Test report No.: 2380300R-RFUSV03S-B

TEST REPORT

Product Name	Notebook Computer
Trademark	LG
Model and /or type reference	15Z90S,15ZD90S,15ZG90S,15ZB90S,15ZW90S,15ZN90S * (* can be 0 to 9 or A to Z or blank denoting buyer request)
FCC ID	BEJNT-15Z90S
Applicant´s name / address	LG Electronics USA, Inc. 111 Sylvan Avenue North Building Englewood Cliffs, NJ 07632 United States
Manufacturer´s name	LG ELECTRONICS INC.
Test method requested, standard	FCC CFR Title 47 Part 15 Subpart E ANSI C63.4: 2014, ANSI C63.10: 2013 KDB Publication 291074
Verdict Summary	IN COMPLIANCE
Documented By (Senior Project Specialist / Genie Chang)	Genie Chang
Tested By (Senior Engineer / Bill Lin)	Bill Lin
Approved By (Senior Engineer / Alan Chen)	Alan Chen
Date of Receipt	2023/08/10
Date of Issue	2023/10/23
Report Version	V1.0

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Appendix 1: EUT Test Photographs
Appendix 2: Product Photos-Please refer to the file: 2380300R-Product Photos

Competences and Guarantees

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

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

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

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

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

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

General conditions

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

Revision History

Report No.	Version	Description	Issued Date
2380300R-RFUSV03S-B	V1.0	Initial issue of report.	2023/10/23

1. General Information

1.1. EUT Description

Product Name	Notebook Computer
Trademark	LG
Model and /or type reference	15Z90S,15ZD90S,15ZG90S,15ZB90S,15ZW90S,15ZN90S * (* can be 0 to 9 or A to Z or blank denoting buyer request)
EUT Rated Voltage	AC 100-240V, 50-60Hz
EUT Test Voltage	AC 120V/60Hz
Frequency Range	802.11a/n/ac/ax-20 MHz: 5845-5885 MHz 802.11n/ac/ax-40 MHz: 5835-5875 MHz 802.11ac/ax-80 MHz: 5855 MHz 802.11ac/ax-160 MHz: 5815 MHz
Number of Channels	802.11a/n/ac/ax-20 MHz: 3 CH 802.11n/ac/ax-40 MHz: 2 CH 802.11ac/ax-80 MHz: 1 CH 802.11ac/ax-160 MHz: 1 CH
Data Rate	802.11a: 6-54 Mbps 802.11n: up to 300 Mbps 802.11ac: up to 1733.3 Mbps 802.11ax: up to 2402 Mbps
Type of Modulation	802.11a/n/ac: OFDM (BPSK, QPSK, 16QAM, 64QAM, 256QAM) 802.11ax: OFDMA (BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM)
Channel Control	Auto
Type C to Type C Cable	Shielded, 2m
Power Adapter	Bao Hui / LP65WFC20P-NJ W Input: AC 100-240 V~1.6A, 50-60 Hz Output: 5.0V⎓3A, 15W or 9V⎓3A, 27W or 15V⎓3A, 45W or 20V⎓3.25A, 65W

Antenna List

No.	Manufacturer	Part No.	Antenna Type	Peak Gain
1	INPAQ	DQ6WAPLEL33 (WA-P-LELE-02-018) (Main)	PIFA	2.84 dBi for 5850~5895 MHz
		DQ6WAPLEL33 (WA-P-LELE-02-018) (Aux)	PIFA	3.85 dBi for 5850~5895 MHz
2	Pulse	DQ602701000 (TQ27010) (Main)	PIFA	2.62 dBi for 5850~5895 MHz
		DQ602701000 (TQ27010) (Aux)	PIFA	3.73 dBi for 5850~5895 MHz
Support mode		☒SISO ☒MIMO ☐CDD ☐Beamforming		

Note:

1. The antenna of EUT is conforming to FCC 15.203.
2. The antenna gain as by the manufacturer provided.
3. Each antenna has been evaluated and only the worst case (higher gain antenna) is presented in the report.
4. The device output signals are completely uncorrelated, the Directional gain = GANT (According to KDB 662911 D01 F)2)a)ii)).

802.11a/n/ac/ax-20 MHz Center Working Frequency of Each Channel:

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	--	--
169	5845	173	5865	177	5885	--	--

802.11n/ac/ax-40 MHz Center Working Frequency of Each Channel:

Channel	Frequency (MHz)	Channel	Frequency (MHz)	--	--	--	--
167	5835	175	5875	--	--	--	--

802.11ac/ax-80 MHz Center Working Frequency of Each Channel:

Channel	Frequency (MHz)	--	--	--	--	--	--
171	5855	--	--	--	--	--	--

802.11ac/ax-160 MHz Center Working Frequency of Each Channel:

Channel	Frequency (MHz)	--	--	--	--	--	--
163	5815	--	--	--	--	--	--

Note:

1. This device is a Notebook Computer with built-in WLAN and Bluetooth transceiver, this report for 5GHz WLAN U-NII-4.
2. It's declared by manufacture about all models are electrically identical, different model names for marketing purpose. The different of each model is shown as below

Model Number	System
15Z90S	(B2C, Windows)
15ZD90S	(NonOS)
15ZG90S	(B2G, Windows)
15ZB90S	(B2B, Windows)
15ZW90S	(B2C/B2B, Whale OS)
15ZN90S*(* can be 0 to 9 or A to Z or blank denoting buyer request)	(All, Whale OS)
The identification of test sample is 15Z90S.	

3. Regarding to the operation frequency, the lowest, middle and highest frequency are selected to perform the test.
4. Lowest and highest data rates are tested in each mode. Only worst case is shown in the report. (802.11a is 6Mbps, 802.11ax is MCS0)
5. The modulation and bandwidth are similar for 802.11n mode and 802.11ac mode and 802.11ax mode, therefore investigated worst case (802.11ax) to representative mode.
6. The spectrum plot against conducted item only shows the worst case.
7. This device does not support partial RU function.
8. DEKRA has evaluated each test mode. Only the worst case is shown in the report.
9. These tests were conducted on a sample of the equipment for the purpose of demonstrating compliance of transmitter with Part 15 Subpart E for Unlicensed National Information Infrastructure devices.

Test Mode	Mode 1	Transmit (802.11a) Transmit (802.11ax-20 MHz) Transmit (802.11ax-40 MHz) Transmit (802.11ax-80 MHz) Transmit (802.11ax-160 MHz)

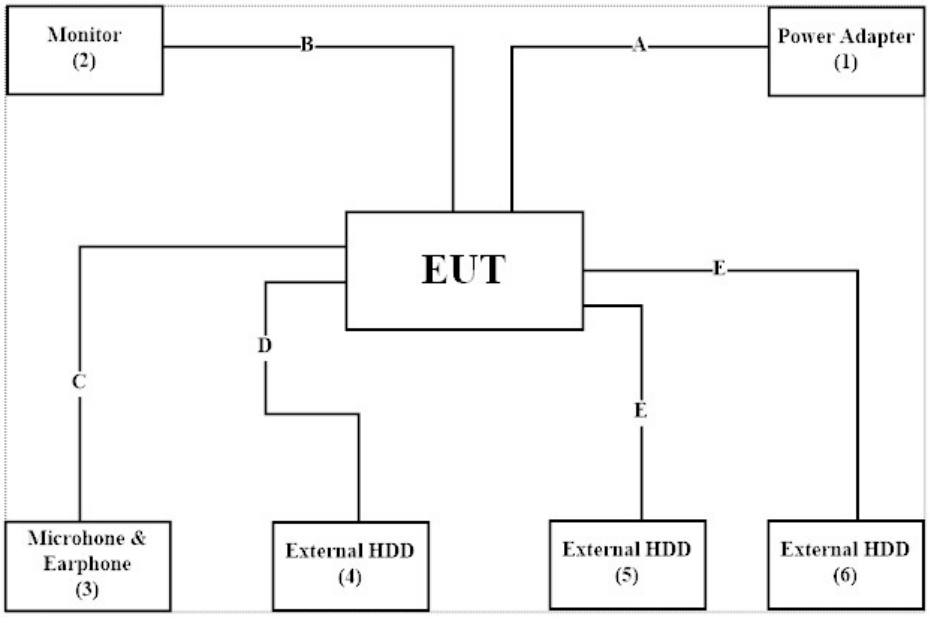
1.2. Tested System Datails

The types for all equipment, plus descriptions of all cables used in the tested system (including inserted cards) are:

Product		Manufacturer	Model No.	Serial No.	Power Cord
1	Power Adapter	Bao Hui	LP65WFC20P-NJ W	N/A	N/A
2	Monitor	DELL	U2415	CN-01RMGX-742 61-63H-09UL-A02	Non-shielded, 1.8m
3	Microphone & Earphone	Verbatim	C09024VB	N/A	N/A
4	External HDD	Transcend	TS1TSJ25MC	F30467-0011	N/A
5	External HDD	Transcend	TS1TSJ25H3B	F21786-0019	N/A
6	External HDD	Transcend	TS1TSJ25H3B	F21786-0103	N/A

Cable Type		Cable Description
A	Type C to Type C Cable	Shielded, 2m
B	HDMI Cable	Shielded, 1.8m
C	Microphone & Earphone Cable	Non-shielded, 1.2m
D	USB Cable	Shielded, 0.5m
E	USB Cable	Shielded, 0.5m
F	USB Cable	Shielded, 0.5m

1.3. Configuration of tested System



1.4. EUT Exercise Software

1	Setup the EUT as shown in Section 1.3.
2	Execute software “DRTU Version 04824.23” on the Notebook PC.
3	Configure the test mode, the test channel, and the data rate.
4	Press “OK” to start the continuous transmit.
5	Verify that the EUT works properly.

1.5. Test Facility

Ambient conditions in the laboratory:

Performed Item	Items	Required	Actual
Conducted Emission	Temperature (°C)	10~40 °C	25.1 °C
	Humidity (%RH)	10~90 %	56.0 %
Radiated Emission	Temperature (°C)	10~40 °C	24.1 °C
	Humidity (%RH)	10~90 %	65.7 %
Conductive	Temperature (°C)	10~40 °C	25.1 °C
	Humidity (%RH)	10~90 %	58.0 %

USA	FCC Registration Number: TW0033
Canada	CAB Identifier Number: TW3023 / Company Number: 26930

Site Description	Accredited by TAF
	Accredited Number: 3023

Test Laboratory	DEKRA Testing and Certification Co., Ltd.
	Linkou Laboratory
Address	No.5-22, Ruishukeng Linkou District, New Taipei City, 24451, Taiwan, R.O.C
Performed Location	No. 26, Huaya 1st Rd., Guishan Dist.,Taoyuan City 333411, Taiwan, R.O.C.
Phone Number	+886-3-275-7255
Fax Number	+886-3-327-8031

1.6. List of Test Equipment

For Conduction Measurements / HY-SR01

	Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Due Date
V	EMI Test Receiver	R&S	ESR7	101601	2023/06/20	2024/06/19
V	Two-Line V-Network	R&S	ENV216	101306	2023/03/16	2024/03/15
V	Two-Line V-Network	R&S	ENV216	101307	2023/08/17	2024/08/16
V	Coaxial Cable	SUHNER	RG400_BNC	RF001	2023/01/10	2024/01/09

Note:
1. All equipments are calibrated every one year.
2. The test instruments marked with "V" are used to measure the final test results.
3. Test Software Version: e3 230303 dekra V9.

For Conducted Measurements / HY-SR02

	Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Due Date
V	Spectrum Analyzer	R&S	FSV30	103466	2022/12/22	2023/12/21
V	Spectrum Analyzer	KEYSIGHT	N9010A	MY53470892	2022/11/07	2023/11/06
V	Peak Power Analyzer	KEYSIGHT	8990B	MY51000539	2023/05/15	2024/05/14
V	Wideband Power Sensor	KEYSIGHT	N1923A	MY59240002	2023/05/18	2024/05/18
V	Wideband Power Sensor	KEYSIGHT	N1923A	MY59240003	2023/05/18	2024/05/17

Note:
1. All equipments are calibrated every one year.
2. The test instruments marked with "V" are used to measure the final test results.
3. Test Software Version: RF Conducted Test Tools R3 V3.0.0.14.

For Radiated Measurements /HY-CB01

	Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Due Date
V	Loop Antenna	AMETEK	HLA6121	56736	2023/05/23	2024/05/24
V	Bi-Log Antenna	SCHWARZBECK	VULB9168	9168-0678	2021/09/23	2023/09/22
V	Horn Antenna	RF SPIN	DRH18-E	210802A18ES	2023/03/23	2024/03/22
V	Horn Antenna	Com-Power	AH-840	101101	2021/11/30	2023/11/29
V	Pre-Amplifier	SGH	0301	20211007-7	2023/01/10	2024/01/09
V	Pre-Amplifier	EMCI	EMC051845SE	980632	2023/01/10	2024/01/09
V	Pre-Amplifier	EMCI	EMC05820SE	980362	2023/01/10	2024/01/09
V	Pre-Amplifier	EMCI	EMC184045SE	980369	2023/01/10	2024/01/09
	Coaxial Cable	EMCI	EMC102-KM-KM-600	1160314		
	Coaxial Cable	EMCI	EMC102-KM-KM-7000	170242		
	Filter	MICRO TRONICS	BRM50702	G251	2023/01/05	2024/01/04
	Filter	MICRO TRONICS	BRM50716	067	2023/01/05	2024/01/04
V	WIFI 6E Filter	MVE	MFN-5850/5895/S1	A80006N	2023/01/05	2024/01/04
	WIFI 6E Filter	MVE	MFN-5925/6425/S1	A80007N	2023/01/05	2024/01/04
	WIFI 6E Filter	MVE	MFN-6425/6525/S1	A80008N	2023/01/05	2024/01/04
	WIFI 6E Filter	MVE	MFN-6525/6875/S1	A80009N	2023/01/05	2024/01/04
	WIFI 6E Filter	MVE	MFN-6875/7125/S1	A80010N	2023/01/05	2024/01/04
V	EMI Test Receiver	R&S	ESR3	102792	2022/12/29	2023/12/28
V	Spectrum Analyzer	R&S	FSV3044	101115	2023/01/06	2024/01/05
V	Coaxial Cable	SUHNER	SUCOFLEX 106	25450/6	2023/01/10	2024/01/09
	Coaxial Cable	SGH	HA800	GD20110222-8		
	Coaxial Cable	SGH	SGH18	2021003-8		
	Coaxial Cable	EMCI	EMC106	151113		

Note:
1. Bi-Log Antenna and Horn Antenna(AH-840) is calibrated every two years, the other equipments are calibrated every one year.
2. The test instruments marked with "V" are used to measure the final test results.
3. Test Software Version: e3 230303 dekra V9.

1.

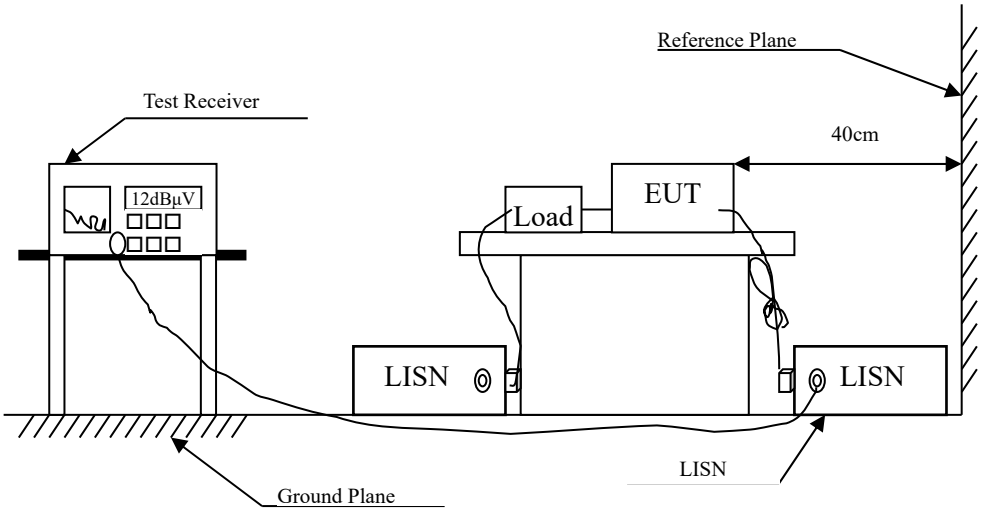
1.7. Uncertainty

Uncertainties have been calculated according to the DEKRA internal document.
The reported expanded uncertainties are based on a standard uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95%.
Measurement uncertainties evaluated for each testing system and associated connections are given here to provide the system information for reference. Compliance determinations do not take into account measurement uncertainties for each testing system, but are based on the results of the compliance measurement.

Test item	Uncertainty
Conducted Emission	±3.50 dB
Maximum conducted output power	Spectrum Analyzer: ±2.14 dB Power Meter: ±1.05 dB
Peak Power Spectral Density	±2.14 dB
Radiated Emission	9 kHz~30 MHz: ±3.88 dB 30 MHz~1 GHz: ±4.42 dB 1 GHz~18 GHz: ±4.28 dB 18 GHz~40 GHz: ±3.90 dB
Band Edge	9 kHz~30 MHz: ±3.88 dB 30 MHz~1 GHz: ±4.42 dB 1 GHz~18 GHz: ±4.28 dB 18 GHz~40 GHz: ±3.90 dB
Occupied Bandwidth	±1580.61 Hz
Duty Cycle	±0.53 %

2. Conducted Emission

2.1. Test Setup



2.2. Limits

FCC Part 15 Subpart C Paragraph 15.207 (dBµV) Limit		
Frequency MHz	Limits	
	QP	AV
0.15 - 0.50	66-56	56-46
0.50 - 5.0	56	46
5.0 - 30	60	50

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

2.3. Test Procedure

The EUT and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm /50uH coupling impedance with 50ohm termination. (Please refers to the block diagram of the test setup and photographs.)

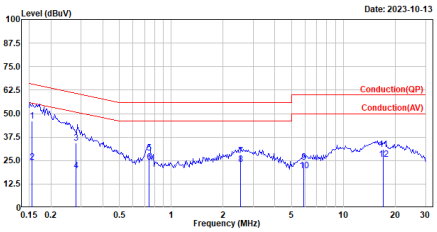
Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.4:2014 on conducted measurement.

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

2.4. Test Result of Conducted Emission

SISO A

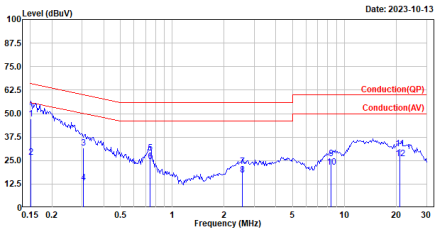
Site :HY-SR01
Condition :Line
Mode :ax160_581SMHz_TX
test by :Neko



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	0.155	45.95	65.72	-19.77	36.27	9.68	QP
2	0.155	24.09	55.72	-31.63	14.41	9.68	Average
3	0.281	34.37	60.79	-26.42	24.69	9.68	QP
4	0.281	19.72	50.79	-31.07	10.04	9.68	Average
5	0.747	29.19	56.00	-26.81	19.49	9.70	QP
6	0.747	24.12	46.00	-21.88	14.42	9.70	Average
7	2.521	27.68	56.00	-28.32	17.69	9.99	QP
8	2.521	23.00	46.00	-23.00	13.01	9.99	Average
9	5.865	24.15	60.00	-35.85	13.31	10.84	QP
10	5.865	19.62	50.00	-30.38	8.78	10.84	Average
11	16.988	30.78	60.00	-29.22	20.03	10.75	QP
12	16.988	25.77	50.00	-24.23	15.02	10.75	Average

Note:
1. Level = Read Level + Factor
2. Factor = LISN insertion loss + Cable loss
3. Over Limit = Level - Limit Line

Site :HY-SR01
Condition :Neutral
Mode :ax160_581SMHz_TX
test by :Neko

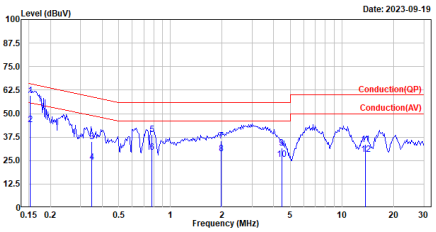


No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	0.152	47.22	65.91	-18.69	37.56	9.66	QP
2	0.152	26.62	55.91	-29.29	16.96	9.66	Average
3	0.304	31.75	60.13	-28.38	22.10	9.65	QP
4	0.304	13.27	50.13	-36.86	3.62	9.65	Average
5	0.745	29.15	56.00	-26.85	19.47	9.68	QP
6	0.745	24.49	46.00	-21.51	14.81	9.68	Average
7	2.551	21.79	56.00	-34.21	11.81	9.98	QP
8	2.551	17.40	46.00	-28.60	7.42	9.98	Average
9	8.377	26.22	60.00	-33.78	15.42	10.80	QP
10	8.377	21.38	50.00	-28.62	10.58	10.80	Average
11	20.938	31.17	60.00	-28.83	20.41	10.76	QP
12	20.938	26.04	50.00	-23.96	15.28	10.76	Average

Note:
1. Level = Read Level + Factor
2. Factor = LISN insertion loss + Cable loss
3. Over Limit = Level - Limit Line

MIMO

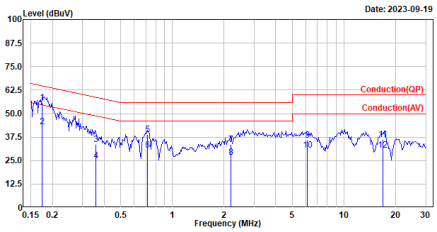
Site :HY-SR01
Condition :Line
Mode :TX_AX160_5815MHz
test by :James



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	0.153	59.62	65.82	-6.20	49.94	9.68	QP
2	0.153	44.17	55.82	-11.65	34.49	9.68	Average
3	0.350	35.18	58.97	-23.79	25.50	9.68	QP
4	0.350	24.32	48.97	-24.65	14.64	9.68	Average
5	0.783	38.70	56.00	-17.30	28.99	9.71	QP
6	0.783	29.26	46.00	-16.74	19.55	9.71	Average
7	1.984	35.46	56.00	-20.54	25.64	9.82	QP
8	1.984	28.69	46.00	-17.31	18.87	9.82	Average
9	4.446	31.63	56.00	-24.37	20.98	10.65	QP
10	4.446	25.75	46.00	-20.25	15.10	10.65	Average
11	13.637	33.73	60.00	-26.27	22.94	10.79	QP
12	13.637	28.19	50.00	-21.81	17.40	10.79	Average

Note:
1. Level = Read Level + Factor
2. Factor = LISN insertion loss + Cable loss
3. Over Limit = Level - Limit Line

Site :HY-SR01
Condition :Neutral
Mode :TX_AX160_5815MHz
test by :James



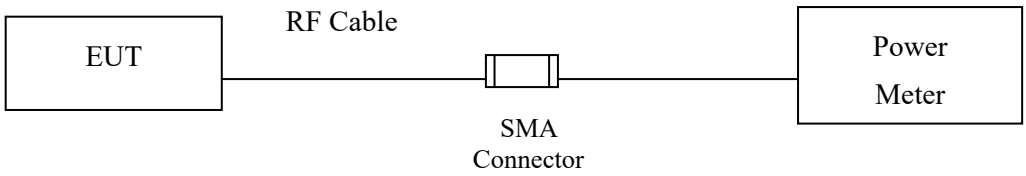
No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	0.174	55.74	64.76	-9.02	46.08	9.66	QP
2	0.174	42.94	54.76	-11.82	33.28	9.66	Average
3	0.359	33.76	58.74	-24.98	24.10	9.66	QP
4	0.359	24.92	48.74	-23.82	15.26	9.66	Average
5	0.719	39.00	56.00	-17.00	29.32	9.68	QP
6	0.719	30.50	46.00	-15.50	20.82	9.68	Average
7	2.201	33.47	56.00	-22.53	23.60	9.87	QP
8	2.201	26.85	46.00	-19.15	16.98	9.87	Average
9	6.096	36.02	60.00	-23.98	25.21	10.81	QP
10	6.096	30.64	50.00	-19.36	19.83	10.81	Average
11	16.782	36.30	60.00	-23.70	25.49	10.81	QP
12	16.782	30.73	50.00	-19.27	19.92	10.81	Average

Note:
1. Level = Read Level + Factor
2. Factor = LISN insertion loss + Cable loss
3. Over Limit = Level - Limit Line

3. Maximun conducted output power

3.1. Test Setup

Conduction Power Measurement



3.2. Limits

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

(ii) For client devices operating under the control of an indoor access point in the 5.850-5.895 GHz band, the maximum e.i.r.p. over the frequency band of operation must not exceed 30 dBm.Client devices operating on a channel that spans the 5.725-5.850 GHz and 5.850-5.895 GHzbands must not exceed an e.i.r.p. of 30 dBm.

(iii) For a subordinate device operating under the control of an indoor access point in the 5.850-5.895 GHz band, the maximum e.i.r.p. over the frequency band of operation must not exceed 36 dBm.

3.3. Test Procedure

As an alternative to FCC KDB-789033, the EUT maximum conducted output power was measured with an average power meter employing a video bandwidth greater the 6dB BW of the emission under test. Maximum conducted output power was read directly from the meter across all data rates, and across three channels within each sub-band. Special care was used to make sure that the EUT was transmitting in continuous mode. This method exceeds the limitations of FCC KDB-789033, and provides more accurate measurements.

802.11a/n/ac/ax (BW≦40MHz) Maximum conducted output power using KDB 789033 section E)3)b) Method PM-G (Measurement using a gated RF average power meter)
Note: the power meter have a video bandwidth that is greater than or equal to the measurement bandwidth, (Anritsu/ MA2411B video bandwidth: 65MHz)

802.11ac/ax (BW≧80MHz) Maximum conducted output power using KDB 789033 section E)2)b) Method SA-1 (trace averaging with the EUT transmitting at full power throughout each sweep).

When transmitted signals consist of two or more non-contiguous spectrum segments (e.g., 80+80 MHz mode) or when a single spectrum segment of a transmission crosses the boundary between two adjacent U-NII bands, KDB 644545 D03 section D) procedure is used for measurements.

3.4. Test Result of Maximum conducted output power

Product : Notebook Computer
Test Item : Maximum conducted output power
Test Mode : Transmit (802.11a)-SISO A
Test Date : 2023/09/04

Channel No.	Frequency Range (MHz)	Output Power (dBm)	Max Ant Gain (dBi)	EIRP Output Power (dBm)	EIRP limit (dBm)	Result
169	5845	18.96	3.85	22.81	30	Pass
173	5865	18.88	3.85	22.73	30	Pass
177	5885	16.90	3.85	20.75	30	Pass

Note:

1. EIRP Output Power (dBm) = Output Power (dBm) + Max Ant Gain (dBi)

Product : Notebook Computer
Test Item : Maximum conducted output power
Test Mode : Transmit (802.11ax-20 MHz)-SISO A
Test Date : 2023/10/16

Channel No.	Frequency (MHz)	Output Power (dBm)	Max Ant Gain (dBi)	EIRP Output Power (dBm)	EIRP limit (dBm)	Result
169	5845	18.91	3.85	22.76	30	Pass
173	5865	18.93	3.85	22.78	30	Pass
177	5885	16.92	3.85	20.77	30	Pass

Note: EIRP Output Power (dBm) = Output Power (dBm) + Max Ant Gain (dBi)

Product : Notebook Computer
Test Item : Maximum conducted output power
Test Mode : Transmit (802.11ax-40 MHz)-SISO A
Test Date : 2023/10/16

Channel No.	Frequency (MHz)	Output Power (dBm)	Max Ant Gain (dBi)	EIRP Output Power (dBm)	EIRP limit (dBm)	Result
167	5835	19.93	3.85	23.78	30	Pass
175	5875	19.87	3.85	23.72	30	Pass

Note: EIRP Output Power (dBm) = Output Power (dBm) + Max Ant Gain (dBi)

Product : Notebook Computer
Test Item : Maximum conducted output power
Test Mode : Transmit (802.11ax-80 MHz)-SISO A
Test Date : 2023/10/16

Channel No.	Frequency (MHz)	Output Power (dBm)	Max Ant Gain (dBi)	EIRP Output Power (dBm)	EIRP limit (dBm)	Result
171	5855	19.79	3.85	23.64	30	Pass

Note: EIRP Output Power (dBm) = Output Power (dBm) + Max Ant Gain (dBi)

Product : Notebook Computer
Test Item : Maximum conducted output power
Test Mode : Transmit (802.11ax-160 MHz)-SISO A
Test Date : 2023/10/16

Channel No.	Frequency (MHz)	Output Power (dBm)	Max Ant Gain (dBi)	EIRP Output Power (dBm)	EIRP limit (dBm)	Result
163	5815	16.17	3.85	20.02	30	Pass

Note: EIRP Output Power (dBm) = Output Power (dBm) + Max Ant Gain (dBi)

Product : Notebook Computer
Test Item : Maximum conducted output power
Test Mode : Transmit (802.11a)-SISO B
Test Date : 2023/10/16

Channel No.	Frequency (MHz)	Output Power (dBm)	Max Ant Gain (dBi)	EIRP Output Power (dBm)	EIRP limit (dBm)	Result
169	5845	18.77	3.85	22.62	30	Pass
173	5865	18.59	3.85	22.44	30	Pass
177	5885	16.87	3.85	20.72	30	Pass

Note: EIRP Output Power (dBm) = Output Power (dBm) + Max Ant Gain (dBi)

Product : Notebook Computer
Test Item : Maximum conducted output power
Test Mode : Transmit (802.11ax-20 MHz)-SISO B
Test Date : 2023/10/16

Channel No.	Frequency (MHz)	Output Power (dBm)	Max Ant Gain (dBi)	EIRP Output Power (dBm)	EIRP limit (dBm)	Result
169	5845	18.69	3.85	22.54	30	Pass
173	5865	18.47	3.85	22.32	30	Pass
177	5885	16.86	3.85	20.71	30	Pass

Note: EIRP Output Power (dBm) = Output Power (dBm) + Max Ant Gain (dBi)

Product : Notebook Computer
Test Item : Maximum conducted output power
Test Mode : Transmit (802.11ax-40 MHz)-SISO B
Test Date : 2023/10/16

Channel No.	Frequency (MHz)	Output Power (dBm)	Max Ant Gain (dBi)	EIRP Output Power (dBm)	EIRP limit (dBm)	Result
167	5835	19.76	3.85	23.61	30	Pass
175	5875	19.70	3.85	23.55	30	Pass

Note: EIRP Output Power (dBm) = Output Power (dBm) + Max Ant Gain (dBi)

Product : Notebook Computer
Test Item : Maximum conducted output power
Test Mode : Transmit (802.11ax-80 MHz)-SISO B
Test Date : 2023/10/16

Channel No.	Frequency (MHz)	Output Power (dBm)	Max Ant Gain (dBi)	EIRP Output Power (dBm)	EIRP limit (dBm)	Result
171	5855	19.88	3.85	23.73	30	Pass

Note: EIRP Output Power (dBm) = Output Power (dBm) + Max Ant Gain (dBi)

Product : Notebook Computer
Test Item : Maximum conducted output power
Test Mode : Transmit (802.11ax-160 MHz)-SISO B
Test Date : 2023/10/16

Channel No.	Frequency (MHz)	Output Power (dBm)	Max Ant Gain (dBi)	EIRP Output Power (dBm)	EIRP limit (dBm)	Result
163	5815	15.84	3.85	19.69	30	Pass

Note: EIRP Output Power (dBm) = Output Power (dBm) + Max Ant Gain (dBi)

Product : Notebook Computer
Test Item : Maximum conducted output power
Test Mode : Transmit (802.11ax-20 MHz)-MIMO
Test Date : 2023/09/04

Channel No.	Frequency Range (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Total Output Power (dBm)	Max Ant Gain (dBi)	EIRP Output Power (dBm)	EIRP limit (dBm)	Result
169	5845	13.29	13.14	16.23	3.85	20.08	30	Pass
173	5865	13.35	13.32	16.35	3.85	20.20	30	Pass
177	5885	10.90	10.85	13.89	3.85	17.74	30	Pass

Note:

1. Total Output Power (dBm) = 10*LOG (Chain A Power (mW) + Chain B Power (mW)).
2. EIRP Output Power (dBm) = Total Output Power (dBm) + Max Ant Gain (dBi)

Product : Notebook Computer
Test Item : Maximum conducted output power
Test Mode : Transmit (802.11ax-40 MHz)-MIMO
Test Date : 2023/09/04

Channel No.	Frequency Range (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Total Output Power (dBm)	Max Ant Gain (dBi)	EIRP Output Power (dBm)	EIRP limit (dBm)	Result
167	5835	16.37	16.28	19.34	3.85	23.19	30	Pass
175	5875	13.98	13.83	16.92	3.85	20.77	30	Pass

Note:
1. Total Output Power (dBm) = 10*LOG (Chain A Power (mW) + Chain B Power (mW)).
2. EIRP Output Power (dBm) = Total Output Power (dBm) + Max Ant Gain (dBi)

Product : Notebook Computer
Test Item : Maximum conducted output power
Test Mode : Transmit (802.11ax-80 MHz)-MIMO
Test Date : 2023/09/05

Channel No.	Frequency Range (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Total Output Power (dBm)	Max Ant Gain (dBi)	EIRP Output Power (dBm)	EIRP limit (dBm)	Result
171	5855	14.88	14.84	17.87	3.85	21.72	30	Pass

Note:
1. Total Output Power (dBm) = 10*LOG (Chain A Power (mW) + Chain B Power (mW)).
2. EIRP Output Power (dBm) = Total Output Power (dBm) + Max Ant Gain (dBi)

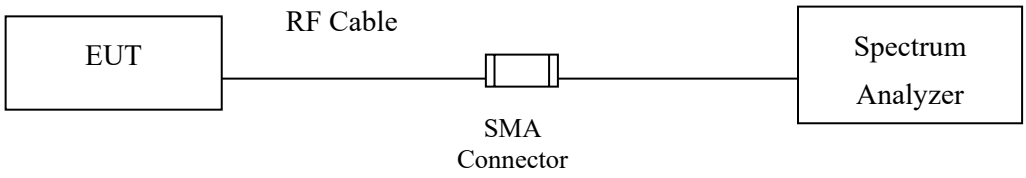
Product : Notebook Computer
Test Item : Maximum conducted output power
Test Mode : Transmit (802.11ax-160 MHz)-MIMO
Test Date : 2023/09/04

Channel No.	Frequency Range (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Total Output Power (dBm)	Max Ant Gain (dBi)	EIRP Output Power (dBm)	EIRP limit (dBm)	Result
163	5815	12.68	12.66	15.68	3.85	19.53	30	Pass

Note:
1. Total Output Power (dBm) = 10*LOG (Chain A Power (mW) + Chain B Power (mW)).
2. EIRP Output Power (dBm) = Total Output Power (dBm) + Max Ant Gain (dBi)

4. Peak Power Spectral Density

4.1. Test Setup



4.2. Limits

(i) For an indoor access point operating in the 5.850-5.895 GHz band, the maximum power spectral density must not exceed 20 dBm e.i.r.p. in any 1-megahertz band.

(ii) For client devices operating under the control of an indoor access point in the 5.850-5.895 GHz band, the maximum power spectral density must not exceed 14 dBm e.i.r.p. in any 1-megahertz band.

(iii) For a subordinate device operating under the control of an indoor access point in the 5.850-5.895 GHz band, the maximum power spectral density must not exceed 20 dBm e.i.r.p in any 1-megahertz band

4.3. Test Procedure

The EUT was setup to ANSI C63.10, 2013; tested to UNII test procedure of FCC KDB-789033 for compliance to FCC 47CFR Subpart E requirements.
The Peak Power Spectral Density using KDB 789033 section F) procedure, Create an average power spectrum for the EUT operating mode being tested by following the instructions in section E)2) for measuring maximum conducted output power using a spectrum analyzer.
SA-1 method is selected to run the test.

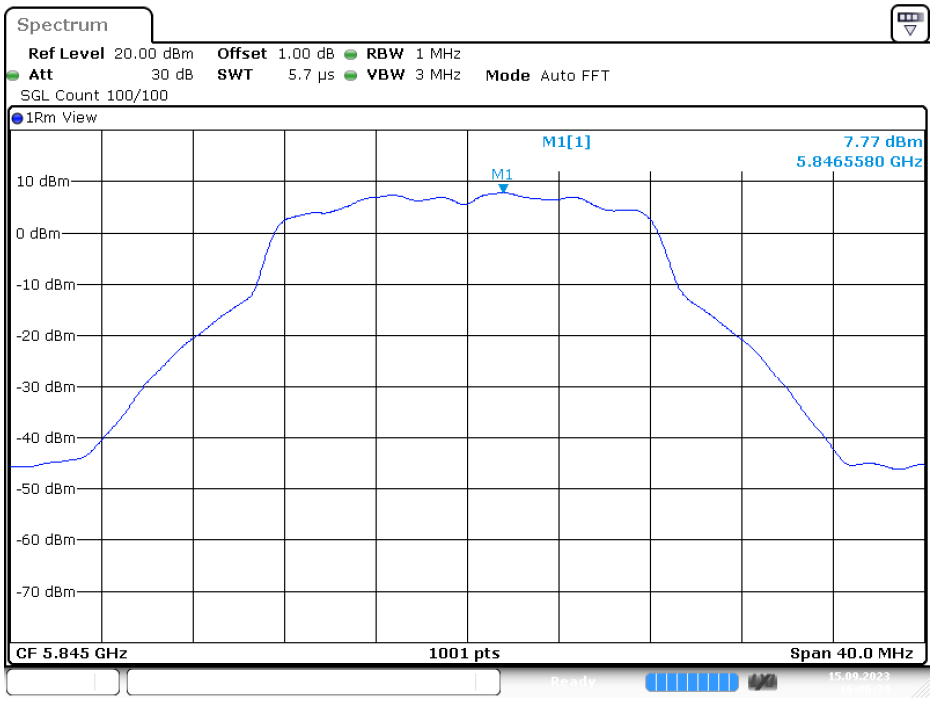
4.4. Test Result of Peak Power Spectral Density

Product : Notebook Computer
Test Item : Peak Power Spectral Density
Test Mode : Transmit (802.11a)-SISO A
Test Date : 2023/09/15

Channel No.	Frequency (MHz)	PPSD/MHz (dBm)	Duty factor (dB)	Total PPSD/MHz (dBm)	Max Ant Gain (dBi)	EIRP PPSD/ MHz (dBm)	EIRP Limit (dBm)	Result
169	5845	7.77	0.12	7.89	3.85	11.74	14	Pass
173	5865	7.56	0.12	7.68	3.85	11.53	14	Pass
177	5885	5.30	0.12	5.42	3.85	9.27	14	Pass

Note:
1. Total PPSD/MHz = PPSD/MHz + Duty factor.
2. EIRP PPSD/MHz = Total PPSD/MHz + Max Ant Gain

Channel 169

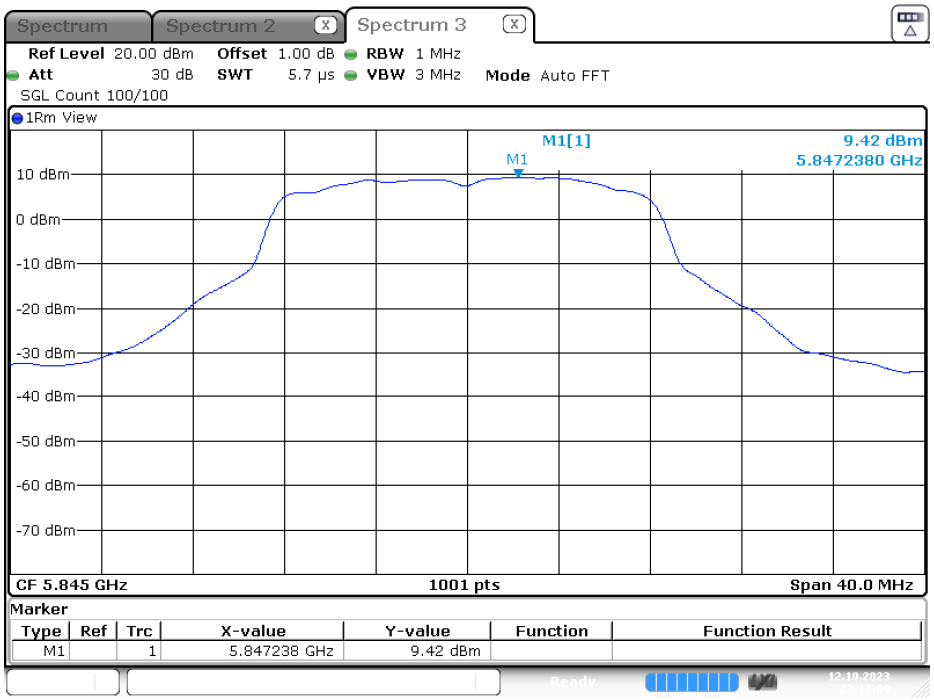


Product : Notebook Computer
Test Item : Peak Power Spectral Density
Test Mode : Transmit (802.11ax-20 MHz)-SISO A
Test Date : 2023/10/12

Channel No.	Frequency (MHz)	Data Rate	PPSD/MHz (dBm)	Duty factor (dB)	Total PPSD/MHz (dBm)	Max Ant Gain (dBi)	EIRP PPSD/MHz (dBm)	EIRP Limit (dBm)	Result
169	5845	MCS0	9.42	0.00	9.42	3.85	13.27	14	Pass
173	5865	MCS0	9.42	0.00	9.42	3.85	13.27	14	Pass
177	5885	MCS0	7.16	0.00	7.16	3.85	11.01	14	Pass

Note:
1. Total PPSD/MHz = PPSD/MHz + Duty factor.
2. EIRP PPSD/MHz = Total PPSD/MHz + Max Ant Gain.

Channel 169



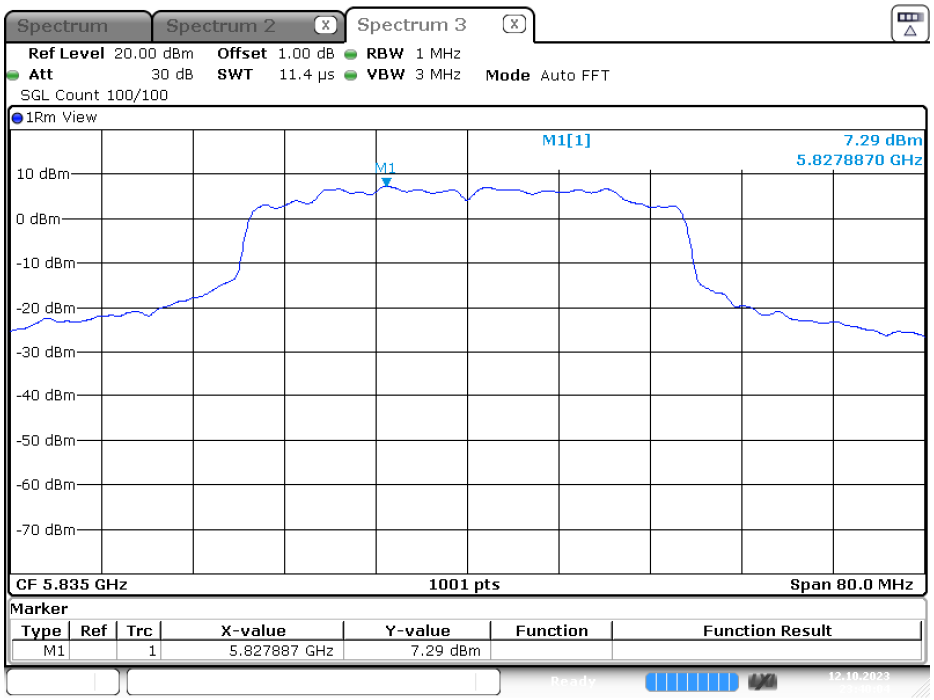
Date: 12.OCT.2023 23:12:09

Product : Notebook Computer
Test Item : Peak Power Spectral Density
Test Mode : Transmit (802.11ax-40 MHz)-SISO A
Test Date : 2023/10/12

Channel No.	Frequency (MHz)	Data Rate	PPSD/MHz (dBm)	Duty factor (dB)	Total PPSD/MHz (dBm)	Max Ant Gain (dBi)	EIRP PPSD/MHz (dBm)	EIRP Limit (dBm)	Result
167	5835	MCS0	7.29	0.00	7.29	3.85	11.14	14	Pass
175	5875	MCS0	7.06	0.00	7.06	3.85	10.91	14	Pass

Note:
1. Total PPSD/MHz = PPSD/MHz + Duty factor.
2. EIRP PPSD/MHz = Total PPSD/MHz + Max Ant Gain.

Channel 167



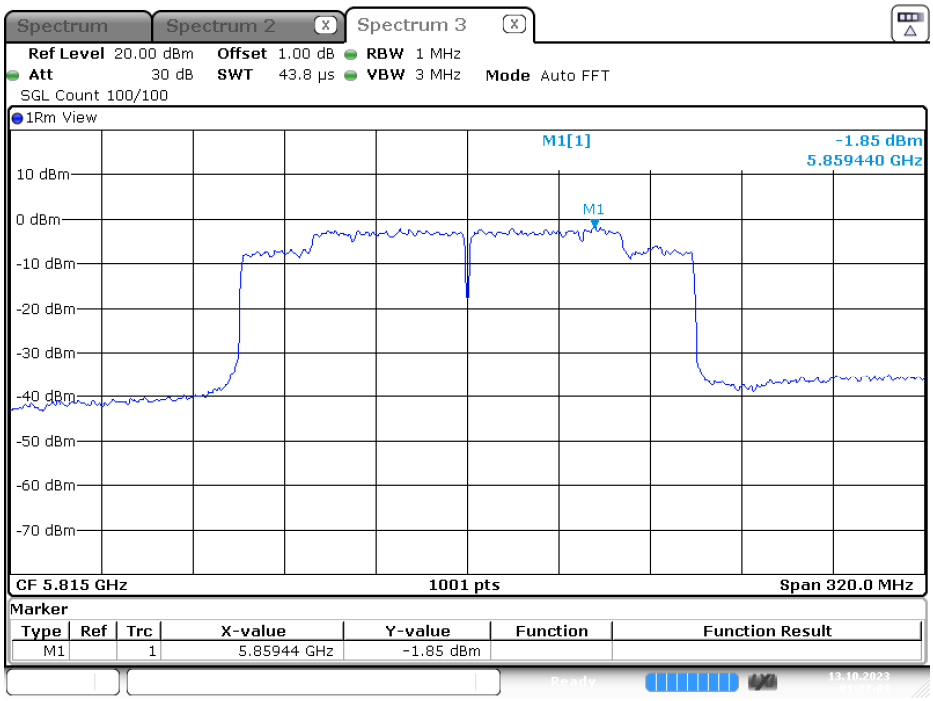
Date: 12.OCT.2023 23:40:05

Product : Notebook Computer
Test Item : Peak Power Spectral Density
Test Mode : Transmit (802.11ax-160 MHz)-SISO A
Test Date : 2023/10/13

Channel No.	Frequency (MHz)	Data Rate	PPSD/MHz (dBm)	Duty factor (dB)	Total PPSD/MHz (dBm)	Max Ant Gain (dBi)	EIRP PPSD/MHz (dBm)	EIRP Limit (dBm)	Result
163	5815	MCS0	-1.85	0.00	-1.85	3.85	2.00	14	Pass

Note:
1. Total PPSD/MHz = PPSD/MHz + Duty factor.
2. EIRP PPSD/MHz = Total PPSD/MHz + Max Ant Gain.

Channel 163

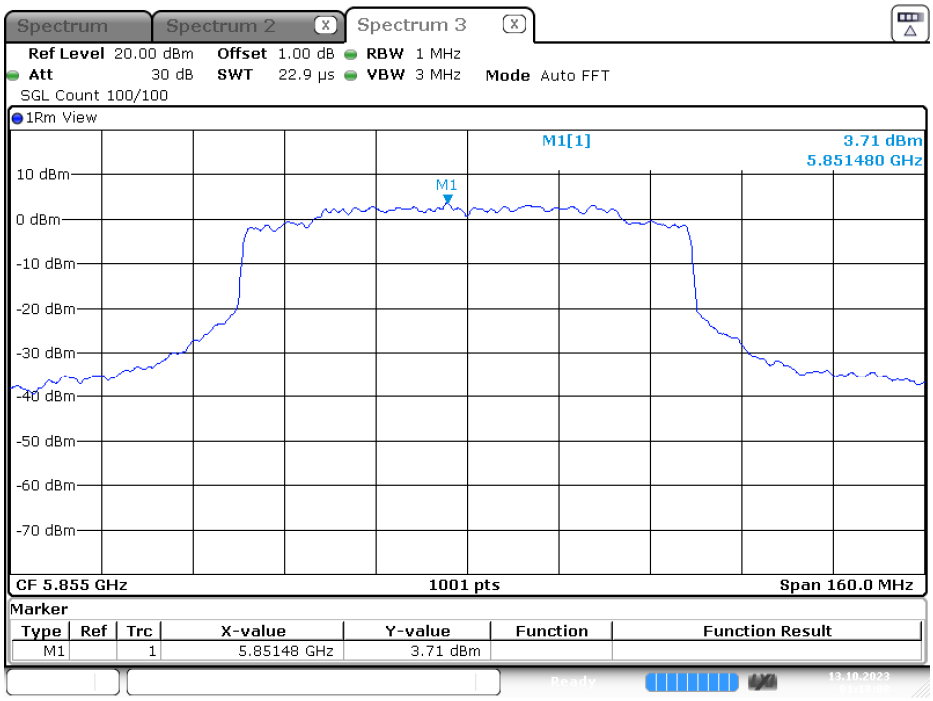


Product : Notebook Computer
Test Item : Peak Power Spectral Density
Test Mode : Transmit (802.11ax-80 MHz)-SISO B
Test Date : 2023/10/13

Channel No.	Frequency (MHz)	Data Rate	PPSD/MHz (dBm)	Duty factor (dB)	Total PPSD/MHz (dBm)	Max Ant Gain (dBi)	EIRP PPSD/MHz (dBm)	EIRP Limit (dBm)	Result
171	5855	MCS0	3.71	0.00	3.71	3.85	7.56	14	Pass

Note:
1. Total PPSD/MHz = PPSD/MHz + Duty factor.
2. EIRP PPSD/MHz = Total PPSD/MHz + Max Ant Gain.

Channel 171



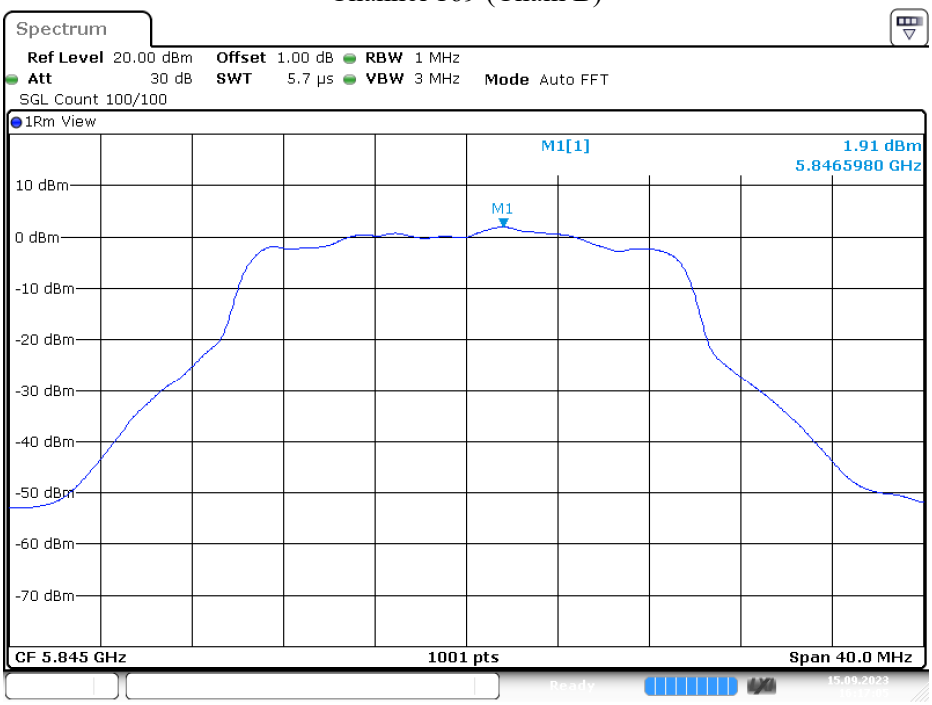
Date: 13.OCT.2023 01:18:08

Product : Notebook Computer
Test Item : Peak Power Spectral Density
Test Mode : Transmit (802.11ax-20 MHz)-MIMO
Test Date : 2023/09/15

Channel No.	Frequency (MHz)	Chain	PPSD/ MHz (dBm)	10*log(2) (dB)	Duty factor (dB)	Total PPSD/MHz (dBm)	Max Ant Gain (dBi)	EIRP PPSD/ MHz (dBm)	EIRP Limit (dBm)	Result
169	5845	A	1.33	3.01	0.00	4.34	3.85	8.19	14	Pass
		B	1.91	3.01	0.00	4.92	3.85	8.77		Pass
173	5865	A	1.70	3.01	0.00	4.71	3.85	8.56	14	Pass
		B	1.40	3.01	0.00	4.41	3.85	8.26		Pass
177	5885	A	-1.07	3.01	0.00	1.94	3.85	5.79	14	Pass
		B	-1.09	3.01	0.00	1.92	3.85	5.77		Pass

Note:
1. Total PPSD/MHz = PPSD/MHz + Duty factor.
2. EIRP PPSD/MHz = Total PPSD/MHz + Max Ant Gain
3. The quantity 10*log 2 (two antennas) is added to the spectrum peak value according to document 662911 D01.

Channel 169 (Chain B)

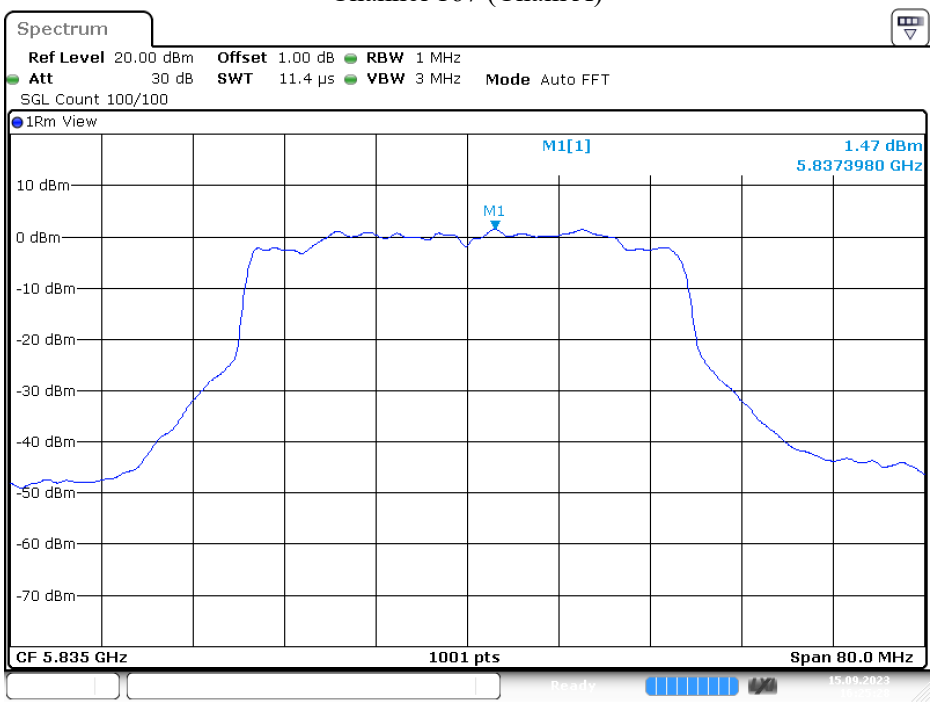


Product : Notebook Computer
Test Item : Peak Power Spectral Density
Test Mode : Transmit (802.11ax-40 MHz)-MIMO
Test Date : 2023/09/15

Channel No.	Frequency (MHz)	Chain	PPSD/ MHz (dBm)	10*log(2) (dB)	Duty factor (dB)	Total PPSD/MHz (dBm)	Max Ant Gain (dBi)	EIRP PPSD/ MHz (dBm)	EIRP Limit (dBm)	Result
167	5835	A	1.47	3.01	0.00	4.48	3.85	8.33	14	Pass
		B	1.37	3.01	0.00	4.38	3.85	8.23		Pass
175	5875	A	-0.79	3.01	0.00	2.22	3.85	6.07	14	Pass
		B	-2.52	3.01	0.00	0.49	3.85	4.34		Pass

Note:
1. Total PPSD/MHz = PPSD/MHz + Duty factor.
2. EIRP PPSD/MHz = Total PPSD/MHz + Max Ant Gain
3. The quantity 10*log 2 (two antennas) is added to the spectrum peak value according to document 662911 D01.

Channel 167 (Chain A)



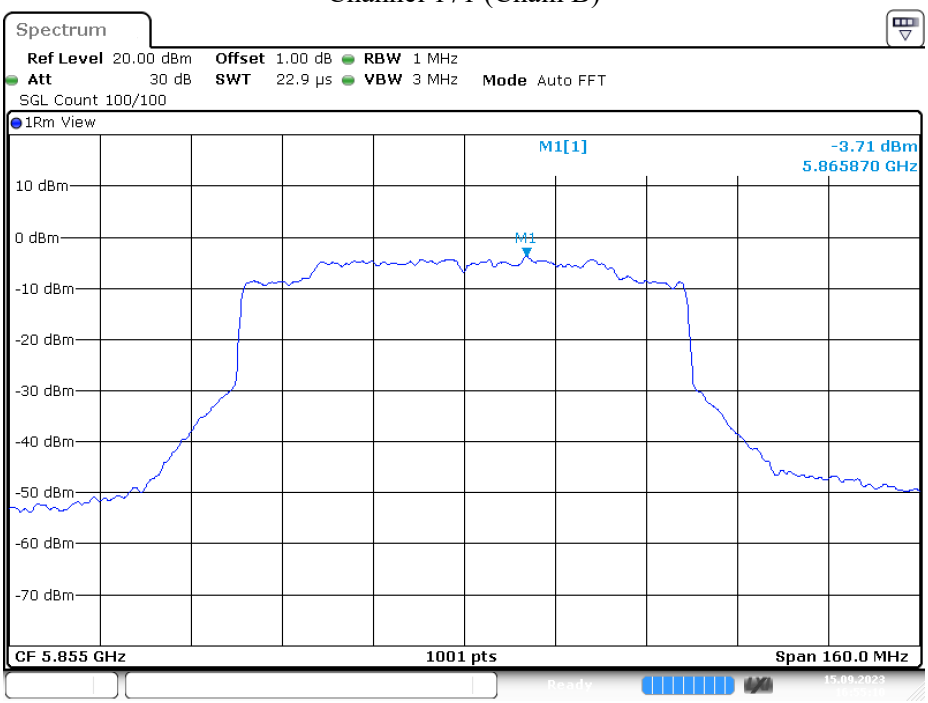
Date: 15.SEP.2023 16:25:29

Product : Notebook Computer
Test Item : Peak Power Spectral Density
Test Mode : Transmit (802.11ax-80 MHz)-MIMO
Test Date : 2023/09/15

Channel No.	Frequency (MHz)	Chain	PPSD/ MHz (dBm)	10*log(2) (dB)	Duty factor (dB)	Total PPSD/MHz (dBm)	Max Ant Gain (dBi)	EIRP PPSD/ MHz (dBm)	EIRP Limit (dBm)	Result
171	5855	A	-3.98	3.01	0.00	-0.97	3.85	2.88	14	Pass
		B	-3.71	3.01	0.00	-0.70	3.85	3.15		Pass

Note:
1. Total PPSD/MHz = PPSD/MHz + Duty factor.
2. EIRP PPSD/MHz = Total PPSD/MHz + Max Ant Gain
3. The quantity 10*log 2 (two antennas) is added to the spectrum peak value according to document 662911 D01.

Channel 171 (Chain B)

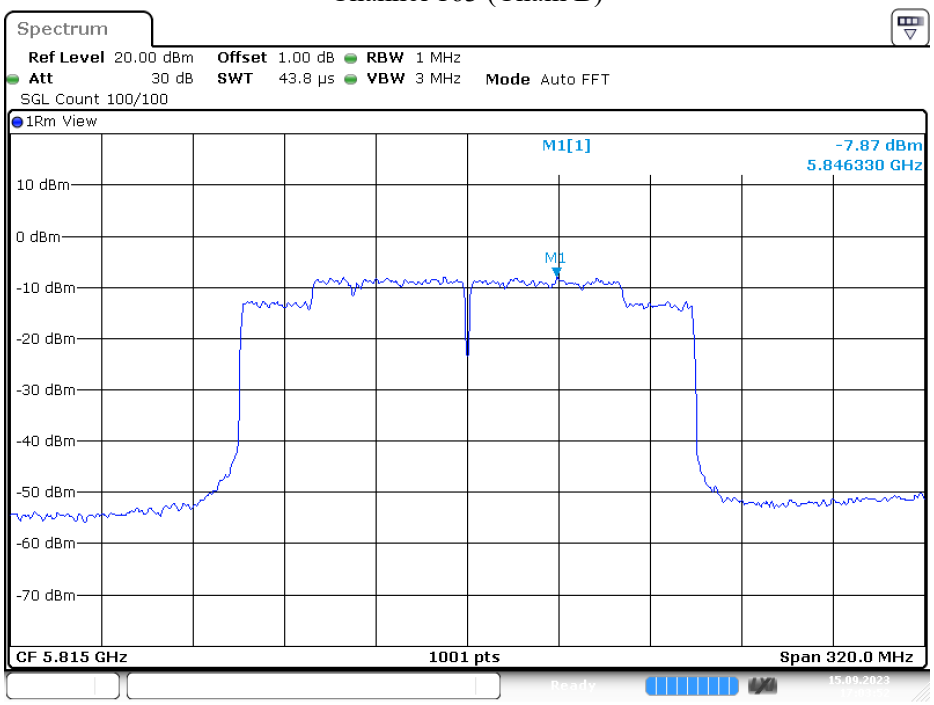


Product : Notebook Computer
Test Item : Peak Power Spectral Density
Test Mode : Transmit (802.11ax-160 MHz)-MIMO
Test Date : 2023/09/15

Channel No.	Frequency (MHz)	Chain	PPSD/ MHz (dBm)	10*log(2) (dB)	Duty factor (dB)	Total PPSD/MHz (dBm)	Max Ant Gain (dBi)	EIRP PPSD/ MHz (dBm)	EIRP Limit (dBm)	Result
163	5815	A	-8.99	3.01	0.09	-5.89	3.85	-2.04	14	Pass
		B	-7.87	3.01	0.09	-4.77	3.85	-0.92		Pass

Note:
1. Total PPSD/MHz = PPSD/MHz + Duty factor.
2. EIRP PPSD/MHz = Total PPSD/MHz + Max Ant Gain
3. The quantity 10*log 2 (two antennas) is added to the spectrum peak value according to document 662911 D01.

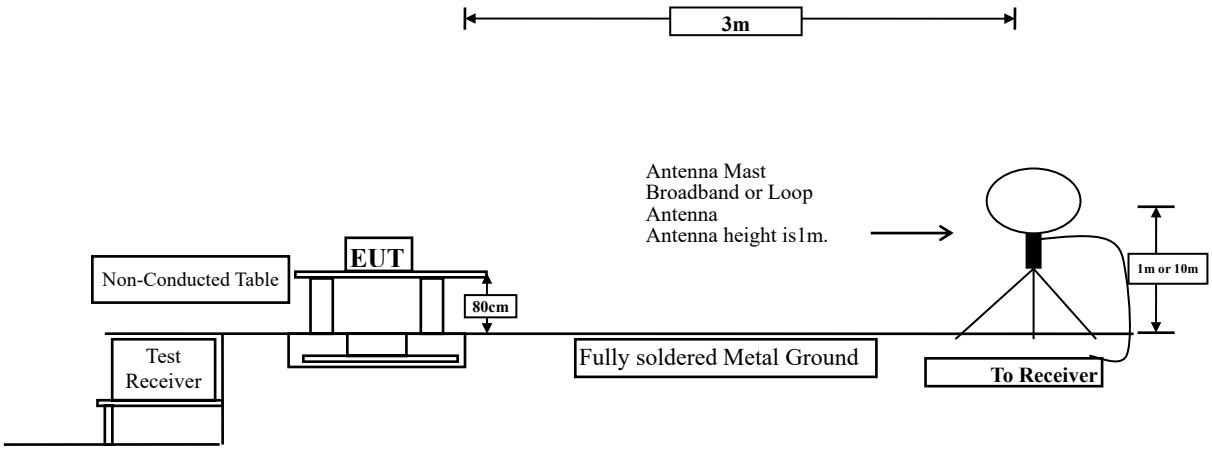
Channel 163 (Chain B)



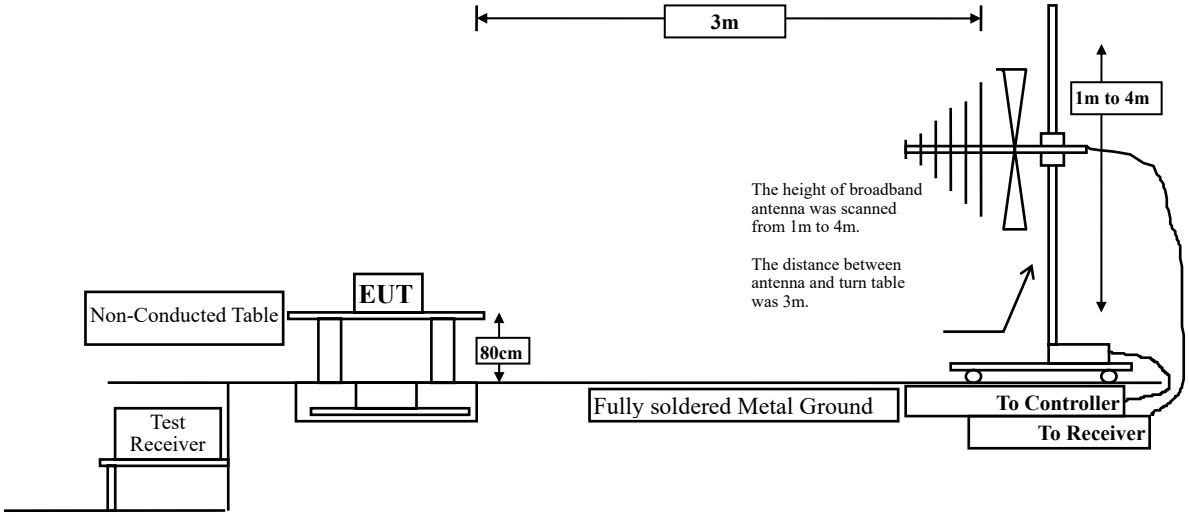
5. Radiated Emission

5.1. Test Setup

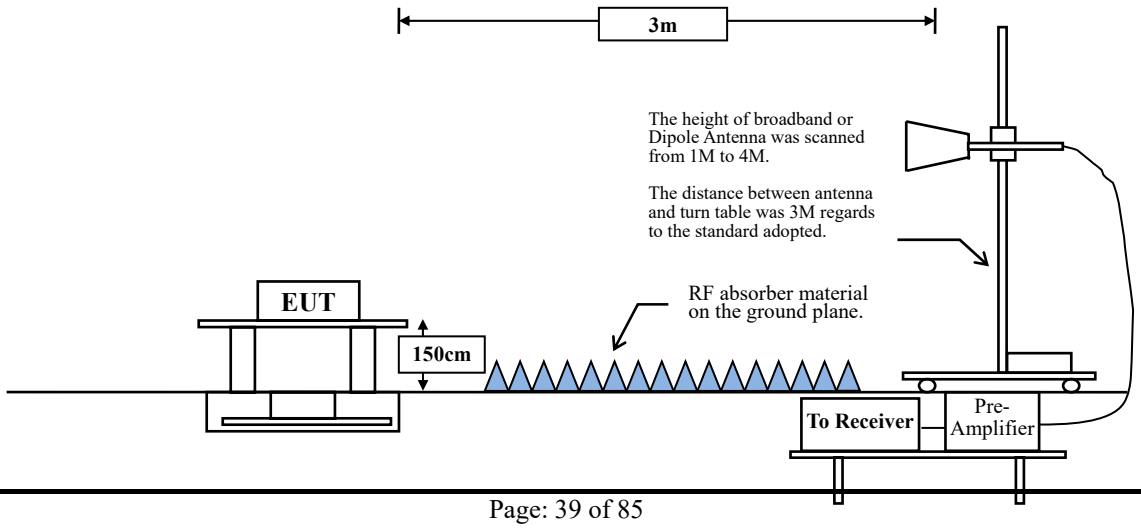
Radiated Emission Under 30 MHz



Radiated Emission Below 1 GHz



Radiated Emission Above 1 GHz



5.2. Limits

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 20dB below the level of the fundamental or to the general radiated emission limits in paragraph 15.209, whichever is the lesser attenuation.

FCC Part 15 Subpart C Paragraph 15.209(a) Limits		
Frequency MHz	Field strength (microvolts/meter)	Measurement distance (meter)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

Remarks: E field strength (dBμV/m) = 20 log E field strength (μV/m)

- For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.
- For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.
- For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.
- For transmitters operating in the 5.725-5.85 GHz band:
  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.
- For transmitters operating in the 5.850-5.895 GHz band:
  (i) For an indoor access point or subordinate device, all emissions at or above 5.895 GHz shall not exceed an e.i.r.p. of 15 dBm/MHz and shall decrease linearly to an e.i.r.p. of −7 dBm/MHz at or above 5.925 GHz.
  (ii) For a client device, all emissions at or above 5.895 GHz shall not exceed an e.i.r.p. of −5 dBm/MHz and shall decrease linearly to an e.i.r.p. of −27 dBm/MHz at or above 5.925 GHz.
  (iii) For a client device or indoor access point or subordinate device, all emissions below 5.725 GHz shall not exceed an e.i.r.p. of −27 dBm/MHz at 5.65 GHz increasing linearly to 10 dBm/MHz at 5.7 GHz, and from 5.7 GHz increasing linearly to a level of 15.6 dBm/MHz at 5.72 GHz, and from 5.72 GHz increasing linearly to a level of 27 dBm/MHz at 5.725 GHz.
- For transmitters operating within the 5.925-7.125 GHz band: Any emissions outside of the 5.925-7.125 GHz band must not exceed an e.i.r.p. of −27 dBm/MHz.

Based on ANSI C63.10-2013 Section 12.7.3 d) provides the conversion formula between field strength and EIRP, if distance is 3m, -27dBm is equivalent to 68.22dBuV/m.

5.3. Test Procedure

The EUT was setup according to ANSI C63.10, 2013 and tested according to FCC KDB-789033 test procedure for compliance to FCC 47CFR 15. 407 requirements.
Measuring the frequency range below 1 GHz, the EUT is placed on a turn table which is 0.8 meter above ground,when measuring the frequency range above 1 GHz, the EUT is placed on a turn table which is 1.5 meter above ground.
The turn table is rotated 360 degrees to determine the position of the maximum emission level.
The EUT was positioned such that the distance from antenna to the EUT was 3 meters.
The antenna is scanned between 1 meter and 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.10: 2013 on radiated measurement.
The resolution bandwidth below 30 MHz setting on the field strength meter is 9kHz and
30 MHz~1 GHz is 120 kHz and above 1 GHz is 1 MHz.
Radiated emission measurements below 30 MHz are made using Loop Antenna and 30 MHz~1 GHz are made using broadband Bilog antenna and above 1 GHz are made using Horn Antennas.
The measurement is divided into the Preliminary Measurement and the Final Measurement.
The suspected frequencies are searched for in Preliminary Measurement with the measurement antenna kept pointed at the source of the emission both in azimuth and elevation, with the polarization of the antenna oriented for maximum response. The antenna is pointed at an angle towards the source of the emission, and the EUT is rotated in both height and polarization to maximize the measured emission. The emission is kept within the illumination area of the 3 dB bandwidth of the antenna.
The measurement frequency range form 9 kHz - 10th Harmonic of fundamental was investigated.

RBW and VBW Parameter setting:
According to KDB 789033 section II.G.5 Procedure for Unwanted Maximum Emissions Measurements above 1000 MHz.
RBW = 1 MHz.
VBW ≥ 3 MHz.

According to KDB 789033 section II.G.6 Procedures for Average Unwanted Emissions Measurements above 1000 MHz.
RBW = 1 MHz.
VBW = 10 Hz, when duty cycle ≥ 98 %
VBW ≥ 1/T, when duty cycle < 98 %
(T refers to the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.)

SISO A

5 GHz band	Duty Cycle (%)	T (ms)	1/T (Hz)	VBW (Hz)
802.11a	97.20	2.0800	481	500
802.11ax-20 MHz	99.10	3.9955	250	10
802.11ax-40 MHz	98.95	3.9935	250	10
802.11ax-80 MHz	98.70	3.9835	251	10
802.11ax-160 MHz	98.71	3.9935	250	10

SISO B

5 GHz band	Duty Cycle (%)	T (ms)	1/T (Hz)	VBW (Hz)
802.11a	97.92	2.0875	479	500
802.11ax-20 MHz	98.70	3.9835	251	10
802.11ax-40 MHz	98.70	3.9835	251	10
802.11ax-80 MHz	98.71	3.9935	250	10
802.11ax-160 MHz	98.70	3.9835	251	10

MIMO

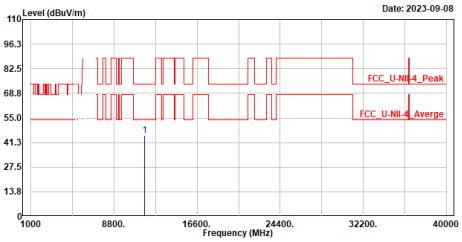
5 GHz band	Duty Cycle (%)	T (ms)	1/T (Hz)	VBW (Hz)
802.11ax-20 MHz	99.01	3.9900	251	10
802.11ax-40 MHz	98.76	3.9800	251	10
802.11ax-80 MHz	98.52	3.9900	251	10
802.11ax-160 MHz	97.97	2.3140	432	500

Note: Duty Cycle Refer to Section 8.

5.4. Test Result of Radiated Emission

SISO A

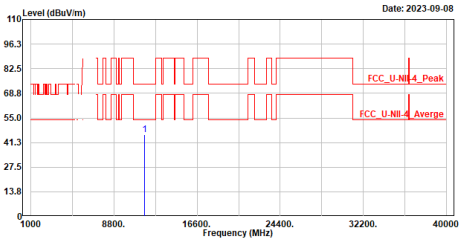
Site :HY-CB01
Condition :3m ,HORIZONTAL
Mode :TX_a_5845MHz
TEST BY :Sam



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	11690.000	45.43	74.00	-28.57	52.60	-7.17	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

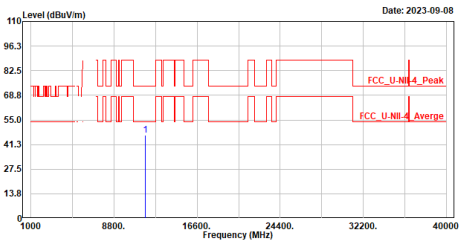
Site :HY-CB01
Condition :3m ,VERTICAL
Mode :TX_a_5845MHz
TEST BY :Sam



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	11690.000	45.84	74.00	-28.16	53.01	-7.17	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

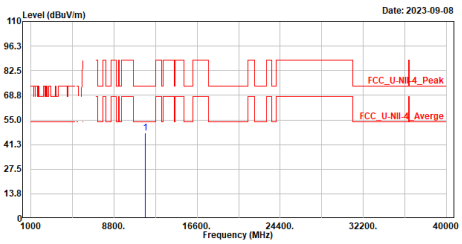
Site :HY-CB01
Condition :3m ,HORIZONTAL
Mode :TX_a_5865MHz
TEST BY :Sam



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	11730.000	46.62	74.00	-27.38	53.79	-7.17	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

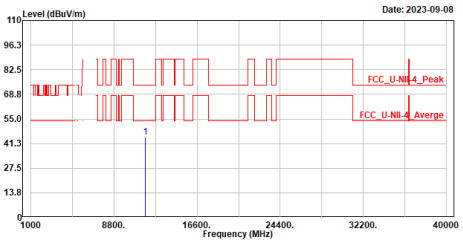
Site :HY-CB01
Condition :3m ,VERTICAL
Mode :TX_a_5865MHz
TEST BY :Sam



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	11730.000	47.69	74.00	-26.31	54.86	-7.17	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

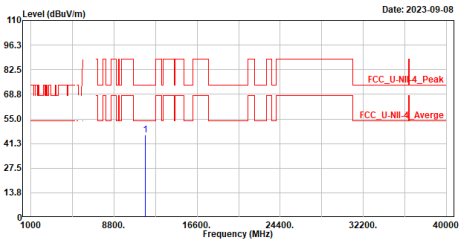
Site :HY-CB01
Condition :3m ,HORIZONTAL
Mode :TX_a_5885MHz
TEST BY :Sam



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	11770.000	44.99	74.00	-29.01	52.24	-7.25	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

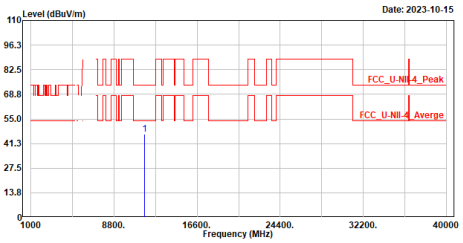
Site :HY-CB01
Condition :3m ,VERTICAL
Mode :TX_a_5885MHz
TEST BY :Sam



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	11770.000	45.99	74.00	-28.01	53.24	-7.25	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

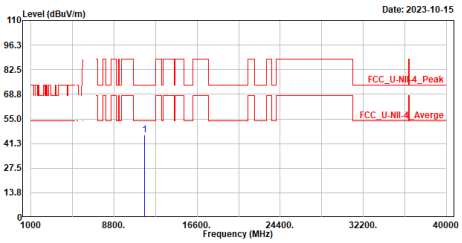
Site :HY-CB01
Condition :3m ,HORIZONTAL
Mode :TX_ax20_5845MHz
TEST BY :Sam



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	11690.000	46.44	74.00	-27.56	53.61	-7.17	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

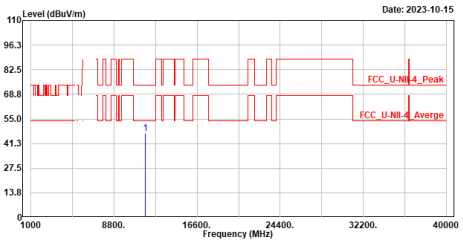
Site :HY-CB01
Condition :3m ,VERTICAL
Mode :TX_ax20_5845MHz
TEST BY :Sam



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	11690.000	46.18	74.00	-27.82	53.35	-7.17	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

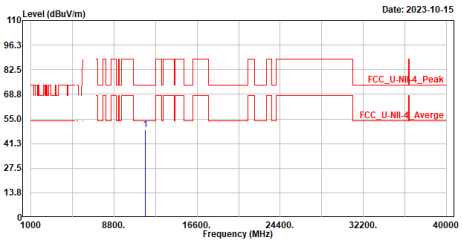
Site :HY-CB01
Condition :3m ,HORIZONTAL
Mode :TX_ax20_5865MHz
TEST BY :Sam



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	11730.000	47.05	74.00	-26.95	54.22	-7.17	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

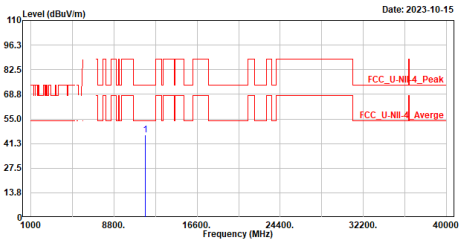
Site :HY-CB01
Condition :3m ,VERTICAL
Mode :TX_ax20_5865MHz
TEST BY :Sam



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	11730.000	48.77	74.00	-25.23	55.94	-7.17	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

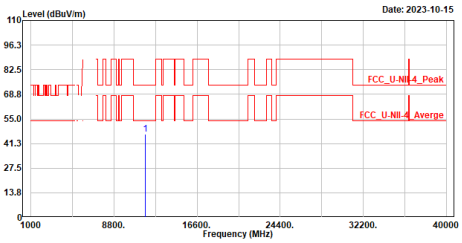
Site :HY-CB01
Condition :3m ,HORIZONTAL
Mode :TX_ax20_5885MHz
TEST BY :Sam



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	11770.000	45.94	74.00	-28.06	53.19	-7.25	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

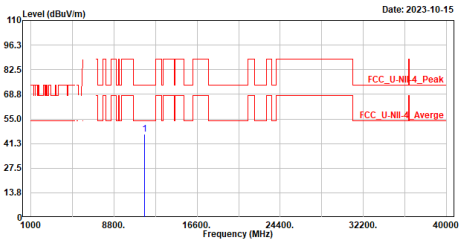
Site :HY-CB01
Condition :3m ,VERTICAL
Mode :TX_ax20_5885MHz
TEST BY :Sam



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	11770.000	46.32	74.00	-27.68	53.57	-7.25	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

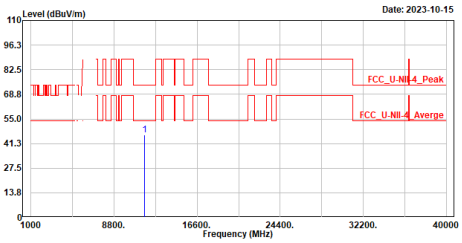
Site :HY-CB01
Condition :3m ,HORIZONTAL
Mode :TX_ax40_5835MHz
TEST BY :Sam



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	11670.000	46.52	74.00	-27.48	53.75	-7.23	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

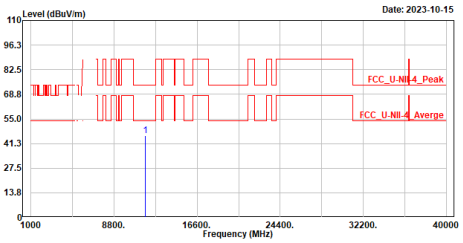
Site :HY-CB01
Condition :3m ,VERTICAL
Mode :TX_ax40_5835MHz
TEST BY :Sam



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	11670.000	45.90	74.00	-28.10	53.13	-7.23	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

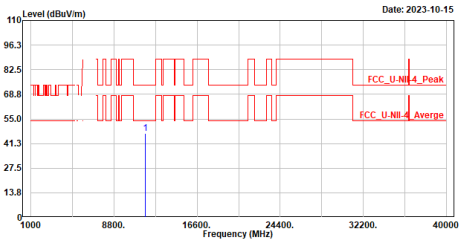
Site :HY-CB01
Condition :3m ,HORIZONTAL
Mode :TX_ax40_5875MHz
TEST BY :Sam



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	11750.000	45.54	74.00	-28.46	52.75	-7.21	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

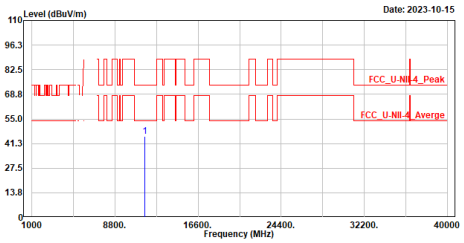
Site :HY-CB01
Condition :3m ,VERTICAL
Mode :TX_ax40_5875MHz
TEST BY :Sam



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	11750.000	47.03	74.00	-26.97	54.24	-7.21	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

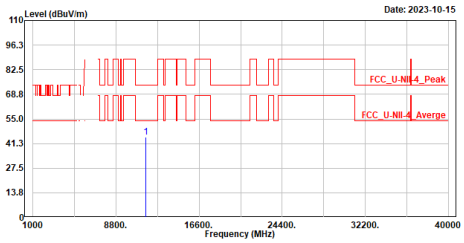
Site :HY-CB01
Condition :3m ,HORIZONTAL
Mode :TX_ax160_5815MHz
TEST BY :Sam



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	11630.000	45.36	74.00	-28.64	52.69	-7.33	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

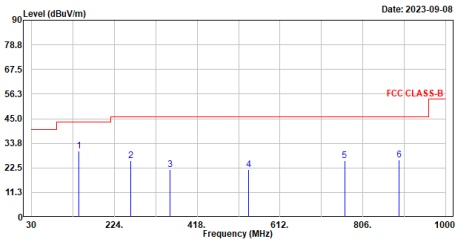
Site :HY-CB01
Condition :3m ,VERTICAL
Mode :TX_ax160_5815MHz
TEST BY :Sam



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	11630.000	44.94	74.00	-29.06	52.27	-7.33	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

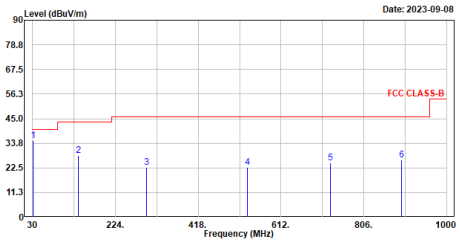
Site :HY-CB01
Condition :3m ,HORIZONTAL
Mode :TX_ax160_5815MHz
TEST BY :Sam



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	140.580	30.21	43.50	-13.29	54.40	-24.19	QP
2	261.830	25.65	46.00	-20.35	50.21	-24.56	QP
3	354.950	21.73	46.00	-24.27	43.67	-21.94	QP
4	539.250	21.66	46.00	-24.34	38.92	-17.26	QP
5	763.320	25.69	46.00	-20.31	38.65	-12.96	QP
6	890.390	26.19	46.00	-19.81	38.05	-11.86	QP

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission under 30MHz was not included since the emission levels are very low against the limit.

Site :HY-CB01
Condition :3m ,VERTICAL
Mode :TX_ax160_5815MHz
TEST BY :Sam

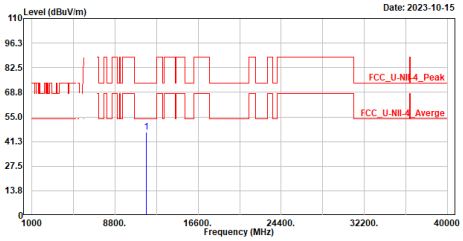


No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	30.970	34.92	40.00	-5.08	60.04	-25.12	QP
2	137.670	28.33	43.50	-15.17	52.79	-24.46	QP
3	297.720	22.86	46.00	-23.14	46.04	-23.18	QP
4	533.430	22.79	46.00	-23.21	40.10	-17.31	QP
5	728.400	24.93	46.00	-21.07	38.71	-13.78	QP
6	895.240	26.09	46.00	-19.91	37.85	-11.76	QP

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission under 30MHz was not included since the emission levels are very low against the limit.

SISO B

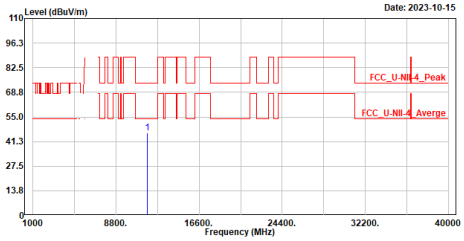
Site :HY-CB01
Condition :3m ,HORIZONTAL
Mode :TX_ax80_5855MHz
TEST BY :Sam



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	11710.000	46.61	74.00	-27.39	53.74	-7.13	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

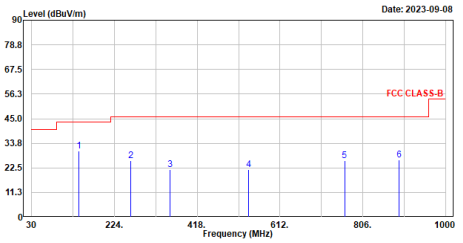
Site :HY-CB01
Condition :3m ,VERTICAL
Mode :TX_ax80_5855MHz
TEST BY :Sam



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	11710.000	46.11	74.00	-27.89	53.24	-7.13	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

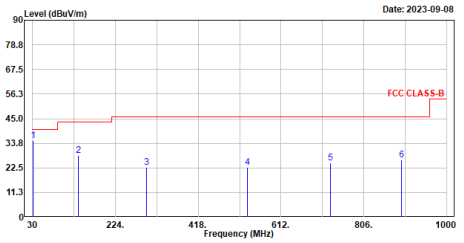
Site :HY-CB01
Condition :3m ,HORIZONTAL
Mode :TX_ax160_5815MHz
TEST BY :Sam



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	140.580	30.21	43.50	-13.29	54.40	-24.19	QP
2	261.830	25.65	46.00	-20.35	50.21	-24.56	QP
3	354.950	21.73	46.00	-24.27	43.67	-21.94	QP
4	539.250	21.66	46.00	-24.34	38.92	-17.26	QP
5	763.320	25.69	46.00	-20.31	38.65	-12.96	QP
6	890.390	26.19	46.00	-19.81	38.05	-11.86	QP

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission under 30MHz was not included since the emission levels are very low against the limit.

Site :HY-CB01
Condition :3m ,VERTICAL
Mode :TX_ax160_5815MHz
TEST BY :Sam

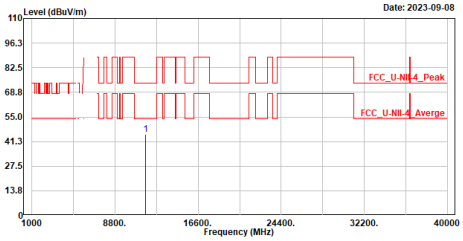


No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	30.970	34.92	40.00	-5.08	60.04	-25.12	QP
2	137.670	28.33	43.50	-15.17	52.79	-24.46	QP
3	297.720	22.86	46.00	-23.14	46.04	-23.18	QP
4	533.430	22.79	46.00	-23.21	40.10	-17.31	QP
5	728.400	24.93	46.00	-21.07	38.71	-13.78	QP
6	895.240	26.09	46.00	-19.91	37.85	-11.76	QP

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission under 30MHz was not included since the emission levels are very low against the limit.

MIMO

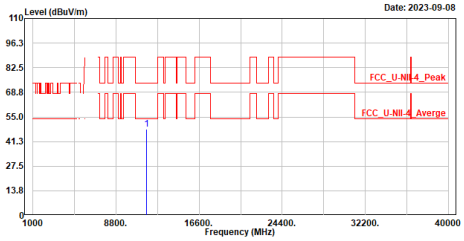
Site :HY-CB01
Condition :3m ,HORIZONTAL
Mode :TX_ax20_5845MHz
TEST BY :Sam



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	11690.000	45.21	74.00	-28.79	52.38	-7.17	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

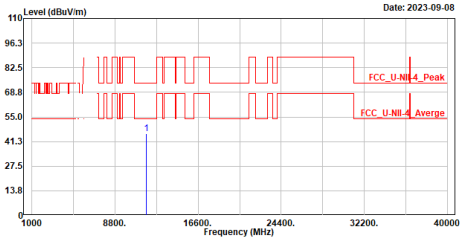
Site :HY-CB01
Condition :3m ,VERTICAL
Mode :TX_ax20_5845MHz
TEST BY :Sam



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	11690.000	48.06	74.00	-25.94	55.23	-7.17	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

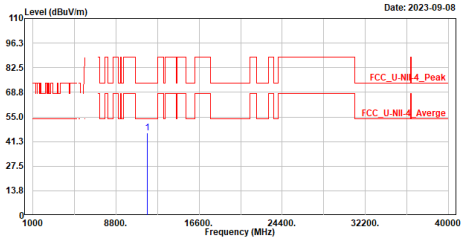
Site :HY-CB01
Condition :3m ,HORIZONTAL
Mode :TX_ax20_5865MHz
TEST BY :Sam



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	11730.000	45.54	74.00	-28.46	52.71	-7.17	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

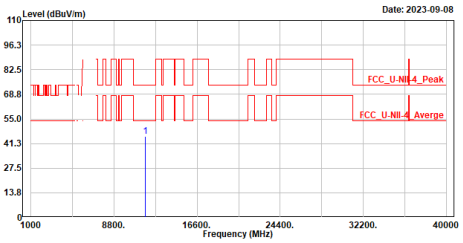
Site :HY-CB01
Condition :3m ,VERTICAL
Mode :TX_ax20_5865MHz
TEST BY :Sam



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	11730.000	46.24	74.00	-27.76	53.41	-7.17	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

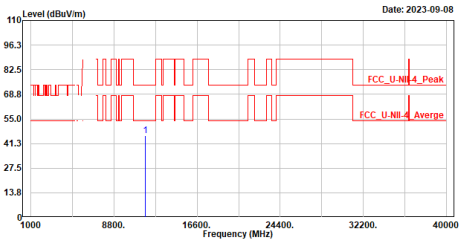
Site :HY-CB01
Condition :3m ,HORIZONTAL
Mode :TX_ax20_5885MHz
TEST BY :Sam



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	11770.000	45.06	74.00	-28.94	52.31	-7.25	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

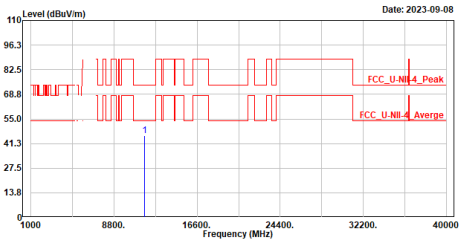
Site :HY-CB01
Condition :3m ,VERTICAL
Mode :TX_ax20_5885MHz
TEST BY :Sam



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	11770.000	45.59	74.00	-28.41	52.84	-7.25	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

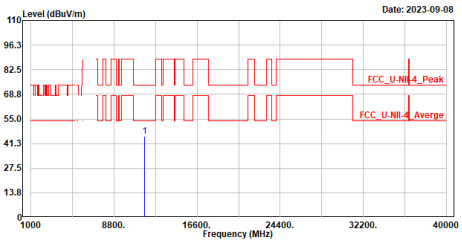
Site :HY-CB01
Condition :3m ,HORIZONTAL
Mode :TX_ax40_5835MHz
TEST BY :Sam



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	11670.000	45.65	74.00	-28.35	52.88	-7.23	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

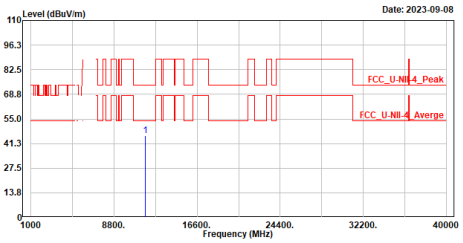
Site :HY-CB01
Condition :3m ,VERTICAL
Mode :TX_ax40_5835MHz
TEST BY :Sam



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	11670.000	45.29	74.00	-28.71	52.52	-7.23	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

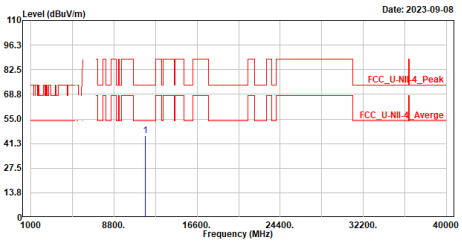
Site :HY-CB01
Condition :3m ,HORIZONTAL
Mode :TX_ax40_5875MHz
TEST BY :Sam



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	11750.000	45.85	74.00	-28.15	53.06	-7.21	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

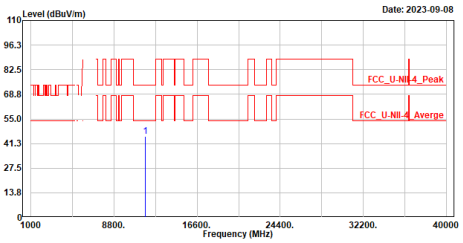
Site :HY-CB01
Condition :3m ,VERTICAL
Mode :TX_ax40_5875MHz
TEST BY :Sam



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	11750.000	45.85	74.00	-28.15	53.06	-7.21	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

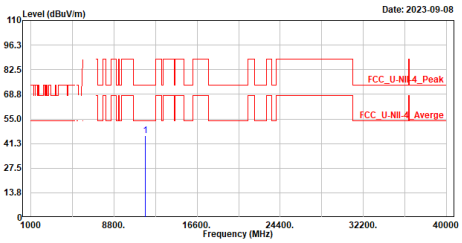
Site :HY-CB01
Condition :3m ,HORIZONTAL
Mode :TX_ax80_5855MHz
TEST BY :Sam



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	11710.000	45.19	74.00	-28.81	52.32	-7.13	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

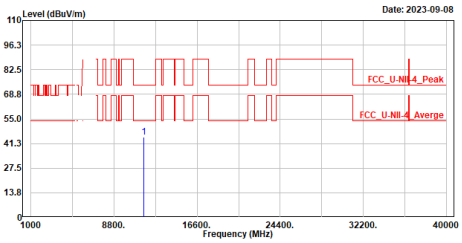
Site :HY-CB01
Condition :3m ,VERTICAL
Mode :TX_ax80_5855MHz
TEST BY :Sam



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	11710.000	45.84	74.00	-28.16	52.97	-7.13	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

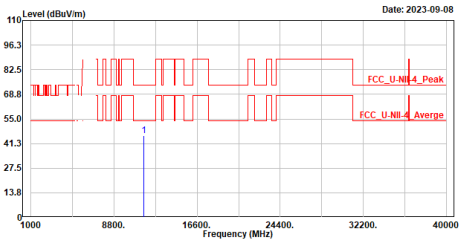
Site :HY-CB01
Condition :3m ,HORIZONTAL
Mode :TX_ax160_5815MHz
TEST BY :Sam



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	11630.000	44.79	74.00	-29.21	52.12	-7.33	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

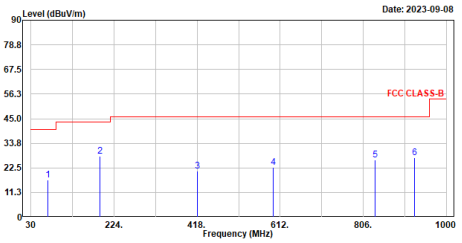
Site :HY-CB01
Condition :3m ,VERTICAL
Mode :TX_ax160_5815MHz
TEST BY :Sam



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	11630.000	45.77	74.00	-28.23	53.10	-7.33	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

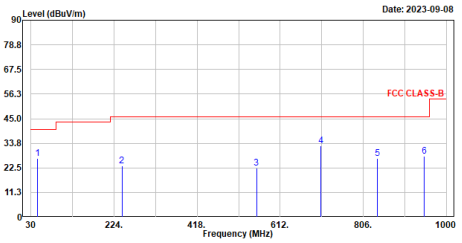
Site :HY-CB01
Condition :3m ,HORIZONTAL
Mode :TX_ax160_5815MHz
TEST BY :Sam



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	69.770	17.12	40.00	-22.88	43.45	-26.33	QP
2	191.990	27.85	43.50	-15.65	54.43	-26.58	QP
3	418.000	20.96	46.00	-25.04	40.91	-19.95	QP
4	595.510	22.81	46.00	-23.19	38.58	-15.77	QP
5	834.130	26.26	46.00	-19.74	38.62	-12.36	QP
6	925.310	27.03	46.00	-18.97	38.20	-11.17	QP

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission under 30MHz was not included since the emission levels are very low against the limit.

Site :HY-CB01
Condition :3m ,VERTICAL
Mode :TX_ax160_5815MHz
TEST BY :Sam



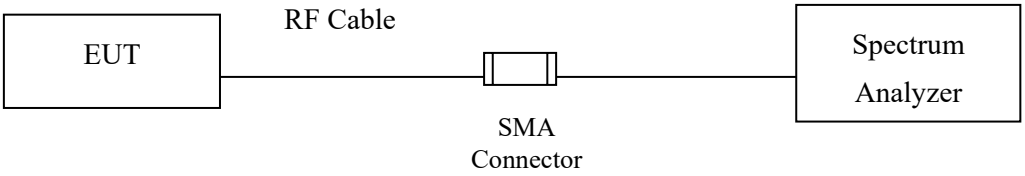
No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	44.550	26.99	40.00	-13.01	50.68	-23.69	QP
2	242.430	23.30	46.00	-22.70	48.17	-24.87	QP
3	556.710	22.30	46.00	-23.70	39.19	-16.89	QP
4	706.090	32.68	46.00	-13.32	46.78	-14.10	QP
5	838.980	26.90	46.00	-19.10	39.07	-12.17	QP
6	947.620	27.70	46.00	-18.30	38.51	-10.81	QP

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission under 30MHz was not included since the emission levels are very low against the limit.

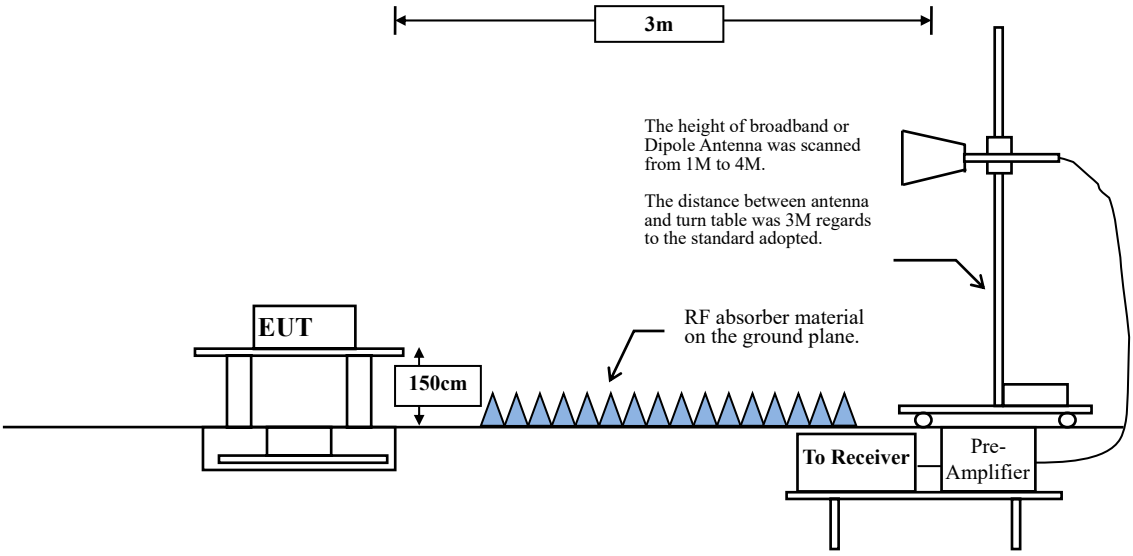
6. Band Edge

6.1. Test Setup

RF Conducted Measurement:



RF Radiated Measurement:



6.2. Limits

The provisions of Section 15.205 of this part apply to intentional radiators operating under this section. Radiated emissions which fall in the restricted bands, as defined in Section 15.205, must also comply with the radiated emission limits specified in Section 15.209:

FCC Part 15 Subpart C Paragraph 15.209 Limits		
Frequency MHz	μV/m @3m	dBμV/m@3m
30-88	100	40
88-216	150	43.5
216-960	200	46
Above 960	500	54

Remarks : 1. RF Voltage (dBμV) = 20 log RF Voltage (μV)
2. In the Above Table, the tighter limit applies at the band edges.
3. Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.

- For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.
- For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.
- For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.
- For transmitters operating in the 5.725-5.85 GHz band:
  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.
- For transmitters operating in the 5.850-5.895 GHz band:
  (i) For an indoor access point or subordinate device, all emissions at or above 5.895 GHz shall not exceed an e.i.r.p. of 15 dBm/MHz and shall decrease linearly to an e.i.r.p. of −7 dBm/MHz at or above 5.925 GHz.
  (ii) For a client device, all emissions at or above 5.895 GHz shall not exceed an e.i.r.p. of −5 dBm/MHz and shall decrease linearly to an e.i.r.p. of −27 dBm/MHz at or above 5.925 GHz.
  (iii) For a client device or indoor access point or subordinate device, all emissions below 5.725 GHz shall not exceed an e.i.r.p. of −27 dBm/MHz at 5.65 GHz increasing linearly to 10 dBm/MHz at 5.7 GHz, and from 5.7 GHz increasing linearly to a level of 15.6 dBm/MHz at 5.72 GHz, and from 5.72 GHz increasing linearly to a level of 27 dBm/MHz at 5.725 GHz.
- For transmitters operating within the 5.925-7.125 GHz band: Any emissions outside of the 5.925-7.125 GHz band must not exceed an e.i.r.p. of −27 dBm/MHz.

Based on ANSI C63.10-2013 Section 12.7.3 d) provides the conversion formula between field strength and EIRP, if distance is 3m, -27dBm is equivalent to 68.22dBuV/m.

6.3. Test Procedure

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

The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level.

Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated according to ANSI C63.10:2013 on radiated measurement.

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

The EUT was setup to ANSI C63.10, 2013; tested to UNII test procedure of FCC KDB-789033 for compliance to FCC 47CFR Subpart E requirements.

RBW and VBW Parameter setting:

According to KDB 789033 section II.G.5 Procedure for Unwanted Maximum Emissions Measurements above 1000 MHz.

RBW = 1 MHz.

VBW ≥ 3 MHz.

According to KDB 789033 section II.G.6 Procedures for Average Unwanted Emissions Measurements above 1000 MHz.

RBW = 1 MHz.

VBW = 10 Hz, when duty cycle ≥ 98 %

VBW ≥ 1/T, when duty cycle < 98 %

(T refers to the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.)

SISO A

5 GHz band	Duty Cycle (%)	T (ms)	1/T (Hz)	VBW (Hz)
802.11a	97.20	2.0800	481	500
802.11ax-20 MHz	99.10	3.9955	250	10
802.11ax-40 MHz	98.95	3.9935	250	10
802.11ax-80 MHz	98.70	3.9835	251	10
802.11ax-160 MHz	98.71	3.9935	250	10

SISO B

5 GHz band	Duty Cycle (%)	T (ms)	1/T (Hz)	VBW (Hz)
802.11a	97.92	2.0875	479	500
802.11ax-20 MHz	98.70	3.9835	251	10
802.11ax-40 MHz	98.70	3.9835	251	10
802.11ax-80 MHz	98.71	3.9935	250	10
802.11ax-160 MHz	98.70	3.9835	251	10

MIMO

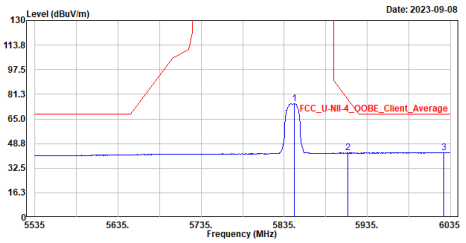
5 GHz band	Duty Cycle (%)	T (ms)	1/T (Hz)	VBW (Hz)
802.11ax-20 MHz	99.01	3.9900	251	10
802.11ax-40 MHz	98.76	3.9800	251	10
802.11ax-80 MHz	98.52	3.9900	251	10
802.11ax-160 MHz	97.97	2.3140	432	500

Note: Duty Cycle Refer to Section 8.

6.4. Test Result of Band Edge

SISO A

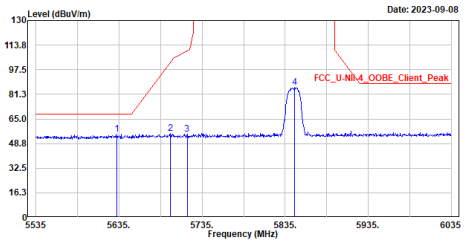
Site :HY-CB01
Condition :3m ,Horizontal
Mode :TX_a_5845MHz
TEST BY :Sam



No.	Frequency MHz	Level dBuV/m	Limit Line dBuV/m	Over Limit dB	Read Level dBuV	Factor dB	Remark
1	5847.000	75.28	------	------	58.58	16.70	Average
2	5912.000	42.59	77.73	-35.14	25.89	16.70	Average
3	6027.000	42.83	68.20	-25.37	26.06	16.77	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

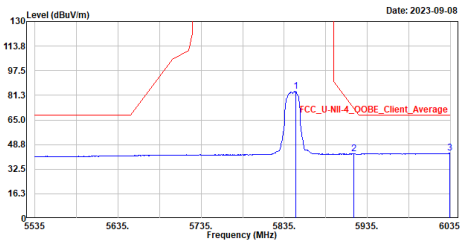
Site :HY-CB01
Condition :3m ,Horizontal
Mode :TX_a_5845MHz
TEST BY :Sam



No.	Frequency MHz	Level dBuV/m	Limit Line dBuV/m	Over Limit dB	Read Level dBuV	Factor dB	Remark
1	5632.500	54.77	68.20	-13.43	38.84	15.93	Peak
2	5697.000	55.43	102.98	-47.55	38.90	16.53	Peak
3	5717.000	55.01	109.96	-54.95	38.44	16.57	Peak
4	5846.500	85.64	------	------	68.94	16.70	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

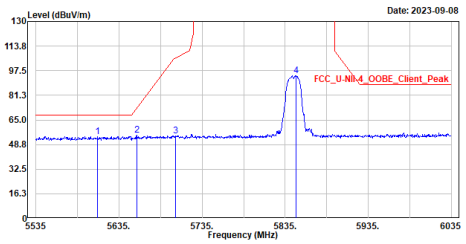
Site :HY-CB01
Condition :3m ,Vertical
Mode :TX_a_5845MHz
TEST BY :Sam



No.	Frequency MHz	Level dBuV/m	Limit Line dBuV/m	Over Limit dB	Read Level dBuV	Factor dB	Remark
1	5849.000	83.71	------	------	67.01	16.70	Average
2	5918.500	42.66	72.97	-30.31	25.96	16.70	Average
3	6034.500	42.96	68.20	-25.24	26.13	16.83	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

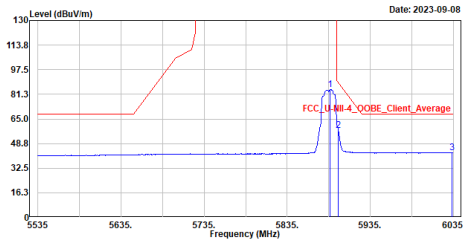
Site :HY-CB01
Condition :3m ,Vertical
Mode :TX_a_5845MHz
TEST BY :Sam



No.	Frequency MHz	Level dBuV/m	Limit Line dBuV/m	Over Limit dB	Read Level dBuV	Factor dB	Remark
1	5609.500	54.14	68.20	-14.06	38.39	15.75	Peak
2	5656.500	54.77	73.02	-18.25	38.63	16.14	Peak
3	5703.500	54.64	106.18	-51.54	38.09	16.55	Peak
4	5848.500	94.16	------	------	77.46	16.70	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

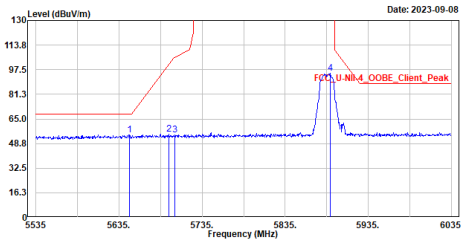
Site :HY-CB01
Condition :3m ,Horizontal
Mode :TX_a_5885MHz
TEST BY :Sam



No.	Frequency MHz	Level dBuV/m	Limit Line dBuV/m	Over Limit dB	Read Level dBuV	Factor dB	Remark
1	5886.500	84.37	------	------	67.67	16.70	Average
2	5896.500	57.40	89.10	-31.70	40.70	16.70	Average
3	6033.000	42.92	68.20	-25.28	26.10	16.82	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

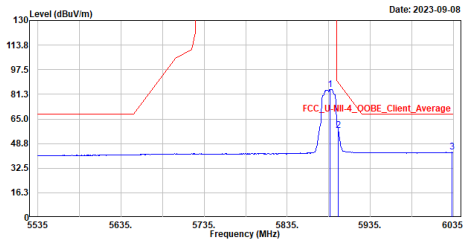
Site :HY-CB01
Condition :3m ,Horizontal
Mode :TX_a_5885MHz
TEST BY :Sam



No.	Frequency MHz	Level dBuV/m	Limit Line dBuV/m	Over Limit dB	Read Level dBuV	Factor dB	Remark
1	5647.500	54.52	68.20	-13.68	38.47	16.05	Peak
2	5695.000	54.85	101.50	-46.65	38.34	16.51	Peak
3	5702.500	54.64	105.90	-51.26	38.09	16.55	Peak
4	5889.000	94.97	------	------	78.27	16.70	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

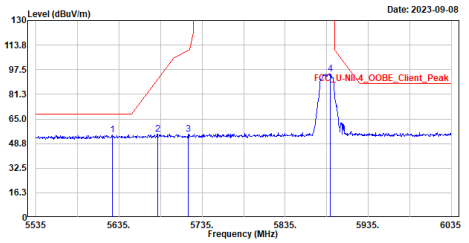
Site :HY-CB01
Condition :3m ,Vertical
Mode :TX_a_5885MHz
TEST BY :Sam



No.	Frequency MHz	Level dBuV/m	Limit Line dBuV/m	Over Limit dB	Read Level dBuV	Factor dB	Remark
1	5887.000	84.37	------	------	67.67	16.70	Average
2	5896.500	57.44	89.10	-31.66	40.74	16.70	Average
3	6033.000	42.97	68.20	-25.23	26.15	16.82	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

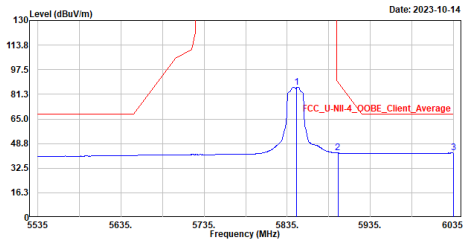
Site :HY-CB01
Condition :3m ,Vertical
Mode :TX_a_5885MHz
TEST BY :Sam



No.	Frequency MHz	Level dBuV/m	Limit Line dBuV/m	Over Limit dB	Read Level dBuV	Factor dB	Remark
1	5627.000	54.42	68.20	-13.78	38.53	15.89	Peak
2	5681.500	54.97	91.51	-36.54	38.57	16.40	Peak
3	5718.500	54.72	110.38	-55.66	38.14	16.58	Peak
4	5889.000	94.62	------	------	77.92	16.70	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

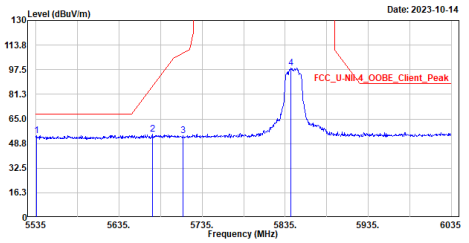
Site :HY-CB01
Condition :3m ,Horizontal
Mode :TX_ax20_5845MHz
TEST BY :Caster



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5846.500	85.82	------	------	69.12	16.70	Average
2	5896.000	42.47	89.47	-47.00	25.77	16.70	Average
3	6035.000	42.49	68.20	-25.71	25.65	16.84	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

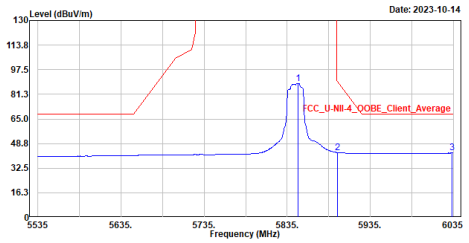
Site :HY-CB01
Condition :3m ,Horizontal
Mode :TX_ax20_5845MHz
TEST BY :Caster



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5535.500	54.18	68.20	-14.02	38.78	15.40	Peak
2	5675.000	55.04	86.70	-31.66	38.68	16.36	Peak
3	5712.500	54.15	108.70	-54.55	37.58	16.57	Peak
4	5842.000	98.75	------	------	82.05	16.70	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

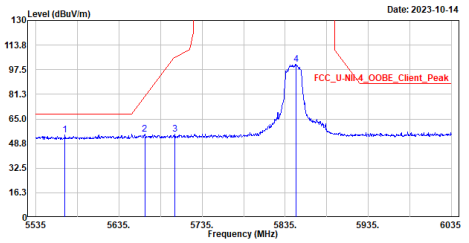
Site :HY-CB01
Condition :3m ,VERTICAL
Mode :TX_ax20_5845MHz
TEST BY :Caster



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5848.500	88.51	------	------	71.81	16.70	Average
2	5895.500	42.86	89.83	-46.97	26.16	16.70	Average
3	6033.500	42.48	68.20	-25.72	25.66	16.82	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

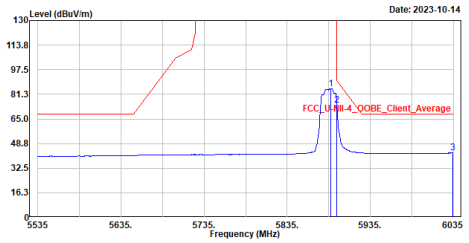
Site :HY-CB01
Condition :3m ,VERTICAL
Mode :TX_ax20_5845MHz
TEST BY :Caster



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5570.000	54.45	68.20	-13.75	38.93	15.52	Peak
2	5666.000	54.94	80.05	-25.11	38.68	16.26	Peak
3	5702.000	55.07	105.76	-50.69	38.53	16.54	Peak
4	5848.000	101.09	------	------	84.39	16.70	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

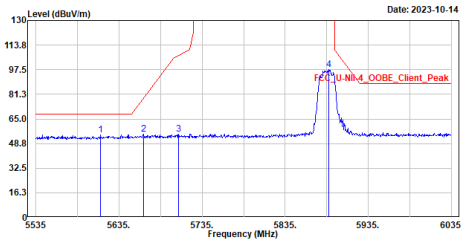
Site :HY-CB01
Condition :3m ,Horizontal
Mode :TX_ax20_5885MHz
TEST BY :Caster



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5887.500	84.87	------	------	68.17	16.70	Average
2	5895.000	74.23	90.20	-15.97	57.53	16.70	Average
3	6034.500	42.50	68.20	-25.70	25.67	16.83	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

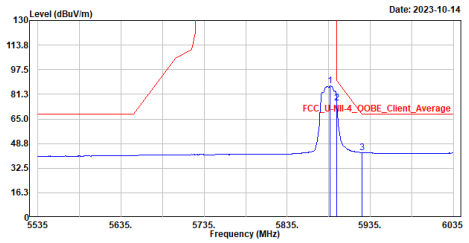
Site :HY-CB01
Condition :3m ,Horizontal
Mode :TX_ax20_5885MHz
TEST BY :Caster



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5613.000	54.51	68.20	-13.69	38.73	15.78	Peak
2	5665.000	54.88	79.31	-24.43	38.63	16.25	Peak
3	5707.000	54.79	107.16	-52.37	38.23	16.56	Peak
4	5887.500	97.70	------	------	81.00	16.70	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

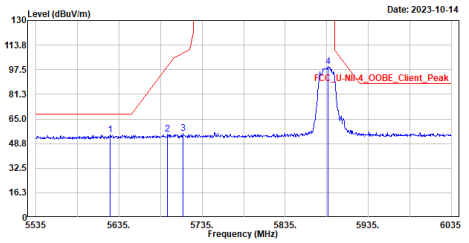
Site :HY-CB01
Condition :3m ,VERTICAL
Mode :TX_ax20_5885MHz
TEST BY :Caster



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5887.000	86.69	------	------	69.99	16.70	Average
2	5895.000	75.43	90.20	-14.77	58.73	16.70	Average
3	5925.000	42.70	68.20	-25.50	26.00	16.70	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

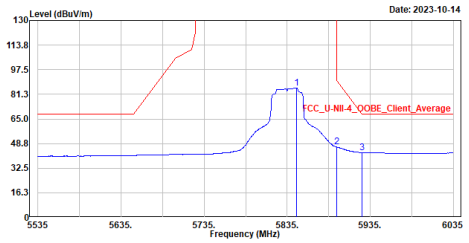
Site :HY-CB01
Condition :3m ,VERTICAL
Mode :TX_ax20_5885MHz
TEST BY :Caster



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5624.500	54.38	68.20	-13.82	38.51	15.87	Peak
2	5693.500	55.29	100.39	-45.37	38.52	16.50	Peak
3	5712.500	55.29	108.70	-53.41	38.72	16.57	Peak
4	5886.500	99.65	------	------	82.95	16.70	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

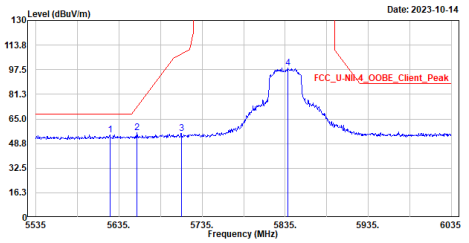
Site :HY-CB01
Condition :3m ,HORIZONTAL
Mode :TX_ax40_5835MHz
TEST BY :Caster



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5846.500	85.47	------	------	68.77	16.70	Average
2	5895.000	46.38	90.20	-43.82	29.68	16.70	Average
3	5925.000	42.72	68.20	-25.48	26.02	16.70	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

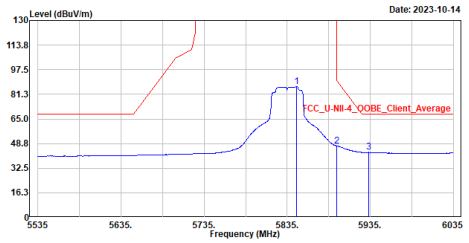
Site :HY-CB01
Condition :3m ,HORIZONTAL
Mode :TX_ax40_5835MHz
TEST BY :Caster



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5624.000	54.58	68.20	-13.62	38.71	15.87	Peak
2	5657.000	55.71	73.39	-17.68	39.56	16.15	Peak
3	5710.000	55.44	108.00	-52.56	38.87	16.57	Peak
4	5838.500	98.55	------	------	81.85	16.70	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

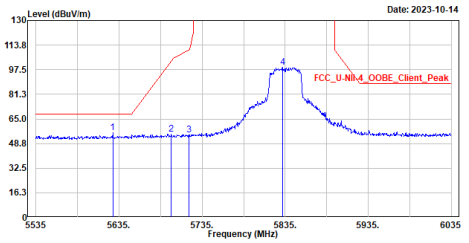
Site :HY-CB01
Condition :3m ,VERTICAL
Mode :TX_ax40_5835MHz
TEST BY :Caster



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5846.500	86.39	------	------	69.69	16.70	Average
2	5895.000	47.11	90.20	-43.09	30.41	16.70	Average
3	5933.500	42.93	68.20	-25.27	26.23	16.70	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

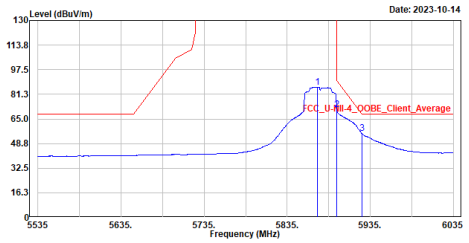
Site :HY-CB01
Condition :3m ,VERTICAL
Mode :TX_ax40_5835MHz
TEST BY :Caster



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5627.500	56.00	68.20	-12.20	40.11	15.89	Peak
2	5698.000	55.02	103.72	-48.70	38.49	16.53	Peak
3	5719.500	54.50	110.66	-56.16	37.92	16.58	Peak
4	5832.000	99.29	------	------	82.61	16.68	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

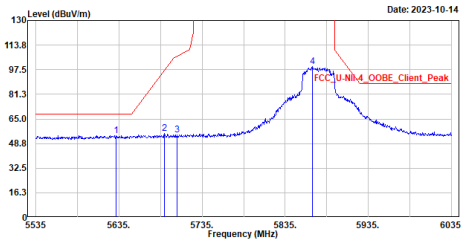
Site :HY-CB01
Condition :3m ,HORIZONTAL
Mode :TX_ax40_5875MHz
TEST BY :Caster



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5871.000	86.05	------	------	69.35	16.70	Average
2	5895.000	71.22	90.20	-18.98	54.52	16.70	Average
3	5925.000	55.28	68.20	-12.92	38.58	16.70	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

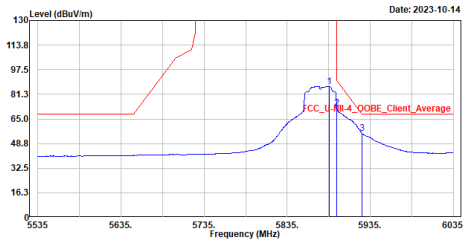
Site :HY-CB01
Condition :3m ,HORIZONTAL
Mode :TX_ax40_5875MHz
TEST BY :Caster



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5631.500	54.14	68.20	-14.06	38.21	15.93	Peak
2	5689.500	55.48	97.43	-41.95	39.00	16.48	Peak
3	5704.500	54.61	106.46	-51.85	38.06	16.55	Peak
4	5867.500	99.57	------	------	82.87	16.70	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

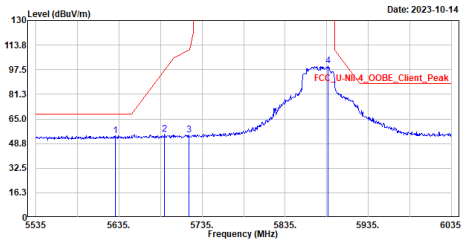
Site :HY-CB01
Condition :3m ,VERTICAL
Mode :TX_ax40_5875MHz
TEST BY :Caster



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5886.000	86.50	------	------	69.80	16.70	Average
2	5895.000	72.21	90.20	-17.99	55.51	16.70	Average
3	5925.000	55.56	68.20	-12.64	38.86	16.70	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

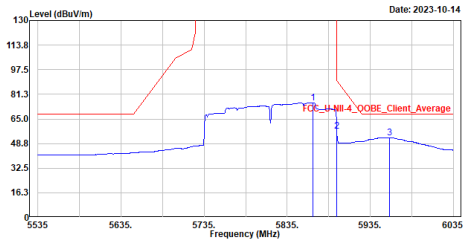
Site :HY-CB01
Condition :3m ,VERTICAL
Mode :TX_ax40_5875MHz
TEST BY :Caster



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5630.500	54.08	68.20	-14.12	38.17	15.91	Peak
2	5690.000	54.79	97.80	-43.01	38.31	16.48	Peak
3	5719.500	54.38	110.66	-56.28	37.80	16.58	Peak
4	5886.500	100.23	------	------	83.53	16.70	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

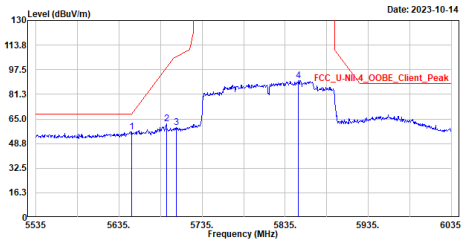
Site :HY-CB01
Condition :3m ,HORIZONTAL
Mode :TX_ax160_5815MHz
TEST BY :Caster



No.	Frequency MHz	Level dBuV/m	Limit Line dBuV/m	Over Limit dB	Read Level dBuV	Factor dB	Remark
1	5866.000	75.75	------	------	59.05	16.70	Average
2	5895.000	56.93	90.20	-33.27	40.23	16.70	Average
3	5958.000	52.72	68.20	-15.48	36.06	16.66	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

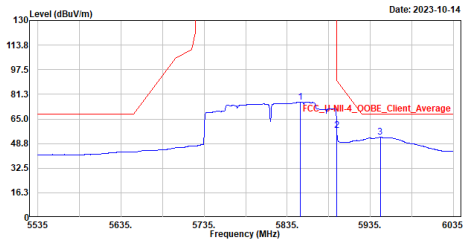
Site :HY-CB01
Condition :3m ,HORIZONTAL
Mode :TX_ax160_5815MHz
TEST BY :Caster



No.	Frequency MHz	Level dBuV/m	Limit Line dBuV/m	Over Limit dB	Read Level dBuV	Factor dB	Remark
1	5650.000	56.48	68.21	-11.73	40.41	16.07	Peak
2	5692.000	61.84	99.28	-37.44	45.35	16.49	Peak
3	5704.000	59.24	106.32	-47.08	42.69	16.55	Peak
4	5851.000	90.19	------	------	73.49	16.70	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

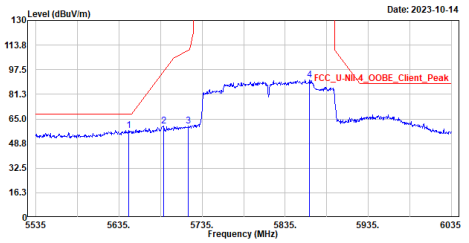
Site :HY-CB01
Condition :3m ,VERTICAL
Mode :TX_ax160_5815MHz
TEST BY :Caster



No.	Frequency MHz	Level dBuV/m	Limit Line dBuV/m	Over Limit dB	Read Level dBuV	Factor dB	Remark
1	5851.000	76.08	------	------	59.38	16.70	Average
2	5895.000	57.59	90.20	-32.61	40.89	16.70	Average
3	5947.000	52.82	68.20	-15.38	36.13	16.69	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB01
Condition :3m ,VERTICAL
Mode :TX_ax160_5815MHz
TEST BY :Caster

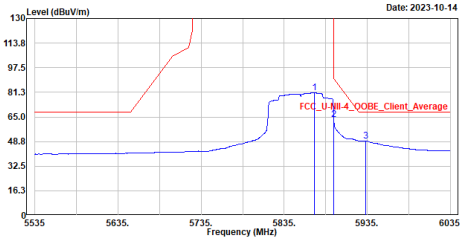


No.	Frequency MHz	Level dBuV/m	Limit Line dBuV/m	Over Limit dB	Read Level dBuV	Factor dB	Remark
1	5646.500	57.54	68.20	-10.66	41.49	16.05	Peak
2	5688.500	60.42	96.69	-36.27	43.95	16.47	Peak
3	5718.500	60.28	110.38	-50.10	43.70	16.58	Peak
4	5864.500	90.67	------	------	73.97	16.70	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

SISO B

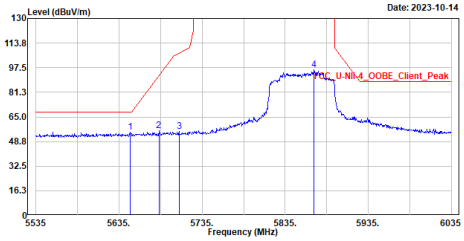
Site :HY-CB01
Condition :3m ,HORIZONTAL
Mode :TX_ax80_5855MHz
TEST BY :Caster



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5871.000	80.98	------	------	64.28	16.70	Average
2	5895.000	63.34	90.20	-26.86	46.64	16.70	Average
3	5933.000	49.21	68.20	-18.99	32.51	16.70	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

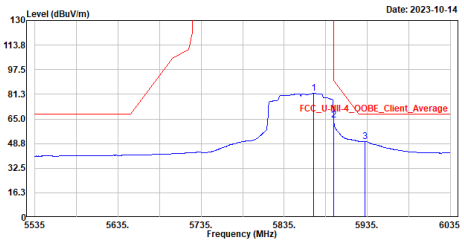
Site :HY-CB01
Condition :3m ,HORIZONTAL
Mode :TX_ax80_5855MHz
TEST BY :Caster



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5648.500	54.77	68.20	-13.43	38.72	16.05	Peak
2	5683.000	56.05	92.62	-36.57	39.64	16.41	Peak
3	5707.500	55.67	107.30	-51.63	39.10	16.57	Peak
4	5870.000	95.96	------	------	79.26	16.70	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

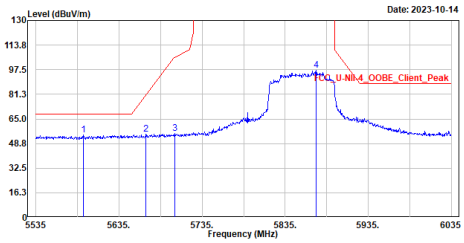
Site :HY-CB01
Condition :3m ,VERTICAL
Mode :TX_ax80_5855MHz
TEST BY :Caster



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5870.500	81.86	------	------	65.16	16.70	Average
2	5895.000	64.40	90.20	-25.80	47.70	16.70	Average
3	5932.000	50.27	68.20	-17.93	33.57	16.70	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB01
Condition :3m ,VERTICAL
Mode :TX_ax80_5855MHz
TEST BY :Caster

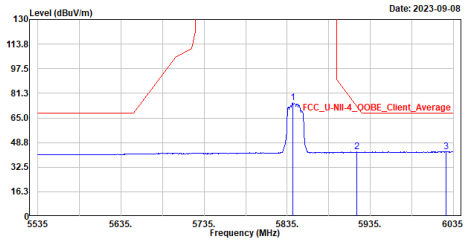


No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5592.500	54.46	68.20	-13.74	38.84	15.62	Peak
2	5667.500	54.87	81.15	-26.28	38.59	16.28	Peak
3	5702.000	55.34	105.76	-50.42	38.80	16.54	Peak
4	5872.500	96.90	------	------	80.20	16.70	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

MIMO

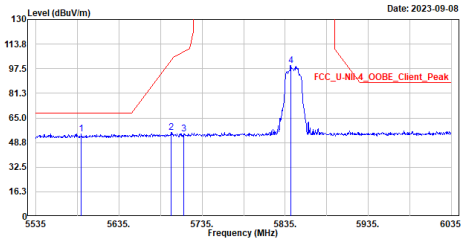
Site :HY-CB01
Condition :3m ,Horizontal
Mode :TX_ax20_5845MHz
TEST BY :Sam



No.	Frequency MHz	Level dBuV/m	Limit Line dBuV/m	Over Limit dB	Read Level dBuV	Factor dB	Remark
1	5841.500	74.92	------	------	58.22	16.70	Average
2	5919.000	42.55	72.60	-30.05	25.85	16.70	Average
3	6026.000	42.74	68.20	-25.46	25.98	16.76	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

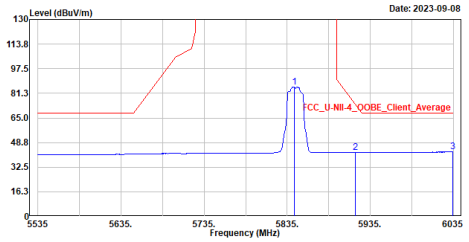
Site :HY-CB01
Condition :3m ,Horizontal
Mode :TX_ax20_5845MHz
TEST BY :Sam



No.	Frequency MHz	Level dBuV/m	Limit Line dBuV/m	Over Limit dB	Read Level dBuV	Factor dB	Remark
1	5589.500	54.68	68.20	-13.52	39.08	15.60	Peak
2	5698.000	55.54	103.72	-48.18	39.01	16.53	Peak
3	5713.000	54.59	108.84	-54.25	38.02	16.57	Peak
4	5841.500	99.38	------	------	82.68	16.70	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

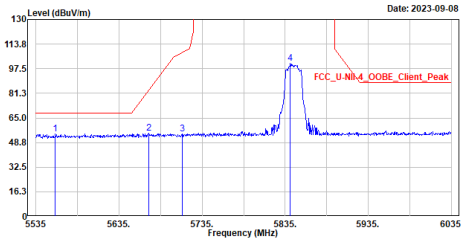
Site :HY-CB01
Condition :3m ,Vertical
Mode :TX_ax20_5845MHz
TEST BY :Sam



No.	Frequency MHz	Level dBuV/m	Limit Line dBuV/m	Over Limit dB	Read Level dBuV	Factor dB	Remark
1	5843.500	85.43	------	------	68.73	16.70	Average
2	5917.000	42.27	74.07	-31.80	25.57	16.70	Average
3	6034.500	42.62	68.20	-25.58	25.79	16.83	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

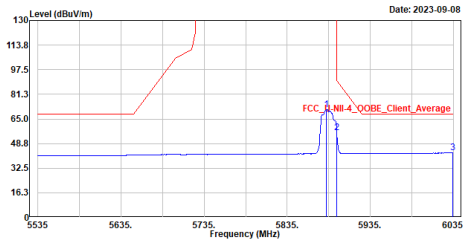
Site :HY-CB01
Condition :3m ,Vertical
Mode :TX_ax20_5845MHz
TEST BY :Sam



No.	Frequency MHz	Level dBuV/m	Limit Line dBuV/m	Over Limit dB	Read Level dBuV	Factor dB	Remark
1	5558.500	54.62	68.20	-13.58	39.14	15.48	Peak
2	5671.000	54.99	83.74	-28.75	38.67	16.32	Peak
3	5711.000	54.67	108.28	-53.61	38.10	16.57	Peak
4	5841.000	101.11	------	------	84.41	16.70	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

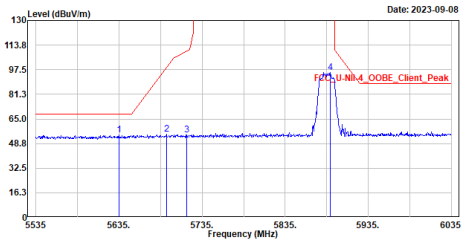
Site :HY-CB01
Condition :3m ,Horizontal
Mode :TX_ax20_5885MHz
TEST BY :Sam



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5882.500	70.92	------	------	54.22	16.70	Average
2	5895.000	56.00	90.20	-34.20	39.30	16.70	Average
3	6034.000	42.66	68.20	-25.54	25.84	16.82	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

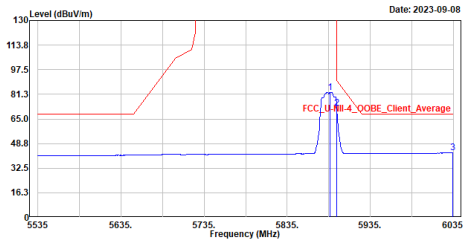
Site :HY-CB01
Condition :3m ,Horizontal
Mode :TX_ax20_5885MHz
TEST BY :Sam



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5635.000	54.40	68.20	-13.80	38.45	15.95	Peak
2	5692.000	54.95	99.28	-44.33	38.46	16.49	Peak
3	5716.500	54.47	109.82	-55.35	37.90	16.57	Peak
4	5889.000	95.80	------	------	79.10	16.70	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

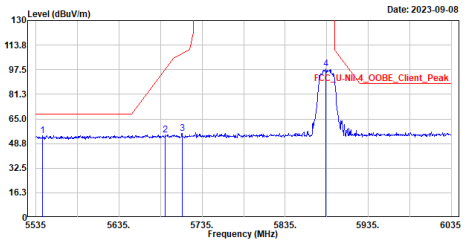
Site :HY-CB01
Condition :3m ,Vertical
Mode :TX_ax20_5885MHz
TEST BY :Sam



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5887.000	82.49	------	------	65.79	16.70	Average
2	5895.000	71.95	90.20	-18.25	55.25	16.70	Average
3	6034.000	42.63	68.20	-25.57	25.81	16.82	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

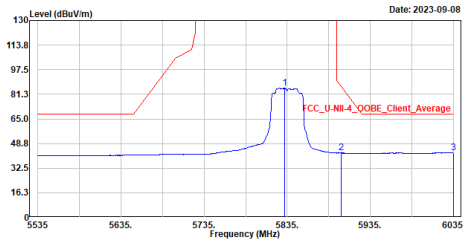
Site :HY-CB01
Condition :3m ,Vertical
Mode :TX_ax20_5885MHz
TEST BY :Sam



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5543.000	54.14	68.20	-14.06	38.72	15.42	Peak
2	5691.000	54.57	98.54	-43.97	38.09	16.48	Peak
3	5711.000	55.51	108.28	-52.77	38.94	16.57	Peak
4	5884.000	98.14	------	------	81.44	16.70	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

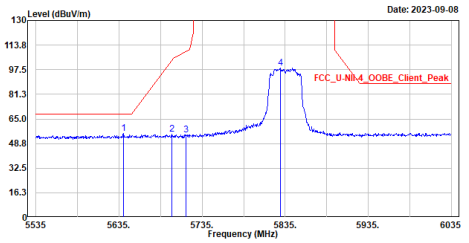
Site :HY-CB01
Condition :3m ,Horizontal
Mode :TX_ax40_5835MHz
TEST BY :Sam



No.	Frequency MHz	Level dBuV/m	Limit Line dBuV/m	Over Limit dB	Read Level dBuV	Factor dB	Remark
1	5832.000	85.23	------	------	68.55	16.68	Average
2	5900.000	42.46	86.53	-44.07	25.77	16.69	Average
3	6035.000	42.69	68.20	-25.51	25.85	16.84	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

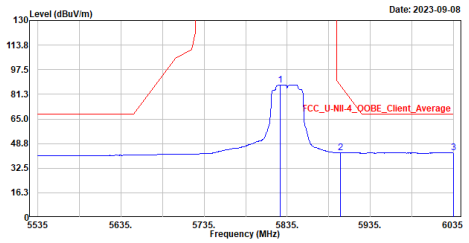
Site :HY-CB01
Condition :3m ,Horizontal
Mode :TX_ax40_5835MHz
TEST BY :Sam



No.	Frequency MHz	Level dBuV/m	Limit Line dBuV/m	Over Limit dB	Read Level dBuV	Factor dB	Remark
1	5640.500	55.20	68.20	-13.00	39.21	15.99	Peak
2	5699.000	55.16	104.46	-49.30	38.62	16.54	Peak
3	5716.000	54.68	109.68	-55.00	38.11	16.57	Peak
4	5829.000	98.62	------	------	81.94	16.68	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

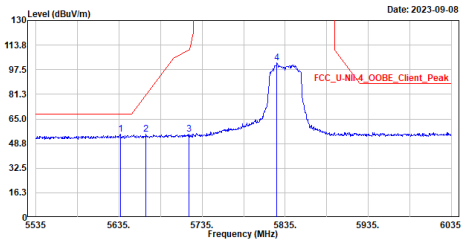
Site :HY-CB01
Condition :3m ,Vertical
Mode :TX_ax40_5835MHz
TEST BY :Sam



No.	Frequency MHz	Level dBuV/m	Limit Line dBuV/m	Over Limit dB	Read Level dBuV	Factor dB	Remark
1	5827.000	87.39	------	------	70.71	16.68	Average
2	5899.000	42.71	87.27	-44.56	26.02	16.69	Average
3	6035.000	42.65	68.20	-25.55	25.81	16.84	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

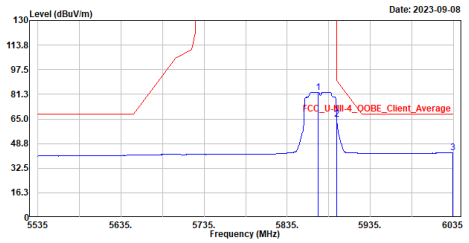
Site :HY-CB01
Condition :3m ,Vertical
Mode :TX_ax40_5835MHz
TEST BY :Sam



No.	Frequency MHz	Level dBuV/m	Limit Line dBuV/m	Over Limit dB	Read Level dBuV	Factor dB	Remark
1	5636.500	54.84	68.20	-13.36	38.88	15.96	Peak
2	5667.500	54.93	81.15	-26.22	38.65	16.28	Peak
3	5719.000	54.88	110.52	-55.64	38.30	16.58	Peak
4	5825.000	101.83	------	------	85.15	16.68	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

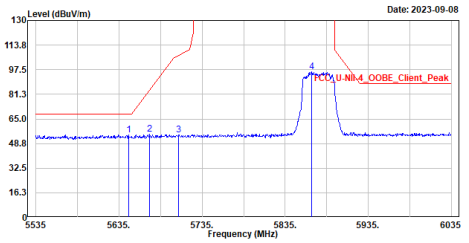
Site :HY-CB01
Condition :3m ,Horizontal
Mode :TX_ax40_5875MHz
TEST BY :Sam



No.	Frequency MHz	Level dBuV/m	Limit Line dBuV/m	Over Limit dB	Read Level dBuV	Factor dB	Remark
1	5872.000	82.65	------	------	65.95	16.70	Average
2	5895.000	64.86	90.20	-25.34	48.16	16.70	Average
3	6034.500	42.62	68.20	-25.58	25.79	16.83	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

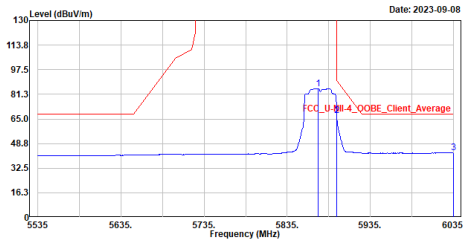
Site :HY-CB01
Condition :3m ,Horizontal
Mode :TX_ax40_5875MHz
TEST BY :Sam



No.	Frequency MHz	Level dBuV/m	Limit Line dBuV/m	Over Limit dB	Read Level dBuV	Factor dB	Remark
1	5646.500	54.57	68.20	-13.63	38.52	16.05	Peak
2	5672.000	54.73	84.48	-29.75	38.40	16.33	Peak
3	5707.000	54.50	107.16	-52.66	37.94	16.56	Peak
4	5866.500	96.00	------	------	79.30	16.70	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

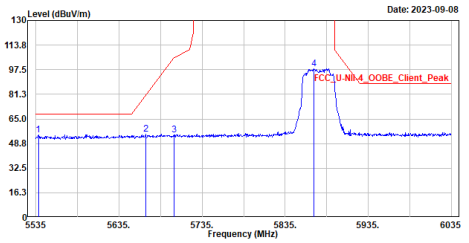
Site :HY-CB01
Condition :3m ,Vertical
Mode :TX_ax40_5875MHz
TEST BY :Sam



No.	Frequency MHz	Level dBuV/m	Limit Line dBuV/m	Over Limit dB	Read Level dBuV	Factor dB	Remark
1	5872.500	84.94	------	------	68.24	16.70	Average
2	5895.000	67.07	90.20	-23.13	50.37	16.70	Average
3	6035.000	42.63	68.20	-25.57	25.79	16.84	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

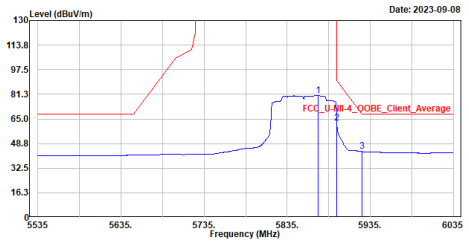
Site :HY-CB01
Condition :3m ,Vertical
Mode :TX_ax40_5875MHz
TEST BY :Sam



No.	Frequency MHz	Level dBuV/m	Limit Line dBuV/m	Over Limit dB	Read Level dBuV	Factor dB	Remark
1	5538.000	54.67	68.20	-13.53	39.26	15.41	Peak
2	5667.000	55.13	80.78	-25.65	38.86	16.27	Peak
3	5701.000	54.53	105.48	-50.95	37.98	16.55	Peak
4	5870.000	98.00	------	------	81.30	16.70	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

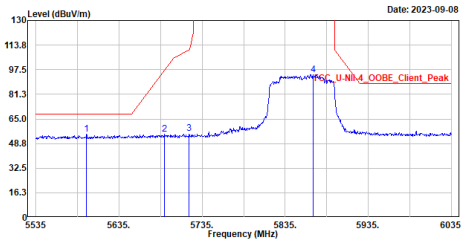
Site :HY-CB01
Condition :3m ,Horizontal
Mode :TX_ax80_5855MHz
TEST BY :Sam



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5872.500	80.54	------	------	63.84	16.70	Average
2	5895.000	62.45	90.20	-27.75	45.75	16.70	Average
3	5925.500	43.42	68.20	-24.78	26.72	16.70	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

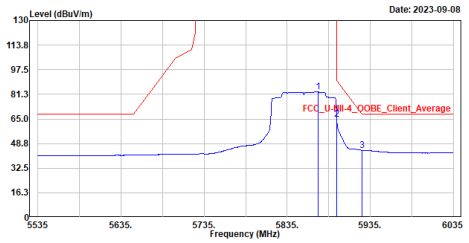
Site :HY-CB01
Condition :3m ,Horizontal
Mode :TX_ax80_5855MHz
TEST BY :Sam



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5596.000	54.98	68.20	-13.22	39.34	15.64	Peak
2	5690.000	54.98	97.80	-42.82	38.50	16.48	Peak
3	5719.500	55.19	110.66	-55.47	38.61	16.58	Peak
4	5868.500	94.19	------	------	77.49	16.70	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

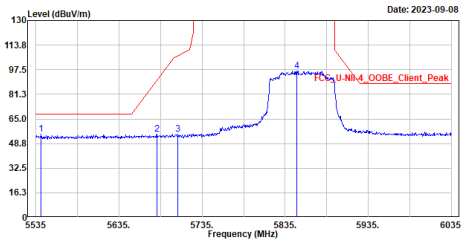
Site :HY-CB01
Condition :3m ,Vertical
Mode :TX_ax80_5855MHz
TEST BY :Sam



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5872.500	82.77	------	------	66.07	16.70	Average
2	5895.000	64.86	90.20	-25.34	48.16	16.70	Average
3	5925.000	44.25	68.20	-23.95	27.55	16.70	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

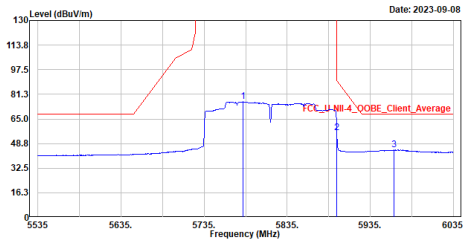
Site :HY-CB01
Condition :3m ,Vertical
Mode :TX_ax80_5855MHz
TEST BY :Sam



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5541.500	54.79	68.20	-13.41	39.37	15.42	Peak
2	5680.500	54.88	90.77	-35.89	38.49	16.39	Peak
3	5706.000	54.96	106.88	-51.92	38.41	16.55	Peak
4	5849.000	96.81	------	------	80.11	16.70	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

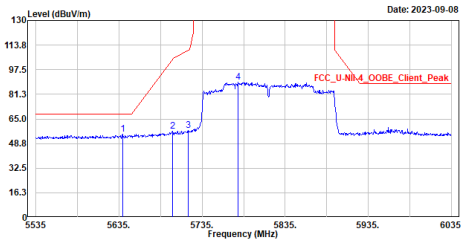
Site :HY-CB01
Condition :3m ,Horizontal
Mode :TX_ax160_5815MHz
TEST BY :Sam



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5781.500	76.38	------	------	59.74	16.64	Average
2	5895.000	55.71	90.20	-34.49	39.01	16.70	Average
3	5964.000	44.45	68.20	-23.75	27.80	16.65	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

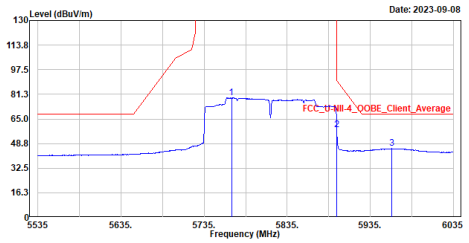
Site :HY-CB01
Condition :3m ,Horizontal
Mode :TX_ax160_5815MHz
TEST BY :Sam



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5639.500	54.70	68.20	-13.50	38.72	15.98	Peak
2	5699.500	56.72	104.83	-48.11	40.17	16.55	Peak
3	5718.000	57.51	110.24	-52.73	40.93	16.58	Peak
4	5778.500	89.28	------	------	72.64	16.64	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

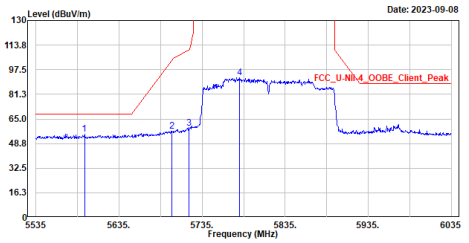
Site :HY-CB01
Condition :3m ,Vertical
Mode :TX_ax160_5815MHz
TEST BY :Sam



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5768.000	78.96	------	------	62.34	16.62	Average
2	5895.000	57.77	90.20	-32.43	41.07	16.70	Average
3	5960.500	45.47	68.20	-22.73	28.81	16.66	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB01
Condition :3m ,Vertical
Mode :TX_ax160_5815MHz
TEST BY :Sam

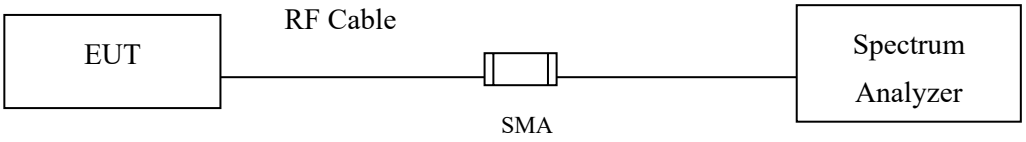


No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5593.500	54.85	68.20	-13.35	39.23	15.62	Peak
2	5698.500	57.06	104.09	-47.03	40.52	16.54	Peak
3	5719.000	59.11	110.52	-51.41	42.53	16.58	Peak
4	5780.500	92.21	------	------	75.57	16.64	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

7. Occupied Bandwidth

7.1. Test Setup



7.2. Limits

For the 5.85-5.895 GHz band, the minimum 6 dB bandwidth of U-NII devices shall be at least 500 kHz

7.3. Test Procedure

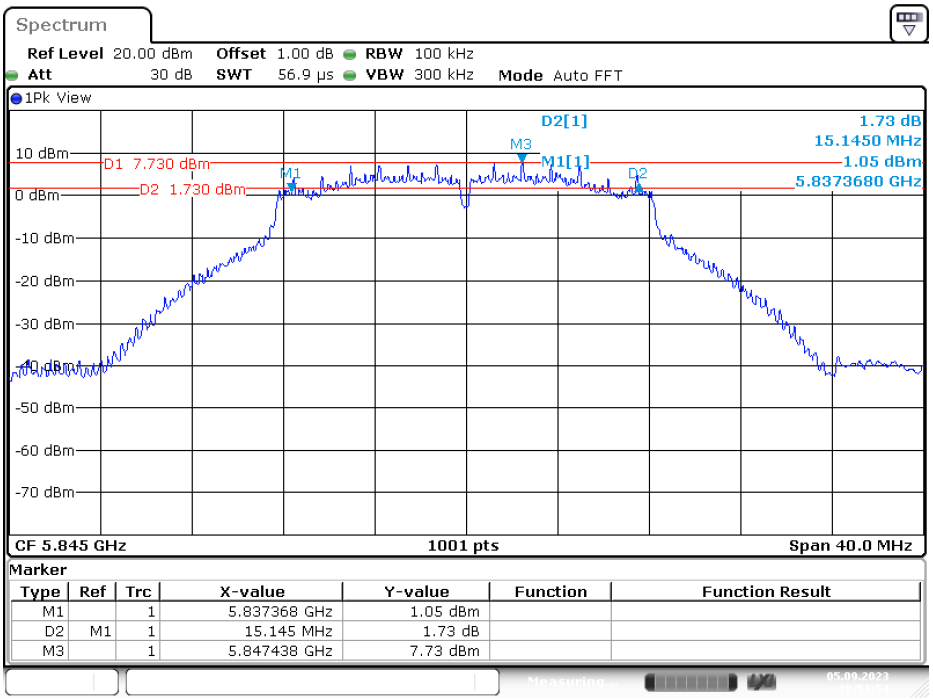
The EUT was setup to ANSI C63.10, 2013; tested to UNII test procedure of FCC KDB-789033 for compliance to FCC 47CFR Subpart E requirements.

7.4. Test Result of Occupied Bandwidth

Product : Notebook Computer
Test Item : Occupied Bandwidth Data
Test Mode : Transmit (802.11a)-SISO A
Test Date : 2023/09/05

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
169	5845	15.15	>500	Pass
173	5865	15.19	>500	Pass
177	5885	15.19	>500	Pass

Channel 169

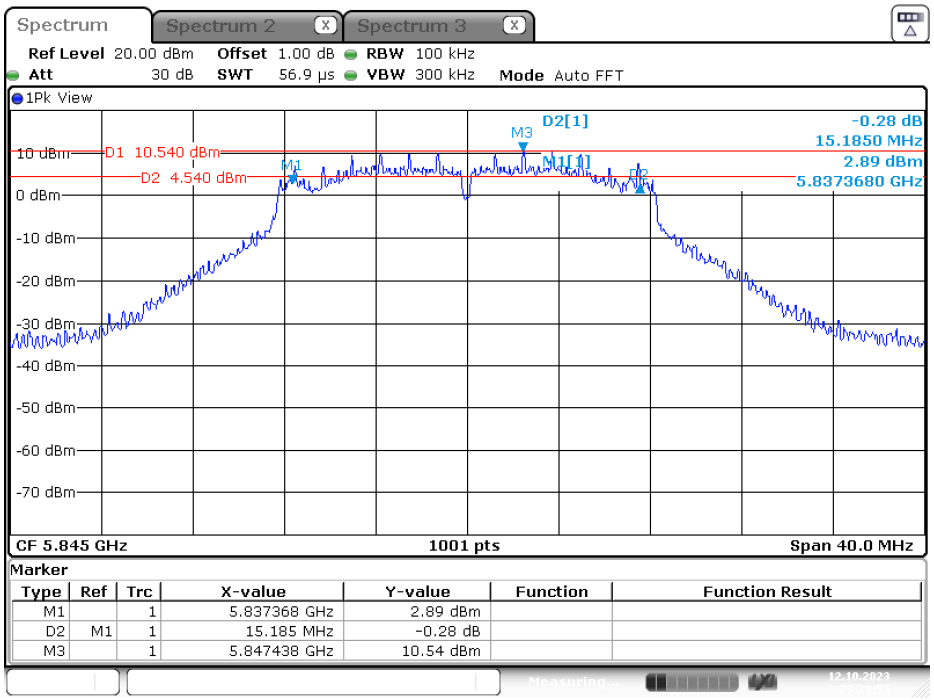


Date: 5.SEP.2023 18:51:54

Product : Notebook Computer
Test Item : Occupied Bandwidth Data
Test Mode : Transmit (802.11ax-20 MHz)-SISO A
Test Date : 2023/10/12

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
169	5845	15.19	>500	Pass
173	5865	15.20	>500	Pass
177	5885	15.19	>500	Pass

Channel 177

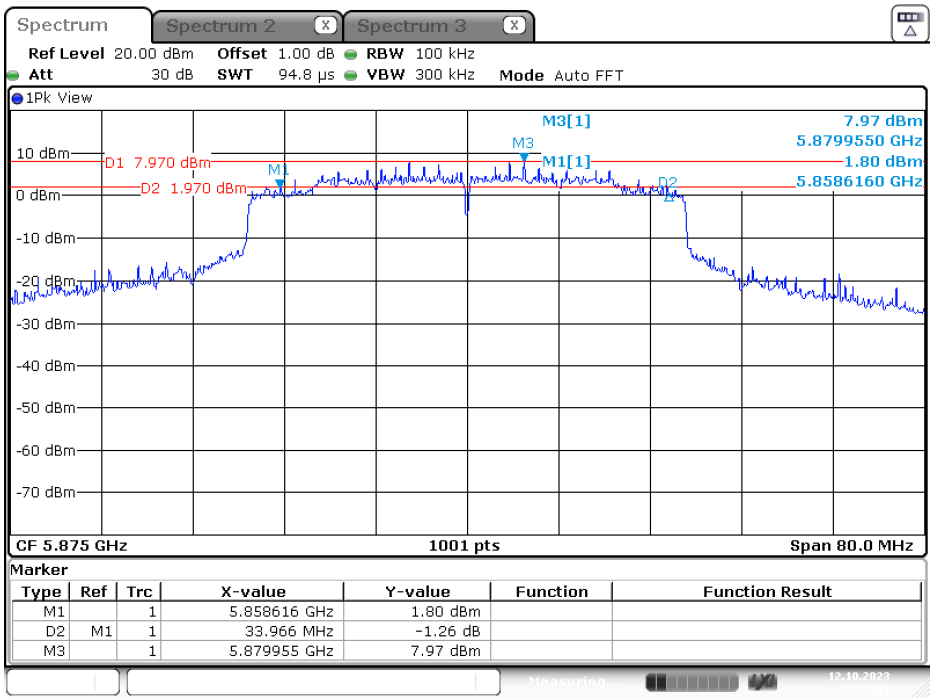


Date: 12.OCT.2023 23:23:55

Product : Notebook Computer
Test Item : Occupied Bandwidth Data
Test Mode : Transmit (802.11ax-40 MHz)-SISO A
Test Date : 2023/10/12

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
167	5835	35.25	>500	Pass
175	5875	33.97	>500	Pass

Channel 175

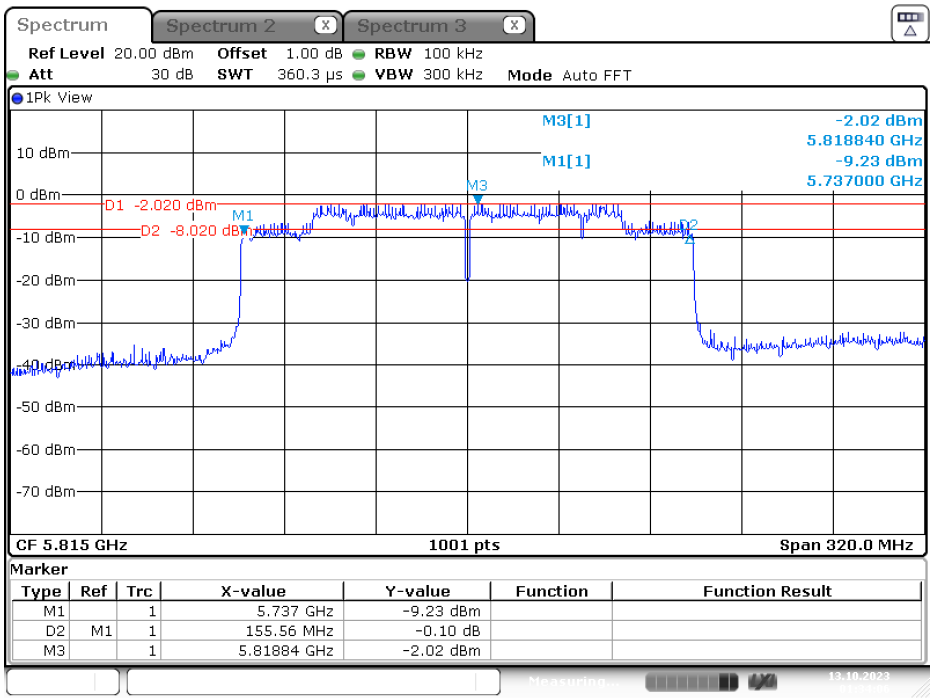


Date: 12.OCT.2023 23:59:05

Product : Notebook Computer
Test Item : Occupied Bandwidth Data
Test Mode : Transmit (802.11ax-160 MHz)-SISO A
Test Date : 2023/10/13

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
163	5815	155.56	>500	Pass

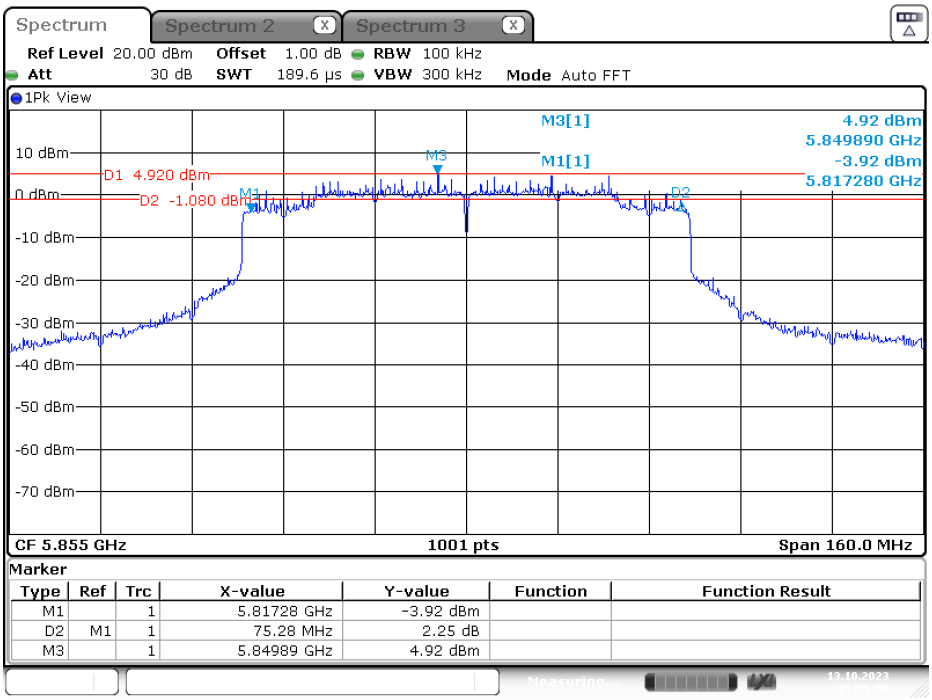
Channel 163



Product : Notebook Computer
Test Item : Occupied Bandwidth Data
Test Mode : Transmit (802.11ax-80 MHz)-SISO B
Test Date : 2023/10/13

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
171	5855	75.28	>500	Pass

Channel 171



Date: 13.OCT.2023 01:25:09

Product : Notebook Computer
Test Item : Occupied Bandwidth Data
Test Mode : Transmit (802.11ax-20 MHz)-MIMO
Test Date : 2023/09/05

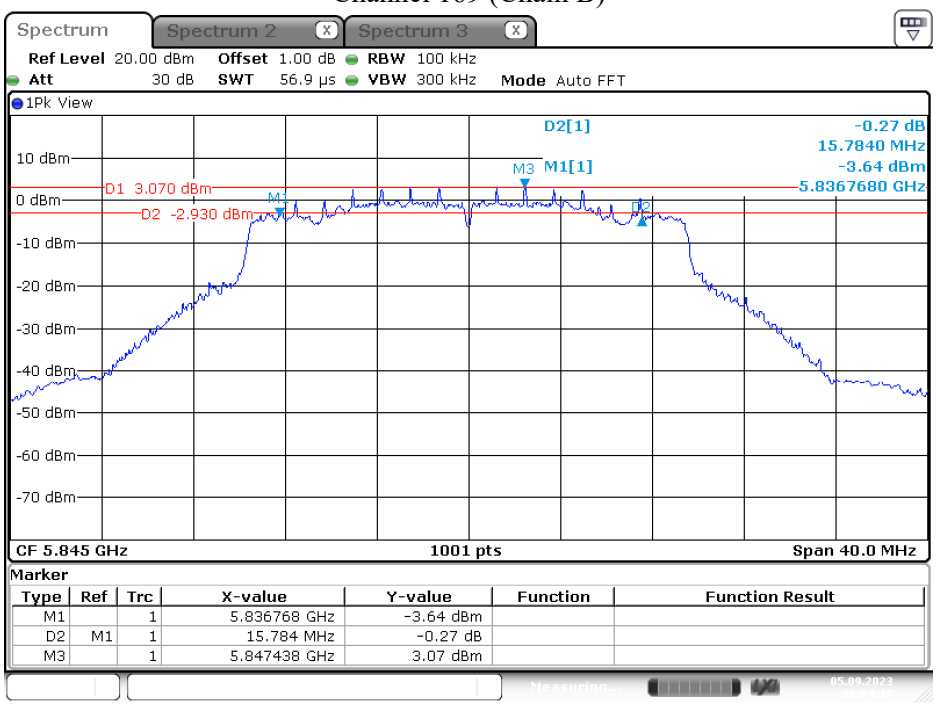
Chain A

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
169	5845	15.86	>500	Pass
173	5865	17.14	>500	Pass
177	5885	16.08	>500	Pass

Chain B

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
169	5845	15.78	>500	Pass
173	5865	16.18	>500	Pass
177	5885	17.02	>500	Pass

Channel 169 (Chain B)



Date: 5.SEP.2023 20:54:18

Product : Notebook Computer
Test Item : Occupied Bandwidth Data
Test Mode : Transmit (802.11ax-40 MHz)-MIMO
Test Date : 2023/09/05

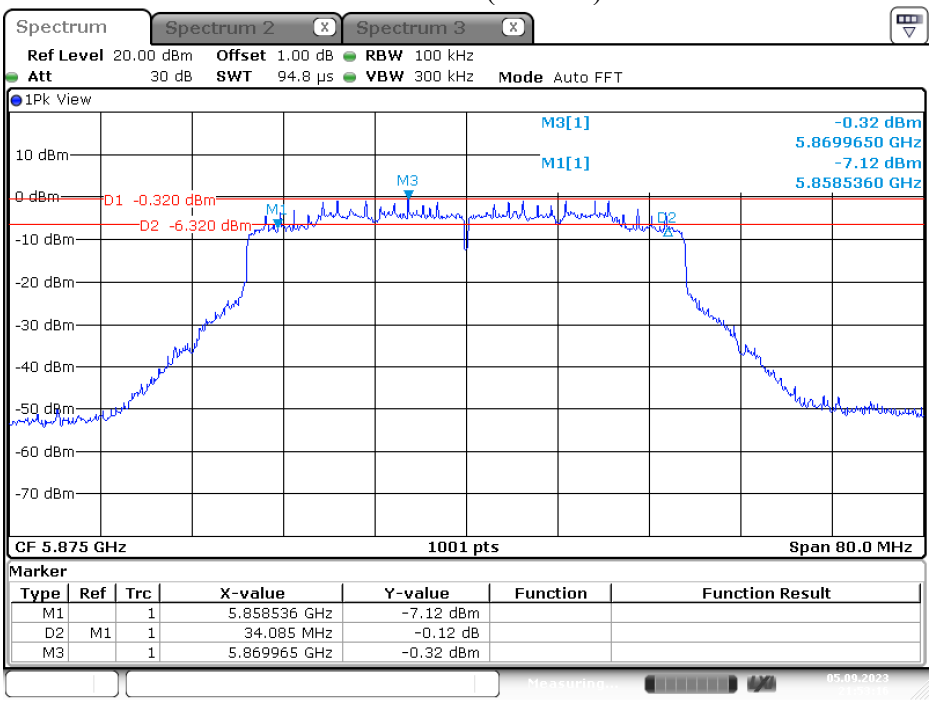
Chain A

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
167	5835	35.25	>500	Pass
175	5875	34.25	>500	Pass

Chain B

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
167	5835	35.25	>500	Pass
175	5875	34.09	>500	Pass

Channel 175 (Chain B)



Date: 5.SEP.2023 21:53:16

Product : Notebook Computer
Test Item : Occupied Bandwidth Data
Test Mode : Transmit (802.11ax-80 MHz)-MIMO
Test Date : 2023/09/13

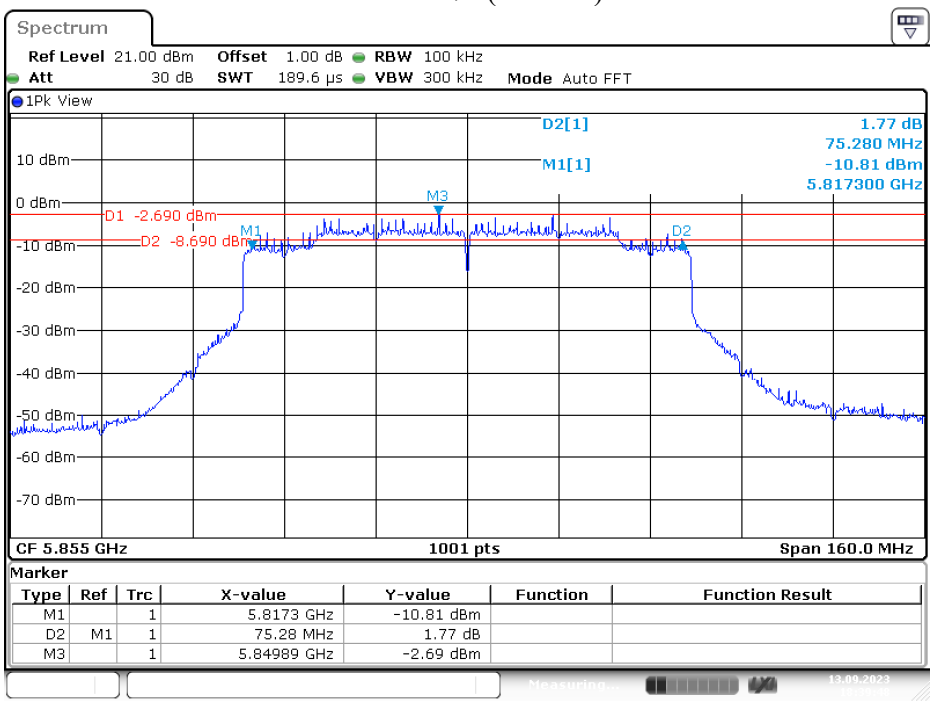
Chain A

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
171	5855	75.32	>500	Pass

Chain B

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
171	5855	75.28	>500	Pass

Channel 171 (Chain B)



Product : Notebook Computer
Test Item : Occupied Bandwidth Data
Test Mode : Transmit (802.11ax-160 MHz)-MIMO
Test Date : 2023/09/05

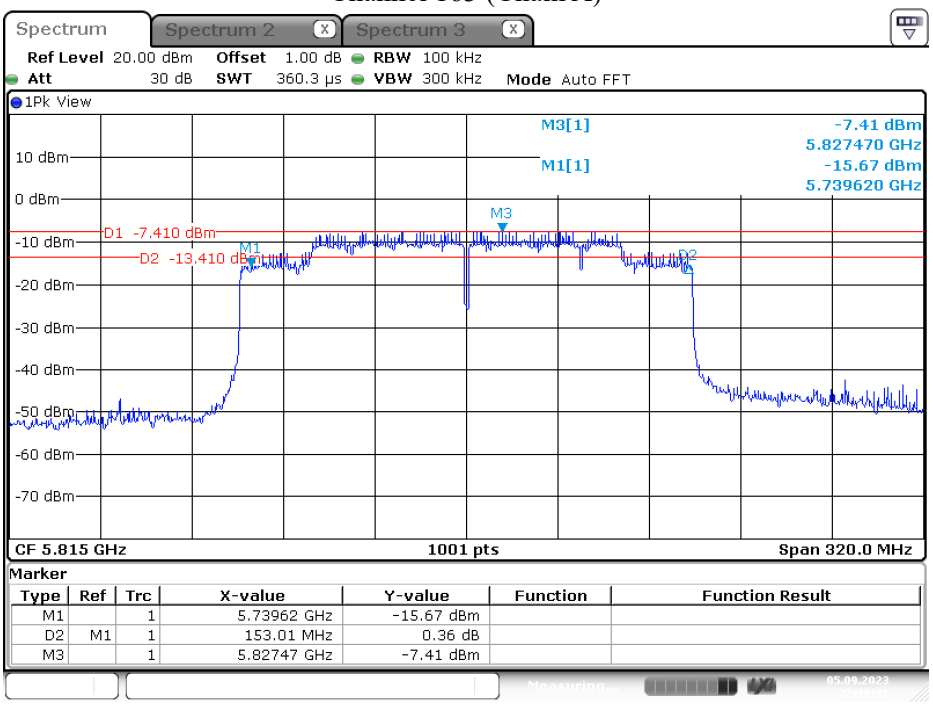
Chain A

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
163	5815	153.01	>500	Pass

Chain B

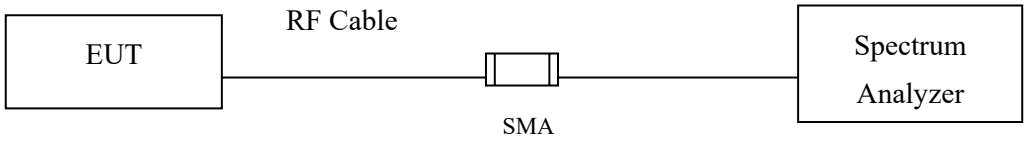
Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
163	5815	153.01	>500	Pass

Channel 163 (Chain A)



8. Duty Cycle

8.1. Test Setup



8.2. Test Procedure

The EUT was setup according to ANSI C63.10 2013; tested according to U-NII test procedure of KDB789033 for compliance to FCC 47CFR 15.407 requirements.

8.3. Test Result of Duty Cycle

Product : Notebook Computer
Test Item : Duty Cycle
Test Mode : Transmit

Duty Cycle Formula:
Duty Cycle = Ton / (Ton + Toff)
Duty Factor = 10 Log (1/Duty Cycle)
Results:

SISO A

5 GHz band	Ton (ms)	Ton + Toff (ms)	Duty Cycle (%)	Duty Factor (dB)
802.11a	2.0800	2.1400	97.20	0.12
802.11ax-20 MHz	3.9955	4.0319	99.10	0.04
802.11ax-40 MHz	3.9935	4.0359	98.95	0.05
802.11ax-80 MHz	3.9835	4.0359	98.70	0.06
802.11ax-160 MHz	3.9935	4.0459	98.71	0.06

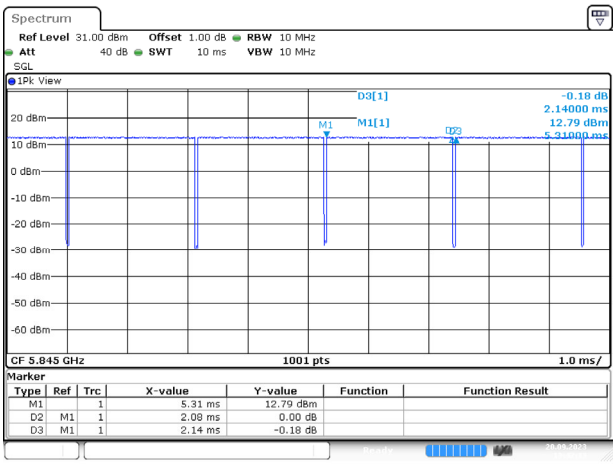
SISO B

5 GHz band	Ton (ms)	Ton + Toff (ms)	Duty Cycle (%)	Duty Factor (dB)
802.11a	2.0875	2.1319	97.92	0.09
802.11ax-20 MHz	3.9835	4.0359	98.70	0.06
802.11ax-40 MHz	3.9835	4.0359	98.70	0.06
802.11ax-80 MHz	3.9935	4.0459	98.71	0.06
802.11ax-160 MHz	3.9835	4.0359	98.70	0.06

MIMO

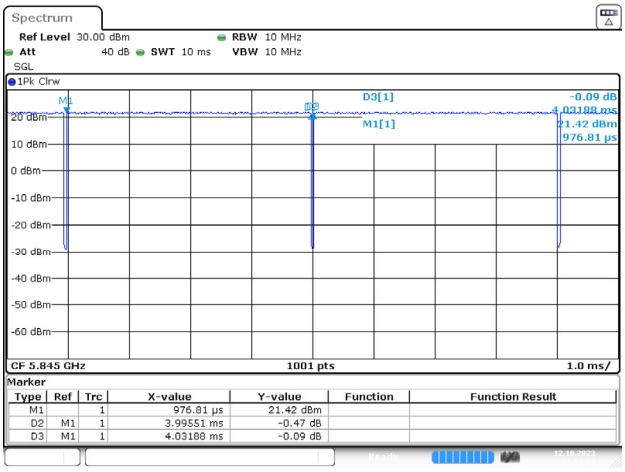
5 GHz band	Ton (ms)	Ton + Toff (ms)	Duty Cycle (%)	Duty Factor (dB)
802.11ax-20 MHz	3.9900	4.0300	99.01	0.04
802.11ax-40 MHz	3.9800	4.0300	98.76	0.05
802.11ax-80 MHz	3.9900	4.0500	98.52	0.06
802.11ax-160 MHz	2.3140	2.3620	97.97	0.09

802.11a-SISO A



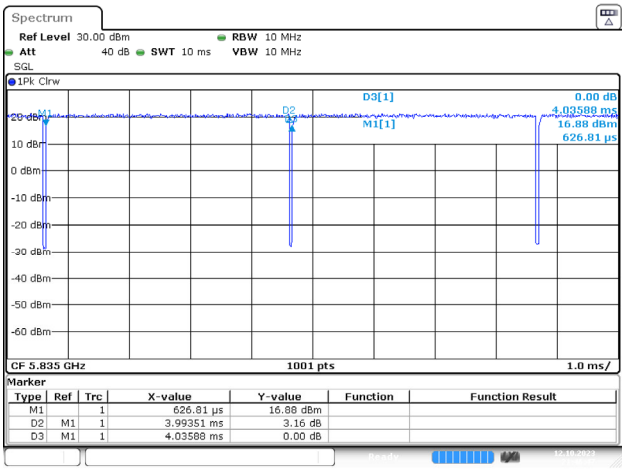
Date: 20.SEP.2023 13:42:13

802.11ax-20 MHz-SISO A



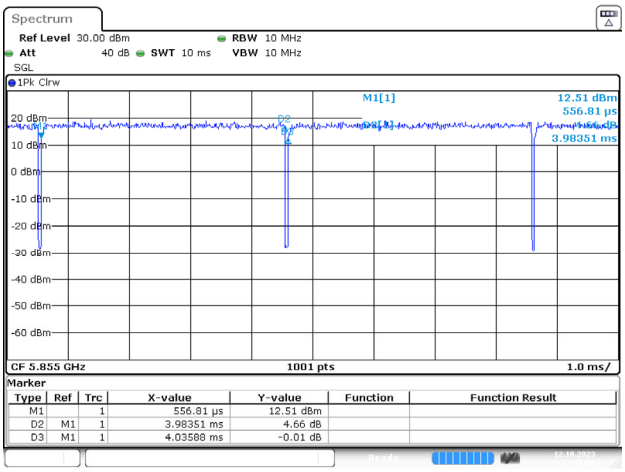
Date: 12.OCT.2023 21:39:15

802.11ax-40 MHz-SISO A



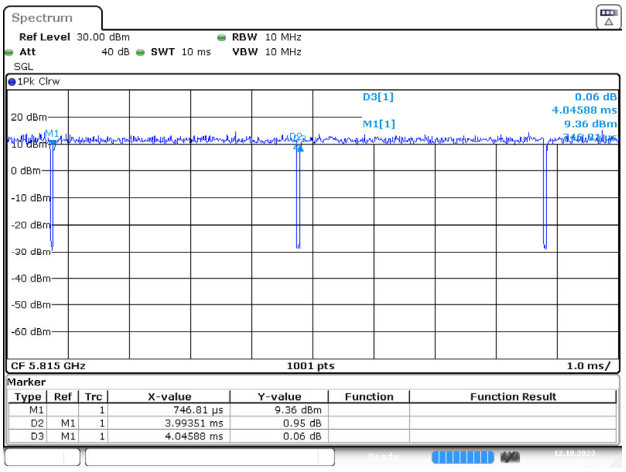
Date: 12.OCT.2023 21:46:48

802.11ax-80 MHz-SISO A



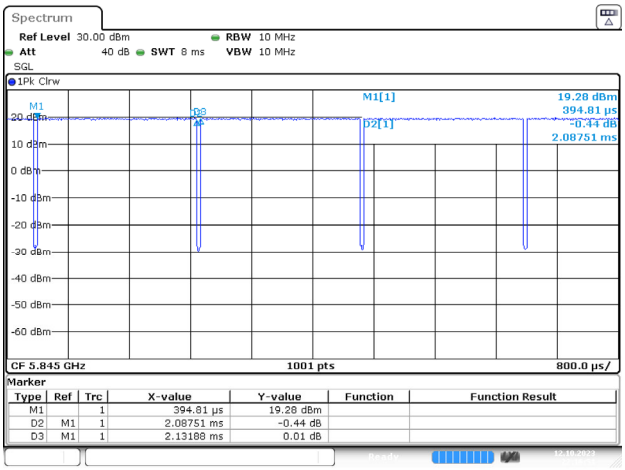
Date: 12.OCT.2023 21:47:49

802.11ax-160 MHz-SISO A



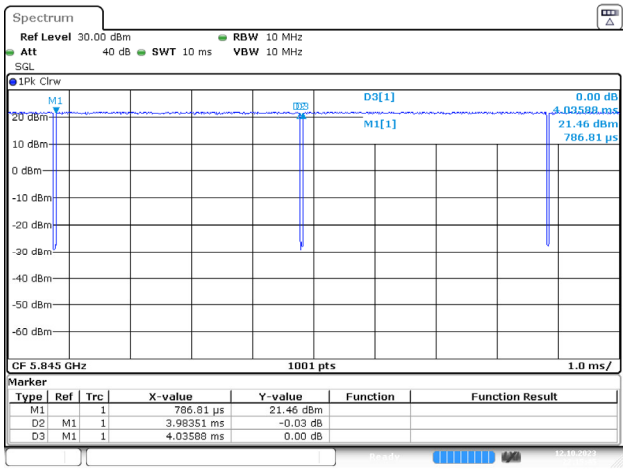
Date: 12.OCT.2023 21:48:43

802.11a-SISO B



Date: 12.OCT.2023 22:16:52

802.11ax-20 MHz-SISO B



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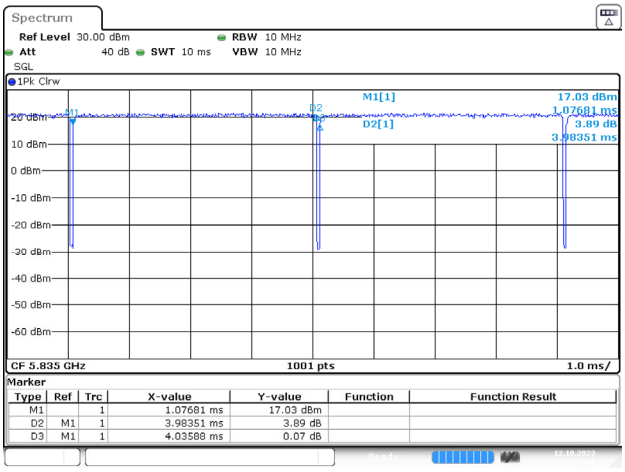
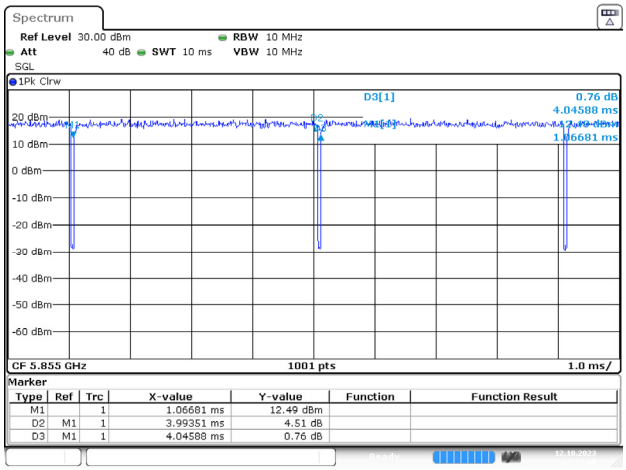
802.11ax-40 MHz-SISO B



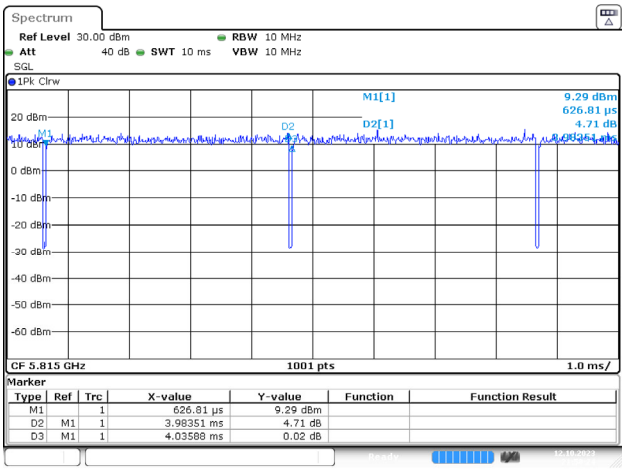
Date: 12.OCT.2023 22:14:40

802.11ax-80 MHz-SISO B



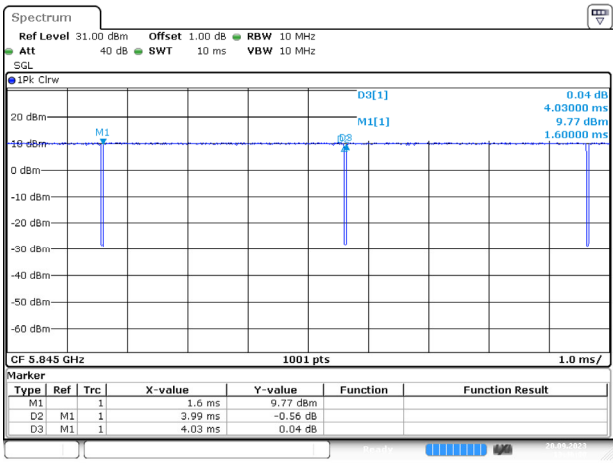
Date: 12.OCT.2023 22:13:40

802.11ax-160 MHz-SISO B



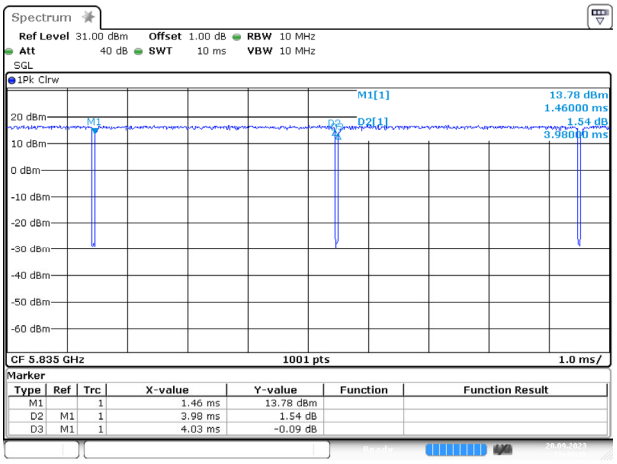
Date: 12.OCT.2023 21:58:24

802.11ax-20 MHz-MIMO



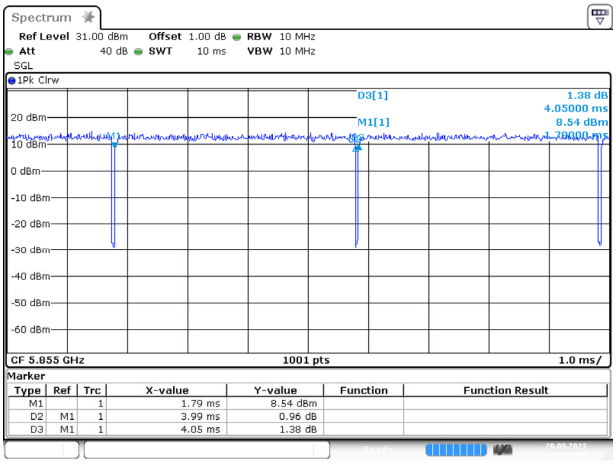
Date: 20.SEP.2023 13:46:00

802.11ax-40 MHz-MIMO



Date: 20.SEP.2023 13:49:35

802.11ax-80 MHz-MIMO



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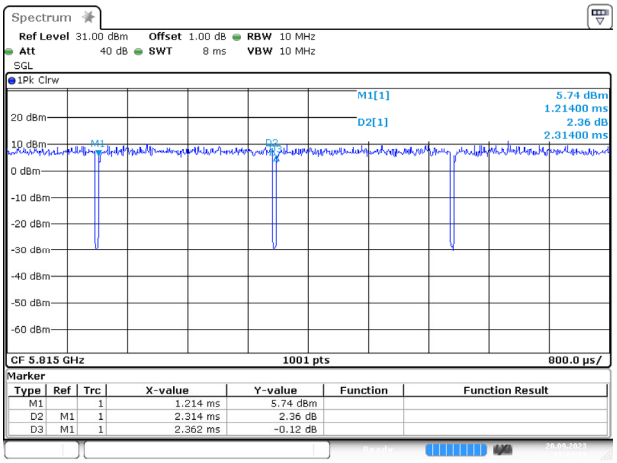
802.11ax-160 MHz-MIMO



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