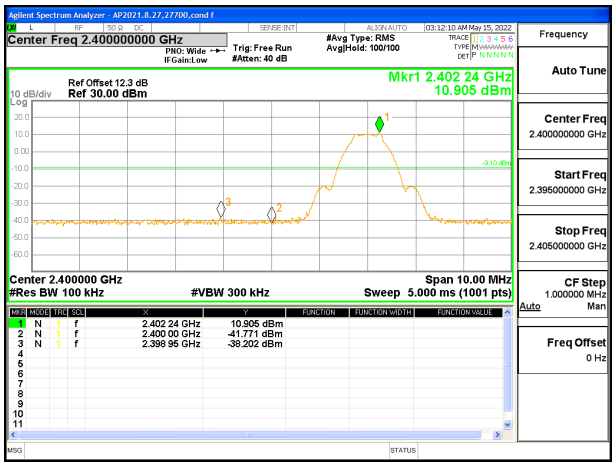
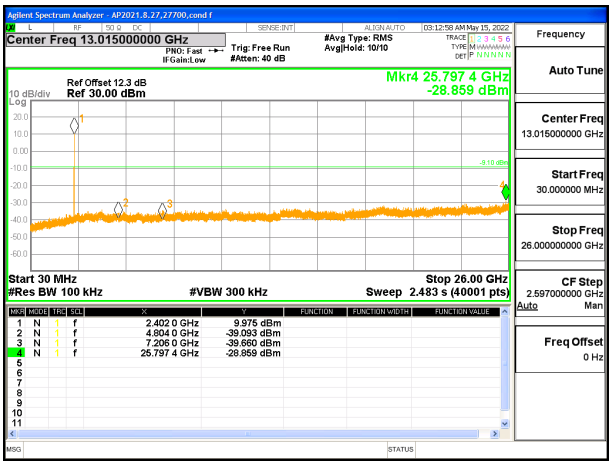
ANT 3



LOW CHANNEL BANDEDGE



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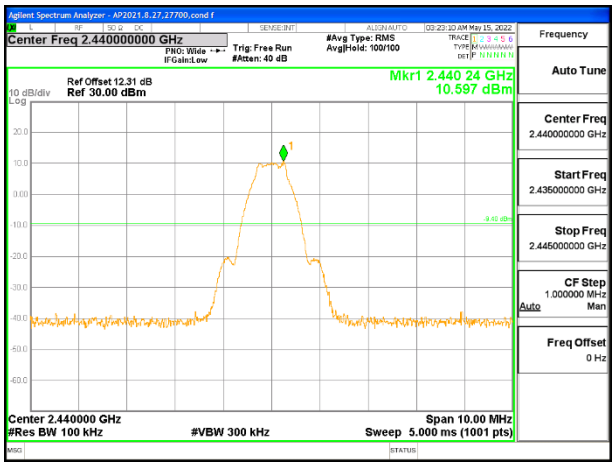

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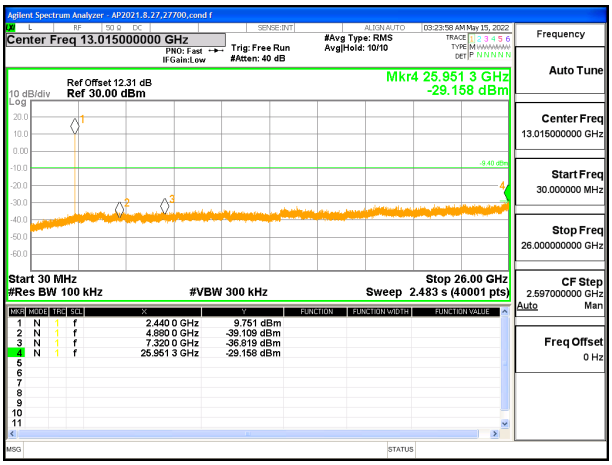

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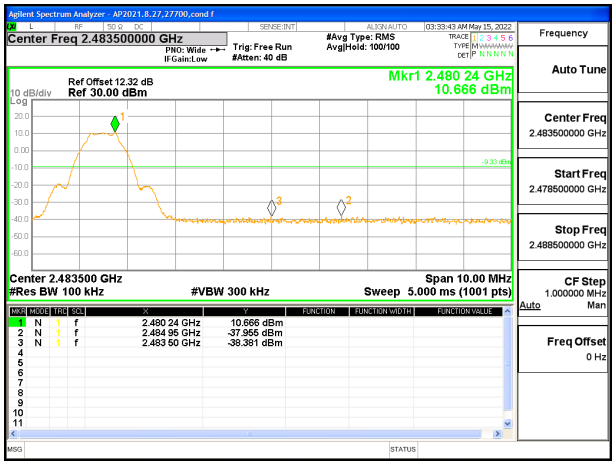

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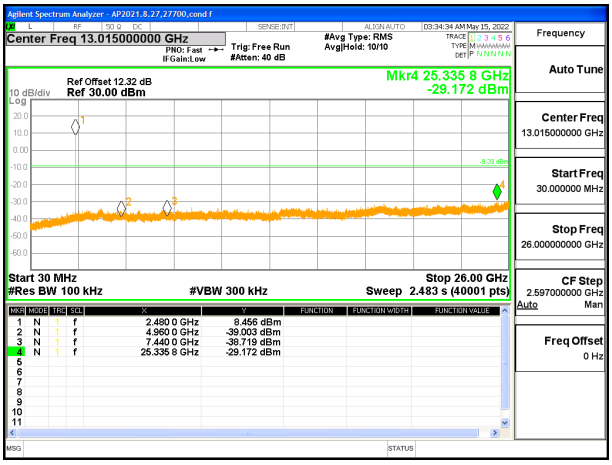

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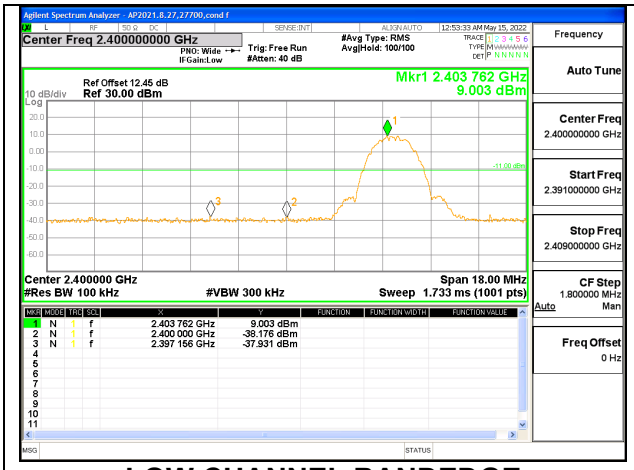
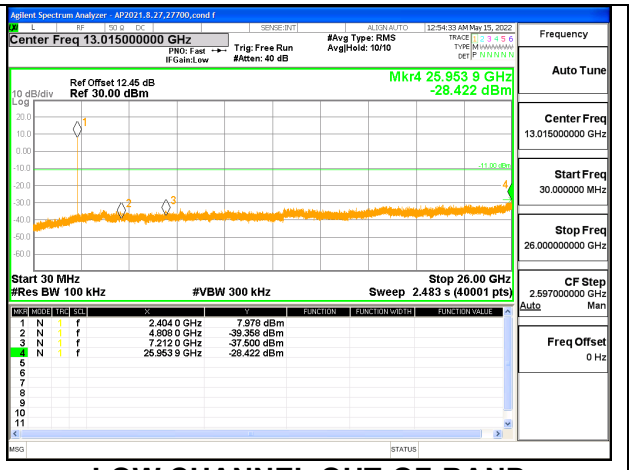
9.7.7. **LOW POWER BLE (2Mbps)**

ANT 4



LOW CHANNEL BANDEDGE



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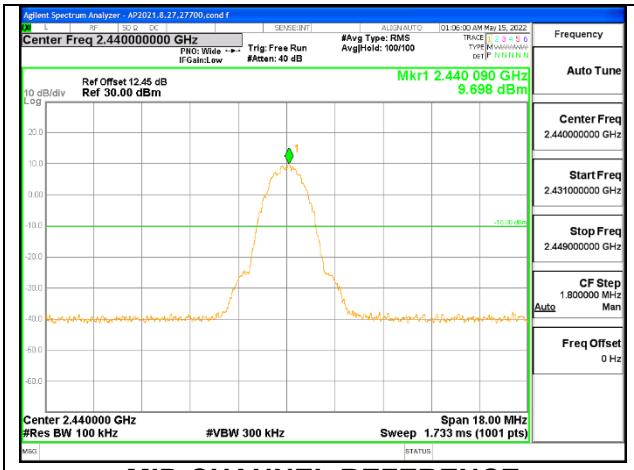

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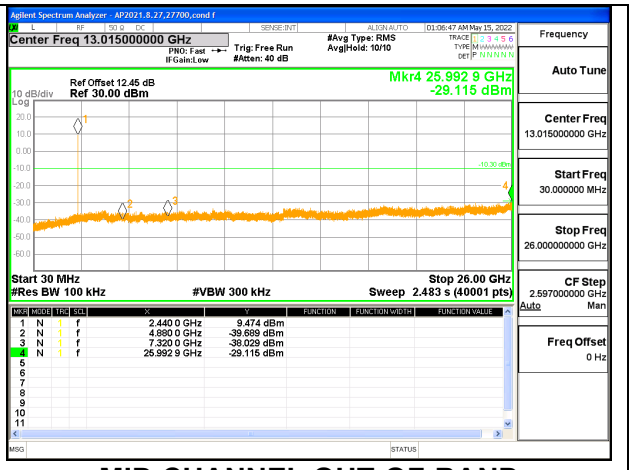

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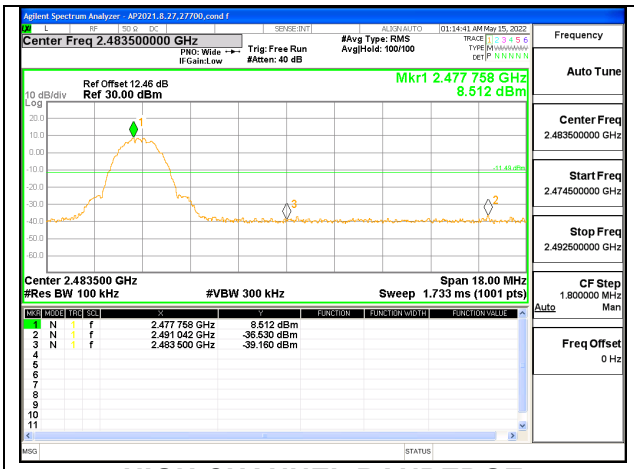
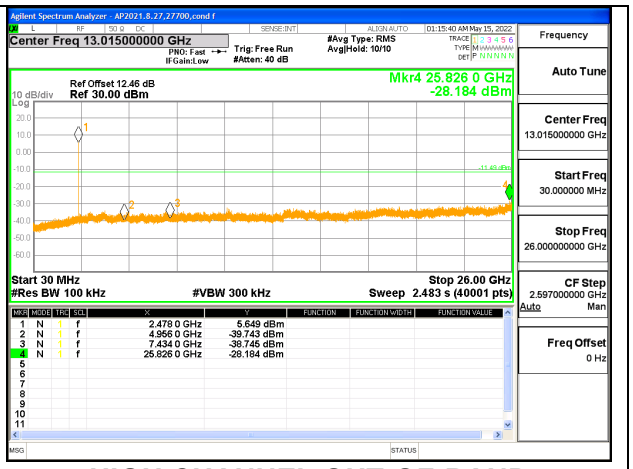


HIGH CHANNEL BANDEDGE



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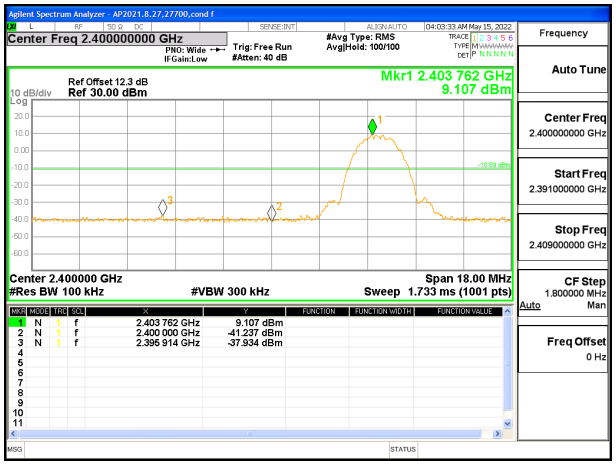
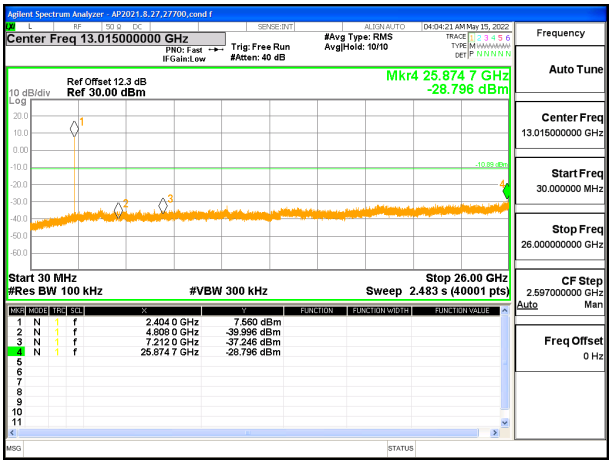
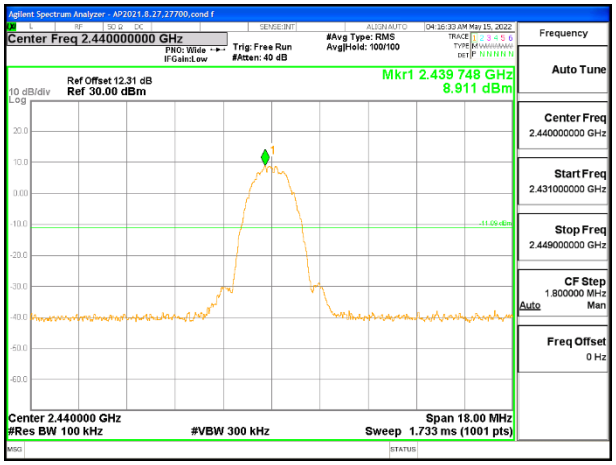


LOW CHANNEL BANDEDGE



LOW CHANNEL OUT-OF-BAND



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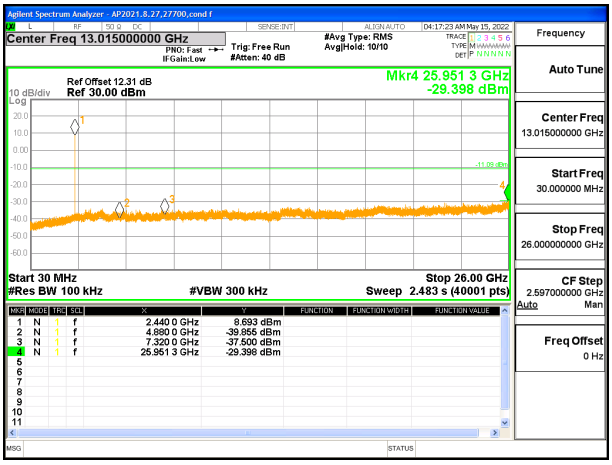

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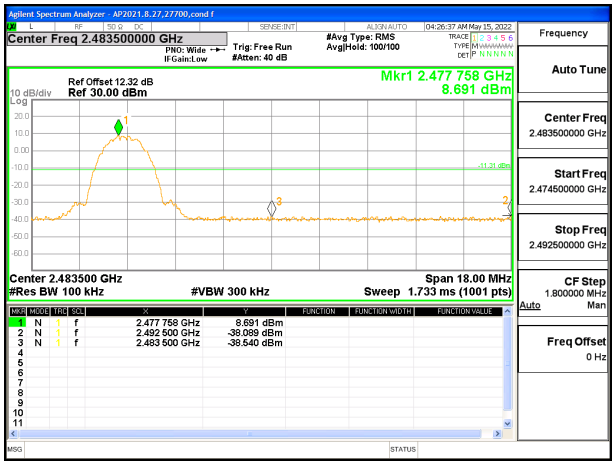
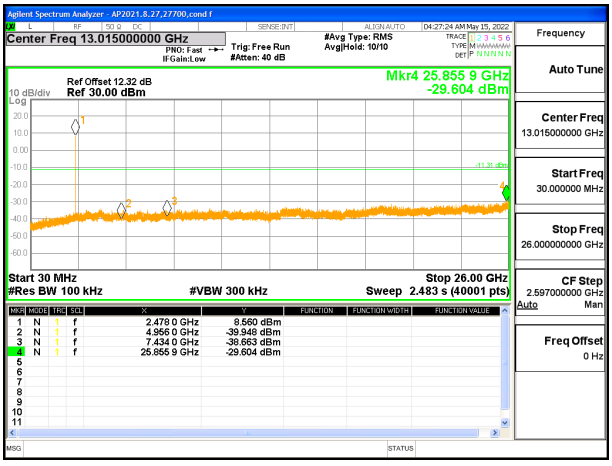


HIGH CHANNEL BANDEDGE



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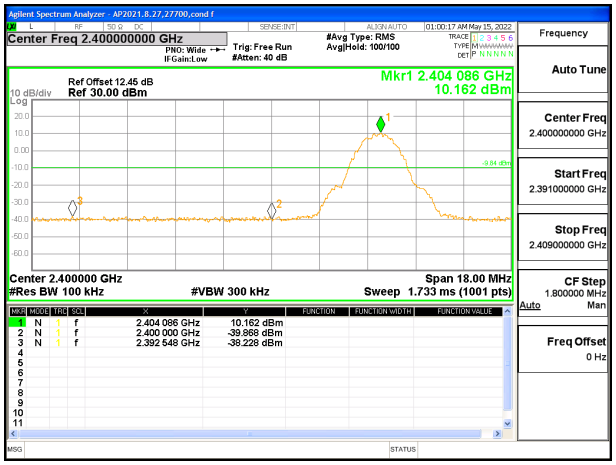
9.7.8. **LOW POWER BLE TXBF (2Mbps)**

ANT 4



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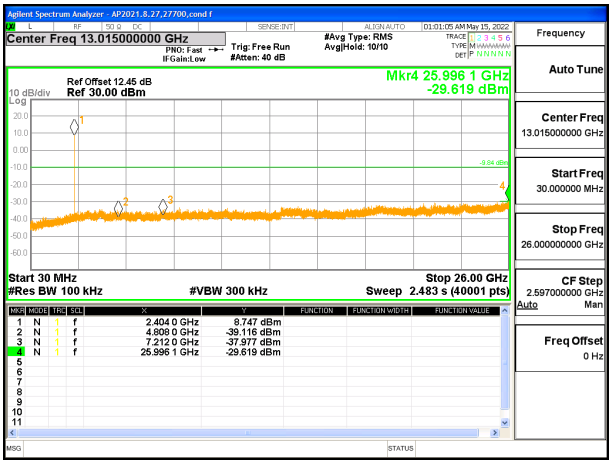

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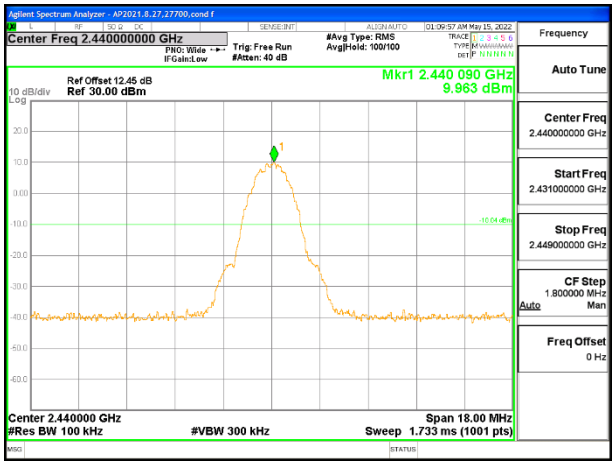

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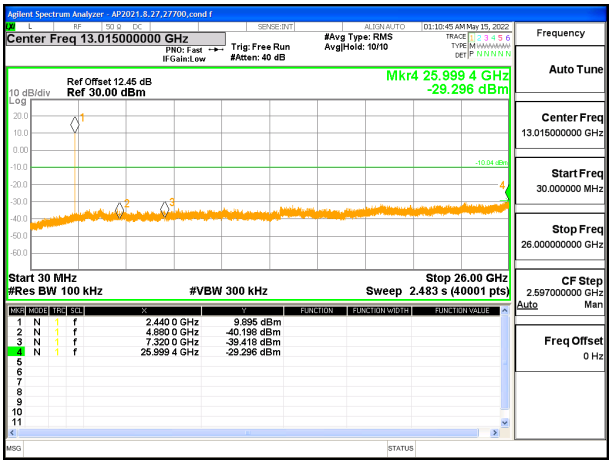

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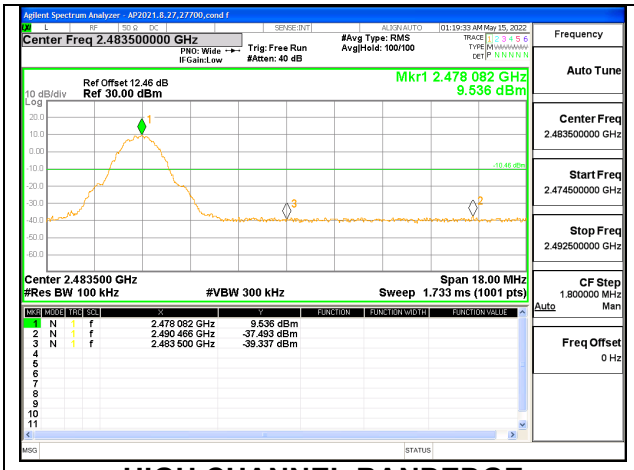
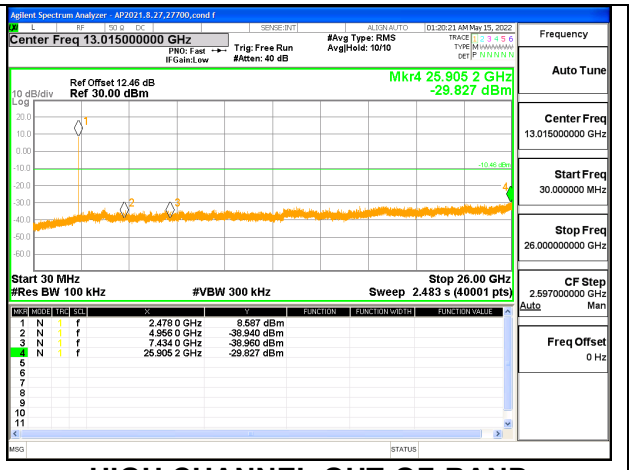


HIGH CHANNEL BANDEDGE



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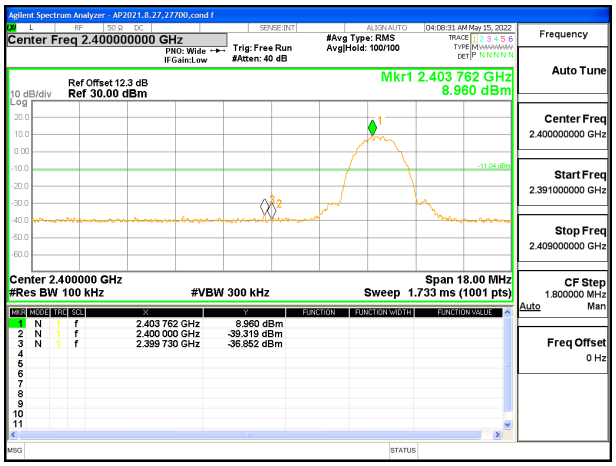

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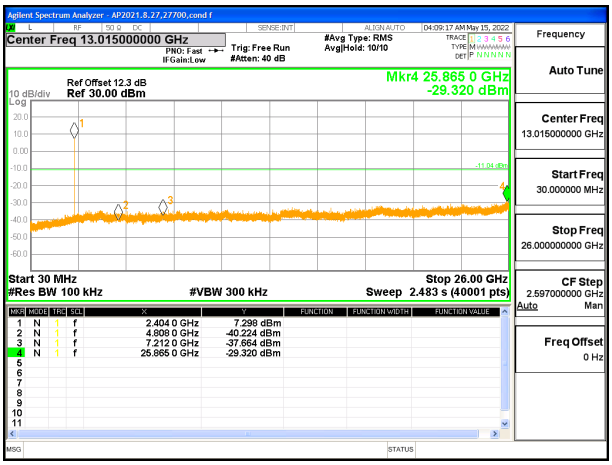

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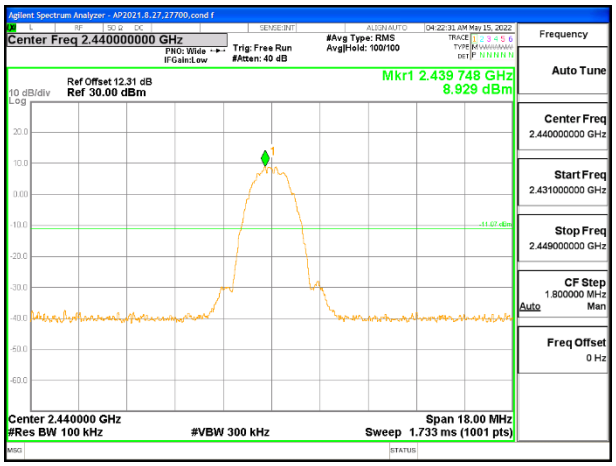

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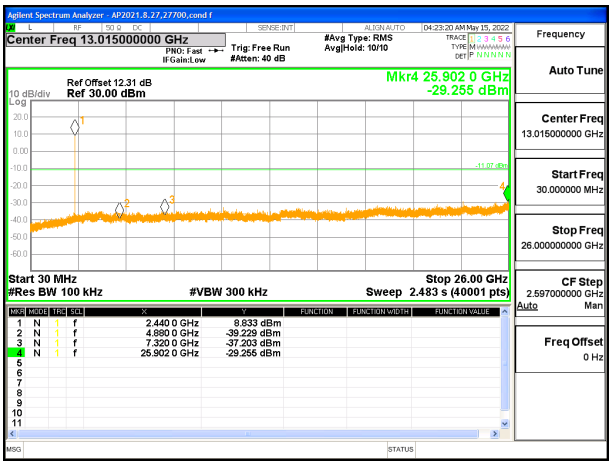

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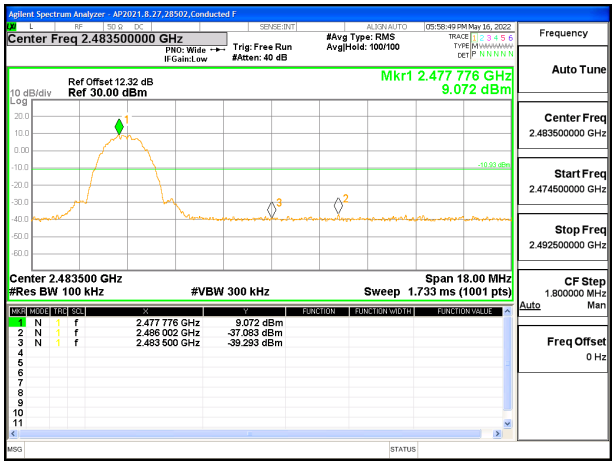
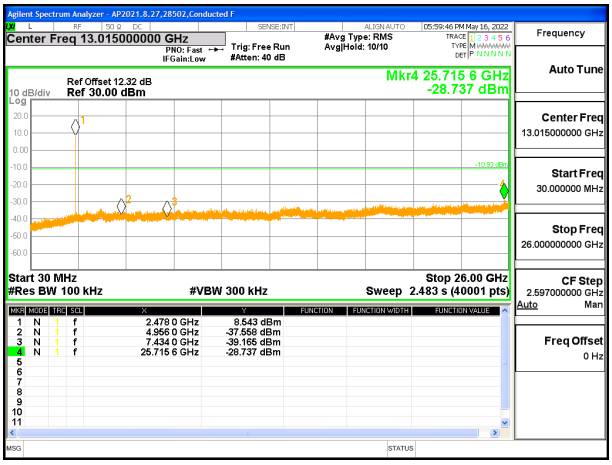


HIGH CHANNEL BANDEDGE



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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.

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Note: The limits in CFR 47, Part 15, Subpart C, paragraph 15.209(a), are identical to those in RSS-Gen section 8.9, Table 6, since the measurements are performed in terms of magnetic field strength and converted to electric field strength levels (as report in the table) using free space impedance of 377 Ohms. For example, the measurement at frequency X kHz resulted in a level of Y dBuV/m, which is equivalent to Y-51.5 = Z dBuA/m, which has the same margin, W dB to the corresponding RSS-Gen Table 6 limit as it has to 15.209(a) limit.

KDB 414788 Open Field Site(OFS) and Chamber Correlation Justification

Base on FCC 15.31 (f) (2): measurements may be performed at a distance closer than that specified in the regulations; however, an attempt should be made to avoid making measurements in the near field.

OFS and chamber correlation testing had been performed and chamber measured test result is the worst case test result.

RESULTS

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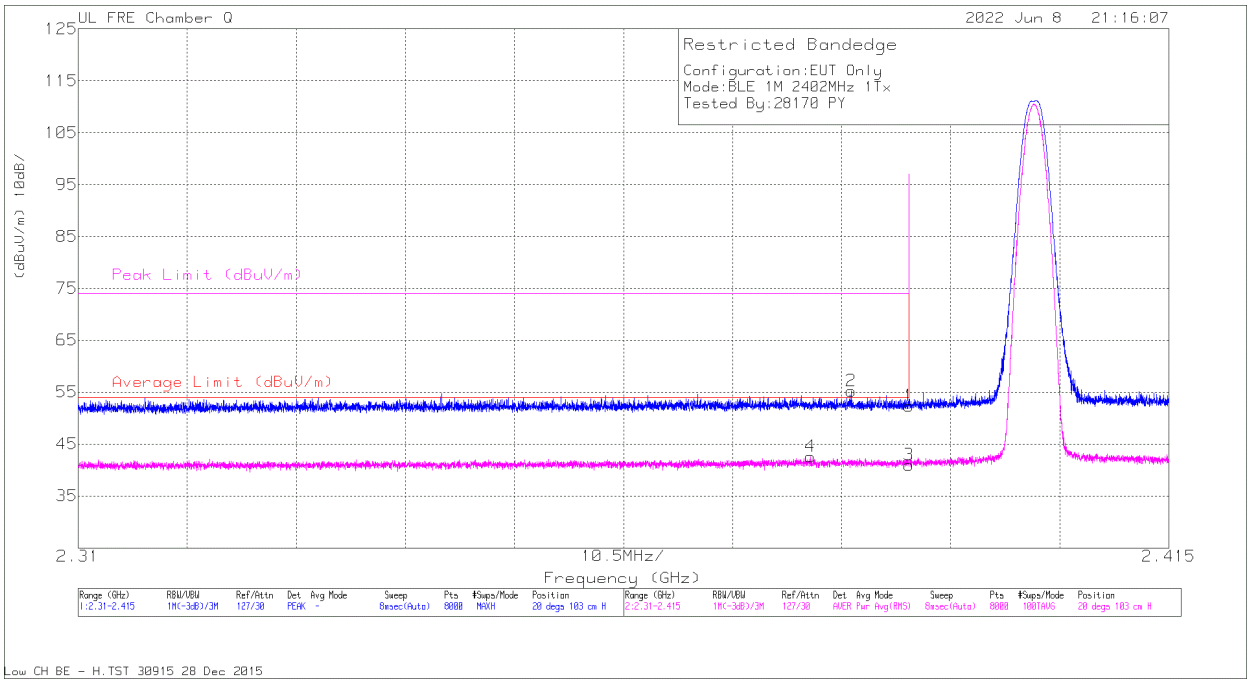
10.2. TRANSMITTER ABOVE 1 GHz

10.2.1. HIGH POWER BLE (1Mbps)

ANT 4

BANDEDGE (LOW CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF 200895 (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	2.380466	44.99	RMS	32	-34.4	42.59	54	-11.41	-	-	20	103	H
2	2.384417	57.66	Pk	32	-34.4	55.26	-	-	74	-18.74	20	103	H
1	2.39	54.8	Pk	31.9	-34.3	52.4	-	-	74	-21.6	20	103	H
3	2.39	43.37	RMS	31.9	-34.3	40.97	54	-13.03	-	-	20	103	H

Pk - Peak detector
RMS - RMS detection

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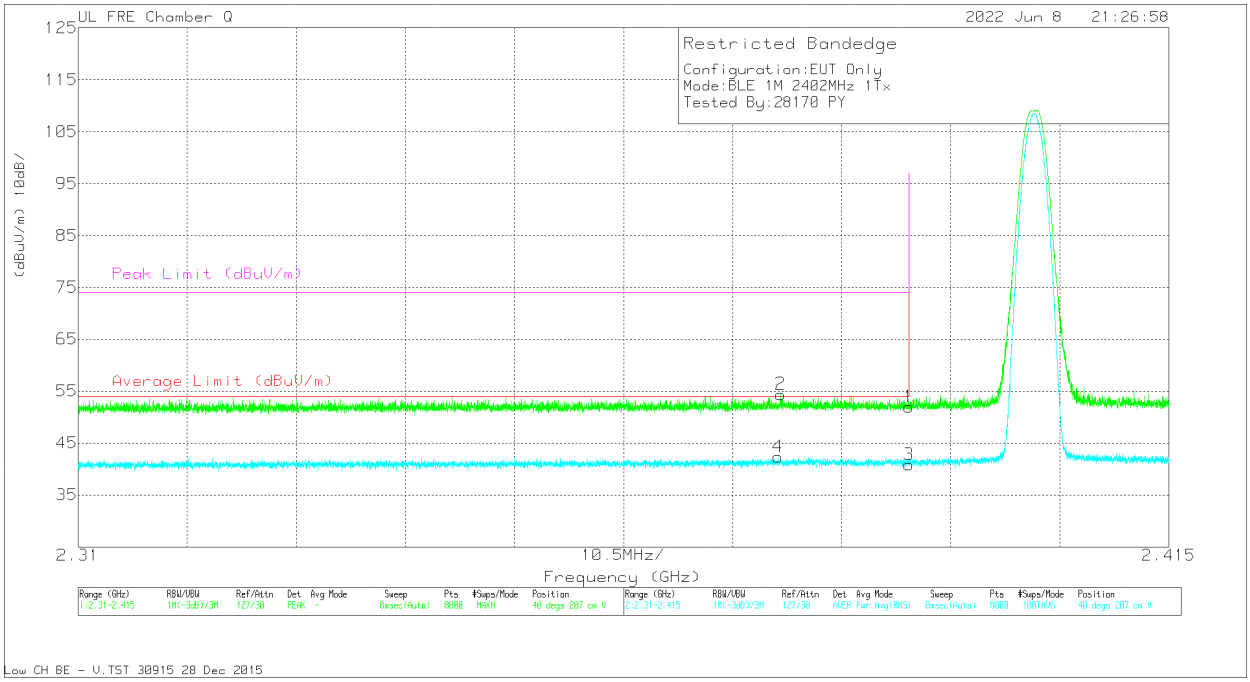
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF 200895 (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	2.377355	44.64	RMS	32	-34.3	42.34	54	-11.66	-	-	40	207	V
2	2.37763	56.71	Pk	32	-34.3	54.41	-	-	74	-19.59	40	207	V
1	2.39	54.33	Pk	31.9	-34.3	51.93	-	-	74	-22.07	40	207	V
3	2.39	43.29	RMS	31.9	-34.3	40.89	54	-13.11	-	-	40	207	V

Pk - Peak detector
RMS - RMS detection

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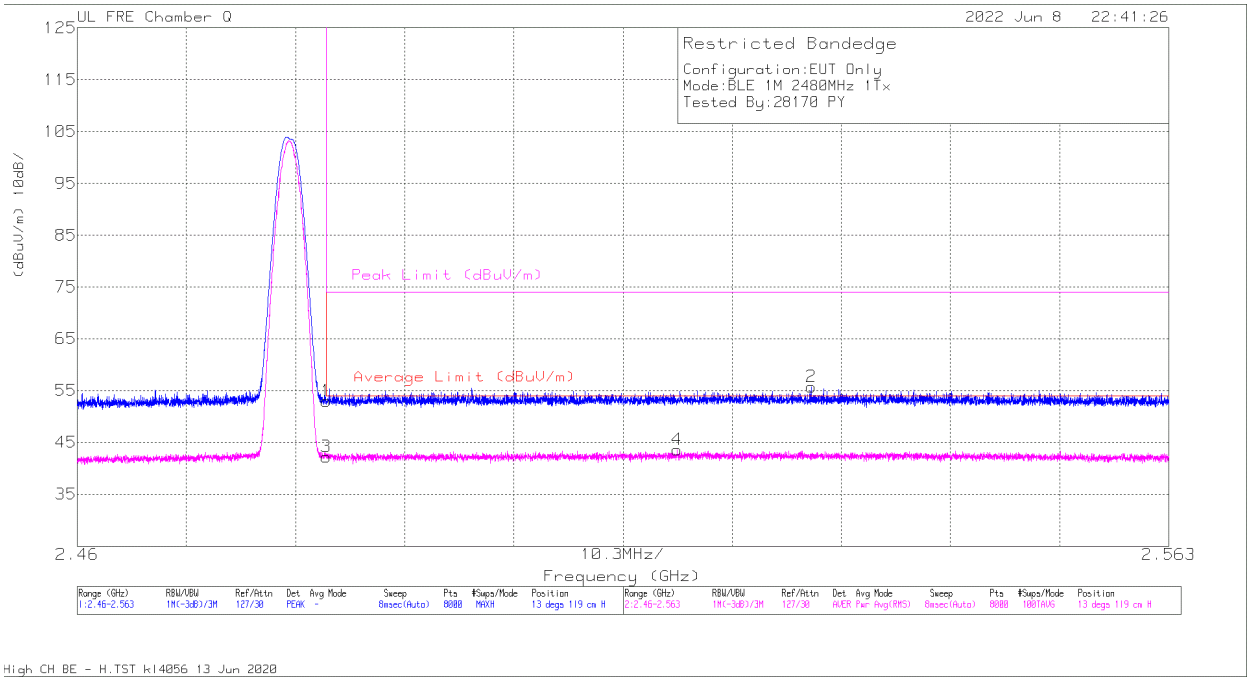
BANDEDGE (HIGH CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF 200895 (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	2.4835	54.69	Pk	32.6	-34.3	52.99	-	-	74	-21.01	13	119	H
3	2.4835	43.88	RMS	32.6	-34.3	42.18	54	-11.82	-	-	13	119	H
4	2.516607	44.84	RMS	32.8	-34.1	43.54	54	-10.46	-	-	13	119	H
2	2.529265	57.19	Pk	32.7	-34.2	55.69	-	-	74	-18.31	13	119	H

Pk - Peak detector
RMS - RMS detection

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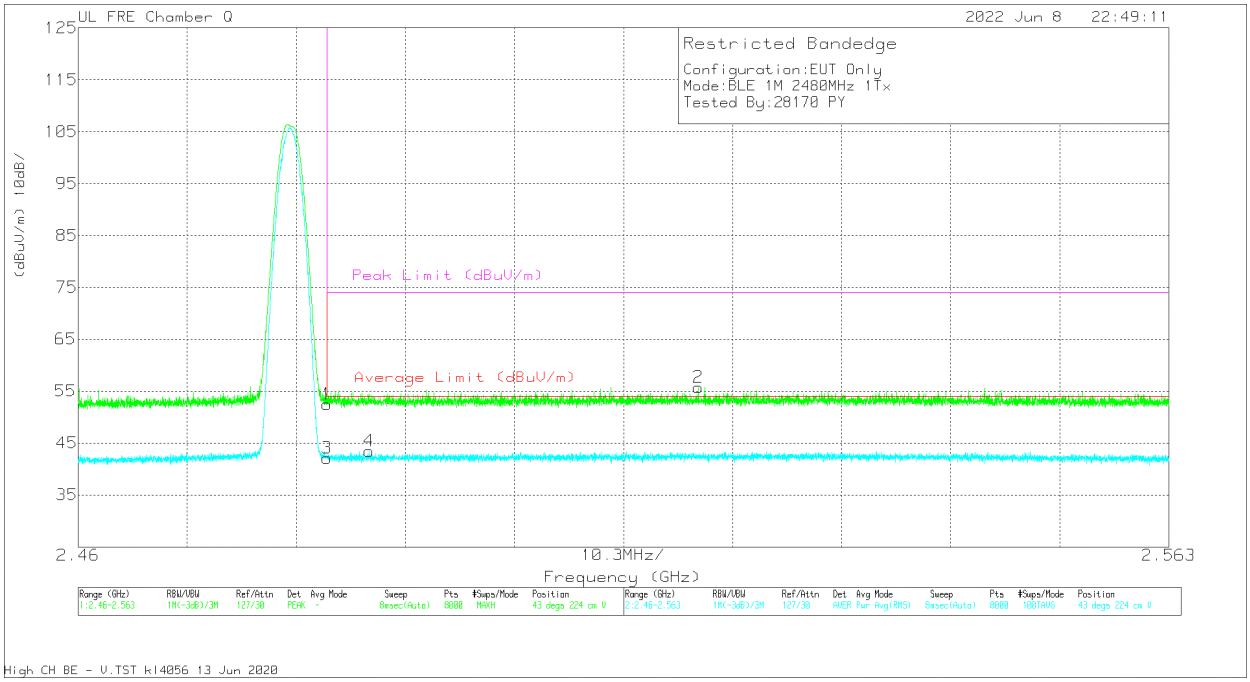
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF 200895 (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	2.4835	54.22	Pk	32.6	-34.3	52.52	-	-	74	-21.48	43	224	V
3	2.4835	43.77	RMS	32.6	-34.3	42.07	54	-11.93	-	-	43	224	V
4	2.487467	44.95	RMS	32.7	-34.2	43.45	54	-10.55	-	-	43	224	V
2	2.518577	57	Pk	32.8	-34.1	55.7	-	-	74	-18.3	43	224	V

Pk - Peak detector
RMS - RMS detection

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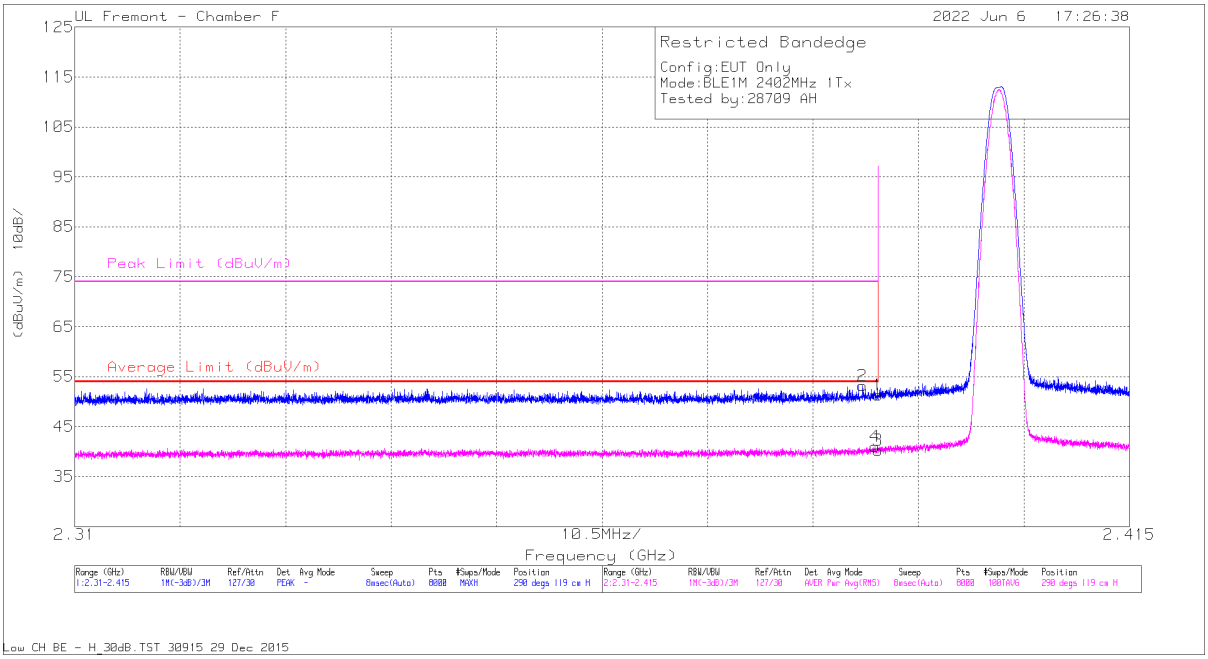
ANT 3

BANDEDGE (LOW CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	81887 ACF (dB)	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	58.56	Pk	32.1	-39.4	51.26	-	-	74	-22.74	290	119	H
2	* 2.388434	60.65	Pk	32.1	-39.5	53.25	-	-	74	-20.75	290	119	H
3	* 2.39	47.58	RMS	32.1	-39.4	40.28	54	-13.72	-	-	290	119	H
4	* 2.389642	48.31	RMS	32.1	-39.4	41.01	54	-12.99	-	-	290	119	H

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

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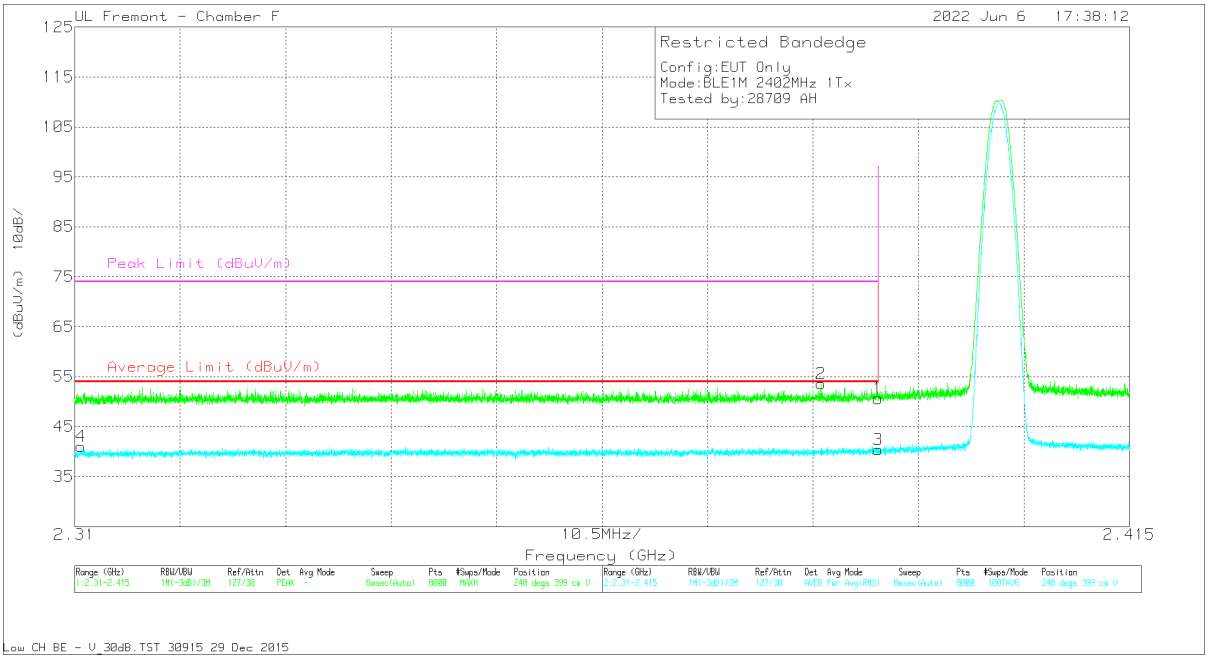
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	81887 ACF (dB)	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	57.93	Pk	32.1	-39.4	50.63	-	-	74	-23.37	248	399	V
2	* 2.384273	60.95	Pk	32	-39.4	53.55	-	-	74	-20.45	248	399	V
3	* 2.39	47.66	RMS	32.1	-39.4	40.36	54	-13.64	-	-	248	399	V
4	* 2.31063	48.75	RMS	31.9	-39.6	41.05	54	-12.95	-	-	248	399	V

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

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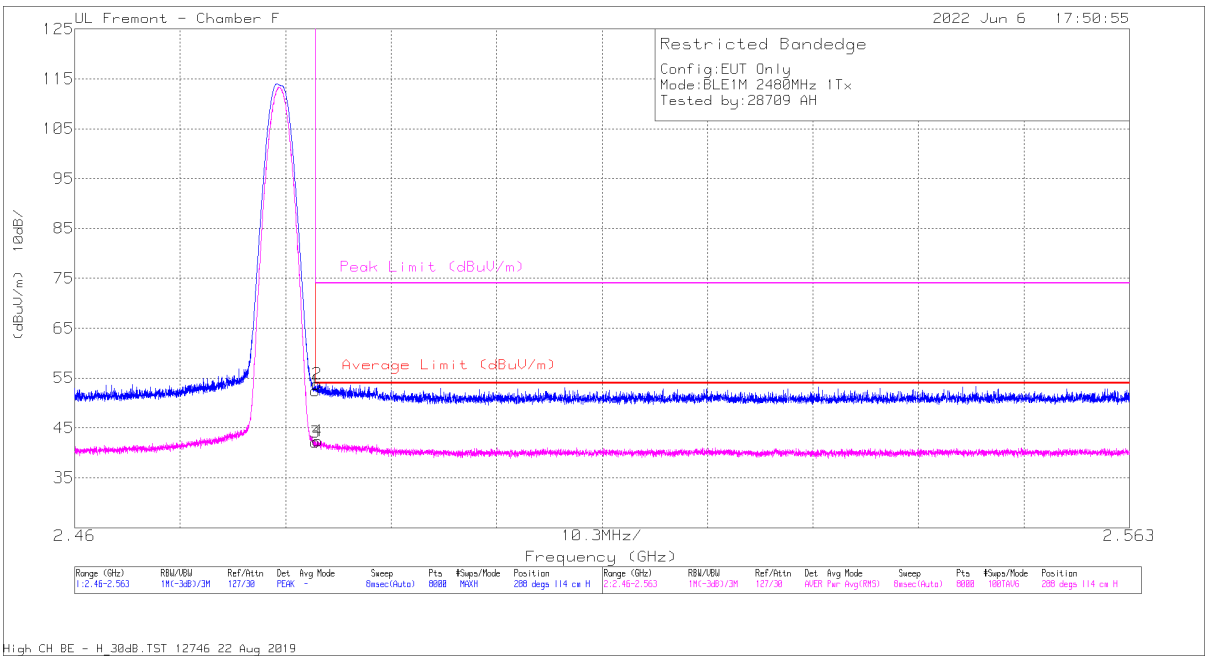
BANDEDGE (HIGH CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	81887 ACF (dB)	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	* 2.4835	59.28	Pk	32.3	-39.1	52.48	-	-	74	-21.52	288	114	H
2	* 2.483694	60.66	Pk	32.3	-39.1	53.86	-	-	74	-20.14	288	114	H
3	* 2.4835	48.96	RMS	32.3	-39.1	42.16	54	-11.84	-	-	288	114	H
4	* 2.483732	49.15	RMS	32.3	-39.1	42.35	54	-11.65	-	-	288	114	H

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

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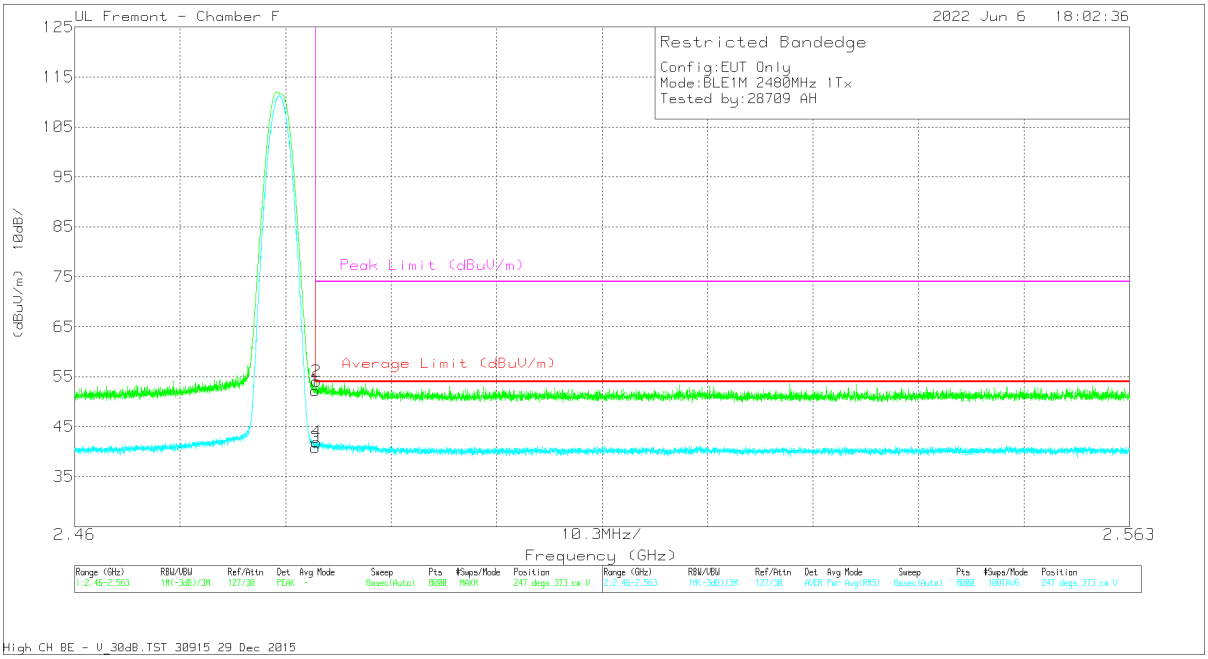
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	81887 ACF (dB)	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	* 2.4835	59.06	Pk	32.3	-39.1	52.26	-	-	74	-21.74	247	373	V
2	* 2.483604	60.88	Pk	32.3	-39.1	54.08	-	-	74	-19.92	247	373	V
3	* 2.4835	47.57	RMS	32.3	-39.1	40.77	54	-13.23	-	-	247	373	V
4	* 2.483629	48.68	RMS	32.3	-39.1	41.88	54	-12.12	-	-	247	373	V

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

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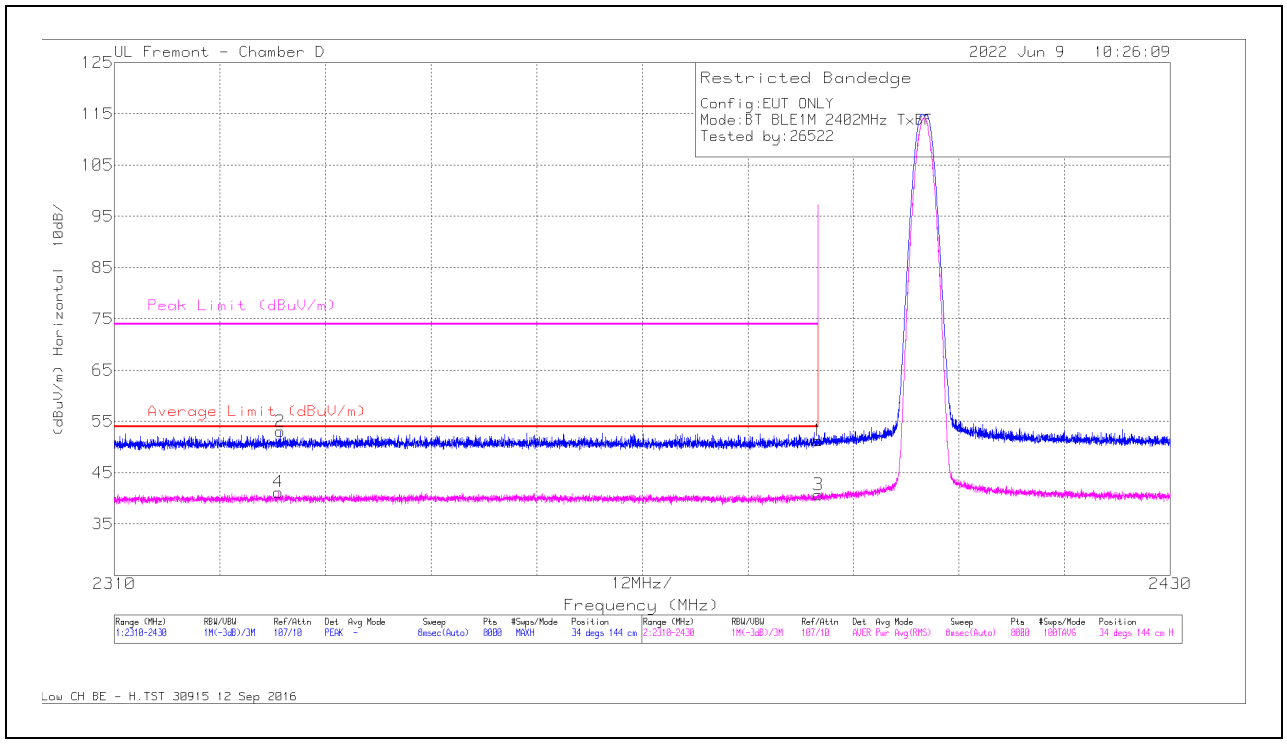
10.2.2. HIGH POWER BLE TXBF (1Mbps)

BANDEDGE (LOW CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	200786 ACF (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	* 2390	39.86	Pk	32.1	-20.7	51.26	-	-	74	-22.74	34	144	H
2	* 2328.843	41.74	Pk	32.2	-20.9	53.04	-	-	74	-20.96	34	144	H
3	* 2390	29.3	RMS	32.1	-20.7	40.7	54	-13.3	-	-	34	144	H
4	* 2328.632	29.93	RMS	32.2	-20.9	41.23	54	-12.77	-	-	34	144	H

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

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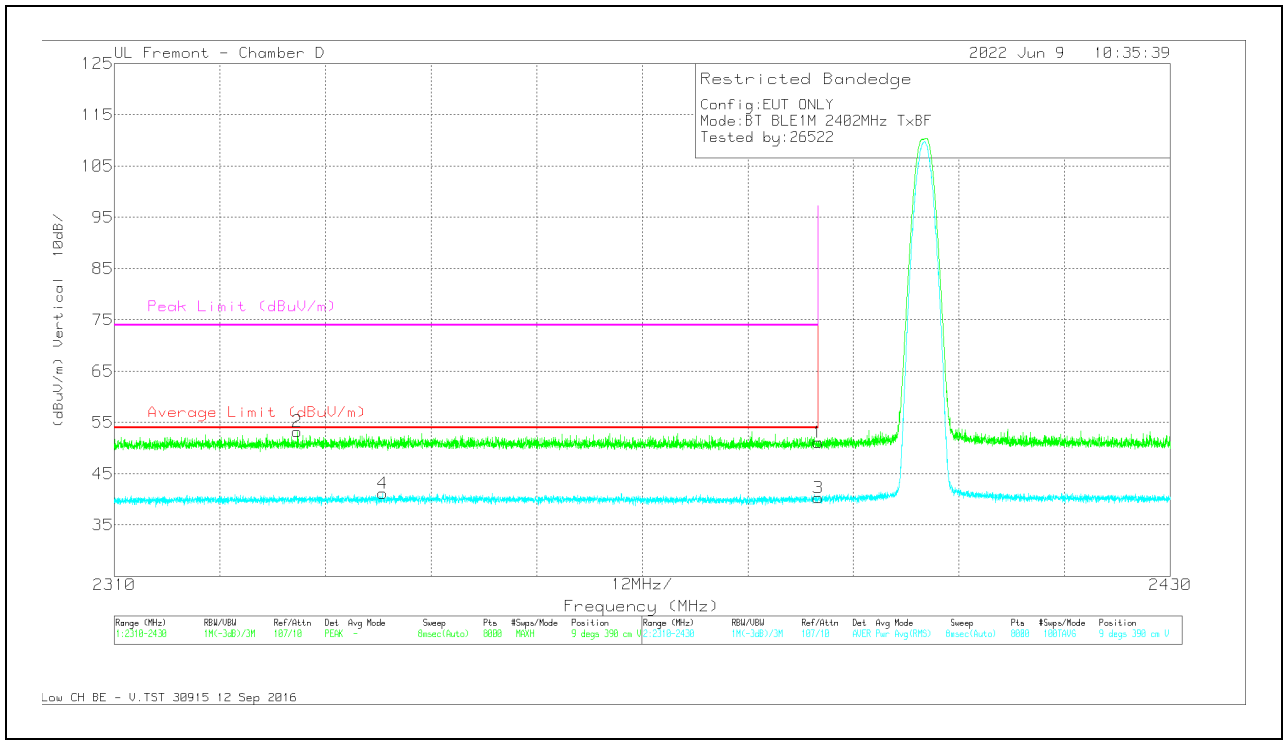
VERTICAL RESULT



Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	200786 ACF (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	* 2390	39.7	Pk	32.1	-20.7	51.1	-	-	74	-22.9	9	390	V
2	* 2330.793	41.9	Pk	32.2	-20.9	53.2	-	-	74	-20.8	9	390	V
3	* 2390	28.89	RMS	32.1	-20.7	40.29	54	-13.71	-	-	9	390	V
4	* 2340.484	29.76	RMS	32.3	-20.9	41.16	54	-12.84	-	-	9	390	V

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

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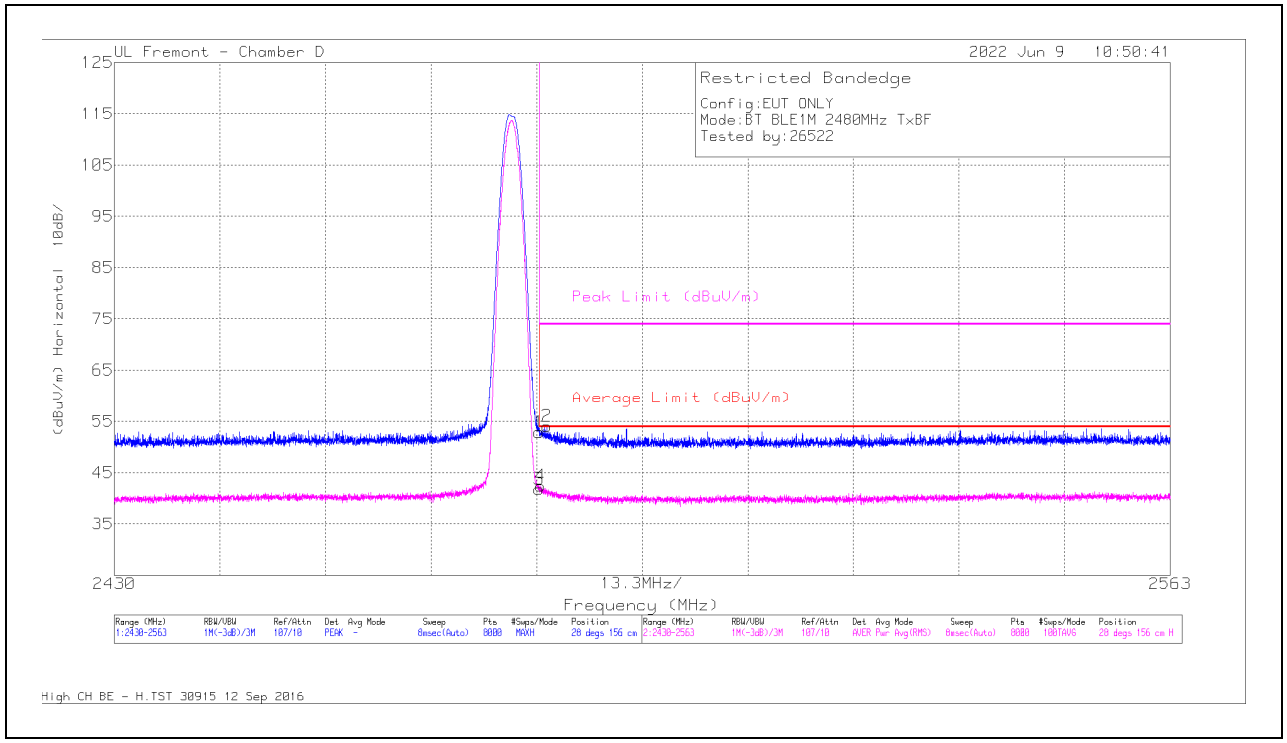
BANDEDGE (HIGH CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	200786 ACF (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	* 2483.5	41.6	Pk	32	-20.7	52.9	-	-	74	-21.1	28	156	H
2	* 2484.47	42.8	Pk	32	-20.7	54.1	-	-	74	-19.9	28	156	H
3	* 2483.5	30.5	RMS	32	-20.7	41.8	54	-12.2	-	-	28	156	H
4	* 2483.672	31.12	RMS	32	-20.7	42.42	54	-11.58	-	-	28	156	H

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

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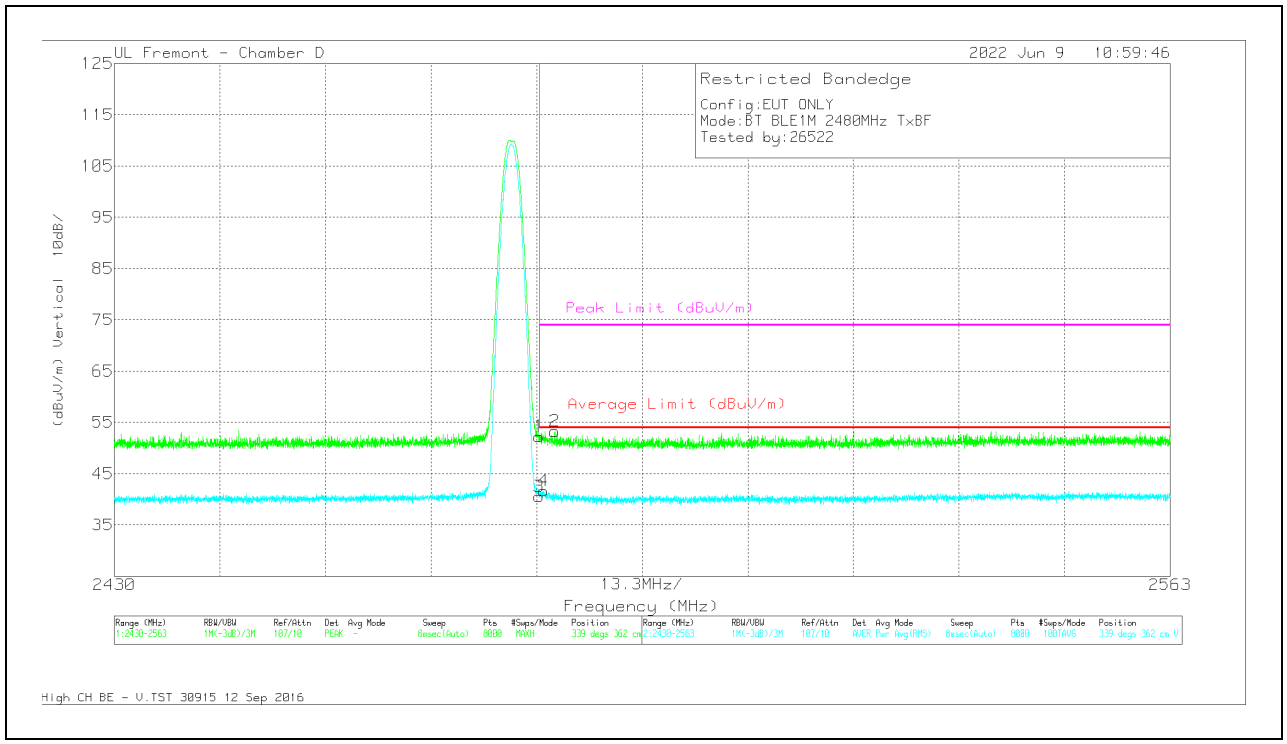
VERTICAL RESULT



Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	200786 ACF (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	* 2483.5	40.96	Pk	32	-20.7	52.26	-	-	74	-21.74	339	362	V
2	* 2485.484	41.96	Pk	32	-20.7	53.26	-	-	74	-20.74	339	362	V
3	* 2483.5	29.25	RMS	32	-20.7	40.55	54	-13.45	-	-	339	362	V
4	* 2484.071	30.34	RMS	32	-20.7	41.64	54	-12.36	-	-	339	362	V

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

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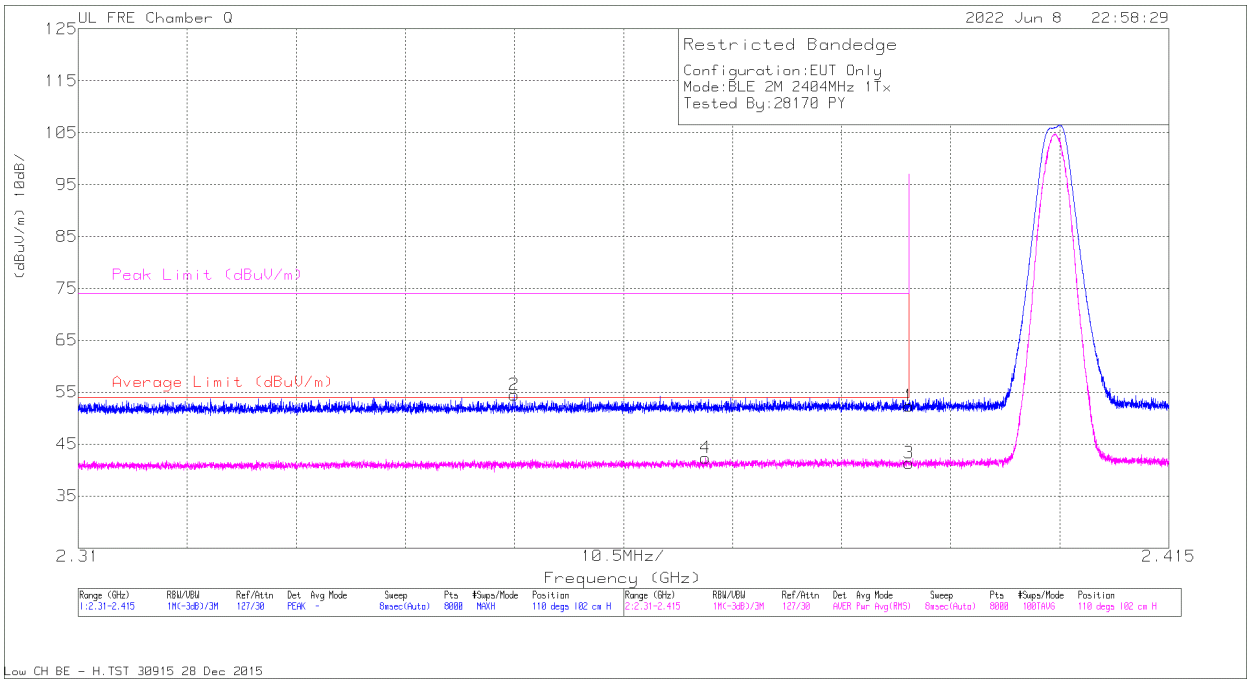
10.2.3. HIGH POWER BLE (2Mbps)

ANT 4

BANDEDGE (LOW CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF 200895 (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
2	2.35198	57.12	Pk	31.8	-34.4	54.52	-	-	74	-19.48	110	102	H
4	2.370371	44.79	RMS	31.9	-34.4	42.29	54	-11.71	-	-	110	102	H
1	2.39	54.71	Pk	31.9	-34.3	52.31	-	-	74	-21.69	110	102	H
3	2.39	43.78	RMS	31.9	-34.3	41.38	54	-12.62	-	-	110	102	H

Pk - Peak detector
RMS - RMS detection

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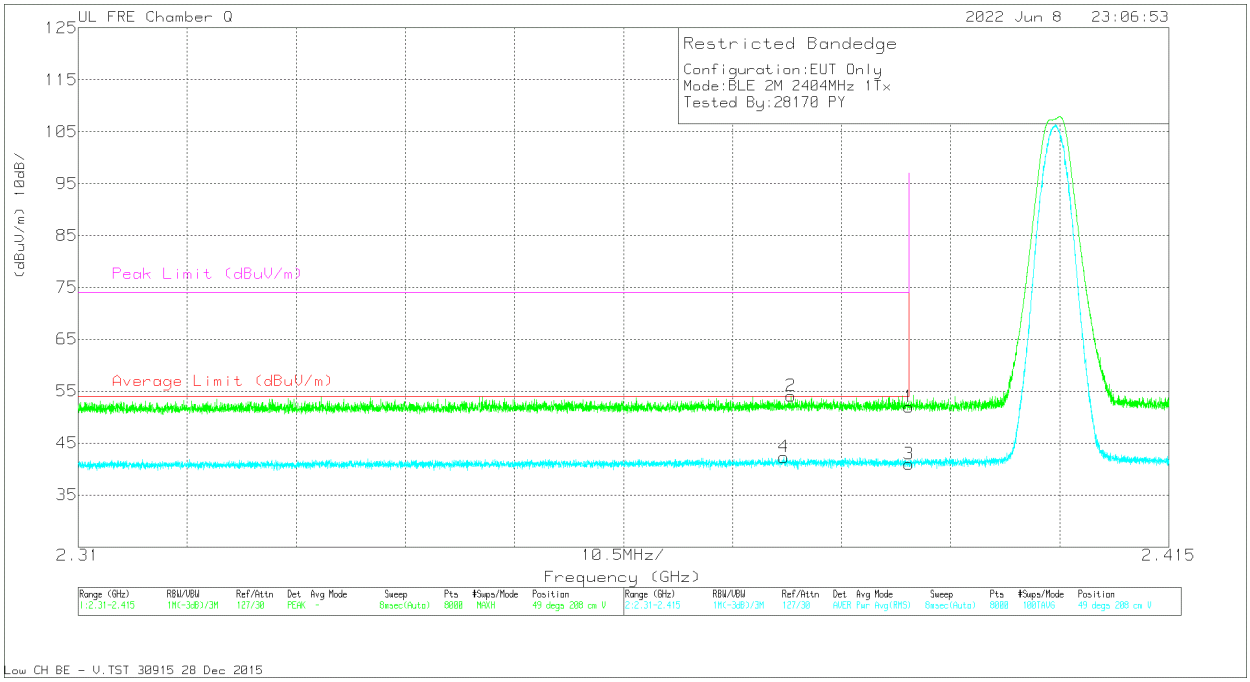
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF 200895 (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	2.377932	44.58	RMS	32	-34.3	42.28	54	-11.72	-	-	49	208	V
2	2.378628	56.42	Pk	32	-34.3	54.12	-	-	74	-19.88	49	208	V
1	2.39	54.42	Pk	31.9	-34.3	52.02	-	-	74	-21.98	49	208	V
3	2.39	43.37	RMS	31.9	-34.3	40.97	54	-13.03	-	-	49	208	V

Pk - Peak detector
RMS - RMS detection

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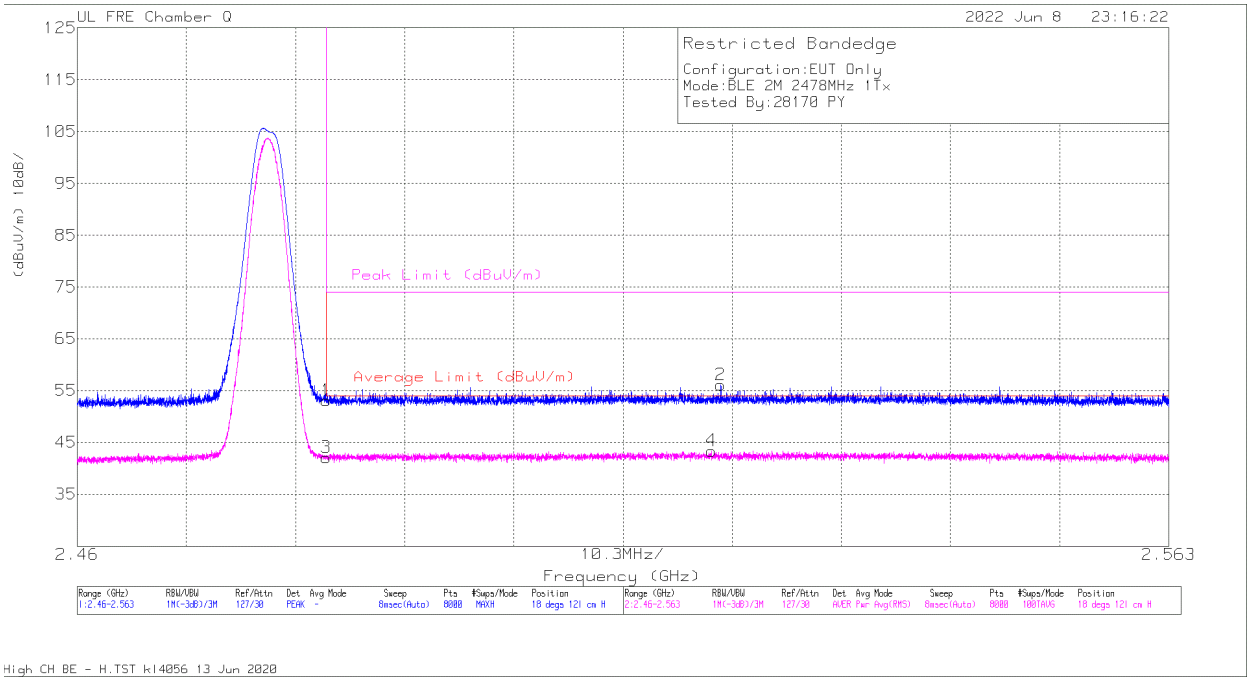
BANDEDGE (HIGH CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF 200895 (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	2.4835	54.83	Pk	32.6	-34.3	53.13	-	-	74	-20.87	18	121	H
3	2.4835	43.73	RMS	32.6	-34.3	42.03	54	-11.97	-	-	18	121	H
4	2.519865	44.7	RMS	32.8	-34.1	43.4	54	-10.6	-	-	18	121	H
2	2.520728	57.35	Pk	32.8	-34.1	56.05	-	-	74	-17.95	18	121	H

Pk - Peak detector
RMS - RMS detection

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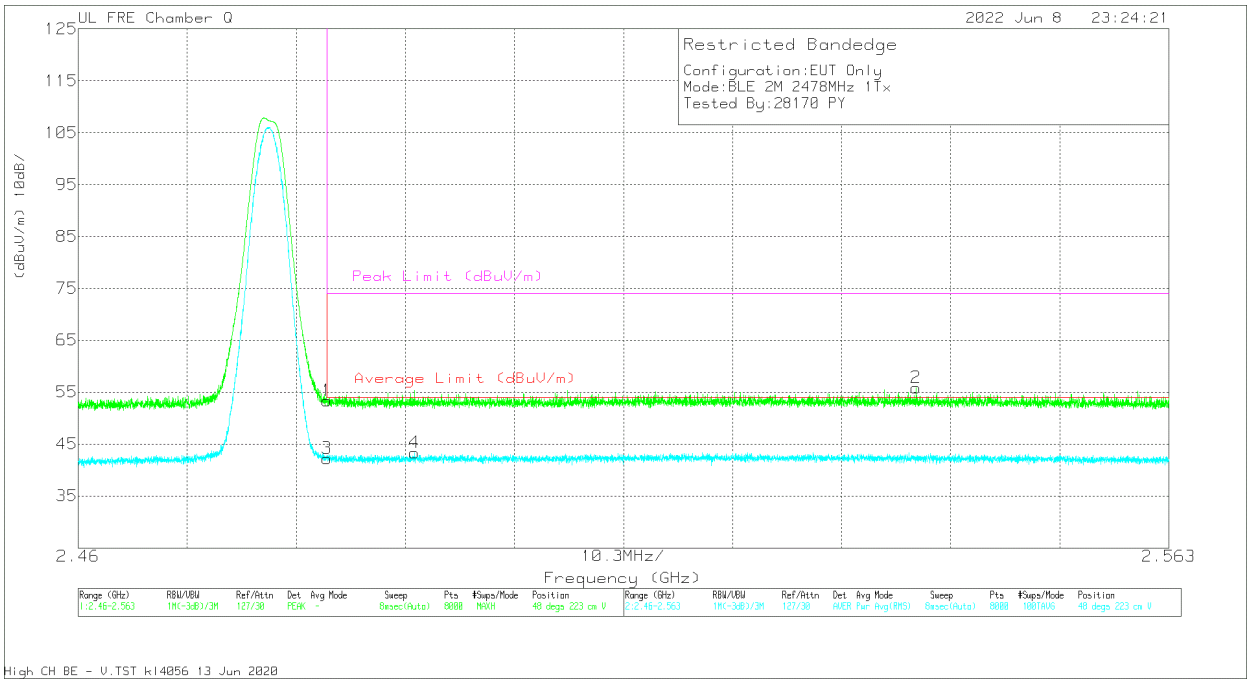
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF 200895 (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	2.4835	55.01	Pk	32.6	-34.3	53.31	-	-	74	-20.69	48	223	V
3	2.4835	43.9	RMS	32.6	-34.3	42.2	54	-11.8	-	-	48	223	V
4	2.491729	44.84	RMS	32.7	-34.2	43.34	54	-10.66	-	-	48	223	V
2	2.539142	57.35	Pk	32.7	-34.2	55.85	-	-	74	-18.15	48	223	V

Pk - Peak detector
RMS - RMS detection

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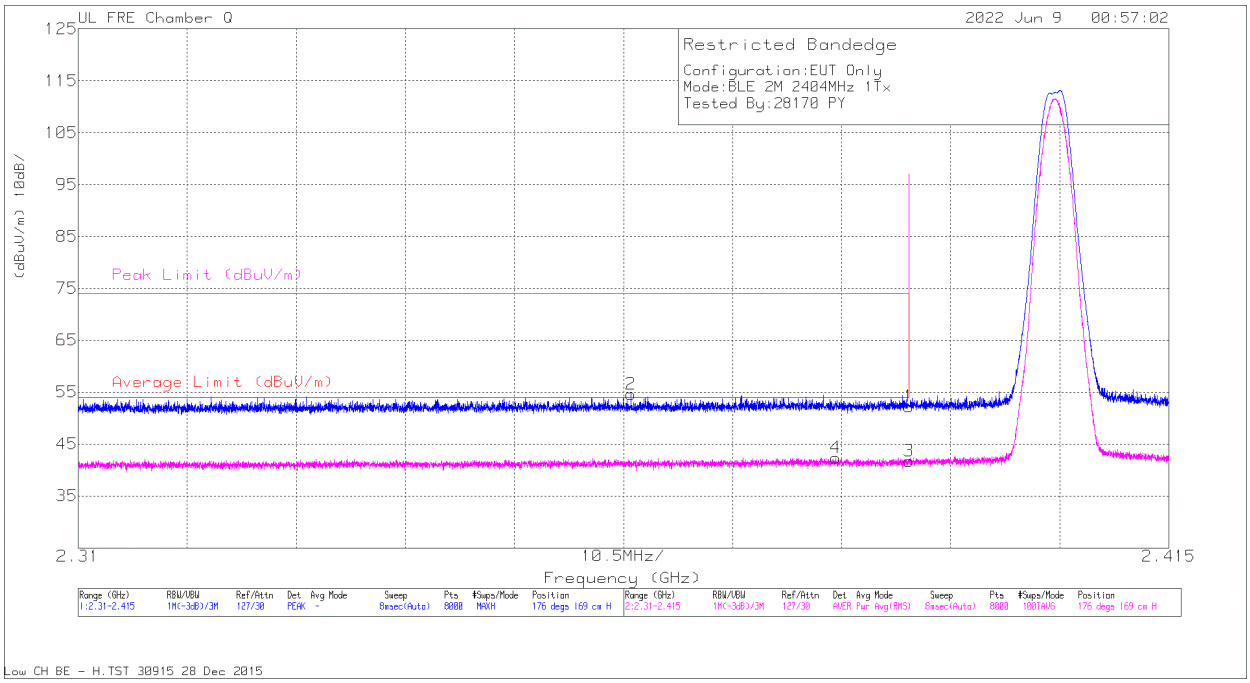
ANT 3

BANDEDGE (LOW CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF 200895 (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
2	2.363204	57.06	Pk	31.9	-34.4	54.56	-	-	74	-19.44	176	169	H
4	2.38292	44.78	RMS	32	-34.4	42.38	54	-11.62	-	-	176	169	H
1	2.39	54.58	Pk	31.9	-34.3	52.18	-	-	74	-21.82	176	169	H
3	2.39	44.11	RMS	31.9	-34.3	41.71	54	-12.29	-	-	176	169	H

Pk - Peak detector
RMS - RMS detection

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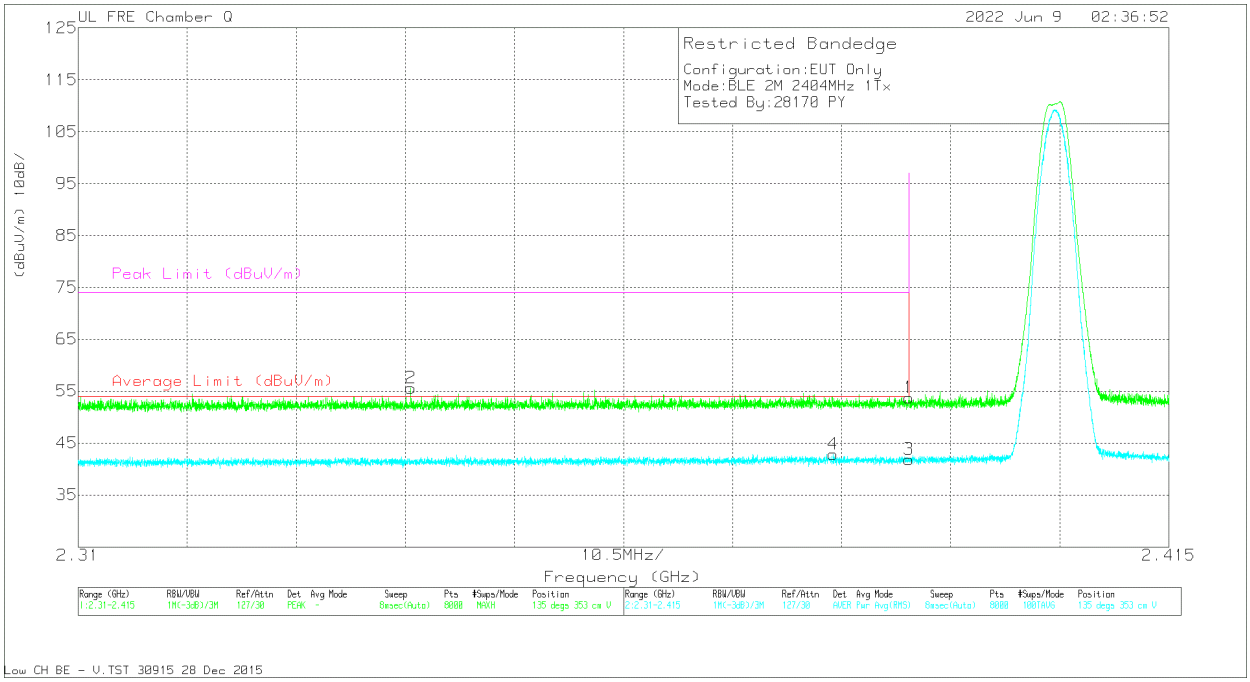
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF 200895 (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
2	2.34203	58.17	Pk	31.8	-34.4	55.57	-	-	74	-18.43	135	353	V
4	2.382684	45.27	RMS	32	-34.4	42.87	54	-11.13	-	-	135	353	V
1	2.39	56.12	Pk	31.9	-34.3	53.72	-	-	74	-20.28	135	353	V
3	2.39	44.27	RMS	31.9	-34.3	41.87	54	-12.13	-	-	135	353	V

Pk - Peak detector
RMS - RMS detection

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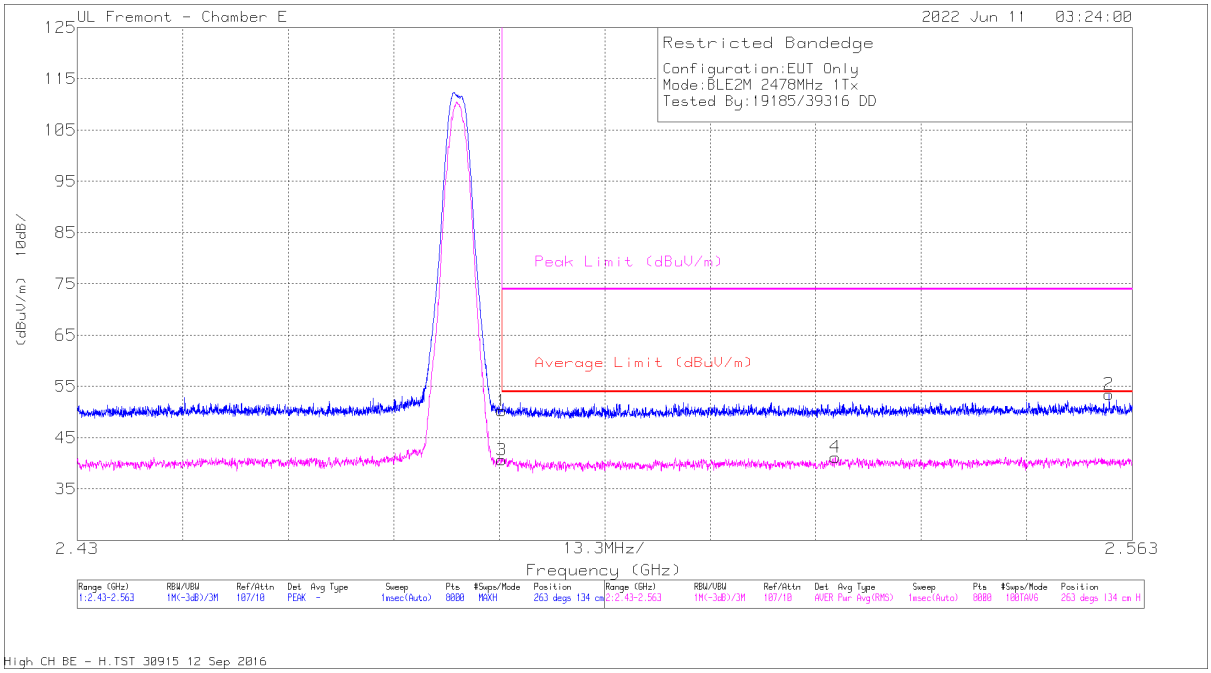
BANDEDGE (HIGH CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	200897 ACF (dB/m)	Amp/Cbl/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	* 2.4835	44.34	Pk	31.8	-25.9	50.24	-	-	74	-23.76	263	134	H
3	* 2.4835	34.75	RMS	31.8	-25.9	40.65	54	-13.35	-	-	263	134	H
4	2.525572	35.11	RMS	32.1	-26	41.21	54	-12.79	-	-	263	134	H
2	2.560073	46.98	Pk	32.4	-25.9	53.48	-	-	74	-20.52	263	134	H

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

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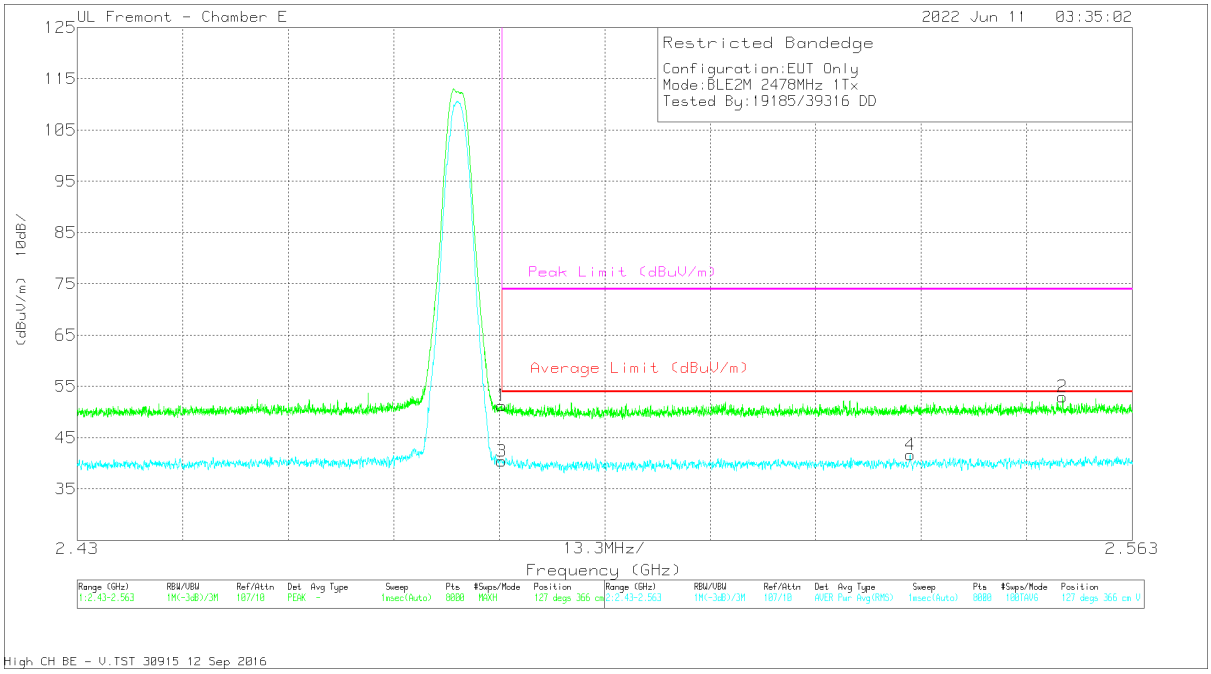
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	200897 ACF (dB/m)	Amp/Cbl/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	* 2.4835	45.35	Pk	31.8	-25.9	51.25	-	-	74	-22.75	127	366	V
3	* 2.4835	34.52	RMS	31.8	-25.9	40.42	54	-13.58	-	-	127	366	V
4	2.535	35.34	RMS	32.3	-26	41.64	54	-12.36	-	-	127	366	V
2	2.554204	46.46	Pk	32.4	-25.9	52.96	-	-	74	-21.04	127	366	V

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

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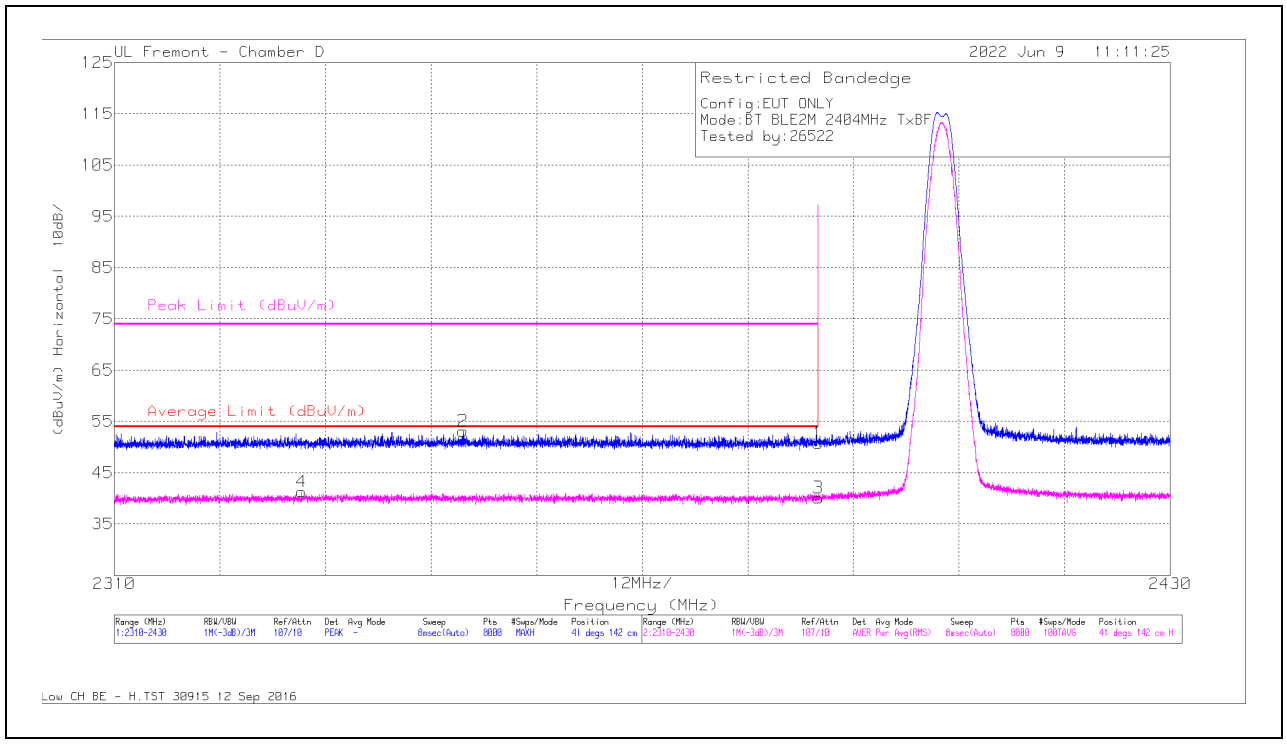
10.2.4. HIGH POWER BLE TXBF (2Mbps)

BANDEDGE (LOW CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	200786 ACF (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	* 2390	39.36	Pk	32.1	-20.7	50.76	-	-	74	-23.24	41	142	H
2	* 2349.62	41.69	Pk	32.3	-20.9	53.09	-	-	74	-20.91	41	142	H
3	* 2390	28.68	RMS	32.1	-20.7	40.08	54	-13.92	-	-	41	142	H
4	* 2331.288	29.96	RMS	32.2	-20.9	41.26	54	-12.74	-	-	41	142	H

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

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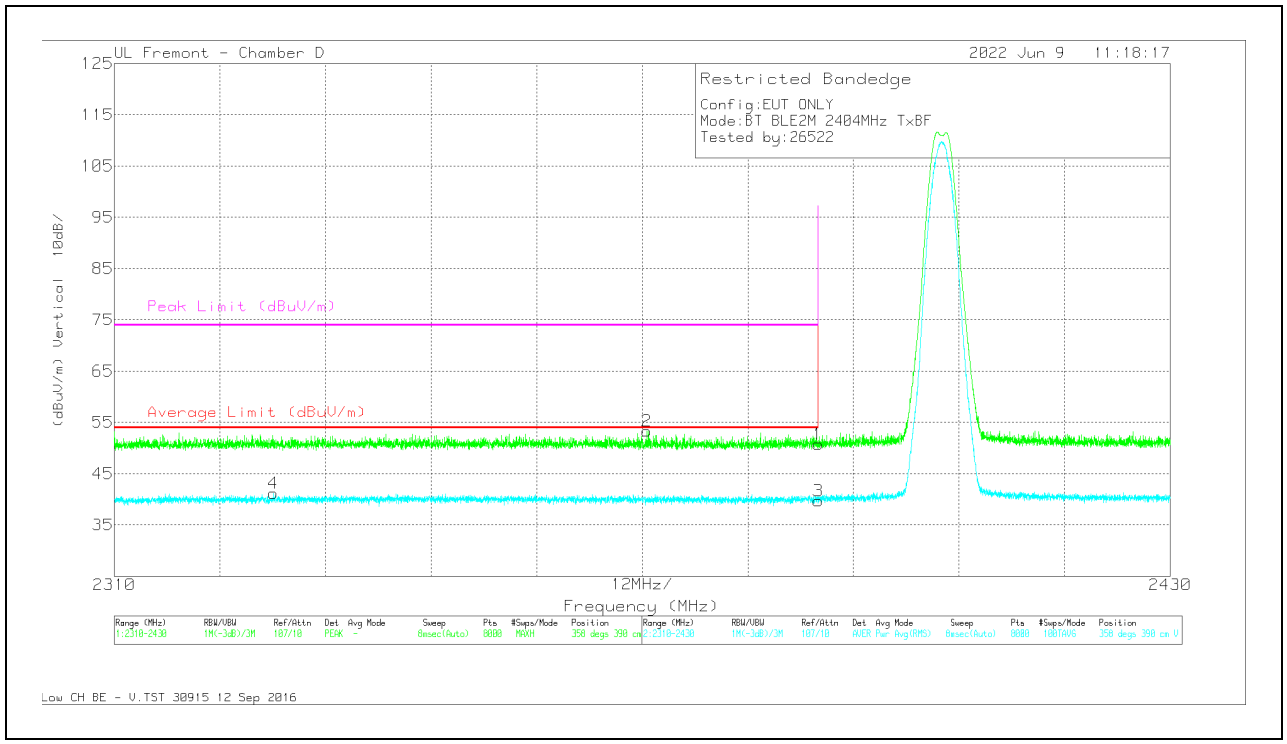
VERTICAL RESULT



Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	200786 ACF (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	* 2390	39.31	Pk	32.1	-20.7	50.71	-	-	74	-23.29	358	390	V
2	* 2370.503	41.9	Pk	32.2	-20.8	53.3	-	-	74	-20.7	358	390	V
3	* 2390	28.29	RMS	32.1	-20.7	39.69	54	-14.31	-	-	358	390	V
4	* 2328.092	29.87	RMS	32.2	-20.9	41.17	54	-12.83	-	-	358	390	V

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

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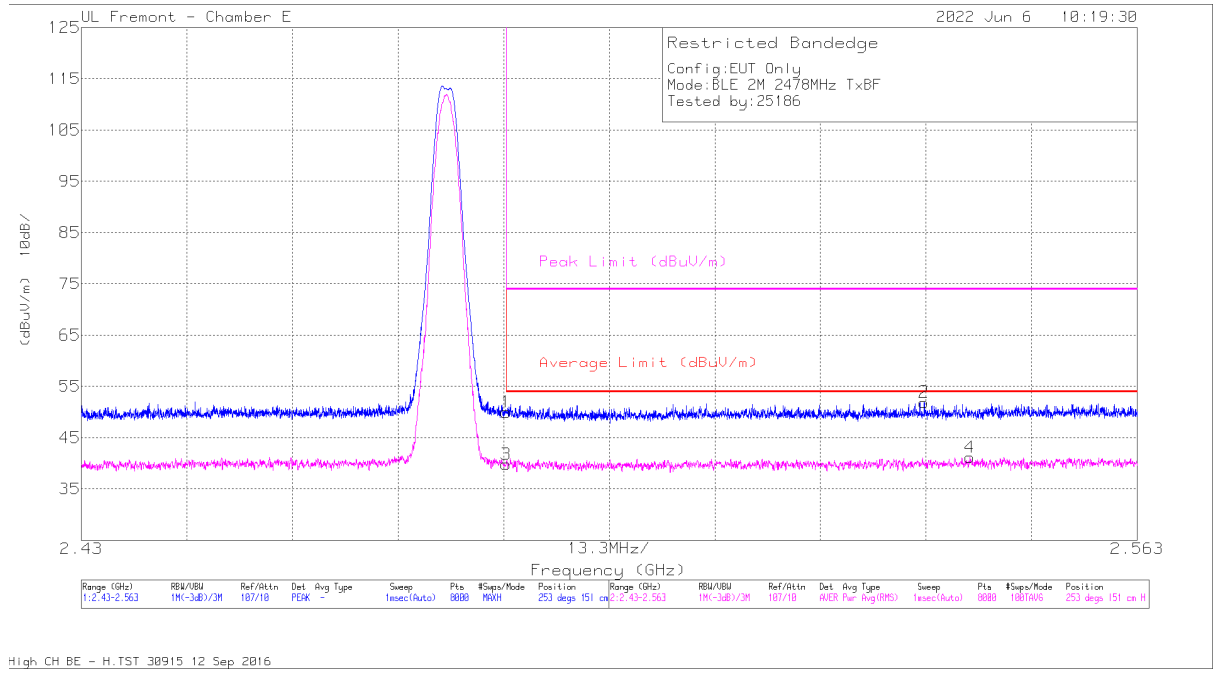
BANDEDGE (HIGH CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	200897 ACF (dB/m)	Amp/Cbl/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	* 2.4835	44.07	Pk	31.8	-25.9	49.97	-	-	74	-24.03	253	151	H
2	2.536163	45.56	Pk	32.3	-26	51.86	-	-	74	-22.14	253	151	H
3	* 2.4835	33.92	RMS	31.8	-25.9	39.82	54	-14.18	-	-	253	151	H
4	2.541933	34.86	RMS	32.3	-26	41.16	54	-12.84	-	-	253	151	H

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

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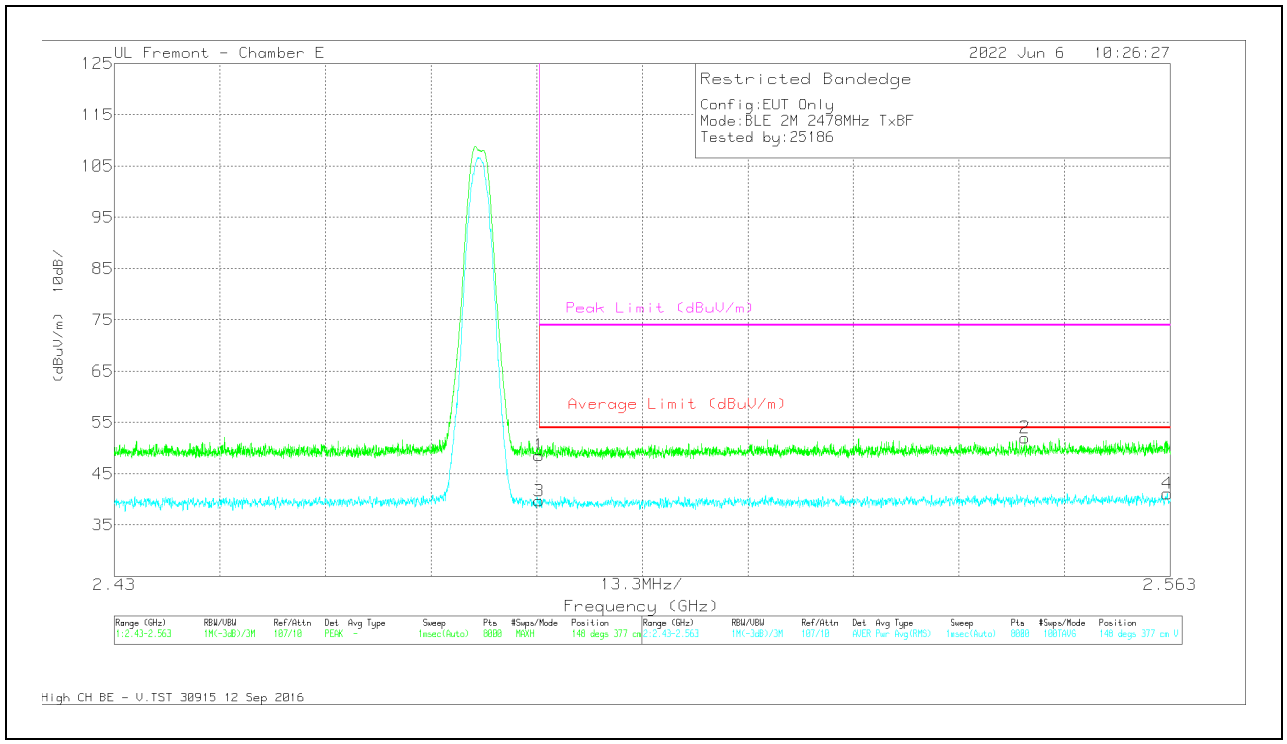
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	200897 ACF (dB/m)	Amp/Cbl/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	* 2.4835	42.69	Pk	31.8	-25.9	48.59	-	-	74	-25.41	148	377	V
3	* 2.4835	33.78	RMS	31.8	-25.9	39.68	54	-14.32	-	-	148	377	V
2	2.544676	45.69	Pk	32.3	-26	51.99	-	-	74	-22.01	148	377	V
4	2.562634	34.63	RMS	32.4	-25.9	41.13	54	-12.87	-	-	148	377	V

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

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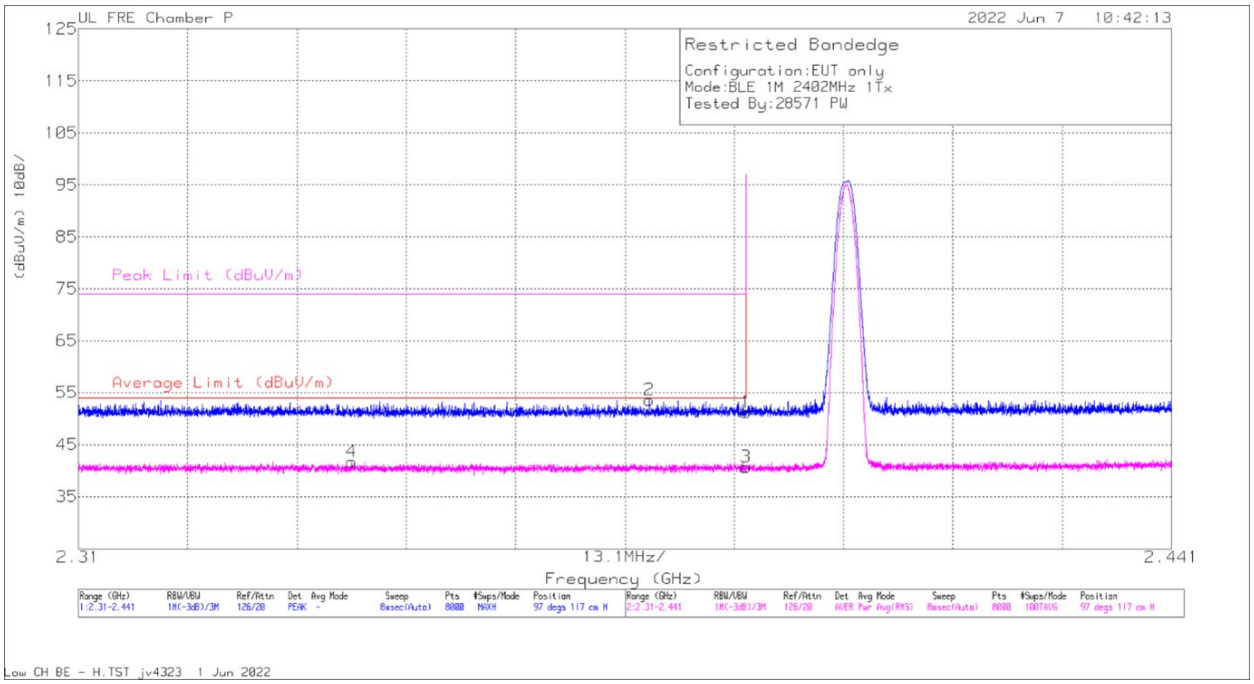
10.2.5. LOW POWER BLE (1Mbps)

ANT 4

BANDEDGE (LOW CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	200897 ACF (dB/m)	Amp/Cbl/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	2.342787	43.84	RMS	31.6	-33.7	41.74	54	-12.26	-	-	97	117	H
2	2.37839	55.68	Pk	31.7	-33.8	53.58	-	-	74	-20.42	97	117	H
1	2.39	53.37	Pk	31.7	-33.8	51.27	-	-	74	-22.73	97	117	H
3	2.39	42.76	RMS	31.7	-33.8	40.66	54	-13.34	-	-	97	117	H

Pk - Peak detector
RMS - RMS detection

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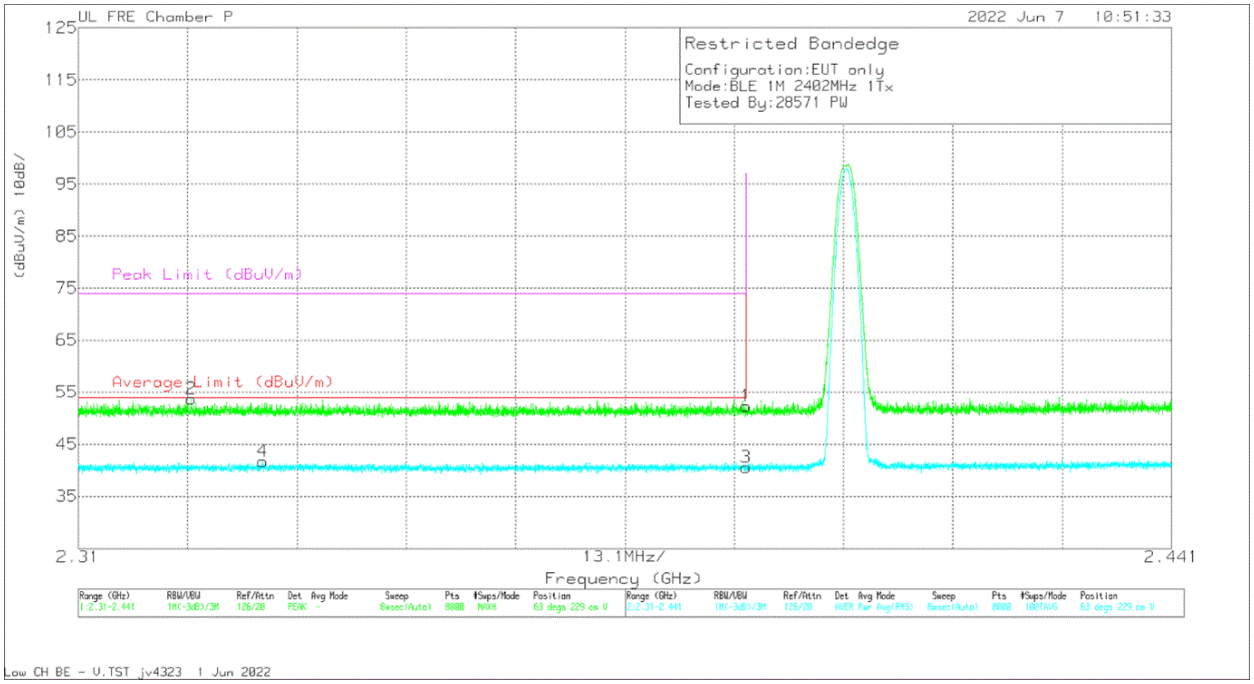
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF 41112 (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
2	2.323527	55.97	Pk	31.6	-33.8	53.77	-	-	74	-20.23	63	229	V
4	2.332076	43.75	RMS	31.7	-33.7	41.75	54	-12.25	-	-	63	229	V
1	2.39	54.47	Pk	31.7	-33.8	52.37	-	-	74	-21.63	63	229	V
3	2.39	42.71	RMS	31.7	-33.8	40.61	54	-13.39	-	-	63	229	V

Pk - Peak detector
RMS - RMS detection

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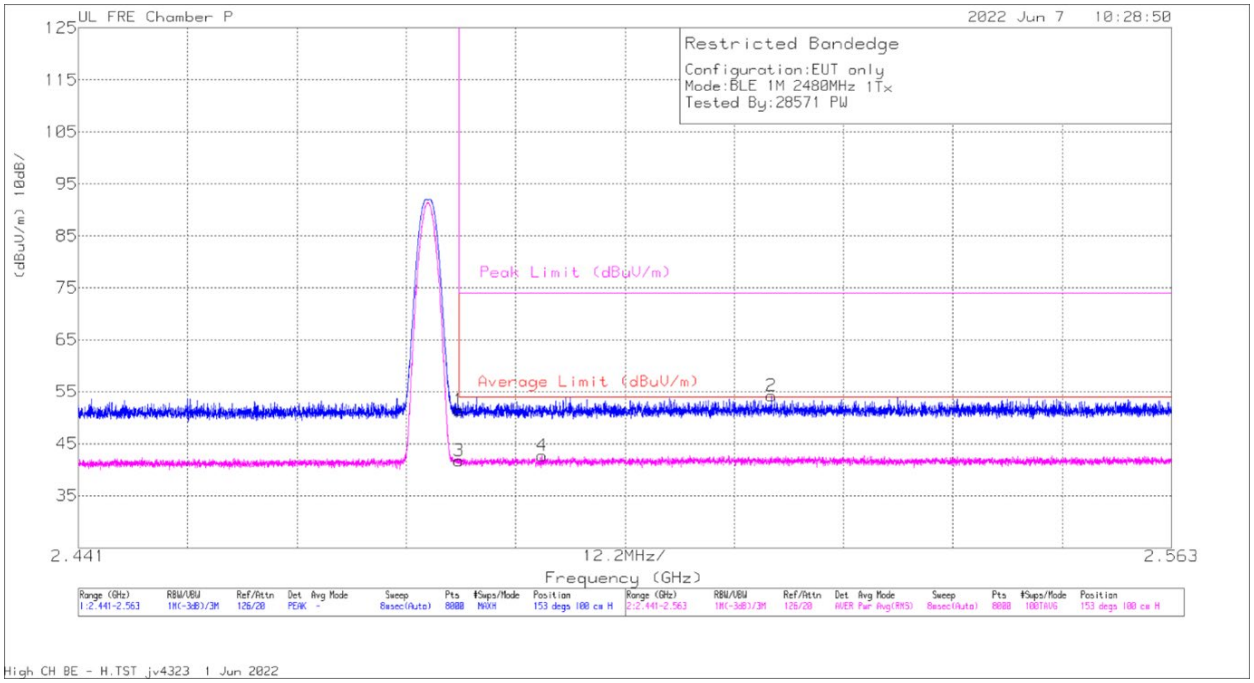
BANDEDGE (HIGH CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF 41112 (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	2.4835	52.75	Pk	32.4	-33.7	51.45	-	-	74	-22.55	153	100	H
3	2.4835	43.04	RMS	32.4	-33.7	41.74	54	-12.26	-	-	153	100	H
4	2.49275	43.87	RMS	32.5	-33.6	42.77	54	-11.23	-	-	153	100	H
2	2.518343	55.1	Pk	32.6	-33.5	54.2	-	-	74	-19.8	153	100	H

Pk - Peak detector
RMS - RMS detection

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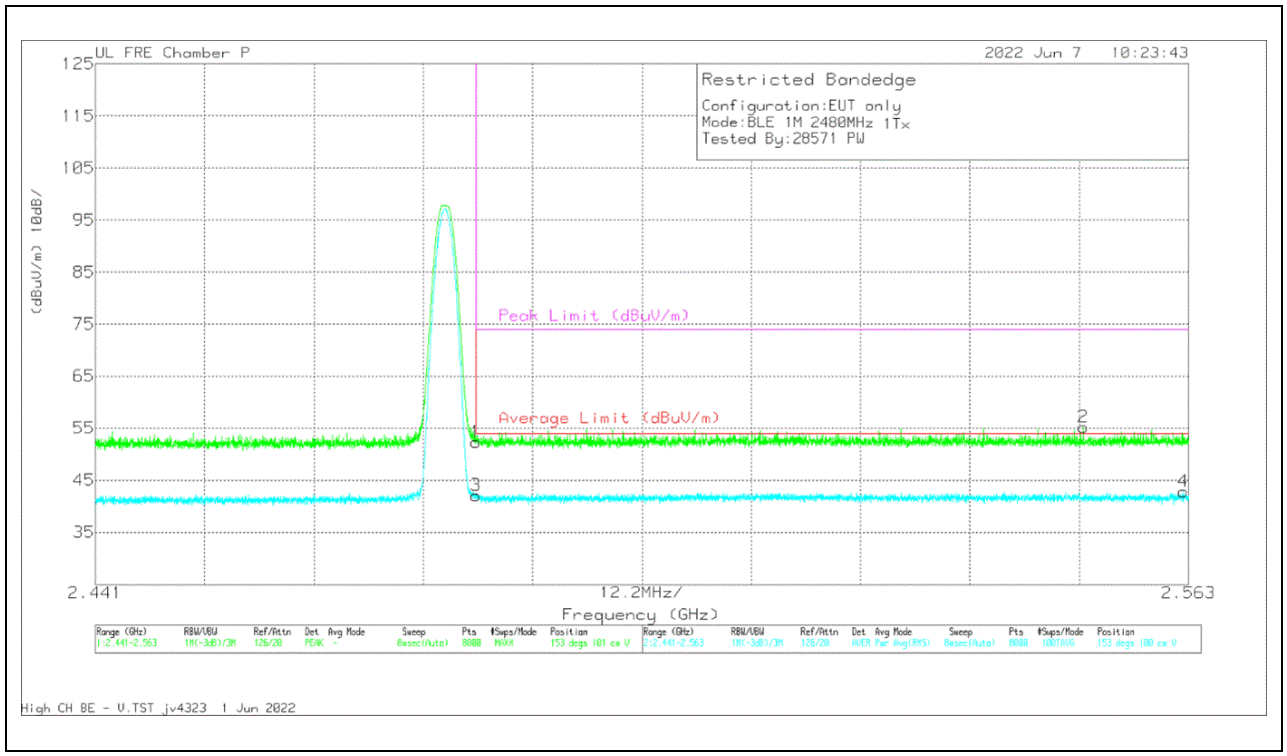
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF 41112 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	2.4835	53.68	Pk	32.4	-33.7	0	52.38	-	-	74	-21.62	153	101	V
3	2.4835	43.39	RMS	32.4	-33.7	0	42.09	54	-11.91	-	-	153	100	V
2	2.551257	56.11	Pk	32.6	-33.5	0	55.21	-	-	74	-18.79	153	101	V
4	2.562421	43.79	RMS	32.6	-33.5	0	42.89	54	-11.11	-	-	153	100	V

Pk - Peak detector
RMS - RMS detection

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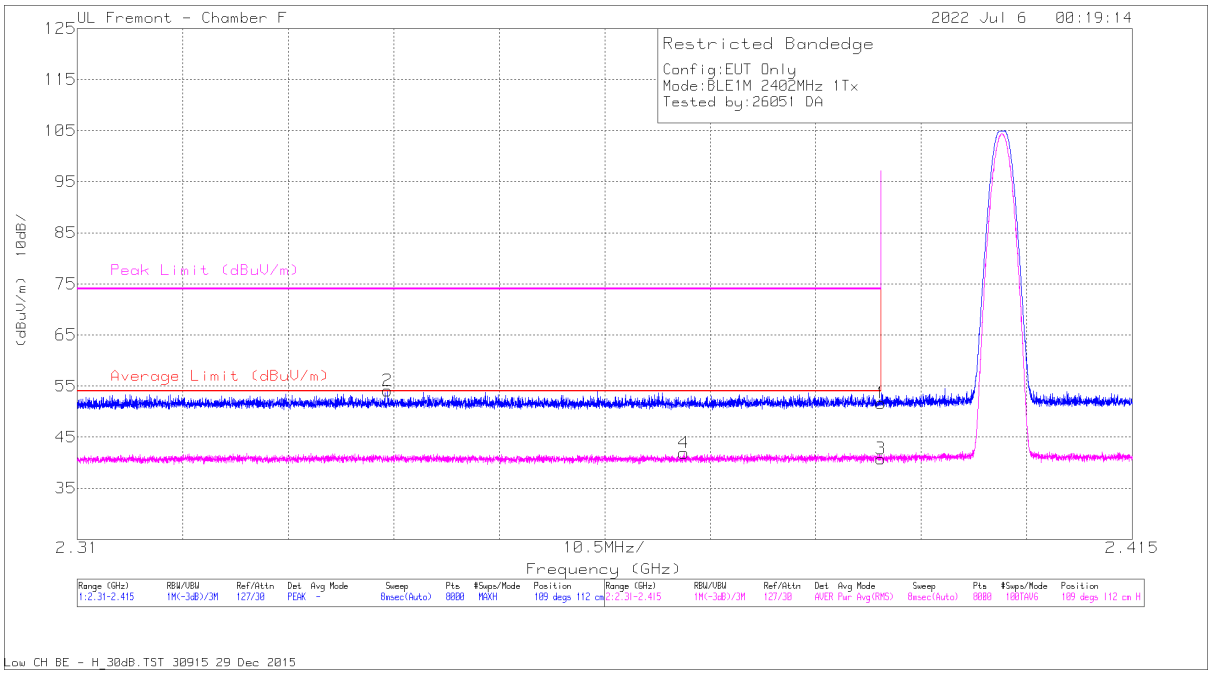
ANT 3

BANDEDGE (LOW CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	81887 ACF (dB)	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	58.95	Pk	32.1	-39.4	51.65	-	-	74	-22.35	109	112	H
2	* 2.340901	61.72	Pk	32	-39.6	54.12	-	-	74	-19.88	109	112	H
3	* 2.39	48.06	RMS	32.1	-39.4	40.76	54	-13.24	-	-	109	112	H
4	* 2.370371	49.42	RMS	32	-39.5	41.92	54	-12.08	-	-	109	112	H

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

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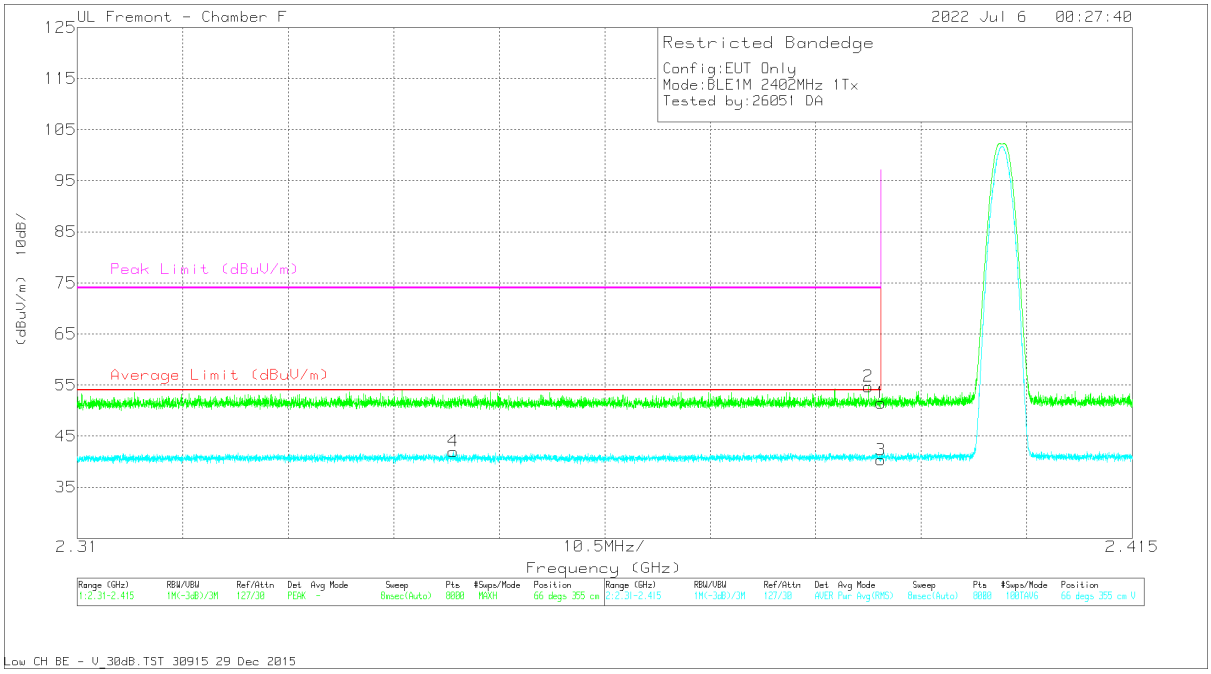
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	81887 ACF (dB)	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	58.83	Pk	32.1	-39.4	51.53	-	-	74	-22.47	66	355	V
2	* 2.388723	62.11	Pk	32.1	-39.5	54.71	-	-	74	-19.29	66	355	V
3	* 2.39	47.65	RMS	32.1	-39.4	40.35	54	-13.65	-	-	66	355	V
4	* 2.347425	49.42	RMS	32.1	-39.5	42.02	54	-11.98	-	-	66	355	V

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

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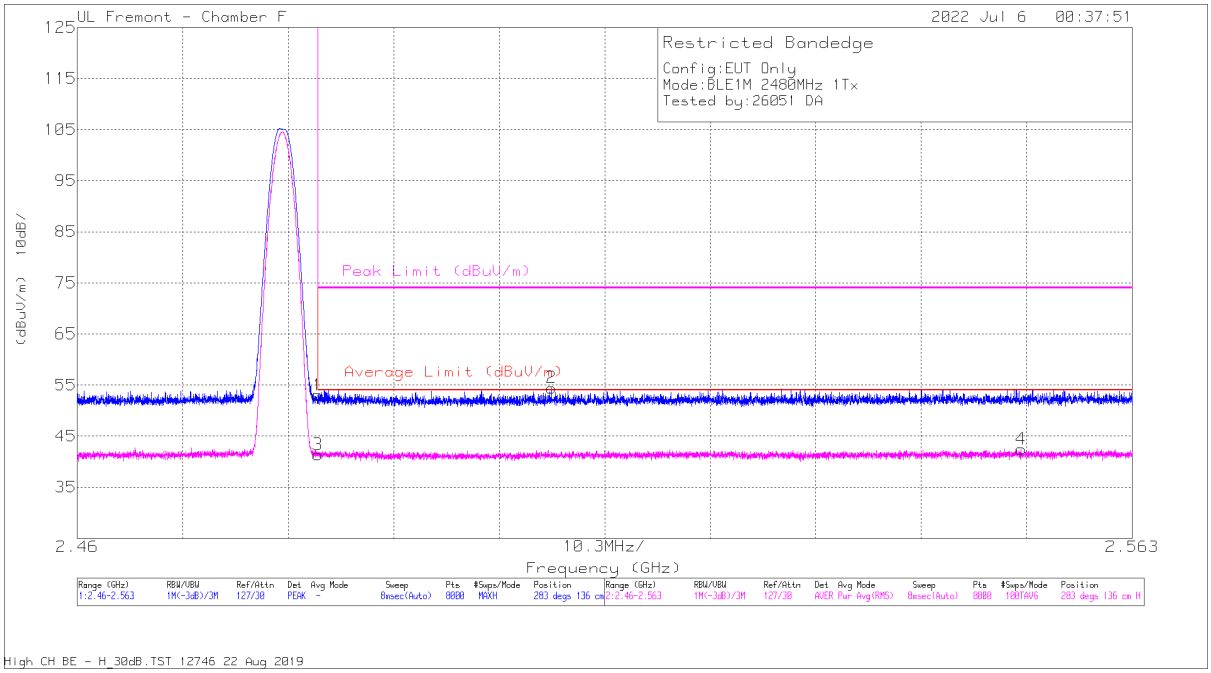
BANDEDGE (HIGH CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	81887 ACF (dB)	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	* 2.4835	59.82	Pk	32.3	-39.1	53.02	-	-	74	-20.98	283	136	H
2	2.506293	61.16	Pk	32.3	-39	54.46	-	-	74	-19.54	283	136	H
3	* 2.4835	48.16	RMS	32.3	-39.1	41.36	54	-12.64	-	-	283	136	H
4	2.552161	49.06	RMS	32.4	-39	42.46	54	-11.54	-	-	283	136	H

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

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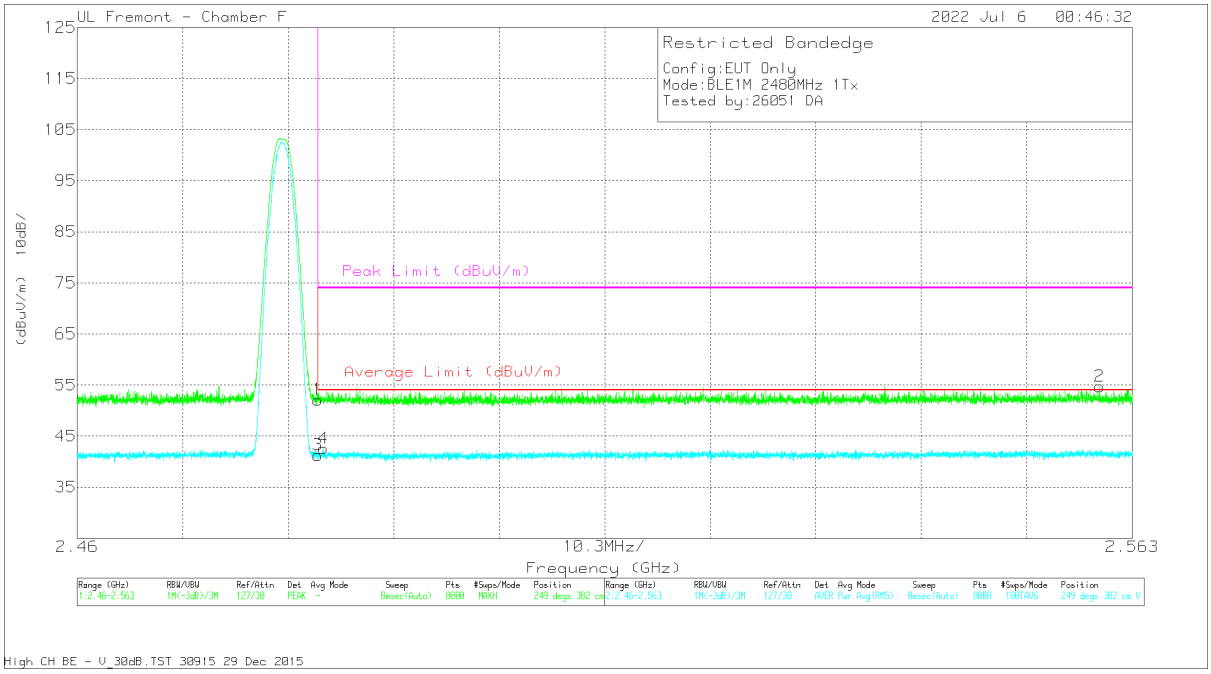
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	81887 ACF (dB)	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	* 2.4835	58.88	Pk	32.3	-39.1	52.08	-	-	74	-21.92	249	382	V
2	2.559784	61.32	Pk	32.4	-39	54.72	-	-	74	-19.28	249	382	V
3	* 2.4835	48.09	RMS	32.3	-39.1	41.29	54	-12.71	-	-	249	382	V
4	* 2.484016	49.35	RMS	32.3	-39.1	42.55	54	-11.45	-	-	249	382	V

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

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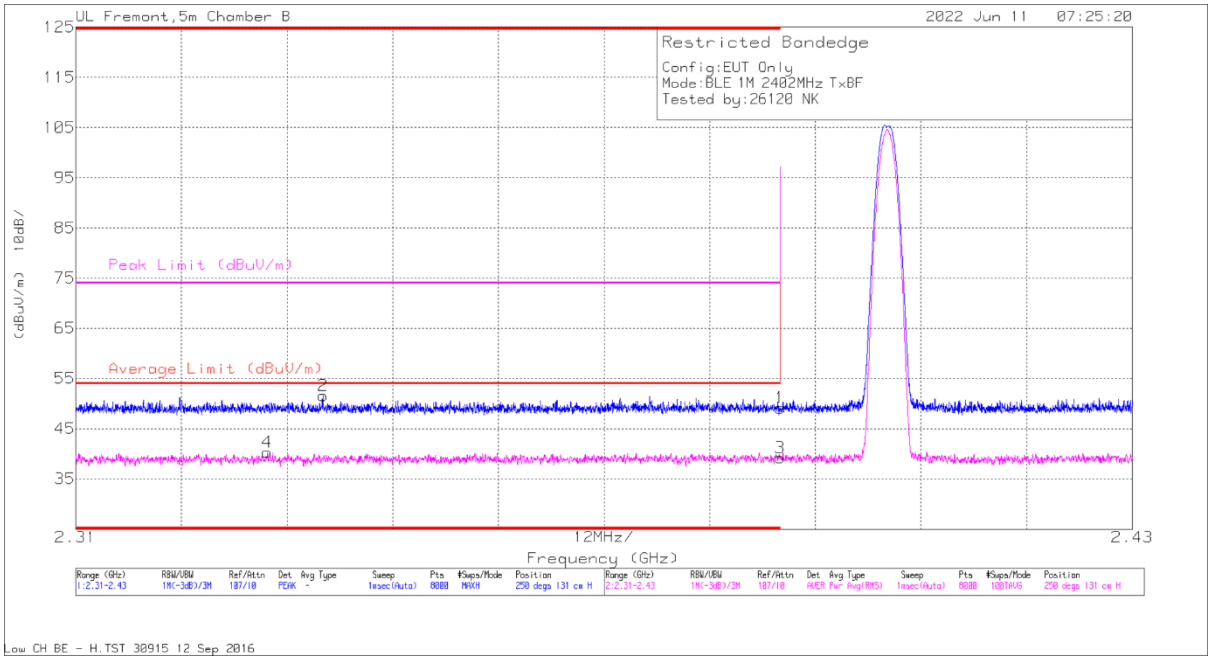
10.2.6. LOW POWER BLE TXBF (1Mbps)

BANDEDGE (LOW CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	81886 ACF (dB)	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	41.76	Pk	32.2	-24.8	49.16	-	-	74	-24.84	250	131	H
2	* 2.338084	44.32	Pk	32.2	-24.9	51.62	-	-	74	-22.38	250	131	H
3	* 2.39	31.78	RMS	32.2	-24.8	39.18	54	-14.82	-	-	250	131	H
4	* 2.331753	33.01	RMS	32.2	-24.9	40.31	54	-13.69	-	-	250	131	H

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

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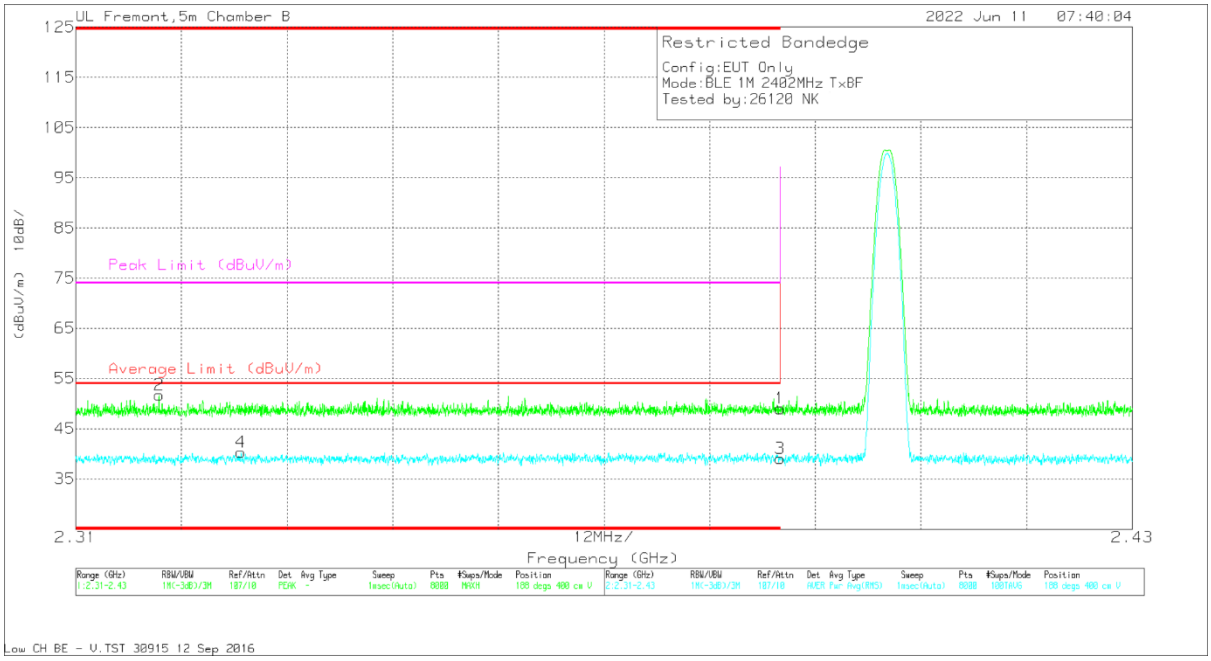
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	81886 ACF (dB)	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
2	* 2.319451	44.39	Pk	32.2	-24.9	51.69	-	-	74	-22.31	188	400	V
4	* 2.328753	33.07	RMS	32.2	-24.9	40.37	54	-13.63	-	-	188	400	V
1	* 2.39	41.64	Pk	32.2	-24.8	49.04	-	-	74	-24.96	188	400	V
3	* 2.39	31.72	RMS	32.2	-24.8	39.12	54	-14.88	-	-	188	400	V

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

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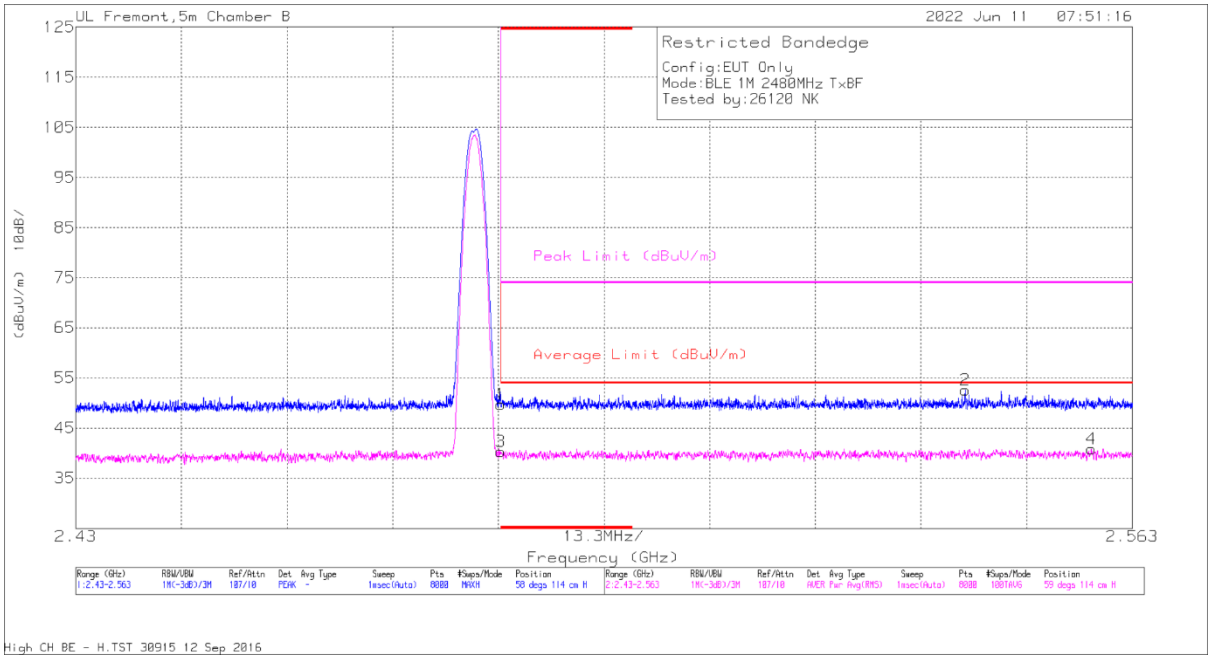
BANDEDGE (HIGH CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	81886 ACF (dB)	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	* 2.4835	41.96	Pk	32.6	-24.8	49.76	-	-	74	-24.24	58	114	H
3	* 2.4835	32.52	RMS	32.6	-24.8	40.32	54	-13.68	-	-	59	114	H
2	2.541966	44.46	Pk	32.8	-24.7	52.56	-	-	74	-21.44	58	114	H
4	2.557845	32.78	RMS	32.8	-24.7	40.88	54	-13.12	-	-	59	114	H

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

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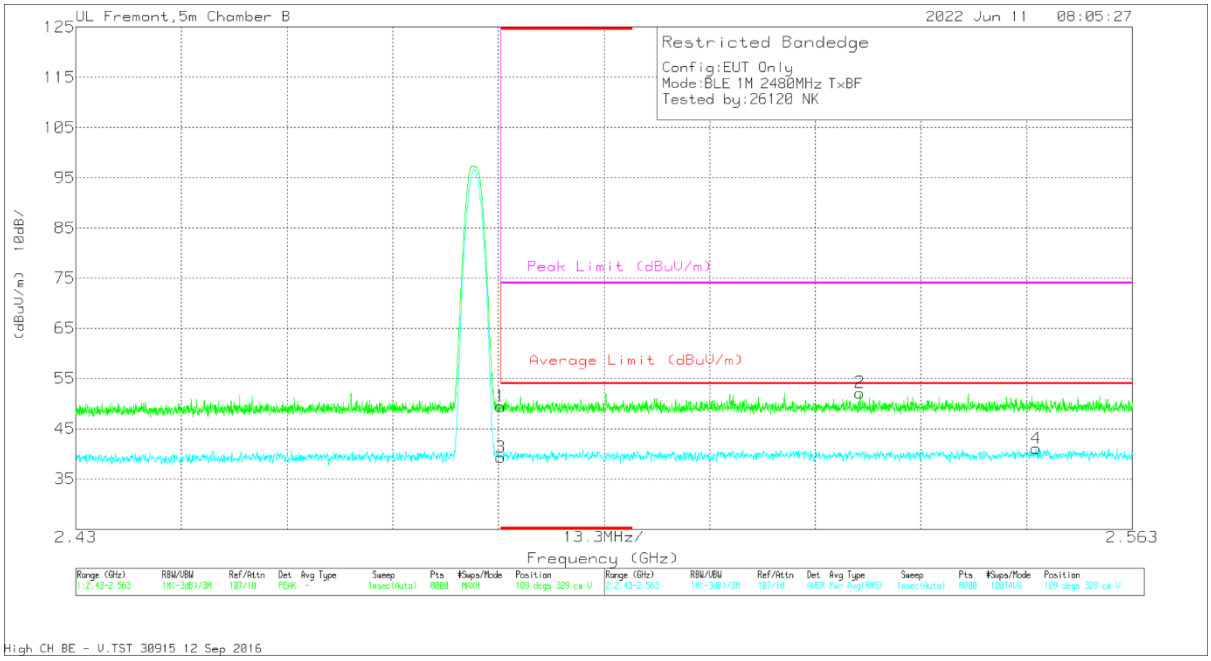
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	81886 ACF (dB)	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	* 2.4835	41.65	Pk	32.6	-24.8	49.45	-	-	74	-24.55	109	329	V
3	* 2.4835	31.55	RMS	32.6	-24.8	39.35	54	-14.65	-	-	109	329	V
2	2.528731	44.06	Pk	32.8	-24.7	52.16	-	-	74	-21.84	109	329	V
4	2.550895	32.95	RMS	32.8	-24.7	41.05	54	-12.95	-	-	109	329	V

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

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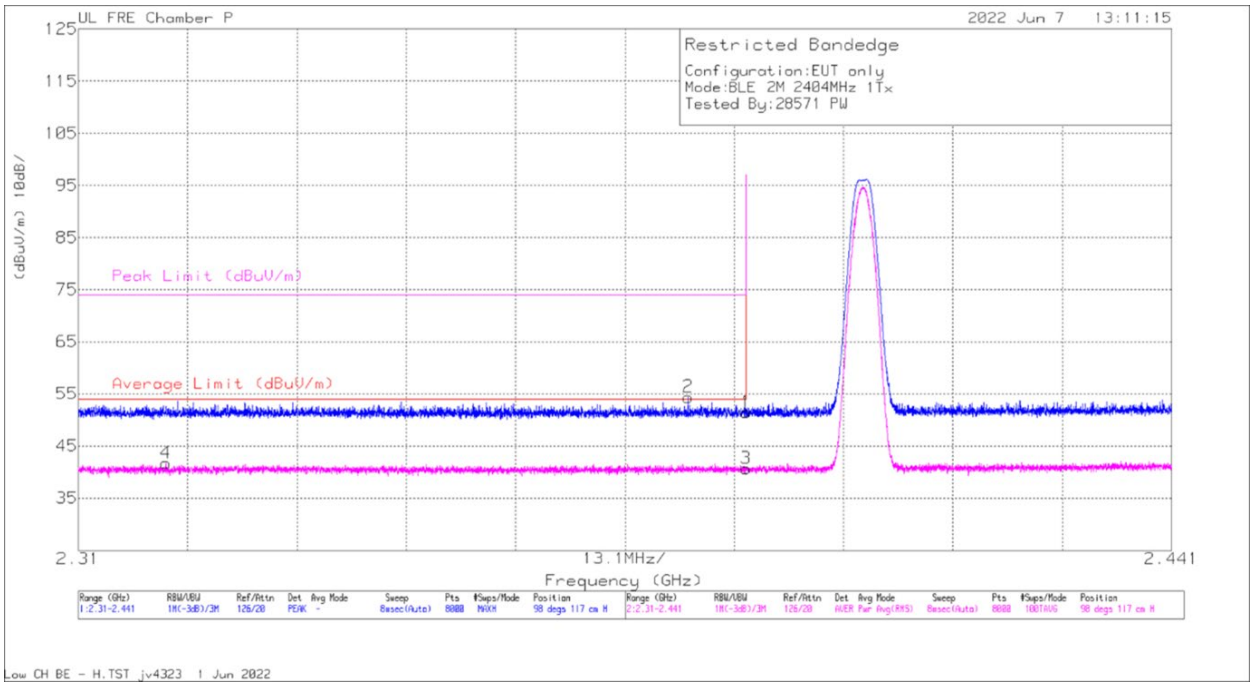
10.2.7. LOW POWER BLE (2Mbps)

ANT 4

BANDEDGE (LOW CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF 41112 (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	2.320465	43.91	RMS	31.6	-33.8	41.71	54	-12.29	-	-	98	117	H
2	2.383058	56.51	Pk	31.7	-33.8	54.41	-	-	74	-19.59	98	117	H
1	2.39	53.62	Pk	31.7	-33.8	51.52	-	-	74	-22.48	98	117	H
3	2.39	42.85	RMS	31.7	-33.8	40.75	54	-13.25	-	-	98	117	H

Pk - Peak detector
RMS - RMS detection

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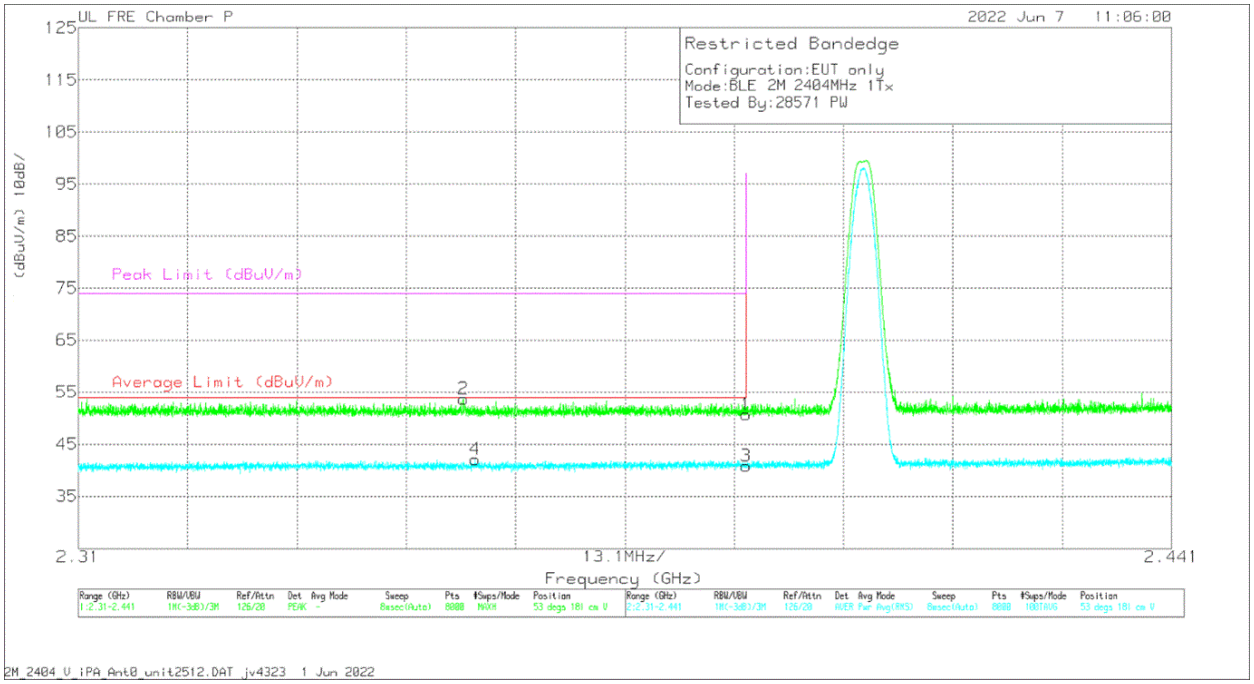
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF 41112 (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
2	2.356118	55.91	Pk	31.6	-33.8	53.71	-	-	74	-20.29	53	181	V
4	2.357542	44.32	RMS	31.6	-33.8	42.12	54	-11.88	-	-	53	181	V
1	2.39	52.86	Pk	31.7	-33.8	50.76	-	-	74	-23.24	53	181	V
3	2.39	42.92	RMS	31.7	-33.8	40.82	54	-13.18	-	-	53	181	V

Pk - Peak detector
RMS - RMS detection

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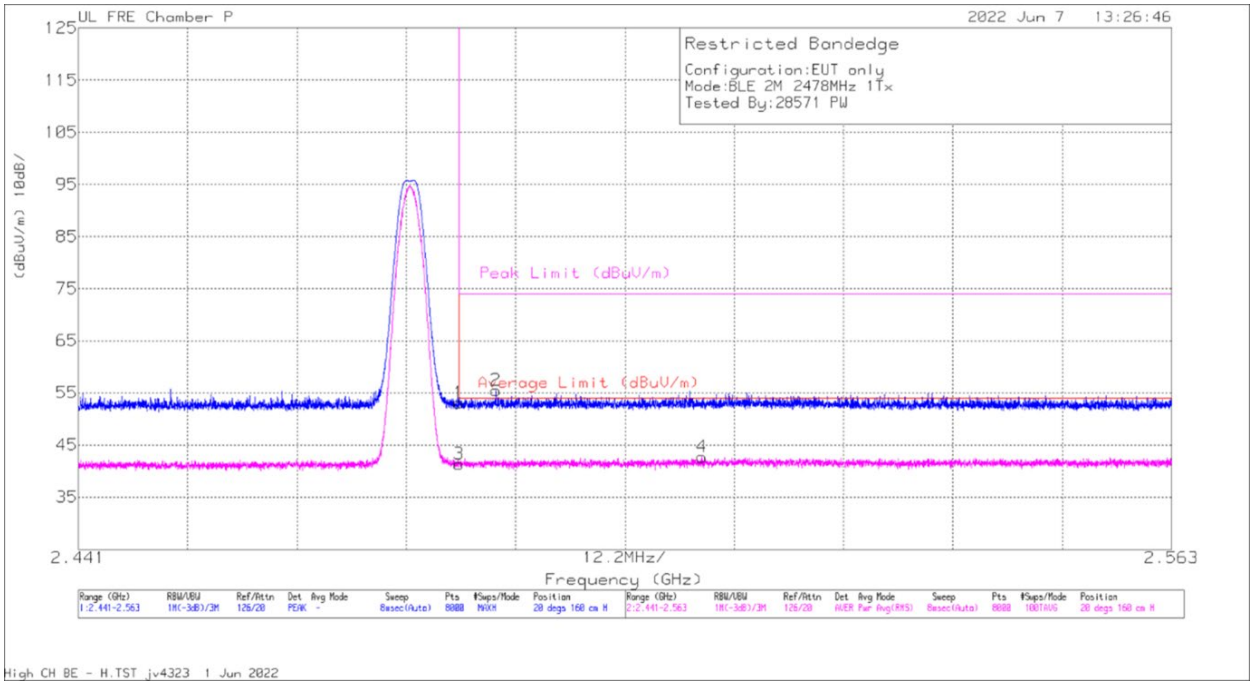
BANDEDGE (HIGH CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF 41112 (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	2.4835	54.4	Pk	32.4	-33.7	53.1	-	-	74	-20.9	20	160	H
3	2.4835	42.68	RMS	32.4	-33.7	41.38	54	-12.62	-	-	20	160	H
2	2.487595	56.55	Pk	32.5	-33.6	55.45	-	-	74	-18.55	20	160	H
4	2.510595	43.63	RMS	32.6	-33.5	42.73	54	-11.27	-	-	20	160	H

Pk - Peak detector
RMS - RMS detection

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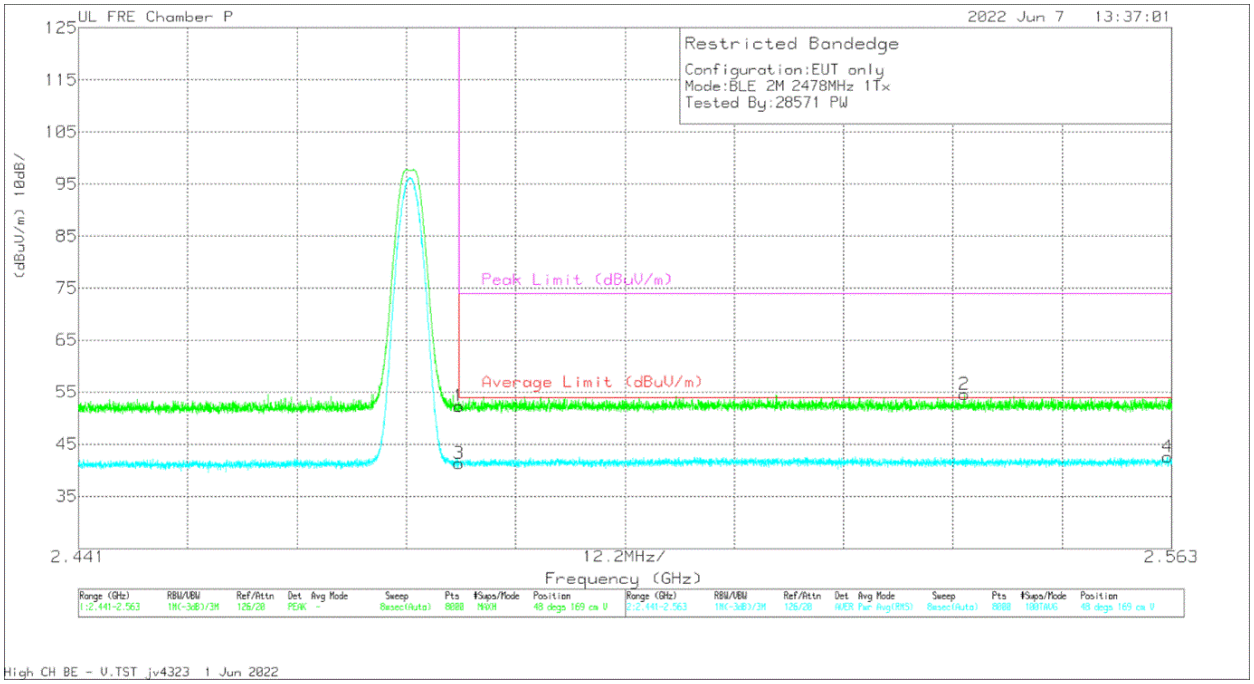
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF 41112 (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	2.4835	53.62	Pk	32.4	-33.7	52.32	-	-	74	-21.68	48	169	V
3	2.4835	42.69	RMS	32.4	-33.7	41.39	54	-12.61	-	-	48	169	V
2	2.539848	55.46	Pk	32.6	-33.5	54.56	-	-	74	-19.44	48	169	V
4	2.562528	43.48	RMS	32.6	-33.5	42.58	54	-11.42	-	-	48	169	V

Pk - Peak detector
RMS - RMS detection

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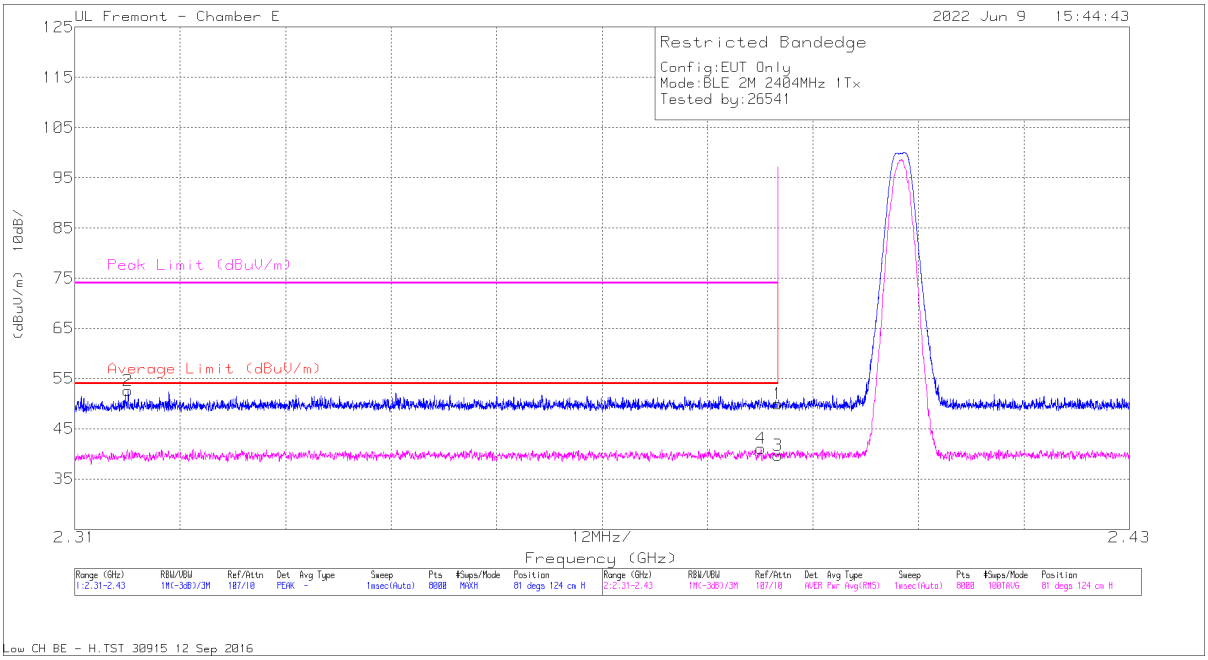
ANT 3

BANDEDGE (LOW CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	200897 ACF (dB/m)	Amp/Cbl/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	43.84	Pk	32	-25.9	49.94	-	-	74	-24.06	81	124	H
2	* 2.316061	46.79	Pk	31.8	-26	52.59	-	-	74	-21.41	81	124	H
3	* 2.39	33.58	RMS	32	-25.9	39.68	54	-14.32	-	-	81	124	H
4	* 2.388085	34.98	RMS	32	-25.9	41.08	54	-12.92	-	-	81	124	H

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

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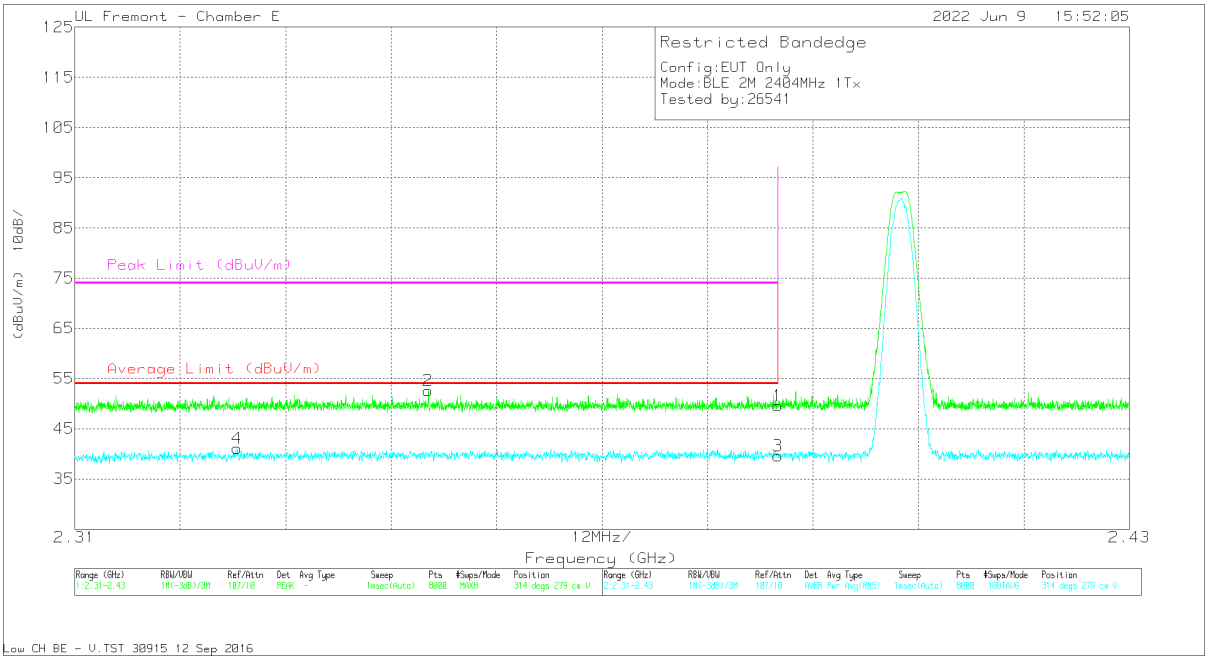
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	200897 ACF (dB/m)	Amp/Cbl/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	43.49	Pk	32	-25.9	49.59	-	-	74	-24.41	314	279	V
2	* 2.350235	46.53	Pk	32	-25.9	52.63	-	-	74	-21.37	314	279	V
3	* 2.39	33.45	RMS	32	-25.9	39.55	54	-14.45	-	-	314	279	V
4	* 2.328482	35.2	RMS	31.9	-26	41.1	54	-12.9	-	-	314	279	V

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

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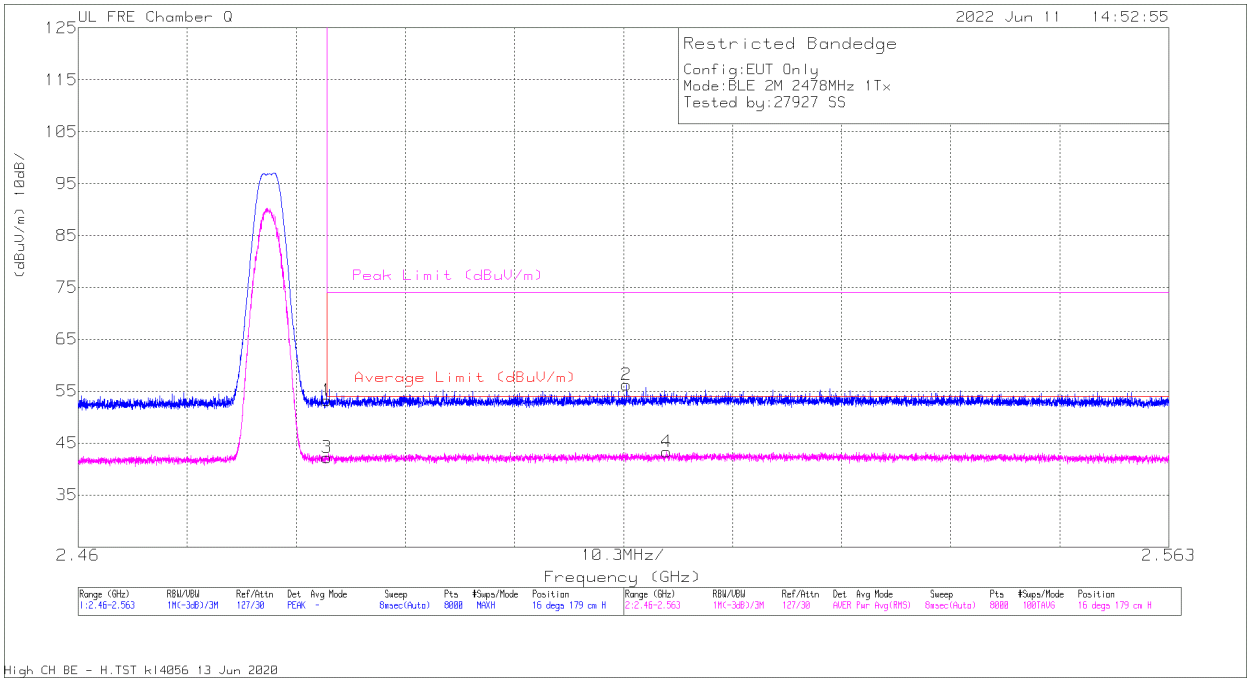
BANDEDGE (HIGH CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF 200895 (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	2.4835	54.87	Pk	32.6	-34.3	53.17	-	-	74	-20.83	16	179	H
3	2.4835	43.87	RMS	32.6	-34.3	42.17	54	-11.83	-	-	16	179	H
2	2.511791	57.58	Pk	32.8	-34.2	56.18	-	-	74	-17.82	16	179	H
4	2.51559	44.6	RMS	32.8	-34.1	43.3	54	-10.7	-	-	16	179	H

Pk - Peak detector
RMS - RMS detection

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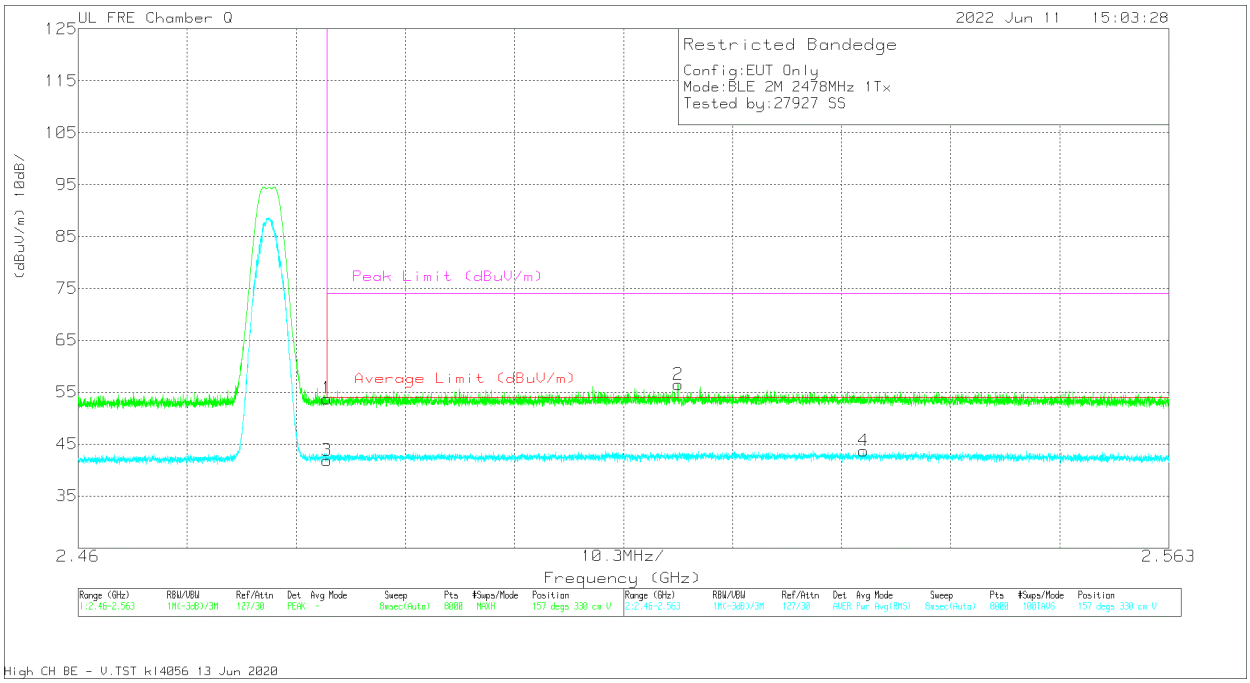
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF 200895 (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	2.4835	55.49	Pk	32.6	-34.3	53.79	-	-	74	-20.21	157	330	V
3	2.4835	43.54	RMS	32.6	-34.3	41.84	54	-12.16	-	-	157	330	V
2	2.516646	57.83	Pk	32.8	-34.1	56.53	-	-	74	-17.47	157	330	V
4	2.534184	45.24	RMS	32.7	-34.2	43.74	54	-10.26	-	-	157	330	V

Pk - Peak detector
RMS - RMS detection

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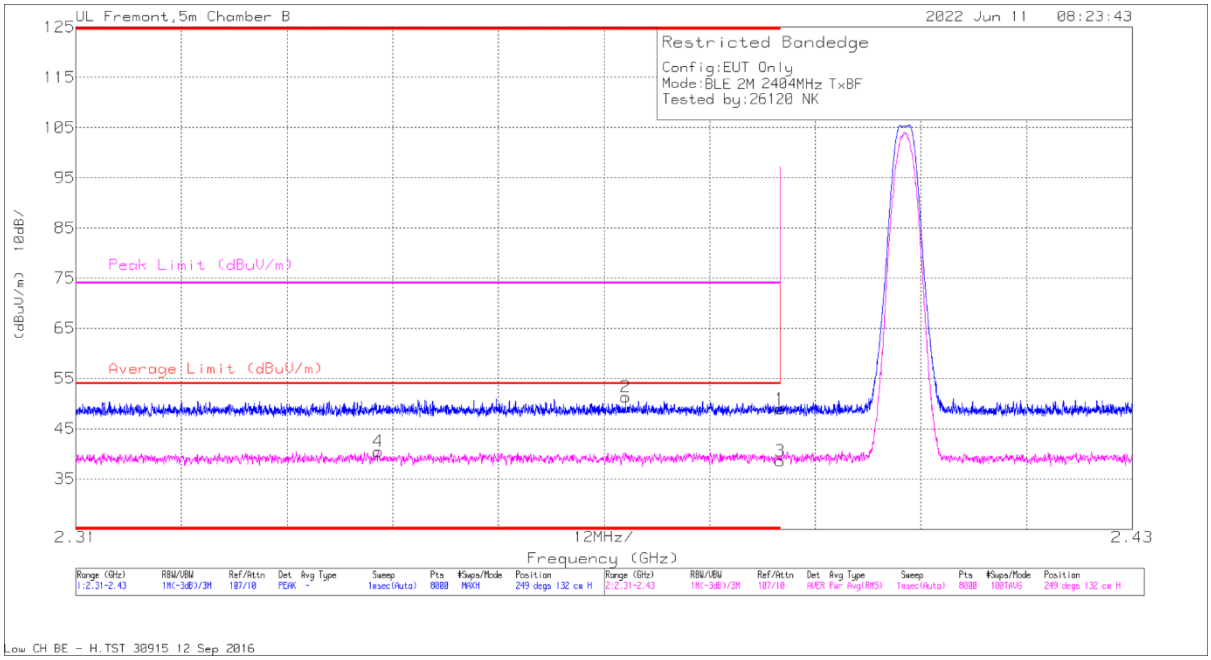
10.2.8. LOW POWER BLE TXBF (2Mbps)

BANDEDGE (LOW CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	81886 ACF (dB)	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	41.52	Pk	32.2	-24.8	48.92	-	-	74	-25.08	249	132	H
2	* 2.372453	44	Pk	32.2	-24.8	51.4	-	-	74	-22.6	249	132	H
3	* 2.39	31.23	RMS	32.2	-24.8	38.63	54	-15.37	-	-	249	132	H
4	* 2.344355	33.12	RMS	32.2	-24.8	40.52	54	-13.48	-	-	249	132	H

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

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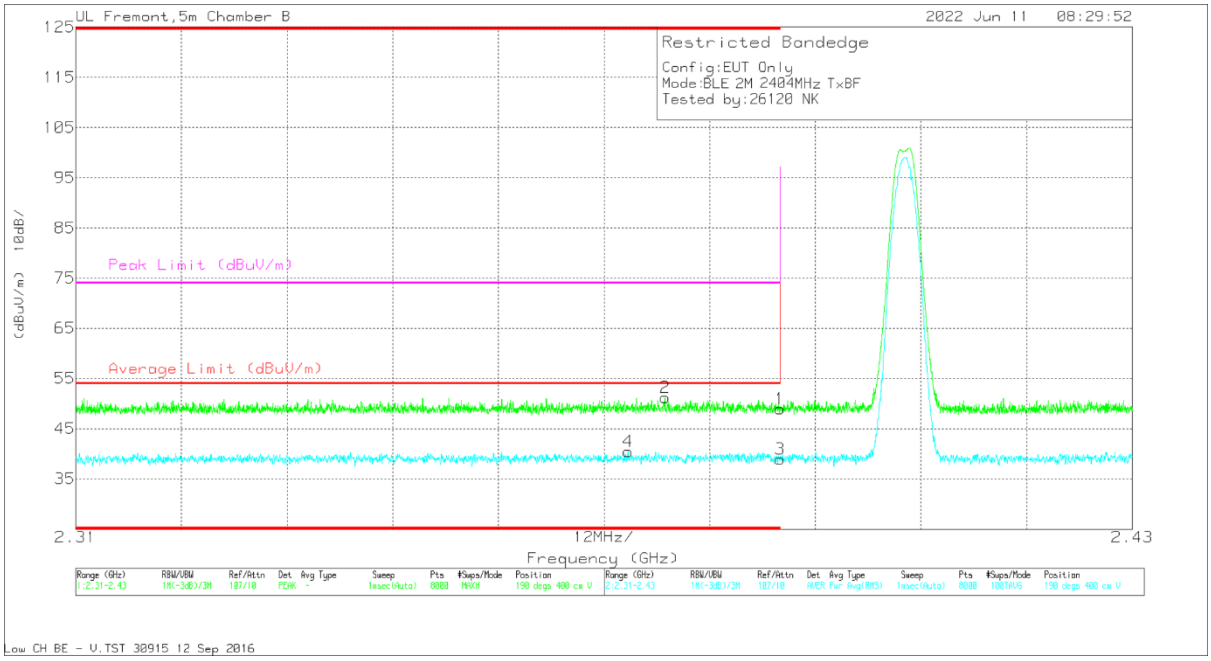
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	81886 ACF (dB)	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	41.55	Pk	32.2	-24.8	48.95	-	-	74	-25.05	190	400	V
2	* 2.376924	43.77	Pk	32.2	-24.8	51.17	-	-	74	-22.83	190	400	V
3	* 2.39	31.51	RMS	32.2	-24.8	38.91	54	-15.09	-	-	190	400	V
4	* 2.372708	33.02	RMS	32.2	-24.8	40.42	54	-13.58	-	-	190	400	V

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

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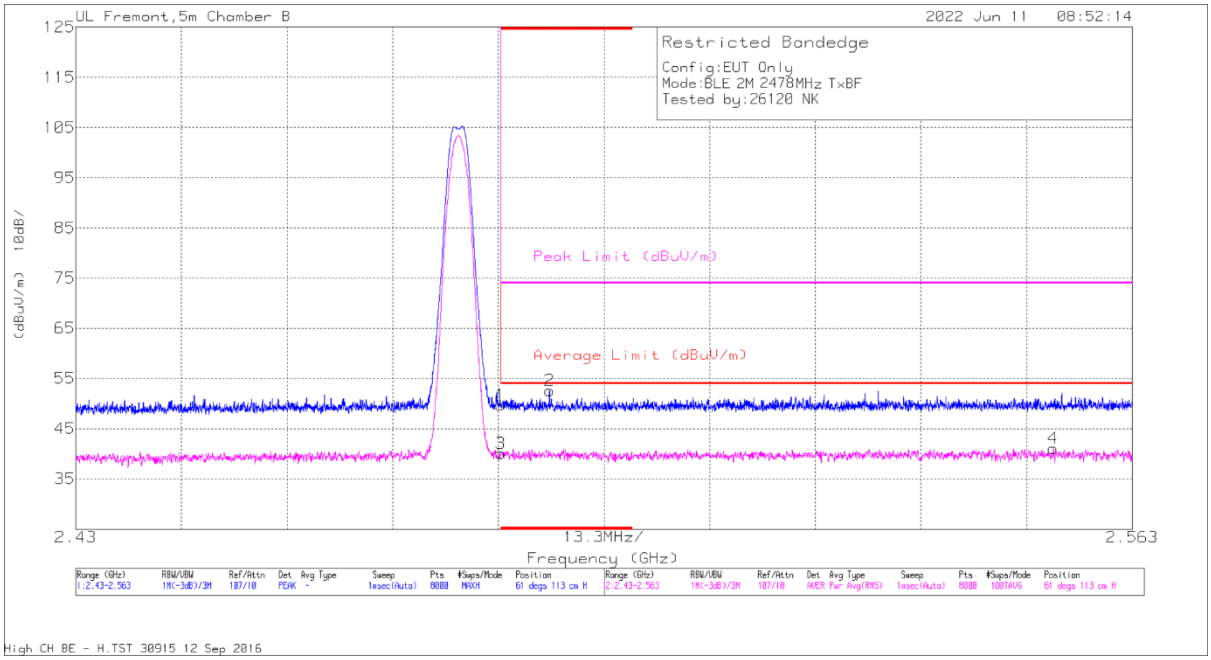
BANDEDGE (HIGH CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	81886 ACF (dB)	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	* 2.4835	41.94	Pk	32.6	-24.8	49.74	-	-	74	-24.26	61	113	H
2	* 2.489624	44.66	Pk	32.7	-24.8	52.56	-	-	74	-21.44	61	113	H
3	* 2.4835	32.31	RMS	32.6	-24.8	40.11	54	-13.89	-	-	61	113	H
4	2.553056	32.94	RMS	32.8	-24.7	41.04	54	-12.96	-	-	61	113	H

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

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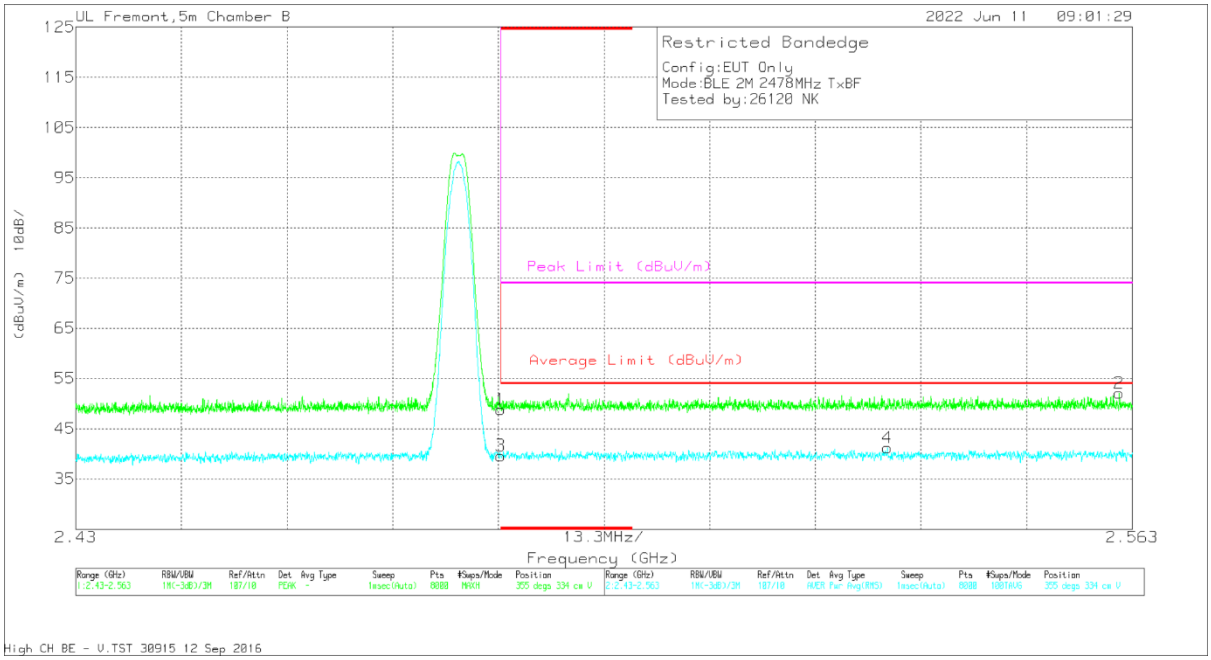
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	81886 ACF (dB)	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	* 2.4835	41.07	Pk	32.6	-24.8	48.87	-	-	74	-25.13	355	334	V
3	* 2.4835	31.85	RMS	32.6	-24.8	39.65	54	-14.35	-	-	355	334	V
4	2.532173	33.06	RMS	32.8	-24.7	41.16	54	-12.84	-	-	355	334	V
2	2.561337	43.98	Pk	32.8	-24.7	52.08	-	-	74	-21.92	355	334	V

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

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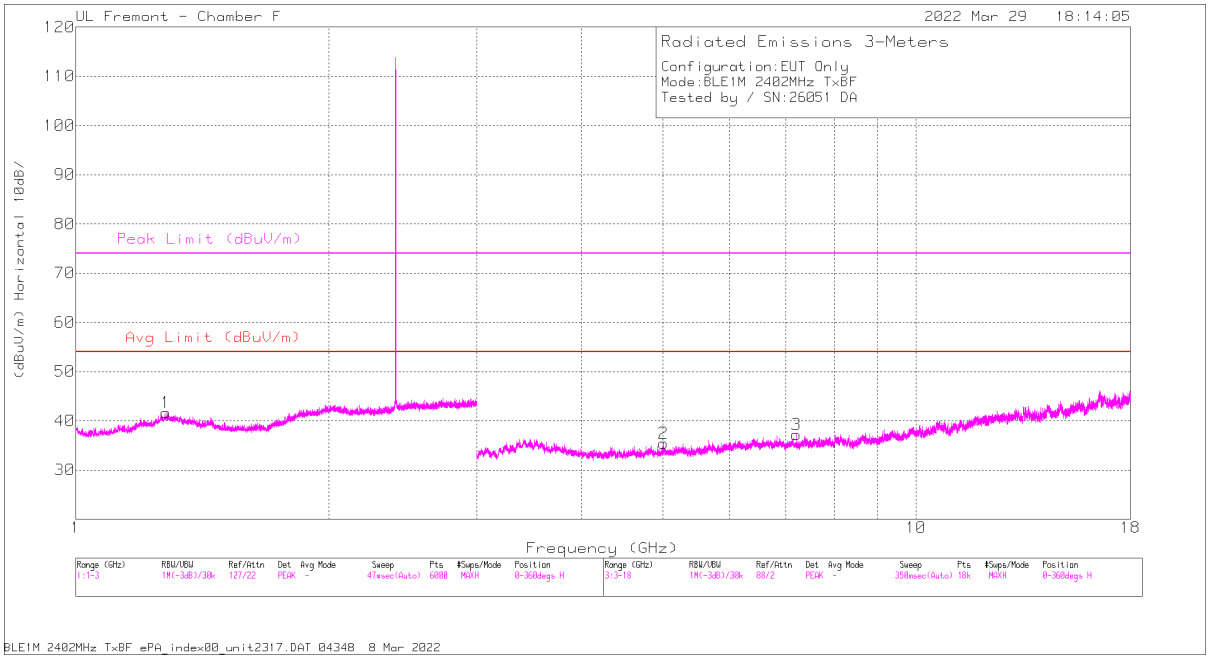
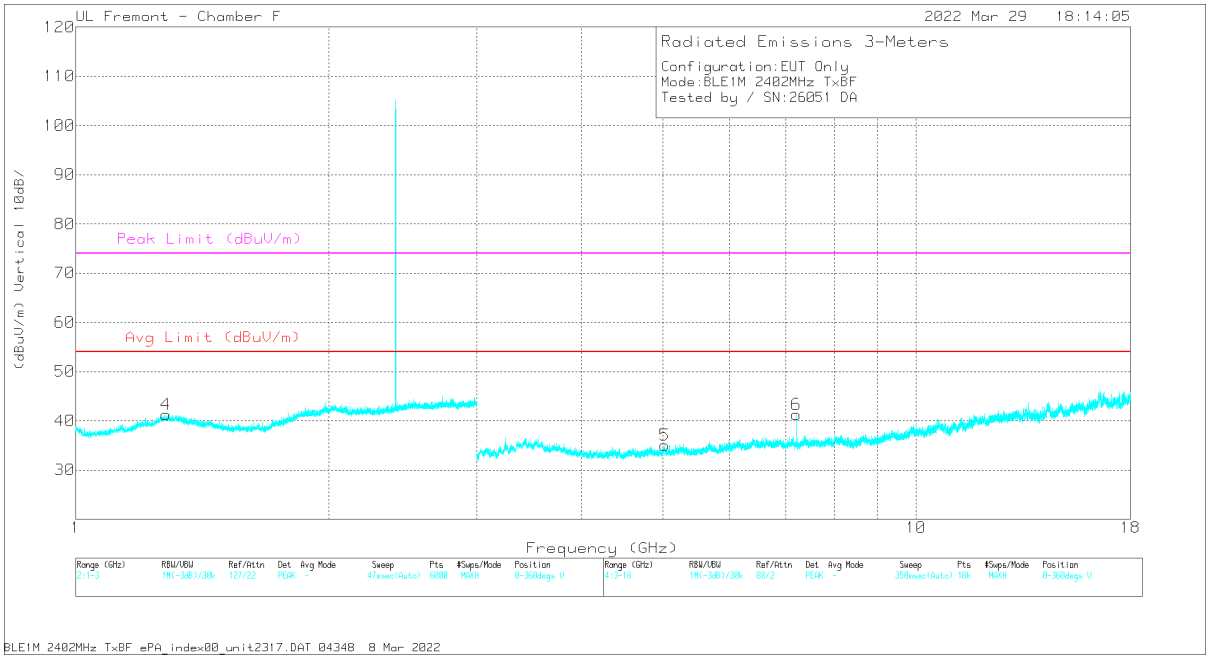
10.2.9. HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL RESULTS



HORIZONTAL



VERTICAL

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RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T120 (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	* 1.279151	59.57	PK2	30.4	-39.1	50.87	-	-	74	-23.13	28	187	H
	* 1.280514	48.39	MAv1	30.4	-39.1	39.69	54	-14.31	-	-	28	187	H
4	* 1.27799	60.49	PK2	30.3	-39.1	51.69	-	-	74	-22.31	71	179	V
	* 1.279651	48.14	MAv1	30.4	-39.1	39.44	54	-14.56	-	-	71	179	V
3	* 5.012025	57.53	PK2	34.2	-47.2	44.53	-	-	74	-29.47	85	115	H
	* 5.01096	45.85	MAv1	34.2	-47	33.05	54	-20.95	-	-	85	115	H
3	7.205035	55.49	PK2	35.5	-45.4	45.59	-	-	-	-	121	163	H
5	* 5.024147	57.71	PK2	34.1	-47.1	44.71	-	-	74	-29.29	166	246	V
	* 5.024154	45.78	MAv1	34.1	-47.1	32.78	54	-21.22	-	-	166	246	V
6	7.208127	55.84	PK2	35.5	-45.6	45.74	-	-	-	-	182	280	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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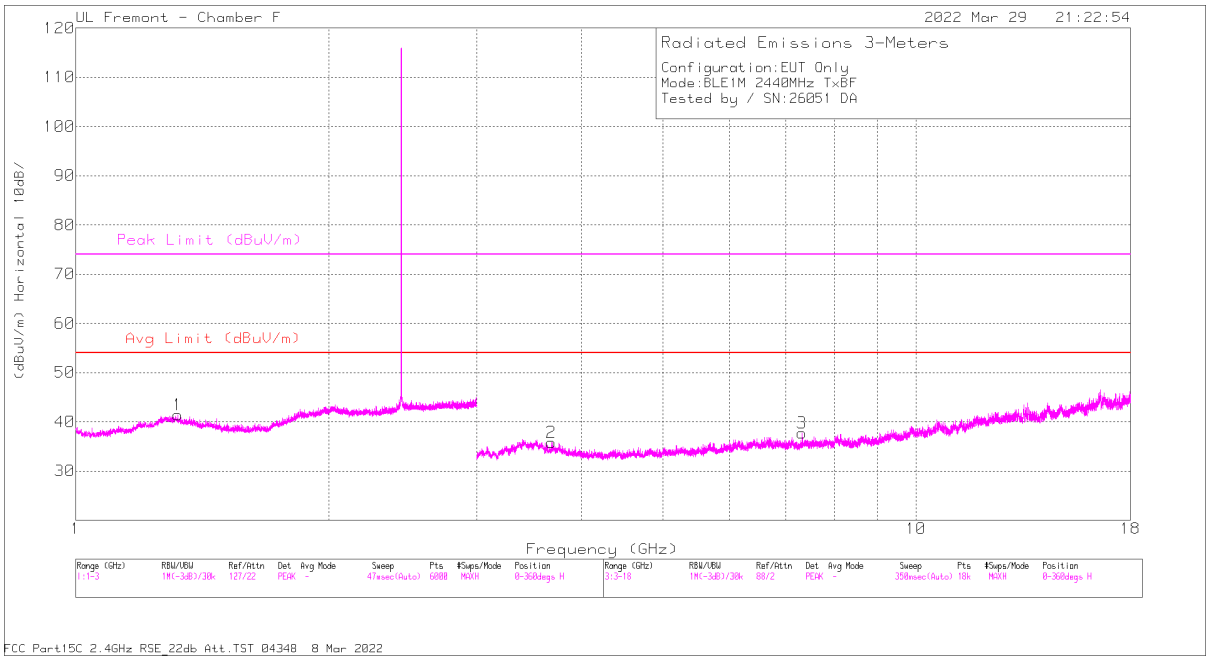
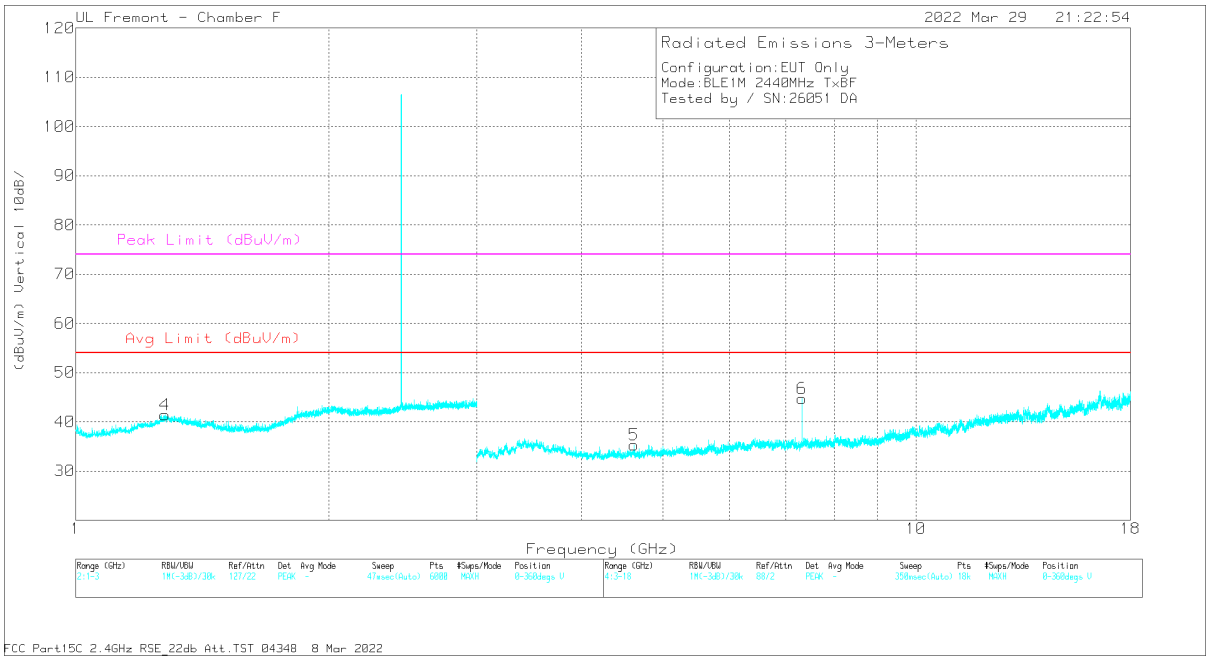
MID CHANNEL RESULTS



HORIZONTAL



VERTICAL

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RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T120 (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	* 1.320987	60.16	PK2	29.9	-39	51.06	-	-	74	-22.94	37	189	H
	* 1.322151	48.28	MAv1	29.8	-39	39.08	54	-14.92	-	-	37	189	H
4	* 1.277008	60.31	PK2	30.3	-39.2	51.41	-	-	74	-22.59	73	142	V
	* 1.278621	48.2	MAv1	30.4	-39.1	39.5	54	-14.5	-	-	73	142	V
2	* 3.680192	56.31	PK2	34.8	-46.2	44.91	-	-	74	-29.09	95	115	H
	* 3.680046	44.79	MAv1	34.8	-46.2	33.39	54	-20.61	-	-	95	115	H
3	* 7.319331	57.91	PK2	35.7	-45	48.61	-	-	74	-25.39	19	109	H
	* 7.319507	47.68	MAv1	35.7	-45.1	38.28	54	-15.72	-	-	19	109	H
5	* 4.621904	58.11	PK2	34.2	-47.4	44.91	-	-	74	-29.09	30	166	V
	* 4.621485	45.76	MAv1	34.2	-47.5	32.46	54	-21.54	-	-	30	166	V
6	* 7.320658	58.72	PK2	35.7	-45.2	49.22	-	-	74	-24.78	34	101	V
	* 7.319483	49.5	MAv1	35.7	-45.1	40.1	54	-13.9	-	-	34	101	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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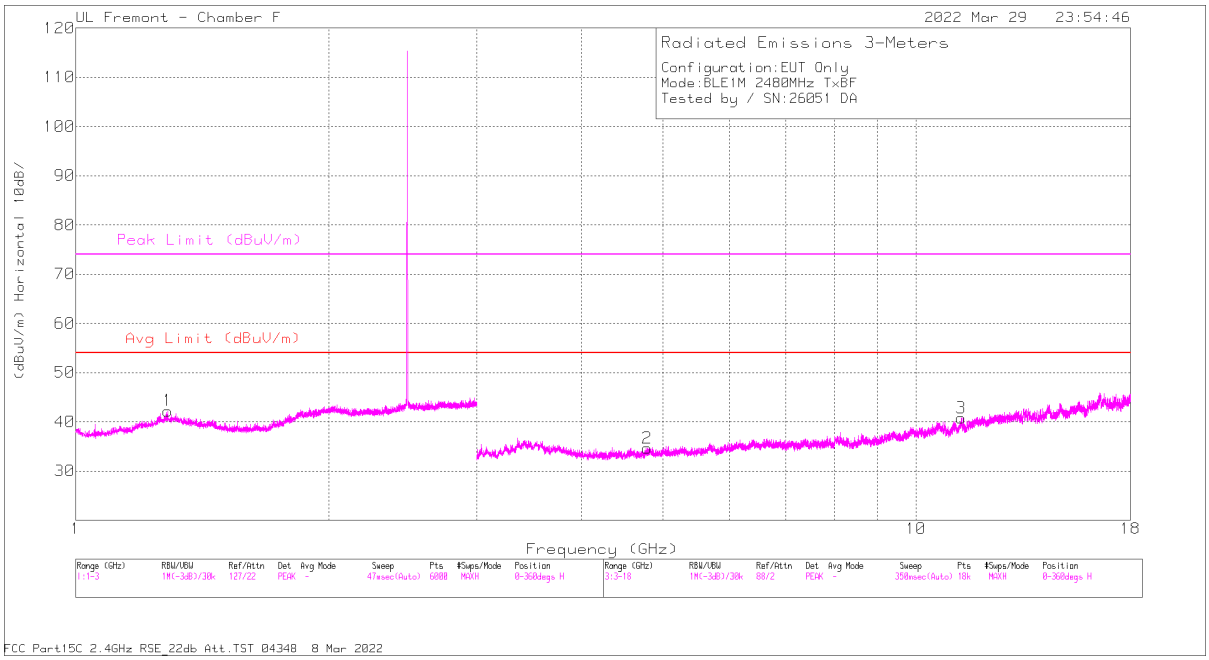
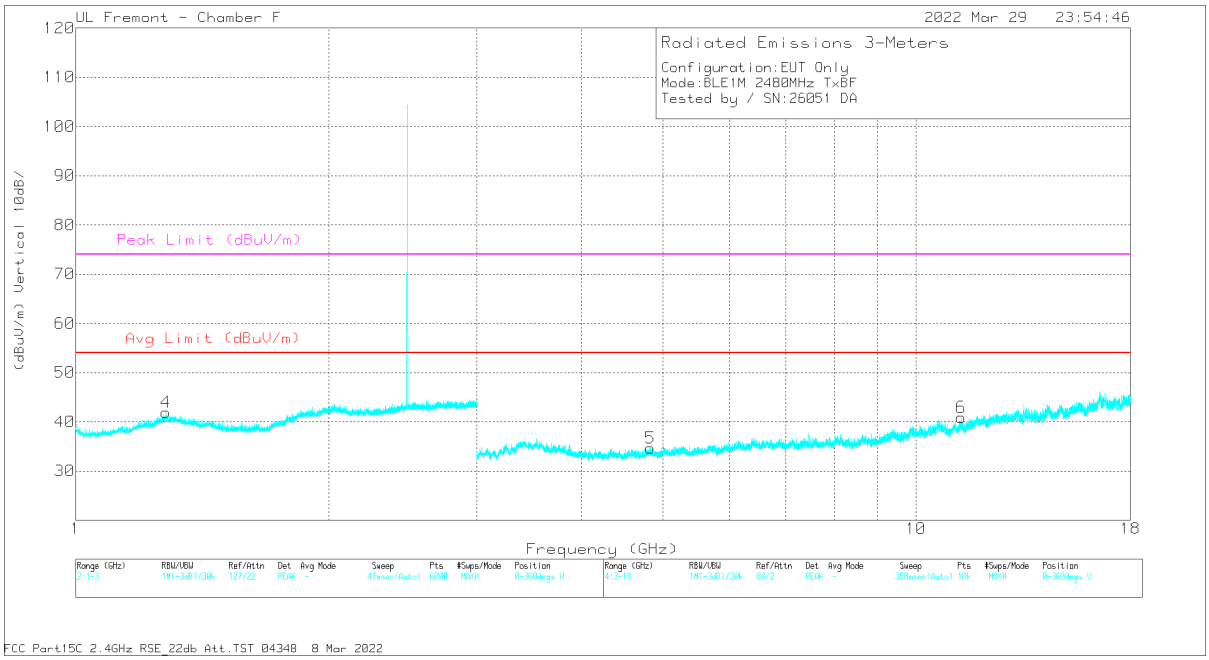
HIGH CHANNEL RESULTS



HORIZONTAL



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RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T120 (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	* 1.286671	60.11	PK2	30.4	-39.1	51.41	-	-	74	-22.59	8	112	H
	* 1.285394	47.96	MAv1	30.4	-39.1	39.26	54	-14.74	-	-	8	112	H
4	* 1.279247	60.28	PK2	30.4	-39.1	51.58	-	-	74	-22.42	29	126	V
	* 1.278095	48.17	MAv1	30.3	-39.1	39.37	54	-14.63	-	-	29	126	V
2	* 4.786003	58.13	PK2	34.1	-47.6	44.63	-	-	74	-29.37	57	164	H
	* 4.785749	45.98	MAv1	34.1	-47.6	32.48	54	-21.52	-	-	57	164	H
3	* 11.328959	56.12	PK2	38.2	-44.1	50.22	-	-	74	-23.78	131	108	H
	* 11.32993	44.76	MAv1	38.2	-43.9	39.06	54	-14.94	-	-	131	108	H
5	* 4.828016	58.34	PK2	34.2	-47.3	45.24	-	-	74	-28.76	157	186	V
	* 4.825873	45.98	MAv1	34.2	-47.2	32.98	54	-21.02	-	-	157	186	V
6	* 11.318543	56.29	PK2	38.1	-44.2	50.19	-	-	74	-23.81	201	226	V
	* 11.31996	44.73	MAv1	38.1	-44.1	38.73	54	-15.27	-	-	201	226	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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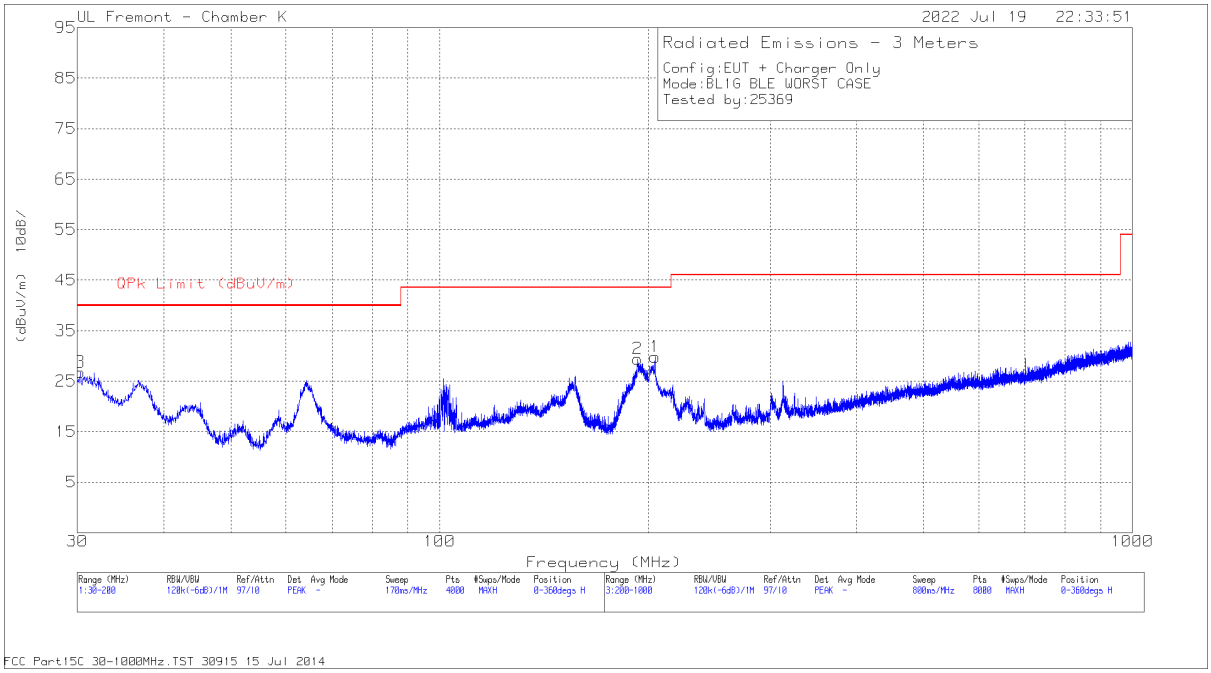
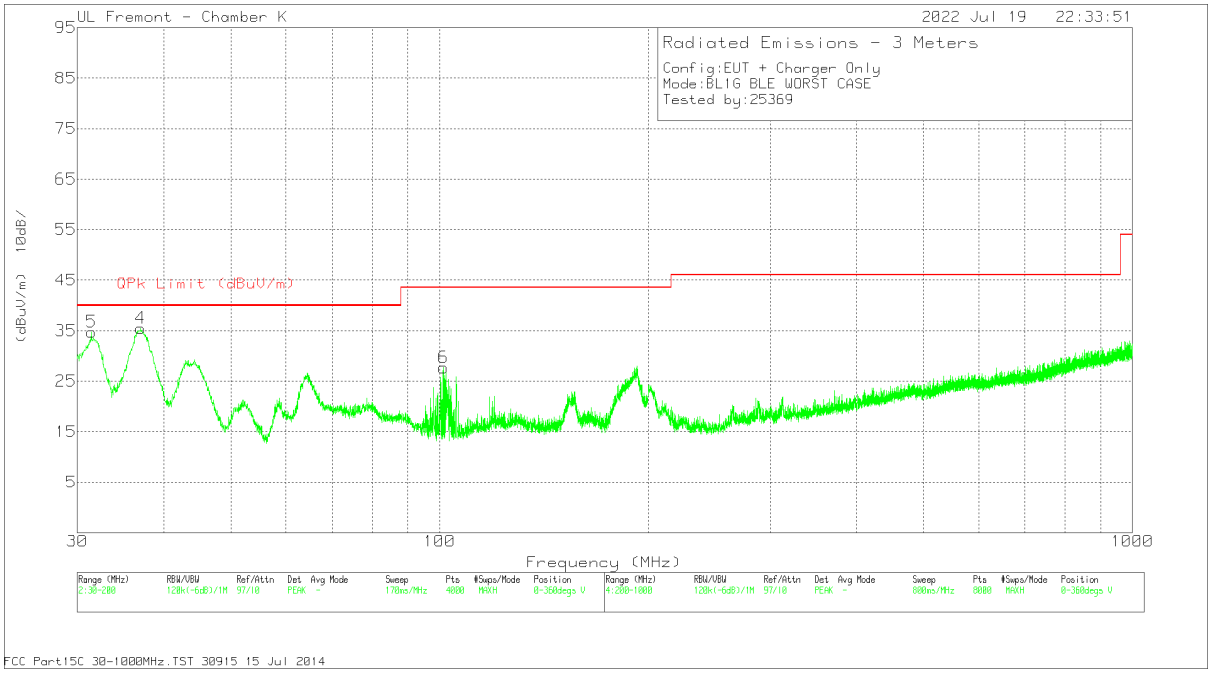
10.3. WORST CASE BELOW 1 GHZ

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



HORIZONTAL



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DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	82258 ACF (dB)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	193.157	41.73	Pk	18	-30.3	29.43	43.52	-14.09	0-360	197	H
3	30.2976	30.58	Pk	27.7	-31.5	26.78	40	-13.22	0-360	99	H
4	37.0568	44.49	Pk	22.5	-31.5	35.49	40	-4.51	0-360	97	V
	37.6762	39.88	Qp	22	-31.4	30.48	40	-9.52	117	134	V
5	31.4454	39.45	Pk	26.8	-31.5	34.75	40	-5.25	0-360	97	V
	31.2408	31.25	Qp	26.9	-31.5	26.65	40	-13.35	355	114	V
6	101.333	41.6	Pk	17	-30.9	27.7	43.52	-15.82	0-360	97	V
1	204.701	42.51	Pk	17.6	-30.3	29.81	43.52	-13.71	0-360	100	H

Pk - Peak detector
Qp - Quasi-Peak detector

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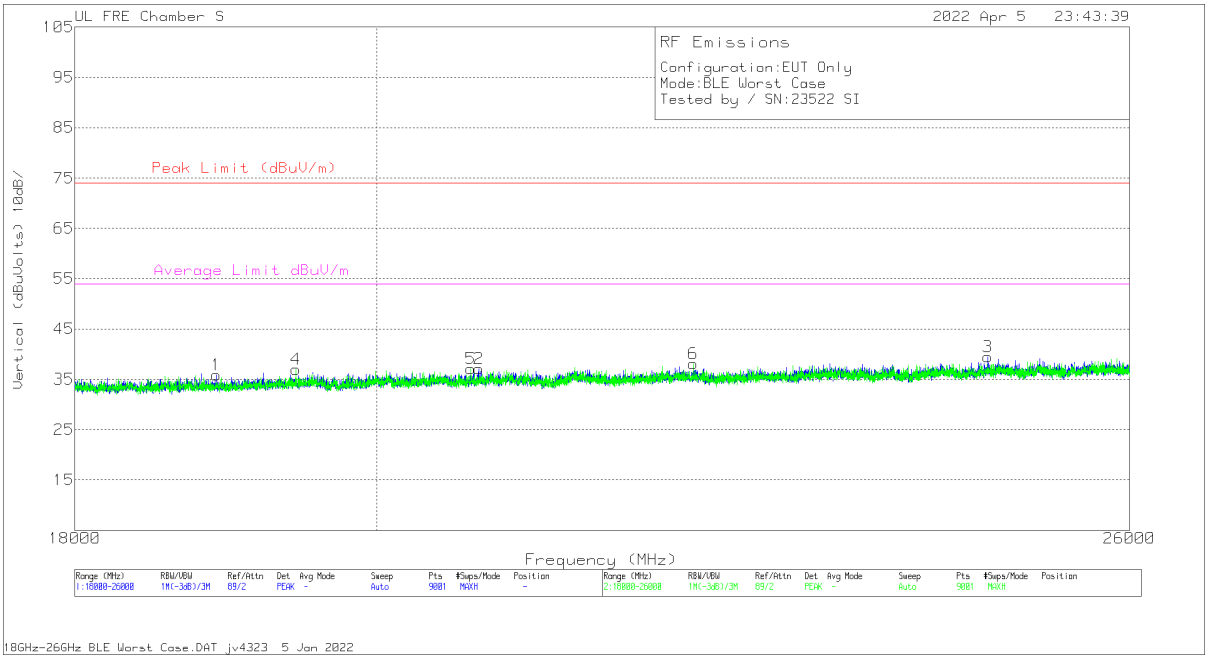
10.4. WORST CASE 18-26GHZ

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



HORIZONTAL & VERTICAL

DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF 81139 (dB/m)	Amp/Cbl (dB)	Dist Corr (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Average Limit dBuV/m	Margin (dB)	Polarity
4	19442.667	70.36	Pk	33.4	-57.3	-9.5	36.96	74	-37.04	54	-15.87	V
5	20666.667	69.7	Pk	33.8	-56.9	-9.5	37.1	74	-36.9	54	-17.04	V
6	22332.445	71.13	Pk	34.3	-57.8	-9.5	38.13	74	-35.87	54	-16.9	V
1	18911.111	70.29	Pk	33.1	-58	-9.5	35.89	74	-38.11	54	-18.11	H
2	20724.445	69.64	Pk	33.8	-56.8	-9.5	37.14	74	-36.86	54	-16.86	H
3	24748.445	69.43	Pk	34.9	-55.3	-9.5	39.53	74	-34.47	54	-14.47	H

Pk - Peak detector

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11. AC POWER LINE CONDUCTED EMISSIONS

LIMITS

FCC §15.207 (a)

RSS-Gen 8.8

Frequency of Emission (MHz)	Conducted Limit (dBµV)	
	Quasi-peak	Average
0.15-0.5	66 to 56 *	56 to 46 *
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

TEST PROCEDURE

The EUT is placed on a non-conducting table 40 cm from the vertical ground plane and 80 cm above the horizontal ground plane. The EUT is configured in accordance with ANSI C63.10.

The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

Line conducted data is recorded for both NEUTRAL and HOT lines.

RESULTS

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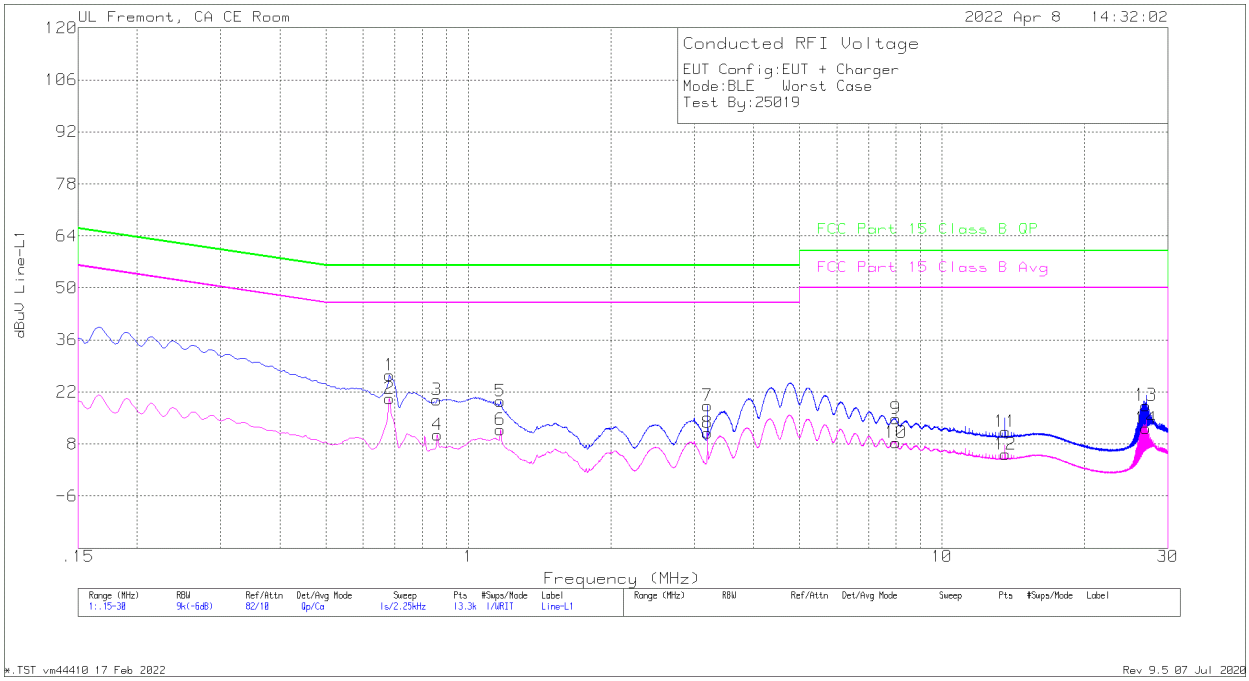
11.1. AC Power Line With AC/DC Adapter

LINE 1 RESULTS



Range 1: Line-L1 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	175765 LISN L1 (dB)	C1&C3 cable (dB)	TekBox Limiter TBFL1 Model 207(dB)	Corrected Reading dBuV	FCC Part 15 Class B QP dBuV	QP Margin (dB)	FCC Part 15 Class B Avg dBuV	Av(CISPR) Margin (dB)
1	.681	17.14	Qp	0	.1	9.3	26.54	56	-29.46	-	-
2	.681	10.82	Ca	0	.1	9.3	20.22	-	-	46	-25.78
3	.85875	10.57	Qp	0	.1	9.3	19.97	56	-36.03	-	-
4	.861	1.08	Ca	0	.1	9.3	10.48	-	-	46	-35.52
5	1.16925	10.07	Qp	0	.1	9.3	19.47	56	-36.53	-	-
6	1.16925	2.44	Ca	0	.1	9.3	11.84	-	-	46	-34.16
7	3.19875	8.92	Qp	0	.1	9.3	18.32	56	-37.68	-	-
8	3.19875	1.62	Ca	0	.1	9.3	11.02	-	-	46	-34.98
9	7.998	5.41	Qp	0	.1	9.3	14.81	60	-45.19	-	-
10	7.998	-.96	Ca	0	.1	9.3	8.44	-	-	50	-41.56
11	13.596	1.82	Qp	.1	.2	9.3	11.42	60	-48.58	-	-
12	13.596	-4.38	Ca	.1	.2	9.3	5.22	-	-	50	-44.78
13	26.94975	8.51	Qp	.2	.3	9.4	18.41	60	-41.59	-	-
14	26.94975	2.39	Ca	.2	.3	9.4	12.29	-	-	50	-37.71

Qp - Quasi-Peak detector
Ca - CISPR average detection

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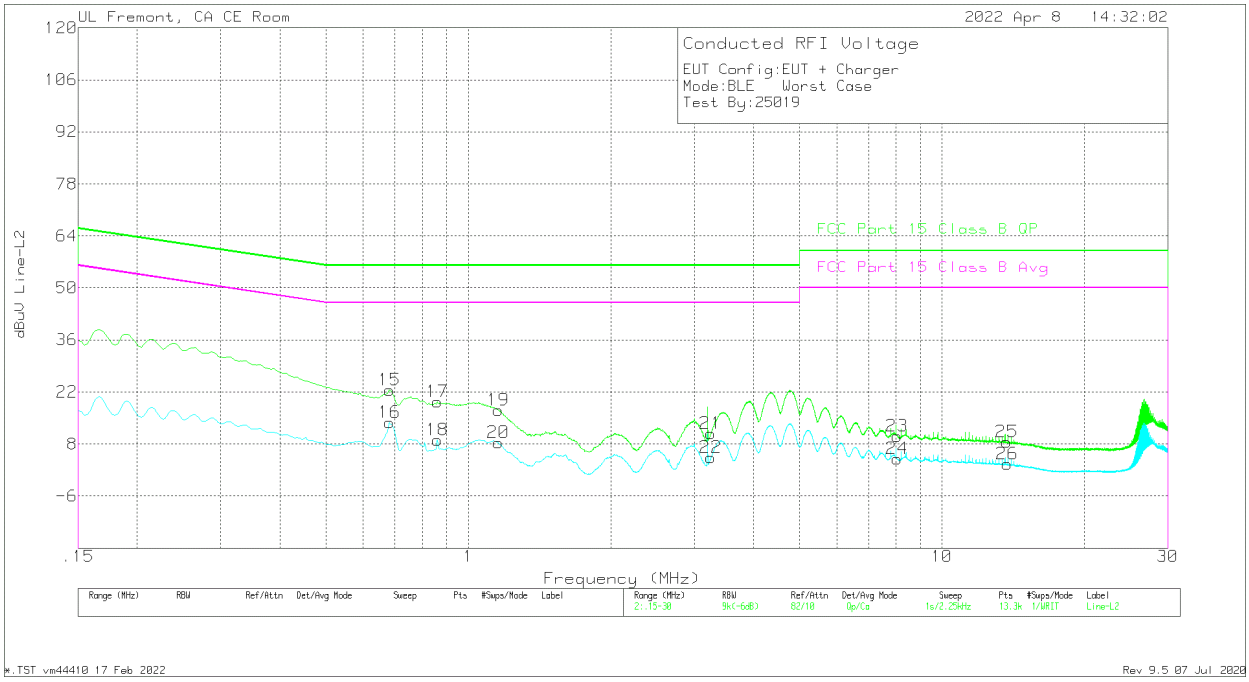
LINE 2 RESULTS



Range 2: Line-L2 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	175765 LISN L2 (dB)	C2&C3 cable (dB)	TekBox Limiter TBFL1 Model 207 (dB)	Corrected Reading dBuV	FCC Part 15 Class B QP dBuV	QP Margin (dB)	FCC Part 15 Class B Avg dBuV	Av(CISPR) Margin (dB)
15	.681	13.16	Qp	0	.1	9.3	22.56	56	-33.44	-	-
16	.681	4.34	Ca	0	.1	9.3	13.74	-	-	46	-32.26
17	.861	9.98	Qp	0	.1	9.3	19.38	56	-36.62	-	-
18	.861	-.35	Ca	0	.1	9.3	9.05	-	-	46	-36.95
19	1.158	7.74	Qp	0	.1	9.3	17.14	56	-38.86	-	-
20	1.15575	-1.07	Ca	0	.1	9.3	8.33	-	-	46	-37.67
21	3.2505	1.47	Qp	0	.1	9.3	10.87	56	-45.13	-	-
22	3.2505	-5.11	Ca	0	.1	9.3	4.29	-	-	46	-41.71
23	8.0475	.8	Qp	0	.1	9.3	10.2	60	-49.8	-	-
24	8.0475	-5.46	Ca	0	.1	9.3	3.94	-	-	50	-46.06
25	13.7175	-1.01	Qp	.1	.2	9.3	8.59	60	-51.41	-	-
26	13.749	-6.95	Ca	.1	.2	9.3	2.65	-	-	50	-47.35

Qp - Quasi-Peak detector
Ca - CISPR average detection

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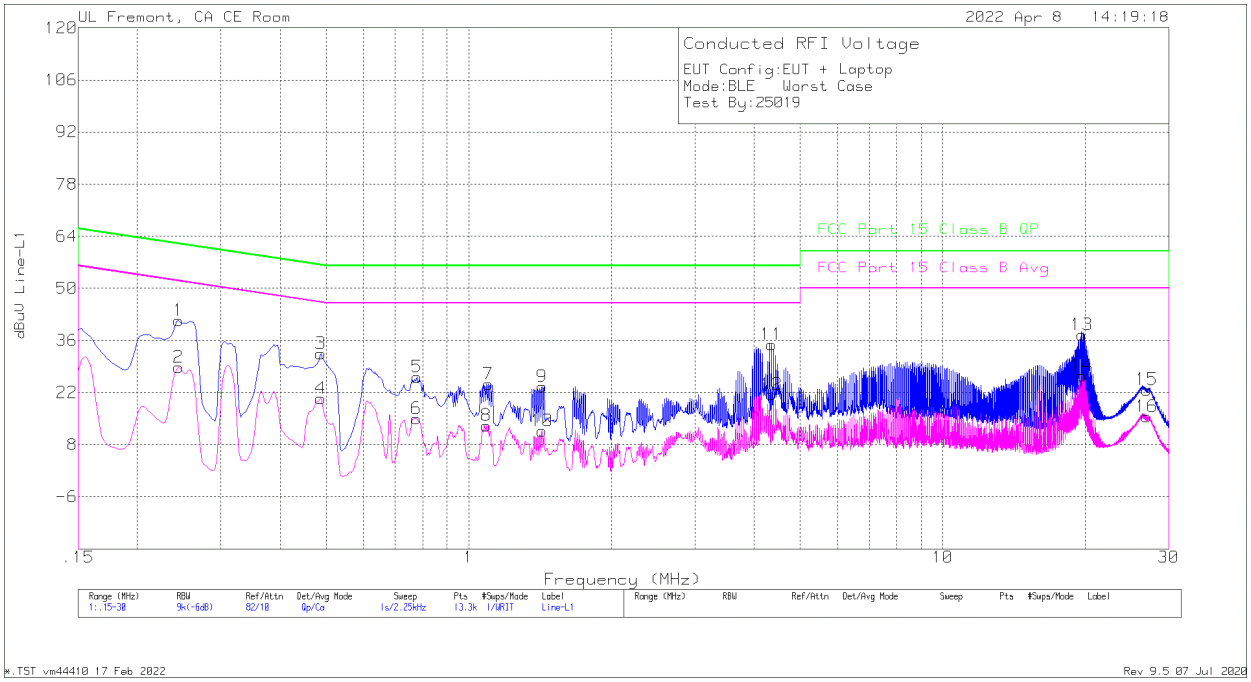
11.2. AC Power Line With Laptop

LINE 1 RESULTS



Range 1: Line-L1 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	175765 LISN L1 (dB)	C1&C3 cable (dB)	TekBox Limiter TBFL1 Model 207 (dB)	Corrected Reading dBuV	FCC Part 15 Class B QP dBuV	QP Margin (dB)	FCC Part 15 Class B Avg dBuV	Av(CISPR) Margin (dB)
1	.2445	31.99	Qp	0	0	9.3	41.29	61.94	-20.65	-	-
2	.2445	19.43	Ca	0	0	9.3	28.73	-	-	51.94	-23.21
3	.4875	23.1	Qp	0	0	9.3	32.4	56.21	-23.81	-	-
4	.4875	11.05	Ca	0	0	9.3	20.35	-	-	46.21	-25.86
5	.77775	16.74	Qp	0	.1	9.3	26.14	56	-29.86	-	-
6	.7755	5.63	Ca	0	.1	9.3	15.03	-	-	46	-30.97
7	1.0995	14.92	Qp	0	.1	9.3	24.32	56	-31.68	-	-
8	1.08825	3.77	Ca	0	.1	9.3	13.17	-	-	46	-32.83
9	1.428	14.23	Qp	0	.1	9.3	23.63	56	-32.37	-	-
10	1.428	2.32	Ca	0	.1	9.3	11.72	-	-	46	-34.28
11	4.353	25.48	Qp	0	.1	9.3	34.88	56	-21.12	-	-
12	4.353	12.11	Ca	0	.1	9.3	21.51	-	-	46	-24.49
13	19.65975	27.94	Qp	.1	.2	9.3	37.54	60	-22.46	-	-
14	19.65525	16.93	Ca	.1	.2	9.3	26.53	-	-	50	-23.47
15	26.94975	12.87	Qp	.2	.3	9.4	22.77	60	-37.23	-	-
16	26.94975	5.65	Ca	.2	.3	9.4	15.55	-	-	50	-34.45

Qp - Quasi-Peak detector
Ca - CISPR average detection

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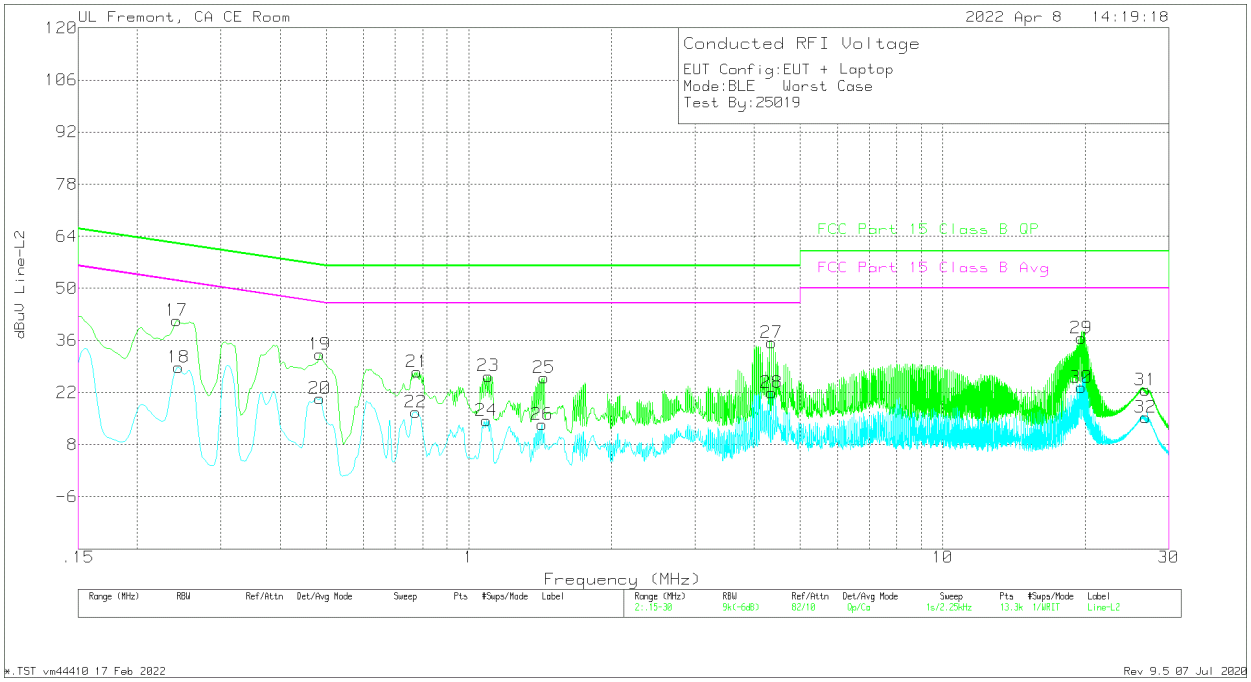
LINE 2 RESULTS



Range 2: Line-L2 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	175765 LISN L2 (dB)	C2&C3 cable (dB)	TekBox Limiter TBFL1 Model 207 (dB)	Corrected Reading dBuV	FCC Part 15 Class B QP dBuV	QP Margin (dB)	FCC Part 15 Class B Avg dBuV	Av(CISPR) Margin (dB)
17	.24225	32.09	Qp	0	0	9.3	41.39	62.02	-20.63	-	-
18	.2445	19.52	Ca	0	0	9.3	28.82	-	-	51.94	-23.12
19	.48525	23.02	Qp	0	0	9.3	32.32	56.25	-23.93	-	-
20	.48525	11.18	Ca	0	0	9.3	20.48	-	-	46.25	-25.77
21	.77775	18.18	Qp	0	.1	9.3	27.58	56	-28.42	-	-
22	.77213	7.41	Ca	0	.1	9.3	16.81	-	-	46	-29.19
23	1.0995	17.04	Qp	0	.1	9.3	26.44	56	-29.56	-	-
24	1.08825	5.08	Ca	0	.1	9.3	14.48	-	-	46	-31.52
25	1.4415	16.65	Qp	0	.1	9.3	26.05	56	-29.95	-	-
26	1.428	4.02	Ca	0	.1	9.3	13.42	-	-	46	-32.58
27	4.353	26.09	Qp	0	.1	9.3	35.49	56	-20.51	-	-
28	4.353	12.62	Ca	0	.1	9.3	22.02	-	-	46	-23.98
29	19.5945	27.05	Qp	.1	.2	9.3	36.65	60	-23.35	-	-
30	19.59225	13.71	Ca	.1	.2	9.3	23.31	-	-	50	-26.69
31	26.799	12.8	Qp	.2	.3	9.4	22.7	60	-37.3	-	-
32	26.799	5.5	Ca	.2	.3	9.4	15.4	-	-	50	-34.6

Qp - Quasi-Peak detector
Ca - CISPR average detection

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12. SETUP PHOTOS

Please refer to 14040866-EP1 for setup photos

END OF TEST REPORT

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