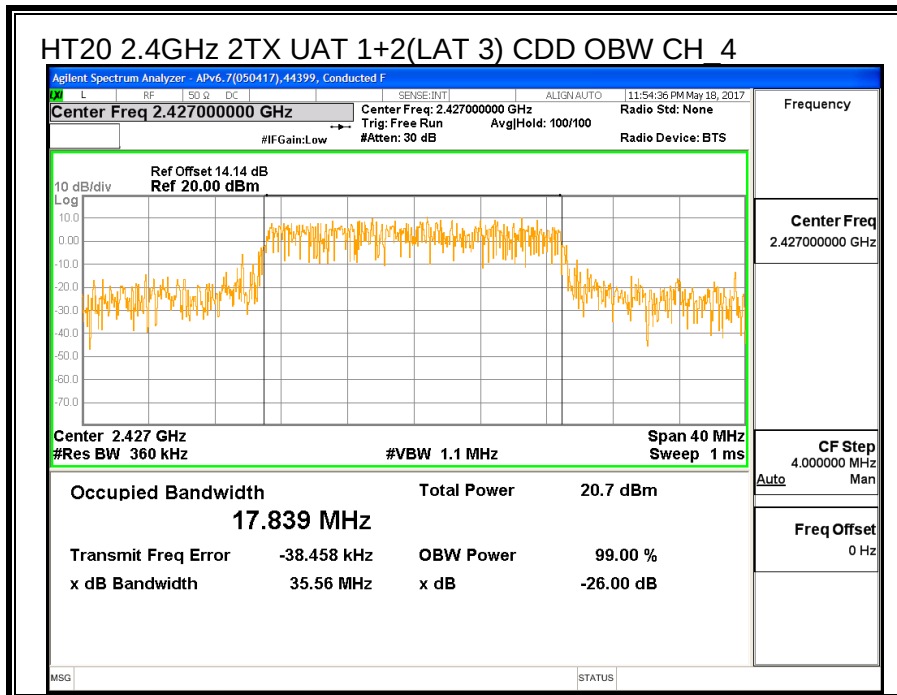
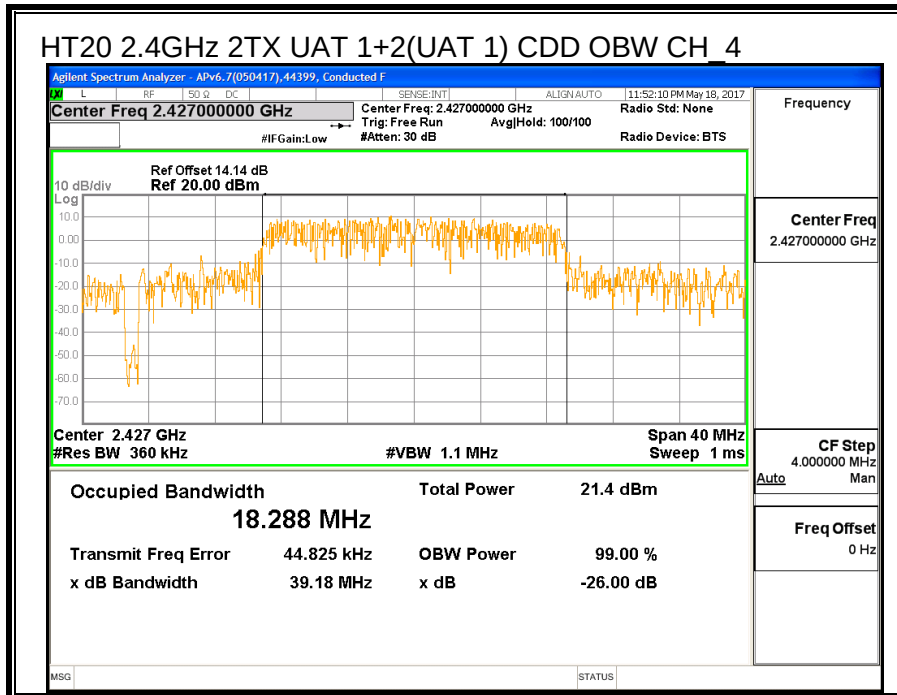
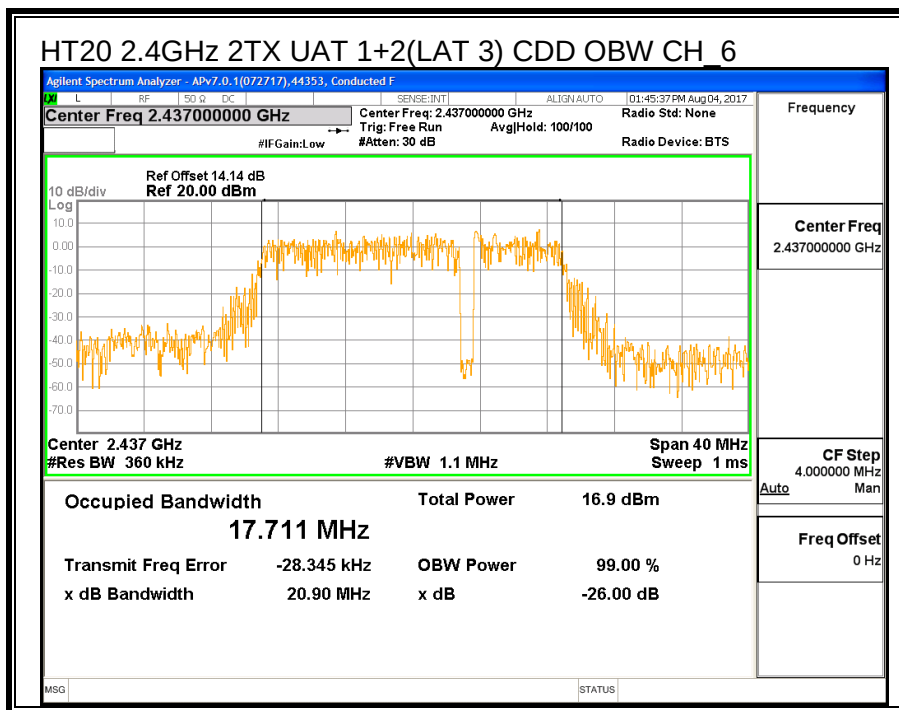
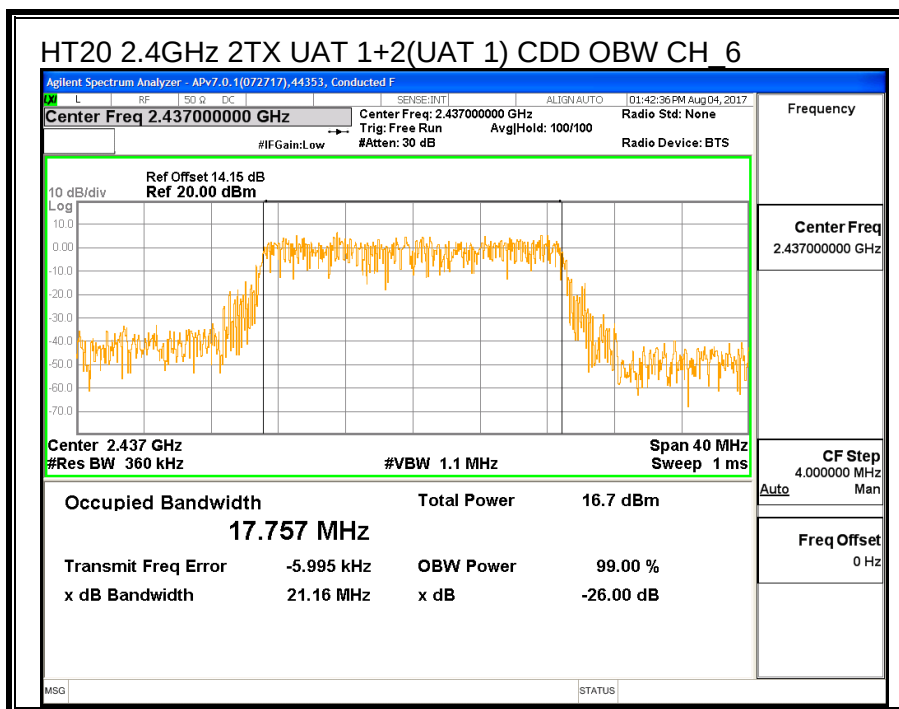
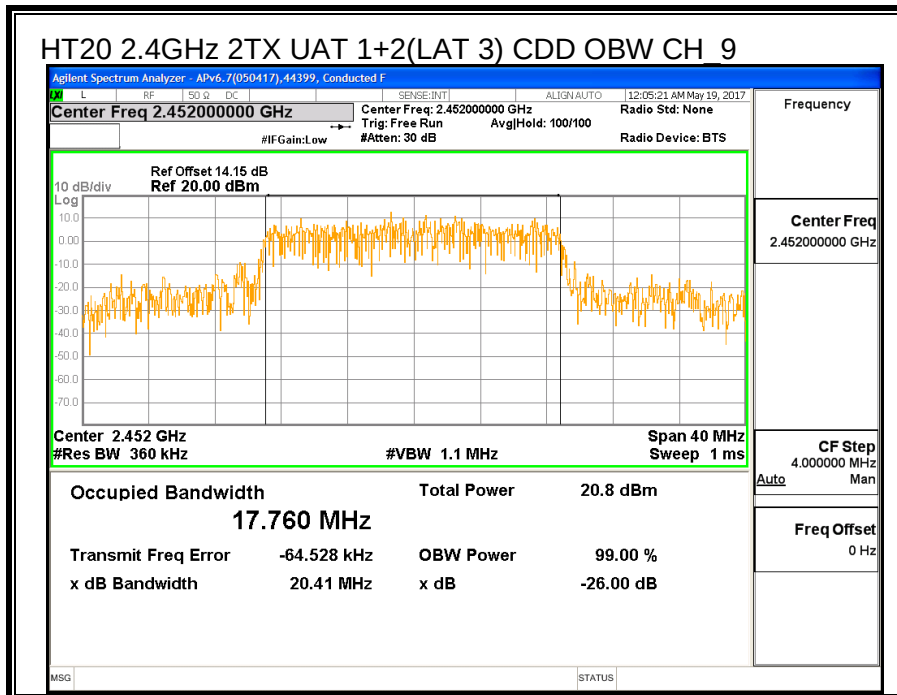
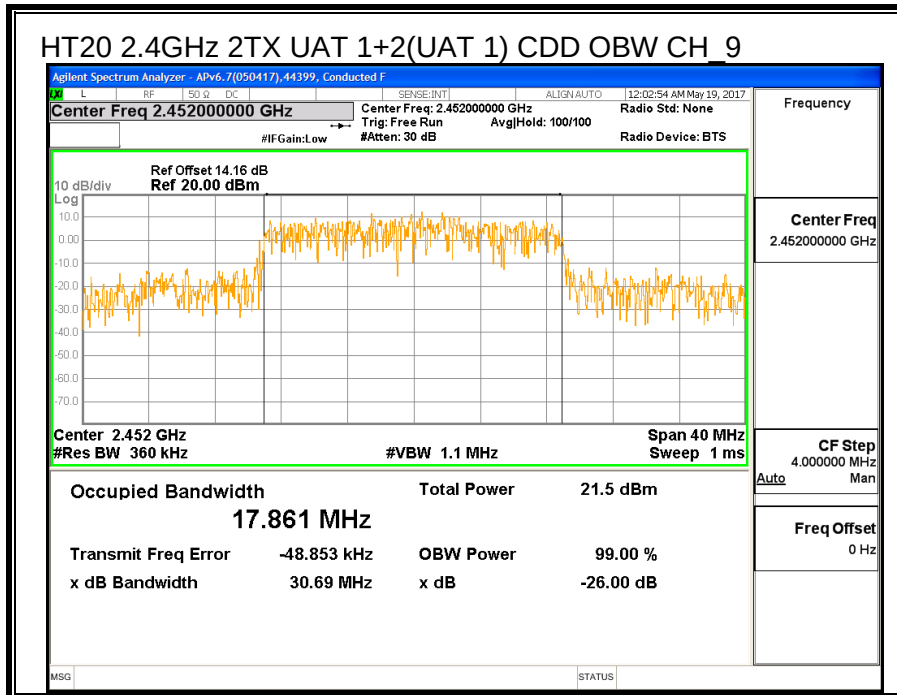
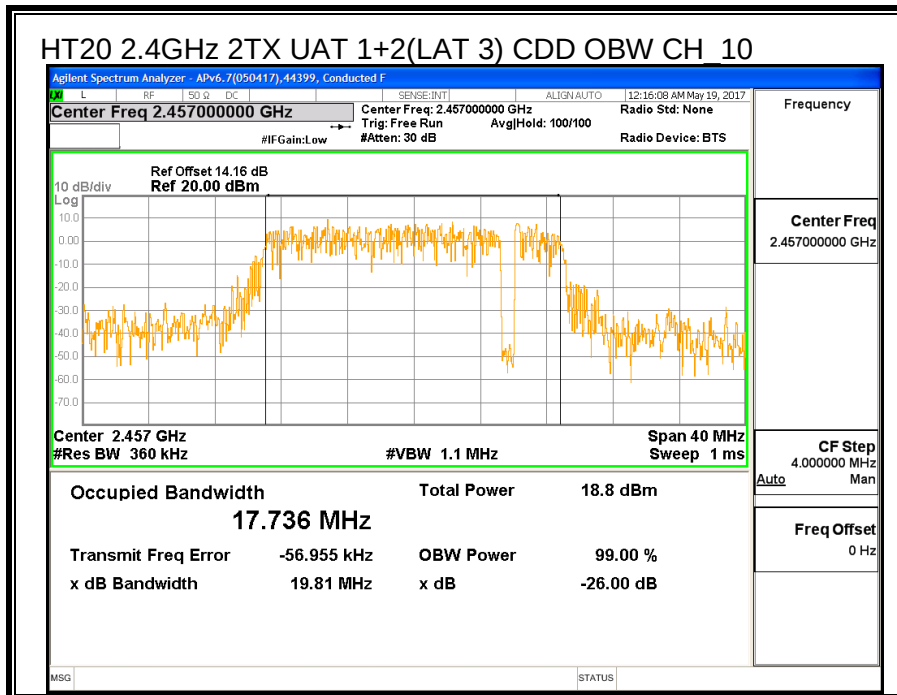
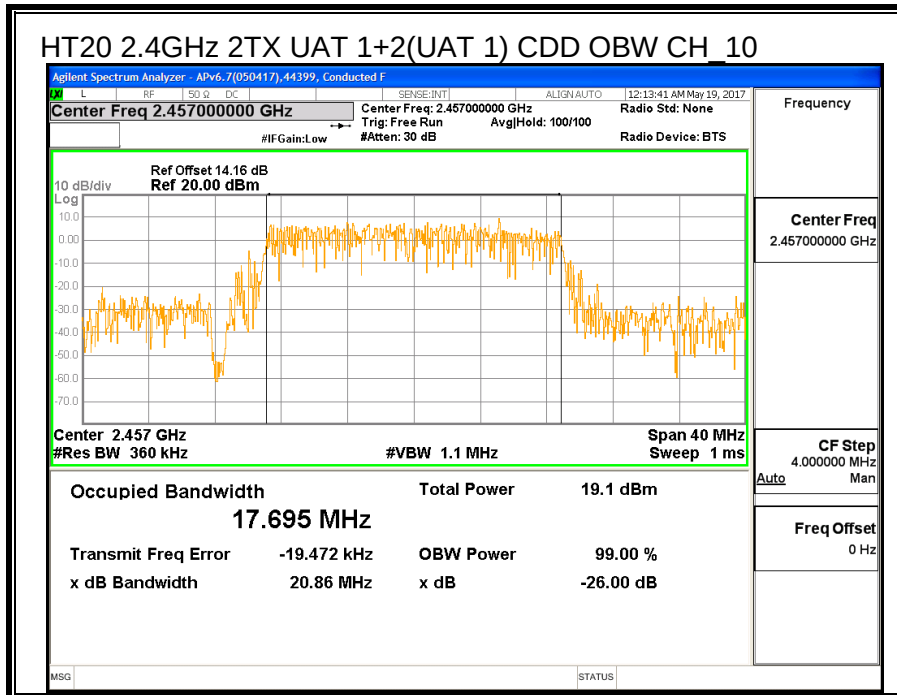
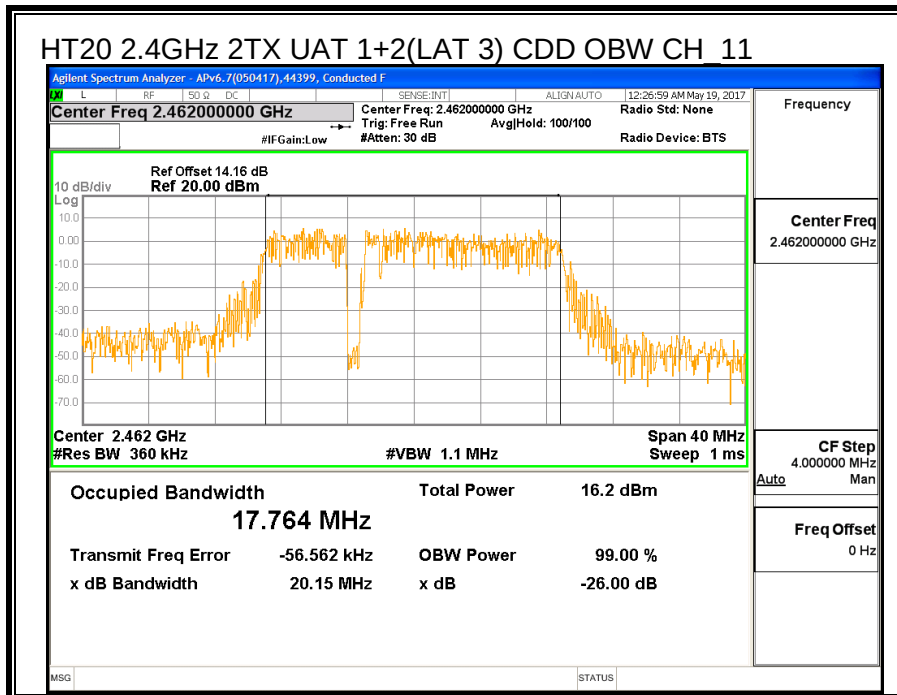
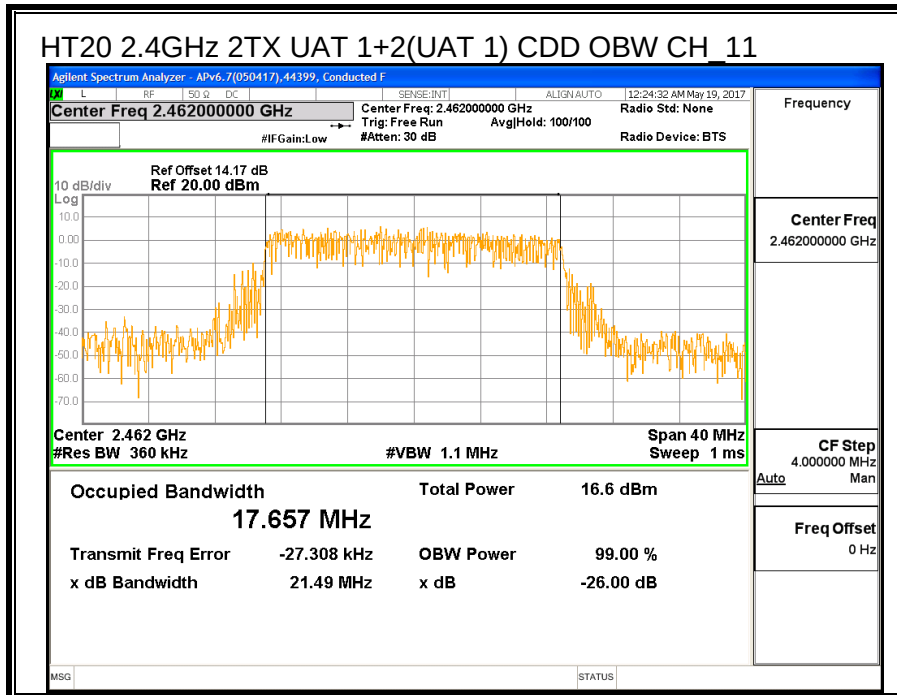


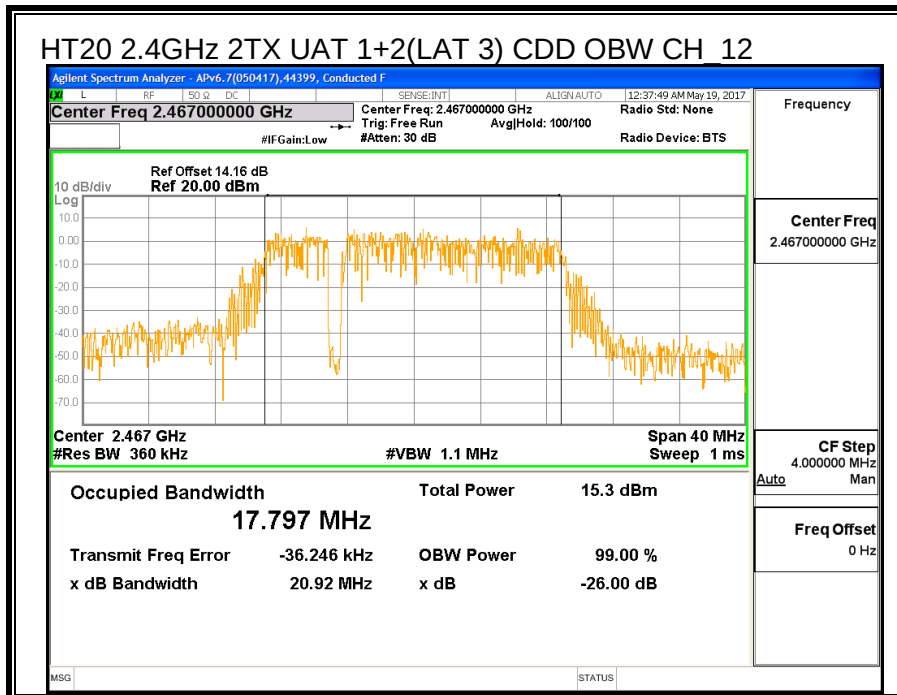
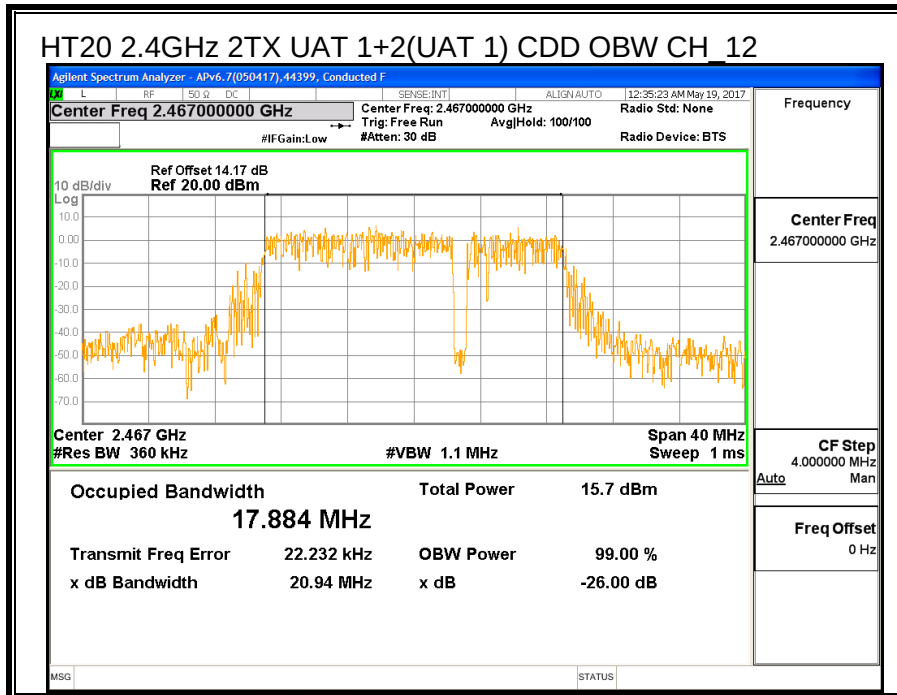


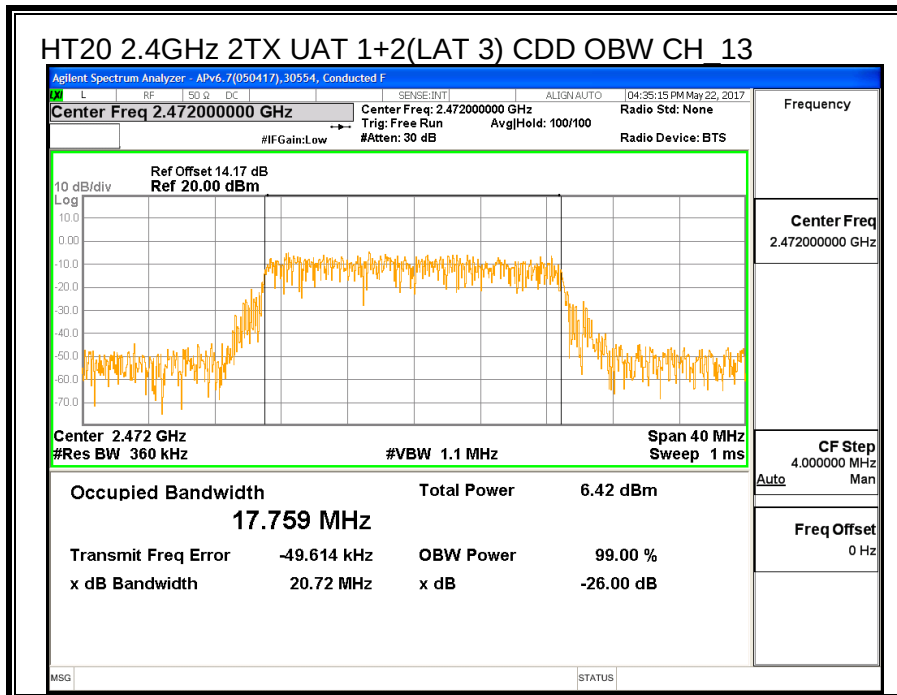
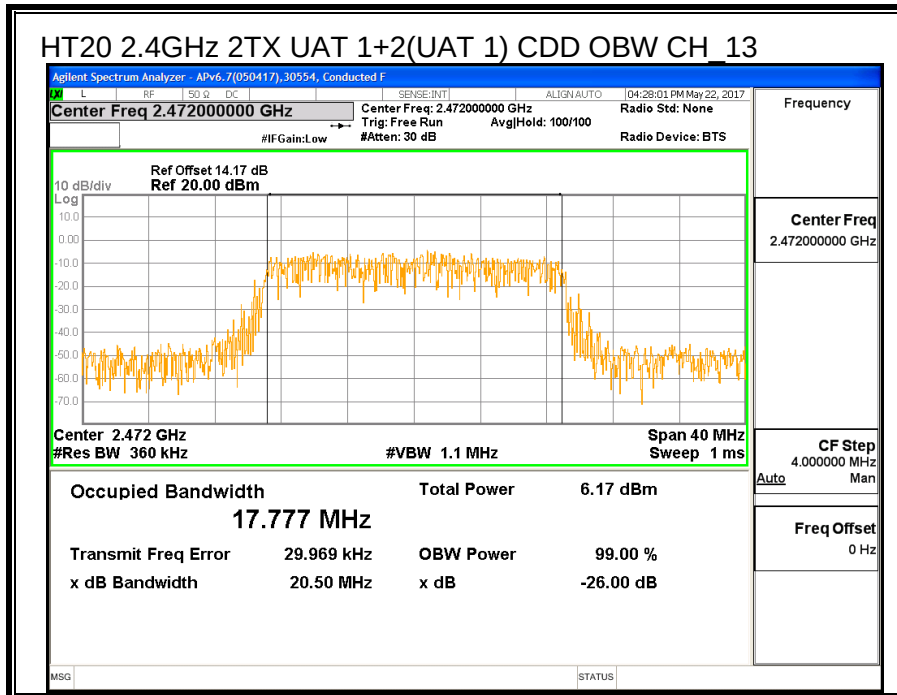












8.5.3. AVERAGE POWER

ID:	30554	Date:	8/1/17
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LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	Power UAT 1 (MHz)	Power LAT 3 (MHz)
Low_1	2412	16.41	16.37
Low_2	2417	18.43	18.40
Low_3	2422	19.87	19.91
Low_4	2427	21.45	21.39
Middle_6	2437	21.44	21.40
High_9	2452	19.88	19.97
High_10	2457	18.48	18.42
High_11	2462	16.44	16.48
High_12	2467	14.39	14.33
High_13	2472	6.87	6.89

8.5.4. OUTPUT POWER

ID:	30554	Date:	8/1/17
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LIMITS

FCC §15.247

IC RSS-247 (5.4) (d)

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:

UAT 1 Gain (dBi)	LAT 3 Gain (dBi)	Uncorrelated Chains Directional Gain (dBi)
-1.67	-4.42	-2.83

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	-2.83	30.00	30	36	30.00
Low_2	2417	-2.83	30.00	30	36	30.00
Low_3	2422	-2.83	30.00	30	36	30.00
Low_4	2427	-2.83	30.00	30	36	30.00
Middle_6	2437	-2.83	30.00	30	36	30.00
High_9	2452	-2.83	30.00	30	36	30.00
High_10	2457	-2.83	30.00	30	36	30.00
High_11	2462	-2.83	30.00	30	36	30.00
High_12	2467	-2.83	30.00	30	36	30.00
High_13	2472	-2.83	30.00	30	36	30.00

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

Channel	Frequency (MHz)	UAT 1 Meas Power (dBm)	LAT 3 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margi (dB)
Low_1	2412	22.53	22.52	25.54	30.00	-4.46
Low_2	2417	24.58	24.74	27.67	30.00	-2.33
Low_3	2422	25.27	23.77	23.66	30.00	-6.34
Low_4	2427	26.59	26.76	29.69	30.00	-0.31
Middle_6	2437	26.67	26.78	29.74	30.00	-0.26
High_9	2452	24.01	23.89	26.96	30.00	-3.04
High_10	2457	24.93	24.71	27.83	30.00	-2.17
High_11	2462	22.51	22.84	25.69	30.00	-4.31
High_12	2467	20.68	20.74	23.72	30.00	-6.28
High_13	2472	13.04	12.98	16.02	30.00	-13.98

8.5.5. POWER SPECTRAL DENSITY

LIMITS

FCC §15.247

IC RSS-247 (5.2) (b)

For digitally modulated systems, the power spectral density conducted from 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.

DIRECTIONAL ANTENNA GAIN

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

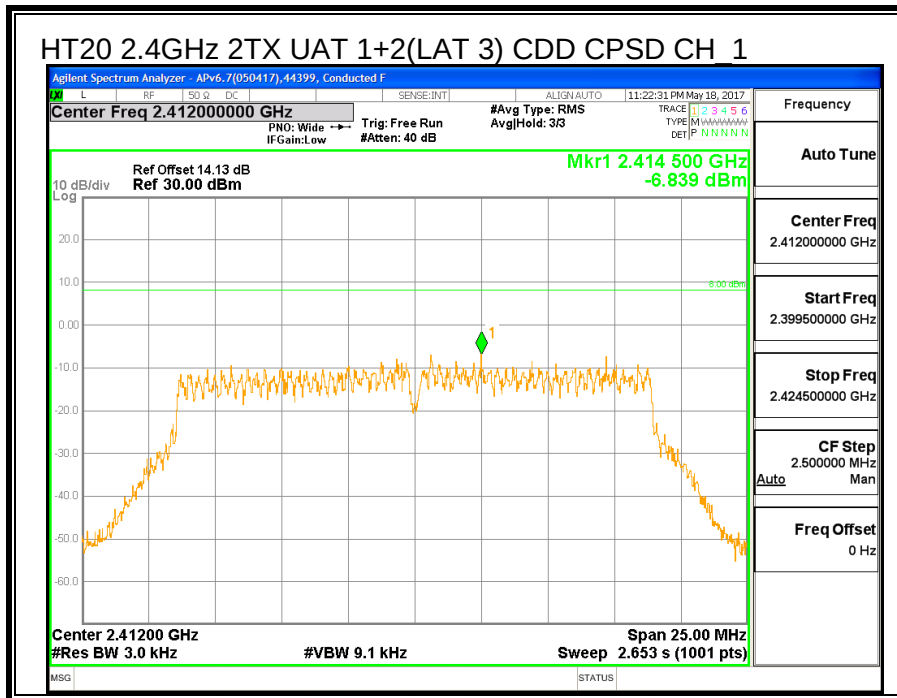
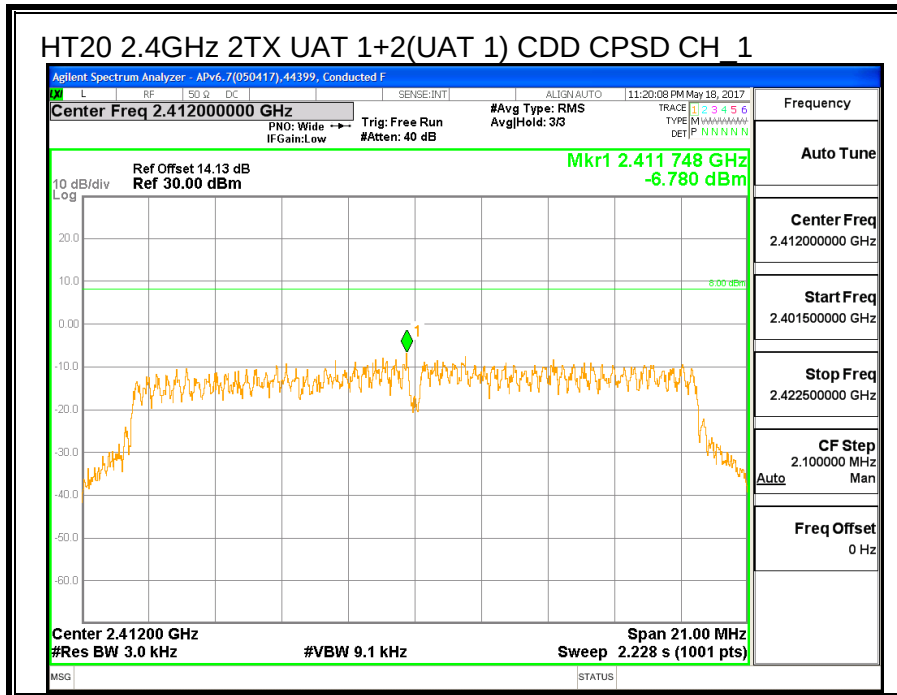
UAT 1 Antenna Gain (dBi)	LAT 3 Antenna Gain (dBi)	Correlated Chains Directional Gain (dBi)
-1.67	-4.42	0.074

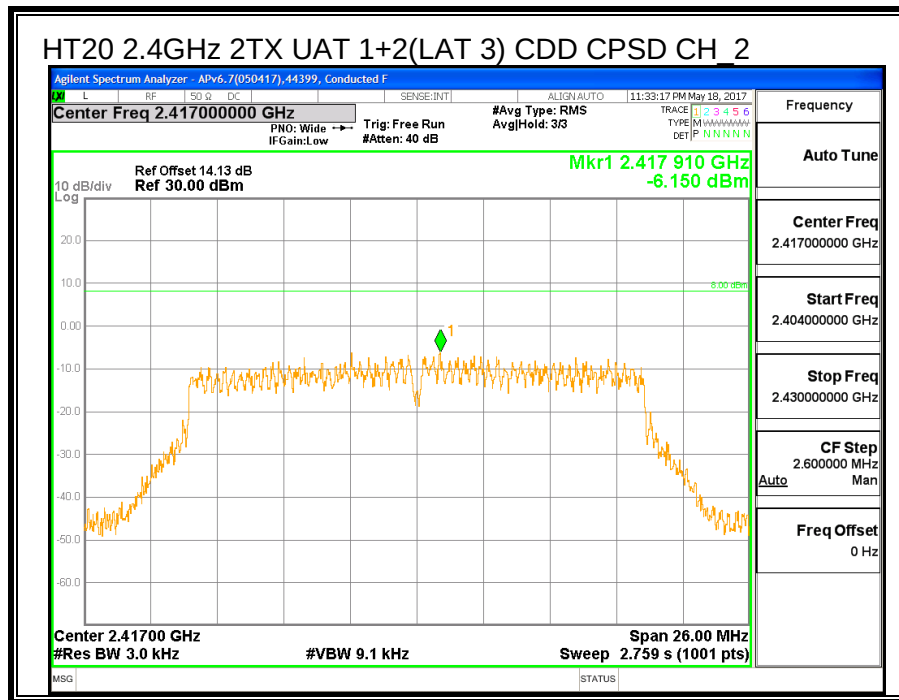
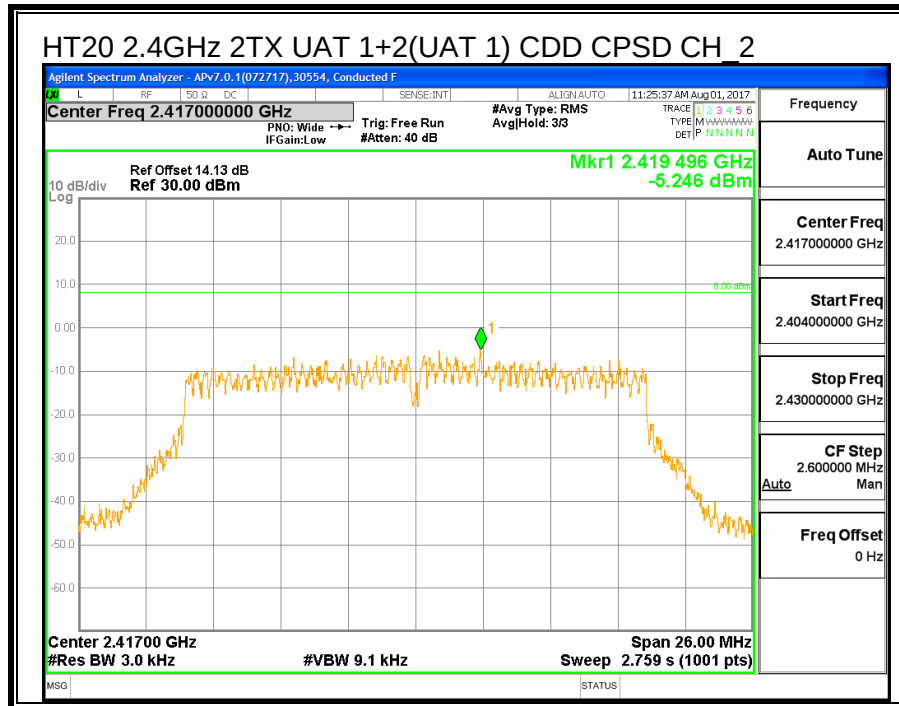
RESULTS

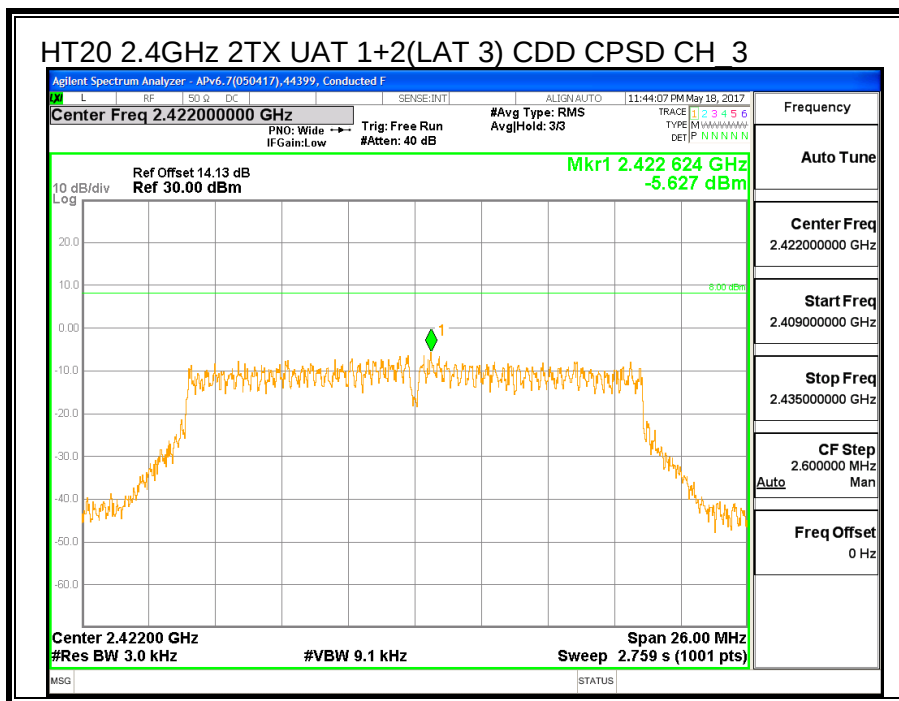
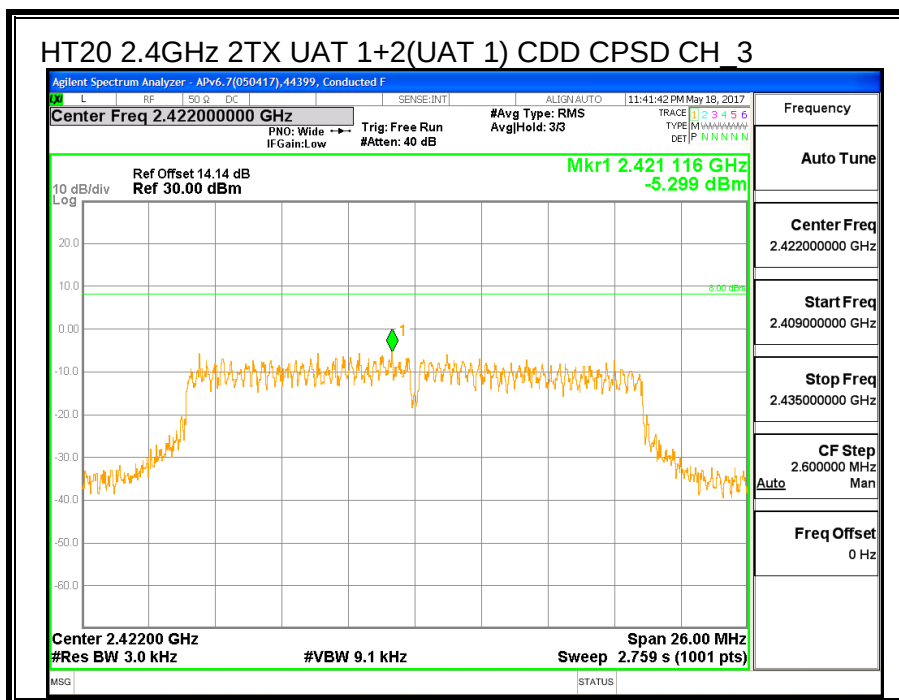
Duty Cycle CF (dB)	0	Included in Calculations of Corr'd PSD
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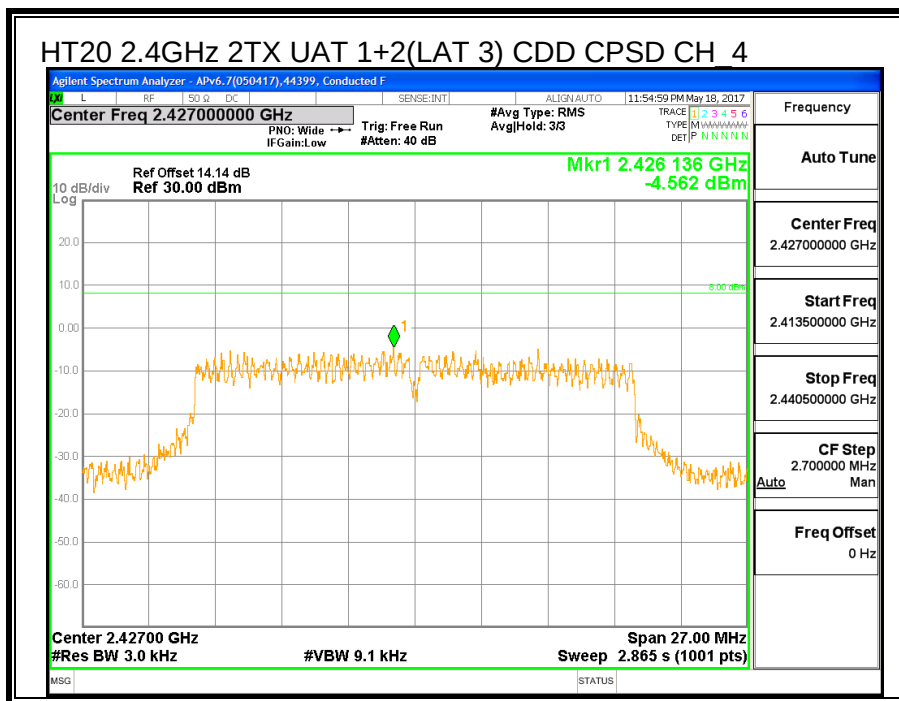
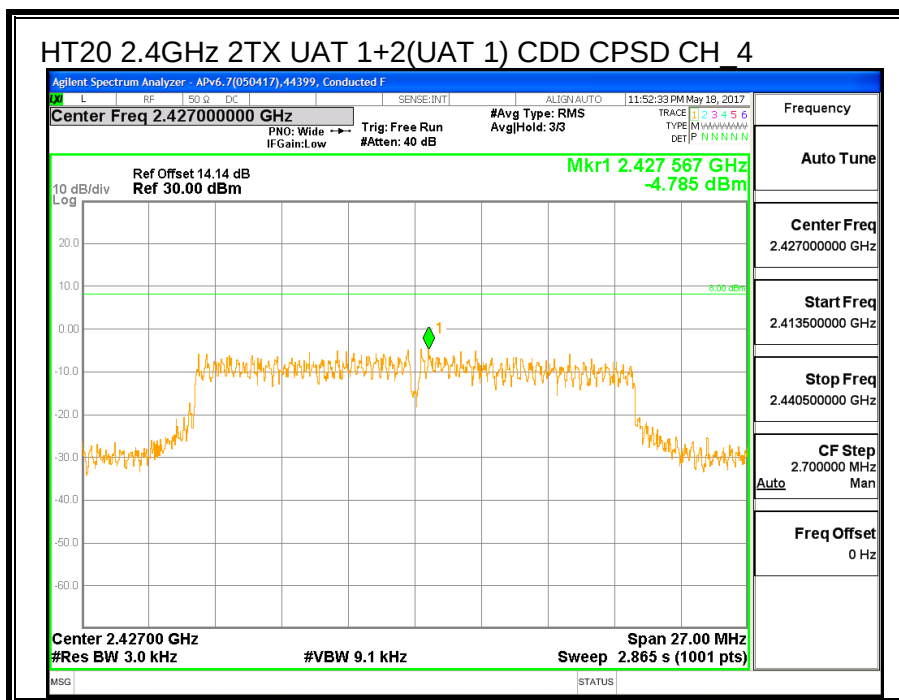
Results

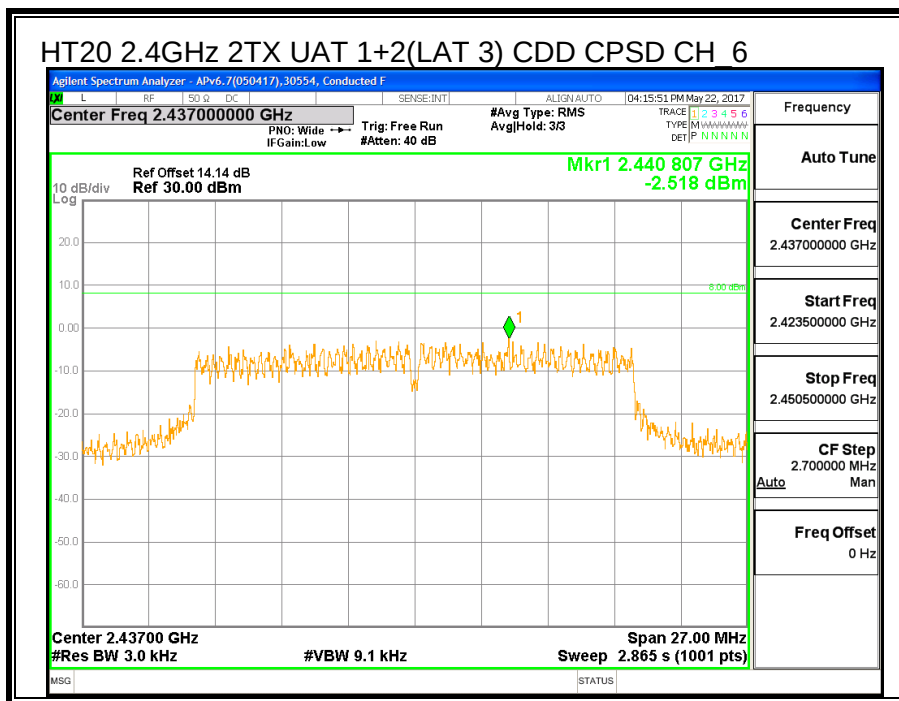
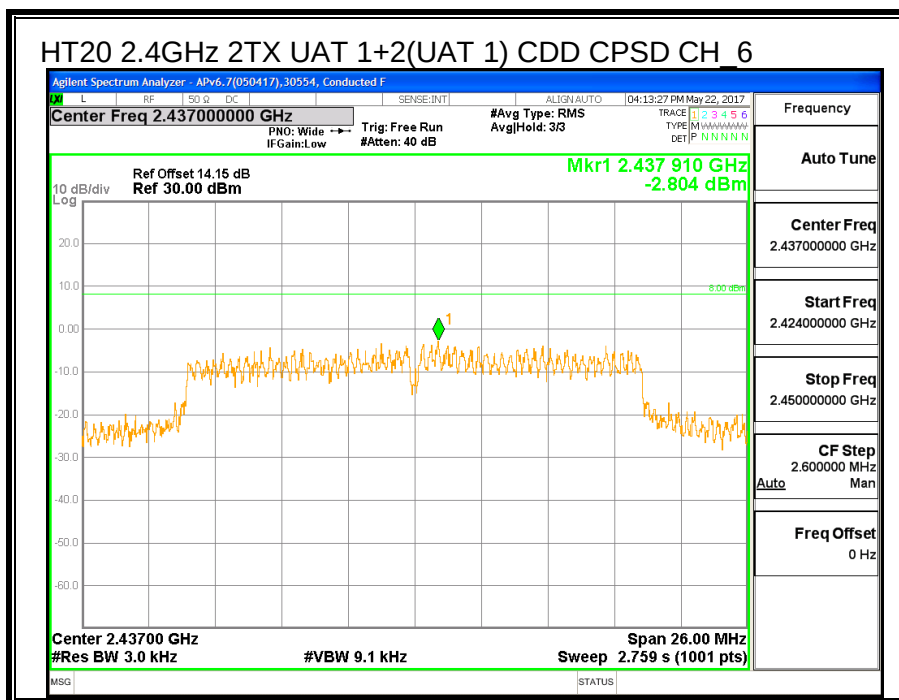
Channel	Frequency (MHz)	Meas UAT 1 (dBm/3KHz)	Meas LAT 3 (dBm/3KHz)	Total Corr'd Power (dBm/3KHz)	Limit (dBm/3KHz)	Margin (dB)
Low_1	2412	-6.78	-6.84	-3.799	8	-11.799
Low_2	2417	-5.25	-6.15	-2.66	8	-10.664
Low_3	2422	-5.30	-5.63	-2.451	8	-10.451
Low_4	2427	-4.79	-4.56	-1.663	8	-9.663
Middle_6	2437	-2.80	-2.52	0.352	8	-7.647
High_9	2452	-3.32	-5.09	-1.105	8	-9.105
High_10	2457	-4.82	-5.37	-2.075	8	-10.075
High_11	2462	-9.11	-8.63	-5.853	8	-13.853
High_12	2467	-9.73	-8.87	-6.268	8	-14.268
High_13	2472	-18.30	-19.35	-15.783	8	-23.783

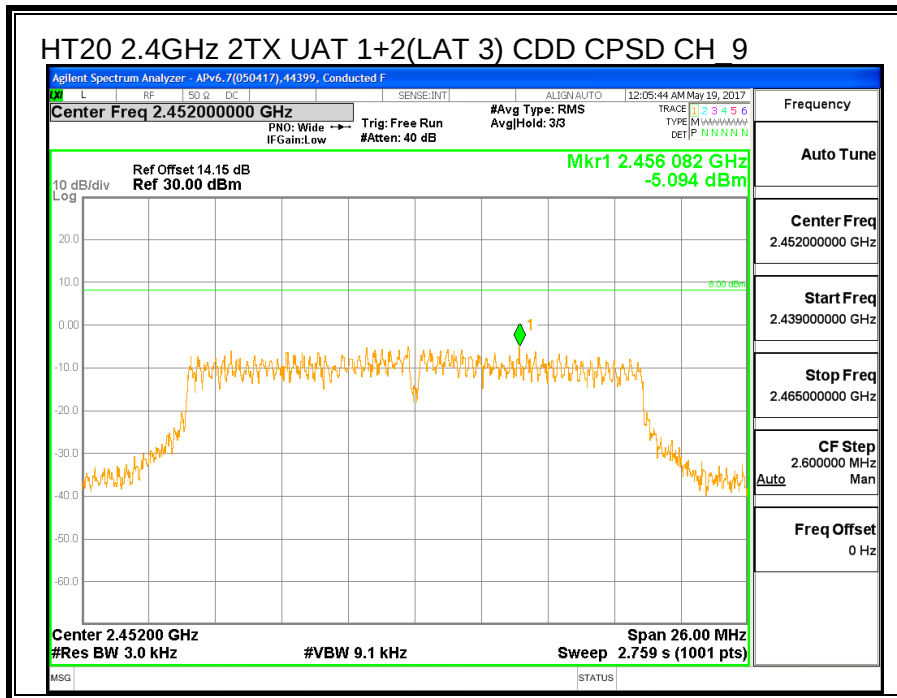
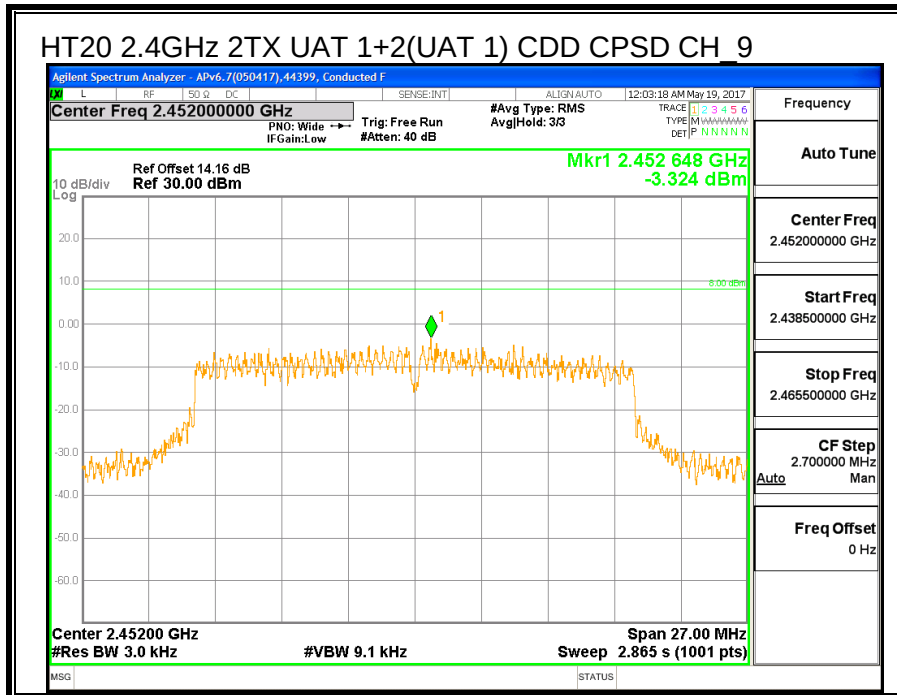


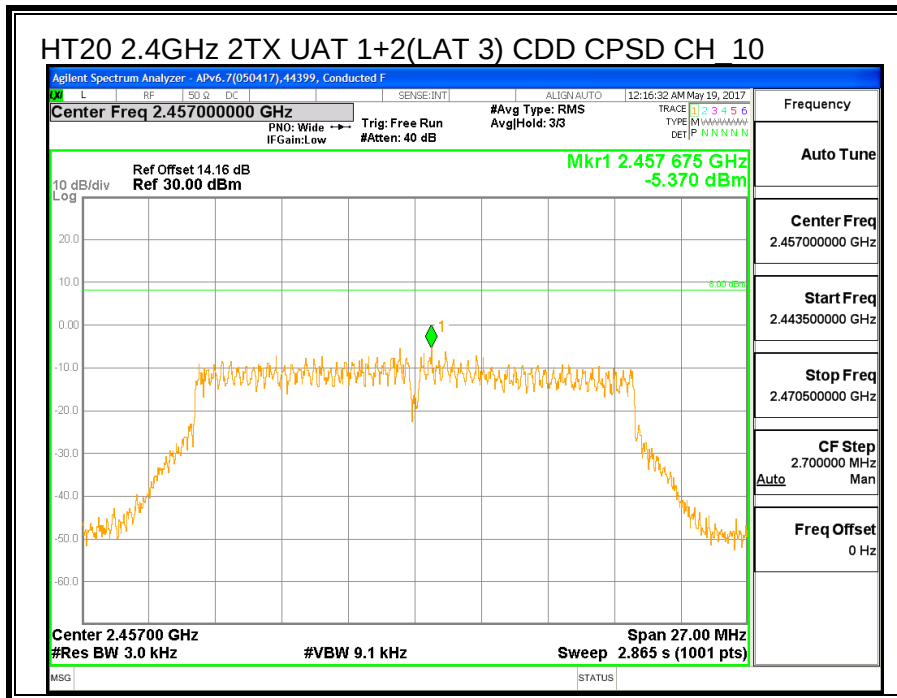
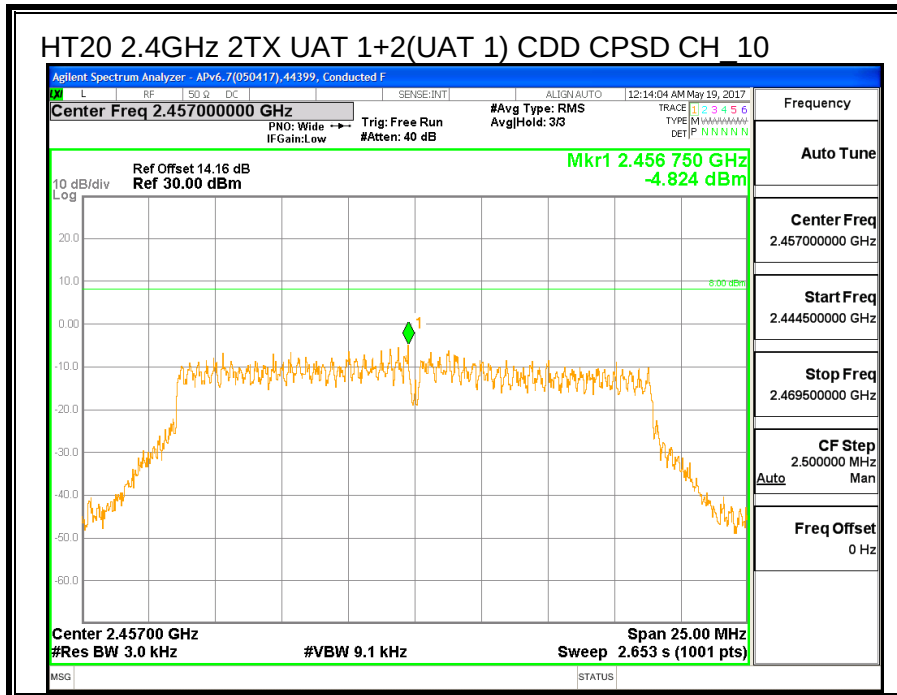


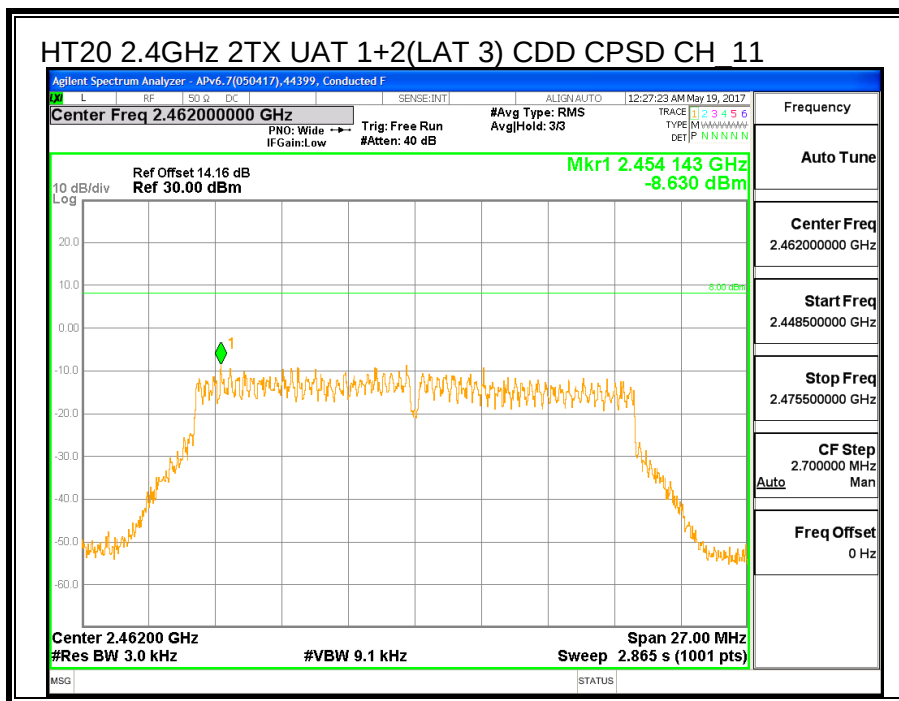
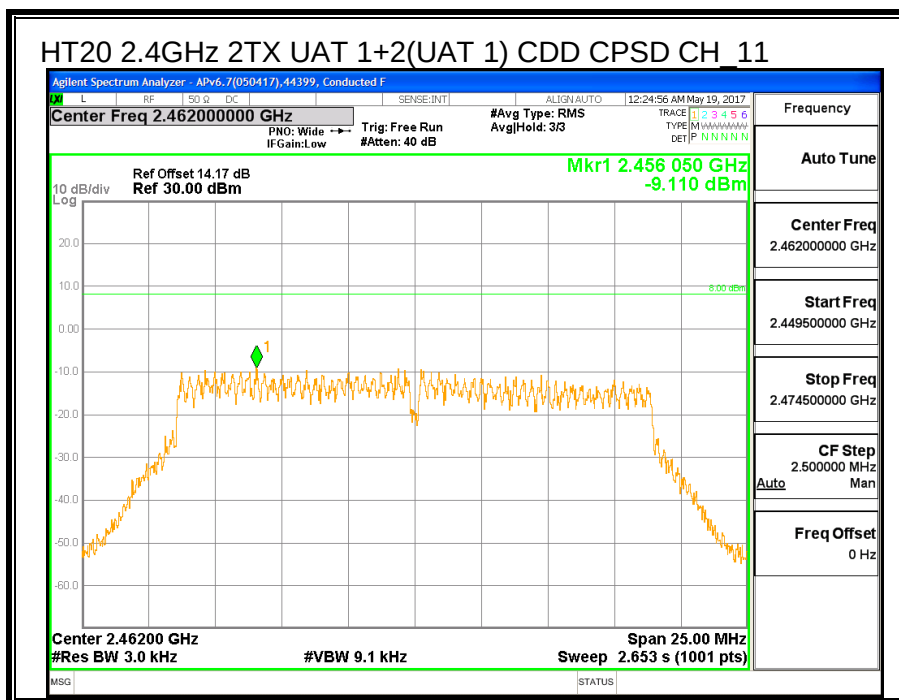


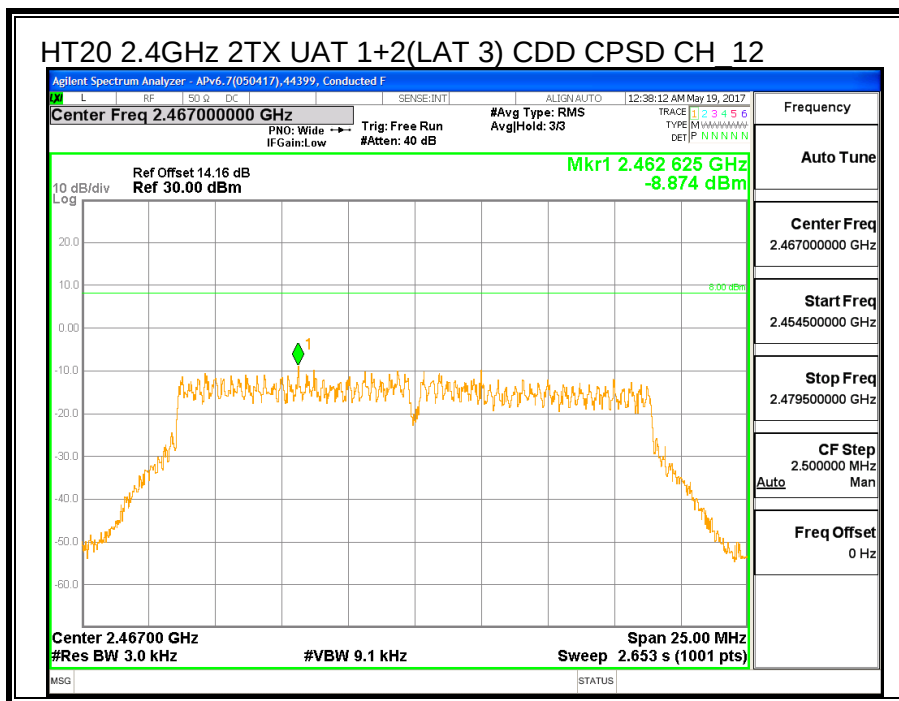
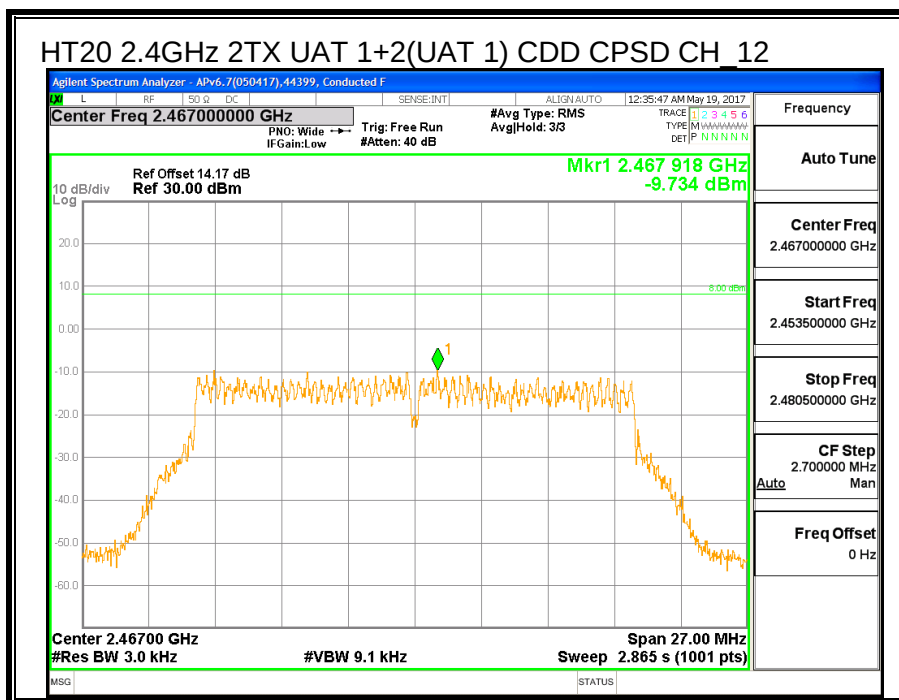


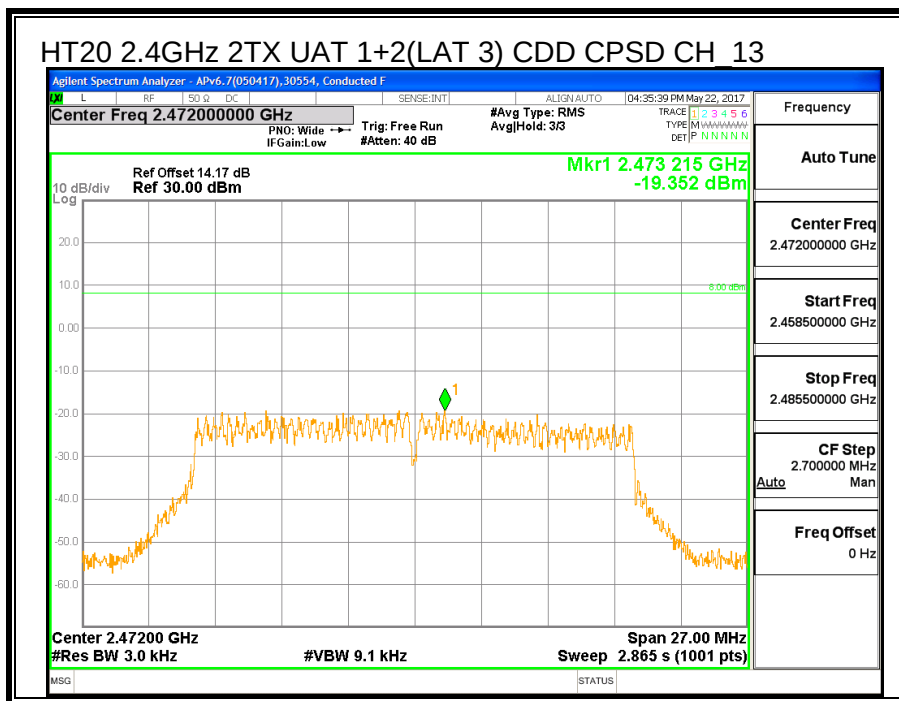
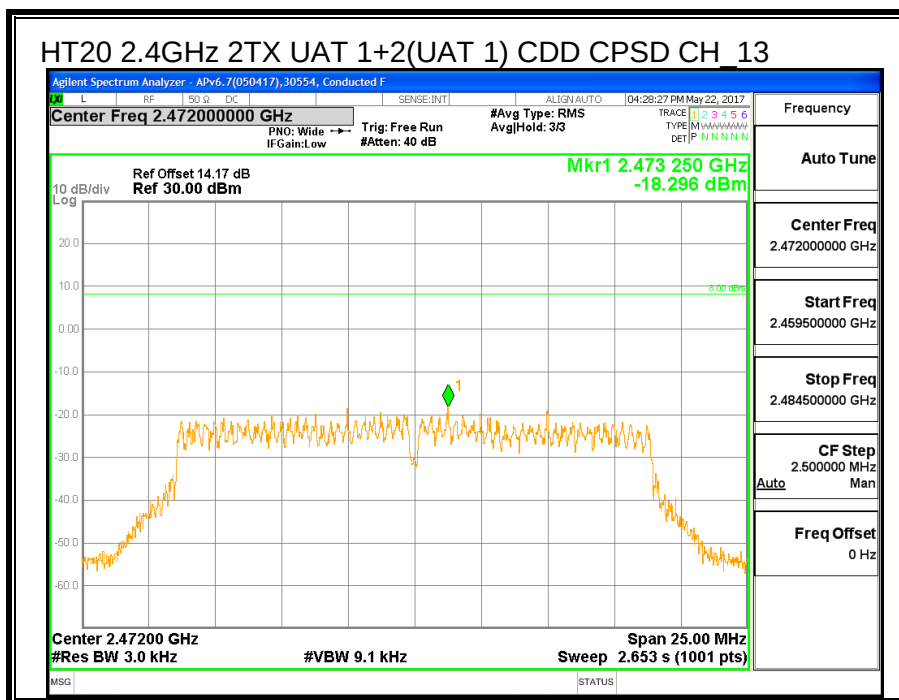












8.5.6. CONDUCTED BANDEDGE AND SPURIOUS EMISSIONS

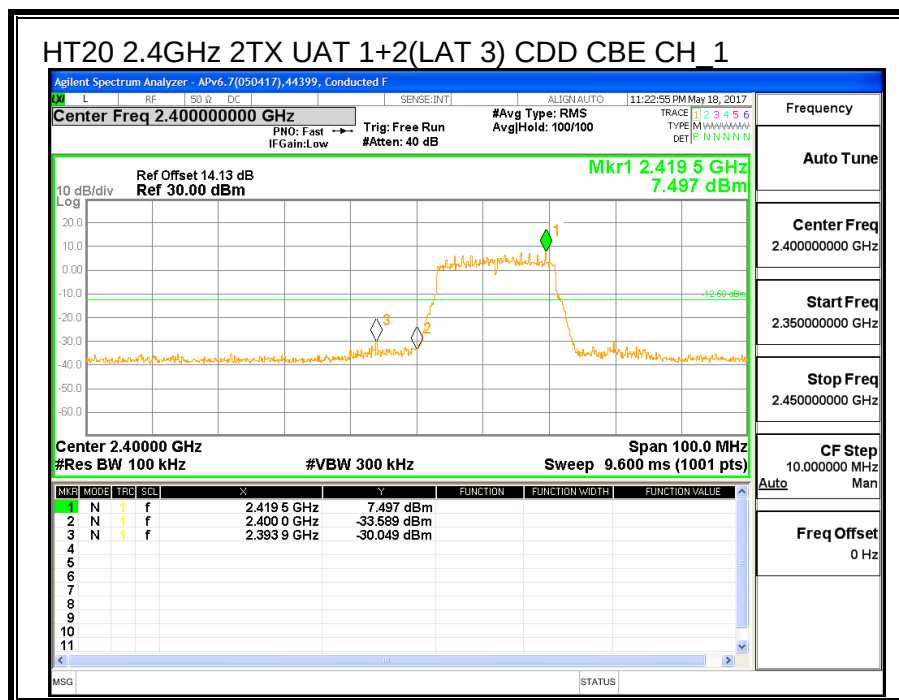
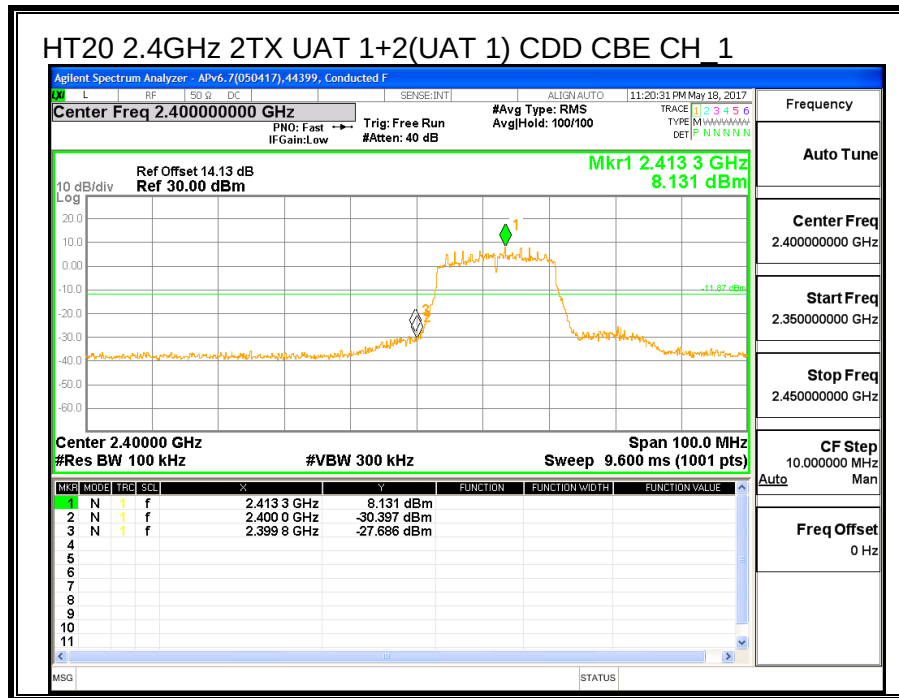
LIMITS

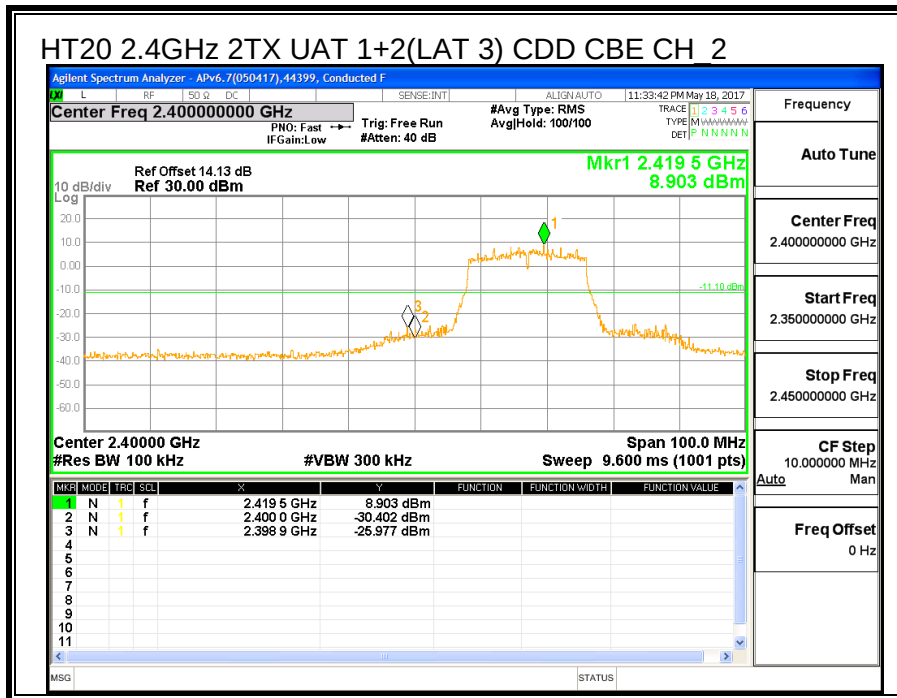
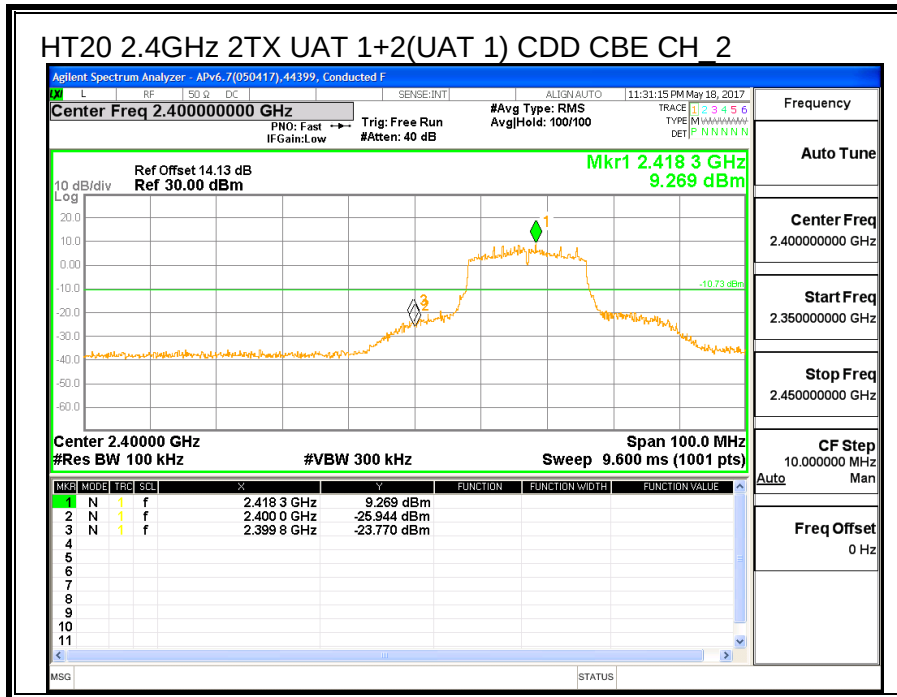
FCC §15.247 (d)

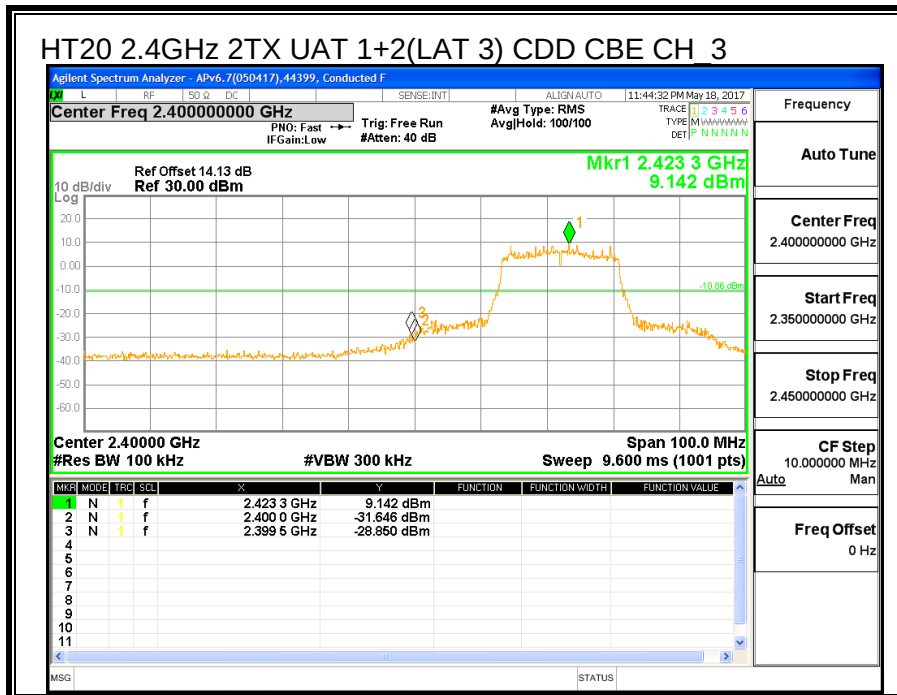
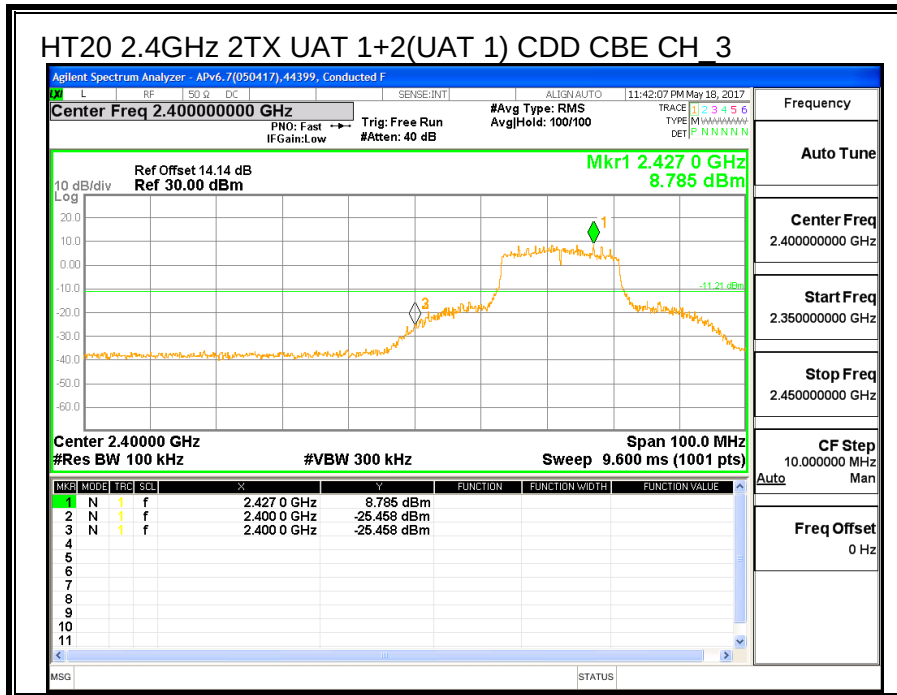
IC RSS-247 (5.5)

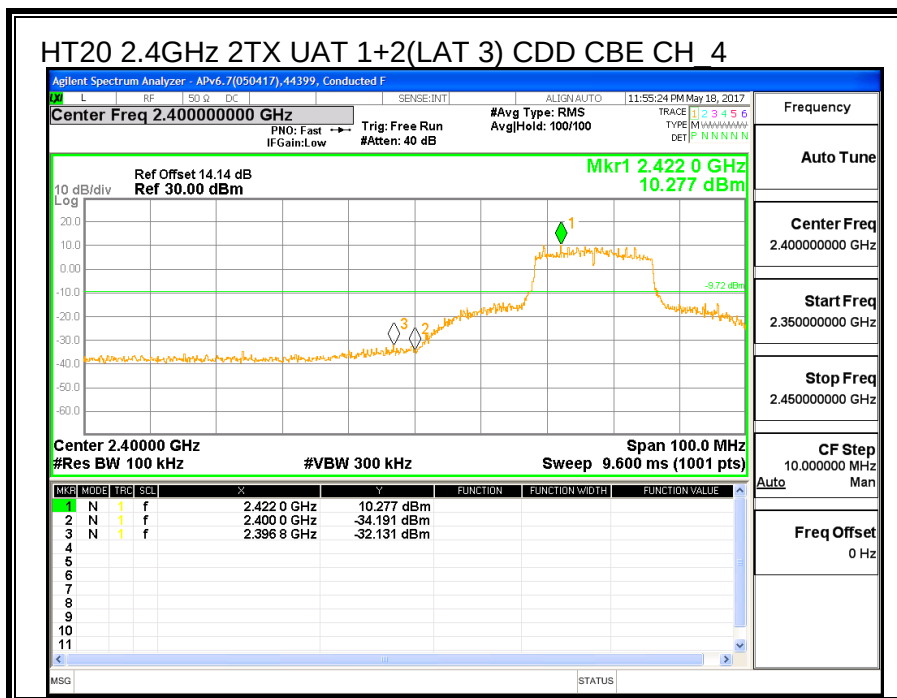
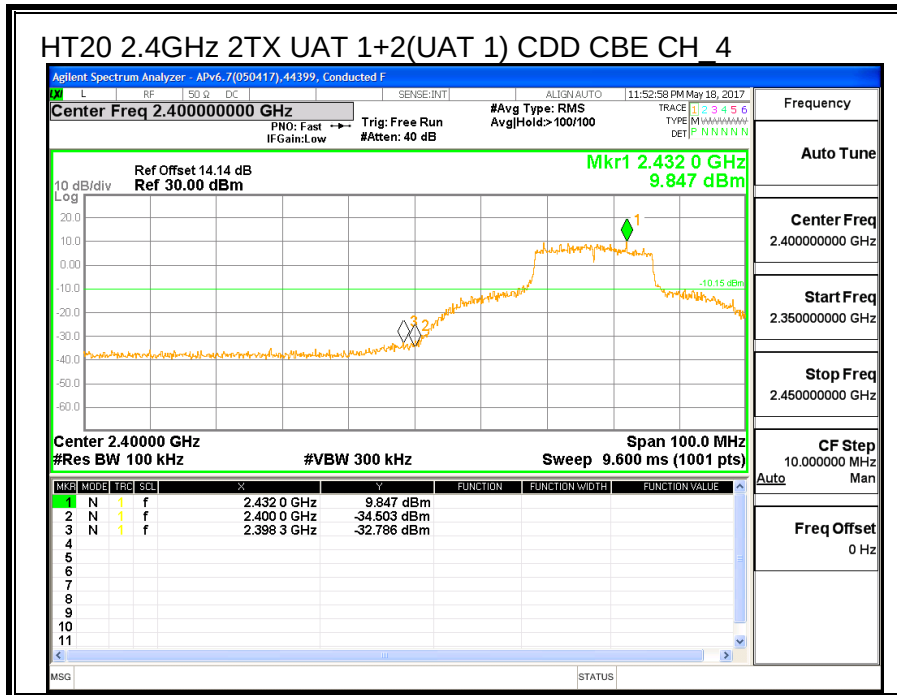
In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the 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.

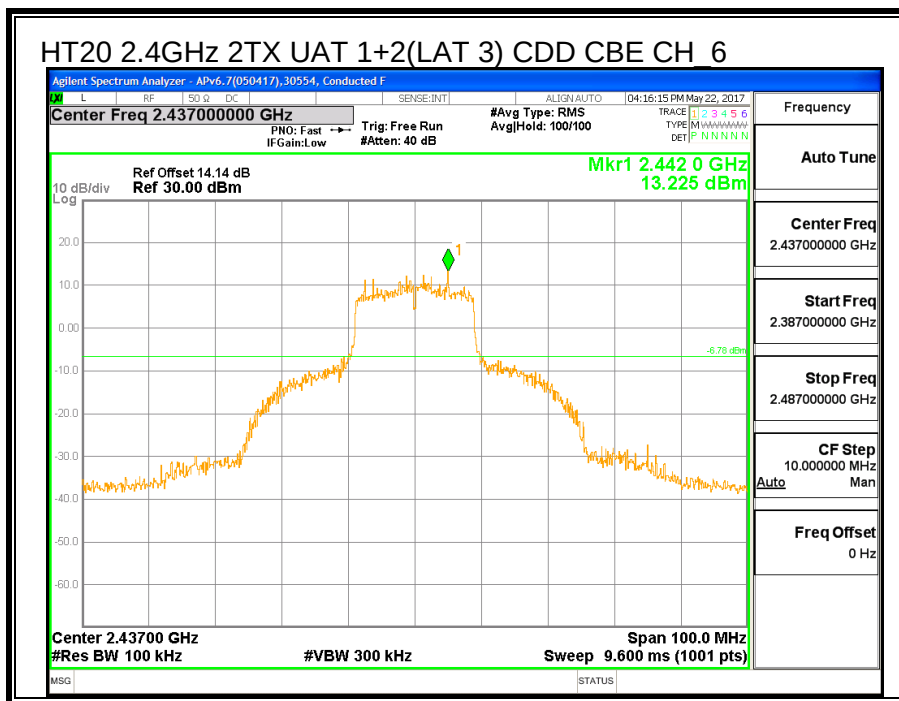
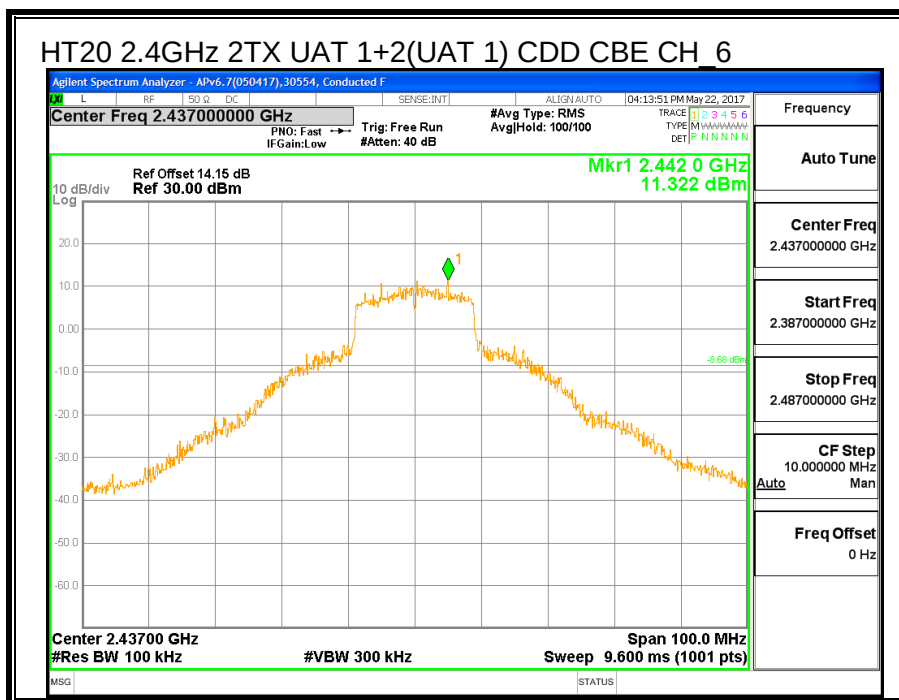
CONDUCTED BANDEDGE AND SPURIOUS EMISSIONS

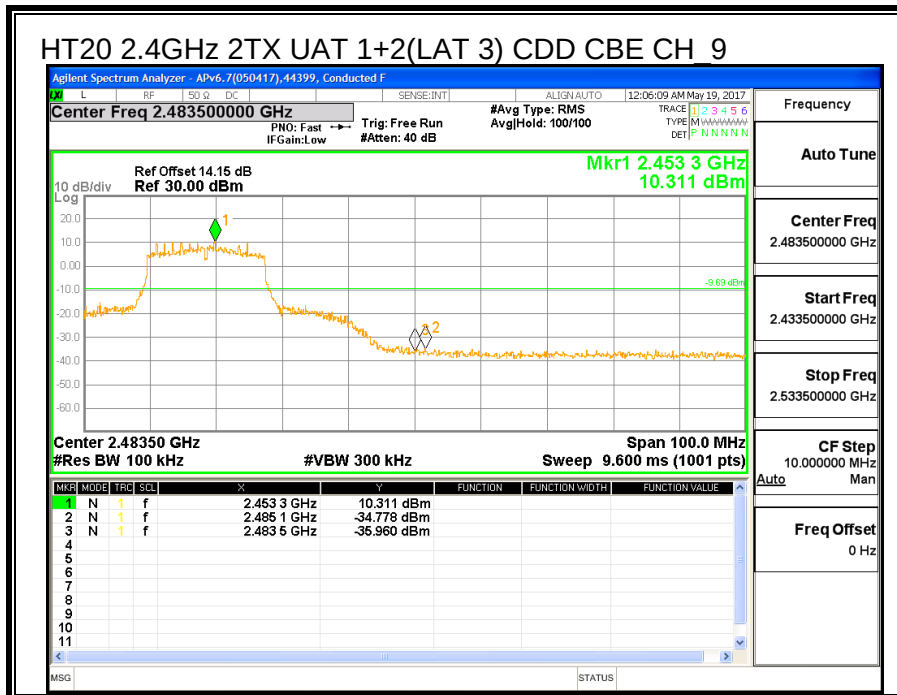
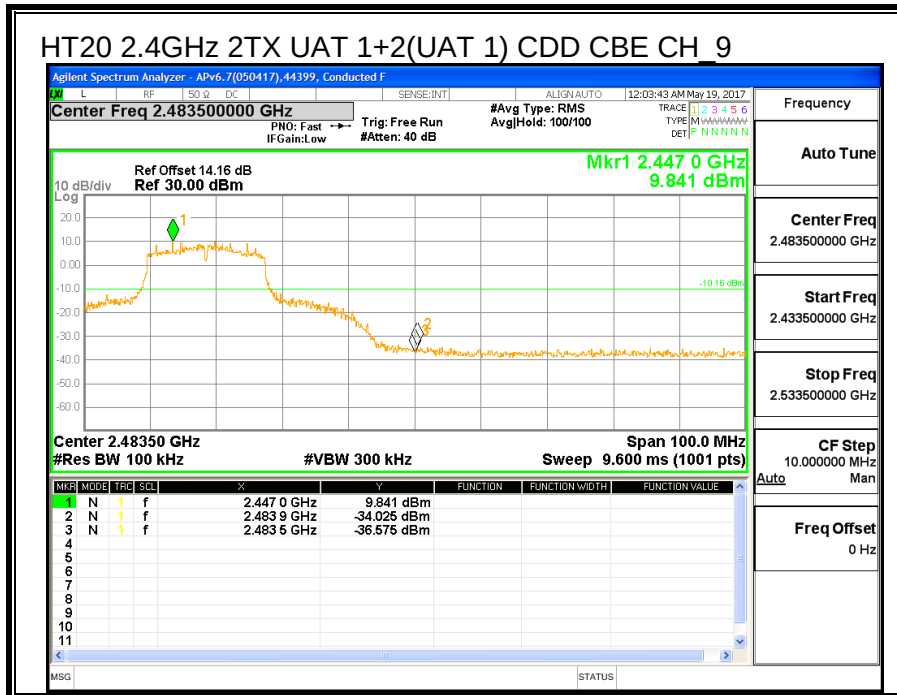


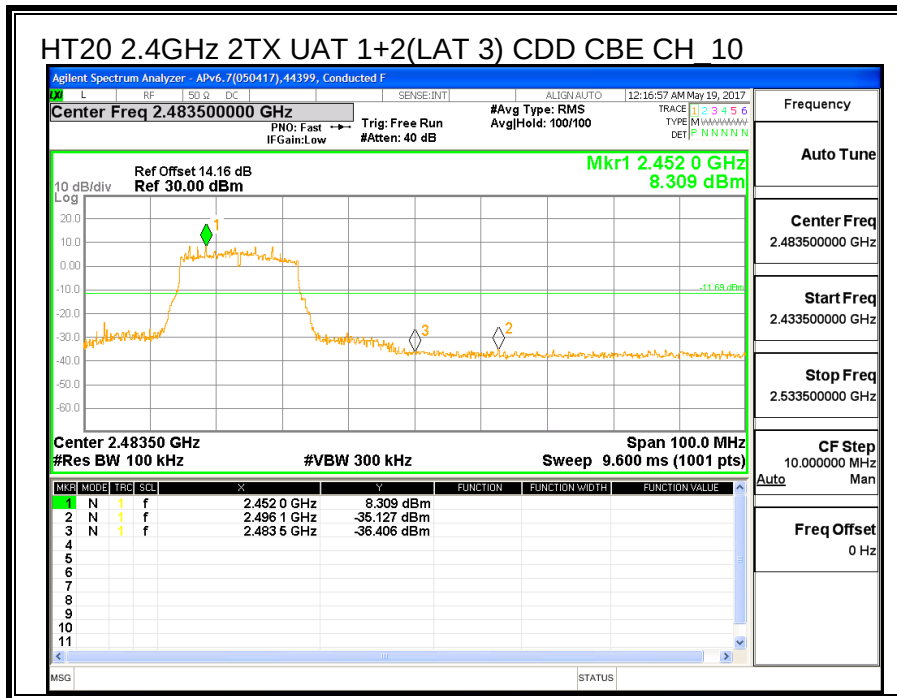
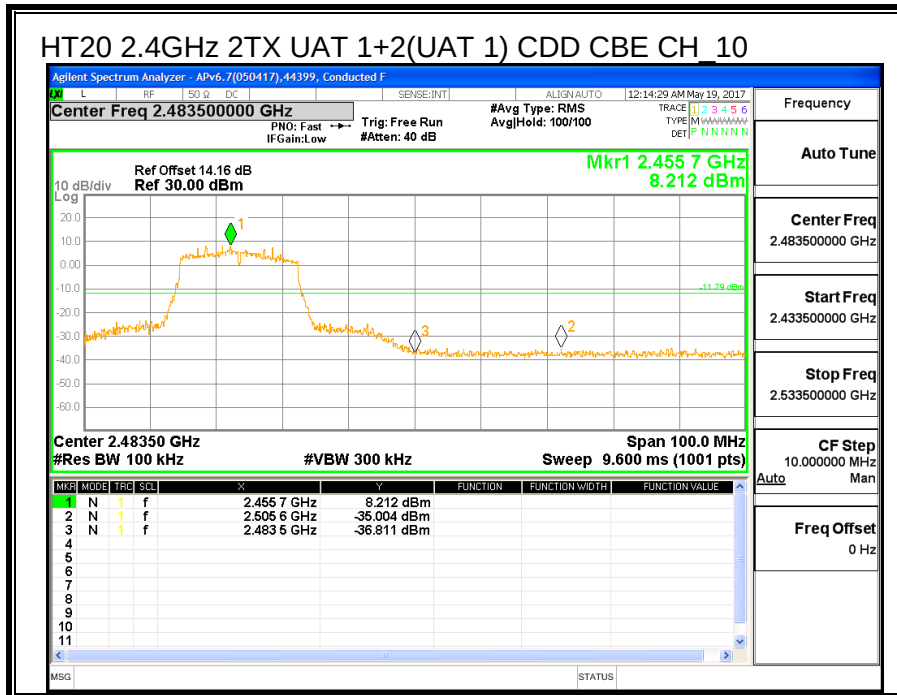


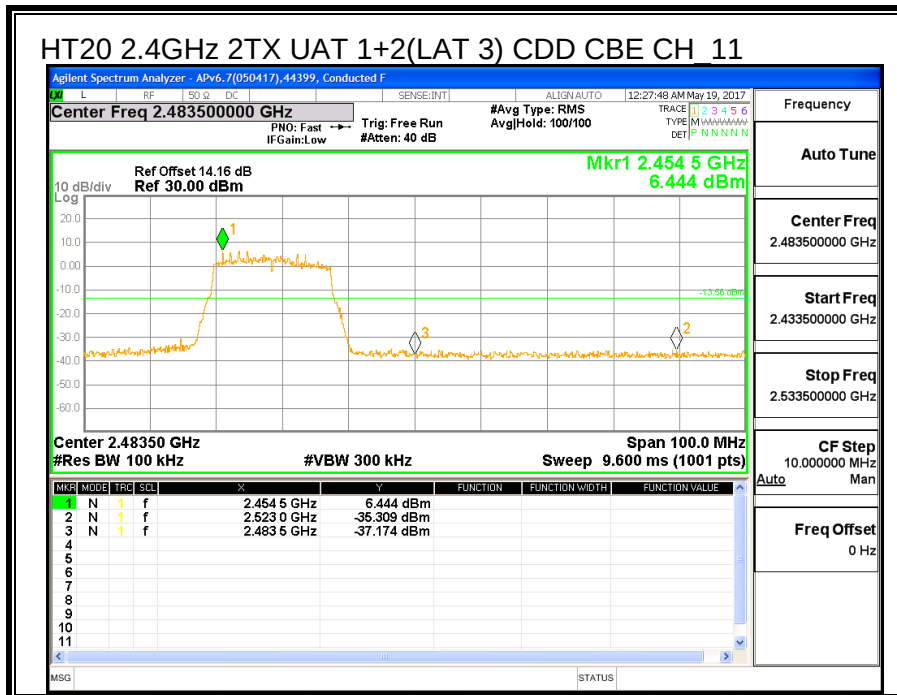
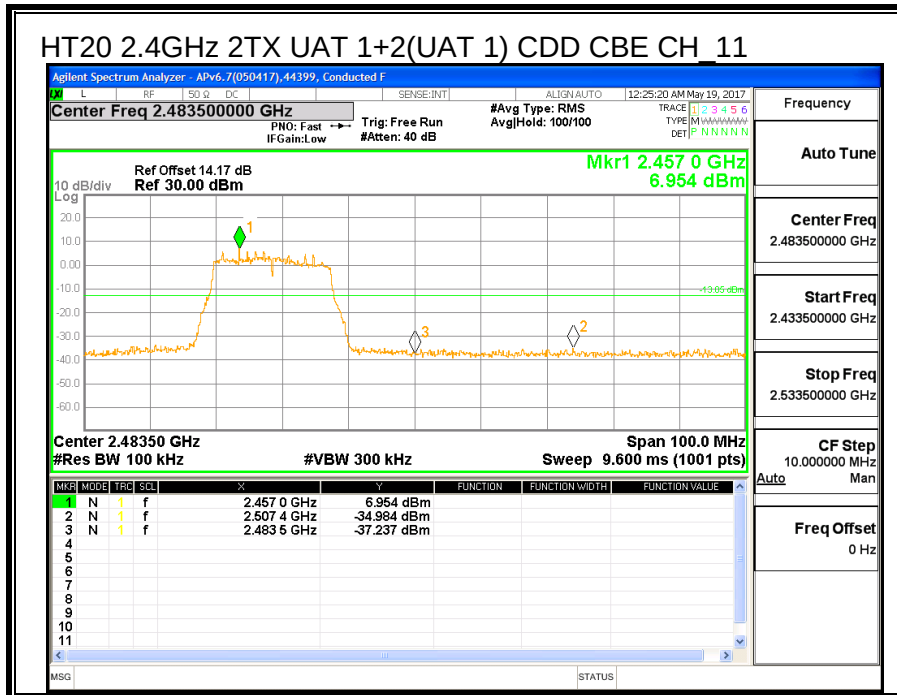


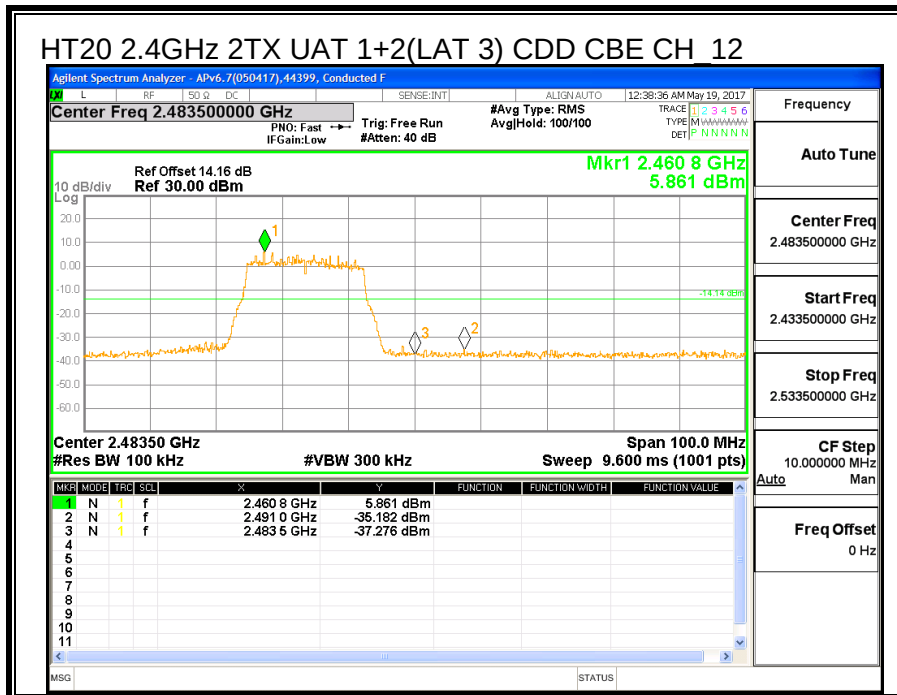
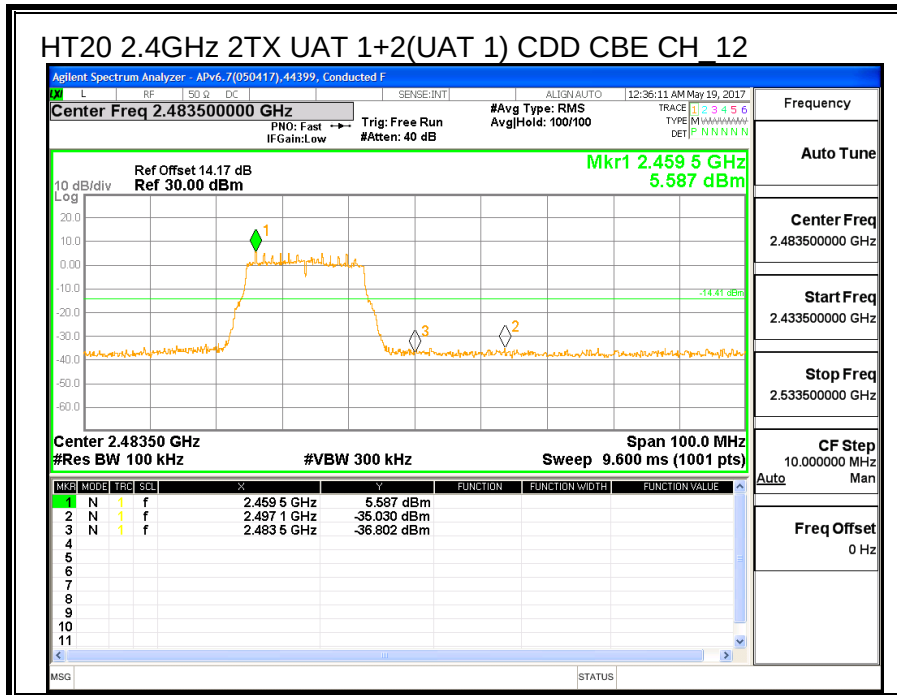


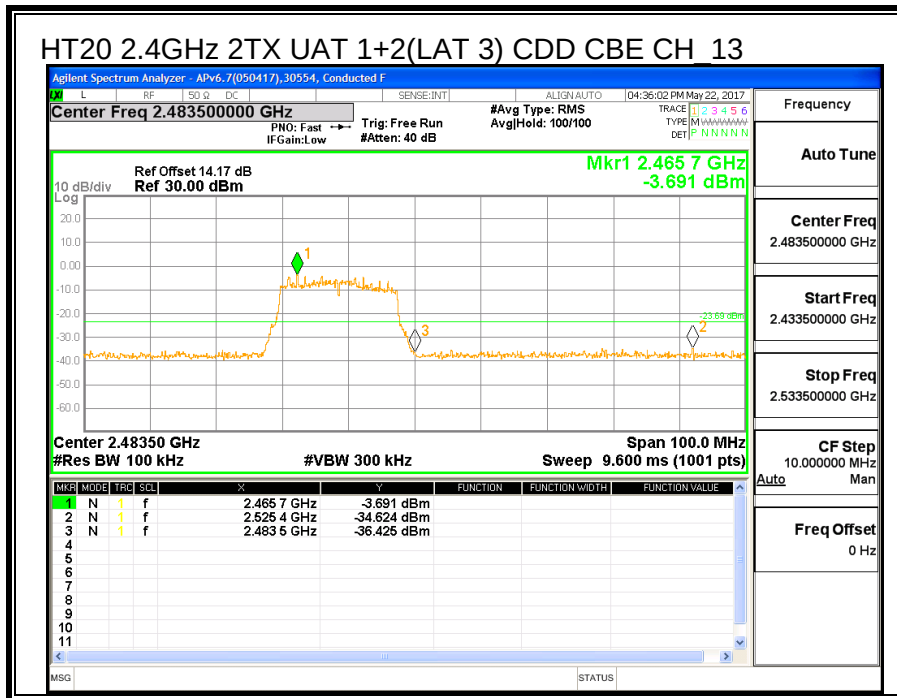
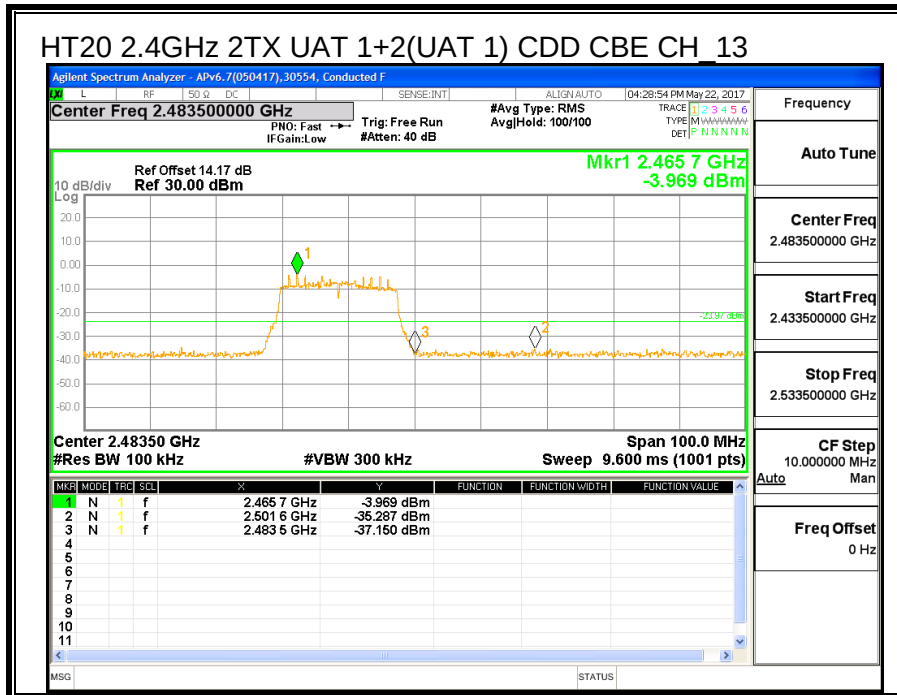


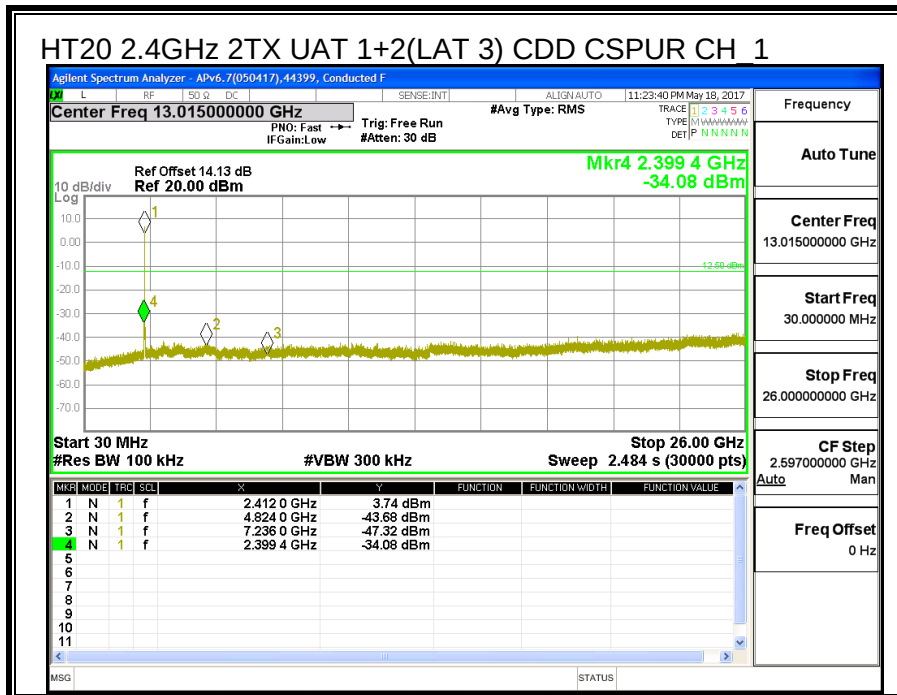
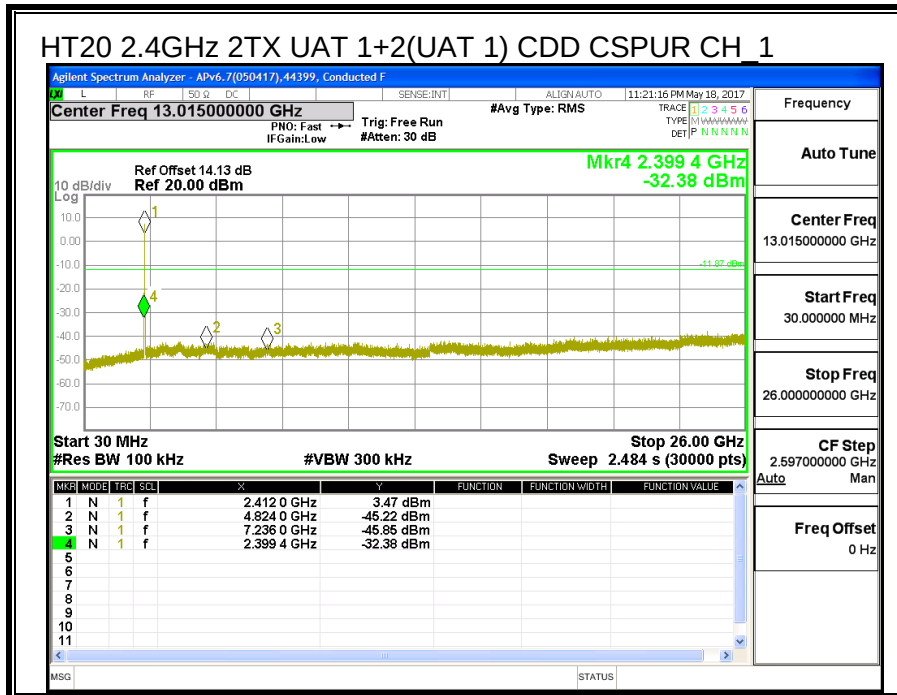


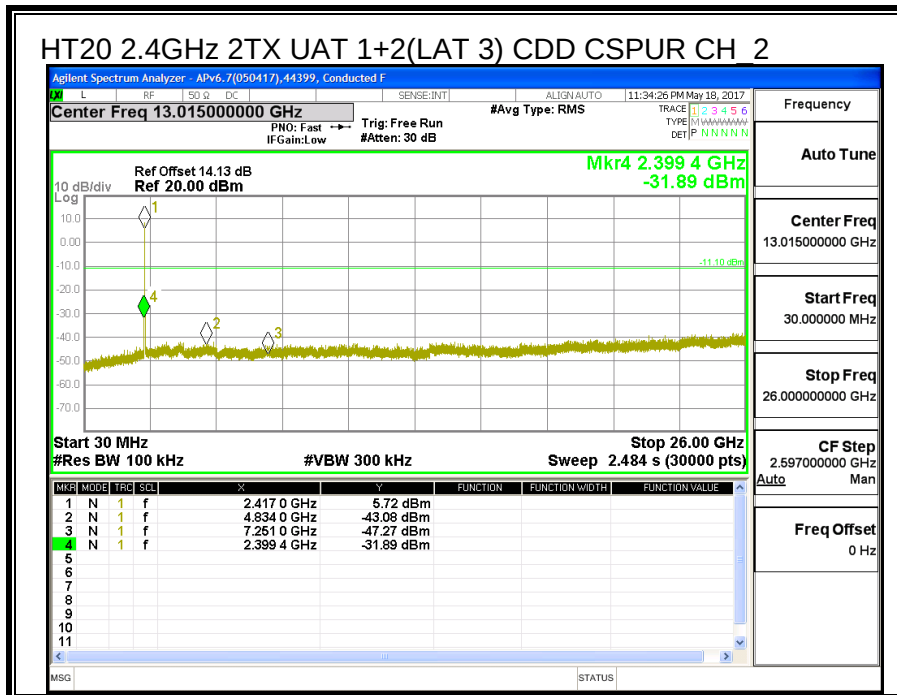
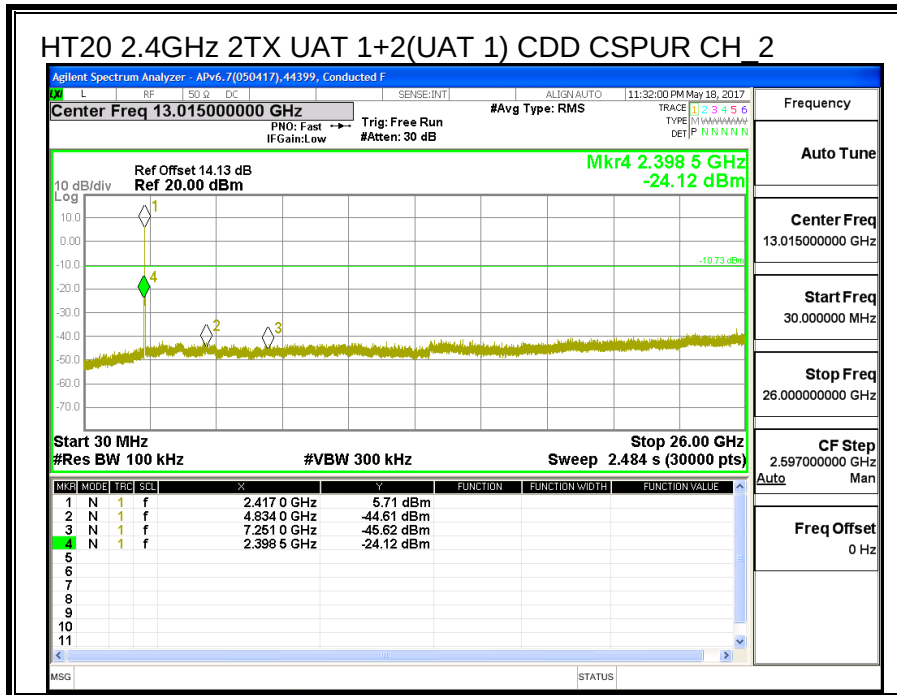


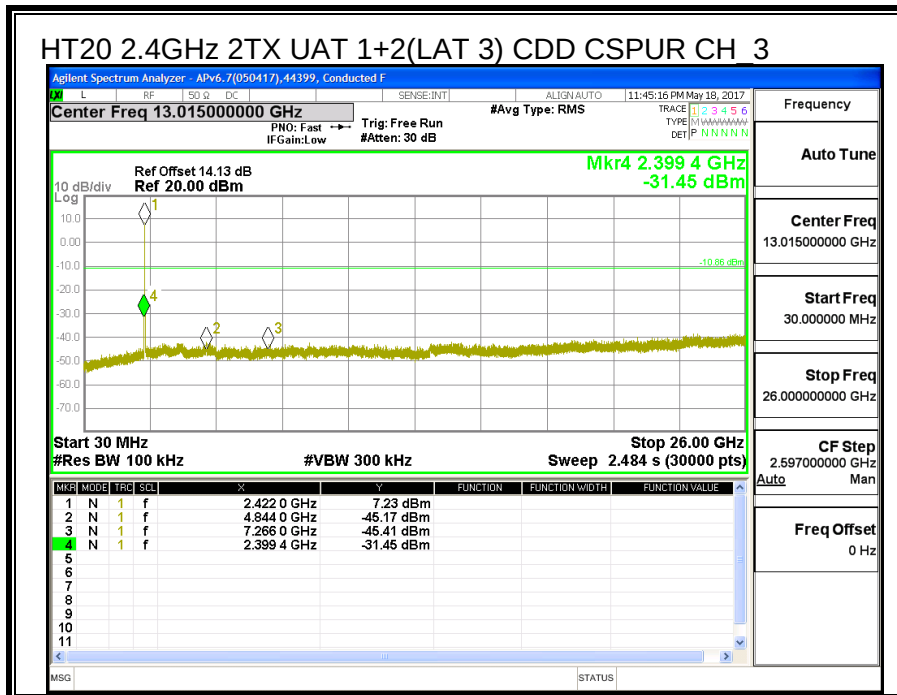
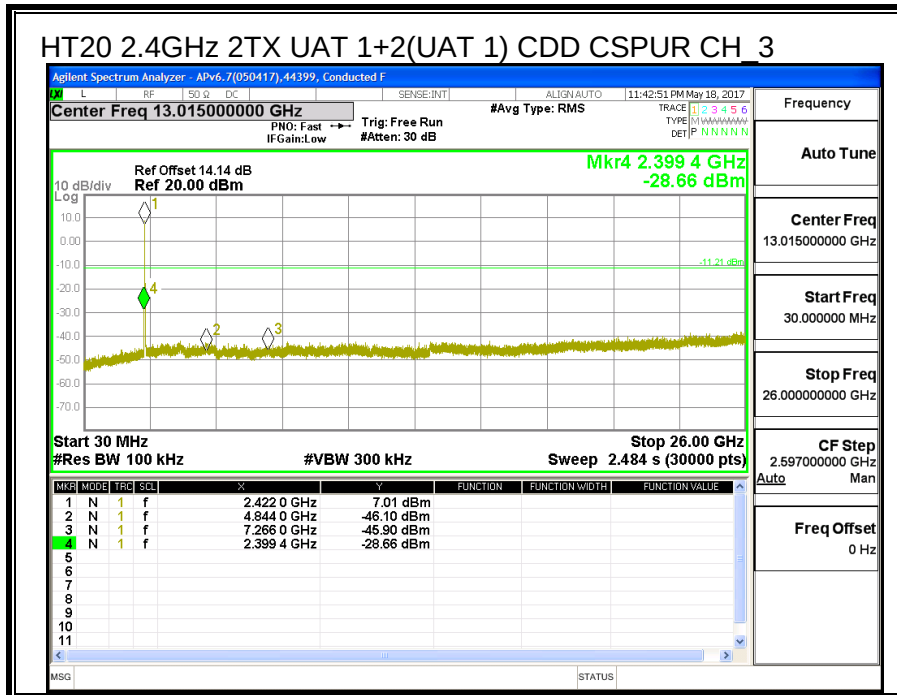


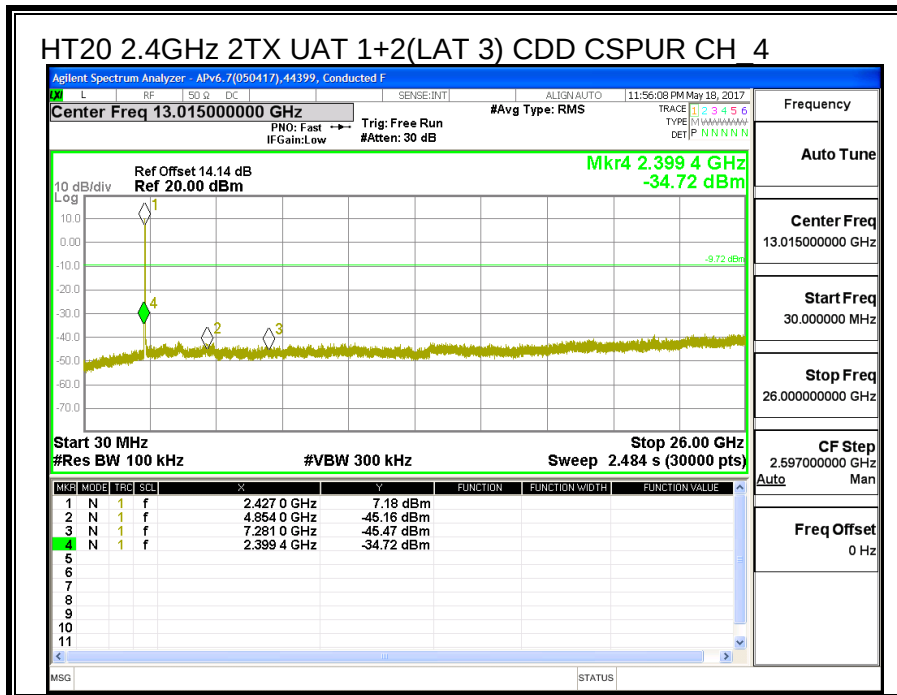
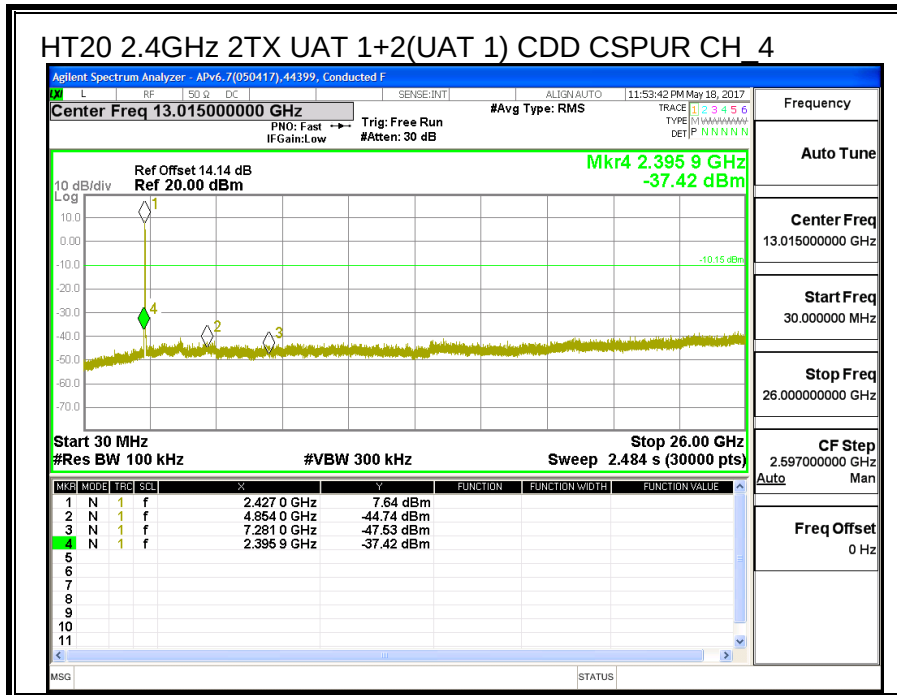


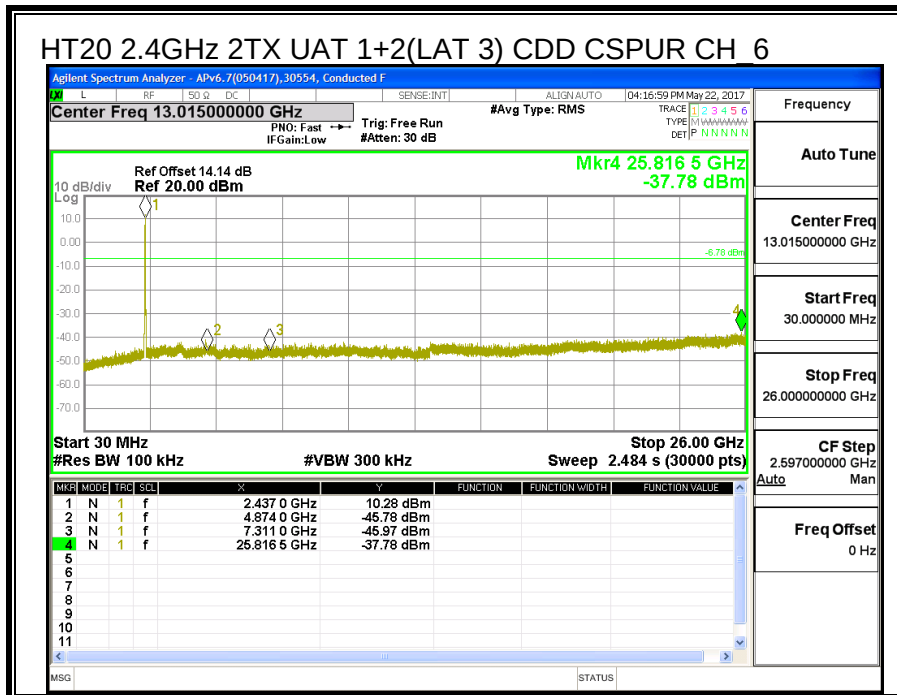
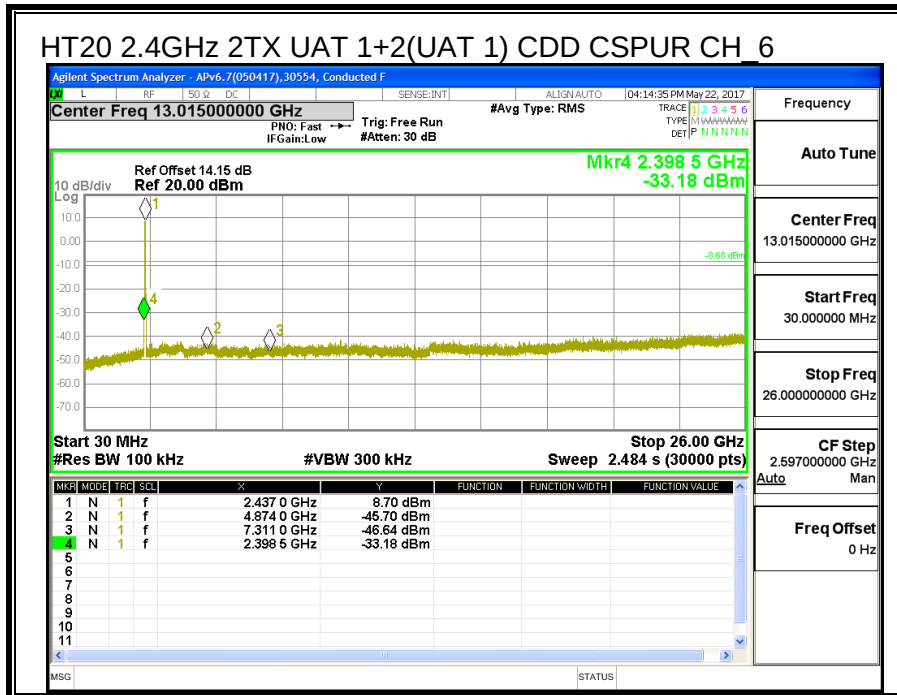


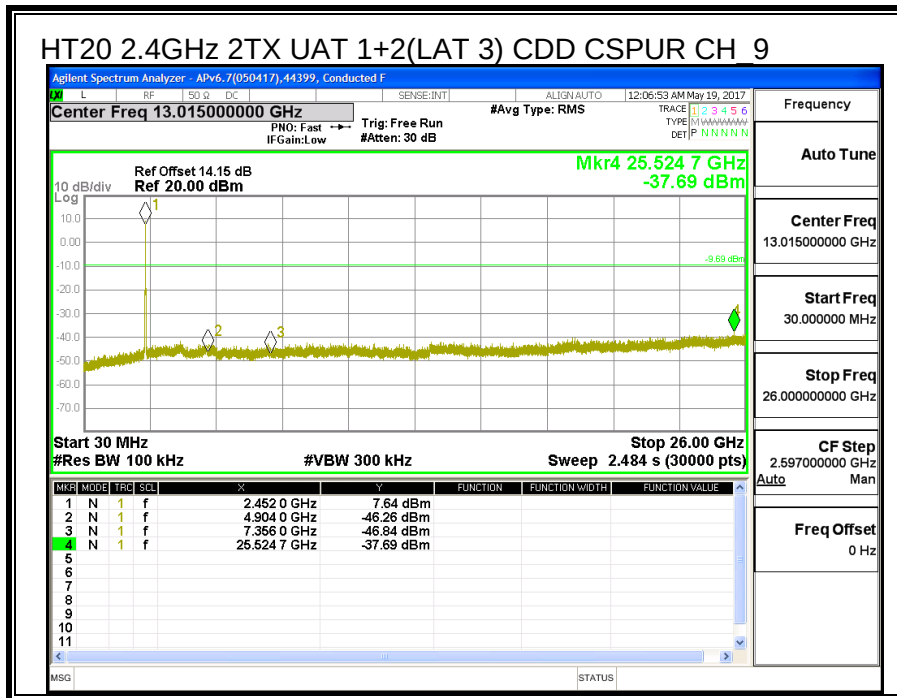
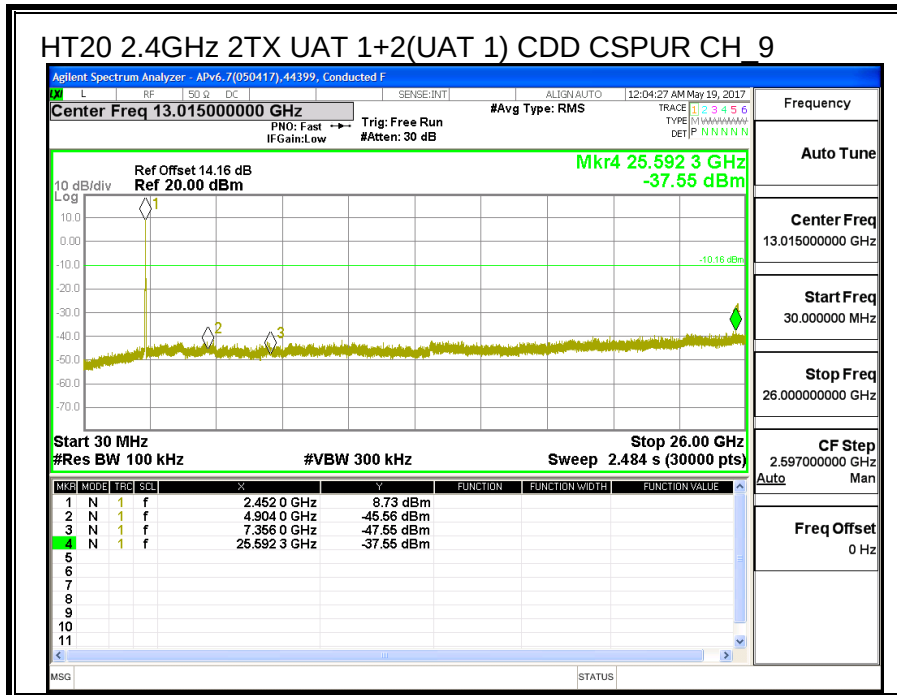


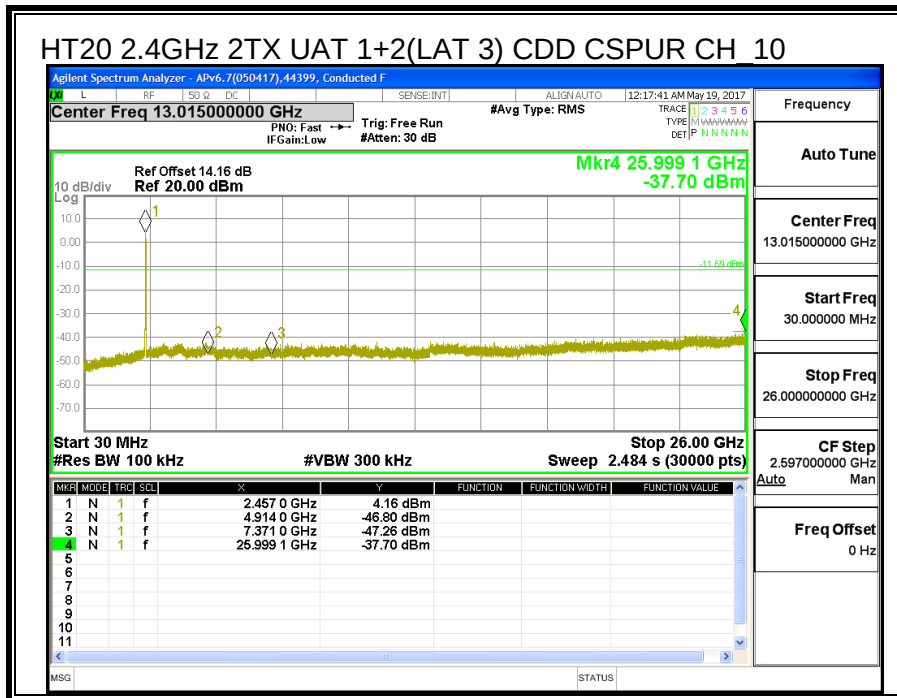
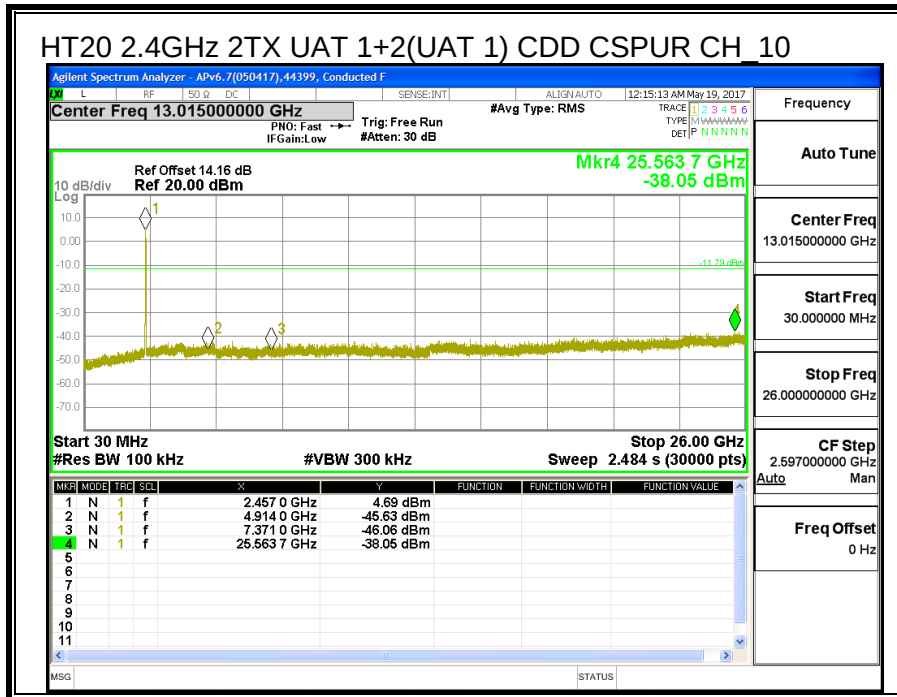


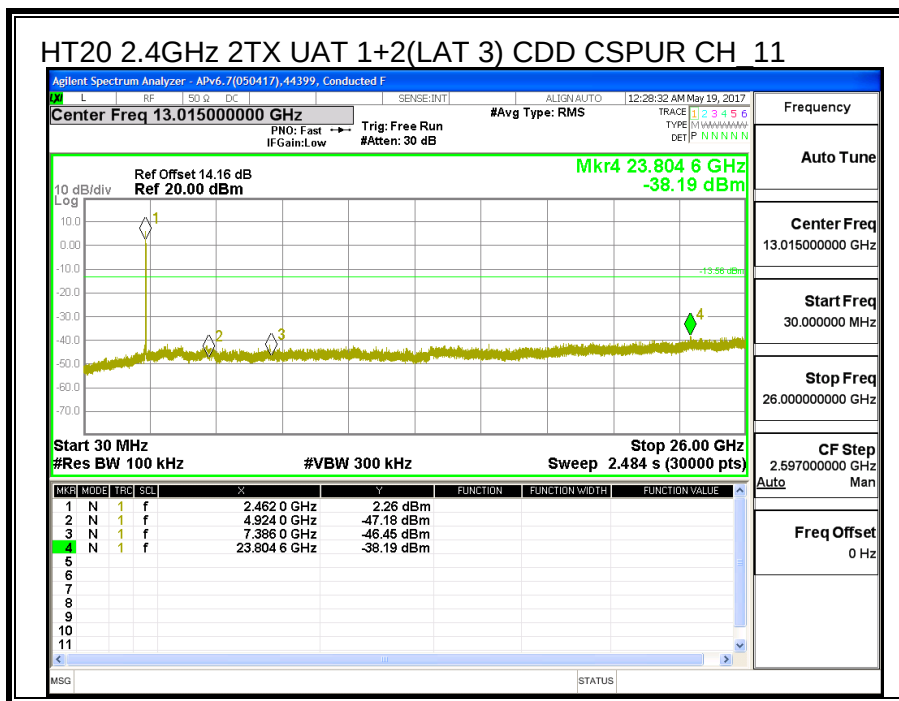
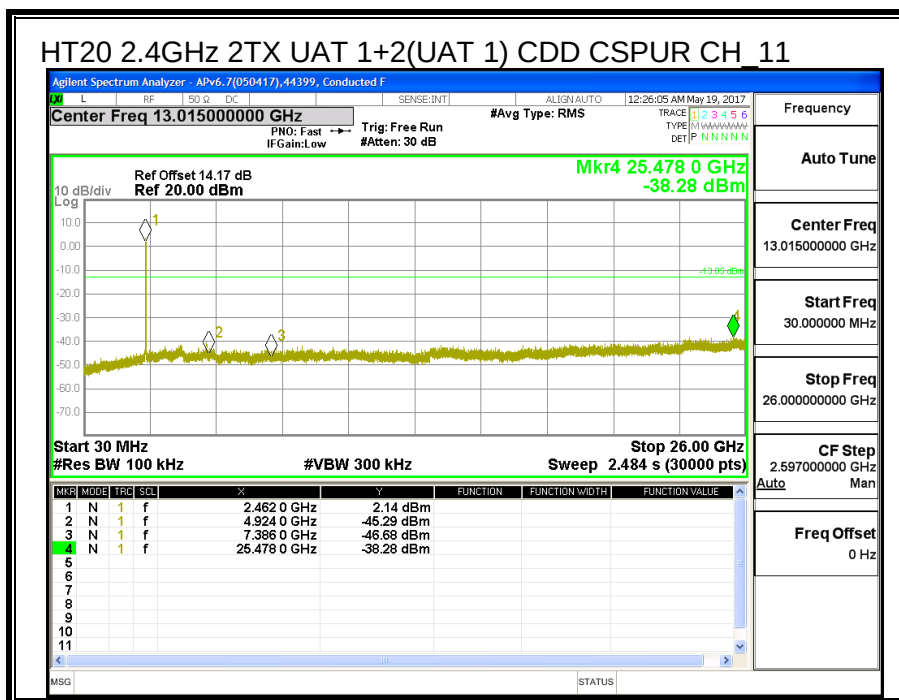


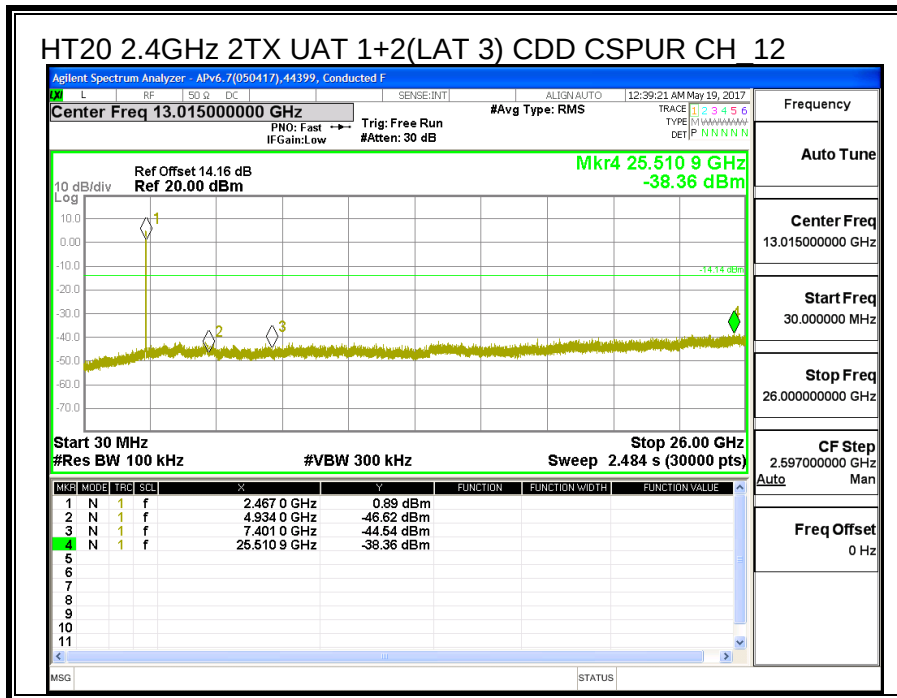
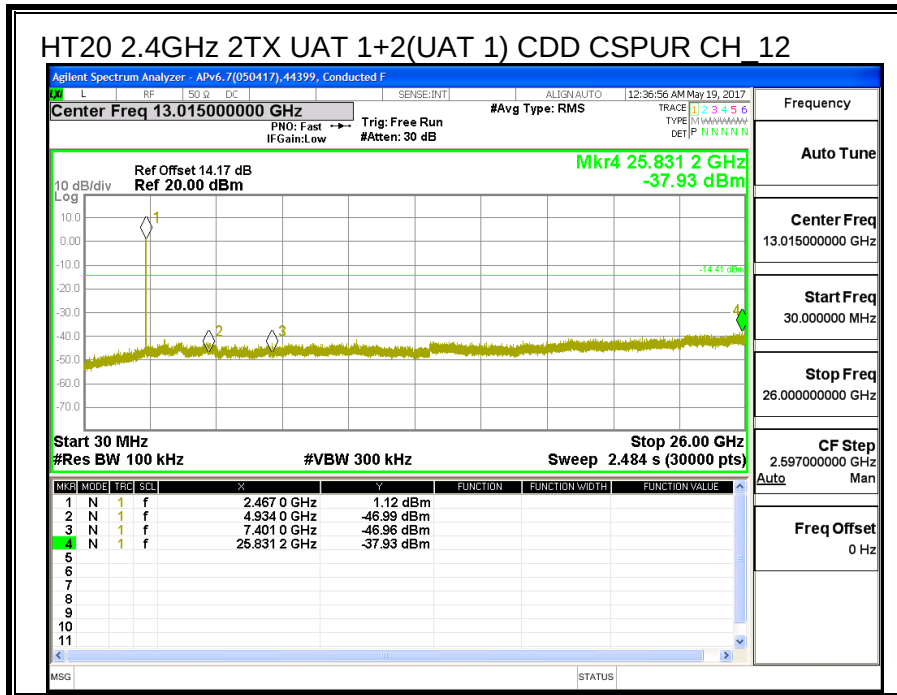


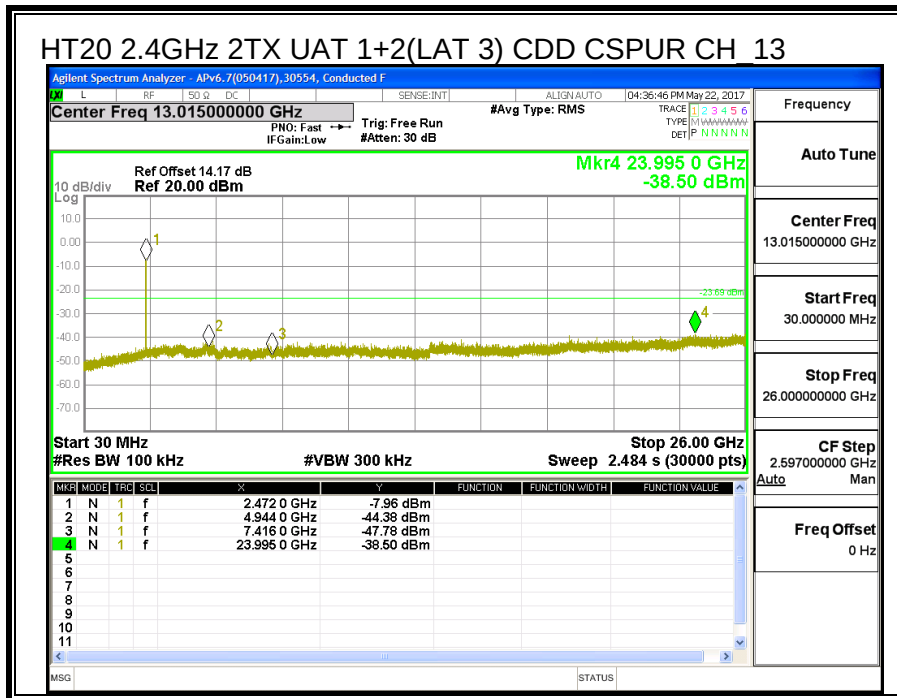
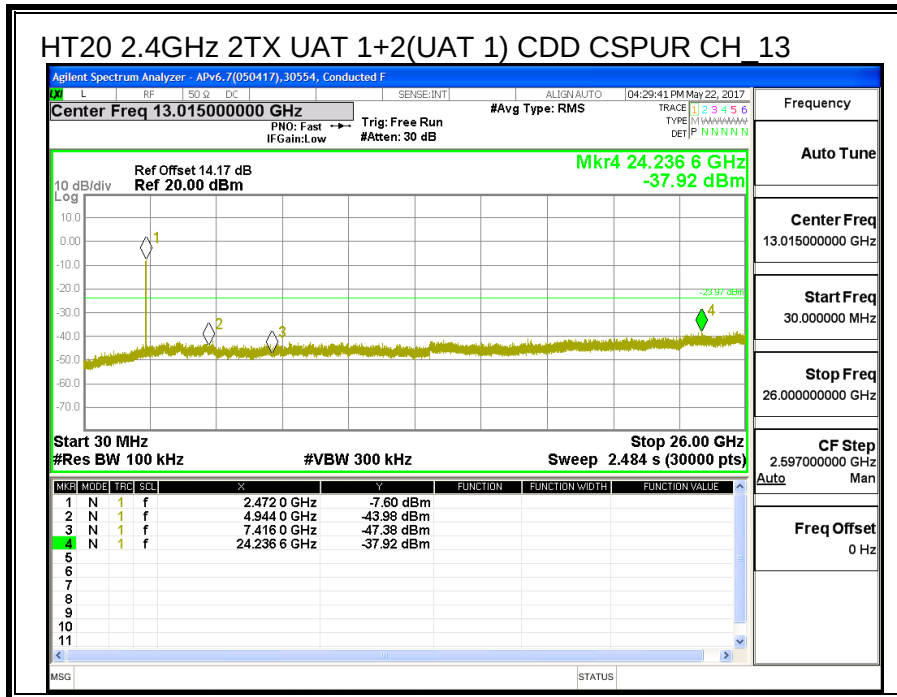












9. RADIATED TEST RESULTS

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.

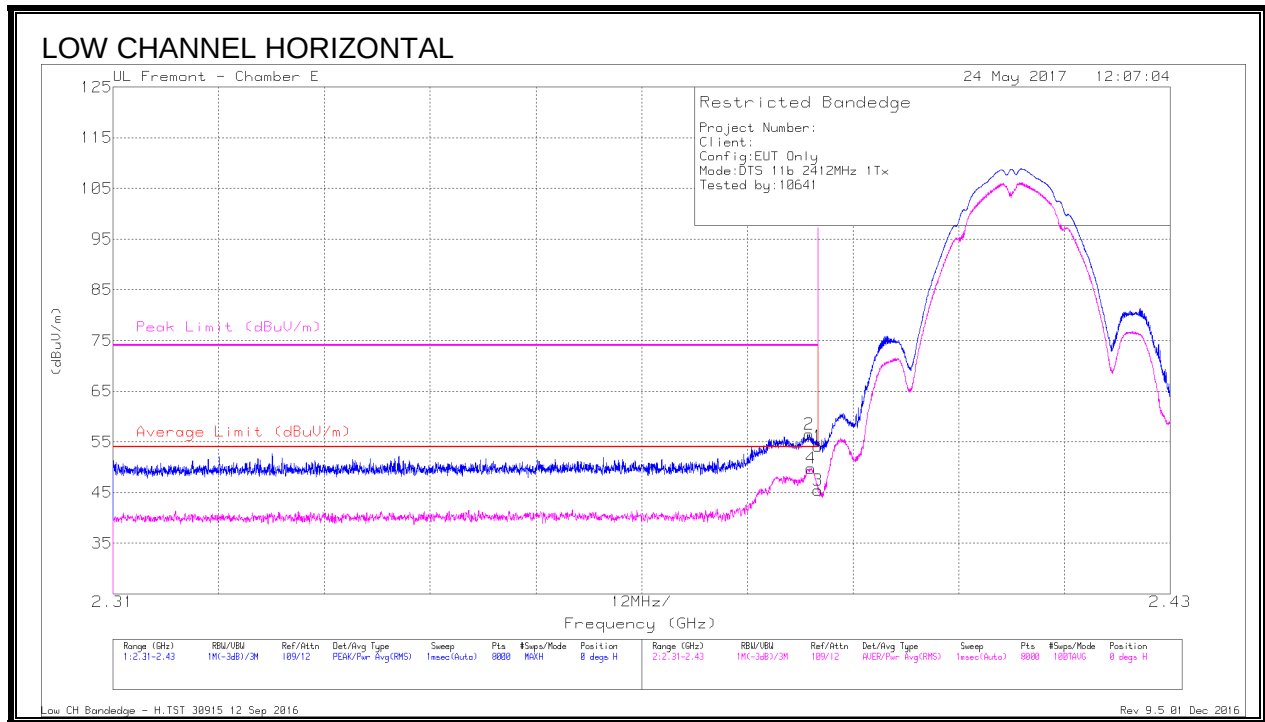
For final measurements above 1 GHz the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 3 MHz for peak measurements and as applicable for average measurements.

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

9.2. TRANSMITTER ABOVE 1 GHz

9.2.1. 11b UAT 1 SISO MODE IN THE 2.4GHz BAND

AUTHORIZED BANDEGE (LOW CHANNEL, CH 1)

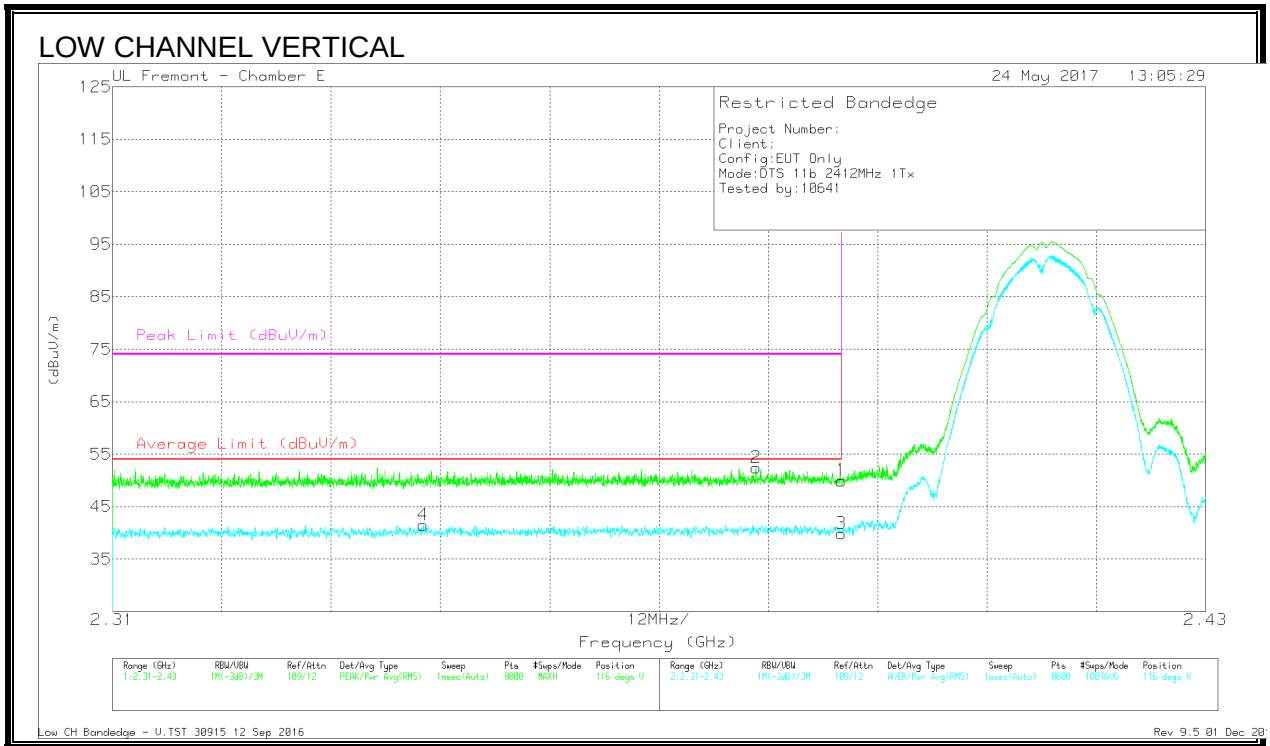


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	41.64	Pk	32.2	-19.7	54.14	-	-	74	-19.86	0	117	H
2	* 2.389	43.99	Pk	32.2	-19.7	56.49	-	-	74	-17.51	0	117	H
3	* 2.39	32.98	RMS	32.2	-19.7	45.48	54	-8.52	-	-	0	117	H
4	* 2.389	37.24	RMS	32.2	-19.7	49.74	54	-4.26	-	-	0	117	H

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

Pk - Peak detector

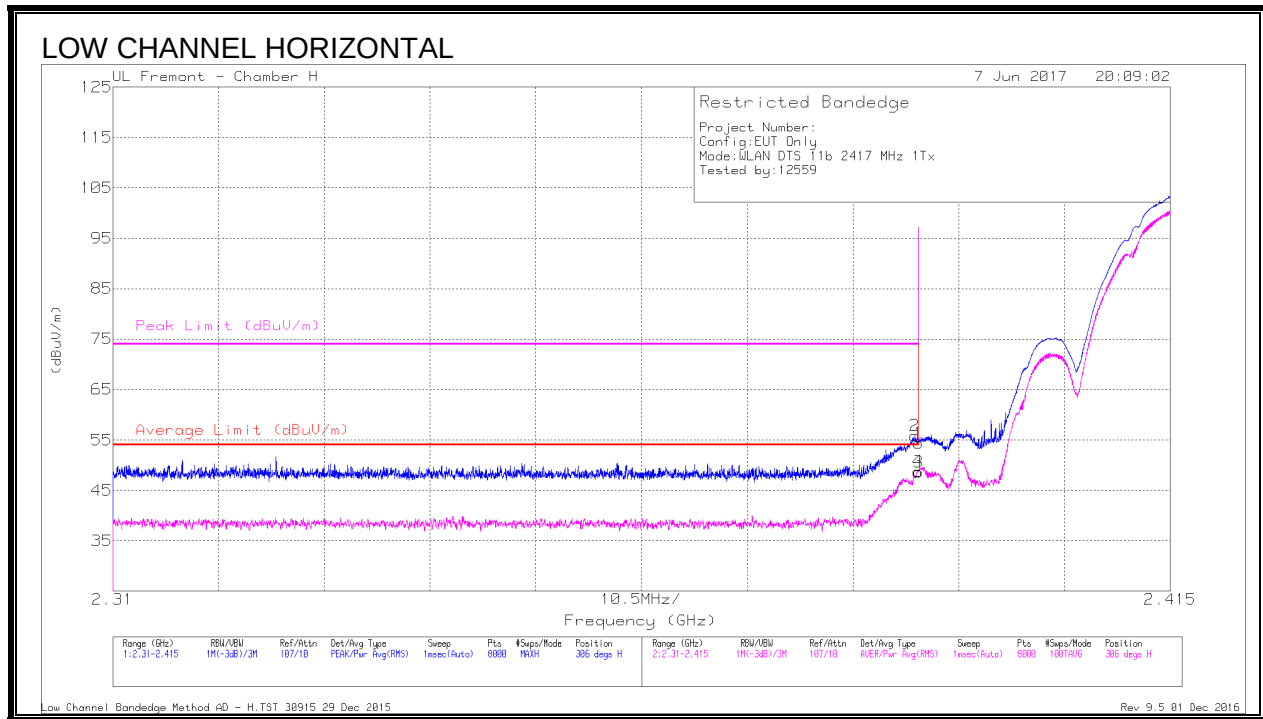
RMS - RMS detection



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AFT136 (dB/m)	Amp/Cbl/Filtr/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	* 2.344	29.2	RMS	32.1	-19.8	41.5	54	-12.5	-	-	116	374	V
2	* 2.381	39.67	Pk	32.2	-19.5	52.37	-	-	74	-21.63	116	374	V
1	* 2.39	37.48	Pk	32.2	-19.7	49.98	-	-	74	-24.02	116	374	V
3	* 2.39	27.32	RMS	32.2	-19.7	39.82	54	-14.18	-	-	116	374	V

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

AUTHORIZED BANDEDGE (LOW CHANNEL, CH 2)

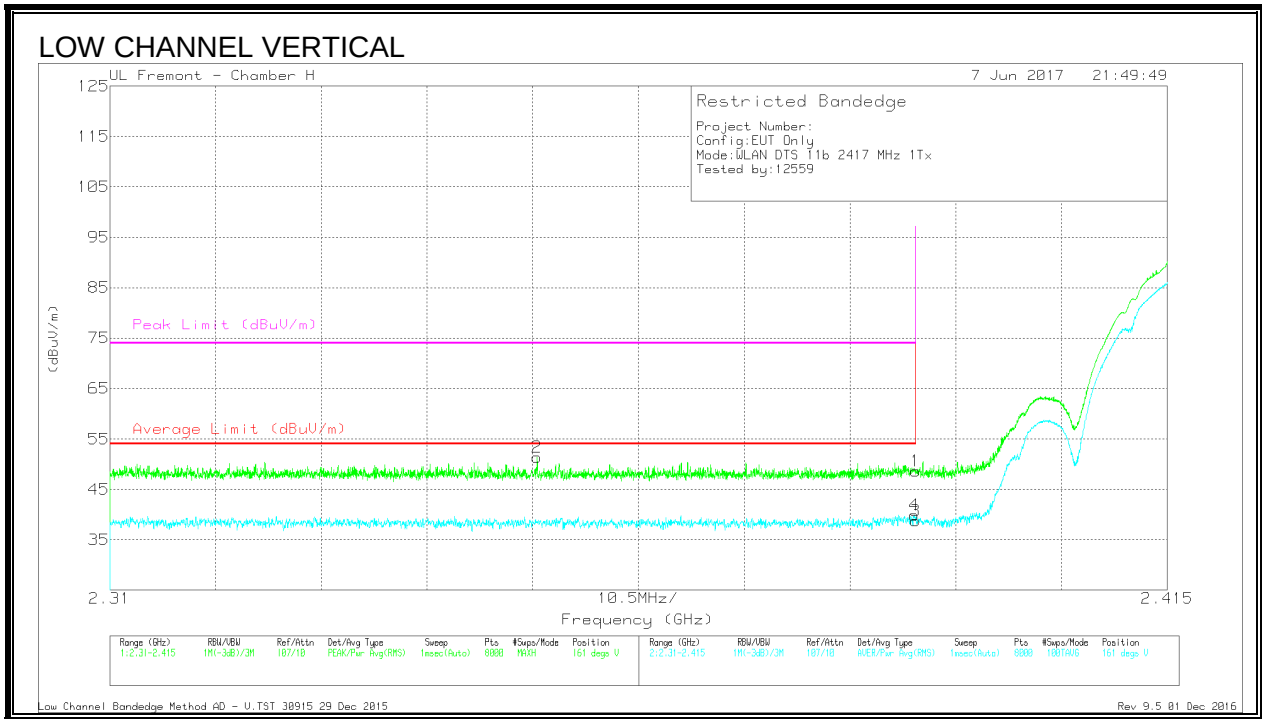


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/C bl/Filtr/ Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	50.13	Pk	32.3	-28.1	54.33	-	-	74	-19.67	306	102	H
2	* 2.39	51.72	Pk	32.3	-28.1	55.92	-	-	74	-18.08	306	102	H
3	* 2.39	44.5	RMS	32.3	-28.1	48.7	54	-5.3	-	-	306	102	H
4	* 2.39	44.61	RMS	32.3	-28.1	48.81	54	-5.19	-	-	306	102	H

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

Pk - Peak detector

RMS - RMS detection



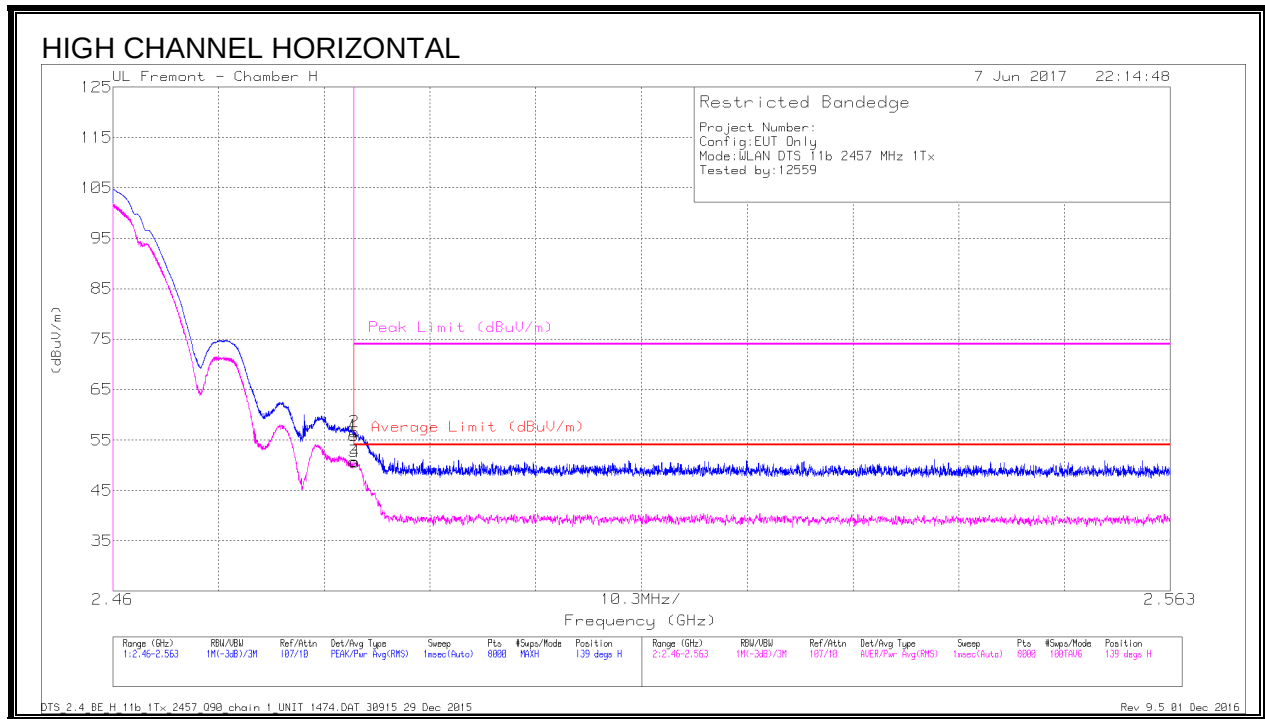
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	44.49	Pk	32.3	-28.1	48.69	-	-	74	-25.31	161	213	V
2	* 2.352	47.41	Pk	32.1	-28.1	51.41	-	-	74	-22.59	161	213	V
3	* 2.39	34.57	RMS	32.3	-28.1	38.77	54	-15.23	-	-	161	213	V
4	* 2.39	35.67	RMS	32.3	-28.1	39.87	54	-14.13	-	-	161	213	V

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

Pk - Peak detector

RMS - RMS detection

AUTHORIZED BANDEDGE (HIGH CHANNEL, CH 10)

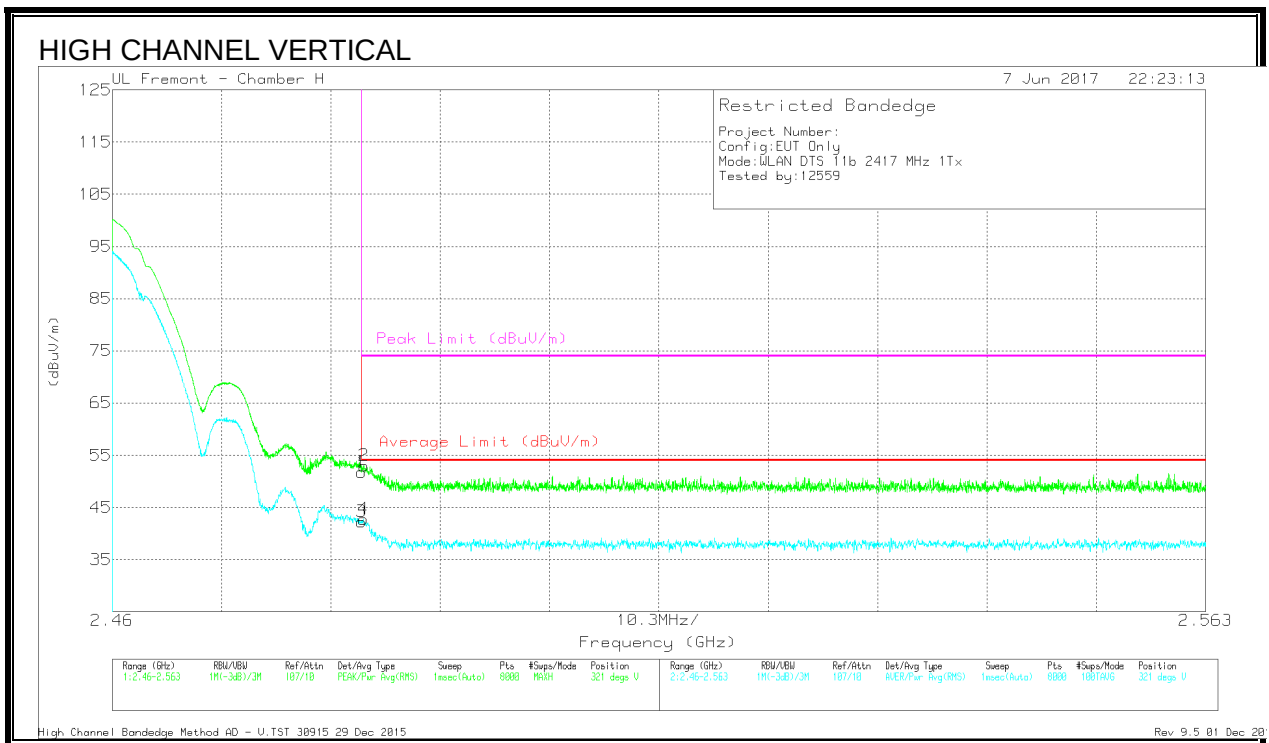


Marker	Frequ ncy (GHz)	Meter Readin g (dBuV)	Det	AF T344 (dB/m)	Amp/C bl/Fitr/ Pad (dB)	Correct ed Readin g (dBuV/ m)	Averag e Limit (dBuV/ m)	Margin (dB)	Peak Limit (dBuV/ m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	51.74	Pk	32.4	-28.2	55.94	-	-	74	-18.06	139	137	H
2	* 2.484	52.48	Pk	32.4	-28.2	56.68	-	-	74	-17.32	139	137	H
3	* 2.484	46.62	RMS	32.4	-28.2	50.82	54	-3.18	-	-	139	137	H
4	* 2.484	46.43	RMS	32.4	-28.2	50.63	54	-3.37	-	-	139	137	H

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

Pk - Peak detector

RMS - RMS detection



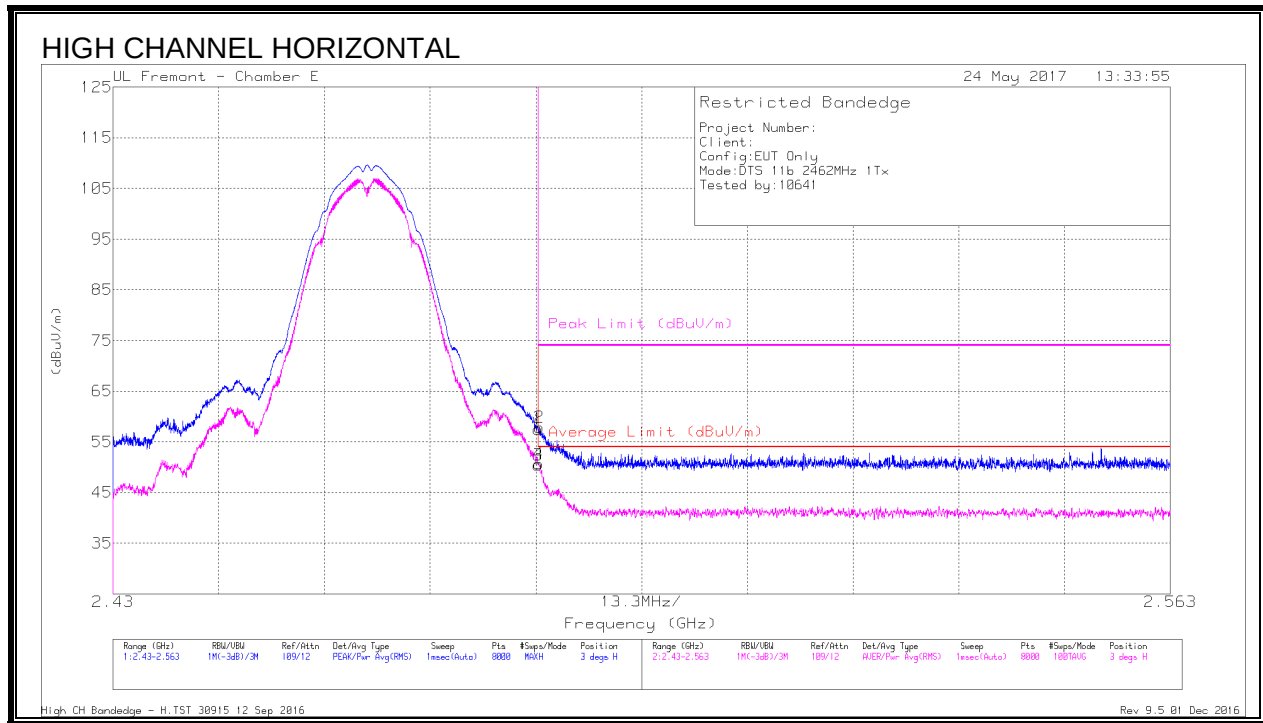
Marker	Frequ ncy (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/C bl/Filtr/ Pad (dB)	Correct ed Reading (dBuV/ m)	Average Limit (dBuV/ m)	Margin (dB)	Peak Limit (dBuV/ m)	PK Margin (dB)	Azimet h (Degs)	Height (cm)	Polarity
1	* 2.484	47.57	Pk	32.4	-28.2	51.77	-	-	74	-22.23	321	362	V
2	* 2.484	48.84	Pk	32.4	-28.2	53.04	-	-	74	-20.96	321	362	V
3	* 2.484	38.03	RMS	32.4	-28.2	42.23	54	-11.77	-	-	321	362	V
4	* 2.484	38.55	RMS	32.4	-28.2	42.75	54	-11.25	-	-	321	362	V

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

Pk - Peak detector

RMS - RMS detection

AUTHORIZED BANDEDGE (HIGH CHANNEL, CH 11)



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Filtr/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	44.45	Pk	32.7	-19.7	57.45	-	-	74	-16.55	3	117	H
2	* 2.484	44.85	Pk	32.7	-19.7	57.85	-	-	74	-16.15	3	117	H
3	* 2.484	37.46	RMS	32.7	-19.7	50.46	54	-3.54	-	-	3	117	H
4	* 2.484	37.65	RMS	32.7	-19.7	50.65	54	-3.35	-	-	3	117	H

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

Pk - Peak detector

RMS - RMS detection