



CERTIFICATION TEST REPORT

Report Number. : 4790357232-E6V4

Applicant : SAMSUNG ELECTRONICS CO., LTD.
129 SAMSUNG-RO, YEONGTONG-GU, SUWON-SI,
GYEONGGI-DO, 16677, KOREA

Model : SM-F721B

FCC ID : A3LSMF721B

EUT Description : GSM/WCDMA/LTE/5G NR Phone + BT/BLE, DTS/UNII a/b/g/n/ac/ax,
NFC and WPT

Test Standard(s) : FCC 47 CFR PART 15 SUBPART E

Date Of Issue:
2022-07-06

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



Revision History

<u>Rev.</u>	<u>Issue Date</u>	<u>Revisions</u>	<u>Revised By</u>
V1	2022-06-14	Initial issue	Dexter(Hyunsik) Yun
V2	2022-06-22	Updated to address TCB's question	Dexter(Hyunsik) Yun
V3	2022-06-24	Updated to address TCB's question	Dexter(Hyunsik) Yun
V4	2022-07-06	Updated to address TCB's question	Dexter(Hyunsik) Yun

TABLE OF CONTENTS

1. ATTESTATION OF TEST RESULTS	6
2. TEST METHODOLOGY	7
3. FACILITIES AND ACCREDITATION	7
4. CALIBRATION AND UNCERTAINTY	7
4.1. <i>MEASURING INSTRUMENT CALIBRATION</i>	<i>7</i>
4.2. <i>SAMPLE CALCULATION</i>	<i>7</i>
4.3. <i>MEASUREMENT UNCERTAINTY.....</i>	<i>8</i>
4.4. <i>DECISION RULE.....</i>	<i>8</i>
5. EQUIPMENT UNDER TEST.....	9
5.1. <i>DESCRIPTION OF EUT</i>	<i>9</i>
5.2. <i>DESCRIPTION OF AVAILABLE ANTENNAS</i>	<i>14</i>
5.3. <i>List of test reduction and modes covering other modes:</i>	<i>14</i>
5.4. <i>WORST-CASE CONFIGURATION AND MODE.....</i>	<i>15</i>
5.5. <i>DESCRIPTION OF TEST SETUP.....</i>	<i>18</i>
6. TEST AND MEASUREMENT EQUIPMENT	20
7. SUMMARY TABLE	21
8. MEASUREMENT METHODS	22
9. REFERENCE MEASUREMENTS RESULTS	23
9.1. <i>ON TIME AND DUTY CYCLE RESULTS.....</i>	<i>23</i>
9.2. <i>DUTY CYCLE PLOTS</i>	<i>24</i>
9.3. <i>26 dB BANDWIDTH.....</i>	<i>29</i>
9.3.1. <i>802.11a.....</i>	<i>32</i>
9.3.2. <i>802.11n HT20</i>	<i>32</i>
9.3.3. <i>802.11n HT40</i>	<i>32</i>
9.3.4. <i>802.11ac VHT80.....</i>	<i>33</i>
9.3.5. <i>802.11ac VHT160.....</i>	<i>33</i>
9.3.6. <i>802.11ax HE20</i>	<i>33</i>
9.3.7. <i>802.11ax HE40</i>	<i>34</i>
9.3.8. <i>802.11ax HE80</i>	<i>34</i>
9.3.9. <i>802.11ax HE160</i>	<i>34</i>
9.3.10. <i>STRADDLE CHANNEL.....</i>	<i>35</i>
9.3.11. <i>802.11ax HE20(RU).....</i>	<i>35</i>
9.3.12. <i>802.11ax HE40(RU).....</i>	<i>36</i>
9.3.13. <i>802.11ax HE80(RU).....</i>	<i>36</i>
9.3.14. <i>802.11ax HE160(RU).....</i>	<i>37</i>

9.3.15. 802.11ax STRADDLE CHANNEL(RU).....37

10. ANTENNA PORT TEST RESULTS38

10.1. 6 dB BANDWIDTH38

10.1.1. UNII-3 & 4 BAND40

10.1.2. UNII-3 & 4 BAND(RU).....41

10.2. OUTPUT POWER AND PPSD42

10.2.1. 802.11a MODE44

10.2.2. 802.11n HT20 MODE45

10.2.3. 802.11n HT40 MODE46

10.2.4. 802.11ac VHT80 MODE47

10.2.5. 802.11ac VHT160 MODE48

10.2.6. STRADDLE CHANNEL.....49

10.2.7. 802.11ax HE20 MODE50

10.2.8. 802.11ax HE40 MODE57

10.2.9. 802.11ax HE80 MODE64

10.2.10. 802.11ax HE160 MODE68

10.2.11. STRADDLE CHANNEL(802.11ax).....71

10.2.12. OUTPUT POWER AND PPSD PLOTS(WORST CASE)72

11. TRANSMITTER ABOVE 1 GHz.....85

11.1. TX ABOVE 1GHz 2Tx MODE IN THE 5.2GHz BAND.....88

11.2. TX ABOVE 1GHz 2Tx MODE IN THE 5.3GHz BAND.....92

11.3. TX ABOVE 1GHz 2Tx MODE IN THE 5.5 GHz BAND.....96

11.4. TX ABOVE 1GHz 2Tx MODE IN THE 5.8 GHz BAND..... 101

11.5. TX ABOVE 1GHz 2Tx MODE IN THE 5.9 GHz BAND..... 105

11.6. Spurious Emissions for Simultaneous Transmission 109

11.6.1. Worst test case RSDB condition 109

11.6.2. Test Results..... 110

12. WORST-CASE BELOW 1 GHz 112

13. AC POWER LINE CONDUCTED EMISSIONS 113

14. DYNAMIC FREQUENCY SELECTION..... 116

14.1. OVERVIEW..... 116

14.1.1. LIMITS..... 116

14.1.2. TEST AND MEASUREMENT SYSTEM 119

14.1.3. SETUP OF EUT..... 122

14.1.4. DESCRIPTION OF EUT 123

14.2. RESULTS FOR 80 MHz BANDWIDTH (UNII-2A BAND) 124

14.2.1. TEST CHANNEL 124

14.2.2. RADAR WAVEFORM AND TRAFFIC 124

14.2.3. OVERLAPPING CHANNEL TESTS 125

14.2.4. MOVE AND CLOSING TIME 125

14.3.	RESULTS FOR 80 MHz BANDWIDTH (UNII-2C BAND).....	128
14.3.1.	TEST CHANNEL	128
14.3.2.	RADAR WAVEFORM AND TRAFFIC	128
14.3.3.	OVERLAPPING CHANNEL TESTS.....	129
14.3.4.	MOVE AND CLOSING TIME	129

1. ATTESTATION OF TEST RESULTS

COMPANY NAME: SAMSUNG ELECTRONICS CO., LTD.

EUT DESCRIPTION: GSM/WCDMA/LTE/5G NR Phone + BT/BLE, DTS/UNII a/b/g/n/ac/ax, NFC and WPT

MODEL NUMBER: SM-F721B

SERIAL NUMBER: 6335d079fa3f7ece (CONDUCTED);
R3CT40DGDYV, R3CT40SS53H, R3CT504WY2D (RADIATED);

DATE TESTED: 2022-04-26 ~ 2022-06-14;

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:



Seokhwan Hong
Suwon Lab Engineer
UL Korea, Ltd.

Tested By:



Dexter(Hyunsik) Yun
Suwon Lab Engineer
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 905462 D02 UNII DFS Compliance Procedures New Rules v02
5. KDB 905462 D03 UNII Clients Without Radar Detection New Rules v01r02
6. KDB 662911 D01 v02r01
7. KDB 291071 DR01-44460(Sept 21, 2021)
8. 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
<input checked="" type="checkbox"/> Chamber 1
<input checked="" type="checkbox"/> Chamber 2
<input checked="" type="checkbox"/> 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>.

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:

$$\begin{aligned} \text{Field Strength (dBuV/m)} &= \text{Measured Voltage (dBuV)} + \text{Antenna Factor (dB/m)} + \\ &\text{Cable Loss (dB)} - \text{Preamp Gain (dB)} \\ 36.5 \text{ dBuV} + 18.7 \text{ dB/m} + 0.6 \text{ dB} - 26.9 \text{ dB} &= 28.9 \text{ dBuV/m} \end{aligned}$$

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	3.02 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 Procedure 2, Clause 4.4.3 in IEC Guide 115:2007.

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The EUT is a GSM/WCDMA/LTE/5G NR Phone + BT/BLE, DTS/UNII a/b/g/n/ac/ax, NFC and WPT. This test report addresses the NII (WLAN) operational mode.

WiFi operating mode

Frequency range	Mode	ANT1	ANT2
5GHz (5180 MHz ~ 5885 MHz)	802.11a MIMO	TX/RX	TX/RX
	802.11n MIMO	TX/RX	TX/RX
	802.11ac MIMO	TX/RX	TX/RX
	802.11ax MIMO	TX/RX	TX/RX

Simultaneous TX Condition

Simultaneous Tx Condition - RSDB

Mode	# of TX	5GHz WLAN		2.4GHz WLAN		Test Case
		ANT1	ANT2	ANT1	ANT2	
2.4GHz MIMO + 5GHz MIMO	4	0	0	0	0	0

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}		61 / -
HE40	26T	0
		9
		17
	52T	37
		41
		44
	106T	53
		54
		56
	242T	61
62		
484T / SU ^{Note}		63 / -
HE80	26T	0
		18
		36
	52T	37
		45
		52
	106T	53
		57
		60
	242T	61
		62
		64
	484T	65
		66
996T / SU ^{Note}		67 / -

Note: 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 MIMO.

Mode	Position	Tones	RU offset
HE160	Lower 80 MHz	26T	0
			18
	36		
	0		
	Upper 80 MHz		18
			36
	Lower 80 MHz	52T	37
			45
	52		
	Upper 80 MHz		37
			45
	52		
	Lower 80 MHz	106T	53
			57
	60		
	Upper 80 MHz		53
57			
60			
Lower 80 MHz	242T	61	
		62	
64			
Upper 80 MHz		61	
		62	
64			
Lower 80 MHz	484T	65	
		66	
Upper 80 MHz		65	
		66	
66			
Lower 80 MHz		996T	67
Upper 80 MHz	67		
-	SU ^{Note}	-	

Note: Full RU(Resource Unit) 996T + 996T 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 MIMO.

Band portion of RU allocation about straddle channels

Mode	Channel	Tones	RU offset	Portion
HE20	Straddle 5720 MHz	26T	6	UNII 2C & UNII 3
		242T / SU	61 / -	
HE40	Straddle 5710 MHz	26T	15	UNII 2C & UNII 3
		484T / SU	65 / -	
HE80	Straddle 5690 MHz	26T	34	UNII 2C & UNII 3
		996T / SU	67 / -	

Note: In case of RU straddle channel, test was performed overlapping RU position.

MAXIMUM OUTPUT POWER

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

Band	Frequency Range [MHz]	Mode	Output Power [dBm]	Output Power [mW]
UNII-1	5180 - 5240	802.11a MIMO	20.72	118.03
		802.11n(HT20) MIMO	20.53	112.98
		802.11ax(HE20) MIMO	19.44	87.90
	5190 - 5230	802.11n(HT40) MIMO	19.56	90.36
		802.11ax(HE40) MIMO	19.04	80.17
	5210	802.11ac(VHT80) MIMO	18.46	70.15
	802.11ax(HE80) MIMO	19.30	85.11	
UNII-2A	5260 - 5320	802.11a MIMO	20.35	108.39
		802.11n(HT20) MIMO	20.37	108.89
		802.11ax(HE20) MIMO	19.57	90.57
	5190 - 5230	802.11n(HT40) MIMO	19.33	85.70
		802.11ax(HE40) MIMO	19.42	87.50
	5270 - 5310	802.11ac(VHT80) MIMO	18.23	66.53
		802.11ax(HE80) MIMO	19.30	85.11
	5250 ^{Note1}	802.11ac(VHT160) MIMO	18.56	71.78
802.11ax(HE160) MIMO		19.35	86.10	
UNII-2C	5500 - 5720	802.11a MIMO	20.06	101.39
		802.11n(HT20) MIMO	19.87	97.05
		802.11ax(HE20) MIMO	19.61	91.41
	5510 - 5710	802.11n(HT40) MIMO	18.93	78.16
		802.11ax(HE40) MIMO	19.68	92.90
	5530 - 5690	802.11ac(VHT80) MIMO	18.05	63.83
		802.11ax(HE80) MIMO	19.55	90.16
	5570	802.11ac(VHT160) MIMO	18.05	63.83
802.11ax(HE160) MIMO		18.56	71.78	
UNII-3	5745 - 5825	802.11a MIMO	20.09	102.09
		802.11n(HT20) MIMO	20.37	108.89
		802.11ax(HE20) MIMO	19.36	86.30
	5755 - 5795	802.11n(HT40) MIMO	19.28	84.72
		802.11ax(HE40) MIMO	19.48	88.72
	5775	802.11ac(VHT80) MIMO	18.06	63.97
802.11ax(HE80) MIMO		19.29	84.92	
UNII-4	5845 - 5885	802.11a MIMO	17.52	56.49
		802.11n(HT20) MIMO	17.81	60.39
		802.11ax(HE20) MIMO	16.57	45.39
	5835 - 5875	802.11n(HT40) MIMO	16.90	48.98
		802.11ax(HE40) MIMO	16.60	45.71
	5855	802.11ac(VHT80) MIMO	15.58	36.14
		802.11ax(HE80) MIMO	19.35	86.10
	5815 ^{Note2}	802.11ac(VHT160) MIMO	15.75	37.58
802.11ax(HE160) MIMO		19.50	89.13	

Note1. Overlap channel(UNII-1 & 2A)

Note2. Overlap channel(UNII-3 & 4)

5.2. 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]	Correlated Chains Directional Gain [dBi]
UNII 1 (5150 – 5250)	-4.4	-5.9	-2.11
UNII 2A (5250 – 5350)	-4.6	-6.1	-2.31
UNII 2C (5470 – 5725)	-4.8	-6.0	-2.37
UNII 3 (5725 – 5850)	-5.0	-6.0	-2.48
UNII 4 (5850 – 5925)	-5.0	-6.0	-2.48

Directional gain for the MIMO operations is determined using KDB 662911 D01 Multiple Transmitter Output section F (2)(d)(1) for *Unequal antenna gains, with equal transmit powers*. The gain is calculated using the formula for correlated transmissions across the two transmit antennas. Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{ANT}]$ dBi.

Sample calculation for this device with $N_{ANT} = 2$
 Directional gain = $10 \log[(10^{-5.10/20} + 10^{-7.00/20})^2 / 2] = -2.99$ dBi

5.3. 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
802.11a	MIMO	802.11a 2TX	
802.11n HT20		802.11n HT20 2TX	
802.11ac VHT20		802.11ac VHT20 2TX	802.11n HT20 2TX
802.11ax HE20(SU)		802.11ax HE20 RU(242T) 2TX	802.11ax HE20 SU 2TX
802.11n HT40		802.11n HT40 2TX	
802.11ac VHT40		802.11ac VHT40 2TX	802.11n HT40 2TX
802.11ax HE40(SU)		802.11ax HE40 RU(484T) 2TX	802.11ax HE40 SU 2TX
802.11ac VHT80		802.11ac VHT80 2TX	
802.11ax HE80(SU)		802.11ax HE80 RU(996T) 2TX	802.11ax HE80 SU 2TX
802.11ac VHT160		802.11ac VHT160 2TX	
802.11ax HE160(SU)		802.11ax HE160 RU(996T*2) 2TX	802.11ax HE160 SU 2TX

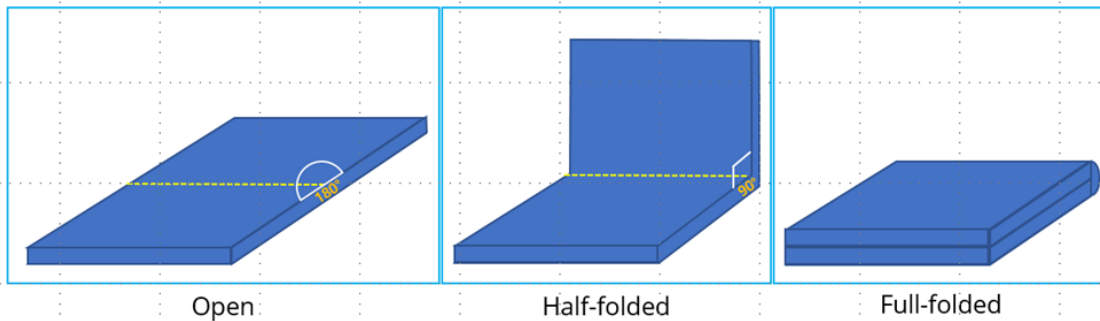
5.4. WORST-CASE CONFIGURATION AND MODE

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

- Worst condition

Axis & Foldable condition	MIMO
Axis	X
Foldable condition	Open



Based on the baseline scan, the worst-case data rates were:

802.11a mode: 6 Mbps 2Tx	802.11n HT20 mode: MCS0 2Tx	802.11ax HE20 mode: MCS0 2Tx
	802.11n HT40 mode: MCS0 2Tx	802.11ax HE40 mode: MCS0 2Tx
	802.11ac VHT80 mode: MCS0 2Tx	802.11ax HE80 mode: MCS0 2Tx
	802.11ac VHT160 mode: MCS0 2Tx	802.11ax HE160 mode: MCS0 2Tx

Radiation test for 802.11a / n HT20 & HT40 / ac VHT80 & VHT160 / ax HE20 & HE40 & HE80 & HE160 were evaluated at MIMO mode.

Note : All radiated and power line conducted tests were performed connected with charger for evaluation of worst case mode.

Worst-case selection criteria for 802.11ax test items :

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

Note : All radiated and power line conducted tests were performed connected with charger for evaluation of worst case mode.

Test case configuration for 802.11a, 802.11n HT20 & 40, 802.11ac VHT20 & 40 & 80 & 160, 802.11ax HE20 & 40 & 80 & 160(SU) modes :

Mode	Band	SISO Target[dBm]				MIMO Target[dBm]			
		802.11a	802.11n	802.11ac	802.11ax (SU)	802.11a	802.11n	802.11ac	802.11ax (SU)
5GHz (20 MHz)	UNII-1	17	17	17	16	20	20	20	19
	UNII-2A	17 Ch64: 16	17 Ch64: 16	17 Ch64: 16	16	20 Ch64: 19	20 Ch64: 19	20 Ch64: 19	19
	UNII-2C	17 Ch100: 16	17 Ch100: 16	17 Ch100: 16	16	20	20 Ch100: 19	20 Ch100: 19	19
	UNII-3	17	17	17	16	20	20	20	19
	UNII-4	17	17	17	16	20	20	20	19
5GHz (40 MHz)	UNII-1		16	16	16		19	19	19
	UNII-2A		16	16	16		19	19	19
	UNII-2C		16	16	16		19	19	19
	UNII-3		16	16	16		19	19	19
	UNII-4		16	16	16		19	19	19
5GHz (80 MHz)	UNII-1			15	16			18	19
	UNII-2A			15	16			18	19
	UNII-2C			15	16			18	19
	UNII-3			15	16			18	19
	UNII-4			15	16			18	19
5GHz (160 MHz)	UNII-1 & 2A			15	16			18	19
	UNII-2C			15	15			18	18
	UNII-3 & 4			15	16			18	19

	Band-Edge & Spurious Emission
	Band-Edge & Spurious Emission Spot-Check
	Band-Edge

Note. Compared to the 802.11a mode, target power is the same or lower and the density is low, so only the spot-check test was performed in the 802.11n & 802.11ac & 802.11ax mode. Spot check test was performed in the worst tested band of 802.11a mode.

Test case configuration for 802.11ax HE20 & 40 & 80 & 160 (RU) modes :

Band	Mode	Freq.	Tone	RU offset	Test Case			Band	Mode	Freq.	Tone	RU offset	Test Case		
					ANT1	ANT2	MIMO						ANT1	ANT2	MIMO
UNII-1	HE20	5180	26 T	0				UNII-2C	HE20	5500	26 T	0			
				4								4			
				8								8			
		5200		0						5580		0			
				4								4			
				8								8			O
	5240	0				5700	0								
		4					4								
		8					8								
	HE160	5250	26 T	0 L				UNII-3	HE20	5745	26 T	0			
				0 H								4			
				36 H								8			
UNII-2A	HE20	5260	26 T	0				UNII-3	HE20	5785	26 T	0			
				4								4			
				8								8			O
		5300		0						5825		0			
				4								4			
				8								8			
	5320	0				UNII-4	HE20	5845	26 T	0					
		4								4					
		8								8					
	HE40	5270	26 T	0				UNII-4	HE20	5865	26 T	0			
				9								4			
				17								8			O
		5310		0						5885		0			
				9								4			
				17								8			
	HE80	5290	26 T	0											
				18				O							
				36											

Spurious Emission
 Band-Edge

Note1. Radiated spurious test was performed on the lower tone(26T) with worst average power.
 Note2. Since the target of 26 tones are all the same, spurious test was performed once in each UNII band.
 Note3. Spot-check test was performed in HE40, HE80, HE160 modes.

5.5. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
Charger	SAMSUNG	EP-TA800	R37R38J49R8SE3	N/A
Data Cable	SAMSUNG	EP-DN980	N/A	N/A

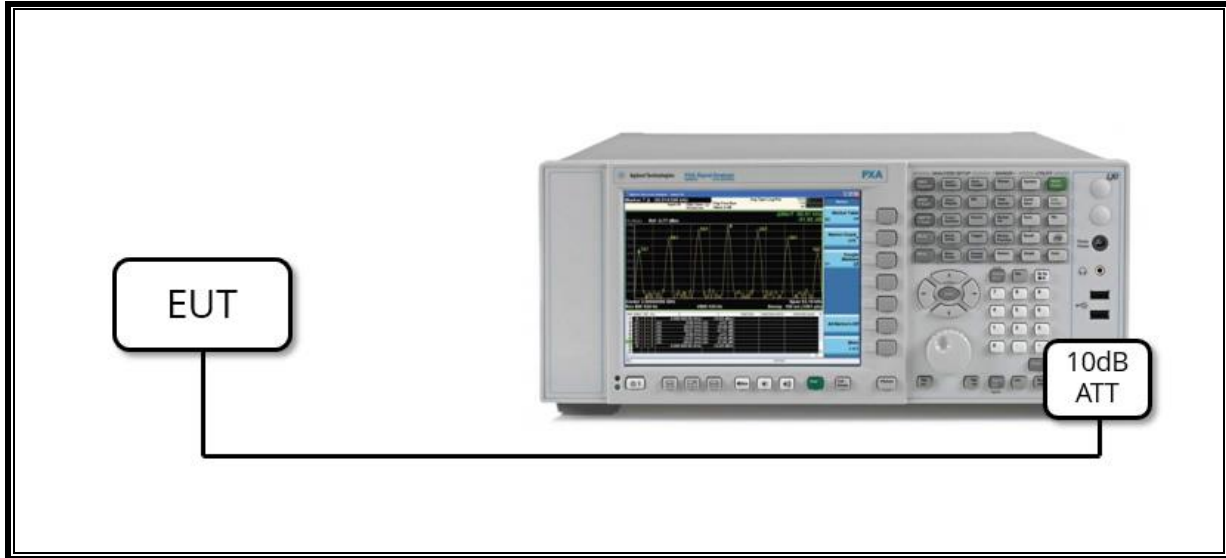
I/O CABLE

I/O Cable List						
Cable No.	Port	# of identical ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	DC Power	1	C Type	Shielded	1.0 m	N/A

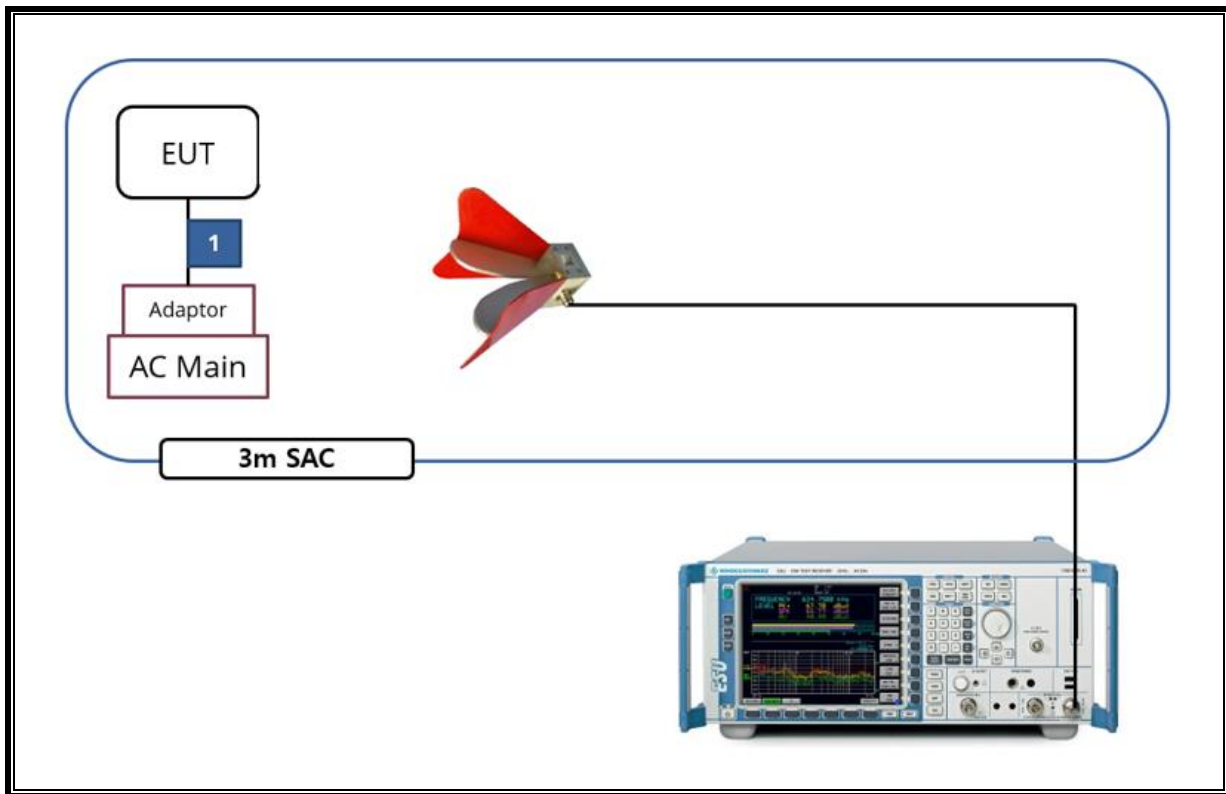
TEST SETUP

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	Agilent / HP	N9030A	MY54170614	2022-08-04
Spectrum Analyzer, 44 GHz	Agilent / HP	N9030A	MY54490312	2022-08-04
Spectrum Analyzer, 44 GHz	KEYSIGHT	N9030B	MY60070693	2023-01-18
Spectrum Analyzer, 44 GHz	KEYSIGHT	N9040B	MY60080268	2023-01-19
Average Power Sensor	Agilent / HP	U2000	MY54270007	2022-08-04
Average Power Sensor	Agilent / HP	U2000	MY54260010	2022-08-04
Attenuator	PASTERNAK	PE7087-10	A001	2022-08-03
Attenuator	PASTERNAK	PE7087-10	A008	2022-08-03
Attenuator	PASTERNAK	PE7004-10	2	2022-08-02
Attenuator	PASTERNAK	PE7087-10	A009	2022-08-03
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	101832	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	ENV-216	101837	2022-08-05
Antenna, Loop, 9kHz-30MHz	R&S	HFH2-Z2	100418	2023-10-06
Termination	WEINSCHL	M1406A	T09	2022-08-03
Attenuator	WEINSCHL	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	UL	UL EMC	Ver 9.5	

7. SUMMARY TABLE

FCC Part Section	Test Description	Test Limit	Test Condition	Test Result
15.407(e)	6dB Band width (5.8GHz)	> 500kHz	Conducted	Complies
15.407 (a)(1)(iv)	TX Cond. Power (5.150-5.250)	< 24dBm		Complies
15.407 (a)(2)	TX Cond. Power (5.250-5.350 & 5.470-5.725)	< 24dBm or 11+10Log(26dB BW)		Complies
15.407 (a)(3)(i)	TX Cond. Power (5.725-5.850)	< 30dBm		Complies
15.407 (a)(3)(iii)	TX Cond. Power (5.850-5.895)	< 30dBm e.i.r.p.		Complies
15.407 (a)(1)(iv) & (a)(2)	PSD (5.150-5.250 5.250-5.350 & 5.470-5.725)	< 11dBm/MHz		Complies
15.407 (a)(3)	PSD (5.725-5.850)	< 30dBm/500kHz		Complies
15.407 (a)(3)(iii)	PSD (5.850-5.895)	< 14dBm/MHz e.i.r.p.		Complies
15.207 (a)	AC Power Line conducted emissions	Section 13		Radiated
15.407 (b) & 15.209	Radiated Spurious Emission	< 74dBuV/m PK < 54dBuV/m AV	Complies	
15.407 (h)(2)	Dynamic Frequency Selection	N/A	Conducted	Complies ^{Note}

Note. This EUT does not support channel puncturing.

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.b(Method PM-G)

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	On Time [ms]	Period [ms]	Duty Cycle X [Linear]	Duty Cycle X [%]	Duty Cycle Correction Factor[dB]
802.11a MIMO	2.834	2.944	0.963	96.264	0.17
802.11n(HT20) MIMO	5.054	5.144	0.983	98.250	-
802.11n(HT40) MIMO	4.763	4.860	0.980	98.004	-
802.11ac(VHT80) MIMO	1.679	1.783	0.942	94.167	0.26
802.11ac(VHT160) MIMO	3.460	3.554	0.974	97.355	0.12

Mode	ANT.	Tone	On Time [ms]	Period [ms]	Duty Cycle X [Linear]	Duty Cycle X [%]	Duty Cycle Correction Factor[dB]
802.11ax HE20	MIMO	26T	5.388	5.401	0.998	99.759	-
		52T	3.753	3.774	0.994	99.444	-
		106T	5.064	5.093	0.994	99.431	-
		SU	11.860	11.880	0.998	99.832	-
802.11ax HE40	MIMO	26T	3.527	3.586	0.984	98.355	-
		52T	3.519	3.578	0.984	98.351	-
		106T	3.376	3.443	0.981	98.054	-
		242T	3.331	3.367	0.989	98.931	-
		SU	11.860	11.880	0.998	99.832	-
802.11ax HE80	MIMO	26T	6.160	6.209	0.992	99.211	-
		52T	6.159	6.222	0.990	98.987	-
		106T	5.839	5.897	0.990	99.016	-
		242T	5.759	5.795	0.994	99.379	-
		484T	5.744	5.767	0.996	99.601	-
		SU	12.720	12.800	0.994	99.375	-
802.11ax HE160	MIMO	26T	6.465	6.519	0.992	99.172	-
		52T	6.455	6.513	0.991	99.109	-
		106T	6.125	6.198	0.988	98.822	-
		242T	6.037	6.107	0.989	98.854	-
		484T	6.038	6.061	0.996	99.621	-
		996T	6.111	6.139	0.995	99.544	-
		SU	6.102	6.126	0.996	99.608	-

Note. If the duty cycle is over 98%, compensation is not included in average measurement.

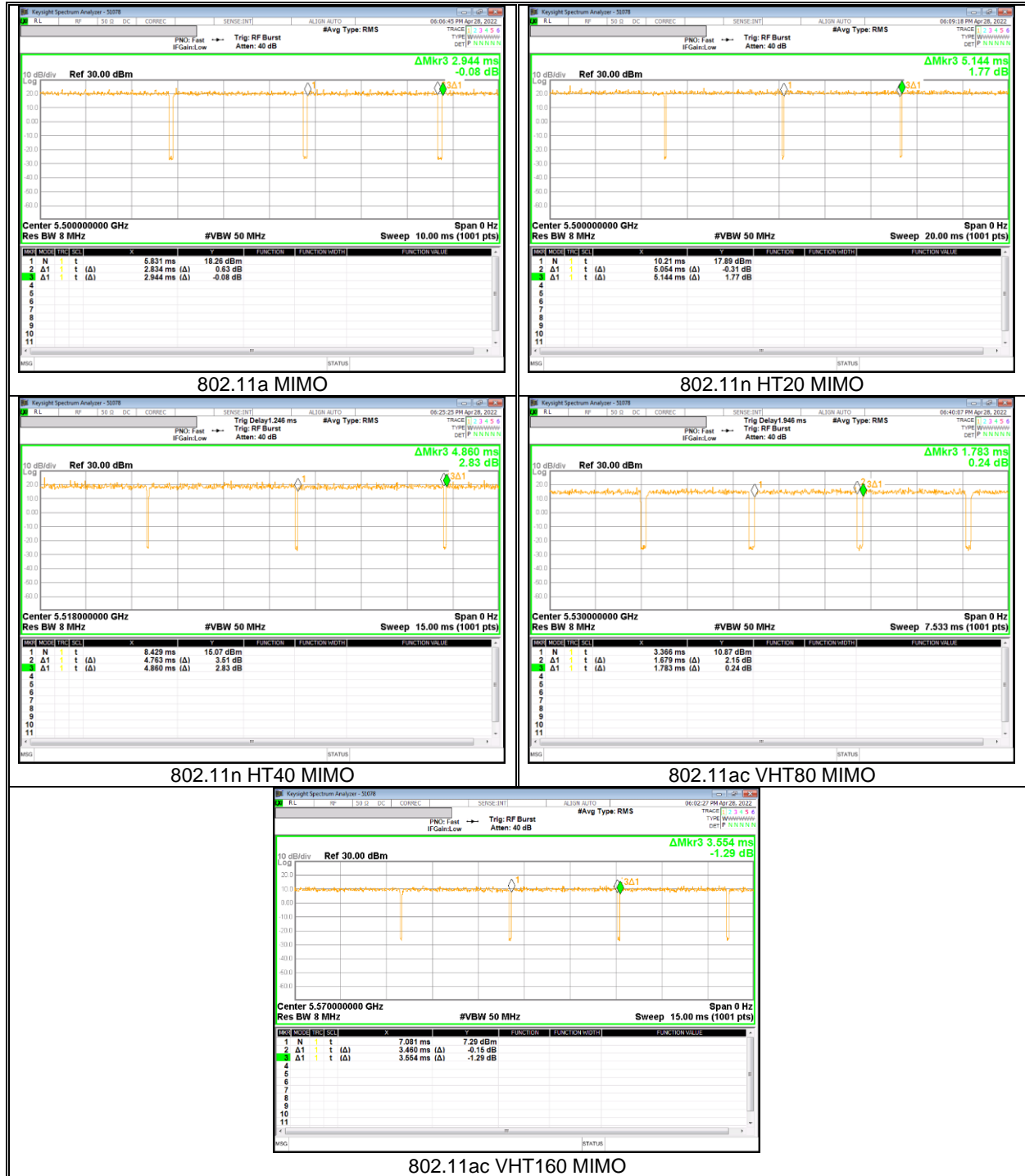
LIMITS

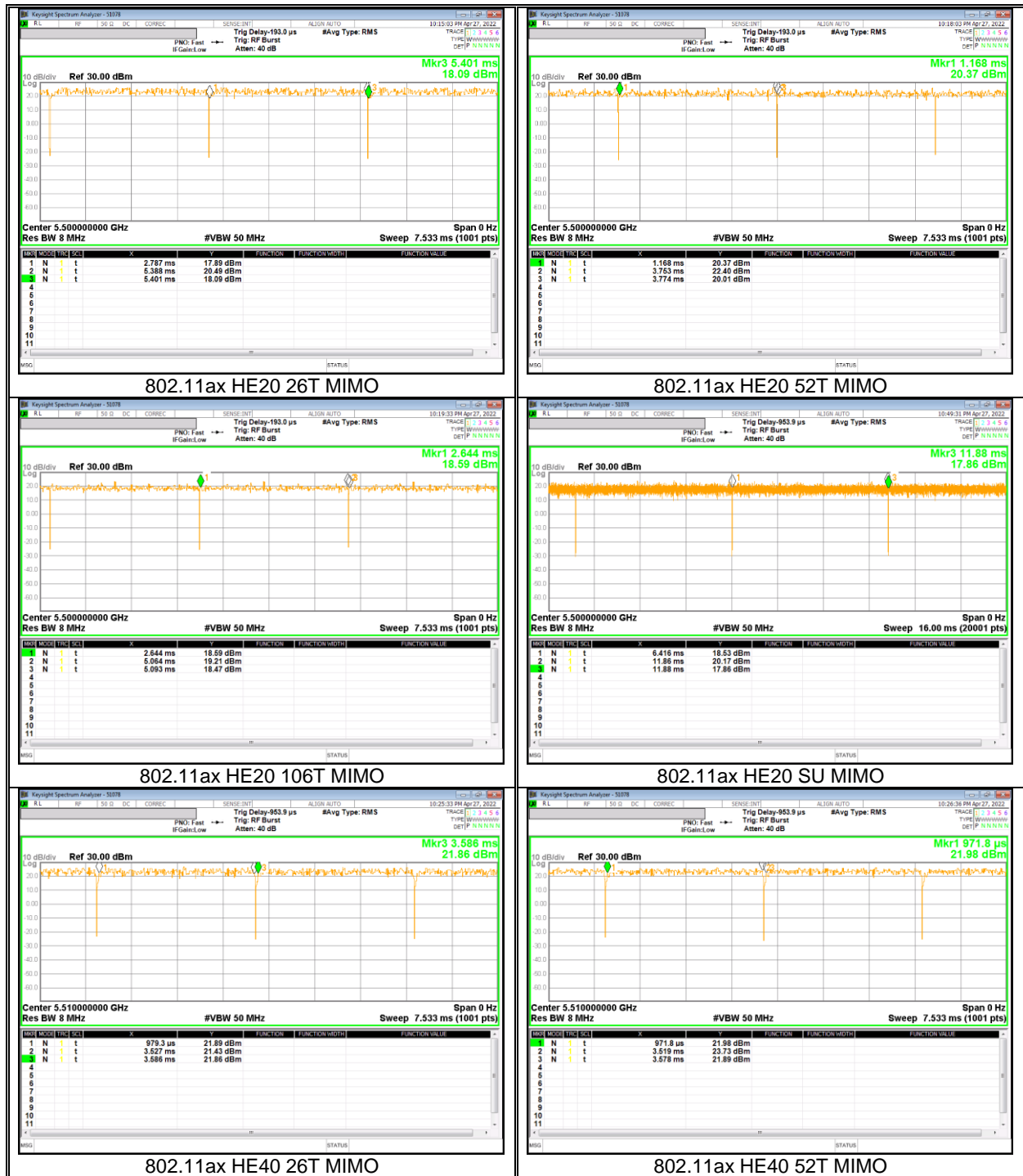
None; for reporting purposes only.

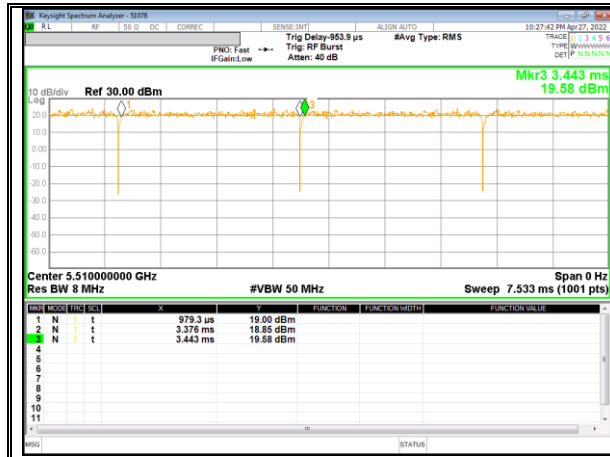
PROCEDURE

KDB 789033 D02 v02r01 Zero-Span Spectrum Analyzer Method.

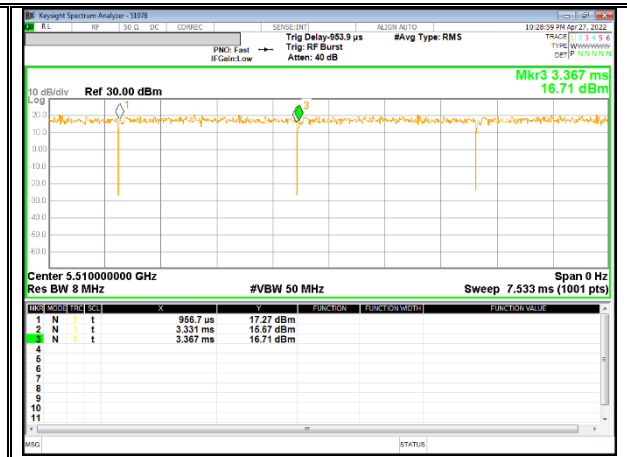
9.2. DUTY CYCLE PLOTS



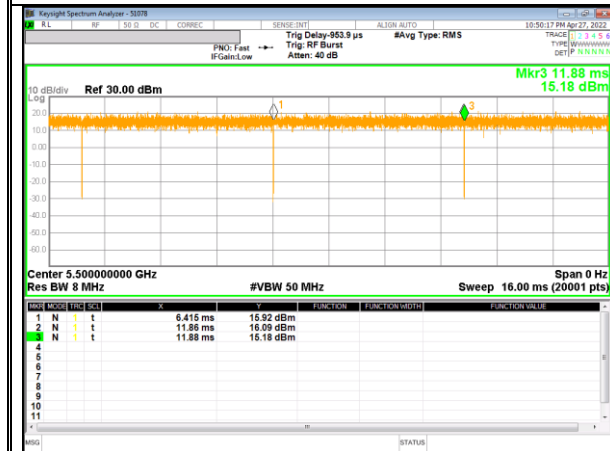




802.11ax HE40 106T MIMO



802.11ax HE40 242T MIMO



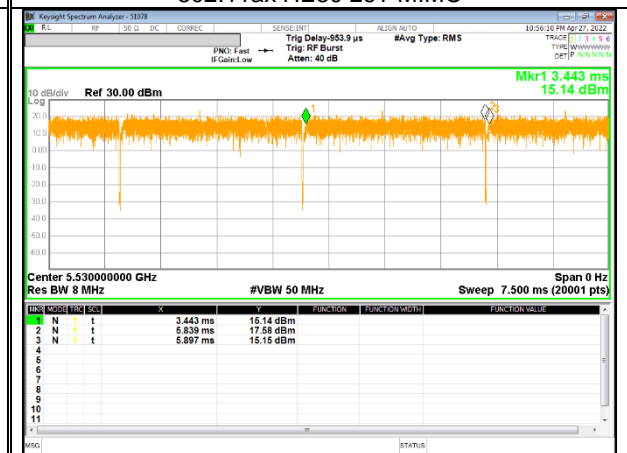
802.11ax HE40 SU MIMO



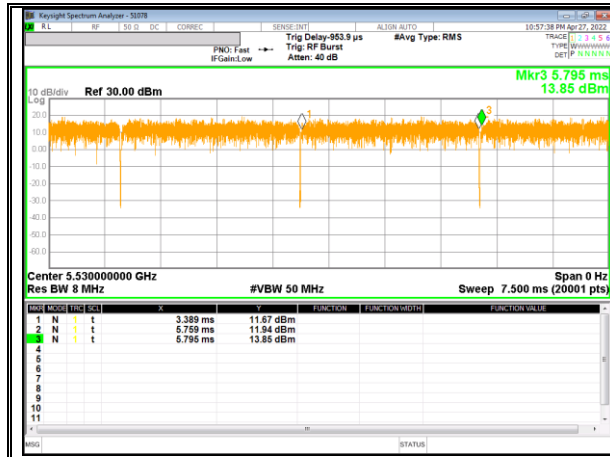
802.11ax HE80 26T MIMO



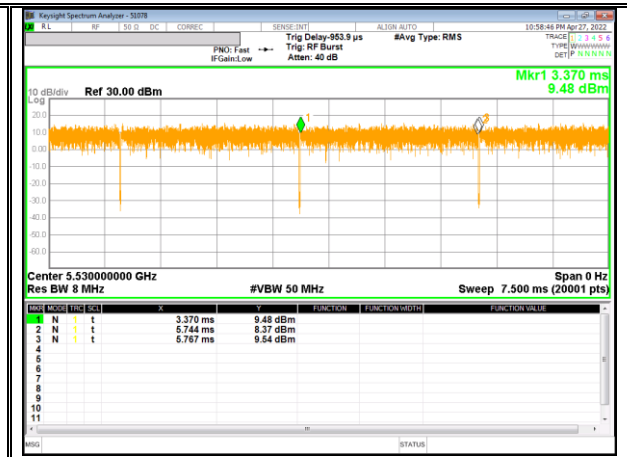
802.11ax HE80 52T MIMO



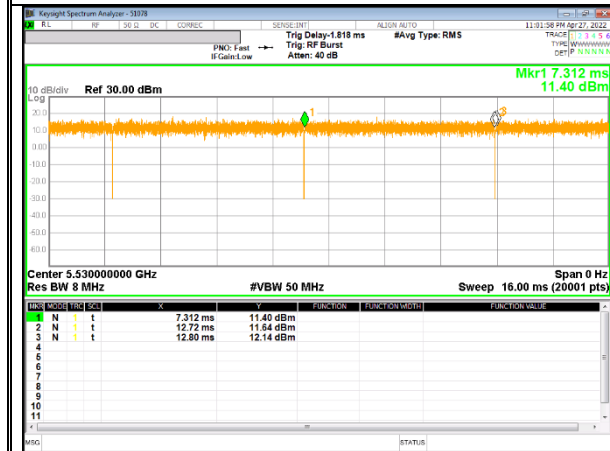
802.11ax HE80 106T MIMO



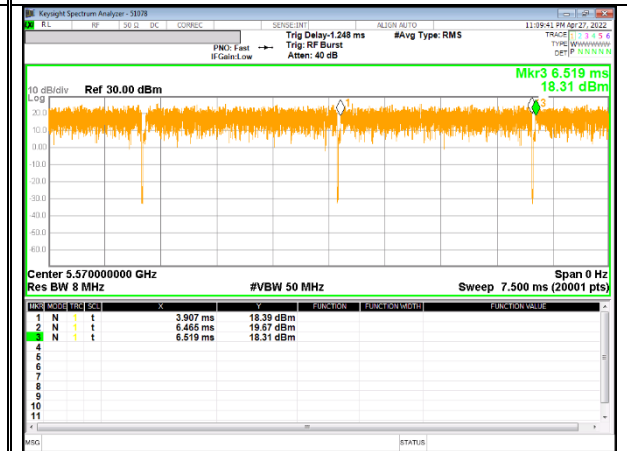
802.11ax HE80 242T MIMO



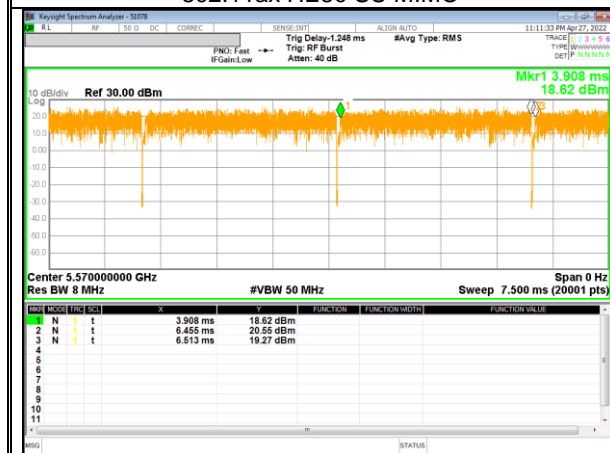
802.11ax HE80 484T MIMO



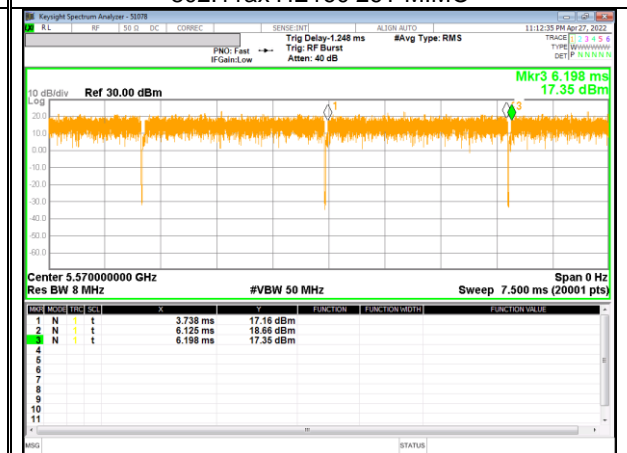
802.11ax HE80 SU MIMO



802.11ax HE160 26T MIMO



802.11ax HE160 52T MIMO



802.11ax HE160 106T MIMO



9.3. 26 dB BANDWIDTH

LIMITS

None; for reporting purposes only.

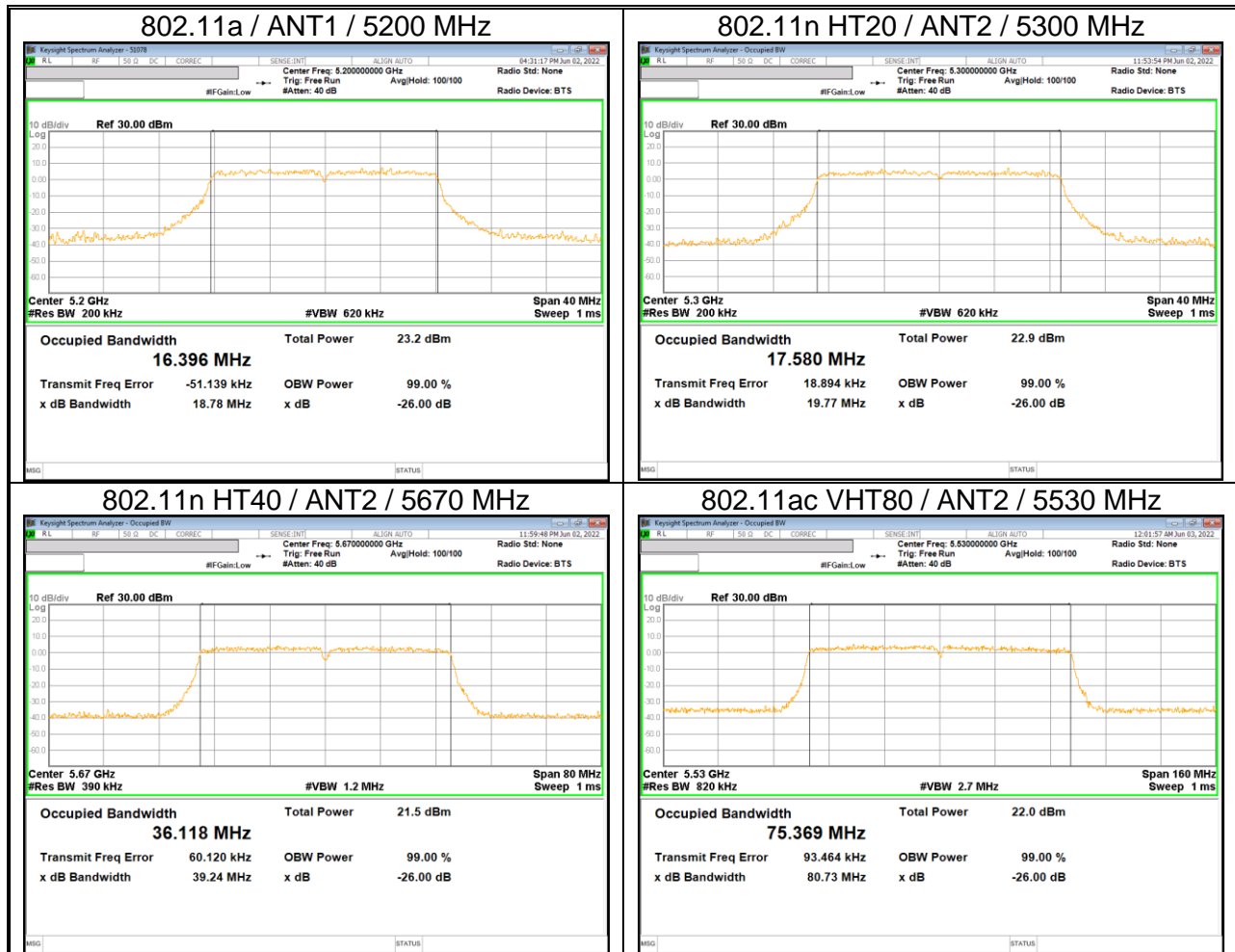
TEST PROCEDURE

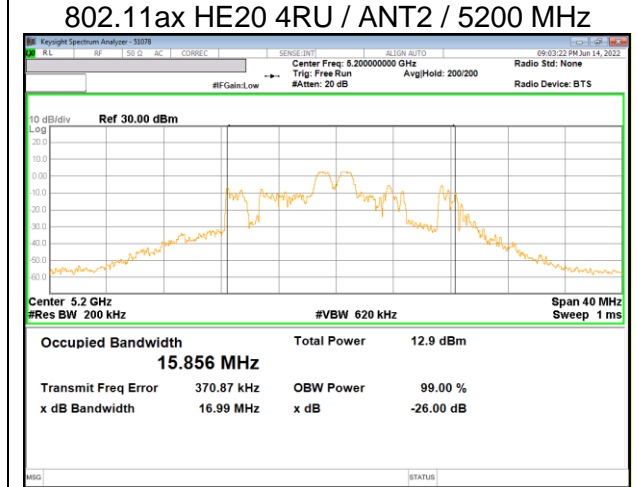
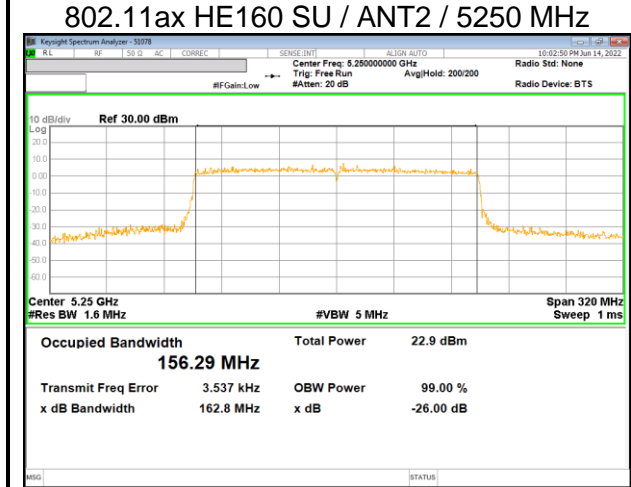
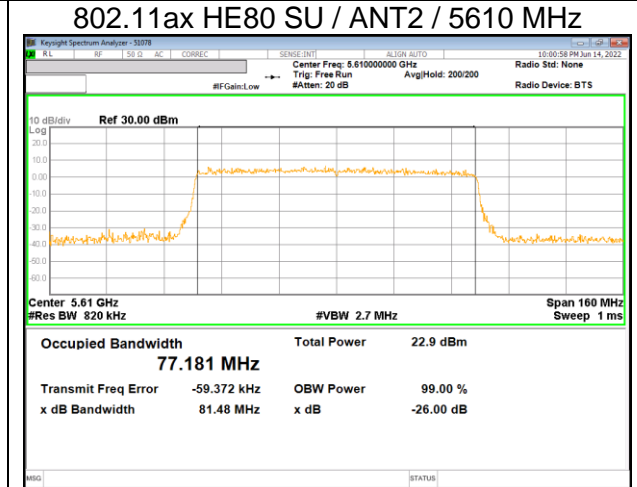
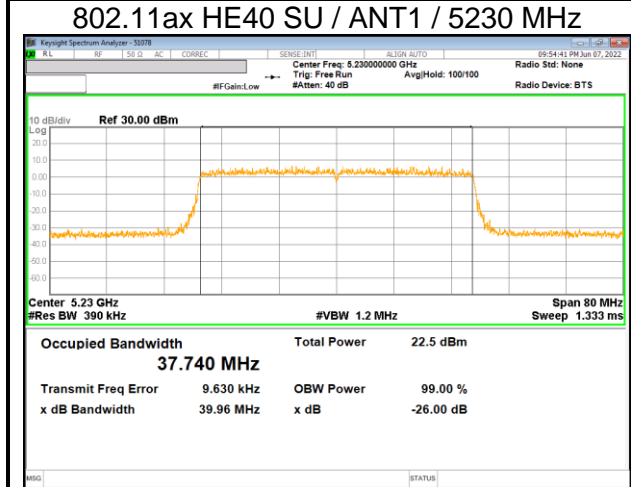
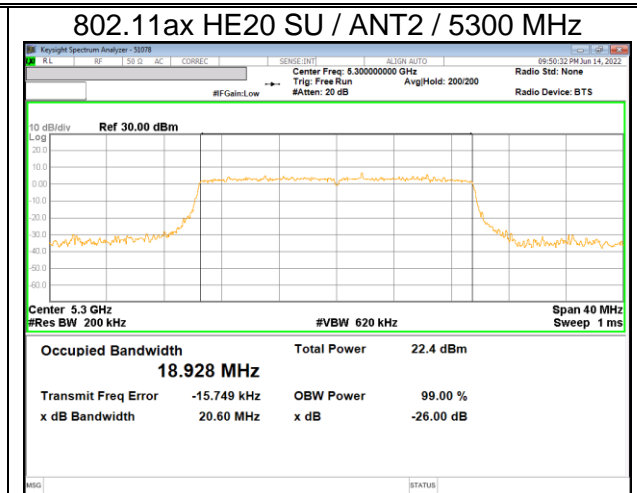
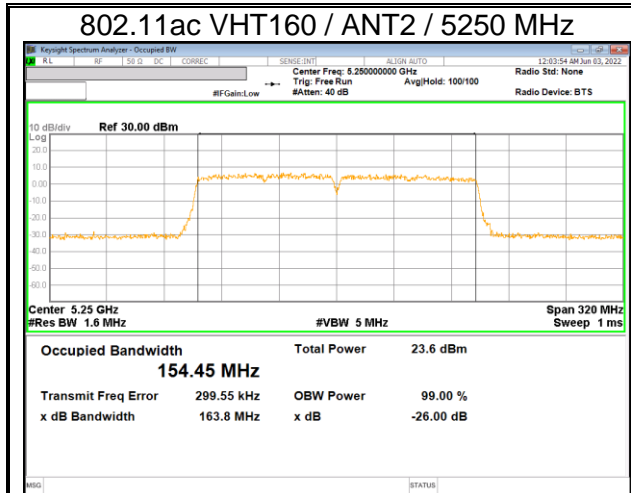
Reference to 789033 D02 General UNII Test Procedures New Rules v02r01: The transmitter output is connected to a spectrum analyzer with the RBW set to approximately 1% of EBW, the VBW > RBW, peak detector and max hold.

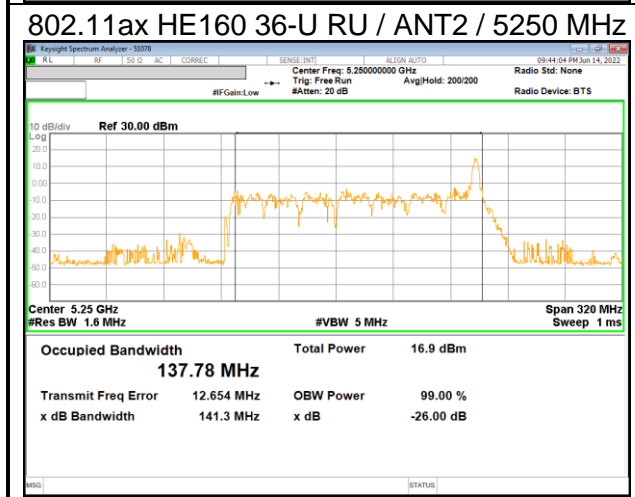
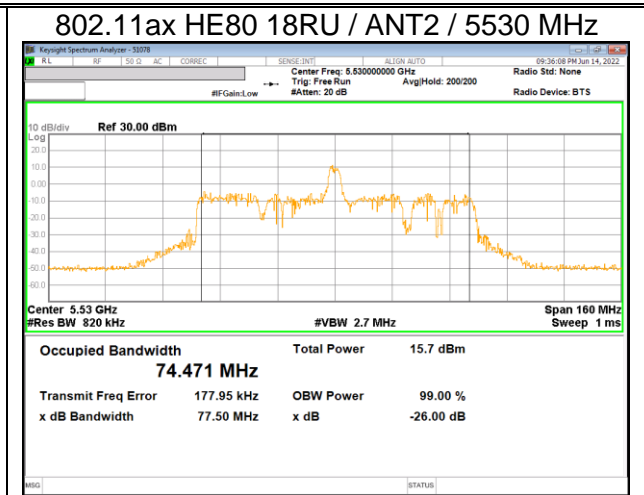
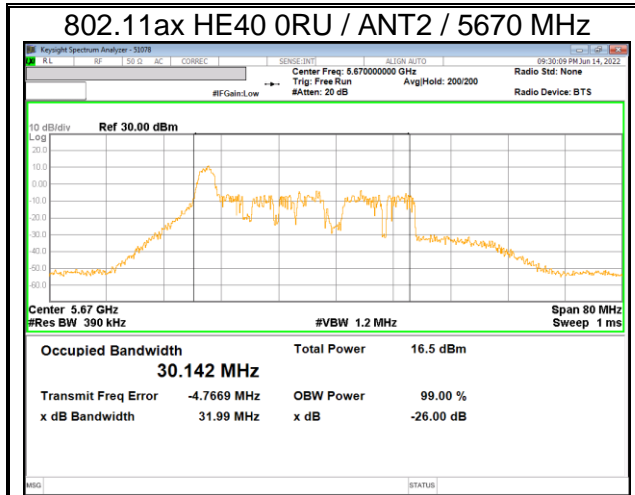
RESULTS

- Please refer to the next page

WORST CASE TEST PLOTS







9.3.1. 802.11a

Band	Channel	Center Freq. [MHz]	26 dB BW [MHz]		Worst	99% BW [MHz]	
			ANT1	ANT2		ANT1	ANT2
UNII-1 ^{Note}	36	5180	22.87	19.15	18.78	16.46	16.40
	40	5200	18.78	18.82		16.40	16.41
	48	5240	19.02	19.00		16.40	16.40
UNII-2A ^{Note}	52	5260	18.95	18.89	18.89	16.39	16.39
	60	5300	18.97	19.05		16.38	16.40
	64	5320	19.37	19.07		16.39	16.40
UNII-2C	100	5500	19.07	19.01	18.81		
	116	5580	18.81	19.24			
	140	5700	19.03	19.04			

Note. As a result of 99% bandwidth test, the bandwidth of UNII-1 does not interfere with UNII-2A.

9.3.2. 802.11n HT20

Band	Channel	Center Freq. [MHz]	26 dB BW [MHz]		Worst	99% BW [MHz]	
			ANT1	ANT2		ANT1	ANT2
UNII-1 ^{Note}	36	5180	20.00	19.99	19.82	17.58	17.56
	40	5200	19.93	19.84		17.57	17.58
	48	5240	19.82	20.04		17.56	17.58
UNII-2A ^{Note}	52	5260	20.03	19.82	19.77	17.57	17.57
	60	5300	20.02	19.77		17.57	17.58
	64	5320	19.96	20.07		17.57	17.57
UNII-2C	100	5500	20.12	20.02	19.91		
	116	5580	20.05	20.00			
	140	5700	19.91	20.01			

Note. As a result of 99% bandwidth test, the bandwidth of UNII-1 does not interfere with UNII-2A.

9.3.3. 802.11n HT40

Band	Channel	Center Freq. [MHz]	26 dB BW [MHz]		Worst	99% BW [MHz]	
			ANT1	ANT2		ANT1	ANT2
UNII-1 ^{Note}	38	5190	39.62	39.55	39.30	36.06	36.08
	46	5230	39.30	39.44		36.04	36.07
UNII-2A ^{Note}	54	5270	39.66	39.35	39.34	36.03	36.05
	62	5310	39.44	39.34		36.06	36.10
UNII-2C	102	5510	39.39	39.40	39.24		
	118	5590	39.38	39.65			
	134	5670	39.63	39.24			

Note. As a result of 99% bandwidth test, the bandwidth of UNII-1 does not interfere with UNII-2A.

9.3.4. 802.11ac VHT80

Band	Channel	Center Freq. [MHz]	26 dB BW [MHz]		Worst	99% BW [MHz]	
			ANT1	ANT2		ANT1	ANT2
UNII-1 ^{Note}	42	5210	81.84	80.92	80.92	75.51	75.42
UNII-2A ^{Note}	58	5290	82.02	80.86	80.86	75.52	75.41
UNII-2C	106	5530	81.62	80.73	80.73		
	122	5610	81.38	80.98			

Note. As a result of 99% bandwidth test, the bandwidth of UNII-1 does not interfere with UNII-2A.

9.3.5. 802.11ac VHT160

Band	Channel	Center Freq. [MHz]	26 dB BW [MHz]		Worst	99% BW [MHz]	
			ANT1	ANT2		ANT1	ANT2
UNII-1&2A	50	5250	164.30	163.80	163.80		
UNII-2C	114	5570	163.90	164.00	163.90		

Note. As a result of 99% bandwidth test, the bandwidth of UNII-1 does not interfere with UNII-2A.

9.3.6. 802.11ax HE20

Band	Channel	Center Freq. [MHz]	26 dB BW [MHz]		Worst	99% BW [MHz](^{Note})	
			ANT1	ANT2		ANT1	ANT2
UNII-1 ^{Note}	36	5180	20.96	22.27	20.60	18.91	18.95
	40	5200	21.07	21.24		18.91	18.91
	48	5240	20.73	20.94		18.91	18.92
UNII-2A ^{Note}	52	5260	20.92	20.94	20.60	18.92	18.95
	60	5300	21.16	20.60		18.92	18.93
	64	5320	20.72	20.98		18.91	18.93
UNII-2C	100	5500	20.99	20.88	20.72		
	116	5580	20.80	20.72			
	140	5700	20.99	21.04			

Note. As a result of 99% bandwidth test, the bandwidth of UNII-1 does not interfere with UNII-2A.

9.3.7. 802.11ax HE40

Band	Channel	Center Freq. [MHz]	26 dB BW [MHz]		Worst	99% BW [MHz](Note)	
			ANT1	ANT2		ANT1	ANT2
UNII-1 ^{Note}	38	5190	40.20	40.03	39.96	37.78	37.78
	46	5230	39.96	40.21		37.74	37.79
UNII-2A ^{Note}	54	5270	40.25	40.29	40.09	37.70	37.79
	62	5310	40.09	40.38		37.71	37.70
UNII-2C	102	5510	40.35	40.18	40.12		
	118	5590	40.32	40.35			
	134	5670	40.12	40.26			

Note. As a result of 99% bandwidth test, the bandwidth of UNII-1 does not interfere with UNII-2A.

9.3.8. 802.11ax HE80

Band	Channel	Center Freq. [MHz]	26 dB BW [MHz]		Worst	99% BW [MHz](Note)	
			ANT1	ANT2		ANT1	ANT2
UNII-1 ^{Note}	42	5210	81.79	81.60	81.60	77.24	77.23
UNII-2A ^{Note}	58	5290	82.25	81.71	81.71	77.27	77.22
UNII-2C	106	5530	81.85	81.75	81.48		
	122	5610	81.96	81.48			

Note. As a result of 99% bandwidth test, the bandwidth of UNII-1 does not interfere with UNII-2A.

9.3.9. 802.11ax HE160

Band	Channel	Center Freq. [MHz]	26 dB BW [MHz]		Worst	99% BW [MHz](Note)	
			ANT1	ANT2		ANT1	ANT2
UNII-1&2A	50	5250	163.80	162.80	162.80		
UNII-2C	114	5570	163.00	163.30	163.00		

Note. As a result of 99% bandwidth test, the bandwidth of UNII-1 does not interfere with UNII-2A.

9.3.10. STRADDLE CHANNEL

Mode	Channel	Center Freq. [MHz]	26 dB BW [MHz]			
			ANT1		ANT2	
			UNII-2C	UNII-3	UNII-2C	UNII-3
802.11a	Straddle	5720	14.60	4.40	14.64	4.36
802.11n HT20	Straddle	5720	15.08	5.04	14.96	4.84
802.11n HT40	Straddle	5710	34.68	4.80	34.64	4.60
802.11ac VHT80	Straddle	5690	75.32	5.44	75.12	5.24
802.11ax HE20(SU)	Straddle	5720	15.65	5.81	15.41	5.25
802.11ax HE40(SU)	Straddle	5710	35.01	5.04	35.10	5.21
802.11ax HE80(SU)	Straddle	5690	75.63	4.95	75.78	5.65

9.3.11. 802.11ax HE20(RU)

Band Mode	Center Freq. [MHz]	Tones	RU offset	26 dB BW [MHz]		99% BW [MHz]	
				ANT1	ANT2	ANT1	ANT2
UNII-1 ^{Note}	5180	26T	0	20.80	20.03	18.47	18.20
			4	18.48	18.36	17.19	16.97
			8	20.28	19.88	17.86	18.19
	5200		0	20.10	19.88	18.46	18.04
			4	18.47	16.99	17.17	15.86
			8	20.32	19.59	18.47	18.23
	5240		0	19.87	19.78	18.07	18.22
			4	18.80	18.12	17.09	17.15
			8	20.27	19.99	18.46	18.09
UNII-2A ^{Note}	5260	26T	0	19.75	20.15	18.06	18.37
			4	18.60	18.37	17.08	16.99
			8	20.38	19.97	18.47	17.96
	5300		0	20.34	20.04	17.69	18.36
			4	18.03	18.31	16.72	17.25
			8	20.29	20.05	20.29	18.42
	5320		0	20.65	20.15	18.21	18.00
			4	18.30	18.27	17.20	16.88
			8	20.09	19.62	18.25	18.21
UNII-2C	5500	26T	0	20.49	20.00		
			4	18.16	18.17		
			8	20.52	19.69		
	5580		0	20.37	20.06		
			4	18.75	17.64		
			8	20.34	19.88		
	5700		0	20.57	19.80		
			4	18.58	17.09		
			8	20.27	19.59		

Note. As a result of 99% bandwidth test, the bandwidth of UNII-1 does not interfere with UNII-2A.

9.3.12. 802.11ax HE40(RU)

Band	Center Freq. [MHz]	Tones	RU offset	26 dB BW [MHz]		99% BW [MHz]	
				ANT1	ANT2	ANT1	ANT2
UNII-1 ^{Note}	5190	26T	0	40.19	39.56	38.20	37.79
			9	38.17	38.01	36.10	36.06
			17	40.05	40.26	37.18	38.15
	5230		0	39.74	39.60	37.59	37.55
			9	36.79	37.94	35.72	35.33
			17	39.57	39.98	37.57	37.40
UNII-2A ^{Note}	5270	26T	0	40.17	39.91	37.86	37.13
			9	38.24	38.06	35.88	36.08
			17	40.04	39.76	38.09	37.75
	5310		0	40.46	39.75	38.25	37.75
			9	38.19	34.26	36.58	31.78
			17	40.22	40.50	38.21	37.30
UNII-2C	5510	26T	0	40.95	38.28		
			9	37.23	37.97		
			17	39.86	39.72		
	5590		0	40.39	39.88		
			9	38.35	37.79		
			17	39.98	39.54		
	5670		0	40.06	31.99		
			9	37.92	34.55		
			17	41.12	40.45		

Note. As a result of 99% bandwidth test, the bandwidth of UNII-1 does not interfere with UNII-2A.

9.3.13. 802.11ax HE80(RU)

Band	Center Freq. [MHz]	Tones	RU offset	26 dB BW [MHz]		99% BW [MHz]	
				ANT1	ANT2	ANT1	ANT2
UNII-1 ^{Note}	5210	26T	0	82.59	80.81	79.04	77.85
			18	77.86	78.07	75.35	74.68
			36	81.68	81.21	79.08	76.77
UNII-2A ^{Note}	5290	26T	0	81.78	81.57	78.79	77.91
			18	77.58	77.97	74.61	74.75
			36	81.45	81.16	78.49	78.20
UNII-2C	5530	26T	0	81.07	79.97		
			18	77.74	77.50		
			36	82.05	81.00		
	5610		0	81.99	79.96		
			18	77.87	77.97		
			36	81.13	81.01		

Note. As a result of 99% bandwidth test, the bandwidth of UNII-1 does not interfere with UNII-2A.

9.3.14. 802.11ax HE160(RU)

Band	Center Freq. [MHz]	Tones	RU offset	26 dB BW [MHz]		99% BW [MHz]	
				ANT1	ANT2	ANT1	ANT2
UNII-1&2A	5250	26T	0 L	165.40	161.50	159.86	156.97
			0 U	157.80	157.80	154.11	152.96
			36 U	163.00	141.30	158.63	137.78
UNII-2C	5570	26T	0 L	164.30	161.00		
			0 U	157.90	156.60		
			36 U	162.00	161.60		

9.3.15. 802.11ax STRADDLE CHANNEL(RU)

Band	Mode	Center Freq. [MHz]	Tones	RU offset	26 dB BW [MHz]			
					ANT1		ANT2	
					UNII-2C	UNII-3	UNII-2C	UNII-3
Straddle Channel	HE20	5720	26T	6	14.17	4.00	12.72	3.51
	HE40	5710		15	33.47	3.84	34.07	3.84
	HE80	5690		34	73.78	3.25	74.09	3.73

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.

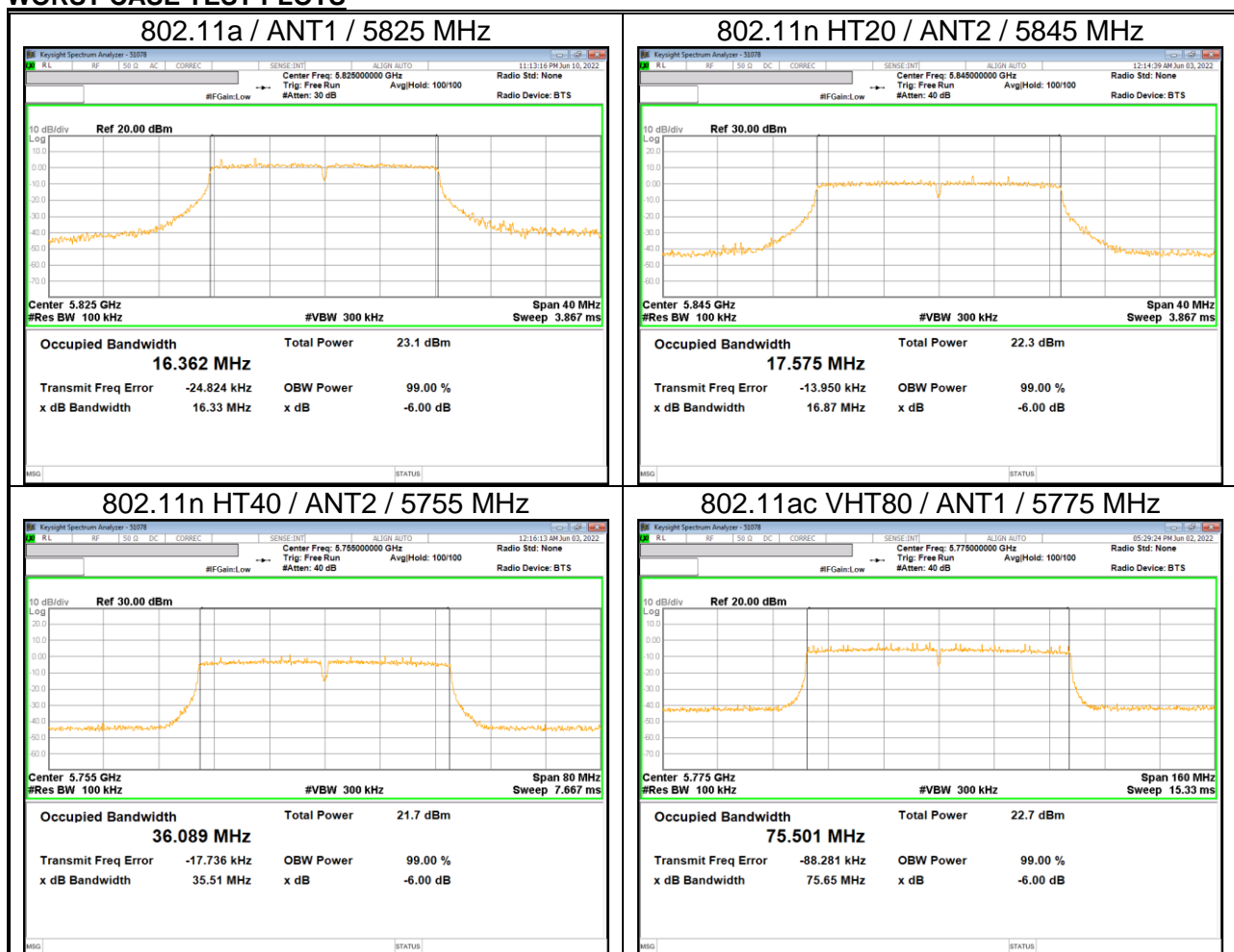
TEST PROCEDURE

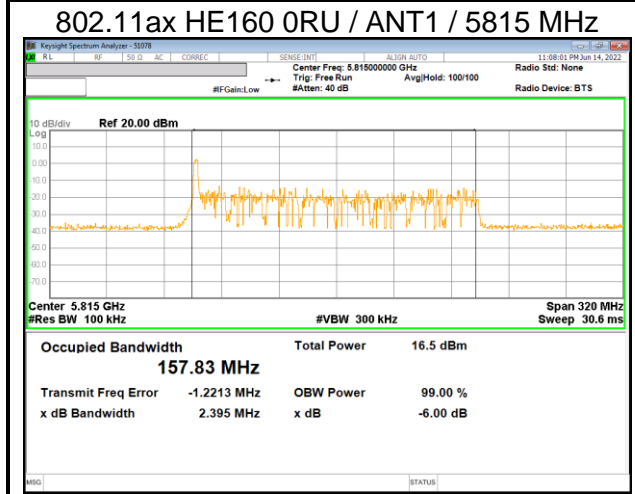
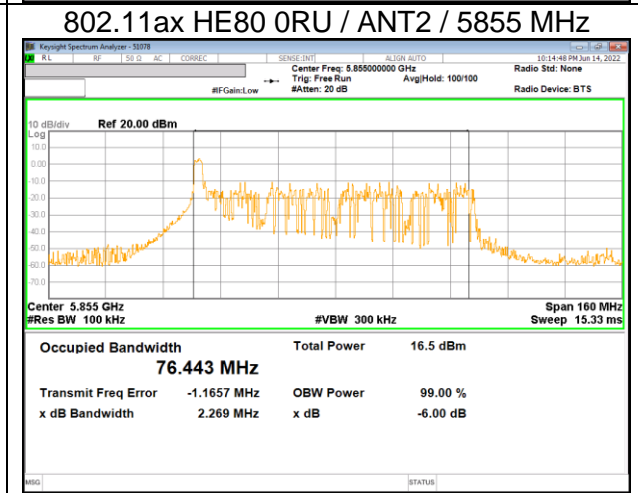
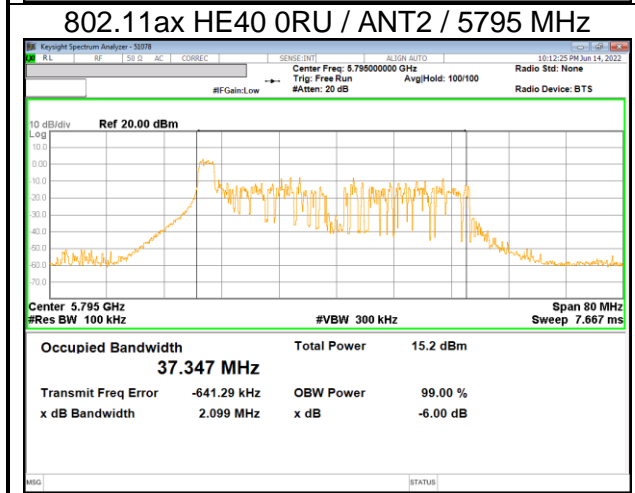
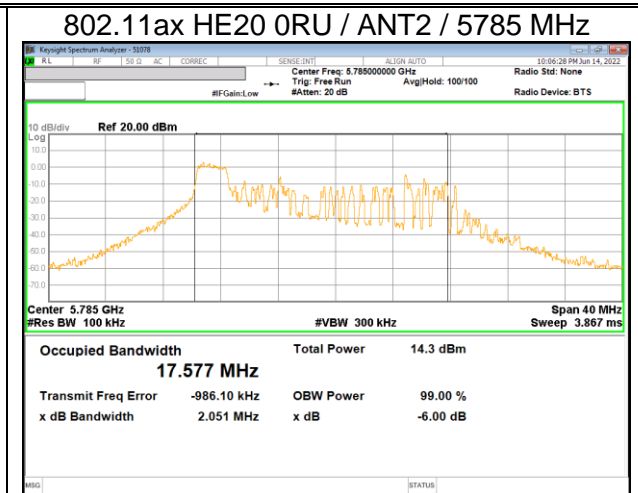
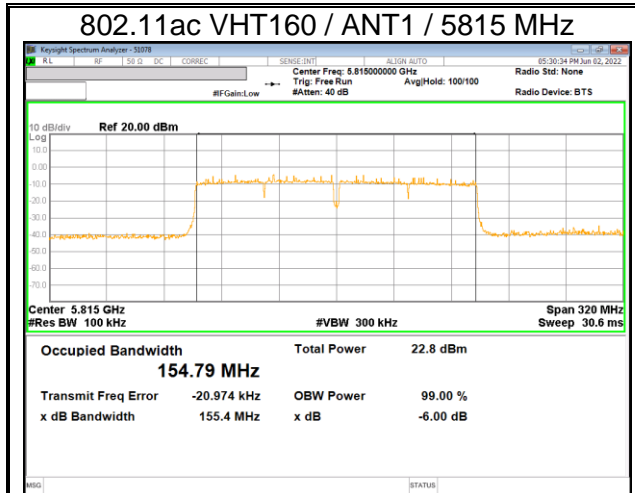
Reference to 789033 D02 General UNII Test Procedures New Rules v02r01: The transmitter output is connected to a spectrum analyzer with the RBW set to 100kHz, the VBW $\geq 3 \times$ RBW, peak detector and max hold.

RESULTS

- Please refer to the next page

WORST CASE TEST PLOTS





10.1.1. UNII-3 & 4 BAND

Mode	Channel	Center Freq. [MHz]	6 dB BW [MHz]		Worst	Minimum Limit [MHz]
			ANT1	ANT2		
802.11a	149	5745	16.40	16.35	16.33	0.5
	157	5785	16.38	16.38		
	165	5825	16.33	16.36		
	169	5845	16.37	16.41		
	173	5865	16.37	16.42		
	177	5885	16.34	16.41		
802.11n HT20	149	5745	17.55	17.59	16.87	
	157	5785	17.31	17.61		
	165	5825	17.34	17.22		
	169	5845	17.58	16.87		
	173	5865	17.62	17.60		
	177	5885	17.59	17.58		
802.11n HT40	151	5755	35.68	35.51	35.51	
	159	5795	35.70	36.37		
	167	5835	35.79	36.06		
	175	5875	36.34	36.35		
802.11ac VHT80	155	5775	75.65	76.25	75.65	
	171	5855	75.83	76.35		
802.11ac VHT160	163	5815	155.40	156.40	155.40	

10.1.2. UNII-3 & 4 BAND(RU)

Mode	Channel	Center Freq. [MHz]	Tones	RU offset	6 dB BW [MHz]		Minimum Limit [MHz]
					ANT1	ANT2	
HE20	149	5745	26T	0	2.09	2.10	0.5
	157	5785			2.07	2.05	
	165	5825			2.15	2.12	
	169	5845			2.10	2.08	
	173	5865			2.06	2.10	
	177	5885			2.10	2.11	
Minimum 6dB Bandwidth					2.05		
HE40	151	5755	26T	0	2.17	2.15	
	159	5795			2.13	2.10	
	167	5835			2.14	2.15	
	175	5875			2.17	2.12	
Minimum 6dB Bandwidth					2.10		
HE80	155	5775	26T	0	2.27	2.28	
	171	5855			2.30	2.27	
Minimum 6dB Bandwidth					2.27		
HE160	163	5815	26T	0	2.40	2.42	
	Minimum 6dB Bandwidth					2.40	

10.2. OUTPUT POWER AND PPSD

LIMITS

FCC §15.407 (a)(1)(iv), (a)(2), (a)(3)(i), (a)(3)(iii)

FCC

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 $11 \text{ dBm} + 10 \log B$, 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 5.725-5.850 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. 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 operating under the control of an indoor access point in the 5.850-5.895 GHz band, the maximum power spectral density must not exceed 14 dBm e.i.r.p. in any 1-megahertz band, and the maximum e.i.r.p. over the frequency band of operation must not exceed 30 dBm. Client devices operating on a channel that spans the 5.725-5.850 GHz and 5.850-5.895 GHz bands must not exceed an e.i.r.p. of 30 dBm.

TEST PROCEDURE

KDB 789033 Method PM is used for output power.

KDB 789033 Method SA-2 is used for PSD. RBW set to 1MHz(500kHz for the band 5.725-5.85 GHz, the VBW >= 3 x RBW, RMS detector and trace averaging).

Straddle Channel(UNII-2C&3)

KDB 789033 Method SA-2 is used for only power of straddle Ch. and PSD. RBW set to 1MHz(500kHz for the band 5.725-5.85 GHz, the VBW >= 3 x RBW, RMS detector and trace averaging). Band power function used for power and peak marker value of the spectrum is used for PSD.

Straddle Channel(UNII-3&4)

KDB 789033 Method PM is used for total power of straddle Ch.

(verification that both limit of UNII-3 and UNII-4 power & e.i.r.p. are satisfied)

KDB 789033 Method SA-2 is used for only PSD of straddle Ch. RBW set to 1MHz(500kHz for the band 5.725-5.85 GHz, the VBW >= 3 x RBW, RMS detector and trace averaging).

Peak marker value of the spectrum is used for PSD. For the band 5.850-5.895 GHz, The correlated gain is added to the result to convert e.i.r.p.

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]	Correlated Chains Directional Gain [dBi]
UNII 1 5150 - 5250	-4.4	-5.9	-2.11
UNII 2A 5250 - 5350	-4.6	-6.1	-2.31
UNII 2C 5470 - 5725	-4.8	-6.0	-2.37
UNII 3 5725 - 5850	-5.0	-6.0	-2.48
UNII 4 5850 - 5925	-5.0	-6.0	-2.48

Note. Since the correlated gain does not exceed 6dBi, bands except for UNII-4 do not consider the antenna gain.

10.2.1. 802.11a MODE

Output Power Results

Band	Channel	Center Freq. [MHz]	Average Power [dBm]		Direct. Gain [dBi]	Corr'd Power [dBm]	Limit [dBm]
			ANT1	ANT2			
UNII-1	36	5180	17.79	17.63		20.72	23.98
	40	5200	17.54	17.26		20.41	
	48	5240	17.40	17.37		20.40	
UNII-2A	52	5260	17.50	17.18		20.35	23.76
	60	5300	16.95	16.42		19.70	
	64	5320	16.67	16.16		19.43	
UNII-2C	100	5500	16.81	15.31		19.13	23.76
	116	5580	17.33	16.76		20.06	
	140	5700	17.36	16.43		19.93	
UNII-3	149	5745	17.58	16.33		20.01	30.00
	157	5785	17.08	16.29		19.71	
	165	5825	17.52	16.58		20.09	
UNII-3&4	169	5845	17.44	16.22		19.88	30.00
		5845	17.44	16.22	-2.48	17.40	30.00 _(e.i.r.p)
UNII-4	173	5865	17.19	16.14	-2.48	17.23	30.00 _(e.i.r.p)
	177	5885	17.48	16.44	-2.48	17.52	

* Calculation of Output Power : Average Power = Meas Power + Duty CF[dB]
 Corr'd Power = Ant1 Average Power + Ant2 Average Power(in case of UNII-4: added directional gain)

PSD Results

Band	Channel	Center Freq. [MHz]	Meas PSD [dBm/MHz]		DCCF.	Direct. Gain [dBi]	Corr'd PSD [dBm]	Limit [dBm/MHz]
			ANT1	ANT2				
UNII-1	36	5180	6.69	6.42	0.17		9.73	11.00
	40	5200	6.42	5.95	0.17		9.37	
	48	5240	5.99	6.10	0.17		9.23	
UNII-2A	52	5260	6.14	5.76	0.17		9.13	11.00
	60	5300	6.47	5.95	0.17		9.40	
	64	5320	6.82	5.83	0.17		9.54	
UNII-2C	100	5500	6.80	5.19	0.17		9.25	11.00
	116	5580	6.23	5.45	0.17		9.03	
	140	5700	6.30	5.16	0.17		8.95	
UNII-3	149	5745	3.17	1.85	0.17		5.74	30.00/500kHz
	157	5785	2.96	1.88	0.17		5.63	
	165	5825	3.09	2.02	0.17		5.77	
UNII-3&4	169	5845	4.03	2.88	0.17		6.67	30.00/500kHz
		5845	6.52	5.00	0.17	-2.48	6.52	14.00 _(e.i.r.p)
UNII-4	173	5865	6.06	4.73	0.17	-2.48	6.14	14.00 _(e.i.r.p)
	177	5885	6.68	5.11	0.17	-2.48	6.66	

* Calculation of PSD: Corr'd PSD = Ant1 PSD + Ant2 PSD + Duty CF [dB] (in case of UNII-4: added directional gain)

10.2.2. 802.11n HT20 MODE

Output Power Results

Band	Channel	Center Freq. [MHz]	Average Power [dBm]		Direct. Gain [dBi]	Corr'd Power [dBm]	Limit [dBm]
			ANT1	ANT2			
UNII-1	36	5180	17.57	17.46		20.53	23.98
	40	5200	17.31	17.11		20.22	
	48	5240	17.14	17.24		20.20	
UNII-2A	52	5260	17.26	17.02		20.15	23.96
	60	5300	17.54	17.02		20.30	
	64	5320	17.64	17.05		20.37	
UNII-2C	100	5500	16.74	15.29		19.09	23.98
	116	5580	17.10	16.60		19.87	
	140	5700	17.00	16.22		19.64	
UNII-3	149	5745	17.92	16.72		20.37	30.00
	157	5785	17.48	16.63		20.09	
	165	5825	17.88	16.77		20.37	
UNII-3&4	169	5845	17.85	16.57		20.27	30.00
		5845	17.85	16.57	-2.48	17.79	30.00 _(e.i.r.p)
UNII-4	173	5865	17.50	16.37	-2.48	17.50	30.00 _(e.i.r.p)
	177	5885	17.72	16.79	-2.48	17.81	

* Calculation of Output Power : Average Power = Meas Power + Duty CF[dB]
 Corr'd Power = Ant1 Average Power + Ant2 Average Power(in case of UNII-4: added directional gain)

PSD Results

Band	Channel	Center Freq. [MHz]	Meas PSD [dBm/MHz]		DCCF.	Direct. Gain [dBi]	Corr'd PSD [dBm]	Limit [dBm/MHz]
			ANT1	ANT2				
UNII-1	36	5180	6.23	5.92	0.00		9.09	11.00
	40	5200	5.92	5.76	0.00		8.85	
	48	5240	5.74	6.03	0.00		8.90	
UNII-2A	52	5260	5.94	5.91	0.00		8.93	11.00
	60	5300	6.28	6.05	0.00		9.18	
	64	5320	6.54	5.85	0.00		9.22	
UNII-2C	100	5500	6.22	4.80	0.00		8.58	11.00
	116	5580	5.99	5.18	0.00		8.61	
	140	5700	6.10	4.85	0.00		8.53	
UNII-3	149	5745	3.63	2.01	0.00		5.90	30.00/500kHz
	157	5785	3.30	2.01	0.00		5.71	
	165	5825	3.33	2.22	0.00		5.82	
UNII-3&4	169	5845	4.54	3.14	0.00		6.91	30.00/500kHz
		5845	6.55	5.59	0.00	-2.48	6.63	14.00 _(e.i.r.p)
UNII-4	173	5865	6.41	5.11	0.00	-2.48	6.34	14.00 _(e.i.r.p)
	177	5885	6.82	5.43	0.00	-2.48	6.71	

* Calculation of PSD: Corr'd PSD = Ant1 PSD + Ant2 PSD + Duty CF [dB] (in case of UNII-4: added directional gain)

10.2.3. 802.11n HT40 MODE

Output Power Results

Band	Channel	Center Freq. [MHz]	Average Power [dBm]		Direct. Gain [dBi]	Corr'd Power [dBm]	Limit [dBm]
			ANT1	ANT2			
UNII-1	38	5190	16.70	16.40		19.56	23.98
	46	5230	16.31	16.10		19.22	
UNII-2A	54	5270	16.10	15.96		19.04	23.98
	62	5310	16.56	16.06		19.33	
UNII-2C	102	5510	16.59	15.12		18.93	23.98
	118	5590	16.06	15.77		18.93	
	134	5670	16.17	15.28		18.76	
UNII-3	151	5755	16.88	15.56		19.28	30.00
	159	5795	16.50	15.60		19.08	
UNII-3&4	167	5835	16.83	15.85		19.38	30.00
		5835	16.83	15.85	-2.48	16.90	30.00 _(e.i.r.p)
UNII-4	175	5875	16.55	15.64	-2.48	16.65	30.00 _(e.i.r.p)

* Calculation of Output Power : Average Power = Meas Power + Duty CF[dB]
 Corr'd Power = Ant1 Average Power + Ant2 Average Power(in case of UNII-4: added directional gain)

PSD Results

Band	Channel	Center Freq. [MHz]	Meas PSD [dBm/MHz]		DCCF.	Direct. Gain [dBi]	Corr'd PSD [dBm]	Limit [dBm/MHz]
			ANT1	ANT2				
UNII-1	38	5190	2.30	2.06	0.00		5.19	11.00
	46	5230	1.95	1.89	0.00		4.93	
UNII-2A	54	5270	1.85	1.61	0.00		4.74	11.00
	62	5310	2.15	1.66	0.00		4.92	
UNII-2C	102	5510	2.16	0.65	0.00		4.48	11.00
	118	5590	1.74	1.28	0.00		4.53	
	134	5670	2.15	0.73	0.00		4.51	
UNII-3	151	5755	-0.62	-2.19	0.00		1.68	30.00/500kHz
	159	5795	-1.09	-2.03	0.00		1.47	
UNII-3&4	167	5835	0.22	-0.76	0.00		2.77	30.00/500kHz
		5835	1.96	1.03	0.00	-2.48	2.05	14.00 _(e.i.r.p)
UNII-4	175	5875	2.30	1.21	0.00	-2.48	2.32	14.00 _(e.i.r.p)

* Calculation of PSD: Corr'd PSD = Ant1 PSD + Ant2 PSD + Duty CF [dB] (in case of UNII-4: added directional gain)

10.2.4. 802.11ac VHT80 MODE

Output Power Results

Band	Channel	Center Freq. [MHz]	Average Power [dBm]		Direct. Gain [dBi]	Corr'd Power [dBm]	Limit [dBm]
			ANT1	ANT2			
UNII-1	42	5210	15.72	15.17		18.46	23.98
UNII-2A	58	5290	15.27	15.16		18.23	23.98
UNII-2C	106	5530	15.38	14.63		18.03	23.98
	122	5610	15.46	14.58		18.05	
UNII-3	155	5775	15.61	14.32		18.02	30.00
UNII-3&4	171	5855	15.74	14.24		18.06	30.00
		5855	15.74	14.24	-2.48	15.58	30.00 _(e.i.r.p)

* Calculation of Output Power : Average Power = Meas Power + Duty CF[dB]
 Corr'd Power = Ant1 Average Power + Ant2 Average Power(in case of UNII-4: added directional gain)

PSD Results

Band	Channel	Center Freq. [MHz]	Meas PSD [dBm/MHz]		DCCF.	Direct. Gain [dBi]	Corr'd PSD [dBm]	Limit [dBm/MHz]
			ANT1	ANT2				
UNII-1	42	5210	-1.83	-2.43	0.26		1.15	11.00
UNII-2A	58	5290	-2.46	-2.61	0.26		0.74	11.00
UNII-2C	106	5530	-2.20	-2.98	0.26		0.70	11.00
	122	5610	-1.91	-3.12	0.26		0.80	
UNII-3	155	5775	-5.33	-6.52	0.26		-2.61	30.00 _{/500kHz}
UNII-3&4	171	5855	-3.96	-5.61	0.26		-1.44	30.00 _{/500kHz}
		5855	-0.80	-2.80	0.26	-2.48	-0.89	14.00 _(e.i.r.p)

* Calculation of PSD: Corr'd PSD = Ant1 PSD + Ant2 PSD + Duty CF [dB] (in case of UNII-4: added directional gain)

10.2.5. 802.11ac VHT160 MODE

Output Power Results

Band	Channel	Center Freq. [MHz]	Average Power [dBm]		Direct. Gain [dBi]	Corr'd Power [dBm]	Limit [dBm]
			ANT1	ANT2			
UNII-1&2A	50	5250	15.61	15.48		18.56	23.98
UNII-2C	114	5570	15.34	14.71		18.05	23.98
UNII-3&4	163	5815	15.52	14.90		18.23	30.00
	163	5815	15.52	14.90	-2.48	15.75	30.00 _(e.i.r.p.)

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

PSD Results

Band	Channel	Center Freq. [MHz]	Meas PSD [dBm/MHz]		DCCF.	Direct. Gain [dBi]	Corr'd PSD [dBm]	Limit [dBm/MHz]
			ANT1	ANT2				
UNII-1&2A	50	5250	-4.72	-4.77	0.12		-1.62	11.00
UNII-2C	114	5570	-4.85	-5.46	0.12		-2.01	11.00
UNII-3&4	163	5815	-7.16	-7.89	0.12		-4.38	30.00/500kHz
	163	5815	-5.23	-6.20	0.12	-2.48	-5.04	14.00 _(e.i.r.p.)

* Calculation of PSD: Corr'd PSD = Ant1 PSD + Ant2 PSD + Duty CF [dB]

10.2.6. STRADDLE CHANNEL

Output Power Results

Mode	Band	Center Freq. [MHz]	Meas Power [dBm]		DCCF.	Corr'd Power [dBm]	Limit [dBm]
			ANT1	ANT2			
802.11a	UNII-2C	5720	16.46	15.31	0.17	19.10	22.64
	UNII-3		9.92	8.67	0.17	12.52	30.00
802.11n HT20	UNII-2C	5720	16.30	15.19	0.00	18.79	22.78
	UNII-3		10.21	9.03	0.00	12.67	30.00
802.11n HT40	UNII-2C	5710	15.95	14.90	0.00	18.47	23.98
	UNII-3		5.00	3.75	0.00	7.43	30.00
802.11ac VHT80	UNII-2C	5690	15.13	13.88	0.26	17.82	23.98
	UNII-3		0.29	-1.23	0.26	2.87	30.00

* Calculation of Output Power : Corr'd Power = Ant1 meas. Power + Ant2 meas. Power + Duty CF [dB]

PSD Results

Mode	Band	Center Freq. [MHz]	Meas PSD [dBm/MHz]		DCCF.	Corr'd PSD [dBm]	Limit [dBm/MHz]
			ANT1	ANT2			
802.11a	UNII-2C	5720	7.05	5.95	0.17	9.71	11.00
	UNII-3		3.39	2.37	0.17	6.09	30.00/500kHz
802.11n HT20	UNII-2C	5720	6.82	5.82	0.00	9.36	11.00
	UNII-3		2.97	2.48	0.00	5.74	30.00/500kHz
802.11n HT40	UNII-2C	5710	2.46	1.87	0.00	5.18	11.00
	UNII-3		-1.72	-2.77	0.00	0.80	30.00/500kHz
802.11ac VHT80	UNII-2C	5690	-1.63	-2.53	0.26	1.22	11.00
	UNII-3		-6.72	-7.99	0.26	-4.04	30.00/500kHz

* Calculation of PSD: Corr'd PSD = Ant1 PSD + Ant2 PSD + Duty CF [dB]

10.2.7. 802.11ax HE20 MODE

Output Power Results

Band	Channel	Center Freq. [MHz]	Tones	RU offset	Average Power [dBm]		Corr'd Power [dBm]	Limit [dBm]
					ANT1	ANT2		
UNII-1	36	5180	26T	0	8.92	8.32	11.64	23.98
				4	8.35	7.73	11.06	
				8	8.65	8.08	11.38	
			52T	37	11.61	11.51	14.57	
				38	11.36	11.21	14.30	
				40	11.34	11.28	14.32	
			106T	53	14.43	14.01	17.23	
				54	14.85	14.47	17.67	
			SU	-	16.18	16.65	19.43	
	40	5200	26T	0	8.40	7.66	11.06	
				4	8.37	7.73	11.07	
				8	8.73	7.99	11.39	
			52T	37	11.85	11.45	14.66	
				38	11.58	11.17	14.39	
				40	11.66	11.25	14.47	
			106T	53	14.35	13.93	17.16	
				54	14.88	14.39	17.65	
			SU	-	16.32	16.28	19.31	
	48	5240	26T	0	8.71	8.39	11.56	
				4	8.14	7.81	10.99	
				8	8.48	8.15	11.33	
			52T	37	11.69	11.60	14.66	
				38	11.39	11.28	14.35	
				40	11.45	11.34	14.41	
			106T	53	14.70	14.34	17.53	
				54	14.51	14.18	17.36	
			SU	-	16.24	16.61	19.44	

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

Band	Channel	Center Freq. [MHz]	Tones	RU offset	Average Power [dBm]		Corr'd Power [dBm]	Limit [dBm]
					ANT1	ANT2		
UNII-2A	52	5260	26T	0	8.15	9.15	11.69	23.56
				4	7.64	8.58	11.15	
				8	7.97	8.89	11.46	
			52T	37	10.99	11.57	14.30	
				38	10.53	11.26	13.92	
				40	10.82	11.35	14.10	
			106T	53	13.42	14.46	16.98	
				54	13.21	14.31	16.81	
			SU	-	15.33	16.75	19.11	
	60	5300	26T	0	8.23	8.49	11.37	
				4	7.88	8.55	11.24	
				8	8.24	8.88	11.58	
			52T	37	10.65	11.52	14.12	
				38	10.29	11.24	13.80	
				40	10.42	11.31	13.90	
			106T	53	13.83	14.49	17.18	
				54	13.67	14.33	17.02	
			SU	-	15.91	16.74	19.36	
	64	5320	26T	0	8.24	8.74	11.51	
				4	8.01	8.73	11.40	
				8	8.37	9.05	11.73	
			52T	37	10.66	11.65	14.19	
				38	10.41	11.39	13.94	
				40	10.51	11.44	14.01	
			106T	53	13.98	14.50	17.26	
				54	13.84	14.31	17.09	
			SU	-	16.28	16.82	19.57	

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

Band	Channel	Center Freq. [MHz]	Tones	RU offset	Average Power [dBm]		Corr'd Power [dBm]	Limit [dBm]
					ANT1	ANT2		
UNII-2C	100	5500	26T	0	8.80	8.42	11.62	23.33
				4	8.82	8.47	11.66	
				8	8.56	8.10	11.35	
			52T	37	11.70	11.50	14.61	
				38	11.41	11.18	14.31	
				40	11.48	11.25	14.38	
			106T	53	14.83	13.94	17.42	
				54	14.69	13.80	17.28	
			SU	-	16.61	15.87	19.27	
	116	5580	26T	0	8.53	8.57	11.56	
				4	8.64	8.56	11.61	
				8	8.94	8.85	11.91	
			52T	37	10.94	11.34	14.15	
				38	11.25	11.73	14.51	
				40	11.35	11.75	14.56	
			106T	53	14.41	14.53	17.48	
				54	14.25	14.36	17.32	
			SU	-	16.23	15.90	19.08	
	140	5700	26T	0	8.91	8.13	11.55	
				4	9.00	8.00	11.54	
				8	8.66	7.81	11.27	
			52T	37	11.91	11.11	14.54	
				38	11.64	10.83	14.26	
				40	11.71	10.85	14.31	
			106T	53	14.45	14.11	17.29	
				54	14.61	14.35	17.49	
			SU	-	16.84	16.34	19.61	

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

Band	Channel	Center Freq. [MHz]	Tones	RU offset	Average Power [dBm]		Corr'd Power [dBm]	Limit [dBm]
					ANT1	ANT2		
UNII-3	149	5745	26T	0	8.54	8.31	11.44	30.00
				4	8.61	8.38	11.51	
				8	8.91	8.66	11.80	
			52T	37	11.14	11.78	14.48	
				38	10.84	11.48	14.18	
				40	10.90	11.50	14.22	
			106T	53	14.79	14.13	17.48	
				54	14.65	13.91	17.31	
			SU	-	16.75	15.61	19.23	
	157	5785	26T	0	8.63	8.09	11.38	
				4	8.66	8.04	11.37	
				8	9.04	8.33	11.71	
			52T	37	11.62	11.39	14.52	
				38	11.31	11.08	14.21	
				40	11.38	11.09	14.25	
			106T	53	14.79	14.04	17.44	
				54	14.64	13.91	17.30	
			SU	-	16.39	15.68	19.06	
	165	5825	26T	0	8.97	8.62	11.81	
				4	8.74	8.41	11.59	
				8	8.76	8.26	11.53	
			52T	37	10.43	10.57	13.51	
				38	10.15	10.26	13.22	
				40	10.22	10.24	13.24	
106T			53	14.52	14.19	17.37		
			54	14.79	14.18	17.51		
SU			-	16.71	15.95	19.36		

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

Band	Channel	Center Freq. [MHz]	Tones	RU offset	Average Power [dBm]		Direct. Gain [dBi]	Corr'd Power [dBm]	Limit [dBm]
					ANT1	ANT2			
UNII-3&4	169 Overlap	5845	26T	0	8.34	9.12		11.76	30.00 or 30.00 e.i.r.p. ^{Note}
				4	7.49	8.88		11.25	
				8	7.88	9.18		11.59	
			52T	37	11.16	11.02		14.10	
				38	11.31	11.23		14.28	
				40	11.27	11.27		14.28	
			106T	53	13.93	14.36		17.16	
				54	13.75	14.31		17.05	
			SU	-	15.96	16.57		19.29	
			UNII-4	173	5865	26T	0	8.85	
4	8.32	9.28					-2.48	9.36	
8	8.66	9.60					-2.48	9.69	
52T	37	11.14				11.49	-2.48	11.85	
	38	10.85				11.20	-2.48	11.56	
	40	10.99				11.24	-2.48	11.65	
106T	53	13.29				14.32	-2.48	14.37	
	54	13.14				14.10	-2.48	14.18	
SU	-	15.71				16.35	-2.48	16.57	
177	5885	26T				0	8.20	9.41	-2.48
				4	7.36	9.20	-2.48	8.91	
				8	7.99	9.10	-2.48	9.11	
		52T		37	10.55	11.19	-2.48	11.41	
				38	10.97	11.58	-2.48	11.82	
				40	11.09	11.59	-2.48	11.88	
		106T		53	13.11	14.30	-2.48	14.28	
				54	12.96	14.13	-2.48	14.11	
		SU		-	15.51	16.41	-2.48	16.51	

* Calculation of Output Power : Average Power = Meas Power + Duty CF[dB]
 Corr'd Power = Ant1 Average Power + Ant2 Average Power(in case of UNII-4: added directional gain)

Note. Since the correrated antenna gain is less than 0 dBi, it satisfies both the limits of UNII-3 and UNII-4.

PSD Results

Band	Channel	Center Freq. [MHz]	Tones	RU offset	Meas PSD [dBm/MHz]		Corr'd PSD [dBm/MHz]	PSD Limit [dBm/MHz]
					ANT1	ANT2		
UNII-1	36	5180	26T	0	5.85	5.21	8.55	11.00
				4	4.51	3.28	6.95	
				8	6.00	4.79	8.45	
			SU	-	4.91	4.47	7.70	
	40	5200	26T	0	5.17	4.34	7.78	
				4	4.24	3.24	6.78	
				8	5.66	4.60	8.17	
			SU	-	4.45	4.24	7.36	
	48	5240	26T	0	5.82	4.97	8.43	
				4	4.52	3.17	6.91	
				8	5.34	4.52	7.96	
			SU	-	4.82	4.37	7.61	
UNII-2A	52	5260	26T	0	6.19	5.65	8.94	11.00
				4	4.66	4.10	7.40	
				8	5.77	5.90	8.84	
			SU	-	4.97	4.58	7.79	
	60	5300	26T	0	6.36	5.00	8.74	
				4	4.71	4.31	7.52	
				8	6.54	5.86	9.22	
			SU	-	5.27	4.73	8.02	
	64	5320	26T	0	6.38	5.45	8.95	
				4	4.94	4.32	7.65	
				8	6.06	5.37	8.74	
			SU	-	5.48	4.84	8.19	
UNII-2C	100	5500	26T	0	5.95	5.36	8.67	11.00
				4	5.13	4.31	7.75	
				8	6.82	4.96	9.00	
			SU	-	5.30	4.08	7.74	
	116	5580	26T	0	6.11	5.49	8.82	
				4	4.90	4.59	7.76	
				8	6.22	6.12	9.18	
			SU	-	5.00	4.00	7.53	
	140	5700	26T	0	6.16	4.64	8.47	
				4	5.20	3.69	7.52	
				8	5.55	4.50	8.07	
			SU	-	5.24	4.14	7.73	

* Calculation of PSD: Corr'd PSD = Ant1 PSD + Ant2 PSD + Duty CF [dB]

Band	Channel	Center Freq. [MHz]	Tones	RU offset	Meas PSD [dBm]		Direct. Gain [dBi]	Corr'd PSD [dBm]	PSD Limit [dBm]	
					ANT1	ANT2				
UNII-3	149	5745	26T	0	2.96	2.57		5.78	30.00 /500kHz	
				4	3.05	2.40		5.75		
				8	3.11	2.91		6.02		
			SU	-	2.26	0.63		4.53		
	157	5785	26T	0	2.97	2.56		5.78		
				4	3.09	1.84		5.52		
				8	3.55	2.42		6.03		
			SU	-	2.11	1.11		4.65		
	165	5825	26T	0	3.18	2.76		5.98		
				4	2.84	2.58		5.72		
				8	3.20	2.20		5.74		
			SU	-	2.18	1.08		4.67		
UNII-3&4	169	5845	26T	6(L)	4.33	3.95		7.15		
				6(U)	5.35	5.22	-2.48	5.82		
			SU(L)	-	4.06	2.49		6.36		
			SU(U)	-	6.12	4.38	-2.48	5.86		
UNII-4	173	5865	26T	0	8.45	7.60	-2.48	8.58		
				4	6.66	5.09	-2.48	6.48		
				8	8.32	5.62	-2.48	7.70		
			SU	-	6.75	5.02	-2.48	6.50		
	177	5885	26T	0	7.49	6.70	-2.48	7.64		
				4	5.25	4.57	-2.48	5.45		
				8	7.72	5.35	-2.48	7.22		
			SU	-	6.34	4.86	-2.48	6.19		

* Calculation of PSD: Corr'd PSD = Ant1 PSD + Ant2 PSD + Duty CF [dB] (in case of UNII-4: added directional gain)

10.2.8. 802.11ax HE40 MODE

Output Power Results

Band	Channel	Center Freq. [MHz]	Tones	RU offset	Average Power [dBm]		Corr'd Power [dBm]	Limit [dBm]
					ANT1	ANT2		
UNII-1	38	5190	26T	0	8.15	8.98	11.60	23.98
				9	7.71	8.49	11.13	
				17	7.84	8.47	11.18	
			52T	37	10.66	11.79	14.27	
				41	10.31	11.24	13.81	
				44	10.35	11.27	13.84	
			106T	53	13.95	14.82	17.42	
				54	13.74	14.51	17.15	
				56	13.68	14.36	17.04	
			242T	61	15.03	16.26	18.70	
				62	15.29	16.65	19.03	
			SU	-	15.16	16.53	18.91	
	46	5230	26T	0	8.21	8.95	11.61	
				9	7.83	8.44	11.16	
				17	7.95	8.42	11.20	
			52T	37	10.74	11.80	14.31	
				41	10.32	11.30	13.85	
				44	10.37	11.33	13.89	
			106T	53	13.73	14.63	17.21	
				54	13.47	14.34	16.94	
				56	13.41	14.22	16.84	
			242T	61	15.22	16.61	18.98	
				62	15.04	16.37	18.77	
			SU	-	15.35	16.61	19.04	

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

Band	Channel	Center Freq. [MHz]	Tones	RU offset	Average Power [dBm]		Corr'd Power [dBm]	Limit [dBm]
					ANT1	ANT2		
UNII-2A	54	5270	26T	0	7.95	8.59	11.29	23.98
				9	7.69	8.65	11.21	
				17	7.75	8.68	11.25	
			52T	37	10.51	11.78	14.20	
				41	10.06	11.31	13.74	
				44	10.12	11.30	13.76	
			106T	53	13.57	14.71	17.19	
				54	13.29	14.38	16.88	
				56	13.26	14.23	16.78	
			242T	61	15.24	16.47	18.91	
				62	15.56	16.77	19.22	
			SU	-	15.41	16.66	19.09	
	62	5310	26T	0	8.31	8.49	11.41	
				9	7.96	8.63	11.32	
				17	8.01	8.61	11.33	
			52T	37	10.83	11.74	14.32	
				41	10.41	11.24	13.86	
				44	10.45	11.24	13.87	
			106T	53	14.07	14.69	17.40	
				54	14.06	14.78	17.45	
				56	14.01	14.64	17.35	
			242T	61	15.84	16.58	19.24	
				62	16.08	16.72	19.42	
			SU	-	15.95	16.53	19.26	

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

Band	Channel	Center Freq. [MHz]	Tones	RU offset	Average Power [dBm]		Corr'd Power [dBm]	Limit [dBm]
					ANT1	ANT2		
UNII-2C	102	5510	26T	0	8.80	8.42	11.62	23.98
				9	8.86	8.48	11.68	
				17	8.90	8.42	11.68	
			52T	37	11.40	11.01	14.22	
				41	11.43	11.18	14.32	
				44	11.41	11.13	14.28	
			106T	53	14.52	13.83	17.20	
				54	14.75	13.84	17.33	
				56	14.64	13.65	17.18	
	242T	61	16.52	15.64	19.11			
		62	16.71	15.88	19.33			
	SU	-	16.60	15.81	19.23			
	118	5590	26T	0	8.64	8.69	11.68	
				9	8.74	8.62	11.69	
				17	8.73	8.57	11.66	
			52T	37	11.16	11.61	14.40	
				41	11.22	11.66	14.46	
				44	11.30	11.63	14.48	
			106T	53	14.62	14.77	17.71	
				54	14.31	14.41	17.37	
				56	14.15	14.20	17.19	
	242T	61	16.11	16.24	19.19			
		62	15.79	15.88	18.85			
	SU	-	16.79	16.54	19.68			
	134	5670	26T	0	8.94	9.00	11.98	
				9	8.41	8.39	11.41	
				17	8.41	8.38	11.41	
52T			37	11.10	11.92	14.54		
			41	10.60	11.35	14.00		
			44	10.62	11.32	13.99		
106T			53	14.70	14.28	17.51		
			54	14.65	14.29	17.48		
			56	14.52	14.09	17.32		
242T	61	16.72	16.18	19.47				
	62	16.44	15.82	19.15				
SU	-	16.79	16.17	19.50				

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

Band	Channel	Center Freq. [MHz]	Tones	RU offset	Average Power [dBm]		Corr'd Power [dBm]	Limit [dBm]
					ANT1	ANT2		
UNII-3	151	5755	26T	0	8.57	8.29	11.44	30.00
				9	8.63	8.36	11.51	
				17	8.70	8.31	11.52	
			52T	37	10.75	11.37	14.08	
				41	10.88	11.40	14.16	
				44	10.87	11.36	14.13	
			106T	53	14.51	13.72	17.14	
				54	14.70	13.96	17.36	
				56	14.58	13.75	17.20	
			242T	61	16.59	15.80	19.22	
				62	16.31	15.41	18.89	
			SU	-	16.66	15.58	19.16	
	159	5795	26T	0	8.62	8.09	11.37	
				9	8.78	8.02	11.43	
				17	8.81	7.98	11.43	
			52T	37	11.83	11.63	14.74	
				41	11.37	11.03	14.21	
				44	11.37	10.95	14.18	
			106T	53	14.50	14.01	17.27	
				54	14.69	13.90	17.32	
				56	14.57	13.70	17.17	
			242T	61	16.64	16.07	19.37	
				62	16.35	15.71	19.05	
			SU	-	16.75	16.18	19.48	

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

Band	Channel	Center Freq. [MHz]	Tones	RU offset	Average Power [dBm]		Direct. Gain [dBi]	Corr'd Power [dBm]	Limit [dBm]
					ANT1	ANT2			
UNII-3&4	167 Overlap	5835	26T	0	7.88	9.52		11.79	30.00 or 30.00 e.i.r.p ^{Not e}
				9	7.17	9.30		11.37	
				17	7.26	9.27		11.39	
			52T	37	10.71	10.60		13.67	
				41	10.28	11.02		13.68	
				44	11.31	11.01		14.17	
			106T	53	13.14	14.51		16.89	
				54	12.86	14.14		16.56	
				56	13.33	14.57		17.00	
			242T	61	15.03	16.29		18.72	
				62	15.34	16.53		18.99	
			SU	-	15.27	16.48		18.93	
			UNII-4	175	5875	26T	0	7.93	
9	8.35	9.33					-2.48	9.40	
17	8.40	9.31					-2.48	9.41	
52T	37	10.86				11.15	-2.48	11.54	
	41	10.87				11.19	-2.48	11.56	
	44	10.96				11.16	-2.48	11.59	
106T	53	13.36				14.52	-2.48	14.51	
	54	13.10				14.14	-2.48	14.18	
	56	13.05				13.97	-2.48	14.06	
242T	61	15.44				16.43	-2.48	16.49	
	62	15.21				16.06	-2.48	16.19	
SU	-	15.62				16.47	-2.48	16.60	

* Calculation of Output Power : Average Power = Meas Power + Duty CF[dB]
 Corr'd Power = Ant1 Average Power + Ant2 Average Power(in case of UNII-4: added directional gain)

Note. Since the correlated antenna gain is less than 0 dBi, it satisfies both the limits of UNII-3 and UNII-4.

PSD Results

Band	Channel	Center Freq. [MHz]	Tones	RU offset	Meas PSD [dBm/MHz]		Corr'd PSD [dBm/MHz]	PSD Limit [dBm/MHz]	
					ANT1	ANT2			
UNII-1	38	5190	26T	0	6.59	5.41	9.05	11.00	
				9	5.51	5.18	8.36		
				17	5.63	4.97	8.32		
	46	5230	26T	SU	-	1.92	1.22		4.60
				0	5.82	5.43	8.64		
				9	5.52	4.96	8.26		
17	5.68	5.09	8.40						
SU	-	1.59	1.51	4.56					
UNII-2A	54	5270	26T	0	5.82	5.31	8.58	11.00	
				9	5.74	5.56	8.66		
				17	5.53	5.24	8.40		
	62	5310	26T	SU	-	1.59	1.73		4.67
				0	6.21	5.08	8.69		
				9	6.03	5.12	8.61		
17	6.06	5.23	8.68						
SU	-	2.12	1.63	4.89					
UNII-2C	102	5510	26T	0	5.87	5.09	8.51	11.00	
				9	6.53	5.40	9.01		
				17	5.76	5.07	8.43		
				SU	-	2.14	0.78		4.53
	118	5590	26T	0	5.73	5.22	8.50		
				9	5.85	5.26	8.57		
				17	5.81	5.29	8.56		
				SU	-	2.39	1.37		4.92
	134	5670	26T	0	5.72	5.54	8.64		
				9	5.44	5.01	8.24		
				17	5.44	4.89	8.18		
				SU	-	2.14	0.98		4.61

* Calculation of PSD: Corr'd PSD = Ant1 PSD + Ant2 PSD + Duty CF [dB]

Band	Channel	Center Freq. [MHz]	Tones	RU offset	Meas PSD [dBm]		Direct. Gain [dBi]	Corr'd PSD [dBm]	PSD Limit [dBm]
					ANT1	ANT2			
UNII-3	151	5755	26T	0	3.19	2.40		5.82	30.00 /500kHz
				9	3.08	2.04		5.60	
				17	3.17	2.30		5.77	
			SU	-	-0.82	-2.32		1.50	
	159	5795	26T	0	2.71	1.99		5.37	
				9	2.79	1.86		5.36	
				17	3.04	2.14		5.62	
			SU	-	-0.52	-1.43		2.06	
UNII-3&4	167	5835	26T	16(L)	2.37	1.92		5.16	30.00 /500kHz
				16(U)	7.04	7.12	-2.48	7.61	14.00 /MHz e.i.r.p.
			SU(L)	-	0.80	-0.29		3.30	30.00 /500kHz
			SU(U)	-	2.09	0.93	-2.48	2.08	14.00 /MHz e.i.r.p.
UNII-4	175	5875	26T	0	8.10	6.67	-2.48	7.98	14.00 /MHz e.i.r.p.
				9	6.52	6.66	-2.48	7.12	
				17	8.27	6.55	-2.48	8.02	
			SU	-	3.50	2.37	-2.48	3.50	

* Calculation of PSD: Corr'd PSD = Ant1 PSD + Ant2 PSD + Duty CF [dB] (in case of UNII-4: added directional gain)

10.2.9. 802.11ax HE80 MODE

Output Power Results

Band	Channel	Center Freq. [MHz]	Tones	RU offset	Average Power [dBm]		Corr'd Power [dBm]	Limit [dBm]
					ANT1	ANT2		
UNII-1	42	5210	26T	0	8.54	8.99	11.78	23.98
				18	8.07	8.53	11.32	
				36	8.13	8.52	11.34	
			52T	37	11.01	11.80	14.43	
				45	10.38	10.92	13.67	
				52	10.41	10.94	13.69	
			106T	53	14.09	14.93	17.54	
				57	13.68	14.69	17.22	
				60	13.70	14.75	17.27	
			242T	61	15.68	16.82	19.30	
				62	15.50	16.85	19.24	
				64	15.28	16.51	18.95	
			484T	65	15.44	16.58	19.06	
				66	15.21	16.49	18.91	
			SU	-	15.17	16.54	18.92	
UNII-2A	58	5290	26T	0	8.12	8.83	11.50	23.98
				18	8.16	9.31	11.78	
				36	8.28	9.20	11.77	
			52T	37	10.11	11.40	13.81	
				45	9.96	11.25	13.66	
				52	10.01	11.02	13.55	
			106T	53	14.07	14.86	17.49	
				57	13.69	14.51	17.13	
				60	13.77	14.57	17.20	
			242T	61	15.64	16.85	19.30	
				62	15.30	16.41	18.90	
				64	15.23	16.24	18.77	
			484T	65	15.57	16.86	19.27	
				66	15.19	16.27	18.77	
			SU	-	15.15	16.38	18.82	

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

Band	Channel	Center Freq. [MHz]	Tones	RU offset	Average Power [dBm]		Corr'd Power [dBm]	Limit [dBm]
					ANT1	ANT2		
UNII-2C	106	5530	26T	0	8.91	8.00	11.49	23.98
				18	8.59	7.52	11.10	
				36	8.58	7.37	11.03	
			52T	37	11.75	10.69	14.26	
				45	11.72	10.64	14.22	
				52	11.67	10.49	14.13	
			106T	53	14.42	14.24	17.34	
				57	14.48	14.09	17.30	
				60	14.44	13.95	17.21	
			242T	61	16.76	16.22	19.51	
				62	16.85	16.20	19.55	
				64	16.49	15.71	19.13	
	484T	65	16.55	15.97	19.28			
		66	16.43	15.73	19.10			
	SU	-	16.48	15.92	19.22			
	122	5610	26T	0	8.84	8.79	11.83	
				18	8.46	8.27	11.38	
				36	8.42	8.13	11.29	
			52T	37	10.81	11.44	14.15	
				45	10.46	10.99	13.74	
				52	10.43	10.86	13.66	
			106T	53	14.54	14.20	17.38	
				57	14.48	14.06	17.29	
				60	14.43	13.93	17.20	
242T			61	16.42	15.73	19.10		
			62	16.51	15.81	19.18		
			64	16.58	15.60	19.13		
484T	65	16.71	16.00	19.38				
	66	16.64	15.66	19.19				
SU	-	16.69	15.88	19.31				

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

Band	Channel	Center Freq. [MHz]	Tones	RU offset	Average Power [dBm]		Corr'd Power [dBm]	Limit [dBm]
					ANT1	ANT2		
UNII-3	155	5775	26T	0	8.95	7.93	11.48	30.00
				18	8.65	7.56	11.15	
				36	8.72	7.32	11.09	
			52T	37	11.52	11.17	14.36	
				45	10.72	10.19	13.47	
				52	10.74	10.04	13.41	
			106T	53	14.87	14.00	17.47	
				57	14.42	13.30	16.91	
				60	14.87	13.74	17.35	
			242T	61	16.86	15.61	19.29	
				62	16.46	15.13	18.86	
				64	16.76	15.05	19.00	
			484T	65	16.59	15.38	19.04	
				66	16.67	15.11	18.97	
			SU	-	16.77	15.36	19.13	
UNII-3&4	171	5855	26T	0	7.69	9.00	11.40	30.00 or 30.00 e.i.r.p ^{Note}
				18	7.28	8.90	11.18	
				36	7.40	8.73	11.13	
			52T	37	11.36	11.54	14.46	
				45	11.04	11.09	14.08	
				52	11.12	10.95	14.05	
			106T	53	13.88	14.24	17.07	
				57	13.89	14.16	17.04	
				60	13.95	14.02	17.00	
			242T	61	15.88	16.76	19.35	
				62	15.58	16.30	18.97	
				64	15.90	16.40	19.17	
			484T	65	15.68	16.52	19.13	
				66	15.87	16.41	19.16	
			SU	-	15.87	16.69	19.31	

* Calculation of Output Power : Average Power = Meas Power + Duty CF[dB]
 Corr'd Power = Ant1 Average Power + Ant2 Average Power(in case of UNII-4: added directional gain)

Note. Since the correrated antenna gain is less than 0 dBi, it satisfies both the limits of UNII-3 and UNII-4.

PSD Results

Band	Channel	Center Freq. [MHz]	Tones	RU offset	Meas PSD [dBm/MHz]		Corr'd PSD [dBm/MHz]	PSD Limit [dBm/MHz]
					ANT1	ANT2		
UNII-1	42	5210	26T	0	6.86	5.20	9.12	11.00
				18	4.66	3.53	7.14	
				36	5.99	4.92	8.50	
			SU	-	-1.60	-1.74	1.34	
UNII-2A	58	5290	26T	0	5.85	5.43	8.66	11.00
				18	4.59	4.79	7.70	
				36	6.10	6.05	9.09	
			SU	-	-1.66	-1.63	1.37	
UNII-2C	106	5530	26T	0	6.09	4.94	8.57	11.00
				18	4.36	3.06	6.77	
				36	5.64	3.70	7.79	
			SU	-	-1.20	-2.10	1.39	
	122	5610	26T	0	5.37	5.17	8.28	
				18	4.28	4.27	7.29	
				36	5.26	4.58	7.94	
			SU	-	-0.99	-2.31	1.41	

Band	Channel	Center Freq. [MHz]	Tones	RU offset	Meas PSD [dBm]		Direct. Gain [dBi]	Corr'd PSD [dBm]	PSD Limit [dBm]
					ANT1	ANT2			
UNII-3	155	5775	26T	0	3.23	1.65		5.52	30.00 /500kHz
				18	2.33	1.29		4.85	
				36	3.08	1.59		5.41	
			SU	-	-3.61	-5.33		-1.37	
UNII-3&4	171	5855	26T	16(L)	4.32	3.42		6.91	30.00 /500kHz
				16(U)	7.15	6.80		9.99	14.00 /MHz e.i.r.p.
			SU(L)	-	-1.04	-3.32		0.98	30.00 /500kHz
			SU(U)	-	2.07	-0.61	-2.48	1.46	14.00 /MHz e.i.r.p.

* Calculation of PSD: Corr'd PSD = Ant1 PSD + Ant2 PSD + Duty CF [dB] (in case of UNII-4: added directional gain)

10.2.10. 802.11ax HE160 MODE

Output Power Results

Band	Channel	Center Freq. [MHz]	Tones	RU offset	Average Power [dBm]		Corr'd Power [dBm]	Limit [dBm]
					ANT1	ANT2		
UNII-1&2A	50	5250	26T	0(LB)	8.04	9.08	11.60	23.98
				0(UB)	7.61	8.56	11.12	
				36(BU)	7.74	8.61	11.21	
			52T	37(LB)	10.72	11.76	14.28	
				37(UB)	10.28	10.93	13.63	
				52(UB)	10.17	10.96	13.59	
			106T	53(LB)	13.59	14.68	17.18	
				53(UB)	13.45	14.50	17.02	
				60(UB)	13.62	14.59	17.14	
			242T	61(LB)	14.90	16.45	18.75	
				61(UB)	15.64	16.83	19.29	
				64(UB)	15.16	16.25	18.75	
			484T	65(LB)	14.92	16.45	18.76	
				65(UB)	15.59	16.75	19.22	
				66(UB)	15.76	16.85	19.35	
			996T	67(LB)	15.21	16.70	19.03	
67(UB)	15.63	16.76		19.24				
SU	-	16.13	15.71	18.94				
UNII-2C	114	5570	26T	0(LB)	8.51	8.65	11.59	23.98
				0(UB)	8.30	8.02	11.17	
				36(UB)	8.45	7.96	11.22	
			52T	37(LB)	11.10	11.75	14.45	
				37(UB)	10.06	10.86	13.49	
				52(UB)	10.13	10.50	13.33	
			106T	53(LB)	14.72	14.52	17.63	
				53(UB)	14.84	14.40	17.64	
				60(UB)	14.57	13.94	17.28	
			242T	61(LB)	15.72	14.92	18.35	
				61(UB)	15.62	14.77	18.23	
				64(UB)	15.40	14.26	17.88	
			484T	65(LB)	15.52	14.87	18.22	
				65(UB)	15.43	14.51	18.00	
				66(UB)	15.24	14.28	17.80	
			996T	67(LB)	15.94	15.12	18.56	
67(UB)	15.29	14.36		17.86				
SU	-	15.56	14.74	18.18				

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

Band	Channel	Center Freq. [MHz]	Tones	RU offset	Average Power [dBm]		Corr'd Power [dBm]	Limit [dBm]
					ANT1	ANT2		
UNII-3&4	163	5815	26T	0(LB)	8.63	8.73	11.69	30.00 or 30.00 e.i.r.p ^{Note}
				0(UB)	8.16	8.36	11.27	
				36(UB)	8.75	8.61	11.69	
			52T	37(LB)	10.42	11.67	14.10	
				37(UB)	10.81	11.65	14.26	
				52(UB)	10.73	11.19	13.98	
			106T	53(LB)	14.53	14.35	17.45	
				53(UB)	14.34	13.73	17.06	
				60(UB)	14.22	13.36	16.82	
			242T	61(LB)	16.63	16.34	19.50	
				61(UB)	16.73	16.03	19.40	
				64(UB)	16.75	15.69	19.26	
			484T	65(LB)	16.43	16.12	19.29	
				65(UB)	16.54	15.82	19.21	
				66(UB)	16.51	15.59	19.08	
			996T	67(LB)	16.22	15.76	19.01	
67(UB)	16.52	15.66		19.12				
SU	-	16.35	15.46	18.94				

* Calculation of Output Power : Average Power = Meas Power + Duty CF[dB]
 Corr'd Power = Ant1 Average Power + Ant2 Average Power(in case of UNII-4: added directional gain)

Note. Since the correrated antenna gain is less than 0 dBi, it satisfies both the limits of UNII-3 and UNII-4.

PSD Results

Band	Channel	Center Freq. [MHz]	Tones	RU offset	Meas PSD [dBm/MHz]		Corr'd PSD [dBm/MHz]	PSD Limit [dBm/MHz]
					ANT1	ANT2		
UNII-1&2A	50	5250	26T	0(LB)	5.95	5.23	8.62	11.00
				0(UB)	5.35	5.24	8.31	
				36(UB)	5.57	4.85	8.24	
			SU	-	-4.48	-4.19	-1.32	
UNII-2C	114	5570	26T	0(LB)	5.38	5.73	8.57	11.00
				0(UB)	5.54	4.70	8.15	
				36(UB)	5.16	3.59	7.45	
			SU	-	-3.99	-4.64	-1.29	

Band	Channel	Center Freq. [MHz]	Tones	RU offset	Meas PSD [dBm]		Direct. Gain [dBi]	Corr'd PSD [dBm]	PSD Limit [dBm]
					ANT1	ANT2			
UNII-3&4	171	5815	26T	16(UB,L)	2.61	2.56		5.60	30.00 /500kHz
				16(UB,U)	5.97	5.50	-2.48	6.27	14.00 /MHz e.i.r.p.
			SU(L)	-	-6.42	-6.72		-3.56	30.00 /500kHz
			SU(U)	-	-4.24	-5.23	-2.48	-4.18	14.00 /MHz e.i.r.p.

* Calculation of PSD: Corr'd PSD = Ant1 PSD + Ant2 PSD + Duty CF [dB] (in case of UNII-4: added directional gain)
 Note. LB=Lower band(Lower 996T),UB=Upper band(Upper 996T), L=Lower side, U=Upper side

10.2.11. STRADDLE CHANNEL(802.11ax)

Output Power Results(SU)

Mode	Band	Center Freq. [MHz]	Meas Power [dBm]		Corr'd Power [dBm]	Limit [dBm]
			ANT1	ANT2		
HE20	UNII-2C	5720	15.12	13.34	17.33	22.94
	UNII-3		9.54	7.70	11.73	30.00
HE40	UNII-2C	5710	16.05	13.78	18.07	23.98
	UNII-3		5.88	3.58	7.89	30.00
HE80	UNII-2C	5690	14.95	13.39	17.25	23.98
	UNII-3		0.83	-0.64	3.17	30.00

* Calculation of Output Power : Corr'd Power = Ant1 meas. Power + Ant2 meas. Power + Duty CF [dB]

PSD Results(SU)

Mode	Band	Center Freq. [MHz]	Meas PSD [dBm/MHz]		DCCF.	Corr'd PSD [dBm]	Limit [dBm/MHz]
			ANT1	ANT2			
HE20	UNII-2C	5720	5.40	4.13	0.00	7.82	11.00
	UNII-3		1.77	0.50	0.00	4.19	30.00/500kHz
HE40	UNII-2C	5710	2.57	1.42	0.00	5.04	11.00
	UNII-3		-1.42	-2.72	0.00	0.99	30.00/500kHz
HE80	UNII-2C	5690	-0.60	-2.34	0.00	1.63	11.00
	UNII-3		-5.73	-6.98	0.00	-3.30	30.00/500kHz

* Calculation of PSD: Corr'd PSD = Ant1 PSD + Ant2 PSD + Duty CF [dB]

Output Power Results(RU)

Mode	Band	Center Freq. [MHz]	Meas Power [dBm]		Corr'd Power [dBm]	Limit [dBm]
			ANT1	ANT2		
HE20	UNII-2C	5720 (6RU)	7.71	6.31	10.07	22.04
	UNII-3		0.44	-0.87	2.84	30.00
HE40	UNII-2C	5710 (15RU)	8.49	6.13	10.48	23.98
	UNII-3		-5.39	-8.46	-3.65	30.00
HE80	UNII-2C	5690 (34RU)	6.86	5.20	9.12	23.98
	UNII-3		-7.46	-9.21	-5.24	30.00

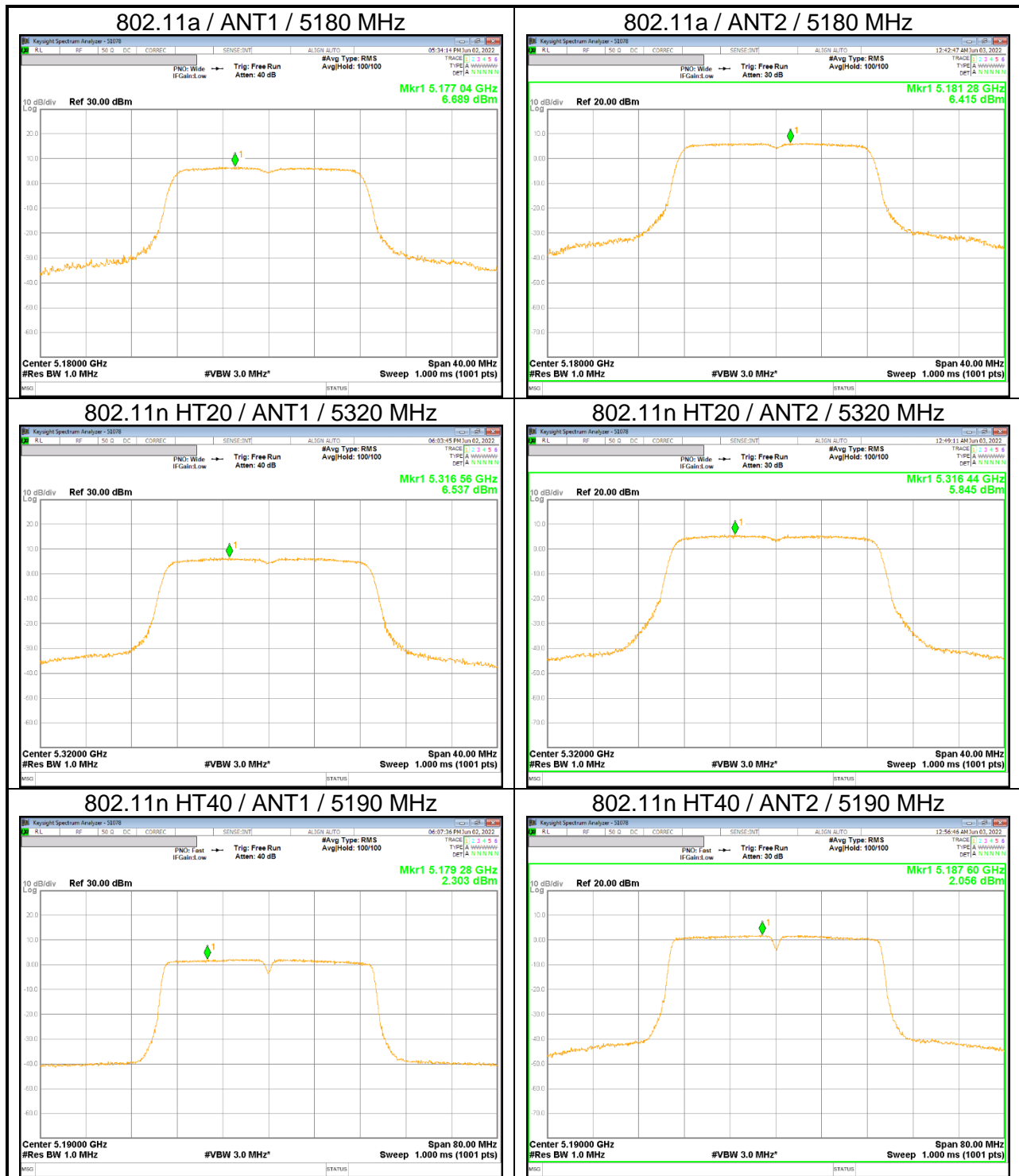
* Calculation of Output Power : Corr'd Power = Ant1 meas. Power + Ant2 meas. Power + Duty CF [dB]

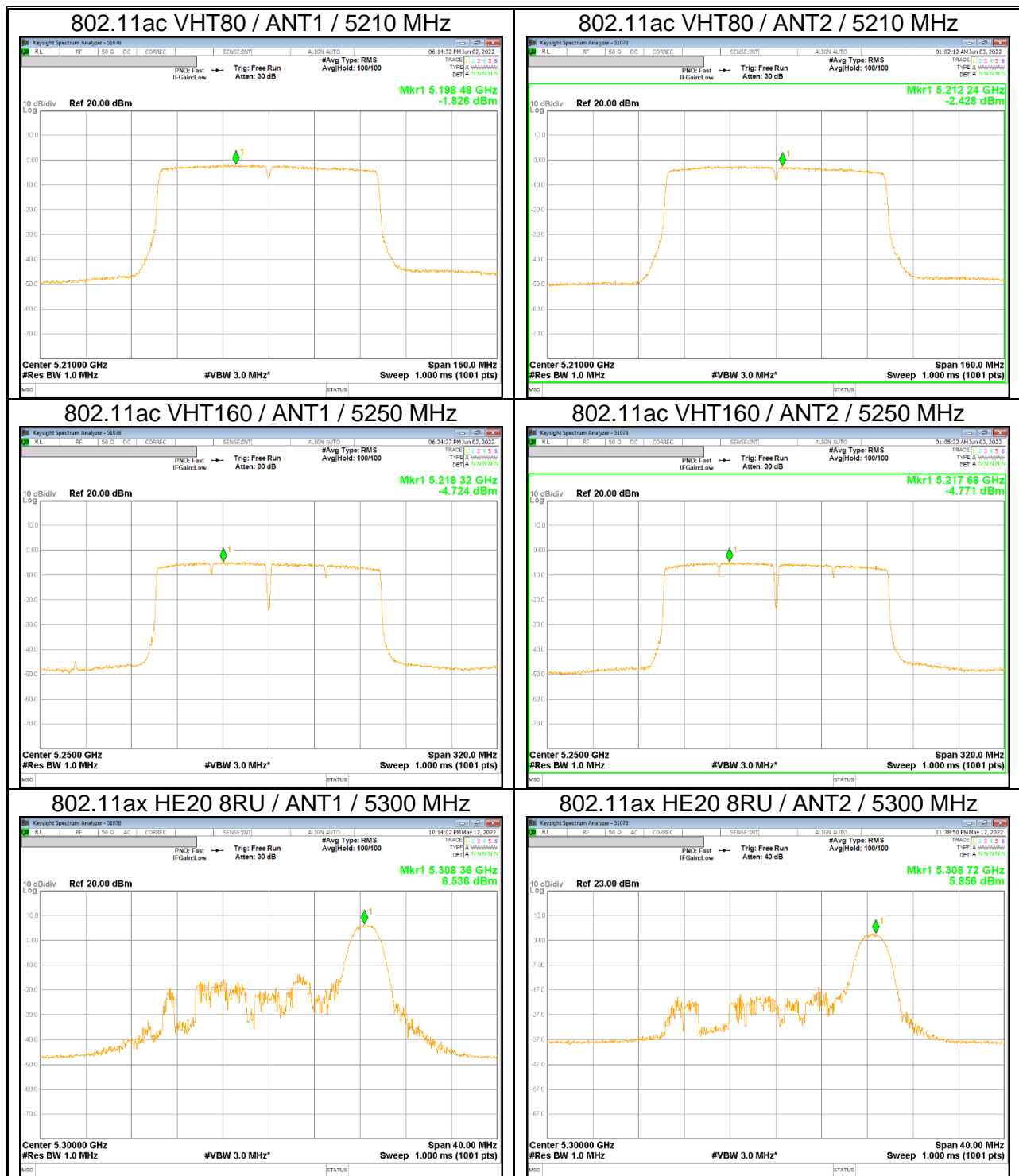
PSD Results(RU)

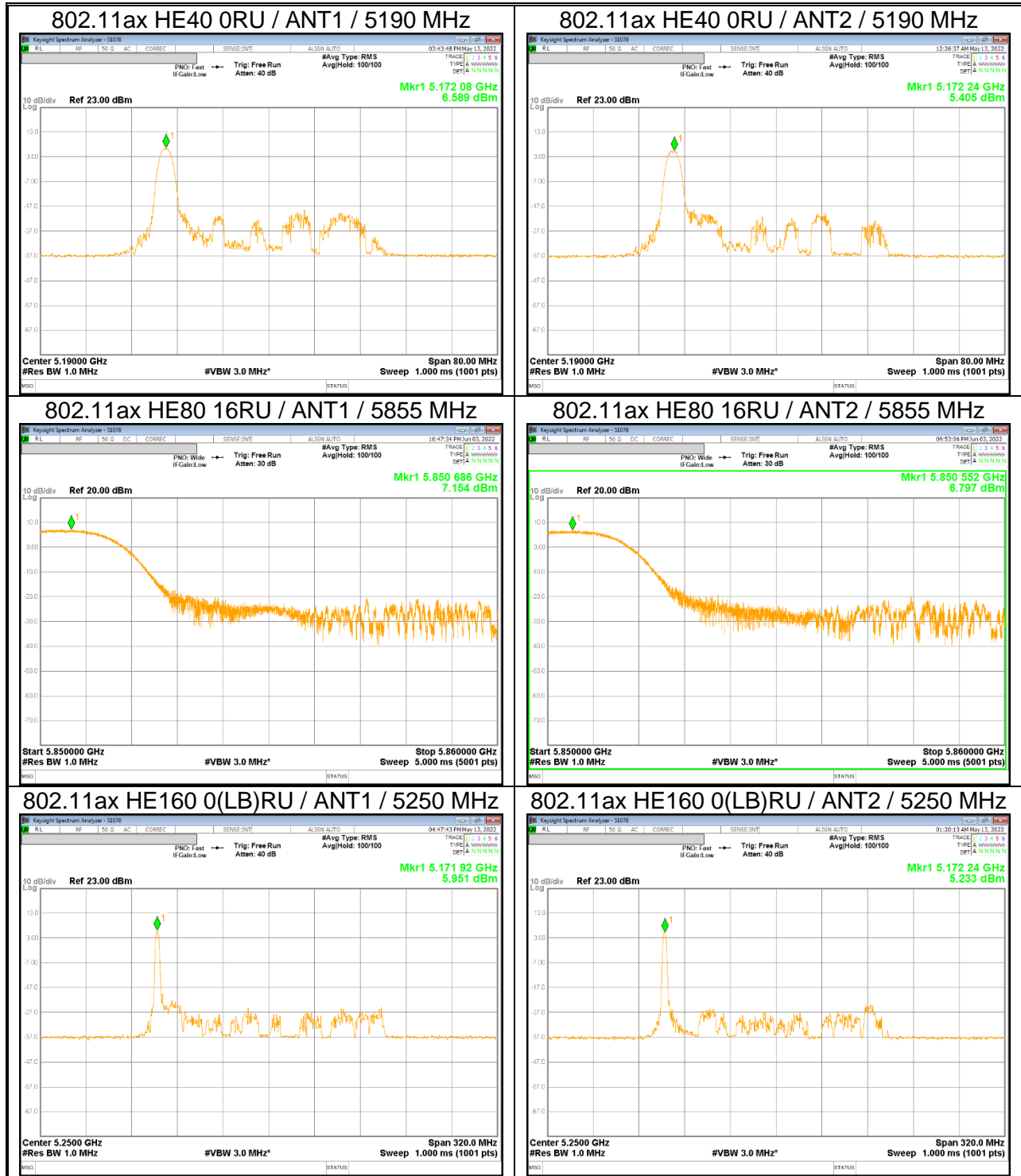
Mode	Band	Center Freq. [MHz]	Meas PSD [dBm/MHz]		DCCF.	Corr'd PSD [dBm]	Limit [dBm/MHz]
			ANT1	ANT2			
HE20	UNII-2C	5720 (6RU)	6.61	5.48	0.00	9.09	11.00
	UNII-3		2.90	1.83	0.00	5.41	30.00/500kHz
HE40	UNII-2C	5710 (15RU)	6.49	5.13	0.00	8.87	11.00
	UNII-3		-6.33	-9.91	0.00	-4.75	30.00/500kHz
HE80	UNII-2C	5690 (34RU)	5.99	4.49	0.00	8.31	11.00
	UNII-3		-5.65	-9.45	0.00	-4.14	30.00/500kHz

* Calculation of PSD: Corr'd PSD = Ant1 PSD + Ant2 PSD + Duty CF [dB]

10.2.12. OUTPUT POWER AND PPSD PLOTS(WORST CASE)







UNII Straddle Ch. IEEE 802.11a mode Output Power and PSD

