RF MEASUREMENT REPORT
C2PC

FCC ID	:	**HD5-CK67X0N**
Applicant	:	**Honeywell International Inc.** **Honeywell Safety and Productivity Solutions**
Application Type	:	**Certification**
Product	:	**Mobile Computer**
Model No.	:	**CK67X0N**
Brand Name	:	**Honeywell**
FCC Classification	:	**15E 6GHz Dual Client (6CD)-Standard Power UNII5/7**
FCC Rule Part(s)	:	**Part 15 Subpart E (Section 15.407)**
Received Date	:	**May 9, 2024**
Test Date	:	**June 21, 2024~July 26, 2024**

Tested By	:	Owen Tsai (Owen Tsai)
Reviewed By	:	Paddy Chen (Paddy Chen)
Approved By	:	Chenz Ker (Chenz Ker)

Testing Laboratory
3261

The test results relate only to the samples tested.
This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in KDB789033. Test results reported herein relate only to the item(s) tested.

Revision History

Report No.	Version	Description	Issue Date	Note
2408TW0114-U1	1.0	Original Report	2024-08-28	
2408TW0114-U1	2.0	Revise the frequency range on P9~P10	2024-09-09	

Note:

This time the Standard Power function is enabled, so the FCC C2PC is executed, original report Grant Date: 08/27/2024, FCC ID: HD5-CK67X0N.

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General Information

Applicant	Honeywell International Inc. Honeywell Safety and Productivity Solutions
Applicant Address	9680 Old Bailes Rd. Fort Mill, SC 29707 United States
Manufacturer	Honeywell International Inc. Honeywell Safety and Productivity Solutions
Manufacturer Address	9680 Old Bailes Rd. Fort Mill, SC 29707 United States
Test Site	MRT Technology (Taiwan) Co., Ltd
Test Site Address	No. 38, Fuxing Second Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C)
MRT FCC Registration No.	291082
FCC Rule Part(s)	Part 15.407
Test Device Serial No.	#1-1 ☐ Production ☒ Pre-Production ☐ Engineering

Test Facility / Accreditations

1. MRT facility is a FCC registered (Reg. No. 291082) test facility with the site description report on file and is designated by the FCC as an Accredited Test Firm.
2. MRT facility is an IC registered (MRT Reg. No. 21723) test laboratory with the site description on file at Industry Canada.
3. MRT Lab is accredited to ISO 17025 by the Taiwan Accreditation Foundation (TAF Cert. No. 3261) in EMC, Telecommunications and Radio testing for FCC (Designation Number: TW3261), Industry Canada, EU and TELEC Rules.

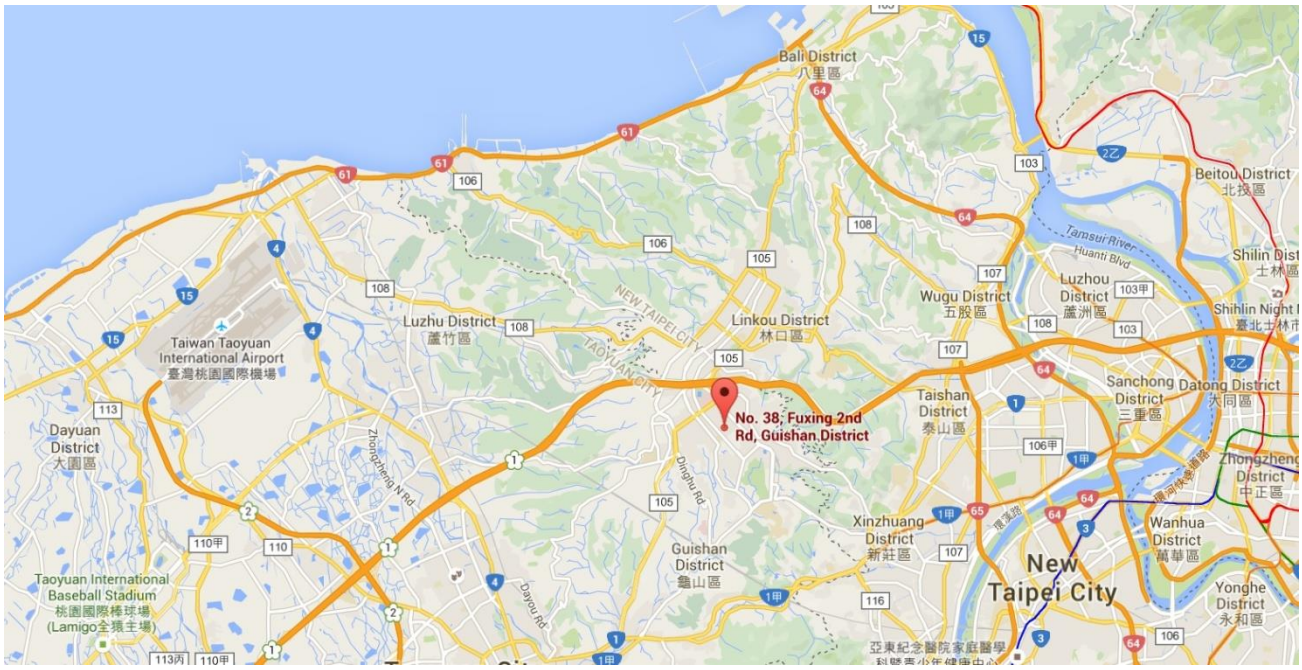
1. INTRODUCTION

1.1. Scope

Measurement and determination of electromagnetic emissions (EMC) of radio frequency devices including intentional and/or unintentional radiators for compliance with the technical rules and regulations of the Federal Communications Commission and the Innovation, Science and Economic Development Canada and Certification and Engineering Bureau.

1.2. MRT Test Location

The map below shows the location of the MRT LABORATORY, its proximity to the Taoyuan City. These measurement tests were conducted at the MRT Technology (Taiwan) Co., Ltd. Facility located at No.38, Fuxing 2nd Rd., Guishan Dist., Taoyuan City 33377, Taiwan (R.O.C).



2. Product Information

2.1. Equipment Description

Product Name	Mobile Computer
Model No.	CK67X0N
Brand Name	Honeywell
Wi-Fi Specification	802.11a/b/g/n/ac/ax
Bluetooth Specification	Main BT/BLE : V5.3 dual mode + 2nd BLE: V5.3 Single mode
NFC Specification	13.56MHz
Antenna Information	Refer to section 1.7
EUT Identification No.:	#24150D867B (Conducted) #24150D865D (Radiated)
Accessory	
Battery	Brand: Honeywell MODEL:CK65-BTSC Rating: 3.6Vdc, 7000mAh, 25.2Wh
Remark: 1. The information of EUT was provided by the manufacturer, and the accuracy of the information shall be the responsibility of the manufacturer.	

Note:

1. For other features of this EUT, test report will be issued separately.
2. This product has 3 scanners, 5 keypads, can refer as below:

Scanner	S0703	S0803FR	S0803	--	--
Keypad	Alpha Numeric	Numeric	Large Numeric	53keys Alpha Numeric	42keys Numeric

3. This report selected S0803FR with Alpha Numeric as the main test.

2.2. Radio Specification

Frequency Range	For 802.11a/ax-HE20: 5935 ~ 6415MHz, 6535 ~ 6855MHz For 802.11ax-HE40: 5965 ~ 6405MHz, 6565MHz ~ 6845MHz For 802.11ax-HE80: 5985 ~ 6385MHz, 6625 ~6785MHz For 802.11ax-HE160: 6025 ~ 6345MHz, 6665MHz
Type of Modulation	802.11a: OFDM 802.11ax: OFDMA
Data Rate	802.11a: 6/9/12/18/24/36/48/54Mbps 802.11ax: up to 2402Mbps

Note: For other features of this EUT, test report will be issued separately.

2.3. Working Frequencies

802.11a/ax-HE20

Channel	Frequency	Channel	Frequency	Channel	Frequency
2	5935 MHz	1	5955 MHz	5	5975 MHz
9	5995 MHz	13	6015 MHz	17	6035 MHz
21	6055 MHz	25	6075 MHz	29	6095 MHz
33	6115 MHz	37	6135 MHz	41	6155 MHz
45	6175 MHz	49	6195 MHz	53	6215 MHz
57	6235 MHz	61	6255 MHz	65	6275 MHz
69	6295 MHz	73	6315 MHz	77	6335 MHz
81	6355 MHz	85	6375 MHz	89	6395 MHz
93	6415 MHz	117	6535 MHz	121	6555 MHz
125	6575 MHz	129	6595 MHz	133	6615 MHz
137	6635 MHz	141	6655 MHz	145	6675 MHz
149	6695 MHz	153	6715 MHz	157	6735 MHz
161	6755 MHz	165	6775 MHz	169	6795 MHz
173	6815 MHz	177	6835 MHz	181	6855 MHz

802.11ax-HE40

Channel	Frequency	Channel	Frequency	Channel	Frequency
3	5965 MHz	11	6005 MHz	19	6045 MHz
27	6085 MHz	35	6125 MHz	43	6165 MHz
51	6205 MHz	59	6245 MHz	67	6285 MHz
75	6325 MHz	83	6365 MHz	91	6405 MHz
123	6565 MHz	131	6605 MHz	139	6645 MHz
147	6685 MHz	155	6725 MHz	163	6765 MHz
171	6805 MHz	179	6845 MHz	--	--

802.11ax-HE80

Channel	Frequency	Channel	Frequency	Channel	Frequency
7	5985 MHz	23	6065 MHz	39	6145 MHz
55	6225 MHz	71	6305 MHz	87	6385 MHz
135	6625 MHz	151	6705 MHz	167	6785 MHz

802.11ax-HE160

Channel	Frequency	Channel	Frequency	Channel	Frequency
15	6025 MHz	47	6185 MHz	79	6345 MHz
143	6665 MHz	--	--	--	--

2.4. Antenna Details

Antenna Type	Frequency Band (MHz)	T_X Paths	Number of spatial streams	Max Antenna Gain (dBi)	Beamforming Directional Gain(dBi)	CDD Directional Gain (dBi)	
						For Power	For PSD
Wi-Fi Antenna							
PIFA	2412 ~ 2462	2	1	3.00	--	3.00	5.67
	5150 ~ 5250	2	1	2.50	--	2.50	5.07
	5250 ~ 5350	2	1	2.40	--	2.40	5.16
	5470 ~ 5725	2	1	2.70	--	2.70	5.42
	5725 ~ 5850	2	1	2.60	--	2.60	5.61
	5850 ~ 5895	2	1	2.60	--	2.60	5.61
	5925 ~ 6425	2	1	3.00	--	3.00	5.86
	6425 ~ 6525	2	1	3.00	--	3.00	5.86
	6525 ~ 6875	2	1	4.00	--	4.00	6.52

Remark:

1. The EUT supports Cyclic Delay Diversity (CDD) mode, and CDD signals are correlated.

   If all antennas have the same gain, G_{ANT}, Directional gain = G_{ANT} + Array Gain, where Array Gain is as follows.

   - For power spectral density (PSD) measurements on all devices,

   Array Gain = 10 log (N_{ANT}/ N_{SS}) dB;

   - For power measurements on IEEE 802.11 devices,

   Array Gain = 0 dB for $N_{ANT} \leq 4$;

2. All messages of antenna were declared by manufacturer.

Test Mode	T_X Paths	CDD Mode	Beamforming Mode
802.11b/g/n (DTS)	2	√	X
802.11ax (DTS)	2	√	X
802.11a/n (NII)	2	√	X
802.11ac/ax (NII)	2	√	X
802.11ax (6CD)	2	√	X

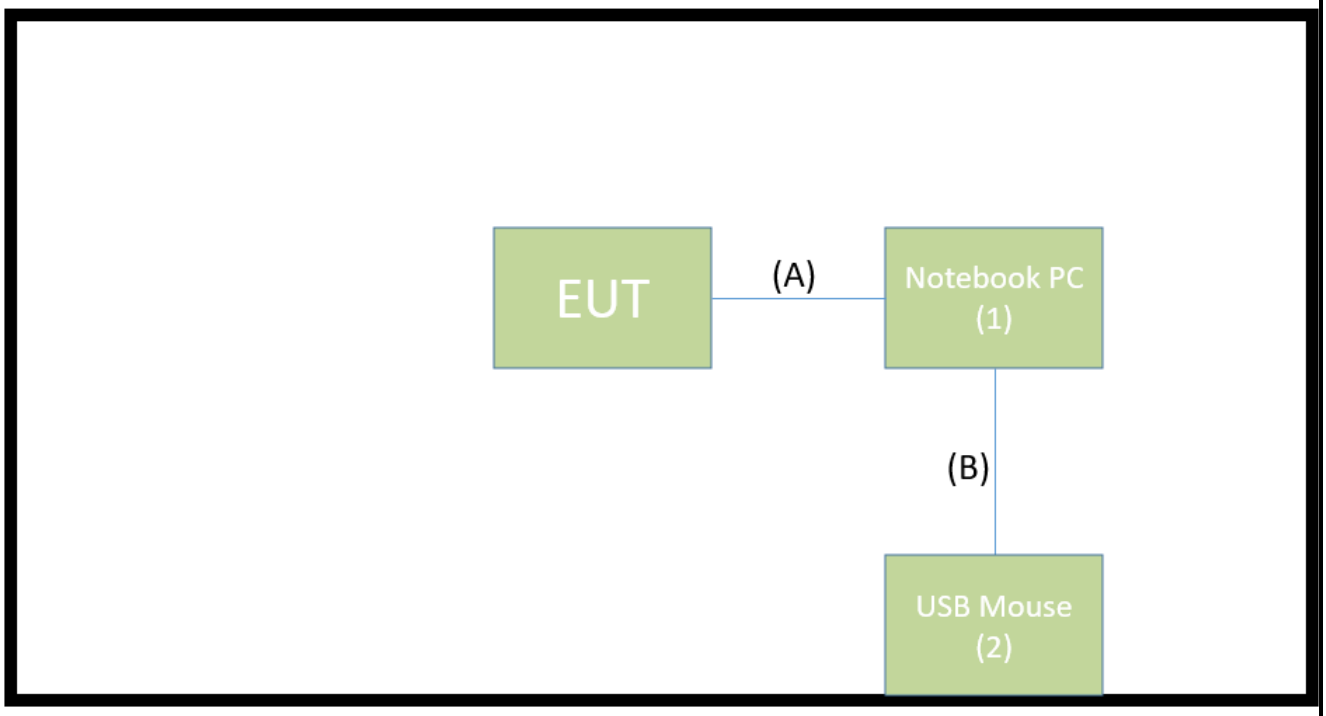
2.5. Test Mode

CDD Mode
Mode 1: Transmit by 802.11a_ (CDD mode)
Mode 2: Transmit by 802.11ax-HE20_ (CDD mode)
Mode 3: Transmit by 802.11ax-HE40_ (CDD mode)
Mode 4: Transmit by 802.11ax-HE80_ (CDD mode)
Mode 5: Transmit by 802.11ax-HE160_ (CDD mode)
Mode 6: Transmit by 802.11ax-HE20_26Tone_RU0 (CDD mode)
Mode 7: Transmit by 802.11ax-HE20_26Tone_RU8 (CDD mode)
Mode 8: Transmit by 802.11ax-HE20_52Tone_RU74 (CDD mode)
Mode 9: Transmit by 802.11ax-HE20_52Tone_RU77 (CDD mode)
Mode 10: Transmit by 802.11ax-HE20_106Tone_RU106 (CDD mode)
Mode 11: Transmit by 802.11ax-HE20_106Tone_RU107 (CDD mode)
Mode 12: Transmit by 802.11ax-HE20_242Tone_RU122 (CDD mode)
Mode 13: Transmit by 802.11ax-HE20_242Tone_RU122 (CDD mode)
Remark: 1. For Radiated emission, the modulation and the data rate picked for testing are determined by the Max. RF conducted power.

2.6. Test System Connection Diagram

The device was tested per the guidance ANSI C63.10: 2013 was used to reference the appropriate EUT setup for radiated emissions testing and AC line conducted testing.

Connection Diagram



Signal Cable Type		Signal Cable Description
A	USB Cable	Shielded, 1.0m
B	USB Mouse Cable	Shielded, 1.8m

2.7. Test System Details

Product		Manufacturer	Model No.	Serial No.	Power Cord
1	Notebook PC	DELL	P65F	N/A	Non-shielded, 0.8m
2	USB Mouse	Logitech	M90	N/A	N/A

2.8. Test Software

The test utility software used during testing was “QRCT”, the version is ver4.0-00209.

Note: Final power setting please refer to operational description.

2.9. Applied Standards

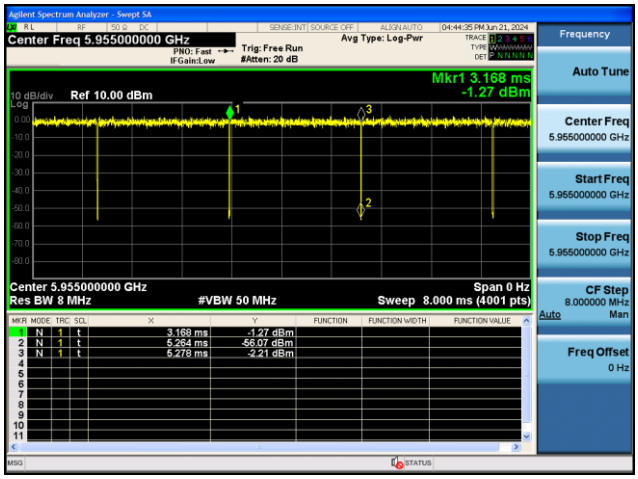
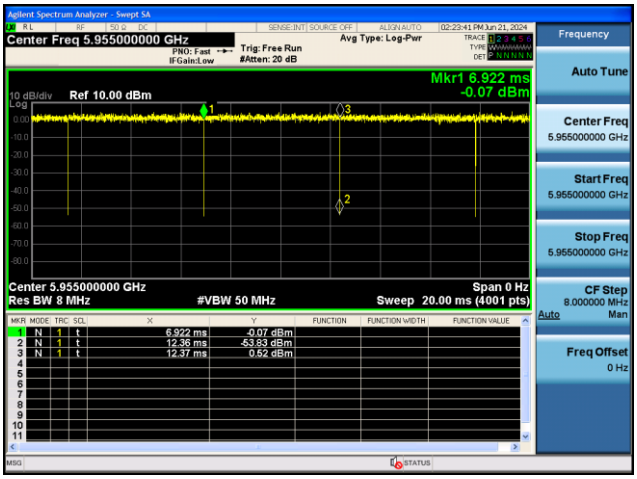
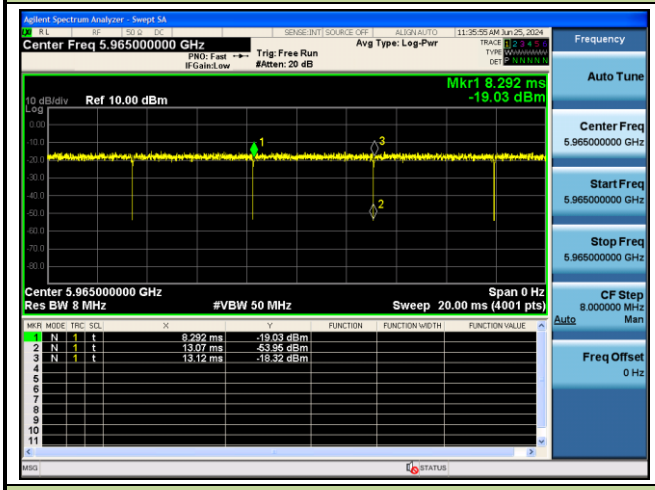
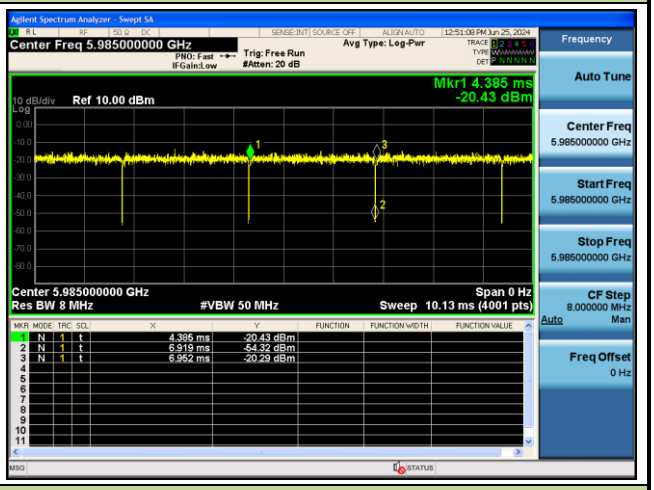
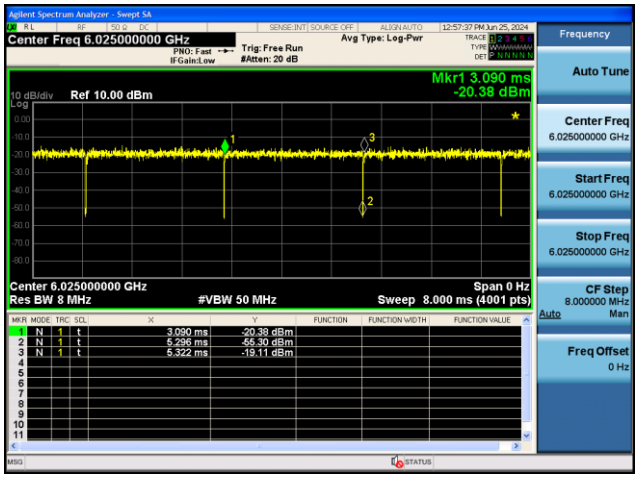
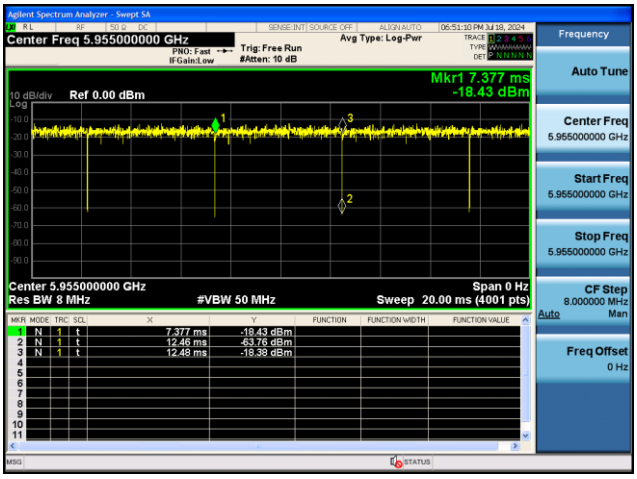
According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

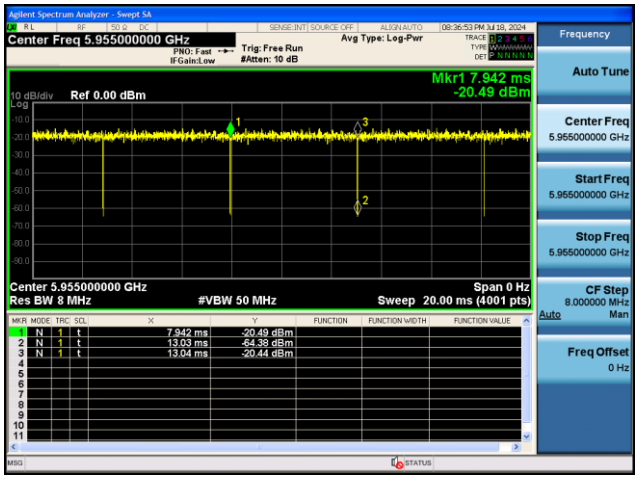
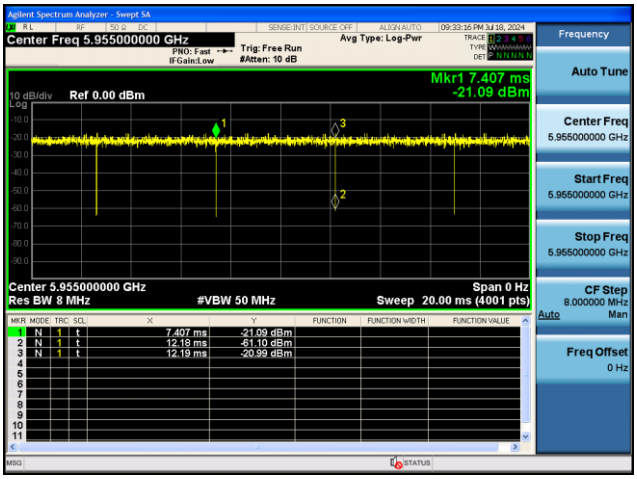
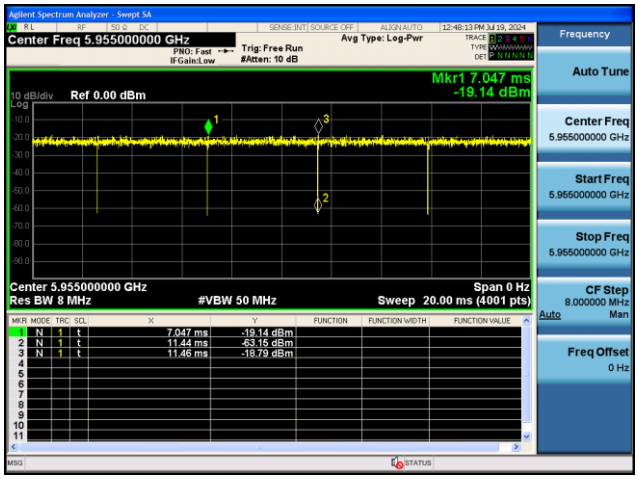
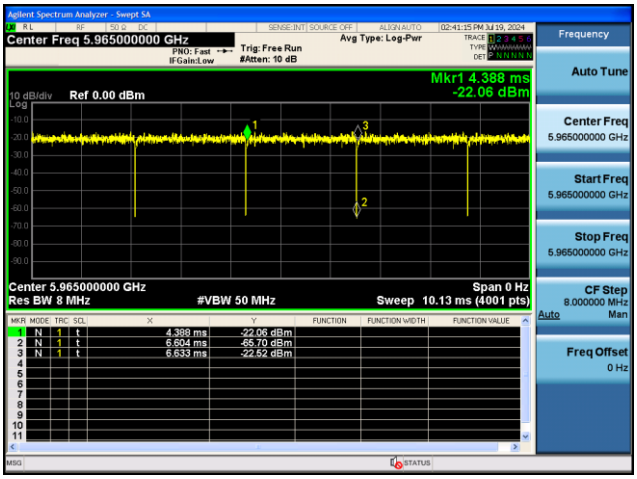
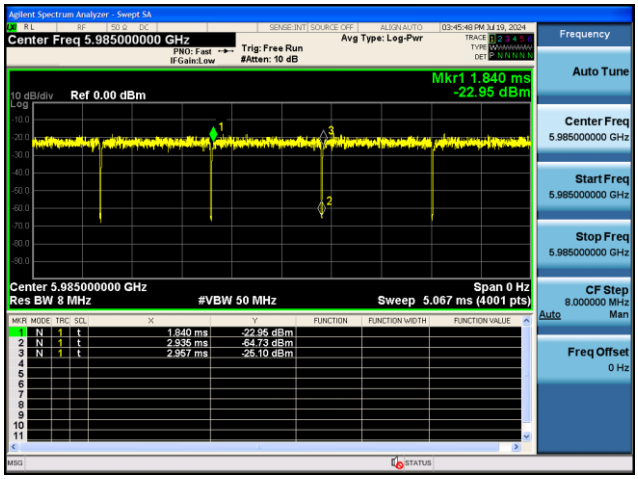
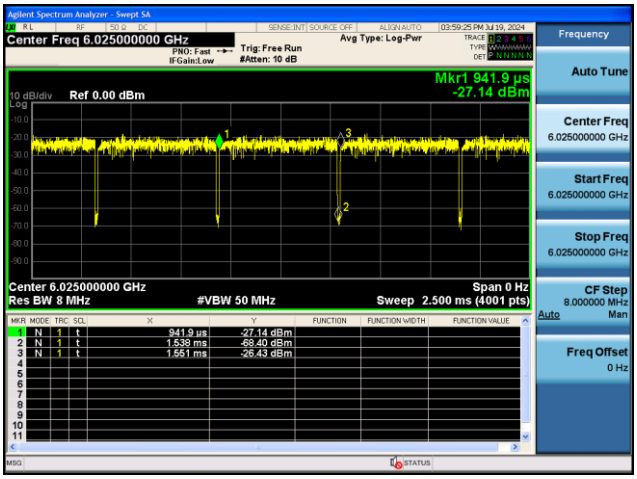
- ANSI C63.10-2013
- FCC KDB 789033 D02v02r01
- FCC KDB 987594 D02v01r01
- FCC KDB 987594 D04v02
- FCC KDB 662911 D01v02r01
- FCC KDB 414788 D01v01r01
- FCC KDB 412172 D01v01r01

2.10. Duty Cycle

The maximum achievable duty cycles for all modes were determined based on measurements performed on a spectrum analyzer in zero-span mode with RBW = 8MHz, VBW = 50MHz. The RBW and VBW were both greater than 50/T, where T is the minimum transmission duration, and the number of sweep points across T was greater than 100. The duty cycles are as follows:

Test Mode	Duty Cycle
802.11a	99.34%
802.11ax-HE20	99.82%
802.11ax-HE40	98.96%
802.11ax-HE80	98.71%
802.11ax-HE160	98.84%
802.11ax-HE20_26 Tone_RU0	99.61%
802.11ax-HE20_52 Tone_RU74	99.80%
802.11ax-HE20_106 Tone_RU106	99.79%
802.11ax-HE20_242 Tone_RU122	99.55%
802.11ax-HE40_484 Tone_RU130	98.71%
802.11ax-HE80_996 Tone_RU134	98.03%
802.11ax-HE160_1992 Tone_RU136	97.87%

Duty Cycle	
802.11a	802.11ax-HE20
	
802.11ax-HE40	802.11ax-HE80
	
802.11ax-HE160	802.11ax-HE20_26 Tone_RU0
	

802.11ax-HE20_52 Tone_RU74	802.11ax-HE20_106 Tone_RU106
	
802.11ax-HE20_242 Tone_RU122	802.11ax-HE40_484 Tone_RU130
	
802.11ax-HE80_996 Tone_RU134	802.11ax-HE160_1992 Tone_RU132
	

2.11. Test Environment Condition

Ambient Temperature	15°C~35°C
Relative Humidity	20%RH ~75%RH

3. Antenna Requirements

Excerpt from §15.203 of the FCC Rules/Regulations:

“An intentional radiator antenna shall be designed to ensure that no antenna other than that furnished by the responsible party can be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.”

The antenna of the device is built in and locked inside the enclosure.

Conclusion:

The device complies with the requirement of §15.407(a)(9).

4. Measuring Instrument

Conducted Emissions

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
Two-Line V-Network	R&S	ENV216	MRTTWA00019	1 year	2025/3/5
Two-Line V-Network	R&S	ENV216	MRTTWA00020	1 year	2025/4/21
EMI Test Receiver	R&S	ESR3	MRTTWA00045	1 year	2025/5/14
DIVA PLUS Funk-Wetterstation	TFA	35.1083	MRTTWA00050	1 year	2025/6/2

Radiated Emissions

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
Acitve Loop Antenna	SCHWARZBECK	FMZB 1519B	MRTTWA00002	1 year	2025/5/7
Broadband TRILOG Antenna	SCHWARZBECK	VULB 9162	MRTTWA00001	1 year	2024/10/31
Broadband Hornantenna	RFSPIN	DRH18-E	MRTTWA00087	1 year	2025/5/20
Broadband Preamplifier	EMC Instruments corporation	EMC118A45SE	MRTTWA00088	1 year	2025/5/14
Breitband Hornantenna	SCHWARZBECK	BBHA 9170	MRTTWA00004	1 year	2025/3/26
Broadband Amplifier	SCHWARZBECK	BBV 9721	MRTTWA00006	1 year	2025/3/21
EMI Test Receiver	R&S	ESR3	MRTTWA00009	1 year	2025/3/5
Signal Analyzer	R&S	FSVA3044	MRTTWA00092	1 year	2025/6/20
Antenna Cable	HUBERSUHNER	SF106	MRTTWE00034	1 year	2025/6/25
Cable	HUBERSUHNER	EMC105-NM-NM-3000	MRTTWE00035	1 year	2025/6/25
Temperature/Humidity Meter	TFA	35.1083	MRTTWA00050	1 year	2025/6/2

Conducted Test Equipment

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
X-Series USB Peak and Average Power Sensor	KEYSIGHT	U2021XA	MRTTWA00014	1 year	2025/4/16
EXA Signal Analyzer	KEYSIGHT	N9010A	MRTTWA00012	1 year	2024/10/17
Attenuator	WTI	218FS-20	MRTTWE00026	1 year	2024/11/1
Attenuator	WTI	218FS-10	MRTTWE00027	1 year	2025/6/13
Temperature & Humidity Chamber	TEN BILLION	TTH-B3UP	MRTTWA00036	1 year	2025/6/6
DIVA PLUS Funk-Wetterstation	TFA	35.1083	MRTTWA00050	1 year	2025/6/2

Software	**Version**	**Function**
e3	9.160520a	EMI Test Software

5. Measurement Uncertainty

Where relevant, the following test uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k = 2.

AC Conducted Emission Measurement
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 150kHz~30MHz: ± 2.53dB
Radiated Emission Measurement
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 9kHz ~ 1GHz: ± 4.25dB 1GHz ~ 40GHz: ± 4.45dB
Conducted Power (Carrier Power / Power Density)
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): ± 0.84dB
Conducted Spurious Emission
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)):± 2.65 dB
Occupied Bandwidth
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): ± 3.3%
Temp. / Humidity
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): ±0.82°C/ ±3%
Frequency Error
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): ±78.4Hz

6. Test Result

6.1. Summary

FCC Section(s)	Test Description	Test Condition	Verdict
15.407(a)	26dB Bandwidth	Conducted	Pass
15.407(a)(7), (a)(8)	Maximum Equivalent Isotopically Radiated Power (E.I.R.P)		Pass
15.407(a)(7), (a)(8)	Peak Power Spectral Density (E.I.R.P)		Pass
15.407(b)(7)	In-Band Emission		Pass
15.407(d)(6)	Contention-Based Protocol		Please refer as report No: 2406RSU035-U2
15.407(a)(7)	Transmit Power Control		Please refer as report No: FR461705-03
15.407(b)(6)	Unwanted Emissions		Pass
15.407(b) (8), (9), (10)	General Field Strength (Restricted Bands and Radiated Emission)	Radiated	Pass
15.207	AC Conducted Emissions 150kHz - 30MHz	Line Conducted	Pass

Remark:

1. Determining compliance is based on the test results met the regulation limits or requirements declared by clients, and the test results don't take into account the value of measurement uncertainty.
2. The analyzer plots shown in this section were all taken with a correction table loaded into the analyzer. The correction table was used to account for the losses of the cables and attenuators used as part ofthe system to connect the EUT to the analyzer at all frequencies of interest.
3. Output power test was verified over all data rates of each mode (data refers to operational description), and then choose the maximum power output (low data rate) for final test of each channel.
4. For radiated emission test, the test results shown in the following sections represent the worst-case emissions.

6.2. 26dB Bandwidth

6.2.1. Test Limit

N/A

6.2.2. Test Procedure used

KDB 789033 D02v02r01- Section C.1 (26dB Bandwidth)

KDB 789033 D02v02r01- Section D (99% Bandwidth)

6.2.3. Test Setting

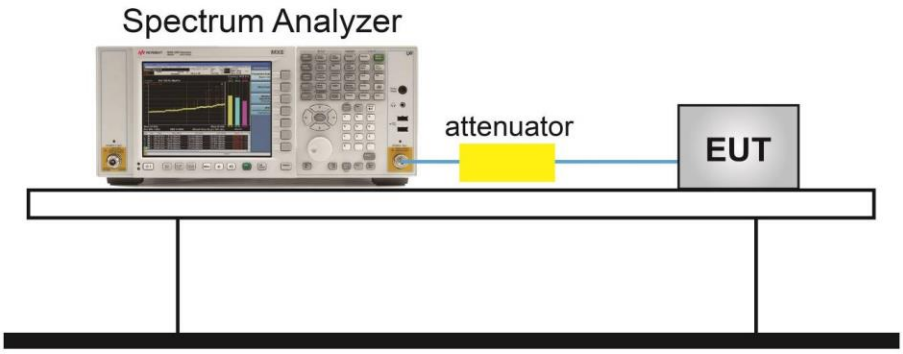
26dB Bandwidth

1. The analyzers' automatic bandwidth measurement capability was used to perform the 26dB bandwidth measurement. The "X" dB bandwidth parameter was set to X = 26. The automatic bandwidth measurement function also has the capability of simultaneously measuring the 99% occupied bandwidth. The bandwidth measurement was not influenced by any intermediated power nulls in the fundamental emission.
2. RBW = approximately 1% of the emission bandwidth.
3. VBW > RBW.
4. Detector = Peak.
5. Trace mode = max hold.

99% Bandwidth

1. Set center frequency to the nominal EUT channel center frequency.
2. Set span = 1.5 times to 5.0 times the OBW.
3. Set RBW = 1% to 5% of the OBW
4. Set VBW ≥ 3×RBW
5. Detector = Peak.
6. Use the 99% power bandwidth function of the instrument.

6.2.4. Test Setup

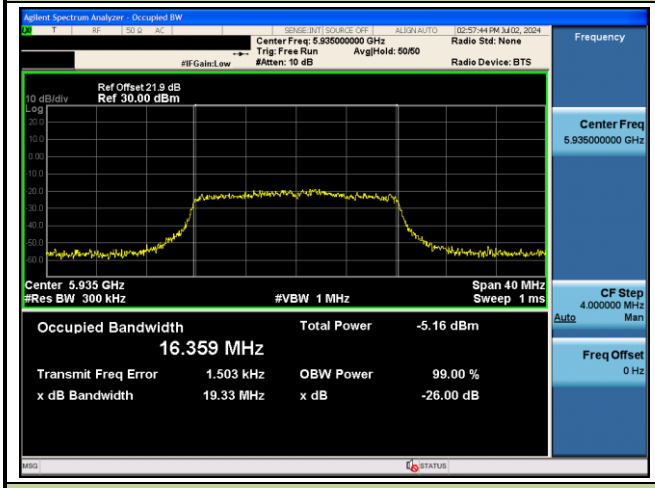
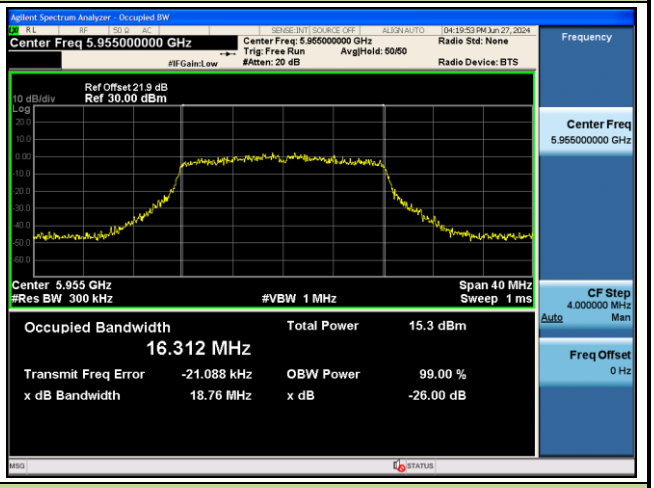
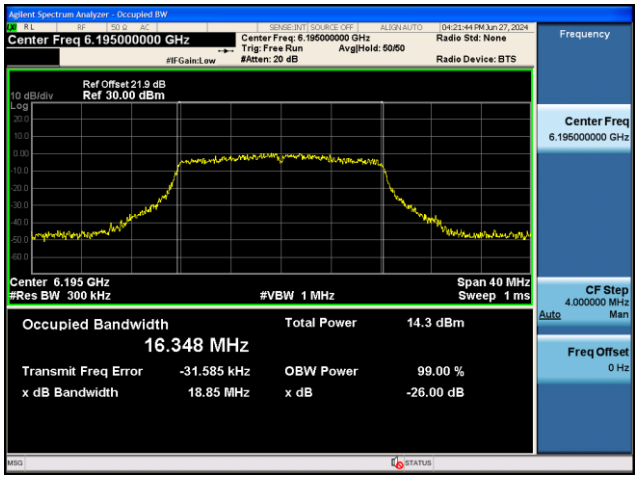
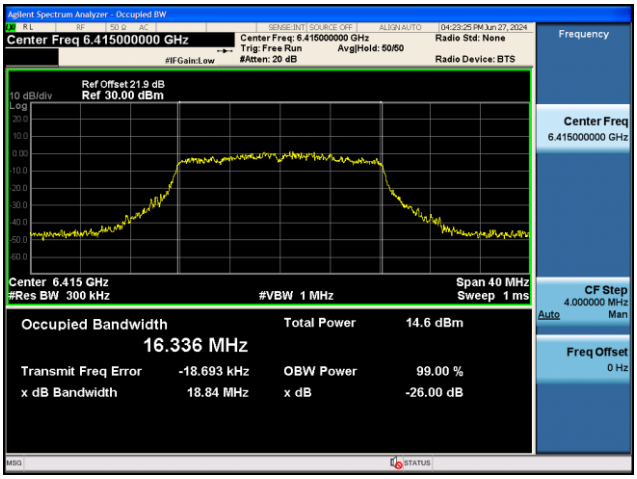
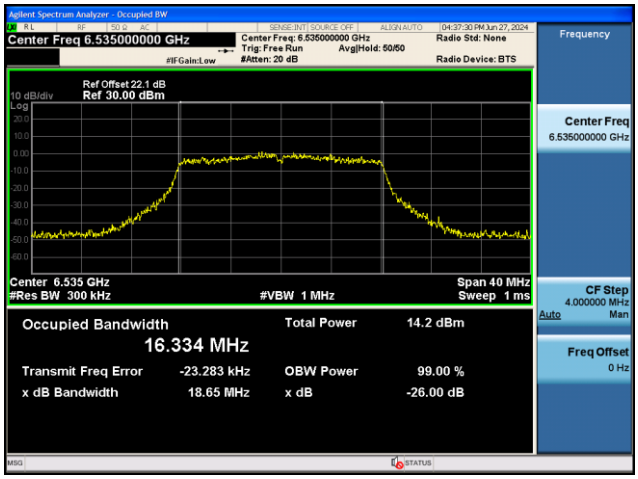
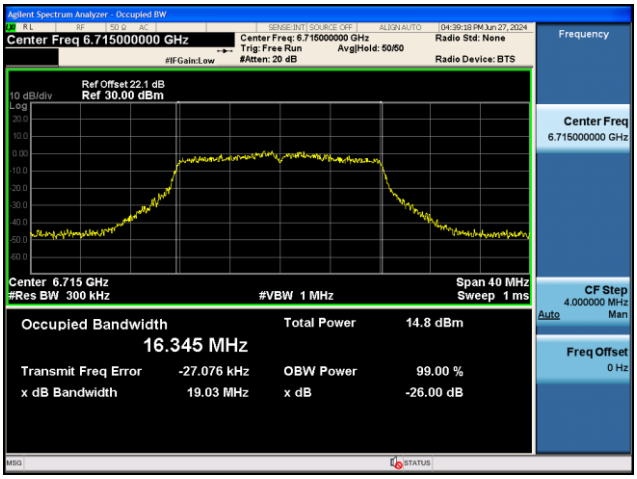


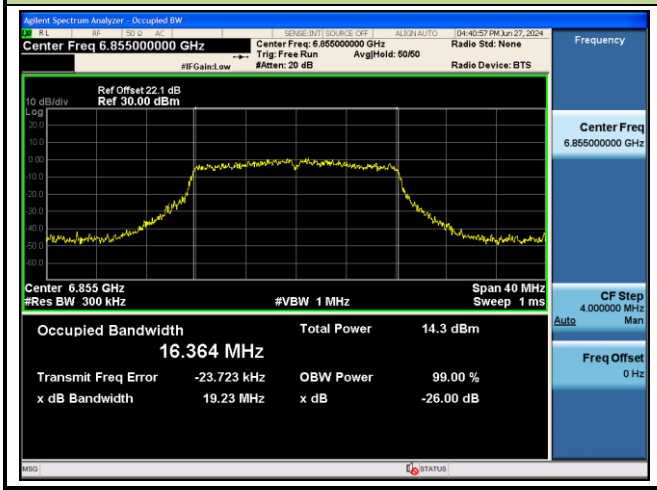
6.2.5. Test Result

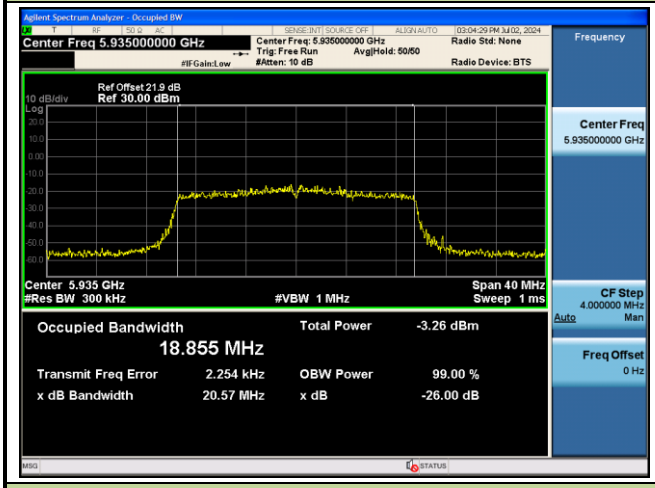
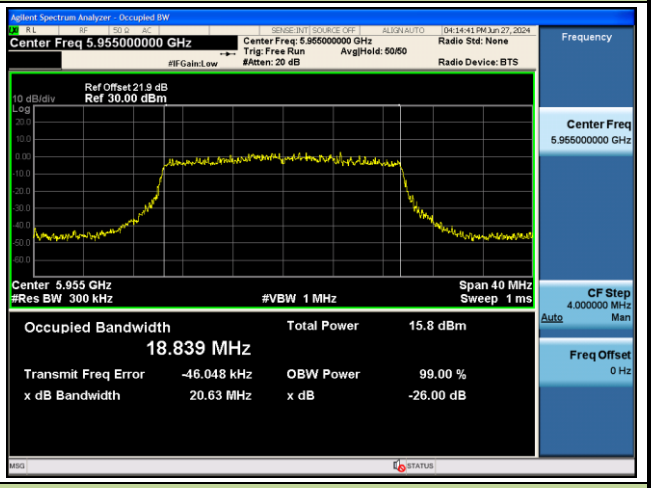
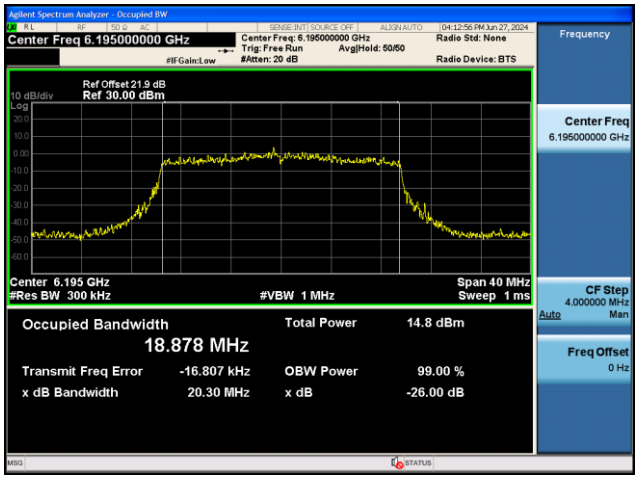
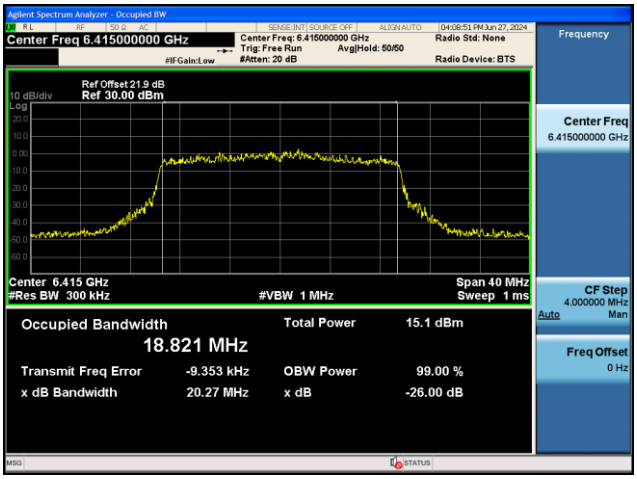
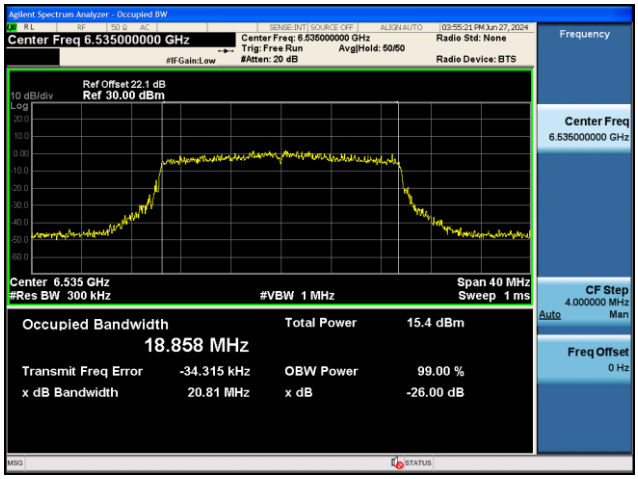
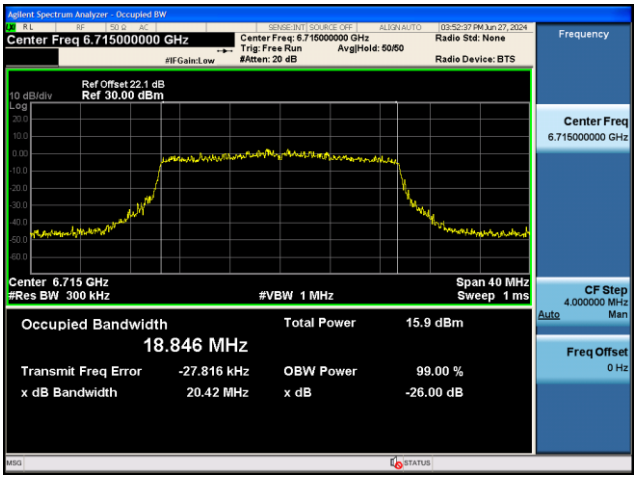
Test Site	SR6	Test Engineer	Owen
Test Date	2024/6/24~2024/7/2		

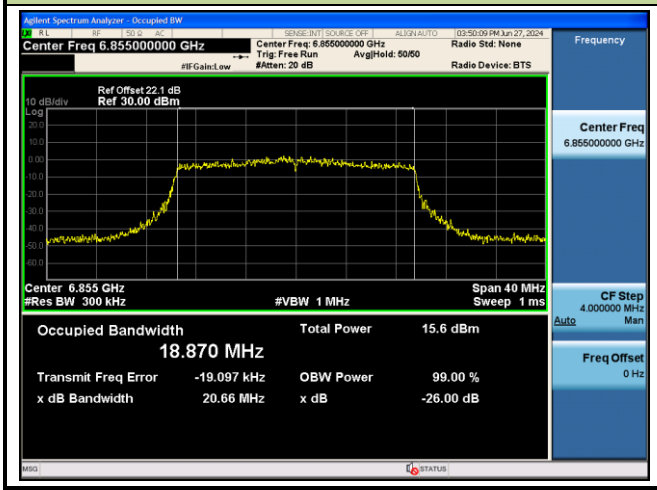
Client Standard Power

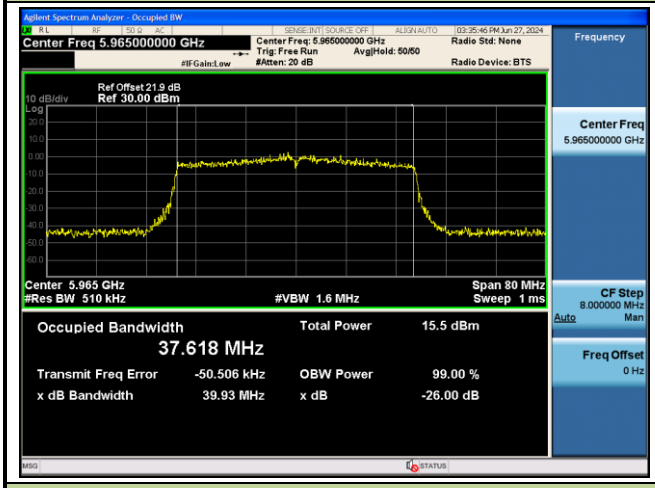
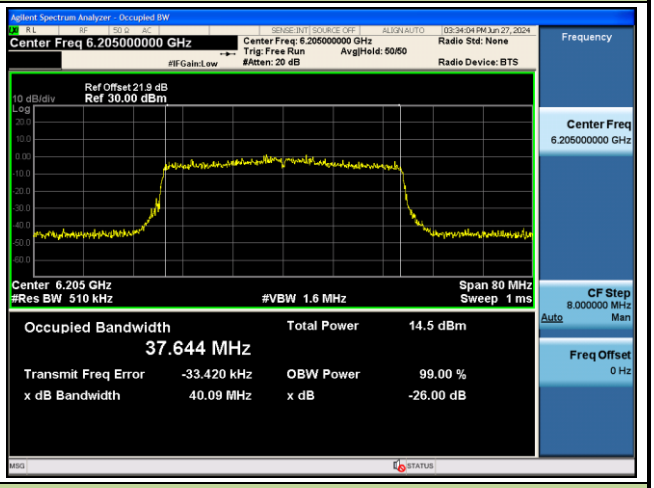
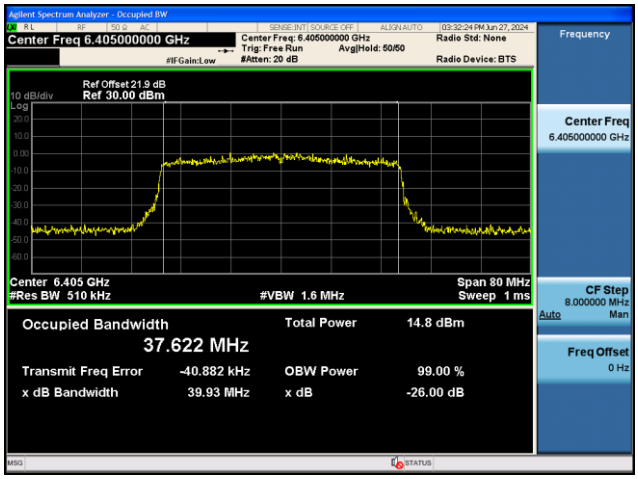
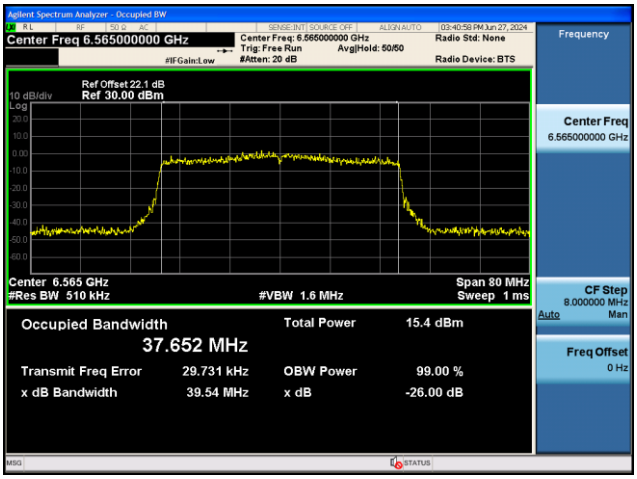
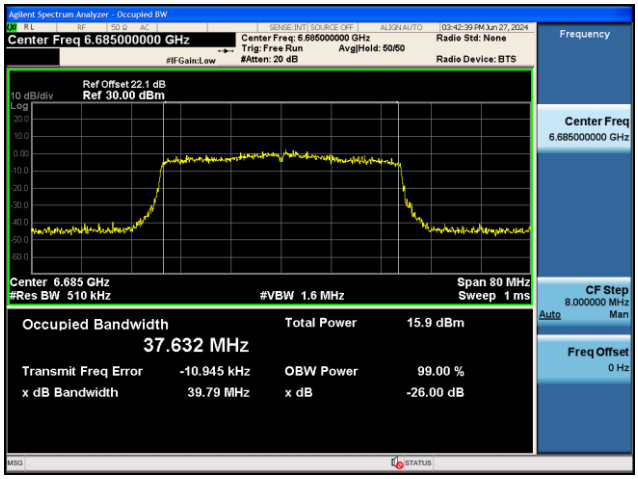
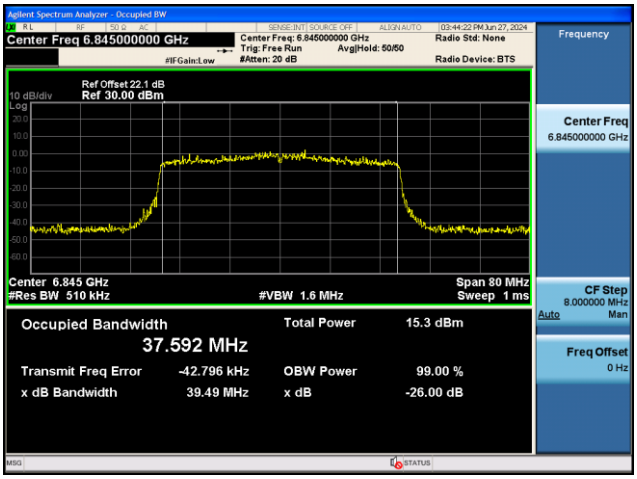
Test Mode	Data Rate/ MCS	Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
802.11a	MCS0	2	5935	19.33	19.359
802.11a	MCS0	1	5955	18.76	16.312
802.11a	MCS0	49	6195	18.85	16.348
802.11a	MCS0	93	6415	18.84	16.336
802.11a	MCS0	117	6535	18.65	16.334
802.11a	MCS0	153	6715	19.03	16.345
802.11a	MCS0	181	6855	19.23	16.364
802.11ax-HE20	MCS0	2	5935	20.57	18.855
802.11ax-HE20	MCS0	1	5955	20.63	18.839
802.11ax-HE20	MCS0	49	6195	20.30	18.878
802.11ax-HE20	MCS0	93	6415	20.27	18.821
802.11ax-HE20	MCS0	117	6535	20.81	18.858
802.11ax-HE20	MCS0	153	6715	20.42	18.846
802.11ax-HE20	MCS0	181	6855	20.66	18.870
802.11ax-HE40	MCS0	3	5965	39.93	37.618
802.11ax-HE40	MCS0	51	6205	40.09	37.644
802.11ax-HE40	MCS0	91	6405	39.93	37.622
802.11ax-HE40	MCS0	123	6565	39.54	37.652
802.11ax-HE40	MCS0	147	6685	39.79	37.632
802.11ax-HE40	MCS0	179	6845	39.49	37.592
802.11ax-HE80	MCS0	7	5985	80.31	77.017
802.11ax-HE80	MCS0	55	6225	80.77	76.956
802.11ax-HE80	MCS0	87	6385	80.68	76.804
802.11ax-HE80	MCS0	135	6625	80.73	76.903
802.11ax-HE80	MCS0	151	6705	80.95	76.893
802.11ax-HE80	MCS0	167	6785	80.68	76.770
802.11ax-HE160	MCS0	15	6025	163.0	155.58
802.11ax-HE160	MCS0	47	6185	163.3	155.56
802.11ax-HE160	MCS0	79	6345	162.9	155.69
802.11ax-HE160	MCS0	143	6665	40.5	155.81

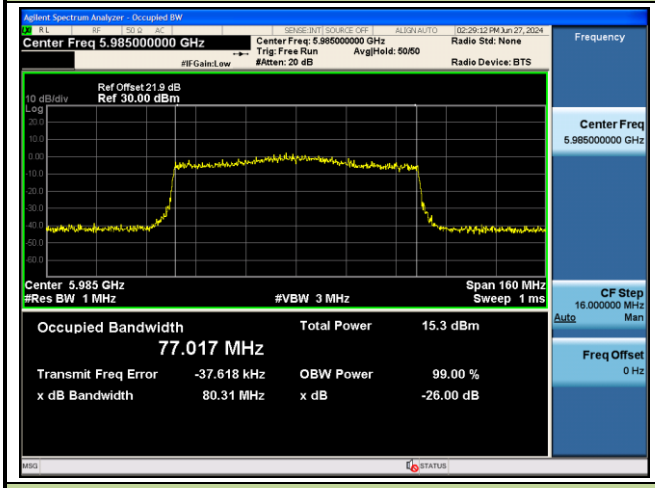
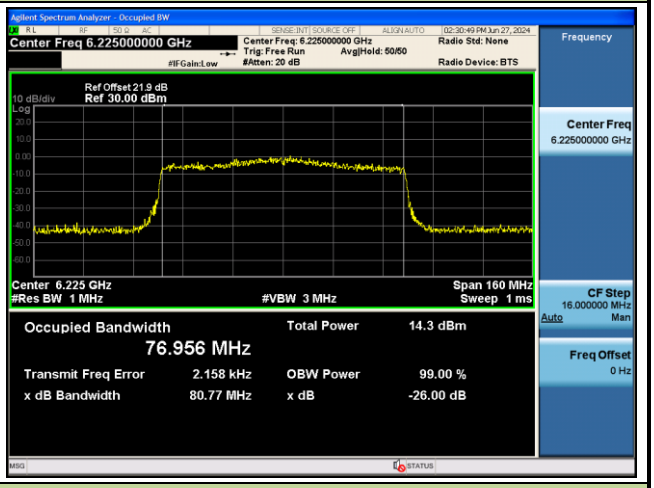
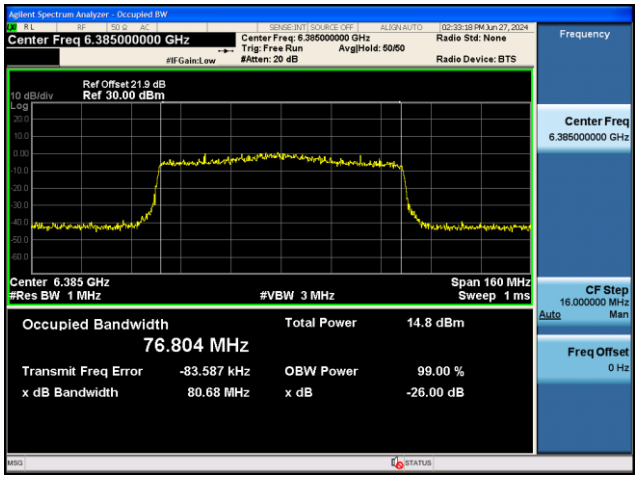
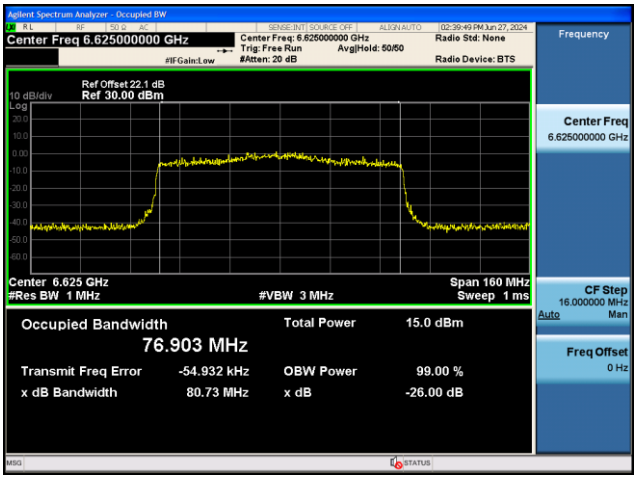
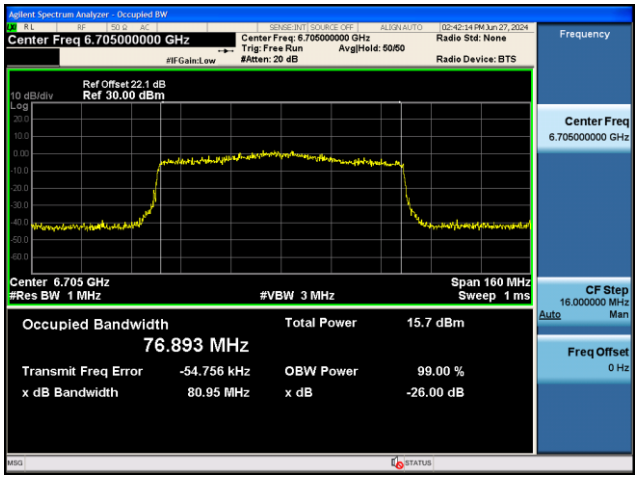
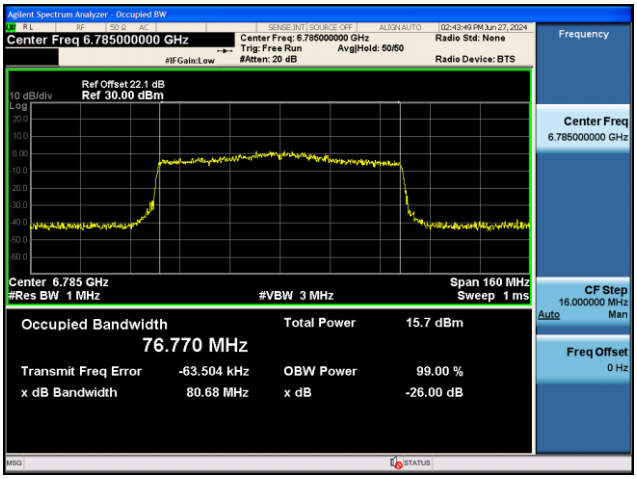
802.11a 26dB Bandwidth & 99% Bandwidth	
Channel 2 (5935MHz)	Channel 1 (5955MHz)
	
Channel 49 (6195MHz)	Channel 93 (6415MHz)
	
Channel 117 (6535MHz)	Channel 153 (6715MHz)
	

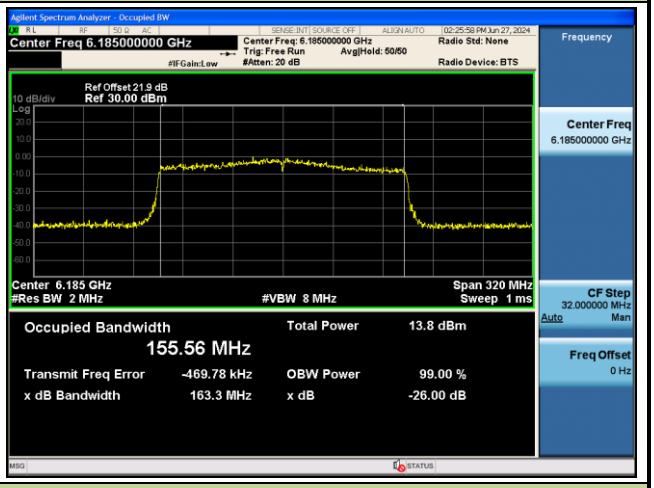
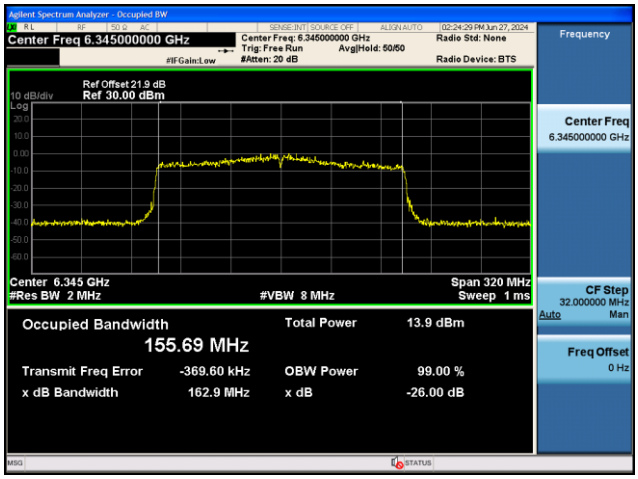
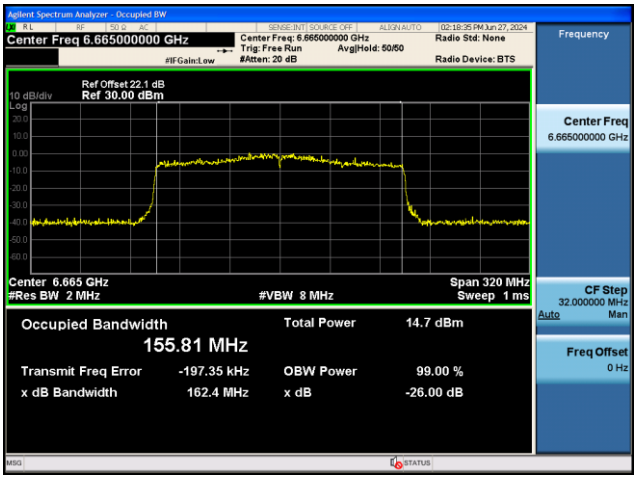
Channel 181 (6855MHz)	
	

802.11ax-HE20 26dB Bandwidth & 99% Bandwidth	
Channel 2 (5935MHz)	Channel 1 (5955MHz)
	
Channel 49 (6195MHz)	Channel 93 (6415MHz)
	
Channel 117 (6535MHz)	Channel 153 (6715MHz)
	

Channel 181 (6855MHz)	
	

802.11ax-HE40 26dB Bandwidth & 99% Bandwidth	
Channel 3 (5965MHz)	Channel 51 (6205MHz)
	
Channel 91 (6405MHz)	Channel 123 (6565MHz)
	
Channel 147 (6685MHz)	Channel 179 (6845MHz)
	

802.11ax-HE80 26dB Bandwidth & 99% Bandwidth	
Channel 7 (5985MHz)	Channel 55 (6225MHz)
	
Channel 87 (6385MHz)	Channel 135 (6625MHz)
	
Channel 151 (6705MHz)	Channel 167 (6785MHz)
	

802.11ax-HE160 26dB Bandwidth & 99% Bandwidth	
Channel 15 (6025MHz)	Channel 47 (6185MHz)
	
Channel 79 (6345MHz)	Channel 143 (6665MHz)
	

6.3. Output Power

6.3.1. Test Limit

For an indoor access point operating in the 5.925-7.125 GHz band, the maximum e.i.r.p. over the frequency band of operation must not exceed 30 dBm.

For a subordinate device operating under the control of an indoor access point in the 5.925-7.125 GHz band, the maximum e.i.r.p. over the frequency band of operation must not exceed 30 dBm.

6.3.2. Test Procedure Used

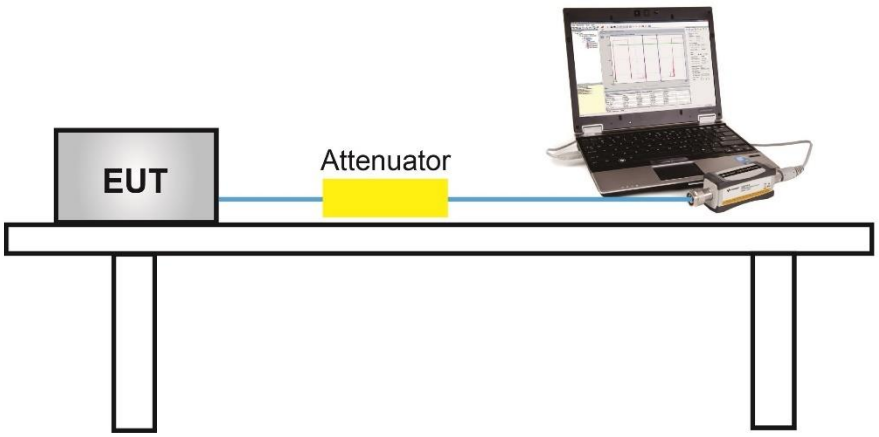
KDB 789033D02v02r01- Section E)3)b) Method PM-G

6.3.3. Test Setting

Average Power Measurement

Average power measurements were performed only when the EUT was transmitting at its maximum power control level using a broadband power meter with a pulse sensor. The power meter implemented triggering and gating capabilities which were set up such that power measurements were recorded only during the ON time of the transmitter.

6.3.4. Test Setup



6.3.5. Test Result

Test Site	SR6	Test Engineer	Owen
Test Date	2024/7/17~2024/7/18		

Client Standard Power

Test CB	Data Rate/ MCS	Channel No.	Freq. (MHz)	Average Power (dBm)		Gain (dBi)	Total EIRP Power (dBm)	EIRP Limit (dBm)
				Ant 0	Ant 1			
CDD mode								
11a	MCS0	2	5935	6.01	7.99	3.00	13.12	≤ 30.00
11a	MCS0	1	5955	10.48	10.29	3.00	16.40	≤ 30.00
11a	MCS0	49	6195	10.38	10.08	3.00	16.24	≤ 30.00
11a	MCS0	93	6415	10.48	9.39	3.00	15.98	≤ 30.00
11a	MCS0	117	6535	10.14	10.31	4.00	17.24	≤ 30.00
11a	MCS0	153	6715	10.13	9.53	4.00	16.85	≤ 30.00
11a	MCS0	181	6855	10.28	9.52	4.00	16.93	≤ 30.00
11ax-HE20	MCS0	2	5935	-9.44	-7.51	3.00	-2.36	≤ 30.00
11ax-HE20	MCS0	1	5955	10.45	10.16	3.00	16.32	≤ 30.00
11ax-HE20	MCS0	49	6195	10.25	9.94	3.00	16.11	≤ 30.00
11ax-HE20	MCS0	93	6415	10.46	9.64	3.00	16.08	≤ 30.00
11ax-HE20	MCS0	117	6535	10.03	10.04	4.00	17.05	≤ 30.00
11ax-HE20	MCS0	153	6715	10.50	10.01	4.00	17.27	≤ 30.00
11ax-HE20	MCS0	181	6855	10.18	9.41	4.00	16.82	≤ 30.00
11ax-HE40	MCS0	3	5965	10.25	9.80	3.00	16.04	≤ 30.00
11ax-HE40	MCS0	51	6205	10.21	9.76	3.00	16.00	≤ 30.00
11ax-HE40	MCS0	91	6405	10.19	10.01	3.00	16.11	≤ 30.00
11ax-HE40	MCS0	123	6565	10.09	9.86	4.00	16.99	≤ 30.00
11ax-HE40	MCS0	147	6685	10.28	10.38	4.00	17.34	≤ 30.00
11ax-HE40	MCS0	179	6845	10.48	9.43	4.00	17.00	≤ 30.00
11ax-HE80	MCS0	7	5985	10.48	10.05	3.00	16.28	≤ 30.00
11ax-HE80	MCS0	55	6225	10.39	9.87	3.00	16.15	≤ 30.00
11ax-HE80	MCS0	87	6385	10.11	9.83	3.00	15.98	≤ 30.00
11ax-HE80	MCS0	135	6625	10.48	10.25	4.00	17.38	≤ 30.00
11ax-HE80	MCS0	151	6705	10.32	9.43	4.00	16.91	≤ 30.00
11ax-HE80	MCS0	167	6785	10.48	9.46	4.00	17.01	≤ 30.00
11ax-HE160	MCS0	15	6025	9.88	9.57	3.00	15.74	≤ 30.00
11ax-HE160	MCS0	47	6185	10.44	9.79	3.00	16.14	≤ 30.00
11ax-HE160	MCS0	79	6345	10.35	10.34	3.00	16.36	≤ 30.00
11ax-HE160	MCS0	143	6665	10.16	10.07	4.00	17.13	≤ 30.00

Test Mode	RU Size	RU Index	Rate	Channel No.	Freq. (MHz)	Average Power (dBm)		Gain (dBi)	Total EIRP Power (dBm)	EIRP Limit (dBm)
						Ant 0	Ant 1			
CDD mode										
11ax-HE20	26 Tone	RU 0	MCS0	1	5955	10.34	9.85	3.00	16.11	≤ 30.00
11ax-HE20		RU 8	MCS0	93	6415	9.94	9.74	3.00	15.85	≤ 30.00
11ax-HE20		RU 0	MCS0	117	6535	9.84	10.18	4.00	17.02	≤ 30.00
11ax-HE20		RU 8	MCS0	181	6855	9.85	9.45	4.00	16.66	≤ 30.00
11ax-HE20	52 Tone	RU 74	MCS0	1	5955	10.14	9.78	3.00	15.97	≤ 30.00
11ax-HE20		RU 77	MCS0	93	6415	9.84	9.67	3.00	15.77	≤ 30.00
11ax-HE20		RU 74	MCS0	117	6535	9.81	10.16	4.00	17.00	≤ 30.00
11ax-HE20		RU 77	MCS0	181	6855	9.77	9.02	4.00	16.42	≤ 30.00
11ax-HE20	106 Tone	RU 106	MCS0	1	5955	10.08	9.91	3.00	16.01	≤ 30.00
11ax-HE20		RU 107	MCS0	93	6415	9.91	9.94	3.00	15.94	≤ 30.00
11ax-HE20		RU 106	MCS0	117	6535	9.85	9.89	4.00	16.88	≤ 30.00
11ax-HE20		RU 107	MCS0	181	6855	9.77	8.82	4.00	16.33	≤ 30.00
11ax-HE20	242 Tone	RU 122	MCS0	1	5955	9.99	9.81	3.00	15.91	≤ 30.00
11ax-HE20		RU 122	MCS0	93	6415	9.98	9.94	3.00	15.97	≤ 30.00
11ax-HE20		RU 122	MCS0	117	6535	9.76	9.84	4.00	16.81	≤ 30.00
11ax-HE20		RU 122	MCS0	181	6855	9.85	8.91	4.00	16.42	≤ 30.00

Test Mode	RU Size	RU Index	Rate	Channel No.	Freq. (MHz)	Average Power (dBm)		Gain (dBi)	Total EIRP Power (dBm)	EIRP Limit (dBm)
						Ant 0	Ant 1			
CDD mode										
11ax-HE40	26 Tone	RU 0	MCS0	3	5965	8.05	9.78	3.00	15.01	≤ 30.00
11ax-HE40		RU 17	MCS0	91	6405	9.91	9.35	3.00	15.65	≤ 30.00
11ax-HE40		RU 0	MCS0	123	6565	9.57	9.51	4.00	16.55	≤ 30.0
11ax-HE40		RU 17	MCS0	179	6845	9.46	8.77	4.00	16.14	≤ 30.0
11ax-HE40	52 Tone	RU 74	MCS0	3	5965	8.76	9.77	3.00	15.30	≤ 30.0
11ax-HE40		RU 81	MCS0	91	6405	9.80	9.36	3.00	15.60	≤ 30.0
11ax-HE40		RU 74	MCS0	123	6565	9.65	9.45	4.00	16.56	≤ 30.0
11ax-HE40		RU 81	MCS0	179	6845	9.50	8.60	4.00	16.08	≤ 30.0
11ax-HE40	106 Tone	RU 106	MCS0	3	5965	7.85	9.90	3.00	15.01	≤ 30.0
11ax-HE40		RU 109	MCS0	91	6405	9.37	9.06	3.00	15.23	≤ 30.0
11ax-HE40		RU 106	MCS0	123	6565	9.84	9.74	4.00	16.80	≤ 30.0
11ax-HE40		RU 109	MCS0	179	6845	9.43	8.43	4.00	15.97	≤ 30.0
11ax-HE40	242 Tone	RU 122	MCS0	3	5965	7.65	9.80	3.00	14.87	≤ 30.0
11ax-HE40		RU 123	MCS0	91	6405	9.79	9.47	3.00	15.64	≤ 30.0
11ax-HE40		RU 122	MCS0	123	6565	9.65	9.48	4.00	16.58	≤ 30.0
11ax-HE40		RU 123	MCS0	179	6845	9.38	8.43	4.00	15.94	≤ 30.0
11ax-HE40	484 Tone	RU 130	MCS0	3	5965	8.58	9.99	3.00	15.35	≤ 30.0
11ax-HE40		RU 130	MCS0	91	6405	9.63	9.71	3.00	15.68	≤ 30.0
11ax-HE40		RU 130	MCS0	123	6565	9.48	9.43	4.00	16.47	≤ 30.00
11ax-HE40		RU 130	MCS0	179	6845	9.91	8.96	4.00	16.47	≤ 30.00

Test Mode	RU Size	RU Index	Rate	Channel No.	Freq. (MHz)	Average Power (dBm)		Gain (dBi)	Total EIRP Power (dBm)	EIRP Limit (dBm)
						Ant 0	Ant 1			
CDD mode										
11ax-HE80	26 Tone	RU 0	MCS0	7	5985	8.63	9.84	3.00	15.29	≤ 30.00
11ax-HE80		RU 36	MCS0	87	6385	9.92	9.17	3.00	15.57	≤ 30.00
11ax-HE80		RU 0	MCS0	135	6625	9.90	9.75	4.00	16.84	≤ 30.00
11ax-HE80		RU 36	MCS0	167	6785	9.69	8.84	4.00	16.30	≤ 30.00
11ax-HE80	52 Tone	RU 74	MCS0	7	5985	8.48	9.77	3.00	15.18	≤ 30.00
11ax-HE80		RU 89	MCS0	87	6385	9.84	9.30	3.00	15.59	≤ 30.00
11ax-HE80		RU 74	MCS0	135	6625	9.80	9.57	4.00	16.70	≤ 30.00
11ax-HE80		RU 89	MCS0	167	6785	9.71	8.59	4.00	16.20	≤ 30.00
11ax-HE80	106 Tone	RU 106	MCS0	7	5985	8.10	9.90	3.00	15.10	≤ 30.00
11ax-HE80		RU 113	MCS0	87	6385	9.84	9.41	3.00	15.64	≤ 30.00
11ax-HE80		RU 106	MCS0	135	6625	9.82	9.30	4.00	16.58	≤ 30.00
11ax-HE80		RU 113	MCS0	167	6785	9.59	8.55	4.00	16.11	≤ 30.00
11ax-HE80	242 Tone	RU 122	MCS0	7	5985	7.73	9.79	3.00	14.89	≤ 30.00
11ax-HE80		RU 125	MCS0	87	6385	9.85	9.25	3.00	15.57	≤ 30.00
11ax-HE80		RU 122	MCS0	135	6625	9.58	9.04	4.00	16.33	≤ 30.00
11ax-HE80		RU 125	MCS0	167	6785	9.50	8.44	4.00	16.01	≤ 30.00
11ax-HE80	484 Tone	RU 130	MCS0	7	5985	8.42	9.78	3.00	15.16	≤ 30.00
11ax-HE80		RU 131	MCS0	87	6385	9.79	9.37	3.00	15.60	≤ 30.00
11ax-HE80		RU 130	MCS0	135	6625	9.49	9.38	4.00	16.45	≤ 30.00
11ax-HE80		RU 131	MCS0	167	6785	10.16	9.08	4.00	16.66	≤ 30.00
11ax-HE80	996 Tone	RU 134	MCS0	7	5985	9.89	9.48	3.00	15.70	≤ 30.00
11ax-HE80		RU 134	MCS0	87	6385	9.48	9.25	3.00	15.38	≤ 30.00
11ax-HE80		RU 134	MCS0	135	6625	9.77	9.61	4.00	16.70	≤ 30.00
11ax-HE80		RU 134	MCS0	167	6785	9.85	8.91	4.00	16.42	≤ 30.00

Test Mode	RU Size	RU Index	Rate	Channel No.	Freq. (MHz)	Average Power (dBm)		Gain (dBi)	Total EIRP Power (dBm)	EIRP Limit (dBm)
						Ant 0	Ant 1			
CDD mode										
11ax-HE160	26 Tone	RU 0	MCS0	15	6025	8.08	9.76	3.00	15.01	≤ 30.00
11ax-HE160		RU 73	MCS0	79	6345	9.45	8.87	3.00	15.18	≤ 30.00
11ax-HE160		RU 73	MCS0	143	6665	9.76	9.52	4.00	16.65	≤ 30.00
11ax-HE160	52 Tone	RU 74	MCS0	15	6025	8.06	9.77	3.00	15.01	≤ 30.00
11ax-HE160		RU 105	MCS0	79	6345	9.47	8.98	3.00	15.24	≤ 30.00
11ax-HE160		RU 105	MCS0	143	6665	9.72	9.33	4.00	16.54	≤ 30.00
11ax-HE160	106 Tone	RU 106	MCS0	15	6025	8.34	9.80	3.00	15.14	≤ 30.00
11ax-HE160		RU 121	MCS0	79	6345	9.42	9.06	3.00	15.25	≤ 30.00
11ax-HE160		RU 121	MCS0	143	6665	9.56	9.44	4.00	16.51	≤ 30.00
11ax-HE160	242 Tone	RU 122	MCS0	15	6025	8.26	9.79	3.00	15.10	≤ 30.00
11ax-HE160		RU 129	MCS0	79	6345	9.38	9.00	3.00	15.20	≤ 30.00
11ax-HE160		RU 129	MCS0	143	6665	9.45	9.43	4.00	16.45	≤ 30.00
11ax-HE160	484 Tone	RU 130	MCS0	15	6025	8.05	9.62	3.00	14.92	≤ 30.00
11ax-HE160		RU 133	MCS0	79	6345	9.62	9.34	3.00	15.49	≤ 30.00
11ax-HE160		RU 133	MCS0	143	6665	9.81	9.79	4.00	16.81	≤ 30.00
11ax-HE160	996 Tone	RU 134	MCS0	15	6025	7.75	9.76	3.00	14.88	≤ 30.00
11ax-HE160		RU 135	MCS0	79	6345	9.43	9.18	3.00	15.32	≤ 30.00
11ax-HE160		RU 135	MCS0	143	6665	9.58	9.60	4.00	16.60	≤ 30.00
11ax-HE160	1992 Tone	RU 136	MCS0	15	6025	8.36	10.33	3.00	15.47	≤ 30.00
11ax-HE160		RU 136	MCS0	143	6665	9.24	9.23	4.00	16.25	≤ 30.00

Note 1: Total Average Power (dBm) = $10*\log\{10^{(\text{Ant 0 Average Power }/10)} + 10^{(\text{Ant 1 Average Power }/10)}\}$.

Note 2: CDD EIRP Power (dBm) = Total Average Power (dBm) + CDD Directional Gain (dBi).

6.4. Power Spectral Density

6.4.1. Test Limit

For an indoor access point operating in the 5.925-7.125 GHz band, the maximum power spectral density must not exceed 5 dBm e.i.r.p. in any 1-megahertz band.

For a subordinate device operating under the control of an indoor access point in the 5.925-7.125 GHz band, the maximum power spectral density must not exceed 5 dBm e.i.r.p in any 1-megahertz band.

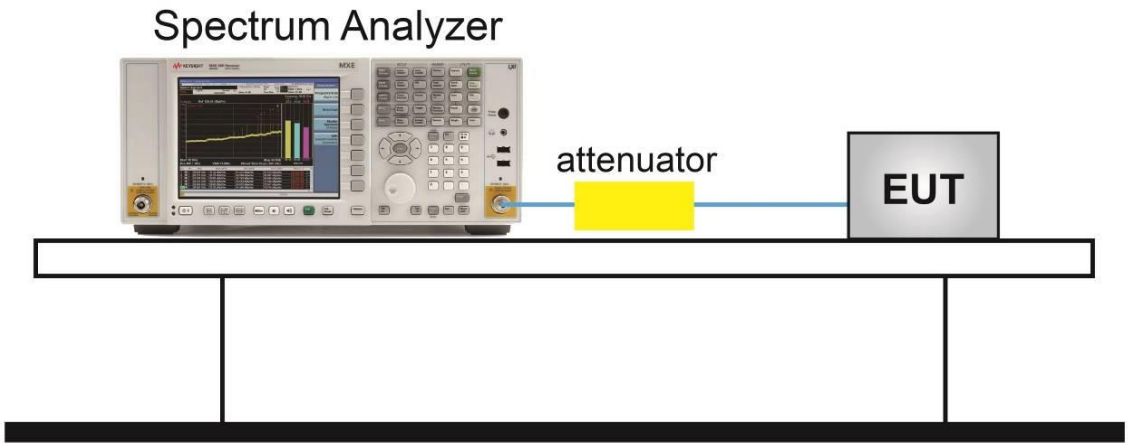
6.4.2. Test Procedure Used

KDB 789033 D02v02r01-SectionF

6.4.3. Test Setting

1. Analyzer was set to the center frequency of the UNII channel under investigation
2. Span was set to encompass the entire 26dB EBW of the signal.
3. RBW = 1MHz
4. VBW = 3MHz
5. Number of sweep points ≥ 2 × (span / RBW)
6. Detector = power averaging (Average)
7. Sweep time = auto
8. Trigger = free run
9. Use the peak search function on the instrument to find the peak of the spectrum and record its value.
10. Add 10*log(1/x), where x is the duty cycle, to the measured power in order to compute the average power during the actual transmission times (because the measurement represents an average over both the on and off times of the transmission). For example, add 10*log(1/0.25) = 6 dB if the duty cycle is 25 percent.

6.4.4. Test Setup



6.4.5. Test Result

Test Site	SR6	Test Engineer	Wen
Test Date	2024/7/17~2024/7/22		

Client Standard Power

Test Mode	Data Rate/ MCS	Channel No.	Freq. (MHz)	PSD (dBm/MHz)		Duty Cycle (%)	Ant Gain (dBi)	EIRP PSD (dBm/MHz)	EIRP PSD Limit (dBm/MHz)
				Ant 0	Ant 1				
CDD mode									
11a	MCS0	2	5935	-3.437	-1.133	99.34%	5.86	6.77	≤ 17.00
11a	MCS0	1	5955	0.800	0.280	99.34%	5.86	9.45	≤ 17.00
11a	MCS0	49	6195	-0.084	-0.275	99.34%	5.86	8.72	≤ 17.00
11a	MCS0	93	6415	-1.131	-0.363	99.34%	5.86	8.17	≤ 17.00
11a	MCS0	117	6535	-0.247	0.265	99.34%	6.52	9.58	≤ 17.00
11a	MCS0	153	6715	0.198	-0.046	99.34%	6.52	9.64	≤ 17.00
11a	MCS0	181	6855	0.251	-0.368	99.34%	6.52	9.51	≤ 17.00
11ax-HE20	MCS0	2	5935	-18.666	-17.129	99.82%	5.86	-8.95	≤ 17.00
11ax-HE20	MCS0	1	5955	0.289	-0.115	99.82%	5.86	8.97	≤ 17.00
11ax-HE20	MCS0	49	6195	-0.251	-0.853	99.82%	5.86	8.34	≤ 17.00
11ax-HE20	MCS0	93	6415	-0.282	-1.224	99.82%	5.86	8.15	≤ 17.00
11ax-HE20	MCS0	117	6535	-0.534	-0.103	99.82%	6.52	9.23	≤ 17.00
11ax-HE20	MCS0	153	6715	0.409	0.037	99.82%	6.52	9.77	≤ 17.00
11ax-HE20	MCS0	181	6855	-0.141	-0.494	99.82%	6.52	9.22	≤ 17.00
11ax-HE40	MCS0	3	5965	-2.631	-3.087	98.96%	5.86	6.06	≤ 17.00
11ax-HE40	MCS0	51	6205	-3.616	-4.377	98.96%	5.86	4.94	≤ 17.00
11ax-HE40	MCS0	91	6405	-3.020	-3.446	98.96%	5.86	5.69	≤ 17.00
11ax-HE40	MCS0	123	6565	-3.169	-3.139	98.96%	6.52	6.42	≤ 17.00
11ax-HE40	MCS0	147	6685	-2.138	-2.140	98.96%	6.52	7.44	≤ 17.00
11ax-HE40	MCS0	179	6845	-2.493	-3.691	98.96%	6.52	6.52	≤ 17.00
11ax-HE80	MCS0	7	5985	-4.797	-5.169	98.71%	5.86	3.95	≤ 17.00
11ax-HE80	MCS0	55	6225	-5.195	-6.006	98.71%	5.86	3.34	≤ 17.00
11ax-HE80	MCS0	87	6385	-5.813	-6.171	98.71%	5.86	2.94	≤ 17.00
11ax-HE80	MCS0	135	6625	-5.101	-4.832	98.71%	6.52	4.62	≤ 17.00
11ax-HE80	MCS0	151	6705	-5.015	-5.613	98.71%	6.52	4.28	≤ 17.00
11ax-HE80	MCS0	167	6785	-4.982	-5.680	98.71%	6.52	4.27	≤ 17.00
11ax-HE160	MCS0	15	6025	-7.667	-7.942	98.84%	5.86	1.12	≤ 17.00
11ax-HE160	MCS0	47	6185	-8.461	-8.801	98.84%	5.86	0.29	≤ 17.00
11ax-HE160	MCS0	79	6345	-8.546	-8.386	98.84%	5.86	0.46	≤ 17.00
11ax-HE160	MCS0	143	6665	-8.106	-8.316	98.84%	6.52	1.37	≤ 17.00

Test Mode	RU Size	RU Index	Rate	Channel No.	Freq. (MHz)	PSD (dBm/MHz)		Duty Cycle (%)	Ant Gain (dBi)	EIRP PSD (dBm/MHz)	EIRP PSD Limit (dBm)
						Ant 0	Ant 1				
CDD mode											
11ax-HE20	26 Tone	RU 0	MCS0	1	5955	8.278	7.755	99.61%	3.00	14.05	≤ 17.00
11ax-HE20		RU 8	MCS0	93	6415	7.299	7.118	99.61%	3.00	13.24	≤ 17.00
11ax-HE20		RU 0	MCS0	117	6535	7.305	8.020	99.61%	4.00	14.70	≤ 17.00
11ax-HE20		RU 8	MCS0	181	6855	7.775	7.225	99.61%	4.00	14.54	≤ 17.00
11ax-HE20	52 Tone	RU 74	MCS0	1	5955	5.491	4.838	99.80%	3.00	11.20	≤ 17.00
11ax-HE20		RU 77	MCS0	93	6415	4.458	4.180	99.80%	3.00	10.34	≤ 17.00
11ax-HE20		RU 74	MCS0	117	6535	4.713	5.140	99.80%	4.00	11.95	≤ 17.00
11ax-HE20		RU 77	MCS0	181	6855	4.496	4.032	99.80%	4.00	11.29	≤ 17.00
11ax-HE20	106 Tone	RU 106	MCS0	1	5955	2.428	1.963	99.79%	3.00	8.22	≤ 17.00
11ax-HE20		RU 107	MCS0	93	6415	1.780	1.711	99.79%	3.00	7.77	≤ 17.00
11ax-HE20		RU 106	MCS0	117	6535	1.740	1.897	99.79%	4.00	8.84	≤ 17.00
11ax-HE20		RU 107	MCS0	181	6855	1.620	0.918	99.79%	4.00	8.30	≤ 17.00
11ax-HE20	242 Tone	RU 122	MCS0	1	5955	-1.293	-1.429	99.55%	3.00	4.67	≤ 17.00
11ax-HE20		RU 122	MCS0	93	6415	-1.843	-1.533	99.55%	3.00	4.34	≤ 17.00
11ax-HE20		RU 122	MCS0	117	6535	-1.897	-1.419	99.55%	4.00	5.38	≤ 17.00
11ax-HE20		RU 122	MCS0	181	6855	-1.721	-2.076	99.55%	4.00	5.14	≤ 17.00

Note 1: Total PSD (dBm/MHz) = $10*\log\{10^{(\text{Ant 0 PSD}/10)} + 10^{(\text{Ant 1 PSD}/10)}\}$

Note 2: When EUT duty cycle < 98%, EIRP PSD (dBm/MHz) = Total PSD (dBm/MHz) + 10*log (1/Duty Cycle) + Directional Gain (dBi).