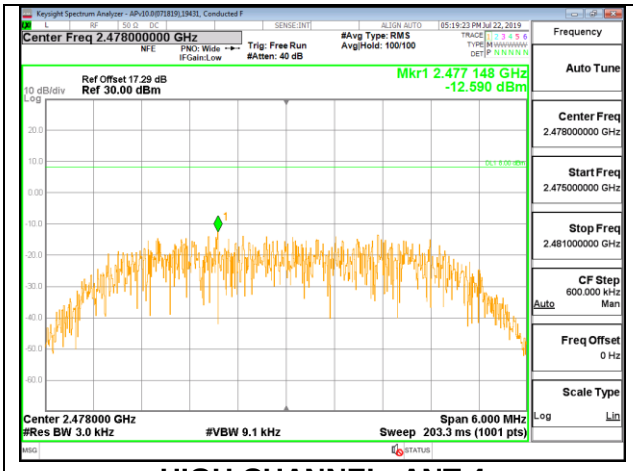
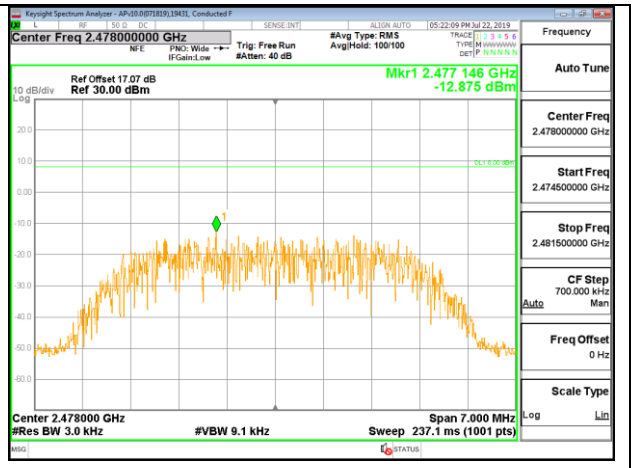


HIGH CHANNEL ANT 4



HIGH CHANNEL ANT 3

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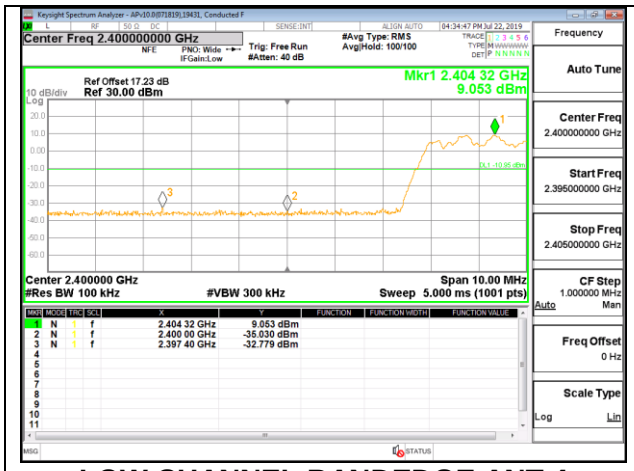
8.13. BEAMFORMING, CONDUCTED SPURIOUS

8.13.1. HDR4, HIGH POWER

Antenna 4



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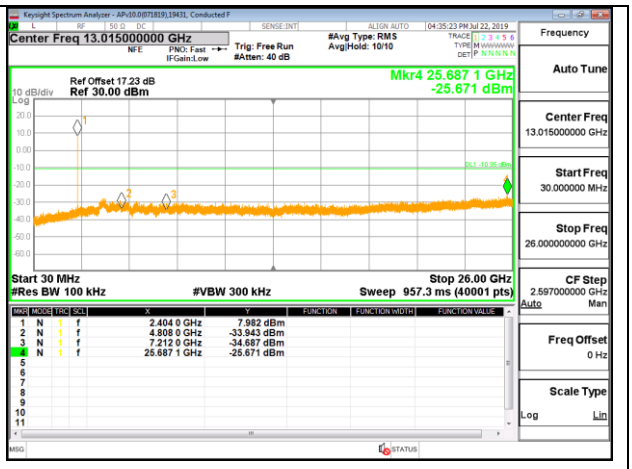

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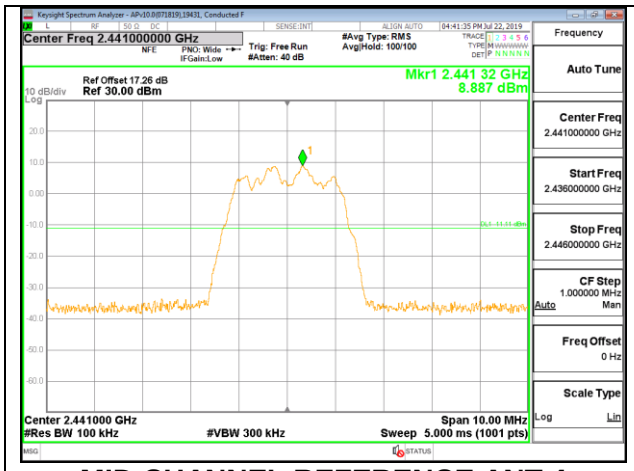

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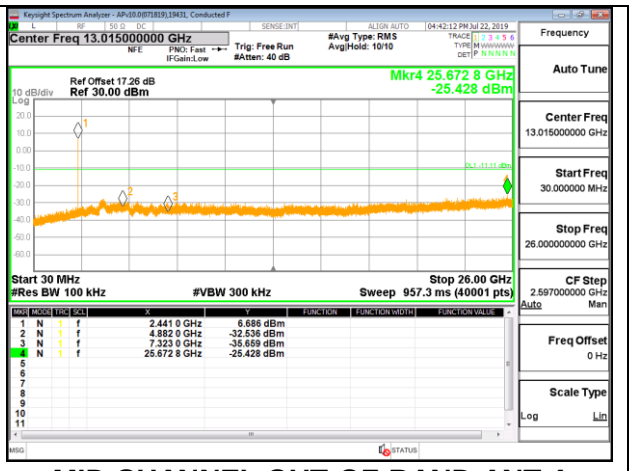

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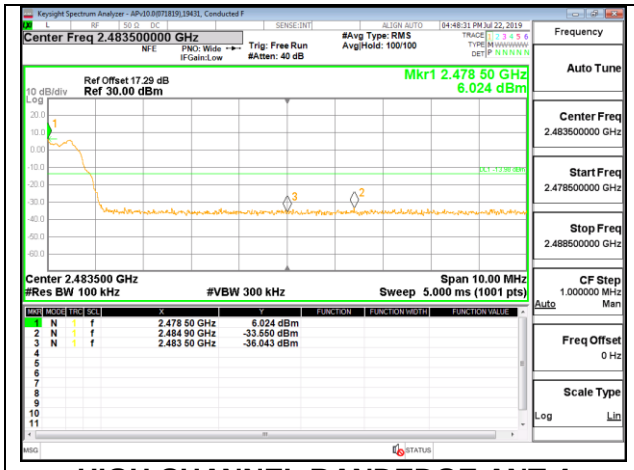

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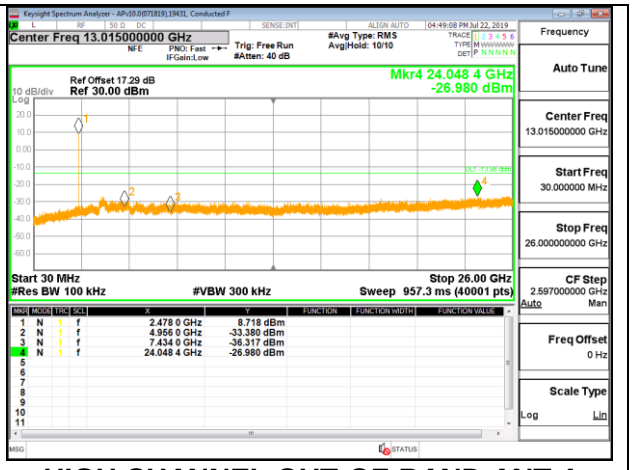

HIGH CHANNEL OUT-OF-BAND ANT 4

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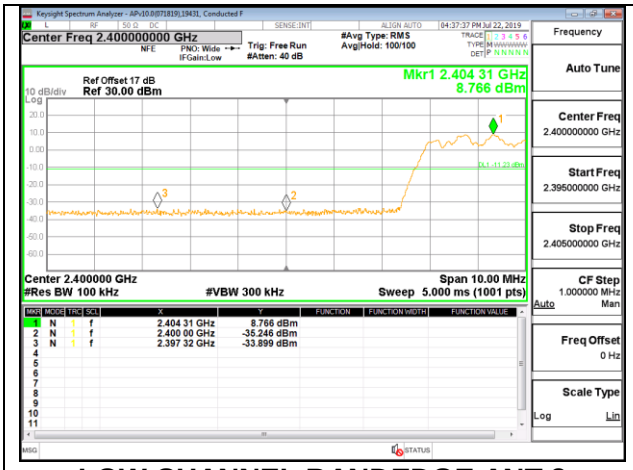
Antenna 3



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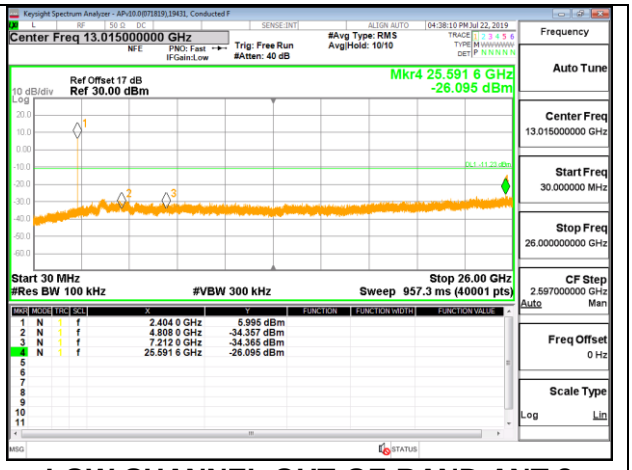

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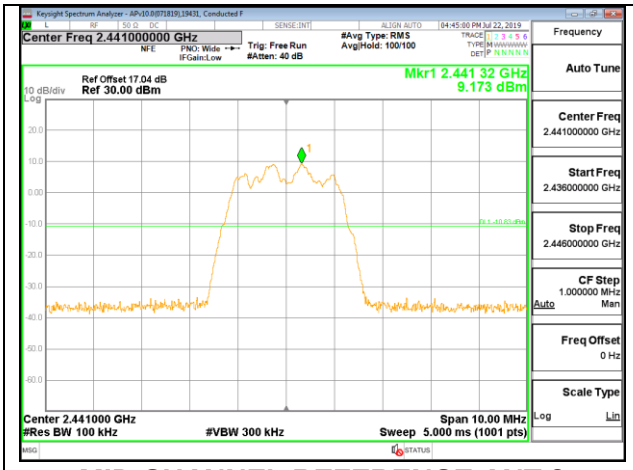

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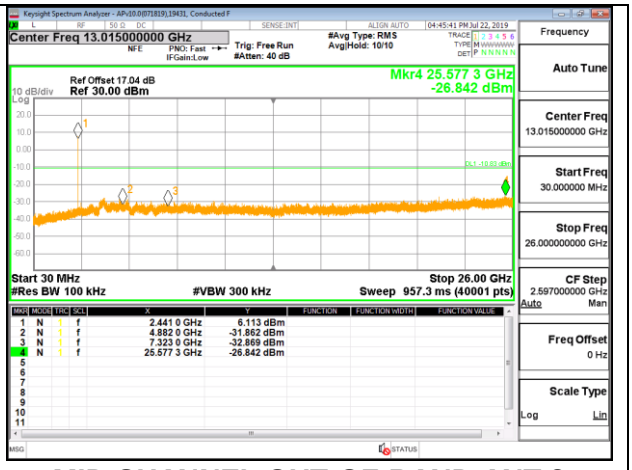

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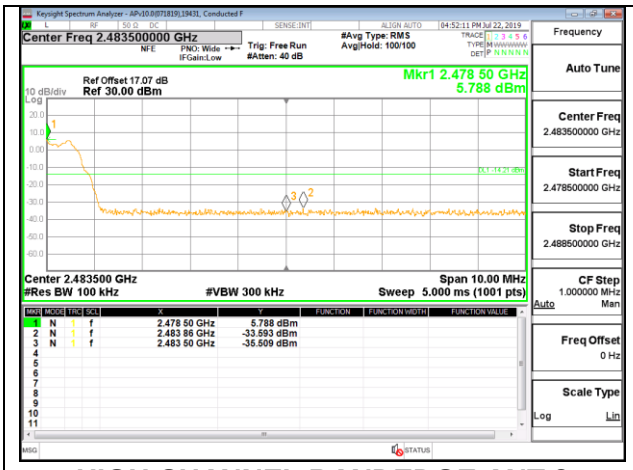

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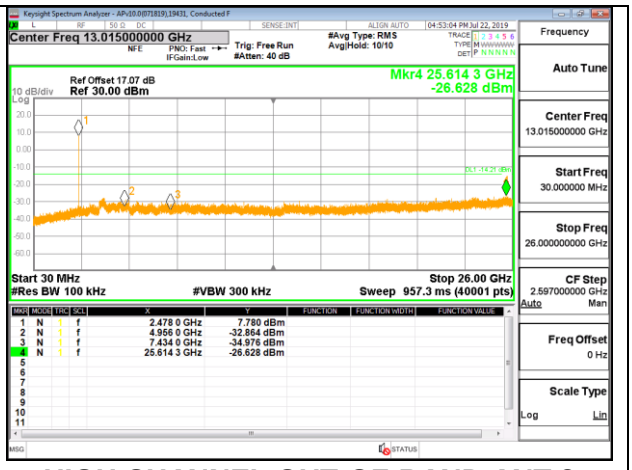

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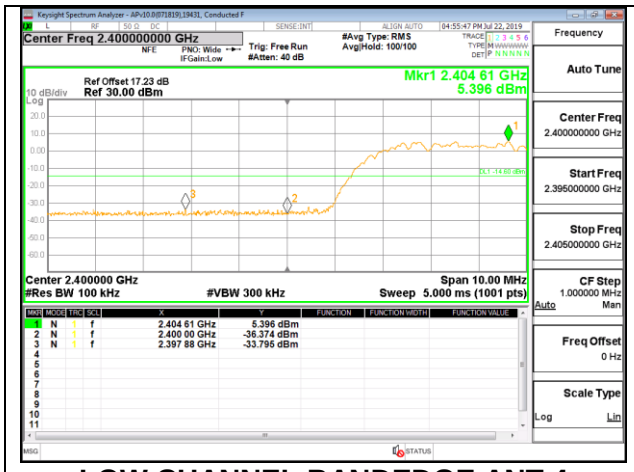
8.13.2. HDR8, HIGH POWER

Antenna 4



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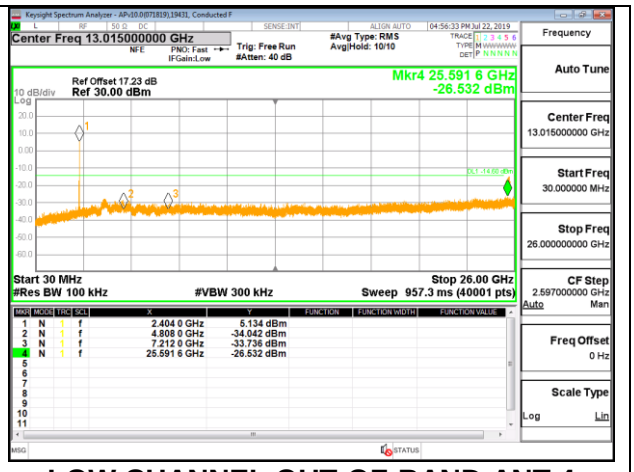

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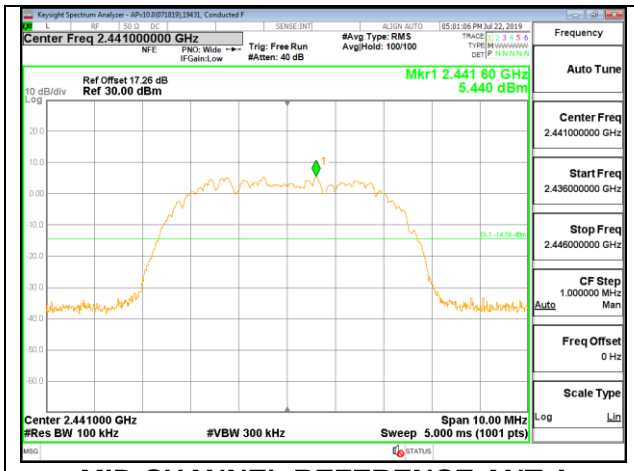

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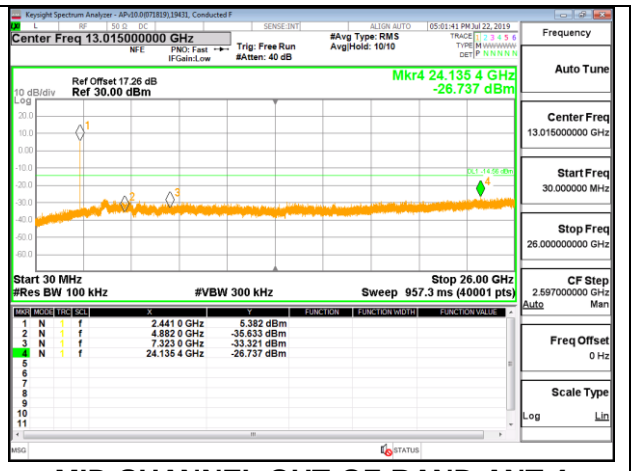

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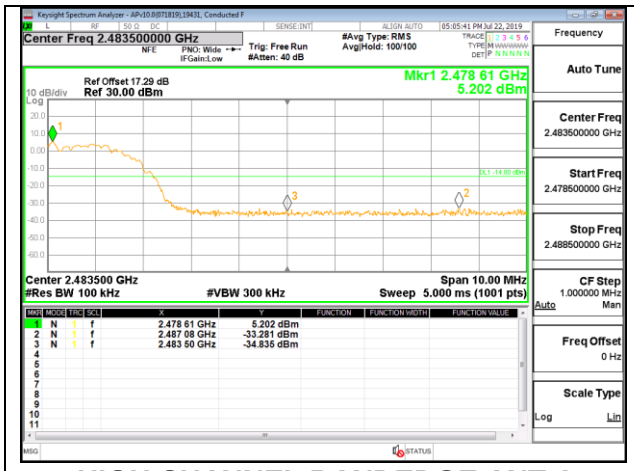

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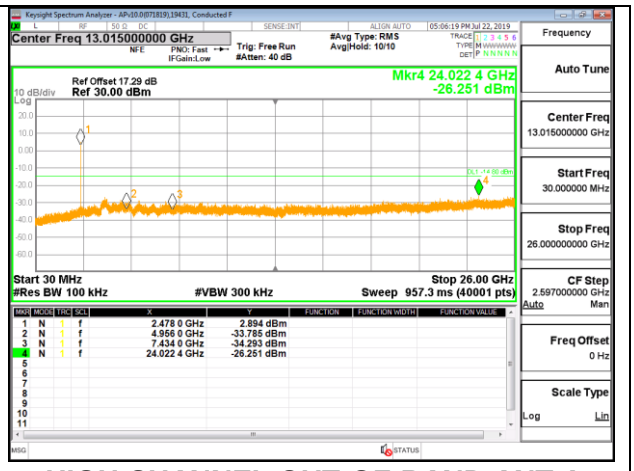

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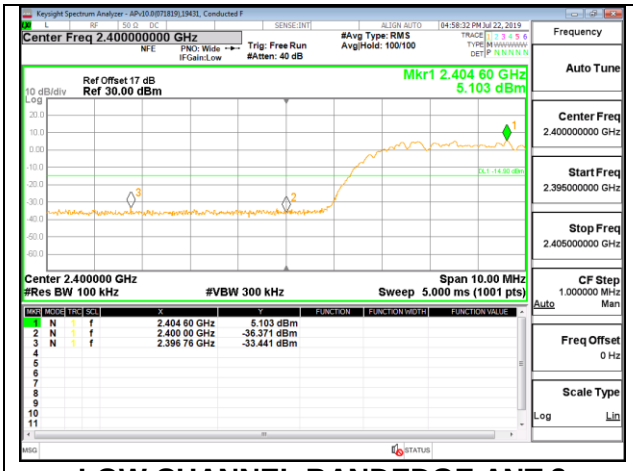
Antenna 3



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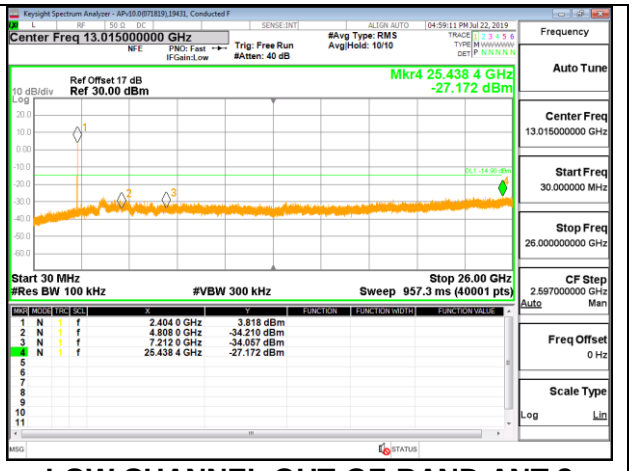

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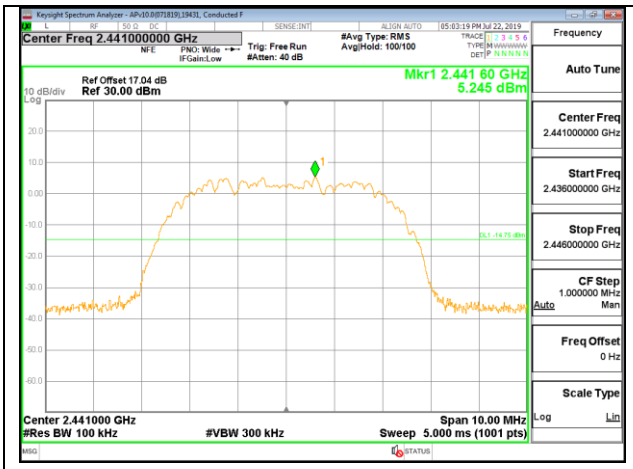

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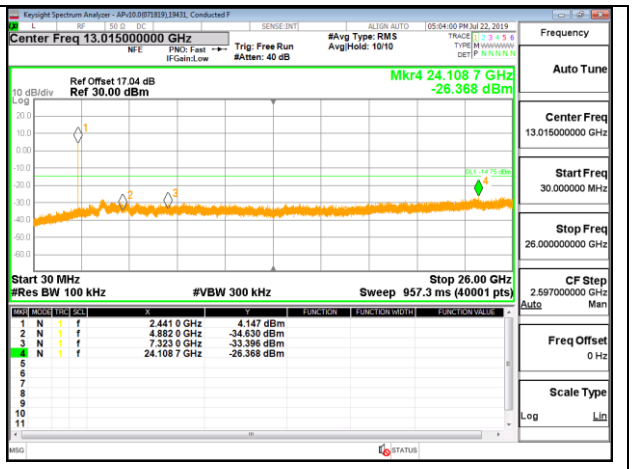

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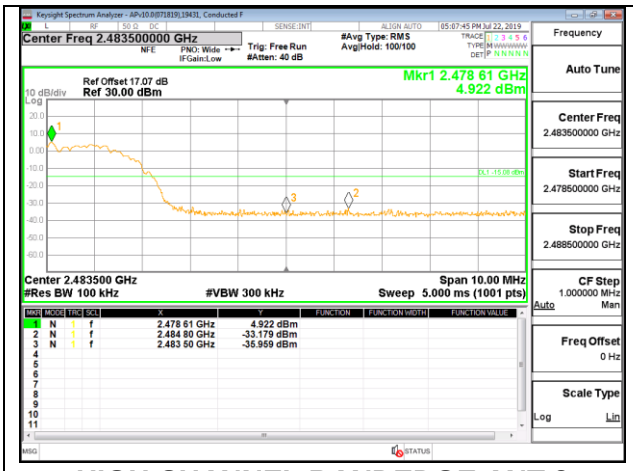

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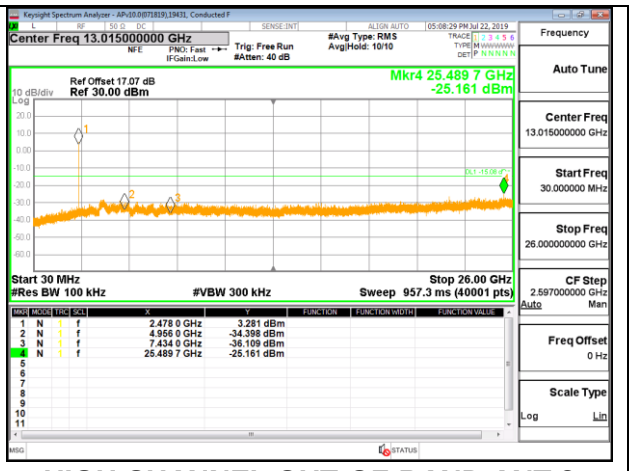

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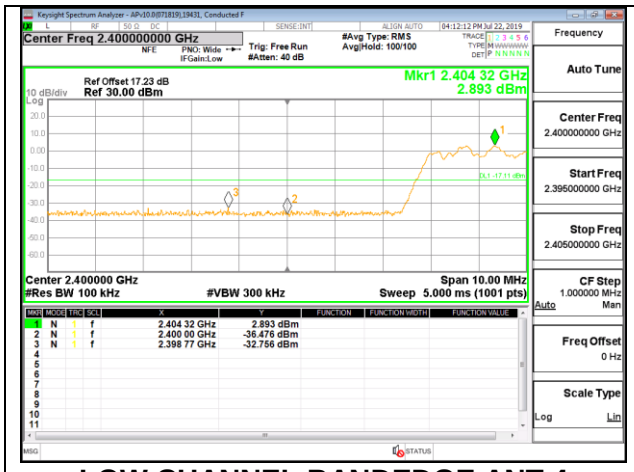
8.13.3. HDR4, LOW POWER

Antenna 4



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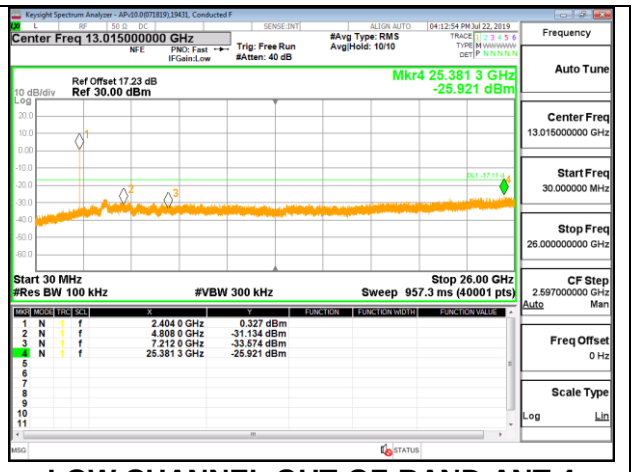
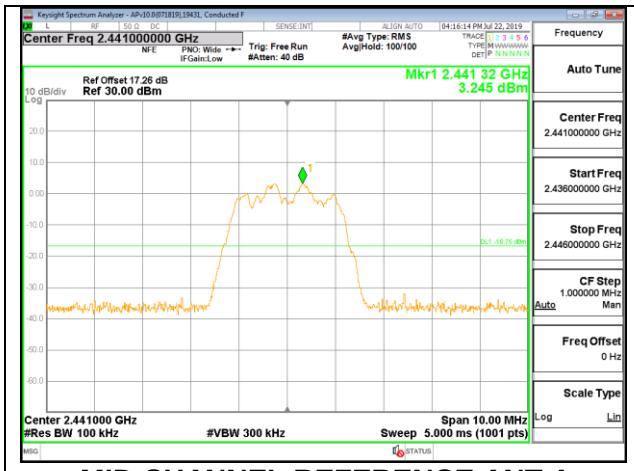
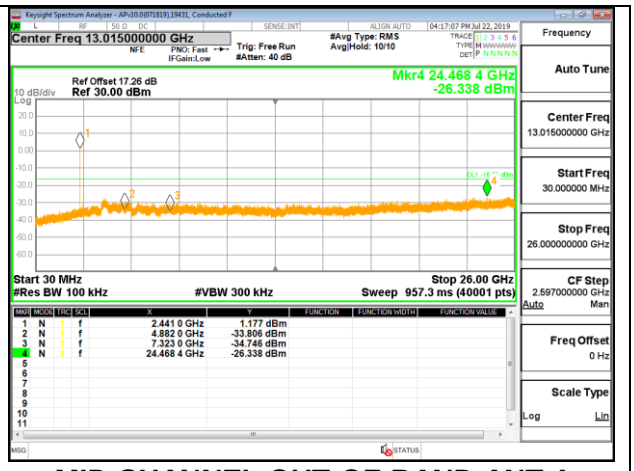


LOW CHANNEL OUT-OF-BAND ANT 4



MID CHANNEL REFERENCE ANT 4



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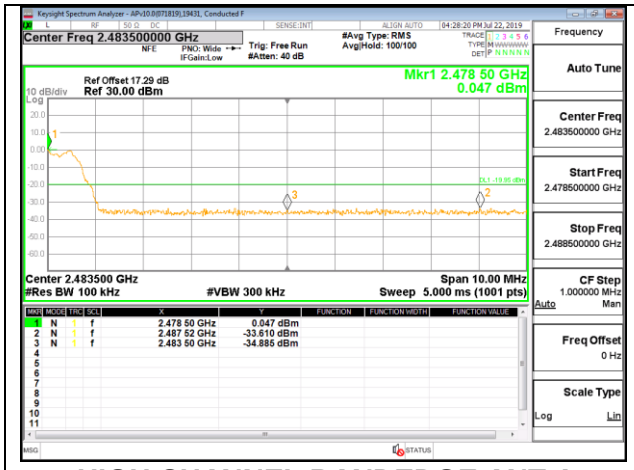

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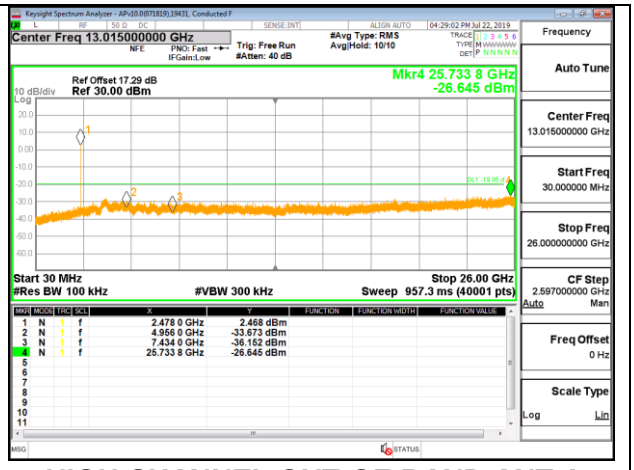

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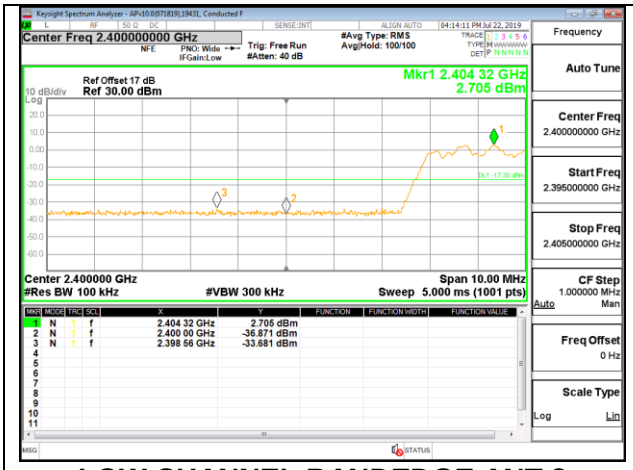
Antenna 3



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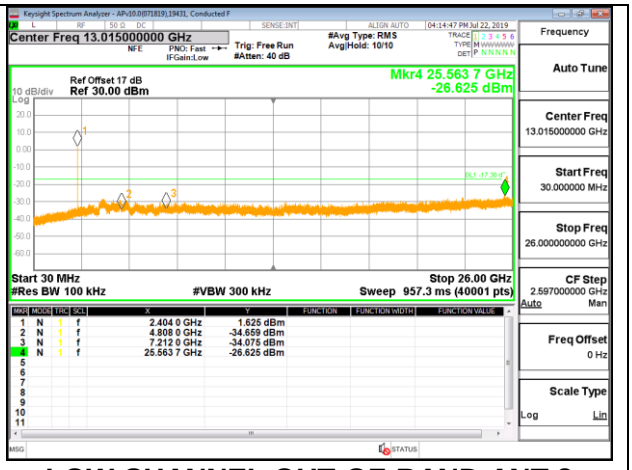

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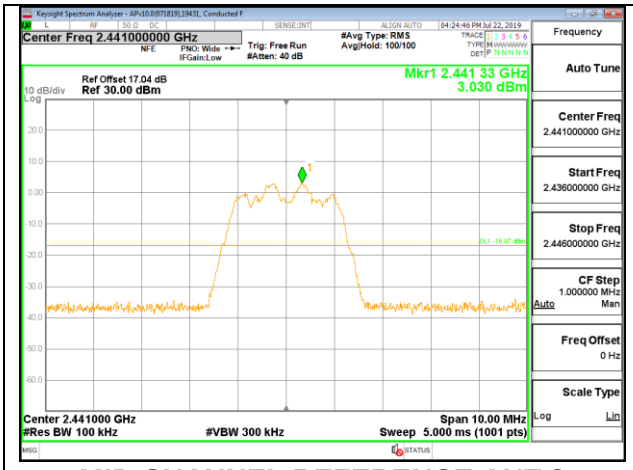

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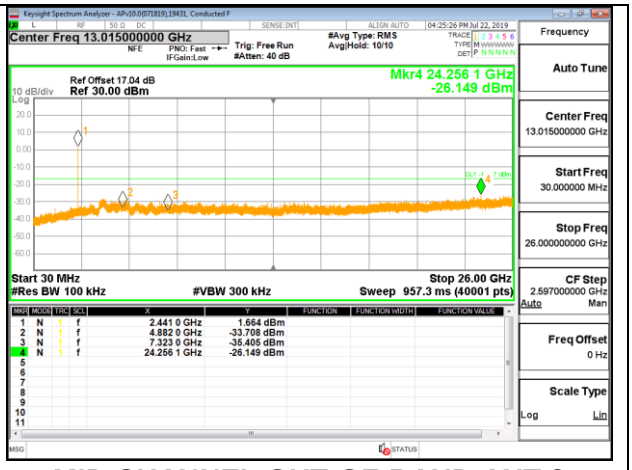
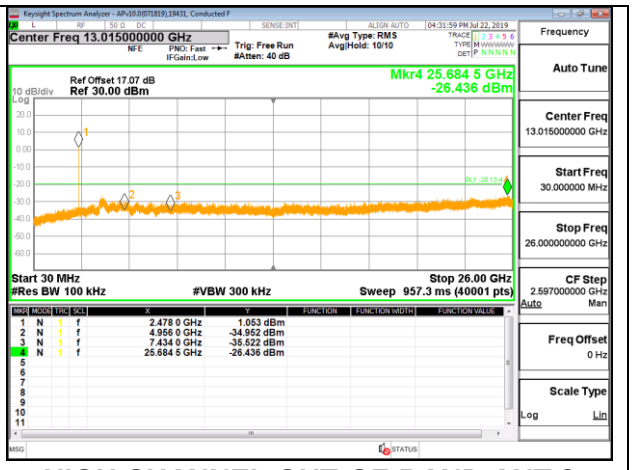


MID CHANNEL OUT-OF-BAND ANT 3

HIGH CHANNEL BANDEDGE ANT 3



HIGH CHANNEL OUT-OF-BAND ANT 3

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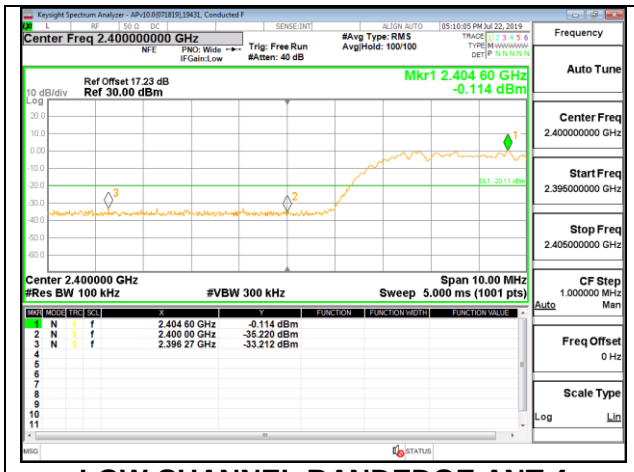
8.13.4. HDR8, LOW POWER

Antenna 4



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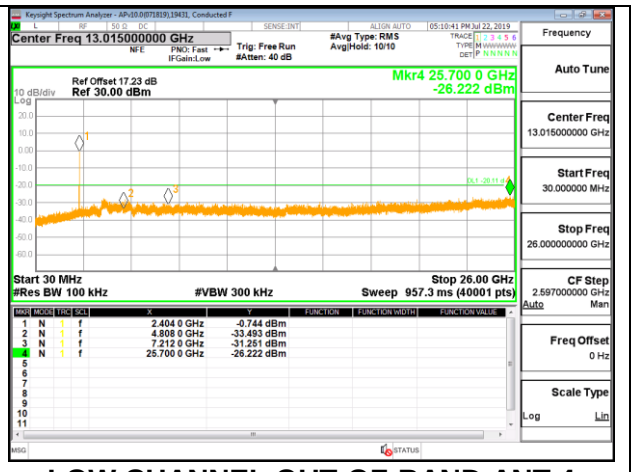

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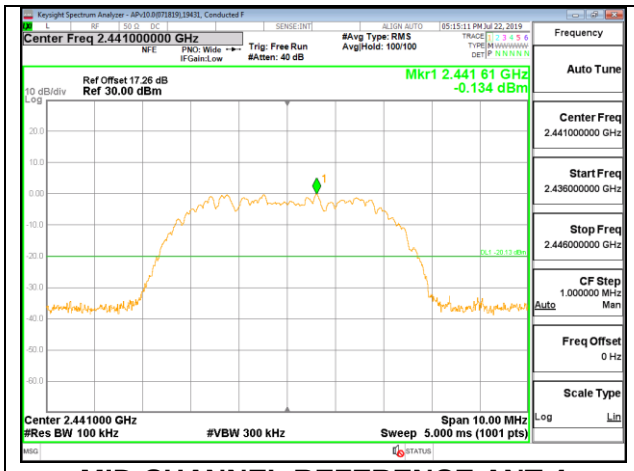
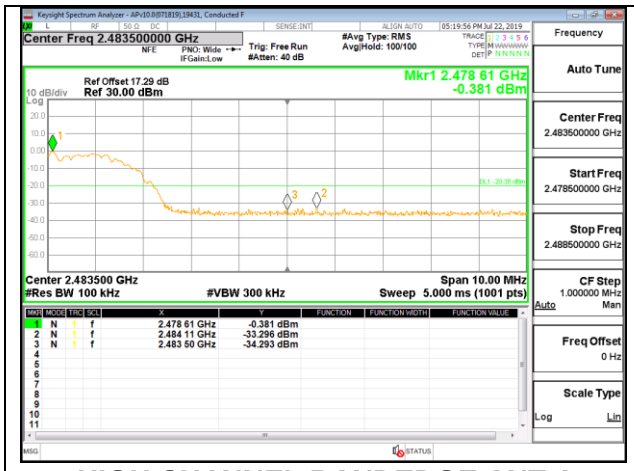
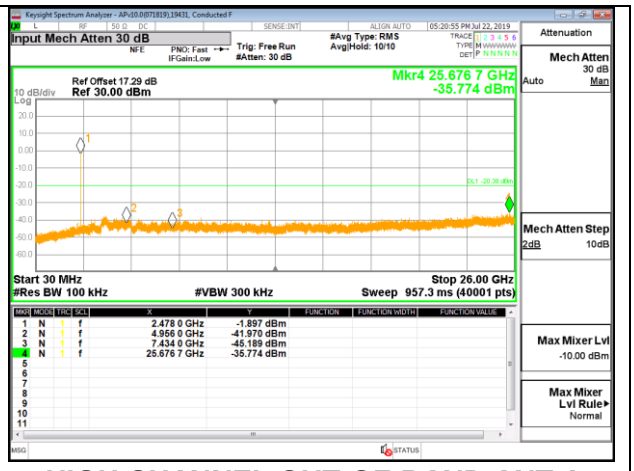


MID CHANNEL REFERENCE ANT 4

MID CHANNEL OUT-OF-BAND ANT 4



HIGH CHANNEL BANDEDGE ANT 4



HIGH CHANNEL OUT-OF-BAND ANT 4

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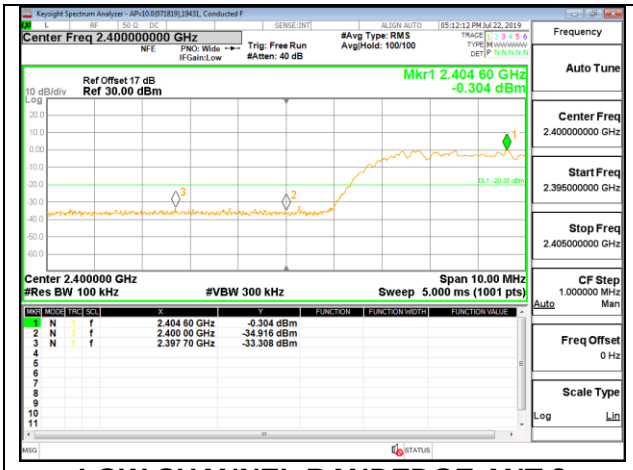
Antenna 3



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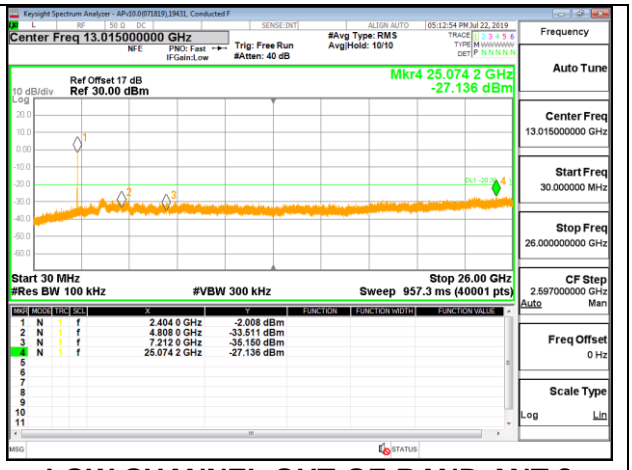

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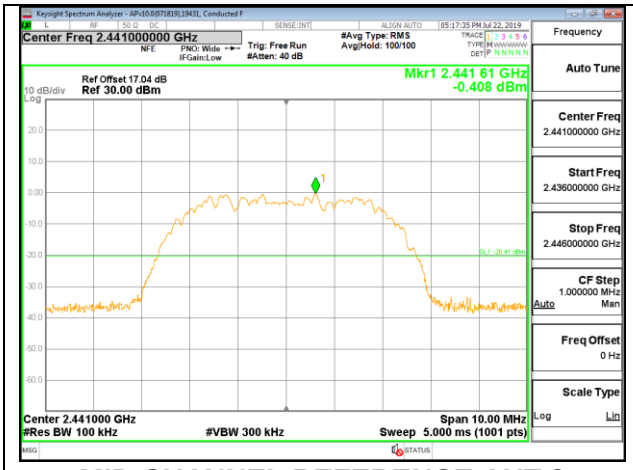

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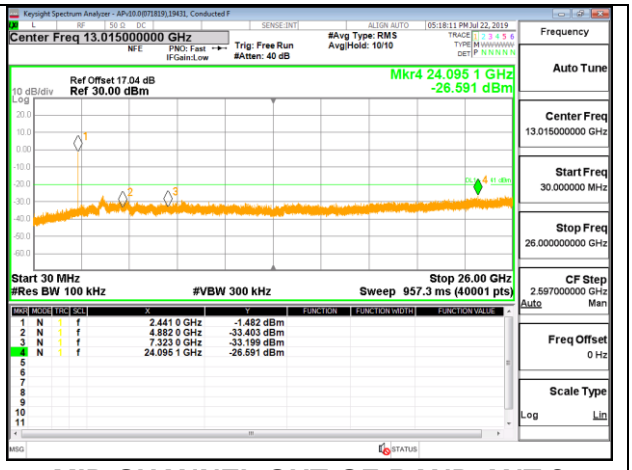

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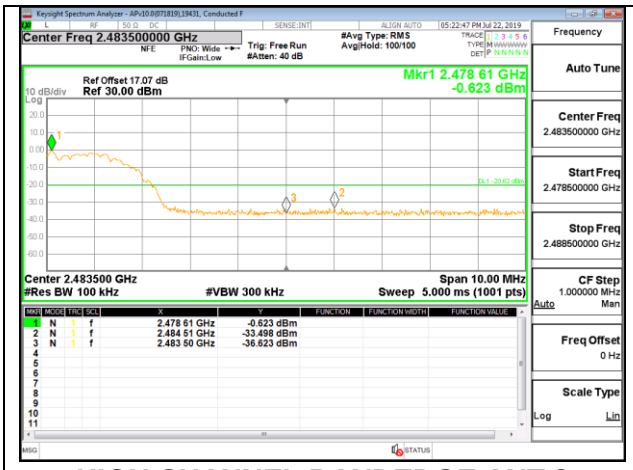

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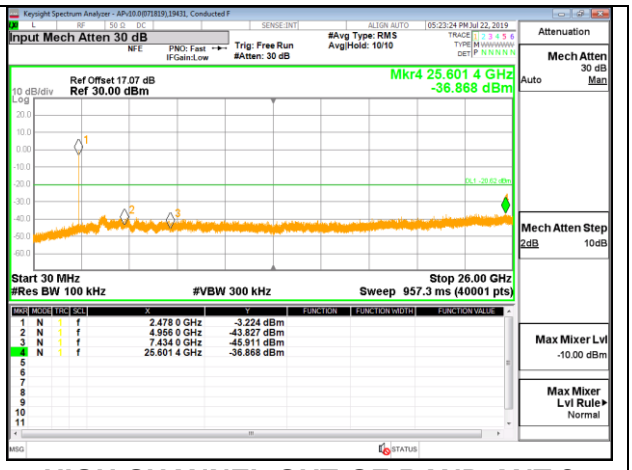

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9. RADIATED TEST RESULTS

9.1. LIMITS AND PROCEDURE

LIMITS

FCC §15.205 and §15.209

RSS-GEN, Section 8.9 and 8.10.

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

TEST PROCEDURE

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

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

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

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

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

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

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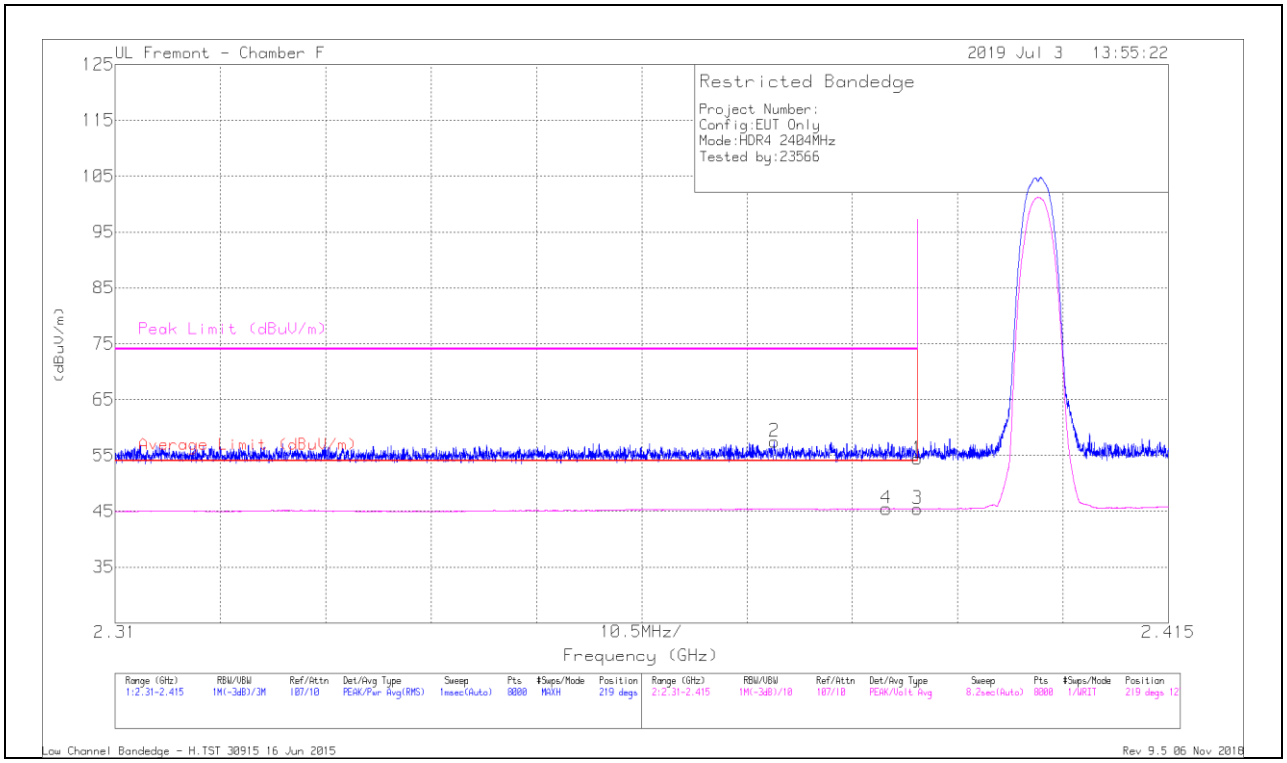
9.2. TRANSMITTER ABOVE 1 GHz

9.2.1. HIGH POWER HDR (HDR4)

Antenna 4

BANDEDGE (LOW CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (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	36.9	Pk	32	-14.5	54.4	-	-	74	-19.6	219	127	H
2	* 2.376	39.97	Pk	31.9	-14.4	57.47	-	-	74	-16.53	219	127	H
3	* 2.39	27.94	VA1T	32	-14.5	45.44	54	-8.56	-	-	219	127	H
4	* 2.387	28.09	VA1T	31.9	-14.5	45.49	54	-8.51	-	-	219	127	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration

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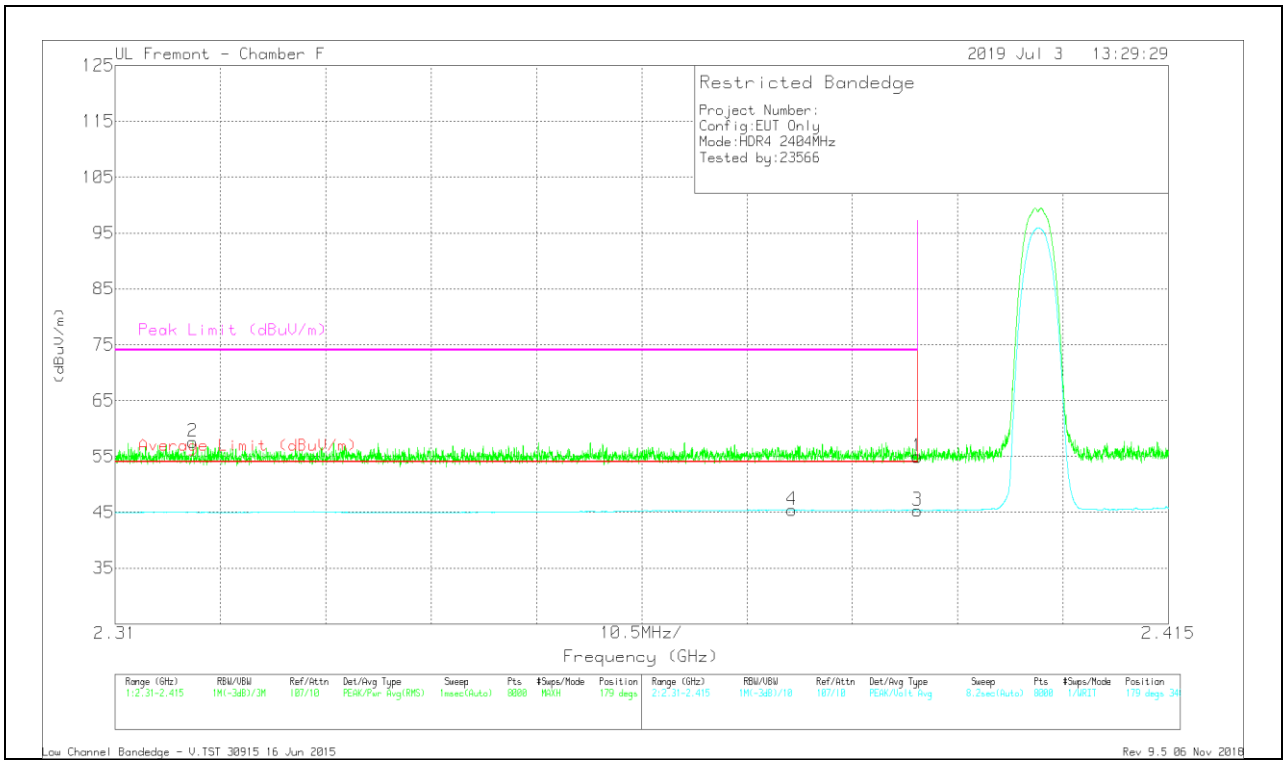
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (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	37.47	Pk	32	-14.5	54.97	-	-	74	-19.03	179	340	V
2	* 2.318	40.54	Pk	31.7	-14.6	57.64	-	-	74	-16.36	179	340	V
3	* 2.39	27.82	VA1T	32	-14.5	45.32	54	-8.68	-	-	179	340	V
4	* 2.377	27.94	VA1T	31.9	-14.4	45.44	54	-8.56	-	-	179	340	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
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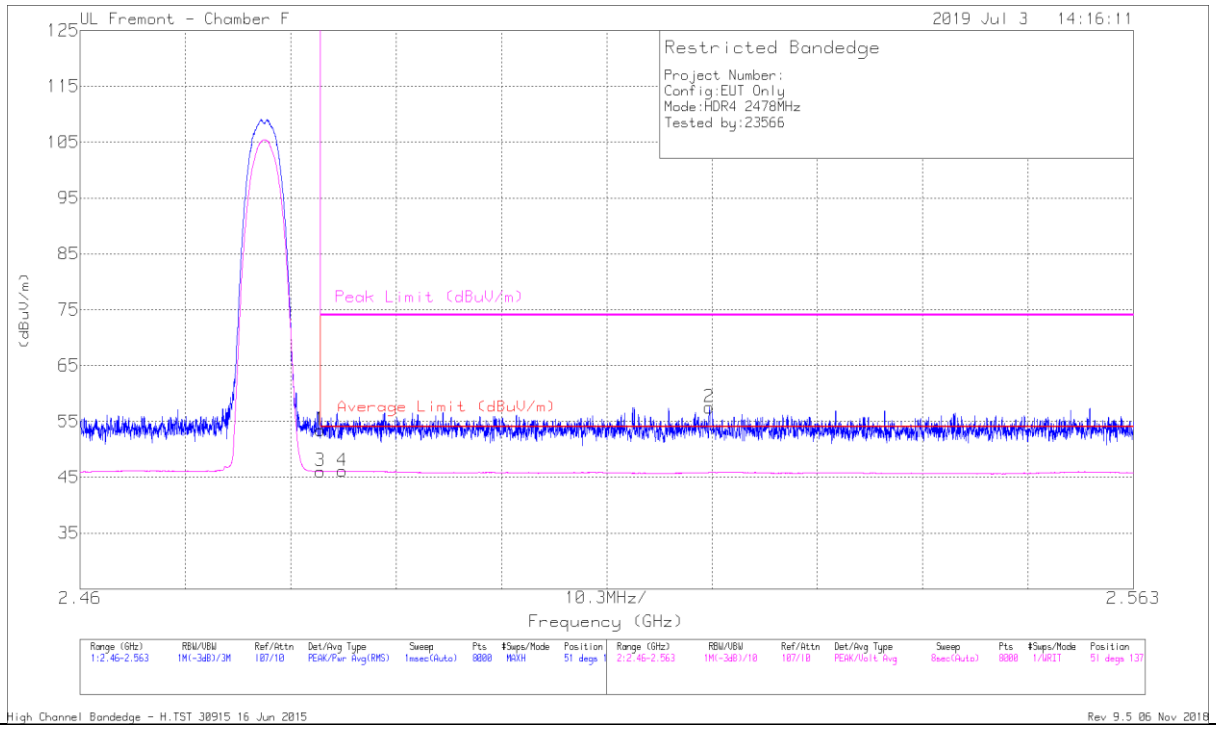
BANDEDGE (HIGH CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (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	35.78	Pk	32.4	-14.7	53.48	-	-	74	-20.52	51	137	H
2	2.522	39.73	Pk	32.3	-14.5	57.53	-	-	74	-16.47	51	137	H
3	* 2.484	28.38	VA1T	32.4	-14.7	46.08	54	-7.92	-	-	51	137	H
4	* 2.486	28.31	VA1T	32.4	-14.6	46.11	54	-7.89	-	-	51	137	H

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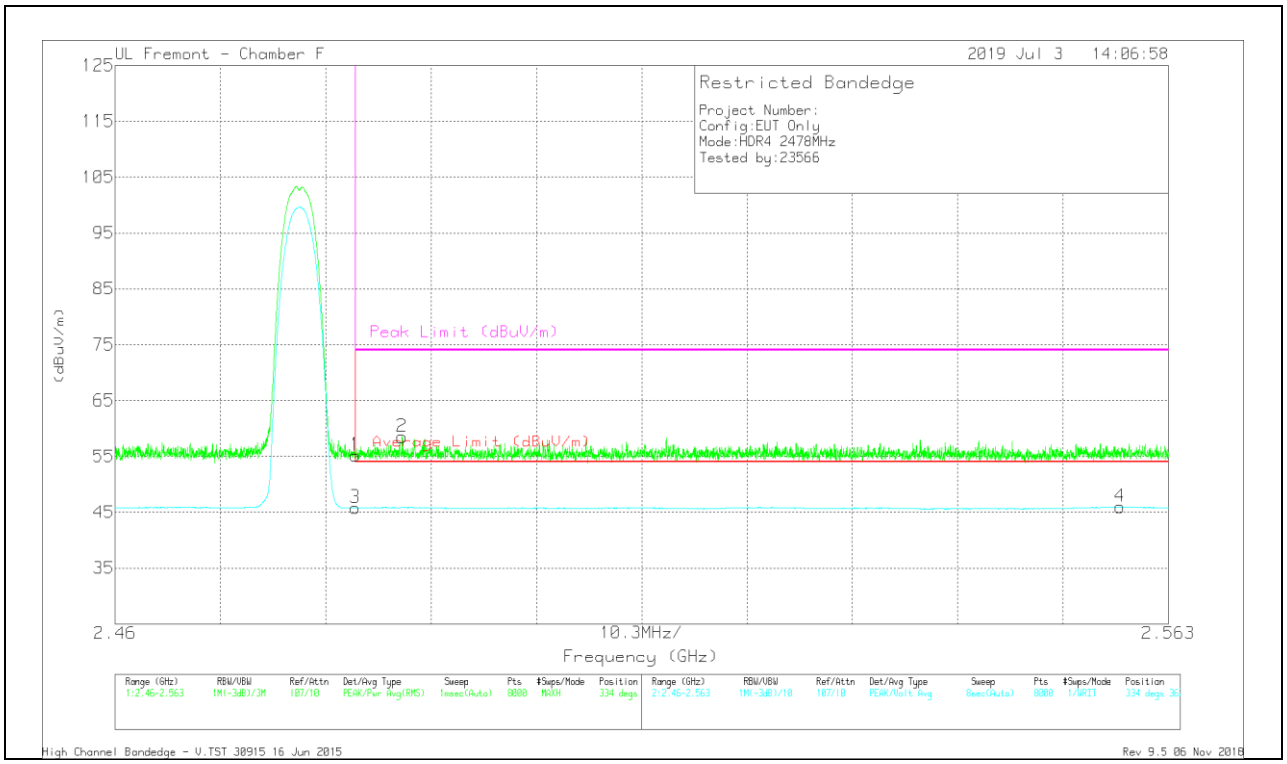
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (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	37.49	Pk	32.4	-14.7	55.19	-	-	74	-18.81	334	362	V
2	* 2.488	40.7	Pk	32.3	-14.5	58.5	-	-	74	-15.5	334	362	V
3	* 2.484	28.09	VA1T	32.4	-14.7	45.79	54	-8.21	-	-	334	362	V
4	2.558	28.07	VA1T	32.4	-14.5	45.97	54	-8.03	-	-	334	362	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration

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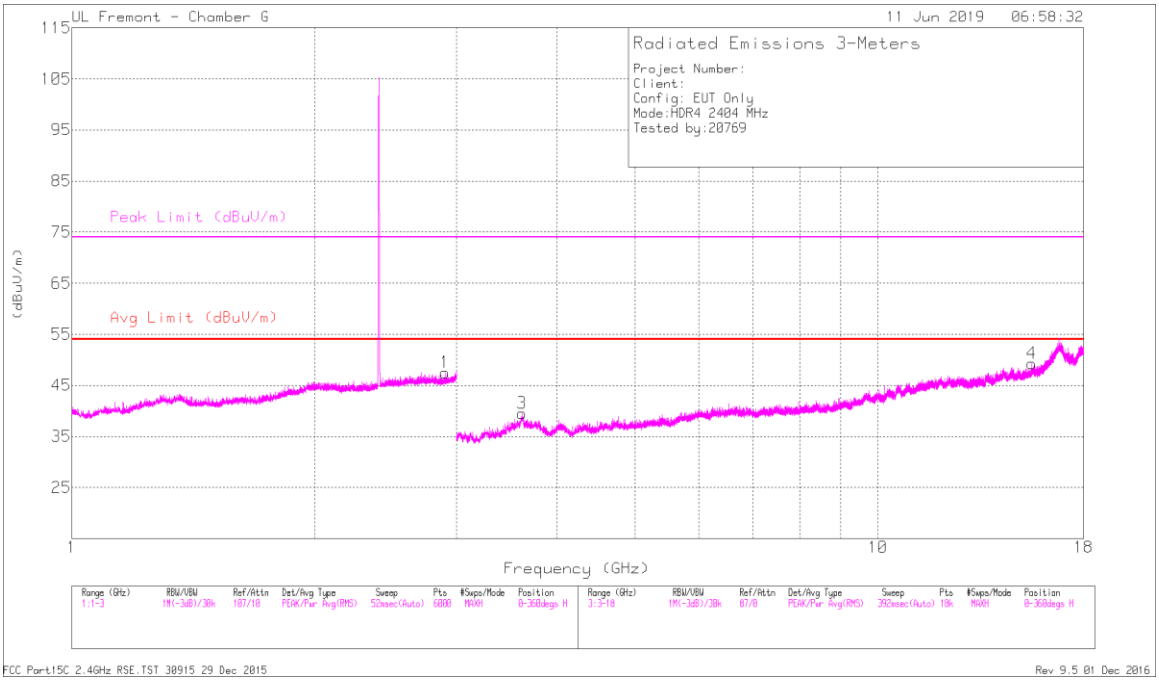
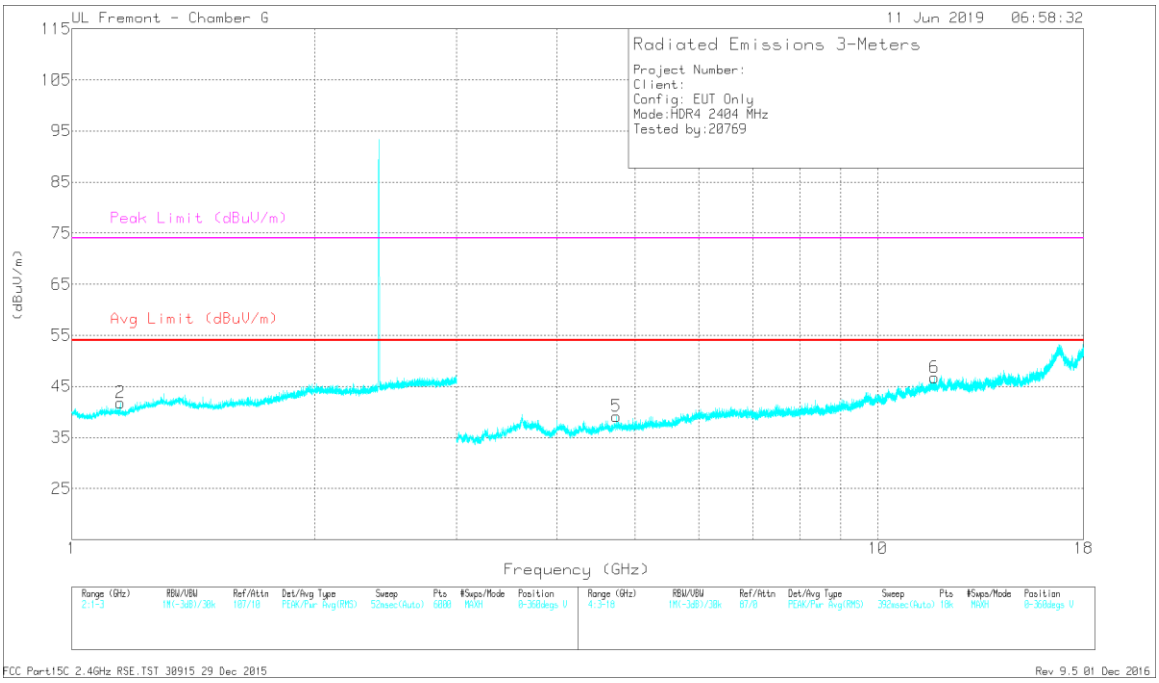
HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL RESULTS



HORIZONTAL



VERTICAL

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