RADIO PERFORMANCE TEST REPORT

Test Report No. : **OT-23N-RWD-004**

Reception No. : **2309003183**

Applicant : **Samsung Electronics Co Ltd**

Address : **19 Chapin Rd., Building D, Pine Brook, New Jersey, 07058, United States**

Manufacturer : **Samsung Electronics Co Ltd**

Address : **129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do 16677, Korea**

Type of Equipment : **Wi-Fi/BT Transceiver**

FCC ID. : **A3LWCD730M**

Model Name : **WCD730M**

Multiple Model Name : **N/A**

Serial number : **N/A**

Total page of Report : **139 pages (including this page)**

Date of Incoming : **October 04, 2023**

Date of issue : **November 01, 2023**

SUMMARY

The equipment complies with the regulation; ***FCC PART 15 SUBPART E Section 15.407***

This test report only contains the result of a single test of the sample supplied for the examination.

It is not a generally valid assessment of the features of the respective products of the mass-production.

This report is not correlated with the "KS Q ISO/IEC 17025 and KOLAS accreditation" of Korean Laboratory Accreditation Scheme.

Tested by	Reviewed by	Approved by
Ju-Yun, Park / Sr. Engineer	Tae-Ho, Kim / Chief Engineer	Jae-Ho, Lee / Chief Engineer
ONETECH Corp.	ONETECH Corp.	ONETECH Corp.

ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)

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ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)

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※ Please refer to the Annex section for All test plots

Revision History

Rev. No.	Issue Report No.	Issued Date	Revisions	Section Affected
0	OT-23N-RWD-004	November 01, 2023	Initial Release	All

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1. VERIFICATION OF COMPLIANCE

Applicant : Samsung Electronics Co Ltd

Address : 19 Chapin Rd., Building D, Pine Brook, New Jersey, 07058, United States

Contact Person : Youngjoong, Noh / Principal Engineer

Telephone No. : +82-31-277-0598

FCC ID : A3LWCD730M

Model Name : WCD730M

Brand Name :

Serial Number : N/A

Date : November 01, 2023

EQUIPMENT CLASS	Unlicensed National Information infrastructure(UNII)
E.U.T. DESCRIPTION	Modular Transmitter, Wi-Fi/BT Transceiver
THIS REPORT CONCERNS	Original Grant
MEASUREMENT PROCEDURES	ANSI C63.10: 2013
TYPE OF EQUIPMENT TESTED	Pre-Production
KIND OF EQUIPMENT AUTHORIZATION REQUESTED	Certification
EQUIPMENT WILL BE OPERATED UNDER FCC RULES PART(S)	FCC PART 15 SUBPART E Section 15.407 789033 D02 General UNII Test Procedures New Rules v02r01
Modifications on the Equipment to Achieve Compliance	None
Final Test was Conducted On	3 m, Semi Anechoic Chamber

-. The above equipment was tested by ONETECH Corp. for compliance with the requirement set forth in the FCC Rules and Regulations. This said equipment in the configuration described in this report, shows the maximum emission levels emanating from equipment are within the compliance requirements.

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2. TEST SUMMARY

2.1 Test items and results

SECTION	TEST ITEMS	RESULTS
15.407(a)	26 dB Bandwidth	PASS
15.407(a)	Maximum Conducted Output Power	Met the Limit / PASS
15.407(a)	Peak Power Spectral Density	Met the Limit / PASS
15.407(e)	6 dB Bandwidth	Met the Limit / PASS
15.407(g)	Frequency Stability	Met the Limit / PASS
15.407(b)	Undesirable Emissions	Met the Limit / PASS
15.205, 15.407(b)	General Field Strength Limits (Restricted Bands and Radiated Emission Limits)	Met the Limit / PASS
15.207	AC Conducted Emissions 150 kHz-30 MHz	Met the Limit / PASS
15.407(h)	Dynamic frequency Selection	Met the Limit / PASS

2.2 Additions, deviations, exclusions from standards

No additions, deviations or exclusions have been made from standard.

2.3 Related Submittal(s) / Grant(s)

Original submittal only

2.4 Purpose of the test

To determine whether the equipment under test fulfills the requirements of the regulation stated in FCC PART 15 SUBPART E Section 15.407

2.5 Test Methodology

Both conducted and radiated testing was performed according to the procedures in ANSI C63.10: 2013. Radiated testing was performed at a distance of 3 m from EUT to the antenna.

2.6 Test Facility

The Onetech Corp. has been designated to perform equipment testing in compliance with ISO/IEC 17025.

The Electromagnetic compatibility measurement facilities are located at 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea

-. Site Filing:

VCCI (Voluntary Control Council for Interference) – Registration No. R-20122/ C-14617/ G-10666/ T-11842

-. Lab Accreditation:

KOLAS (Korea Laboratory Accreditation Scheme) - Accreditation NO. KT085

ISED (Innovation, Science and Economic Development Canada) – Registration No. Site# 3736A-3

FCC (Federal Communications Commission) - Accreditation No. KR0013

RRA (Radio Research Agency) – Designation No. KR0013

3. GENERAL INFORMATION

3.1 Product Description

The Samsung Electronics Co Ltd, Model WCD730M (referred to as the EUT in this report) is a Wi-Fi/BT Transceiver. The product specification described herein was obtained from product data sheet or user's manual.

DEVICE TYPE	Wi-Fi/BT Transceiver	
Temperature Range	-20 °C ~ 50 °C	
OPERATING FREQUENCY	Bluetooth LE	2 402 MHz ~ 2 480 MHz
	Bluetooth	2 402 MHz ~ 2 480 MHz
	WLAN 2.4 GHz	2 412 MHz ~ 2 472 MHz (802.11b/g/n(HT20))
	WLAN 5 150 MHz ~ 5 250 MHz Band	5 180 MHz ~ 5 240 MHz (802.11a/n(HT20)/ac(VHT20))
		5 190 MHz ~ 5 230 MHz (802.11n(HT40)/ac(VHT40))
		5 210 MHz (802.11ac(VHT80))
	WLAN 5 250 MHz ~ 5 350 MHz Band	5 260 MHz ~ 5 320 MHz (802.11a/n(HT20)/ac(VHT20))
		5 270 MHz ~ 5 310 MHz (802.11n(HT40)/ac(VHT40))
		5 290 MHz (802.11ac(VHT80))
	WLAN 5 470 MHz ~ 5 725 MHz Band	5 500 MHz ~ 5 720 MHz (802.11a/n(HT20)/ac(VHT20))
		5 510 MHz ~ 5 710 MHz (802.11n(HT40)/ac(VHT40))
		5 530 MHz ~ 5 690 MHz (802.11ac(VHT80))
	WLAN 5 725 MHz ~ 5 850 MHz Band	5 745 MHz ~ 5 825 MHz (802.11a/n(HT20)/ac(VHT20))
		5 755 MHz ~ 5 795 MHz (802.11n(HT40)/ac(VHT40))
		5 775 MHz (802.11ac(VHT80))
MODULATION TYPE	Bluetooth LE	GFSK for 1 Mbps / 2 Mbps
	Bluetooth	GFSK for 1Mbps, π/4-DQPSK for 2Mbps, 8-DPSK for 3Mbps
	WLAN 2.4 GHz	802.11b: DSSS Modulation(DBPSK/DQPSK/CCK) 802.11g/n(HT20): OFDM Modulation(BPSK/QPSK/16QAM/64QAM)
	WLAN 5 GHz	802.11a/n(HT20)/n(HT40)/ac(VHT80): OFDM Modulation(BPSK/QPSK/16QAM/64QAM)

RF OUTPUT POWER	Bluetooth LE	1 Mbps	9.98 dBm
		2 Mbps	9.89 dBm
	Bluetooth	1 Mbps	10.97 dBm
		2 Mbps	10.51 dBm
		3 Mbps	10.53 dBm
	WLAN 2.4 GHz	Antenna 1	18.08 dBm(802.11b) 15.61 dBm(802.11g) 15.01 dBm(802.11n_HT20)
		Antenna 2	20.59 dBm(802.11b) 16.75 dBm(802.11g) 16.61 dBm(802.11n_HT20)
		Multiple Antenna	18.77 dBm(802.11g) 18.72 dBm(802.11n_HT20)
	WLAN 5 150 MHz ~ 5 250 MHz Band	Antenna 1	12.31 dBm(802.11a) 12.38 dBm(802.11n_HT20) 14.12 dBm(802.11n_HT40) 12.73 dBm(802.11ac_VHT80)
		Antenna 2	12.08 dBm(802.11a) 12.08 dBm(802.11n_HT20) 14.21 dBm(802.11n_HT40) 13.14 dBm(802.11ac_VHT80)
		Multiple Antenna	15.16 dBm(802.11a) 15.24 dBm(802.11n_HT20) 17.08 dBm(802.11n_HT40) 15.95 dBm(802.11ac_VHT80)
	WLAN 5 250 MHz ~ 5 350 MHz Band	Antenna 1	15.75 dBm(802.11a) 15.56 dBm(802.11n_HT20) 14.73 dBm(802.11n_HT40) 12.16 dBm(802.11ac_VHT80)
		Antenna 2	15.75 dBm(802.11a) 15.55 dBm(802.11n_HT20) 14.61 dBm(802.11n_HT40) 12.08 dBm(802.11ac_VHT80)
		Multiple Antenna	18.76 dBm(802.11a) 18.57 dBm(802.11n_HT20) 17.60 dBm(802.11n_HT40) 15.13 dBm(802.11ac_VHT80)

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RF OUTPUT POWER	WLAN 5 470 MHz ~ 5 725 MHz Band	Antenna 1	14.38 dBm(802.11a) 14.81 dBm(802.11n_HT20) 14.26 dBm(802.11n_HT40) 10.22 dBm(802.11ac_VHT80)
		Antenna 1_Straddle	8.30 dBm(802.11a) 9.04 dBm(802.11n_HT20) 8.64 dBm(802.11n_HT40) 9.43 dBm(802.11ac_VHT80)
		Antenna 2	15.71 dBm(802.11a) 16.41 dBm(802.11n_HT20) 15.71 dBm(802.11n_HT40) 12.03 dBm(802.11ac_VHT80)
		Antenna 2_Straddle	10.51 dBm(802.11a) 11.10 dBm(802.11n_HT20) 10.86 dBm(802.11n_HT40) 11.96 dBm(802.11ac_VHT80)
		Multiple Antenna	18.11 dBm(802.11a) 18.69 dBm(802.11n_HT20) 17.97 dBm(802.11n_HT40) 14.23 dBm(802.11ac_VHT80)
		Multiple Antenna _Straddle	12.55 dBm(802.11a) 13.20 dBm(802.11n_HT20) 12.90 dBm(802.11n_HT40) 13.89 dBm(802.11ac_VHT80)

RF OUTPUT POWER	WLAN 5 725 MHz ~ 5 850 MHz Band	Antenna 1	11.65 dBm(802.11a) 12.51 dBm(802.11n_HT20) 12.85 dBm(802.11n_HT40) 11.75 dBm(802.11ac_VHT80)
		Antenna 1_Straddle	0.48 dBm(802.11a) 1.71 dBm(802.11n_HT20) -3.17 dBm(802.11n_HT40) -4.98 dBm(802.11ac_VHT80)
		Antenna 2	14.18 dBm(802.11a) 15.01 dBm(802.11n_HT20) 15.55 dBm(802.11n_HT40) 14.25 dBm(802.11ac_VHT80)
		Antenna 2_Straddle	2.76 dBm(802.11a) 3.73 dBm(802.11n_HT20) -1.00 dBm(802.11n_HT40) -2.61 dBm(802.11ac_VHT80)
		Multiple Antenna	16.11 dBm(802.11a) 16.95 dBm(802.11n_HT20) 17.42 dBm(802.11n_HT40) 16.19 dBm(802.11ac_VHT80)
		Multiple Antenna _Straddle	4.78 dBm(802.11a) 5.85 dBm(802.11n_HT20) 1.06 dBm(802.11n_HT40) -0.62 dBm(802.11ac_VHT80)

ANTENNA TYPE	Chip Antenna		
ANTENNA GAIN	Bluetooth LE	-1.82 dBi	
	Bluetooth	-1.82 dBi	
	WLAN 2.4 GHz	Antenna 1	0.71 dBi
		Antenna 2	1.38 dBi
		Multiple Antenna	4.07 dBi
	5 150 MHz ~ 5 250 MHz Band	Antenna 1	1.39 dBi
		Antenna 2	1.43 dBi
		Multiple Antenna	4.42 dBi
	5 250 MHz ~ 5 350 MHz Band	Antenna 1	1.43 dBi
		Antenna 2	1.43 dBi
		Multiple Antenna	4.44 dBi
	5 470 MHz ~ 5 725 MHz Band	Antenna 1	1.40 dBi
		Antenna 2	1.43 dBi
		Multiple Antenna	4.43 dBi
	5 725 MHz ~ 5 850 MHz Band	Antenna 1	1.32 dBi
		Antenna 2	1.41 dBi
		Multiple Antenna	4.38 dBi
List of each Osc. or crystal Freq.(Freq. >= 1 MHz)	40 MHz		

3.2 Alternative type(s)/model(s); also covered by this test report.

-. The following lists consist of the added model and their differences.

Model Name	Differences	Tested
WCD730M	Basic: MIC and Accelation sensor at the top side.	☑
	Option 1: This model is identical to the basic model except for the removal MIC.	☐
	Option 2: This model is identical to the basic model except for the removal MIC and Accelation sensor at the top side.	☐

Note: 1. Applicant consigns only basic model to test, therefore this test report just guarantees the units, which have been tested.

2. The Applicant/manufacturer is responsible for the compliance of all variants.

4. EUT MODIFICATIONS

-. None

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5. SYSTEM TEST CONFIGURATION

5.1 Justification

This device was configured for testing in a typical way as a normal customer is supposed to be used. During the test, the following components were installed inside of the EUT.

DEVICE TYPE	MANUFACTURER	MODEL/PART NUMBER	FCC ID
Main Board	Samsung Electronics Co Ltd	HDWB-2470 V1.0	N/A

5.2 Peripheral equipment

Defined as equipment needed for correct operation of the EUT, but not considered as tested:

Model	Manufacturer	Description	Connected to
WCD730M	Samsung Electronics Co Ltd	Wi-Fi/BT Transceiver (EUT)	
Ideapad320	LENOVO	Notebook PC	EUT
ADL45WCE	CHICONY POWER TECHNOLOGY(SUZHOU) CO.,LTD.	AC Adapter	

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5.3 Mode of operation during the test

For the testing, software used to control the EUT for staying in continuous transmitting mode is programmed.

-. Frequency / Channel Operations

		Channel	Frequency
802.11a 802.11n 802.11ac(20 MHz)	Band 1	36	5 180
		44	5 220
		48	5 240
	Band 2A	52	5 260
		60	5 300
		64	5 320
	Band 2C	100	5 500
		116	5 580
		140	5 700
	Straddle	144	5 720
	Band 3	149	5 745
		157	5 785
		165	5 825
802.11n 802.11ac(40 MHz)	Band 1	38	5 190
		46	5 230
	Band 2A	54	5 270
		62	5 310
	Band 2C	102	5 510
		110	5 550
		134	5 670
	Straddle	142	5 710
	Band 3	151	5 755
		5 795	5 795
802.11ac(80 MHz)	Band 1	42	5 210
	Band 2A	58	5 290
	Band 2C	106	5 530
	Straddle	138	5 690
	Band 3	155	5 775

-. Power Level Setting(Dec)

Operating Frequency / Modulation		Power Level Setting(Dec)	
		Ant 1	Ant 2
UNII1 [5 150 MHz ~ 5 250 MHz]	802.11a	9.0	9.0
	802.11n_HT20	9.0	9.0
	802.11n_HT40	11.0	11.0
	802.11ac_VHT80	11.0	11.0
UNII1 [5 250 MHz ~ 5 350 MHz]	802.11a	11.0	11.0
	802.11n_HT20	11.0	11.0
	802.11n_HT40	11.0	11.0
	802.11ac_VHT80	8.0	8.0
UNII2C [5 470 MHz ~ 5 725 MHz]	802.11a	11.0	11.0
	802.11n_HT20	12.0	12.0
	802.11n_HT40	12.0	12.0
	802.11ac_VHT80	8.0	8.0
UNII3 [5 725 MHz ~ 5 850 MHz]	802.11a	11.0	11.0
	802.11n_HT20	12.0	12.0
	802.11n_HT40	13.0	13.0
	802.11ac_VHT80	12.0	12.0

-. UNII 1

Modulation	DATA RATE	OUTPUT POWER[dBm]	
		Antenna 1	Antenna 2
802.11 a (Middle Channel)	6 Mbps	11.74	11.84
	9 Mbps	11.71	11.81
	12 Mbps	11.65	11.72
	18 Mbps	11.66	11.74
	24 Mbps	10.68	10.98
	36 Mbps	10.88	11.21
	48 Mbps	9.91	10.17
	54 Mbps	9.14	9.28
HT 20 (Middle Channel)	6.5 Mbps	11.63	11.91
	13 Mbps	11.56	11.88
	19.5 Mbps	11.54	11.82
	26 Mbps	11.51	11.78
	39 Mbps	11.49	11.75
	52 Mbps	10.64	10.93
	58.5 Mbps	8.65	8.77
	65 Mbps	8.74	8.88
HT 40 (Low Channel)	13.5 Mbps	14.12	14.01
	27 Mbps	14.01	13.9
	40.5 Mbps	14.06	13.89
	54 Mbps	13.98	13.87
	81 Mbps	13.98	13.87
	108 Mbps	13.31	13.13
	121.5 Mbps	11.48	11.13
	135 Mbps	11.45	11.12

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VHT80 (Middle Channel)	29.3 Mbps	12.74	13.14
	58.5 Mbps	12.68	13.08
	87.8 Mbps	12.64	13.01
	117 Mbps	12.51	12.98
	175.5 Mbps	12.48	12.89
	234 Mbps	11.83	11.99
	263.3 Mbps	11.89	12.05
	292.5 Mbps	10.06	10.21
	351 Mbps	9.93	10.04
	390 Mbps	9.87	10.03

-. The worse case data rate for each modulation is determined 6 Mbps(Ant.0/Ant.1) for IEEE 802.11a, 6.5 Mbps(Ant.0/Ant.1) for HT20, 13.5 Mbps(Ant.0/Ant.1) for HT40, 29.3 Mbps(Ant.0/Ant.1) for VHT80.

-. To get a maximum emission levels from the EUT, the EUT was moved throughout the XY, XZ, and YZ planes and the worst case is “XY” axis.

-. UNII 2A

Modulation	DATA RATE	OUTPUT POWER[dBm]	
		Antenna 1	Antenna 2
802.11 a (Middle Channel)	6 Mbps	15.46	15.61
	9 Mbps	15.37	15.52
	12 Mbps	15.27	15.44
	18 Mbps	15.26	15.42
	24 Mbps	14.38	14.49
	36 Mbps	14.43	14.54
	48 Mbps	13.46	13.51
	54 Mbps	12.54	12.64
HT 20 (Middle Channel)	6.5 Mbps	15.46	15.51
	13 Mbps	15.31	15.42
	19.5 Mbps	15.29	15.34
	26 Mbps	15.24	15.31
	39 Mbps	15.16	15.31
	52 Mbps	14.31	14.4
	58.5 Mbps	12.49	12.47
	65 Mbps	12.57	12.48
HT 40 (Low Channel)	13.5 Mbps	14.73	14.44
	27 Mbps	14.46	14.28
	40.5 Mbps	14.35	14.26
	54 Mbps	14.29	14.15
	81 Mbps	14.22	14.14
	108 Mbps	13.54	13.44
	121.5 Mbps	11.91	11.71
	135 Mbps	11.78	11.63

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VHT80 (Middle Channel)	29.3 Mbps	12.16	12.08
	58.5 Mbps	12.07	12.01
	87.8 Mbps	11.94	11.88
	117 Mbps	11.88	11.83
	175.5 Mbps	11.79	11.74
	234 Mbps	11.01	10.95
	263.3 Mbps	10.84	10.74
	292.5 Mbps	8.88	8.79
	351 Mbps	8.73	8.65
	390 Mbps	8.73	8.64

-. The worse case data rate for each modulation is determined 6 Mbps(Ant.0/Ant.1) for IEEE 802.11a, 6.5 Mbps(Ant.0/Ant.1) for HT20, 13.5 Mbps(Ant.0/Ant.1) for HT40, 29.3 Mbps(Ant.0/Ant.1) for VHT80.

-. To get a maximum emission levels from the EUT, the EUT was moved throughout the XY, XZ, and YZ planes and the worst case is “XY” axis.

-. UNII 2C

Modulation	DATA RATE	OUTPUT POWER[dBm]	
		Antenna 1	Antenna 2
802.11 a (Middle Channel)	6 Mbps	12.61	15.15
	9 Mbps	12.55	15.09
	12 Mbps	12.47	15.05
	18 Mbps	12.41	15.01
	24 Mbps	11.37	14
	36 Mbps	11.28	13.9
	48 Mbps	10.06	12.97
	54 Mbps	9.21	12.1
HT 20 (Middle Channel)	6.5 Mbps	13.16	15.92
	13 Mbps	13.08	15.86
	19.5 Mbps	12.95	15.73
	26 Mbps	12.88	15.68
	39 Mbps	12.78	15.56
	52 Mbps	12.16	14.72
	58.5 Mbps	10.17	13.01
	65 Mbps	9.96	12.84
HT 40 (Low Channel)	13.5 Mbps	13.81	15.71
	27 Mbps	13.51	15.56
	40.5 Mbps	13.25	15.23
	54 Mbps	13.24	15.22
	81 Mbps	13.13	15.1
	108 Mbps	12.41	14.4
	121.5 Mbps	10.16	12.4
	135 Mbps	10.51	12.6

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VHT80 (Middle Channel)	29.3 Mbps	10.22	12.03
	58.5 Mbps	10.14	11.88
	87.8 Mbps	9.7	11.71
	117 Mbps	9.64	11.68
	175.5 Mbps	9.41	11.51
	234 Mbps	8.51	10.58
	263.3 Mbps	8.64	10.68
	292.5 Mbps	6.75	8.55
	351 Mbps	6.48	8.31
	390 Mbps	6.43	8.26

-. The worse case data rate for each modulation is determined 6 Mbps(Ant.0/Ant.1) for IEEE 802.11a, 6.5 Mbps(Ant.0/Ant.1) for HT20, 13.5 Mbps(Ant.0/Ant.1) for HT40, 29.3 Mbps(Ant.0/Ant.1) for VHT80.

-. To get a maximum emission levels from the EUT, the EUT was moved throughout the XY, XZ, and YZ planes and the worst case is “XY” axis.

-. UNII 3

Modulation	DATA RATE	OUTPUT POWER[dBm]	
		Antenna 1	Antenna 2
802.11 a (Middle Channel)	6 Mbps	11.28	13.82
	9 Mbps	10.91	13.43
	12 Mbps	11.01	13.48
	18 Mbps	10.77	13.36
	24 Mbps	9.85	12.42
	36 Mbps	9.61	12.25
	48 Mbps	8.65	11.35
	54 Mbps	7.88	10.52
HT 20 (Middle Channel)	6.5 Mbps	11.75	14.41
	13 Mbps	11.64	14.28
	19.5 Mbps	11.51	14.15
	26 Mbps	11.52	14.16
	39 Mbps	11.38	14.04
	52 Mbps	10.64	13.19
	58.5 Mbps	8.65	11.37
	65 Mbps	8.68	11.28
HT 40 (Low Channel)	13.5 Mbps	12.85	15.55
	27 Mbps	12.71	15.42
	40.5 Mbps	12.58	15.24
	54 Mbps	12.28	15.04
	81 Mbps	12.36	15.11
	108 Mbps	11.24	14.02
	121.5 Mbps	9.46	12.22
	135 Mbps	9.31	12.12

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VHT80 (Middle Channel)	29.3 Mbps	11.75	14.25
	58.5 Mbps	11.5	13.96
	87.8 Mbps	11.12	13.65
	117 Mbps	11.16	13.66
	175.5 Mbps	11.05	13.57
	234 Mbps	10.26	12.75
	263.3 Mbps	10.16	12.67
	292.5 Mbps	8.35	10.92
	351 Mbps	8.21	10.73
	390 Mbps	8.19	10.71

-. The worse case data rate for each modulation is determined 6 Mbps(Ant.0/Ant.1) for IEEE 802.11a, 6.5 Mbps(Ant.0/Ant.1) for HT20, 13.5 Mbps(Ant.0/Ant.1) for HT40, 29.3 Mbps(Ant.0/Ant.1) for VHT80.

-. To get a maximum emission levels from the EUT, the EUT was moved throughout the XY, XZ, and YZ planes and the worst case is “XY” axis.

-. Duty Cycle

	Band	Mode	Tx On Time [ms]	Tx Off Time [ms]	Duty Cycle [%]	Correction Factor [dB]
Antenna 1	UNII 1	802.11 a	-	-	100.00	-
		802.11 HT 20	-	-	100.00	-
		802.11 HT 40	-	-	100.00	-
		802.11 VHT 80	-	-	100.00	-
	UNII 2A	802.11 a	-	-	100.00	-
		802.11 HT 20	-	-	100.00	-
		802.11 HT 40	-	-	100.00	-
		802.11 VHT 80	-	-	100.00	-
	UNII 2C	802.11 a	-	-	100.00	-
		802.11 HT 20	-	-	100.00	-
		802.11 HT 40	-	-	100.00	-
		802.11 VHT 80	-	-	100.00	-
	UNII 3	802.11 a	-	-	100.00	-
		802.11 HT 20	-	-	100.00	-
		802.11 HT 40	-	-	100.00	-
		802.11 VHT 80	-	-	100.00	-
Antenna 2	UNII 1	802.11 a	-	-	100.00	-
		802.11 HT 20	-	-	100.00	-
		802.11 HT 40	-	-	100.00	-
		802.11 VHT 80	-	-	100.00	-
	UNII 2A	802.11 a	-	-	100.00	-
		802.11 HT 20	-	-	100.00	-
		802.11 HT 40	-	-	100.00	-
		802.11 VHT 80	-	-	100.00	-
	UNII 2C	802.11 a	-	-	100.00	-
		802.11 HT 20	-	-	100.00	-
		802.11 HT 40	-	-	100.00	-
		802.11 VHT 80	-	-	100.00	-
	UNII 3	802.11 a	-	-	100.00	-
		802.11 HT 20	-	-	100.00	-
		802.11 HT 40	-	-	100.00	-
		802.11 VHT 80	-	-	100.00	-

	Mode	Tx On Time [ms]	Tx Off Time [ms]	Duty Cycle [%]	Correction Factor [dB]
Staddle	802.11 a	-	-	100.00	-
	802.11 HT 20	-	-	100.00	-
	802.11 HT 40	-	-	100.00	-
	802.11 VHT 80	-	-	100.00	-

Note – Duty Cycle : (Tx On Time / (Tx On Time + Tx Off Time)) * 100

Correction Factor : 10 * Log(1 / (Duty Cycle / 100))

5.4 Configuration of Test System

Line Conducted Test: The EUT was connected to USB and the power of USB was connected to Notebook PC. All supporting equipments were connected to another LISN. Preliminary Power line Conducted Emission test was performed by using the procedure in ANSI C63.10: 2013 to determine the worse operating conditions.

Radiated Emission Test: Preliminary radiated emissions test were conducted using the procedure in ANSI C63.10: 2013 to determine the worse operating conditions. Final radiated emission tests were conducted at 3 meter Semi Anechoic Chamber.

The turntable was rotated through 360 degrees and the EUT was tested by positioned three orthogonal planes to obtain the highest reading on the field strength meter. Once maximum reading was determined, the search antenna was raised and lowered in both vertical and horizontal polarization.

5.5 Antenna Requirement

For intentional device, according to section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

Antenna Construction:

The antenna of the EUT is a Chip Antenna on the main board in the EUT, so no consideration of replacement by the user.

6. MEASUREMENT UNCERTAINTY

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI C63.10-2013. All measurement uncertainty values are shown with a coverage factor of $k = 2$ to indicate a 95 % level of confidence. The measurement data shown herein meets or exceeds the U_{CISPR} measurement uncertainty values specified in CISPR 16-4-2 and, thus, can be compared directly to specified limits to determine compliance.

Parameter	Expanded Uncertainty (dB)
Conducted Output Power	0.68
Conducted Spurious Emission < 26.5 GHz	1.60
Power Spectral Density	1.55
Line Conducted Disturbance (150 kHz ~ 30 MHz)	2.00
Radiated Disturbance (9 kHz ~ 30 MHz)	4.09
Radiated Disturbance (30 MHz ~ 1 GHz)	3.98
Radiated Disturbance (1 GHz ~ 18 GHz)	5.56
Radiated Disturbance (18 GHz ~ 40 GHz)	5.65

7. PRELIMINARY TEST

7.1 AC Power line Conducted Emissions Tests

During Preliminary Test, the following operating mode was investigated.

Operation Mode	The Worse operating condition (Please check one only)
Transmitting Mode	X

7.2 General Radiated Emissions Tests

During Preliminary Test, the following operating mode was investigated.

Operation Mode	The Worse operating condition (Please check one only)
Transmitting Mode	X

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8. MIMIMUM 26 dB BANDWIDTH

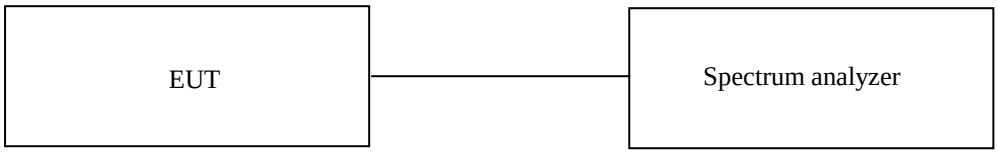
8.1 Operating environment

Temperature : 22 °C

Relative humidity : 41 % R.H.

8.2 Test set-up

The antenna output of the EUT was connected to the spectrum analyzer. The resolution bandwidth is set to 100 kHz, and peak detection was used. The 26 dB bandwidth is defined as the total spectrum over which the power is higher than the peak power minus 26 dB.



8.3 Test Date

October 04, 2023 ~ October 20, 2023

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8.4 Test data for 802.11a RLAN Mode

8.4.1 Test data for Antenna 1

-. Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	26 dB Bandwidth (MHz)
5 150 ~ 5 250	Low	5 180.00	19.88
	Middle	5 220.00	19.83
	High	5 240.00	19.98
5 250 ~ 5 350	Low	5 260.00	19.98
	Middle	5 300.00	20.13
	High	5 320.00	19.98
5 470 ~ 5 725	Low	5 500.00	19.83
	Middle	5 580.00	19.68
	High	5 700.00	19.83
5 725 ~ 5 850	Low	5 745.00	19.73
	Middle	5 785.00	19.78
	High	5 825.00	19.88

8.4.2 Test data for Antenna 2

-. Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	26 dB Bandwidth (MHz)
5 150 ~ 5 250	Low	5 180.00	19.73
	Middle	5 220.00	19.68
	High	5 240.00	19.88
5 250 ~ 5 350	Low	5 260.00	19.83
	Middle	5 300.00	19.73
	High	5 320.00	19.98
5 470 ~ 5 725	Low	5 500.00	19.78
	Middle	5 580.00	19.78
	High	5 700.00	19.88
5 725 ~ 5 850	Low	5 745.00	19.78
	Middle	5 785.00	19.68
	High	5 825.00	19.58

8.4.3 Test data for Staddle Channel_Antenna 1

-. Test Result : Pass

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	26 dB Bandwidth (MHz)
5 470 ~ 5 725	5 720.00	14.89
5 725 ~ 5 850	5 720.00	4.79

8.4.4 Test data for Staddle Channel_Antenna 2

-. Test Result : Pass

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	26 dB Bandwidth (MHz)
5 470 ~ 5 725	5 720.00	14.99
5 725 ~ 5 850	5 720.00	4.74

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8.5 Test data for 802.11n_HT20 RLAN Mode

8.5.1 Test data for Antenna 1

-. Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	26 dB Bandwidth (MHz)
5 150 ~ 5 250	Low	5 180.00	20.03
	Middle	5 220.00	20.08
	High	5 240.00	20.33
5 250 ~ 5 350	Low	5 260.00	20.28
	Middle	5 300.00	20.23
	High	5 320.00	20.68
5 470 ~ 5 725	Low	5 500.00	20.03
	Middle	5 580.00	19.88
	High	5 700.00	20.18
5 725 ~ 5 850	Low	5 745.00	20.18
	Middle	5 785.00	20.28
	High	5 825.00	20.23

8.5.2 Test data for Antenna 2

-. Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	26 dB Bandwidth (MHz)
5 150 ~ 5 250	Low	5 180.00	19.98
	Middle	5 220.00	20.03
	High	5 240.00	20.08
5 250 ~ 5 350	Low	5 260.00	20.03
	Middle	5 300.00	19.98
	High	5 320.00	20.23
5 470 ~ 5 725	Low	5 500.00	21.43
	Middle	5 580.00	20.08
	High	5 700.00	20.18
5 725 ~ 5 850	Low	5 745.00	20.13
	Middle	5 785.00	20.08
	High	5 825.00	20.03

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8.5.3 Test data for Staddle Channel_Antenna 1

-. Test Result : Pass

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	26 dB Bandwidth (MHz)
5 470 ~ 5 725	5 720.00	15.09
5 725 ~ 5 850	5 720.00	5.19

8.5.4 Test data for Staddle Channel_Antenna 2

-. Test Result : Pass

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	26 dB Bandwidth (MHz)
5 470 ~ 5 725	5 720.00	15.04
5 725 ~ 5 850	5 720.00	5.14

8.6 Test data for 802.11n_HT40 RLAN Mode

8.6.1 Test data for Antenna 1

-. Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	26 dB Bandwidth (MHz)
5 150 ~ 5 250	Low	5 190.00	40.16
	High	5 230.00	40.66
5 250 ~ 5 350	Low	5 270.00	40.56
	High	5 310.00	40.86
5 470 ~ 5 725	Low	5 510.00	41.16
	Middle	5 550.00	40.76
	High	5 670.00	40.96
5 725 ~ 5 850	Low	5 755.00	40.76
	High	5 795.00	40.26

8.6.2 Test data for Antenna 2

-. Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	26 dB Bandwidth (MHz)
5 150 ~ 5 250	Low	5 190.00	40.16
	High	5 230.00	40.46
5 250 ~ 5 350	Low	5 270.00	39.96
	High	5 310.00	40.16
5 470 ~ 5 725	Low	5 510.00	40.36
	Middle	5 550.00	40.16
	High	5 670.00	40.46
5 725 ~ 5 850	Low	5 755.00	39.96
	High	5 795.00	40.26

8.6.3 Test data for Staddle Channel_Antenna 1

-. Test Result : Pass

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	26 dB Bandwidth (MHz)
5 470 ~ 5 725	5 710.00	35.18
5 725 ~ 5 850	5 710.00	5.08

8.6.4 Test data for Staddle Channel_Antenna 2

-. Test Result : Pass

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	26 dB Bandwidth (MHz)
5 470 ~ 5 725	5 710.00	35.18
5 725 ~ 5 850	5 710.00	5.08

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8.7 Test data for 802.11ac_VHT80 RLAN Mode

8.7.1 Test data for Antenna 1

-. Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	26 dB Bandwidth (MHz)
5 150 ~ 5 250	Middle	5 210.00	81.12
5 250 ~ 5 350	Middle	5 290.00	81.32
5 470 ~ 5 725	Middle	5 530.00	81.32
5 725 ~ 5 850	Middle	5 775.00	80.92

8.7.2 Test data for Antenna 2

-. Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	26 dB Bandwidth (MHz)
5 150 ~ 5 250	Middle	5 210.00	81.12
5 250 ~ 5 350	Middle	5 290.00	80.72
5 470 ~ 5 725	Middle	5 530.00	81.12
5 725 ~ 5 850	Middle	5 775.00	80.72

8.7.3 Test data for Staddle Channel_Antenna 1

-. Test Result : Pass

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	26 dB Bandwidth (MHz)
5 470 ~ 5 725	5 690.00	75.76
5 725 ~ 5 850	5 690.00	5.56

8.7.4 Test data for Staddle Channel_Antenna 2

-. Test Result : Pass

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	26 dB Bandwidth (MHz)
5 470 ~ 5 725	5 690.00	75.36
5 725 ~ 5 850	5 690.00	5.76

9. 6 dB BANDWIDTH

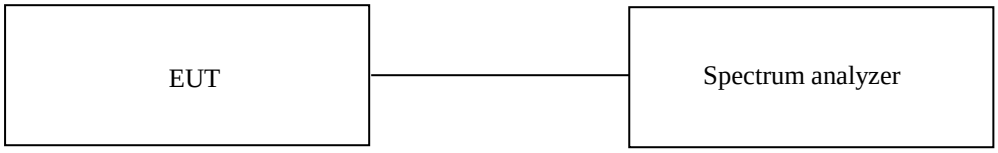
9.1 Operating environment

Temperature : 22 °C

Relative humidity : 41 % R.H.

9.2 Test set-up

The antenna output of the EUT was connected to the spectrum analyzer. The resolution bandwidth is set to 100 kHz, and peak detection was used. The 6 dB bandwidth is defined as the total spectrum over which the power is higher than the peak power minus 6 dB.



9.3 Test Date

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9.4 Test data for 802.11a RLAN Mode

9.4.1 Test data for Antenna 1

-. Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	6 dB Bandwidth (MHz)
5 725 ~ 5 850	Low	5 745.00	16.28
	Middle	5 785.00	16.33
	High	5 825.00	16.33

9.4.2 Test data for Antenna 2

-. Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	6 dB Bandwidth (MHz)
5 725 ~ 5 850	Low	5 745.00	16.28
	Middle	5 785.00	16.33
	High	5 825.00	16.33

9.4.3 Test data for Staddle Channel_Antenna 1

-. Test Result : Pass

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	6 dB Bandwidth (MHz)
5 470 ~ 5 725	5 720.00	13.19
5 725 ~ 5 850	5 720.00	3.14

9.4.4 Test data for Staddle Channel_Antenna 2

-. Test Result : Pass

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	6 dB Bandwidth (MHz)
5 470 ~ 5 725	5 720.00	13.19
5 725 ~ 5 850	5 720.00	3.14

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9.5 Test data for 802.11n_HT 20 RLAN Mode

9.5.1 Test data for Antenna 1

-. Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	6 dB Bandwidth (MHz)
5 725 ~ 5 850	Low	5 745.00	17.53
	Middle	5 785.00	17.53
	High	5 825.00	16.98

9.5.2 Test data for Antenna 2

-. Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	6 dB Bandwidth (MHz)
5 725 ~ 5 850	Low	5 745.00	17.53
	Middle	5 785.00	16.88
	High	5 825.00	17.58

9.5.3 Test data for Staddle Channel_Antenna 1

-. Test Result : Pass

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	6 dB Bandwidth (MHz)
5 470 ~ 5 725	5 720.00	13.84
5 725 ~ 5 850	5 720.00	3.74

9.5.4 Test data for Staddle Channel_Antenna 2

-. Test Result : Pass

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	6 dB Bandwidth (MHz)
5 470 ~ 5 725	5 720.00	13.79
5 725 ~ 5 850	5 720.00	3.74

9.6 Test data for 802.11n_HT40 RLAN Mode

9.6.1 Test data for Antenna 1

-. Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	6 dB Bandwidth (MHz)
5 725 ~ 5 850	Low	5 755.00	36.46
	High	5 795.00	36.46

9.6.2 Test data for Antenna 2

-. Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	6 dB Bandwidth (MHz)
5 725 ~ 5 850	Low	5 755.00	36.46
	High	5 795.00	36.36

9.6.3 Test data for Staddle Channel_Antenna 1

-. Test Result : Pass

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	6 dB Bandwidth (MHz)
5 470 ~ 5 725	5 710.00	33.18
5 725 ~ 5 850	5 710.00	3.18

9.6.4 Test data for Staddle Channel_Antenna 2

-. Test Result : Pass

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	6 dB Bandwidth (MHz)
5 470 ~ 5 725	5 710.00	33.18
5 725 ~ 5 850	5 710.00	3.08

9.7 Test data for 802.11ac_VHT80 RLAN Mode

9.7.1 Test data for Antenna 1

-. Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	6 dB Bandwidth (MHz)
5 725 ~ 5 850	Middle	5 775.00	76.72

9.7.2 Test data for Antenna 2

-. Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	6 dB Bandwidth (MHz)
5 725 ~ 5 850	Middle	5 775.00	76.52

9.7.3 Test data for Staddle Channel_Antenna 1

-. Test Result : Pass

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	6 dB Bandwidth (MHz)
5 470 ~ 5 725	5 690.00	73.36
5 725 ~ 5 850	5 690.00	3.36

9.7.4 Test data for Staddle Channel_Antenna 2

-. Test Result : Pass

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	6 dB Bandwidth (MHz)
5 470 ~ 5 725	5 690.00	73.36
5 725 ~ 5 850	5 690.00	3.36

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10. MAXIMUM CONDUCTED OUTPUT POWER

10.1 Operating environment

Temperature : 22 °C

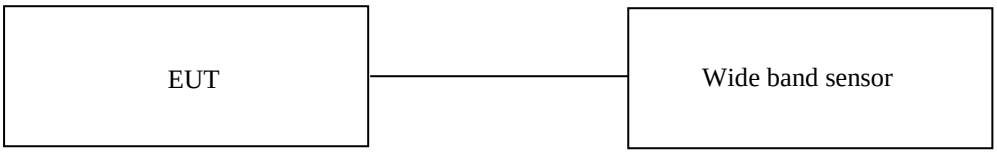
Relative humidity : 41 % R.H.

10.2 Test set-up

The maximum peak output power was measured with the wide band sensor connected to the antenna output of the EUT.

The Wide Band Sensor is measured when the EUT is transmitting at the appropriate center frequency its maximum power control level as described in Section E. 3.(KDB 789033 D02 General UNII Test Procedures New Rules v02r01).

Since this measurement is made only during the ON time of the transmitter, no duty cycle correction is required.



10.3 Test Date

October 04, 2023 ~ October 20, 2023

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10.4 Test data for 802.11a RLAN Mode

10.4.1 Test data for Antenna 1

-. Test Result : Pass

-. Duty Cycle : > 98 %

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	LIMIT (dBm)	MARGIN (dB)
5 150 ~ 5 250	Low	5 180.00	12.31	24.00	11.69
	Middle	5 220.00	11.74	24.00	12.26
	High	5 240.00	11.68	24.00	12.32
5 250 ~ 5 350	Low	5 260.00	15.75	24.00	8.25
	Middle	5 300.00	15.46	24.00	8.54
	High	5 320.00	15.31	24.00	8.69
5 470 ~ 5 725	Low	5 500.00	14.38	24.00	9.62
	Middle	5 580.00	12.61	24.00	11.39
	High	5 700.00	11.51	24.00	12.49
5 725 ~ 5 850	Low	5 745.00	11.65	30.00	18.35
	Middle	5 785.00	11.28	30.00	18.72
	High	5 825.00	11.28	30.00	18.72

Remark: Margin = Limit – Measured Value (=Power Sensor Reading + Cable Loss)

10.4.2 Test data for Antenna 2

-. Test Result : Pass

-. Duty Cycle : > 98 %

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	LIMIT (dBm)	MARGIN (dB)
5 150 ~ 5 250	Low	5 180.00	11.98	22.12	10.14
	Middle	5 220.00	11.84	22.12	10.28
	High	5 240.00	12.08	22.12	10.04
5 250 ~ 5 350	Low	5 260.00	15.75	29.13	13.38
	Middle	5 300.00	15.61	29.12	13.51
	High	5 320.00	15.54	29.13	13.59
5 470 ~ 5 725	Low	5 500.00	15.71	29.14	13.43
	Middle	5 580.00	15.15	29.13	13.98
	High	5 700.00	13.61	29.13	15.52
5 725 ~ 5 850	Low	5 745.00	14.18	30.00	15.82
	Middle	5 785.00	13.82	30.00	16.18
	High	5 825.00	13.71	30.00	16.29

Remark: Margin = Limit – Measured Value (=Power Sensor Reading + Cable Loss)

10.4.3 Test data for Multiple Transmit

-. Test Result : Pass

-. Duty Cycle : > 98 %

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	LIMIT (dBm)	MARGIN (dB)
5 150 ~ 5 250	Low	5 180.00	15.16	24.00	8.84
	Middle	5 220.00	14.80	24.00	9.20
	High	5 240.00	14.89	24.00	9.11
5 250 ~ 5 350	Low	5 260.00	18.76	24.00	5.24
	Middle	5 300.00	18.55	24.00	5.45
	High	5 320.00	18.44	24.00	5.56
5 470 ~ 5 725	Low	5 500.00	18.11	24.00	5.89
	Middle	5 580.00	17.07	24.00	6.93
	High	5 700.00	15.70	24.00	8.30
5 725 ~ 5 850	Low	5 745.00	16.11	30.00	13.89
	Middle	5 785.00	15.74	30.00	14.26
	High	5 825.00	15.67	30.00	14.33

Remark 1: Margin = Limit – Measured Value (=Power Sensor Reading + Cable Loss)

Remark 2: Calculated Output Power= $10\log (10^{(\text{Antenna0 Output Power}/10)} + 10^{(\text{Antenna1 Output Power}/10)})$

10.4.4 Test data for Staddle Channel_Antenna 1

-. Test Result : Pass

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	MEASURED VALUE (dBm)	LIMIT (dBm)	MARGIN (dB)
5 470 ~ 5 725	5 720.00	8.30	24.00	15.70
5 725 ~ 5 825	5 720.00	0.48	30.00	29.52

10.4.5 Test data for Staddle Channel_Antenna 2

-. Test Result : Pass

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	MEASURED VALUE (dBm)	LIMIT (dBm)	MARGIN (dB)
5 470 ~ 5 725	5 720.00	10.51	24.00	13.49
5 725 ~ 5 825	5 720.00	2.76	30.00	27.24

10.4.6 Test data for Staddle Channel_Multiple Transmit

-. Test Result : Pass

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	MEASURED VALUE (dBm)	LIMIT (dBm)	MARGIN (dB)
5 470 ~ 5 725	5 720.00	12.55	24.00	11.45
5 725 ~ 5 825	5 720.00	4.78	30.00	25.22

Remark 1: Margin = Limit – Measured Value (=Receiver Reading + Cable Loss)

Remark 2: Calculated Output Power= $10\log(10^{(\text{Antenna1 Output Power}/10)}+10^{(\text{Antenna2 Output Power}/10)})$

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10.5 Test data for 802.11n_HT20 RLAN Mode

10.5.1 Test data for Antenna 1

-. Test Result : Pass

-. Duty Cycle : > 98 %

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	LIMIT (dBm)	MARGIN (dB)
5 150 ~ 5 250	Low	5 180.00	12.38	24.00	11.62
	Middle	5 220.00	11.63	24.00	12.37
	High	5 240.00	11.56	24.00	12.44
5 250 ~ 5 350	Low	5 260.00	15.56	24.00	8.44
	Middle	5 300.00	15.46	24.00	8.54
	High	5 320.00	15.24	24.00	8.76
5 470 ~ 5 725	Low	5 500.00	14.81	24.00	9.19
	Middle	5 580.00	13.16	24.00	10.84
	High	5 700.00	12.41	24.00	11.59
5 725 ~ 5 850	Low	5 745.00	12.51	30.00	17.49
	Middle	5 785.00	11.75	30.00	18.25
	High	5 825.00	10.65	30.00	19.35

Remark: Margin = Limit – Measured Value (=Power Sensor Reading + Cable Loss)

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10.5.2 Test data for Antenna 2

-. Test Result : Pass

-. Duty Cycle : > 98 %

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	LIMIT (dBm)	MARGIN (dB)
5 150 ~ 5 250	Low	5 180.00	12.08	24.00	11.92
	Middle	5 220.00	11.91	24.00	12.09
	High	5 240.00	11.96	24.00	12.04
5 250 ~ 5 350	Low	5 260.00	15.55	24.00	8.45
	Middle	5 300.00	15.51	24.00	8.49
	High	5 320.00	15.43	24.00	8.57
5 470 ~ 5 725	Low	5 500.00	16.41	24.00	7.59
	Middle	5 580.00	15.92	24.00	8.08
	High	5 700.00	14.51	24.00	9.49
5 725 ~ 5 850	Low	5 745.00	15.01	30.00	14.99
	Middle	5 785.00	14.41	30.00	15.59
	High	5 825.00	13.16	30.00	16.84

Remark: Margin = Limit – Measured Value (=Power Sensor Reading + Cable Loss)

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10.5.3 Test data for Multiple Transmit

-. Test Result : Pass

-. Duty Cycle : > 98 %

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	LIMIT (dBm)	MARGIN (dB)
5 150 ~ 5 250	Low	5 180.00	15.24	24.00	8.76
	Middle	5 220.00	14.78	24.00	9.22
	High	5 240.00	14.77	24.00	9.23
5 250 ~ 5 350	Low	5 260.00	18.57	24.00	5.43
	Middle	5 300.00	18.50	24.00	5.50
	High	5 320.00	18.35	24.00	5.65
5 470 ~ 5 725	Low	5 500.00	18.69	24.00	5.31
	Middle	5 580.00	17.77	24.00	6.23
	High	5 700.00	16.60	24.00	7.40
5 725 ~ 5 850	Low	5 745.00	16.95	30.00	13.05
	Middle	5 785.00	16.29	30.00	13.71
	High	5 825.00	15.09	30.00	14.91

Remark 1: Margin = Limit – Measured Value (=Power Sensor Reading + Cable Loss)

Remark 2: Calculated Output Power= $10\log (10^{(\text{Antenna0 Output Power}/10)} + 10^{(\text{Antenna1 Output Power}/10)})$

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10.5.4 Test data for Staddle Channel_Antenna 1

-. Test Result : Pass

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	MEASURED VALUE (dBm)	LIMIT (dBm)	MARGIN (dB)
5 470 ~ 5 725	5 720.00	9.04	24.00	14.96
5 725 ~ 5 825	5 720.00	1.71	30.00	28.29

10.5.5 Test data for Staddle Channel_Antenna 2

-. Test Result : Pass

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	MEASURED VALUE (dBm)	LIMIT (dBm)	MARGIN (dB)
5 470 ~ 5 725	5 720.00	11.10	24.00	12.90
5 725 ~ 5 825	5 720.00	3.73	30.00	26.27

10.5.6 Test data for Staddle Channel_Multiple Transmit

-. Test Result : Pass

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	MEASURED VALUE (dBm)	LIMIT (dBm)	MARGIN (dB)
5 470 ~ 5 725	5 720.00	13.20	24.00	10.80
5 725 ~ 5 825	5 720.00	5.85	30.00	24.15

Remark 1: Margin = Limit – Measured Value (=Receiver Reading + Cable Loss)

Remark 2: Calculated Output Power= $10\log(10^{(\text{Antenna1 Output Power}/10)}+10^{(\text{Antenna2 Output Power}/10)})$

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10.6 Test data for 802.11n_HT40 RLAN Mode

10.6.1 Test data for Antenna 1

-. Test Result : Pass

-. Duty Cycle : > 98 %

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	LIMIT (dBm)	MARGIN (dB)
5 150 ~ 5 250	Low	5 190.00	14.12	24.00	9.88
	High	5 230.00	13.65	24.00	10.35
5 250 ~ 5 350	Low	5 270.00	14.73	24.00	9.27
	High	5 310.00	14.45	24.00	9.55
5 470 ~ 5 725	Low	5 510.00	14.26	24.00	9.74
	Middle	5 550.00	13.81	24.00	10.19
	High	5 670.00	12.16	24.00	11.84
5 725 ~ 5 850	Low	5 755.00	12.85	30.00	17.15
	High	5 795.00	11.84	30.00	18.16

Remark: Margin = Limit – Measured Value (=Power Sensor Reading + Cable Loss)

10.6.2 Test data for Antenna 2

-. Test Result : Pass

-. Duty Cycle : > 98 %

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	LIMIT (dBm)	MARGIN (dB)
5 150 ~ 5 250	Low	5 190.00	14.01	24.00	9.99
	High	5 230.00	14.21	24.00	9.79
5 250 ~ 5 350	Low	5 270.00	14.44	24.00	9.56
	High	5 310.00	14.61	24.00	9.39
5 470 ~ 5 725	Low	5 510.00	15.56	24.00	8.44
	Middle	5 550.00	15.71	24.00	8.29
	High	5 670.00	14.78	24.00	9.22
5 725 ~ 5 850	Low	5 755.00	15.55	30.00	14.45
	High	5 795.00	14.12	30.00	15.88

Remark: Margin = Limit – Measured Value (=Power Sensor Reading + Cable Loss)

10.6.3 Test data for Multiple Transmit

-. Test Result : Pass

-. Duty Cycle : > 98 %

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	LIMIT (dBm)	MARGIN (dB)
5 150 ~ 5 250	Low	5 190.00	17.08	24.00	6.92
	High	5 230.00	16.95	24.00	7.05
5 250 ~ 5 350	Low	5 270.00	17.60	24.00	6.40
	High	5 310.00	17.54	24.00	6.46
5 470 ~ 5 725	Low	5 510.00	17.97	24.00	6.03
	Middle	5 550.00	17.87	24.00	6.13
	High	5 670.00	16.67	24.00	7.33
5 725 ~ 5 850	Low	5 755.00	17.42	30.00	12.58
	High	5 795.00	16.14	30.00	13.86

Remark 1: Margin = Limit – Measured Value (=Power Sensor Reading + Cable Loss)

Remark 2: Calculated Output Power= $10\log (10^{(\text{Antenna0 Output Power}/10)} + 10^{(\text{Antenna1 Output Power}/10)})$

10.6.4 Test data for Staddle Channel_Antenna 1

-. Test Result : Pass

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	MEASURED VALUE (dBm)	LIMIT (dBm)	MARGIN (dB)
5 470 ~ 5 725	5 710.00	8.64	24.00	15.36
5 725 ~ 5 825	5 710.00	-3.17	30.00	33.17

10.6.5 Test data for Staddle Channel_Antenna 2

-. Test Result : Pass

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	MEASURED VALUE (dBm)	LIMIT (dBm)	MARGIN (dB)
5 470 ~ 5 725	5 710.00	10.86	24.00	13.14
5 725 ~ 5 825	5 710.00	-1.00	30.00	31.00

10.6.6 Test data for Staddle Channel_Multiple Transmit

-. Test Result : Pass

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	MEASURED VALUE (dBm)	LIMIT (dBm)	MARGIN (dB)
5 470 ~ 5 725	5 710.00	12.90	24.00	11.10
5 725 ~ 5 825	5 710.00	1.06	30.00	28.94

Remark 1: Margin = Limit – Measured Value (=Receiver Reading + Cable Loss)

Remark 2: Calculated Output Power= $10\log(10^{(\text{Antenna1 Output Power}/10)}+10^{(\text{Antenna2 Output Power}/10)})$

10.7 Test data for 802.11ac_HT80 RLAN Mode

10.7.1 Test data for Antenna 1

-. Test Result : Pass

-. Duty Cycle : > 98 %

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	LIMIT (dBm)	MARGIN (dB)
5 150 ~ 5 250	Low	5 210.00	12.73	24.00	11.27
5 250 ~ 5 350	Low	5 290.00	12.16	24.00	11.84
5 470 ~ 5 725	Low	5 530.00	10.22	24.00	13.78
5 725 ~ 5 850	Low	5 775.00	11.75	30.00	18.25

Remark: Margin = Limit – Measured Value (=Power Sensor Reading + Cable Loss)

10.7.2 Test data for Antenna 2

-. Test Result : Pass

-. Duty Cycle : > 98 %

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	LIMIT (dBm)	MARGIN (dB)
5 150 ~ 5 250	Low	5 210.00	13.14	24.00	10.86
5 250 ~ 5 350	Low	5 290.00	12.08	24.00	11.92
5 470 ~ 5 725	Low	5 530.00	12.03	24.00	11.97
5 725 ~ 5 850	Low	5 775.00	14.25	30.00	15.75

Remark: Margin = Limit – Measured Value (=Power Sensor Reading + Cable Loss)

10.7.3 Test data for Multiple Transmit

-. Test Result : Pass

-. Duty Cycle : > 98 %

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	LIMIT (dBm)	MARGIN (dB)
5 150 ~ 5 250	Low	5 210.00	15.95	24.00	8.05
5 250 ~ 5 350	Low	5 290.00	15.13	24.00	8.87
5 470 ~ 5 725	Low	5 530.00	14.23	24.00	9.77
5 725 ~ 5 850	Low	5 775.00	16.19	30.00	13.81

Remark 1: Margin = Limit – Measured Value (=Power Sensor Reading + Cable Loss)

Remark 2: Calculated Output Power= $10\log(10^{(\text{Antenna0 Output Power}/10)} + 10^{(\text{Antenna1 Output Power}/10)})$

10.7.4 Test data for Staddle Channel_Antenna 1

-. Test Result : Pass

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	MEASURED VALUE (dBm)	LIMIT (dBm)	MARGIN (dB)
5 470 ~ 5 725	5 690.00	9.43	24.00	14.57
5 725 ~ 5 825	5 690.00	-4.98	30.00	34.98

10.7.5 Test data for Staddle Channel_Antenna 2

-. Test Result : Pass

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	MEASURED VALUE (dBm)	LIMIT (dBm)	MARGIN (dB)
5 470 ~ 5 725	5 690.00	11.96	24.00	12.04
5 725 ~ 5 825	5 690.00	-2.61	30.00	32.61

10.7.6 Test data for Staddle Channel_Multiple Transmit

-. Test Result : Pass

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	MEASURED VALUE (dBm)	LIMIT (dBm)	MARGIN (dB)
5 470 ~ 5 725	5 690.00	13.89	24.00	10.11
5 725 ~ 5 825	5 690.00	-0.62	30.00	30.62

Remark 1: Margin = Limit – Measured Value (=Receiver Reading + Cable Loss)

Remark 2: Calculated Output Power= $10\log(10^{(\text{Antenna1 Output Power}/10)}+10^{(\text{Antenna2 Output Power}/10)})$

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11. PEAK POWER SPECTRUL DENSITY

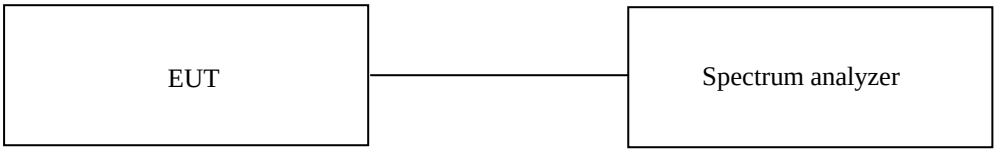
11.1 Operating environment

Temperature : 22 °C

Relative humidity : 41 % R.H.

11.2 Test set-up

The antenna output of the EUT was connected to the spectrum analyzer. The resolution bandwidth is set to 1 MHz, the video bandwidth is set to 3 times the resolution bandwidth. The maximum level form the EUT in 1 MHz bandwidth was measured with above condition.



11.3 Test Date

October 04, 2023 ~ October 20, 2023

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11.4 Test data for 802.11a RLAN Mode

11.4.1 Test data for Antenna 1

-. Operating condition : Highest Output Power Transmitting Mode

-. Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	EIRP (dBm)	LIMIT (dBm)	MARGIN (dB)
5 150 ~ 5 250	Low	5 180.00	0.58	1.97	10.00	8.03
	Middle	5 220.00	0.27	1.66	10.00	8.34
	High	5 240.00	0.14	1.53	10.00	8.47
5 250 ~ 5 350	Low	5 260.00	3.46	-	11.00	7.54
	Middle	5 300.00	2.76	-	11.00	8.24
	High	5 320.00	3.07	-	11.00	7.93
5 470 ~ 5 725	Low	5 500.00	1.45	-	11.00	9.55
	Middle	5 580.00	-0.18	-	11.00	11.18
	High	5 700.00	-0.95	-	11.00	11.95
5 725 ~ 5 850	Low	5 745.00	-4.12	-	30.00	34.12
	Middle	5 785.00	-3.79	-	30.00	33.79
	High	5 825.00	-4.38	-	30.00	34.38

Remark: Margin = Limit – EIRP(=Measured Value + Antenna Gain) Or

Limit – Measured Value

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11.4.2 Test data for Antenna 2

-. Operating condition : Highest Output Power Transmitting Mode

-. Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	EIRP (dBm)	LIMIT (dBm)	MARGIN (dB)
5 150 ~ 5 250	Low	5 180.00	0.39	1.82	10.00	8.18
	Middle	5 220.00	0.25	1.68	10.00	8.32
	High	5 240.00	-0.33	1.10	10.00	8.90
5 250 ~ 5 350	Low	5 260.00	2.51	-	11.00	8.49
	Middle	5 300.00	2.89	-	11.00	8.11
	High	5 320.00	2.89	-	11.00	8.11
5 470 ~ 5 725	Low	5 500.00	3.45	-	11.00	7.55
	Middle	5 580.00	3.08	-	11.00	7.92
	High	5 700.00	1.41	-	11.00	9.59
5 725 ~ 5 850	Low	5 745.00	-1.77	-	30.00	31.77
	Middle	5 785.00	-1.83	-	30.00	31.83
	High	5 825.00	-1.59	-	30.00	31.59

Remark: Margin = Limit – EIRP(=Measured Value + Antenna Gain) Or

Limit – Measured Value

11.4.3 Test data for Multiple Transmit

-. Operating condition : Highest Output Power Transmitting Mode

-. Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	EIRP (dBm)	LIMIT (dBm)	MARGIN (dB)
5 150 ~ 5 250	Low	5 180.00	3.50	7.92	10.00	2.08
	Middle	5 220.00	3.27	7.69	10.00	2.31
	High	5 240.00	2.92	7.34	10.00	2.66
5 250 ~ 5 350	Low	5 260.00	6.02	-	11.00	4.98
	Middle	5 300.00	5.84	-	11.00	5.16
	High	5 320.00	5.99	-	11.00	5.01
5 470 ~ 5 725	Low	5 500.00	5.57	-	11.00	5.43
	Middle	5 580.00	4.76	-	11.00	6.24
	High	5 700.00	3.40	-	11.00	7.60
5 725 ~ 5 850	Low	5 745.00	0.22	-	30.00	29.78
	Middle	5 785.00	0.31	-	30.00	29.69
	High	5 825.00	0.25	-	30.00	29.75

Remark: Margin = Limit – EIRP(=Measured Value + Antenna Gain) Or

Limit – Measured Value

11.4.4 Test data for Staddle Channel_Antenna 1

-. Operating condition : Highest Output Power Transmitting Mode

-. Test Result : Pass

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	MEASURED VALUE (dBm)	EIRP (dBm)	LIMIT (dBm)	MARGIN (dB)
5 470 ~ 5 725	5 720.00	-1.34	-	11.00	12.34
5 725 ~ 5 850	5 720.00	-6.64	-	30.00	36.64

11.4.5 Test data for Staddle Channel_Antenna 2

-. Operating condition : Highest Output Power Transmitting Mode

-. Test Result : Pass

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	MEASURED VALUE (dBm)	EIRP (dBm)	LIMIT (dBm)	MARGIN (dB)
5 470 ~ 5 725	5 720.00	0.67	-	11.00	10.33
5 725 ~ 5 850	5 720.00	-4.15	-	30.00	34.15

11.4.6 Test data for Staddle Channel_Multiple Transmit

-. Operating condition : Highest Output Power Transmitting Mode

-. Test Result : Pass

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	MEASURED VALUE (dBm)	EIRP (dBm)	LIMIT (dBm)	MARGIN (dB)
5 470 ~ 5 725	5 720.00	2.79	-	11.00	6.57
5 725 ~ 5 850	5 720.00	-2.21	-	30.00	32.21

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11.5 Test data for 802.11n_HT20 RLAN Mode

11.5.1 Test data for Antenna 1

-. Operating condition : Highest Output Power Transmitting Mode

-. Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	EIRP (dBm)	LIMIT (dBm)	MARGIN (dB)
5 150 ~ 5 250	Low	5 180.00	0.53	1.92	10.00	8.08
	Middle	5 220.00	0.12	1.51	10.00	8.49
	High	5 240.00	-0.74	0.65	10.00	9.35
5 250 ~ 5 350	Low	5 260.00	2.89	-	11.00	8.11
	Middle	5 300.00	3.13	-	11.00	7.87
	High	5 320.00	2.40	-	11.00	8.60
5 470 ~ 5 725	Low	5 500.00	3.53	-	11.00	7.47
	Middle	5 580.00	1.79	-	11.00	9.21
	High	5 700.00	0.68	-	11.00	10.32
5 725 ~ 5 850	Low	5 745.00	-3.35	-	30.00	33.35
	Middle	5 785.00	-3.09	-	30.00	33.09
	High	5 825.00	-3.60	-	30.00	33.60

Remark: Margin = Limit – EIRP(=Measured Value + Antenna Gain) Or

Limit – Measured Value

11.5.2 Test data for Antenna 2

-. Operating condition : Highest Output Power Transmitting Mode

-. Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	EIRP (dBm)	LIMIT (dBm)	MARGIN (dB)
5 150 ~ 5 250	Low	5 180.00	-0.36	1.07	10.00	8.93
	Middle	5 220.00	-0.27	1.16	10.00	8.84
	High	5 240.00	-0.62	0.81	10.00	9.19
5 250 ~ 5 350	Low	5 260.00	2.37	-	11.00	8.63
	Middle	5 300.00	2.75	-	11.00	8.25
	High	5 320.00	2.45	-	11.00	8.55
5 470 ~ 5 725	Low	5 500.00	4.16	-	11.00	6.84
	Middle	5 580.00	3.53	-	11.00	7.47
	High	5 700.00	2.14	-	11.00	8.86
5 725 ~ 5 850	Low	5 745.00	-1.37	-	30.00	31.37
	Middle	5 785.00	-1.29	-	30.00	31.29
	High	5 825.00	-1.93	-	30.00	31.93

Remark: Margin = Limit – EIRP(=Measured Value + Antenna Gain) Or

Limit – Measured Value

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11.5.3 Test data for Multiple Transmit

-. Operating condition : Highest Output Power Transmitting Mode

-. Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	EIRP (dBm)	LIMIT (dBm)	MARGIN (dB)
5 150 ~ 5 250	Low	5 180.00	3.12	7.54	10.00	2.46
	Middle	5 220.00	2.94	7.36	10.00	2.64
	High	5 240.00	2.33	6.75	10.00	3.25
5 250 ~ 5 350	Low	5 260.00	5.65	-	11.00	5.35
	Middle	5 300.00	5.95	-	11.00	5.05
	High	5 320.00	5.44	-	11.00	5.56
5 470 ~ 5 725	Low	5 500.00	6.87	-	11.00	4.13
	Middle	5 580.00	5.76	-	11.00	5.24
	High	5 700.00	4.48	-	11.00	6.52
5 725 ~ 5 850	Low	5 745.00	0.76	-	30.00	29.24
	Middle	5 785.00	0.91	-	30.00	29.09
	High	5 825.00	0.33	-	30.00	29.67

Remark: Margin = Limit – EIRP(=Measured Value + Antenna Gain) Or

Limit – Measured Value

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11.5.4 Test data for Staddle Channel_Antenna 1

-. Operating condition : Highest Output Power Transmitting Mode

-. Test Result : Pass

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	MEASURED VALUE (dBm)	EIRP (dBm)	LIMIT (dBm)	MARGIN (dB)
5 470 ~ 5 725	5 720.00	-0.50	-	11.00	11.50
5 725 ~ 5 850	5 720.00	-5.80	-	30.00	35.80

11.5.5 Test data for Staddle Channel_Antenna 2

-. Operating condition : Highest Output Power Transmitting Mode

-. Test Result : Pass

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	MEASURED VALUE (dBm)	EIRP (dBm)	LIMIT (dBm)	MARGIN (dB)
5 470 ~ 5 725	5 720.00	1.67	-	11.00	9.33
5 725 ~ 5 850	5 720.00	-3.69	-	30.00	33.69

11.5.6 Test data for Staddle Channel_Multiple Transmit

-. Operating condition : Highest Output Power Transmitting Mode

-. Test Result : Pass

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	MEASURED VALUE (dBm)	EIRP (dBm)	LIMIT (dBm)	MARGIN (dB)
5 470 ~ 5 725	5 720.00	3.73	8.15	11.00	2.85
5 725 ~ 5 850	5 720.00	-1.61	-	30.00	31.61

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11.6 Test data for 802.11n_HT40 RLAN Mode

11.6.1 Test data for Antenna 1

-. Operating condition : Highest Output Power Transmitting Mode

-. Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	EIRP (dBm)	LIMIT (dBm)	MARGIN (dB)
5 150 ~ 5 250	Low	5 190.00	-1.02	0.37	10.00	9.63
	High	5 230.00	-1.79	-0.40	10.00	10.40
5 250 ~ 5 350	Low	5 270.00	-1.39	-	11.00	12.39
	High	5 310.00	-1.19	-	11.00	12.19
5 470 ~ 5 725	Low	5 510.00	-1.30	-	11.00	12.30
	Middle	5 550.00	-1.54	-	11.00	12.54
	High	5 670.00	-3.17	-	11.00	14.17
5 725 ~ 5 850	Low	5 755.00	-6.46	-	30.00	36.46
	High	5 795.00	-6.28	-	30.00	36.28

Remark: Margin = Limit – EIRP(=Measured Value + Antenna Gain) Or

Limit – Measured Value

11.6.2 Test data for Antenna 2

-. Operating condition : Highest Output Power Transmitting Mode

-. Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	EIRP (dBm)	LIMIT (dBm)	MARGIN (dB)
5 150 ~ 5 250	Low	5 190.00	-1.56	-0.13	10.00	10.13
	High	5 230.00	-2.01	-0.58	10.00	10.58
5 250 ~ 5 350	Low	5 270.00	-1.82	-	11.00	12.82
	High	5 310.00	-1.85	-	11.00	12.85
5 470 ~ 5 725	Low	5 510.00	-0.44	-	11.00	11.44
	Middle	5 550.00	0.08	-	11.00	10.92
	High	5 670.00	-1.38	-	11.00	12.38
5 725 ~ 5 850	Low	5 755.00	-4.35	-	30.00	34.35
	High	5 795.00	-4.44	-	30.00	34.44

Remark: Margin = Limit – EIRP(=Measured Value + Antenna Gain) Or

Limit – Measured Value

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11.6.3 Test data for Multiple Transmit

-. Operating condition : Highest Output Power Transmitting Mode

-. Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	EIRP (dBm)	LIMIT (dBm)	MARGIN (dB)
5 150 ~ 5 250	Low	5 190.00	1.73	6.15	10.00	3.85
	High	5 230.00	1.11	5.53	10.00	4.47
5 250 ~ 5 350	Low	5 270.00	1.41	-	11.00	9.59
	High	5 310.00	1.50	-	11.00	9.50
5 470 ~ 5 725	Low	5 510.00	2.16	-	11.00	8.84
	Middle	5 550.00	2.36	-	11.00	8.64
	High	5 670.00	0.83	-	11.00	10.17
5 725 ~ 5 850	Low	5 755.00	-2.27	-	30.00	32.27
	High	5 795.00	-2.25	-	30.00	32.25

Remark: Margin = Limit – EIRP(=Measured Value + Antenna Gain) Or

Limit – Measured Value

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11.6.4 Test data for Staddle Channel_Antenna 1

-. Operating condition : Highest Output Power Transmitting Mode

-. Test Result : Pass

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	MEASURED VALUE (dBm)	EIRP (dBm)	LIMIT (dBm)	MARGIN (dB)
5 470 ~ 5 725	5 710.00	-4.84	-	11.00	15.84
5 725 ~ 5 850	5 710.00	-10.53	-	30.00	40.53

11.6.5 Test data for Staddle Channel_Antenna 2

-. Operating condition : Highest Output Power Transmitting Mode

-. Test Result : Pass

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	MEASURED VALUE (dBm)	EIRP (dBm)	LIMIT (dBm)	MARGIN (dB)
5 470 ~ 5 725	5 710.00	-2.24	-	11.00	13.24
5 725 ~ 5 850	5 710.00	-8.54	-	30.00	38.54

11.6.6 Test data for Staddle Channel_Multiple Transmit

-. Operating condition : Highest Output Power Transmitting Mode

-. Test Result : Pass

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	MEASURED VALUE (dBm)	EIRP (dBm)	LIMIT (dBm)	MARGIN (dB)
5 470 ~ 5 725	5 710.00	-0.34	-	11.00	13.24
5 725 ~ 5 850	5 710.00	-6.41	-	30.00	36.41

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11.7 Test data for 802.11ac_HT80 RLAN Mode

11.7.1 Test data for Antenna 1

-. Operating condition : Highest Output Power Transmitting Mode

-. Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	EIRP (dBm)	LIMIT (dBm)	MARGIN (dB)
5 150 ~ 5 250	Low	5 210.00	-4.67	-3.28	10.00	13.28
5 250 ~ 5 350	Low	5 290.00	-7.49	-	11.00	18.49
5 470 ~ 5 725	Low	5 530.00	-9.10	-	11.00	20.10
5 725 ~ 5 850	Low	5 775.00	-10.93	-	30.00	40.93

Remark: Margin = Limit – EIRP(=Measured Value + Antenna Gain) Or
Limit – Measured Value

11.7.2 Test data for Antenna 2

-. Operating condition : Highest Output Power Transmitting Mode

-. Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	EIRP (dBm)	LIMIT (dBm)	MARGIN (dB)
5 150 ~ 5 250	Low	5 210.00	-5.14	-3.71	10.00	13.71
5 250 ~ 5 350	Low	5 290.00	-7.29	-	11.00	18.29
5 470 ~ 5 725	Low	5 530.00	-7.05	-	11.00	18.05
5 725 ~ 5 850	Low	5 775.00	-8.94	-	30.00	38.94

Remark: Margin = Limit – EIRP(=Measured Value + Antenna Gain) Or
Limit – Measured Value

11.7.3 Test data for Multiple Transmit

-. Operating condition : Highest Output Power Transmitting Mode

-. Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	EIRP (dBm)	LIMIT (dBm)	MARGIN (dB)
5 150 ~ 5 250	Low	5 210.00	-1.89	2.53	10.00	7.47
5 250 ~ 5 350	Low	5 290.00	-4.38	-	11.00	15.38
5 470 ~ 5 725	Low	5 530.00	-4.94	-	11.00	15.94
5 725 ~ 5 850	Low	5 775.00	-6.81	-	30.00	36.81

Remark: Margin = Limit – EIRP(=Measured Value + Antenna Gain) Or
Limit – Measured Value

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11.7.4 Test data for Staddle Channel_Antenna 1

-. Operating condition : Highest Output Power Transmitting Mode

-. Test Result : Pass

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	MEASURED VALUE (dBm)	EIRP (dBm)	LIMIT (dBm)	MARGIN (dB)
5 470 ~ 5 725	5 690.00	-7.80	-	11.00	18.80
5 725 ~ 5 850	5 690.00	-12.48	-	30.00	42.48

11.7.5 Test data for Staddle Channel_Antenna 2

-. Operating condition : Highest Output Power Transmitting Mode

-. Test Result : Pass

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	MEASURED VALUE (dBm)	EIRP (dBm)	LIMIT (dBm)	MARGIN (dB)
5 470 ~ 5 725	5 690.00	-5.35	-	11.00	16.35
5 725 ~ 5 850	5 690.00	-10.06	-	30.00	40.06

11.7.6 Test data for Staddle Channel_Multiple Transmit

-. Operating condition : Highest Output Power Transmitting Mode

-. Test Result : Pass

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	MEASURED VALUE (dBm)	EIRP (dBm)	LIMIT (dBm)	MARGIN (dB)
5 470 ~ 5 725	5 690.00	-3.39	-	11.00	14.39
5 725 ~ 5 850	5 690.00	-8.09	-	30.00	38.09

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12. FREQUENCY STABILITY WITH TEMPERATURE VARIATION

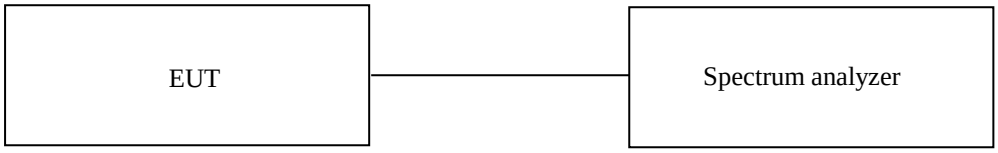
12.1 Operating environment

Temperature : 22 °C

Relative humidity : 41 % R.H.

12.2 Test set-up

Turn EUT off and set chamber temperature to -20 °C and then allow sufficient time (approximately 20 min to 30 min after chamber reach the assigned temperature) for EUT to stabilize. Turn on the EUT and measure the EUT operating frequency and then turn off the EUT after the measurement. The temperature in the chamber was raised 10 °C step from -20 °C to +80 °C. Repeat above method for frequency measurements every 10 °C step and then record all measured frequencies on each temperature step.



12.3 Test Date

October 04, 2023 ~ October 20, 2023

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12.4 Test Data for U-NII-1

-. Result : Pass

Temperature (˚C)	Carrier Freq. (Hz)	Measured Freq. (Hz)	Frequency Error (Hz)
-20	5 180 000 000	5 180 014 095	14 095
-10		5 180 013 070	13 070
0		5 180 011 704	11 704
10		5 180 012 087	12 087
20		5 179 988 250	- 11 750
30		5 179 994 025	- 5 975
40		5 179 994 684	- 5 316
50		5 179 995 625	- 4 375
-20	5 220 000 000	5 220 014 659	14 659
-10		5 220 013 676	13 676
0		5 220 012 317	12 317
10		5 220 012 701	12 701
20		5 219 988 839	- 11 161
30		5 219 994 633	- 5 367
40		5 219 995 313	- 4 687
50		5 219 996 210	- 3 790
-20	5 240 000 000	5 240 014 524	14 524
-10		5 240 013 639	13 639
0		5 240 012 220	12 220
10		5 240 012 629	12 629
20		5 239 988 739	- 11 261
30		5 239 994 526	- 5 474
40		5 239 995 156	- 4 844
50		5 239 996 172	- 3 828

Note : While maintaining a constant temperature inside the environmental chamber, turn the EUT ON and record the operating frequency at startup, and at 2 minutes, 5 minutes, and 10 minutes after the EUT is energized. Four measurements in total are made.(ANSI C63.10: 2013)

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12.5 Test Data for U-NII-2A

-. Result : Pass

Temperature (˚C)	Carrier Freq. (Hz)	Measured Freq. (Hz)	Frequency Error (Hz)
-20	5 260 000 000	5 260 015 566	15 566
-10		5 260 014 560	14 560
0		5 260 013 148	13 148
10		5 260 013 569	13 569
20		5 259 989 769	- 10 231
30		5 259 995 543	- 4 457
40		5 259 996 211	- 3 789
50		5 259 997 266	- 2 734
-20	5 300 000 000	5 300 015 668	15 668
-10		5 300 014 568	14 568
0		5 300 013 168	13 168
10		5 300 013 633	13 633
20		5 299 989 792	- 10 208
30		5 299 995 588	- 4 412
40		5 299 996 241	- 3 759
50		5 299 997 195	- 2 805
-20	5 320 000 000	5 320 015 630	15 630
-10		5 320 014 579	14 579
0		5 320 013 195	13 195
10		5 320 013 562	13 562
20		5 319 989 757	- 10 243
30		5 319 995 596	- 4 404
40		5 319 996 133	- 3 867
50		5 319 997 174	- 2 826

Note : While maintaining a constant temperature inside the environmental chamber, turn the EUT ON and record the operating frequency at startup, and at 2 minutes, 5 minutes, and 10 minutes after the EUT is energized. Four measurements in total are made.(ANSI C63.10: 2013)

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12.6 Test Data for U-NII-2C

-. Result : Pass

Temperature (˚C)	Carrier Freq. (Hz)	Measured Freq. (Hz)	Frequency Error (Hz)
-20	5 500 000 000	5 500 015 571	15 571
-10		5 500 014 669	14 669
0		5 500 013 252	13 252
10		5 500 013 579	13 579
20		5 499 989 791	- 10 209
30		5 499 995 653	- 4 347
40		5 499 996 272	- 3 728
50		5 499 997 212	- 2 788
-20	5 580 000 000	5 580 015 687	15 687
-10		5 580 014 651	14 651
0		5 580 013 183	13 183
10		5 580 013 602	13 602
20		5 579 989 806	- 10 194
30		5 579 995 657	- 4 343
40		5 579 996 185	- 3 815
50		5 579 997 249	- 2 751
-20	5 700 000 000	5 700 015 646	15 646
-10		5 700 014 634	14 634
0		5 700 013 128	13 128
10		5 700 013 633	13 633
20		5 699 989 811	- 10 189
30		5 699 995 692	- 4 308
40		5 699 996 295	- 3 705
50		5 699 997 310	- 2 690

Note : While maintaining a constant temperature inside the environmental chamber, turn the EUT ON and record the operating frequency at startup, and at 2 minutes, 5 minutes, and 10 minutes after the EUT is energized. Four measurements in total are made.(ANSI C63.10: 2013)

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12.7 Test Data for U-NII-3

-. Result : Pass

Temperature (˚C)	Carrier Freq. (Hz)	Measured Freq. (Hz)	**Frequency Error (Hz)**
-20	5 745 000 000	5 745 015 588	15 588
-10		5 745 014 661	14 661
0		5 745 013 170	13 170
10		5 745 013 593	13 593
20		5 744 989 766	- 10 234
30		5 744 995 591	- 4 409
40		5 744 996 205	- 3 795
50		5 744 997 250	- 2 750
-20	5 785 000 000	5 785 015 674	15 674
-10		5 785 014 627	14 627
0		5 785 013 172	13 172
10		5 785 013 593	13 593
20		5 784 989 801	- 10 199
30		5 784 995 595	- 4 405
40		5 784 996 241	- 3 759
50		5 784 997 195	- 2 805
-20	5 825 000 000	5 825 015 744	15 744
-10		5 825 014 655	14 655
0		5 825 013 326	13 326
10		5 825 013 676	13 676
20		5 824 989 862	- 10 138
30		5 824 995 718	- 4 282
40		5 824 996 358	- 3 642
50		5 824 997 356	- 2 644

Note : While maintaining a constant temperature inside the environmental chamber, turn the EUT ON and record the operating frequency at startup, and at 2 minutes, 5 minutes, and 10 minutes after the EUT is energized. Four measurements in total are made.(ANSI C63.10: 2013)

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13. FREQUENCY STABILITY WITH VOLTAGE VARIATION

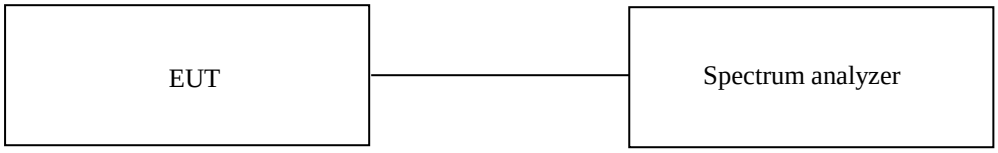
13.1 Operating environment

Temperature : 22 °C

Relative humidity : 41 % R.H.

13.2 Test set-up

An external DC power supply was connected to the input of the EUT. The voltage of EUT set to 110.0 % of the nominal value and then was reduced to 90.0 % of nominal voltage. The output frequency was recorded at each step.



13.3 Test Date

October 04, 2023 ~ October 20, 2023

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13.4 Test Data for U-NII-1

-. Result : Pass

Voltage (VDC)	Carrier Freq. (Hz)	Measured Freq. (Hz)	Frequency Error (Hz)
5	5 180 000 000	5 179 988 250	- 11 750
4.5		5 179 988 316	- 11 684
5.5		5 179 988 297	- 11 703
5	5 220 000 000	5 219 988 839	- 11 161
4.5		5 219 988 890	- 11 110
5.5		5 219 988 815	- 11 185
5	5 240 000 000	5 239 988 739	- 11 261
4.5		5 239 988 795	- 11 205
5.5		5 239 988 786	- 11 214

13.5 Test Data for U-NII-2A

-. Result : Pass

Voltage (VDC)	Carrier Freq. (Hz)	Measured Freq. (Hz)	Frequency Error (Hz)
5	5 260 000 000	5 259 989 769	- 10 231
4.5		5 259 989 808	- 10 192
5.5		5 259 989 749	- 10 251
5	5 300 000 000	5 299 989 792	- 10 208
4.5		5 299 989 793	- 10 207
5.5		5 299 989 834	- 10 166
5	5 320 000 000	5 319 989 757	- 10 243
4.5		5 319 989 757	- 10 243
5.5		5 319 989 788	- 10 212

13.6 Test Data for U-NII-2C

-. Result : Pass

Voltage (VDC)	Carrier Freq. (Hz)	Measured Freq. (Hz)	Frequency Error (Hz)
5	5 500 000 000	5 499 989 791	- 10 209
4.5		5 499 989 803	- 10 197
5.5		5 499 989 858	- 10 142
5	5 580 000 000	5 579 989 806	- 10 194
4.5		5 579 989 876	- 10 124
5.5		5 579 989 808	- 10 192
5	5 700 000 000	5 699 989 811	- 10 189
4.5		5 699 989 865	- 10 135
5.5		5 699 989 831	- 10 169

13.7 Test Data for U-NII-3

-. Result : Pass

Voltage (VDC)	Carrier Freq. (Hz)	Measured Freq. (Hz)	Frequency Error (Hz)
5	5 745 000 000	5 744 989 766	- 10 234
4.5		5 744 989 797	- 10 203
5.5		5 744 989 789	- 10 211
5	5 785 000 000	5 784 989 801	- 10 199
4.5		5 784 989 901	- 10 099
5.5		5 784 989 868	- 10 132
5	5 825 000 000	5 824 989 862	- 10 138
4.5		5 824 989 841	- 10 159
5.5		5 824 989 902	- 10 098

14. RADIATED SPURIOUS EMISSIONS

14.1 Operating environment

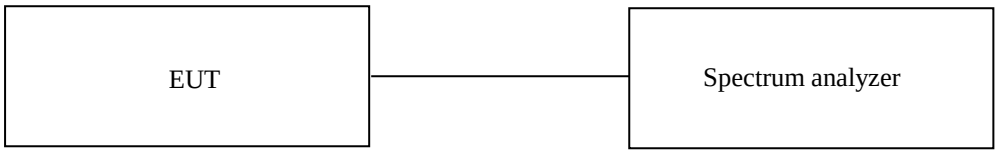
Temperature : 22 °C

Relative humidity : 41 % R.H.

14.2 Test set-up for conducted measurement

The radiated emissions measurements were on the 3 m semi anechoic chamber. The EUT and other support equipment were placed on a non-conductive turntable above the ground plane. The interconnecting cables from outside test site were inserted into ferrite clamps at the point where the cables reach the turntable.

The frequency spectrum from 30 MHz to 40 GHz was scanned and maximum emission levels at each frequency recorded. The system was rotated 360°, and the antenna was varied in the height between 1.0 m and 4.0 m in order to determine the maximum emission levels. This procedure was performed for horizontal and vertical polarization of the receiving antenna.



14.3 Test Date

October 04, 2023 ~ October 20, 2023

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14.4 Test data for Below 30 MHz

-. Resolution bandwidth : 200 Hz (from 9 kHz to 0.15 MHz), 9 kHz (from 0.15 MHz to 30 MHz)

-. Frequency range : 9 kHz ~ 30 MHz

-. Measurement distance : 3 m

-. Operating mode : Transmitting mode

Frequency (MHz)	Reading (dBµV)	Ant. Pol. (H/V)	Ant. Height (m)	Angle (°)	Ant. Factor (dB/m)	Cable Loss	Emission Level(dBµV/m)	Limits (dBµV/m)	Margin (dB)
Emission from the EUT more than 20 dB below the limit in each frequency range.									

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14.5 Test data for 30 MHz ~ 1 000 MHz

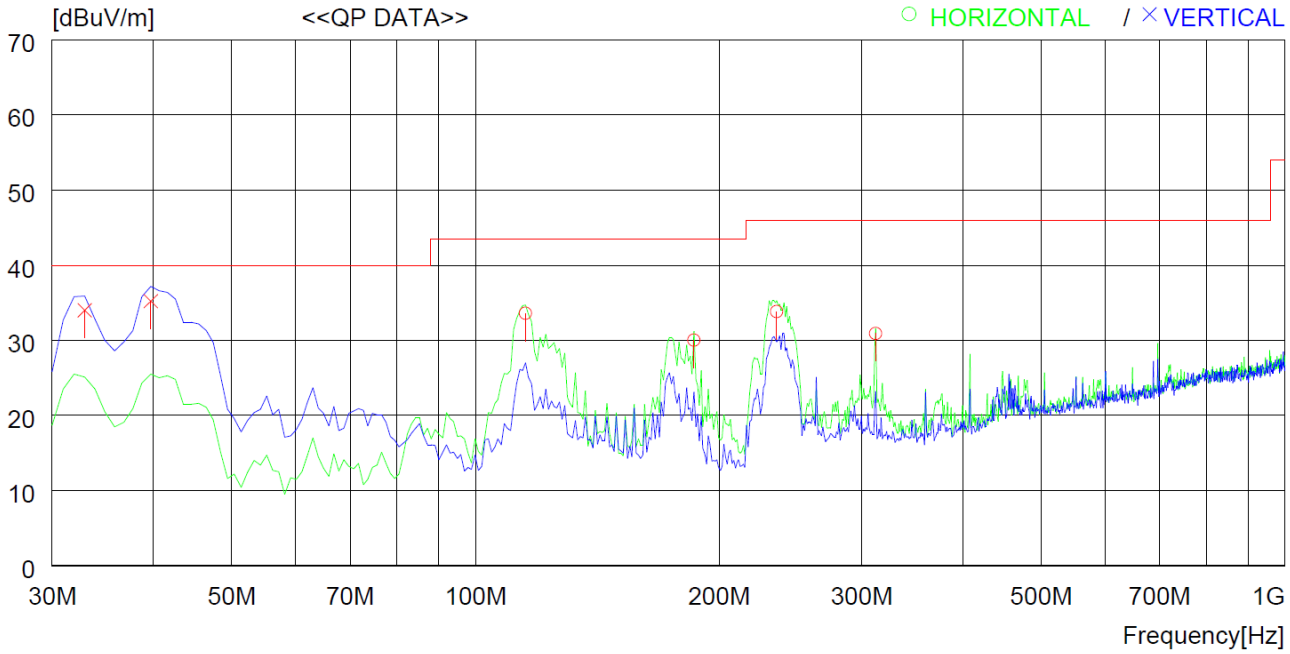
14.5.1 Test data for WLAN 5 GHz

Limits apply to : FCC CFR 47, PART 15, SUBPART C, SECTION 15.247

Result : PASSED

EUT : Wi-Fi/BT Transceiver

Detector : CISPR Quasi-Peak (6 dB Bandwidth: 120 kHz)



No.	FREQ [MHz]	READING QP [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal ------										
1	115.360	46.2	17.8	1.6	32.0	33.6	43.5	9.9	300	0
2	186.170	43.8	16.2	2.0	32.0	30.0	43.5	13.5	200	286
3	235.640	46.5	17.0	2.3	32.0	33.8	46.0	12.2	100	116
4	312.270	40.8	19.4	2.7	32.0	30.9	46.0	15.1	100	326
----- Vertical ------										
5	32.910	45.1	20.2	0.9	32.2	34.0	40.0	6.0	300	227
6	39.700	49.3	17.1	0.9	32.1	35.2	40.0	4.8	300	187

-. Antenna 1, Antenna 2 and Multiple transmit tested, but the worst data were recorded.

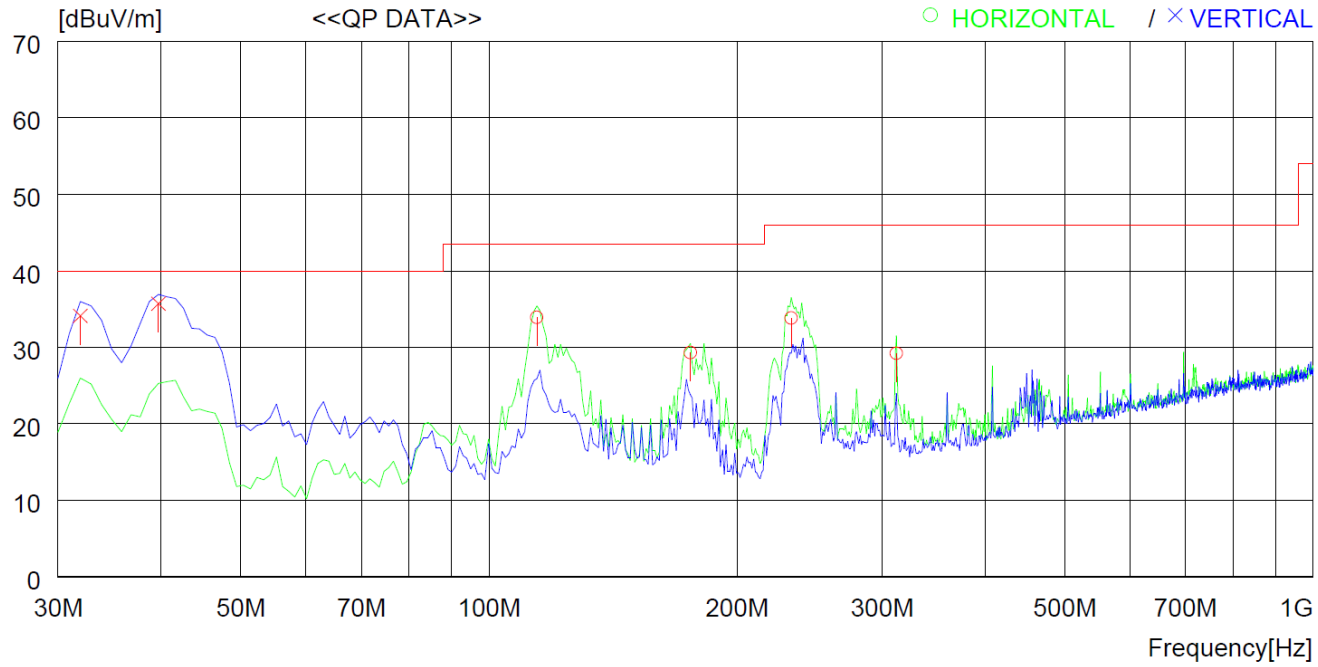
14.5.2 Test data for Intermodulation Mode(Bluetooth LE + WLAN 2.4 GHz + WLAN 5 GHz)

Limits apply to : FCC CFR 47, PART 15, SUBPART C, SECTION 15.247

Result : PASSED

EUT : Wi-Fi/BT Transceiver

Detector : CISPR Quasi-Peak (6 dB Bandwidth: 120 kHz)



No.	FREQ [MHz]	READING QP [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal ------										
1	114.390	46.6	17.7	1.6	32.0	33.9	43.5	9.6	300	0
2	175.500	42.5	16.8	2.0	32.0	29.3	43.5	14.2	200	263
3	232.730	46.7	16.8	2.3	32.0	33.8	46.0	12.2	200	359
4	312.270	39.1	19.4	2.7	32.0	29.2	46.0	16.8	100	0
----- Vertical ------										
5	31.940	44.9	20.6	0.9	32.3	34.1	40.0	5.9	300	152
6	39.700	49.8	17.1	0.9	32.1	35.7	40.0	4.3	300	112

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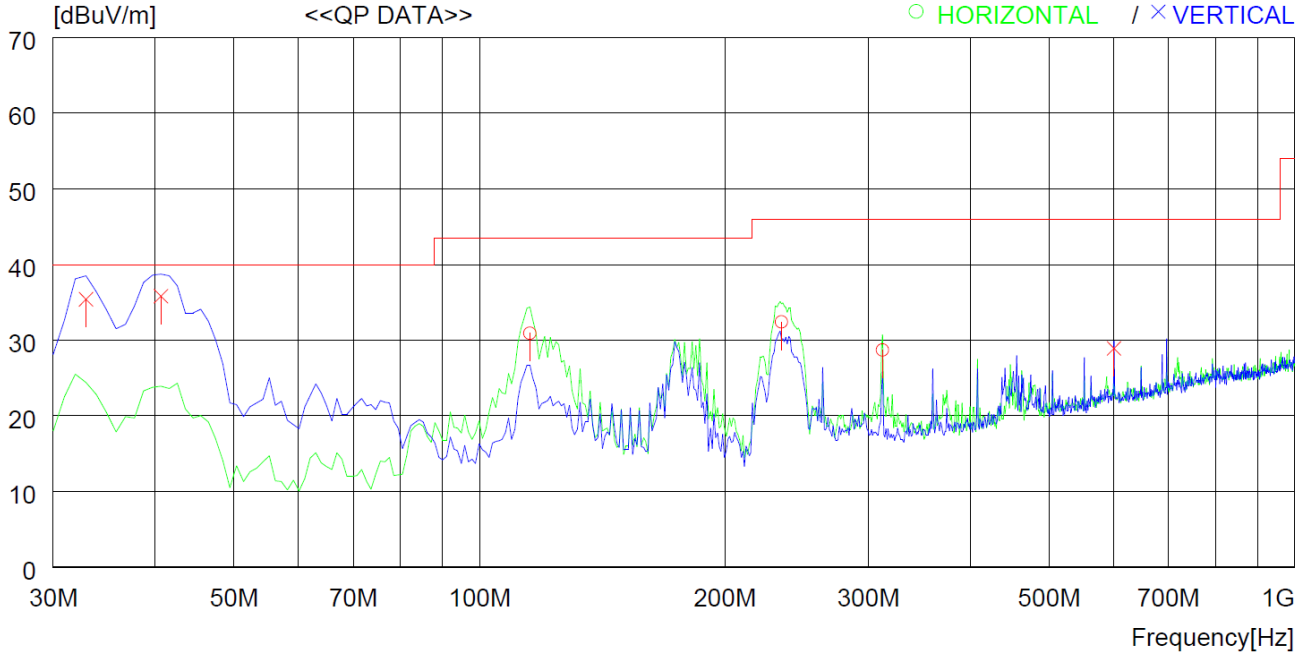
14.5.3 Test data for Intermodulation Mode(Bluetooth + WLAN 2.4 GHz + WLAN 5 GHz)

Limits apply to : FCC CFR 47, PART 15, SUBPART C, SECTION 15.247

Result : PASSED

EUT : Wi-Fi/BT Transceiver

Detector : CISPR Quasi-Peak (6 dB Bandwidth: 120 kHz)



No.	FREQ [MHz]	READING QP [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal ------										
1	115.360	43.5	17.8	1.6	32.0	30.9	43.5	12.6	300	102
2	234.670	45.2	16.9	2.3	32.0	32.4	46.0	13.6	200	116
3	312.270	38.6	19.4	2.7	32.0	28.7	46.0	17.3	100	0
----- Vertical ------										
4	32.910	46.5	20.2	0.9	32.2	35.4	40.0	4.6	200	359
5	40.670	50.3	16.7	0.9	32.1	35.8	40.0	4.2	200	359
6	600.358	33.2	24.1	3.8	32.2	28.9	46.0	17.1	200	359

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14.6 Test data for Above 1 GHz

14.6.1 Test data for Frequency UNII I

14.6.1.1 Test data for 802.11a RLAN Mode

-. Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode for the emissions fall in restricted band,
1 MHz and RMS Detector for Average Mode for the emissions fall in restricted band
100 kHz for Peak Mode for the emissions outside restricted band

-. Video bandwidth : 3 MHz for Peak and Average Mode

-. Frequency range : 1 GHz ~ 40 GHz

-. Measurement distance : 3 m

-. Duty Cycle : > 98 %

-. Operating mode : Transmitting mode

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Gain	Duty Factor (dB)	Total (dBμV/m)	Limits (dBμV/m)	Margin (dB)
Test Data for Low Channel										
10 364.36	49.13	Peak	H	39.46	15.66	42.10	-	62.15	68.20	6.05
10 363.00	49.10	Peak	V	39.45	15.66	42.10	-	62.11	68.20	6.09
Test Data for Middle Channel										
10 439.14	48.99	Peak	H	39.83	15.66	42.10	-	62.38	68.20	5.82
10 436.12	48.57	Peak	V	39.82	15.66	42.10	-	61.95	68.20	6.25
Test Data for High Channel										
10 477.34	48.22	Peak	H	39.95	14.67	42.10	-	60.74	68.20	7.46
10 477.62	48.59	Peak	V	39.96	14.67	42.10	-	61.12	68.20	7.08

Remark: “H”: Horizontal, “V”: Vertical

Margin (dB) = Limits (dBμV/m) - Emission Level (dBμV/m)

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14.6.1.2 Test data for 802.11n_HT20 RLAN Mode

-. Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode for the emissions fall in restricted band,
1 MHz and RMS Detector for Average Mode for the emissions fall in restricted band
100 kHz for Peak Mode for the emissions outside restricted band

-. Video bandwidth : 3 MHz for Peak and Average Mode

-. Frequency range : 1 GHz ~ 40 GHz

-. Measurement distance : 3 m

-. Duty Cycle : > 98 %

-. Operating mode : Transmitting mode

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Gain	Duty Factor (dB)	Total (dBμV/m)	Limits (dBμV/m)	Margin (dB)
Test Data for Low Channel										
10 356.98	49.75	Peak	H	39.43	15.66	42.10	-	62.74	68.20	5.46
10 359.55	52.36	Peak	V	39.44	15.66	42.10	-	65.36	68.20	2.84
Test Data for Middle Channel										
10 439.41	48.99	Peak	H	39.84	15.66	42.10	-	62.39	68.20	5.81
10 442.17	51.08	Peak	V	39.85	15.66	42.10	-	64.49	68.20	3.71
Test Data for High Channel										
10 477.76	48.76	Peak	H	39.96	14.67	42.10	-	61.29	68.20	6.91
10 483.51	49.39	Peak	V	39.97	14.67	42.10	-	61.93	68.20	6.27

Remark: “H”: Horizontal, “V”: Vertical

Margin (dB) = Limits (dBμV/m) - Emission Level (dBμV/m)

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14.6.1.3 Test data for 802.11n_HT40 RLAN Mode

-. Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode for the emissions fall in restricted band,
1 MHz and RMS Detector for Average Mode for the emissions fall in restricted band
100 kHz for Peak Mode for the emissions outside restricted band

-. Video bandwidth : 3 MHz for Peak and Average Mode

-. Frequency range : 1 GHz ~ 40 GHz

-. Measurement distance : 3 m

-. Duty Cycle : > 98 %

-. Operating mode : Transmitting mode

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Gain	Duty Factor (dB)	Total (dBμV/m)	Limits (dBμV/m)	Margin (dB)
Test Data for Low Channel										
10 379.15	49.50	Peak	H	39.52	15.66	42.10	-	62.58	68.20	5.62
10 381.08	49.42	Peak	V	39.52	15.66	42.10	-	62.50	68.20	5.70
Test Data for High Channel										
10 463.08	48.96	Peak	H	39.93	14.67	42.10	-	61.46	68.20	6.74
10 462.08	48.96	Peak	V	39.92	14.67	42.10	-	61.45	68.20	6.75

Remark: “H”: Horizontal, “V”: Vertical

Margin (dB) = Limits (dBμV/m) - Emission Level (dBμV/m)

14.6.1.4 Test data for 802.11ac_HT80 RLAN Mode

-. Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode for the emissions fall in restricted band,
1 MHz and RMS Detector for Average Mode for the emissions fall in restricted band
100 kHz for Peak Mode for the emissions outside restricted band

-. Video bandwidth : 3 MHz for Peak and Average Mode

-. Frequency range : 1 GHz ~ 40 GHz

-. Measurement distance : 3 m

-. Duty Cycle : > 98 %

-. Operating mode : Transmitting mode

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Gain	Duty Factor (dB)	Total (dBμV/m)	Limits (dBμV/m)	Margin (dB)
Test Data for Middle Channel										
10 422.74	49.22	Peak	H	39.74	15.66	42.10	-	62.52	68.20	5.68
10 423.78	48.83	Peak	V	39.74	15.66	42.10	-	62.13	68.20	6.07

Remark: “H”: Horizontal, “V”: Vertical

Margin (dB) = Limits (dBμV/m) - Emission Level (dBμV/m)

14.6.2 Test data for Frequency UNII 2A

14.6.2.1 Test data for 802.11a RLAN Mode

-. Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode for the emissions fall in restricted band,
1 MHz and RMS Detector for Average Mode for the emissions fall in restricted band
100 kHz for Peak Mode for the emissions outside restricted band

-. Video bandwidth : 3 MHz for Peak and Average Mode

-. Frequency range : 1 GHz ~ 40 GHz

-. Measurement distance : 3 m

-. Duty Cycle : > 98 %

-. Operating mode : Transmitting mode

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Gain	Duty Factor (dB)	Total (dBμV/m)	Limits (dBμV/m)	Margin (dB)
Test Data for Low Channel										
10 523.95	50.55	Peak	H	39.95	14.67	42.10	-	63.07	68.20	5.13
10 522.10	49.70	Peak	V	39.96	14.67	42.10	-	62.23	68.20	5.97
Test Data for Middle Channel										
10 603.59	51.70	Peak	H	39.80	14.83	42.10	-	64.23	74.00	9.77
10 599.35	39.46	Average	H	39.80	14.83	42.10	-	51.99	54.00	2.01
10 603.22	50.43	Peak	V	39.80	14.83	42.10	-	62.96	74.00	11.04
10 599.33	37.68	Average	V	39.80	14.83	42.10	-	50.21	54.00	3.79
Test Data for High Channel										
10 639.86	51.30	Peak	H	39.80	14.83	42.10	-	63.83	74.00	10.17
10 639.79	39.10	Average	H	39.80	14.83	42.10	-	51.63	54.00	2.37
10 638.76	50.66	Peak	V	39.80	14.83	42.10	-	63.19	74.00	10.81
10 638.98	38.16	Average	V	39.80	14.83	42.10	-	50.69	54.00	3.31

Remark: “H”: Horizontal, “V”: Vertical

Margin (dB) = Limits (dBμV/m) - Emission Level (dBμV/m)

14.6.2.2 Test data for 802.11n_HT20 RLAN Mode

-. Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode for the emissions fall in restricted band,
1 MHz and RMS Detector for Average Mode for the emissions fall in restricted band
100 kHz for Peak Mode for the emissions outside restricted band

-. Video bandwidth : 3 MHz for Peak and Average Mode

-. Frequency range : 1 GHz ~ 40 GHz

-. Measurement distance : 3 m

-. Duty Cycle : > 98 %

-. Operating mode : Transmitting mode

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Gain	Duty Factor (dB)	Total (dBμV/m)	Limits (dBμV/m)	Margin (dB)
Test Data for Low Channel										
10 524.80	50.62	Peak	H	39.95	14.67	42.10	-	63.14	68.20	5.06
10 519.89	51.61	Peak	V	39.96	14.67	42.10	-	64.14	68.20	4.06
Test Data for Middle Channel										
10 601.59	49.89	Peak	H	39.80	14.83	42.10	-	62.42	74.00	11.58
10 601.70	37.72	Average	H	39.80	14.83	42.10	-	50.25	54.00	3.75
10 604.57	49.37	Peak	V	39.80	14.83	42.10	-	61.90	74.00	12.10
10 600.06	37.66	Average	V	39.80	14.83	42.10	-	50.19	54.00	3.81
Test Data for High Channel										
10 641.01	50.80	Peak	H	39.80	14.83	42.10	-	63.33	74.00	10.67
10 640.99	38.87	Average	H	39.80	14.83	42.10	-	51.40	54.00	2.60
10 643.36	49.89	Peak	V	39.80	14.83	42.10	-	62.42	74.00	11.58
10 638.73	37.91	Average	V	39.80	14.83	42.10	-	50.44	54.00	3.56

Remark: “H”: Horizontal, “V”: Vertical

Margin (dB) = Limits (dBμV/m) - Emission Level (dBμV/m)

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14.6.2.3 Test data for 802.11n_HT40 RLAN Mode

-. Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode for the emissions fall in restricted band,
1 MHz and RMS Detector for Average Mode for the emissions fall in restricted band
100 kHz for Peak Mode for the emissions outside restricted band

-. Video bandwidth : 3 MHz for Peak and Average Mode

-. Frequency range : 1 GHz ~ 40 GHz

-. Measurement distance : 3 m

-. Duty Cycle : > 98 %

-. Operating mode : Transmitting mode

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Gain	Duty Factor (dB)	Total (dBμV/m)	Limits (dBμV/m)	Margin (dB)
Test Data for Low Channel										
10 535.04	49.69	Peak	H	39.93	14.67	42.10	-	62.19	68.20	6.01
10 538.45	51.83	Peak	V	39.92	14.67	42.10	-	64.32	68.20	3.88
Test Data for High Channel										
10 621.08	49.22	Peak	H	39.80	14.83	42.10	-	61.75	74.00	12.25
10 623.25	37.08	Average	H	39.80	14.83	42.10	-	49.61	54.00	4.39
10 617.03	49.37	Peak	V	39.80	14.83	42.10	-	61.90	74.00	12.10
10 621.53	37.15	Average	V	39.80	14.83	42.10	-	49.68	54.00	4.32

Remark: “H”: Horizontal, “V”: Vertical

Margin (dB) = Limits (dBμV/m) - Emission Level (dBμV/m)

14.6.2.4 Test data for 802.11ac_HT80 RLAN Mode

-. Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode for the emissions fall in restricted band,
1 MHz and RMS Detector for Average Mode for the emissions fall in restricted band
100 kHz for Peak Mode for the emissions outside restricted band

-. Video bandwidth : 3 MHz for Peak and Average Mode

-. Frequency range : 1 GHz ~ 40 GHz

-. Measurement distance : 3 m

-. Duty Cycle : > 98 %

-. Operating mode : Transmitting mode

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Gain	Duty Factor (dB)	Total (dBμV/m)	Limits (dBμV/m)	Margin (dB)
Test Data for Middle Channel										
10 582.47	49.44	Peak	H	39.84	14.83	42.10	-	62.01	68.20	6.19
10 577.71	49.38	Peak	V	39.84	14.83	42.10	-	61.95	68.20	6.25

Remark: “H”: Horizontal, “V”: Vertical

Margin (dB) = Limits (dBμV/m) - Emission Level (dBμV/m)

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14.6.3 Test data for Frequency UNII 2C

14.6.3.1 Test data for 802.11a RLAN Mode

-. Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode for the emissions fall in restricted band,
1 MHz and RMS Detector for Average Mode for the emissions fall in restricted band
100 kHz for Peak Mode for the emissions outside restricted band

-. Video bandwidth : 3 MHz for Peak and Average Mode

-. Frequency range : 1 GHz ~ 40 GHz

-. Measurement distance : 3 m

-. Duty Cycle : > 98 %

-. Operating mode : Transmitting mode

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Gain	Duty Factor (dB)	Total (dBμV/m)	Limits (dBμV/m)	Margin (dB)
Test Data for Low Channel										
11 003.580	49.36	Peak	H	40.29	14.80	42.10	-	62.35	74.00	11.65
10 998.590	37.32	Average	H	40.30	14.80	42.10	-	50.32	54.00	3.68
10 999.230	53.01	Peak	V	40.30	14.80	42.10	-	66.01	74.00	7.99
10 999.020	38.94	Average	V	40.30	14.80	42.10	-	51.94	54.00	2.06
Test Data for Middle Channel										
11 163.360	49.78	Peak	H	39.85	14.67	42.07	-	62.23	74.00	11.77
11 157.010	37.10	Average	H	39.87	14.67	42.07	-	49.57	54.00	4.43
11 159.130	50.53	Peak	V	39.86	14.67	42.07	-	62.99	74.00	11.01
11 159.700	38.73	Average	V	39.86	14.67	42.07	-	51.19	54.00	2.81
Test Data for High Channel										
11 401.750	48.85	Peak	H	39.90	15.15	42.02	-	61.88	74.00	12.12
11 402.320	36.43	Average	H	39.90	15.15	42.02	-	49.46	54.00	4.54
11 399.300	49.75	Peak	V	39.90	15.15	42.02	-	62.78	74.00	11.22
11 399.640	37.69	Average	V	39.90	15.15	42.02	-	50.72	54.00	3.28

Remark: “H”: Horizontal, “V”: Vertical

Margin (dB) = Limits (dBμV/m) - Emission Level (dBμV/m)

14.6.3.2 Test data for 802.11n_HT20 RLAN Mode

-. Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode for the emissions fall in restricted band,
1 MHz and RMS Detector for Average Mode for the emissions fall in restricted band
100 kHz for Peak Mode for the emissions outside restricted band

-. Video bandwidth : 3 MHz for Peak and Average Mode

-. Frequency range : 1 GHz ~ 40 GHz

-. Measurement distance : 3 m

-. Duty Cycle : > 98 %

-. Operating mode : Transmitting mode

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Gain	Duty Factor (dB)	Total (dBμV/m)	Limits (dBμV/m)	Margin (dB)
Test Data for Low Channel										
11 003.36	49.99	Peak	H	40.29	14.80	42.10	-	62.98	74.00	11.02
10 996.98	37.41	Average	H	40.30	14.80	42.10	-	50.41	54.00	3.59
10 997.31	51.77	Peak	V	40.30	14.80	42.10	-	64.77	74.00	9.23
10 999.53	38.29	Average	V	40.30	14.80	42.10	-	51.29	54.00	2.71
Test Data for Middle Channel										
11 155.93	49.97	Peak	H	39.88	14.67	42.07	-	62.45	74.00	11.55
11 158.42	37.27	Average	H	39.87	14.67	42.07	-	49.74	54.00	4.26
11 157.62	51.16	Peak	V	39.87	14.67	42.07	-	63.63	74.00	10.37
11 160.26	38.67	Average	V	39.86	14.67	42.07	-	51.13	54.00	2.87
Test Data for High Channel										
11 398.12	48.57	Peak	H	39.90	15.15	42.02	-	61.60	74.00	12.40
11 398.45	36.41	Average	H	39.90	15.15	42.02	-	49.44	54.00	4.56
11 396.85	49.35	Peak	V	39.90	15.15	42.02	-	62.38	74.00	11.62
11 400.26	37.48	Average	V	39.90	15.15	42.02	-	50.51	54.00	3.49

Remark: “H”: Horizontal, “V”: Vertical

Margin (dB) = Limits (dBμV/m) - Emission Level (dBμV/m)

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14.6.3.3 Test data for 802.11n_HT40 RLAN Mode

-. Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode for the emissions fall in restricted band,
1 MHz and RMS Detector for Average Mode for the emissions fall in restricted band
100 kHz for Peak Mode for the emissions outside restricted band

-. Video bandwidth : 3 MHz for Peak and Average Mode

-. Frequency range : 1 GHz ~ 40 GHz

-. Measurement distance : 3 m

-. Duty Cycle : > 98 %

-. Operating mode : Transmitting mode

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Gain	Duty Factor (dB)	Total (dBμV/m)	Limits (dBμV/m)	Margin (dB)
Test Data for Low Channel										
11 022.29	50.00	Peak	H	40.26	14.80	42.10	-	62.96	74.00	11.04
11 017.13	37.94	Average	H	40.27	14.80	42.10	-	50.91	54.00	3.09
11 017.18	50.14	Peak	V	40.27	14.80	42.10	-	63.11	74.00	10.89
11 021.23	38.11	Average	V	40.26	14.80	42.10	-	51.07	54.00	2.93
Test Data for Middle Channel										
11 101.02	50.19	Peak	H	40.19	15.46	42.08	-	63.76	74.00	10.24
11 098.92	37.52	Average	H	40.20	15.46	42.08	-	51.10	54.00	2.90
11 096.69	49.67	Peak	V	40.20	15.46	42.08	-	63.25	74.00	10.75
11 100.52	37.89	Average	V	40.20	15.46	42.08	-	51.47	54.00	2.53
Test Data for High Channel										
11 341.73	49.33	Peak	H	39.90	15.90	42.03	-	63.10	74.00	10.90
11 341.60	37.24	Average	H	39.90	15.90	42.03	-	51.01	54.00	2.99
11 337.52	50.01	Peak	V	39.90	15.90	42.03	-	63.78	74.00	10.22
11 341.46	37.19	Average	V	39.90	15.90	42.03	-	50.96	54.00	3.04

Remark: “H”: Horizontal, “V”: Vertical

Margin (dB) = Limits (dBμV/m) - Emission Level (dBμV/m)

14.6.3.4 Test data for 802.11ac_HT80 RLAN Mode

-. Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode for the emissions fall in restricted band,
1 MHz and RMS Detector for Average Mode for the emissions fall in restricted band
100 kHz for Peak Mode for the emissions outside restricted band

-. Video bandwidth : 3 MHz for Peak and Average Mode

-. Frequency range : 1 GHz ~ 40 GHz

-. Measurement distance : 3 m

-. Duty Cycle : > 98 %

-. Operating mode : Transmitting mode

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Gain	Duty Factor (dB)	Total (dBμV/m)	Limits (dBμV/m)	Margin (dB)
Test Data for Middle Channel										
11 062.110	49.65	Peak	H	40.20	15.46	42.09	-	63.22	74.00	10.78
11 055.660	37.40	Average	H	40.20	15.46	42.09	-	50.97	54.00	3.03
11 060.090	49.41	Peak	V	40.20	15.46	42.09	-	62.98	74.00	11.02
11 057.950	37.22	Average	V	40.20	15.46	42.09	-	50.79	54.00	3.21

Remark: “H”: Horizontal, “V”: Vertical

Margin (dB) = Limits (dBμV/m) - Emission Level (dBμV/m)

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14.6.4 Test data for Frequency UNII 3

14.6.4.1 Test data for 802.11a RLAN Mode

-. Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode for the emissions fall in restricted band,
1 MHz and RMS Detector for Average Mode for the emissions fall in restricted band
100 kHz for Peak Mode for the emissions outside restricted band

-. Video bandwidth : 3 MHz for Peak and Average Mode

-. Frequency range : 1 GHz ~ 40 GHz

-. Measurement distance : 3 m

-. Duty Cycle : > 98 %

-. Operating mode : Transmitting mode

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Gain	Duty Factor (dB)	Total (dBμV/m)	Limits (dBμV/m)	Margin (dB)
Test Data for Low Channel										
11 494.730	49.12	Peak	H	40.18	16.25	42.00	-	63.55	74.00	10.45
11 486.980	36.66	Average	H	40.15	16.25	42.00	-	51.06	54.00	2.94
11 485.640	49.20	Peak	V	40.14	16.25	42.00	-	63.59	74.00	10.41
11 489.720	37.53	Average	V	40.16	16.25	42.00	-	51.94	54.00	2.06
Test Data for Middle Channel										
11 568.350	49.39	Peak	H	40.06	15.61	41.99	-	63.07	74.00	10.93
11 574.480	37.01	Average	H	40.05	15.61	41.99	-	50.68	54.00	3.32
11 569.070	50.89	Peak	V	40.06	15.61	41.99	-	64.57	74.00	9.43
11 573.620	38.14	Average	V	40.05	15.61	41.99	-	51.81	54.00	2.19
Test Data for High Channel										
11 648.730	49.29	Peak	H	39.61	15.61	41.97	-	62.54	74.00	11.46
11 651.430	36.97	Average	H	39.59	16.14	41.97	-	50.73	54.00	3.27
11 650.680	50.58	Peak	V	39.60	16.14	41.97	-	64.35	74.00	9.65
11 649.740	38.60	Average	V	39.60	15.61	41.97	-	51.84	54.00	2.16

Remark: “H”: Horizontal, “V”: Vertical

Margin (dB) = Limits (dBμV/m) - Emission Level (dBμV/m)

14.6.4.2 Test data for 802.11n_HT20 RLAN Mode

-. Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode for the emissions fall in restricted band,
1 MHz and RMS Detector for Average Mode for the emissions fall in restricted band
100 kHz for Peak Mode for the emissions outside restricted band

-. Video bandwidth : 3 MHz for Peak and Average Mode

-. Frequency range : 1 GHz ~ 40 GHz

-. Measurement distance : 3 m

-. Duty Cycle : > 98 %

-. Operating mode : Transmitting mode

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Gain	Duty Factor (dB)	Total (dBμV/m)	Limits (dBμV/m)	Margin (dB)
Test Data for Low Channel										
11 485.370	48.96	Peak	H	40.14	16.25	42.00	-	63.35	74.00	10.65
11 490.350	36.68	Average	H	40.16	16.25	42.00	-	51.09	54.00	2.91
11 488.840	49.65	Peak	V	40.16	16.25	42.00	-	64.06	74.00	9.94
11 489.800	37.90	Average	V	40.16	16.25	42.00	-	52.31	54.00	1.69
Test Data for Middle Channel										
11 568.000	49.19	Peak	H	40.06	15.61	41.99	-	62.87	74.00	11.13
11 565.950	37.00	Average	H	40.07	15.61	41.99	-	50.69	54.00	3.31
11 570.770	50.10	Peak	V	40.06	15.61	41.99	-	63.78	74.00	10.22
11 570.250	38.47	Average	V	40.06	15.61	41.99	-	52.15	54.00	1.85
Test Data for High Channel										
11 646.030	49.50	Peak	H	39.63	15.61	41.97	-	62.77	74.00	11.23
11 648.090	36.97	Average	H	39.62	15.61	41.97	-	50.23	54.00	3.77
11 647.460	49.78	Peak	V	39.62	15.61	41.97	-	63.04	74.00	10.96
11 651.090	37.85	Average	V	39.59	16.14	41.97	-	51.61	54.00	2.39

Remark: “H”: Horizontal, “V”: Vertical

Margin (dB) = Limits (dBμV/m) - Emission Level (dBμV/m)

14.6.4.3 Test data for 802.11n_HT40 RLAN Mode

-. Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode for the emissions fall in restricted band,
1 MHz and RMS Detector for Average Mode for the emissions fall in restricted band
100 kHz for Peak Mode for the emissions outside restricted band

-. Video bandwidth : 3 MHz for Peak and Average Mode

-. Frequency range : 1 GHz ~ 40 GHz

-. Measurement distance : 3 m

-. Duty Cycle : > 98 %

-. Operating mode : Transmitting mode

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Gain	Duty Factor (dB)	Total (dBμV/m)	Limits (dBμV/m)	Margin (dB)
Test Data for Low Channel										
11 508.930	49.70	Peak	H	40.18	16.25	42.00	-	64.13	74.00	9.87
11 507.040	36.95	Average	H	40.19	16.25	42.00	-	51.39	54.00	2.61
11 507.600	49.83	Peak	V	40.18	16.25	42.00	-	64.26	74.00	9.74
11 508.660	37.23	Average	V	40.18	16.25	42.00	-	51.66	54.00	2.34
Test Data for High Channel										
11 593.600	49.55	Peak	H	40.01	15.61	41.98	-	63.19	74.00	10.81
11 590.940	37.25	Average	H	40.02	15.61	41.98	-	50.90	54.00	3.10
11 588.130	49.60	Peak	V	40.02	15.61	41.98	-	63.25	74.00	10.75
11 590.020	37.54	Average	V	40.02	15.61	41.98	-	51.19	54.00	2.81

Remark: “H”: Horizontal, “V”: Vertical

Margin (dB) = Limits (dBμV/m) - Emission Level (dBμV/m)

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14.6.4.4 Test data for 802.11ac_HT80 RLAN Mode

14.6.4.4.1 Test data for Multiple Transmit

-. Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode for the emissions fall in restricted band,
1 MHz and RMS Detector for Average Mode for the emissions fall in restricted band
100 kHz for Peak Mode for the emissions outside restricted band

-. Video bandwidth : 3 MHz for Peak and Average Mode

-. Frequency range : 1 GHz ~ 40 GHz

-. Measurement distance : 3 m

-. Duty Cycle : > 98 %

-. Operating mode : Transmitting mode

Frequency (MHz)	Reading (dBµV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Gain	Duty Factor (dB)	Total (dBµV/m)	Limits (dBµV/m)	Margin (dB)
Test Data for Middle Channel										
11 553.900	49.73	Peak	H	40.09	15.61	41.99	-	63.44	74.00	10.56
11 553.490	37.66	Average	H	40.09	15.61	41.99	-	51.37	54.00	2.63
11 549.680	50.51	Peak	V	40.10	16.25	41.99	-	64.87	74.00	9.13
11 550.870	37.49	Average	V	40.10	15.61	41.99	-	51.21	54.00	2.79

Remark: “H”: Horizontal, “V”: Vertical

Margin (dB) = Limits (dBµV/m) - Emission Level (dBµV/m)

15. RADIATED RESTRICTED BAND EDGE MEASUREMENTS

15.1 Operating environment

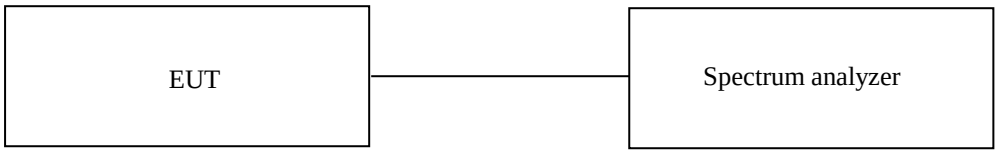
Temperature : 22 °C

Relative humidity : 41 % R.H.

15.2 Test set-up for conducted measurement

The radiated emissions measurements were performed on the 3 m, open-field test site. The EUT was placed on a non-conductive turntable above the ground plane.

The system was rotated 360°, and the antenna was varied in the height between 1.0 m and 4.0 m in order to determine the maximum emission levels. This procedure was performed for horizontal and vertical polarization of the receiving antenna.



15.3 Test Date

October 04, 2023 ~ October 20, 2023

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15.4 Test data for Frequency UNII I

15.4.1 Test data for 802.11a RLAN Mode

-. Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode

1 MHz and RMS Detector for Average Mode

-. Video bandwidth : 3 MHz for Peak and Average Mode

-. Measurement distance : 3 m

-. Duty Cycle : > 98 %

-. Result : PASSED

Frequency (MHz)	Reading (dBµV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Gain	ATT (dB)	Duty Factor (dB)	Total (dBµV/m)	Limits (dBµV/m)	Margin (dB)
5 148.41	49.56	Peak	H	31.91	10.32	41.77	6.13	-	56.15	74.00	17.85
5 123.96	39.95	Average	H	32.00	10.39	41.78	6.13	-	46.69	54.00	7.31
4 532.95	48.97	Peak	V	30.67	9.58	41.89	6.12	-	53.45	74.00	20.55
5 136.86	37.86	Average	V	31.95	10.32	41.77	6.13	-	44.49	54.00	9.51

Tabulated test data for Restricted Band

Remark: “H”: Horizontal, “V”: Vertical

Margin (dB) = Limits (dBµV/m) - Total Level (dBµV/m)

Total Level = Reading + Antenna Factor + Cable Loss – AMP Gain + ATT + Duty Factor

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15.4.2 Test data for 802.11n_HT20 RLAN Mode

-. Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode
1 MHz and RMS Detector for Average Mode

-. Video bandwidth : 3 MHz for Peak and Average Mode

-. Measurement distance : 3 m

-. Duty Cycle : > 98 %

-. Result : PASSED

Frequency (MHz)	Reading (dBµV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Gain	ATT (dB)	Duty Factor (dB)	Total (dBµV/m)	Limits (dBµV/m)	Margin (dB)
5 117.84	50.39	Peak	H	32.03	10.39	41.78	6.13	-	57.16	74.00	16.84
5 149.77	40.28	Average	H	31.90	10.32	41.77	6.13	-	46.86	54.00	7.14
4 622.62	49.10	Peak	V	30.89	9.60	41.88	6.12	-	53.83	74.00	20.17
4 528.87	37.86	Average	V	30.66	9.58	41.89	6.12	-	42.33	54.00	11.67

Tabulated test data for Restricted Band

Remark: “H”: Horizontal, “V”: Vertical

Margin (dB) = Limits (dBµV/m) - Total Level (dBµV/m)

Total Level = Reading + Antenna Factor + Cable Loss – AMP Gain + ATT + Duty Factor

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15.4.3 Test data for 802.11n_HT40 RLAN Mode

-. Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode
1 MHz and RMS Detector for Average Mode

-. Video bandwidth : 3 MHz for Peak and Average Mode

-. Measurement distance : 3 m

-. Duty Cycle : > 98 %

-. Result : PASSED

Frequency (MHz)	Reading (dBµV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Gain	ATT (dB)	Duty Factor (dB)	Total (dBµV/m)	Limits (dBµV/m)	Margin (dB)
5 148.30	55.13	Peak	H	31.91	10.32	41.77	6.13	-	61.72	74.00	12.28
5 149.68	43.31	Average	H	31.90	10.32	41.77	6.13	-	49.89	54.00	4.11
5 133.13	49.44	Peak	V	31.97	10.32	41.77	6.13	-	56.09	74.00	17.91
5 147.61	38.25	Average	V	31.91	10.32	41.77	6.13	-	44.84	54.00	9.16

Tabulated test data for Restricted Band

Remark: “H”: Horizontal, “V”: Vertical

Margin (dB) = Limits (dBµV/m) - Total Level (dBµV/m)

Total Level = Reading + Antenna Factor + Cable Loss – AMP Gain + ATT + Duty Factor

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15.4.4 Test data for 802.11ac_HT80 RLAN Mode

-. Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode
1 MHz and RMS Detector for Average Mode

-. Video bandwidth : 3 MHz for Peak and Average Mode

-. Measurement distance : 3 m

-. Duty Cycle : > 98 %

-. Result : PASSED

Frequency (MHz)	Reading (dBµV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Gain	ATT (dB)	Duty Factor (dB)	Total (dBµV/m)	Limits (dBµV/m)	Margin (dB)
5 145.81	57.18	Peak	H	31.92	10.32	41.77	6.13	-	63.78	74.00	10.22
5 148.65	44.28	Average	H	31.91	10.32	41.77	6.13	-	50.87	54.00	3.13
5 148.65	50.18	Peak	V	31.91	10.32	41.77	6.13	-	56.77	74.00	17.23
5 137.30	38.52	Average	V	31.95	10.32	41.77	6.13	-	45.15	54.00	8.85

Tabulated test data for Restricted Band

Remark: “H”: Horizontal, “V”: Vertical

Margin (dB) = Limits (dBµV/m) - Total Level (dBµV/m)

Total Level = Reading + Antenna Factor + Cable Loss – AMP Gain + ATT + Duty Factor

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15.5 Test data for Frequency UNII 2A

15.5.1 Test data for 802.11a RLAN Mode

-. Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode

1 MHz and RMS Detector for Average Mode

-. Video bandwidth : 3 MHz for Peak and Average Mode

-. Measurement distance : 3 m

-. Duty Cycle : > 98 %

-. Result : PASSED

Frequency (MHz)	Reading (dBµV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Gain	ATT (dB)	Duty Factor (dB)	Total (dBµV/m)	Limits (dBµV/m)	Margin (dB)
5 377.13	55.65	Peak	H	31.45	10.41	41.72	6.14	-	61.93	74.00	12.07
5 375.31	43.72	Average	H	31.45	10.41	41.72	6.14	-	50.00	54.00	4.00
5 383.43	55.40	Peak	V	31.47	10.41	41.72	6.14	-	61.70	74.00	12.30
5 418.95	43.42	Average	V	31.61	10.41	41.72	6.14	-	49.86	54.00	4.14

Tabulated test data for Restricted Band

Remark: “H”: Horizontal, “V”: Vertical

Margin (dB) = Limits (dBµV/m) - Total Level (dBµV/m)

Total Level = Reading + Antenna Factor + Cable Loss – AMP Gain + ATT + Duty Factor

15.5.2 Test data for 802.11n_HT20 RLAN Mode

-. Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode
1 MHz and RMS Detector for Average Mode

-. Video bandwidth : 3 MHz for Peak and Average Mode

-. Measurement distance : 3 m

-. Duty Cycle : > 98 %

-. Result : PASSED

Frequency (MHz)	Reading (dBµV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Gain	ATT (dB)	Duty Factor (dB)	Total (dBµV/m)	Limits (dBµV/m)	Margin (dB)
5 450.42	55.11	Peak	H	31.80	10.54	41.71	6.14	-	61.88	74.00	12.12
5 394.06	43.65	Average	H	31.49	10.41	41.72	6.14	-	49.97	54.00	4.03
5 429.86	55.00	Peak	V	31.68	10.54	41.71	6.14	-	61.65	74.00	12.35
5 430.70	43.23	Average	V	31.68	10.54	41.71	6.14	-	49.88	54.00	4.12

Tabulated test data for Restricted Band

Remark: “H”: Horizontal, “V”: Vertical

Margin (dB) = Limits (dBµV/m) - Total Level (dBµV/m)

Total Level = Reading + Antenna Factor + Cable Loss – AMP Gain + ATT + Duty Factor

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15.5.3 Test data for 802.11n_HT40 RLAN Mode

-. Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode
1 MHz and RMS Detector for Average Mode

-. Video bandwidth : 3 MHz for Peak and Average Mode

-. Measurement distance : 3 m

-. Duty Cycle : > 98 %

-. Result : PASSED

Frequency (MHz)	Reading (dBµV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Gain	ATT (dB)	Duty Factor (dB)	Total (dBµV/m)	Limits (dBµV/m)	Margin (dB)
5 350.98	57.44	Peak	H	31.40	10.49	41.73	6.13	-	63.73	74.00	10.27
5 350.38	43.51	Average	H	31.40	10.49	41.73	6.13	-	49.80	54.00	4.20
5 351.43	54.54	Peak	V	31.40	10.49	41.73	6.13	-	60.83	74.00	13.17
5 351.28	40.31	Average	V	31.40	10.49	41.73	6.13	-	46.60	54.00	7.40

Tabulated test data for Restricted Band

Remark: “H”: Horizontal, “V”: Vertical

Margin (dB) = Limits (dBµV/m) - Total Level (dBµV/m)

Total Level = Reading + Antenna Factor + Cable Loss – AMP Gain + ATT + Duty Factor

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15.5.4 Test data for 802.11ac_HT80 RLAN Mode

-. Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode
1 MHz and RMS Detector for Average Mode

-. Video bandwidth : 3 MHz for Peak and Average Mode

-. Measurement distance : 3 m

-. Duty Cycle : > 98 %

-. Result : PASSED

Frequency (MHz)	Reading (dBµV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Gain	ATT (dB)	Duty Factor (dB)	Total (dBµV/m)	Limits (dBµV/m)	Margin (dB)
5 350.71	56.05	Peak	H	31.40	10.49	41.73	6.13	-	62.34	74.00	11.66
5 350.37	44.11	Average	H	31.40	10.49	41.73	6.13	-	50.40	54.00	3.60
5 350.20	52.96	Peak	V	31.40	10.49	41.73	6.13	-	59.25	74.00	14.75
5 350.03	39.11	Average	V	31.40	10.49	41.73	6.13	-	45.40	54.00	8.60

Tabulated test data for Restricted Band

Remark: “H”: Horizontal, “V”: Vertical

Margin (dB) = Limits (dBµV/m) - Total Level (dBµV/m)

Total Level = Reading + Antenna Factor + Cable Loss – AMP Gain + ATT + Duty Factor

15.6 Test data for Frequency UNII 2C

15.6.1 Test data for 802.11a RLAN Mode

-. Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode

1 MHz and RMS Detector for Average Mode

-. Video bandwidth : 3 MHz for Peak and Average Mode

-. Measurement distance : 3 m

-. Duty Cycle : > 98 %

-. Result : PASSED

Frequency (MHz)	Reading (dBµV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Gain	ATT (dB)	Duty Factor (dB)	Total (dBµV/m)	Limits (dBµV/m)	Margin (dB)
5 456.620	51.03	Peak	H	31.80	10.54	41.71	6.14	-	57.80	74.00	16.20
5 457.670	40.28	Average	H	31.80	10.54	41.71	6.14	-	47.05	54.00	6.95
5 416.160	50.57	Peak	V	31.60	10.41	41.72	6.14	-	57.00	74.00	17.00
5 426.500	38.70	Average	V	31.66	10.54	41.71	6.14	-	45.33	54.00	8.67

Tabulated test data for Restricted Band

Remark: “H”: Horizontal, “V”: Vertical

Margin (dB) = Limits (dBµV/m) - Total Level (dBµV/m)

Total Level = Reading + Antenna Factor + Cable Loss – AMP Gain + ATT + Duty Factor

15.6.2 Test data for 802.11n_HT20 RLAN Mode

-. Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode
1 MHz and RMS Detector for Average Mode

-. Video bandwidth : 3 MHz for Peak and Average Mode

-. Measurement distance : 3 m

-. Duty Cycle : > 98 %

-. Result : PASSED

Frequency (MHz)	Reading (dBµV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Gain	ATT (dB)	Duty Factor (dB)	Total (dBµV/m)	Limits (dBµV/m)	Margin (dB)
5 455.120	50.92	Peak	H	31.80	10.54	41.71	6.14	-	57.69	74.00	16.31
5 426.050	39.34	Average	H	31.66	10.54	41.71	6.14	-	45.97	54.00	8.03
5 448.680	50.28	Peak	V	31.79	10.54	41.71	6.14	-	57.04	74.00	16.96
5 422.600	38.61	Average	V	31.64	10.41	41.72	6.14	-	45.08	54.00	8.92

Tabulated test data for Restricted Band

Remark: “H”: Horizontal, “V”: Vertical

Margin (dB) = Limits (dBµV/m) - Total Level (dBµV/m)

Total Level = Reading + Antenna Factor + Cable Loss – AMP Gain + ATT + Duty Factor

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15.6.3 Test data for 802.11n_HT40 RLAN Mode

-. Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode
1 MHz and RMS Detector for Average Mode

-. Video bandwidth : 3 MHz for Peak and Average Mode

-. Measurement distance : 3 m

-. Duty Cycle : > 98 %

-. Result : PASSED

Frequency (MHz)	Reading (dBµV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Gain	ATT (dB)	Duty Factor (dB)	Total (dBµV/m)	Limits (dBµV/m)	Margin (dB)
5 460.050	54.44	Peak	H	31.80	10.54	41.71	6.14	-	61.21	74.00	12.79
5 459.250	42.84	Average	H	31.80	10.54	41.71	6.14	-	49.61	54.00	4.39
5 450.940	50.53	Peak	V	31.80	10.54	41.71	6.14	-	57.30	74.00	16.70
5 458.290	39.34	Average	V	31.80	10.54	41.71	6.14	-	46.11	54.00	7.89

Tabulated test data for Restricted Band

Remark: “H”: Horizontal, “V”: Vertical

Margin (dB) = Limits (dBµV/m) - Total Level (dBµV/m)

Total Level = Reading + Antenna Factor + Cable Loss – AMP Gain + ATT + Duty Factor

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15.6.4 Test data for 802.11ac_HT80 RLAN Mode

-. Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode
1 MHz and RMS Detector for Average Mode

-. Video bandwidth : 3 MHz for Peak and Average Mode

-. Measurement distance : 3 m

-. Duty Cycle : > 98 %

-. Result : PASSED

Frequency (MHz)	Reading (dBµV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Gain	ATT (dB)	Duty Factor (dB)	Total (dBµV/m)	Limits (dBµV/m)	Margin (dB)
5 459.780	56.84	Peak	H	31.80	10.54	41.71	6.14	-	63.61	74.00	10.39
5 455.640	44.26	Average	H	31.80	10.54	41.71	6.14	-	51.03	54.00	2.97
5 457.620	50.84	Peak	V	31.80	10.54	41.71	6.14	-	57.61	74.00	16.39
5 456.000	39.94	Average	V	31.80	10.54	41.71	6.14	-	46.71	54.00	7.29

Tabulated test data for Restricted Band

Remark: “H”: Horizontal, “V”: Vertical

Margin (dB) = Limits (dBµV/m) - Total Level (dBµV/m)

Total Level = Reading + Antenna Factor + Cable Loss – AMP Gain + ATT + Duty Factor

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15.7 Test data for Frequency U-NII-3

15.7.1 Test data for 802.11a RLAN Mode

-. Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode
1 MHz and RMS Detector for Average Mode

-. Video bandwidth : 3 MHz for Peak and Average Mode

-. Measurement distance : 3 m

-. Duty Cycle : > 98 %

-. Result : PASSED

Frequency (MHz)	Reading (dBµV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Gain	ATT (dB)	Duty Factor (dB)	Total (dBµV/m)	Limits (dBµV/m)	Margin (dB)
Low Channel											
5 650.32	49.97	Peak	H	31.90	10.56	41.70	6.13	-	56.86	68.44	11.58
5 703.43	50.69	Peak	H	31.90	10.95	41.70	6.12	-	57.96	106.16	48.20
5 720.13	51.10	Peak	H	31.90	10.95	41.70	6.12	-	58.37	111.10	52.73
5 854.82	49.73	Peak	H	32.41	10.95	41.70	6.12	-	57.51	111.21	53.70
5 874.57	49.41	Peak	H	32.45	10.95	41.70	6.12	-	57.23	105.32	48.09
5 924.98	48.66	Peak	H	32.50	11.14	41.70	6.13	-	56.73	68.21	11.48
5 650.47	49.23	Peak	V	31.90	10.56	41.70	6.13	-	56.12	68.55	12.43
5 702.37	49.69	Peak	V	31.90	10.95	41.70	6.12	-	56.96	105.86	48.90
5 720.03	48.69	Peak	V	31.90	10.95	41.70	6.12	-	55.96	110.87	54.91
5 854.51	50.48	Peak	V	32.41	10.95	41.70	6.12	-	58.26	111.92	53.66
5 874.25	49.90	Peak	V	32.45	10.95	41.70	6.12	-	57.72	105.41	47.69
5 924.28	49.42	Peak	V	32.50	11.14	41.70	6.13	-	57.49	68.73	11.24

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High Channel											
5 650.47	48.66	Peak	H	31.90	10.56	41.70	6.13	-	55.55	68.55	13.00
5 700.81	49.75	Peak	H	31.90	10.95	41.70	6.12	-	57.02	105.43	48.41
5 720.02	49.48	Peak	H	31.90	10.95	41.70	6.12	-	56.75	110.85	54.10
5 854.98	49.65	Peak	H	32.41	10.95	41.70	6.12	-	57.43	110.85	53.42
5 874.93	49.41	Peak	H	32.45	10.95	41.70	6.12	-	57.23	105.22	47.99
5 924.92	48.75	Peak	H	32.50	11.14	41.70	6.13	-	56.82	68.26	11.44
5 650.27	48.93	Peak	V	31.90	10.56	41.70	6.13	-	55.82	68.40	12.58
5 701.63	49.73	Peak	V	31.90	10.95	41.70	6.12	-	57.00	105.66	48.66
5 720.33	49.61	Peak	V	31.90	10.95	41.70	6.12	-	56.88	111.55	54.67
5 854.92	50.20	Peak	V	32.41	10.95	41.70	6.12	-	57.98	110.98	53.00
5 874.47	49.91	Peak	V	32.45	10.95	41.70	6.12	-	57.73	105.35	47.62
5 924.98	49.20	Peak	V	32.50	11.14	41.70	6.13	-	57.27	68.21	10.94

Tabulated test data for Restricted Band

Remark: “H”: Horizontal, “V”: Vertical

Margin (dB) = Limits (dBμV/m) - Total Level (dBμV/m)

Total Level = Reading + Antenna Factor + Cable Loss – AMP Gain + ATT + Duty Factor

15.7.2 Test data for 802.11n_HT20 RLAN Mode

-. Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode
1 MHz and RMS Detector for Average Mode

-. Video bandwidth : 3 MHz for Peak and Average Mode

-. Measurement distance : 3 m

-. Duty Cycle : > 98 %

-. Result : PASSED

Frequency (MHz)	Reading (dBµV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Gain	ATT (dB)	Duty Factor (dB)	Total (dBµV/m)	Limits (dBµV/m)	Margin (dB)
Low Channel											
5 650.22	49.91	Peak	H	31.90	10.56	41.70	6.13	-	56.80	68.36	11.56
5 703.97	52.06	Peak	H	31.90	10.95	41.70	6.12	-	59.33	106.31	46.98
5 723.47	67.42	Peak	H	31.90	10.95	41.70	6.12	-	74.69	118.71	44.02
5 854.83	49.90	Peak	H	32.41	10.95	41.70	6.12	-	57.68	111.19	53.51
5 873.71	50.36	Peak	H	32.45	10.95	41.70	6.12	-	58.18	105.56	47.38
5 924.78	50.22	Peak	H	32.50	11.14	41.70	6.13	-	58.29	68.36	10.07
5 651.07	49.56	Peak	V	31.90	10.56	41.70	6.13	-	56.45	68.99	12.54
5 700.45	49.74	Peak	V	31.90	10.95	41.70	6.12	-	57.01	105.33	48.32
5 721.65	55.85	Peak	V	31.90	10.95	41.70	6.12	-	63.12	114.56	51.44
5 854.87	49.70	Peak	V	32.41	10.95	41.70	6.12	-	57.48	111.10	53.62
5 872.11	50.45	Peak	V	32.44	10.95	41.70	6.12	-	58.26	106.01	47.75
5 924.83	48.89	Peak	V	32.50	11.14	41.70	6.13	-	56.96	68.33	11.37

High Channel											
5 650.92	50.81	Peak	H	31.90	10.56	41.70	6.13	-	57.70	68.88	11.18
5 700.13	50.47	Peak	H	31.90	10.95	41.70	6.12	-	57.74	105.24	47.50
5 720.55	50.34	Peak	H	31.90	10.95	41.70	6.12	-	57.61	112.05	54.44
5 854.84	49.90	Peak	H	32.41	10.95	41.70	6.12	-	57.68	111.16	53.48
5 873.89	50.95	Peak	H	32.45	10.95	41.70	6.12	-	58.77	105.51	46.74
5 924.38	49.55	Peak	H	32.50	11.14	41.70	6.13	-	57.62	68.66	11.04
5 652.17	50.21	Peak	V	31.90	10.56	41.70	6.13	-	57.10	69.81	12.71
5 700.01	49.07	Peak	V	31.90	10.95	41.70	6.12	-	56.34	105.20	48.86
5 720.11	48.86	Peak	V	31.90	10.95	41.70	6.12	-	56.13	111.05	54.92
5 854.89	49.25	Peak	V	32.41	10.95	41.70	6.12	-	57.03	111.05	54.02
5 872.65	50.25	Peak	V	32.45	10.95	41.70	6.12	-	58.07	105.86	47.79
5 924.92	49.37	Peak	V	32.50	11.14	41.70	6.13	-	57.44	68.26	10.82

Tabulated test data for Restricted Band

Remark: “H”: Horizontal, “V”: Vertical

Margin (dB) = Limits (dBμV/m) - Total Level (dBμV/m)

Total Level = Reading + Antenna Factor + Cable Loss – AMP Gain + ATT + Duty Factor

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15.7.3 Test data for 802.11n_HT40 RLAN Mode

-. Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode
1 MHz and RMS Detector for Average Mode

-. Video bandwidth : 3 MHz for Peak and Average Mode

-. Measurement distance : 3 m

-. Duty Cycle : > 98 %

-. Result : PASSED

Frequency (MHz)	Reading (dBµV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Gain	ATT (dB)	Duty Factor (dB)	Total (dBµV/m)	Limits (dBµV/m)	Margin (dB)
Low Channel											
5 651.02	49.01	Peak	H	31.90	10.56	41.70	6.13	-	55.90	68.95	13.05
5 715.93	62.06	Peak	H	31.90	10.95	41.70	6.12	-	69.33	109.66	40.33
5 721.27	65.20	Peak	H	31.90	10.95	41.70	6.12	-	72.47	113.70	41.23
5 854.62	50.17	Peak	H	32.41	10.95	41.70	6.12	-	57.95	111.67	53.72
5 873.67	50.69	Peak	H	32.45	10.95	41.70	6.12	-	58.51	105.57	47.06
5 924.78	49.51	Peak	H	32.50	11.14	41.70	6.13	-	57.58	68.36	10.78
5 650.37	49.24	Peak	V	31.90	10.56	41.70	6.13	-	56.13	68.47	12.34
5 719.27	58.46	Peak	V	31.90	10.95	41.70	6.12	-	65.73	110.60	44.87
5 721.60	61.85	Peak	V	31.90	10.95	41.70	6.12	-	69.12	114.45	45.33
5 854.63	50.56	Peak	V	32.41	10.95	41.70	6.12	-	58.34	111.64	53.30
5 874.53	49.70	Peak	V	32.45	10.95	41.70	6.12	-	57.52	105.33	47.81
5 924.53	48.92	Peak	V	32.50	11.14	41.70	6.13	-	56.99	68.55	11.56

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High Channel											
5 652.42	50.99	Peak	H	31.90	10.56	41.70	6.13	-	57.88	69.99	12.11
5 700.47	50.01	Peak	H	31.90	10.95	41.70	6.12	-	57.28	105.33	48.05
5 720.00	50.82	Peak	H	31.90	10.95	41.70	6.12	-	58.09	110.80	52.71
5 854.68	50.08	Peak	H	32.41	10.95	41.70	6.12	-	57.86	111.53	53.67
5 871.57	50.85	Peak	H	32.44	10.95	41.70	6.12	-	58.66	106.16	47.50
5 924.33	49.50	Peak	H	32.50	11.14	41.70	6.13	-	57.57	68.70	11.13
5 650.12	48.94	Peak	V	31.90	10.56	41.70	6.13	-	55.83	68.29	12.46
5 700.07	49.53	Peak	V	31.90	10.95	41.70	6.12	-	56.80	105.22	48.42
5 720.28	49.98	Peak	V	31.90	10.95	41.70	6.12	-	57.25	111.44	54.19
5 854.99	50.65	Peak	V	32.41	10.95	41.70	6.12	-	58.43	110.82	52.39
5 874.71	49.89	Peak	V	32.45	10.95	41.70	6.12	-	57.71	105.28	47.57
5 924.63	49.12	Peak	V	32.50	11.14	41.70	6.13	-	57.19	68.47	11.28

Tabulated test data for Restricted Band

Remark: “H”: Horizontal, “V”: Vertical

Margin (dB) = Limits (dBμV/m) - Total Level (dBμV/m)

Total Level = Reading + Antenna Factor + Cable Loss – AMP Gain + ATT + Duty Factor

15.7.4 Test data for 802.11ac_HT80 RLAN Mode

-. Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode
1 MHz and RMS Detector for Average Mode

-. Video bandwidth : 3 MHz for Peak and Average Mode

-. Measurement distance : 3 m

-. Duty Cycle : > 98 %

-. Result : PASSED

Frequency (MHz)	Reading (dBµV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Gain	ATT (dB)	Duty Factor (dB)	Total (dBµV/m)	Limits (dBµV/m)	Margin (dB)
Low Channel											
5 652.07	50.95	Peak	H	31.90	10.56	41.70	6.13	-	57.84	69.73	11.89
5 711.70	70.06	Peak	H	31.90	10.95	41.70	6.12	-	77.33	108.48	31.15
5 720.94	72.43	Peak	H	31.90	10.95	41.70	6.12	-	79.70	112.94	33.24
5 854.90	62.17	Peak	H	32.41	10.95	41.70	6.12	-	69.95	111.03	41.08
5 867.60	60.02	Peak	H	32.44	10.95	41.70	6.12	-	67.83	107.27	39.44
5 924.88	49.12	Peak	H	32.50	11.14	41.70	6.13	-	57.19	68.29	11.10
5 650.57	49.86	Peak	V	31.90	10.56	41.70	6.13	-	56.75	68.62	11.87
5 716.13	61.67	Peak	V	31.90	10.95	41.70	6.12	-	68.94	109.72	40.78
5 720.36	63.24	Peak	V	31.90	10.95	41.70	6.12	-	70.51	111.62	41.11
5 854.97	50.78	Peak	V	32.41	10.95	41.70	6.12	-	58.56	110.87	52.31
5 874.49	49.63	Peak	V	32.45	10.95	41.70	6.12	-	57.45	105.34	47.89
5 924.98	48.82	Peak	V	32.50	11.14	41.70	6.13	-	56.89	68.21	11.32

Tabulated test data for Restricted Band

Remark: “H”: Horizontal, “V”: Vertical

Margin (dB) = Limits (dBµV/m) - Total Level (dBµV/m)

Total Level = Reading + Antenna Factor + Cable Loss – AMP Gain + ATT + Duty Factor

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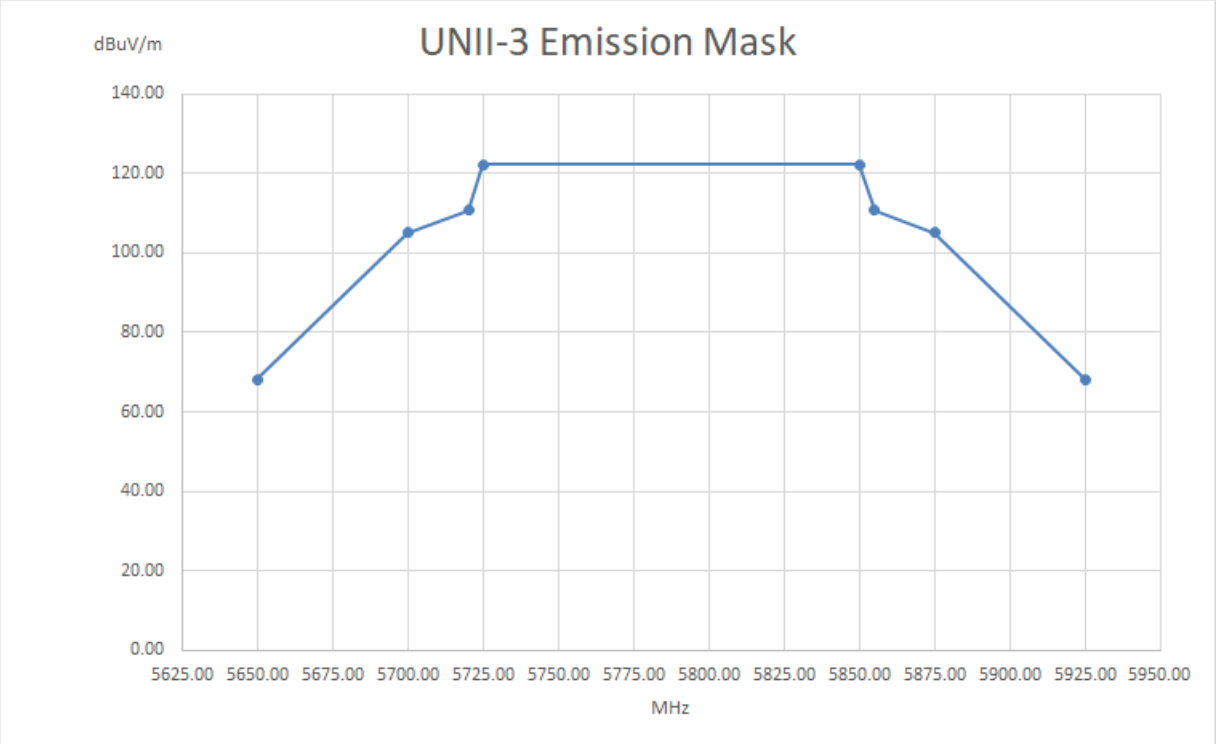
15.7.5 U-NII-3 Emission Limits

15.7.5.1 Emission Mask Plots



Remark.

-. Title 47 → Part 15 → Subpart E—UNLICENSED NATIONAL INFORMATION INFRASTRUCTURE DEVICES

§ 15.407 General technical requirements.

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

(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.

16. CONDUCTED EMISSION TEST

16.1 Operating environment

Temperature : 22 °C

Relative humidity : 41 % R.H.

16.2 Test set-up

The EUT was placed on a wooden table, 0.8 m height above the floor. Power was fed to the EUT through a 50 Ω / 50 μH + 5 Ω Artificial Mains Network (AMN). The ground plane was electrically bonded to the reference ground system and all power lines were filtered from ambient.

16.3 Test Date

October 04, 2023 ~ October 20, 2023

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16.4 Test data

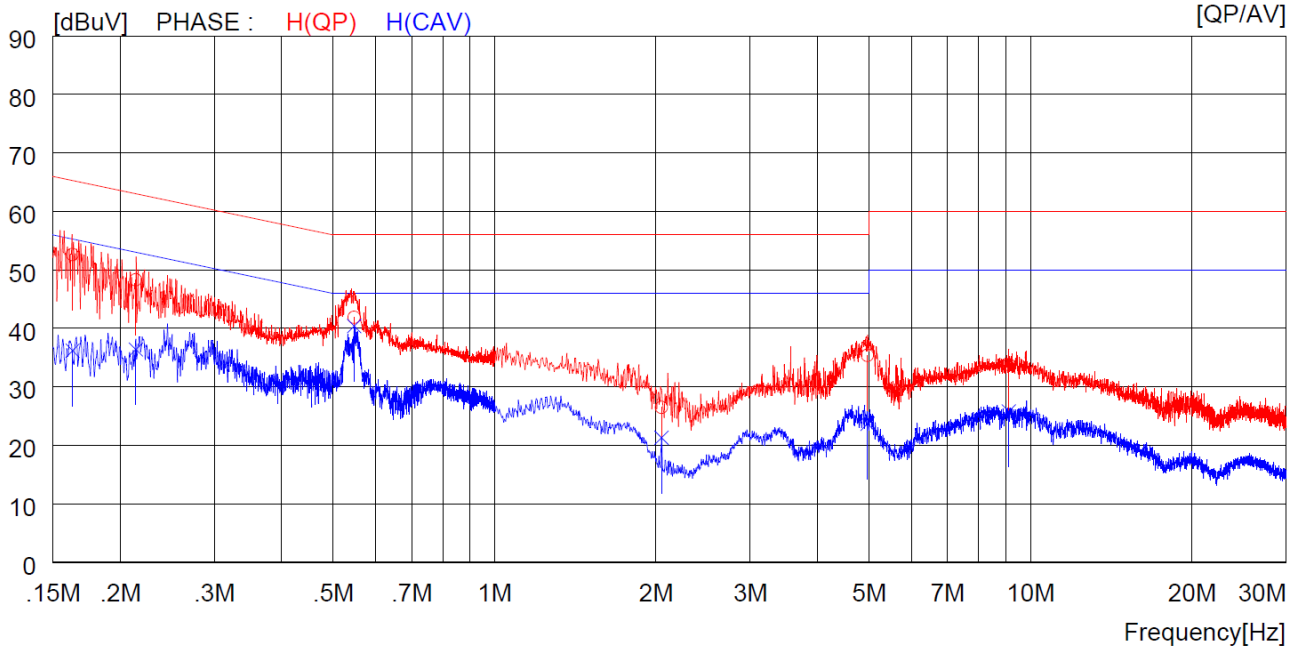
16.4.1 Test data for WLAN 5 GHz

-. Resolution bandwidth : 9 kHz

-. Frequency range : 0.15 MHz ~ 30 MHz

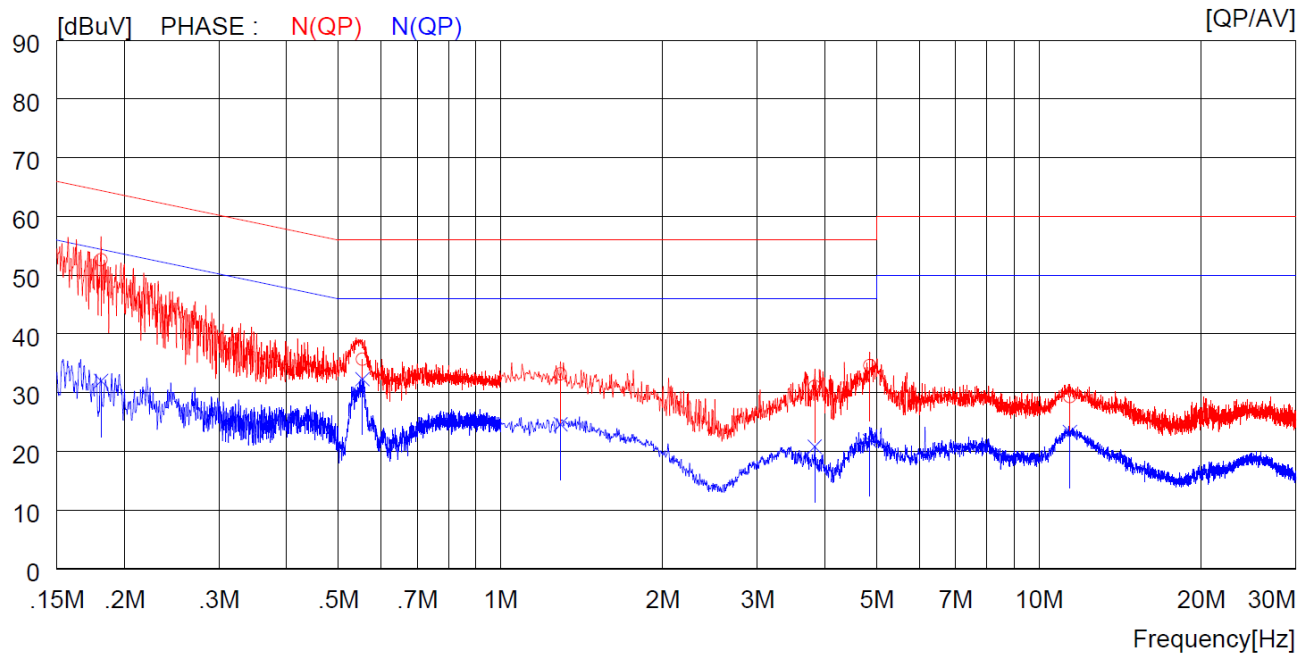
-. Antenna 1, Antenna 2 and Multiple transmit tested, but the worst data were recorded.

-. Tested Line : HOT LINE



NO	FREQ	READING QP [dBuV]	READING AV [dBuV]	C.FACTOR [dB]	RESULT QP [dBuV]	RESULT AV [dBuV]	LIMIT QP [dBuV]	LIMIT AV [dBuV]	MARGIN QP [dBuV]	MARGIN AV [dBuV]	PHASE
1	0.16300	42.5	----	10.1	52.6	----	65.3	----	12.7	----	H(QP)
2	0.21400	38.2	----	10.1	48.3	----	63.0	----	14.7	----	H(QP)
3	0.54700	31.8	----	10.1	41.9	----	56.0	----	14.1	----	H(QP)
4	2.04800	16.2	----	10.3	26.5	----	56.0	----	29.5	----	H(QP)
5	4.96400	25.1	----	10.3	35.4	----	56.0	----	20.6	----	H(QP)
6	9.10500	23.3	----	10.5	33.8	----	60.0	----	26.2	----	H(QP)
7	0.16300	----	26.1	10.1	----	36.2	----	55.3	----	19.1	H(CAV)
8	0.21400	----	26.3	10.1	----	36.4	----	53.0	----	16.6	H(CAV)
9	0.54700	----	30.3	10.1	----	40.4	----	46.0	----	5.6	H(CAV)
10	2.04800	----	11.0	10.3	----	21.3	----	46.0	----	24.7	H(CAV)
11	4.96400	----	13.4	10.3	----	23.7	----	46.0	----	22.3	H(CAV)
12	9.10500	----	15.3	10.5	----	25.8	----	50.0	----	24.2	H(CAV)

-. Tested Line : NEUTRAL LINE



NO	FREQ	READING QP	READING AV	C.FACTOR	RESULT QP	RESULT AV	LIMIT QP	LIMIT AV	MARGIN QP	MARGIN AV	PHASE
	[MHz]	[dBuV]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	
1	0.18100	42.5	----	10.1	52.6	----	64.4	----	11.8	----	N(QP)
2	0.55400	25.6	----	10.1	35.7	----	56.0	----	20.3	----	N(QP)
3	1.29200	23.1	----	10.1	33.2	----	56.0	----	22.8	----	N(QP)
4	3.83200	20.7	----	10.3	31.0	----	56.0	----	25.0	----	N(QP)
5	4.84800	24.3	----	10.3	34.6	----	56.0	----	21.4	----	N(QP)
6	11.41000	18.8	----	10.5	29.3	----	60.0	----	30.7	----	N(QP)
7	0.18100	----	21.9	10.1	----	32.0	----	54.4	----	22.4	NCAV)
8	0.55400	----	22.2	10.1	----	32.3	----	46.0	----	13.7	NCAV)
9	1.29200	----	14.5	10.1	----	24.6	----	46.0	----	21.4	NCAV)
10	3.83200	----	10.5	10.3	----	20.8	----	46.0	----	25.2	NCAV)
11	4.84800	----	11.5	10.3	----	21.8	----	46.0	----	24.2	NCAV)
12	11.41000	----	12.8	10.5	----	23.3	----	50.0	----	26.7	NCAV)

Remark: Margin (dB) = Limit – Level (Result)

The emission level in above table is included the transducer factor that means insertion loss (LISN), cable loss and attenuator.

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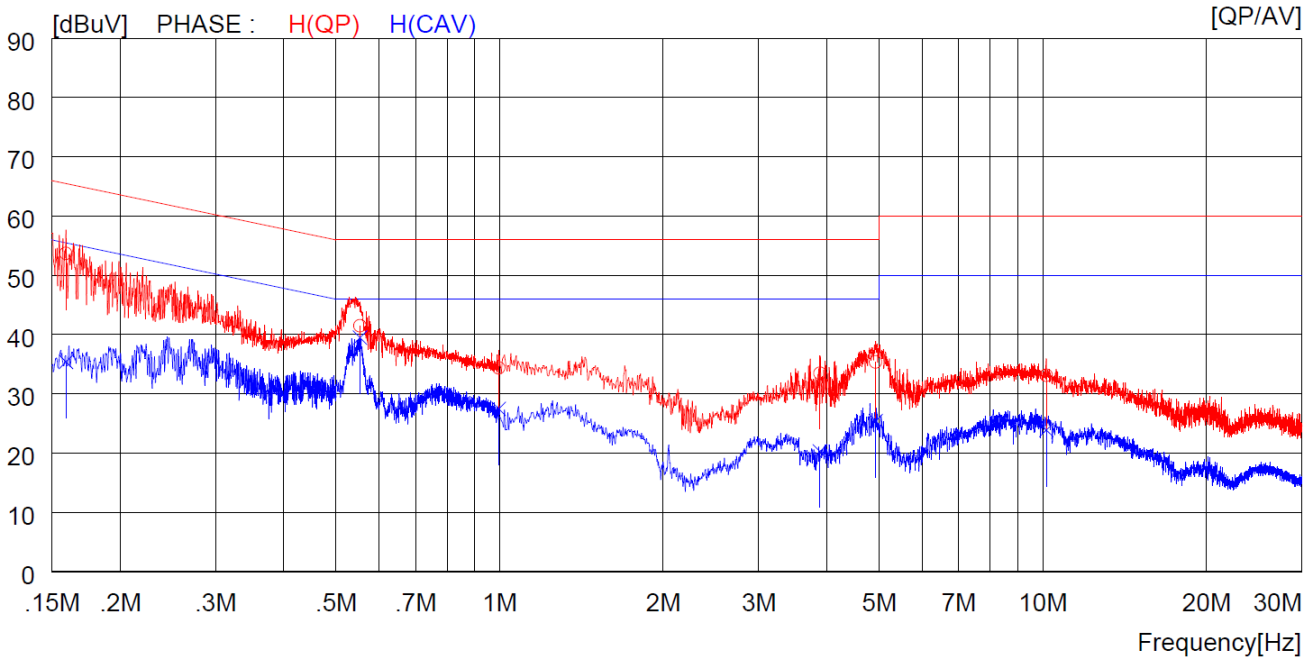
16.4.2 Test data for Intermodulation Mode(Bluetooth LE + WLAN 2.4 GHz + WLAN 5 GHz)

-. Resolution bandwidth : 9 kHz

-. Frequency range : 0.15 MHz ~ 30 MHz

-. Tested Line : HOT LINE



NO	FREQ [MHz]	READING QP [dBuV]	READING AV [dBuV]	C.FACTOR [dB]	RESULT QP [dBuV]	RESULT AV [dBuV]	LIMIT QP [dBuV]	LIMIT AV [dBuV]	MARGIN QP [dBuV]	MARGIN AV [dBuV]	PHASE
1	0.15900	43.6	----	10.1	53.7	----	65.5	----	11.8	----	H(QP)
2	0.55300	31.4	----	10.1	41.5	----	56.0	----	14.5	----	H(QP)
3	0.99600	24.3	----	10.1	34.4	----	56.0	----	21.6	----	H(QP)
4	3.88800	23.2	----	10.3	33.5	----	56.0	----	22.5	----	H(QP)
5	4.92400	25.1	----	10.3	35.4	----	56.0	----	20.6	----	H(QP)
6	10.15000	22.6	----	10.5	33.1	----	60.0	----	26.9	----	H(QP)
7	0.15900	----	25.3	10.1	----	35.4	----	55.5	----	20.1	H(CAV)
8	0.55300	----	29.4	10.1	----	39.5	----	46.0	----	6.5	H(CAV)
9	0.99600	----	17.4	10.1	----	27.5	----	46.0	----	18.5	H(CAV)
10	3.88800	----	10.0	10.3	----	20.3	----	46.0	----	25.7	H(CAV)
11	4.92400	----	15.1	10.3	----	25.4	----	46.0	----	20.6	H(CAV)
12	10.15000	----	13.4	10.5	----	23.9	----	50.0	----	26.1	H(CAV)

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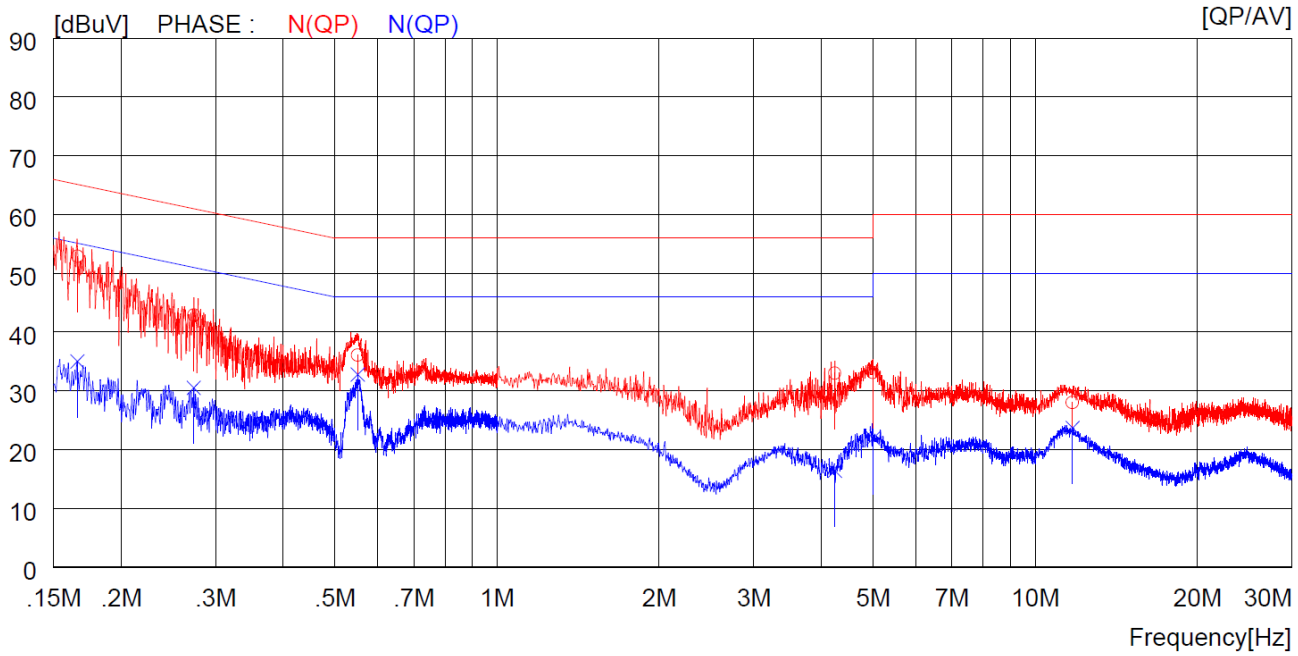
-. Tested Line : NEUTRAL LINE



NO	FREQ	READING QP	READING AV	C.FACTOR	RESULT QP	RESULT AV	LIMIT QP	LIMIT AV	MARGIN QP	MARGIN AV	PHASE
	[MHz]	[dBuV]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	
1	0.16600	42.8	----	10.1	52.9	----	65.2	----	12.3	----	N(QP)
2	0.27300	32.8	----	10.1	42.9	----	61.0	----	18.1	----	N(QP)
3	0.55100	26.0	----	10.1	36.1	----	56.0	----	19.9	----	N(QP)
4	4.24400	22.7	----	10.3	33.0	----	56.0	----	23.0	----	N(QP)
5	4.99600	22.8	----	10.3	33.1	----	56.0	----	22.9	----	N(QP)
6	11.73000	17.5	----	10.5	28.0	----	60.0	----	32.0	----	N(QP)
7	0.16600	----	24.9	10.1	----	35.0	----	55.2	----	20.2	NCAV)
8	0.27300	----	20.4	10.1	----	30.5	----	51.0	----	20.5	NCAV)
9	0.55100	----	22.7	10.1	----	32.8	----	46.0	----	13.2	NCAV)
10	4.24400	----	6.1	10.3	----	16.4	----	46.0	----	29.6	NCAV)
11	4.99600	----	11.6	10.3	----	21.9	----	46.0	----	24.1	NCAV)
12	11.73000	----	13.2	10.5	----	23.7	----	50.0	----	26.3	NCAV)

Remark: Margin (dB) = Limit – Level (Result)

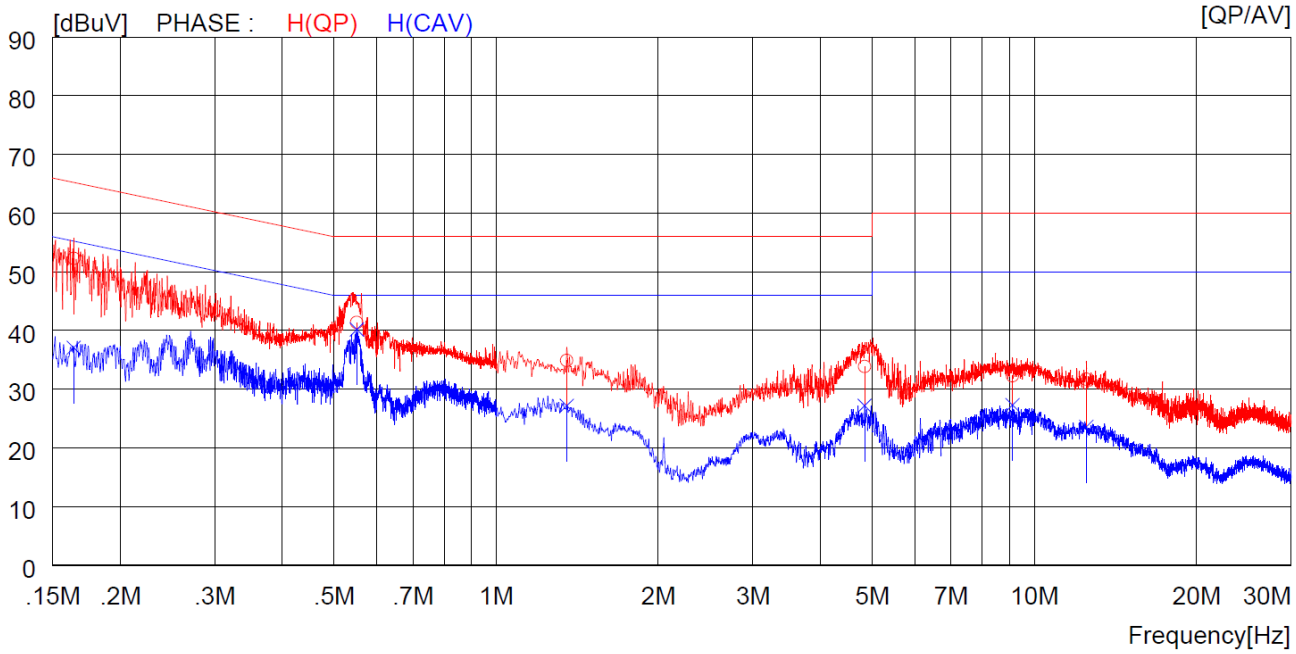
The emission level in above table is included the transducer factor that means insertion loss (LISN), cable loss and attenuator.

16.4.3 Test data for Intermodulation Mode(Bluetooth + WLAN 2.4 GHz + WLAN 5 GHz)

-. Resolution bandwidth : 9 kHz

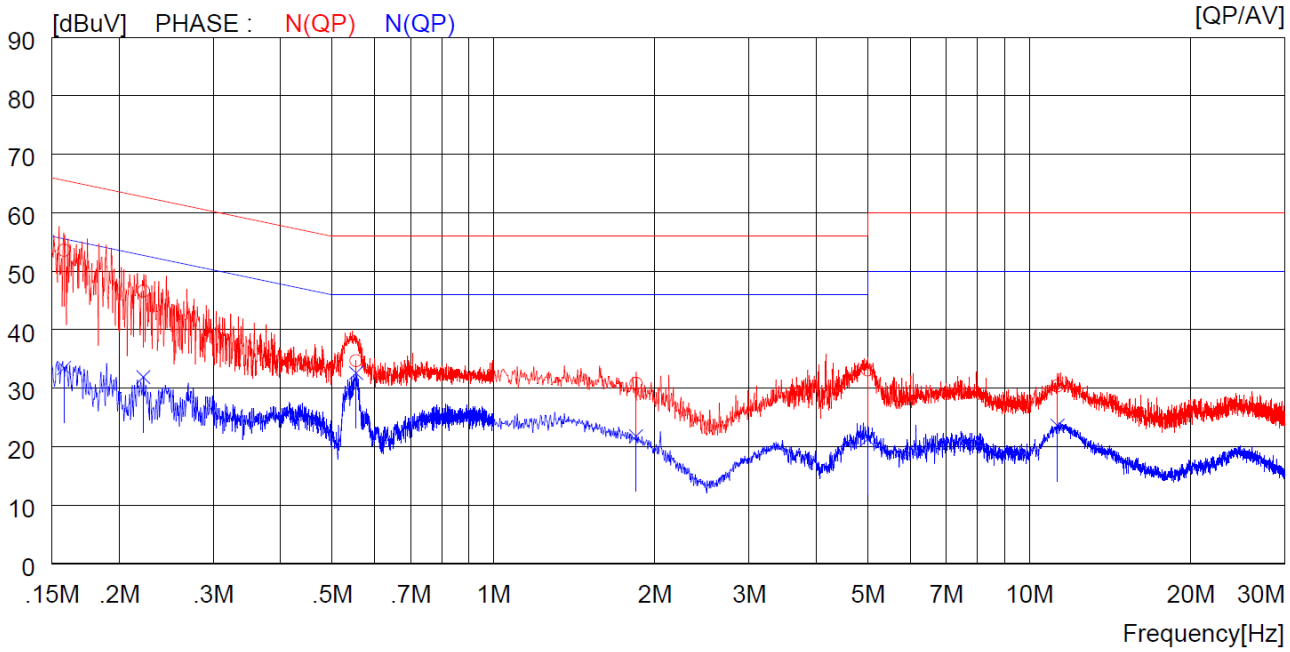
-. Frequency range : 0.15 MHz ~ 30 MHz

-. Tested Line : HOT LINE



NO	FREQ [MHz]	READING QP [dBuV]	READING AV [dBuV]	C.FACTOR [dB]	RESULT QP [dBuV]	RESULT AV [dBuV]	LIMIT QP [dBuV]	LIMIT AV [dBuV]	MARGIN QP [dBuV]	MARGIN AV [dBuV]	PHASE
1	0.16400	42.2	----	10.1	52.3	----	65.3	----	13.0	----	H(QP)
2	0.55100	31.3	----	10.1	41.4	----	56.0	----	14.6	----	H(QP)
3	1.35200	24.8	----	10.1	34.9	----	56.0	----	21.1	----	H(QP)
4	4.83600	23.6	----	10.3	33.9	----	56.0	----	22.1	----	H(QP)
5	9.11000	21.8	----	10.5	32.3	----	60.0	----	27.7	----	H(QP)
6	12.49000	21.2	----	10.5	31.7	----	60.0	----	28.3	----	H(QP)
7	0.16400	----	27.0	10.1	----	37.1	----	55.3	----	18.2	H(CAV)
8	0.55100	----	30.1	10.1	----	40.2	----	46.0	----	5.8	H(CAV)
9	1.35200	----	17.1	10.1	----	27.2	----	46.0	----	18.8	H(CAV)
10	4.83600	----	16.9	10.3	----	27.2	----	46.0	----	18.8	H(CAV)
11	9.11000	----	16.8	10.5	----	27.3	----	50.0	----	22.7	H(CAV)
12	12.49000	----	13.1	10.5	----	23.6	----	50.0	----	26.4	H(CAV)

-. Tested Line : NEUTRAL LINE



NO	FREQ [MHz]	READING QP [dBuV]	READING AV [dBuV]	C.FACTOR [dB]	RESULT QP [dBuV]	RESULT AV [dBuV]	LIMIT QP [dBuV]	LIMIT AV [dBuV]	MARGIN QP [dBuV]	MARGIN AV [dBuV]	PHASE
1	0.15800	43.5	----	10.1	53.6	----	65.6	----	12.0	----	N(QP)
2	0.22200	36.5	----	10.1	46.6	----	62.7	----	16.1	----	N(QP)
3	0.55400	24.6	----	10.1	34.7	----	56.0	----	21.3	----	N(QP)
4	1.84400	20.7	----	10.1	30.8	----	56.0	----	25.2	----	N(QP)
5	4.99200	22.8	----	10.3	33.1	----	56.0	----	22.9	----	N(QP)
6	11.28000	19.9	----	10.5	30.4	----	60.0	----	29.6	----	N(QP)
7	0.15800	----	23.4	10.1	----	33.5	----	55.6	----	22.1	NCAV)
8	0.22200	----	21.8	10.1	----	31.9	----	52.7	----	20.8	NCAV)
9	0.55400	----	22.5	10.1	----	32.6	----	46.0	----	13.4	NCAV)
10	1.84400	----	11.7	10.1	----	21.8	----	46.0	----	24.2	NCAV)
11	4.99200	----	11.0	10.3	----	21.3	----	46.0	----	24.7	NCAV)
12	11.28000	----	13.1	10.5	----	23.6	----	50.0	----	26.4	NCAV)

Remark: Margin (dB) = Limit – Level (Result)

The emission level in above table is included the transducer factor that means insertion loss (LISN), cable loss and attenuator.

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17. DYNAMIC FREQUENCY SELECTION (DFS)

17.1 Operating environment

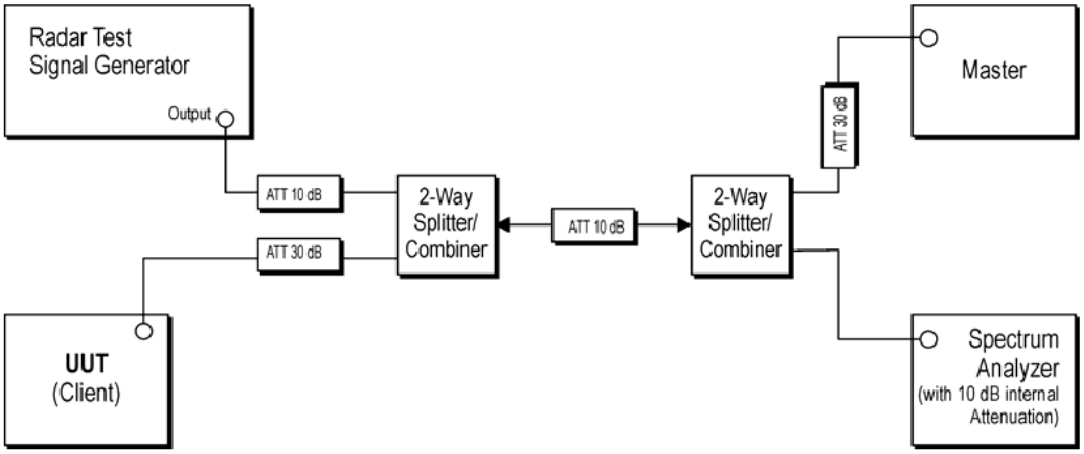
Temperature : 22 °C

Relative humidity : 41 % R.H.

17.2 Test set-ups

The FCC 06-96 and RSS-210 A9.3 describes a conducted test setup. A conducted test setup was user this testing. Figure 1 shows the typical test setup. Each one channel selected between 5 250 MHz and 5 350 MHz, 5 470 MHz and 5 725 MHz is chosen for the testing.

Figure 1. Setup for Client with injection at the Master



The operational behavior and individual DFS requirements that are associated with these modes are as follows:

<Master Devices>

a) The Master Device will use DFS in order to detect Radar Waveforms with received signal strength above the DFS Detection Threshold in the 5 250 – 5 350 MHz and 5 470 – 5 725 MHz bands. DFS is not required in the 5 150 – 5 250 MHz or 5 725 – 5 825 MHz bands.

b) Before initiating a network on a Channel, the Master Device will perform a Channel Availability Check for a specified time duration (Channel Availability Check Time) to ensure that there is no radar system operating on the Channel, using DFS described under subsection a) above.

c) The Master Device initiates a U-NII network by transmitting control signals that will enable other U-NII devices to Associate with the Master Device.

d) During normal operation, the Master Device will monitor the Channel (In-Service Monitoring) to ensure that there is no radar system operating on the Channel, using DFS described under a).

e) If the Master Device has detected a Radar Waveform during In-Service Monitoring as described under d), the Operating Channel of the U-NII network is no longer an Available Channel. The Master Device will instruct all associated Client Device(s) to stop transmitting on this Channel within the Channel Move Time. The transmissions during the Channel Move Time will be limited to the Channel Closing Transmission Time.

f) Once the Master Device has detected a Radar Waveform it will not utilize the Channel for the duration of the Non-Occupancy Period. 3

g) If the Master Device delegates the In-Service Monitoring to a Client Device, then the combination will be tested to the requirements described under d) through f) above.

<Client Devices>

a) A Client Device will not transmit before having received appropriate control signals from a Master Device.

b) A Client Device will stop all its transmissions whenever instructed by a Master Device to which it is associated and will meet the Channel Move Time and Channel Closing Transmission Time requirements. The Client Device will not resume any transmissions until it has again received control signals from a Master Device.

c) If a Client Device is performing In-Service Monitoring and detects a Radar Waveform above the DFS Detection Threshold, it will inform the Master Device. This is equivalent to the Master Device detecting the Radar Waveform and d) through f) of section 5.1.1 apply.

d) Irrespective of Client Device or Master Device detection the Channel Move Time and Channel Closing Transmission Time requirements remain the same.

e) The client test frequency must be monitored to ensure no transmission of any type has occurred for 30 minutes. Note: If the client moves with the master, the device is considered compliant if nothing appears in the client non-occupancy period test. For devices that shut down (rather than moving channels), no beacons should appear.

<Channel Connection Information>

a) Master Devices : GT-AXE11000

b) Client(=EUT) Devices : WCD730M

c) Connect to test channel : See next page for measurement data.

17.3 DFS Test Signals

Table 5 – Short Pulse Radar Test Waveforms

Radar Type	Pulse Width (µsec)	PRI (µsec)	Number of Pulses	Minimum Percentage of Successful Detection	Minimum Number of Trials
0	1	1428	18	See Note 1	See Note 1
1	1	Test A: 15 unique PRI values randomly selected from the list of 23 PRI values in Table 5a	Roundup $\left\{\left(\frac{1}{360}\right)\cdot\left(\frac{19\cdot 10^6}{PRI_{\mu sec}}\right)\right\}$	60%	30
		Test B: 15 unique PRI values randomly selected within the range of 518-3066 µ sec, with a minimum increment of 1 µ sec, excluding PRI values selected in Test A			
2	1-5	150-230	23-29	60%	30
3	6-10	200-500	16-18	60%	30
4	11-20	200-500	12-16	60%	30
Aggregate (Radar Types 1-4)				80%	120

Table 6 – Long Pulse Radar Test Waveform

Radar Type	Pulse Width (µsec)	Chirp Width (MHz)	PRI (µsec)	Number of Pulses per *Burst*	Number of *Bursts*	Minimum Percentage of Successful Detection	Minimum Number of Trials
5	50-100	5-20	1000-2000	1-3	8-20	80%	30

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17.4 Technical Requirement Specification

Table 1: Applicability of DFS Requirements Prior to Use of a Channel

Requirement	Operational Mode		
	Master	**Client (without DFS)**	**Client (with DFS)**
Non-Occupancy Period	Yes	Not required	Yes
DFS Detection Threshold	Yes	Not required	Yes
Channel Availability Check Time	Yes	Not required	Not required
Uniform Spreading	Yes	Not required	Not required
U-NII Detection Bandwidth	Yes	Not required	Yes

Table 2: Applicability of DFS requirements during normal operation

Requirement	Operational Mode		
	Master	**Client** (without DFS)	**Client** (with DFS)
DFS Detection Threshold	Yes	Not required	Yes
Channel Closing Transmission Time	Yes	Yes	Yes
Channel Move Time	Yes	Yes	Yes
U-NII Detection Bandwidth	Yes	Not required	Yes

17.5 Test Date

October 04, 2023 ~ October 20, 2023

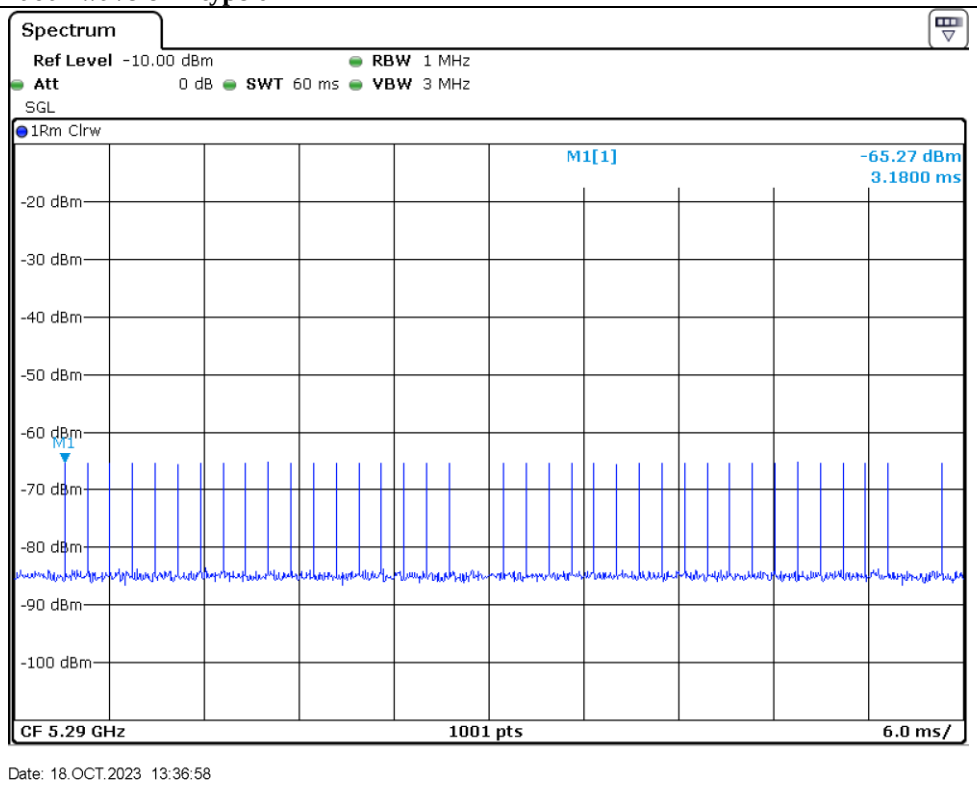
17.6 Test data

Band	Frequency (MHz)	Channel move time(s)		Channel closing transmission time(ms)	
		Measured	Limit	Measured	Limit
UNII 2A	5 290.00	0.62	10.00	1.8	200 milliseconds + an aggregate of 60 milliseconds over remaining 10 second period.
UNII 2C	5 530.00	0.74		2.4	

Note. Channel closing transmission time: 9 * 0.2 ms = 1.8 ms / 12 * 0.2 ms = 2.4 ms

17.6.1 UNII 2A

17.6.1.1 Plot of Radar waveform type 0



Note: The calibrated conducted DFS detection threshold level is set to -65.27 dBm (-62+1+1.43= -59.57 dBm)

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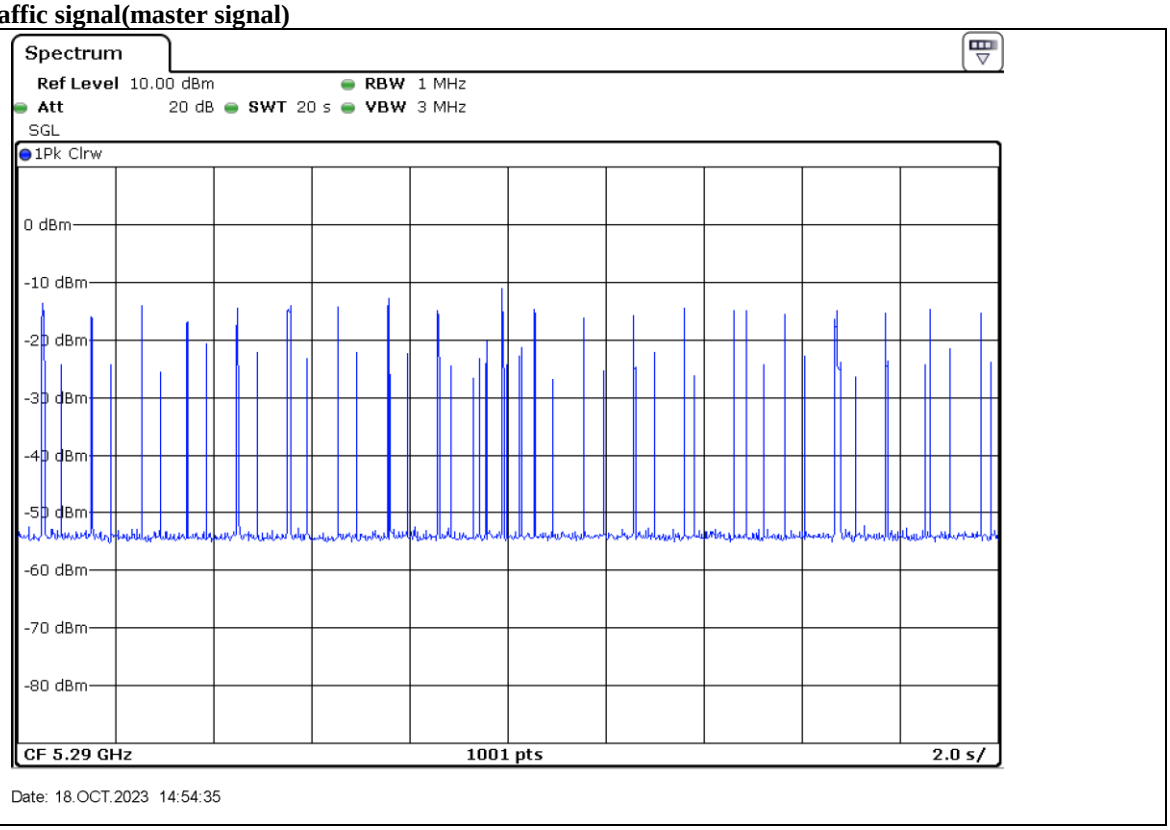
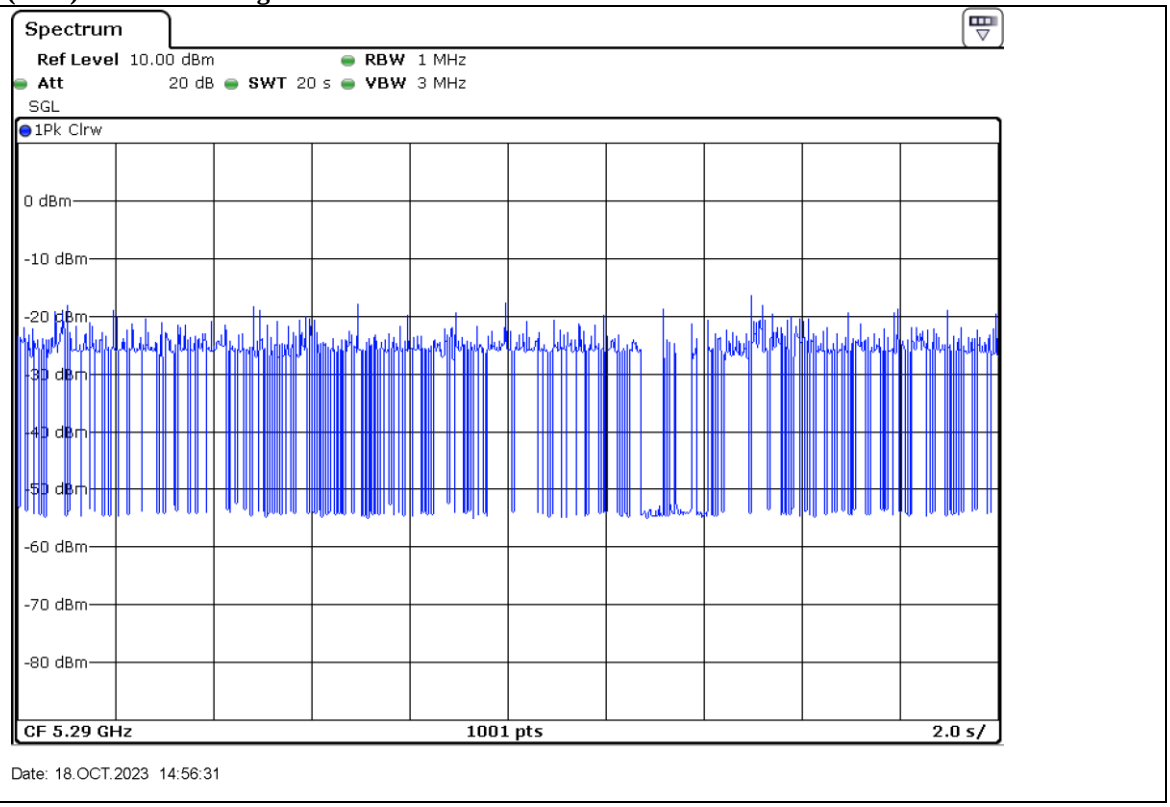
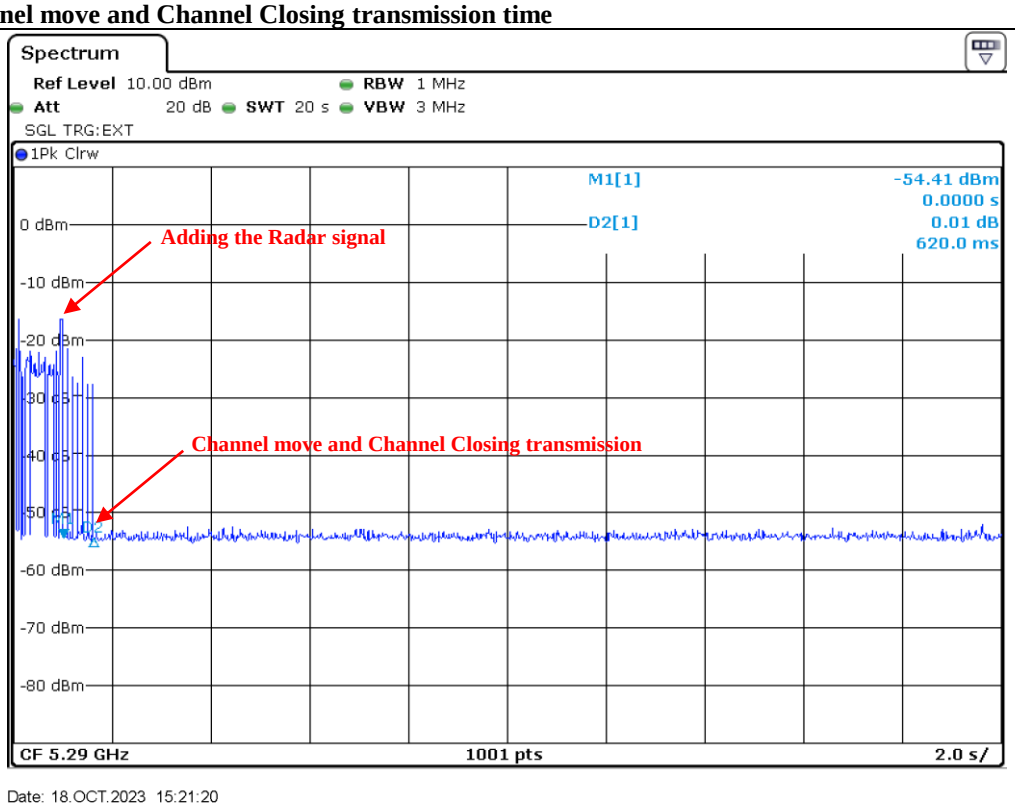
17.6.1.2 No traffic signal(master signal)



17.6.1.3 Client(EUT) Data Traffic Signal

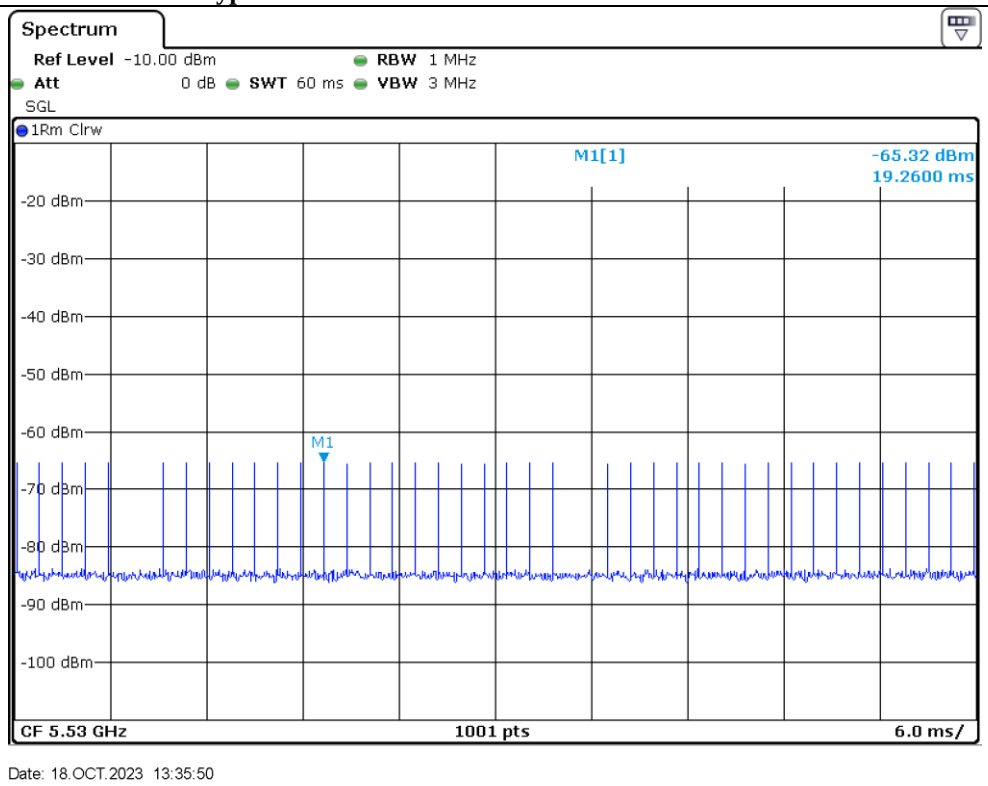


17.6.1.4 Channel move and Channel Closing transmission time



17.6.2 UNII 2C

17.6.2.1 Plot of Radar waveform type 0



Note: The calibrated conducted DFS detection threshold level is set to -65.32 dBm (-62+1+1.43= -59.57 dBm)

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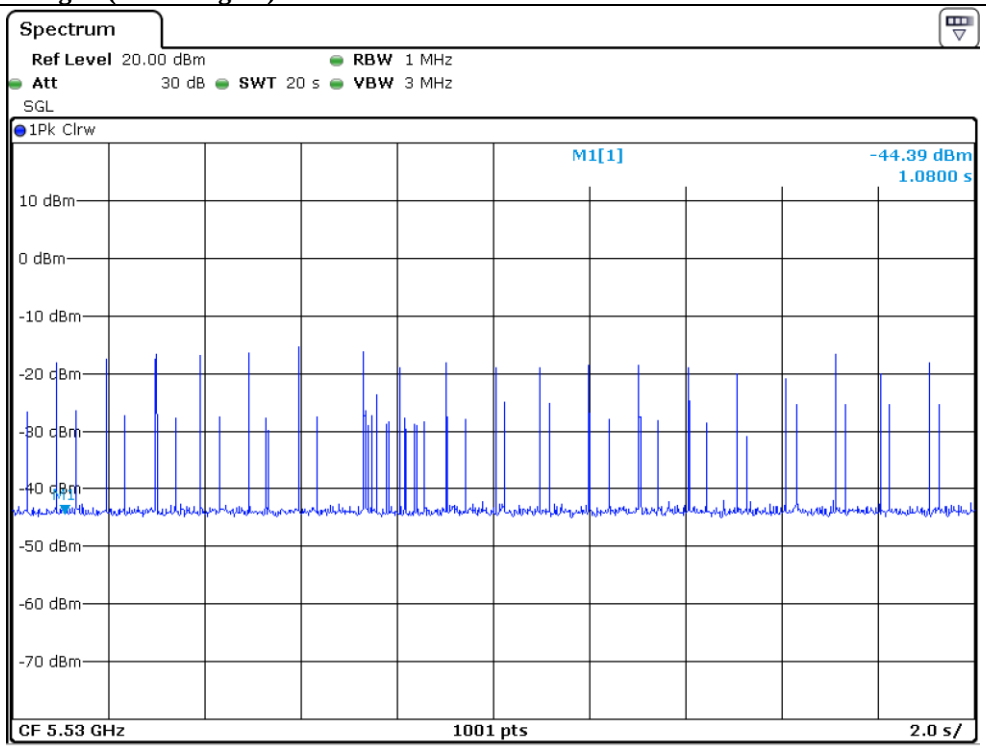
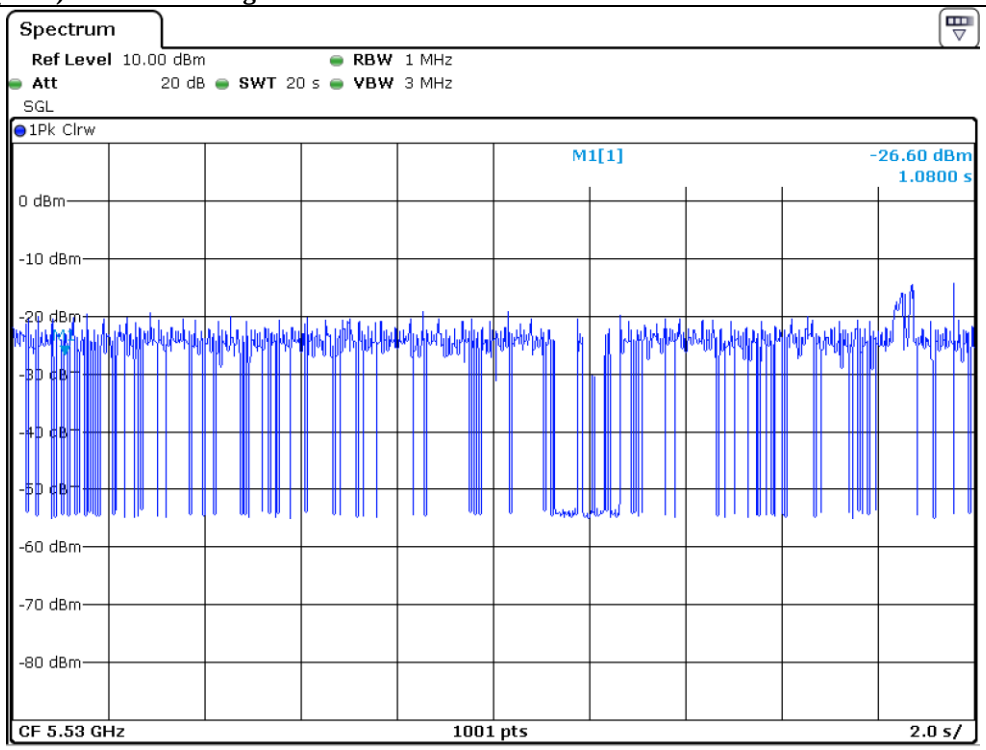
17.6.2.2 No traffic signal(master signal)



17.6.2.3 Client(EUT) Data Traffic Signal



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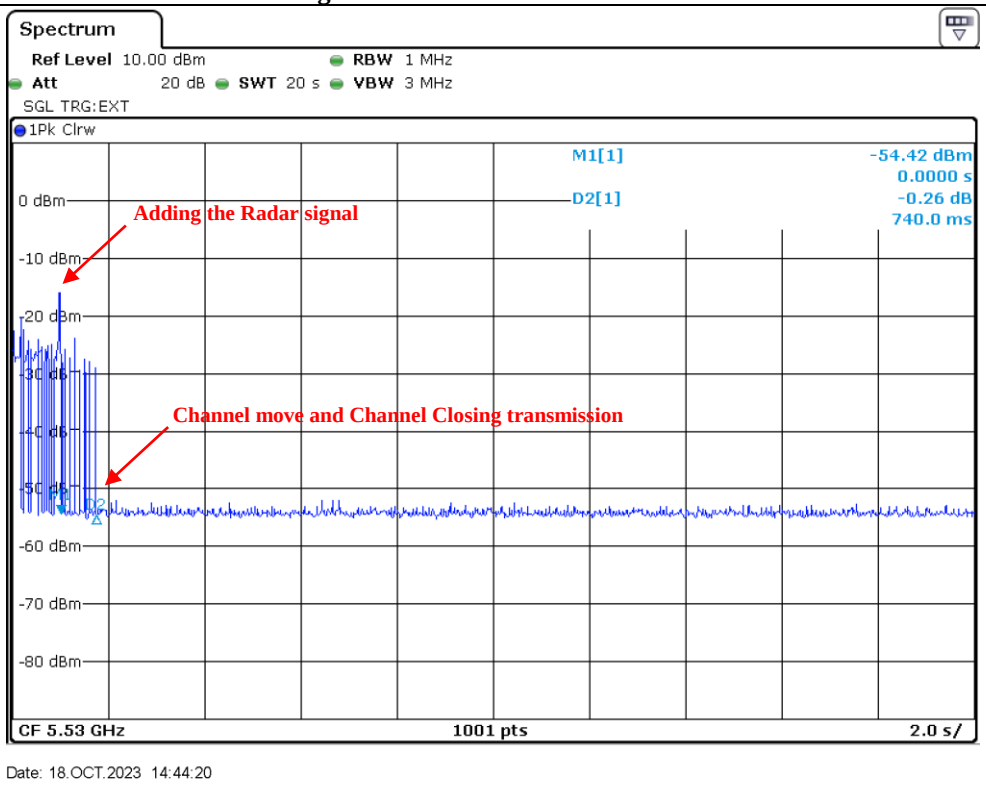
17.6.2.4 Channel move and Channel Closing transmission time



18. LIST OF TEST EQUIPMENT

Model Number	Manufacturer	Description	Serial Number	Last Cal.(Interval)
FSV40-N	Rohde & Schwarz	Signal Analyzer	102196	Apr. 03, 2023 (1Y)
FSVA40	Rohde & Schwarz	Signal Analyzer	101598	Apr. 03, 2023 (1Y)
ESU	Rohde & Schwarz	EMI Test Receiver	100261	Mar. 06, 2023 (1Y)
310N	Sonoma Instrument	Pre-Amplifier	392756	Oct. 16, 2023 (1Y)
SCU18	Rohde & Schwarz	Pre-Amplifer	102266	Jul. 11, 2023 (1Y)
SCU40A	Rohde & Schwarz	Pre-Amplifer	100436	Jan. 18, 2023 (1Y)
DT2000-2t	Innco System	Turn Table	N/A	N/A
MA-4640-XPET	Innco System	Antenna Master	MA4640/652/43100318/P	N/A
CO3000	Innco System	Controller	1026/40960617/P	N/A
FMZB 1513	Schwarzbeck	Loop Antenna	1513-235	Mar. 24, 2022 (2Y)
HLP-2008	TDK	Hybrid Antenna	131316	Mar. 07, 2022 (2Y)
BBHA9120D	Schwarzbeck	Horn Antenna	9120D-1366	Jun. 22, 2023 (1Y)
BBHA9170	Schwarzbeck	Horn Antenna	BBHA9170178	Jan. 04, 2023 (1Y)
F-40-10.0-RF	RLC Electronis	High Pass Filter	0427	Jan. 17, 2023 (1Y)
QFA1802-26-6-S	Qualwave	6dB Attenuator	225338	Apr. 04, 2023 (1Y)
QPD2-0-26500-2-S	Qualwave	Divider	22175074	Apr. 05, 2023 (1Y)
QPD2-0-26500-2-S	Qualwave	Divider	22175075	Apr. 05, 2023 (1Y)
8494B	Agilent	Step Attenuator (11 dB)	MY42142590	Jan. 17, 2023 (1Y)
8495B	Agilent	Step Attenuator (70 dB)	MY42141151	Jan. 17, 2023 (1Y)
E3632A	Agilent	DC POWER SUPPLY	MY50370016	Jan. 18, 2023 (1Y)
SSE-43CI-A	Samkun Tech	Environmental Test chamber	60712	Jan. 18, 2023 (1Y)
NRP-Z91	Rohde & Schwarz	Wideband Power Sensor	103780	Jul. 11, 2023 (1Y)
NRP-Z81	Rohde & Schwarz	Wideband Power Sensor	104811	Jan. 16, 2023 (1Y)
ESCI	Rohde & Schwarz	EMI TEST RECEIVER	101012	Sep. 26, 2023 (1Y)
NSLK8128	Schwarzbeck	AMN	8128216	Mar. 14, 2023 (1Y)
ESH3-Z2	Rohde & Schwarz	PULSE LIMITER	100655	Mar. 13, 2023 (1Y)
SMBV100A	Rohde & Schwarz	VECTOR SIGNAL GENERATOR	260423	Jan. 17, 2023 (1Y)
GT-AXE11000	ASUS	ROG RAPTURE Router	N/A	N/A

Note. ROG RAPTURE Router(Model : GT-AXE11000) Information.

; FCC ID : MSQ-RTAXJF00, IC ID : 3568A-RTAXJF00

Note. This Device not support TPC Function.

All test equipment used is calibrated on a regular basis.

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