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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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.

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

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 channel (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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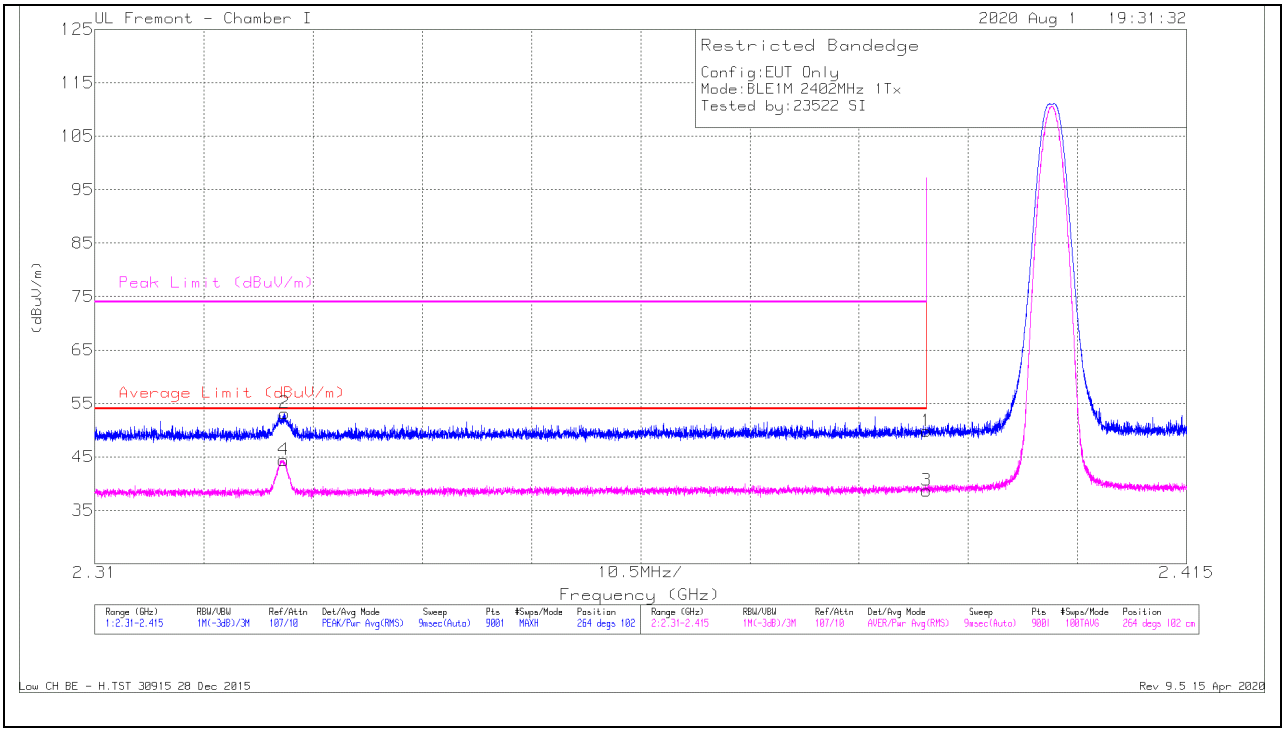
10.2. TRANSMITTER ABOVE 1 GHz

10.2.1. HIGH POWER BLE (1Mbps)

ANT 4

BANDEDGE (LOW CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (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	35.22	Pk	31.9	-17.3	49.82	-	-	74	-24.18	264	102	H
2	* 2.32827	38.87	Pk	31.5	-17.2	53.17	-	-	74	-20.83	264	102	H
3	* 2.38999	24.1	RMS	31.9	-17.3	38.7	54	-15.3	-	-	264	102	H
4	* 2.32815	30.12	RMS	31.5	-17.2	44.42	54	-9.58	-	-	264	102	H

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

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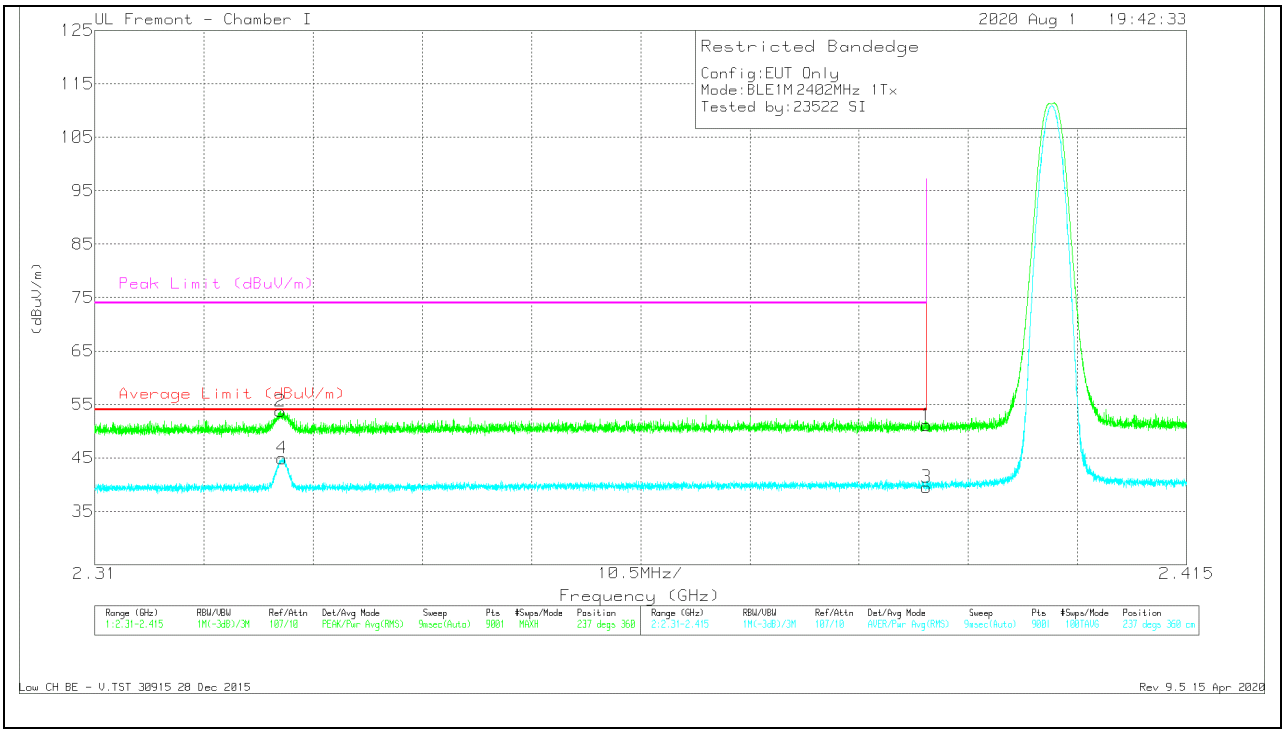
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (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	36.53	Pk	31.9	-17.3	51.13	-	-	74	-22.87	237	360	V
2	* 2.32785	39.43	Pk	31.5	-17.2	53.73	-	-	74	-20.27	237	360	V
3	* 2.38999	24.89	RMS	31.9	-17.3	39.49	54	-14.51	-	-	237	360	V
4	* 2.32798	30.61	RMS	31.5	-17.2	44.91	54	-9.09	-	-	237	360	V

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

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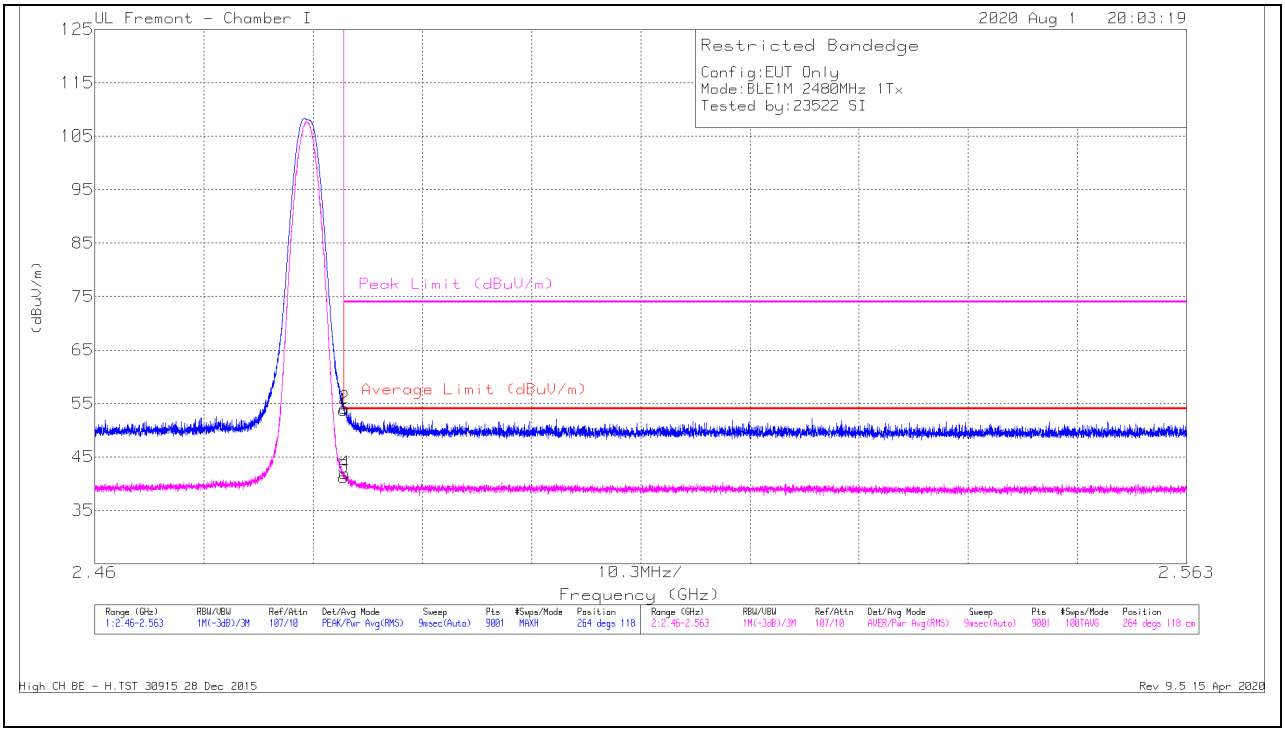
BANDEDGE (HIGH CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (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	39	Pk	32.4	-17.7	53.7	-	-	74	-20.3	264	118	H
2	* 2.48353	39.4	Pk	32.4	-17.7	54.1	-	-	74	-19.9	264	118	H
3	* 2.48351	26.53	RMS	32.4	-17.7	41.23	54	-12.77	-	-	264	118	H
4	* 2.48357	27.23	RMS	32.4	-17.7	41.93	54	-12.07	-	-	264	118	H

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

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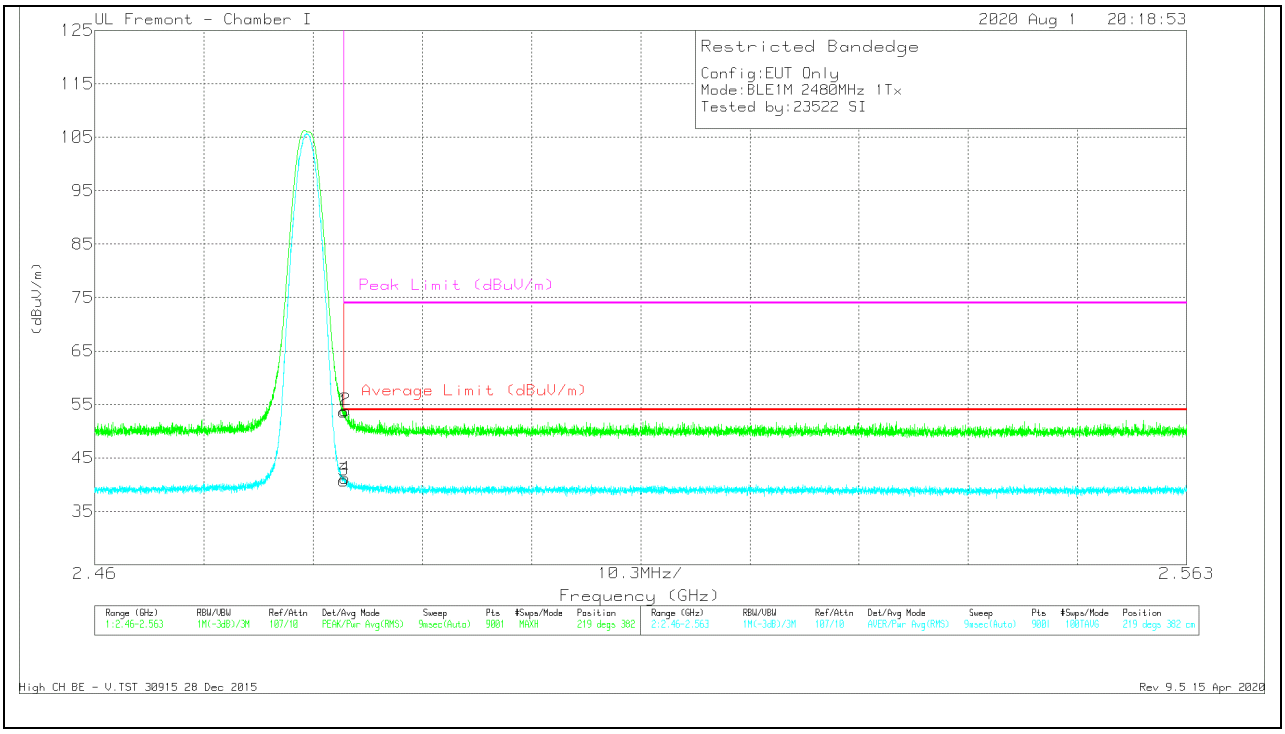
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (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	38.93	Pk	32.4	-17.7	53.63	-	-	74	-20.37	219	382	V
2	* 2.48363	39.21	Pk	32.4	-17.7	53.91	-	-	74	-20.09	219	382	V
3	* 2.48351	26.08	RMS	32.4	-17.7	40.78	54	-13.22	-	-	219	382	V
4	* 2.48362	26.47	RMS	32.4	-17.7	41.17	54	-12.83	-	-	219	382	V

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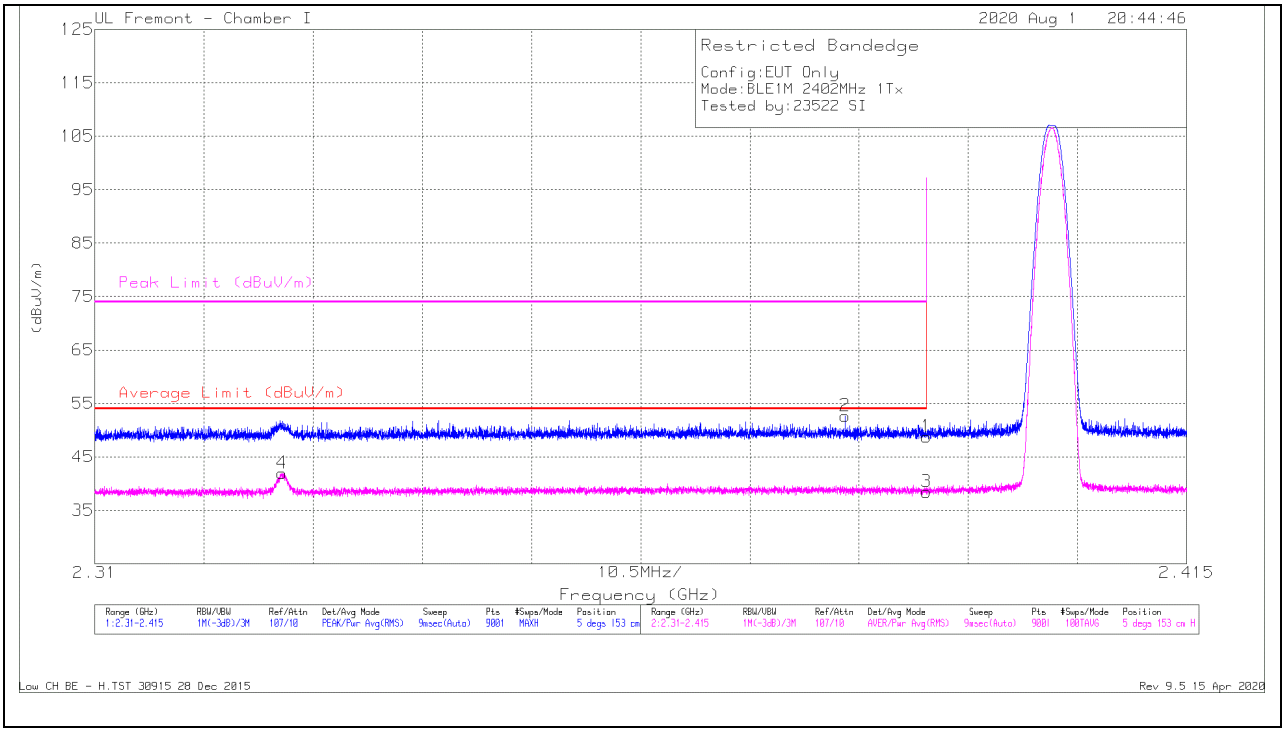
ANT 3

BANDEDGE (LOW CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (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	34.17	Pk	31.9	-17.3	48.77	-	-	74	-25.23	5	153	H
2	* 2.38217	38.08	Pk	31.9	-17.3	52.68	-	-	74	-21.32	5	153	H
3	* 2.38999	23.87	RMS	31.9	-17.3	38.47	54	-15.53	-	-	5	153	H
4	* 2.328	27.63	RMS	31.5	-17.2	41.93	54	-12.07	-	-	5	153	H

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

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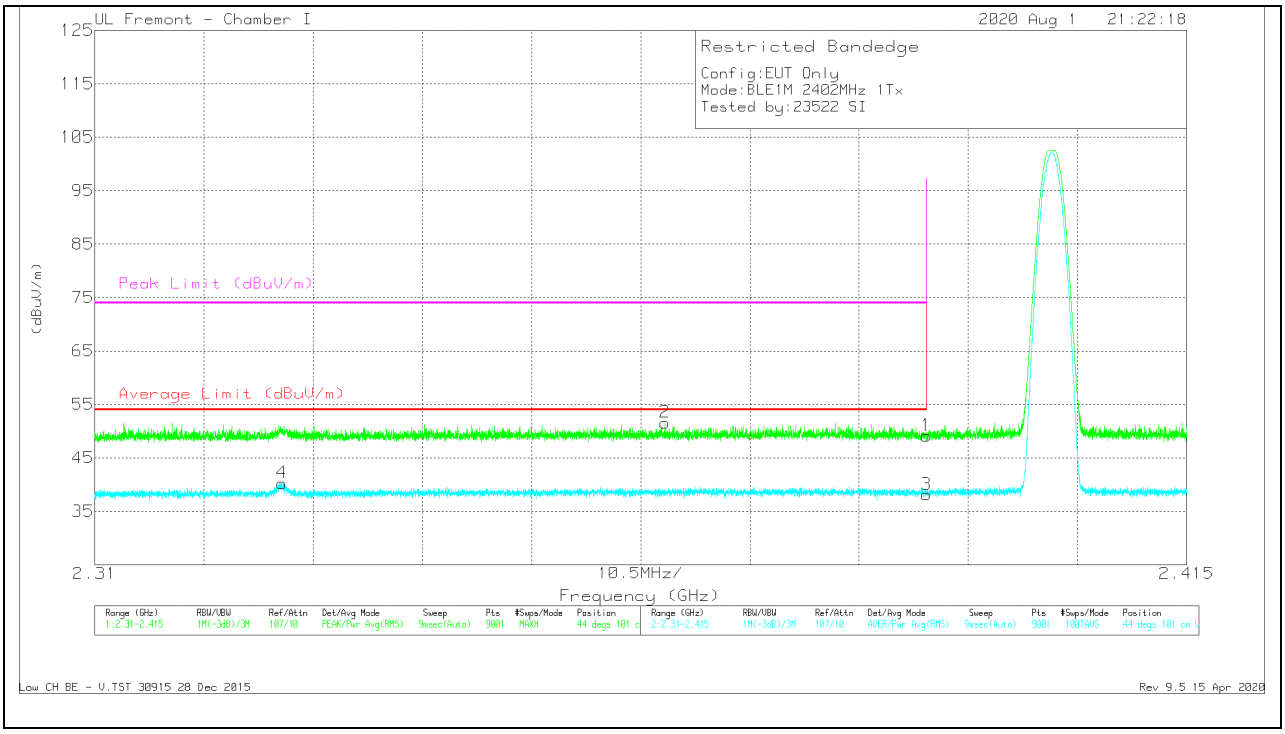
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (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	34.53	Pk	31.9	-17.3	49.13	-	-	74	-24.87	44	101	V
2	* 2.36485	37.1	Pk	31.8	-17.3	51.6	-	-	74	-22.4	44	101	V
3	* 2.38999	23.52	RMS	31.9	-17.3	38.12	54	-15.88	-	-	44	101	V
4	* 2.32798	25.97	RMS	31.5	-17.2	40.27	54	-13.73	-	-	44	101	V

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RMS - RMS detection

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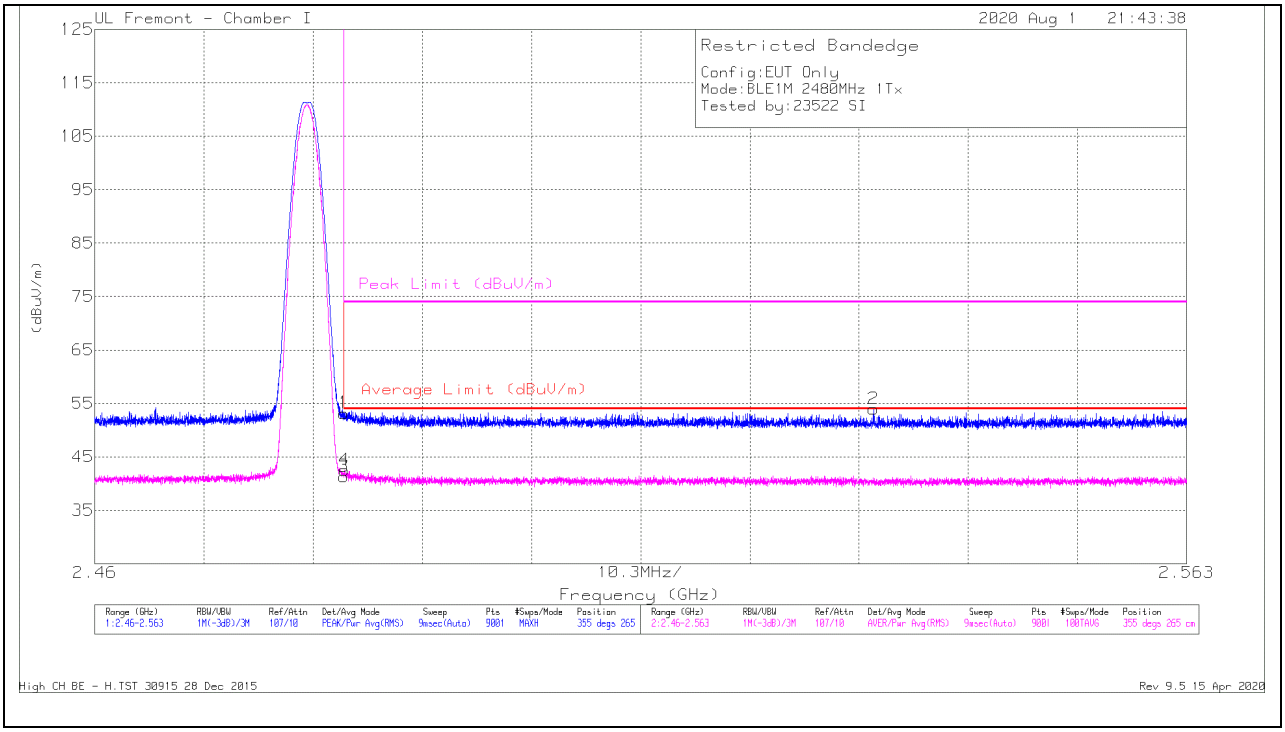
BANDEDGE (HIGH CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (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	38.45	Pk	32.4	-17.7	53.15	-	-	74	-20.85	355	265	H
2	2.53346	39.55	Pk	32.2	-17.8	53.95	-	-	74	-20.05	355	265	H
3	* 2.48351	26.63	RMS	32.4	-17.7	41.33	54	-12.67	-	-	355	265	H
4	* 2.48354	27.81	RMS	32.4	-17.7	42.51	54	-11.49	-	-	355	265	H

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

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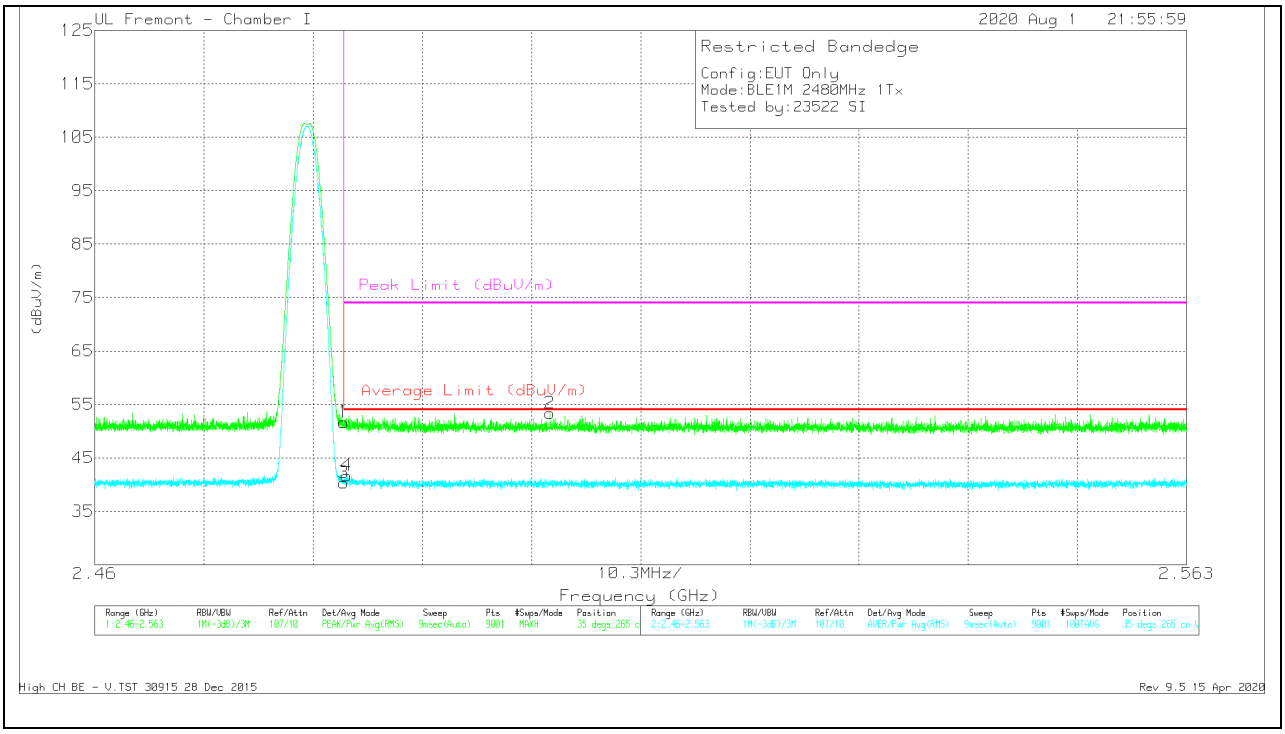
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (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	36.99	Pk	32.4	-17.7	51.69	-	-	74	-22.31	35	265	V
2	2.50292	38.85	Pk	32.3	-17.8	53.35	-	-	74	-20.65	35	265	V
3	* 2.48351	25.6	RMS	32.4	-17.7	40.3	54	-13.7	-	-	35	265	V
4	* 2.48377	26.94	RMS	32.4	-17.7	41.64	54	-12.36	-	-	35	265	V

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RMS - RMS detection

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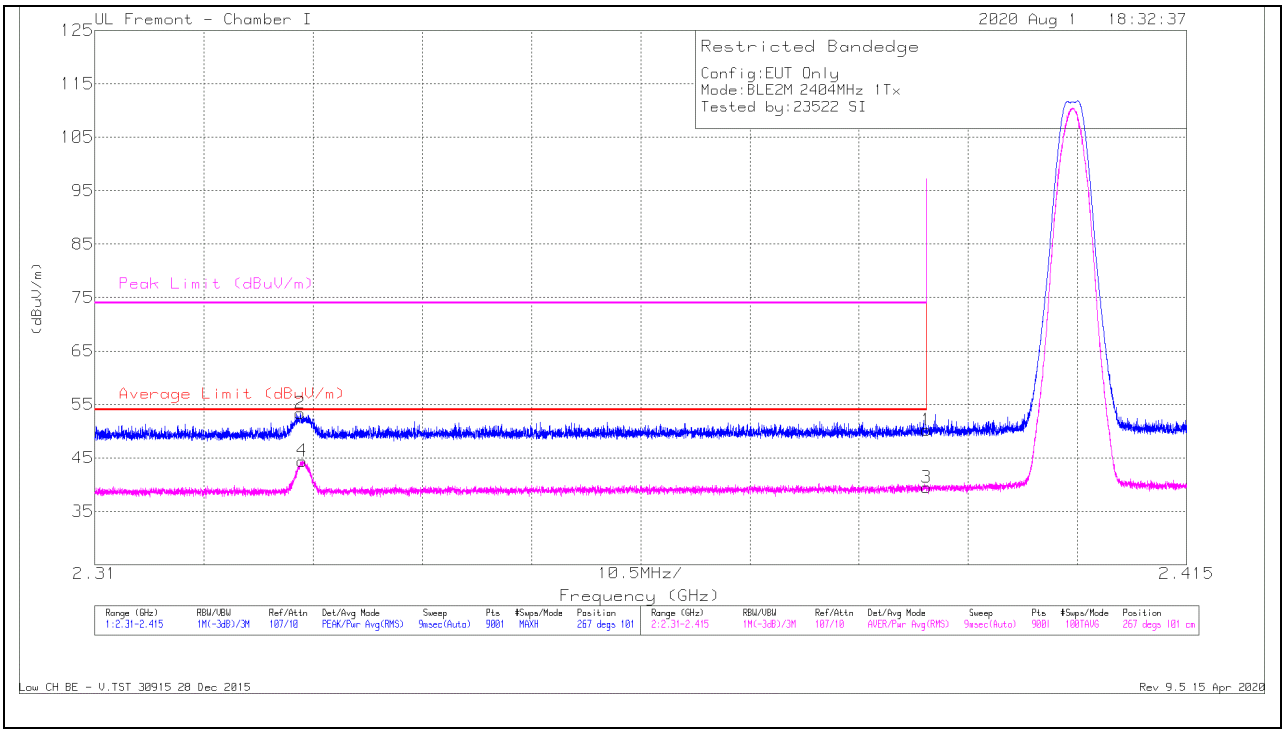
10.2.2. HIGH POWER BLE (2Mbps)

ANT 4

BANDEDGE (LOW CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (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	35.57	Pk	31.9	-17.3	50.17	-	-	74	-23.83	267	101	H
2	* 2.32976	39.04	Pk	31.5	-17.2	53.34	-	-	74	-20.66	267	101	H
3	* 2.38999	24.87	RMS	31.9	-17.3	39.47	54	-14.53	-	-	267	101	H
4	* 2.32993	30.09	RMS	31.5	-17.2	44.39	54	-9.61	-	-	267	101	H

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

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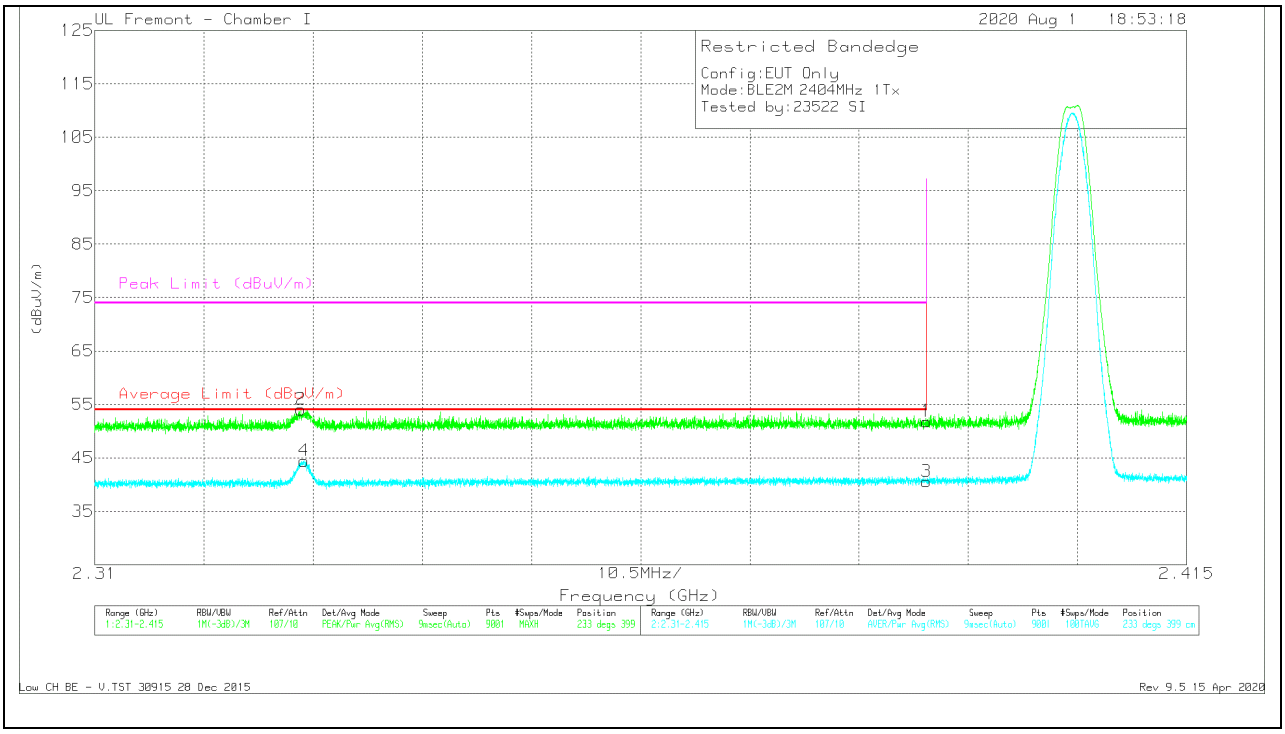
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (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	37.2	Pk	31.9	-17.3	51.8	-	-	74	-22.2	233	399	V
2	* 2.32981	39.76	Pk	31.5	-17.2	54.06	-	-	74	-19.94	233	399	V
3	* 2.38999	25.97	RMS	31.9	-17.3	40.57	54	-13.43	-	-	233	399	V
4	* 2.33015	30.14	RMS	31.5	-17.2	44.44	54	-9.56	-	-	233	399	V

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

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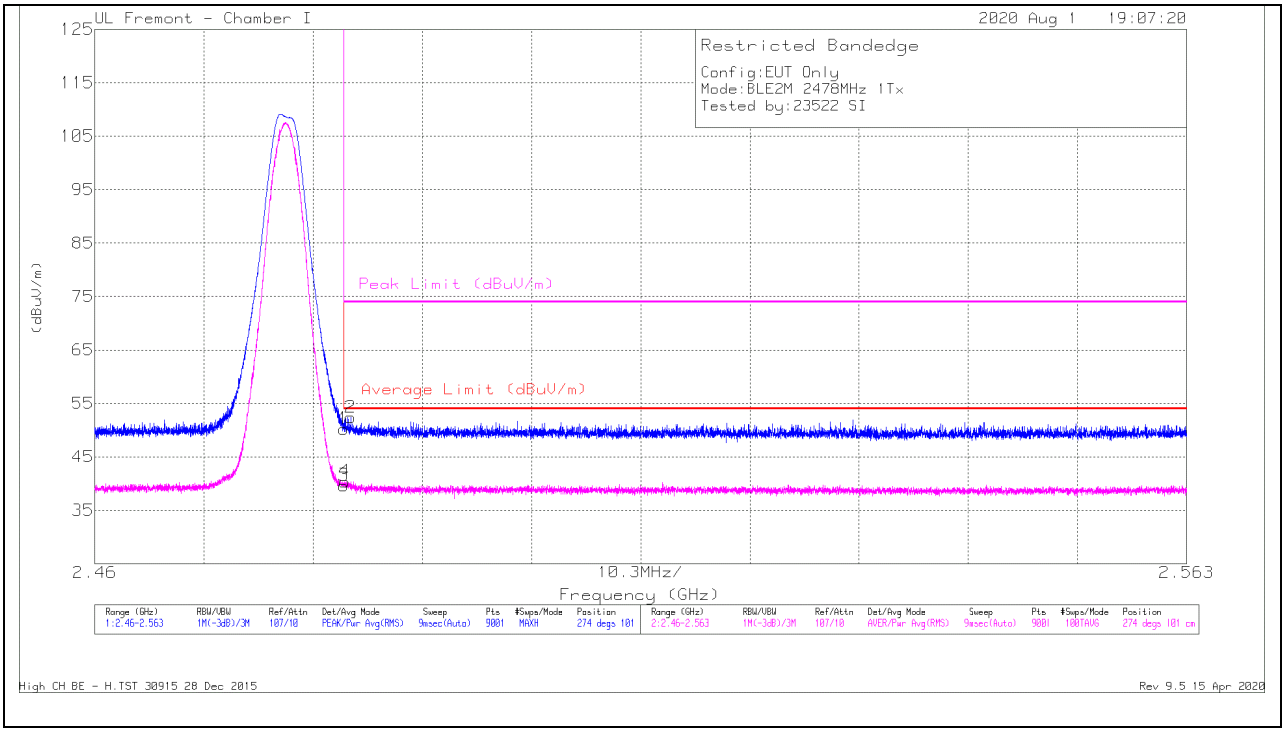
BANDEDGE (HIGH CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (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	35.52	Pk	32.4	-17.7	50.22	-	-	74	-23.78	274	101	H
2	* 2.48414	37.69	Pk	32.4	-17.7	52.39	-	-	74	-21.61	274	101	H
3	* 2.48351	24.93	RMS	32.4	-17.7	39.63	54	-14.37	-	-	274	101	H
4	* 2.48357	25.67	RMS	32.4	-17.7	40.37	54	-13.63	-	-	274	101	H

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

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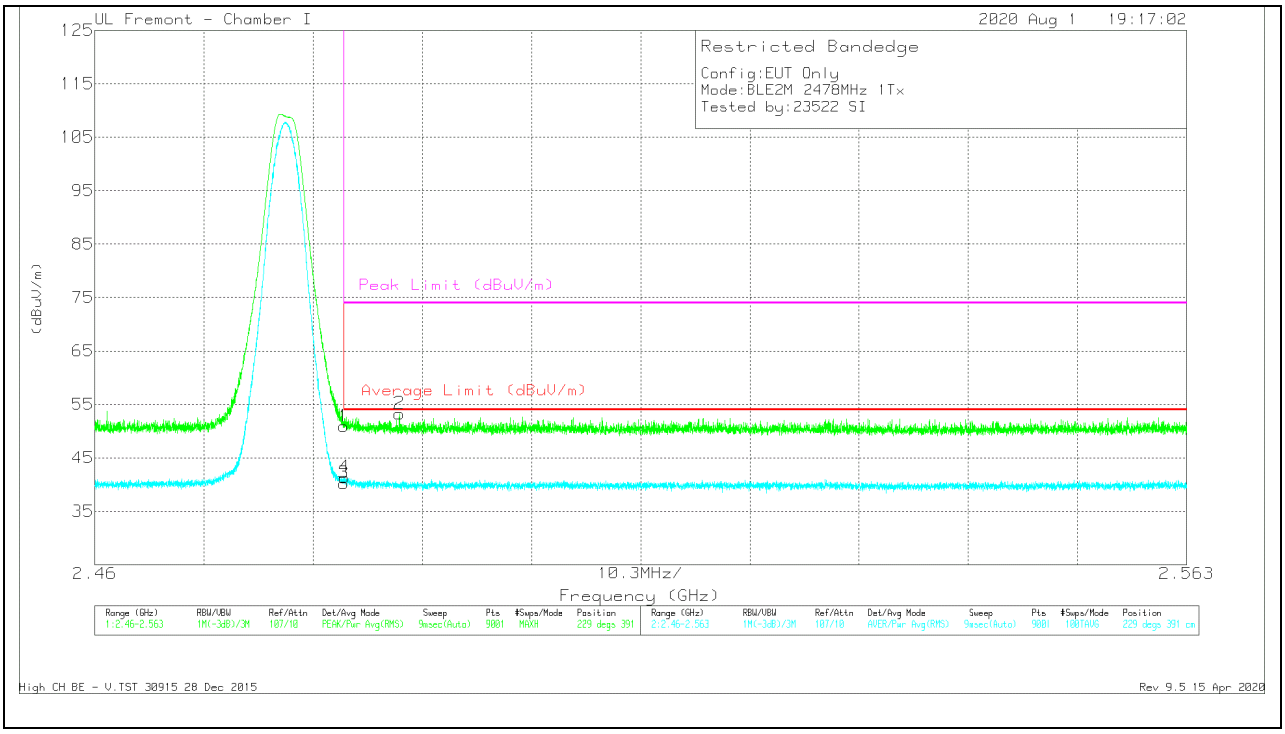
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (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	36.2	Pk	32.4	-17.7	50.9	-	-	74	-23.1	229	391	V
2	* 2.48874	38.79	Pk	32.3	-17.8	53.29	-	-	74	-20.71	229	391	V
3	* 2.48351	25.56	RMS	32.4	-17.7	40.26	54	-13.74	-	-	229	391	V
4	* 2.48356	26.61	RMS	32.4	-17.7	41.31	54	-12.69	-	-	229	391	V

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

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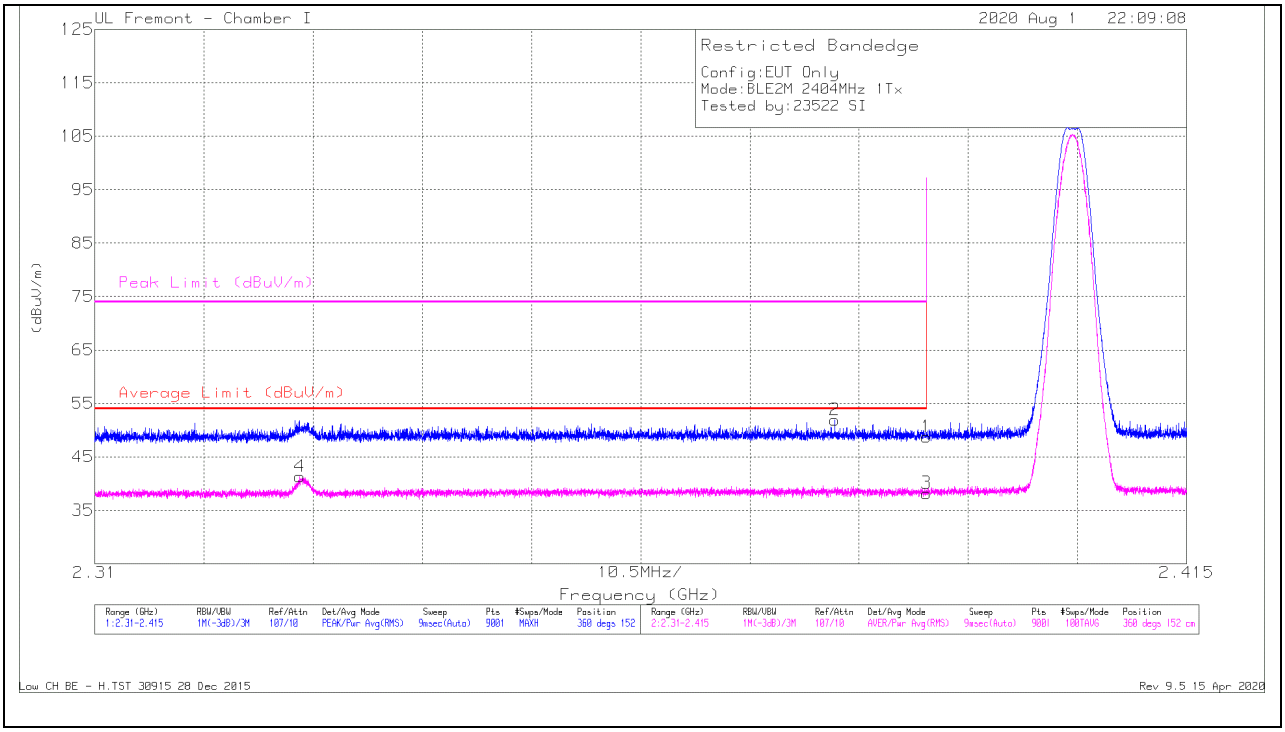
ANT 3

BANDEDGE (LOW CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (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	34.11	Pk	31.9	-17.3	48.71	-	-	74	-25.29	360	152	H
2	* 2.38117	37.29	Pk	31.9	-17.3	51.89	-	-	74	-22.11	360	152	H
3	* 2.38999	23.57	RMS	31.9	-17.3	38.17	54	-15.83	-	-	360	152	H
4	* 2.32972	26.99	RMS	31.5	-17.2	41.29	54	-12.71	-	-	360	152	H

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

Low CH BE - H.TST 30915 28 Dec 2015
Rev 9.5 15 Apr 2020

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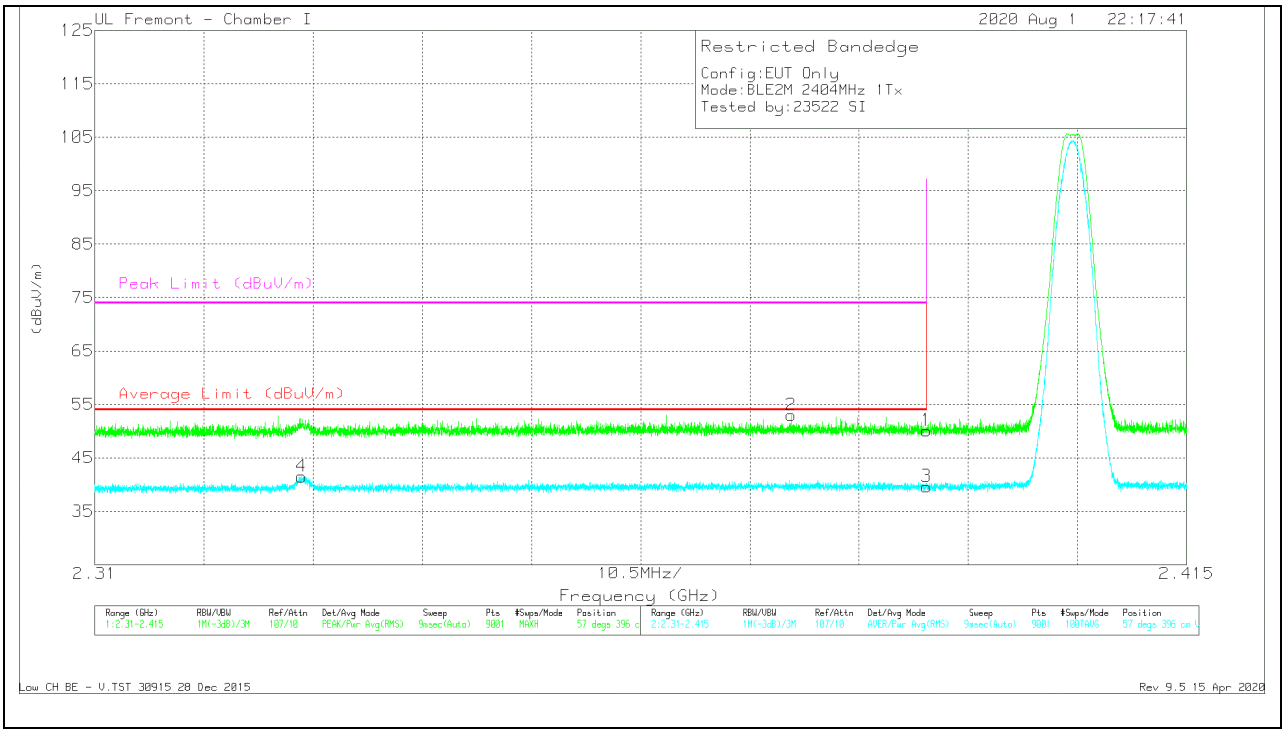
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (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	35.52	Pk	31.9	-17.3	50.12	-	-	74	-23.88	57	396	V
2	* 2.37696	38.39	Pk	31.9	-17.3	52.99	-	-	74	-21.01	57	396	V
3	* 2.38999	25.03	RMS	31.9	-17.3	39.63	54	-14.37	-	-	57	396	V
4	* 2.32987	27.2	RMS	31.5	-17.2	41.5	54	-12.5	-	-	57	396	V

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

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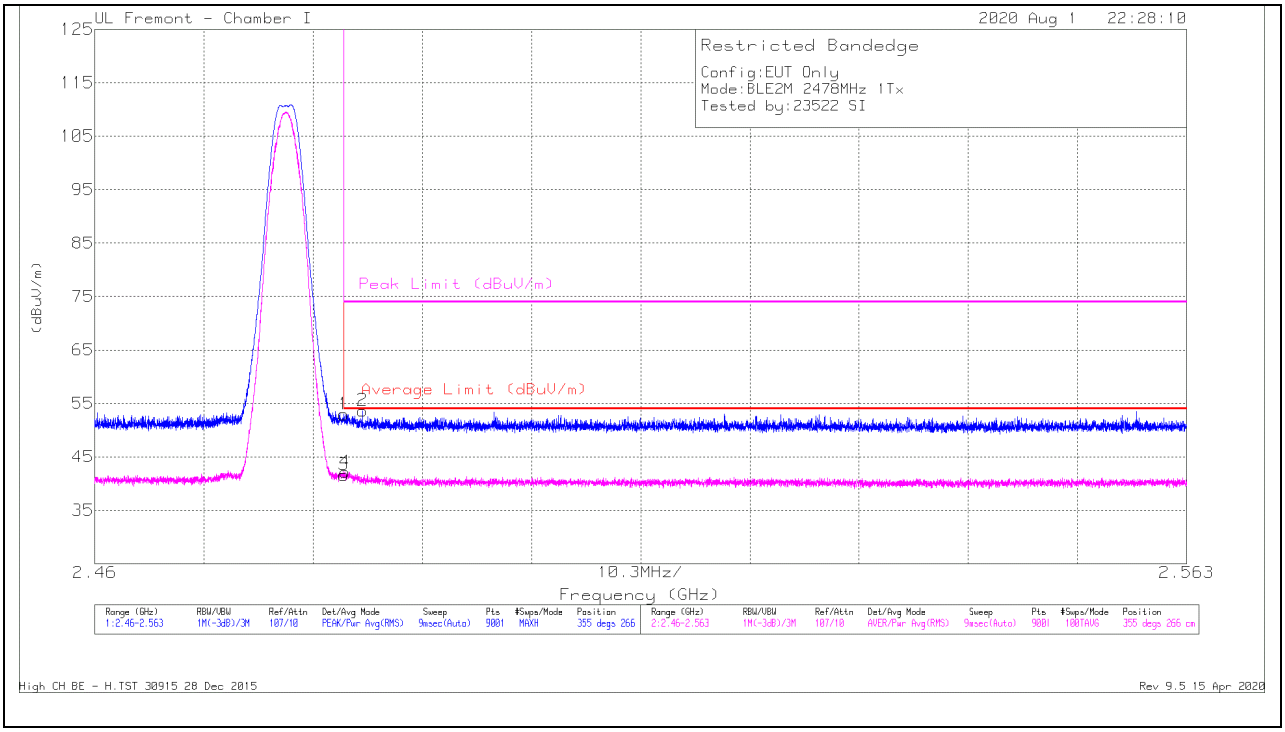
BANDEDGE (HIGH CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (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	38.25	Pk	32.4	-17.7	52.95	-	-	74	-21.05	355	266	H
2	* 2.48525	38.95	Pk	32.4	-17.7	53.65	-	-	74	-20.35	355	266	H
3	* 2.48351	26.93	RMS	32.4	-17.7	41.63	54	-12.37	-	-	355	266	H
4	* 2.48362	27.44	RMS	32.4	-17.7	42.14	54	-11.86	-	-	355	266	H

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

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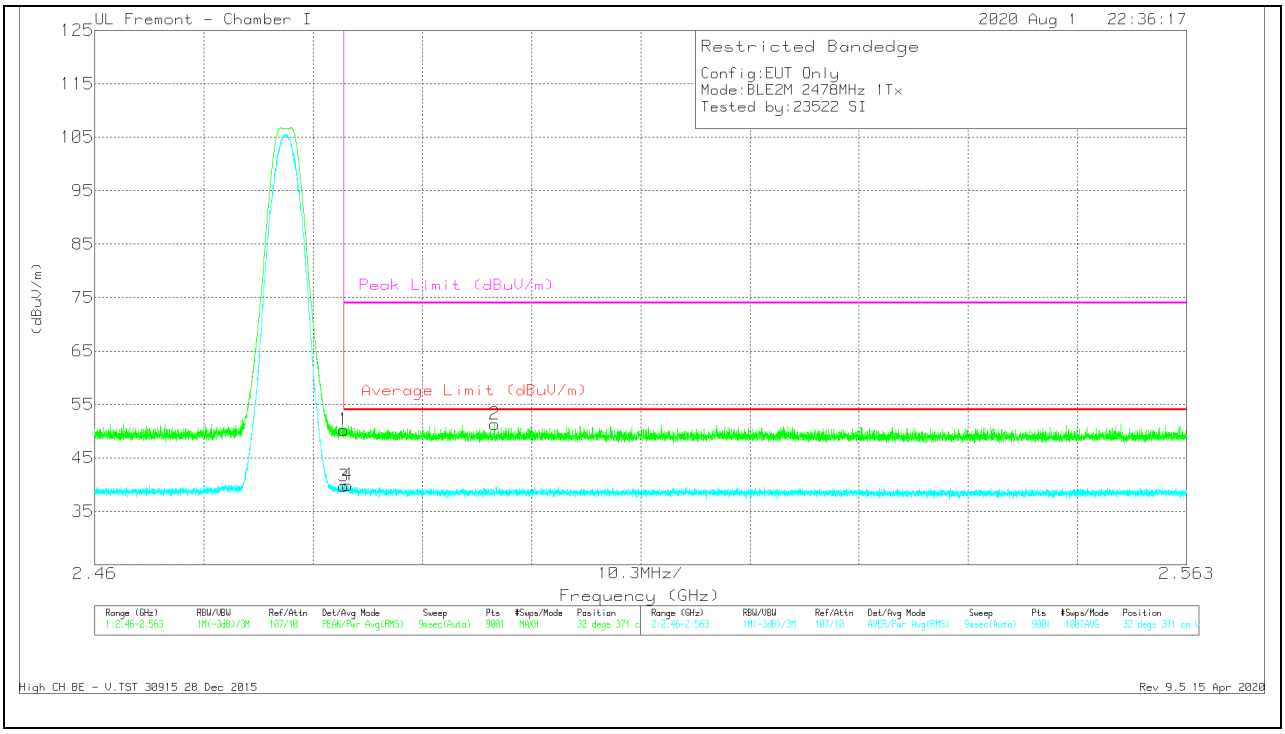
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (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	35.55	Pk	32.4	-17.7	50.25	-	-	74	-23.75	32	371	V
2	* 2.49771	36.8	Pk	32.3	-17.8	51.3	-	-	74	-22.7	32	371	V
3	* 2.48351	25	RMS	32.4	-17.7	39.7	54	-14.3	-	-	32	371	V
4	* 2.48387	25.18	RMS	32.4	-17.7	39.88	54	-14.12	-	-	32	371	V

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

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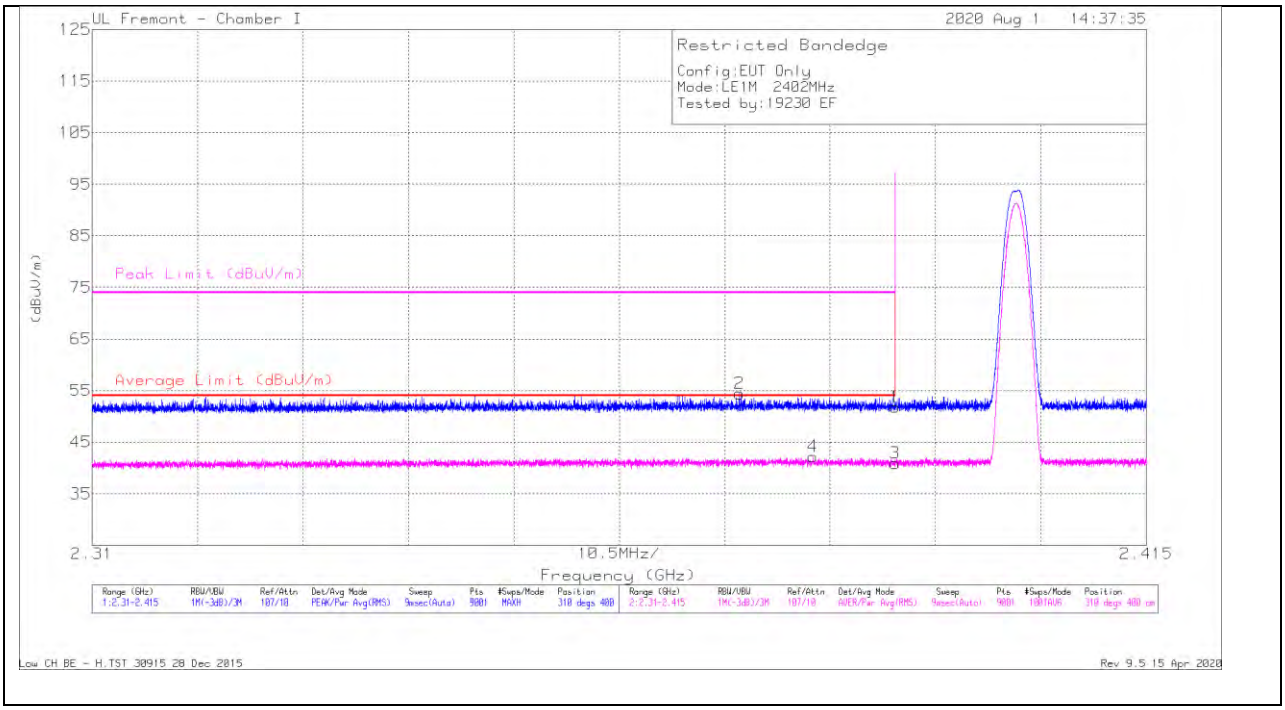
10.2.3. LOW POWER BLE (1Mbps)

ANT 4

BANDEDGE (LOW CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (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	37.15	Pk	31.9	-17.3	51.75	-	-	74	-22.25	310	400	H
2	* 2.37448	39.82	Pk	31.9	-17.3	54.42	-	-	74	-19.58	310	400	H
3	* 2.38999	26.3	RMS	31.9	-17.3	40.9	54	-13.1	-	-	310	400	H
4	* 2.38179	27.57	RMS	31.9	-17.3	42.17	54	-11.83	-	-	310	400	H

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

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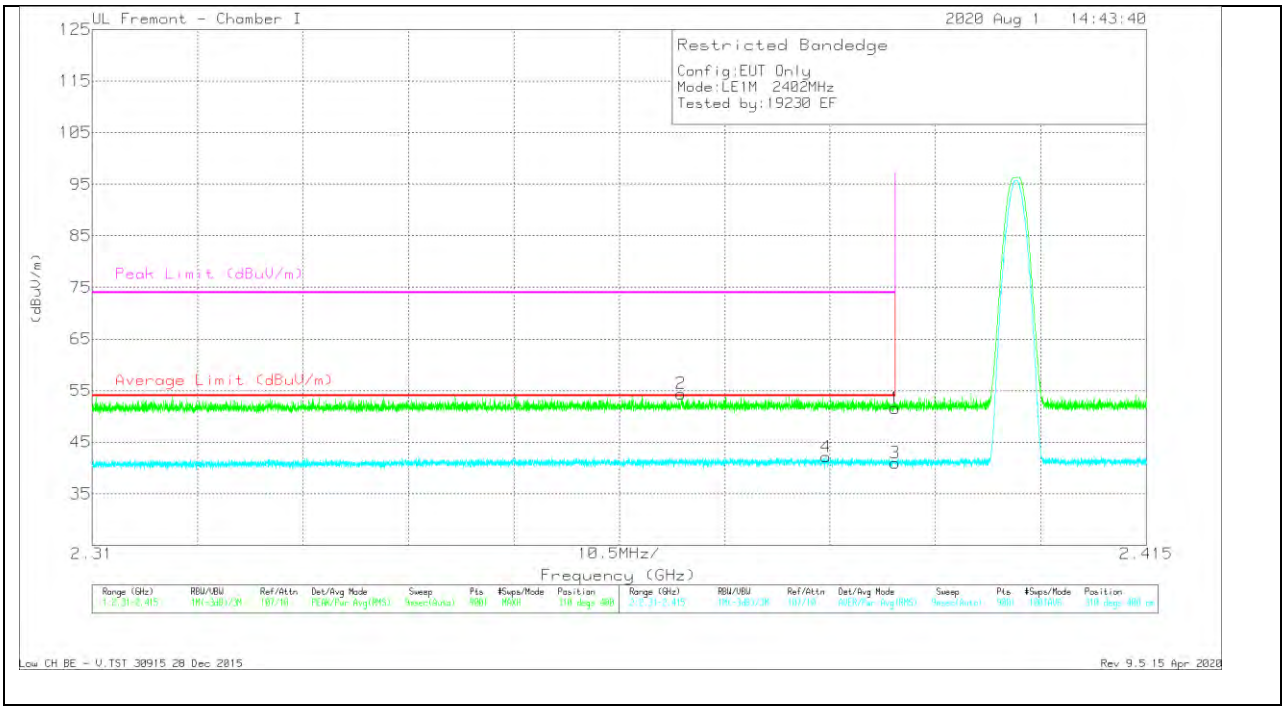
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (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	37.01	Pk	31.9	-17.3	51.61	-	-	74	-22.39	310	400	V
2	* 2.36866	39.79	Pk	31.9	-17.3	54.39	-	-	74	-19.61	310	400	V
3	* 2.38999	26.36	RMS	31.9	-17.3	40.96	54	-13.04	-	-	310	400	V
4	* 2.38308	27.56	RMS	31.9	-17.3	42.16	54	-11.84	-	-	310	400	V

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

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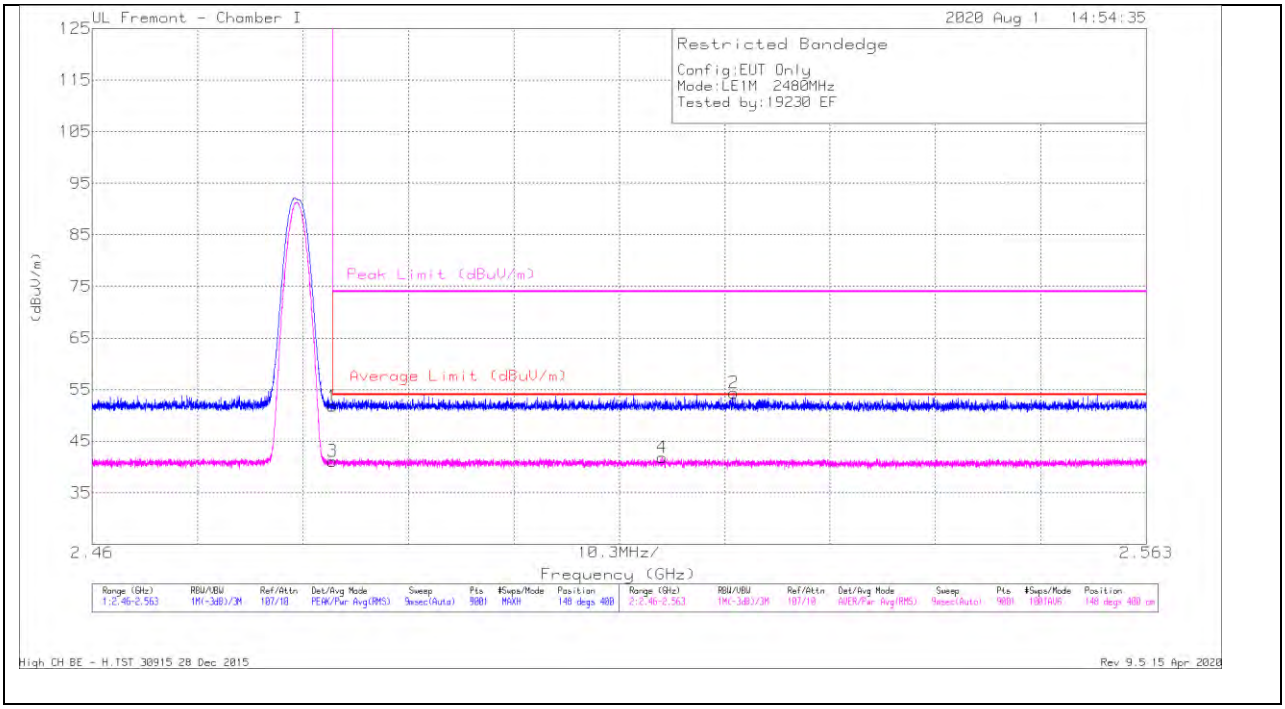
BANDEDGE (HIGH CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (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	37.06	Pk	32.4	-17.7	51.76	-	-	74	-22.24	148	400	H
2	2.52268	39.85	Pk	32.3	-17.8	54.35	-	-	74	-19.65	148	400	H
3	* 2.48351	26.41	RMS	32.4	-17.7	41.11	54	-12.89	-	-	148	400	H
4	2.51568	27.24	RMS	32.4	-17.8	41.84	54	-12.16	-	-	148	400	H

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

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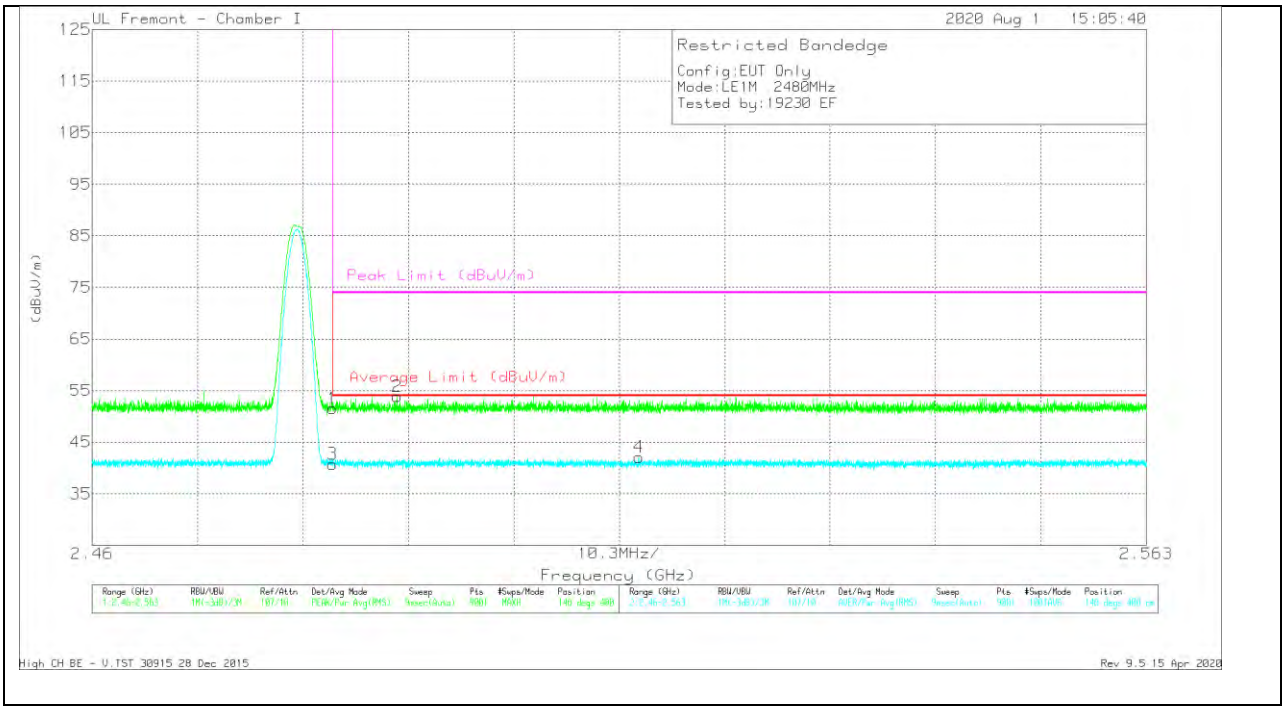
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (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	36.82	Pk	32.4	-17.7	51.52	-	-	74	-22.48	148	400	V
2	* 2.48981	39.33	Pk	32.3	-17.8	53.83	-	-	74	-20.17	148	400	V
3	* 2.48351	26.04	RMS	32.4	-17.7	40.74	54	-13.26	-	-	148	400	V
4	2.51341	27.58	RMS	32.3	-17.8	42.08	54	-11.92	-	-	148	400	V

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

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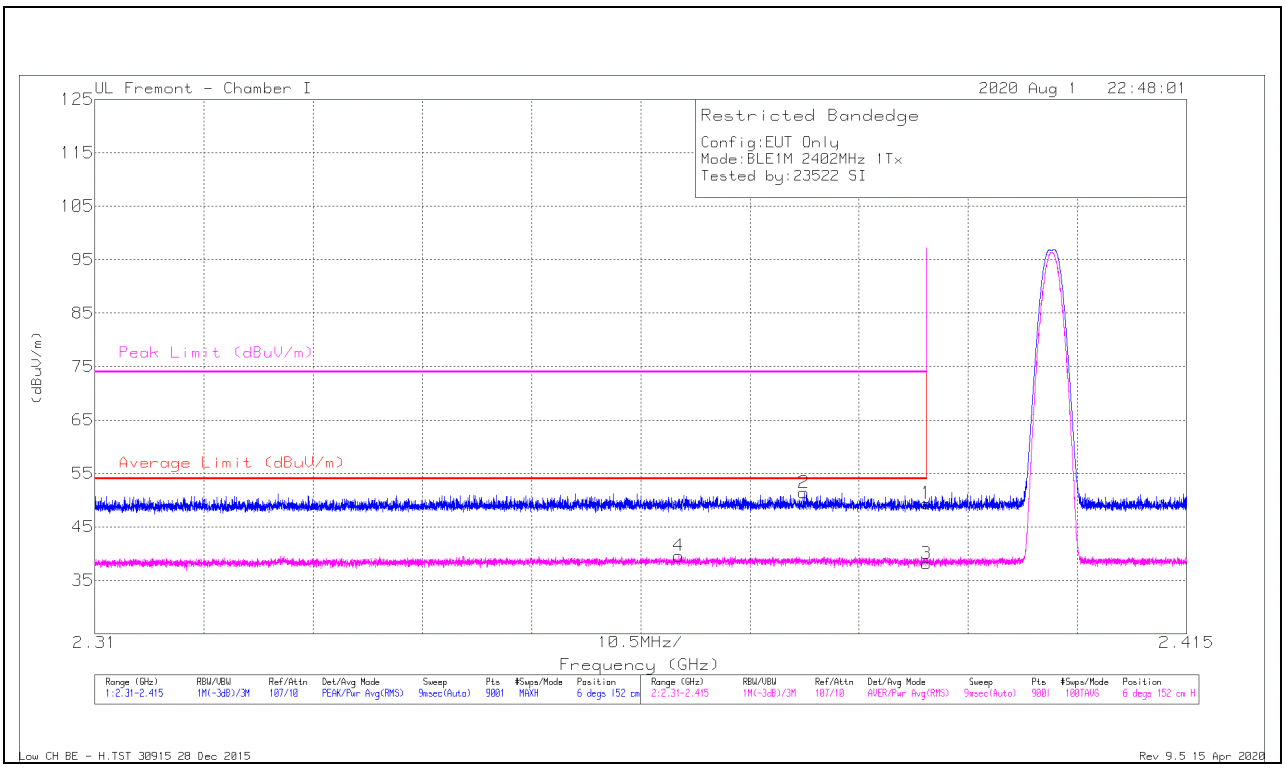
ANT 3

BANDEDGE (LOW CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (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	34.79	Pk	31.9	-17.3	49.39	-	-	74	-24.61	6	152	H
2	* 2.37819	36.79	Pk	31.9	-17.3	51.39	-	-	74	-22.61	6	152	H
3	* 2.38999	23.51	RMS	31.9	-17.3	38.11	54	-15.89	-	-	6	152	H
4	* 2.36614	25.06	RMS	31.8	-17.3	39.56	54	-14.44	-	-	6	152	H

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

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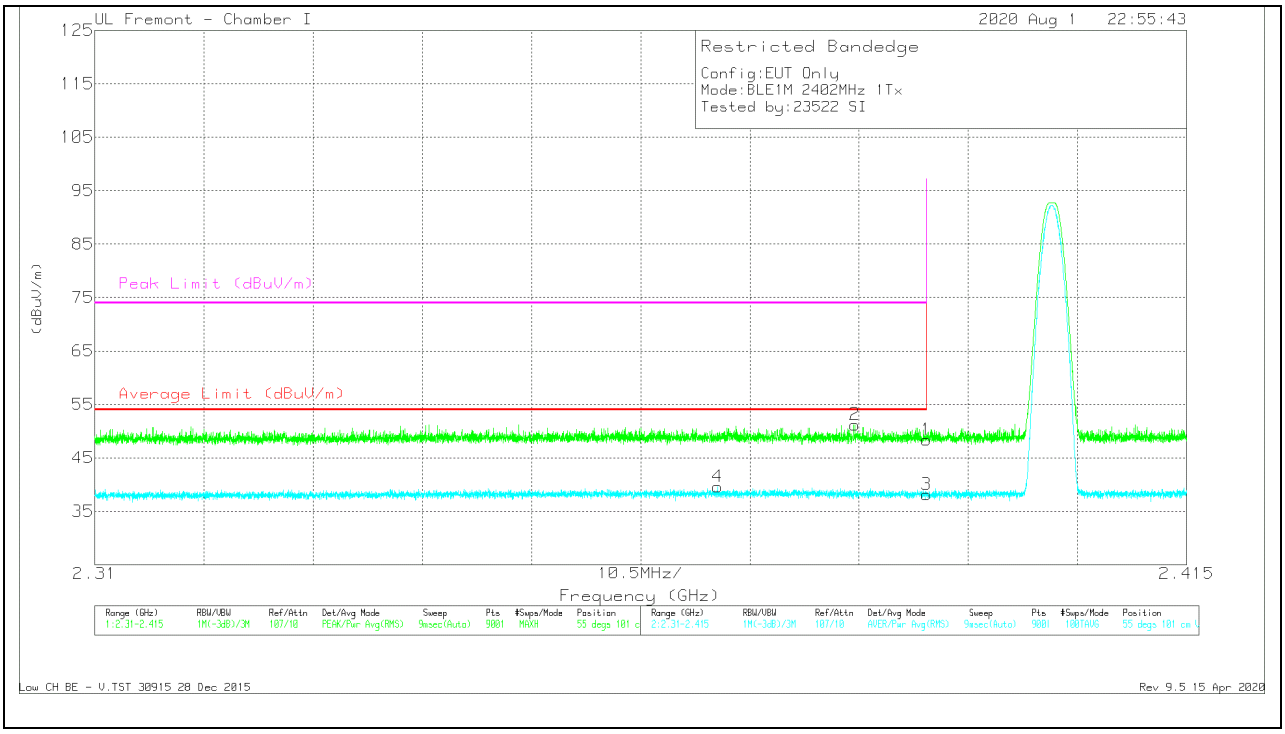
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (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	33.74	Pk	31.9	-17.3	48.34	-	-	74	-25.66	55	101	V
2	* 2.38308	36.62	Pk	31.9	-17.3	51.22	-	-	74	-22.78	55	101	V
3	* 2.38999	23.54	RMS	31.9	-17.3	38.14	54	-15.86	-	-	55	101	V
4	* 2.3699	24.99	RMS	31.9	-17.3	39.59	54	-14.41	-	-	55	101	V

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

Low CH BE - V.TST 30915 28 Dec 2015
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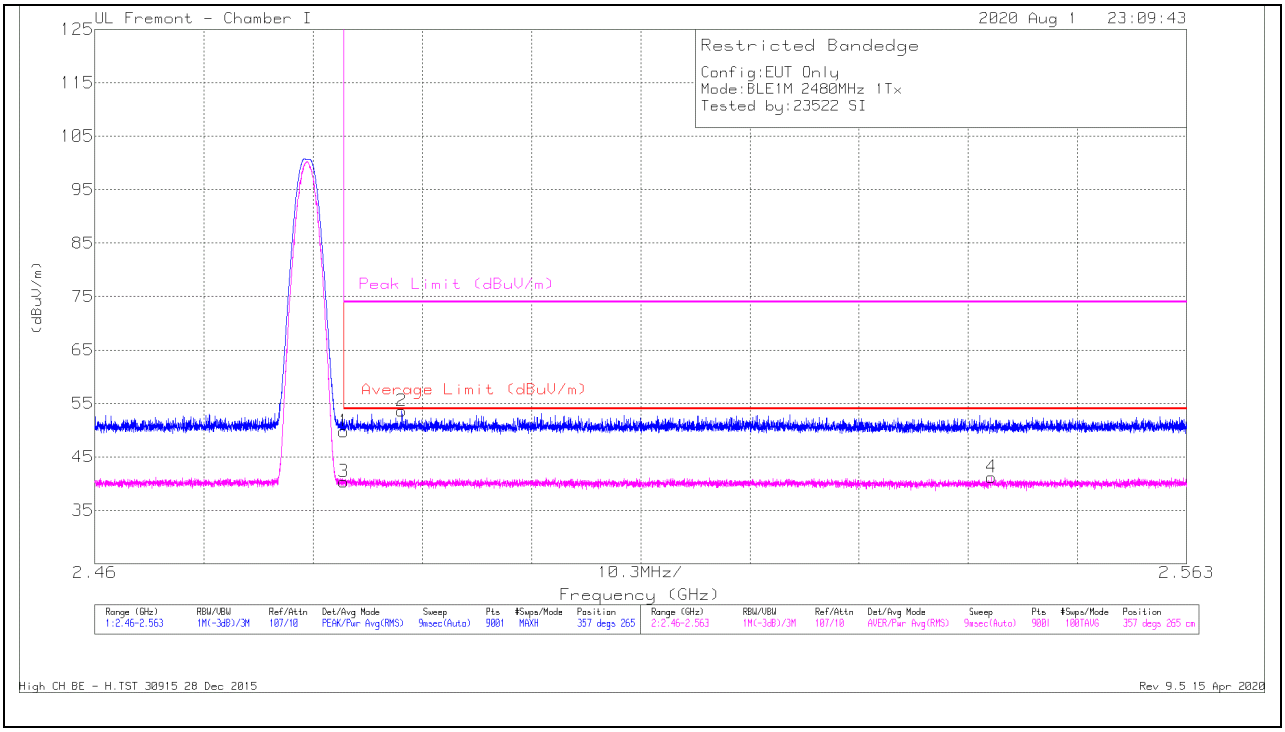
BANDEDGE (HIGH CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (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	35.08	Pk	32.4	-17.7	49.78	-	-	74	-24.22	357	265	H
2	* 2.48894	39.08	Pk	32.3	-17.8	53.58	-	-	74	-20.42	357	265	H
3	* 2.48351	25.65	RMS	32.4	-17.7	40.35	54	-13.65	-	-	357	265	H
4	2.54459	26.8	RMS	32.2	-17.8	41.2	54	-12.8	-	-	357	265	H

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

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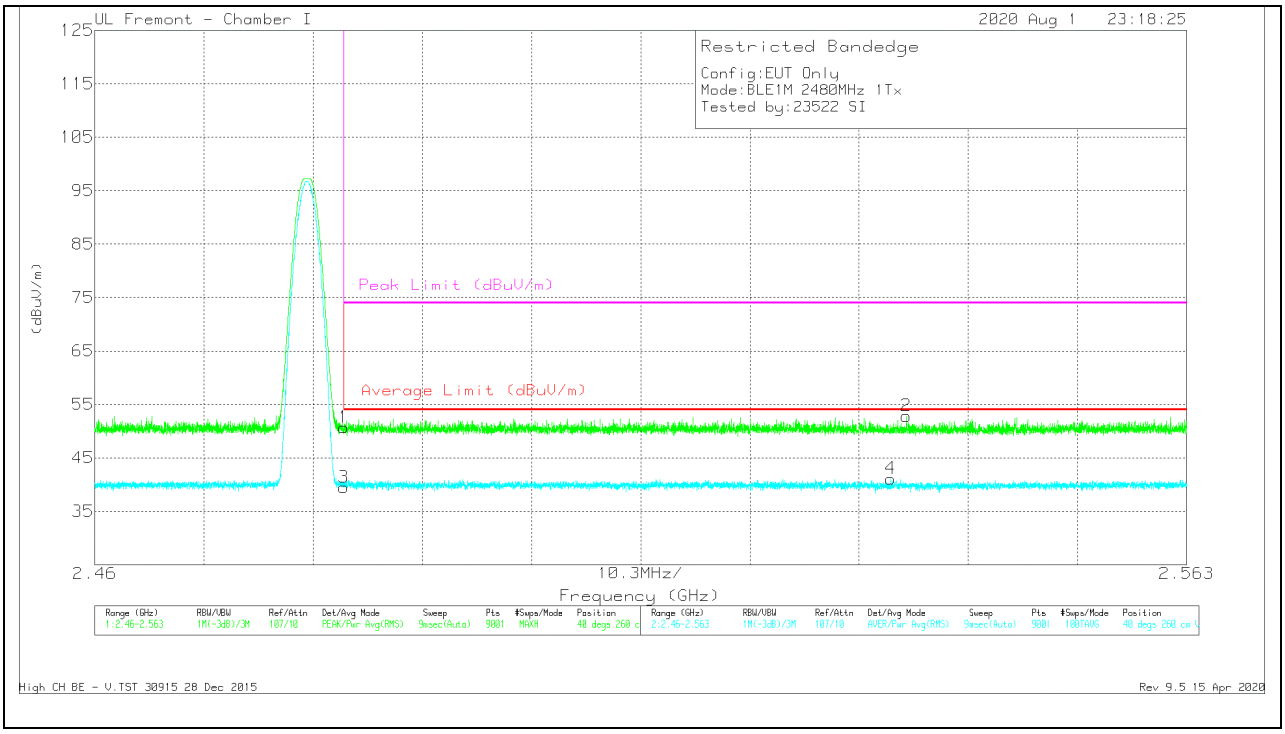
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (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	35.96	Pk	32.4	-17.7	50.66	-	-	74	-23.34	40	260	V
2	2.53655	38.42	Pk	32.2	-17.8	52.82	-	-	74	-21.18	40	260	V
3	* 2.48351	24.77	RMS	32.4	-17.7	39.47	54	-14.53	-	-	40	260	V
4	2.53508	26.71	RMS	32.2	-17.8	41.11	54	-12.89	-	-	40	260	V

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

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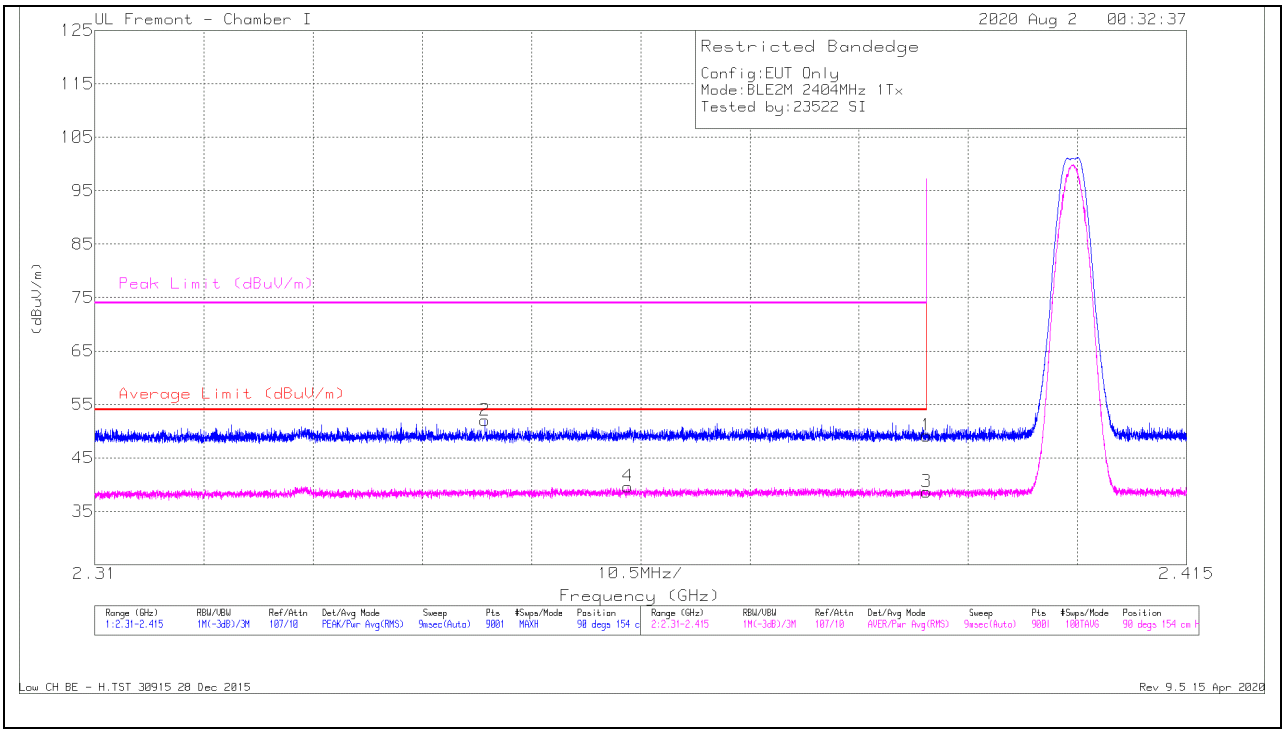
10.2.4. LOW POWER BLE (2Mbps)

ANT 4

BANDEDGE (LOW CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (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	34.59	Pk	31.9	-17.3	49.19	-	-	74	-24.81	90	154	H
2	* 2.34751	37.5	Pk	31.7	-17.2	52	-	-	74	-22	90	154	H
3	* 2.38999	24.06	RMS	31.9	-17.3	38.66	54	-15.34	-	-	90	154	H
4	* 2.36128	25.15	RMS	31.8	-17.3	39.65	54	-14.35	-	-	90	154	H

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

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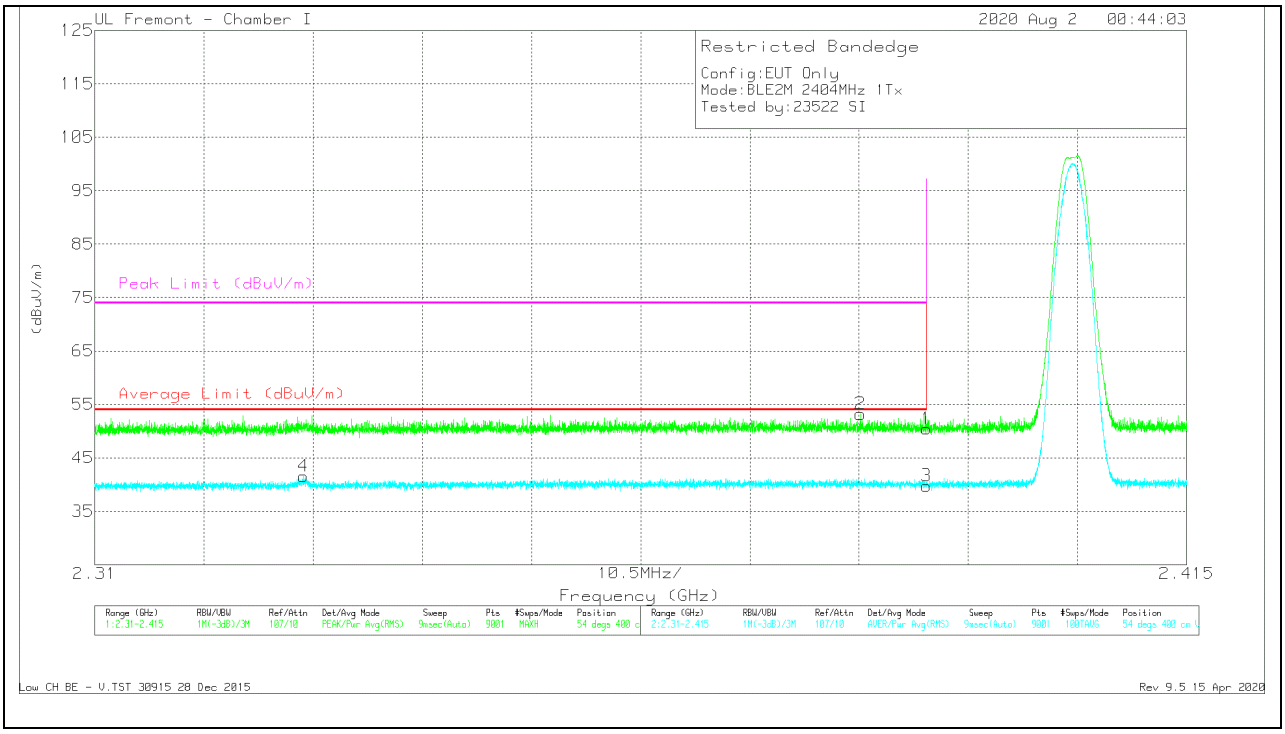
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (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	35.81	Pk	31.9	-17.3	50.41	-	-	74	-23.59	54	400	V
2	* 2.38363	38.6	Pk	31.9	-17.3	53.2	-	-	74	-20.8	54	400	V
3	* 2.38999	25.13	RMS	31.9	-17.3	39.73	54	-14.27	-	-	54	400	V
4	* 2.33006	27.22	RMS	31.5	-17.2	41.52	54	-12.48	-	-	54	400	V

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

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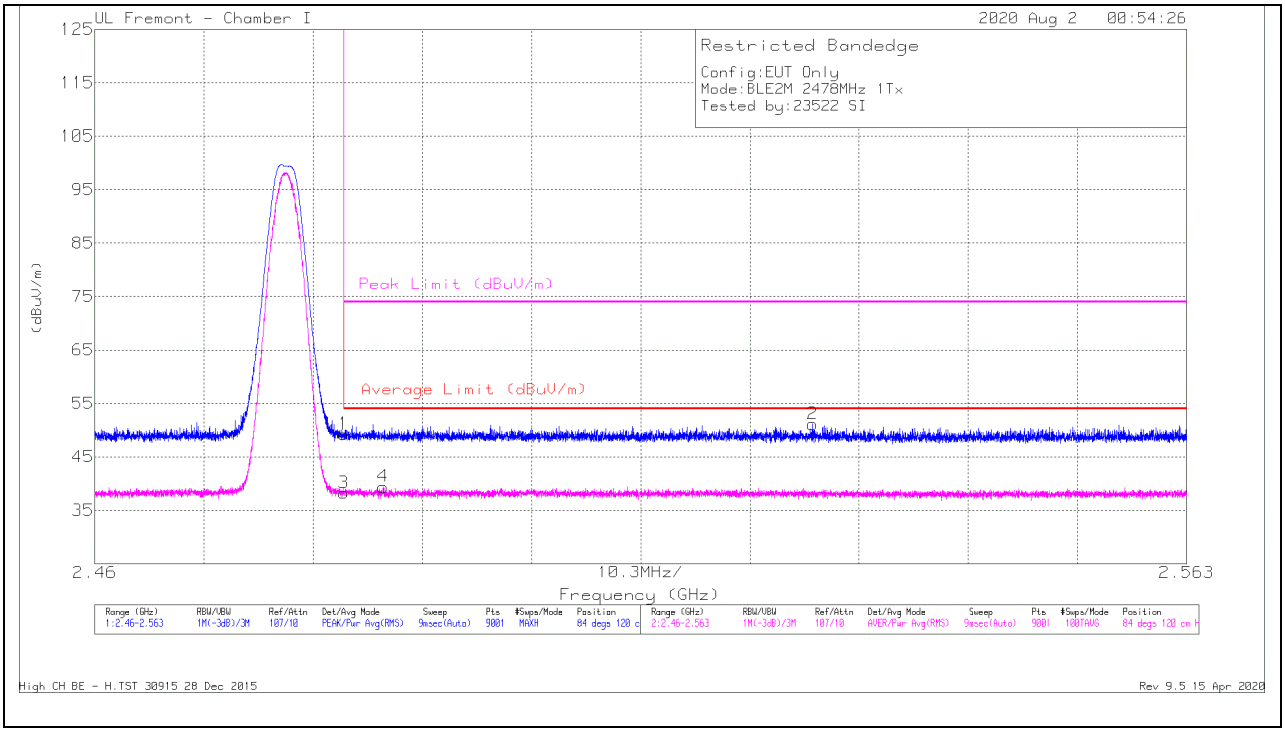
BANDEDGE (HIGH CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (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	34.54	Pk	32.4	-17.7	49.24	-	-	74	-24.76	84	120	H
2	2.52774	36.63	Pk	32.3	-17.8	51.13	-	-	74	-22.87	84	120	H
3	* 2.48351	23.55	RMS	32.4	-17.7	38.25	54	-15.75	-	-	84	120	H
4	* 2.4872	24.81	RMS	32.3	-17.7	39.41	54	-14.59	-	-	84	120	H

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

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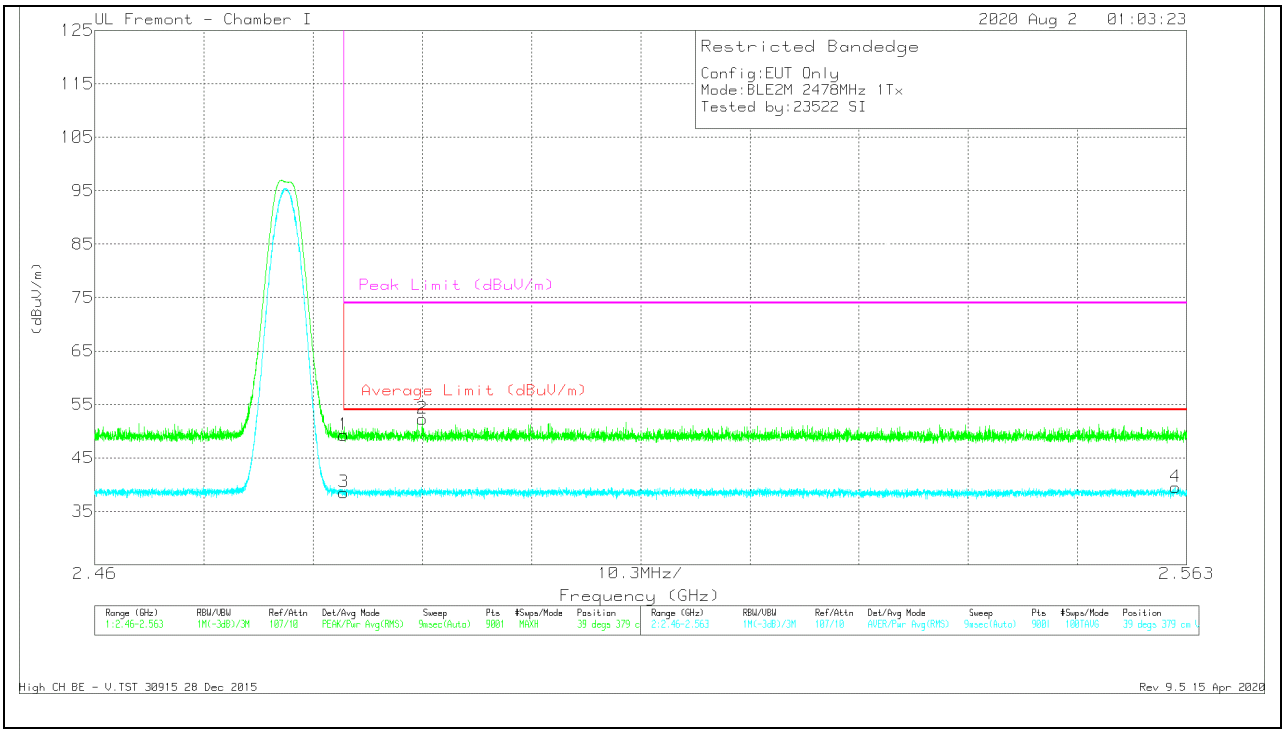
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (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	34.59	Pk	32.4	-17.7	49.29	-	-	74	-24.71	39	379	V
2	* 2.49089	37.82	Pk	32.3	-17.8	52.32	-	-	74	-21.68	39	379	V
3	* 2.48351	23.86	RMS	32.4	-17.7	38.56	54	-15.44	-	-	39	379	V
4	2.56197	25.04	RMS	32.3	-17.8	39.54	54	-14.46	-	-	39	379	V

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

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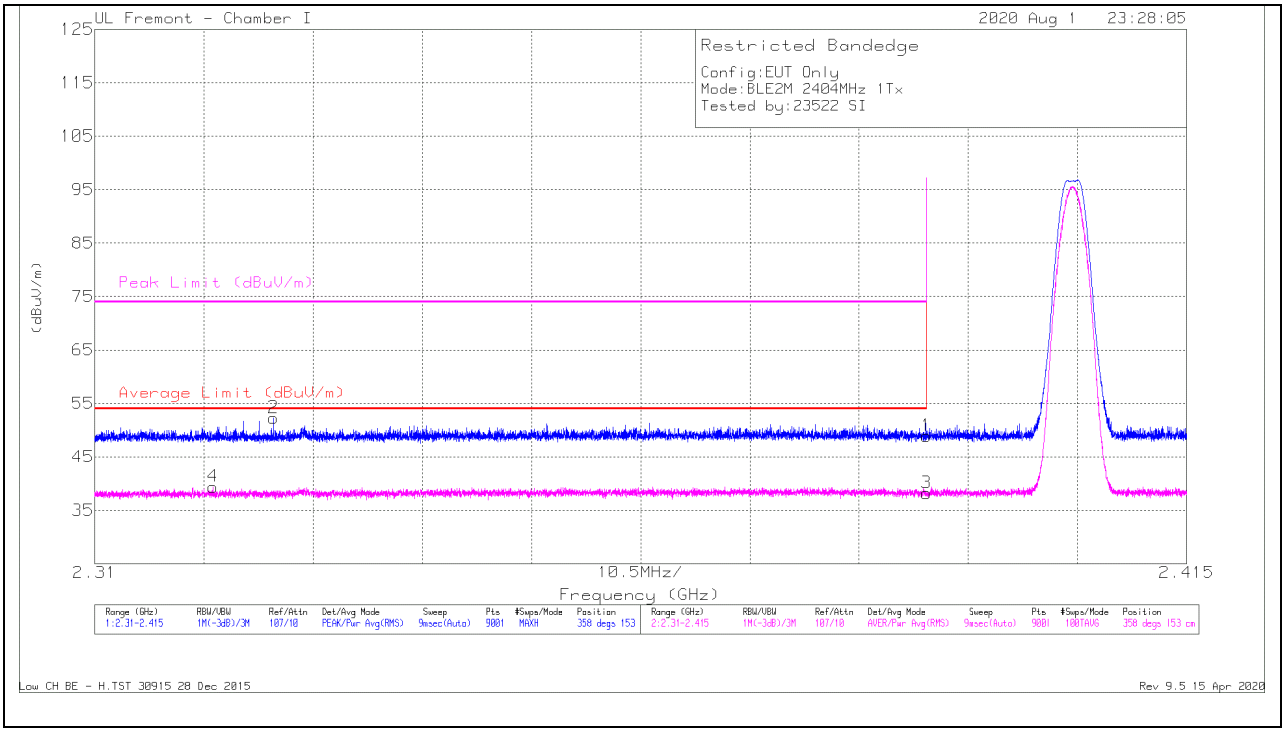
ANT 3

BANDEDGE (LOW CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (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	34.33	Pk	31.9	-17.3	48.93	-	-	74	-25.07	358	153	H
2	* 2.32717	37.99	Pk	31.5	-17.2	52.29	-	-	74	-21.71	358	153	H
3	* 2.38999	23.62	RMS	31.9	-17.3	38.22	54	-15.78	-	-	358	153	H
4	* 2.32136	25.11	RMS	31.5	-17.2	39.41	54	-14.59	-	-	358	153	H

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

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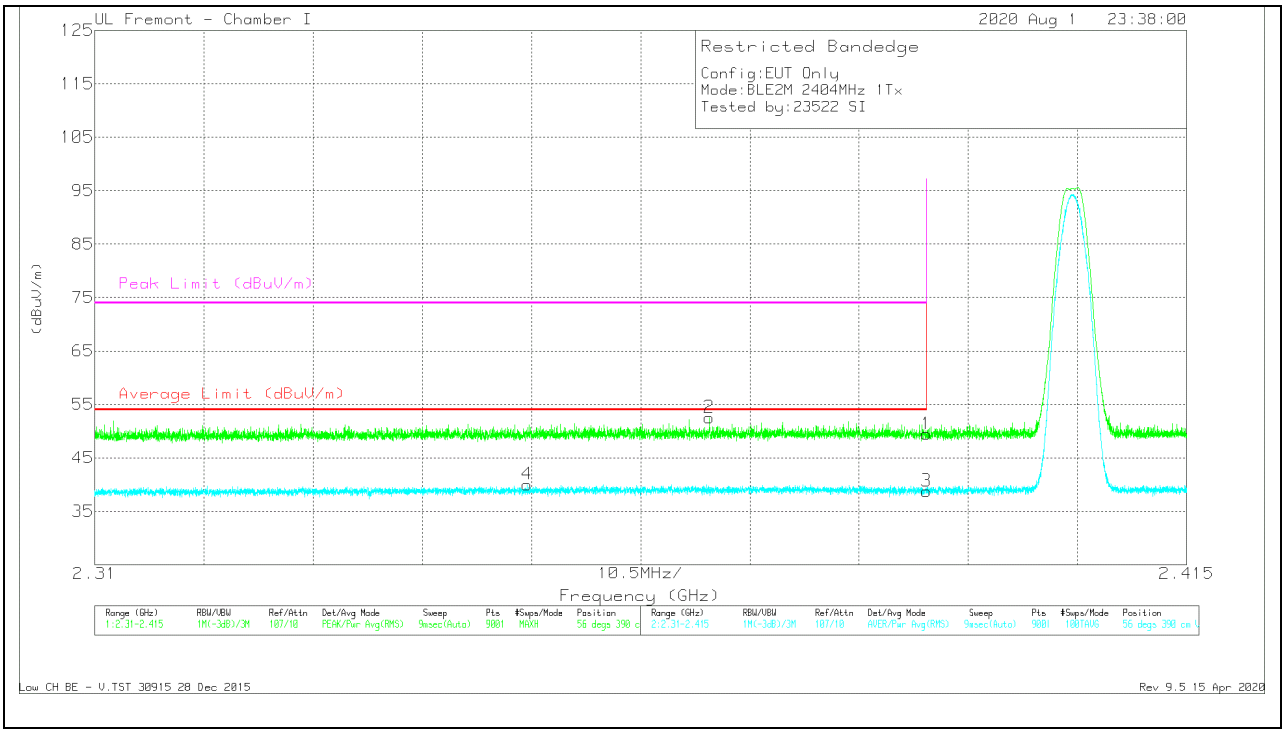
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (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	34.85	Pk	31.9	-17.3	49.45	-	-	74	-24.55	56	390	V
2	* 2.36907	37.95	Pk	31.9	-17.3	52.55	-	-	74	-21.45	56	390	V
3	* 2.38999	24.17	RMS	31.9	-17.3	38.77	54	-15.23	-	-	56	390	V
4	* 2.35157	25.52	RMS	31.7	-17.2	40.02	54	-13.98	-	-	56	390	V

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

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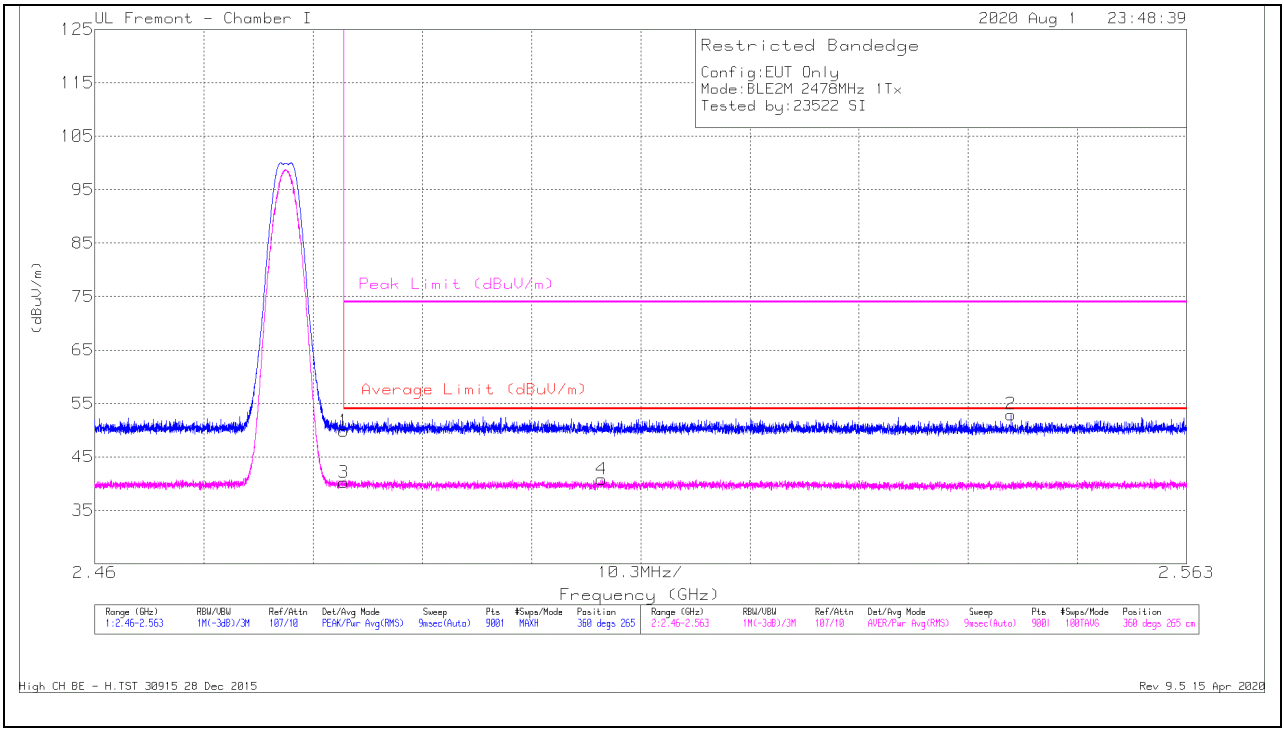
BANDEDGE (HIGH CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (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	35.12	Pk	32.4	-17.7	49.82	-	-	74	-24.18	360	265	H
2	2.54641	38.44	Pk	32.3	-17.8	52.94	-	-	74	-21.06	360	265	H
3	* 2.48351	25.49	RMS	32.4	-17.7	40.19	54	-13.81	-	-	360	265	H
4	2.50781	26.31	RMS	32.3	-17.8	40.81	54	-13.19	-	-	360	265	H

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

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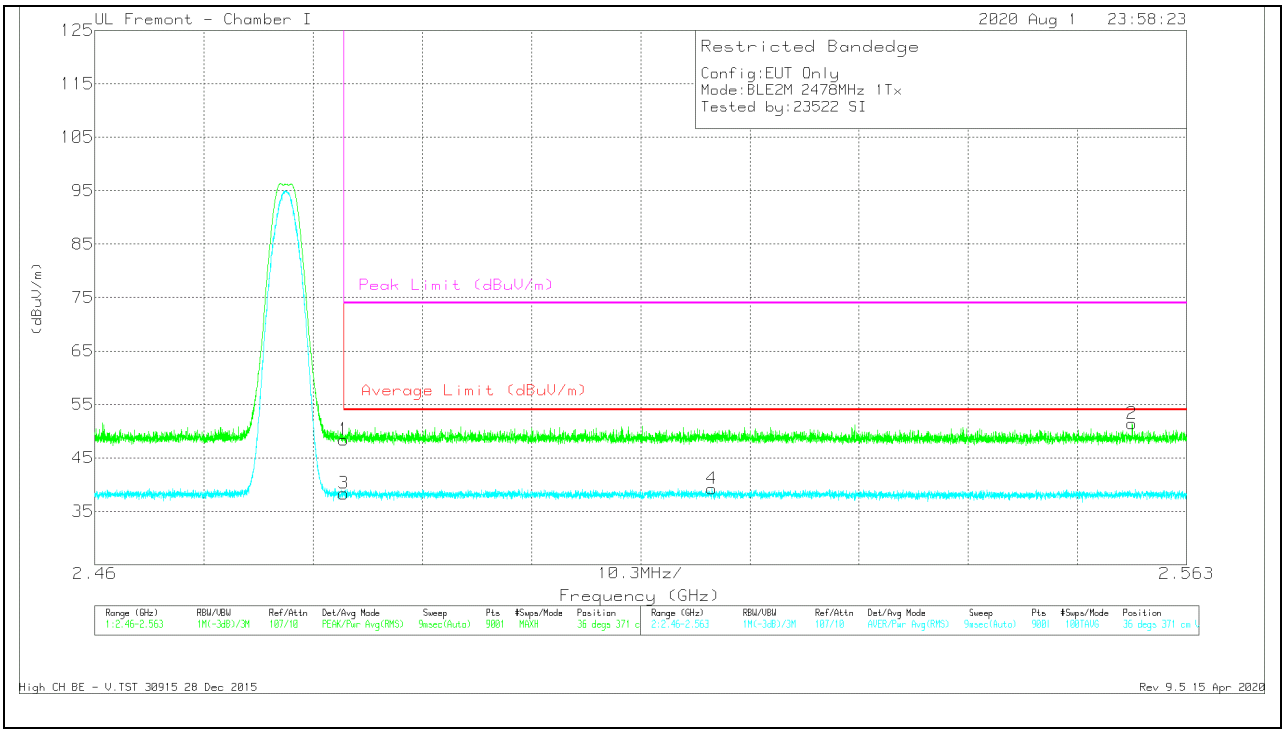
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (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	33.68	Pk	32.4	-17.7	48.38	-	-	74	-25.62	36	371	V
2	2.55786	36.91	Pk	32.3	-17.8	51.41	-	-	74	-22.59	36	371	V
3	* 2.48351	23.64	RMS	32.4	-17.7	38.34	54	-15.66	-	-	36	371	V
4	2.51819	24.73	RMS	32.3	-17.8	39.23	54	-14.77	-	-	36	371	V

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

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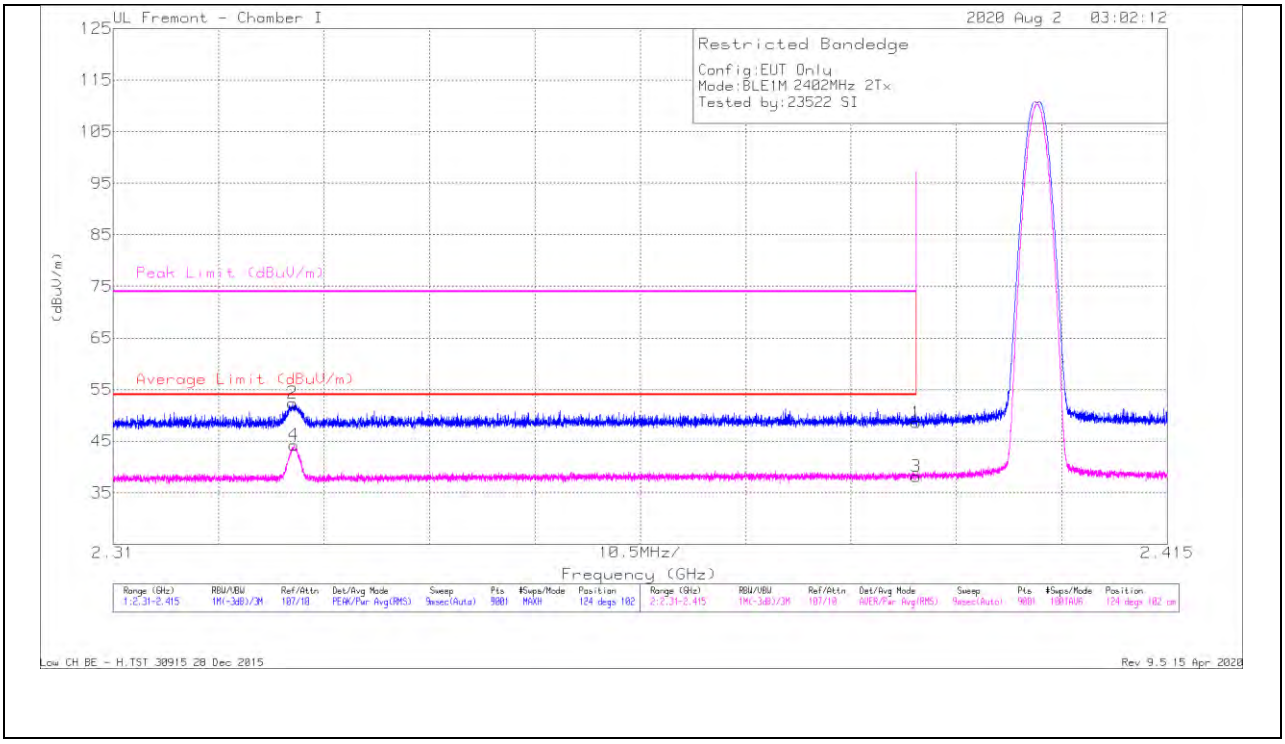
10.2.5. HIGH POWER BLE TXBF (1Mbps)

BANDEDGE (LOW CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (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	Pk	31.9	-17.3	48.6	-	-	74	-25.4	124	102	H
2	* 2.3279	38.1	Pk	31.5	-17.2	52.4	-	-	74	-21.6	124	102	H
3	* 2.38999	23.55	RMS	31.9	-17.3	38.15	54	-15.85	-	-	124	102	H
4	* 2.328	29.96	RMS	31.5	-17.2	44.26	54	-9.74	-	-	124	102	H

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

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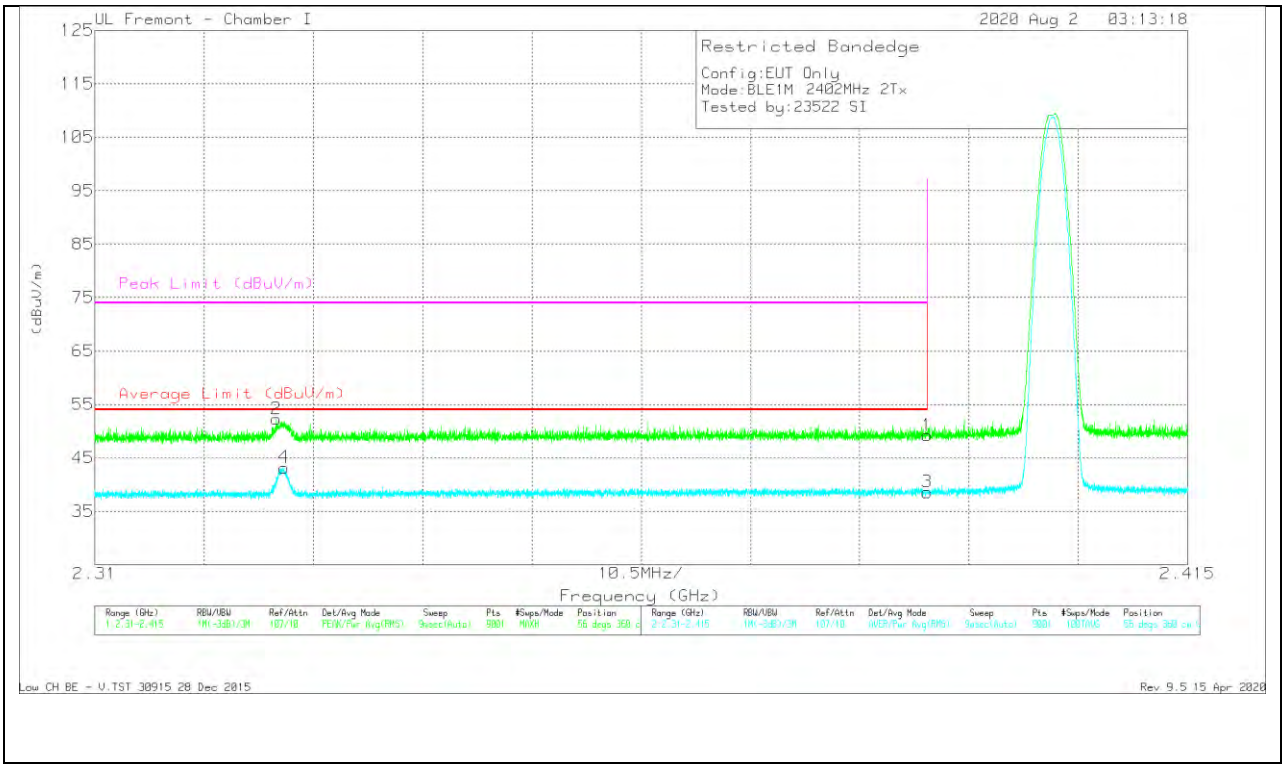
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (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	34.6	Pk	31.9	-17.3	49.2	-	-	74	-24.8	56	360	V
2	* 2.32745	37.97	Pk	31.5	-17.2	52.27	-	-	74	-21.73	56	360	V
3	* 2.38999	23.98	RMS	31.9	-17.3	38.58	54	-15.42	-	-	56	360	V
4	* 2.32817	28.87	RMS	31.5	-17.2	43.17	54	-10.83	-	-	56	360	V

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

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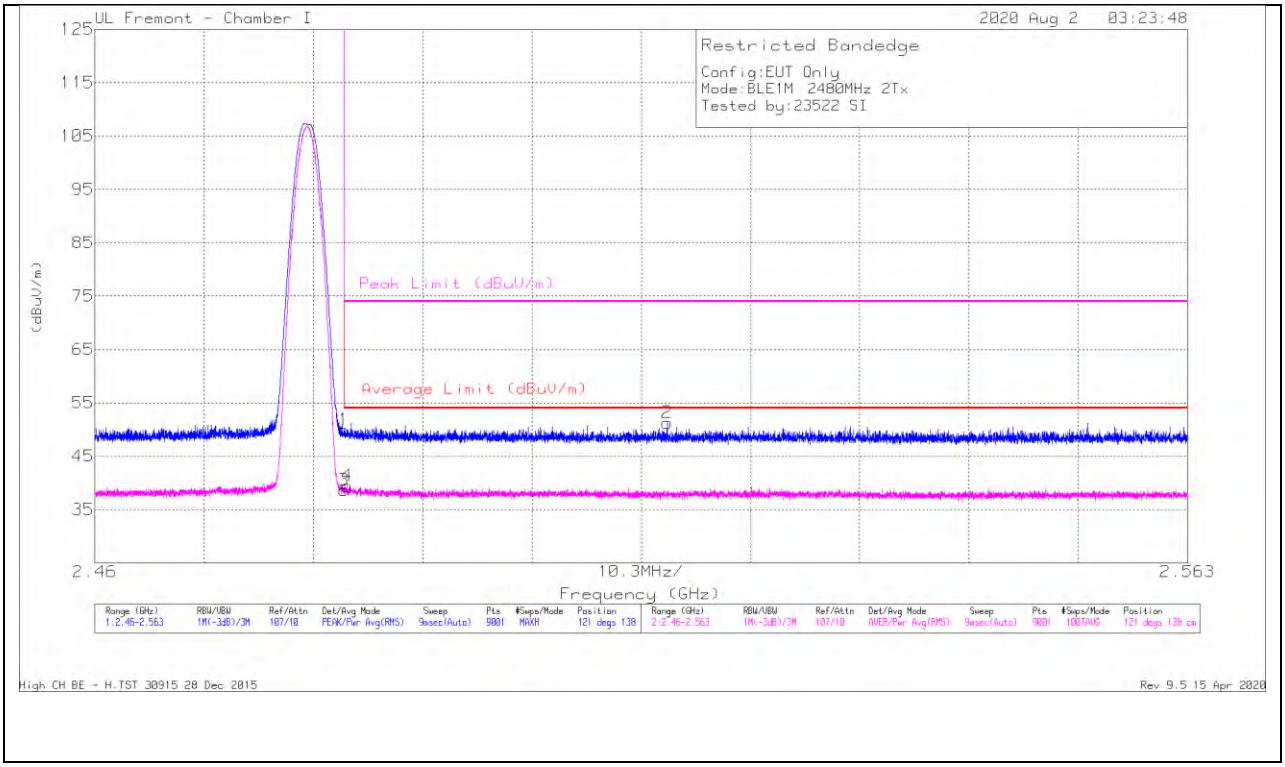
BANDEDGE (HIGH CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (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	35.23	Pk	32.4	-17.7	49.93	-	-	74	-24.07	121	138	H
2	2.51395	36.75	Pk	32.3	-17.8	51.25	-	-	74	-22.75	121	138	H
3	* 2.48351	23.9	RMS	32.4	-17.7	38.6	54	-15.4	-	-	121	138	H
4	* 2.48379	24.73	RMS	32.4	-17.7	39.43	54	-14.57	-	-	121	138	H

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

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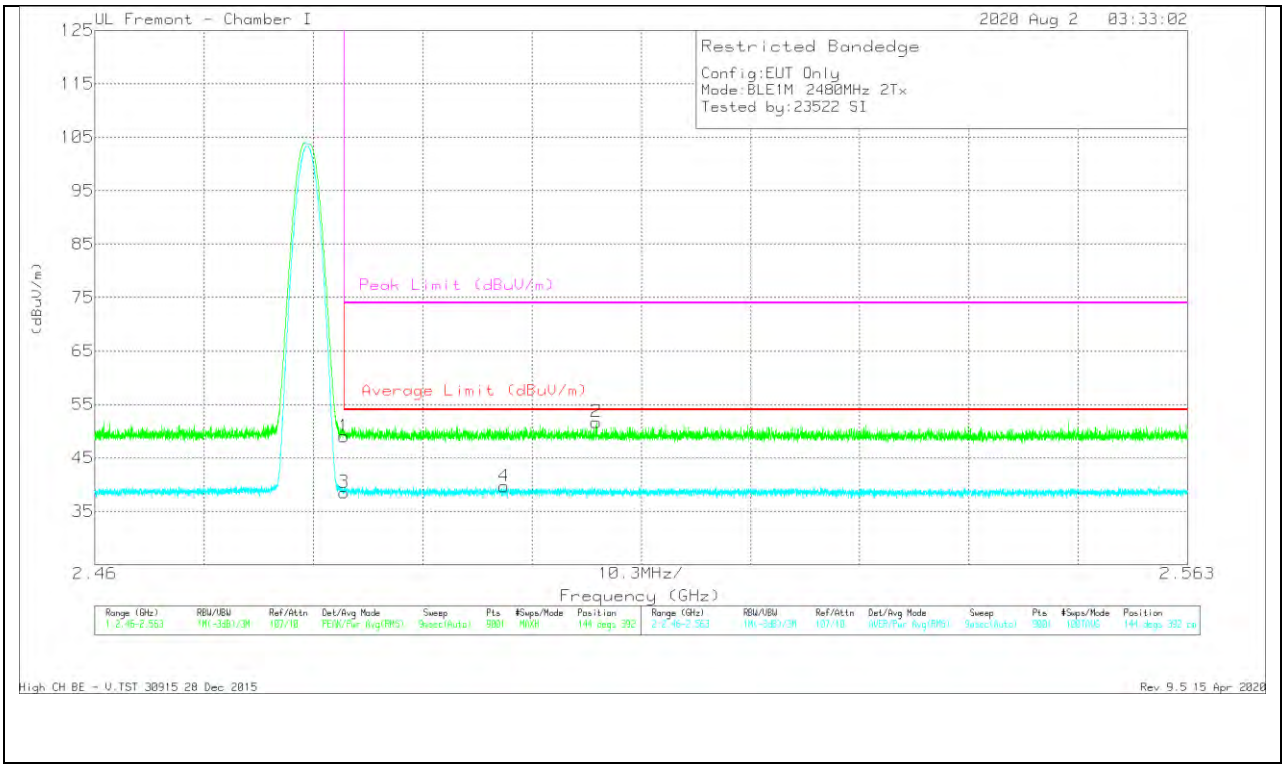
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (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	34.36	Pk	32.4	-17.7	49.06	-	-	74	-24.94	144	392	V
2	2.50726	37.21	Pk	32.3	-17.8	51.71	-	-	74	-22.29	144	392	V
3	* 2.48351	23.83	RMS	32.4	-17.7	38.53	54	-15.47	-	-	144	392	V
4	* 2.4986	25.18	RMS	32.3	-17.8	39.68	54	-14.32	-	-	144	392	V

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

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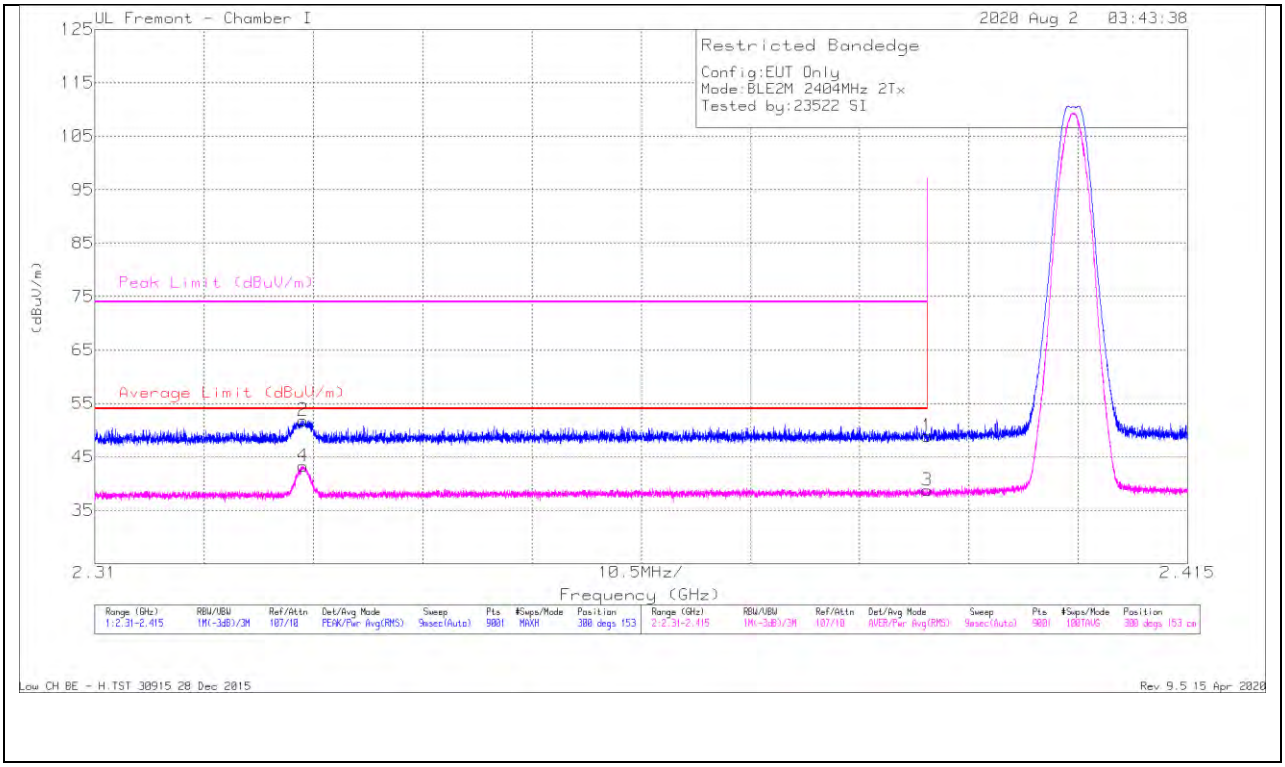
10.2.6. HIGH POWER BLE TXBF (2Mbps)

BANDEDGE (LOW CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (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	34.28	Pk	31.9	-17.3	48.88	-	-	74	-25.12	300	153	H
2	* 2.33002	37.52	Pk	31.5	-17.2	51.82	-	-	74	-22.18	300	153	H
3	* 2.38999	24.16	RMS	31.9	-17.3	38.76	54	-15.24	-	-	300	153	H
4	* 2.33001	29	RMS	31.5	-17.2	43.3	54	-10.7	-	-	300	153	H

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

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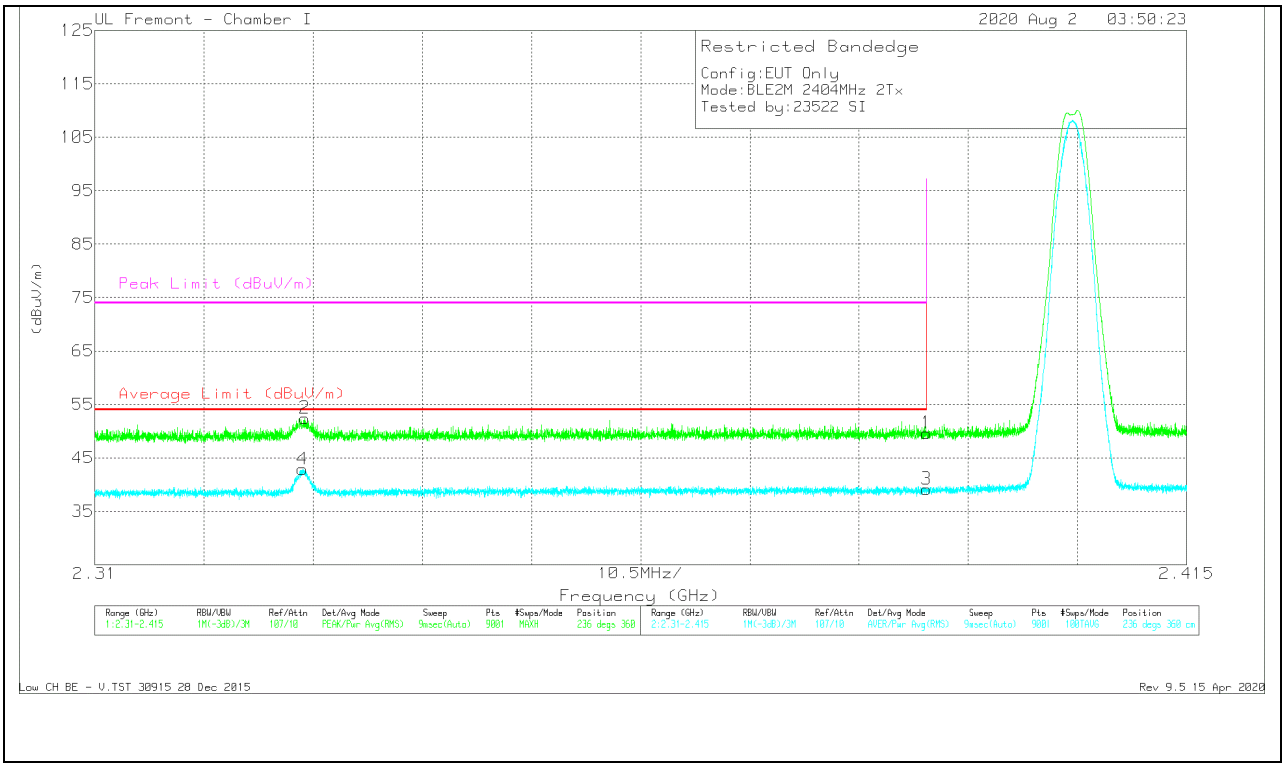
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (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	35.03	Pk	31.9	-17.3	49.63	-	-	74	-24.37	236	360	V
2	* 2.33018	38.1	Pk	31.5	-17.2	52.4	-	-	74	-21.6	236	360	V
3	* 2.38999	24.53	RMS	31.9	-17.3	39.13	54	-14.87	-	-	236	360	V
4	* 2.32997	28.57	RMS	31.5	-17.2	42.87	54	-11.13	-	-	236	360	V

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

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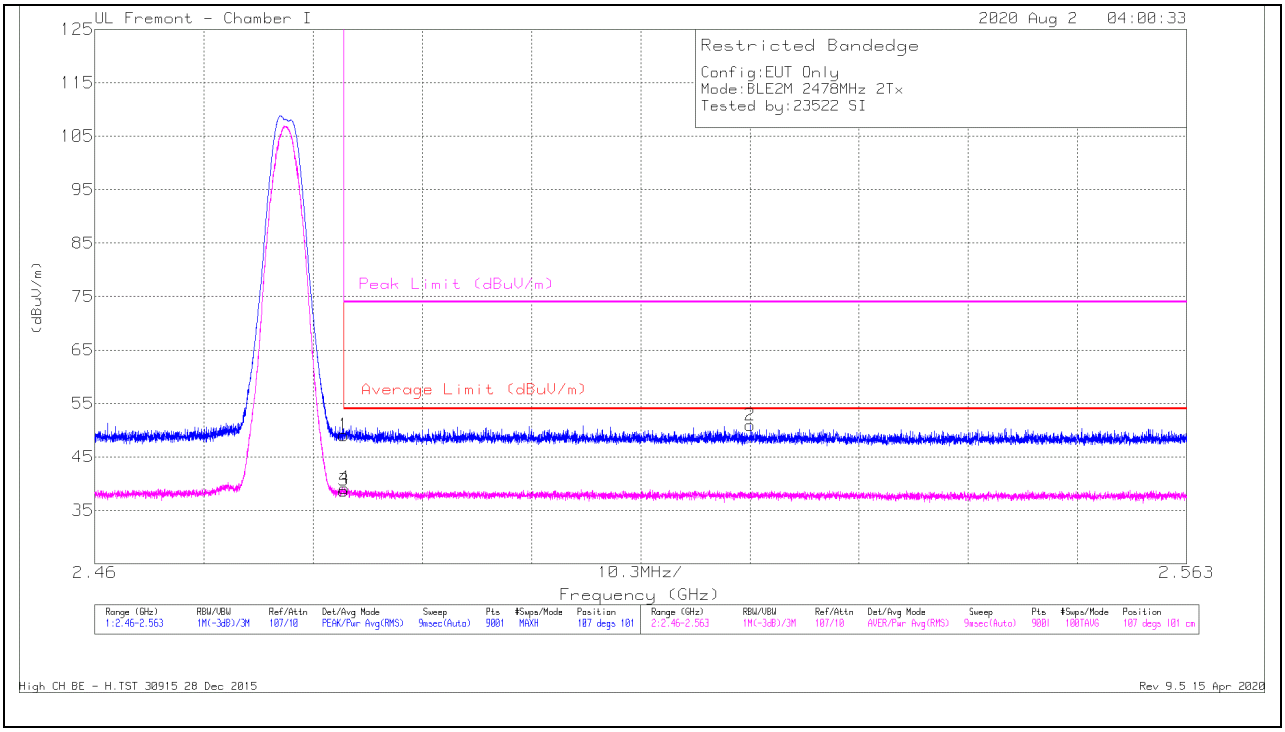
BANDEDGE (HIGH CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (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	34.36	Pk	32.4	-17.7	49.06	-	-	74	-24.94	107	101	H
2	2.52181	36.4	Pk	32.3	-17.8	50.9	-	-	74	-23.1	107	101	H
3	* 2.48351	23.98	RMS	32.4	-17.7	38.68	54	-15.32	-	-	107	101	H
4	* 2.48354	24.42	RMS	32.4	-17.7	39.12	54	-14.88	-	-	107	101	H

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

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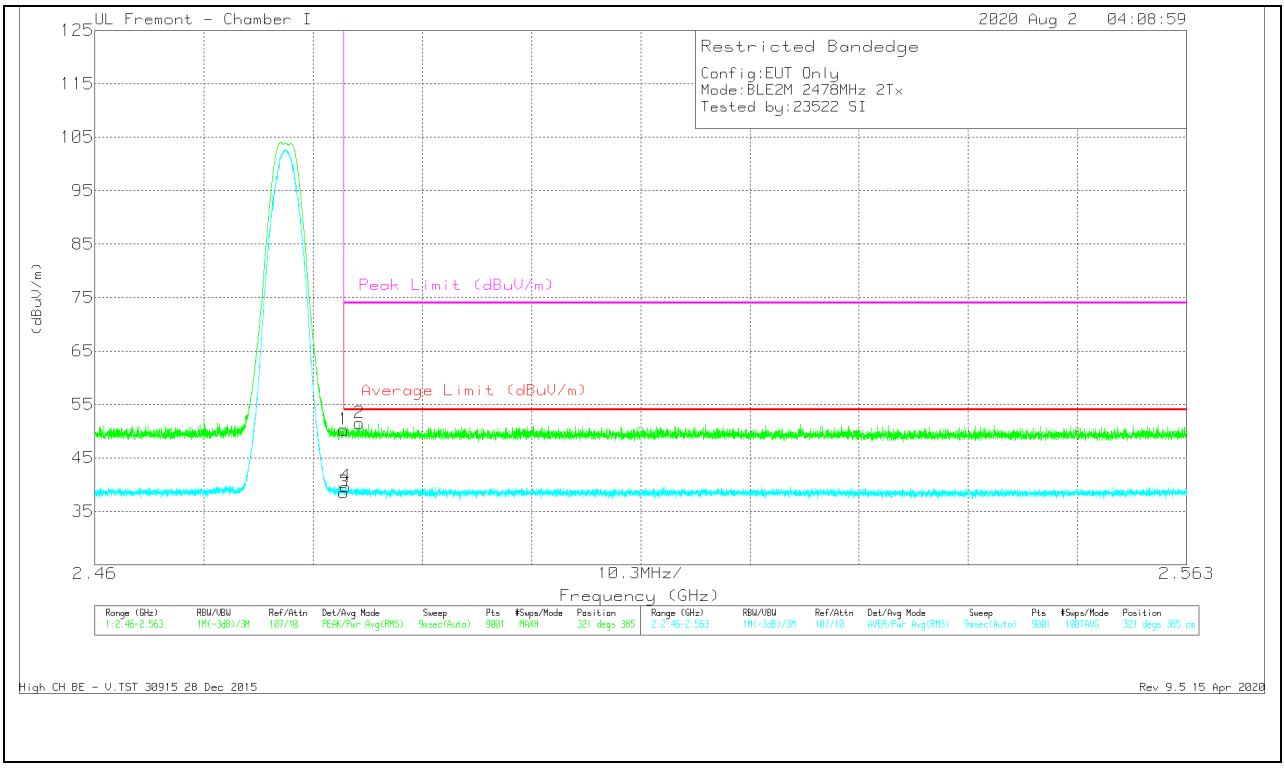
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (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	35.57	Pk	32.4	-17.7	50.27	-	-	74	-23.73	321	385	V
2	* 2.48494	36.79	Pk	32.4	-17.7	51.49	-	-	74	-22.51	321	385	V
3	* 2.48351	23.82	RMS	32.4	-17.7	38.52	54	-15.48	-	-	321	385	V
4	* 2.48369	24.92	RMS	32.4	-17.7	39.62	54	-14.38	-	-	321	385	V

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

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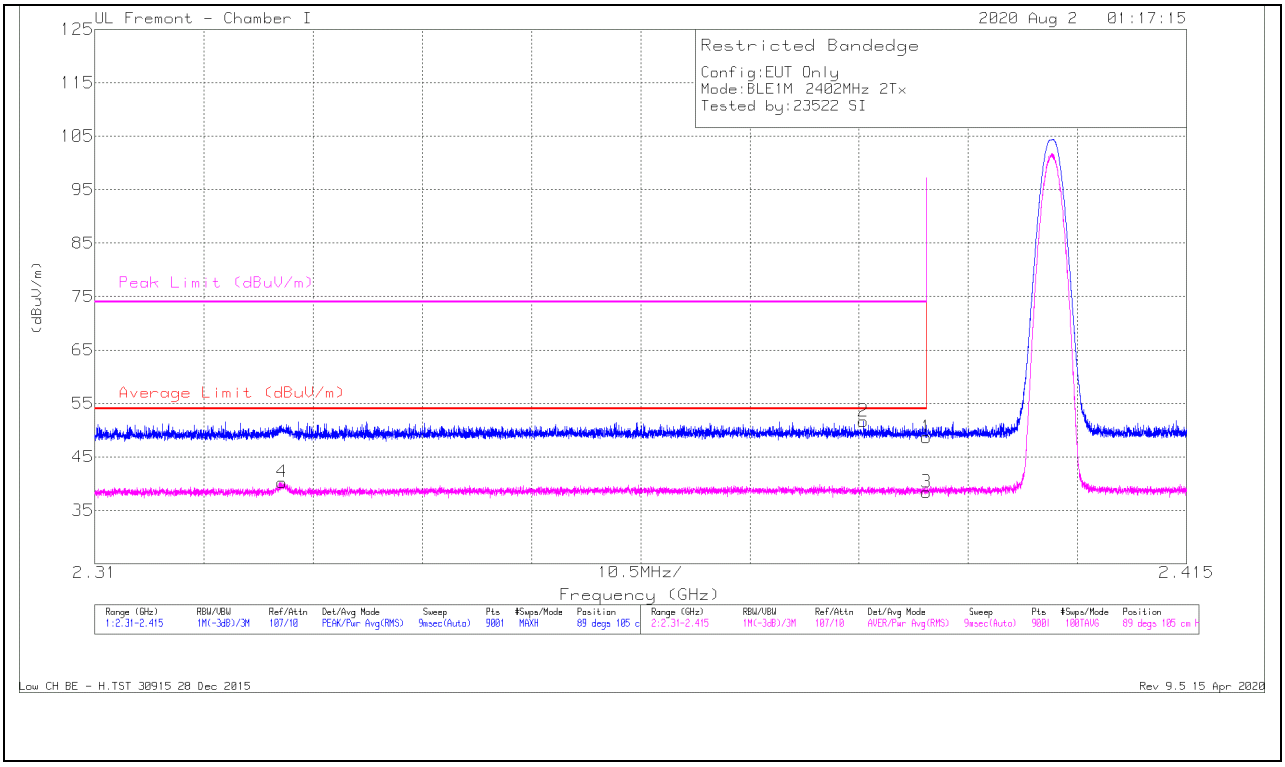
10.2.7. LOW POWER BLE TXBF (1Mbps)

BANDEDGE (LOW CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (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	34.08	Pk	31.9	-17.3	48.68	-	-	74	-25.32	89	105	H
2	* 2.38392	37.07	Pk	31.9	-17.3	51.67	-	-	74	-22.33	89	105	H
3	* 2.38999	23.79	RMS	31.9	-17.3	38.39	54	-15.61	-	-	89	105	H
4	* 2.328	25.96	RMS	31.5	-17.2	40.26	54	-13.74	-	-	89	105	H

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

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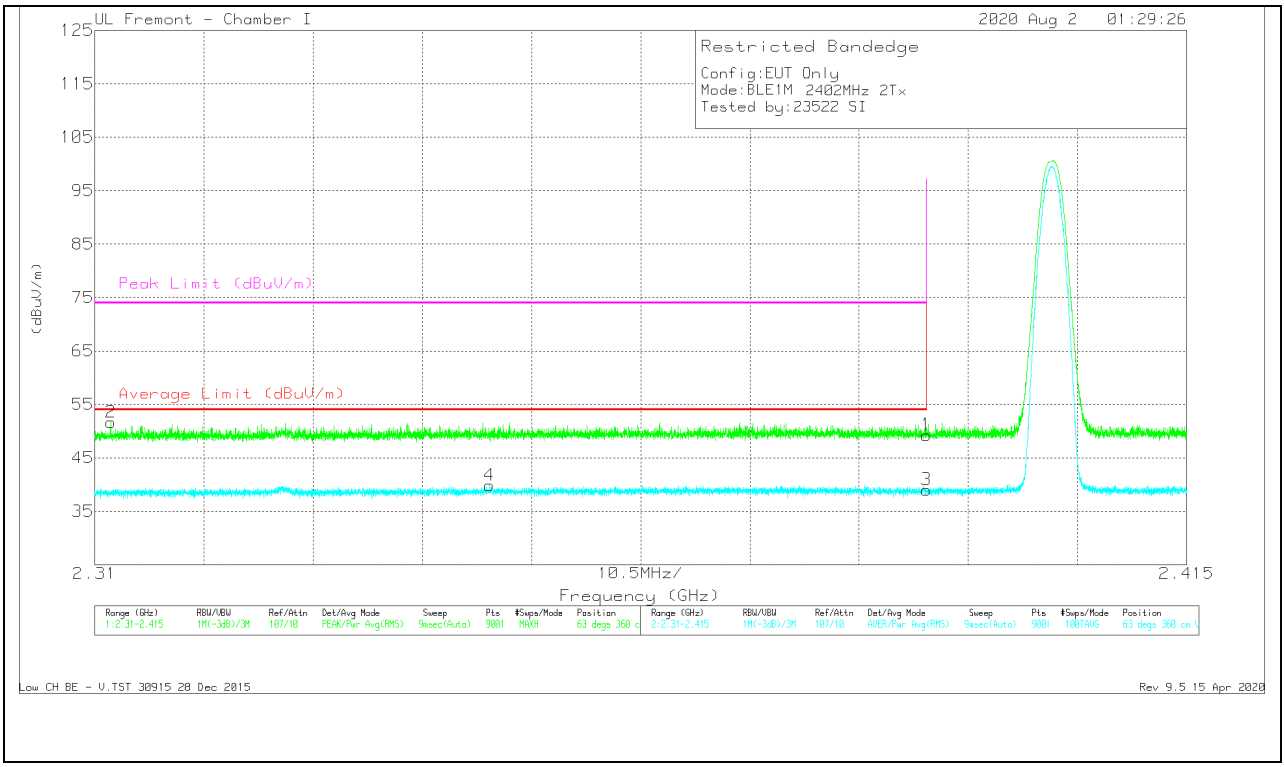
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (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	34.66	Pk	31.9	-17.3	49.26	-	-	74	-24.74	63	360	V
2	* 2.31155	37.46	Pk	31.4	-17.2	51.66	-	-	74	-22.34	63	360	V
3	* 2.38999	24.4	RMS	31.9	-17.3	39	54	-15	-	-	63	360	V
4	* 2.34795	25.34	RMS	31.7	-17.2	39.84	54	-14.16	-	-	63	360	V

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

Low CH BE - V.TST 30915 28 Dec 2015
Rev 9.5 15 Apr 2020

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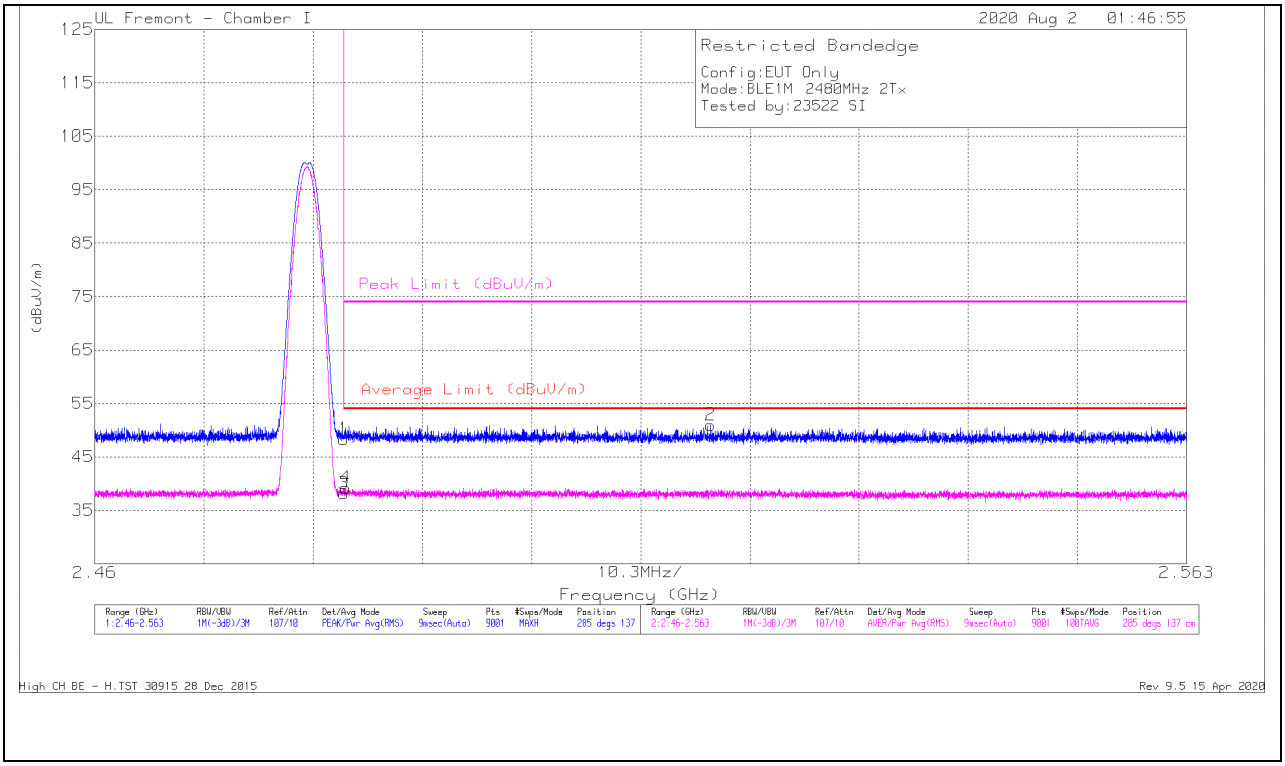
BANDEDGE (HIGH CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (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	33.63	Pk	32.4	-17.7	48.33	-	-	74	-25.67	285	137	H
2	2.51808	36.47	Pk	32.3	-17.8	50.97	-	-	74	-23.03	285	137	H
3	* 2.48351	23.44	RMS	32.4	-17.7	38.14	54	-15.86	-	-	285	137	H
4	* 2.48367	24.5	RMS	32.4	-17.7	39.2	54	-14.8	-	-	285	137	H

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

High CH BE - H.TST 30915 28 Dec 2015
Rev 9.5 15 Apr 2020

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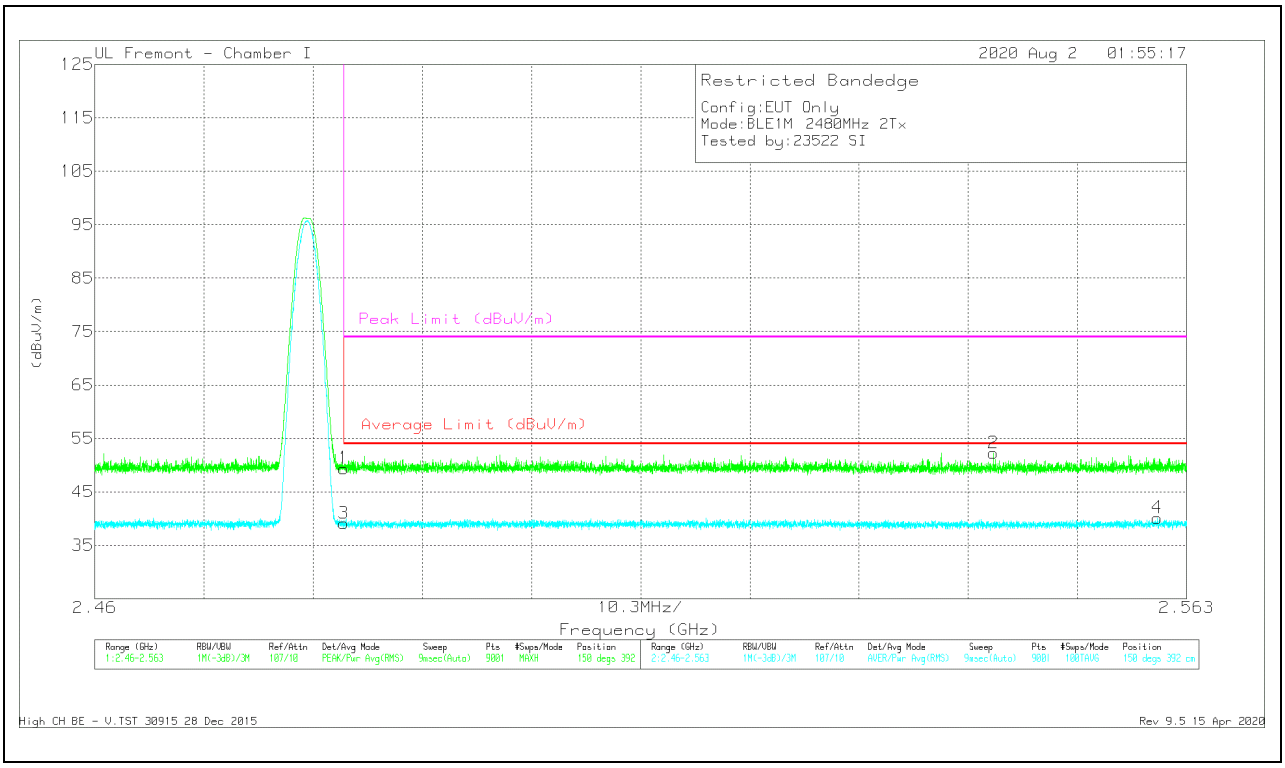
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (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	34.68	Pk	32.4	-17.7	49.38	-	-	74	-24.62	150	392	V
2	2.54478	37.85	Pk	32.2	-17.8	52.25	-	-	74	-21.75	150	392	V
3	* 2.48351	24.41	RMS	32.4	-17.7	39.11	54	-14.89	-	-	150	392	V
4	2.56022	25.63	RMS	32.3	-17.8	40.13	54	-13.87	-	-	150	392	V

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

High CH BE - V.TST 30915 28 Dec 2015
Rev 9.5 15 Apr 2020

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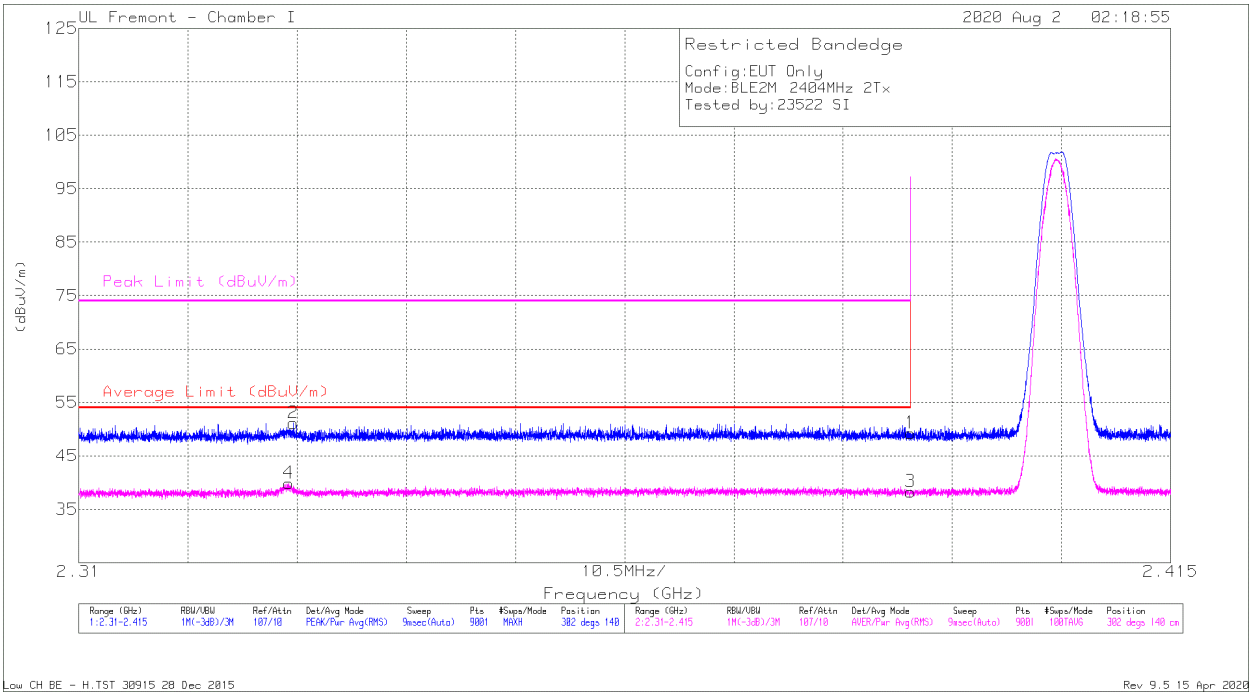
10.2.8. LOW POWER BLE TXBF (2Mbps)

BANDEDGE (LOW CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (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	34.65	Pk	31.9	-17.3	49.25	-	-	74	-24.75	302	140	H
2	* 2.33065	36.83	Pk	31.5	-17.2	51.13	-	-	74	-22.87	302	140	H
3	* 2.38999	23.69	RMS	31.9	-17.3	38.29	54	-15.71	-	-	302	140	H
4	* 2.33018	25.59	RMS	31.5	-17.2	39.89	54	-14.11	-	-	302	140	H

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

Low CH BE - H.TST 30915 28 Dec 2015
Rev 9.5 15 Apr 2020

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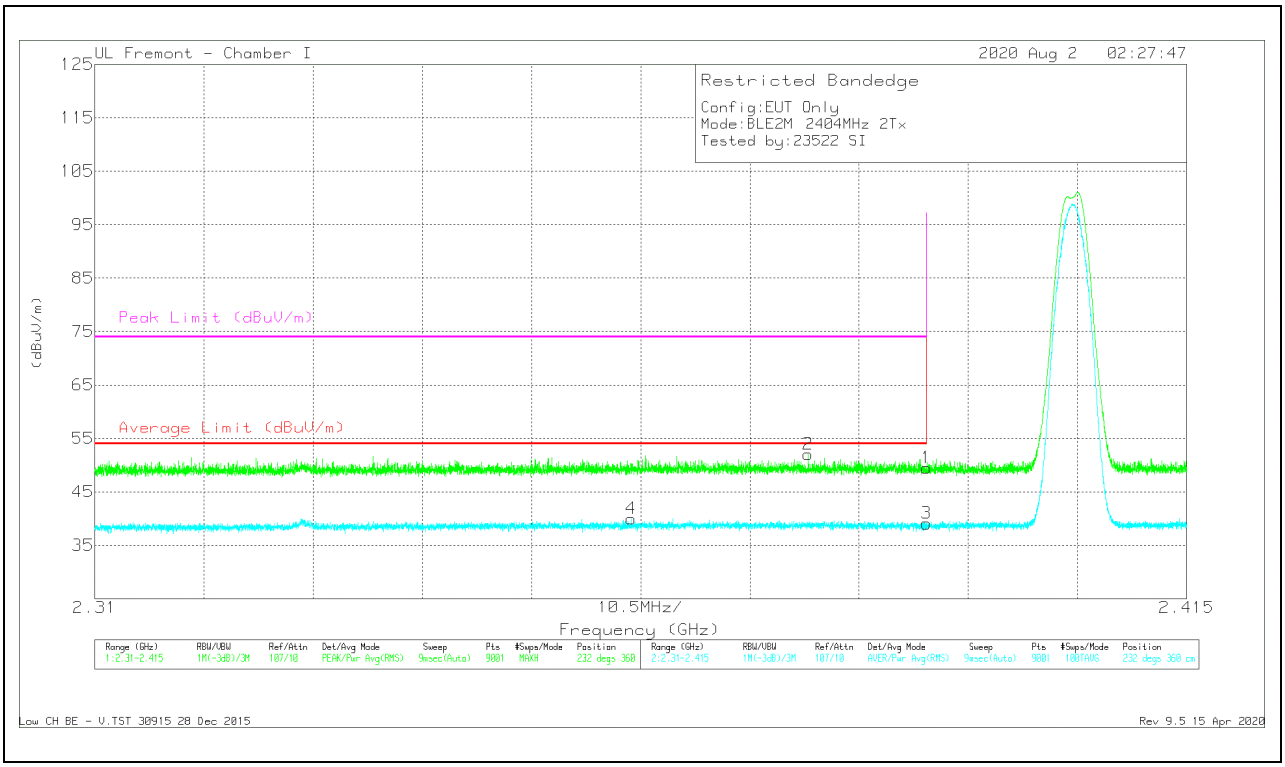
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (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	34.87	Pk	31.9	-17.3	49.47	-	-	74	-24.53	232	360	V
2	* 2.37859	37.42	Pk	31.9	-17.3	52.02	-	-	74	-21.98	232	360	V
3	* 2.38999	24.48	RMS	31.9	-17.3	39.08	54	-14.92	-	-	232	360	V
4	* 2.36159	25.45	RMS	31.8	-17.3	39.95	54	-14.05	-	-	232	360	V

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

Low CH BE - V.TST 30915 28 Dec 2015
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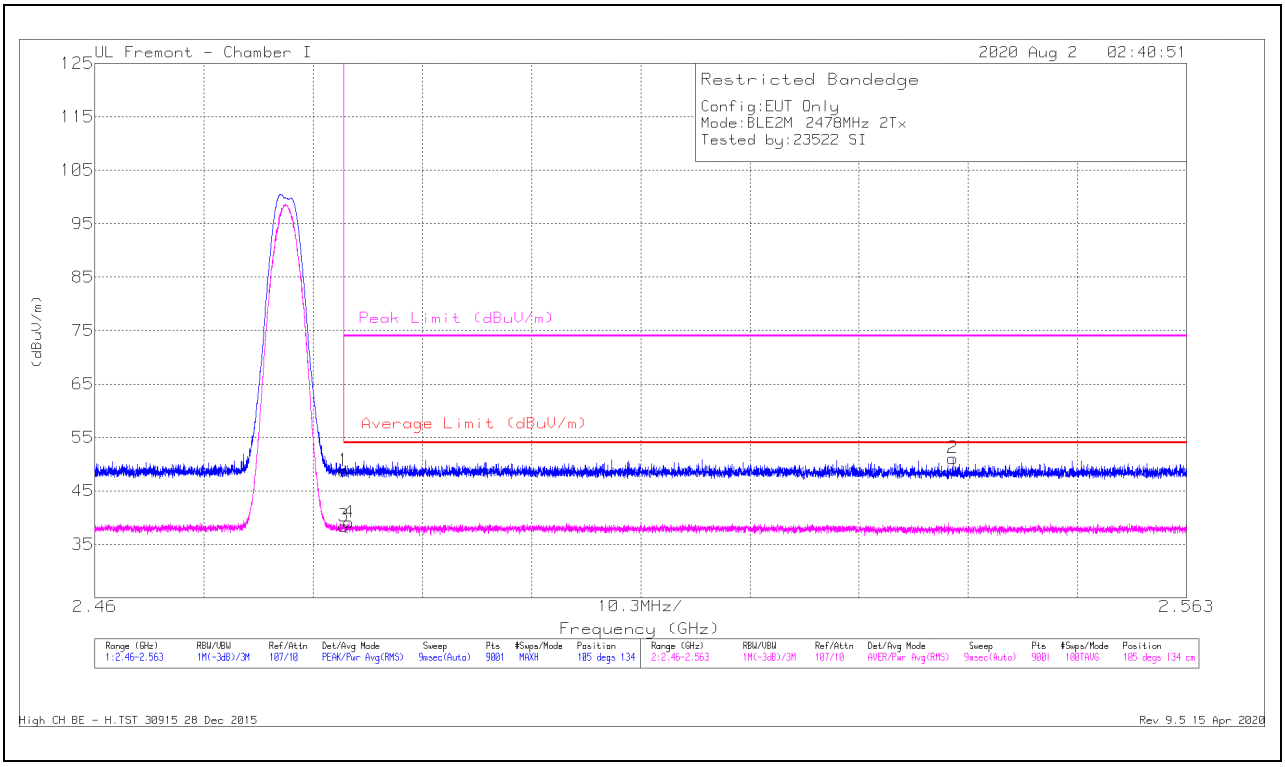
BANDEDGE (HIGH CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (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	34.06	Pk	32.4	-17.7	48.76	-	-	74	-25.24	105	134	H
2	2.54094	36.71	Pk	32.2	-17.8	51.11	-	-	74	-22.89	105	134	H
3	* 2.48351	23.73	RMS	32.4	-17.7	38.43	54	-15.57	-	-	105	134	H
4	* 2.48398	24.4	RMS	32.4	-17.7	39.1	54	-14.9	-	-	105	134	H

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

High CH BE - H.TST 30915 28 Dec 2015
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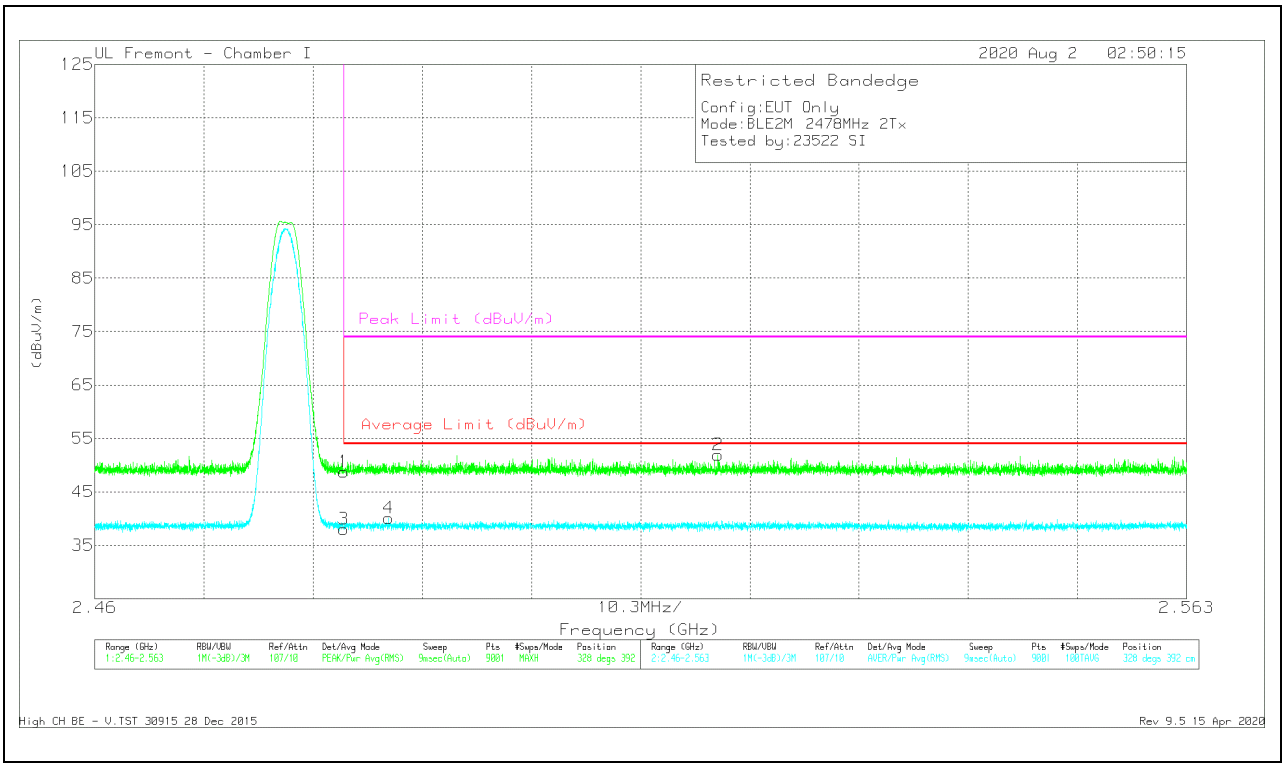
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (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	34.03	Pk	32.4	-17.7	48.73	-	-	74	-25.27	328	392	V
2	2.51879	37.4	Pk	32.3	-17.8	51.9	-	-	74	-22.1	328	392	V
3	* 2.48351	23.3	RMS	32.4	-17.7	38	54	-16	-	-	328	392	V
4	* 2.48772	25.46	RMS	32.3	-17.7	40.06	54	-13.94	-	-	328	392	V

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

High CH BE - V.TST 30915 28 Dec 2015
Rev 9.5 15 Apr 2020

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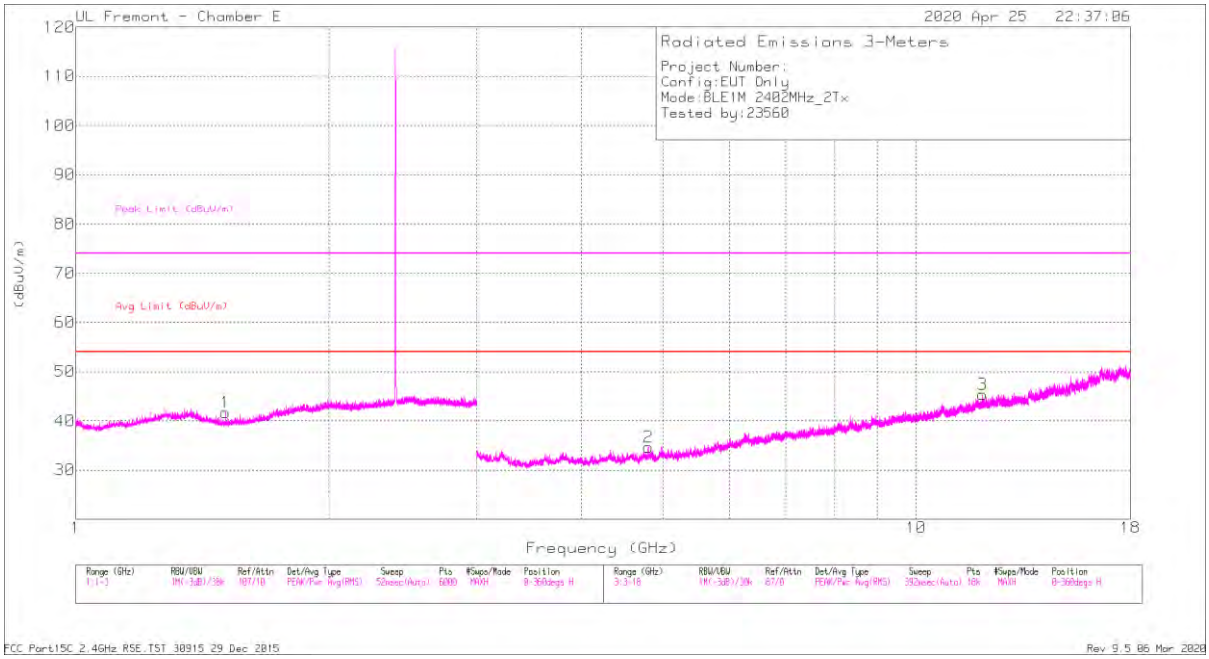
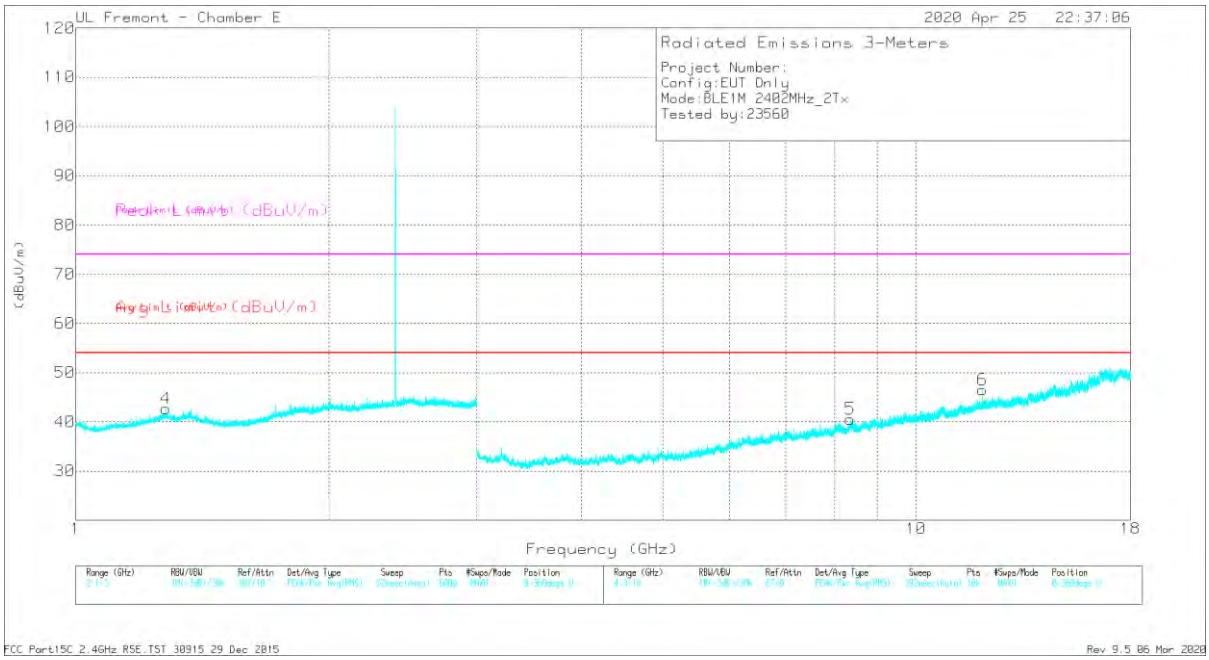
10.2.9. HIGH POWER HARMONICS AND SPURIOUS EMISSIONS TXBF BLE (1Mbps)

LOW CHANNEL RESULTS



HORIZONTAL



VERTICAL

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RADIATED EMISSIONS

Radiated Emissions

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (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	* 1.5097	45.59	PK2	28.1	-26.4	47.29	-	-	74	-26.71	162	113	H
	* 1.50724	33.93	MAv1	28.1	-26.4	35.63	54	-18.37	-	-	162	113	H
4	* 1.28121	45.69	PK2	29.7	-26.3	49.09	-	-	74	-24.91	20	258	V
	* 1.28003	33.92	MAv1	29.7	-26.3	37.32	54	-16.68	-	-	20	258	V
2	* 4.79929	39.43	PK2	34.2	-31.9	41.73	-	-	74	-32.27	20	101	H
	* 4.80044	28.85	MAv1	34.2	-31.9	31.15	54	-22.85	-	-	20	101	H
3	* 12.00866	36.59	PK2	38.6	-23.1	52.09	-	-	74	-21.91	0	215	H
	* 12.00741	23.62	MAv1	38.6	-23.1	39.12	54	-14.88	-	-	0	215	H
5	* 8.35538	36.76	PK2	35.9	-26.1	46.56	-	-	74	-27.44	284	217	V
	* 8.35454	26.04	MAv1	35.9	-26.1	35.84	54	-18.16	-	-	284	217	V
6	* 12.00292	38.57	PK2	38.6	-23.1	54.07	-	-	74	-19.93	8	106	V
	* 12.00262	28.13	MAv1	38.6	-23.1	43.63	54	-10.37	-	-	8	106	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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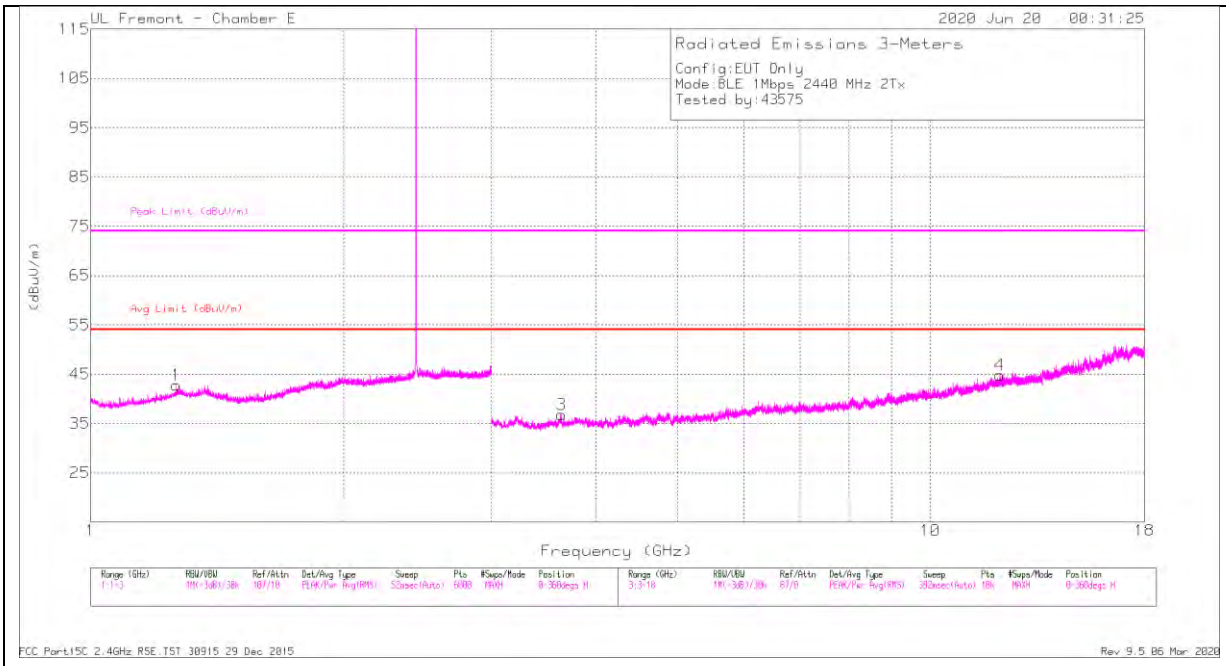
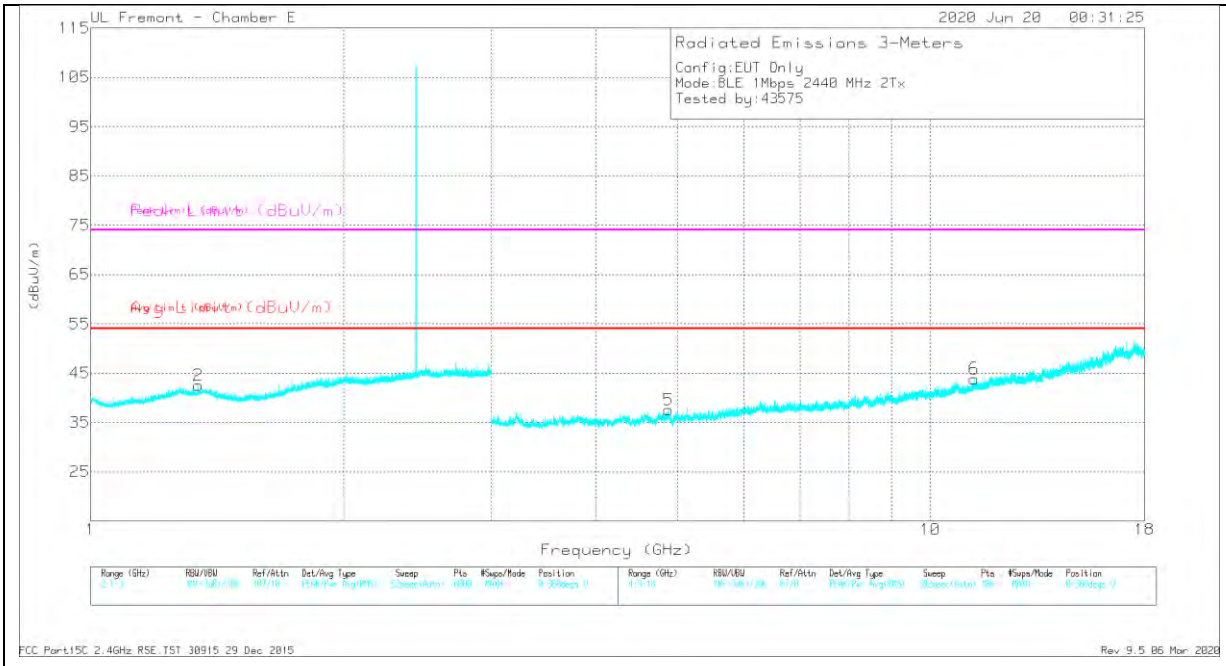
MID CHANNEL RESULTS



HORIZONTAL



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RADIATED EMISSIONS

Markers	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (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	* 1.26739	45.67	PK2	29.5	-26.3	48.87	-	-	74	-25.13	0	200	H
	* 1.26632	34.08	MAv1	29.5	-26.3	37.28	54	-16.72	-	-	0	200	H
2	* 1.34293	45.94	PK2	29.5	-26.4	49.04	-	-	74	-24.96	0	200	V
	* 1.34529	34.17	MAv1	29.5	-26.4	37.27	54	-16.73	-	-	0	200	V
3	* 3.63721	43.56	PK2	33.2	-33.8	42.96	-	-	74	-31.04	0	101	H
	* 3.63602	31.82	MAv1	33.2	-33.8	31.22	54	-22.78	-	-	0	101	H
4	* 12.11287	35.54	PK2	38.7	-22.8	51.44	-	-	74	-22.56	0	101	H
	* 12.11064	24.19	MAv1	38.8	-22.8	40.19	54	-13.81	-	-	0	101	H
5	* 4.88393	41.4	PK2	34.1	-31.2	44.3	-	-	74	-29.7	0	200	V
	* 4.88482	30.1	MAv1	34.1	-31.2	33	54	-21	-	-	0	200	V
6	* 11.2871	35.91	PK2	37.8	-22.9	50.81	-	-	74	-23.19	0	101	V
	* 11.28712	24.51	MAv1	37.8	-22.9	39.41	54	-14.59	-	-	0	101	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK2 - KDB558074 Method: Maximum Peak
MAv1 - KDB558074 Option 1 Maximum RMS Average

FCC Part15C 2.4GHz RSE.TST 30915 29 Dec 2015
Rev 9.5 06 Mar 2020

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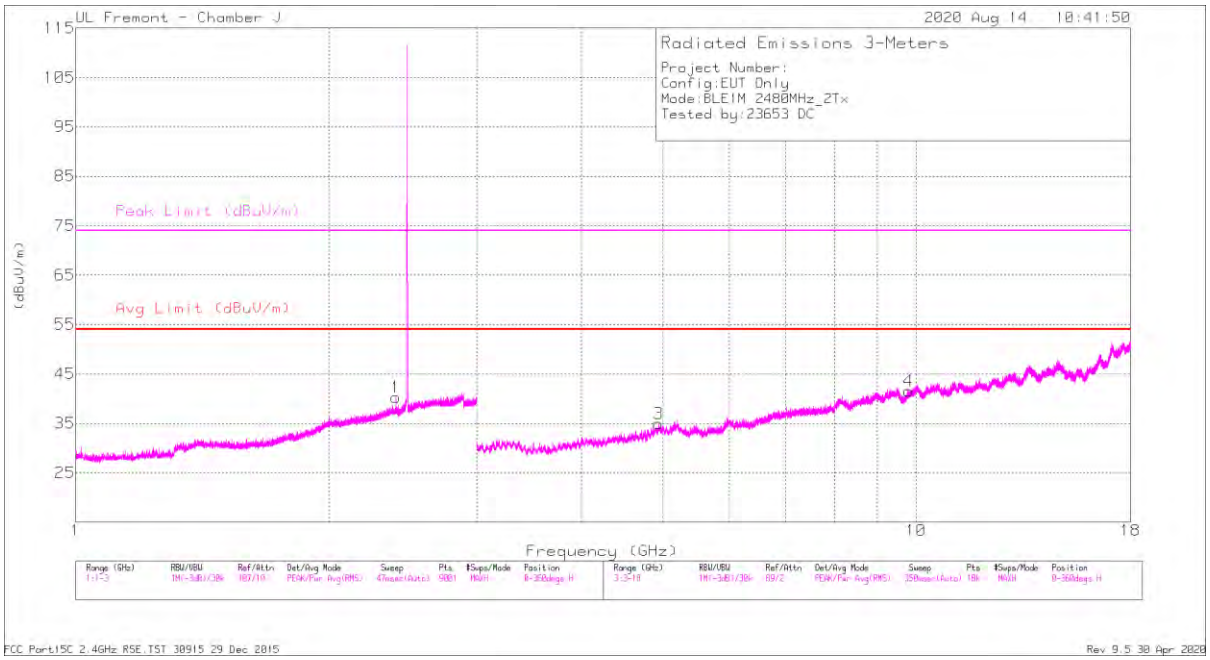
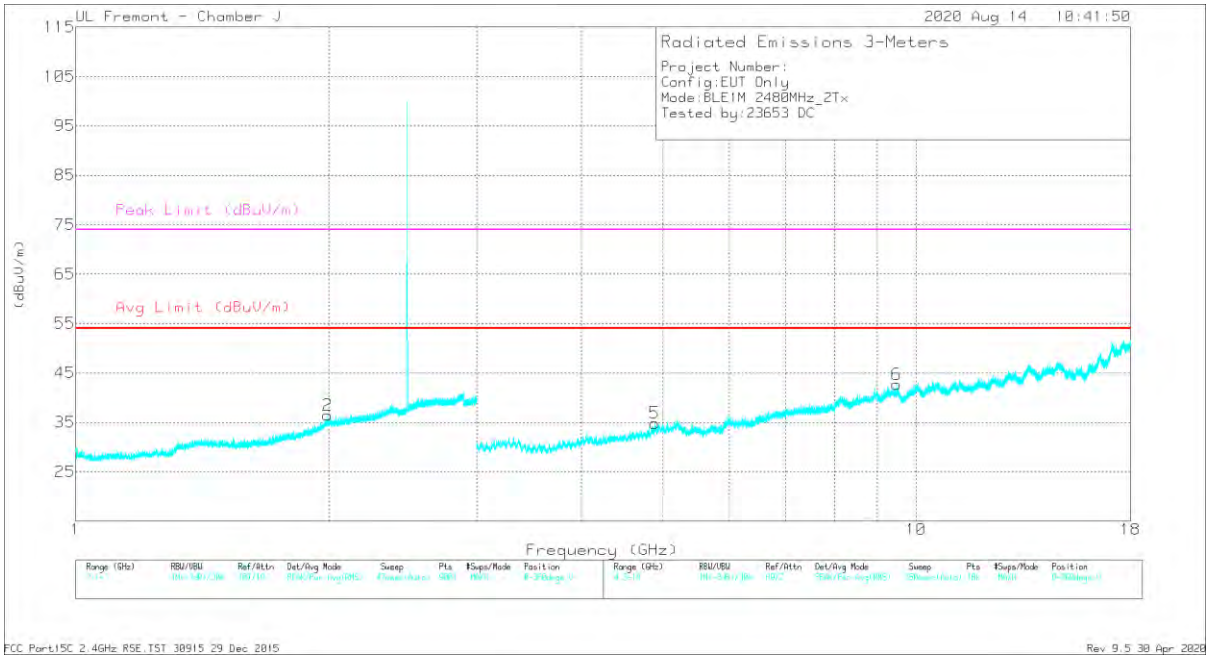
HIGH CHANNEL RESULTS



HORIZONTAL



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RADIATED EMISSIONS

Radiated Emissions

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T963 (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	2.40674	32.28	PK2	29.1	-14.7	46.68	-	-	-	-	32	165	H
3	* 4.94111	38.4	PK2	33.8	-30.1	42.1	-	-	74	-31.9	85	166	H
	* 4.93931	28.84	MAv1	33.8	-30.2	32.44	54	-21.56	-	-	85	166	H
4	9.8006	34.61	PK2	38.6	-23.8	49.41	-	-	-	-	46	101	H
2	1.99169	29.9	PK2	27.6	-15.9	41.6	-	-	-	-	51	153	V
5	* 4.88938	39.43	PK2	33.6	-30.8	42.23	-	-	74	-31.77	76	196	V
	* 4.89257	29.38	MAv1	33.6	-30.8	32.18	54	-21.82	-	-	76	196	V
6	* 9.48586	33.64	PK2	38.7	-23.2	49.14	-	-	74	-24.86	107	272	V
	* 9.48586	24.02	MAv1	38.7	-23.2	39.52	54	-14.48	-	-	107	272	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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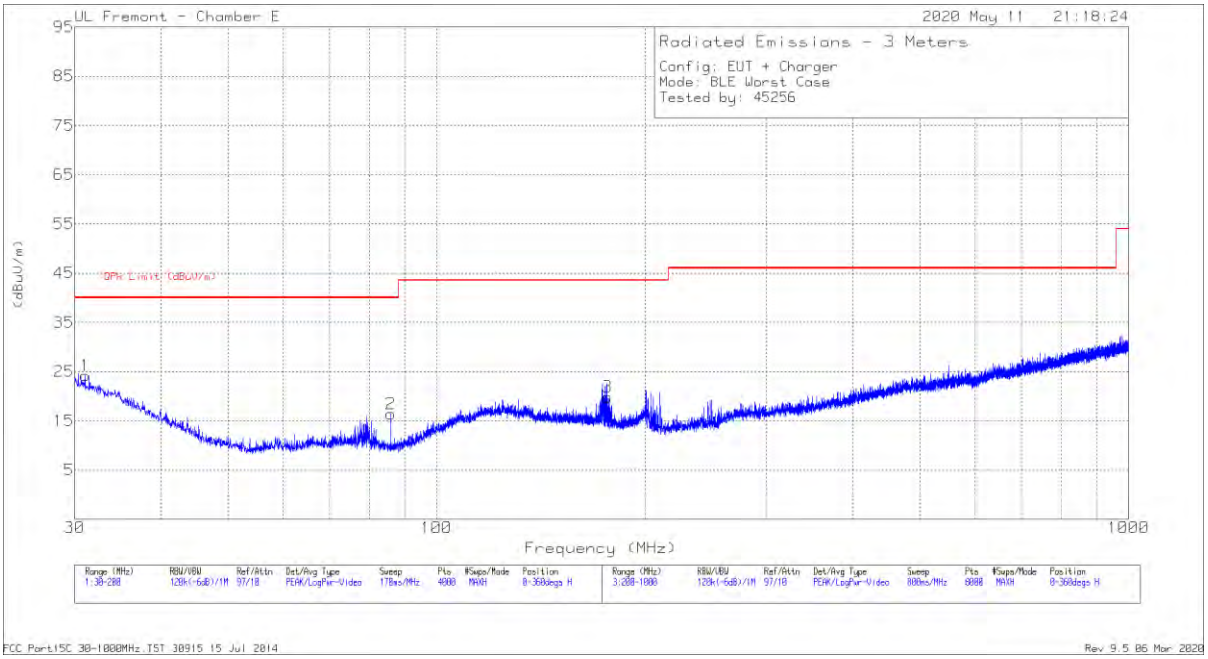
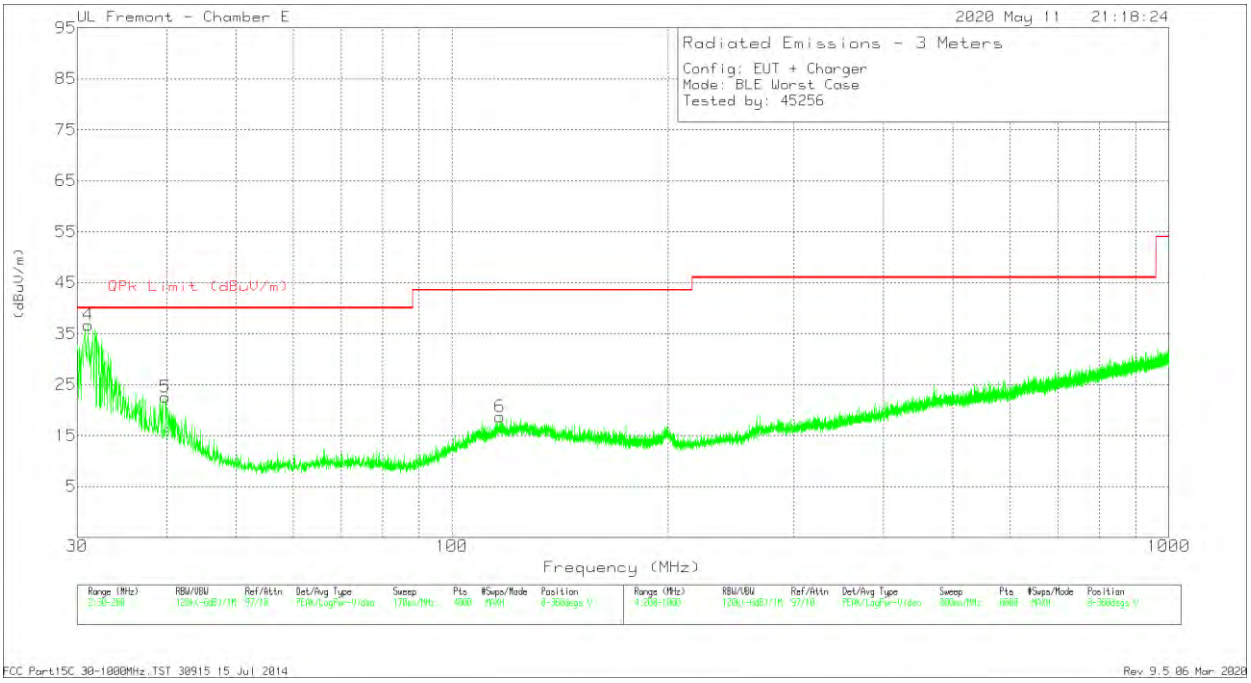
10.3. WORST CASE BELOW 1 GHZ

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



HORIZONTAL



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Below 1GHz Data

Trace Markers

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
6	* 116.5949	29.45	Pk	19.8	-30.6	18.65	43.52	-24.87	0-360	100	V
1	31.0628	29.66	Pk	26	-31.5	24.16	40	-15.84	0-360	201	H
4	31.1756	31.85	Qp	25.9	-31.5	26.25	40	-13.75	304	101	V
5	39.82	34.51	Pk	19.4	-31.4	22.51	40	-17.49	0-360	100	V
2	85.9445	34.36	Pk	13	-30.9	16.46	40	-23.54	0-360	201	H
3	176.6204	32.69	Pk	17.3	-30.2	19.79	43.52	-23.73	0-360	201	H

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

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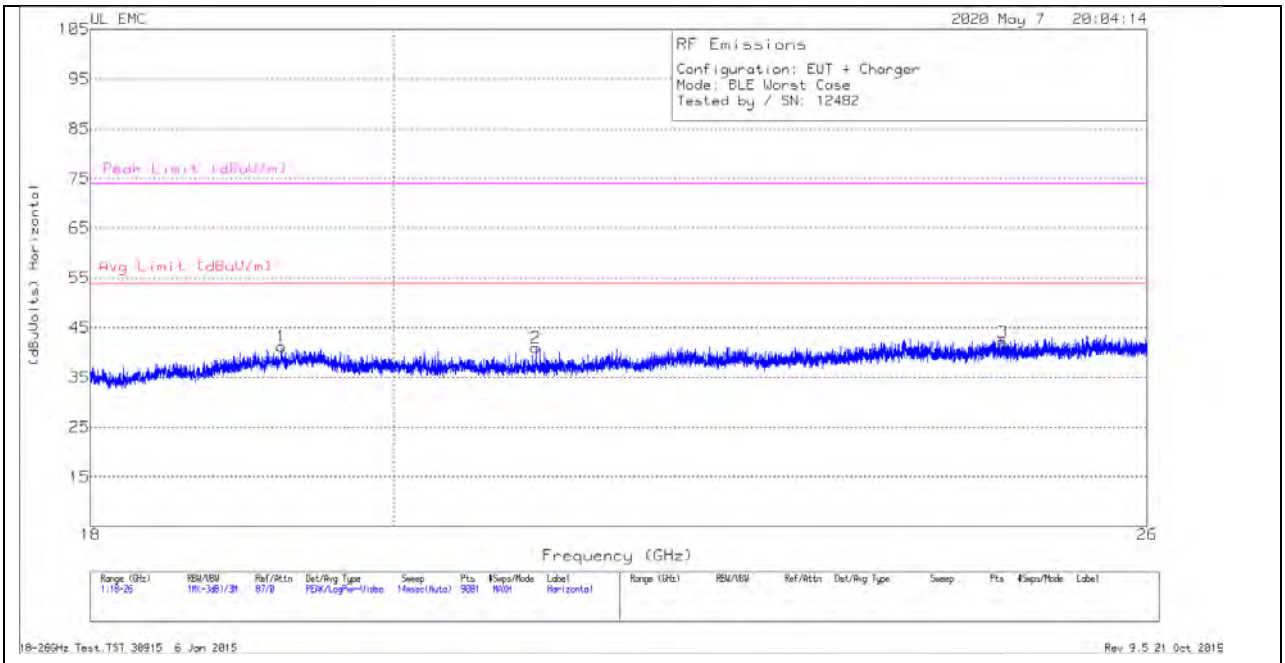
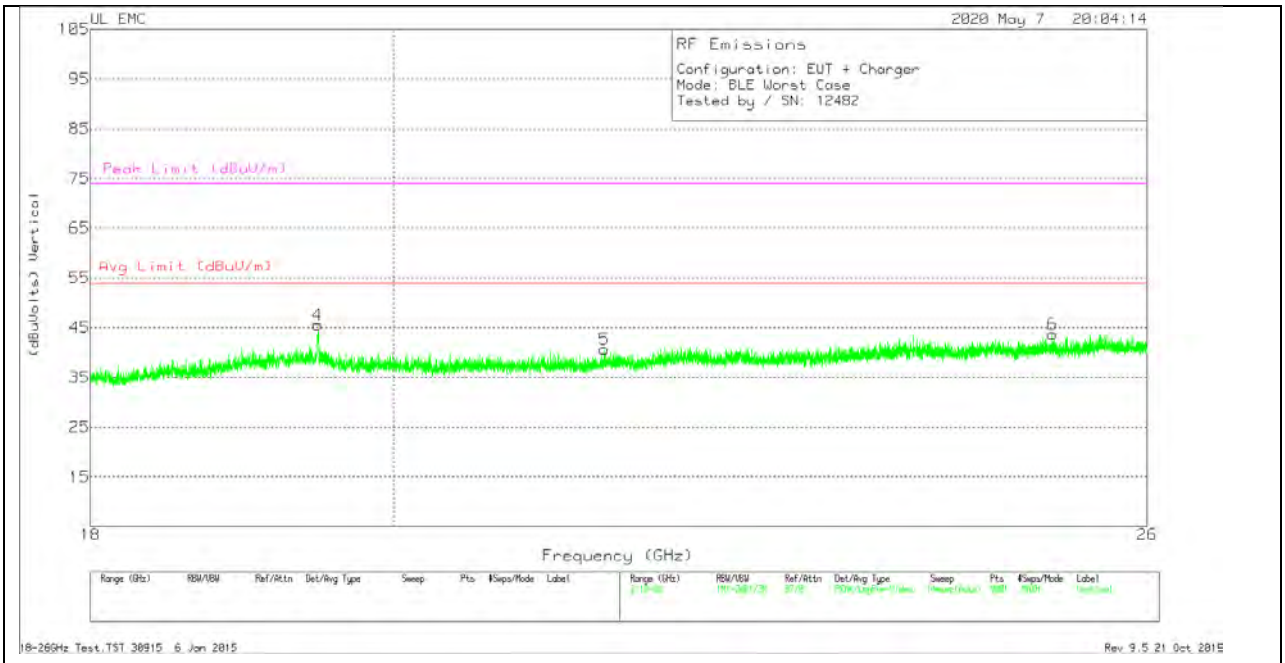
10.4. WORST CASE 18-26 GHz

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



HORIZONTAL



VERTICAL

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18 – 26GHz 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	19.23733	36.91	Pk	32.8	-19	-9.5	41.21			74	-32.79
2	21.01867	38.47	Pk	33.1	-21.1	-9.5	40.97			74	-33.03
3	24.72267	36.28	Pk	34.1	-18.8	-9.5	42.08			74	-31.92
4	19.48506	41.79	Pk	32.8	-19.2	-9.5	45.89			74	-28.11
	19.485	29.37	Av	32.8	-19.2	-9.5	33.47	54	-20.53		
5	21.52444	37.92	Pk	33.2	-21	-9.5	40.62			74	-33.38
6	25.15467	38.5	Pk	34.2	-19.5	-9.5	43.7			74	-30.3

Pk - Peak detector
Av - Average detection

18-26GHz Test.TST 30915 6 Jan 2015
Rev 9.5 21 Oct 2019

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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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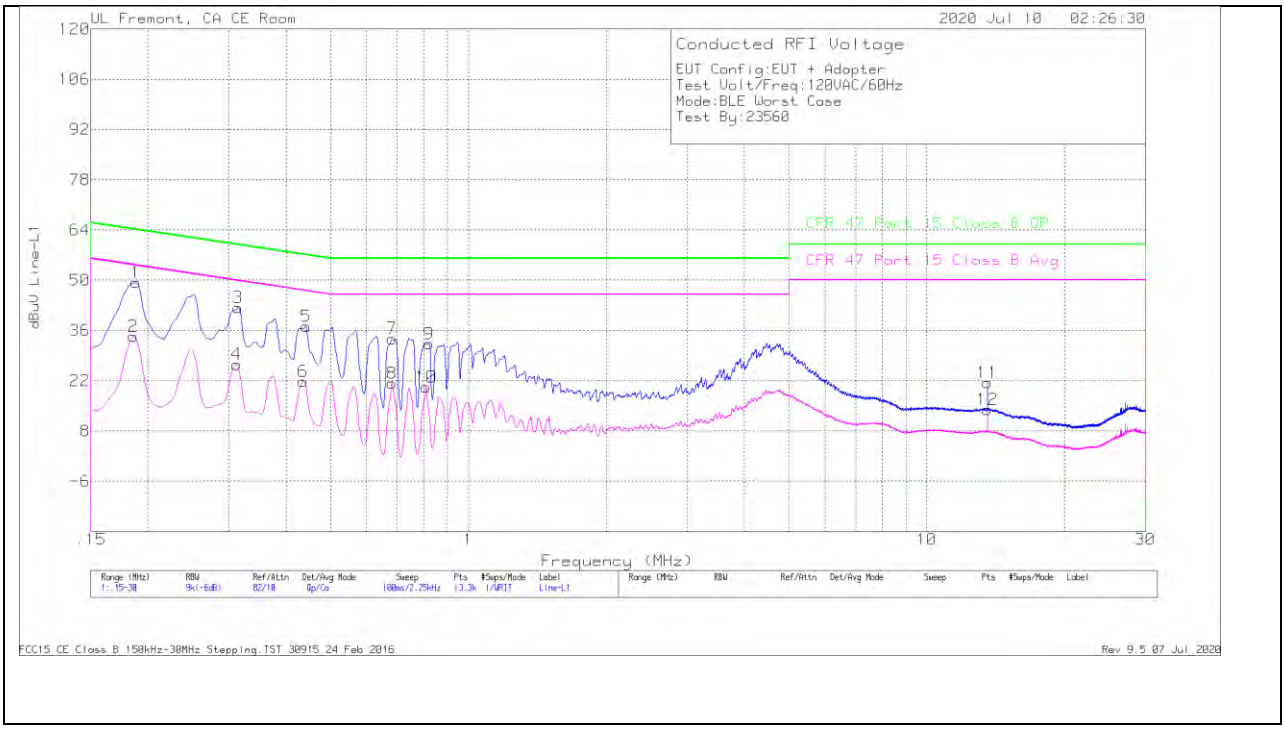
11.1. AC POWER LINE WITH AC/DC ADAPTER

LINE 1 RESULTS



Range 1: Line-L1 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	PRE018644 6 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	.18825	39.35	Qp	0	0	10	49.35	64.11	-14.76	-	-
2	.186	24.44	Ca	0	0	10	34.44	-	-	54.21	-19.77
3	.31425	32.48	Qp	0	0	10	42.48	59.86	-17.38	-	-
4	.312	16.61	Ca	0	0	10	26.61	-	-	49.92	-23.31
5	.4425	27.09	Qp	0	0	10	37.09	57.01	-19.92	-	-
6	.43575	11.84	Ca	0	0	10	21.84	-	-	47.14	-25.3
7	.681	23.76	Qp	0	0	10	33.76	56	-22.24	-	-
8	.681	11.33	Ca	0	0	10	21.33	-	-	46	-24.67
9	.8205	22.35	Qp	0	0	10	32.35	56	-23.65	-	-
10	.80925	10.22	Ca	0	0	10	20.22	-	-	46	-25.78
11	13.56	11.09	Qp	.1	.2	10.1	21.49	60	-38.51	-	-
12	13.56	3.61	Ca	.1	.2	10.1	14.01	-	-	50	-35.99

Qp - Quasi-Peak detector
Ca - CISPR average detection

FCC15 CE Class B 150kHz-30MHz Stepping.TST 30915 24 Feb 2016
Rev 9.5 07 Jul 2020

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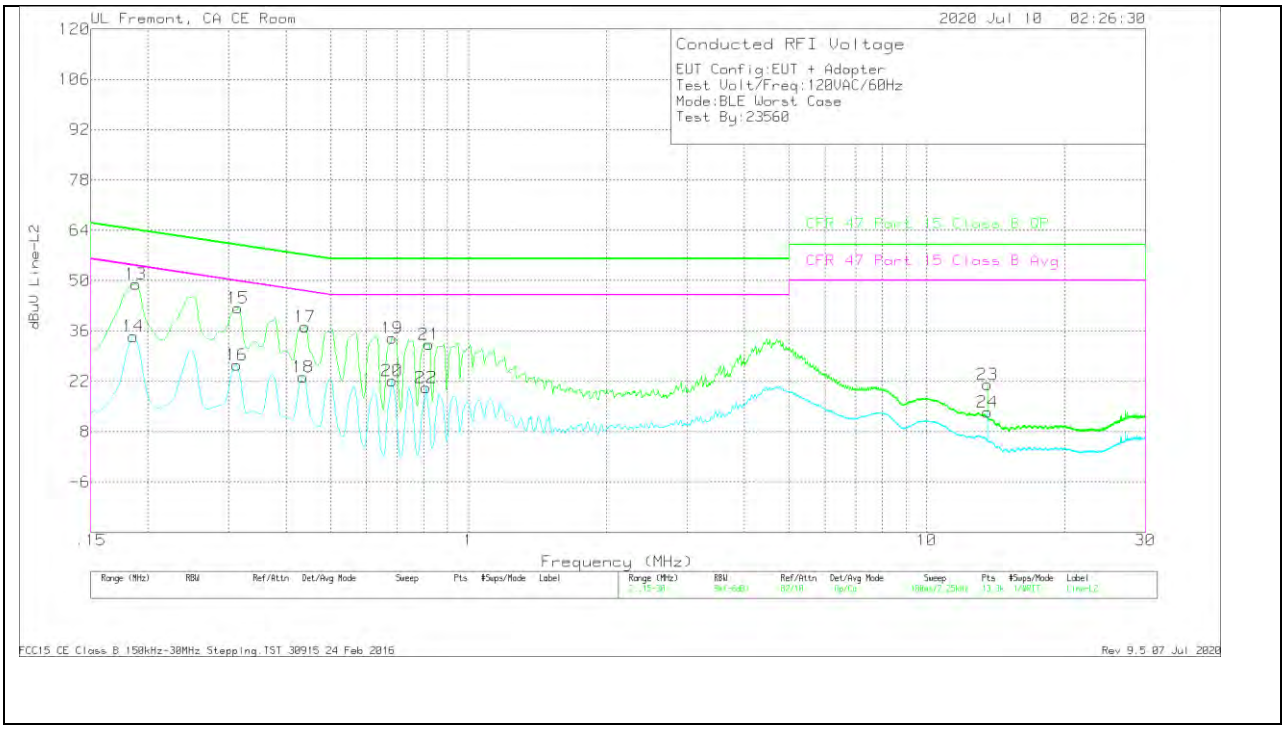
LINE 2 RESULTS



Range 2: Line-L2 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	PRE018644 6 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)M argin (dB)
13	.18825	39.11	Qp	0	0	10	49.11	64.11	-15	-	-
14	.186	24.47	Ca	0	0	10	34.47	-	-	54.21	-19.74
15	.31425	32.37	Qp	0	0	10	42.37	59.86	-17.49	-	-
16	.312	16.55	Ca	0	0	10	26.55	-	-	49.92	-23.37
17	.44025	27.22	Qp	0	0	10	37.22	57.06	-19.84	-	-
18	.43575	13.25	Ca	0	0	10	23.25	-	-	47.14	-23.89
19	.681	23.99	Qp	0	0	10	33.99	56	-22.01	-	-
20	.681	12.2	Ca	0	0	10	22.2	-	-	46	-23.8
21	.8205	22.34	Qp	0	0	10	32.34	56	-23.66	-	-
22	.80925	10.24	Ca	0	0	10	20.24	-	-	46	-25.76
23	13.56	10.67	Qp	.1	.2	10.1	21.07	60	-38.93	-	-
24	13.56	3.11	Ca	.1	.2	10.1	13.51	-	-	50	-36.49

Qp - Quasi-Peak detector
Ca - CISPR average detection

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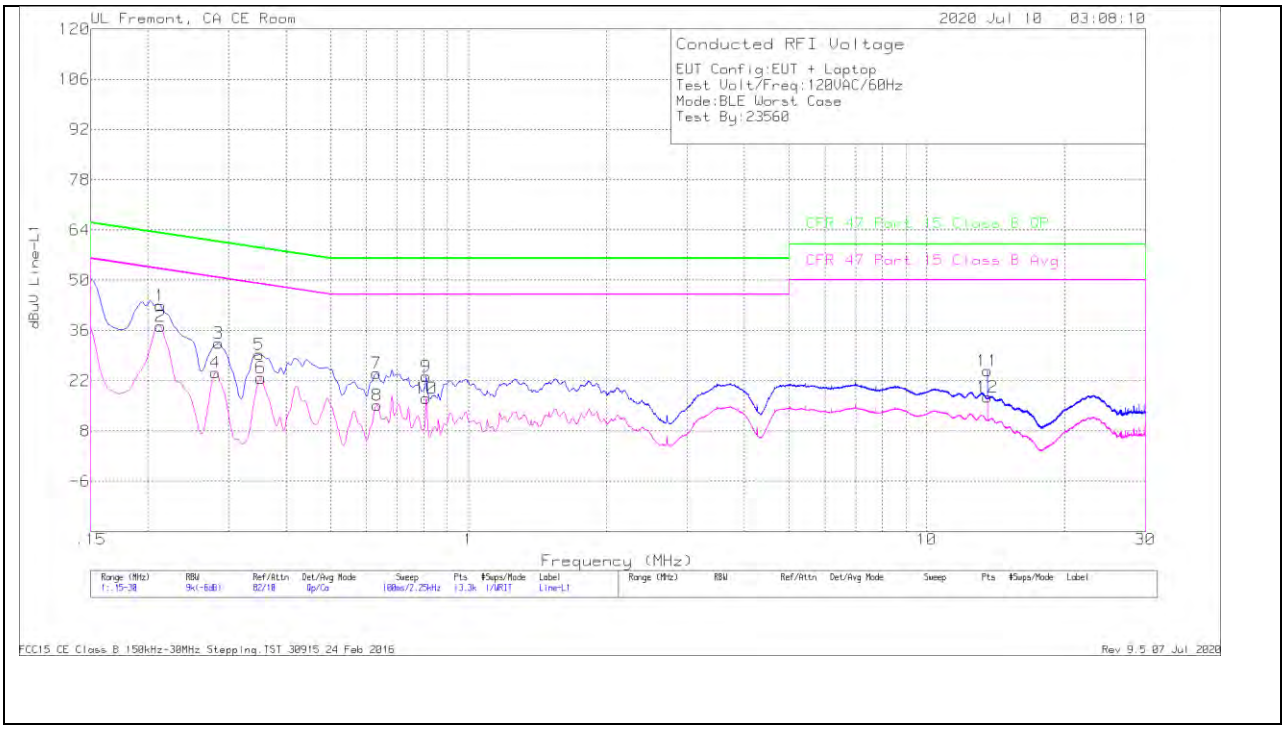
11.2. AC LINE WITH LAPTOP

LINE 1 RESULTS



Range 1: Line-L1 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	PRE018644 6 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)M argin (dB)
1	.213	32.85	Qp	0	0	10	42.85	63.09	-20.24	-	-
2	.213	27.17	Ca	0	0	10	37.17	-	-	53.09	-15.92
3	.285	22.41	Qp	0	0	10	32.41	60.67	-28.26	-	-
4	.2805	14.19	Ca	0	0	10	24.19	-	-	50.8	-26.61
5	.35025	19.29	Qp	0	0	10	29.29	58.96	-29.67	-	-
6	.3525	12.78	Ca	0	0	10	22.78	-	-	48.9	-26.12
7	.62925	14.13	Qp	0	0	10	24.13	56	-31.87	-	-
8	.6315	5.24	Ca	0	0	10	15.24	-	-	46	-30.76
9	.80925	13.17	Qp	0	0	10	23.17	56	-32.83	-	-
10	.80925	7.13	Ca	0	0	10	17.13	-	-	46	-28.87
11	13.56	14.41	Qp	.1	.2	10.1	24.81	60	-35.19	-	-
12	13.56	7.11	Ca	.1	.2	10.1	17.51	-	-	50	-32.49

Qp - Quasi-Peak detector
Ca - CISPR average detection

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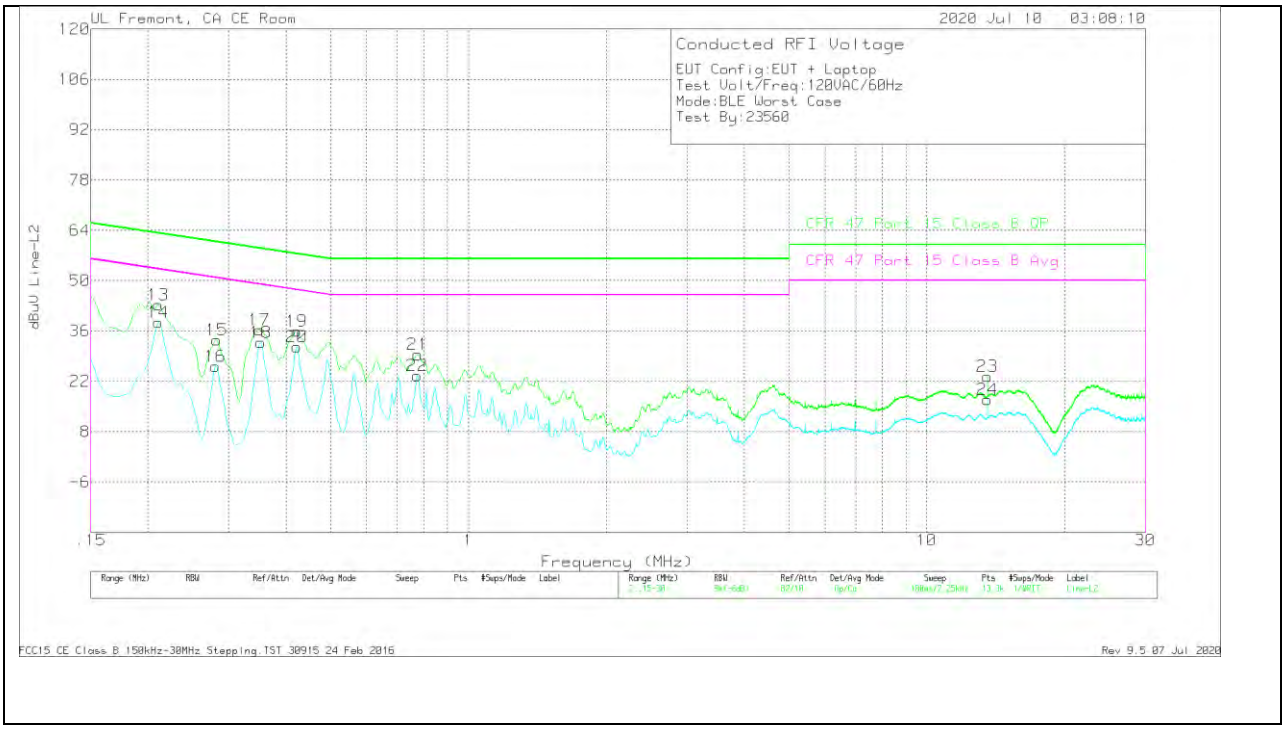
LINE 2 RESULTS



Range 2: Line-L2 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	PRE018644 6 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)M argin (dB)
13	.21075	33.28	Qp	0	0	10	43.28	63.18	-19.9	-	-
14	.21075	28.32	Ca	0	0	10	38.32	-	-	53.18	-14.86
15	.28275	23.52	Qp	0	0	10	33.52	60.73	-27.21	-	-
16	.2805	16.17	Ca	0	0	10	26.17	-	-	50.8	-24.63
17	.35025	26.32	Qp	0	0	10	36.32	58.96	-22.64	-	-
18	.3525	22.81	Ca	0	0	10	32.81	-	-	48.9	-16.09
19	.42225	25.94	Qp	0	0	10	35.94	57.4	-21.46	-	-
20	.42225	21.53	Ca	0	0	10	31.53	-	-	47.4	-15.87
21	.7755	19.41	Qp	0	0	10	29.41	56	-26.59	-	-
22	.77325	13.49	Ca	0	0	10	23.49	-	-	46	-22.51
23	13.56	12.97	Qp	.1	.2	10.1	23.37	60	-36.63	-	-
24	13.56	6.57	Ca	.1	.2	10.1	16.97	-	-	50	-33.03

Qp - Quasi-Peak detector
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12. SETUP PHOTOS

Please refer to 13259315-EP1 for setup photos

END OF TEST REPORT

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