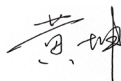


TEST REPORT

Applicant: Simgo Asset Acquisition Corp – D/B/A StratusX
EUT Description: MIFI
Model: AI740
Brand: stratusX
FCC ID: 2BBUC-AI740
Standards: FCC 47 CFR Part 15 Subpart C
Date of Receipt: 2023/09/14
Date of Test: 2023/09/14 to 2023/10/09
Date of Issue: 2023/10/26

TOWE. tested the above equipment in accordance with the requirements set forth in the above standards. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

the results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. It is the manufacturer's responsibility to assure that additional production units of the model are manufactured with identical electrical and mechanical components. All sample tested were in good operating condition throughout the entire test program. Measurement Uncertainties are published for informational purposes only and were not taken into account unless noted otherwise. without written approval of TOWE, the test report shall not be reproduced except in full.



Approved By:



Reviewed By:

Revision History

Rev.	Issue Date	Description	Revised by
01	2023/10/26	Original	

Summary of Test Results

Clause	FCC Part	Test Items	Result
4.1	§15.203/15.247(b)	Antenna Requirement	PASS
4.2	§15.207	AC Power Line Conducted Emission	PASS
4.3	§15.247 (b)(3)	Output Power	PASS
4.4	§15.247 (a)(2)	Occupied Bandwidth	Reporting purposes only
4.5	§15.247 (e)	Power Spectral Density	PASS
4.6	§15.247(d)	Band Edge for Conducted Emissions	PASS
4.7	§15.247(d)	Spurious RF Conducted Emissions	PASS
4.8	§15.205/15.209	Radiated Spurious emissions and Band Edge	PASS

Test Method: ANSI C63.10-2013, KDB 558074 D01 15.247 Mesa Guidance v05r02.

Remark: Pass is EUT meets standard requirements.

Table of Contents

1	General Description	5
1.1	Lab Information.....	5
1.1.1	Testing Location	5
1.1.2	Test Facility / Accreditations	5
1.2	Client Information	5
1.2.1	Applicant.....	5
1.2.2	Manufacturer.....	5
1.3	Product Information.....	6
2	Test Configuration	7
2.1	Test Channel	7
2.2	Worst-case configuration and Mode	7
2.3	Test Duty Cycle	8
2.4	Support Unit used in test	8
2.5	Test Environment.....	8
2.6	Test RF Cable	8
2.7	Modifications.....	8
2.8	Test Setup Diagram	9
2.8.1	Conducted Configuration	9
2.8.2	Radiated Configuration	10
3	Equipment and Measurement Uncertainty.....	11
3.1	Test Equipment List.....	11
3.2	Measurement Uncertainty	12
4	Test Results.....	13
4.1	Antenna Requirement.....	13
4.2	AC Power Line Conducted Emissions	14
4.3	Output Power	17
4.4	Occupied Bandwidth	18
4.5	Power Spectral Density	19
4.6	Band Edge for Conducted Emissions.....	20
4.7	Spurious RF Conducted Emissions	21
4.8	Radiated Spurious Emissions and Band Edge	22

1 General Description

1.1 Lab Information

1.1.1 Testing Location

These measurements tests were conducted at the Sushi TOWE Wireless Testing(Shenzhen) Co., Ltd. facility located at F401 and F101, Building E, Hongwei Industrial Zone, Liuxian 3rd Road, Bao'an District, Shenzhen, China. The measurement facility is compliant with the test site requirements specified in ANSI C63.4-2014
Tel.: +86-755-27212361
Contact Email: info@towewireless.com

1.1.2 Test Facility / Accreditations

A2LA (Certificate Number: 7088.01)

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 General requirements for the competence of testing and calibration laboratories. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated April 2017).

FCC Designation No.: CN1353

Sushi TOWE Wireless Testing(Shenzhen) Co., Ltd. has been recognized as an accredited testing laboratory. Designation Number: CN1353.

ISED CAB identifier: CN0152

Sushi TOWE Wireless Testing(Shenzhen) Co., Ltd. has been recognized by ISED as an accredited testing laboratory.
CAB identifier: CN0152
Company Number: 31000

1.2 Client Information

1.2.1 Applicant

Applicant:	Simgo Asset Acquisition Corp – D/B/A StratusX
Address:	251 Little Falls Rd - Wilmington DE 19808

1.2.2 Manufacturer

Manufacturer:	Shenzhen Qingyu Technical Development Ltd
Address:	Shenzhen Banan Songgang Juleyuan Baifulou# 104

1.3 Product Information

EUT Description:	MIFI		
Model No.:	AI740		
Brand:	stratus X		
Hardware Version:	A1740_MB_P2		
Software Version:	StratusX_user_20230727103904_5bd0760ce2		
SN:	AX30209		
Modulation Type:	802.11b:	DSSS-DBPSK, DQPSK, CCK	
	802.11g&HT:	OFDM-BPSK, QPSK, 16QAM, 64QAM	
Smart System:	<input checked="" type="checkbox"/> SISO	802.11b/g/HT	/
	<input type="checkbox"/> MIMO	802.11g/HT/VHT/HE	()TX()RX
	<input type="checkbox"/> CDD	802.11b	()TX()RX
Frequency Range:	2400 ~ 2483.5MHz		
Channel Frequency:	20M bandwidth Channel: 2412 ~ 2462MHz		
Channel Number:	11:	802.11b/g/HT20	
Remark: The above EUT's information was declared by applicant, please refer to the specifications or user's manual for more detailed description.			

2 Test Configuration

2.1 Test Channel

Frequency Channels							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
1	2412MHz	4	2427MHz	7	2442MHz	10	2457MHz
2	2417MHz	5	2432MHz	8	2447MHz	11	2462MHz
3	2422MHz	6	2437MHz	9	2452MHz	/	

Remark:

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

Modulation Type	Test Channel	Test Frequency
802.11b/g/HT20	The Lowest channel (CH1)	2412MHz
	The Middle channel (CH6)	2437MHz
	The Highest channel (CH11)	2462MHz

2.2 Worst-case configuration and Mode

Modulation Type	SISO - Data Rate	MIMO - Data Rate
802.11b	1 Mbps	2 Mbps
802.11g	6 Mbps	12 Mbps
802.11(HT20)	MCS0 (6.5 Mbps)	MCS0 (13 Mbps)
Transmitting mode:	Keep the EUT was programmed to be in continuously transmitting mode.	
Normal Link:	Keep the EUT operation to normal function.	

Note:

1. Radiated emission below 1GHz and above 1GHz, were performed with the EUT set to transmit at the channel with highest output power as worst-case scenario.
2. AC power line Conducted Emission was tested under maximum output power.

2.3 Test Duty Cycle

Test Type	T(ms)	T Period(ms)	Duty Cycle(%)	1/T	VBW Set*
802.11b	8.19	8.39	97.62	0.122	300Hz
802.11g	1.36	1.55	87.74	0.735	1kHz
802.11(HT20)	1.27	1.47	86.39	0.787	1kHz

Note: *Radiated average measurements.

If Duty Cycle>98% VBW is set to 10Hz.

2.4 Support Unit used in test

Description	Manufacturer	Model	Serial Number
PC	Lenovo	ThinkBook 14	YX05R1PP

2.5 Test Environment

Temperature:	Normal: 15°C ~ 35°C, Extreme: -30°C ~ +50°C
Humidity:	45-56 % RH Ambient
Voltage:	Nominal: 3.70 Vdc, Extreme: Low 3.4 Vdc, High 4.25 Vdc
AC Voltage:	AC 120V/60Hz

Remark: The testing environment is within the scope of the EUT user manual and meets the requirements of the standard testing environment.

2.6 Test RF Cable

For all conducted test items: The offset level is set spectrum analyzer to compensate the RF cable loss and attenuator factor between RF conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level will be exactly the RF output level.

The spectrum analyzer offset is derived from RF cable loss and attenuator factor.

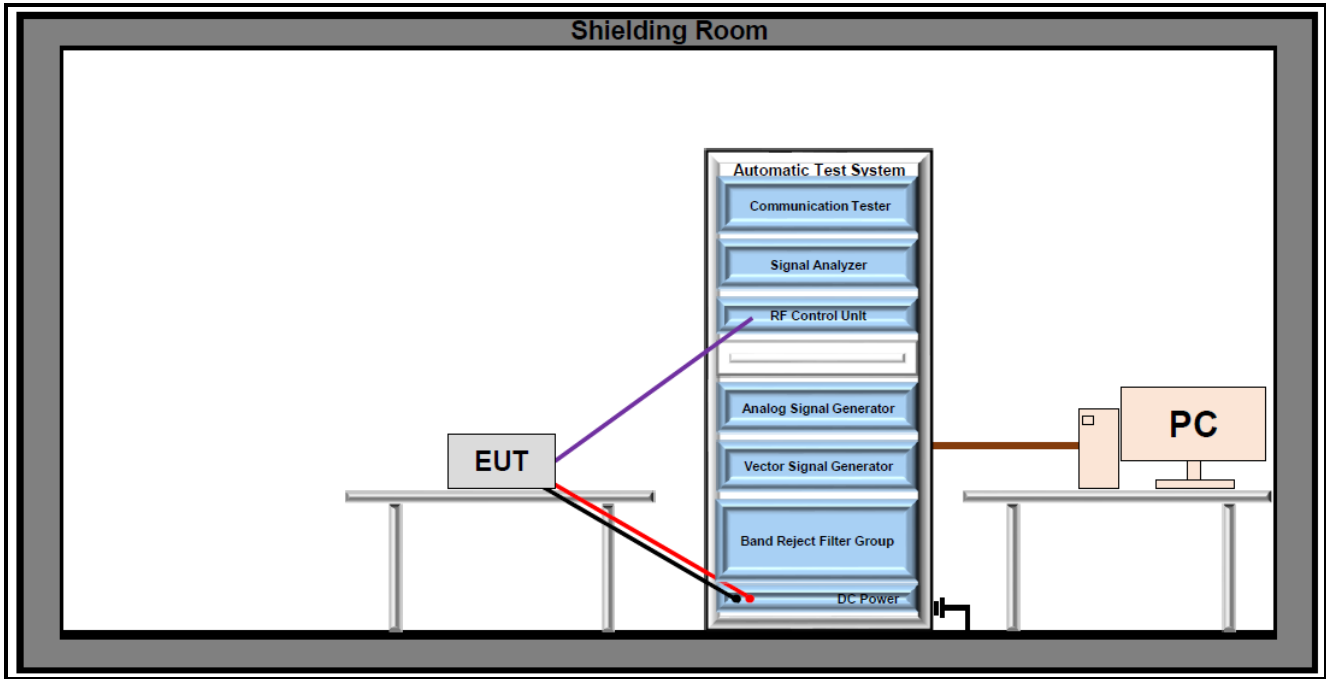
Offset = RF cable loss + attenuator factor.

2.7 Modifications

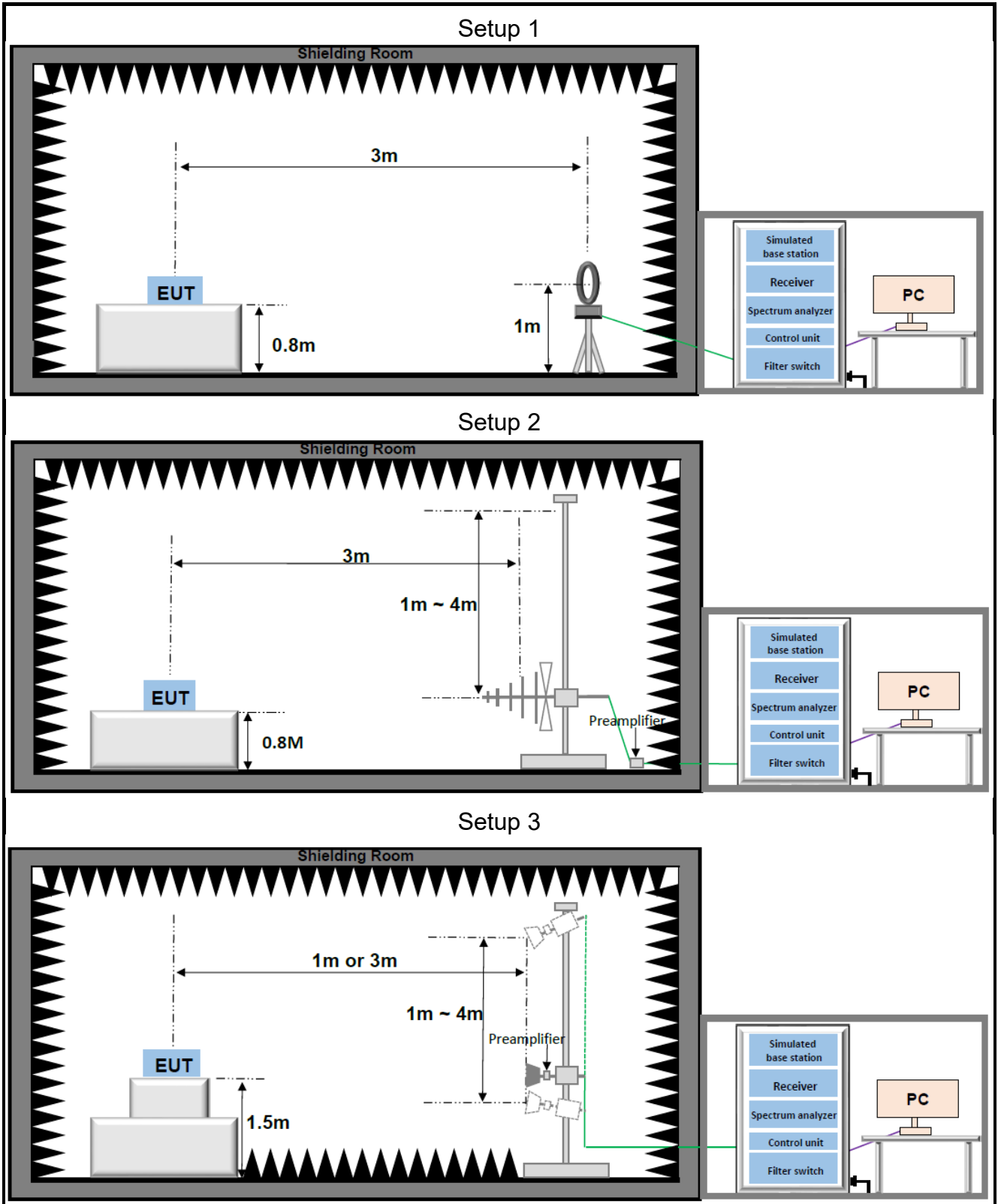
No modifications were made during testing.

2.8 Test Setup Diagram

2.8.1 Conducted Configuration



2.8.2 Radiated Configuration



3 Equipment and Measurement Uncertainty

All test and measuring equipment utilized to perform the tests documented in this report are calibrated on a regular basis, whichever is less, and where applicable is traceable to recognized national standards.

3.1 Test Equipment List

RF4 Test System					
Description	Manufacturer	Model	SN	Last Due	Cal Due
Signal Analyzer	Keysight	N9020A	US46470429	2023/04/08	2024/04/07
Signal Generator	R&S	SMR20	101027	2023/04/08	2024/04/07
Wideband Radio Communication Tester	R&S	CMW500	150615	2023/04/08	2024/04/07
Wireless Communication Tester	R&S	CMW270	102840	2023/06/27	2024/06/26
UP/Down-Converter	R&S	CMW-Z800A	100572	2023/06/27	2024/06/26
Hygrometer	BingYu	HTC-1	N/A	2023/06/01	2024/05/31
Vector Signal Generator	R&S	SMM100A	549353	2023/06/27	2024/06/26
RF Control Unit	Tonscend	JS0806-2	23C80620671	2023/06/27	2024/06/26
4ADC	Tonscend	JS0806-4ADC	21L8060515	N/A	N/A
Test software	Tonscend	V3.3.38	10659	N/A	N/A

Radiated Emission					
Description	Manufacturer	Model	S.N.	Last Due	Cal Due
Biconic Logarithmic Periodic Antennas	Schwarzbeck	VULB9163	1643	06/25/2023	06/24/2025
Double-Ridged Horn Antennas	Schwarzbeck	BBHA 9120D	2809	06/25/2023	06/24/2025
Broad-Band Horn Antenna	Schwarzbeck	BBHA 9170	1290	06/25/2023	06/24/2025
Signal Analyzer	Keysight	N9020A	MY49100252	04/08/2023	04/07/2024
EMI Tester Receiver	Rohde & Schwarz	ESR7	102719	08/17/2023	08/16/2024
Wideband Radio Communication Tester	Rohde & Schwarz	CMW500	150645	04/08/2023	04/07/2024
Low Noise Amplifier	Tonscend	TAP9K3G40	AP23A8060273	04/08/2023	04/07/2025
Low Noise Amplifier	Tonscend	TAP01018050	AP22G806258	04/08/2023	04/07/2025
Band Reject Filter Group	Townshend	JS0806-F	23A806F0652	N/A	N/A
Test Software	Tonscend	TS+	Version: 5.0.0	N/A	N/A

Conducted Emission					
Description	Manufacturer	Model	S.N.	Last Due	Cal Due
EMI Tester Receiver	Rohde & Schwarz	ESR3	103108	07/28/2023	07/27/2024
LISN	Rohde & Schwarz	ENV 216	102836	04/08/2023	04/07/2024
Test software	Rohde & Schwarz	ELEKTRA v4.61	N/A	N/A	N/A

3.2 Measurement Uncertainty

Parameter	U _{lab}
Output power	0.76dB
Occupied bandwidth/out-of-band emission/frequency range	6.8kHz
Conducted spurious emissions	2.22dB
Radiated Emissions (9kHz~30MHz)	2.40dB
Radiated Emissions(30MHz~1000MHz)	4.66dB
Radiated Emissions(1GHz~18GHz)	5.42dB
Radiated Emissions(18GHz~40GHz)	5.46dB
Conducted Emissions(150KHz~30MHz)	2.43dB

Uncertainty figures are valid to a confidence level of 95%

4 Test Results

4.1 Antenna Requirement

Standard Applicable:	47 CFR Part 15C Section 15.203 /247(b)
<p>15.203 requirement: An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.</p>	
<p>15.247(b) (4) requirement: The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.</p>	
<p>The antenna gain and type as provided by the manufacturer are as follows: The antenna Type is FPC. With maximum gain is 1.4dBi. Antenna Anti-Replacement Construction: An embedded-in antenna design is used.</p>	

4.2 AC Power Line Conducted Emissions

Limits

Frequency range (MHz)	Limit (dBuV)	
	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.

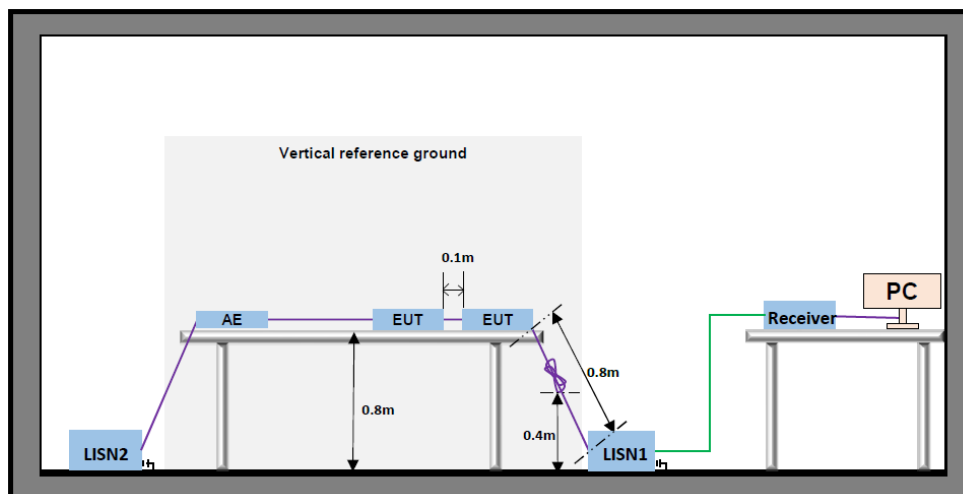
Test Procedure

ANSI C63.10-2013, Section 6.2.

Test Settings

1. The EUT was connected to AC power source through a LISN 1 (Line Impedance Stabilization Network) which provides a $50\Omega/50\mu\text{H} + 5\Omega$ linear impedance. The power cables of all other units of the EUT were connected to a second LISN 2, which was bonded to the ground reference plane in the same way as the LISN 1 for the unit being measured. A multiple socket outlet strip was used to connect multiple power cables to a single LISN provided the rating of the LISN was not exceeded.
2. The tabletop EUT was placed upon a non-metallic table 0.8m above the ground reference plane. And for floor-standing arrangement, the EUT was placed on the horizontal ground reference plane.
3. The test was performed with a vertical ground reference plane. The rear of the EUT shall be 0.4 m from the vertical ground reference plane. The vertical ground reference plane was bonded to the horizontal ground reference plane. The LISN 1 was placed 0.8 m from the boundary of the unit under test and bonded to a ground reference plane for LISNs mounted on top of the ground reference plane. This distance was between the closest points of the LISN 1 and the EUT. All other units of the EUT and associated equipment was at least 0.8 m from the LISN 2.
4. The receiver is set to a resolution bandwidth of 9kHz. Peak detection is used unless otherwise noted as quasi-peak or average.
5. AC Power Line Conducted Emissions, the channel with the highest output power was tested.
6. Both sides of AC line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10 on conducted measurement.

Test Setup

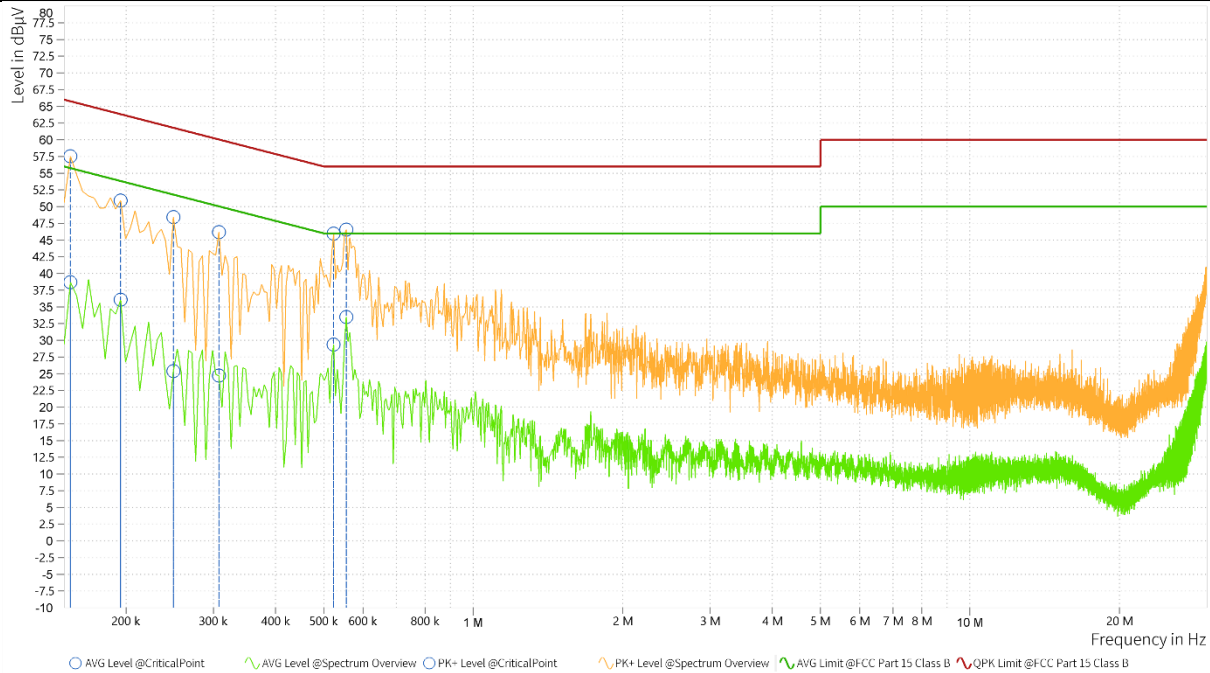


Measuring Instruments

The measuring equipment is listed in the section 3.1 of this test report.

Test Result:

Test mode:	802.11b Tx		
Test Voltage:	AC 120V / 60Hz	Phase:	Line

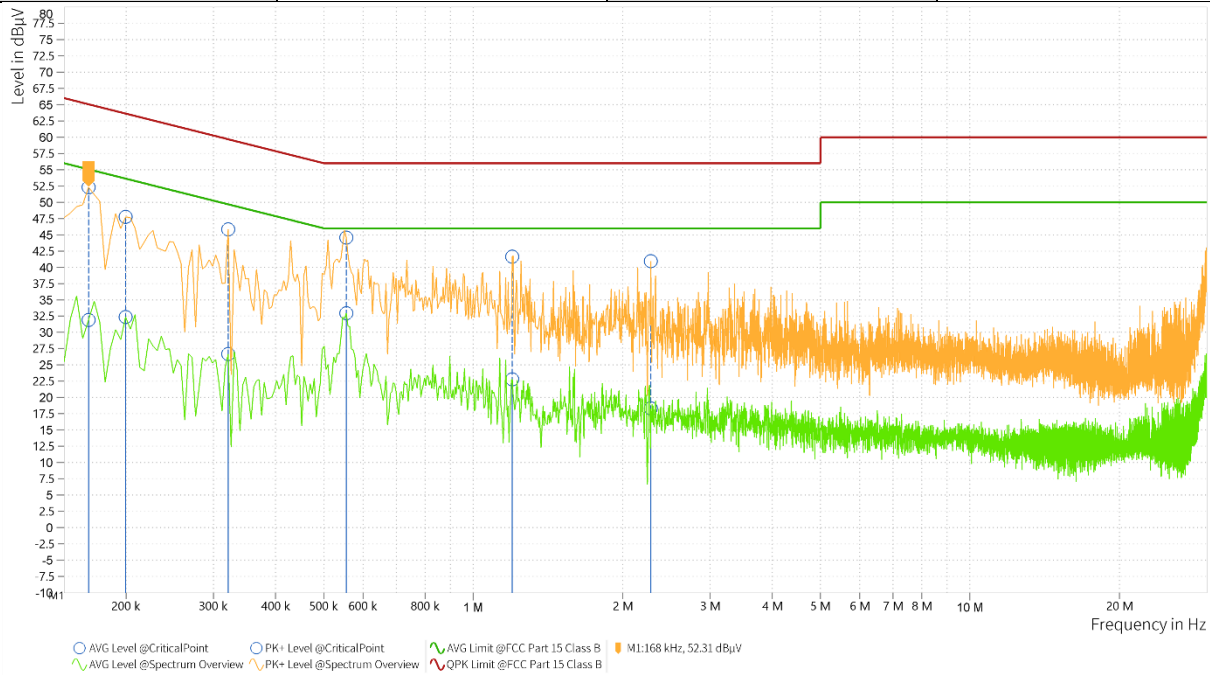


Rg	Frequency [MHz]	PK+ Level [dBµV]	PK+: QPK Limit [dBµV]	PK+ Margin [dB]	AVG Level [dBµV]	AVG Limit [dBµV]	AVG Margin [dB]	Correction [dB]	Line
1	0.155	57.53	65.75	8.23	38.69	55.75	17.06	10.48	L1
1	0.195	50.92	63.82	12.91	36.06	53.82	17.76	10.49	L1
1	0.249	48.42	61.79	13.37	25.39	51.79	26.40	10.50	L1
1	0.308	46.17	60.04	13.87	24.70	50.04	25.34	10.52	L1
1	0.524	45.95	56.00	10.05	29.36	46.00	16.64	10.43	L1
1	0.555	46.55	56.00	9.45	33.47	46.00	12.53	10.43	L1

Note:

- The following Quasi-Peak and Average measurements were performed on the EUT:
- Margin = Limit[dBµV]+ Level[dBµV].

Test mode:	802.11b Tx		
Test Voltage:	AC 120V / 60Hz	Phase:	Neutral



Rg	Frequency [MHz]	PK+ Level [dBµV]	PK+: QPK Limit [dBµV]	PK+ Margin [dB]	AVG Level [dBµV]	AVG Limit [dBµV]	AVG Margin [dB]	Correction [dB]	Line
1	0.168	52.31	65.06	12.75	31.90	55.06	23.16	10.42	N
1	0.200	47.74	63.63	15.89	32.36	53.63	21.27	10.40	N
1	0.321	45.82	59.68	13.86	26.65	49.68	23.03	10.41	N
1	0.555	44.58	56.00	11.42	32.95	46.00	13.05	10.37	N
1	1.199	41.65	56.00	14.35	22.79	46.00	23.21	10.40	N
1	2.279	40.95	56.00	15.05	18.32	46.00	27.68	10.40	N

Note:

- The following Quasi-Peak and Average measurements were performed on the EUT:
- Margin = Limit[dBµV]+ Level[dBµV].

4.3 Output Power

Limits

If With directional antenna gains less than 6 dBi, the limit is 30dBm.

Test Procedure

ANSI C63.10:2013 Section 11.9.1.2

Test Settings

1. Set to the maximum power setting and enable the EUT transmit continuously.
2. The transmitter output is connected to a spectrum analyzer:
3. RBW = 1MHz
4. VBW \geq 3 times the RBW
5. Span \geq 1.5 times the DTS
6. Sweep = Auto
7. Detector = Peak
8. Trace = Max hold
9. The trace was allowed to stabilize
10. Measure and record the results in the test report.

Test Setup

Refer to section 2.8.1 for details.

Measuring Instruments

The measuring equipment is listed in the section 3.1 of this test report.

Test Result

The detailed test data see: **Appendix 4-WLAN**.

4.4 Occupied Bandwidth

Limits

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

99%BW: None, for reporting purposes only.

Test Procedure

ANSI C63.10:2013 Section 11.8.2 and 6.9.3

Test Settings

11. Set to the maximum power setting and enable the EUT transmit continuously.
12. The transmitter output is connected to a spectrum analyzer:
13. RBW = 100kHz(DTS)
14. RBW = 1% - 5%(99%BW)
15. VBW = 3 times the RBW
16. Sweep = Auto
17. Detector = Peak
18. Trace = Max hold
19. The trace was allowed to stabilize
20. Measure and record the results in the test report.

Test Notes

The signal analyzers' automatic bandwidth measurement capability of the spectrum analyzer was used to perform the 6dB bandwidth measurement. The "X" dB bandwidth parameter was set to X= 6. The bandwidth measurement was not influenced by any intermediate power nulls in the fundamental emission.

Test Setup

Refer to section 2.8.1 for details.

Measuring Instruments

The measuring equipment is listed in the section 3.1 of this test report.

Test Result

The detailed test data see: **Appendix 4-WLAN**.

4.5 Power Spectral Density

Limits

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

Test Procedure

ANSI C63.10:2013 Section 11.10.2(PKPSD)

Test Settings

1. Set to the maximum power setting and enable the EUT transmit continuously
2. The transmitter output is connected to a spectrum analyzer
3. $3\text{kHz} \leq \text{RBW} \leq 100\text{ kHz}$
(If measured value exceeds requirement, then reduce RBW (but no less than 3 kHz) and repeat.)
4. $\text{VBW} \geq 3$ times RBW
5. Span = 1.5 times the DTS bandwidth
6. Sweep = Auto
7. Detector = Peak
8. Trace = Max hold
9. The trace was allowed to stabilize
10. Measure and record the results in the test report.

Test Setup

Refer to section 2.8.1 for details.

Measuring Instruments

The measuring equipment is listed in the section 3.1 of this test report.

Test Result

The detailed test data see: **Appendix 4-WLAN**.

4.6 Band Edge for Conducted Emissions

Limits

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits.

If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph 15.247(b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB.

Test Procedure

ANSI C63.10:2013 Section 11.11.3

Test Settings

1. Set to the maximum power setting and enable the EUT transmit continuously
2. The transmitter output is connected to a spectrum analyzer
3. RBW = 100kHz
4. VBW = 300kHz
5. Point $\geq 2 \times$ span/RBW
6. Sweep = Auto
7. Detector = Peak
8. Trace = Max hold
9. The trace was allowed to stabilize
10. Measure and record the results in the test report

Test Setup

Refer to section 2.8.1 for details.

Measuring Instruments

The measuring equipment is listed in the section 3.1 of this test report.

Test Result

The detailed test data see: **Appendix 4-WLAN**.

4.7 Spurious RF Conducted Emissions

Limits

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits.

If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph 15.247(b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB.

Test Procedure

ANSI C63.10:2013 Section 11.11.3

Test Settings

1. Set to the maximum power setting and enable the EUT transmit continuously.
2. Activate frequency hopping function if necessary.
3. The transmitter output is connected to a spectrum analyzer
4. The spectrum from 30MHz - 26.5GHz
5. RBW = 100kHz
6. VBW = 300kHz
7. Sweep = Auto
8. Detector = Peak
9. Trace = Max hold
10. The trace was allowed to stabilize
11. Measure and record the results in the test report

Test Setup

Refer to section 2.8.1 for details.

Measuring Instruments

The measuring equipment is listed in the section 3.1 of this test report.

Test Result

The detailed test data see: **Appendix 4-WLAN.**

4.8 Radiated Spurious Emissions and Band Edge

Limits

Spurious emissions are permitted in an of the frequency bands:

MHz	MHz	MHz	MHz	GHz	GHz
0.090 - 0.110	12.29 - 12.293	149.9 - 150.05	1660 - 1710	4.5 - 5.15	14.47 - 14.5
0.495 - 0.505	12.51975 - 12.52025	156.52475 - 156.52525	1718.8 - 1722.2	5.35 - 5.46	15.35 - 16.2
2.1735 - 2.1905	12.5767 - 12.57725	156.7 - 156.9	2200 - 2300	7.25 - 7.75	17.7 - 21.4
4.125 - 128	13.36 - 13.41	162.0125 - 167.17	2310 - 2390	8.025 - 8.5	22.01 - 23.12
4.17725 - 4.17775	16.42 - 16.423	167.72 - 173.2	2483.5 - 2500	9.0 - 9.2	23.6 - 24.0
4.20725 - 4.20775	16.69475 - 16.69525	240 - 285	2655 - 2900	9.3 - 9.5	31.2 - 31.8
6.215 - 6.218	1680425 - 1680475	322 - 335.4	3260 - 3267	10.6 - 12.7	36.43 - 36.5
6.26775 - 6.26825	25.5 - 25.67	399.9 - 410	3332 - 3339	13.25 - 13.4	
6.31175 - 6.31225	37.5 - 38.25	608 - 614	3345.8 - 3358		
8.291 - 8.294	73 - 74.6	960 - 1240	3600 - 4400		
8.362 - 8.366	74.8 - 75.2	1300 - 1427			
8.37625 - 8.38675	108 - 121.94	1435 - 1626.5			
8.41425 - 8.41475	123 - 138	1645.5 - 1646.5			

Radiated disturbance of an intentional radiator:

Frequency	Field strength ($\mu\text{V}/\text{m}$)	Limit (dB $\mu\text{V}/\text{m}$)	Remark	Measurement distance (m)
0.009MHz-0.490MHz	2400/F(kHz)	-	-	300
0.490MHz-1.705MHz	24000/F(kHz)	-	-	30
1.705MHz-30MHz	30	-	-	30
30MHz-88MHz	100	40.0	Quasi-peak	3
88MHz-216MHz	150	43.5	Quasi-peak	3
216MHz-960MHz	200	46.0	Quasi-peak	3
960MHz-1GHz	500	54.0	Quasi-peak	3
Above 1GHz	500	74.0	Peak	3
		54.0	Average	

Test Procedure

ANSI C63.10:2013 Section 6.4 & 6.5 & 6.6

Test Settings

- For radiated emissions measurements performed at frequencies less than or equal to 1GHz, the EUT shall be placed on a RF-transparent table or support at a nominal height of 80cm above the reference ground plane.
- For radiated emissions measurements performed at frequencies above 1GHz, the EUT shall be placed on a RF-transparent table or support at a nominal height of 80cm above the ground plane.
- Radiated measurements shall be made with the measurement antenna positioned in both horizontal and vertical polarization. The measurement antenna shall be varied from 1m to 4m in height above the reference ground in a search for the relative positioning that produces the maximum radiated signal level (i.e, field strength or received power), when orienting the measurement antenna in vertical polarization, the minimum height of the lowest element of the antenna shall clear the site reference ground plane by at least 25cm.
- For each suspected emission, the EUT was ranged its worst case and then tune the antenna tower(from 1~4m) and turntable(from 0~360°) find the maximum reading. Pre-amplifier and a high pass filter are used for the test in order get better signal level comply with the guidelines.
- Set to the maximum power setting and enable the EUT transmit continuously.
- The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector.
- spectrum analyzer setting:

Measurements 30MHz ~ 1000MHz: RBW = 120 kHz; VBW ≥ 300 kHz; Detector = Peak

Measurements Above 1000MHz: RBW = 1 MHz; VBW ≥ 3 MHz; Detector = Peak

Average Measurements Above 1000MHz:

RBW = 1 MHz, VBW ≥ 1/T, with peak detector for average measurements.

8. The field strength is calculated by adding the Antenna Factor, Cable Factor. The basic equation with a sample calculation is as follows:

Level = Reading(dBμV) + AF(dB/m) + Factor(dB):

AF = Antenna Factor(dB/m)

Factor = Cable Factor(dB) - Preamplifier gain(dB)

Margin = Limit(dBμV/m) – Level(dBμV/m)

9. Repeat above procedures until all frequencies measured was complete.
10. Measure and record the results in the test report.

Test Notes

1. Emissions below 18GHz were measured at a 3-meter test distance while emissions above 18GHz were measured at a 1-meter test distance with the application of a distance correction factor.
2. Radiated spurious emissions were investigated from 9kHz to 30MHz, 30MHz-1GHz and above 1GHz. the disturbance between 9KHz to 30MHz and 18GHz to 40GHz was very low. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be recorded, so only the harmonics had been displayed.
3. The "-" shown in the following RSE tables are used to denote a noise floor measurement.

Test Setup

Refer to section 2.8.2 for details.

Measuring Instruments

The measuring equipment is listed in the section 3.1 of this test report.

Test Result

The detailed test data see: **Appendix 4-WLAN.**

~The End~