



CERTIFICATION TEST REPORT

Report Number. : 4790089626-E3V1

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

Model : SM-S906B/DS

FCC ID : A3LSMS906B

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

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

Date Of Issue:
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ACCREDITED

Testing Laboratory

TL-637

Revision History

Rev.	Issue Date	Revisions	Revised By
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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, NFC, WPT and UWB

MODEL NUMBER: SM-S906B/DS

SERIAL NUMBER: R3CR80TBT6V (CONDUCTED);
R3CR80TBTVN (RADIATED);

DATE TESTED: 2021-09-23 ~ 2021-10-29;

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
CFR 47 Part 15 Subpart C	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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2. TEST METHODOLOGY

1. FCC CFR 47 Part 2.
2. FCC CFR 47 Part 15.
3. KDB 558074 D01 DTS Meas Guidance v05r02.
4. KDB 662911 D01 Multiple Transmitter Output v02r01
5. ANSI C63.10-2013.

3. FACILITIES AND ACCREDITATION

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

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

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

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:

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

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

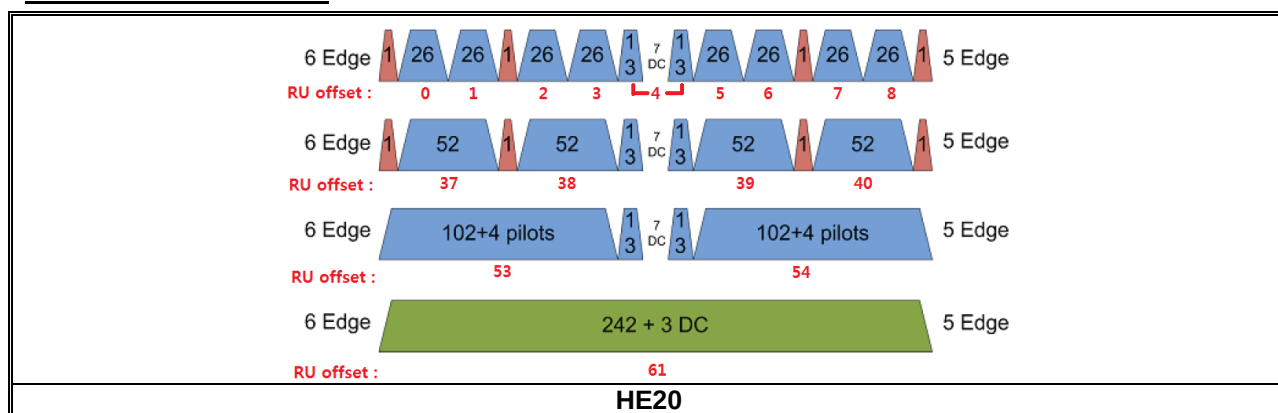
5.1. EUT DESCRIPTION

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

WiFi operating mode

Frequency rage	Mode	ANT 1	ANT 2
2.4GHz (2412 MHz ~ 2472 MHz)	802.11b SISO	TX/RX	TX/RX
	802.11g MIMO	TX/RX	
	802.11n(HT20) MIMO	TX/RX	
	802.11ax(HE20) MIMO	TX/RX	

802.11ax RU allocations



Test RU offset for tones

Mode	Tones number in RU	RU offset
HE20	26T	0
		4
		8
	52T	37
		38
		40
	106T	53
		54
	242T / SU Note 1	61 / -

Note. Full RU(Resource Unit) 242T 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.

5.2. MAXIMUM OUTPUT POWER

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

Frequency Range [MHz]	Mode	Output Power [dBm]		Output Power [mW]	
		ANT1	ANT2	ANT1	ANT2
2412 - 2462	802.11b SISO	18.66	18.04	73.45	63.68
	802.11g MIMO	19.82		95.94	
	802.11n(HT20) MIMO	20.14		103.28	
	802.11ax(HE20) MIMO	19.91		97.95	

5.3. DESCRIPTION OF AVAILABLE ANTENNAS

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

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

The radio utilizes an internal antennas, with ANT 1's maximum gain of -6.4 dBi and ANT 2's maximum gain of -1.9 dBi

5.4. TESTED CHANNELS LIST

Ch.	Frequency [MHz]	11b [SISO]	11g [MIMO]	11n(HT20) [MIMO]	11ax(HE20) [MIMO]
1	2 412	O	O	O	O
2	2 417		O	O	O
6	2 437	O	O	O	O
10	2 457			O	
11	2 462	O	O	O	O
12	2 467	O	O	O	O
13	2 472	O	O	O	O

5.5. 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 case of antenna axis:

ANT1	ANT2	MIMO
Y	X	X

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

802.11b mode: 1 Mbps 1TX

802.11g mode: 6 Mbps 2TX

802.11n HT20 mode: MCS0 2TX

802.11ax HE20 mode: MCS0 2TX

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.

All radiated and power line conducted tests were performed attached with travel adapter for the worst case condition mode.

Test case configuration for 802.11b, g, n HT20, ax HE20(SU)modes :

SISO Target[dBm]						MIMO Target[dBm]				
Ch.	Freq.	802.11b	802.11g	802.11n HT20	802.11ax HE20(SU)	Ch.	Freq.	802.11g	802.11n HT20	802.11ax HE20(SU)
1	2412	18				1	2412	18	18	17
2	2417					2	2417	20	20	20
6	2437	18				6	2437	20	20	20
10	2457					10	2457		20	
11	2462	18				11	2462	20	18	20
12	2467	18				12	2467	17	17	16
13	2472	18				13	2472	11	11	11

	Band-Edge
	Band-Edge & Spurious Emission
	Spurious Emission

Note. Since the power density is same as 11g or 11n mode, 11ax SU mode's spurious test was omitted.

Test case configuration for 802.11ax HE20(RU) modes :

SISO ANT2 Worst RU offset[dBm]					
Mode	Ch.	Freq.	Tone	RU offset	Test Case
802.11ax RU mode	1	2412	26 T	0	-
				4	O
				8	-
	6	2437		0	-
				4	O
				8	-
	11	2462		0	O
				4	-
				8	-

Note. In 802.11ax HE20(RU) mode, the test case according to RU offset was selected from the offset with worst average power.

5.6. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
Charger	SAMSUNG	EP-TA800	R37N9BV0382HM3	N/A
Data Cable	SAMSUNG	EP-DN980BBE	N/A	N/A

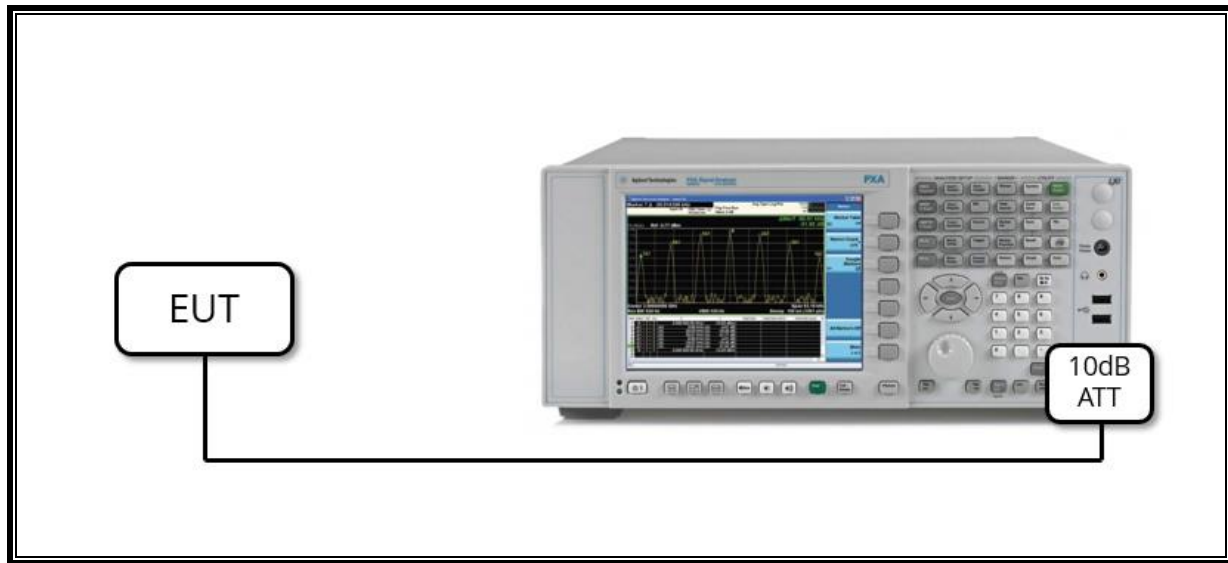
I/O CABLE

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

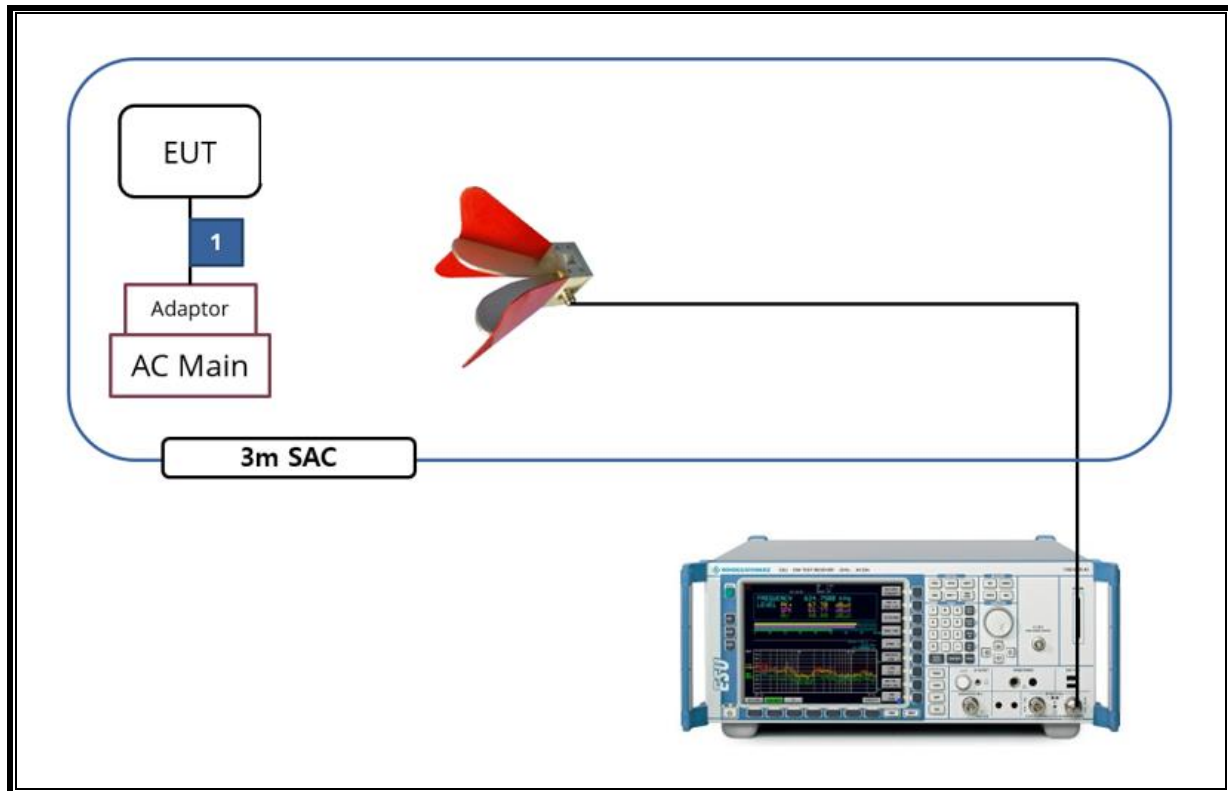
TEST SETUP

The EUT is a stand-alone unit during the tests.
Test software in hidden menu exercised the EUT to enable DTS mode.

SETUP DIAGRAM FOR TESTS (CONDUCTED TEST SETUP)



SETUP DIAGRAM FOR TESTS (RADIATED TEST SETUP)



6. MEASUREMENT METHOD

6 dB BW : KDB 558074 D01 v05r02, Section 8.2

OUTPUT POWER : KDB 558074 D01 v05r02, Section 8.3.2.3.

POWER SPECTRAL DENSITY : KDB 558074 D01 v05r02, Section 8.4.

Out-of-band EMISSIONS (Conducted) : KDB 558074 D01 v05r02, Section 8.5.

Out-of-band EMISSIONS IN NON-RESTRICTED BANDS: KDB 558074 D01 v05r02, Section 8.5.

Out-of-band EMISSIONS IN RESTRICTED BANDS KDB 558074 D01 v05r02, Section 8.6.

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

7. 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, 40 GHz	ETS	3116C	00166155	2022-08-04
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
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
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
UL Software				
Description	Manufacturer	Model	Version	
Radiated software	UL	UL EMC	Ver 9.5	
AC Line Conducted software	UL	UL EMC	Ver 9.5	

8. SUMMARY TABLE

FCC Part Section	Test Description	Test Limit	Test Condition	Test Result
15.247 (a)(2)	Occupied Bandwidth(6dB)	> 500kHz	Conducted	Complies
2.1051, 15.247(d)	Band Edge / Conducted Spurious Emission	-30 dBc		Complies
15.247 (b)(3)	TX conducted output power	< 30 dBm		Complies
15.247(e)	PSD	< 8 dBm/3kHz		Complies
15.207(a)	AC Power Line conducted emissions	Section 11	Power Line conducted	Complies
15.205, 15.209	Radiated Spurious Emission	< 54dBuV/m(Av)	Radiated	Complies

9. ANTENNA PORT TEST RESULTS

9.1. ON TIME AND DUTY CYCLE

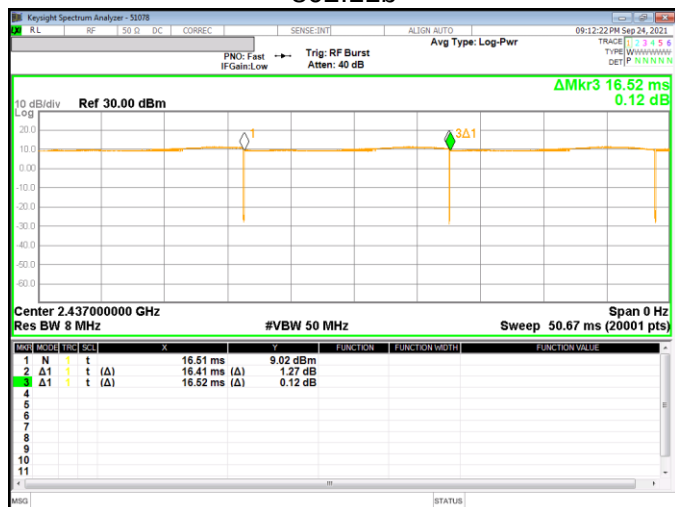
LIMITS

None; for reporting purposes only.

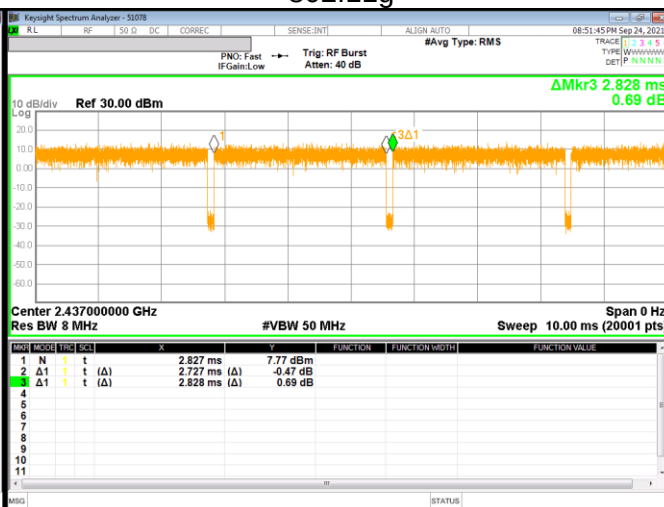
Mode	On Time [ms]	Period [ms]	Duty Cycle X [Linear]	Duty Cycle X [%]	Duty Cycle Correction Factor[dB]	1/T Minimum VBW[kHz]
802.11b	16.410	16.520	0.993	99.334	-	0.06
802.11g MIMO	2.727	2.828	0.964	96.429	0.16	0.37
802.11n(HT20) MIMO	2.533	2.637	0.961	96.056	0.17	0.39
802.11ax(HE20) MIMO SU	1.012	1.114	0.908	90.844	0.42	0.99
802.11ax(HE20) MIMO 26T	5.148	5.253	0.980	98.001	-	0.19
802.11ax(HE20) MIMO 52T	4.951	5.052	0.980	98.001	-	0.20
802.11ax(HE20) MIMO 106T	2.371	2.473	0.959	95.875	0.18	0.42

Note. According to ANSI C63.10 Section 11.6, do not apply the Duty Cycle Correction Factor judging that a duty cycle of greater than or equal to 98% is continuous signal.

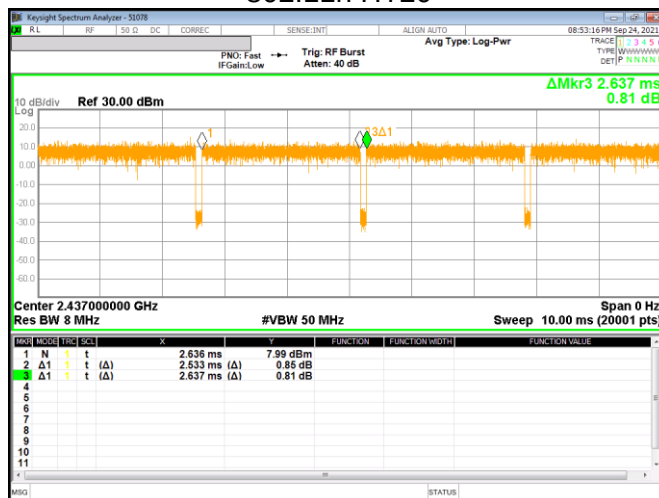
802.11b



802.11g

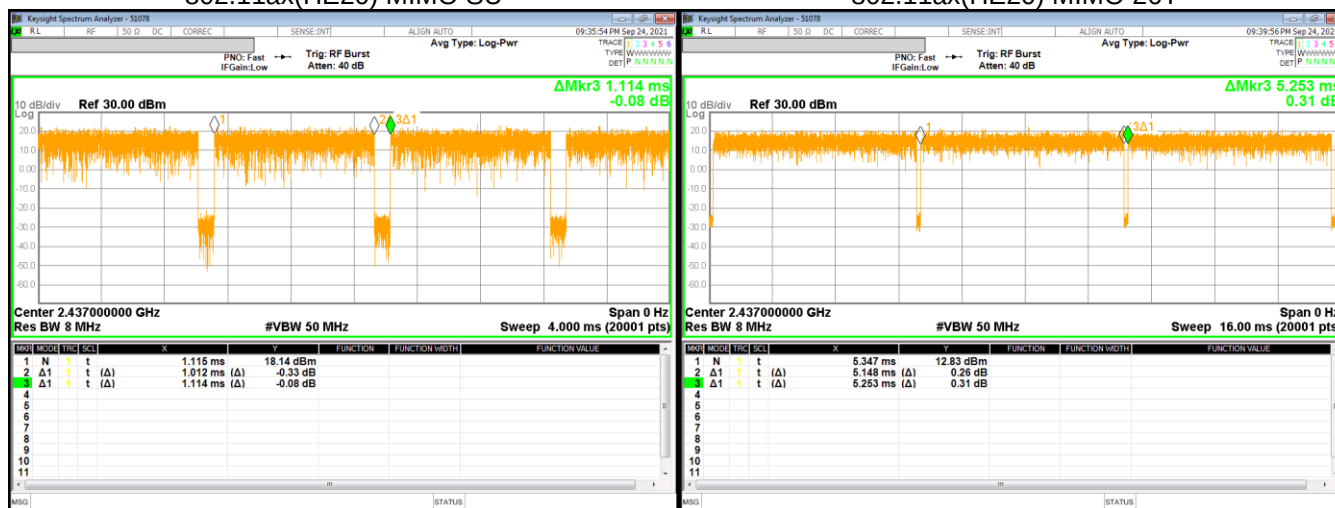


802.11n HT20



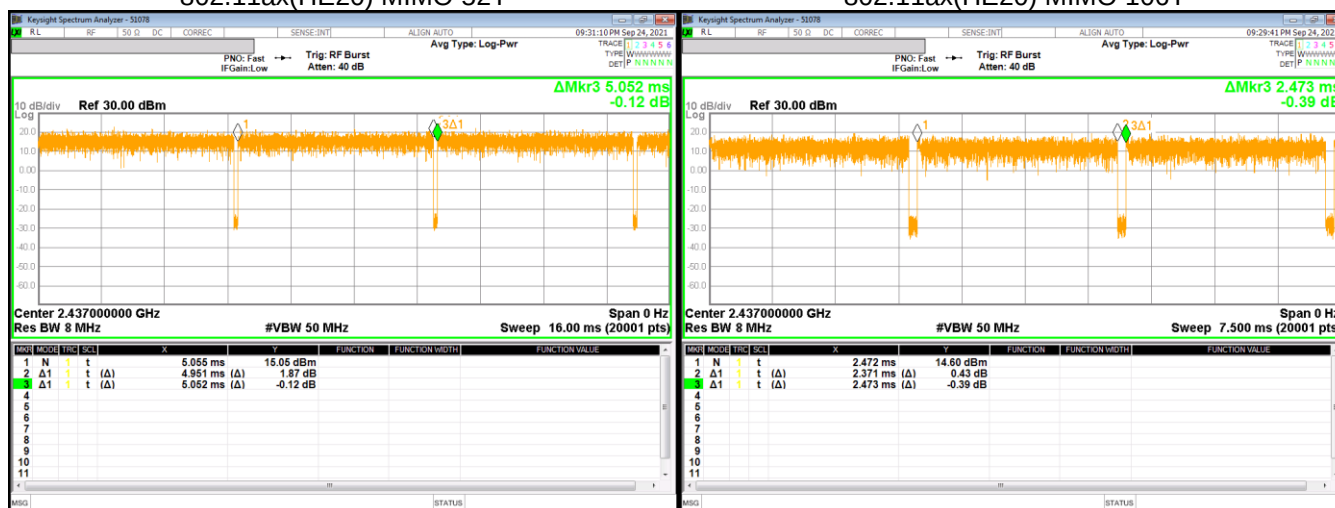
802.11ax(HE20) MIMO SU

802.11ax(HE20) MIMO 26T



802.11ax(HE20) MIMO 52T

802.11ax(HE20) MIMO 106T



9.2. 6 dB BANDWIDTH

LIMITS

FCC §15.247 (a) (2)

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

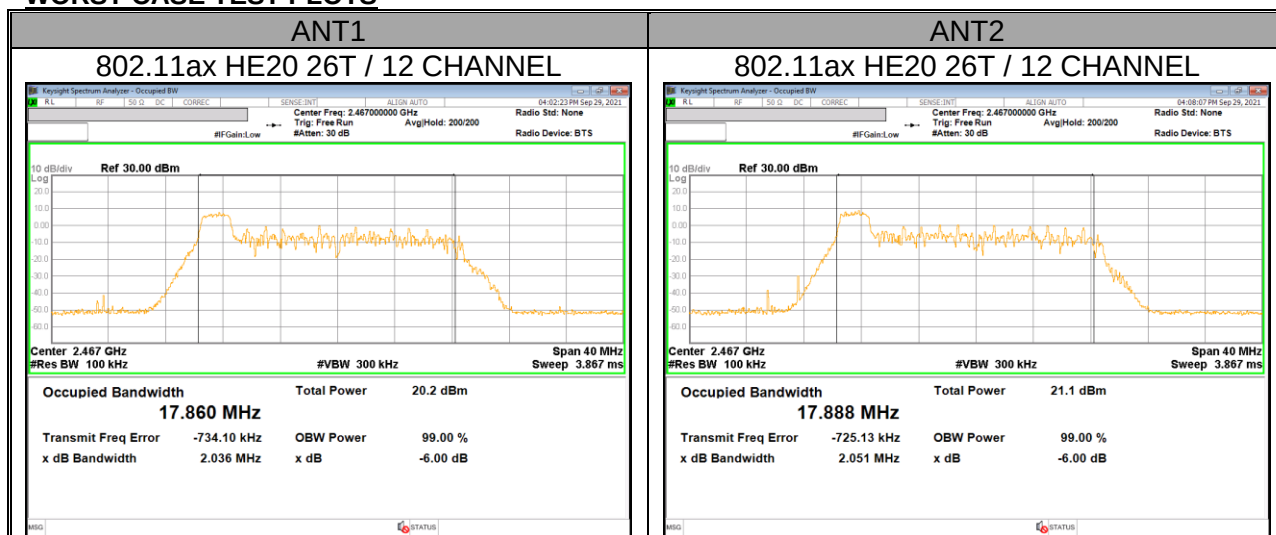
TEST PROCEDURE

Reference to KDB 558074 D01 15.247 Meas Guidance: The transmitter output is connected to a spectrum analyzer with the RBW set to 100 kHz, the VBW $\geq 3 \times$ RBW, peak detector and max hold.

RESULTS

- Please refer to the next page

WORST CASE TEST PLOTS



9.2.1. 802.11b SISO MODE IN THE 2.4 GHz BAND

Channel	Frequency [MHz]	6 dB Bandwidth [MHz]		Minimum Limit [MHz]
		ANT 1	ANT 2	
1	2 412	8.073	8.033	0.5
6	2 437	8.077	7.091	
11	2 462	8.584	7.606	
12	2 467	8.525	8.051	
13	2 462	7.566	8.560	
Worst		7.566	7.091	

9.2.2. 802.11g MIMO MODE IN THE 2.4 GHz BAND

Channel	Frequency [MHz]	6 dB Bandwidth [MHz]		Minimum Limit [MHz]
		ANT 1	ANT 2	
1	2 412	16.340	16.360	0.5
2	2 417	16.350	16.310	
6	2 437	16.360	16.370	
11	2 462	16.340	16.370	
12	2 467	16.100	16.330	
13	2 472	16.350	16.450	
Worst		16.100	16.310	

9.2.3. 802.11n HT20 MIMO MODE IN THE 2.4 GHz BAND

Channel	Frequency [MHz]	6 dB Bandwidth [MHz]		Minimum Limit [MHz]
		ANT 1	ANT 2	
1	2 412	17.580	17.610	0.5
2	2 417	17.560	17.580	
6	2 437	17.590	17.610	
10	2 457	17.610	17.610	
11	2 462	17.320	17.330	
12	2 467	17.580	17.610	
13	2 472	16.930	17.620	
Worst		16.930	17.330	

9.2.4. 802.11ax HE20(26T) MIMO MODE IN THE 2.4 GHz BAND

Channel	Frequency [MHz]	6 dB Bandwidth [MHz]		Minimum Limit [MHz]
		ANT 1	ANT 2	
1	2 412	2.103	2.105	0.5
2	2 417	2.058	2.066	
6	2 437	2.072	2.101	
11	2 462	2.080	2.115	
12	2 467	2.036	2.051	
13	2 472	2.071	2.059	
Worst		2.036	2.051	

9.3. OUTPUT POWER

LIMITS

FCC §15.247 (b) (3)

For systems using digital modulation in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands: 1 Watt, based on the use of antennas with directional gains that do not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

TEST PROCEDURE

Measurements perform using a wideband RF frame average power sensor.

The cable assembly insertion loss and duty cycle correction factor was entered as an offset in the power sensor to allow for direct reading of power.

Output power measurement was performed utilizing the 8.3.2.3 under KDB558074 D01 15.247 Meas Guidance.

DIRECTIONAL ANTENNA GAIN

The TX chains are correlated and the antenna gain is unequal among the chains.
The directional gain is:

Bands [MHz]	ANT 1 [dBi]	ANT 2 [dBi]	Correlated Directional Gain [dBi]
2 412 ~ 2 472	-6.40	-1.90	-0.85

Note. Since the correlated directional gain does not exceed 6dBi, it is not mentioned further below.

9.3.1. TEST RESULTS

- 802.11b,g,n,ax(SU) mode

Mode	Channel	Frequency [MHz]	SISO Average Power [dBm]		MIMO Average Power [dBm]			Power Limit [dBm]
			ANT1	ANT2	ANT1	ANT2	Total Corr'd Power [dBm]	
802.11b	1	2 412	18.66	18.04	Not Supported			30.00
	6	2 437	18.18	17.45				
	11	2 462	18.64	17.93				
	12	2 467	15.71	16.76				
	13	2 472	5.90	4.70				
Worst Case			18.66	18.04				
802.11g	1	2 412	Not Supported		14.66	14.97	17.83	
	2	2 417			16.20	16.93	19.59	
	6	2 437			16.72	16.89	19.82	
	11	2 462			16.43	16.89	19.68	
	12	2 467			13.38	13.66	16.53	
	13	2 472			2.60	2.51	5.57	
Worst Case							19.82	
802.11n HT20	1	2 412			14.67	15.02	17.86	
	2	2 417			16.30	17.02	19.69	
	6	2 437			17.12	17.14	20.14	
	10	2 457			16.07	16.62	19.36	
	11	2 462			15.42	15.77	18.61	
	12	2 467			12.99	13.22	16.12	
	13	2 472			2.40	2.57	5.50	
Worst Case							20.14	
802.11ax HE20(SU)	1	2 412			13.94	14.37	17.17	
	2	2 417			16.34	17.18	19.79	
	6	2 437			16.62	16.63	19.64	
	11	2 462			16.72	17.08	19.91	
	12	2 467			12.22	12.98	15.63	
	13	2 472			2.76	2.61	5.70	
Worst Case							19.91	

- Calculation of Output Power result

Average Power = Meas. Power + Duty Cycle CF / Total Corr'd Power = ANT1's Average Power + ANT2's Average Power

- 802.11ax (RU) mode

Channel	Frequency [MHz]	Tones	RU Offset	SISO Average Power [dBm]		MIMO Average Power [dBm]			Power Limit [dBm]	
				ANT1	ANT2	ANT1	ANT2	Total Corr'd Power [dBm]		
1	2 412	26T	0	Not Supported		13.25	13.90	16.60	30.00	
			4			13.76	14.57	17.19		
			8			13.90	14.04	16.98		
		52T	37			13.86	14.10	16.99		
			38			13.58	14.07	16.84		
			40			14.51	14.13	17.33		
		106T	53			14.38	14.48	17.44		
			54			13.91	13.85	16.89		
			2			2 417	26T	0		15.72
4	15.95	16.59						19.29		
8	16.05	15.82						18.95		
52T	37	15.73					16.48	19.13		
	38	15.00					15.76	18.41		
	40	15.73					15.66	18.71		
106T	53	16.12					16.69	19.42		
	54	15.89					16.03	18.97		
	6	2 437					26T	0		16.28
4			16.16			16.81		19.51		
8			15.95			16.09		19.03		
52T			37			15.71	15.76	18.75		
			38			15.32	15.91	18.64		
			40			16.21	16.45	19.34		
106T			53			16.01	15.91	18.97		
			54			15.80	15.76	18.79		
			11			2 462	26T	0		15.75
4	15.41	16.19						18.83		
8	15.26	15.63						18.46		
52T	37	15.82					16.09	18.97		
	38	15.89					16.62	19.28		
	40	16.00					16.36	19.19		
106T	53	15.95					16.17	19.07		
	54	15.60					15.87	18.75		
	12	2 467					26T	0		12.50
4			12.18			12.99		15.61		
8			13.05			13.10		16.09		
52T			37			12.90	13.16	16.04		
			38			12.10	12.77	15.46		
			40			12.66	12.70	15.69		
106T			53			13.22	13.45	16.35		
			54			12.49	12.50	15.51		
			13			2 472	26T	0		1.75
4	2.36	2.98						5.69		
8	1.80	1.81						4.82		
52T	37	1.57					1.80	4.70		
	38	2.02					2.60	5.33		
	40	1.92					1.83	4.89		
106T	53	2.64					2.53	5.60		
	54	2.40					2.30	5.36		
	Worst Case									19.51

9.4. POWER SPECTRAL DENSITY

LIMITS

FCC §15.247 (e)

RSS-247 (5.2) (b)

The power spectral density conducted from the transmitter to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

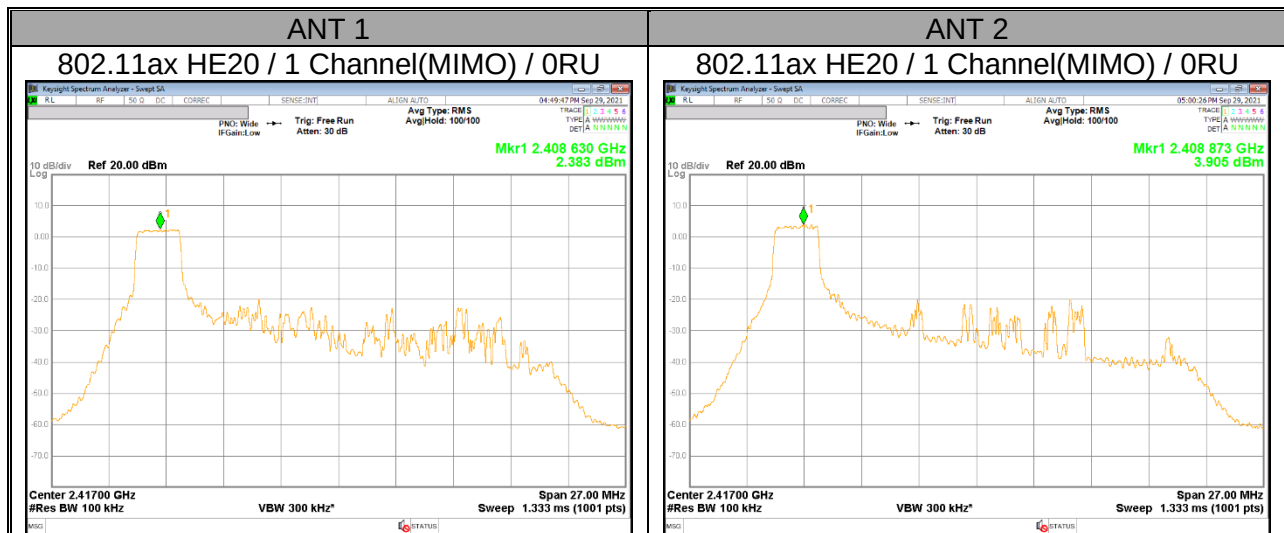
TEST PROCEDURE

Power Spectral Density was performed utilizing the section 8.4 under KDB558074 D01 15.247 Meas Guidance.

RESULTS

- Please refer to the next page

WORST CASE TEST PLOTS



9.4.1. 802.11b/g/n HT20 MODE TEST RESULTS

- SISO Mode

Mode	Channel	Frequency [MHz]	Meas PSD [dBm/100kHz]		Total Corr'd PSD [dBm/100kHz]		PSD Limit [dBm/3kHz]
			ANT1	ANT2	ANT1	ANT2	
802.11b	1	2 412	1.882	2.126	1.882	2.126	8.00 ^{Note}
	6	2 437	2.562	1.362	2.562	1.362	
	11	2 462	2.524	1.632	2.524	1.632	
	12	2 467	2.110	1.629	2.110	1.629	
	13	2 472	1.707	1.023	1.707	1.023	

- MIMO Mode

Mode	Channel	Frequency [MHz]	Meas PSD [dBm/100kHz]		DCCF	Total Corr'd PSD [dBm/100kHz]	PSD Limit [dBm/3kHz]
			ANT1	ANT2			
802.11g	1	2 412	-4.387	-4.228	0.160	-1.136	8.00 ^{Note}
	2	2 417	-2.869	-1.874	0.160	0.827	
	6	2 437	-2.324	-1.925	0.160	1.050	
	11	2 462	-3.062	-2.624	0.160	0.333	
	12	2 467	-5.310	-4.294	0.160	-1.602	
	13	2 472	-11.374	-11.162	0.160	-8.096	
802.11n HT20	1	2 412	-4.745	-4.016	0.170	-1.185	
	2	2 417	-3.370	-2.393	0.170	0.326	
	6	2 437	-2.744	-2.454	0.170	0.584	
	10	2 457	-3.493	-2.952	0.170	-0.034	
	11	2 462	-4.558	-4.067	0.170	-1.125	
	12	2 467	-5.622	-4.765	0.170	-1.992	
	13	2 472	-11.868	-10.832	0.170	-8.139	

- MIMO Mode(802.11ax HE20)

Channel	Frequency [MHz]	Tones	RU Offset	Meas PPSD [dBm/100kHz]		DCCF	Total Corr'd PPSD [dBm/100kHz]	PSD Limit [dBm/3kHz]
				ANT1	ANT2			
2	2 417	26T	0	2.383	3.905		6.221	8.00 ^{Note}
			4	1.929	2.955		5.483	
			8	1.713	2.365		5.062	
		SU	-	-5.960	-4.514	0.420	-1.747	
6	2 437	26T	0	2.273	2.732		5.519	
			4	2.425	3.826		6.192	
			8	2.535	2.792		5.676	
		SU	-	-6.297	-5.680	0.420	-2.547	
11	2 462	26T	0	2.161	2.890		5.551	
			4	1.919	2.960		5.481	
			8	1.945	2.339		5.157	
		SU	-	-5.904	-5.532	0.420	-2.284	

Calculation of Output PSD result

- 1TX : Corr'd PSD = Meas PSD + Duty Cycle CF

- 2TX : Total PSD = ANT1 Meas PSD + ANT2 Meas PSD + Duty Cycle CF

Note. RBW 100kHz measurement data is lower than 3kHz limit.

9.5. CONDUCTED SPURIOUS EMISSIONS

LIMITS

FCC §15.247 (d)

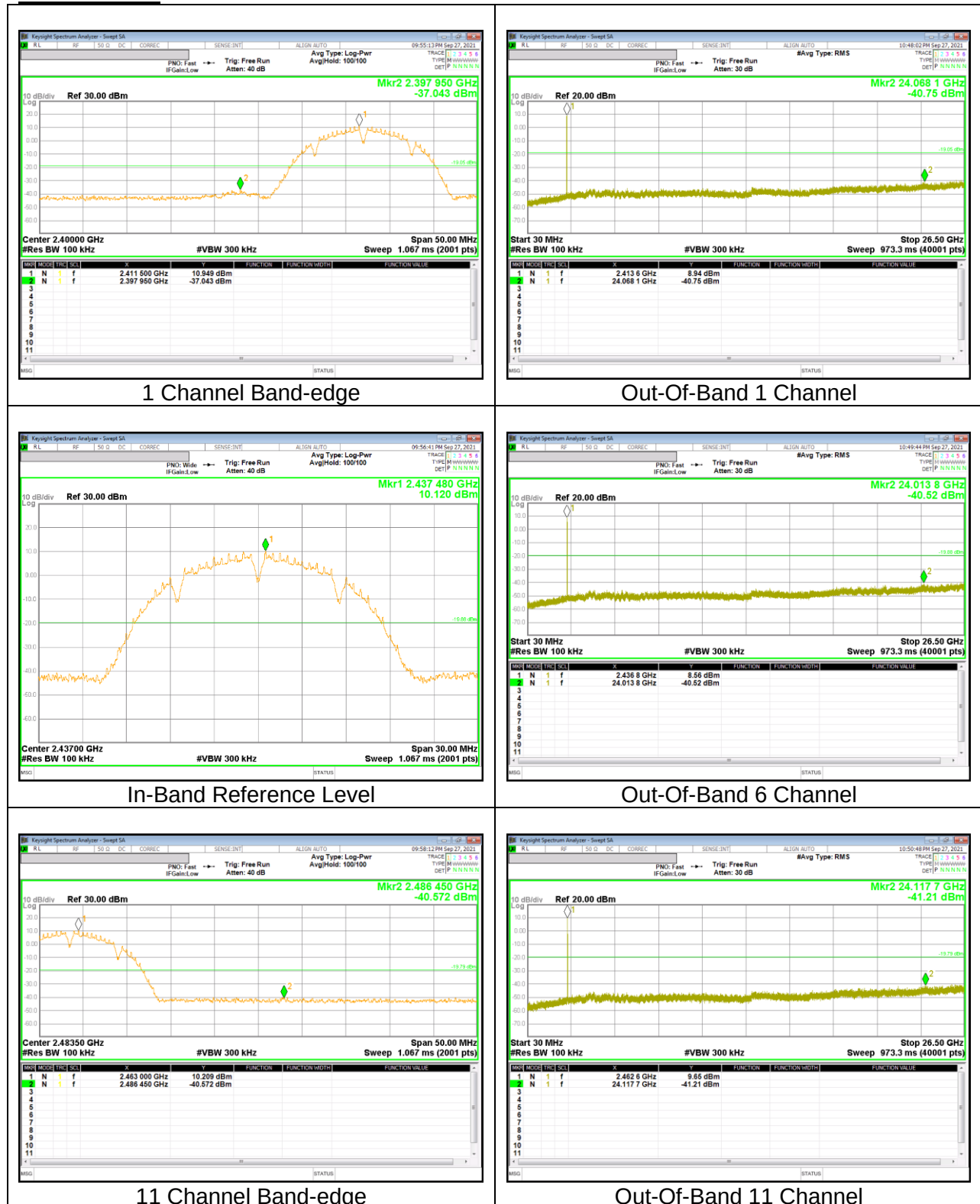
RSS-247 5.5

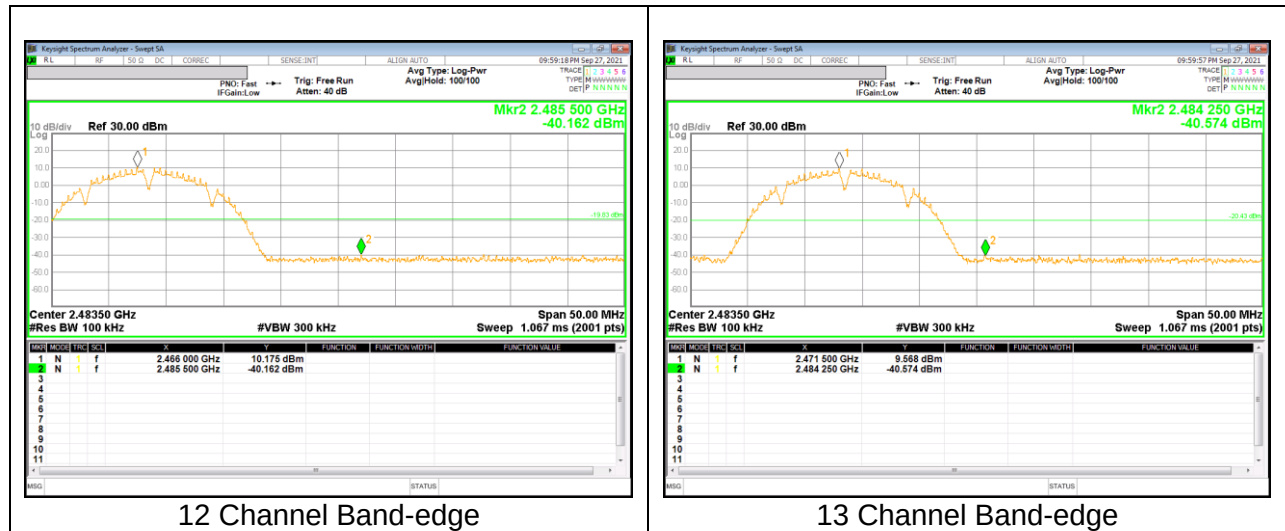
Output power was measured based on the use of average measurement, therefore the required attenuation is 30 dB.

RESULTS

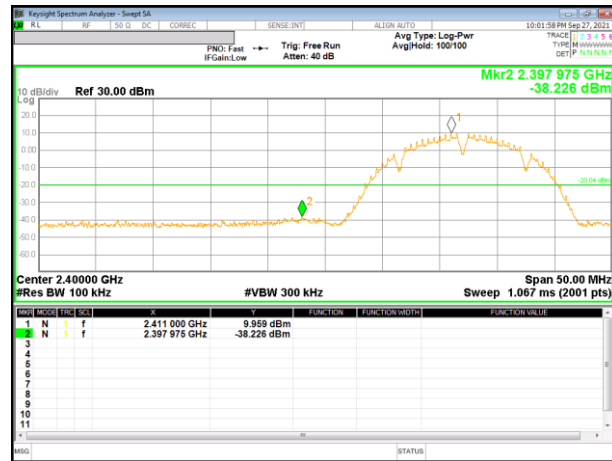
9.5.1. 802.11b MODE

1TX Antenna 1

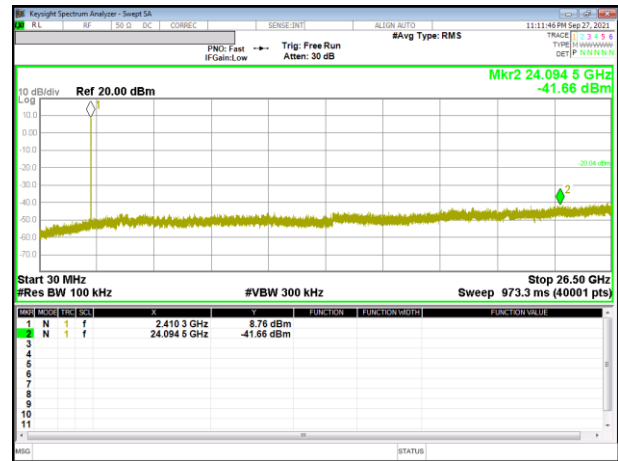




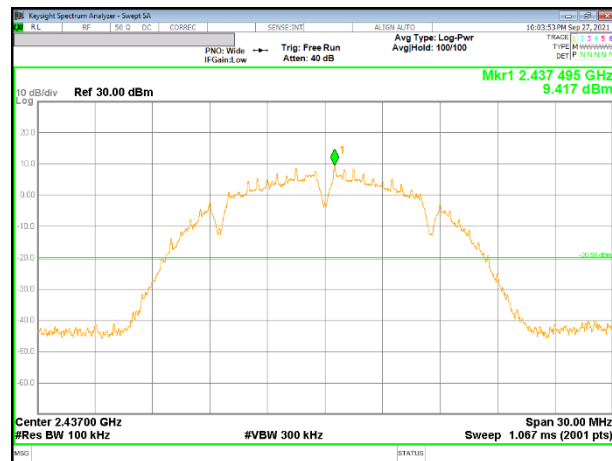
1TX Antenna 2



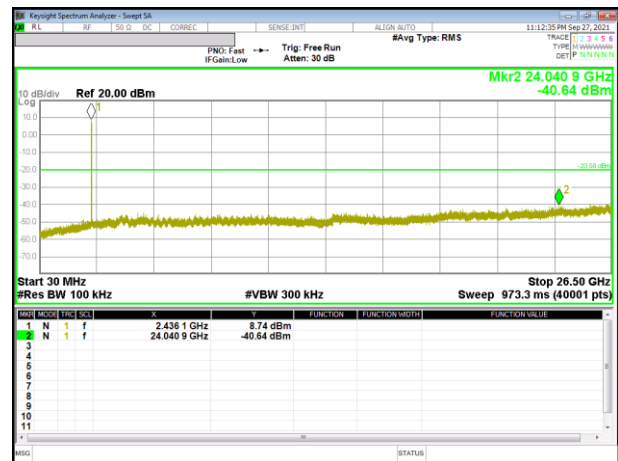
1 Channel Band-edge



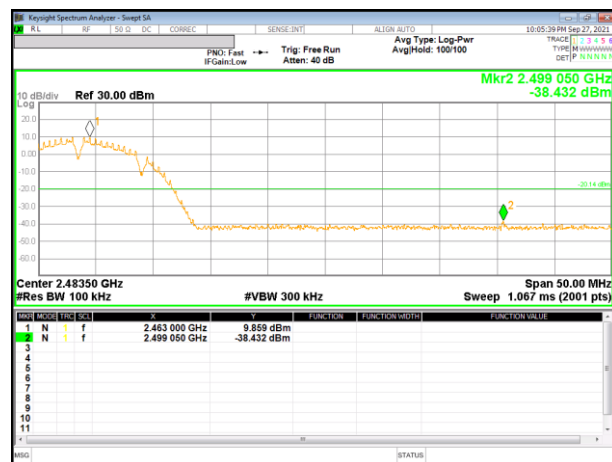
Out-Of-Band 1 Channel



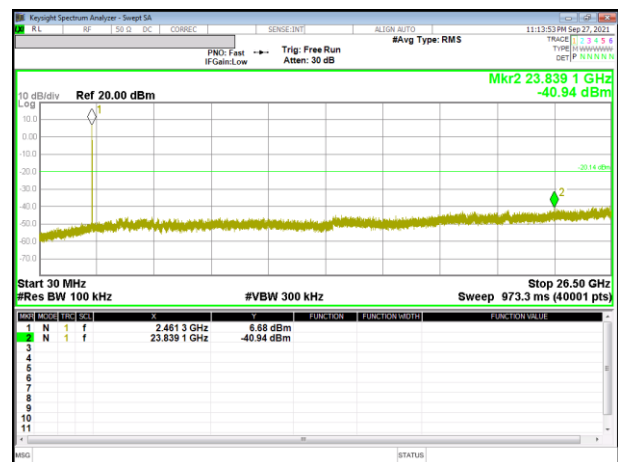
In-Band Reference Level



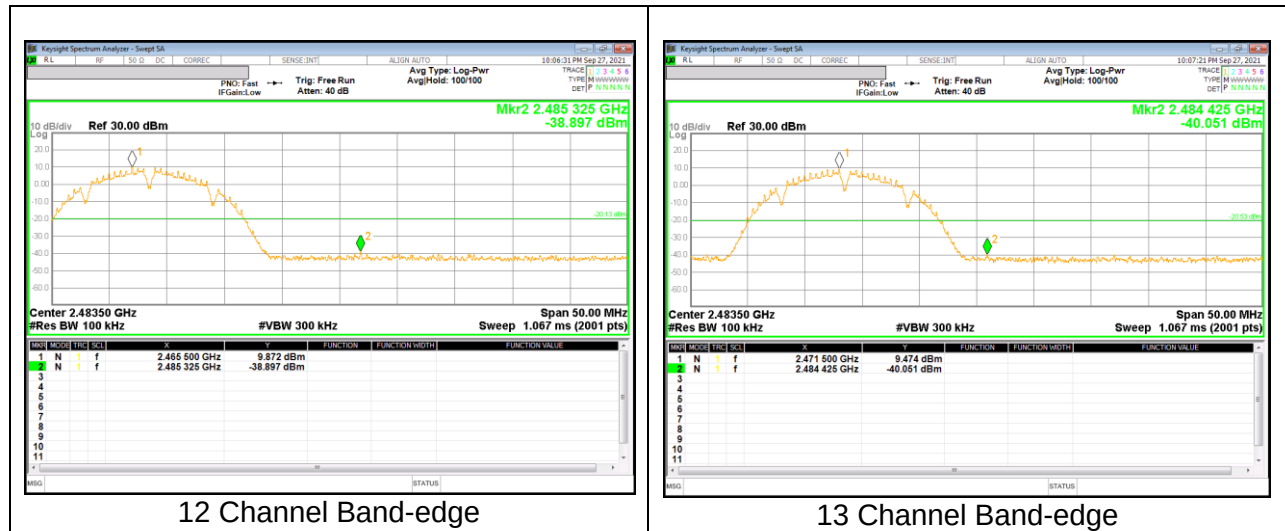
Out-Of-Band 6 Channel



11 Channel Band-edge

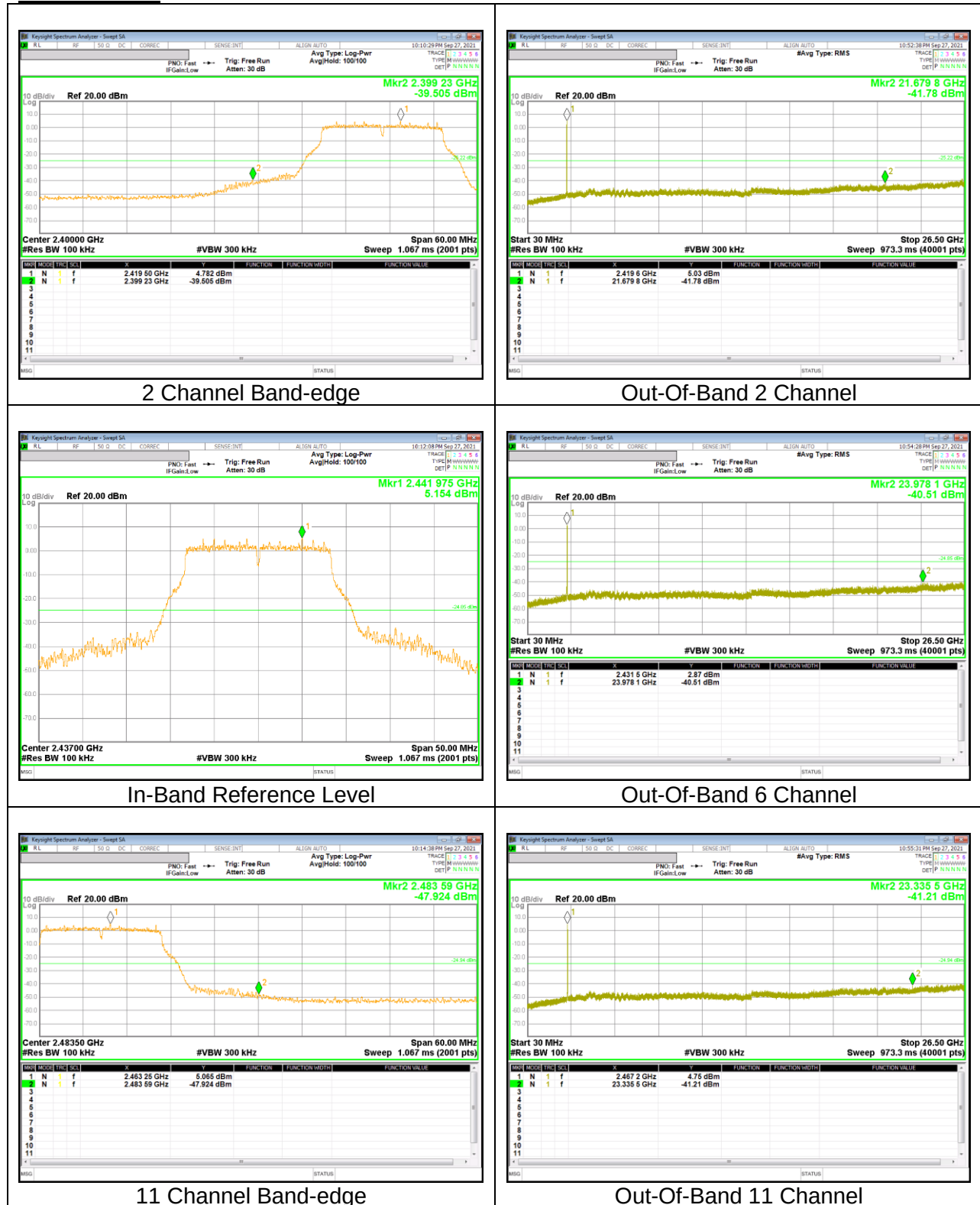


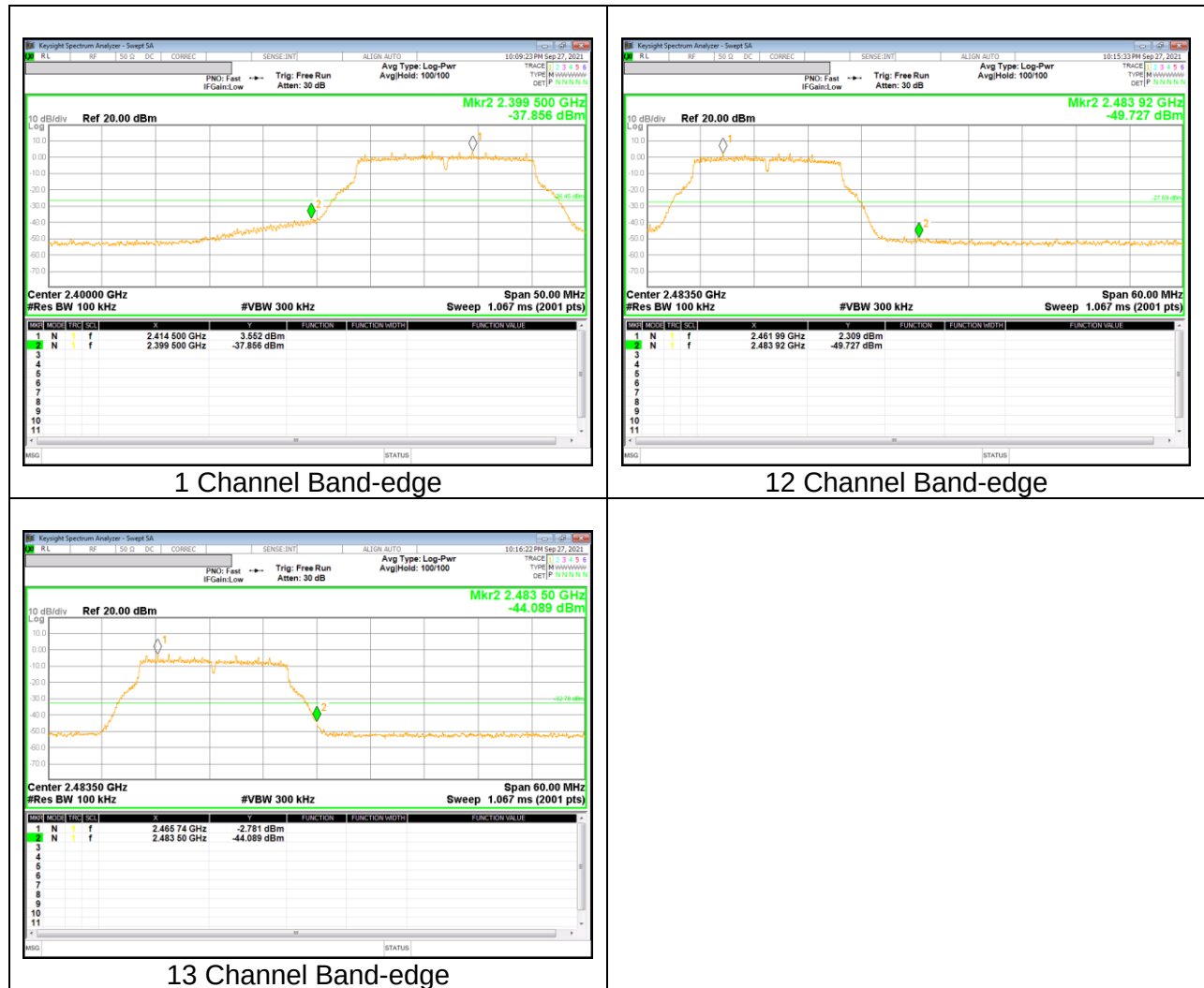
Out-Of-Band 11 Channel



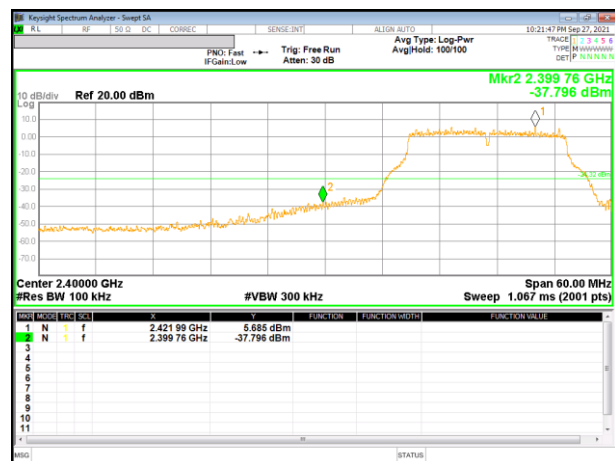
9.5.2. 802.11g MODE

2TX Antenna 1

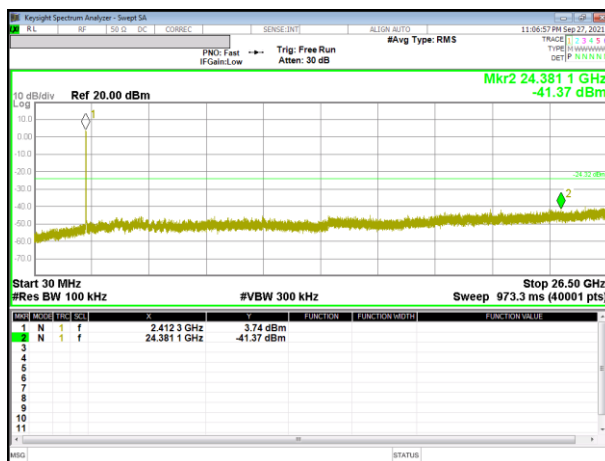




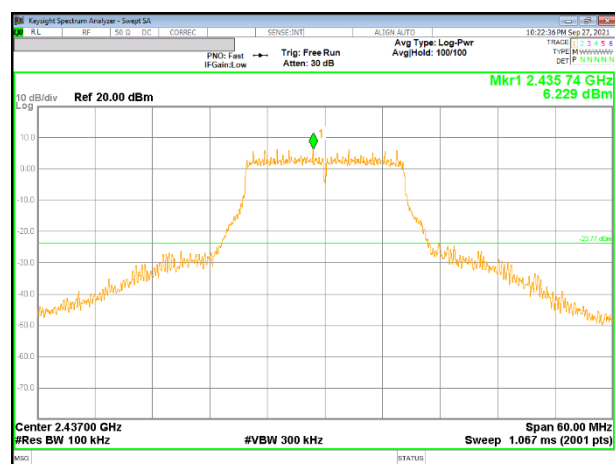
2TX Antenna 2



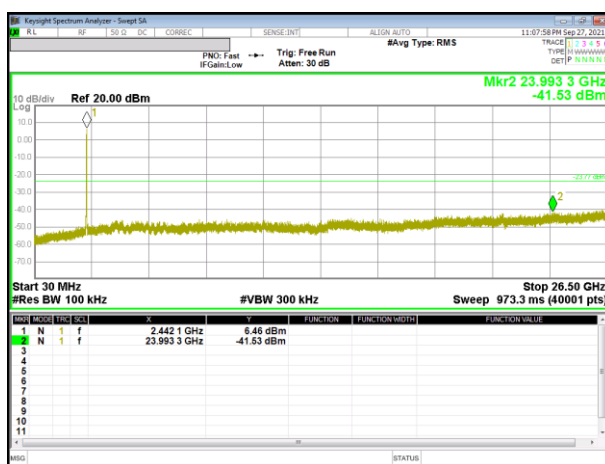
2 Channel Band-edge



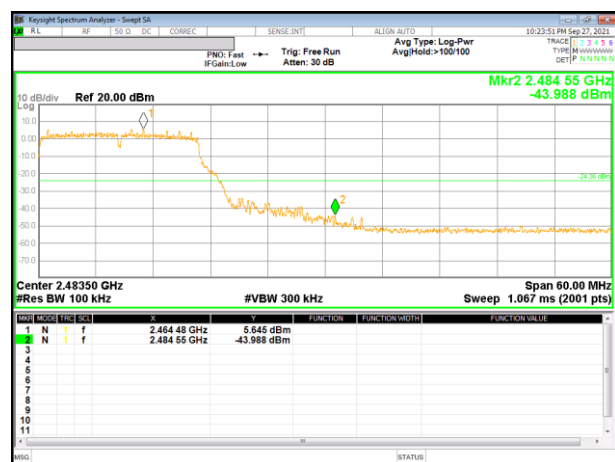
Out-Of-Band 2 Channel



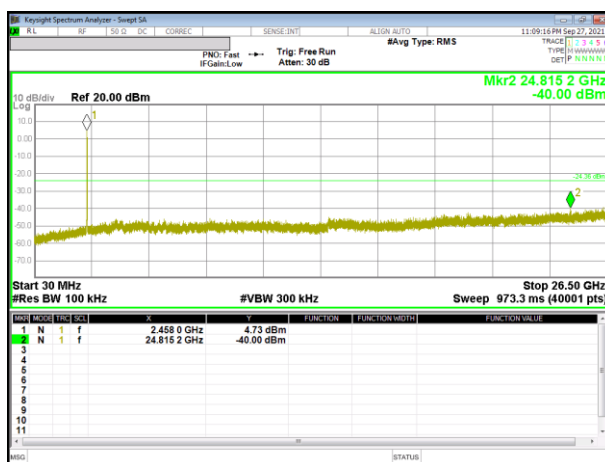
In-Band Reference Level



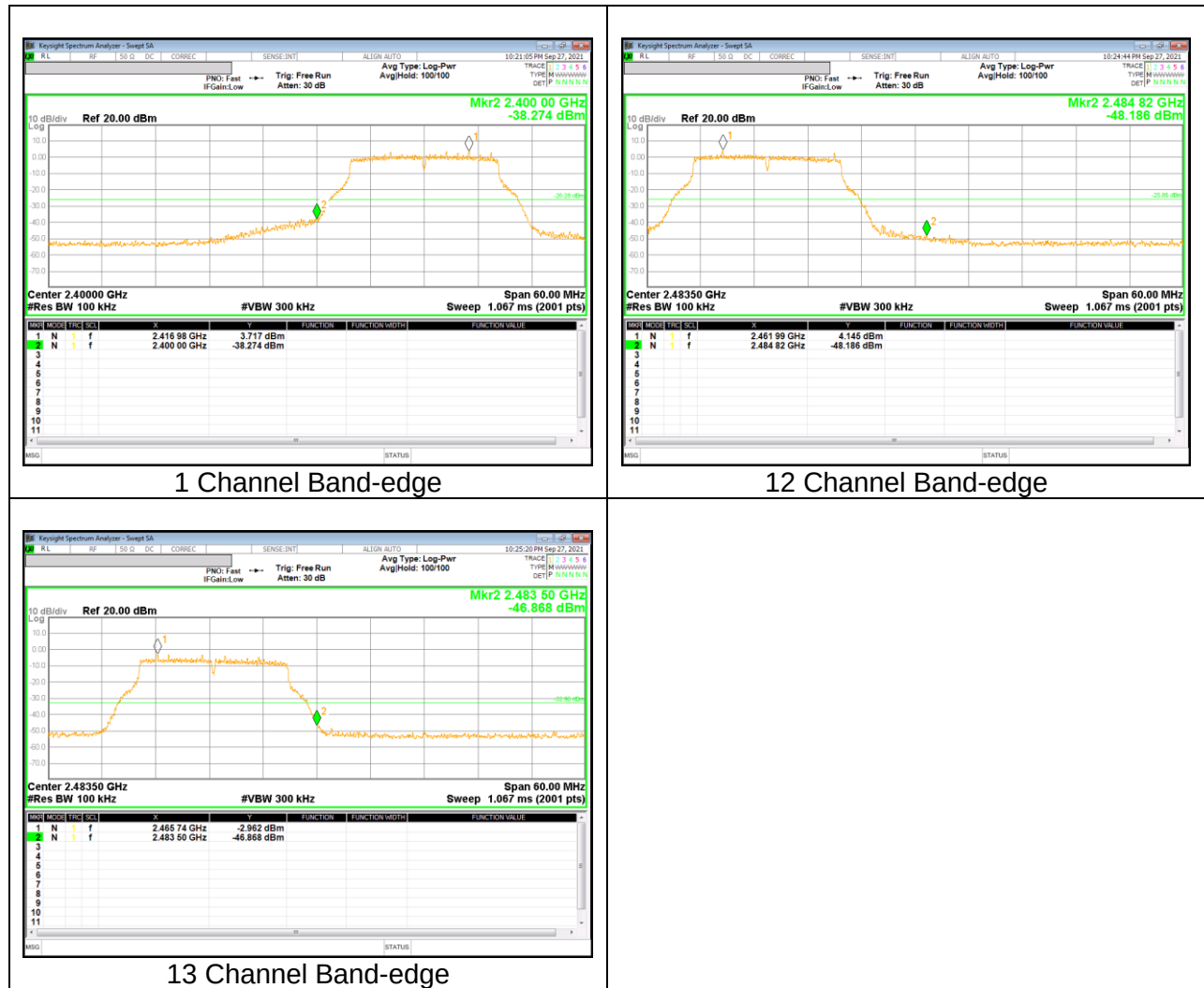
Out-Of-Band 6 Channel



11 Channel Band-edge



Out-Of-Band 11 Channel



9.5.3. 802.11n HT20 MODE

2TX Antenna 1

