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.

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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.

Compliance with radiated spurious emissions limits in the restricted bands closest to the allocated 2402 – 2480 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 2Mbps 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. The 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

High Power Beamforming BLE 1Mbps mode is set to maximum power per chain to cover both SISO and MIMO modes to complies with radiated spurious emissions limits in the restricted bands between 1GHz and 18GHz low/mid/high channels (except the band edge).

Spurious emissions for frequencies below 1GHz and above 18GHz were limited to the middle channel as preliminary testing indicated that changing the operating frequency had no significant impact on the emissions in those frequency bands.

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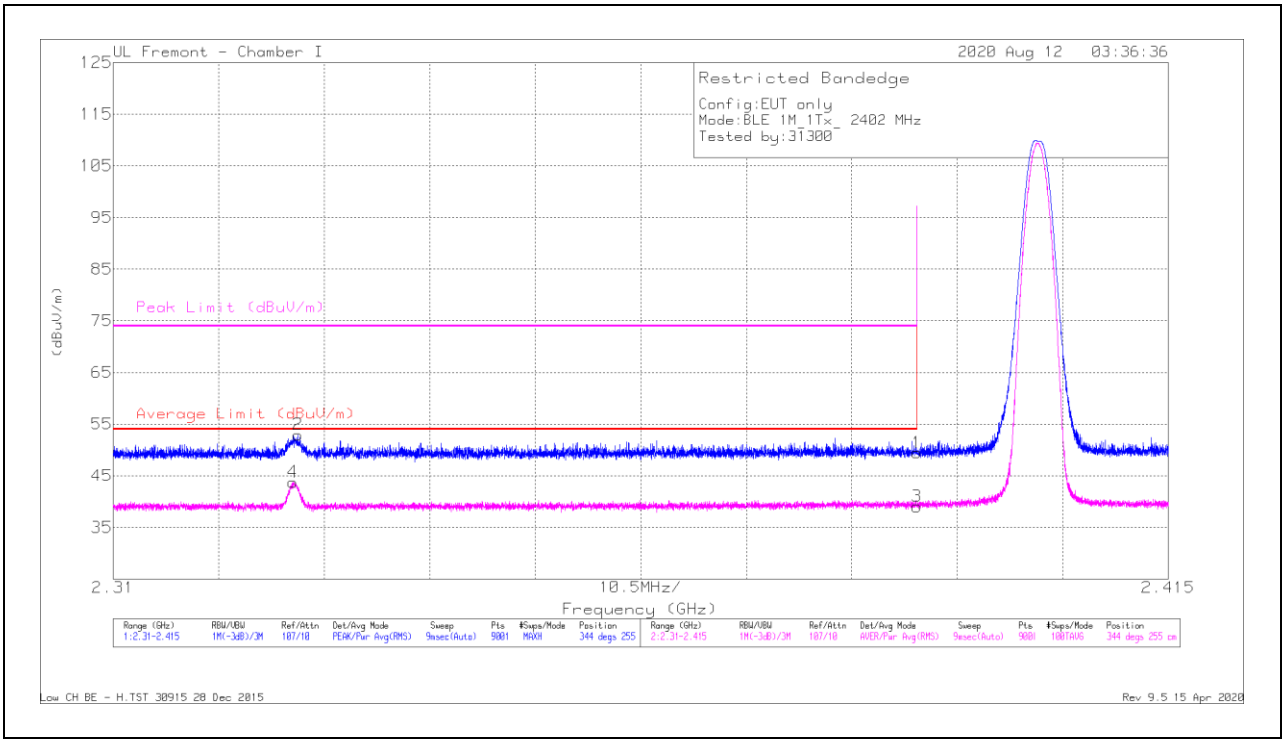
10.2. TRANSMITTER ABOVE 1 GHz

10.2.1. HIGH POWER BLE (1Mbps)

ANT 4

BANDEDGE (LOW CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (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	* 2.38999	34.74	Pk	32	-17.3	49.44	-	-	74	-24.56	344	255	H
2	* 2.32838	38.44	Pk	31.7	-17.2	52.94	-	-	74	-21.06	344	255	H
3	* 2.38999	24.37	RMS	32	-17.3	39.07	54	-14.93	-	-	344	255	H
4	* 2.32787	29.26	RMS	31.7	-17.2	43.76	54	-10.24	-	-	344	255	H

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

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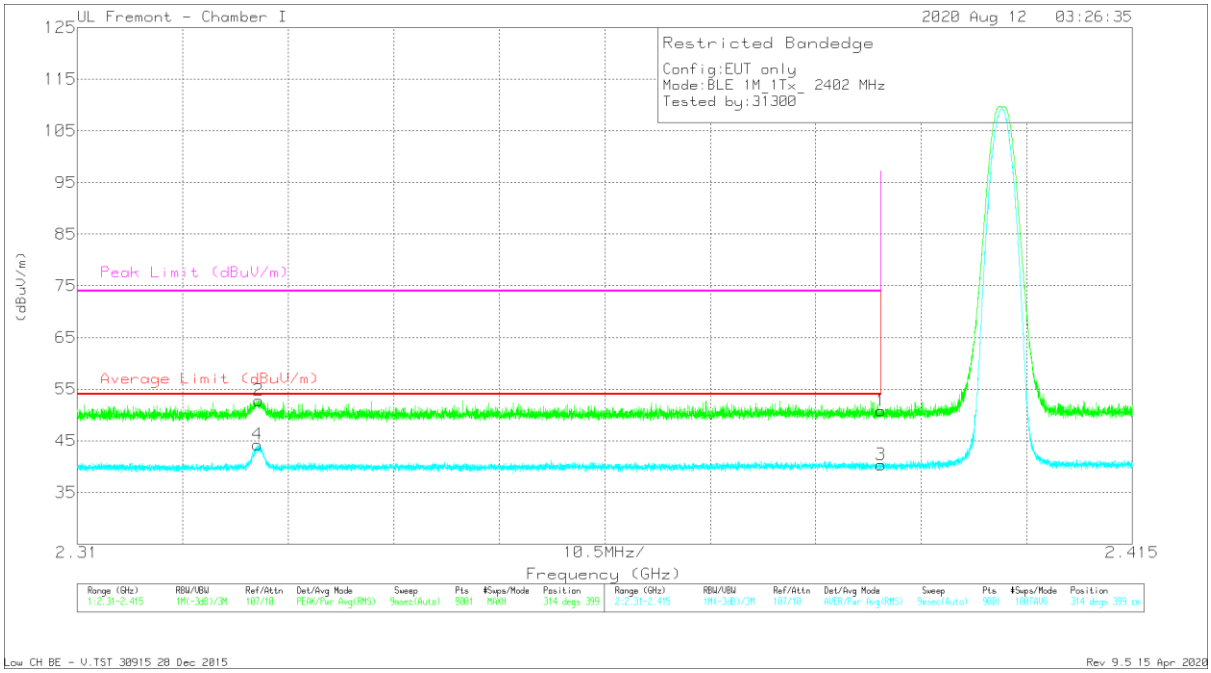
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (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	* 2.38999	36.09	Pk	32	-17.3	50.79	-	-	74	-23.21	314	399	V
2	* 2.32805	38.31	Pk	31.7	-17.2	52.81	-	-	74	-21.19	314	399	V
3	* 2.38999	25.68	RMS	32	-17.3	40.38	54	-13.62	-	-	314	399	V
4	* 2.32792	29.79	RMS	31.7	-17.2	44.29	54	-9.71	-	-	314	399	V

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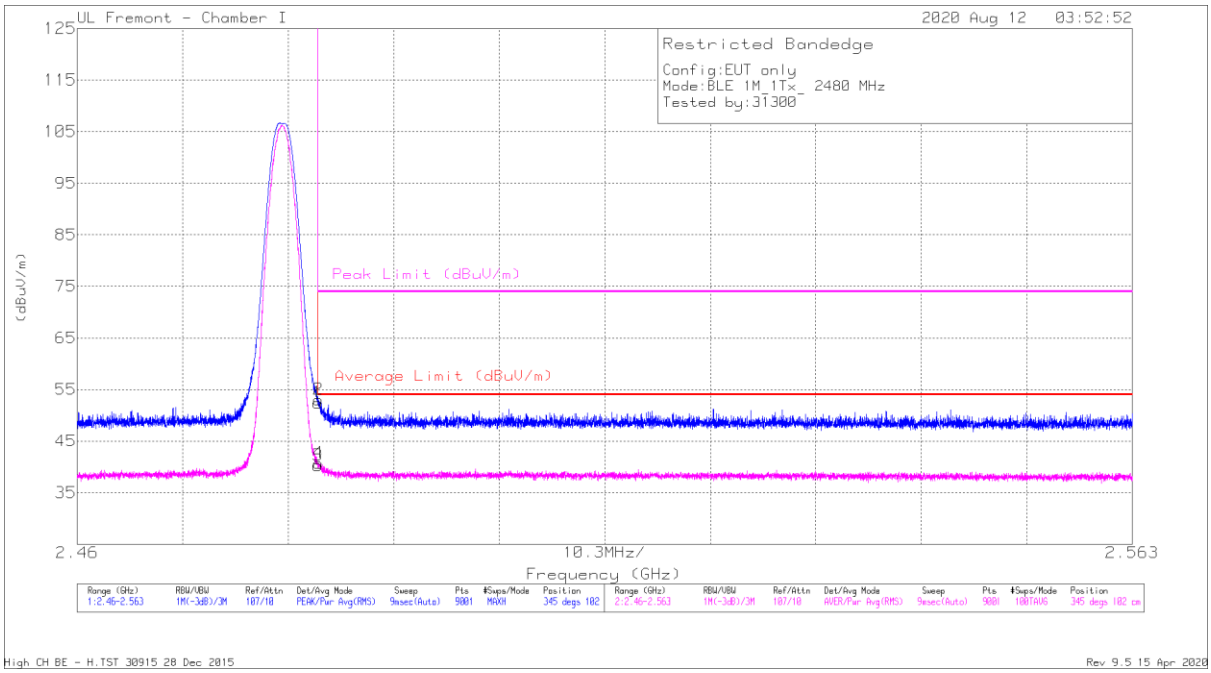
BANDEDGE (HIGH CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (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	* 2.48351	37.74	Pk	32.4	-17.7	52.44	-	-	74	-21.56	345	102	H
2	* 2.48353	38.35	Pk	32.4	-17.7	53.05	-	-	74	-20.95	345	102	H
3	* 2.48351	25.58	RMS	32.4	-17.7	40.28	54	-13.72	-	-	345	102	H
4	* 2.48353	26.06	RMS	32.4	-17.7	40.76	54	-13.24	-	-	345	102	H

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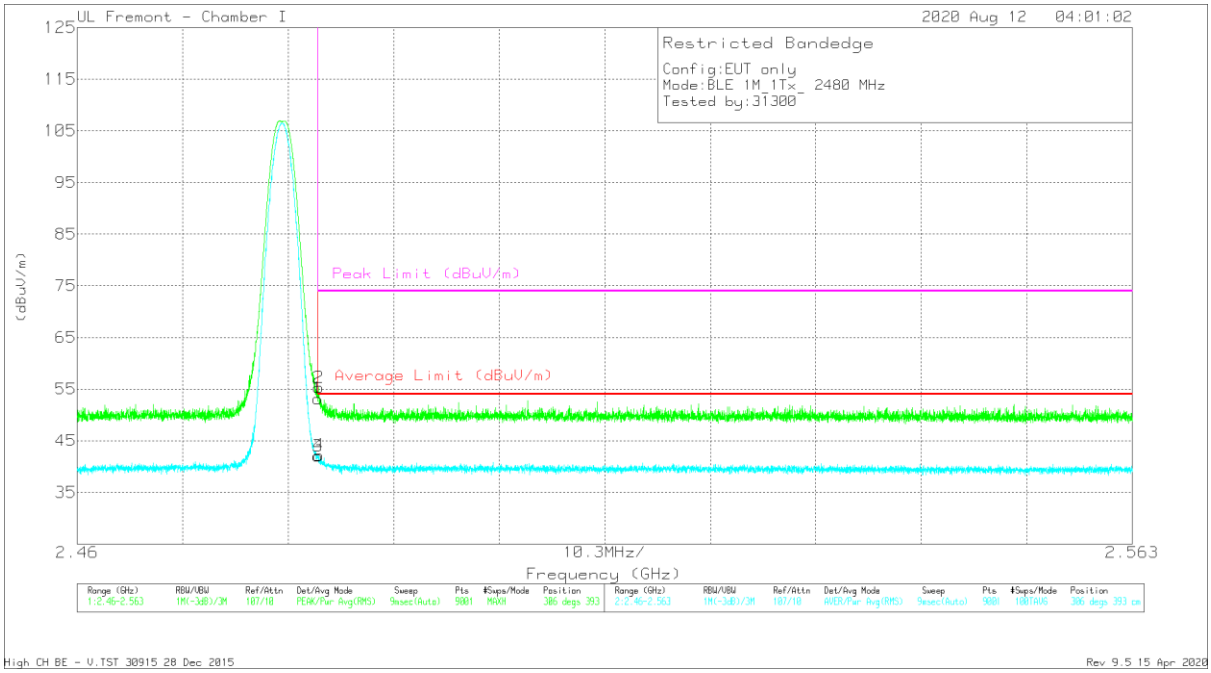
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (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	* 2.48351	38.48	Pk	32.4	-17.7	53.18	-	-	74	-20.82	306	393	V
2	* 2.48357	40.61	Pk	32.4	-17.7	55.31	-	-	74	-18.69	306	393	V
3	* 2.48351	27.33	RMS	32.4	-17.7	42.03	54	-11.97	-	-	306	393	V
4	* 2.48357	27.47	RMS	32.4	-17.7	42.17	54	-11.83	-	-	306	393	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
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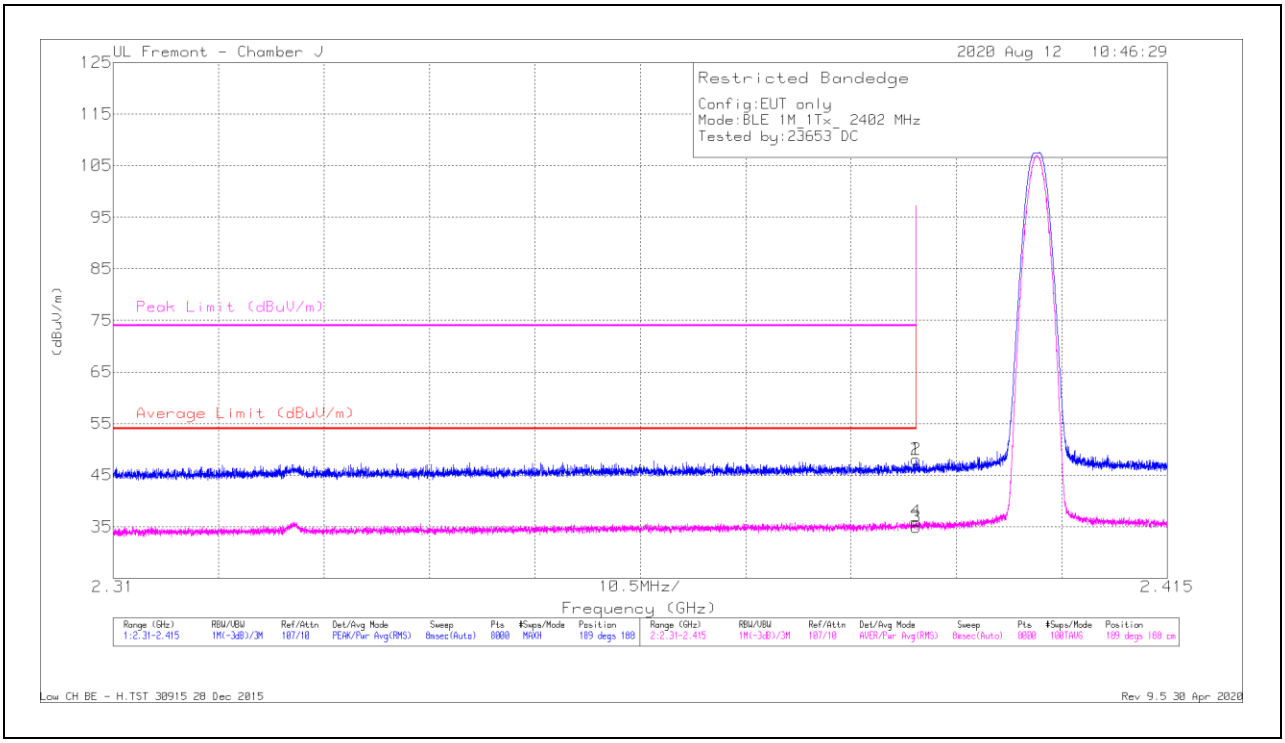
ANT 3

BANDEDGE (LOW CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T963 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	33.72	Pk	29	-14.7	48.02	-	-	74	-25.98	189	188	H
2	* 2.38998	33.74	Pk	29	-14.7	48.04	-	-	74	-25.96	189	188	H
3	* 2.39	20.62	RMS	29	-14.7	34.92	54	-19.08	-	-	189	188	H
4	* 2.38998	21.69	RMS	29	-14.7	35.99	54	-18.01	-	-	189	188	H

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

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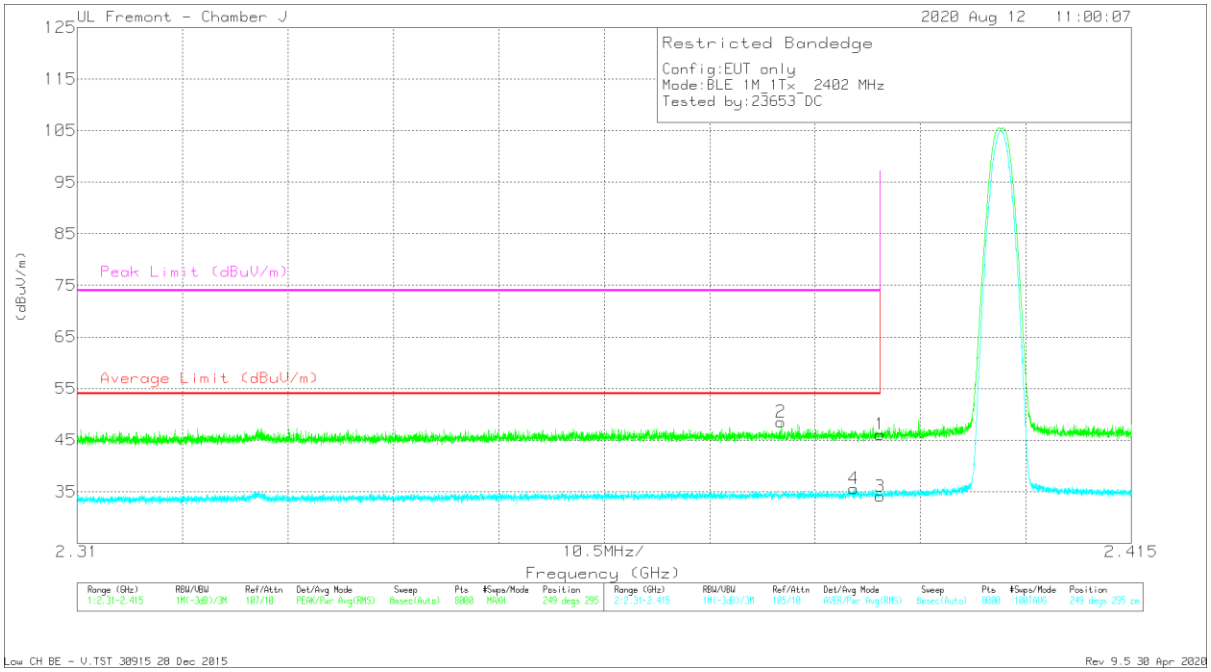
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T963 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	31.81	Pk	29	-14.7	46.11	-	-	74	-27.89	249	295	V
2	* 2.3801	34.23	Pk	29	-14.7	48.53	-	-	74	-25.47	249	295	V
3	* 2.39	19.79	RMS	29	-14.7	34.09	54	-19.91	-	-	249	295	V
4	* 2.38737	21.29	RMS	29	-14.7	35.59	54	-18.41	-	-	249	295	V

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

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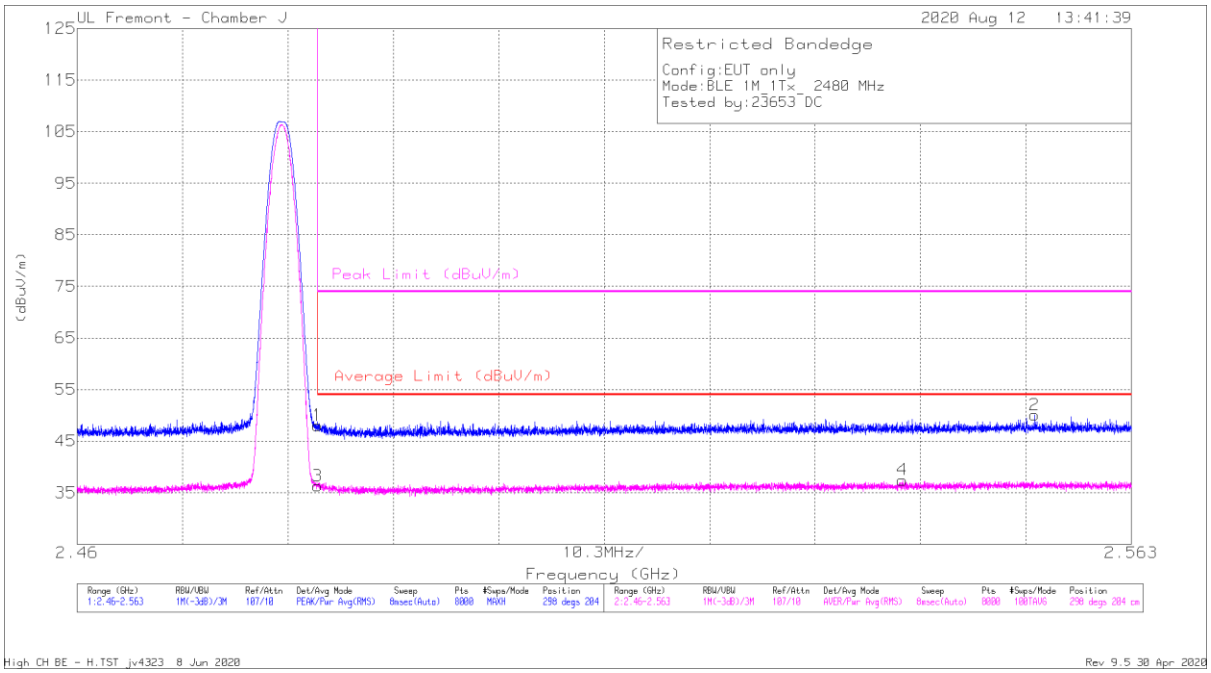
BANDEDGE (HIGH CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T963 (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	33.12	Pk	29.5	-14.6	48.02	-	-	74	-25.98	298	204	H
2	2.55354	34.57	Pk	29.9	-14.4	50.07	-	-	74	-23.93	298	204	H
3	* 2.4835	21.39	RMS	29.5	-14.6	36.29	54	-17.71	-	-	298	204	H
4	2.54064	22.17	RMS	29.8	-14.5	37.47	54	-16.53	-	-	298	204	H

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RMS - RMS detection

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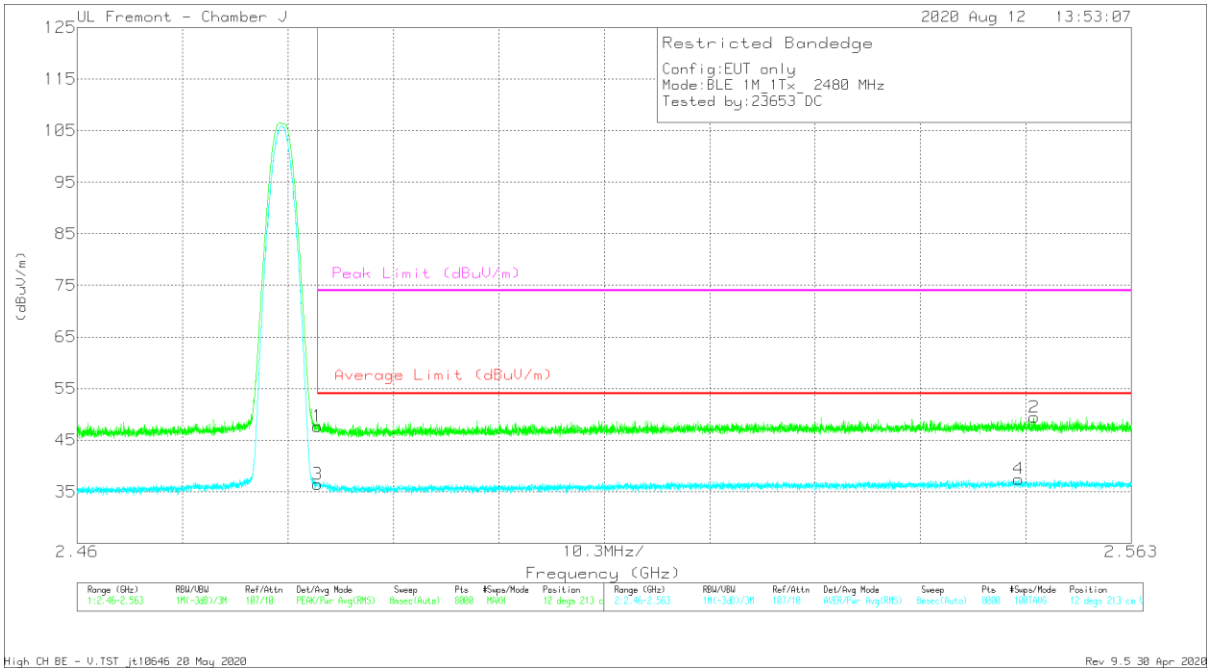
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T963 (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	32.79	Pk	29.5	-14.6	47.69	-	-	74	-26.31	12	213	V
2	2.55351	33.97	Pk	29.9	-14.4	49.47	-	-	74	-24.53	12	213	V
3	* 2.4835	21.54	RMS	29.5	-14.6	36.44	54	-17.56	-	-	12	213	V
4	2.55198	21.96	RMS	29.9	-14.4	37.46	54	-16.54	-	-	12	213	V

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

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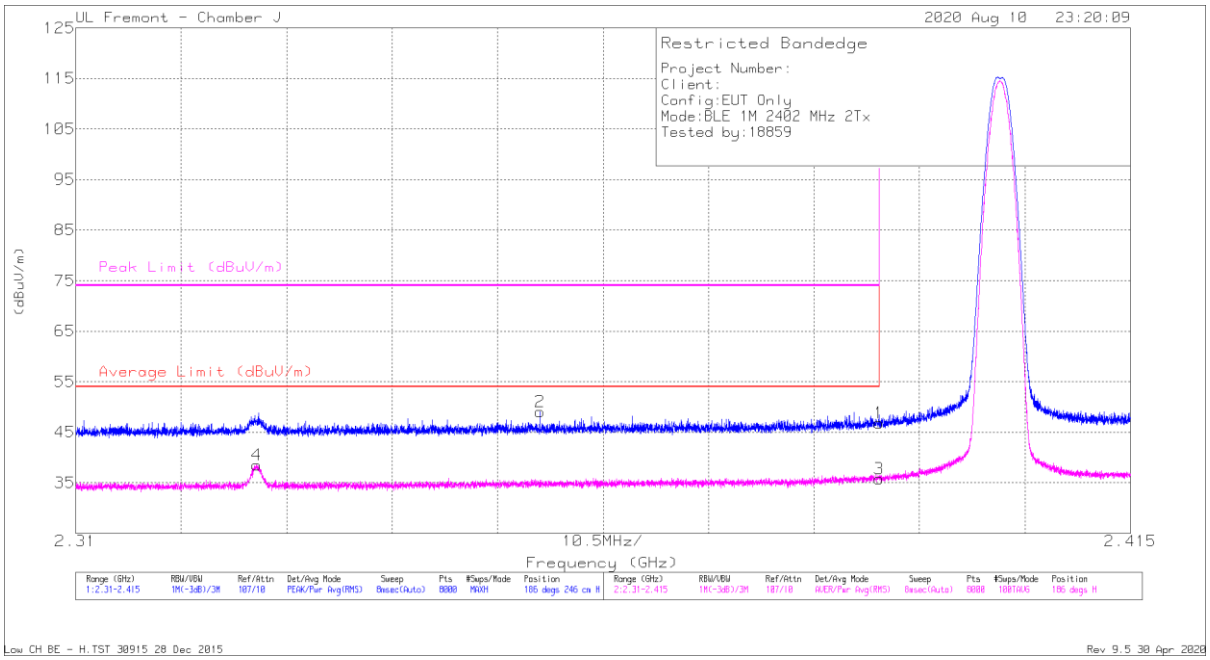
10.2.2. HIGH POWER BLE TXBF (1Mbps)

BANDEDGE (LOW CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T963 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	32.51	Pk	29	-14.7	46.81	-	-	74	-27.19	186	246	H
2	* 2.35621	34.99	Pk	29	-14.9	49.09	-	-	74	-24.91	186	246	H
3	* 2.39	21.46	RMS	29	-14.7	35.76	54	-18.24	-	-	186	246	H
4	* 2.32805	24.45	RMS	28.9	-14.9	38.45	54	-15.55	-	-	186	246	H

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

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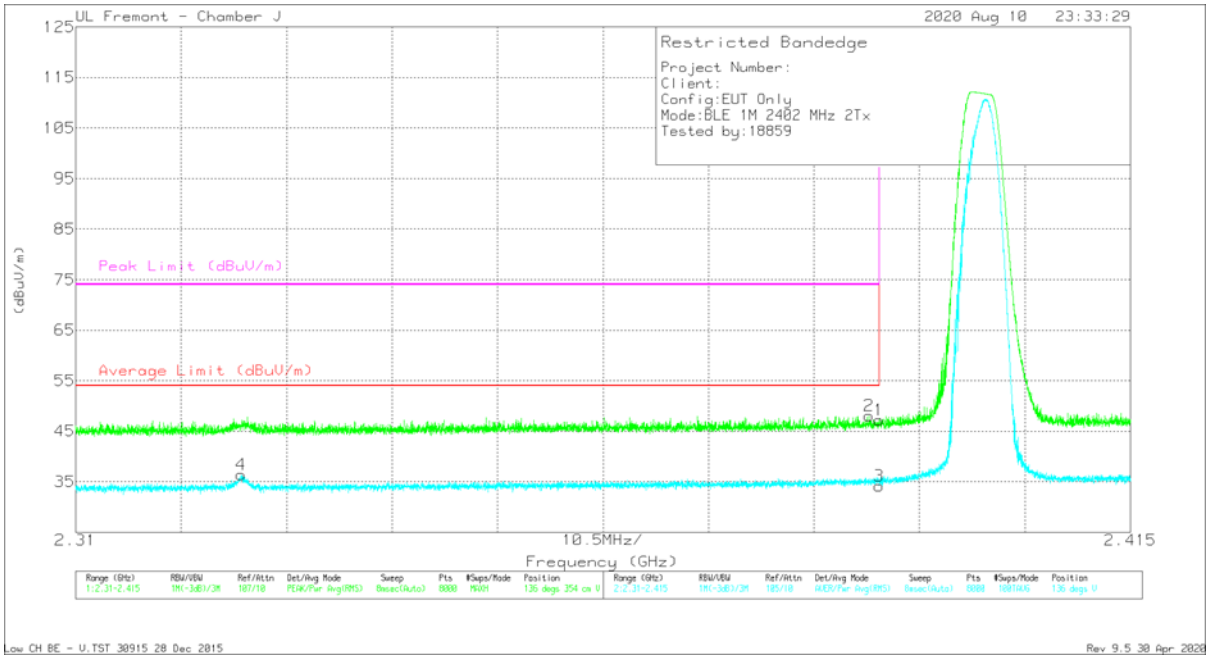
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T963 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	32.89	Pk	29	-14.7	47.19	-	-	74	-26.81	136	354	V
2	* 2.389	33.7	Pk	29	-14.7	48	-	-	74	-26	136	354	V
3	* 2.39	19.88	RMS	29	-14.7	34.18	54	-19.82	-	-	136	354	V
4	* 2.32646	22.45	RMS	28.8	-14.9	36.35	54	-17.65	-	-	136	354	V

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Pk - Peak detector
RMS - RMS detection

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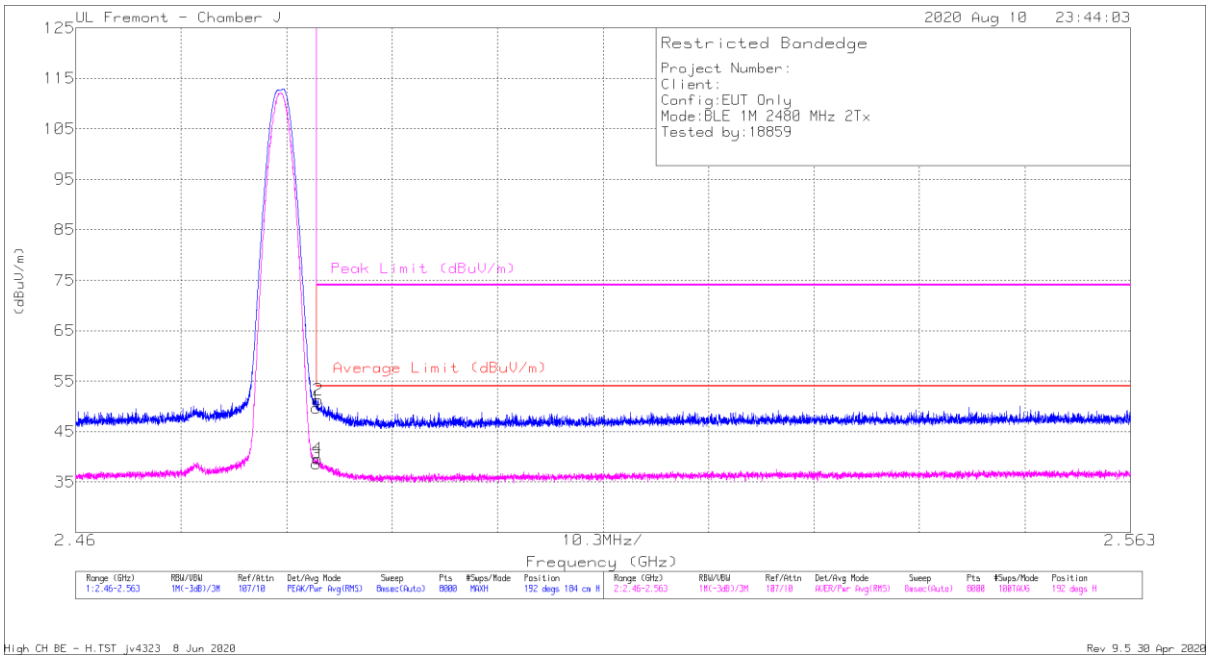
BANDEDGE (HIGH CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T963 (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	34.83	Pk	29.5	-14.6	49.73	-	-	74	-24.27	192	184	H
2	* 2.48366	36.34	Pk	29.5	-14.6	51.24	-	-	74	-22.76	192	184	H
3	* 2.4835	23.77	RMS	29.5	-14.6	38.67	54	-15.33	-	-	192	184	H
4	* 2.48363	24.7	RMS	29.5	-14.6	39.6	54	-14.4	-	-	192	184	H

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RMS - RMS detection

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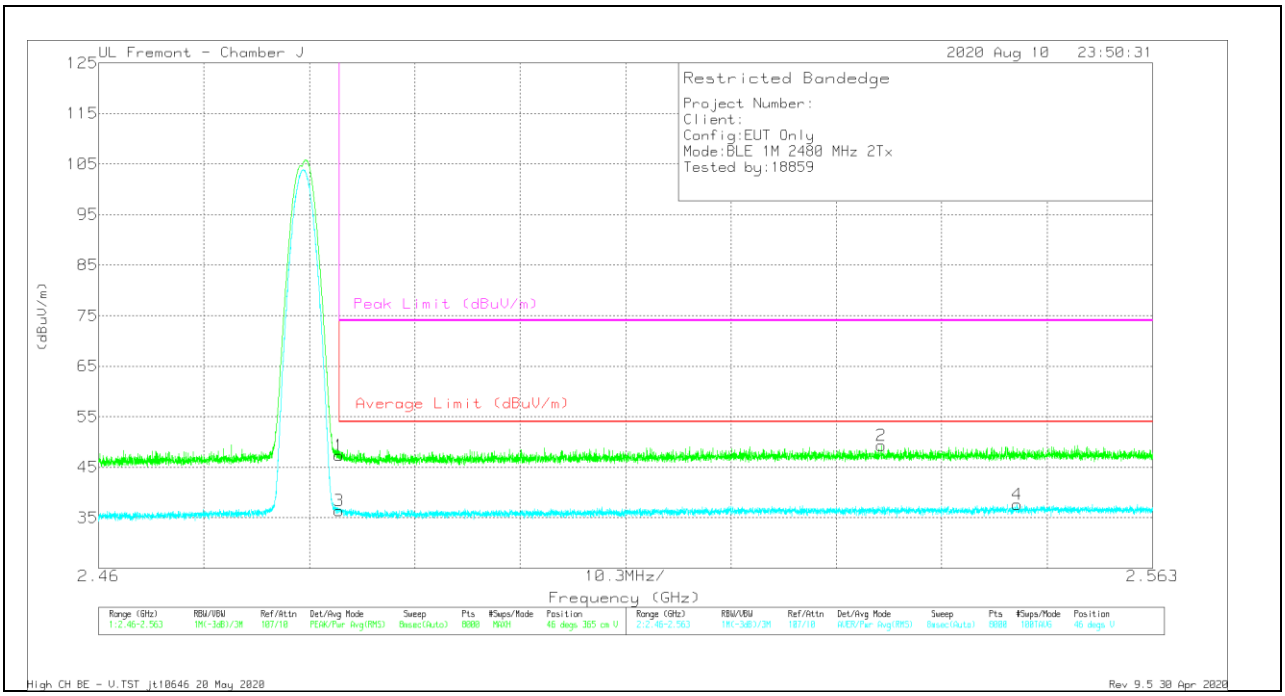
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T963 (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	32.41	Pk	29.5	-14.6	47.31	-	-	74	-26.69	46	365	V
2	2.5365	33.95	Pk	29.8	-14.5	49.25	-	-	74	-24.75	46	365	V
3	* 2.4835	21.53	RMS	29.5	-14.6	36.43	54	-17.57	-	-	46	365	V
4	2.5498	22.27	RMS	29.9	-14.5	37.67	54	-16.33	-	-	46	365	V

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

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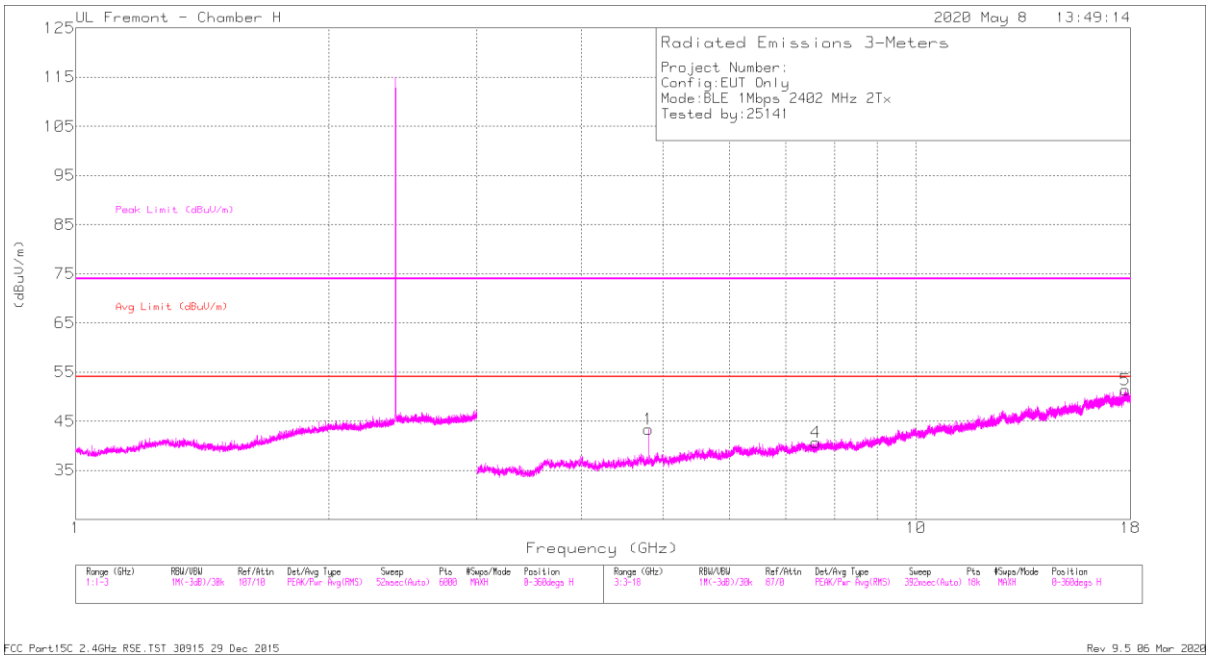
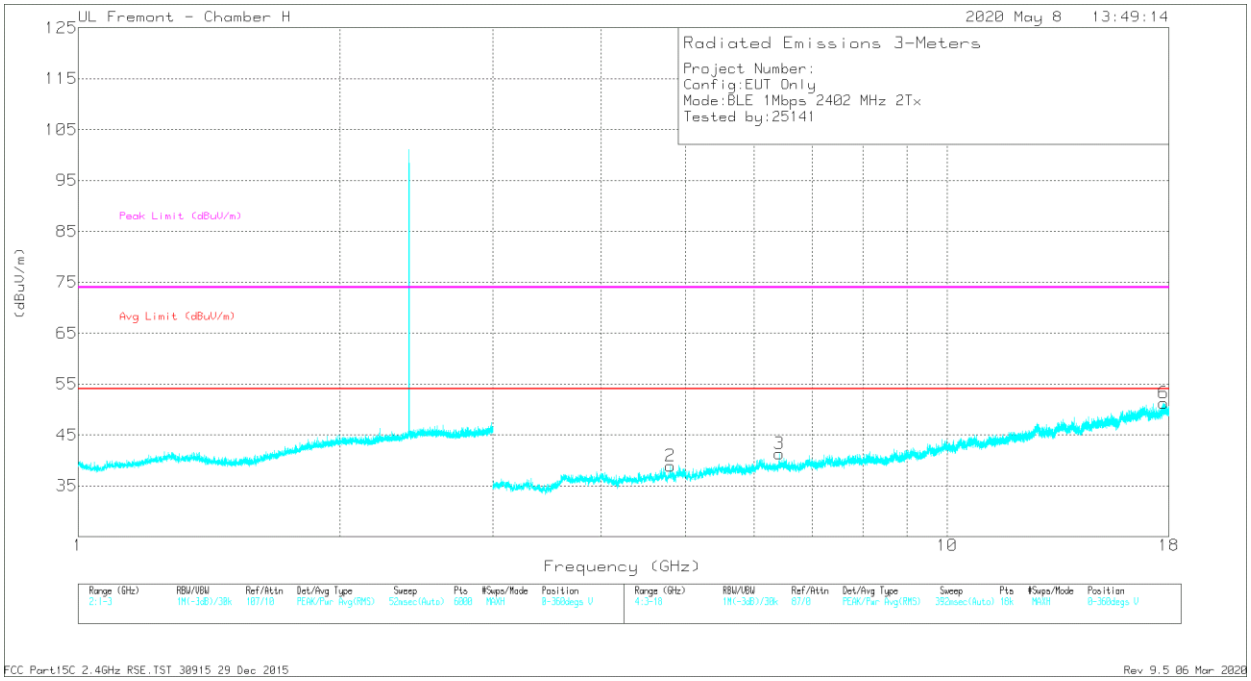
HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL RESULTS



HORIZONTAL



VERTICAL

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RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (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	* 4.80114	46.91	PK2	34.4	-31.5	49.81	-	-	74	-24.19	300	109	H
1	* 4.80342	38.05	MAv1	34.4	-31.5	40.95	54	-13.05	-	-	300	109	H
2	* 4.80066	45.42	PK2	34.4	-31.5	48.32	-	-	74	-25.68	263	378	V
2	* 4.80271	34.51	MAv1	34.4	-31.5	37.41	54	-16.59	-	-	263	378	V
3	6.41007	40.79	PK2	35.7	-29.5	46.99	-	-	-	-	0	246	V
3	6.40929	29.15	MAv1	35.7	-29.5	35.35	-	-	-	-	0	246	V
4	* 7.5986	39.52	PK2	36.2	-28.2	47.52	-	-	74	-26.48	206	110	H
4	* 7.59506	27.61	MAv1	36.2	-28.3	35.51	54	-18.49	-	-	206	110	H
5	* 17.75814	35.96	PK2	41.4	-19.5	57.86	-	-	74	-16.14	92	216	H
5	* 17.75762	24.49	MAv1	41.4	-19.5	46.39	54	-7.61	-	-	92	216	H
6	* 17.7539	36.6	PK2	41.4	-19.6	58.4	-	-	74	-15.6	60	156	V
6	* 17.75363	24.58	MAv1	41.4	-19.6	46.38	54	-7.62	-	-	60	156	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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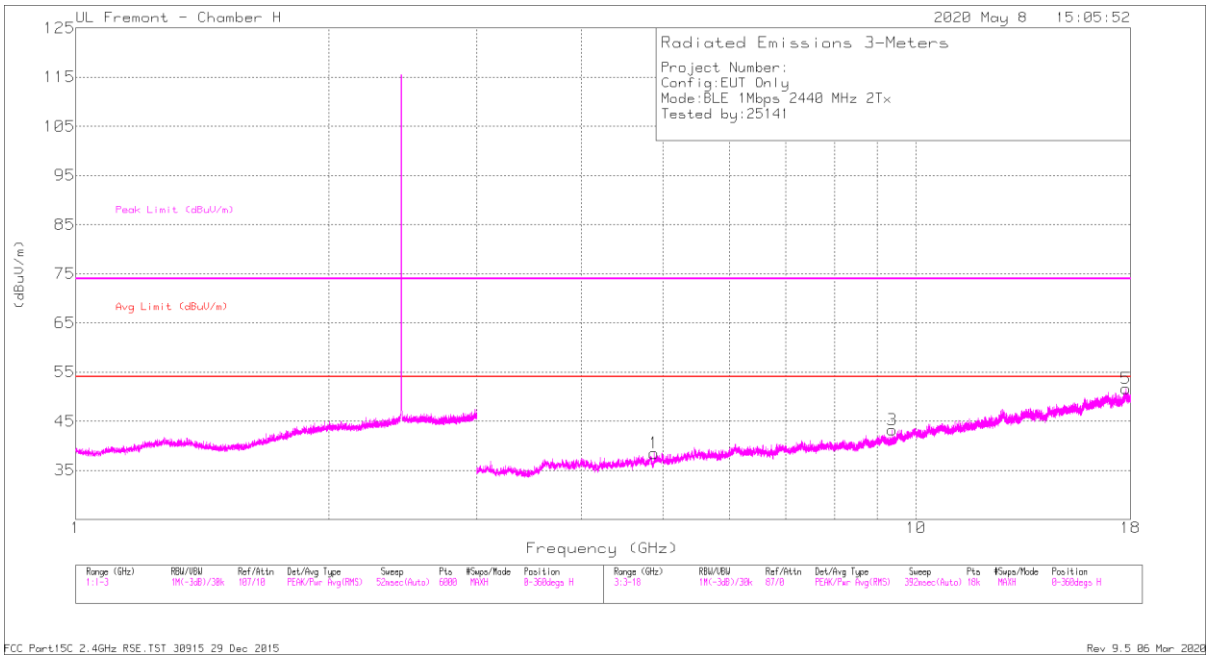
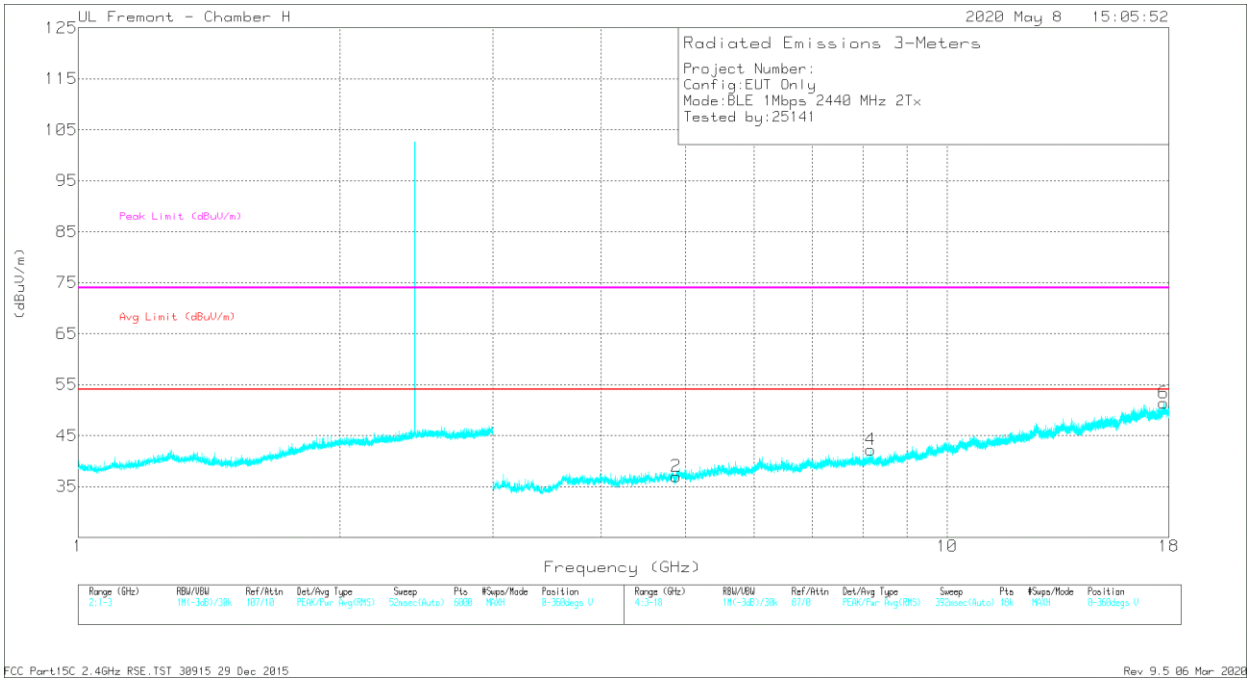
MID CHANNEL RESULTS



HORIZONTAL



VERTICAL

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RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (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	* 4.88012	43.19	PK2	34.3	-31.4	46.09	-	-	74	-27.91	9	101	H
1	* 4.88013	32.75	MAv1	34.3	-31.4	35.65	54	-18.35	-	-	9	101	H
2	* 4.88019	43.4	PK2	34.3	-31.4	46.3	-	-	74	-27.7	356	347	V
2	* 4.87996	33.18	MAv1	34.3	-31.4	36.08	54	-17.92	-	-	356	347	V
3	* 9.37466	38.11	PK2	36.5	-25.2	49.41	-	-	74	-24.59	0	204	H
3	* 9.37295	25.76	MAv1	36.5	-25.3	36.96	54	-17.04	-	-	0	204	H
4	* 8.16579	38.08	PK2	36	-26.4	47.68	-	-	74	-26.32	49	255	V
4	* 8.16402	26.54	MAv1	36	-26.4	36.14	54	-17.86	-	-	49	255	V
5	* 17.77363	36.08	PK2	41.4	-19.4	58.08	-	-	74	-15.92	19	217	H
5	* 17.77129	24.36	MAv1	41.3	-19.4	46.26	54	-7.74	-	-	19	217	H
6	* 17.76131	35.36	PK2	41.4	-19.4	57.36	-	-	74	-16.64	257	126	V
6	* 17.76071	24.44	MAv1	41.4	-19.4	46.44	54	-7.56	-	-	257	126	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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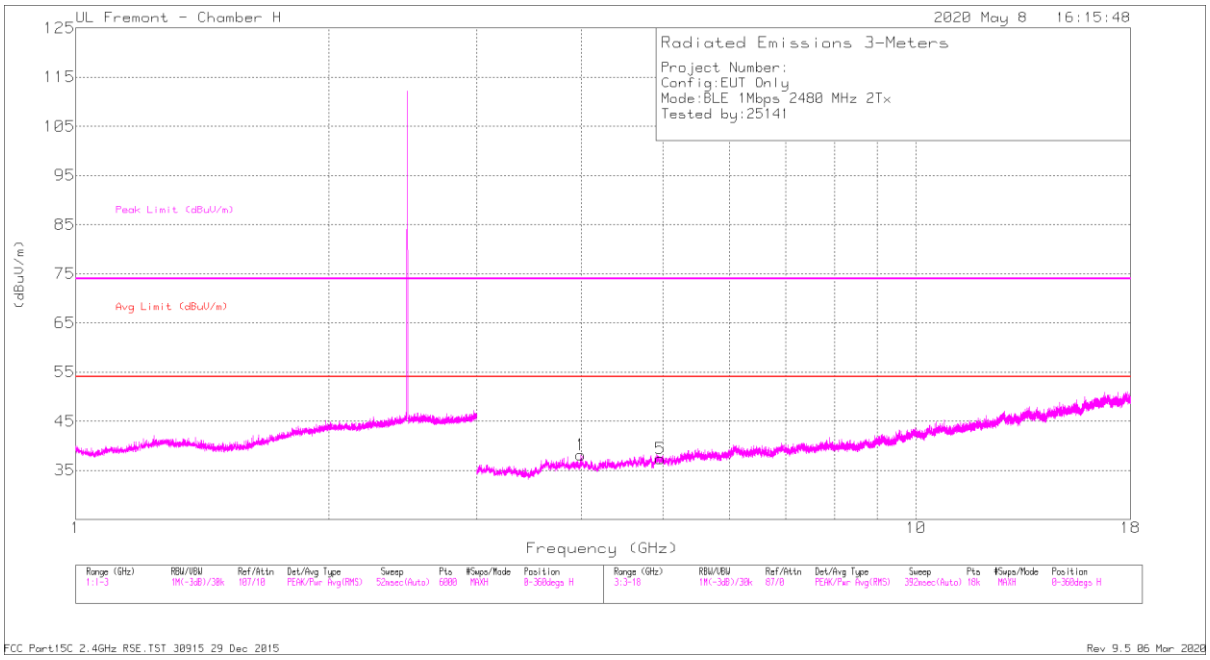
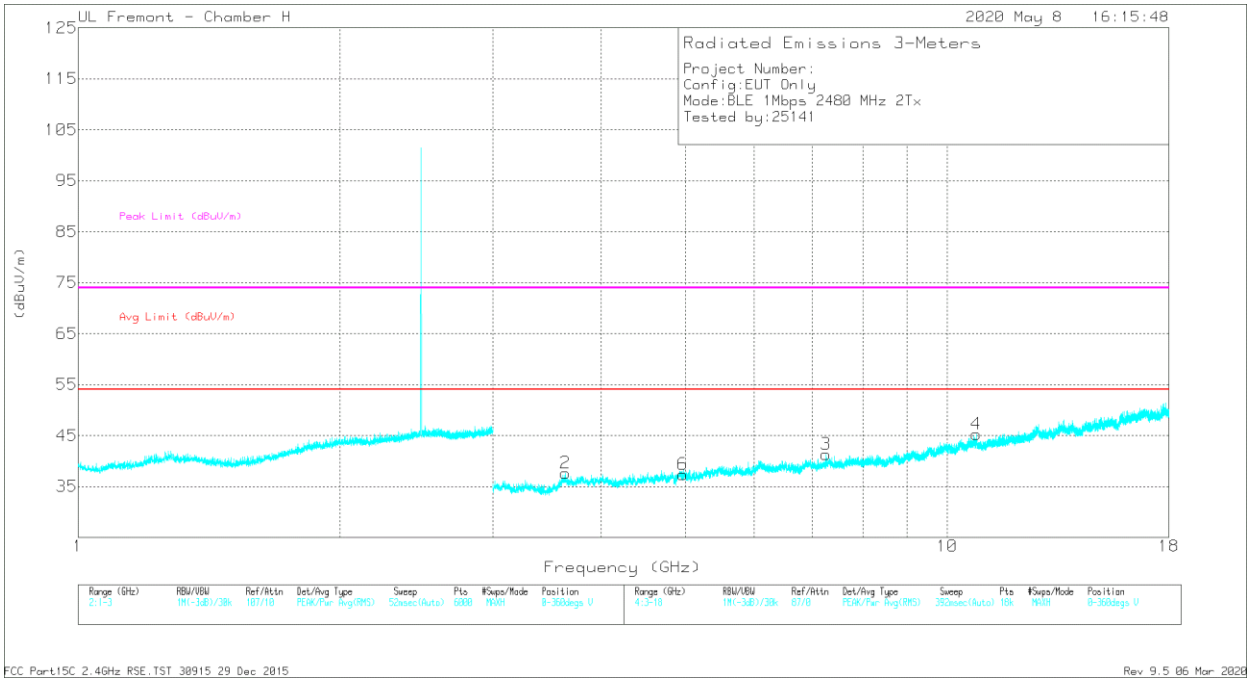
HIGH CHANNEL RESULTS



HORIZONTAL



VERTICAL

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RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (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	* 3.99168	41.95	PK2	33.5	-30.8	44.65	-	-	74	-29.35	119	225	H
1	* 3.98982	30.21	MAv1	33.5	-30.8	32.91	54	-21.09	-	-	119	225	H
	* 15.53932	36.75	PK2	40.9	-22.7	54.95	-	-	74	-19.05	327	271	H
	* 15.53773	25.37	MAv1	40.9	-22.7	43.57	54	-10.43	-	-	327	271	H
5	* 4.96117	41.39	PK2	34.2	-30.7	44.89	-	-	74	-29.11	330	392	H
5	* 4.96035	29.64	MAv1	34.2	-30.7	33.14	54	-20.86	-	-	330	392	H
2	* 3.63791	41.98	PK2	33	-30.3	44.68	-	-	74	-29.32	243	187	V
2	* 3.63628	30.28	MAv1	33	-30.3	32.98	54	-21.02	-	-	243	187	V
3	* 7.25771	39.27	PK2	36	-27.7	47.57	-	-	74	-26.43	230	362	V
3	* 7.25492	27.67	MAv1	36	-27.8	35.87	54	-18.13	-	-	230	362	V
4	* 10.80918	37.13	PK2	37.6	-22.8	51.93	-	-	74	-22.07	133	214	V
4	* 10.81006	25.01	MAv1	37.6	-22.8	39.81	54	-14.19	-	-	133	214	V
6	* 4.96096	40.87	PK2	34.2	-30.7	44.37	-	-	74	-29.63	149	400	V
6	* 4.96035	29.5	MAv1	34.2	-30.7	33	54	-21	-	-	149	400	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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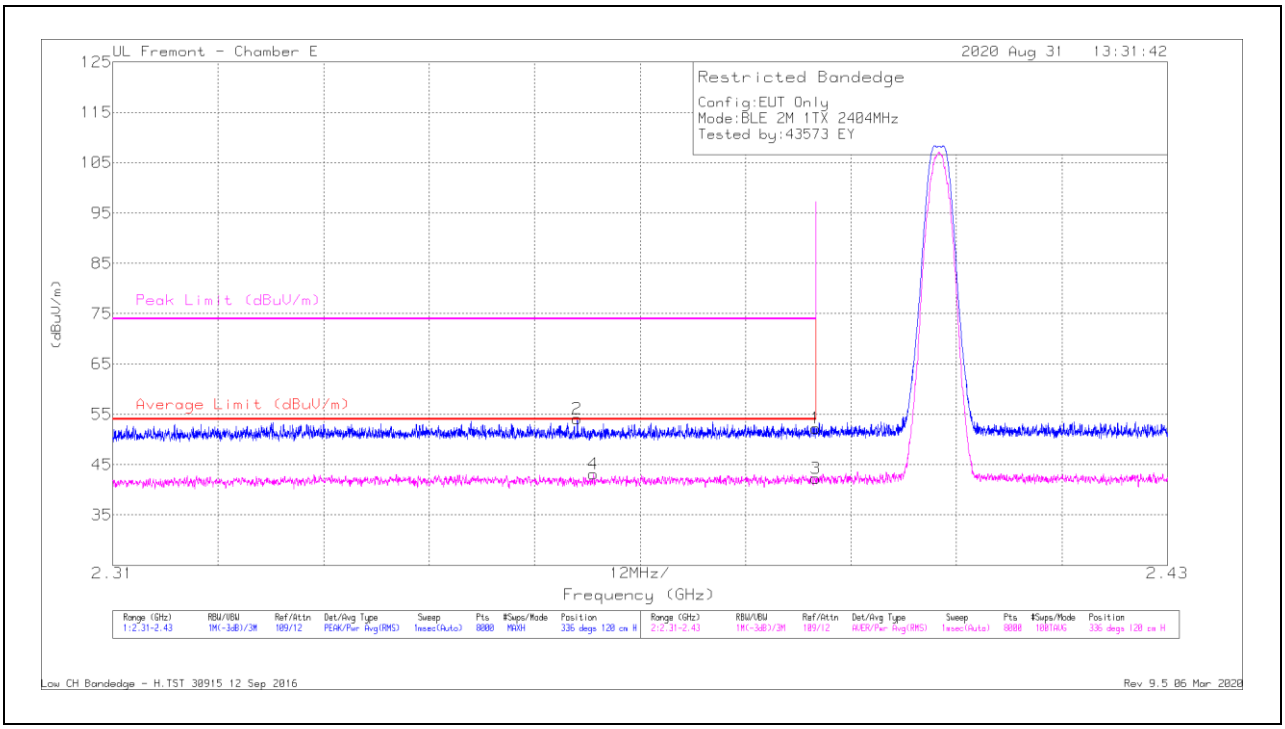
10.2.3. HIGH POWER BLE (2Mbps)

ANT 4

BANDEDGE (LOW CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (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	* 2.38999	38.5	Pk	32.2	-18.4	52.3	-	-	74	-21.7	336	120	H
2	* 2.36285	40.45	Pk	32.1	-18.4	54.15	-	-	74	-19.85	336	120	H
3	* 2.38999	28.45	RMS	32.2	-18.4	42.25	54	-11.75	-	-	336	120	H
4	* 2.36468	29.43	RMS	32.1	-18.4	43.13	54	-10.87	-	-	336	120	H

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

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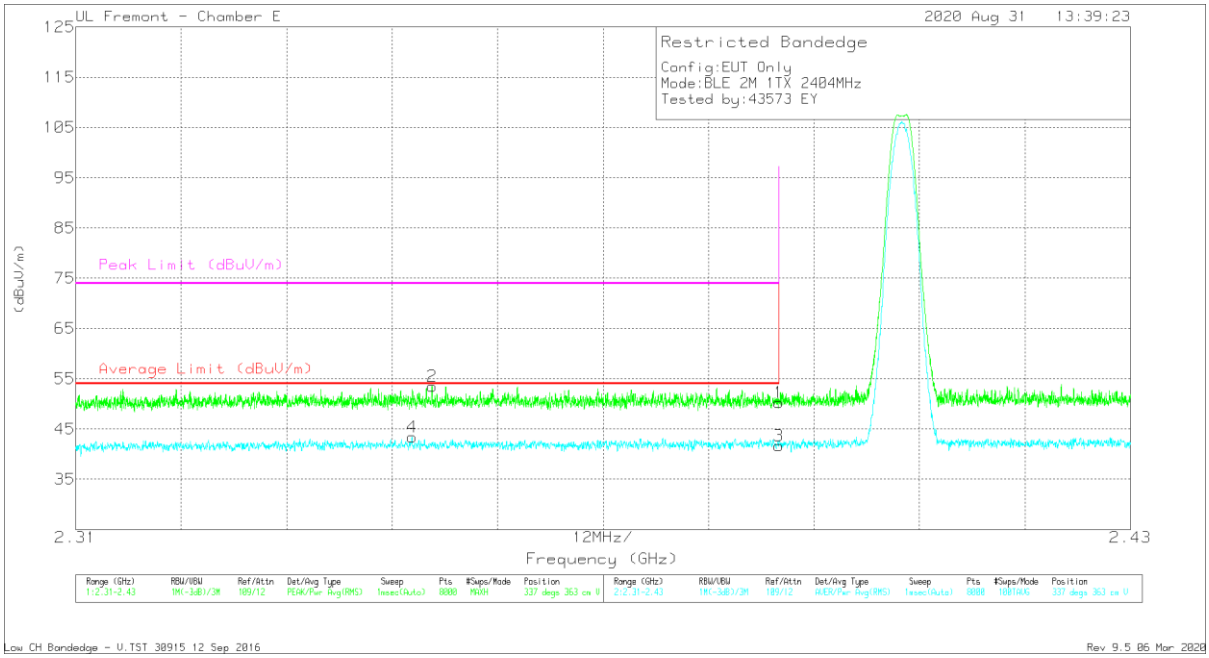
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (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	* 2.34826	29.61	RMS	32.1	-18.3	43.41	54	-10.59	-	-	337	363	V
2	* 2.35054	39.74	Pk	32.1	-18.3	53.54	-	-	74	-20.46	337	363	V
1	* 2.38999	36.51	Pk	32.2	-18.4	50.31	-	-	74	-23.69	337	363	V
3	* 2.38999	27.85	RMS	32.2	-18.4	41.65	54	-12.35	-	-	337	363	V

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

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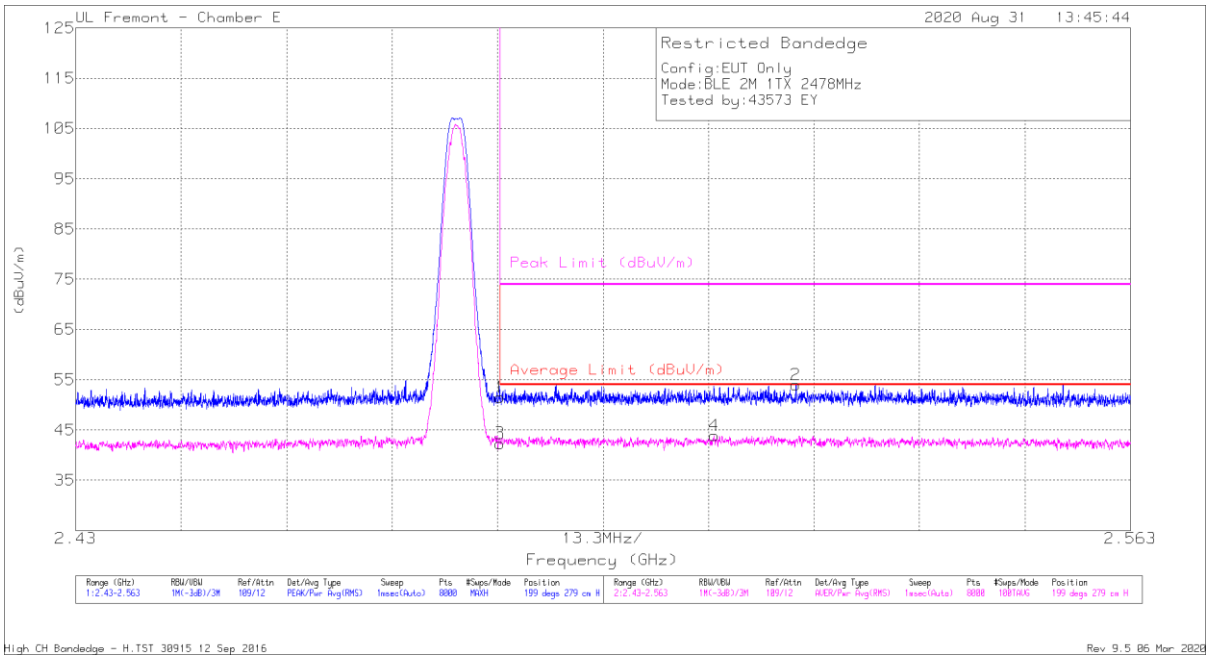
BANDEDGE (HIGH CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (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	* 2.48351	37.1	Pk	32.8	-18.4	51.5	-	-	74	-22.5	199	279	H
3	* 2.48351	27.94	RMS	32.8	-18.4	42.34	54	-11.66	-	-	199	279	H
4	2.51054	29.35	RMS	32.8	-18.3	43.85	54	-10.15	-	-	199	279	H
2	2.52083	39.55	Pk	32.8	-18.3	54.05	-	-	74	-19.95	199	279	H

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

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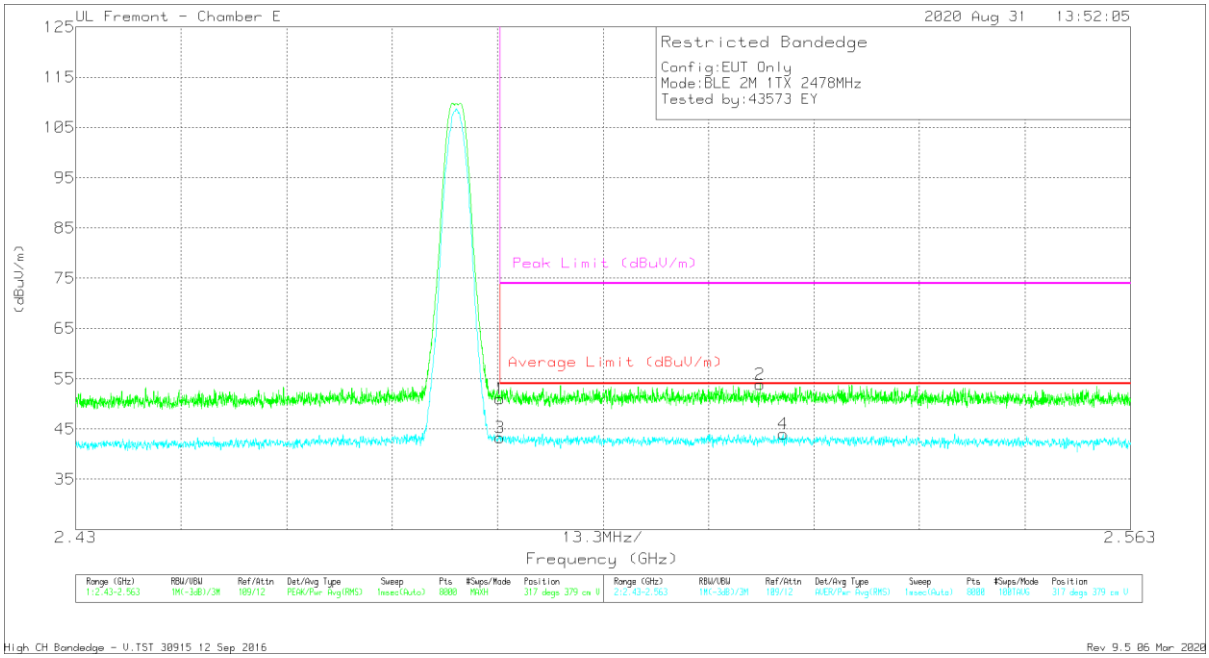
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (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	* 2.48351	36.57	Pk	32.8	-18.4	50.97	-	-	74	-23.03	317	379	V
3	* 2.48351	28.84	RMS	32.8	-18.4	43.24	54	-10.76	-	-	317	379	V
2	2.51629	39.32	Pk	32.9	-18.4	53.82	-	-	74	-20.18	317	379	V
4	2.5192	29.6	RMS	32.8	-18.4	44	54	-10	-	-	317	379	V

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

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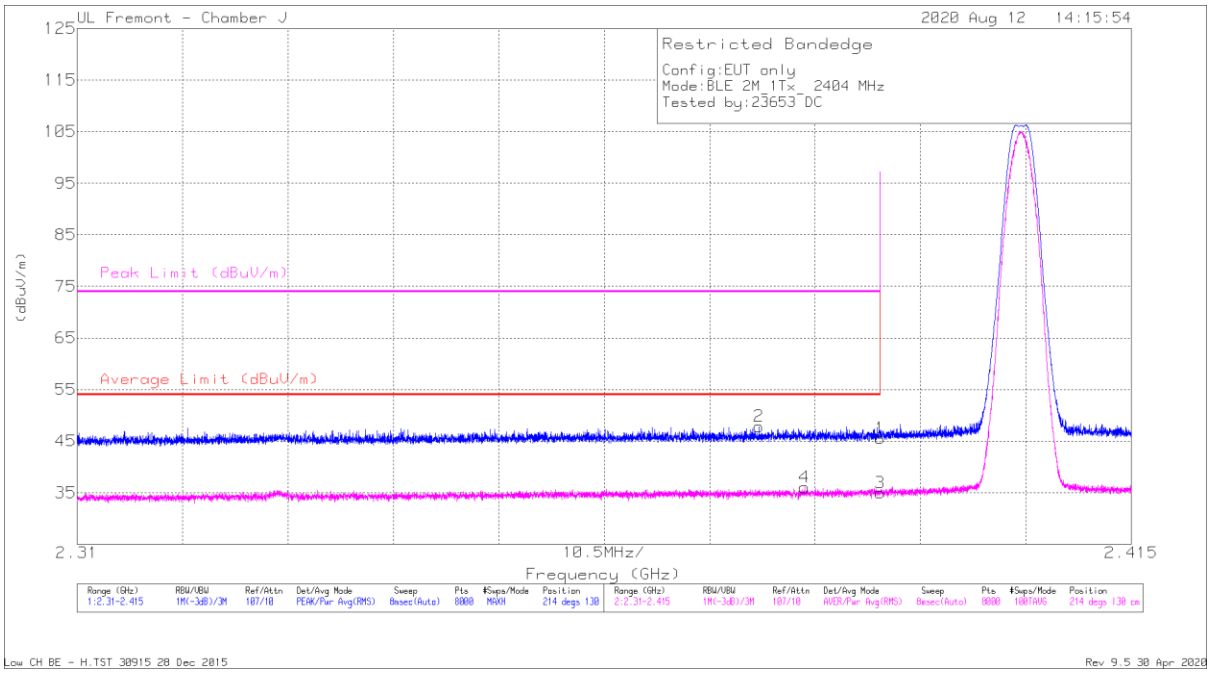
ANT 3

BANDEDGE (LOW CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T963 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	31.27	Pk	29	-14.7	45.57	-	-	74	-28.43	214	130	H
2	* 2.37789	33.53	Pk	29	-14.7	47.83	-	-	74	-26.17	214	130	H
3	* 2.39	20.67	RMS	29	-14.7	34.97	54	-19.03	-	-	214	130	H
4	* 2.38245	21.72	RMS	29	-14.7	36.02	54	-17.98	-	-	214	130	H

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

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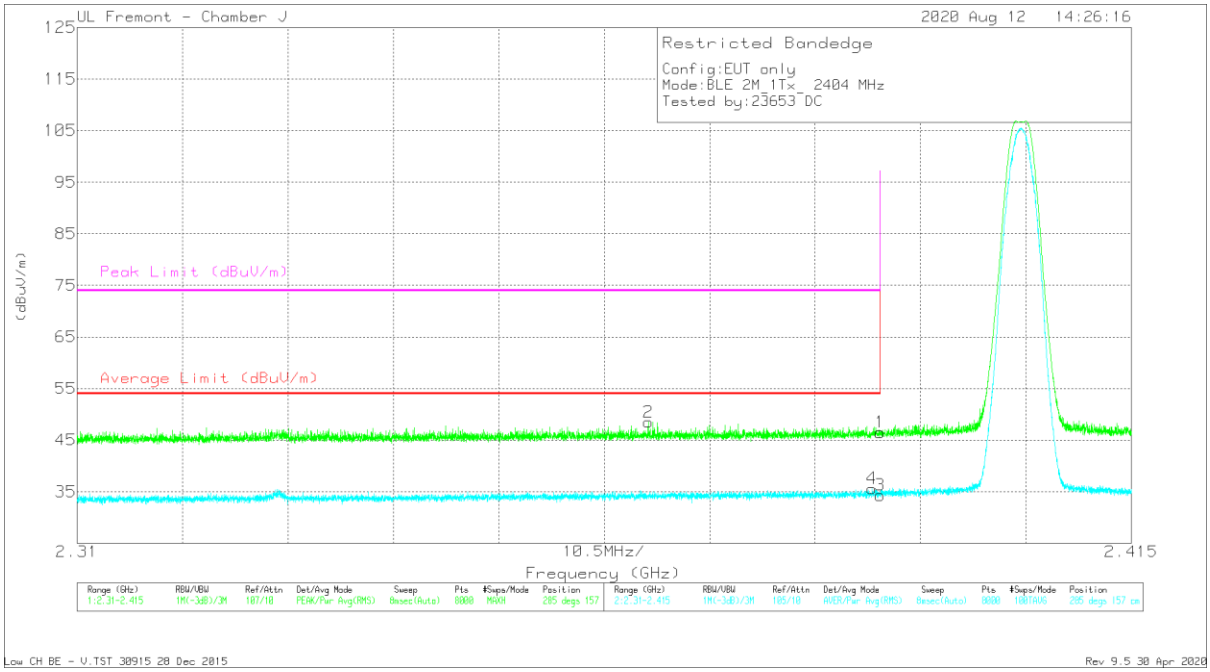
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T963 (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	32.64	Pk	29.5	-14.6	47.54	-	-	74	-26.46	211	163	H
2	2.55319	34	Pk	29.9	-14.4	49.5	-	-	74	-24.5	211	163	H
3	* 2.4835	21.55	RMS	29.5	-14.6	36.45	54	-17.55	-	-	211	163	H
4	* 2.48356	22.73	RMS	29.5	-14.6	37.63	54	-16.37	-	-	211	163	H

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

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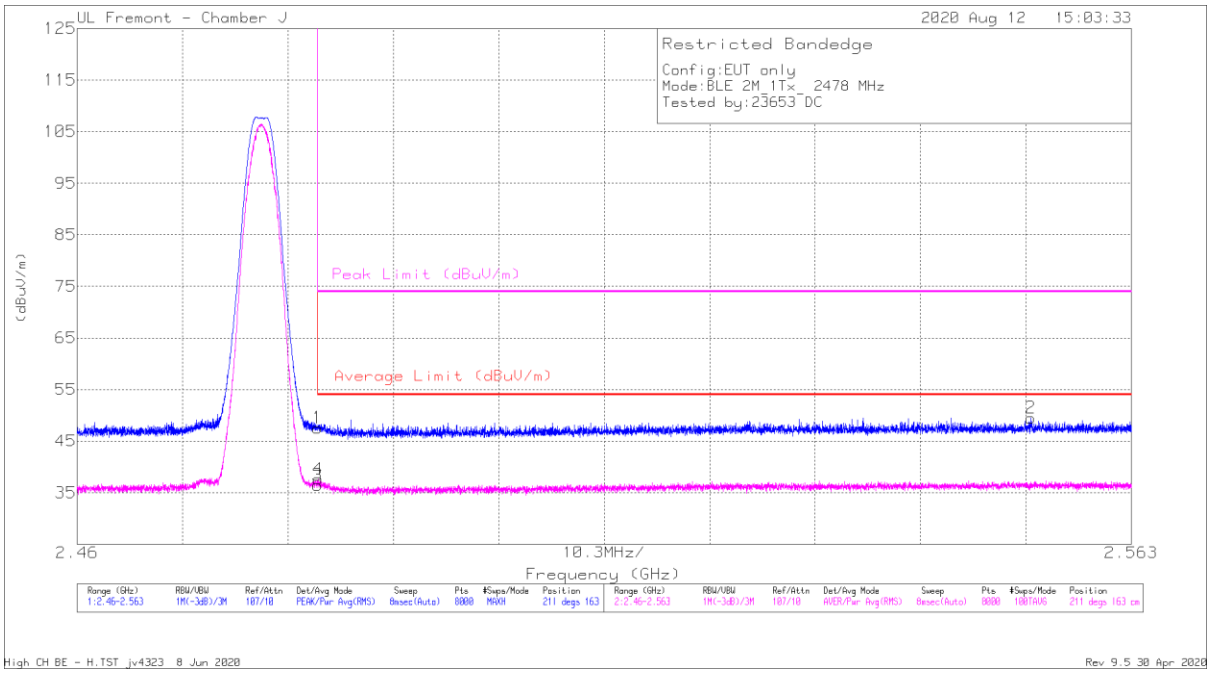
BANDEDGE (HIGH CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T963 (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	32.64	Pk	29.5	-14.6	47.54	-	-	74	-26.46	211	163	H
2	2.55319	34	Pk	29.9	-14.4	49.5	-	-	74	-24.5	211	163	H
3	* 2.4835	21.55	RMS	29.5	-14.6	36.45	54	-17.55	-	-	211	163	H
4	* 2.48356	22.73	RMS	29.5	-14.6	37.63	54	-16.37	-	-	211	163	H

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

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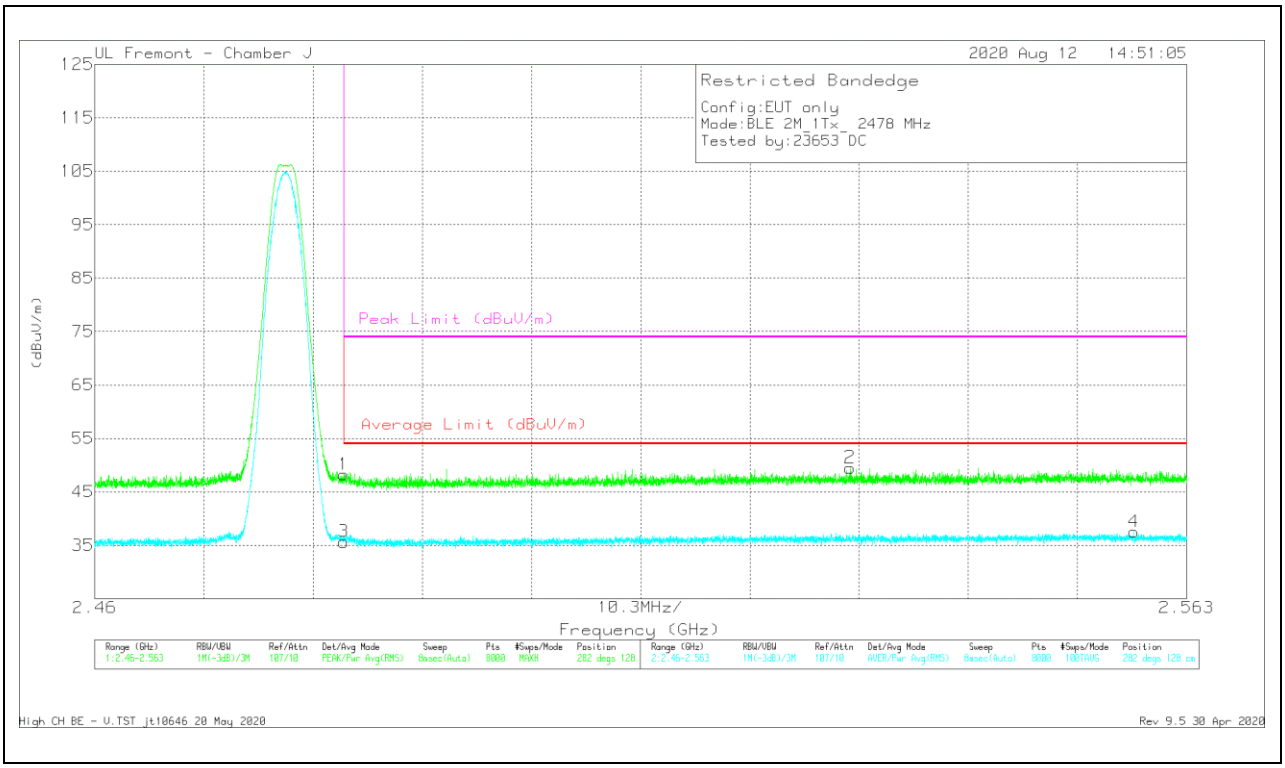
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T963 (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	33.32	Pk	29.5	-14.6	48.22	-	-	74	-25.78	282	128	V
2	2.53125	34.21	Pk	29.8	-14.5	49.51	-	-	74	-24.49	282	128	V
3	* 2.4835	20.76	RMS	29.5	-14.6	35.66	54	-18.34	-	-	282	128	V
4	2.55801	22.11	RMS	29.8	-14.4	37.51	54	-16.49	-	-	282	128	V

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

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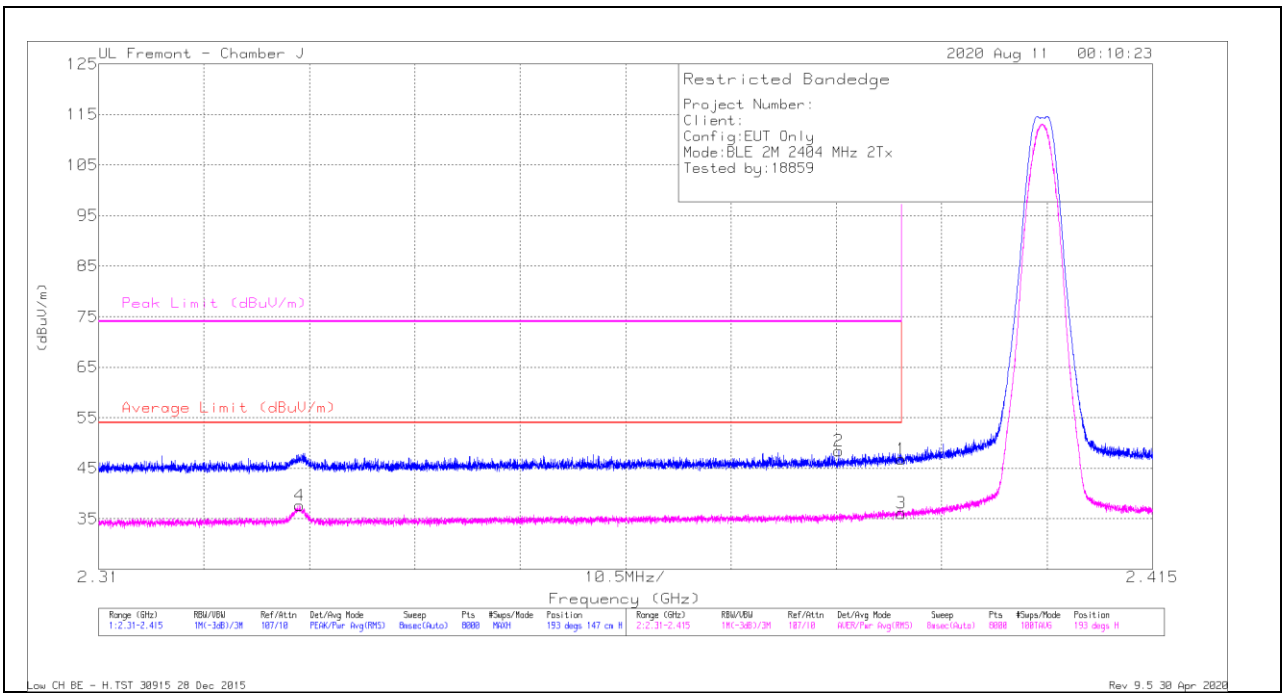
10.2.4. HIGH POWER BLE TXBF (2Mbps)

BANDEDGE (LOW CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T963 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	32.5	Pk	29	-14.7	46.8	-	-	74	-27.2	193	147	H
2	* 2.38373	34.16	Pk	29	-14.7	48.46	-	-	74	-25.54	193	147	H
3	* 2.39	21.78	RMS	29	-14.7	36.08	54	-17.92	-	-	193	147	H
4	* 2.33002	23.58	RMS	28.9	-14.9	37.58	54	-16.42	-	-	193	147	H

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

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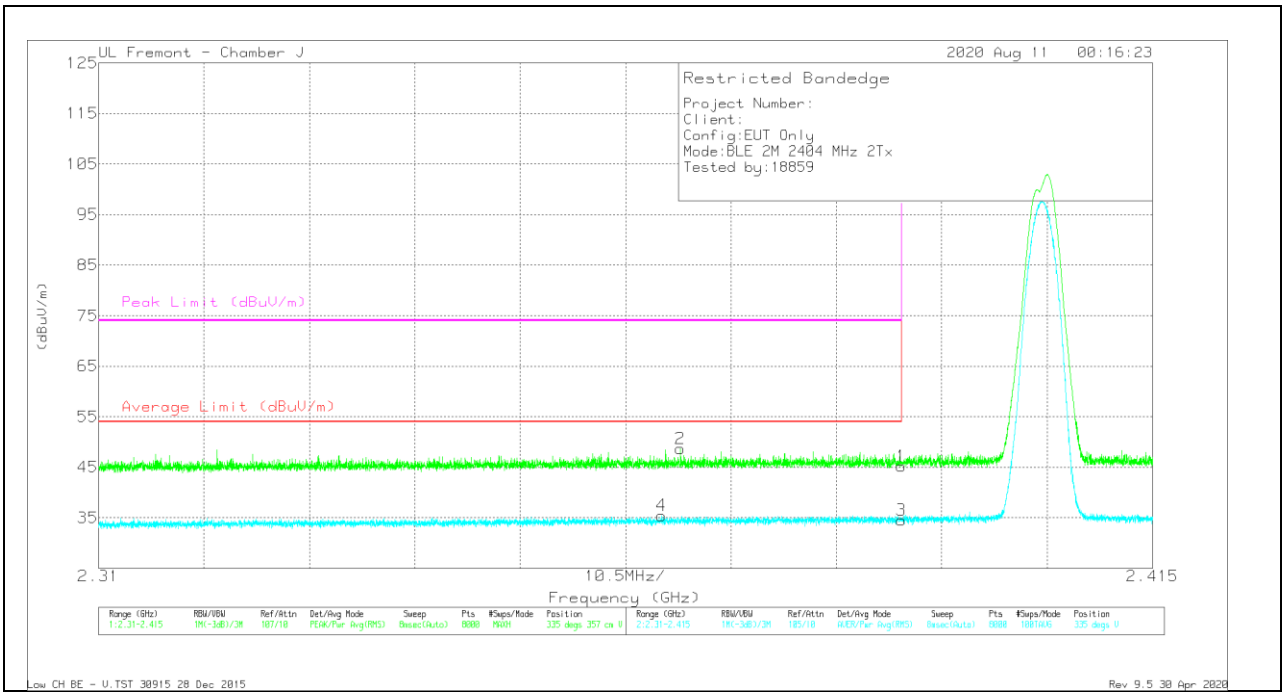
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T963 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	30.86	Pk	29	-14.7	45.16	-	-	74	-28.84	335	357	V
2	* 2.36798	34.5	Pk	29	-14.8	48.7	-	-	74	-25.3	335	357	V
3	* 2.39	20.17	RMS	29	-14.7	34.47	54	-19.53	-	-	335	357	V
4	* 2.3661	21.25	RMS	29	-14.8	35.45	54	-18.55	-	-	335	357	V

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

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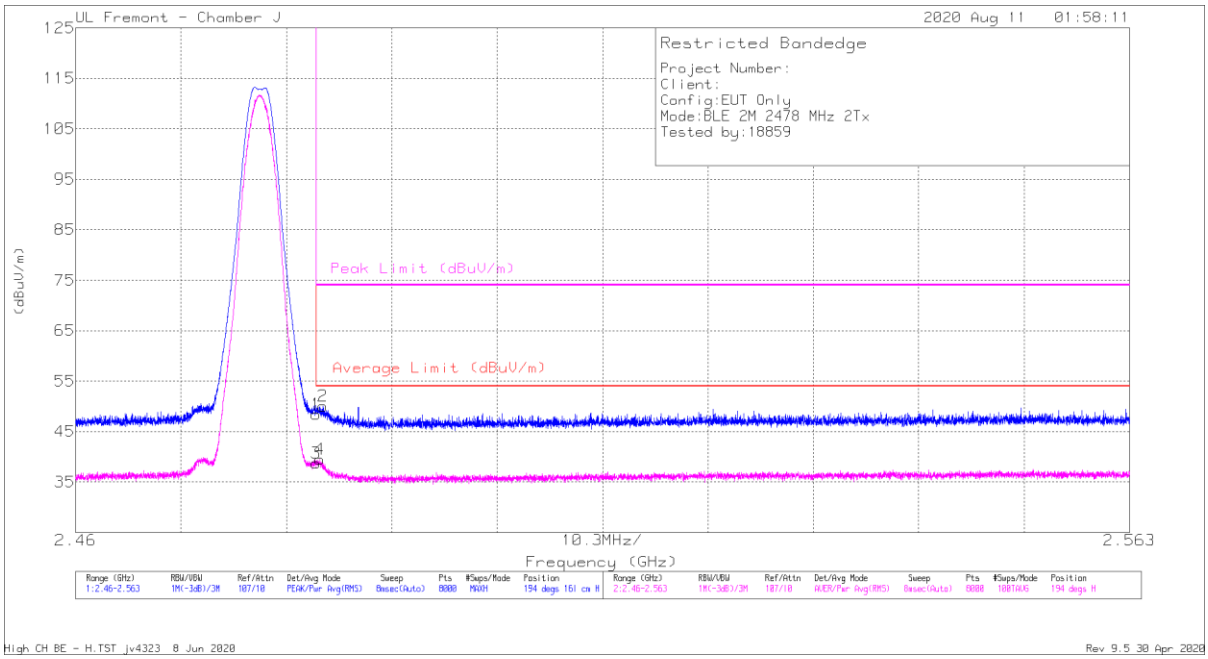
BANDEDGE (HIGH CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T963 (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	33.49	Pk	29.5	-14.6	48.39	-	-	74	-25.61	194	161	H
2	* 2.4842	35.1	Pk	29.5	-14.6	50	-	-	74	-24	194	161	H
3	* 2.4835	23.89	RMS	29.5	-14.6	38.79	54	-15.21	-	-	194	161	H
4	* 2.48386	24.58	RMS	29.5	-14.6	39.48	54	-14.52	-	-	194	161	H

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

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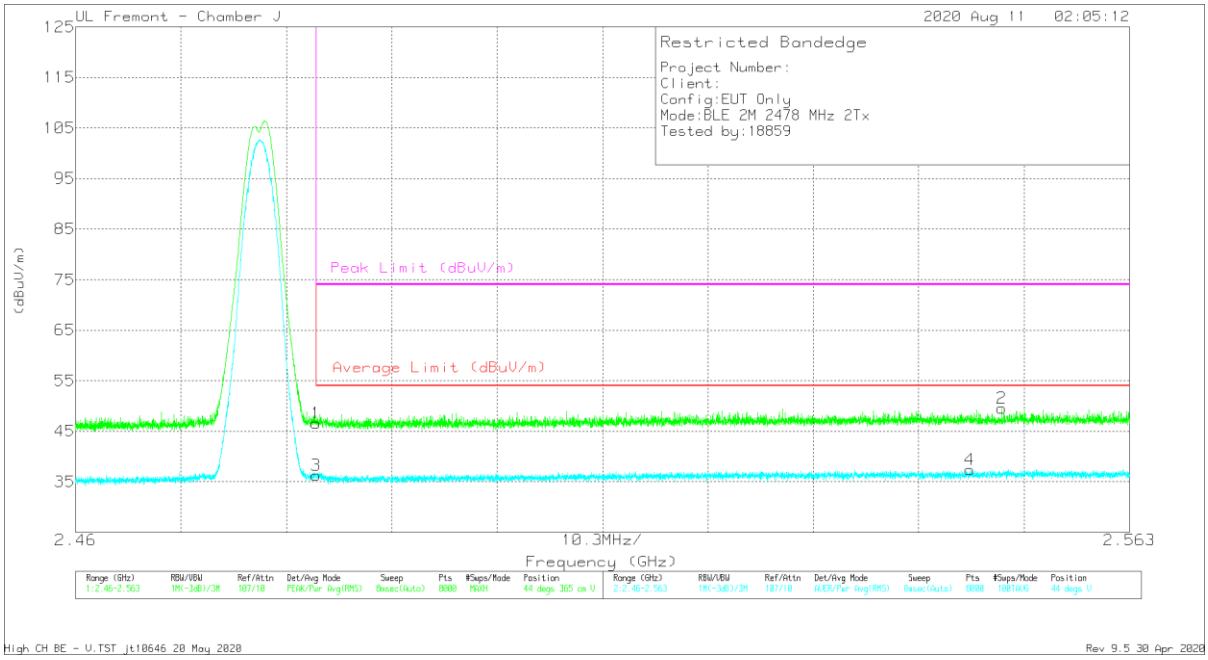
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T963 (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	31.61	Pk	29.5	-14.6	46.51	-	-	74	-27.49	44	365	V
2	2.55053	34.11	Pk	29.9	-14.5	49.51	-	-	74	-24.49	44	365	V
3	* 2.4835	21.38	RMS	29.5	-14.6	36.28	54	-17.72	-	-	44	365	V
4	2.54741	22.01	RMS	29.9	-14.5	37.41	54	-16.59	-	-	44	365	V

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

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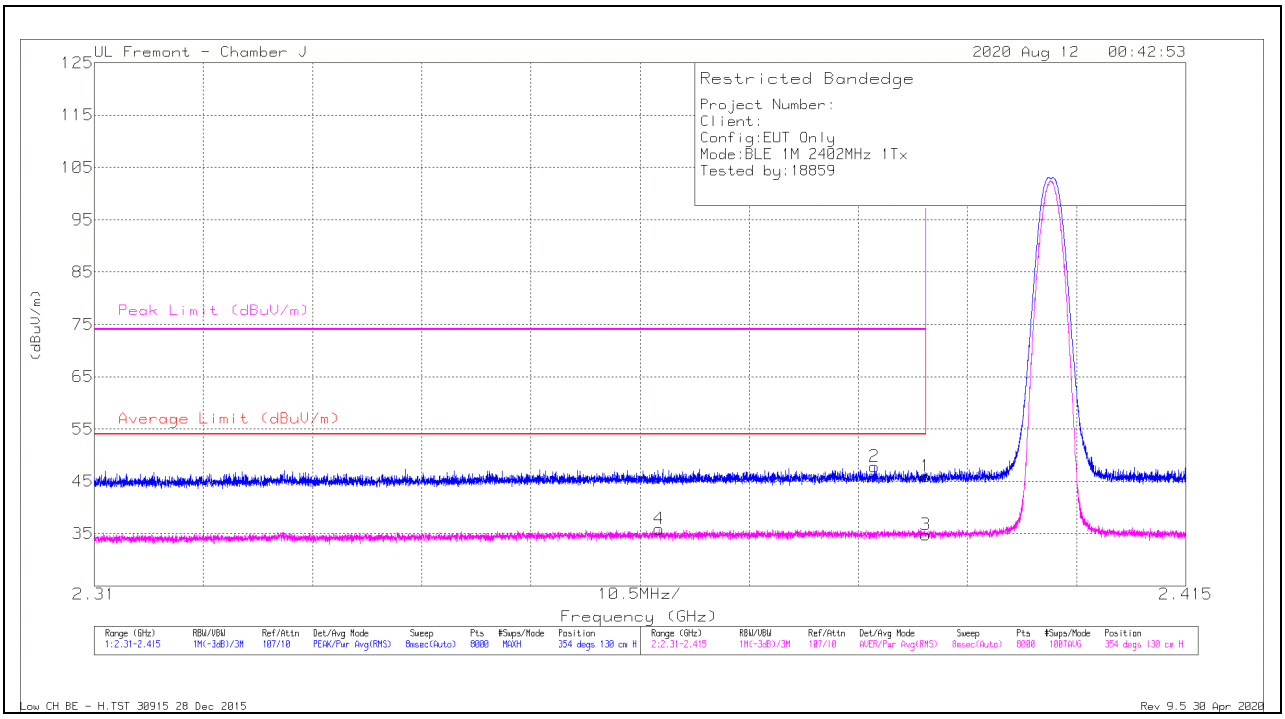
10.2.5. LOW POWER BLE (1Mbps)

ANT 4

BANDEDGE (LOW CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T963 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	31.63	Pk	29	-14.7	45.93	-	-	74	-28.07	354	130	H
2	* 2.38506	33.56	Pk	29	-14.7	47.86	-	-	74	-26.14	354	130	H
3	* 2.39	20.48	RMS	29	-14.7	34.78	54	-19.22	-	-	354	130	H
4	* 2.36433	21.66	RMS	29	-14.8	35.86	54	-18.14	-	-	354	130	H

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

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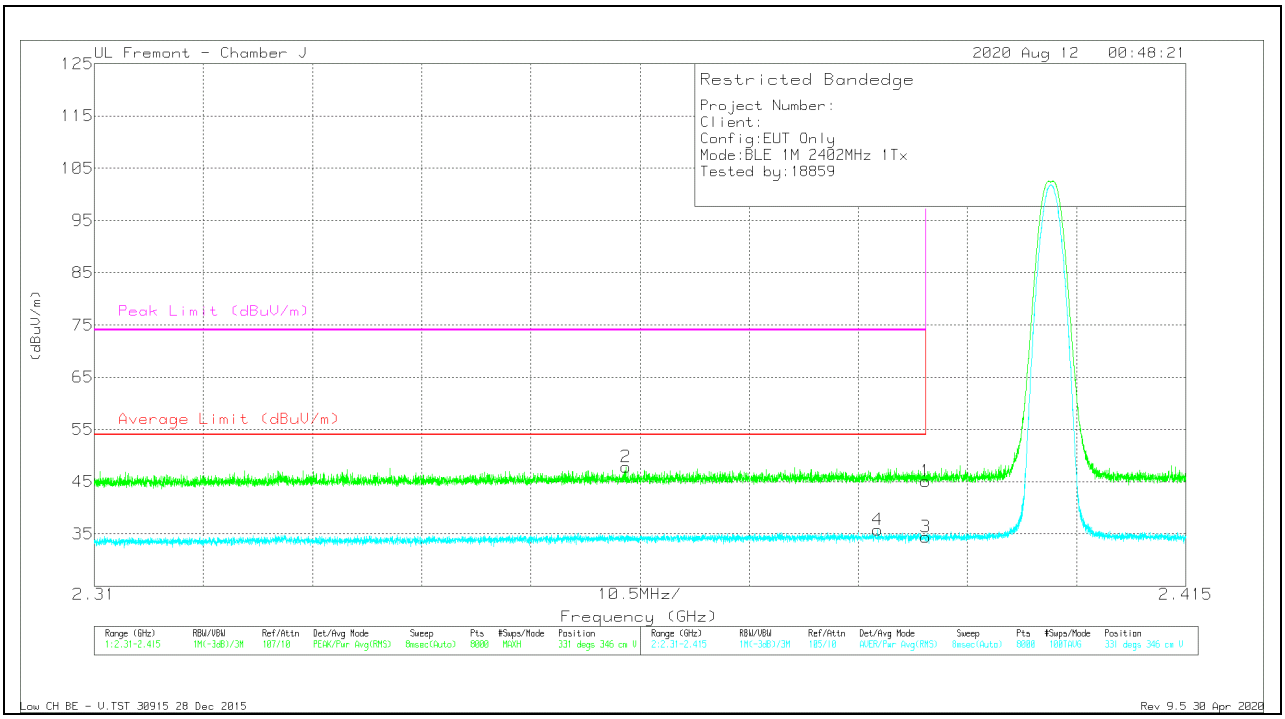
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T963 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	30.83	Pk	29	-14.7	45.13	-	-	74	-28.87	331	346	V
2	* 2.36114	33.58	Pk	29	-14.8	47.78	-	-	74	-26.22	331	346	V
3	* 2.39	20.11	RMS	29	-14.7	34.41	54	-19.59	-	-	331	346	V
4	* 2.38539	21.46	RMS	29	-14.7	35.76	54	-18.24	-	-	331	346	V

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

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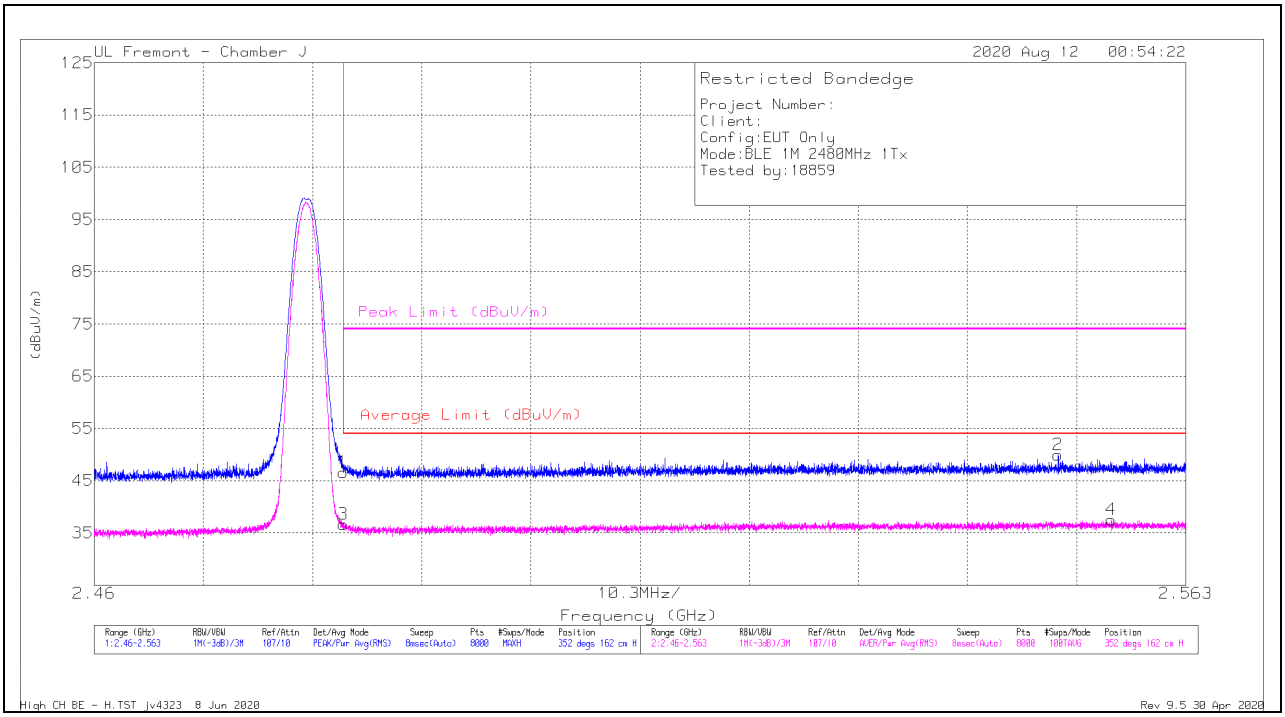
BANDEDGE (HIGH CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T963 (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	31.69	Pk	29.5	-14.6	46.59	-	-	74	-27.41	352	162	H
2	2.55096	34.49	Pk	29.9	-14.5	49.89	-	-	74	-24.11	352	162	H
3	* 2.4835	21.73	RMS	29.5	-14.6	36.63	54	-17.37	-	-	352	162	H
4	2.55599	22.07	RMS	29.8	-14.4	37.47	54	-16.53	-	-	352	162	H

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

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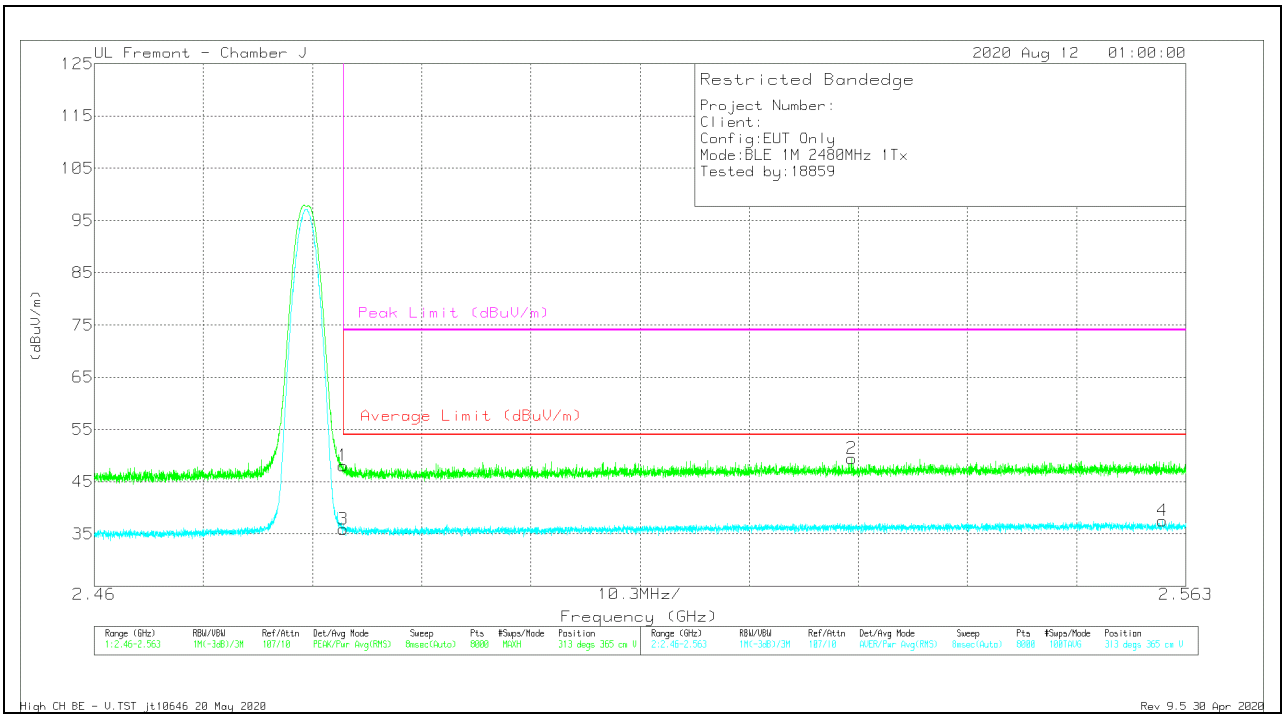
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T963 (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	33.2	Pk	29.5	-14.6	48.1	-	-	74	-25.9	313	365	V
2	2.53145	34.14	Pk	29.8	-14.5	49.44	-	-	74	-24.56	313	365	V
3	* 2.4835	21.03	RMS	29.5	-14.6	35.93	54	-18.07	-	-	313	365	V
4	2.56079	22.09	RMS	29.8	-14.4	37.49	54	-16.51	-	-	313	365	V

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

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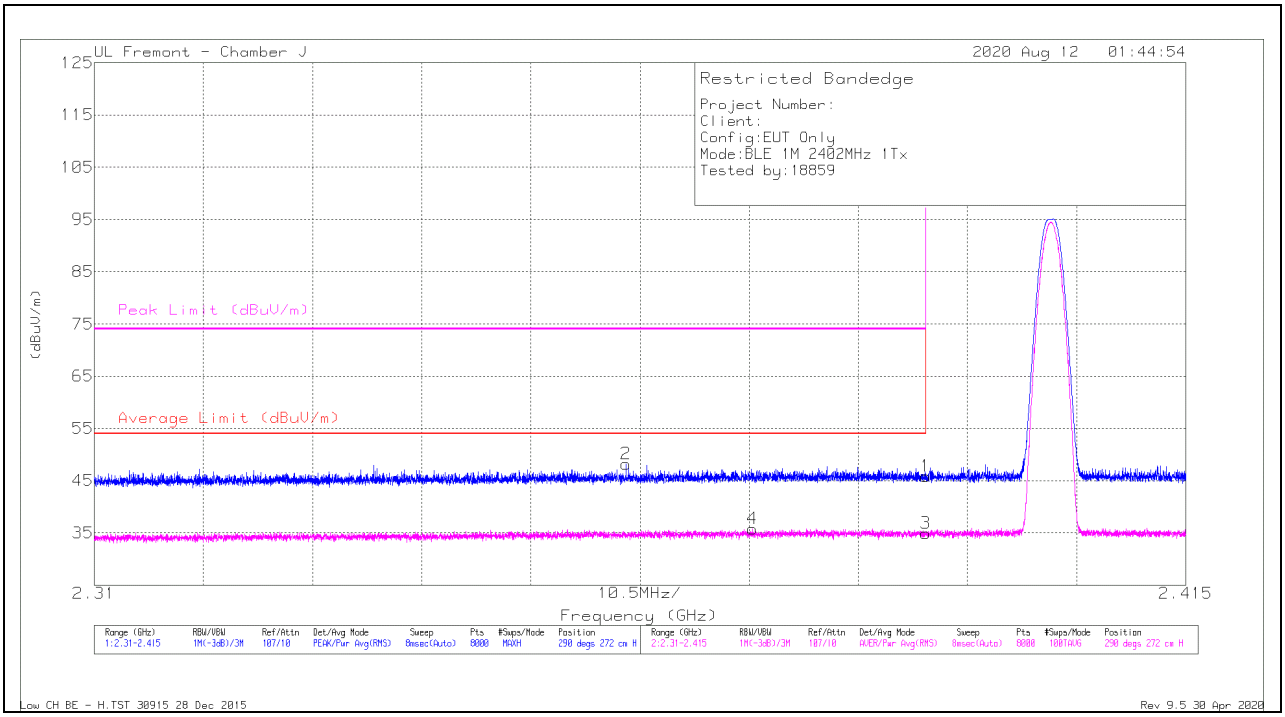
ANT 3

BANDEDGE (LOW CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T963 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	31.57	Pk	29	-14.7	45.87	-	-	74	-28.13	290	272	H
2	* 2.36114	33.98	Pk	29	-14.8	48.18	-	-	74	-25.82	290	272	H
3	* 2.39	20.6	RMS	29	-14.7	34.9	54	-19.1	-	-	290	272	H
4	* 2.3733	21.54	RMS	29	-14.8	35.74	54	-18.26	-	-	290	272	H

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

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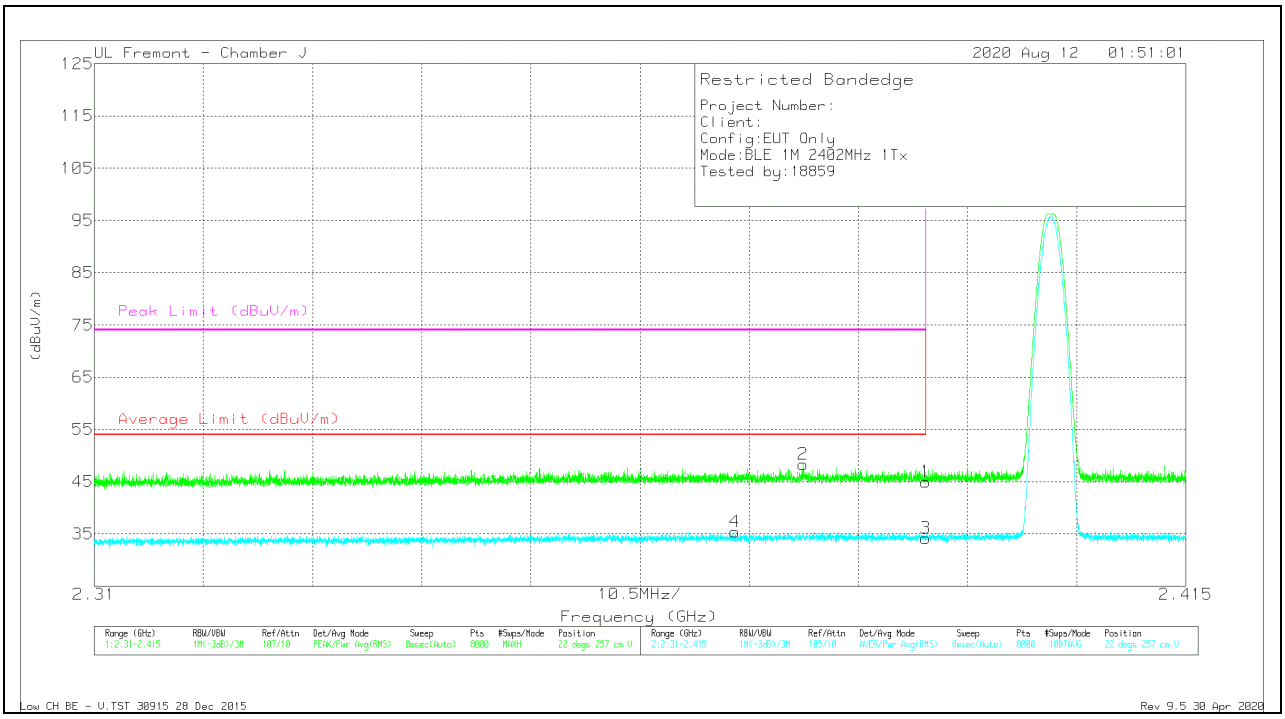
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T963 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	30.69	Pk	29	-14.7	44.99	-	-	74	-29.01	22	257	V
2	* 2.37821	34.06	Pk	29	-14.7	48.36	-	-	74	-25.64	22	257	V
3	* 2.39	19.83	RMS	29	-14.7	34.13	54	-19.87	-	-	22	257	V
4	* 2.37166	21.2	RMS	29	-14.8	35.4	54	-18.6	-	-	22	257	V

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

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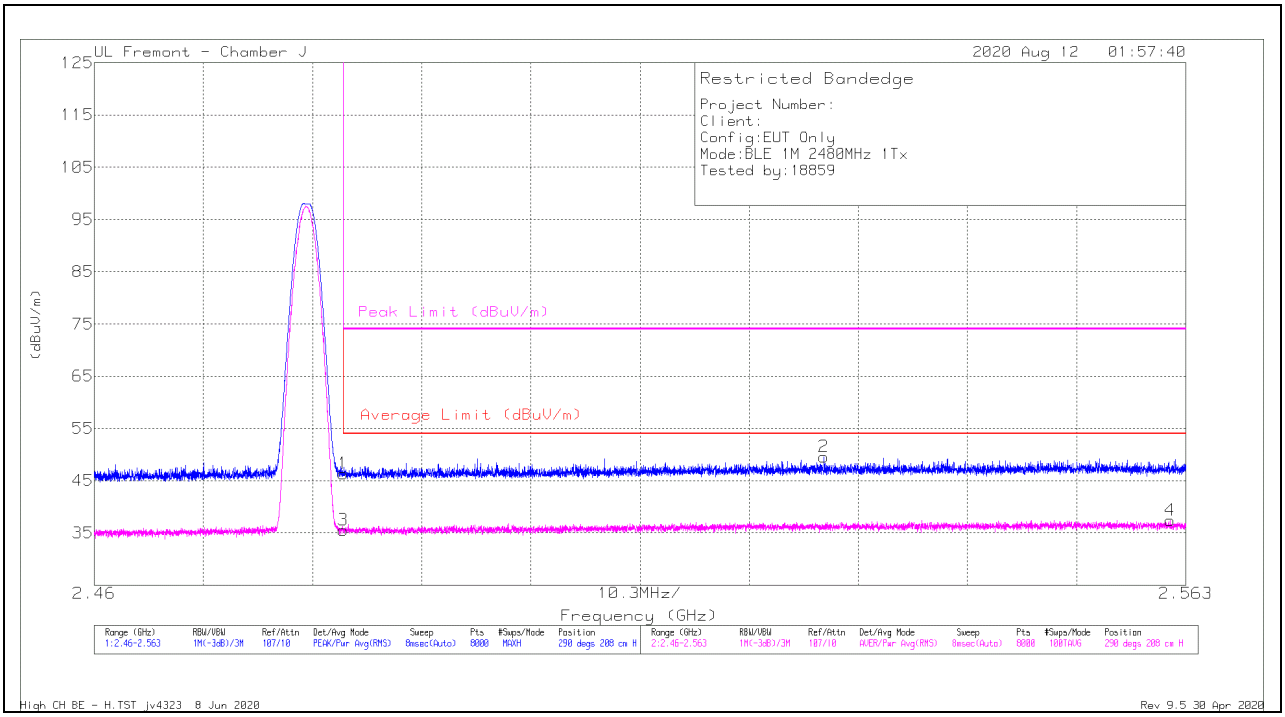
BANDEDGE (HIGH CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T963 (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	31.37	Pk	29.5	-14.6	46.27	-	-	74	-27.73	290	208	H
2	2.52884	34.2	Pk	29.8	-14.5	49.5	-	-	74	-24.5	290	208	H
3	* 2.4835	20.57	RMS	29.5	-14.6	35.47	54	-18.53	-	-	290	208	H
4	2.56154	22	RMS	29.8	-14.4	37.4	54	-16.6	-	-	290	208	H

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

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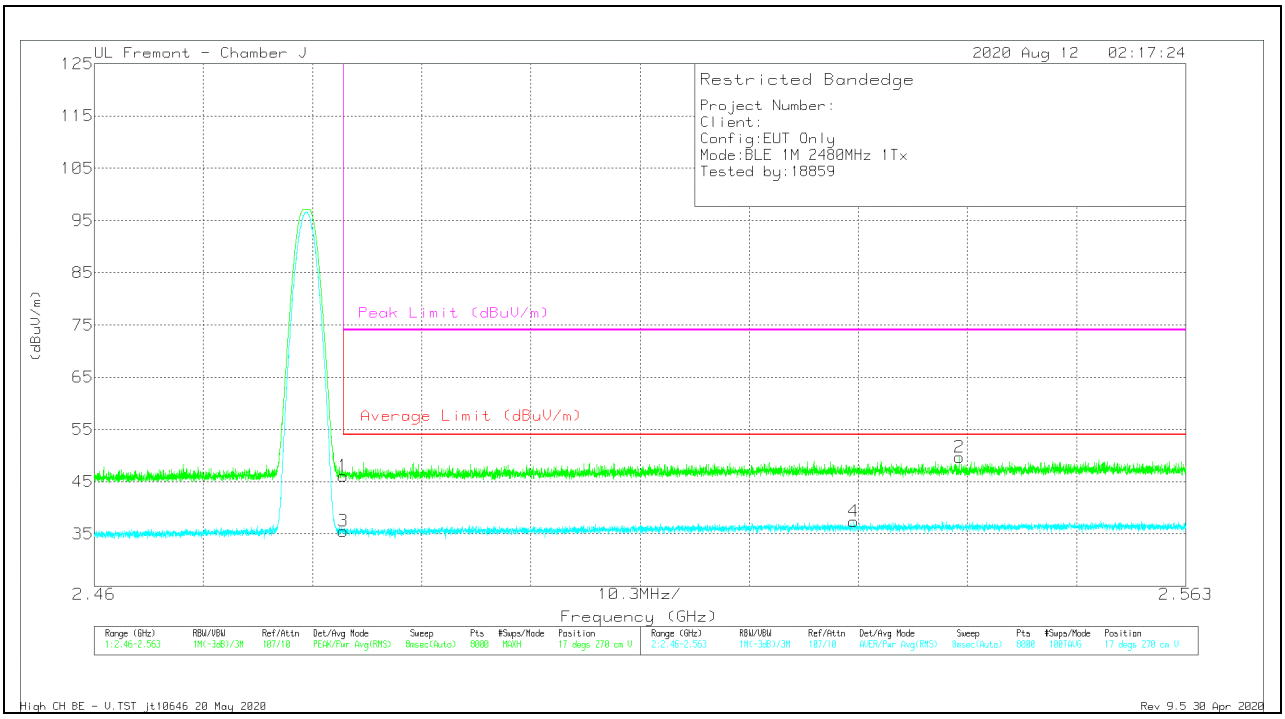
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T963 (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	31.21	Pk	29.5	-14.6	46.11	-	-	74	-27.89	17	270	V
2	2.54164	34.4	Pk	29.8	-14.5	49.7	-	-	74	-24.3	17	270	V
3	* 2.4835	20.65	RMS	29.5	-14.6	35.55	54	-18.45	-	-	17	270	V
4	2.53165	22.09	RMS	29.8	-14.5	37.39	54	-16.61	-	-	17	270	V

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

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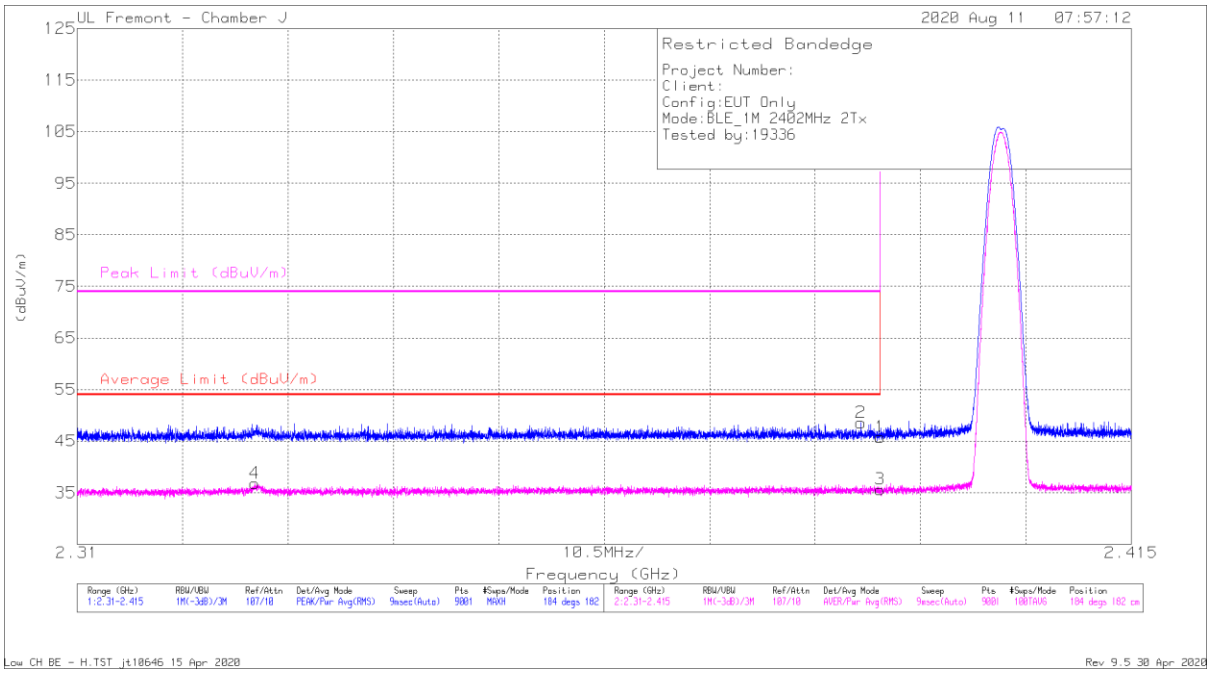
10.2.6. LOW POWER BLE TXBF (1Mbps)

BANDEDGE (LOW CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T963 (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	* 2.38999	42.26	Pk	29	-25.5	45.76	-	-	74	-28.24	184	182	H
2	* 2.38806	45.07	Pk	29	-25.5	48.57	-	-	74	-25.43	184	182	H
3	* 2.38999	32.13	RMS	29	-25.5	35.63	54	-18.37	-	-	184	182	H
4	* 2.32768	33.52	RMS	28.9	-25.6	36.82	54	-17.18	-	-	184	182	H

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

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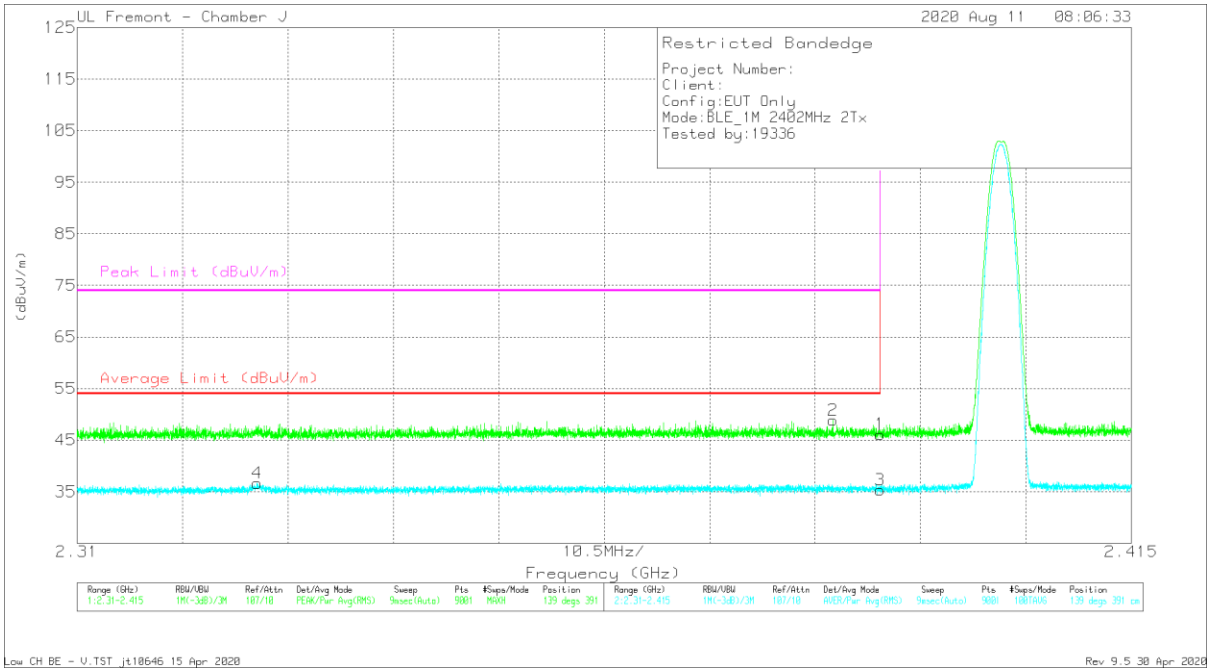
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T963 (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	* 2.38999	42.57	Pk	29	-25.5	46.07	-	-	74	-27.93	139	391	V
2	* 2.38528	45.36	Pk	29	-25.5	48.86	-	-	74	-25.14	139	391	V
3	* 2.38999	31.84	RMS	29	-25.5	35.34	54	-18.66	-	-	139	391	V
4	* 2.32796	33.33	RMS	28.9	-25.6	36.63	54	-17.37	-	-	139	391	V

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

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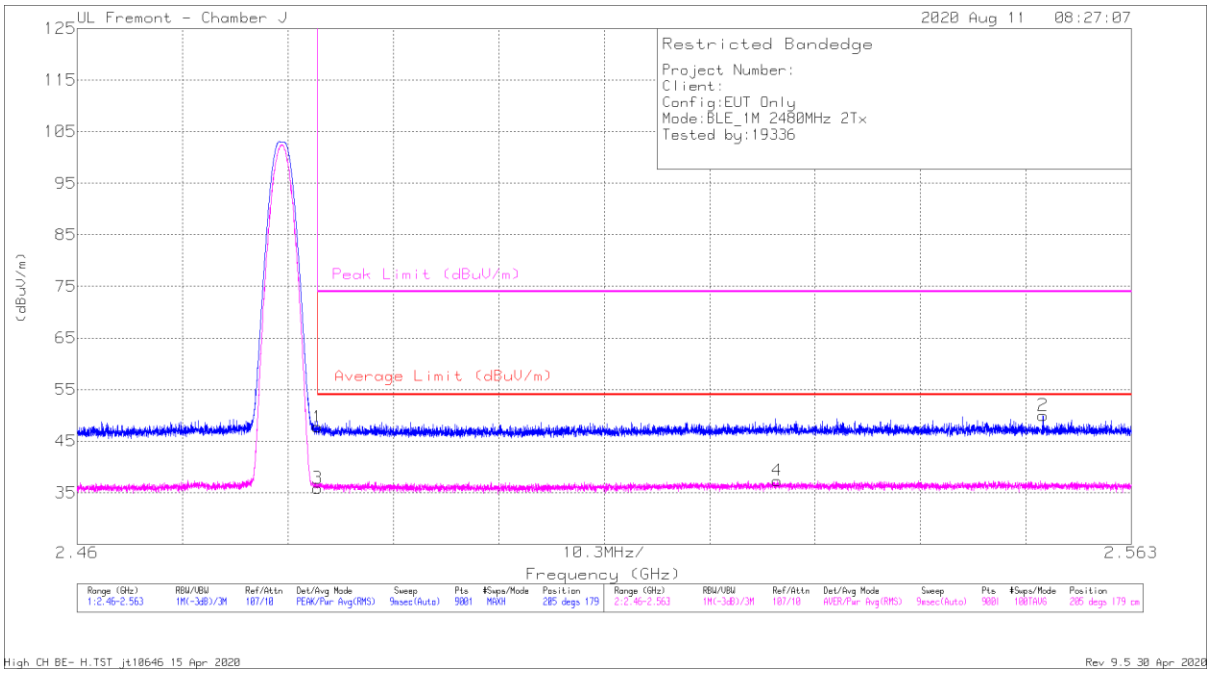
BANDEDGE (HIGH CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T963 (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	* 2.48351	43.75	Pk	29.5	-25.5	47.75	-	-	74	-26.25	205	179	H
2	2.55437	45.49	Pk	29.9	-25.4	49.99	-	-	74	-24.01	205	179	H
3	* 2.48351	31.86	RMS	29.5	-25.5	35.86	54	-18.14	-	-	205	179	H
4	2.5284	32.94	RMS	29.8	-25.4	37.34	54	-16.66	-	-	205	179	H

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

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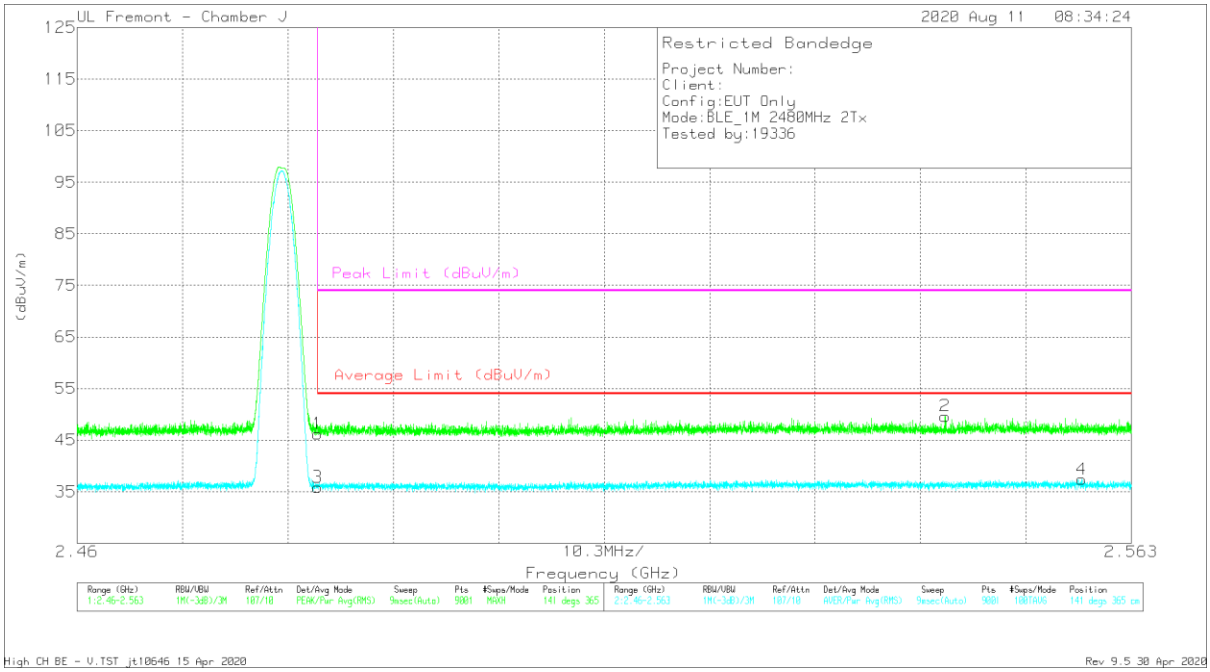
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T963 (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	* 2.48351	42.24	Pk	29.5	-25.5	46.24	-	-	74	-27.76	141	365	V
2	2.5448	45.24	Pk	29.8	-25.4	49.64	-	-	74	-24.36	141	365	V
3	* 2.48351	31.84	RMS	29.5	-25.5	35.84	54	-18.16	-	-	141	365	V
4	2.55816	32.99	RMS	29.8	-25.4	37.39	54	-16.61	-	-	141	365	V

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

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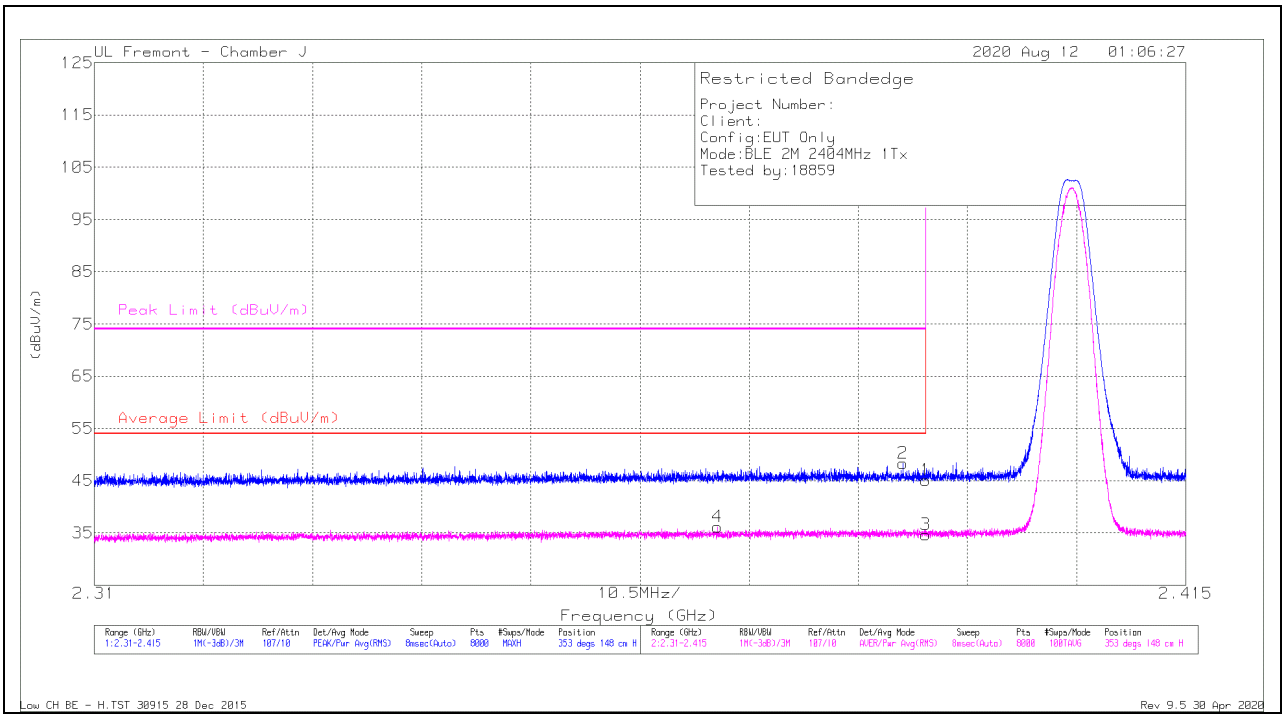
10.2.7. LOW POWER BLE (2Mbps)

ANT 4

BANDEDGE (LOW CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T963 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	30.81	Pk	29	-14.7	45.11	-	-	74	-28.89	353	148	H
2	* 2.38779	34.04	Pk	29	-14.7	48.34	-	-	74	-25.66	353	148	H
3	* 2.39	20.32	RMS	29	-14.7	34.62	54	-19.38	-	-	353	148	H
4	* 2.36995	21.93	RMS	29	-14.8	36.13	54	-17.87	-	-	353	148	H

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

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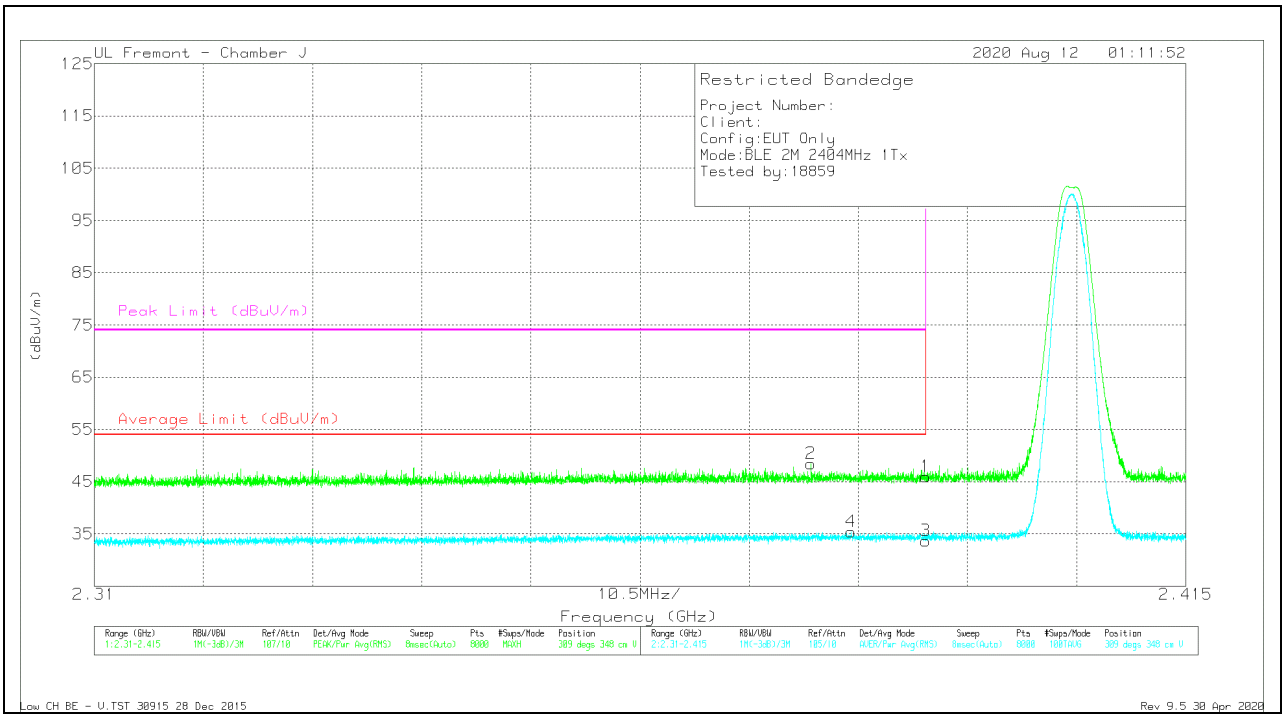
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T963 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	31.63	Pk	29	-14.7	45.93	-	-	74	-28.07	309	348	V
2	* 2.37896	34.14	Pk	29	-14.7	48.44	-	-	74	-25.56	309	348	V
3	* 2.39	19.3	RMS	29	-14.7	33.6	54	-20.4	-	-	309	348	V
4	* 2.3828	21.04	RMS	29	-14.7	35.34	54	-18.66	-	-	309	348	V

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

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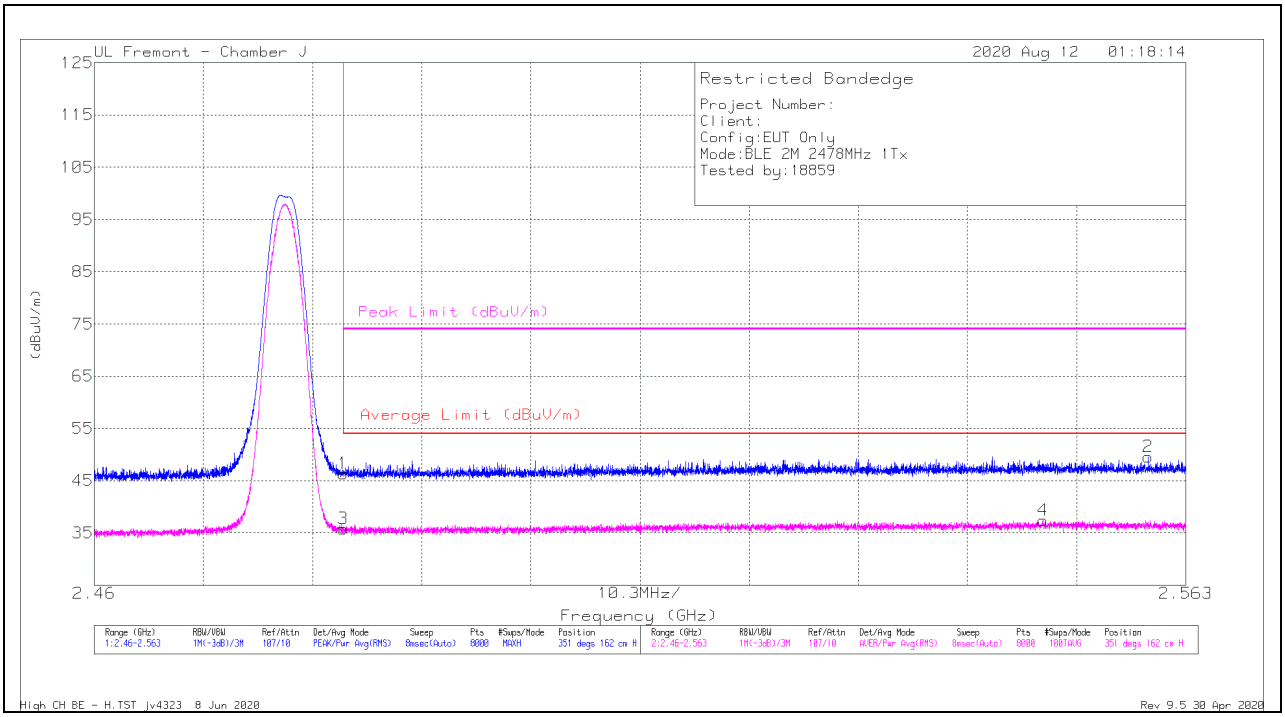
BANDEDGE (HIGH CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T963 (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	31.45	Pk	29.5	-14.6	46.35	-	-	74	-27.65	351	162	H
2	2.55946	34.14	Pk	29.8	-14.4	49.54	-	-	74	-24.46	351	162	H
3	* 2.4835	20.82	RMS	29.5	-14.6	35.72	54	-18.28	-	-	351	162	H
4	2.54952	21.94	RMS	29.9	-14.5	37.34	54	-16.66	-	-	351	162	H

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

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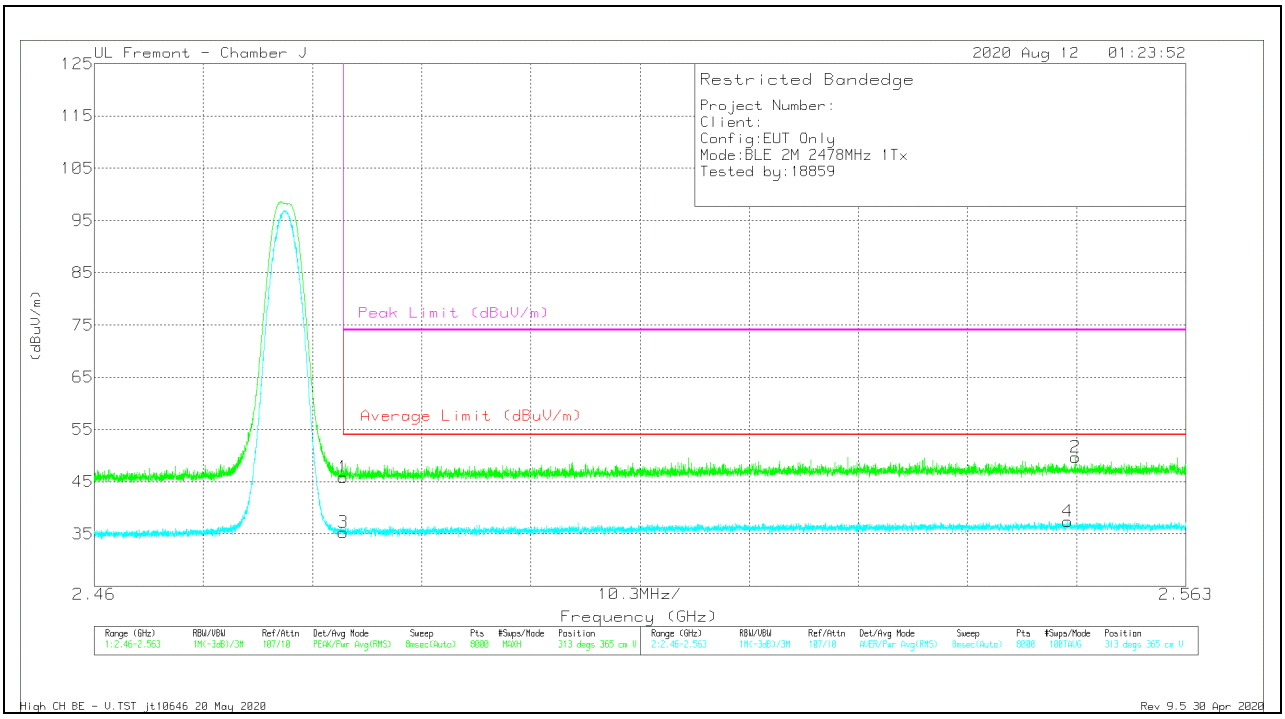
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T963 (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	30.9	Pk	29.5	-14.6	45.8	-	-	74	-28.2	313	365	V
2	2.55259	34.22	Pk	29.9	-14.4	49.72	-	-	74	-24.28	313	365	V
3	* 2.4835	20.37	RMS	29.5	-14.6	35.27	54	-18.73	-	-	313	365	V
4	2.55185	21.87	RMS	29.9	-14.4	37.37	54	-16.63	-	-	313	365	V

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

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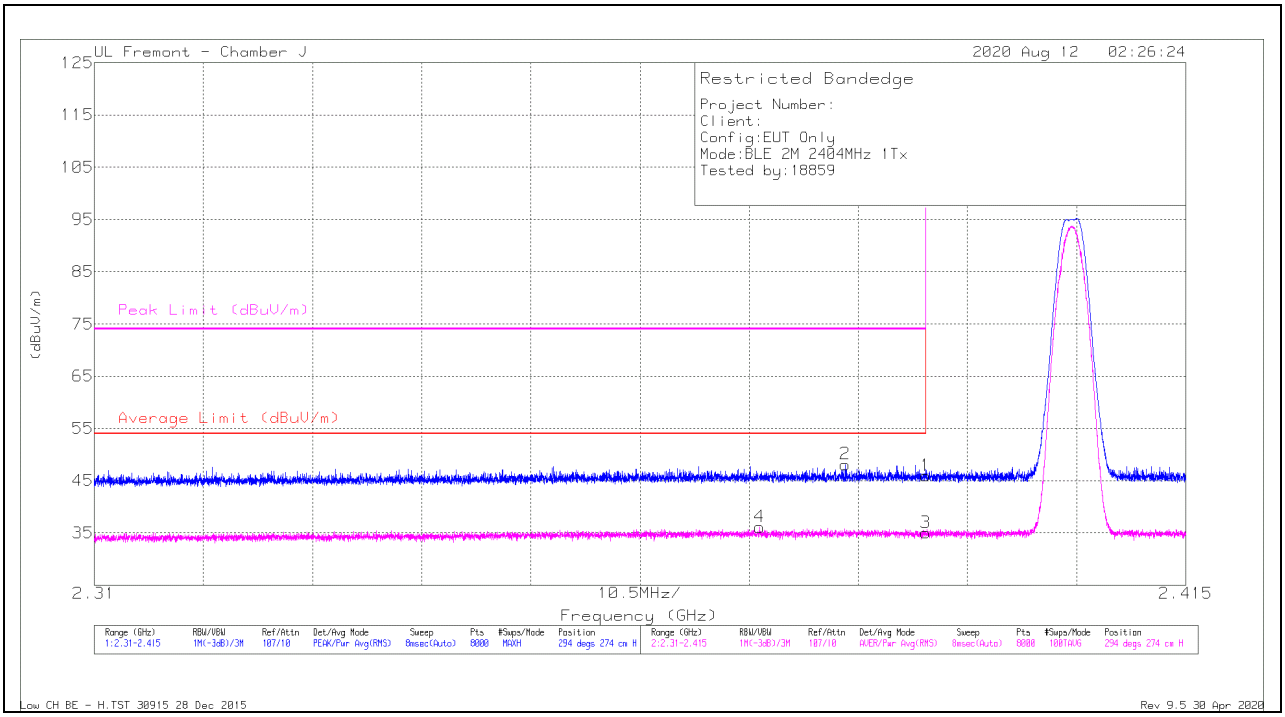
ANT 3

BANDEDGE (LOW CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T963 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	31.6	Pk	29	-14.7	45.9	-	-	74	-28.1	294	274	H
2	* 2.38225	33.82	Pk	29	-14.7	48.12	-	-	74	-25.88	294	274	H
3	* 2.39	20.72	RMS	29	-14.7	35.02	54	-18.98	-	-	294	274	H
4	* 2.37398	21.88	RMS	29	-14.8	36.08	54	-17.92	-	-	294	274	H

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

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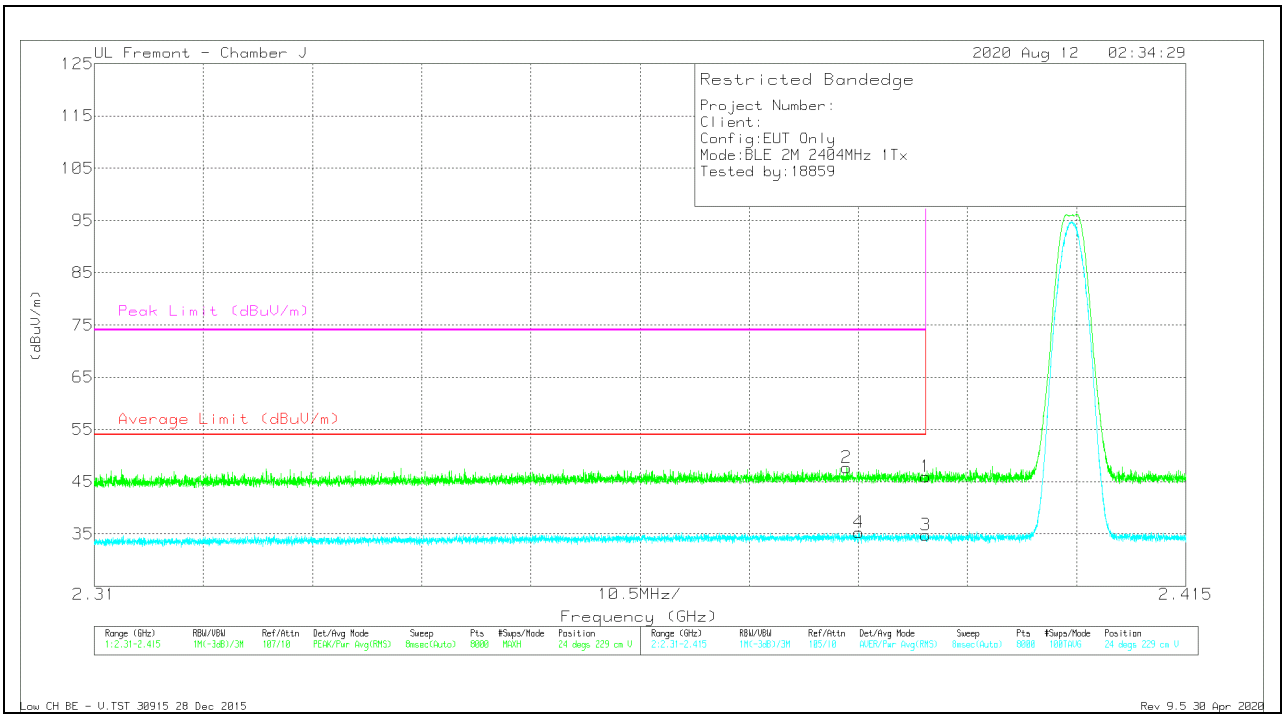
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T963 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	31.62	Pk	29	-14.7	45.92	-	-	74	-28.08	24	229	V
2	* 2.38236	33.41	Pk	29	-14.7	47.71	-	-	74	-26.29	24	229	V
3	* 2.39	20.52	RMS	29	-14.7	34.82	54	-19.18	-	-	24	229	V
4	* 2.38355	20.97	RMS	29	-14.7	35.27	54	-18.73	-	-	24	229	V

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

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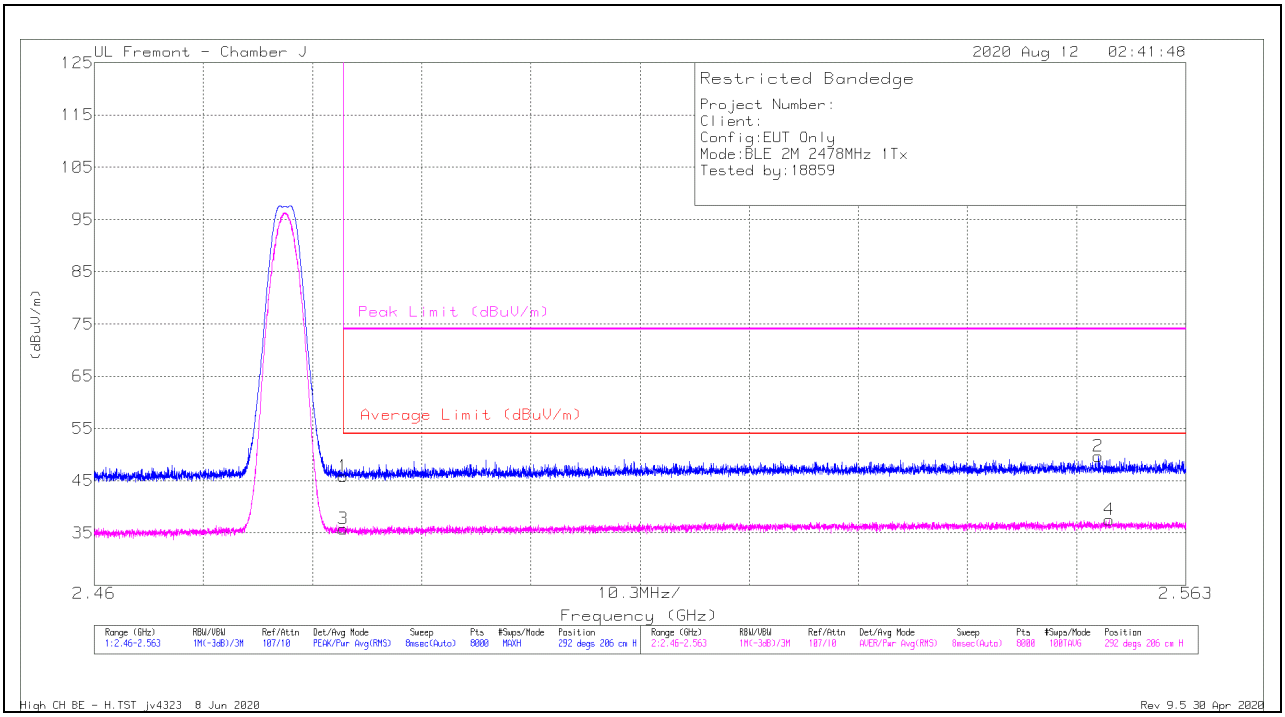
BANDEDGE (HIGH CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T963 (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	30.89	Pk	29.5	-14.6	45.79	-	-	74	-28.21	292	206	H
2	2.55476	34.15	Pk	29.9	-14.4	49.65	-	-	74	-24.35	292	206	H
3	* 2.4835	20.89	RMS	29.5	-14.6	35.79	54	-18.21	-	-	292	206	H
4	2.55578	22.05	RMS	29.8	-14.4	37.45	54	-16.55	-	-	292	206	H

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

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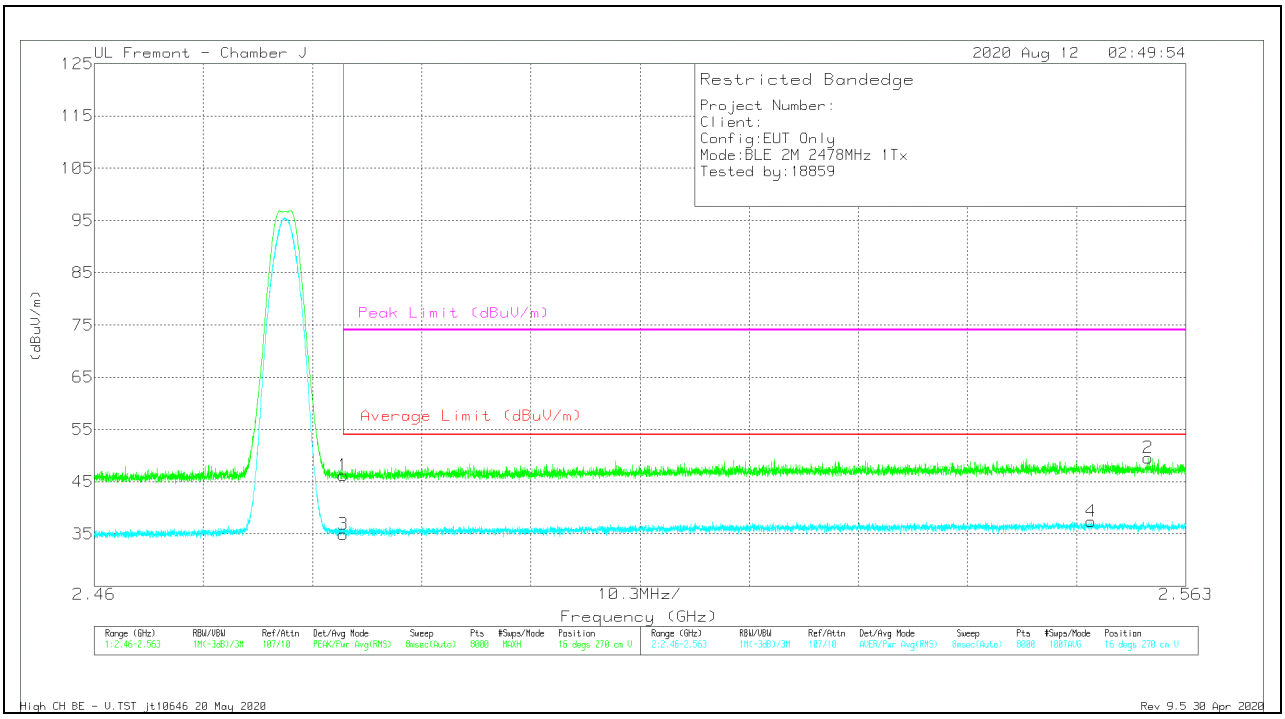
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T963 (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	31.27	Pk	29.5	-14.6	46.17	-	-	74	-27.83	16	270	V
2	2.55942	34.17	Pk	29.8	-14.4	49.57	-	-	74	-24.43	16	270	V
3	* 2.4835	19.95	RMS	29.5	-14.6	34.85	54	-19.15	-	-	16	270	V
4	2.55407	21.87	RMS	29.9	-14.4	37.37	54	-16.63	-	-	16	270	V

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

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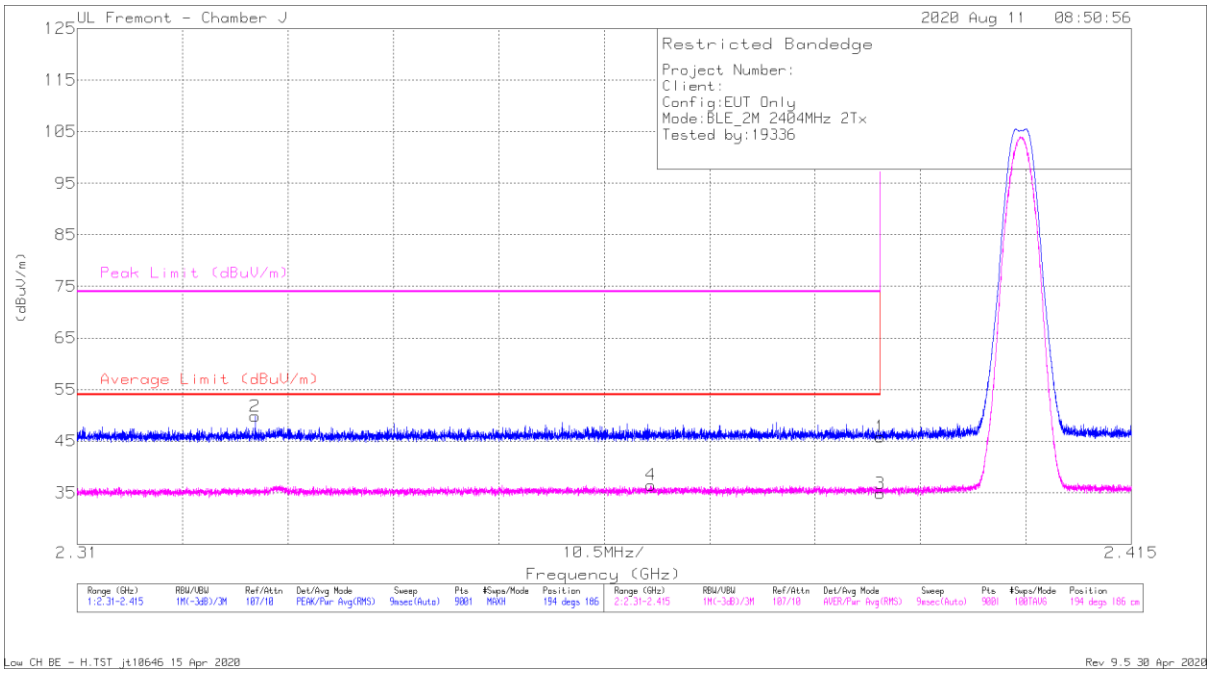
10.2.8. LOW POWER BLE TXBF (2Mbps)

BANDEDGE (LOW CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T963 (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	* 2.38999	42.32	Pk	29	-25.5	45.82	-	-	74	-28.18	194	186	H
2	* 2.32772	46.53	Pk	28.9	-25.6	49.83	-	-	74	-24.17	194	186	H
3	* 2.38999	31.32	RMS	29	-25.5	34.82	54	-19.18	-	-	194	186	H
4	* 2.36715	32.99	RMS	29	-25.5	36.49	54	-17.51	-	-	194	186	H

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

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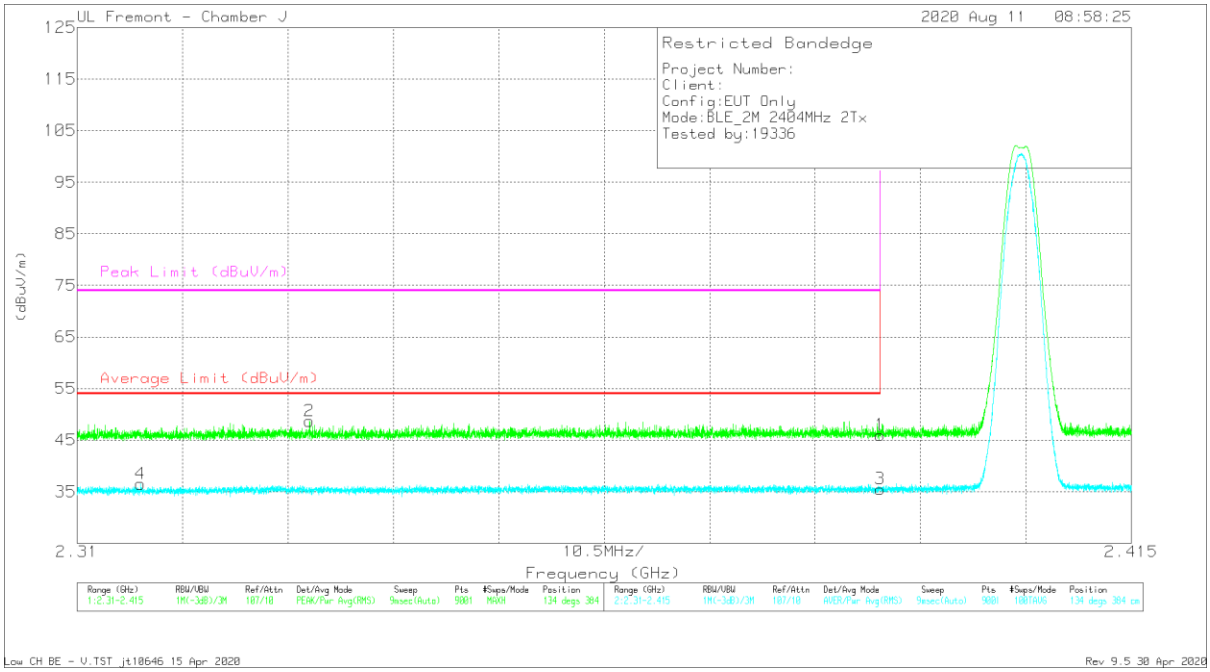
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T963 (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	* 2.38999	42.46	Pk	29	-25.5	45.96	-	-	74	-28.04	134	384	V
2	* 2.33315	45.4	Pk	28.9	-25.6	48.7	-	-	74	-25.3	134	384	V
3	* 2.38999	32.01	RMS	29	-25.5	35.51	54	-18.49	-	-	134	384	V
4	* 2.3163	33.32	RMS	28.7	-25.5	36.52	54	-17.48	-	-	134	384	V

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

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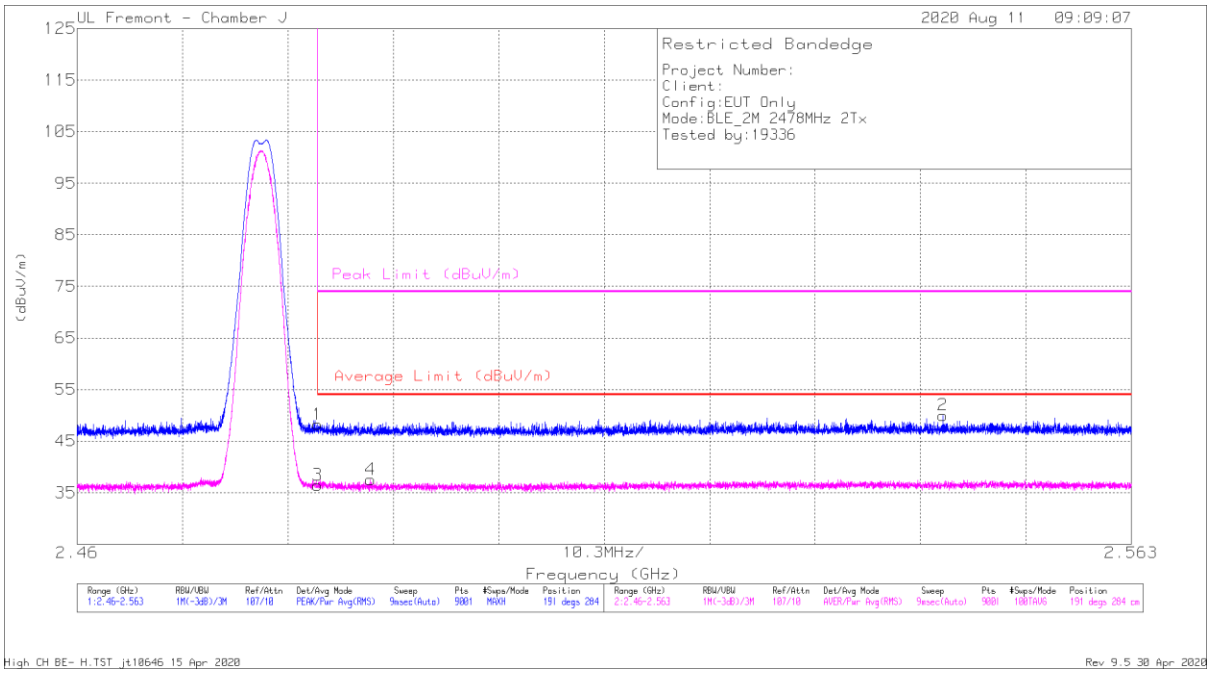
BANDEDGE (HIGH CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T963 (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	* 2.48351	44.22	Pk	29.5	-25.5	48.22	-	-	74	-25.78	191	284	H
2	2.54458	45.61	Pk	29.8	-25.4	50.01	-	-	74	-23.99	191	284	H
3	* 2.48351	32.46	RMS	29.5	-25.5	36.46	54	-17.54	-	-	191	284	H
4	* 2.48867	33.54	RMS	29.5	-25.5	37.54	54	-16.46	-	-	191	284	H

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

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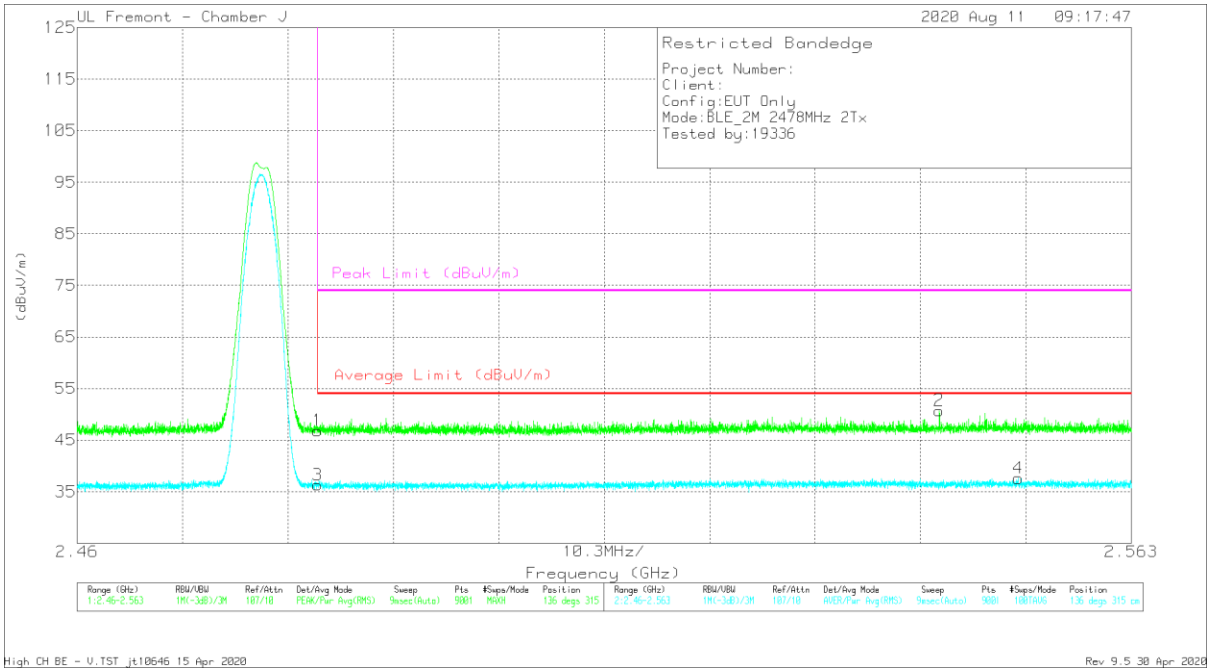
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T963 (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	* 2.48351	42.85	Pk	29.5	-25.5	46.85	-	-	74	-27.15	136	315	V
2	2.54424	46.31	Pk	29.8	-25.4	50.71	-	-	74	-23.29	136	315	V
3	* 2.48351	32.29	RMS	29.5	-25.5	36.29	54	-17.71	-	-	136	315	V
4	2.55194	33.11	RMS	29.9	-25.4	37.61	54	-16.39	-	-	136	315	V

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

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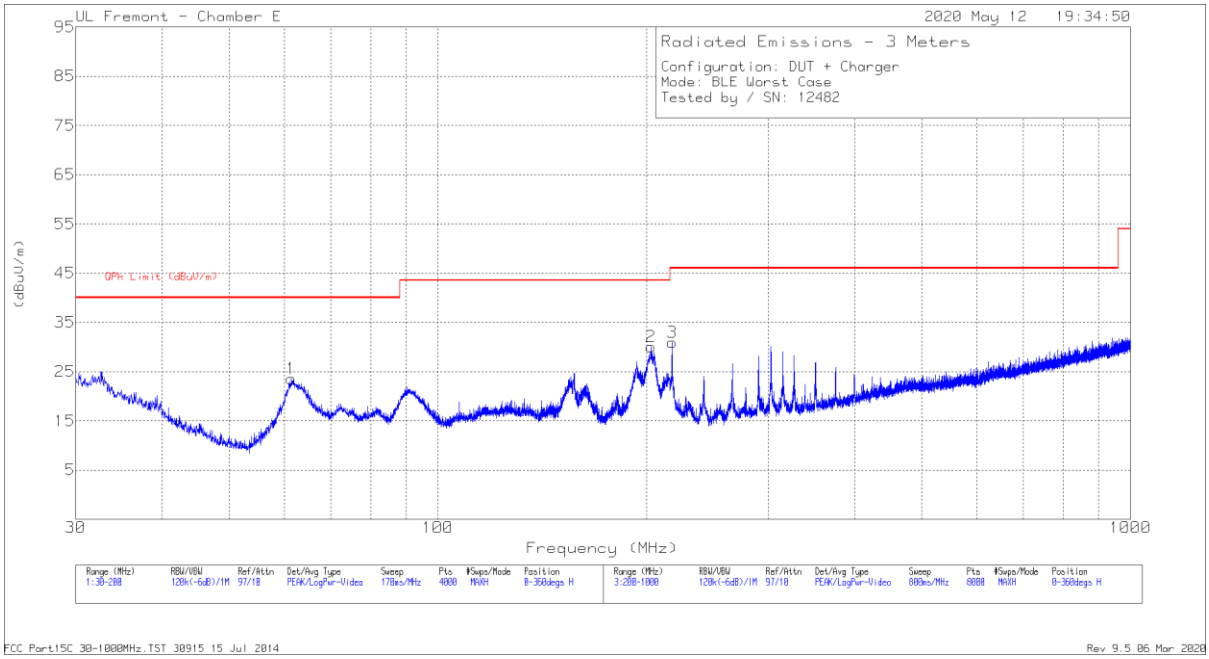
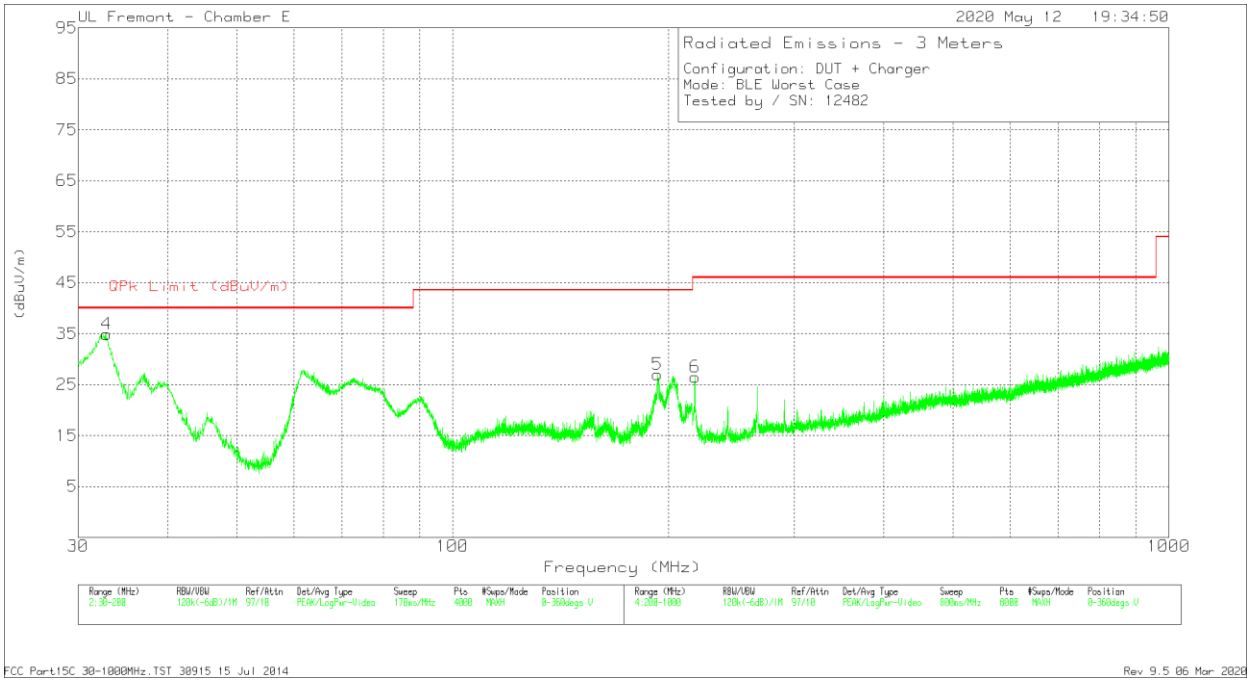
10.3. WORST CASE BELOW 1 GHZ

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



HORIZONTAL



VERTICAL

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DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T130 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	32.5274	41.98	Pk	25.1	-31.5	35.58	40	-4.42	297	104	V
4	32.6434	37.81	Qp	25	-31.5	31.31	40	-8.69	297	104	V
1	61.4581	41.33	Pk	13.4	-31.2	23.53	40	-16.47	0-360	301	H
5	193.3698	39.3	Pk	17.7	-30	27	43.52	-16.52	0-360	100	V
2	203.3004	42.82	Pk	17.2	-30	30.02	43.52	-13.5	0-360	99	H
6	217.8023	39.73	Pk	16.5	-29.8	26.43	46.02	-19.59	0-360	99	V
3	217.9023	44.22	Pk	16.5	-29.8	30.92	46.02	-15.1	0-360	99	H

Pk - Peak detector
Qp - Quasi-Peak detector

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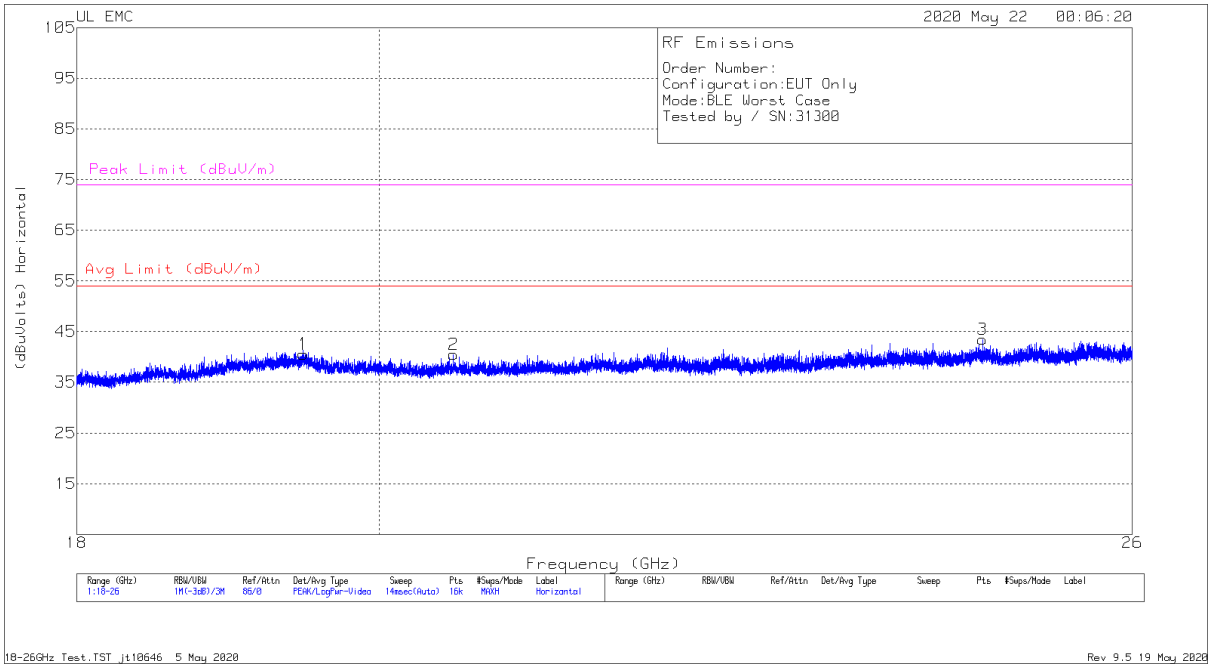
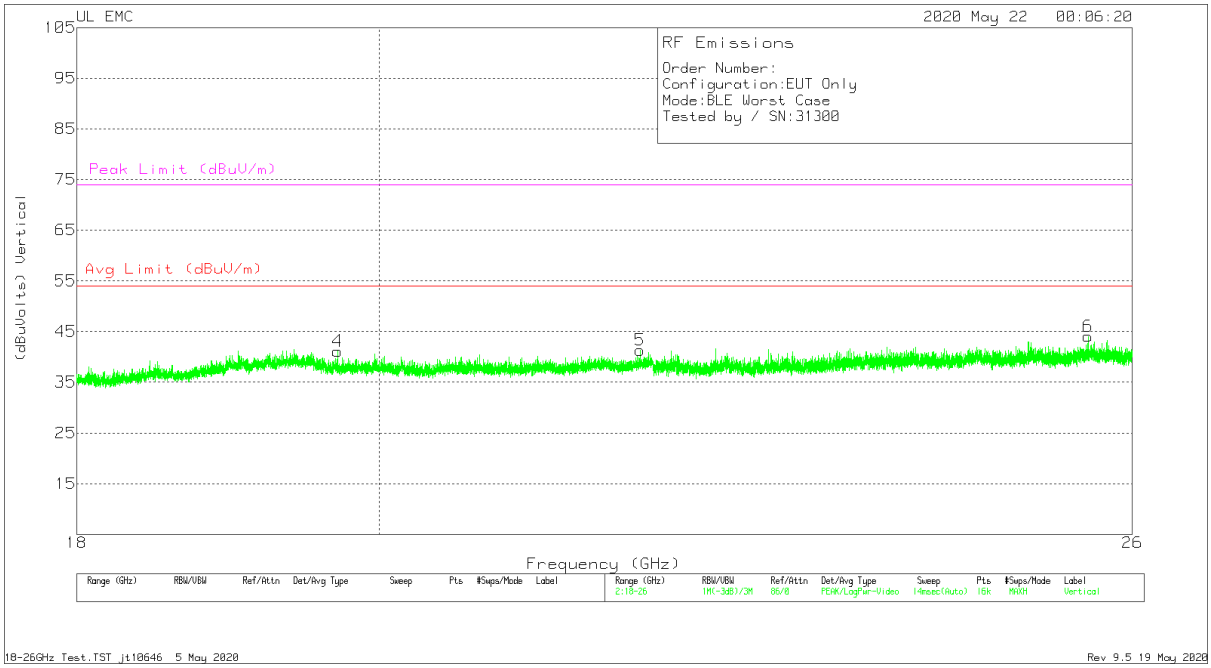
10.4. WORST CASE 18-26 GHz

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



HORIZONTAL



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DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	T125 AF (dB/m)	Amp/Cbl (dB)	Dist Corr (dB)	Corrected Reading (dBuVolts)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)
1	19.47741	36.22	Pk	32.8	-19	-9.5	40.52	54	-13.48	74	-33.48
2	20.52334	37.97	Pk	33.1	-21.1	-9.5	40.47	54	-13.53	74	-33.53
3	24.67759	37.87	Pk	34.1	-19	-9.5	43.47	54	-10.53	74	-30.53
4	19.71239	38.01	Pk	32.8	-20.2	-9.5	41.11	54	-12.89	74	-32.89
5	21.90176	38.11	Pk	33.4	-20.7	-9.5	41.31	54	-12.69	74	-32.69
6	25.60153	38.96	Pk	34.3	-19.7	-9.5	44.06	54	-9.94	74	-29.94

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 (dBuV)	
	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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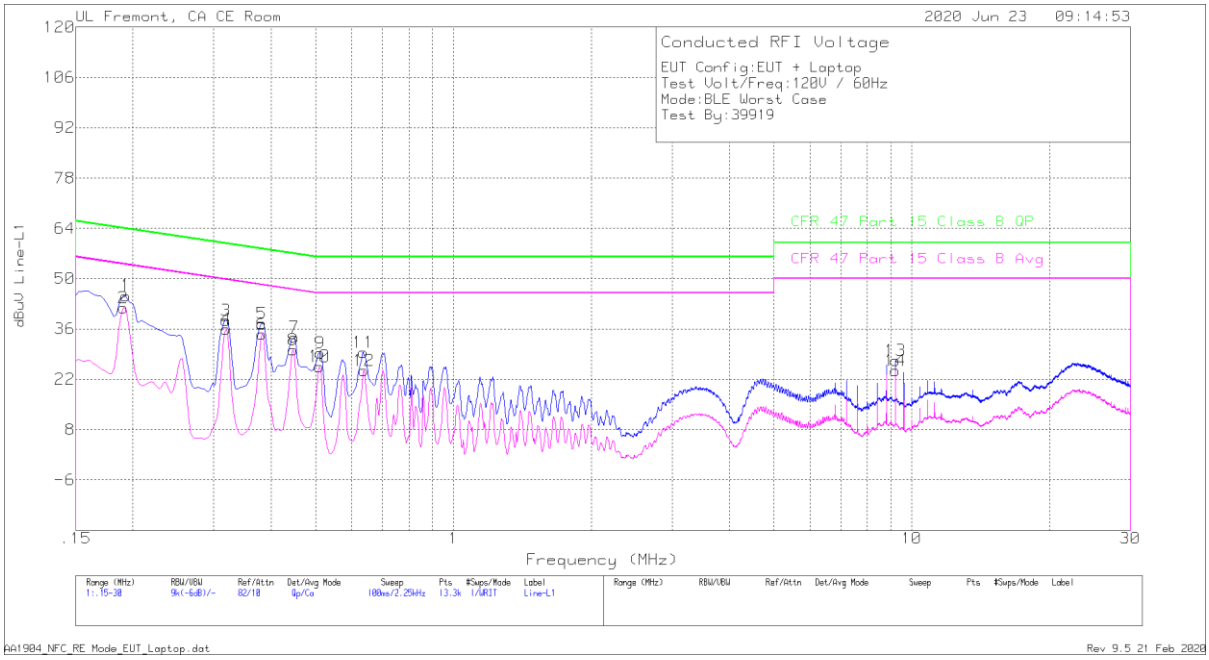
11.1. AC Power Line With Laptop

LINE 1 RESULTS



Range 1: Line-L1 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	PRE0186446 LISN L1	LC Cables C1&C3	Limiter (dB)	Corrected Reading dBuV	CFR 47 Part 15 Class B QP	QP Margin (dB)	CFR 47 Part 15 Class B Avg	Av(CISPR)Margin (dB)
1	.19275	35.28	Qp	0	0	10	45.28	63.92	-18.64	-	-
2	.1905	31.89	Ca	0	0	10	41.89	-	-	54.01	-12.12
3	.31875	28.33	Qp	0	0	10	38.33	59.74	-21.41	-	-
4	.31875	26.02	Ca	0	0	10	36.02	-	-	49.74	-13.72
5	.38175	27.56	Qp	0	0	10	37.56	58.24	-20.68	-	-
6	.38175	24.5	Ca	0	0	10	34.5	-	-	48.24	-13.74
7	.44925	23.67	Qp	0	0	10	33.67	56.89	-23.22	-	-
8	.447	20.13	Ca	0	0	10	30.13	-	-	46.93	-16.8
9	.51225	19.3	Qp	0	0	10	29.3	56	-26.7	-	-
10	.51	15.56	Ca	0	0	10	25.56	-	-	46	-20.44
11	.636	19.48	Qp	0	0	10	29.48	56	-26.52	-	-
12	.63825	14.51	Ca	0	0	10	24.51	-	-	46	-21.49
13	9.2085	16.86	Qp	0	.2	10.1	27.16	60	-32.84	-	-
14	9.2085	14.06	Ca	0	.2	10.1	24.36	-	-	50	-25.64

Qp - Quasi-Peak detector
Ca - CISPR average detection

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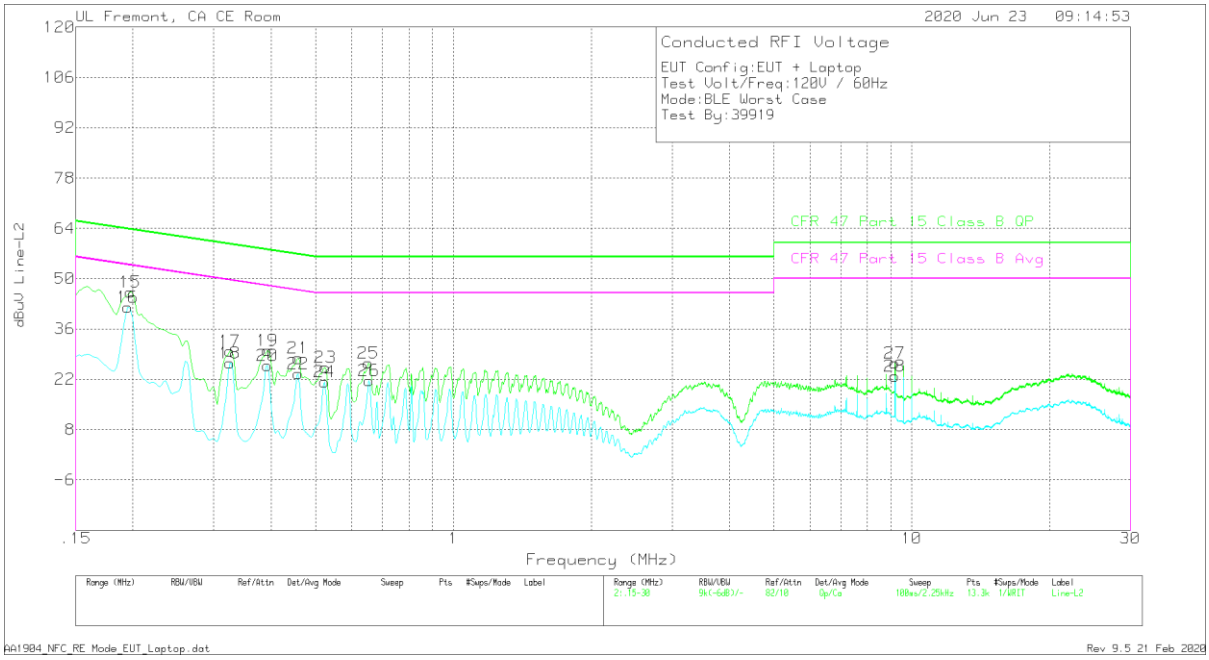
LINE 2 RESULTS



Range 2: Line-L2 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	PRE0186446 LISN L2	LC Cables C2&C3	Limiter (dB)	Corrected Reading dBuV	CFR 47 Part 15 Class B QP	QP Margin (dB)	CFR 47 Part 15 Class B Avg	Av(CISPR)Margin (dB)
15	.19725	36.32	Qp	0	0	10	46.32	63.73	-17.41	-	-
16	.195	32.12	Ca	0	0	10	42.12	-	-	53.82	-11.7
17	.3255	19.88	Qp	0	0	10	29.88	59.57	-29.69	-	-
18	.3255	16.58	Ca	0	0	10	26.58	-	-	49.57	-22.99
19	.393	20.03	Qp	0	0	10	30.03	58	-27.97	-	-
20	.393	15.75	Ca	0	0	10	25.75	-	-	48	-22.25
21	.45825	17.84	Qp	0	0	10	27.84	56.72	-28.88	-	-
22	.45825	13.57	Ca	0	0	10	23.57	-	-	46.72	-23.15
23	.52575	15.26	Qp	0	0	10	25.26	56	-30.74	-	-
24	.5235	11.22	Ca	0	0	10	21.22	-	-	46	-24.78
25	.65175	16.53	Qp	0	0	10	26.53	56	-29.47	-	-
26	.654	11.57	Ca	0	0	10	21.57	-	-	46	-24.43
27	9.195	16.15	Qp	0	.2	10.1	26.45	60	-33.55	-	-
28	9.195	12.55	Ca	0	.2	10.1	22.85	-	-	50	-27.15

Qp - Quasi-Peak detector
Ca - CISPR average detection

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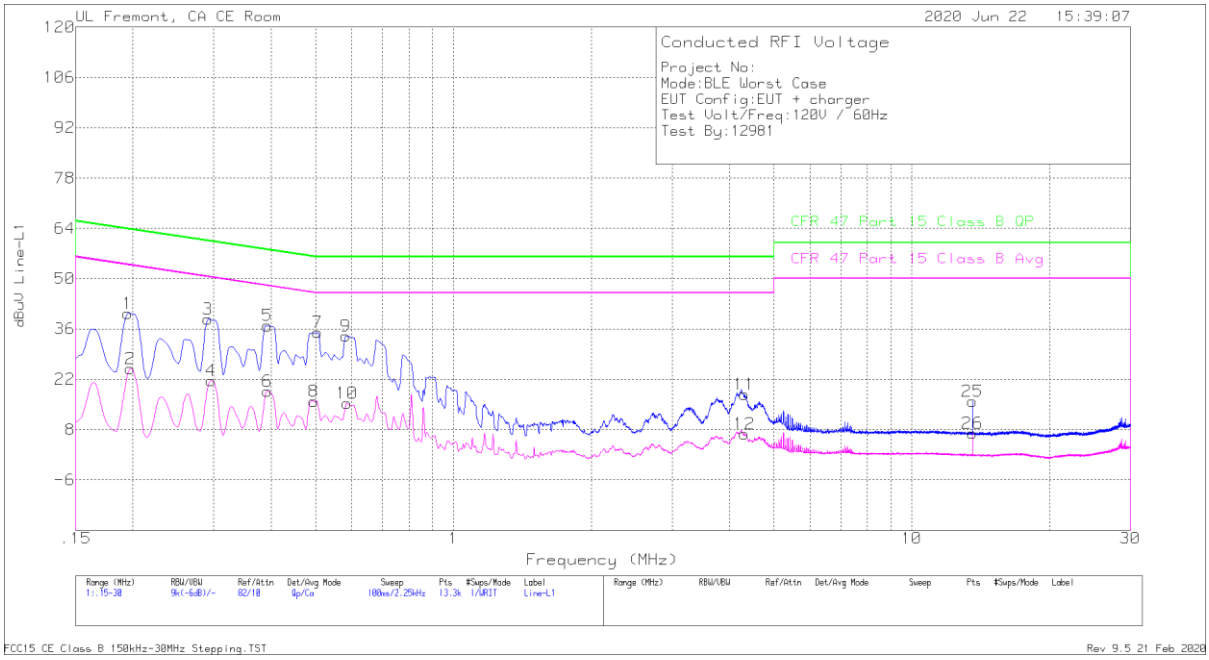
11.2. AC Power Line With AC/DC Adapter

LINE 1 RESULTS



Range 1: Line-L1 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	PRE0186446 LISN L1	LC Cables C1&C3	Limiter (dB)	Corrected Reading dBuV	CFR 47 Part 15 Class B QP	QP Margin (dB)	CFR 47 Part 15 Class B Avg	Av(CISPR)Margin (dB)
1	.195	30.34	Qp	0	0	10	40.34	63.82	-23.48	-	-
2	.19725	14.9	Ca	0	0	10	24.9	-	-	53.73	-28.83
3	.29175	28.75	Qp	0	0	10	38.75	60.47	-21.72	-	-
4	.29625	11.68	Ca	0	0	10	21.68	-	-	50.35	-28.67
5	.393	26.91	Qp	0	0	10	36.91	58	-21.09	-	-
6	.393	8.67	Ca	0	0	10	18.67	-	-	48	-29.33
7	.5055	25.01	Qp	0	0	10	35.01	56	-20.99	-	-
8	.4965	5.9	Ca	0	0	10	15.9	-	-	46.06	-30.16
9	.582	24.1	Qp	0	0	10	34.1	56	-21.9	-	-
10	.5865	5.3	Ca	0	0	10	15.3	-	-	46	-30.7
11	4.317	7.68	Qp	0	.1	10.1	17.88	56	-38.12	-	-
12	4.317	-3.42	Ca	0	.1	10.1	6.78	-	-	46	-39.22
*25	13.56	5.42	Qp	.1	.2	10.1	15.82	60	-44.18	-	-
*26	13.56	-3.38	Ca	.1	.2	10.1	7.02	-	-	50	-42.98

Qp - Quasi-Peak detector
Ca - CISPR average detection

*Indicates UL RFID signal. Not from device.

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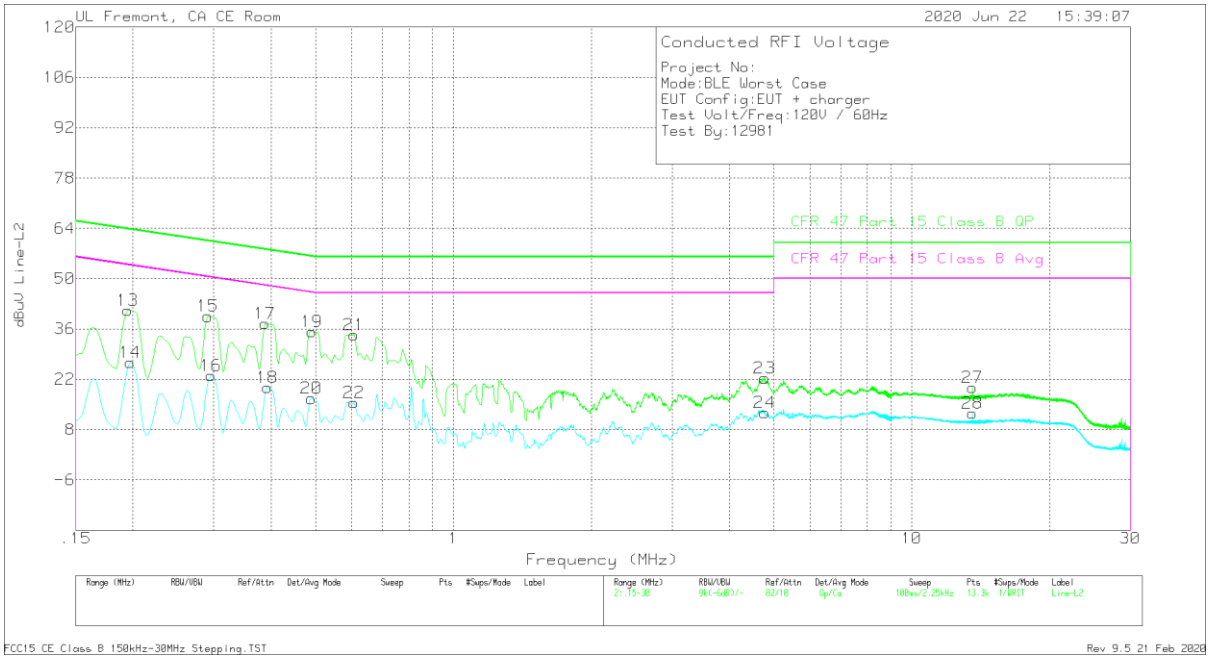
LINE 2 RESULTS



Range 2: Line-L2 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	PRE0186446 LISN L2	LC Cables C2&C3	Limiter (dB)	Corrected Reading dBuV	CFR 47 Part 15 Class B QP	QP Margin (dB)	CFR 47 Part 15 Class B Avg	Av(CISPR)Margin (dB)
13	.195	31.24	Qp	0	0	10	41.24	63.82	-22.58	-	-
14	.19725	16.62	Ca	0	0	10	26.62	-	-	53.73	-27.11
15	.29175	29.53	Qp	0	0	10	39.53	60.47	-20.94	-	-
16	.29625	13.05	Ca	0	0	10	23.05	-	-	50.35	-27.3
17	.3885	27.49	Qp	0	0	10	37.49	58.1	-20.61	-	-
18	.393	9.75	Ca	0	0	10	19.75	-	-	48	-28.25
19	.492	25.27	Qp	0	0	10	35.27	56.13	-20.86	-	-
20	.48975	6.67	Ca	0	0	10	16.67	-	-	46.17	-29.5
21	.60675	24.42	Qp	0	0	10	34.42	56	-21.58	-	-
22	.60675	5.51	Ca	0	0	10	15.51	-	-	46	-30.49
23	4.77825	12.09	Qp	0	.1	10.1	22.29	56	-33.71	-	-
24	4.77825	2.61	Ca	0	.1	10.1	12.81	-	-	46	-33.19
*27	13.56	9.34	Qp	.1	.2	10.1	19.74	60	-40.26	-	-
*28	13.56	2.12	Ca	.1	.2	10.1	12.52	-	-	50	-37.48

Qp - Quasi-Peak detector
Ca - CISPR average detection

*Indicates UL RFID signal. Not from device.

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12. SETUP PHOTOS

Please refer to 13335182-EP1V1 for setup photos

END OF TEST REPORT

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