CERTIFICATION TEST REPORT

Report Number. : 11686683-E2V3

Applicant	:	DIGI INTERNATIONAL INC. 11001 BREN RD. E MINNETONKA, MN 55343, U.S.A.
Model	:	SMARTGATEWAY
FCC ID	:	MCQ-SMARTGTW01
IC	:	1846A-SMARTGTW01
EUT Description	:	DIGI SMART GATEWAY (AT&T)
Test Standard(s)	:	FCC 47 CFR PART 15 SUBPART C INDUSTRY CANADA RSS - 247 ISSUE 2

Date Of Issue:
May 17, 2017

Prepared by:
UL Verification Services Inc.
47173 Benicia Street
Fremont, CA 94538, U.S.A.
TEL: (510) 771-1000
FAX: (510) 661-0888

NVLAP LAB CODE 200065-0

Revision History

Rev.	Issue Date	Revisions	Revised By
V1	04/28/2017	Initial Issue	D. Coronia
V2	05/05/2017	Updated KDB reference number	D. Coronia
V3	05/17/2017	Updated Section 3 and EUT Description	D. Coronia

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: DIGI WIRELESS DESIGN SERVICES INC.
11001 BREN RD. E
MINNETONKA, MN 55343, U.S.A.

EUT DESCRIPTION: DIGI SMART GATEWAY (AT&T)

MODEL: SMARTGATEWAY

SERIAL NUMBER: F000025 (CONDUCTED), F000026 (RADIATED)

DATE TESTED: MARCH 23, 2017 – APRIL 27, 2017

APPLICABLE STANDARDS	
STANDARD	**TEST RESULTS**
CFR 47 Part 15 Subpart C	Pass
INDUSTRY CANADA RSS-247 Issue 1	Pass
INDUSTRY CANADA RSS-GEN Issue 4	Pass

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 any government.

Approved & Released For
UL Verification Services Inc. By:

DAN CORONIA
CONSUMER TECHNOLOGY DIVISION
WiSE PROJECT LEAD
UL VERIFICATION SERVICES INC.

Prepared By:

OREN STOELTING
CONSUMER TECHNOLOGY DIVISION
WiSE LABORATORY TECHNICIAN
UL VERIFICATION SERVICES INC.

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 5558074 D01 v03r05, ANSI C63.10-2013, RSS-GEN Issue 4, and RSS-247 Issue 2.

3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 47173 and 47266 Benicia Street, 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
☐ Chamber A (IC:2324B-1)	☐ Chamber D (IC:22541-1)
☒ Chamber B (IC:2324B-2)	☐ Chamber E (IC:22541-2)
☐ Chamber C (IC:2324B-3)	☐ Chamber F (IC:22541-3)
	☐ Chamber G (IC:22541-4)
	☒ Chamber H (IC:22541-5)

The above test sites and facilities are covered under FCC Test Firm Registration # 208313.

UL Verification Services Inc. is accredited by NVLAP, Laboratory Code 200065-0. The full scope of accreditation can be viewed at http://ts.nist.gov/standards/scopes/2000650.htm.

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:

Field Strength (dBuV/m) = Measured Voltage (dBuV) + Antenna Factor (dB/m) + Cable Loss (dB) – Preamp Gain (dB)
36.5 dBuV + 18.7 dB/m + 0.6 dB – 26.9 dB = 28.9 dBuV/m

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. BRIEF DESCRIPTION OF EUT

The EUT (HCGateway) is a connected product that pairs with various sensors over BLE and WLAN, as part of Digi's Cold Chain Solutions. The sensor data and gateway position is transmitted to the cloud over the cellular network.

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)
2412 - 2462	802.11b	13.92	24.66
2412 - 2462	802.11g	16.20	41.69
2412 - 2462	802.11n HT20	16.02	39.99
2412 - 2452	802.11n HT40	15.02	31.77

5.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes dual-band PCB antenna, with a maximum gain of -1.45dBi.

5.4. SOFTWARE AND FIRMWARE

The test utility software used during testing was Qualcomm Atheros Radio Tool 2 for Internet of Everything (ART2_IoE).

5.5. WORST-CASE CONFIGURATION AND MODE

Radiated bandedge, harmonics, and spurious emissions from 1 GHz to 18GHz were performed. The EUT was set to transmit at the Low/Middle/High channels with designed (target) output powers.

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

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
802.11n HT40mode: MCS0

5.6. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Description	Manufacturer	Model	Serial Number	FCC ID
Laptop	HP	HSTNN-DA25	WCNVH0AAR2Z641	NA
AC/DC Adapter	HP	EliteBook 8570p	N/A	NA
DC Power Supply	Sorensen	XHR 60-18	1308A01936	NA

I/O CABLES (CONDUCTED TEST)

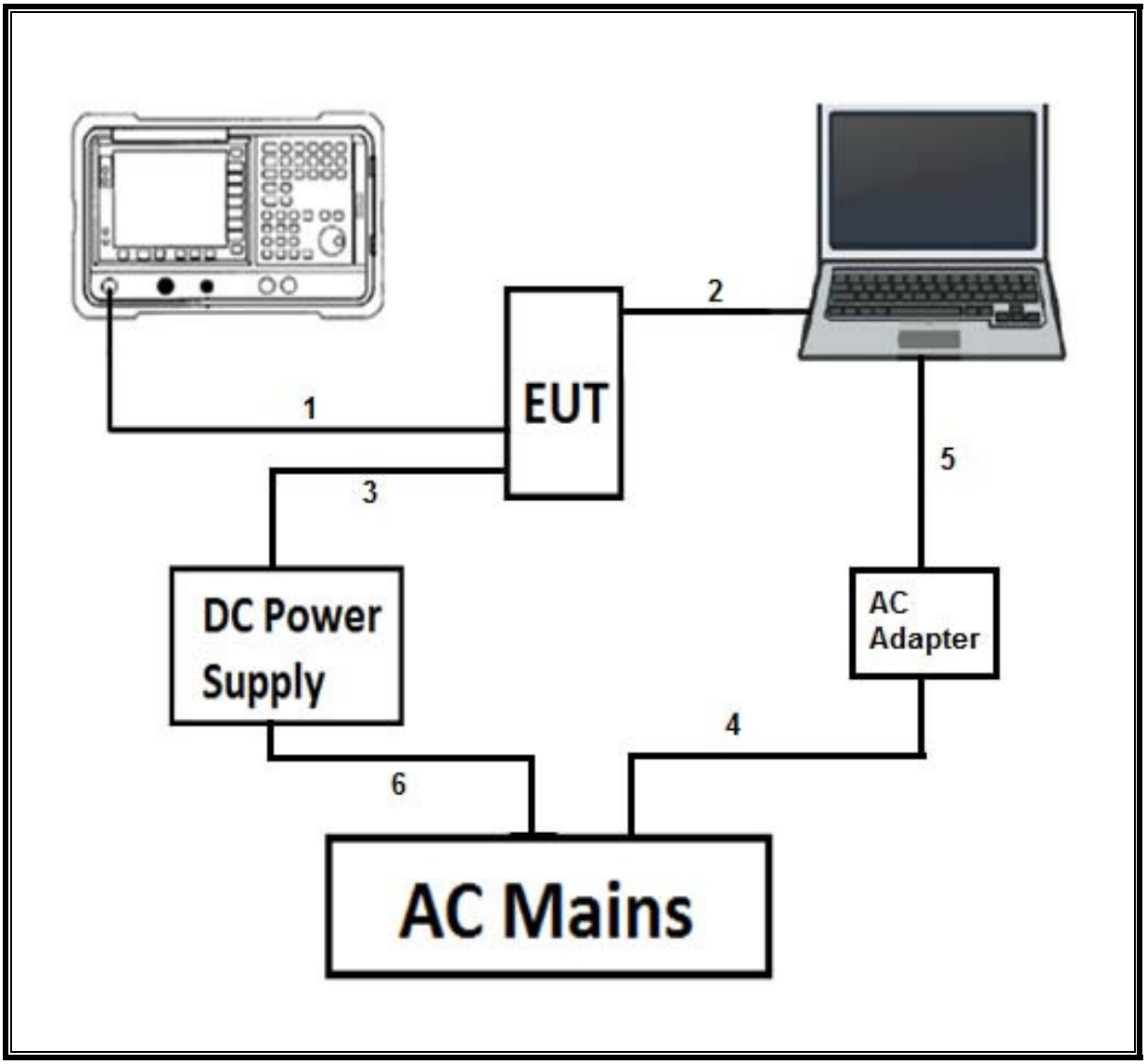
I/O Cable List						
Cable No	Port	# of identical ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	Antenna	1	RF	Shielded	0.2	Antenna Port To Spectrum Analyzer
2	MicroUSB	1	USB	Shielded	1	EUT To Laptop
3	DC	1	DC	Un-Shielded	0.1	DC Power Supply To EUT
4	AC	1	AC	Shielded	1	AC Mains To AC Adapter
5	DC	1	DC	Shielded	1	AC/DC To Laptop
6	AC	1	AC	Shielded	1	AC Mains To DC Power Supply

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	DC	1	DC	Un-Shielded	0.1	DC Power SupplyTo EUT
2	AC	1	AC	Shielded	1	AC Mains To DC Power Supply

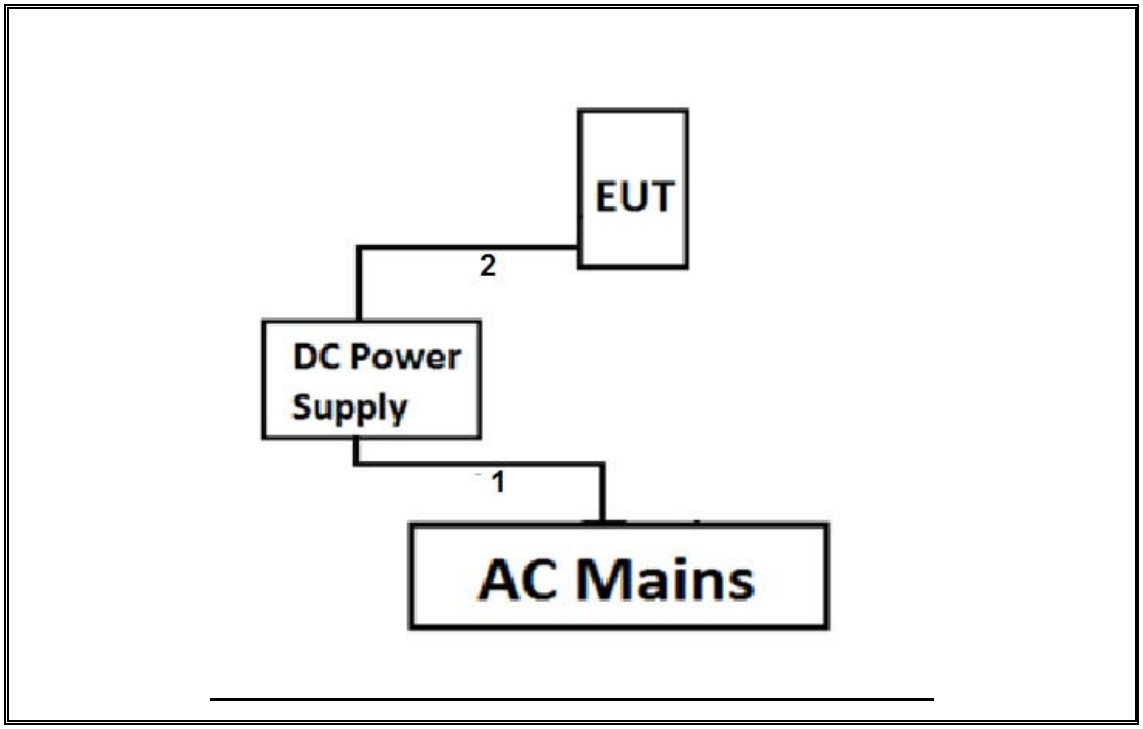
TEST SETUP

CONDUCTED TEST SETUP DIAGRAM



TEST SETUP

RADIATED AND AC LINE CONDUCTED EMISSIONS SETUP DIAGRAM



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**	**T Number**	**Cal Date**	**Cal Due**
Amplifier, 1 to 18 GHz	Miteq	AFS43-00101800-25-S-42	493	02/15/17	02/15/18
Amplifier, 1 to 8 GHz	Miteq	AMF-4D-01000800-30-29P	1156	02/15/17	02/15/18
Pre-Amp 1-26.5GHz	Agilent	8449B	404	07/05/16	07/05/17
Amplifier, 10KHz to 1GHz, 32dB	Keysight	8447D	10	02/15/17	02/15/18
Antenna, Broadband Hybrid, 30MHz to 2000MHz	Sunol Sciences	JB3	477	06/22/16	06/22/17
Antenna, Horn 1-18GHz	ETS Lindgren	3117	345	03/23/17	03/23/18
18 - 26.5 GHz Horn Antenna	Seavey Division	MWH-1826/B	449	05/26/16	05/26/17
Loop Antenna	EMCO	6502	35	03/20/17	03/20/18
Spectrum Analyzer, PXA 3Hz to 44GHz	Keysight	N9030A	907	01/23/17	01/23/18
PSA Series Spectrum Analyzer, 3Hz - 44GHz	Agilent	E4446A	146	07/13/16	07/13/17
Power Meter	Keysight	N1911A	T229	07/28/16	07/28/17
Power Sensor	Keysight	N1921A	T413	06/20/16	06/20/17
EMI Receiver	Rohde & Schwarz	ESR-EMI	1436	12/19/16	12/19/17
LISN	FISCHER	FCC-LISN-50/250-25-2-01	1310	06/08/16	06/08/17

NOTE: *testing is completed before equipment calibration expiration date.

Test Software List			
Description	**Manufacturer**	**Model**	**Version**
Radiated Software	UL	UL EMC	Ver 9.5, Dec 01, 2016
Antenna Port Software	UL	UL RF	Ver 6.5, Apr 21, 2017

7. MEASUREMENT METHODS

On Time and Duty Cycle: KDB 5558074 D01 v03r05, Section 6.

6 dB BW: KDB 5558074 D01 v03r05, Section 8.1.

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

Output Power: KDB 5558074 D01 v03r05, Section 9.2.3.2.

Power Spectral Density: KDB 5558074 D01 v03r05, Section 10.3.

Out-of-band emissions in non-restricted bands: KDB 5558074 D01 v03r05, Section 11.1 (b).

Out-of-band emissions in restricted bands: KDB 5558074 D01 v03r05, Section 12.1.

Band-edge: KDB 5558074 D01 v03r05, Section 12.1.

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

8. SUMMARY TABLE

FCC Part Section	RSS Section(s)	Test Description	Test Limit	Test Condition	Test Result
15.247 (a)(2)	RSS-247 5.2.1	Occupied Band width (6dB)	>500KHz	Conducted	Pass
2.1051, 15.247 (d)	RSS-247 5.5	Band Edge / Conducted Spurious Emission	-30dBc		Pass
15.247 (b) (3)	RSS-247 5.4.4	TX conducted output power	<30dBm		Pass
15.247 (e)	RSS-247 5.2.2	PSD	<8dBm		Pass
15.207 (a)	RSS-GEN 8.8	AC Power Line conducted emissions	Section 10	Radiated	Pass
15.205, 15.209, 15.247(d)	RSS-GEN 8.9/7	Radiated Spurious Emission	< 54dBuV/m		Pass

9. ANTENNA PORT TEST RESULTS

9.1. ON TIME AND DUTY CYCLE

LIMITS

None; for reporting purposes only.

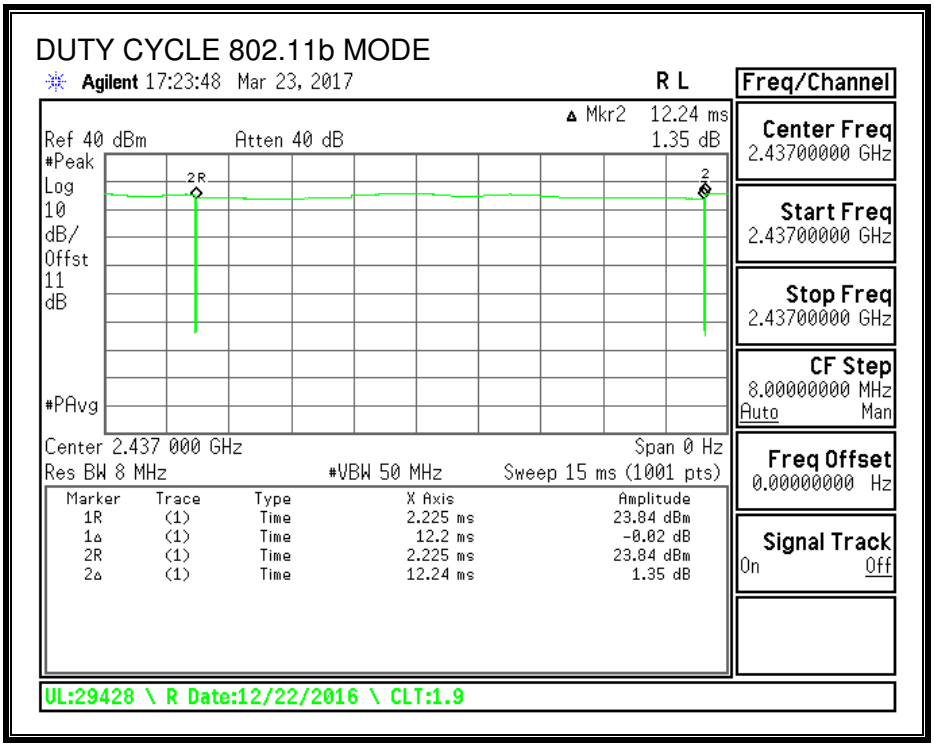
PROCEDURE

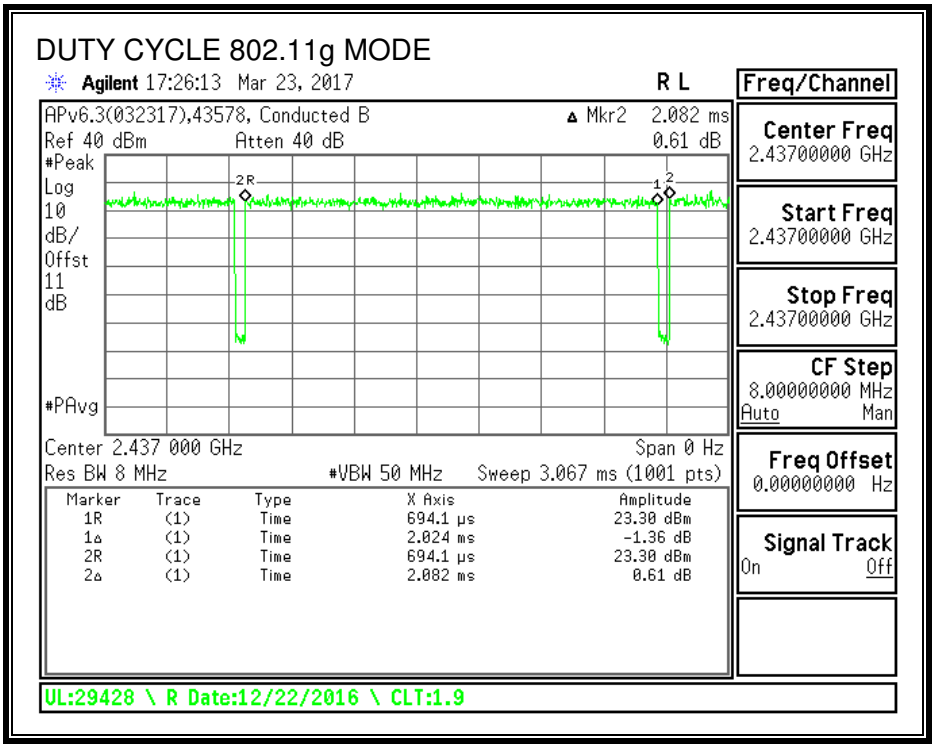
KDB 5558074 Zero-Span Spectrum Analyzer Method.

ON TIME AND DUTY CYCLE RESULTS

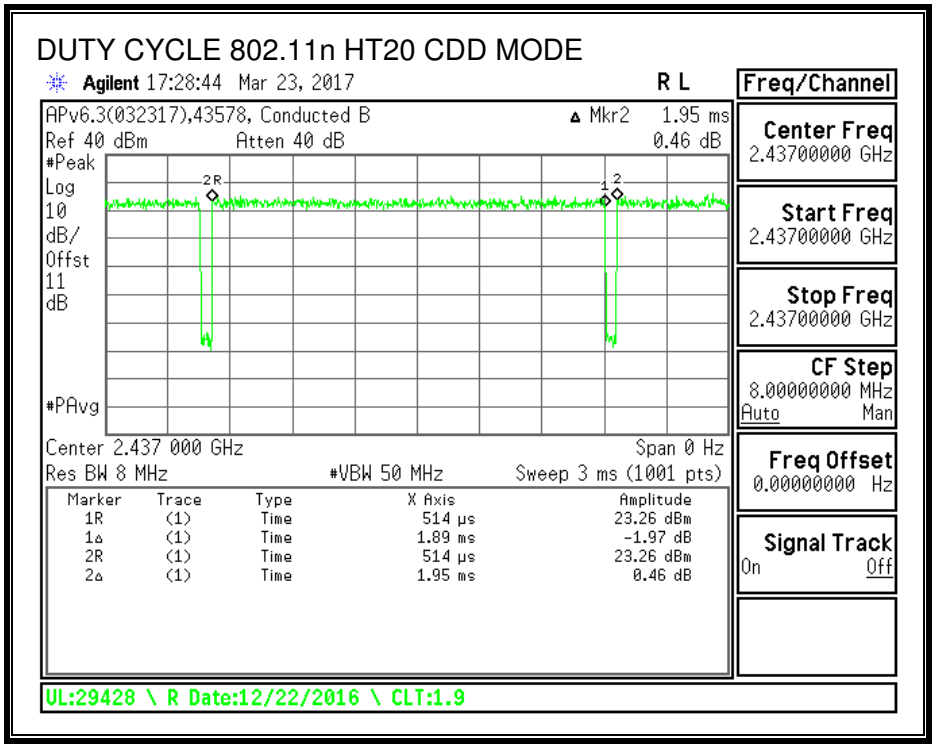
Mode	ON Time (msec)	Period (msec)	Duty Cycle x (linear)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	1/T Minimum VBW (kHz)
802.11b	12.200	12.240	0.997	99.67%	0.00	0.010
802.11g	2.024	2.082	0.972	97.21%	0.12	0.494
802.11n HT20 CDD	1.890	1.950	0.969	96.92%	0.14	0.529
802.11n HT40 CDD	0.926	0.983	0.942	94.22%	0.26	1.080

DUTY CYCLE PLOTS

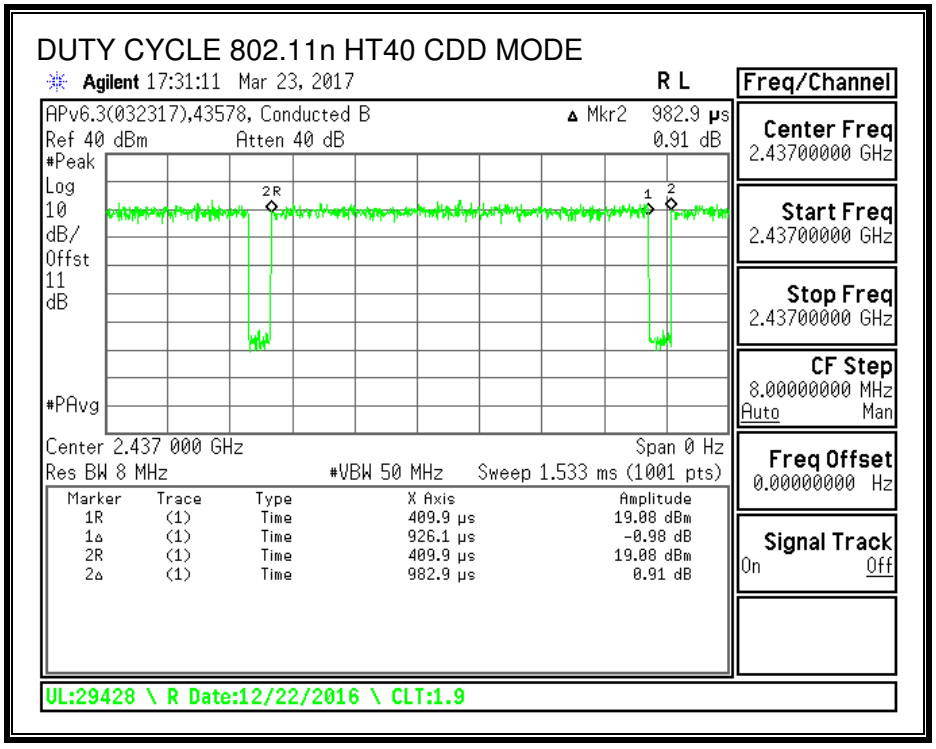




DUTY CYCLE 802.11n HT20 CDD MODE



DUTY CYCLE 802.11n HT40 CDD MODE



9.2. 11b MODE IN THE 2.4GHz BAND

9.2.1. 6 dB BANDWIDTH

LIMITS

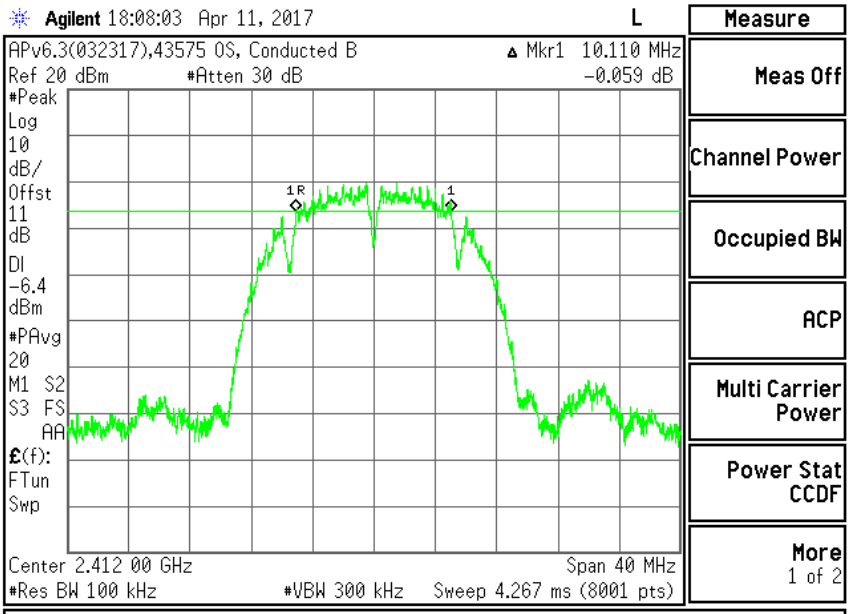
FCC §15.247 (a) (2)
IC RSS-247 (5.2) (1)

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

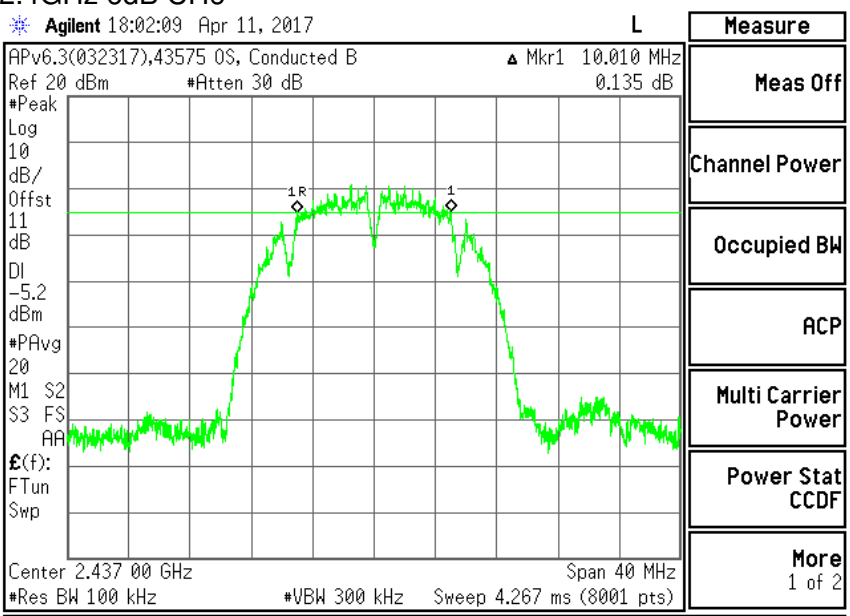
RESULTS

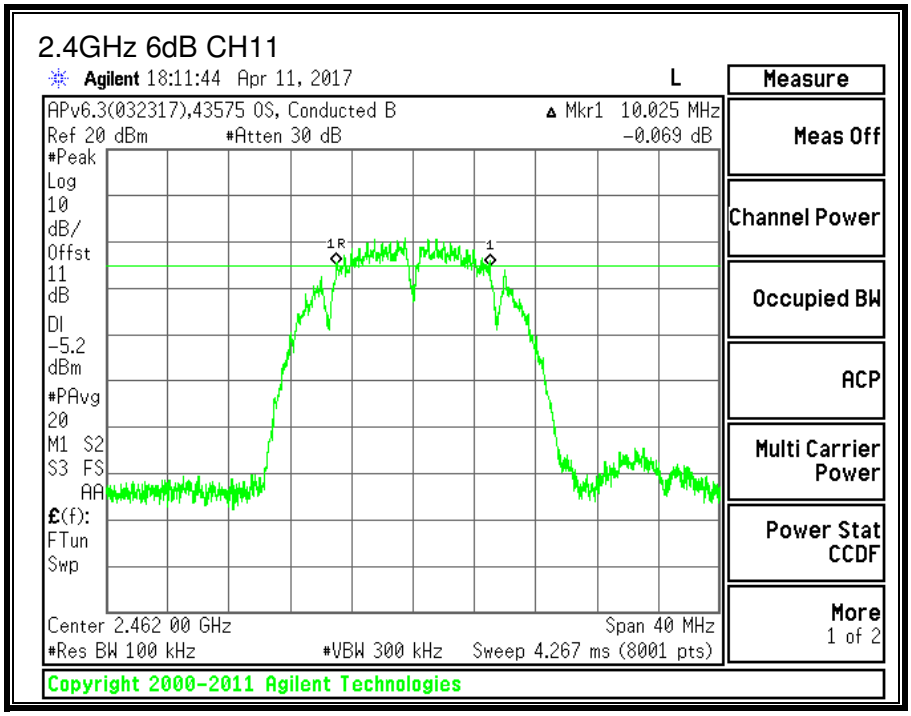
Channel	Frequency (MHz)	6 dB BW (MHz)	Minimum Limit (MHz)
CH1	2412	10.110	0.5
CH6	2437	10.010	0.5
CH11	2462	10.025	0.5

2.4GHz 6dB CH1



2.4GHz 6dB CH6





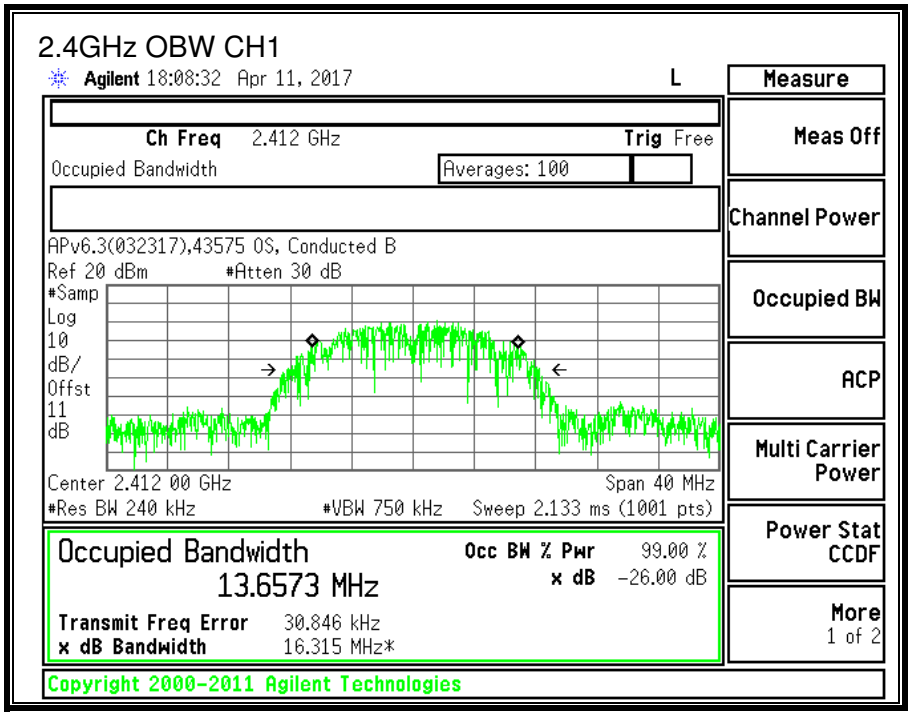
9.2.2. 99% BANDWIDTH

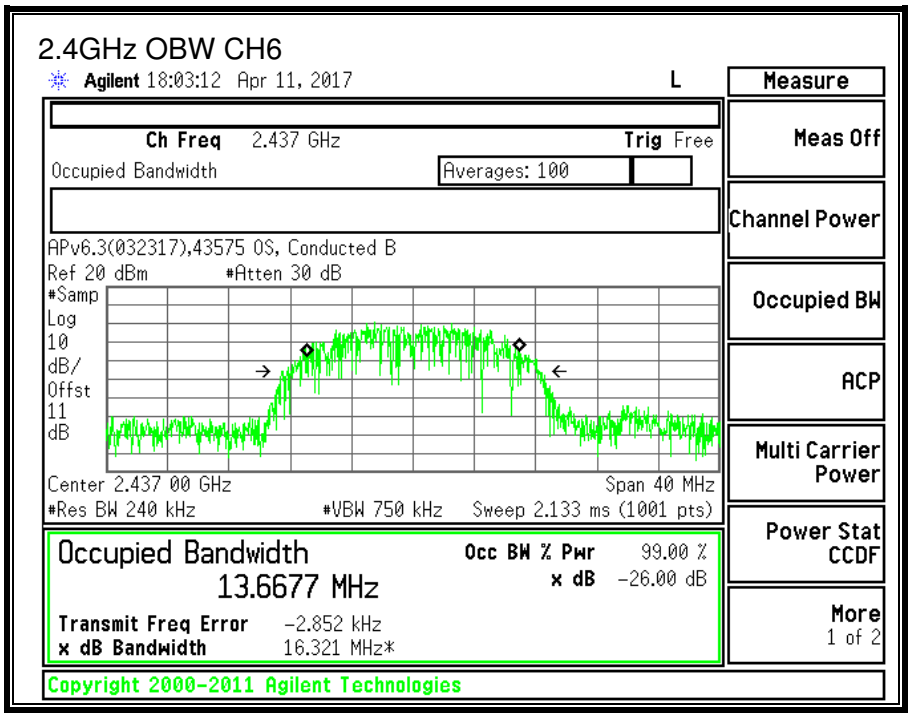
LIMITS

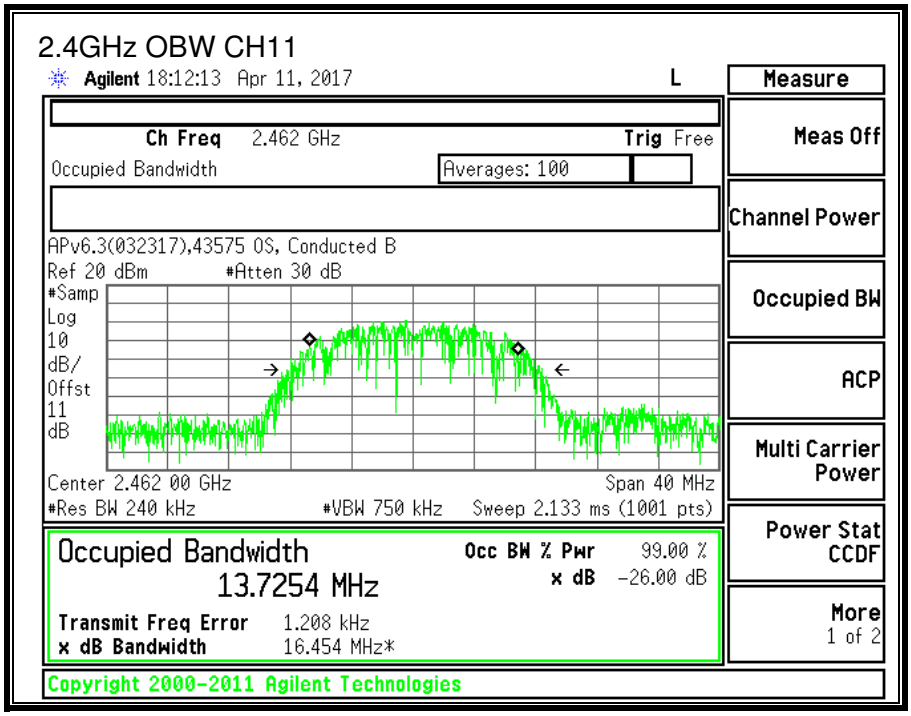
None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
CH1	2412	13.6573
CH6	2437	13.6677
CH11	2462	13.7254







9.2.3. OUTPUT POWER

LIMITS

FCC §15.247 (b) (3)
IC RSS-247 (5.4) (4)

For systems using digital modulation in the 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

KDB 558074 D01 v03r05 Section 9.2.3.2

RESULTS

ID:	43575	Date:	04/11/2017

Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Max Power (dBm)
CH1	2412	-1.45	30.00	30	36	30.00
CH6	2437	-1.45	30.00	30	36	30.00
CH11	2462	-1.45	30.00	30	36	30.00

Results

Channel	Frequency (MHz)	Meas Power (dBm)	Power Limit (dBm)	Margin (dB)
CH1	2412	12.59	30.00	-17.41
CH6	2437	13.92	30.00	-16.08
CH11	2462	13.88	30.00	-16.12

9.2.4. POWER SPECTRAL DENSITY

LIMITS

FCC §15.247 (e)
IC RSS-247 (5.2) (2)

For digitally modulated systems, the power spectral density conducted form the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 KHz band during any time interval of continuous transmissions.

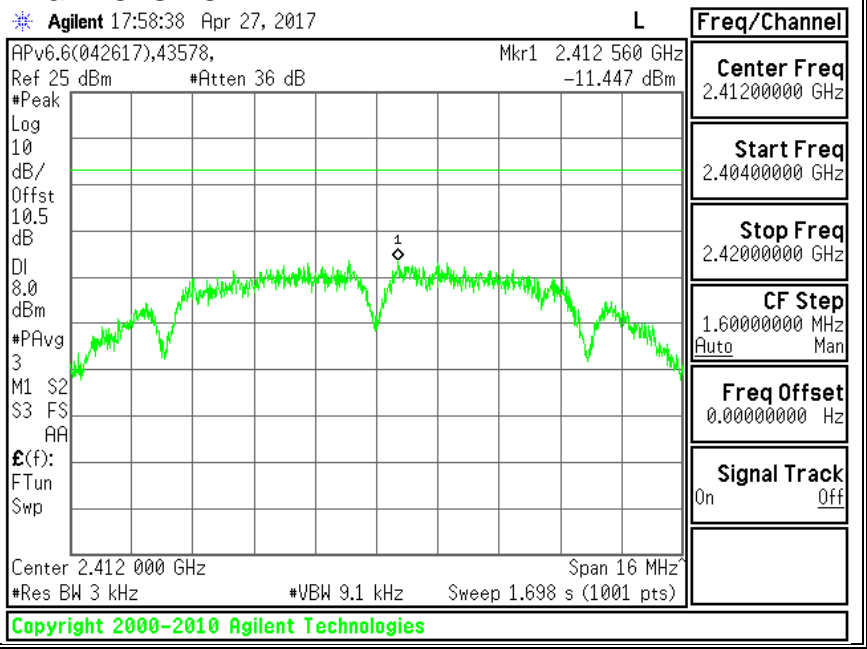
RESULTS

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

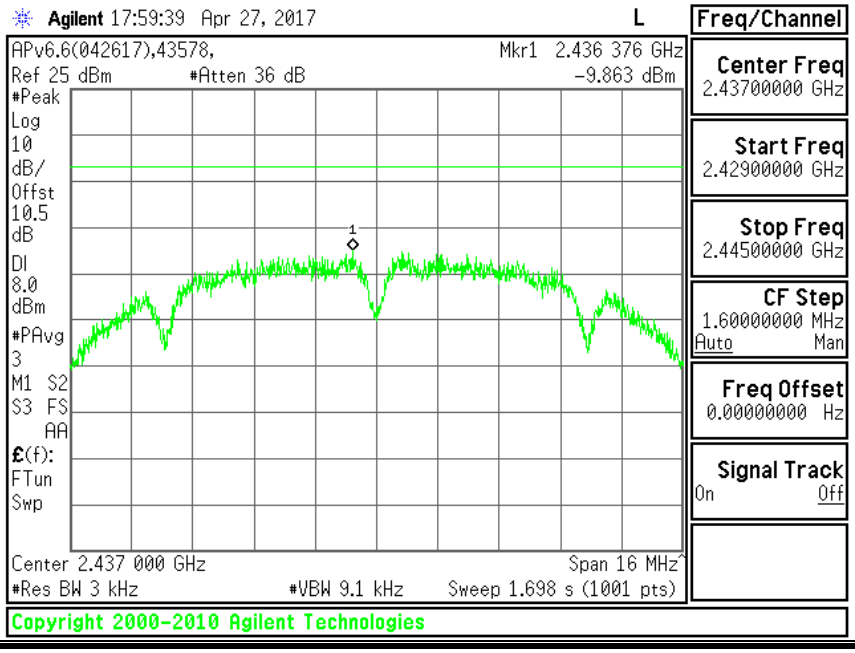
PSD Results

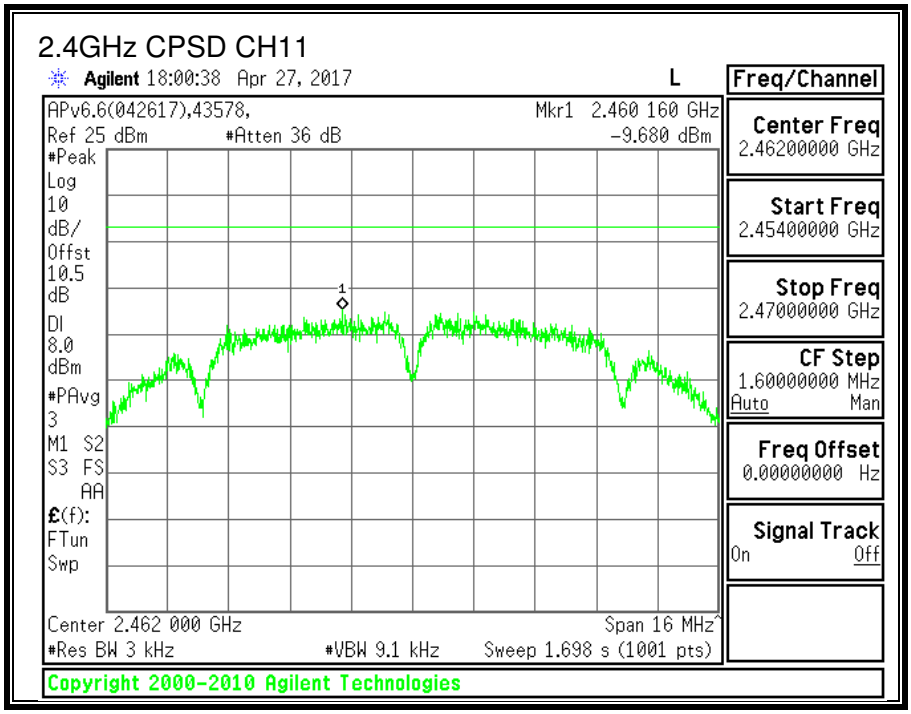
Channel	Frequency (MHz)	Meas (dBm)	Total Corr'd PSD (dBm)	Limit (dBm)	Margin (dB)
CH1	2412	-11.447	-11.45	8.0	-19.4
CH6	2437	-9.863	-9.86	8.0	-17.9
CH11	2462	-9.680	-9.68	8.0	-17.7

2.4GHz CPSD CH1



2.4GHz CPSD CH6





9.2.5. CONDUCTED BANDEDGE AND SPURIOUS EMISSIONS

LIMITS

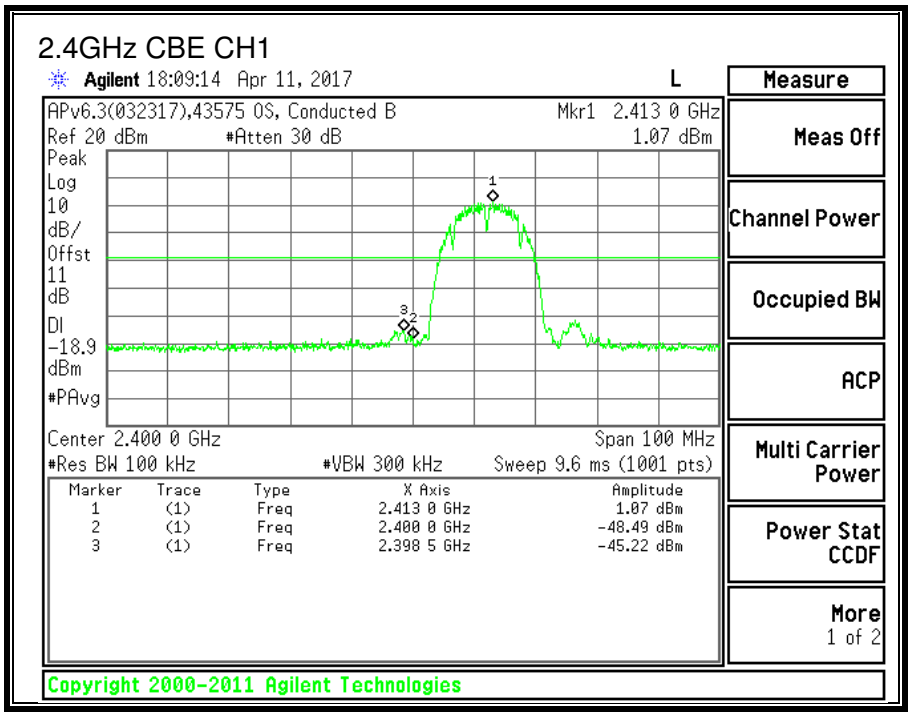
FCC §15.247 (d)

IC RSS-247 (5.5)

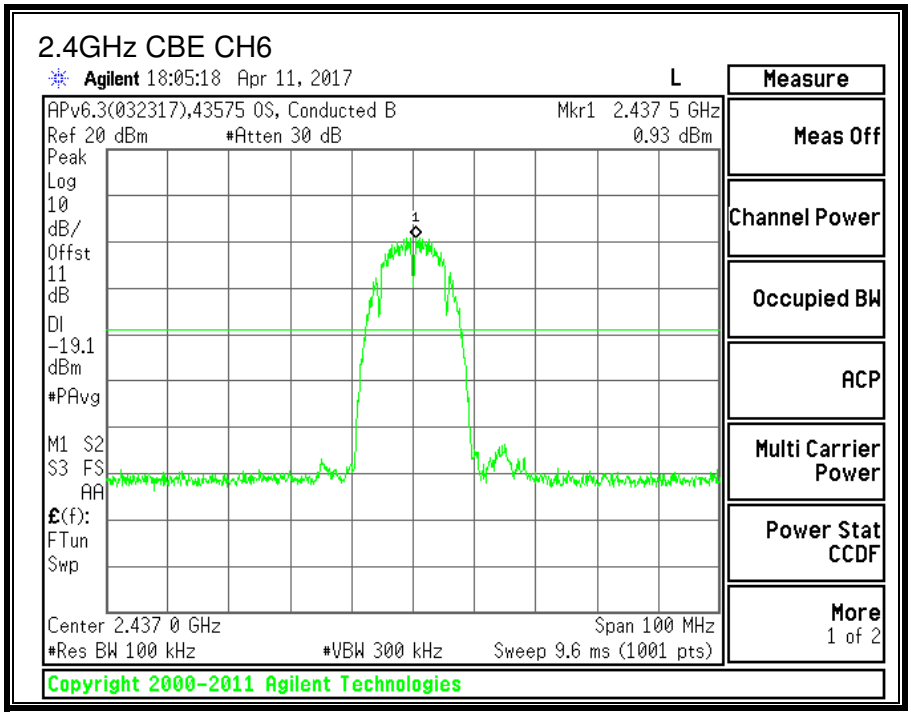
Output power was measured based on the use of a peak measurement, therefore the required attenuation is 20 dB.

RESULTS:

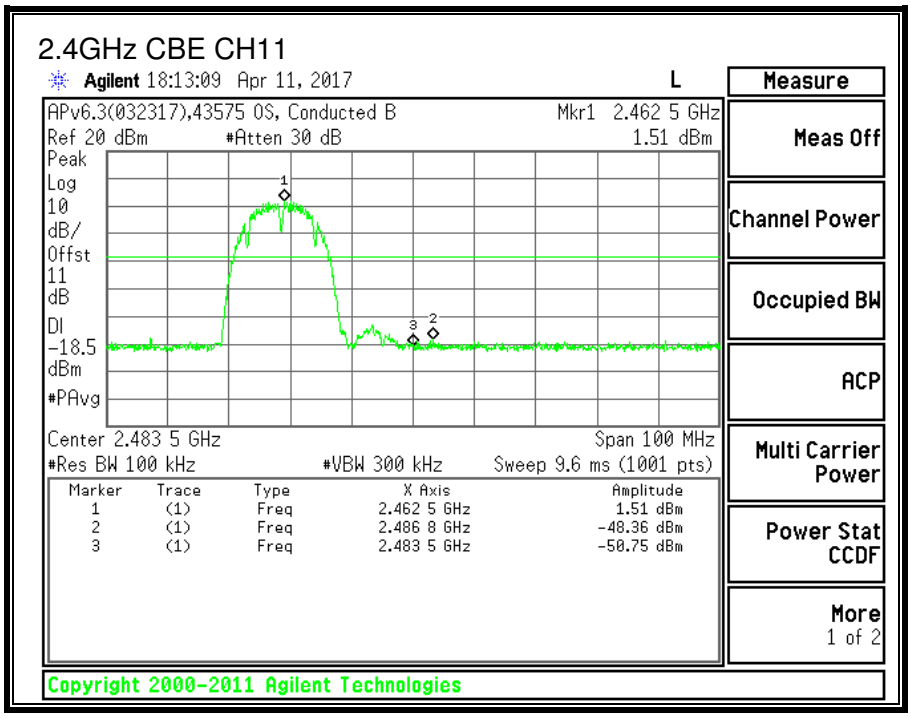
CONDUCTED BANDEDGE:



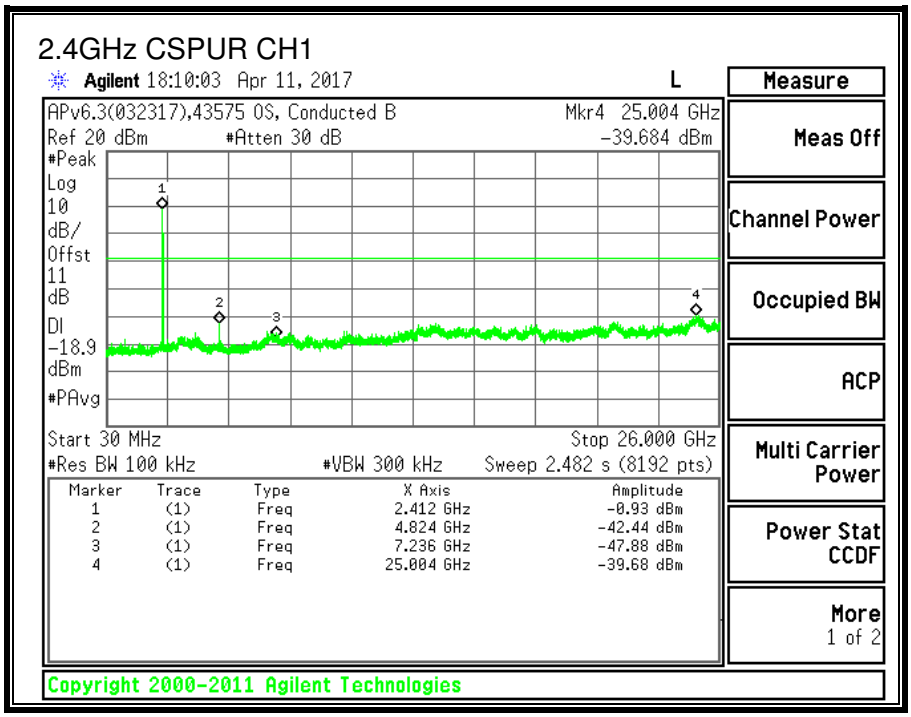
2.4GHz CBE CH6

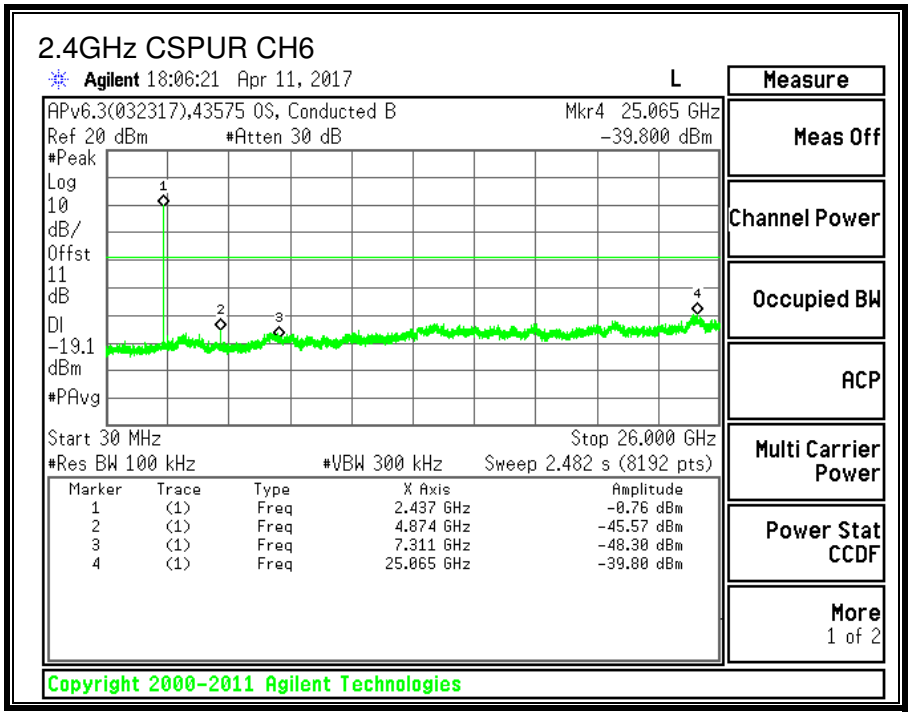


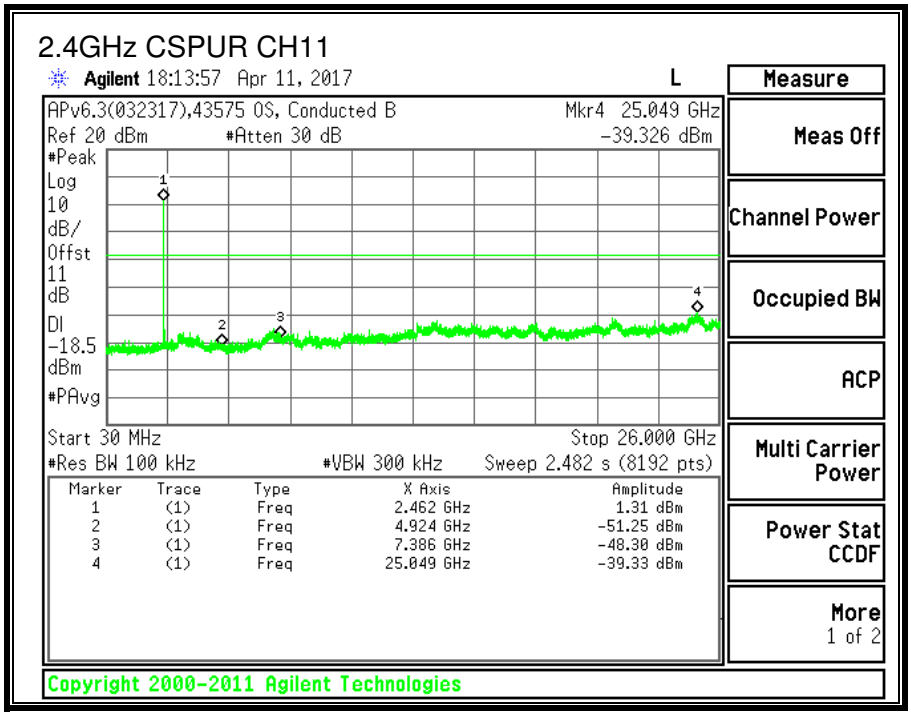
2.4GHz CBE CH11



CONDUCTED SPURIOUS EMISSIONS:







9.3. 11g MODE IN THE 2.4GHz BAND

9.3.1. 6 dB BANDWIDTH

LIMITS

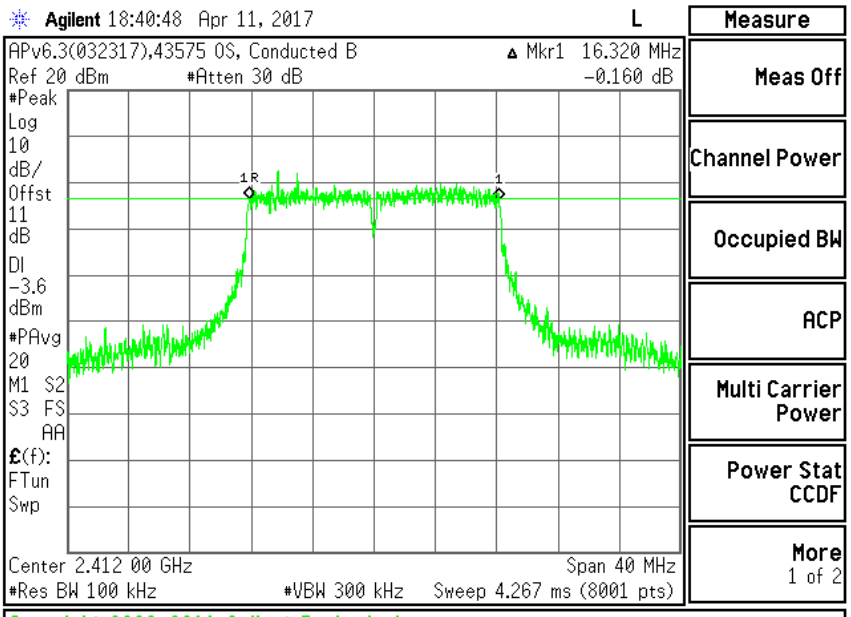
FCC §15.247 (a) (2)
IC RSS-247 (5.2) (1)

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

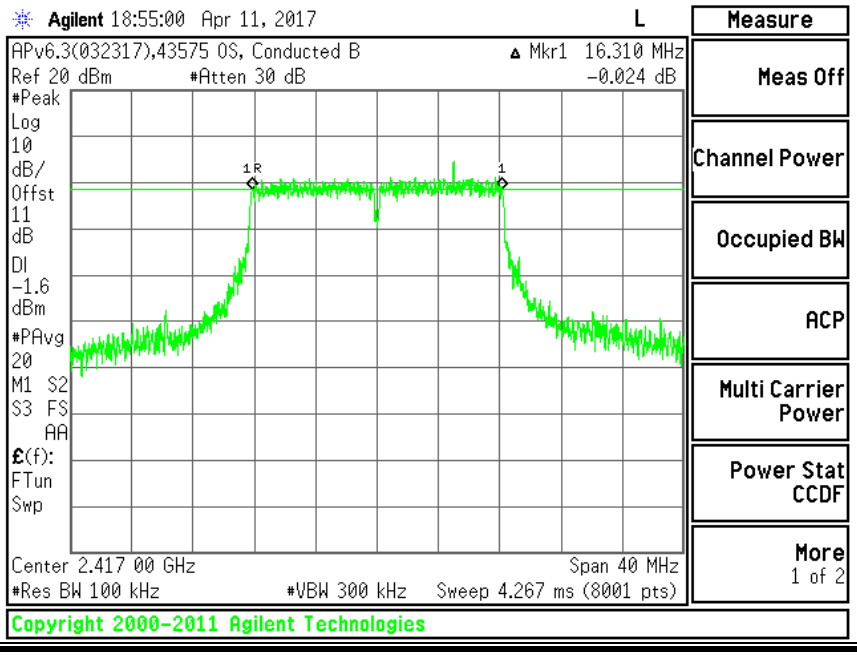
RESULTS

Channel	Frequency (MHz)	6 dB BW (MHz)	Minimum Limit (MHz)
CH1	2412	16.320	0.5
CH2	2417	16.310	0.5
CH6	2437	16.340	0.5
CH10	2457	16.300	0.5
CH11	2462	16.320	0.5

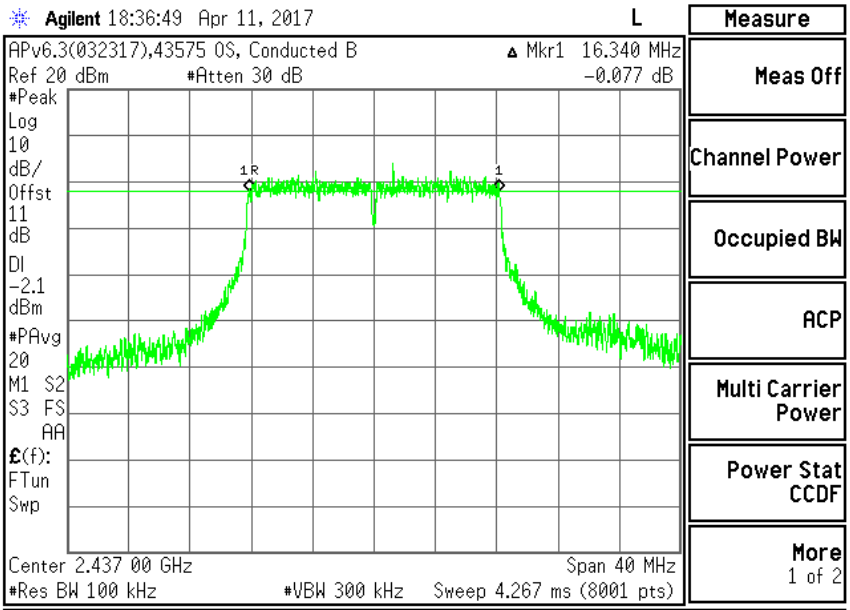
2.4GHz 6dB CH1



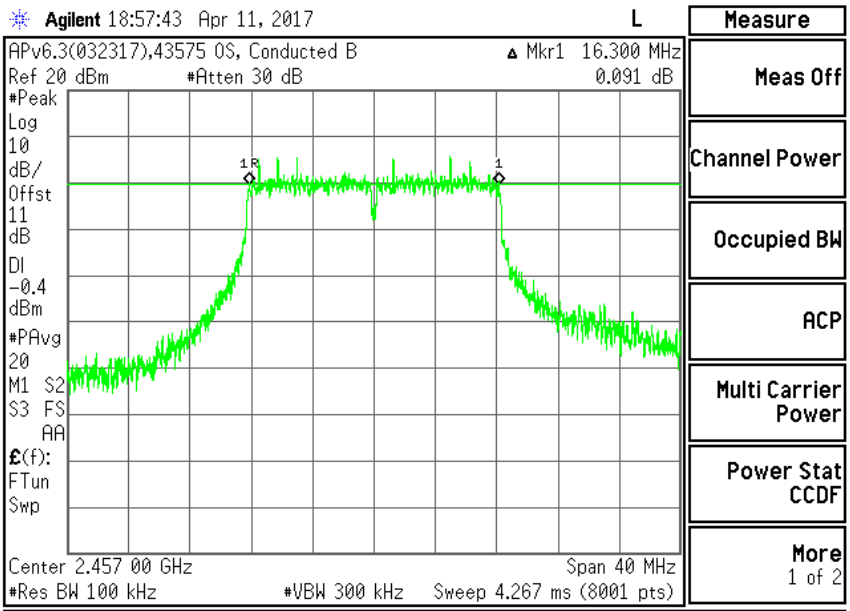
2.4GHz 6dB CH2

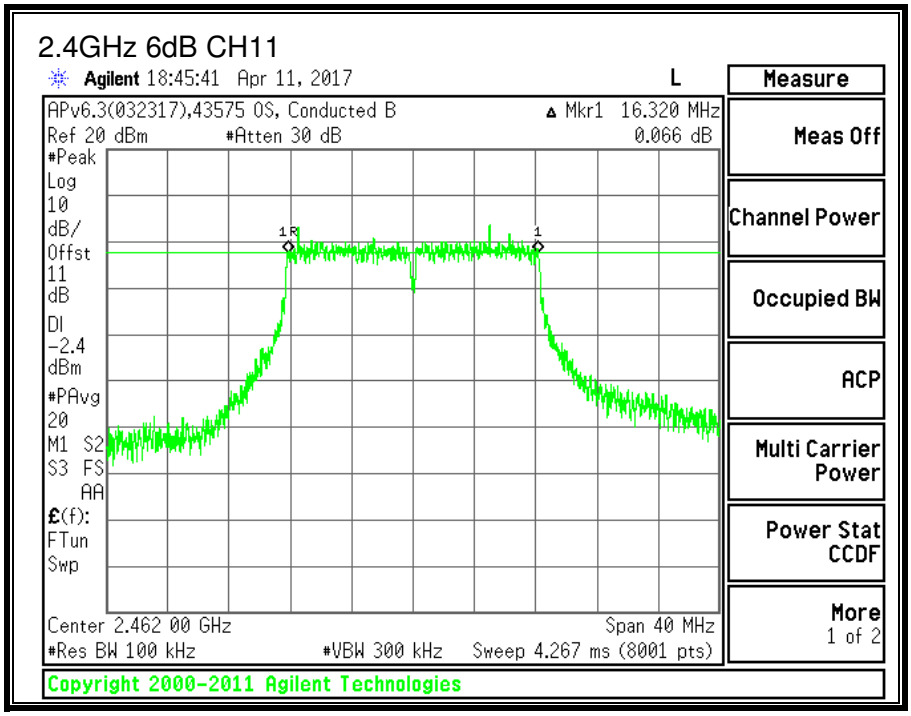


2.4GHz 6dB CH6



2.4GHz 6dB CH10





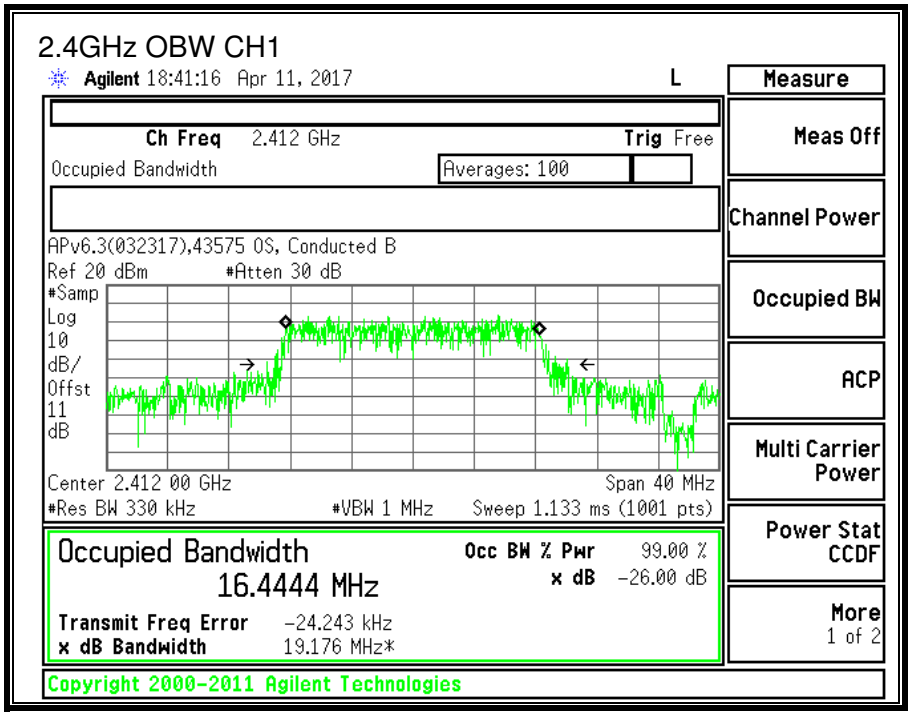
9.3.2. 99% BANDWIDTH

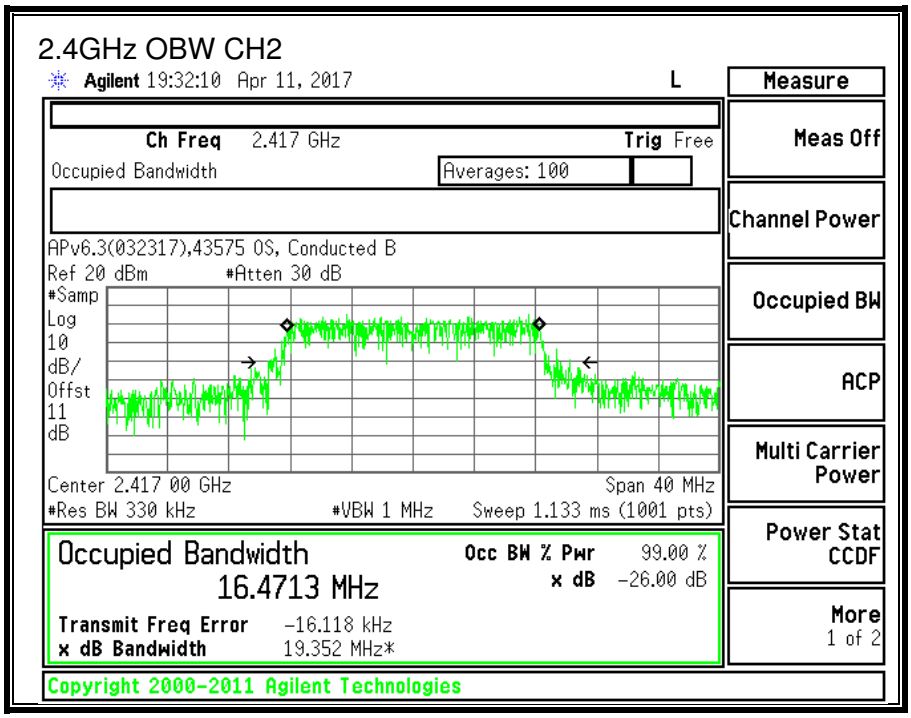
LIMITS

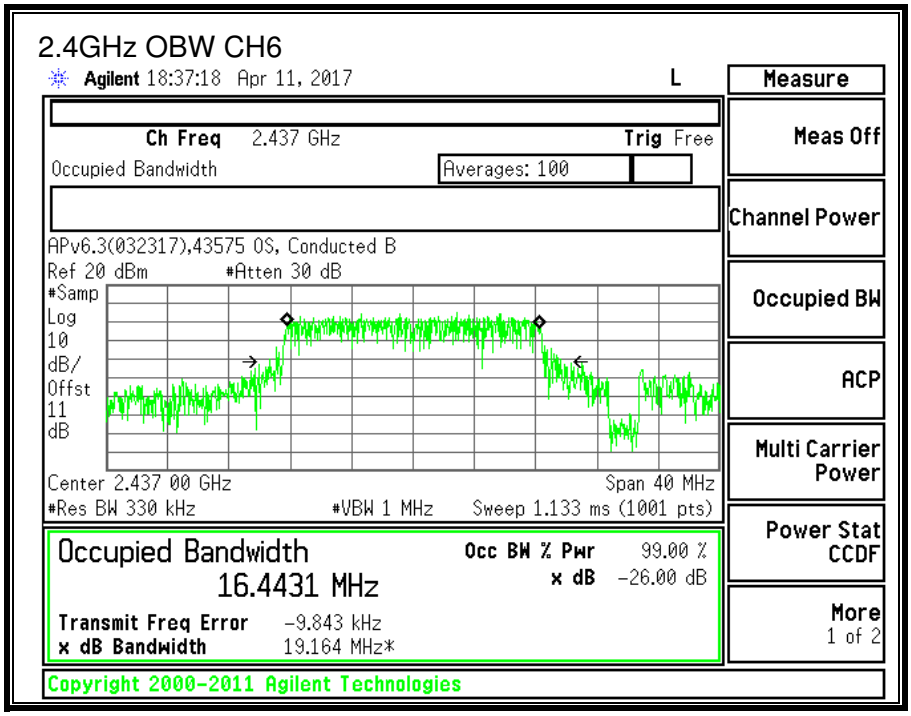
None; for reporting purposes only.

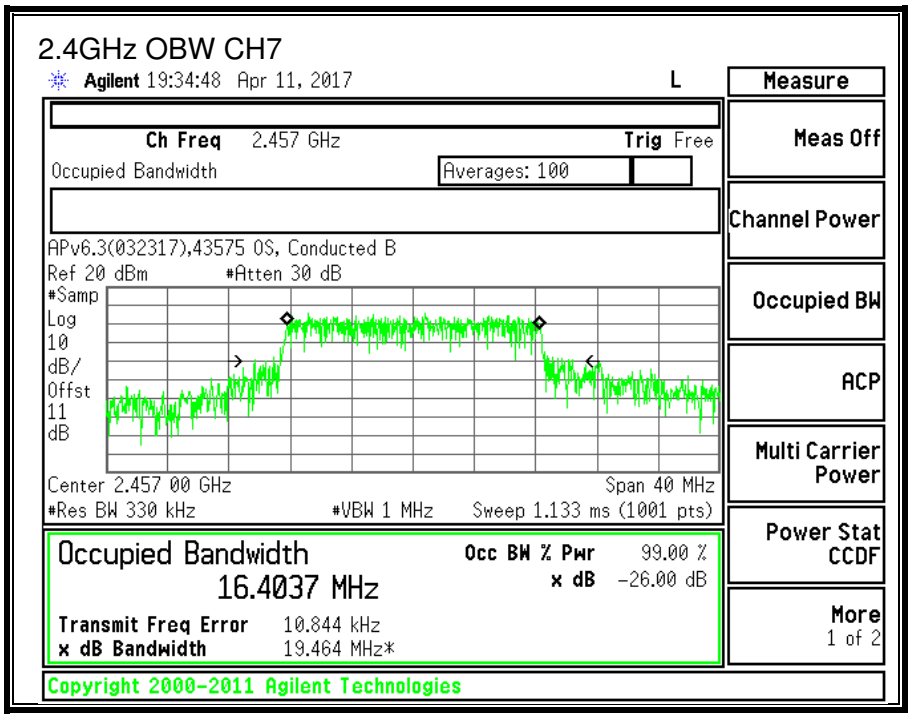
RESULTS

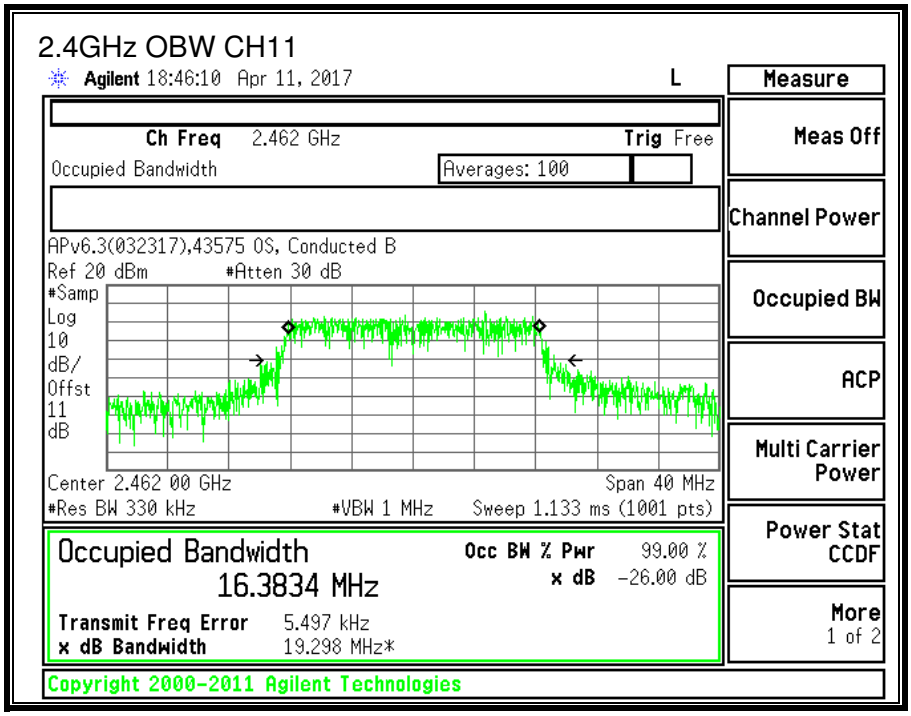
Channel	Frequency (MHz)	99% Bandwidth (MHz)
CH1	2412	16.4444
CH2	2417	16.4713
CH6	2437	16.4431
CH10	2457	16.4037
CH11	2462	16.3834











9.3.3. OUTPUT POWER

LIMITS

FCC §15.247 (b) (3)
IC RSS-247 (5.4) (4)

For systems using digital modulation in the 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

KDB 558074 D01 v03r05 Section 9.2.3.2

RESULTS

ID:	43575	Date:	04/11/2017

Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Max Power (dBm)
CH1	2412	-1.45	30.00	30	36	30.00
CH2	2417	-1.45	30.00	30	36	30.00
CH6	2437	-1.45	30.00	30	36	30.00
CH10	2457	-1.45	30.00	30	36	30.00
CH11	2462	-1.45	30.00	30	36	30.00

Results

Channel	Frequency (MHz)	Meas Power (dBm)	Power Limit (dBm)	Margin (dB)
CH1	2412	13.51	30.00	-16.49
CH2	2417	15.42	30.00	-14.58
CH6	2437	15.34	30.00	-14.66
CH10	2457	16.20	30.00	-13.80
CH11	2462	14.58	30.00	-15.42

9.3.4. POWER SPECTRAL DENSITY

LIMITS

FCC §15.247 (e)
IC RSS-247 (5.2) (2)

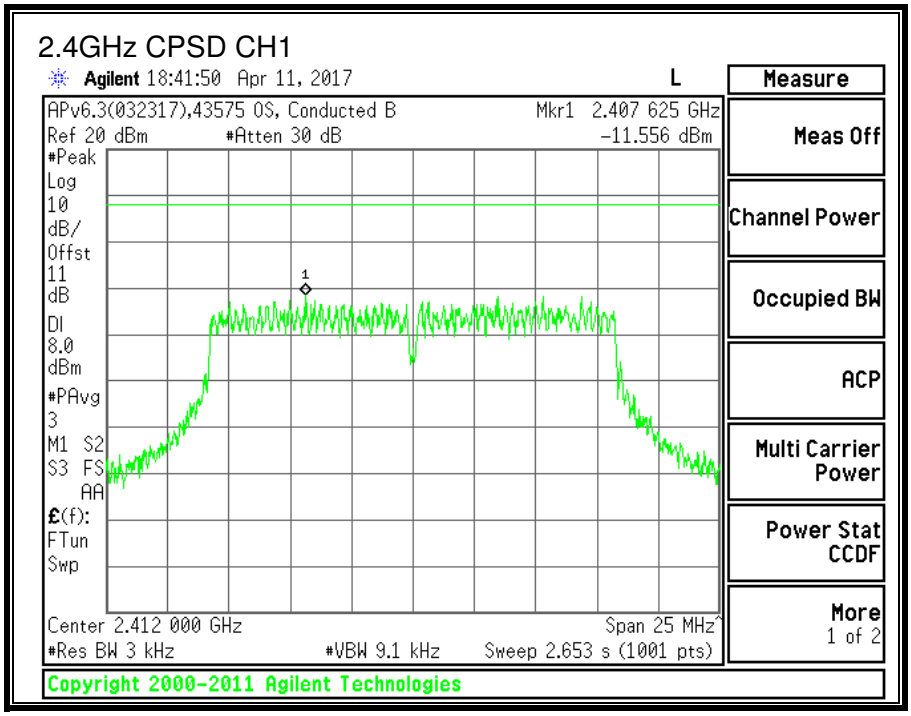
For digitally modulated systems, the power spectral density conducted form the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 KHz band during any time interval of continuous transmissions.

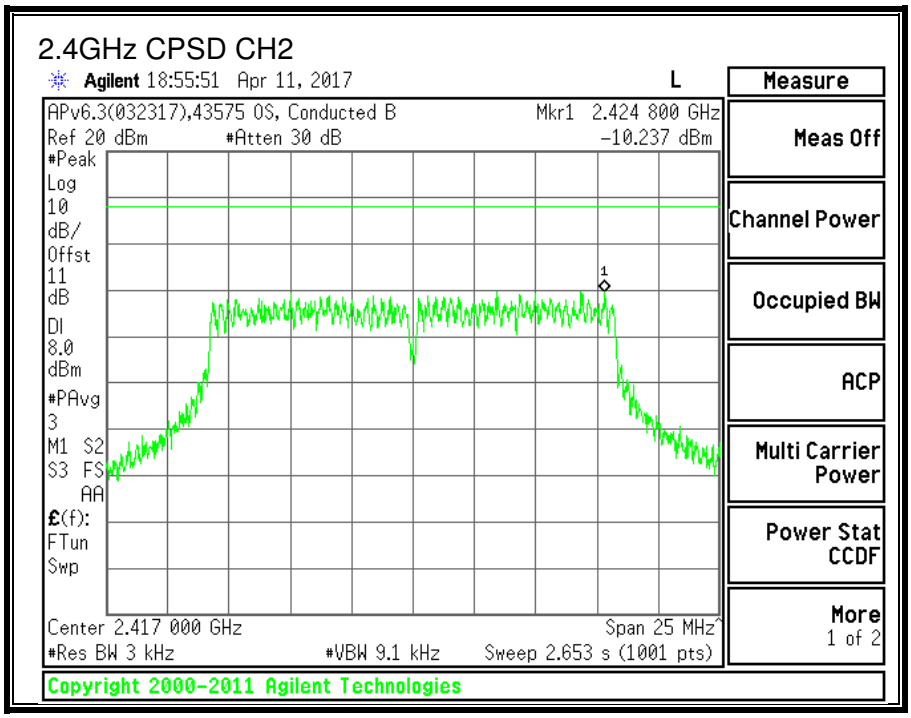
RESULTS

Duty Cycle CF (dB)	0.12	Included in Calculations of Corr'd PSD

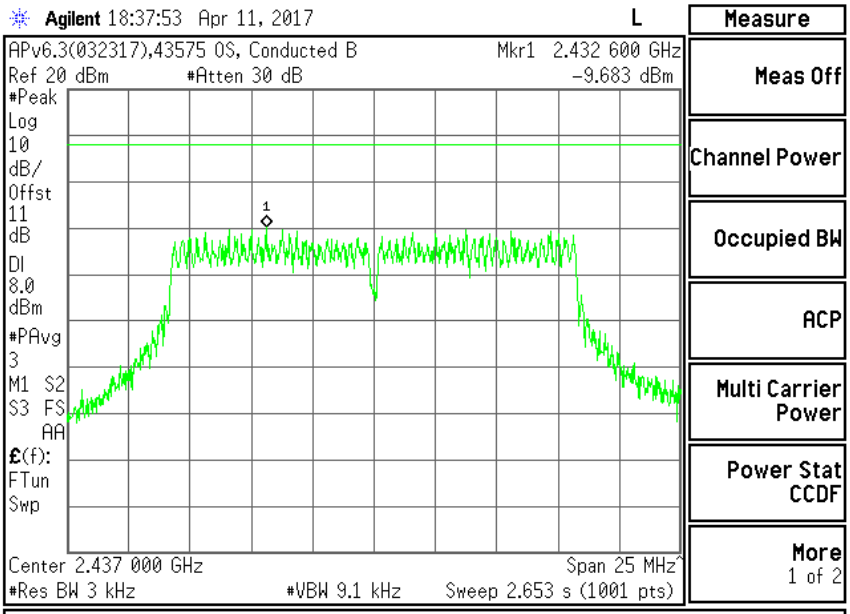
PSD Results

Channel	Frequency (MHz)	Meas (dBm)	Total Corr'd PSD (dBm)	Limit (dBm)	Margin (dB)
CH1	2412	-11.556	-11.44	8.0	-19.4
CH2	2417	-10.237	-10.12	8.0	-18.1
CH6	2437	-9.683	-9.56	8.0	-17.6
CH10	2457	-8.602	-8.48	8.0	-16.5
CH11	2462	-10.494	-10.37	8.0	-18.4

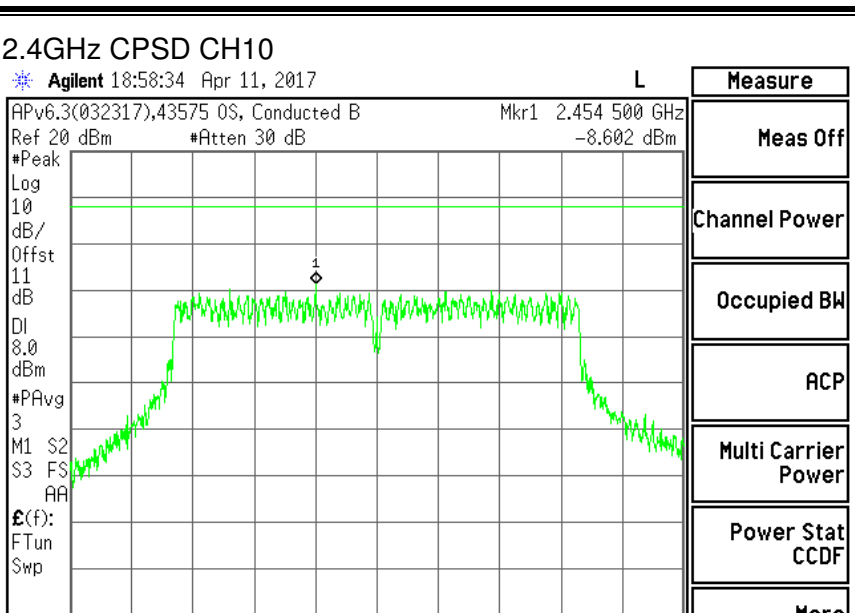


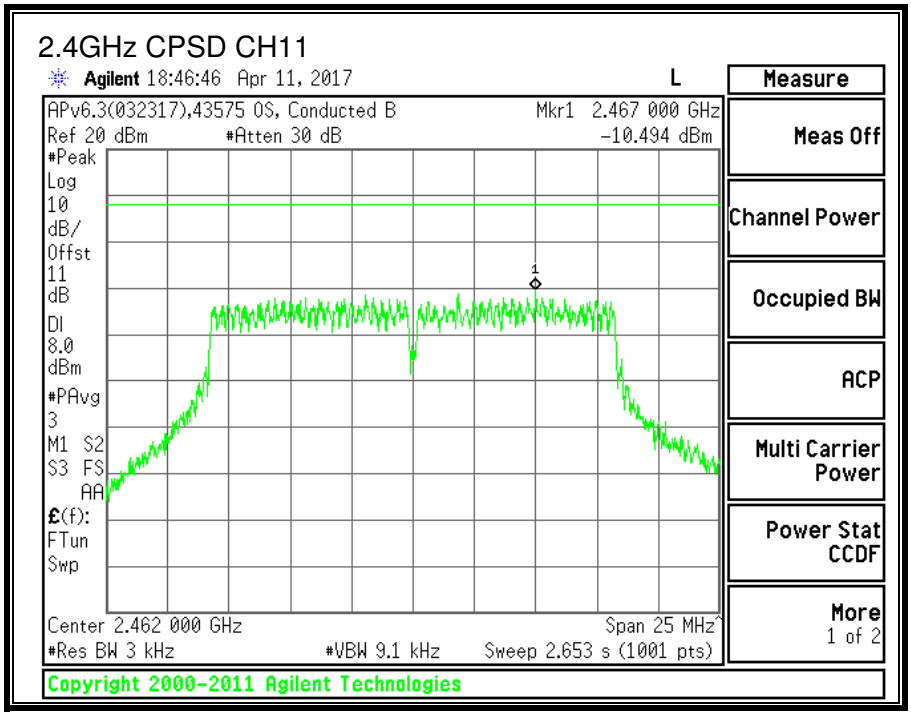


2.4GHz CPSD CH6



2.4GHz CPSD CH10





9.3.5. CONDUCTED BANDEDGE AND SPURIOUS EMISSIONS

LIMITS

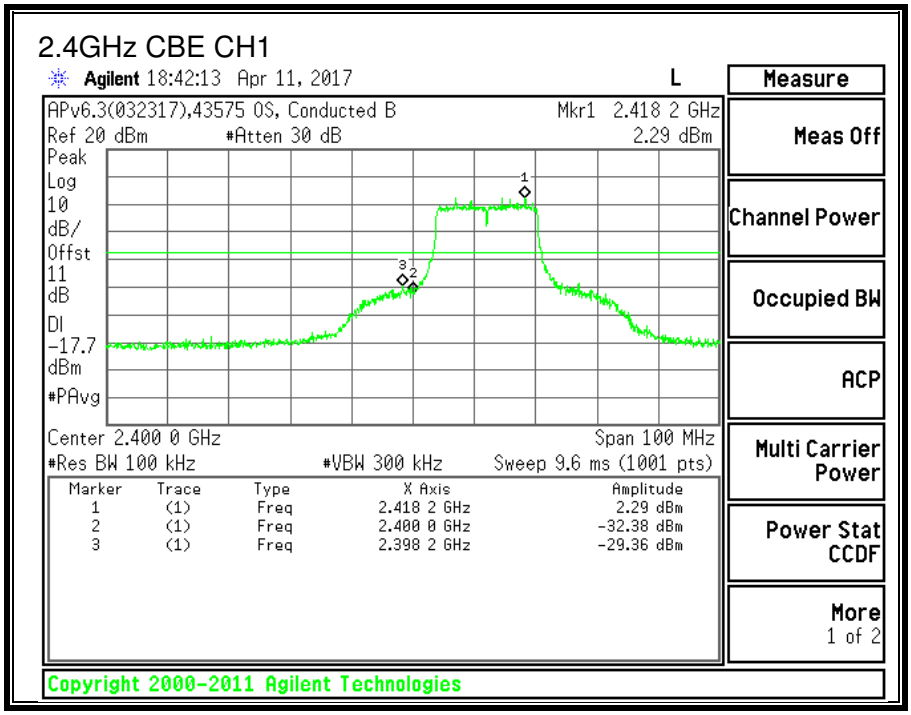
FCC §15.247 (d)

IC RSS-247 (5.5)

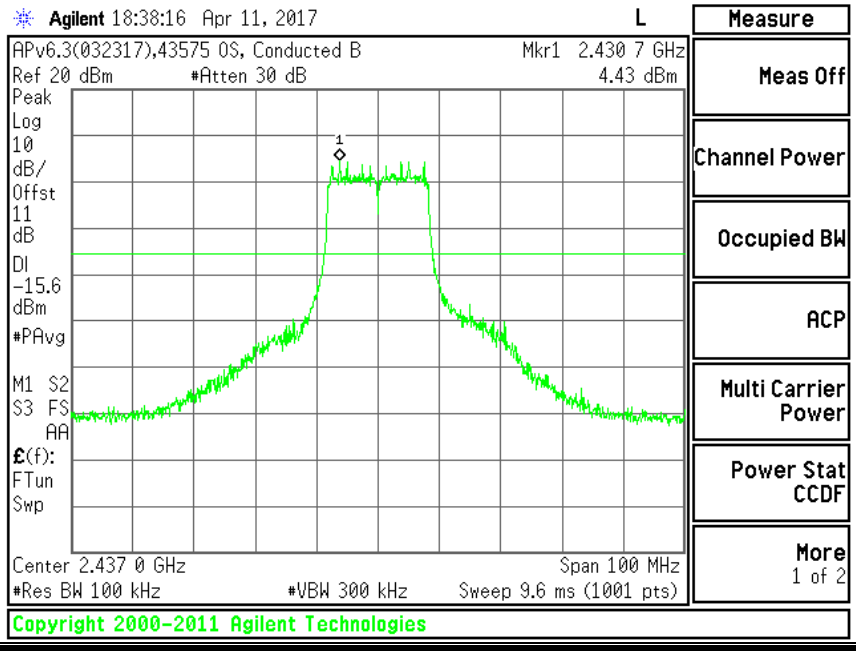
Output power was measured based on the use of a peak measurement, therefore the required attenuation is 20 dB.

RESULTS:

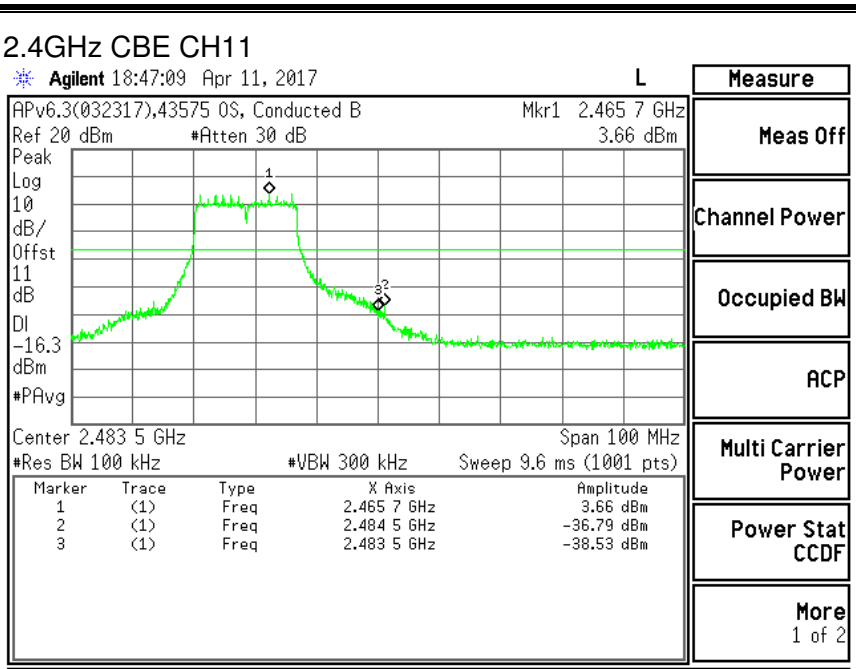
CONDUCTED BANDEDGE:



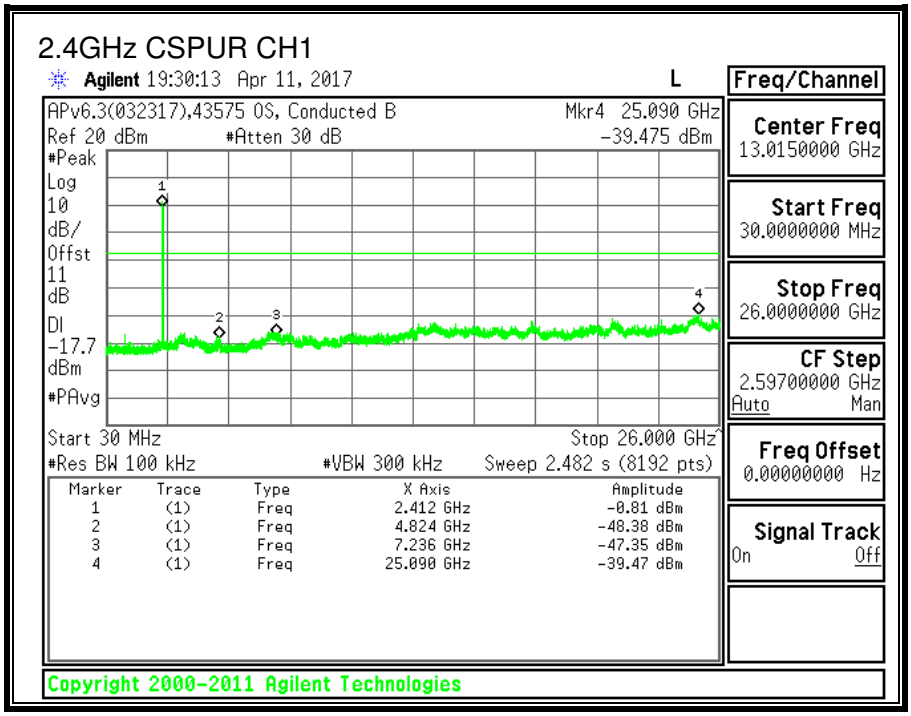
2.4GHz CBE CH6

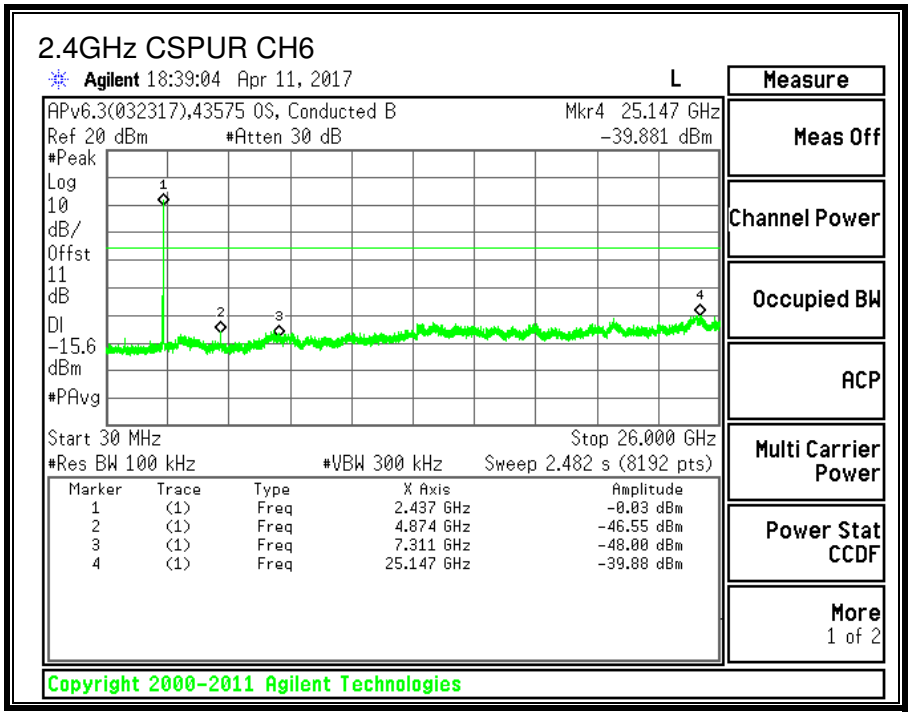


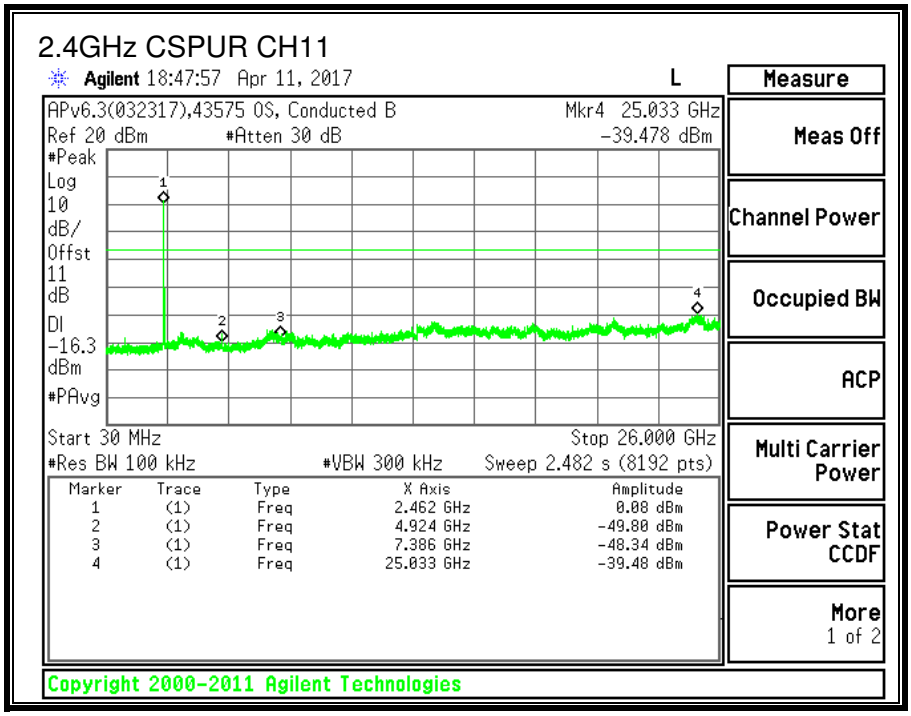
2.4GHz CBE CH11



CONDUCTED SPURIOUS EMISSIONS:







9.4. 11n HT20 MODE IN THE 2.4GHz BAND

9.4.1. 6 dB BANDWIDTH

LIMITS

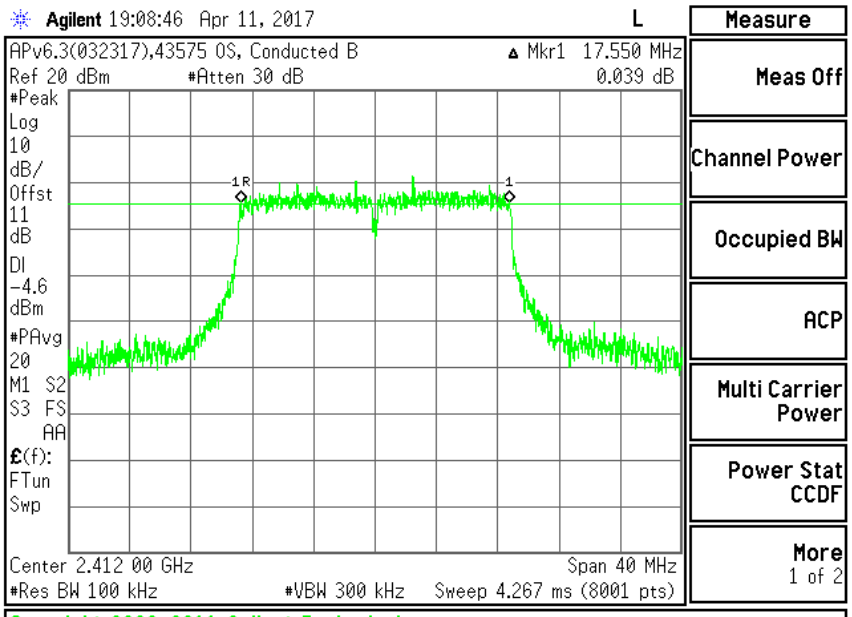
FCC §15.247 (a) (2)
IC RSS-247 (5.2) (1)

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

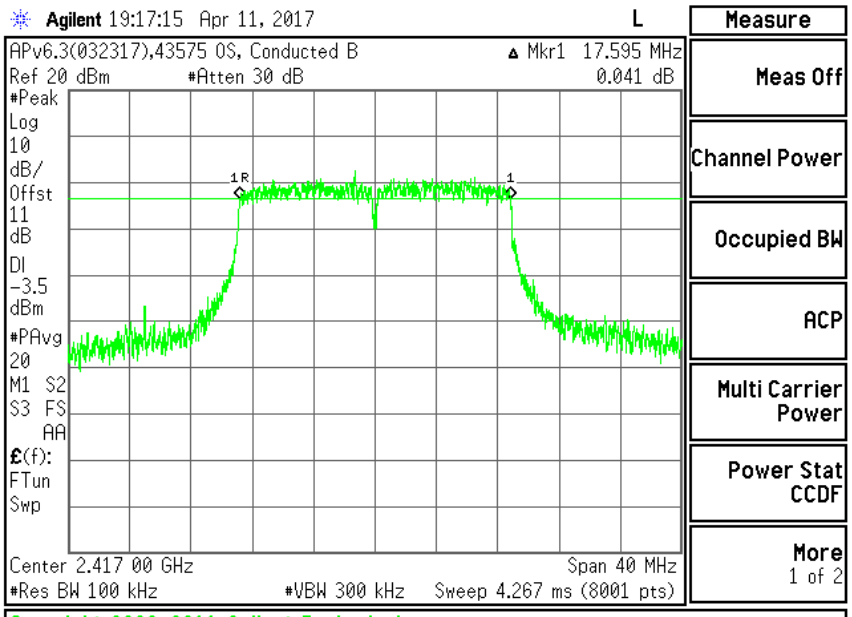
RESULTS

Channel	Frequency (MHz)	6 dB BW (MHz)	Minimum Limit (MHz)
CH1	2412	17.550	0.5
CH2	2417	17.595	0.5
CH6	2437	17.570	0.5
CH10	2457	17.625	0.5
CH11	2462	17.525	0.5

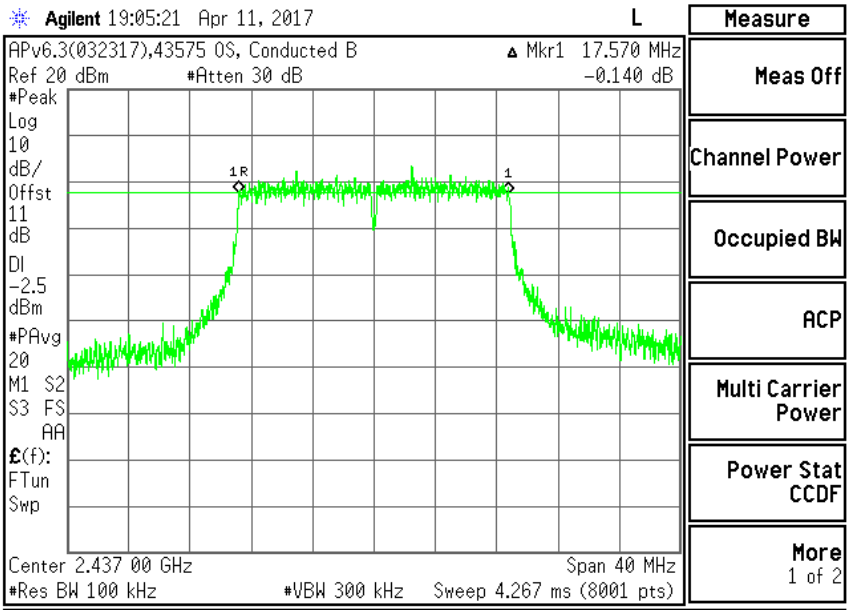
2.4GHz 6dB CH1



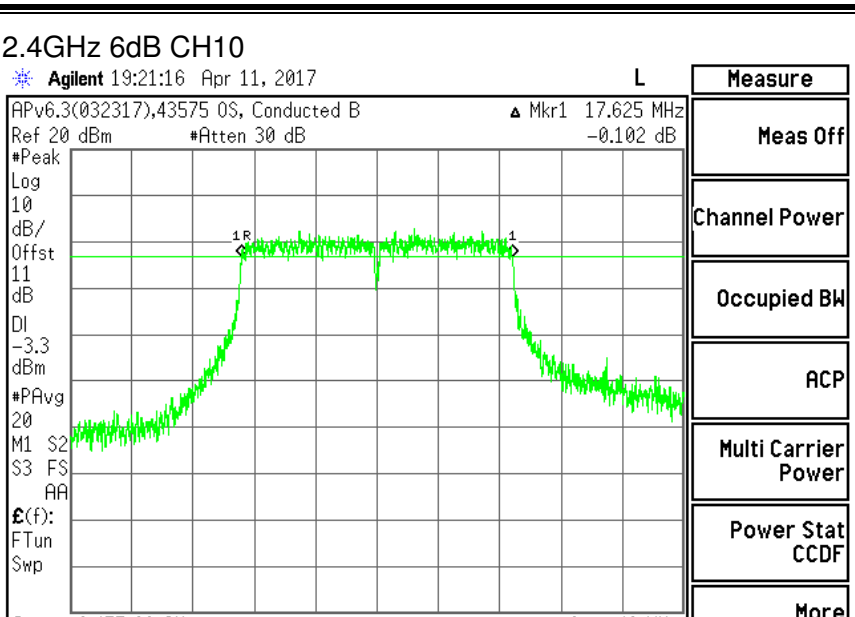
2.4GHz 6dB CH2

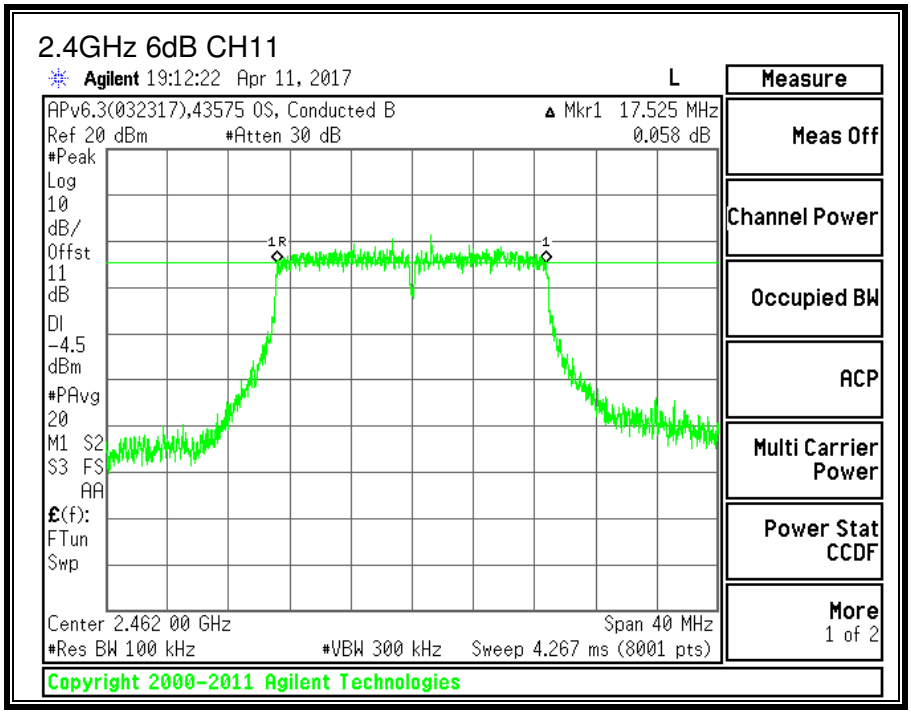


2.4GHz 6dB CH6



2.4GHz 6dB CH10





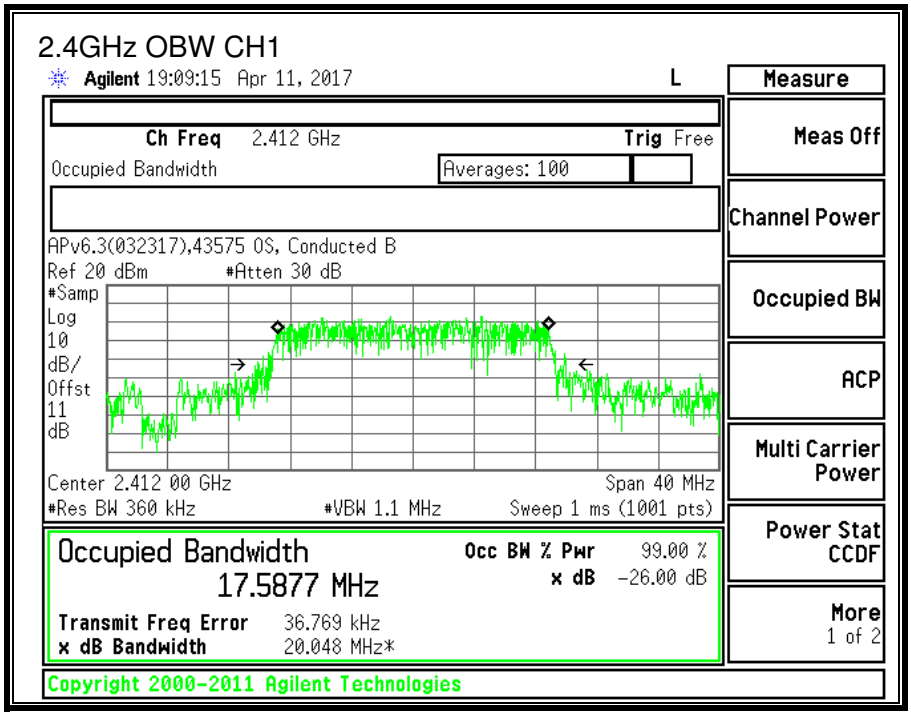
9.4.2. 99% BANDWIDTH

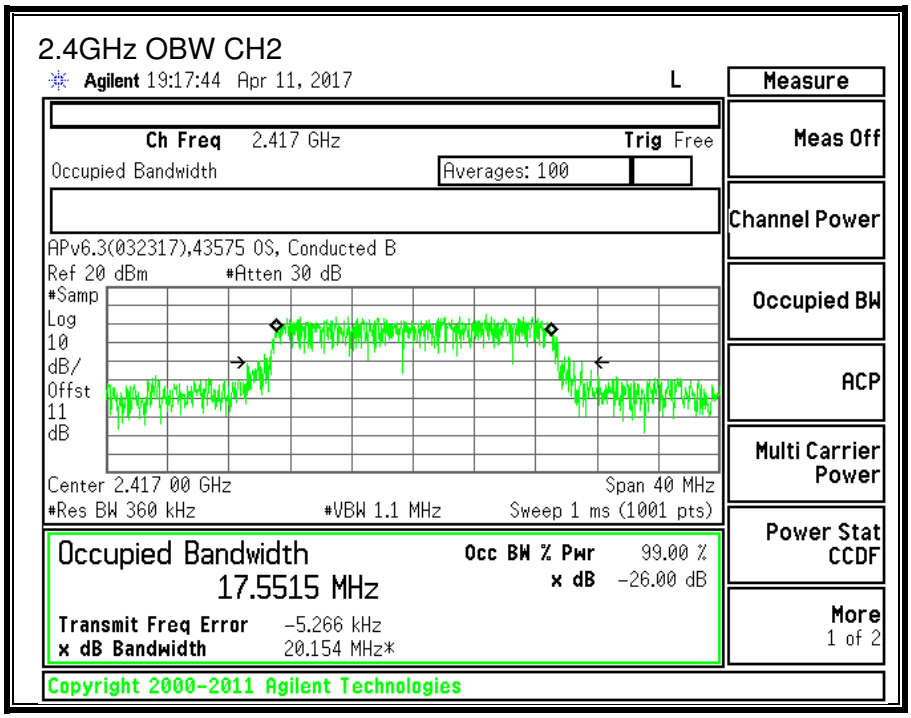
LIMITS

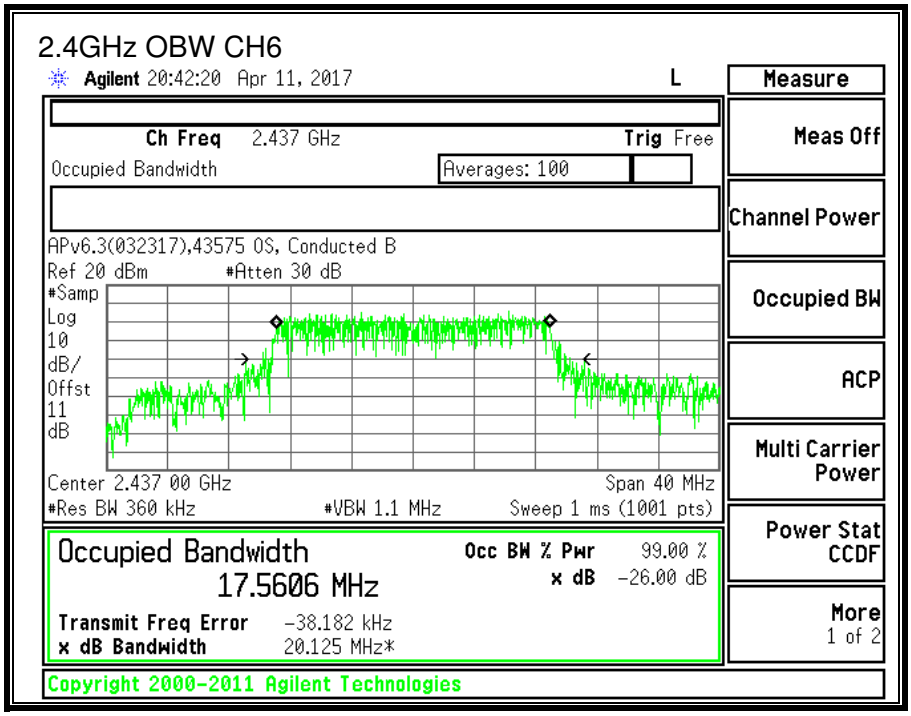
None; for reporting purposes only.

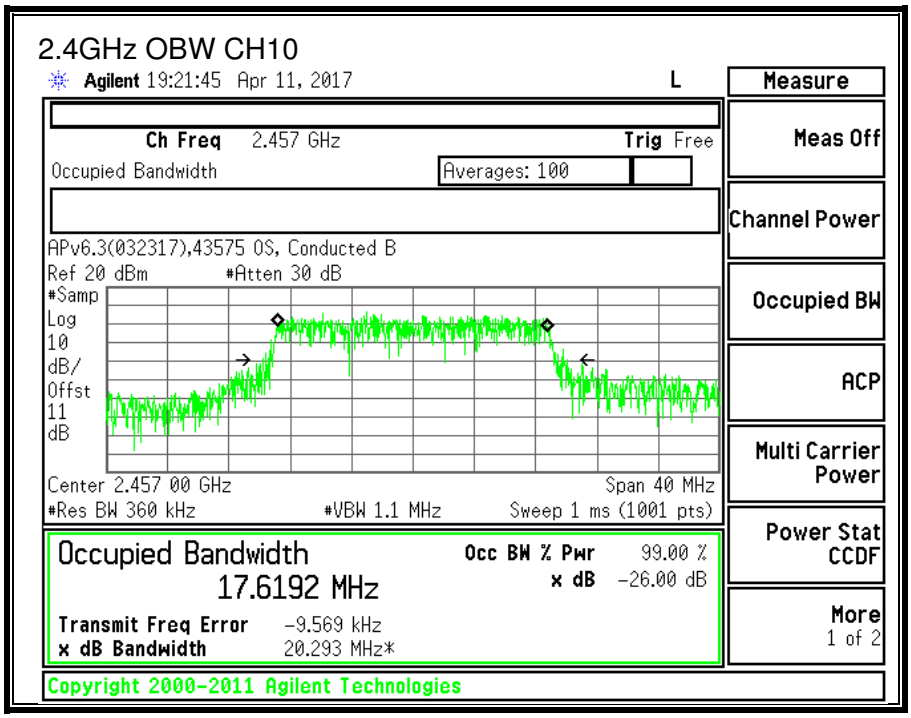
RESULTS

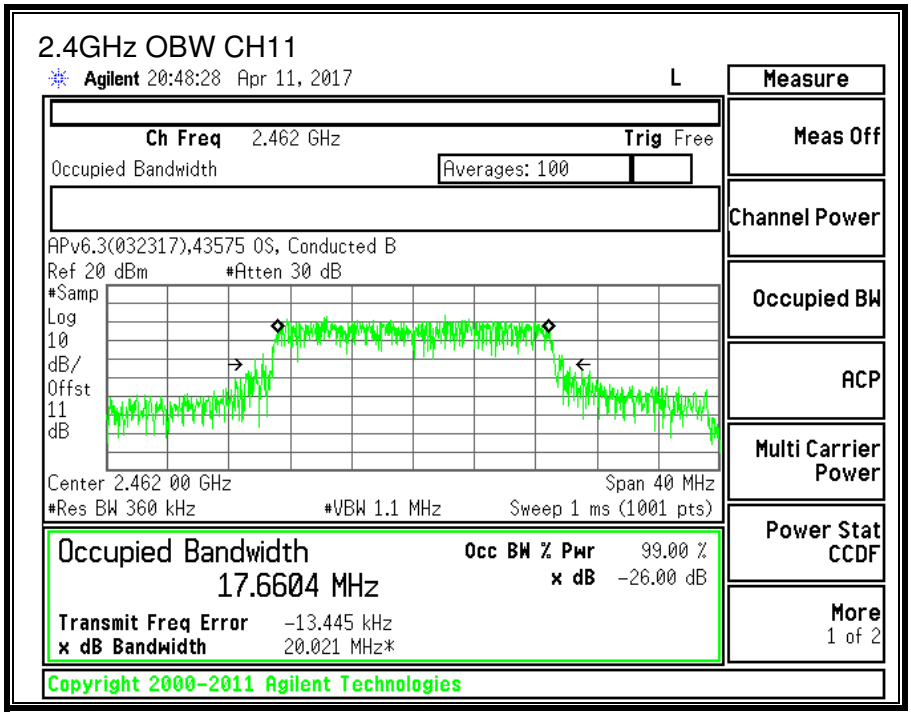
Channel	Frequency (MHz)	99% Bandwidth (MHz)
CH1	2412	17.5877
CH2	2417	17.5515
CH6	2437	17.5606
CH10	2457	17.6192
CH11	2462	17.6604











9.4.3. OUTPUT POWER

LIMITS

FCC §15.247 (b) (3)
IC RSS-247 (5.4) (4)

For systems using digital modulation in the 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

KDB 558074 D01 v03r05 Section 9.2.3.2

RESULTS

ID:	43575	Date:	04/11/2017

Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Max Power (dBm)
CH1	2412	-1.45	30.00	30	36	30.00
CH2	2417	-1.45	30.00	30	36	30.00
CH6	2437	-1.45	30.00	30	36	30.00
CH10	2457	-1.45	30.00	30	36	30.00
CH11	2462	-1.45	30.00	30	36	30.00

Results

Channel	Frequency (MHz)	Meas Power (dBm)	Power Limit (dBm)	Margin (dB)
CH1	2412	12.76	30.00	-17.24
CH2	2417	15.17	30.00	-14.83
CH6	2437	15.27	30.00	-14.74
CH10	2457	16.02	30.00	-13.99
CH11	2462	12.94	30.00	-17.06

9.4.4. POWER SPECTRAL DENSITY

LIMITS

FCC §15.247 (e)
IC RSS-247 (5.2) (2)

For digitally modulated systems, the power spectral density conducted form the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 KHz band during any time interval of continuous transmissions.

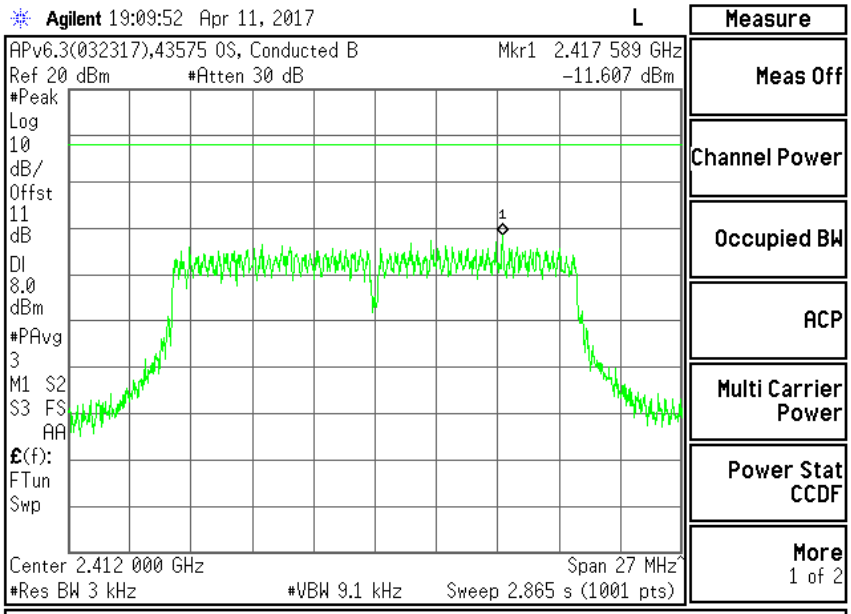
RESULTS

Duty Cycle CF (dB)	0.14	Included in Calculations of Corr'd PSD

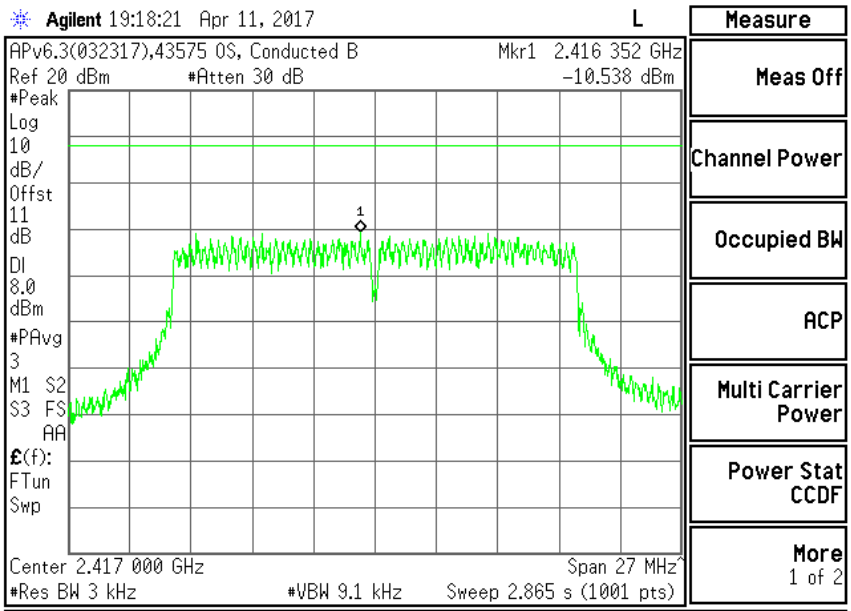
PSD Results

Channel	Frequency (MHz)	Meas (dBm)	Total Corr'd PSD (dBm)	Limit (dBm)	Margin (dB)
CH1	2412	-11.607	-11.47	8.0	-19.5
CH2	2417	-10.538	-10.40	8.0	-18.4
CH6	2437	-10.194	-10.05	8.0	-18.1
CH10	2457	-9.712	-9.57	8.0	-17.6
CH11	2462	-12.853	-12.71	8.0	-20.7

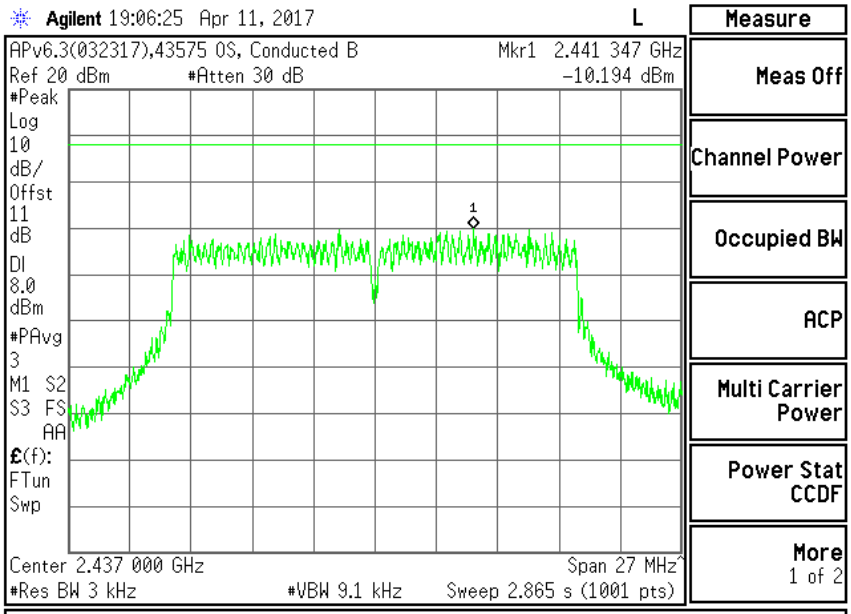
2.4GHz CPSD CH1



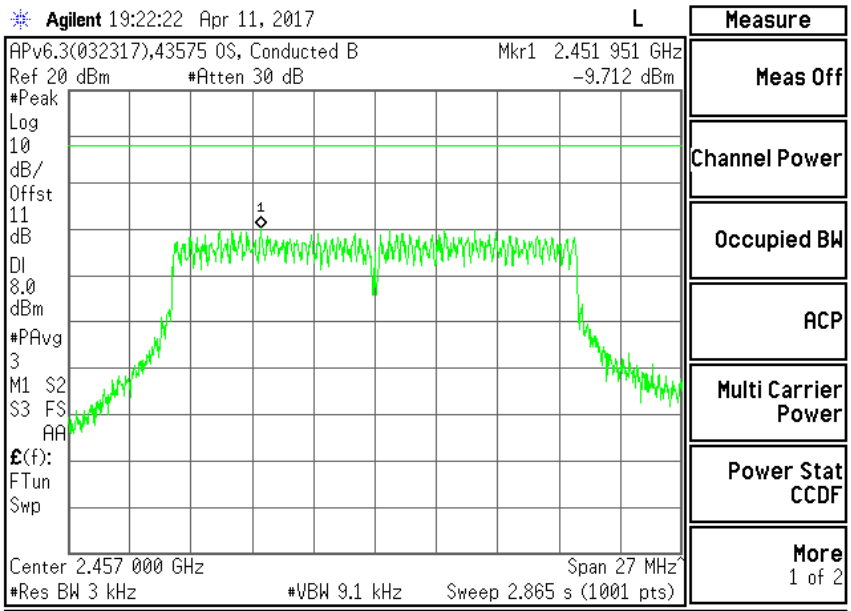
2.4GHz CPSD CH2

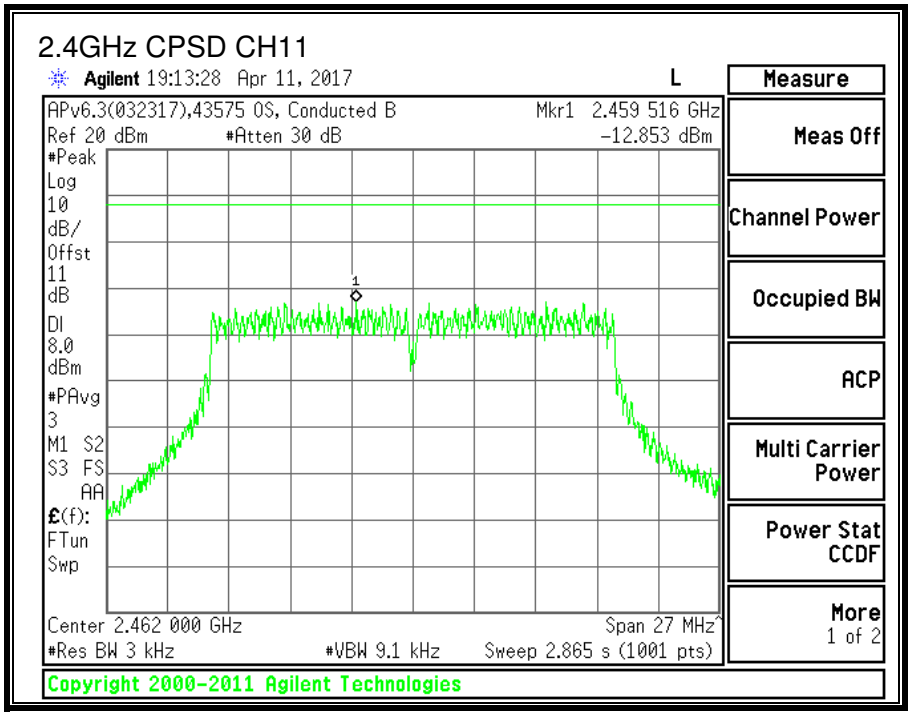


2.4GHz CPSD CH6



2.4GHz CPSD CH10





9.4.5. CONDUCTED BANDEDGE AND SPURIOUS EMISSIONS

LIMITS

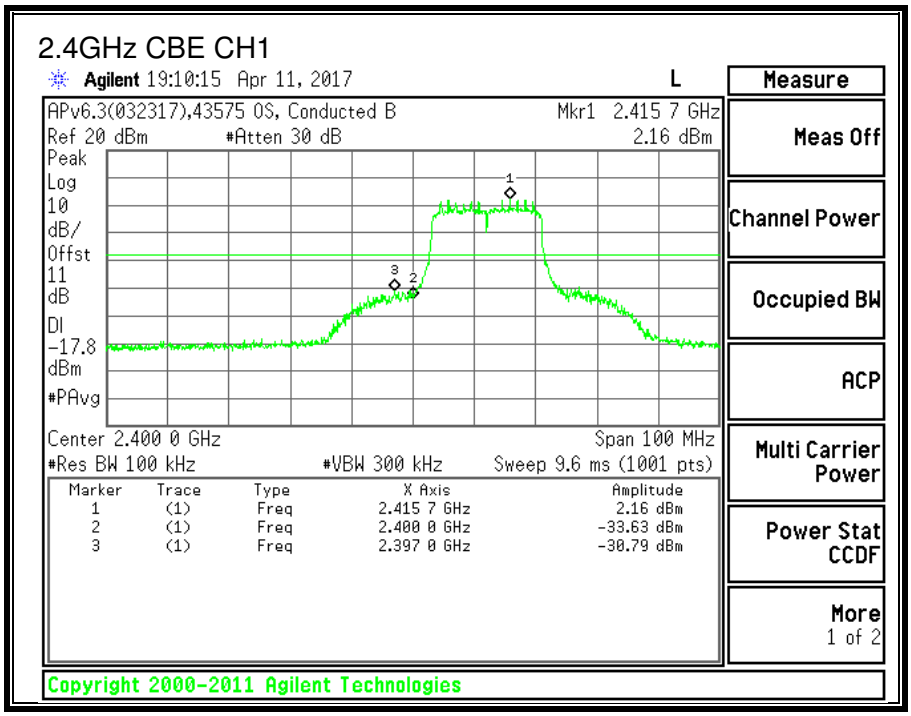
FCC §15.247 (d)

IC RSS-247 (5.5)

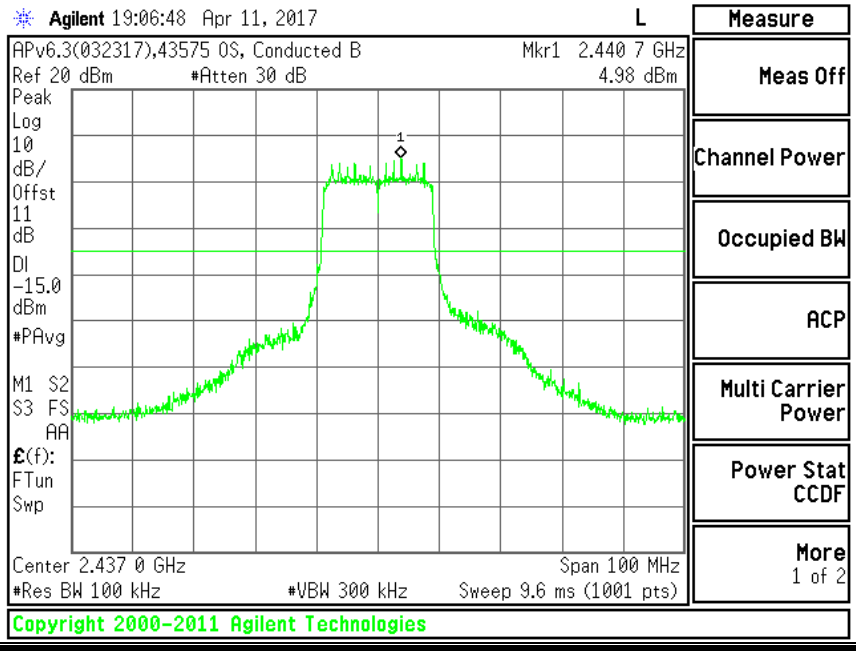
Output power was measured based on the use of a peak measurement, therefore the required attenuation is 20 dB.

RESULTS:

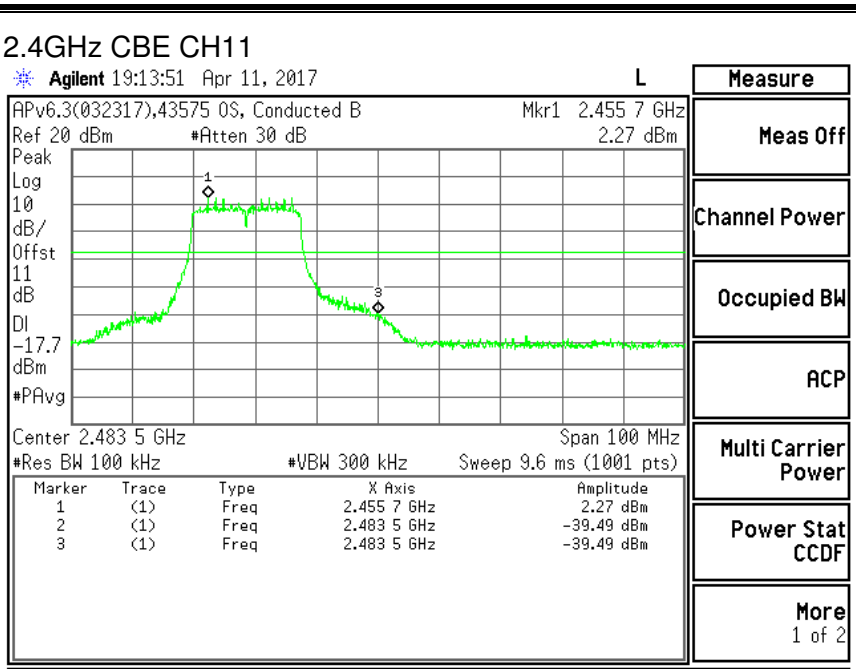
CONDUCTED BANDEDGE:



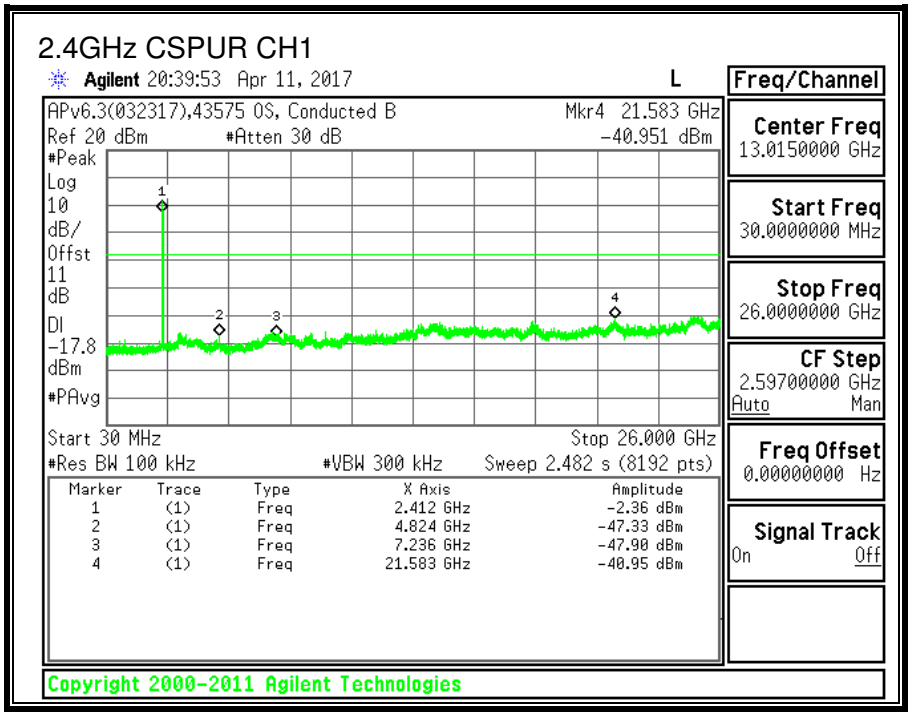
2.4GHz CBE CH6

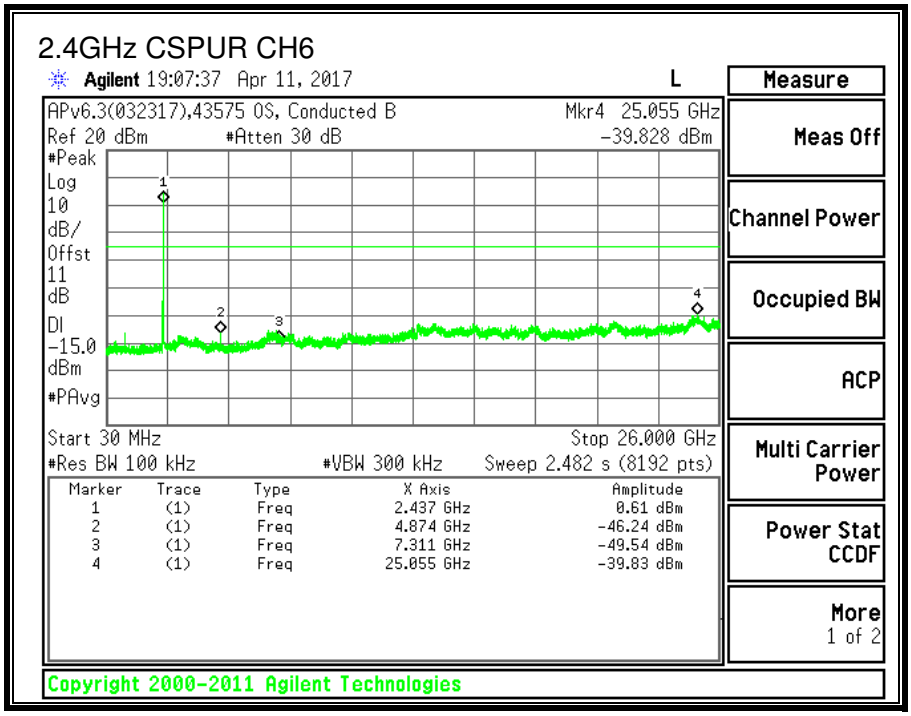


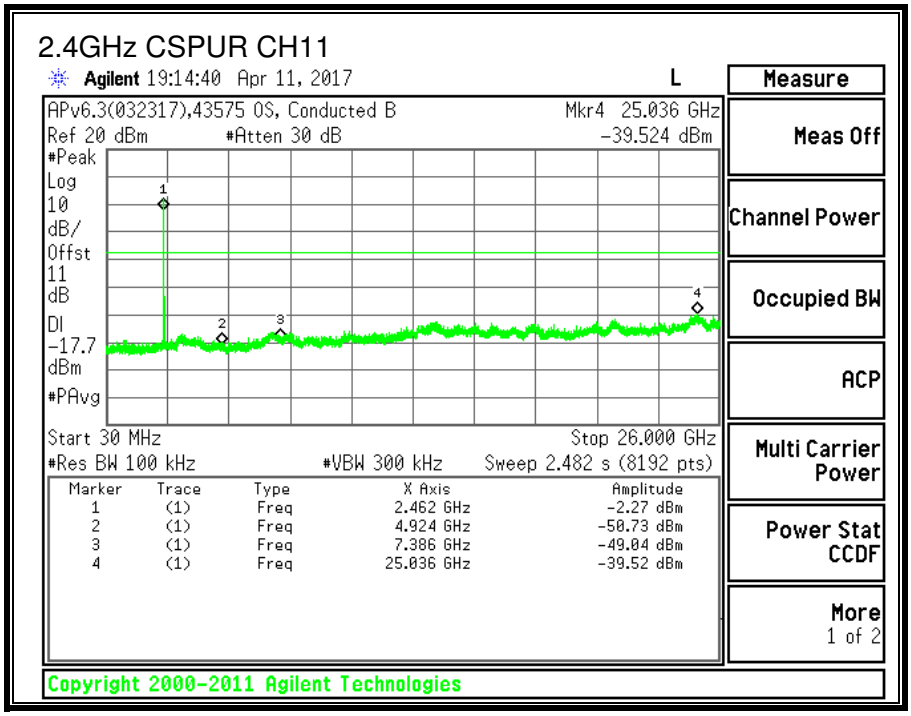
2.4GHz CBE CH11



CONDUCTED SPURIOUS EMISSIONS:







9.5. 11n HT40 MODE IN THE 2.4GHz BAND

9.5.1. 6 dB BANDWIDTH

LIMITS

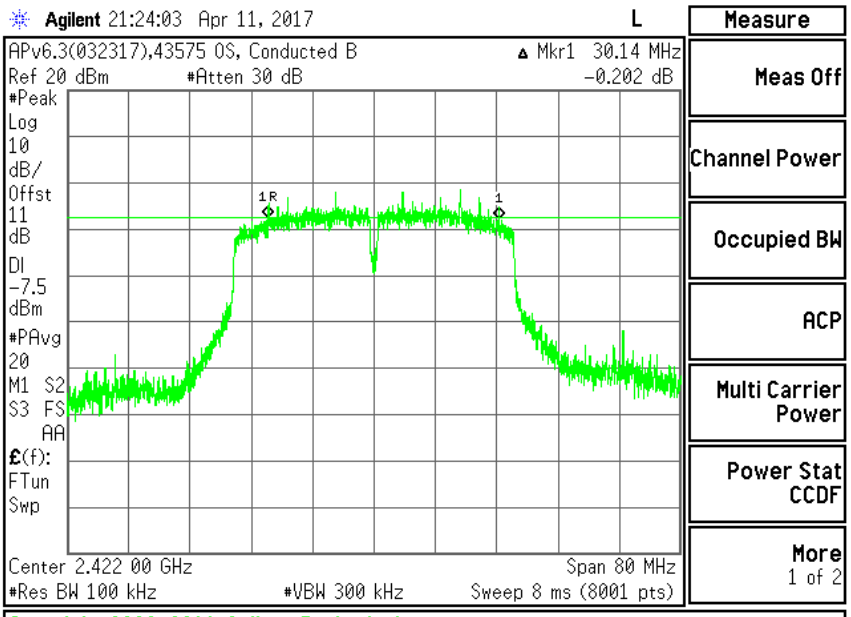
FCC §15.247 (a) (2)
IC RSS-247 (5.2) (1)

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

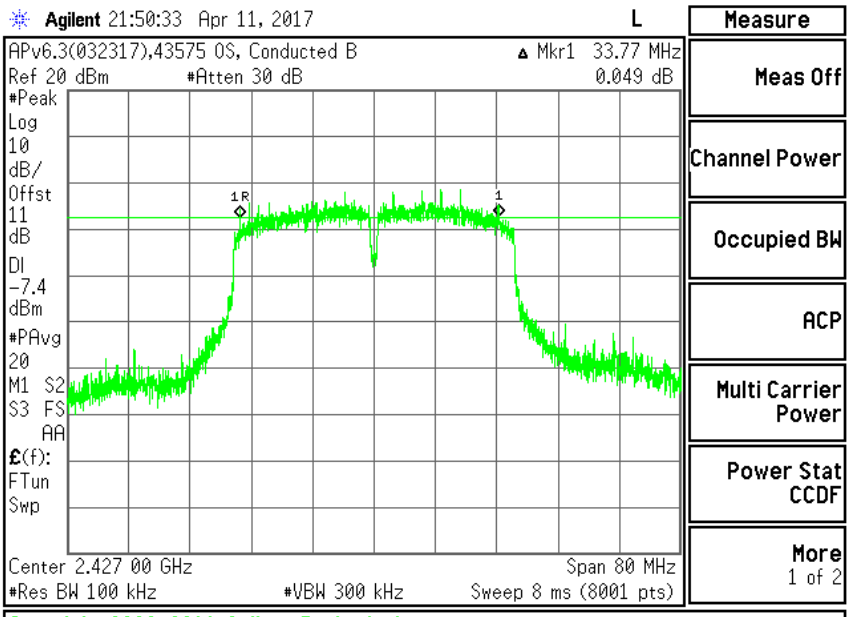
RESULTS

Channel	Frequency (MHz)	6 dB BW (MHz)	Minimum Limit (MHz)
CH3	2422	30.14	0.5
CH4	2427	33.77	0.5
CH5	2432	31.54	0.5
CH6	2437	30.03	0.5
CH7	2442	31.96	0.5
CH8	2447	34.03	0.5
CH9	2452	31.72	0.5

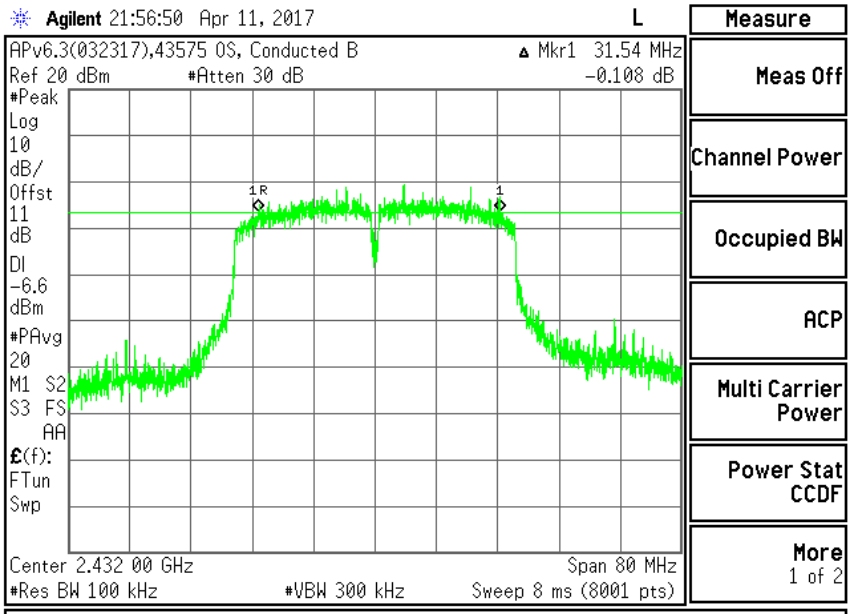
2.4GHz 6dB CH3



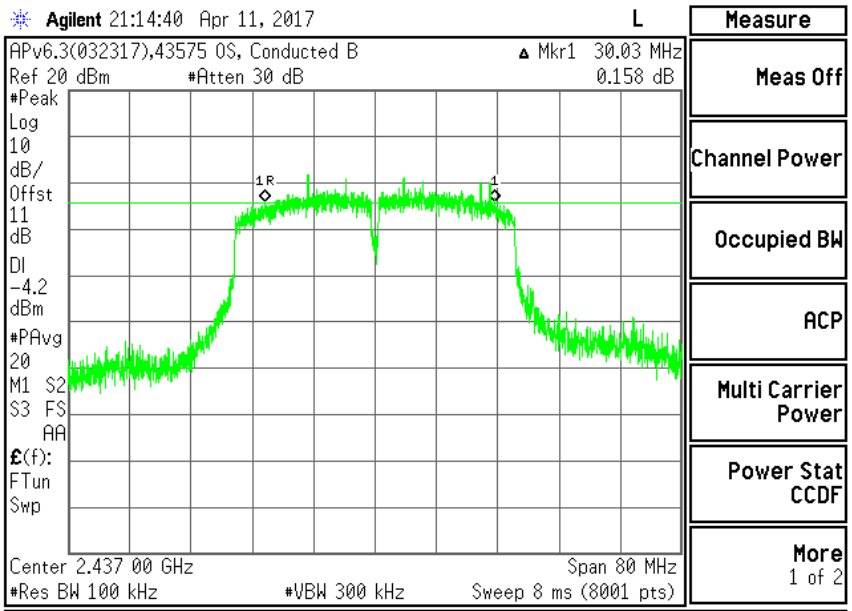
2.4GHz 6dB CH4



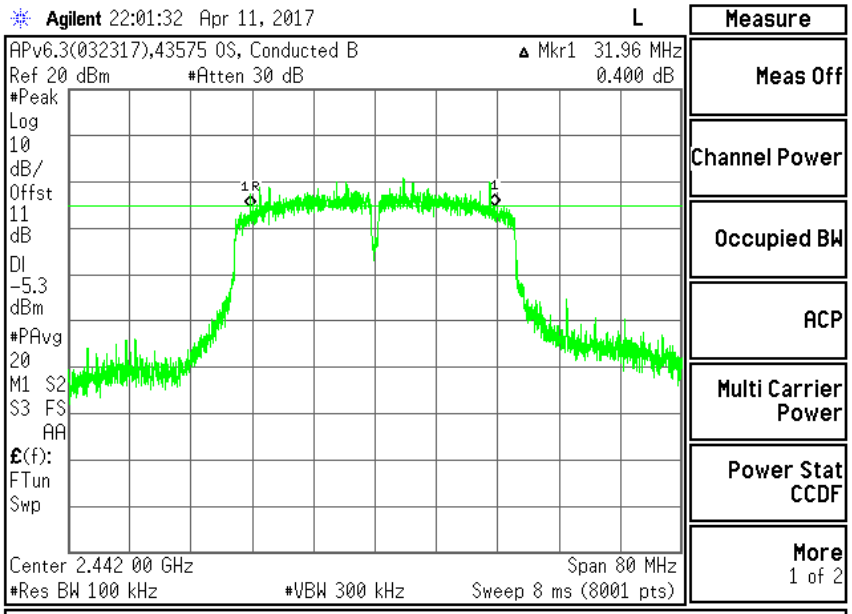
2.4GHz 6dB CH5



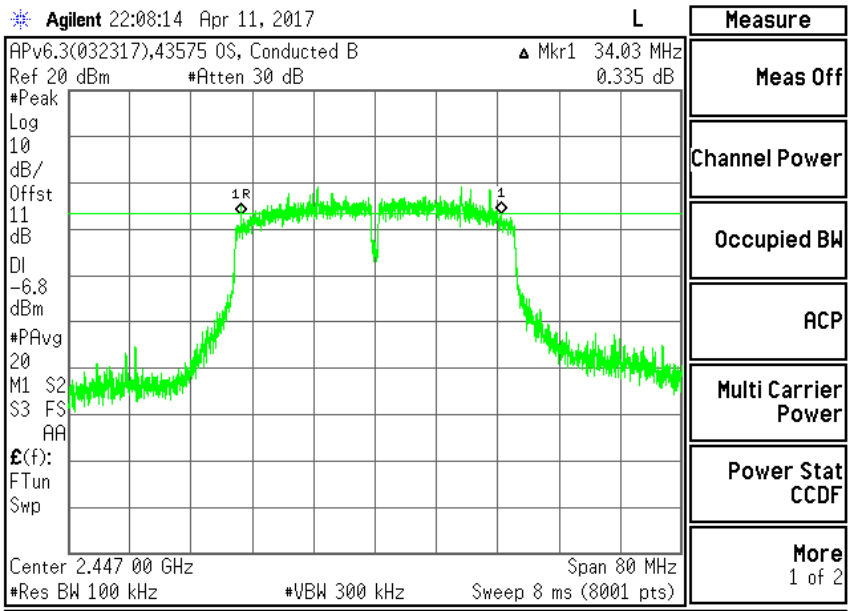
2.4GHz 6dB CH6

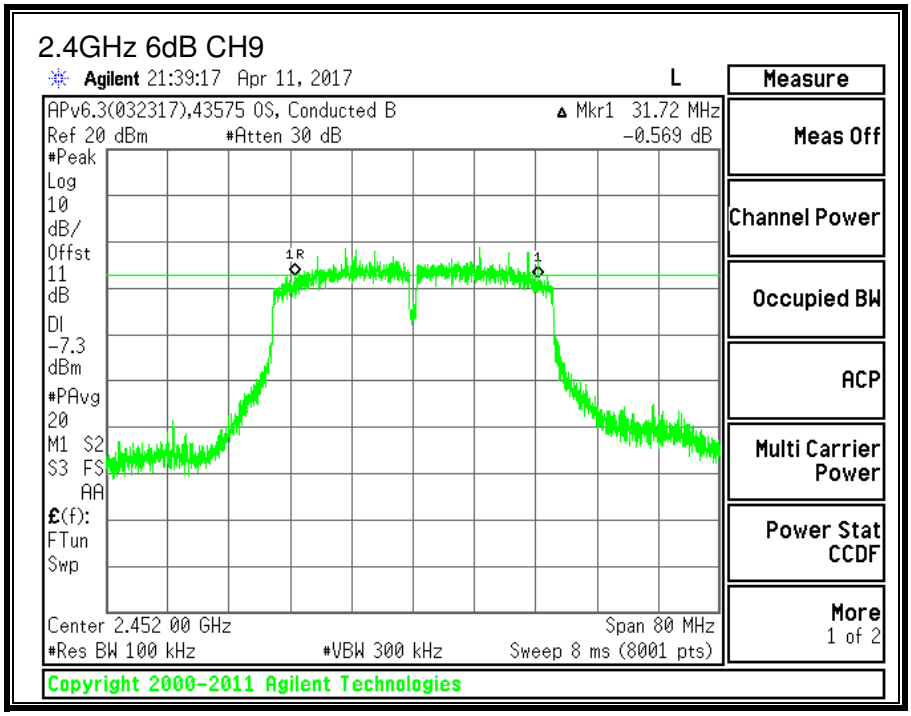


2.4GHz 6dB CH7



2.4GHz 6dB CH8





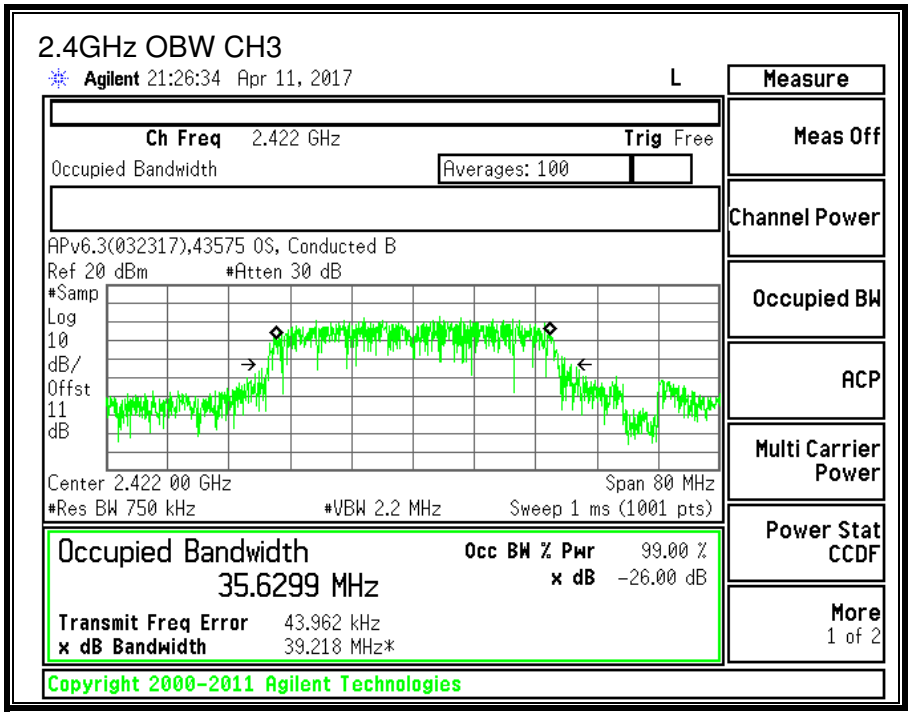
9.5.2. 99% BANDWIDTH

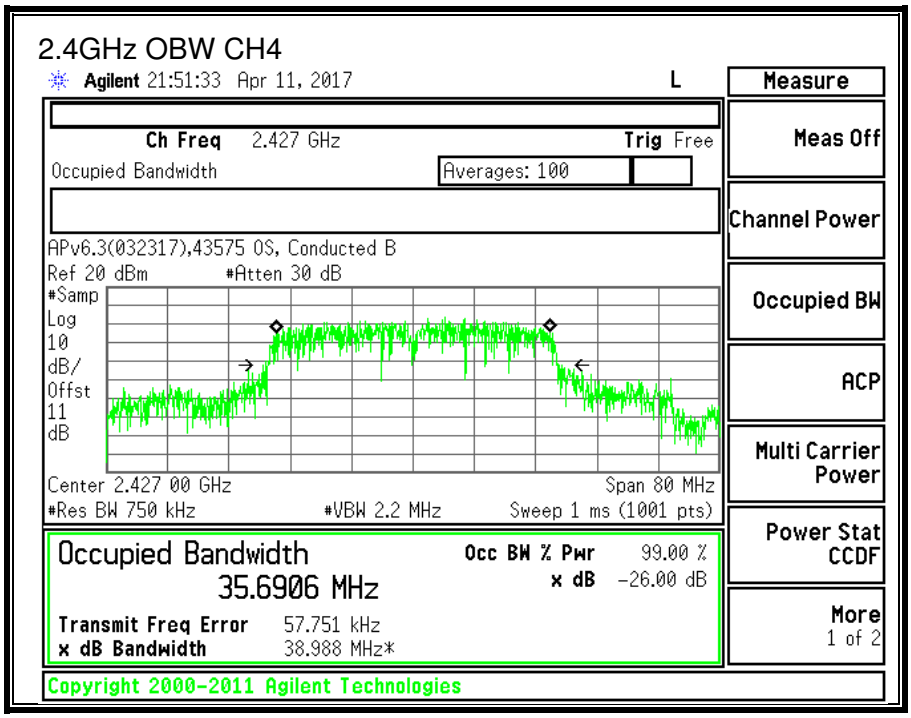
LIMITS

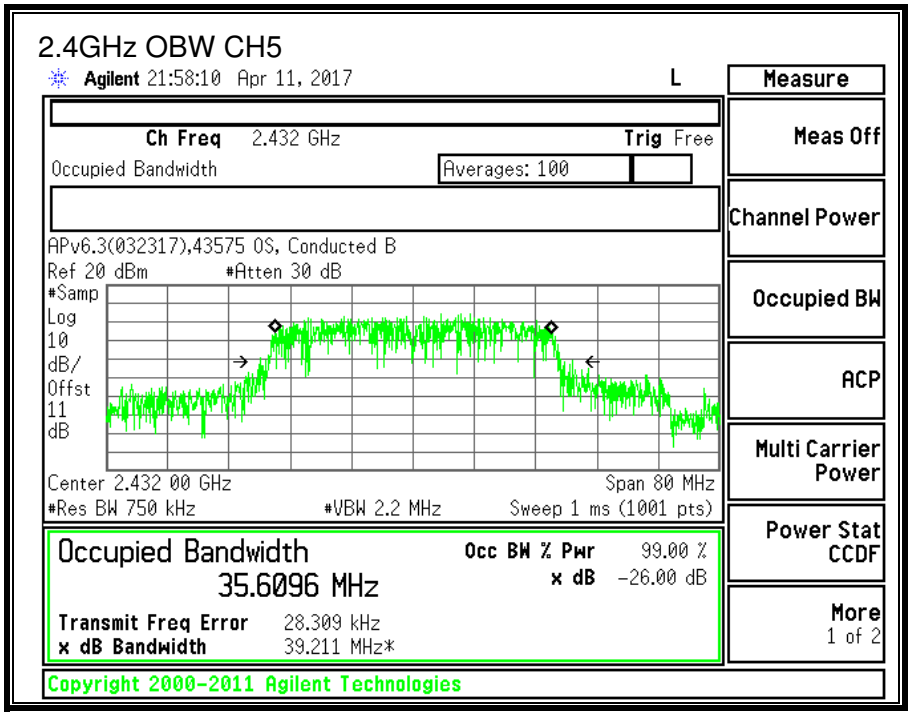
None; for reporting purposes only.

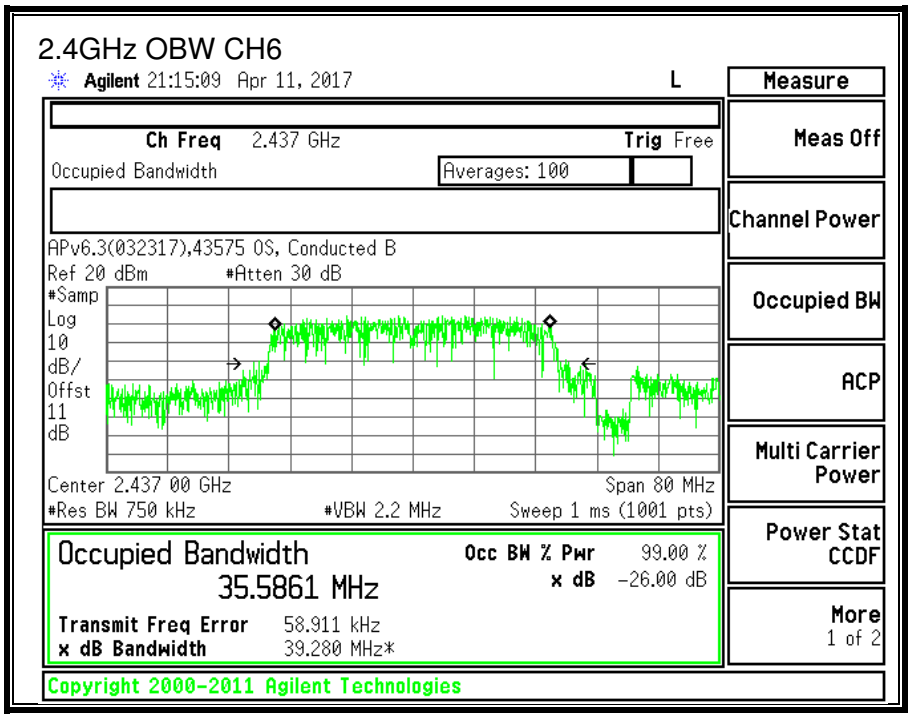
RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
CH3	2422	35.6299
CH4	2427	35.6906
CH5	2432	35.6096
CH6	2437	35.5861
CH7	2442	35.6432
CH8	2447	35.5394
CH9	2452	35.6190

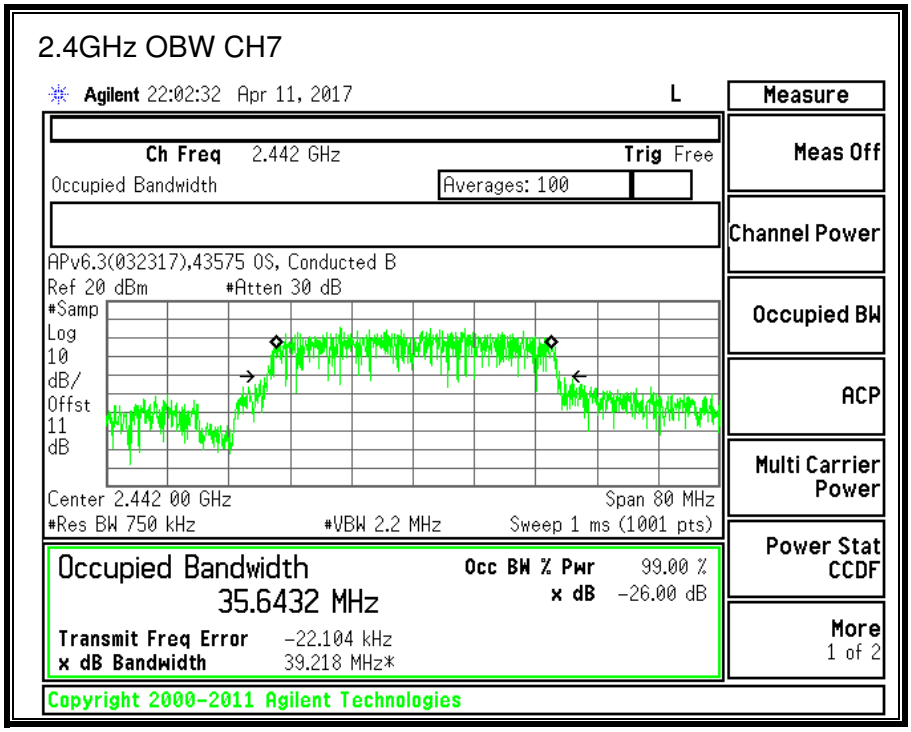




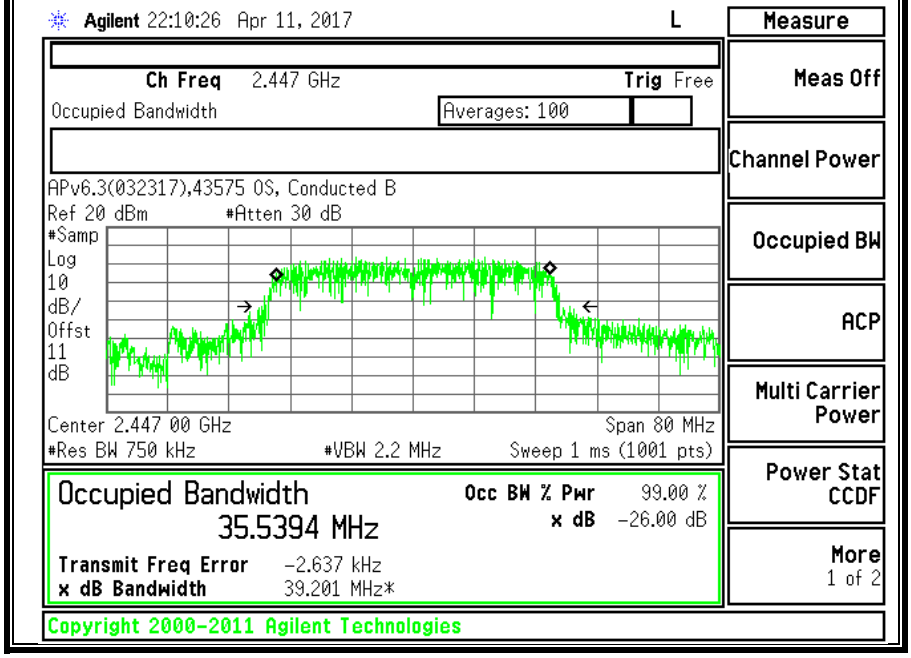


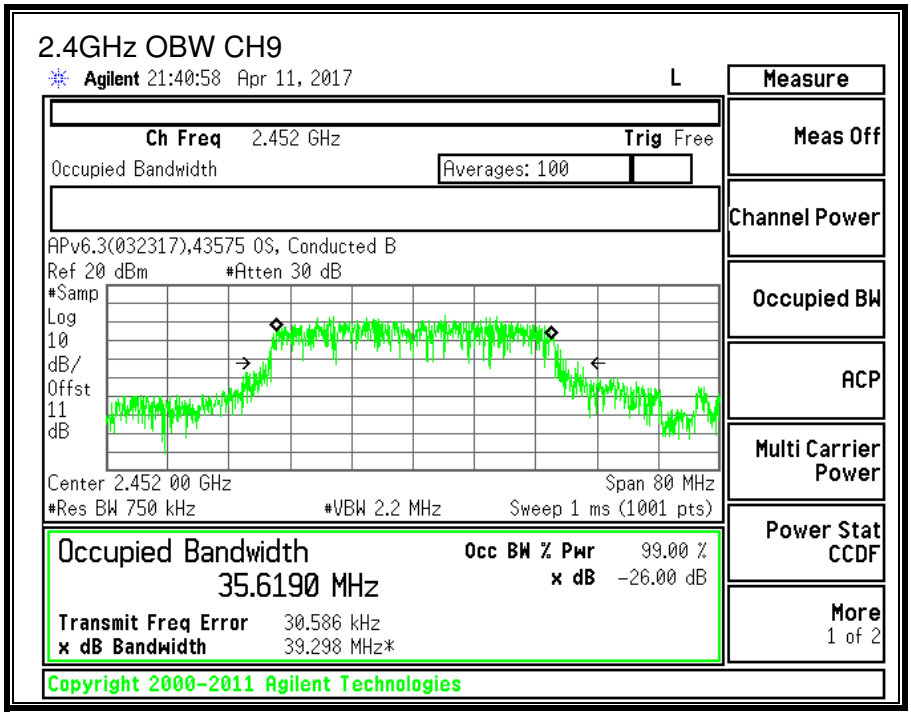


2.4GHz OBW CH7



2.4GHz OBW CH8





9.5.3. OUTPUT POWER

LIMITS

FCC §15.247 (b) (3)
IC RSS-247 (5.4) (4)

For systems using digital modulation in the 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

KDB 558074 D01 v03r05 Section 9.2.3.2

RESULTS

ID:	43575	Date:	04/11/2017

Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Max Power (dBm)
CH3	2422	-1.45	30.00	30	36	30.00
CH4	2427	-1.45	30.00	30	36	30.00
CH5	2432	-1.45	30.00	30	36	30.00
CH6	2437	-1.45	30.00	30	36	30.00
CH7	2442	-1.45	30.00	30	36	30.00
CH8	2447	-1.45	30.00	30	36	30.00
CH9	2452	-1.45	30.00	30	36	30.00

Results

Channel	Frequency (MHz)	Meas Power (dBm)	Power Limit (dBm)	Margin (dB)
CH3	2422	11.59	30.00	-18.41
CH4	2427	12.36	30.00	-17.64
CH5	2432	13.07	30.00	-16.93
CH6	2437	15.02	30.00	-14.98
CH7	2442	14.55	30.00	-15.45
CH8	2447	13.40	30.00	-16.60
CH9	2452	12.37	30.00	-17.63

9.5.4. POWER SPECTRAL DENSITY

LIMITS

FCC §15.247 (e)
IC RSS-247 (5.2) (2)

For digitally modulated systems, the power spectral density conducted form the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 KHz band during any time interval of continuous transmissions.

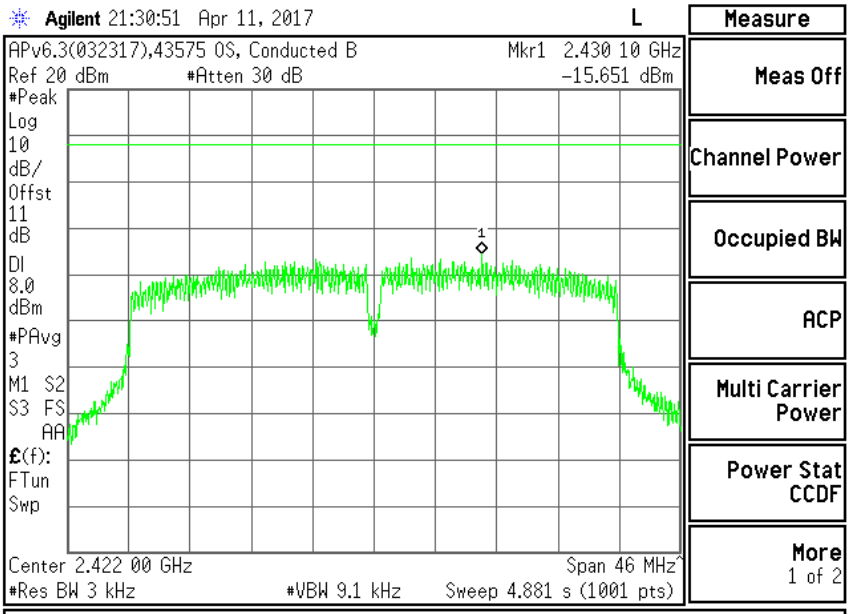
RESULTS

Duty Cycle CF (dB)	0.26	Included in Calculations of Corr'd PSD

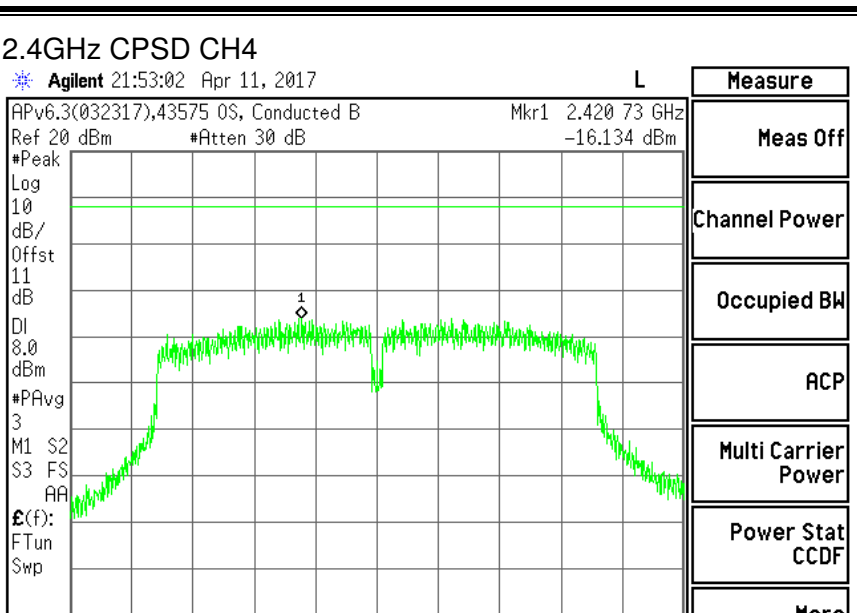
PSD Results

Channel	Frequency (MHz)	Meas (dBm)	Total Corr'd PSD (dBm)	Limit (dBm)	Margin (dB)
CH3	2422	-15.651	-15.39	8.0	-23.4
CH4	2427	-16.134	-15.87	8.0	-23.9
CH5	2432	-13.527	-13.27	8.0	-21.3
CH6	2437	-13.225	-12.97	8.0	-21.0
CH7	2442	-11.398	-11.14	8.0	-19.1
CH8	2447	-14.142	-13.88	8.0	-21.9
CH9	2452	-15.493	-15.23	8.0	-23.2

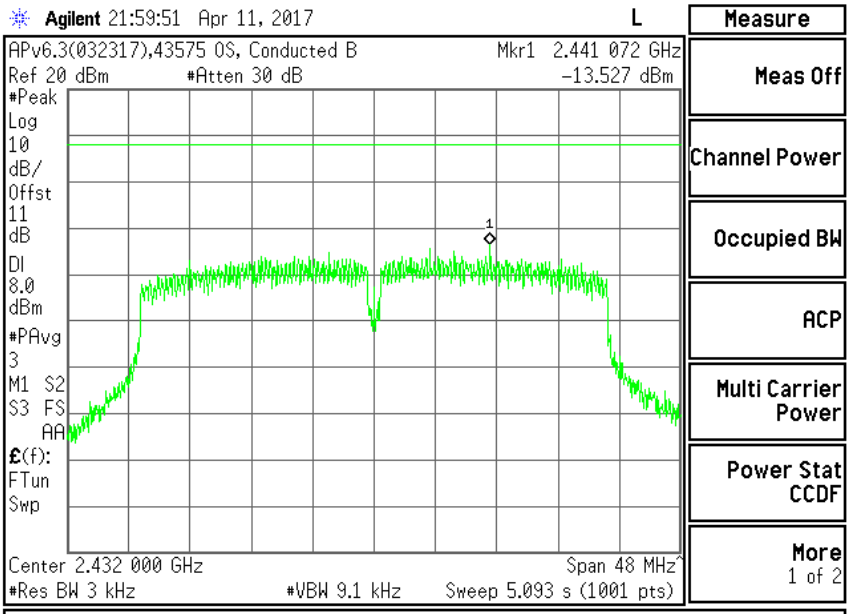
2.4GHz CPSD CH3



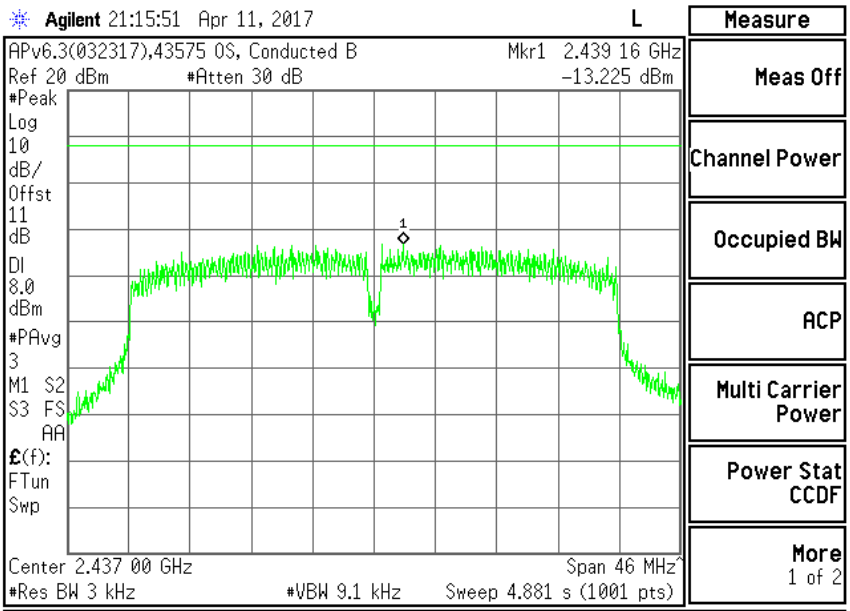
2.4GHz CPSD CH4



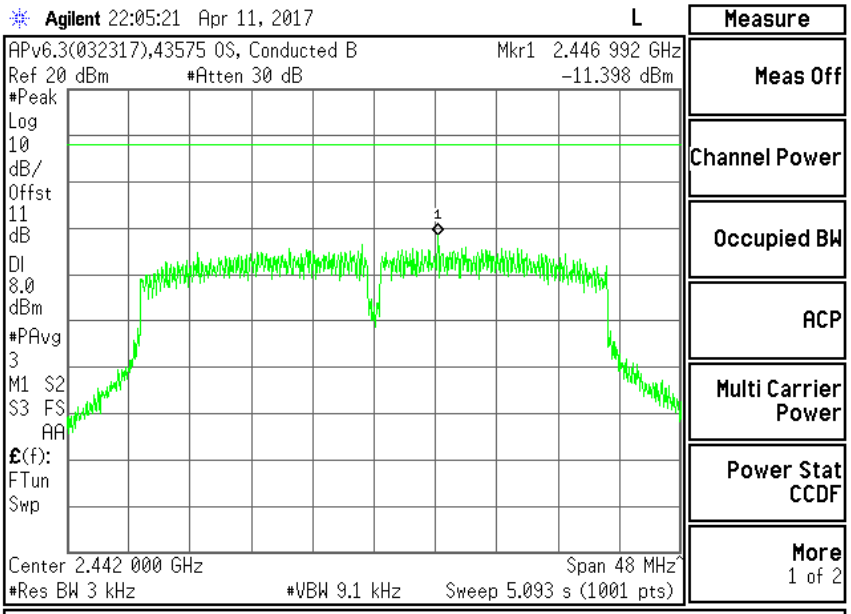
2.4GHz CPSD CH5



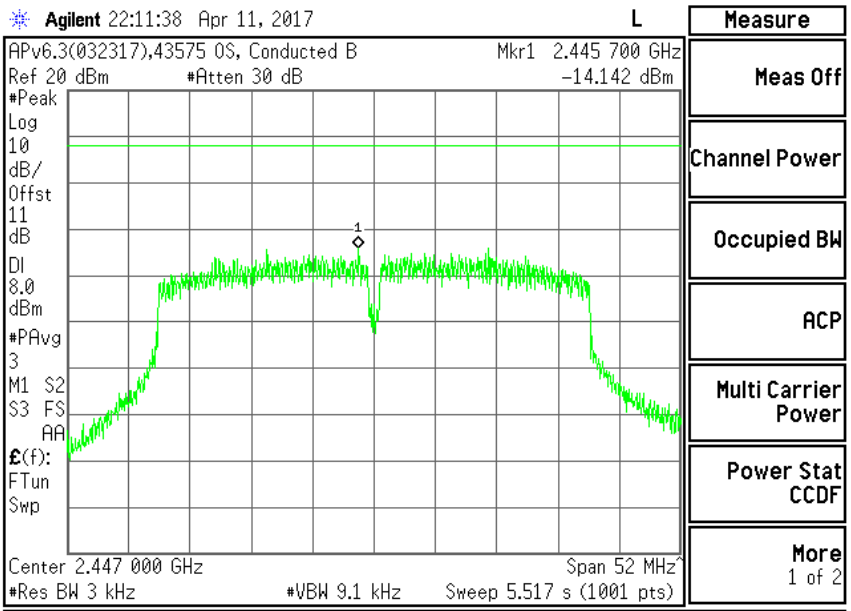
2.4GHz CPSD CH6

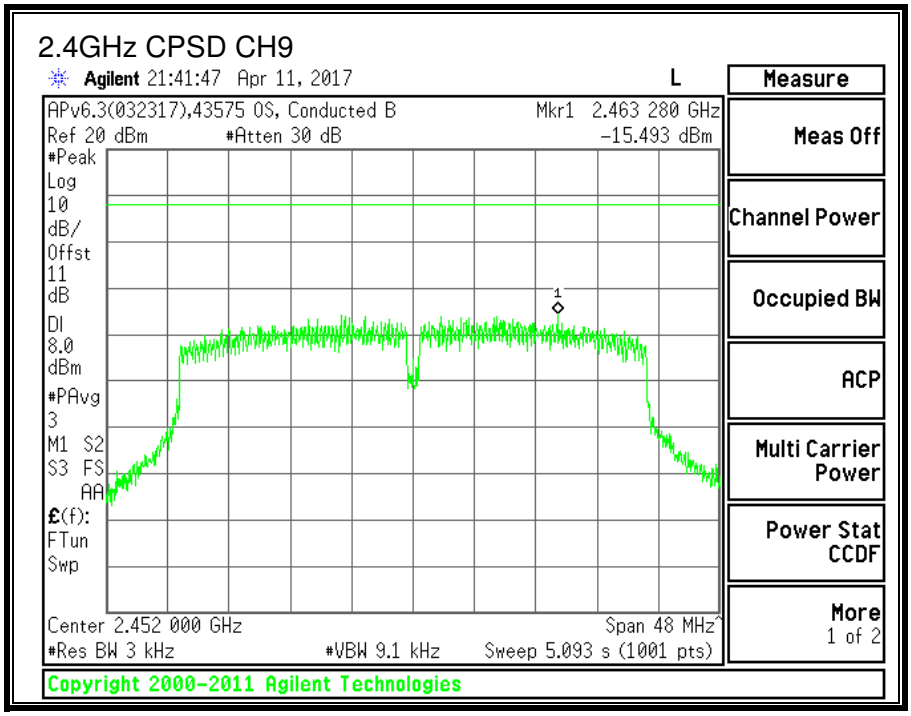


2.4GHz CPSD CH7



2.4GHz CPSD CH8





9.5.5. CONDUCTED BANDEDGE AND SPURIOUS EMISSIONS

LIMITS

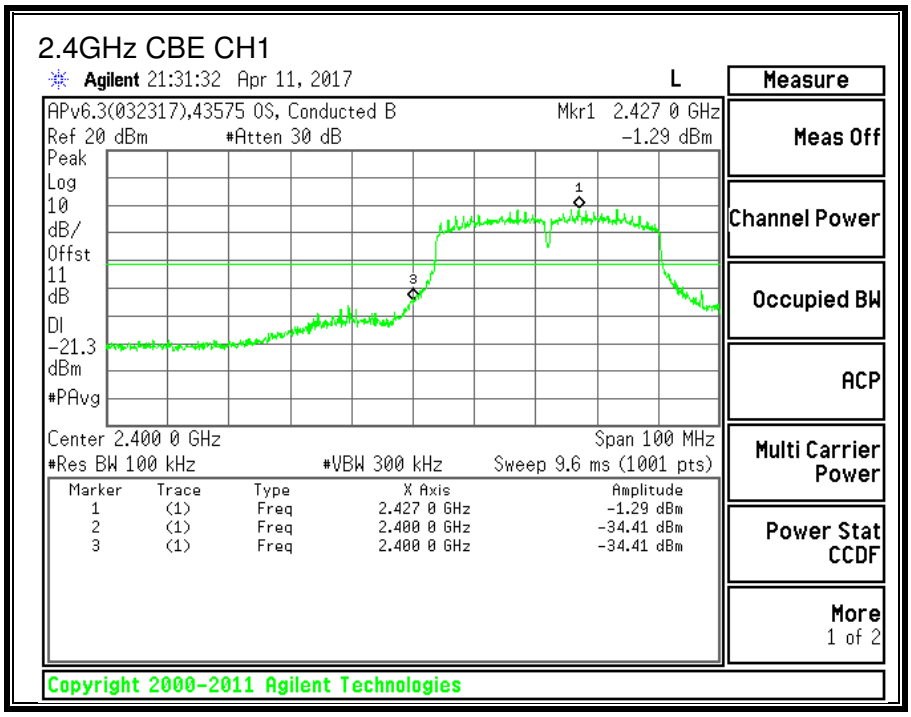
FCC §15.247 (d)

IC RSS-247 (5.5)

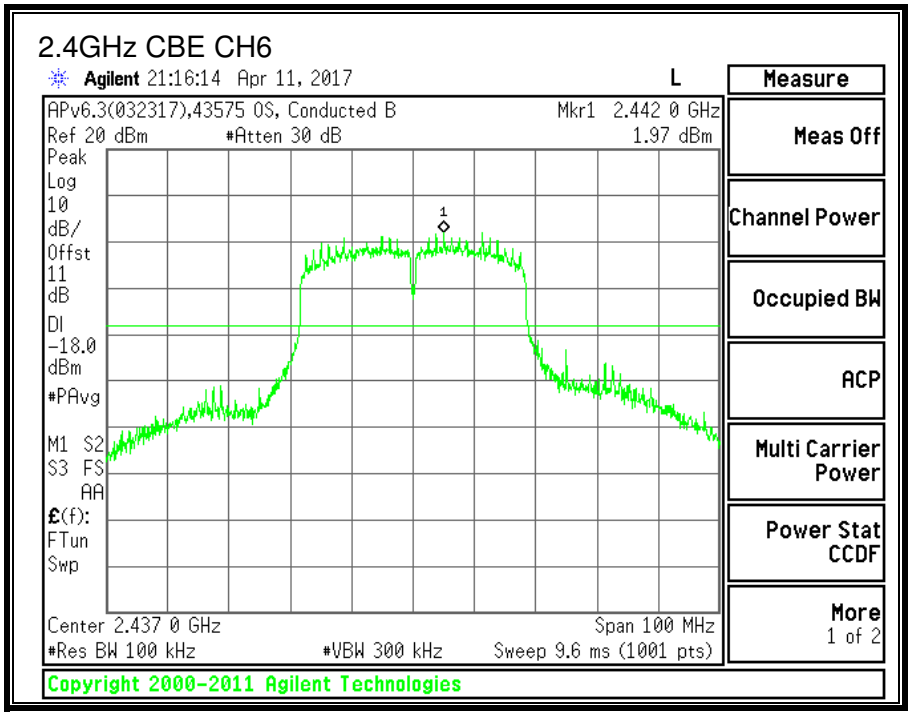
Output power was measured based on the use of a peak measurement, therefore the required attenuation is 20 dB.

RESULTS:

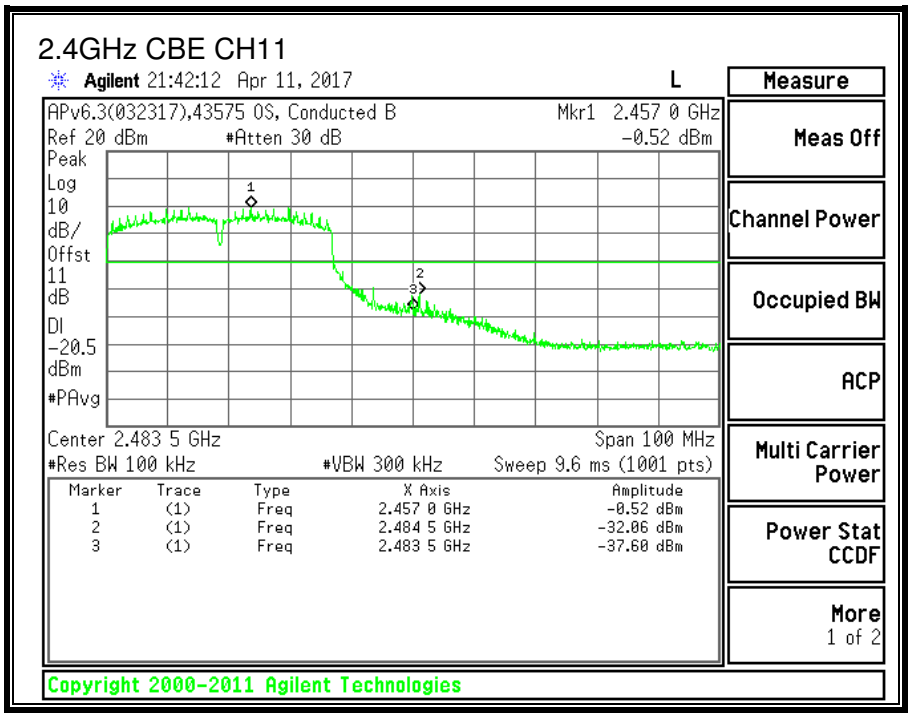
CONDUCTED BANDEDGE:



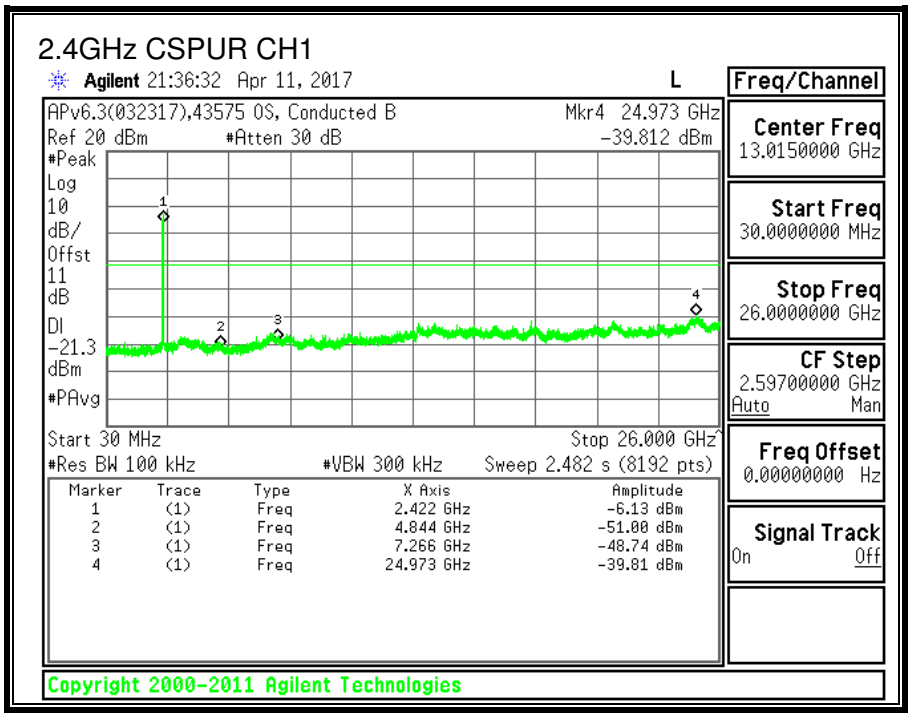
2.4GHz CBE CH6

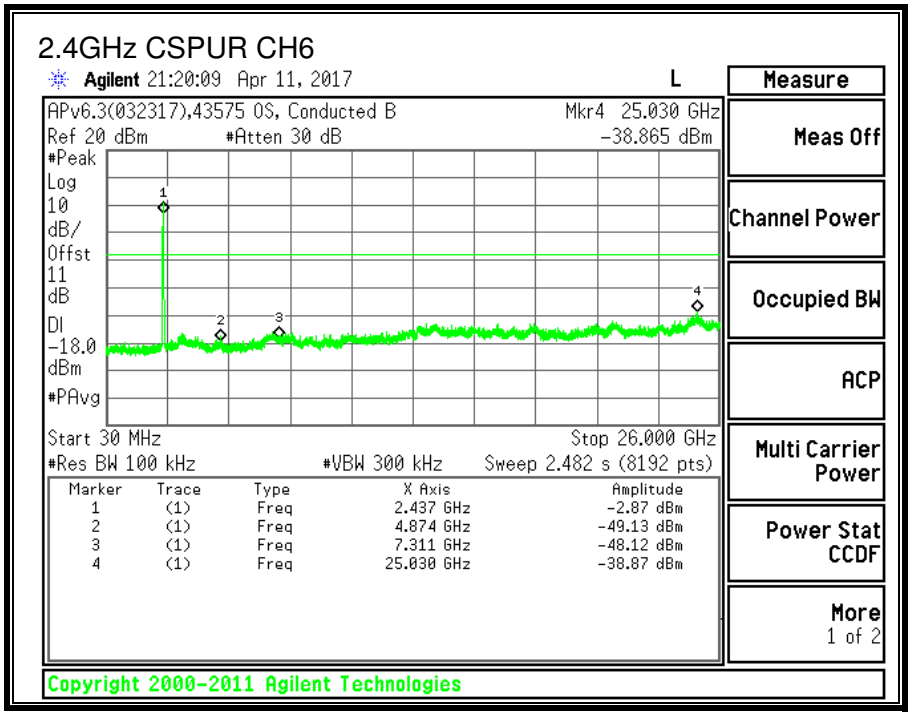


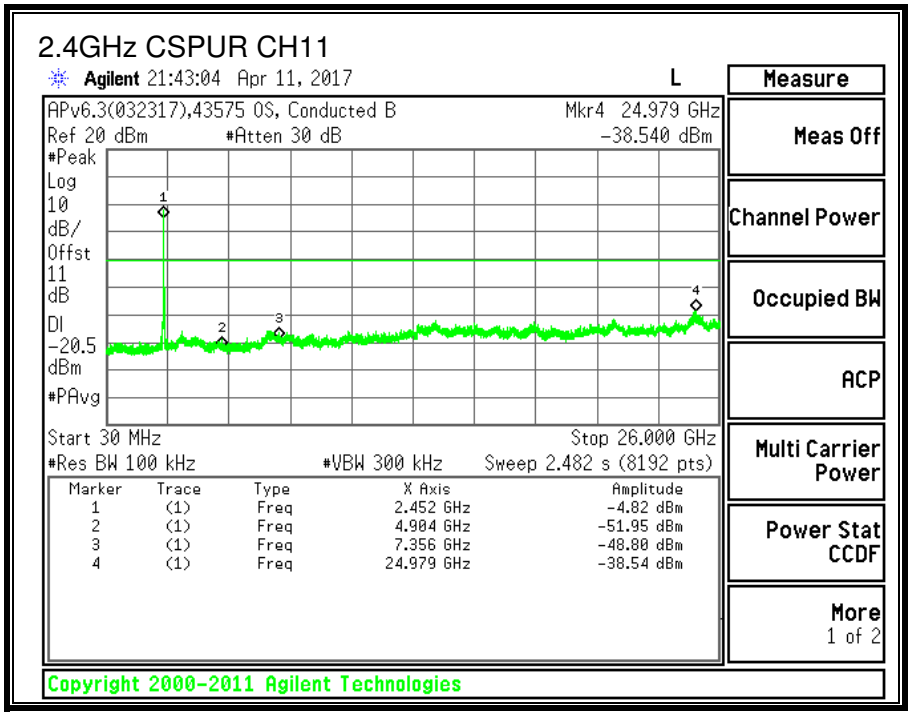
2.4GHz CBE CH11



CONDUCTED SPURIOUS EMISSIONS:







10. RADIATED TEST RESULTS

10.1. LIMITS AND PROCEDURE

LIMITS

FCC §15.205 and §15.209
IC RSS-GEN, Section 8.9 and 8.10.

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	2400/F(kHz) @ 300m
0.490-1.705	24000/F(kHz) @ 30 m	24000/F(kHz) @ 30m
1.705 - 30	30 @ 30m	30 @ 30m
30 - 88	100	40
88 - 216	150	43.5
216 - 960	200	46
Above 960	500	54

NOTE: KDB 414788 D01 OATS and Chamber Correlation Justification

- Based on FCC 15.31 (f) (2): measurements may be performed at a distance closer than that specified in the regulations; however, an attempt should be made to avoid making measurements in the near field.
- OATs and chamber correlation testing had been performed and chamber measured test result is the worst case test result.

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 120 kHz for peak detection measurements or 120 kHz for quasi-peak detection measurements for the 30-1000 MHz range, 9 kHz for peak detection measurements or 9 kHz for quasi-peak detection measurements for the 0.15-30 MHz range and 200 Hz for peak detection measurements or 200 Hz for quasi-peak detection measurements for the 9 to 150 kHz range. 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.

For 2.4 GHz band, the spectrum from 9 kHz to 26 GHz is investigated with the EUT was set to transmit on the channel with higher output power as worst-case scenario.

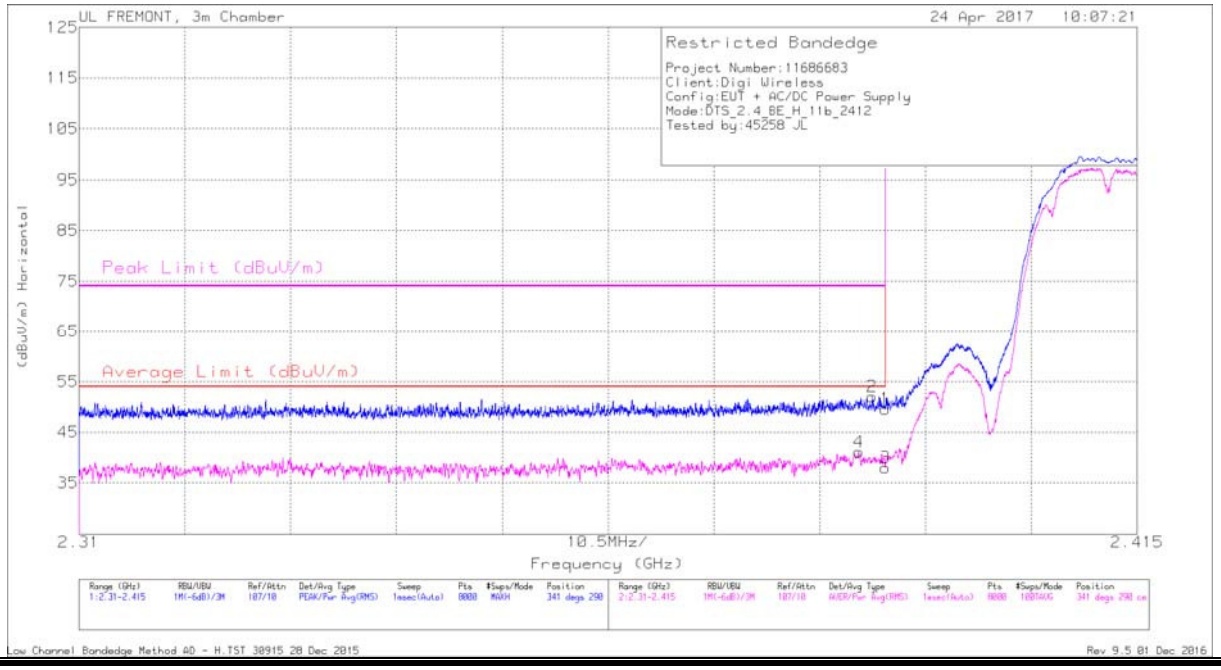
The frequency range of interest is monitored at a fixed antenna height and EUT azimuth. The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are made with the antenna polarized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

10.2. TRANSMITTER ABOVE 1 GHz

10.2.1. 11b MODE IN THE 2.4GHz BAND

AUTHORIZED BANDEDGE (LOW CHANNEL, CH 1)

LOW CHANNEL HORIZONTAL

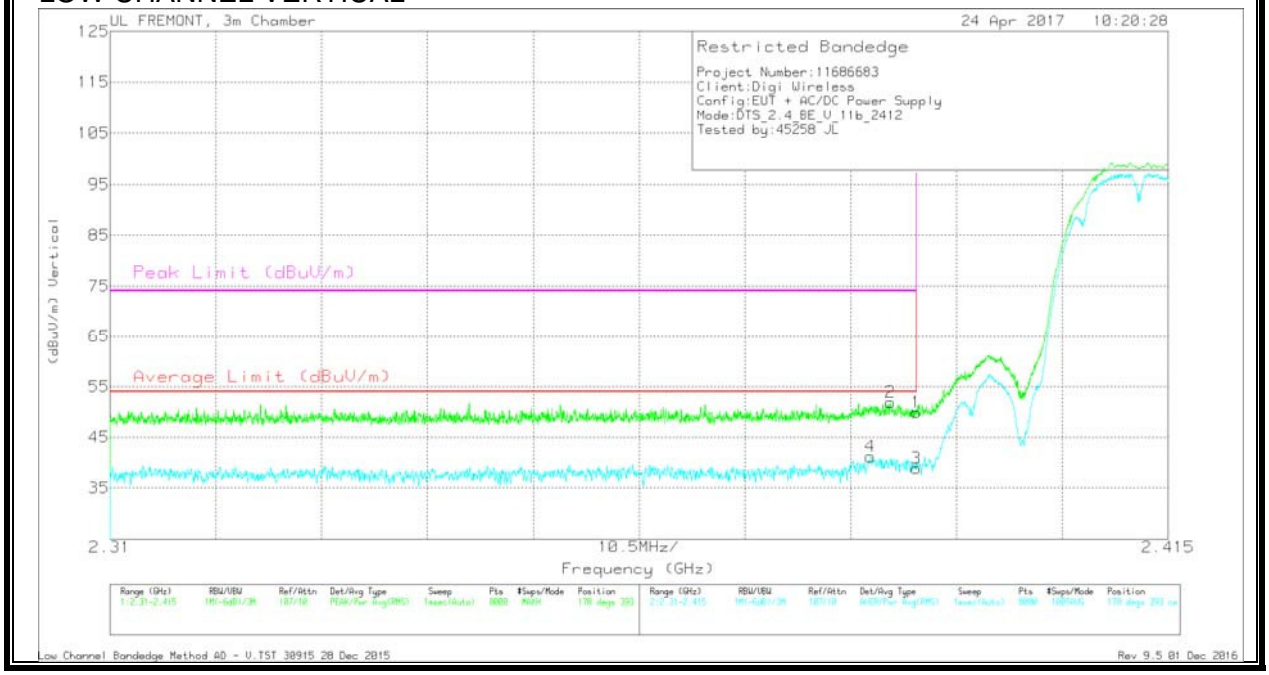


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/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
4	2.387	30.15	RMS	31.9	-20.9	0	41.15	54	-12.85	-	-	341	290	H
2	2.389	40.94	Pk	31.9	-20.8	0	52.04	-	-	74	-21.96	341	290	H
1	2.39	38.51	Pk	31.9	-20.8	0	49.61	-	-	74	-24.39	341	290	H
3	2.39	26.88	RMS	31.9	-20.8	0	37.98	54	-16.02	-	-	341	290	H

Pk - Peak detector
RMS - RMS detection

LOW CHANNEL VERTICAL



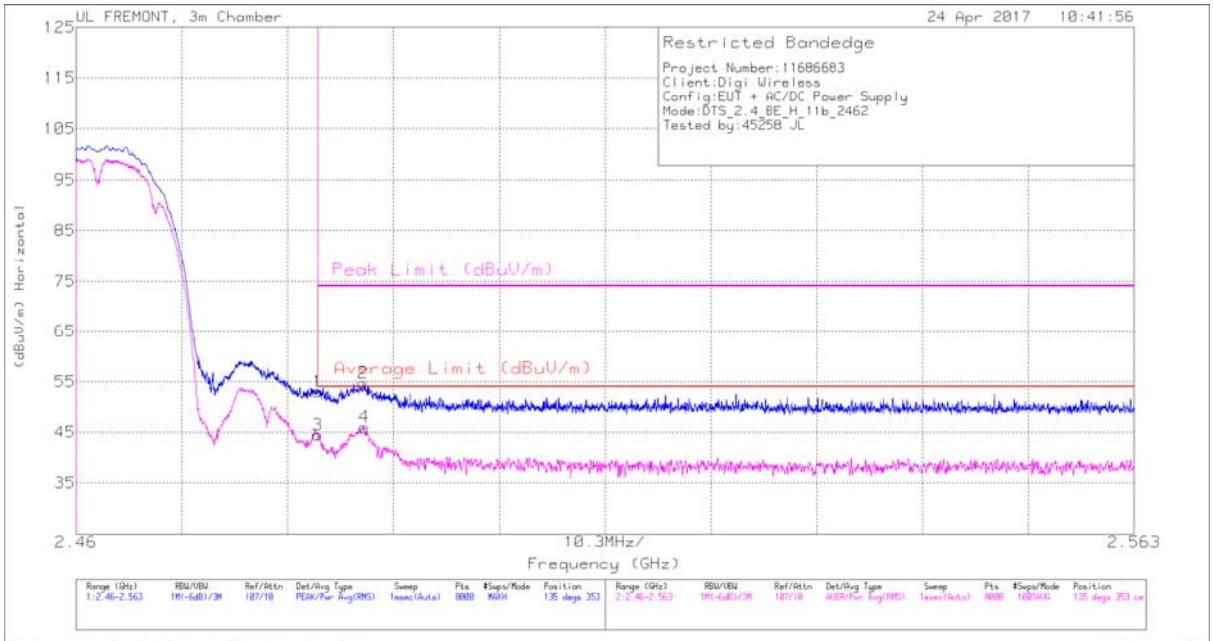
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/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
4	2.385	30.17	RMS	31.9	-20.9	0	41.17	54	-12.83	-	-	178	393	V
2	2.387	40.88	Pk	31.9	-20.9	0	51.88	-	-	74	-22.12	178	393	V
1	2.39	38.81	Pk	31.9	-20.8	0	49.91	-	-	74	-24.09	178	393	V
3	2.39	27.81	RMS	31.9	-20.8	0	38.91	54	-15.09	-	-	178	393	V

Pk - Peak detector
RMS - RMS detection

AUTHORIZED BANDEDGE (HIGH CHANNEL, CH 11)

HIGH CHANNEL HORIZONTAL

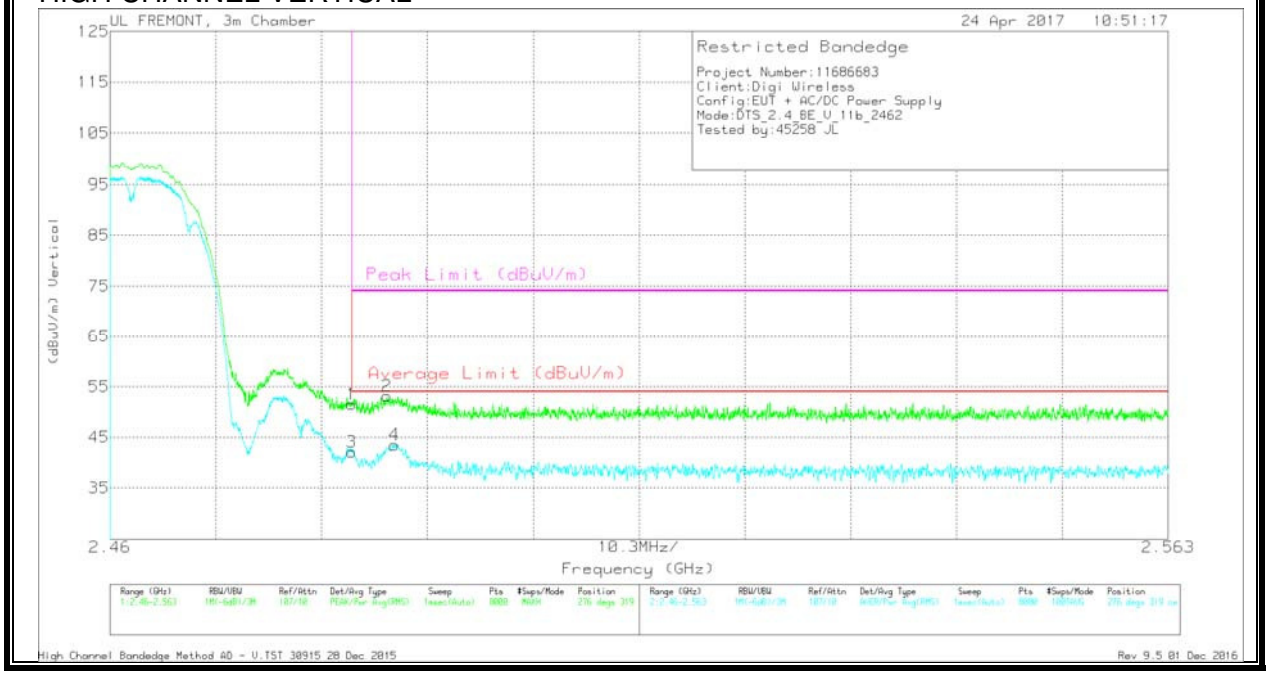


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/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	41.38	Pk	32.4	-20.8	0	52.98	-	-	74	-21.02	135	353	H
3	2.484	32.84	RMS	32.4	-20.8	0	44.44	54	-9.56	-	-	135	353	H
2	2.488	43.21	Pk	32.4	-20.9	0	54.71	-	-	74	-19.29	135	353	H
4	2.488	34.51	RMS	32.4	-20.9	0	46.01	54	-7.99	-	-	135	353	H

Pk - Peak detector
RMS - RMS detection

HIGH CHANNEL VERTICAL



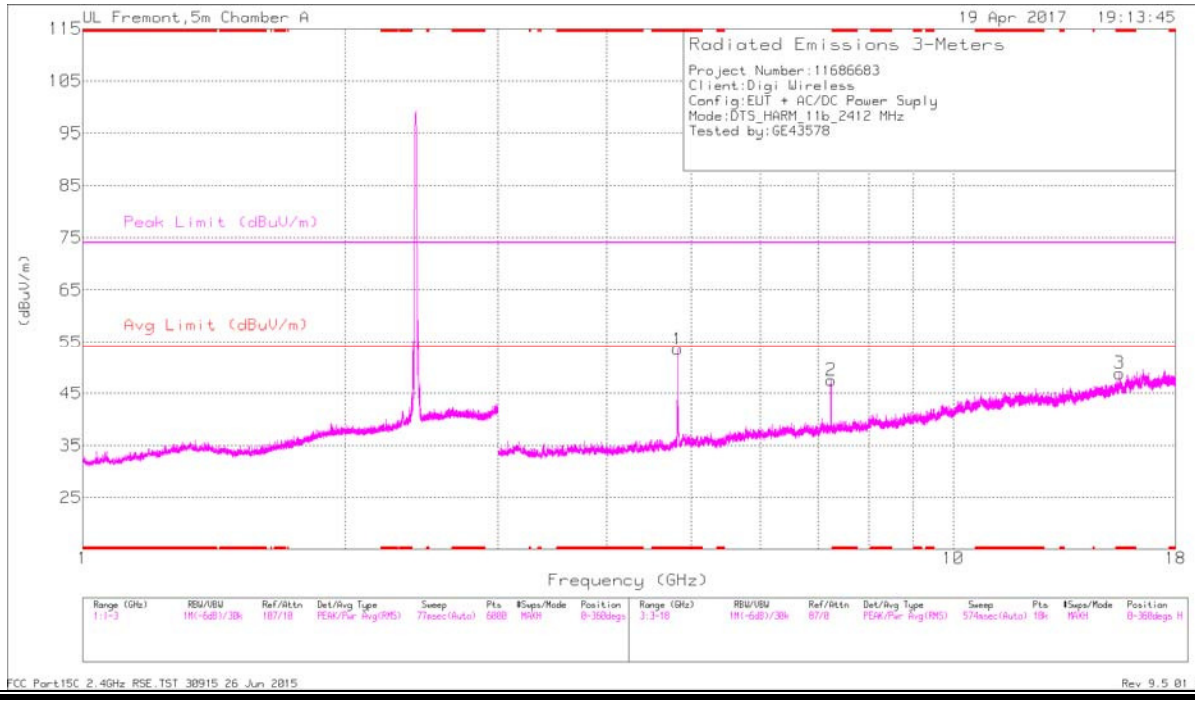
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/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	39.9	Pk	32.4	-20.8	0	51.5	-	-	74	-22.5	276	319	V
3	2.484	30.49	RMS	32.4	-20.8	0	42.09	54	-11.91	-	-	276	319	V
2	2.487	41.63	Pk	32.4	-20.9	0	53.13	-	-	74	-20.87	276	319	V
4	2.488	32.02	RMS	32.4	-20.9	0	43.52	54	-10.48	-	-	276	319	V

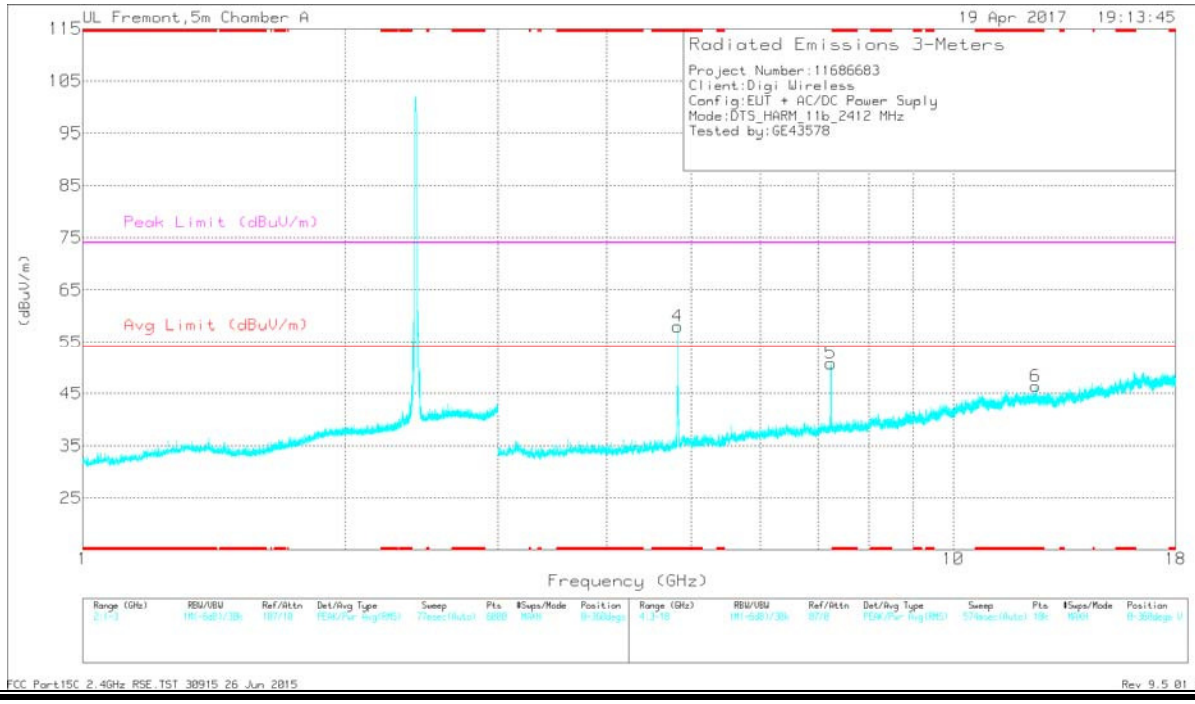
Pk - Peak detector
RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, CH 1)

LOW CHANNEL HORIZONTAL



LOW CHANNEL VERTICAL



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/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	* 4.824	47.79	Pk	34	-28.2	0	53.59	-	-	74	-20.41	0-360	101	H
3	* 15.522	27.26	Pk	40.3	-18.7	0	48.86	-	-	74	-25.14	0-360	101	H
4	* 4.824	52.2	Pk	34	-28.2	0	58	-	-	74	-16	0-360	101	V
6	* 12.422	27.48	Pk	38.9	-20	0	46.38	-	-	74	-27.62	0-360	101	V
5	7.234	40.18	Pk	35.5	-24.9	0	50.78	-	-	-	-	0-360	101	V
2	7.237	36.89	Pk	35.5	-24.9	0	47.49	-	-	-	-	0-360	101	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector

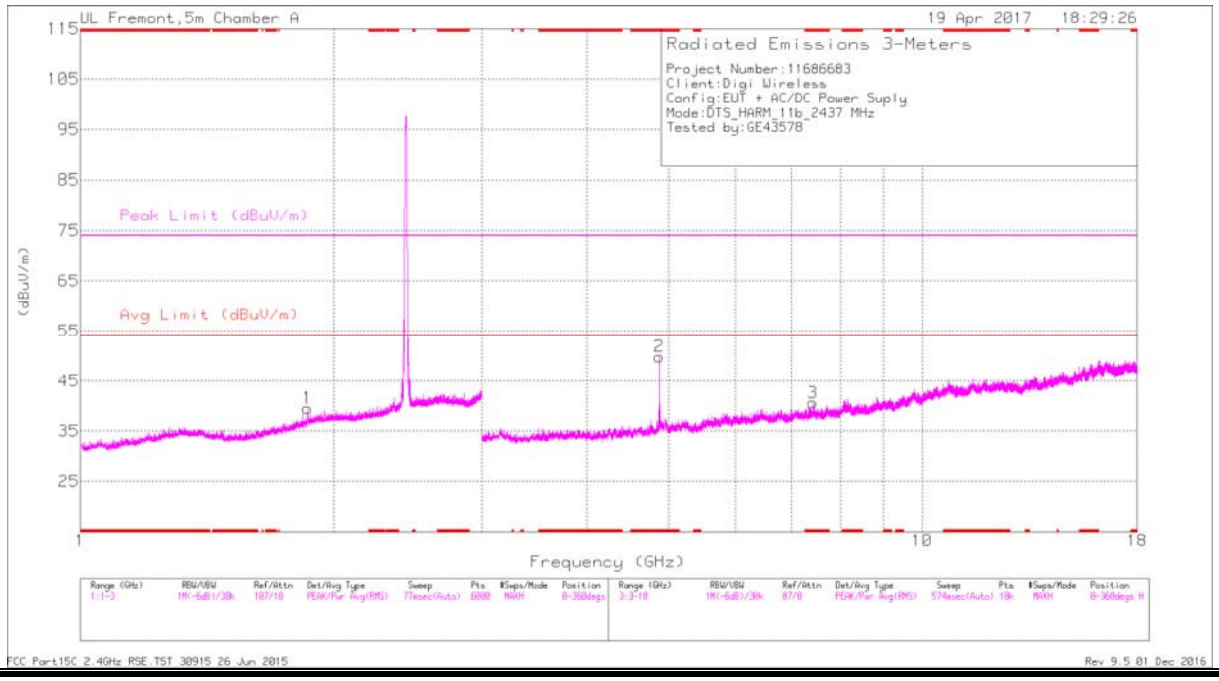
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/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
* 4.824	46.59	PK2	34	-28.2	0	52.39	-	-	74	-21.61	244	162	H
* 4.824	42.9	MAv1	34	-28.2	0	48.7	54	-5.3	-	-	244	162	H
* 15.523	33.1	PK2	40.3	-18.7	0	54.7	-	-	74	-19.3	32	103	H
* 15.52	20.66	MAv1	40.3	-18.8	0	42.16	54	-11.84	-	-	32	103	H
* 4.824	48.91	PK2	34	-28.2	0	54.71	-	-	74	-19.29	305	122	V
* 4.824	47	MAv1	34	-28.2	0	52.8	54	-1.2	-	-	305	122	V
* 12.421	32	PK2	38.9	-20.1	0	50.8	-	-	74	-23.2	204	103	V
* 12.42	20.51	MAv1	38.9	-20.1	0	39.31	54	-14.69	-	-	204	103	V
7.235	38.69	PK2	35.5	-24.9	0	49.29	-	-	-	-	75	103	H
7.237	39.99	PK2	35.5	-24.9	0	50.59	-	-	-	-	264	103	V

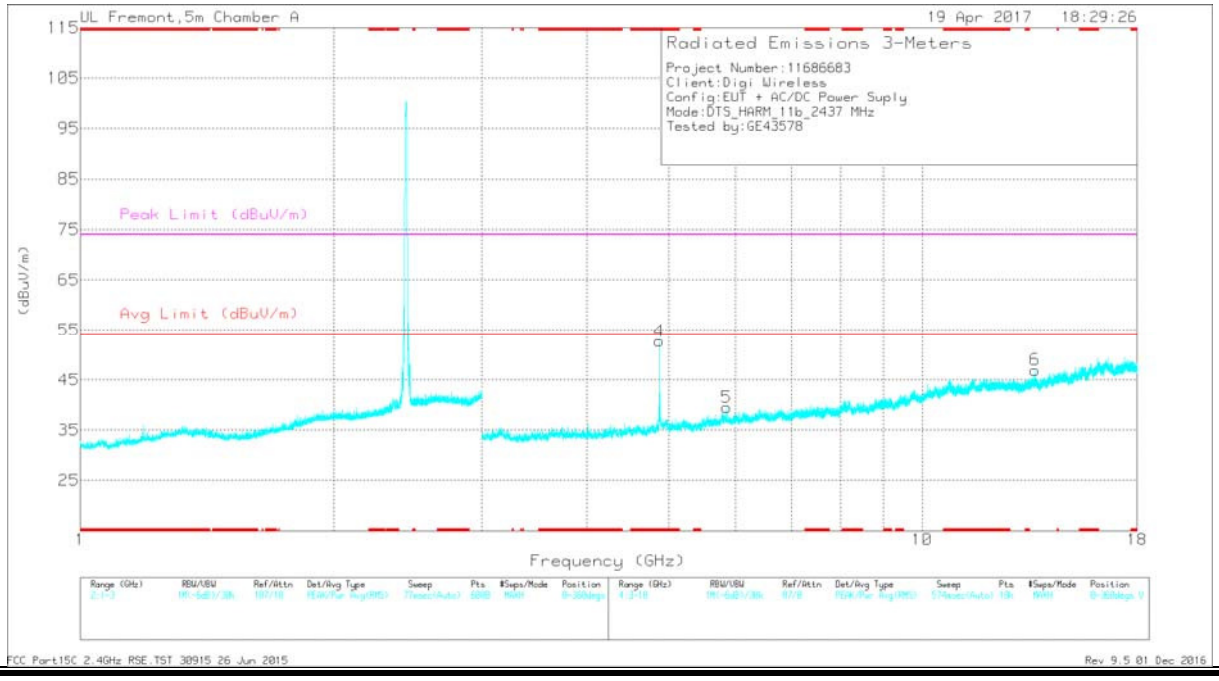
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK2 - KDB5558074 Method: Maximum Peak
MAv1 - KDB5558074 Option 1 Maximum RMS Average

HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, CH 6)

MID CHANNEL HORIZONTAL



MID CHANNEL VERTICAL



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/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
2	* 4.874	43.63	Pk	34	-27.8	0	49.83	-	-	74	-24.17	0-360	101	H
3	* 7.415	28.56	Pk	35.5	-23.4	0	40.66	-	-	74	-33.34	0-360	199	H
4	* 4.874	46.55	Pk	34	-27.8	0	52.75	-	-	74	-21.25	0-360	101	V
1	1.861	32.27	Pk	30.9	-23.6	0	39.57	-	-	-	-	0-360	101	H
5	5.86	31.22	Pk	34.8	-26.5	0	39.52	-	-	-	-	0-360	200	V
6	13.62	28.46	Pk	38.8	-20.3	0	46.96	-	-	-	-	0-360	200	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector

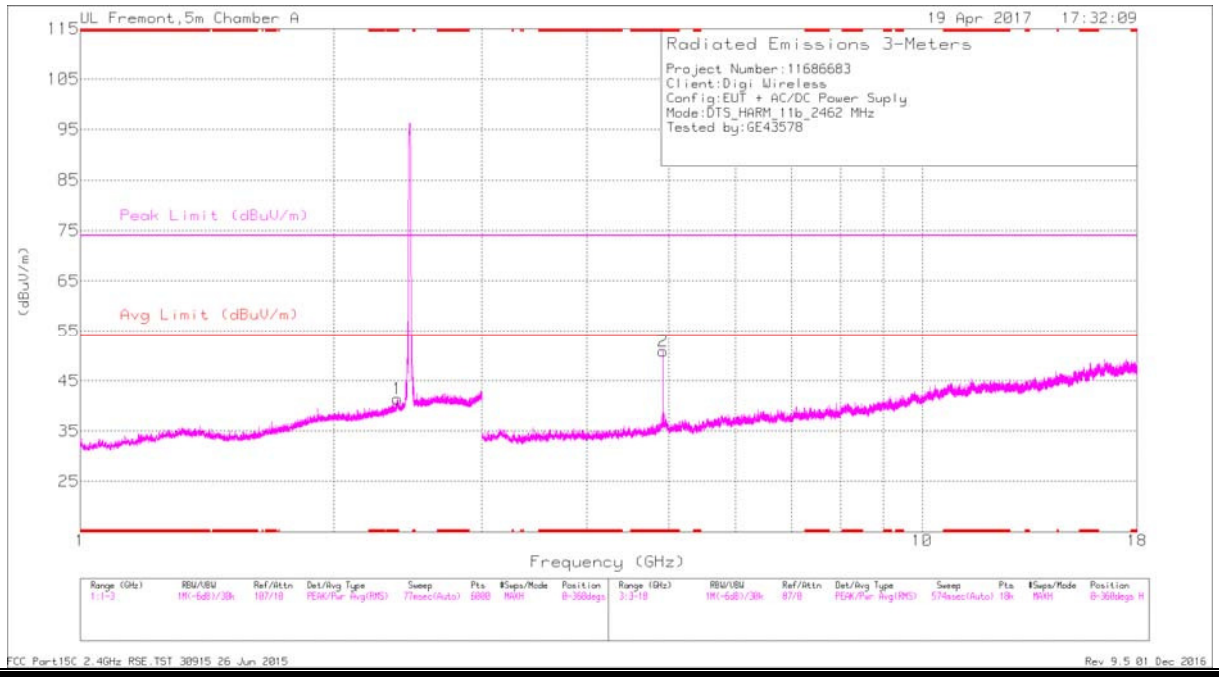
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/ 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
* 4.874	47.69	PK2	34	-27.8	0	53.89	-	-	74	-20.11	67	115	H
* 4.874	44.93	MAv1	34	-27.8	0	51.13	54	-2.87	-	-	67	115	H
* 7.416	33.66	PK2	35.5	-23.4	0	45.76	-	-	74	-28.24	292	199	H
* 7.414	21.84	MAv1	35.5	-23.5	0	33.84	54	-20.16	-	-	292	199	H
* 4.874	49.95	PK2	34	-27.8	0	56.15	-	-	74	-17.85	304	119	V
* 4.874	47.56	MAv1	34	-27.8	0	53.76	54	-.24	-	-	304	119	V
1.86	37.03	PK2	30.9	-23.6	0	44.33	-	-	-	-	169	142	H
5.859	35.79	PK2	34.8	-26.4	0	44.19	-	-	-	-	224	199	V
13.619	33.26	PK2	38.8	-20.2	0	51.86	-	-	-	-	145	199	V

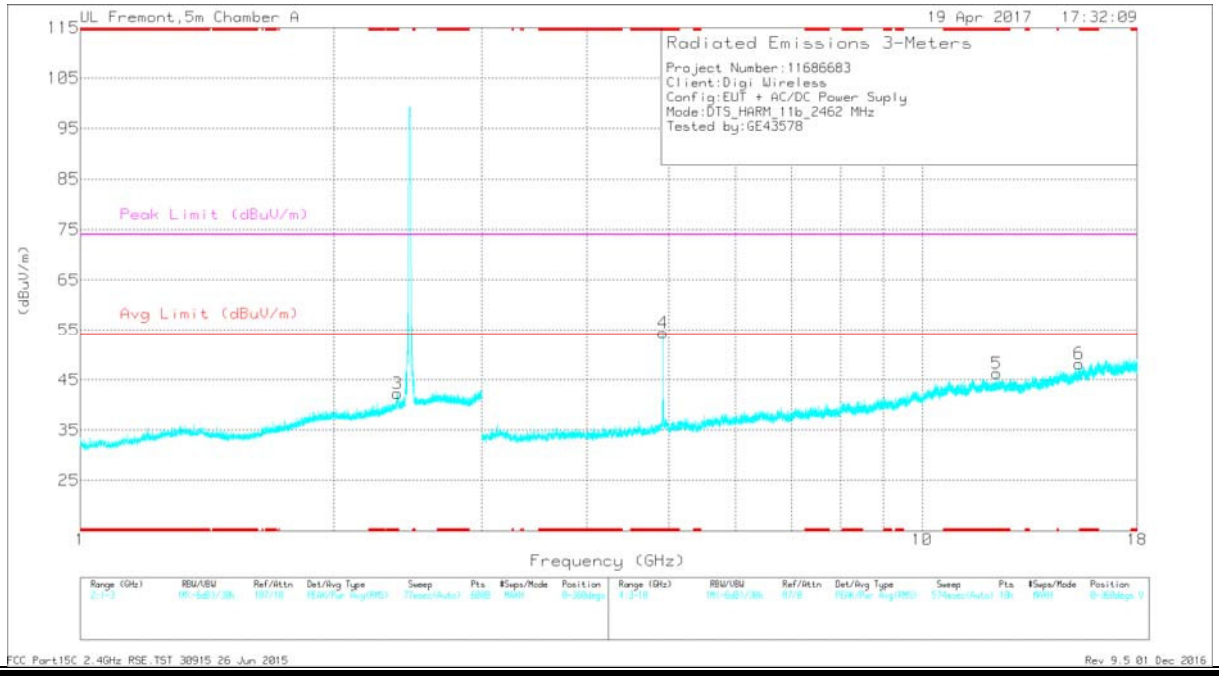
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK2 - KDB5558074 Method: Maximum Peak
MAv1 - KDB5558074 Option 1 Maximum RMS Average

HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, CH 11)

HIGH CHANNEL HORIZONTAL



HIGH CHANNEL VERTICAL



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/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	* 2.383	32.97	Pk	32.1	-23.7	0	41.37	-	-	74	-32.63	0-360	102	H
3	* 2.383	33.87	Pk	32.1	-23.7	0	42.27	-	-	74	-31.73	0-360	101	V
2	* 4.923	44.51	Pk	34.1	-27.7	0	50.91	-	-	74	-23.09	0-360	101	H
4	* 4.923	48.02	Pk	34.1	-27.7	0	54.42	-	-	74	-19.58	0-360	101	V
5	* 12.258	27.46	Pk	38.8	-20	0	46.26	-	-	74	-27.74	0-360	200	V
6	* 15.365	27.89	Pk	40.1	-19.8	0	48.19	-	-	74	-25.81	0-360	101	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector

Radiated Emissions

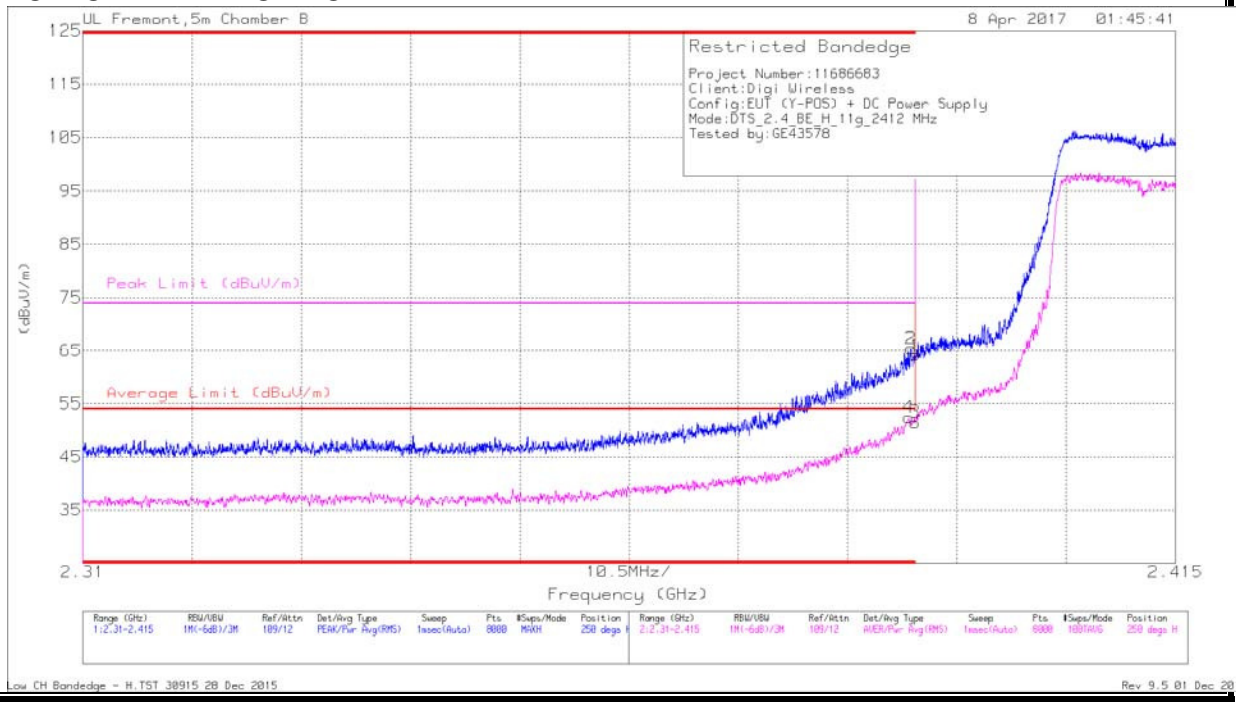
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/ Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 2.385	39.18	PK2	32.1	-23.7	0	47.58	-	-	74	-26.42	69	106	H
* 2.383	28.24	MAv1	32.1	-23.7	0	36.64	54	-17.36	-	-	69	106	H
* 2.381	39.21	PK2	32.1	-23.7	0	47.61	-	-	74	-26.39	313	176	V
* 2.38	28.58	MAv1	32.1	-23.7	0	36.98	54	-17.02	-	-	313	176	V
* 4.924	48.16	PK2	34.1	-27.8	0	54.46	-	-	74	-19.54	70	101	H
* 4.924	45.75	MAv1	34.1	-27.8	0	52.05	54	-1.95	-	-	70	101	H
* 4.924	49.53	PK2	34.1	-27.8	0	55.83	-	-	74	-18.17	304	183	V
* 4.924	47.24	MAv1	34.1	-27.8	0	53.54	54	-.46	-	-	304	183	V
* 12.258	32.29	PK2	38.8	-20	0	51.09	-	-	74	-22.91	2	275	V
* 12.258	20.47	MAv1	38.8	-20	0	39.27	54	-14.73	-	-	2	275	V
* 15.365	32.83	PK2	40.1	-19.8	0	53.13	-	-	74	-20.87	170	102	V
* 15.365	21.11	MAv1	40.1	-19.8	0	41.41	54	-12.59	-	-	170	102	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK2 - KDB5558074 Method: Maximum Peak
MAv1 - KDB5558074 Option 1 Maximum RMS Average

10.2.2. 11g MODE IN THE 2.4GHz BAND

AUTHORIZED BANDEDGE (LOW CHANNEL, CH 1)

LOW CHANNEL HORIZONTAL

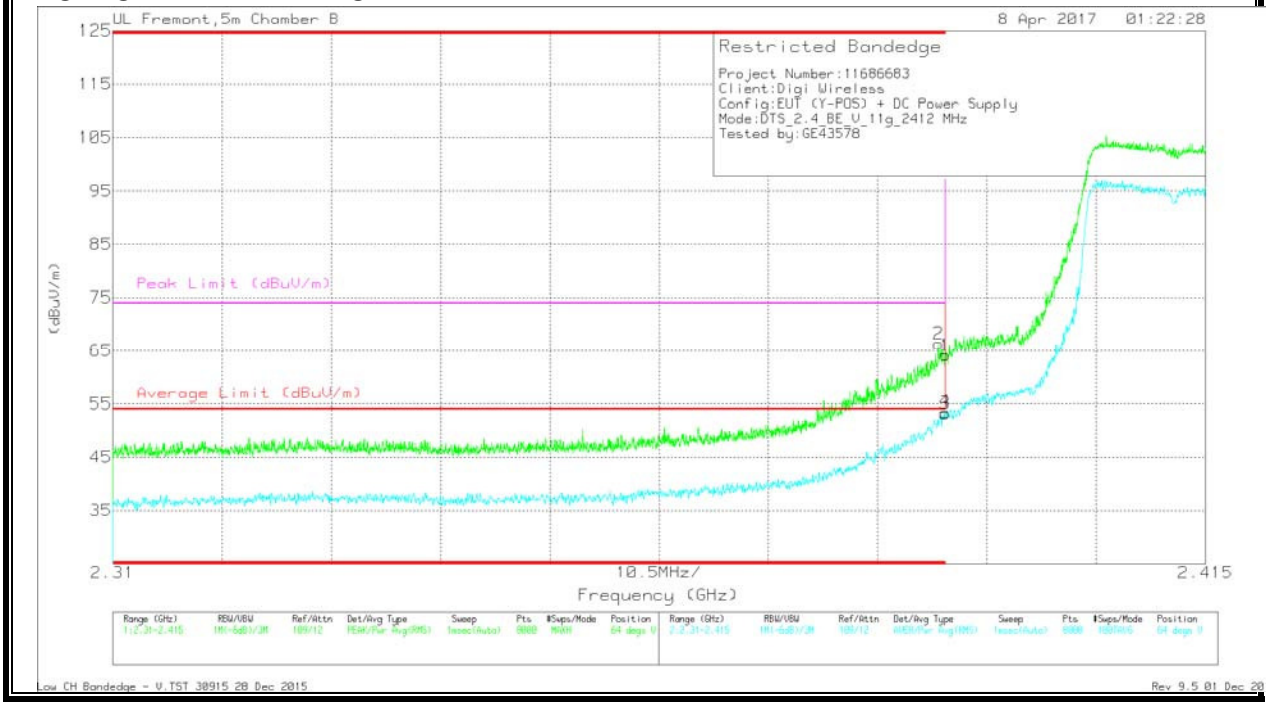


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/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
4	* 2.389	41.58	RMS	32	-21.3	.12	52.4	54	-1.6	-	-	250	322	H
1	* 2.39	53.42	Pk	32	-21.3	0	64.12	-	-	74	-9.88	250	322	H
2	* 2.39	54.72	Pk	32	-21.3	0	65.42	-	-	74	-8.58	250	322	H
3	* 2.39	40.64	RMS	32	-21.3	.12	51.46	54	-2.54	-	-	250	322	H

Pk - Peak detector
RMS - RMS detection

LOW CHANNEL VERTICAL



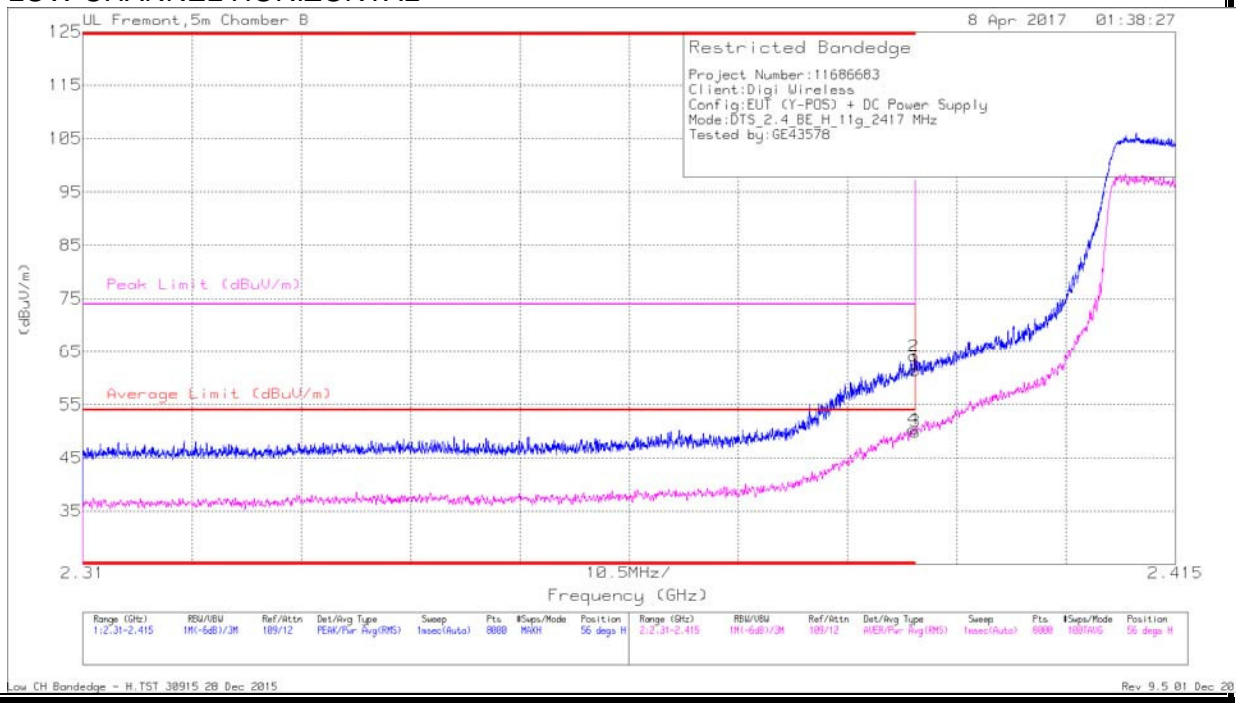
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/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
2	* 2.389	55.63	Pk	32	-21.3	0	66.33	-	-	74	-7.67	64	316	V
1	* 2.39	53.44	Pk	32	-21.3	0	64.14	-	-	74	-9.86	64	316	V
3	* 2.39	42.34	RMS	32	-21.3	.12	53.16	54	-.84	-	-	64	316	V
4	* 2.39	42.61	RMS	32	-21.3	.12	53.43	54	-.57	-	-	64	316	V

Pk - Peak detector
RMS - RMS detection

AUTHORIZED BANDEDGE (LOW CHANNEL, CH 2)

LOW CHANNEL HORIZONTAL

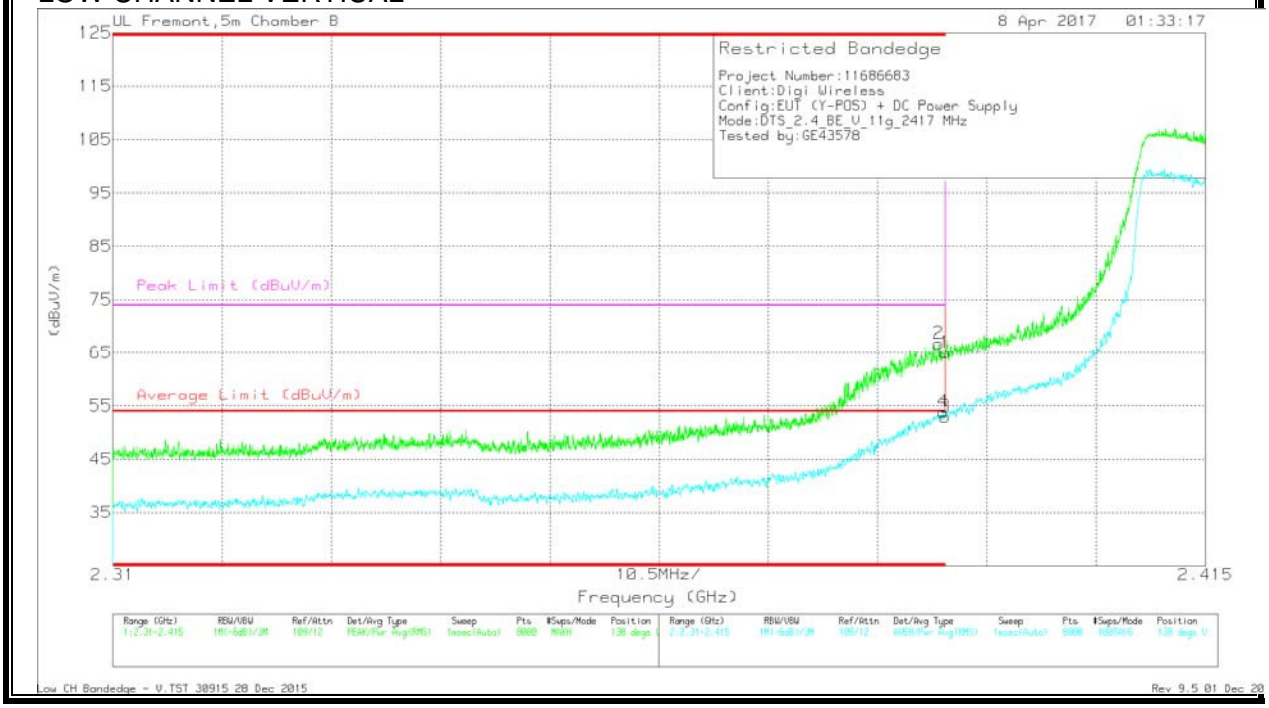


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/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	50.72	Pk	32	-21.3	0	61.42	-	-	74	-12.58	56	259	H
2	* 2.39	53.44	Pk	32	-21.3	0	64.14	-	-	74	-9.86	56	259	H
3	* 2.39	39.09	RMS	32	-21.3	.12	49.91	54	-4.09	-	-	56	259	H
4	* 2.39	39.48	RMS	32	-21.3	.12	50.3	54	-3.7	-	-	56	259	H

Pk - Peak detector
RMS - RMS detection

LOW CHANNEL VERTICAL



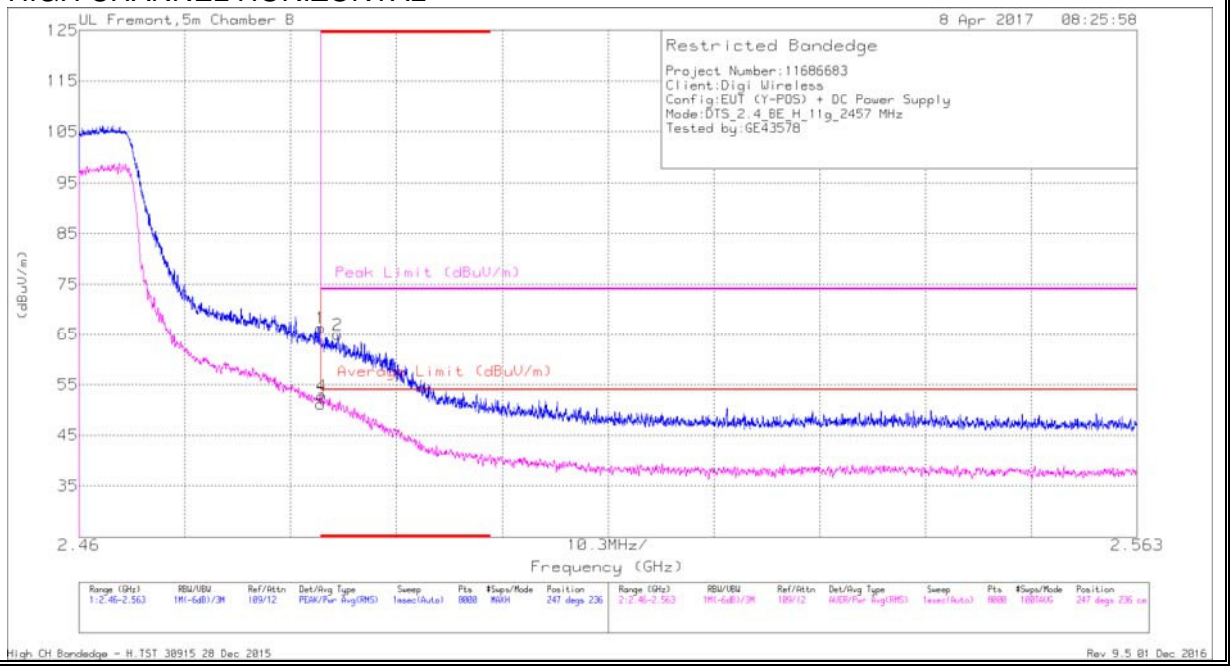
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/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
2	* 2.389	56.07	Pk	32	-21.3	0	66.77	-	-	74	-7.23	138	261	V
1	* 2.39	54.35	Pk	32	-21.3	0	65.05	-	-	74	-8.95	138	261	V
3	* 2.39	42.09	RMS	32	-21.3	.12	52.91	54	-1.09	-	-	138	261	V
4	* 2.39	43.02	RMS	32	-21.3	.12	53.84	54	-.16	-	-	138	261	V

Pk - Peak detector
RMS - RMS detection

AUTHORIZED BANDEDGE (HIGH CHANNEL, CH 10)

HIGH CHANNEL HORIZONTAL

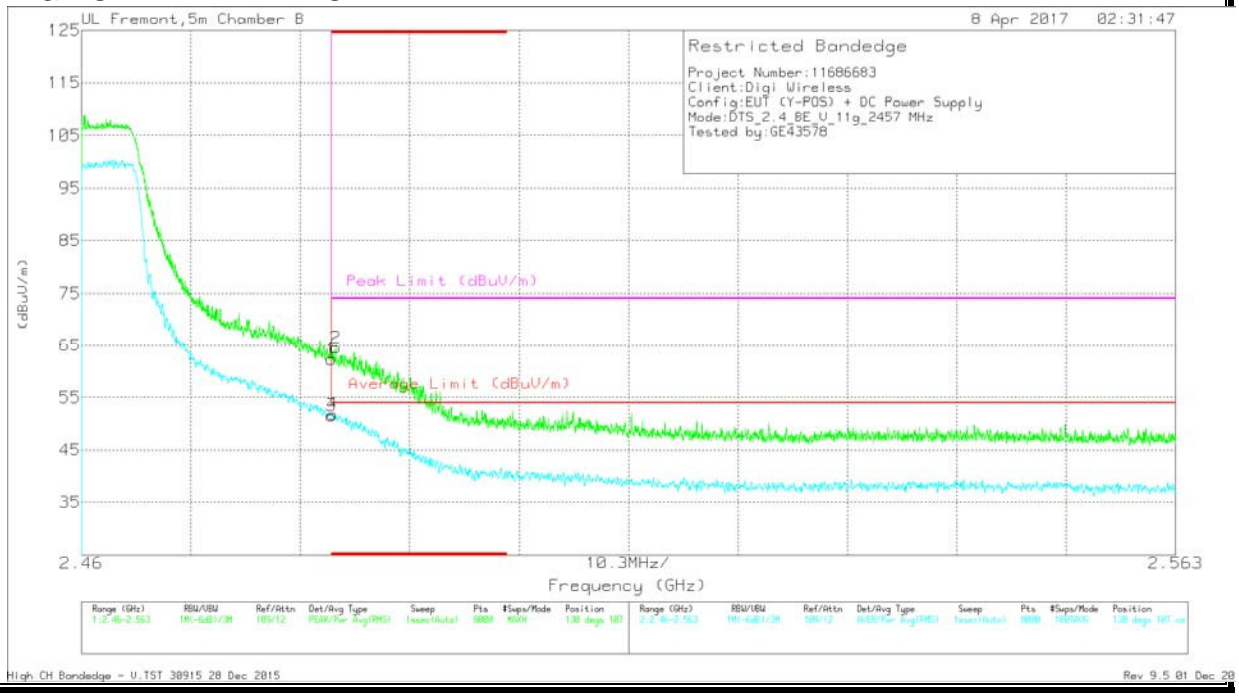


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/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	55.36	Pk	32.1	-21.2	0	66.26	-	-	74	-7.74	247	236	H
2	* 2.485	53.95	Pk	32.1	-21.1	0	64.95	-	-	74	-9.05	247	236	H
3	* 2.484	40.15	RMS	32.1	-21.2	.12	51.17	54	-2.83	-	-	247	236	H
4	* 2.484	41.72	RMS	32.1	-21.2	.12	52.74	54	-1.26	-	-	247	236	H

Pk - Peak detector
RMS - RMS detection

HIGH CHANNEL VERTICAL



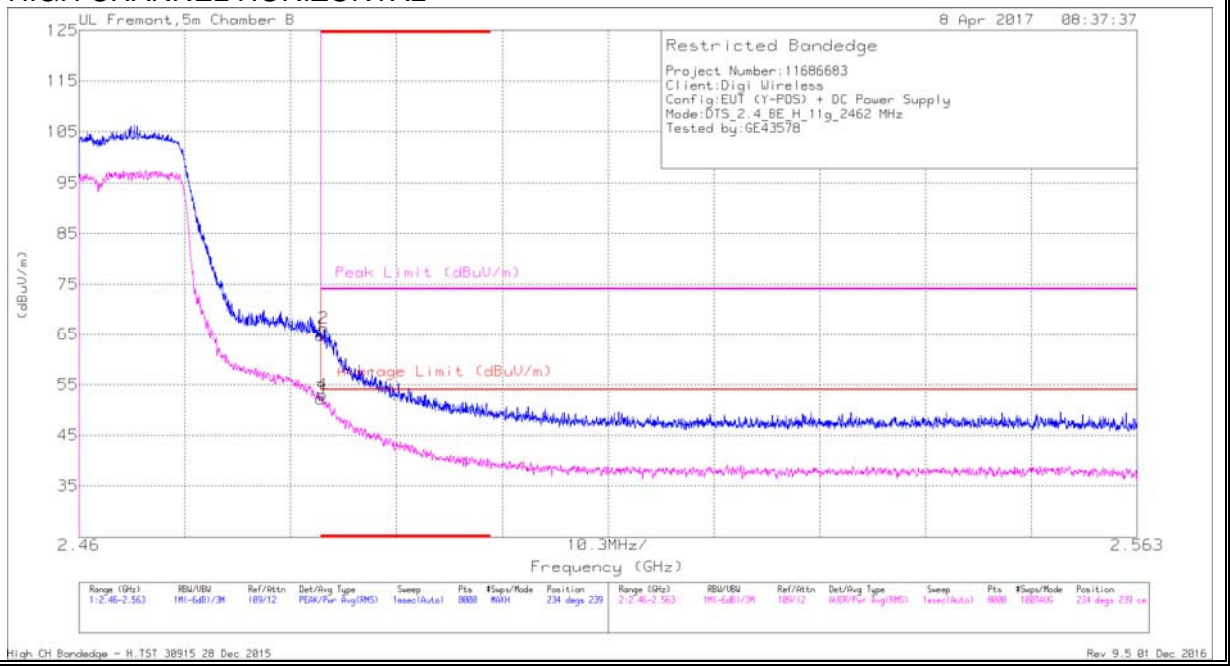
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/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	51.41	Pk	32.1	-21.2	0	62.31	-	-	74	-11.69	130	107	V
2	* 2.484	53.64	Pk	32.1	-21.2	0	64.54	-	-	74	-9.46	130	107	V
3	* 2.484	40.56	RMS	32.1	-21.2	.12	51.58	54	-2.42	-	-	130	107	V
4	* 2.484	40.72	RMS	32.1	-21.2	.12	51.74	54	-2.26	-	-	130	107	V

Pk - Peak detector
RMS - RMS detection

AUTHORIZED BANDEDGE (HIGH CHANNEL, CH 11)

HIGH CHANNEL HORIZONTAL

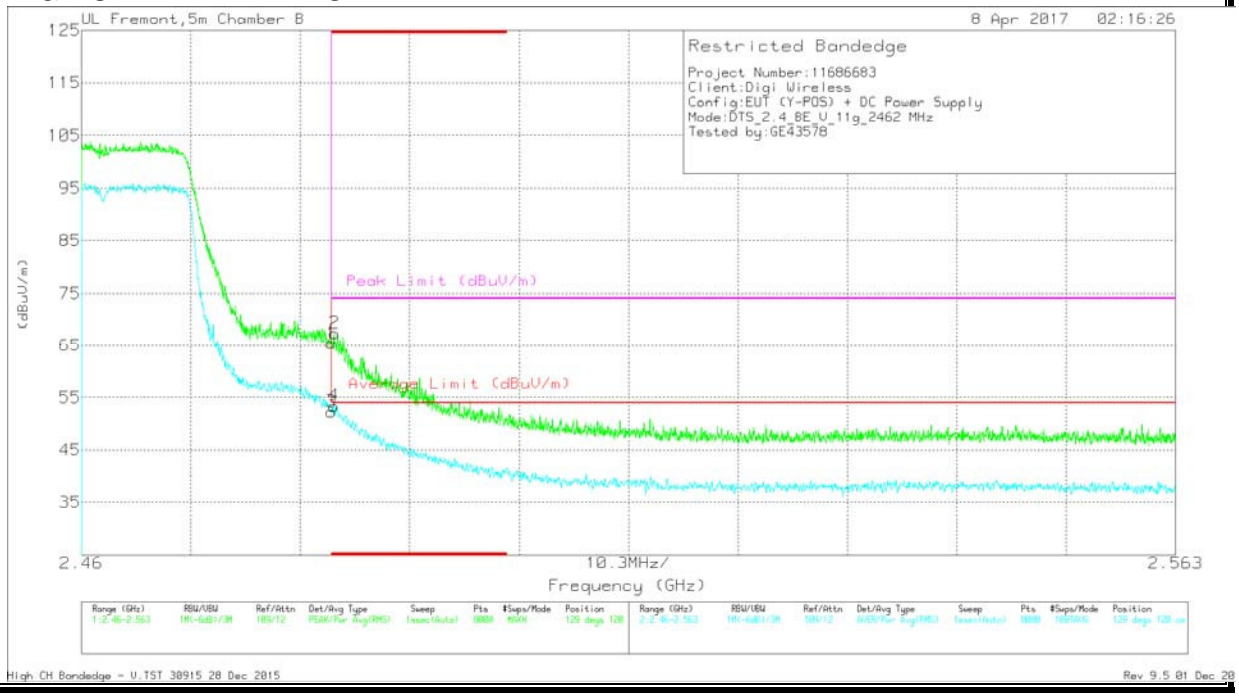


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/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	53.81	Pk	32.1	-21.2	0	64.71	-	-	74	-9.29	234	239	H
2	* 2.484	55.37	Pk	32.1	-21.2	0	66.27	-	-	74	-7.73	234	239	H
3	* 2.484	41.2	RMS	32.1	-21.2	.12	52.22	54	-1.78	-	-	234	239	H
4	* 2.484	41.98	RMS	32.1	-21.2	.12	53	54	-1	-	-	234	239	H

Pk - Peak detector
RMS - RMS detection

HIGH CHANNEL VERTICAL



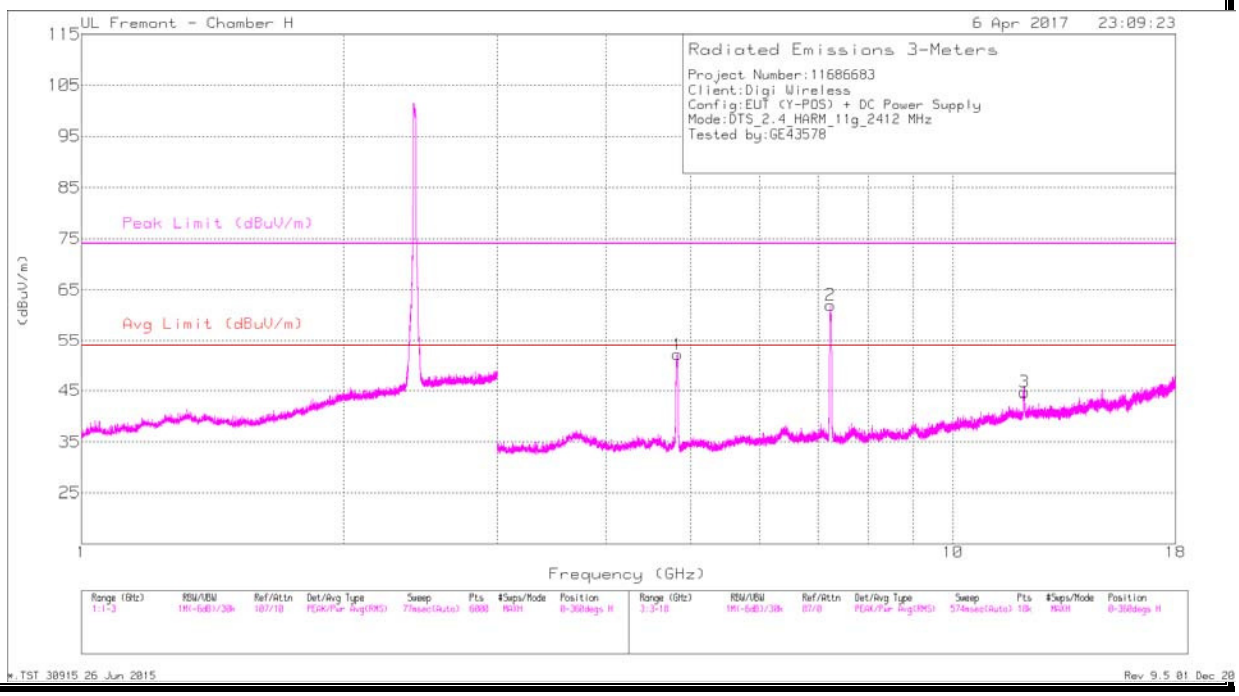
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/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	54.51	Pk	32.1	-21.2	0	65.41	-	-	74	-8.59	129	120	V
2	* 2.484	56.57	Pk	32.1	-21.2	0	67.47	-	-	74	-6.53	129	120	V
3	* 2.484	41.24	RMS	32.1	-21.2	.12	52.26	54	-1.74	-	-	129	120	V
4	* 2.484	42.32	RMS	32.1	-21.2	.12	53.34	54	-.66	-	-	129	120	V

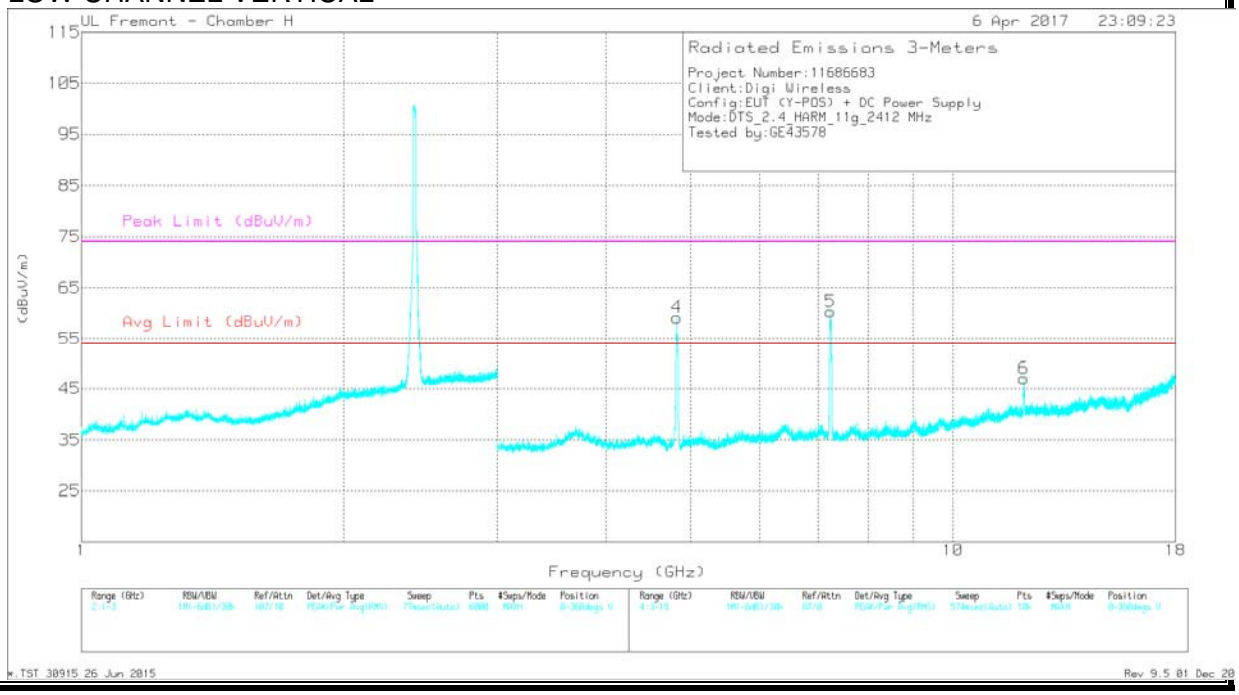
Pk - Peak detector
RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, CH 1)

LOW CHANNEL HORIZONTAL



LOW CHANNEL VERTICAL



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T120 (dB/m)	Amp/Cbl/Fltr/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	* 4.828	53.14	Pk	34	-35	0	52.14	-	-	74	-21.86	0-360	200	H
3	* 12.074	31.82	Pk	39.3	-26.4	0	44.72	-	-	74	-29.28	0-360	200	H
4	* 4.823	60.18	Pk	34	-35	0	59.18	-	-	74	-14.82	0-360	99	V
6	* 12.05	34.06	Pk	39.3	-26.4	0	46.96	-	-	74	-27.04	0-360	201	V
2	7.231	57.95	Pk	35.7	-31.7	0	61.95	-	-	-	-	0-360	200	H
5	7.233	56.29	Pk	35.7	-31.7	0	60.29	-	-	-	-	0-360	99	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector

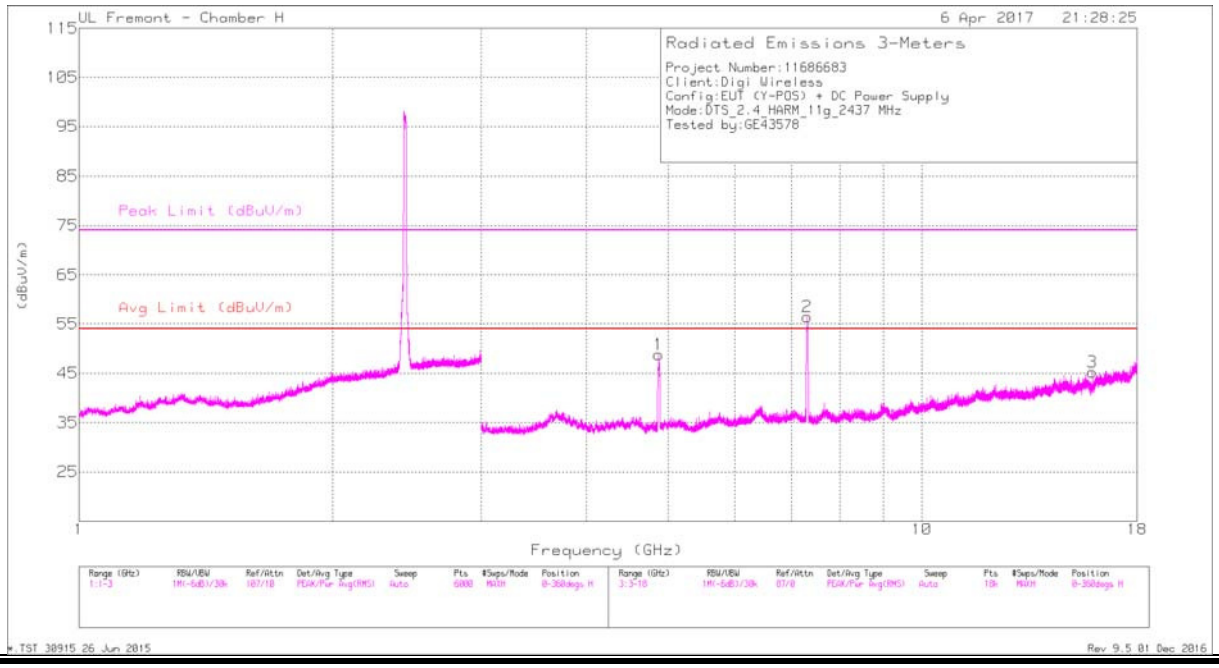
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T120 (dB/m)	Amp/Cbl/Fltr/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
* 4.824	65.05	PK2	34	-35	0	64.05	-	-	74	-9.95	248	280	H
* 4.825	51.85	MAv1	34	-35	.12	50.97	54	-3.03	-	-	248	280	H
* 12.051	44.97	PK2	39.3	-26.4	0	57.87	-	-	74	-16.13	122	224	H
* 12.062	31.4	MAv1	39.3	-26.4	.12	44.42	54	-9.58	-	-	122	224	H
* 4.823	65.78	PK2	34	-35	0	64.78	-	-	74	-9.22	124	123	V
* 4.824	53.99	MAv1	34	-35	.12	53.11	54	-.89	-	-	124	123	V
* 12.051	46.17	PK2	39.3	-26.4	0	59.07	-	-	74	-14.93	170	189	V
* 12.059	32.31	MAv1	39.3	-26.4	.12	45.33	54	-8.67	-	-	170	189	V
7.232	66.58	PK2	35.7	-31.7	0	70.58	-	-	-	-	151	108	V
7.234	69.26	PK2	35.7	-31.7	0	73.26	-	-	-	-	136	109	H

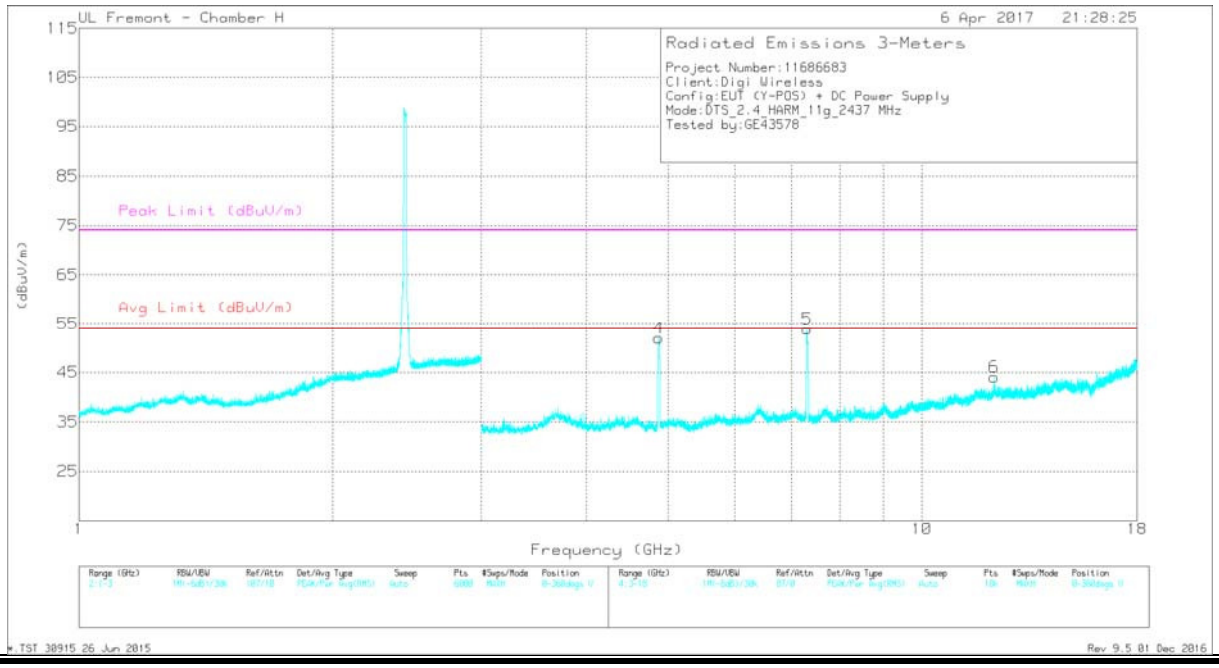
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK2 - KDB5558074 Method: Maximum Peak
MAv1 - KDB5558074 Option 1 Maximum RMS Average

HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, CH 6)

MID CHANNEL HORIZONTAL



MID CHANNEL VERTICAL



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T120 (dB/m)	Amp/Cbl/Fltr/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	* 4.873	49.68	Pk	34	-34.9	0	48.78	-	-	74	-25.22	0-360	200	H
2	* 7.314	52.16	Pk	35.7	-31.4	0	56.46	-	-	74	-17.54	0-360	100	H
3	* 15.92	28.61	Pk	40.3	-23.7	0	45.21	-	-	74	-28.79	0-360	100	H
4	* 4.875	52.89	Pk	34	-34.9	0	51.99	-	-	74	-22.01	0-360	99	V
5	* 7.305	49.5	Pk	35.7	-31.3	0	53.9	-	-	74	-20.1	0-360	99	V
6	* 12.181	31.05	Pk	39.3	-26.3	0	44.05	-	-	74	-29.95	0-360	201	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector

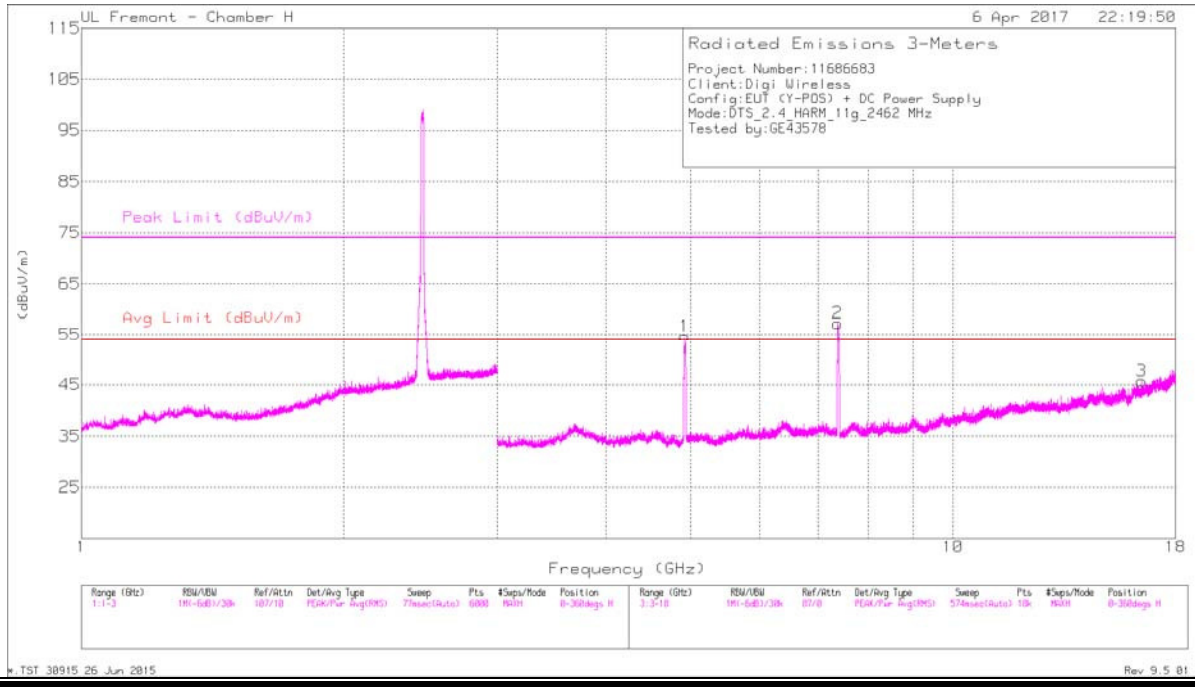
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T120 (dB/m)	Amp/Cbl/Fltr/ 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
* 7.314	63.11	PK2	35.7	-31.3	0	67.51	-	-	74	-6.49	142	101	H
* 7.311	48.22	MAv1	35.7	-31.4	.12	52.64	54	-1.36	-	-	142	101	H
* 4.876	59.2	PK2	34	-34.9	0	58.3	-	-	74	-15.7	248	199	H
* 4.874	46.9	MAv1	34	-34.9	.12	46.12	54	-7.88	-	-	248	199	H
* 15.919	33.26	PK2	40.3	-23.7	0	49.86	-	-	74	-24.14	244	100	H
* 15.921	21.43	MAv1	40.3	-23.7	.12	38.15	54	-15.85	-	-	244	100	H
* 4.878	62.74	PK2	34	-34.9	0	61.84	-	-	74	-12.16	129	109	V
* 4.873	49.57	MAv1	34	-34.9	.12	48.79	54	-5.21	-	-	129	109	V
* 7.307	58.79	PK2	35.7	-31.3	0	63.19	-	-	74	-10.81	143	107	V
* 7.31	45.92	MAv1	35.7	-31.4	.12	50.34	54	-3.66	-	-	143	107	V
* 12.183	39.16	PK2	39.3	-26.3	0	52.16	-	-	74	-21.84	173	202	V
* 12.183	27	MAv1	39.3	-26.3	.12	40.12	54	-13.88	-	-	173	202	V

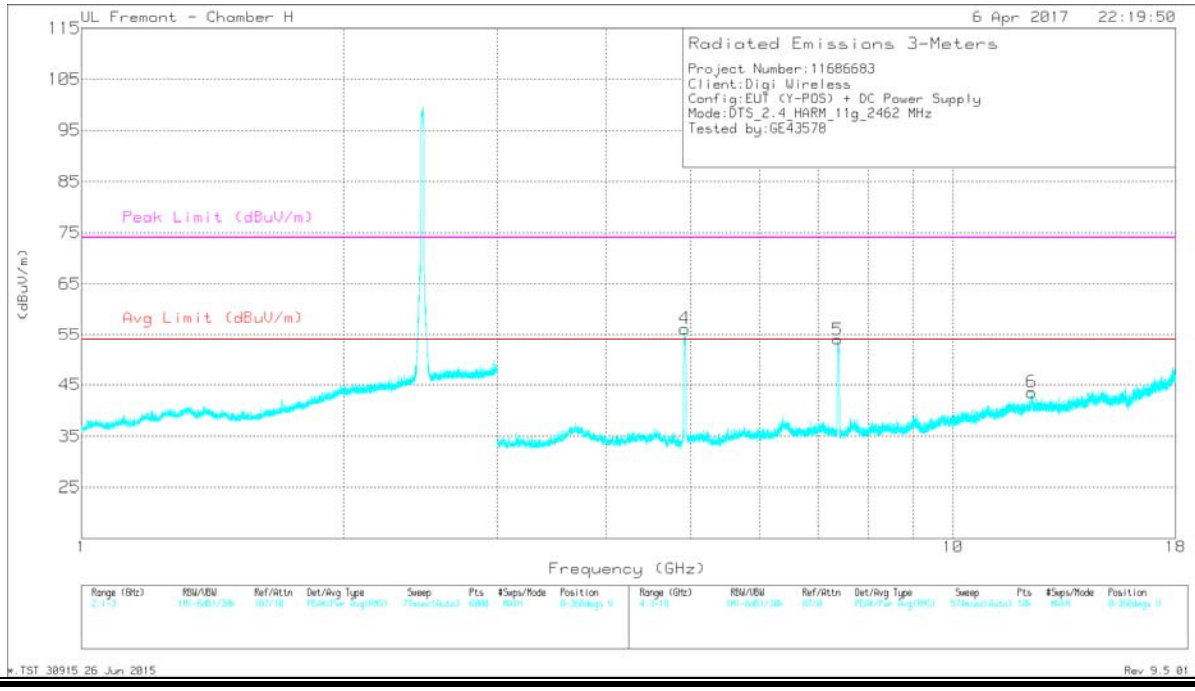
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK2 - KDB5558074 Method: Maximum Peak
MAv1 - KDB5558074 Option 1 Maximum RMS Average

HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, CH 11)

HIGH CHANNEL HORIZONTAL



HIGH CHANNEL VERTICAL



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T120 (dB/m)	Amp/Cbl/Fltr/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	* 4.923	55.23	Pk	34	-34.5	0	54.73	-	-	74	-19.27	0-360	200	H
2	* 7.38	52.3	Pk	35.7	-30.8	0	57.2	-	-	74	-16.8	0-360	100	H
4	* 4.923	56.67	Pk	34	-34.5	0	56.17	-	-	74	-17.83	0-360	99	V
5	* 7.378	49.19	Pk	35.7	-30.8	0	54.09	-	-	74	-19.91	0-360	99	V
6	* 12.309	30.32	Pk	39.2	-25.9	0	43.62	-	-	74	-30.38	0-360	201	V
3	16.463	28.32	Pk	41	-23.6	0	45.72	-	-	-	-	0-360	100	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector

Radiated Emissions

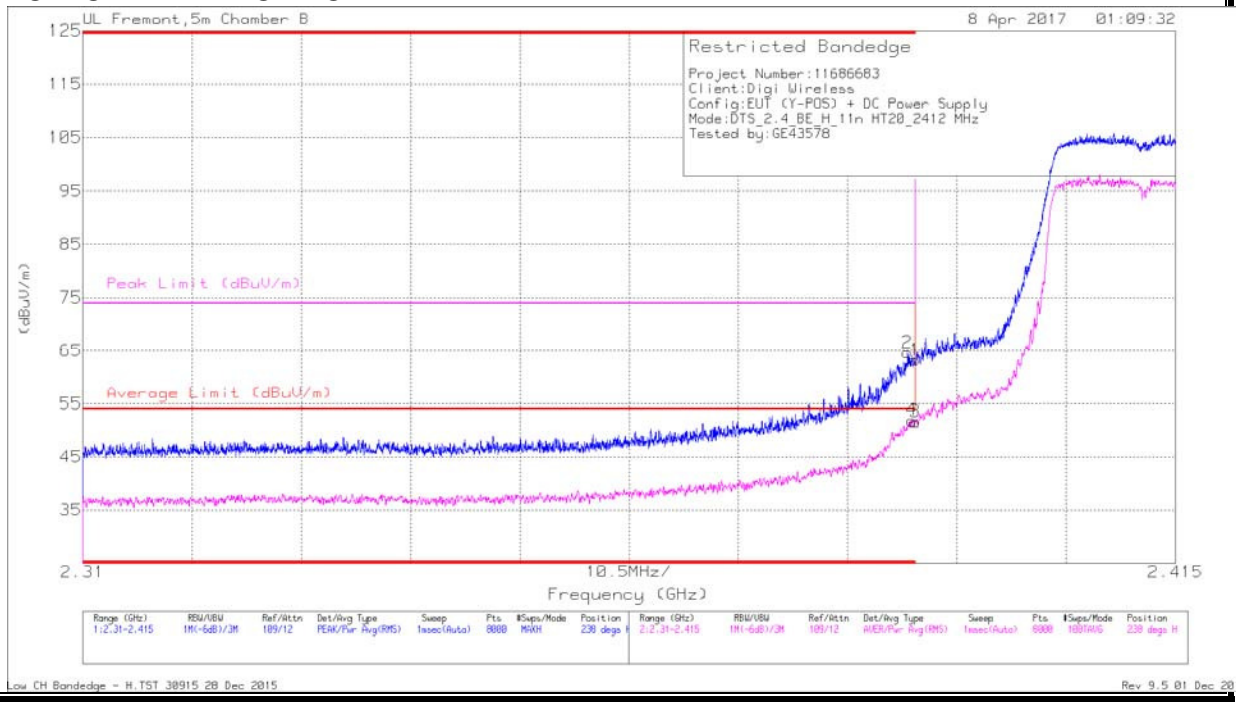
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T120 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 7.378	61.06	PK2	35.7	-30.8	0	65.96	-	-	74	-8.04	131	102	H
* 7.384	48.68	MAv1	35.7	-30.9	.12	53.6	54	-.4	-	-	131	102	H
* 4.928	64.09	PK2	34	-34.5	0	63.59	-	-	74	-10.41	245	199	H
* 4.924	51.36	MAv1	34	-34.5	.12	50.98	54	-3.02	-	-	245	199	H
* 4.924	64.55	PK2	34	-34.5	0	64.05	-	-	74	-9.95	119	107	V
* 4.924	52.66	MAv1	34	-34.5	.12	52.28	54	-1.72	-	-	119	107	V
* 7.383	58.96	PK2	35.7	-30.9	0	63.76	-	-	74	-10.24	121	100	V
* 7.385	45.34	MAv1	35.7	-31	.12	50.16	54	-3.84	-	-	121	100	V
* 12.309	37.15	PK2	39.2	-25.8	0	50.55	-	-	74	-23.45	188	202	V
* 12.307	25.07	MAv1	39.2	-25.9	.12	38.49	54	-15.51	-	-	188	202	V
16.461	33.81	PK2	41	-23.6	0	51.21	-	-	-	-	133	100	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK2 - KDB5558074 Method: Maximum Peak
MAv1 - KDB5558074 Option 1 Maximum RMS Average

10.2.3. 11n-HT20 MODE IN THE 2.4GHz BAND

AUTHORIZED BANDEDGE (LOW CHANNEL, CH 1)

LOW CHANNEL HORIZONTAL

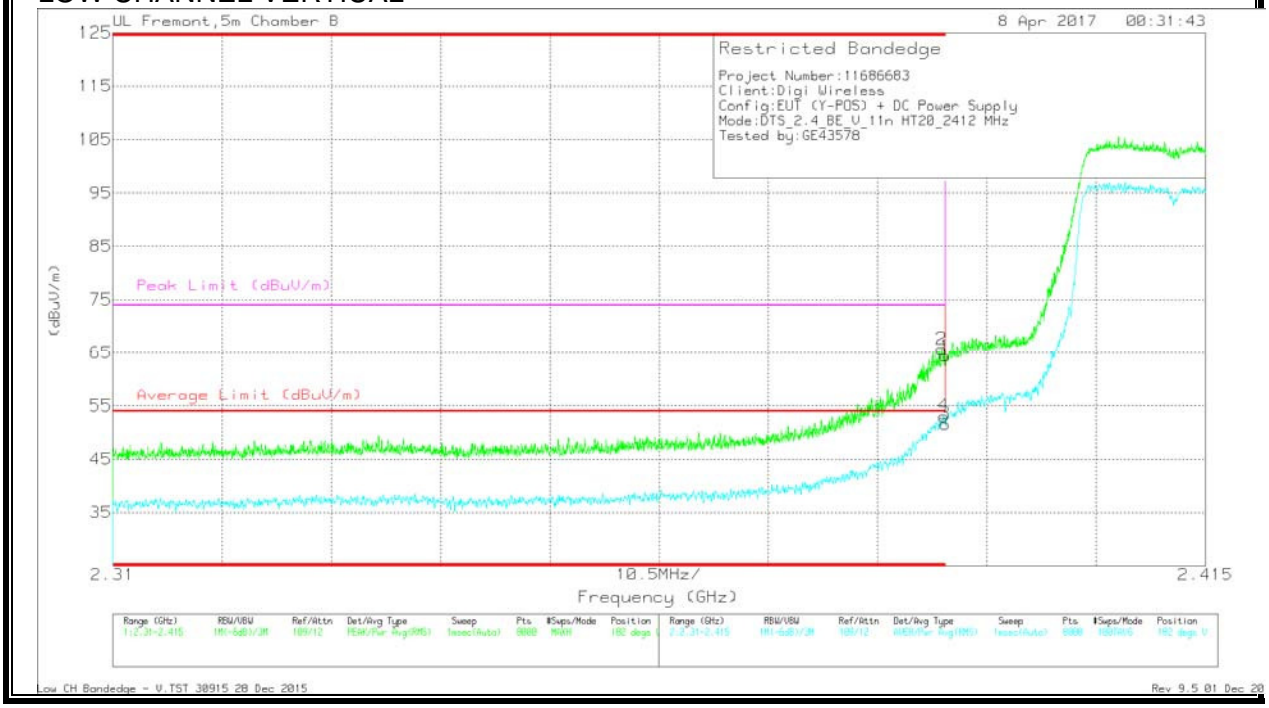


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/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
2	* 2.389	54.07	Pk	31.9	-21.3	0	64.67	-	-	74	-9.33	238	281	H
1	* 2.39	52.48	Pk	32	-21.3	0	63.18	-	-	74	-10.82	238	281	H
3	* 2.39	40.76	RMS	32	-21.3	.14	51.6	54	-2.4	-	-	238	281	H
4	* 2.39	41.01	RMS	32	-21.3	.14	51.85	54	-2.15	-	-	238	281	H

Pk - Peak detector
RMS - RMS detection

LOW CHANNEL VERTICAL



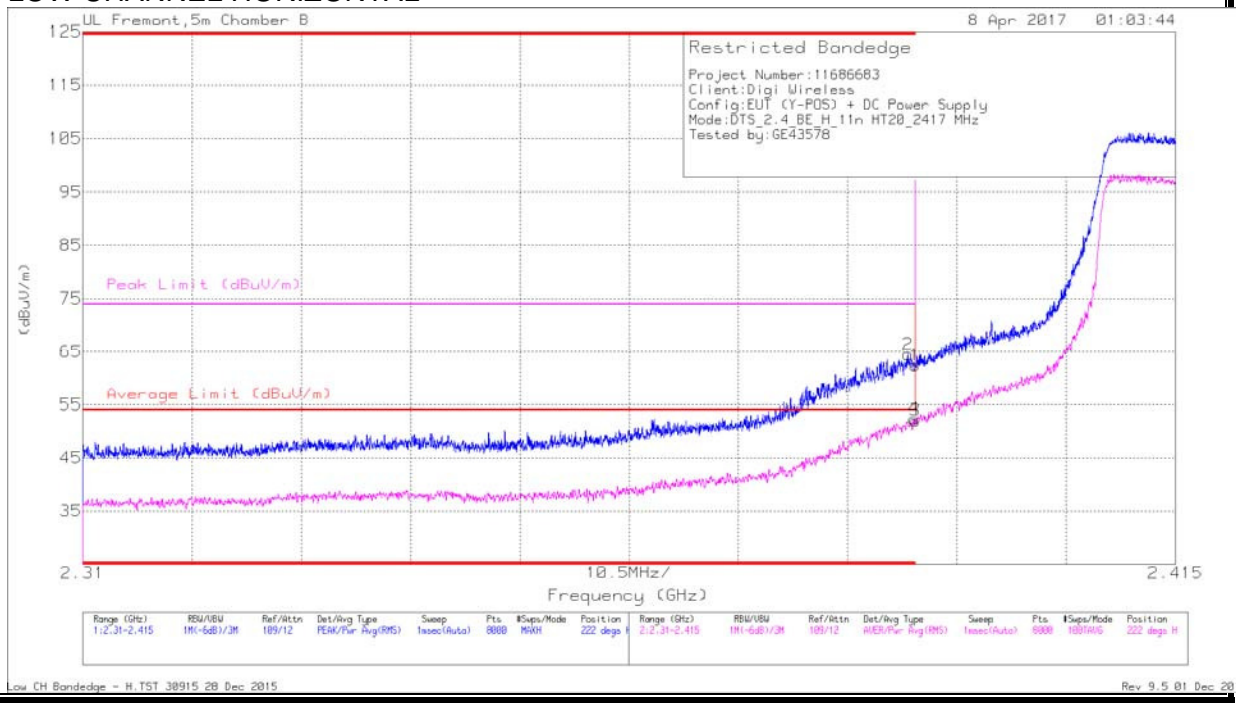
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/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	53.66	Pk	32	-21.3	0	64.36	-	-	74	-9.64	182	263	V
2	* 2.39	54.97	Pk	32	-21.3	0	65.67	-	-	74	-8.33	182	263	V
3	* 2.39	40.75	RMS	32	-21.3	.14	51.59	54	-2.41	-	-	182	263	V
4	* 2.39	42.22	RMS	32	-21.3	.14	53.06	54	-.94	-	-	182	263	V

Pk - Peak detector
RMS - RMS detection

AUTHORIZED BANDEDGE (LOW CHANNEL, CH 2)

LOW CHANNEL HORIZONTAL

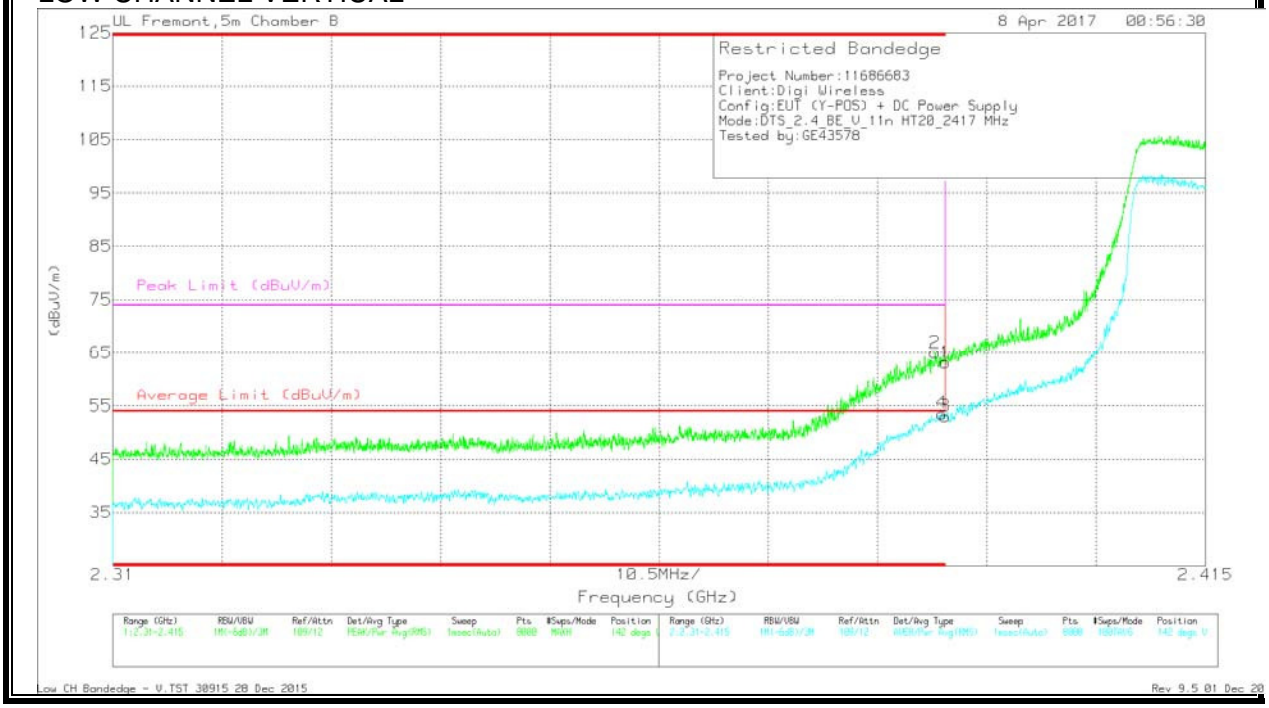


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/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
2	* 2.389	53.76	Pk	32	-21.3	0	64.46	-	-	74	-9.54	222	168	H
1	* 2.39	51.71	Pk	32	-21.3	0	62.41	-	-	74	-11.59	222	168	H
3	* 2.39	41.13	RMS	32	-21.3	.14	51.97	54	-2.03	-	-	222	168	H
4	* 2.39	41.42	RMS	32	-21.3	.14	52.26	54	-1.74	-	-	222	168	H

Pk - Peak detector
RMS - RMS detection

LOW CHANNEL VERTICAL



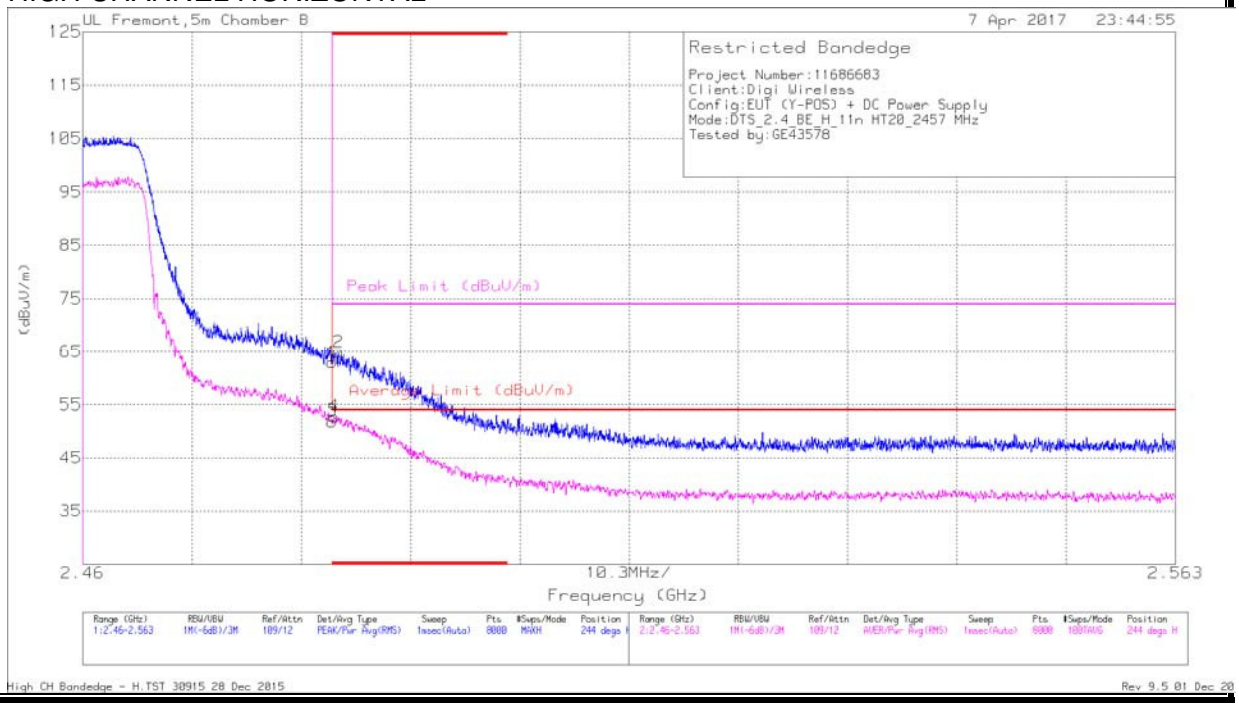
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/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
2	* 2.389	54.43	Pk	31.9	-21.3	0	65.03	-	-	74	-8.97	142	191	V
1	* 2.39	52.41	Pk	32	-21.3	0	63.11	-	-	74	-10.89	142	191	V
3	* 2.39	42.15	RMS	32	-21.3	.14	52.99	54	-1.01	-	-	142	191	V
4	* 2.39	42.72	RMS	32	-21.3	.14	53.56	54	-.44	-	-	142	191	V

Pk - Peak detector
RMS - RMS detection

AUTHORIZED BANDEDGE (HIGH CHANNEL, CH 10)

HIGH CHANNEL HORIZONTAL

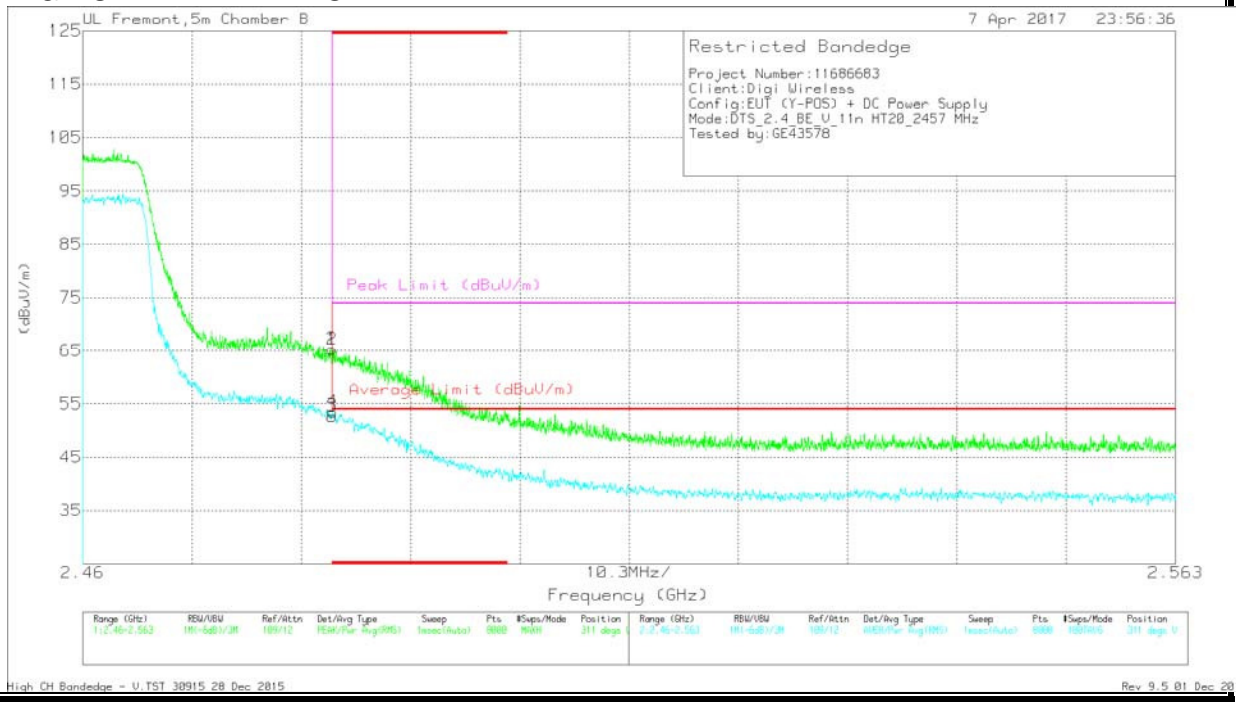


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/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	52.03	Pk	32.1	-21.2	0	62.93	-	-	74	-11.07	244	267	H
2	* 2.484	54.08	Pk	32.1	-21.2	0	64.98	-	-	74	-9.02	244	267	H
3	* 2.484	40.81	RMS	32.1	-21.2	.14	51.85	54	-2.15	-	-	244	267	H
4	* 2.484	41.71	RMS	32.1	-21.2	.14	52.75	54	-1.25	-	-	244	267	H

Pk - Peak detector
RMS - RMS detection

HIGH CHANNEL VERTICAL



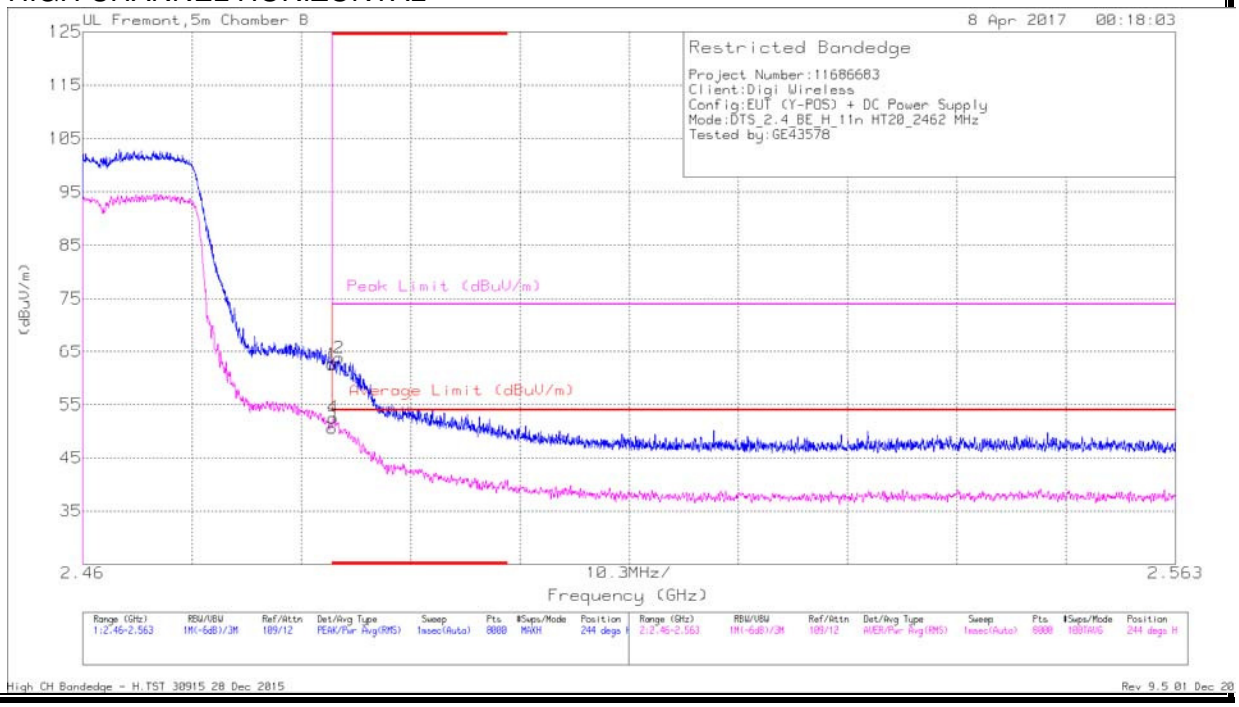
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/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	54.39	Pk	32.1	-21.2	0	65.29	-	-	74	-8.71	311	231	V
2	* 2.484	54.39	Pk	32.1	-21.2	0	65.29	-	-	74	-8.71	311	231	V
3	* 2.484	41.65	RMS	32.1	-21.2	.14	52.69	54	-1.31	-	-	311	231	V
4	* 2.484	42.45	RMS	32.1	-21.2	.14	53.49	54	-.51	-	-	311	231	V

Pk - Peak detector
RMS - RMS detection

AUTHORIZED BANDEDGE (HIGH CHANNEL, CH 11)

HIGH CHANNEL HORIZONTAL

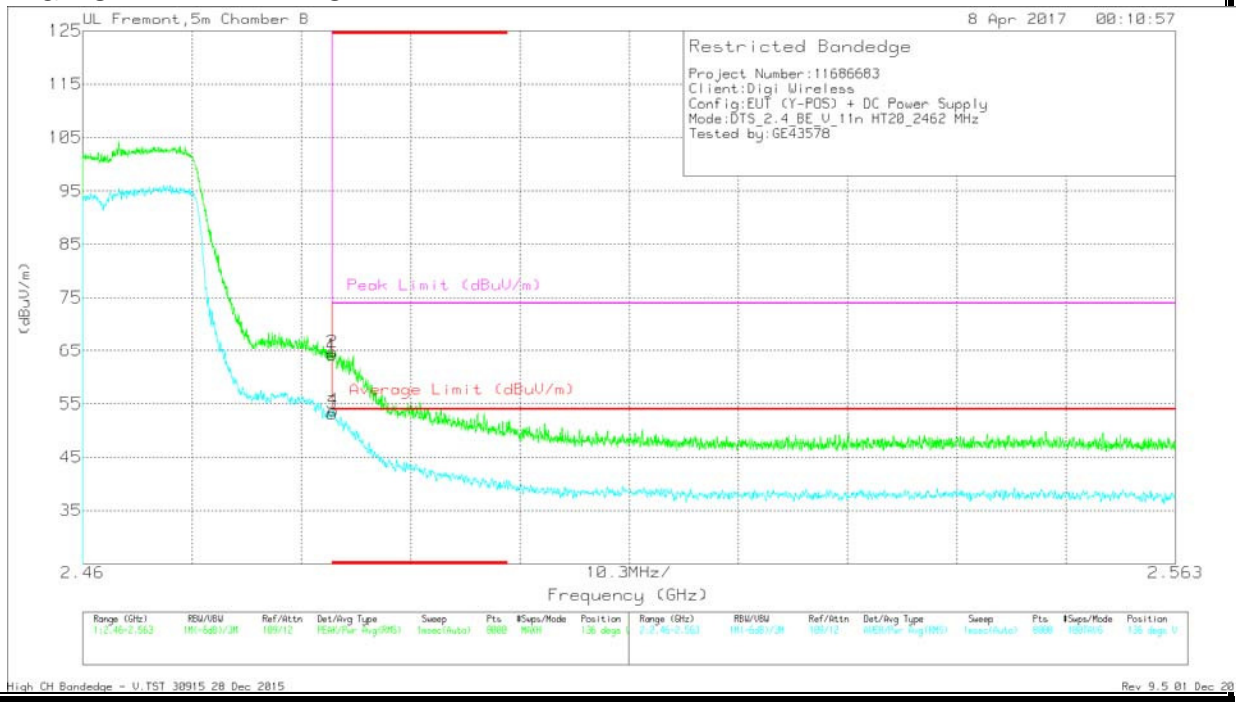


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/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	51.71	Pk	32.1	-21.2	0	62.61	-	-	74	-11.39	244	269	H
2	* 2.484	52.9	Pk	32.1	-21.2	0	63.8	-	-	74	-10.2	244	269	H
3	* 2.484	39.55	RMS	32.1	-21.2	.14	50.59	54	-3.41	-	-	244	269	H
4	* 2.484	41.49	RMS	32.1	-21.2	.14	52.53	54	-1.47	-	-	244	269	H

Pk - Peak detector
RMS - RMS detection

HIGH CHANNEL VERTICAL



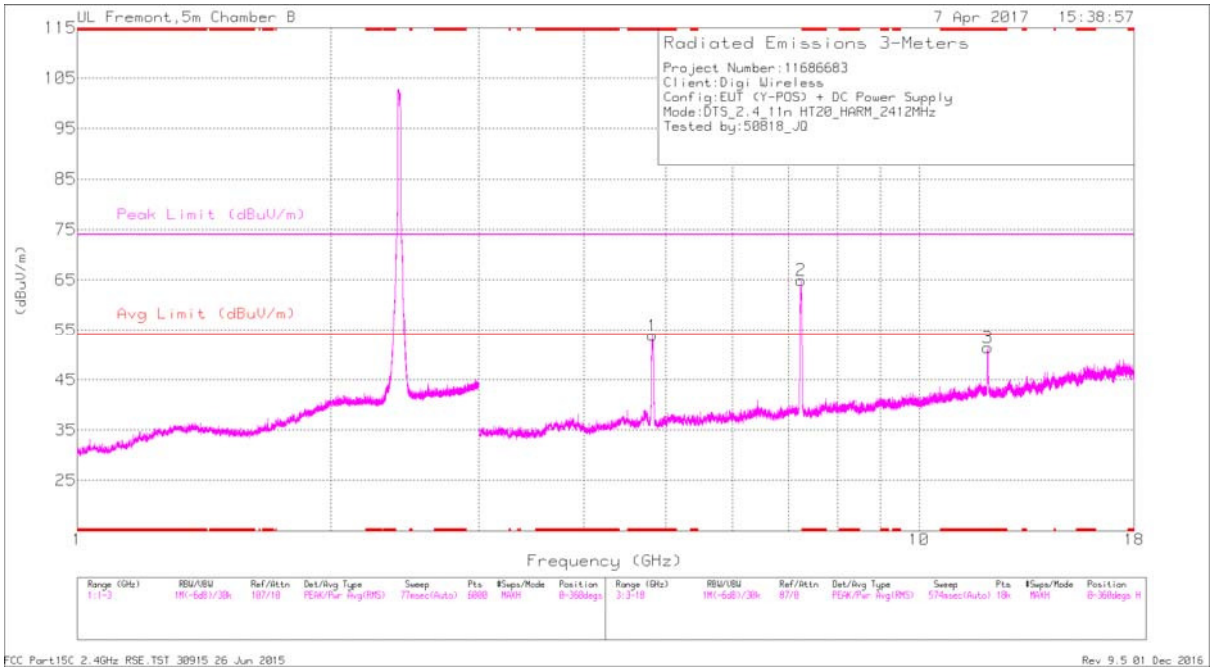
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/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	53.3	Pk	32.1	-21.2	0	64.2	-	-	74	-9.8	136	231	V
2	* 2.484	53.9	Pk	32.1	-21.2	0	64.8	-	-	74	-9.2	136	231	V
3	* 2.484	42.17	RMS	32.1	-21.2	.14	53.21	54	-.79	-	-	136	231	V
4	* 2.484	42.72	RMS	32.1	-21.2	.14	53.76	54	-.24	-	-	136	231	V

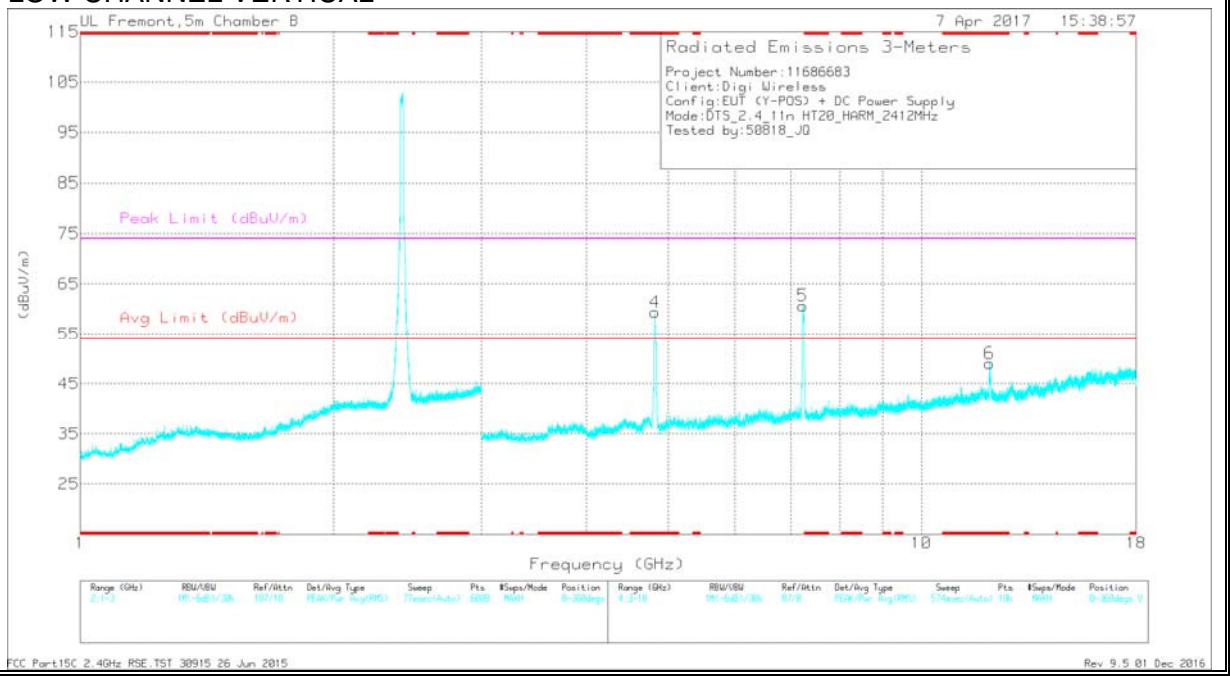
Pk - Peak detector
RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, CH 1)

LOW CHANNEL HORIZONTAL



LOW CHANNEL VERTICAL



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/Fltr/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	* 4.823	48.88	Pk	34.4	-29.4	0	53.88	-	-	74	-20.12	0-360	102	H
3	* 12.061	35.03	Pk	39.4	-23	0	51.43	-	-	74	-22.57	0-360	199	H
4	* 4.823	54.36	Pk	34.4	-29.4	0	59.36	-	-	74	-14.64	0-360	102	V
6	* 12.052	32.45	Pk	39.5	-22.9	0	49.05	-	-	74	-24.95	0-360	199	V
5	7.232	51.96	Pk	36.1	-27.4	0	60.66	-	-	-	-	0-360	102	V
2	7.242	56.52	Pk	36	-27.6	0	64.92	-	-	-	-	0-360	199	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector

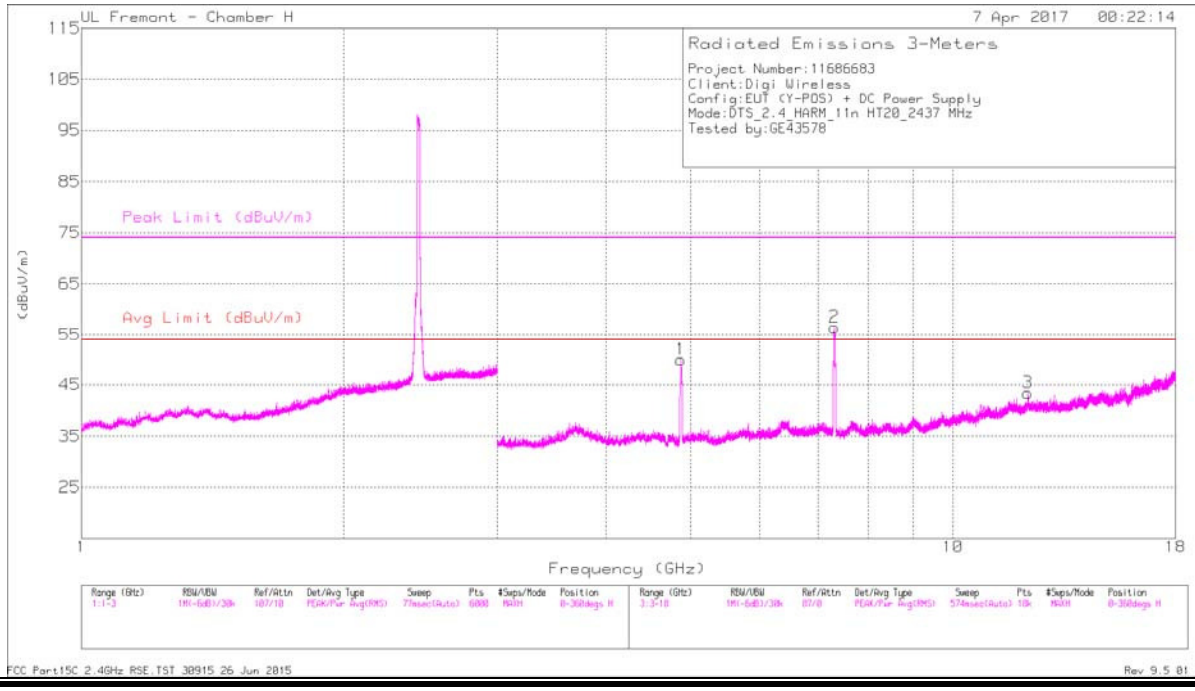
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/Fltr/ 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
* 4.828	56.03	PK2	34.4	-29.6	0	60.83	-	-	74	-13.17	188	168	H
* 4.825	43.6	MAv1	34.4	-29.5	.14	48.64	54	-5.36	-	-	188	168	H
* 12.067	43.7	PK2	39.4	-23	0	60.1	-	-	74	-13.9	194	233	H
* 12.061	29.94	MAv1	39.4	-23	.14	46.48	54	-7.52	-	-	194	233	H
* 4.822	60.02	PK2	34.4	-29.4	0	65.02	-	-	74	-8.98	185	129	V
* 4.823	48.13	MAv1	34.4	-29.4	.14	53.27	54	-.73	-	-	185	129	V
* 12.054	43.36	PK2	39.5	-23	0	59.86	-	-	74	-14.14	128	217	V
* 12.059	28.95	MAv1	39.4	-23	.14	45.49	54	-8.51	-	-	128	217	V
7.232	60.86	PK2	36.1	-27.4	0	69.56	-	-	-	-	116	106	V
7.238	48.16	MAv1	36.1	-27.5	.14	56.9	-	-	-	-	116	106	V
7.239	51.36	MAv1	36.1	-27.5	.14	60.1	-	-	-	-	164	246	H
7.24	64.99	PK2	36.1	-27.5	0	73.59	-	-	-	-	164	246	H

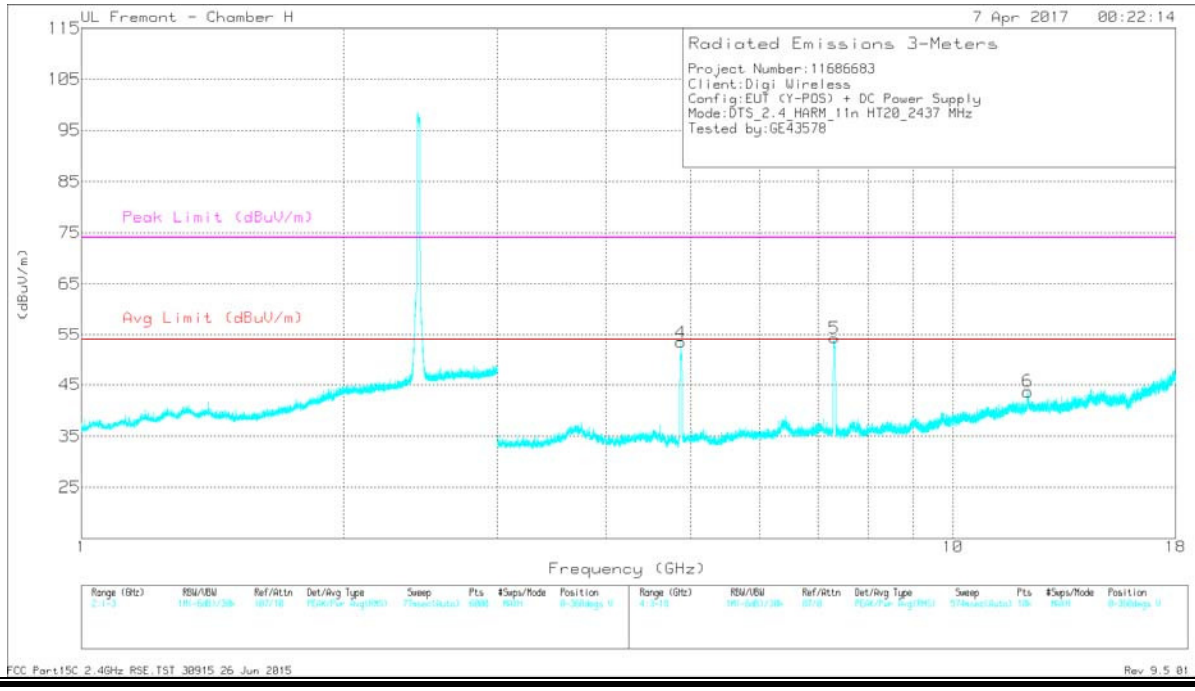
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK2 - KDB5558074 Method: Maximum Peak
MAv1 - KDB5558074 Option 1 Maximum RMS Average

HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, CH 6)

MID CHANNEL HORIZONTAL



MID CHANNEL VERTICAL



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T120 (dB/m)	Amp/Cbl/Fltr/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	* 4.874	50.81	Pk	34	-34.9	0	49.91	-	-	74	-24.09	0-360	200	H
2	* 7.307	52.09	Pk	35.7	-31.3	0	56.49	-	-	74	-17.51	0-360	100	H
3	* 12.179	30.56	Pk	39.3	-26.4	0	43.46	-	-	74	-30.54	0-360	200	H
4	* 4.875	54.35	Pk	34	-34.9	0	53.45	-	-	74	-20.55	0-360	99	V
5	* 7.314	49.99	Pk	35.7	-31.4	0	54.29	-	-	74	-19.71	0-360	99	V
6	* 12.184	30.67	Pk	39.3	-26.3	0	43.67	-	-	74	-30.33	0-360	201	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector

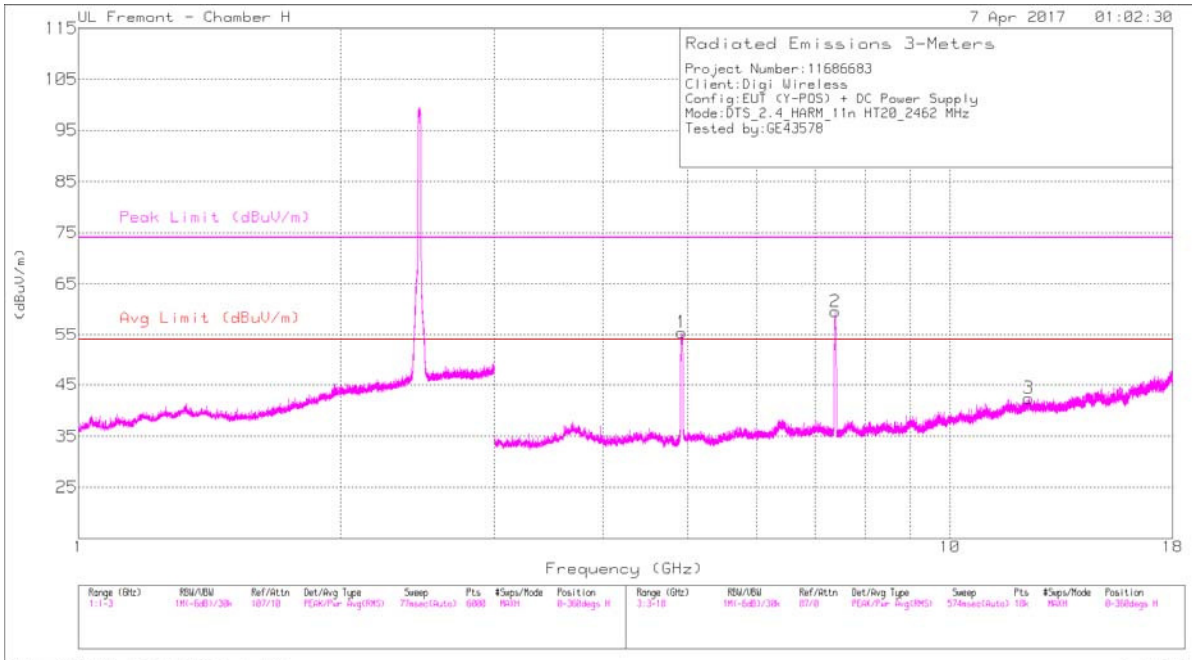
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T120 (dB/m)	Amp/Cbl/Fltr/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
* 7.313	62.38	PK2	35.7	-31.4	0	66.68	-	-	74	-7.32	138	104	H
* 7.313	48.54	MAv1	35.7	-31.4	.14	52.98	54	-1.02	-	-	138	104	H
* 4.875	59.81	PK2	34	-34.9	0	58.91	-	-	74	-15.09	242	241	H
* 4.875	47.33	MAv1	34	-34.9	.14	46.57	54	-7.43	-	-	242	241	H
* 12.19	38.01	PK2	39.3	-26.5	0	50.81	-	-	74	-23.19	121	217	H
* 12.189	25.9	MAv1	39.3	-26.5	.14	38.84	54	-15.16	-	-	121	217	H
* 4.874	61.96	PK2	34	-34.9	0	61.06	-	-	74	-12.94	133	100	V
* 4.875	50.03	MAv1	34	-34.9	.14	49.27	54	-4.73	-	-	133	100	V
* 7.308	60.16	PK2	35.7	-31.3	0	64.56	-	-	74	-9.44	149	113	V
* 7.314	46.38	MAv1	35.7	-31.4	.14	50.82	54	-3.18	-	-	149	113	V
* 12.188	39.06	PK2	39.3	-26.5	0	51.86	-	-	74	-22.14	171	202	V
* 12.183	26.93	MAv1	39.3	-26.3	.14	40.07	54	-13.93	-	-	171	202	V

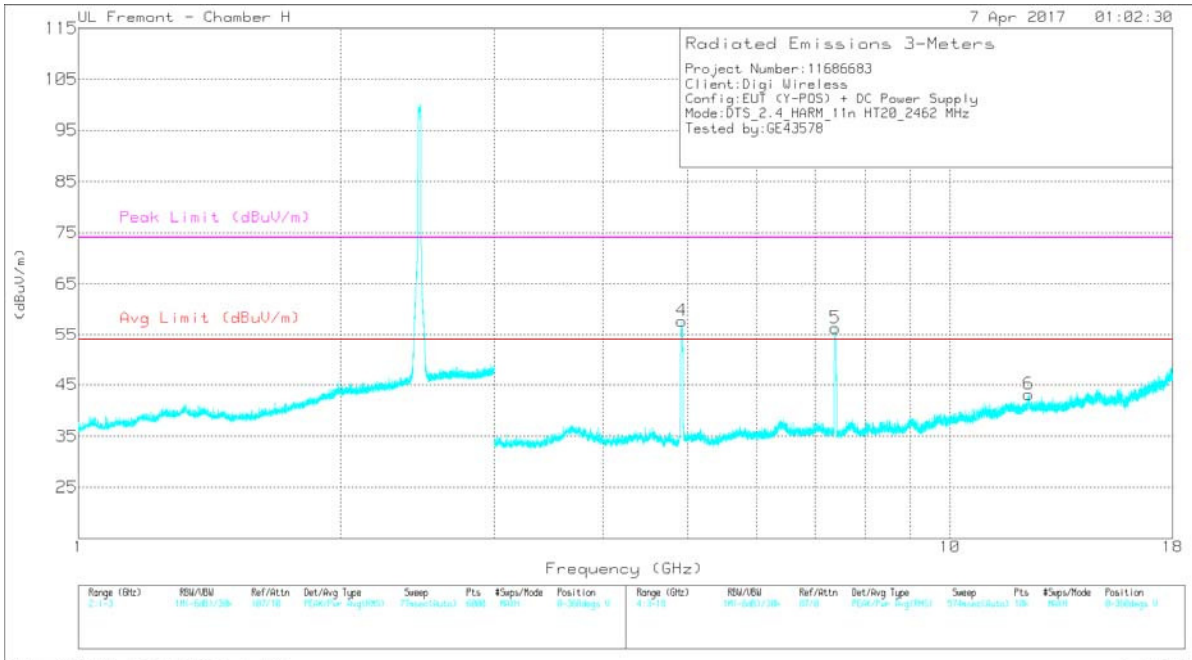
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK2 - KDB5558074 Method: Maximum Peak
MAv1 - KDB5558074 Option 1 Maximum RMS Average

HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, CH 11)

HIGH CHANNEL HORIZONTAL



HIGH CHANNEL VERTICAL



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T120 (dB/m)	Amp/Cbl/Fltr/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	* 4.923	55.93	Pk	34	-34.5	0	55.43	-	-	74	-18.57	0-360	200	H
2	* 7.381	54.57	Pk	35.7	-30.8	0	59.47	-	-	74	-14.53	0-360	100	H
3	* 12.307	29.08	Pk	39.2	-25.9	0	42.38	-	-	74	-31.62	0-360	200	H
4	* 4.928	58.26	Pk	34	-34.5	0	57.76	-	-	74	-16.24	0-360	99	V
5	* 7.39	51.56	Pk	35.7	-30.9	0	56.36	-	-	74	-17.64	0-360	99	V
6	* 12.309	29.85	Pk	39.2	-25.9	0	43.15	-	-	74	-30.85	0-360	99	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector

Radiated Emissions

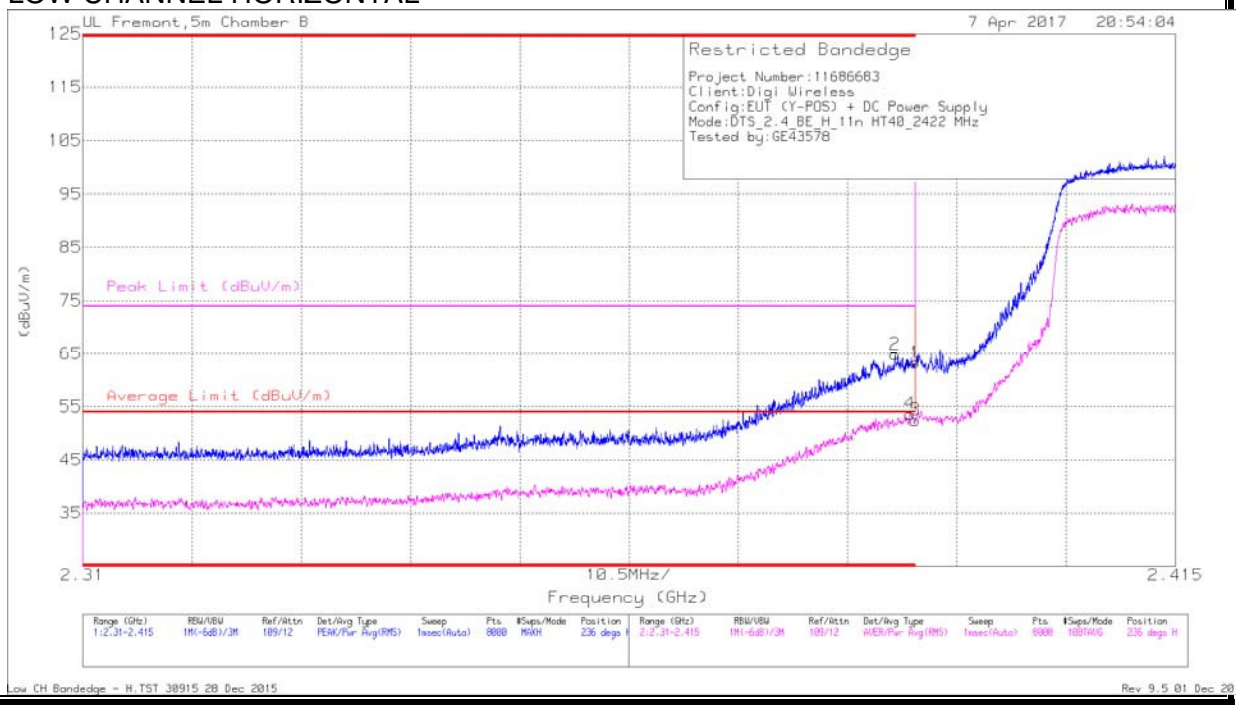
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T120 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 7.388	62.12	PK2	35.7	-30.9	0	66.92	-	-	74	-7.08	142	104	H
* 7.386	48.68	MAv1	35.7	-31	.14	53.52	54	-.48	-	-	142	104	H
* 4.928	64.17	PK2	34	-34.5	0	63.67	-	-	74	-10.33	246	201	H
* 4.925	51.41	MAv1	34	-34.6	.14	50.95	54	-3.05	-	-	246	201	H
* 12.302	37.07	PK2	39.2	-26	0	50.27	-	-	74	-23.73	132	294	H
* 12.303	24.73	MAv1	39.2	-26	.14	38.07	54	-15.93	-	-	132	294	H
* 4.928	64.36	PK2	34	-34.5	0	63.86	-	-	74	-10.14	109	189	V
* 4.923	52.19	MAv1	34	-34.5	.14	51.83	54	-2.17	-	-	109	189	V
* 7.38	59.44	PK2	35.7	-30.8	0	64.34	-	-	74	-9.66	112	111	V
* 7.385	45.95	MAv1	35.7	-30.9	.14	50.89	54	-3.11	-	-	112	111	V
* 12.295	38	PK2	39.2	-26.1	0	51.1	-	-	74	-22.9	168	287	V
* 12.306	25.94	MAv1	39.2	-25.9	.14	39.38	54	-14.62	-	-	168	287	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK2 - KDB5558074 Method: Maximum Peak
MAv1 - KDB5558074 Option 1 Maximum RMS Average

10.2.4. 11n-HT40 MODE IN THE 2.4GHz BAND

AUTHORIZED BANDEDGE (LOW CHANNEL, CH 3)

LOW CHANNEL HORIZONTAL

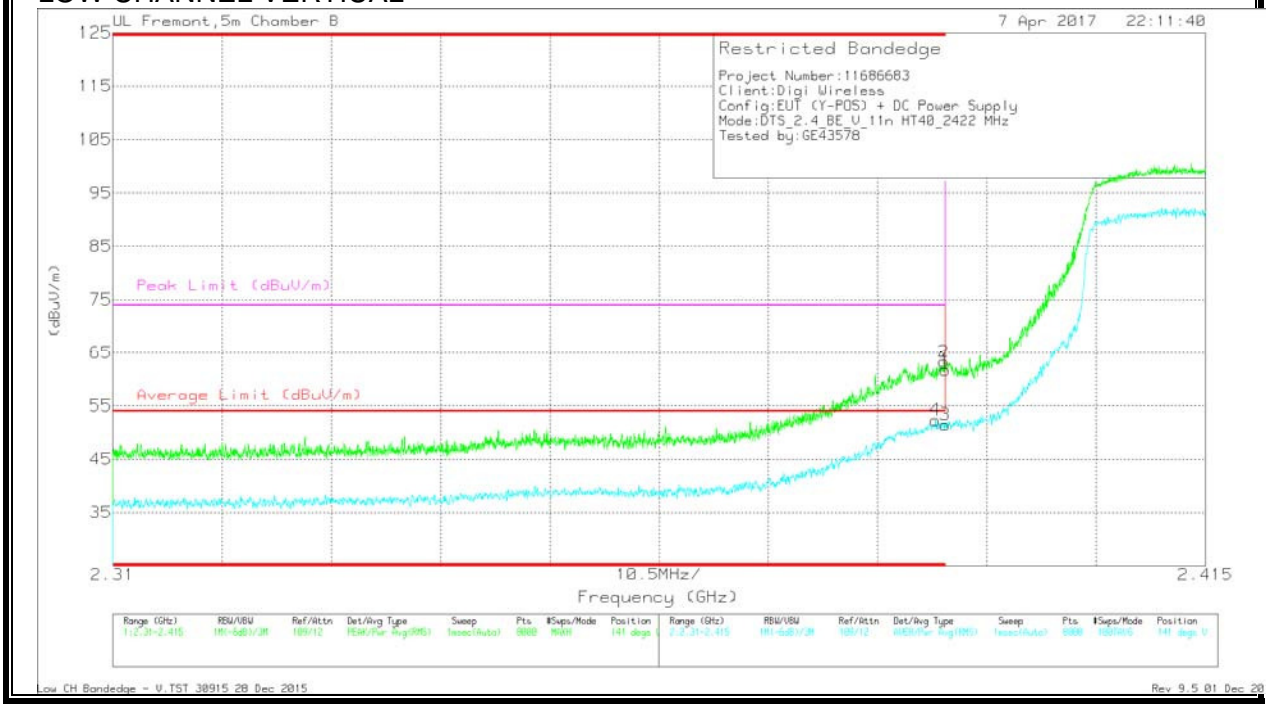


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/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
2	* 2.388	54.31	Pk	31.9	-21.3	0	64.91	-	-	74	-9.09	236	249	H
4	* 2.389	42.65	RMS	32	-21.3	.26	53.61	54	-.39	-	-	236	249	H
1	* 2.39	52.59	Pk	32	-21.3	0	63.29	-	-	74	-10.71	236	249	H
3	* 2.39	41.53	RMS	32	-21.3	.26	52.49	54	-1.51	-	-	236	249	H

Pk - Peak detector
RMS - RMS detection

LOW CHANNEL VERTICAL



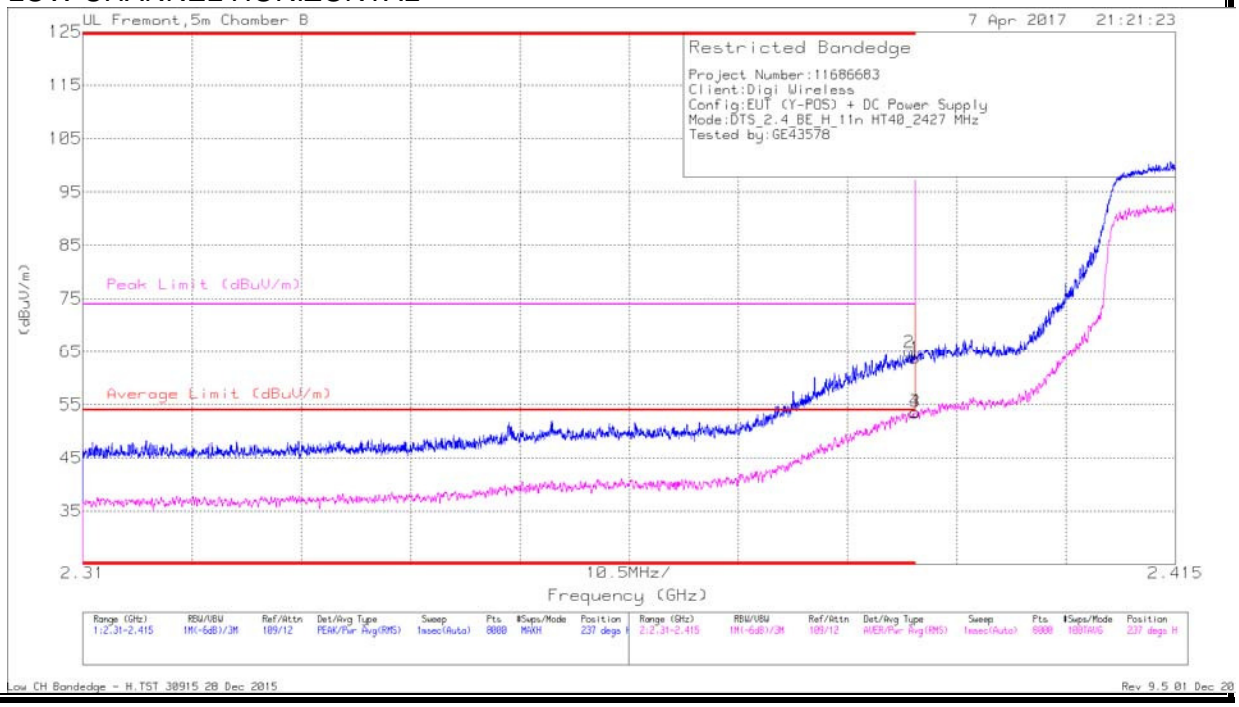
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/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
4	* 2.389	41.41	RMS	31.9	-21.3	.26	52.27	54	-1.73	-	-	141	193	V
1	* 2.39	51.01	Pk	32	-21.3	0	61.71	-	-	74	-12.29	141	193	V
2	* 2.39	52.56	Pk	32	-21.3	0	63.26	-	-	74	-10.74	141	193	V
3	* 2.39	40.46	RMS	32	-21.3	.26	51.42	54	-2.58	-	-	141	193	V

Pk - Peak detector
RMS - RMS detection

AUTHORIZED BANDEDGE (LOW CHANNEL, CH 4)

LOW CHANNEL HORIZONTAL

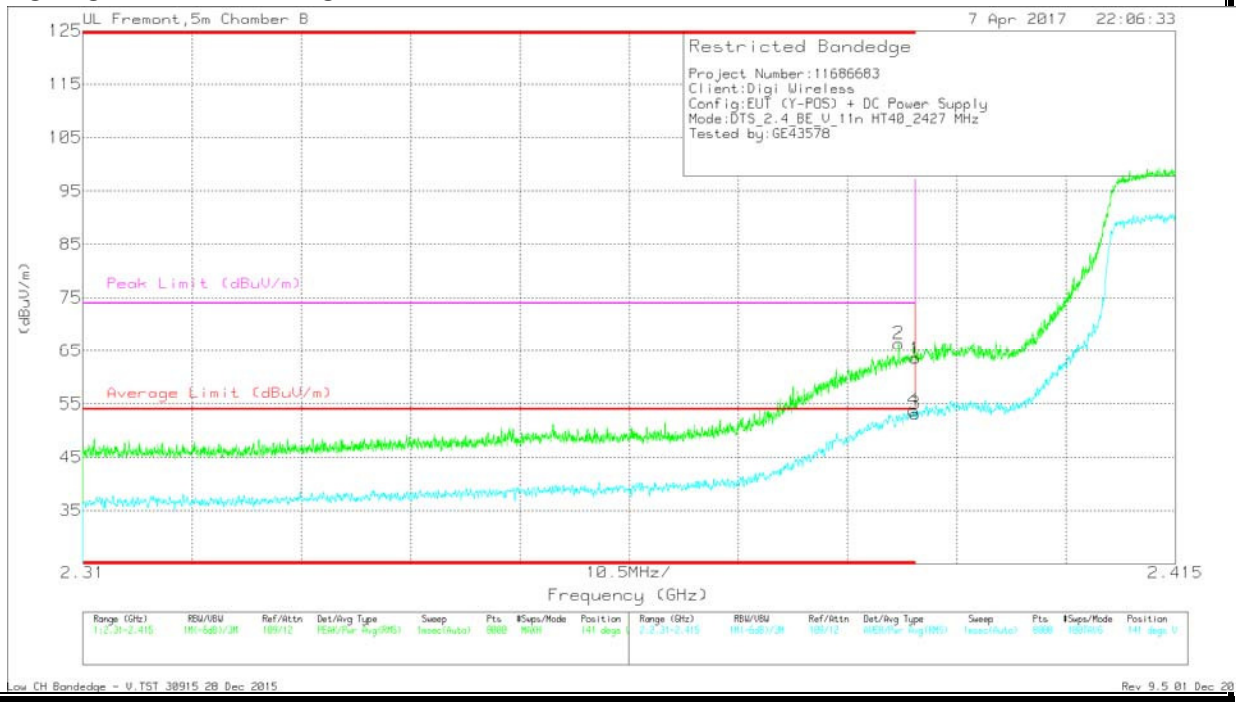


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/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
2	* 2.389	54.26	Pk	32	-21.3	0	64.96	-	-	74	-9.04	237	251	H
1	* 2.39	53.11	Pk	32	-21.3	0	63.81	-	-	74	-10.19	237	251	H
3	* 2.39	42.61	RMS	32	-21.3	.26	53.57	54	-.43	-	-	237	251	H
4	* 2.39	42.69	RMS	32	-21.3	.26	53.65	54	-.35	-	-	237	251	H

Pk - Peak detector
RMS - RMS detection

LOW CHANNEL VERTICAL



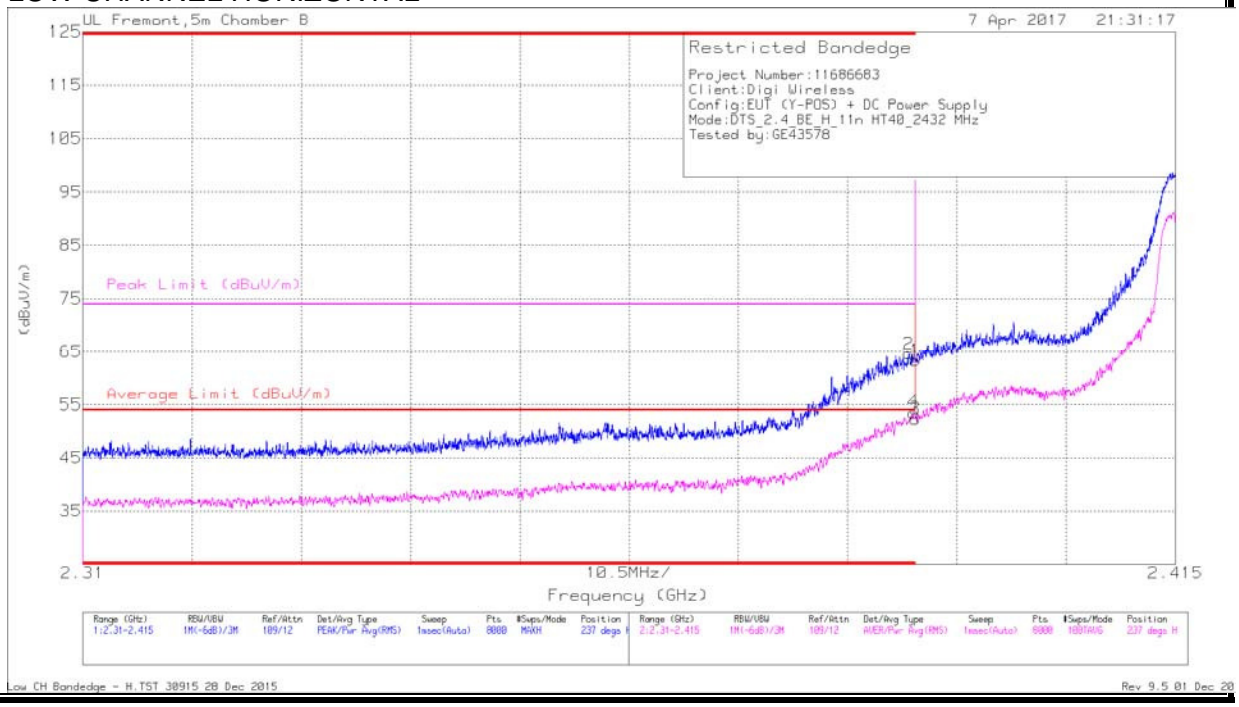
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/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
2	* 2.388	55.8	Pk	31.9	-21.3	0	66.4	-	-	74	-7.6	141	258	V
1	* 2.39	52.84	Pk	32	-21.3	0	63.54	-	-	74	-10.46	141	258	V
3	* 2.39	42.15	RMS	32	-21.3	.26	53.11	54	-.89	-	-	141	258	V
4	* 2.39	42.76	RMS	32	-21.3	.26	53.72	54	-.28	-	-	141	258	V

Pk - Peak detector
RMS - RMS detection

AUTHORIZED BANDEDGE (LOW CHANNEL, CH 5)

LOW CHANNEL HORIZONTAL

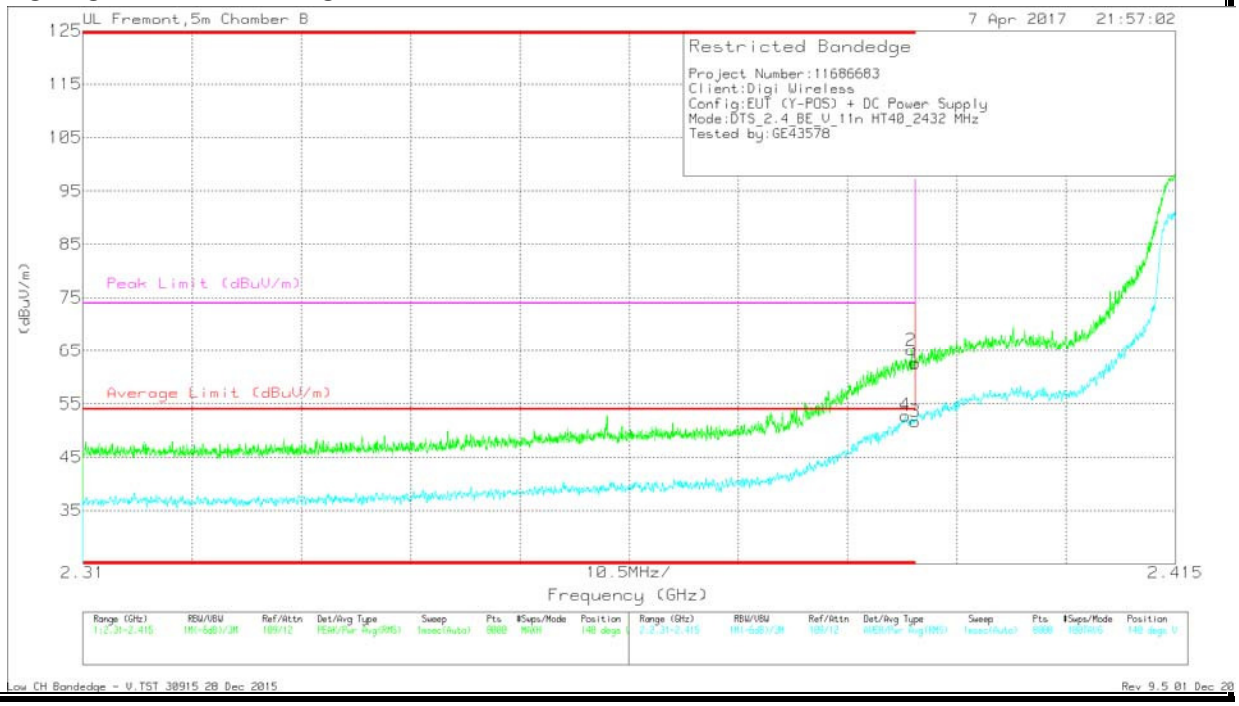


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/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
2	* 2.389	53.89	Pk	32	-21.3	0	64.59	-	-	74	-9.41	237	249	H
1	* 2.39	52.64	Pk	32	-21.3	0	63.34	-	-	74	-10.66	237	249	H
3	* 2.39	41.35	RMS	32	-21.3	.26	52.31	54	-1.69	-	-	237	249	H
4	* 2.39	42.57	RMS	32	-21.3	.26	53.53	54	-.47	-	-	237	249	H

Pk - Peak detector
RMS - RMS detection

LOW CHANNEL VERTICAL



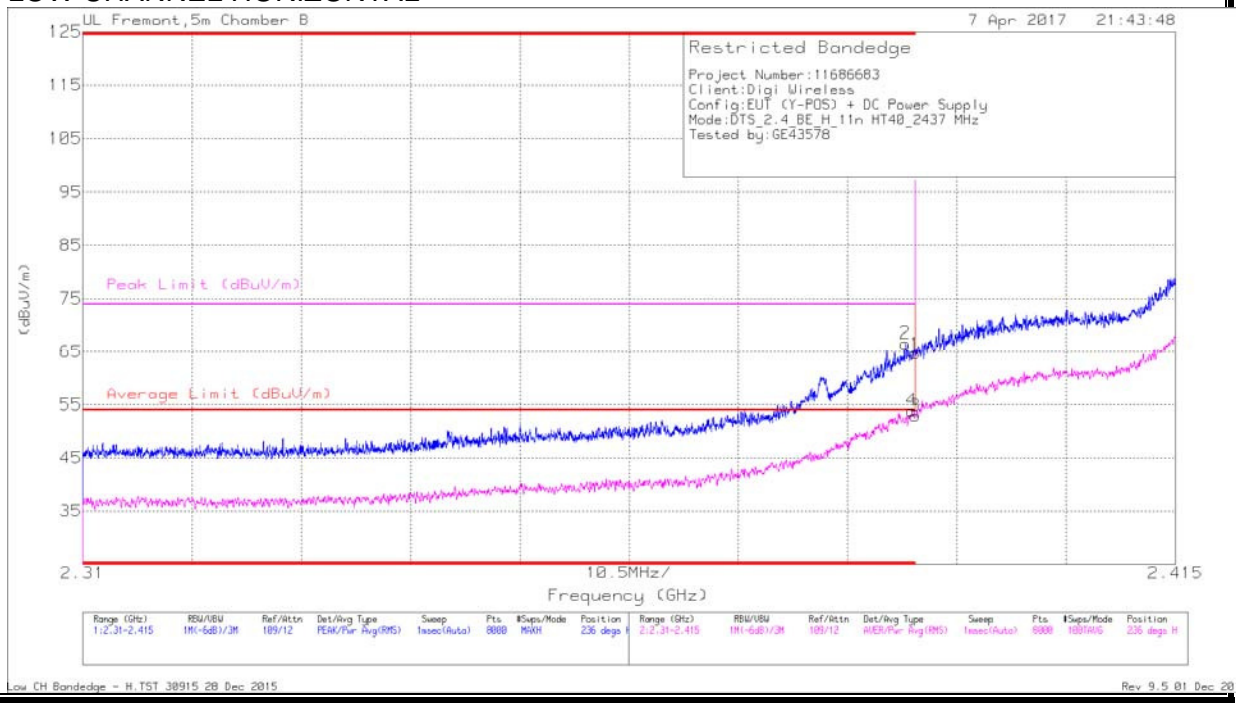
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/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
4	* 2.389	41.94	RMS	31.9	-21.3	.26	52.8	54	-1.2	-	-	140	198	V
1	* 2.39	51.83	Pk	32	-21.3	0	62.53	-	-	74	-11.47	140	198	V
2	* 2.39	54.43	Pk	32	-21.3	0	65.13	-	-	74	-8.87	140	198	V
3	* 2.39	40.72	RMS	32	-21.3	.26	51.68	54	-2.32	-	-	140	198	V

Pk - Peak detector
RMS - RMS detection

AUTHORIZED BANDEDGE (LOW CHANNEL, CH 6 LOW)

LOW CHANNEL HORIZONTAL

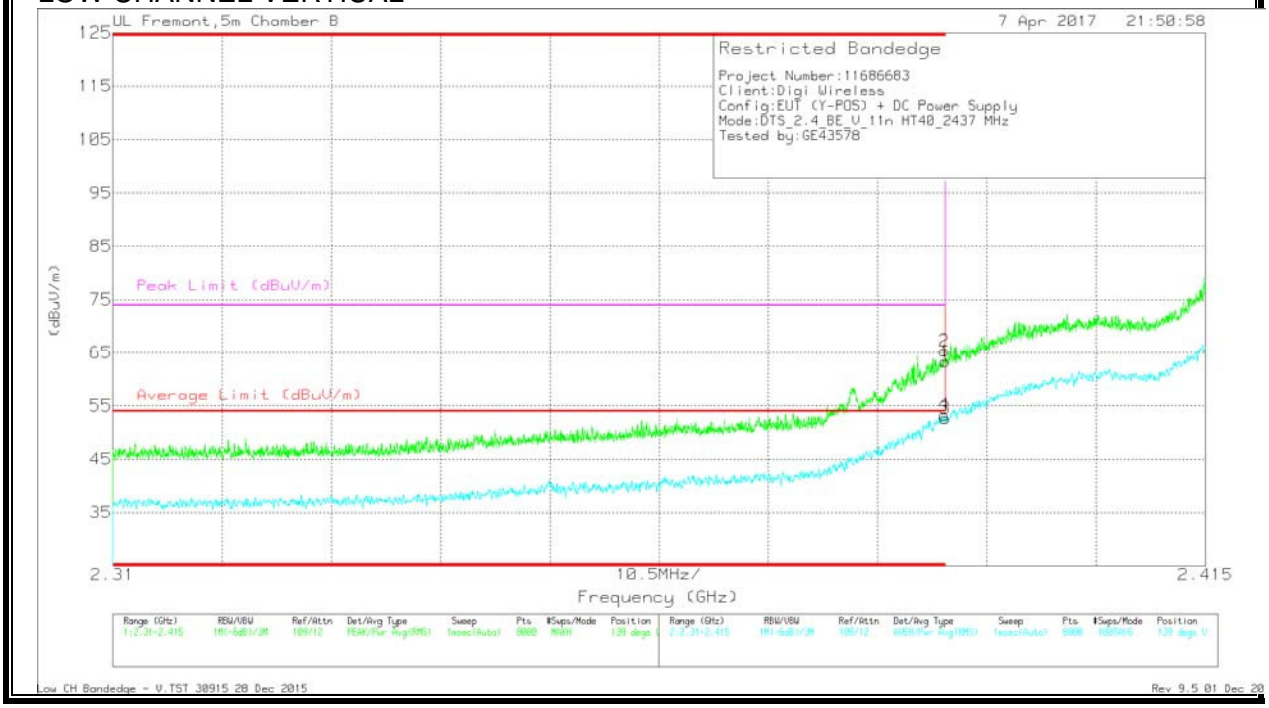


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/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
2	* 2.389	56.01	Pk	31.9	-21.3	0	66.61	-	-	74	-7.39	236	247	H
1	* 2.39	53.92	Pk	32	-21.3	0	64.62	-	-	74	-9.38	236	247	H
3	* 2.39	41.93	RMS	32	-21.3	.26	52.89	54	-1.11	-	-	236	247	H
4	* 2.39	42.92	RMS	32	-21.3	.26	53.88	54	-.12	-	-	236	247	H

Pk - Peak detector
RMS - RMS detection

LOW CHANNEL VERTICAL



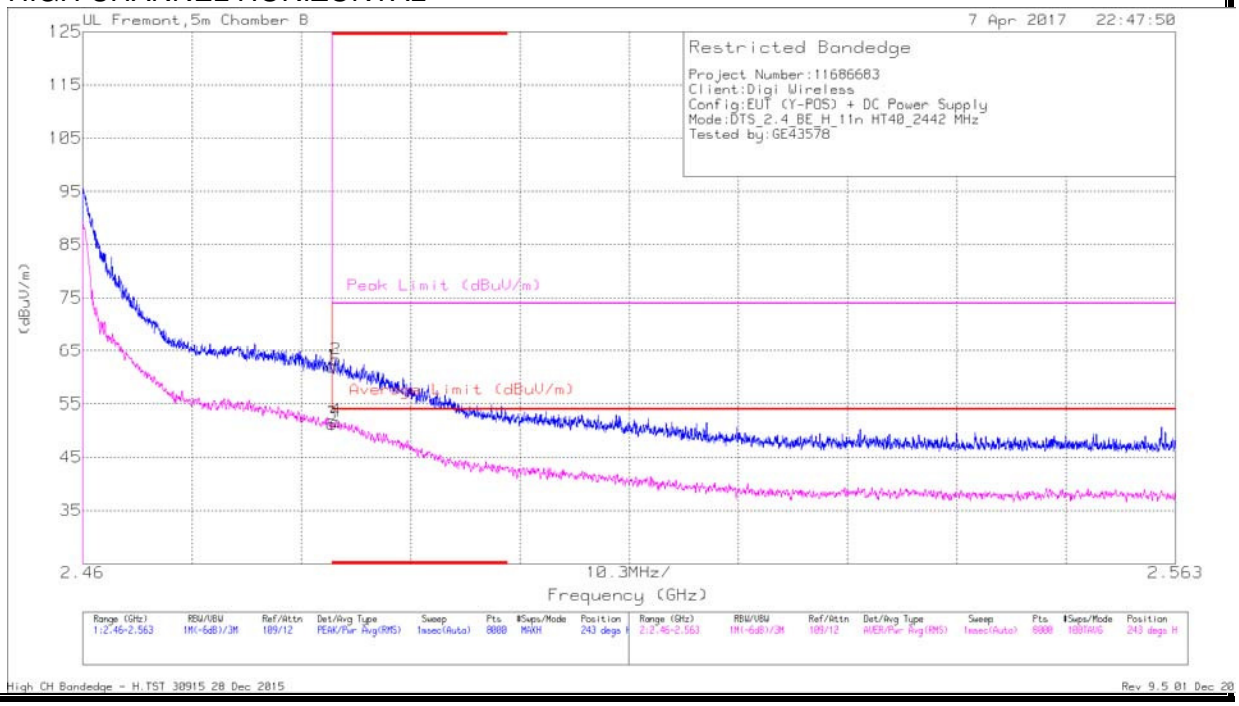
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/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	52.59	Pk	32	-21.3	0	63.29	-	-	74	-10.71	139	190	V
2	* 2.39	54.62	Pk	32	-21.3	0	65.32	-	-	74	-8.68	139	190	V
3	* 2.39	41.66	RMS	32	-21.3	.26	52.62	54	-1.38	-	-	139	190	V
4	* 2.39	42.31	RMS	32	-21.3	.26	53.27	54	-.73	-	-	139	190	V

Pk - Peak detector
RMS - RMS detection

AUTHORIZED BANDEDGE (HIGH CHANNEL, CH 7)

HIGH CHANNEL HORIZONTAL

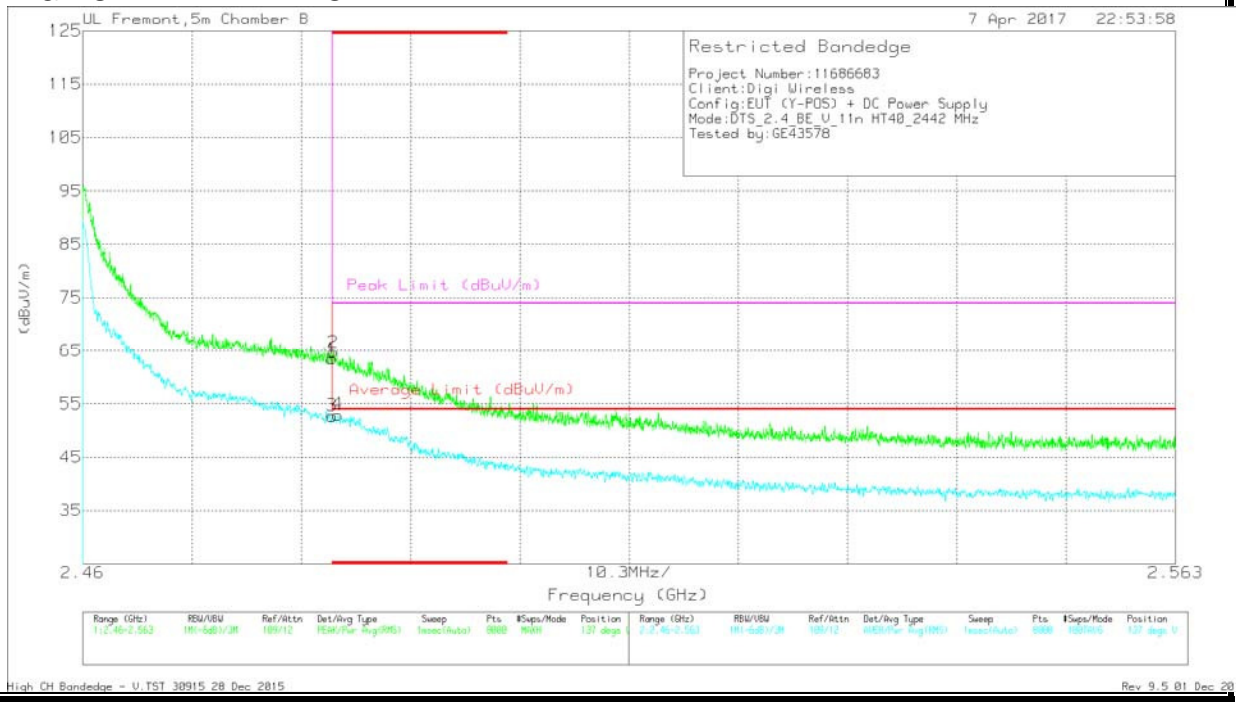


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/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	51.11	Pk	32.1	-21.2	0	62.01	-	-	74	-11.99	243	209	H
2	* 2.484	52.44	Pk	32.1	-21.2	0	63.34	-	-	74	-10.66	243	209	H
3	* 2.484	40.05	RMS	32.1	-21.2	.26	51.21	54	-2.79	-	-	243	209	H
4	* 2.484	40.55	RMS	32.1	-21.2	.26	51.71	54	-2.29	-	-	243	209	H

Pk - Peak detector
RMS - RMS detection

HIGH CHANNEL VERTICAL



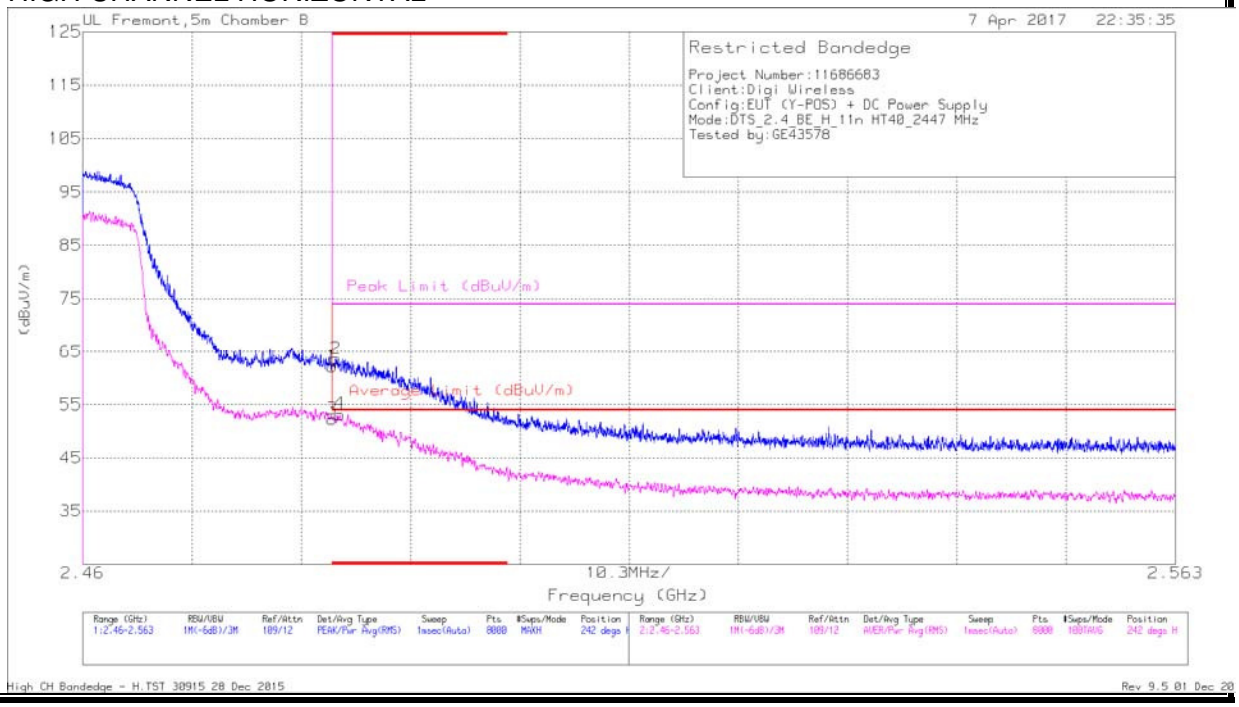
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/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	52.47	Pk	32.1	-21.2	0	63.37	-	-	74	-10.63	137	226	V
2	* 2.484	53.85	Pk	32.1	-21.2	0	64.75	-	-	74	-9.25	137	226	V
3	* 2.484	41.57	RMS	32.1	-21.2	.26	52.73	54	-1.27	-	-	137	226	V
4	* 2.484	41.77	RMS	32.1	-21.2	.26	52.93	54	-1.07	-	-	137	226	V

Pk - Peak detector
RMS - RMS detection

AUTHORIZED BANDEDGE (HIGH CHANNEL, CH 8)

HIGH CHANNEL HORIZONTAL

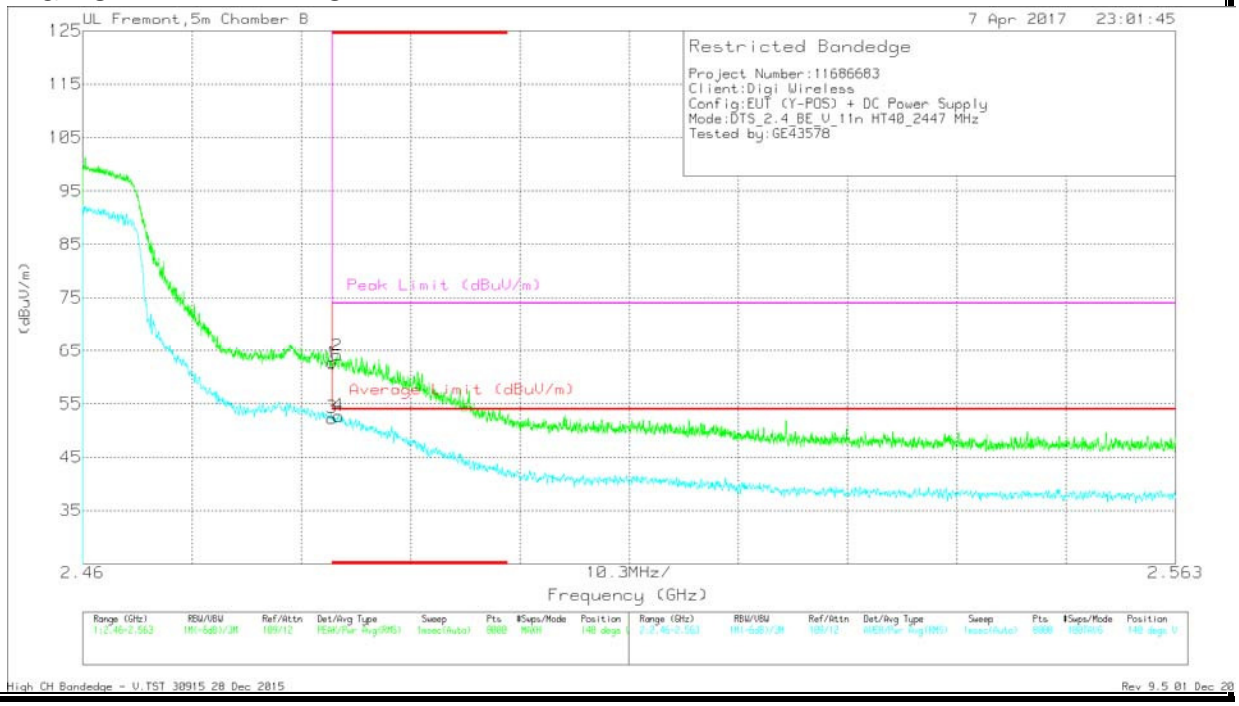


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/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	51.31	Pk	32.1	-21.2	0	62.21	-	-	74	-11.79	242	269	H
2	* 2.484	52.78	Pk	32.1	-21.2	0	63.68	-	-	74	-10.32	242	269	H
3	* 2.484	41.09	RMS	32.1	-21.2	.26	52.25	54	-1.75	-	-	242	269	H
4	* 2.484	42.03	RMS	32.1	-21.2	.26	53.19	54	-.81	-	-	242	269	H

Pk - Peak detector
RMS - RMS detection

HIGH CHANNEL VERTICAL



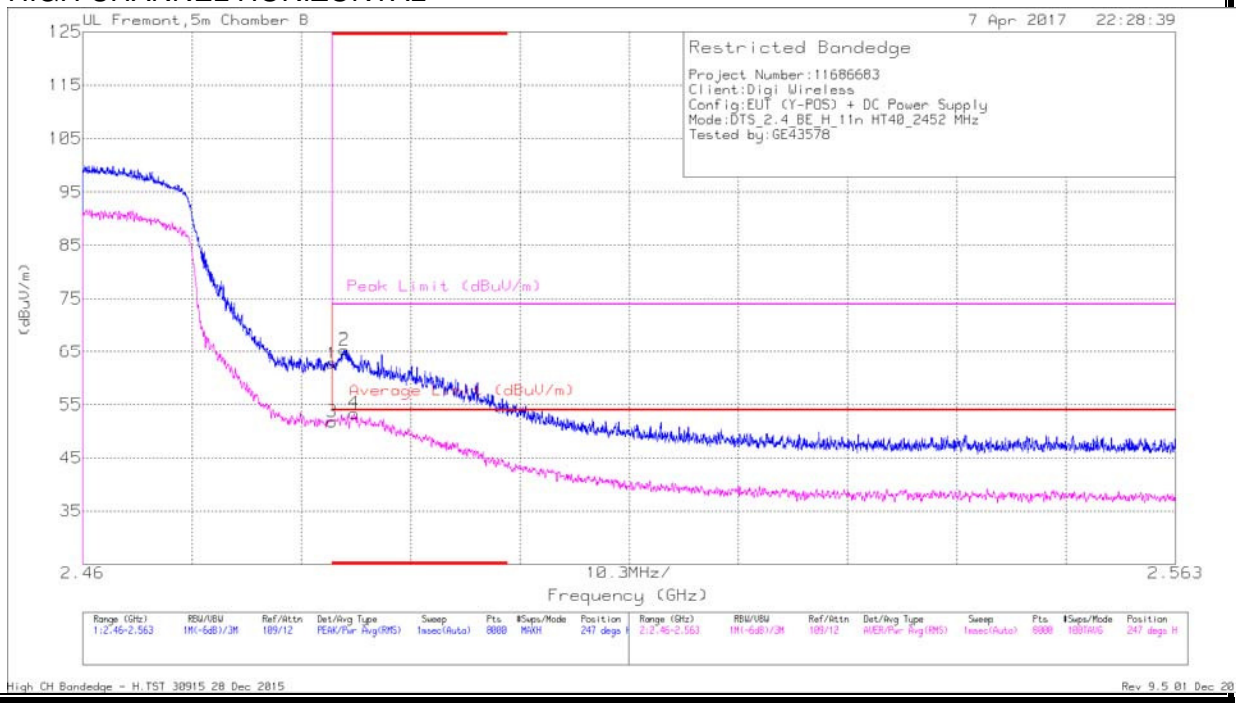
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/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	51.8	Pk	32.1	-21.2	0	62.7	-	-	74	-11.3	140	228	V
2	* 2.484	53.21	Pk	32.1	-21.2	0	64.11	-	-	74	-9.89	140	228	V
3	* 2.484	41.18	RMS	32.1	-21.2	.26	52.34	54	-1.66	-	-	140	228	V
4	* 2.484	41.57	RMS	32.1	-21.2	.26	52.73	54	-1.27	-	-	140	228	V

Pk - Peak detector
RMS - RMS detection

AUTHORIZED BANDEDGE (HIGH CHANNEL, CH 9)

HIGH CHANNEL HORIZONTAL

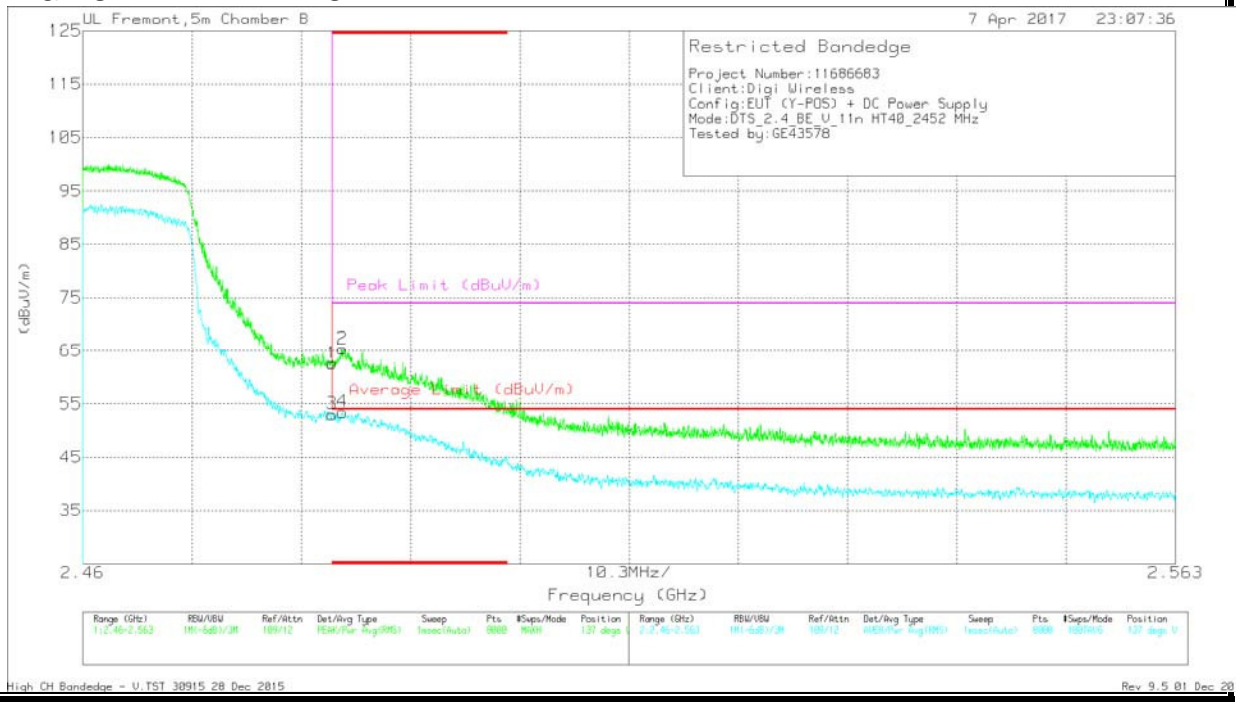


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/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	51.87	Pk	32.1	-21.2	0	62.77	-	-	74	-11.23	247	265	H
3	* 2.484	40.62	RMS	32.1	-21.2	.26	51.78	54	-2.22	-	-	247	265	H
2	* 2.485	54.38	Pk	32.1	-21.1	0	65.38	-	-	74	-8.62	247	265	H
4	* 2.486	42.09	RMS	32.1	-21.1	.26	53.35	54	-.65	-	-	247	265	H

Pk - Peak detector
RMS - RMS detection

HIGH CHANNEL VERTICAL



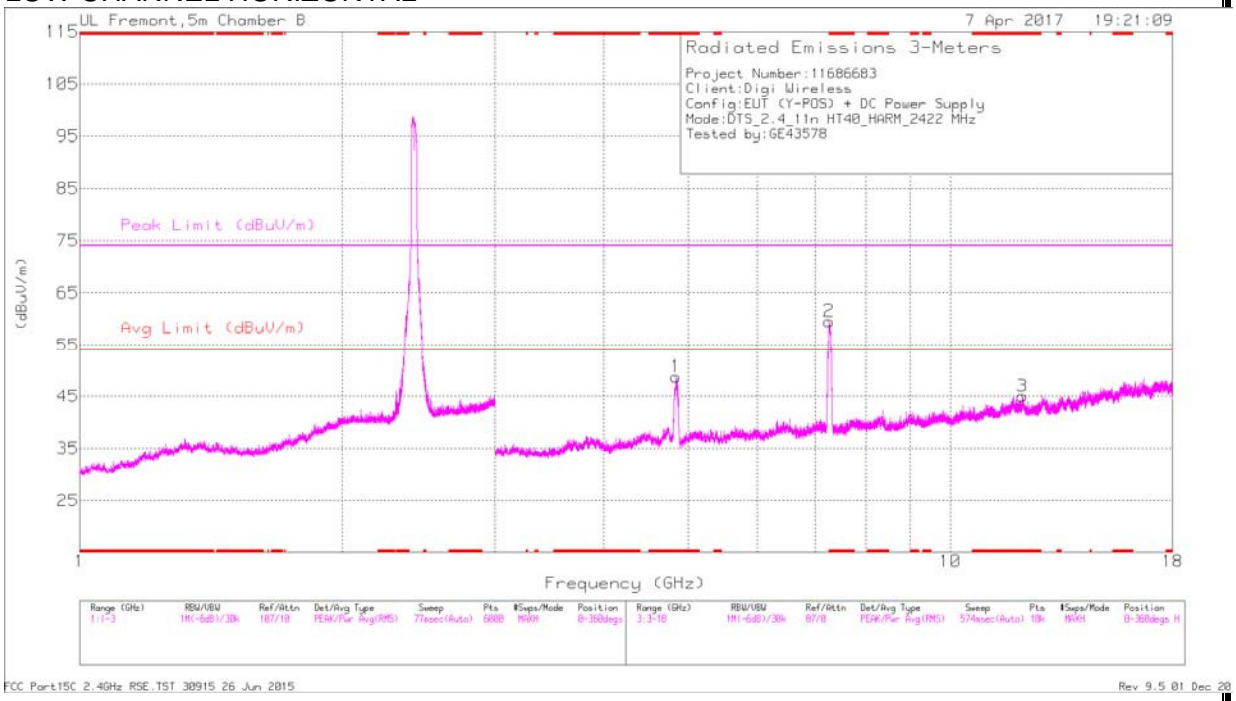
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/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	51.7	Pk	32.1	-21.2	0	62.6	-	-	74	-11.4	137	234	V
2	* 2.484	54.5	Pk	32.1	-21.2	0	65.4	-	-	74	-8.6	137	234	V
3	* 2.484	41.91	RMS	32.1	-21.2	.26	53.07	54	-.93	-	-	137	234	V
4	* 2.484	42.3	RMS	32.1	-21.2	.26	53.46	54	-.54	-	-	137	234	V

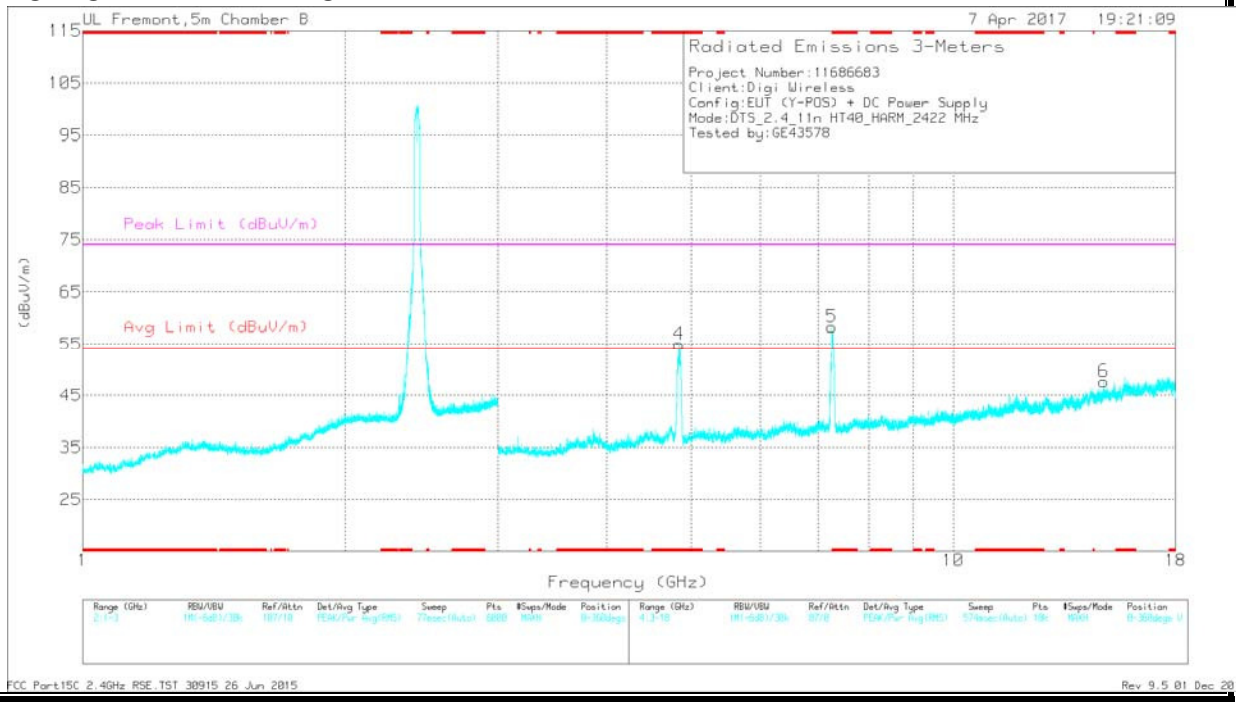
Pk - Peak detector
RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, CH 3)

LOW CHANNEL HORIZONTAL



LOW CHANNEL VERTICAL



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/Fltr/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	* 4.843	44.28	Pk	34.4	-29.9	0	48.78	-	-	74	-25.22	0-360	199	H
2	* 7.258	51.36	Pk	36	-27.8	0	59.56	-	-	74	-14.44	0-360	102	H
3	* 12.101	28.42	Pk	39.2	-22.6	0	45.02	-	-	74	-28.98	0-360	199	H
4	* 4.843	50.34	Pk	34.5	-29.9	0	54.94	-	-	74	-19.06	0-360	200	V
5	* 7.255	50.11	Pk	36	-27.8	0	58.31	-	-	74	-15.69	0-360	102	V
6	14.894	28.58	Pk	40.7	-21.6	0	47.68	-	-	-	-	0-360	102	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector

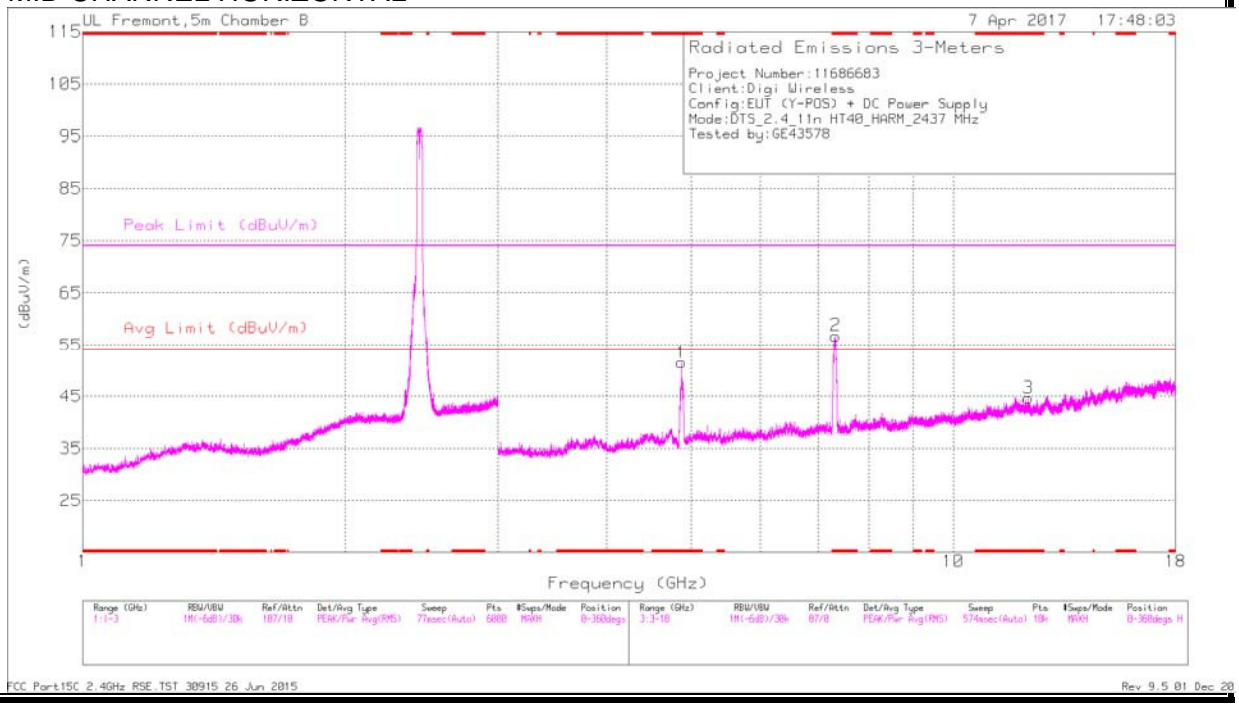
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/Fltr/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
* 7.277	57.82	PK2	36	-28	0	65.82	-	-	74	-8.18	176	110	H
* 7.273	45.09	MAv1	36	-28	.26	53.35	54	-.65	-	-	176	110	H
* 4.846	52.42	PK2	34.5	-29.9	0	57.02	-	-	74	-16.98	291	235	H
* 4.844	40.04	MAv1	34.5	-29.9	.26	44.9	54	-9.1	-	-	291	235	H
* 12.105	35.09	PK2	39.2	-22.6	0	51.69	-	-	74	-22.31	176	266	H
* 12.103	24.02	MAv1	39.2	-22.6	.26	40.88	54	-13.12	-	-	176	266	H
* 4.827	55.29	PK2	34.4	-29.5	0	60.19	-	-	74	-13.81	151	191	V
* 4.843	43.09	MAv1	34.4	-29.9	.26	47.85	54	-6.15	-	-	151	191	V
* 7.276	55.37	PK2	36	-28	0	63.37	-	-	74	-10.63	198	104	V
* 7.272	43.12	MAv1	36	-28	.26	51.38	54	-2.62	-	-	198	104	V
14.892	33.39	PK2	40.7	-21.7	0	52.39	-	-	-	-	100	104	V

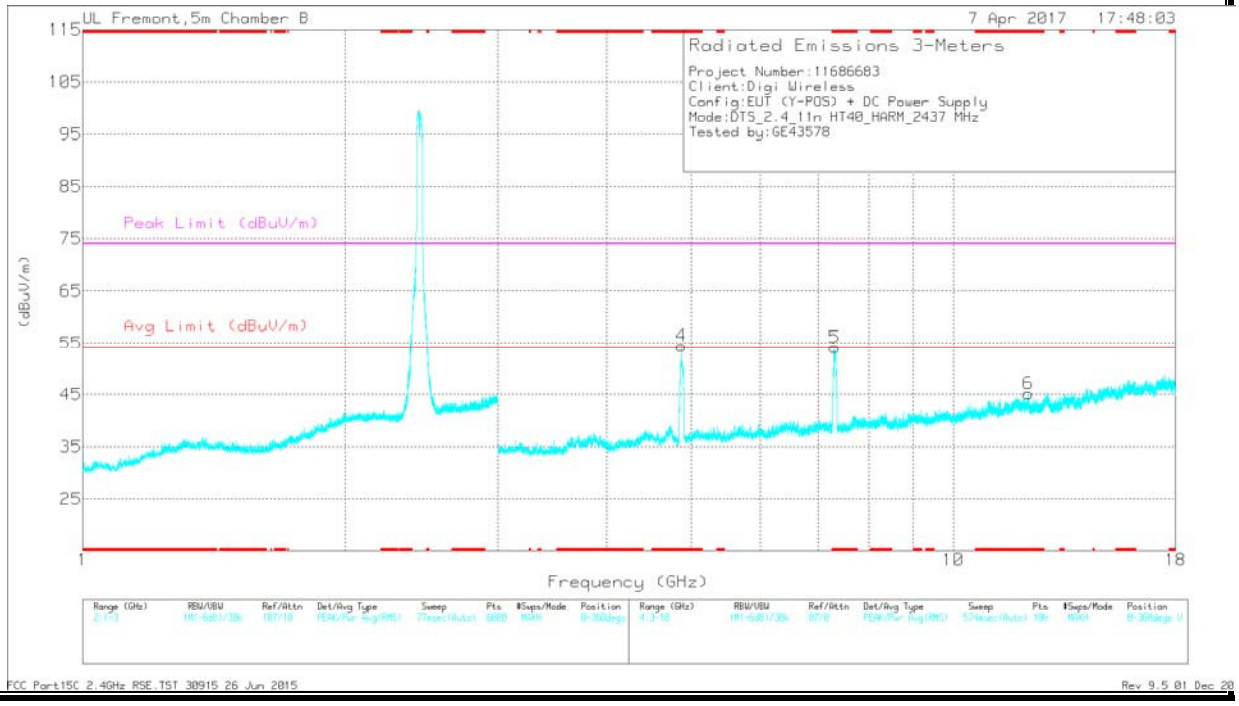
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK2 - KDB5558074 Method: Maximum Peak
MAv1 - KDB5558074 Option 1 Maximum RMS Average

HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, CH 6)

MID CHANNEL HORIZONTAL



MID CHANNEL VERTICAL



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/Fltr/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	* 4.873	47.42	Pk	34.5	-30.4	0	51.52	-	-	74	-22.48	0-360	199	H
2	* 7.324	48.59	Pk	36	-27.8	0	56.79	-	-	74	-17.21	0-360	102	H
3	* 12.201	28.57	Pk	39	-22.9	0	44.67	-	-	74	-29.33	0-360	199	H
4	* 4.873	50.32	Pk	34.5	-30.4	0	54.42	-	-	74	-19.58	0-360	102	V
5	* 7.309	46.11	Pk	36	-28	0	54.11	-	-	74	-19.89	0-360	102	V
6	* 12.194	28.92	Pk	39	-22.8	0	45.12	-	-	74	-28.88	0-360	199	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector

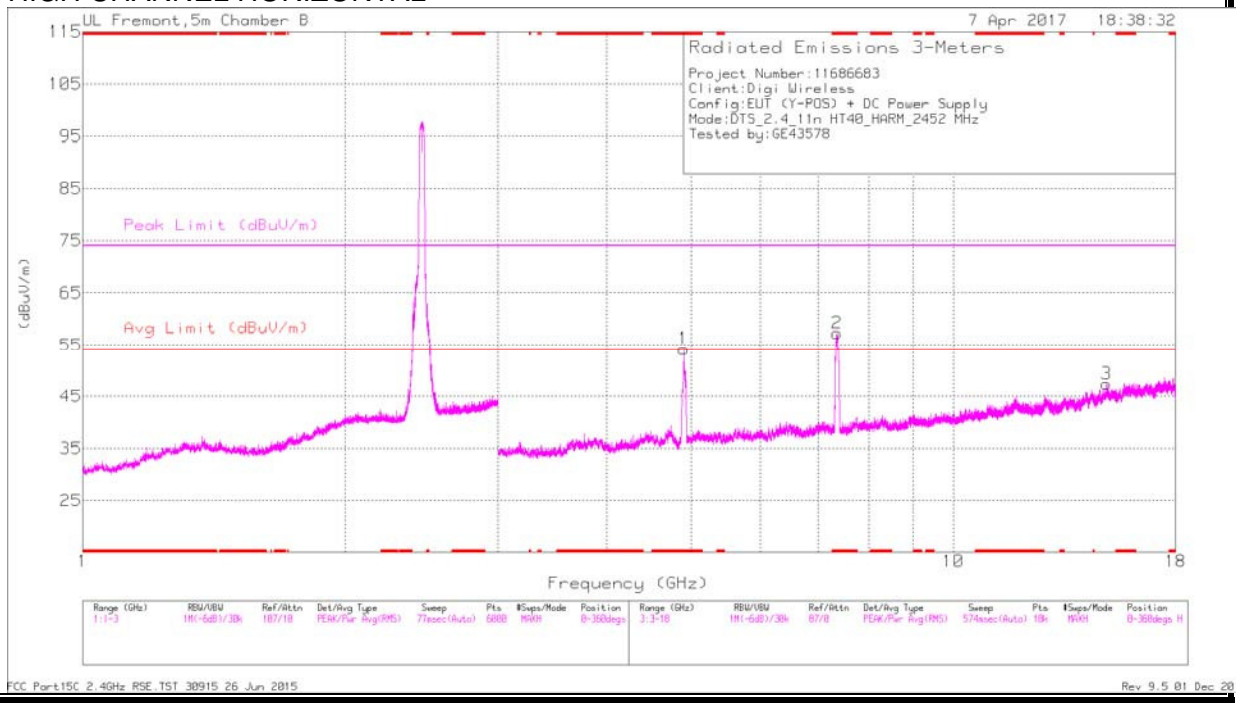
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/Fltr/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
* 7.32	57.3	PK2	36	-27.8	0	65.5	-	-	74	-8.5	177	104	H
* 7.308	45.48	MAv1	36	-28	.26	53.74	54	-.26	-	-	177	104	H
* 4.871	53.07	PK2	34.5	-30.3	0	57.27	-	-	74	-16.73	284	245	H
* 4.873	41.07	MAv1	34.5	-30.4	.26	45.43	54	-8.57	-	-	284	245	H
* 12.206	34.2	PK2	39	-22.9	0	50.3	-	-	74	-23.7	163	230	H
* 12.194	22.73	MAv1	39	-22.8	.26	39.19	54	-14.81	-	-	163	230	H
* 4.872	56	PK2	34.5	-30.4	0	60.1	-	-	74	-13.9	177	106	V
* 4.875	43.87	MAv1	34.5	-30.4	.26	48.23	54	-5.77	-	-	177	106	V
* 7.304	53.94	PK2	36	-28.1	0	61.84	-	-	74	-12.16	159	109	V
* 7.309	42.12	MAv1	36	-28	.26	50.38	54	-3.62	-	-	159	109	V
* 12.196	34.91	PK2	39	-22.8	0	51.11	-	-	74	-22.89	220	239	V
* 12.194	23.38	MAv1	39	-22.8	.26	39.84	54	-14.16	-	-	220	239	V

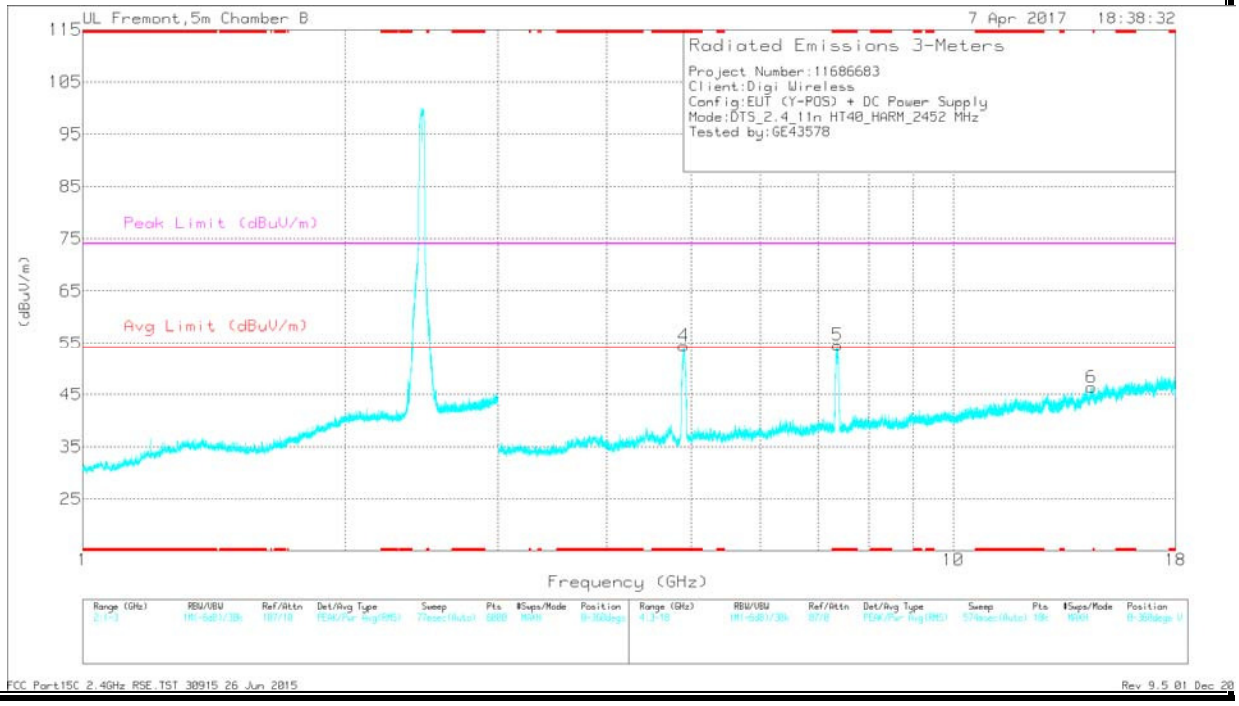
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK2 - KDB5558074 Method: Maximum Peak
MAv1 - KDB5558074 Option 1 Maximum RMS Average

HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, CH 9)

HIGH CHANNEL HORIZONTAL



HIGH CHANNEL VERTICAL



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/Fltr/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	* 4.903	50.22	Pk	34.5	-30.5	0	54.22	-	-	74	-19.78	0-360	199	H
2	* 7.349	48.77	Pk	36	-27.5	0	57.27	-	-	74	-16.73	0-360	102	H
4	* 4.903	50.43	Pk	34.5	-30.5	0	54.43	-	-	74	-19.57	0-360	102	V
5	* 7.362	45.98	Pk	36	-27.4	0	54.58	-	-	74	-19.42	0-360	102	V
6	14.408	27.29	Pk	40.9	-21.8	0	46.39	-	-	-	-	0-360	200	V
3	14.991	27.77	Pk	41.3	-21.7	0	47.37	-	-	-	-	0-360	102	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector

Radiated Emissions

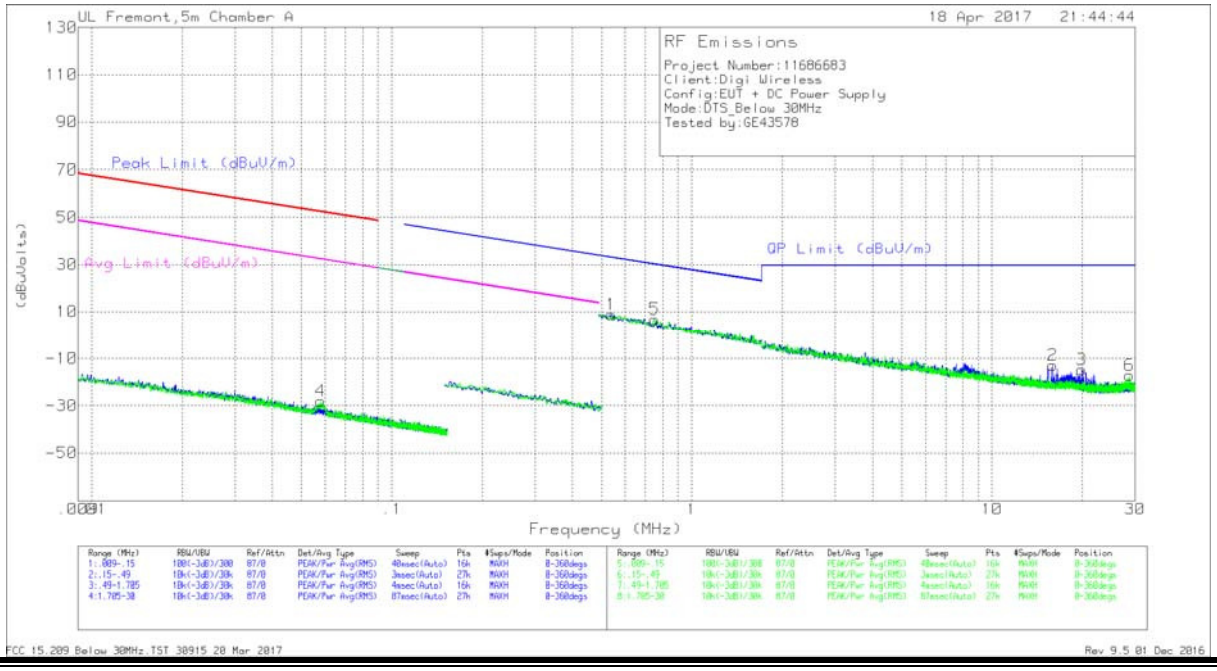
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 7.353	56.3	PK2	36	-27.5	0	64.8	-	-	74	-9.2	184	102	H
* 7.348	44.43	MAv1	36	-27.5	.26	53.19	54	-.81	-	-	184	102	H
* 4.904	54.92	PK2	34.5	-30.5	0	58.92	-	-	74	-15.08	290	290	H
* 4.905	42.94	MAv1	34.5	-30.5	.26	47.2	54	-6.8	-	-	290	290	H
* 7.351	53.68	PK2	36	-27.5	0	62.18	-	-	74	-11.82	160	104	V
* 7.35	41.92	MAv1	36	-27.5	.26	50.68	54	-3.32	-	-	160	104	V
* 4.908	58.49	PK2	34.5	-30.5	0	62.49	-	-	74	-11.51	176	106	V
* 4.902	46.74	MAv1	34.5	-30.5	.26	51	54	-3	-	-	176	106	V
14.407	33.24	PK2	40.9	-21.8	0	52.34	-	-	-	-	144	200	V
15.001	32.63	PK2	41.4	-21.7	0	52.33	-	-	-	-	193	104	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK2 - KDB5558074 Method: Maximum Peak
MAv1 - KDB5558074 Option 1 Maximum RMS Average

10.2 WORST-CASE BELOW 30 MHz

SPURIOUS EMISSIONS BELOW 30 MHz (WORST-CASE CONFIGURATION)

HORIZONTAL AND VERTICAL PLOTS



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)	QP Limit (dBuV/m)	Margin (dB)	QP Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
4	.05804	39.66	Pk	12.2	.1	-80	-28.04	52.31	-80.35	32.31	-60.35	-	-	-	-	-	-	-	-	0-360

Pk - Peak detector

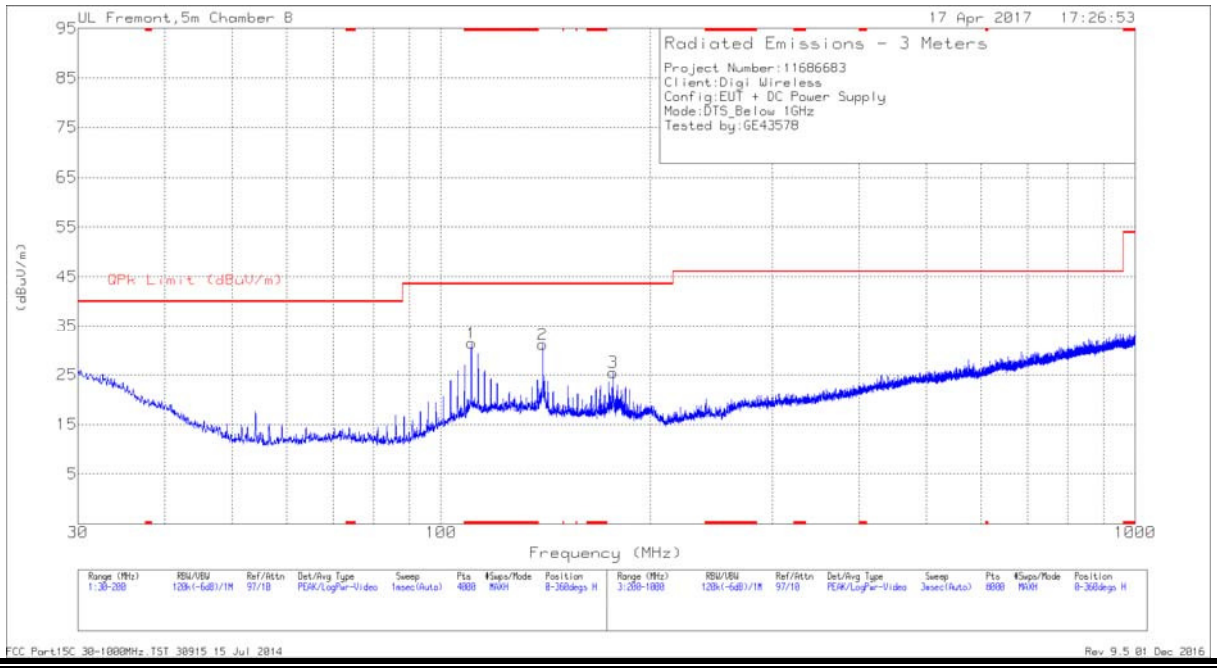
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Cbl (dB)	Dist Corr 30m	Corrected Reading (dBuVolts)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	QP Limit (dBuV/m)	Margin (dB)	QP Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
1	.53815	37.37	Pk	11.5	.1	-40	8.97	-	-	-	-	-	-	32.99	-24.02	-	-	-	-	0-360
5	.75079	35.29	Pk	11.5	.1	-40	6.89	-	-	-	-	-	-	30.1	-23.21	-	-	-	-	0-360
2	15.93212	16.36	Pk	10.1	.6	-40	-12.94	-	-	-	-	-	-	29.5	-42.44	-	-	-	-	0-360
3	19.88099	14.87	Pk	9.7	.7	-40	-14.73	-	-	-	-	-	-	29.5	-44.23	-	-	-	-	0-360
6	28.63965	13.93	Pk	8.2	.8	-40	-17.07	-	-	-	-	-	-	29.5	-46.57	-	-	-	-	0-360

Pk - Peak detector

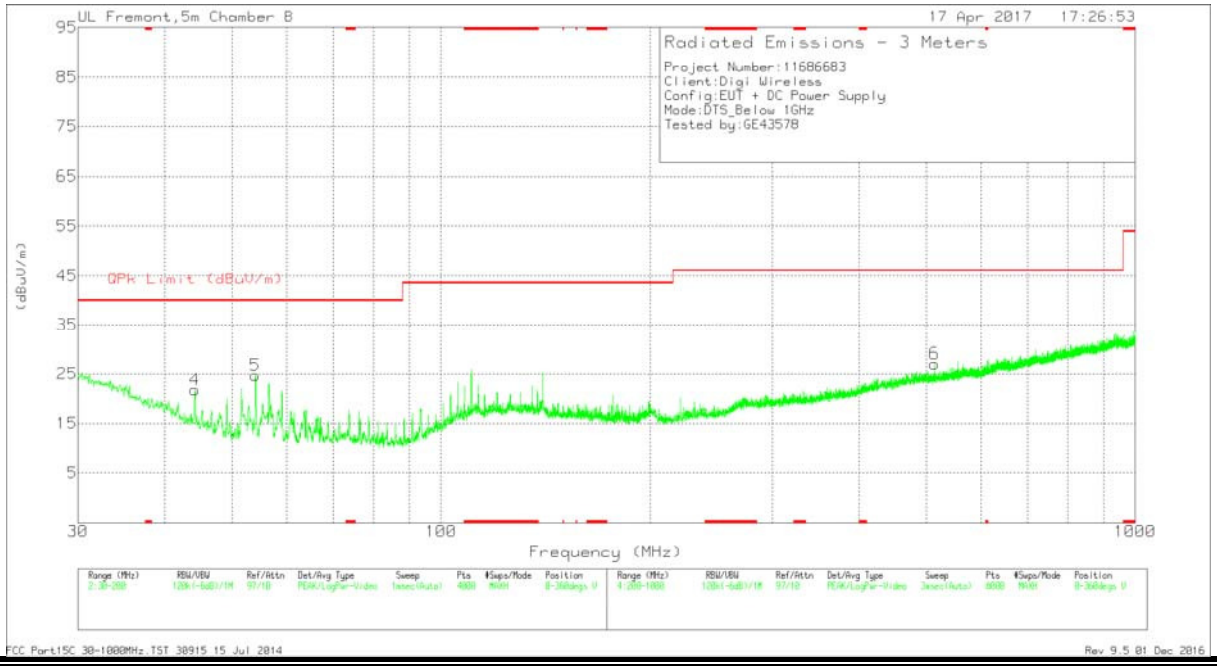
10.3 WORST-CASE BELOW 1 GHz

SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION)

HORIZONTAL PLOT



VERTICAL PLOT



Trace Markers

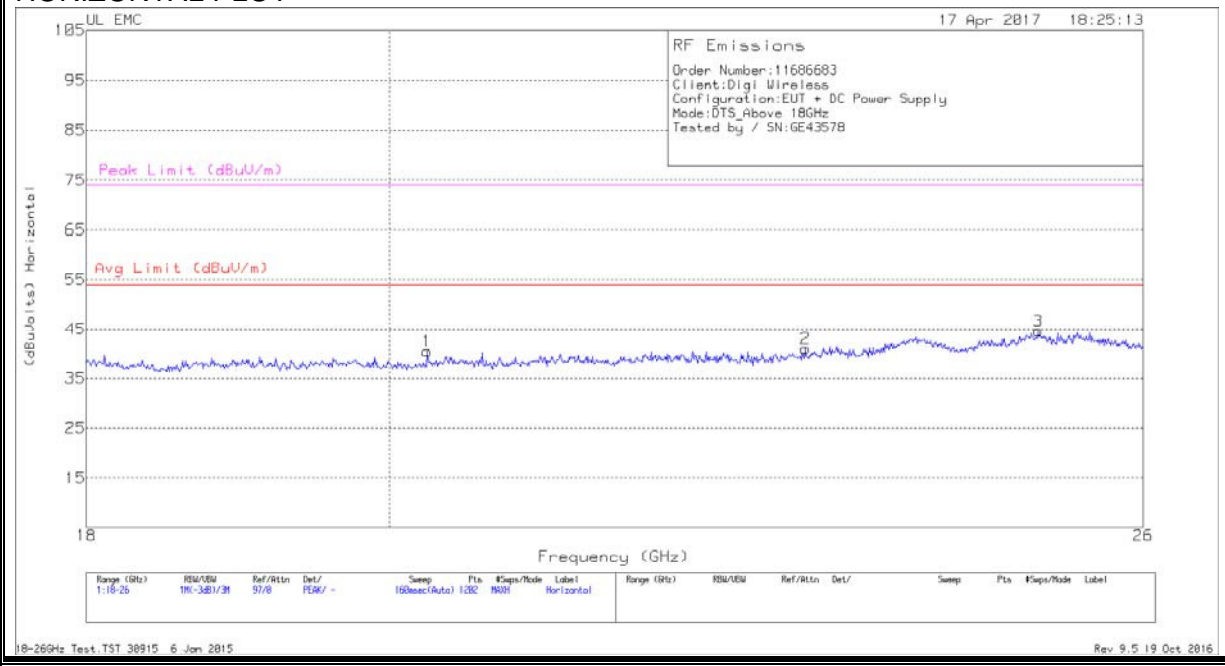
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T477 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 110.6009	42.61	Pk	16.6	-27.8	31.41	43.52	-12.11	0-360	300	H
4	44.2412	35.47	Pk	14.9	-28.6	21.77	40	-18.23	0-360	100	V
5	54.0612	41.97	Pk	11.2	-28.4	24.77	40	-15.23	0-360	100	V
2	140.1035	41.79	Pk	16.9	-27.5	31.19	43.52	-12.33	0-360	300	H
3	177.003	37.22	Pk	15.3	-27.1	25.42	43.52	-18.1	0-360	200	H
6	514.0408	31.36	Pk	21.7	-26	27.06	46.02	-18.96	0-360	300	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector

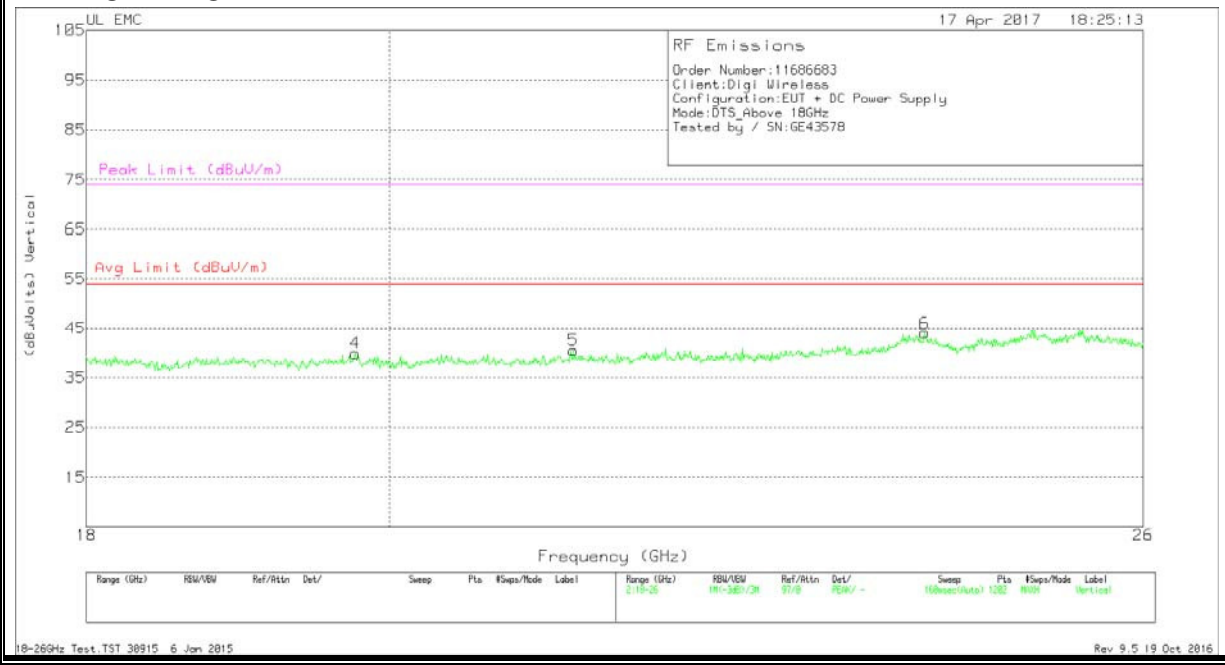
10.5. WORST-CASE 18 to 26 GHz

SPURIOUS EMISSIONS 18 TO 26 GHz (WORST-CASE CONFIGURATION)

HORIZONTAL PLOT



VERTICAL PLOT



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T449 (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	20.265	42.4	Pk	32.8	-25.2	-9.5	40.5	54	-13.5	74	-33.5
2	23.116	42.4	Pk	33.5	-25.4	-9.5	41	54	-13	74	-33
3	25.067	44.67	Pk	34.3	-24.8	-9.5	44.67	54	-9.33	74	-29.33
4	19.765	41.43	Pk	32.7	-24.8	-9.5	39.83	54	-14.17	74	-34.17
5	21.324	42	Pk	33.1	-25.1	-9.5	40.5	54	-13.5	74	-33.5
6	24.095	43.8	Pk	34	-24.3	-9.5	44	54	-10	74	-30

Pk - Peak detector

11 AC POWER LINE CONDUCTED EMISSIONS

LIMITS

FCC §15.207 (a)
RSS-Gen 8.8

Frequency of Emission (MHz)	Conducted Limit (dBµV)	
	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.

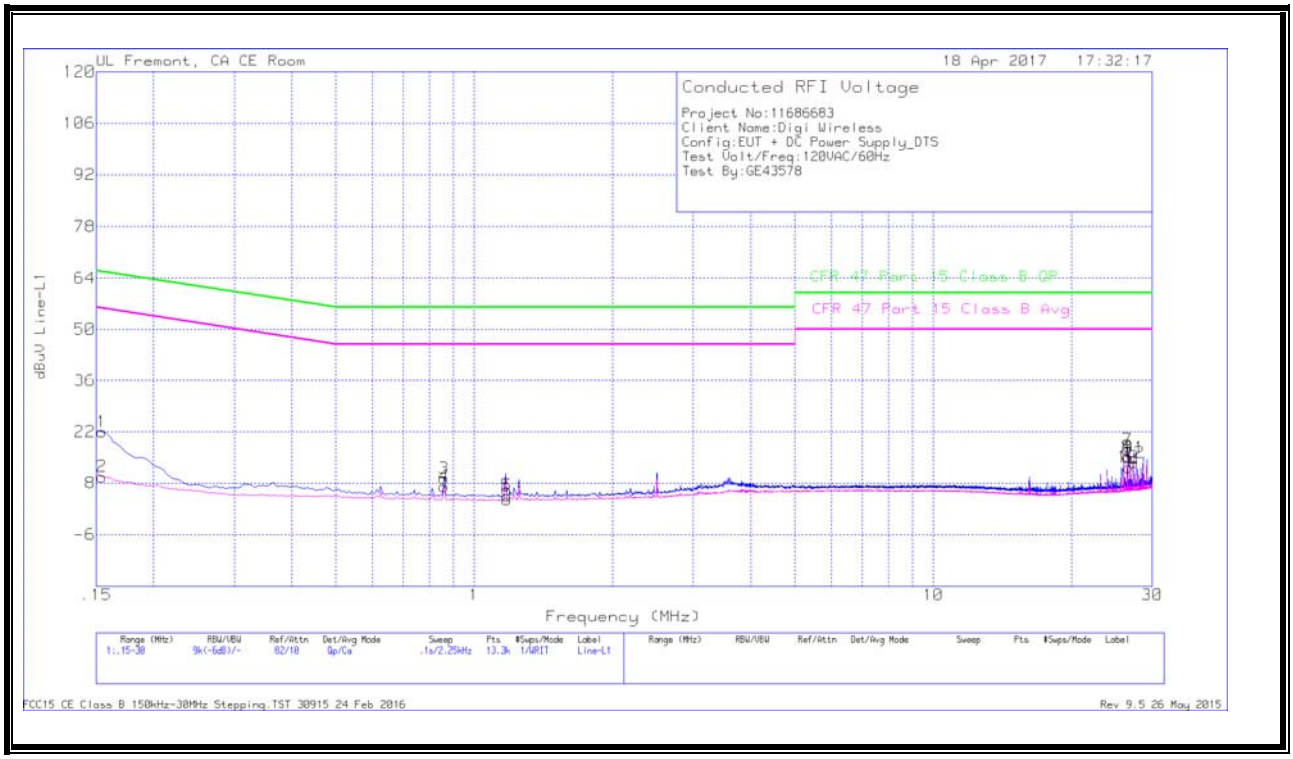
TEST PROCEDURE

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.

LINE 1 RESULTS



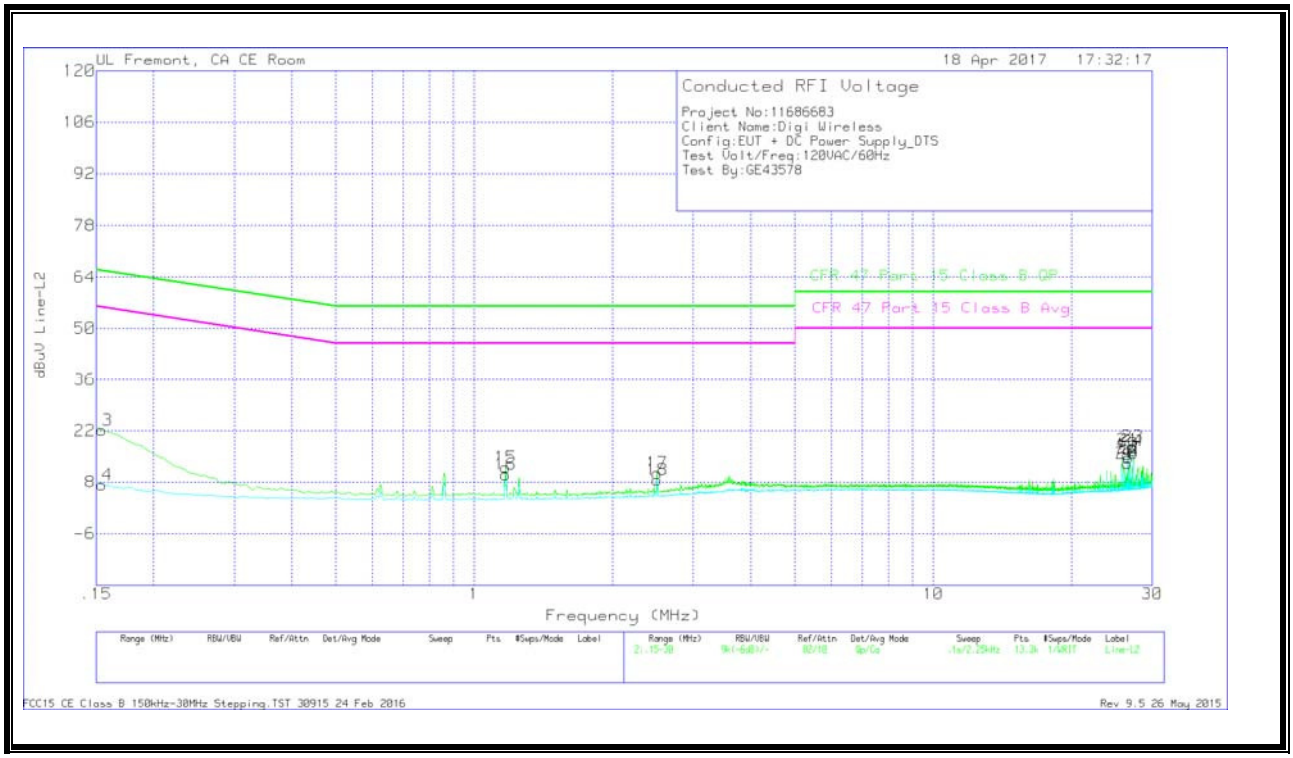
Trace Markers

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	.1545	11.62	Qp	.1	.1	10.1	21.92	65.75	-43.83	-	-
2	.1545	-.58	Ca	.1	.1	10.1	9.72	-	-	55.75	-46.03
3	.85875	-.94	Qp	0	.1	10.1	9.26	56	-46.74	-	-
4	.85875	-3.08	Ca	0	.1	10.1	7.12	-	-	46	-38.88
5	1.17825	-5.62	Qp	0	.1	10.1	4.58	56	-51.42	-	-
6	1.17825	-6.74	Ca	0	.1	10.1	3.46	-	-	46	-42.54
7	26.4885	6.23	Qp	.1	.3	10.5	17.13	60	-42.87	-	-
8	26.4885	4.35	Ca	.1	.3	10.5	15.25	-	-	50	-34.75
9	26.61	4.04	Qp	.1	.3	10.5	14.94	60	-45.06	-	-
10	26.61	1.37	Ca	.1	.3	10.5	12.27	-	-	50	-37.73
11	27.348	3.96	Qp	.1	.3	10.5	14.86	60	-45.14	-	-
12	27.348	2.67	Ca	.1	.3	10.5	13.57	-	-	50	-36.43

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	.1545	11.89	Qp	0	.1	10.1	22.09	65.75	-43.66	-	-
14	.1545	-2.97	Ca	0	.1	10.1	7.23	-	-	55.75	-48.52
15	1.16925	1.83	Qp	0	.1	10.1	12.03	56	-43.97	-	-
16	1.16925	-.12	Ca	0	.1	10.1	10.08	-	-	46	-35.92
17	2.5035	.23	Qp	0	.1	10.1	10.43	56	-45.57	-	-
18	2.5035	-1.58	Ca	0	.1	10.1	8.62	-	-	46	-37.38
19	26.4885	4.59	Qp	.1	.3	10.5	15.49	60	-44.51	-	-
20	26.4885	2.23	Ca	.1	.3	10.5	13.13	-	-	50	-36.87
21	26.61	5.9	Qp	.1	.3	10.5	16.8	60	-43.2	-	-
22	26.61	3.76	Ca	.1	.3	10.5	14.66	-	-	50	-35.34
23	27.1635	6.77	Qp	.1	.3	10.5	17.67	60	-42.33	-	-
24	27.1635	5.55	Ca	.1	.3	10.5	16.45	-	-	50	-33.55

Qp - Quasi-Peak detector

Ca - CISPR average detection