



CERTIFICATION TEST REPORT

Report Number. : 4790632108-E6V1

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

Model : SM-A546U, SM-A546U1, SM-S546VL

FCC ID : A3LSMA546U

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

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

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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 and NFC.

MODEL NUMBER: SM-A546U, SM-A546U1, SM-S546VL

SERIAL NUMBER: R3CTA0AY1NV (CONDUCTED, Original);
R3CTA0LX0FT (CONDUCTED, Spot-check);
R3CTB0F5WGD, R3CTB0F5QVZ (RADIATED, Spot-check);

DATE TESTED: 2022-11-25 ~ 2023-01-17(Original);
2023-01-05 ~ 2023-01-20(Spot-check);

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.

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Tested By:



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Suwon Lab Engineer
UL Korea, Ltd.

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1.1. INTRODUCTION OF TEST DATA REUSE

This report referenced from the FCC ID: A3LSMA546V NII WLAN(FCC CFR 47 Part 15C). And the applicant takes full responsibility that the test data as referenced in this report represent compliance for this FCC ID.

1.2. DIFFERENCE

The A3LSMA546U model shares the same enclosure and circuit board as A3LSMA546V. The WLAN antennas and surrounding circuitry and layout are identical between these two units.

After confirming through preliminary radiated emissions that the performance of the A3LSMA546V remains representative of A3LSMA546U. The test data of A3LSMA546V being submitted for this application to cover WLAN features.

1.3. SPOT CHECK VERIFICATION DATA

(Worst case of the radiated band-edge and radiated spurious emissions)

Band	Test Item	Mode	Frequency	Test Limit	Original model	Spot check model	Deviation	Remark
					SM-A546V Results	SM-A546U Results		
					FCC ID : A3LSMA546V	FCC ID : A3LSMA546U		
NII WLAN (5GHz)	BANDEDGE	802.11n HT40	5190 MHz	54.0 dBuV/m	51.48 dBuV/m	48.96 dBuV/m	-2.52 dB	
	RSE	802.11a	10480 MHz	68.2 dBuV/m	55.71 dBuV/m	52.97 dBuV/m	-2.74 dB	
	BANDEDGE	802.11a	5320 MHz	54.0 dBuV/m	51.13 dBuV/m	49.77 dBuV/m	-1.36 dB	
	RSE	802.11a	10640 MHz	54.0 dBuV/m	45.74 dBuV/m	44.45 dBuV/m	-1.29 dB	
	BANDEDGE	802.11a	5500 MHz	68.2 dBuV/m	65.93 dBuV/m	61.47 dBuV/m	-4.46 dB	
	RSE	802.11a	11160 MHz	54.0 dBuV/m	50.05 dBuV/m	47.14 dBuV/m	-2.91 dB	
	BANDEDGE	802.11ac VHT80	5775 MHz	-27.00 dBm	-34.24 dBm	-35.24 dBm	-1.00 dB	
	RSE	802.11a	11650 MHz	54.0 dBuV/m	48.55 dBuV/m	47.19 dBuV/m	-1.36 dB	
	BANDEDGE	802.11ax HE20	5180 MHz	54.0 dBuV/m	49.5 dBuV/m	49.5 dBuV/m	0.02 dB	
	RSE	802.11ax HE20	10360 MHz	68.2 dBuV/m	56.47 dBuV/m	51.64 dBuV/m	-4.83 dB	
	BANDEDGE	802.11ax HE40	5310 MHz	54.0 dBuV/m	50.47 dBuV/m	52.00 dBuV/m	1.53 dB	
	RSE	802.11ax HE20	10600 MHz	54.0 dBuV/m	42.40 dBuV/m	39.24 dBuV/m	-3.16 dB	
	BANDEDGE	802.11ax HE20	5500 MHz	68.2 dBuV/m	65.67 dBuV/m	65.15 dBuV/m	-0.52 dB	
	RSE	802.11ax HE20	11160 MHz	54.0 dBuV/m	44.37 dBuV/m	45.90 dBuV/m	1.53 dB	
	BANDEDGE	802.11ax HE40	5795 MHz	-27.00 dBm	-33.91 dBm	-35.20 dBm	-1.29 dB	
	RSE	802.11ax HE20	11490 MHz	54.0 dBuV/m	46.55 dBuV/m	46.44 dBuV/m	-0.11 dB	

Comparison of two models, upper deviation is within 3 dB range and all test results are under FCC Technical Limits.

1.4. REFERENCE DETAIL

Reference application that contains the reused reference data in the individual test reports:

Equipment Class	Reference FCC ID (Parent)	Application Type	Reference Test report number	Exhibit Type	Variant Test Report Number	Data Re-used
PCE	A3LSMA546V	Original Grant	4790632299-E2 (WWAN)	Test Report	4790632108-E2 (WWAN)	Partial
DTS	A3LSMA546V	Original Grant	4790632299-E3 (802.11b/g/n/ax)	Test Report	4790632108-E3 (802.11b/g/n/ax)	All
			4790632299-E4 (Bluetooth LE)	Test Report	4790632108-E4 (Bluetooth LE)	All
DSS	A3LSMA546V	Original Grant	4790632299-E5 (Bluetooth)	Test Report	4790632108-E5 (Bluetooth)	All
NII	A3LSMA546V	Original Grant	4790632299-E6 (802.11a/n/ac/ax)	Test Report	4790632108-E6 (802.11a/n/ac/ax)	All
DXX	A3LSMA546V	Original Grant	4790632299-E7 (NFC)	Test Report	4790632108-E7 (NFC)	All
CBE	A3LSMA546V	Original Grant	4790632299-E8 (CBRS)	Test Report	4790632108-E8 (CBRS)	All

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. ANSI C63.10-2013.
8. KDB 484596 D01 Referencing Test Data v01

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(3m semi-anechoic chamber)
<input checked="" type="checkbox"/>	Chamber 2(3m semi-anechoic chamber)
<input checked="" type="checkbox"/>	Chamber 3(3m semi-anechoic chamber)
<input type="checkbox"/>	Chamber 4(3m Full-anechoic chamber)
<input type="checkbox"/>	Chamber 5(3m Full-anechoic chamber)

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:

$$\text{Field Strength (dBuV/m)} = \text{Measured Voltage (dBuV)} + \text{Antenna Factor (dB/m)} + \text{Cable Loss (dB)} - \text{Preamp Gain (dB)}$$

$$36.5 \text{ dBuV} + 18.7 \text{ dB/m} + 0.6 \text{ dB} - 26.9 \text{ dB} = 28.9 \text{ dBuV/m}$$

$$\text{Corrected Reading (dBuV)} = \text{Meter Reading (dBuV)} + \text{External Cable (dB)} + \text{Cableloss (dB)}$$

$$46.62 \text{ dBuV} + 9.8 \text{ dB} + 0.1 \text{ dB} = 56.52 \text{ dBuV}$$

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	2.80 dB
Radiated Disturbance, 9 kHz to 30 MHz	1.69 dB
Radiated Disturbance, 30 MHz to 1 GHz	3.92 dB
Radiated Disturbance, 1 GHz to 18 GHz	5.06 dB
Radiated Disturbance, Above 18 GHz	6.02 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 115:2021.

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 and NFC. This test report addresses the NII (WLAN) operational mode.

Representative model	Difference	Derivative model	
		SM-A546U1	SM-S546VL
SM-A546U	Hardware	Same as SM-A546U	Same as SM-A546U
	Software	Same as SM-A546U	Different from SM-A546U (Exclude some of the main band)

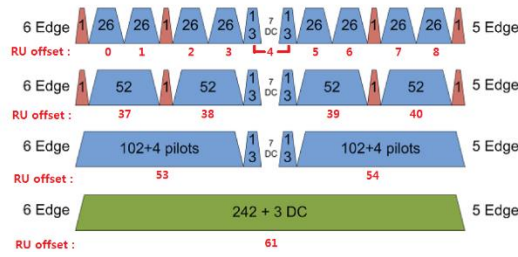
Thus, SM-A546U was set for final test.

WiFi operating mode

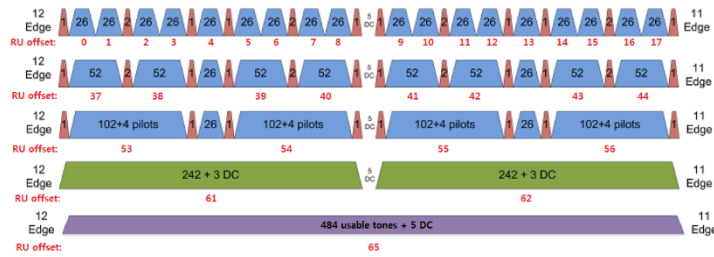
Frequency rage	Mode	ANT1	ANT2
5GHz (5180 MHz ~ 5825 MHz)	802.11a MIMO	TX/RX	TX/RX
	802.11n MIMO	TX/RX	TX/RX
	802.11ac MIMO	TX/RX	TX/RX
	802.11ax MIMO	TX/RX	TX/RX

802.11ax RU allocations

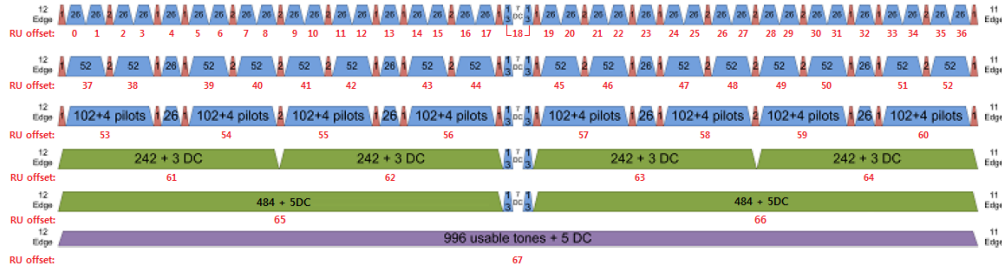
**- HE 20 Mode -
20 MHz**



**- HE 40 Mode -
40 MHz**



- HE 80(996T)



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.

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	19.33	85.70
		802.11n(HT20) MIMO	19.59	90.99
		802.11ax(HE20) MIMO	19.21	83.37
	5190 - 5230	802.11n(HT40) MIMO	16.37	43.35
		802.11ax(HE40) MIMO	16.43	43.95
	5210	802.11ac(VHT80) MIMO	14.67	29.31
	802.11ax(HE80) MIMO	14.30	26.92	
UNII-2A	5260 - 5320	802.11a MIMO	19.28	84.72
		802.11n(HT20) MIMO	19.47	88.51
		802.11ax(HE20) MIMO	19.12	81.66
	5190 - 5230	802.11n(HT40) MIMO	16.32	42.85
		802.11ax(HE40) MIMO	16.33	42.95
	5270 - 5310	802.11ac(VHT80) MIMO	14.78	30.06
802.11ax(HE80) MIMO		14.44	27.80	
UNII-2C	5500 - 5720	802.11a MIMO	19.64	92.04
		802.11n(HT20) MIMO	19.36	86.30
		802.11ax(HE20) MIMO	18.96	78.70
	5510 - 5710	802.11n(HT40) MIMO	16.61	45.81
		802.11ax(HE40) MIMO	16.36	43.25
	5530 - 5690	802.11ac(VHT80) MIMO	14.91	30.97
802.11ax(HE80) MIMO		14.15	26.00	
UNII-3	5745 - 5825	802.11a MIMO	19.61	91.41
		802.11n(HT20) MIMO	19.42	87.50
		802.11ax(HE20) MIMO	19.42	87.50
	5755 - 5795	802.11n(HT40) MIMO	16.57	45.39
		802.11ax(HE40) MIMO	16.35	43.15
	5775	802.11ac(VHT80) MIMO	14.99	31.55
802.11ax(HE80) MIMO		13.97	24.95	

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	-3.08	-6.68	-1.68
UNII 2A 5250 - 5350	-3.55	-6.84	-2.03
UNII 2C 5470 - 5725	-4.09	-6.51	-2.21
UNII 3 5725 - 5850	-3.78	-5.37	-1.53

“SUB3_WIF11 5Ghz” and “SUB9_WIF12 5Ghz” as indicated in antenna specification are written as ANT 1 and ANT 2 in this report.

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 = $10 \log[(10^{-3.5/20} + 10^{-7.1/20})^2 / 2] = -2.1$ 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

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.

For MIMO, 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.

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

Radiation test for 802.11a / n HT20 & HT40 / ac VHT80 / ax HE20 & HE40 & HE80 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 , 802.11ax HE20 & 40 & 80 (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	16.5	16.5	16.5	16	19.5	19.5	19.5	19
	UNII-2A	16.5 Ch64: 15	16.5 Ch64: 15	16.5 Ch64: 15	16 Ch64: 15	19.5 Ch64: 18	19.5 Ch64: 18	19.5 Ch64: 18	19 Ch64: 18
	UNII-2C	16.5 Ch100: 15 Ch140: 10.5	16.5 Ch100: 15 Ch140: 10.5	16.5 Ch100: 15 Ch140: 10.5	16 Ch100: 15 Ch140: 10.5	19.5 Ch100: 18 Ch140: 13.5	19.5 Ch100: 18 Ch140: 13.5	19.5 Ch100: 18 Ch140: 13.5	19 Ch100: 18 Ch140: 13.5
	UNII-3	16.5	16.5	16.5	16	19.5	19.5	19.5	19.5
5GHz (40 MHz)	UNII-1		13.5	13.5	13.5		16.5	16.5	16.5
	UNII-2A		13.5 Ch62: 12.5	13.5 Ch62: 12.5	13.5 Ch62: 12.5		16.5 Ch62: 15.5	16.5 Ch62: 15.5	16.5 Ch62: 15.5
	UNII-2C		13.5	13.5	13.5		16.5	16.5	16.5
	UNII-3		13.5	13.5	13.5		16.5	16.5	16.5
5GHz (80 MHz)	UNII-1			11.5	11.5			14.5	14.5
	UNII-2A			11.5	11.5			14.5	14.5
	UNII-2C			11.5	11.5			14.5	14.5
	UNII-3			11.5	11.5			14.5	14.5

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

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 (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			O					4								
				8								8								
		5200		0						0										
				4						4										
				8						8										
		5240		0						0										
				4						4				O						
				8						8										
UNII-2A	HE20	5260	26 T	0				UNII-3	HE20	5745	26 T	0								
				4								4			O					
				8								8								
		5300		0						0										
				4			O			4				O						
				8						8										
		5320		0						0										
				4						4				O						
				8						8				O						
																	0			O
														HE40	5755	26 T	9			
														HE80	5775		17			
										0			O							
											18									
											36									

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 modes.

5.5. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
Charger	SAMSUNG	EP-TA800	R37R38J4A28SE3	N/A
Data Cable	SAMSUNG	EP-DN980	GH39-02111ABBE	N/A

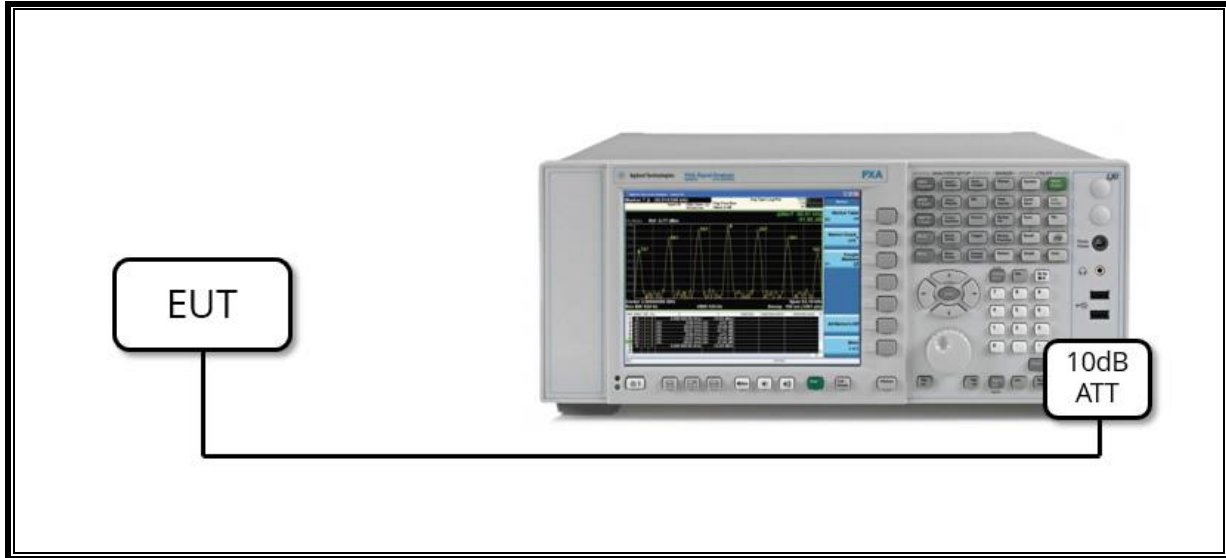
I/O CABLE

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

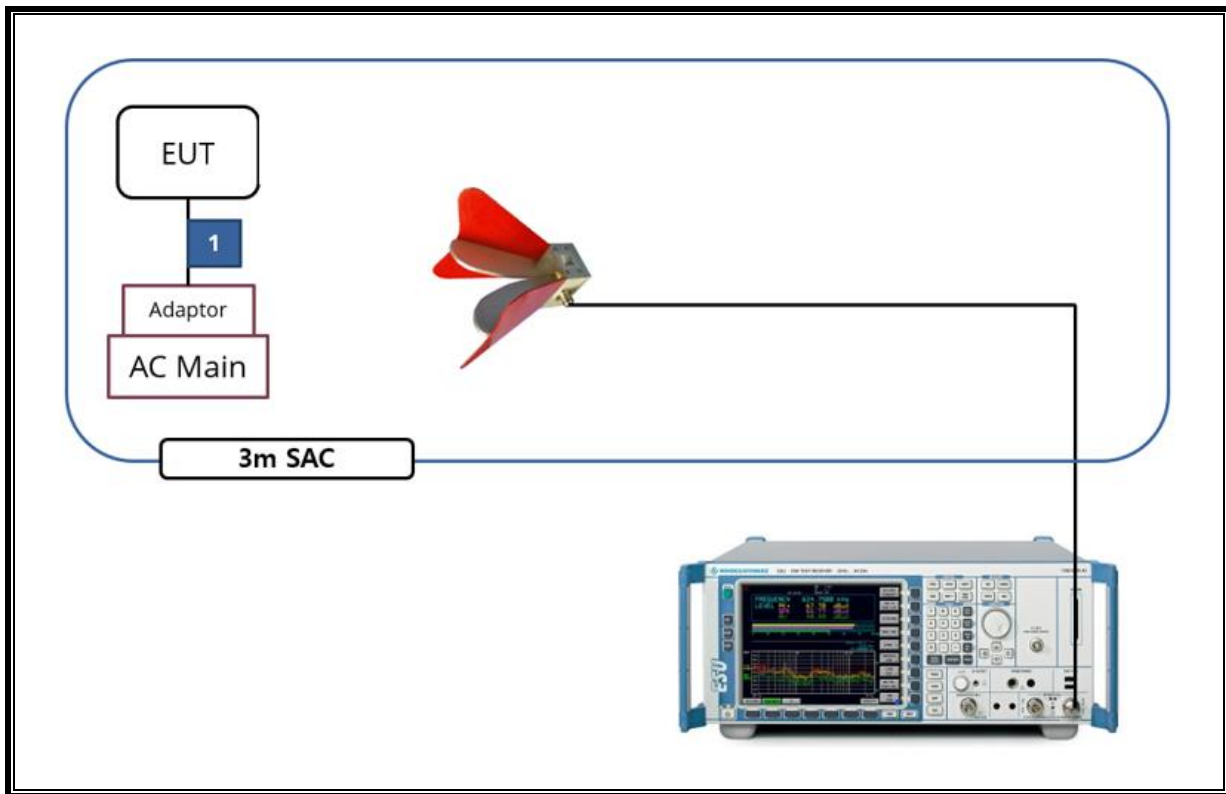
TEST SETUP

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	2024-08-15
Antenna, Bilog, 30MHz-1GHz	SCHWARZBECK	VULB9163	749	2024-08-15
Antenna, Bilog, 30MHz-1GHz	SCHWARZBECK	VULB9163	845	2024-08-15
Antenna, Horn, 18 GHz	ETS	3115	00167211	2024-08-04
Antenna, Horn, 18 GHz	ETS	3115	00161451	2024-08-21
Antenna, Horn, 18 GHz	ETS	3117	00168724	2024-08-04
Antenna, Horn, 18 GHz	ETS	3117	00168717	2024-08-21
Antenna, Horn, 18 GHz	ETS	3117	00218957	2025-01-08
Antenna, Horn, 40 GHz	ETS	3116C	00166155	2024-08-02
Antenna, Horn, 40 GHz	ETS	3116C	00168645	2023-10-13
Preamplifier	ETS	3116C-PA	00168841	2023-08-04
Preamplifier, 1000 MHz	Sonoma	310N	341282	2023-08-02
Preamplifier, 1000 MHz	Sonoma	310N	351741	2023-08-02
Preamplifier, 1000 MHz	Sonoma	310N	370599	2023-08-02
Preamplifier, 18 GHz	Mteq	AFS42-00101800-25-S-42	1876511	2023-08-02
Preamplifier, 18 GHz	Mteq	AFS42-00101800-25-S-42	1896138	2023-08-01
Preamplifier, 18 GHz	Mteq	AFS42-00101800-25-S-42	2029169	2023-08-01
Spectrum Analyzer, 44 GHz	Agilent / HP	N9030A	MY54170614	2023-08-03
Spectrum Analyzer, 44 GHz	Agilent / HP	N9030A	MY54490312	2023-08-01
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	2023-08-03
Average Power Sensor	Agilent / HP	U2000	MY54260010	2023-08-03
Attenuator	PASTERNAK	PE7087-10	A001	2023-08-03
Attenuator	PASTERNAK	PE7087-10	A008	2023-08-03
Attenuator	PASTERNAK	PE7004-10	2	2023-08-01
Attenuator	PASTERNAK	PE7087-10	A009	2023-08-03
EMI Test Receive, 40 GHz	R&S	ESU40	100439	2023-08-02
EMI Test Receive, 40 GHz	R&S	ESU40	100457	2023-07-29
EMI Test Receive, 3 GHz	R&S	ESR3	101832	2023-08-01
Notch Filter	Micro-Tronics	BRM50702-02	G037	2023-08-01
Notch Filter	Micro-Tronics	BRM50716-2	006	2023-08-01
Low Pass Filter 5GHz	Micro-Tronics	LPS17541	009	2023-08-02
Low Pass Filter 5GHz	Micro-Tronics	LPS17541	015	2023-08-01
Low Pass Filter 5GHz	Micro-Tronics	LPS17541	020	2023-08-01
High Pass Filter 3GHz	Micro-Tronics	HPM17543	010	2023-08-02
High Pass Filter 3GHz	Micro-Tronics	HPM17543	015	2023-08-01
High Pass Filter 3GHz	Micro-Tronics	HPM17543	020	2023-08-01
High Pass Filter 6GHz	Micro-Tronics	HPS17542	009	2023-08-02
High Pass Filter 6GHz	Micro-Tronics	HPS17542	016	2023-08-01
High Pass Filter 6GHz	Micro-Tronics	HPS17542	021	2023-08-01
LISN	R&S	ENV-216	101837	2023-08-04
Antenna, Loop, 9kHz-30MHz	R&S	HFH2-Z2	100418	2023-10-06
Termination	WEINSCHL	M1406A	T09	2023-08-03
Attenuator	WEINSCHL	WA76-30-21	A015	2023-08-03
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)(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
15.207 (a)	AC Power Line conducted emissions	Section 13	Radiated	Complies
15.407 (b) & 15.209	Radiated Spurious Emission	< 74dBuV/m PK < 54dBuV/m AV		Complies
15.407 (h)(2)	Dynamic Frequency Selection	N/A	Condcuted	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	2.792	2.855	0.978	97.793	0.10
802.11n(HT20) MIMO	8.720	8.773	0.994	99.396	-
802.11n(HT40) MIMO	4.204	4.322	0.973	97.270	0.12
802.11ac(VHT80) MIMO	1.012	1.066	0.949	94.934	0.23

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	5.547	5.623	0.99	98.65	-
		52T	2.904	2.976	0.98	97.58	0.11
		106T	1.400	1.464	0.96	95.63	0.19
		SU	4.196	4.251	0.99	98.71	-
802.11ax HE40	MIMO	26T	5.547	5.623	0.99	98.65	-
		52T	2.904	2.968	0.98	97.84	0.09
		106T	1.399	1.464	0.96	95.56	0.20
		242T	0.664	0.720	0.92	92.23	0.35
		SU	2.132	2.186	0.98	97.53	0.11
802.11ax HE80	MIMO	26T	5.545	5.623	0.99	98.61	-
		52T	2.904	2.968	0.98	97.84	0.09
		106T	1.400	1.463	0.96	95.69	0.19
		242T	0.664	0.719	0.92	92.30	0.35
		484T	0.376	0.439	0.86	85.57	0.68
		SU	1.060	1.115	0.95	95.07	0.22

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

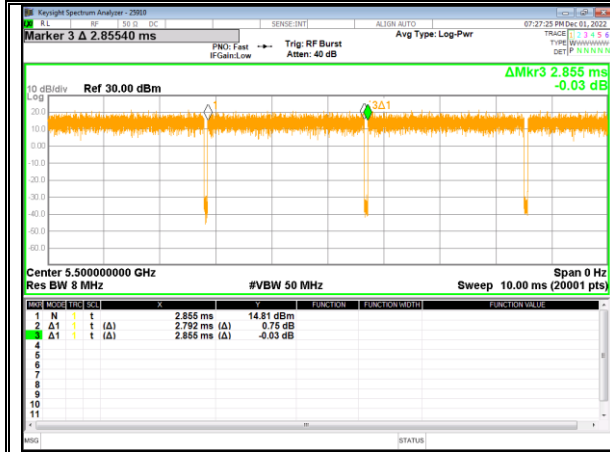
LIMITS

None; for reporting purposes only.

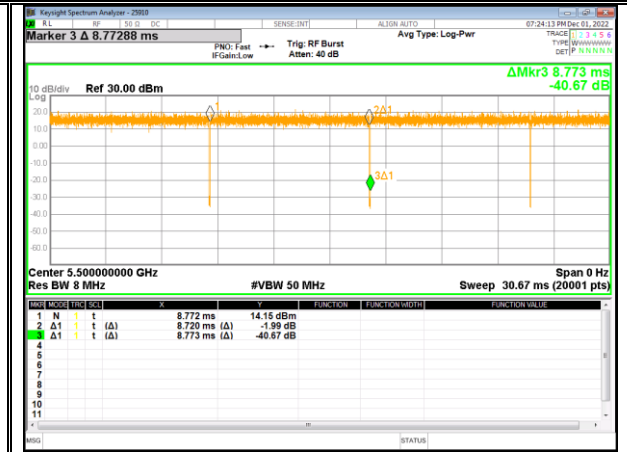
PROCEDURE

KDB 789033 D02 v02r01 Zero-Span Spectrum Analyzer Method.

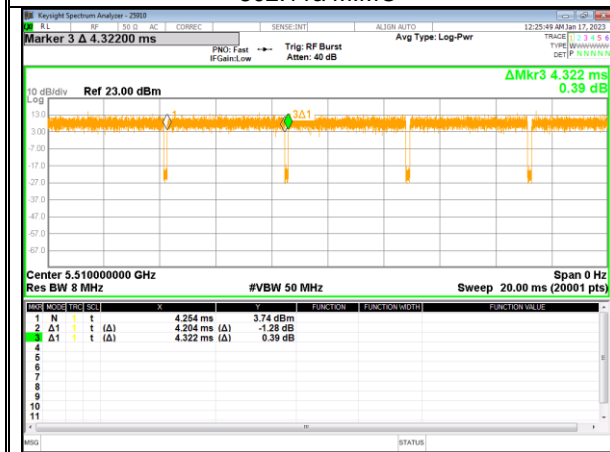
9.2. DUTY CYCLE PLOTS



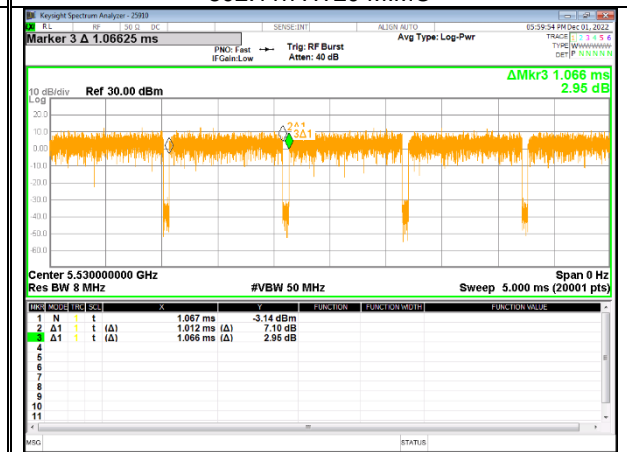
802.11a MIMO



802.11n HT20 MIMO



802.11n HT40 MIMO



802.11ac VHT80 MIMO







9.3. 26 dB BANDWIDTH

LIMITS

None; for reporting purposes only.

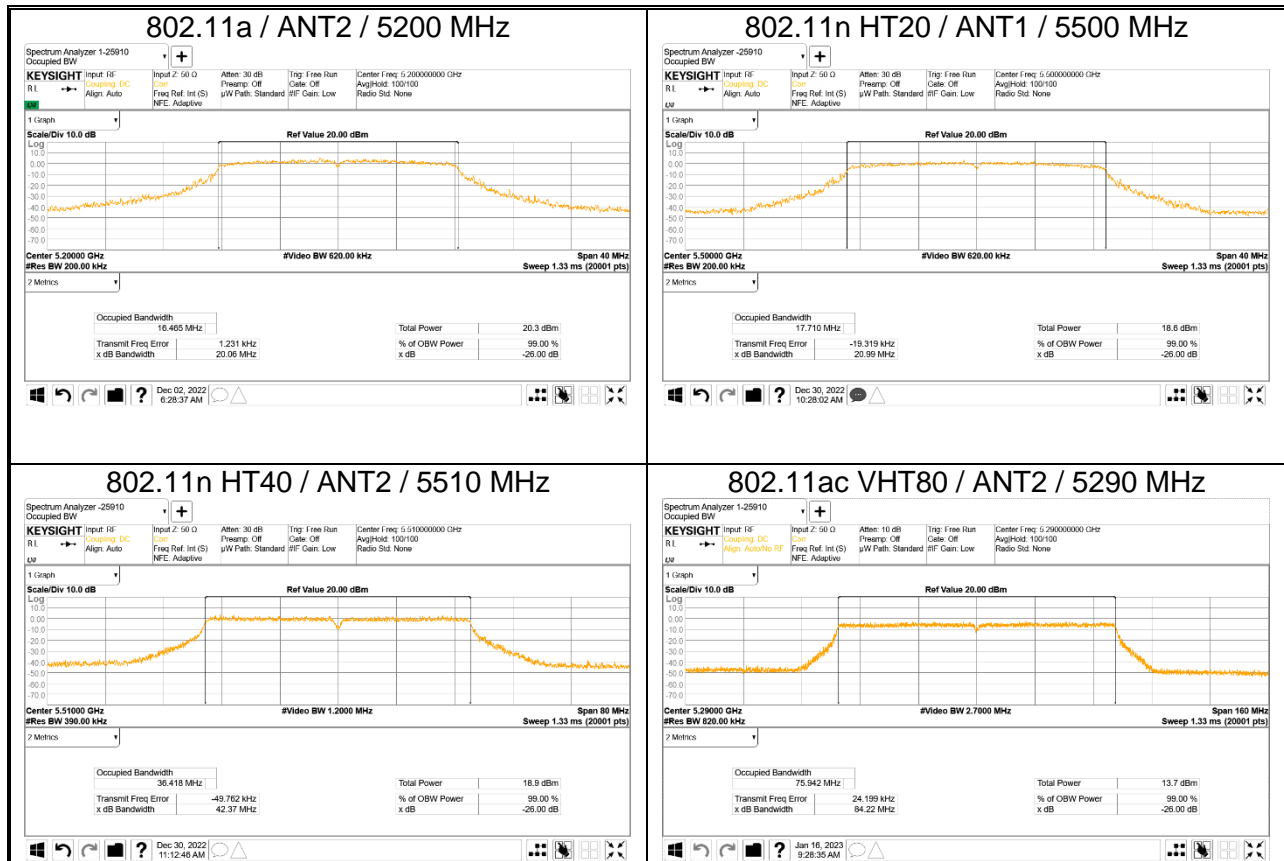
TEST PROCEDURE

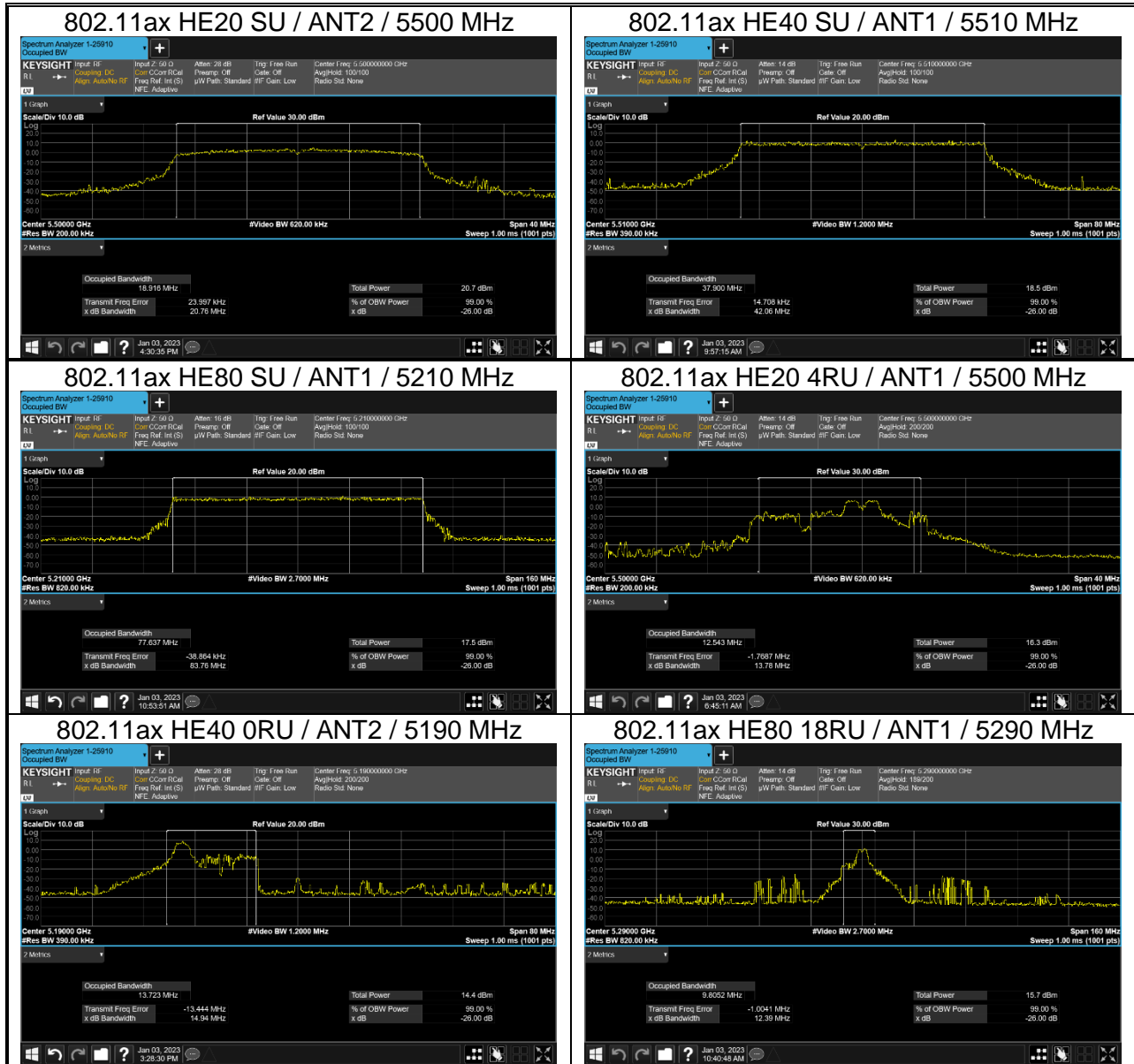
Reference to 789033 D02 General UNII Test Procedures New Rules v02r01: The transmitter output is connected to a spectrum analyzer with the RBW set to approximately 1% of EBW, the VBW > RBW, peak detector and max hold.

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	20.83	20.22	20.06	16.56	16.47
	40	5200	21.14	20.06		16.59	16.47
	48	5240	21.02	20.23		16.60	16.49
UNII-2A ^{Note}	52	5260	20.32	20.57	20.28	16.54	16.47
	60	5300	20.99	20.28		16.48	16.46
	64	5320	20.46	20.39		16.44	16.44
UNII-2C	100	5500	20.31	20.56	20.08		
	116	5580	20.16	20.33			
	140	5700	20.41	20.08			

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	22.74	22.65	22.08	17.74	17.79
	40	5200	22.13	23.71		17.82	17.84
	48	5240	23.52	22.08		17.97	17.67
UNII-2A ^{Note}	52	5260	22.99	22.62	21.13	17.70	17.69
	60	5300	21.31	21.90		17.79	17.73
	64	5320	21.96	21.13		17.68	17.76
UNII-2C	100	5500	20.99	21.83	21.55		
	116	5580	21.46	22.05			
	140	5700	21.74	21.55			

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	44.36	43.03	42.63	36.45	36.34
	46	5230	44.23	42.63		36.48	36.40
UNII-2A ^{Note}	54	5270	43.35	43.02	42.83	36.42	36.40
	62	5310	44.35	42.83		36.52	36.38
UNII-2C	102	5510	43.46	42.37	42.37		
	118	5590	45.05	42.79			
	134	5670	43.25	43.57			

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	84.54	85.30	84.54	75.96	75.92
UNII-2A ^{Note}	58	5290	84.83	84.22	84.22	75.93	75.94
UNII-2C	106	5530	86.80	85.11	85.11		
	122	5610	85.69	86.26			

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

9.3.5. 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	23.09	21.79	21.05	18.99	18.95
	40	5200	21.17	21.93		18.88	18.89
	48	5240	21.26	21.05		18.86	18.87
UNII-2A ^{Note}	52	5260	21.03	21.88	20.92	19.05	19.11
	60	5300	20.96	20.92		18.95	18.92
	64	5320	21.87	21.46		18.89	18.93
UNII-2C	100	5500	21.30	20.76	20.76		
	116	5580	21.48	21.47			
	140	5700	21.23	21.65			

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

9.3.6. 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	44.46	43.10	43.10	37.91	37.93
	46	5230	43.79	44.58		37.99	37.94
UNII-2A ^{Note}	54	5270	44.39	43.17	43.17	37.96	37.93
	62	5310	45.59	43.36		37.96	37.91
UNII-2C	102	5510	42.06	43.19	42.06		
	118	5590	45.00	42.94			
	134	5670	43.78	43.34			

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

9.3.7. 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	83.76	84.64	83.76	77.64	77.49
UNII-2A ^{Note}	58	5290	84.32	85.72	84.32	77.55	77.54
UNII-2C	106	5530	84.29	84.55	84.29		
	122	5610	84.87	85.68			

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

9.3.8. 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	15.24	5.04	15.12	4.86
802.11n HT20	Straddle	5720	15.92	5.52	15.86	6.06
802.11n HT40	Straddle	5710	37.00	6.64	36.02	6.94
802.11ac VHT80	Straddle	5690	77.48	7.52	77.78	7.42
802.11ax HE20(SU)	Straddle	5720	15.65	5.55	15.40	5.66
802.11ax HE40(SU)	Straddle	5710	36.79	7.47	36.16	6.67
802.11ax HE80(SU)	Straddle	5690	77.23	9.01	77.39	7.71

9.3.9. 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	19.42	19.63	17.34	18.00
			4	17.26	16.37	15.80	14.74
			8	18.14	19.04	16.59	17.12
	5200		0	18.87	14.45	17.28	13.09
			4	17.58	17.77	13.44	16.07
			8	19.01	19.95	17.41	18.10
	5240		0	19.70	19.23	18.35	17.79
			4	16.32	15.82	14.35	13.53
			8	19.18	19.64	17.88	17.93
UNII-2A ^{Note}	5260	26T	0	19.86	19.78	18.05	18.30
			4	17.86	17.18	15.03	13.24
			8	19.45	19.64	17.94	17.94
	5300		0	20.18	19.83	18.31	18.15
			4	16.02	17.84	12.97	14.83
			8	19.86	19.83	18.04	18.04
	5320		0	20.36	17.59	16.75	16.30
			4	17.21	15.44	15.00	13.91
			8	19.76	19.76	17.98	17.30
UNII-2C	5500	26T	0	19.88	19.69		
			4	13.78	16.88		
			8	17.44	19.99		
	5580		0	19.99	18.12		
			4	16.86	16.69		
			8	20.28	19.15		
	5700		0	19.02	19.68		
			4	15.43	16.19		
			8	18.90	19.96		

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

9.3.10. 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	21.69	14.94	19.02	13.72
			9	19.48	20.97	17.90	19.13
			17	21.45	21.77	18.93	18.27
	5230		0	19.30	20.68	16.92	18.85
			9	20.71	21.55	19.57	19.52
			17	21.17	16.76	18.84	14.10
UNII-2A ^{Note}	5270	26T	0	21.24	18.64	19.13	17.31
			9	21.34	21.67	19.52	19.31
			17	20.99	20.17	18.92	18.10
	5310		0	19.23	18.08	17.47	16.49
			9	20.57	21.34	17.71	18.69
			17	19.16	20.32	17.90	18.96
UNII-2C	5510	26T	0	20.56	20.74		
			9	20.30	16.45		
			17	19.93	20.07		
	5590		0	20.60	20.15		
			9	18.78	21.33		
			17	21.29	20.71		
	5670		0	21.37	20.58		
			9	21.79	16.21		
			17	20.24	17.91		

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

9.3.11. 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	21.68	22.34	19.08	19.45
			18	26.44	41.46	22.36	36.62
			36	21.29	17.26	19.22	14.49
UNII-2A ^{Note}	5290	26T	0	22.12	22.27	19.64	19.59
			18	12.39	38.13	9.81	36.30
			36	21.15	16.07	18.87	14.77
UNII-2C	5530	26T	0	18.71	22.56		
			18	36.62	37.21		
			36	21.78	19.66		
	5610		0	21.83	22.50		
			18	37.01	37.56		
			36	22.24	19.16		

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

9.3.12. 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	12.85	3.89	13.30	3.05
	HE40	5710		15	13.77	2.35	11.63	2.89
	HE80	5690		34	9.71	4.21	14.27	3.63

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.

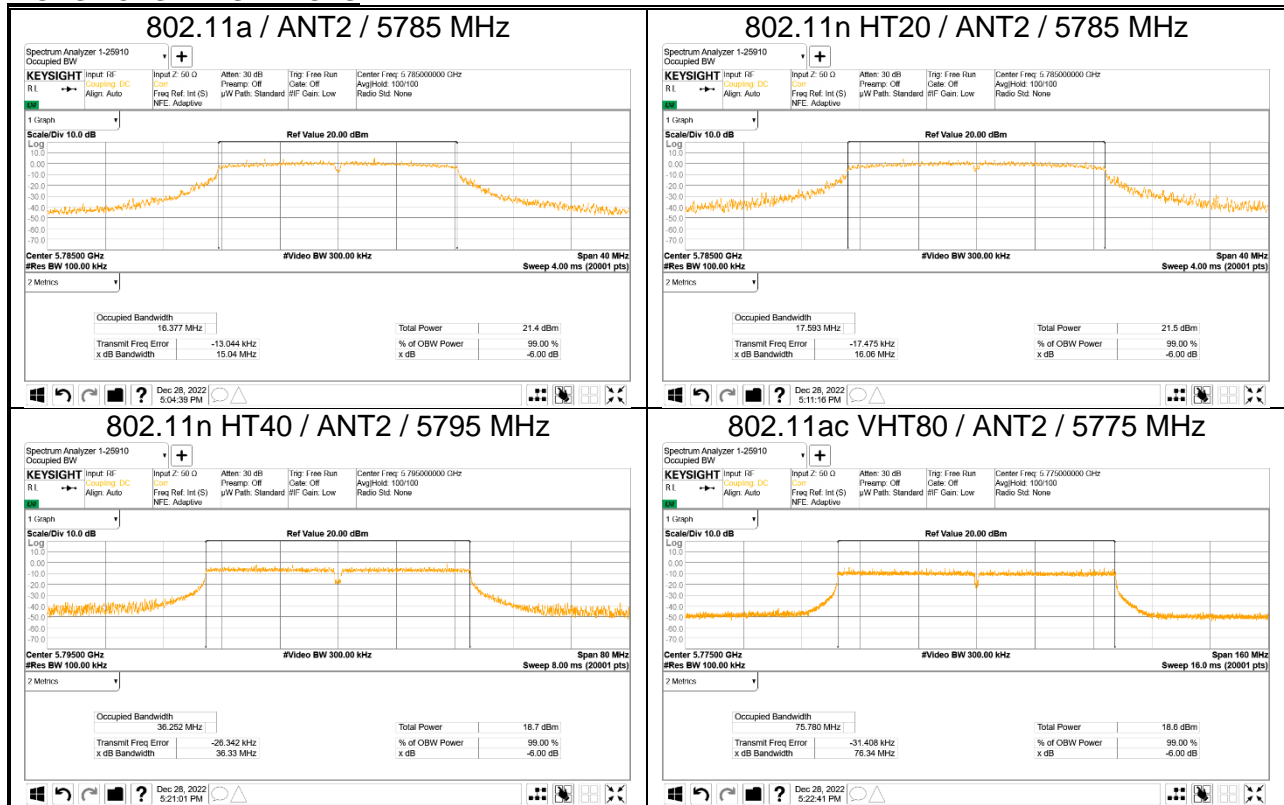
TEST PROCEDURE

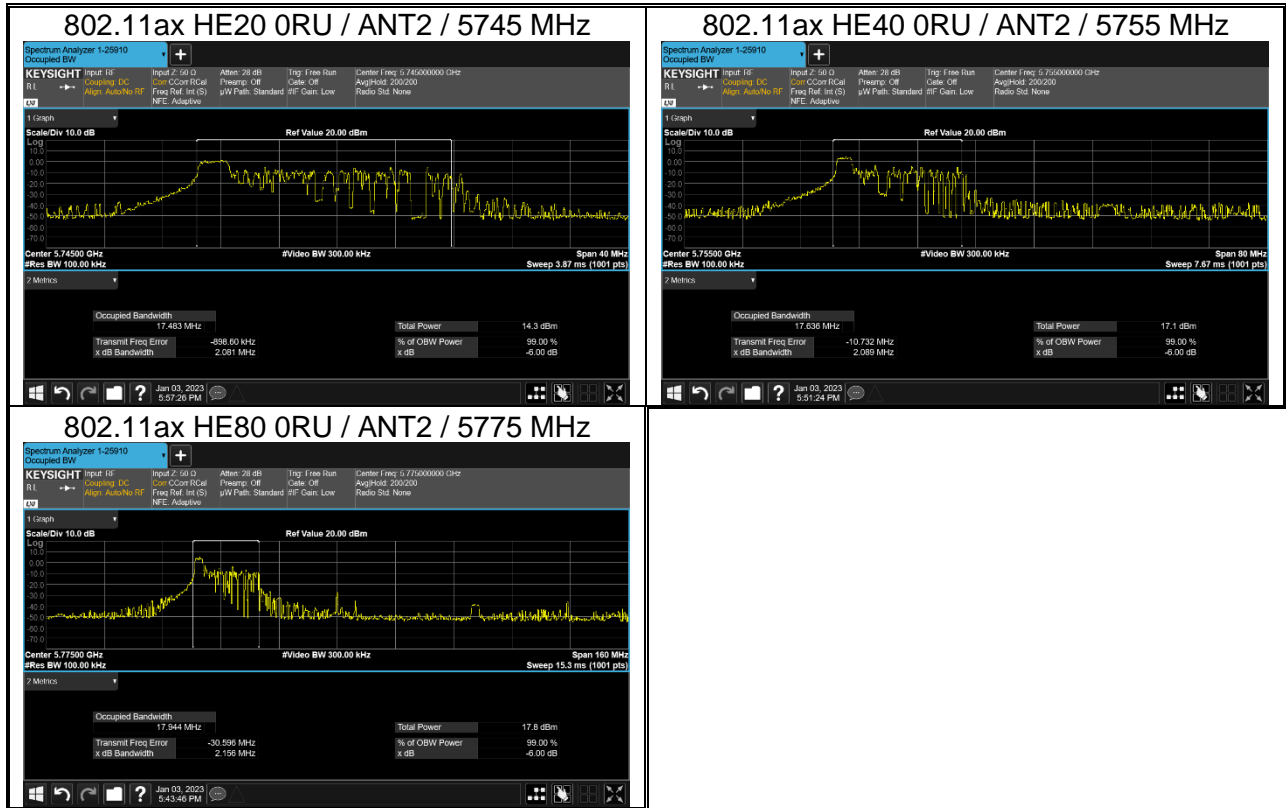
Reference to 789033 D02 General UNII Test Procedures New Rules v02r01: The transmitter output is connected to a spectrum analyzer with the RBW set to 100kHz, the VBW >= 3 x RBW, peak detector and max hold.

RESULTS

- Please refer to the next page

WORST CASE TEST PLOTS





10.1.1. UNII-3 BAND

Mode	Channel	Center Freq. [MHz]	6 dB BW [MHz]		Worst	Minimum Limit [MHz]
			ANT1	ANT2		
802.11a	149	5745	16.04	15.65	15.04	0.5
	157	5785	15.66	15.04		
	165	5825	15.09	15.64		
802.11n HT20	149	5745	17.56	17.56	16.06	
	157	5785	17.55	16.06		
	165	5825	16.50	17.18		
802.11n HT40	151	5755	36.34	36.39	36.33	
	159	5795	36.36	36.33		
802.11ac VHT80	155	5775	76.34	76.34	76.34	
802.11ax HE20(SU)	149	5745	18.47	16.81	14.93	
	157	5785	18.17	17.12		
	165	5825	14.93	18.62		
802.11ax HE40(SU)	151	5755	38.12	38.15	38.12	
	159	5795	38.17	38.12		
802.11ax HE80(SU)	155	5775	78.15	78.18	78.15	

10.1.2. UNII-3 BAND(RU)

Mode	Channel	Center Freq. [MHz]	Tones	RU offset	6 dB BW [MHz]		Minimum Limit [MHz]
					ANT1	ANT2	
HE20	149	5745	26T	0	10.85	2.08	0.5
	157	5785			12.04	14.50	
	165	5825			14.51	13.24	
Minimum 6dB Bandwidth					2.08		
HE40	151	5755	26T	0	2.13	2.09	
	159	5795			2.14	2.13	
	Minimum 6dB Bandwidth					2.09	
HE80	155	5775	26T	0	2.27	2.16	
	Minimum 6dB Bandwidth					2.16	

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.

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.

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	-3.08	-6.68	-1.68
UNII 2A 5250 - 5350	-3.55	-6.84	-2.03
UNII 2C 5470 - 5725	-4.09	-6.51	-2.21
UNII 3 5725 - 5850	-3.78	-5.37	-1.53

10.2.1. 802.11a MODE

Output Power Results

Band	Channel	Center Freq. [MHz]	Average Power [dBm]		Corr'd Power [dBm]	Limit [dBm]
			ANT1	ANT2		
UNII-1	36	5180	16.43	15.99	19.23	23.98
	40	5200	16.58	16.05	19.33	
	48	5240	16.62	15.83	19.25	
UNII-2A	52	5260	16.37	15.67	19.04	23.98
	60	5300	16.71	15.77	19.28	
	64	5320	15.49	14.79	18.16	
UNII-2C	100	5500	15.31	14.52	17.94	23.98
	116	5580	16.85	16.40	19.64	
	140	5700	10.29	10.74	13.53	
UNII-3	149	5745	16.45	16.71	19.59	30.00
	157	5785	16.40	16.80	19.61	
	165	5825	16.13	16.43	19.29	

* 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.	Corr'd PSD [dBm]	Limit [dBm/MHz]
			ANT1	ANT2			
UNII-1	36	5180	2.56	2.04	0.10	5.41	11.00
	40	5200	2.89	2.99	0.10	6.04	
	48	5240	2.50	2.93	0.10	5.83	
UNII-2A	52	5260	3.26	3.03	0.10	6.25	11.00
	60	5300	4.07	3.39	0.10	6.85	
	64	5320	2.36	2.56	0.10	5.57	
UNII-2C	100	5500	3.10	3.85	0.10	6.60	11.00
	116	5580	3.72	4.27	0.10	7.11	
	140	5700	-1.23	-0.03	0.10	2.52	
UNII-3	149	5745	1.87	2.11	0.10	5.10	30.00/500kHz
	157	5785	2.28	1.87	0.10	5.18	
	165	5825	2.35	1.24	0.10	4.93	

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

10.2.2. 802.11n HT20 MODE

Output Power Results

Band	Channel	Center Freq. [MHz]	Average Power [dBm]		Corr'd Power [dBm]	Limit [dBm]
			ANT1	ANT2		
UNII-1	36	5180	16.24	16.16	19.21	23.98
	40	5200	16.79	16.35	19.59	
	48	5240	16.39	15.97	19.20	
UNII-2A	52	5260	16.55	15.95	19.27	23.98
	60	5300	16.86	16.01	19.47	
	64	5320	15.17	14.79	17.99	
UNII-2C	100	5500	15.29	14.84	18.08	23.98
	116	5580	16.52	16.18	19.36	
	140	5700	10.34	10.63	13.50	
UNII-3	149	5745	15.99	16.58	19.31	30.00
	157	5785	16.16	16.65	19.42	
	165	5825	16.15	16.26	19.22	

* 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.	Corr'd PSD [dBm]	Limit [dBm/MHz]
			ANT1	ANT2			
UNII-1	36	5180	3.40	2.79	-	6.12	11.00
	40	5200	4.51	2.99	-	6.83	
	48	5240	4.22	2.30	-	6.37	
UNII-2A	52	5260	4.01	2.74	-	6.43	11.00
	60	5300	4.23	3.46	-	6.87	
	64	5320	2.57	2.42	-	5.50	
UNII-2C	100	5500	3.35	3.23	-	6.30	11.00
	116	5580	4.06	3.89	-	6.98	
	140	5700	0.05	-0.13	-	2.97	
UNII-3	149	5745	1.82	1.70	-	4.77	30.00/500kHz
	157	5785	1.62	1.57	-	4.61	
	165	5825	2.15	1.49	-	4.84	

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

10.2.3. 802.11n HT40 MODE

Output Power Results

Band	Channel	Center Freq. [MHz]	Average Power [dBm]		Corr'd Power [dBm]	Limit [dBm]
			ANT1	ANT2		
UNII-1	38	5190	13.47	13.24	16.37	23.98
	46	5230	13.43	12.90	16.18	
UNII-2A	54	5270	13.77	12.80	16.32	23.98
	62	5310	12.60	11.64	15.16	
UNII-2C	102	5510	13.72	13.44	16.59	23.98
	118	5590	13.60	13.42	16.52	
	134	5670	13.56	13.63	16.61	
UNII-3	151	5755	13.23	13.86	16.57	30.00
	159	5795	13.39	13.66	16.54	

* 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.	Corr'd PSD [dBm]	Limit [dBm/MHz]
			ANT1	ANT2			
UNII-1	38	5190	-0.89	-3.83	0.12	1.02	11.00
	46	5230	-0.33	-3.29	0.12	1.57	
UNII-2A	54	5270	0.11	-3.42	0.12	1.83	11.00
	62	5310	-1.05	-3.14	0.12	1.16	
UNII-2C	102	5510	0.33	-1.42	0.12	2.67	11.00
	118	5590	-1.13	-2.40	0.12	1.41	
	134	5670	-0.33	-1.13	0.12	2.42	
UNII-3	151	5755	-3.62	-2.40	0.12	0.16	30.00/500kHz
	159	5795	-4.18	-3.33	0.12	-0.60	

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

10.2.4. 802.11ac VHT80 MODE

Output Power Results

Band	Channel	Center Freq. [MHz]	Average Power [dBm]		Corr'd Power [dBm]	Limit [dBm]
			ANT1	ANT2		
UNII-1	42	5210	11.95	11.35	14.67	23.98
UNII-2A	58	5290	12.28	11.18	14.78	23.98
UNII-2C	106	5530	12.21	11.56	14.91	23.98
	122	5610	11.78	11.54	14.67	
UNII-3	155	5775	11.48	12.48	14.99	30.00

* 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.	Corr'd PSD [dBm]	Limit [dBm/MHz]
			ANT1	ANT2			
UNII-1	38	5190	-6.71	-9.18	0.23	-4.54	11.00
UNII-2A	54	5270	-6.05	-8.51	0.23	-3.87	11.00
UNII-2C	102	5510	-5.93	-6.68	0.23	-3.05	11.00
	134	5670	-6.54	-7.94	0.23	-3.94	
UNII-3	151	5755	-9.26	-8.29	0.23	-5.51	30.00/500kHz

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

10.2.5. 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	15.02	16.56	0.10	18.96	22.80
	UNII-3		7.50	8.93	0.10	11.38	30.00
802.11n HT20	UNII-2C	5720	15.37	16.74	-	19.12	23.00
	UNII-3		7.86	9.90	-	12.01	30.00
802.11n HT40	UNII-2C	5710	13.17	14.15	0.12	16.82	23.98
	UNII-3		2.86	4.88	0.12	7.12	30.00
802.11ac VHT80	UNII-2C	5690	9.35	9.03	0.23	12.43	23.98
	UNII-3		-4.10	-4.83	0.23	-1.22	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	5.15	6.20	0.10	8.81	11.00
	UNII-3		0.34	1.32	0.10	3.97	30.00/500kHz
802.11n HT20	UNII-2C	5720	5.13	4.78	-	7.97	11.00
	UNII-3		0.20	0.28	-	3.25	30.00/500kHz
802.11n HT40	UNII-2C	5710	-0.59	-1.17	0.12	2.26	11.00
	UNII-3		-5.37	-5.55	0.12	-2.33	30.00/500kHz
802.11ac VHT80	UNII-2C	5690	-7.81	-9.34	0.23	-5.27	11.00
	UNII-3		-12.54	-13.34	0.23	-9.68	30.00/500kHz

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

10.2.6. 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	6.19	5.80	9.01	23.98
				4	9.61	9.30	12.47	
				8	5.90	5.10	8.53	
			52T	37	7.18	6.62	9.92	
				38	9.23	8.78	12.02	
				40	6.86	6.19	9.55	
			106T	53	8.11	7.74	10.94	
				54	8.18	7.68	10.95	
			SU	-	16.21	15.80	19.02	
	40	5200	26T	0	6.13	5.49	8.83	
				4	9.53	8.82	12.20	
				8	5.72	4.96	8.37	
			52T	37	7.58	6.94	10.28	
				38	9.46	8.82	12.16	
				40	7.67	6.80	10.27	
			106T	53	8.58	7.99	11.31	
				54	8.36	8.06	11.22	
			SU	-	16.59	15.76	19.21	
	48	5240	26T	0	6.18	5.38	8.81	
				4	9.81	8.73	12.31	
				8	6.19	5.29	8.77	
			52T	37	7.27	6.08	9.73	
				38	9.29	8.23	11.80	
				40	7.41	6.12	9.82	
			106T	53	8.25	7.41	10.86	
				54	8.48	7.21	10.90	
			SU	-	16.18	15.35	18.80	

* 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	6.55	5.70	9.16	22.89
				4	9.66	8.67	12.20	
				8	6.12	5.16	8.68	
			52T	37	7.32	6.44	9.91	
				38	9.30	8.61	11.98	
				40	6.96	6.26	9.63	
			106T	53	8.36	7.72	11.06	
				54	8.28	7.33	10.84	
			SU	-	16.39	15.50	18.98	
	60	5300	26T	0	6.11	5.38	8.77	
				4	9.69	8.72	12.24	
				8	6.35	5.19	8.82	
			52T	37	7.49	6.75	10.15	
				38	9.67	8.56	12.16	
				40	7.66	6.69	10.21	
			106T	53	8.77	8.05	11.44	
				54	8.80	7.84	11.36	
			SU	-	16.55	15.63	19.12	
	64	5320	26T	0	6.22	5.39	8.84	
				4	9.60	8.73	12.20	
				8	6.20	5.30	8.78	
			52T	37	7.50	6.85	10.20	
				38	9.44	8.78	12.13	
				40	7.34	6.66	10.02	
106T			53	8.51	8.20	11.37		
			54	8.72	8.03	11.40		
SU			-	15.28	14.83	18.07		

* 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	6.13	5.67	8.92	22.39
				4	9.67	9.21	12.46	
				8	6.34	5.57	8.98	
			52T	37	7.19	6.66	9.94	
				38	9.25	8.68	11.98	
				40	7.24	6.57	9.93	
			106T	53	8.47	7.86	11.19	
				54	8.42	7.91	11.18	
			SU	-	15.47	14.85	18.18	
	116	5580	26T	0	6.24	5.83	9.05	
				4	9.73	9.38	12.57	
				8	6.26	5.77	9.03	
			52T	37	7.27	6.92	10.11	
				38	9.07	8.87	11.98	
				40	7.29	6.94	10.13	
			106T	53	8.13	7.84	11.00	
				54	8.38	8.07	11.24	
			SU	-	16.07	15.83	18.96	
	140	5700	26T	0	5.77	6.04	8.92	
				4	9.37	9.28	12.34	
				8	5.76	6.03	8.91	
			52T	37	7.22	7.35	10.30	
				38	9.08	9.23	12.17	
				40	7.17	7.29	10.24	
			106T	53	8.33	8.48	11.42	
				54	8.46	8.59	11.54	
			SU	-	10.02	9.93	12.99	

* 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	5.85	6.61	9.26	30.00
				4	9.34	9.66	12.51	
				8	5.59	6.33	8.99	
			52T	37	7.50	7.82	10.67	
				38	9.36	9.74	12.56	
				40	7.26	7.56	10.42	
			106T	53	7.96	8.44	11.22	
				54	8.18	8.40	11.30	
			SU	-	16.15	16.65	19.42	
	157	5785	26T	0	5.88	6.41	9.16	
				4	9.41	9.91	12.68	
				8	5.77	6.38	9.10	
			52T	37	6.82	7.46	10.16	
				38	8.89	9.53	12.23	
				40	6.73	7.07	9.91	
			106T	53	7.85	8.66	11.28	
				54	7.75	8.43	11.11	
			SU	-	15.72	16.41	19.09	
	165	5825	26T	0	5.58	6.02	8.82	
				4	9.16	9.56	12.37	
				8	5.71	5.92	8.83	
			52T	37	7.23	7.51	10.38	
				38	9.21	9.39	12.31	
				40	7.07	7.33	10.21	
106T			53	8.39	8.57	11.49		
			54	8.33	8.61	11.48		
SU			-	15.78	15.84	18.82		

* 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]	Tones	RU offset	Meas PSD [dBm/MHz]		Corr'd PSD [dBm/MHz]	PSD Limit [dBm/MHz]
					ANT1	ANT2		
UNII-1	36	5180	26T	0	3.79	3.20	6.51	11.00
				4	6.06	5.37	8.74	
				8	3.58	3.06	6.34	
			SU	-	5.71	4.81	8.29	
	40	5200	26T	0	3.76	2.92	6.37	
				4	6.35	5.89	9.14	
				8	3.91	3.52	6.73	
			SU	-	6.11	5.53	8.84	
	48	5240	26T	0	3.88	3.07	6.50	
				4	6.42	5.58	9.03	
				8	3.91	3.23	6.59	
			SU	-	5.61	4.71	8.20	
UNII-2A	52	5260	26T	0	3.58	2.70	6.17	11.00
				4	6.40	5.43	8.95	
				8	4.14	3.39	6.79	
			SU	-	5.90	4.49	8.26	
	60	5300	26T	0	4.27	2.87	6.64	
				4	6.50	5.35	8.98	
				8	4.00	3.03	6.55	
			SU	-	6.09	5.05	8.61	
	64	5320	26T	0	3.77	2.94	6.39	
				4	5.94	5.37	8.67	
				8	3.72	2.67	6.23	
			SU	-	4.62	3.14	6.95	
UNII-2C	100	5500	26T	0	4.07	3.28	6.70	11.00
				4	6.45	5.81	9.15	
				8	4.18	3.31	6.78	
			SU	-	5.16	4.15	7.69	
	116	5580	26T	0	3.56	2.28	5.97	
				4	6.34	5.44	8.93	
				8	3.47	2.61	6.07	
			SU	-	5.31	4.38	7.88	
	140	5700	26T	0	3.33	2.85	6.11	
				4	6.24	5.62	8.95	
				8	3.90	3.60	6.77	
			SU	-	5.47	5.27	8.38	

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

Band	Channel	Center Freq. [MHz]	Tones	RU offset	Meas PSD [dBm/MHz]		Corr'd PSD [dBm/MHz]	PSD Limit [dBm/MHz]
					ANT1	ANT2		
UNII-3	149	5745	26T	0	1.15	1.40	4.29	30.00 /500kHz
				4	4.22	4.73	7.50	
				8	1.24	1.50	4.38	
			SU	-	2.97	3.06	6.02	
	157	5785	26T	0	1.04	1.20	4.13	
				4	3.97	4.52	7.26	
				8	0.86	1.32	4.11	
			SU	-	2.45	2.58	5.52	
	165	5825	26T	0	0.29	0.39	3.35	
				4	3.35	3.49	6.43	
				8	0.41	0.77	3.61	
			SU	-	1.80	1.92	4.87	

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

10.2.7. 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	8.90	8.92	11.92	23.98
				9	8.52	8.53	11.54	
				17	8.23	8.12	11.19	
			52T	37	9.26	9.10	12.19	
				41	8.42	8.44	11.44	
				44	8.22	8.08	11.16	
			106T	53	8.81	8.90	11.87	
				54	8.72	8.50	11.62	
				56	8.42	8.10	11.27	
			242T	61	8.61	8.68	11.66	
				62	8.15	8.08	11.13	
			SU	-	13.60	13.24	16.43	
	46	5230	26T	0	8.30	8.31	11.32	
				9	8.70	8.20	11.47	
				17	8.80	8.21	11.53	
			52T	37	8.65	8.30	11.49	
				41	8.68	8.10	11.41	
				44	8.81	8.17	11.51	
			106T	53	8.70	8.30	11.51	
				54	8.60	8.15	11.39	
				56	8.72	8.16	11.46	
			242T	61	8.50	8.11	11.32	
				62	8.48	8.12	11.31	
			SU	-	13.40	13.12	16.27	

* 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	9.42	9.01	12.23	23.57
				9	8.90	8.22	11.58	
				17	8.62	8.12	11.39	
			52T	37	9.40	9.12	12.27	
				41	8.90	8.45	11.69	
				44	8.60	8.10	11.37	
			106T	53	9.36	8.78	12.09	
				54	8.90	8.55	11.74	
				56	8.60	8.11	11.37	
			242T	61	8.90	8.61	11.77	
				62	8.52	8.10	11.33	
			SU	-	13.45	13.19	16.33	
	62	5310	26T	0	9.25	8.94	12.11	
				9	9.20	8.80	12.01	
				17	9.32	8.91	12.13	
			52T	37	9.06	8.77	11.93	
				41	9.10	8.79	11.96	
				44	9.15	8.70	11.94	
			106T	53	9.04	8.76	11.91	
				54	9.13	8.80	11.98	
				56	9.32	8.90	12.13	
			242T	61	8.96	8.60	11.79	
				62	9.05	8.70	11.89	
			SU	-	12.74	11.69	15.26	

* 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	9.25	9.26	12.27	23.10
				9	9.14	9.18	12.17	
				17	9.22	9.24	12.24	
			52T	37	9.48	9.31	12.41	
				41	9.24	9.05	12.16	
				44	9.40	9.16	12.29	
			106T	53	9.41	9.19	12.31	
				54	9.26	9.05	12.17	
				56	9.27	9.09	12.19	
	242T	61	9.07	9.08	12.09			
		62	8.90	8.91	11.92			
	SU	-	13.51	13.19	16.36			
	118	5590	26T	0	9.11	8.92	12.03	
				9	8.94	8.91	11.94	
				17	9.01	9.28	12.16	
			52T	37	9.05	9.28	12.18	
				41	8.86	9.11	12.00	
				44	9.03	9.24	12.15	
			106T	53	8.90	9.15	12.04	
				54	8.89	8.71	11.81	
				56	9.04	8.98	12.02	
	242T	61	8.86	8.78	11.83			
		62	8.81	9.09	11.96			
	SU	-	13.32	13.30	16.32			
	134	5670	26T	0	8.90	9.42	12.18	
				9	8.91	9.35	12.15	
				17	8.90	9.42	12.18	
52T			37	9.11	9.35	12.24		
			41	8.70	9.50	12.13		
			44	9.00	9.49	12.26		
106T			53	9.05	9.52	12.30		
			54	9.01	9.42	12.23		
			56	8.91	9.41	12.18		
242T	61	8.90	9.31	12.12				
	62	8.81	9.22	12.03				
SU	-	13.05	13.61	16.35				

* 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	8.76	9.78	12.31	30.00
				9	8.50	9.42	11.99	
				17	8.42	9.31	11.90	
			52T	37	8.80	9.74	12.31	
				41	8.36	9.61	12.04	
				44	8.38	9.55	12.01	
			106T	53	8.65	9.90	12.33	
				54	8.40	9.70	12.11	
				56	8.30	9.54	11.97	
			242T	61	8.41	9.61	12.06	
				62	8.16	9.39	11.83	
			SU	-	12.84	13.72	16.31	
	159	5795	26T	0	8.90	9.58	12.26	
				9	8.72	9.35	12.06	
				17	8.70	9.31	12.03	
			52T	37	8.98	9.62	12.32	
				41	8.69	9.26	11.99	
				44	8.65	9.25	11.97	
			106T	53	8.90	9.58	12.26	
				54	8.72	9.32	12.04	
				56	8.71	9.26	12.00	
			242T	61	8.38	9.28	11.86	
				62	8.48	9.03	11.77	
			SU	-	13.01	13.65	16.35	

* 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]	Tones	RU offset	Meas PSD [dBm/MHz]		Corr'd PSD [dBm/MHz]	PSD Limit [dBm/MHz]	
					ANT1	ANT2			
UNII-1	38	5190	26T	0	2.87	3.35	6.13	11.00	
				9	3.09	3.63	6.38		
				17	3.77	3.47	6.63		
	46	5230	26T	SU	-	-3.53	-4.00		-0.64
				0	3.19	3.17	6.19		
				9	3.47	3.23	6.36		
17	4.05	3.54	6.81						
SU	-	-3.00	-3.86	-0.29					
UNII-2A	54	5270	26T	0	3.39	3.56	6.49	11.00	
				9	4.15	4.45	7.31		
				17	4.72	4.55	7.64		
	62	5310	26T	SU	-	-2.90	-3.48		-0.06
				0	4.09	4.29	7.20		
				9	4.23	4.30	7.27		
17	4.70	4.60	7.66						
SU	-	-3.28	-3.81	-0.42					
UNII-2C	102	5510	26T	0	2.95	3.98	6.51	11.00	
				9	3.59	4.29	6.97		
				17	4.51	4.71	7.62		
	118	5590	26T	SU	-	-3.30	-3.59		-0.33
				0	3.07	3.30	6.20		
				9	2.92	3.22	6.08		
	17	3.88	3.89	6.90					
	SU	-	-3.96	-4.53	-1.12				
	134	5670	26T	0	3.12	3.46	6.30		
9				2.79	3.81	6.34			
17				3.67	4.35	7.04			
SU	-	-4.57	-4.31	-1.32					
UNII-3	151	5755	26T	0	0.63	2.34	4.57	30.00 /500kHz	
				9	1.40	2.26	4.86		
				17	1.15	2.61	4.95		
	159	5795	26T	SU	-	-6.42	-6.15		-3.16
				0	1.26	2.11	4.72		
				9	0.97	1.59	4.30		
17	1.20	1.61	4.42						
SU	-	-6.34	-6.57	-3.33					

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

10.2.8. 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	9.42	9.58	12.51	23.98
				18	8.61	8.43	11.53	
				36	7.96	7.62	10.80	
			52T	37	9.52	9.54	12.54	
				45	8.61	8.19	11.42	
				52	8.25	7.61	10.95	
			106T	53	9.30	9.26	12.29	
				57	8.51	8.09	11.32	
				60	7.80	7.54	10.68	
			242T	61	9.15	9.04	12.11	
				62	8.60	8.41	11.52	
				64	7.70	7.55	10.64	
			484T	65	9.21	9.02	12.13	
				66	8.35	8.12	11.25	
			SU	-	11.48	11.10	14.30	
UNII-2A	58	5290	26T	0	8.90	8.25	11.60	21.93
				18	9.01	8.16	11.62	
				36	9.42	8.40	11.95	
			52T	37	9.02	8.14	11.61	
				45	9.01	8.15	11.61	
				52	9.33	8.34	11.87	
			106T	53	8.76	8.09	11.45	
				57	8.89	8.05	11.50	
				60	9.16	8.15	11.69	
			242T	61	8.91	8.22	11.59	
				62	8.85	8.06	11.48	
				64	9.01	8.06	11.57	
			484T	65	9.02	8.26	11.67	
				66	9.15	8.22	11.72	
			SU	-	11.76	11.07	14.44	

* 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-2C	106	5530	26T	0	9.11	8.64	11.89	23.72
				18	8.70	8.51	11.62	
				36	9.21	8.80	12.02	
			52T	37	8.90	8.60	11.76	
				45	8.80	8.59	11.71	
				52	9.10	8.91	12.02	
			106T	53	8.72	8.46	11.60	
				57	8.81	8.61	11.72	
				60	8.84	8.76	11.81	
			242T	61	9.08	8.61	11.86	
				62	8.80	8.60	11.71	
				64	9.01	8.53	11.79	
	484T	65	9.11	8.90	12.02			
		66	9.08	8.62	11.87			
	SU	-	11.26	11.01	14.15			
	122	5610	26T	0	8.60	8.29	11.46	
				18	8.50	8.66	11.59	
				36	8.80	9.01	11.92	
			52T	37	8.32	8.51	11.43	
				45	8.33	8.52	11.44	
				52	8.80	8.88	11.85	
			106T	53	8.26	8.40	11.34	
				57	8.50	8.48	11.50	
				60	8.66	8.68	11.68	
242T			61	8.31	8.36	11.35		
			62	8.56	8.60	11.59		
			64	8.40	8.33	11.38		
484T	65	8.60	8.63	11.63				
	66	8.71	8.87	11.80				
SU	-	11.20	11.04	14.13				

* 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	8.81	9.56	12.21	30.00
				18	8.33	9.20	11.80	
				36	8.30	9.37	11.88	
			52T	37	8.80	9.81	12.34	
				45	8.42	9.26	11.87	
				52	8.46	9.24	11.88	
			106T	53	8.73	9.54	12.16	
				57	8.01	9.23	11.67	
				60	8.05	9.02	11.57	
			242T	61	8.41	8.37	11.40	
				62	8.46	9.13	11.82	
				64	8.05	8.66	11.38	
			484T	65	8.69	9.22	11.97	
				66	8.30	9.12	11.74	
			SU	-	10.56	11.32	13.97	

* 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]	Tones	RU offset	Meas PSD [dBm/MHz]		Corr'd PSD [dBm/MHz]	PSD Limit [dBm/MHz]
					ANT1	ANT2		
UNII-1	42	5210	26T	0	5.50	5.09	8.31	11.00
				18	3.74	3.75	6.75	
				36	4.11	3.07	6.63	
			SU	-	-6.40	-7.80	-3.81	
UNII-2A	58	5290	26T	0	4.55	3.60	7.11	11.00
				18	4.25	3.23	6.78	
				36	5.49	4.43	8.00	
			SU	-	-6.00	-7.26	-3.36	
UNII-2C	106	5530	26T	0	5.04	3.94	7.53	11.00
				18	4.17	3.43	6.82	
				36	5.24	4.97	8.12	
			SU	-	-7.16	-7.49	-4.09	
	122	5610	26T	0	4.14	3.88	7.02	
				18	3.12	2.53	5.84	
				36	4.93	4.50	7.73	
			SU	-	-7.56	-7.63	-4.37	
UNII-3	155	5775	26T	0	2.38	2.32	5.36	30.00 /500kHz
				18	2.30	2.03	5.18	
				36	2.26	2.39	5.34	
			SU	-	-10.48	-10.16	-7.08	

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

10.2.9. 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	15.58	15.44	18.52	22.88
	UNII-3					30.00
HE40	UNII-2C	5710	12.90	13.29	16.11	23.98
	UNII-3					30.00
HE80	UNII-2C	5690	11.40	11.13	14.28	23.98
	UNII-3					30.00

* Calculation of Output Power : Corr'd Power = Ant1 meas. Power + Ant2 meas. Power + Duty CF [dB]
 Note. 11ax HE20, 40, 80's total power satisfies all the limits of UNII-2C & 3.

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	1.21	2.23	-	4.76	11.00
	UNII-3		-2.81	-2.15	-	0.55	30.00/500kHz
HE40	UNII-2C	5710	-2.10	-1.25	0.11	1.47	11.00
	UNII-3		-5.08	-4.64	0.11	-1.73	30.00/500kHz
HE80	UNII-2C	5690	-7.49	-7.12	0.22	-4.07	11.00
	UNII-3		-9.41	-9.30	0.22	-6.13	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)	7.48	7.49	10.49	22.09
	UNII-3		0.85	0.77	3.82	30.00
HE40	UNII-2C	5710 (15RU)	6.36	6.85	9.62	21.66
	UNII-3		-7.51	-6.80	-4.13	30.00
HE80	UNII-2C	5690 (34RU)	8.01	7.95	10.99	20.87
	UNII-3		-5.60	-5.98	-2.78	30.00

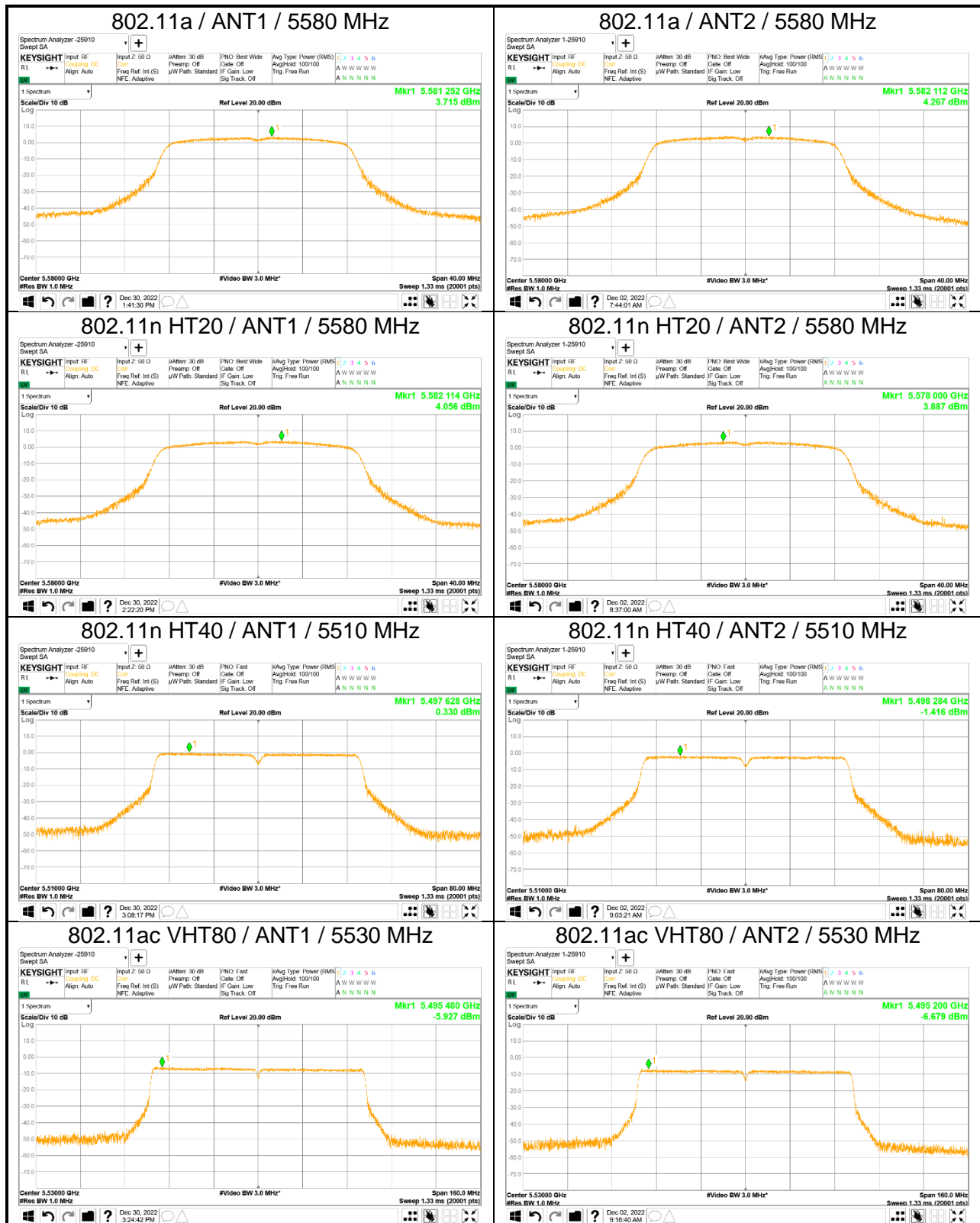
* Calculation of Output Power : Corr'd Power = Ant1 meas. Power + Ant2 meas. Power + Duty CF [dB]

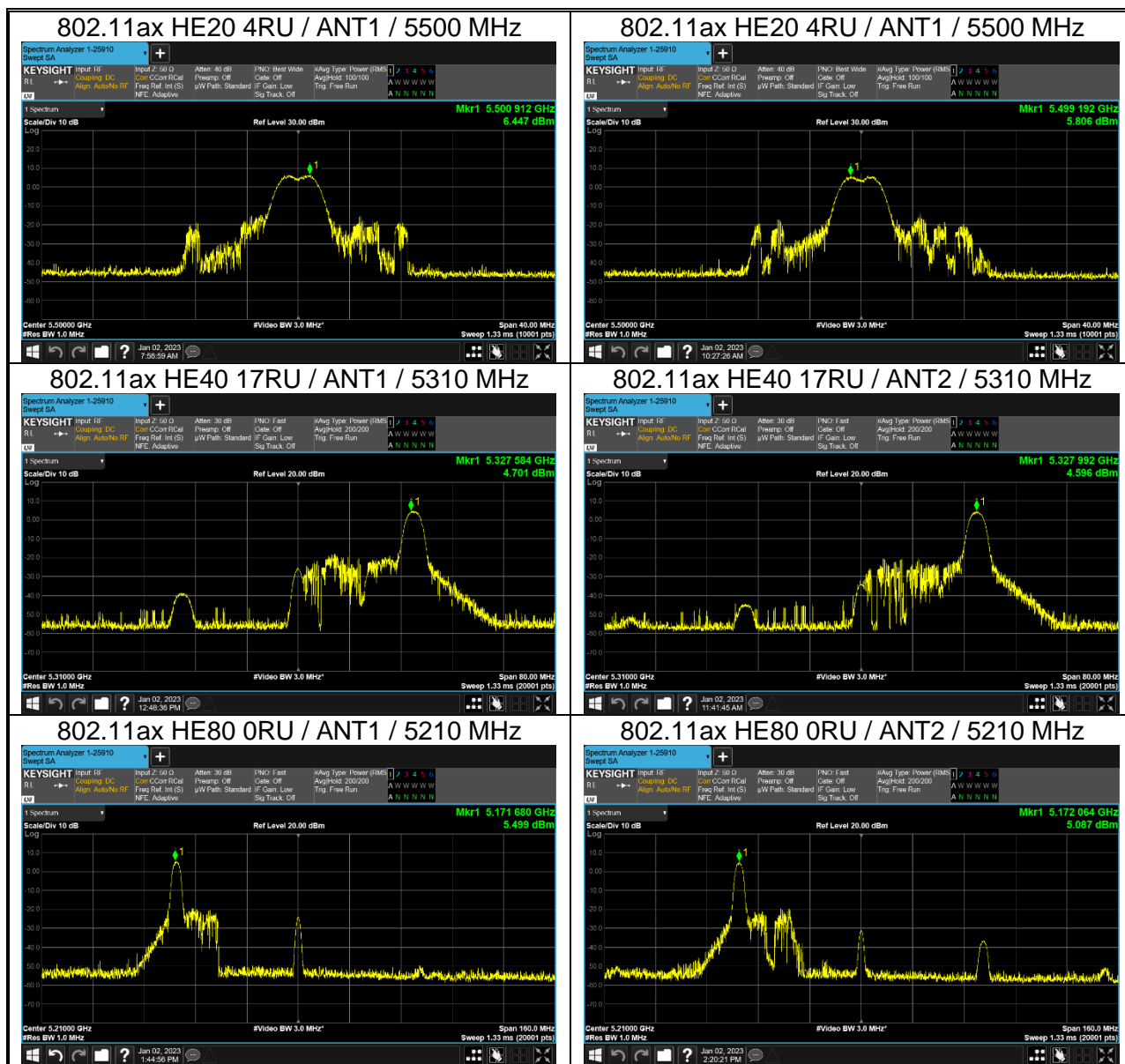
PSD Results(RU)

Mode	Band	Center Freq. [MHz]	Meas PSD [dBm/MHz]		DCCF.	Corr'd PSD [dBm]	Limit [dBm/MHz]
			ANT1	ANT2			
HE20	UNII-2C	5720 (6RU)	6.157	6.63	-	9.41	11.00
	UNII-3		2.531	2.431	-	5.49	30.00/500kHz
HE40	UNII-2C	5710 (15RU)	3.224	3.825	-	6.55	11.00
	UNII-3		3.389	3.897	-	6.66	30.00/500kHz
HE80	UNII-2C	5690 (34RU)	2.363	1.953	-	5.17	11.00
	UNII-3		3.773	3.264	-	6.54	30.00/500kHz

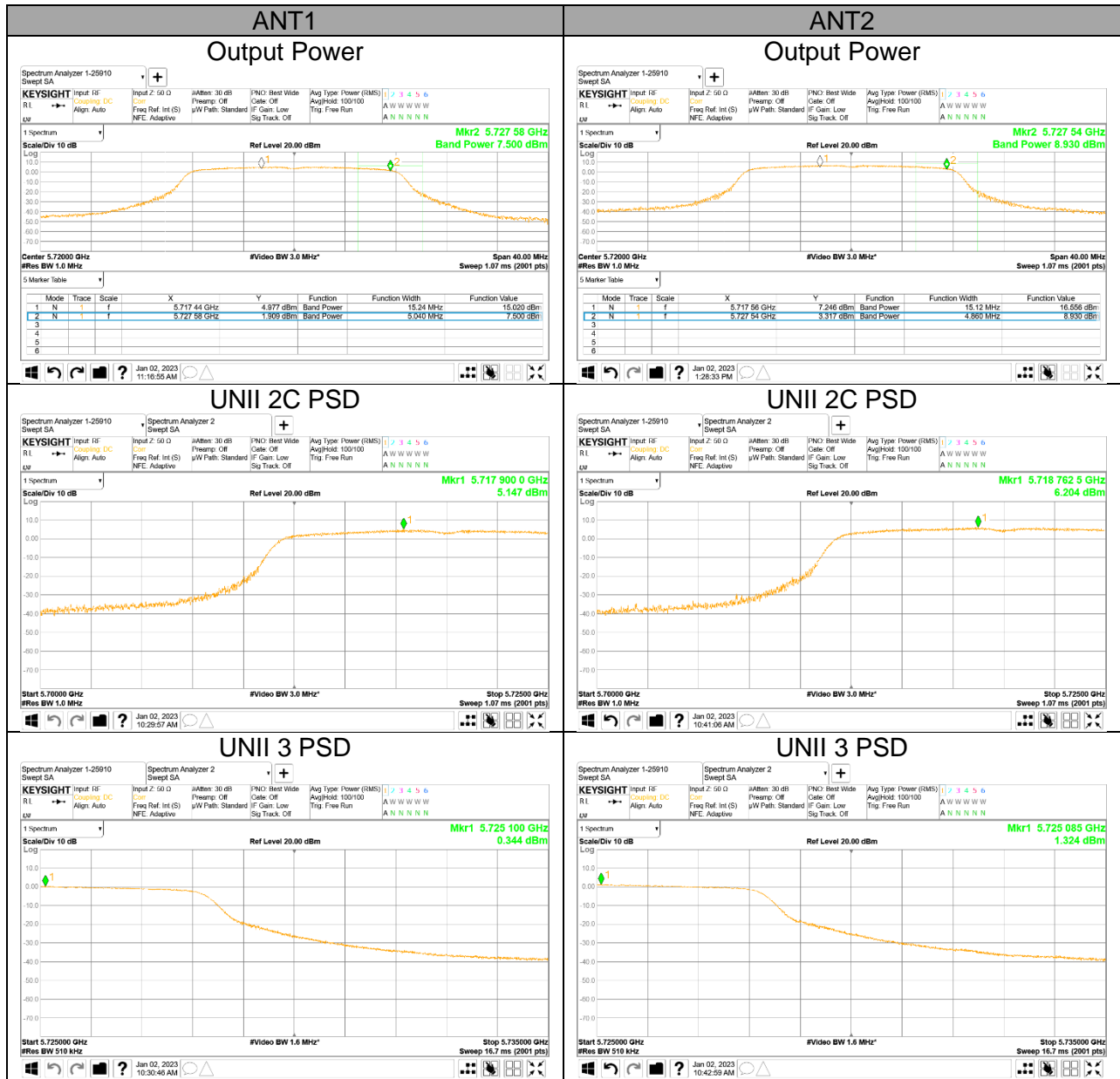
* Calculation of PSD: Corr'd PSD = Ant1 PSD + Ant2 PSD + Duty CF [dB]

10.2.10. OUTPUT POWER AND PPSD PLOTS(WORST CASE)

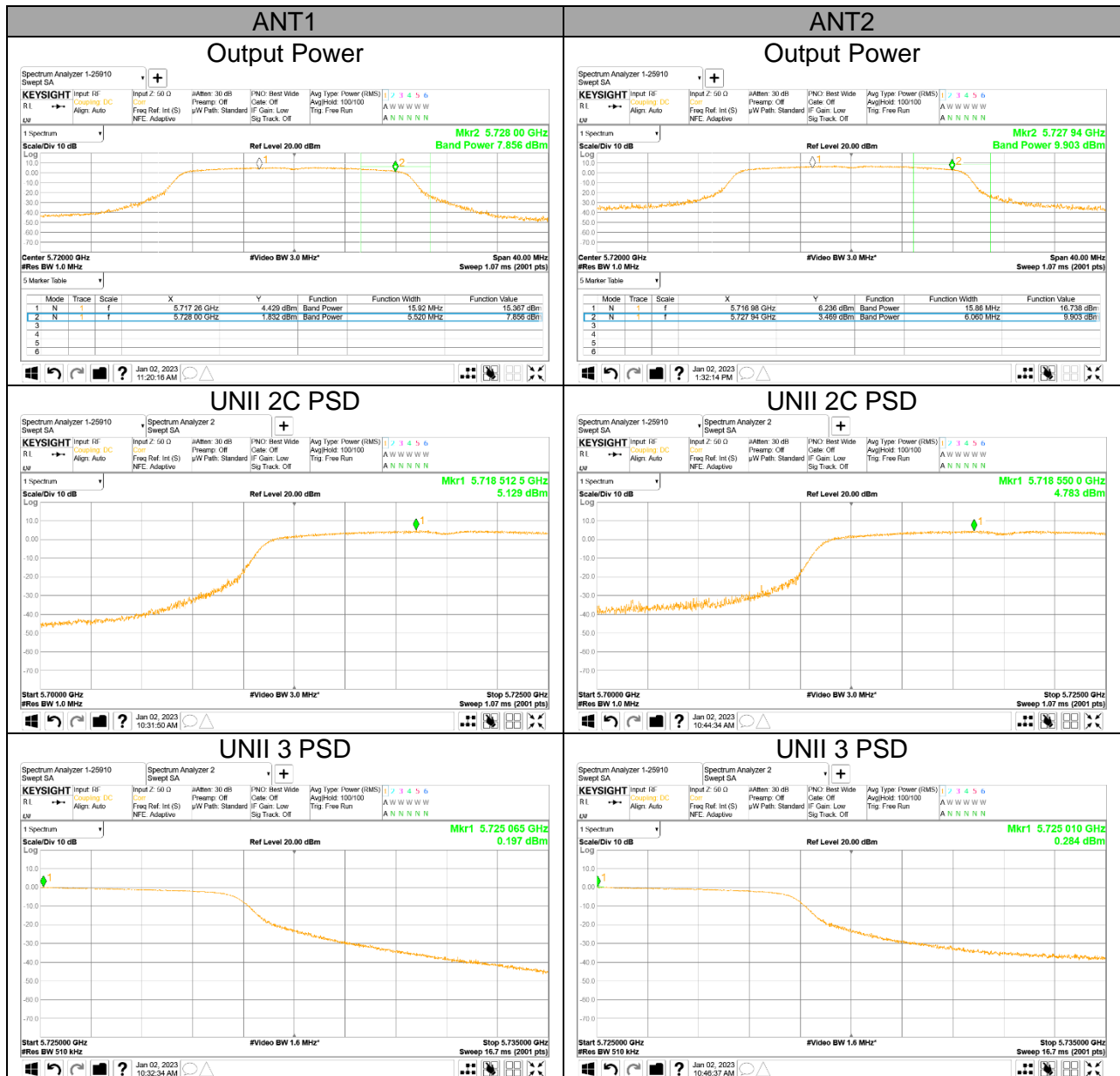




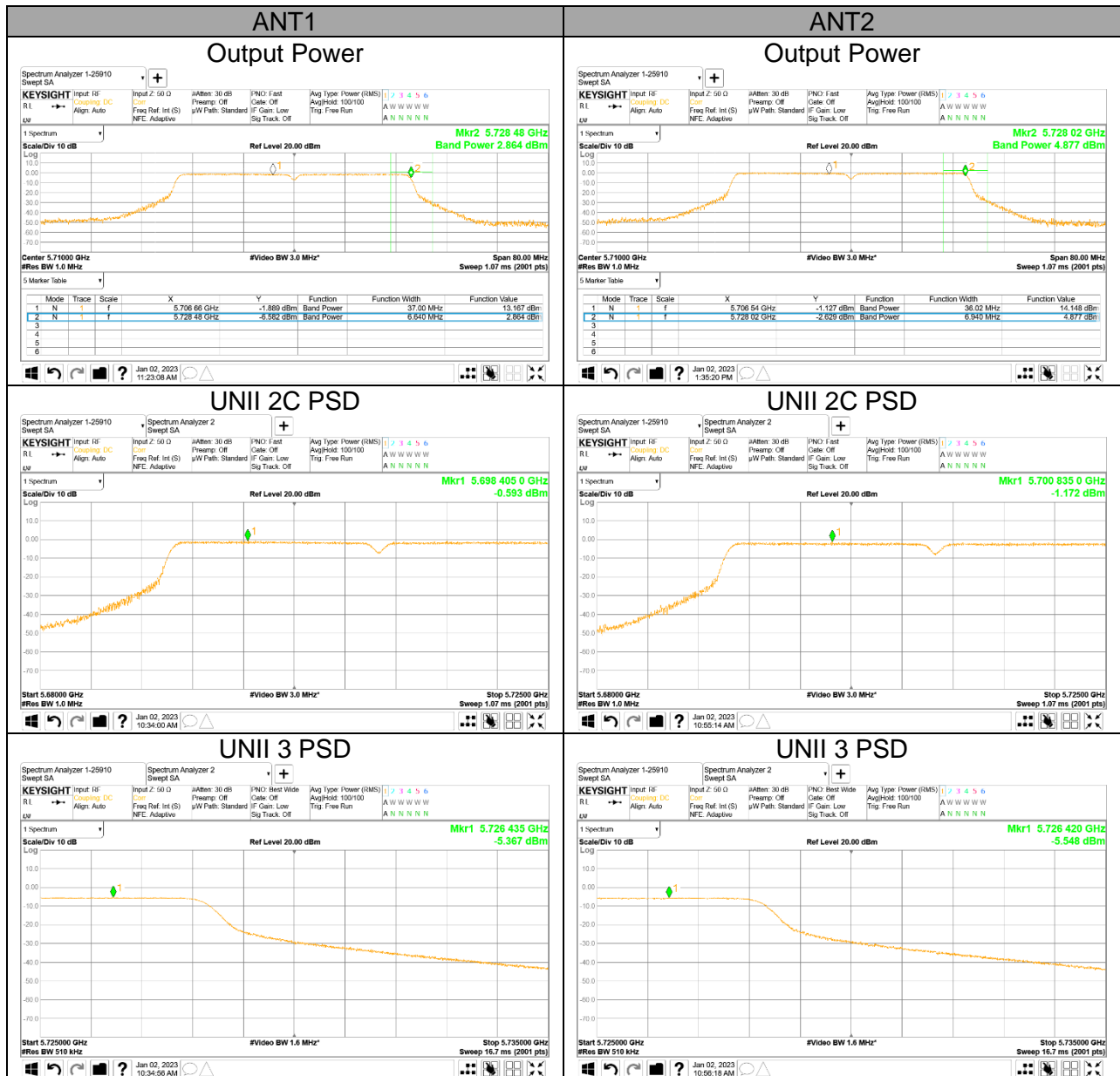
UNII Straddle Ch. IEEE 802.11a mode Output Power and PSD



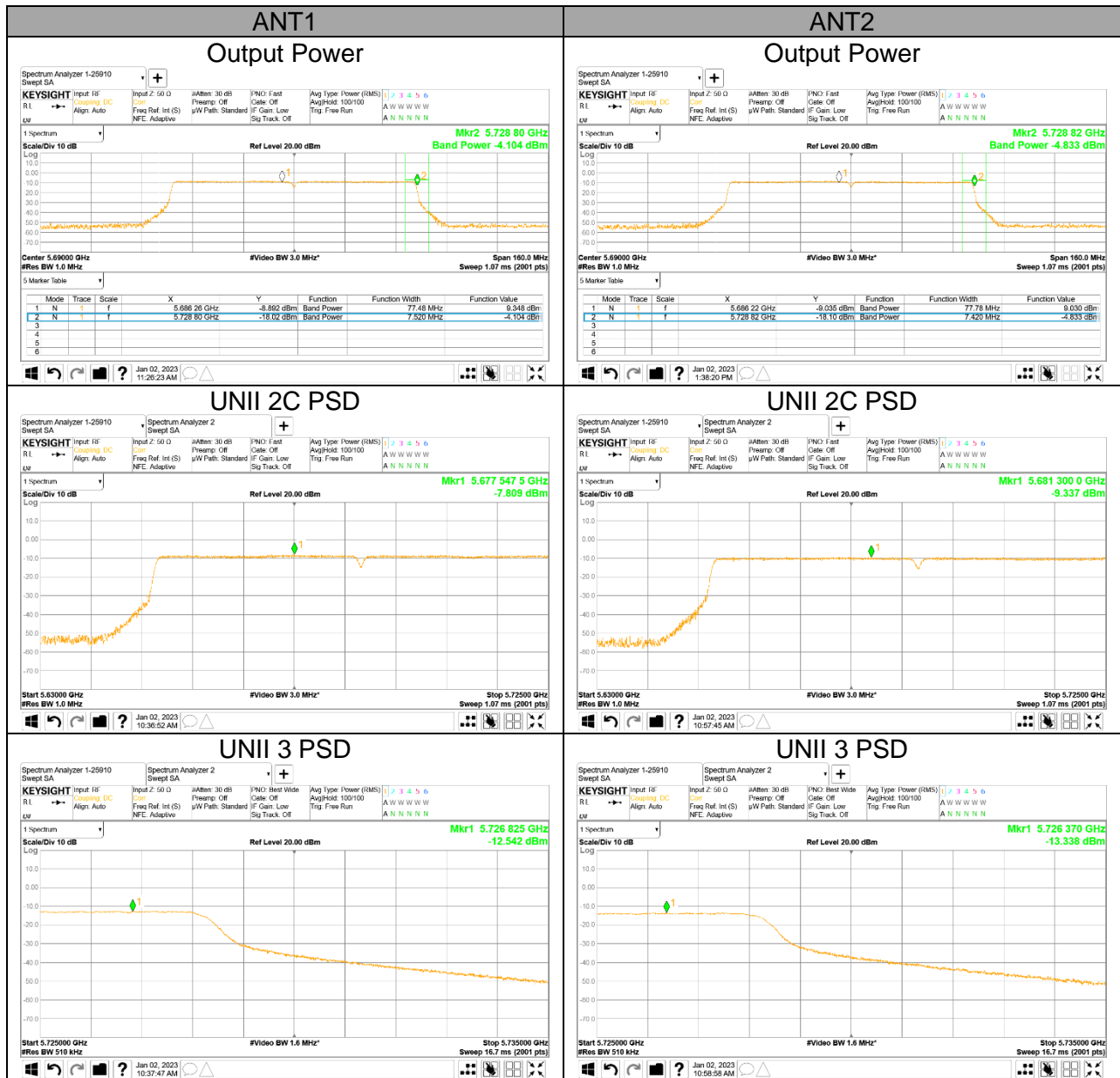
UNII Straddle Ch. IEEE 802.11n HT20 mode Output Power and PSD



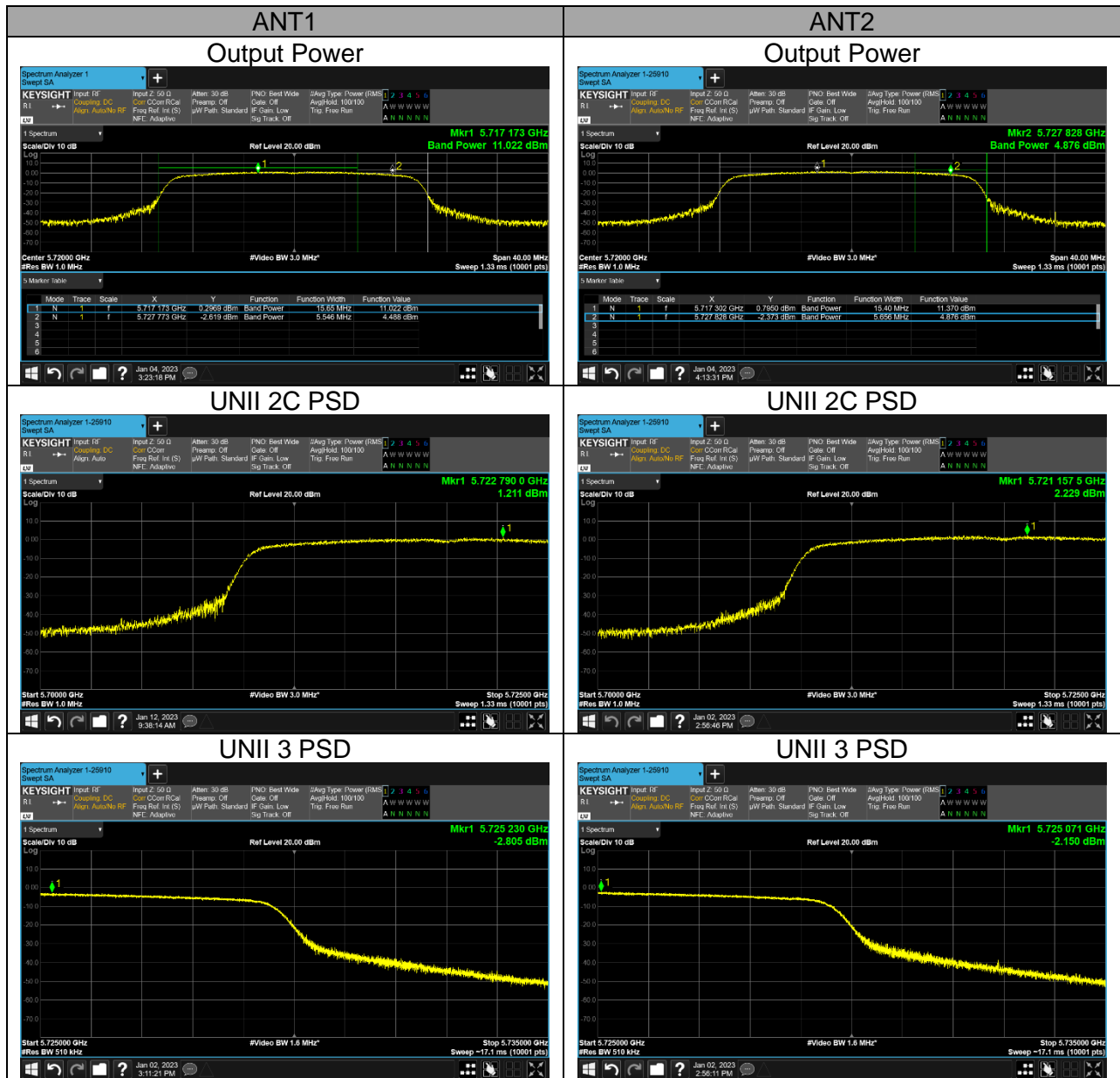
UNII Straddle Ch. IEEE 802.11n HT40 mode Output Power and PSD



UNII Straddle Ch. IEEE 802.11ac VHT80 mode Output Power and PSD



UNII Straddle Ch. IEEE 802.11ax HE20(SU) mode Output Power and PSD



UNII Straddle Ch. IEEE 802.11ax HE40(SU) mode Output Power and PSD

