



CERTIFICATION TEST REPORT

Report Number. : 12371351-E4V2

Applicant : SONY MOBILE COMMUNICATIONS, INC.
4-12-3 HIGASHI-SHINAGAWA
SHINAGAWA-KU, TOKYO, 140-0002, JAPAN

FCC ID : PY7-26828G

EUT Description : GSM/WCDMA/LTE Phone with BT, DTS/UNII a/b/g/n/ac & NFC

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

Date Of Issue:

July 24, 2018

Prepared by:

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NVLAP Lab code: 200065-0

REPORT REVISION HISTORY

Rev.	Issue Date	Revisions	Revised By
V1	7/6/2018	Initial Issue	
V2	7/24/2018	Removed labels of "2TX Antenna 1 + Antenna 2.	Kiya Kedida

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: SONY MOBILE COMMUNICATIONS, INC.
4-12-3 HIGASHI-SHINAGAWA,
SHINAGAWA-KU, TOKYO, 140-0002, JAPAN

EUT DESCRIPTION: GSM/WCDMA/LTE Phone with BT, DTS/UNII a/b/g/n/ac & NFC

SERIAL NUMBER: BH93004ED4, BH93008XD4 (Conducted),
BH93008MD4, BH93008QD4 (Radiated)

DATE TESTED: June 21 – July 2, 2018

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

UL Verification Services Inc. 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 Verification Services Inc. 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 Verification Services Inc. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL Verification Services Inc. 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 NVLAP, NIST, any agency of the Federal Government, or any agency of the U.S. government.

Approved & Released For
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Reviewed By:



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2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with FCC CFR 47 Part 2, FCC CFR 47 Part 15, KDB 558074 D01 v4, KDB 662911 D01 v02r01 and ANSI C63.10-2013.

3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 47173 and 47266 Benicia Street, and at 47658 Kato Road, Fremont, California, USA. Line conducted emissions are measured only at the 47173 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.

47173 Benicia Street	47266 Benicia Street	47658 Kato Rd.
☐ Chamber A (ISED:2324B-1)	☐ Chamber D (ISED:22541-1)	☒ Chamber K (ISED: 2324A-1)
☒ Chamber B (ISED:2324B-2)	☐ Chamber E (ISED:22541-2)	☒ Chamber L (ISED: 2324A-3)
☐ Chamber C (ISED:2324B-3)	☐ Chamber F (ISED:22541-3)	
	☐ Chamber G (ISED:22541-4)	
	☐ Chamber H (ISED:22541-5)	

The above test sites and facilities are covered under FCC Test Firm Registration # 208313. Chambers A through C are covered under ISED company address code 2324B with site numbers 2324B -1 through 2324B-3, respectively. Chambers D through H are covered under ISED company address code 22541 with site numbers 22541 -1 through 22541-5, respectively.

ISED company address codes for chambers K through L are in process, and have yet to be determined.

UL Verification Services Inc. is accredited by NVLAP, Laboratory Code 200065-0

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:

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

4.3. MEASUREMENT UNCERTAINTY

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

PARAMETER	UNCERTAINTY
Worst Case Conducted Disturbance, 9KHz to 0.15 MHz	3.84 dB
Worst Case Conducted Disturbance, 0.15 to 30 MHz	3.65 dB
Worst Case Radiated Disturbance, 9KHz to 30 MHz	3.15 dB
Worst Case Radiated Disturbance, 30 to 1000 MHz	5.36 dB
Worst Case Radiated Disturbance, 1000 to 18000 MHz	4.32 dB
Worst Case Radiated Disturbance, 18000 to 26000 MHz	4.45 dB
Worst Case Radiated Disturbance, 26000 to 40000 MHz	5.24 dB

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

5. EQUIPMENT UNDER TEST

5.1. EUT DESCRIPTION

The EUT is a GSM/WCDMA/LTE Phone with BT, DTS/UNII a/b/g/n/ac, & NFC.

5.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum conducted output power as follows:

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
2Tx			
2412 - 2472	802.11b	18.22	66.37
2412 - 2472	802.11g	18.04	63.68
2412 - 2472	802.11n HT20 CDD	17.96	62.52

5.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes Loop Antennas with maximum gain as below table:

Frequency Band (GHz)	Chain 0	Chain 1
	Antenna Gain (dBi)	Antenna Gain (dBi)
2.4	-1.50	-8.50

5.4. SOFTWARE AND FIRMWARE

The firmware installed in the EUT during testing was s_atp_0_00436_A_12_16.
The test utility software used during testing was Tera Term Ver 4.79

5.5. WORST-CASE CONFIGURATION AND MODE

Radiated emissions below 30MHz, 1GHz, above 18GHz, and AC power line conducted emission were performed with the EUT set to transmit at the channel with highest output power as worst-case scenario.

Band edge and radiated emissions between 1GHz and 18GHz were performed with the EUT set to transmit at the highest power on low, middle and high channels.

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

Worst-case data rates as provided by the client were:

802.11b mode: 1 Mbps

802.11g mode: 6 Mbps

802.11n HT20mode: MCS0

The simultaneous mode (SISO 2.4GHz Chain 0 and 5GHz chain 1) was checked and stand-alone (MIMO) 2.4 GHz / 5GHz remain the worst case.

NOTE: SISO mode is covered by MIMO mode due to same maximum tune-up limit (power).

5.6. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
Laptop	Lenovo	20B7S0A200	PC015REW	N/A
Desktop	Lenovo	ThinkCentre	MJ00QA59	N/A
AC Adapter	SONY	UCH20	3416W45305784	N/A
DC Power Supply	Ametek	XT 15-4	T463	N/A

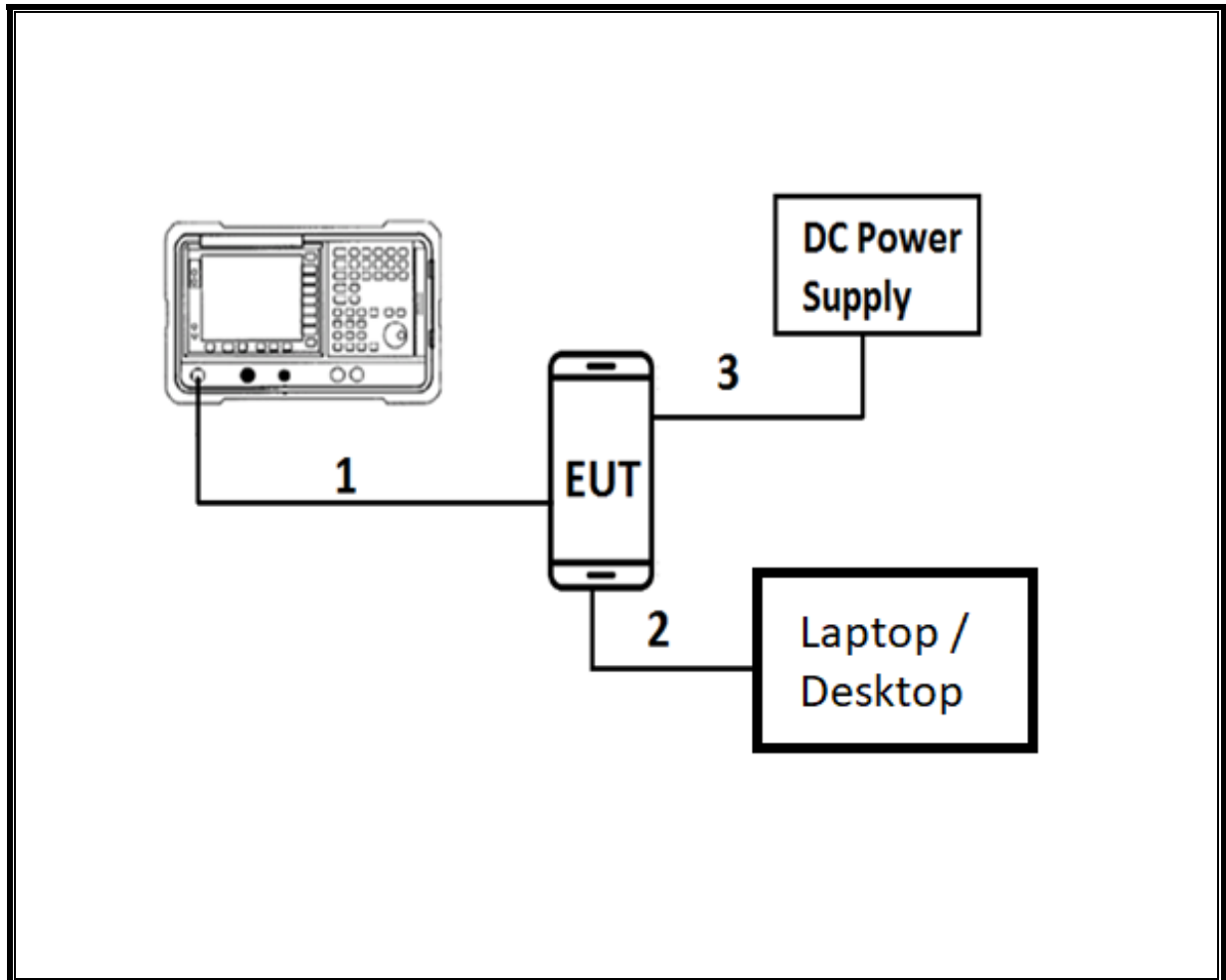
I/O CABLES (CONDUCTED TEST)

I/O Cable List						
Cable No	Port	# of identical ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	Antenna	1	RF	Shielded	0.2	To spectrum Analyzer
2	USB	1	USB Type C	Shielded	1	N/A
3	DC	1	DC	Shielded	0.3	N/A

I/O CABLES (RADIATED AND CONDUCTED EMISSIONS)

I/O Cable List						
Cable No	Port	# of identical ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	USB	1	USB Type C	Shielded	3	N/A

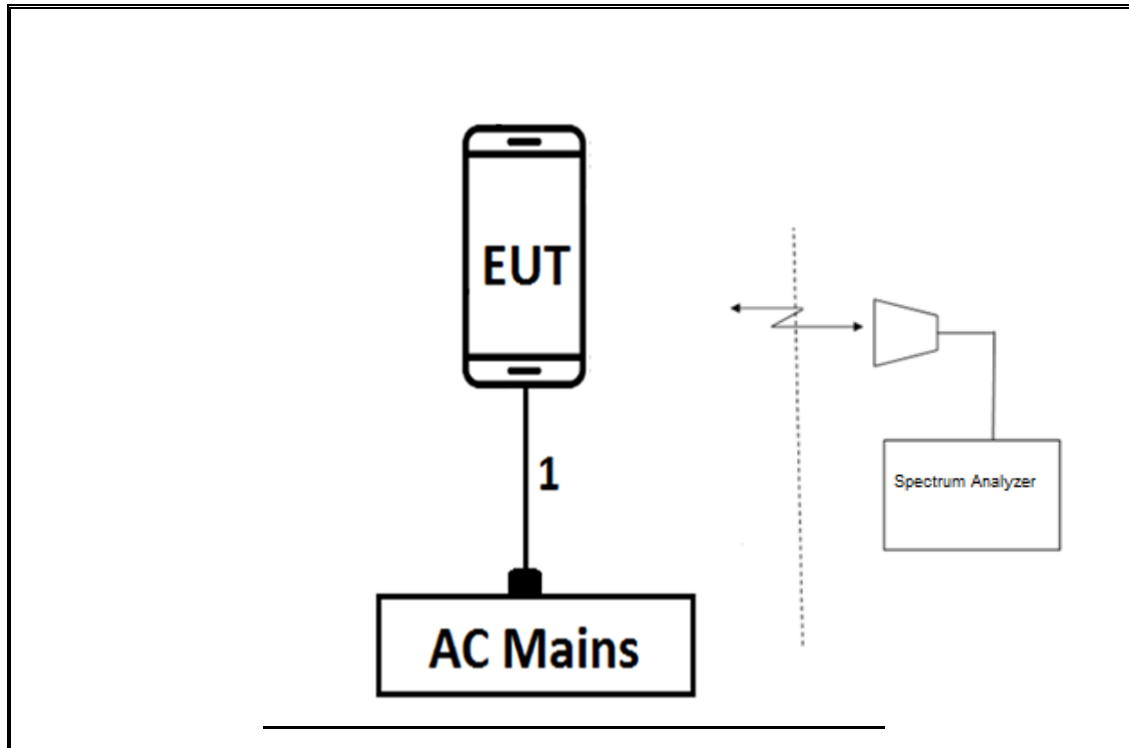
CONDCUTED TEST SETUP DIAGRAM



TEST SETUP

For conducted tests: the EUT was connected to a host laptop via an USB cable for parameter setting purpose such as channel, output power...etc. The test software exercises the radio.

RADIATED AND AC LINE CONDUCTED EMISSIONS SETUP DIAGRAM



TEST SETUP

For radiated tests: All support equipment were removed after the EUT programmed. The test software exercises the radio.

6. MEASUREMENT METHOD

On Time and Duty Cycle: KDB 558074 D01 v04, Section 6.

6 dB BW: KDB 558074 D01 v04, Section 8.1.

99% BW: ANSI C63.10-2013, Section 6.9.3.

Output Power: KDB 558074 D01 v04, Section 9.2.3.2.

Power Spectral Density: KDB 558074 D01 v04, Section 10.3.

Out-of-band emissions in non-restricted bands: KDB 558074 D01 v04, Section 11.1 (b).

Out-of-band emissions in restricted bands: KDB 558074 D01 v04, Section 12.1.

Band-edge: KDB 558074 D01 v04, Section 12.1.

AC Power Line Conducted Emissions: 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	ID Num	Cal Due
Amplifier	Hewlet Packard	8447D	T64	06/25/2019
Amplifier, 9KHz to 1GHz, 32dB	Sonoma Instrument	310	PRE0180089	06/21/2019
Antenna, Broadband Hybrid, 30MHz to 2000MHz	Sunol Sciences Corp.	JB3	T407	05/10/2019
Antenna, Broadband Hybrid, 30MHz to 2000MHz w/4dB Pad	Sunol Sciences Corp.	JB3	T477	07/07/2018
Antenna, Horn 1-18GHz	ETS-Lindgren	3117	T344	04/30/2019
Antenna, Horn 1-18GHz	ETS-Lindgren	3117	T4294	04/30/2019
Amplifier, 1 to 18GHz, 35dB	AMPLICAL	AMP1G18-35	T1569	06/03/2019
RF Amplifier	MITEQ	AFS42-00101800-25-S-42	T1568	06/21/2019
Amplifier, 1 to 7.0GHz, 20.0dB Gain minimum, 6dB NF	AMPLICAL	AMP1G7-20-27	T1563	06/03/2019
Amplifier 1-8GHz 30dB gain	L3 Narda	AMF-4D-01000800-30-29P	167495	06/22/2019
EMI TEST RECEIVER	Rohde & Schwarz	ESW44	PRE0179522	05/11/2019
EMI TEST RECEIVER	Rohde & Schwarz	ESW44	PRE0179367	04/25/2019
Spectrum Analyzer, PXA, 3Hz to 44GHz	Agilent (Keysight) Technologies	N9030A	T1113	12/21/2018
Spectrum Analyzer, PSA, 3Hz to 44GHz	Agilent (Keysight) Technologies	N9030A	T146	07/18/2018
Spectrum Analyzer, PSA, 3Hz to 44GHz	Agilent (Keysight) Technologies	N9030A	T1454	01/08/2019
Power Meter, P-series single channel	Agilent (Keysight) Technologies	N1911A	T1271	07/17/2018
Power Sensor, P-series, 50MHz to 18GHz, Wideband	Agilent (Keysight) Technologies	N1921A	T1225	04/10/2019
Filter, HPF 3.0GHz	MICRO-TRONICS	HPM17543	T1013	06/21/2019
Filter, HPF 3.0GHz	MICRO-TRONICS	HPM17543	T894	06/03/2019
Antenna, Active Loop 9kHz-30MHz	Com-Power Corp.	AL-130R	T1866	10/10/2018
18 - 26.5 GHz Horn Antenna	Seavey Division	MWH-1826/B	T89	01/18/2019
Pre-Amp 1-26.5 GHz	Agilent	8449B	T404	03/09/2019
EMI Reciever	Rohde & Schwarz	ESR	T1436	02/21/2019
L.I.S.N.	FCC INC.	FCC LISN 50/250	T1310	06/15/2019
L.I.S.N.	FCC INC.	FCC LISN 50/250	T24	03/06/2019
Thermometer - Digital	Control Company	14-650-118	PRE0177862	02/22/2019

UL AUTOMATION SOFTWARE			
Radiated Software	UL	UL EMC	Ver 9.5, June 22, 2018
Antenna Port Software	UL	UL EMC	Ver 8.4, June 12, 2018

8. ANTENNA PORT TEST RESULTS

8.1. ON TIME AND DUTY CYCLE

LIMITS

None; for reporting purposes only.

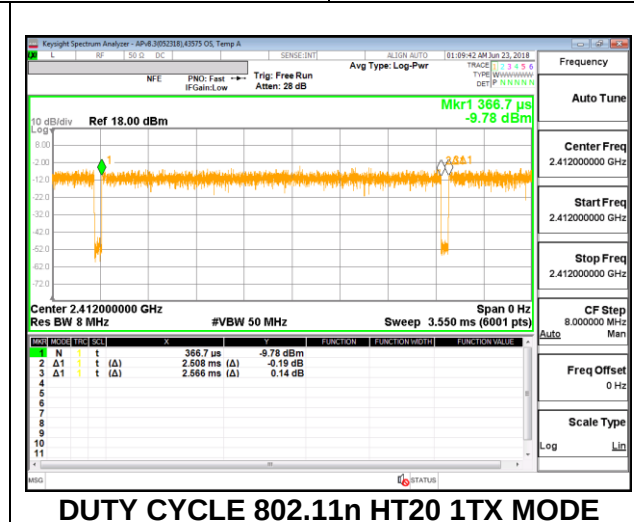
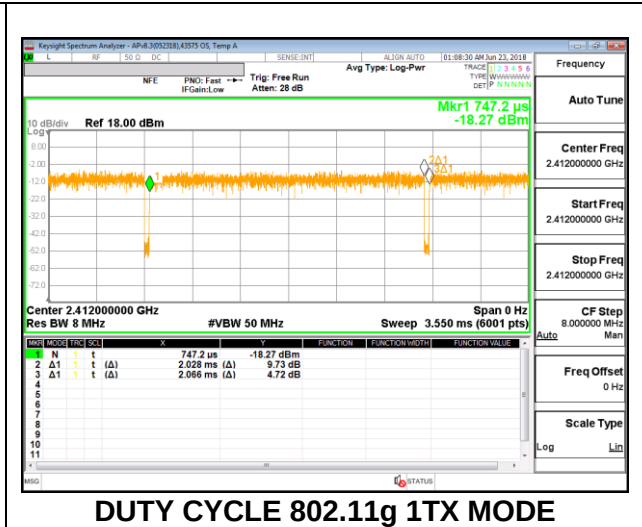
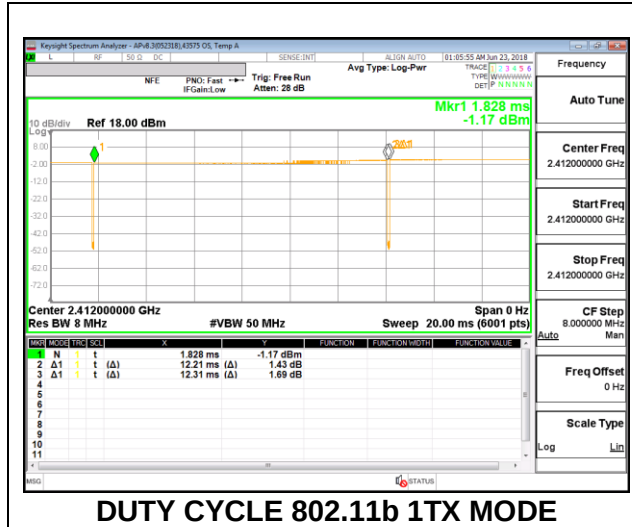
PROCEDURE

KDB 789033 Zero-Span Spectrum Analyzer Method.

ON TIME AND DUTY CYCLE RESULTS

Mode	ON Time B (msec)	Period (msec)	Duty Cycle x (linear)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	1/B Minimum VBW (kHz)
2.4GHz Band						
802.11b 1TX	12.210	12.310	0.992	99.19%	0.00	0.010
802.11g 1TX	2.028	2.066	0.982	98.16%	0.00	0.010
802.11n HT20 1TX	2.508	2.566	0.977	97.74%	0.10	0.399

DUTY CYCLE PLOTS



8.2. 99% BANDWIDTH

LIMITS

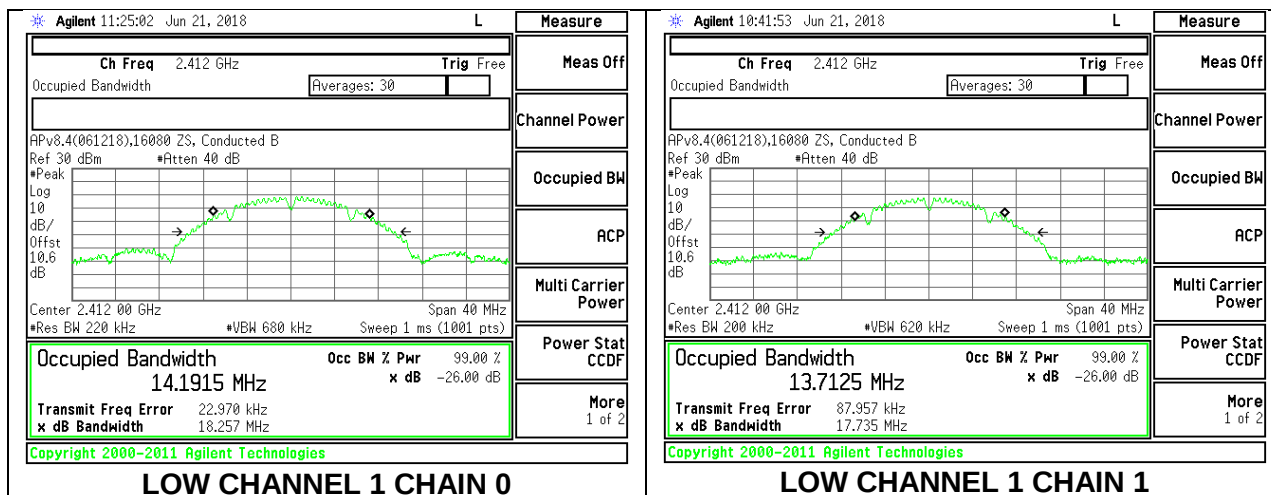
None; for reporting purposes only.

RESULTS

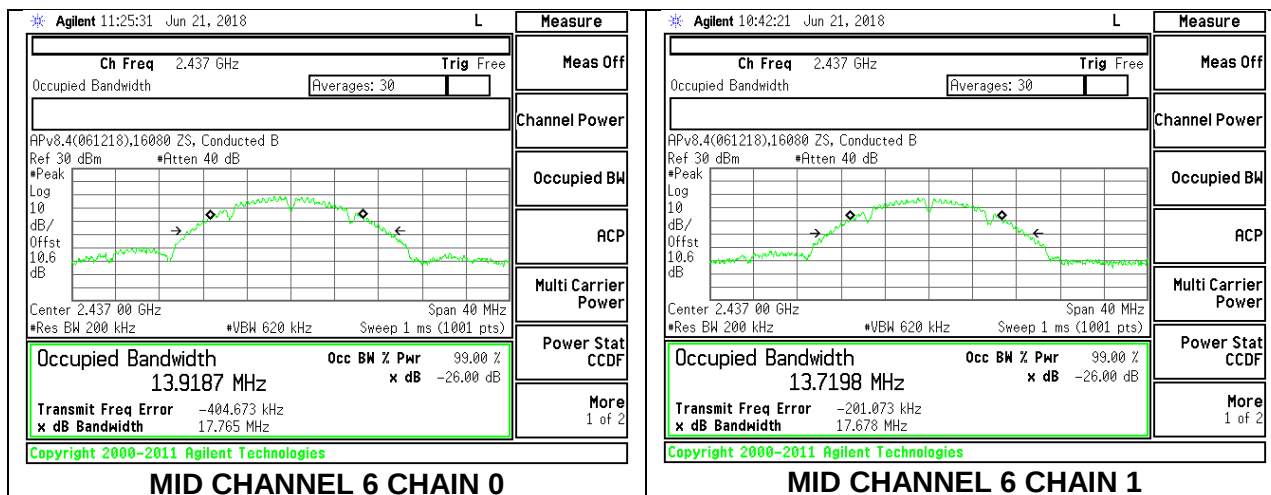
8.2.1. 802.11b MODE

Channel	Frequency (MHz)	99% Bandwidth Chain 0 (MHz)	99% Bandwidth Chain 1 (MHz)
Low 1	2412	14.1915	13.7125
Mid 6	2437	13.9187	13.7198
High 11	2462	13.5039	13.6858
High 12	2467	13.7821	13.8109
High 13	2472	13.8932	13.6781
Worst		14.1915	13.8109

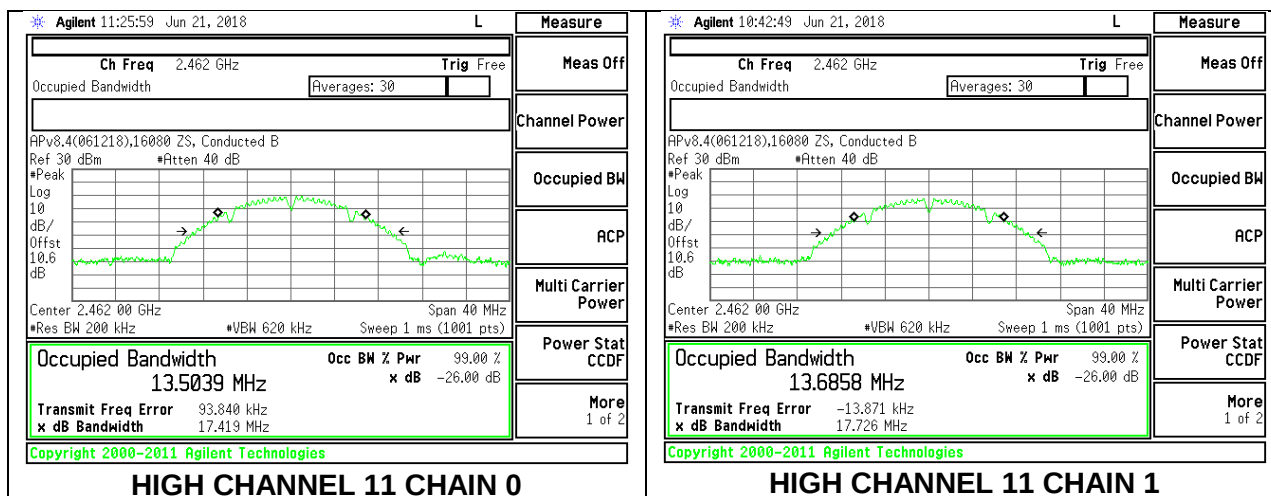
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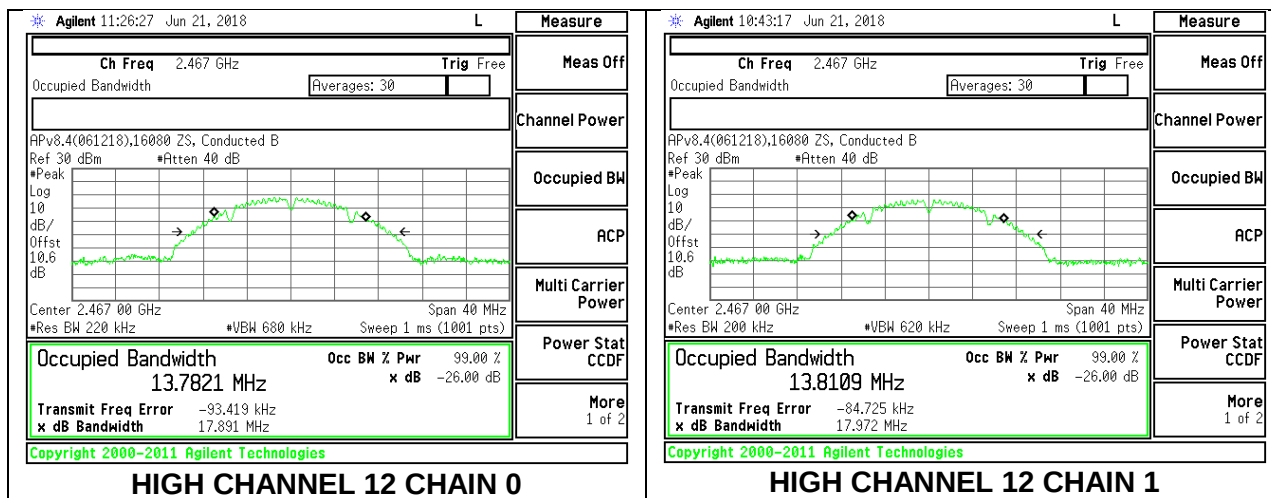
MID CHANNEL 6



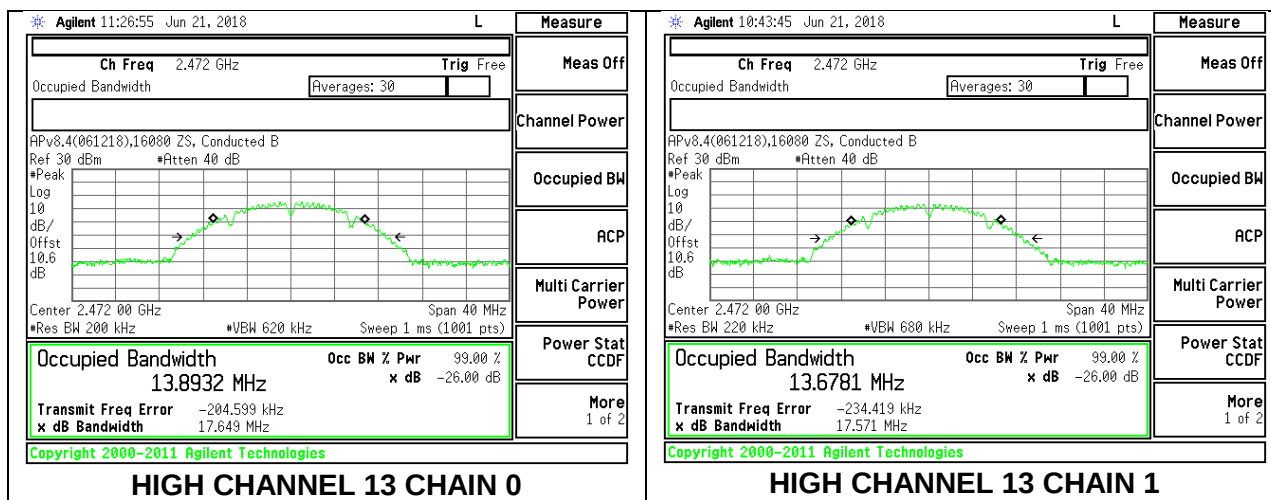
HIGH CHANNEL 11



HIGH CHANNEL 12



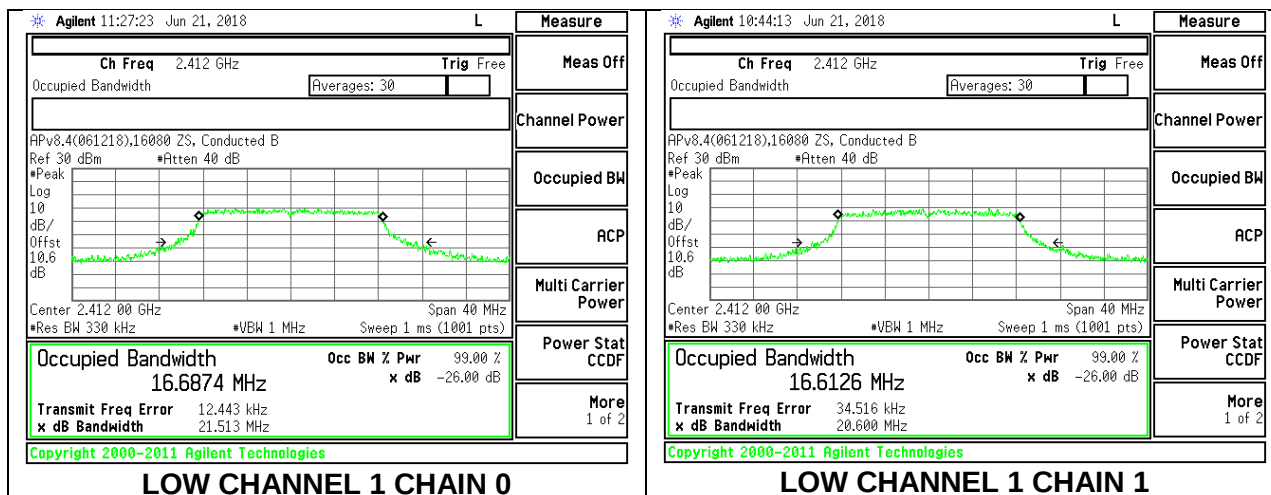
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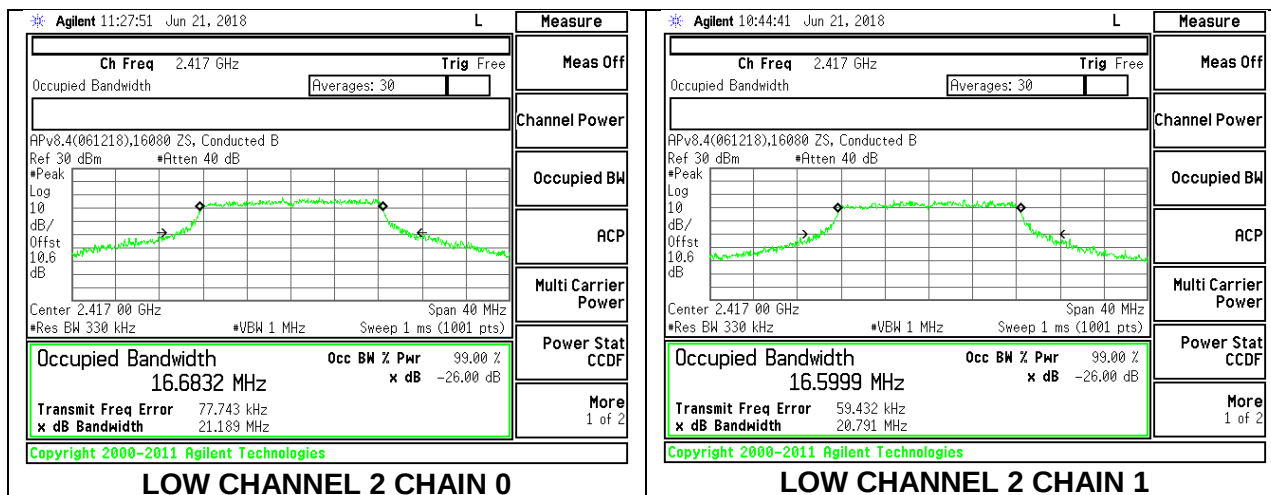
8.2.2. 802.11g MODE

Channel	Frequency (MHz)	99% Bandwidth Chain 0 (MHz)	99% Bandwidth Chain 1 (MHz)
Low 1	2412	16.6874	16.6126
Low 2	2417	16.6832	16.5999
Mid 6	2437	16.6108	16.7126
High 11	2462	16.4204	16.4359
High 12	2467	16.5207	16.4523
High 13	2472	16.5382	16.5945
Worst		16.6874	16.7126

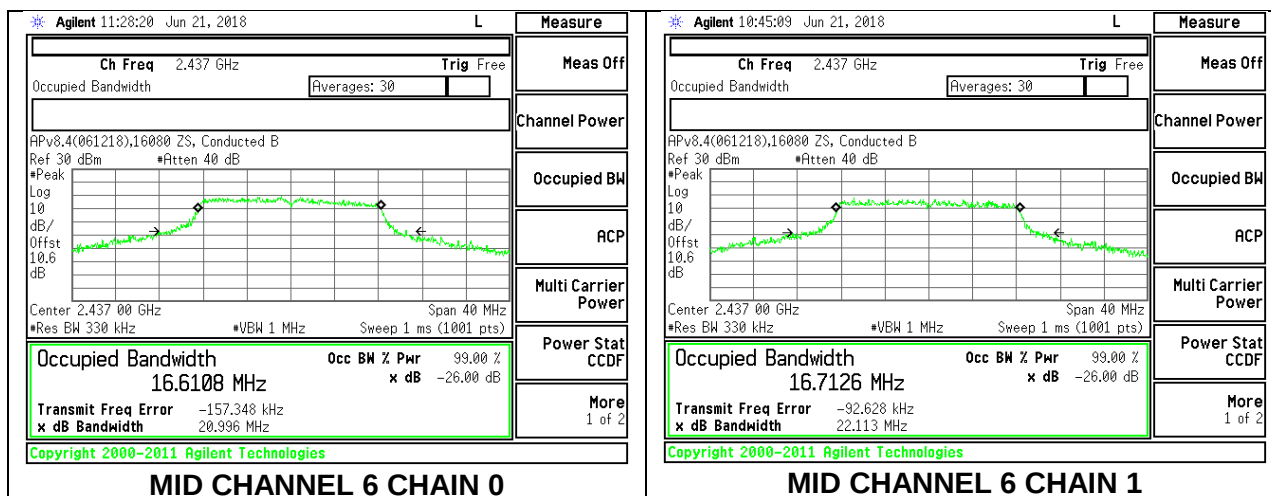
LOW CHANNEL 1



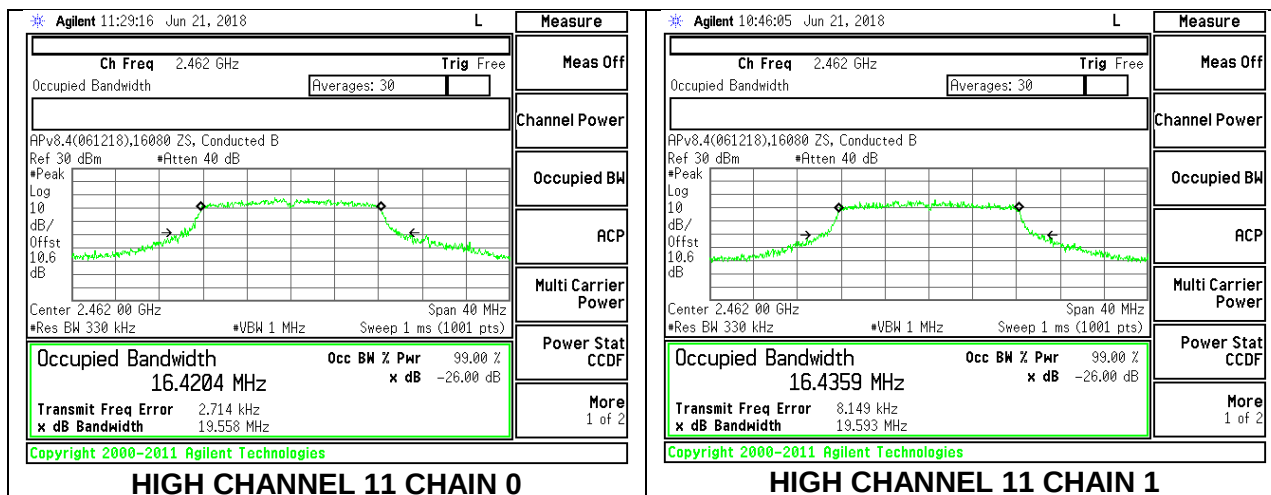
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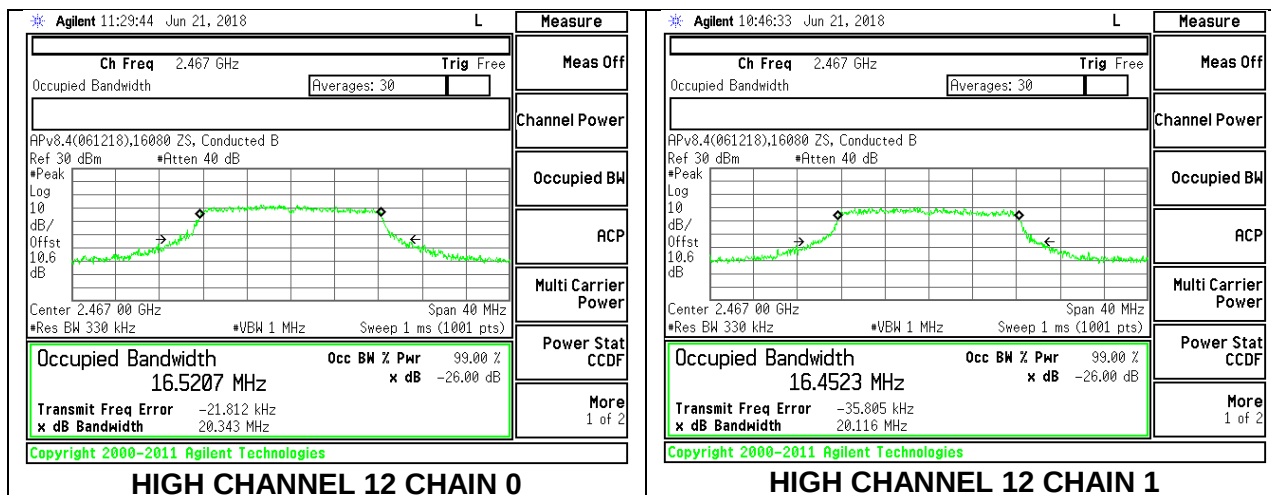
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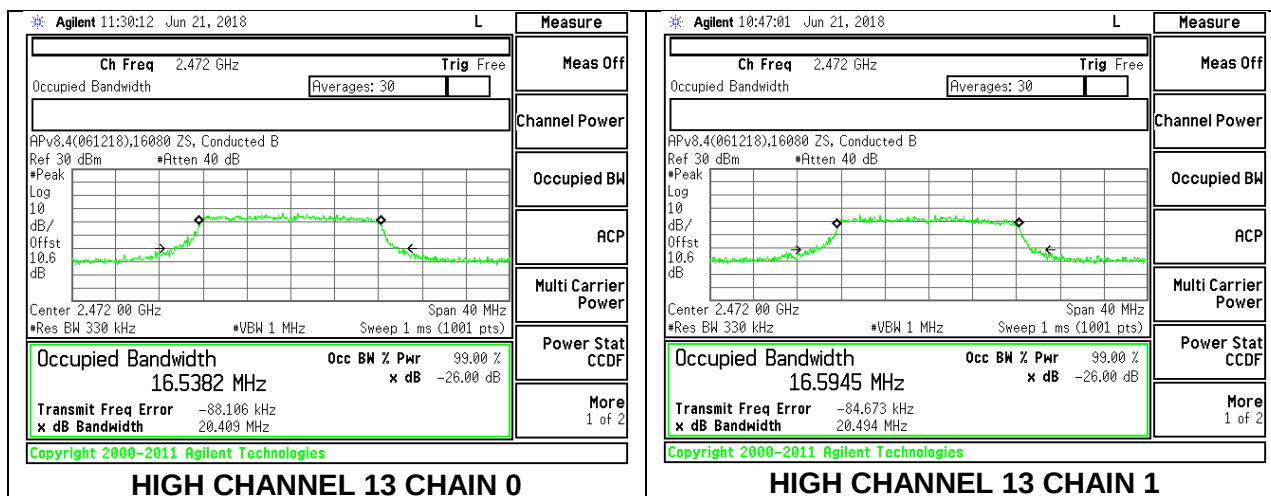
HIGH CHANNEL 11



HIGH CHANNEL 12



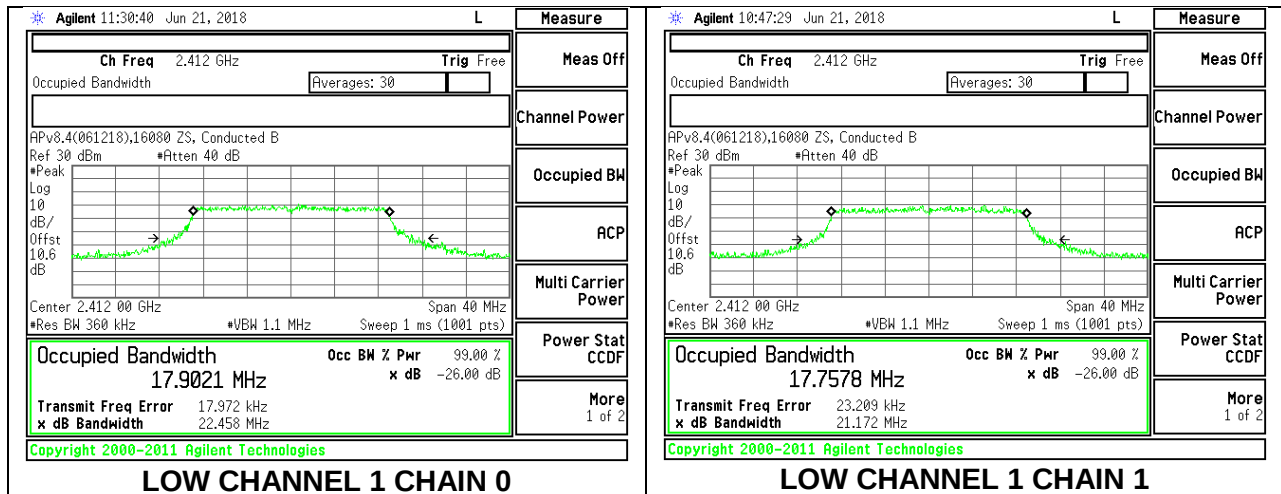
HIGH CHANNEL 13



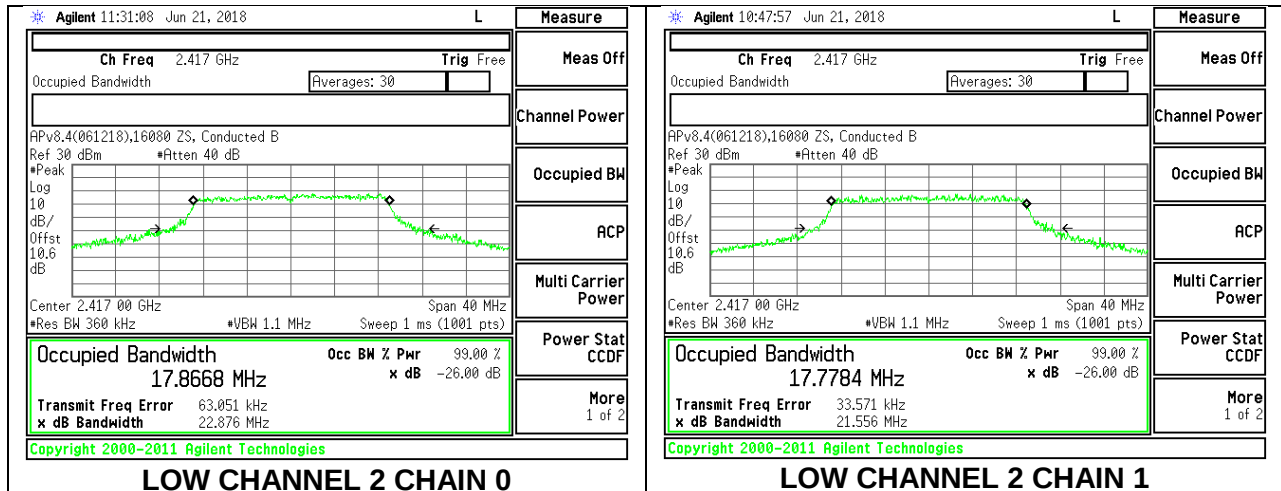
8.2.3. 802.11n HT20 MODE

Channel	Frequency (MHz)	99% Bandwidth Chain 0 (MHz)	99% Bandwidth Chain 1 (MHz)
Low 1	2412	17.9021	17.7578
Low 2	2417	17.8668	17.7784
Mid 6	2437	17.8265	17.8385
High 11	2462	17.6664	17.6765
High 12	2467	17.7491	17.7143
High 13	2472	17.7913	17.8595
Worst		17.9021	17.8595

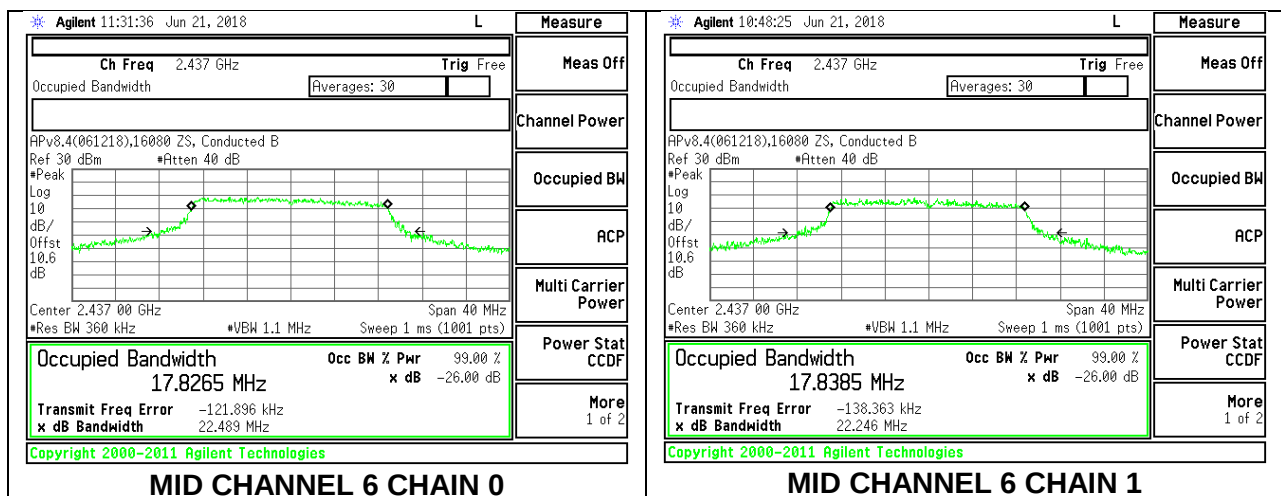
LOW CHANNEL 1



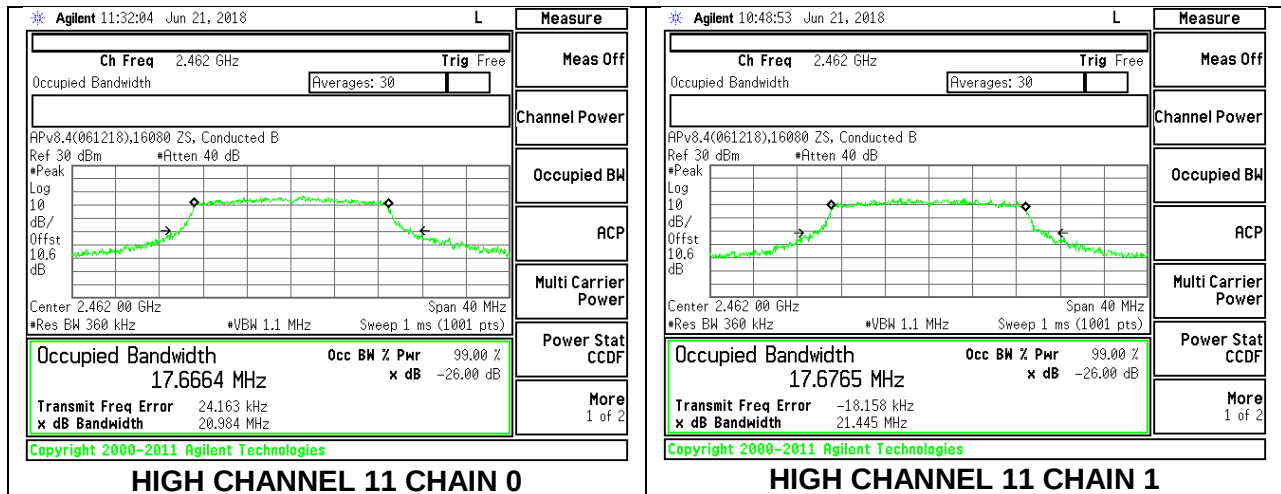
LOW CHANNEL 2



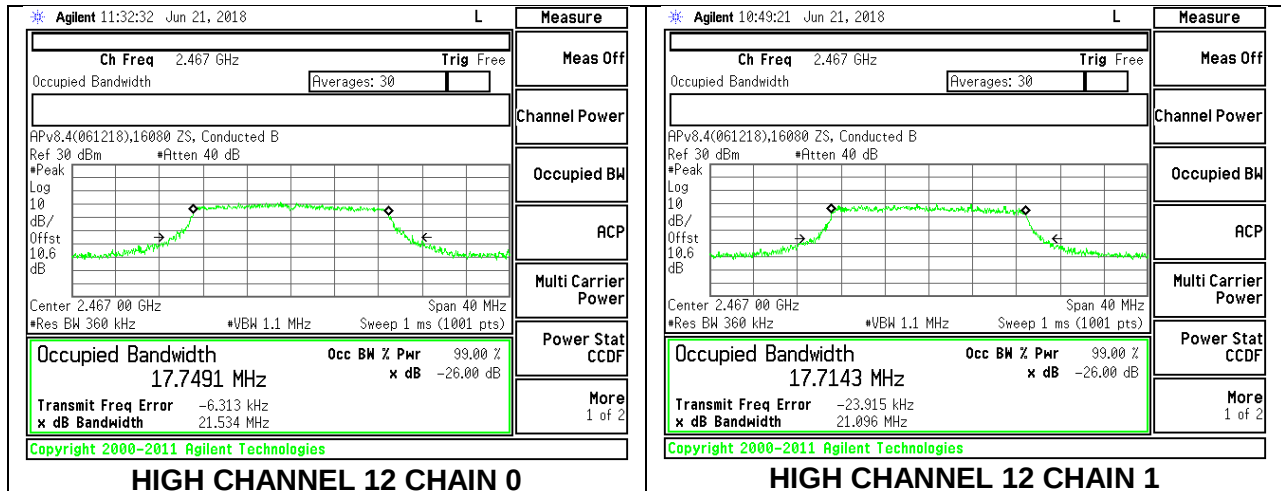
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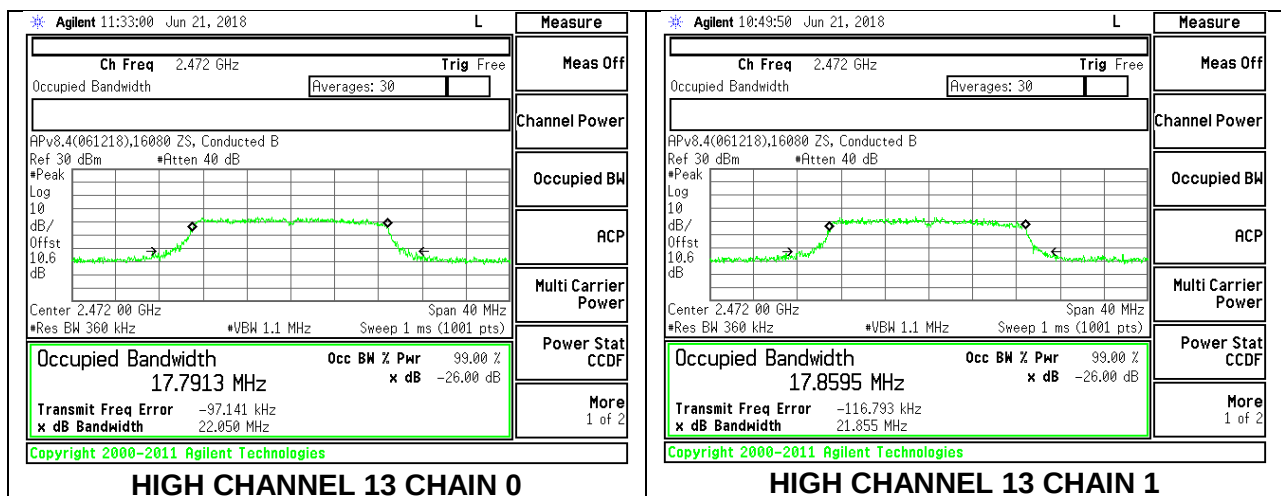
HIGH CHANNEL 11



HIGH CHANNEL 12



HIGH CHANNEL 13



8.3. 6 dB BANDWIDTH

LIMITS

FCC §15.247 (a) (2)

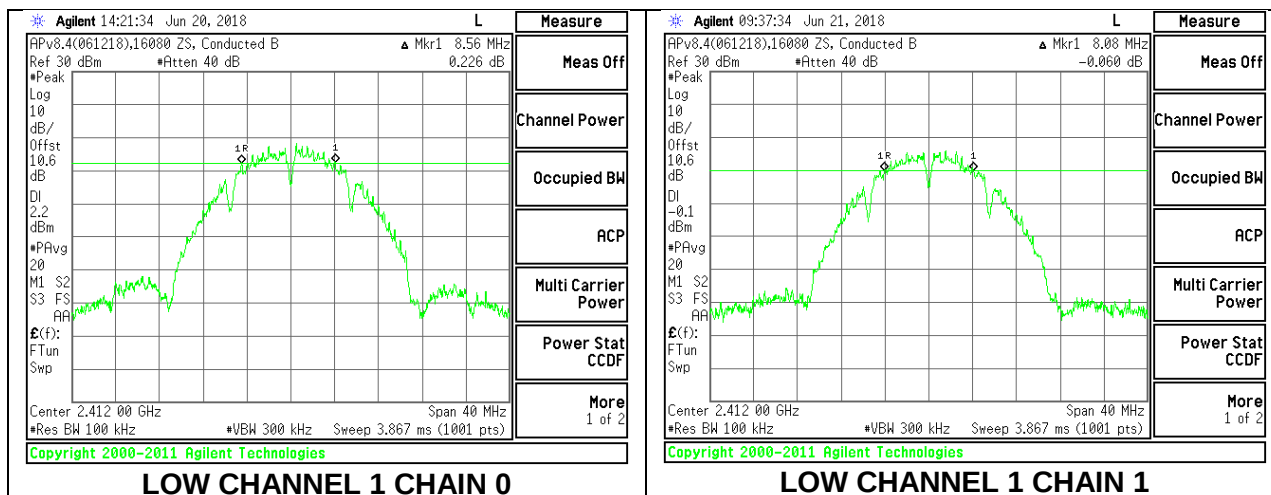
The minimum 6 dB bandwidth shall be at least 500 kHz.

RESULTS

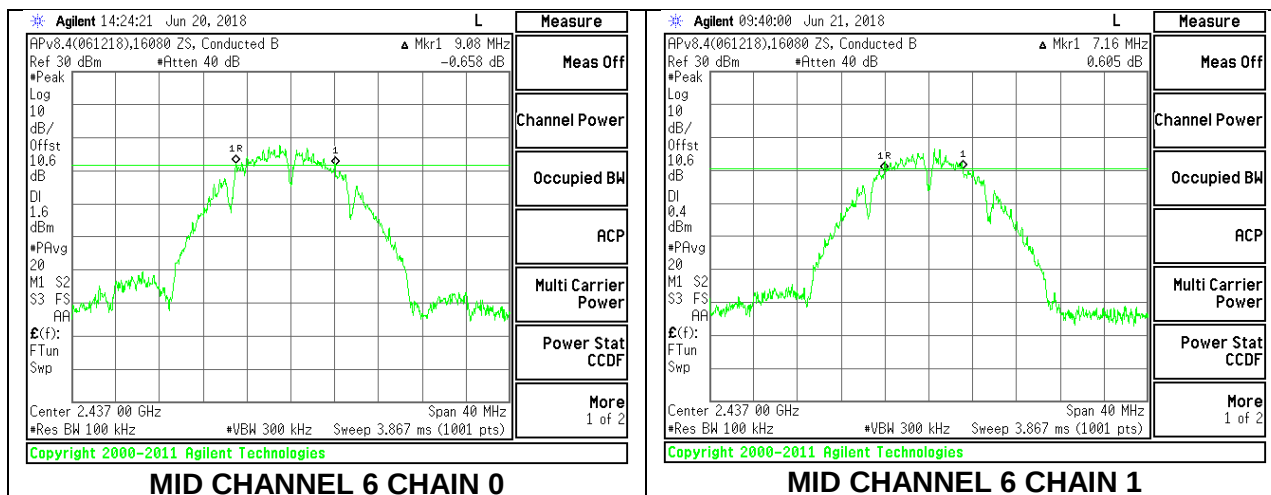
8.3.1. 802.11b MODE

Channel	Frequency (MHz)	6 dB BW Chain 0 (MHz)	6 dB BW Chain 1 (MHz)	Minimum Limit (MHz)
Low 1	2412	8.56	8.08	0.5
Mid 6	2437	9.08	7.16	0.5
High 11	2462	8.12	8.08	0.5
High 12	2467	8.56	8.12	0.5
High 13	2472	8.04	8.12	0.5

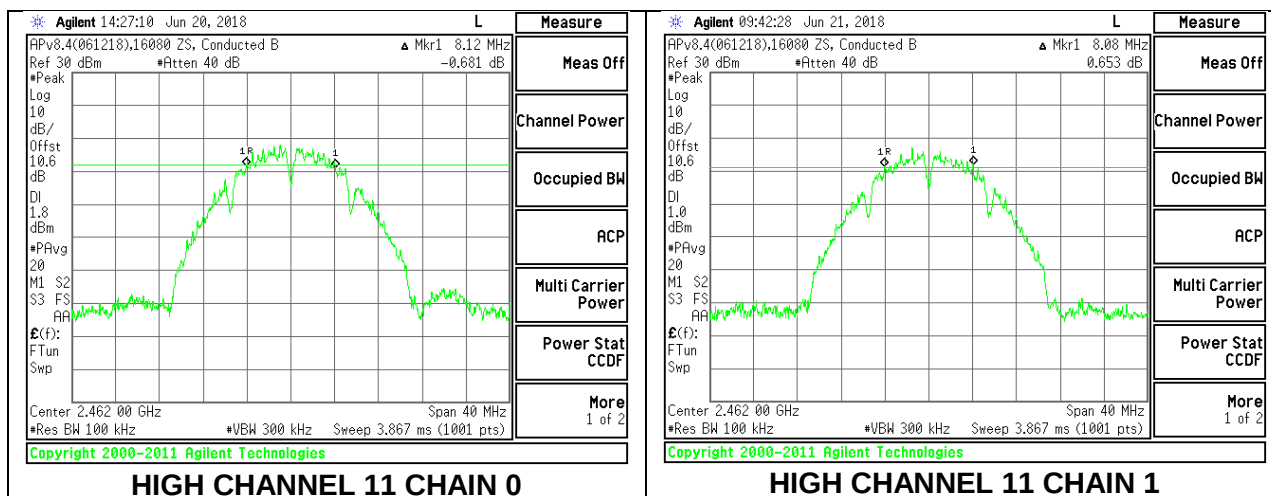
LOW CHANNEL 1



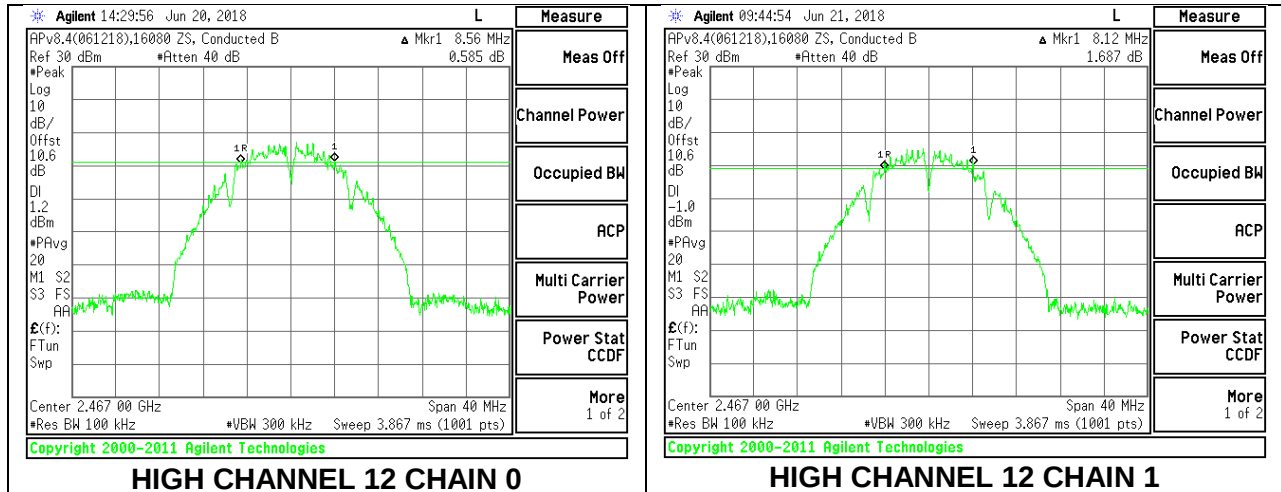
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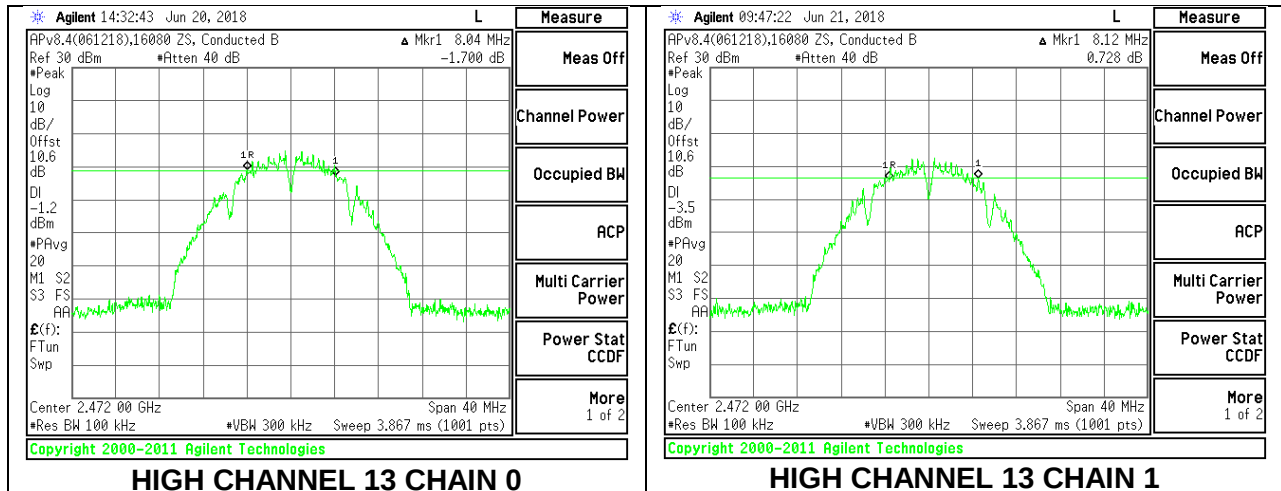
HIGH CHANNEL 11



HIGH CHANNEL 12



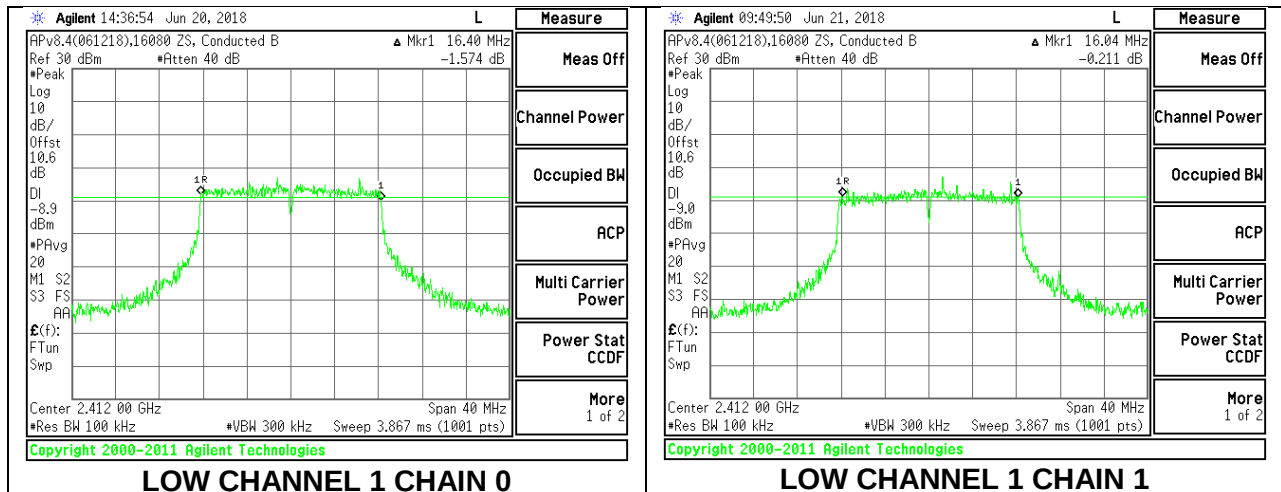
HIGH CHANNEL 13



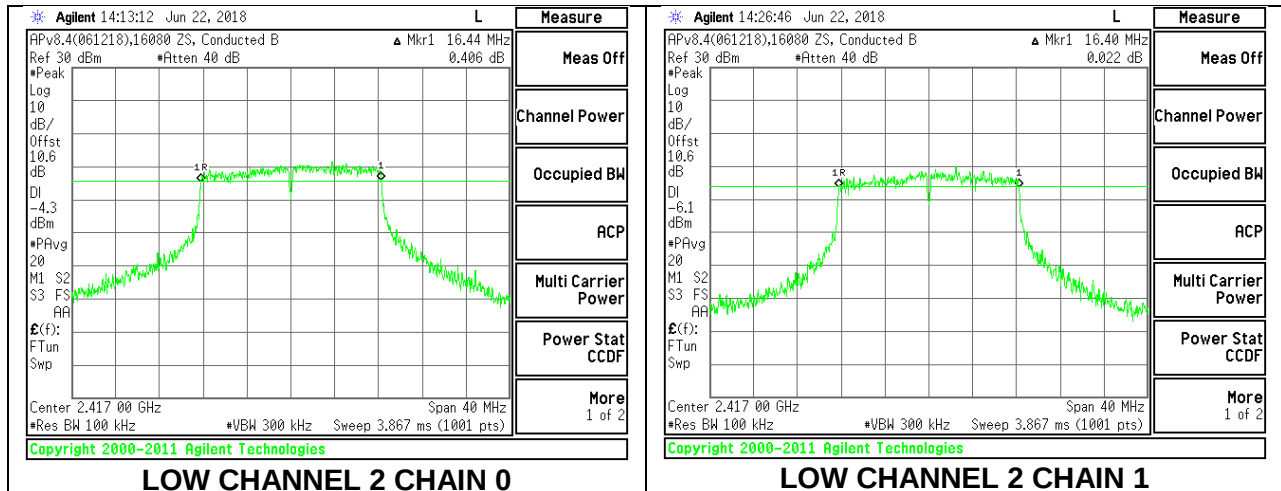
8.3.2. 802.11g MODE

Channel	Frequency (MHz)	6 dB BW Chain 0 (MHz)	6 dB BW Chain 1 (MHz)	Minimum Limit (MHz)
Low 1	2412	16.40	16.04	0.5
Low 2	2417	16.44	16.40	0.5
Mid 6	2437	16.44	16.16	0.5
High 11	2462	16.36	16.04	0.5
High 12	2467	16.12	16.40	0.5
High 13	2472	16.40	16.12	0.5

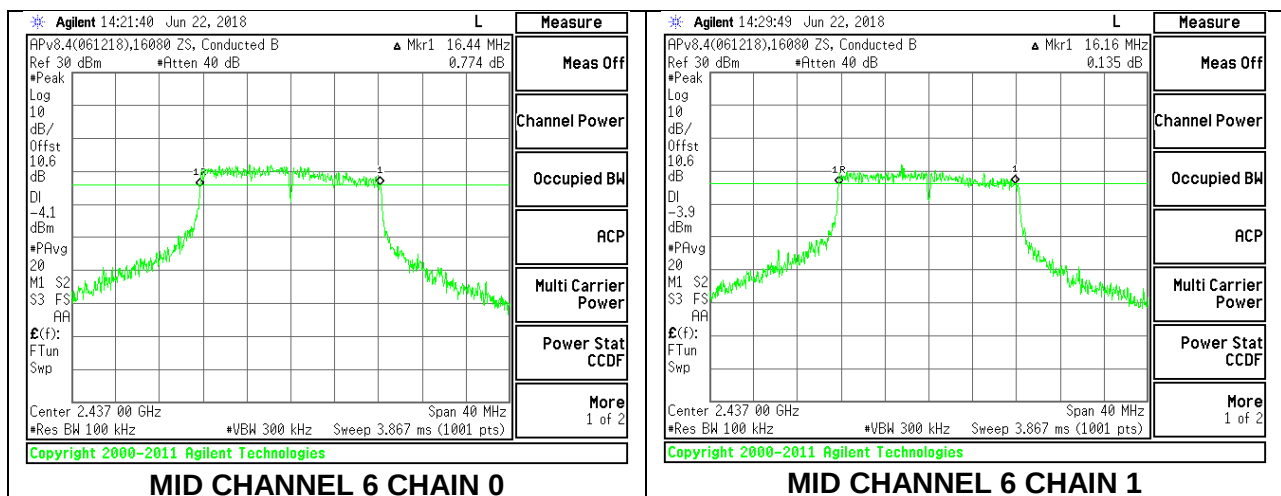
LOW CHANNEL 1



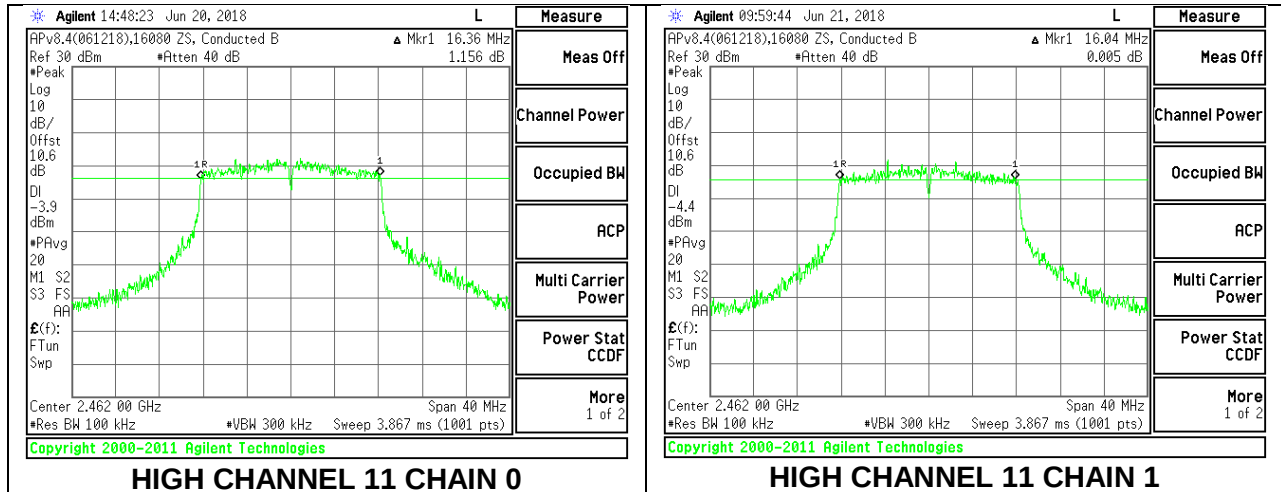
LOW CHANNEL 2



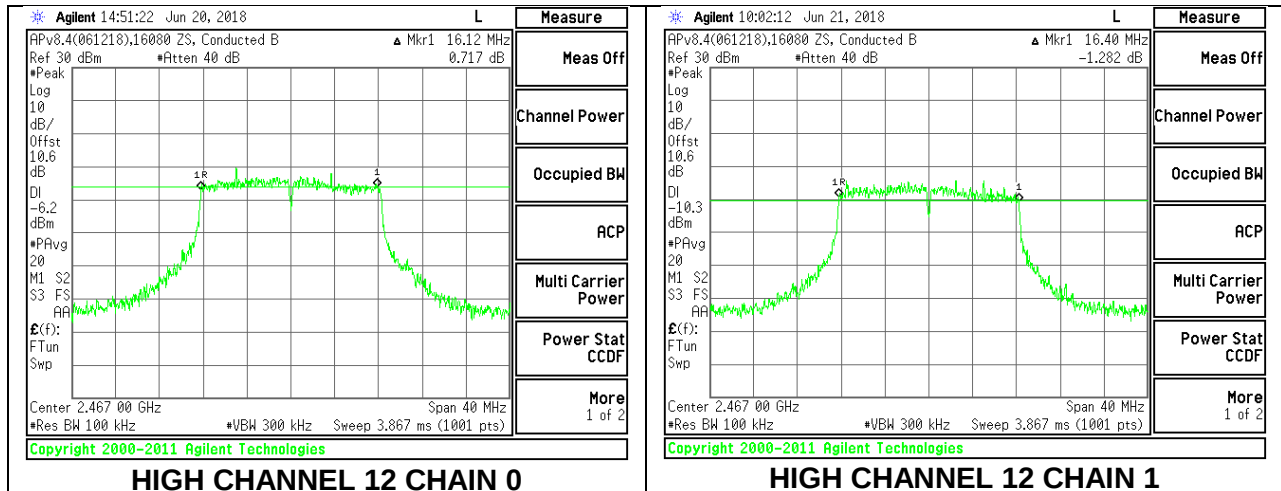
MID CHANNEL 6



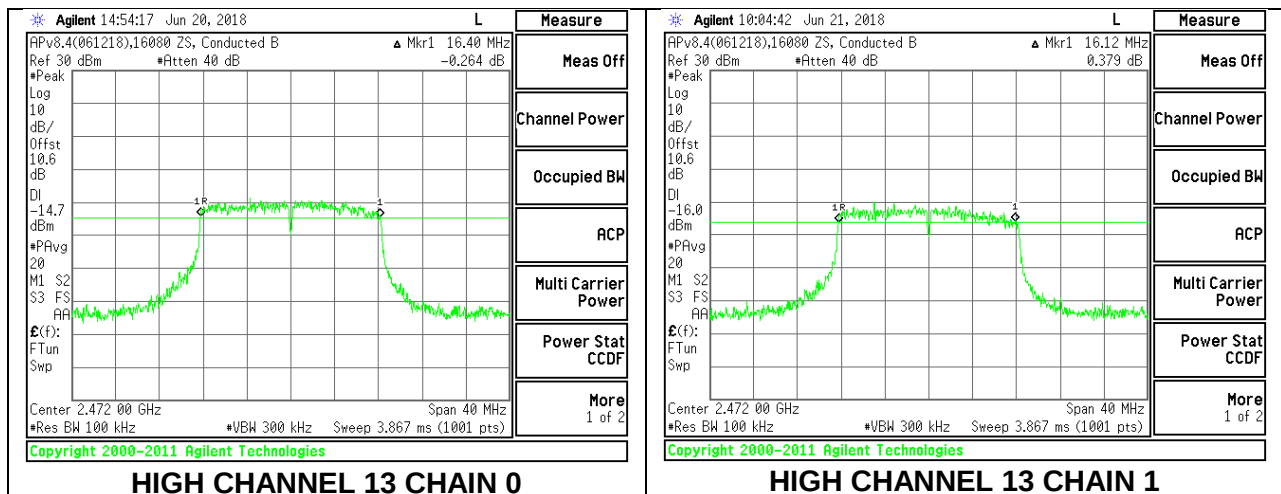
HIGH CHANNEL 11



HIGH CHANNEL 12



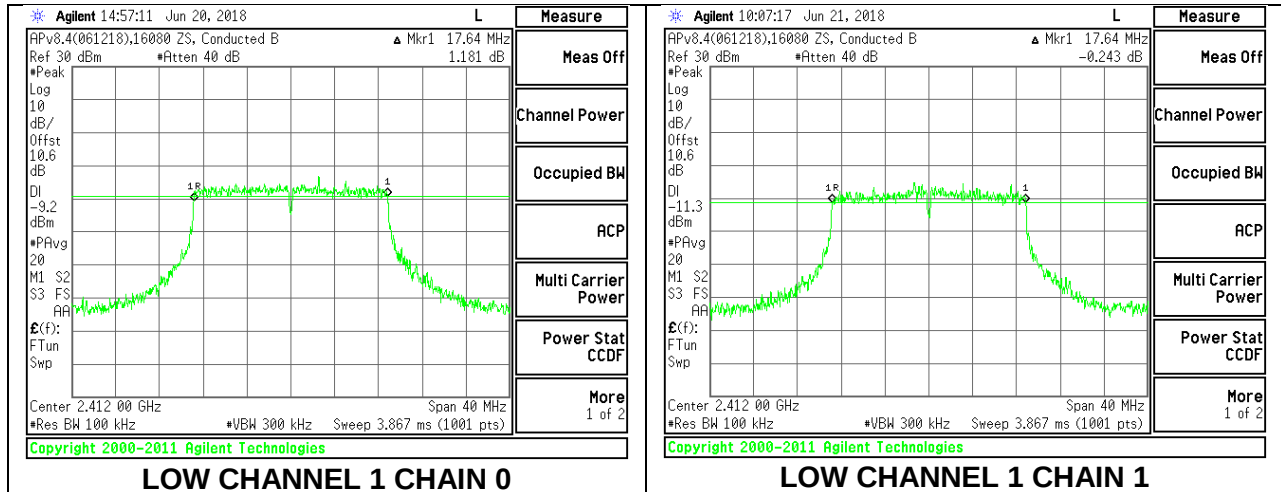
HIGH CHANNEL 13



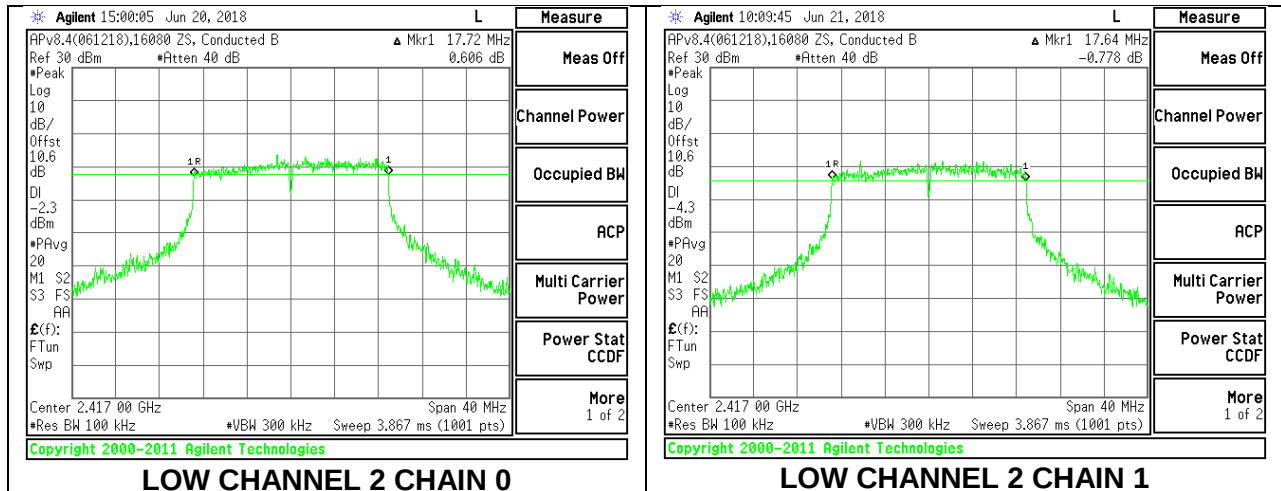
8.3.3. 802.11n HT20 MODE

Channel	Frequency (MHz)	6 dB BW Chain 0 (MHz)	6 dB BW Chain 1 (MHz)	Minimum Limit (MHz)
Low 1	2412	17.64	17.64	0.5
Low 2	2417	17.72	17.64	0.5
Mid 6	2437	17.64	17.24	0.5
High 11	2462	17.12	17.60	0.5
High 12	2467	17.72	17.64	0.5
High 13	2472	17.68	17.28	0.5

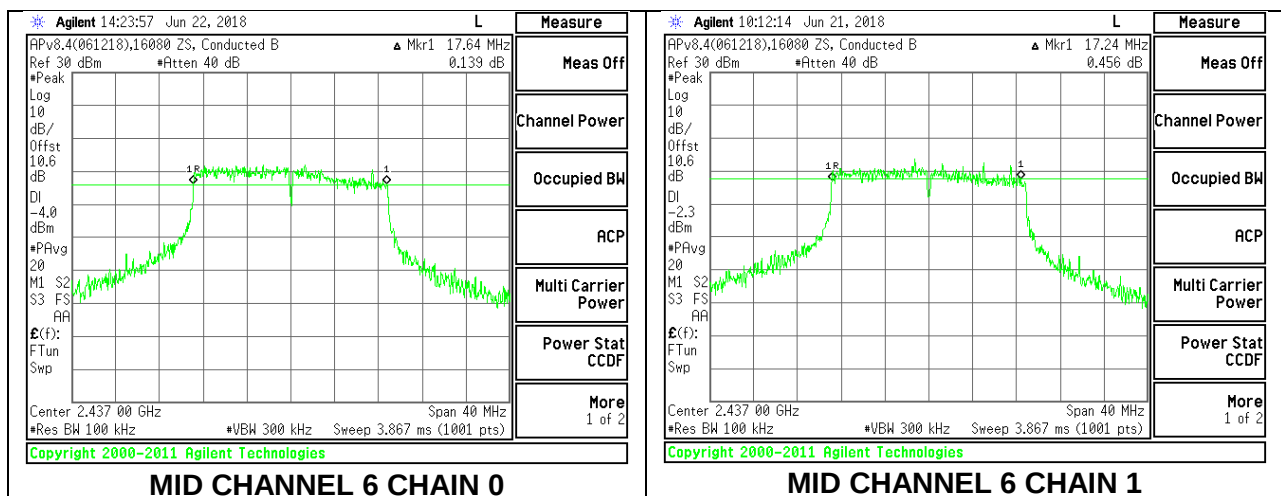
LOW CHANNEL 1



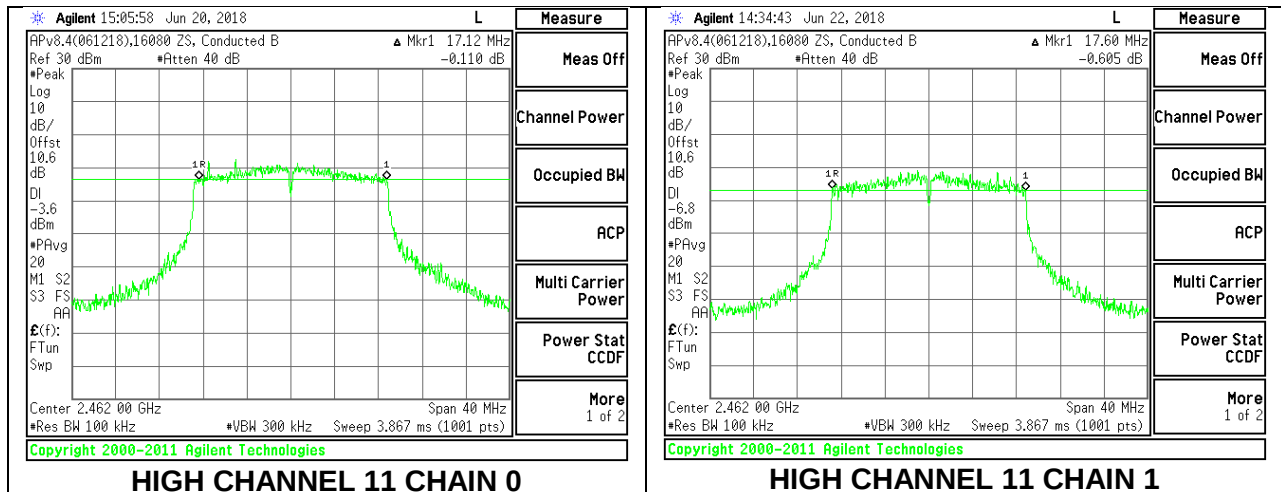
LOW CHANNEL 2



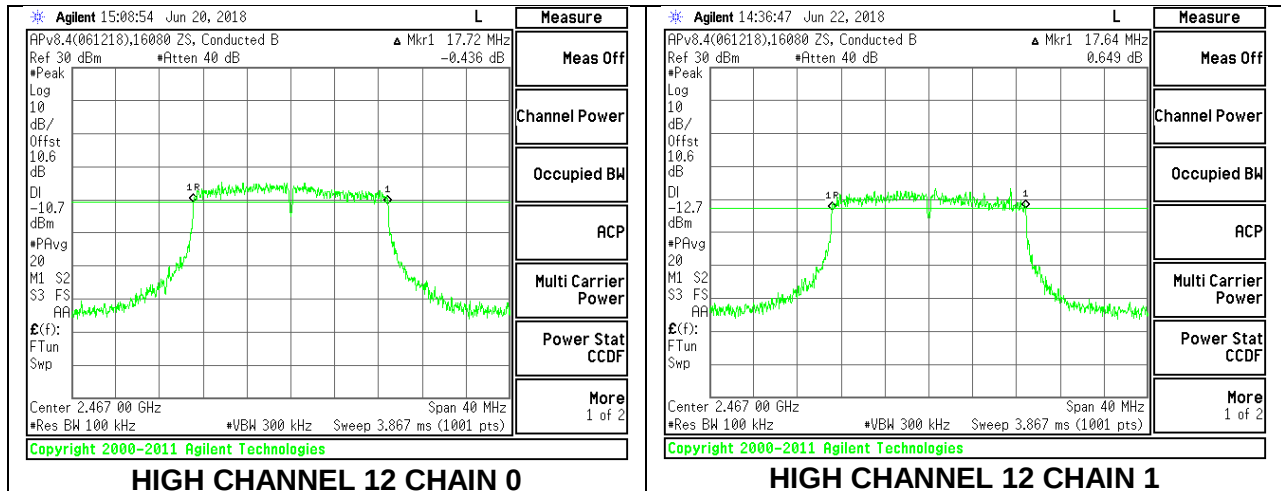
MID CHANNEL 6



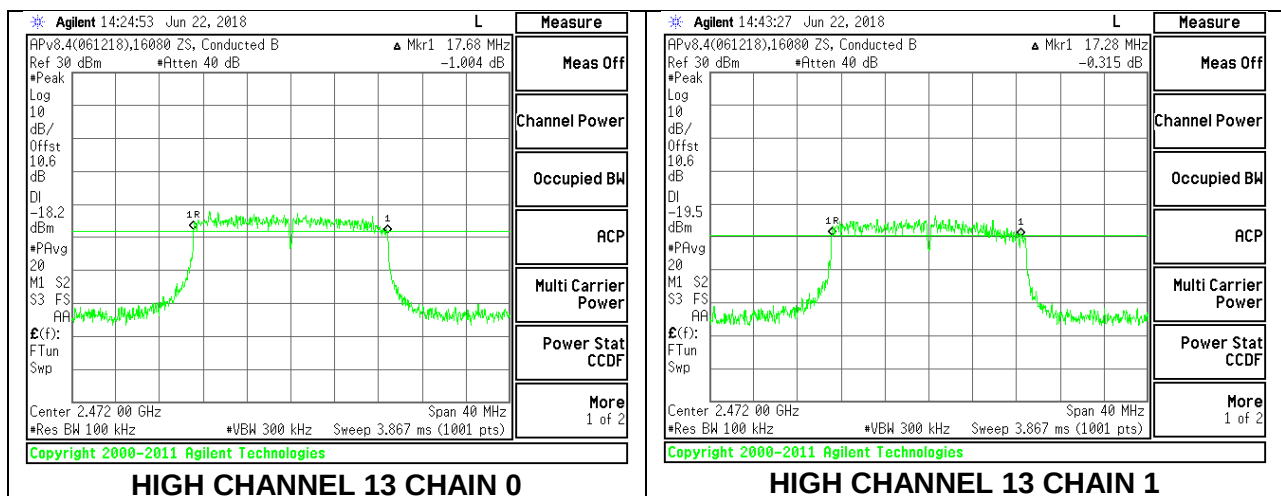
HIGH CHANNEL 11



HIGH CHANNEL 12



HIGH CHANNEL 13



8.4. 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

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 a gated Average reading of power.

DIRECTIONAL ANTENNA GAIN

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

Band (GHz)	Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Uncorrelated Chains Directional Gain (dBi)
2.4	-1.50	-8.50	-3.72

RESULTS

ID:	GE43578	Date:	06/18/18
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8.4.1. 802.11b MODE

Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC/ISED Power Limit (dBm)	ISED EIRP Limit (dBm)	Max Power (dBm)
Low 1	2412	-3.72	30.00	36	30.00
Mid 6	2437	-3.72	30.00	36	30.00
High 11	2462	-3.72	30.00	36	30.00
High 12	2467	-3.72	30.00	36	30.00
High 13	2472	-3.72	30.00	36	30.00

Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margi (dB)
Low 1	2412	15.51	14.34	17.97	30.00	-12.03
Mid 6	2437	15.47	13.98	17.80	30.00	-12.20
High 11	2462	15.91	14.38	18.22	30.00	-11.78
High 12	2467	14.91	13.01	17.07	30.00	-12.93
High 13	2472	12.02	10.04	14.15	30.00	-15.85

8.4.2. 802.11g MODE

Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC/ISED Power Limit (dBm)	ISED EIRP Limit (dBm)	Max Power (dBm)
Low 1	2412	-3.72	30.00	36	30.00
Low 2	2417	-3.72	30.00	36	30.00
Mid 6	2437	-3.72	30.00	36	30.00
High 11	2462	-3.72	30.00	36	30.00
High 12	2467	-3.72	30.00	36	30.00
High 13	2472	-3.72	30.00	36	30.00

Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margi (dB)
Low 1	2412	7.71	5.76	9.85	30.00	-20.15
Low 2	2417	14.76	12.52	16.79	30.00	-13.21
Mid 6	2437	15.89	13.96	18.04	30.00	-11.96
High 11	2462	13.94	11.94	16.06	30.00	-13.94
High 12	2467	9.23	7.07	11.29	30.00	-18.71
High 13	2472	3.05	1.24	5.25	30.00	-24.75

8.4.3. 802.11n HT20 MODE

Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC/ISED Power Limit (dBm)	ISED EIRP Limit (dBm)	Max Power (dBm)
Low 1	2412	-3.72	30.00	36	30.00
Low 2	2417	-3.72	30.00	36	30.00
Mid 6	2437	-3.72	30.00	36	30.00
High 11	2462	-3.72	30.00	36	30.00
High 12	2467	-3.72	30.00	36	30.00
High 13	2472	-3.72	30.00	36	30.00

Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margi (dB)
Low 1	2412	7.73	5.81	9.89	30.00	-20.11
Low 2	2417	15.21	13.69	17.53	30.00	-12.47
Mid 6	2437	15.71	14.03	17.96	30.00	-12.04
High 11	2462	13.26	11.25	15.38	30.00	-14.62
High 12	2467	7.77	5.89	9.94	30.00	-20.06
High 13	2472	0.92	-0.55	3.26	30.00	-26.74

8.5. POWER SPECTRAL DENSITY

LIMITS

FCC §15.247 (e)

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.

RESULTS

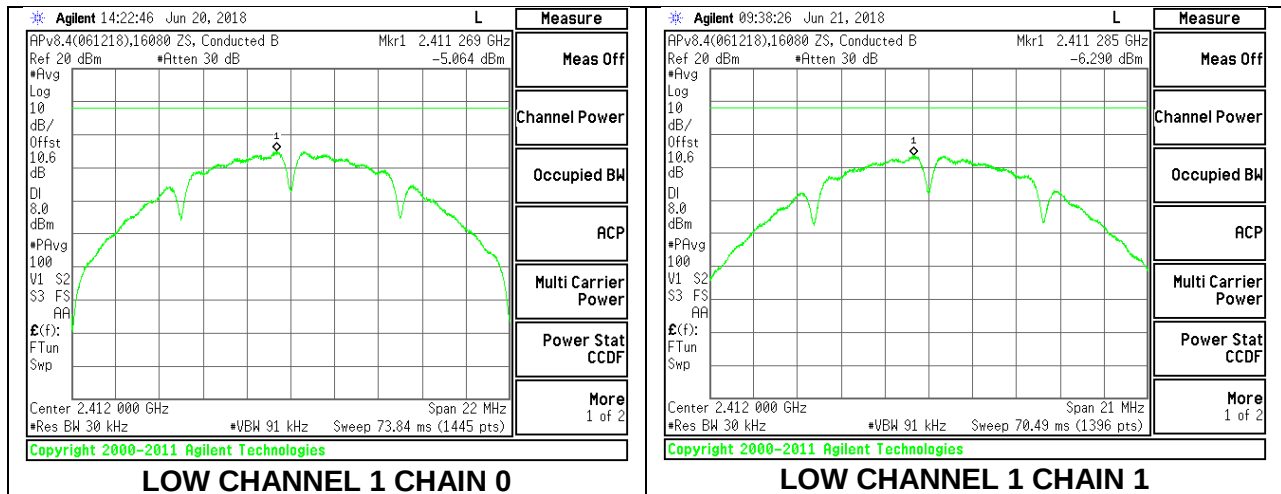
8.5.1. 802.11b MODE

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd PSD
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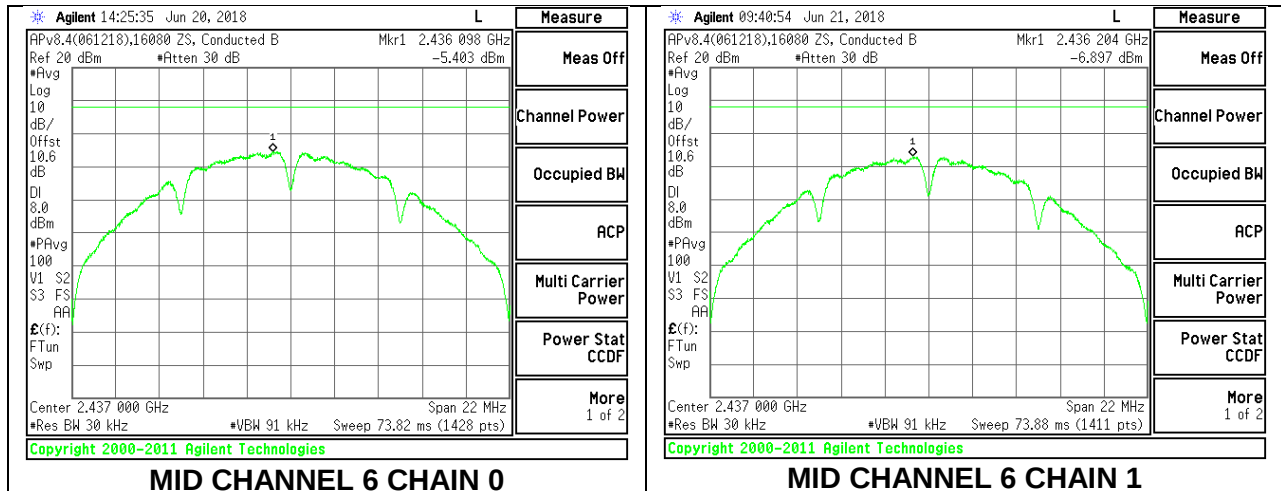
PSD Results

Channel	Frequency (MHz)	Chain 0 Meas (dBm/ 3kHz)	Chain 1 Meas (dBm/ 3kHz)	Total Corr'd PSD (dBm/ 3kHz)	Limit (dBm/ 3kHz)	Margin (dB)
Low 1	2412	-5.064	-6.290	-2.62	8.0	-10.6
Mid 6	2437	-5.403	-6.897	-3.08	8.0	-11.1
High 11	2462	-4.564	-6.348	-2.35	8.0	-10.4
High 12	2467	-5.271	-7.550	-3.25	8.0	-11.3
High 13	2472	-8.597	-10.891	-6.58	8.0	-14.6

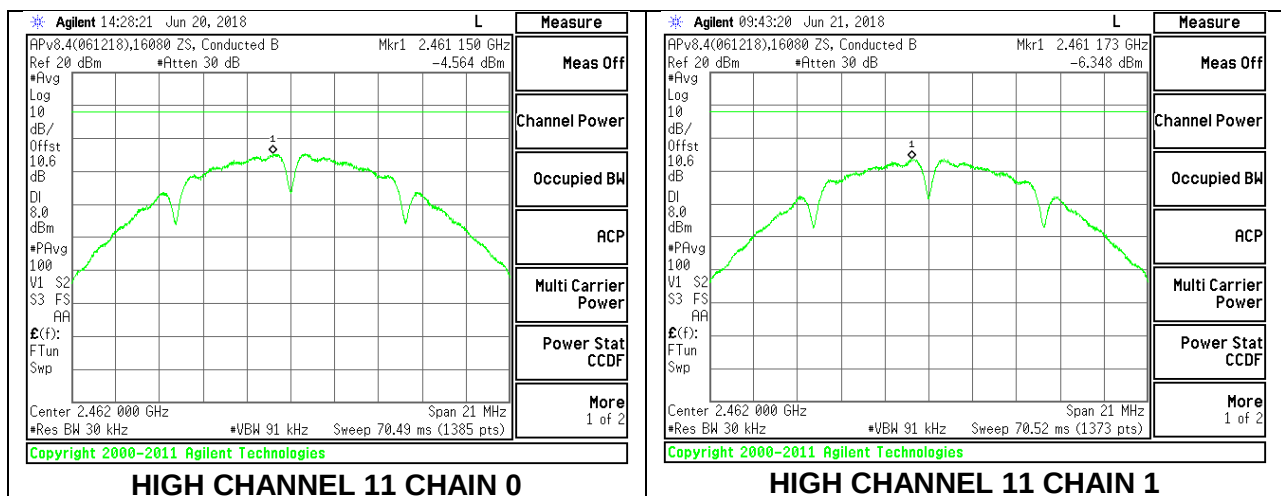
LOW CHANNEL 1



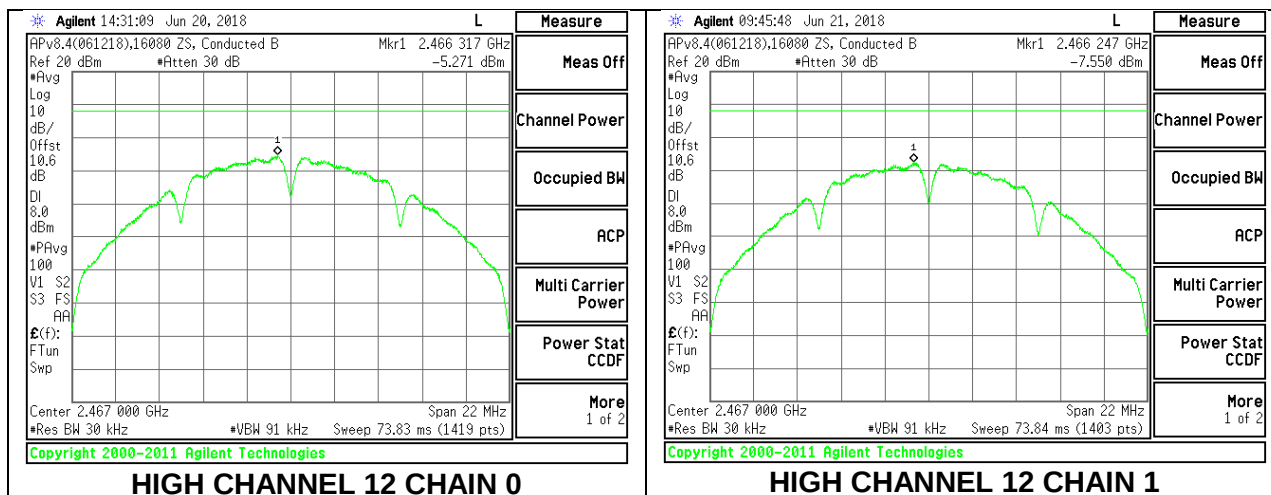
MID CHANNEL 6



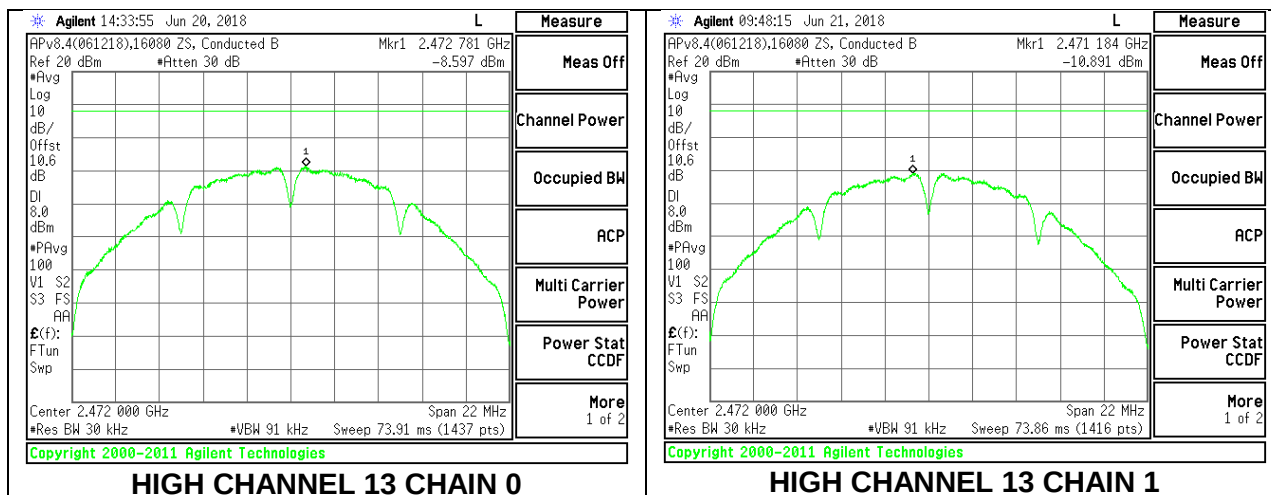
HIGH CHANNEL 11



HIGH CHANNEL 12



HIGH CHANNEL 13



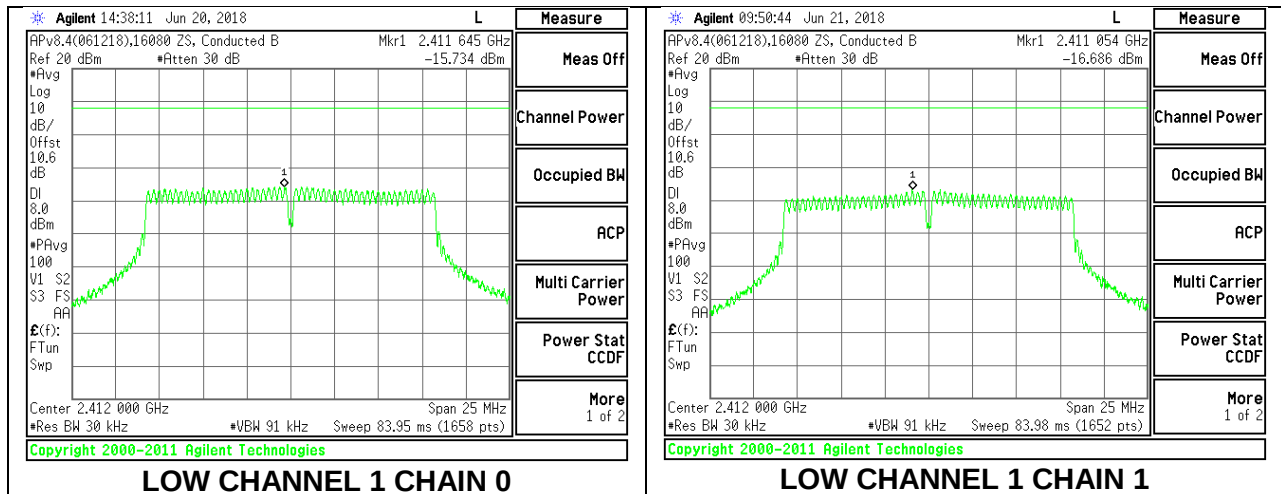
8.5.2. 802.11g MODE

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd PSD
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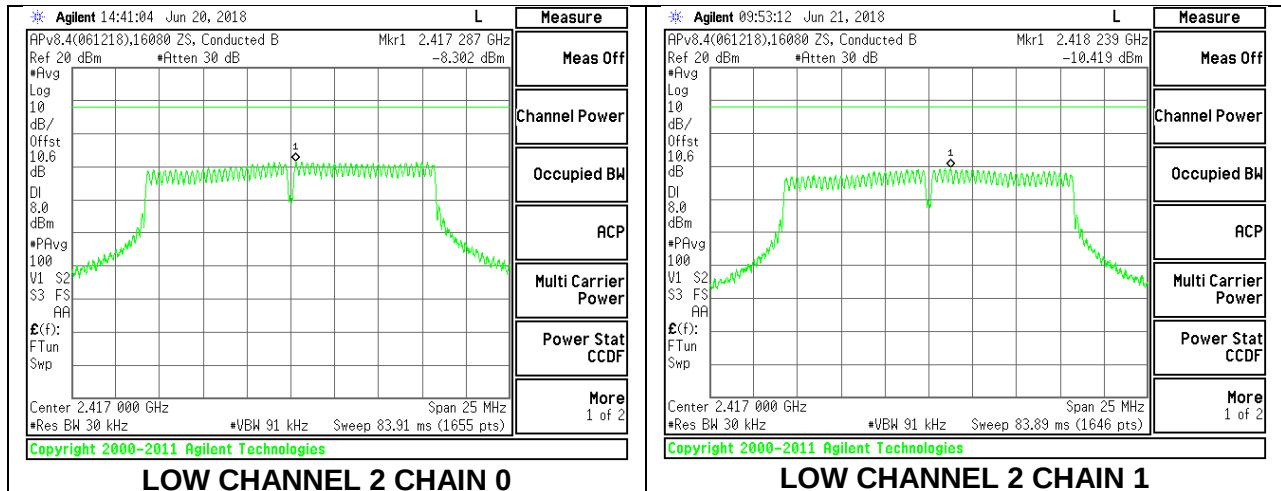
PSD Results

Channel	Frequency (MHz)	Chain 0 Meas (dBm/ 3kHz)	Chain 1 Meas (dBm/ 3kHz)	Total Corr'd PSD (dBm/ 3kHz)	Limit (dBm/ 3kHz)	Margin (dB)
Low 1	2412	-15.734	-16.686	-13.17	8.0	-21.2
Low 2	2417	-8.302	-10.419	-6.22	8.0	-14.2
Mid 6	2437	-6.946	-9.571	-5.05	8.0	-13.1
High 11	2462	-8.407	-10.996	-6.50	8.0	-14.5
High 12	2467	-13.583	-15.839	-11.56	8.0	-19.6
High 13	2472	-20.058	-21.931	-17.88	8.0	-25.9

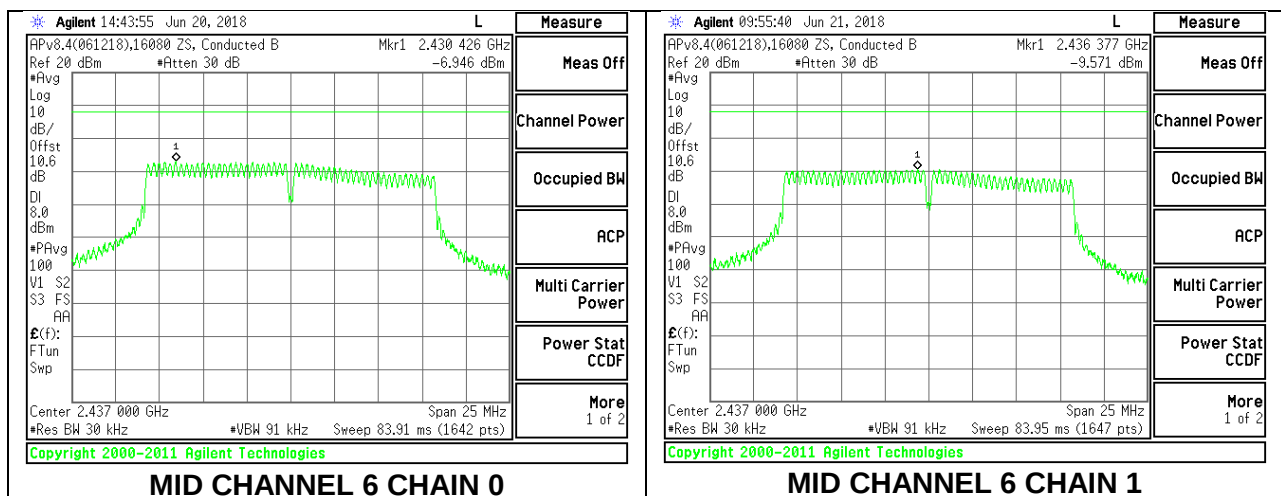
LOW CHANNEL 1



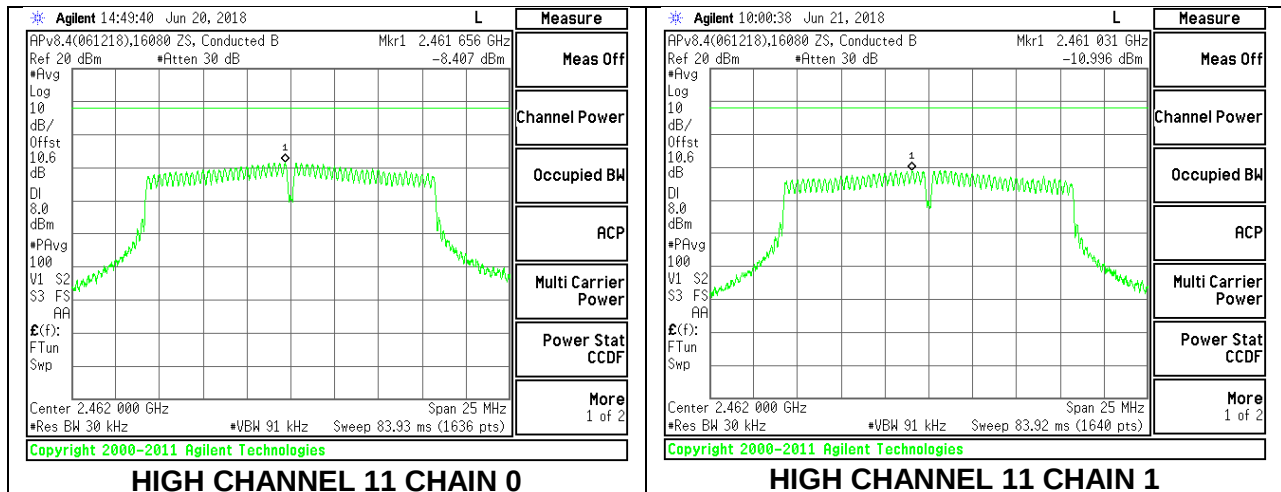
LOW CHANNEL 2



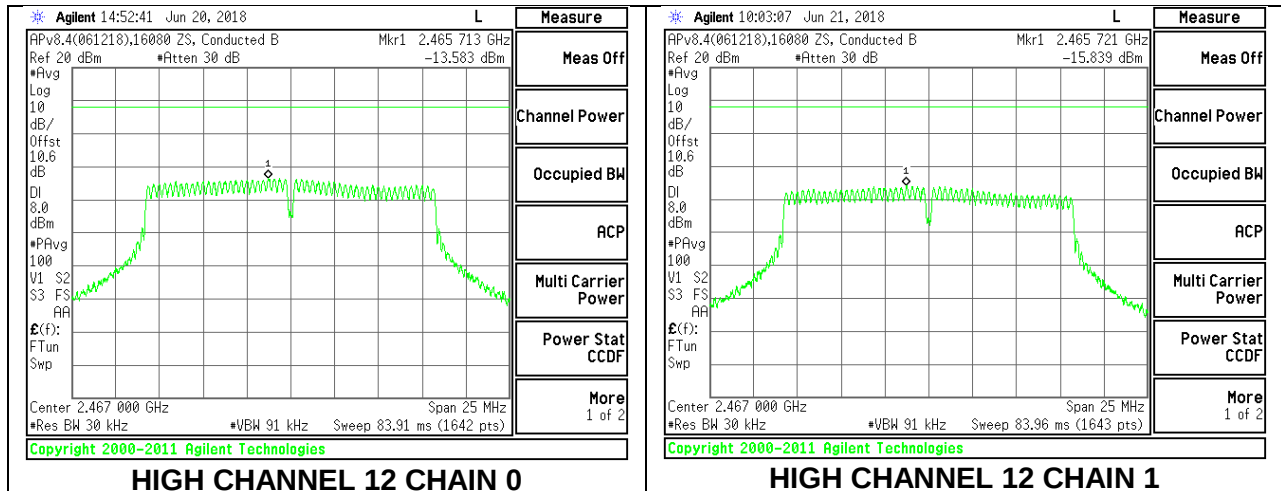
MID CHANNEL 6



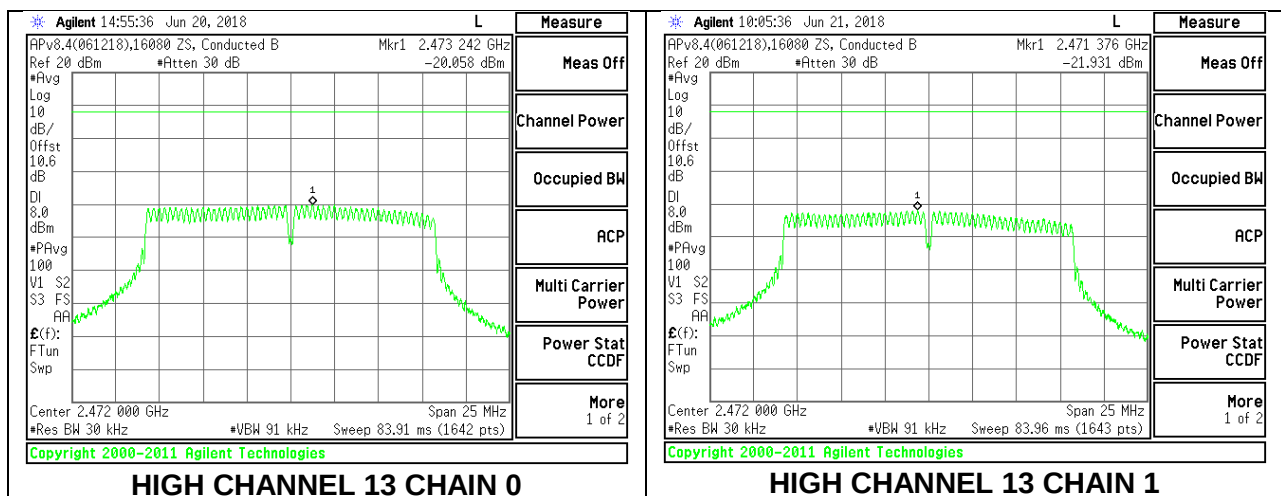
HIGH CHANNEL 11



HIGH CHANNEL 12



HIGH CHANNEL 13



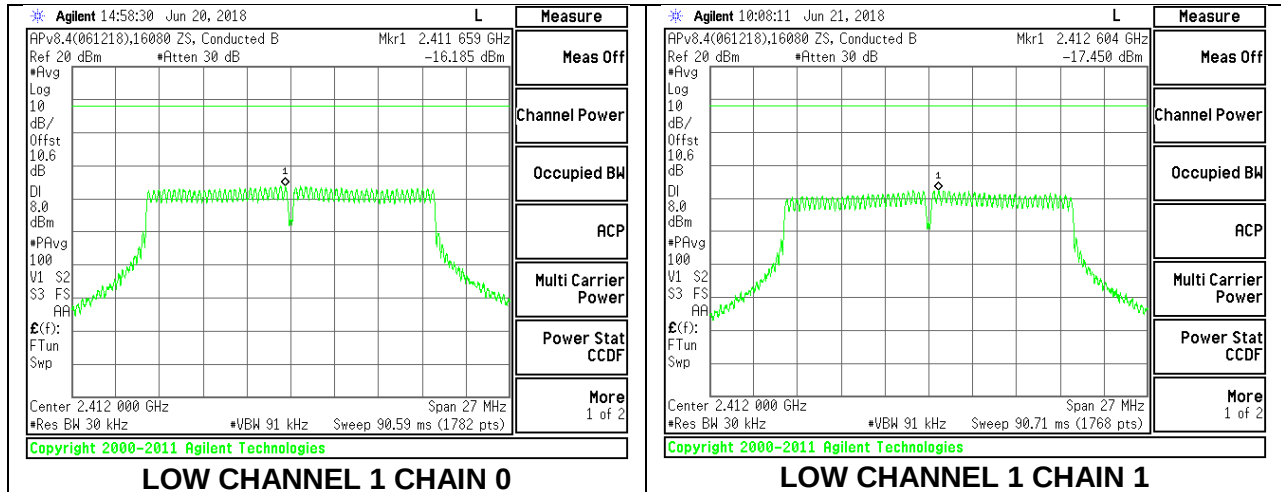
8.5.3. 802.11n HT20 MODE

Duty Cycle CF (dB)	0.10	Included in Calculations of Corr'd PSD
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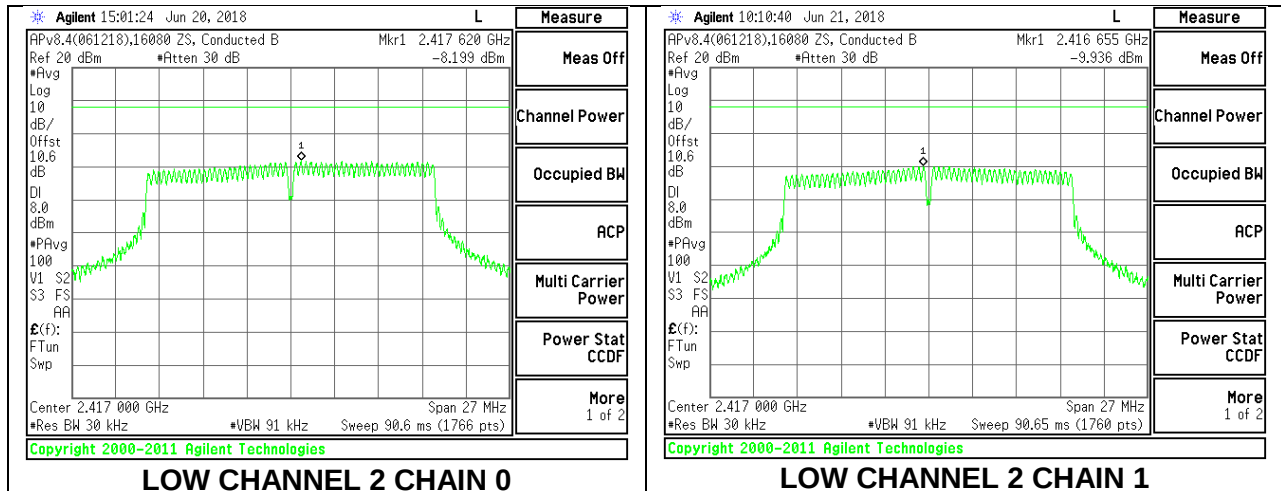
PSD Results

Channel	Frequency (MHz)	Chain 0 Meas (dBm/ 3kHz)	Chain 1 Meas (dBm/ 3kHz)	Total Corr'd PSD (dBm/ 3kHz)	Limit (dBm/ 3kHz)	Margin (dB)
Low 1	2412	-16.185	-17.450	-13.66	8.0	-21.7
Low 2	2417	-8.199	-9.936	-5.87	8.0	-13.9
Mid 6	2437	-7.498	-9.708	-5.35	8.0	-13.4
High 11	2462	-9.254	-11.490	-7.12	8.0	-15.1
High 12	2467	-15.435	-17.253	-13.14	8.0	-21.1
High 13	2472	-22.716	-23.780	-20.11	8.0	-28.1

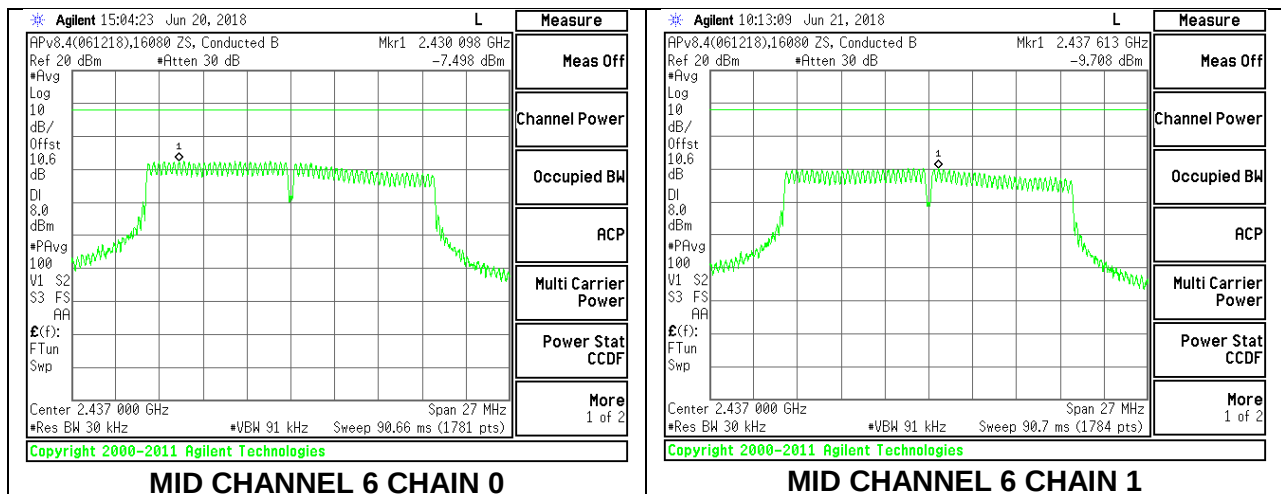
LOW CHANNEL 1



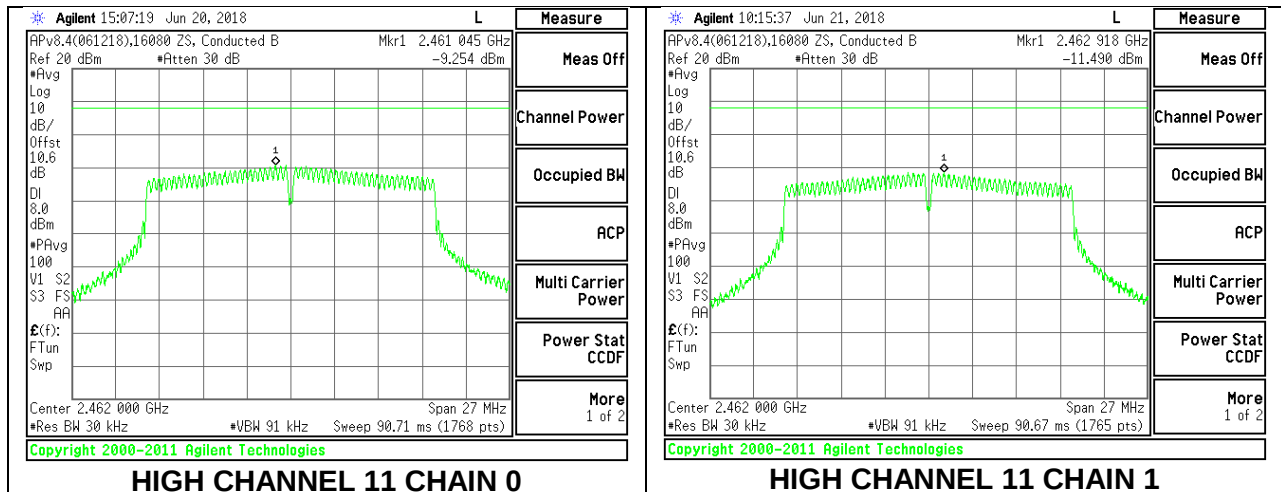
LOW CHANNEL 2



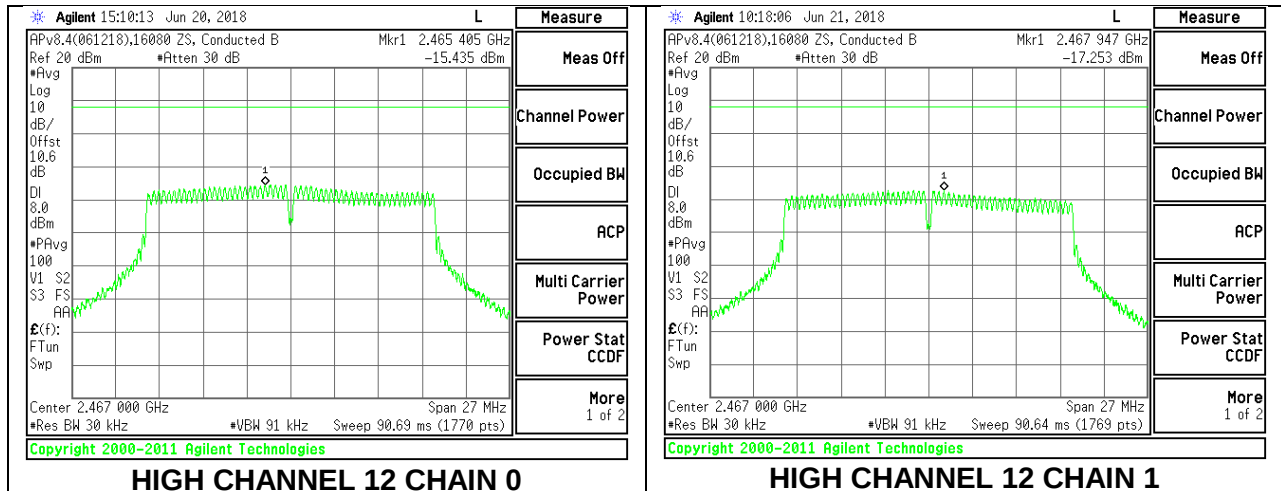
MID CHANNEL 6



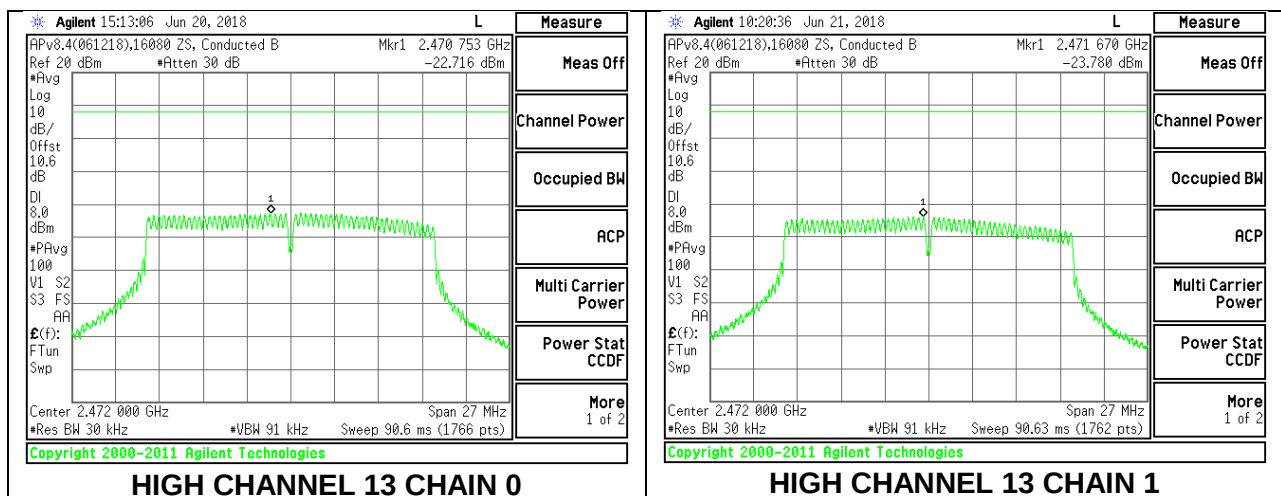
HIGH CHANNEL 11



HIGH CHANNEL 12



HIGH CHANNEL 13



8.6. CONDUCTED SPURIOUS EMISSIONS

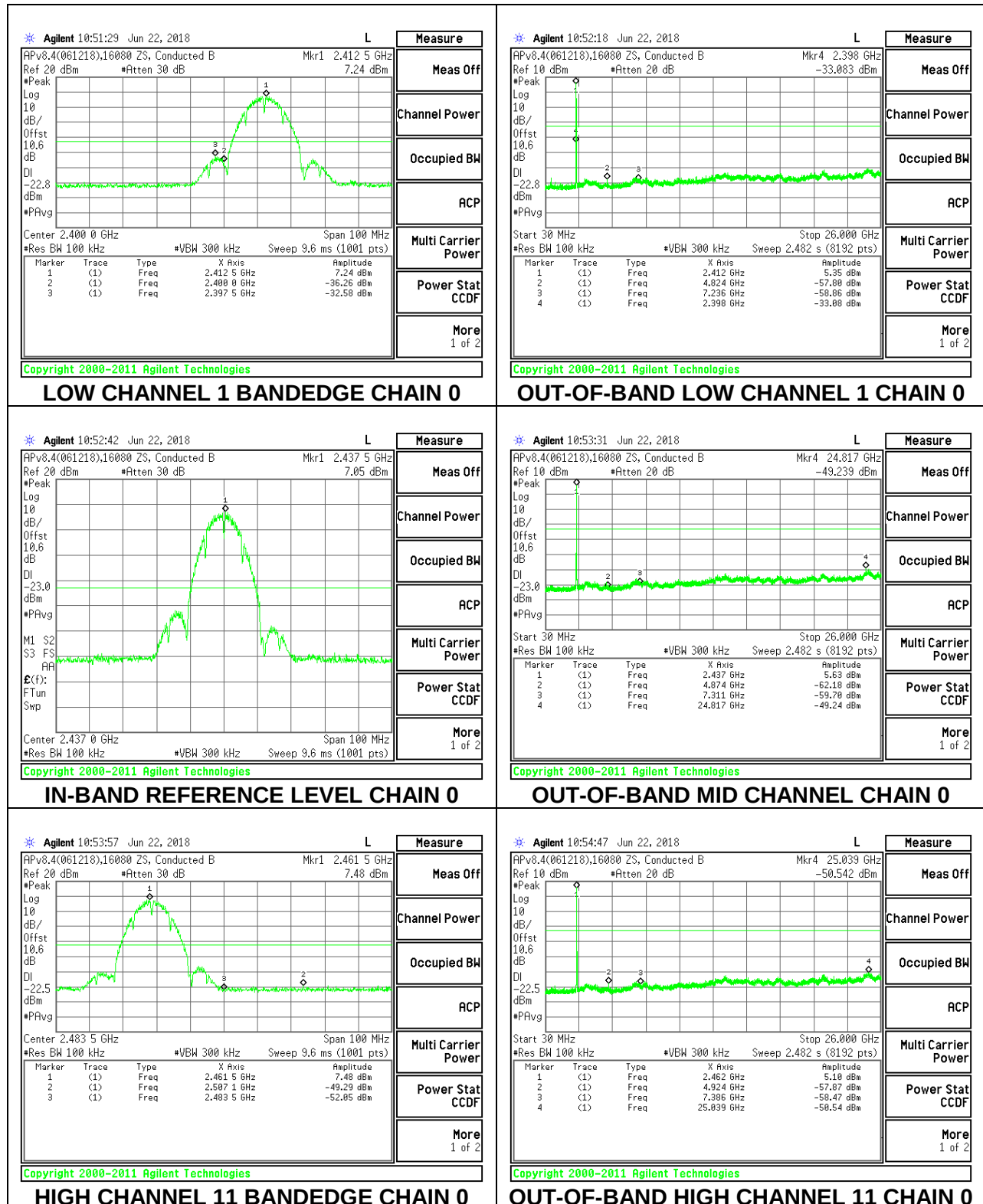
LIMITS

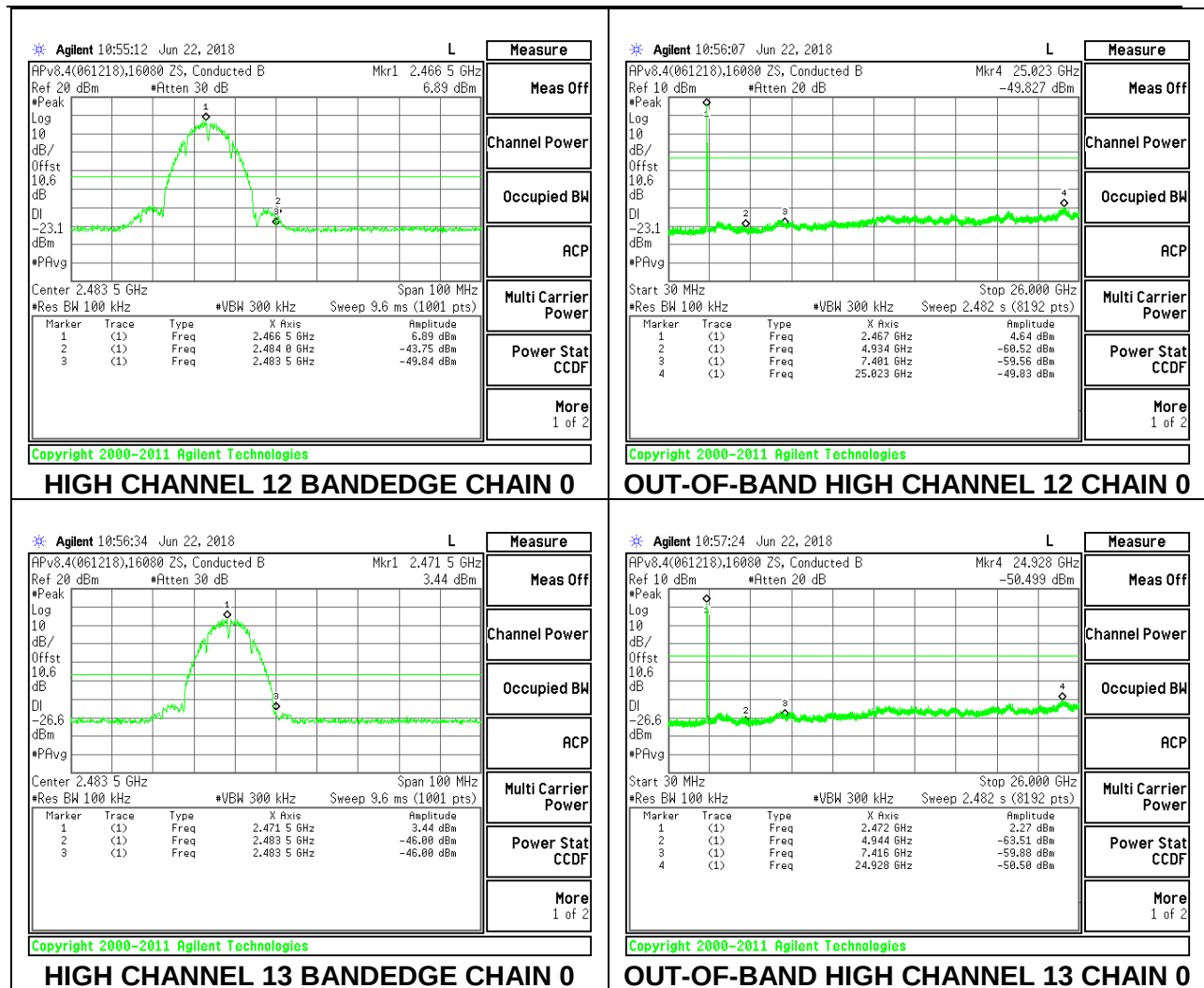
FCC §15.247 (d)

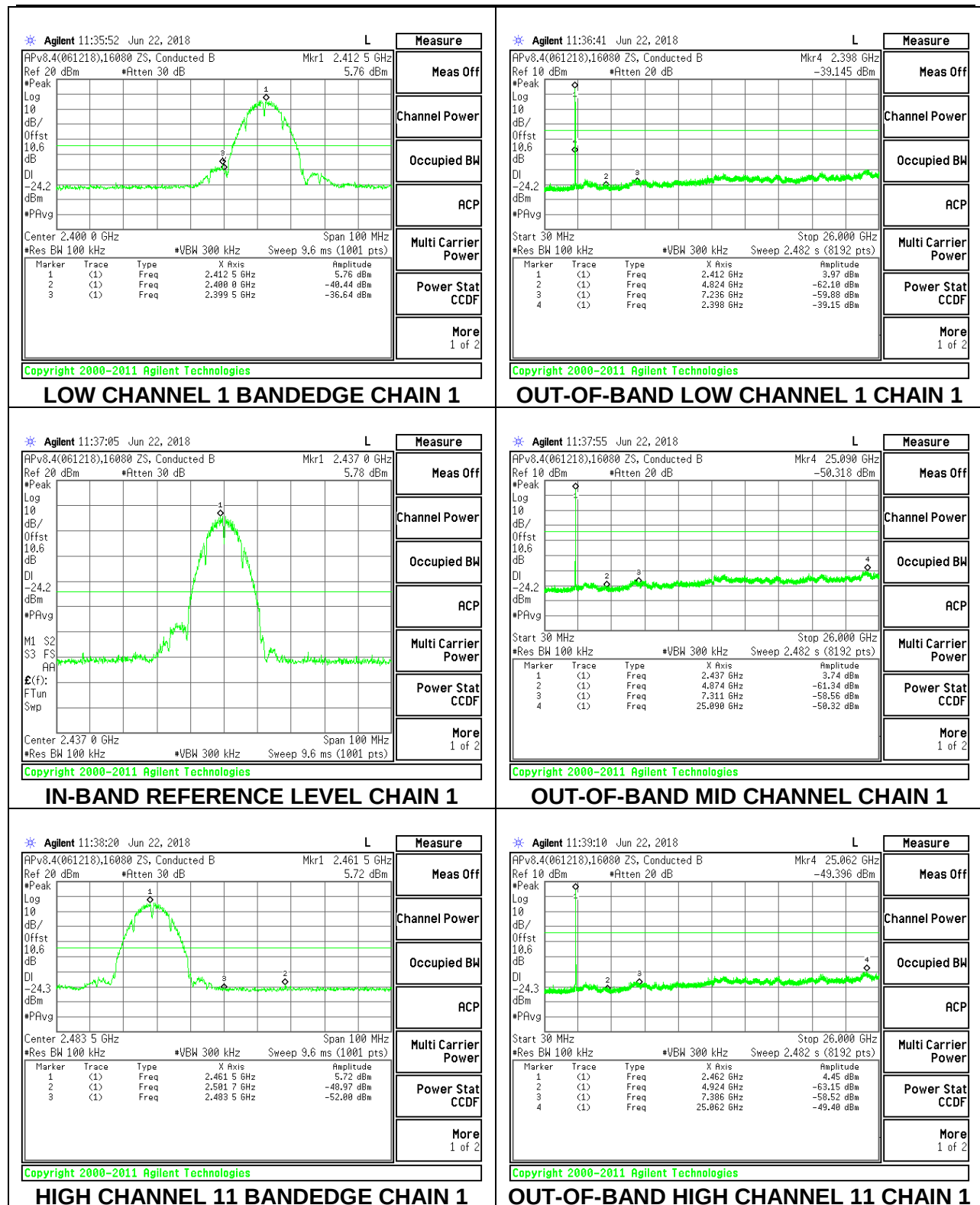
Output power was measured based on the use of peak measurement, therefore the required attenuation is 20 dB.

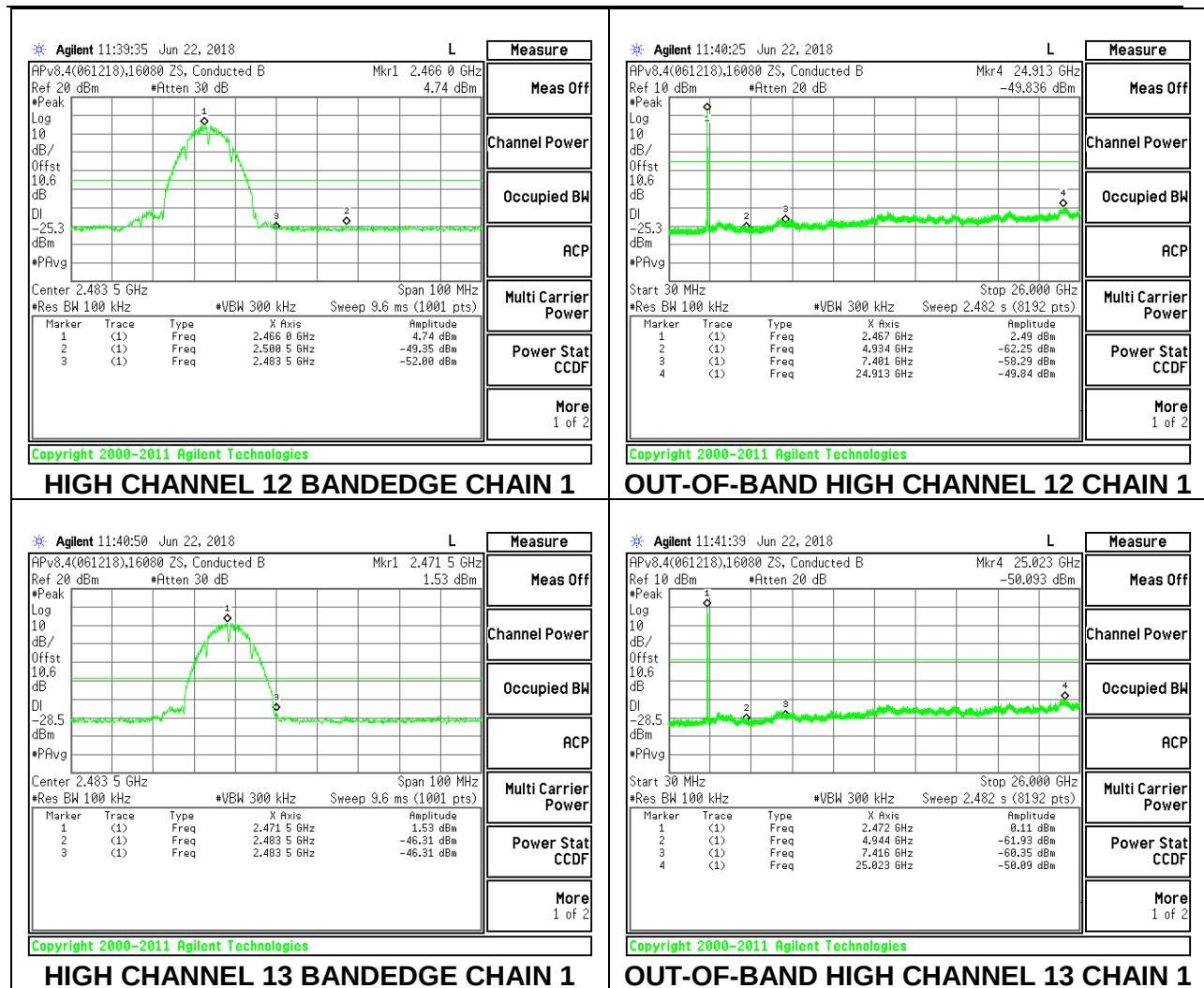
RESULTS

8.6.1. 802.11b MODE

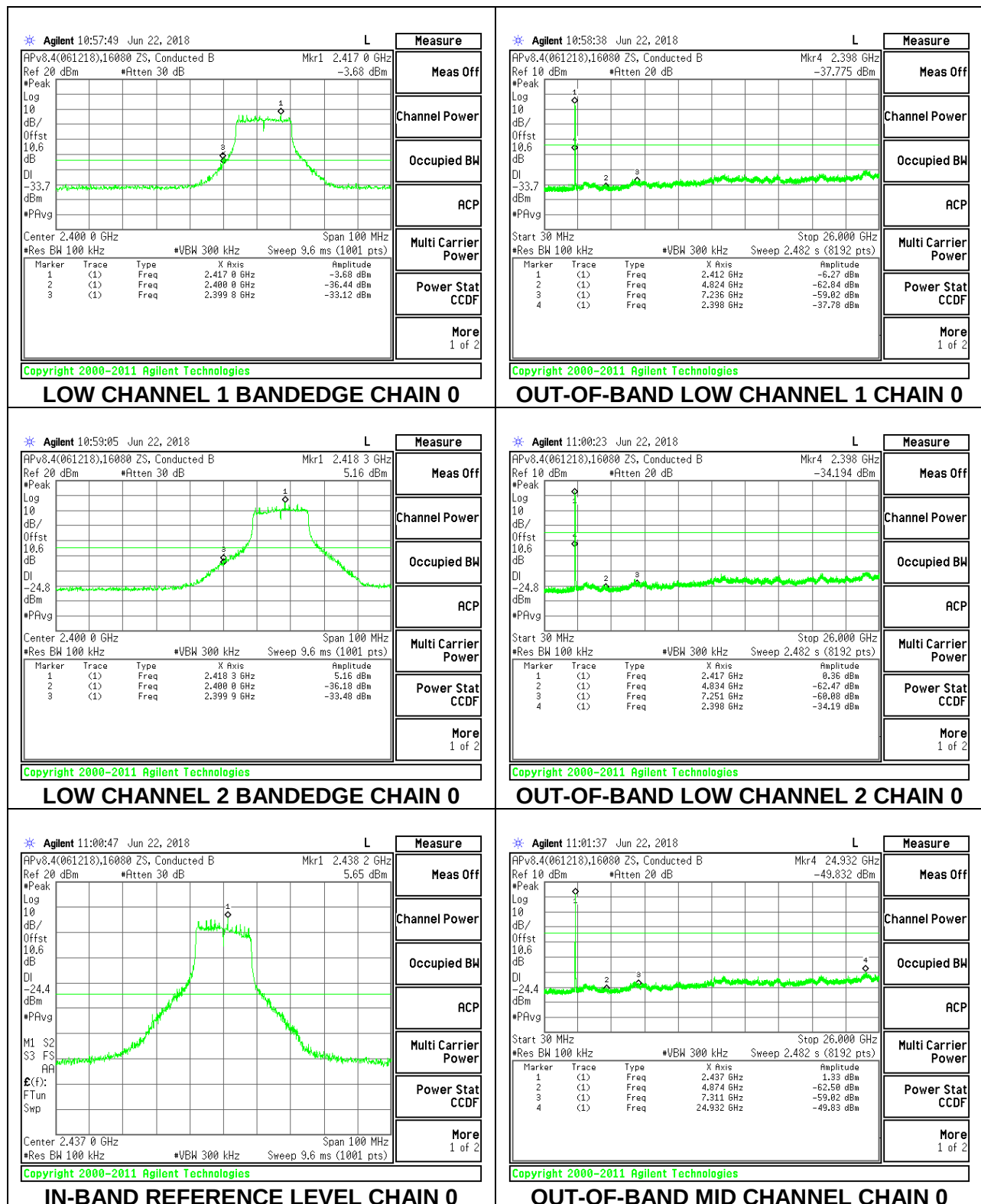


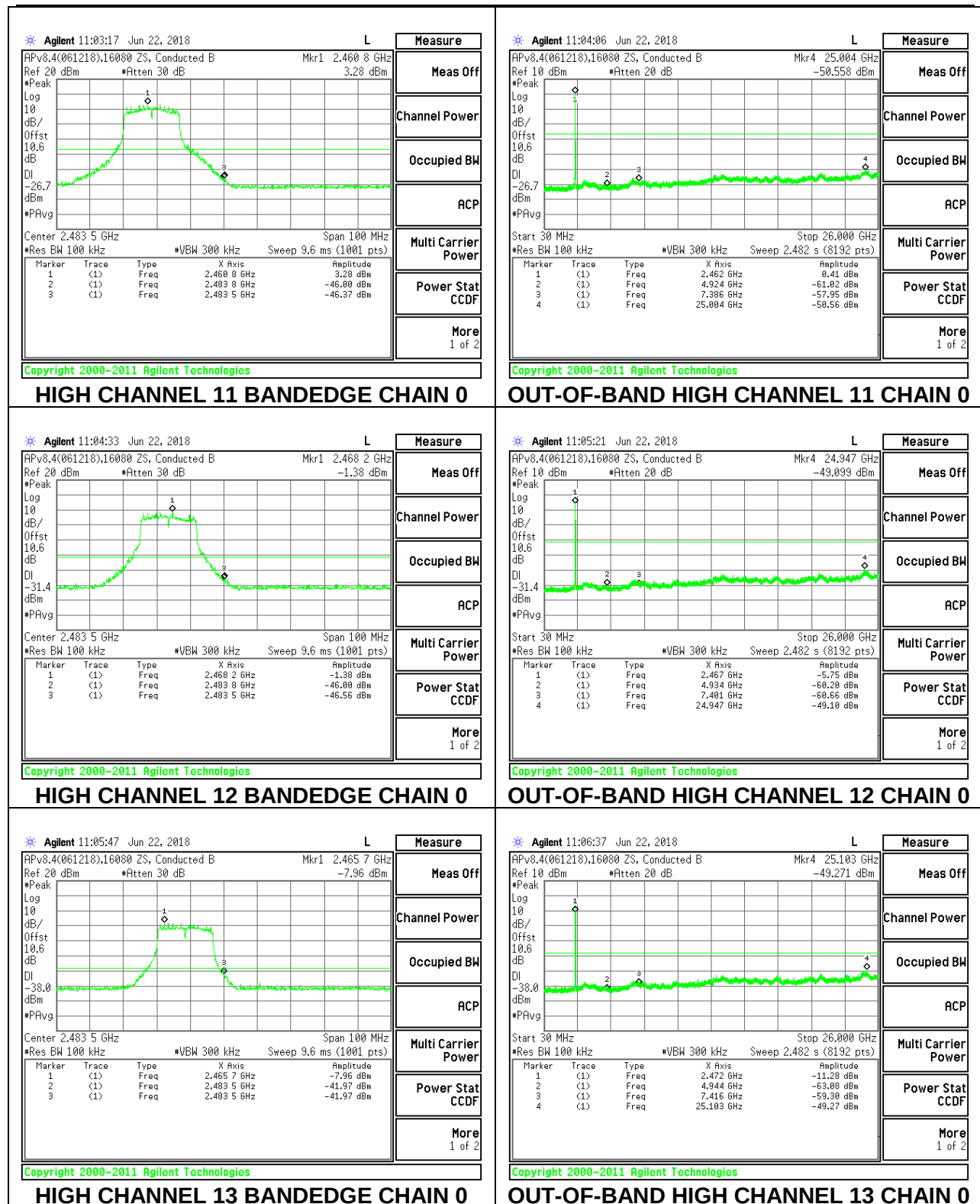


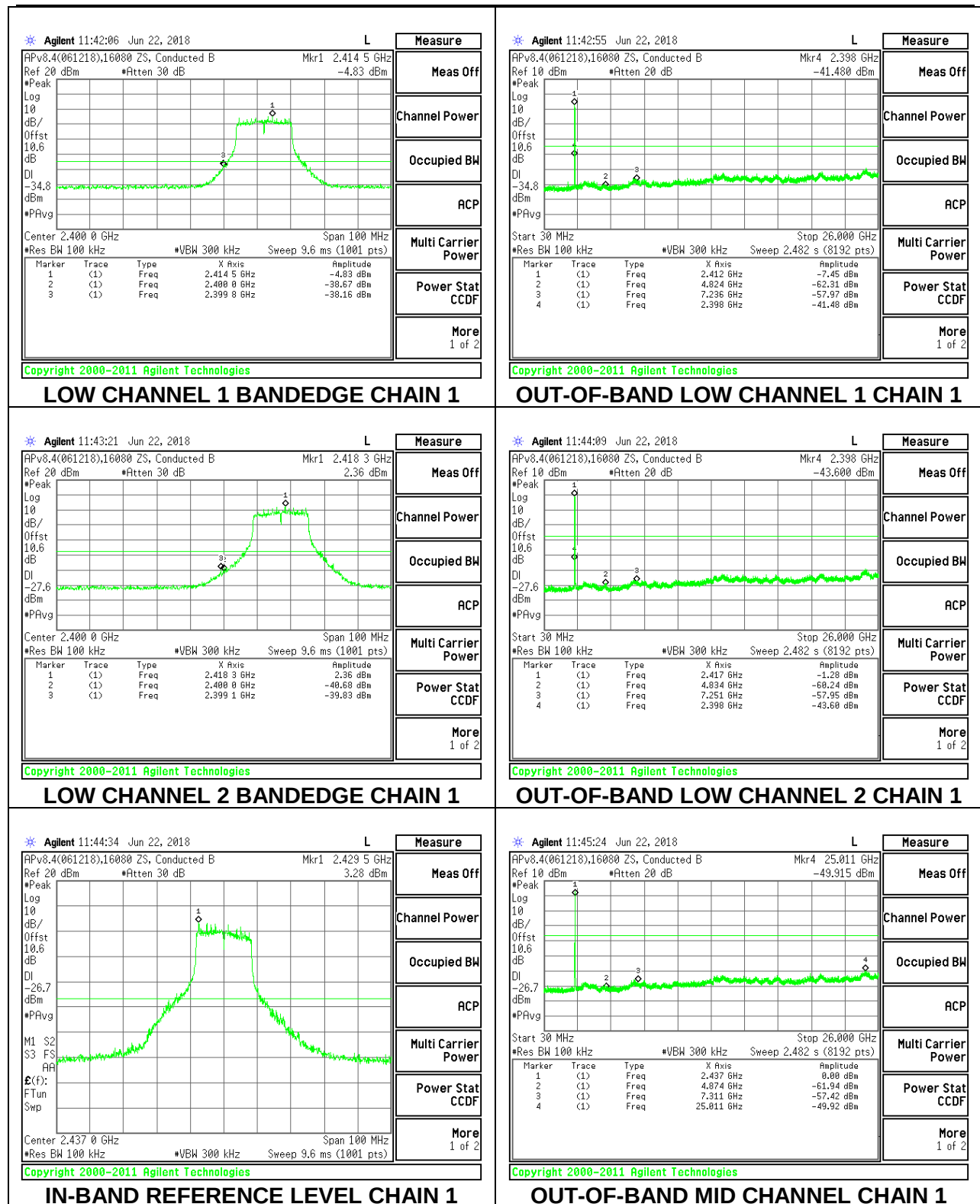


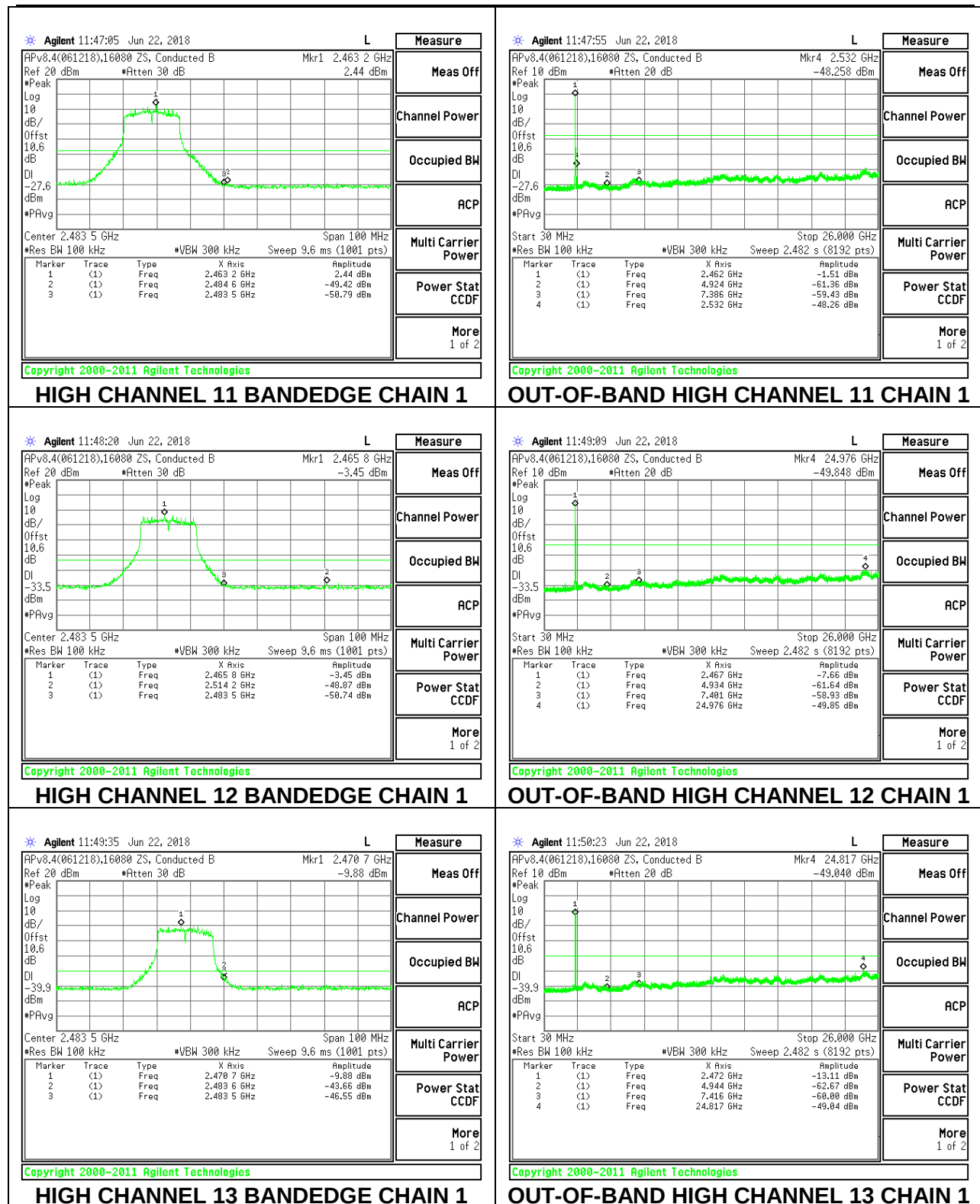


8.6.2. 802.11g MODE

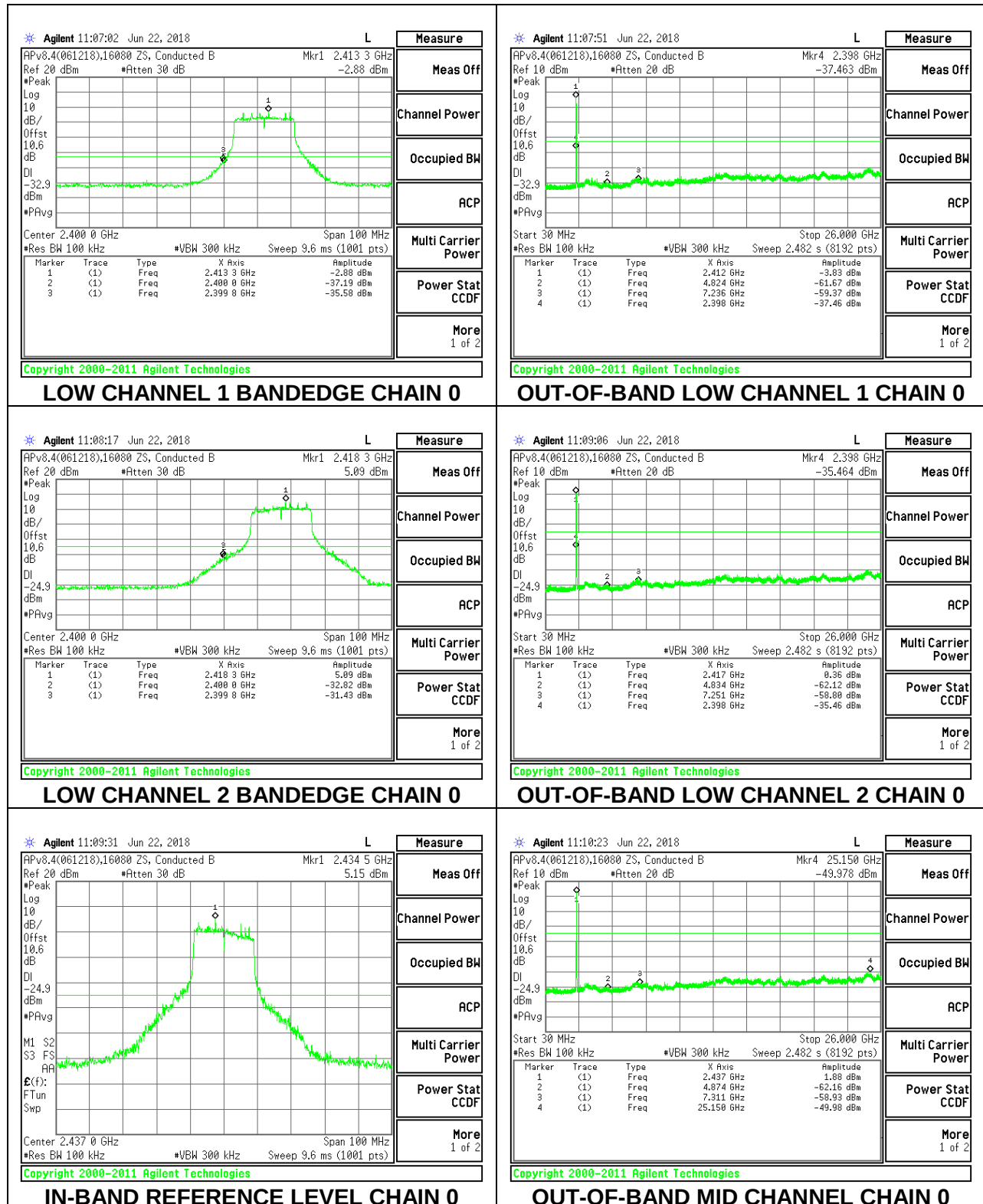


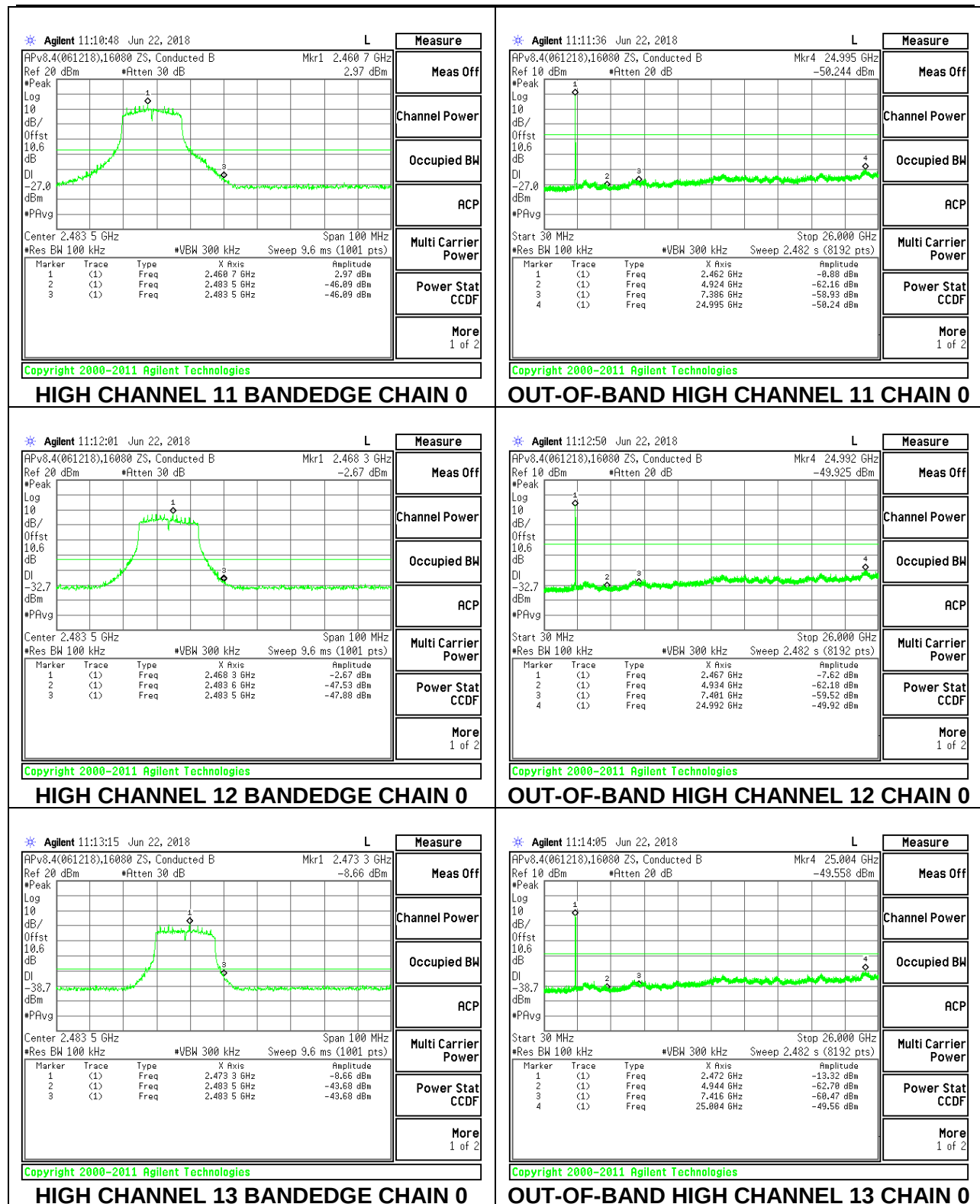


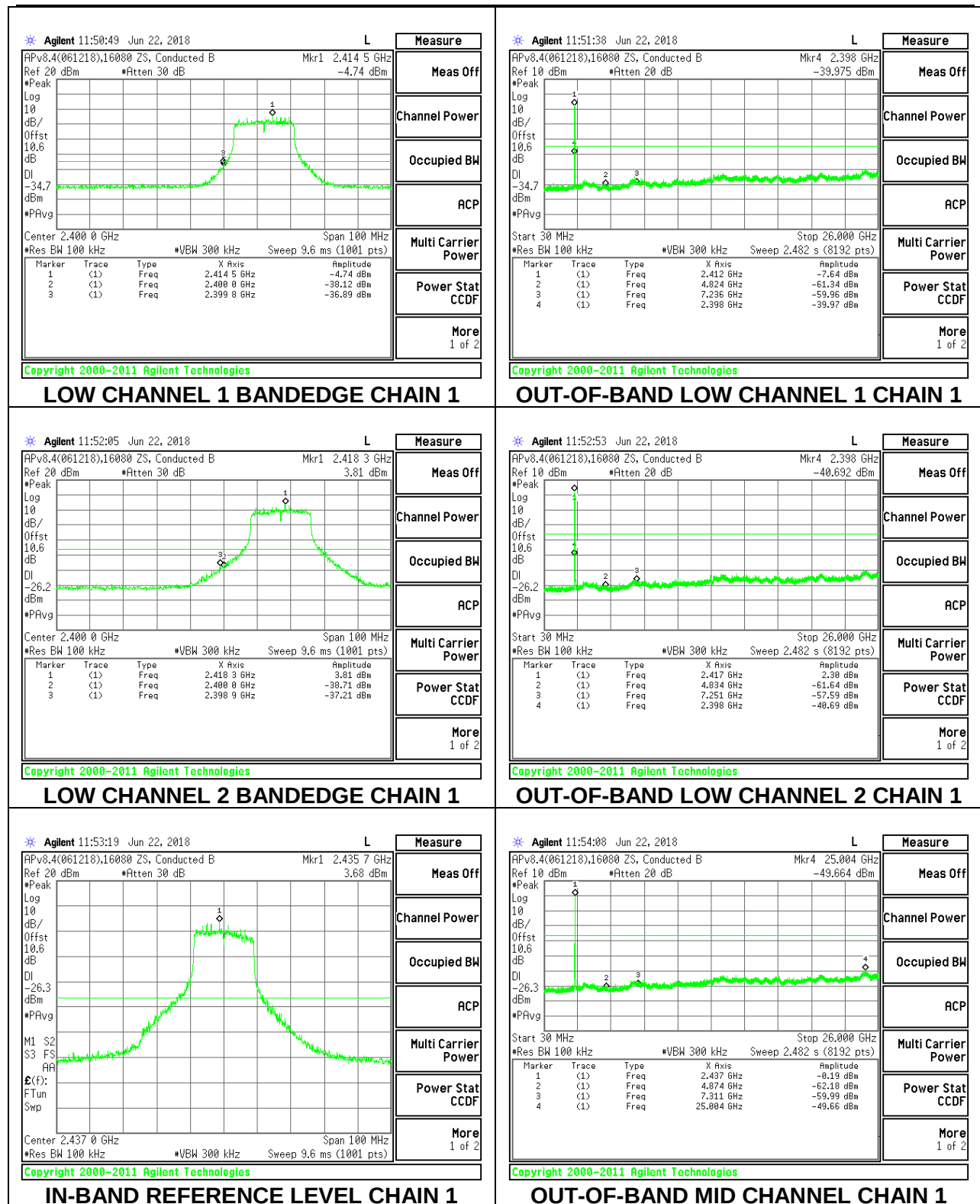


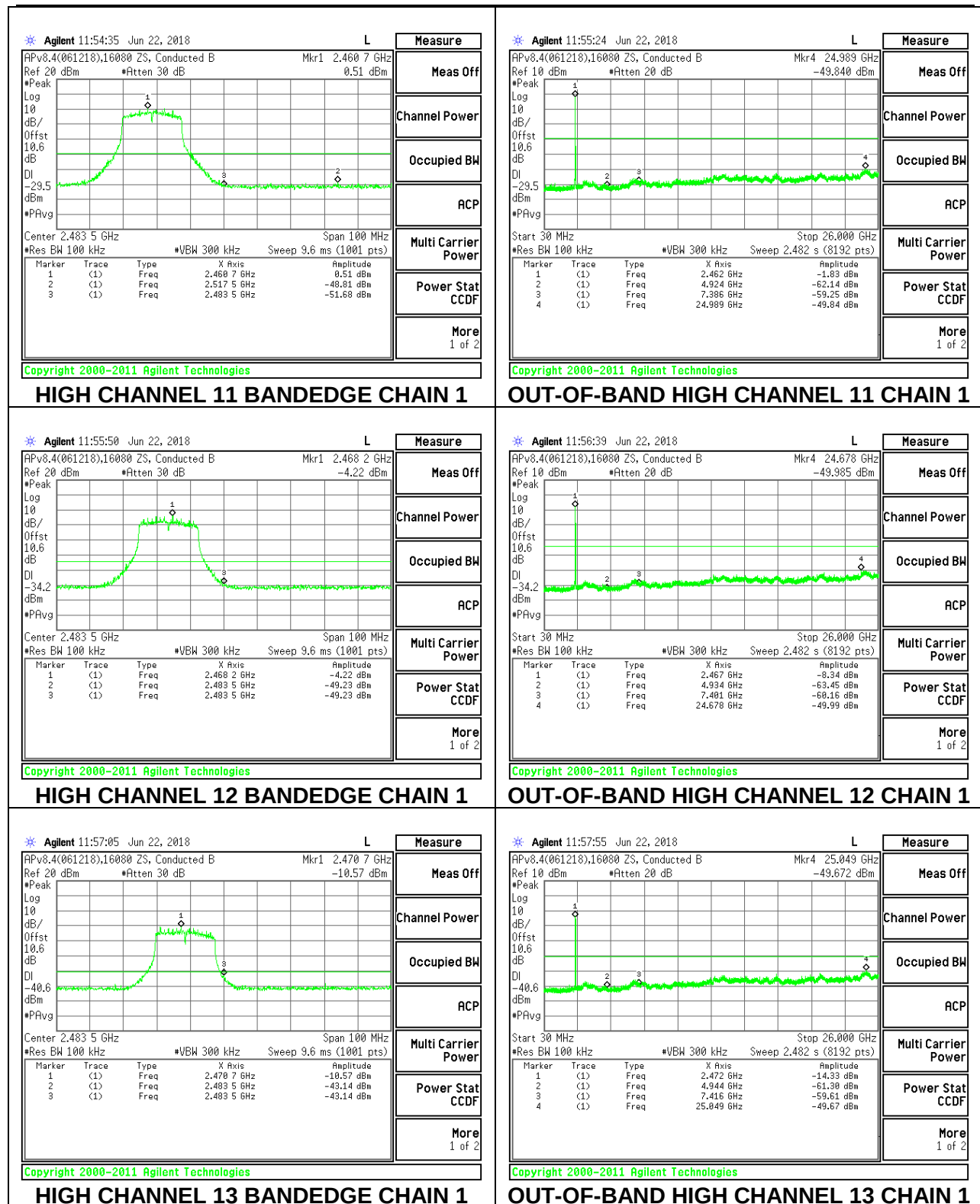


8.6.3. 802.11n HT20 MODE









9. RADIATED TEST RESULTS

LIMITS

FCC §15.205 and §15.209

Frequency Range (MHz)	Field Strength Limit (uV/m) at 3 m	Field Strength Limit (dBuV/m) at 3 m
0.009-0.490	2400/F(kHz) @ 300 m	-
0.490-1.705	24000/F(kHz) @ 30 m	-
1.705 - 30	30 @ 30m	-
30 - 88	100	40
88 - 216	150	43.5
216 - 960	200	46
Above 960	500	54

TEST PROCEDURE

The EUT is placed on a non-conducting table 80 cm above the ground plane for measurement below 1GHz; 1.5 m above the ground plane for measurement above 1GHz. The antenna to EUT distance is 3 meters. The EUT is configured in accordance with ANSI C63.10. The EUT is set to transmit in a continuous mode.

For measurements below 1 GHz the resolution bandwidth is set to 100 kHz for peak detection measurements or 120 kHz for quasi-peak detection measurements. Peak detection is used unless otherwise noted as quasi-peak.

For pre-scans above 1 GHz the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 30 KHz for peak measurements.

For final measurements above 1 GHz the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 3 MHz for peak measurements and as applicable for average measurements.

The spectrum from 1 GHz to 18 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in each applicable band. Below 1GHz and above 18GHz emissions, the channel with the highest output power was tested.

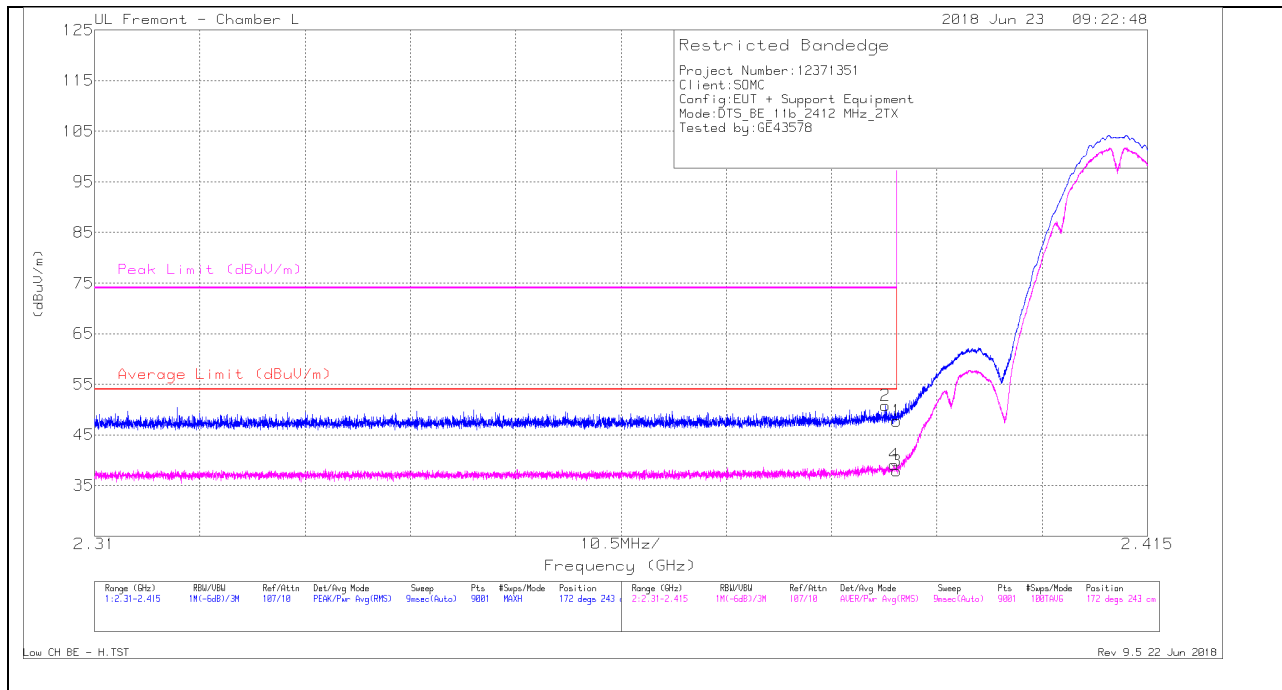
The frequency range of interest is monitored at a fixed antenna height and EUT azimuth. The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are made with the antenna polarized in both the vertical and the horizontal positions.

9.1. TRANSMITTER ABOVE 1 GHz

9.1.1. TX ABOVE 1 GHz 802.11b MODE IN THE 2.4 GHz BAND

BANDEDGE (LOW CHANNEL, CH 1)

HORIZONTAL RESULT



Trace Markers

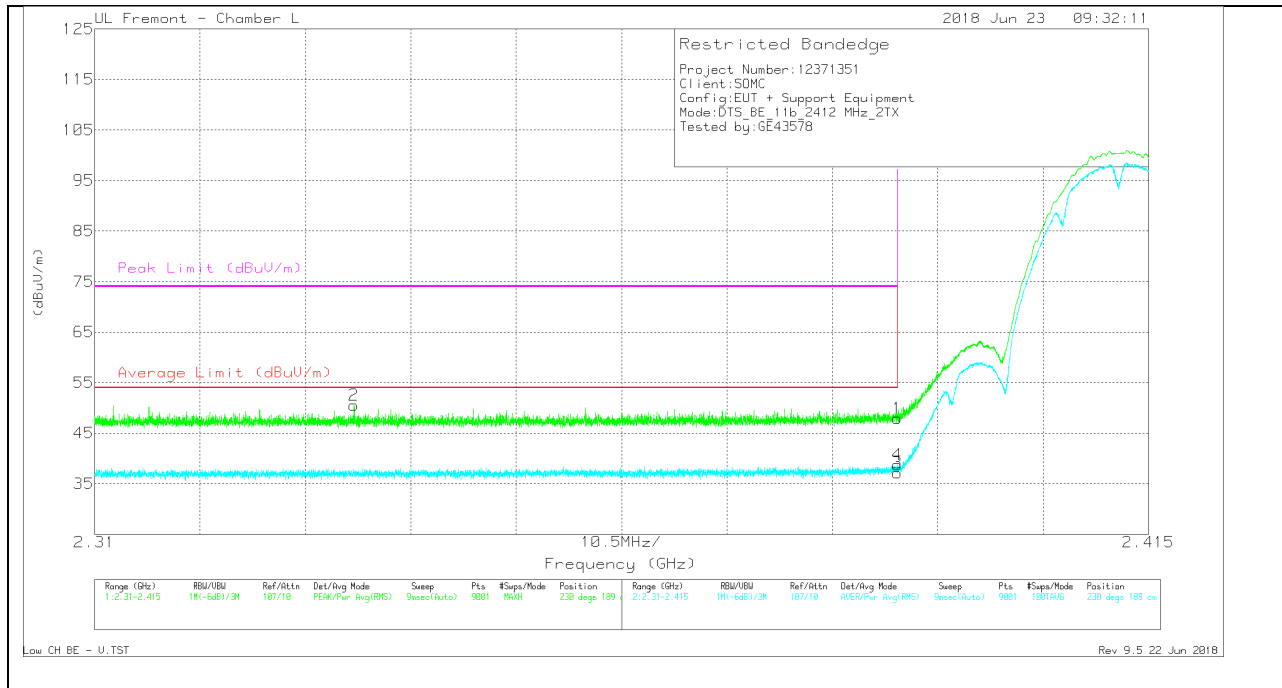
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF EMC4294 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	38.85	Pk	31.8	-22.9	0	47.75	-	-	74	-26.25	172	243	H
2	* 2.389	41.89	Pk	31.8	-22.9	0	50.79	-	-	74	-23.21	172	243	H
3	* 2.39	28.92	RMS	31.8	-22.9	0	37.82	54	-16.18	-	-	172	243	H
4	* 2.39	30.17	RMS	31.8	-22.9	0	39.07	54	-14.93	-	-	172	243	H

* - indicates frequency in CFR47 Pt 15 Restricted Band

Pk - Peak detector

RMS - RMS detection

VERTICAL RESULT



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF EMC4294 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	39.02	Pk	31.8	-22.9	0	47.92	-	-	74	-26.08	230	189	V
2	* 2.336	41.99	Pk	31.5	-23	0	50.49	-	-	74	-23.51	230	189	V
3	* 2.39	28.24	RMS	31.8	-22.9	0	37.14	54	-16.86	-	-	230	189	V
4	* 2.39	29.81	RMS	31.8	-22.9	0	38.71	54	-15.29	-	-	230	189	V

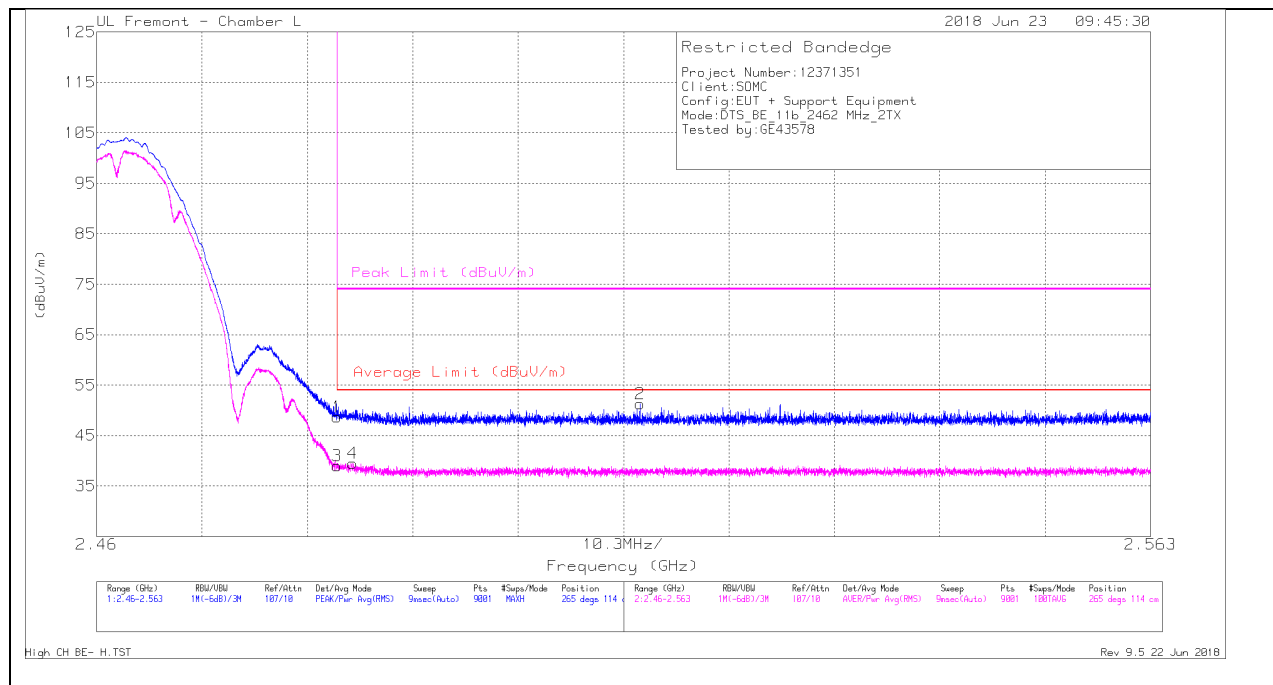
* - indicates frequency in CFR47 Pt 15 Restricted Band

Pk - Peak detector

RMS - RMS detection

BANDEDGE (HIGH CHANNEL, CH 11)

HORIZONTAL RESULT



Trace Markers

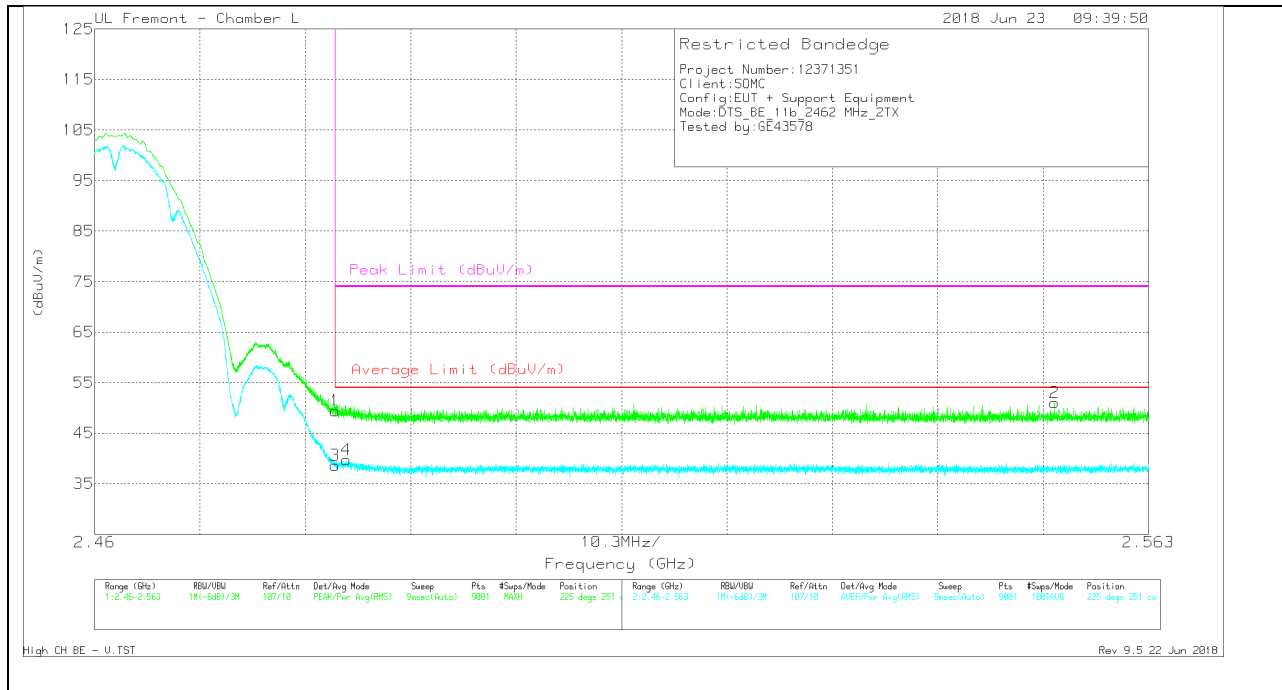
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF EMC4294 (dB/m)	Amp/Cbl/Fitr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	39.13	Pk	32.3	-22.7	0	48.73	-	-	74	-25.27	265	114	H
2	2.513	41.61	Pk	32.3	-22.6	0	51.31	-	-	74	-22.69	265	114	H
3	* 2.484	29.4	RMS	32.3	-22.7	0	39	54	-15	-	-	265	114	H
4	* 2.485	29.88	RMS	32.3	-22.7	0	39.48	54	-14.52	-	-	265	114	H

* - indicates frequency in CFR47 Pt 15 Restricted Band

Pk - Peak detector

RMS - RMS detection

VERTICAL RESULT



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF EMC4294 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	39.88	Pk	32.3	-22.7	0	49.48	-	-	74	-24.52	225	251	V
2	2.554	41.38	Pk	32.3	-22.7	0	50.98	-	-	74	-23.02	225	251	V
3	* 2.484	29.03	RMS	32.3	-22.7	0	38.63	54	-15.37	-	-	225	251	V
4	* 2.485	30.13	RMS	32.3	-22.7	0	39.73	54	-14.27	-	-	225	251	V

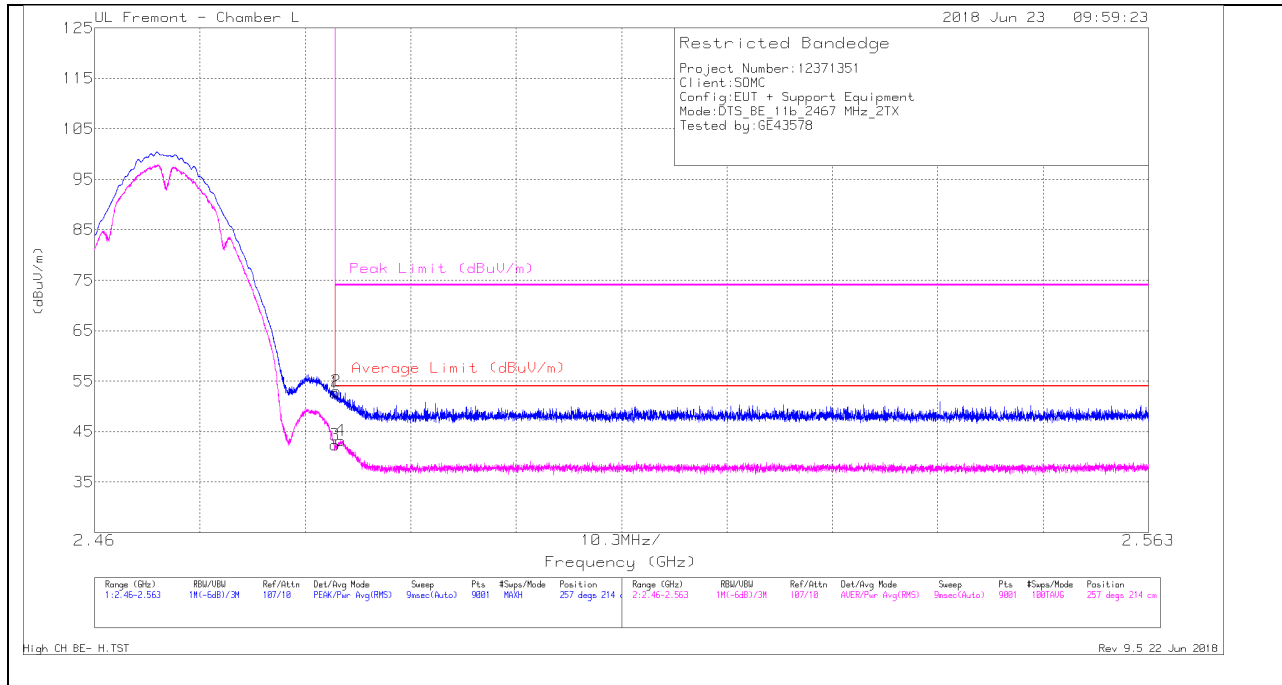
* - indicates frequency in CFR47 Pt 15 Restricted Band

Pk - Peak detector

RMS - RMS detection

BANDEDGE (HIGH CHANNEL, CH 12)

HORIZONTAL RESULT



Trace Markers

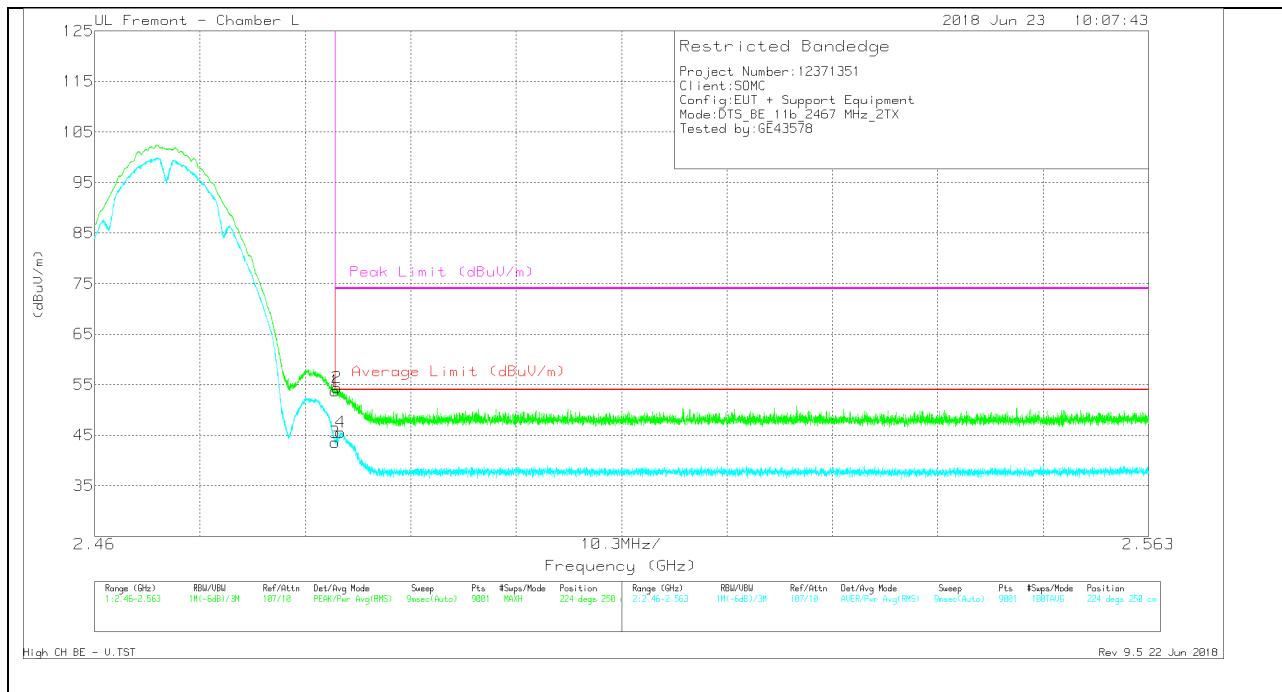
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF EMC4294 (dB/m)	Amp/Cbl/Fitr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	43.11	Pk	32.3	-22.7	0	52.71	-	-	74	-21.29	257	214	H
2	* 2.484	43.46	Pk	32.3	-22.7	0	53.06	-	-	74	-20.94	257	214	H
3	* 2.484	32.69	RMS	32.3	-22.7	0	42.29	54	-11.71	-	-	257	214	H
4	* 2.484	33.65	RMS	32.3	-22.7	0	43.25	54	-10.75	-	-	257	214	H

* - indicates frequency in CFR47 Pt 15 Restricted Band

Pk - Peak detector

RMS - RMS detection

VERTICAL RESULT



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF EMC4294 (dB/m)	Amp/Cbl/Filr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	44.12	Pk	32.3	-22.7	0	53.72	-	-	74	-20.28	224	250	V
2	* 2.484	44.77	Pk	32.3	-22.7	0	54.37	-	-	74	-19.63	224	250	V
3	* 2.484	33.97	RMS	32.3	-22.7	0	43.57	54	-10.43	-	-	224	250	V
4	* 2.484	35.96	RMS	32.3	-22.7	0	45.56	54	-8.44	-	-	224	250	V

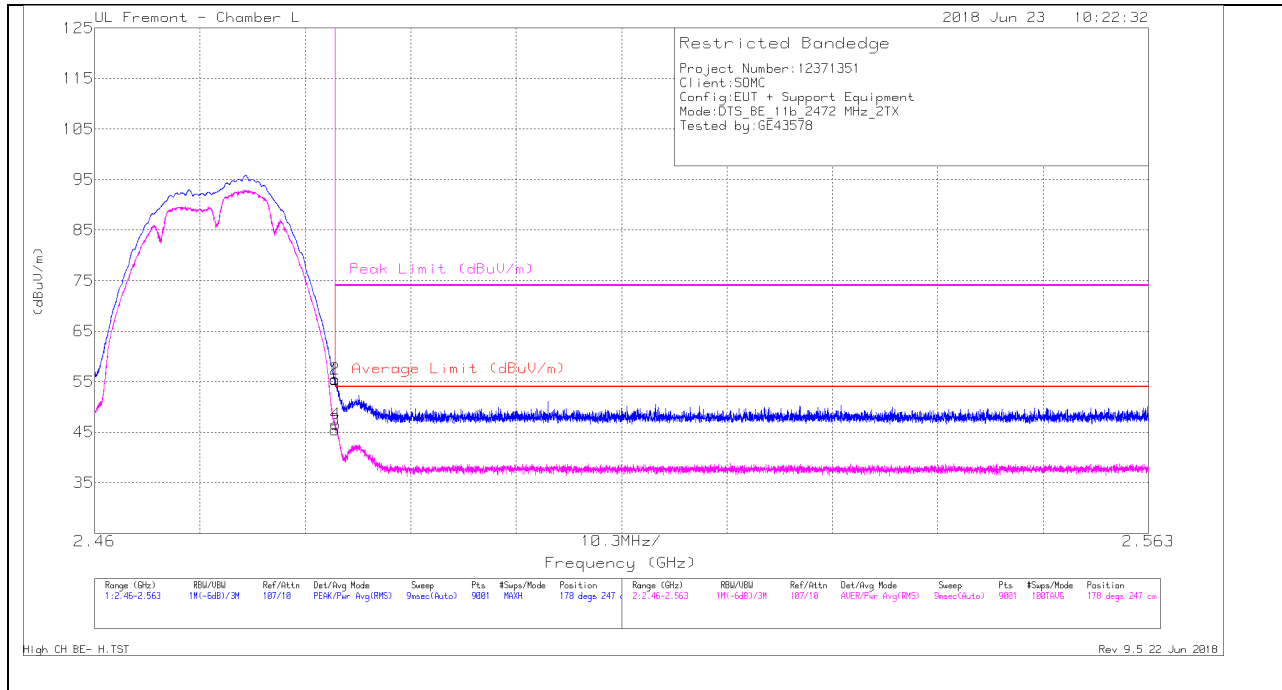
* - indicates frequency in CFR47 Pt 15 Restricted Band

Pk - Peak detector

RMS - RMS detection

BANDEGE (HIGH CHANNEL, CH 13)

HORIZONTAL RESULT



Trace Markers

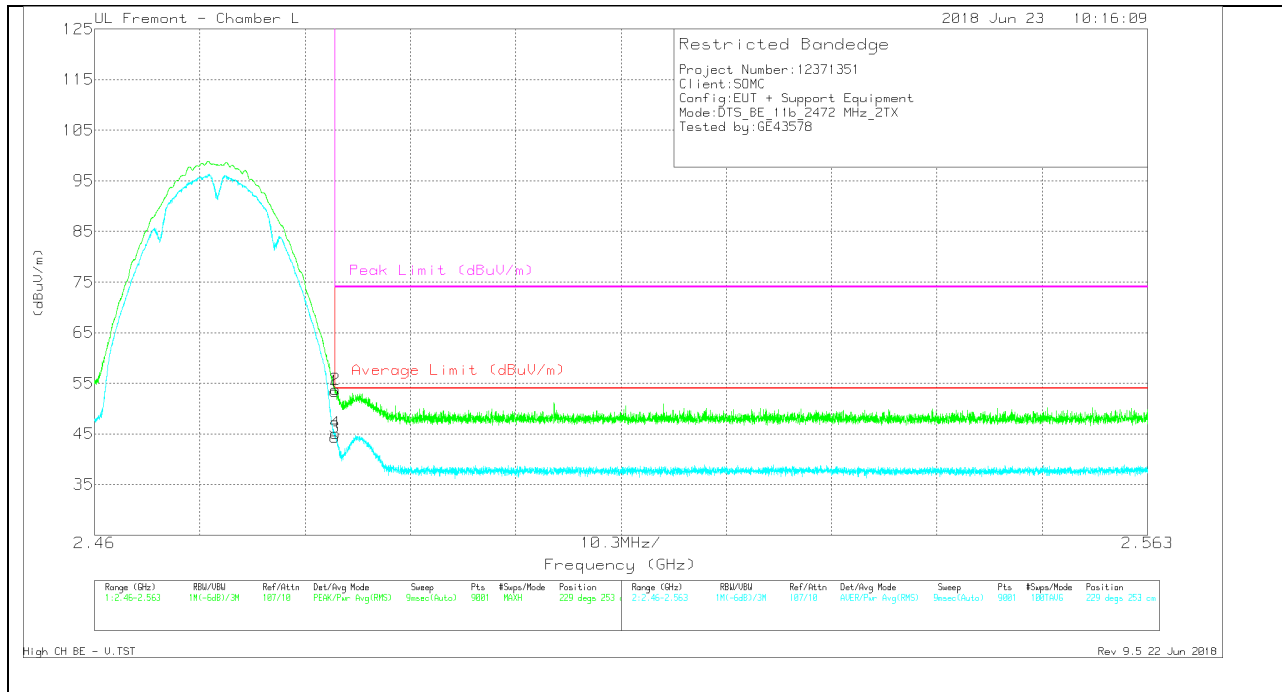
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF EMC4294 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	45.78	Pk	32.3	-22.7	0	55.38	-	-	74	-18.62	178	247	H
2	* 2.484	45.87	Pk	32.3	-22.7	0	55.47	-	-	74	-18.53	178	247	H
3	* 2.484	35.87	RMS	32.3	-22.7	0	45.47	54	-8.53	-	-	178	247	H
4	* 2.484	36.97	RMS	32.3	-22.7	0	46.57	54	-7.43	-	-	178	247	H

* - indicates frequency in CFR47 Pt 15 Restricted Band

Pk - Peak detector

RMS - RMS detection

VERTICAL RESULT



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF EMC4294 (dB/m)	Amp/Cbl/Fitr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	43.85	Pk	32.3	-22.7	0	53.45	-	-	74	-20.55	229	253	V
2	* 2.484	44.19	Pk	32.3	-22.7	0	53.79	-	-	74	-20.21	229	253	V
3	* 2.484	34.74	RMS	32.3	-22.7	0	44.34	54	-9.66	-	-	229	253	V
4	* 2.484	35.54	RMS	32.3	-22.7	0	45.14	54	-8.86	-	-	229	253	V

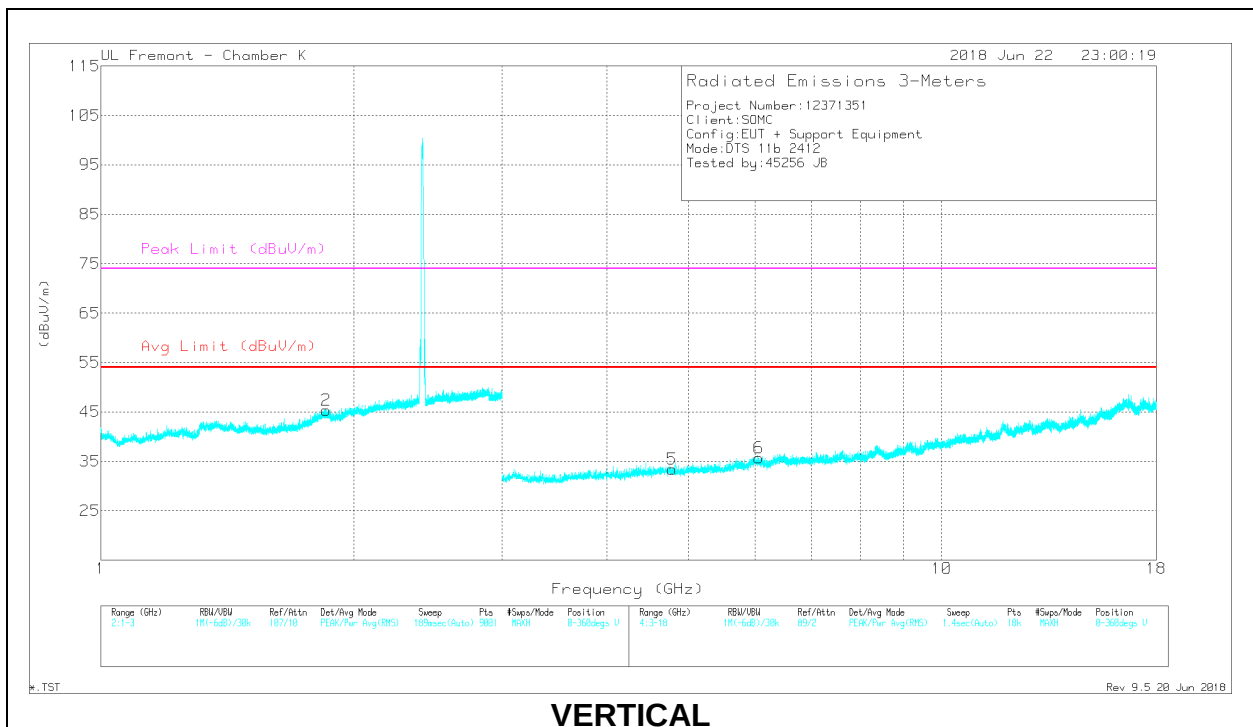
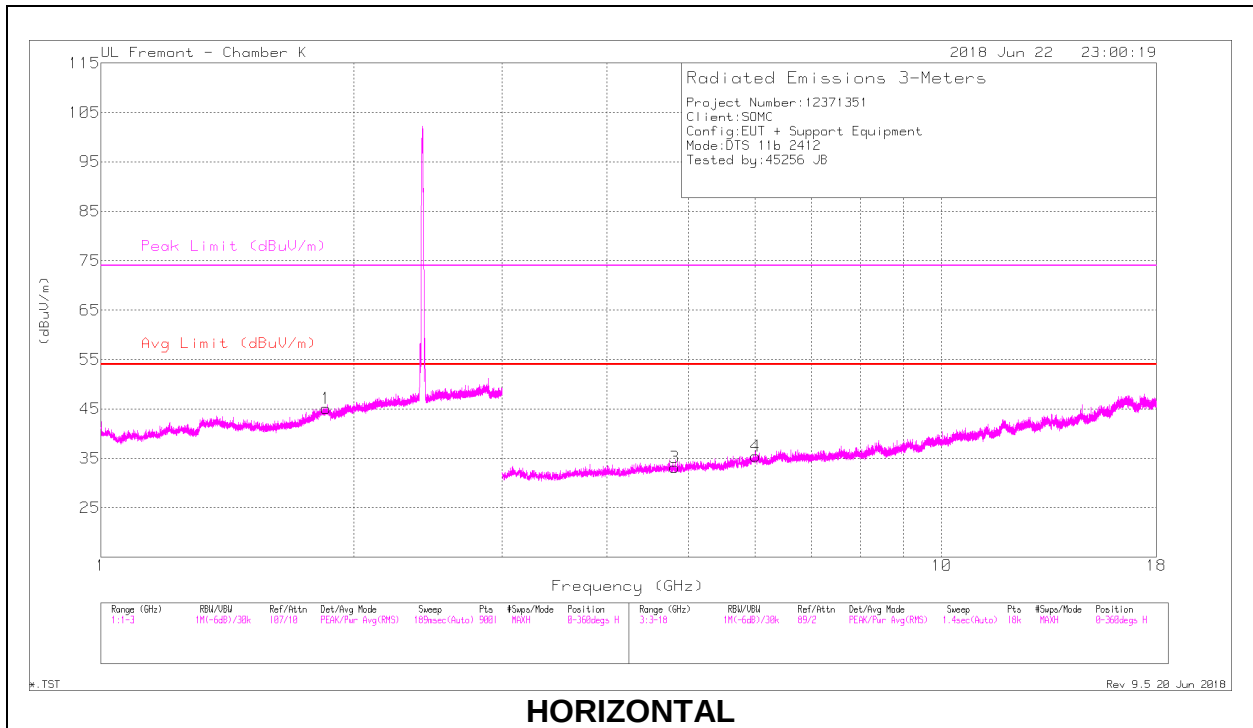
* - indicates frequency in CFR47 Pt 15 Restricted Band

Pk - Peak detector

RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL, CH 1 RESULTS



RADIATED EMISSIONS

Radiated Emissions

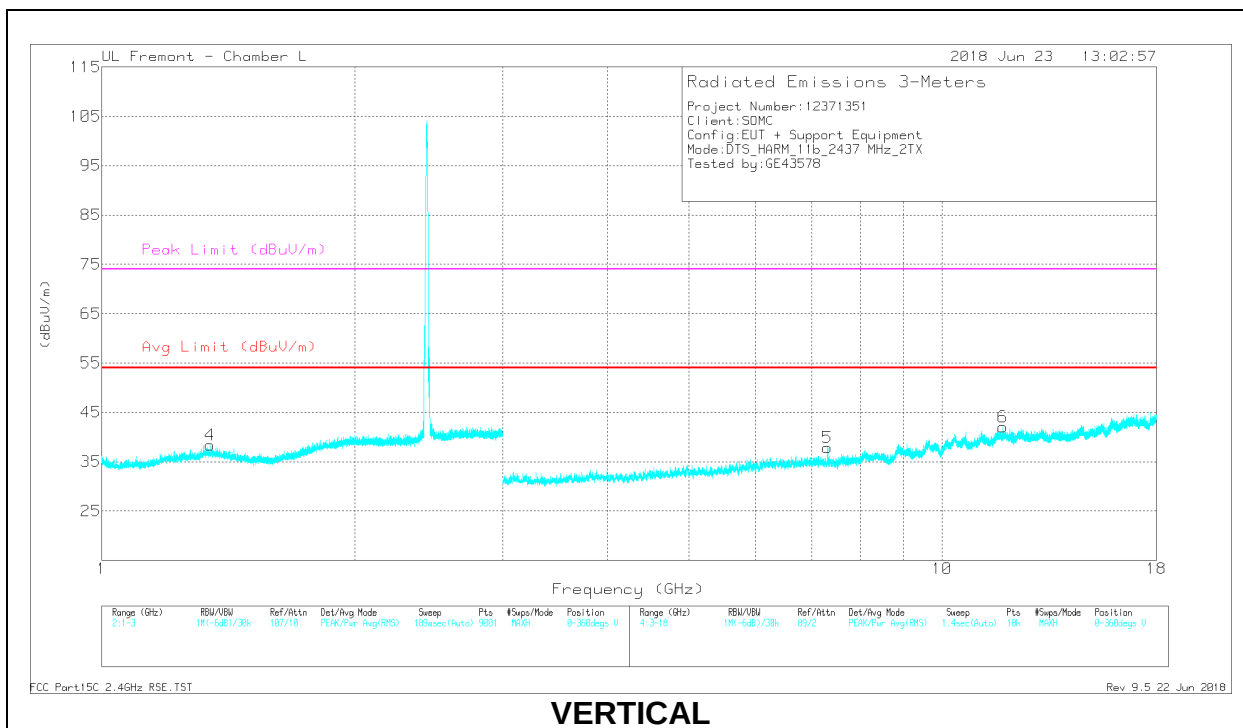
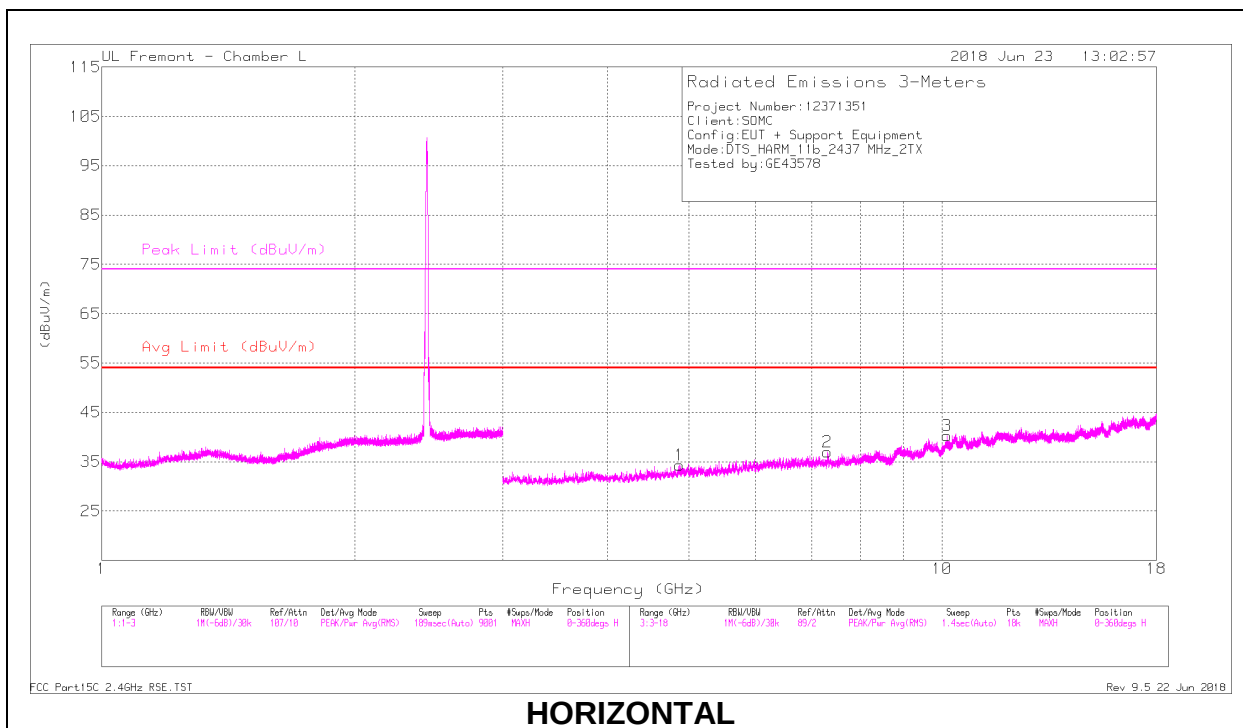
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.855	30.88	PK2	30.4	-9	0	52.28	-	-	-	-	87	116	H
2	1.853	29.86	PK2	30.4	-9	0	51.26	-	-	-	-	23	367	V
3	* 4.812	37.84	PK2	34.2	-31	0	41.04	-	-	74	-32.96	135	161	H
	* 4.812	28.6	MAv1	34.2	-31	0	31.8	54	-22.2	-	-	135	161	H
4	6.01	36.83	PK2	35.2	-28.1	0	43.93	-	-	-	-	352	152	H
5	* 4.781	37.31	PK2	34.1	-30.7	0	40.71	-	-	74	-33.29	128	389	V
	* 4.781	27.34	MAv1	34.1	-30.7	0	30.74	54	-23.26	-	-	128	389	V
6	6.055	35.47	PK2	35.3	-27.7	0	43.07	-	-	-	-	164	118	V

* - indicates frequency in CFR47 Pt 15 Restricted Band

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

MID CHANNEL, CH 6 RESULTS



RADIATED EMISSIONS

Radiated Emissions

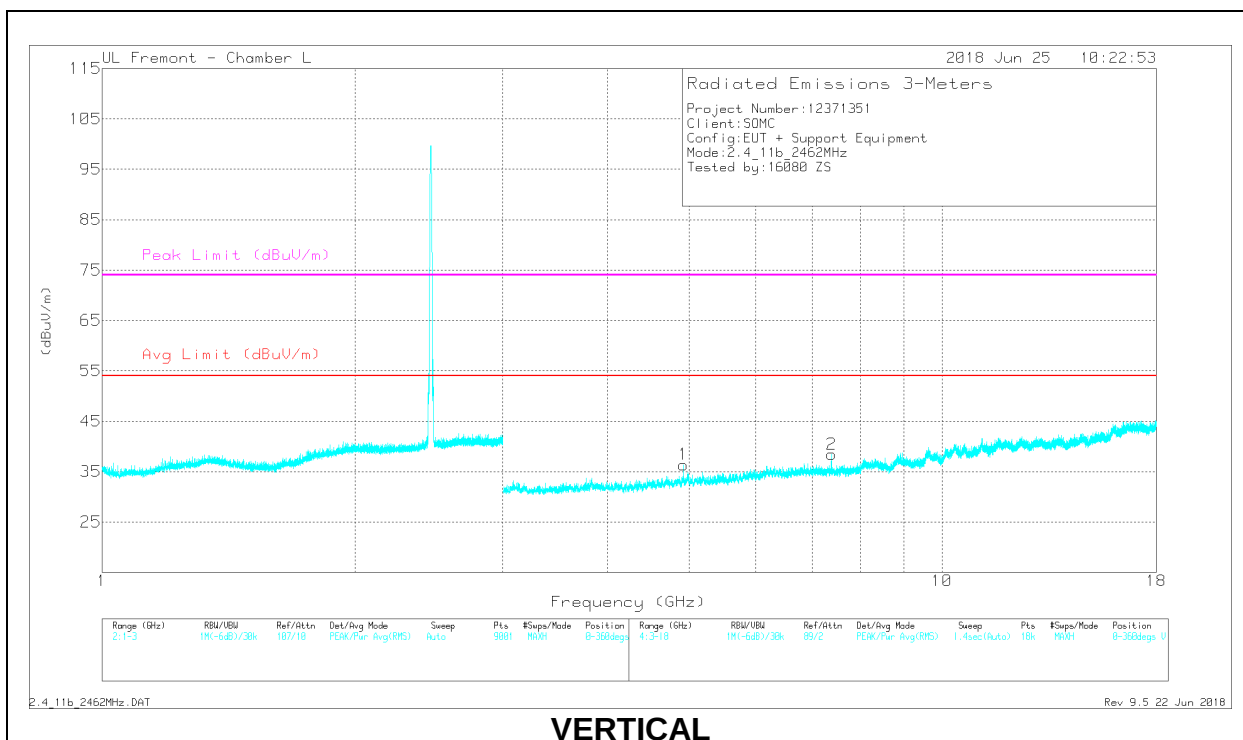
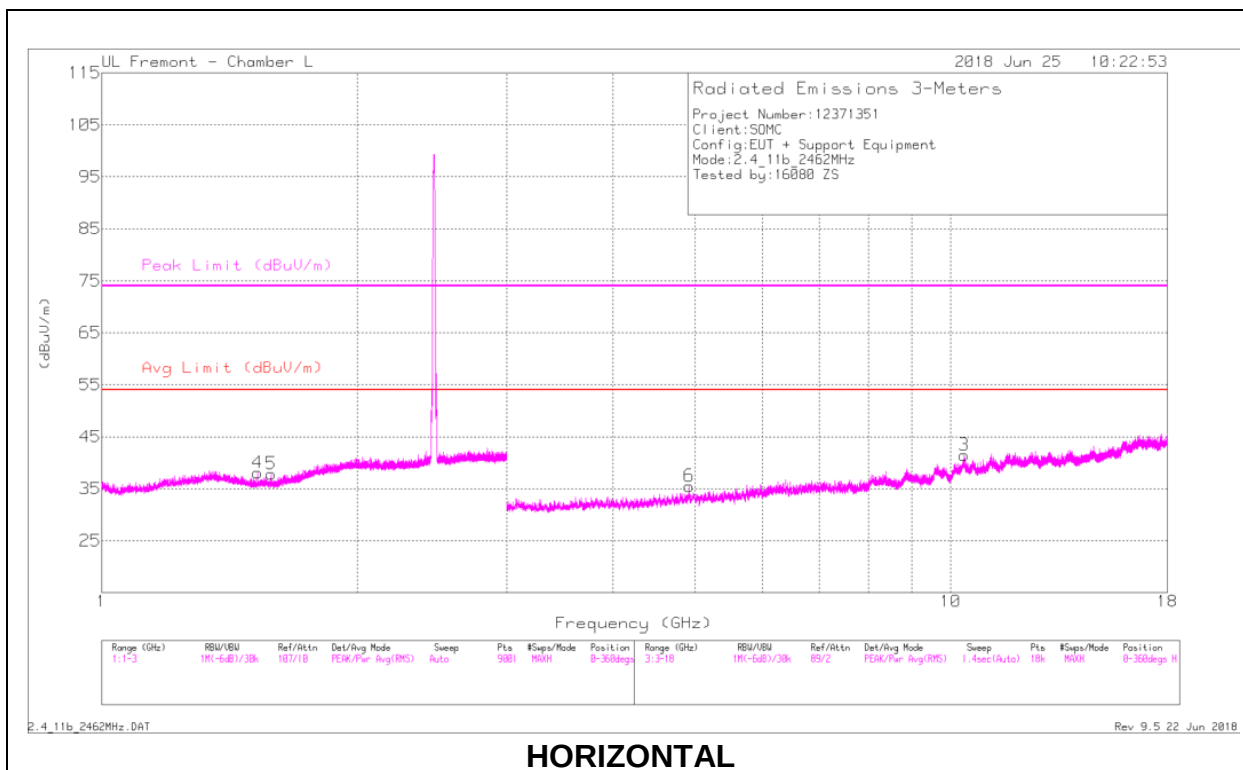
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF EMC4294 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	* 1.344	40.36	PK2	29.5	-24.8	0	45.06	-	-	74	-28.94	56	100	V
	* 1.347	30.85	MAv1	29.5	-24.8	0	35.55	54	-18.45	-	-	56	100	V
1	* 4.874	36.12	PK2	34.2	-29.1	0	41.22	-	-	74	-32.78	258	115	H
	* 4.874	26.23	MAv1	34.2	-29.1	0	31.33	54	-22.67	-	-	258	115	H
2	* 7.311	35.61	PK2	35.7	-25.2	0	46.11	-	-	74	-27.89	199	157	H
	* 7.31	27.01	MAv1	35.7	-25.2	0	37.51	54	-16.49	-	-	199	157	H
3	10.138	28.82	PK2	37.3	-19.5	0	46.62	-	-	-	-	358	100	H
5	* 11.807	29.29	PK2	38.6	-20.7	0	47.19	-	-	74	-26.81	105	298	V
	* 11.809	20.04	MAv1	38.6	-20.7	0	37.94	54	-16.06	-	-	105	298	V
6	* 7.308	35.08	PK2	35.7	-25.2	0	45.58	-	-	74	-28.42	128	294	V
	* 7.31	26.71	MAv1	35.7	-25.2	0	37.21	54	-16.79	-	-	128	294	V

* - indicates frequency in CFR47 Pt 15 Restricted Band

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

HIGH CHANNEL, CH 11 RESULTS



RADIATED EMISSIONS

Radiated Emissions

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF EMC4294 (dB/m)	Amp/Cb/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	* 1.524	40.1	PK2	28.1	-24.4	43.8	-	-	74	-30.2	167	220	H
	* 1.525	30.34	MAv1	28.1	-24.4	34.04	54	-19.96	-	-	167	220	H
5	* 1.584	40.41	PK2	28	-24.3	44.11	-	-	74	-29.89	166	353	H
	* 1.585	29.93	MAv1	28	-24.3	33.63	54	-20.37	-	-	166	353	H
3	10.369	28.58	PK2	37.5	-19.6	46.48	-	-	-	-	256	115	H
6	* 4.923	36.16	PK2	34.2	-27.8	42.56	-	-	74	-31.44	288	277	H
	* 4.924	27.98	MAv1	34.2	-27.9	34.28	54	-19.72	-	-	288	277	H
1	* 4.924	35.23	PK2	34.2	-27.9	41.53	-	-	74	-32.47	74	172	V
	* 4.924	27.57	MAv1	34.2	-27.9	33.87	54	-20.13	-	-	74	172	V
2	* 7.385	33.37	PK2	35.7	-24.9	44.17	-	-	74	-29.83	48	227	V
	* 7.387	25.96	MAv1	35.7	-24.9	36.76	54	-17.24	-	-	48	227	V

* - indicates frequency in CFR47 Pt 15 Restricted Band

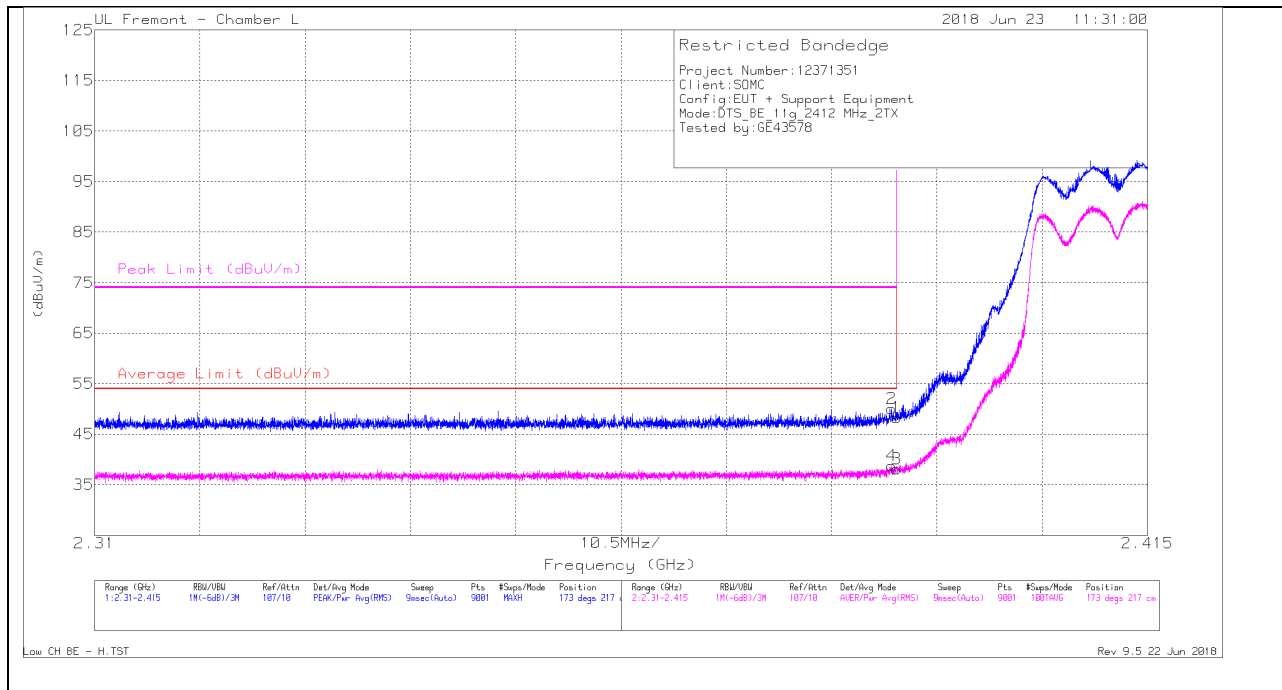
PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

9.1.2. TX ABOVE 1 GHz 802.11g MODE IN THE 2.4 GHz BAND

BANDEDGE (LOW CHANNEL, CH 1)

HORIZONTAL RESULT



Trace Markers

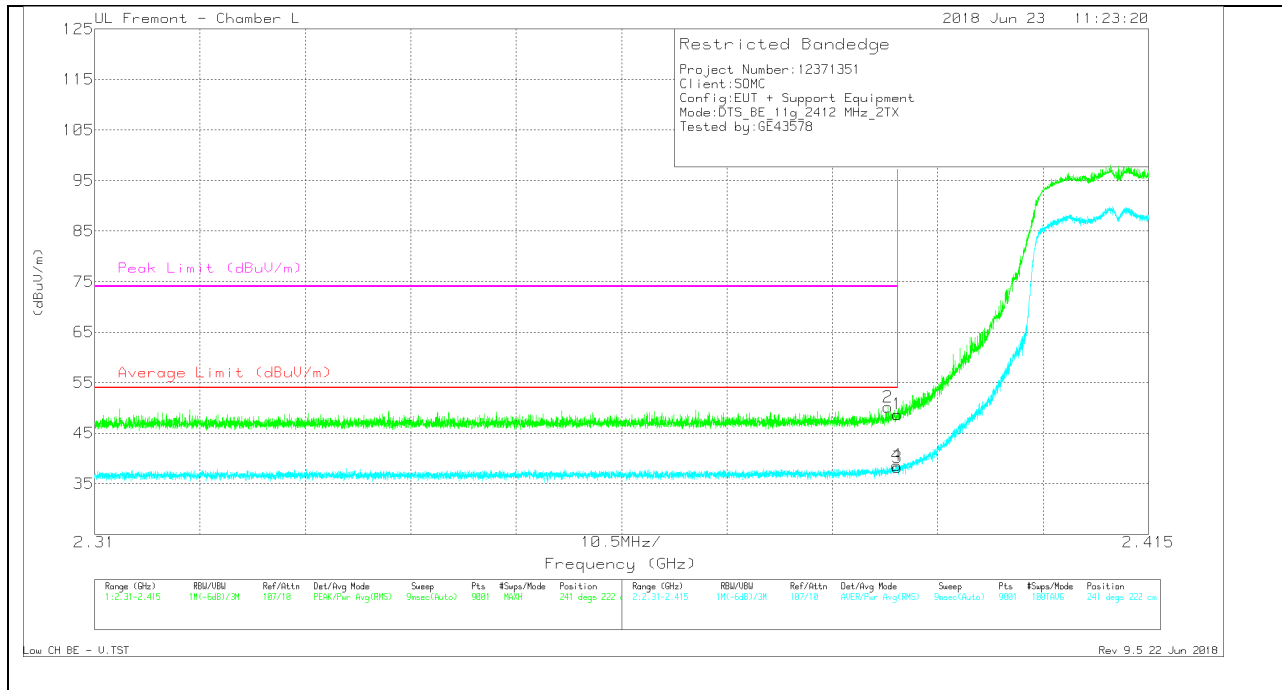
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF EMC4294 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	39.45	Pk	31.8	-22.9	0	48.35	-	-	74	-25.65	173	217	H
2	* 2.389	41.14	Pk	31.8	-22.9	0	50.04	-	-	74	-23.96	173	217	H
3	* 2.39	29.17	RMS	31.8	-22.9	0	38.07	54	-15.93	-	-	173	217	H
4	* 2.389	29.81	RMS	31.8	-22.9	0	38.71	54	-15.29	-	-	173	217	H

* - indicates frequency in CFR47 Pt 15 Restricted Band

Pk - Peak detector

RMS - RMS detection

VERTICAL RESULT



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF EMC4294 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	39.84	Pk	31.8	-22.9	0	48.74	-	-	74	-25.26	241	222	V
2	* 2.389	41.22	Pk	31.8	-22.9	0	50.12	-	-	74	-23.88	241	222	V
3	* 2.39	29.37	RMS	31.8	-22.9	0	38.27	54	-15.73	-	-	241	222	V
4	* 2.39	29.78	RMS	31.8	-22.9	0	38.68	54	-15.32	-	-	241	222	V

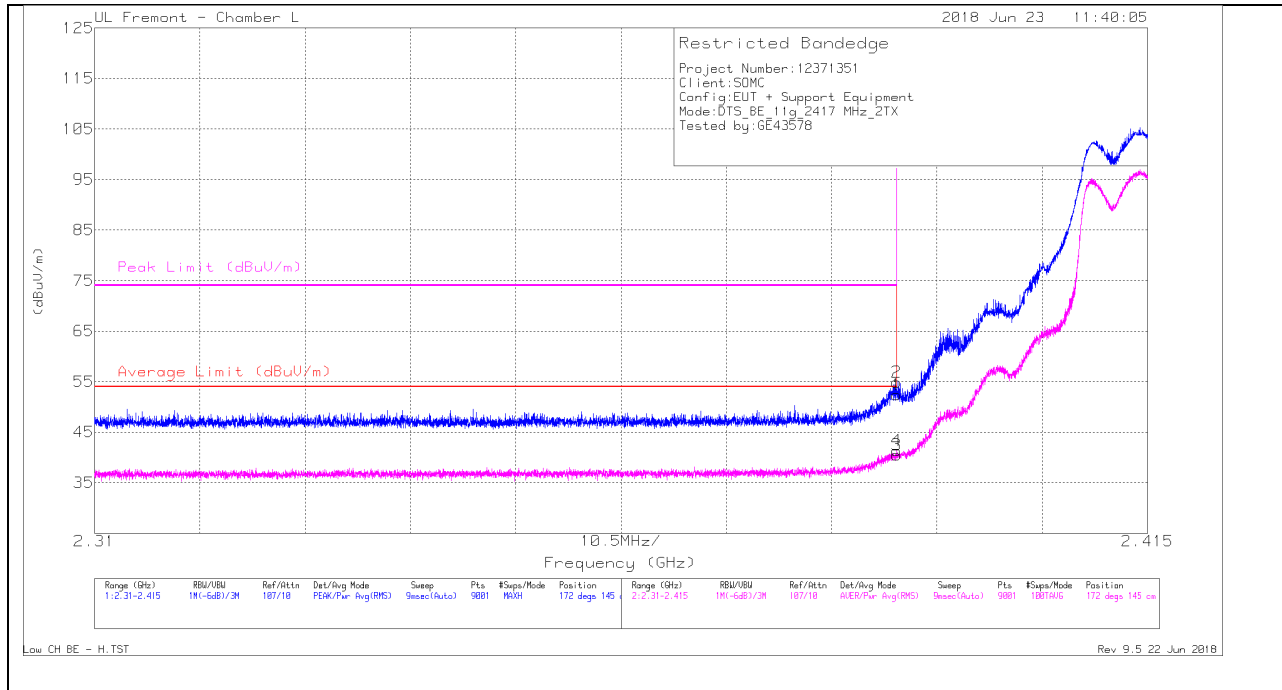
* - indicates frequency in CFR47 Pt 15 Restricted Band

Pk - Peak detector

RMS - RMS detection

BANDEDGE (LOW CHANNEL, CH 2)

HORIZONTAL RESULT



Trace Markers

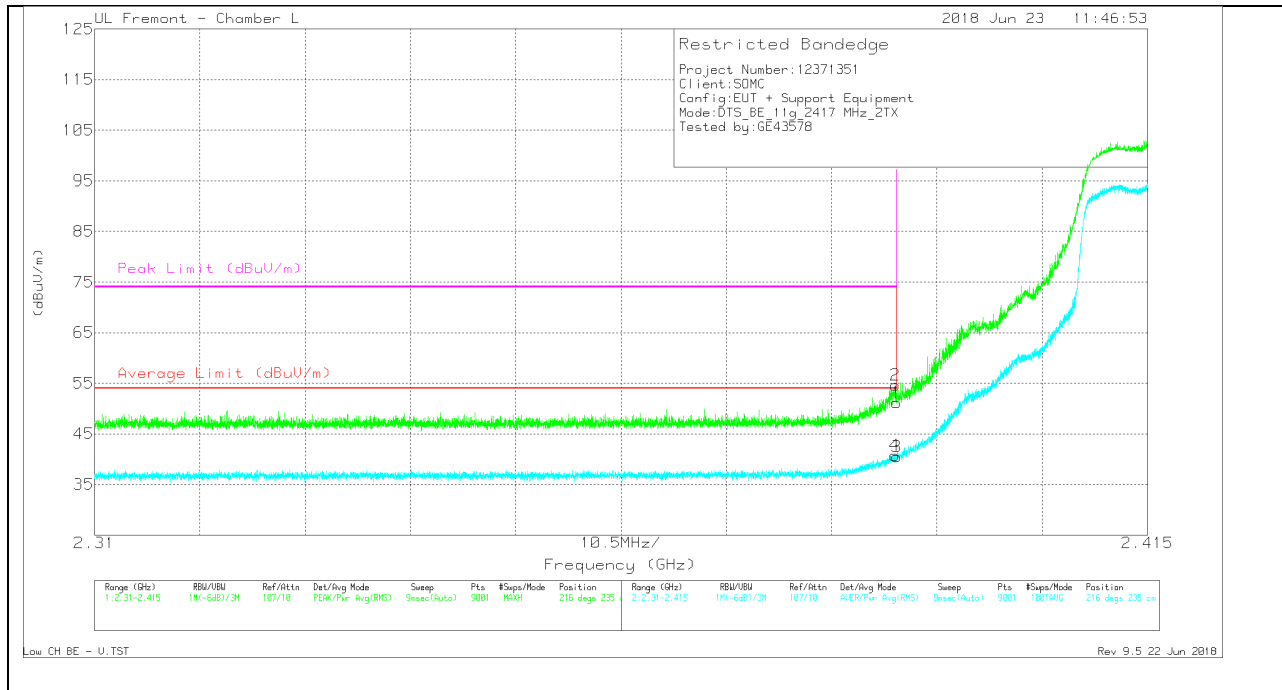
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF EMC4294 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	43.45	Pk	31.8	-22.9	0	52.35	-	-	74	-21.65	172	145	H
2	* 2.39	46	Pk	31.8	-22.9	0	54.9	-	-	74	-19.1	172	145	H
3	* 2.39	31.56	RMS	31.8	-22.9	0	40.46	54	-13.54	-	-	172	145	H
4	* 2.39	32.41	RMS	31.8	-22.9	0	41.31	54	-12.69	-	-	172	145	H

* - indicates frequency in CFR47 Pt 15 Restricted Band

Pk - Peak detector

RMS - RMS detection

VERTICAL RESULT



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF EMC4294 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	42.3	Pk	31.8	-22.9	0	51.2	-	-	74	-22.8	216	235	V
2	* 2.39	45.78	Pk	31.8	-22.9	0	54.68	-	-	74	-19.32	216	235	V
3	* 2.39	31.59	RMS	31.8	-22.9	0	40.49	54	-13.51	-	-	216	235	V
4	* 2.39	31.86	RMS	31.8	-22.9	0	40.76	54	-13.24	-	-	216	235	V

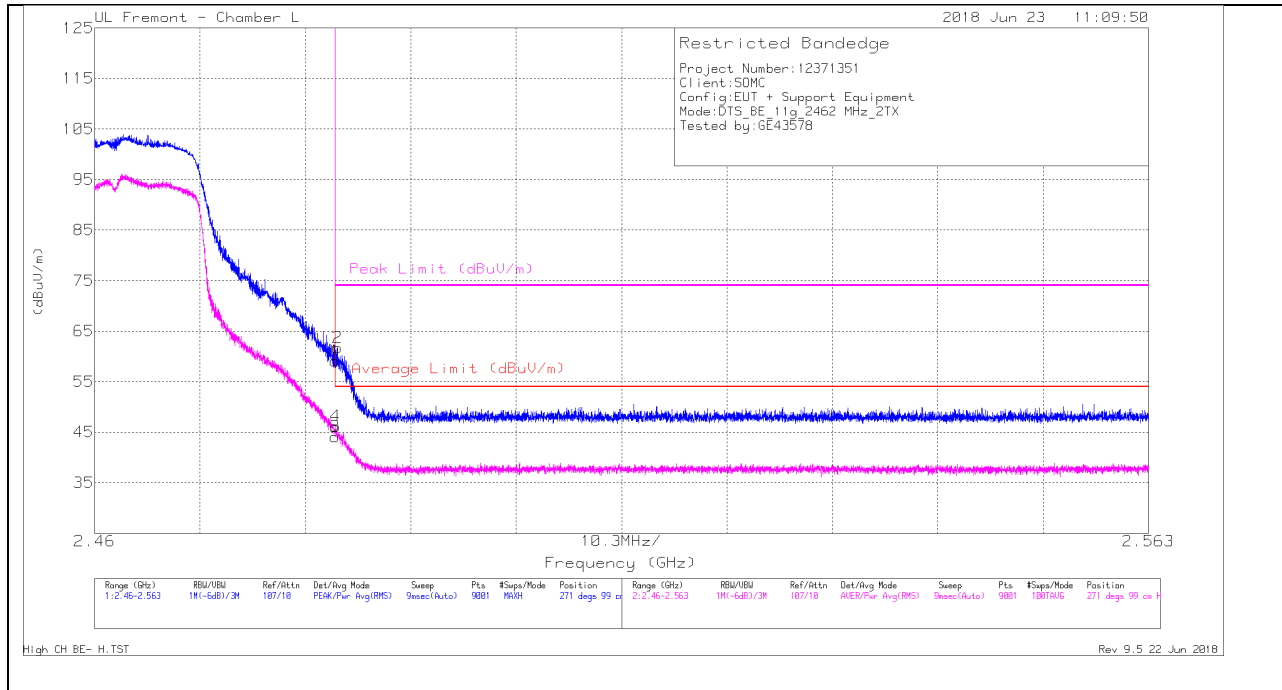
* - indicates frequency in CFR47 Pt 15 Restricted Band

Pk - Peak detector

RMS - RMS detection

BANDEDGE (HIGH CHANNEL, CH 11)

HORIZONTAL RESULT



Trace Markers

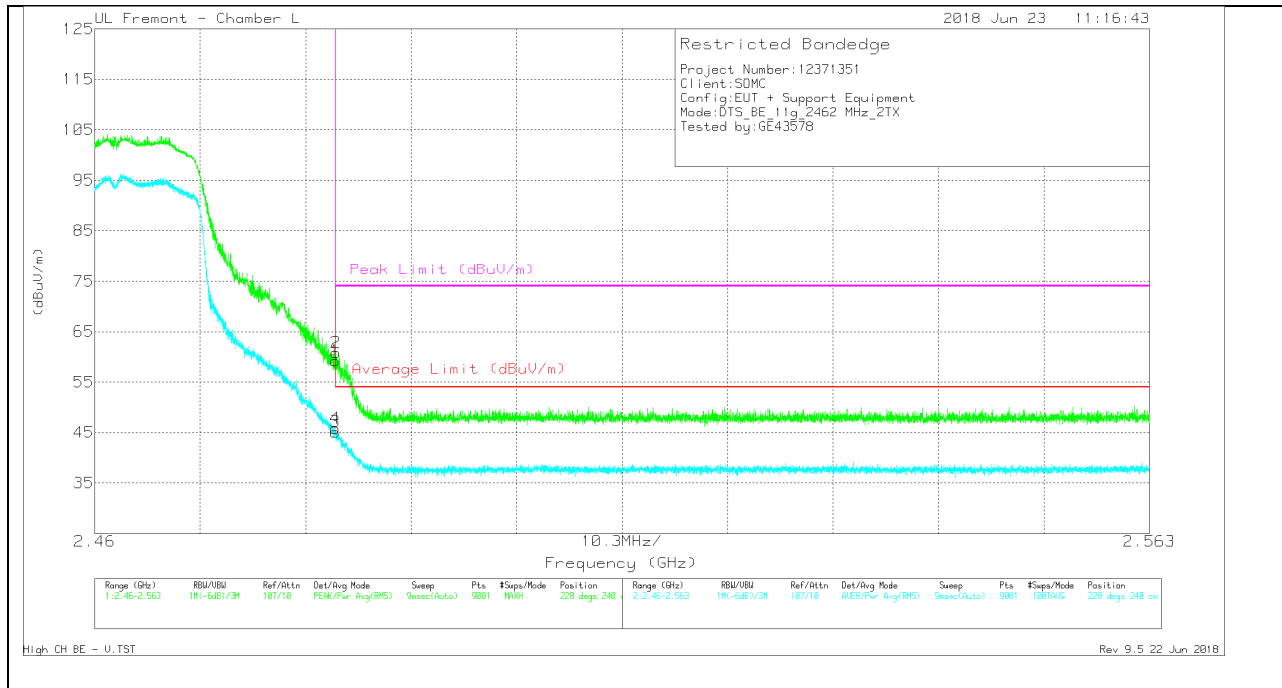
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF EMC4294 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	49.51	Pk	32.3	-22.7	0	59.11	-	-	74	-14.89	271	99	H
2	* 2.484	52.17	Pk	32.3	-22.7	0	61.77	-	-	74	-12.23	271	99	H
3	* 2.484	34.51	RMS	32.3	-22.7	0	44.11	54	-9.89	-	-	271	99	H
4	* 2.484	36.57	RMS	32.3	-22.7	0	46.17	54	-7.83	-	-	271	99	H

* - indicates frequency in CFR47 Pt 15 Restricted Band

Pk - Peak detector

RMS - RMS detection

VERTICAL RESULT



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF EMC4294 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	49.67	Pk	32.3	-22.7	0	59.27	-	-	74	-14.73	228	240	V
2	* 2.484	51.3	Pk	32.3	-22.7	0	60.9	-	-	74	-13.1	228	240	V
3	* 2.484	35.54	RMS	32.3	-22.7	0	45.14	54	-8.86	-	-	228	240	V
4	* 2.484	36.18	RMS	32.3	-22.7	0	45.78	54	-8.22	-	-	228	240	V

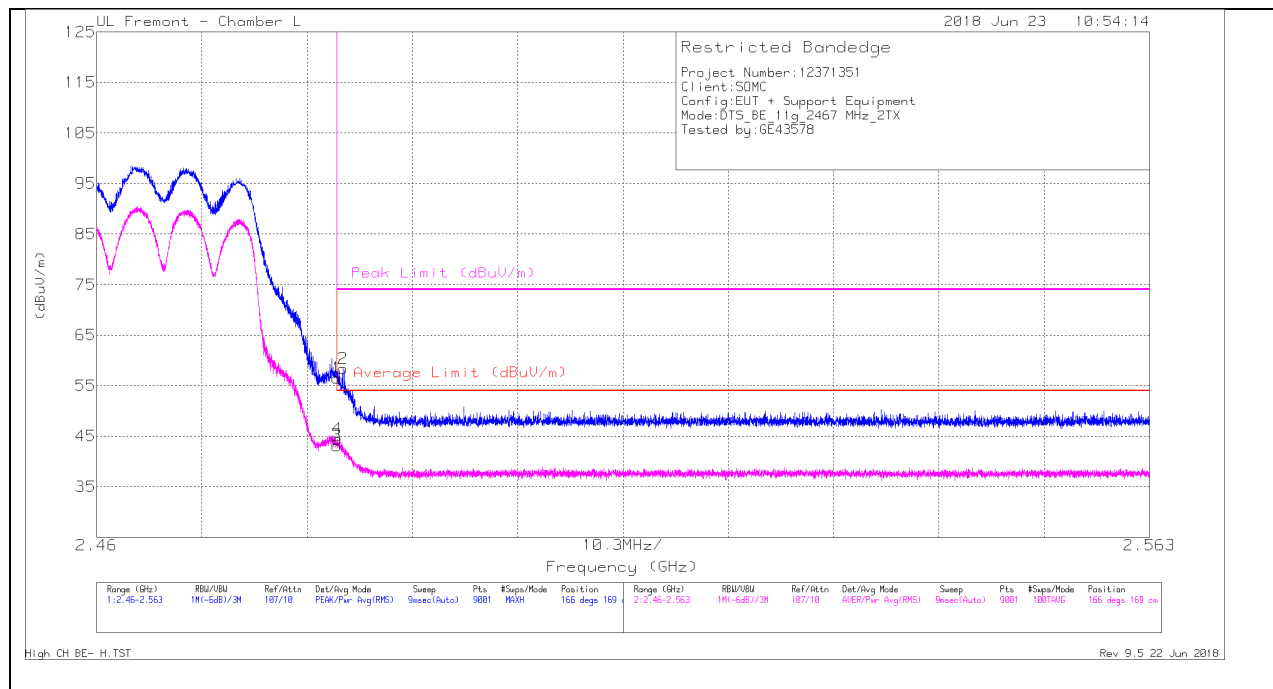
* - indicates frequency in CFR47 Pt 15 Restricted Band

Pk - Peak detector

RMS - RMS detection

BANDEDGE (HIGH CHANNEL, CH 12)

HORIZONTAL RESULT



Trace Markers

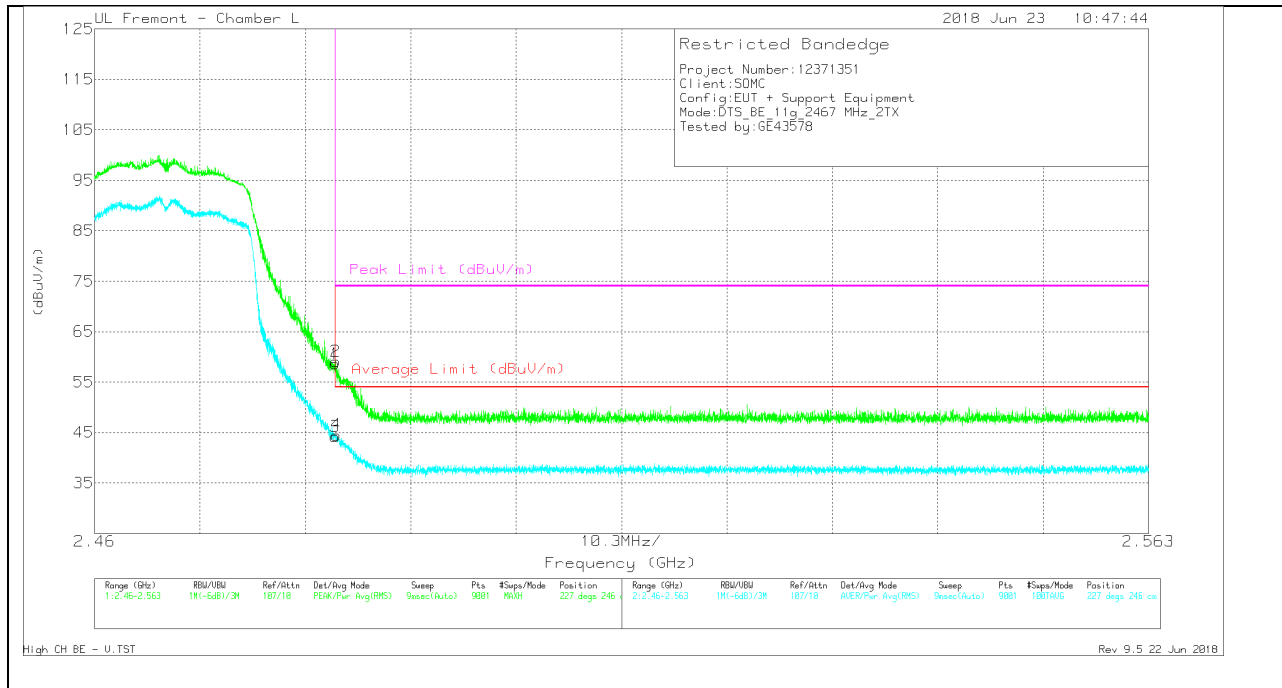
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF EMC4294 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	46.86	Pk	32.3	-22.7	0	56.46	-	-	74	-17.54	166	169	H
2	* 2.484	48.71	Pk	32.3	-22.7	0	58.31	-	-	74	-15.69	166	169	H
3	* 2.484	33.55	RMS	32.3	-22.7	0	43.15	54	-10.85	-	-	166	169	H
4	* 2.484	34.82	RMS	32.3	-22.7	0	44.42	54	-9.58	-	-	166	169	H

* - indicates frequency in CFR47 Pt 15 Restricted Band

Pk - Peak detector

RMS - RMS detection

VERTICAL RESULT



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF EMC4294 (dB/m)	Amp/Cbl/Fitr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	48.96	Pk	32.3	-22.7	0	58.56	-	-	74	-15.44	227	246	V
2	* 2.484	49.48	Pk	32.3	-22.7	0	59.08	-	-	74	-14.92	227	246	V
3	* 2.484	34.59	RMS	32.3	-22.7	0	44.19	54	-9.81	-	-	227	246	V
4	* 2.484	34.92	RMS	32.3	-22.7	0	44.52	54	-9.48	-	-	227	246	V

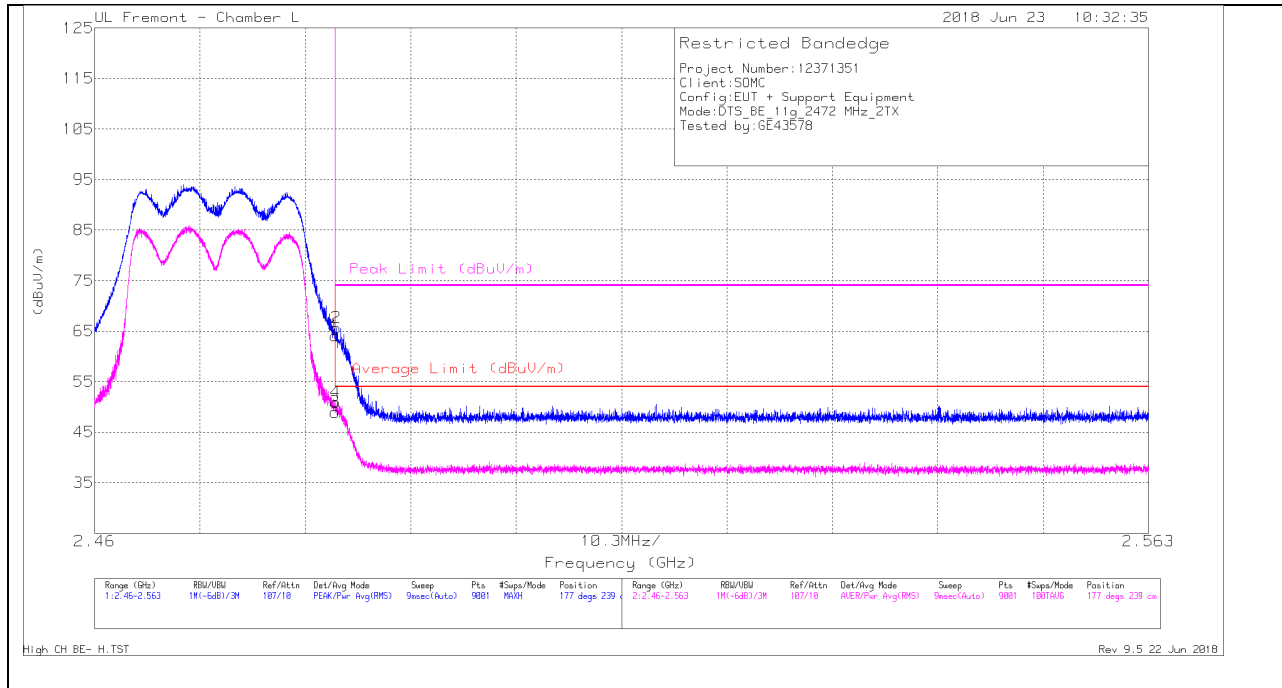
* - indicates frequency in CFR47 Pt 15 Restricted Band

Pk - Peak detector

RMS - RMS detection

BANDEGE (HIGH CHANNEL, CH 13)

HORIZONTAL RESULT



Trace Markers

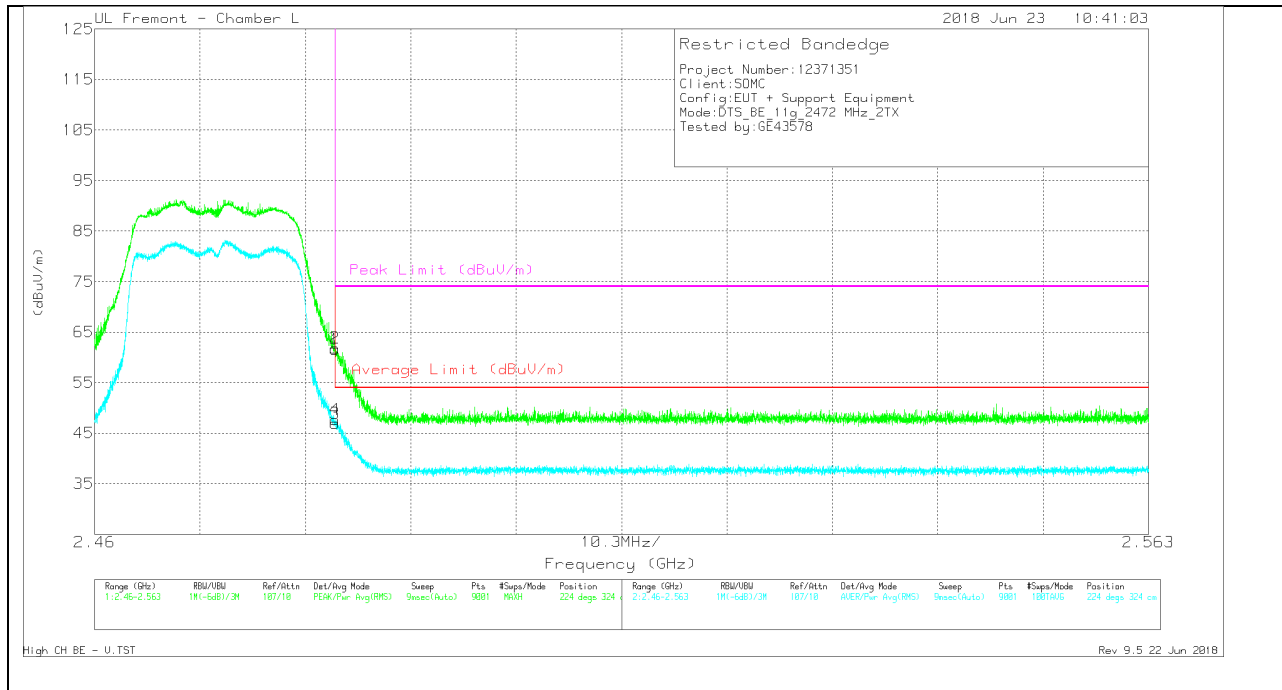
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF EMC4294 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	54.5	Pk	32.3	-22.7	0	64.1	-	-	74	-9.9	177	239	H
2	* 2.484	56.04	Pk	32.3	-22.7	0	65.64	-	-	74	-8.36	177	239	H
3	* 2.484	39.39	RMS	32.3	-22.7	0	48.99	54	-5.01	-	-	177	239	H
4	* 2.484	41.3	RMS	32.3	-22.7	0	50.9	54	-3.1	-	-	177	239	H

* - indicates frequency in CFR47 Pt 15 Restricted Band

Pk - Peak detector

RMS - RMS detection

VERTICAL RESULT



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF EMC4294 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	51.98	Pk	32.3	-22.7	0	61.58	-	-	74	-12.42	224	324	V
2	* 2.484	52.21	Pk	32.3	-22.7	0	61.81	-	-	74	-12.19	224	324	V
3	* 2.484	37.39	RMS	32.3	-22.7	0	46.99	54	-7.01	-	-	224	324	V
4	* 2.484	38.09	RMS	32.3	-22.7	0	47.69	54	-6.31	-	-	224	324	V

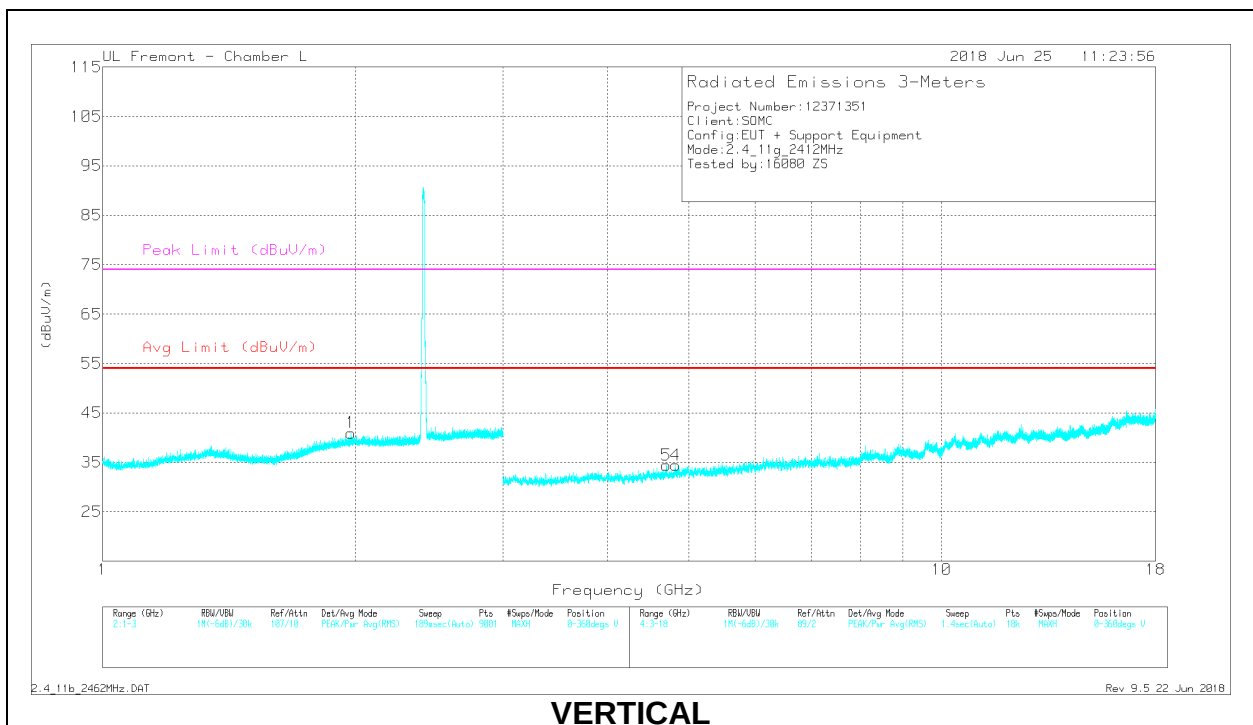
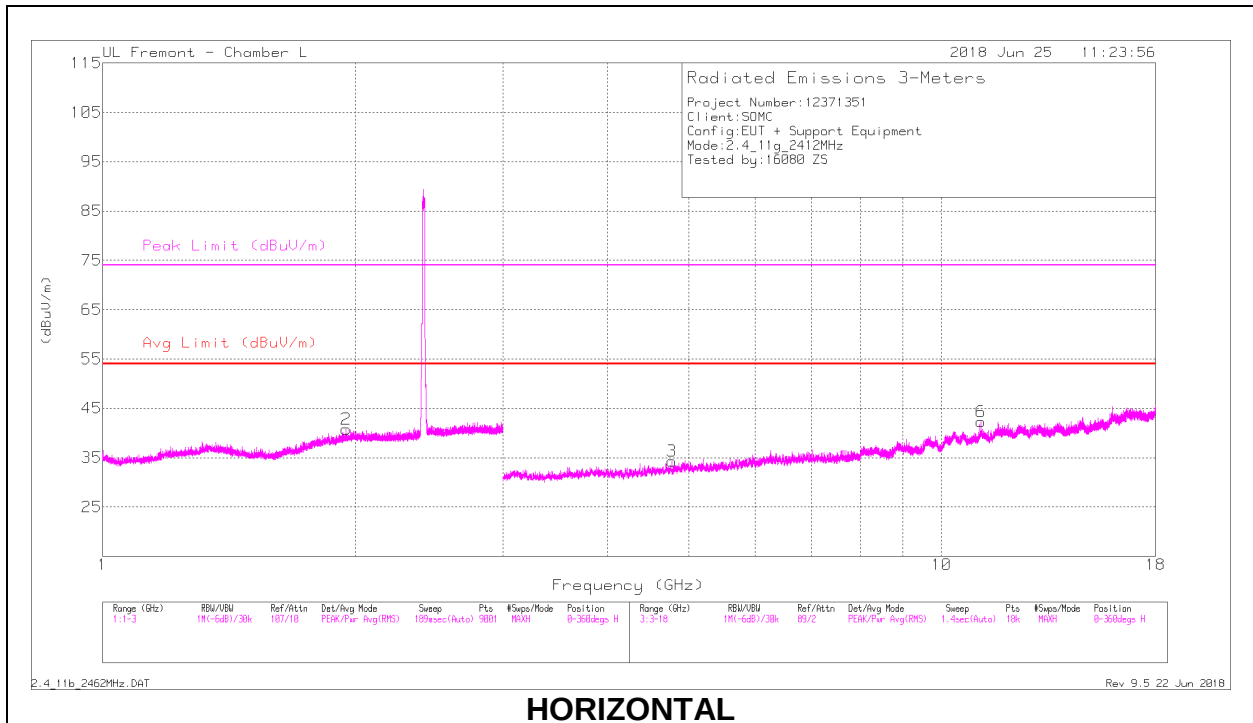
* - indicates frequency in CFR47 Pt 15 Restricted Band

Pk - Peak detector

RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL, CH 1 RESULTS



RADIATED EMISSIONS

Radiated Emissions

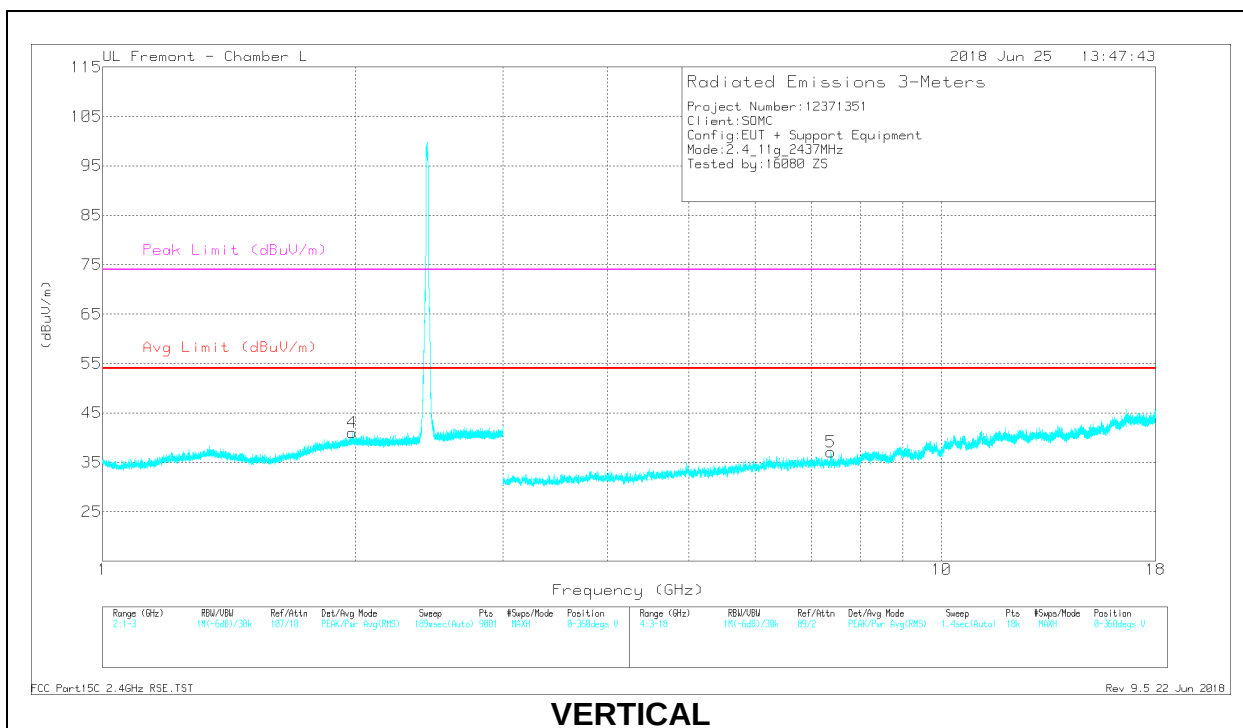
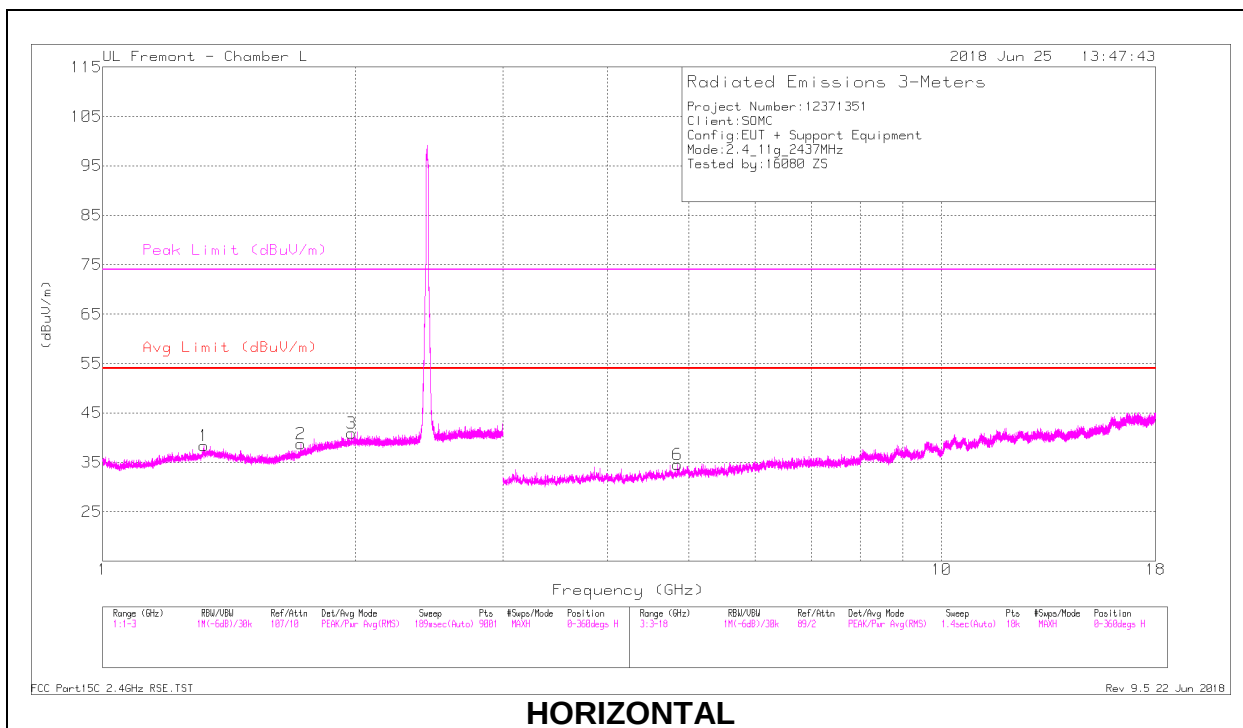
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF EMC4294 (dB/m)	Amp/Cb/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	1.952	32.82	PK2	31.5	-23.6	40.72	-	-	-	-	0-360	202	H
1	1.978	32.97	PK2	31.6	-23.6	40.97	-	-	-	-	0-360	202	V
3	* 4.776	34.98	PK2	34.1	-29	40.08	-	-	74	-33.92	6	117	H
	* 4.774	26.18	MAv1	34.1	-29.1	31.18	54	-22.82	-	-	6	117	H
6	* 11.147	28.9	PK2	37.9	-18.8	48	-	-	74	-26	200	173	H
	* 11.147	19.5	MAv1	37.9	-18.8	38.6	54	-15.4	-	-	200	173	H
4	* 4.825	35.03	PK2	34.2	-29	40.23	-	-	74	-33.77	164	261	V
	* 4.823	25.48	MAv1	34.2	-29	30.68	54	-23.32	-	-	164	261	V
5	* 4.697	35.26	PK2	34	-28.5	40.76	-	-	74	-33.24	188	392	V
	* 4.696	26.39	MAv1	34	-28.5	31.89	54	-22.11	-	-	188	392	V

* - indicates frequency in CFR47 Pt 15 Restricted Band

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

MID CHANNEL, CH 6 RESULTS



RADIATED EMISSIONS

Radiated Emissions

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF EMC4294 (dB/m)	Amp/Cb/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.321	39.2	PK2	29.2	-24.8	43.6	-	-	74	-30.4	329	334	H
	* 1.32	30.91	MAv1	29.2	-24.8	35.31	54	-18.69	-	-	329	334	H
2	* 1.719	39.46	PK2	29.2	-24	44.66	-	-	74	-29.34	209	301	H
	* 1.722	29.86	MAv1	29.3	-24	35.16	54	-18.84	-	-	209	301	H
3	1.98	32.87	PK2	31.6	-23.6	40.87	-	-	-	-	0-360	100	H
4	1.984	33.05	PK2	31.6	-23.6	41.05	-	-	-	-	0-360	100	V
6	* 4.848	34.91	PK2	34.2	-29.1	40.01	-	-	74	-33.99	65	333	H
	* 4.846	25.66	MAv1	34.2	-29.1	30.76	54	-23.24	-	-	65	333	H
5	* 7.376	32.59	PK2	35.6	-24.8	43.39	-	-	74	-30.61	212	127	V
	* 7.377	22.48	MAv1	35.6	-24.8	33.28	54	-20.72	-	-	212	127	V

* - indicates frequency in CFR47 Pt 15 Restricted Band

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

RADIATED EMISSIONS

Radiated Emissions

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF EMC4294 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.218	40.14	PK2	28.5	-25.1	43.54	-	-	74	-30.46	177	100	H
	* 1.215	30.5	MAv1	28.5	-25.1	33.9	54	-20.1	-	-	177	100	H
2	1.435	33.86	PK2	28.6	-24.6	37.86	-	-	-	-	0-360	100	H
3	* 1.559	39.91	PK2	28.1	-24.4	43.61	-	-	74	-30.39	242	181	V
	* 1.561	30	MAv1	28.1	-24.4	33.7	54	-20.3	-	-	242	181	V
4	* 3.666	35.54	PK2	33.2	-29.7	39.04	-	-	74	-34.96	62	202	V
	* 3.667	26.72	MAv1	33.2	-29.7	30.22	54	-23.78	-	-	62	202	V
5	* 4.127	35.18	PK2	33.5	-29.1	39.58	-	-	74	-34.42	331	286	V
	* 4.124	25.7	MAv1	33.5	-29.2	30	54	-24	-	-	331	286	V
6	4.476	29.17	PK2	33.7	-28.9	33.97	-	-	-	-	0-360	202	V

* - indicates frequency in CFR47 Pt 15 Restricted Band

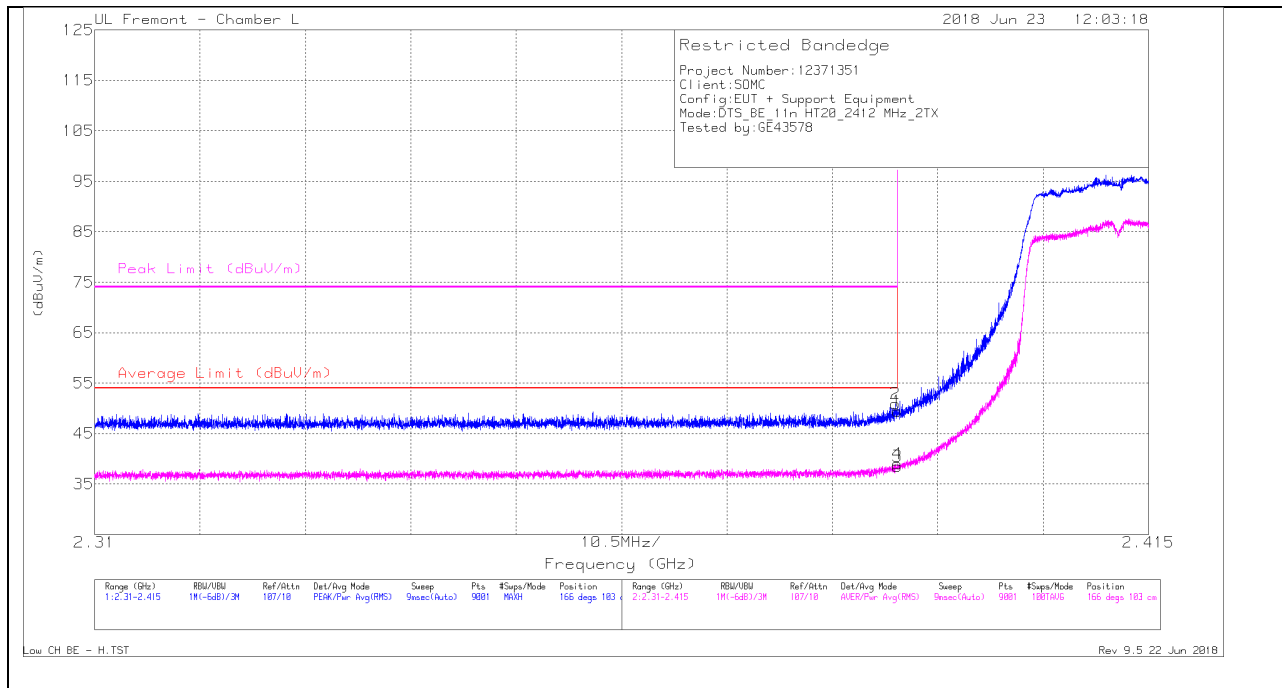
PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

9.1.3. TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 2.4 GHz BAND

BANDEDGE (LOW CHANNEL, CH 1)

HORIZONTAL RESULT



Trace Markers

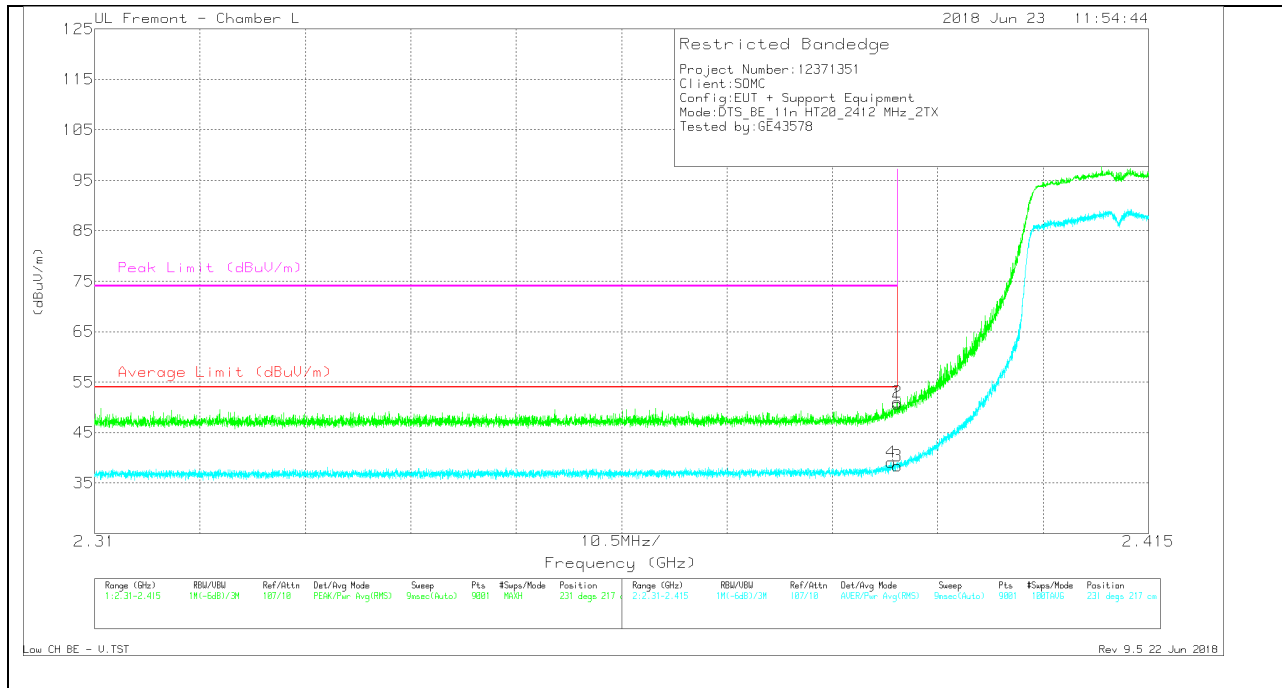
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF EMC4294 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	40.48	Pk	31.8	-22.9	0	49.38	-	-	74	-24.62	166	103	H
2	* 2.39	41.96	Pk	31.8	-22.9	0	50.86	-	-	74	-23.14	166	103	H
3	* 2.39	29.5	RMS	31.8	-22.9	.1	38.5	54	-15.5	-	-	166	103	H
4	* 2.39	29.94	RMS	31.8	-22.9	.1	38.94	54	-15.06	-	-	166	103	H

* - indicates frequency in CFR47 Pt 15 Restricted Band

Pk - Peak detector

RMS - RMS detection

VERTICAL RESULT



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF EMC4294 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	41.72	Pk	31.8	-22.9	0	50.62	-	-	74	-23.38	231	217	V
2	* 2.39	42.11	Pk	31.8	-22.9	0	51.01	-	-	74	-22.99	231	217	V
3	* 2.39	29.35	RMS	31.8	-22.9	.1	38.35	54	-15.65	-	-	231	217	V
4	* 2.389	30.07	RMS	31.8	-22.9	.1	39.07	54	-14.93	-	-	231	217	V

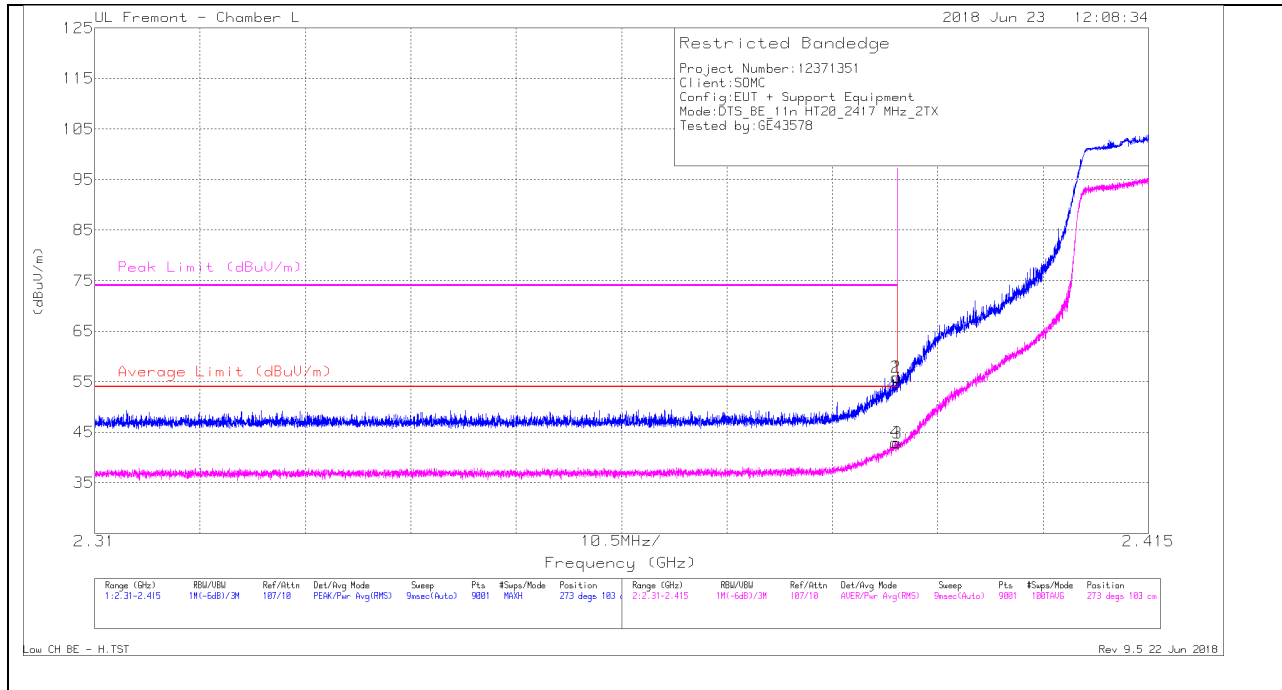
* - indicates frequency in CFR47 Pt 15 Restricted Band

Pk - Peak detector

RMS - RMS detection

BANDEGE (LOW CHANNEL, CH 2)

HORIZONTAL RESULT



Trace Markers

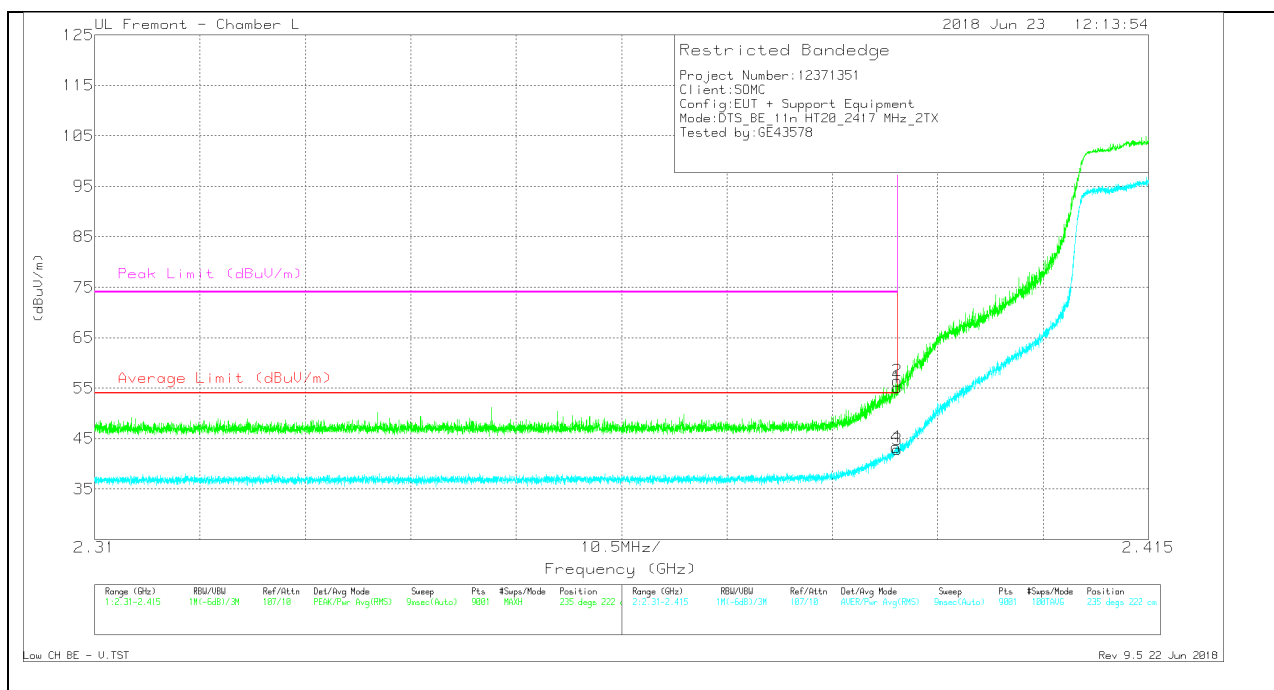
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF EMC4294 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	46.96	Pk	31.8	-22.9	0	55.86	-	-	74	-18.14	273	103	H
2	* 2.39	46.92	Pk	31.8	-22.9	0	55.82	-	-	74	-18.18	273	103	H
3	* 2.39	33.83	RMS	31.8	-22.9	.1	42.83	54	-11.17	-	-	273	103	H
4	* 2.39	34.01	RMS	31.8	-22.9	.1	43.01	54	-10.99	-	-	273	103	H

* - indicates frequency in CFR47 Pt 15 Restricted Band

Pk - Peak detector

RMS - RMS detection

VERTICAL RESULT



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF EMC4294 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	46.25	Pk	31.8	-22.9	0	55.15	-	-	74	-18.85	235	222	V
2	* 2.39	47.54	Pk	31.8	-22.9	0	56.44	-	-	74	-17.56	235	222	V
3	* 2.39	33.89	RMS	31.8	-22.9	.1	42.89	54	-11.11	-	-	235	222	V
4	* 2.39	34.28	RMS	31.8	-22.9	.1	43.28	54	-10.72	-	-	235	222	V

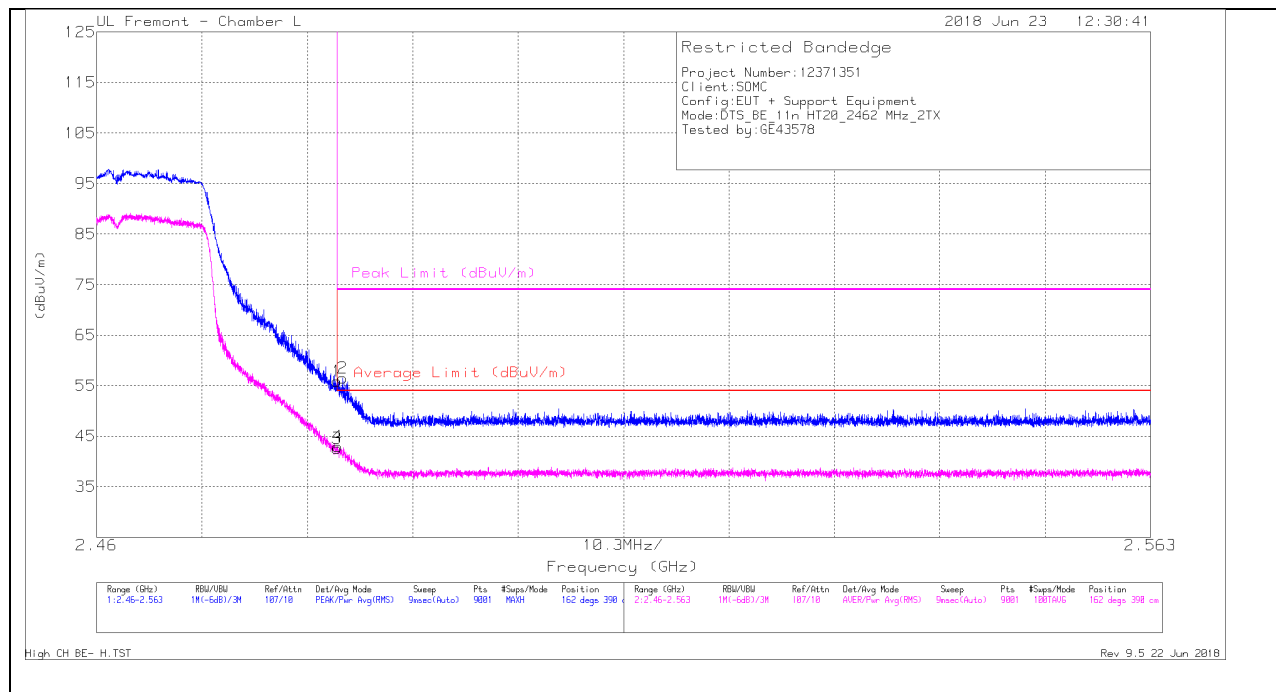
* - indicates frequency in CFR47 Pt 15 Restricted Band

Pk - Peak detector

RMS - RMS detection

BANDEGE (HIGH CHANNEL, CH 11)

HORIZONTAL RESULT



Trace Markers

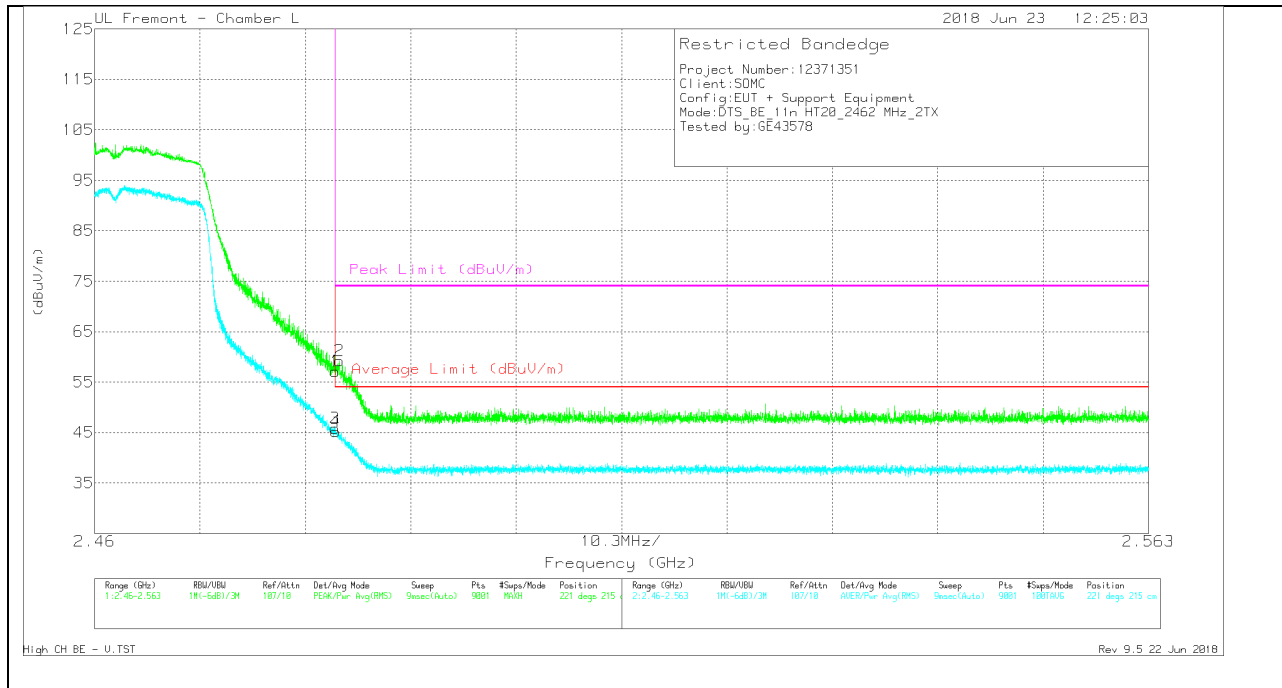
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF EMC4294 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	46.31	Pk	32.3	-22.7	0	55.91	-	-	74	-18.09	162	390	H
2	* 2.484	46.88	Pk	32.3	-22.7	0	56.48	-	-	74	-17.52	162	390	H
3	* 2.484	32.93	RMS	32.3	-22.7	.1	42.63	54	-11.37	-	-	162	390	H
4	* 2.484	33.22	RMS	32.3	-22.7	.1	42.92	54	-11.08	-	-	162	390	H

* - indicates frequency in CFR47 Pt 15 Restricted Band

Pk - Peak detector

RMS - RMS detection

VERTICAL RESULT



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF EMC4294 (dB/m)	Amp/Cbl/Fitr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	47.52	Pk	32.3	-22.7	0	57.12	-	-	74	-16.88	221	215	V
2	* 2.484	49.65	Pk	32.3	-22.7	0	59.25	-	-	74	-14.75	221	215	V
3	* 2.484	36.08	RMS	32.3	-22.7	.1	45.78	54	-8.22	-	-	221	215	V
4	* 2.484	35.5	RMS	32.3	-22.7	.1	45.2	54	-8.8	-	-	221	215	V

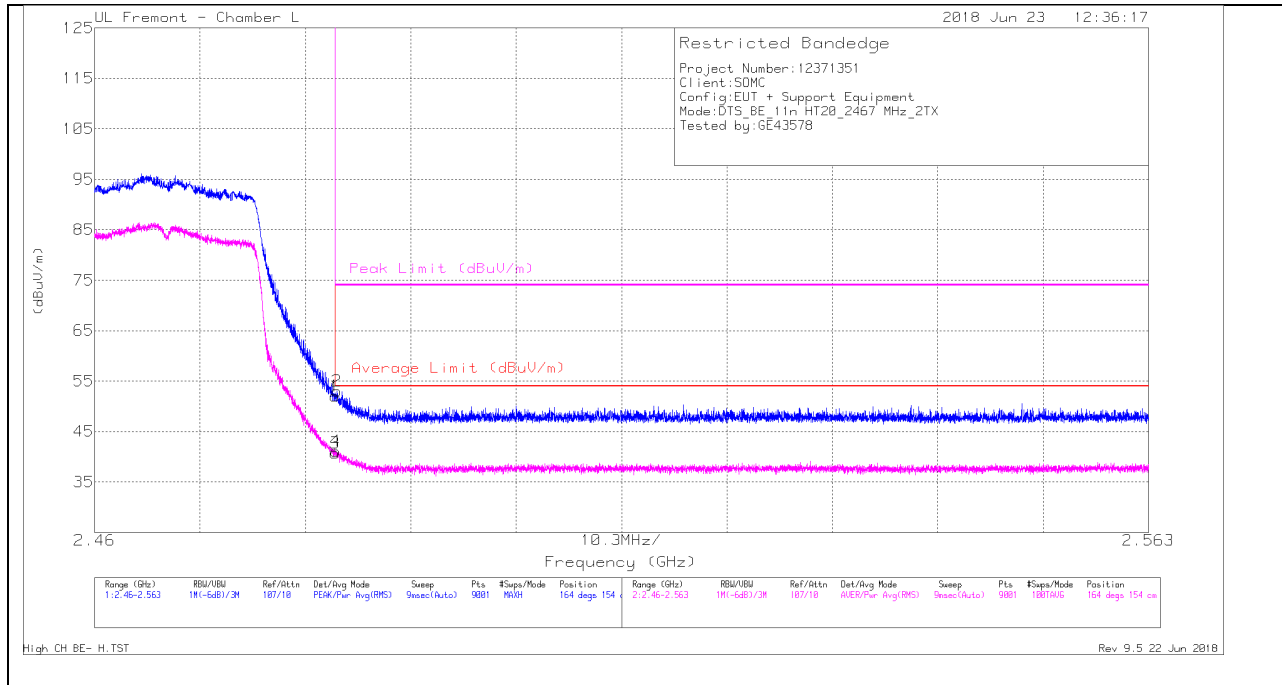
* - indicates frequency in CFR47 Pt 15 Restricted Band

Pk - Peak detector

RMS - RMS detection

BANDEDGE (HIGH CHANNEL, CH 12)

HORIZONTAL RESULT



Trace Markers

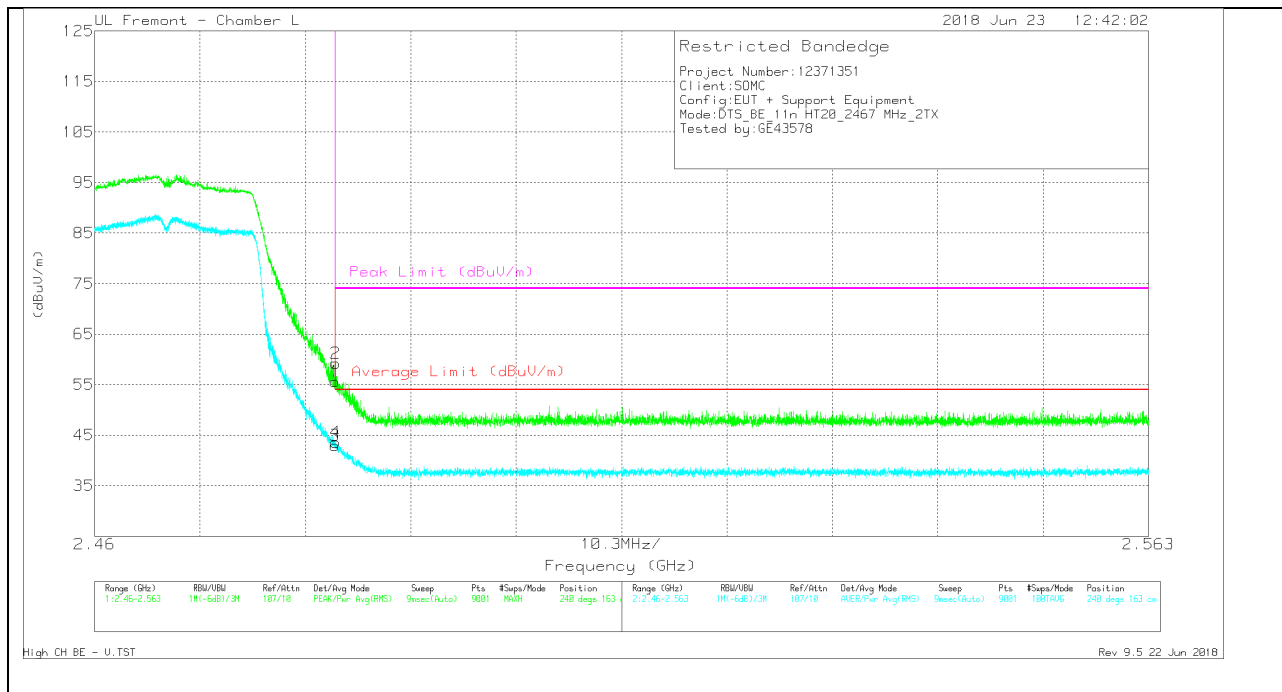
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF EMC4294 (dB/m)	Amp/Cbl/Fitr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	42.42	Pk	32.3	-22.7	0	52.02	-	-	74	-21.98	164	154	H
2	* 2.484	43.45	Pk	32.3	-22.7	0	53.05	-	-	74	-20.95	164	154	H
3	* 2.484	31.01	RMS	32.3	-22.7	.1	40.71	54	-13.29	-	-	164	154	H
4	* 2.484	31.44	RMS	32.3	-22.7	.1	41.14	54	-12.86	-	-	164	154	H

* - indicates frequency in CFR47 Pt 15 Restricted Band

Pk - Peak detector

RMS - RMS detection

VERTICAL RESULT



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF EMC4294 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	45.98	Pk	32.3	-22.7	0	55.58	-	-	74	-18.42	240	163	V
2	* 2.484	49.62	Pk	32.3	-22.7	0	59.22	-	-	74	-14.78	240	163	V
3	* 2.484	33.32	RMS	32.3	-22.7	.1	43.02	54	-10.98	-	-	240	163	V
4	* 2.484	33.9	RMS	32.3	-22.7	.1	43.6	54	-10.4	-	-	240	163	V

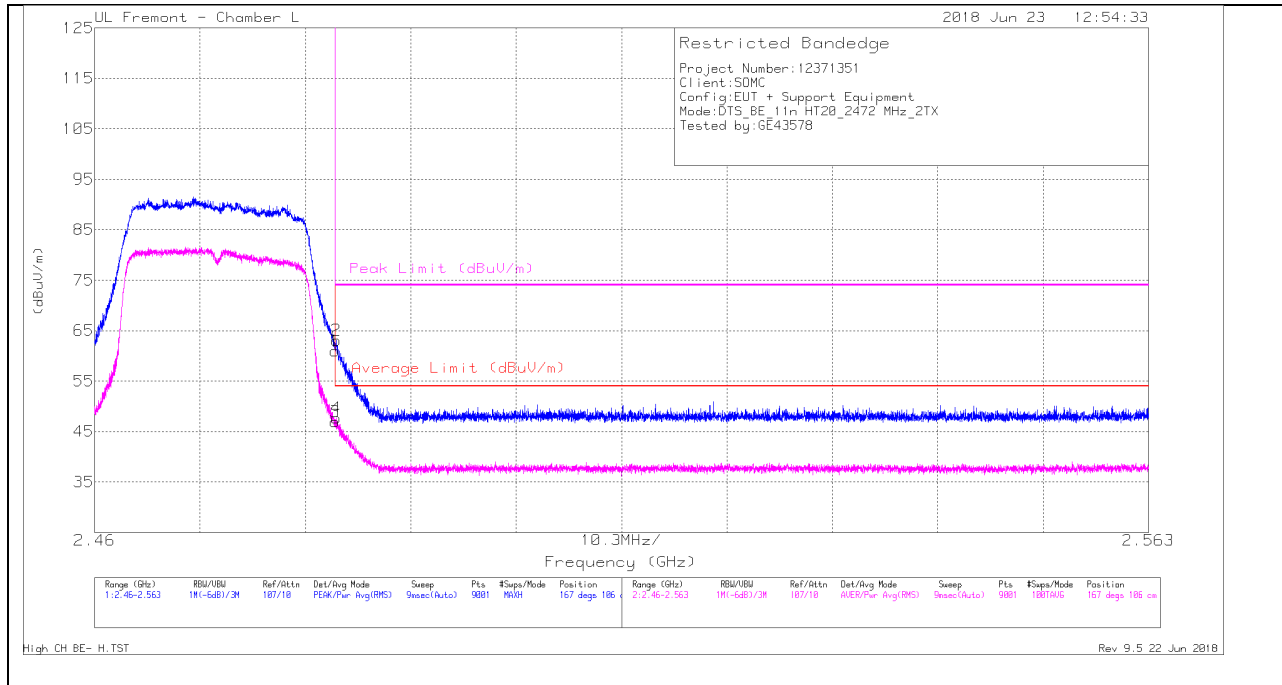
* - indicates frequency in CFR47 Pt 15 Restricted Band

Pk - Peak detector

RMS - RMS detection

BANDEDGE (HIGH CHANNEL, CH 13)

HORIZONTAL RESULT



Trace Markers

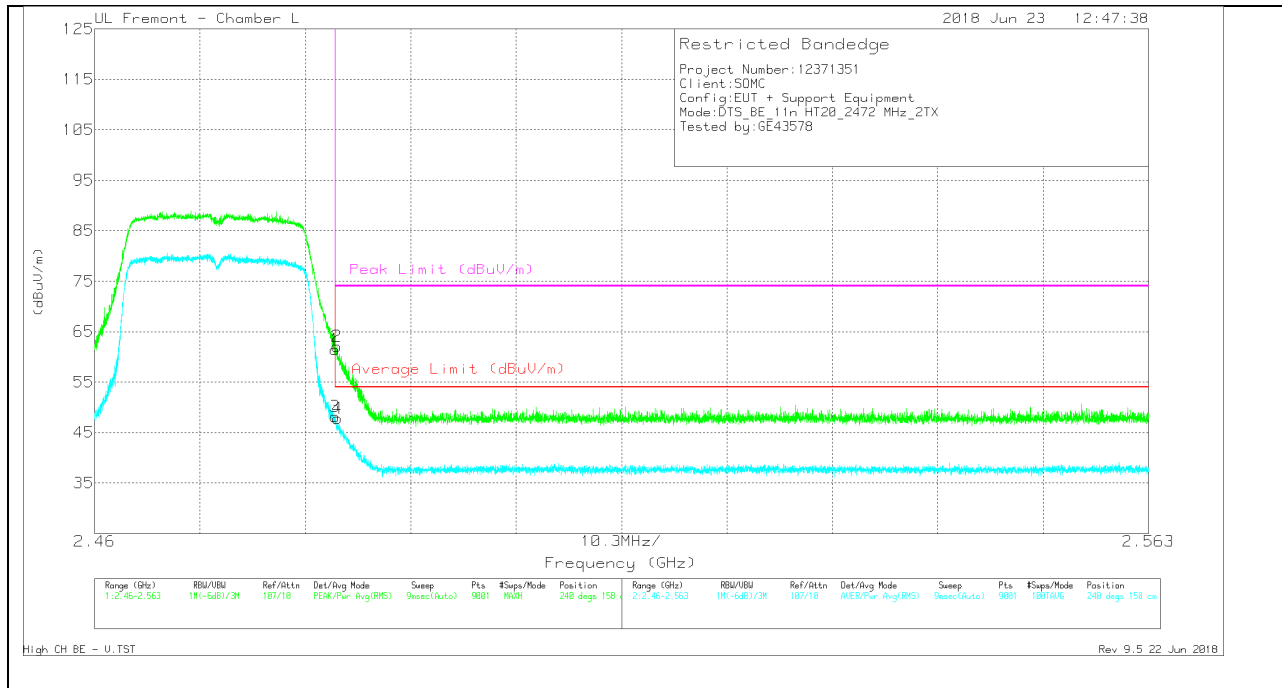
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1	* 2.484	51.41	Pk	32.3	-22.7	0	61.01	-	-	74	-12.99	167	106	H
2	* 2.484	53.53	Pk	32.3	-22.7	0	63.13	-	-	74	-10.87	167	106	H
3	* 2.484	37.29	RMS	32.3	-22.7	.1	46.99	54	-7.01	-	-	167	106	H
4	* 2.484	37.93	RMS	32.3	-22.7	.1	47.63	54	-6.37	-	-	167	106	H

* - indicates frequency in CFR47 Pt 15 Restricted Band

Pk - Peak detector

RMS - RMS detection

VERTICAL RESULT



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF EMC4294 (dB/m)	Amp/Cbl/Fitr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	51.92	Pk	32.3	-22.7	0	61.52	-	-	74	-12.48	240	158	V
2	* 2.484	52.47	Pk	32.3	-22.7	0	62.07	-	-	74	-11.93	240	158	V
3	* 2.484	38.53	RMS	32.3	-22.7	.1	48.23	54	-5.77	-	-	240	158	V
4	* 2.484	38.16	RMS	32.3	-22.7	.1	47.86	54	-6.14	-	-	240	158	V

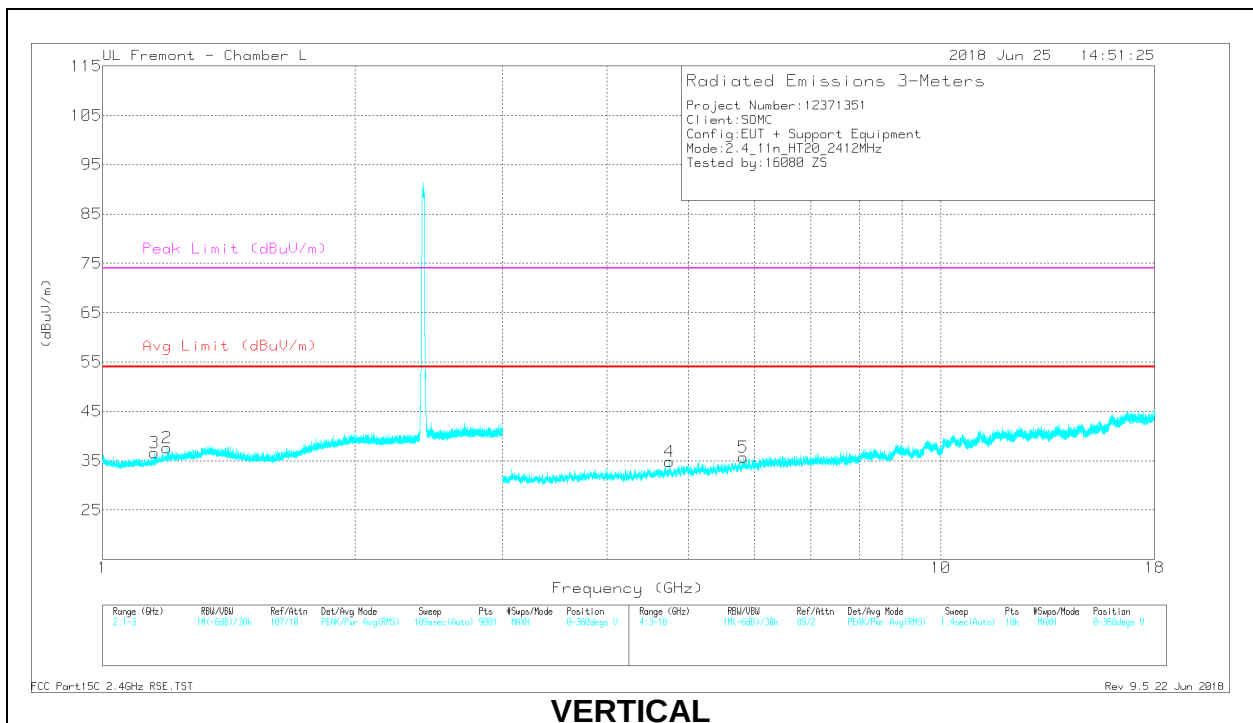
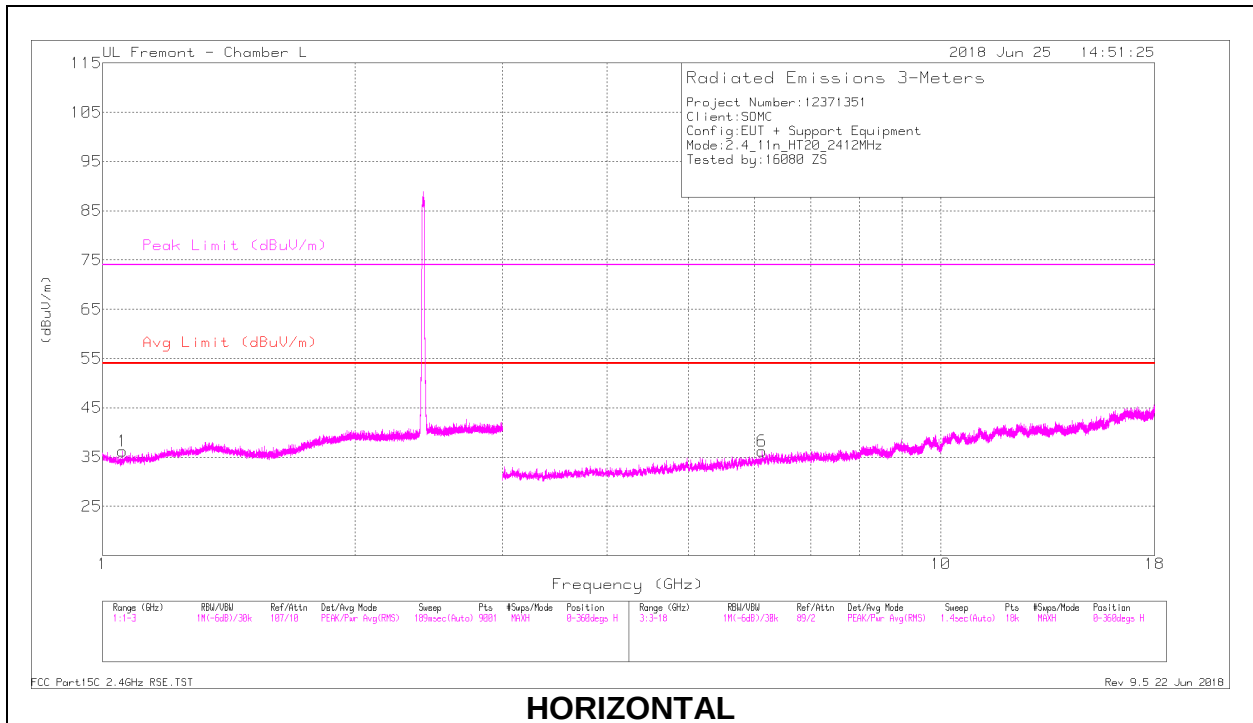
* - indicates frequency in CFR47 Pt 15 Restricted Band

Pk - Peak detector

RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL, CH 1 RESULTS



RADIATED EMISSIONS

Radiated Emissions

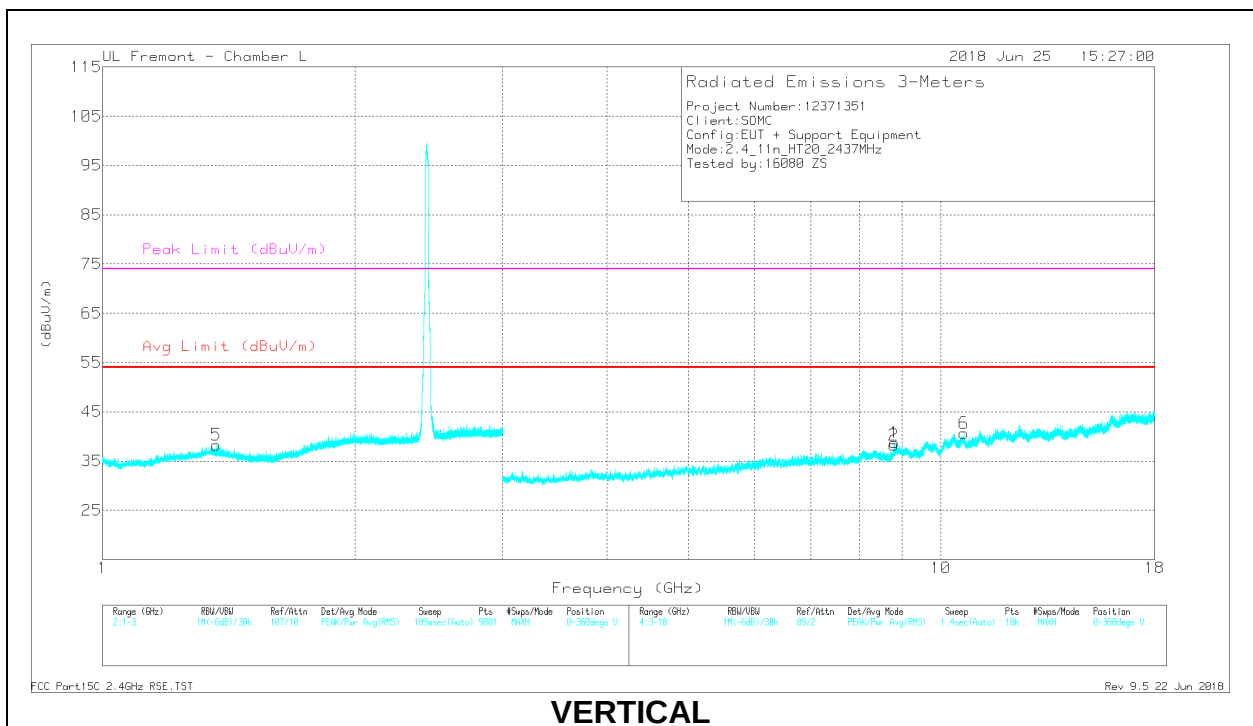
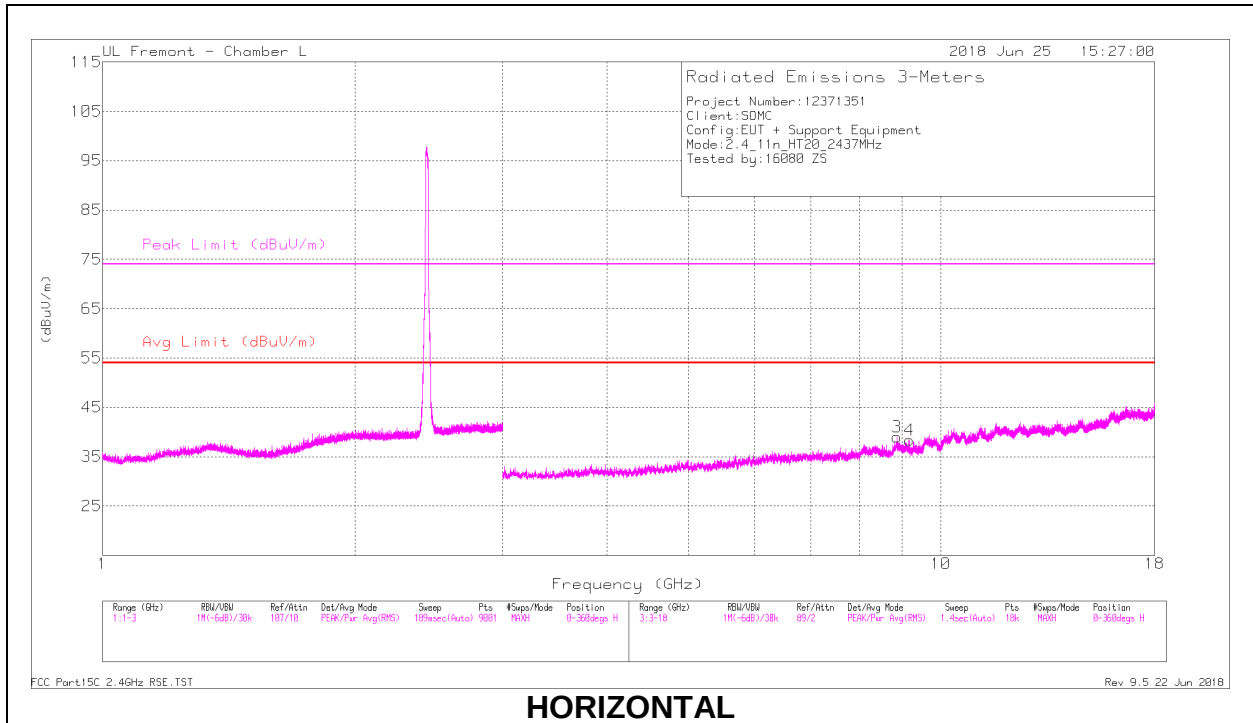
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF EMC4294 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.056	40.66	PK2	26.8	-25.4	0	42.06	-	-	74	-31.94	325	251	H
	* 1.058	31.3	MAv1	26.9	-25.4	.1	32.9	54	-21.1	-	-	325	251	H
2	* 1.194	40.32	PK2	28.3	-25.1	0	43.52	-	-	74	-30.48	272	296	V
	* 1.193	30.56	MAv1	28.2	-25.1	.1	33.76	54	-20.24	-	-	272	296	V
3	* 1.154	41	PK2	27.6	-25.2	0	43.4	-	-	74	-30.6	353	305	V
	* 1.154	31.02	MAv1	27.6	-25.2	.1	33.52	54	-20.48	-	-	353	305	V
6	6.126	27.51	PK2	35.4	-26.7	0	36.21	-	-	-	-	0-360	202	H
4	* 4.744	35.41	PK2	34	-28.8	0	40.61	-	-	74	-33.39	132	173	V
	* 4.742	25.78	MAv1	34	-28.8	.1	31.08	54	-22.92	-	-	132	173	V
5	5.814	28.7	PK2	35.1	-28.1	0	35.7	-	-	-	-	0-360	202	V

* - indicates frequency in CFR47 Pt 15 Restricted Band

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

MID CHANNEL, CH 6 RESULTS



RADIATED EMISSIONS

Radiated Emissions

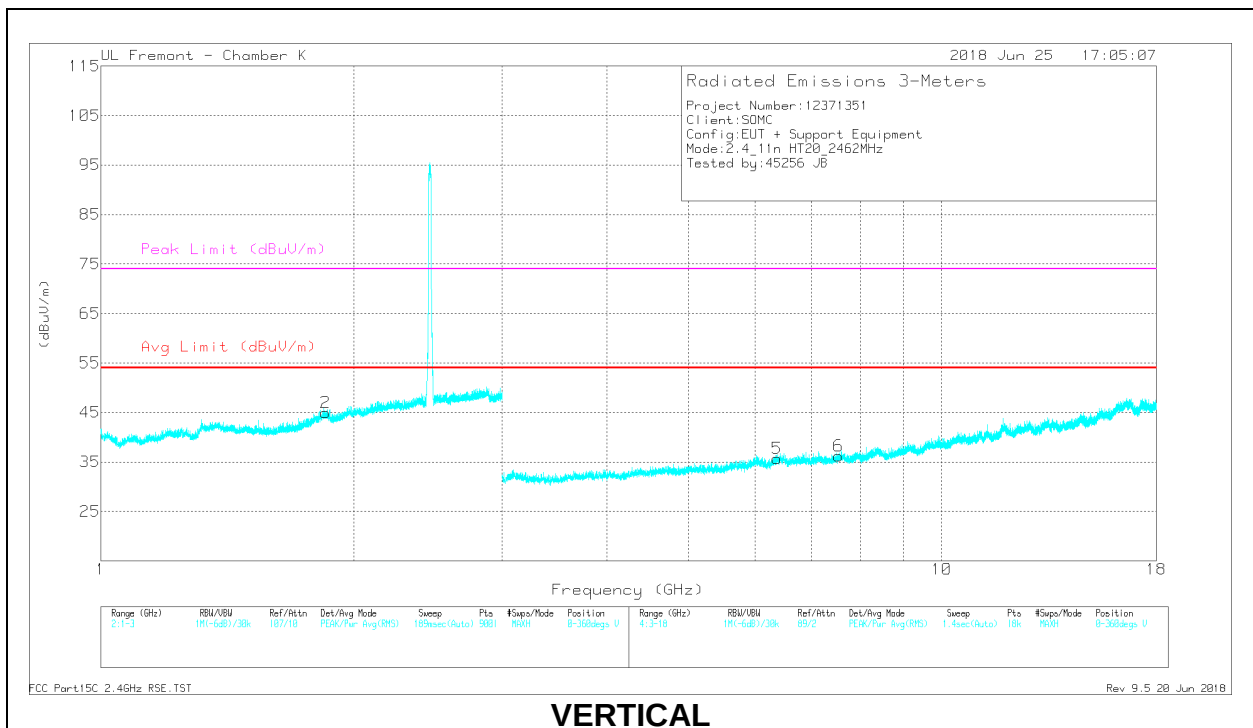
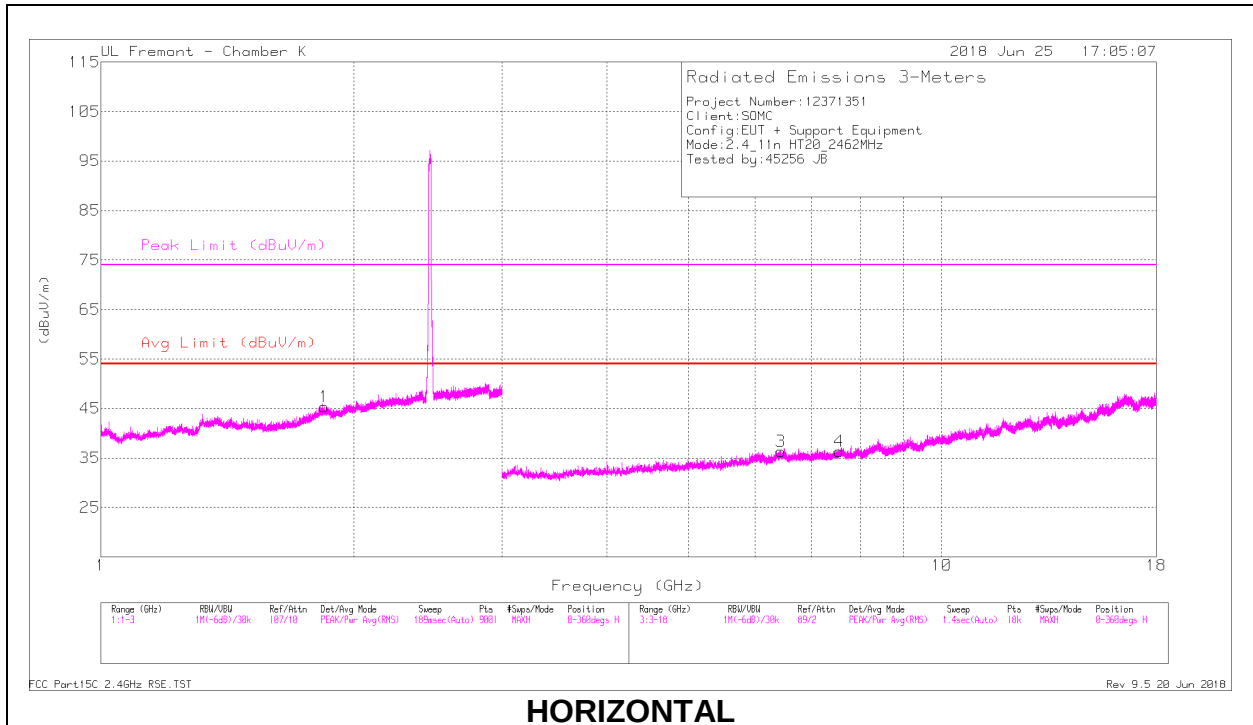
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF EMC4294 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
5	* 1.366	39.86	PK2	29.4	-24.8	0	44.46	-	-	74	-29.54	341	102	V
	* 1.365	30.32	MAv1	29.4	-24.8	.1	35.02	54	-18.98	-	-	341	102	V
3	8.864	24.56	PK2	36.2	-21.8	0	38.96	-	-	-	-	0-360	201	H
4	* 9.187	30.07	PK2	36.4	-22.1	0	44.37	-	-	74	-29.63	300	142	H
	* 9.188	20.24	MAv1	36.4	-22.1	.1	34.64	54	-19.36	-	-	300	142	H
1	8.813	25.18	PK2	36.1	-22.5	0	38.78	-	-	-	-	0-360	201	V
2	8.799	24.59	PK2	36.1	-22.5	0	38.19	-	-	-	-	0-360	201	V
6	* 10.663	28.67	PK2	37.6	-19.3	0	46.97	-	-	74	-27.03	121	266	V
	* 10.661	19.53	MAv1	37.6	-19.2	.1	38.03	54	-15.97	-	-	121	266	V

* - indicates frequency in CFR47 Pt 15 Restricted Band

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

HIGH CHANNEL, CH 11 RESULTS



RADIATED EMISSIONS

Radiated Emissions

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.844	29.22	PK2	30.4	-9	0	50.62	-	-	-	-	61	303	H
2	1.852	30.32	PK2	30.4	-9	0	51.72	-	-	-	-	173	199	V
3	6.436	35.21	PK2	35.4	-26.9	0	43.71	-	-	-	-	135	368	H
4	* 7.555	34.34	PK2	35.6	-26.1	0	43.84	-	-	74	-30.16	50	339	H
	* 7.556	24.7	MAv1	35.6	-26.1	.1	34.3	54	-19.7	-	-	50	339	H
5	6.373	35.38	PK2	35.4	-27.4	0	43.38	-	-	-	-	118	107	V
6	* 7.537	34.69	PK2	35.6	-26.3	0	43.99	-	-	74	-30.01	17	378	V
	* 7.541	24.65	MAv1	35.6	-26.2	.1	34.15	54	-19.85	-	-	17	378	V

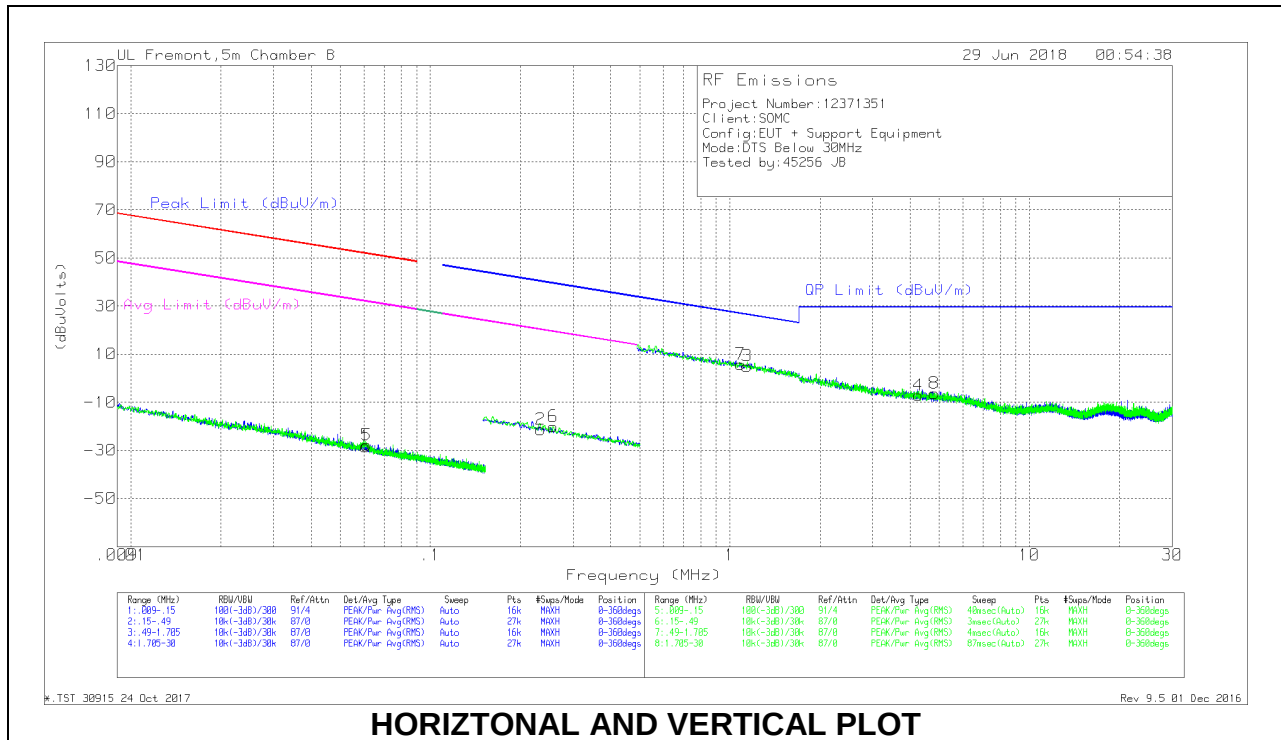
* - indicates frequency in CFR47 Pt 15 Restricted Band

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

9.2. Worst Case Below 30 MHz

SPURIOUS EMISSIONS 9 kHz TO 30 MHz (WORST-CASE CONFIGURATION)



HORIZONTAL AND VERTICAL PLOT

Below 30 MHz Data

Trace Markers

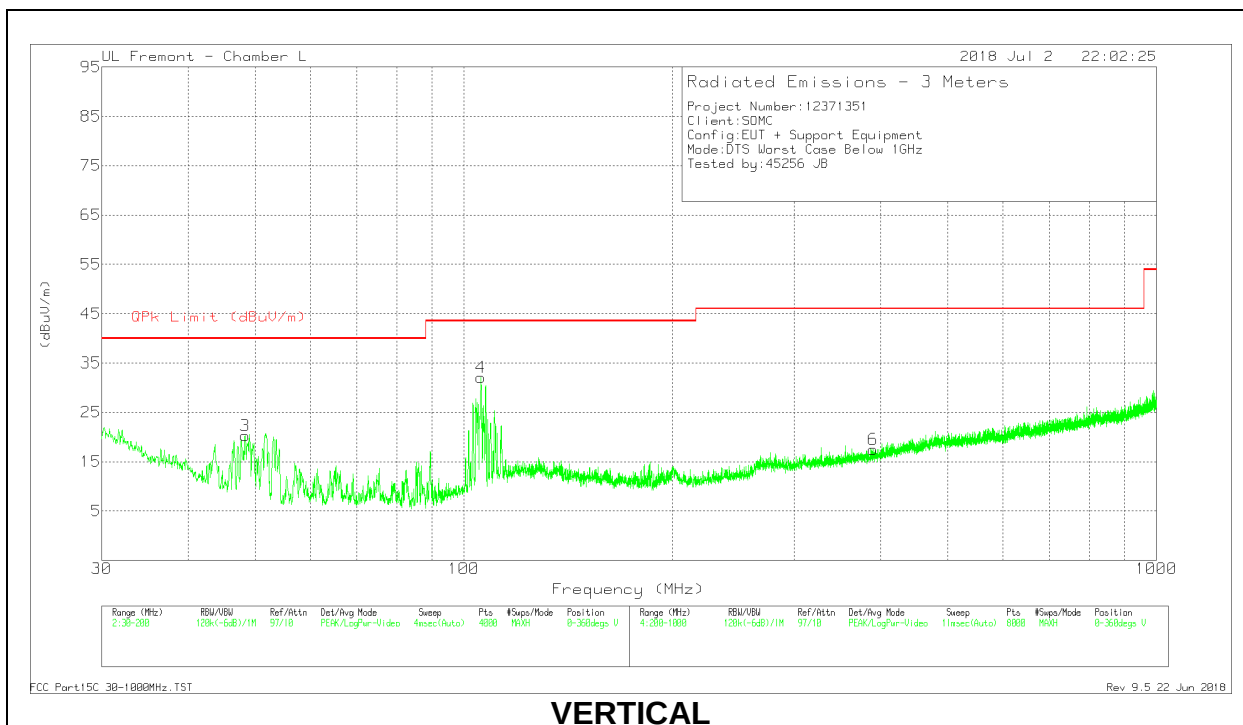
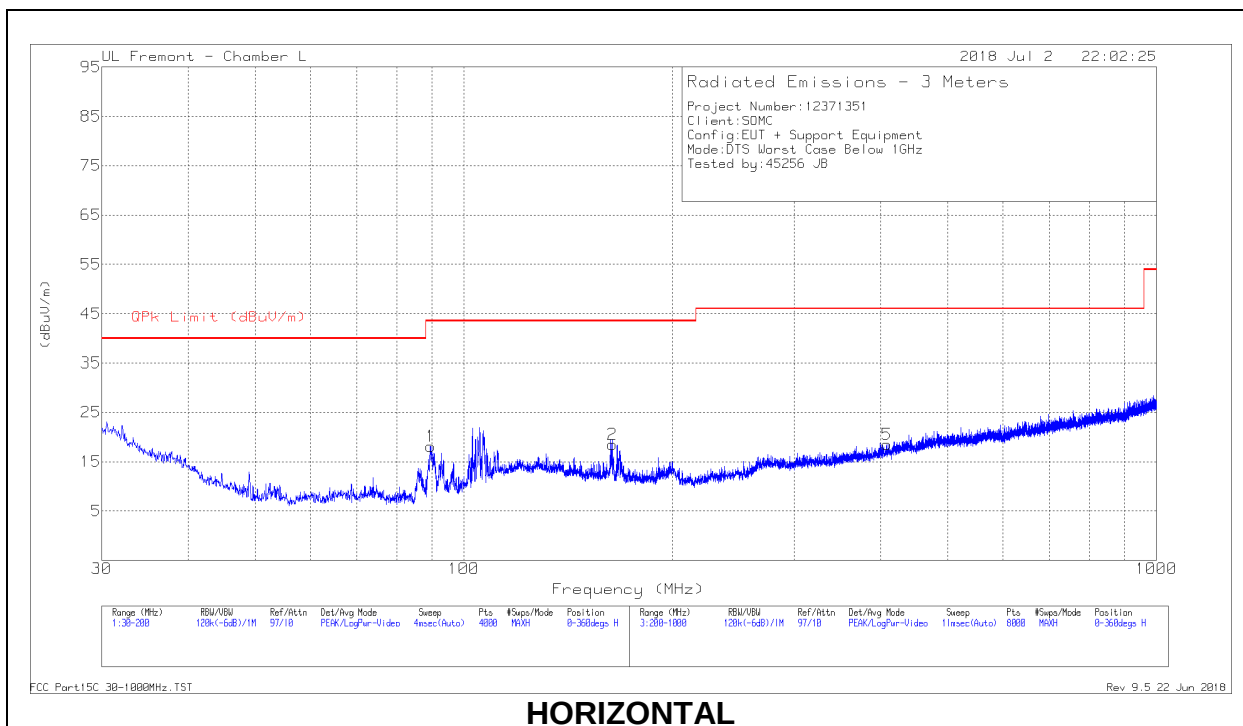
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Cbl (dB)	Dist Corr 300m	Corrected Reading (dBuVolts)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
1	.06068	35.72	Pk	14.5	1.4	-80	-28.38	51.92	-80.3	31.92	-60.3	-	-	-	-	0-360
5	.06136	36.37	Pk	14.5	1.4	-80	-27.73	51.83	-79.56	31.83	-59.56	-	-	-	-	0-360
2	.23335	43.3	Pk	13.9	1.5	-80	-21.3	-	-	-	-	40.26	-61.56	20.26	-41.56	0-360
6	.25714	44.6	Pk	13.8	1.5	-80	-20.1	-	-	-	-	39.41	-59.51	19.41	-39.51	0-360

Pk - Peak detector

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Cbl (dB)	Dist Corr (dB) 40Log	Corrected Reading (dBuVolts)	QP Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
7	1.08595	30.02	Pk	14.3	1.5	-40	5.82	26.91	-21.09	-	-	-	-	0-360
3	1.14231	29.26	Pk	14.3	1.5	-40	5.06	26.47	-21.41	-	-	-	-	0-360
4	4.26002	16.9	Pk	14.5	1.5	-40	-7.1	29.5	-36.6	-	-	-	-	0-360
8	4.81756	17.83	Pk	14.4	1.5	-40	-6.27	29.5	-35.77	-	-	-	-	0-360

Pk - Peak detector

9.3. Worst Case Below 1 GHz



Below 1GHz DATA

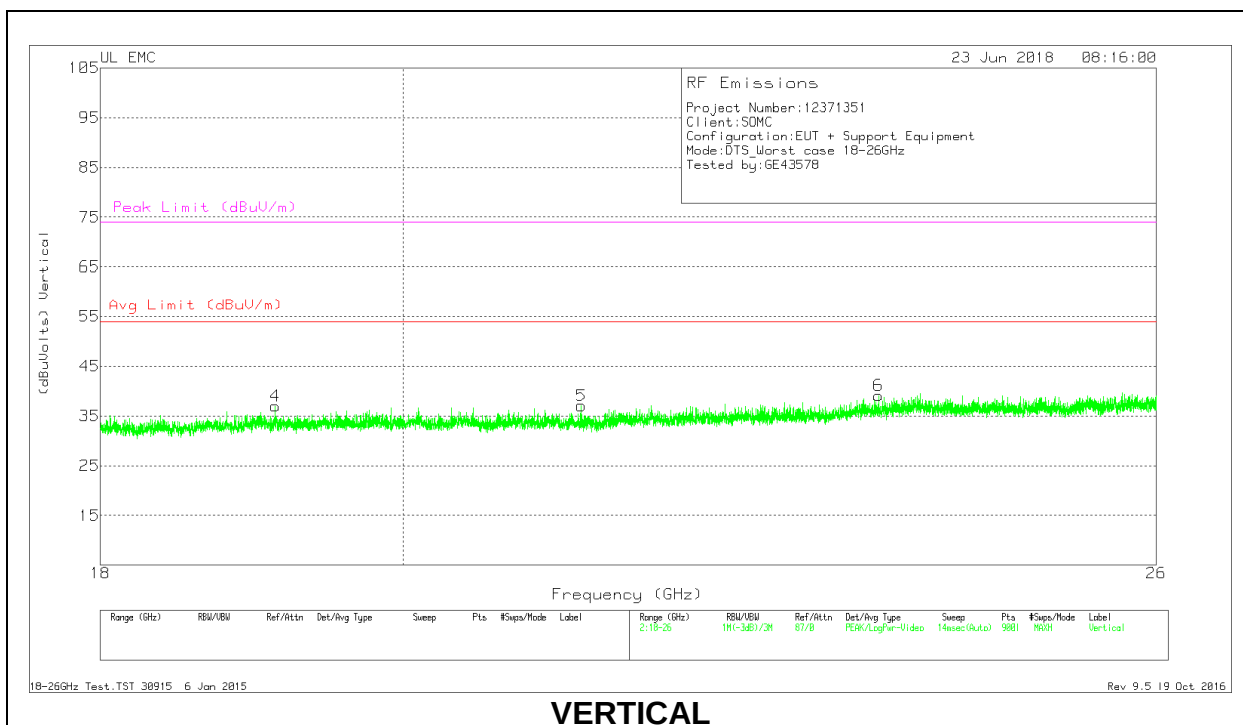
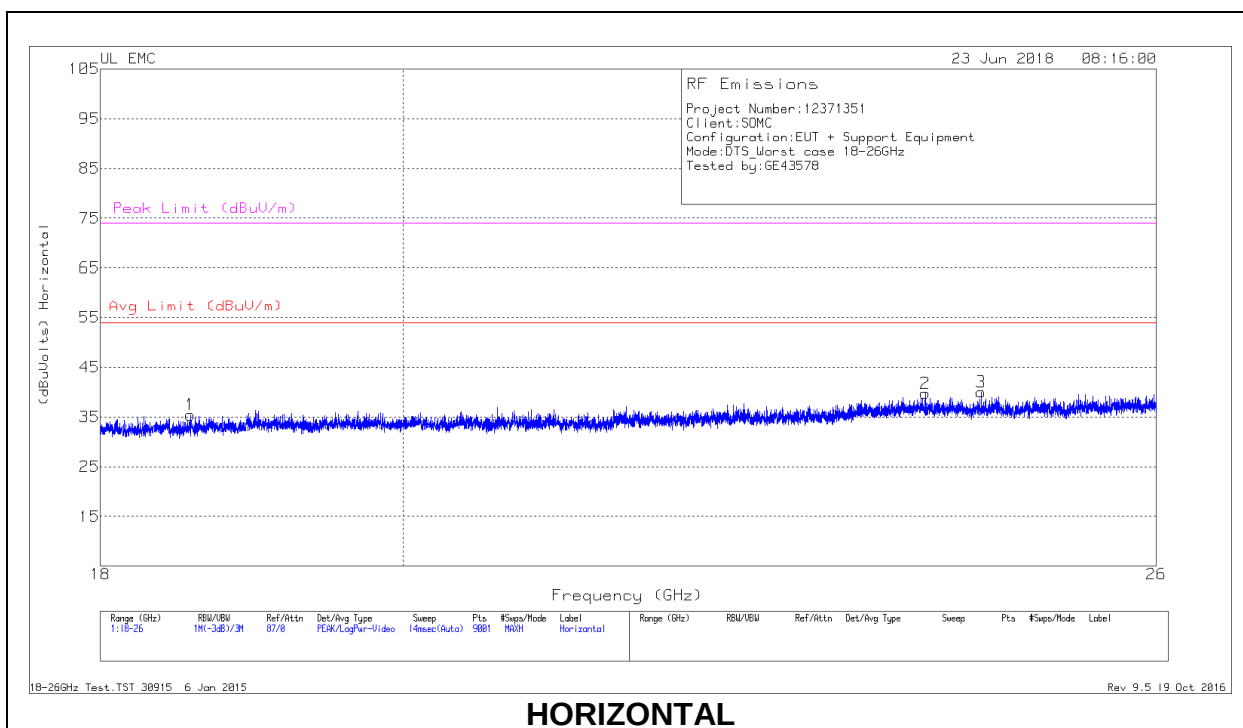
Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T477 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	89.4729	37.08	Pk	12	-31	18.08	43.52	-25.44	0-360	199	H
2	* 163.9522	32.64	Pk	16.4	-30.5	18.54	43.52	-24.98	0-360	199	H
3	48.3222	38.35	Pk	13.3	-31.4	20.25	40	-19.75	0-360	100	V
4	105.7971	46.83	Pk	16.2	-30.9	32.13	43.52	-11.39	0-360	100	V
5	* 408.1271	27.96	Pk	20.2	-29.7	18.46	46.02	-27.56	0-360	299	H
6	390.1247	27.43	Pk	19.7	-29.7	17.43	46.02	-28.59	0-360	199	V

* - indicates frequency in CFR47 Pt 15 Restricted Band

Pk - Peak detector

9.4. Worst Case 18-26 GHz



18 – 26GHz DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	T89 AF (dB/m)	Amp/Cbl (dB)	Dist Corr (dB)	Corrected Reading (dBuVolts)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)
1	18.572	37.91	Pk	32.3	-25.3	-9.5	35.41	54	-18.59	74	-38.59
2	23.989	39.78	Pk	33.9	-24.4	-9.5	39.78	54	-14.22	74	-34.22
3	24.461	39.8	Pk	34	-24.3	-9.5	40	54	-14	74	-34
4	19.131	38.49	Pk	32.5	-24.5	-9.5	36.99	54	-17.01	74	-37.01
5	21.281	38.88	Pk	33	-25.3	-9.5	37.08	54	-16.92	74	-36.92
6	23.603	38.83	Pk	33.9	-24.1	-9.5	39.13	54	-14.87	74	-34.87

Pk - Peak detector

10. AC POWER LINE CONDUCTED EMISSIONS

LIMITS

FCC §15.207 (a)

Frequency of Emission (MHz)	Conducted Limit (dBuV)	
	Quasi-peak	Average
0.15-0.5	66 to 56 [*]	56 to 46 [*]
0.5-5	56	46
5-30	60	50

^{*} Decreases with the logarithm of the frequency.

TEST PROCEDURE

The EUT is placed on a non-conducting table 40 cm from the vertical ground plane and 80 cm above the horizontal ground plane. The EUT is configured in accordance with ANSI C63.10.

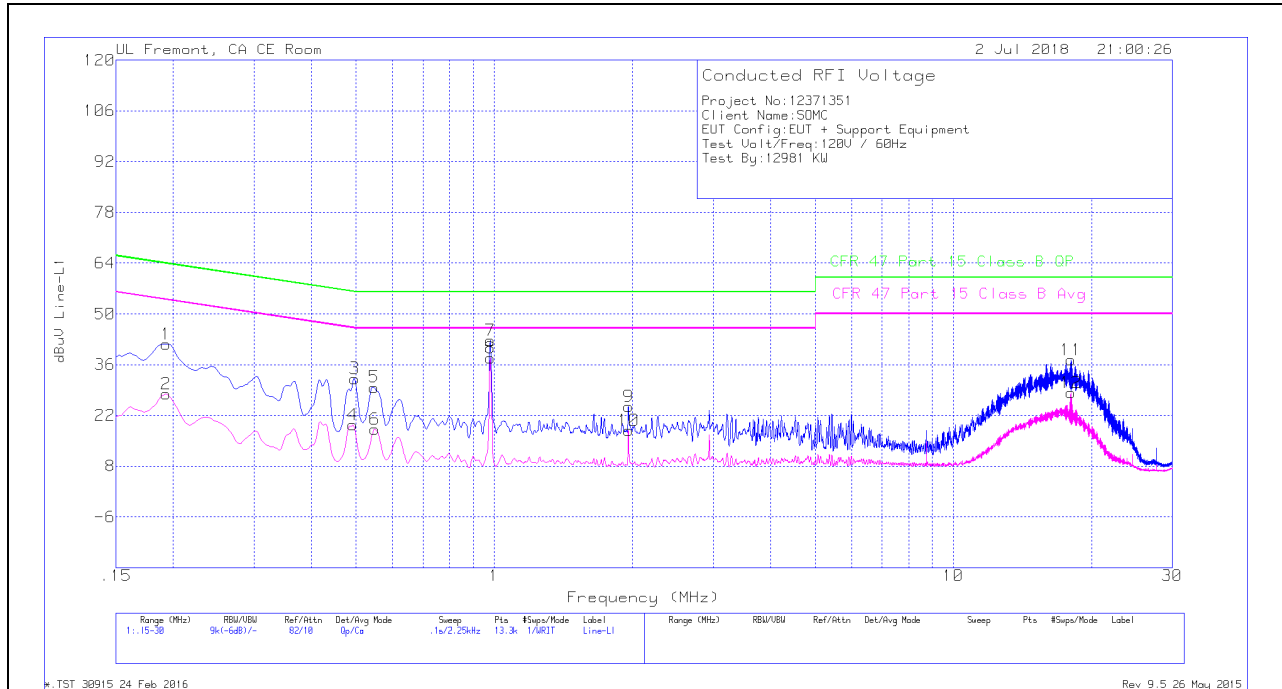
The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

Line conducted data is recorded for both NEUTRAL and HOT lines.

RESULTS

10.1.1. AC Power Line Norm

LINE 1 RESULTS



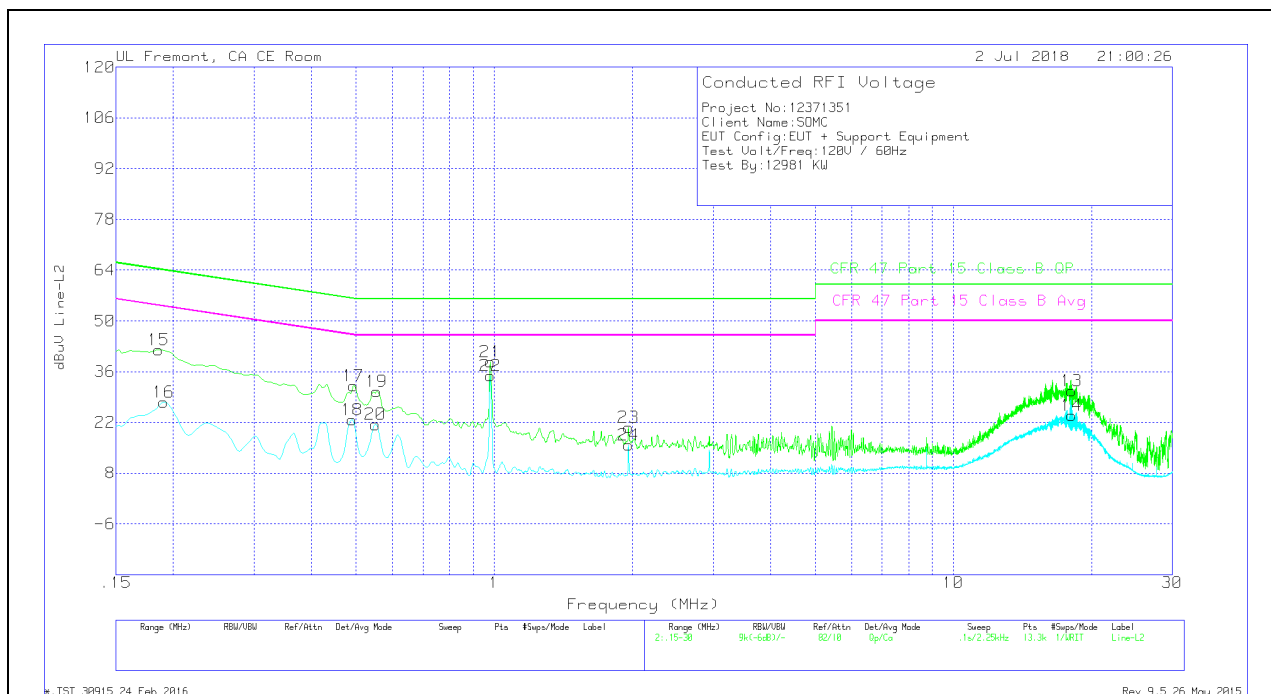
Trace Markers

Range 1: Line-L1 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN L1	LC Cables C1&C3	Limiter (dB)	Corrected Reading dBuV	CFR 47 Part 15 Class B QP	QP Margin (dB)	CFR 47 Part 15 Class B Avg	Av(CISPR) Margin (dB)
1	.19275	31.63	Qp	0	0	10.1	41.73	63.92	-22.19	-	-
2	.19275	17.77	Ca	0	0	10.1	27.87	-	-	53.92	-26.05
3	.4965	22.08	Qp	0	0	10.1	32.18	56.06	-23.88	-	-
4	.492	9.25	Ca	0	0	10.1	19.35	-	-	46.13	-26.78
5	.54825	19.65	Qp	0	0	10.1	29.75	56	-26.25	-	-
6	.54937	8.09	Ca	0	0	10.1	18.19	-	-	46	-27.81
7	.98025	32.46	Qp	0	.1	10.1	42.66	56	-13.34	-	-
8	.98025	27.63	Ca	0	.1	10.1	37.83	-	-	46	-8.17
9	1.96125	14.21	Qp	0	.1	10.1	24.41	56	-31.59	-	-
10	1.96125	7.69	Ca	0	.1	10.1	17.89	-	-	46	-28.11
11	18.051	26.54	Qp	.1	.3	10.3	37.24	60	-22.76	-	-
12	18.051	17.58	Ca	.1	.3	10.3	28.28	-	-	50	-21.72

Qp - Quasi-Peak detector

Ca - CISPR average detection

LINE 2 RESULTS



Trace Markers

Range 2: Line-L2 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN L2	LC Cables C2&C3	Limiter (dB)	Corrected Reading dBuV	CFR 47 Part 15 Class B QP	QP Margin (dB)	CFR 47 Part 15 Class B Avg	Av(CISPR) Margin (dB)
13	18.123	20.06	Qp	.1	.3	10.3	30.76	60	-29.24	-	-
14	18.123	13.2	Ca	.1	.3	10.3	23.9	-	-	50	-26.1
15	.186	31.98	Qp	0	0	10.1	42.08	64.21	-22.13	-	-
16	.1905	17.53	Ca	0	0	10.1	27.63	-	-	54.01	-26.38
17	.49425	22.04	Qp	0	0	10.1	32.14	56.1	-23.96	-	-
18	.48975	12.57	Ca	0	0	10.1	22.67	-	-	46.17	-23.5
19	.555	20.41	Qp	0	0	10.1	30.51	56	-25.49	-	-
20	.55162	11.31	Ca	0	0	10.1	21.41	-	-	46	-24.59
21	.98025	28.43	Qp	0	.1	10.1	38.63	56	-17.37	-	-
22	.98025	24.64	Ca	0	.1	10.1	34.84	-	-	46	-11.16
23	1.96125	10.37	Qp	0	.1	10.1	20.57	56	-35.43	-	-
24	1.96125	5.54	Ca	0	.1	10.1	15.74	-	-	46	-30.26

Qp - Quasi-Peak detector

Ca - CISPR average detection