.5 MHz ~ 5847.5 MHz > gain 21.0 dBi

Remark:

1. The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.
2. Only full RB is tested by manufacturer request.
3. The manufacturer declared the device is fixed point to point access point

1.5 Modification of EUT

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



1.6 Testing Location

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

Test Firm	Sporton International (Kunshan) Inc.		
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.
	CO01-KS 03CH06-KS TH01-KS	CN1257	314309

1.7 Test Software

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

1.8 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

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: conducted emission (150 kHz to 30 MHz) and radiated 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 (Y plane) were recorded in this report.

2.1 Carrier Frequency and Channel

LTE Band 46 UNII-1 Test Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
20	Frequency	5165	5200	5240
15	Frequency	5165	5200	5240
10	Frequency	5160	5200	5245
5	Frequency	5157.5	5200	5247.5

LTE Band 46 UNII-3 Test Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
20	Frequency	5735	5788	5840
15	Frequency	5732.5	5788	5843
10	Frequency	5730	5788	5845
5	Frequency	5727.5	5788	5847.5



2.2 Test Mode

<For RSE and Conducted test items>

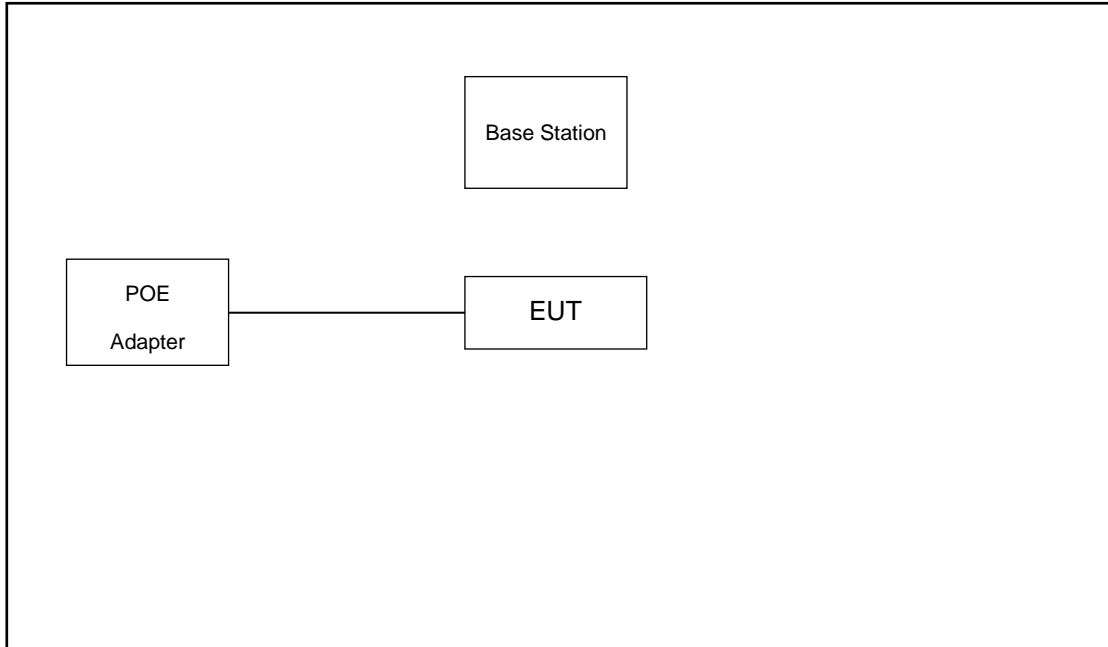
Ch. #		UNII-1 : 5157.5-5247.5 MHz				UNII-3 : 5727.5-5847.5 MHz			
		5M	10M	15M	20M	5M	10M	15M	20M
L	Low	5157.5	5160	5165	5165	5727.5	5730	5732.5	5735
M	Middle	5200	5200	5200	5200	5788	5788	5788	5788
H	High	5247.5	5245	5240	5240	5847.5	5845	5843	5840

<For AC Conducted Emission>

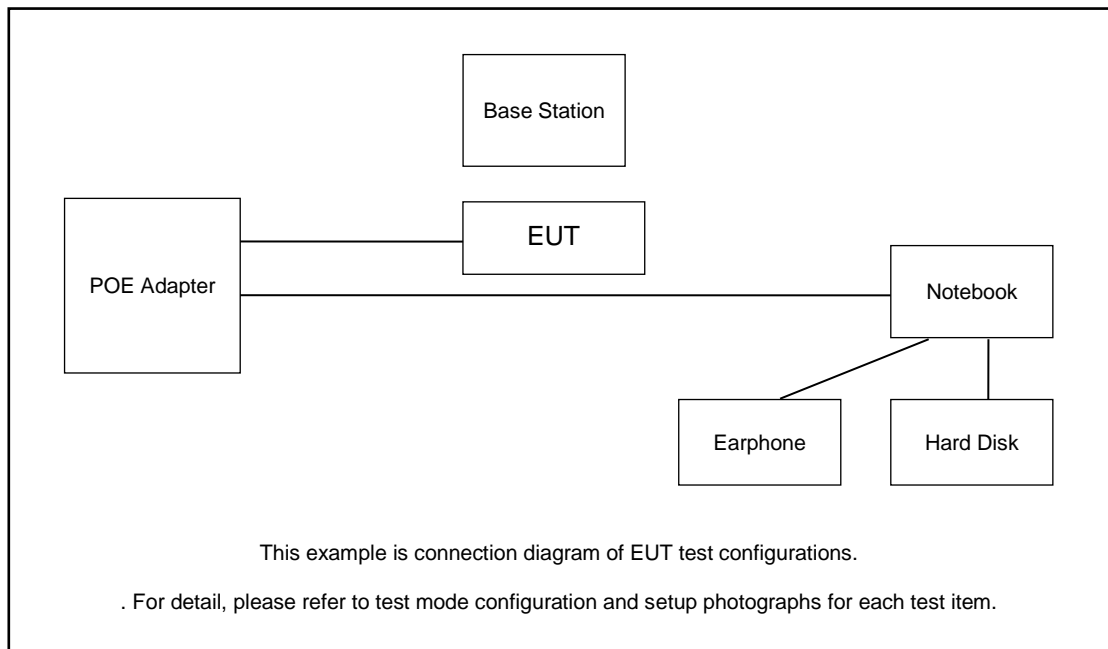
AC Conducted Emission	Mode 1 : Band 46 Link + POE Charge + POE RJ45 Data Link
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2.3 Connection Diagram of Test System

For Radiated Emission:



For AC Conducted Emission:





2.4 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	LTE Base Station	Anritus	MT8821C	N/A	N/A	Unshielded,1.8m
2.	Notebook	Lenovo	V130-15IKB005	N/A	N/A	AC I/P: Unshielded, 1.8 m DC O/P: Shielded, 1.8 m
3.	Hard Disk	Lenovo	F310	DoC	Shielded, 1.2m	N/A
4.	Earphone	Lenovo	P121	N/A	N/A	Unshielded,1.2m

2.5 EUT Operation Test Setup

The EUT was link with Base station and set to maximum transmit power during the testing.

At the same time, the EUT was attached to the POE Adapter and LAN link with Notebook for AC conduction mode.

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 6.7 dB.

$$\begin{aligned}
 \text{Offset(dB)} &= \text{RF cable loss(dB)}. \\
 &= 6.7 \text{ (dB)}
 \end{aligned}$$



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

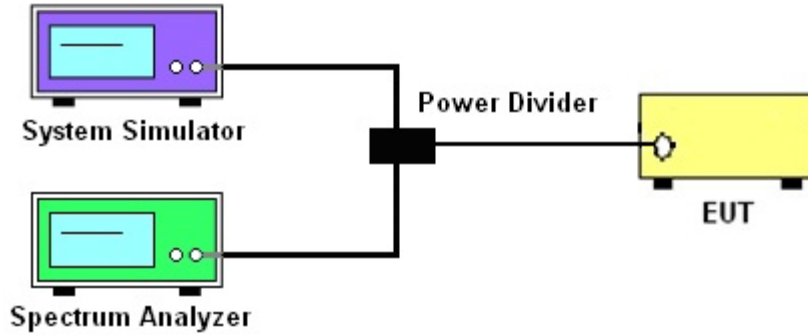
The measuring equipment is listed in the section 4 of this test report.

3.1.3 Test Procedures

- The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.

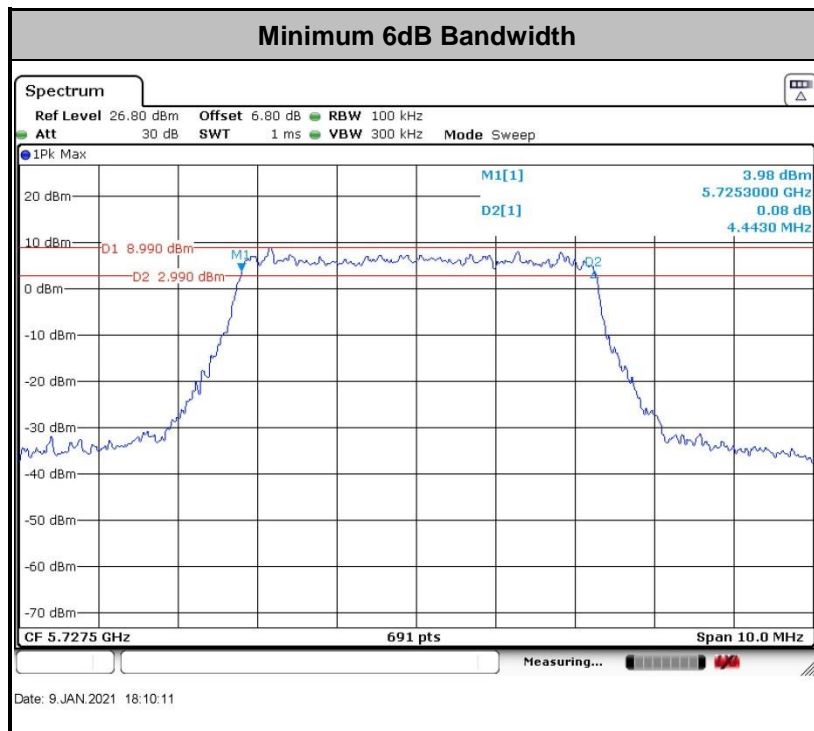
<input checked="" type="checkbox"/>	Section C) Bandwidth Measurement 1. Emission Bandwidth (EBW)
	<ol style="list-style-type: none"> Set RBW = approximately 1% of the emission bandwidth. Set the VBW > RBW. Detector = Peak. Trace mode = max hold Measure the maximum width of the emission that is 26 dB down from the peak of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%. For 99% Bandwidth Measurement, the spectrum analyzer's resolution bandwidth (RBW) is set 1MHz and set the Video bandwidth (VBW) $\geq 3 * RBW$. Measure and record the results in the test report.
<input checked="" type="checkbox"/>	Section C) Bandwidth Measurement 2. Minimum Emission Bandwidth for the band 5.725 - 5.85 GHz
	<ol style="list-style-type: none"> Set RBW = 100kHz. Set the VBW $\geq 3 * RBW$. Detector = Peak. Trace mode = max hold Measure the maximum width of the emission that is 6 dB down from the peak of the emission. Measure and record the results in the test report.

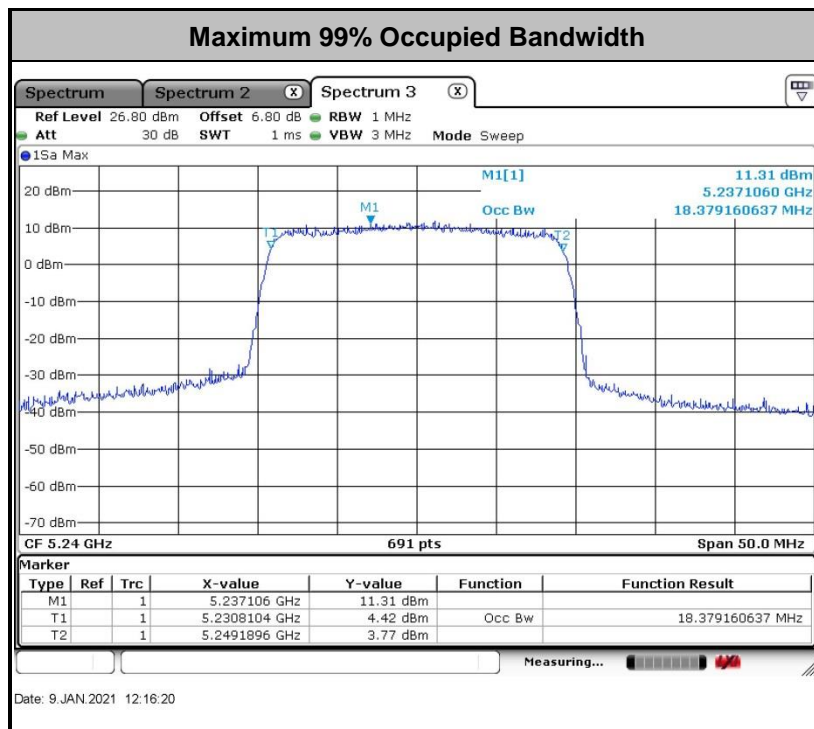
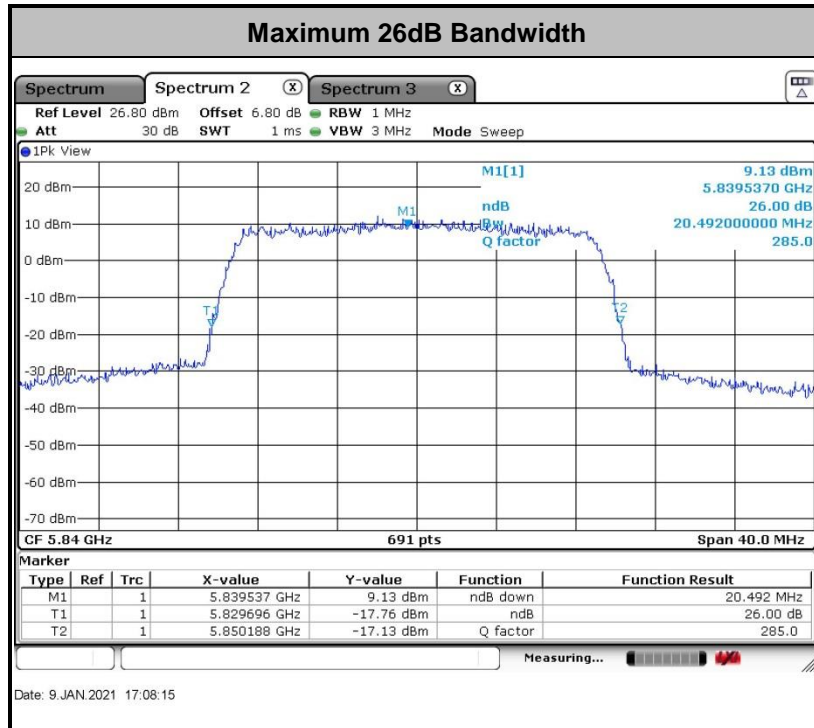
3.1.4 Test Setup



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

<FCC 14-30 CFR 15.407>

For UNII-1

For fixed point-to-point access points operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W.

Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power or maximum power spectral density. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum conducted output power and maximum power spectral density is required for each 1 dB of antenna gain in excess of 23 dBi.

For UNII-3

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, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power.

3.2.2 Measuring Instruments

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

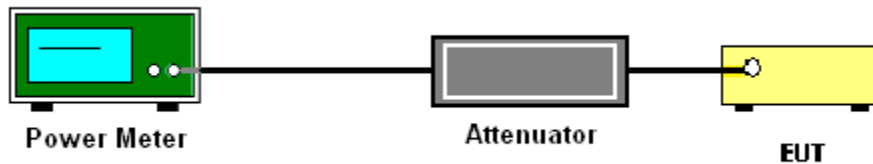
3.2.3 Test Procedures

The testing follows Method PM of 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

<FCC 14-30 CFR 15.407>

For UNII-1

For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band.

Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power or maximum power spectral density. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum conducted output power and maximum power spectral density is required for each 1 dB of antenna gain in excess of 23 dBi.

For UNII-3

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

If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power.

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.

For devices operating in the band 5150 – 5250 MHz

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.

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 = 1 MHz.
- Set VBW \geq 3 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.
- 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.

For devices operating in the band 5725 - 5850 MHz

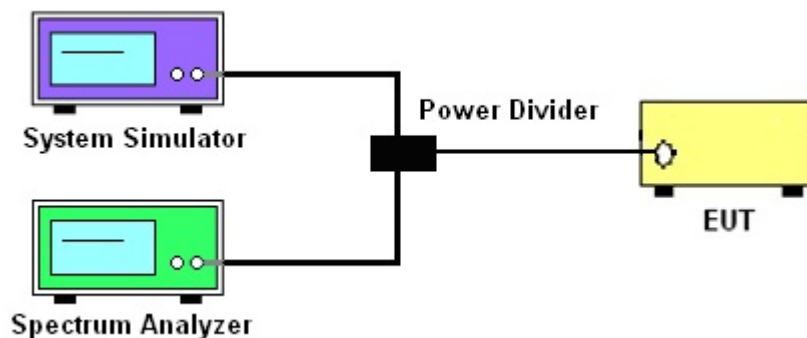
1. The RF output of EUT was connected to the spectrum analyzer by a low loss cable.
2. Each plot has already offset with cable loss, and attenuator loss. Measure the PPSD and record it.

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 = 300 kHz.
- 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.
- 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.

3.3.4 Test Setup

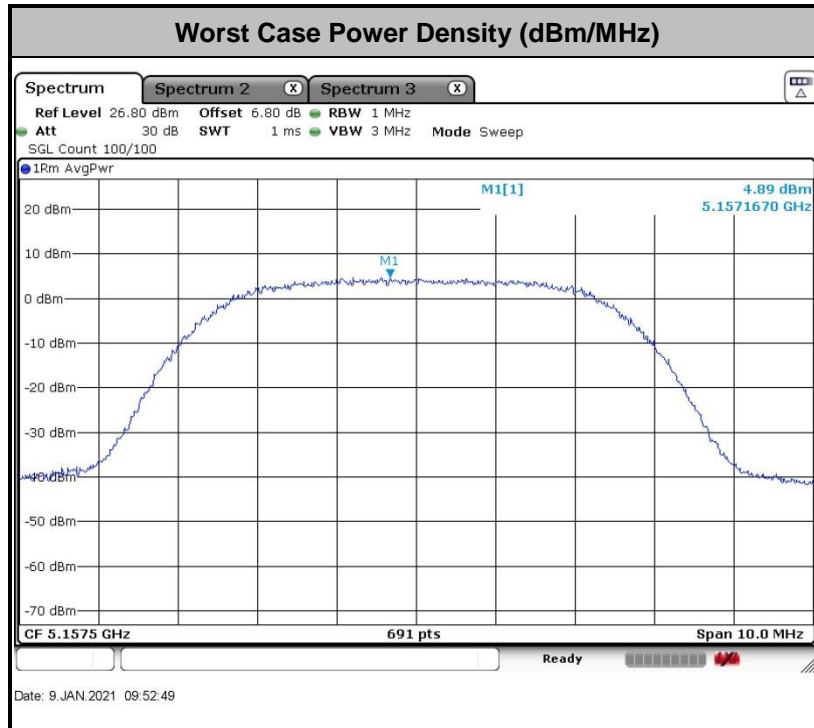




3.3.5 Test Result of Power Spectral Density

Please refer to Appendix A.

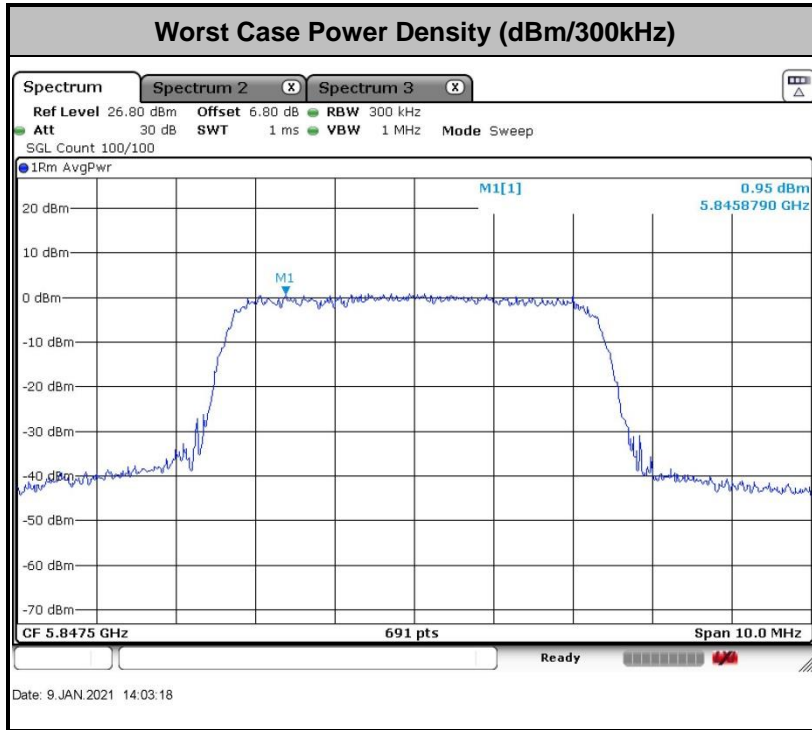
For devices operating in the bands 5150 – 5250 MHz



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



For devices operating in the band 5725 - 5850 MHz



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



3.4 Unwanted Emissions Measurement

This section as specified in FCC Part 15.407(b) is to measure unwanted emissions through radiated measurement for band edge spurious emissions and out of band emissions measurement. The unwanted emissions shall comply with 15.407(b)(1) to (6), and restricted bands per FCC Part15.205.

3.4.1 Limit of Unwanted Emissions

- (1) For transmitters operating in the 5150-5250MHz band: all emissions outside of the 5150-5350 MHz band shall not exceed an EIRP of -27dBm/MHz.
- (2) For transmitters operating in the 5725-5850MHz 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.
- (3) Unwanted spurious emissions fallen in restricted bands per FCC Part15.205 shall comply with the general field strength limits set forth in § 15.209 as below table,

Frequency (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	68.2

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

- 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 ≥ 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 ≥ 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.

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

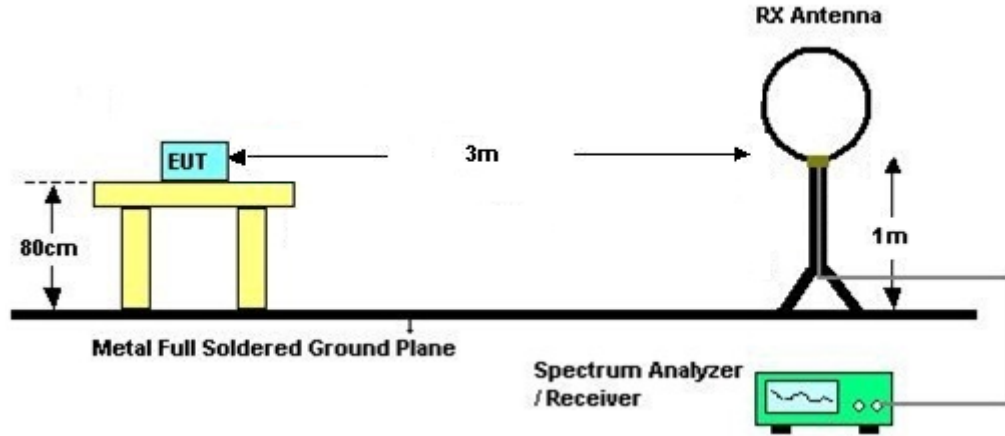


polarization and vertical polarization of the antenna.

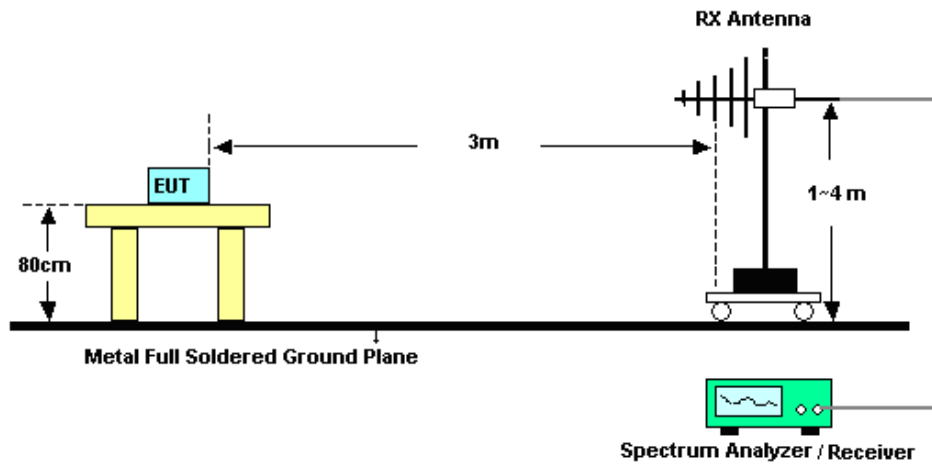
5. For each suspected emission, the EUT was arranged to its worst case and then adjust the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading.
6. For testing below 1GHz, if the emission level of the EUT in peak mode was 3 dB lower than the limit specified, 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 average 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

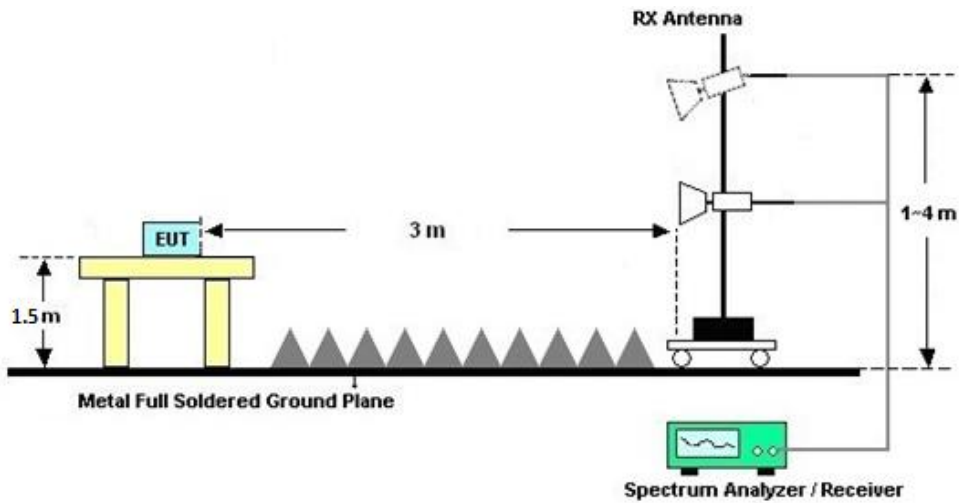
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



3.4.5 Test Results of Radiated Spurious 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 per 15.31(o) was not reported.

3.4.6 Test Result of Radiated Spurious at Band Edges

Please refer to Appendix B and C.

3.4.7 Duty Cycle

Please refer to Appendix D.

3.4.8 Test Result of Radiated Spurious Emissions (30MHz ~ 10th Harmonic)

Please refer to Appendix B and 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.

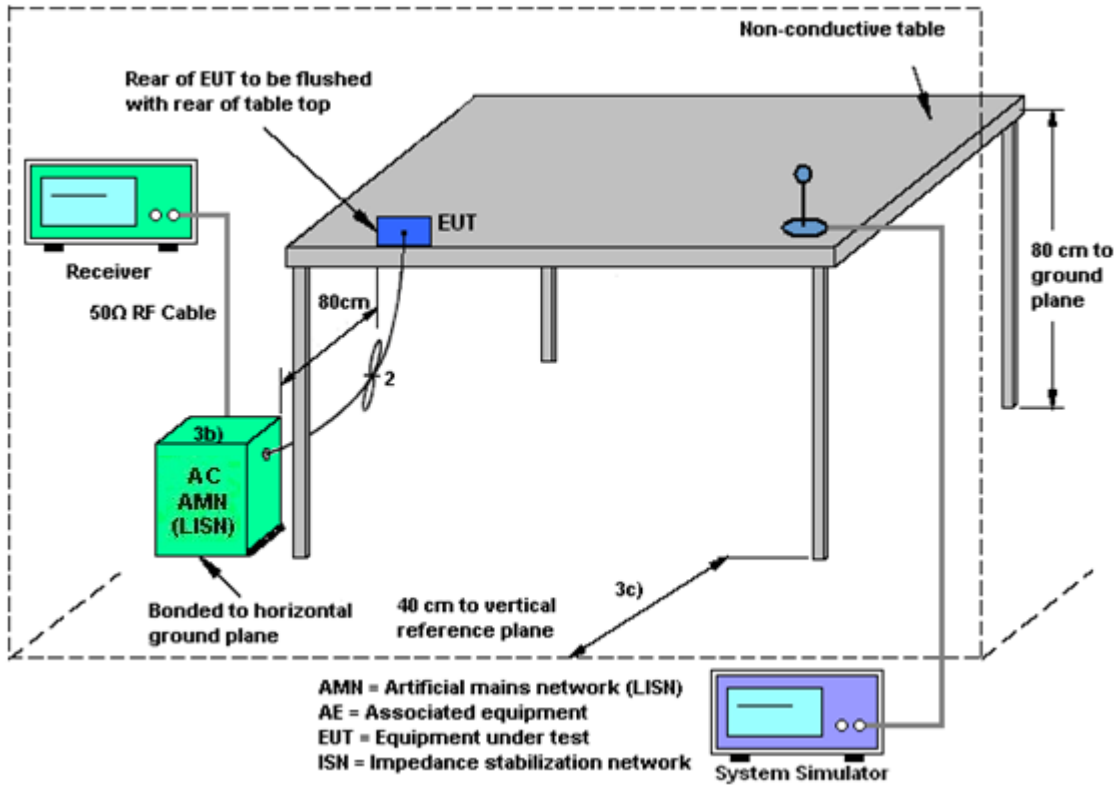
3.5.2 Measuring Instruments

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 Automatically Discontinue Transmission

3.6.1 Limit of Automatically Discontinue Transmission

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

3.6.2 Measuring Instruments

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

3.6.3 Test Result of Automatically Discontinue Transmission

While the EUT is not transmitting any information, the EUT can automatically discontinue transmission and become standby mode for power saving. The EUT can detect the controlling signal of ACK message transmitting from remote device and verify whether it shall resend or discontinue transmission.



3.7 Antenna Requirements

3.7.1 Standard Applicable

For UNII-1

Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power or maximum power spectral density. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum conducted output power and maximum power spectral density is required for each 1 dB of antenna gain in excess of 23 dBi.

For UNII-3

Fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power.

3.7.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.



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	Nov. 01, 2020	Jan. 09, 2021	Oct. 31, 2021	Conducted (TH01-KS)
System Simulator	R&S	CMW500	139342	2G/3G/4G	Jan. 07, 2021	Jan. 09, 2021	Jan. 06, 2022	Conducted (TH01-KS)
EMI Test Receiver	Keysight	N9038A	MY56400004	3Hz~8.5GHz;Max 30dBm	Oct. 17, 2020	Jan. 09, 2021	Oct. 16, 2021	Radiation (03CH06-KS)
EXA Spectrum Analyzer	Keysight	N9010A	MY55150208	10Hz~44GHz	Apr. 14, 2020	Jan. 09, 2021	Apr. 13, 2021	Radiation (03CH06-KS)
Loop Antenna	R&S	HFH2-Z2	100321	9kHz~30MHz	Nov. 01, 2020	Jan. 09, 2021	Oct. 31, 2021	Radiation (03CH06-KS)
Bilog Antenna	TeseQ	CBL6111D	49921	30MHz~1GHz	May 29, 2020	Jan. 09, 2021	May 28, 2021	Radiation (03CH06-KS)
Double Ridge Horn Antenna	ETS-Lindgren	3117	00218652	1GHz~18GHz	Apr. 27, 2020	Jan. 09, 2021	Apr. 26, 2021	Radiation (03CH06-KS)
SHF-EHF Horn	Com-power	AH-840	101115	18GHz~40GHz	Jun. 05, 2020	Jan. 09, 2021	Jun. 04, 2021	Radiation (03CH06-KS)
Amplifier	SONOMA	310N	187289	9KHz ~1GHZ	Apr. 14, 2020	Jan. 09, 2021	Apr. 13, 2021	Radiation (03CH06-KS)
Amplifier	MITEQ	TTA1840-35-HG	2014749	18~40GHz	Jun. 12, 2020	Jan. 09, 2021	Jun. 11, 2021	Radiation (03CH06-KS)
Amplifier	MITEQ	AMF-7D-00101800-30-10P	2025788	1Ghz-18Ghz	Aug. 16, 2020	Jan. 09, 2021	Aug. 15, 2021	Radiation (03CH06-KS)
Amplifier	Keysight	83017A	MY53270203	500MHz~26.5G Hz	Apr. 15, 2020	Jan. 09, 2021	Apr. 14, 2021	Radiation (03CH06-KS)
AC Power Source	Chroma	61601	F104090004	N/A	NCR	Jan. 09, 2021	NCR	Radiation (03CH06-KS)
Turn Table	ChamPro	EM 1000-T	060762-T	0~360 degree	NCR	Jan. 09, 2021	NCR	Radiation (03CH06-KS)
Antenna Mast	ChamPro	EM 1000-A	060762-A	1 m~4 m	NCR	Jan. 09, 2021	NCR	Radiation (03CH06-KS)
EMI Receiver	R&S	ESC17	100768	9kHz~7GHz;	Apr. 14, 2020	Aug. 17, 2020	Apr. 13, 2021	Conduction (CO01-KS)
AC LISN (for auxiliary equipment)	MessTec	AN3016	060103	9kHz~30MHz	Oct. 18, 2019	Aug. 17, 2020	Oct. 17, 2020	Conduction (CO01-KS)
AC LISN	MessTec	AN3016	060105	9kHz~30MHz	Oct. 28, 2019	Aug. 17, 2020	Oct. 27, 2020	Conduction (CO01-KS)
AC Power Source	Chroma	61602	ABP000000811	AC 0V~300V, 45Hz~1000Hz	Oct. 18, 2019	Aug. 17, 2020	Oct. 17, 2020	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 Emission Measurement (150kHz ~ 30MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	2.94dB
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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
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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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Appendix A. Conducted Test Results

Report Number : FR052507

Test Engineer:	Albert Shi	Temperature:	21~25	°C
Test Date:	2021/1/9	Relative Humidity:	51~54	%

TEST RESULTS DATA
26dB and 99% OBW

Band I											
Mod.	NTX	CH.	Freq. (MHz)	99% Bandwidth (MHz) QPSK	99% Bandwidth (MHz) 16QAM	99% Bandwidth (MHz) 64QAM	26 dB Bandwidth (MHz) QPSK	26 dB Bandwidth (MHz) 16QAM	26 dB Bandwidth (MHz) 64QAM		
5M	1	46865	5157.5	5.75	5.63	5.59	7.31	6.87	6.89		
5M	1	47290	5200	5.72	5.70	5.70	7.16	7.06	6.95		
5M	1	47765	5247.5	5.72	5.70	5.70	7.02	7.06	7.05		
10M	1	46890	5160	9.80	9.80	9.77	11.32	11.29	11.35		
10M	1	47290	5200	9.77	9.77	9.77	11.32	11.35	11.29		
10M	1	47740	5245	9.77	9.77	9.77	11.32	11.43	11.35		
15M	1	46940	5165	14.00	14.00	14.00	15.67	15.80	15.63		
15M	1	47290	5200	14.00	14.00	14.06	15.63	15.72	15.76		
15M	1	47690	5240	14.00	14.00	14.00	15.72	15.72	15.63		
20M	1	46940	5165	18.31	18.31	18.31	20.26	20.32	20.32		
20M	1	47290	5200	18.31	18.31	18.38	20.32	20.15	20.26		
20M	1	47690	5240	18.23	18.38	18.38	20.26	20.32	20.26		

TEST RESULTS DATA
Power Spectral Density

FCC Band I											
Mod.	Freq. (MHz)	Ntx	CH.	Duty Factor(dB)	QPSK	16QAM	64QAM	Average PSD Limit (dBm/MHz)	DG (dBi)	-	Pass/Fail
5M	5157.5	1	46865	2.22	7.11	6.45	6.57	17.00	21.00		Pass
5M	5200	1	47290	2.22	6.97	6.67	6.70	17.00	21.00		Pass
5M	5247.5	1	47765	2.22	7.06	6.89	7.04	17.00	21.00		Pass
10M	5160	1	46890	2.22	4.36	4.53	4.59	17.00	21.00		Pass
10M	5200	1	47290	2.22	4.45	4.69	4.59	17.00	21.00		Pass
10M	5245	1	47740	2.22	4.50	4.55	4.36	17.00	21.00		Pass
15M	5165	1	46940	2.22	2.63	2.57	2.69	17.00	21.00		Pass
15M	5200	1	47290	2.22	2.88	2.56	2.46	17.00	21.00		Pass
15M	5240	1	47690	2.22	2.71	2.96	2.72	17.00	21.00		Pass
20M	5165	1	46940	2.22	1.79	1.82	1.65	17.00	21.00		Pass
20M	5200	1	47290	2.22	1.86	1.90	1.80	17.00	21.00		Pass
20M	5240	1	47690	2.22	1.73	1.74	1.76	17.00	21.00		Pass

TEST RESULTS DATA
Average Power Table

FCC Band I									
Mod.	CH.	Freq. (MHz)	QPSK	16QAM	64QAM	FCC Conducted Power Limit (dBm)	DG (dBi)		Pass/Fail
5M	46865	5157.5	14.02	14.13	14.08	30.00	21.00		Pass
5M	47290	5200	14.03	14.05	14.06	30.00	21.00		Pass
5M	47765	5247.5	14.06	14.08	14.12	30.00	21.00		Pass
10M	46890	5160	14.18	14.12	14.05	30.00	21.00		Pass
10M	47290	5200	14.06	14.05	14.03	30.00	21.00		Pass
10M	47740	5245	14.11	14.08	14.06	30.00	21.00		Pass
15M	46940	5165	14.07	14.09	14.15	30.00	21.00		Pass
15M	47290	5200	14.15	14.12	14.13	30.00	21.00		Pass
15M	47690	5240	14.11	14.05	14.02	30.00	21.00		Pass
20M	46940	5165	14.08	14.15	14.05	30.00	21.00		Pass
20M	47290	5200	14.16	14.06	14.05	30.00	21.00		Pass
20M	47690	5240	14.19	14.13	14.09	30.00	21.00		Pass

TEST RESULTS DATA
26dB and 99% OBW

Band IV														
Mod.	Ntx	CH.	Freq. (MHz)	99% Bandwidth (MHz)QPSK	99% Bandwidth (MHz)16QA M	99% Bandwidth (MHz)64QA M	26 dB Bandwidth (MHz)QPSK	26 dB Bandwidth (MHz)16QA M	26 dB Bandwidth (MHz)64QA M	6 dB Bandwidth (MHz)QPSK	6 dB Bandwidth (MHz)16QA M	6 dB Bandwidth (MHz)64QA M		
5M	1	L	5727.5	5.72	5.72	5.73	7.02	6.93	7.06	4.44	4.47	4.49		
5M	1	M	5788	5.70	5.72	5.72	6.98	4.47	4.50	4.47	4.47	4.50		
5M	1	H	5847.5	5.70	5.70	5.70	6.93	6.92	6.86	4.47	4.50	4.49		
10M	1	L	5730	9.80	9.73	9.77	11.26	11.26	11.26	8.94	8.94	8.94		
10M	1	M	5788	9.77	9.73	9.77	11.26	11.38	11.35	8.97	8.97	8.97		
10M	1	H	5845	9.73	9.77	9.73	11.23	11.20	11.26	8.97	8.97	9.00		
15M	1	L	5732.5	14.00	14.00	14.00	15.85	15.80	15.72	13.50	13.46	13.46		
15M	1	M	5788	14.00	14.06	14.00	15.72	15.67	15.85	13.47	13.47	13.47		
15M	1	H	5843	14.00	14.00	14.00	15.63	15.76	15.72	13.46	13.46	13.46		
20M	1	L	5735	18.38	18.38	18.38	20.20	20.32	20.32	17.95	17.89	17.95		
20M	1	M	5788	18.38	18.38	18.38	20.32	20.32	20.20	17.89	17.89	17.95		
20M	1	H	5840	18.38	18.38	18.38	20.26	20.26	20.49	17.95	17.95	17.95		

TEST RESULTS DATA
Power Spectral Density

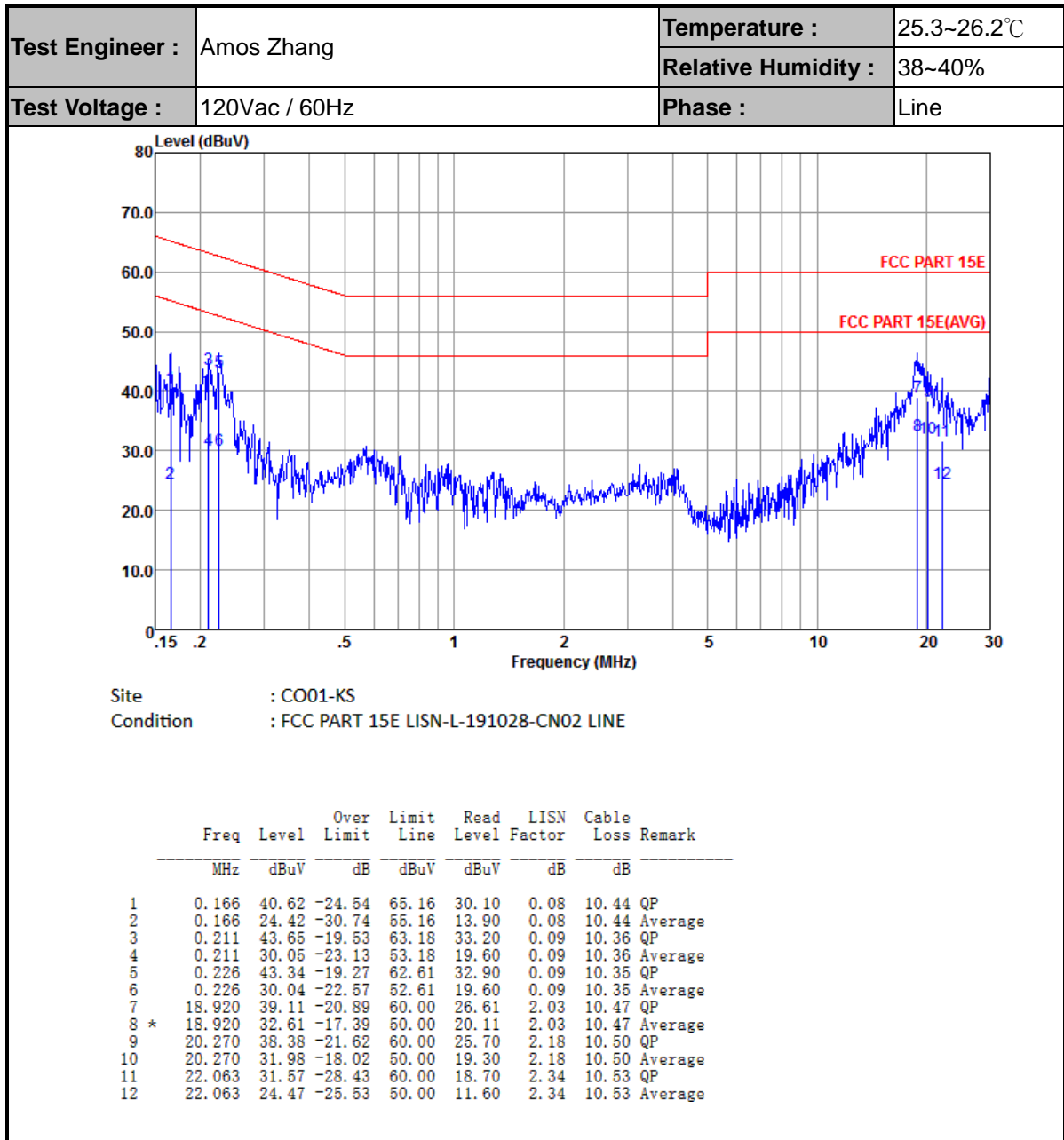
FCC Band IV											
Mod.	Freq. (MHz)	NTX	CH.	10log (500kHz /RBW) Factor (dB)	QPSK Average PSD (dBm/500kHz)	16QAM Average PSD (dBm/500kHz)	64QAM Average PSD (dBm/500kHz)	Average PSD Limit (dBm/500kHz)	DG (dBi)	-	Pass/Fail
5M	5727.5	1	L	2.22	5.19	5.29	5.31	30.00	21.00		Pass
5M	5788	1	M	2.22	5.25	5.21	5.10	30.00	21.00		Pass
5M	5847.5	1	H	2.22	4.89	5.17	5.39	30.00	21.00		Pass
10M	5730	1	L	2.22	2.05	1.87	2.06	30.00	21.00		Pass
10M	5788	1	M	2.22	1.94	1.82	1.83	30.00	21.00		Pass
10M	5845	1	H	2.22	1.62	1.57	1.58	30.00	21.00		Pass
15M	5732.5	1	L	2.22	-0.01	0.07	-0.16	30.00	21.00		Pass
15M	5788	1	M	2.22	-0.13	-0.18	0.02	30.00	21.00		Pass
15M	5843	1	H	2.22	-0.33	-0.42	-0.42	30.00	21.00		Pass
20M	5735	1	L	2.22	-0.81	-1.04	-1.19	30.00	21.00		Pass
20M	5788	1	M	2.22	-1.01	-1.16	-0.91	30.00	21.00		Pass
20M	5840	1	H	2.22	-1.25	-1.42	-1.28	30.00	21.00		Pass

TEST RESULTS DATA
Average Power Table

FCC Band IV									
Mod.	Freq. (MHz)	NTX	CH.	QPSK	16QAM	64QAM	Conducted power Limit (dBm/MHz)	DG (dBi)	Pass/Fail
5M	5727.5	1	L	14.76	14.89	14.85	30.00	21.00	Pass
5M	5788	1	M	14.89	14.77	14.85	30.00	21.00	Pass
5M	5847.5	1	H	14.95	14.86	14.89	30.00	21.00	Pass
10M	5730	1	L	14.86	14.75	14.82	30.00	21.00	Pass
10M	5788	1	M	14.88	14.77	14.96	30.00	21.00	Pass
10M	5845	1	H	14.78	14.86	14.75	30.00	21.00	Pass
15M	5732.5	1	L	14.49	14.56	14.57	30.00	21.00	Pass
15M	5788	1	M	14.85	14.75	14.74	30.00	21.00	Pass
15M	5843	1	H	14.86	14.88	14.71	30.00	21.00	Pass
20M	5735	1	L	14.32	14.44	14.29	30.00	21.00	Pass
20M	5788	1	M	14.82	14.76	14.72	30.00	21.00	Pass
20M	5840	1	H	14.83	14.85	14.76	30.00	21.00	Pass

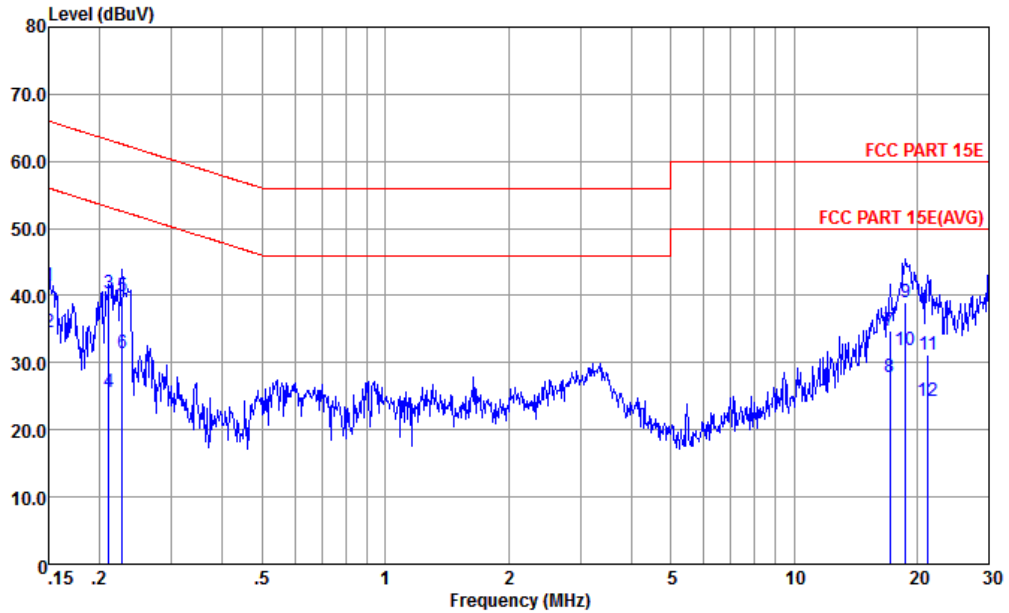


Appendix B. AC Conducted Emission Test Results





Test Engineer :	Amos Zhang	Temperature :	25.3~26.2°C
		Relative Humidity :	38~40%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral



Site : CO01-KS
 Condition : FCC PART 15E LISN-N-191028-CN02 NEUTRAL

	Freq	Level	Over	Limit	Read	LISN	Cable	Remark
	MHz	dBuV	Limit	Line	Level	Factor	Loss	
			dB	dBuV	dBuV	dB	dB	
1	0.150	41.53	-24.47	66.00	30.90	0.15	10.48	QP
2	0.150	34.53	-21.47	56.00	23.90	0.15	10.48	Average
3	0.211	40.43	-22.75	63.18	29.90	0.17	10.36	QP
4	0.211	25.73	-27.45	53.18	15.20	0.17	10.36	Average
5	0.227	39.82	-22.75	62.57	29.29	0.18	10.35	QP
6	0.227	31.42	-21.15	52.57	20.89	0.18	10.35	Average
7	17.199	34.86	-25.14	60.00	22.10	2.32	10.44	QP
8	17.199	27.96	-22.04	50.00	15.20	2.32	10.44	Average
9	18.721	38.96	-21.04	60.00	25.90	2.59	10.47	QP
10 *	18.721	31.86	-18.14	50.00	18.80	2.59	10.47	Average
11	21.260	31.24	-28.76	60.00	17.80	2.92	10.52	QP
12	21.260	24.34	-25.66	50.00	10.90	2.92	10.52	Average



Appendix C. Radiated Spurious Emission

Band 1 - 5150~5250MHz

WIFI 802. Band46_ 5M (Band Edge @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
Band46_ 5157.5 5M LOW		5108.32	54.82	-19.18	74	41.65	34.9	11.01	32.74	174	1	P	H
		5150	47.29	-6.71	54	34.06	34.93	11.02	32.72	174	1	A	H
		5158	103.59	-	-	90.34	34.95	11.02	32.72	174	1	P	H
		5158	98.11	-	-	84.86	34.95	11.02	32.72	174	1	A	H
		5149.92	56.65	-17.35	74	43.42	34.93	11.02	32.72	300	48	P	V
		5150	48.26	-5.74	54	35.03	34.93	11.02	32.72	300	48	A	V
		5158	105.29	-	-	92.04	34.95	11.02	32.72	300	48	P	V
		5158	100.24	-	-	86.99	34.95	11.02	32.72	300	48	A	V
Band46_ 5200 5M MID		5104.64	54.81	-19.19	74	41.66	34.88	11.01	32.74	131	360	P	H
		5104.96	45.92	-8.08	54	32.77	34.88	11.01	32.74	131	360	A	H
		5200	101.95	-	-	88.64	34.98	11.03	32.7	131	360	P	H
		5200	96.46	-	-	83.15	34.98	11.03	32.7	131	360	A	H
		5387.76	53.73	-20.27	74	39.95	35.16	11.25	32.63	131	360	P	H
		5397.66	44.99	-9.01	54	31.18	35.17	11.27	32.63	131	360	A	H
		5104.48	55.07	-18.93	74	41.92	34.88	11.01	32.74	367	0	P	V
		5101.92	45.79	-8.21	54	32.64	34.88	11.01	32.74	367	0	A	V
		5200	103.87	-	-	90.56	34.98	11.03	32.7	367	0	P	V
		5200	97.76	-	-	84.45	34.98	11.03	32.7	367	0	A	V
		5378.4	53.22	-20.78	74	39.44	35.16	11.25	32.63	367	0	P	V
		5395.68	44.99	-9.01	54	31.18	35.17	11.27	32.63	367	0	A	V



Band46_ 5247.5 5M HIGH		5391.9	55.29	-18.71	74	41.51	35.16	11.25	32.63	122	0	P	H
		5394.78	45.04	-8.96	54	31.23	35.17	11.27	32.63	122	0	A	H
		5248	104.95	-	-	91.52	35.03	11.09	32.69	122	0	P	H
		5248	99.49	-	-	86.06	35.03	11.09	32.69	122	0	A	H
		5397.66	54.24	-19.76	74	40.43	35.17	11.27	32.63	362	0	P	V
		5380.56	45.02	-8.98	54	31.24	35.16	11.25	32.63	362	0	A	V
		5248	110.3	-	-	96.87	35.03	11.09	32.69	362	0	P	V
		5248	105.28	-	-	91.85	35.03	11.09	32.69	362	0	A	V
Remark	<ol style="list-style-type: none"> No other spurious found. All results are PASS against Peak and Average limit line. 												



Band 1 5150~5250MHz

WIFI 802. Band46_ 5M (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
Band46_ 5157.5 5M LOW		10313.31	44.2	-24.1	68.3	53.05	37.73	16.01	62.59	300	0	P	H
		10313.31	43.52	-24.78	68.3	52.37	37.73	16.01	62.59	100	360	P	V
Band46_ 5200 5M MID		10398.39	47.78	-20.52	68.3	56.54	37.8	16.08	62.64	300	0	P	H
		10398.39	42.67	-25.63	68.3	51.43	37.8	16.08	62.64	100	360	P	V
Band46_ 5247.5 5M HIGH		10493.49	46.02	-22.28	68.3	54.7	37.86	16.15	62.69	300	0	P	H
		10493.49	43.9	-24.4	68.3	52.58	37.86	16.15	62.69	100	360	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 1 5150~5250MHz
WIFI 802. Band46_ 10M (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
Band46_ 5160 10M LOW		5147.68	55.05	-18.95	74	41.82	34.93	11.02	32.72	320	0	P	H
		5149.925	48.33	-5.67	54	35.1	34.93	11.02	32.72	320	0	A	H
		5158	102.43	-	-	89.18	34.95	11.02	32.72	320	0	P	H
		5158	95.07	-	-	81.82	34.95	11.02	32.72	320	0	A	H
		5149.6	59.83	-14.17	74	46.6	34.93	11.02	32.72	190	0	P	V
		5149.876	51.6	-2.4	54	38.37	34.93	11.02	32.72	190	0	A	V
		5158	106.72	-	-	93.47	34.95	11.02	32.72	190	0	P	V
		5158	100.67	-	-	87.42	34.95	11.02	32.72	190	0	A	V
Band46_ 5200 10M MID		5120.48	55.95	-18.05	74	42.77	34.9	11.01	32.73	131	360	P	H
		5101.28	45.96	-8.04	54	32.81	34.88	11.01	32.74	131	360	A	H
		5200	100.41	-	-	87.1	34.98	11.03	32.7	131	360	P	H
		5200	93.63	-	-	80.32	34.98	11.03	32.7	131	360	A	H
		5353.02	54.01	-19.99	74	40.32	35.12	11.21	32.64	131	360	P	H
		5398.56	44.94	-9.06	54	31.13	35.17	11.27	32.63	131	360	A	H
		5117.76	55.19	-18.81	74	42.01	34.9	11.01	32.73	351	360	P	V
		5110.24	45.66	-8.34	54	32.49	34.9	11.01	32.74	351	360	A	V
		5200	101.84	-	-	88.53	34.98	11.03	32.7	351	360	P	V
		5200	95.61	-	-	82.3	34.98	11.03	32.7	351	360	A	V
		5393.16	53.81	-20.19	74	40.03	35.16	11.25	32.63	351	360	P	V
		5383.8	44.97	-9.03	54	31.19	35.16	11.25	32.63	351	360	A	V



Band46_ 5245 10M HIGH		5373.54	54	-20	74	40.27	35.14	11.23	32.64	120	358	P	H
		5394.42	45.13	-8.87	54	31.35	35.16	11.25	32.63	120	358	A	H
		5242	105	-	-	91.57	35.03	11.09	32.69	120	358	P	H
		5242	97.71	-	-	84.28	35.03	11.09	32.69	120	358	A	H
		5388.12	53.73	-20.27	74	39.95	35.16	11.25	32.63	360	0	P	V
		5392.62	45.05	-8.95	54	31.27	35.16	11.25	32.63	360	0	A	V
		5242	109.17	-	-	95.74	35.03	11.09	32.69	360	0	P	V
		5242	102.05	-	-	88.62	35.03	11.09	32.69	360	0	A	V
Remark	<ol style="list-style-type: none"> No other spurious found. All results are PASS against Peak and Average limit line. 												



Band 1 5150~5250MHz

WIFI 802. Band46_ 10M (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
Band46_ 5160 10M LOW		10318.32	42.76	-25.54	68.3	51.61	37.73	16.01	62.59	300	0	P	H
		10318.32	40.85	-27.45	68.3	49.7	37.73	16.01	62.59	100	360	P	V
Band46_ 5200 10M MID		10398.39	46.59	-21.71	68.3	55.35	37.8	16.08	62.64	300	0	P	H
		10398.39	43.82	-24.48	68.3	52.58	37.8	16.08	62.64	100	360	P	V
Band46_ 5245 10M HIGH		10488.49	46.24	-22.06	68.3	54.92	37.86	16.15	62.69	300	0	P	H
		10488.49	44.47	-23.83	68.3	53.15	37.86	16.15	62.69	100	360	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 1 5150~5250MHz
WIFI 802. Band46_ 15M (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
Band46_ 5165 15M LOW		5149.12	55.61	-18.39	74	42.38	34.93	11.02	32.72	168	360	P	H
		5149.44	47.54	-6.46	54	34.31	34.93	11.02	32.72	168	360	A	H
		5170	100.38	-	-	87.12	34.95	11.02	32.71	168	360	P	H
		5170	93.52	-	-	80.26	34.95	11.02	32.71	168	360	A	H
		5149.98	58.74	-15.26	74	45.51	34.93	11.02	32.72	192	0	P	V
		5149.987	50.31	-3.69	54	37.08	34.93	11.02	32.72	192	0	A	V
		5164	105.09	-	-	91.84	34.95	11.02	32.72	192	0	P	V
		5164	98.1	-	-	84.85	34.95	11.02	32.72	192	0	A	V
Band46_ 5200 15M MID		5105.92	55.01	-18.99	74	41.84	34.9	11.01	32.74	132	0	P	H
		5103.84	45.88	-8.12	54	32.73	34.88	11.01	32.74	132	0	A	H
		5200	99.43	-	-	86.12	34.98	11.03	32.7	132	0	P	H
		5200	91.85	-	-	78.54	34.98	11.03	32.7	132	0	A	H
		5356.62	54.76	-19.24	74	41.07	35.12	11.21	32.64	132	0	P	H
		5397.48	44.88	-9.12	54	31.07	35.17	11.27	32.63	132	0	A	H
		5135.04	55.48	-18.52	74	42.28	34.91	11.02	32.73	214	360	P	V
		5115.68	46.43	-7.57	54	33.26	34.9	11.01	32.74	214	360	A	V
		5200	98.83	-	-	85.52	34.98	11.03	32.7	214	360	P	V
		5200	92.04	-	-	78.73	34.98	11.03	32.7	214	360	A	V
		5380.92	54.18	-19.82	74	40.4	35.16	11.25	32.63	214	360	P	V
		5391.9	45.1	-8.9	54	31.32	35.16	11.25	32.63	214	360	A	V



Band46_ 5240 15M HIGH		5353.2	53.88	-20.12	74	40.19	35.12	11.21	32.64	121	0	P	H
		5397.66	45.07	-8.93	54	31.26	35.17	11.27	32.63	121	0	A	H
		5242	103.49	-	-	90.06	35.03	11.09	32.69	121	0	P	H
		5242	95.44	-	-	82.01	35.03	11.09	32.69	121	0	A	H
		5357.34	54.55	-19.45	74	40.86	35.12	11.21	32.64	116	360	P	V
		5393.7	45.01	-8.99	54	31.23	35.16	11.25	32.63	116	360	A	V
		5242	101.22	-	-	87.79	35.03	11.09	32.69	116	360	P	V
		5242	93.68	-	-	80.25	35.03	11.09	32.69	116	360	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 1 5150~5250MHz

WIFI 802. Band46_ 15M (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
Band46_ 5165 15M LOW		10328.33	44.2	-24.1	68.3	53.03	37.75	16.02	62.6	300	0	P	H
		10328.33	43.69	-24.61	68.3	52.52	37.75	16.02	62.6	100	360	P	V
Band46_ 5200 15M MID		10398.39	46.41	-21.89	68.3	55.17	37.8	16.08	62.64	300	0	P	H
		10398.39	44.08	-24.22	68.3	52.84	37.8	16.08	62.64	100	360	P	V
Band46_ 5240 15M HIGH		10478.47	45.8	-22.5	68.3	54.48	37.86	16.15	62.69	300	0	P	H
		10478.47	44.96	-23.34	68.3	53.64	37.86	16.15	62.69	100	360	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 1 5150~5250MHz
WIFI 802. Band46_ 20M (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
Band46_ 5165 20M LOW		5148.32	56.91	-17.09	74	43.68	34.93	11.02	32.72	168	2	P	H
		5149.98	49.65	-4.35	54	36.42	34.93	11.02	32.72	168	2	A	H
		5164	100.58	-	-	87.33	34.95	11.02	32.72	168	2	P	H
		5164	93.4	-	-	80.15	34.95	11.02	32.72	168	2	A	H
		5145.44	60.24	-13.76	74	47.01	34.93	11.02	32.72	191	0	P	V
		5149.987	53.13	-0.87	54	39.9	34.93	11.02	32.72	191	0	A	V
		5164	104.69	-	-	91.44	34.95	11.02	32.72	191	0	P	V
		5164	97.15	-	-	83.9	34.95	11.02	32.72	191	0	A	V
Band46_ 5200 20M MID		5137.12	55.87	-18.13	74	42.67	34.91	11.02	32.73	132	0	P	H
		5103.04	46.06	-7.94	54	32.91	34.88	11.01	32.74	132	0	A	H
		5200	99.04	-	-	85.73	34.98	11.03	32.7	132	0	P	H
		5200	91.28	-	-	77.97	34.98	11.03	32.7	132	0	A	H
		5390.46	54.81	-19.19	74	41.03	35.16	11.25	32.63	132	0	P	H
		5396.76	45.2	-8.8	54	31.39	35.17	11.27	32.63	132	0	A	H
		5130.24	56.23	-17.77	74	43.03	34.91	11.02	32.73	228	1	P	V
		5115.04	46.26	-7.74	54	33.09	34.9	11.01	32.74	228	1	A	V
		5200	99.48	-	-	86.17	34.98	11.03	32.7	228	1	P	V
		5200	91.2	-	-	77.89	34.98	11.03	32.7	228	1	A	V
		5364.36	55.09	-18.91	74	41.36	35.14	11.23	32.64	228	1	P	V
		5364.72	44.88	-9.12	54	31.15	35.14	11.23	32.64	228	1	A	V



Band46_ 5240 20M HIGH	5361.12	54.52	-19.48	74	40.79	35.14	11.23	32.64	121	0	P	H
	5399.1	45.38	-8.62	54	31.57	35.17	11.27	32.63	121	0	A	H
	5242	102.15	-	-	88.72	35.03	11.09	32.69	121	0	P	H
	5242	95.18	-	-	81.75	35.03	11.09	32.69	121	0	A	H
	5360.04	54.63	-19.37	74	40.94	35.12	11.21	32.64	117	0	P	V
	5378.76	45.16	-8.84	54	31.38	35.16	11.25	32.63	117	0	A	V
	5236	101.65	-	-	88.26	35.01	11.07	32.69	117	0	P	V
	5236	93.02	-	-	79.63	35.01	11.07	32.69	117	0	A	V
Remark	<ol style="list-style-type: none"> No other spurious found. All results are PASS against Peak and Average limit line. 											



Band 1 5150~5250MHz

WIFI 802. Band46_ 20M (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
Band46_ 5165 20M LOW		10328.33	44.5	-23.8	68.3	53.33	37.75	16.02	62.6	300	0	P	H
		10328.33	43.9	-24.4	68.3	52.73	37.75	16.02	62.6	100	360	P	V
Band46_ 5200 20M MID		10398.39	47.33	-20.97	68.3	56.09	37.8	16.08	62.64	300	0	P	H
		10398.39	44.54	-23.76	68.3	53.3	37.8	16.08	62.64	100	360	P	V
Band46_ 5240 20M HIGH		10478.47	47.1	-21.2	68.3	55.78	37.86	16.15	62.69	300	0	P	H
		10478.47	45.22	-23.08	68.3	53.9	37.86	16.15	62.69	100	360	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 4 - 5725~5850MHz

WIFI 802. Band46_ 5M (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
Band46_ 5727.5 5M LOW		5636	55.15	-13.15	68.3	40.68	35.4	11.74	32.67	245	44	P	H
		5675.6	55.39	-31.89	87.28	40.89	35.37	11.82	32.69	245	44	P	H
		5718.4	55.62	-54.83	110.45	41.07	35.32	11.95	32.72	245	44	P	H
		5724.8	95.03	-26.81	121.84	80.48	35.32	11.95	32.72	245	44	P	H
		5728	102.86	-	-	88.31	35.32	11.95	32.72	245	44	P	H
		5728	97.87	-	-	83.32	35.32	11.95	32.72	245	44	A	H
		5632	54.85	-13.45	68.3	40.43	35.38	11.7	32.66	138	275	P	V
		5695.2	54.25	-47.51	101.76	39.74	35.35	11.86	32.7	138	275	P	V
		5710.4	55.42	-52.79	108.21	40.89	35.34	11.91	32.72	138	275	P	V
		5724.8	93.9	-27.94	121.84	79.35	35.32	11.95	32.72	138	275	P	V
		5728	101.97	-	-	87.42	35.32	11.95	32.72	138	275	P	V
		5728	97.34	-	-	82.79	35.32	11.95	32.72	138	275	A	V



WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
Band46_5788 5M MID		5637.2	54.61	-13.69	68.3	40.14	35.4	11.74	32.67	235	42	P	H
		5668.8	54.83	-27.42	82.25	40.33	35.37	11.82	32.69	235	42	P	H
		5702	54.83	-51.03	105.86	40.28	35.34	11.91	32.7	235	42	P	H
		5721.6	53.4	-61.15	114.55	38.85	35.32	11.95	32.72	235	42	P	H
		5853.2	53.75	-61.25	115	39.22	35.22	12.12	32.81	235	42	P	H
		5859.6	54.74	-54.87	109.61	40.23	35.2	12.12	32.81	235	42	P	H
		5884.8	54.28	-43.74	98.02	39.78	35.2	12.12	32.82	235	42	P	H
		5977.2	54.45	-13.85	68.3	39.96	35.23	12.14	32.88	235	42	P	H
		5788	106.15	-	-	91.54	35.26	12.11	32.76	235	42	P	H
		5788	101.39	-	-	86.78	35.26	12.11	32.76	235	42	A	H
		5642	54.58	-13.72	68.3	40.11	35.4	11.74	32.67	135	279	P	V
		5679.2	54.47	-35.48	89.95	39.97	35.37	11.82	32.69	135	279	P	V
		5702	54.49	-51.37	105.86	39.94	35.34	11.91	32.7	135	279	P	V
		5721.2	54.18	-59.46	113.64	39.63	35.32	11.95	32.72	135	279	P	V
		5854.4	53.2	-59.07	112.27	38.69	35.2	12.12	32.81	135	279	P	V
		5860.4	54.96	-54.43	109.39	40.45	35.2	12.12	32.81	135	279	P	V
		5875.6	54.93	-49.92	104.85	40.43	35.2	12.12	32.82	135	279	P	V
		5980.8	55.58	-12.72	68.3	41.09	35.23	12.14	32.88	135	279	P	V
		5788	105.06	-	-	90.45	35.26	12.11	32.76	135	279	P	V
	5788	97.41	-	-	82.8	35.26	12.11	32.76	135	279	A	V	



WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
Band46_5847.5 5M HIGH		5850	99.06	-23.24	122.3	84.53	35.22	12.12	32.81	285	43	P	H
		5855.01	56.25	-54.65	110.9	41.74	35.2	12.12	32.81	285	43	P	H
		5897.6	54.48	-34.06	88.54	39.99	35.21	12.12	32.84	285	43	P	H
		5974.8	54.87	-13.43	68.3	40.38	35.23	12.14	32.88	285	43	P	H
		5848	102.62	-	-	88.09	35.22	12.12	32.81	285	43	P	H
		5848	96.18	-	-	81.65	35.22	12.12	32.81	285	43	A	H
		5850	97.93	-24.37	122.3	83.4	35.22	12.12	32.81	276	0	P	V
		5859.2	55.13	-54.59	109.72	40.62	35.2	12.12	32.81	276	0	P	V
		5901.2	54.72	-31.15	85.87	40.23	35.21	12.12	32.84	276	0	P	V
		5986	55.01	-13.29	68.3	40.52	35.23	12.14	32.88	276	0	P	V
		5848	101.29	-	-	86.76	35.22	12.12	32.81	276	0	P	V
		5848	96.19	-	-	81.66	35.22	12.12	32.81	276	0	A	V
	Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.											



Band 4 5725~5850MHz

WIFI 802. Band46_ 5M (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
Band46_ 5727.5 5M LOW		11454.45	56.06	-17.94	74	62.74	38.56	17.12	62.36	202	128	P	H
		11454.45	48.75	-5.25	54	55.43	38.56	17.12	62.36	202	128	A	H
		11454.45	48.27	-25.73	74	54.95	38.56	17.12	62.36	100	360	P	V
Band46_ 5788 5M MID		11576	54.39	-19.61	74	60.64	38.68	17.26	62.19	125	188	P	H
		11576	47.74	-6.26	54	53.99	38.68	17.26	62.19	125	188	A	H
		11576	48.59	-25.41	74	54.84	38.68	17.26	62.19	100	360	P	V
Band46_ 5847.5 5M HIGH		11694.69	55.74	-18.26	74	61.54	38.83	17.4	62.03	293	240	P	H
		11694.69	48.63	-5.37	54	54.43	38.83	17.4	62.03	293	240	A	H
		11694.69	48.72	-25.28	74	54.52	38.83	17.4	62.03	100	360	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



WIFI 802. Band46_ 10M (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
Band46_ 5730 10M LOW		5623.2	55.19	-13.11	68.3	40.77	35.38	11.7	32.66	148	2	P	H
		5667.6	54.88	-26.48	81.36	40.38	35.37	11.82	32.69	148	2	P	H
		5718	57.8	-52.54	110.34	43.25	35.32	11.95	32.72	148	2	P	H
		5724.8	85.92	-35.92	121.84	71.37	35.32	11.95	32.72	148	2	P	H
		5728	101.66	-	-	87.11	35.32	11.95	32.72	148	2	P	H
		5728	92.39	-	-	77.84	35.32	11.95	32.72	148	2	A	H
		5639.6	54.29	-14.01	68.3	39.82	35.4	11.74	32.67	134	274	P	V
		5683.6	55.52	-37.68	93.2	41.01	35.35	11.86	32.7	134	274	P	V
		5719.6	56.67	-54.12	110.79	42.12	35.32	11.95	32.72	134	274	P	V
		5724.8	86.57	-35.27	121.84	72.02	35.32	11.95	32.72	134	274	P	V
		5728	101.17	-	-	86.62	35.32	11.95	32.72	134	274	P	V
		5728	94.73	-	-	80.18	35.32	11.95	32.72	134	274	A	V



WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
Band46_5788 10M MID		5609.2	54.95	-13.35	68.3	40.56	35.37	11.66	32.64	234	40	P	H
		5674.4	54.47	-31.93	86.4	39.97	35.37	11.82	32.69	234	40	P	H
		5712.4	54.7	-54.07	108.77	40.17	35.34	11.91	32.72	234	40	P	H
		5723.6	53.31	-65.8	119.11	38.76	35.32	11.95	32.72	234	40	P	H
		5854	53.11	-60.07	113.18	38.6	35.2	12.12	32.81	234	40	P	H
		5860	54.83	-54.67	109.5	40.32	35.2	12.12	32.81	234	40	P	H
		5907.6	54.07	-27.07	81.14	39.57	35.21	12.13	32.84	234	40	P	H
		6000	54.25	-14.05	68.3	39.78	35.23	12.14	32.9	234	40	P	H
		5788	103.13	-	-	88.52	35.26	12.11	32.76	234	40	P	H
		5788	97.21	-	-	82.6	35.26	12.11	32.76	234	40	A	H
		5638.4	55.03	-13.27	68.3	40.56	35.4	11.74	32.67	133	280	P	V
		5677.6	54.4	-34.36	88.76	39.9	35.37	11.82	32.69	133	280	P	V
		5707.6	53.76	-53.67	107.43	39.23	35.34	11.91	32.72	133	280	P	V
		5724.4	53.77	-67.16	120.93	39.22	35.32	11.95	32.72	133	280	P	V
		5850	54.3	-68	122.3	39.77	35.22	12.12	32.81	133	280	P	V
		5863.2	54.01	-54.59	108.6	39.5	35.2	12.12	32.81	133	280	P	V
		5897.2	54.1	-34.73	88.83	39.61	35.21	12.12	32.84	133	280	P	V
		5966.8	54.08	-14.22	68.3	39.6	35.22	12.14	32.88	133	280	P	V
		5788	103.4	-	-	88.79	35.26	12.11	32.76	133	280	P	V
	5788	96.76	-	-	82.15	35.26	12.11	32.76	133	280	A	V	



WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
Band46_5845 10M HIGH		5850	94.55	-27.75	122.3	80.02	35.22	12.12	32.81	283	42	P	H
		5855.8	60.06	-50.62	110.68	45.55	35.2	12.12	32.81	283	42	P	H
		5890	54.84	-39.33	94.17	40.33	35.21	12.12	32.82	283	42	P	H
		5938	55.15	-13.15	68.3	40.65	35.22	12.13	32.85	283	42	P	H
		5848	100.15	-	-	85.62	35.22	12.12	32.81	283	42	P	H
		5848	95.19	-	-	80.66	35.22	12.12	32.81	283	42	A	H
		5850	92.01	-30.29	122.3	77.48	35.22	12.12	32.81	274	360	P	V
		5856	56.71	-53.91	110.62	42.2	35.2	12.12	32.81	274	360	P	V
		5888	54.48	-41.17	95.65	39.97	35.21	12.12	32.82	274	360	P	V
		5983.2	54.55	-13.75	68.3	40.06	35.23	12.14	32.88	274	360	P	V
		5848	99.76	-	-	85.23	35.22	12.12	32.81	274	360	P	V
		5848	92.7	-	-	78.17	35.22	12.12	32.81	274	360	A	V
Remark	<ol style="list-style-type: none"> No other spurious found. All results are PASS against Peak and Average limit line. 												



Band 4 5725~5850MHz

WIFI 802. Band46_ 10M (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
Band46_ 5730 10M LOW		11464.46	55.46	-18.54	74	62.08	38.58	17.14	62.34	205	128	P	H
		11464.46	46.59	-7.41	54	53.21	38.58	17.14	62.34	205	128	A	H
		11459.46	48.92	-25.08	74	55.6	38.56	17.12	62.36	100	360	P	V
Band46_ 5788 10M MID		11574.57	49.76	-24.24	74	56.01	38.68	17.26	62.19	300	0	P	H
		11574.57	47.17	-26.83	74	53.42	38.68	17.26	62.19	100	360	P	V
Band46_ 5845 10M HIGH		11689.69	55.08	-18.92	74	60.88	38.83	17.4	62.03	287	240	P	H
		11689.69	47.32	-6.68	54	53.12	38.83	17.4	62.03	287	240	A	H
		11689.69	49.61	-24.39	74	55.41	38.83	17.4	62.03	100	360	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



WIFI 802. Band46_ 15M (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
Band46_ 5732.5 15M LOW		5647.6	54.51	-13.79	68.3	40.04	35.4	11.74	32.67	100	104	P	H
		5661.6	53.95	-22.96	76.91	39.48	35.38	11.78	32.69	100	104	P	H
		5720	57.35	-53.55	110.9	42.8	35.32	11.95	32.72	100	104	P	H
		5724.8	78.11	-43.73	121.84	63.56	35.32	11.95	32.72	100	104	P	H
		5734	101	-	-	86.46	35.32	11.95	32.73	100	104	P	H
		5734	94.6	-	-	80.06	35.32	11.95	32.73	100	104	A	H
		5615.6	54.89	-13.41	68.3	40.47	35.38	11.7	32.66	320	339	P	V
		5652	54.21	-15.58	69.79	39.72	35.38	11.78	32.67	320	339	P	V
		5718.4	55.32	-55.13	110.45	40.77	35.32	11.95	32.72	320	339	P	V
		5724.8	79.67	-42.17	121.84	65.12	35.32	11.95	32.72	320	339	P	V
		5734	100.42	-	-	85.88	35.32	11.95	32.73	320	339	P	V
		5734	94.05	-	-	79.51	35.32	11.95	32.73	320	339	A	V



WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5628	54.59	-13.71	68.3	40.17	35.38	11.7	32.66	234	42	P	H
		5653.6	54.67	-16.3	70.97	40.18	35.38	11.78	32.67	234	42	P	H
		5719.2	53.94	-56.74	110.68	39.39	35.32	11.95	32.72	234	42	P	H
		5723.2	53.17	-65.03	118.2	38.62	35.32	11.95	32.72	234	42	P	H
		5851.2	53.49	-66.07	119.56	38.96	35.22	12.12	32.81	234	42	P	H
		5868.8	53.91	-53.12	107.03	39.4	35.2	12.12	32.81	234	42	P	H
		5876.4	56.53	-47.73	104.26	42.03	35.2	12.12	32.82	234	42	P	H
		5977.6	55.22	-13.08	68.3	40.73	35.23	12.14	32.88	234	42	P	H
		5788	102.51	-	-	87.9	35.26	12.11	32.76	234	42	P	H
		5788	95.78	-	-	81.17	35.26	12.11	32.76	234	42	A	H
		5625.2	54.22	-14.08	68.3	39.8	35.38	11.7	32.66	139	278	P	V
		5670.8	55.47	-28.26	83.73	40.97	35.37	11.82	32.69	139	278	P	V
		5710	55.08	-53.02	108.1	40.55	35.34	11.91	32.72	139	278	P	V
		5720.4	52.7	-59.11	111.81	38.15	35.32	11.95	32.72	139	278	P	V
		5851.6	52.81	-65.84	118.65	38.28	35.22	12.12	32.81	139	278	P	V
		5862.4	53.74	-55.09	108.83	39.23	35.2	12.12	32.81	139	278	P	V
		5915.2	53.95	-21.58	75.53	39.45	35.21	12.13	32.84	139	278	P	V
		5964.4	54.16	-14.14	68.3	39.68	35.22	12.14	32.88	139	278	P	V
		5788	102.02	-	-	87.41	35.26	12.11	32.76	139	278	P	V
		5788	94.13	-	-	79.52	35.26	12.11	32.76	139	278	A	V



WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
Band46_5843 15M HIGH		5850	92.01	-30.29	122.3	77.48	35.22	12.12	32.81	272	44	P	H
		5856.4	56.39	-54.12	110.51	41.88	35.2	12.12	32.81	272	44	P	H
		5898.4	55.1	-32.85	87.95	40.61	35.21	12.12	32.84	272	44	P	H
		5990	54.49	-13.81	68.3	40.02	35.23	12.14	32.9	272	44	P	H
		5842	100.98	-	-	86.43	35.22	12.12	32.79	272	44	P	H
		5842	92.56	-	-	78.01	35.22	12.12	32.79	272	44	A	H
		5850	92.49	-29.81	122.3	77.96	35.22	12.12	32.81	274	360	P	V
		5855.8	57.05	-53.63	110.68	42.54	35.2	12.12	32.81	274	360	P	V
		5914.4	55.1	-21.02	76.12	40.6	35.21	12.13	32.84	274	360	P	V
		5934.8	54.64	-13.66	68.3	40.14	35.22	12.13	32.85	274	360	P	V
		5842	99.57	-	-	85.02	35.22	12.12	32.79	274	360	P	V
		5842	88.42	-	-	73.87	35.22	12.12	32.79	274	360	A	V
Remark	<ol style="list-style-type: none"> No other spurious found. All results are PASS against Peak and Average limit line. 												



Band 4 5725~5850MHz

WIFI 802. Band46_ 15M (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
Band46_ 5732.5 15M LOW		11464.46	49.13	-24.87	74	55.75	38.58	17.14	62.34	300	0	P	H
		11464.46	46.5	-27.5	74	53.12	38.58	17.14	62.34	100	360	P	V
Band46_ 5788 15M MID		11574.57	50	-24	74	56.25	38.68	17.26	62.19	300	0	P	H
		11574.57	47.86	-26.14	74	54.11	38.68	17.26	62.19	100	360	P	V
Band46_ 5843 15M HIGH		11684.68	49.54	-24.46	74	55.34	38.83	17.4	62.03	300	0	P	H
		11684.68	47.07	-26.93	74	52.87	38.83	17.4	62.03	100	360	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



WIFI 802. Band46_ 20M (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
Band46_ 5735 20M LOW		5641.2	55.07	-13.23	68.3	40.6	35.4	11.74	32.67	231	45	P	H
		5672.4	55.42	-29.5	84.92	40.92	35.37	11.82	32.69	231	45	P	H
		5718.4	56.16	-54.29	110.45	41.61	35.32	11.95	32.72	231	45	P	H
		5724.8	70.51	-51.33	121.84	55.96	35.32	11.95	32.72	231	45	P	H
		5740	98.88	-	-	84.31	35.31	11.99	32.73	231	45	P	H
		5740	89.96	-	-	75.39	35.31	11.99	32.73	231	45	A	H
		5606.8	54.22	-14.08	68.3	39.83	35.37	11.66	32.64	137	278	P	V
		5681.6	54.2	-37.52	91.72	39.7	35.37	11.82	32.69	137	278	P	V
		5719.2	56.44	-54.24	110.68	41.89	35.32	11.95	32.72	137	278	P	V
		5724.8	68.57	-53.27	121.84	54.02	35.32	11.95	32.72	137	278	P	V
		5734	99.52	-	-	84.98	35.32	11.95	32.73	137	278	P	V
		5734	92.03	-	-	77.49	35.32	11.95	32.73	137	278	A	V



WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
Band46_5788 20M MID		5603.2	54.14	-14.16	68.3	39.75	35.37	11.66	32.64	233	44	P	H
		5668	53.78	-27.88	81.66	39.28	35.37	11.82	32.69	233	44	P	H
		5708.8	54.8	-52.97	107.77	40.27	35.34	11.91	32.72	233	44	P	H
		5720	52.63	-58.27	110.9	38.08	35.32	11.95	32.72	233	44	P	H
		5851.6	53.42	-65.23	118.65	38.89	35.22	12.12	32.81	233	44	P	H
		5870	53.86	-52.84	106.7	39.36	35.2	12.12	32.82	233	44	P	H
		5923.2	53.87	-15.76	69.63	39.37	35.22	12.13	32.85	233	44	P	H
		5943.6	54.18	-14.12	68.3	39.7	35.22	12.13	32.87	233	44	P	H
		5788	102.25	-	-	87.64	35.26	12.11	32.76	233	44	P	H
		5788	91.53	-	-	76.92	35.26	12.11	32.76	233	44	A	H
		5611.6	53.87	-14.43	68.3	39.5	35.37	11.66	32.66	134	279	P	V
		5698.4	54.74	-49.38	104.12	40.23	35.35	11.86	32.7	134	279	P	V
		5706.8	53.71	-53.5	107.21	39.18	35.34	11.91	32.72	134	279	P	V
		5720.8	53.06	-59.66	112.72	38.51	35.32	11.95	32.72	134	279	P	V
		5852.4	52.86	-63.97	116.83	38.33	35.22	12.12	32.81	134	279	P	V
		5862.8	54.48	-54.23	108.71	39.97	35.2	12.12	32.81	134	279	P	V
		5890.4	53.82	-40.05	93.87	39.31	35.21	12.12	32.82	134	279	P	V
		5974	54.78	-13.52	68.3	40.29	35.23	12.14	32.88	134	279	P	V
		5788	100.78	-	-	86.17	35.26	12.11	32.76	134	279	P	V
	5788	91.32	-	-	76.71	35.26	12.11	32.76	134	279	A	V	



WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
Band46_5840 20M HIGH		5850	81.57	-40.73	122.3	67.04	35.22	12.12	32.81	217	48	P	H
		5855.2	56.64	-54.2	110.84	42.13	35.2	12.12	32.81	217	48	P	H
		5875.01	54.45	-50.84	105.29	39.95	35.2	12.12	32.82	217	48	P	H
		5957.2	54.72	-13.58	68.3	40.23	35.22	12.14	32.87	217	48	P	H
		5842	98.03	-	-	83.48	35.22	12.12	32.79	217	48	P	H
		5842	88.47	-	-	73.92	35.22	12.12	32.79	217	48	A	H
		5850	78.12	-44.18	122.3	63.59	35.22	12.12	32.81	275	360	P	V
		5856.4	56.45	-54.06	110.51	41.94	35.2	12.12	32.81	275	360	P	V
		5886.4	54.52	-42.32	96.84	40.02	35.2	12.12	32.82	275	360	P	V
		5948	54.3	-14	68.3	39.82	35.22	12.13	32.87	275	360	P	V
		5842	96.38	-	-	81.83	35.22	12.12	32.79	275	360	P	V
		5842	89.52	-	-	74.97	35.22	12.12	32.79	275	360	A	V
	Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.											



Band 4 5725~5850MHz

WIFI 802. Band46_ 20M (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
Band46_ 5735 20M LOW		11474.47	49.22	-24.78	74	55.84	38.58	17.14	62.34	300	0	P	H
		11474.47	45.25	-28.75	74	51.87	38.58	17.14	62.34	100	360	P	V
Band46_ 5788 20M MID		11579.58	49.03	-24.97	74	55.28	38.68	17.26	62.19	300	0	P	H
		11574.57	45.8	-28.2	74	52.05	38.68	17.26	62.19	100	360	P	V
Band46_ 5840 20M HIGH		11679.68	49.47	-24.53	74	55.33	38.81	17.38	62.05	300	0	P	H
		11679.68	47.2	-26.8	74	53.06	38.81	17.38	62.05	100	360	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Emission below 1GHz

WIFI 802. Band46_ 5M (LF @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11a LF		119.24	28.52	-14.98	43.5	42.89	16.93	1.56	32.86	-	-	P	H
		250.19	32.7	-13.3	46	44.93	18.5	2.37	33.1	-	-	P	H
		499.48	27.9	-18.1	46	33.61	23.68	3.41	32.8	-	-	P	H
		624.61	36.9	-9.1	46	40.56	25.1	3.84	32.6	-	-	P	H
		749.74	36.36	-9.64	46	38.93	25.9	4.23	32.7	-	-	P	H
		902.03	37.61	-8.39	46	38.73	26.72	4.65	32.49	100	0	P	H
		58.13	38.05	-1.95	40	56.43	13.72	1.04	33.14	100	0	P	V
		220.12	32.44	-13.56	46	45.79	17.55	2.2	33.1	-	-	P	V
		267.65	31.14	-14.86	46	42.04	19.68	2.45	33.03	-	-	P	V
		499.48	31.02	-14.98	46	35.93	24.48	3.41	32.8	-	-	P	V
		624.61	34.67	-11.33	46	37.73	25.7	3.84	32.6	-	-	P	V
		749.74	38.6	-7.4	46	40.57	26.5	4.23	32.7	-	-	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	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		(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													
2412MHz		2390	43.54	-10.46	54	42.6	32.22	4.58	35.86	103	308	A	H

- Level(dBμV/m) =
Antenna Factor(dB/m) + Cable Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)
- Over Limit(dB) = Level(dBμV/m) – Limit Line(dBμV/m)

For Peak Limit @ 2390MHz:

- Level(dBμV/m)
= Antenna Factor(dB/m) + Cable 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)
- Over Limit(dB)
= Level(dBμV/m) – Limit Line(dBμV/m)
= 55.45(dBμV/m) – 74(dBμV/m)
= -18.55(dB)

For Average Limit @ 2390MHz:

- Level(dBμV/m)
= Antenna Factor(dB/m) + Cable 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)
- 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

Duty Cycle(%)	T(ms)	1/T(kHz)	VBW Setting
39.64	1.98	0.505	0.51KHz

