



FCC CFR47 PART 15 SUBPART C

DTS Wireless LAN

CERTIFICATION TEST REPORT

FOR

WCDMA/LTE Wrist device + BT/BLE and DTS b/g/n

MODEL NUMBER : SM-R805F, SM-R805N

FCC ID: A3LSMR805F

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

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



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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: SAMSUNG ELECTRONICS CO., LTD.

EUT DESCRIPTION: WCDMA/LTE Wrist device + BT/BLE and DTS b/g/n

MODEL NUMBER: SM-R805F, SM-R805N

SERIAL NUMBER: R3AK5009A4D, R3AK5009A8H (RADIATED, Original);
R3AK4005HZR (CONDUCTED, Original);
R3AK400936H, R3AK40096WD, R3AK40096XR
(RADIATED, Spot check)

DATE TESTED: MAY 16, 2018 - JUN 26, 2018 (Original);
JUL 10, 2018 - JUL 11, 2018 (Spot check);

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
CFR 47 Part 15 Subpart C	Pass

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:

Tested By:



SungGil Park
Suwon Lab Engineer
UL Korea, Ltd.

Hoonpyo Lee
Suwon Lab Engineer
UL Korea, Ltd.

1.1. INTRODUCTION OF TEST DATA REUSE

This report referenced from the FCC ID: A3LSMR805U DTS 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 FCC ID: A3LSMR805F shares the same enclosure and circuit board as FCC ID: A3LSMR805U. 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 FCC ID: A3LSMR805U remains representative of FCC ID: A3LSMR805F. The test data of FCC ID: A3LSMR805U being submitted for this application to cover WLAN features.

Model number "SM-R805F" was used for the test.

1.3. SPOT CHECK VERIFICATION DATA

Band	Test Item	Mode	Frequency	Test Limit	Original model	Spot check model	Deviation	Remark
					SM-R805U Results	SM-R805F Results		
					FCC ID : A3LSMR805U	FCC ID : A3LSMR805F		
DTS WLAN (2.4GHz)	Band Edge	802.11b	2462 MHz	54 dBuV/m	39.65 dBuV/m	39.59 dBuV/m	-0.06 dB	
	RSE	802.11b	2462 MHz	74 dBuV/m	40.48 dBuV/m	39.93 dBuV/m	-0.55 dB	Noise floor level
	Band Edge	802.11g	2412 MHz	54 dBuV/m	41.52 dBuV/m	39.02 dBuV/m	-2.50 dB	
	RSE	802.11g	2412 MHz	74 dBuV/m	39.54 dBuV/m	39.38 dBuV/m	-0.16 dB	Noise floor level
	Band Edge	802.11n	2472 MHz	54 dBuV/m	41.00 dBuV/m	42.37 dBuV/m	1.37 dB	
	RSE	802.11n	2462 MHz	74 dBuV/m	39.91 dBuV/m	40.13 dBuV/m	0.22 dB	Noise floor level

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

1.4. REFERENCE DETAIL

Reference application that contains the reused reference data.

Equipment Class	Reference FCC ID	Type Grant/Permissive Change	Reference Application	Folder Test/RF Exposure	Report Tittle / Section
DTS	A3LSMR805U	Grant	4788480978-E1V2	Test	FCC Report DTS WLAN / All sections
			4788480978-E2V3	Test	FCC Report BLE All sections
DSS	A3LSMR805U	Grant	4788480978-E3V2	Test	FCC Report BT / All sections

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 558074 D01 DTS Meas Guidance v04.
4. 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 <http://www.iasonline.org/PDF/TL/TL-637.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	2.32 dB
Radiated Disturbance, Below 1GHz	3.86 dB
Radiated Disturbance, Above 1 GHz	5.97 dB

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

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The EUT is a WCDMA/LTE Wrist device + BT/BLE and DTS b/g/n.
This test report addresses the DTS (WLAN) operational mode.

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]
2412 - 2472	802.11b	17.21	52.60
	802.11g	15.18	32.96
	802.11n HT20	14.16	26.06

5.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes an internal antennas, with a antenna's maximum gain of -6.1 dBi.

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.

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

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

802.11b mode: 1 Mbps
802.11g mode: 6 Mbps
802.11n HT20 mode: MCS0

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

5.5. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
Charger	SAMSUNG	EP-TA60EBE	R37K4Q17VG3RT3	N/A
Wireless Charger	SAMSUNG	EP-YO805	N/A	A3LEPYO805
Data Cable	SAMSUNG	ECB-DU2EBE	N/A	N/A

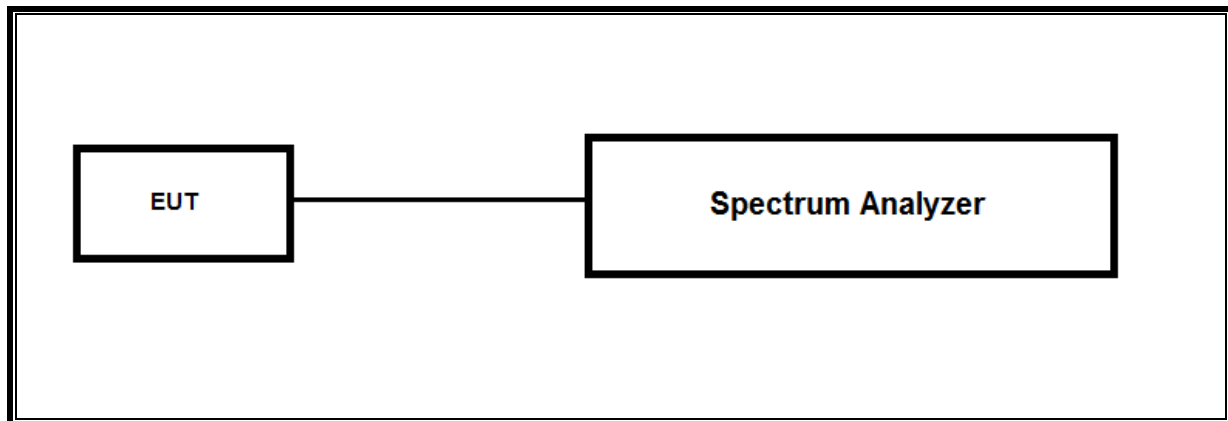
I/O CABLES

Cable No	Port	# of identical ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	DC Power	1	Mini-USB	Shielded	1m	N/A

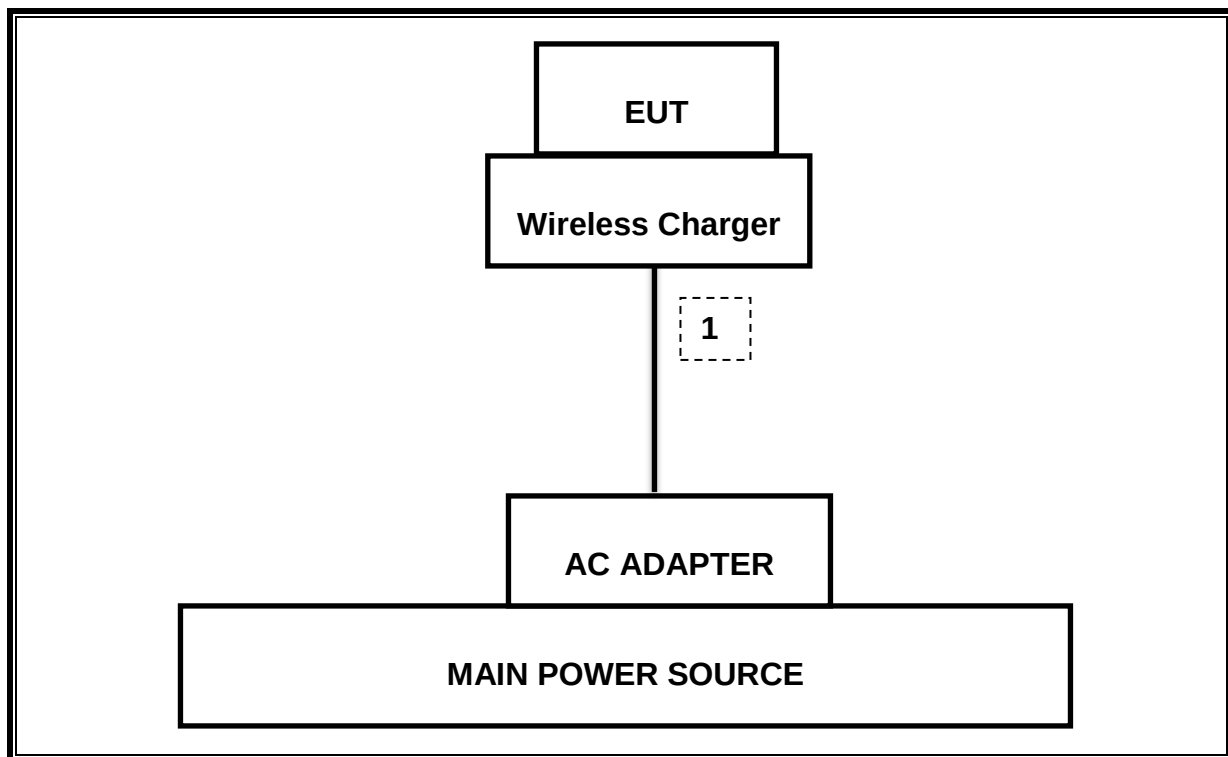
TEST SETUP

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. 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	08-31-19
Antenna, Bilog, 30MHz-1GHz	SCHWARZBECK	VULB9163	749	09-14-19
Antenna, Bilog, 30MHz-1GHz	SCHWARZBECK	VULB9163	845	08-31-19
Antenna, Horn, 18 GHz	ETS	3115	00167211	10-14-18
Antenna, Horn, 18 GHz	ETS	3115	00161451	03-10-19
Antenna, Horn, 18 GHz	ETS	3117	00168724	05-31-19
Antenna, Horn, 18 GHz	ETS	3117	00168717	05-31-19
Antenna, Horn, 18 GHz	ETS	3117	00205959	11-29-18
Antenna, Horn, 40 GHz	ETS	3116C	00166155	12-04-19
Antenna, Horn, 40 GHz	ETS	3116C	00168645	12-04-19
Antenna, Horn, 40 GHz	ETS	3116C-PA	00168841	11-13-19
Preamplifier, 1000 MHz	Sonoma	310N	341282	08-09-18
Preamplifier, 1000 MHz	Sonoma	310N	351741	08-07-18
Preamplifier, 1000 MHz	Sonoma	310N	370599	08-10-18
Preamplifier, 18 GHz	Miteq	AFS42-00101800-25-S-42	1876511	08-08-18
Preamplifier, 18 GHz	Miteq	AFS42-00101800-25-S-42	1896138	08-08-18
Preamplifier, 18 GHz	Miteq	AFS42-00101800-25-S-42	2029169	08-11-18
Spectrum Analyzer, 44 GHz	Agilent / HP	N9030A	MY54170614	08-08-18
Spectrum Analyzer, 44 GHz	Agilent / HP	N9030A	MY54490312	08-08-18
Spectrum Analyzer, 43.5 GHz	R&S	FSW43	104089	08-11-18
Average Power Sensor	Agilent / HP	U2000	MY54270007	08-08-18
Attenuator	PASTERNAK	PE7087-10	A001	08-08-18
Attenuator	PASTERNAK	PE7087-10	A008	08-08-18
Attenuator	PASTERNAK	PE7087-10	2	08-10-18
Attenuator	PASTERNAK	PE7087-10	A009	08-08-18
EMI Test Receive, 40 GHz	R&S	ESU40	100439	08-08-18
EMI Test Receive, 40 GHz	R&S	ESU40	100457	08-08-18
EMI Test Receive, 44 GHz	R&S	ESW44	101590	08-09-18
EMI Test Receive, 3 GHz	R&S	ESR3	101832	08-07-18
Low Pass Filter 5GHz	Micro-Tronics	LPS17541	009	08-08-18
Low Pass Filter 5GHz	Micro-Tronics	LPS17541	015	08-08-18
Low Pass Filter 5GHz	Micro-Tronics	LPS17541	020	08-11-18
High Pass Filter 3GHz	Micro-Tronics	HPM17543	010	08-08-18
High Pass Filter 3GHz	Micro-Tronics	HPM17543	015	08-08-18
High Pass Filter 3GHz	Micro-Tronics	HPM17543	020	08-11-18
High Pass Filter 6GHz	Micro-Tronics	HPS17542	009	08-08-18
High Pass Filter 6GHz	Micro-Tronics	HPS17542	016	08-08-18
High Pass Filter 6GHz	Micro-Tronics	HPS17542	021	08-11-18
LISN	R&S	ENV-216	101837	08-09-18
UL Software				
Description	Manufacturer	Model	Version	
Radiated software	UL	UL EMC	Ver 9.5	

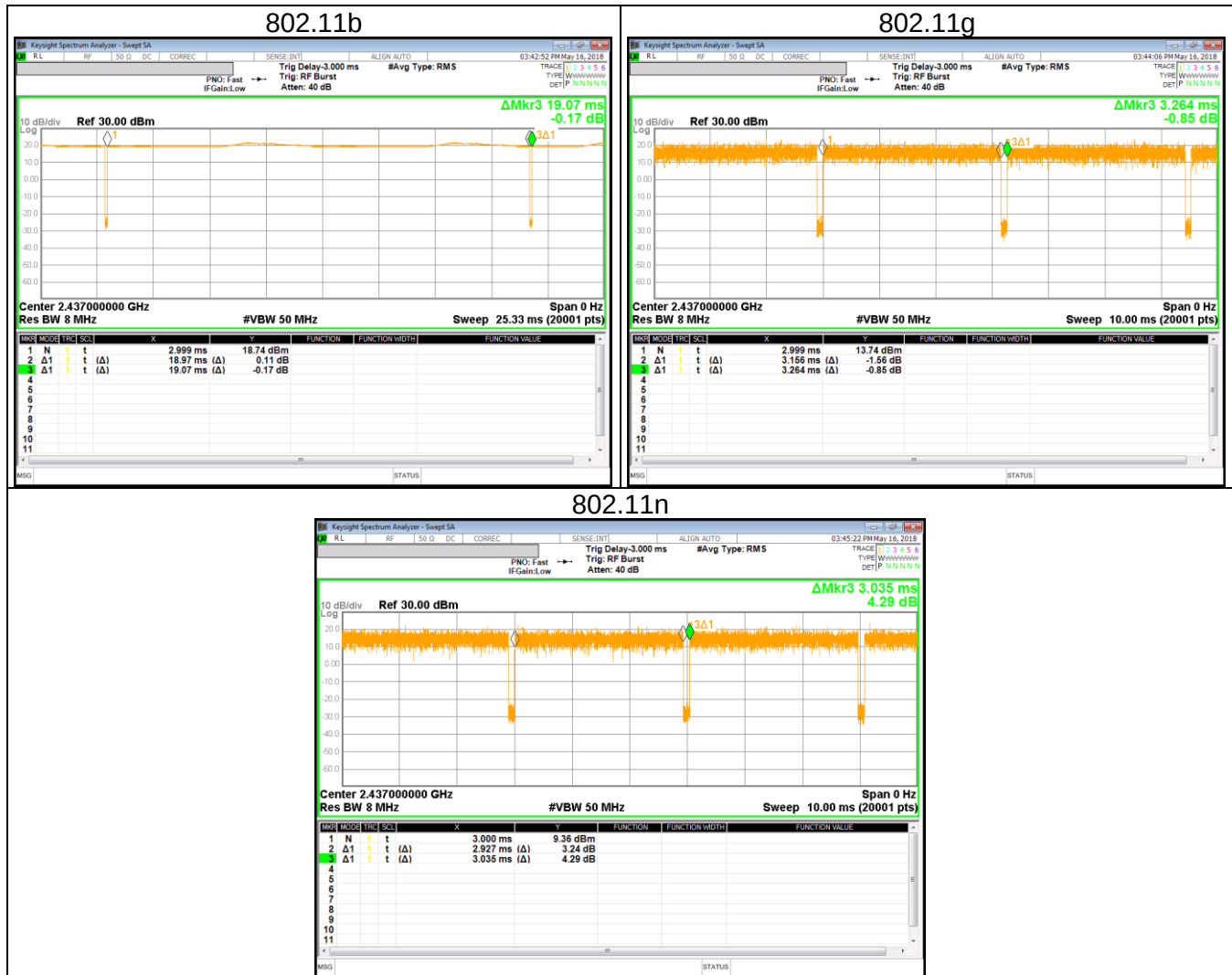
7. REFERENCE MEASUREMENT RESULTS

7.1. ON TIME AND DUTY CYCLE RESULTS

LIMITS

None; for reporting purposes only.

Mode	ON Time B [msec]	Period [msec]	Duty Cycle x [linear]	Duty Cycle [%]	Duty Cycle Correction Factor [dB]	1/T Minimum VBW [kHz]
2400MHz Bands						
802.11b	18.97	19.07	0.995	99.5%	0.00	0.010
802.11g	3.156	3.264	0.967	96.7%	0.15	0.317
802.11n HT20	2.927	3.035	0.964	96.4%	0.16	0.342



7.1. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

7.1.1. 802.11b MODE IN THE 2.4 GHz BAND

Channel	Frequency [MHz]	99% Bandwidth [MHz]
1	2412	11.910
6	2437	12.005
11	2462	12.354
12	2467	10.809
13	2472	10.694
Worst		12.354

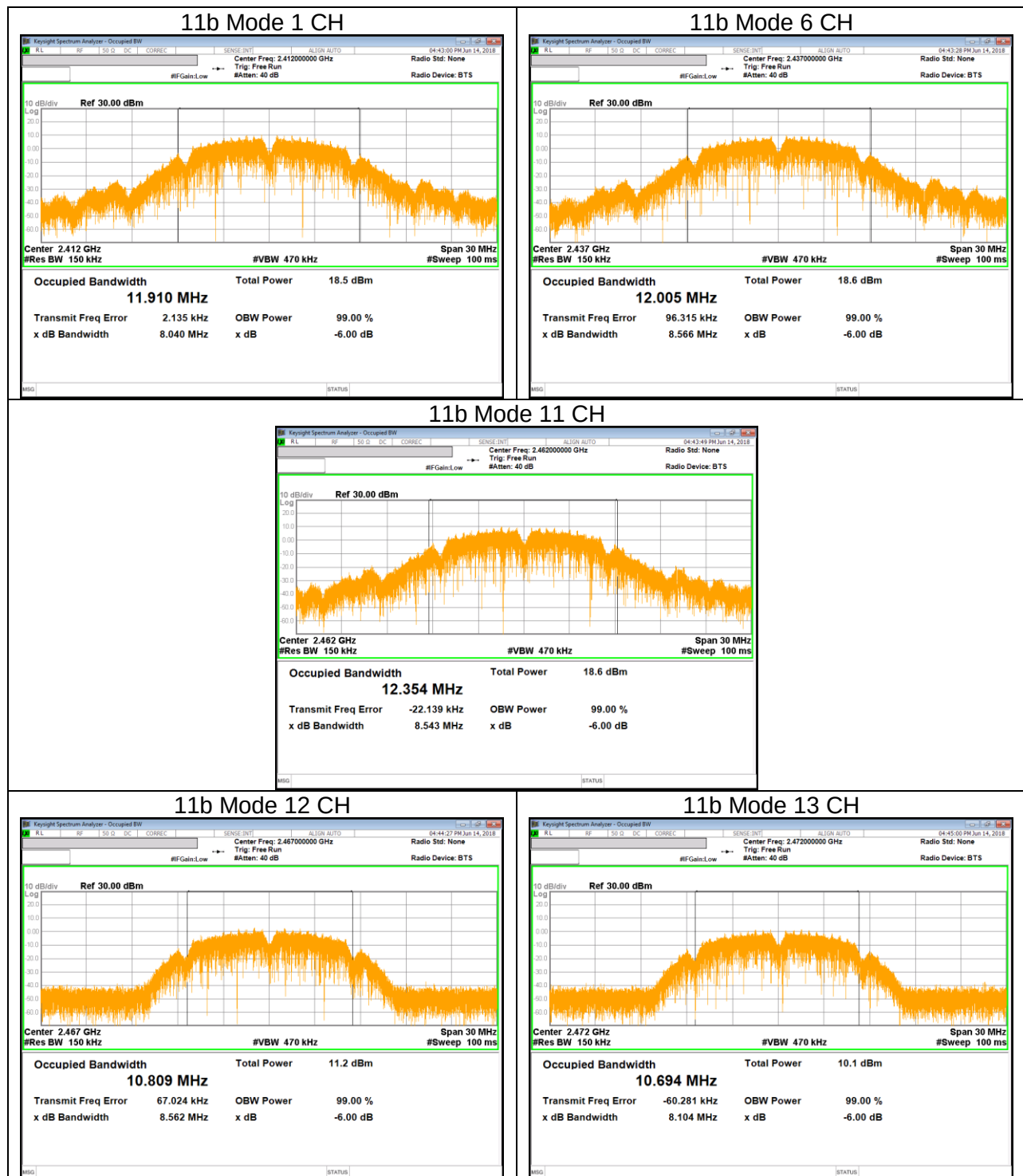
7.1.2. 802.11g MODE IN THE 2.4 GHz BAND

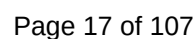
Channel	Frequency [MHz]	99% Bandwidth [MHz]
1	2412	16.315
6	2437	16.349
11	2462	16.340
12	2467	16.362
13	2472	16.299
Worst		16.362

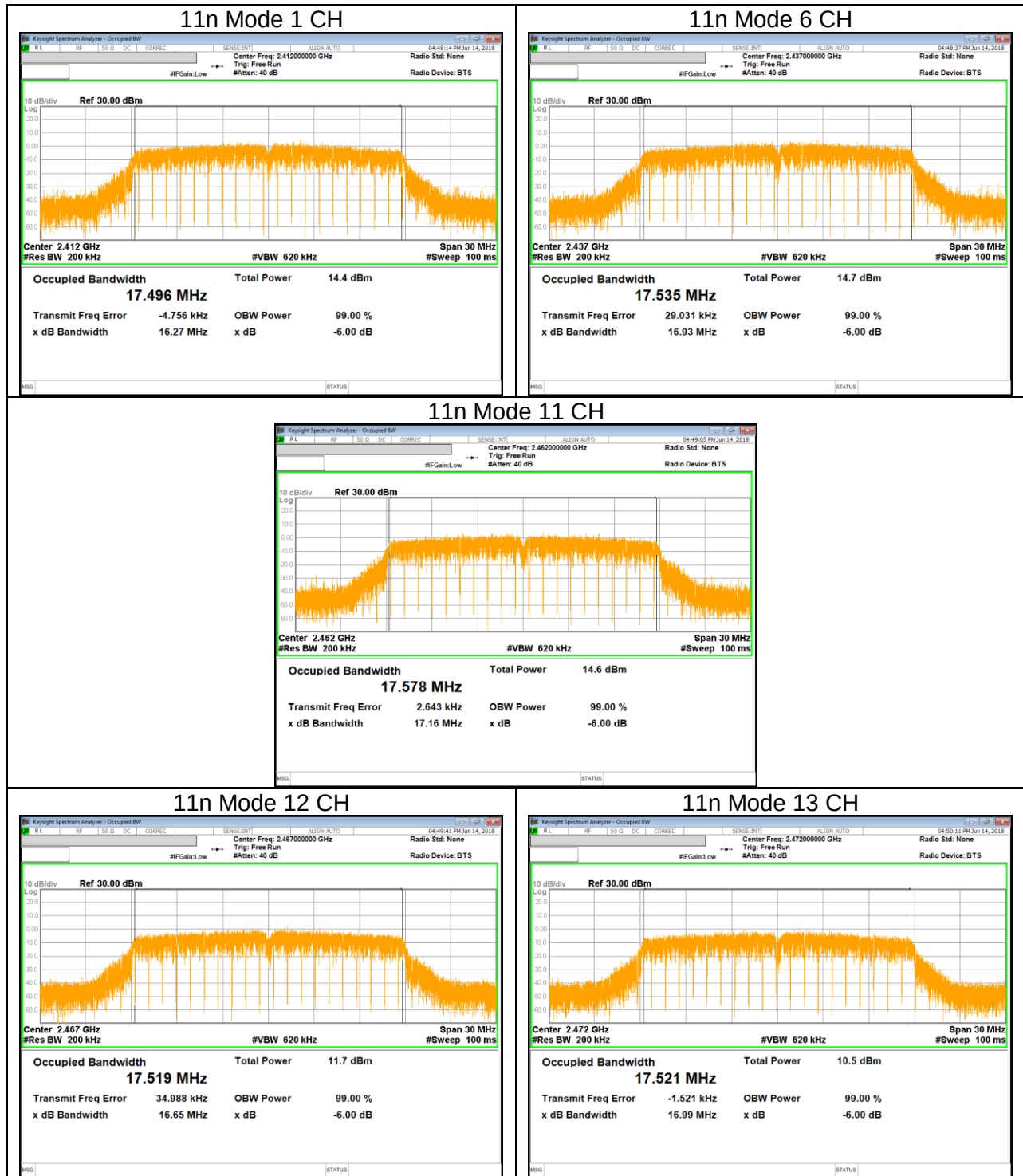
7.1.3. 802.11n HT20 MODE IN THE 2.4 GHz BAND

Channel	Frequency [MHz]	99% Bandwidth [MHz]
1	2412	17.496
6	2437	17.535
11	2462	17.578
12	2467	17.519
13	2472	17.521
Worst		17.578

7.1.4. 99% BANDWIDTH PLOTS







8. MEASUREMENT METHODS

6 dB BW : KDB 558074 D01 v04, Section 8.2.

OUTPUT POWER : KDB 558074 D01 v04, Section 9.2.3.1.

POWER SPECTRAL DENSITY : KDB 558074 D01 v04, Section 10.3./10.5.

Out-of-band EMISSIONS (Conducted) : KDB 558074 D01 v04, Section 11.1, 11.2.

Out-of-band EMISSIONS IN NON-RESTRICTED BANDS: KDB 558074 D01 v04, Section 11.0.

Out-of-band EMISSIONS IN RESTRICTED BANDS : KDB 558074 D01 v04, Section 12.1.

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

9. SUMMARY TABLE

FCC Part Section	Test Description	Test Limit	Test Condition	Test Result
15.247 (a)(2)	Occupied Band width (6dB)	>500KHz	Conducted	Pass
2.1051, 15.247 (d)	Band Edge / Conducted Spurious Emission	-30dBc		Pass
15.247 (b)(3)	TX conducted output power	<30dBm		Pass
15.247 (e)	PSD	<8dBm		Pass
15.207 (a)	AC Power Line conducted emissions	Section 10	Power Line conducted	Pass
15.205, 15.209	Radiated Spurious Emission	< 54dBuV/m	Radiated	Pass

10. ANTENNA PORT TEST RESULTS

10.1. 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 DTS Meas Guidance v04: 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**10.1.1.802.11b MODE IN THE 2.4 GHz BAND**

Channel	Frequency [MHz]	6 dB Bandwidth [MHz]	Minimum Limit [MHz]
1	2412	8.556	0.5
6	2437	9.048	0.5
11	2462	9.052	0.5
12	2467	8.078	0.5
13	2472	8.998	0.5
Worst		8.078	0.5

10.1.1.1. 802.11g MODE IN THE 2.4 GHz BAND

Channel	Frequency [MHz]	6 dB Bandwidth [MHz]	Minimum Limit [MHz]
1	2412	15.110	0.5
6	2437	15.440	0.5
11	2462	15.800	0.5
12	2467	15.760	0.5
13	2472	16.292	0.5
Worst		15.110	0.5

10.1.2.802.11n HT20 MODE IN THE 2.4 GHz BAND

Channel	Frequency [MHz]	6 dB Bandwidth [MHz]	Minimum Limit [MHz]
1	2412	15.040	0.5
6	2437	15.920	0.5
11	2462	16.290	0.5
12	2467	15.540	0.5
13	2472	15.100	0.5
Worst		15.040	0.5

10.1.3. 6 dB BANDWIDTH PLOTS







10.2. OUTPUT POWER

LIMITS

FCC §15.247

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.

DIRECTIONAL ANTENNA GAIN

There is only one transmitter output therefore the directional gain is equal to the antenna gain.

TEST PROCEDURE

The transmitter output is connected to a power meter.

The cable assembly insertion loss was entered as an offset in the power meter to allow for direct reading of power.

Output power measurement was performed utilizing the “§9.2.3.1 AVGPM” under KDB558074 D01 DTS Meas Guidance v04.

Duty cycle correction factor is already added to the average output power results for duty cycle factor < 98%. (802.11g, 802.11n mode)

RESULTS**10.2.1.802.11b MODE IN THE 2.4 GHz BAND****Limits**

Channel	Frequency [MHz]	Directional Gain Primary [dBi]	FCC Power Limit [dBm]	Max Power [dBm]
1	2412	-6.10	30.00	30.00
6	2437	-6.10	30.00	30.00
11	2462	-6.10	30.00	30.00
12	2467	-6.10	30.00	30.00
13	2472	-6.10	30.00	30.00

Results

Channel	Frequency [MHz]	Meas Power [dBm]	Total Power [dBm]	Power Limit [dBm]	Margin [dB]
1	2412	16.66	16.66	30.00	-13.34
6	2437	17.21	17.21	30.00	-12.79
11	2462	16.40	16.40	30.00	-13.60
12	2467	9.56	9.56	30.00	-20.44
13	2472	8.29	8.29	30.00	-21.71
Worst			17.21	30.00	-12.79

10.2.2.802.11g MODE IN THE 2.4 GHz BAND

Limits

Channel	Frequency [MHz]	Directional Gain Primary [dBi]	FCC Power Limit [dBm]	Max Power [dBm]
1	2412	-6.10	30.00	30.00
6	2437	-6.10	30.00	30.00
11	2462	-6.10	30.00	30.00
12	2467	-6.10	30.00	30.00
13	2472	-6.10	30.00	30.00

Results

Channel	Frequency [MHz]	Meas Power [dBm]	Total Power [dBm]	Power Limit [dBm]	Margin [dB]
1	2412	14.72	14.72	30.00	-15.28
6	2437	15.18	15.18	30.00	-14.82
11	2462	14.73	14.73	30.00	-15.27
12	2467	10.31	10.31	30.00	-19.69
13	2472	9.11	9.11	30.00	-20.89
Worst			15.18	30.00	-14.82

10.2.3.802.11n HT20 MODE IN THE 2.4 GHz BAND

Limits

Channel	Frequency [MHz]	Directional Gain Primary [dBi]	FCC Power Limit [dBm]	Max Power [dBm]
1	2412	-6.10	30.00	30.00
6	2437	-6.10	30.00	30.00
11	2462	-6.10	30.00	30.00
12	2467	-6.10	30.00	30.00
13	2472	-6.10	30.00	30.00

Results

Channel	Frequency [MHz]	Meas Power [dBm]	Total Power [dBm]	Power Limit [dBm]	Margin [dB]
1	2412	13.54	13.54	30.00	-16.46
6	2437	14.16	14.16	30.00	-15.84
11	2462	13.60	13.60	30.00	-16.40
12	2467	10.17	10.17	30.00	-19.83
13	2472	9.01	9.01	30.00	-20.99
Worst			14.16	30.00	-15.84

10.3. PSD

LIMITS

FCC §15.247

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 "Method §10.3 AVGPS-1 (802.11 b/g/n mode) under KDB558074 D01 DTS Meas Guidance v04.

RESULTS

10.3.1.802.11b MODE IN THE 2.4 GHz BAND

PSD Results

Channel	Frequency [MHz]	PSD Meas [dBm]	Duty Factor [dB]	Final PSD [dBm/3kHz]	Limit [dBm/3kHz]	Margin [dB]
1	2412	-14.267	0.00	-14.267	8.00	-22.267
6	2437	-13.798	0.00	-13.798	8.00	-21.798
11	2462	-14.981	0.00	-14.981	8.00	-22.981
12	2467	-21.228	0.00	-21.228	8.00	-29.228
13	2472	-22.989	0.00	-22.989	8.00	-30.989

10.3.2.802.11g MODE IN THE 2.4 GHz BAND

PSD Results

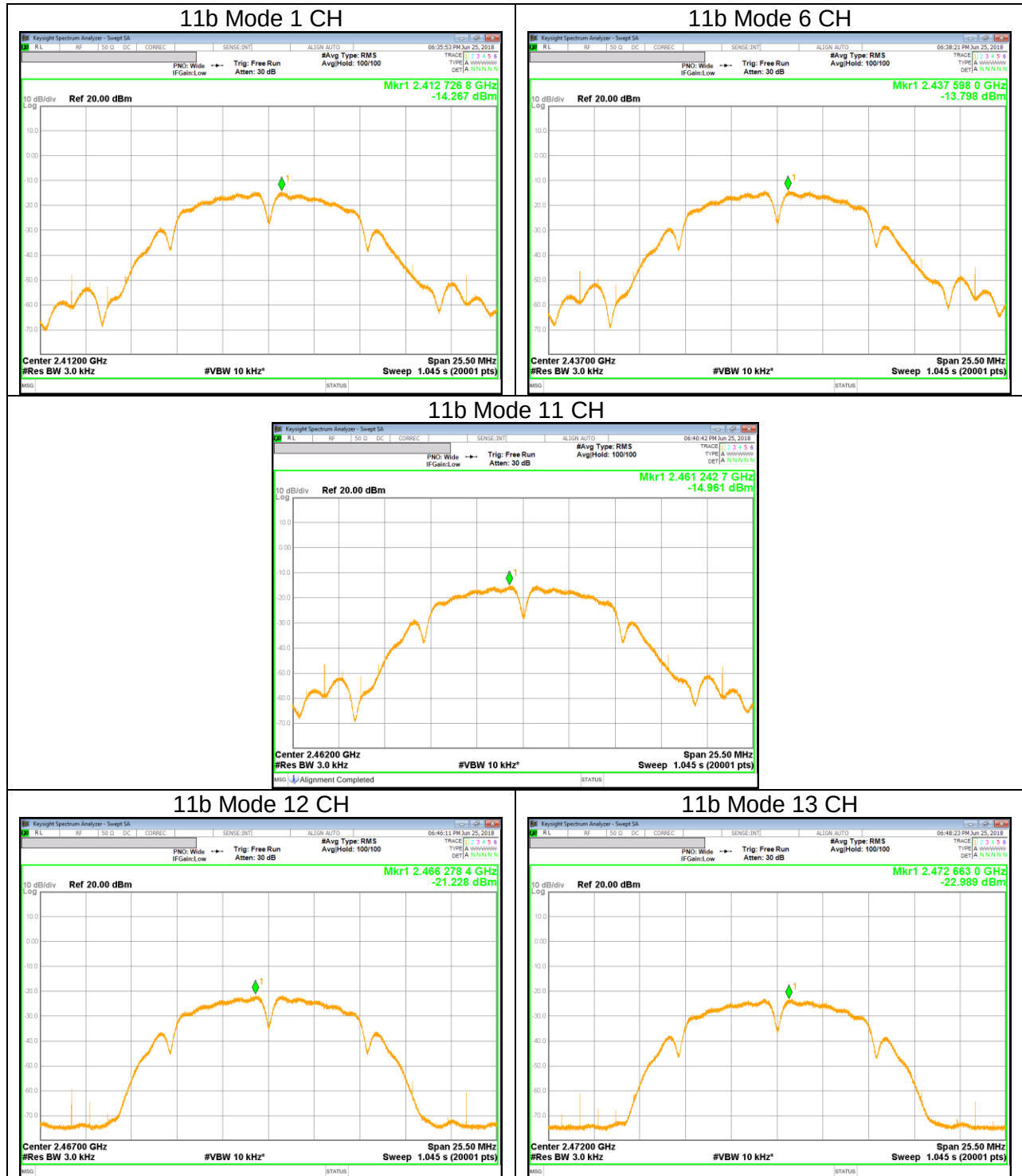
Channel	Frequency [MHz]	PSD Meas [dBm]	Duty Factor [dB]	Final PSD [dBm/3kHz]	Limit [dBm/3kHz]	Margin [dB]
1	2412	-16.511	0.15	-16.361	8.00	-24.511
6	2437	-15.937	0.15	-15.787	8.00	-23.937
11	2462	-16.744	0.15	-16.594	8.00	-24.744
12	2467	-21.392	0.15	-21.242	8.00	-29.392
13	2472	-21.980	0.15	-21.830	8.00	-29.980

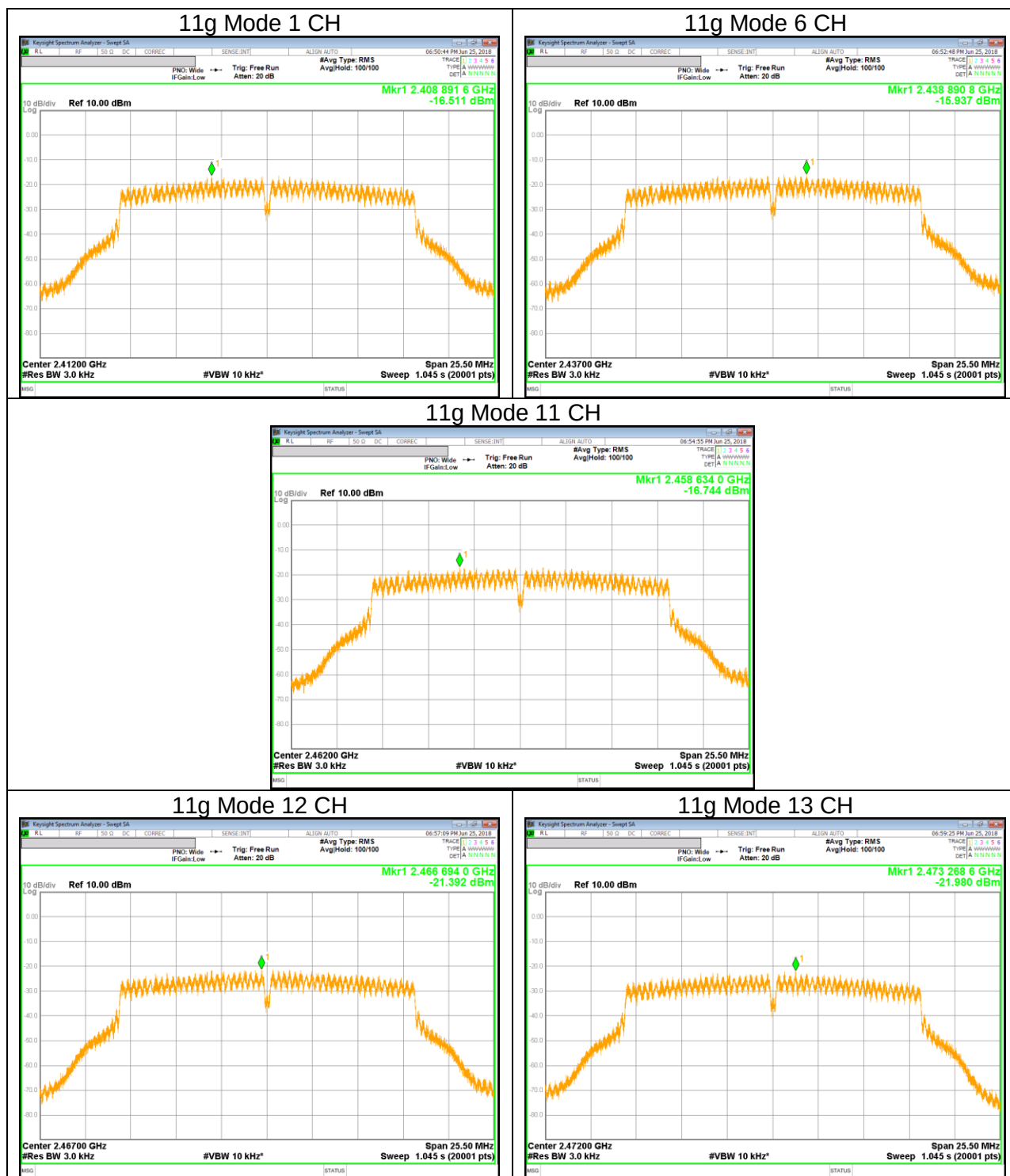
10.3.3.802.11n HT20 MODE IN THE 2.4 GHz BAND

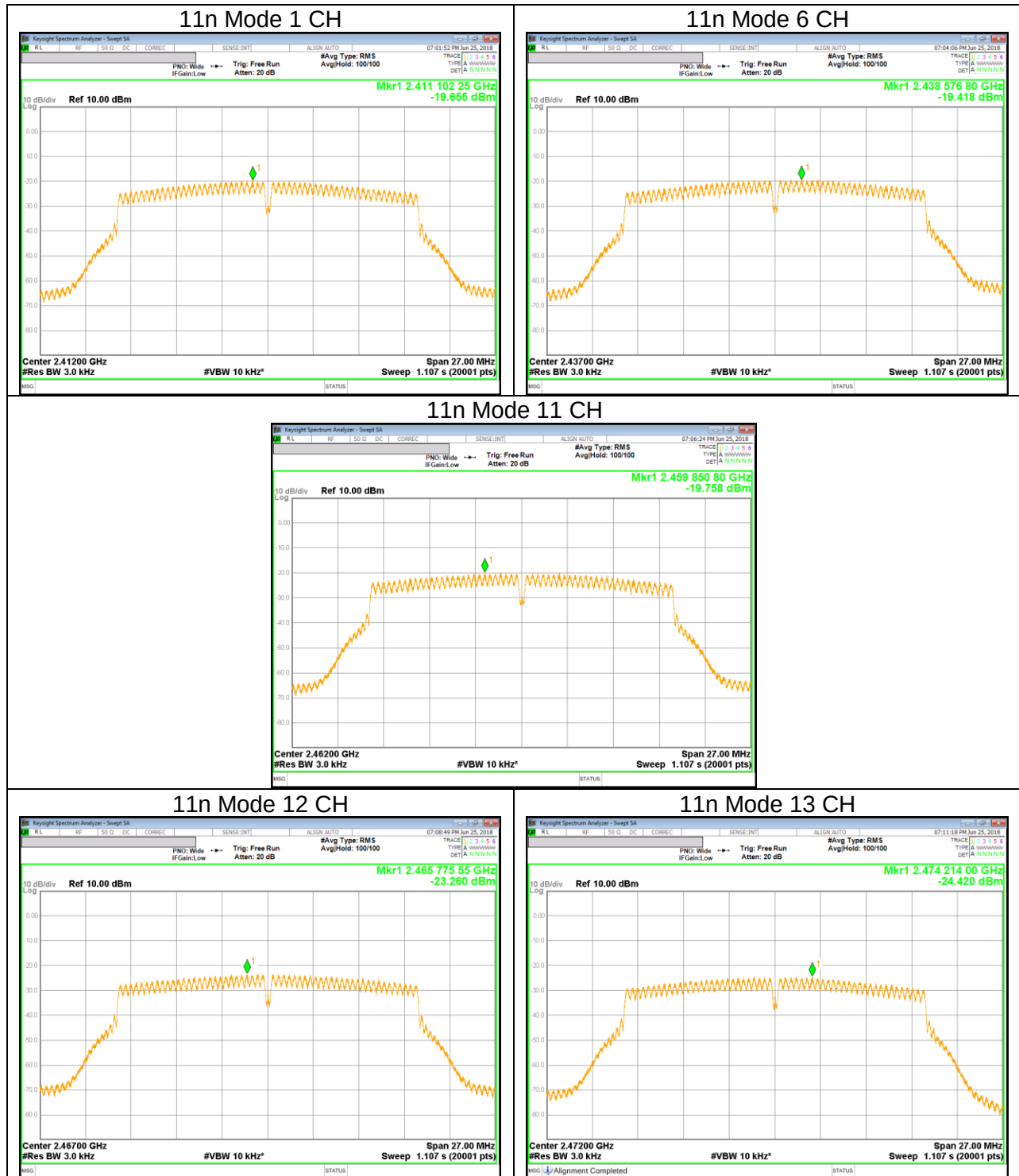
PSD Results

Channel	Frequency [MHz]	PSD Meas [dBm]	Duty Factor [dB]	Final PSD [dBm/3kHz]	Limit [dBm/3kHz]	Margin [dB]
1	2412	-19.655	0.16	-19.495	8.00	-27.655
6	2437	-19.418	0.16	-19.258	8.00	-27.418
11	2462	-19.758	0.16	-19.598	8.00	-27.758
12	2467	-23.260	0.16	-23.100	8.00	-31.260
13	2472	-24.420	0.16	-24.260	8.00	-32.420

10.3.4.PSD PLOTS







10.4. OUT-OF-BAND EMISSIONS

LIMITS

FCC §15.247 (d)

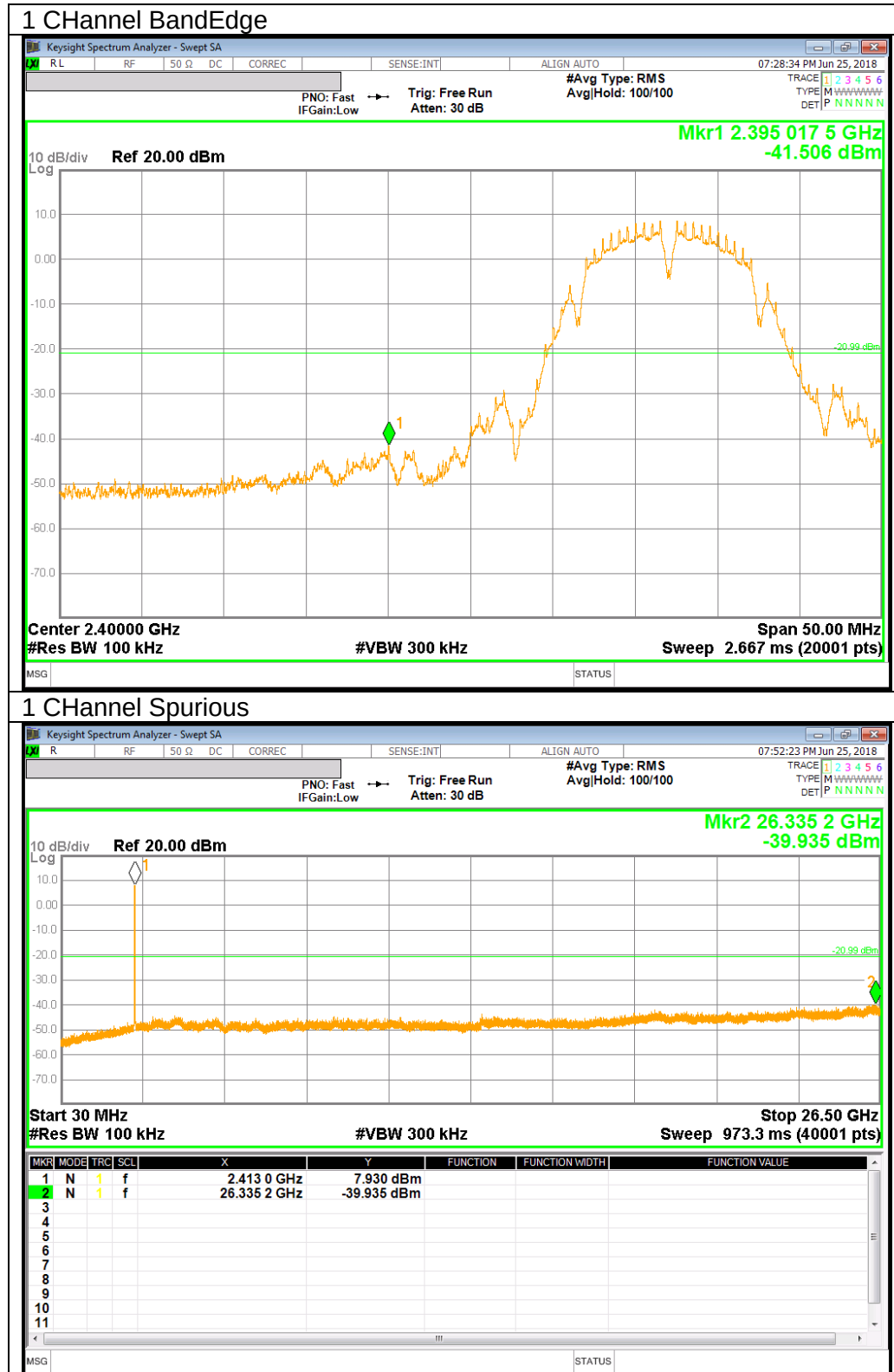
In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required.

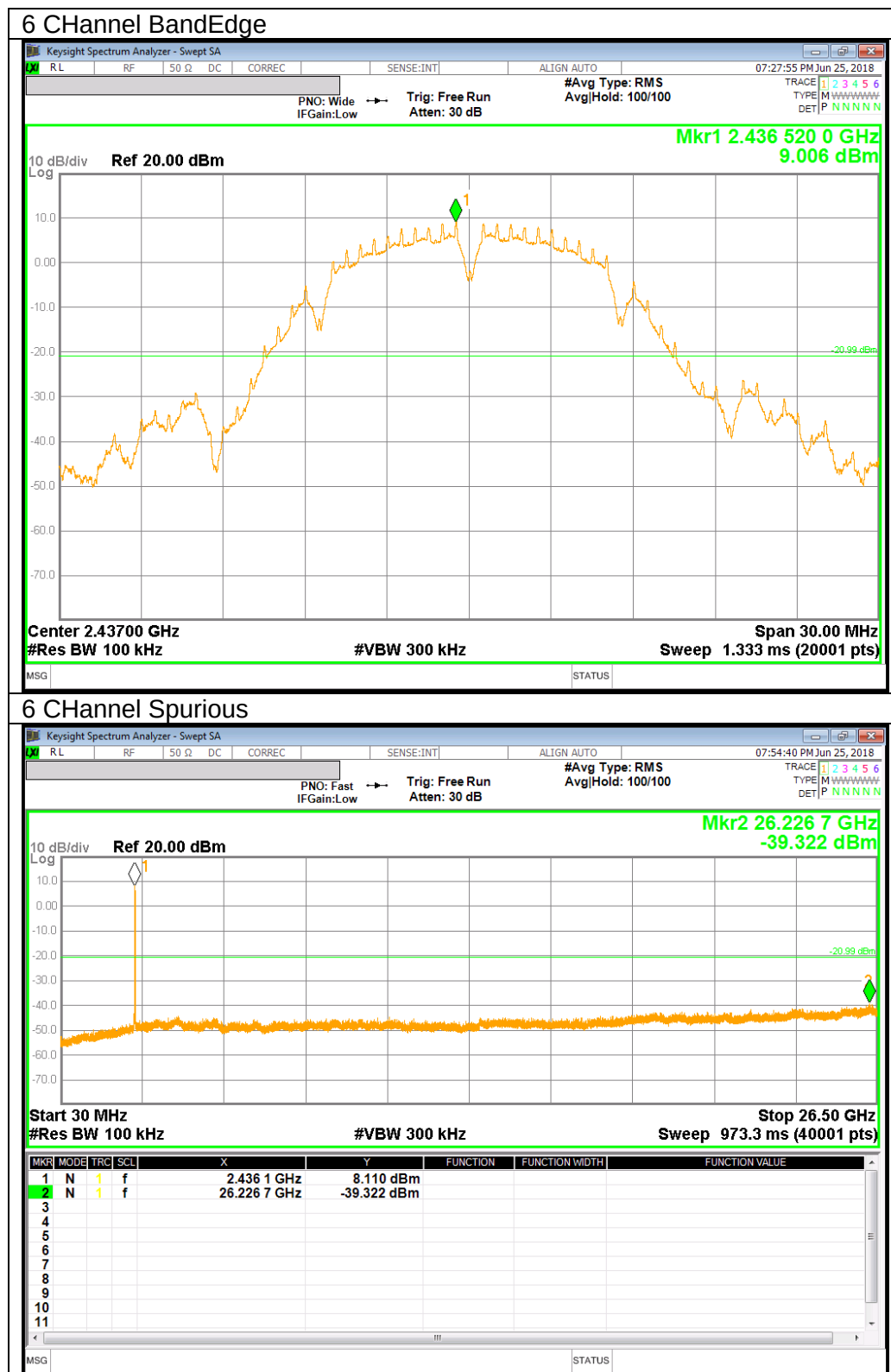
TEST PROCEDURE

The transmitter output is connected to a spectrum analyzer with RBW = 100 kHz, VBW = 300 kHz, peak detector, and max hold. Measurements utilizing these settings are made of the in-band reference level, bandedge, out-of-band emissions (where measurements to the general radiated limits will not be made)

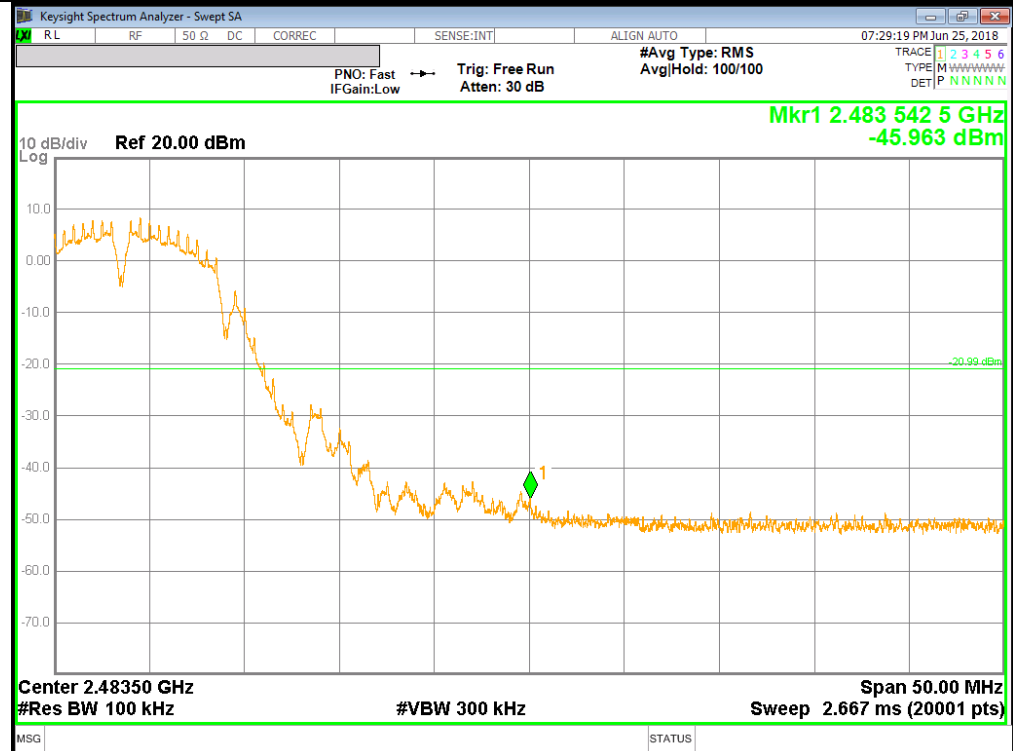
RESULTS

10.4.1.802.11b MODE IN THE 2.4 GHz BAND

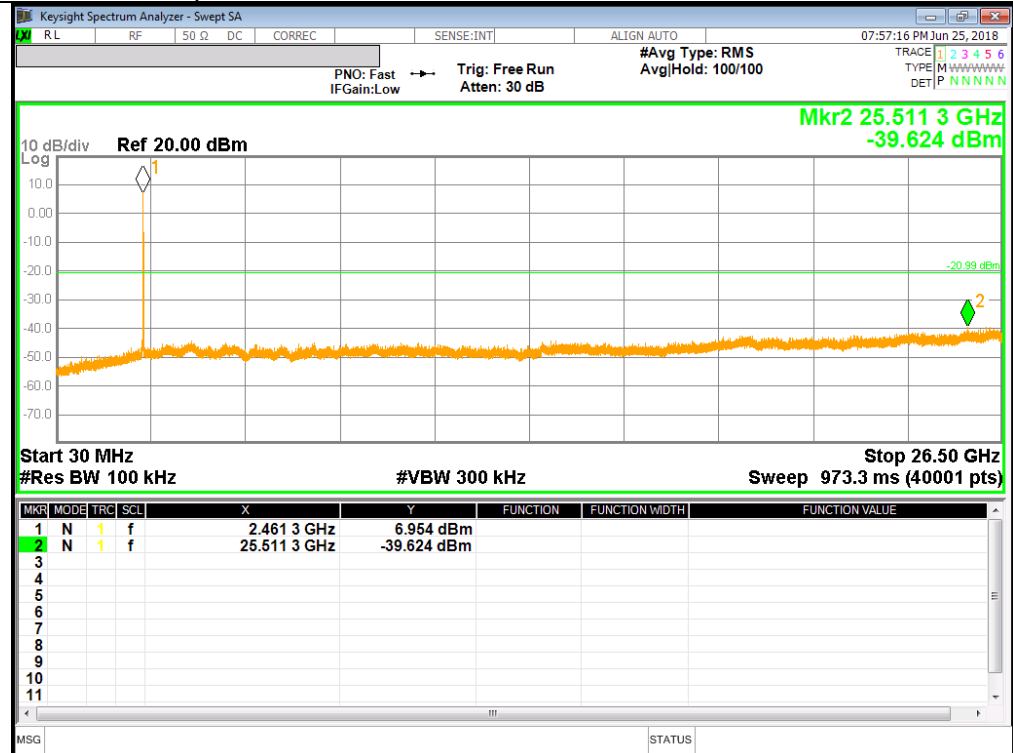




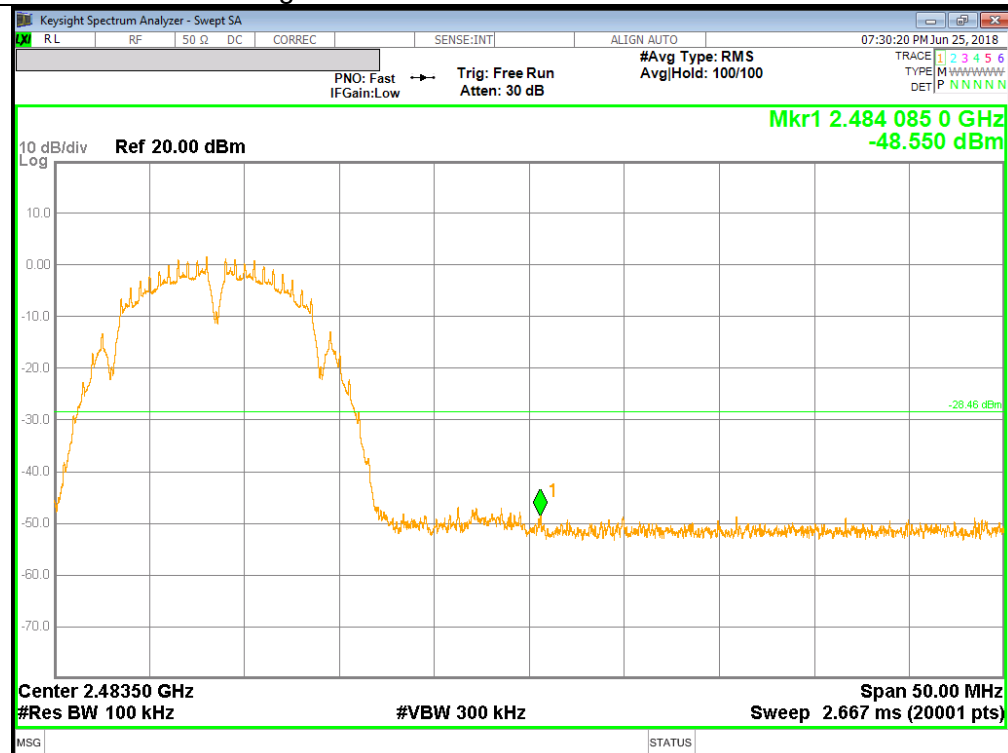
11 Channel BandEdge



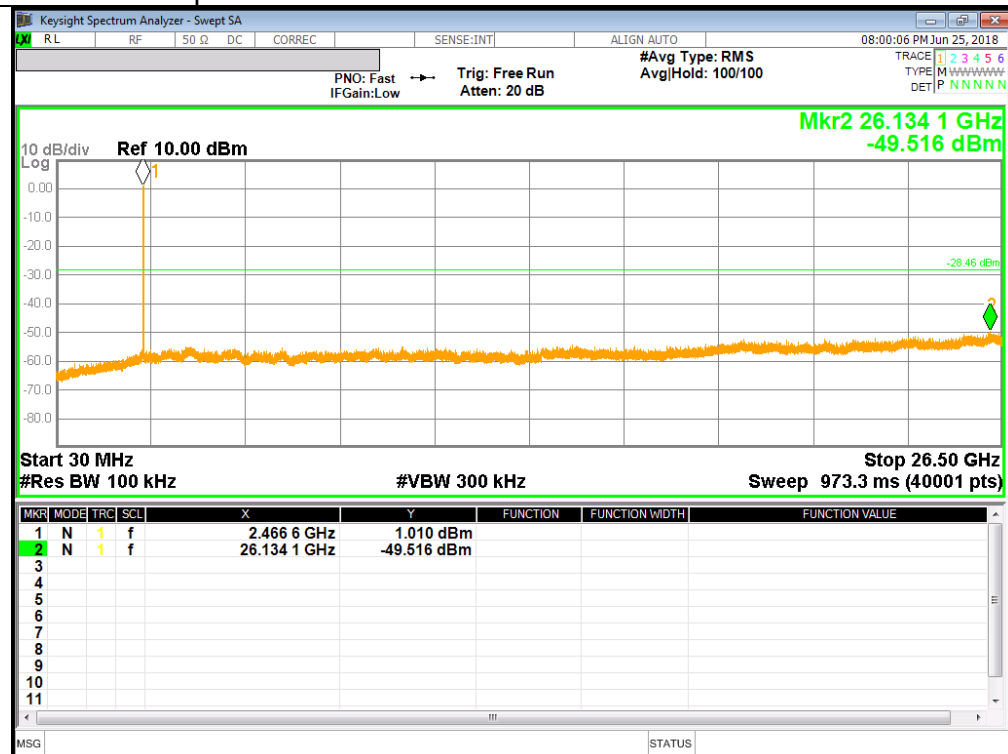
11 Channel Spurious



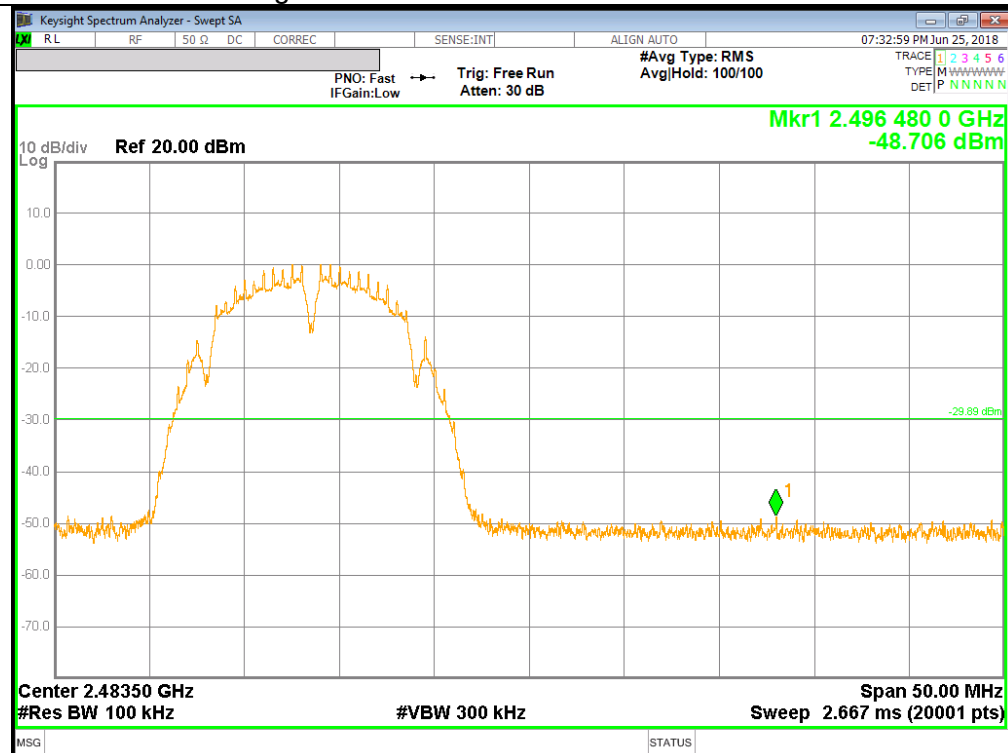
12 CHannel BandEdge



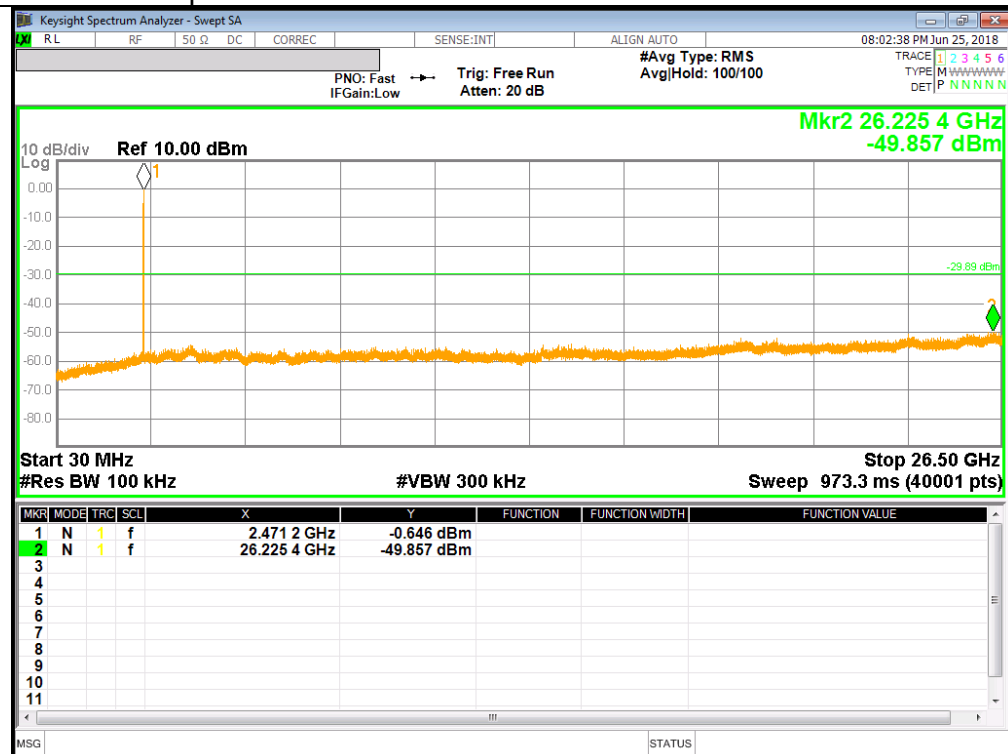
12 CHannel Spurious



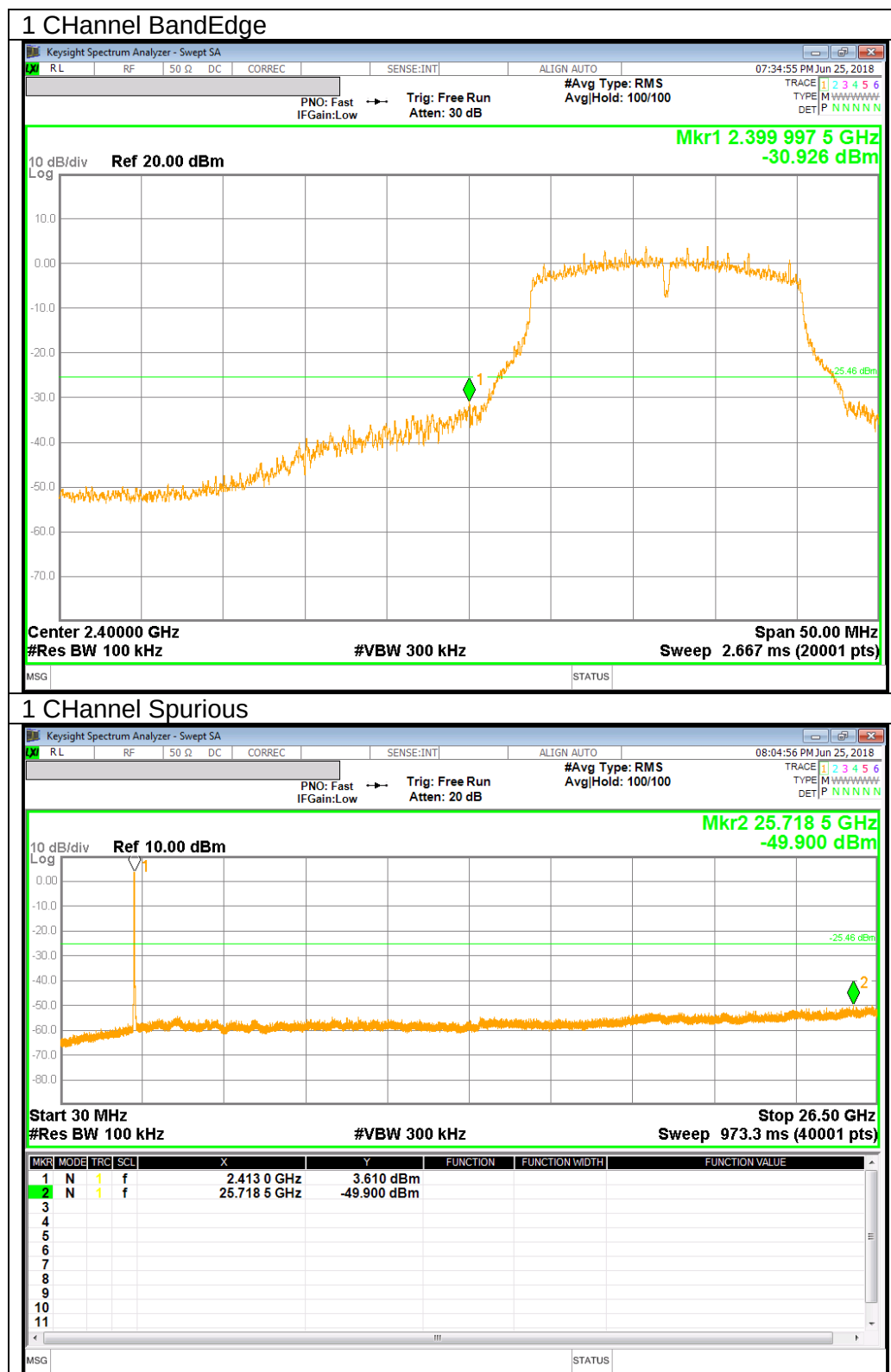
13 Channel BandEdge



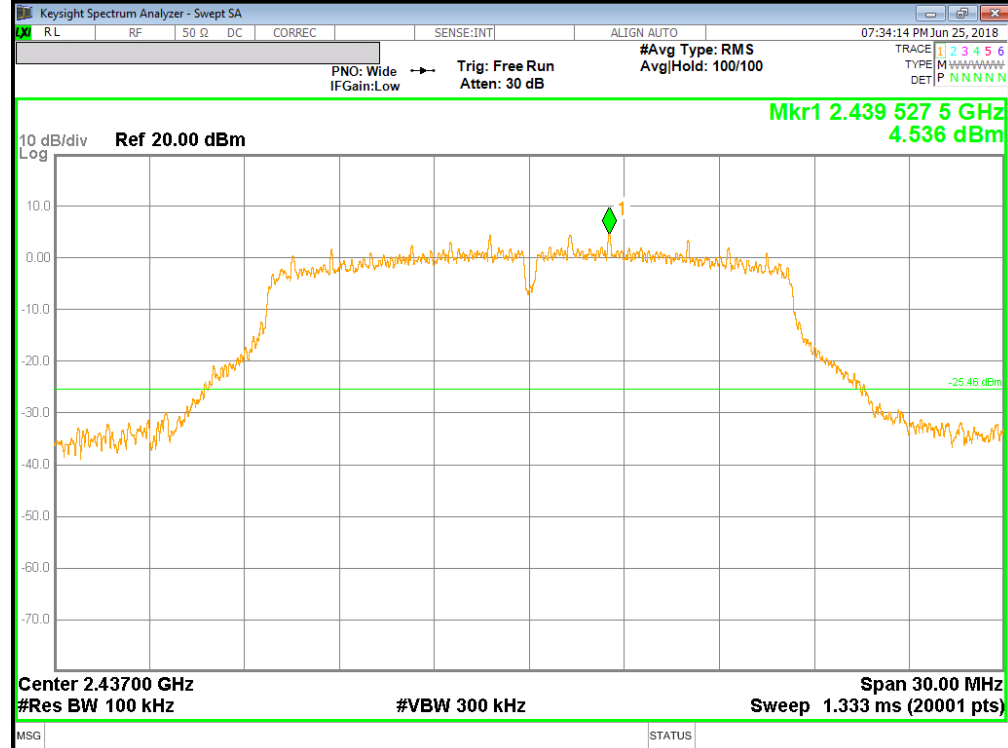
13 Channel Spurious



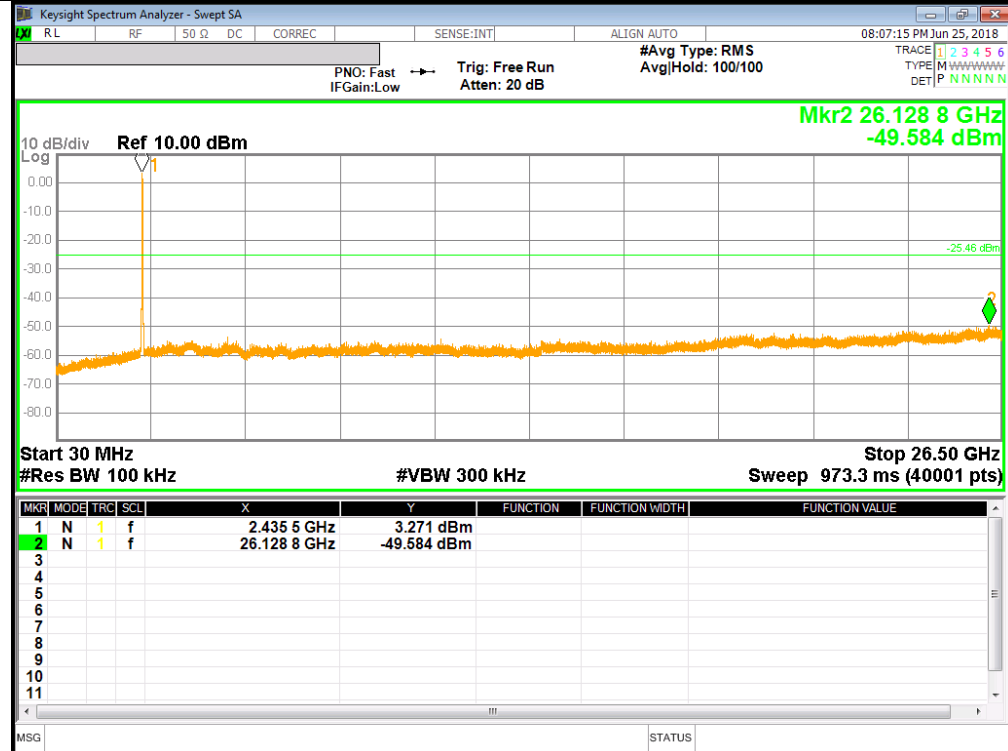
10.4.2.802.11g MODE IN THE 2.4 GHz BAND



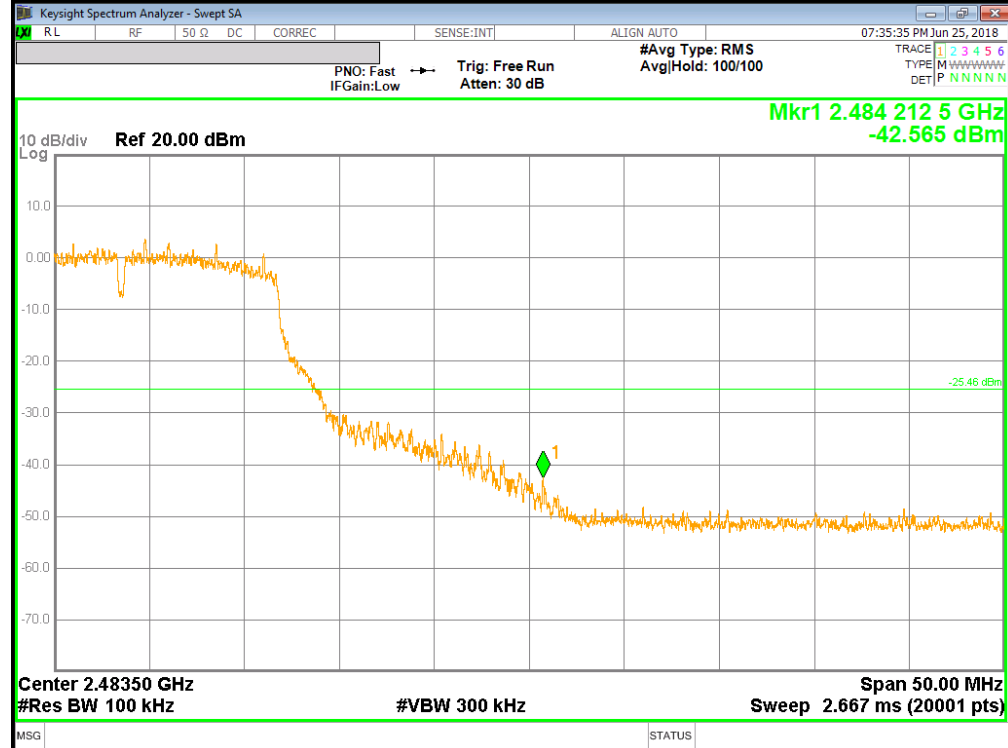
6 Channel BandEdge



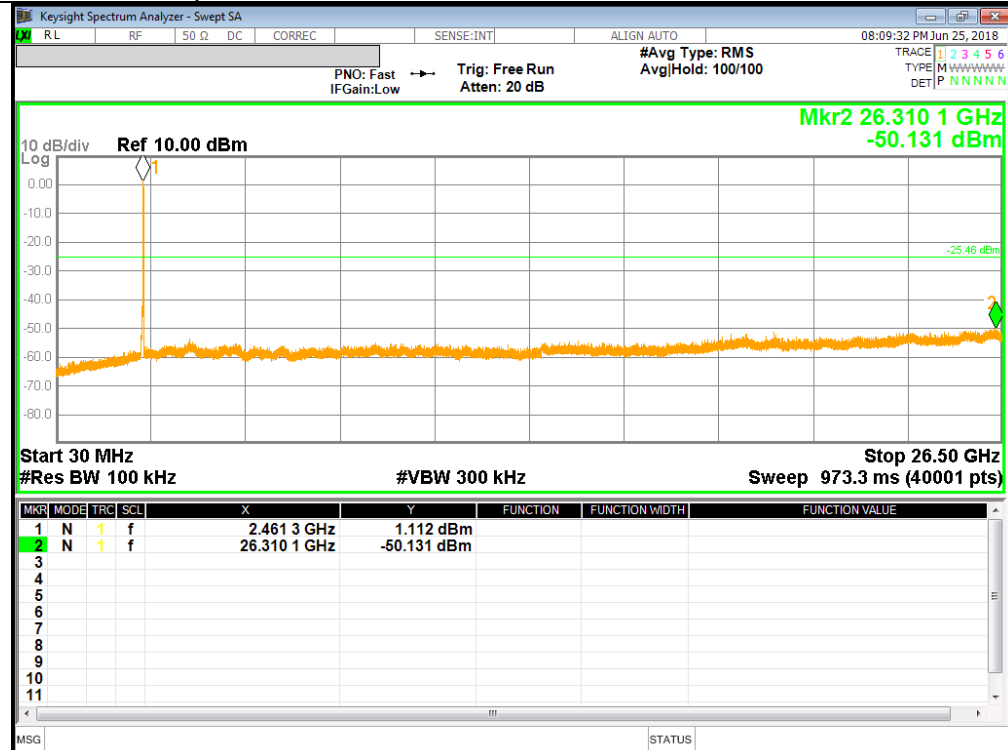
6 Channel Spurious



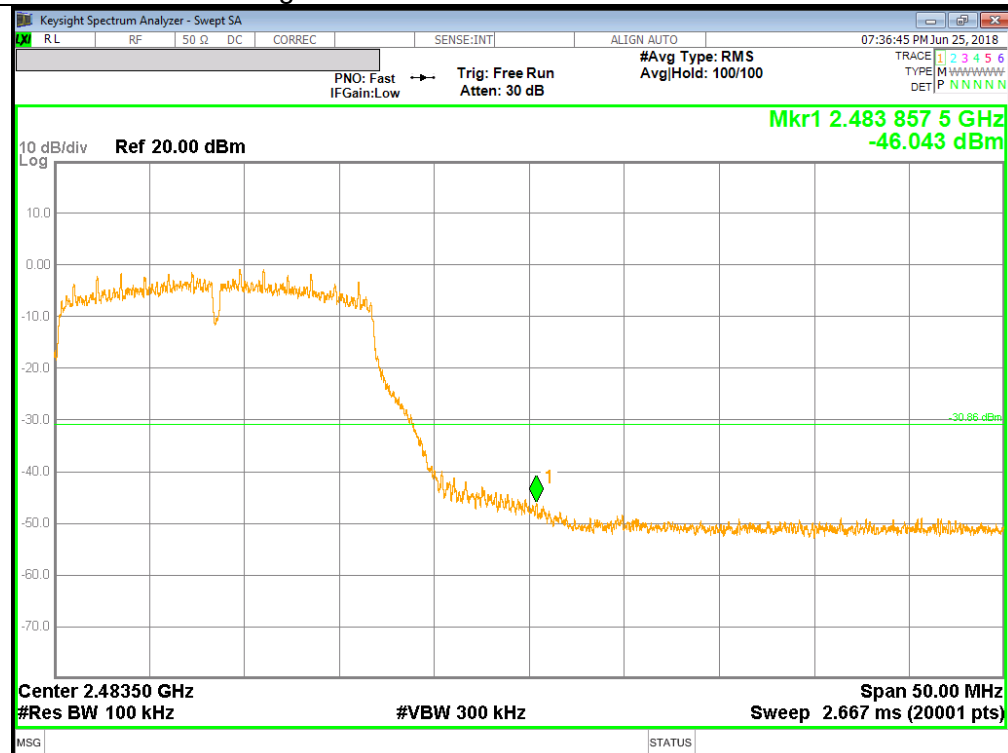
11 Channel BandEdge



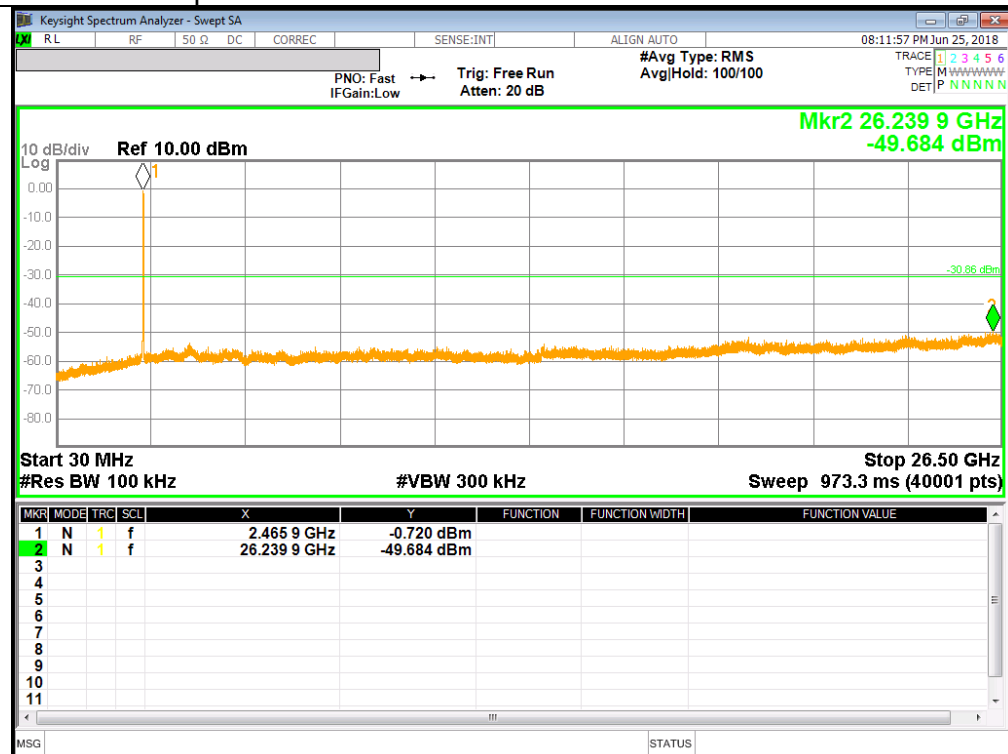
11 Channel Spurious



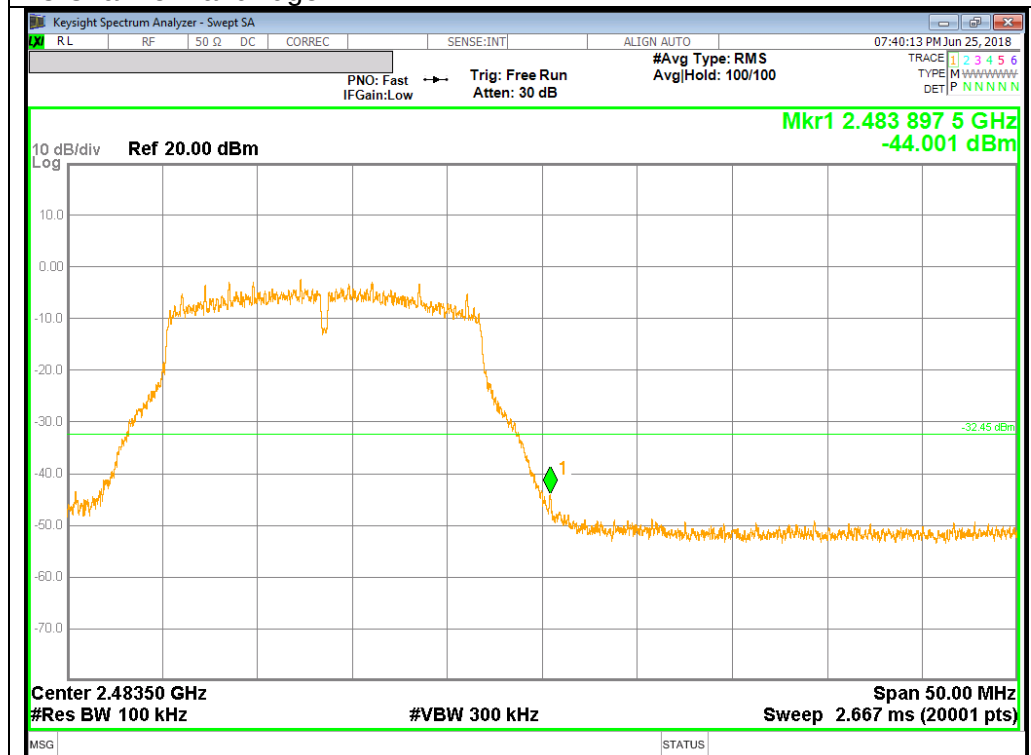
12 CHannel BandEdge



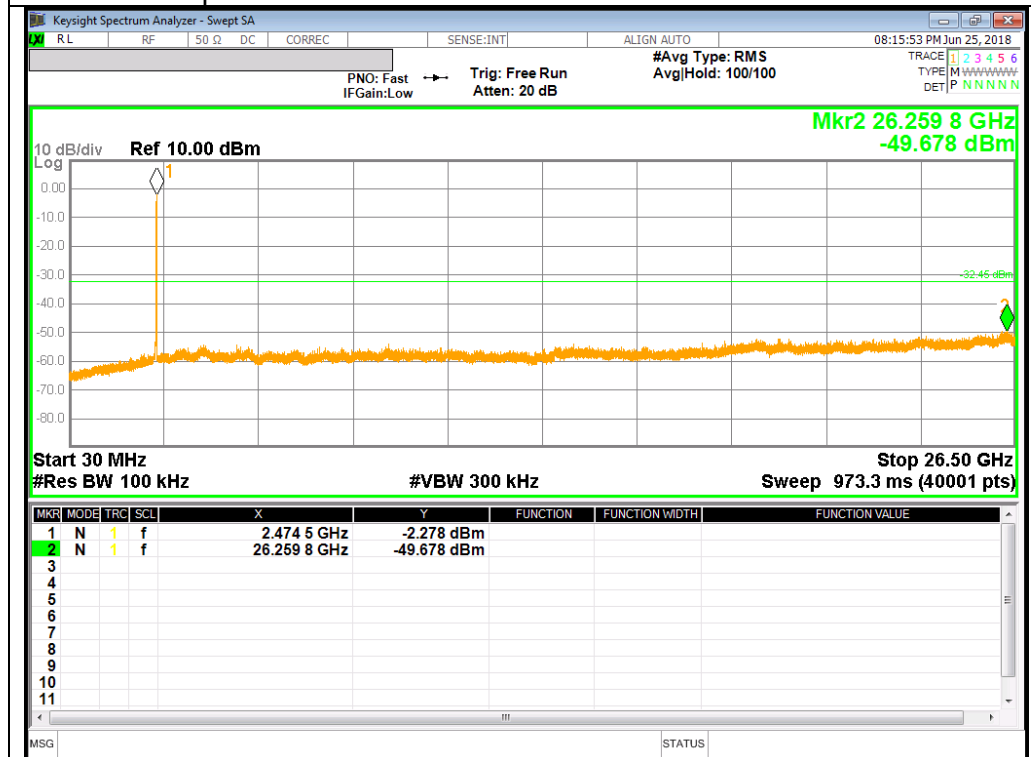
12 CHannel Spurious



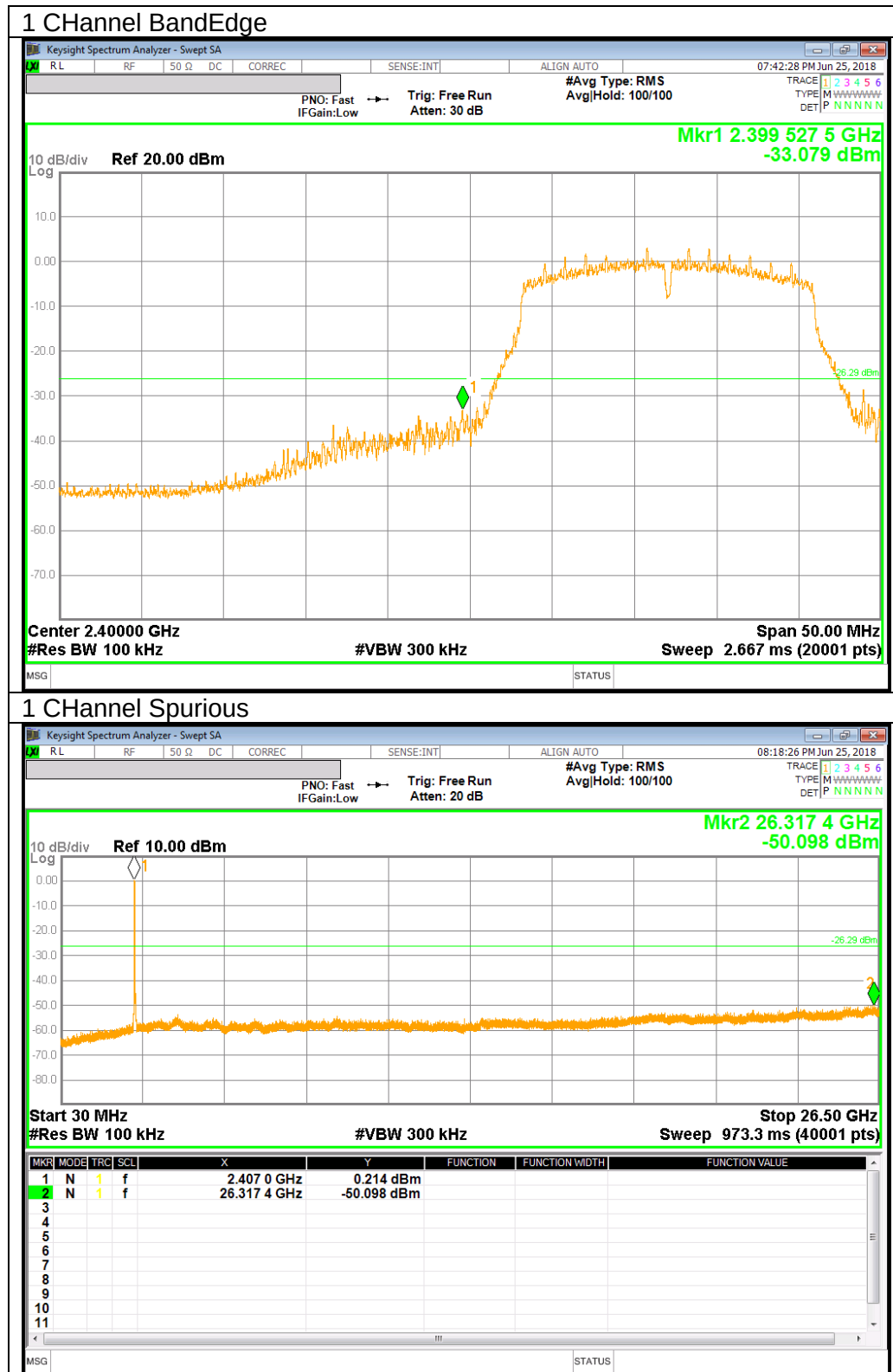
13 Channel BandEdge



13 Channel Spurious



10.4.3.802.11n HT20 MODE IN THE 2.4 GHz BAND



Keysight Spectrum Analyzer - Swept SA

RL RF 50 Ω DC CORREC SENSE:INT ALIGN AUTO 07:41:33 PM Jun 25, 2018

PNO: Wide IFGain:Low Trig: Free Run Atten: 30 dB #Avg Type: RMS AvgHold: 100/100

TRACE 1 2 3 4 5 6
TYPE M
DET P

10 dB/div Ref 20.00 dBm

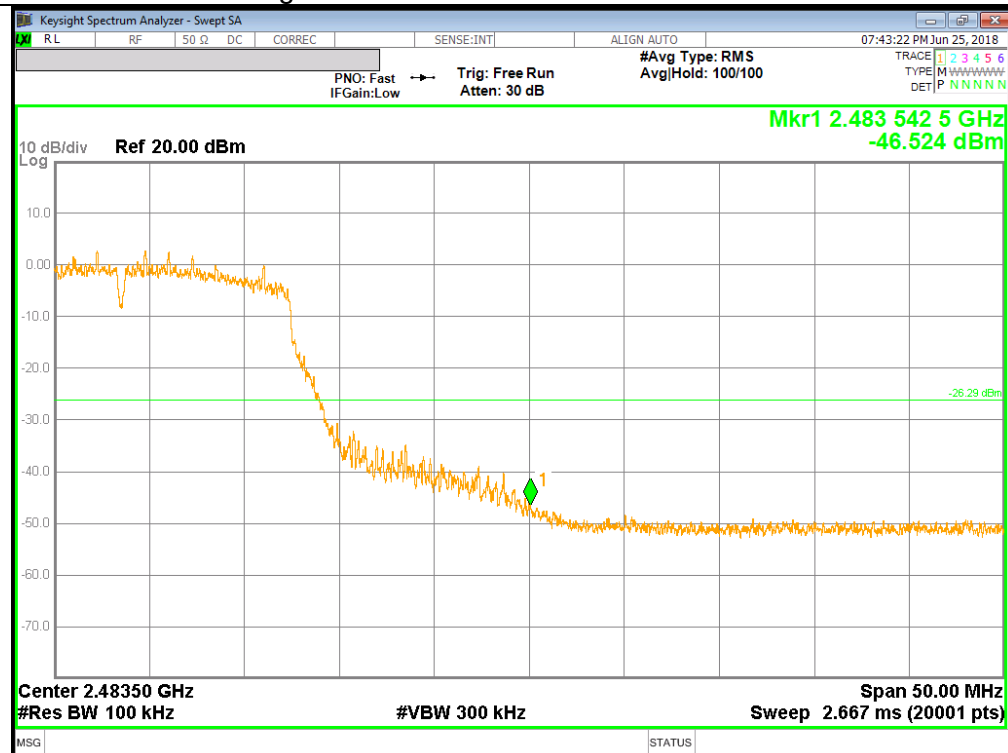
Mkr1 2.439 521 5 GHz
3.706 dBm

Center 2.43700 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 1.333 ms (20001 pts)

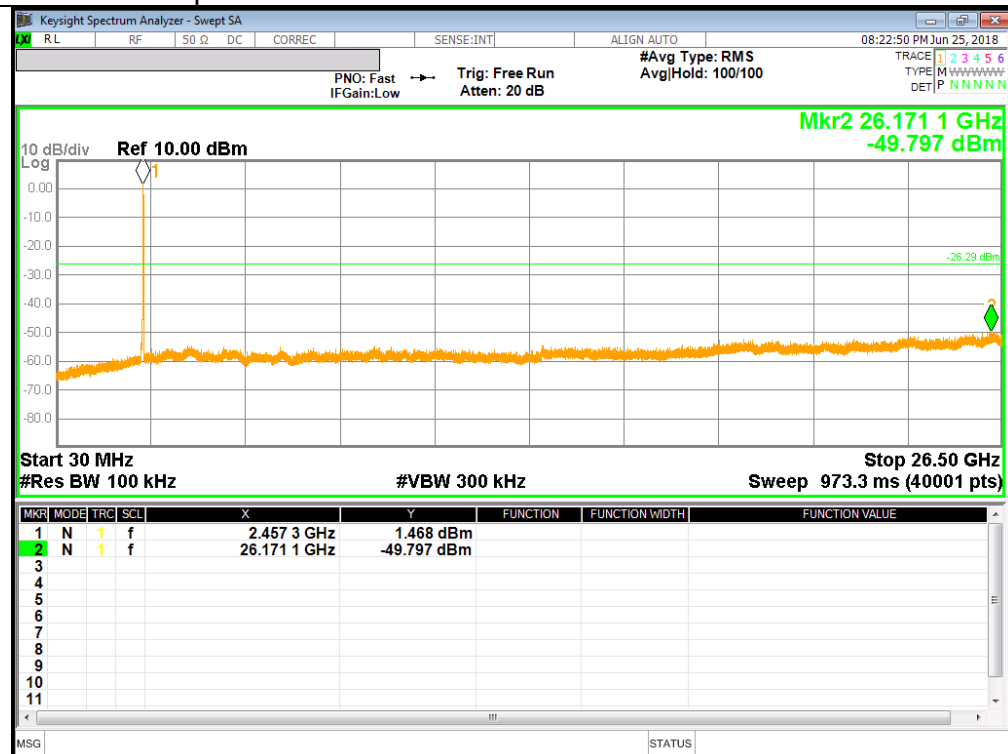
MSG STATUS

[illegible]

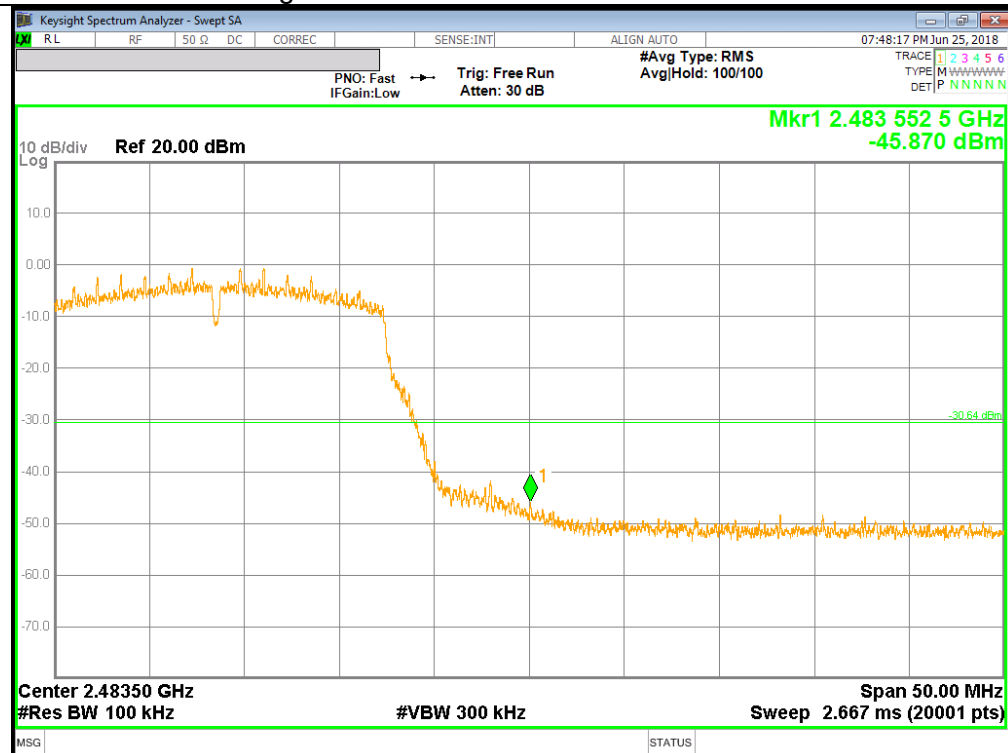
11 Channel BandEdge



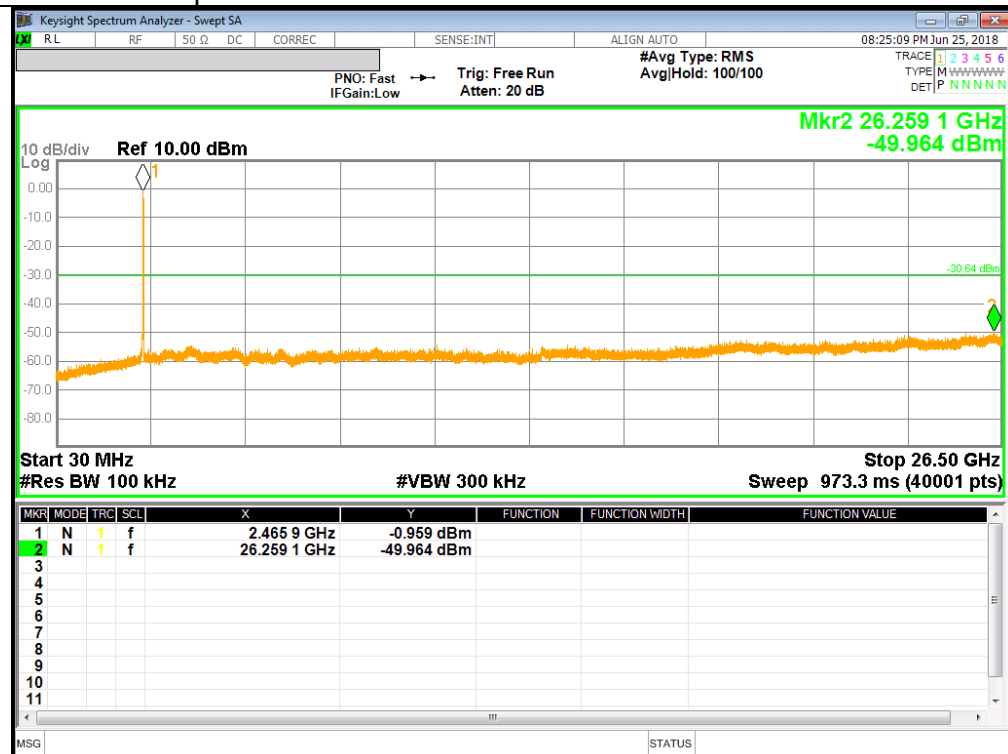
11 Channel Spurious



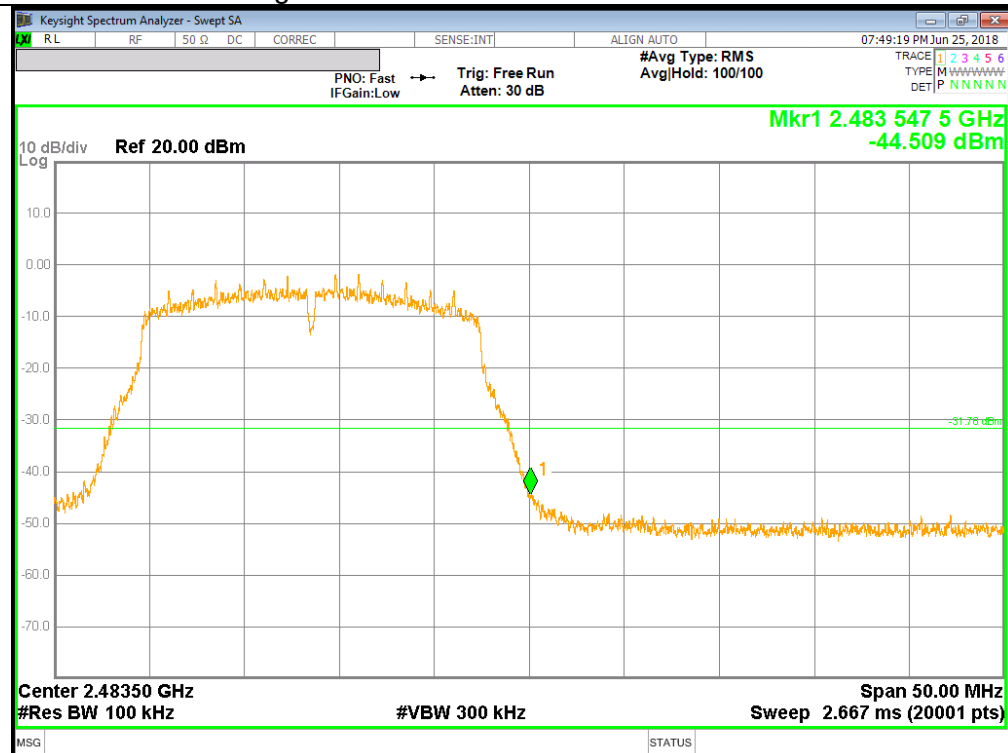
12 Channel BandEdge



12 Channel Spurious



13 Channel BandEdge



13 Channel Spurious

