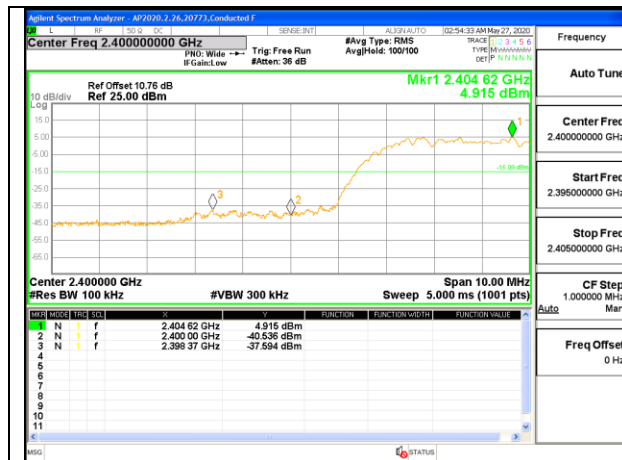
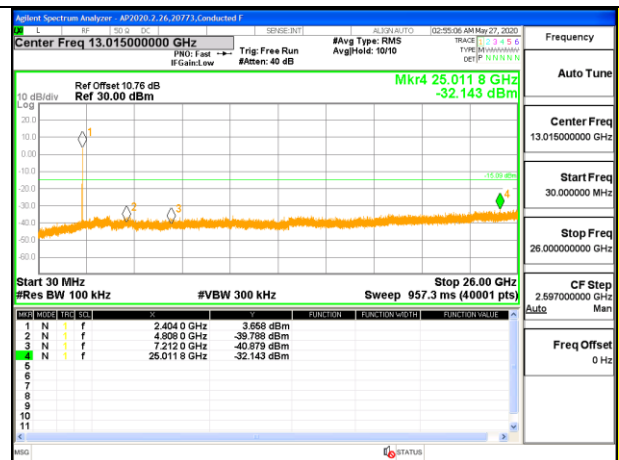


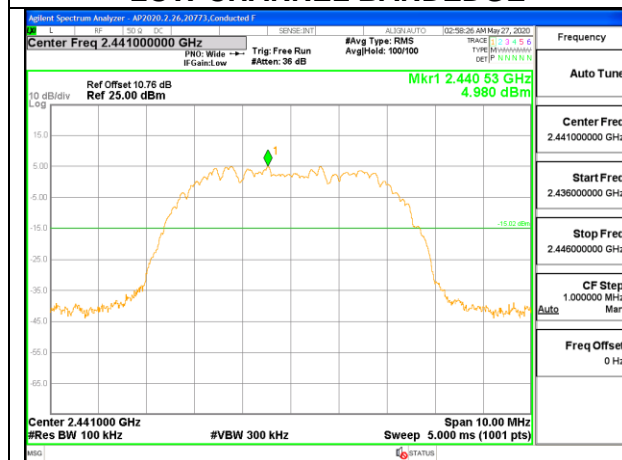
ANT 3



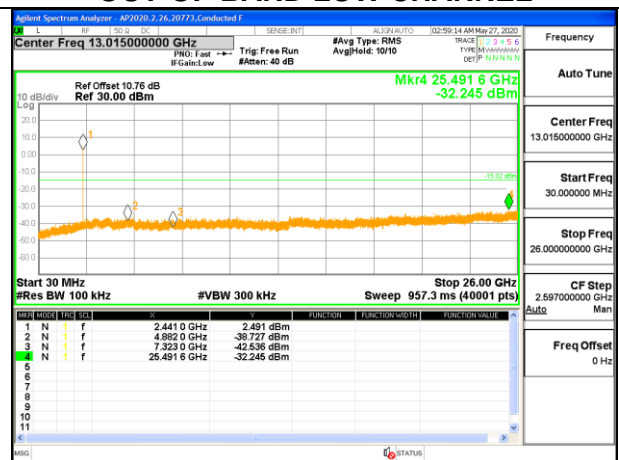
LOW CHANNEL BANDEDGE



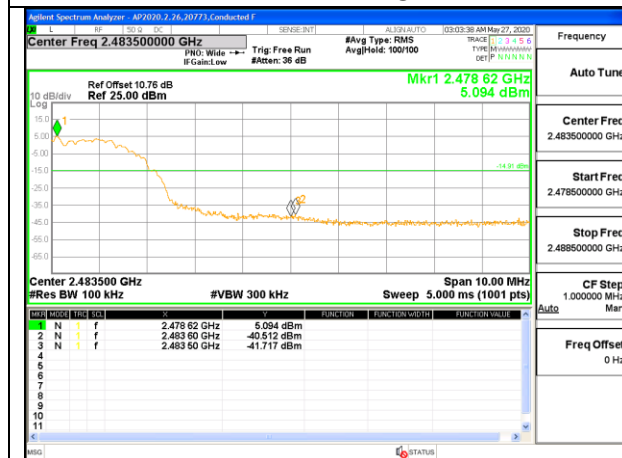
OUT-OF-BAND LOW CHANNEL



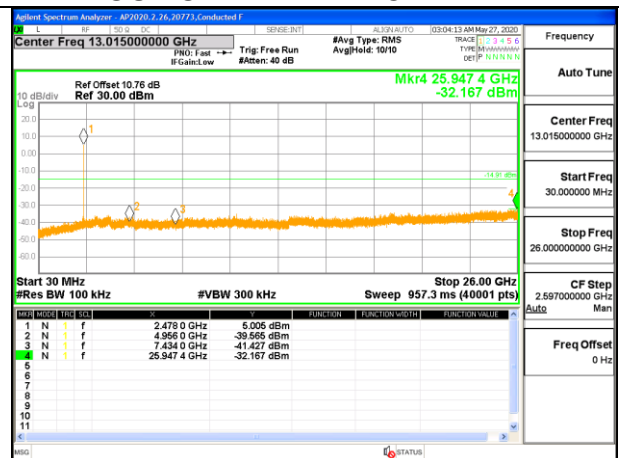
IN-BAND REFERENCE LEVEL



OUT-OF-BAND MID CHANNEL



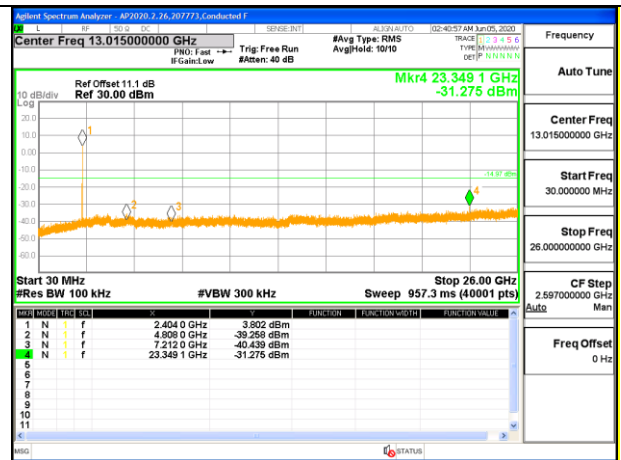
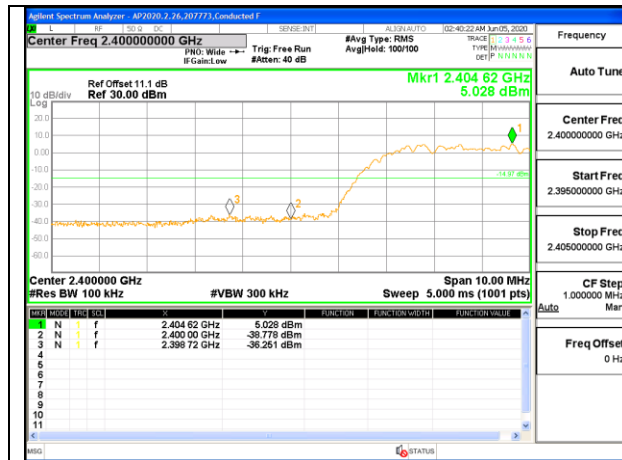
HIGH CHANNEL BANDEDGE



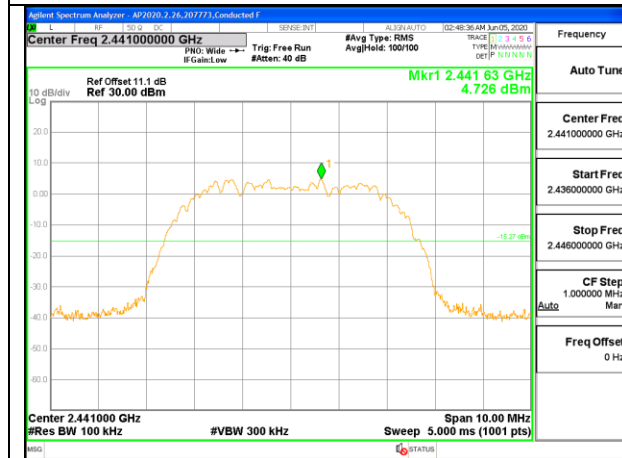
OUT-OF-BAND HIGH CHANNEL

9.7.4. HIGH POWER HDR TXBF (HDR8)

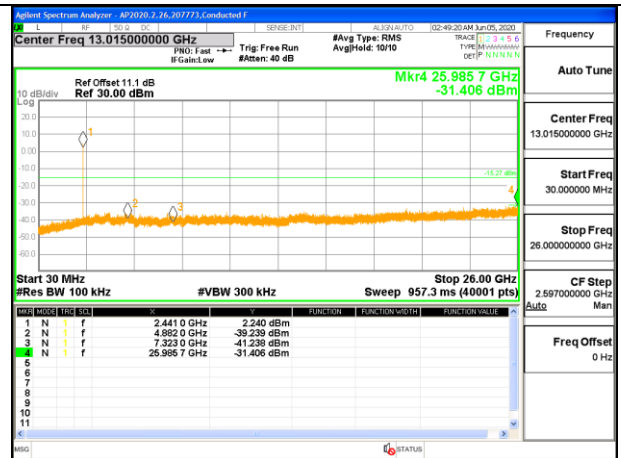
ANT 4



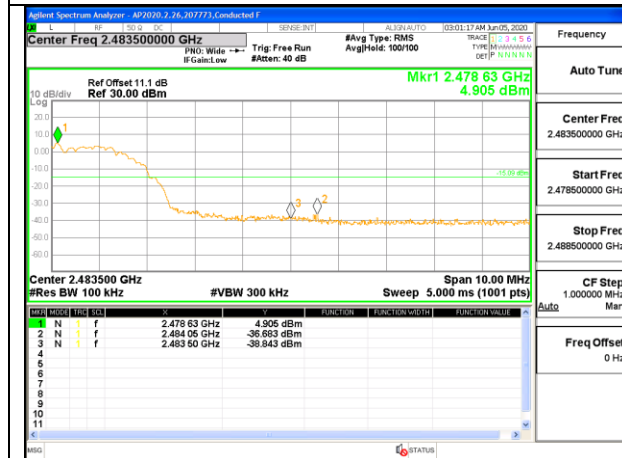
LOW CHANNEL BANDEDGE ANT 4



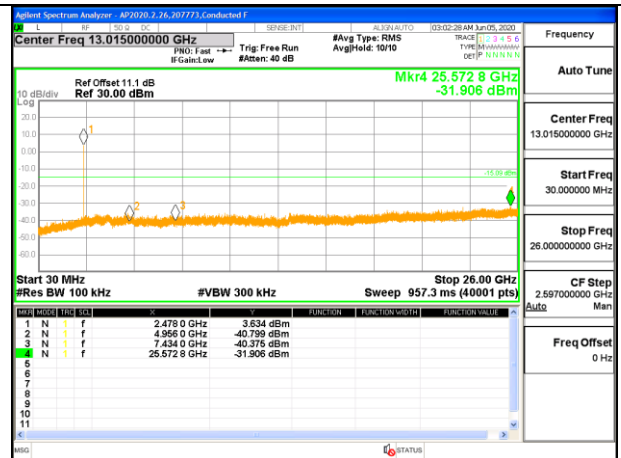
OUT-OF-BAND LOW CHANNEL ANT 4



IN-BAND REFERENCE LEVEL ANT 4

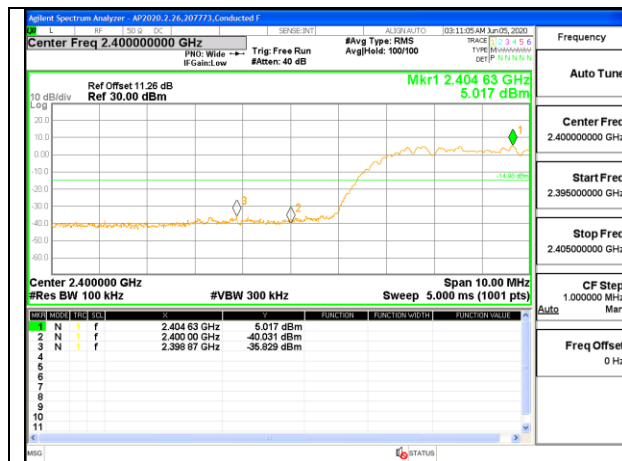
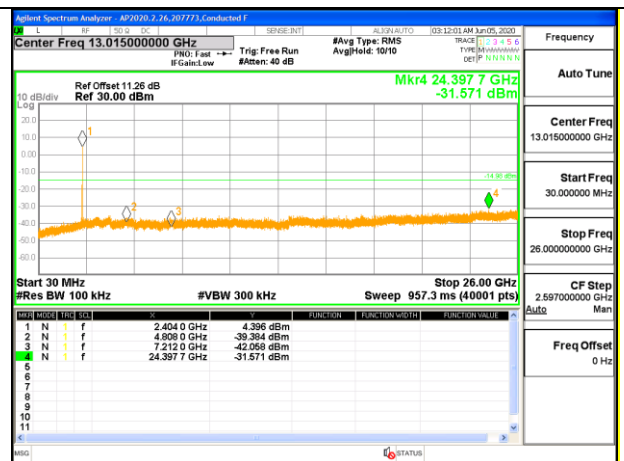
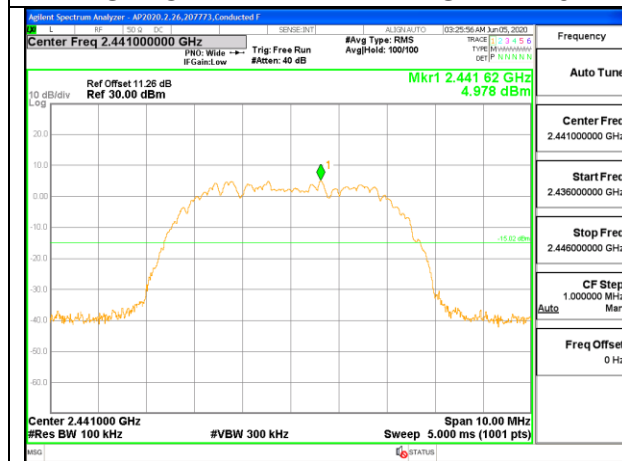
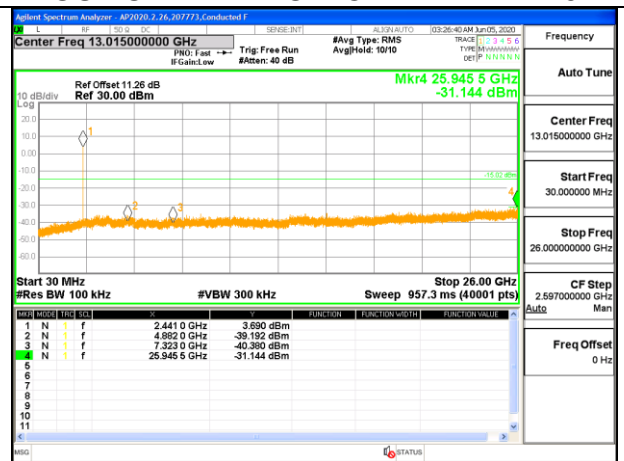
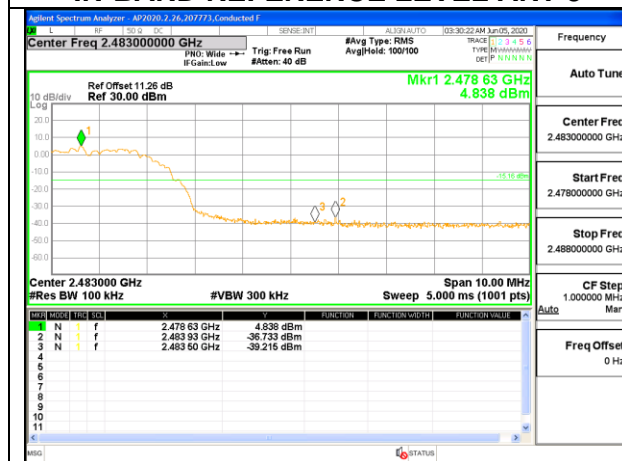
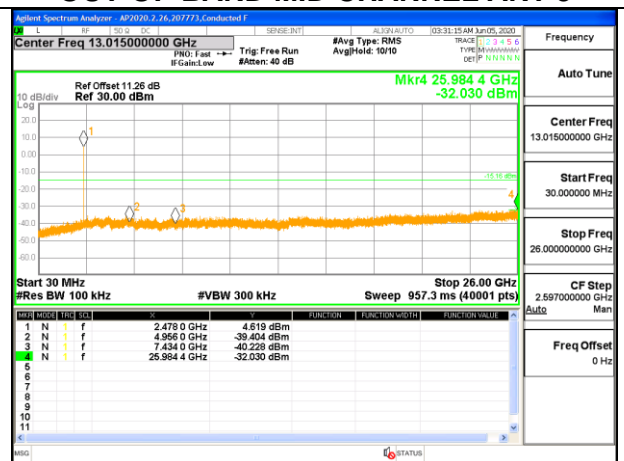


OUT-OF-BAND MID CHANNEL ANT 4



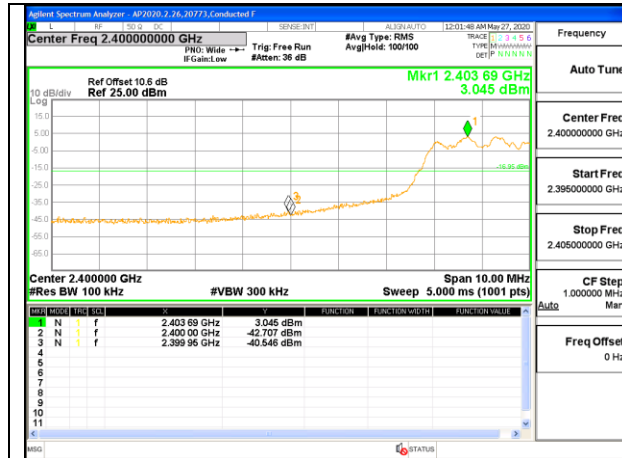
HIGH CHANNEL BANDEDGE ANT 4

OUT-OF-BAND HIGH CHANNEL ANT 4

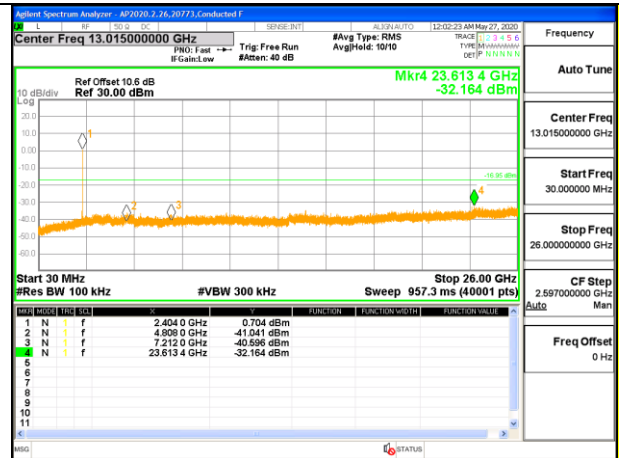
ANT 3**LOW CHANNEL BANDEDGE ANT 3****OUT-OF-BAND LOW CHANNEL ANT 3****IN-BAND REFERENCE LEVEL ANT 3****OUT-OF-BAND MID CHANNEL ANT 3****HIGH CHANNEL BANDEDGE ANT 3****OUT-OF-BAND HIGH CHANNEL ANT 3**

9.7.5. LOW POWER HDR (HDR4)

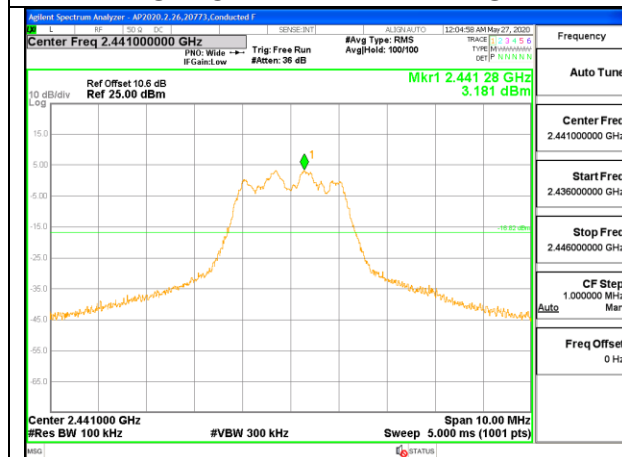
ANT 4



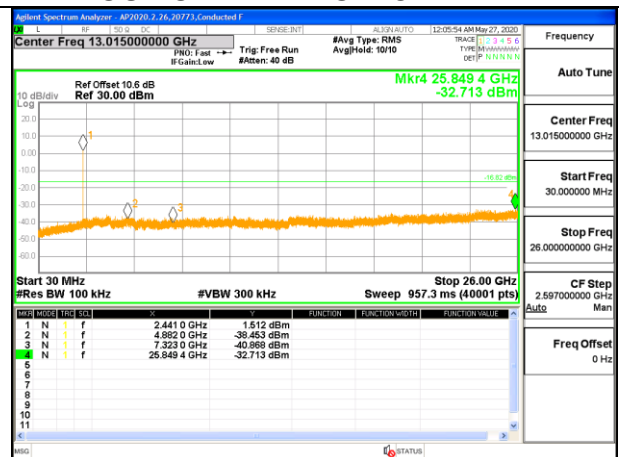
LOW CHANNEL BANDEDGE



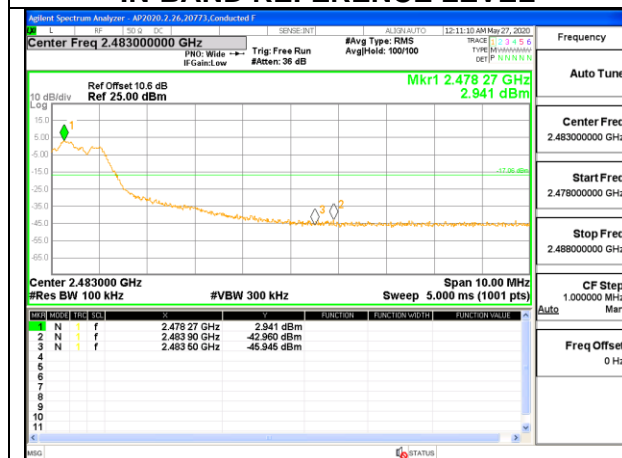
OUT-OF-BAND LOW CHANNEL



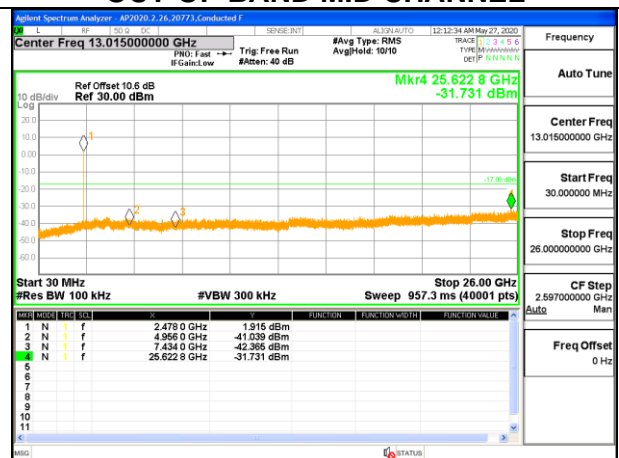
IN-BAND REFERENCE LEVEL



OUT-OF-BAND MID CHANNEL

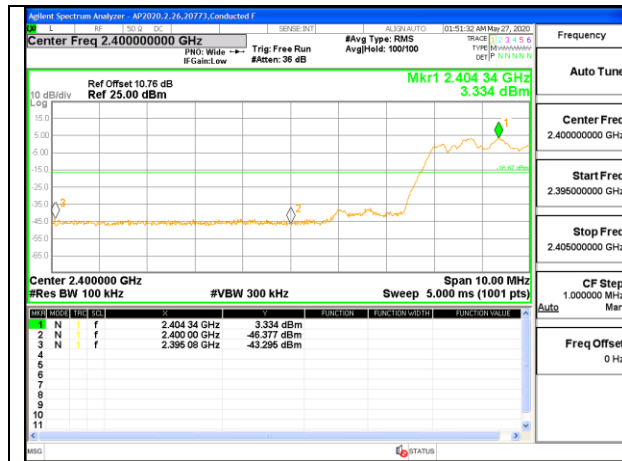


HIGH CHANNEL BANDEDGE

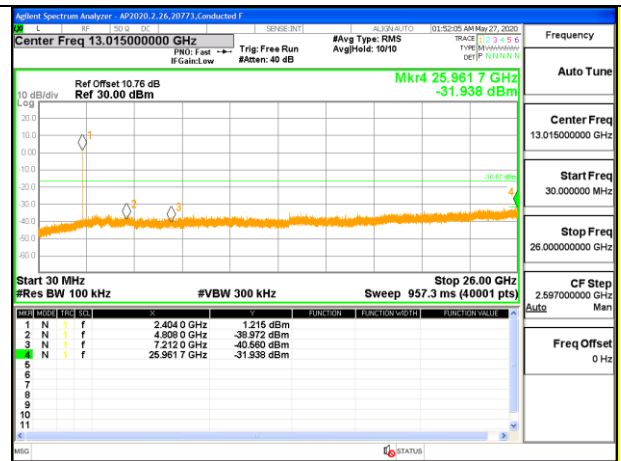


OUT-OF-BAND HIGH CHANNEL

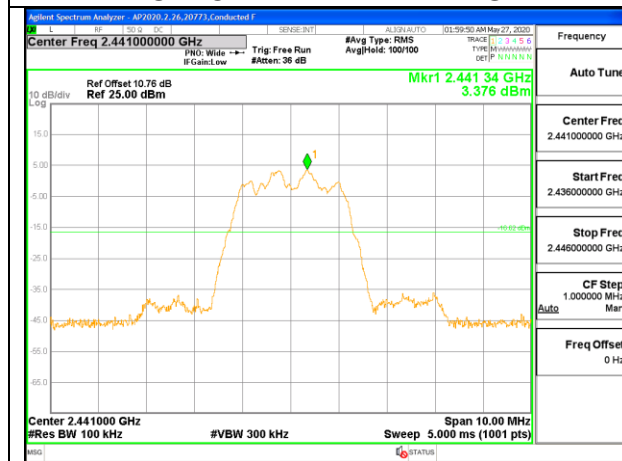
ANT 3



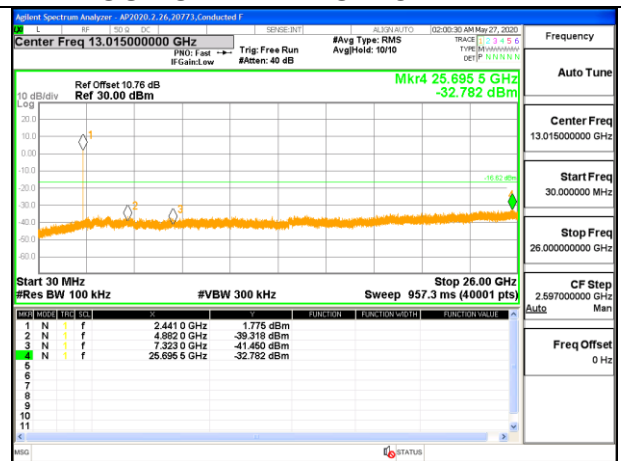
LOW CHANNEL BANDEDGE



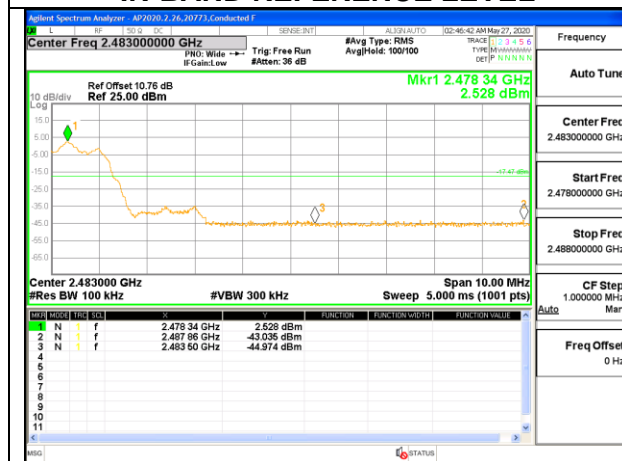
OUT-OF-BAND LOW CHANNEL



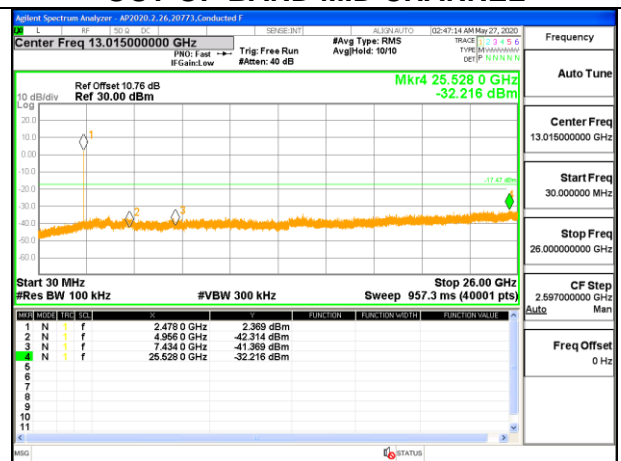
IN-BAND REFERENCE LEVEL



OUT-OF-BAND MID CHANNEL



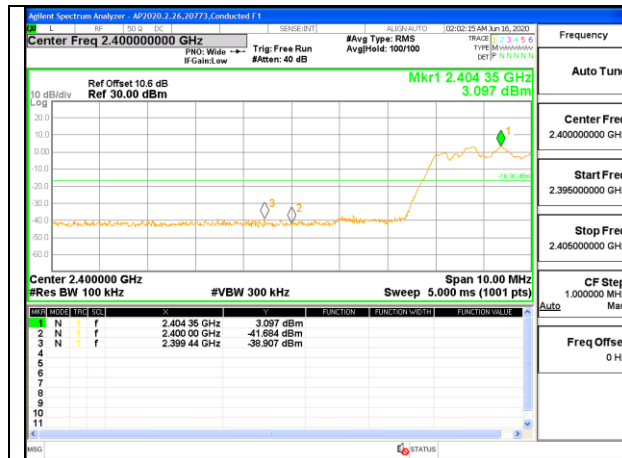
HIGH CHANNEL BANDEDGE



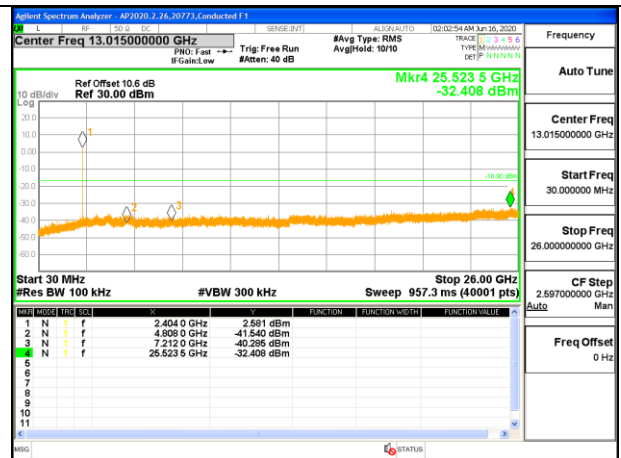
OUT-OF-BAND HIGH CHANNEL

9.7.6. LOW POWER HDR TXBF (HDR4)

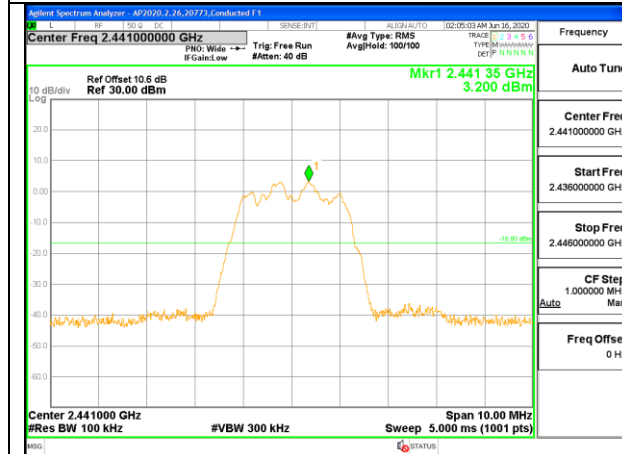
ANT 4



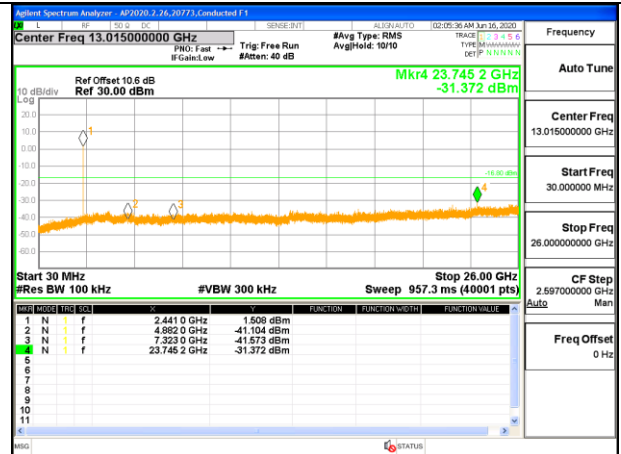
LOW CHANNEL BANDEDGE ANT 4



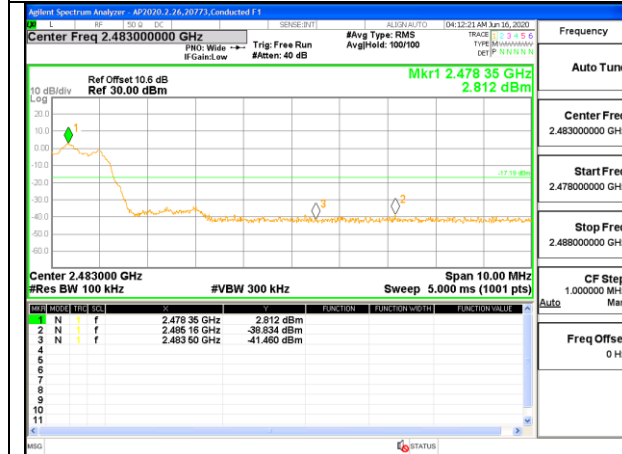
OUT-OF-BAND LOW CHANNEL ANT 4



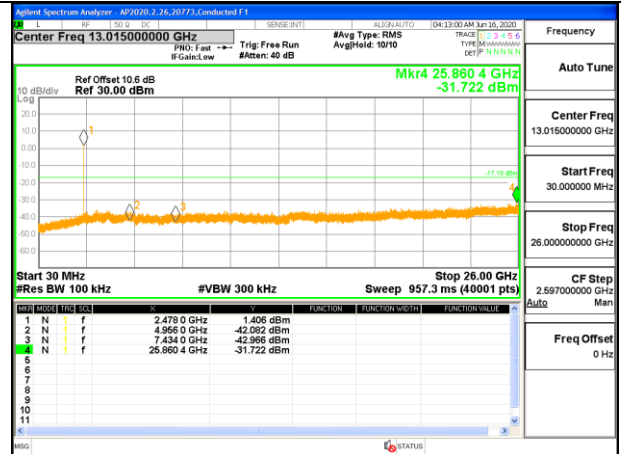
IN-BAND REFERENCE LEVEL ANT 4



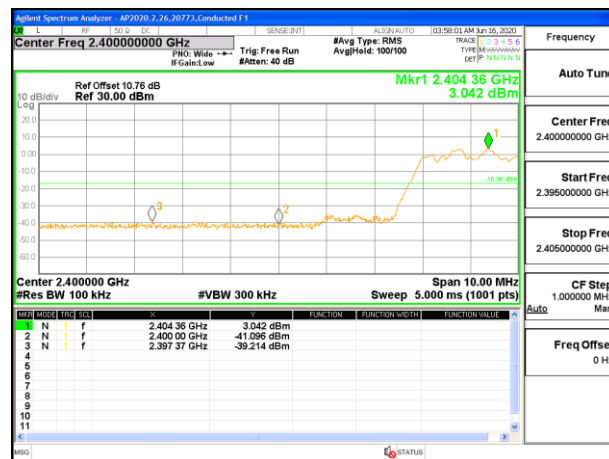
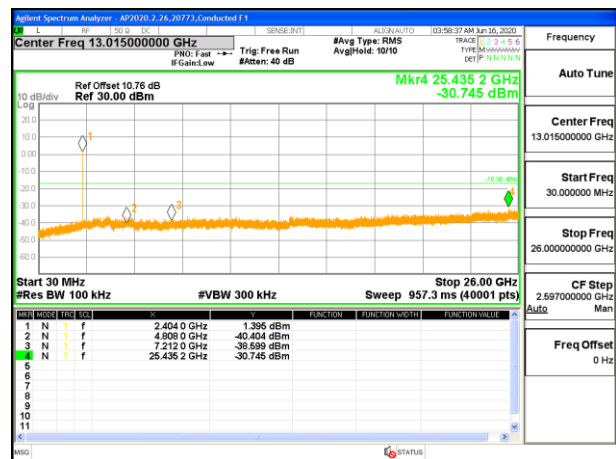
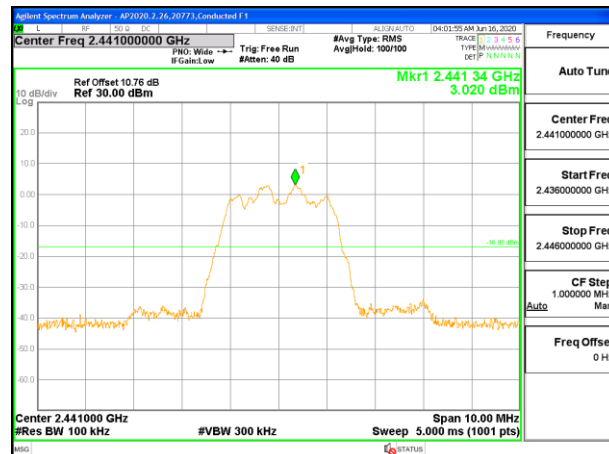
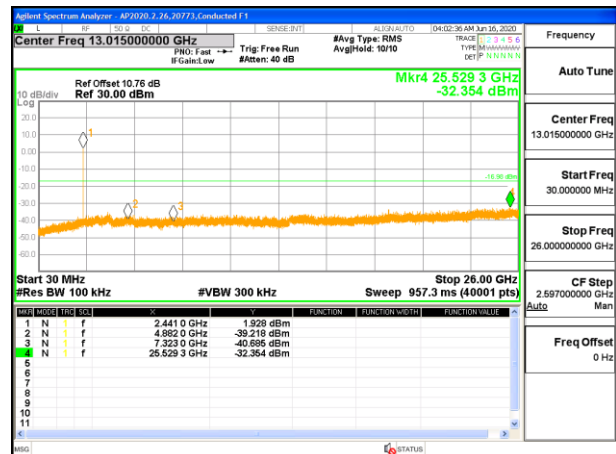
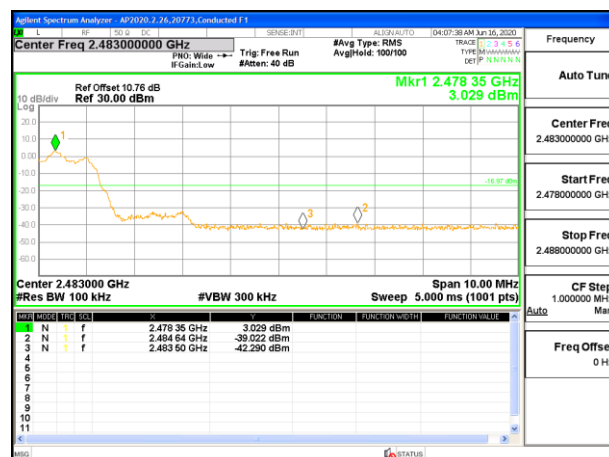
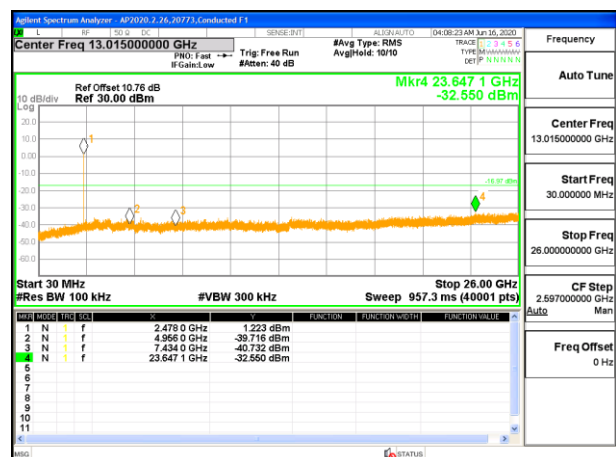
OUT-OF-BAND MID CHANNEL ANT 4



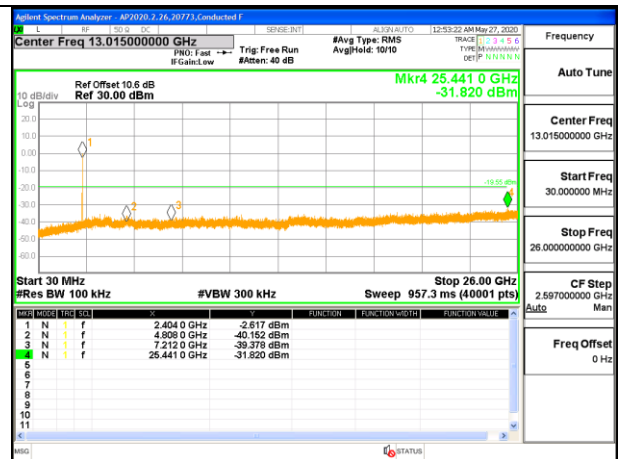
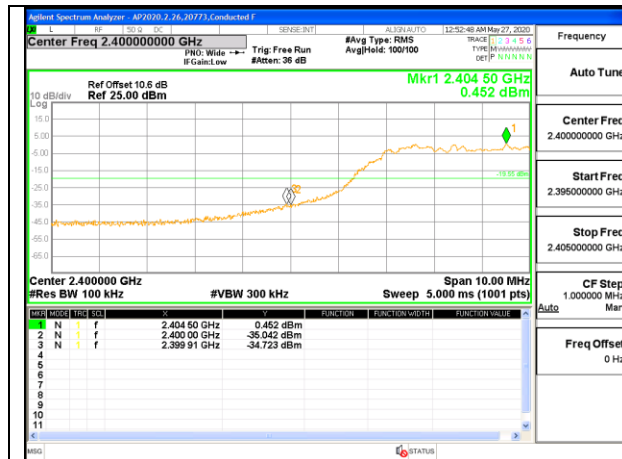
HIGH CHANNEL BANDEDGE ANT 4



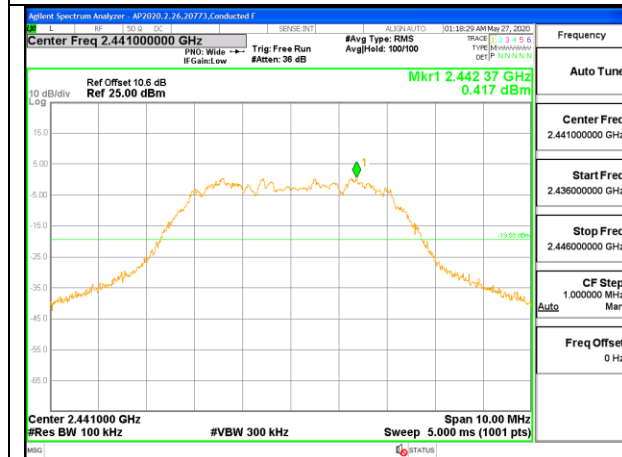
OUT-OF-BAND HIGH CHANNEL ANT 4

ANT 3**LOW CHANNEL BANDEDGE ANT 3****OUT-OF-BAND LOW CHANNEL ANT 3****IN-BAND REFERENCE LEVEL ANT 3****OUT-OF-BAND MID CHANNEL ANT 3****HIGH CHANNEL BANDEDGE ANT 3****OUT-OF-BAND HIGH CHANNEL ANT 3**

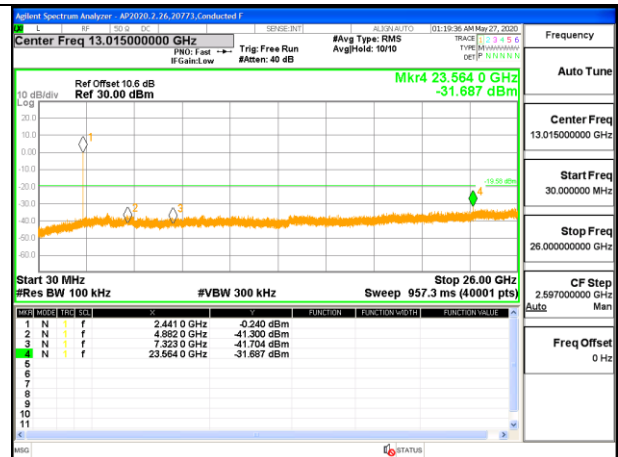
9.7.7. LOW POWER HDR (HDR8) ANT 4



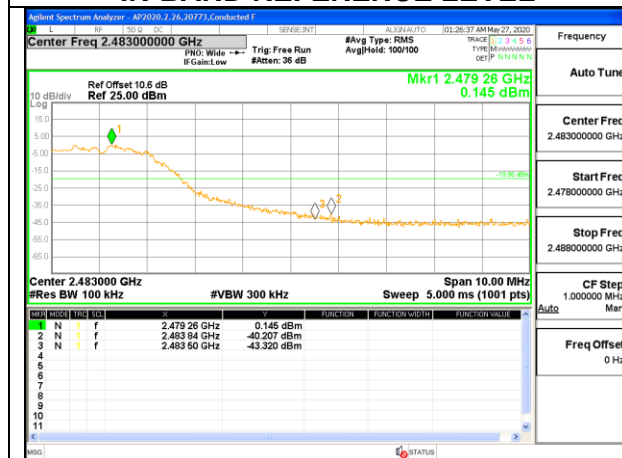
LOW CHANNEL BANDEDGE



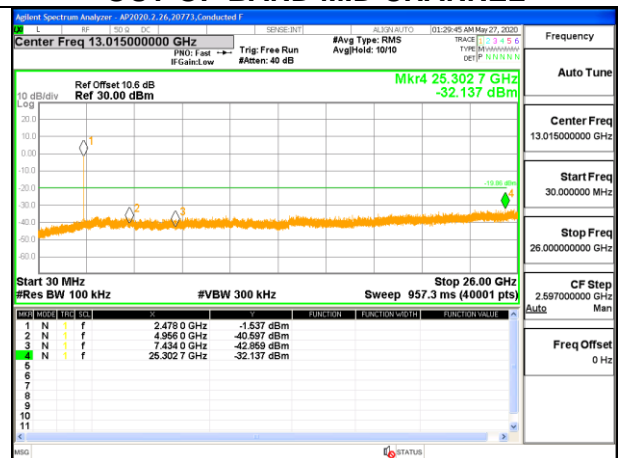
OUT-OF-BAND LOW CHANNEL



IN-BAND REFERENCE LEVEL



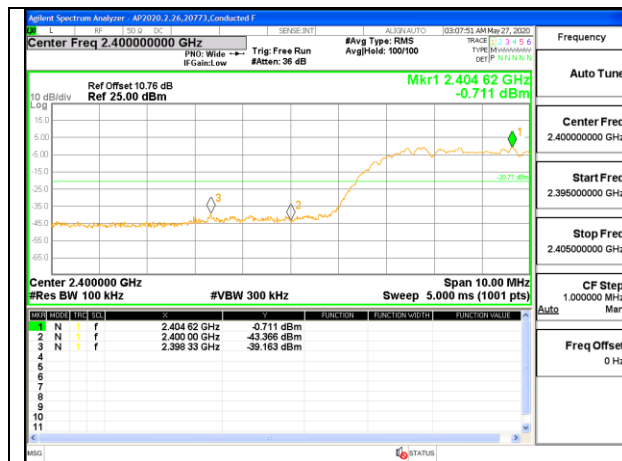
OUT-OF-BAND MID CHANNEL



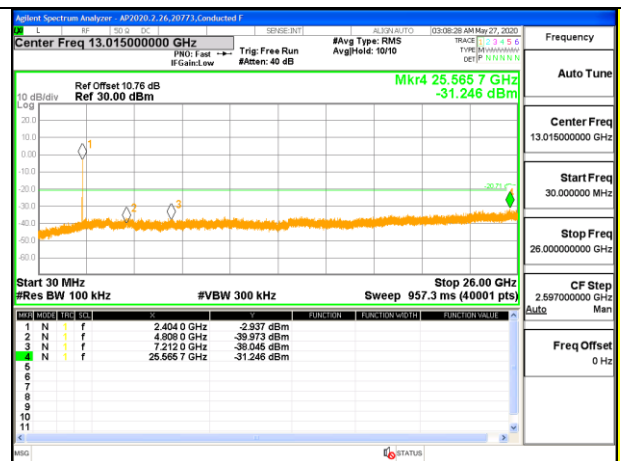
HIGH CHANNEL BANDEDGE

OUT-OF-BAND HIGH CHANNEL

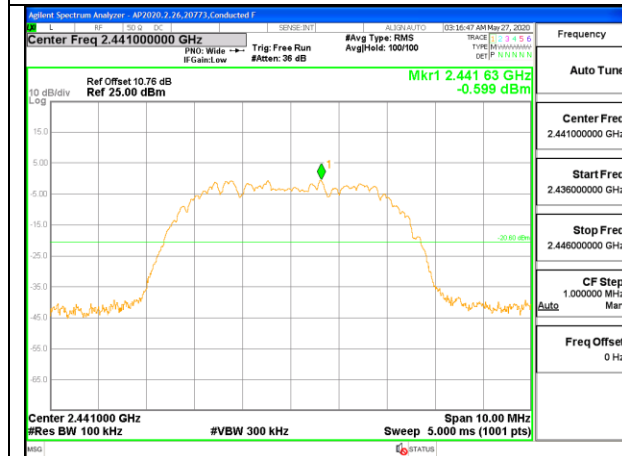
ANT 3



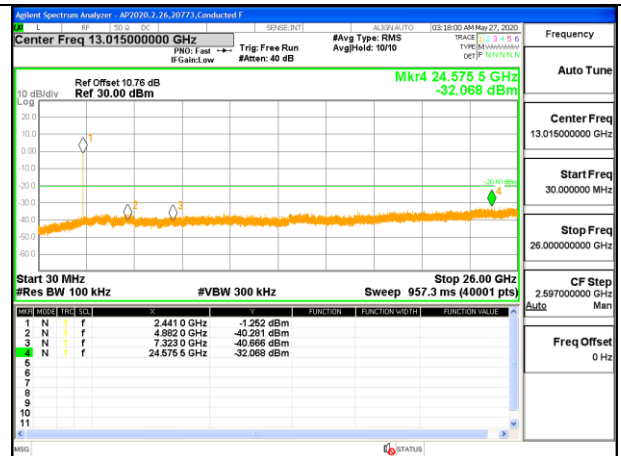
LOW CHANNEL BANDEDGE



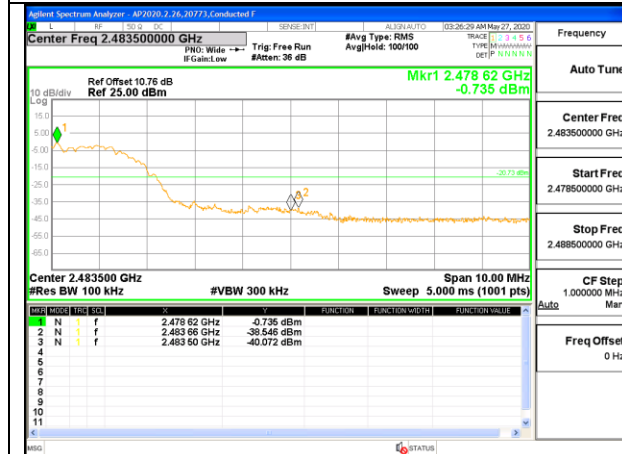
OUT-OF-BAND LOW CHANNEL



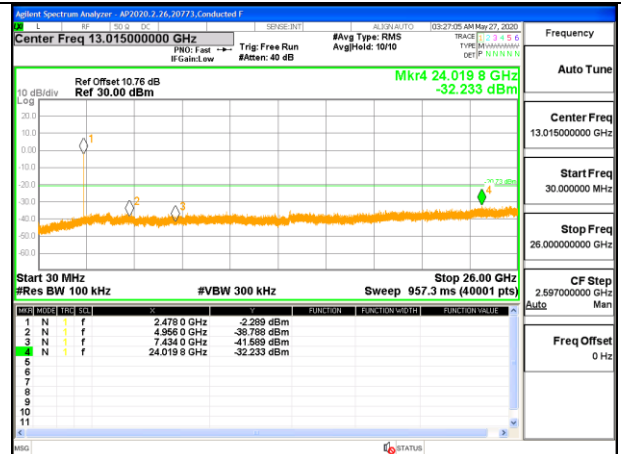
IN-BAND REFERENCE LEVEL



OUT-OF-BAND MID CHANNEL



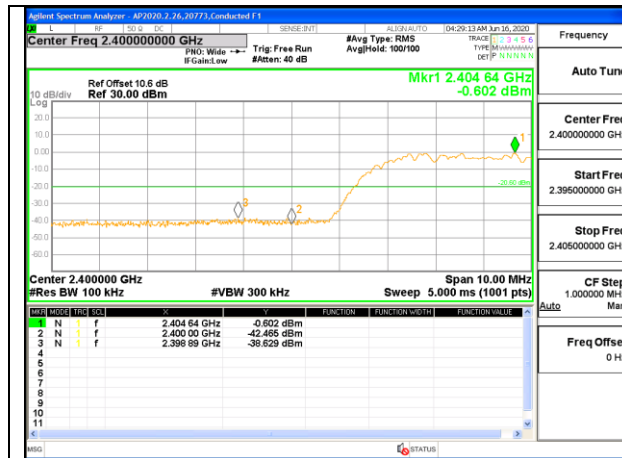
HIGH CHANNEL BANDEDGE



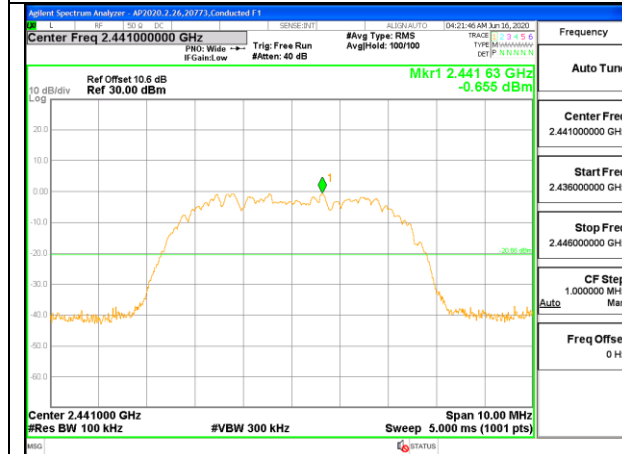
OUT-OF-BAND HIGH CHANNEL

9.7.8. LOW POWER HDR TXBF (HDR8)

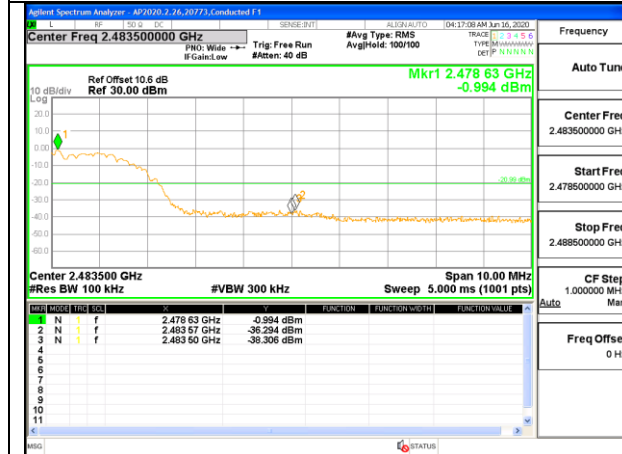
ANT 4



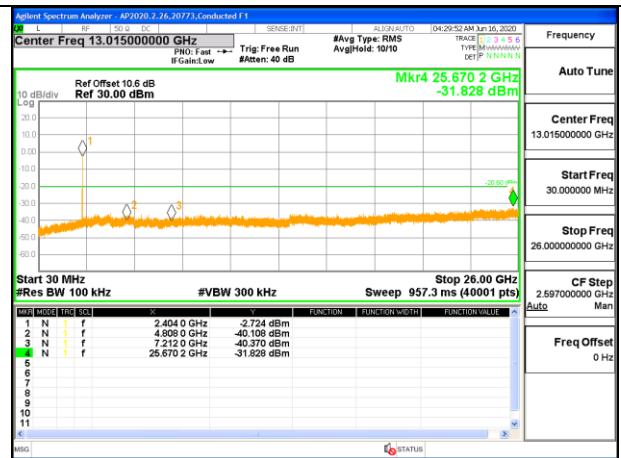
LOW CHANNEL BANDEDGE ANT 4



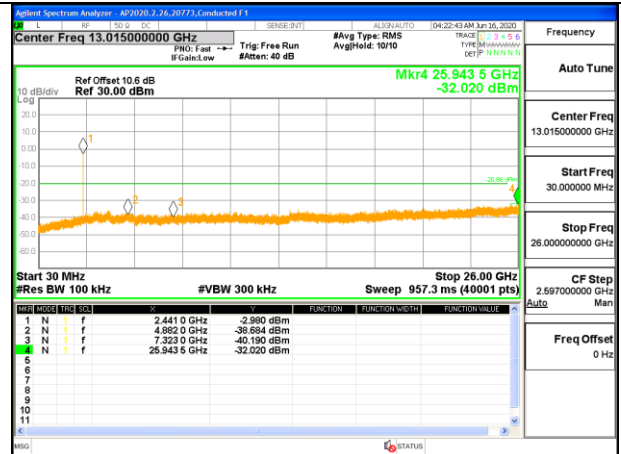
IN-BAND REFERENCE LEVEL ANT 4



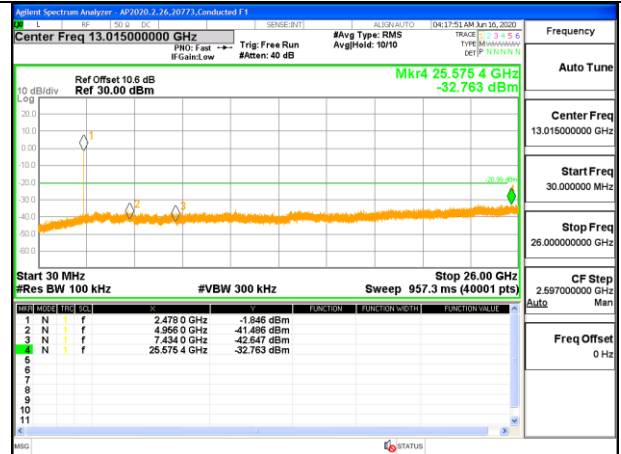
HIGH CHANNEL BANDEDGE ANT 4



OUT-OF-BAND LOW CHANNEL ANT 4

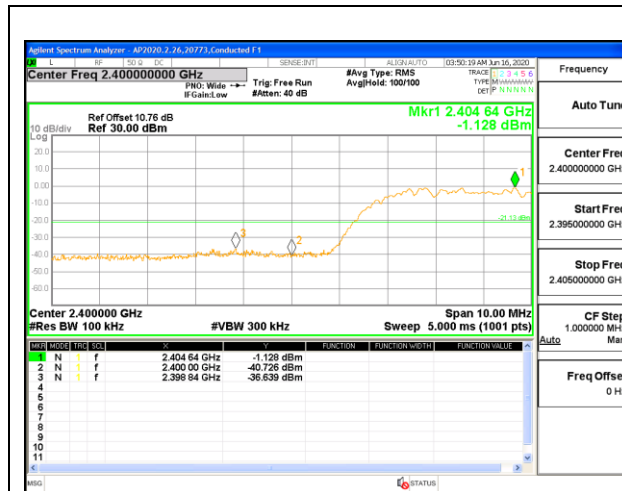


OUT-OF-BAND MID CHANNEL ANT 4

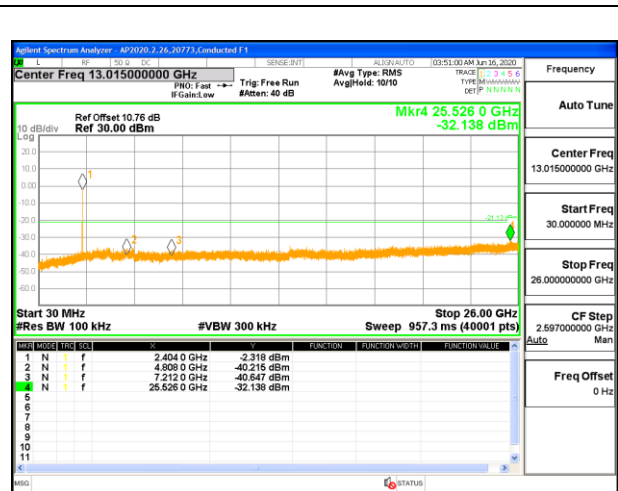


OUT-OF-BAND HIGH CHANNEL ANT 4

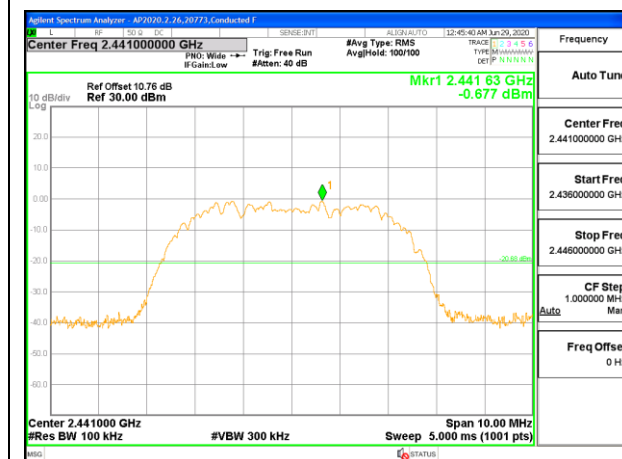
ANT 3



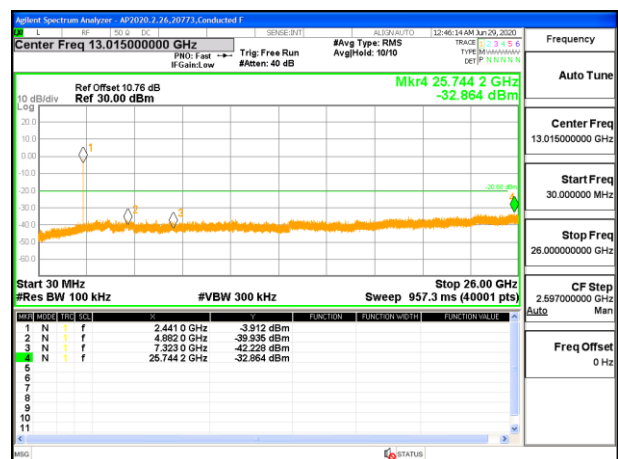
LOW CHANNEL BANDEDGE ANT 3



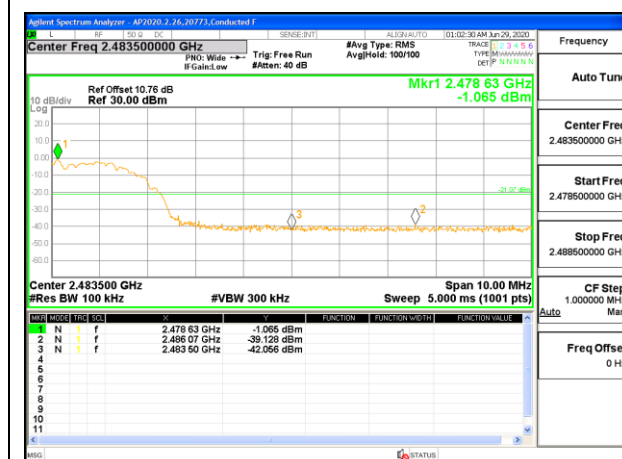
OUT-OF-BAND LOW CHANNEL ANT 3



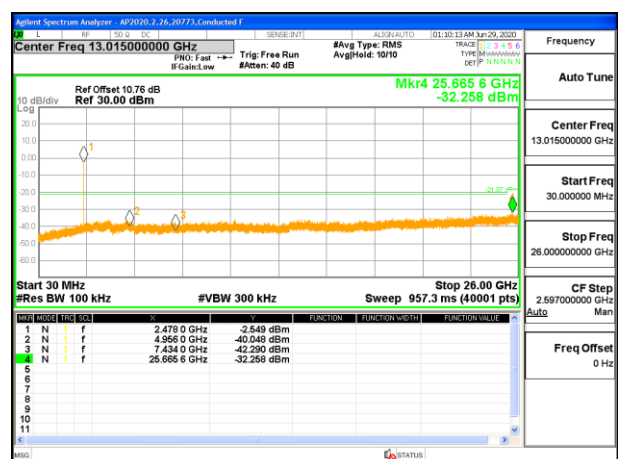
IN-BAND REFERENCE LEVEL ANT 3



OUT-OF-BAND MID CHANNEL ANT 3



HIGH CHANNEL BANDEDGE ANT 3



OUT-OF-BAND HIGH CHANNEL ANT 3

10. RADIATED TEST RESULTS

10.1. 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.

For below 30MHz testing, investigation was done on three antenna orientations (parallel, perpendicular, and ground-parallel), parallel and perpendicular are the worst orientations, therefore testing was performed on these two orientations only.

Compliance with radiated spurious emissions limits in the restricted bands closest to the allocated 2404 – 2478 MHz band were performed on all modes for the low and high channels. Additional measurements on adjacent channels to the low and/or high channels were limited to cases where the edge channels have a significantly lower rated power than the adjacent channels.

Compliance with radiated spurious emissions limits in the restricted bands between 1GHz and 18GHz (except as explained for the band edge) the operating band were performed on the low, middle and high channel for HDR8 mode. As this mode has the highest output power and highest power spectral density it is considered worst case for spurious emissions across all modes. For these tests both transmit chains were operating simultaneously and set to the maximum power per chain to cover both TXBF mode. Spurious emissions for frequencies below 1Ghz and above 18GHz were limited to the center channel as preliminary testing indicated that changing the operating frequency had no significant impact on the emissions in those frequency bands.

RESULTS:

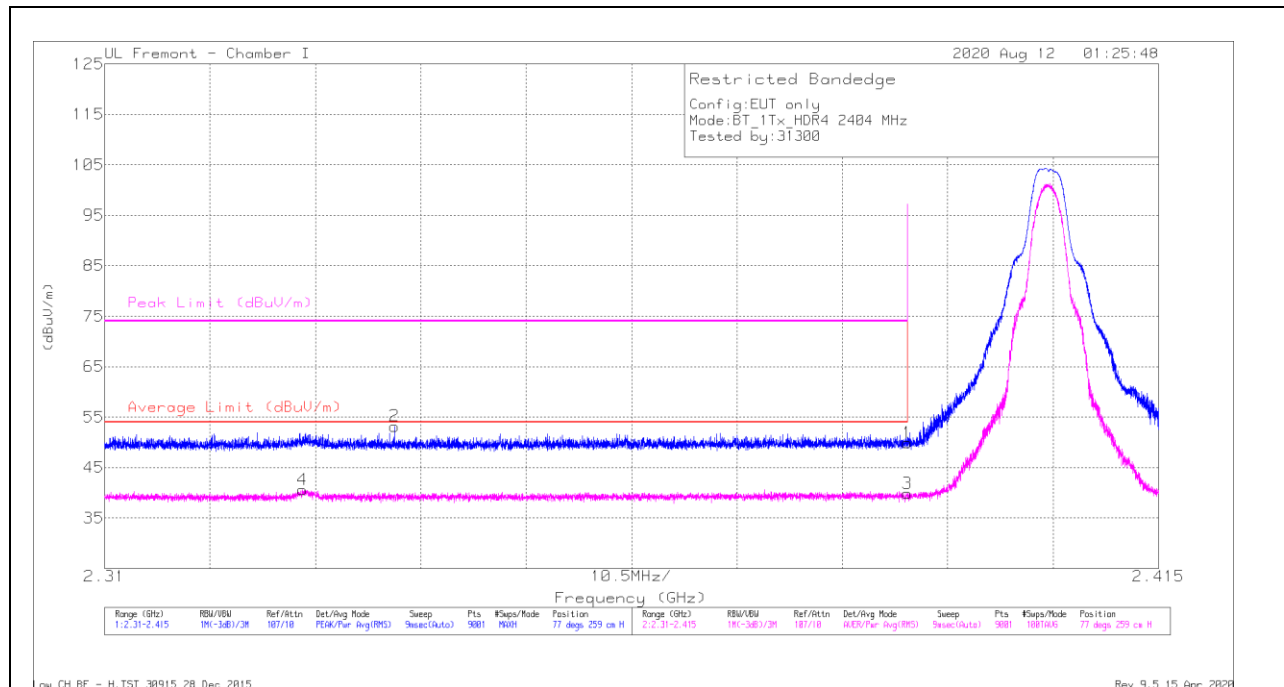
10.2. TRANSMITTER ABOVE 1 GHz

10.2.1. HIGH POWER HDR (HDR4)

ANT 4

BANDEDGE (LOW CHANNEL)

HORIZONTAL RESULT



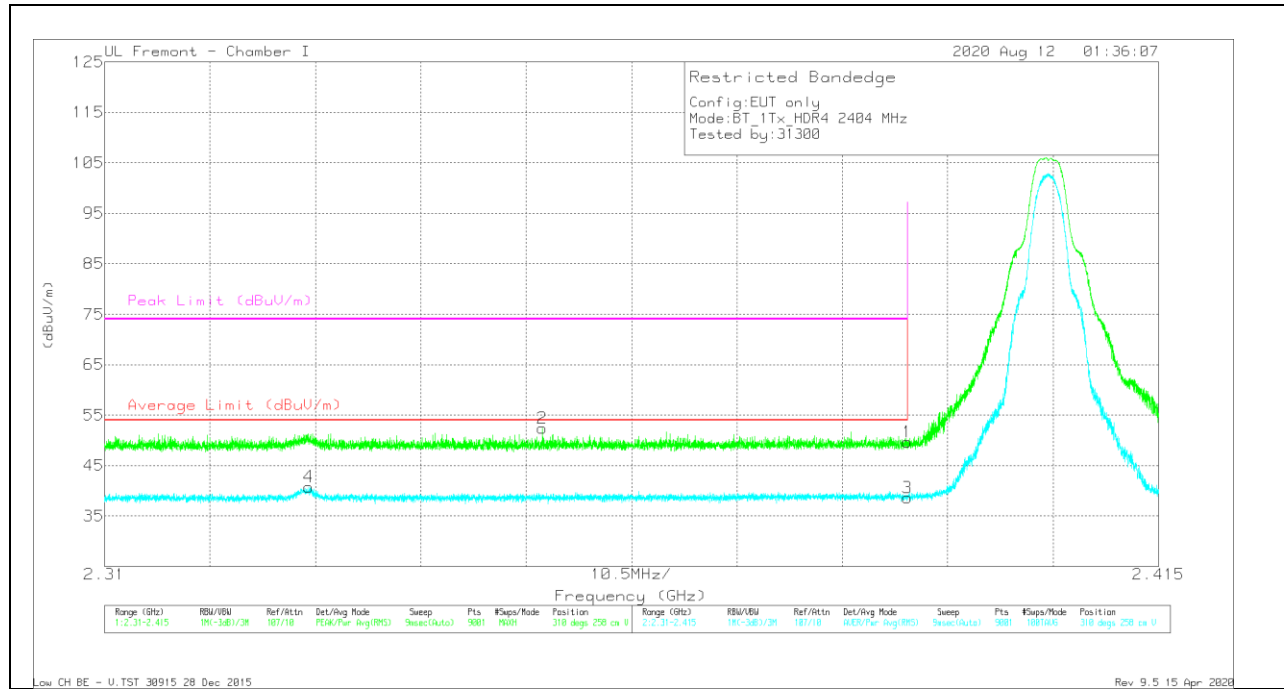
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AFT346 (dB/m)	Amp/Cb/Ftr/Pa d (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.38999	35.26	Pk	32	-17.3	49.96	-	-	74	-24.04	77	259	H
2	* 2.33889	38.61	Pk	31.8	-17.2	53.21	-	-	74	-20.79	77	259	H
3	* 2.38999	25.19	RMS	32	-17.3	39.89	54	-14.11	-	-	77	259	H
4	* 2.32969	25.99	RMS	31.8	-17.2	40.59	54	-13.41	-	-	77	259	H

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

Pk - Peak detector

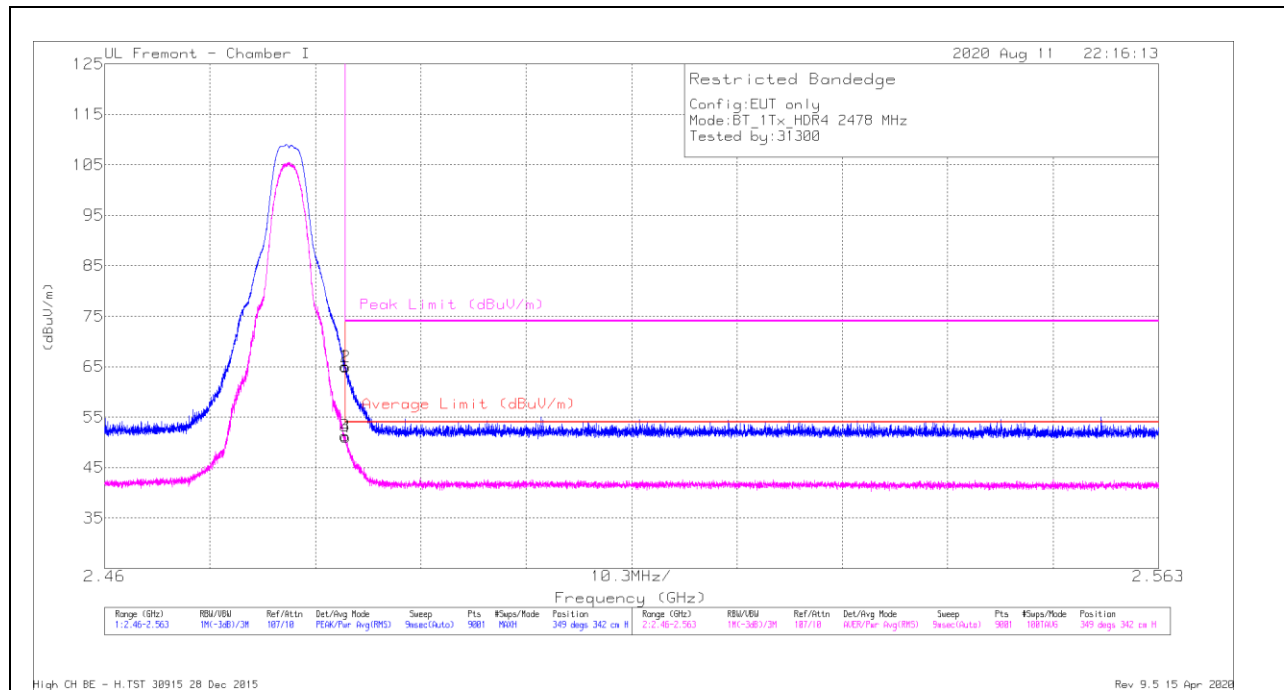
RMS - RMS detection

VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cb/Filt/Pa d (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.38999	35.01	Pk	32	-17.3	49.71	-	-	74	-24.29	310	258	V
2	* 2.3536	37.79	Pk	31.8	-17.2	52.39	-	-	74	-21.61	310	258	V
3	* 2.38999	23.94	RMS	32	-17.3	38.64	54	-15.36	-	-	310	258	V
4	* 2.33036	26.19	RMS	31.8	-17.2	40.79	54	-13.21	-	-	310	258	V

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

BANDEDGE (HIGH CHANNEL)**HORIZONTAL RESULT**

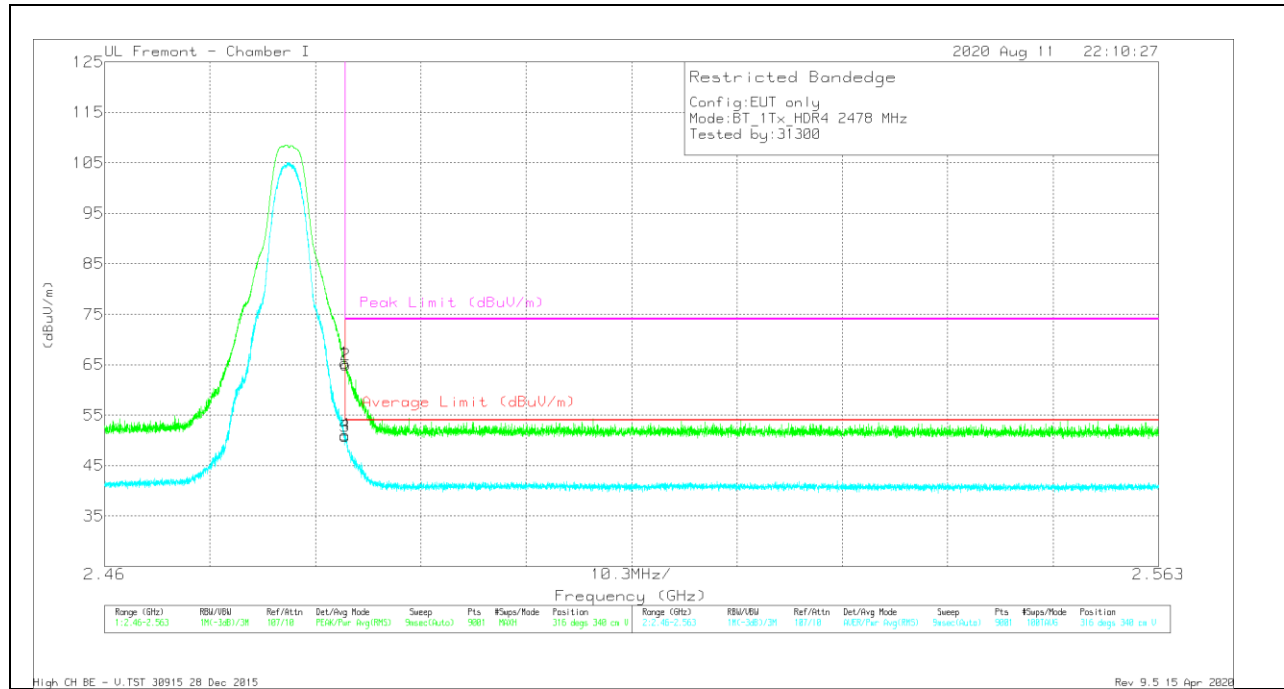
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/Ftr/Pa d (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.48351	50.37	Pk	32.4	-17.7	65.07	-	-	74	-8.93	349	342	H
2	* 2.48354	50.28	Pk	32.4	-17.7	64.98	-	-	74	-9.02	349	342	H
3	* 2.48351	36.53	RMS	32.4	-17.7	51.23	54	-2.77	-	-	349	342	H
4	* 2.48356	36.28	RMS	32.4	-17.7	50.98	54	-3.02	-	-	349	342	H

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

Pk - Peak detector

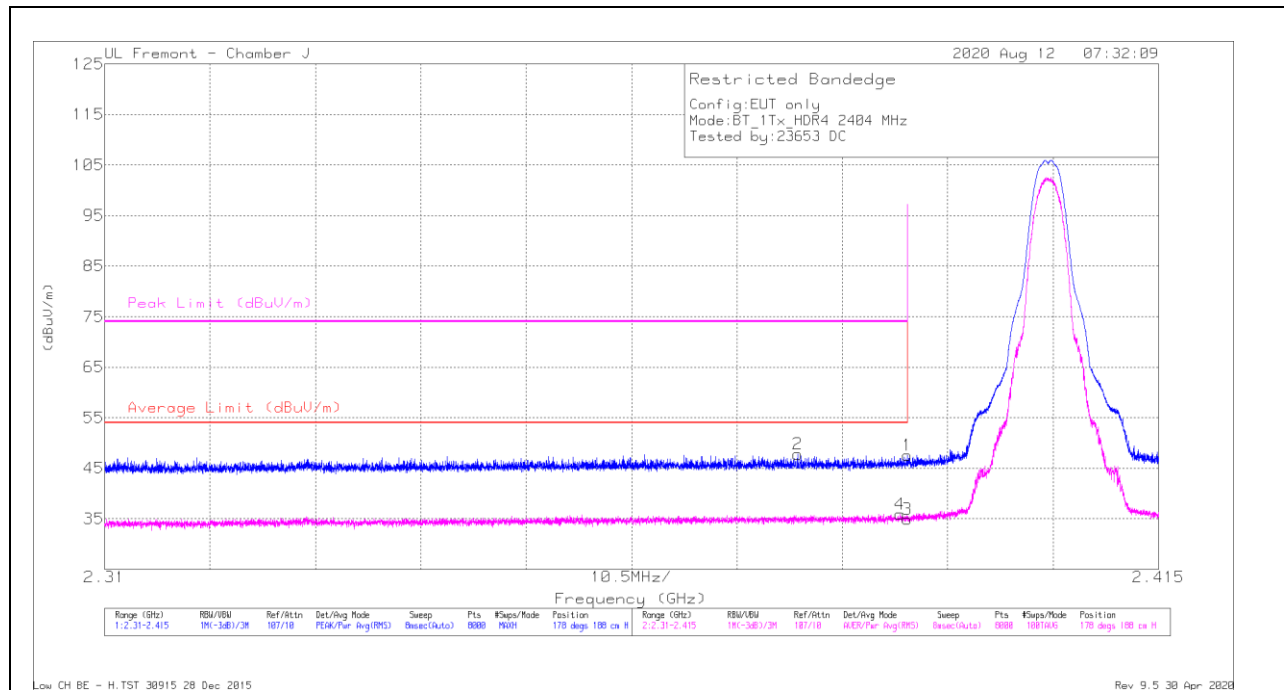
RMS - RMS detection

VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/Fitr/Pa d (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.48351	50.65	Pk	32.4	-17.7	65.35	-	-	74	-8.65	316	340	V
2	* 2.48356	50.29	Pk	32.4	-17.7	64.99	-	-	74	-9.01	316	340	V
3	* 2.48351	36.13	RMS	32.4	-17.7	50.83	54	-3.17	-	-	316	340	V
4	* 2.48352	36.4	RMS	32.4	-17.7	51.1	54	-2.9	-	-	316	340	V

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

ANT 3**BANDEDGE (LOW CHANNEL)****HORIZONTAL RESULT**

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T963 (dB/m)	Amp/Cb/Filt/Pa d (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	33.22	Pk	29	-14.7	47.92	-	-	74	-26.48	178	188	H
2	* 2.37903	33.45	Pk	29	-14.7	47.75	-	-	74	-26.25	178	188	H
3	* 2.39	20.61	RMS	29	-14.7	34.91	54	-19.09	-	-	178	188	H
4	* 2.38922	21.62	RMS	29	-14.7	35.92	54	-18.08	-	-	178	188	H

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

Pk - Peak detector

RMS - RMS detection