

Test Report No:
2550032R-RFUSV03S-A

TEST REPORT

FCC Rules&Regulations

Product Name	System-On-Module
Brand Name	AMobile
Model No.	SoM-SD700, SoM-SD510
FCC ID	2AQ5W-SOM510-700
Applicant's Name / Address	AMobile Solutions Corp. 8F.-1, No.700, Zhongzheng Rd., Zhonghe Dist., New Taipei City 235, Taiwan
Manufacturer's Name / Address	AMobile Solutions Corp. 8F.-1, No.700, Zhongzheng Rd., Zhonghe Dist., New Taipei City 235, Taiwan
Test Method Requested, Standard	FCC CFR Title 47 Part 15 Subpart E Section 15.407 ANSI C63.10-2013
Verdict Summary	IN COMPLIANCE
Documented By	 Vera Hsu
Approved By	 Allen Lin
Date of Receipt	May 05, 2025
Date of Issue	Jul. 15, 2025
Report Version	V1.0

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Competences and Guarantees

DEKRA is a testing laboratory competent to carry out the tests described in this report.

In order to assure the traceability to other national and international laboratories, DEKRA has a calibration and maintenance program for its measurement equipment.

DEKRA guarantees the reliability of the data presented in this report, which is the result of the measurements and the tests performed to the item under test on the date and under the conditions stated in the report and it is based on the knowledge and technical facilities available at DEKRA at the time of performance of the test.

DEKRA is liable to the client for the maintenance of the confidentiality of all information related to the item under test and the results of the test.

The results presented in this Test Report apply only to the particular item under test established in this document.

IMPORTANT: No parts of this report may be reproduced or quoted out of context, in any form or by any means, except in full, without the previous written permission of DEKRA.

General Conditions

1. The test results relate only to the samples tested.
2. The test results shown in the test report are traceable to the national/international standard through the calibration report of the equipment and evaluated measurement uncertainty herein.
3. This report must not be used to claim product endorsement by TAF or any agency of the government.
4. The test report shall not be reproduced without the written approval of DEKRA Testing and Certification Co., Ltd.
5. Measurement uncertainties evaluated for each testing system and associated connections are given here to provide the system information for reference. Compliance determinations do not take into account measurement uncertainties for each testing system, but are based on the results of the compliance measurement.

Revision History

Version	Description	Issued Date
V1.0	Initial issue of report	Jul. 15, 2025

Summary of Test Result

Report Clause	Test Items	Result (PASS/FAIL)	Remark
3	AC Power Line Conducted Emission	PASS	-
4	Emission Bandwidth	PASS	-
5	Maximum Conducted Output Power	PASS	-
6	Maximum Power Spectral Density	PASS	-
7	Transmitter Radiated Spurious Emission	PASS	-

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.

Comments and Remarks

The product specification and testing instructions for the EUT declared in the report are provided by the manufacturer who will take all responsibilities for the accuracy.

1. General Information

1.1. EUT Description

Frequency Range	5150 ~ 5250 MHz 5250 ~ 5350 MHz 5470 ~ 5850 MHz	
Operating Frequency / Channel Number	IEEE 802.11a IEEE 802.11n/ac (20 MHz)	5180 ~ 5240 MHz / 4 Channels 5260 ~ 5320 MHz / 4 Channels 5500 ~ 5720 MHz / 12 Channels 5745 ~ 5825 MHz / 5 Channels
	IEEE 802.11n/ac (40 MHz)	5190 ~ 5230 MHz / 2 Channels 5270 ~ 5310 MHz / 2 Channels 5510 ~ 5710 MHz / 6 Channels 5755 ~ 5795 MHz / 2 Channels
	IEEE 802.11ac (80 MHz)	5210 MHz / 1 Channel 5290 MHz / 1 Channel 5530 ~ 5690 MHz / 3 Channels 5775 MHz / 1 Channel
Type of Modulation	IEEE 802.11a/n	OFDM-BPSK, QPSK, 16QAM, 64QAM
	IEEE 802.11ac	OFDM-BPSK, QPSK, 16QAM, 64QAM, 256QAM

The difference for each model is shown as below:

EUT	Model No.	Platform	Description
1	SoM-SD700	MT8390	The differences are platform and CPU/GPU. All under same layout.
2	SoM-SD510	MT8370	

From the above models, model: SoM-SD700 was selected as representative model for the test and its data was recorded in this report.

Antenna Information							
Ant.	Brand Name	Part No.	Type	Antenna Gain (dBi)			
				U-NII 1	U-NII 2A	U-NII 2C	U-NII 3
1	Cortec	AN0750-74S05BSM	Dipole	3.07	2.66	2.55	2.85
2	Cortec	AN0750-74S05BSM	Dipole	3.07	2.66	2.55	2.85

For IEEE 802.11a/n/ac Mode: (2TX, 2RX)

Both Ant. 1 and Ant. 2 can be used as transmitting/receiving antennas, and they can transmit/receive signal simultaneously.

1.2. EUT Information

EUT Power Type	From Adapter / Host system			
EUT Function	☒	Point-to-multipoint	☐	Point-to-point
TPC Function	☒	With TPC Function	☐	Without TPC Function
Weather Band (5600 ~ 5650 MHz)	☒	With 5600 ~ 5650 MHz	☐	Without 5600 ~ 5650 MHz
Beamforming Function	☐	With beamforming	☒	Without beamforming

1.3. Applicable Standards

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

- ♦ 47 CFR FCC Part 15
- ♦ ANSI C63.10-2013
- ♦ KDB 789033 D02 v02r01

The following reference test guidance is not within the scope of accreditation of TAF.

- ♦ KDB 662911 D01 v02r01
- ♦ KDB 412172 D01 v01r01
- ♦ KDB 414788 D01 v01r01

1.4. Testing Location Information

Testing Location Information		
Test Laboratory : DEKRA Testing and Certification Co., Ltd.		
1 (TAF: 3024)	ADD: No.372-2, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County 31061, Taiwan, R.O.C. TEL: +886-3-582-8001 FAX: +886-3-582-8958 Test site Designation No. TW3024 with FCC. Conformity Assessment Body Identifier (CABID) TW3024 with ISED.	
2 (TAF: 3024)	ADD: No.372, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County 31061, Taiwan, R.O.C. TEL: +886-3-582-8001 FAX: +886-3-582-8958 Test site Designation No. TW3024 with FCC. Conformity Assessment Body Identifier (CABID) TW3024 with ISED.	
Test site number for address 1 includes HC-SR02 and HC-CB10. Test site number for address 2 includes HC-CB02, HC-CB03, HC-CB04, HC-SR10 and HC-SR12.		

Test Condition	Test Site No.	Test Engineer	Test Environment (°C / %)	Test Date
AC Conduction Emission	HC-SR02	Cyril Chen	25 / 65	2025/05/29
RF Conducted Emission	HC-SR12	Scott Chang	24.5~25.4 / 46.4~50.4	2025/05/23~2025/05/27
Radiated Emission	HC-CB04	Jason Yang Cyril Chen	21.3~23.5 / 53~63	2025/05/22~2025/05/28

1.5. Measurement Uncertainty

Uncertainties have been calculated according to the DEKRA internal document with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2)).

Test Item	Uncertainty
AC Power Line Conducted Emission	± 2.34 dB
Emission Bandwidth	± 636.54 Hz
Maximum Conducted Output Power	± 1.16 dB
Maximum Power Spectral Density	± 2.47 dB
Transmitter Radiated Spurious Emission	± 3.52 dB below 1 GHz ± 3.56 dB above 1 GHz

1.6. List of Test Equipment

HC-SR02

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Cal. Date	Next Cal. Date
Artificial Mains Network	R&S	ENV4200	848411/010	9kHz-30MHz, 4line/100A	2024/12/02	2025/12/01
EMI Test Receiver	R&S	ESR3	102608	9 kHz - 3.6 GHz	2024/09/11	2025/09/10
Two-Line V-Network	R&S	ENV216	100096	9kHz-30MHz	2024/06/03	2025/06/02
Coaxial Cable(9 m)	Harbour	RG-400	HC-SR02	9 kHz–2500 MHz	2024/08/15	2025/08/14
EMI Testing System	Audix	e3 210616 dekra V9	HC-SR02	N/A	N/A	N/A

HC-SR12

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Cal. Date	Next Cal. Date
Signal & Spectrum Analyzer	R&S	FSV40	101869	10Hz-40GHz	2024/06/20	2025/06/19
High Speed Peak Power Meter Dual Input	Anritsu	ML2496A	1602004	0.3-40 GHz	2024/10/29	2025/10/28
Pulse Power Sensor	Anritsu	MA2411B	1531043	0.3-40 GHz	2024/10/29	2025/10/28

HC-CB04

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Cal. Date	Next Cal. Date
Signal and Spectrum Analyzer	R&S	FSVA40	101435	10 Hz-40 GHz	2025/05/20	2026/05/19
Trilog Broadband Antenna	Schwarzbeck	VULB 9168	1209	30 MHz-2 GHz	2024/06/11	2025/06/10
Double Ridged Horn Antenna	RF SPIN	DRH18-E	211212A18EN	1G-18GHz	2024/11/26	2025/11/25
Horn Antenna	Schwarzbeck	BBHA 9170	203	18G-40GHz	2025/01/14	2026/01/13
Pre-Amplifier	DEKRA	AP-400C	201801231	18G-40 GHz,48 dB	2024/10/15	2025/10/14
Coaxial Cable	Huber+Suhner	SF104	HC-CB04	30 MHz-18 GHz, 11m	2024/08/07	2025/08/06
Coaxial Cable	Huber+Suhner, Rosnol	SF102_UP0264	HC-CB04-1	18-40 GHz, 3m	2024/08/13	2025/08/12
Radiated Software	Audix	e3 V9	HC-CB04_1	N/A	N/A	N/A
Pre-Amplifier	EMCI	EMC01820I	980364	30M-8 GHz,20 dB	2024/06/04	2025/06/03
Pre-Amplifier	EMEC	EM01G18GA	060835	1-18 GHz,50 dB	2024/07/16	2025/07/15
DEKRA Testing System	DEKRA	Version 2.0	HC-CB04	N/A	N/A	N/A
Radiated Software	Audix	e3 V9	HC-CB04_1	N/A	N/A	N/A

Note: All equipment upon which need to calibrated are with calibration period of 1 year.

2. Test Configuration of EUT

2.1. Test Condition

EUT Operational Condition	
Testing Voltage	AC 120V/60Hz

2.2. Test Frequency Mode

Test Software	cmd
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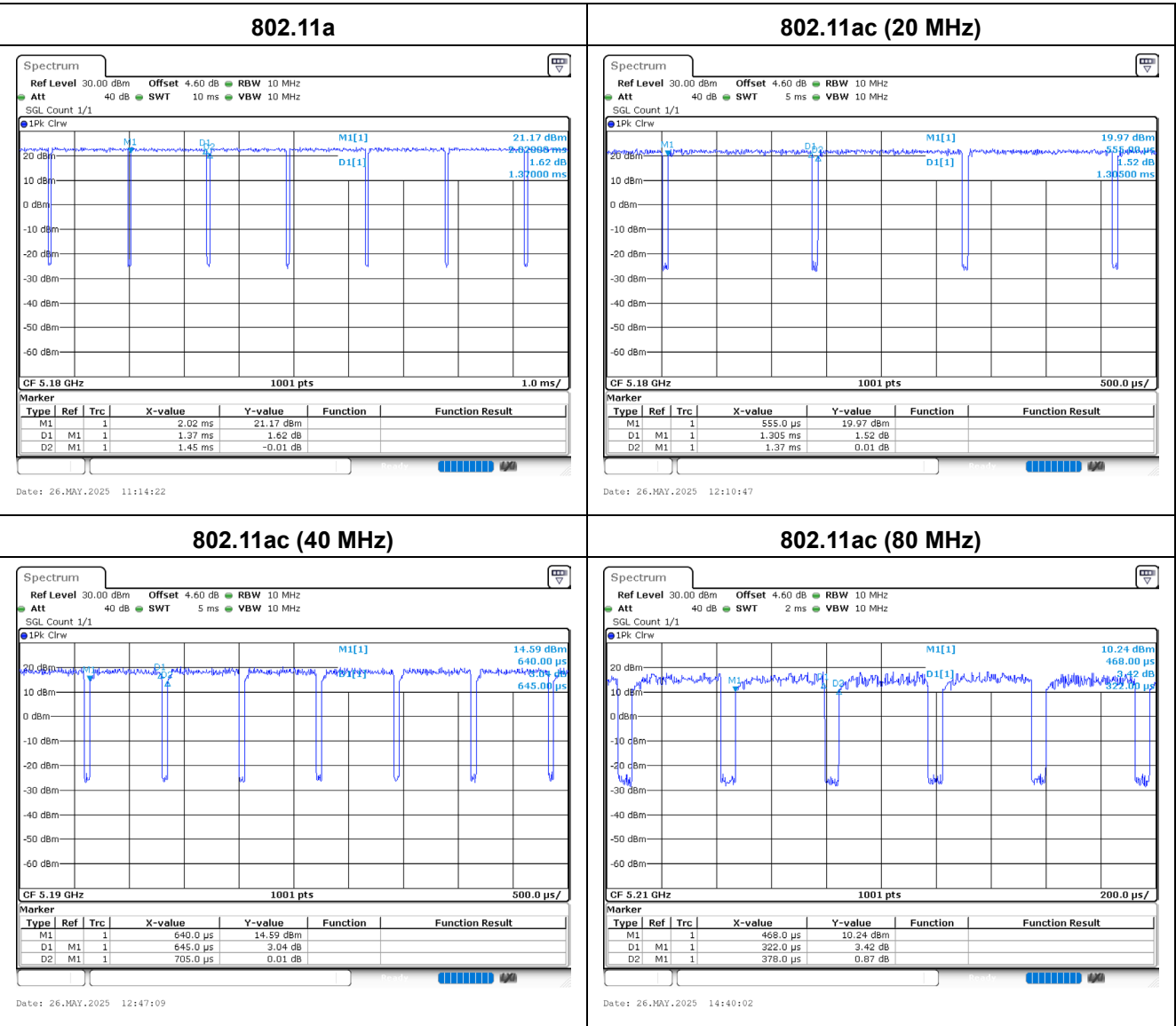
Modulation	Frequency (MHz)	Power Setting
802.11a	5180	17.0
	5220	17.0
	5240	17.0
	5260	17.5
	5300	17.5
	5320	17.0
	5500	17.0
	5580	16.5
	5700	12.5
	5720	14.0
	5745	13.5
	5785	14.0
	5825	15.0
802.11ac (20 MHz)	5180	18.0
	5220	18.0
	5240	18.0
	5260	18.5
	5300	18.5
	5320	18.5
	5500	18.5
	5580	18.5
	5700	15.5
	5720	18.0
	5745	15.0
	5785	15.0
	5825	16.0

Modulation	Frequency (MHz)	Power Setting
802.11ac (40 MHz)	5190	16.0
	5230	19.5
	5270	19.5
	5310	16.0
	5510	16.0
	5550	19.5
	5670	16.0
	5710	20.0
	5755	19.0
	5795	17.0
802.11ac (80 MHz)	5210	15.5
	5290	16.0
	5530	16.0
	5610	20.0
	5690	18.5
	5755	17.5

2.3. Duty Cycle

Modulation	On Time (ms)	On+Off Time (ms)	Duty Cycle (%)	Duty Factor (dB)	1/T Minimum VBW (kHz)
802.11a	1.370	1.450	94.48%	0.25	0.730
802.11ac (20 MHz)	1.305	1.370	95.26%	0.21	0.766
802.11ac (40 MHz)	0.645	0.705	91.49%	0.39	1.550
802.11ac (80 MHz)	0.322	0.378	85.19%	0.70	3.106

Note: The duty factor will compensate for the total power and power spectral density.



2.4. The Worst Case Measurement Configuration

Tests Item	AC Power Line Conducted Emission
Test Condition	AC power line conducted measurement for line and neutral
Operating Mode	Transmit
1	EUT 1 + Adapter
2	EUT 1 + Notebook (Host System)

Tests Item	Emission Bandwidth Maximum Conducted Output Power Maximum Power Spectral Density
Test Condition	Conducted measurement at transmit chains

Tests Item	Transmitter Radiated Spurious Emission
Test Condition	Radiated measurement If EUT consist of multiple antenna assembly (multiple antenna are used in EUT regardless of spatial multiplexing MIMO configuration), the radiated test should be performed with highest antenna gain of each antenna type.
Operating Mode < 1GHz	Transmit
1	EUT 1 + Adapter
2	EUT 1 + Notebook (Host System)
3	EUT 2 + Notebook (Host System)
Operating Mode > 1GHz	Transmit

Tests Item	Simultaneous Transmission Analysis - Radiated Emission Co-location
Test Condition	Radiated measurement
Operating Mode	Transmit
1	Bluetooth + WiFi 2.4GHz
2	Bluetooth + WiFi 5GHz
Refer to Appendix F for Radiated Emission Co-location.	

Tests Item	Simultaneous Transmission Analysis - Co-location RF Exposure Evaluation
Operating Mode	Transmit
1	Bluetooth + WiFi 2.4GHz
2	Bluetooth + WiFi 5GHz
Refer to DEKRA Test Report No.: 2550032R-RFUSV17S-A for Co-location RF Exposure Evaluation.	

Note:

1. Determining compliance shall be based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.
2. For radiated emission below 1 GHz and AC power line conducted emission have performed all modes of operation were investigated and the worst-case emissions are reported.
3. The modulation and bandwidth are similar for 802.11n mode for HT20/HT40, 802.11ac mode for VHT20/VHT40/VHT80, therefore investigated worst case to representative mode in test report.

2.5. Tested System Details

Test Mode: Mode 1

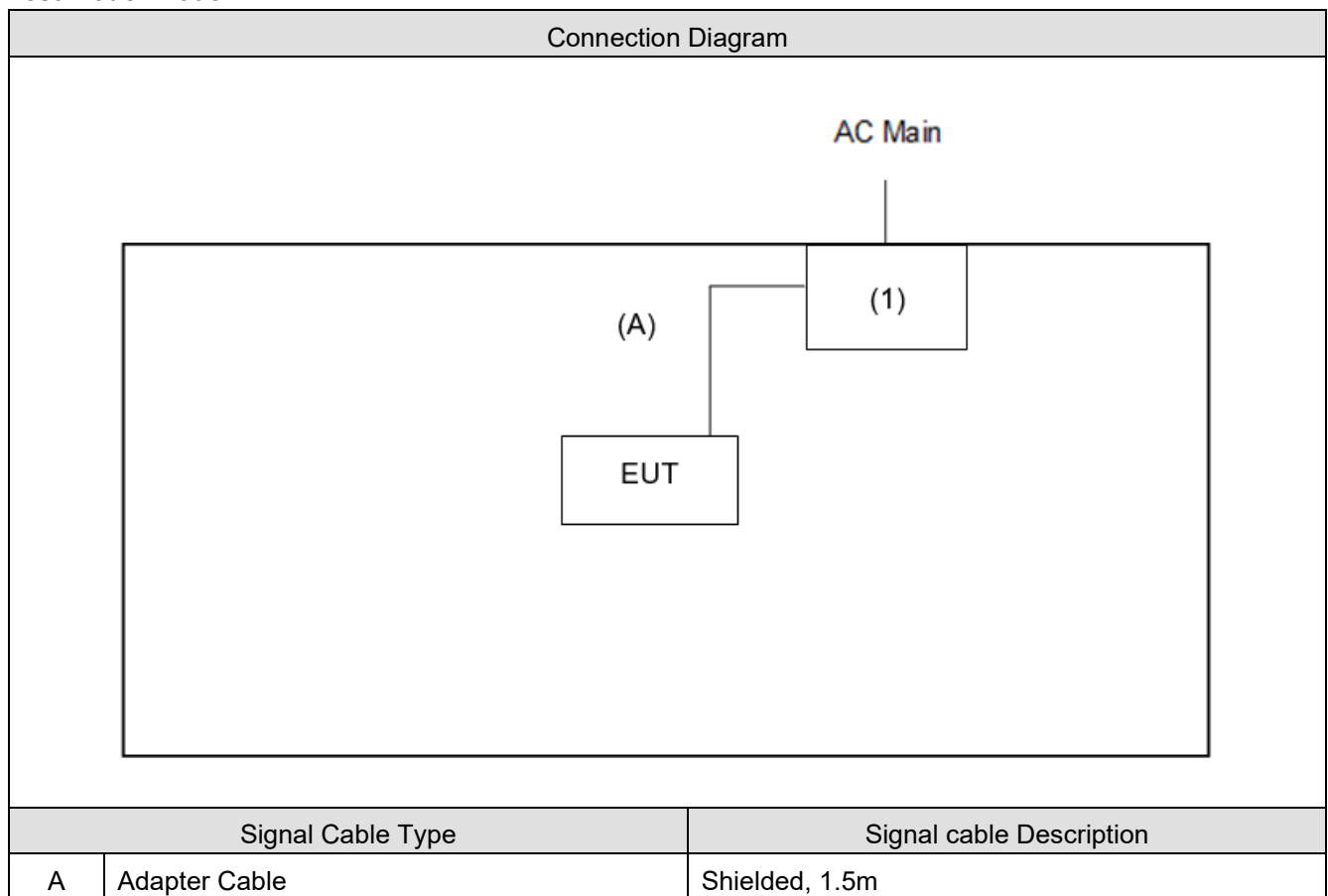
No.	Equipment	Brand Name	Model No.	Serial No.
1	Adaptor	Channel Well Technology Co., Ltd	N/A	-

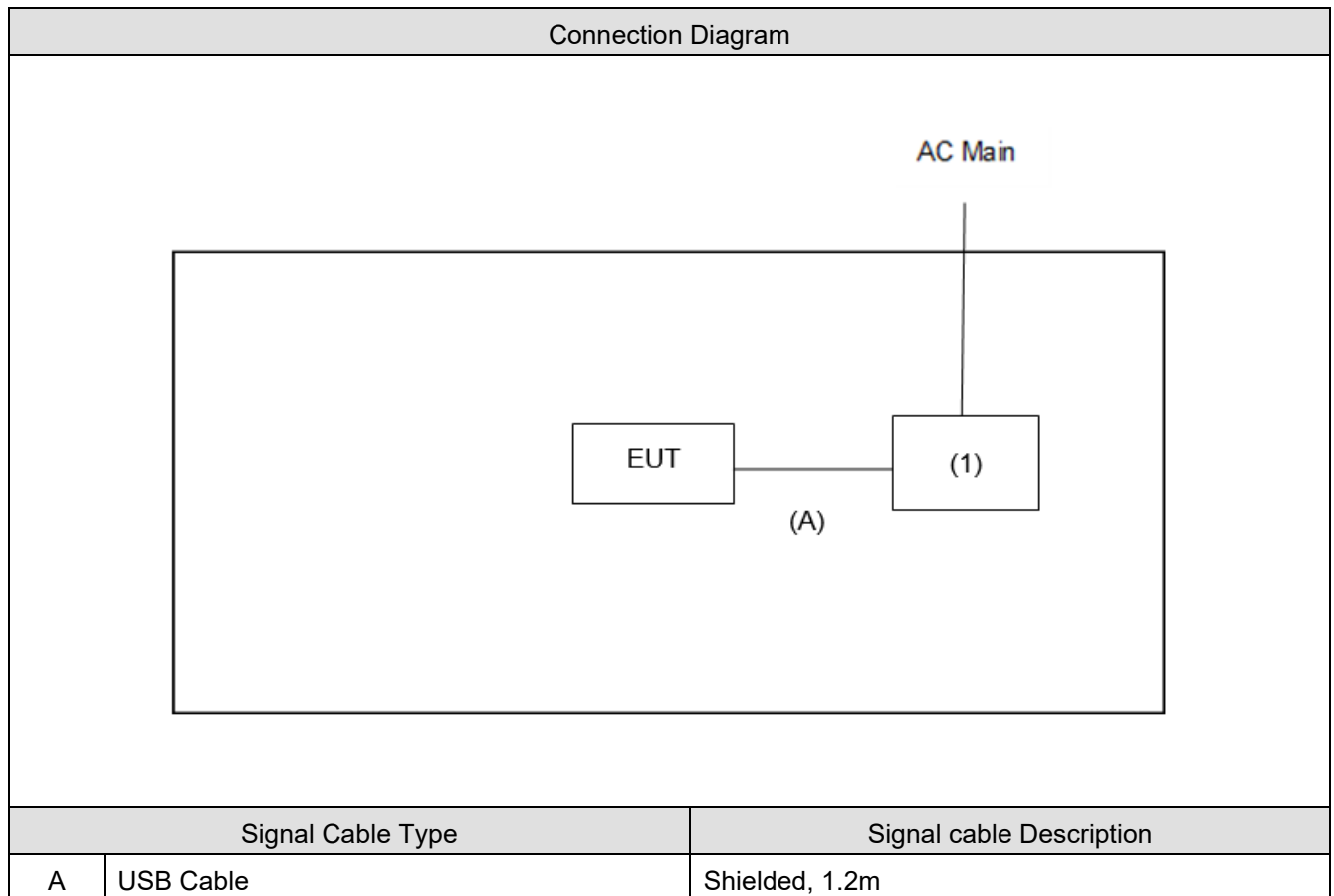
Test Mode: Mode 2 / Mode 3

No.	Equipment	Brand Name	Model No.	Serial No.
1	Notebook	Lenovo	Lenovo Ideapad 320	PF0SXXY1

2.6. Configuration of tested System

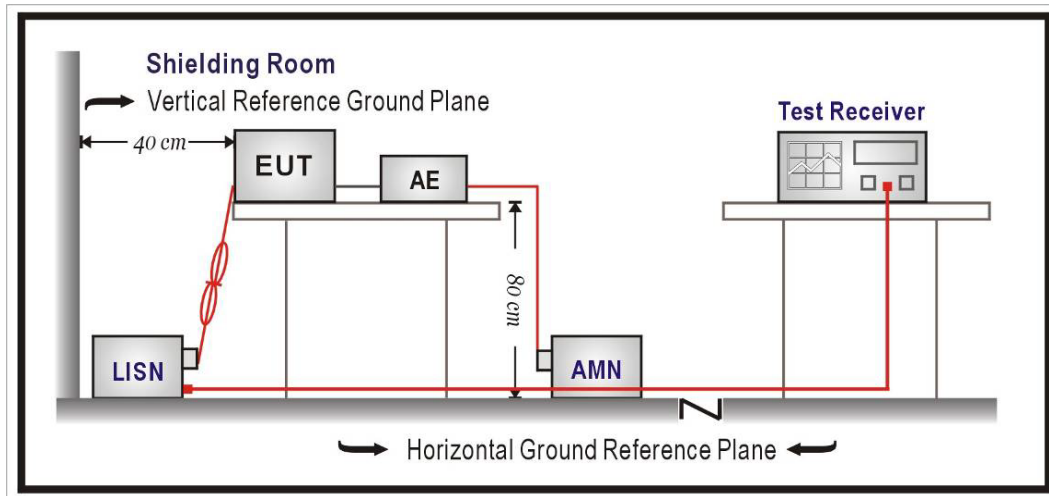
Test Mode: Mode 1



Test Mode: Mode 2 / Mode 3

3. AC Power Line Conducted Emission

3.1. Test Setup



3.2. Test Limit

Frequency (MHz)	QP (dBuV)	AV (dBuV)
0.15 - 0.50	66 - 56	56 - 46
0.50 - 5.0	56	46
5.0 - 30	60	50

Remark: In the above table, the tighter limit applies at the band edges.

3.3. Test Procedure

The EUT was setup according to ANSI C63.10: 2013. The EUT was placed on a platform of nominal size, 1 m by 1.5 m, raised 80 cm above the conducting ground plane. The vertical conducting plane was located 40 cm to the rear of the EUT. All other surfaces of EUT were at least 80 cm from any other grounded conducting surface. The EUT and simulators are connected to the main power through a line impedance stabilization network (LISN). The LISN provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN. (Please refer to the block diagram of the test setup and photographs.)

Each current-carrying conductor of the EUT power cord, except the ground (safety) conductor, was individually connected through a LISN to the input power source.

The excess length of the power cord between the EUT and the LISN receptacle were folded back and forth at the center of the lead to form a bundle not exceeding 40 cm in length.

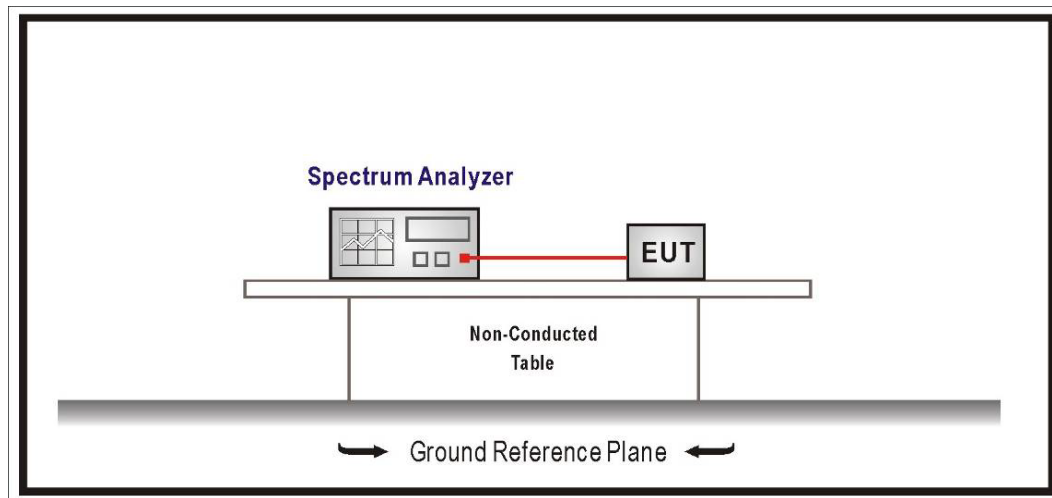
Conducted emissions were investigated over the frequency range from 0.15 MHz to 30 MHz using a receiver bandwidth of 9 kHz.

3.4. Test Result of AC Power Line Conducted Emission

Refer as Appendix A

4. Emission Bandwidth

4.1. Test Setup



4.2. Test Limit

99% & 26dB Bandwidth : No Required

6dB Bandwidth $\geq$ 500kHz

4.3. Test Procedure

99% & 26dB Bandwidth :

The EUT was tested according to U-NII test procedure of KDB 789033.

Set RBW 1% of the emission bandwidth, VBW equal to 3 times the RBW.

DTS Bandwidth :

Set RBW = 100kHz, VBW $\geq$ 3xRBW, Sweep time=Auto, Set Peak detector.

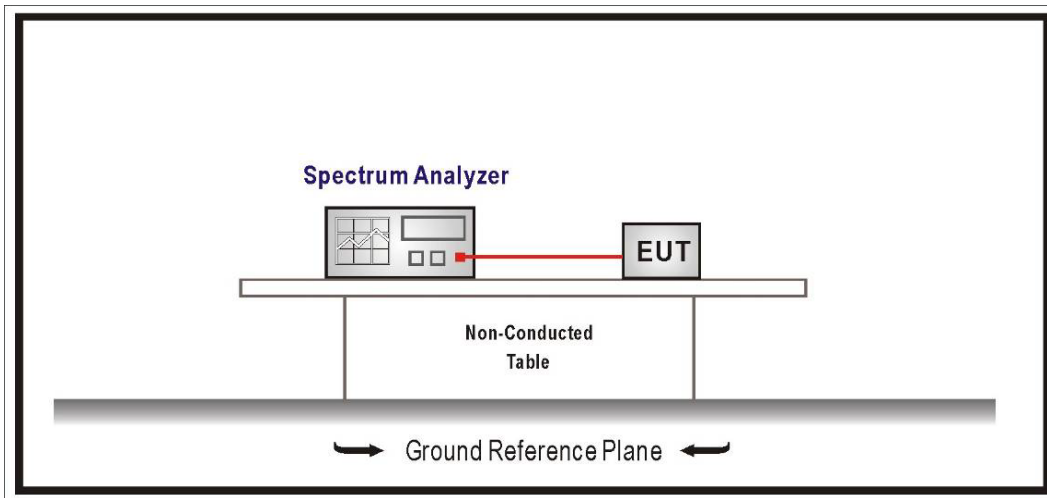
4.4. Test Result of Emission Bandwidth

Refer as Appendix B

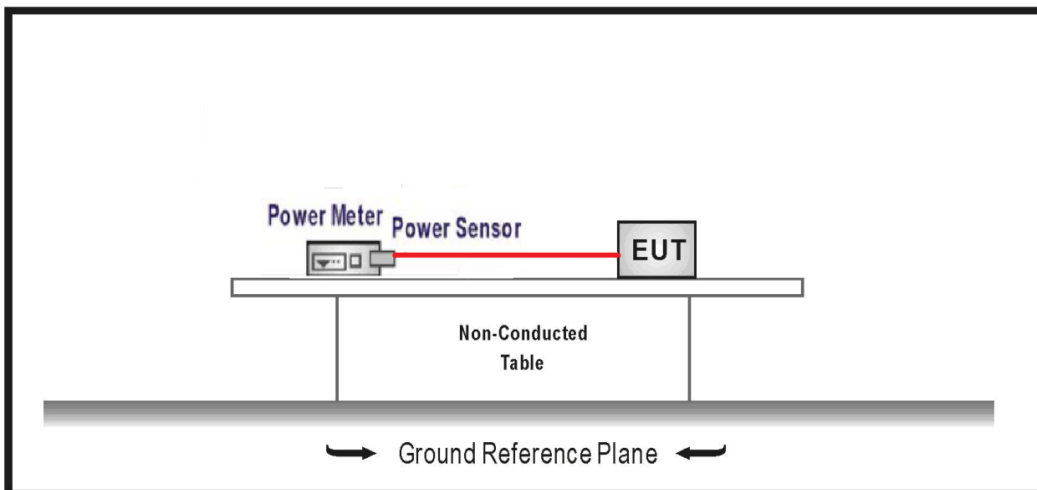
5. Maximum Conducted Output Power

5.1. Test Setup

For straddle channels:



For other channels:



5.2. Test Limit

1. For an outdoor access point and an indoor access point 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 provided the maximum antenna gain does not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. For client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.
2. For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or $11 \text{ dBm} + 10 \log B$, where B is the 26 dB emission bandwidth in megahertz. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.
3. For the band 5.725-5.850 GHz, the 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.
4. For the band 5.850–5.895 GHz:

For an indoor access point, the maximum e.i.r.p. over the frequency band of operation must not exceed 36 dBm. Indoor access points operating on a channel that spans the 5.725–5.850 GHz and 5.850–5.895 GHz bands must not exceed an e.i.r.p. of 36 dBm.

For client devices, the maximum e.i.r.p. over the frequency band of operation must not exceed 30 dBm. Client devices operating on a channel that spans the 5.725–5.850 GHz and 5.850–5.895 GHz bands must not exceed an e.i.r.p. of 30 dBm.

For a subordinate device, the maximum e.i.r.p. over the frequency band of operation must not exceed 36 dBm.

5.3. Test Procedure

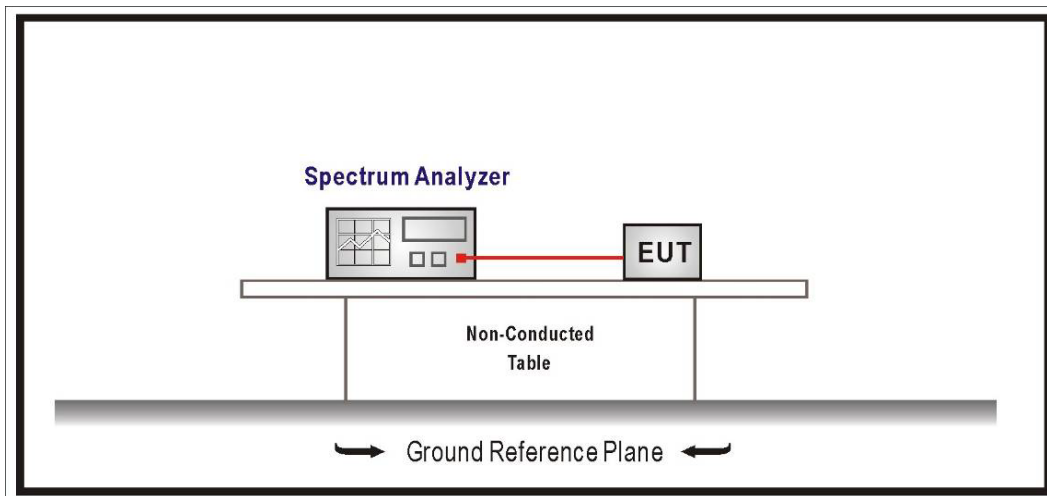
The EUT was setup to ANSI C63.10: 2013; tested according to U-NII test procedure of KDB 789033.

5.4. Test Result of Maximum Conducted Output Power

Refer as Appendix C

6. Maximum Power Spectral Density

6.1. Test Setup



6.2. Test Limit

1. For the band 5.15 ~ 5.25 GHz, the peak power spectral density shall not exceed 17 dBm in any 1 MHz band. If transmitting antenna of directional gain greater than 6 dBi are used, the peak power spectral density shall be reduced by the amount in dB that directional gain of the antenna exceeds 6 dBi.
2. For client devices in the 5.15 ~ 5.25 GHz band, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.
3. For the 5.25 ~ 5.35 GHz, 5470 ~ 5725 MHz, the peak power spectral density shall not exceed 11 dBm in any 1-MHz band. If transmitting antenna of directional gain greater than 6 dBi are used, the peak power spectral density shall be reduced by the amount in dB that directional gain of the antenna exceeds 6 dBi.
4. For the band 5.725 ~ 5.850 GHz, the peak power spectral density shall not exceed 30 dBm in any 500 kHz band. If transmitting antenna of directional gain greater than 6 dBi are used, the peak power spectral density shall be reduced by the amount in dB that directional gain of the antenna exceeds 6 dBi.
5. The frequency band 5.850 ~ 5.895 GHz:
 For an indoor access point operating in the 5.850–5.895 GHz band, the maximum power spectral density must not exceed 20 dBm e.i.r.p. in any 1–megahertz band.
 For client devices operating under the control of an indoor access point in the 5.850–5.895 GHz band, the maximum power spectral density must not exceed 14 dBm e.i.r.p. in any 1-megahertz band.
 For a subordinate device operating under the control of an indoor access point in the 5.850–5.895 GHz band, the maximum power spectral density must not exceed 20 dBm e.i.r.p in any 1–megahertz band.

6.3. Test Procedure

The EUT was setup to ANSI C63.10: 2013; tested to U-NII test procedure of KDB 789033.

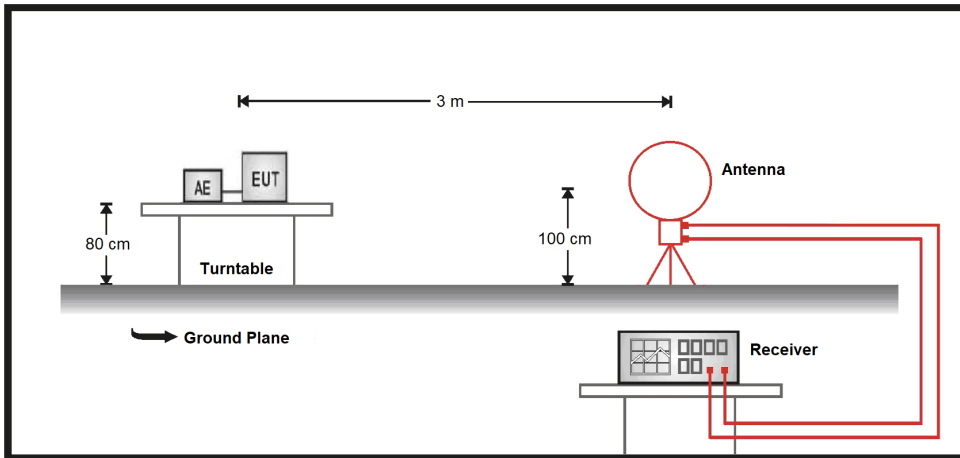
6.4. Test Result of Maximum Power Spectral Density

Refer as Appendix D

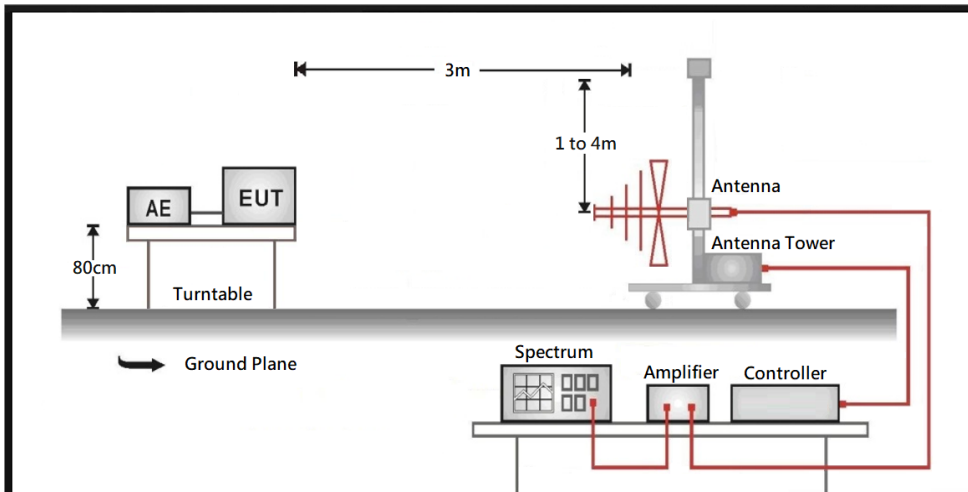
7. Transmitter Radiated Spurious Emission

7.1. Test Setup

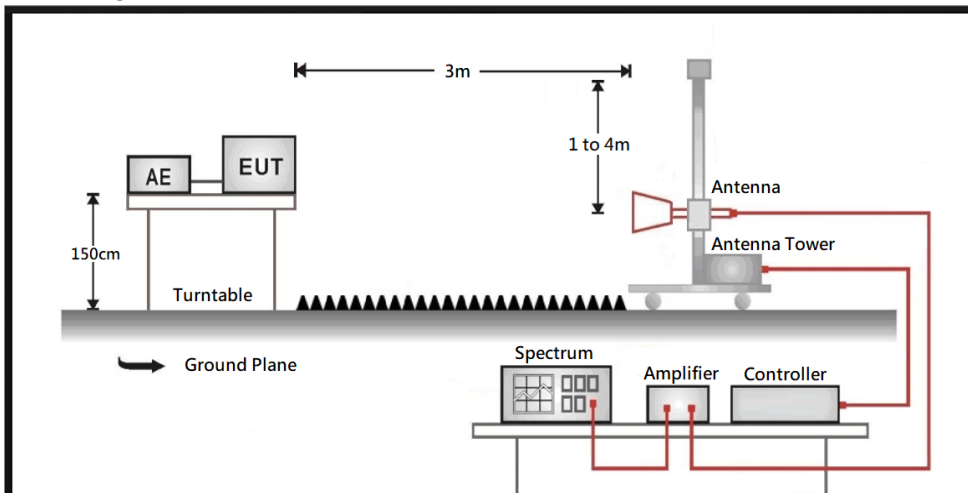
9 kHz ~ 30 MHz



30 MHz ~ 1 GHz



Above 1 GHz



7.2. Test Limit

Frequency (MHz)	Field strength (uV/m)	Field strength (dBuV/m)	Measurement distance (m)
0.009 – 0.490	2400/F(kHz)	20 log (2400/F(kHz))	300
0.490 – 1.705	24000/F(kHz)	20 log (24000/F(kHz))	30
1.705 - 30	30	29.5	30
30 - 88	100	40	3
88 - 216	150	43.5	3
216 - 960	200	46	3
Above 960	500	54	3

Remarks:

1. Field strength (dBuV/m) = 20 log Field strength (uV/m)
2. In the Above Table, the tighter limit applies at the band edges.
2. Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system

Unwanted Emission out of the restricted bands Test Limit

Frequency (MHz)	EIRP Limit (dBm/MHz)	Equivalent Field Strength (dBuV/m@3m)
5150 – 5250	-27	68.2
5250 – 5350	-27	68.2
5470 – 5725	-27	68.2
5725 – 5850	-27 ^{*1}	68.2 ^{*1}
	10 ^{*2}	105.2 ^{*2}
	15.6 ^{*3}	110.8 ^{*3}
	27 ^{*4}	122.2 ^{*4}
5850 – 5895	(i) For an indoor access point or subordinate device, all emissions at or above 5.895 GHz shall not exceed an e.i.r.p. of 15 dBm/MHz and shall decrease linearly to an e.i.r.p. of -7 dBm/MHz at or above 5.925 GHz. (ii) For a client device, all emissions at or above 5.895 GHz shall not exceed an e.i.r.p. of -5 dBm/MHz and shall decrease linearly to an e.i.r.p. of -27 dBm/MHz at or above 5.925 GHz. (iii) For a client device or indoor access point or subordinate device, all emissions below 5.725 GHz shall not exceed an e.i.r.p. of -27 dBm/MHz at 5.65 GHz increasing linearly to 10 dBm/MHz at 5.7 GHz, and from 5.7 GHz increasing linearly to a level of 15.6 dBm/MHz at 5.72 GHz, and from 5.72 GHz increasing linearly to a level of 27 dBm/MHz at 5.725 GHz.	
^{*1} beyond 75 MHz or more above of the band edge. ^{*2} below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above. ^{*3} below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above. ^{*4} from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.		

Remark:

The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength:

$$E = \frac{1000000\sqrt{30P}}{3} \text{ uV/m, where P is the eirp (Watts).}$$

7.3. Test Procedure

The EUT and its simulators are placed on a turn table which is 0.8 or 1.5 meter above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.

The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level. Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated according to ANSI C63.10: 2013 on radiated measurement.

The additional latch filter below 1 GHz was used to measure the level of harmonics radiated emission during field strength of harmonics measurement.

The bandwidth below 1 GHz setting on the field strength meter is 120 kHz, above 1 GHz are 1 MHz.

The frequency range from 9 kHz to 10th harmonics and included The frequency range from the lowest oscillator frequency generated within the device up to the 10th harmonic was checked is checked.

7.4. Test Result of Transmitter Radiated Spurious Emission (Below 30 MHz)

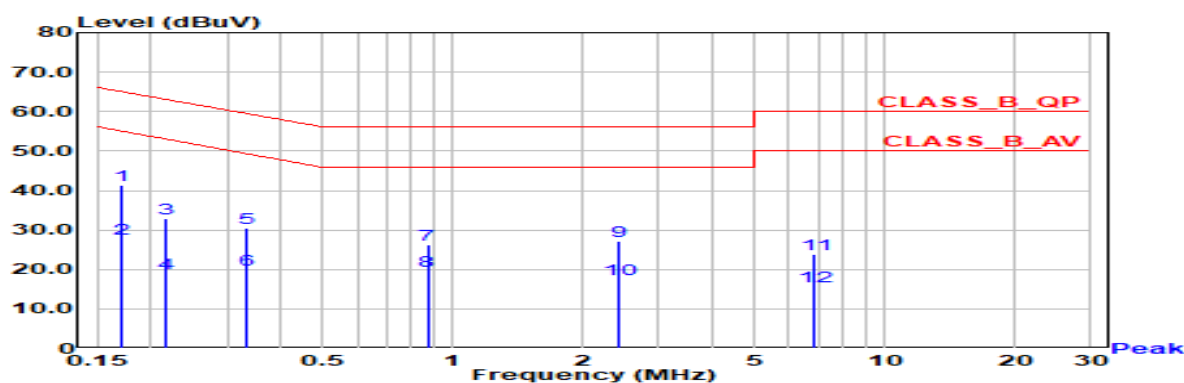
The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

7.5. Test Result of Transmitter Radiated Spurious Emission

Refer as Appendix E

Appendix A. Test Result of AC Power Line Conducted Emission

Test Mode	Mode 1	Phase	Line
Test Condition	WiFi 5GHz		

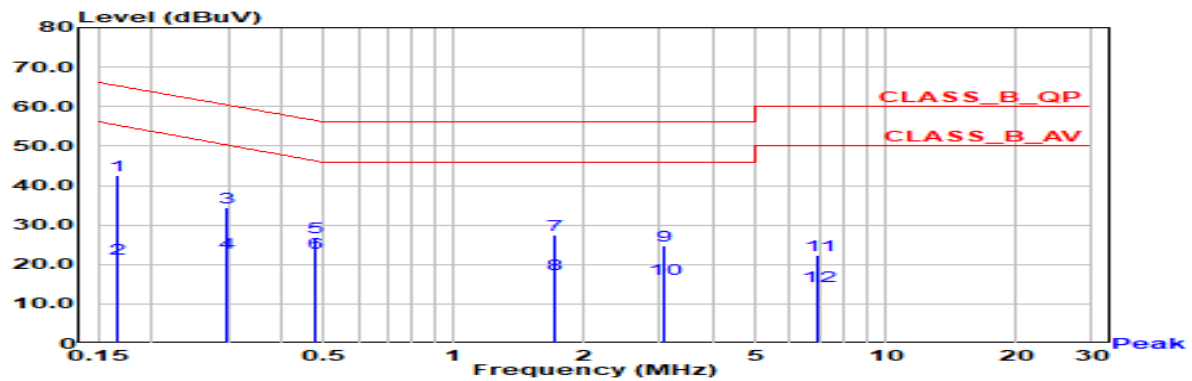


No	Frequency (MHz)	Emission Level (dBuV)	Limit (dBuV)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
*1	0.172	41.29	64.87	-23.58	31.67	9.62	QP
2	0.172	27.67	54.87	-27.20	18.05	9.62	AV
3	0.217	32.80	62.93	-30.13	23.17	9.63	QP
4	0.217	19.16	52.93	-33.76	9.54	9.63	AV
5	0.331	30.44	59.42	-28.98	20.80	9.64	QP
6	0.331	19.80	49.42	-29.62	10.17	9.64	AV
7	0.873	26.29	56.00	-29.71	16.60	9.69	QP
8	0.873	19.57	46.00	-26.43	9.89	9.69	AV
9	2.428	27.13	56.00	-28.87	17.35	9.78	QP
10	2.428	17.59	46.00	-28.41	7.81	9.78	AV
11	6.896	23.82	60.00	-36.18	13.86	9.96	QP
12	6.896	15.65	50.00	-34.35	5.68	9.96	AV

Note:

1. "*" means this data is the worst emission level.
2. Emission Level = Reading Level + Correct Factor (Correct Factor = LISN Insertion Loss + Cable Loss).
3. Margin = Emission Level - Limit.

Test Mode	Mode 1	Phase	Neutral
Test Condition	WiFi 5GHz		

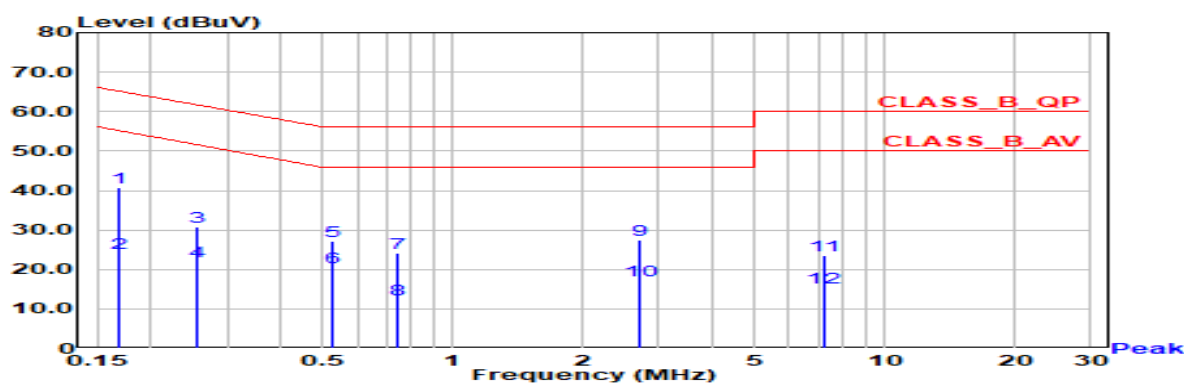


No	Frequency (MHz)	Emission Level (dBUV)	Limit (dBUV)	Margin (dB)	Reading Level (dBUV)	Correct Factor (dB)	Detector Type
*1	0.166	42.63	65.16	-22.54	33.01	9.62	QP
2	0.166	21.55	55.16	-33.62	11.92	9.62	AV
3	0.299	34.33	60.27	-25.94	24.70	9.63	QP
4	0.299	22.91	50.27	-27.36	13.27	9.63	AV
5	0.476	26.79	56.41	-29.62	17.14	9.65	QP
6	0.476	22.90	46.41	-23.52	13.25	9.65	AV
7	1.708	27.60	56.00	-28.40	17.85	9.75	QP
8	1.708	17.62	46.00	-28.38	7.87	9.75	AV
9	3.082	24.84	56.00	-31.16	15.02	9.82	QP
10	3.082	16.32	46.00	-29.68	6.50	9.82	AV
11	6.988	22.34	60.00	-37.66	12.34	10.00	QP
12	6.988	14.41	50.00	-35.59	4.41	10.00	AV

Note:

1. "*" means this data is the worst emission level.
2. Emission Level = Reading Level + Correct Factor (Correct Factor = LISN Insertion Loss + Cable Loss).
3. Margin = Emission Level - Limit.

Test Mode	Mode 2	Phase	Line
Test Condition	WiFi 5GHz		

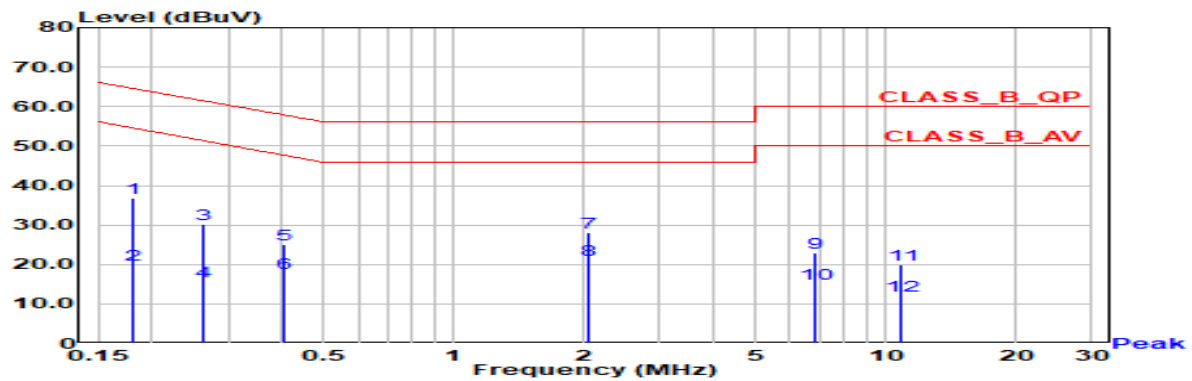


No	Frequency (MHz)	Emission Level (dBuV)	Limit (dBuV)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
*1	0.169	40.85	65.02	-24.16	31.23	9.62	QP
2	0.169	24.24	55.02	-30.78	14.62	9.62	AV
3	0.254	30.81	61.63	-30.82	21.18	9.63	QP
4	0.254	22.08	51.63	-29.54	12.45	9.63	AV
5	0.526	27.18	56.00	-28.82	17.53	9.66	QP
6	0.526	20.66	46.00	-25.34	11.01	9.66	AV
7	0.740	24.05	56.00	-31.95	14.37	9.68	QP
8	0.740	12.52	46.00	-33.48	2.84	9.68	AV
9	2.700	27.58	56.00	-28.42	17.77	9.80	QP
10	2.700	17.22	46.00	-28.78	7.41	9.80	AV
11	7.204	23.59	60.00	-36.41	13.59	10.01	QP
12	7.204	15.46	50.00	-34.54	5.46	10.01	AV

Note:

1. "*" means this data is the worst emission level.
2. Emission Level = Reading Level + Correct Factor (Correct Factor = LISN Insertion Loss + Cable Loss).
3. Margin = Emission Level - Limit.

Test Mode	Mode 2	Phase	Neutral
Test Condition	WiFi 5GHz		



No	Frequency (MHz)	Emission Level (dBuV)	Limit (dBuV)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	0.181	36.72	64.43	-27.70	27.10	9.62	QP
2	0.181	19.96	54.43	-34.47	10.34	9.62	AV
3	0.264	30.10	61.31	-31.21	20.47	9.63	QP
4	0.264	15.79	51.31	-35.52	6.16	9.63	AV
5	0.405	24.99	57.75	-32.76	15.35	9.64	QP
6	0.405	17.82	47.75	-29.94	8.18	9.64	AV
7	2.047	28.13	56.00	-27.87	18.36	9.77	QP
*8	2.047	21.03	46.00	-24.97	11.26	9.77	AV
9	6.842	22.92	60.00	-37.08	12.93	9.99	QP
10	6.842	14.97	50.00	-35.03	4.97	9.99	AV
11	10.882	20.02	60.00	-39.98	9.87	10.15	QP
12	10.882	11.98	50.00	-38.02	1.83	10.15	AV

Note:

1. "*" means this data is the worst emission level.
2. Emission Level = Reading Level + Correct Factor (Correct Factor = LISN Insertion Loss + Cable Loss).
3. Margin = Emission Level - Limit.

Appendix B. Test Result of Emission Bandwidth

Modulation	Frequency (MHz)	99% Bandwidth (MHz)			26dB Bandwidth (MHz)		
		Ant. 1	Ant. 2	Limit	Ant. 1	Ant. 2	Limit
802.11a	5180	16.90	16.90	-	28.60	23.80	-
	5220	16.66	16.58	-	20.40	20.44	-
	5240	16.54	16.58	-	20.40	20.44	-
	5260	16.90	16.78	-	24.44	22.00	-
	5300	16.66	16.66	-	20.64	20.56	-
	5320	16.66	16.54	-	20.40	20.48	-
	5500	16.74	16.54	-	21.40	20.16	-
	5580	16.66	16.50	-	20.64	20.44	-
	5700	16.98	16.50	-	24.52	20.48	-
	5720 (UNII-2C)	13.63	13.39	-	17.64	15.20	-
Modulation	Frequency (MHz)	99% Bandwidth (MHz)			DTS Bandwidth (MHz)		
		Ant. 1	Ant. 2	Limit	Ant. 1	Ant. 2	Limit
802.11a	5720 (UNII-3)	3.43	3.23	-	3.04	2.44	0.50
	5745	29.69	30.69	-	15.12	16.32	0.50
	5785	30.81	31.73	-	15.92	15.08	0.50
	5825	31.29	31.33	-	15.32	15.92	0.50

Modulation	Frequency (MHz)	99% Bandwidth (MHz)			26dB Bandwidth (MHz)		
		Ant. 1	Ant. 2	Limit	Ant. 1	Ant. 2	Limit
802.11ac (20 MHz)	5180	17.66	17.70	-	20.28	20.44	-
	5220	17.66	17.66	-	20.44	20.80	-
	5240	17.62	17.70	-	20.60	20.28	-
	5260	17.70	17.70	-	20.64	20.76	-
	5300	17.74	17.74	-	20.72	20.80	-
	5320	17.66	17.70	-	20.92	21.00	-
	5500	17.74	17.74	-	24.04	22.52	-
	5580	17.78	17.74	-	22.96	25.32	-
	5700	17.62	17.58	-	20.08	20.12	-
	5720 (UNII-2C)	13.99	13.99	-	16.08	15.20	-
Modulation	Frequency (MHz)	99% Bandwidth (MHz)			DTS Bandwidth (MHz)		
		Ant. 1	Ant. 2	Limit	Ant. 1	Ant. 2	Limit
802.11ac (20 MHz)	5720 (UNII-3)	3.87	3.79	-	2.44	2.44	0.50
	5745	31.25	32.85	-	16.32	16.04	0.50
	5785	32.05	32.41	-	15.72	16.92	0.50
	5825	31.97	32.41	-	16.64	17.24	0.50

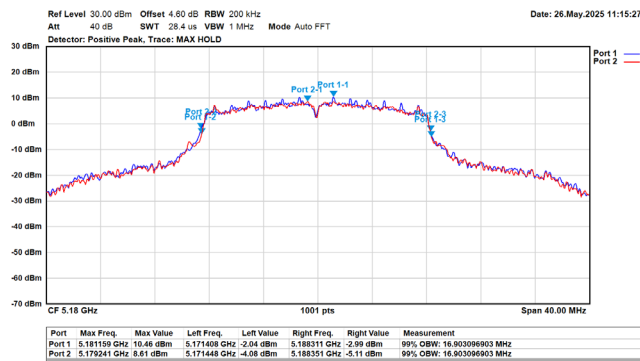
Modulation	Frequency (MHz)	99% Bandwidth (MHz)			26dB Bandwidth (MHz)		
		Ant. 1	Ant. 2	Limit	Ant. 1	Ant. 2	Limit
802.11ac (40 MHz)	5190	36.12	36.04	-	40.40	40.16	-
	5230	36.52	36.44	-	69.36	52.08	-
	5270	37.00	36.60	-	67.08	60.48	-
	5310	36.12	36.20	-	40.88	39.92	-
	5510	36.12	36.12	-	40.64	40.40	-
	5550	37.32	36.68	-	72.84	67.68	-
	5670	36.36	36.28	-	52.88	40.56	-
	5710 (UNII-2C)	38.50	36.26	-	57.36	59.04	-
Modulation	Frequency (MHz)	99% Bandwidth (MHz)			DTS Bandwidth (MHz)		
		Ant. 1	Ant. 2	Limit	Ant. 1	Ant. 2	Limit
802.11ac (40 MHz)	5710 (UNII-3)	10.73	8.58	-	2.44	2.44	0.50
	5755	59.86	59.46	-	32.56	32.56	0.50
	5795	66.25	62.90	-	30.16	30.72	0.50

Modulation	Frequency (MHz)	99% Bandwidth (MHz)			26dB Bandwidth (MHz)		
		Ant. 1	Ant. 2	Limit	Ant. 1	Ant. 2	Limit
802.11ac (80 MHz)	5210	75.60	75.28	-	80.48	79.20	-
	5290	75.44	75.28	-	80.96	79.36	-
	5530	75.60	75.44	-	81.44	80.48	-
	5610	76.72	76.08	-	130.60	121.00	-
	5690 (UNII-2C)	73.84	73.20	-	109.80	112.00	-
Modulation	Frequency (MHz)	99% Bandwidth (MHz)			DTS Bandwidth (MHz)		
		Ant. 1	Ant. 2	Limit	Ant. 1	Ant. 2	Limit
802.11ac (80 MHz)	5690 (UNII-3)	3.52	3.04	-	2.44	2.44	0.50
	5755	89.67	78.80	-	75.04	75.04	0.50

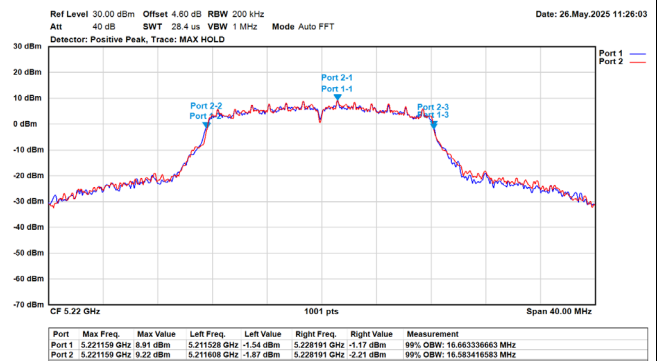
For 99% Bandwidth:

Spectrum plot of worst value

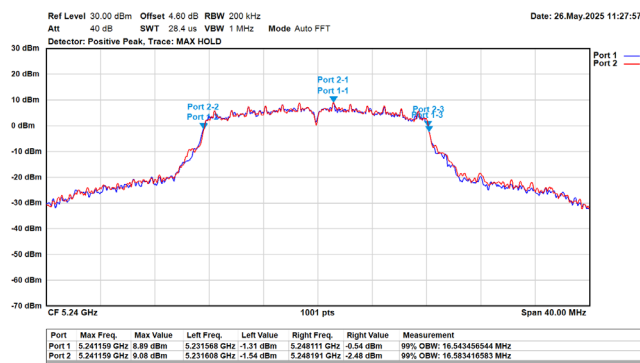
802.11a / 5180 MHz



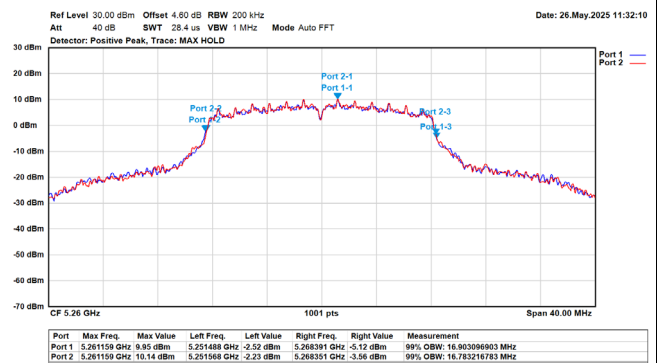
802.11a / 5220 MHz



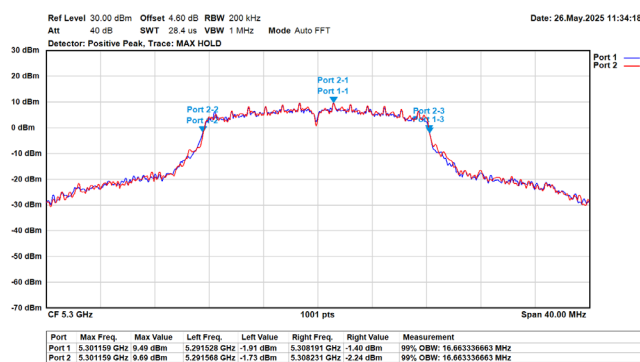
802.11a / 5240 MHz



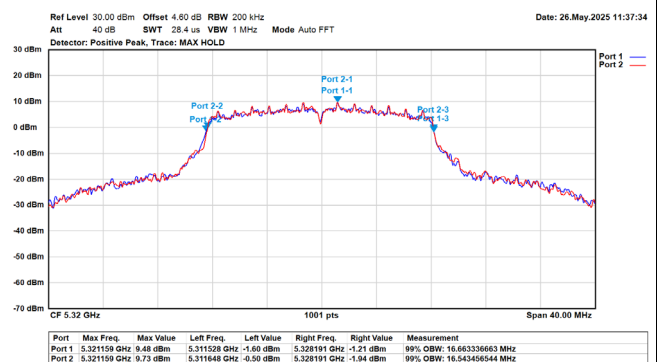
802.11a / 5260 MHz



802.11a / 5300 MHz

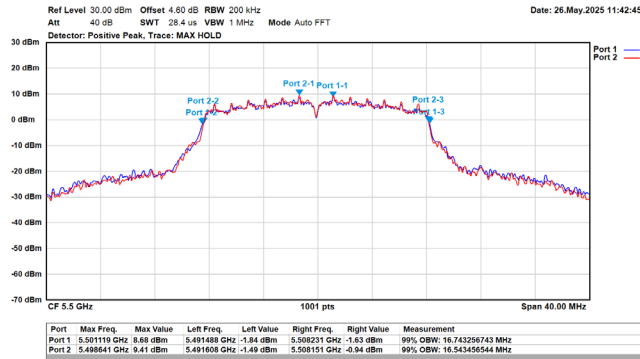


802.11a / 5320 MHz

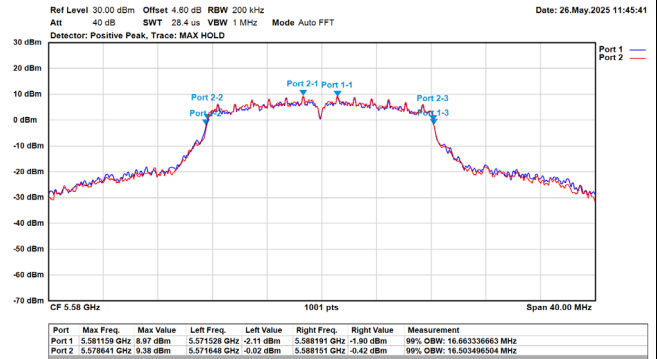


Spectrum plot of worst value

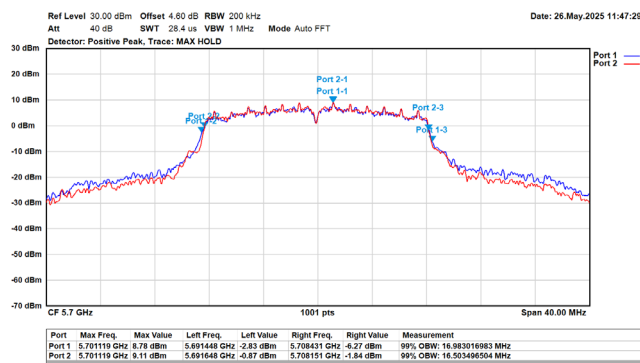
802.11a / 5500 MHz



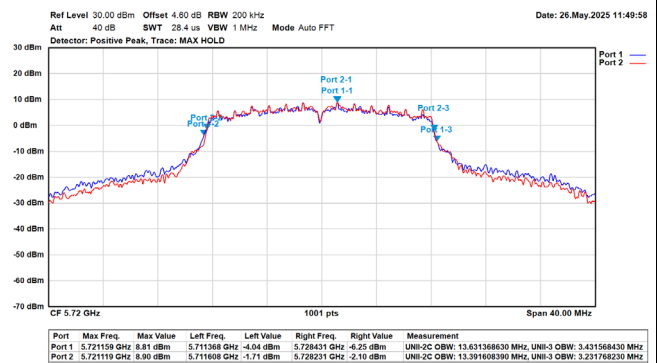
802.11a / 5580 MHz



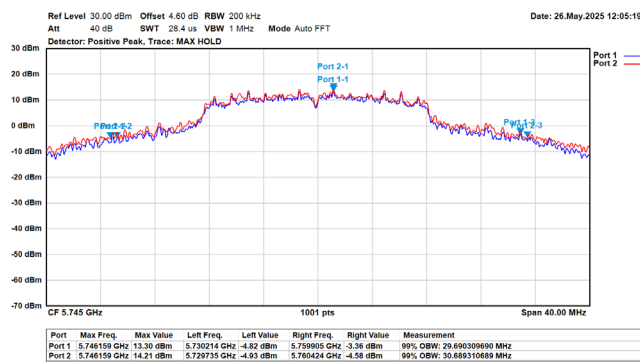
802.11a / 5700 MHz



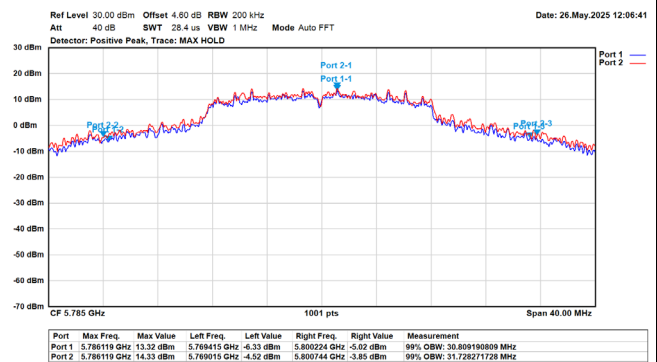
802.11a / 5720 MHz



802.11a / 5745 MHz

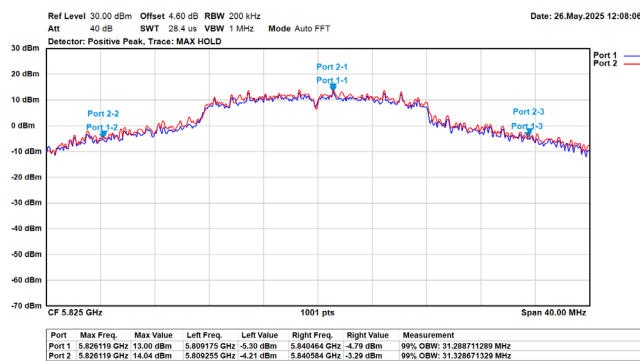


802.11a / 5785 MHz

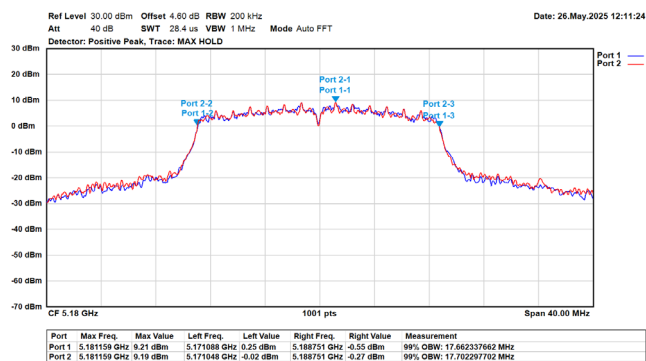


Spectrum plot of worst value

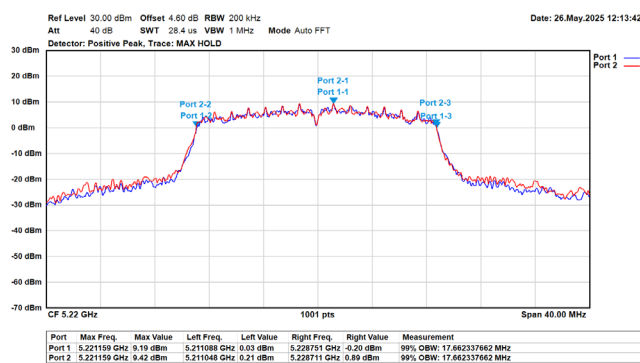
802.11a / 5825 MHz



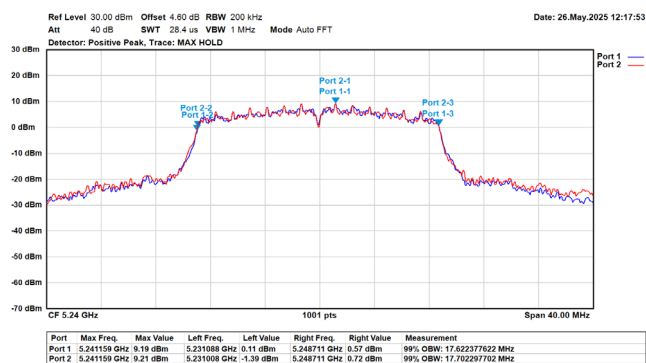
802.11ac (20 MHz) / 5180 MHz



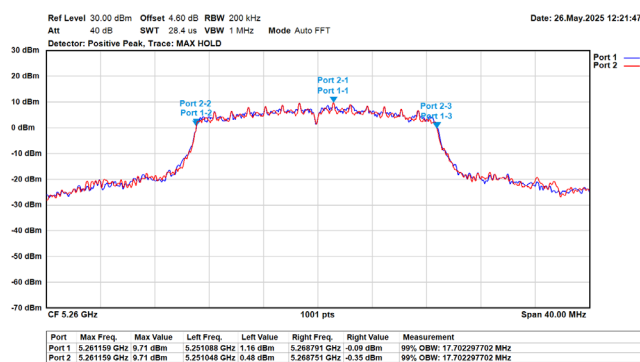
802.11ac (20 MHz) / 5220 MHz



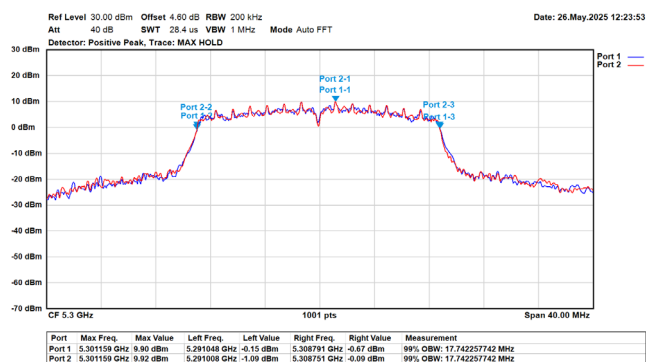
802.11ac (20 MHz) / 5240 MHz



802.11ac (20 MHz) / 5260 MHz

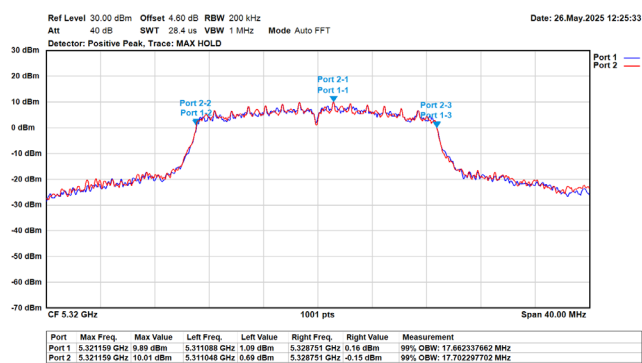


802.11ac (20 MHz) / 5300 MHz

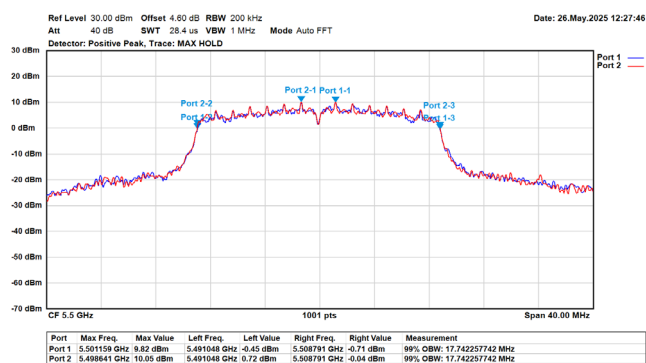


Spectrum plot of worst value

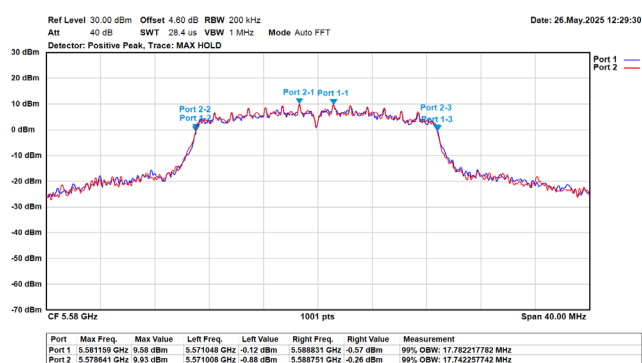
802.11ac (20 MHz) / 5320 MHz



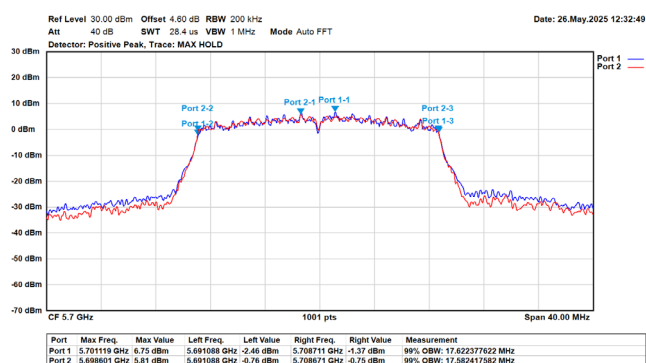
802.11ac (20 MHz) / 5500 MHz



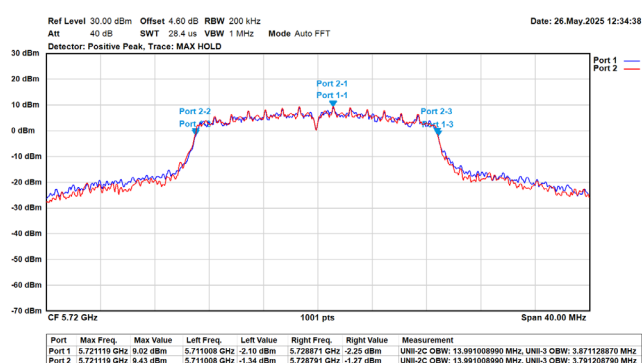
802.11ac (20 MHz) / 5580 MHz



802.11ac (20 MHz) / 5700 MHz



802.11ac (20 MHz) / 5720 MHz



802.11ac (20 MHz) / 5745 MHz

