CERTIFICATION TEST REPORT

Report Number. : 4790309672-FR4V2

Applicant	:	Kaonbroadband CO., LTD. 884-3, Seongnam-daero, Bundang-gu, Seongnam-si Gyeonggi-do, South Korea
Model	:	AR1344P, AR1344, AR1344E, AR1344E2, EVO6700AP2
FCC ID	:	2AXCW-AP67002
EUT Description	:	WiFi6 Smart Mesh
Test Standard(s)	:	FCC 47 CFR PART 15 SUBPART E

Date Of Issue:
May 10, 2022

Prepared by:
UL Korea, Ltd.
26th floor, 152, Teheran-ro, Gangnam-gu Seoul, 06236, Korea

Suwon Test Site: UL Korea, Ltd. Suwon Laboratory
218 Maeyeong-ro, Yeongtong-gu,
Suwon-si, Gyeonggi-do, 16675, Korea
TEL: (031) 337-9902
FAX: (031) 213-5433

IAS ACCREDITED
Testing Laboratory
TL-637

Revision History

Rev.	Issue Date	Revisions	Revised By
V1	04/20/22	Initial issue	Jaehyong Lee
V2	05/10/22	Updated to address about the TCB's question	Jaehyong Lee

TABLE OF CONTENTS

1. ATTESTATION OF TEST RESULTS

COMPANY NAME:	Kaonbroadband CO., LTD.
EUT DESCRIPTION:	WiFi6 Smart Mesh
MODEL NUMBER:	AR1344P, AR1344, AR1344E, AR1344E2, EVO6700AP2
SERIAL NUMBER:	Proto type (CONDUCTED) Proto type (RADIATED);
DATE TESTED:	FEB 28, 2022 – APR 07, 2022;

APPLICABLE STANDARDS	
STANDARD	**TEST RESULTS**
CFR 47 Part 15 Subpart E	Complies

UL Korea, Ltd. tested the above equipment in accordance with the requirements set forth in the above standards. All indications of Pass/Fail in this report are opinions expressed by UL Korea, Ltd. based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

Note: The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by UL Korea, Ltd. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL Korea, Ltd. will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by IAS, any agency of the Federal Government, or any agency of any government.

Approved & Released For
UL Korea, Ltd. By:

Robby Lee
Senior Laboratory Engineer
UL Korea, Ltd.

Tested By:

Jaehyong Lee
Laboratory Engineer Associate
UL Korea, Ltd.

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with following methods.

1. FCC CFR 47 Part 2.
2. FCC CFR 47 Part 15.
3. KDB 789033 D02 General UNII Test Procedures New Rules v02r01
4. KDB 662911 D01 v02r01
5. ANSI C63.10-2013.

3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 218 Maeyeong-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16675, Korea. Line conducted emissions are measured only at the 218 address. The following table identifies which facilities were utilized for radiated emission measurements documented in this report. Specific facilities are also identified in the test results sections.

218 Maeyeong-ro
☒ Chamber 1
☒ Chamber 2
☒ Chamber 3

UL Korea, Ltd. is accredited by IAS, Laboratory Code TL-637. The full scope of accreditation can be viewed at https://www.iasonline.org/wp-content/uploads/2017/05/TL-637-cert-New.pdf.

UL Korea, Ltd. is accredited by National Radio Research Agency, Designation Number KR0161, for all testing performed within the scope of this report.

ISED CABID	ISED Company Number	FCC Registration
KR0161	2324L	644529

4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations, and is traceable to recognized national standards.

4.2. SAMPLE CALCULATION

Where relevant, the following sample calculation is provided:

Field Strength (dBuV/m) = Measured Voltage (dBuV) + Antenna Factor (dB/m) + Cable Loss (dB) – Preamp Gain (dB)

28.9 dBuV/m = 36.5 dBuV + 18.7 dB/m + 0.6 dB – 26.9 dB

4.3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

PARAMETER	UNCERTAINTY
Conducted Disturbance, 0.15 to 30 MHz	2.87 dB
Radiated Disturbance, 30 MHz to 1 GHz	4.05 dB
Radiated Disturbance, 1 GHz to 18 GHz	5.78 dB
Radiated Disturbance, 18 GHz to 40 GHz	5.58 dB

Uncertainty figures are valid to a confidence level of 95%.

4.4. DECISION RULE

Decision rule for statement(s) of conformity is based on Accuracy Method specified in Procedure 2, Clause 4.4.3 in IEC Guide 115:2007.

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The EUT is a WiFi6 Smart Mesh.
This test report addresses the 802.11ax WLAN (UNII) operational mode.

This report covers the models AR1344P and AR1344, AR1344E, AR1344E2, EVO6700AP2.
The difference between these models is only the momory size.

Model	Memory size
AR1344P, AR1344E2, EVO6700AP2	256MB/512MB (FLASH MEMORY / SDRAM)
AR1344, AR1344E	128MB/256MB (FLASH MEMORY / SDRAM)

The model AR1344P was set for final test.

WiFi Operating mode

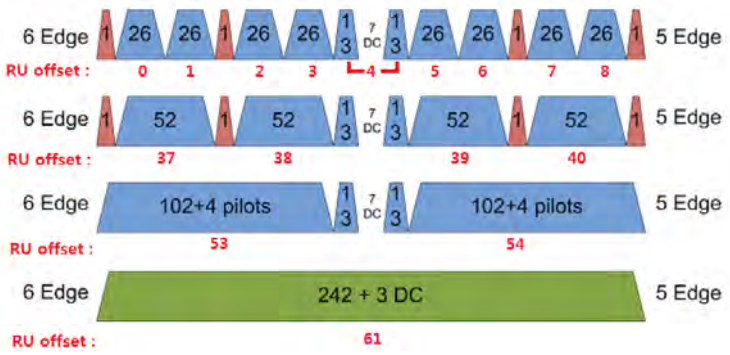
Frequency rage	Mode	Antenna 1	Antenna 2	Antenna 3	Antenna 4
5GHz (5180 MHz ~ 5825 MHz)	802.11ax(HE20) SISO	-	-	-	-
	802.11ax(HE20) MIMO	TX/RX	TX/RX	TX/RX	TX/RX
	802.11ax(HE40) SISO	-	-	-	-
	802.11ax(HE40) MIMO	TX/RX	TX/RX	TX/RX	TX/RX
	802.11ax(HE80) SISO	-	-	-	-
	802.11ax(HE80) MIMO	TX/RX	TX/RX	TX/RX	TX/RX
	802.11ax(HE160) SISO	-	-	-	-
	802.11ax(HE160) MIMO	TX/RX	TX/RX	TX/RX	TX/RX

Simultaneous TX Condition

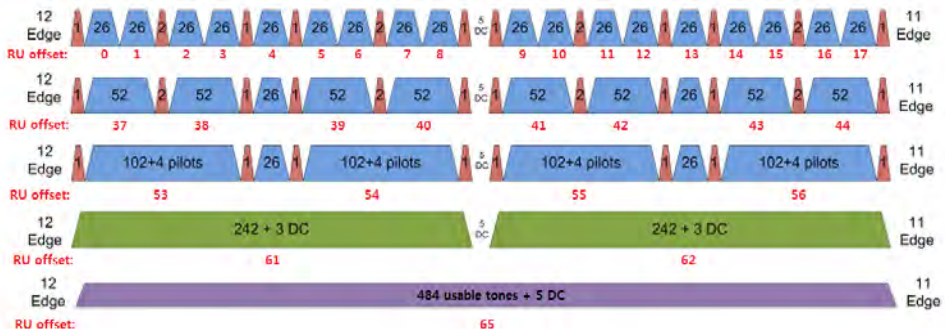
Simultaneous Tx Condition - RSDB

Mode	# of TX	5GHz WLAN				2.4GHz WLAN		Test Case
		ANT1	ANT2	ANT3	ANT4	ANT1	ANT2	
2.4GHz + 5GHz RSDB MIMO	6	O	O	O	O	O	O	O

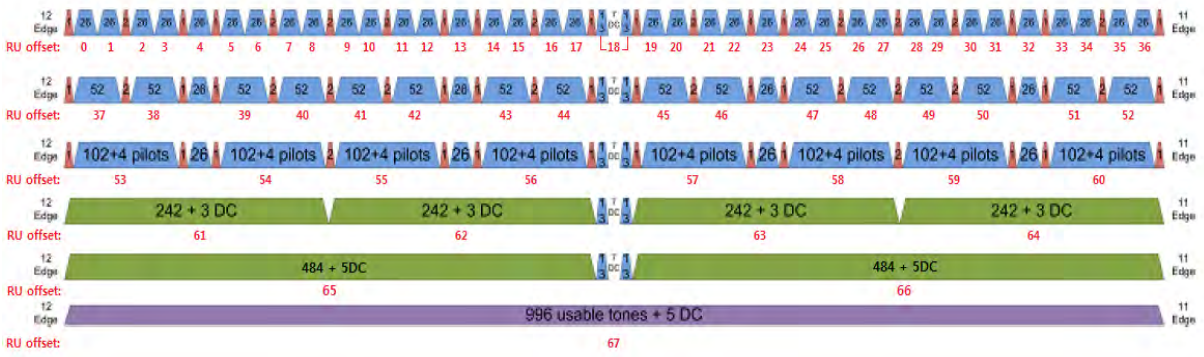
802.11ax RU allocations



- HE 20 Mode -



- HE 40 Mode -



- HE 80 Mode -

- HE 160 Mode (80 MHz + 80 MHz) -

Test RU offset for tones in each modes

Mode	Tones	RU offset
HE20	26T	0
		4
		8
	52T	37
		38
		40
	106T	53
		54
	242T / SU Note 1	61 / -
HE40	26T	0
		9
		17
	52T	37
		41
		44
	106T	53
		54
		56
	242T	61
		62
	484T / SU Note 1	63 / -
HE80	26T	0
		18
		36
	52T	37
		45
		52
	106T	53
		57
		60
	242T	61
		62
		64
	484T	65
		66
	996T / SU Note 1	67 / -
HE160	Note 2	

Note1: Full RU(Resource Unit) mode and SU(Single Unit) mode have no difference in physical waveform. This report has been reported the SU mode with highest output power in SISO and the SU mode with highest output power in MIMO.
Note2: It is used by being bonded to 80MHz + 80MHz, and refer to 80MHz for RU index configuration.

Band portion of RU allocation about straddle channels

Mode	Channel	Tones	RU offset	Portion
HE20	Straddle 5720 MHz	26T	4	UNII 2C & UNII 3
		242T / SU	61 / -	
HE40	Straddle 5710 MHz	26T	9	UNII 2C & UNII 3
		484T / SU	65 / -	
HE80	Straddle 5690 MHz	26T	18	UNII 2C & UNII 3
		996T / SU	67 / -	

5.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum total conducted average output power as follows:

Frequency Range [MHz]	Mode	Output Power [dBm]				Output Power [mW]			
		ANT1	ANT2	ANT3	ANT4	ANT1	ANT2	ANT3	ANT4
5180 - 5240	802.11ax HE20 MIMO	18.26				66.99			
5190 - 5230	802.11ax HE40 MIMO	19.27				84.53			
5210	802.11ax HE80 MIMO	18.69				73.96			
5250	802.11ax HE160 MIMO	18.67				73.62			
5260 - 5320	802.11ax HE20 MIMO	19.38				86.70			
5270 - 5310	802.11ax HE40 MIMO	15.67				36.90			
5290	802.11ax HE80 MIMO	18.45				69.98			
5500 - 5720	802.11ax HE20 MIMO	19.30				85.11			
5510 - 5710	802.11ax HE40 MIMO	20.44				110.66			
5530 - 5690	802.11ax HE80 MIMO	19.28				84.72			
5570	802.11ax HE160 MIMO	19.02				79.80			
5745 - 5825	802.11ax HE20 MIMO	23.72				235.50			
5755 - 5795	802.11ax HE40 MIMO	23.48				222.84			
5775	802.11ax HE80 MIMO	22.76				188.80			

5.3. DESCRIPTION OF AVAILABLE ANTENNAS

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 internal antenna was Permanently attached.
Therefore this E.U.T Complies with the requirement of §15.203.

The radio utilizes a internal antenna, with a maximum gain of:

Frequency Band [MHz]	ANT1 Gain [dBi]	ANT2 Gain [dBi]	ANT3 Gain [dBi]	ANT4 Gain [dBi]	Correlated Chains Directional Gain [dBi]
UNII 1 5150 - 5250	1.98	1.98	1.98	1.98	8.00
UNII 2A 5250 - 5350	1.97	1.97	1.97	1.97	7.99
UNII 2C 5470 - 5725	1.94	1.94	1.94	1.94	7.96
UNII 3 5725 - 5850	1.86	1.86	1.86	1.86	7.88

5.4. List of test reduction and modes covering other modes:

The output power on covered modes is equal to or less than one referenced.

Authorized Frequency Band			
Mode	**Antenna Stream**	**Mode**	**Covered by**
802.11ax HE 20	MIMO	802.11ax HE20 RU(242T) 4TX	802.11ax HE20 SU 4TX
802.11ax HE 40	MIMO	802.11ax HE40 RU(484T) 4TX	802.11ax HE40 SU 4TX
802.11ax HE 80	MIMO	802.11ax HE80 RU(996T) 4TX	802.11ax HE80 SU 4TX
802.11ax HE 160	MIMO	802.11ax HE160 RU(996T+996T) 4TX	802.11ax HE160 SU 4TX

5.5. WORST-CASE CONFIGURATION AND MODE

Radiated emission below 1 GHz and power line conducted emission were performed with the EUT set to transmit at the channel with highest output power as worst-case scenario.

Radiated emission above 1 GHz was performed with the EUT set to transmit low/mid/high channels.

For UNII-1, radiated emission tests were performed with higher power than reported power.

The fundamental of the EUT was investigated in three orthogonal orientations X, Y and Z, it was determined that X orientation was worst-case orientation; therefore, all final radiated testing was performed with the EUT in X orientation.

Worst-case selection criteria for test items :

- For the radiated band-edge test, the test data for RU was only reported in this test report because SU mode is same with 802.11n/ac mode. And the PSD of 26RU is highest across all RU tones.

- For the spurious emissions, it was tested at the bandwidth/RU allocation with highest power and bandwidth/RU allocation with highest PSD for each bandwidth.
  (The test data for RU was only reported in this test report because SU mode is same or lower than n/ac mode. And the PSD of 26RU is highest across all RU tones)
  Partial RU allocations(26RU) are the same across all channels and share the same nominal output power. Therefore testing are performed once to cover the equivalent RU allocation across all channel bandwidths.

- For the spurious emissions, all bandwidth were investigated, test result of 802.11ax HE20 were worst case. so the test data for 802.11ax HE20 mode were only reported in this test report.

- For the 6dB Bandwidth, it was tested at the RU allocation with lowest tones number for each bandwidth.

Based on the baseline scan, the worst-case data rates were:
802.11ax HE20 mode: MCS0 4Tx
802.11ax HE40 mode: MCS0 4Tx
802.11ax HE80 mode: MCS0 4Tx
802.11ax HE160 mode: MCS0 4Tx

5.6. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	**Manufacturer**	**Model**	**Serial Number**	**FCC ID**
Switching mode Power Adaptor	CHENZHOU FRECOM ELECTRONICS	F18L16-120150SPAU	N/A	N/A

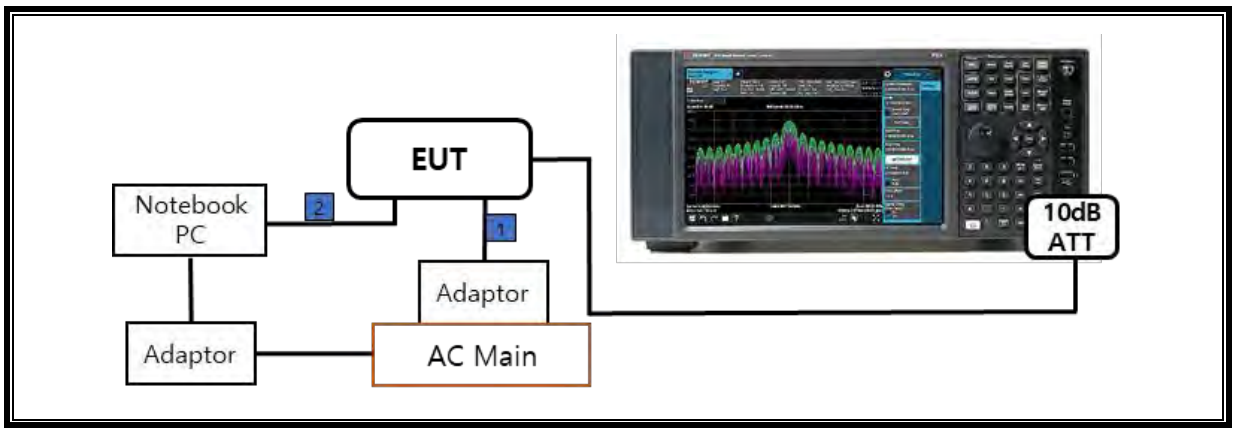
I/O CABLE

I/O Cable List						
Cable No	**Port**	**# of identical ports**	**Connector Type**	**Cable Type**	**Cable Length (m)**	**Remarks**
1	DC Power	1	Pin	Shielded	1.5m	N/A
2	LAN	2	RJ-45	Shielded	2.0m	N/A

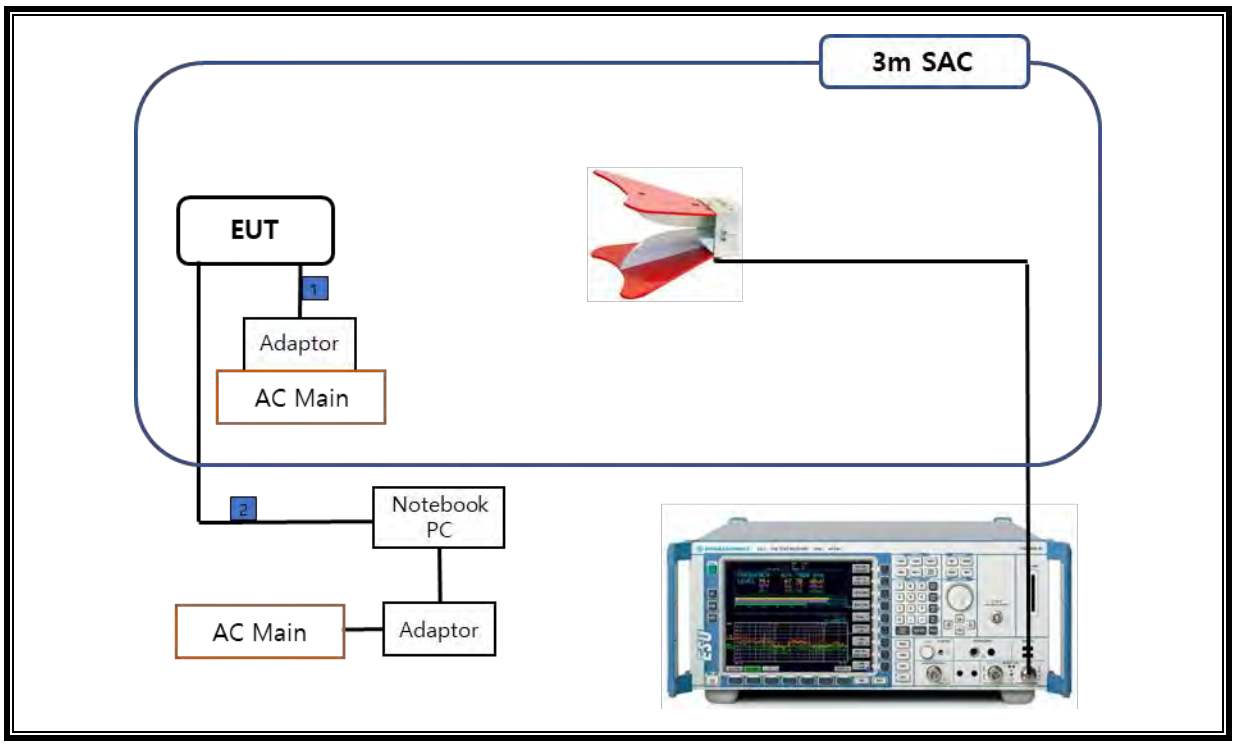
TEST SETUP

The EUT is a stand-alone unit during the tests.
Test software exercised the EUT to enable NII mode.

SETUP DIAGRAM FOR TESTS (CONDUCTED TEST SETUP)



SETUP DIAGRAM FOR TESTS (RADIATED TEST SETUP)



6. TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the tests documented in this report:

Test Equipment List				
Description	**Manufacturer**	**Model**	**S/N**	**Cal Due**
Antenna, Bilog, 30MHz-1GHz	SCHWARZBECK	VULB9163	750	2022-08-19
Antenna, Bilog, 30MHz-1GHz	SCHWARZBECK	VULB9163	749	2022-08-13
Antenna, Bilog, 30MHz-1GHz	SCHWARZBECK	VULB9163	845	2022-08-13
Antenna, Horn, 18 GHz	ETS	3115	00167211	2022-07-27
Antenna, Horn, 18 GHz	ETS	3115	00161451	2022-08-15
Antenna, Horn, 18 GHz	ETS	3117	00168724	2022-07-27
Antenna, Horn, 18 GHz	ETS	3117	00168717	2022-08-15
Antenna, Horn, 18 GHz	ETS	3117	00218957	2023-01-15
Antenna, Horn, 40 GHz	ETS	3116C	00166155	2023-01-15
Antenna, Horn, 40 GHz	ETS	3116C	00168645	2023-10-13
Preamplifier	ETS	3116C-PA	00168841	2022-08-04
Preamplifier, 1000 MHz	Sonoma	310N	341282	2022-08-02
Preamplifier, 1000 MHz	Sonoma	310N	351741	2022-08-02
Preamplifier, 1000 MHz	Sonoma	310N	370599	2022-08-02
Preamplifier, 18 GHz	Miteq	AFS42-00101800-25-S-42	1876511	2022-08-02
Preamplifier, 18 GHz	Miteq	AFS42-00101800-25-S-42	1896138	2022-08-02
Preamplifier, 18 GHz	Miteq	AFS42-00101800-25-S-42	2029168	2022-08-02
Spectrum Analyzer, 44 GHz	KEYSIGHT	N9030B	MY57143717	2023-01-11
RF Switching Unit	TA Engineering	TA-018S-16	SW-1	N/A
10dB ATTENUATOR	MINI-CIRCUITS	BW-K10-2W44+	2117	2022-10-22
Power Sensor	R&S	NRP8S	104520	2022-08-04
Power Sensor	R&S	NRP8S	104521	2022-08-04
Power Sensor	R&S	NRP8S	111164	2022-10-15
Power Sensor	R&S	NRP-Z91	102681	2022-08-04
Attenuator	R&S	10dB	None	2022-08-05
Attenuator	R&S	10dB	None	2022-08-05
Attenuator	R&S	10dB	None	2022-08-05
Attenuator	R&S	10dB	None	2022-08-05
EMI Test Receive, 40 GHz	R&S	ESU40	100439	2022-08-02
EMI Test Receive, 40 GHz	R&S	ESU40	100457	2022-08-02
EMI Test Receive, 3 GHz	R&S	ESR3	102592	2022-08-02
Notch Filter	Micro-Tronics	BRM50702-02	G037	2022-08-03
Notch Filter	Micro-Tronics	BRM50716-2	006	2022-08-02
Low Pass Filter 5GHz	Micro-Tronics	LPS17541	009	2022-08-02
Low Pass Filter 5GHz	Micro-Tronics	LPS17541	015	2022-08-02
Low Pass Filter 5GHz	Micro-Tronics	LPS17541	019	2022-08-02
High Pass Filter 3GHz	Micro-Tronics	HPM17543	010	2022-08-02
High Pass Filter 3GHz	Micro-Tronics	HPM17543	015	2022-08-02
High Pass Filter 3GHz	Micro-Tronics	HPM17543	020	2022-08-02
High Pass Filter 6GHz	Micro-Tronics	HPS17542	009	2022-08-02
High Pass Filter 6GHz	Micro-Tronics	HPS17542	016	2022-08-02
High Pass Filter 6GHz	Micro-Tronics	HPS17542	020	2022-08-02
LISN	R&S	ENV216	102478	2022-08-06
OPEN SWITCH AND CONTROL	R&S	OSP220	101437	N/A
Antenna, Loop, 9kHz-30MHz	R&S	HFH2-Z2	100418	2023-10-06
Termination	WEINSCHEL	M1406A	T09	2022-08-03
Attenuator	WEINSCHEL	WA76-30-21	A015	2022-08-03
UL Software				
Description	**Manufacturer**	**Model**	**Version**	
Radiated software	UL	UL EMC	Ver 9.5	
AC Line Conducted software	R&S	EMC32	Ver 10.60.10	

7. SUMMARY TABLE

FCC Part Section	Test Description	Test Limit	Test Condition	Test Result
15.407 (a)	Emission Bandwidth (26dB Bandwidth)	N/A	Condcuted	N/A
15.407(e)	6dB Band width (5.8GHz)	500 kHz		PASS
15.407 (a)(2)	TX Cond. Power 5.15-2.25, 5.25-5.35 & 5.47-5.725	< 250mW (23.98dBm) or 11+10Log(26dB BW)		PASS
15.407 (a)(3)	TX Cond. Power 5.725-5.825	< 30dBm		PASS
15.407 (a)(5)	PSD (5.2,5.3,5.5GHz)	< 11dBm		PASS
15.407 (a)(5)	PSD (5.8GHz)	30dBm per 500 kHz		PASS
15.207 (a)	AC Power Line conducted emissions	Section 10	Power Line Conducted	Refer to the UNII 802.11a_n_ac WLAN Test report (No.:4790309672-FR3)
15.407 (b) & 15.209	Radiated Spurious Emission	< 54dBuV/m	Radiated	PASS
15.407 (h)(2)	Dynamic Frequency Selection	N/A		Refer to the UNII WLAN DFS Test report (No.:14221535-E1)

8. MEASUREMENT METHODS

On-Time and Duty Cycle : KDB 789033 D02 v02r01, Section II.B.

6dB Emission BW : KDB 789033 D02 v02r01, Section II.C.2.

26dB Emission BW : KDB 789033 D02 v02r01, Section II.C.1.

99% Occupied BW : KDB 789033 D02 v02r01, Section II.D.

Conducted Output Power : KDB 789033 D02 v02r01, Section II.E.3.a(Method PM)

Conducted Output Power for Straddle Channel (ch144/142/138 for 20/40/80MHz BW):
KDB 789033 D02 v02r01, Section II.E.2.b(Method SA-1)

Power Spectral Density : KDB 789033 D02 v02r01, Section II.F.

Unwanted emissions in restricted bands : KDB 789033 D02 v02r01, Section II.G.3 – II.G.6.

Unwanted emissions in non-restricted bands : KDB 789033 D02 v02r01, Section II.G.3 – II.G.6.

AC Power Line Conducted Emission : ANSI C63.10-2013, Section 6.2.

9. REFERENCE MEASUREMENTS RESULTS

9.1. ON TIME AND DUTY CYCLE RESULTS

Mode	ANT	Tone	On Time [ms]	Period [ms]	Duty Cycle X [Linear]	Duty Cycle X [%]	Duty Cycle Correction Factor [dB]
802.11ax HE20	ALL	26T	3.078	3.108	0.99	99.03	0.00
		52T	2.933	2.962	0.99	99.02	0.00
		106T	2.846	2.877	0.99	98.92	0.00
		242T	2.650	2.691	0.98	98.48	0.00
		SU	3.311	3.339	0.99	99.16	0.00
802.11ax HE40	ALL	26T	3.086	3.115	0.99	99.07	0.00
		52T	2.932	2.961	0.99	99.02	0.00
		106T	2.846	2.877	0.99	98.92	0.00
		242T	2.815	2.846	0.99	98.91	0.00
		484T	2.802	2.832	0.99	98.94	0.00
		SU	2.498	2.527	0.99	98.85	0.00
802.11ax HE80	ALL	26T	3.074	3.103	0.99	99.07	0.00
		52T	2.936	2.966	0.99	98.99	0.00
		106T	2.850	2.881	0.99	98.92	0.00
		242T	2.820	2.850	0.99	98.95	0.00
		484T	2.806	2.836	0.99	98.94	0.00
		996T	2.806	2.836	0.99	98.94	0.00
		SU	2.466	2.498	0.99	98.72	0.00
802.11ax HE160	ALL	26T	4.390	4.479	0.98	98.01	0.00
		52T	4.240	4.325	0.98	98.03	0.00
		106T	4.159	4.241	0.98	98.07	0.00
		242T	4.118	4.194	0.98	98.19	0.00
		484T	4.138	4.180	0.99	99.00	0.00
		996T	4.174	4.203	0.99	99.31	0.00
		996T+996T	2.809	2.838	0.99	98.98	0.00
		SU	1.650	1.681	0.98	98.16	0.00

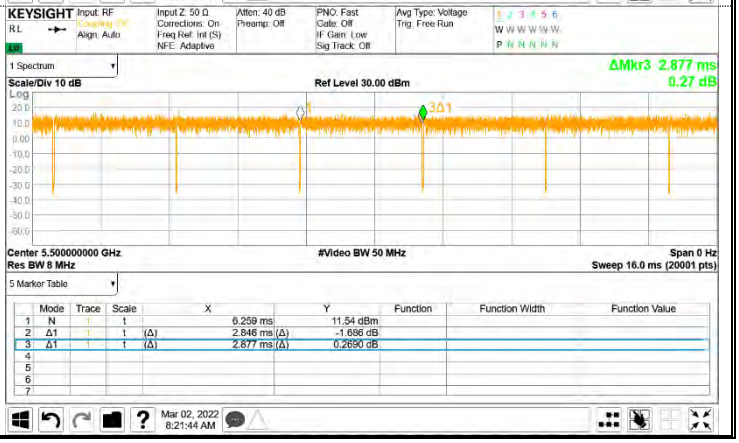
LIMITS

None; for reporting purposes only.

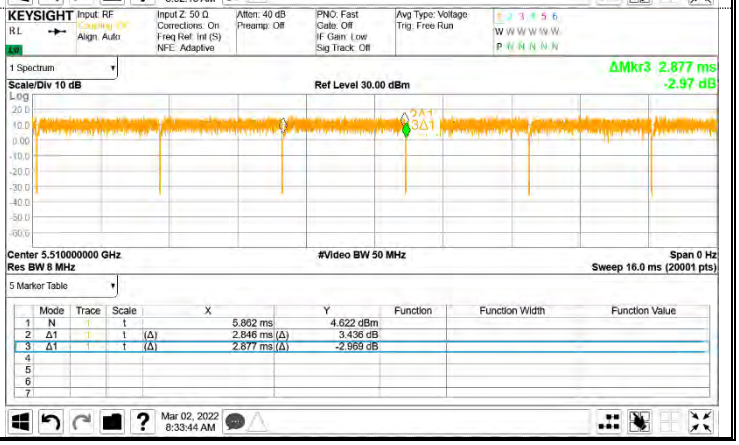
PROCEDURE

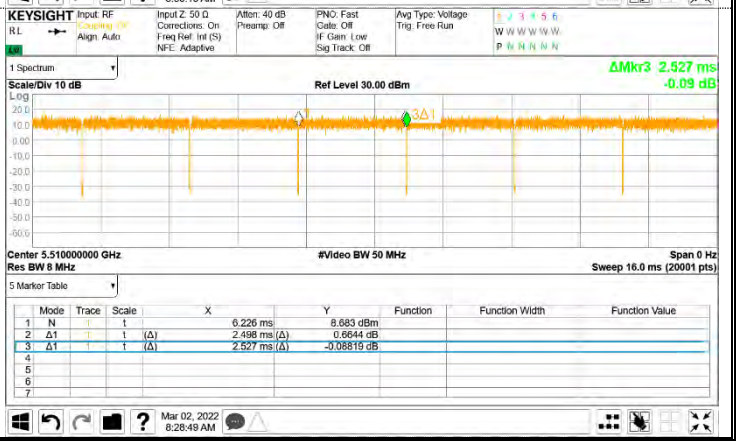
KDB 789033 D02 v02r01 Zero-Span Spectrum Analyzer Method.

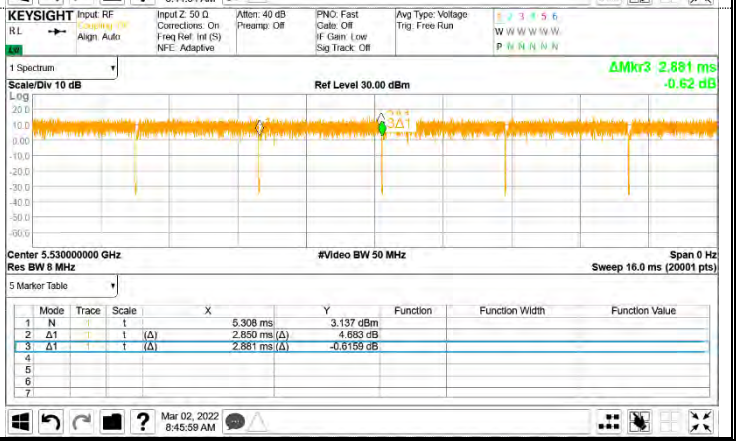
DUTY CYCLE PLOTS

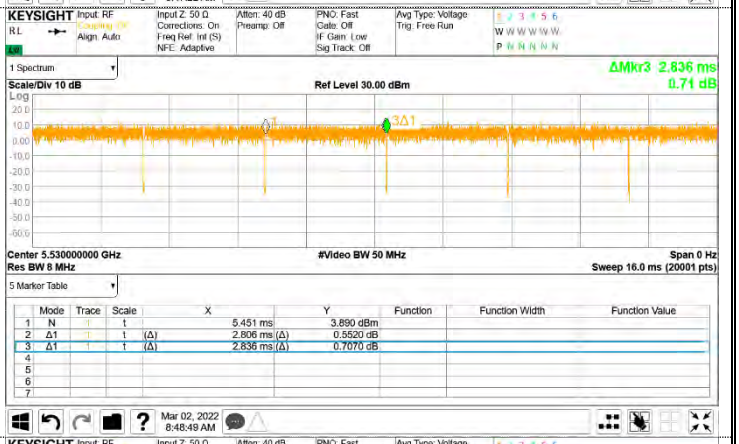
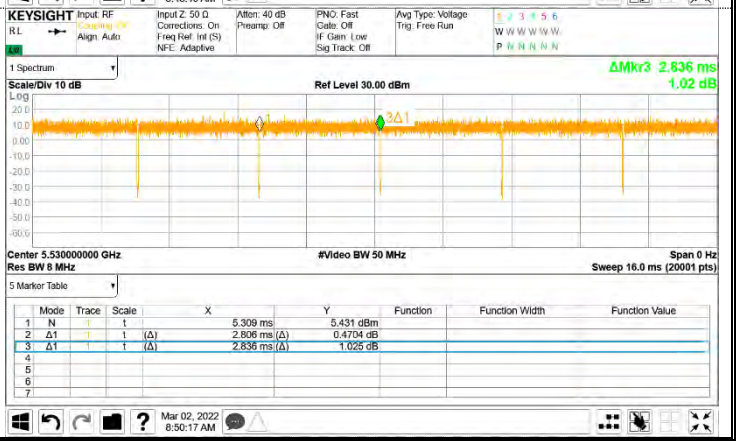
Mode	ANT	Mode (Tones)	Test Plot
802.11ax HE20	ALL	26T	
		52T	
		106T	

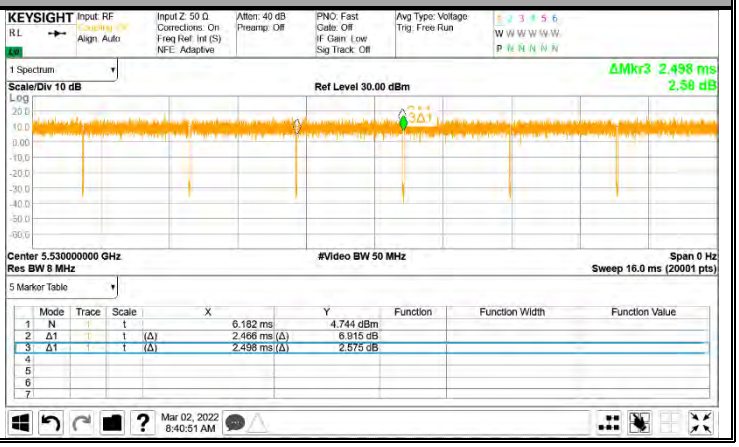
Mode	ANT	Mode (Tones)	Test Plot
802.11ax HE20	ALL	242T	
		SU	

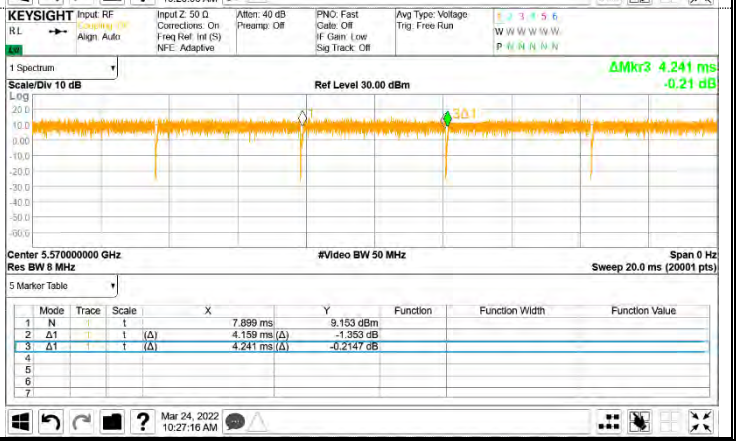
Mode	ANT	Mode (Tones)	Test Plot
802.11ax HE40	ALL	26T	
		52T	
		106T	

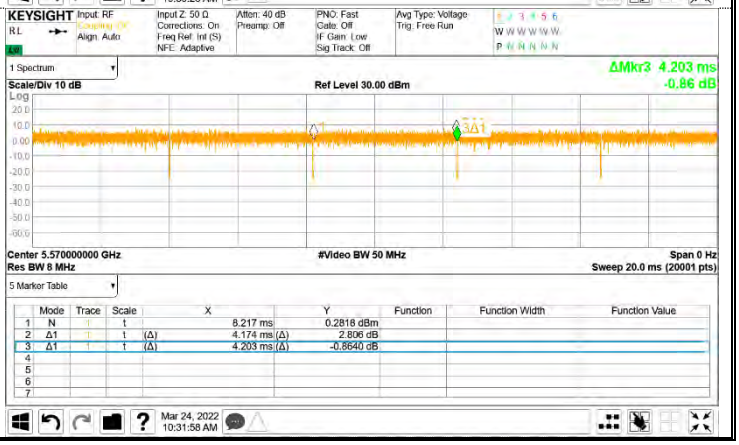
Mode	ANT	Mode (Tones)	Test Plot
802.11ax HE40	ALL	242T	
		484T	
		SU	

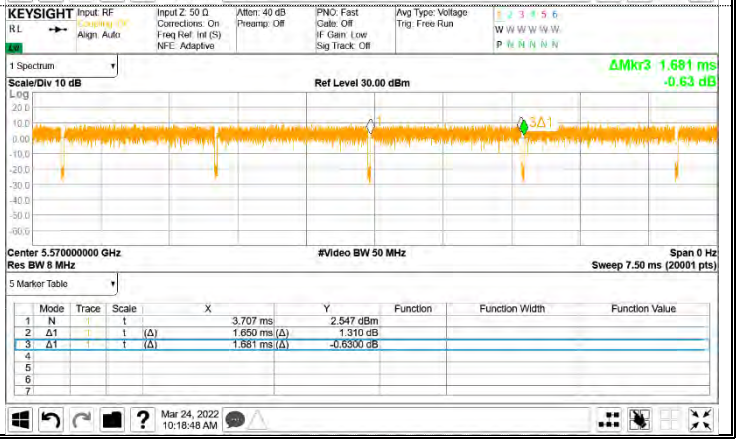
Mode	ANT	Mode (Tones)	Test Plot
802.11ax HE80	ALL	26T	
		52T	
		106T	

Mode	ANT	Mode (Tones)	Test Plot
802.11ax HE80	ALL	242T	
		484T	
		996T	

Mode	ANT	Mode (Tones)	Test Plot
802.11ax HE80	ALL	SU	

Mode	ANT	Mode (Tones)	Test Plot
802.11ax HE160	ALL	26T	
		52T	
		106T	

Mode	ANT	Mode (Tones)	Test Plot
802.11ax HE160	ALL	242T	
		484T	
		996T	

Mode	ANT	Mode (Tones)	Test Plot
802.11ax HE160	ALL	996T + 996T	
		SU	

9.2. 26 dB BANDWIDTH

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

Reference to 789033 D02 General UNII Test Procedures New Rules v02r01:
The transmitter output is connected to a spectrum analyzer with the RBW set to approximately 1% of EBW, the VBW > RBW, peak detector and max hold.

NOTE

- Calculation for 26dB Bandwidth of RU allocation and channels inclueded to straddle band in UNII-2C and UNII-3 Straddle Channel

ex) Marker 2: Lower point of 26 dB bandwidth
Marker 3: Upper point of 26 dB bandwidth
- o Turning Frequency : 5725MHz
- o Marker 2: 5710 MHz
- o Marker 3: 5730 MHz
- o 26dB Bandwidth of UNII-2C band Portion
= (5725 – 5710) = 15 MHz
- o 26dB Bandwidth of UNII-3 band Portion
= (5730 - 5725) = 5 MHz

RESULTS

See the next page.

9.2.1. 802.11ax 5.2 GHz BAND

Band	Mode	Center Freq. [MHz]	Tones	RU offset	26 dB BW [MHz]			
					ANT1	ANT2	ANT3	ANT4
UNII-1	HE20	5180	26T	0	19.70	20.07	19.66	19.80
				4	18.31	17.17	18.45	17.72
				8	19.49	19.64	20.05	19.94
			SU	-	21.41	21.35	21.43	21.22
		5200	26T	0	20.02	19.93	19.77	19.74
				4	18.00	18.15	18.45	18.01
				8	20.25	19.78	20.14	19.99
			SU	-	21.43	21.29	21.31	21.28
		5240	26T	0	19.70	19.50	19.96	19.75
				4	18.81	18.13	18.41	17.79
				8	20.35	20.25	19.96	20.05
			SU	-	21.68	21.23	21.12	21.74
	HE40	5190	26T	0	39.19	39.39	38.88	37.88
				9	37.95	37.97	35.98	36.94
				17	39.05	39.05	38.95	39.08
			SU	-	40.03	40.01	40.06	39.78
		5230	26T	0	39.23	39.04	35.49	39.20
				9	38.36	38.05	37.92	38.46
				17	39.13	39.13	34.34	39.05
			SU	-	40.32	40.01	40.06	40.02
	HE80	5210	26T	0	79.84	79.99	79.41	79.57
				18	77.05	71.02	77.92	78.07
				36	79.74	79.74	79.69	80.10
			SU	-	81.40	81.13	81.71	81.61
UNII-1 & 2A	HE160	5250	SU	-	163.20	164.40	163.60	164.00

9.2.2. 802.11ax 5.3 GHz BAND

Band	Mode	Center Freq. [MHz]	Tones	RU offset	26 dB BW [MHz]			
					ANT1	ANT2	ANT3	ANT4
UNII-2A	HE20	5260	26T	0	19.68	19.55	19.83	19.59
				4	18.16	17.83	18.09	17.20
				8	19.25	20.25	19.75	20.29
			SU	-	21.25	21.46	21.44	21.31
		5300	26T	0	20.25	20.21	19.95	19.46
				4	18.25	15.86	17.98	18.63
				8	20.23	19.75	19.55	19.87
			SU	-	21.31	21.17	21.66	21.21
		5320	26T	0	19.70	20.03	19.82	19.84
				4	18.51	18.14	16.80	18.01
				8	20.08	19.89	19.53	19.52
			SU	-	21.29	21.56	21.30	21.32
	HE40	5270	26T	0	38.93	39.12	39.36	39.45
				9	37.96	38.45	38.06	38.12
				17	38.97	39.09	39.13	39.16
			SU	-	40.16	39.78	40.08	39.97
		5310	26T	0	37.81	39.18	39.11	39.06
				9	38.16	37.68	38.16	37.86
				17	39.39	38.96	39.03	39.15
			SU	-	40.34	40.16	39.80	40.06
	HE80	5290	26T	0	70.25	79.77	79.59	79.85
				18	74.88	78.04	78.21	77.94
				36	79.86	79.90	79.35	79.73
			SU	-	81.19	81.47	80.91	81.73

9.2.3. 802.11ax 5.5 GHz BAND

Band	Mode	Center Freq. [MHz]	Tones	RU offset	26 dB BW [MHz]			
					ANT1	ANT2	ANT3	ANT4
UNII-2C	HE20	5500	26T	0	20.09	19.63	19.57	19.82
				4	18.30	17.22	17.57	17.92
				8	19.79	20.13	19.81	19.60
			SU	-	21.62	21.47	21.38	21.49
		5580	26T	0	19.34	19.56	19.70	19.19
				4	18.49	18.05	18.04	17.52
				8	19.99	19.80	19.60	19.86
			SU	-	21.47	21.18	21.09	21.16
		5700	26T	0	19.73	19.71	19.72	19.73
				4	18.18	17.99	16.57	18.23
				8	19.68	20.20	19.91	19.54
			SU	-	21.47	21.31	21.53	21.24
	HE40	5510	26T	0	38.93	39.29	38.90	39.26
				9	38.36	36.32	38.05	37.98
				17	39.41	39.05	38.92	39.21
			SU	-	40.35	39.96	40.11	40.02
		5550	26T	0	38.87	39.40	39.16	39.06
				9	37.80	38.42	38.06	37.95
				17	38.48	39.08	37.26	38.34
			SU	-	40.14	39.83	40.08	39.66
		5670	26T	0	39.15	39.30	37.89	39.50
				9	38.18	38.26	38.42	36.50
				17	39.03	39.14	38.97	39.31
			SU	-	40.18	39.88	40.27	40.19
	HE80	5530	26T	0	79.69	79.97	79.90	80.12
				18	78.08	77.79	78.03	76.52
				36	78.92	79.48	79.07	79.09
			SU	-	81.21	80.76	81.47	80.83
		5610	26T	0	79.71	80.03	80.00	79.65
				18	77.94	76.10	78.27	77.96
				36	79.50	79.63	79.74	78.71
			SU	-	80.87	81.50	81.74	81.28
	HE160	5570	SU	-	163.30	162.50	164.10	163.60

9.2.4. 802.11ax STRADDLE CHANNEL

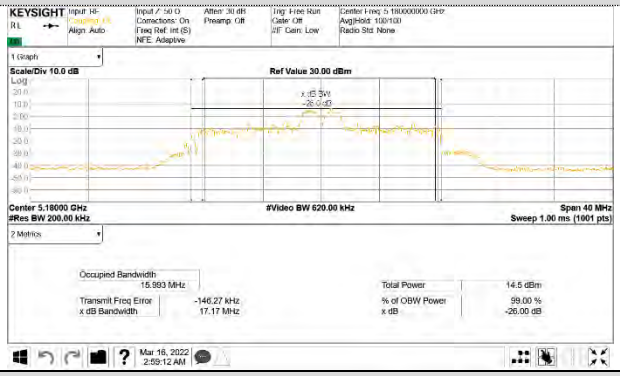
Mode	Center Freq. [MHz]	Tones	RU offset	26 dB BW [MHz]							
				ANT1		ANT2		ANT3		ANT4	
				UNII-2C	UNII-3	UNII-2C	UNII-3	UNII-2C	UNII-3	UNII-2C	UNII-3
HE20	5720	26T	4	14.132	4.246	14.076	4.140	14.126	4.480	13.924	4.114
		SU	-	15.644	5.768	15.698	5.692	15.710	5.646	15.562	5.716
HE40	5710	26T	9	34.004	4.304	34.044	4.372	34.036	3.924	34.164	4.372
		SU	-	35.072	5.204	34.872	4.976	34.828	4.832	35.132	5.184
HE80	5690	26T	18	73.760	3.898	73.656	4.058	73.968	3.898	73.928	3.954
		SU	-	75.200	5.386	75.136	5.282	75.368	5.234	75.696	5.426

9.2.5. WORST CASE TEST PLOT_802.11ax 5.2 GHz BAND

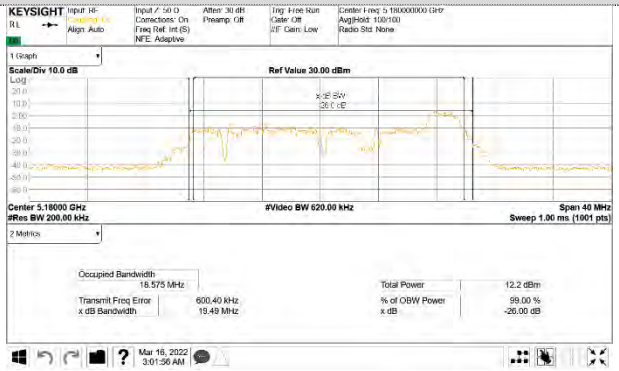
Band	UNII-1
Mode	HE20

ANT2 / 5240 MHz / 26T / 0RU

ANT2 / 5180 MHz / 26T / 4RU



ANT1 / 5180 MHz / 26T / 8RU

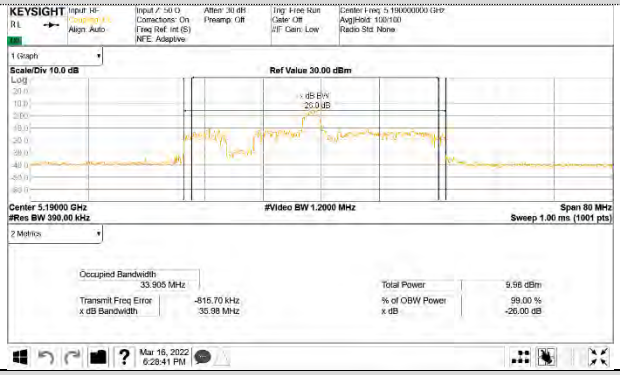


ANT3 / 5240 MHz / SU

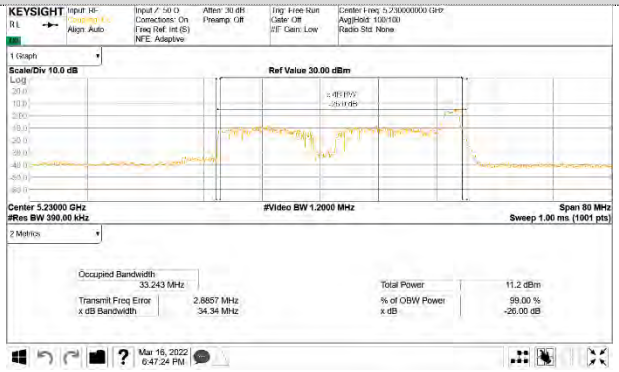
Band	UNII-1
Mode	HE40

ANT3 / 5230 MHz / 26T / 0RU

ANT3 / 5190 MHz / 26T / 9RU



ANT3 / 5230 MHz / 26T / 17RU

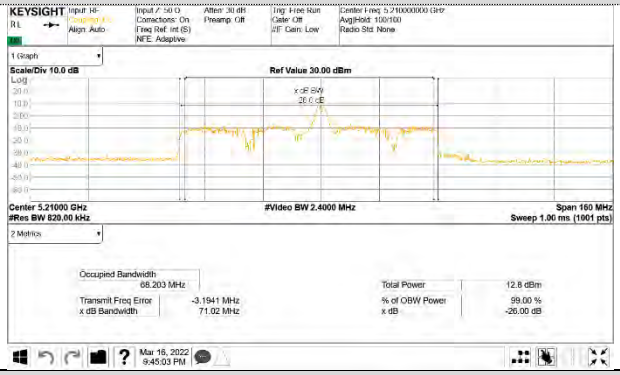


ANT4 / 5190 MHz / SU

Band	UNII-1
Mode	HE80

ANT3 / 5210 MHz / 26T / 0RU

ANT2 / 5210 MHz / 26T / 18RU



ANT3 / 5210 MHz / 26T / 36RU

ANT2 / 5210 MHz / SU

Band	UNII-1 & 2A
Mode	HE160

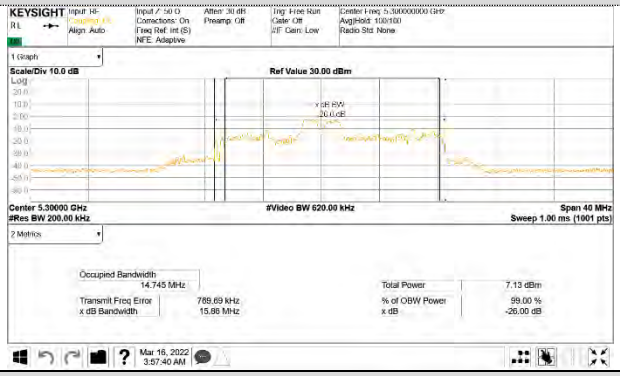
ANT1 / 5250 MHz / SU

9.2.6. WORST CASE TEST PLOT_802.11ax 5.3 GHz BAND

Band	UNII-2A
Mode	HE20

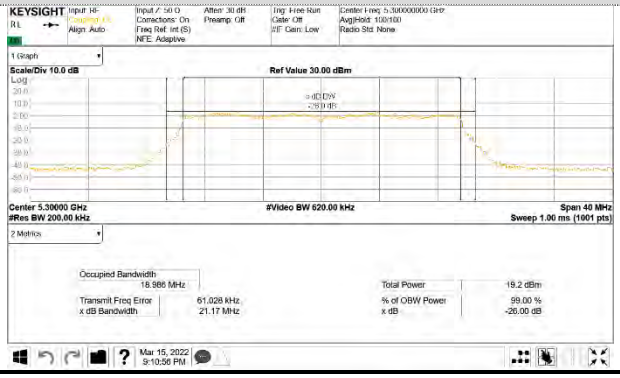
ANT4 / 5300 MHz / 26T / 0RU

ANT2 / 5300 MHz / 26T / 4RU



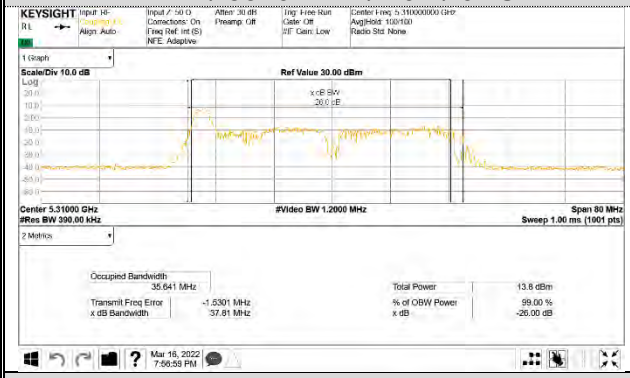
ANT1 / 5260 MHz / 26T / 8RU

ANT2 / 5300 MHz / SU

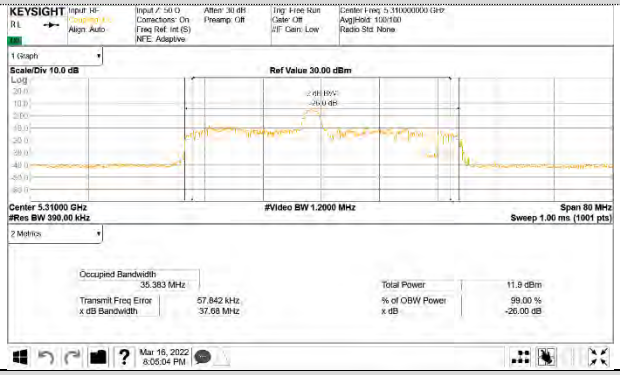


Band	UNII-2A
Mode	HE40

ANT1 / 5310 MHz / 26T / 0RU

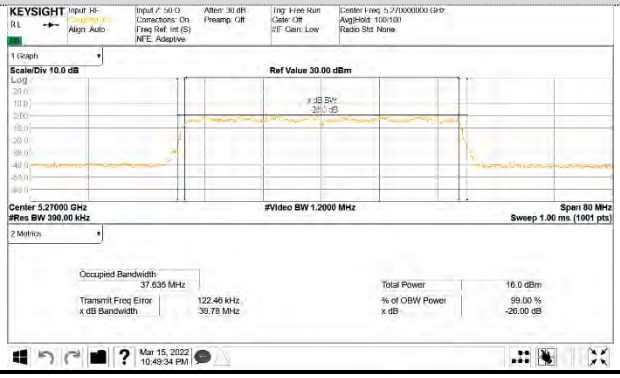


ANT2 / 5310 MHz / 26T / 9RU



ANT2 / 5310 MHz / 26T / 17RU

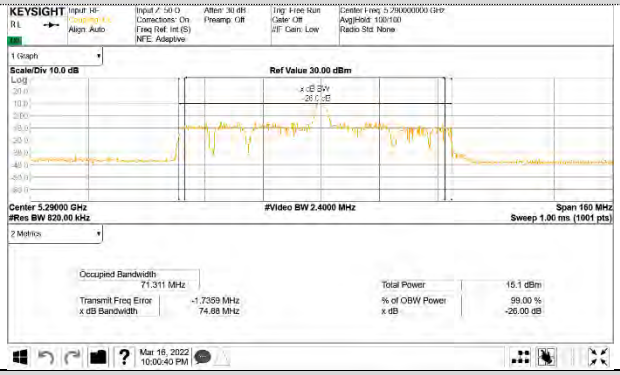
ANT2 / 5270 MHz / SU



Band	UNII-2A
Mode	HE80

ANT1 / 5290 MHz / 26T / 0RU

ANT1 / 5290 MHz / 26T / 18RU



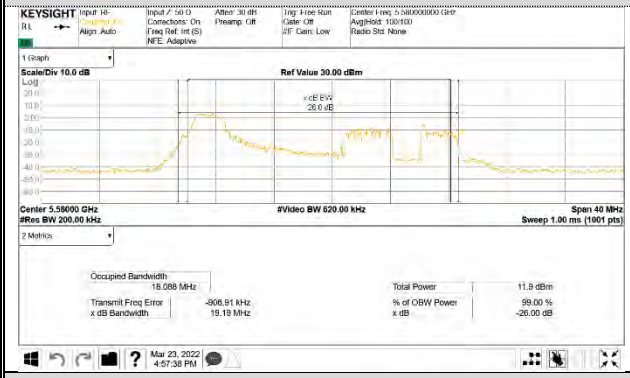
ANT3 / 5290 MHz / 26T / 36RU

ANT3 / 5290 MHz / SU

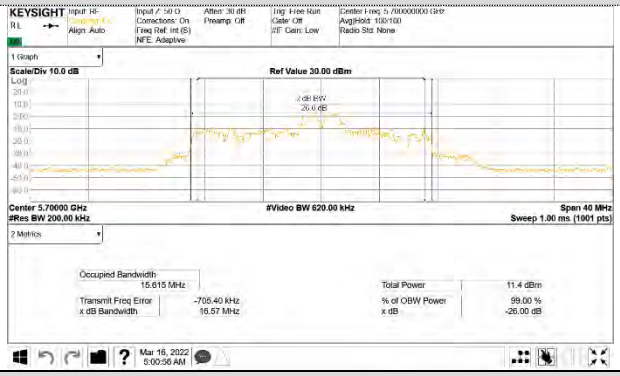
9.2.7. WORST CASE TEST PLOT_802.11ax 5.5 GHz BAND

Band	UNII-2C
Mode	HE20

ANT4 / 5580 MHz / 26T / 0RU



ANT3 / 5700 MHz / 26T / 4RU

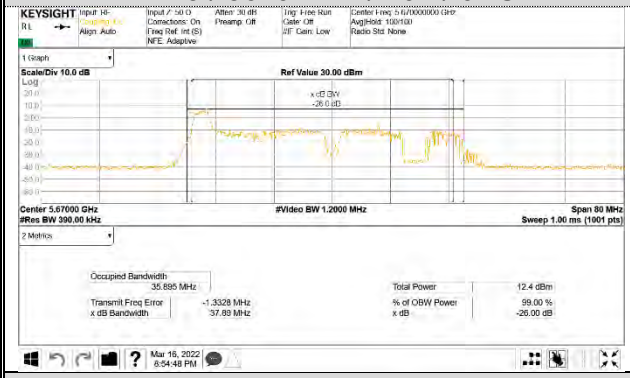


ANT4 / 5700 MHz / 26T / 8RU

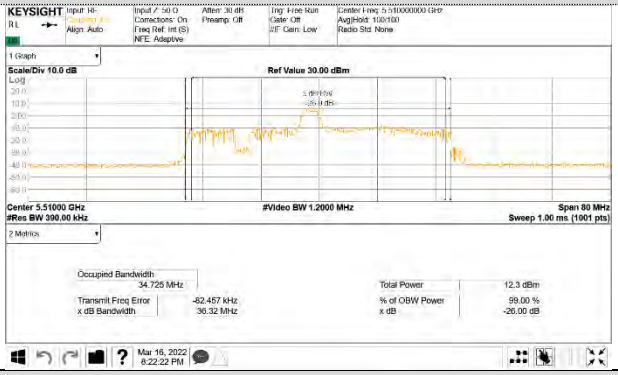
ANT3 / 5580 MHz / SU

Band	UNII-2C
Mode	HE40

ANT3 / 5670 MHz / 26T / 0RU



ANT2 / 5510 MHz / 26T / 9RU



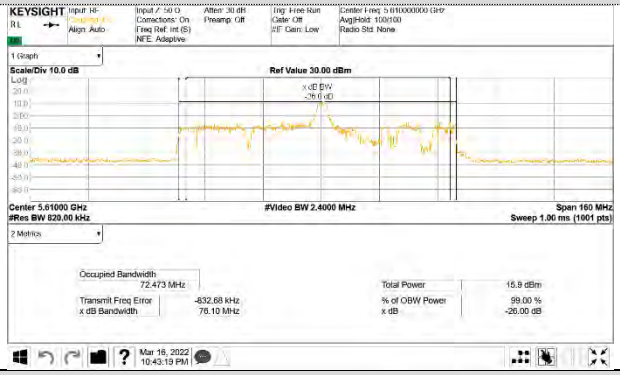
ANT3 / 5550 MHz / 26T / 17RU

ANT4 / 5550 MHz / SU

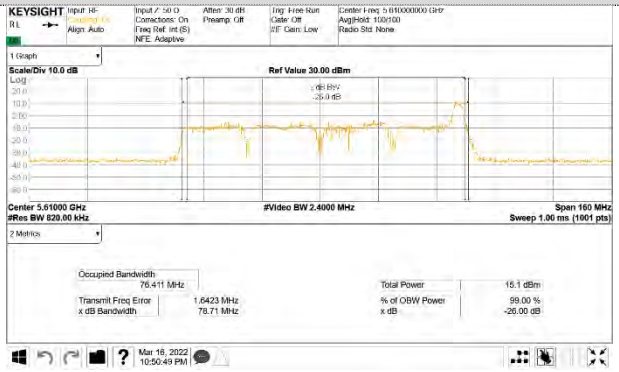
Band	UNII-2C
Mode	HE80

ANT4 / 5610 MHz / 26T / 0RU

ANT2 / 5610 MHz / 26T / 18RU



ANT4 / 5610 MHz / 26T / 36RU



ANT2 / 5530 MHz / SU

Band	UNII-2C
Mode	HE160

ANT2 / 5570 MHz / SU

9.2.8. WORST CASE TEST PLOT_802.11ax STRADDLE CHANNEL

Band	UNII-2C & 3 (Straddle)	
Mode	HE20	
Frequency	5720 MHz	
	26T	SU
		
Band	UNII-2C & 3 (Straddle)	
Mode	HE40	
Frequency	5710 MHz	
	26T	SU
		
Band	UNII-2C & 3 (Straddle)	
Mode	HE80	
Frequency	5690 MHz	
	26T	SU
		

10. ANTENNA PORT TEST RESULTS

10.1. 6 dB BANDWIDTH

LIMITS

FCC §15.407

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

TEST PROCEDURE

6dB Bandwidth
Reference to 789033 D02 General UNII Test Procedures New Rules v02r01: The transmitter output is connected to a spectrum analyzer with the RBW set to100KHz, the VBW >= 3 x RBW, peak detector and max hold.

RESULTS
See the next page.

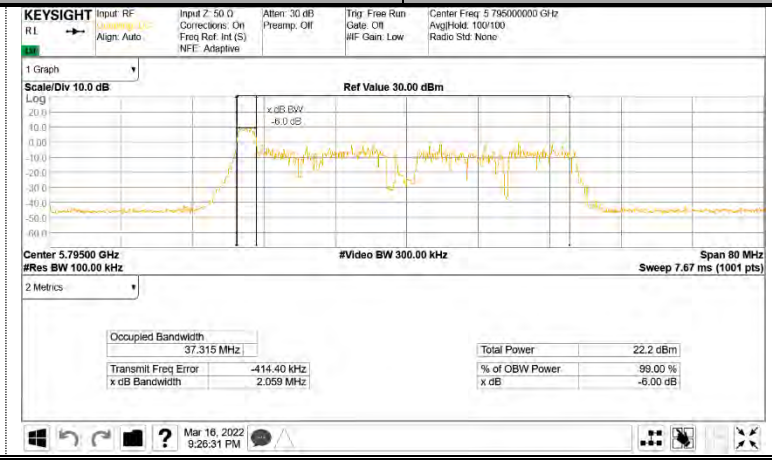
10.1.1. 802.11ax 5.8 GHz BAND

Band	Mode	Center Freq.(MHz)	Tones	RU offset	6 dB BW [MHz]				Minimum Limit (MHz)
					ANT1	ANT2	ANT3	ANT4	
UNII-3	HE20	5745	26T	0	2.208	2.133	2.051	2.132	0.5
		5785			2.183	2.145	2.023	2.188	
		5825			2.086	2.151	2.023	2.088	
		Minimum 6dB Bandwidth			2.086	2.133	2.023	2.088	
	HE40	5755	26T	0	2.063	2.127	2.141	2.131	
		5795			2.166	2.059	2.166	2.063	
		Minimum 6dB Bandwidth			2.063	2.059	2.141	2.063	
	HE80	5775	26T	0	2.073	2.181	2.235	2.144	
		Minimum 6dB Bandwidth			2.073	2.181	2.235	2.144	

10.1.2. WORST CASE TEST PLOT_802.11ax 5.8 GHz BAND

Band	UNII-3
Mode	HE20

Band	UNII-3
Mode	HE40



Band	UNII-3
Mode	HE80

10.2. OUTPUT POWER AND PPSD

LIMITS

FCC §15.407 (a) (1) (2) (3)

For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.
For client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band.

TEST PROCEDURE

KDB 789033 Method PM is used for output power.

KDB 789033 Method SA-2 is used for only power of straddle Ch. and PPSD. RBW set to 100kHz (the VBW >= 3 x RBW, RMS detector and trace averaging, add 10 log (1 MHz/RBW). For UNII-3, add 10 log (500kHz/RBW)). Band power function used for power and peak marker value of the spectrum is used for PSD. Add duty cycle correction factor.

DIRECTIONAL ANTENNA GAIN

For OUTPUT POWER and PSD: The TX chains are correlated and the antenna gains are unequal among the chains. The directional gain is:

Frequency Band [MHz]	ANT1 Gain [dBi]	ANT2 Gain [dBi]	ANT3 Gain [dBi]	ANT4 Gain [dBi]	Directional Gain for Output Power [dBi]	Directional Gain for PSD [dBi]
UNII 1 5150 - 5250	1.98	1.98	1.98	1.98	1.98	8.00
UNII 2A 5250 - 5350	1.97	1.97	1.97	1.97	1.97	7.99
UNII 2C 5470 - 5725	1.94	1.94	1.94	1.94	1.94	7.96
UNII 3 5725 - 5850	1.86	1.86	1.86	1.86	1.86	7.88

Note: Array gain calculation for CDD

For power measurements on IEEE 802.11 devices:

- Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$
- Array Gain = 0 dB (i.e., no array gain) for channel widths ≥ 40 MHz for any N_{ANT}

RESULTS

See the next page.

10.2.1. 802.11ax 4Tx (MIMO) MODE 5.2 GHz BAND

Bandwidth and Antenna Gain, Limits

Mode	Channel	Frequency [MHz]	Directional Gain		Power Limit [dBm]	PPSD Limit [dBm/MHz]
			For Power	For PSD		
			[dBi]	[dBi]		
HE20	36	5180	1.98	8.00	23.98	9
	40	5200			23.98	
	48	5240			23.98	
HE40	38	5190			23.98	
	46	5230			23.98	
HE80	42	5210			23.98	
HE160	50	5250			23.98	

Included in Calculations of Corr'd [Power & PPSD]				
Duty Cycle CF [dB]	HE20	26T	-	dB
		52T	-	dB
		106T	-	dB
		242T	-	dB
		SU	-	dB
	HE40	26T	-	dB
		52T	-	dB
		106T	-	dB
		242T	-	dB
		484T	-	dB
		SU	-	dB
	HE80	26T	-	dB
		52T	-	dB
		106T	-	dB
		242T	-	dB
		484T	-	dB
		996T	-	dB
		SU	-	dB
	HE160	26T	-	dB
		52T		dB
		106T	-	dB
		242T	-	dB
		484T	-	dB
		996T	-	dB
		996T + 996T	-	dB
		SU	-	dB

Output Power Results

Mode	Ch.	Freq. [MHz]	Tones	RU offset	Average Power [dBm]				Corr'd Power [dBm]	Power Limit [dBm]
					ANT1	ANT2	ANT3	ANT4		
HE20	36	5180	26T	0	3.70	4.80	3.49	3.85	10.01	23.98
				4	4.89	5.53	3.37	4.46	10.65	
				8	4.42	5.41	3.15	4.17	10.38	
			52T	37	6.80	7.43	6.04	6.76	12.81	
				38	6.84	8.19	6.36	6.82	13.13	
				40	6.83	8.22	6.21	6.83	13.11	
			106T	53	8.89	9.88	7.75	8.31	14.80	
				54	8.83	9.86	8.15	8.76	14.96	
			242T	61	10.88	11.76	9.89	10.38	16.80	
			SU	-	12.40	13.21	11.28	11.82	18.26	
	40	5200	26T	0	5.93	4.11	4.42	5.15	10.98	23.98
				4	6.09	3.86	4.24	5.61	11.07	
				8	5.84	3.88	3.99	4.89	10.74	
			52T	37	7.87	5.65	6.16	6.63	12.68	
				38	8.01	6.57	6.61	6.80	13.06	
				40	7.89	6.51	6.29	6.68	12.91	
			106T	53	10.06	8.19	8.47	8.78	14.96	
				54	10.03	8.18	8.38	8.74	14.92	
			242T	61	10.99	11.71	9.96	10.34	16.82	
			SU	-	12.38	13.14	11.31	11.87	18.25	
	48	5240	26T	0	5.42	3.65	3.96	4.93	10.57	23.98
				4	6.07	3.86	4.11	5.44	10.99	
				8	5.79	3.86	3.74	4.68	10.62	
			52T	37	8.24	6.02	6.25	6.82	12.94	
				38	8.28	6.92	6.72	6.94	13.28	
				40	8.12	6.77	6.33	6.78	13.07	
			106T	53	10.68	8.71	8.78	9.19	15.44	
				54	10.78	8.83	8.84	9.21	15.51	
			242T	61	10.93	11.66	9.86	10.29	16.76	
			SU	-	12.42	13.09	11.27	11.92	18.25	

* Calculation of Output Power : Average Power = Meas Power + Duty CF[dB]
Corr'd Power = Ant1 Average Power + Ant2 Average Power + Ant3 Average Power + Ant4 Average Power

Mode	Ch.	Freq. [MHz]	Tones	RU offset	Average Power [dBm]				Corr'd Power [dBm]	Power Limit [dBm]
					ANT1	ANT2	ANT3	ANT4		
HE40	38	5190	26T	0	6.31	3.99	4.15	5.01	10.99	23.98
				9	4.06	5.31	2.63	3.66	10.04	
				17	4.15	5.92	3.41	3.46	10.38	
			52T	37	7.39	8.06	6.29	6.70	13.18	
				41	7.48	8.64	6.59	6.77	13.47	
				44	7.37	8.20	6.26	6.55	13.18	
			106T	53	10.47	11.21	9.36	9.67	16.26	
				54	10.63	11.59	9.66	10.04	16.56	
				56	10.38	11.47	9.44	9.84	16.37	
			242T	61	11.90	12.51	10.64	11.22	17.64	
				62	12.18	12.75	10.85	11.14	17.82	
			484T	65	13.12	13.65	11.62	12.13	18.72	
			SU	-	13.73	14.21	12.10	12.64	19.27	
	46	5230	26T	0	5.71	3.40	3.23	4.78	10.42	23.98
				9	5.90	4.83	3.96	5.39	11.10	
				17	5.47	4.21	3.51	4.51	10.50	
			52T	37	7.55	7.49	6.10	6.73	13.03	
				41	7.98	8.45	6.34	7.04	13.55	
				44	7.23	8.51	6.51	6.40	13.27	
			106T	53	10.37	11.05	9.11	9.65	16.13	
				54	10.91	11.49	9.61	10.11	16.61	
				56	10.61	11.22	9.26	9.85	16.32	
			242T	61	12.00	12.41	10.60	11.21	17.63	
				62	12.14	12.50	10.58	11.23	17.70	
			484T	65	12.99	13.51	11.45	12.12	18.61	
			SU	-	13.64	13.97	12.12	12.72	19.19	
HE80	42	5210	26T	0	4.33	3.92	1.74	2.79	9.33	23.98
				18	5.03	5.28	3.49	4.19	10.57	
				36	4.63	5.54	2.68	3.05	10.15	
			52T	37	6.67	6.68	5.44	5.59	12.15	
				45	7.55	7.72	6.11	6.17	12.97	
				52	7.01	7.84	5.69	5.67	12.67	
			106T	53	9.30	9.93	8.17	8.43	15.04	
				57	9.11	10.14	8.21	8.33	15.04	
				60	9.05	9.64	7.54	8.24	14.71	
			242T	61	11.19	11.85	9.82	10.33	16.89	
				62	11.70	12.29	10.57	10.96	17.45	
				64	11.41	12.14	10.08	10.57	17.14	
			484T	65	11.43	12.10	10.30	10.72	17.21	
				66	11.63	12.36	10.11	10.83	17.33	
			996T	67	12.47	13.16	11.05	11.56	18.16	
			SU	-	13.07	13.48	11.59	12.28	18.69	

* Calculation of Output Power : Average Power = Meas Power + Duty CF[dB]
Corr'd Power = Ant1 Average Power + Ant2 Average Power + Ant3 Average Power + Ant4 Average Power

Mode	Ch.	Freq. [MHz]	Tones	RU offset	Average Power [dBm]				Corr'd Power [dBm]	Power Limit [dBm]
					ANT1	ANT2	ANT3	ANT4		
HE 160	50	5250	26T	0	5.23	3.17	2.78	4.23	9.98	23.98
				37	4.99	5.88	2.98	2.39	10.31	
				73	4.73	5.15	2.22	2.55	9.87	
			52T	74	6.51	6.48	5.26	4.98	11.88	
				89	7.05	7.86	5.72	4.68	12.52	
				105	6.68	7.33	4.79	4.59	12.03	
			106T	106	7.28	7.75	6.03	5.61	12.78	
				113	8.11	8.67	6.56	6.33	13.55	
				121	7.37	7.86	5.72	5.32	12.72	
			242T	122	8.46	9.06	7.10	6.91	14.00	
				125	8.74	9.28	7.16	6.93	14.16	
				129	8.80	9.07	6.55	6.18	13.86	
			484T	130	9.72	10.89	8.72	8.02	15.49	
				131	9.81	10.44	8.27	7.61	15.20	
				133	10.04	10.68	8.13	7.79	15.35	
			996T	134	10.35	11.15	9.09	8.51	15.92	
				135	10.84	11.46	9.00	8.57	16.16	
			996T + 996T	136	11.47	12.14	9.76	9.61	16.90	
			SU	-	13.22	13.76	11.67	11.52	18.67	

* Calculation of Output Power : Average Power = Meas Power + Duty CF[dB]
Corr'd Power = Ant1 Average Power + Ant2 Average Power + Ant3 Average Power + Ant4 Average Power

PPSD Results

Actual RBW	Ref. Bandwidth	Corr'd factor
100 kHz	1000 kHz	10.00 dB

Mode	Ch.	Freq. [MHz]	Tones	RU offset	Meas PPSD [dBm/100kHz]				Corr'd PPSD [dBm/MHz]	PPSD Limit [dBm/MHz]
					ANT1	ANT2	ANT3	ANT4		
HE20	36	5180	26T	0	-7.33	-6.67	-10.82	-7.88	8.10	9
				4	-7.90	-6.78	-11.09	-7.14	8.08	
				8	-6.62	-6.73	-11.51	-8.11	8.16	
			SU	-	-8.68	-8.68	-11.38	-9.95	6.49	
	40	5200	26T	0	-8.16	-9.98	-10.96	-8.91	6.65	
				4	-5.70	-9.03	-8.93	-7.55	8.44	
				8	-6.08	-9.74	-9.36	-7.38	8.14	
			SU	-	-9.08	-9.35	-11.83	-10.18	6.03	
	48	5240	26T	0	-6.51	-9.13	-9.34	-7.10	8.18	
				4	-9.88	-10.18	-11.97	-9.17	5.84	
				8	-6.22	-8.78	-8.91	-7.28	8.37	
			SU	-	-10.48	-9.74	-11.41	-9.56	5.78	
HE40	38	5190	26T	0	-9.31	-9.06	-12.04	-7.13	6.97	
				9	-7.82	-7.31	-11.33	-8.80	7.45	
				17	-6.21	-6.55	-10.44	-8.89	8.33	
			SU	-	-11.32	-11.04	-13.68	-12.03	4.12	
	46	5230	26T	0	-10.97	-11.20	-11.57	-10.17	5.08	
				9	-9.50	-10.25	-10.40	-9.68	6.08	
				17	-6.14	-9.23	-9.52	-7.44	8.16	
			SU	-	-11.86	-11.63	-14.25	-11.58	3.82	
HE80	42	5210	26T	0	-9.67	-9.76	-11.87	-8.56	6.21	
				18	-7.86	-9.20	-9.88	-8.39	7.26	
				36	-8.55	-9.14	-11.00	-8.25	6.91	
			SU	-	-14.87	-14.89	-17.69	-15.10	0.53	
HE 160	50	5250	26T	0	-9.25	-8.52	-12.52	-9.90	6.21	
				37	-9.15	-7.23	-11.22	-9.56	6.97	
				73	-9.39	-8.01	-12.43	-10.49	6.23	
			SU	-	-17.03	-16.98	-20.10	-18.33	-1.91	

* Calculation of PPSD result :
Corr'd PPSD = Ant1 PPSD + Ant2 PPSD + Ant3 PPSD + Ant4 PPSD + Duty CF + Corr'd factor [dB]

10.2.2. 802.11ax 4Tx (MIMO) MODE 5.3 GHz BAND

Bandwidth and Antenna Gain, Limits

Mode	Channel	Frequency [MHz]	Directional Gain		Power Limit [dBm]	PPSD Limit [dBm/MHz]
			For Power	For PSD		
			[dBi]	[dBi]		
HE20	52	5260	1.97	7.99	23.36	9.01
	60	5300			23.00	
	64	5320			23.25	
HE40	54	5270			23.98	
	62	5310			23.98	
HE80	58	5290			23.98	
HE160	50	5250			23.98	

Included in Calculations of Corr'd [Power & PPSD]				
Duty Cycle CF [dB]	HE20	26T	-	dB
		52T	-	dB
		106T	-	dB
		242T	-	dB
		SU	-	dB
	HE40	26T	-	dB
		52T	-	dB
		106T	-	dB
		242T	-	dB
		484T	-	dB
		SU	-	dB
	HE80	26T	-	dB
		52T	-	dB
		106T	-	dB
		242T	-	dB
		484T	-	dB
		996T	-	dB
		SU	-	dB
	HE160	26T	-	dB
		52T		dB
		106T	-	dB
		242T	-	dB
		484T	-	dB
		996T	-	dB
		996T + 996T	-	dB
		SU	-	dB

Output Power Results

Mode	Ch.	Freq. [MHz]	Tones	RU offset	Average Power [dBm]				Corr'd Power [dBm]	Power Limit [dBm]
					ANT1	ANT2	ANT3	ANT4		
HE20	52	5260	26T	0	5.34	3.79	4.04	4.78	10.55	23.36
				4	5.44	3.45	3.92	4.92	10.52	
				8	5.08	3.55	3.52	4.00	10.11	
			52T	37	7.37	5.34	5.46	6.36	12.23	
				38	7.40	6.31	6.07	6.39	12.59	
				40	7.13	6.11	5.56	6.22	12.31	
			106T	53	10.13	8.60	8.53	9.16	15.17	
				54	10.20	8.65	8.48	9.16	15.20	
			242T	61	12.54	13.02	11.31	11.38	18.15	
			SU	-	13.70	13.75	12.26	12.49	19.12	
	60	5300	26T	0	4.83	3.28	3.44	4.25	10.02	23.00
				4	5.50	3.34	3.72	4.79	10.44	
				8	5.21	3.49	3.17	3.91	10.04	
			52T	37	7.61	5.33	5.21	6.26	12.23	
				38	7.56	6.32	5.80	6.21	12.54	
				40	7.11	5.90	5.13	5.94	12.10	
			106T	53	10.47	8.87	8.57	9.32	15.39	
				54	10.52	8.88	8.47	9.29	15.38	
			242T	61	13.00	13.15	11.73	11.58	18.44	
			SU	-	14.07	13.95	12.55	12.63	19.38	
	64	5320	26T	0	4.91	3.30	3.38	4.28	10.04	23.25
				4	5.53	3.27	3.66	4.75	10.42	
				8	5.30	3.47	3.03	3.89	10.03	
			52T	37	7.42	5.25	5.02	6.17	12.09	
				38	7.52	6.34	5.77	6.30	12.55	
				40	7.35	6.08	5.31	6.21	12.32	
			106T	53	10.45	8.76	8.37	9.22	15.29	
				54	10.44	8.72	8.24	9.15	15.24	
			242T	61	12.71	13.00	11.55	11.45	18.25	
			SU	-	13.86	13.92	12.46	12.57	19.28	

* Calculation of Output Power : Average Power = Meas Power + Duty CF[dB]
Corr'd Power = Ant1 Average Power + Ant2 Average Power + Ant3 Average Power + Ant4 Average Power

Mode	Ch.	Freq. [MHz]	Tones	RU offset	Average Power [dBm]				Corr'd Power [dBm]	Power Limit [dBm]
					ANT1	ANT2	ANT3	ANT4		
HE40	54	5270	26T	0	5.61	3.44	2.83	4.38	10.21	23.98
				9	5.56	4.59	3.77	4.74	10.73	
				17	5.39	4.18	3.20	4.25	10.35	
			52T	37	7.14	5.15	5.47	6.21	12.08	
				41	7.27	6.07	5.54	6.30	12.36	
				44	6.66	5.59	5.13	5.67	11.82	
			106T	53	8.05	6.59	6.39	7.02	13.08	
				54	8.44	7.00	6.80	7.44	13.49	
				56	8.11	6.65	6.28	7.02	13.09	
			242T	61	9.04	7.54	7.34	8.08	14.07	
				62	9.07	7.46	7.24	8.03	14.03	
			484T	65	10.02	8.45	8.24	9.03	15.01	
			SU	-	10.74	9.11	8.88	9.64	15.67	
	62	5310	26T	0	5.66	3.14	2.53	4.14	10.05	23.98
				9	5.19	4.03	3.49	4.23	10.30	
				17	5.47	3.91	3.06	4.22	10.27	
			52T	37	6.83	4.79	4.83	5.63	11.62	
				41	7.31	5.99	5.34	6.14	12.28	
				44	6.72	5.51	4.91	5.61	11.76	
			106T	53	7.16	5.61	5.20	6.01	12.08	
				54	7.24	5.79	5.34	6.15	12.21	
				56	6.91	5.37	4.80	5.73	11.79	
			242T	61	8.23	6.66	6.20	7.08	13.13	
				62	8.30	6.58	6.13	7.07	13.12	
			484T	65	8.74	7.08	6.62	7.55	13.59	
			SU	-	9.26	7.60	7.18	8.11	14.13	
HE80	58	5290	26T	0	5.62	3.47	2.68	4.34	10.19	23.98
				18	5.65	3.60	3.74	4.93	10.58	
				36	5.30	3.74	2.78	4.05	10.08	
			52T	37	7.07	5.06	5.24	5.99	11.93	
				45	7.74	5.88	5.61	6.48	12.53	
				52	7.35	6.04	5.37	6.11	12.30	
			106T	53	8.16	8.53	6.88	6.11	13.55	
				57	8.88	9.22	7.31	7.22	14.27	
				60	9.54	7.95	7.32	8.35	14.39	
			242T	61	9.43	9.94	8.16	7.54	14.89	
				62	9.97	10.46	8.61	8.08	15.41	
				64	9.68	10.02	7.99	7.67	14.98	
			484T	65	10.40	11.04	9.14	8.66	15.93	
				66	10.65	11.25	9.02	8.70	16.06	
			996T	67	11.57	11.91	10.13	9.64	16.94	
			SU	-	13.07	13.43	11.61	11.20	18.45	

* Calculation of Output Power : Average Power = Meas Power + Duty CF[dB]
Corr'd Power = Ant1 Average Power + Ant2 Average Power + Ant3 Average Power + Ant4 Average Power

PPSD Results

Actual RBW	Ref. Bandwidth	Corr'd factor
100 kHz	1000 kHz	10.00 dB

Mode	Ch.	Freq. [MHz]	Tones	RU offset	Meas PPSD [dBm/100kHz]				Corr'd PPSD [dBm/MHz]	PPSD Limit [dBm/MHz]
					ANT1	ANT2	ANT3	ANT4		
HE20	52	5260	26T	0	-6.92	-9.48	-9.92	-7.66	7.70	9.01
				4	-5.58	-9.02	-10.21	-7.73	8.24	
				8	-6.42	-9.25	-10.67	-8.23	7.65	
			SU	-	-8.18	-8.98	-10.04	-9.15	6.98	
	60	5300	26T	0	-7.35	-9.99	-9.94	-8.26	7.28	
				4	-7.04	-9.82	-10.34	-7.60	7.55	
				8	-7.16	-10.05	-11.09	-8.15	7.18	
			SU	-	-8.41	-8.54	-10.64	-8.67	7.04	
	64	5320	26T	0	-11.16	-10.33	-13.32	-10.68	4.79	
				4	-9.13	-10.53	-13.93	-10.72	5.26	
				8	-6.39	-9.39	-10.20	-8.00	7.77	
			SU	-	-8.32	-8.98	-10.18	-8.43	7.10	
HE40	54	5270	26T	0	-10.08	-9.97	-12.64	-9.57	5.61	
				9	-6.39	-9.06	-9.60	-7.16	8.17	
				17	-9.18	-10.06	-12.68	-10.53	5.58	
			SU	-	-13.81	-15.55	-16.85	-14.59	0.96	
	62	5310	26T	0	-9.83	-10.75	-12.63	-12.55	4.75	
				9	-11.86	-11.71	-12.19	-10.66	4.45	
				17	-6.61	-9.98	-9.85	-7.50	7.78	
			SU	-	-18.90	-19.30	-20.31	-19.58	-3.47	
HE80	58	5290	26T	0	-9.88	-10.95	-13.18	-10.89	4.95	
				18	-5.98	-9.30	-10.22	-7.67	8.04	
				36	-6.64	-10.00	-10.92	-8.26	7.38	
			SU	-	-14.66	-15.22	-17.45	-15.74	0.37	

* Calculation of PPSD result :
Corr'd PPSD = Ant1 PPSD + Ant2 PPSD + Ant3 PPSD + Ant4 PPSD + Duty CF + Corr'd factor [dB]

10.2.3. 802.11ax 4Tx (MIMO) MODE 5.5 GHz BAND

Bandwidth and Antenna Gain, Limits

Mode	Channel	Frequency [MHz]	Directional Gain		Power Limit [dBm]	PPSD Limit [dBm/MHz]
			For Power [dBi]	For PSD [dBi]		
HE20	100	5500	1.94	7.96	23.36	9.04
	116	5580			23.44	
	140	5700			23.19	
HE40	102	5510			23.98	
	110	5550			23.98	
	134	5670			23.98	
HE80	106	5530			23.98	
	122	5610			23.98	
HE160	114	5570			23.98	

Included in Calculations of Corr'd [Power & PPSD]				
Duty Cycle CF [dB]	HE20	26T	-	dB
		52T	-	dB
		106T	-	dB
		242T	-	dB
		SU	-	dB
	HE40	26T	-	dB
		52T	-	dB
		106T	-	dB
		242T	-	dB
		484T	-	dB
		SU	-	dB
	HE80	26T	-	dB
		52T	-	dB
		106T	-	dB
		242T	-	dB
		484T	-	dB
		996T	-	dB
		SU	-	dB
	HE160	26T	-	dB
		52T		dB
		106T	-	dB
		242T	-	dB
		484T	-	dB
		996T	-	dB
		996T + 996T	-	dB
		SU	-	dB

Output Power Results

Mode	Ch.	Freq. [MHz]	Tones	RU offset	Average Power [dBm]				Corr'd Power [dBm]	Power Limit [dBm]
					ANT1	ANT2	ANT3	ANT4		
HE20	100	5500	26T	0	5.17	4.98	2.48	4.91	10.53	23.36
				4	5.45	3.99	2.99	4.77	10.42	
				8	5.06	4.18	2.33	4.52	10.16	
			52T	37	7.27	6.66	4.36	6.45	12.33	
				38	7.46	5.64	4.61	6.54	12.21	
				40	6.97	5.42	4.19	6.35	11.88	
			106T	53	10.15	8.98	7.27	9.33	15.07	
				54	10.05	8.93	7.24	9.24	15.00	
			242T	61	11.28	12.01	10.87	10.75	17.28	
			SU	-	13.53	13.88	12.86	12.73	19.30	
	116	5580	26T	0	3.91	3.65	2.08	4.72	9.71	23.44
				4	3.84	3.65	2.49	4.38	9.66	
				8	3.26	3.16	1.94	4.24	9.25	
			52T	37	6.65	6.84	5.24	7.67	12.71	
				38	6.81	6.06	5.34	7.81	12.62	
				40	6.40	5.87	5.19	7.73	12.42	
			106T	53	9.72	9.42	8.26	10.71	15.63	
				54	9.49	9.35	8.24	10.64	15.53	
			242T	61	10.90	12.04	11.43	11.61	17.53	
			SU	-	12.03	12.99	12.54	12.77	18.62	
	140	5700	26T	0	3.07	4.04	3.35	5.29	10.05	23.19
				4	2.62	4.48	3.51	5.07	10.04	
				8	2.98	4.46	4.03	5.53	10.37	
			52T	37	6.36	6.91	5.67	6.98	12.53	
				38	6.36	6.50	5.74	7.11	12.48	
				40	6.14	6.08	5.79	6.92	12.27	
			106T	53	9.29	9.60	8.60	9.97	15.41	
				54	9.07	9.58	8.56	9.94	15.34	
			242T	61	10.82	11.75	10.93	11.12	17.19	
			SU	-	11.10	11.87	11.26	11.28	17.41	

* Calculation of Output Power : Average Power = Meas Power + Duty CF[dB]
Corr'd Power = Ant1 Average Power + Ant2 Average Power + Ant3 Average Power + Ant4 Average Power

Mode	Ch.	Freq. [MHz]	Tones	RU offset	Average Power [dBm]				Corr'd Power [dBm]	Power Limit [dBm]
					ANT1	ANT2	ANT3	ANT4		
HE40	102	5510	26T	0	5.01	3.94	2.42	4.19	10.01	23.98
				9	5.21	3.23	3.01	4.80	10.19	
				17	5.06	2.60	2.68	5.24	10.10	
			52T	37	7.40	6.46	4.47	6.23	12.28	
				41	7.49	5.92	4.86	6.53	12.32	
				44	6.90	5.19	4.24	6.17	11.76	
			106T	53	9.03	8.05	6.22	8.29	14.03	
				54	9.40	8.29	6.60	8.61	14.36	
				56	8.98	8.04	6.19	8.24	14.00	
			242T	61	10.62	9.26	7.77	9.77	15.49	
				62	10.44	9.24	7.61	9.66	15.38	
			484T	65	11.52	11.86	10.78	10.95	17.32	
			SU	-	12.52	12.91	11.71	11.88	18.30	
	110	5550	26T	0	4.95	3.95	2.42	4.42	10.05	23.98
				9	5.33	3.53	3.14	5.08	10.39	
				17	4.44	2.49	2.36	4.97	9.74	
			52T	37	6.83	6.25	4.52	6.71	12.19	
				41	7.12	6.08	5.16	7.25	12.50	
				44	6.88	5.88	5.14	7.44	12.45	
			106T	53	8.93	8.04	6.62	9.02	14.27	
				54	9.09	8.26	6.92	9.36	14.53	
				56	8.56	7.95	6.59	9.09	14.16	
			242T	61	10.45	11.02	10.00	10.47	16.52	
				62	10.23	10.98	10.01	10.65	16.50	
			484T	65	13.19	13.84	13.22	13.93	19.58	
			SU	-	13.90	14.25	13.69	14.41	20.09	
	134	5670	26T	0	3.49	4.35	3.20	5.40	10.22	23.98
				18	3.27	4.10	3.16	5.18	10.03	
				36	2.91	3.61	3.27	5.17	9.85	
			52T	37	6.01	6.63	4.66	6.21	11.96	
				45	6.38	6.83	5.49	6.76	12.42	
				52	5.98	6.42	5.33	6.71	12.16	
			106T	53	8.05	8.20	6.84	8.31	13.91	
				57	8.28	8.54	7.20	8.66	14.23	
				60	8.37	8.70	7.53	8.97	14.45	
			242T	61	10.75	10.96	10.44	10.50	16.69	
				62	10.50	10.90	10.69	10.56	16.69	
			484T	65	13.06	13.43	13.26	13.51	19.34	
			SU	-	14.19	14.48	14.25	14.75	20.44	

* Calculation of Output Power : Average Power = Meas Power + Duty CF[dB]
Corr'd Power = Ant1 Average Power + Ant2 Average Power + Ant3 Average Power + Ant4 Average Power

Mode	Ch.	Freq. [MHz]	Tones	RU offset	Average Power [dBm]				Corr'd Power [dBm]	Power Limit [dBm]
					ANT1	ANT2	ANT3	ANT4		
HE80	106	5530	26T	0	6.01	4.41	2.96	4.67	10.67	23.98
				18	5.27	4.30	2.91	4.71	10.40	
				36	4.58	3.22	3.05	5.71	10.30	
			52T	37	6.84	6.03	3.99	5.82	11.81	
				45	7.29	6.87	4.54	6.47	12.43	
				52	6.76	5.25	4.24	6.16	11.73	
			106T	53	8.80	7.81	5.95	8.08	13.80	
				57	9.15	8.23	6.41	8.46	14.19	
				60	9.03	8.32	6.47	8.46	14.19	
			242T	61	9.43	9.68	8.27	8.50	15.03	
				62	9.72	10.10	8.84	8.94	15.45	
				64	9.12	9.68	8.45	8.44	14.97	
			484T	65	10.43	11.01	9.53	9.93	16.28	
				66	10.36	11.00	9.68	9.73	16.25	
			996T	67	12.44	12.88	11.62	11.95	18.27	
			SU	-	13.42	13.80	12.73	12.91	19.26	
	122	5610	26T	0	4.13	4.18	2.64	4.76	10.02	23.98
				18	3.51	4.40	2.91	5.10	10.08	
				36	4.84	3.65	3.61	5.07	10.36	
			52T	37	6.46	6.25	3.99	5.74	11.73	
				45	6.83	7.06	4.87	6.58	12.44	
				52	6.24	6.05	4.93	6.49	11.99	
			106T	53	8.50	7.92	6.10	7.98	13.73	
				57	8.68	8.36	6.77	8.49	14.16	
				60	7.83	7.80	6.37	7.96	13.56	
			242T	61	9.50	9.84	9.28	9.15	15.47	
				62	9.67	10.12	9.65	9.54	15.77	
				64	8.82	9.72	9.48	9.15	15.33	
			484T	65	10.55	10.71	10.39	10.30	16.51	
				66	10.45	10.84	10.60	10.53	16.63	
			996T	67	12.37	12.75	12.48	12.83	18.63	
			SU	-	13.04	13.38	13.25	13.36	19.28	

* Calculation of Output Power : Average Power = Meas Power + Duty CF[dB]
Corr'd Power = Ant1 Average Power + Ant2 Average Power + Ant3 Average Power + Ant4 Average Power

Mode	Ch.	Freq. [MHz]	Tones	RU offset	Average Power [dBm]				Corr'd Power [dBm]	Power Limit [dBm]
					ANT1	ANT2	ANT3	ANT4		
HE 160	114	5570	26T	0	5.50	4.14	2.50	4.13	10.22	23.98
				37	5.46	2.82	2.89	4.88	10.19	
				73	4.46	3.35	3.20	4.68	9.99	
			52T	74	7.16	6.47	4.32	6.11	12.15	
				89	7.32	6.00	4.88	6.74	12.35	
				105	6.16	6.01	4.78	6.28	11.87	
			106T	106	8.26	7.44	5.41	7.45	13.28	
				113	7.90	8.19	6.82	6.28	13.39	
				121	6.53	7.46	6.54	6.08	12.70	
			242T	122	8.43	8.30	7.33	7.02	13.83	
				125	9.02	9.21	8.22	7.82	14.63	
				129	7.71	8.68	7.93	7.14	13.92	
			484T	130	9.90	10.14	9.12	8.87	15.56	
				131	9.85	10.10	9.07	8.83	15.52	
				133	8.66	9.53	8.70	8.13	14.80	
			996T	134	10.75	10.91	10.21	10.13	16.53	
				135	10.44	11.14	10.54	10.18	16.61	
			996T + 996T	136	12.53	12.90	12.21	12.33	18.52	
			SU	-	12.89	13.47	12.88	12.71	19.02	

* Calculation of Output Power : Average Power = Meas Power + Duty CF[dB]
Corr'd Power = Ant1 Average Power + Ant2 Average Power + Ant3 Average Power + Ant4 Average Power

PPSD Results

Actual RBW	Ref. Bandwidth	Corr'd factor
100 kHz	1000 kHz	10.00 dB

Mode	Ch.	Freq. [MHz]	Tones	RU offset	Meas PPSD [dBm/100kHz]				Corr'd PPSD [dBm/MHz]	PPSD Limit [dBm/MHz]
					ANT1	ANT2	ANT3	ANT4		
HE20	100	5500	26T	0	-6.29	-8.28	-10.51	-7.12	8.24	9.04
				4	-6.41	-8.12	-10.10	-6.61	8.44	
				8	-6.68	-8.66	-11.20	-6.79	8.04	
			SU	-	-7.53	-7.87	-8.84	-7.15	8.22	
	116	5580	26T	0	-7.94	-5.61	-8.29	-7.22	8.88	
				4	-7.97	-5.74	-9.08	-7.81	8.55	
				8	-8.41	-6.05	-9.27	-7.46	8.39	
			SU	-	-8.16	-6.94	-9.38	-7.70	8.07	
	140	5700	26T	0	-6.76	-7.96	-9.90	-6.75	8.35	
				4	-9.51	-8.82	-9.48	-9.32	6.75	
				8	-9.74	-8.92	-13.31	-9.59	5.92	
			SU	-	-7.93	-8.18	-11.20	-8.46	7.26	
HE40	102	5510	26T	0	-6.61	-8.75	-10.73	-7.33	7.93	
				9	-6.50	-8.98	-11.35	-7.67	7.74	
				17	-6.55	-9.80	-11.93	-7.32	7.60	
			SU	-	-10.92	-11.54	-13.30	-11.13	4.39	
	110	5550	26T	0	-6.88	-6.01	-9.98	-7.28	8.71	
				9	-6.99	-6.42	-8.80	-8.51	8.46	
				17	-8.71	-7.06	-9.81	-6.98	8.03	
			SU	-	-8.96	-8.53	-11.21	-8.61	6.82	
	134	5670	26T	0	-6.48	-7.41	-10.25	-6.97	8.46	
				9	-7.37	-6.86	-10.48	-6.34	8.52	
				17	-6.89	-8.09	-10.17	-6.93	8.19	
			SU	-	-8.17	-7.73	-10.25	-8.35	7.50	

* Calculation of PPSD result :
Corr'd PPSD = Ant1 PPSD + Ant2 PPSD + Ant3 PPSD + Ant4 PPSD + Duty CF + Corr'd factor [dB]

Mode	Ch.	Freq. [MHz]	Tones	RU offset	Meas PPSD [dBm/100kHz]				Corr'd PPSD [dBm/MHz]	PPSD Limit [dBm/MHz]
					ANT1	ANT2	ANT3	ANT4		
HE80	106	5530	26T	0	-5.66	-8.33	-10.73	-7.08	8.44	9.04
				18	-5.51	-7.97	-11.45	-8.99	8.05	
				36	-5.90	-8.94	-10.89	-6.68	8.33	
			SU	-	-12.59	-13.21	-14.90	-12.53	2.81	
	122	5610	26T	0	-6.28	-8.18	-10.21	-6.85	8.39	
				18	-7.40	-7.52	-10.12	-6.95	8.18	
				36	-7.32	-8.27	-9.81	-6.54	8.20	
			SU	-	-12.67	-11.91	-14.60	-12.09	3.33	
HE 160	114	5570	26T	0	-8.75	-7.73	-9.14	-6.21	8.22	
				37	-7.85	-7.22	-8.71	-6.36	8.57	
				73	-7.90	-6.17	-8.71	-6.39	8.85	
			SU	-	-15.28	-13.75	-16.90	-15.22	0.87	

* Calculation of PPSD result :
Corr'd PPSD = Ant1 PPSD + Ant2 PPSD + Ant3 PPSD + Ant4 PPSD + Duty CF + Corr'd factor [dB]

10.2.4.802.11ax 4Tx (MIMO) MODE STRADDLE CHANNEL

Bandwidth and Antenna Gain, Limits

Frequency [MHz]	Portion	Directional Gain		Power Limit [dBm]	PPSD Limit
		For Power [dBi]	For PSD [dBi]		
5720(HE20)	UNII-2C	1.94	7.96	22.44	9.04 [dBm/MHz]
	UNII-3	1.86	7.88	30	30 [dBm/500kHz]
5710(HE40)	UNII-2C	1.94	7.96	23.98	9.04 [dBm/MHz]
	UNII-3	1.86	7.88	30	30 [dBm/500kHz]
5690(HE80)	UNII-2C	1.94	7.96	23.98	9.04 [dBm/MHz]
	UNII-3	1.86	7.88	30	30 [dBm/500kHz]

Included in Calculations of Corr'd Power & PPSD				
Duty Cycle CF [dB]	HE20	26T	-	dB
		SU	-	dB
	HE40	26T	-	dB
		SU	-	dB
	HE80	26T	-	dB
		SU	-	dB

Output Power Results

Freq. [MHz]	Portion	Tones	RU offset	Average Power [dBm]				Corr'd Power [dBm]	Power Limit [dBm]
				ANT1	ANT2	ANT3	ANT4		
5720	UNII-2C	26T	4	6.67	7.41	3.60	6.97	12.41	22.44
		SU	-	10.91	10.81	9.20	11.44	16.69	
	UNII-3	26T	4	-18.95	-17.16	-20.39	-17.68	-12.35	30
		SU	-	5.99	5.61	4.20	6.45	11.66	
5710	UNII-2C	26T	9	6.66	7.57	3.69	6.50	12.34	23.98
		SU	-	12.24	12.79	11.34	13.37	18.52	
	UNII-3	26T	9	-22.85	-16.51	-29.75	-19.97	-14.13	30
		SU	-	2.20	2.73	1.34	3.53	8.54	
5690	UNII-2C	26T	18	7.21	7.67	4.66	6.58	12.69	23.98
		SU	-	12.99	13.52	11.96	13.88	19.17	
	UNII-3	26T	18	-24.54	-23.04	-33.39	-25.83	-19.37	30
		SU	-	0.27	0.29	-1.63	0.42	5.94	

* Calculation of Output Power : Average Power = Meas Power + Duty CF[dB]
Corr'd Power = Ant1 Average Power + Ant2 Average Power + Ant3 Average Power + Ant4 Average Power

PPSD Results

Band	Actual RBW	Ref. Bandwidth	Corr'd factor
UNII-2C	100 kHz	1000 kHz	10.00 dB
UNII-3	100 kHz	500 kHz	6.99 dB

Freq. [MHz]	Portion	Tones	RU offset	Meas PPSD [dBm/MHz]				Corr'd PPSD [dBm]	PPSD Limit [dBm/ MHz]
				ANT1	ANT2	ANT3	ANT4		
5720	UNII-2C	26T	4	-6.96	-6.71	-11.67	-7.50	8.20	9.04
		SU	-	-8.08	-8.71	-10.96	-8.26	7.16	
	UNII-3	26T	4	-28.37	-27.31	-29.83	-26.71	-14.89	30
		SU	-	-8.24	-8.58	-10.95	-8.62	4.04	
5710	UNII-2C	26T	9	-8.68	-8.82	-12.69	-7.80	6.87	9.04
		SU	-	-10.04	-8.95	-12.63	-9.67	5.90	
	UNII-3	26T	9	-25.04	-23.81	-28.61	-26.11	-12.55	30
		SU	-	-11.28	-10.73	-13.02	-10.79	1.65	
5690	UNII-2C	26T	18	-8.37	-8.09	-11.91	-9.67	6.75	9.04
		SU	-	-14.19	-13.75	-16.33	-14.52	1.43	
	UNII-3	26T	18	-33.51	-30.81	-34.74	-32.16	-19.55	30
		SU	-	-15.26	-15.53	-17.60	-15.66	-2.91	

Note: * For UNII-3, the unit of PPSD is [dBm/500kHz].
Calculation of PPSD result :
Corr'd PPSD = Ant1 PPSD + Ant2 PPSD + Ant3 PPSD + Ant4 PPSD + Duty CF + Corr'd factor [dB]

10.2.5. 802.11ax 4Tx (MIMO) MODE 5.8 GHz BAND

Bandwidth and Antenna Gain, Limits

Mode	Channel	Frequency [MHz]	Directional Gain For Power [dBi]	Directional Gain For PSD [dBi]	Power Limit [dBm]	PPSD Limit [dBm/500kHz]
HE20	149	5745	1.86	7.88	30	28.12
	157	5785				
	165	5825				
HE40	151	5755				
	159	5795				
HE80	155	5775				

Included in Calculations of Corr'd [Power & PPSD]				
Duty Cycle CF [dB]	HE20	26T	0.00	dB
		52T	0.00	dB
		106T	0.00	dB
		242T	0.00	dB
		SU	0.00	dB
	HE40	26T	0.00	dB
		52T	0.00	dB
		106T	0.00	dB
		242T	0.00	dB
		484T	0.00	dB
		SU	0.00	dB
	HE80	26T	0.00	dB
		52T	0.00	dB
		106T	0.00	dB
		242T	0.00	dB
		484T	0.00	dB
		996T	0.00	dB
		SU	0.00	dB

Output Power Results

Mode	Ch.	Freq. [MHz]	Tones	RU offset	Average Power [dBm]				Corr'd Power [dBm]	Power Limit [dBm]
					ANT1	ANT2	ANT3	ANT4		
HE20	149	5745	26T	0	11.50	12.02	11.71	12.57	17.99	30
				4	11.23	13.02	11.96	12.37	18.21	
				8	11.11	12.22	11.93	12.41	17.97	
			52T	37	14.06	15.06	14.72	15.62	20.92	
				38	14.14	15.04	14.81	15.59	20.95	
				40	13.92	14.52	14.70	15.38	20.68	
			106T	53	15.62	16.72	16.19	17.09	22.46	
				54	15.68	16.70	16.23	17.01	22.45	
			242T	61	16.45	17.62	17.10	18.03	23.36	
			SU	-	16.85	17.99	17.50	18.33	23.72	
	157	5785	26T	0	13.70	13.90	13.85	14.74	20.09	30
				4	13.38	14.85	14.01	14.72	20.30	
				8	13.28	14.05	13.90	14.70	20.03	
			52T	37	14.31	15.23	14.97	16.02	21.20	
				38	14.42	15.53	15.05	15.92	21.29	
				40	14.32	15.00	15.01	15.63	21.04	
			106T	53	15.67	16.51	16.02	16.93	22.33	
				54	15.63	16.55	15.95	16.86	22.29	
			242T	61	16.40	17.46	16.84	18.01	23.24	
			SU	-	16.78	17.94	17.39	18.41	23.69	
	165	5825	26T	0	13.69	13.82	14.13	14.95	20.20	30
				4	13.46	14.85	14.32	15.16	20.51	
				8	13.34	13.96	14.16	15.05	20.19	
			52T	37	14.45	15.26	15.20	16.37	21.40	
				38	14.65	15.73	15.28	16.27	21.54	
				40	14.50	15.21	15.02	16.04	21.25	
			106T	53	15.90	16.59	16.23	17.37	22.58	
				54	15.72	16.46	16.06	17.17	22.41	
			242T	61	16.18	16.99	16.58	17.82	22.96	
			SU	-	16.61	17.69	17.18	18.33	23.52	

* Calculation of Output Power : Average Power = Meas Power + Duty CF[dB]
Corr'd Power = Ant1 Average Power + Ant2 Average Power + Ant3 Average Power + Ant4 Average Power

Mode	Ch.	Freq. [MHz]	Tones	RU offset	Average Power [dBm]				Corr'd Power [dBm]	Power Limit [dBm]
					ANT1	ANT2	ANT3	ANT4		
HE40	151	5755	26T	0	11.47	12.48	12.03	13.11	18.33	30
				9	12.05	12.82	12.47	13.39	18.73	
				17	11.45	11.78	12.11	12.49	18.00	
			52T	37	14.44	14.96	14.85	15.83	21.07	
				41	14.69	15.16	15.43	16.35	21.47	
				44	14.39	14.91	14.73	15.58	20.95	
			106T	53	14.64	14.59	14.90	16.05	21.11	
				54	14.92	15.23	15.43	16.28	21.52	
				56	14.58	14.77	14.97	16.00	21.14	
			242T	61	15.89	16.04	16.18	17.22	22.39	
				62	15.70	16.22	16.19	17.05	22.34	
			484T	65	16.66	17.16	17.16	18.29	23.38	
			SU	-	16.79	17.23	17.26	18.38	23.48	
	159	5795	26T	0	12.82	13.42	13.65	14.84	19.77	30
				9	13.56	14.23	13.95	14.98	20.23	
				17	13.69	13.92	14.05	14.58	20.09	
			52T	37	14.40	14.80	14.73	15.87	21.01	
				41	14.75	15.07	15.32	16.26	21.41	
				44	14.42	14.74	14.59	15.53	20.86	
			106T	53	14.80	14.56	15.08	16.18	21.22	
				54	14.93	14.94	15.32	16.28	21.42	
				56	14.59	14.68	14.81	15.83	21.03	
			242T	61	15.88	15.91	16.21	17.17	22.35	
				62	15.77	15.89	15.95	16.90	22.17	
			484T	65	16.73	16.88	16.95	18.16	23.24	
			SU	-	16.75	16.87	17.04	18.21	23.28	
HE80	155	5775	26T	0	11.20	11.74	11.72	12.56	17.85	30
				18	11.43	12.23	11.95	12.32	18.02	
				36	11.58	11.82	11.83	12.34	17.92	
			52T	37	12.52	13.07	12.96	13.98	19.19	
				45	12.84	13.64	13.41	14.36	19.62	
				52	12.20	13.11	12.65	13.42	18.89	
			106T	53	13.31	13.39	13.87	14.73	19.88	
				57	13.62	14.03	14.23	15.11	20.30	
				60	13.08	13.59	13.43	14.42	19.68	
			242T	61	13.46	13.64	14.01	14.73	20.01	
				62	13.87	14.04	14.30	15.11	20.38	
				64	13.28	13.72	13.53	14.53	19.81	
			484T	65	14.57	14.82	15.10	16.15	21.22	
				66	14.51	14.89	14.85	16.03	21.13	
			996T	67	15.64	16.05	16.20	17.09	22.30	
			SU	-	16.16	16.52	16.68	17.49	22.76	

* Calculation of Output Power : Average Power = Meas Power + Duty CF[dB]
Corr'd Power = Ant1 Average Power + Ant2 Average Power + Ant3 Average Power + Ant4 Average Power

PPSD Results

Mode	Ch.	Freq. [MHz]	Tones	RU offset	Meas PPSD [dBm/500kHz]				Corr'd PPSD [dBm/ 500kHz]	PPSD Limit [dBm/ 500kHz]
					ANT1	ANT2	ANT3	ANT4		
HE20	149	5745	26T	0	7.75	6.69	5.15	7.96	20.03	28.12
				4	6.70	7.66	5.21	7.97	20.02	
				8	7.39	7.33	5.43	8.01	20.15	
			SU	-	4.09	4.24	2.05	4.17	16.73	
	157	5785	26T	0	9.58	8.57	7.51	10.41	22.16	
				4	8.38	10.05	7.23	10.18	22.14	
				8	8.55	9.12	7.68	9.59	21.80	
			SU	-	5.51	3.40	2.08	4.85	17.17	
	165	5825	26T	0	10.32	10.35	8.30	10.20	22.88	
				4	8.93	10.04	8.30	10.81	22.64	
				8	9.65	9.16	7.85	10.36	22.36	
			SU	-	3.62	4.13	2.34	4.44	16.71	
HE40	151	5755	26T	0	9.21	8.35	5.23	8.51	21.08	
				9	8.88	8.75	6.65	9.32	21.52	
				17	8.52	7.97	5.63	8.52	20.82	
			SU	-	1.92	2.09	0.19	1.88	14.59	
	159	5795	26T	0	10.57	9.96	8.53	11.34	23.23	
				9	10.14	10.68	8.09	10.80	23.06	
				17	10.37	10.02	8.69	10.28	22.90	
			SU	-	2.49	1.12	-0.31	2.12	14.49	
HE80	155	5775	26T	0	9.19	7.89	5.65	8.10	20.89	
				18	7.53	7.66	4.78	8.39	20.29	
				36	8.36	7.80	5.11	7.96	20.48	
			SU	-	-1.31	-1.60	-3.60	-1.57	11.08	

* Calculation of PPSD result :
Corr'd PPSD = Ant1 PPSD + Ant2 PPSD + Ant3 PPSD + Ant4 PPSD + Duty CF