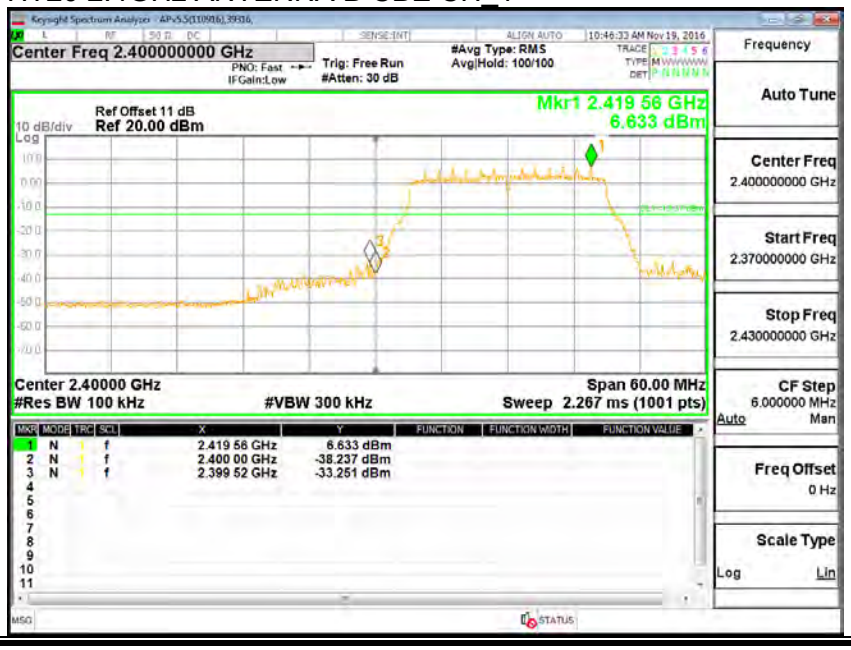
RESULTS

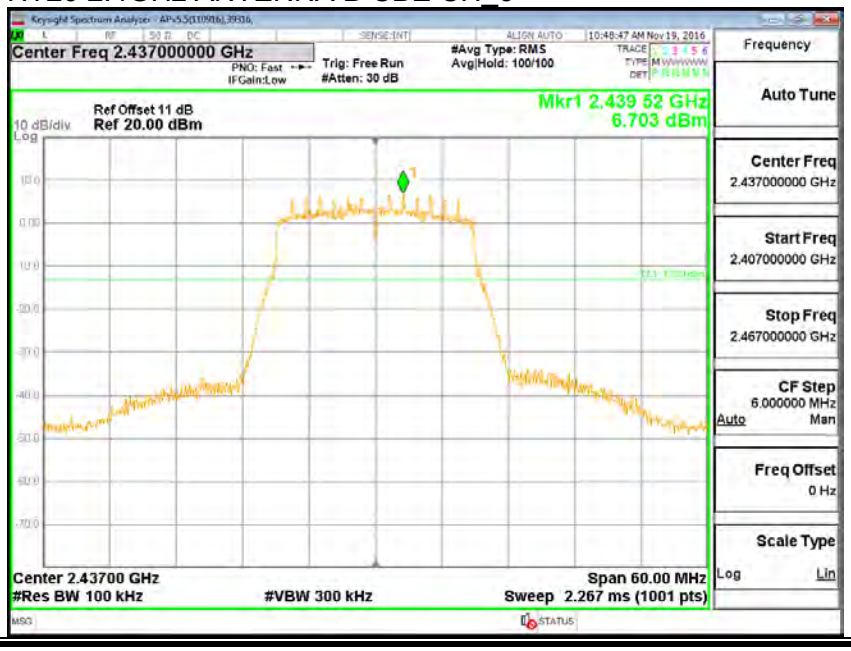
LOW CHANNEL BANDEDGE

HT20 2.4GHz ANTENNA B CBE CH_1



MID CHANNEL REFERENCE

HT20 2.4GHz ANTENNA B CBE CH_6



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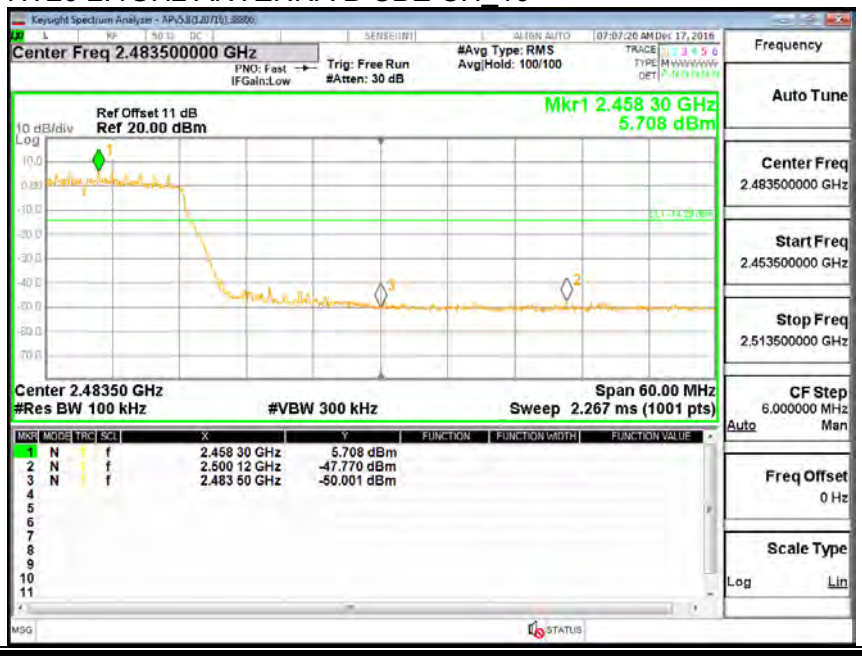
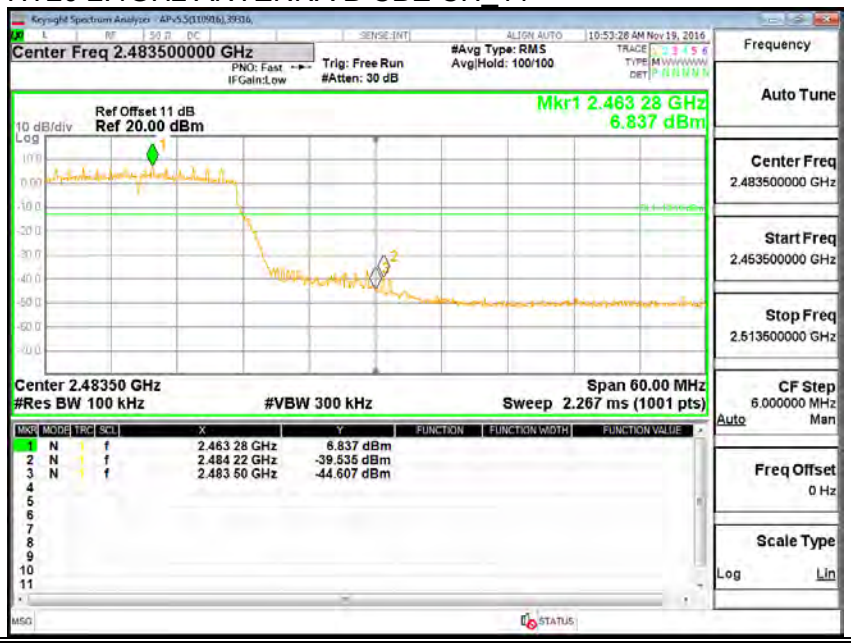
HT20 2.4GHz ANTENNA B CBE CH_10



HT20 2.4GHz ANTENNA B CBE CH_11



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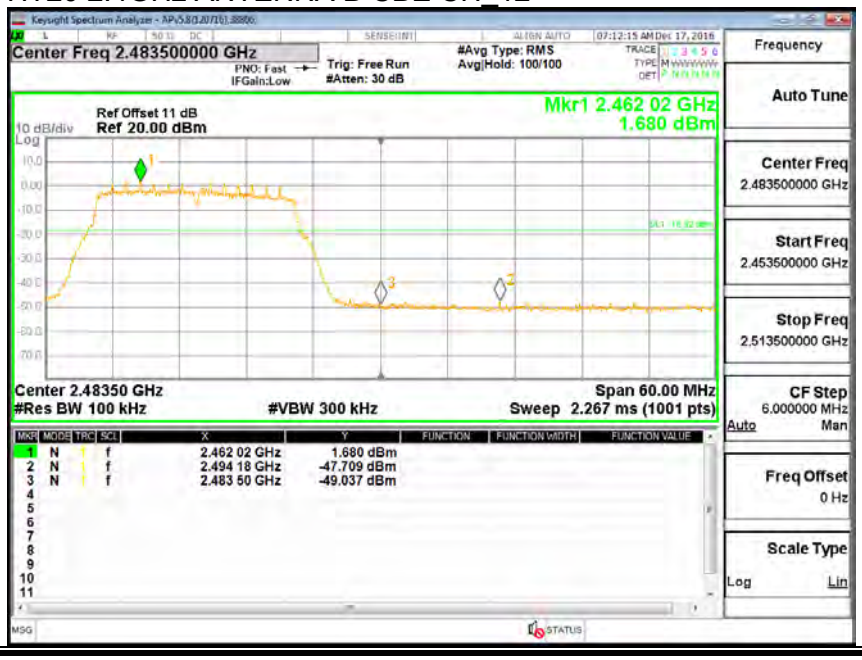
HT20 2.4GHz ANTENNA B CBE CH_12



HT20 2.4GHz ANTENNA B CBE CH_13

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OUT-OF-BAND EMISSIONS

HT20 2.4GHz ANTENNA B CSPUR CH_1

HT20 2.4GHz ANTENNA B CSPUR CH_6

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HT20 2.4GHz ANTENNA B CSPUR CH_13

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8.5. 11n 2TX CDD_HT20 MIMO MODE IN THE 2.4GHz BAND

8.5.1. 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 ANTENNA A (MHz)	6 dB BW ANTENNA B (MHz)	Minimum Limit (MHz)
Low_1	2412	16.40	16.36	0.5
Low_2	2417	17.55	16.58	0.5
Middle_6	2437	17.36	17.56	0.5
High_10	2457	17.56	17.64	0.5
High_11	2462	15.96	17.60	0.5
High_12	2467	16.68	17.56	0.5
High_13	2472	16.32	17.60	0.5

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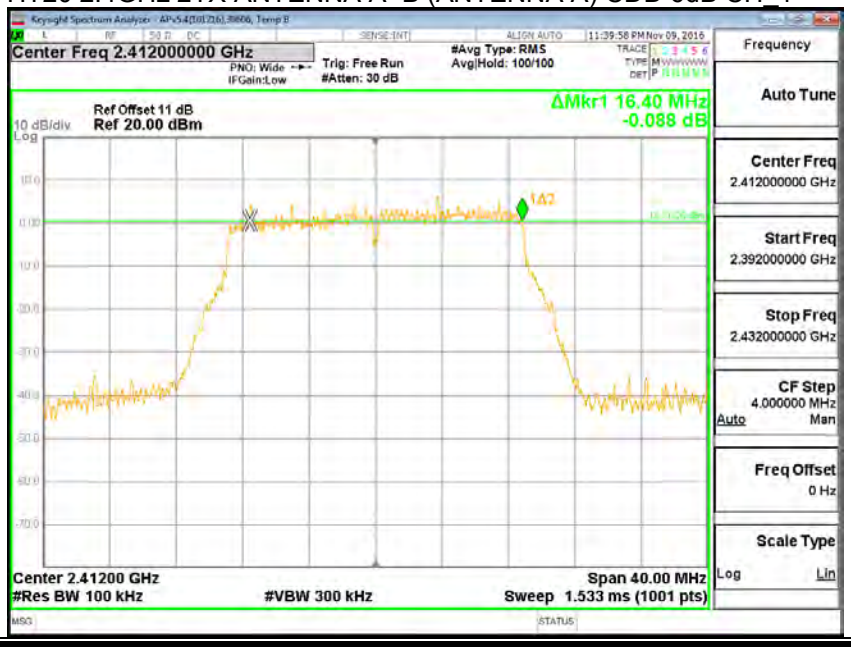
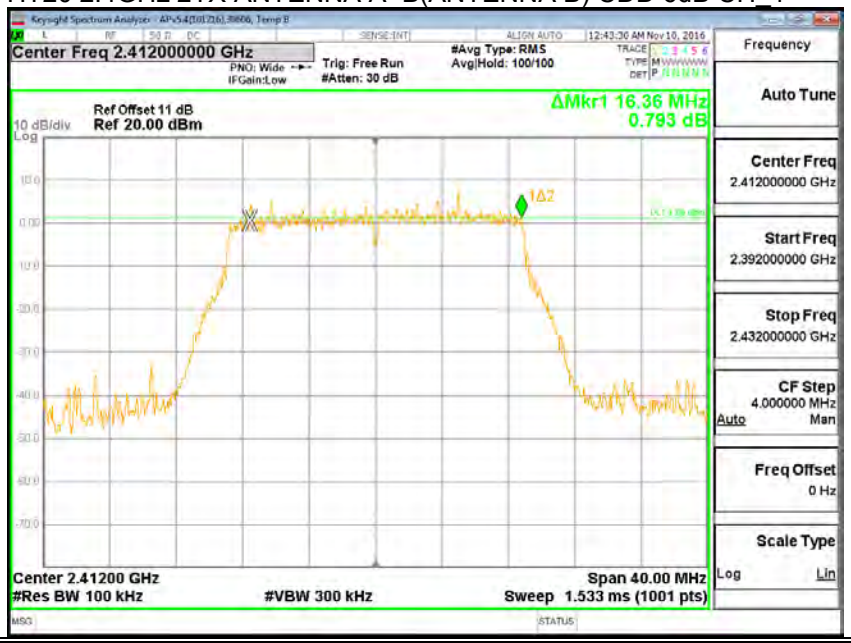
HT20 2.4GHz 2TX ANTENNA A+B (ANTENNA A) CDD 6dB CH_1



HT20 2.4GHz 2TX ANTENNA A+B(ANTENNA B) CDD 6dB CH_1



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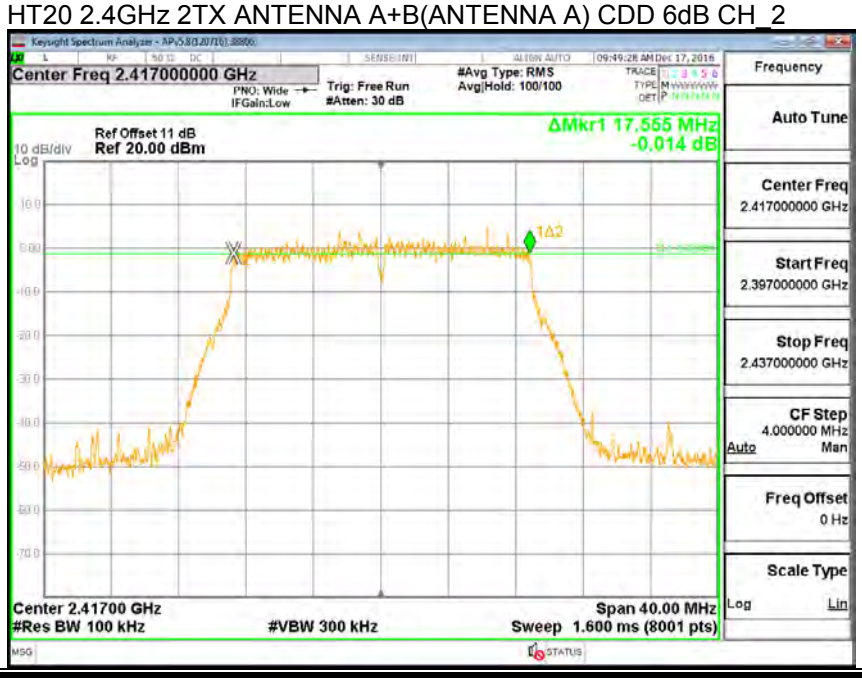
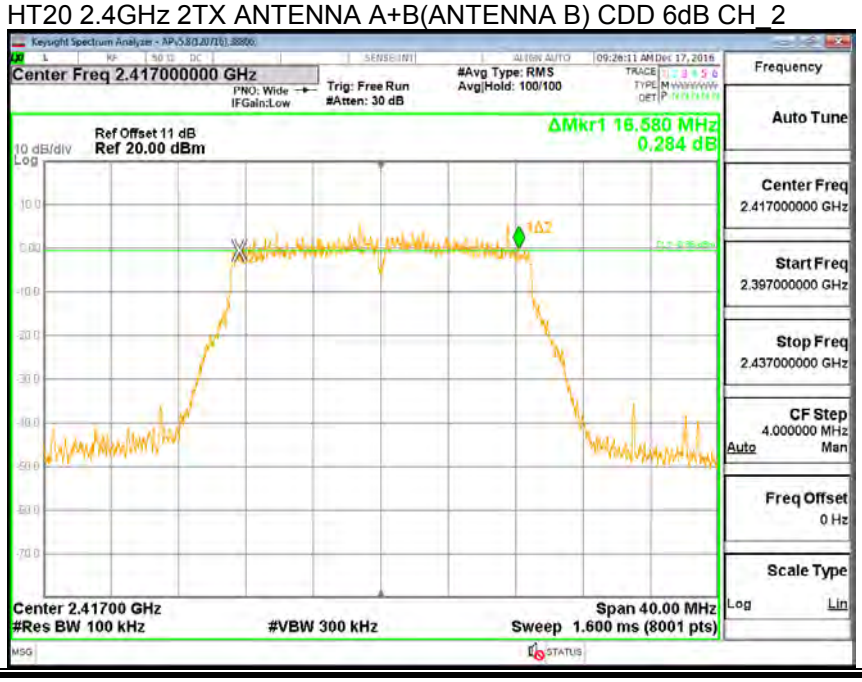
HT20 2.4GHz 2TX ANTENNA A+B(ANTENNA A) CDD 6dB CH_2



HT20 2.4GHz 2TX ANTENNA A+B(ANTENNA B) CDD 6dB CH_2



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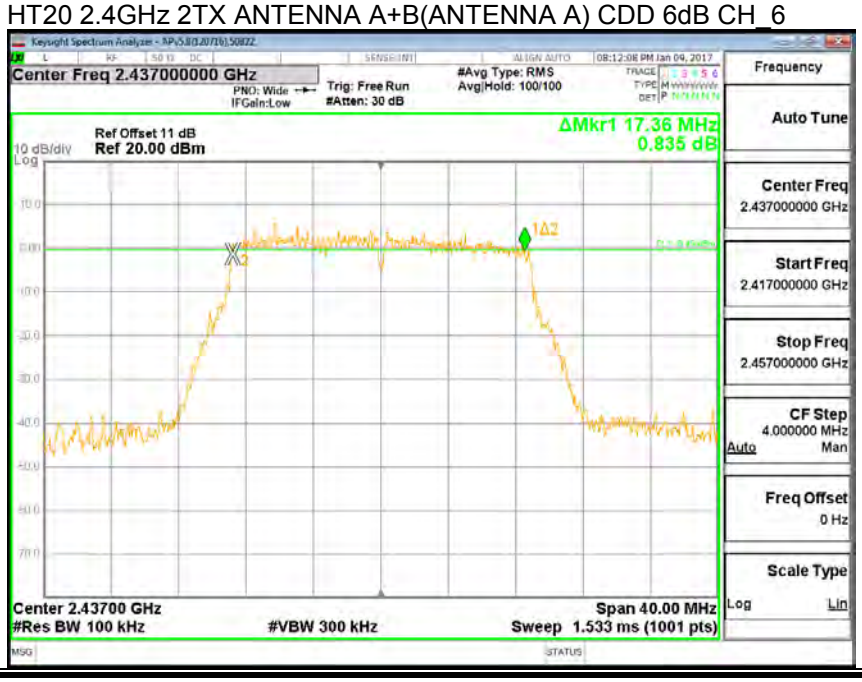
HT20 2.4GHz 2TX ANTENNA A+B(ANTENNA A) CDD 6dB CH_6



HT20 2.4GHz 2TX ANTENNA A+B(ANTENNA B) CDD 6dB CH_6

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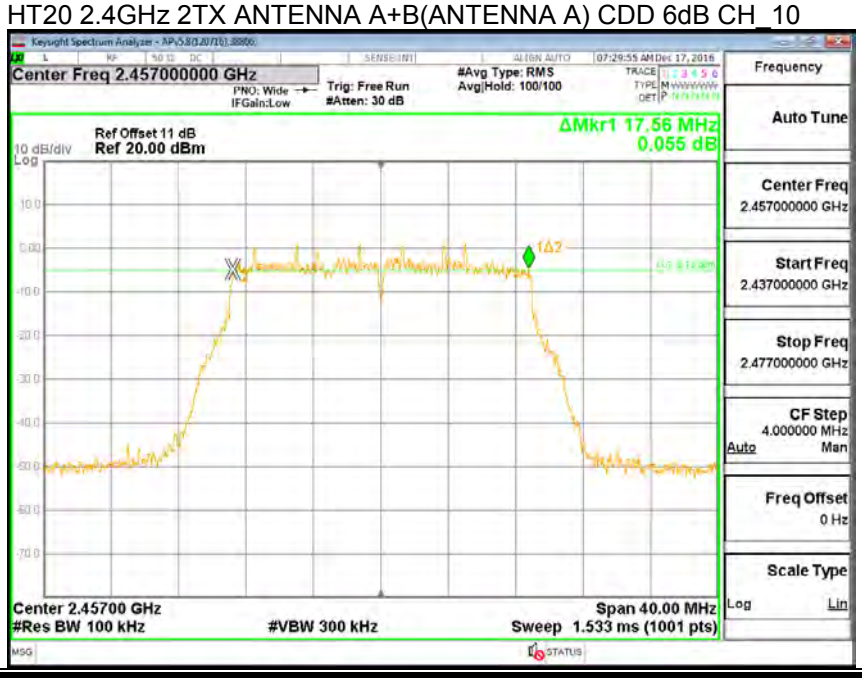
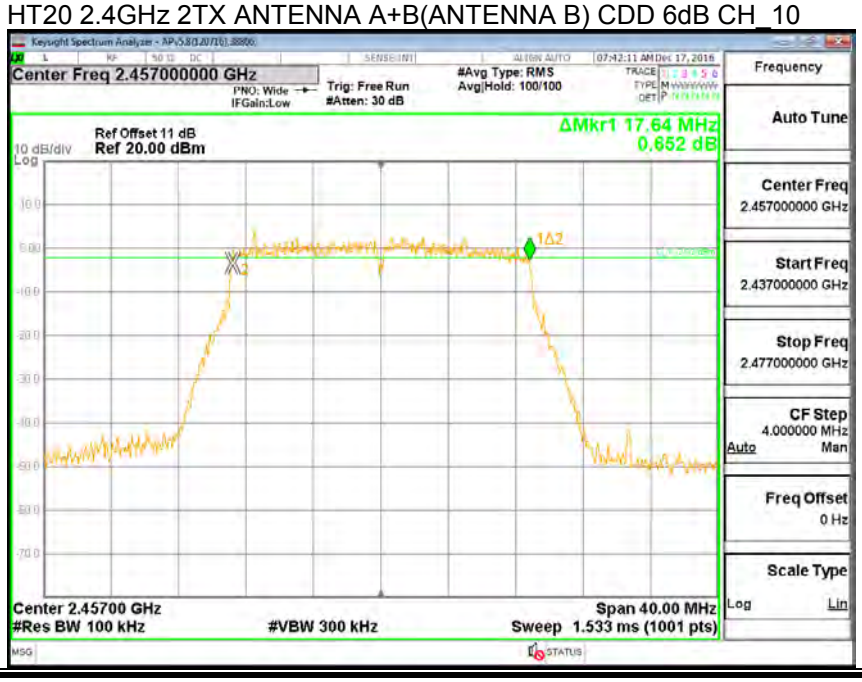
HT20 2.4GHz 2TX ANTENNA A+B(ANTENNA A) CDD 6dB CH_10



HT20 2.4GHz 2TX ANTENNA A+B(ANTENNA B) CDD 6dB CH_10



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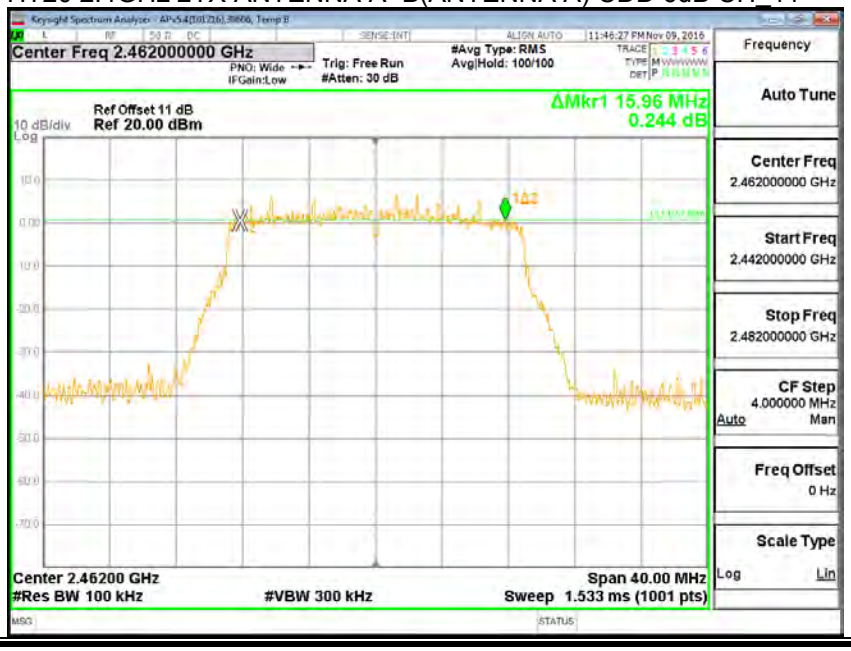
HT20 2.4GHz 2TX ANTENNA A+B(ANTENNA A) CDD 6dB CH_11



HT20 2.4GHz 2TX ANTENNA A+B(ANTENNA B) CDD 6dB CH_11

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HT20 2.4GHz 2TX ANTENNA A+B(ANTENNA A) CDD 6dB CH_12

HT20 2.4GHz 2TX ANTENNA A+B(ANTENNA B) CDD 6dB CH_12

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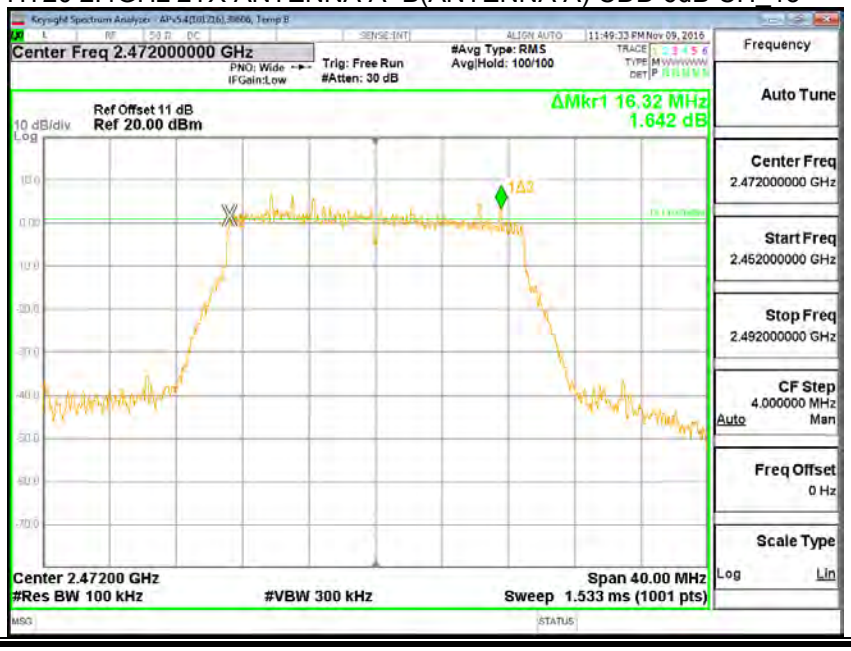
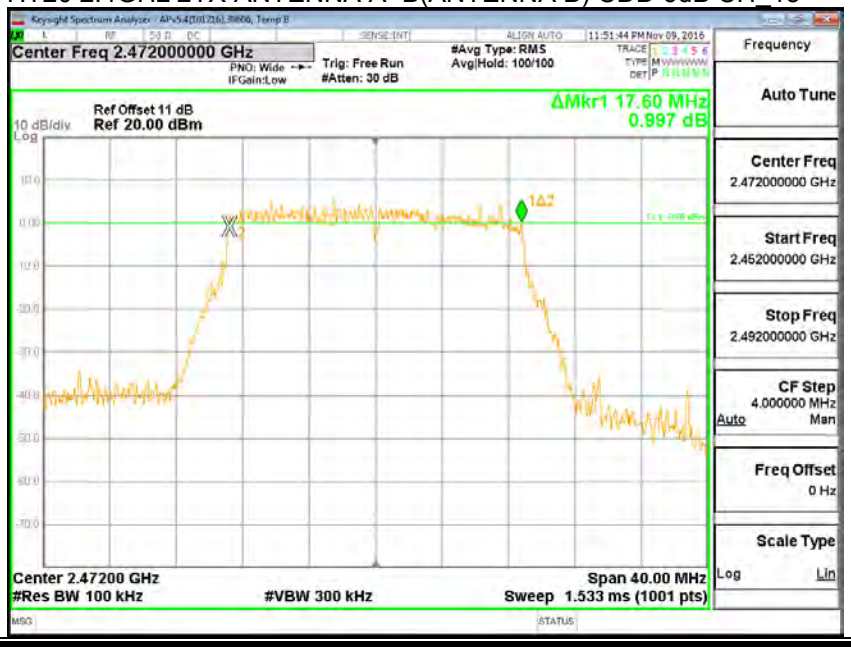
HT20 2.4GHz 2TX ANTENNA A+B(ANTENNA A) CDD 6dB CH_13



HT20 2.4GHz 2TX ANTENNA A+B(ANTENNA B) CDD 6dB CH_13



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8.5.2. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	99% Bandwidth ANTENNA A (MHz)	99% Bandwidth ANTENNA B (MHz)
Low_1	2412	17.847	17.768
Low_2	2417	17.748	17.642
Middle_6	2437	17.679	17.710
High_10	2457	17.745	17.835
High_11	2462	17.639	17.744
High_12	2467	17.794	17.854
High_13	2472	17.773	17.872

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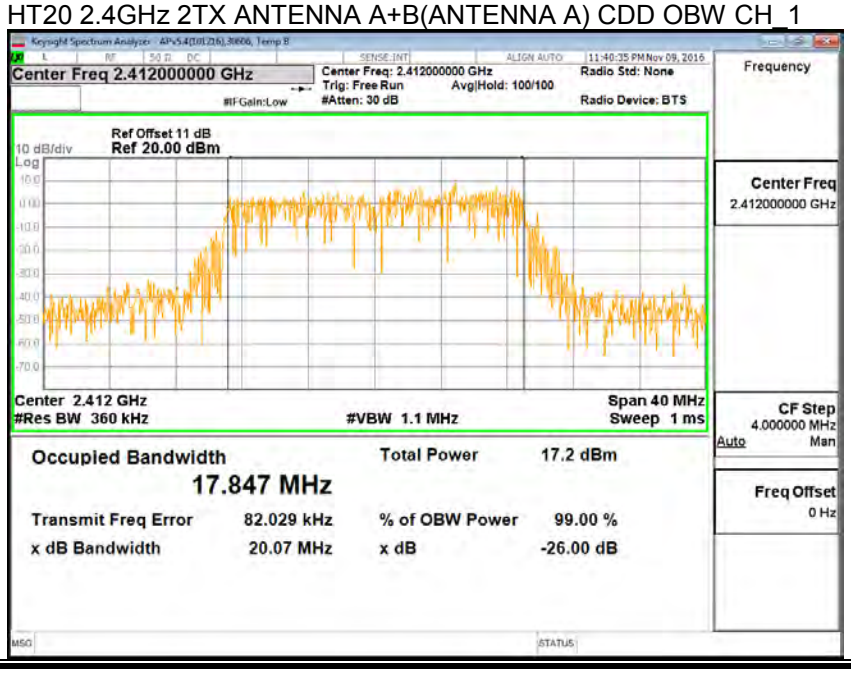
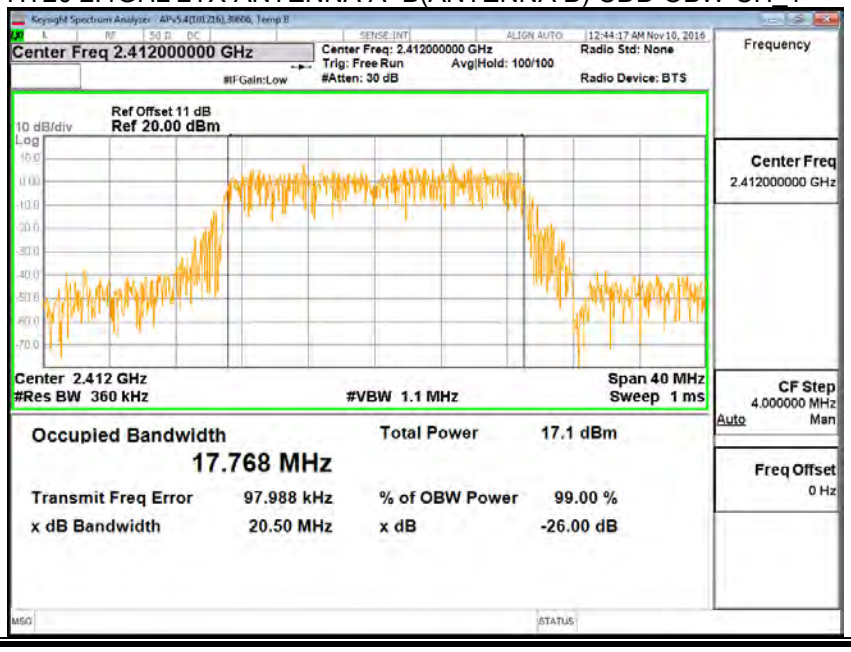
HT20 2.4GHz 2TX ANTENNA A+B(ANTENNA A) CDD OBW CH_1



HT20 2.4GHz 2TX ANTENNA A+B(ANTENNA B) CDD OBW CH_1



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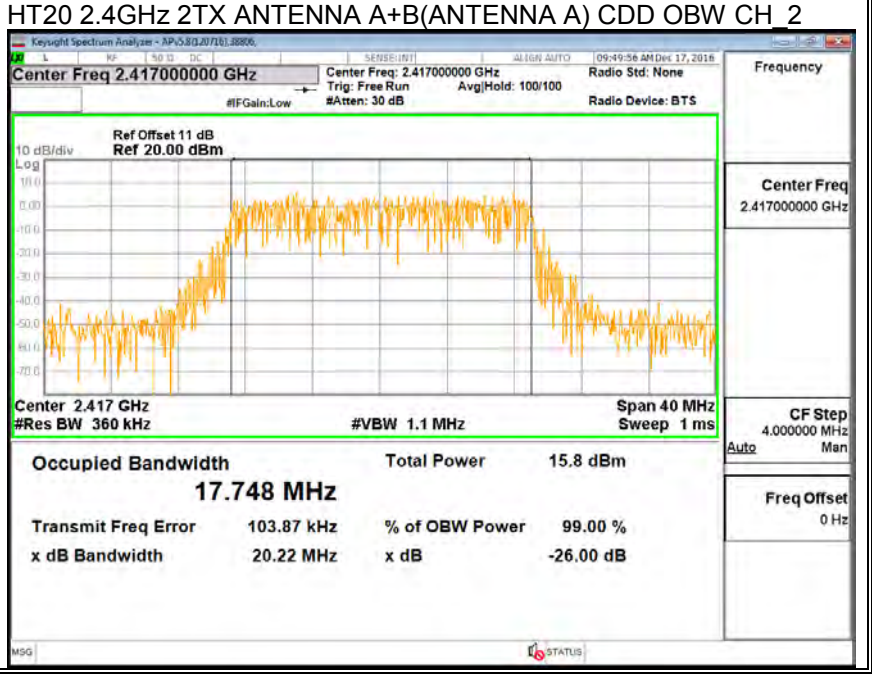
HT20 2.4GHz 2TX ANTENNA A+B(ANTENNA A) CDD OBW CH_2



HT20 2.4GHz 2TX ANTENNA A+B(ANTENNA B) CDD OBW CH_2

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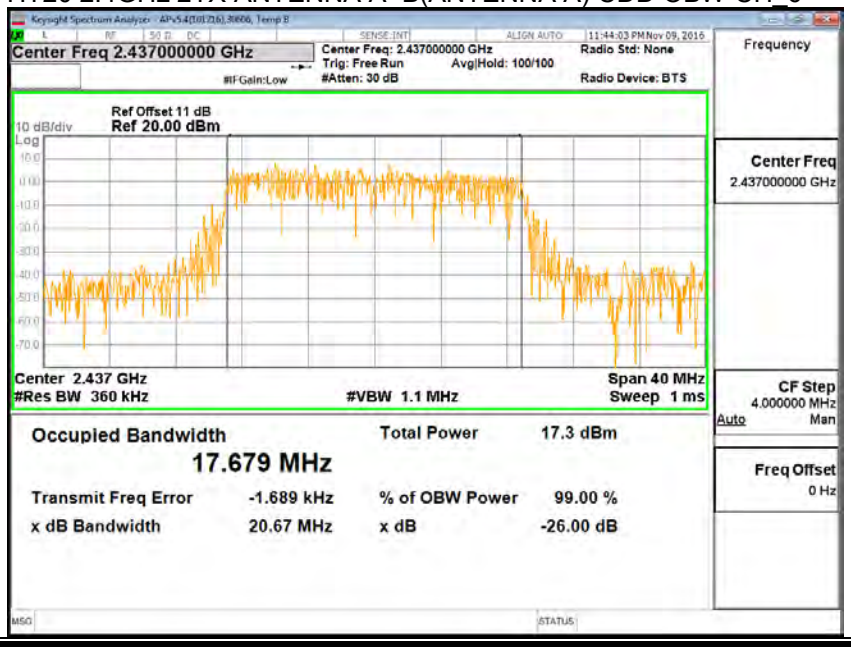
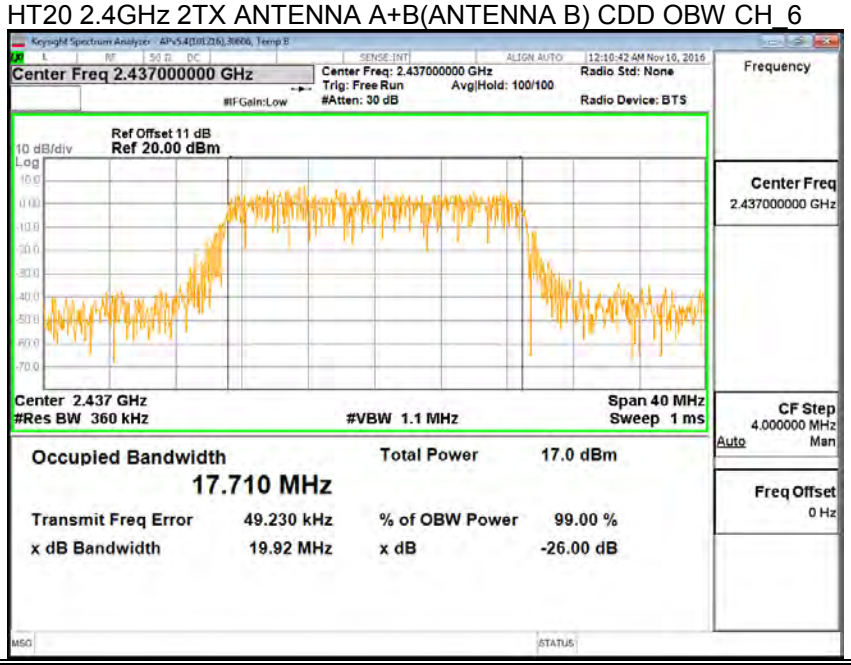
HT20 2.4GHz 2TX ANTENNA A+B(ANTENNA A) CDD OBW CH_6



HT20 2.4GHz 2TX ANTENNA A+B(ANTENNA B) CDD OBW CH_6



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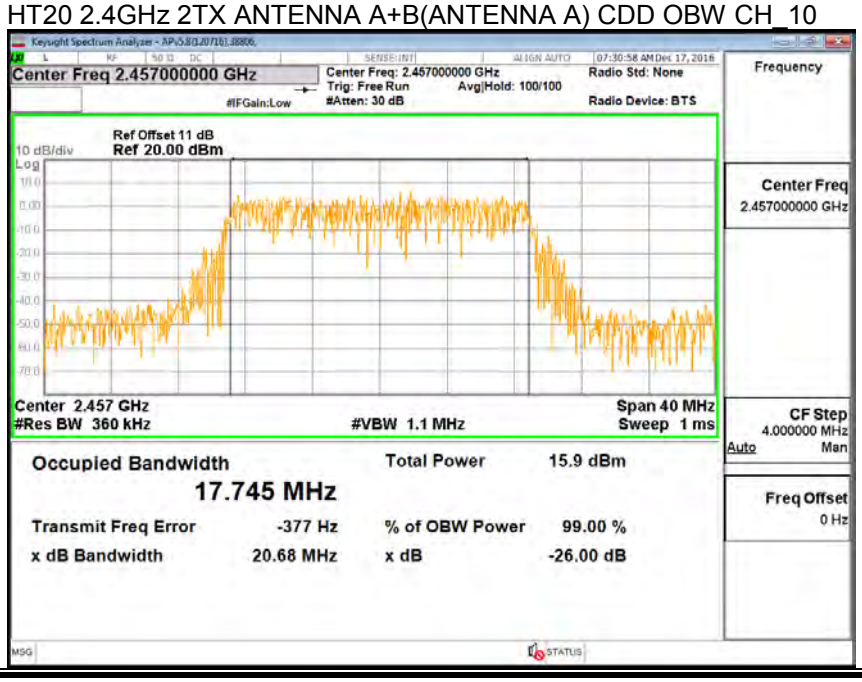
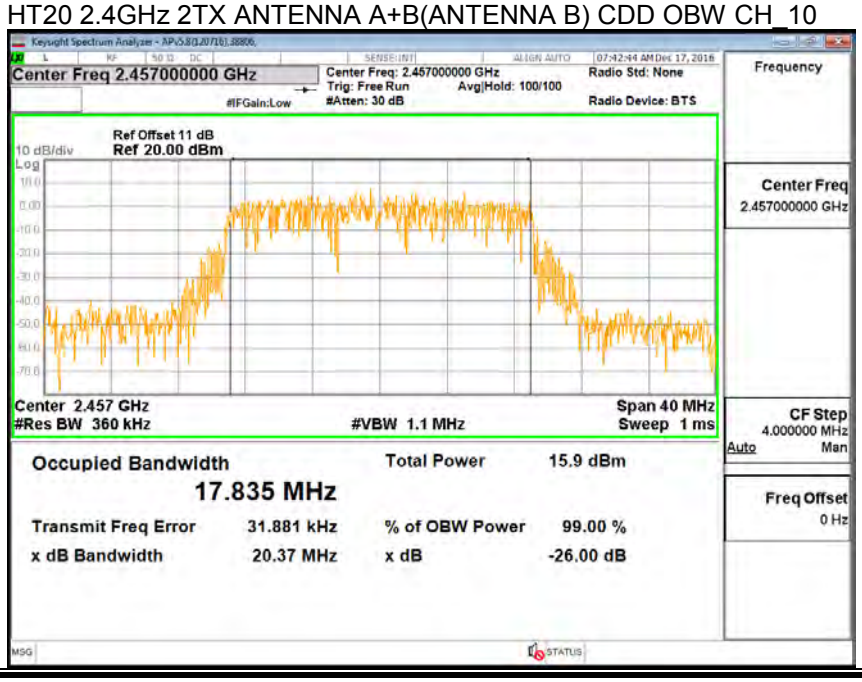
HT20 2.4GHz 2TX ANTENNA A+B(ANTENNA A) CDD OBW CH_10



HT20 2.4GHz 2TX ANTENNA A+B(ANTENNA B) CDD OBW CH_10



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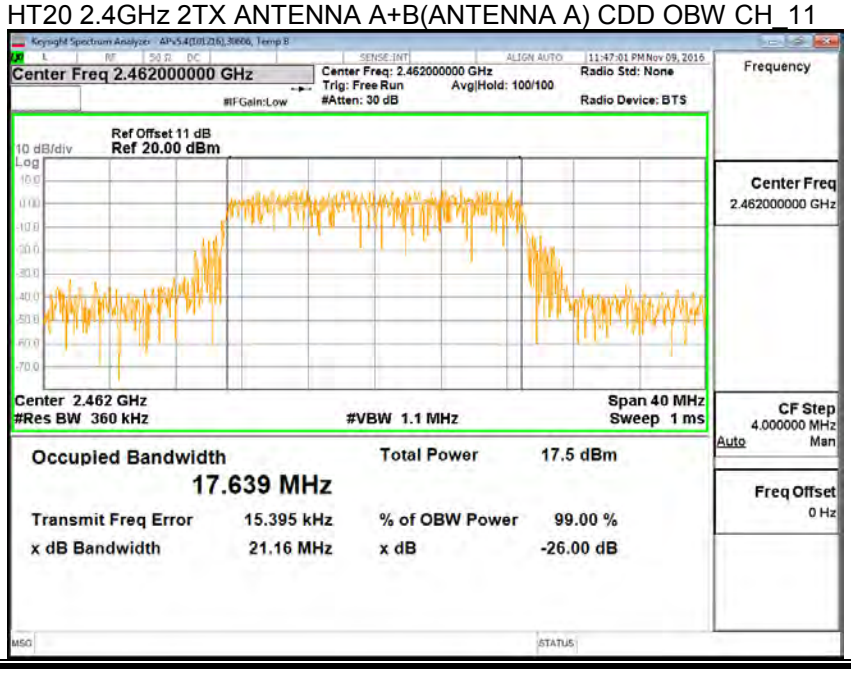
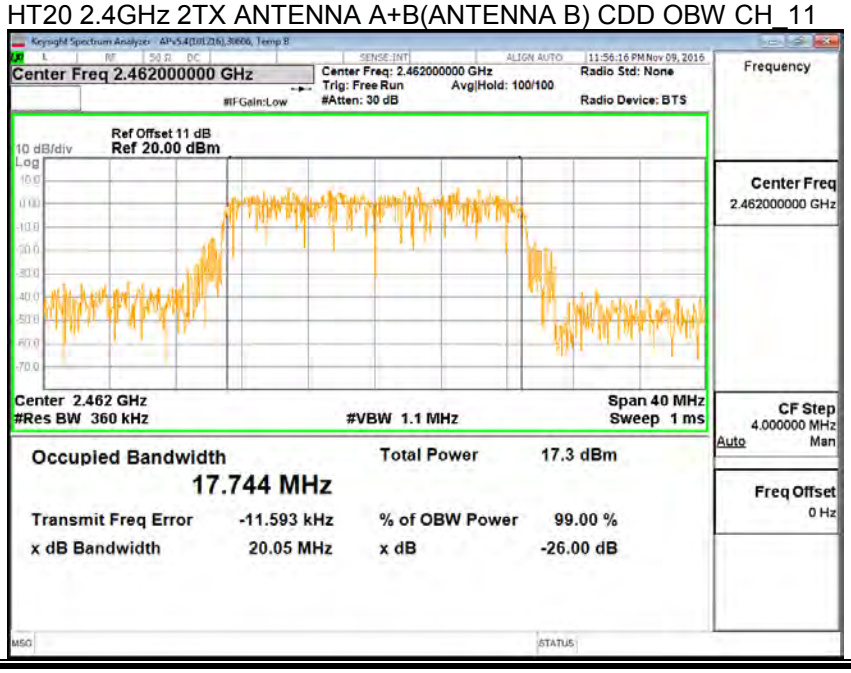
HT20 2.4GHz 2TX ANTENNA A+B(ANTENNA A) CDD OBW CH_11



HT20 2.4GHz 2TX ANTENNA A+B(ANTENNA B) CDD OBW CH_11



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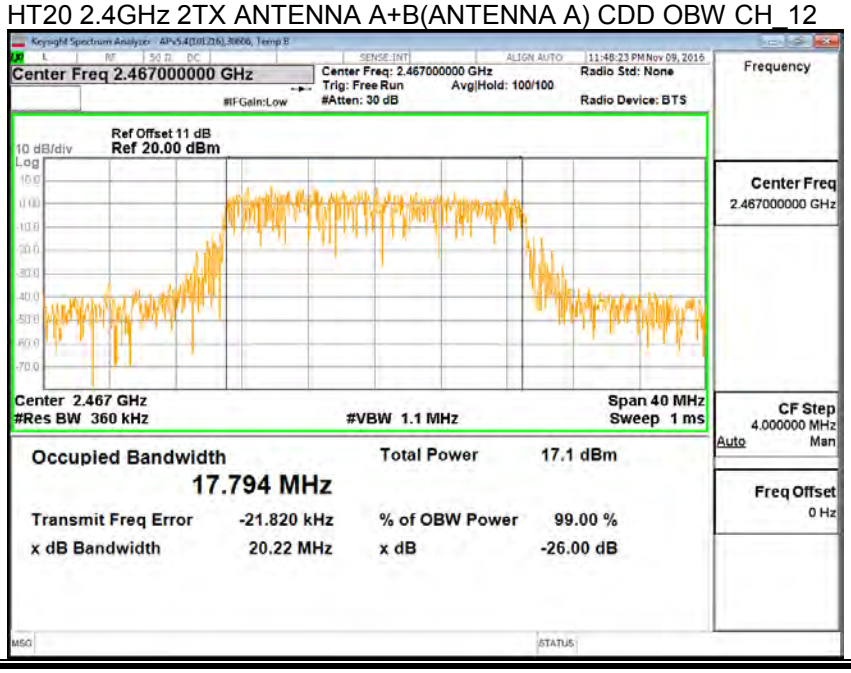
HT20 2.4GHz 2TX ANTENNA A+B(ANTENNA A) CDD OBW CH_12



HT20 2.4GHz 2TX ANTENNA A+B(ANTENNA B) CDD OBW CH_12

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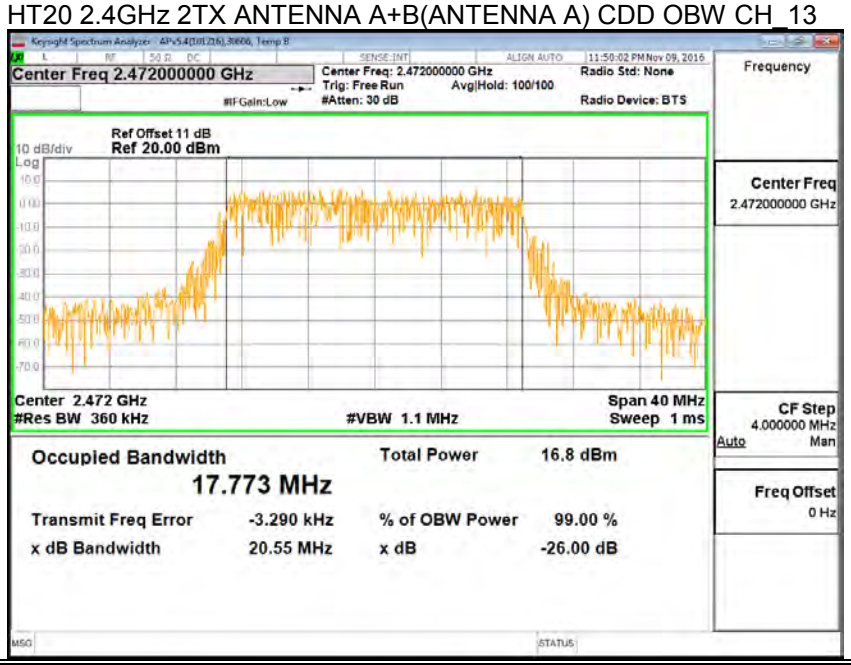
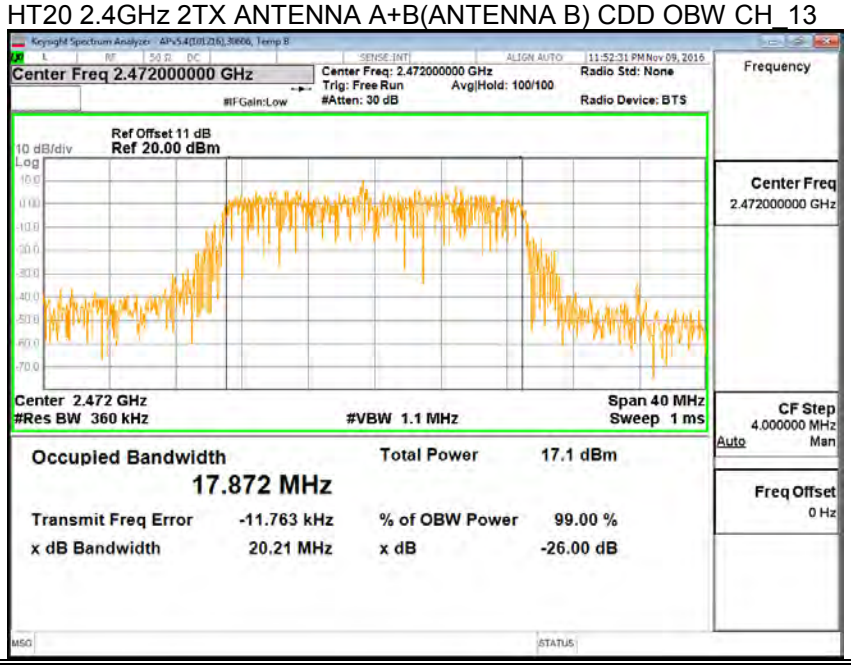
HT20 2.4GHz 2TX ANTENNA A+B(ANTENNA A) CDD OBW CH_13



HT20 2.4GHz 2TX ANTENNA A+B(ANTENNA B) CDD OBW CH_13



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8.5.3. AVERAGE POWER

ID:	39472	Date:	12/17/16

LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	Power ANTENNA A (MHz)	Power ANTENNA B (MHz)
Low_1	2412	12.82	12.87
Low_2	2417	15.97	15.35
Middle_6	2437	15.82	15.50
High_10	2457	15.97	15.39
High_11	2462	12.46	12.50
High_12	2467	10.46	10.50
High_13	2472	0.93	0.79

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8.5.4. OUTPUT POWER

ID:	39472	Date:	12/17/16

LIMITS

FCC §15.247

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

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

ANTENNA A Gain (dBi)	ANTENNA B Gain (dBi)	Uncorrelated Chains Directional Gain (dBi)
1.91	0.56	1.29

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RESULTS

Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Max Power (dBm)
Low_1	2412	1.29	30	30	36	30
Low_2	2417	1.29	30	30	36	30
Middle_6	2437	1.29	30	30	36	30
High_10	2457	1.29	30	30	36	30
High_11	2462	1.29	30	30	36	30
High_12	2467	1.29	30	30	36	30
High_13	2472	1.29	30	30	36	30

Duty Cycle CF (dB)	0	Included in Calculations of Corr'd Power

Results

Channel	Frequency (MHz)	Power ANTENNA A (MHz)	Power ANTENNA B (MHz)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low_1	2412	20.20	20.32	23.27	30.00	-6.73
Low_2	2417	23.35	22.86	26.12	30.00	-3.88
Middle_6	2437	23.19	23.01	26.11	30.00	-3.89
High_10	2457	23.22	22.94	26.09	30.00	-3.91
High_11	2462	19.85	19.89	22.88	30.00	-7.12
High_12	2467	17.62	17.60	20.62	30.00	-9.38
High_13	2472	7.84	7.77	10.82	30.00	-11.18

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8.5.5. POWER SPECTRAL DENSITY

LIMITS

FCC §15.247

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)	Antenna A Meas (dBm)	Antenna B Meas (dBm)	Total Corr'd PSD (dBm)	Limit (dBm)	Margin (dB)
Low_1	2412	-7.25	-8.28	-4.72	8.0	-12.7
Low_2	2417	-8.43	-10.29	-6.25	8.0	-14.3
Mid	2437	-9.62	-9.52	-6.56	8.0	-14.6
High_10	2457	-10.18	-10.23	-7.19	8.0	-15.2
High_11	2462	-9.17	-9.32	-6.23	8.0	-14.2
High_12	2467	-15.71	-14.92	-12.29	8.0	-20.3
High_13	2472	-26.31	-25.88	-23.08	8.0	-31.1

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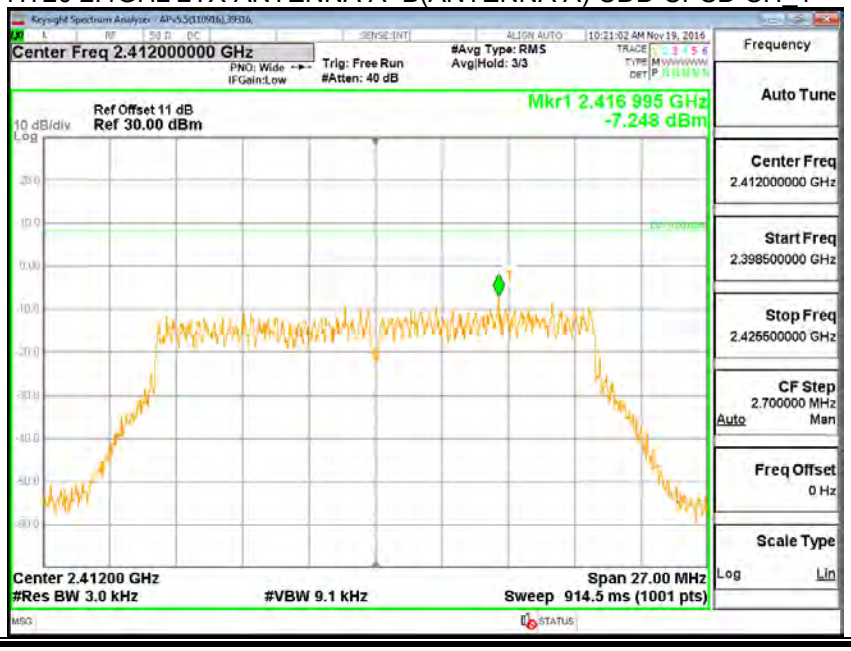
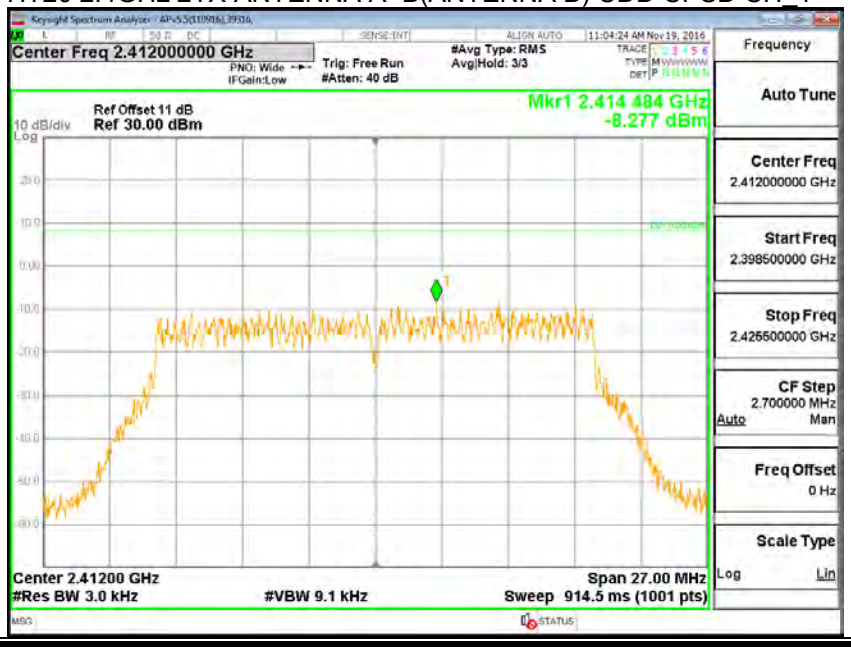
HT20 2.4GHz 2TX ANTENNA A+B(ANTENNA A) CDD CPSD CH_1



HT20 2.4GHz 2TX ANTENNA A+B(ANTENNA B) CDD CPSD CH_1



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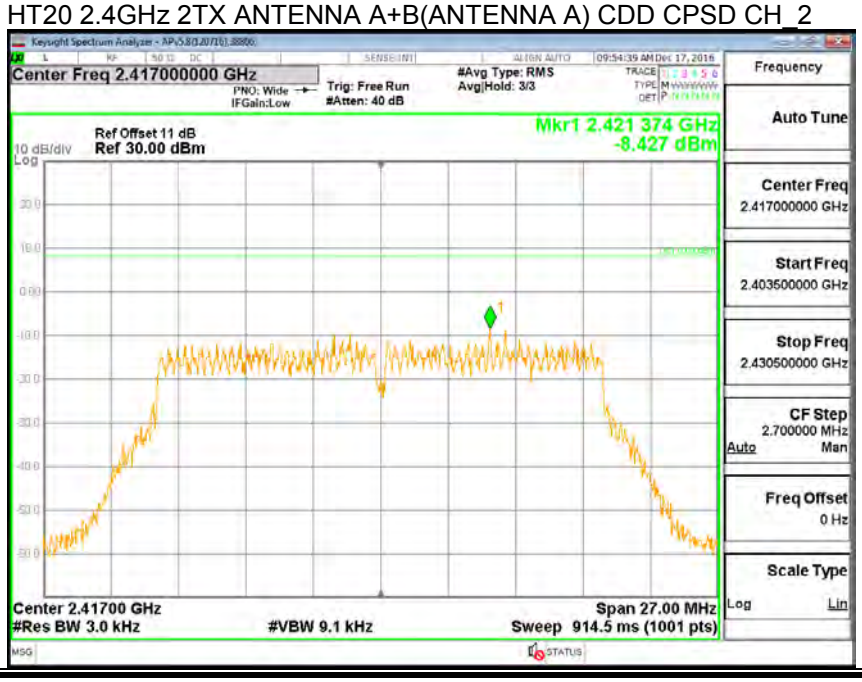
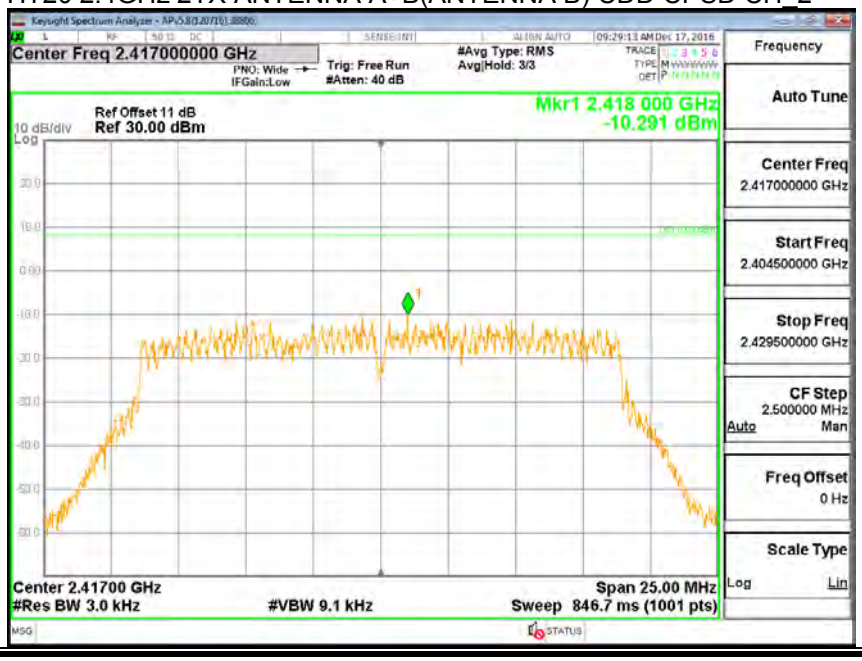
HT20 2.4GHz 2TX ANTENNA A+B(ANTENNA A) CDD CPSD CH_2



HT20 2.4GHz 2TX ANTENNA A+B(ANTENNA B) CDD CPSD CH_2



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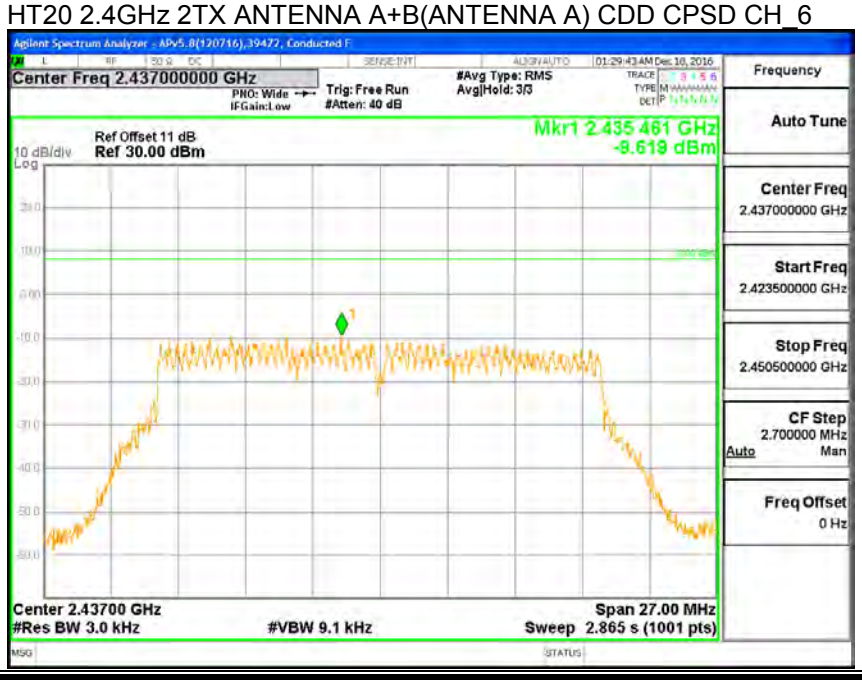
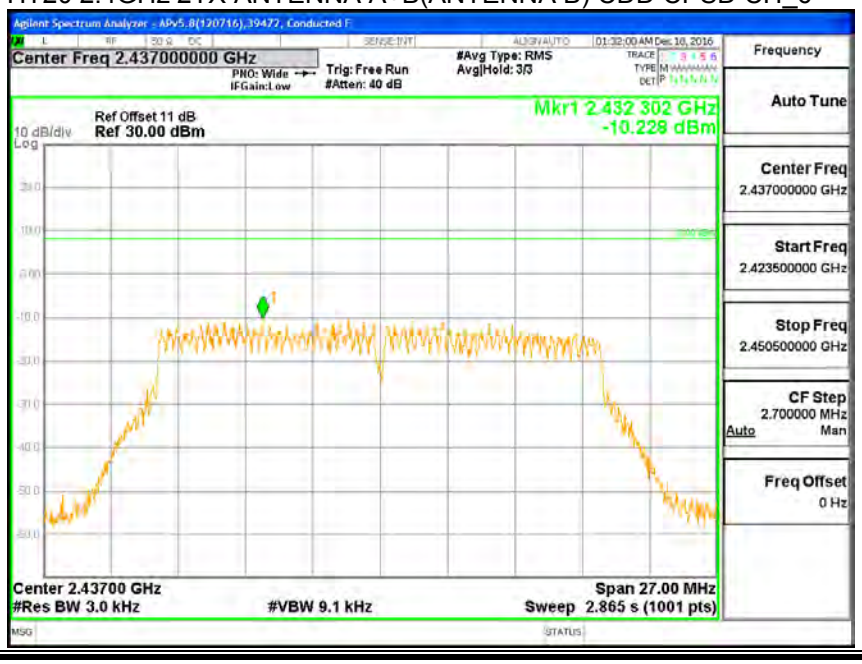
HT20 2.4GHz 2TX ANTENNA A+B(ANTENNA A) CDD CPSD CH_6



HT20 2.4GHz 2TX ANTENNA A+B(ANTENNA B) CDD CPSD CH_6



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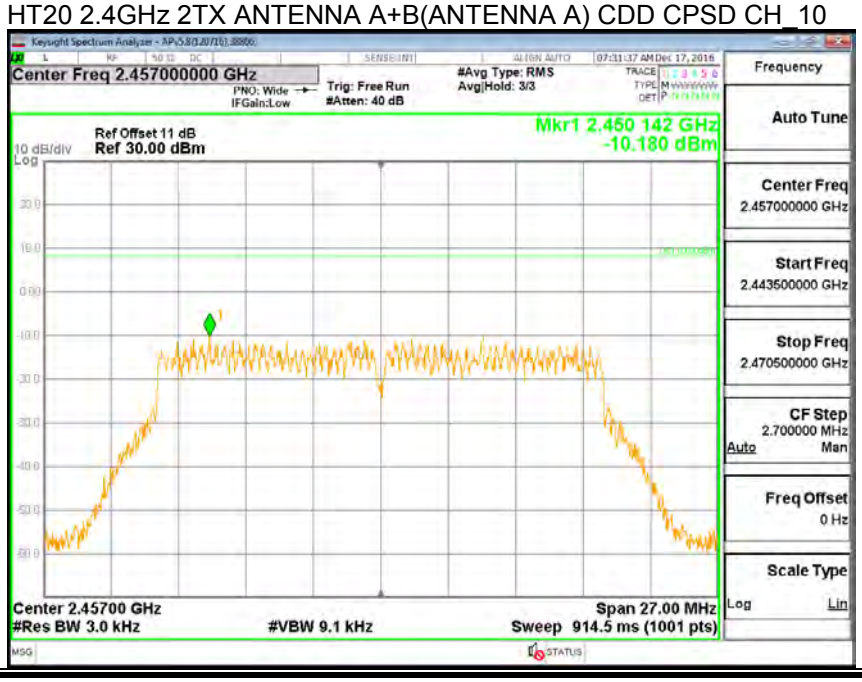
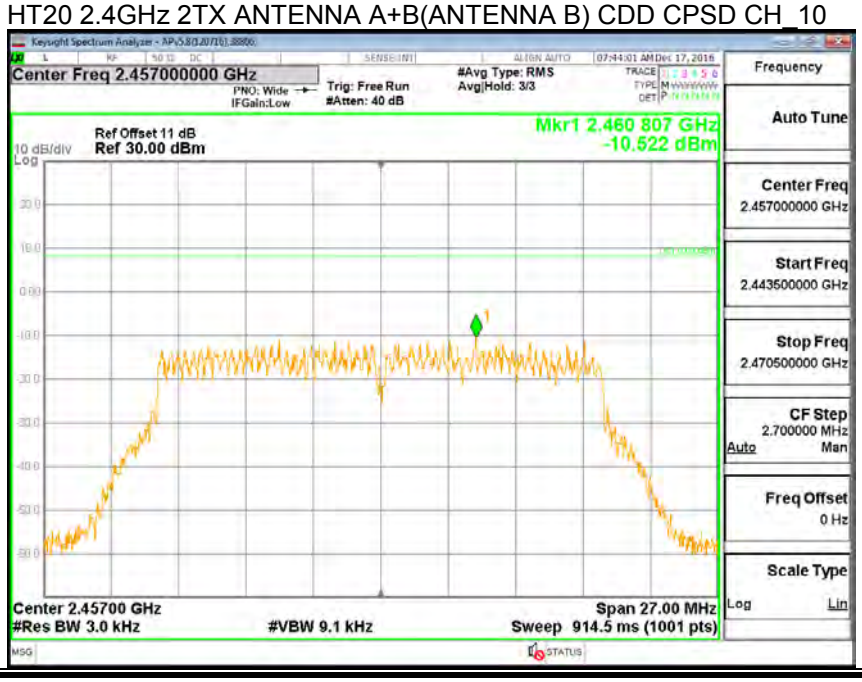
HT20 2.4GHz 2TX ANTENNA A+B(ANTENNA A) CDD CPSD CH_10



HT20 2.4GHz 2TX ANTENNA A+B(ANTENNA B) CDD CPSD CH_10



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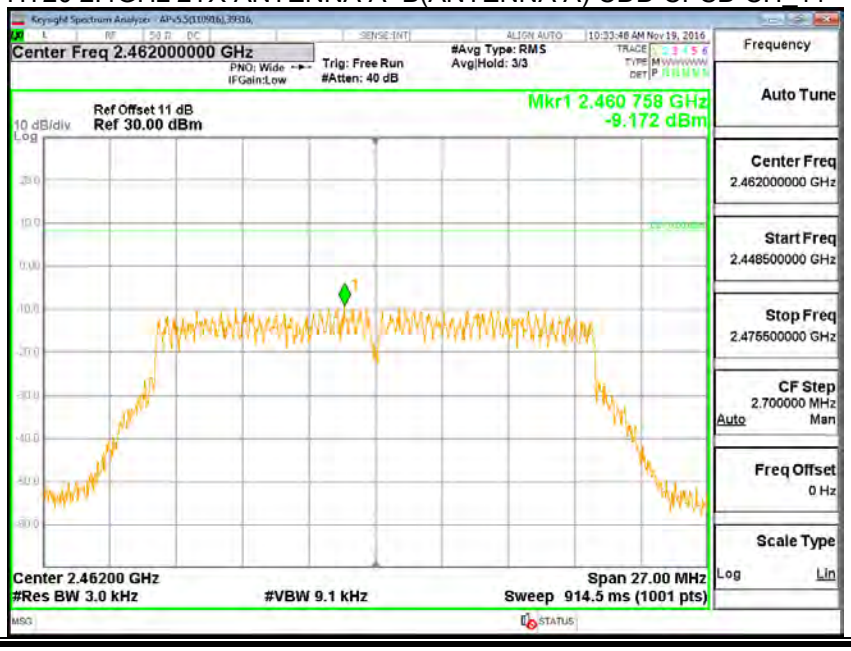
HT20 2.4GHz 2TX ANTENNA A+B(ANTENNA A) CDD CPSD CH_11



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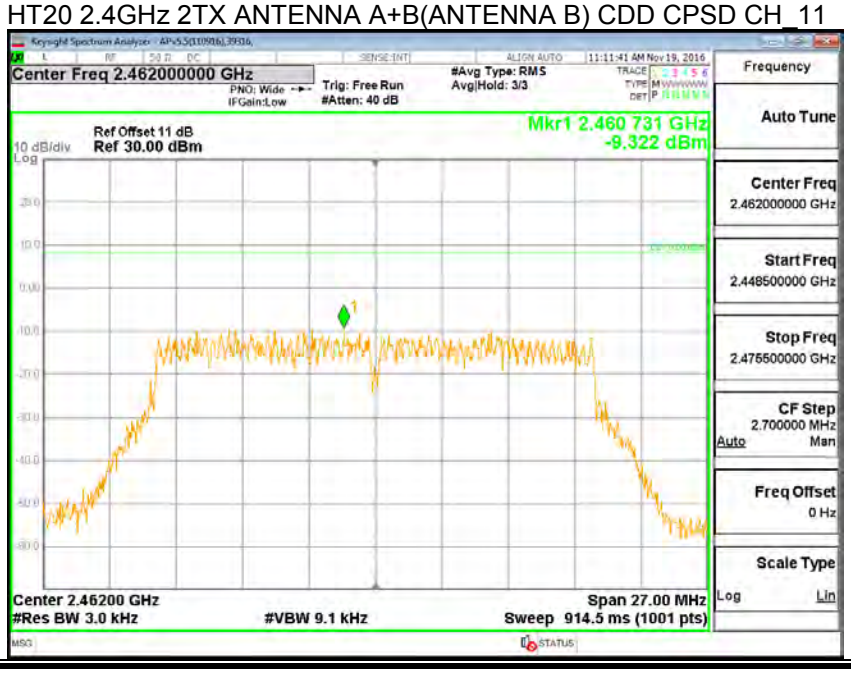

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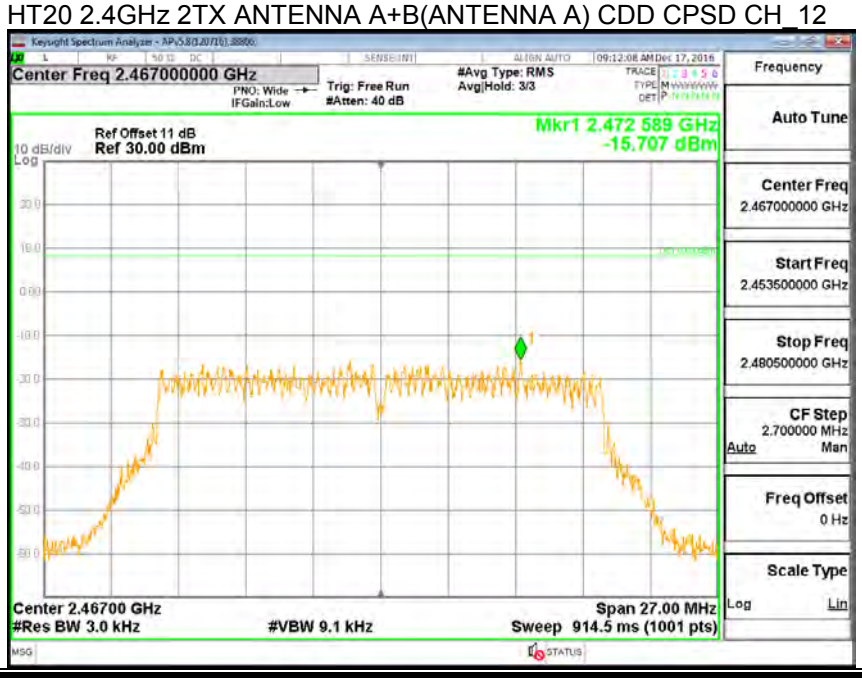
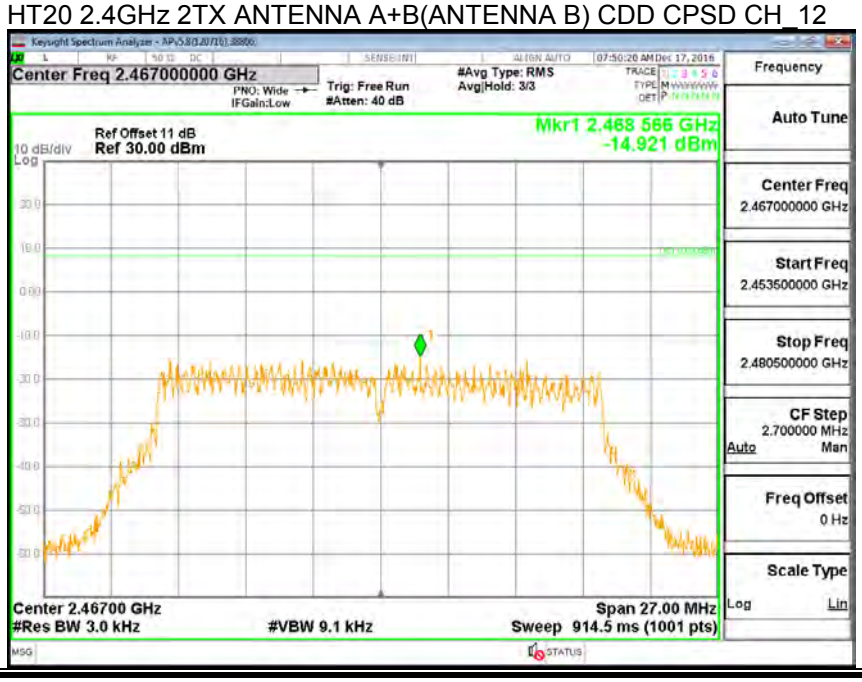
HT20 2.4GHz 2TX ANTENNA A+B(ANTENNA A) CDD CPSD CH_12



HT20 2.4GHz 2TX ANTENNA A+B(ANTENNA B) CDD CPSD CH_12



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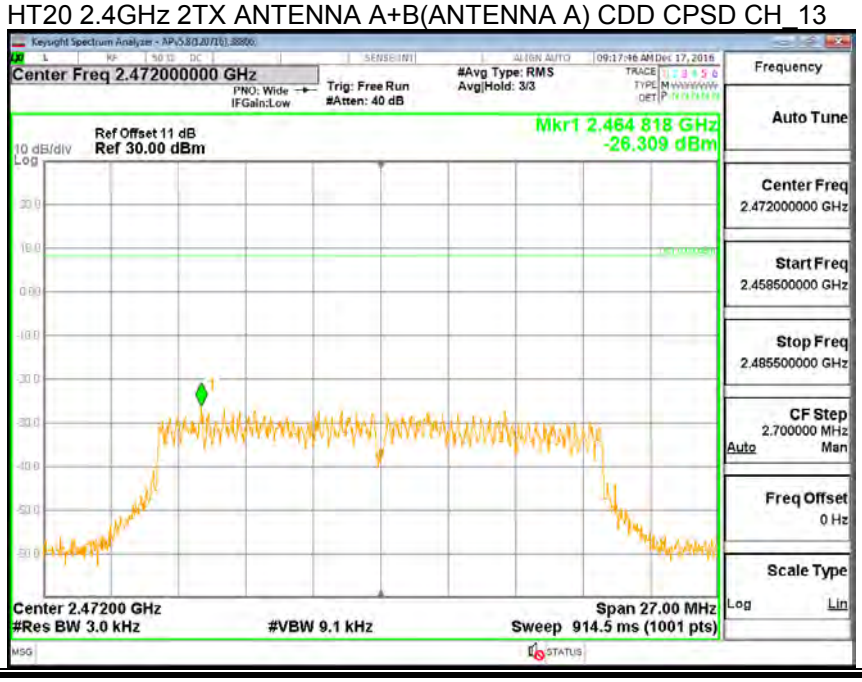
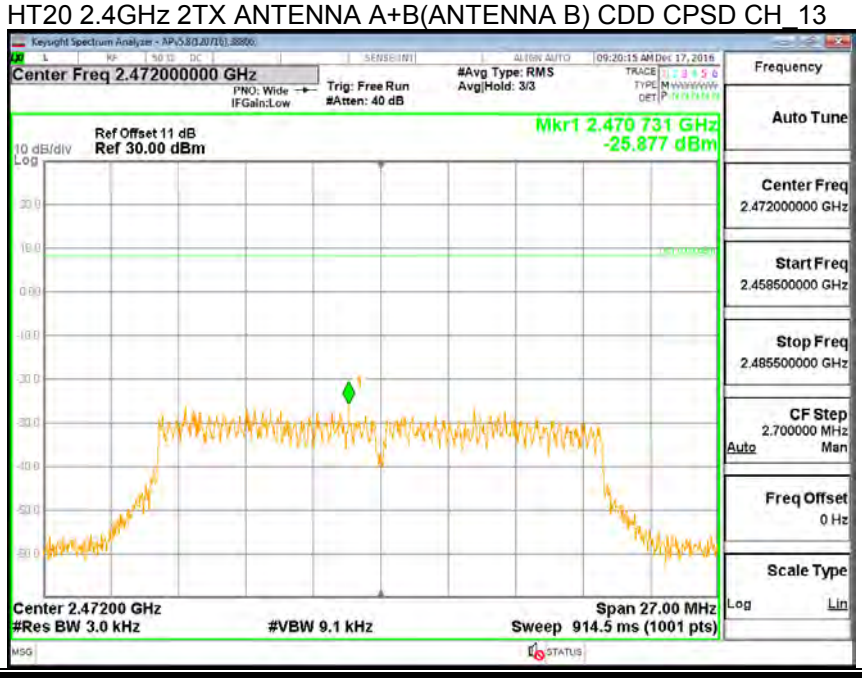
HT20 2.4GHz 2TX ANTENNA A+B(ANTENNA A) CDD CPSD CH_13



HT20 2.4GHz 2TX ANTENNA A+B(ANTENNA B) CDD CPSD CH_13



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8.5.6. CONDUCTED BANDEDGE AND SPURIOUS EMISSIONS

LIMITS

FCC §15.247 (d)

IC RSS-247 (5.5)

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

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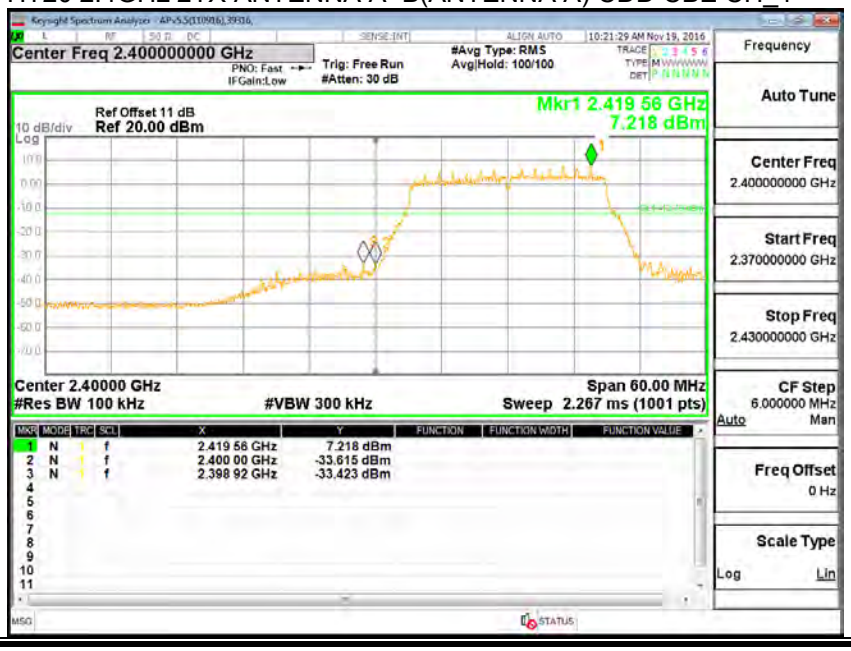
RESULTS

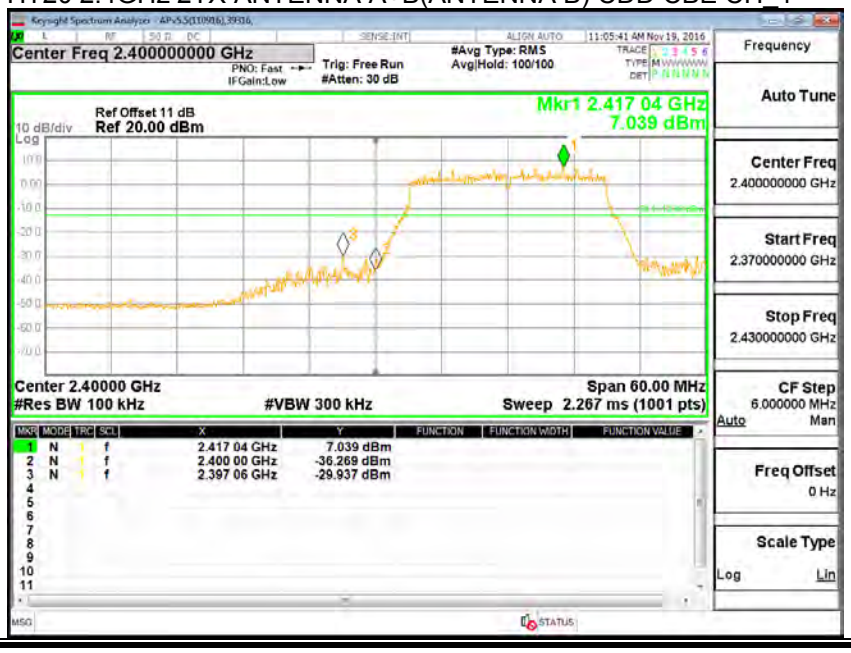
LOW CHANNEL BANDEDGE, ANTENNA A

HT20 2.4GHz 2TX ANTENNA A+B(ANTENNA A) CDD CBE CH_1



LOW CHANNEL BANDEDGE, ANTENNA B

HT20 2.4GHz 2TX ANTENNA A+B(ANTENNA B) CDD CBE CH_1



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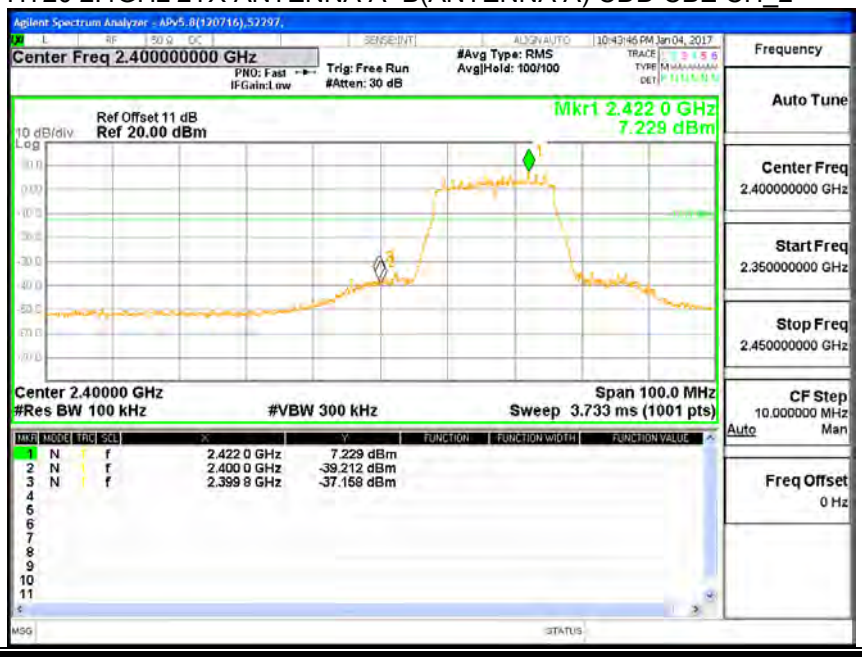
LOW CHANNEL BANDEDGE, ANTENNA A

HT20 2.4GHz 2TX ANTENNA A+B(ANTENNA A) CDD CBE CH_2



LOW CHANNEL BANDEDGE, ANTENNA B

HT20 2.4GHz 2TX ANTENNA A+B(ANTENNA B) CDD CBE CH_2

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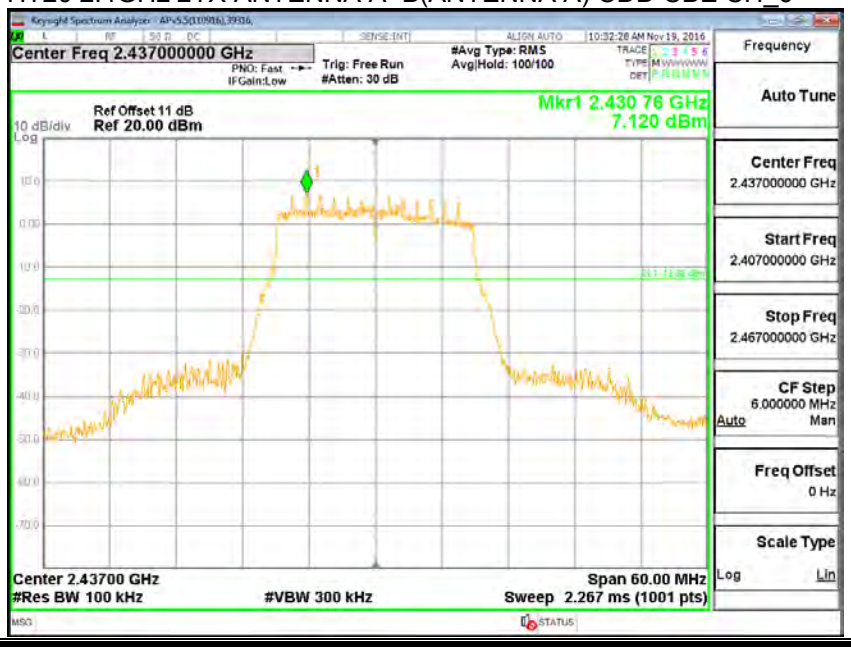
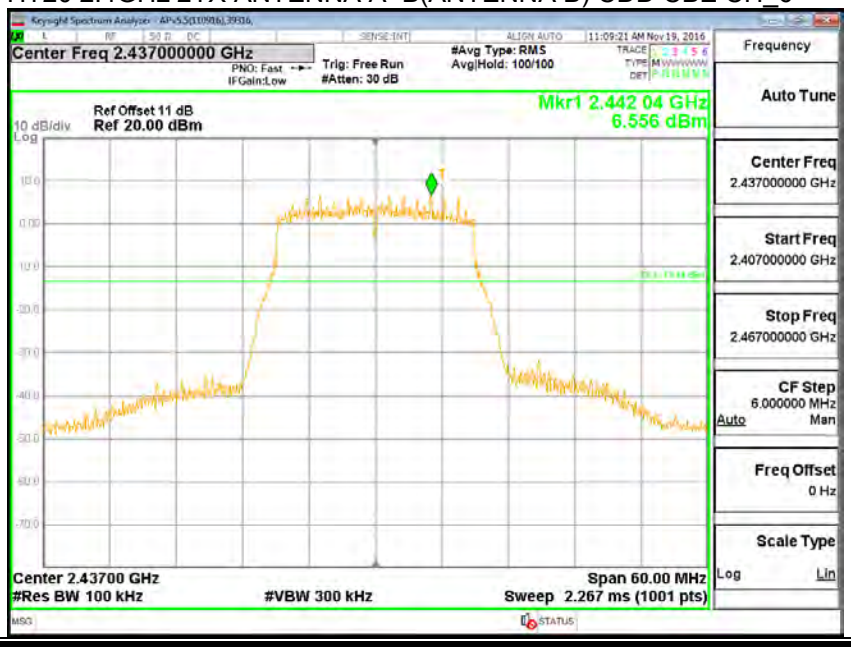
MID CHANNEL REFERENCE, ANTENNA A

HT20 2.4GHz 2TX ANTENNA A+B(ANTENNA A) CDD CBE CH_6



MID CHANNEL REFERENCE, ANTENNA B

HT20 2.4GHz 2TX ANTENNA A+B(ANTENNA B) CDD CBE CH_6



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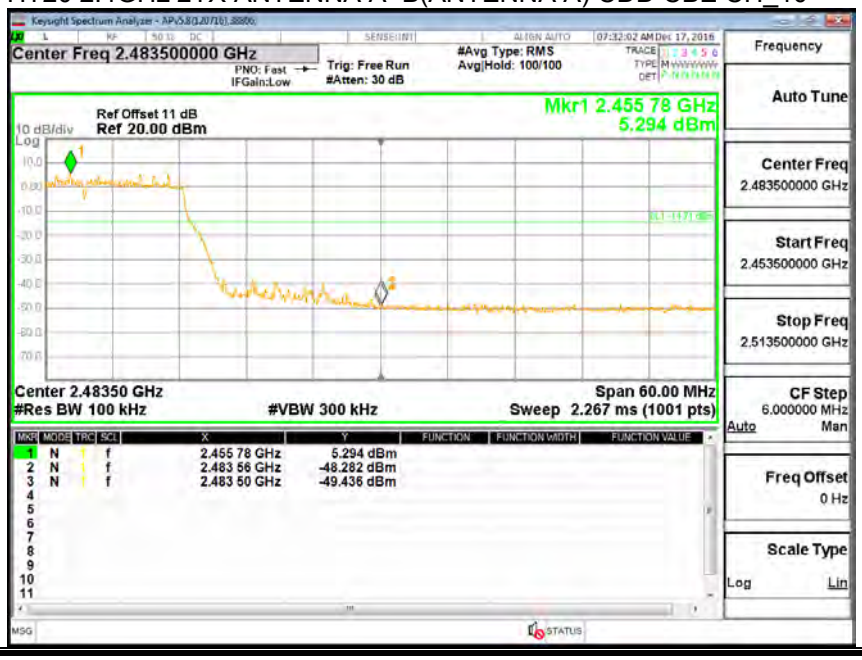
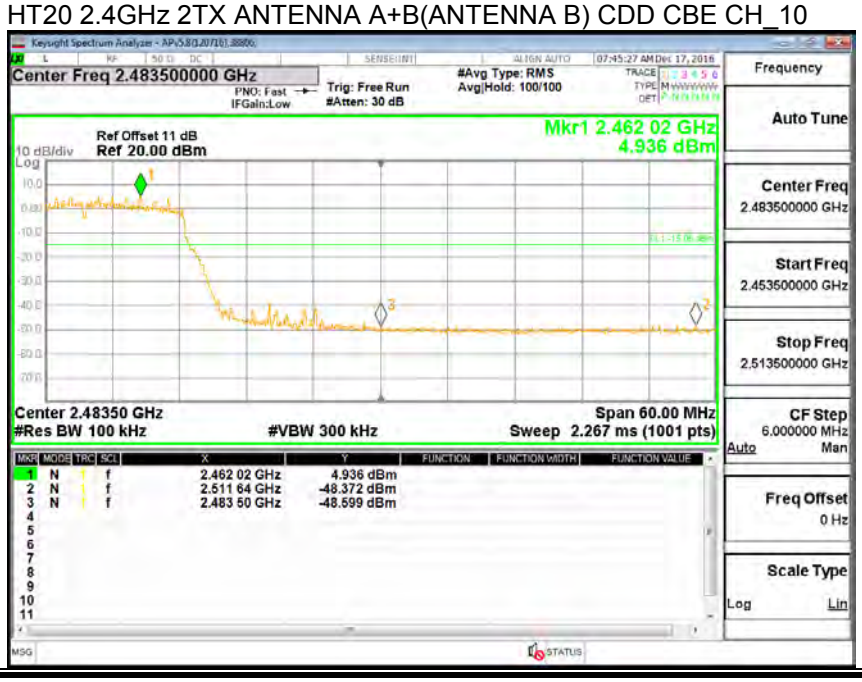
HIGH CHANNEL BANDEDGE, ANTENNA A

HT20 2.4GHz 2TX ANTENNA A+B(ANTENNA A) CDD CBE CH_10



HIGH CHANNEL BANDEDGE, ANTENNA B

HT20 2.4GHz 2TX ANTENNA A+B(ANTENNA B) CDD CBE CH_10



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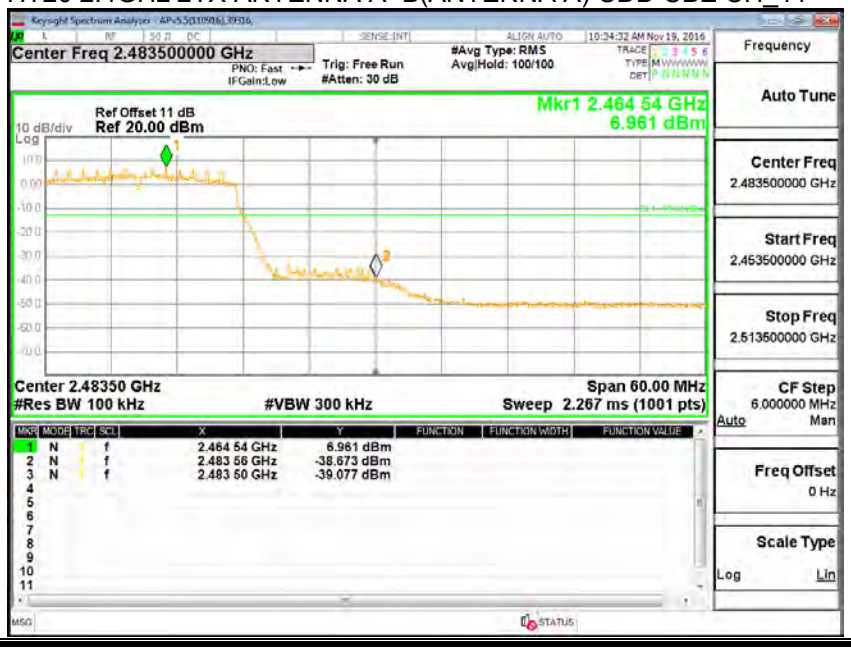
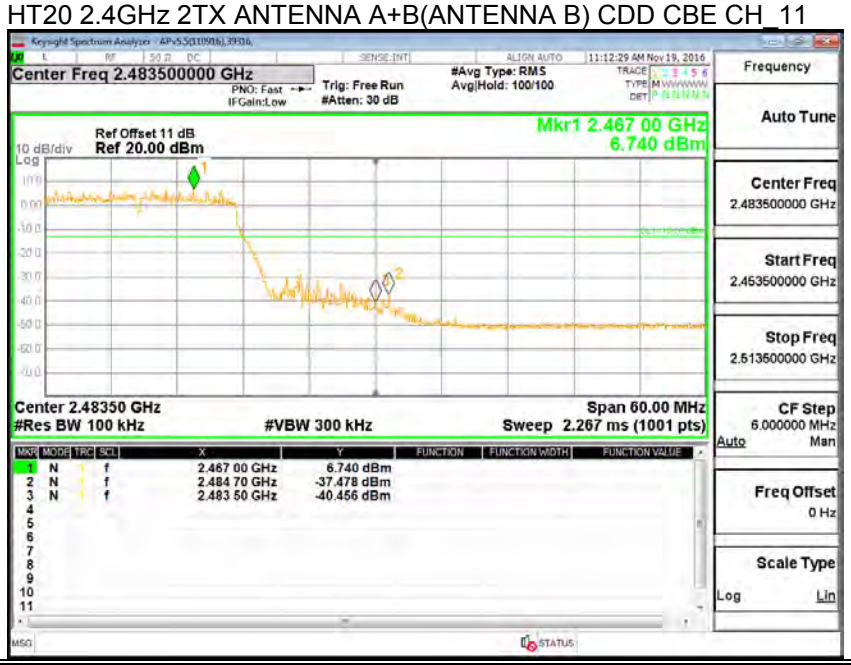
HIGH CHANNEL BANDEDGE, ANTENNA A

HT20 2.4GHz 2TX ANTENNA A+B(ANTENNA A) CDD CBE CH_11



HIGH CHANNEL BANDEDGE, ANTENNA B

HT20 2.4GHz 2TX ANTENNA A+B(ANTENNA B) CDD CBE CH_11



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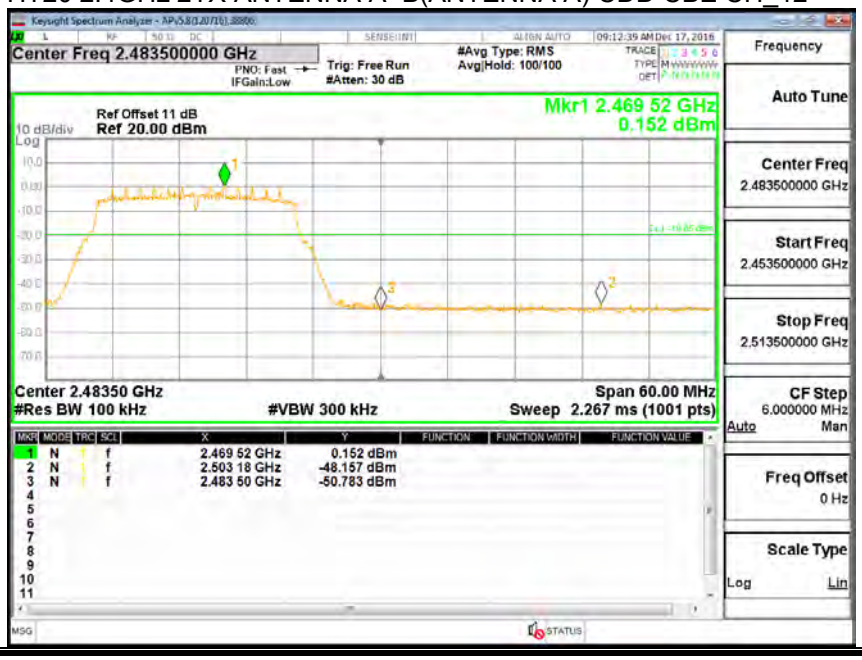
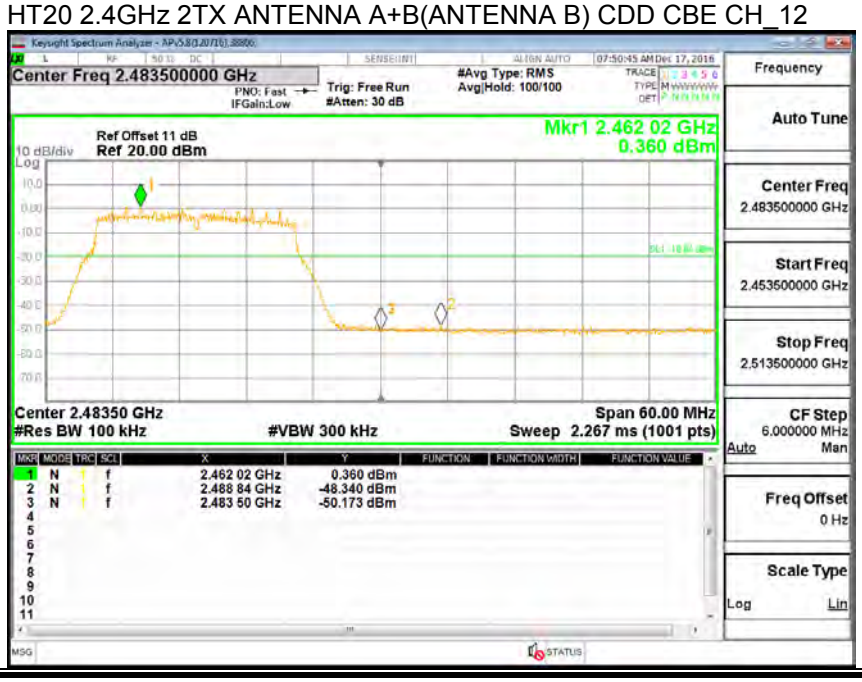
HIGH CHANNEL BANDEDGE, ANTENNA A

HT20 2.4GHz 2TX ANTENNA A+B(ANTENNA A) CDD CBE CH_12



HIGH CHANNEL BANDEDGE, ANTENNA B

HT20 2.4GHz 2TX ANTENNA A+B(ANTENNA B) CDD CBE CH_12



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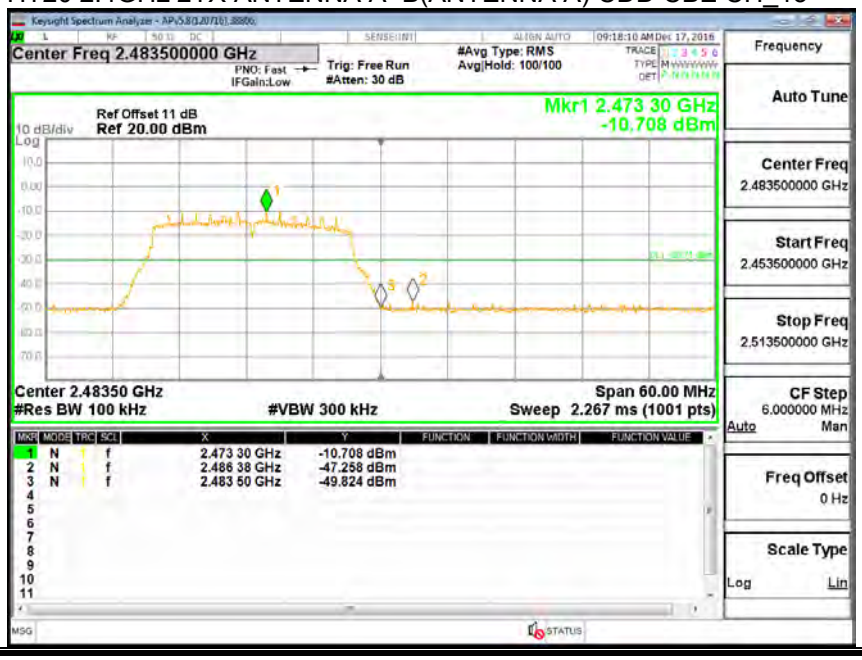
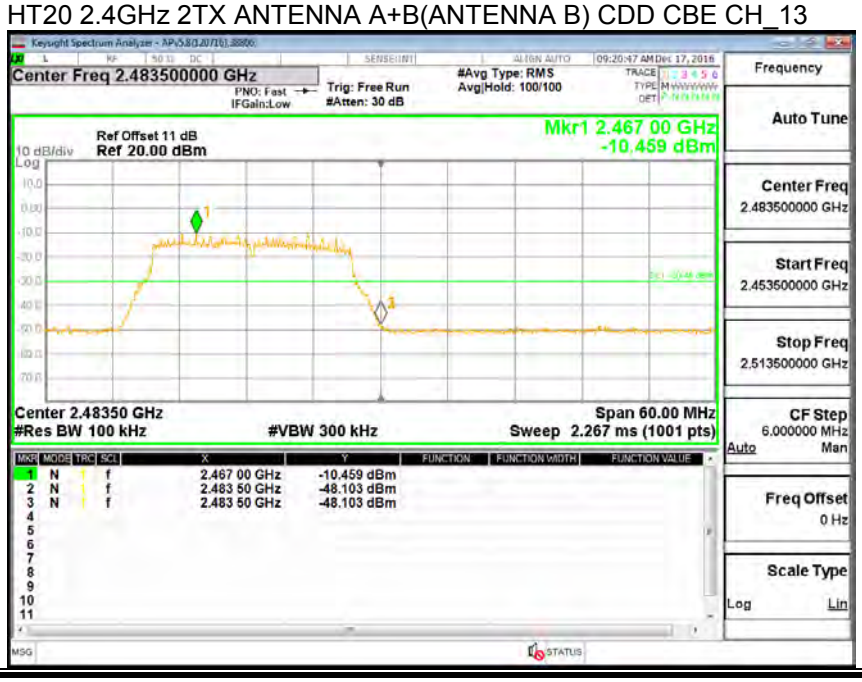
HIGH CHANNEL BANDEDGE, ANTENNA A

HT20 2.4GHz 2TX ANTENNA A+B(ANTENNA A) CDD CBE CH_13



HIGH CHANNEL BANDEDGE, ANTENNA B

HT20 2.4GHz 2TX ANTENNA A+B(ANTENNA B) CDD CBE CH_13



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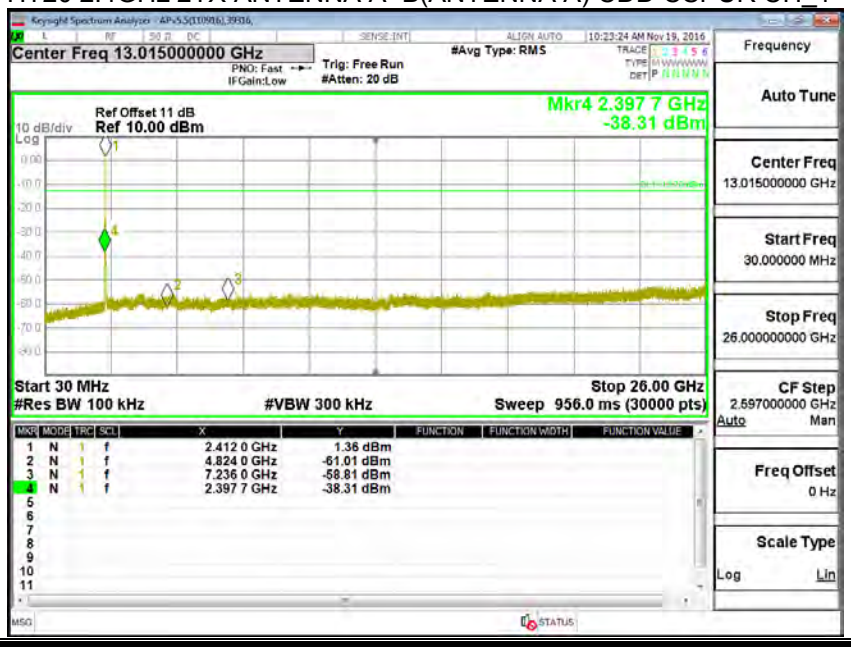
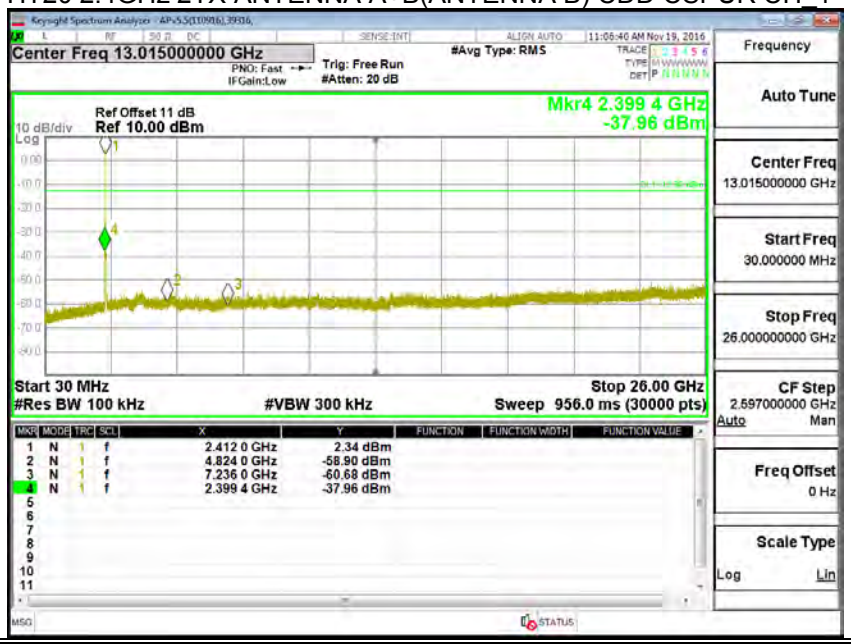
OUT-OF-BAND EMISSIONS, ANTENNA A

HT20 2.4GHz 2TX ANTENNA A+B(ANTENNA A) CDD CSPUR CH_1



OUT-OF-BAND EMISSIONS, ANTENNA B

HT20 2.4GHz 2TX ANTENNA A+B(ANTENNA B) CDD CSPUR CH_1



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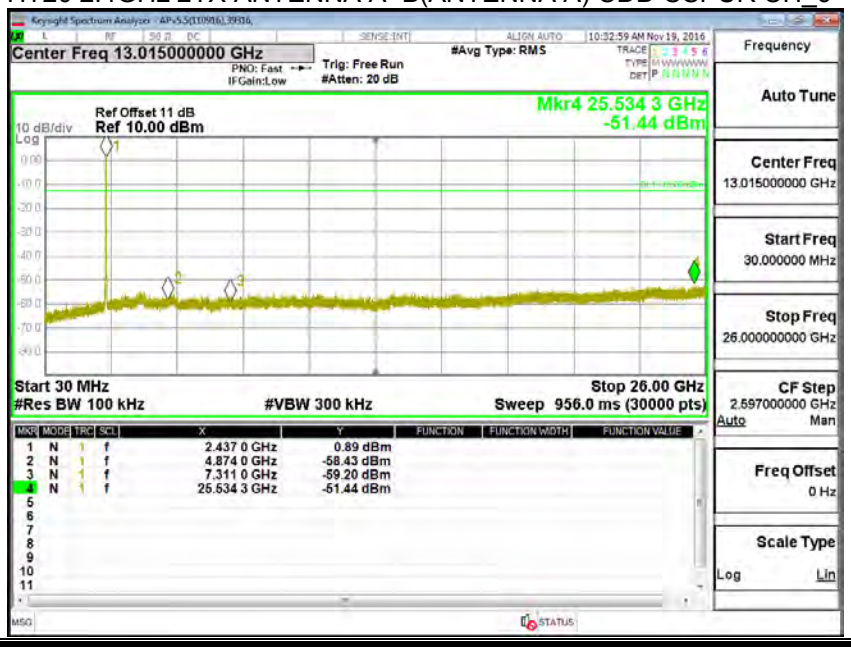
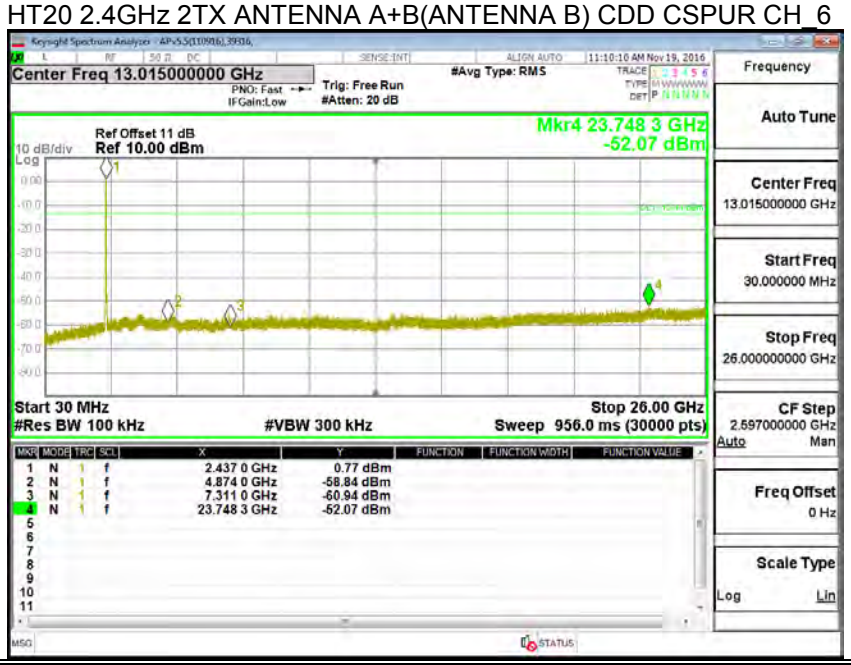
OUT-OF-BAND EMISSIONS, ANTENNA A

HT20 2.4GHz 2TX ANTENNA A+B(ANTENNA A) CDD CSPUR CH_6



OUT-OF-BAND EMISSIONS, ANTENNA B

HT20 2.4GHz 2TX ANTENNA A+B(ANTENNA B) CDD CSPUR CH_6



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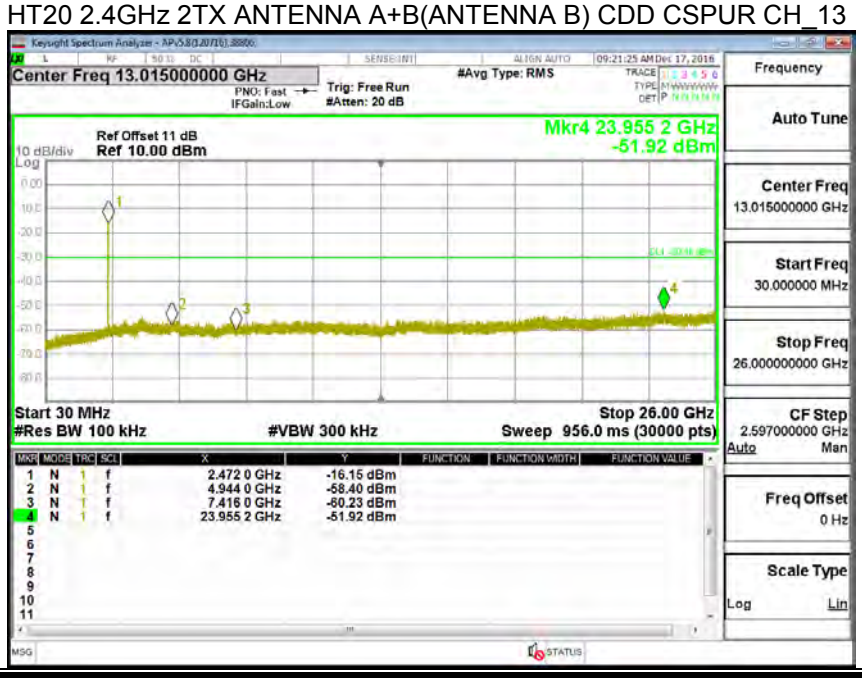
OUT-OF-BAND EMISSIONS, ANTENNA A

HT20 2.4GHz 2TX ANTENNA A+B(ANTENNA A) CDD CSPUR CH_13

OUT-OF-BAND EMISSIONS, ANTENNA B

HT20 2.4GHz 2TX ANTENNA A+B(ANTENNA B) CDD CSPUR CH_13



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9. RADIATED TEST RESULTS

9.1. 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
30 - 88	100	40
88 - 216	150	43.5
216 - 960	200	46
Above 960	500	54

TEST PROCEDURE

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

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

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

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

For 2.4 GHz band, the spectrum from 30 MHz to 1 GHz and from 18 GHz to 26 GHz is investigated with the transmitter set to the channel with the highest output power as worst case in each applicable band. The spectrum from 1 GHz to 18GHz is investigated with the transmitter set to the lowest, middle, and highest channels in each applicable band.

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

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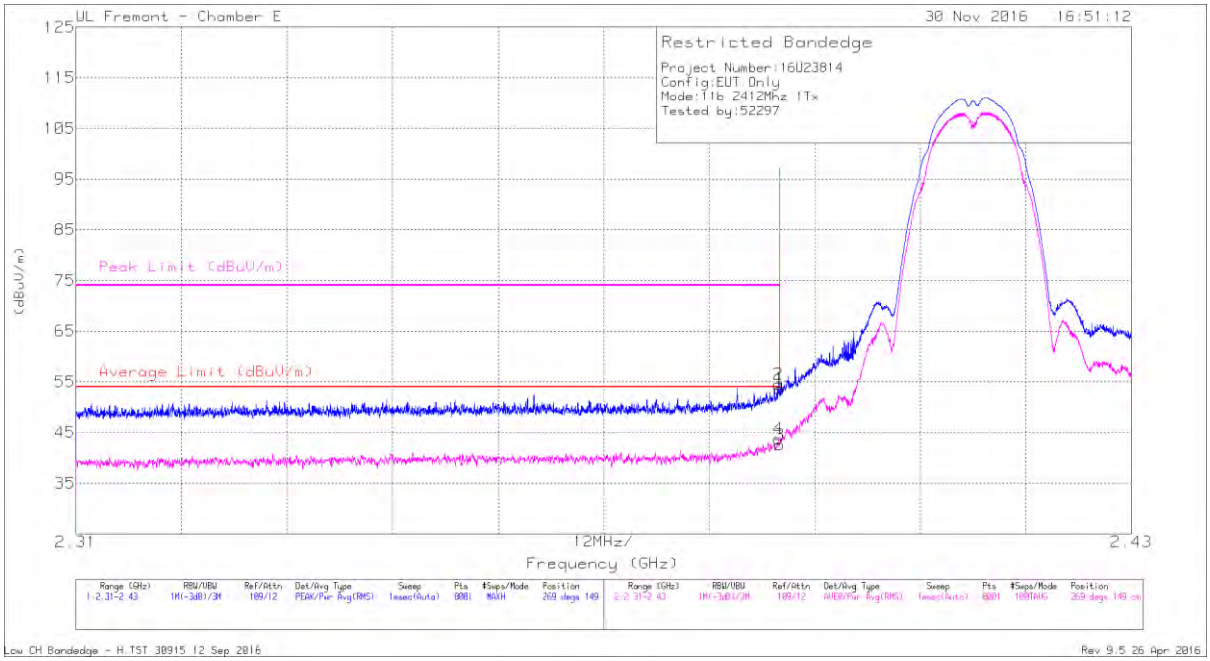
9.2. TRANSMITTER ABOVE 1 GHz

9.2.1. 11b ANTENNA A SISO MODE IN THE 2.4GHz BAND

AUTHORIZED BANDEDGE (LOW CHANNEL, CH 1)

LOW CHANNEL HORIZONTAL



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	41.29	Pk	32.1	-19.7	53.69	-	-	74	-20.31	269	149	H
2	* 2.39	42.14	Pk	32.1	-19.7	54.54	-	-	74	-19.46	269	149	H
3	* 2.39	30.19	RMS	32.1	-19.7	42.59	54	-11.41	-	-	269	149	H
4	* 2.39	31.33	RMS	32.1	-19.7	43.73	54	-10.27	-	-	269	149	H

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

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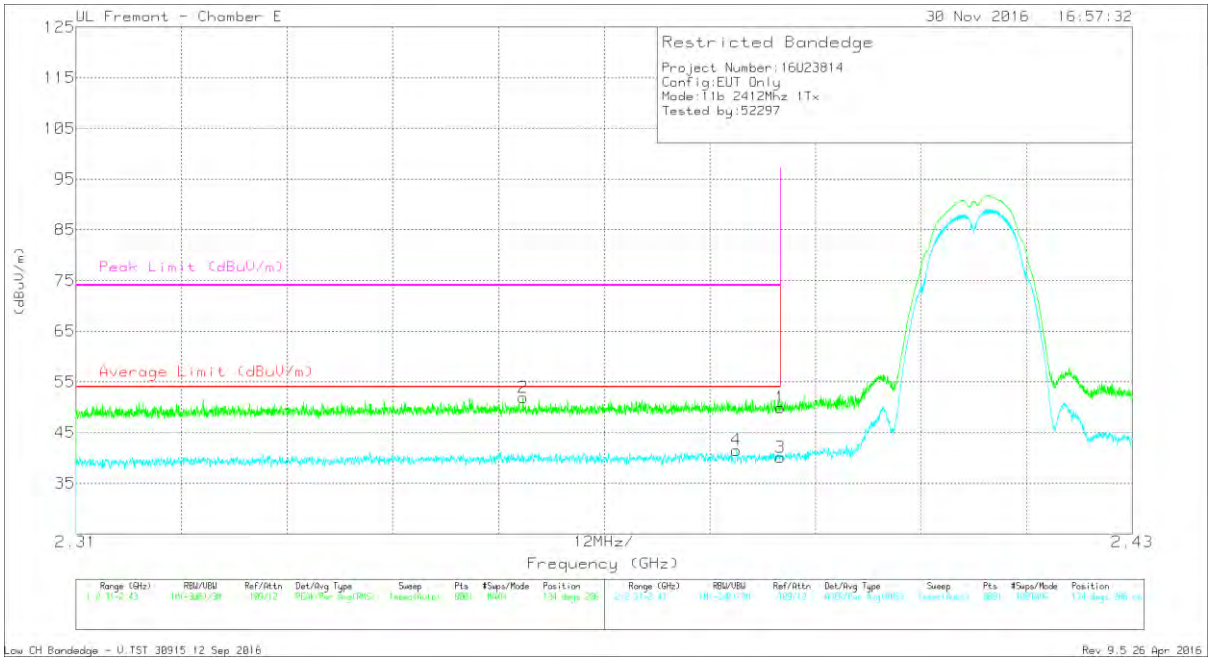
LOW CHANNEL VERTICAL



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/Pad (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	37.56	Pk	32.1	-19.7	49.96	-	-	74	-24.04	134	286	V
2	* 2.361	39.8	Pk	31.9	-19.8	51.9	-	-	74	-22.1	134	286	V
3	* 2.39	27.74	RMS	32.1	-19.7	40.14	54	-13.86	-	-	134	286	V
4	* 2.385	29.04	RMS	32.1	-19.6	41.54	54	-12.46	-	-	134	286	V

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

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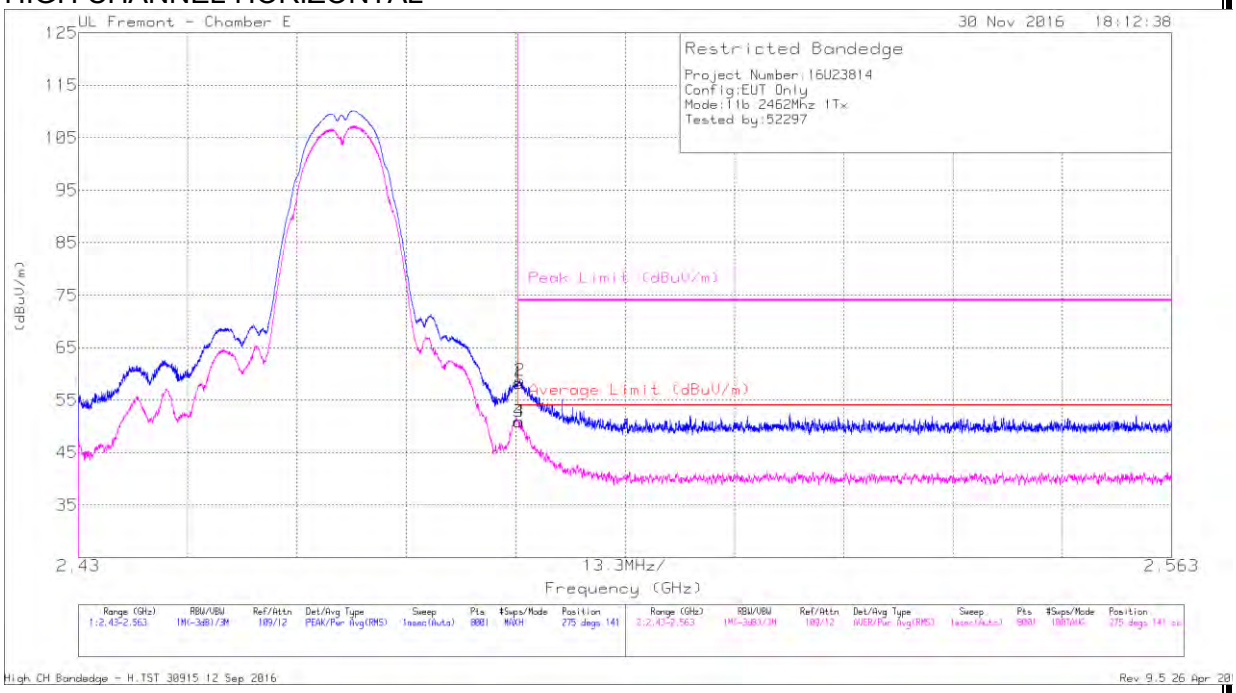
AUTHORIZED BANDEDGE (HIGH CHANNEL, CH 11)

HIGH CHANNEL HORIZONTAL



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	45.69	Pk	32.3	-19.7	58.29	-	-	74	-15.71	275	141	H
2	* 2.484	46.17	Pk	32.3	-19.7	58.77	-	-	74	-15.23	275	141	H
3	* 2.484	38.34	RMS	32.3	-19.7	50.94	54	-3.06	-	-	275	141	H
4	* 2.484	38.31	RMS	32.3	-19.7	50.91	54	-3.09	-	-	275	141	H

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

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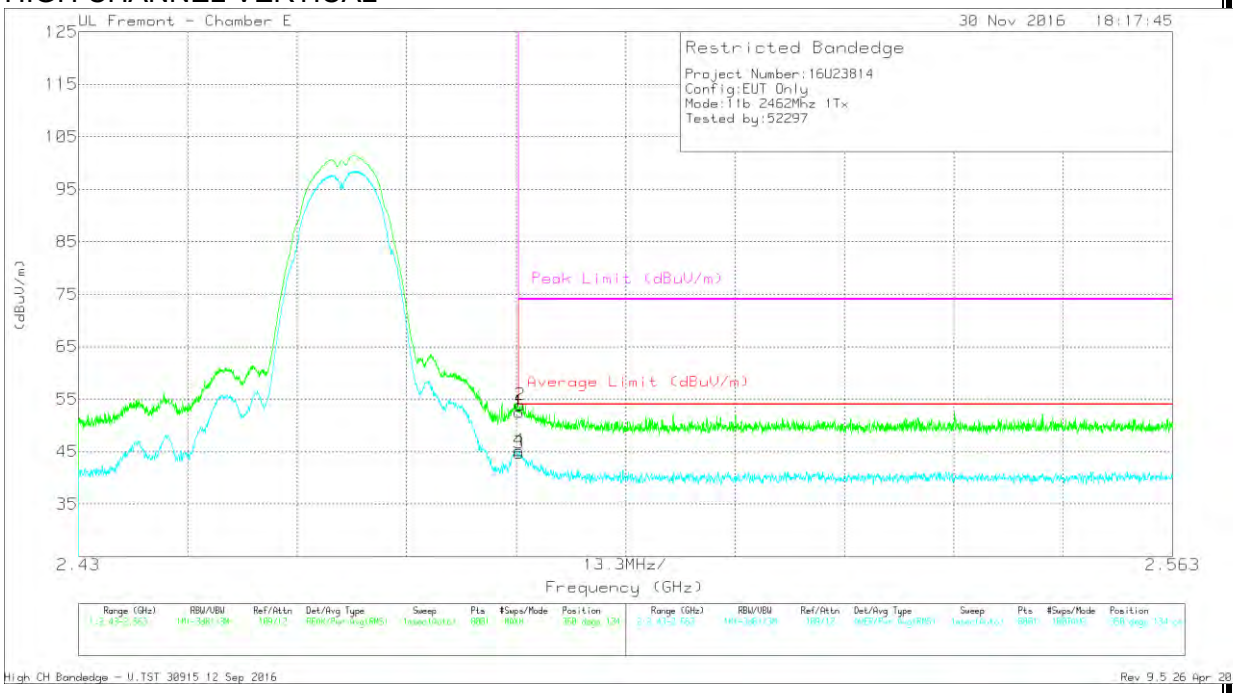
HIGH CHANNEL VERTICAL



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/Pad (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	39.93	Pk	32.3	-19.7	52.53	-	-	74	-21.47	350	134	V
2	* 2.484	41.24	Pk	32.3	-19.7	53.84	-	-	74	-20.16	350	134	V
3	* 2.484	32.16	RMS	32.3	-19.7	44.76	54	-9.24	-	-	350	134	V
4	* 2.484	32.65	RMS	32.3	-19.7	45.25	54	-8.75	-	-	350	134	V

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

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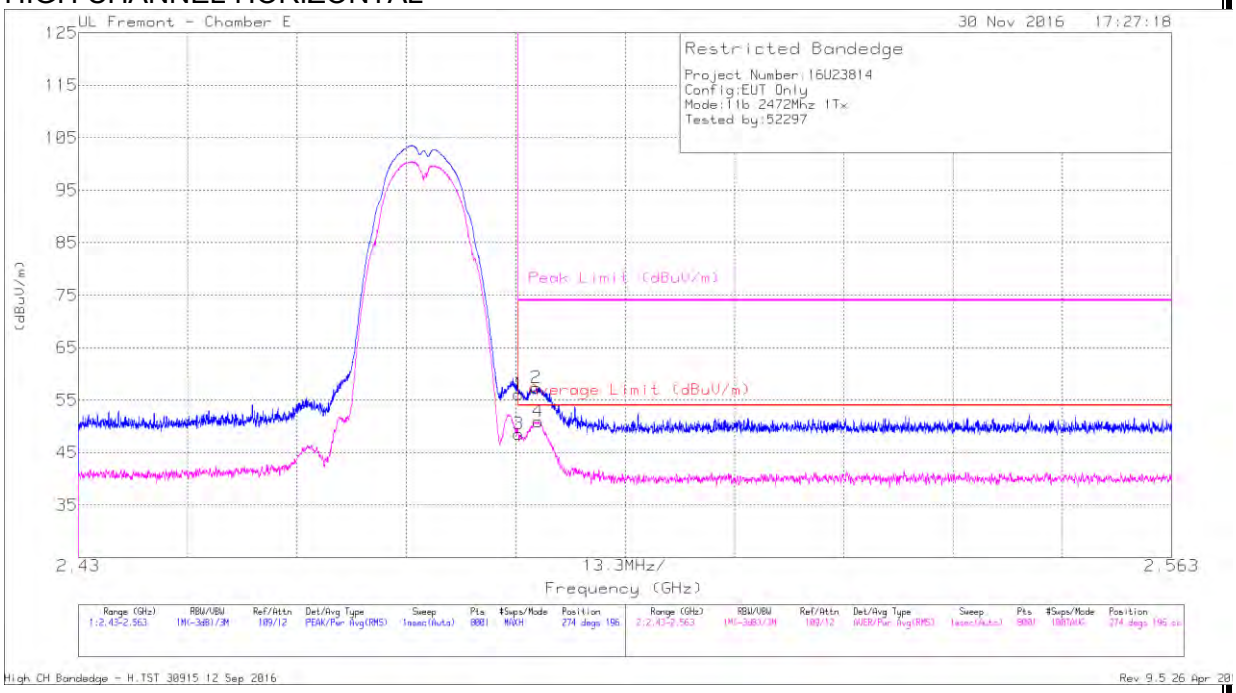
AUTHORIZED BANDEDGE (HIGH CHANNEL, CH 13)

HIGH CHANNEL HORIZONTAL



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	43.55	Pk	32.3	-19.7	56.15	-	-	74	-17.85	274	196	H
3	* 2.484	35.91	RMS	32.3	-19.7	48.51	54	-5.49	-	-	274	196	H
2	* 2.486	44.92	Pk	32.3	-19.8	57.42	-	-	74	-16.58	274	196	H
4	* 2.486	38.39	RMS	32.3	-19.8	50.89	54	-3.11	-	-	274	196	H

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

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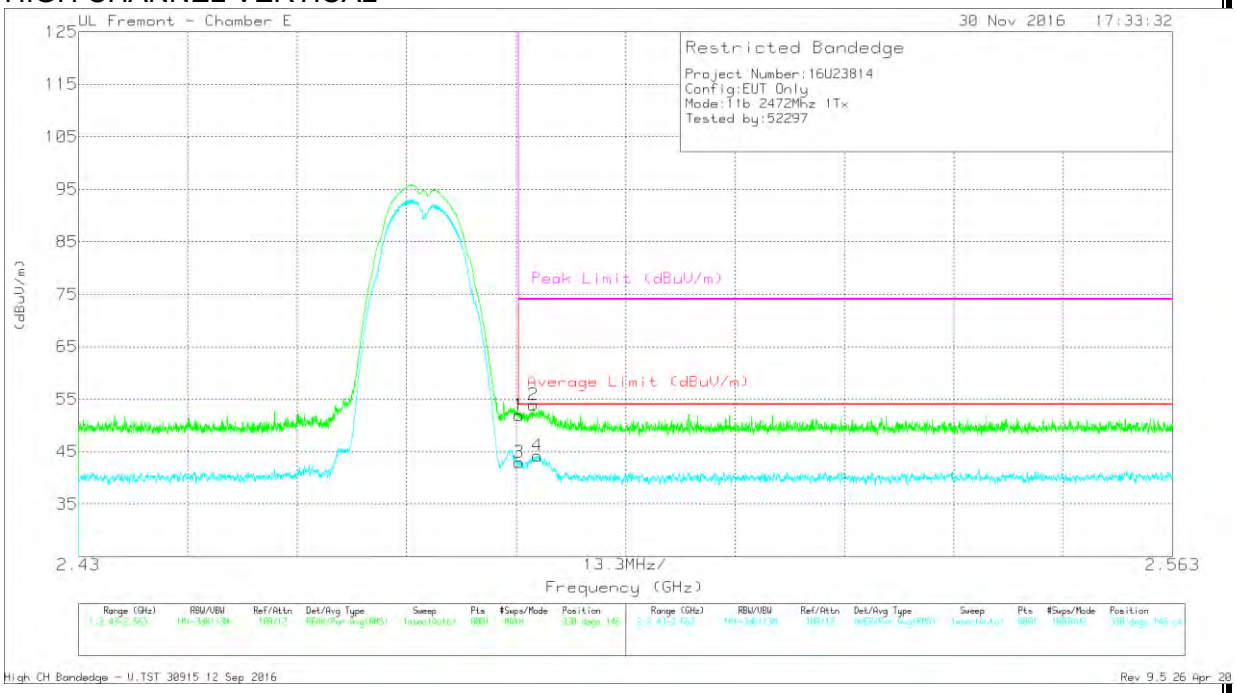
HIGH CHANNEL VERTICAL



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/Pad (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	39.33	Pk	32.3	-19.7	51.93	-	-	74	-22.07	330	146	V
3	* 2.484	30.38	RMS	32.3	-19.7	42.98	54	-11.02	-	-	330	146	V
2	* 2.485	41.3	Pk	32.3	-19.7	53.9	-	-	74	-20.1	330	146	V
4	* 2.486	31.7	RMS	32.3	-19.8	44.2	54	-9.8	-	-	330	146	V

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

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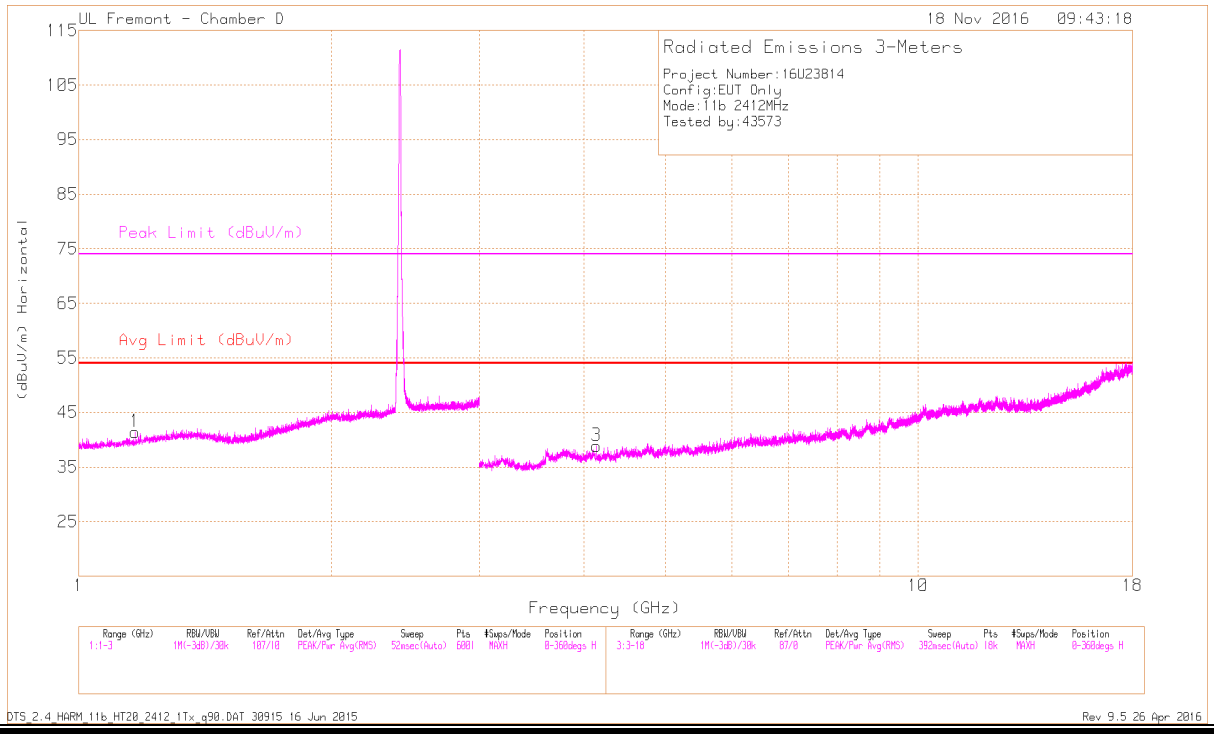
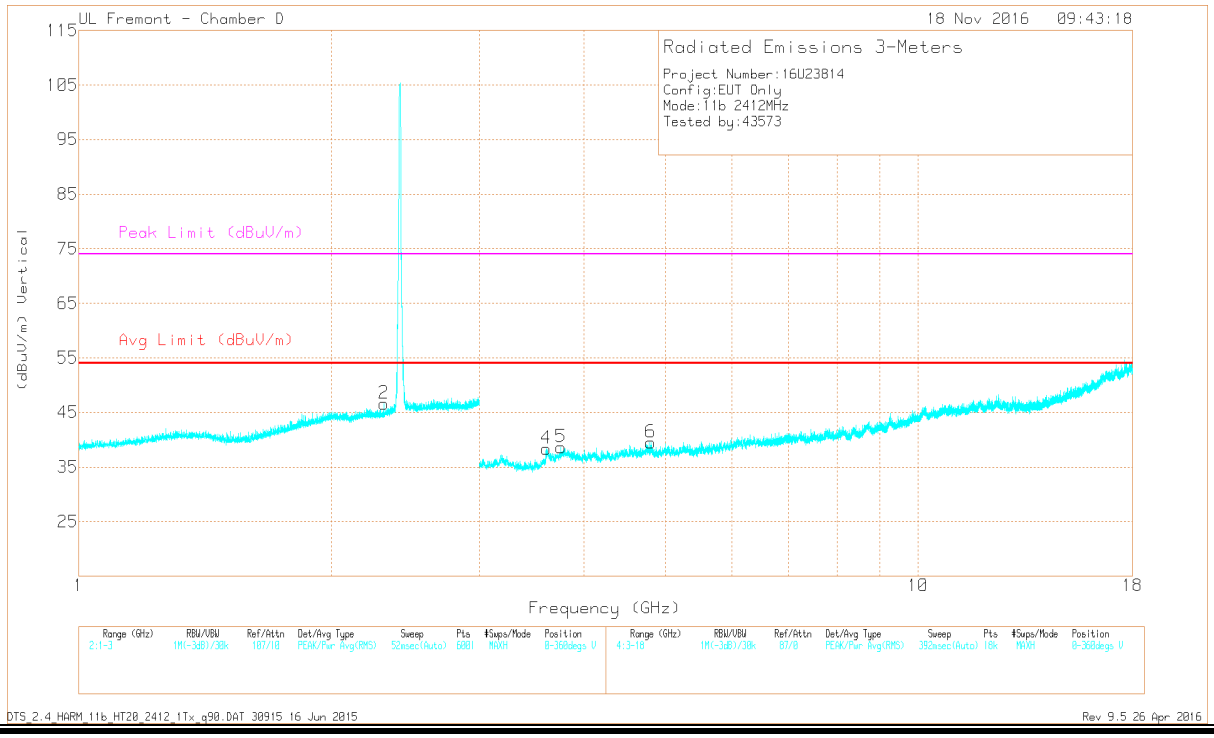
HARMONICS AND SPURIOUS EMISSIONS LOW CHANNEL, CH 1)

LOW CHANNEL HORIZONTAL



LOW CHANNEL VERTICAL



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Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/ Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.169	41.33	PK2	28	-22.3	47.03	-	-	74	-26.97	58	101	H
	* 1.167	30.9	MAv1	28	-22.3	36.6	54	-17.4	-	-	58	101	H
3	* 4.135	38.49	PK2	33.5	-27.9	44.09	-	-	74	-29.91	253	143	H
	* 4.137	28.81	MAv1	33.5	-27.9	34.41	54	-19.59	-	-	256	143	H
4	* 3.605	39.42	PK2	33.3	-28.1	44.62	-	-	74	-29.38	105	205	V
	* 3.606	29.19	MAv1	33.3	-28.1	34.39	54	-19.61	-	-	105	205	V
5	* 3.753	38.96	PK2	33.5	-28.2	44.26	-	-	74	-29.74	324	136	V
	* 3.754	29.02	MAv1	33.5	-28.2	34.32	54	-19.68	-	-	324	136	V
6	* 4.799	38.58	PK2	34.1	-26.7	45.98	-	-	74	-28.02	104	254	V
	* 4.801	28.24	MAv1	34.1	-26.7	35.64	54	-18.36	-	-	104	254	V
2	2.309	41.29	PK2	31.5	-20.8	51.99	-	-	-	-	36	158	V
	2.309	30.98	MAv1	31.5	-20.8	41.68	-	-	-	-	36	158	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK2 - KDB558074 Method: Maximum Peak
MAv1 - KDB558074 Option 1 Maximum RMS Average
DTS_2.4_HARM_11b_HT20_2412_1Tx_q90.DAT 30915 16 Jun 2015
Rev 9.5 26 Apr 2016

UL VERIFICATION SERVICES INC. FORM NO: CCSUP4701J
47173 BENICIA STREET, FREMONT, CA 94538, USA TEL: (510) 771-1000 FAX: (510) 661-0888
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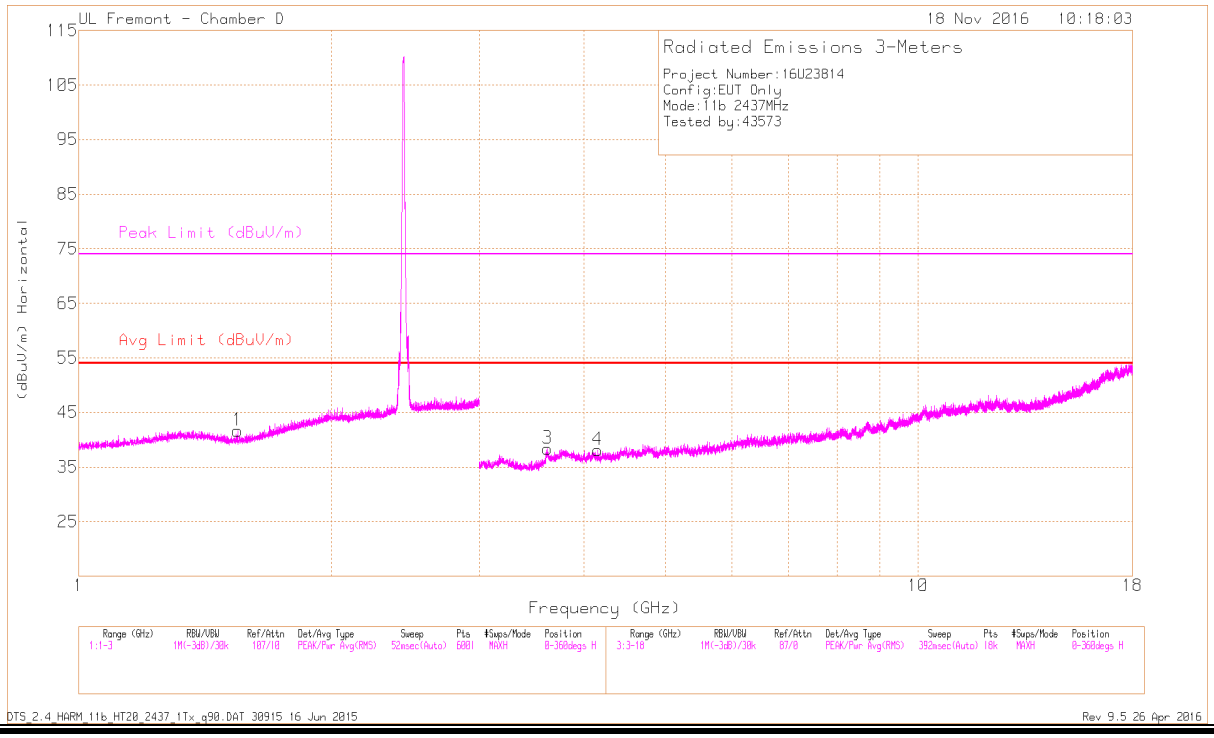
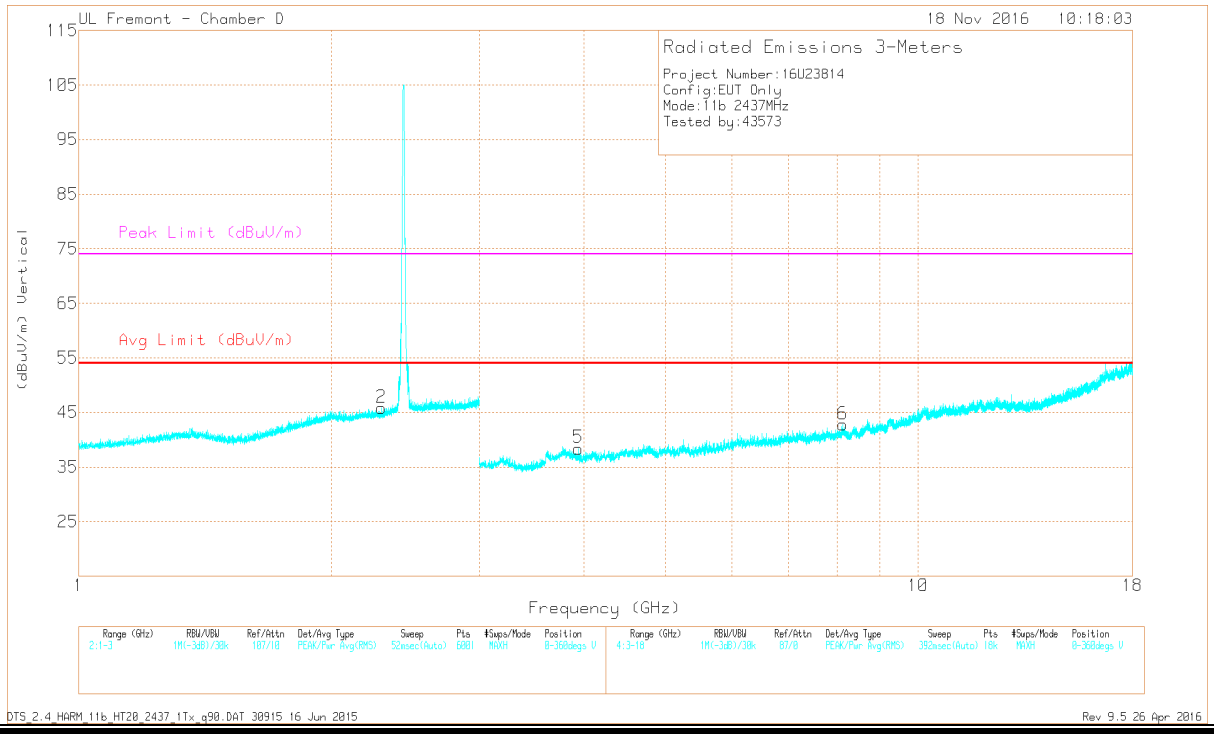
HARMONICS AND SPURIOUS EMISSIONS MID CHANNEL, CH 6)

MID CHANNEL HORIZONTAL



MID CHANNEL VERTICAL



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Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/ Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.546	41.45	PK2	27.9	-21.7	47.65	-	-	74	-26.35	303	247	H
	* 1.545	30.8	MAv1	27.9	-21.7	37	54	-17	-	-	303	247	H
2	* 2.296	40.94	PK2	31.4	-20.8	51.54	-	-	74	-22.46	254	143	V
	* 2.294	31.17	MAv1	31.4	-20.8	41.77	54	-12.23	-	-	254	143	V
3	* 3.619	39.29	PK2	33.3	-28.3	44.29	-	-	74	-29.71	84	206	H
	* 3.619	29.51	MAv1	33.3	-28.3	34.51	54	-19.49	-	-	84	206	H
4	* 4.152	38.74	PK2	33.5	-27.8	44.44	-	-	74	-29.56	250	109	H
	* 4.152	28.47	MAv1	33.5	-27.8	34.17	54	-19.83	-	-	250	109	H
5	* 3.934	39.07	PK2	33.5	-27.9	44.67	-	-	74	-29.33	147	258	V
	* 3.935	28.74	MAv1	33.4	-27.9	34.24	54	-19.76	-	-	147	258	V
6	* 8.126	36.1	PK2	35.8	-22.7	49.2	-	-	74	-24.8	173	259	V
	* 8.127	24.97	MAv1	35.8	-22.7	38.07	54	-15.93	-	-	173	259	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK2 - KDB558074 Method: Maximum Peak
MAv1 - KDB558074 Option 1 Maximum RMS Average
DTS_2.4_HARM_11b_HT20_2437_1Tx_q90.DAT 30915 16 Jun 2015
Rev 9.5 26 Apr 2016

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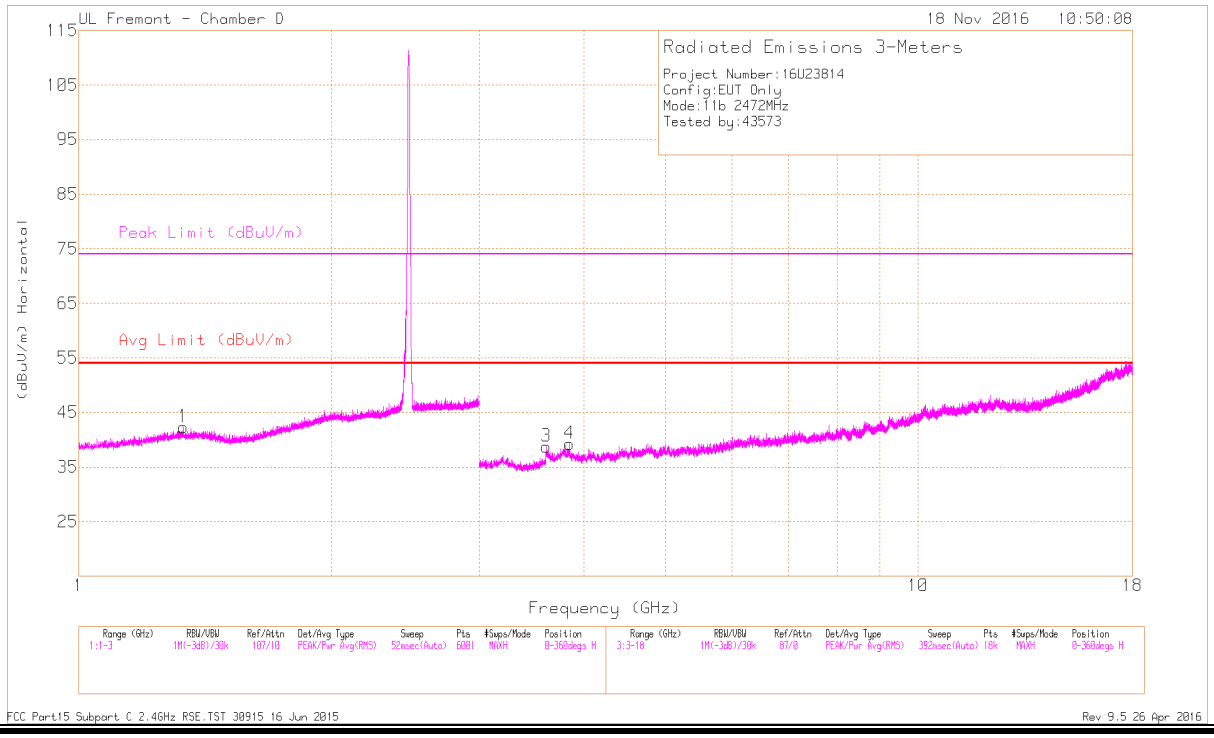
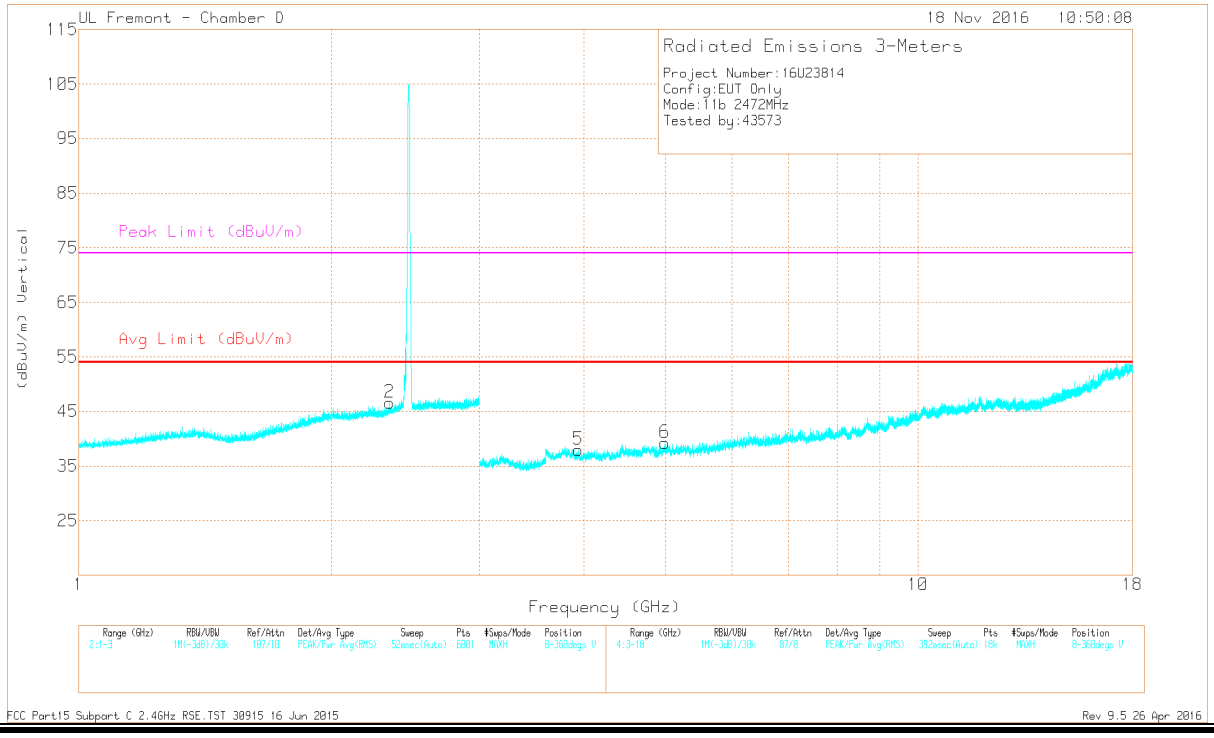
HARMONICS AND SPURIOUS EMISSIONS HIGH CHANNEL, CH 13)

HIGH CHANNEL HORIZONTAL



HIGH CHANNEL VERTICAL



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Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/ Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.333	41.63	PK2	28.9	-22.1	48.43	-	-	74	-25.57	254	106	H
	* 1.331	31.15	MAv1	28.9	-22.1	37.95	54	-16.05	-	-	254	106	H
2	* 2.346	41.42	PK2	31.8	-20.7	52.52	-	-	74	-21.48	83	153	V
	* 2.343	30.99	MAv1	31.7	-20.7	41.99	54	-12.01	-	-	83	153	V
3	* 3.607	39	PK2	33.3	-28.1	44.2	-	-	74	-29.8	156	214	H
	* 3.608	29.25	MAv1	33.3	-28.1	34.45	54	-19.55	-	-	156	214	H
4	* 3.843	39.59	PK2	33.5	-28.5	44.59	-	-	74	-29.41	99	136	H
	* 3.839	29.5	MAv1	33.5	-28.5	34.5	54	-19.5	-	-	99	136	H
5	* 3.94	40.02	PK2	33.4	-28	45.42	-	-	74	-28.58	205	169	V
	* 3.941	28.6	MAv1	33.4	-28	34	54	-20	-	-	205	169	V
6	* 4.989	37.87	PK2	34	-26.9	44.97	-	-	74	-29.03	147	109	V
	* 4.987	27.99	MAv1	34	-26.9	35.09	54	-18.91	-	-	147	109	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK2 - KDB558074 Method: Maximum Peak
MAv1 - KDB558074 Option 1 Maximum RMS Average
FCC Part15 Subpart C 2.4GHz RSE.TST 30915 16 Jun 2015
Rev 9.5 26 Apr 2016

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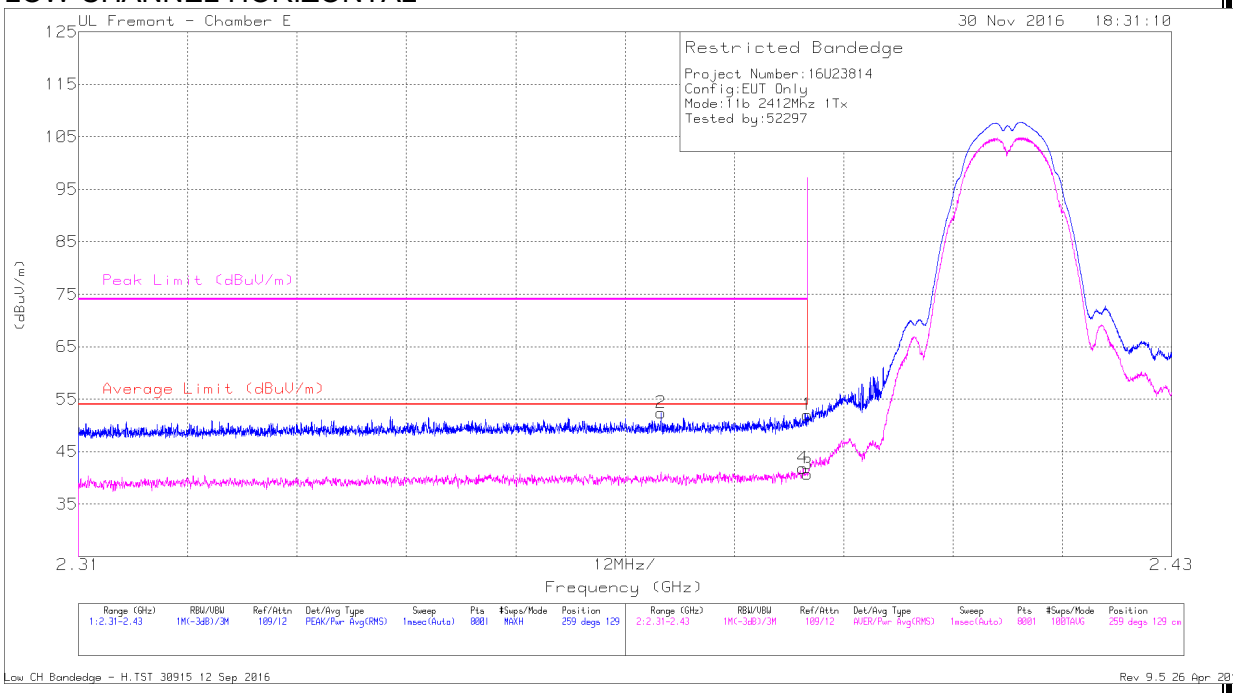
9.2.2. 11b ANTENNA B SISO MODE IN THE 2.4GHz BAND

AUTHORIZED BANDEDGE (LOW CHANNEL, CH 1)

LOW CHANNEL HORIZONTAL



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
6	* 2.374	40.06	Pk	32	-19.7	52.36	-	-	74	-21.64	259	129	H
1	* 2.39	39.59	Pk	32.1	-19.7	51.99	-	-	74	-22.01	259	129	H
3	* 2.39	28.35	RMS	32.1	-19.7	40.75	54	-13.25	-	-	259	129	H
4	* 2.39	29.4	RMS	32.1	-19.7	41.8	54	-12.2	-	-	259	129	H

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

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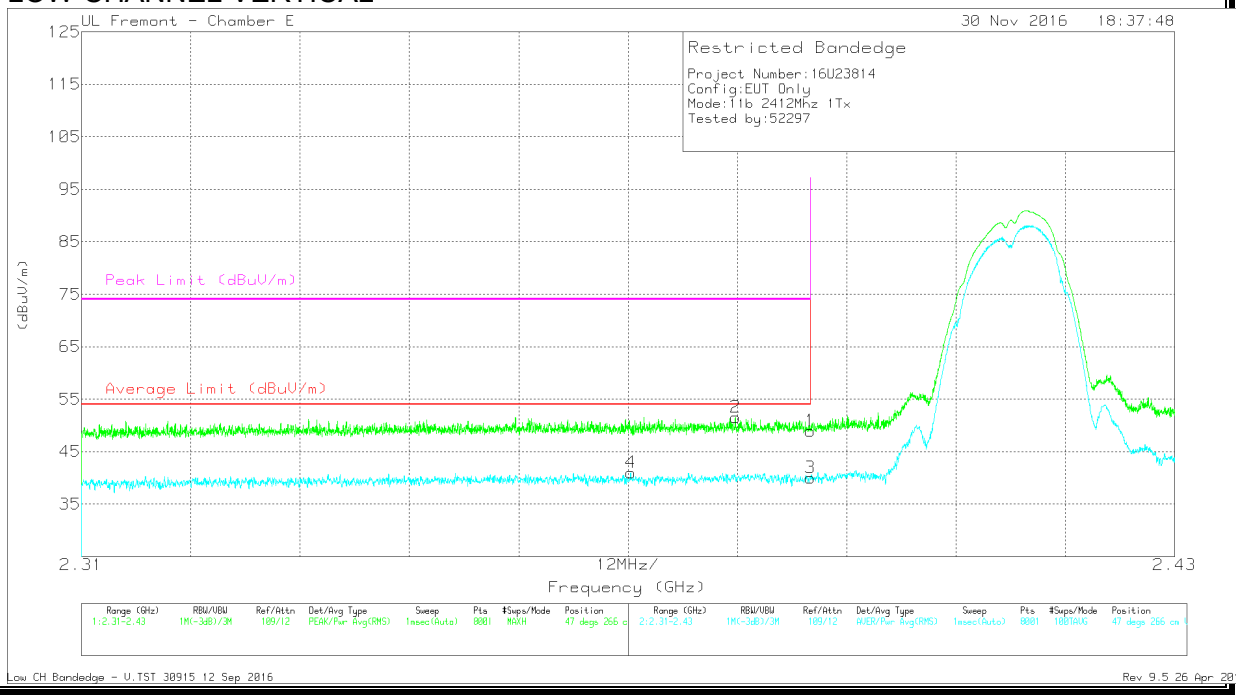
LOW CHANNEL VERTICAL



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	* 2.37	28.77	RMS	32	-19.8	40.97	54	-13.03	-	-	47	266	V
2	* 2.382	39	Pk	32	-19.5	51.5	-	-	74	-22.5	47	266	V
1	* 2.39	36.52	Pk	32.1	-19.7	48.92	-	-	74	-25.08	47	266	V
3	* 2.39	27.63	RMS	32.1	-19.7	40.03	54	-13.97	-	-	47	266	V

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

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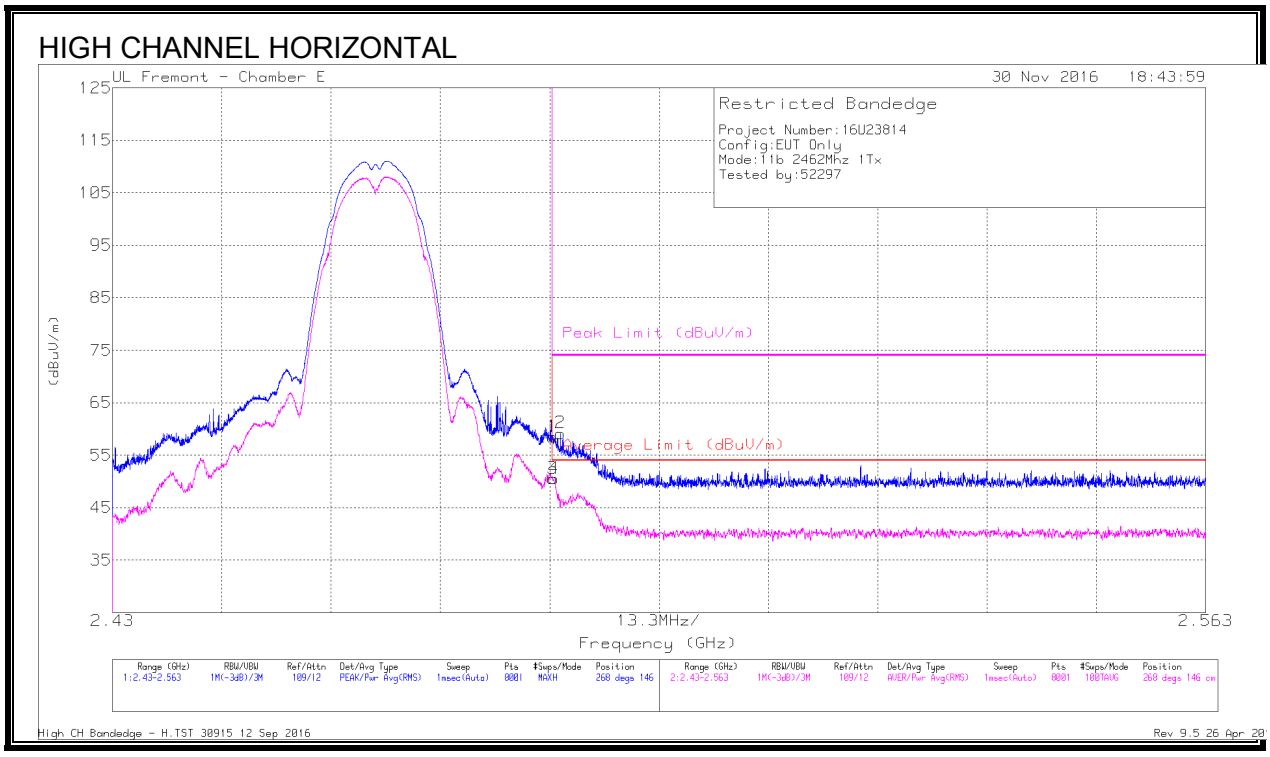
AUTHORIZED BANDEDGE (HIGH CHANNEL, CH 11)



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	45.84	Pk	32.3	-19.7	58.44	-	-	74	-15.56	268	146	H
2	* 2.484	46.57	Pk	32.3	-19.7	59.17	-	-	74	-14.83	268	146	H
3	* 2.484	37.89	RMS	32.3	-19.7	50.49	54	-3.51	-	-	268	146	H
4	* 2.484	37.99	RMS	32.3	-19.7	50.59	54	-3.41	-	-	268	146	H

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

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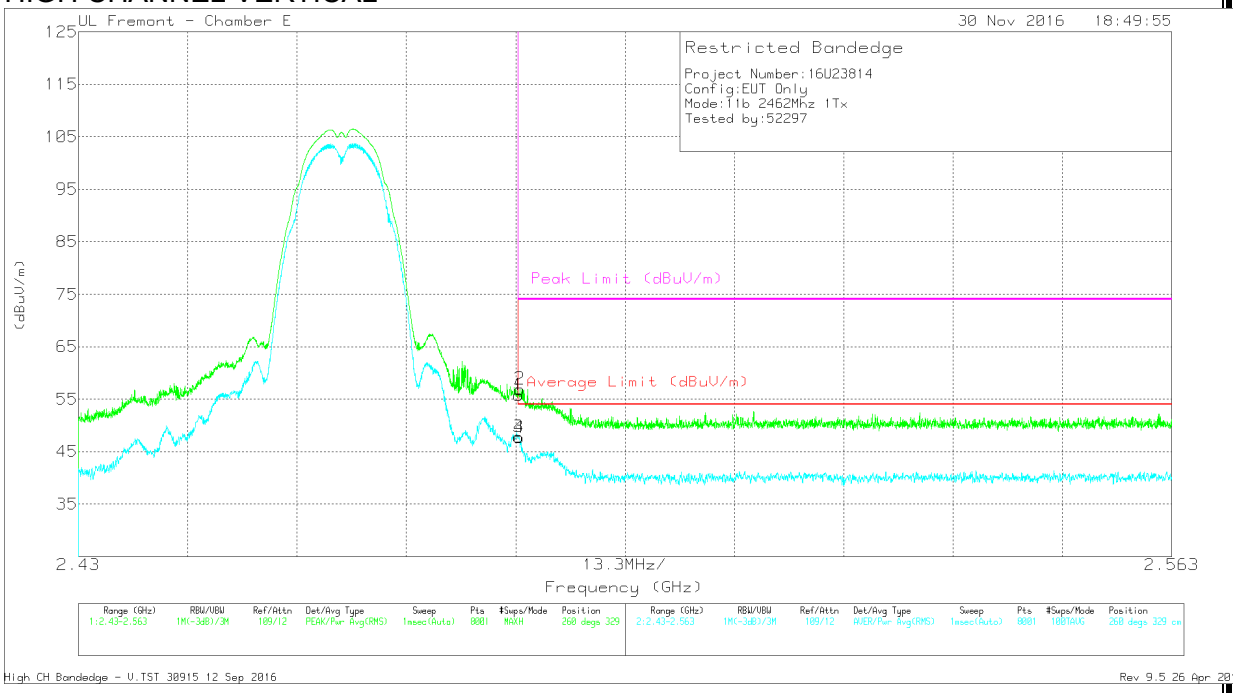
HIGH CHANNEL VERTICAL



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	43.11	Pk	32.3	-19.7	55.71	-	-	74	-18.29	260	329	V
2	* 2.484	44.33	Pk	32.3	-19.7	56.93	-	-	74	-17.07	260	329	V
3	* 2.484	35.18	RMS	32.3	-19.7	47.78	54	-6.22	-	-	260	329	V
4	* 2.484	35.08	RMS	32.3	-19.7	47.68	54	-6.32	-	-	260	329	V

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

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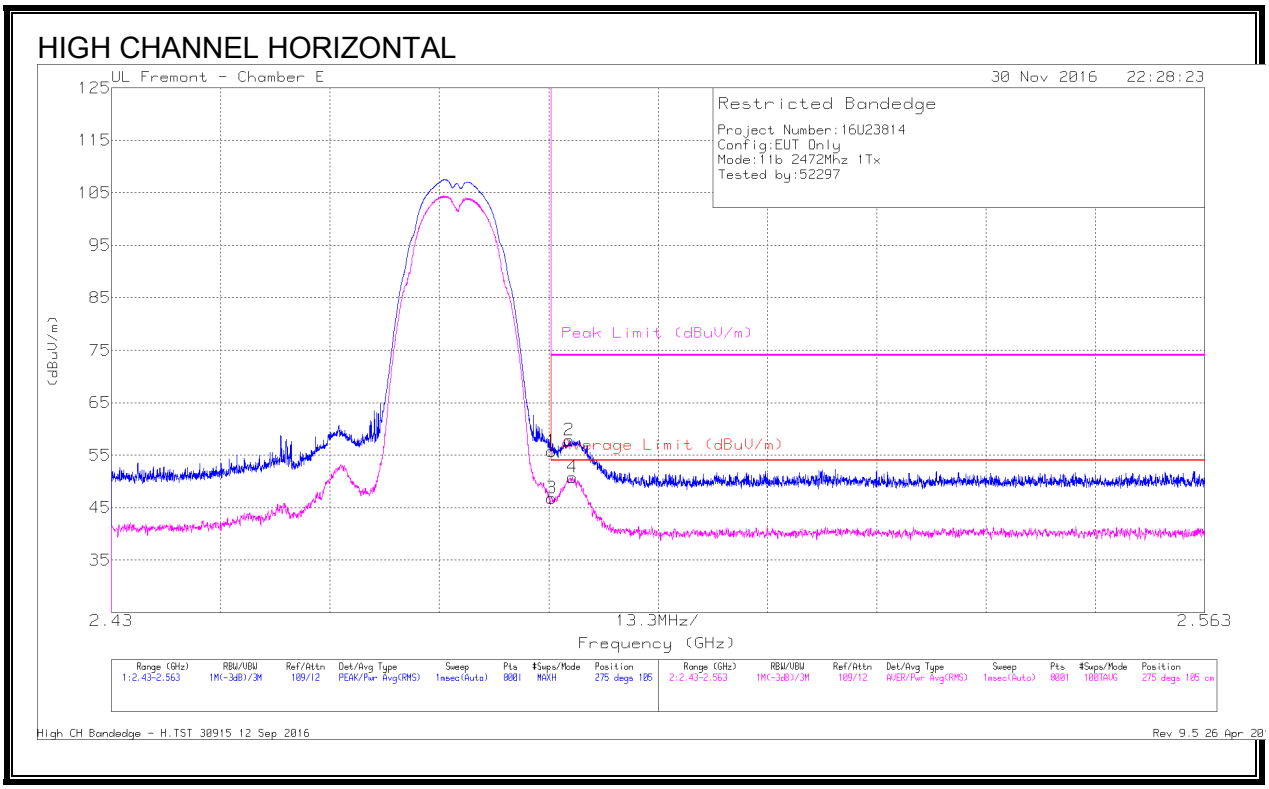
AUTHORIZED BANDEDGE (HIGH CHANNEL, CH 13)



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	43.14	Pk	32.3	-19.7	55.74	-	-	74	-18.26	275	105	H
3	* 2.484	34.23	RMS	32.3	-19.7	46.83	54	-7.17	-	-	275	105	H
2	* 2.486	45.32	Pk	32.3	-19.8	57.82	-	-	74	-16.18	275	105	H
4	* 2.486	38.27	RMS	32.3	-19.8	50.77	54	-3.23	-	-	275	105	H

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

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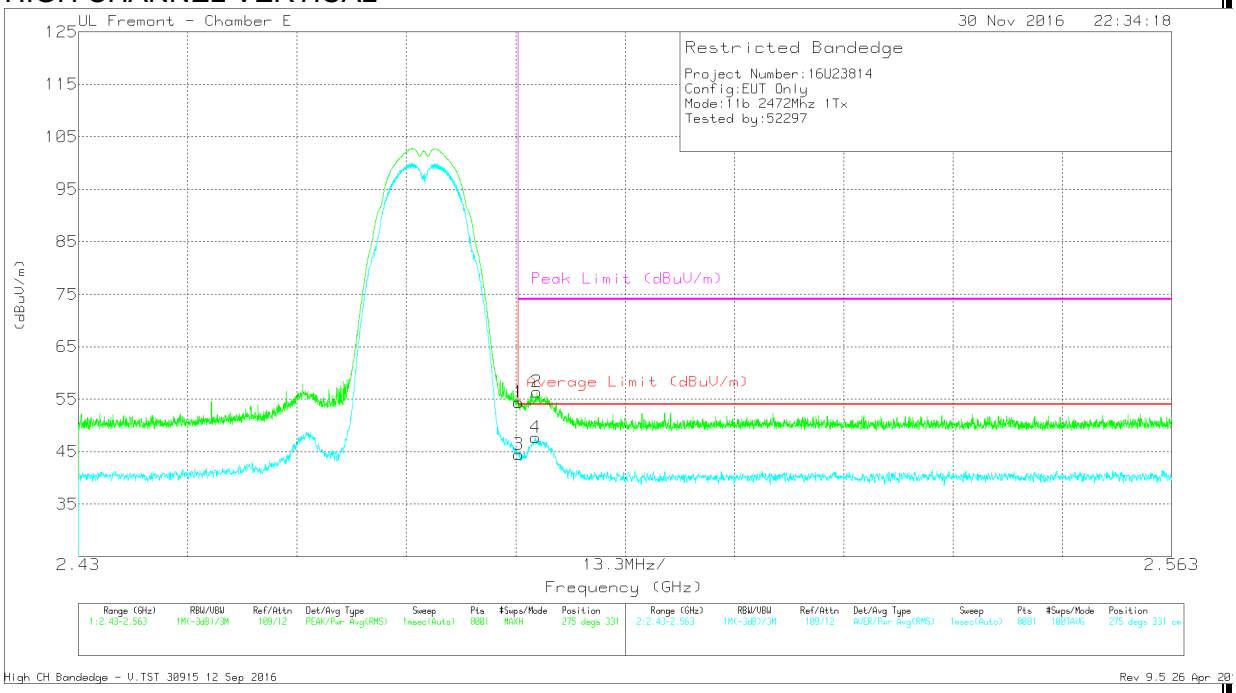
HIGH CHANNEL VERTICAL



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/Pad (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	41.76	Pk	32.3	-19.7	54.36	-	-	74	-19.64	275	331	V
3	* 2.484	31.83	RMS	32.3	-19.7	44.43	54	-9.57	-	-	275	331	V
2	* 2.486	43.82	Pk	32.3	-19.8	56.32	-	-	74	-17.68	275	331	V
4	* 2.486	35.07	RMS	32.3	-19.7	47.67	54	-6.33	-	-	275	331	V

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

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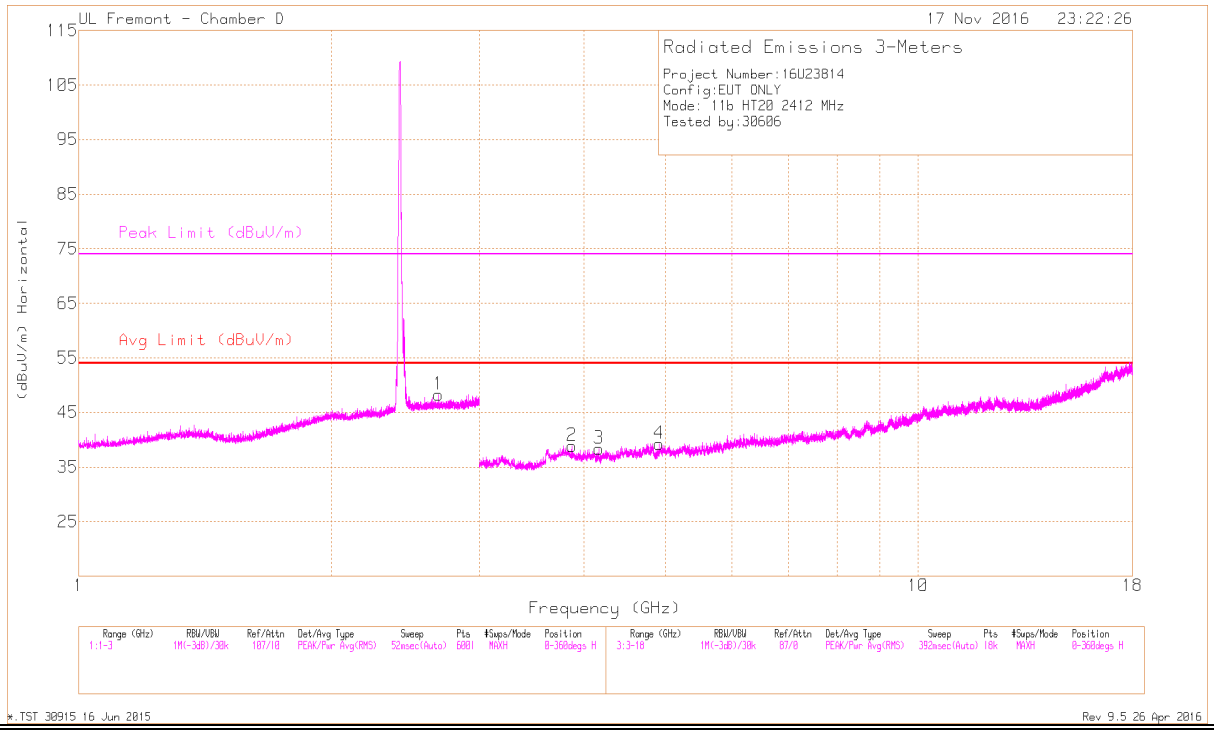
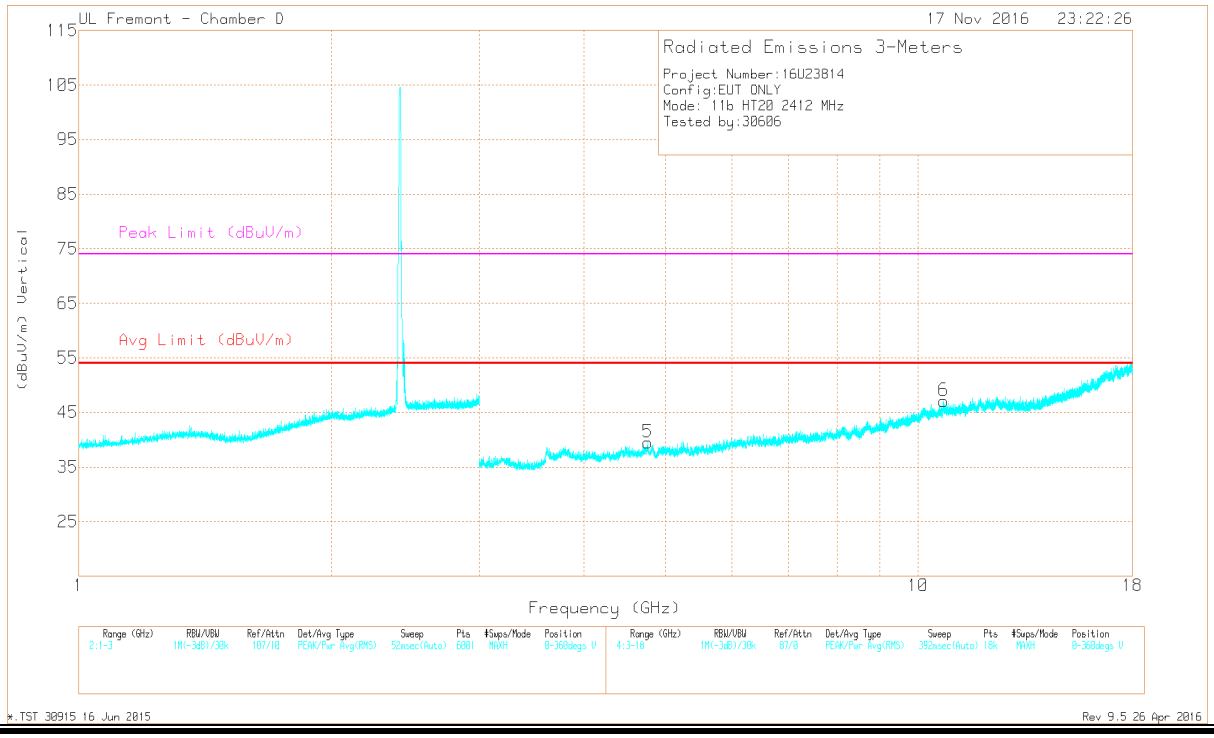
HARMONICS AND SPURIOUS EMISSIONS LOW CHANNEL, CH 1)

LOW CHANNEL HORIZONTAL



LOW CHANNEL VERTICAL



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Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.681	41.66	PK2	32.3	-20.4	53.56	-	-	74	-20.44	353	177	H
	* 2.684	30.39	MAv1	32.4	-20.4	42.39	54	-11.61	-	-	353	177	H
2	* 3.868	39.55	PK2	33.5	-28.3	44.75	-	-	74	-29.25	21	159	H
	* 3.866	28.3	MAv1	33.5	-28.4	33.4	54	-20.6	-	-	21	159	H
3	* 4.168	38.27	PK2	33.5	-27.8	43.97	-	-	74	-30.03	293	106	H
	* 4.167	27.78	MAv1	33.5	-27.8	33.48	54	-20.52	-	-	293	106	H
4	* 4.915	38.67	PK2	34.1	-27.9	44.87	-	-	74	-29.13	331	216	H
	* 4.914	27.83	MAv1	34.1	-27.9	34.03	54	-19.97	-	-	331	216	H
5	* 4.759	37.7	PK2	34	-26.4	45.3	-	-	74	-28.7	130	114	V
	* 4.759	27.2	MAv1	34	-26.4	34.8	54	-19.2	-	-	130	114	V
6	* 10.715	35.67	PK2	37.9	-20.3	53.27	-	-	74	-20.73	356	235	V
	* 10.718	24.68	MAv1	37.9	-20.3	42.28	54	-11.72	-	-	356	235	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK2 - KDB558074 Method: Maximum Peak
MAv1 - KDB558074 Option 1 Maximum RMS Average
*.TST 30915 16 Jun 2015
Rev 9.5 26 Apr 2016

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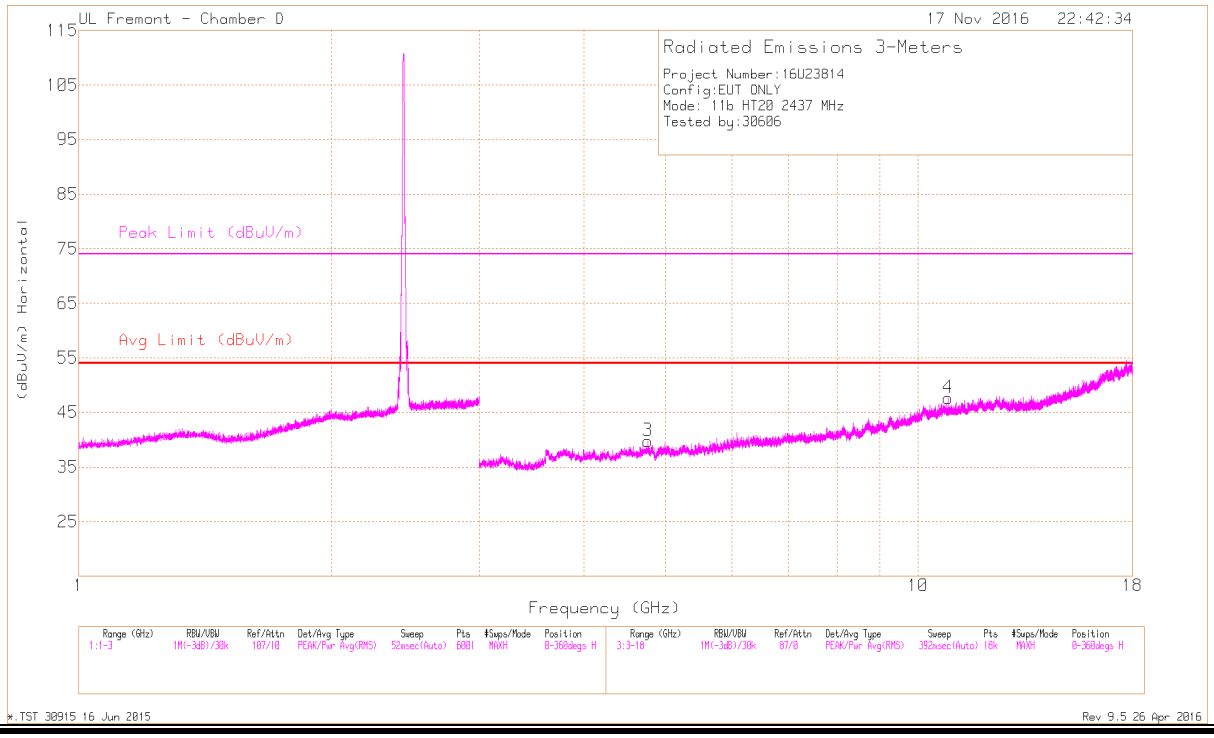
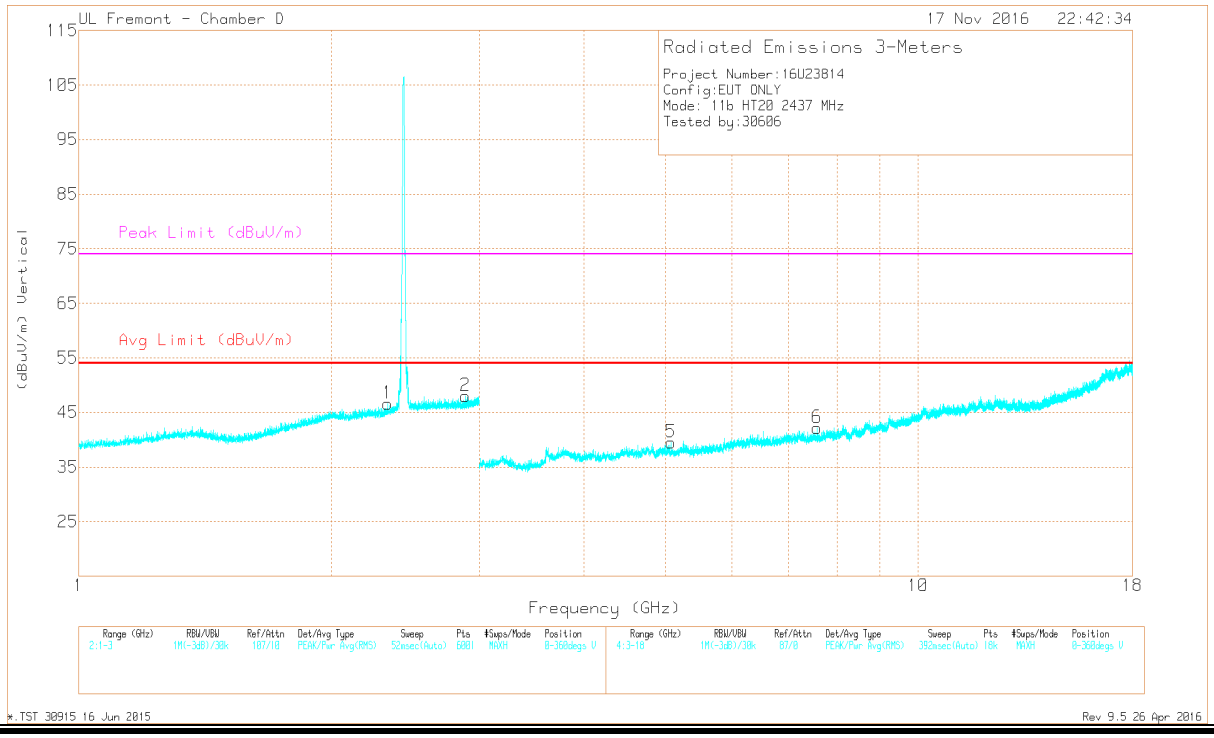
HARMONICS AND SPURIOUS EMISSIONS MID CHANNEL, CH 6)

MID CHANNEL HORIZONTAL



MID CHANNEL VERTICAL



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Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.331	41.47	PK2	31.6	-20.7	52.37	-	-	74	-21.63	305	143	V
	* 2.331	30.45	MAv1	31.6	-20.7	41.35	54	-12.65	-	-	305	143	V
2	* 2.886	41.44	PK2	32.3	-20.1	53.64	-	-	74	-20.36	336	204	V
	* 2.886	30.26	MAv1	32.3	-20.1	42.46	54	-11.54	-	-	336	204	V
3	* 4.765	38.1	PK2	34	-26.4	45.7	-	-	74	-28.3	128	273	H
	* 4.766	27.35	MAv1	34	-26.4	34.95	54	-19.05	-	-	128	273	H
4	* 10.855	35.77	PK2	37.9	-20.8	52.87	-	-	74	-21.13	151	166	H
	* 10.854	24.66	MAv1	37.9	-20.7	41.86	54	-12.14	-	-	151	166	H
5	* 5.08	38.5	PK2	34	-26.6	45.9	-	-	74	-28.1	355	216	V
	* 5.082	26.78	MAv1	34	-26.6	34.18	54	-19.82	-	-	355	216	V
6	* 7.579	36.73	PK2	35.8	-24.6	47.93	-	-	74	-26.07	224	131	V
	* 7.58	25.64	MAv1	35.8	-24.7	36.74	54	-17.26	-	-	224	131	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK2 - KDB558074 Method: Maximum Peak
MAv1 - KDB558074 Option 1 Maximum RMS Average
*.TST 30915 16 Jun 2015
Rev 9.5 26 Apr 2016

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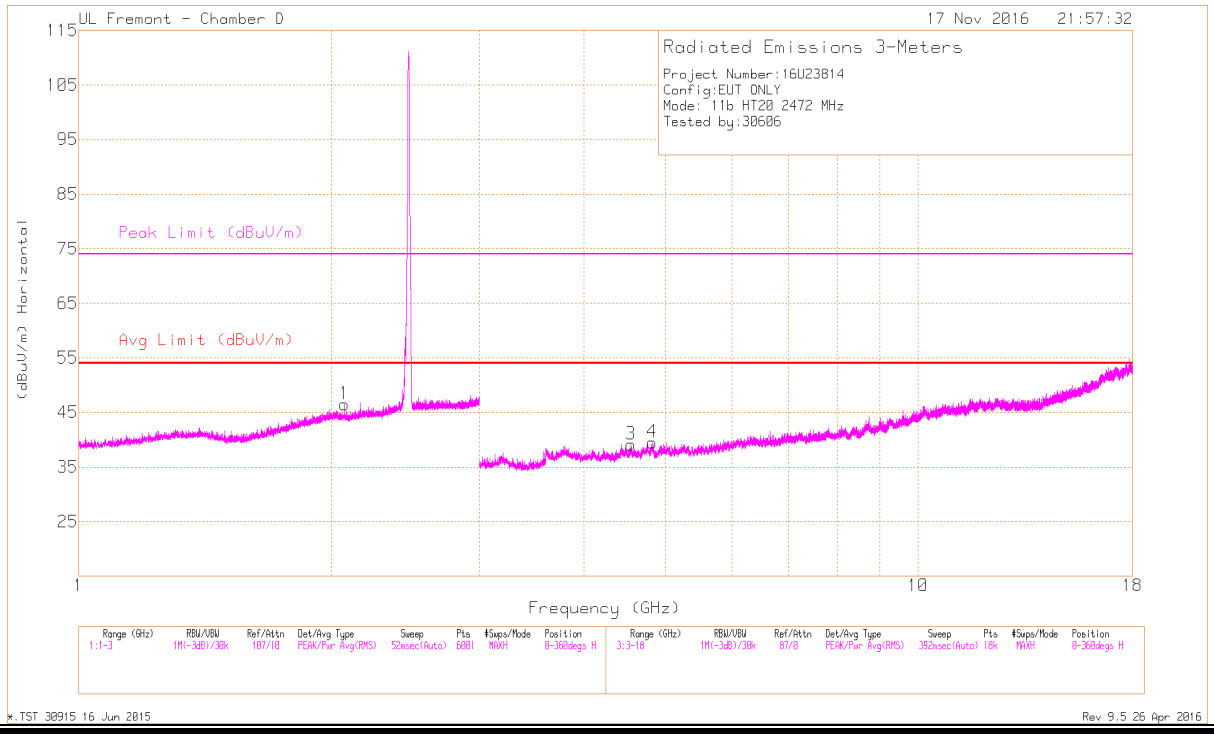
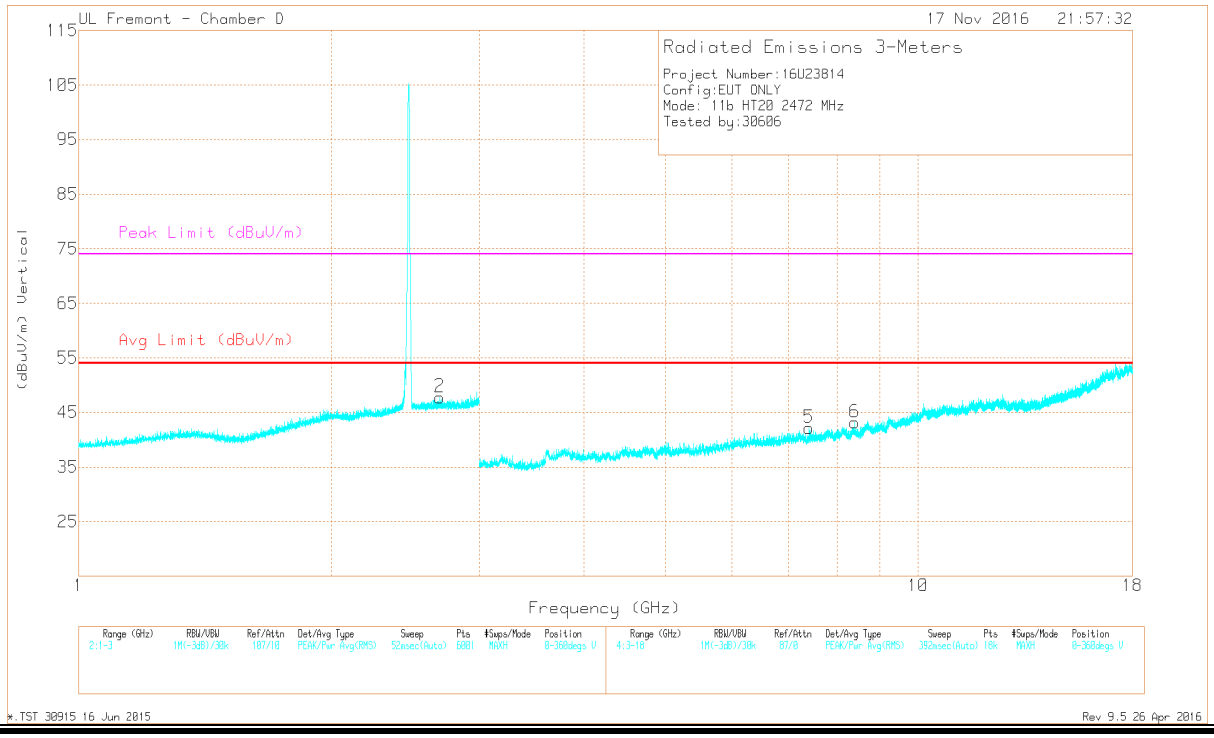
HARMONICS AND SPURIOUS EMISSIONS HIGH CHANNEL, CH 13)

HIGH CHANNEL HORIZONTAL



HIGH CHANNEL VERTICAL



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Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 2.693	41.34	PK2	32.4	-20.4	53.34	-	-	74	-20.66	132	251	V
	* 2.692	30.28	MAv1	32.4	-20.4	42.28	54	-11.72	-	-	322	200	V
3	* 4.549	39.03	PK2	34	-27.7	45.33	-	-	74	-28.67	360	176	H
	* 4.549	28.07	MAv1	34	-27.7	34.37	54	-19.63	-	-	307	200	H
4	* 4.818	38.19	PK2	34.1	-26.9	45.39	-	-	74	-28.61	193	334	H
	* 4.819	27.9	MAv1	34.1	-26.9	35.1	54	-18.9	-	-	350	200	H
5	* 7.414	36.16	PK2	35.6	-24.6	47.16	-	-	74	-26.84	239	114	V
	* 7.416	25.7	MAv1	35.6	-24.6	36.7	54	-17.3	-	-	239	114	V
6	* 8.403	36.16	PK2	35.8	-22.8	49.16	-	-	74	-24.84	164	101	V
	* 8.399	25.09	MAv1	35.8	-22.8	38.09	54	-15.91	-	-	164	101	V
1	2.075	41.58	PK2	31.2	-21	51.78	-	-	-	-	59	351	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK2 - KDB558074 Method: Maximum Peak
MAv1 - KDB558074 Option 1 Maximum RMS Average
*.TST 30915 16 Jun 2015
Rev 9.5 26 Apr 2016

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47173 BENICIA STREET, FREMONT, CA 94538, USA TEL: (510) 771-1000 FAX: (510) 661-0888
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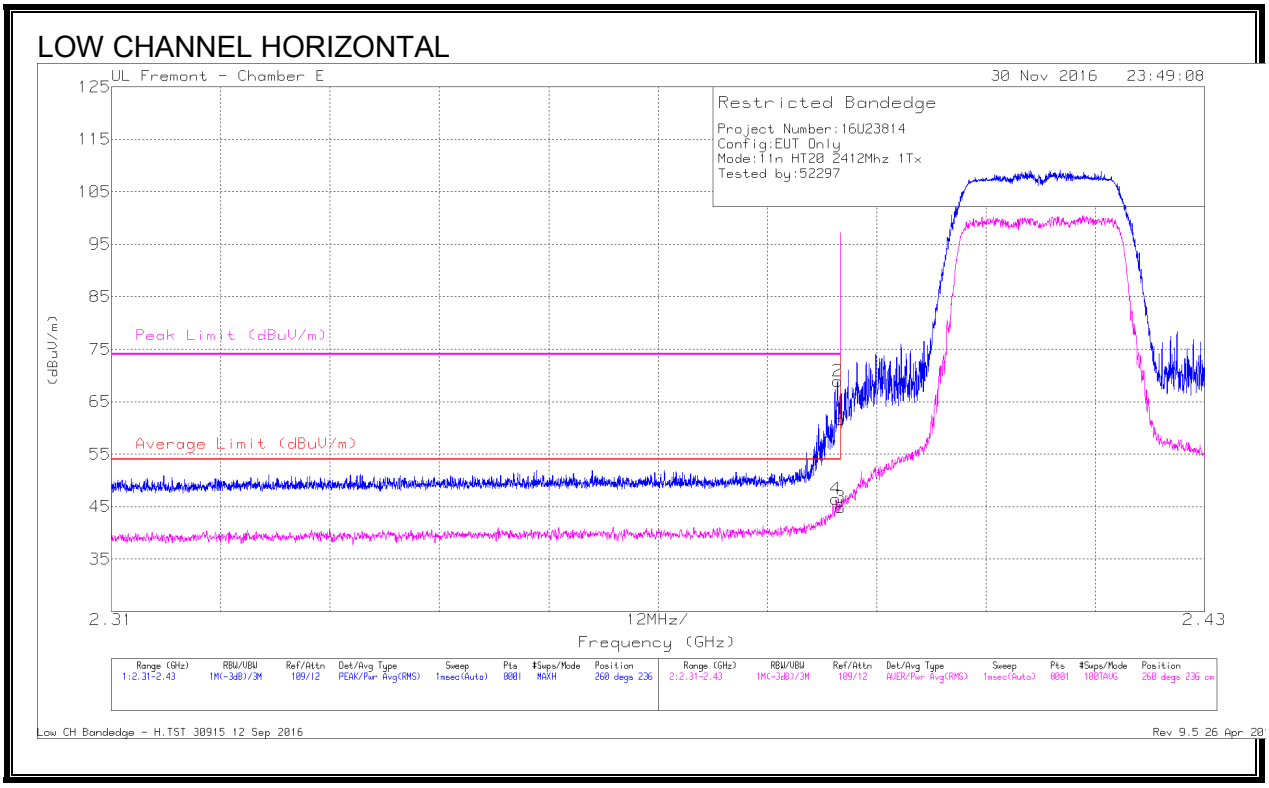
9.2.3. 11n HT20 ANTENNA A SISO MODE IN THE 2.4GHz BAND

AUTHORIZED BANDEDGE (LOW CHANNEL, CH 1)



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/Pad (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	49.17	Pk	32.1	-19.7	61.57	-	-	74	-12.43	260	236	H
2	* 2.39	56.47	Pk	32.1	-19.7	68.87	-	-	74	-5.13	260	236	H
3	* 2.39	32.47	RMS	32.1	-19.7	44.87	54	-9.13	-	-	260	236	H
4	* 2.39	34.01	RMS	32.1	-19.7	46.41	54	-7.59	-	-	260	236	H

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

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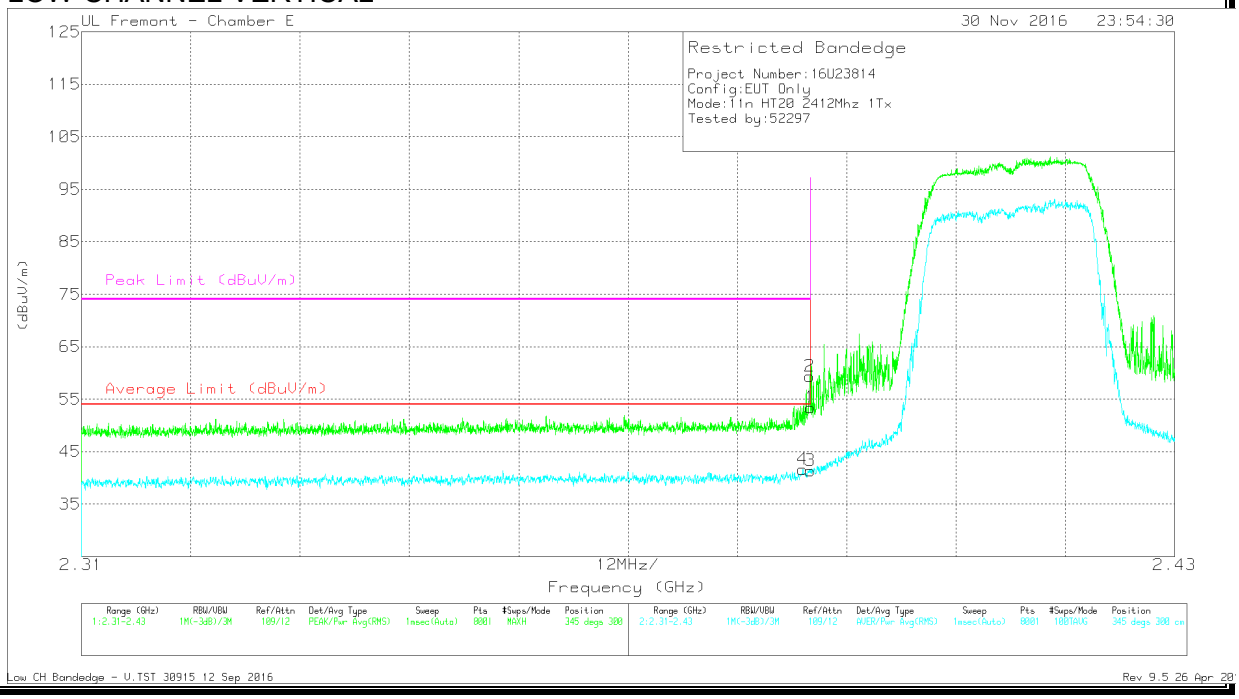
LOW CHANNEL VERTICAL



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/Pad (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	29.23	RMS	32.1	-19.7	41.63	54	-12.37	-	-	345	300	V
1	* 2.39	41	Pk	32.1	-19.7	53.4	-	-	74	-20.6	345	300	V
2	* 2.39	46.98	Pk	32.1	-19.7	59.38	-	-	74	-14.62	345	300	V
3	* 2.39	29	RMS	32.1	-19.7	41.4	54	-12.6	-	-	345	300	V

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

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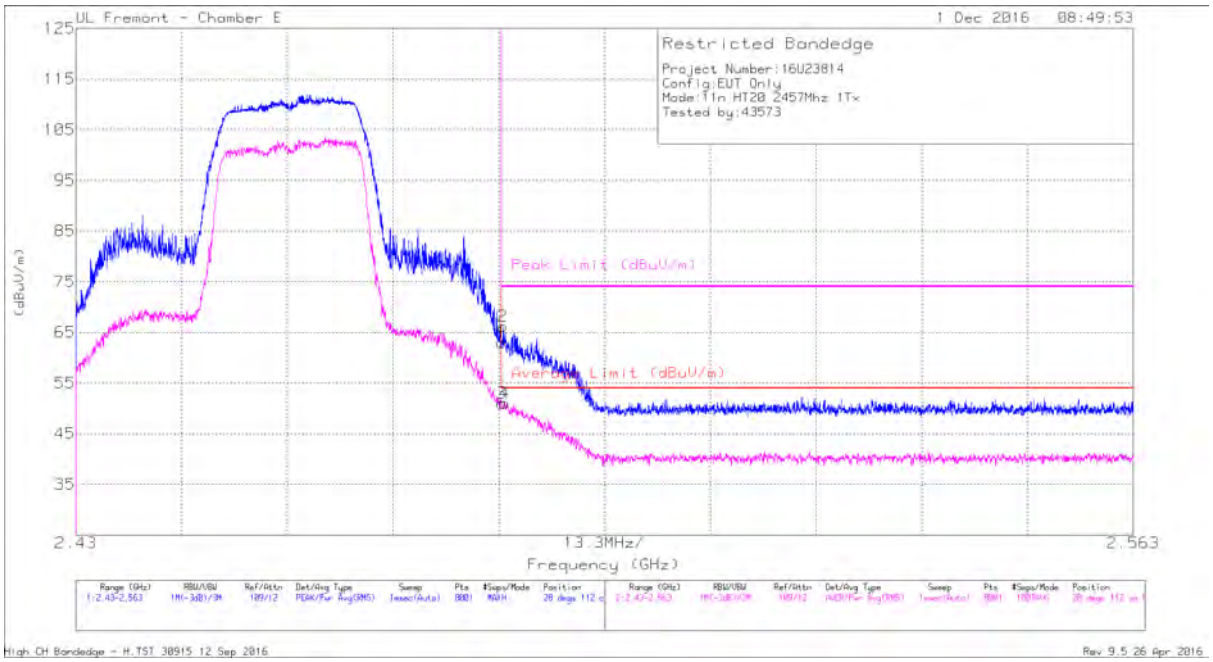
AUTHORIZED BANDEDGE (HIGH CHANNEL, CH 10)

HIGH CHANNEL HORIZONTAL



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/Pad (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	50.36	Pk	32.3	-19.7	62.96	-	-	74	-11.04	28	112	H
2	* 2.484	53.57	Pk	32.3	-19.7	66.17	-	-	74	-7.83	28	112	H
3	* 2.484	38.42	RMS	32.3	-19.7	51.02	54	-2.98	-	-	28	112	H
4	* 2.484	38.48	RMS	32.3	-19.7	51.08	54	-2.92	-	-	28	112	H

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

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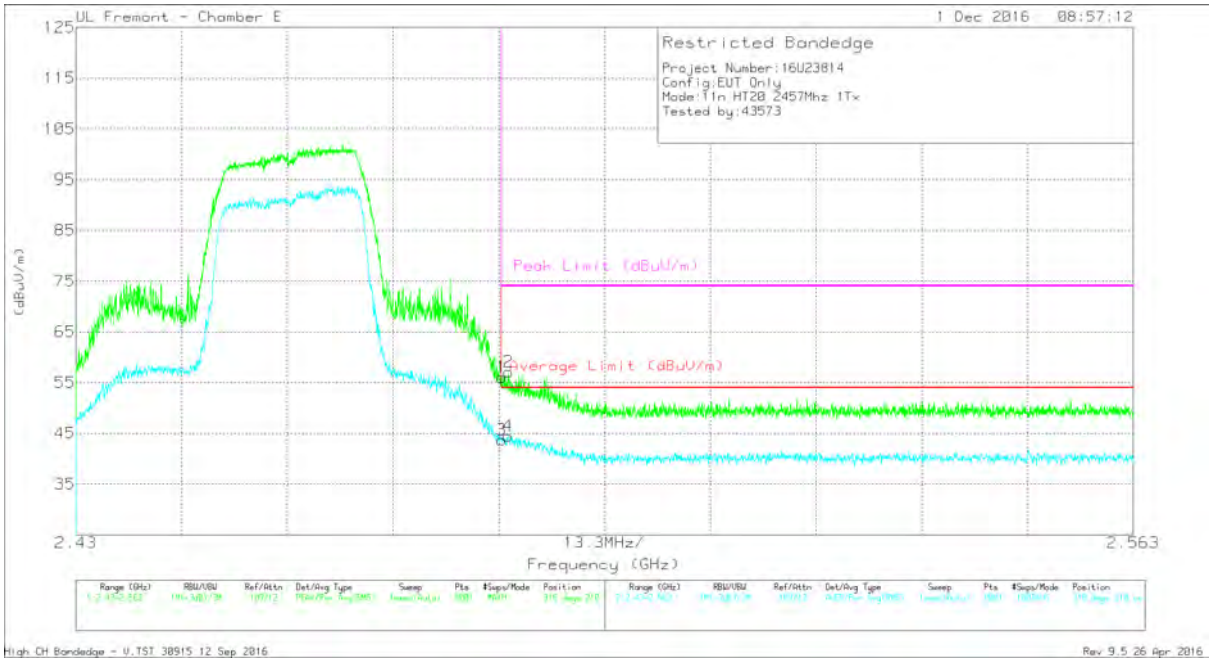
HIGH CHANNEL VERTICAL



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	43.42	Pk	32.3	-19.7	56.02	-	-	74	-17.98	318	210	V
2	* 2.484	44.55	Pk	32.3	-19.7	57.15	-	-	74	-16.85	318	210	V
3	* 2.484	31.12	RMS	32.3	-19.7	43.72	54	-10.28	-	-	318	210	V
4	* 2.484	31.84	RMS	32.3	-19.7	44.44	54	-9.56	-	-	318	210	V

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

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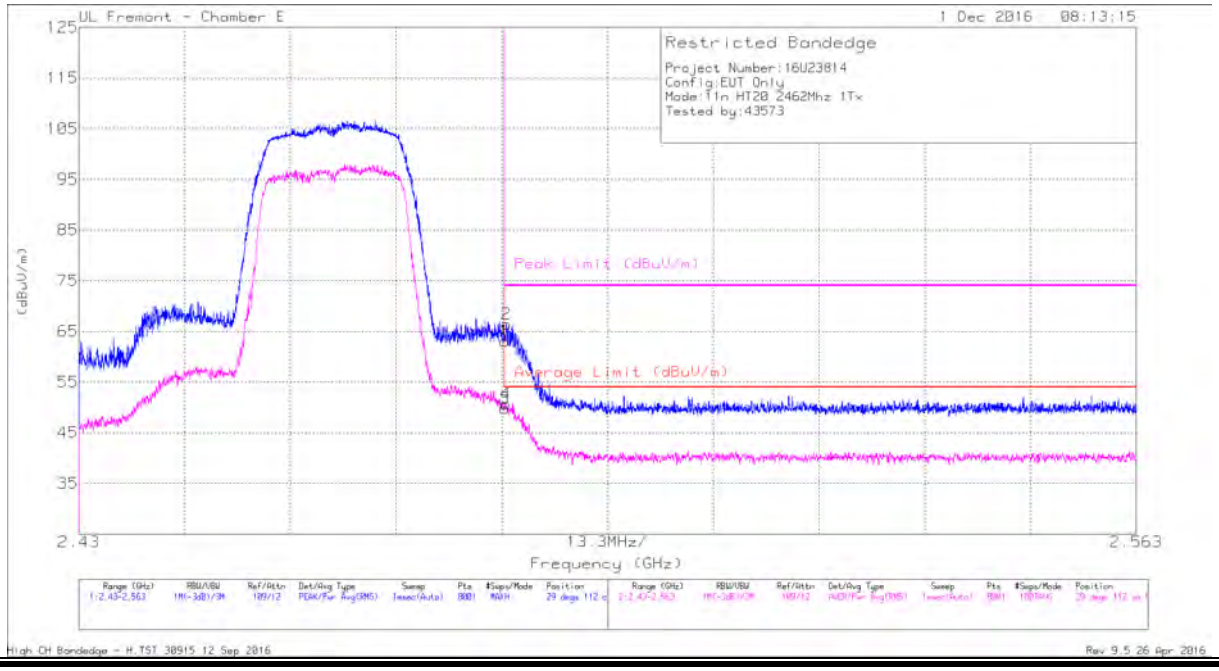
AUTHORIZED BANDEDGE (HIGH CHANNEL, CH 11)

HIGH CHANNEL HORIZONTAL



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/Pad (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	50.53	Pk	32.3	-19.7	63.13	-	-	74	-10.87	29	112	H
2	* 2.484	53.86	Pk	32.3	-19.7	66.46	-	-	74	-7.54	29	112	H
3	* 2.484	37.19	RMS	32.3	-19.7	49.79	54	-4.21	-	-	29	112	H
4	* 2.484	38.07	RMS	32.3	-19.7	50.67	54	-3.33	-	-	29	112	H

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

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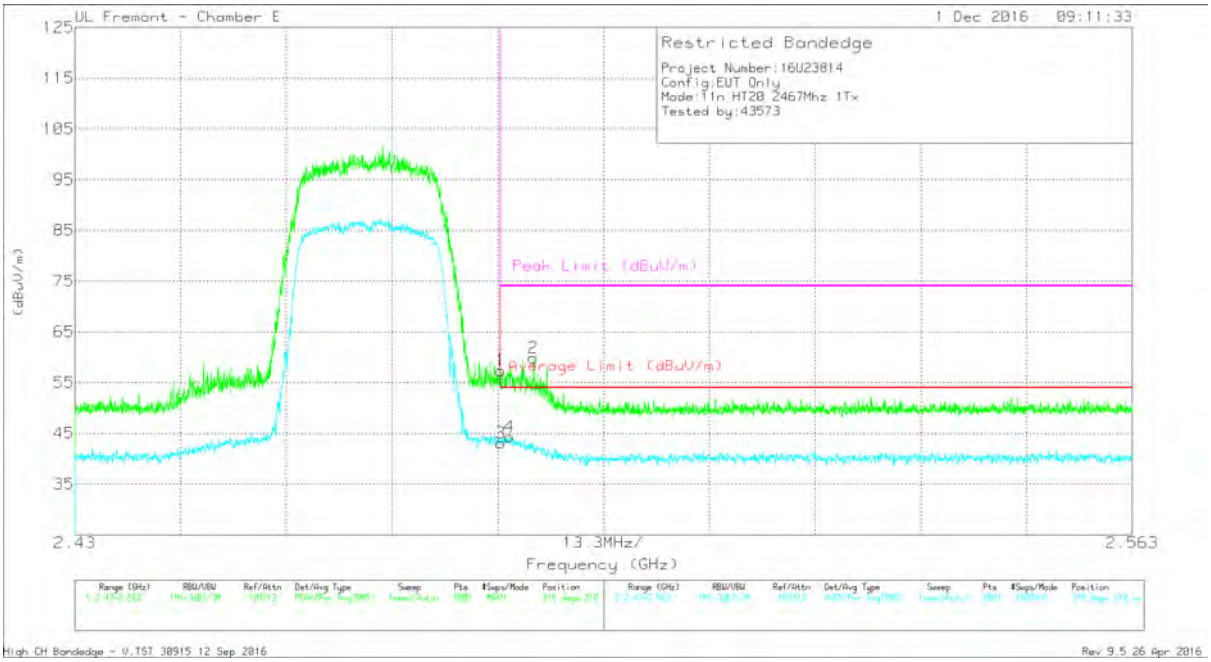
HIGH CHANNEL VERTICAL



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	44.81	Pk	32.3	-19.7	57.41	-	-	74	-16.59	318	210	V
2	* 2.488	47.41	Pk	32.3	-19.9	59.81	-	-	74	-14.19	318	210	V
3	* 2.484	30.52	RMS	32.3	-19.7	43.12	54	-10.88	-	-	318	210	V
4	* 2.485	31.74	RMS	32.3	-19.7	44.34	54	-9.66	-	-	318	210	V

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

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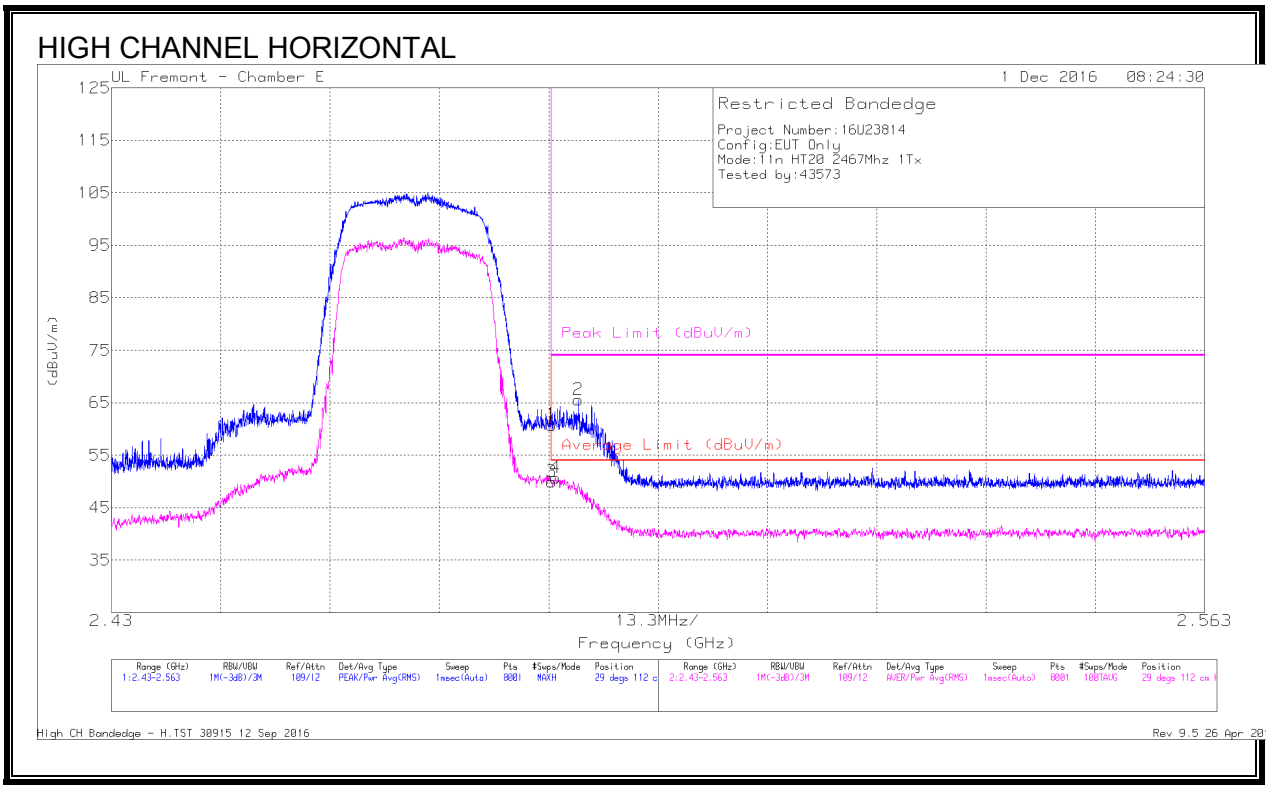
AUTHORIZED BANDEDGE (HIGH CHANNEL, CH 12)



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	48.18	Pk	32.3	-19.7	60.78	-	-	74	-13.22	29	112	H
3	* 2.484	37.36	RMS	32.3	-19.7	49.96	54	-4.04	-	-	29	112	H
4	* 2.484	38.04	RMS	32.3	-19.7	50.64	54	-3.36	-	-	29	112	H
2	* 2.487	53.02	Pk	32.3	-19.8	65.52	-	-	74	-8.48	29	112	H

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

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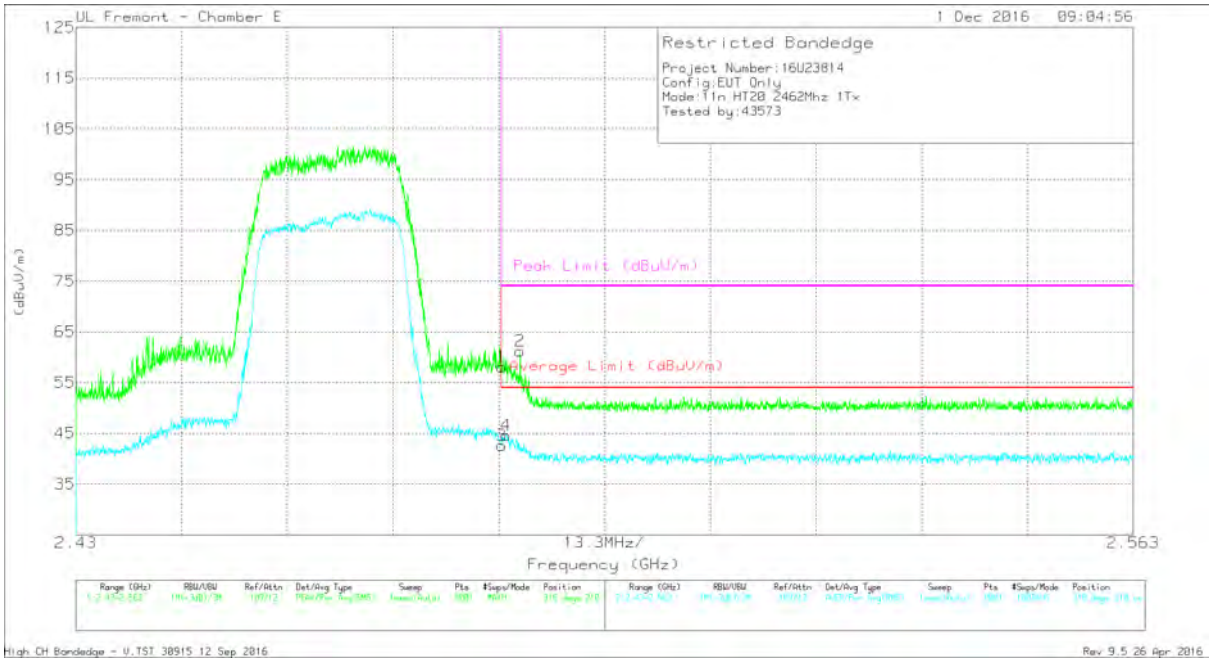
HIGH CHANNEL VERTICAL



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	45.53	Pk	32.3	-19.7	58.13	-	-	74	-15.87	318	210	V
2	* 2.486	48.7	Pk	32.3	-19.8	61.2	-	-	74	-12.8	318	210	V
3	* 2.484	30	RMS	32.3	-19.7	42.6	54	-11.4	-	-	318	210	V
4	* 2.484	32	RMS	32.3	-19.7	44.6	54	-9.4	-	-	318	210	V

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

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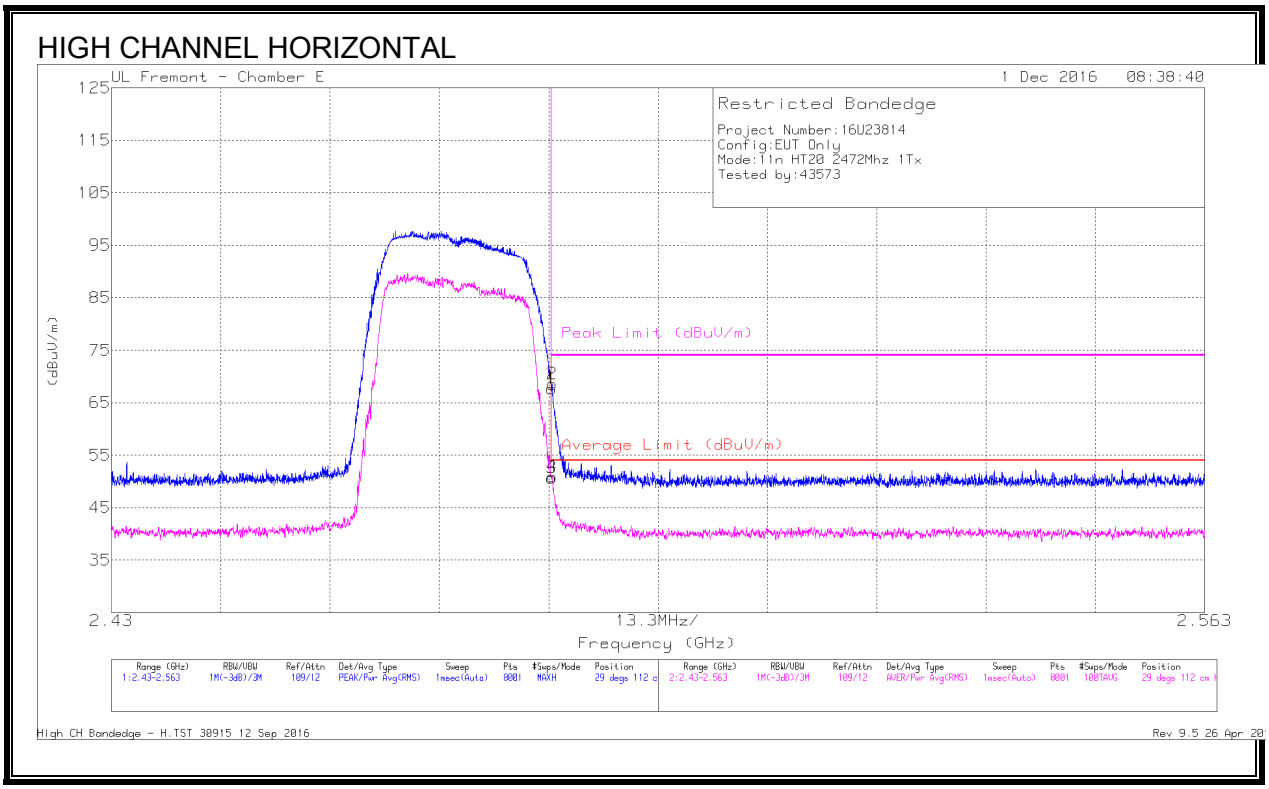
AUTHORIZED BANDEDGE (HIGH CHANNEL, CH 13)



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/Pad (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	55.05	Pk	32.3	-19.7	67.65	-	-	74	-6.35	29	112	H
2	* 2.484	55.93	Pk	32.3	-19.7	68.53	-	-	74	-5.47	29	112	H
3	* 2.484	38.09	RMS	32.3	-19.7	50.69	54	-3.31	-	-	29	112	H
4	* 2.484	38.31	RMS	32.3	-19.7	50.91	54	-3.09	-	-	29	112	H

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

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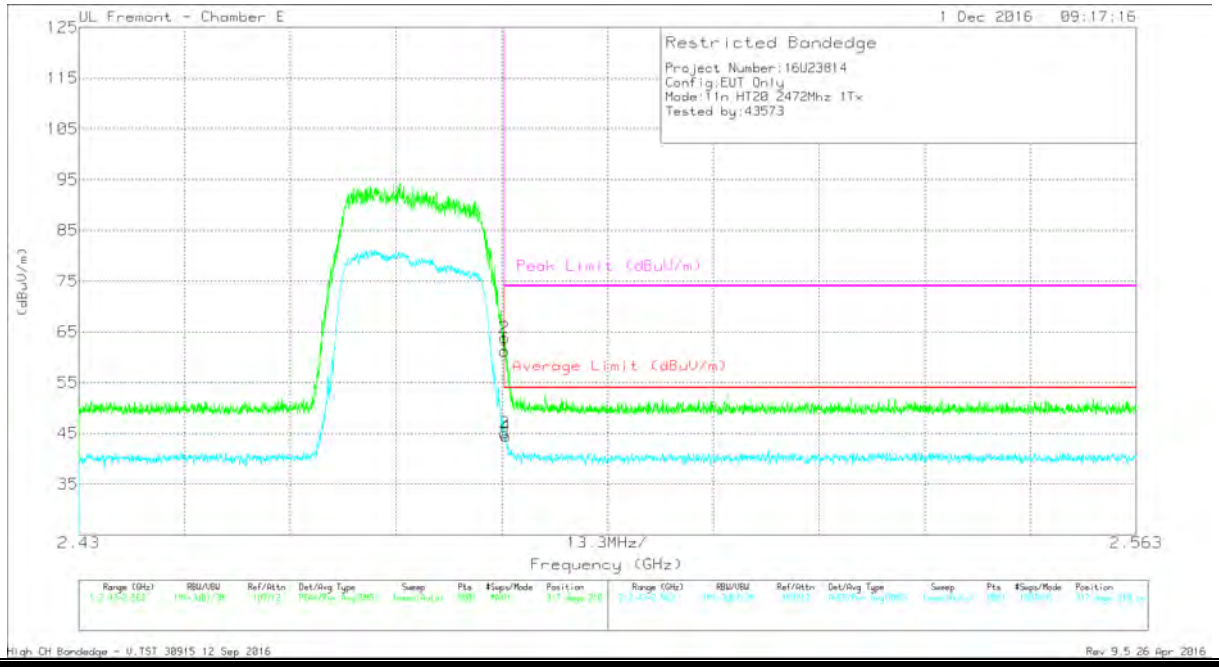
HIGH CHANNEL VERTICAL



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	48.61	Pk	32.3	-19.7	61.21	-	-	74	-12.79	317	210	V
2	* 2.484	51.19	Pk	32.3	-19.7	63.79	-	-	74	-10.21	317	210	V
3	* 2.484	32.53	RMS	32.3	-19.7	45.13	54	-8.87	-	-	317	210	V
4	* 2.484	31.89	RMS	32.3	-19.7	44.49	54	-9.51	-	-	317	210	V

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

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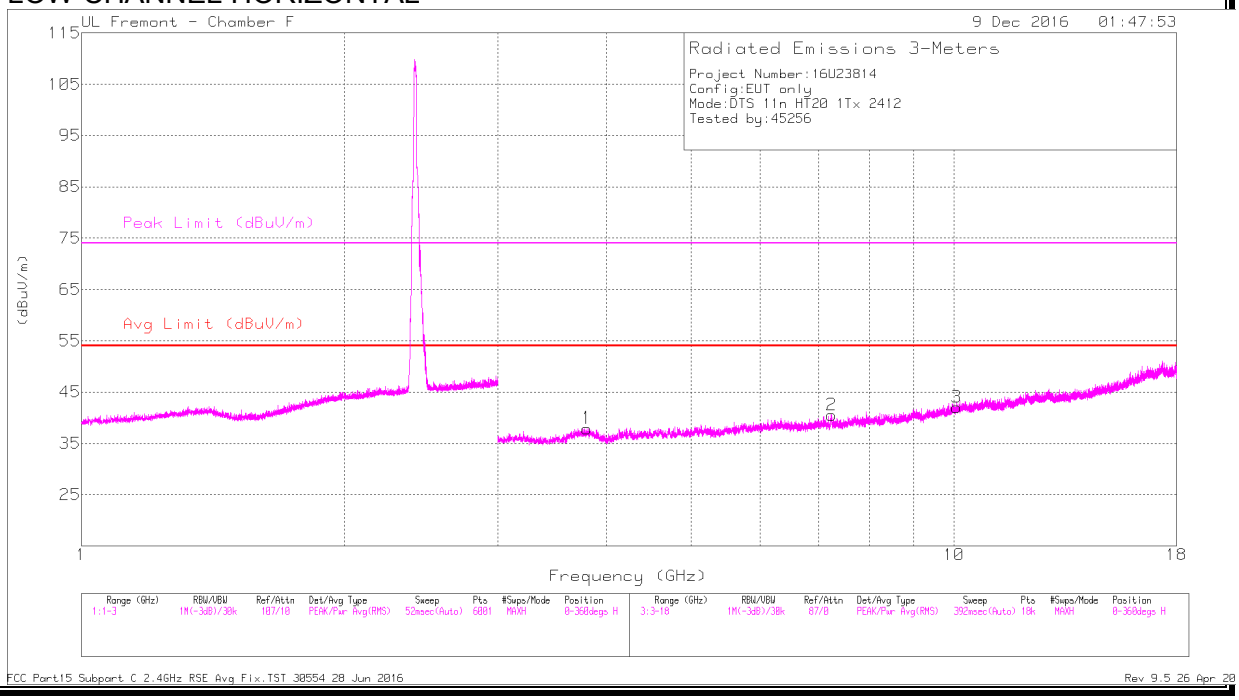
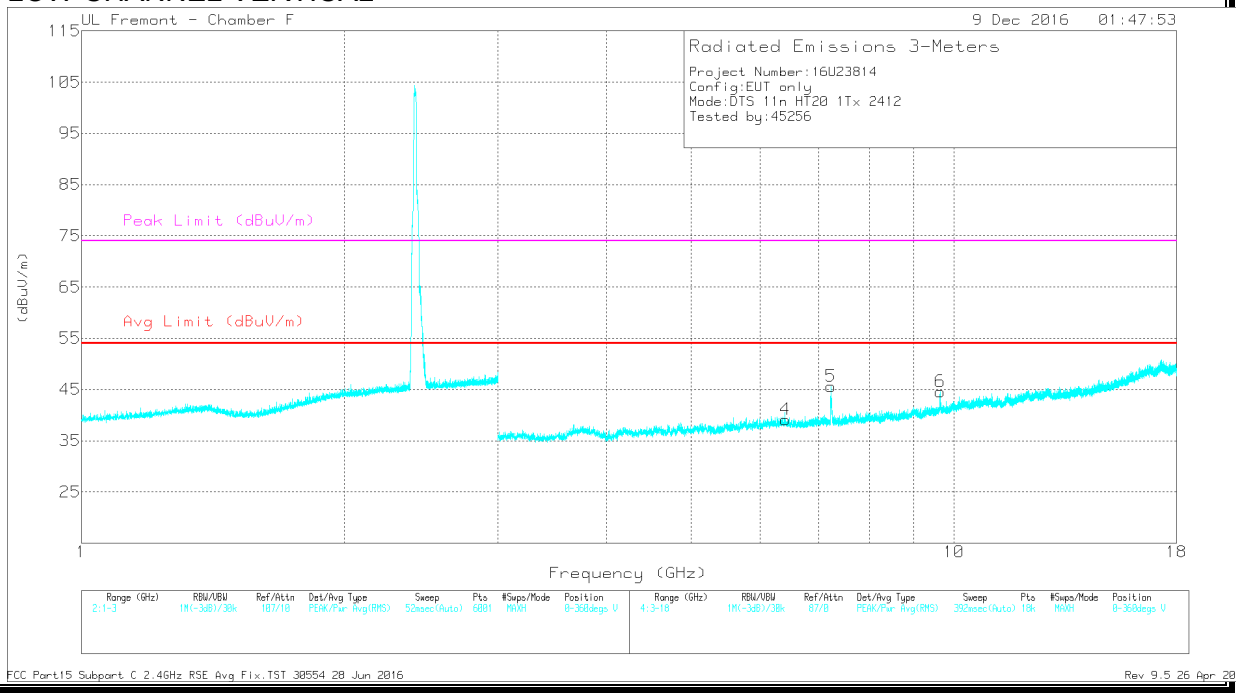
HARMONICS AND SPURIOUS EMISSIONS LOW CHANNEL, CH 1)

LOW CHANNEL HORIZONTAL



LOW CHANNEL VERTICAL



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Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (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	* 3.795	38.65	PK2	33.4	-28.7	0	43.35	-	-	74	-30.65	355	281	H
	* 3.796	27.89	MAv1	33.4	-28.7	0	32.59	54	-21.41	-	-	355	281	H
2	7.24	38.98	PK2	35.6	-26	0	48.58	-	-	-	-	259	164	H
3	10.07	33.52	PK2	37.1	-21.9	0	48.72	-	-	-	-	227	312	H
4	6.415	36.9	PK2	35.4	-27.1	0	45.2	-	-	-	-	305	306	V
5	7.233	39.16	PK2	35.6	-26	0	48.76	-	-	-	-	248	201	V
6	9.648	36.49	PK2	36.6	-22.2	0	50.89	-	-	-	-	276	101	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK2 - KDB558074 Method: Maximum Peak
MAv1 - KDB558074 Option 1 Maximum RMS Average
*.TST 30915 16 Jun 2015
Rev 9.5 26 Apr 2016

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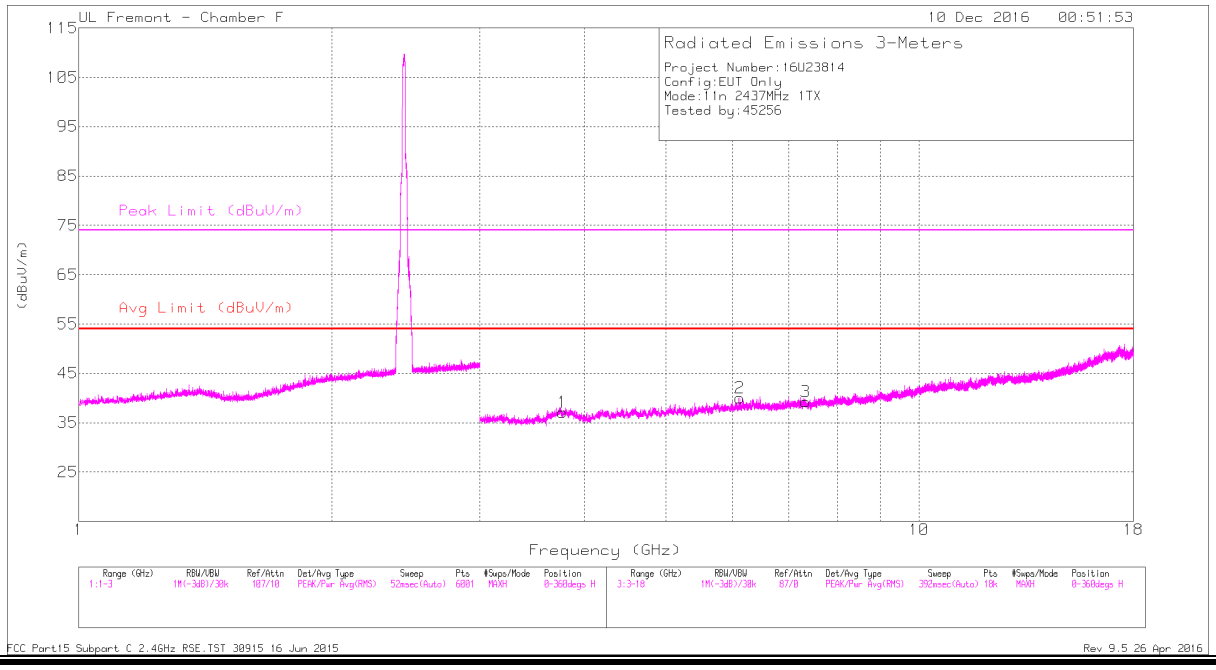
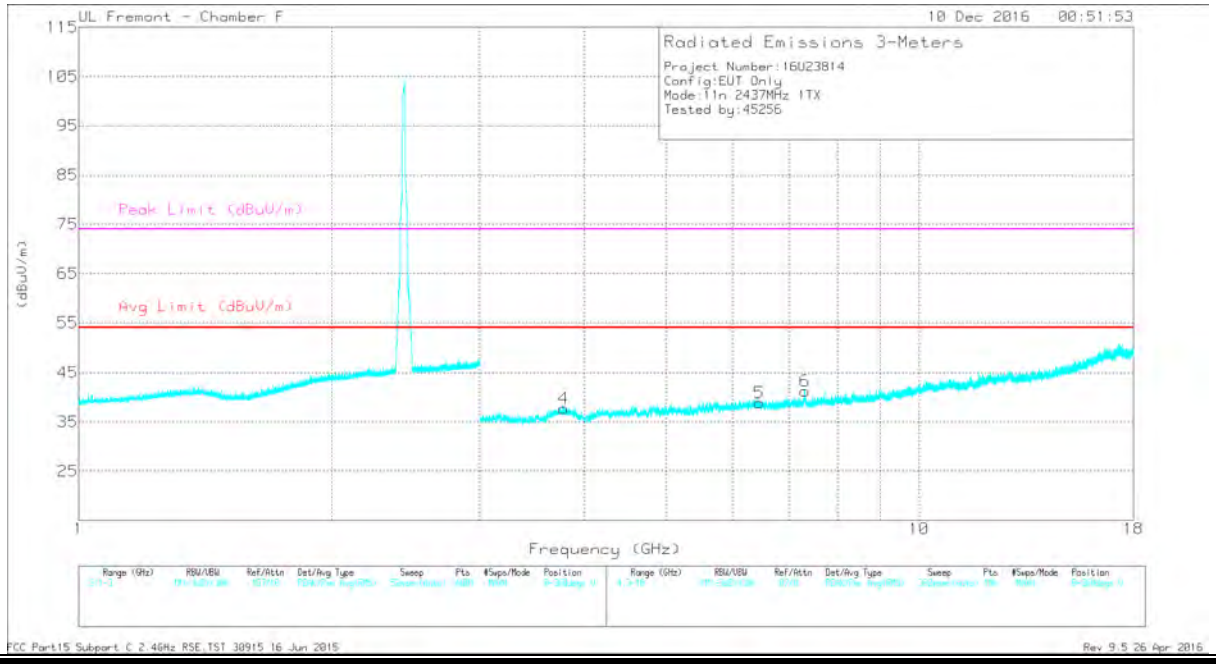
HARMONICS AND SPURIOUS EMISSIONS MID CHANNEL, CH 6)

MID CHANNEL HORIZONTAL



MID CHANNEL VERTICAL



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Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl/Flt r/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	* 3.767	38.33	PK2	33.4	-29	0	42.73	-	-	74	-31.27	312	122	H
	* 3.768	27.87	MAv1	33.4	-29.1	0	32.17	54	-21.83	-	-	312	122	H
2	6.12	36.81	PK2	35.5	-26.8	0	45.51	-	-	-	-	302	360	H
3	* 7.328	37.3	PK2	35.6	-26.4	0	46.5	-	-	74	-27.5	269	278	H
	* 7.327	26.48	MAv1	35.6	-26.4	0	35.68	54	-18.32	-	-	269	278	H
4	* 3.776	38.14	PK2	33.4	-28.9	0	42.64	-	-	74	-31.36	80	318	V
	* 3.775	28.02	MAv1	33.4	-29	0	32.42	54	-21.58	-	-	80	318	V
5	6.453	37.23	PK2	35.4	-27.2	0	45.43	-	-	-	-	283	120	V
6	* 7.317	40.93	PK2	35.5	-26.4	0	50.03	-	-	74	-23.97	128	107	V
	* 7.316	29.32	MAv1	35.5	-26.4	0	38.42	54	-15.58	-	-	128	107	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK2 - KDB558074 Method: Maximum Peak
MAv1 - KDB558074 Option 1 Maximum RMS Average
*.TST 30915 16 Jun 2015
Rev 9.5 26 Apr 2016

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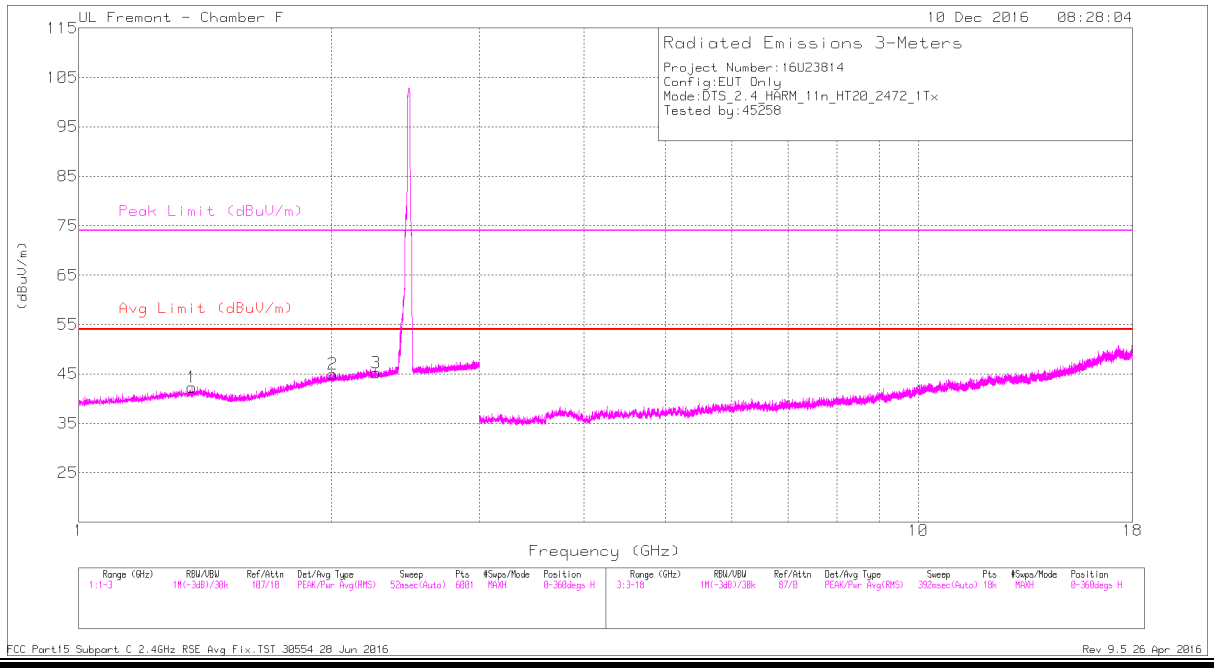
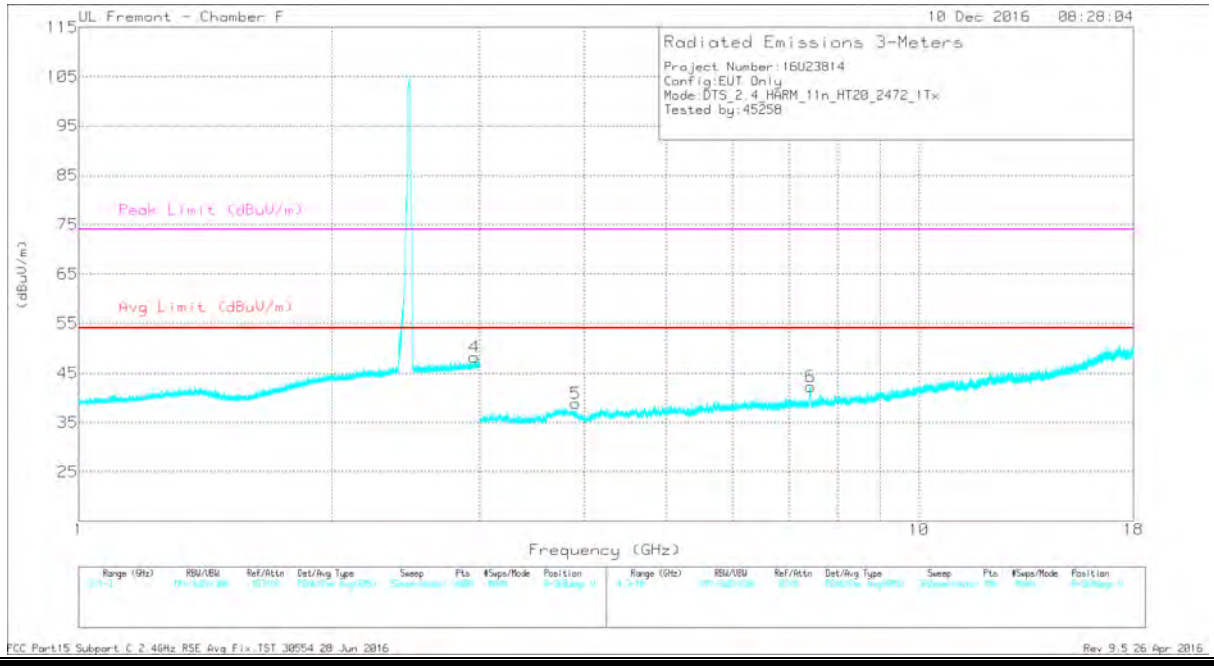
HARMONICS AND SPURIOUS EMISSIONS HIGH CHANNEL, CH 13)

HIGH CHANNEL HORIZONTAL



HIGH CHANNEL VERTICAL



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Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl/Flt r/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	2.006	41.41	PK2	31.5	-21.4	0	51.51	-	-	-	-	277	281	H
1	* 1.364	41.94	PK2	29.2	-22.1	0	49.04	-	-	74	-24.96	289	190	H
	* 1.363	31.11	MAv1	29.2	-22.1	0	38.21	54	-15.79	-	-	289	190	H
3	* 2.259	41.58	PK2	31.8	-20.9	0	52.48	-	-	74	-21.52	187	159	H
	* 2.26	30.87	MAv1	31.8	-21	0	41.67	54	-12.33	-	-	187	159	H
4	2.958	41.92	PK2	32.7	-20.4	0	54.22	-	-	-	-	227	236	V
6	* 7.429	40.15	PK2	35.6	-25.8	0	49.95	-	-	74	-24.05	240	270	V
	* 7.426	28.87	MAv1	35.6	-25.7	0	38.77	54	-15.23	-	-	240	270	V
5	* 3.904	37.99	PK2	33.4	-28.9	0	42.49	-	-	74	-31.51	115	179	V
	* 3.905	28.71	MAv1	33.4	-28.9	0	33.21	54	-20.79	-	-	115	179	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK2 - KDB558074 Method: Maximum Peak
MAv1 - KDB558074 Option 1 Maximum RMS Average
FCC Part15 Subpart C 2.4GHz RSE.TST 30915 16 Jun 2015
Rev 9.5 26 Apr 2016

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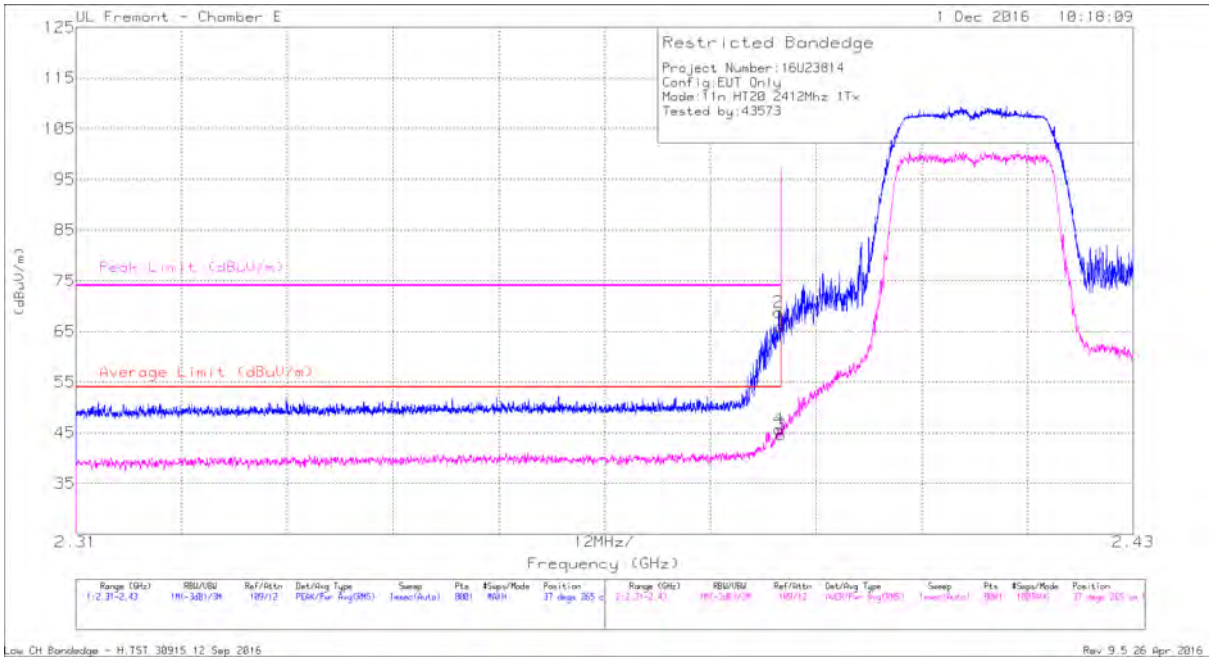
9.2.4. 11n HT20 ANTENNA B SISO MODE IN THE 2.4GHz BAND

AUTHORIZED BANDEDGE (LOW CHANNEL, CH 1)

LOW CHANNEL HORIZONTAL



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/Pad (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	53.49	Pk	32.1	-19.7	65.89	-	-	74	-8.11	37	265	H
2	* 2.39	56.35	Pk	32.1	-19.7	68.75	-	-	74	-5.25	37	265	H
3	* 2.39	32.23	RMS	32.1	-19.7	44.63	54	-9.37	-	-	37	265	H
4	* 2.39	33.29	RMS	32.1	-19.7	45.69	54	-8.31	-	-	37	265	H

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

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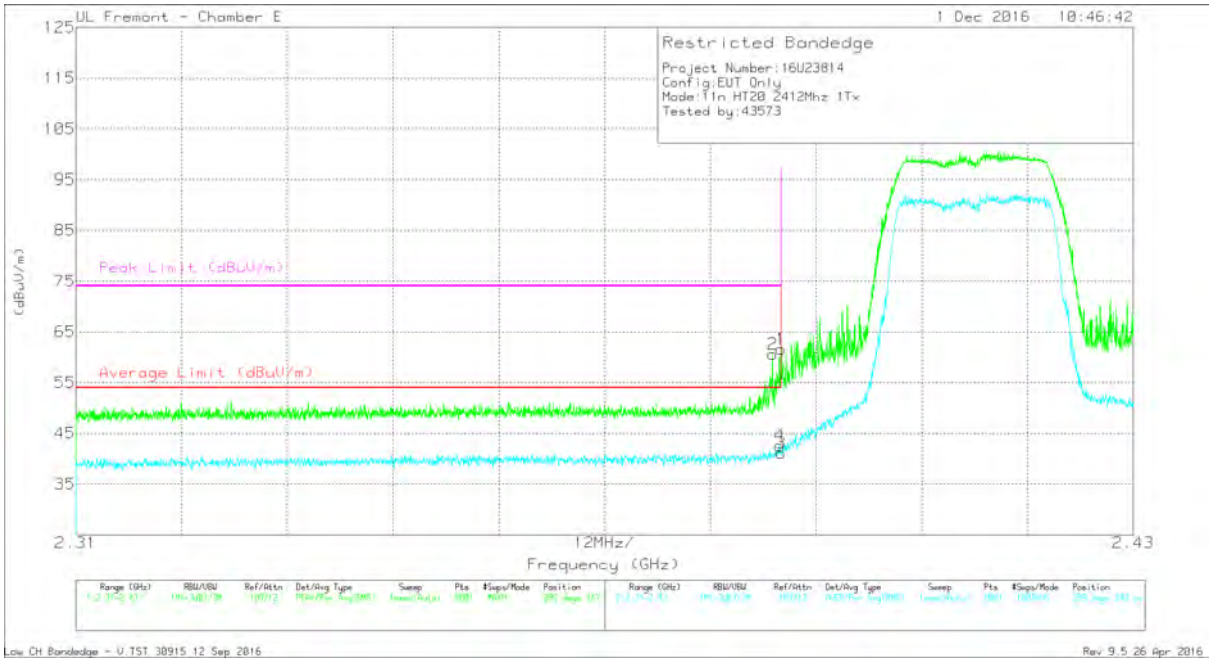
LOW CHANNEL VERTICAL



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/Pad (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	49.21	Pk	32.1	-19.7	61.61	-	-	74	-12.39	289	343	V
2	* 2.389	48.2	Pk	32.1	-19.7	60.6	-	-	74	-13.4	289	343	V
3	* 2.39	28.65	RMS	32.1	-19.7	41.05	54	-12.95	-	-	289	343	V
4	* 2.39	30.15	RMS	32.1	-19.7	42.55	54	-11.45	-	-	289	343	V

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

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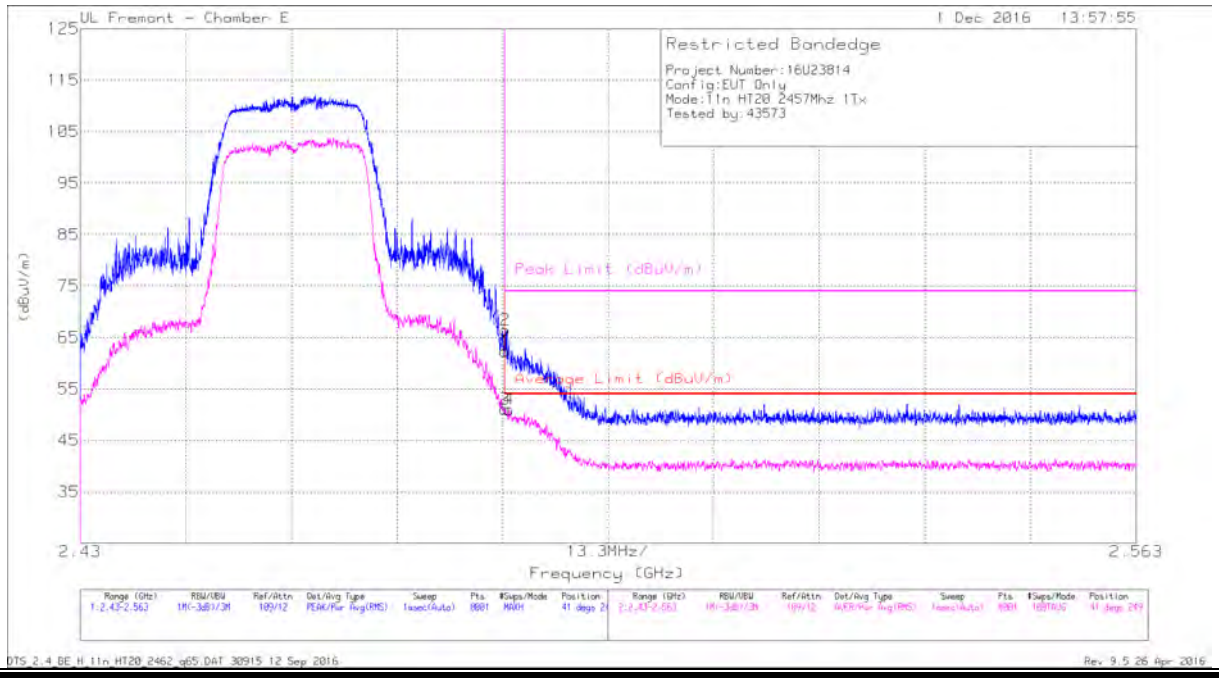
AUTHORIZED BANDEDGE (HIGH CHANNEL, CH 10)

HIGH CHANNEL HORIZONTAL



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	49.71	Pk	32.3	-19.7	62.31	-	-	74	-11.69	41	249	H
2	* 2.484	53.85	Pk	32.3	-19.7	66.45	-	-	74	-7.55	41	249	H
3	* 2.484	38.47	RMS	32.3	-19.7	51.07	54	-2.93	-	-	41	249	H
4	* 2.484	38.42	RMS	32.3	-19.7	51.02	54	-2.98	-	-	41	249	H

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

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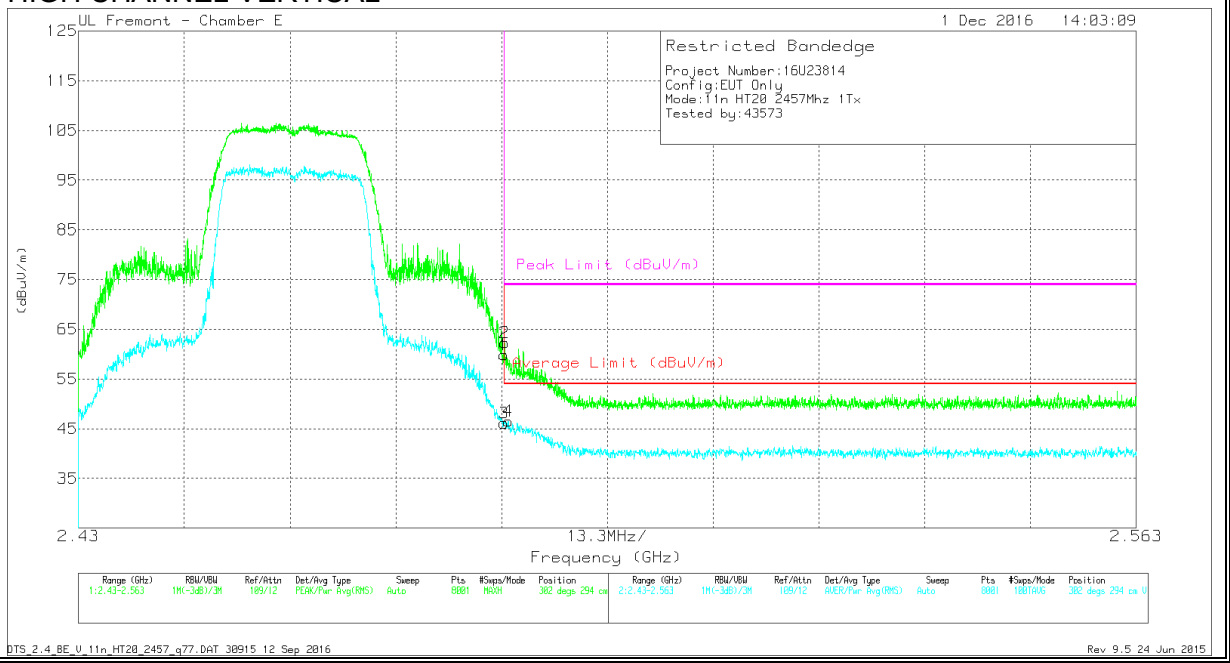
HIGH CHANNEL VERTICAL



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	47.27	Pk	32.3	-19.7	59.87	-	-	74	-14.13	302	294	V
2	* 2.484	49.71	Pk	32.3	-19.7	62.31	-	-	74	-11.69	302	294	V
3	* 2.484	33.53	RMS	32.3	-19.7	46.13	54	-7.87	-	-	302	294	V
4	* 2.484	33.9	RMS	32.3	-19.7	46.5	54	-7.5	-	-	302	294	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band
Pk - Peak detector
RMS - RMS detection

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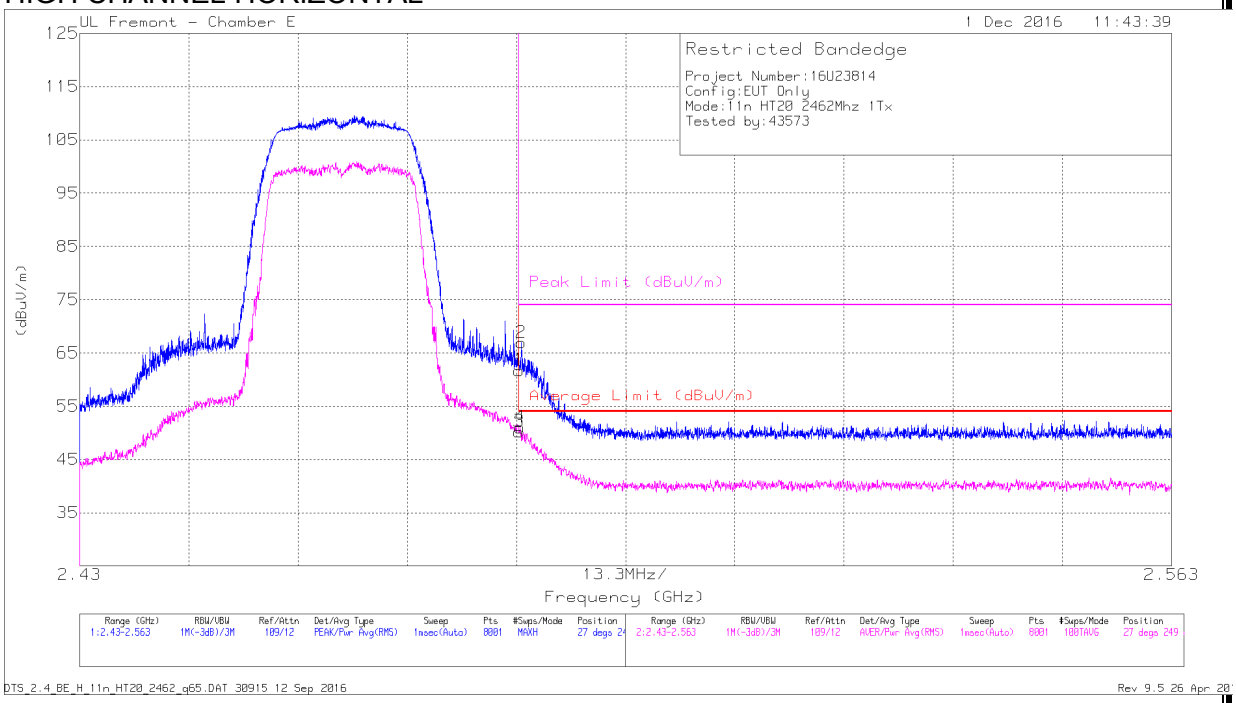
AUTHORIZED BANDEDGE (HIGH CHANNEL, CH 11)

HIGH CHANNEL HORIZONTAL



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	49.12	Pk	32.3	-19.7	61.72	-	-	74	-12.28	27	249	H
2	* 2.484	54.32	Pk	32.3	-19.7	66.92	-	-	74	-7.08	27	249	H
3	* 2.484	37.65	RMS	32.3	-19.7	50.25	54	-3.75	-	-	27	249	H
4	* 2.484	38.41	RMS	32.3	-19.7	51.01	54	-2.99	-	-	27	249	H

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

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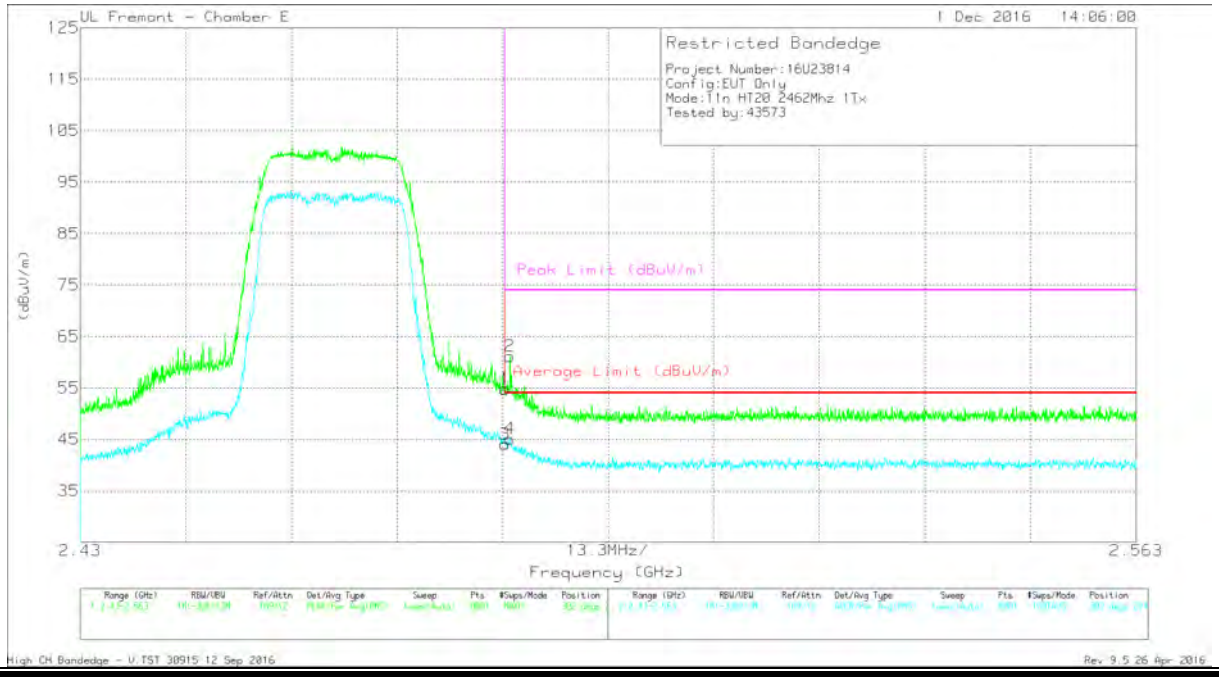
HIGH CHANNEL VERTICAL



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	42.2	Pk	32.3	-19.7	54.8	-	-	74	-19.2	302	294	V
2	* 2.484	48.56	Pk	32.3	-19.7	61.16	-	-	74	-12.84	302	294	V
3	* 2.484	31.48	RMS	32.3	-19.7	44.08	54	-9.92	-	-	302	294	V
4	* 2.484	32.52	RMS	32.3	-19.7	45.12	54	-8.88	-	-	302	294	V

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

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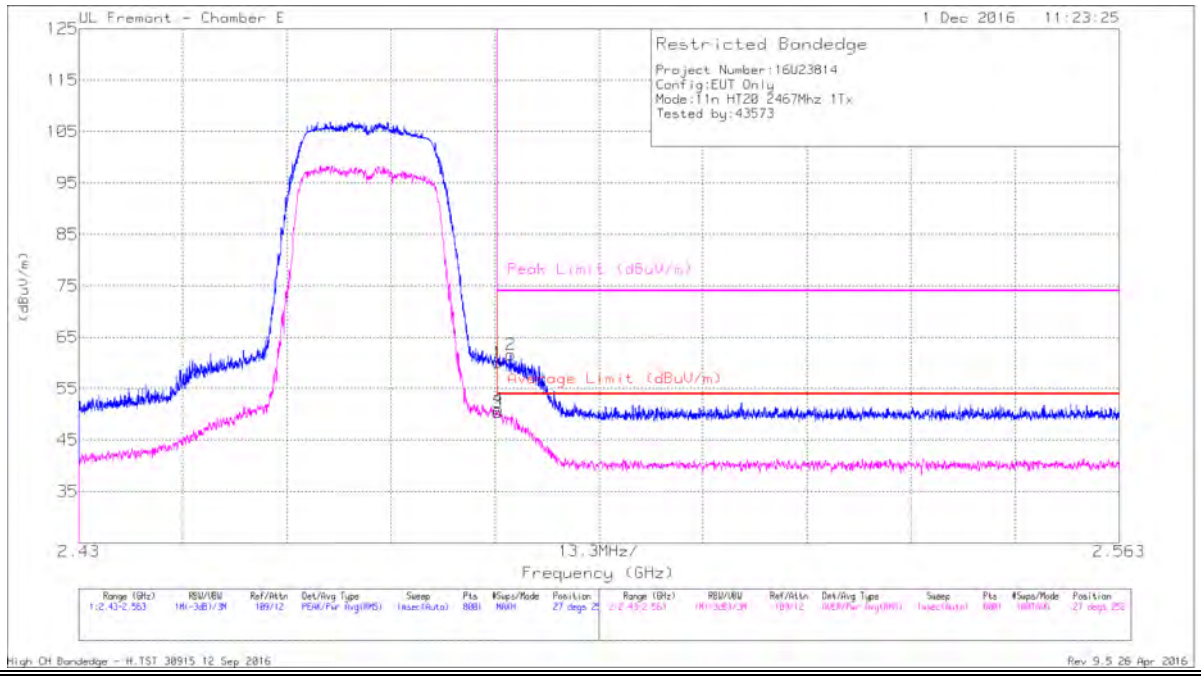
AUTHORIZED BANDEDGE (HIGH CHANNEL, CH 12)

HIGH CHANNEL HORIZONTAL



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	47.42	Pk	32.3	-19.7	60.02	-	-	74	-13.98	27	252	H
2	* 2.485	49	Pk	32.3	-19.7	61.6	-	-	74	-12.4	27	252	H
3	* 2.484	37.77	RMS	32.3	-19.7	50.37	54	-3.63	-	-	27	252	H
4	* 2.484	38.46	RMS	32.3	-19.7	51.06	54	-2.94	-	-	27	252	H

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

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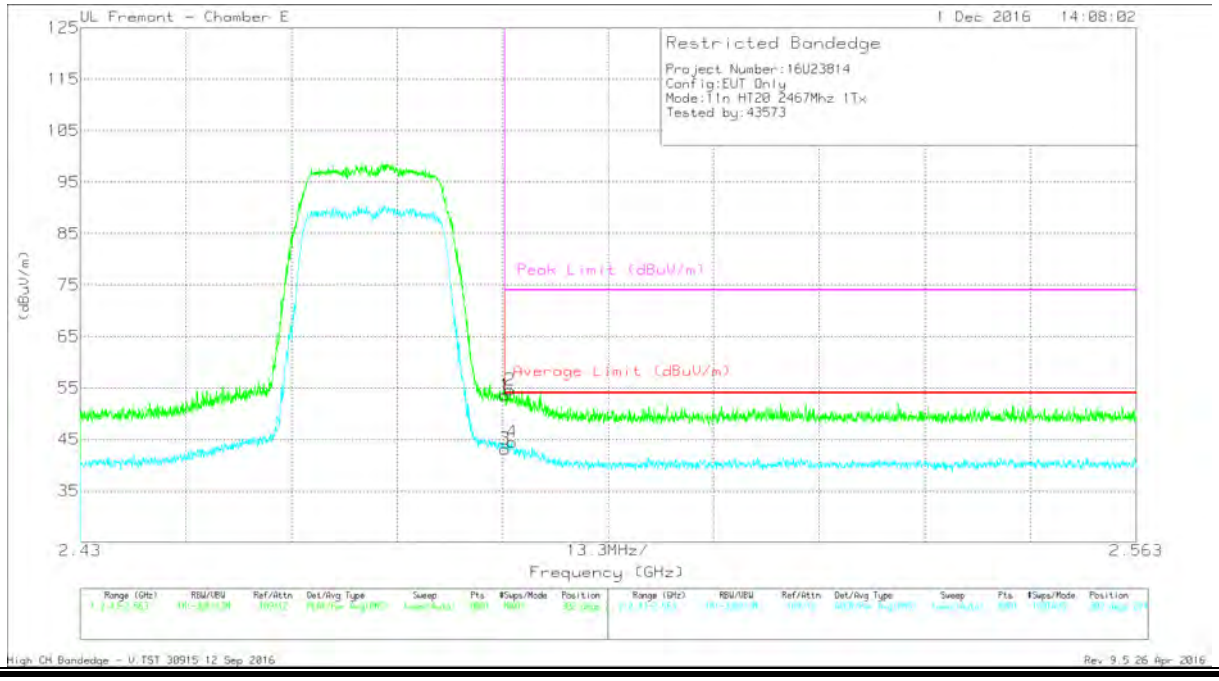
HIGH CHANNEL VERTICAL



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/Pad (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	Pk	32.3	-19.7	53.6	-	-	74	-20.4	302	294	V
2	* 2.484	42.02	Pk	32.3	-19.7	54.62	-	-	74	-19.38	302	294	V
3	* 2.484	30.56	RMS	32.3	-19.7	43.16	54	-10.84	-	-	302	294	V
4	* 2.484	31.88	RMS	32.3	-19.7	44.48	54	-9.52	-	-	302	294	V

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

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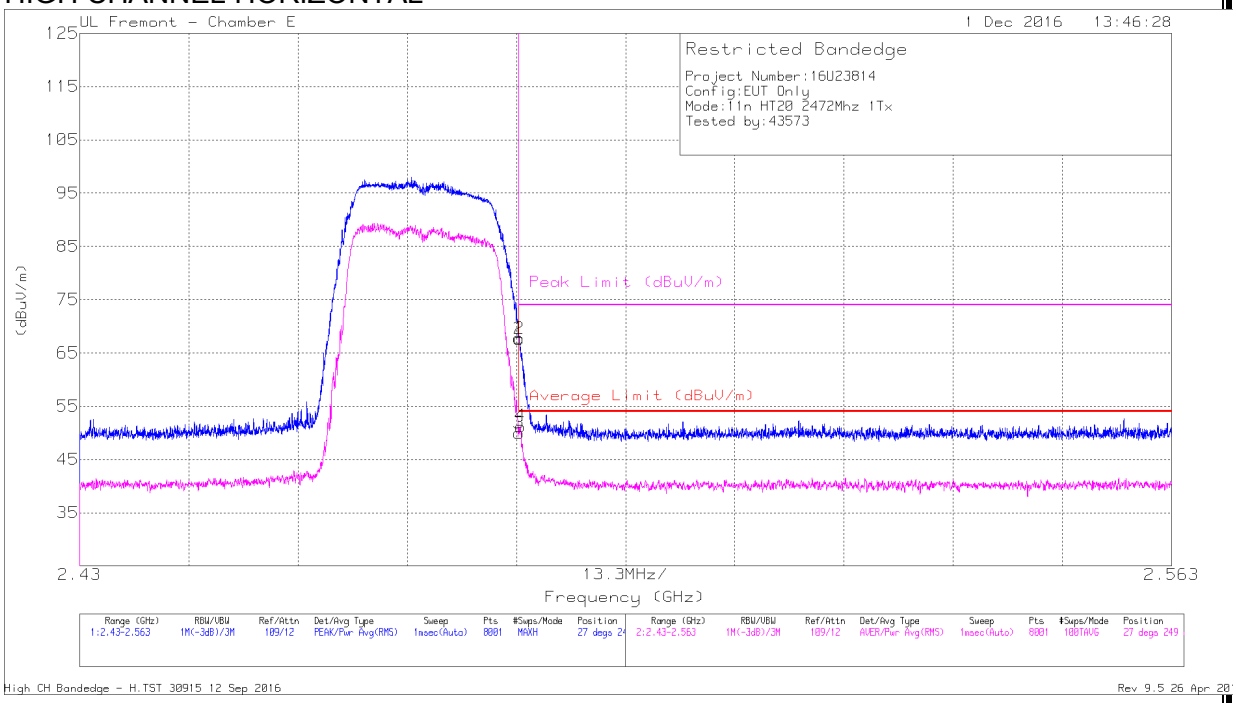
AUTHORIZED BANDEDGE (HIGH CHANNEL, CH 13)

HIGH CHANNEL HORIZONTAL



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/Pad (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	55.18	Pk	32.3	-19.7	67.78	-	-	74	-6.22	27	249	H
2	* 2.484	55.03	Pk	32.3	-19.7	67.63	-	-	74	-6.37	27	249	H
3	* 2.484	37.35	RMS	32.3	-19.7	49.95	54	-4.05	-	-	27	249	H
4	* 2.484	38.64	RMS	32.3	-19.7	51.24	54	-2.76	-	-	27	249	H

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

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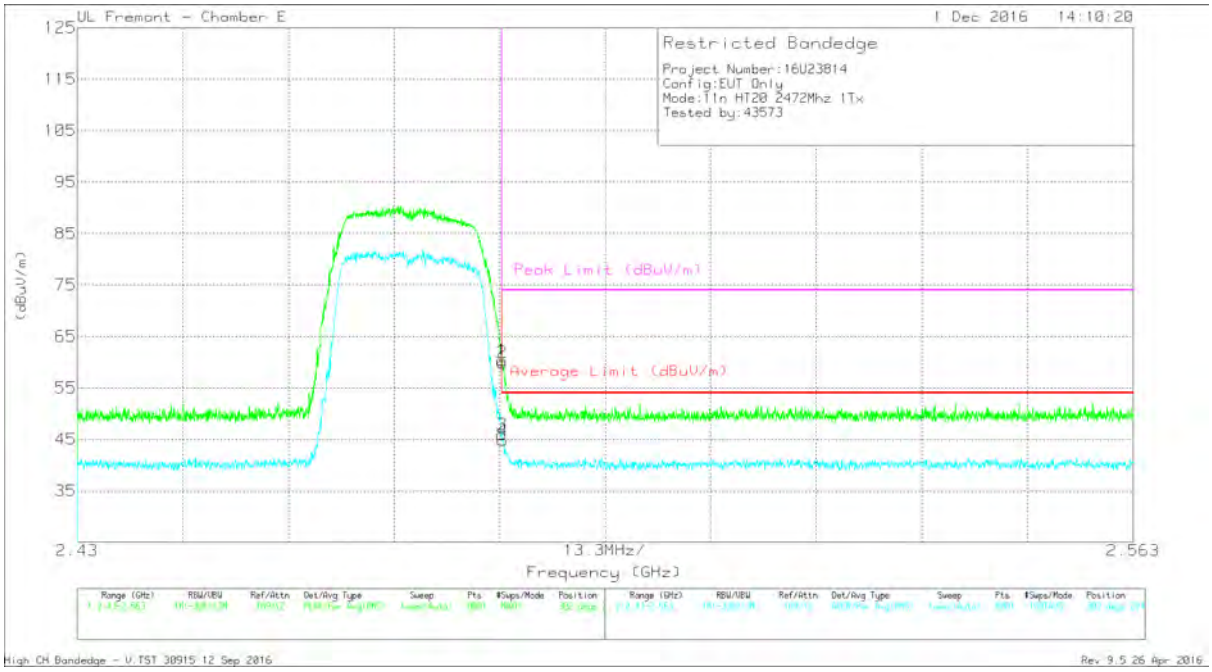
HIGH CHANNEL VERTICAL



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	47.76	Pk	32.3	-19.7	60.36	-	-	74	-13.64	302	294	V
2	* 2.484	47.32	Pk	32.3	-19.7	59.92	-	-	74	-14.08	302	294	V
3	* 2.484	33.31	RMS	32.3	-19.7	45.91	54	-8.09	-	-	302	294	V
4	* 2.484	32.24	RMS	32.3	-19.7	44.84	54	-9.16	-	-	302	294	V

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

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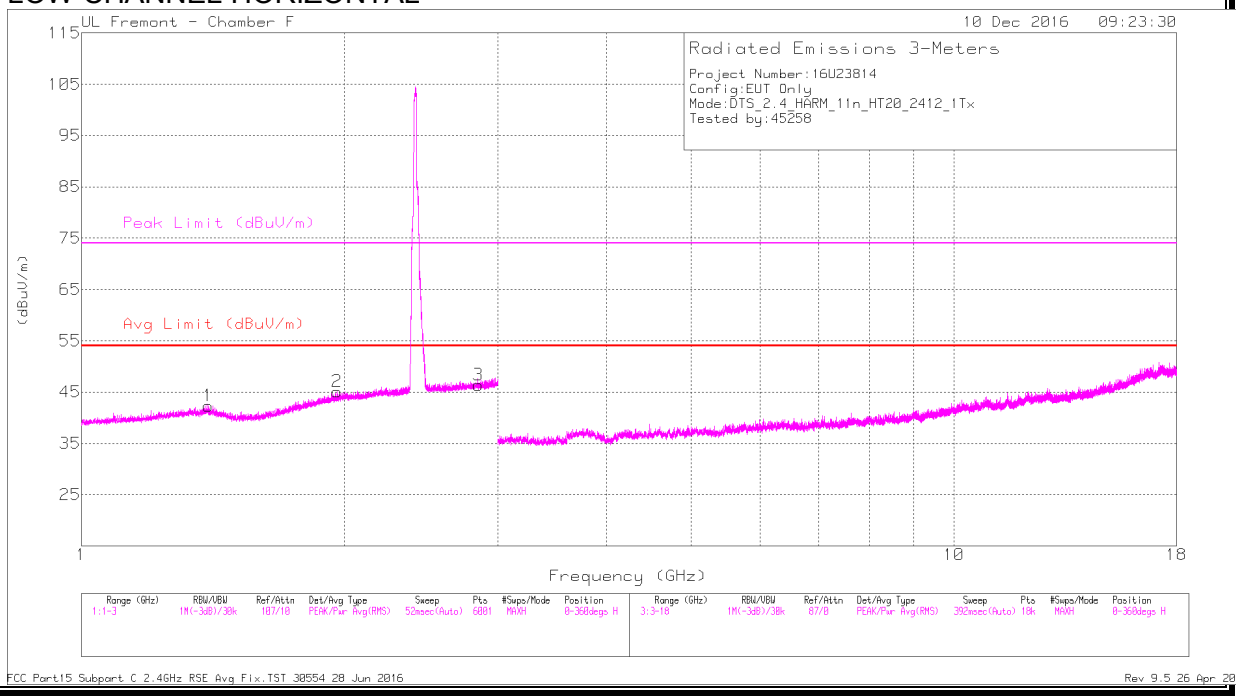
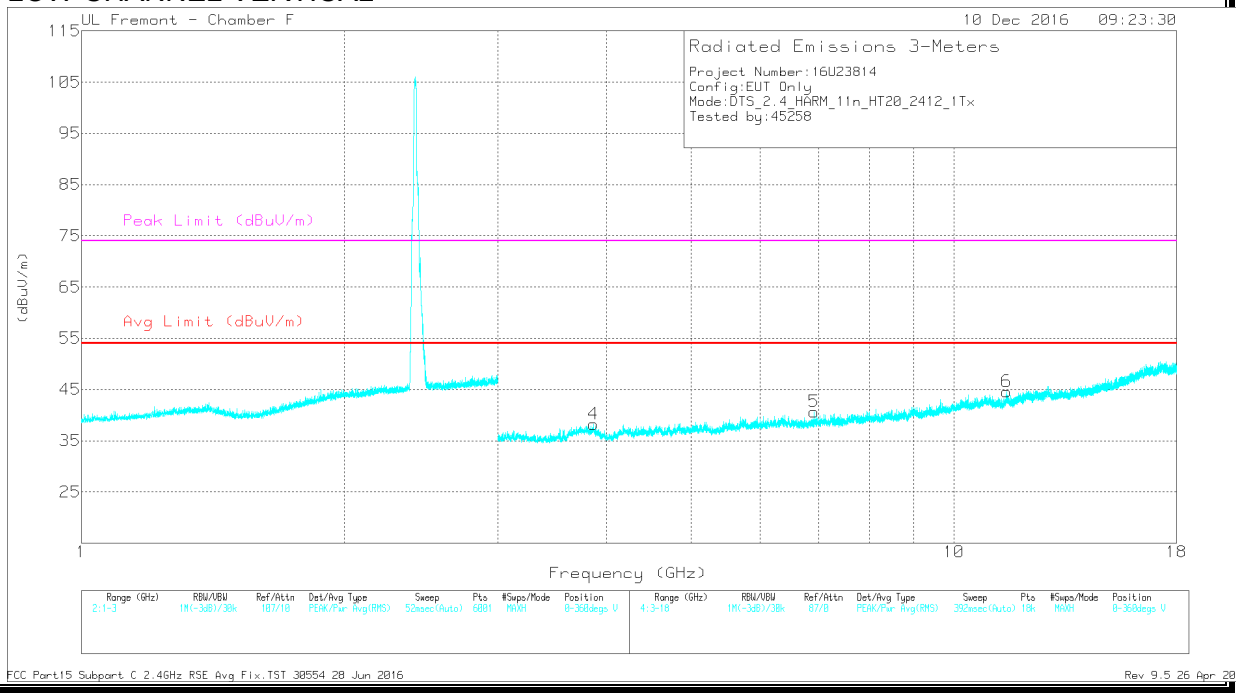
HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, CH 1)

LOW CHANNEL HORIZONTAL



LOW CHANNEL VERTICAL



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Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (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	1.963	41.2	PK2	31.3	-21.4	0	51.1	-	-	-	-	63	137	H
	* 1.398	41.48	PK2	29.3	-22	0	48.78	-	-	74	-25.22	136	208	H
1	* 1.4	30.91	MAv1	29.3	-22	0	38.21	54	-15.79	-	-	136	208	H
3	* 2.853	41.78	PK2	32.6	-20.3	0	54.08	-	-	74	-19.92	239	181	H
	* 2.852	30.71	MAv1	32.6	-20.3	0	43.01	54	-10.99	-	-	239	181	H
5	6.91	37.32	PK2	35.5	-26.5	0	46.32	-	-	-	-	163	182	V
4	* 3.865	38.68	PK2	33.4	-28.2	0	43.88	-	-	74	-30.12	206	232	V
	* 3.864	28.42	MAv1	33.4	-28.2	0	33.62	54	-20.38	-	-	206	232	V
6	* 11.5	33.12	PK2	38.1	-21.2	0	50.02	-	-	74	-23.98	335	255	V
	* 11.498	23.28	MAv1	38.1	-21.3	0	40.08	54	-13.92	-	-	335	255	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK2 - KDB558074 Method: Maximum Peak
MAv1 - KDB558074 Option 1 Maximum RMS Average
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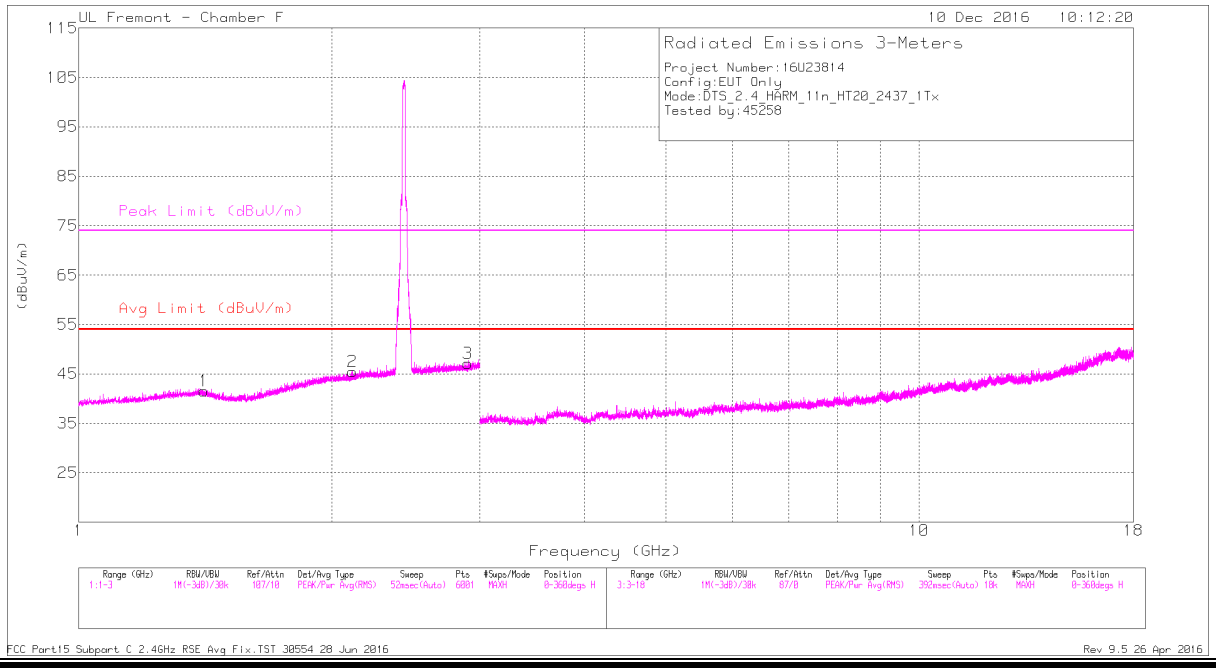
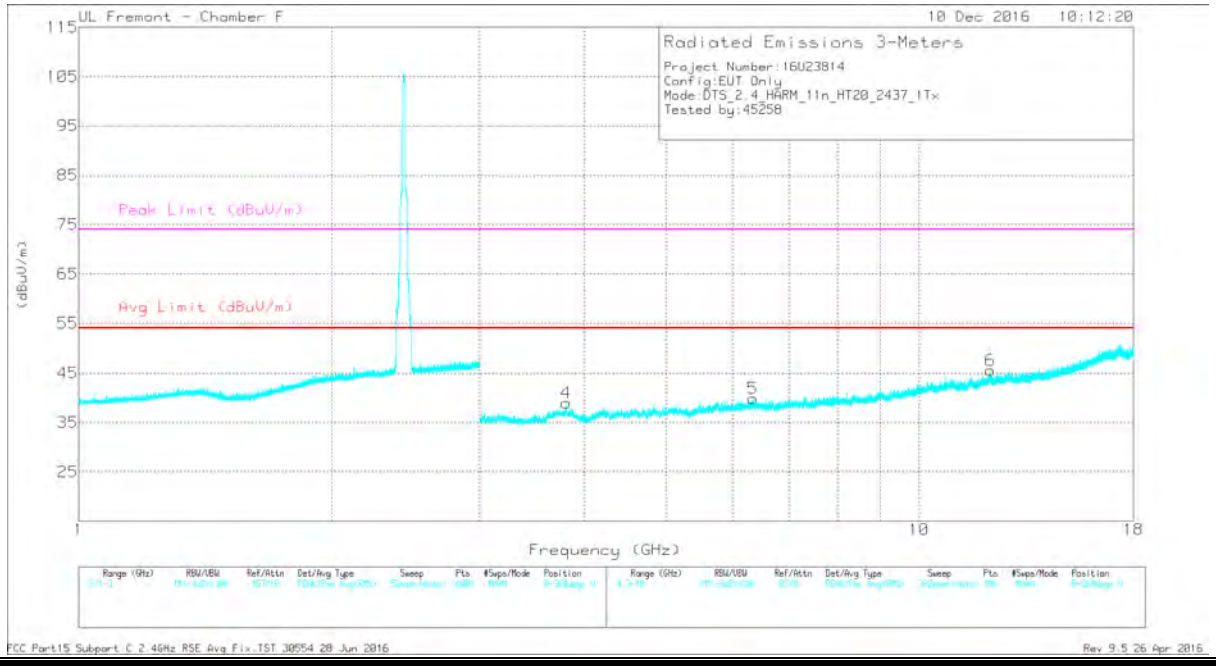
HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, CH 6)

MID CHANNEL HORIZONTAL



MID CHANNEL VERTICAL



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Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (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	2.118	42.21	PK2	31.5	-21.2	0	52.51	-	-	-	-	326	138	H
1	* 1.411	41.45	PK2	29.2	-22	0	48.65	-	-	74	-25.35	295	199	H
	* 1.41	30.99	MAv1	29.2	-22	0	38.19	54	-15.81	-	-	295	199	H
3	2.906	41.51	PK2	32.6	-20.4	0	53.71	-	-	-	-	295	199	H
5	6.349	36.72	PK2	35.4	-26.7	0	45.42	-	-	-	-	251	172	V
4	* 3.802	38.52	PK2	33.4	-28.6	0	43.32	-	-	74	-30.68	155	234	V
	* 3.803	28.26	MAv1	33.4	-28.6	0	33.06	54	-20.94	-	-	155	234	V
6	* 12.171	33.94	PK2	38.9	-21.5	0	51.34	-	-	74	-22.66	58	208	V
	* 12.17	23.8	MAv1	38.9	-21.4	0	41.3	54	-12.7	-	-	58	208	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
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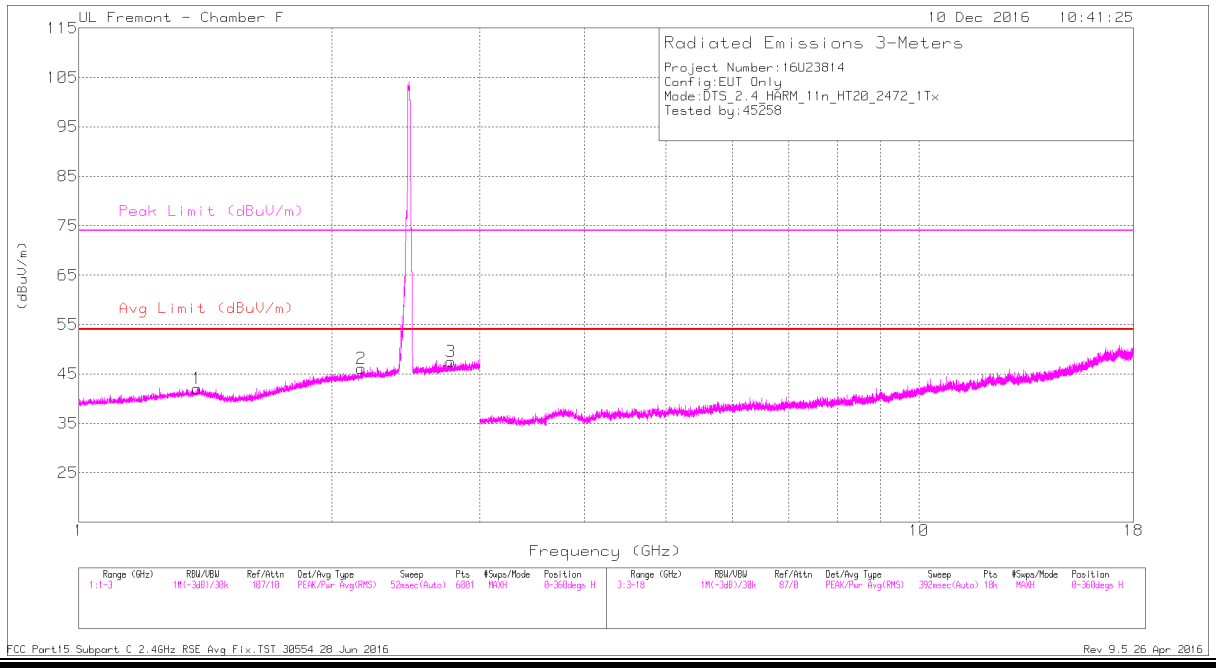
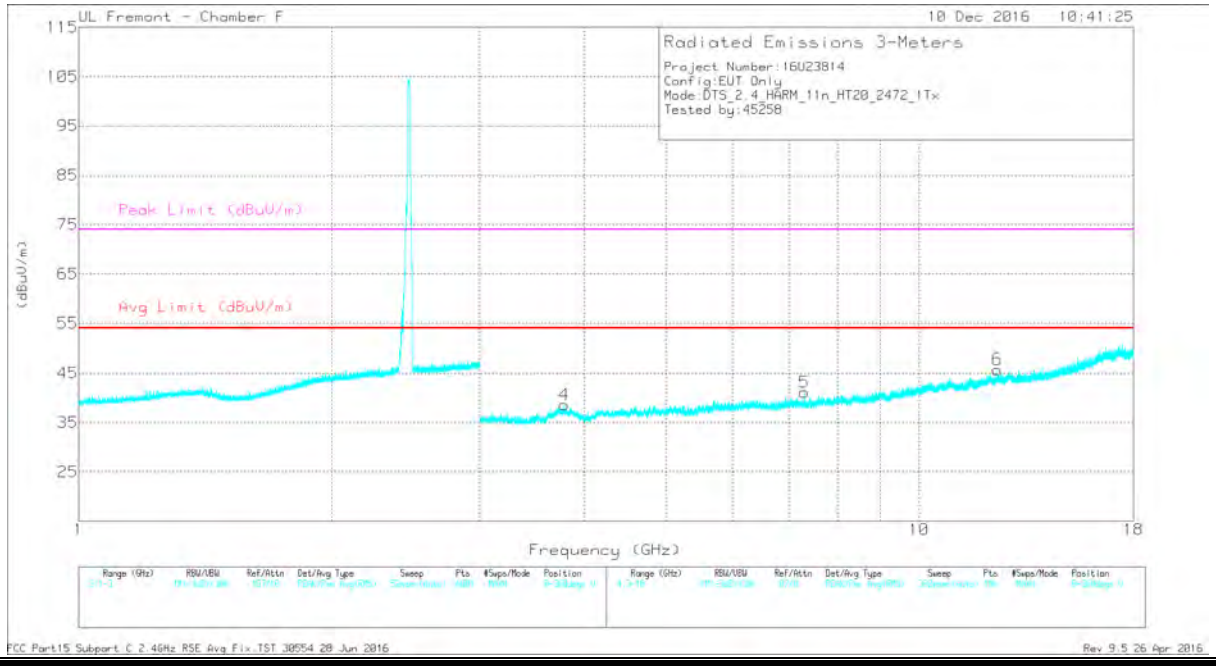
HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, CH 13)

HIGH CHANNEL HORIZONTAL



HIGH CHANNEL VERTICAL



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Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (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	2.172	41.33	PK2	31.8	-21.1	0	52.03	-	-	-	-	66	195	H
1	* 1.384	42.76	PK2	29.2	-22.1	0	49.86	-	-	74	-24.14	146	239	H
	* 1.383	30.86	MAv1	29.2	-22.1	0	37.96	54	-16.04	-	-	146	239	H
3	* 2.774	41.19	PK2	32.5	-20.5	0	53.19	-	-	74	-20.81	102	275	H
	* 2.776	31.12	MAv1	32.5	-20.5	0	43.12	54	-10.88	-	-	102	275	H
4	* 3.785	38.2	PK2	33.4	-28.9	0	42.7	-	-	74	-31.3	258	219	V
	* 3.782	28.59	MAv1	33.4	-28.9	0	33.09	54	-20.91	-	-	258	219	V
5	* 7.305	37.46	PK2	35.5	-26.5	0	46.46	-	-	74	-27.54	331	255	V
	* 7.306	27.17	MAv1	35.5	-26.5	0	36.17	54	-17.83	-	-	331	255	V
6	* 12.404	34.9	PK2	39	-22	0	51.9	-	-	74	-22.1	284	278	V
	* 12.406	24.18	MAv1	39	-22	0	41.18	54	-12.82	-	-	284	278	V

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