DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (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
2	* 3.724	40.06	PKFH	34.2	-30.7	43.56	-	-	74	-30.44	53	126	H
	* 3.724	28.63	VA1T	34.2	-30.7	32.13	54	-21.87	-	-	53	126	H
5	* 7.741	38.46	PKFH	36.1	-29.7	44.86	-	-	74	-29.14	42	210	V
	* 7.741	27.28	VA1T	36.1	-29.7	33.68	54	-20.32	-	-	42	210	V
1	1.97	37.19	PKFH	31.5	-24.2	44.49	-	-	-	-	0	200	H
4	1.99	37.19	PKFH	31.6	-24.2	44.59	-	-	-	-	105	100	V
3	8.511	32.77	PKFH	35.8	-28.8	39.77	-	-	-	-	54	201	H
6	9.719	31.59	PKFH	36.8	-26.9	41.49	-	-	-	-	0	201	V

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

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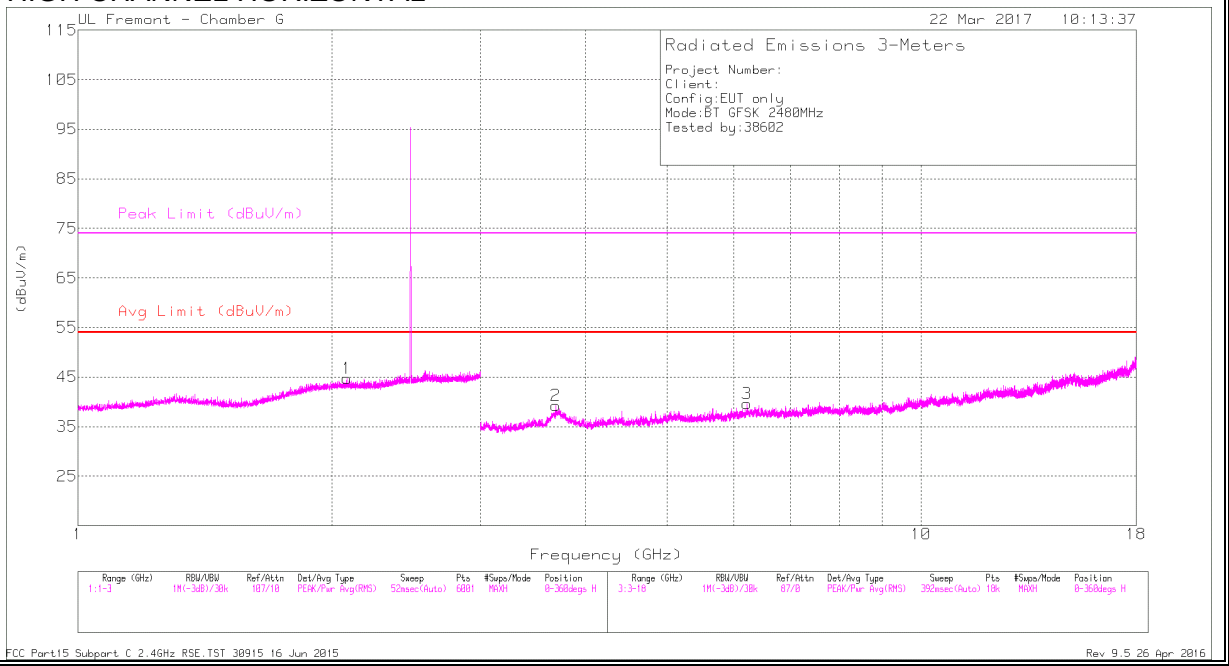
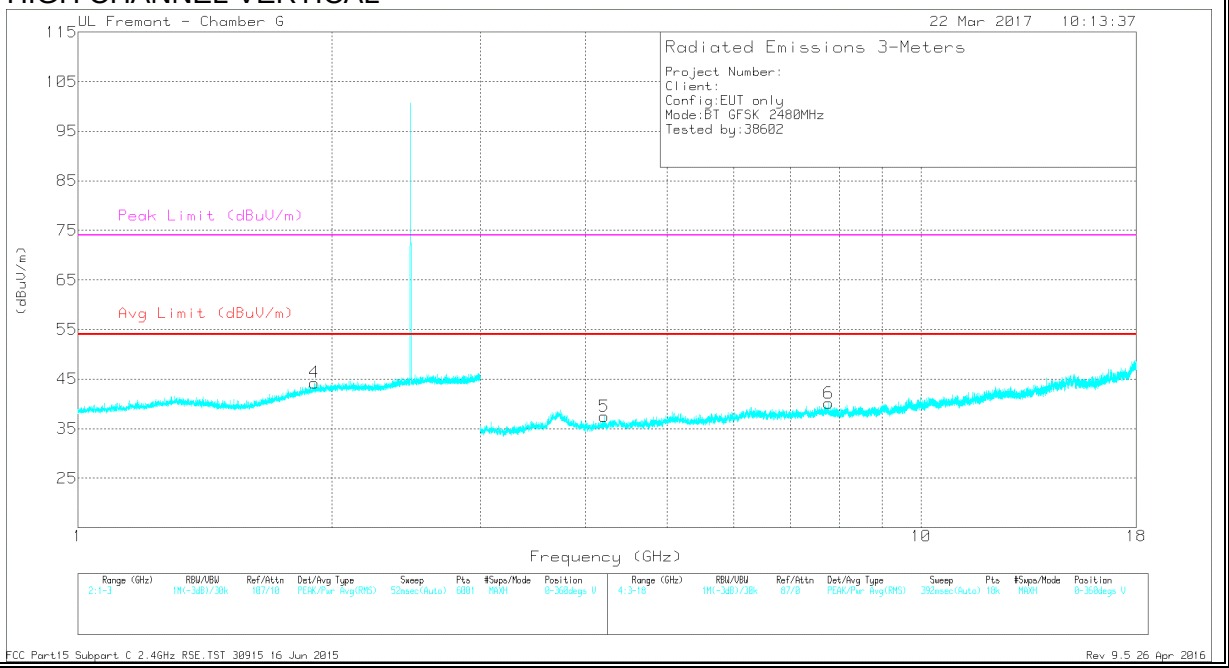
HIGH CHANNEL HORIZONTAL



HIGH CHANNEL VERTICAL



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DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (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
2	* 3.688	40.14	PKFH	34.3	-30.8	43.64	-	-	74	-30.36	47	400	H
	* 3.688	28.54	VA1T	34.3	-30.8	32.04	54	-21.96	-	-	47	400	H
5	* 4.213	40.24	PKFH	33.7	-32.1	41.84	-	-	74	-32.16	210	101	V
	* 4.209	28.7	VA1T	33.7	-32.1	30.3	54	-23.7	-	-	210	101	V
4	1.906	37.17	PKFH	31.4	-24.3	44.27	-	-	-	-	0	201	V
1	2.086	37.09	PKFH	31.6	-24	44.69	-	-	-	-	110	100	H
3	6.213	35.3	PKFH	35.7	-31.4	39.6	-	-	-	-	58	201	H
6	7.775	33.51	PKFH	36.1	-29.5	40.11	-	-	-	-	50	100	V

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

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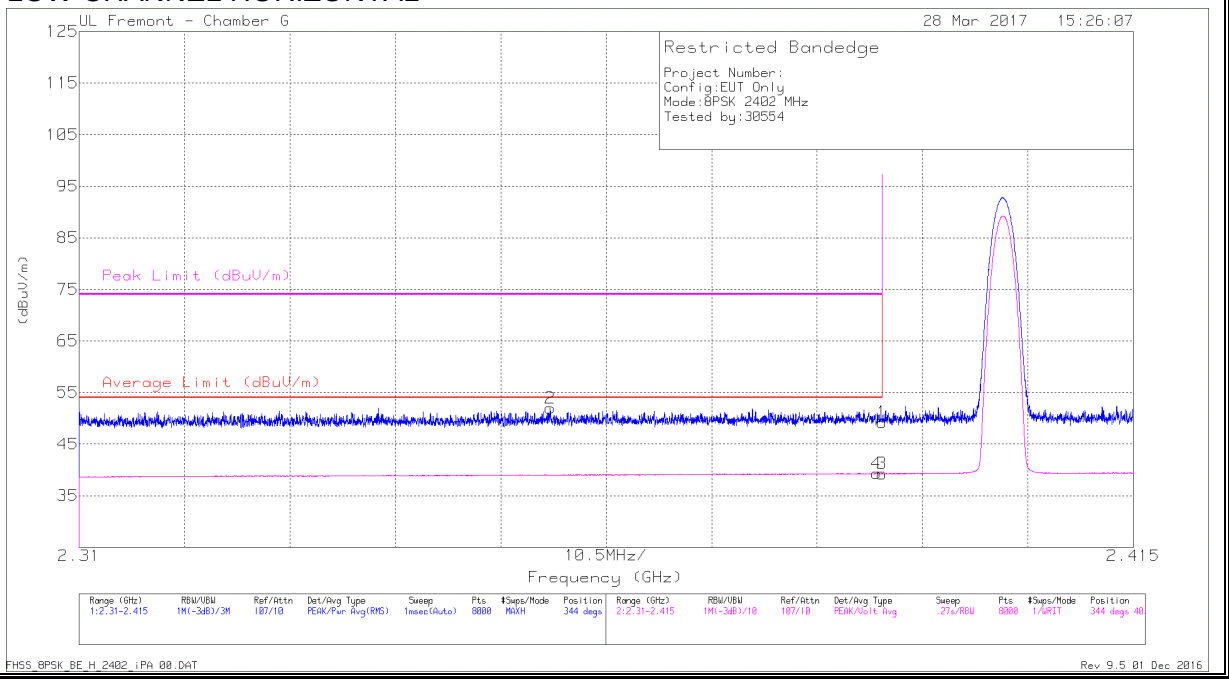
9.5. UAT 1, PLOW ENHANCED DATA RATE 8PSK MODULATION

9.5.1. RESTRICTED BANDEDGE (LOW CHANNEL)

LOW CHANNEL HORIZONTAL



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (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	40.8	Pk	32.1	-23.7	49.2	-	-	74	-24.8	344	403	H
2	* 2.357	43.76	Pk	31.9	-23.7	51.96	-	-	74	-22.04	344	403	H
3	* 2.39	30.87	VA1T	32.1	-23.7	39.27	54	-14.73	-	-	344	403	H
4	* 2.389	30.92	VA1T	32.1	-23.7	39.32	54	-14.68	-	-	344	403	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration
FHSS_8PSK_BE_H_2402_iPA 00.DAT
Rev 9.5 01 Dec 2016

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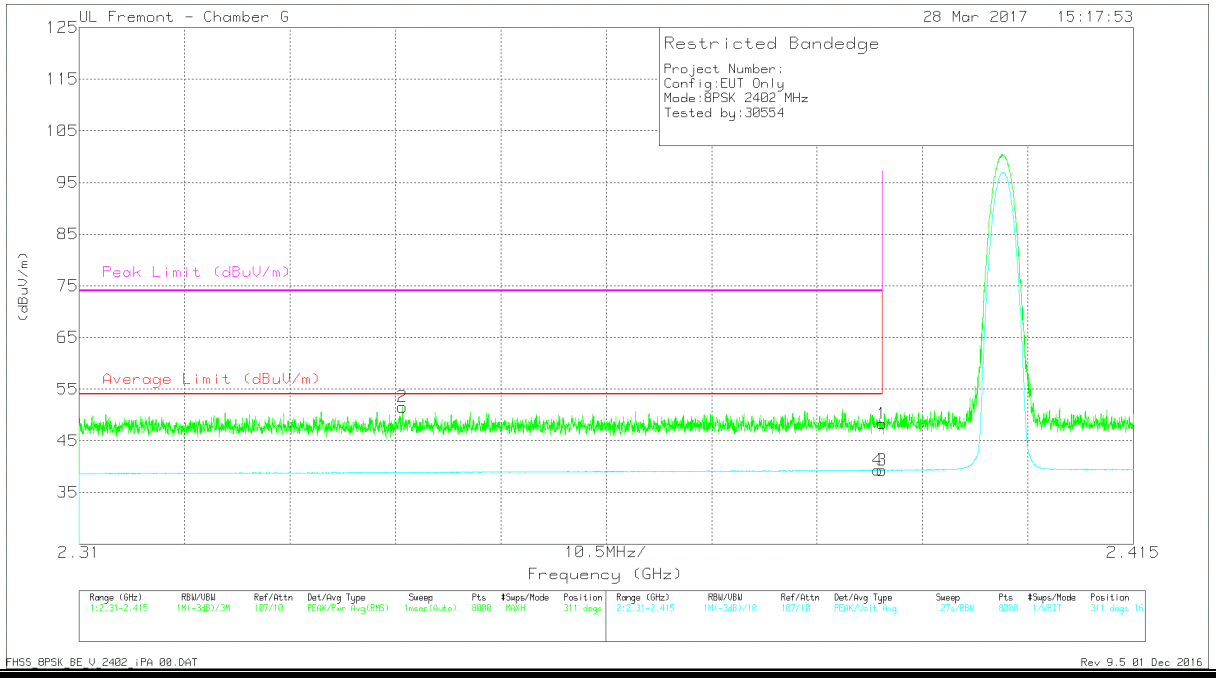
LOW CHANNEL VERTICAL



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (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	39.91	Pk	32.1	-23.7	48.31	-	-	74	-25.69	311	161	V
2	* 2.342	43.57	Pk	31.8	-23.8	51.57	-	-	74	-22.43	311	161	V
3	* 2.39	30.89	VA1T	32.1	-23.7	39.29	54	-14.71	-	-	311	161	V
4	* 2.39	30.91	VA1T	32.1	-23.7	39.31	54	-14.69	-	-	311	161	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration
FHSS_8PSK_BE_V_2402_iPA 00.DAT
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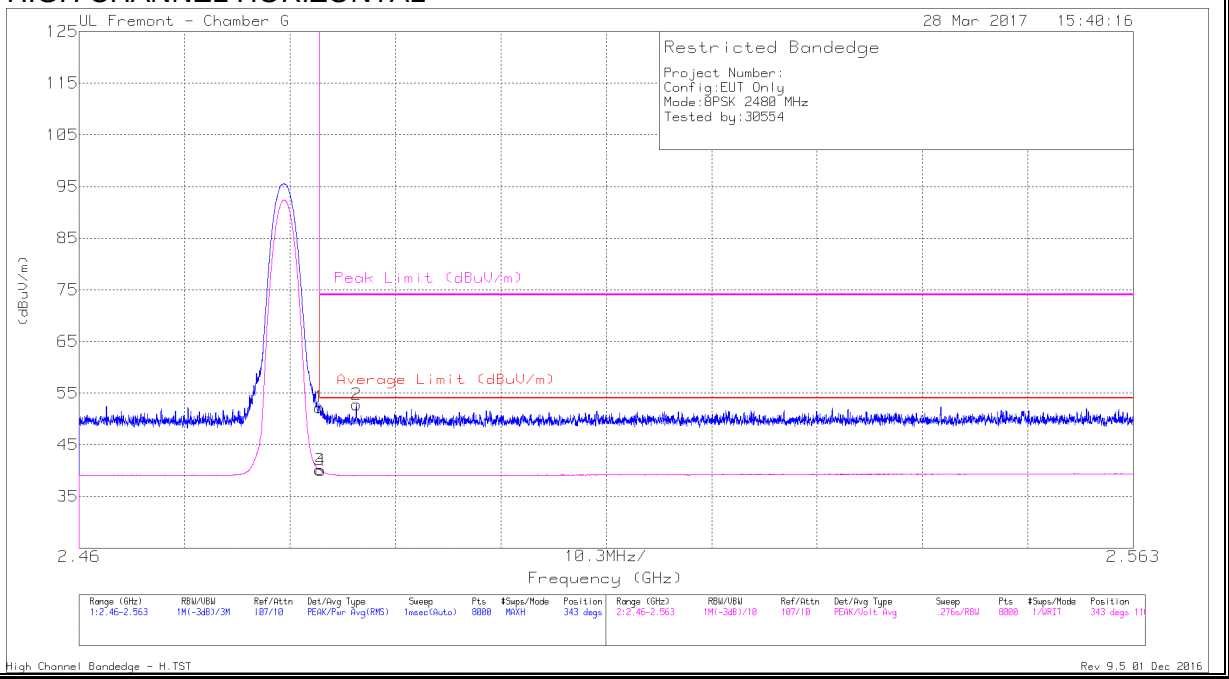
9.5.2. AUTHORIZED BANDEDGE (HIGH CHANNEL)

HIGH CHANNEL HORIZONTAL



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	43.68	Pk	32.3	-23.7	52.28	-	-	74	-21.72	343	110	H
2	* 2.487	44.2	Pk	32.3	-23.7	52.8	-	-	74	-21.2	343	110	H
3	* 2.484	31.55	VA1T	32.3	-23.7	40.15	54	-13.85	-	-	343	110	H
4	* 2.484	31.44	VA1T	32.3	-23.7	40.04	54	-13.96	-	-	343	110	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration
High Channel Bandedge - H.TST
Rev 9.5 01 Dec 2016

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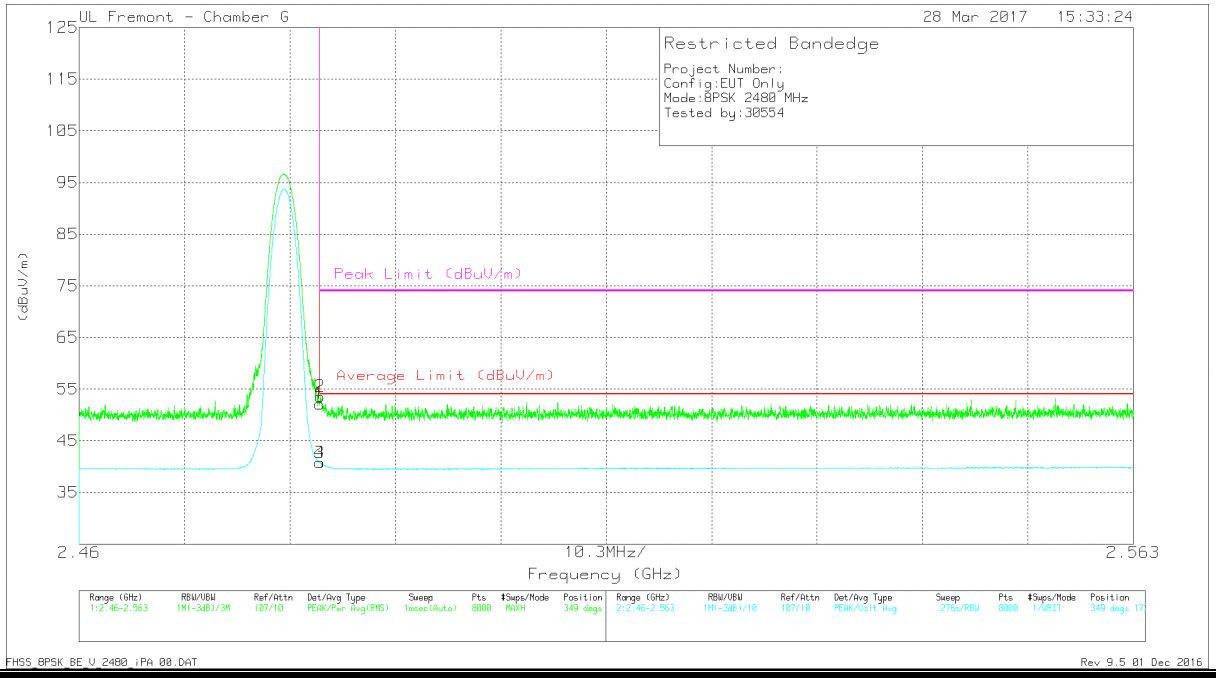
HIGH CHANNEL VERTICAL



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	43.55	Pk	32.3	-23.7	52.15	-	-	74	-21.85	349	172	V
2	* 2.484	44.98	Pk	32.3	-23.7	53.58	-	-	74	-20.42	349	172	V
3	* 2.484	32.16	VA1T	32.3	-23.7	40.76	54	-13.24	-	-	349	172	V
4	* 2.484	32.16	VA1T	32.3	-23.7	40.76	54	-13.24	-	-	349	172	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration
FHSS_8PSK_BE_V_2480_iPA 00.DAT
Rev 9.5 01 Dec 2016

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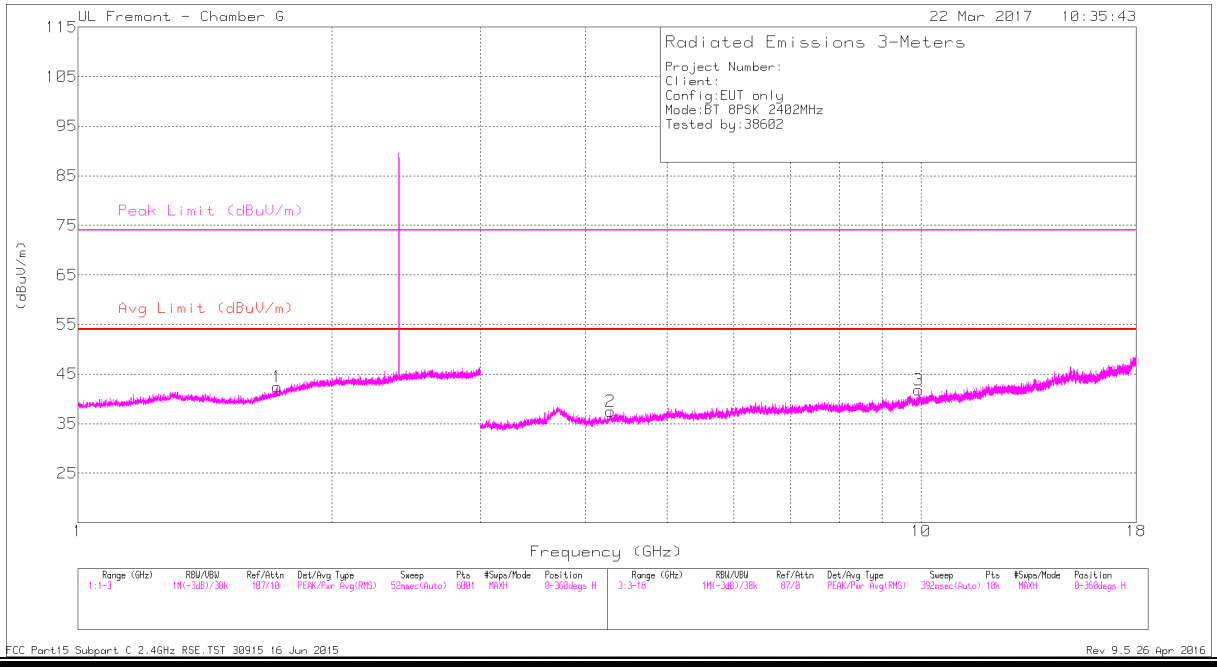
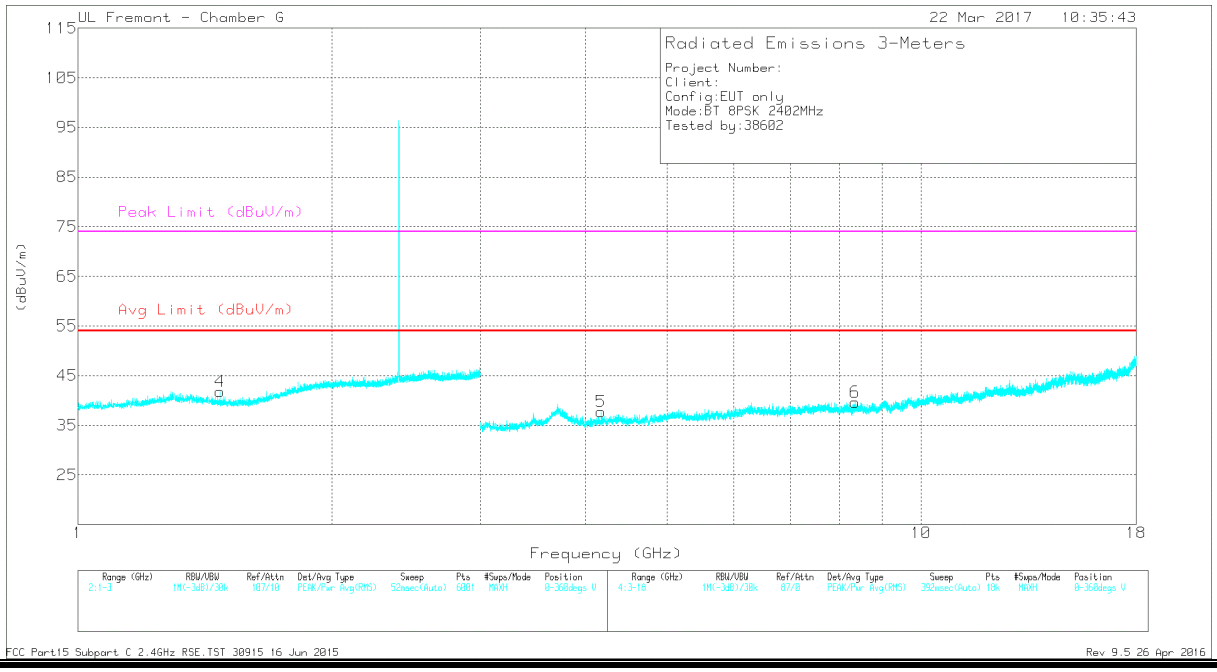
9.5.3. HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



LOW CHANNEL VERTICAL



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DATA

Radiated Emissions

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (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	*1.722	43.87	PKFH	29.5	-24.3	49.07	-	-	-	-	82	397	H
	* 1.719	31.59	VA1T	29.4	-24.3	36.69	54	-17.31	-	-	82	397	H
4	* 1.472	42.73	PKFH	28.3	-24.6	46.43	-	-	74	-27.57	37	363	V
	* 1.473	31.51	VA1T	28.3	-24.6	35.21	54	-18.79	-	-	37	363	V
2	* 4.286	39.75	PKFH	33.9	-31.3	42.35	-	-	74	-31.65	267	385	H
	* 4.285	28.44	VA1T	33.9	-31.3	31.04	54	-22.96	-	-	267	385	H
5	* 4.176	40.94	PKFH	33.7	-32.4	42.24	-	-	74	-31.76	160	161	V
	* 4.175	29.18	VA1T	33.7	-32.4	30.48	54	-23.52	-	-	160	161	V
6	* 8.349	37.65	PKFH	35.8	-29	44.45	-	-	74	-29.55	115	119	V
	* 8.346	26.73	VA1T	35.8	-29	33.53	54	-20.47	-	-	115	119	V
3	9.942	31.78	PKFH	37.1	-27.1	41.78	-	-	-	-	0	100	H

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

PKFH - FHSS: RB=100k/1MHz VB=3 x RB, Peak

VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration

FCC Part15 Subpart C 2.4GHz RSE.TST 30915 16 Jun 2015
Rev 9.5 26 Apr 2016

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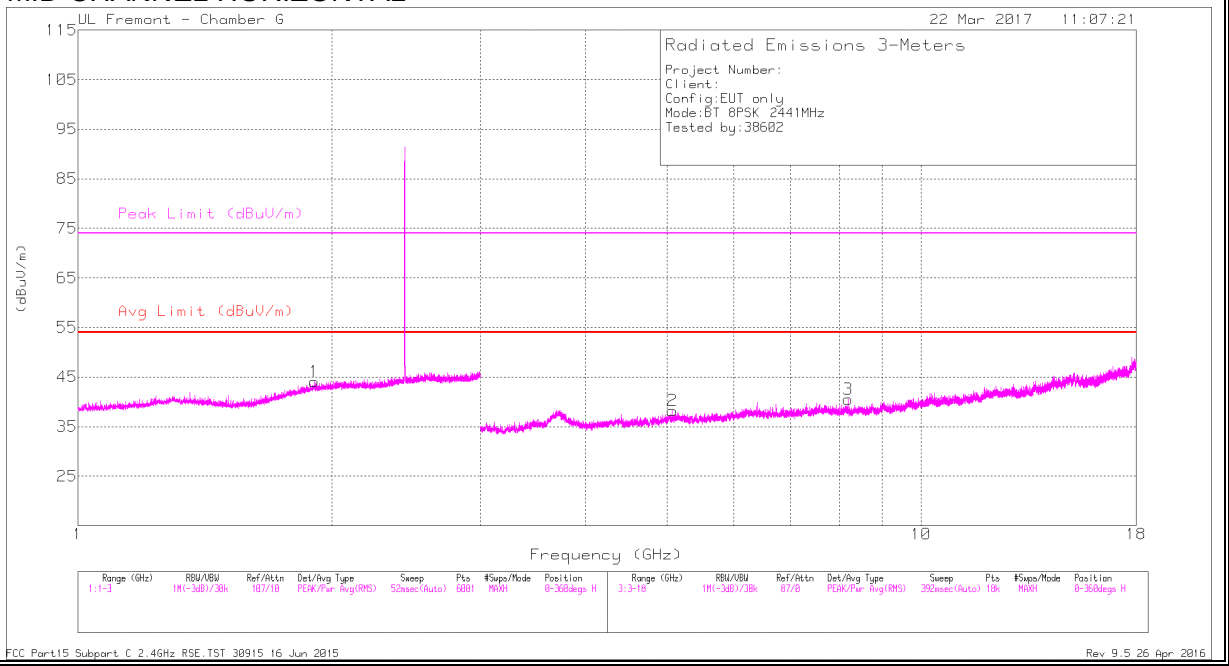
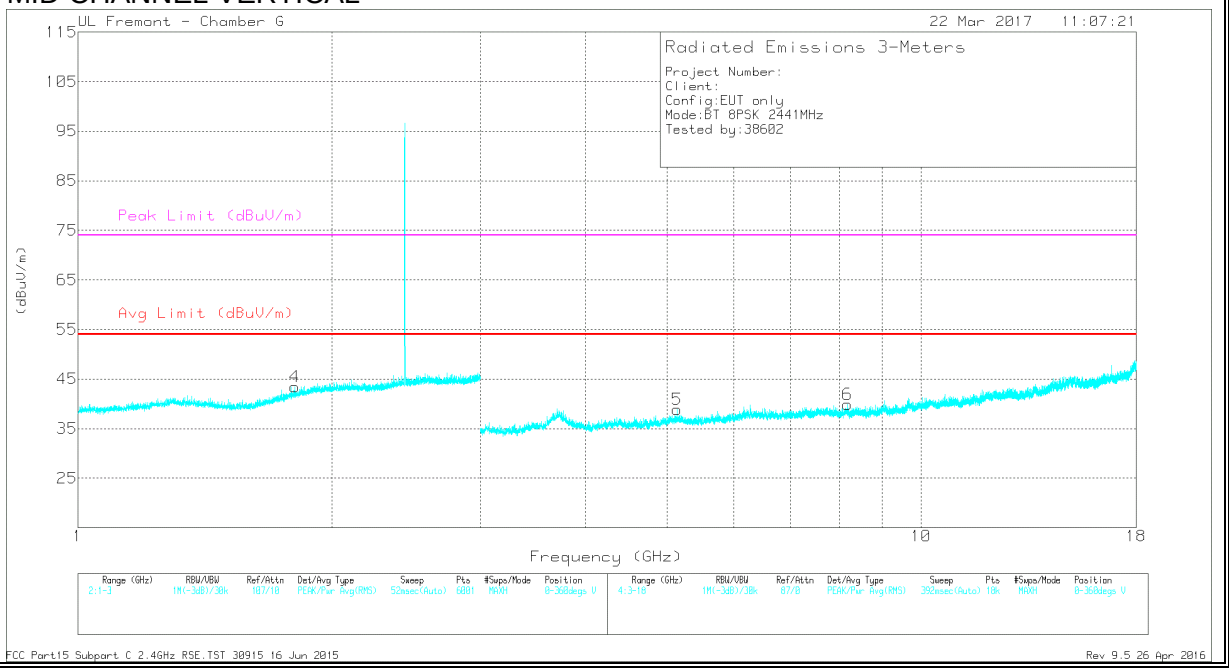
MID CHANNEL HORIZONTAL



MID CHANNEL VERTICAL



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DATA

Radiated Emissions

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 5.071	39.51	PKFH	34.9	-31.5	42.91	-	-	74	-31.09	303	202	H
	* 5.072	28	VA1T	34.9	-31.5	31.4	54	-22.6	-	-	303	202	H
3	* 8.193	37.69	PKFH	35.8	-28.9	44.59	-	-	74	-29.41	211	286	H
	* 8.193	26.44	VA1T	35.8	-28.9	33.34	54	-20.66	-	-	211	286	H
5	* 5.138	39.31	PKFH	35.1	-31.6	42.81	-	-	74	-31.19	188	364	V
	* 5.138	28.32	VA1T	35.1	-31.6	31.82	54	-22.18	-	-	188	364	V
6	* 8.18	37.87	PKFH	35.8	-28.8	44.87	-	-	74	-29.13	110	101	V
	* 8.183	26.59	VA1T	35.8	-28.8	33.59	54	-20.41	-	-	110	101	V
4	1.809	37.28	Pk	30.5	-24.3	43.48	-	-	-	-	0-360	200	V
1	1.907	36.95	Pk	31.4	-24.3	44.05	-	-	-	-	0-360	100	H

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

PKFH - FHSS: RB=100k/1MHz VB=3 x RB, Peak

VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration

FCC Part15 Subpart C 2.4GHz RSE.TST 30915 16 Jun 2015
Rev 9.5 26 Apr 2016

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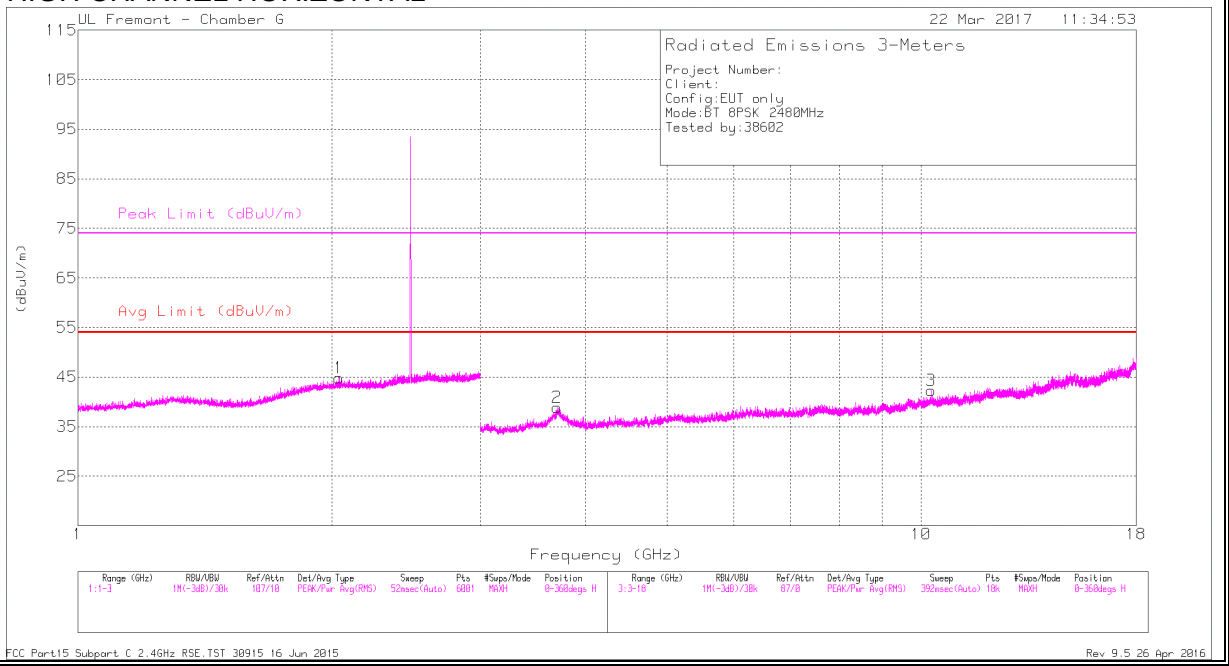
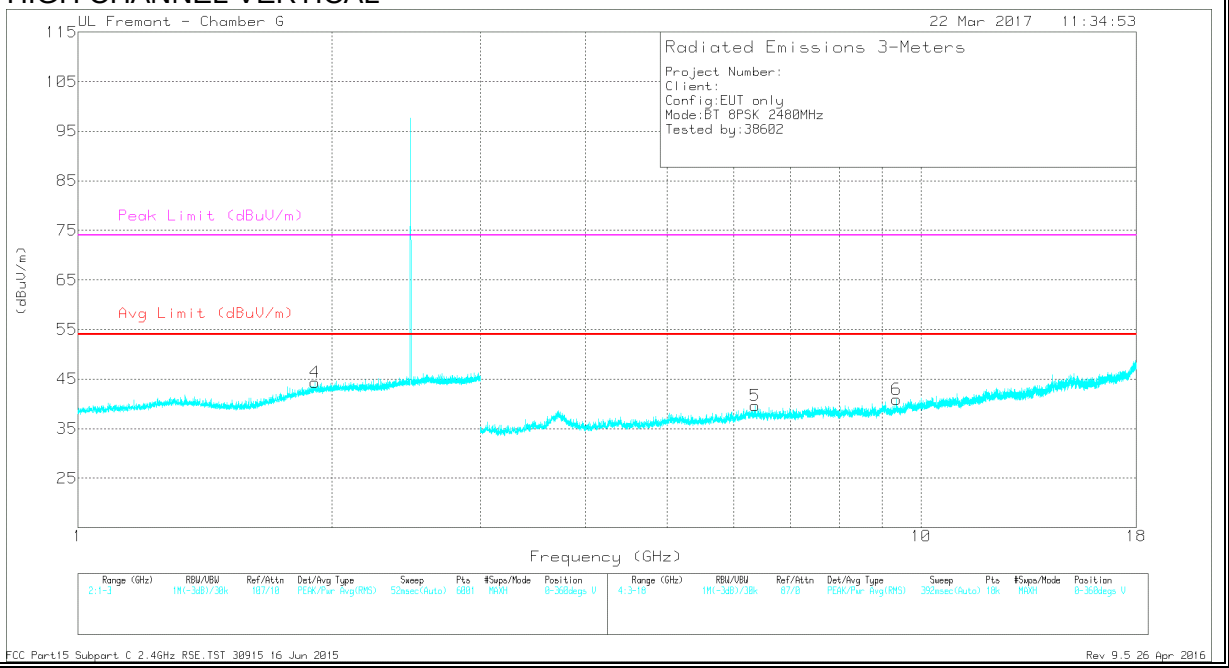
HIGH CHANNEL HORIZONTAL



HIGH CHANNEL VERTICAL



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DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 3.7	40.59	PKFH	34.3	-30.7	44.19	-	-	74	-29.81	195	391	H
	* 3.7	28.38	VA1T	34.3	-30.7	31.98	54	-22.02	-	-	195	391	H
6	* 9.349	37.08	PKFH	36.4	-27.7	45.78	-	-	74	-28.22	298	316	V
	* 9.349	25.46	VA1T	36.4	-27.7	34.16	54	-19.84	-	-	298	316	V
4	1.91	37.23	Pk	31.4	-24.3	44.33	-	-	-	-	0-360	201	V
1	2.039	37.36	Pk	31.6	-24.1	44.86	-	-	-	-	0-360	100	H
5	6.36	34.83	Pk	35.7	-30.9	39.63	-	-	-	-	0-360	100	V
3	10.28	31.52	Pk	37.3	-26.5	42.32	-	-	-	-	0-360	201	H

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

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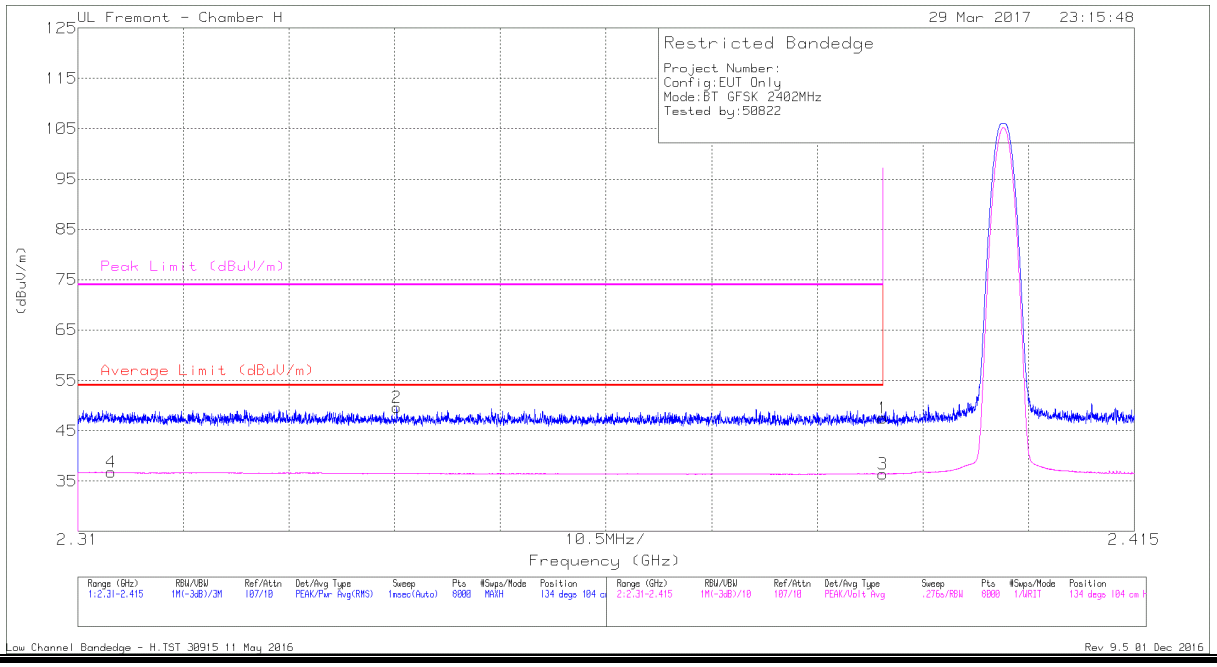
9.6. LAT 3, PMAX BASIC DATA RATE GFSK MODULATION

9.6.1. RESTRICTED BANDEDGE (LOW CHANNEL)

LOW CHANNEL HORIZONTAL



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T120 (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	44.06	Pk	31.9	-28.4	47.56	-	-	74	-26.44	134	104	H
2	* 2.342	46.34	Pk	31.7	-28.4	49.64	-	-	74	-24.36	134	104	H
3	* 2.39	32.95	VA1T	31.9	-28.4	36.45	54	-17.55	-	-	134	104	H
4	* 2.313	33.57	VA1T	31.6	-28.4	36.77	54	-17.23	-	-	134	104	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration
Low Channel Bandedge - H.TST 30915 11 May 2016
Rev 9.5 01 Dec 2016

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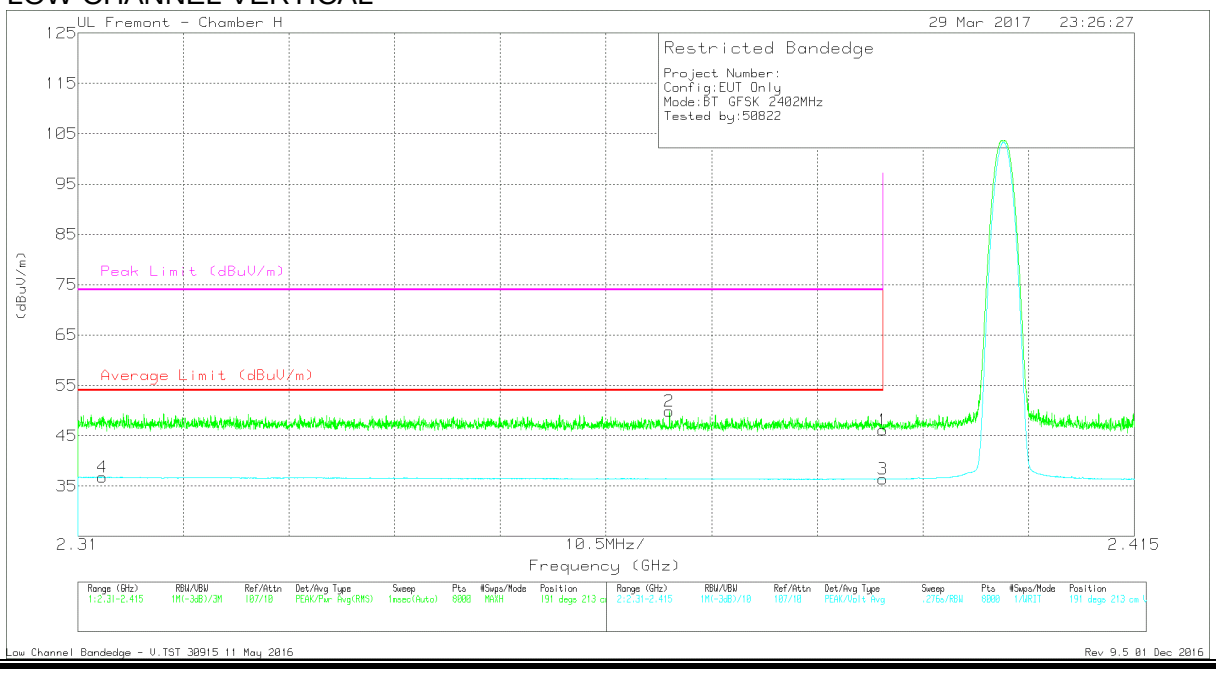
LOW CHANNEL VERTICAL



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T120 (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	42.62	Pk	31.9	-28.4	46.12	-	-	74	-27.88	191	213	V
2	* 2.369	46.46	Pk	31.8	-28.4	49.86	-	-	74	-24.14	191	213	V
3	* 2.39	32.91	VA1T	31.9	-28.4	36.41	54	-17.59	-	-	191	213	V
4	* 2.312	33.57	VA1T	31.6	-28.4	36.77	54	-17.23	-	-	191	213	V

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

Pk - Peak detector

VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration

Low Channel Bandedge - V.TST 30915 11 May 2016

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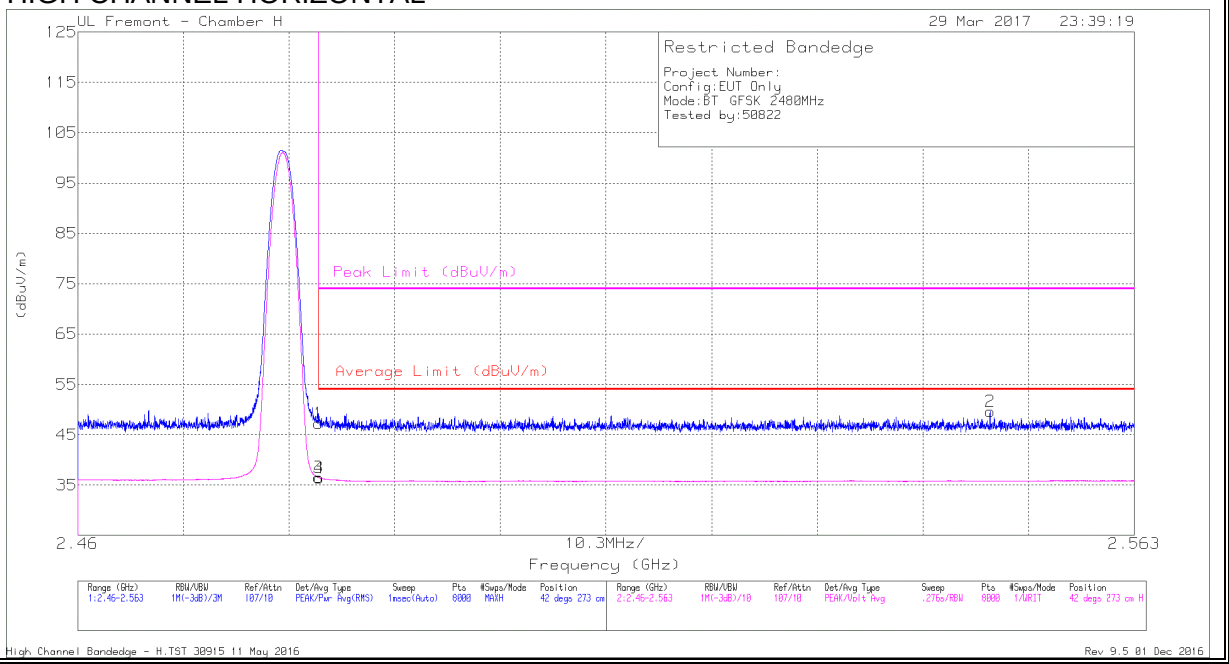
9.6.2. AUTHORIZED BANDEDGE (HIGH CHANNEL)

HIGH CHANNEL HORIZONTAL



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T120 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	43.63	Pk	32.2	-28.5	47.33	-	-	74	-26.67	42	273	H
3	* 2.484	32.81	VA1T	32.2	-28.5	36.51	54	-17.49	-	-	42	273	H
4	* 2.484	32.76	VA1T	32.2	-28.5	36.46	54	-17.54	-	-	42	273	H
2	2.549	45.9	Pk	32.2	-28.5	49.6	-	-	74	-24.4	42	273	H

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

Pk - Peak detector

VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration

High Channel Bandedge - H.TST 30915 11 May 2016

Rev 9.5 01 Dec 2016

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47173 BENICIA STREET, FREMONT, CA 94538, USA TEL: (510) 771-1000 FAX: (510) 661-0888

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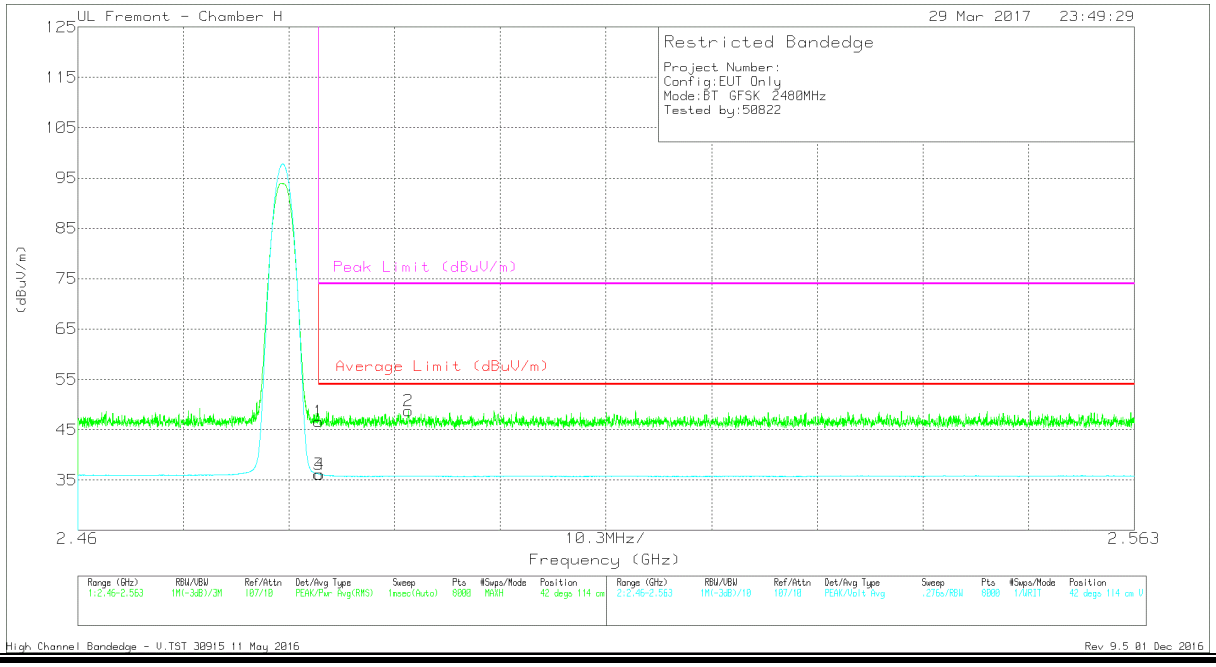
HIGH CHANNEL VERTICAL



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T120 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	42.91	Pk	32.2	-28.5	46.61	-	-	74	-27.39	42	114	V
2	* 2.492	45.05	Pk	32.2	-28.5	48.75	-	-	74	-25.25	42	114	V
3	* 2.484	32.46	VA1T	32.2	-28.5	36.16	54	-17.84	-	-	42	114	V
4	* 2.484	32.47	VA1T	32.2	-28.5	36.17	54	-17.83	-	-	42	114	V

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

Pk - Peak detector

VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration

High Channel Bandedge - V.TST 30915 11 May 2016

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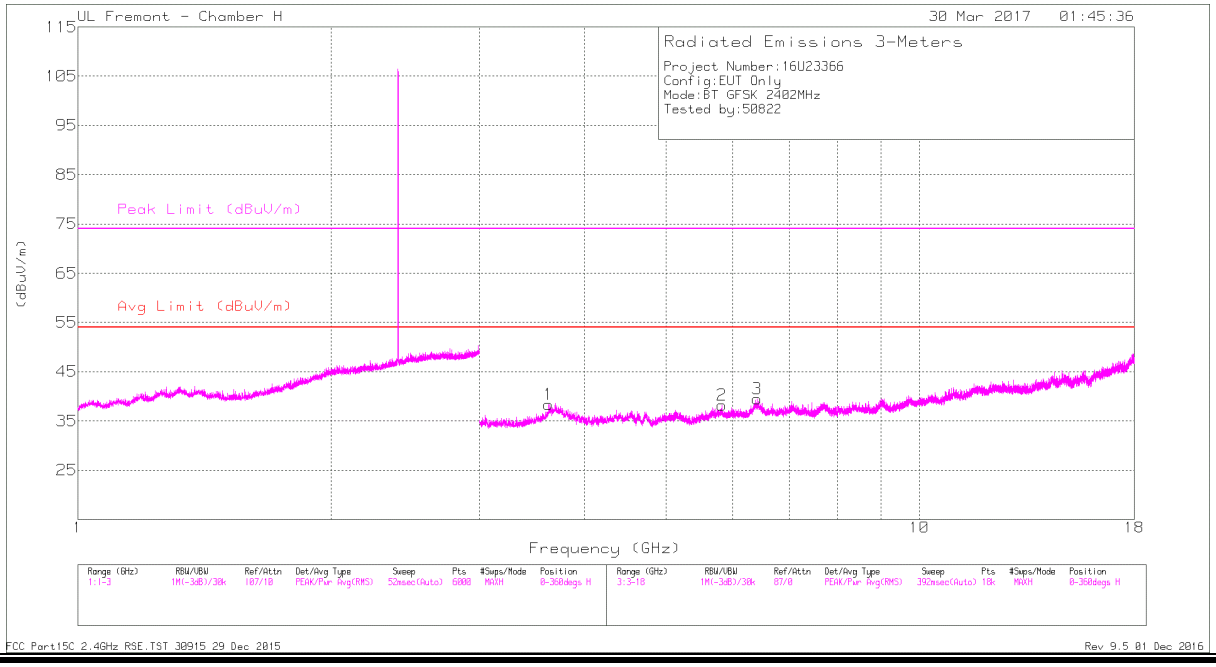
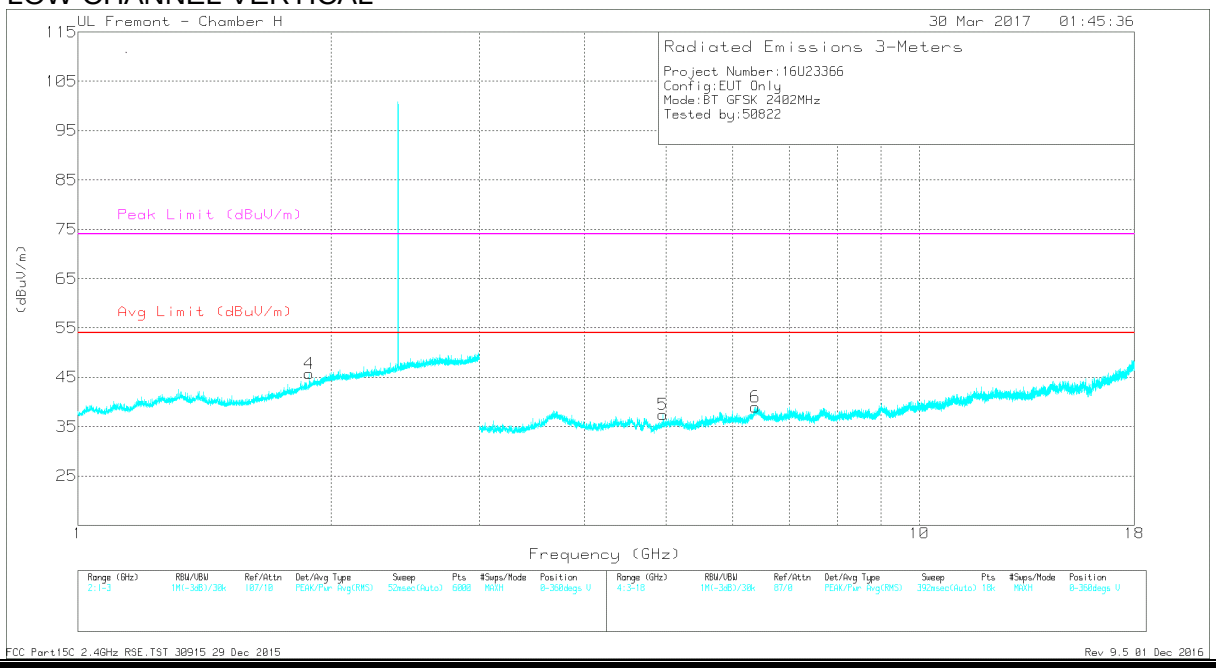
9.6.3. HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



LOW CHANNEL VERTICAL



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DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T120 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3.626	45.58	PKFH	34.9	-35.7	44.78	-	-	74	-29.22	145	158	H
	* 3.63	32.55	VA1T	34.9	-35.7	31.75	54	-22.25	-	-	145	158	H
5	* 4.959	44.07	PKFH	34	-34.3	43.77	-	-	74	-30.23	217	206	V
	* 4.957	30.54	VA1T	34	-34.3	30.24	54	-23.76	-	-	217	206	V
4	1.882	37.48	PKFH	30.8	-17.7	50.58	-	-	-	-	276	142	V
	1.884	24.21	VA1T	30.9	-17.7	37.41	-	-	-	-	276	142	V
2	5.823	28.52	VA1T	35	-32.1	31.42	-	-	-	-	74	161	H
	5.827	40.91	PKFH	35	-32.4	43.51	-	-	-	-	74	161	H
6	6.379	28.64	VA1T	35.6	-31.5	32.74	-	-	-	-	325	197	V
	6.381	42.04	PKFH	35.6	-31.5	46.14	-	-	-	-	325	197	V
3	6.412	28.58	VA1T	35.7	-31.4	32.88	-	-	-	-	238	288	H
	6.413	41.28	PKFH	35.7	-31.4	45.58	-	-	-	-	238	288	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PKFH - FHSS: RB=100k/1MHz VB=3 x RB, Peak
VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration
FHSS_8PSK_HARM_2441MHz.DAT 30915 29 Dec 2015
Rev 9.5 26 Apr 2016

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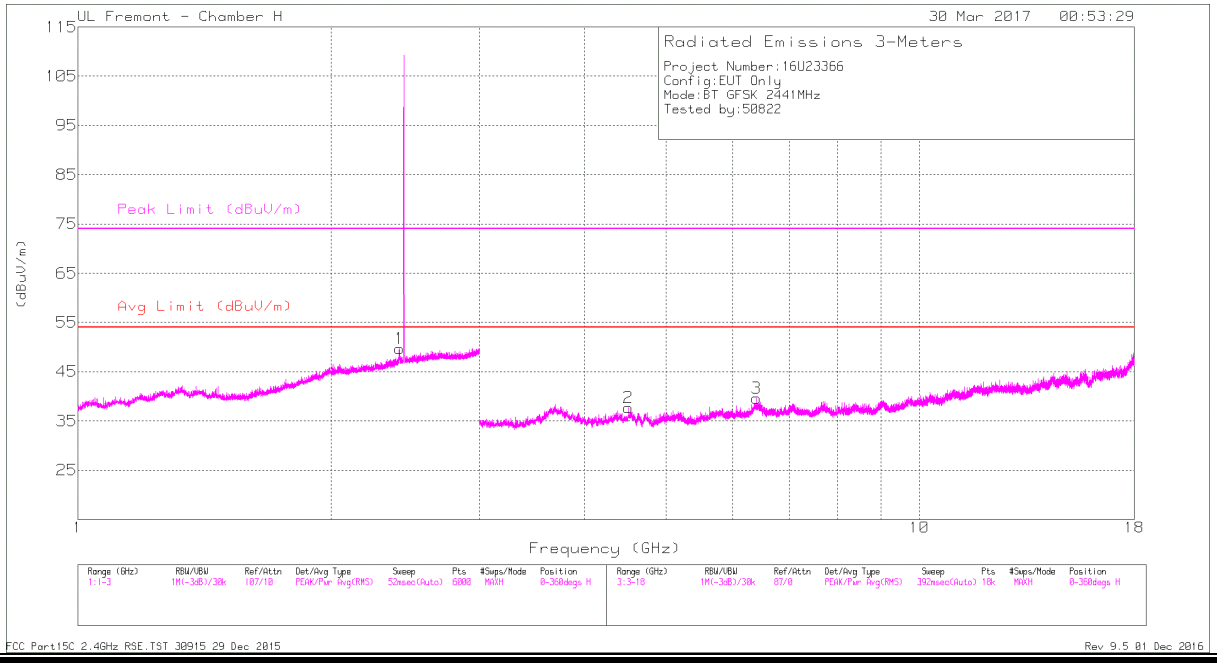
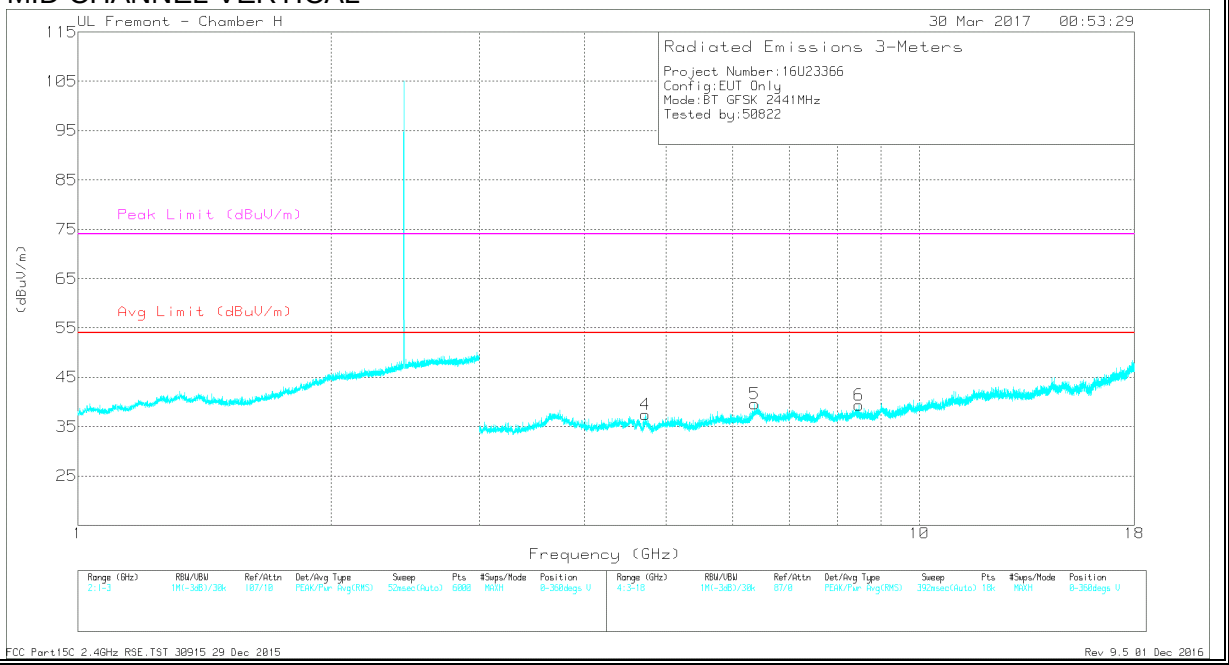
MID CHANNEL HORIZONTAL



MID CHANNEL VERTICAL



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DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T120 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 4.508	44.6	PKFH	33.8	-35.2	43.2	-	-	74	-30.8	334	126	H
	* 4.51	31.62	VA1T	33.8	-35.2	30.22	54	-23.78	-	-	334	126	H
4	* 4.728	42.88	PKFH	34	-34.5	42.38	-	-	74	-31.62	101	172	V
	* 4.728	30.49	VA1T	34	-34.5	29.99	54	-24.01	-	-	101	172	V
6	* 8.478	38.29	PKFH	35.8	-30	44.09	-	-	74	-29.91	309	246	V
	* 8.477	25.75	VA1T	35.8	-29.9	31.65	54	-22.35	-	-	309	246	V
1	1.999	24.52	VA1T	31.9	-17.4	39.02	-	-	-	-	112	359	H
	2.001	37.7	PKFH	31.9	-17.5	52.1	-	-	-	-	112	359	H
5	6.372	28.62	VA1T	35.6	-31.5	32.72	-	-	-	-	351	280	V
	6.373	41.39	PKFH	35.6	-31.5	45.49	-	-	-	-	351	280	V
3	6.406	28.45	VA1T	35.7	-31.5	32.65	-	-	-	-	238	158	H
	6.407	41.07	PKFH	35.7	-31.4	45.37	-	-	-	-	238	158	H

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

PKFH - FHSS: RB=100k/1MHz VB=3 x RB, Peak

VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration

FCC Part15 Subpart C 2.4GHz RSE.TST 30915 16 Jun 2015
Rev 9.5 26 Apr 2016

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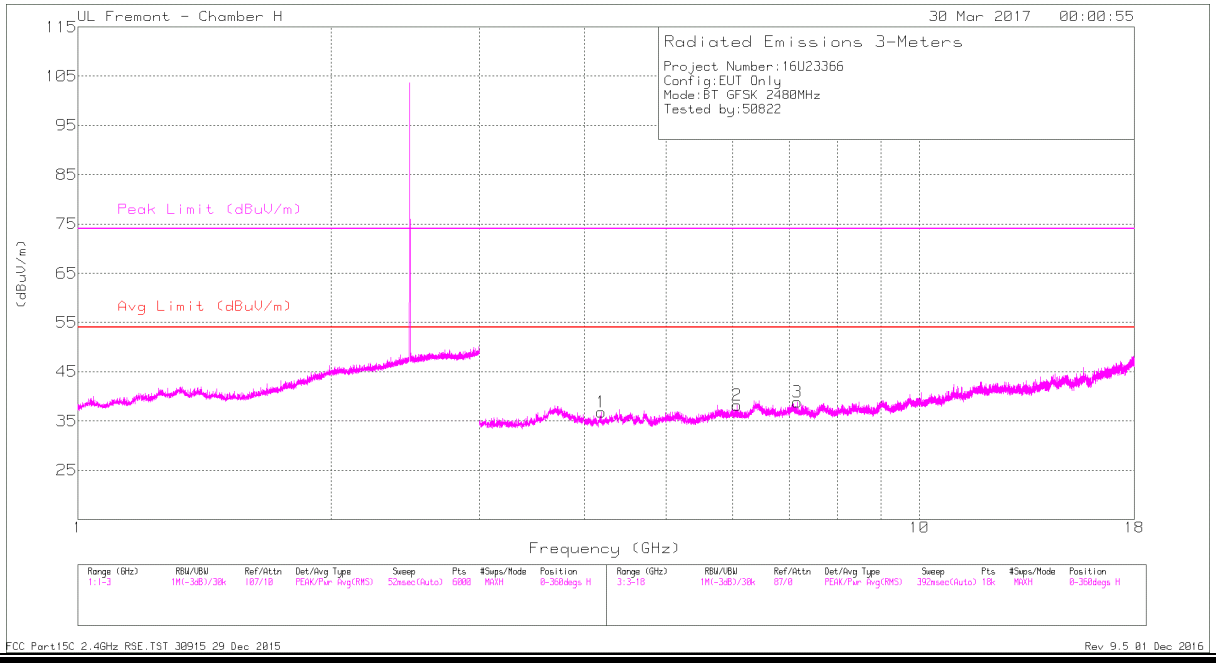
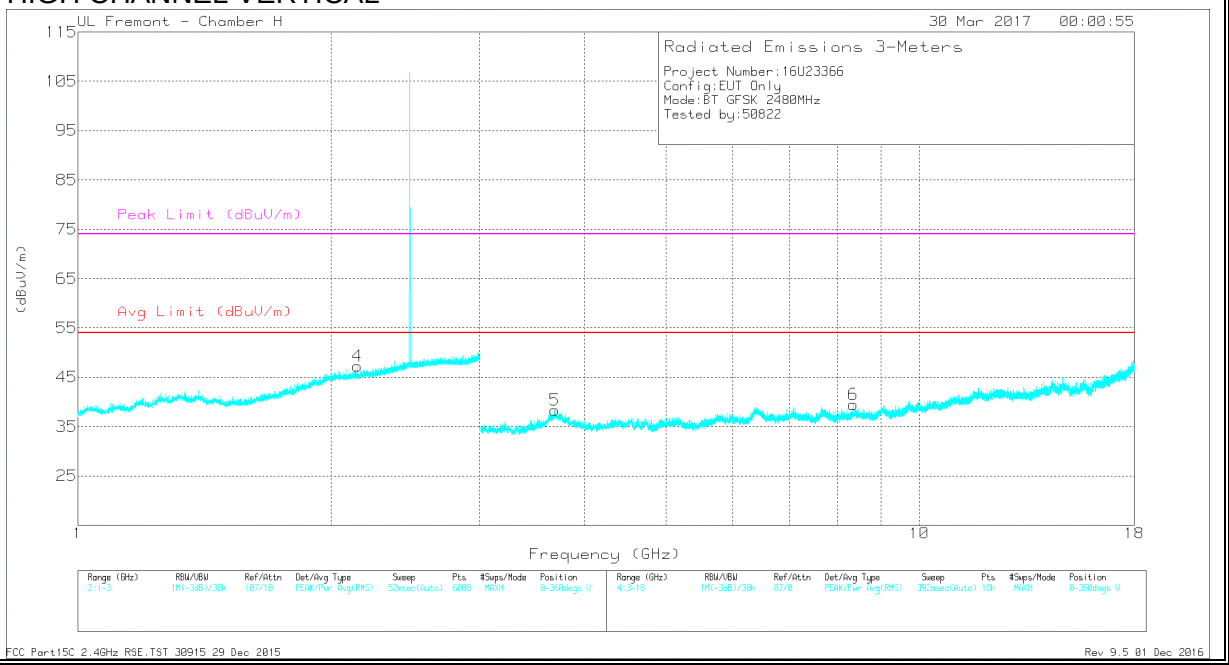
HIGH CHANNEL HORIZONTAL



HIGH CHANNEL VERTICAL



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DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T120 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.191	44.15	PKFH	33.5	-35.1	42.55	-	-	74	-31.45	96	117	H
	* 4.188	31.45	VA1T	33.5	-35.1	29.85	54	-24.15	-	-	96	117	H
5	* 3.689	45.96	PKFH	34.9	-36	44.86	-	-	74	-29.14	312	167	V
	* 3.691	33.08	VA1T	34.9	-36	31.98	54	-22.02	-	-	312	167	V
6	* 8.341	39.44	PKFH	35.8	-29.7	45.54	-	-	74	-28.46	325	106	V
	* 8.337	26.03	VA1T	35.8	-29.7	32.13	54	-21.87	-	-	325	106	V
4	2.149	37.59	PKFH	31.6	-17.1	52.09	-	-	-	-	56	356	V
	2.152	24.72	VA1T	31.6	-17.1	39.22	-	-	-	-	56	356	V
2	6.07	27.57	VA1T	35.4	-31.9	31.07	-	-	-	-	15	399	H
	6.074	40.21	PKFH	35.4	-31.8	43.81	-	-	-	-	15	399	H
3	7.161	27.72	VA1T	35.7	-31.6	31.82	-	-	-	-	118	294	H
	7.162	40.57	PKFH	35.7	-31.6	44.67	-	-	-	-	118	294	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PKFH - FHSS: RB=100k/1MHz VB=3 x RB, Peak
VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration
FHSS_8PSK_HARM_2441MHz.DAT 30915 29 Dec 2015
Rev 9.5 26 Apr 2016

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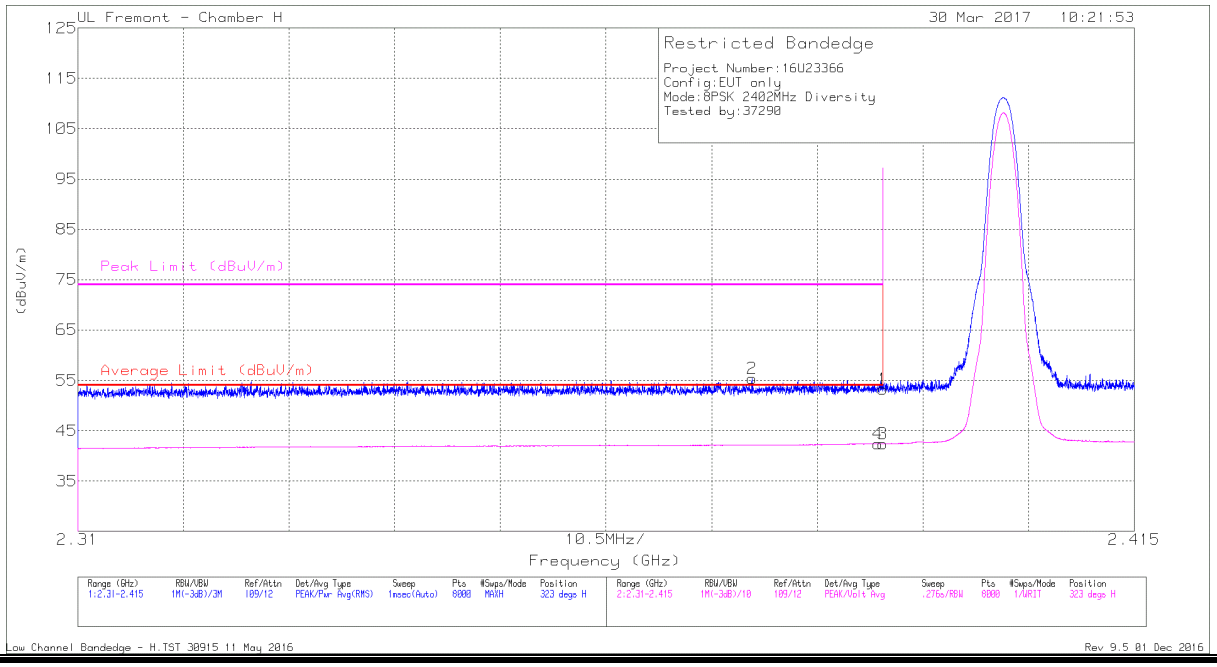
9.7. LAT 3, PMAX ENHANCED DATA RATE 8PSK MODULATION

9.7.1. RESTRICTED BANDEDGE (LOW CHANNEL)

LOW CHANNEL HORIZONTAL



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T120 (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	38.01	Pk	31.9	-16.6	53.31	-	-	74	-20.69	323	106	H
2	* 2.377	40.11	Pk	31.9	-16.6	55.41	-	-	74	-18.59	323	106	H
3	* 2.39	27.11	VA1T	31.9	-16.6	42.41	54	-11.59	-	-	323	106	H
4	* 2.389	27.15	VA1T	31.9	-16.6	42.45	54	-11.55	-	-	323	106	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration
Low Channel Bandedge - H.TST 30915 11 May 2016
Rev 9.5 01 Dec 2016

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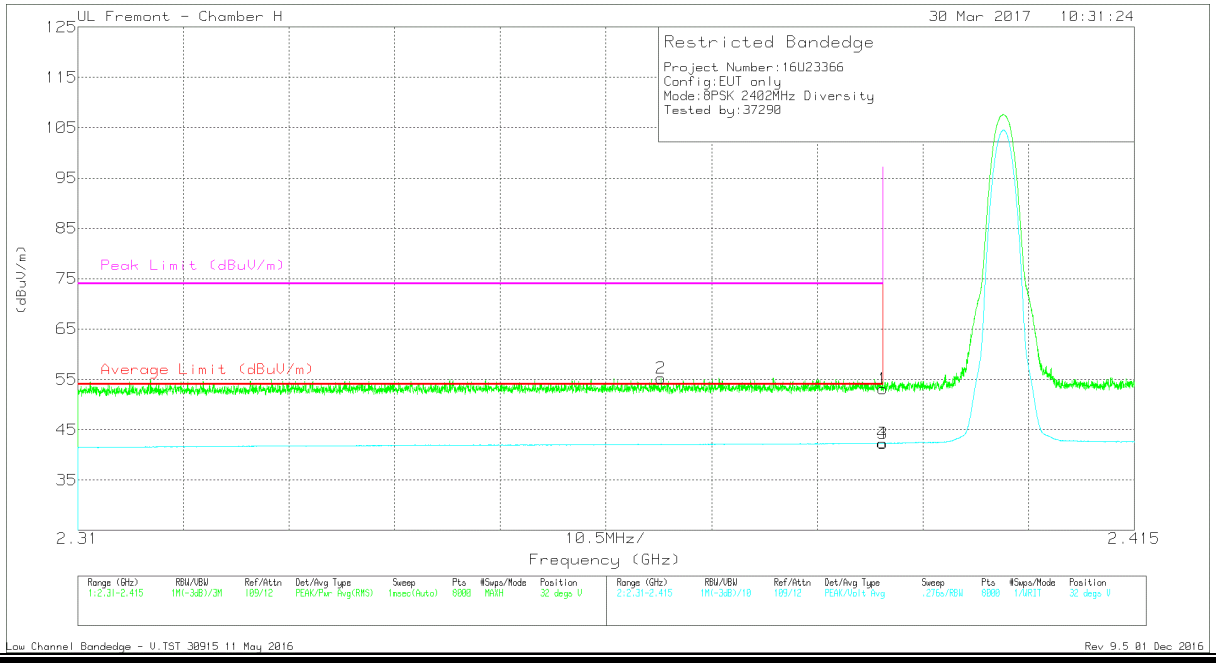
LOW CHANNEL VERTICAL



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T120 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	37.8	Pk	31.9	-16.6	53.1	-	-	74	-20.9	32	121	V
2	* 2.368	40.09	Pk	31.8	-16.6	55.29	-	-	74	-18.71	32	121	V
3	* 2.39	27.02	VA1T	31.9	-16.6	42.32	54	-11.68	-	-	32	121	V
4	* 2.39	27.04	VA1T	31.9	-16.6	42.34	54	-11.66	-	-	32	121	V

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

Pk - Peak detector

VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration

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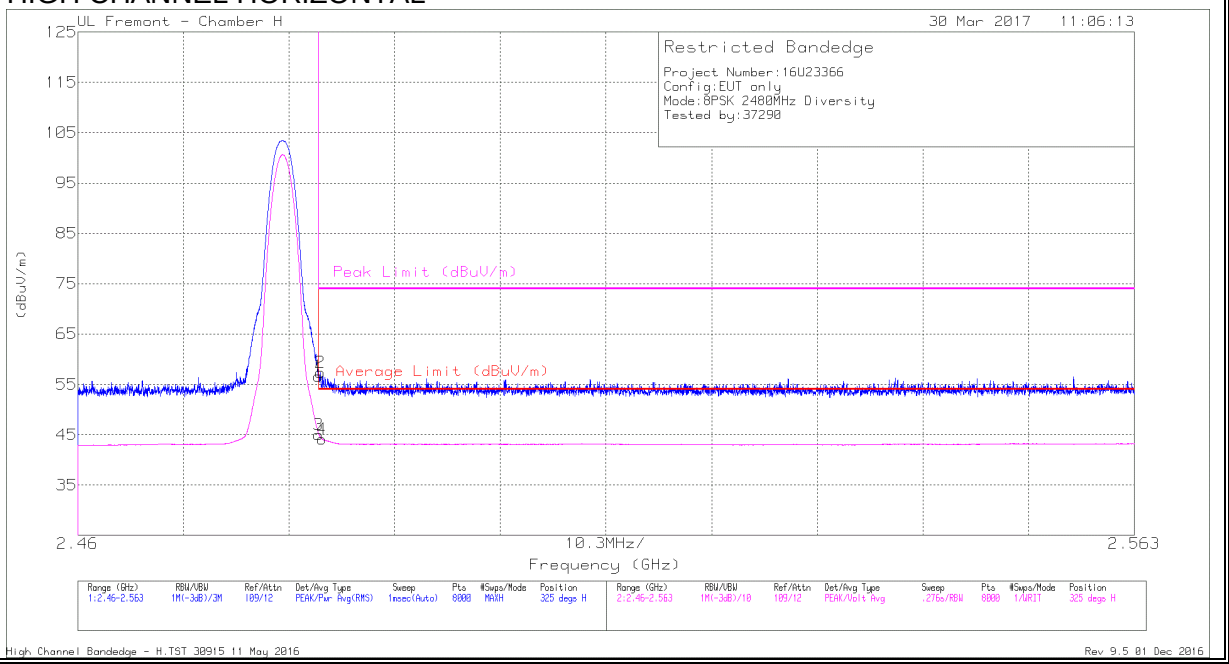
9.7.2. AUTHORIZED BANDEDGE (HIGH CHANNEL)

HIGH CHANNEL HORIZONTAL



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T120 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	40.79	Pk	32.2	-16.4	56.59	-	-	74	-17.41	325	106	H
2	* 2.484	41.57	Pk	32.2	-16.4	57.37	-	-	74	-16.63	325	106	H
3	* 2.484	29.28	VA1T	32.2	-16.4	45.08	54	-8.92	-	-	325	106	H
4	* 2.484	28.33	VA1T	32.2	-16.4	44.13	54	-9.87	-	-	325	106	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration
High Channel Bandedge - H.TST 30915 11 May 2016
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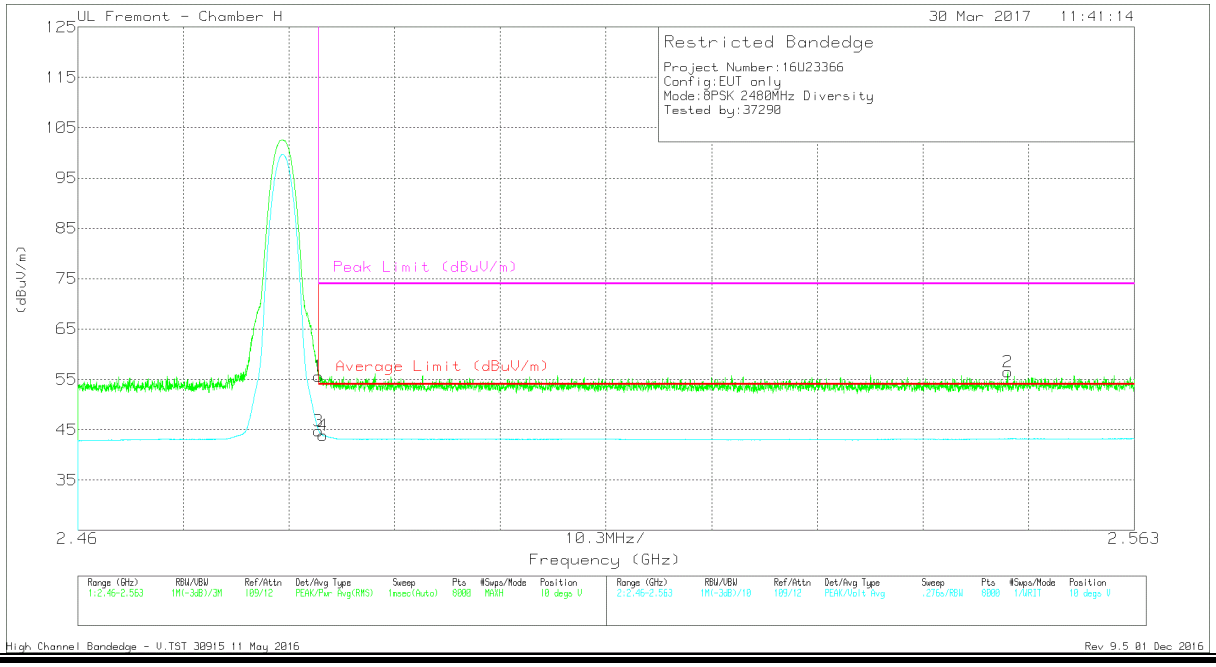
HIGH CHANNEL VERTICAL



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T120 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	39.89	Pk	32.2	-16.4	55.69	-	-	74	-18.31	10	183	V
3	* 2.484	29	VA1T	32.2	-16.4	44.8	54	-9.2	-	-	10	183	V
4	* 2.484	28.07	VA1T	32.2	-16.4	43.87	54	-10.13	-	-	10	183	V
2	2.551	40.47	Pk	32.2	-16.2	56.47	-	-	74	-17.53	10	183	V

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

Pk - Peak detector

VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration

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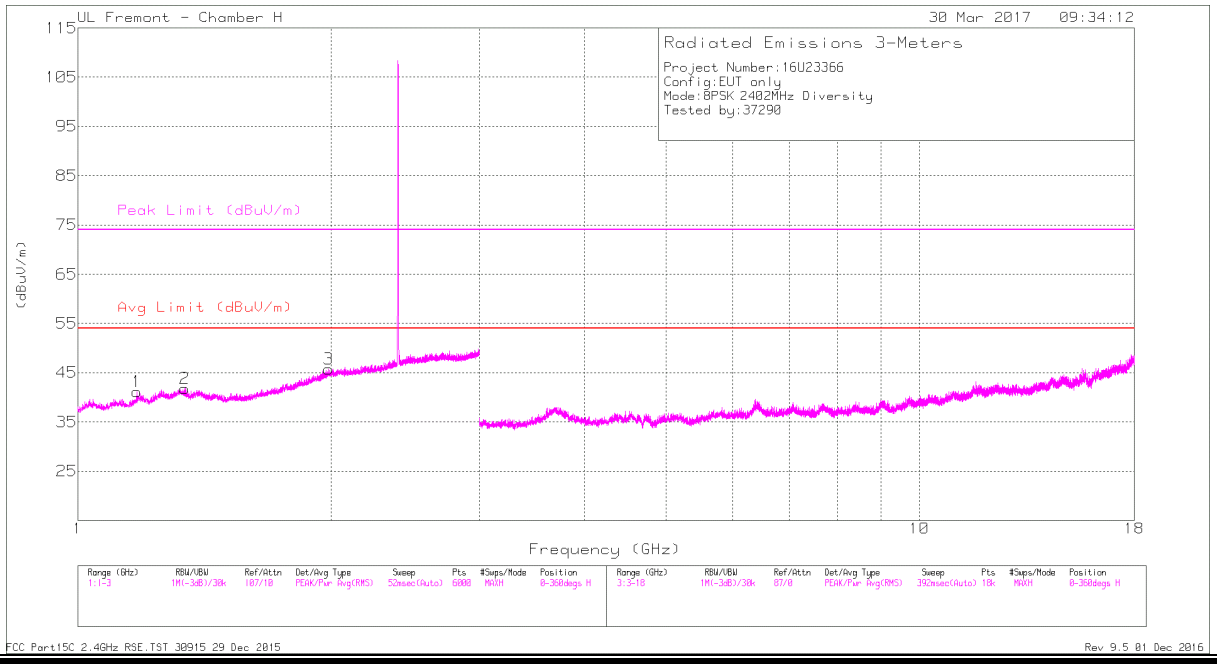
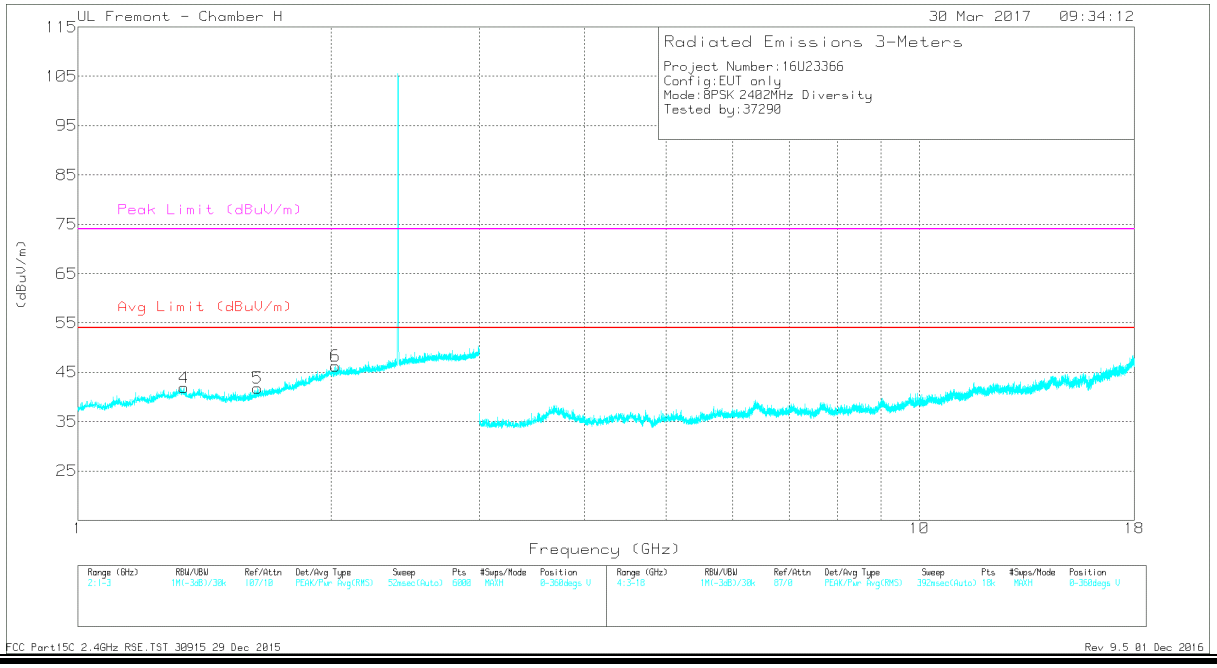
9.7.3. HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



LOW CHANNEL VERTICAL



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DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T120 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.174	35.92	PKFH	28.4	-18.7	45.62	-	-	74	-28.38	360	201	H
	* 1.177	24.43	VA1T	28.5	-18.7	34.23	54	-19.77	-	-	360	201	H
2	* 1.339	36.8	PKFH	29.6	-18.7	47.7	-	-	74	-26.3	235	201	H
	* 1.338	24.26	VA1T	29.6	-18.7	35.16	54	-18.84	-	-	235	201	H
4	* 1.337	36.46	PKFH	29.6	-18.6	47.46	-	-	74	-26.54	110	100	V
	* 1.336	24.33	VA1T	29.6	-18.6	35.33	54	-18.67	-	-	110	100	V
5	1.634	24.35	VA1T	28.1	-17.6	34.85	-	-	-	-	55	100	V
	1.636	36.75	PKFH	28.2	-17.6	47.35	-	-	-	-	55	100	V
3	1.985	36.47	PKFH	31.8	-17.4	50.87	-	-	-	-	72	201	H
	1.985	24.57	VA1T	31.8	-17.4	38.97	-	-	-	-	72	201	H
6	2.024	36.52	PKFH	31.8	-17.4	50.92	-	-	-	-	94	100	V
	2.025	24.57	VA1T	31.8	-17.3	39.07	-	-	-	-	94	100	V

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

PKFH - FHSS: RB=100k/1MHz VB=3 x RB, Peak

VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration

FCC Part15C 2.4GHz RSE.TST 30915 29 Dec 2015
Rev 9.5 01 Dec 2016

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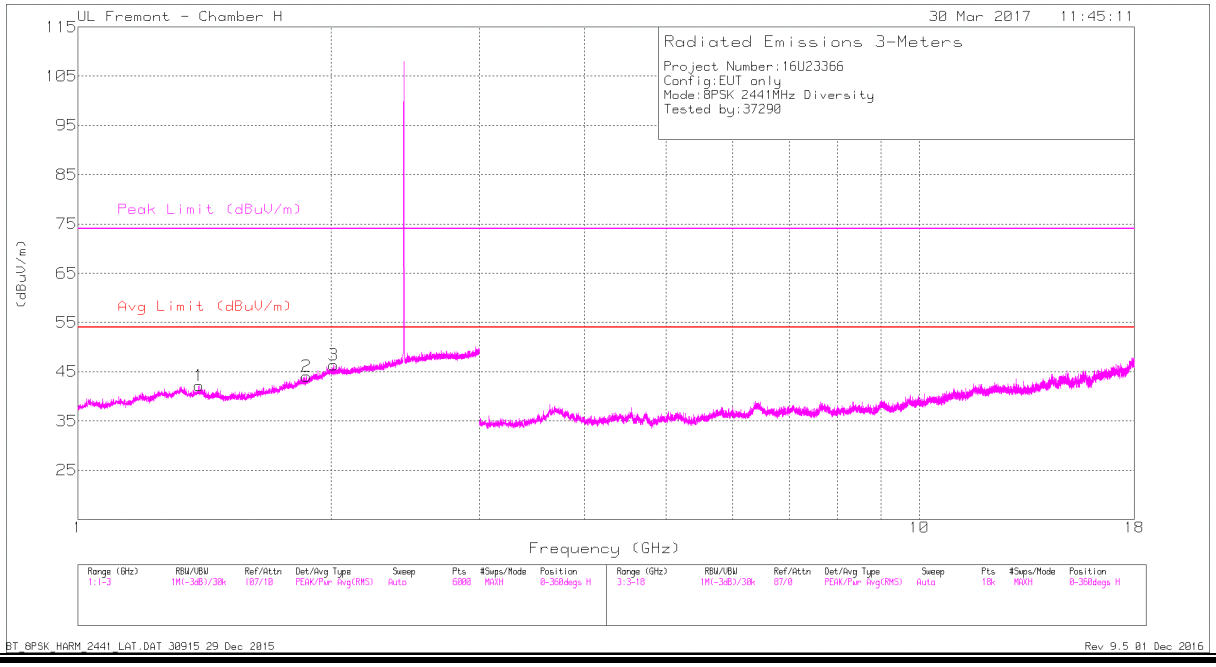
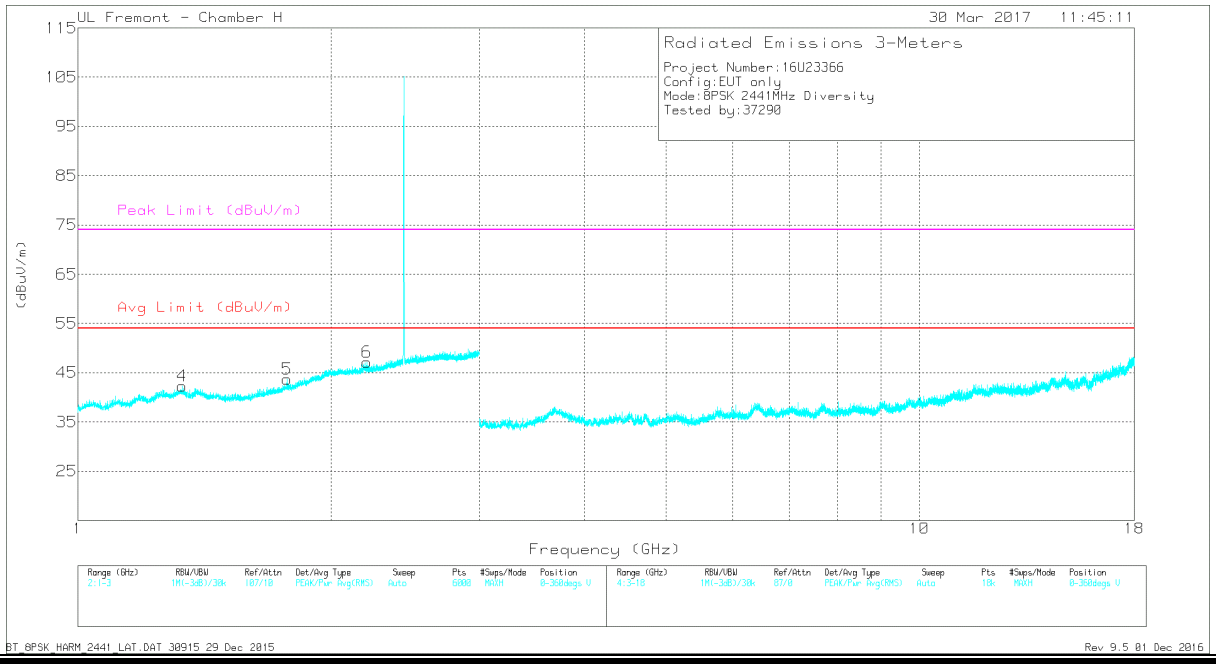
MID CHANNEL HORIZONTAL



MID CHANNEL VERTICAL



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DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T120 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.395	36.58	PKFH	29.3	-18.4	47.48	-	-	74	-26.52	45	201	H
	* 1.395	24.36	VA1T	29.3	-18.4	35.26	54	-18.74	-	-	45	201	H
4	* 1.331	36.58	PKFH	29.6	-18.7	47.48	-	-	74	-26.52	56	100	V
	* 1.329	24.54	VA1T	29.6	-18.7	35.44	54	-18.56	-	-	56	100	V
6	* 2.206	36.7	PKFH	31.7	-16.9	51.5	-	-	74	-22.5	25	100	V
	* 2.207	24.82	VA1T	31.7	-16.9	39.62	54	-14.38	-	-	25	100	V
5	1.771	24.52	VA1T	29.6	-17.7	36.42	-	-	-	-	84	202	V
	1.774	36.25	PKFH	29.6	-17.7	48.15	-	-	-	-	84	202	V
2	1.87	24.15	VA1T	30.7	-17.8	37.05	-	-	-	-	74	100	H
	1.871	35.69	PKFH	30.7	-17.8	48.59	-	-	-	-	74	100	H
3	2.012	36.13	PKFH	31.9	-17.4	50.63	-	-	-	-	55	201	H
	2.014	24.5	VA1T	31.9	-17.4	39	-	-	-	-	55	201	H

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

PKFH - FHSS: RB=100k/1MHz VB=3 x RB, Peak

VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration

BT_8PSK_HARM_2441_LAT.DAT 30915 29 Dec 2015

Rev 9.5 01 Dec 2016

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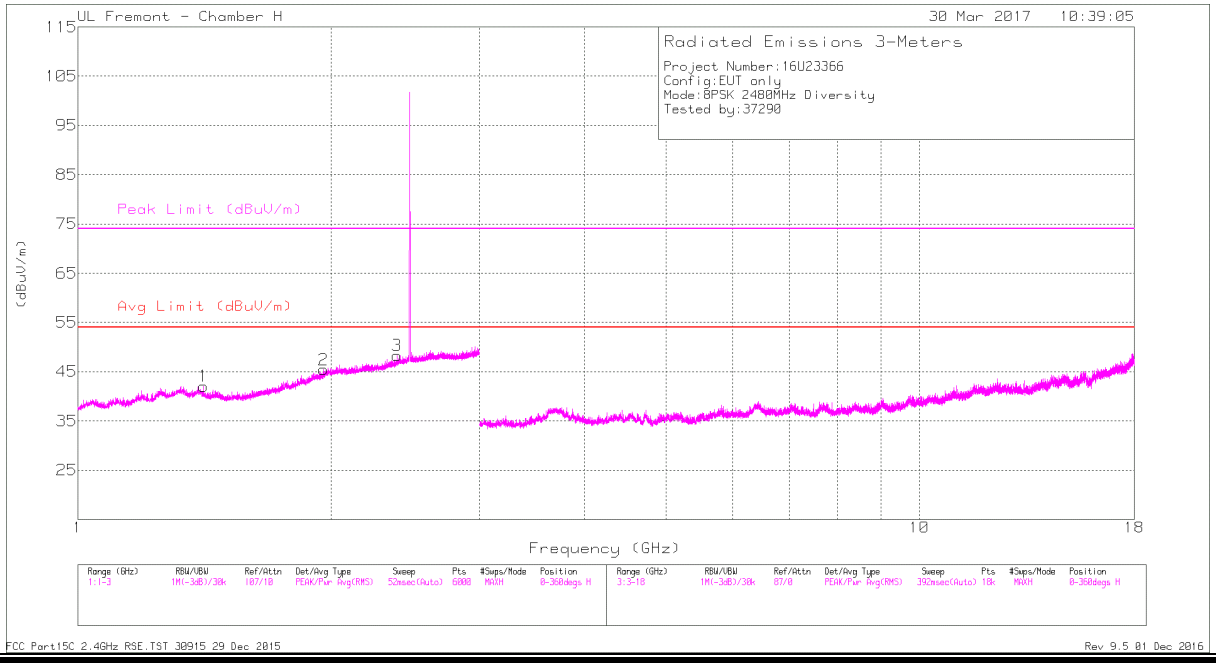
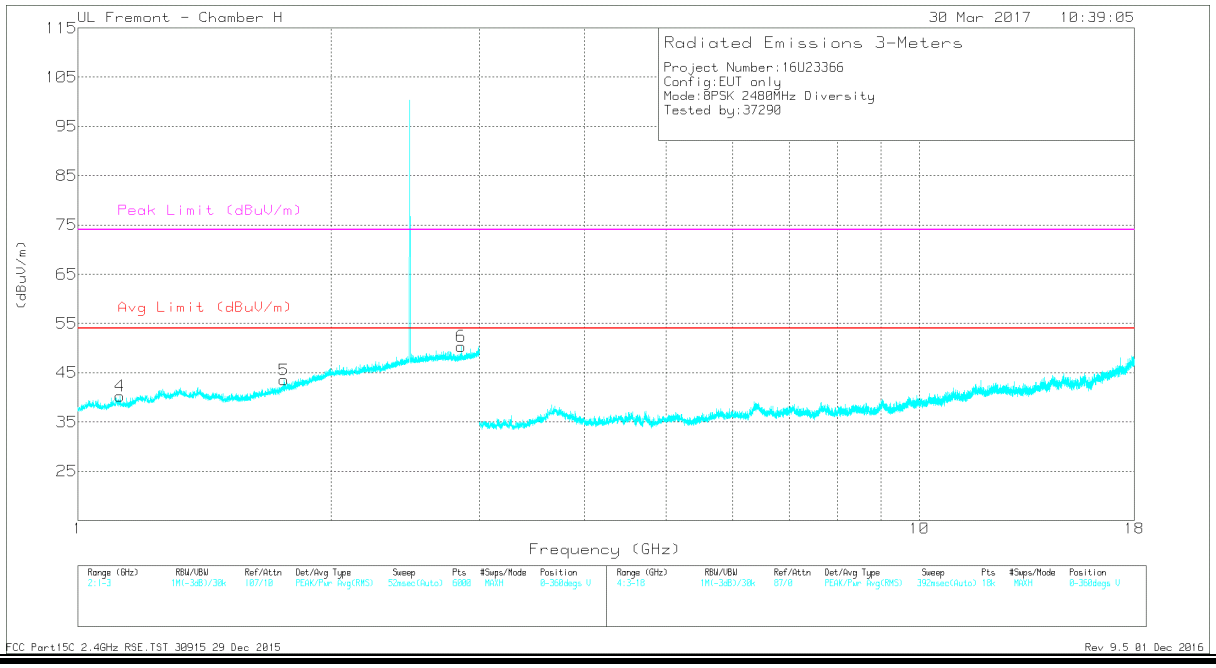
HIGH CHANNEL HORIZONTAL



HIGH CHANNEL VERTICAL



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DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T120 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.41	36.11	PKFH	29.2	-18.4	46.91	-	-	74	-27.09	37	201	H
	* 1.409	24.08	VA1T	29.2	-18.4	34.88	54	-19.12	-	-	37	201	H
4	* 1.121	36.33	PKFH	28.1	-18.9	45.53	-	-	74	-28.47	52	100	V
	* 1.121	24.31	VA1T	28.1	-18.9	33.51	54	-20.49	-	-	52	100	V
6	* 2.854	37.4	PKFH	32.7	-16.1	54	-	-	74	-20	32	202	V
	* 2.852	25.28	VA1T	32.7	-16.1	41.88	54	-12.12	-	-	32	202	V
5	1.758	35.98	PKFH	29.4	-17.7	47.68	-	-	-	-	73	100	V
	1.759	24.43	VA1T	29.4	-17.7	36.13	-	-	-	-	73	100	V
2	1.957	35.96	PKFH	31.5	-17.6	49.86	-	-	-	-	85	100	H
	1.96	24.41	VA1T	31.6	-17.6	38.41	-	-	-	-	85	100	H
3	2.394	25.22	VA1T	31.9	-16.6	40.52	-	-	-	-	120	100	H
	2.396	36.71	PKFH	31.9	-16.6	52.01	-	-	-	-	120	100	H

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

PKFH - FHSS: RB=100k/1MHz VB=3 x RB, Peak

VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration

FCC Part15C 2.4GHz RSE.TST 30915 29 Dec 2015

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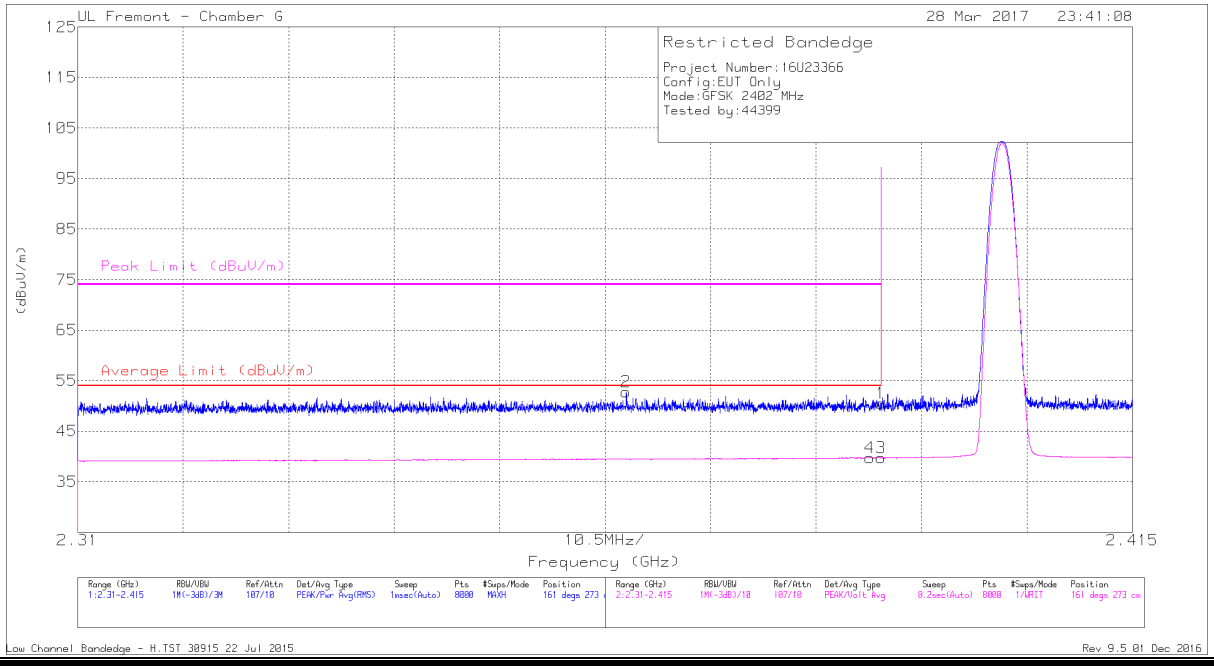
9.8. LAT 3, PLOW BASIC DATA RATE GFSK MODULATION

9.8.1. RESTRICTED BANDEDGE (LOW CHANNEL)

LOW CHANNEL HORIZONTAL



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 2.365	44.71	Pk	31.9	-23.8	52.81		-	74	-21.19	161	273	H
4	* 2.389	31.33	VA1T	32.1	-23.7	39.73	54	-14.27			161	273	H
1	* 2.39	42.15	Pk	32.1	-23.7	50.55			74	-23.45	161	273	H
3	* 2.39	31.3	VA1T	32.1	-23.7	39.7	54	-14.30			161	273	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration
Low Channel Bandedge - H.TST
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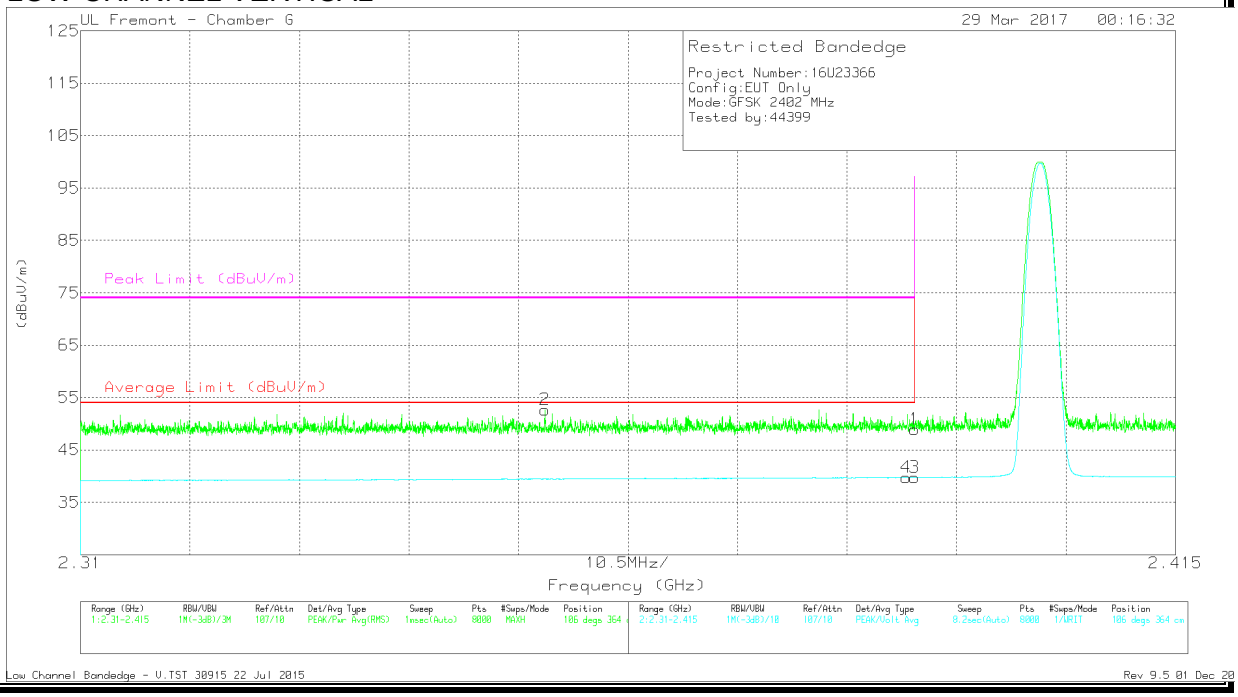
LOW CHANNEL VERTICAL



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 2.355	44.5	Pk	31.9	-23.7	52.7	-	-	74	-21.3	106	364	V
4	* 2.389	31.37	VA1T	32.1	-23.7	39.77	54	-14.23			106	364	V
1	* 2.39	40.51	Pk	32.1	-23.7	48.91			74	-25.09	106	364	V
3	* 2.39	31.29	VA1T	32.1	-23.7	39.69	54	-14.31			106	364	V

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

Pk - Peak detector

VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration

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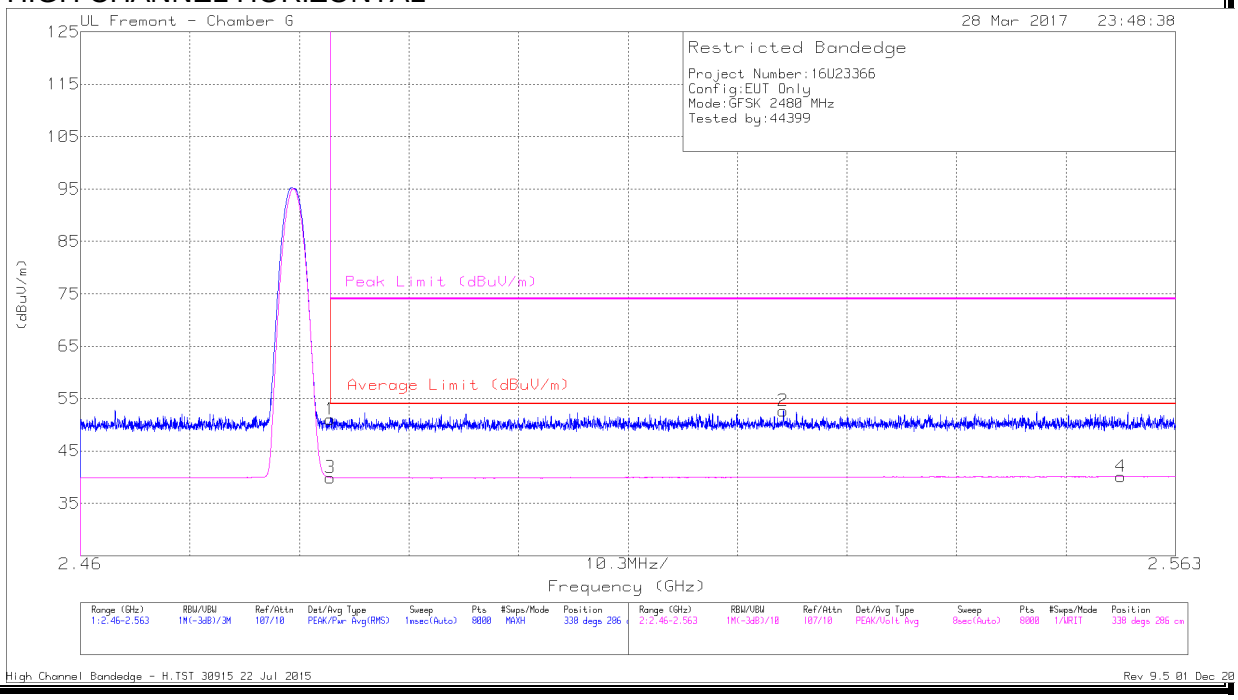
9.8.2. AUTHORIZED BANDEDGE (HIGH CHANNEL)

HIGH CHANNEL HORIZONTAL



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	42.41	Pk	32.3	-23.7	51.01			74	-22.99	338	286	H
3	* 2.484	31.32	VA1T	32.3	-23.7	39.92	54	-14.08			338	286	H
2	2.526	43.88	Pk	32.5	-23.7	52.68			74	-21.32	338	286	H
4	2.558	31.25	VA1T	32.6	-23.7	40.15	54	-13.85			338	286	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration
Low Channel Bandedge - H.TST
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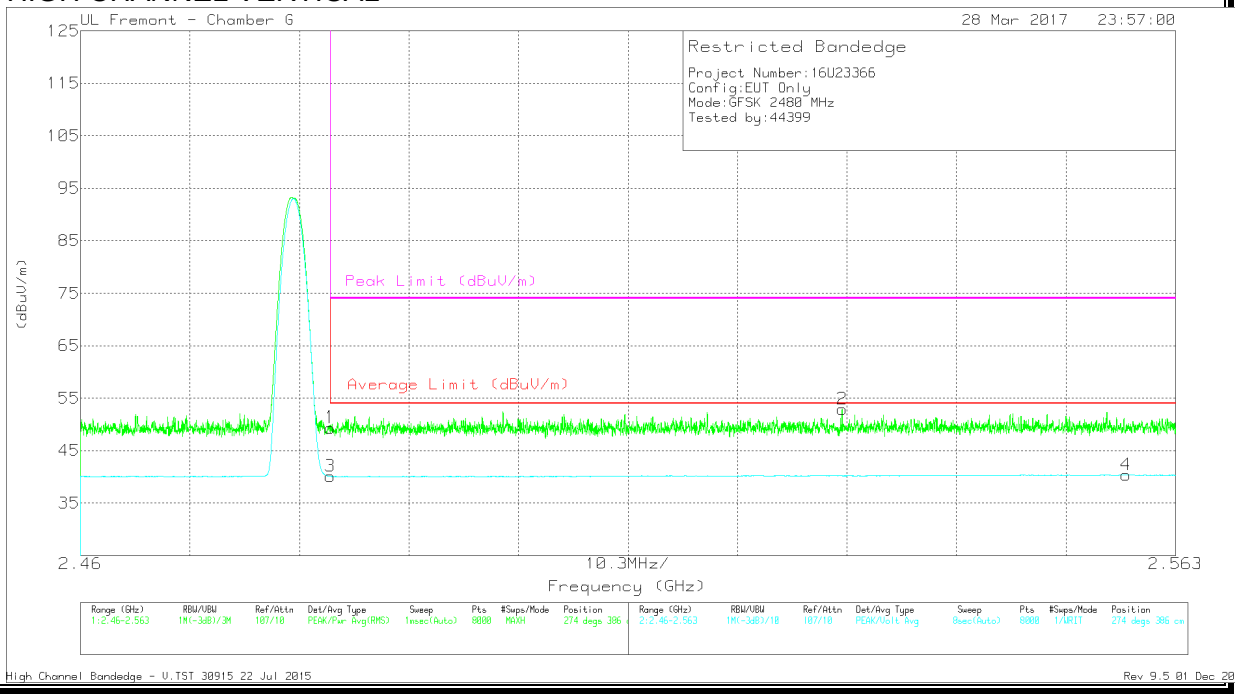
HIGH CHANNEL VERTICAL



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	40.76	Pk	32.3	-23.7	49.36			74	-24.64	274	386	V
3	* 2.484	31.48	VA1T	32.3	-23.7	40.08	54	-13.92			274	386	V
2	2.532	44.06	Pk	32.5	-23.7	52.86			74	-21.14	274	386	V
4	2.558	31.45	VA1T	32.6	-23.7	40.35	54	-13.65			274	386	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration
Low Channel Bandedge - H.TST
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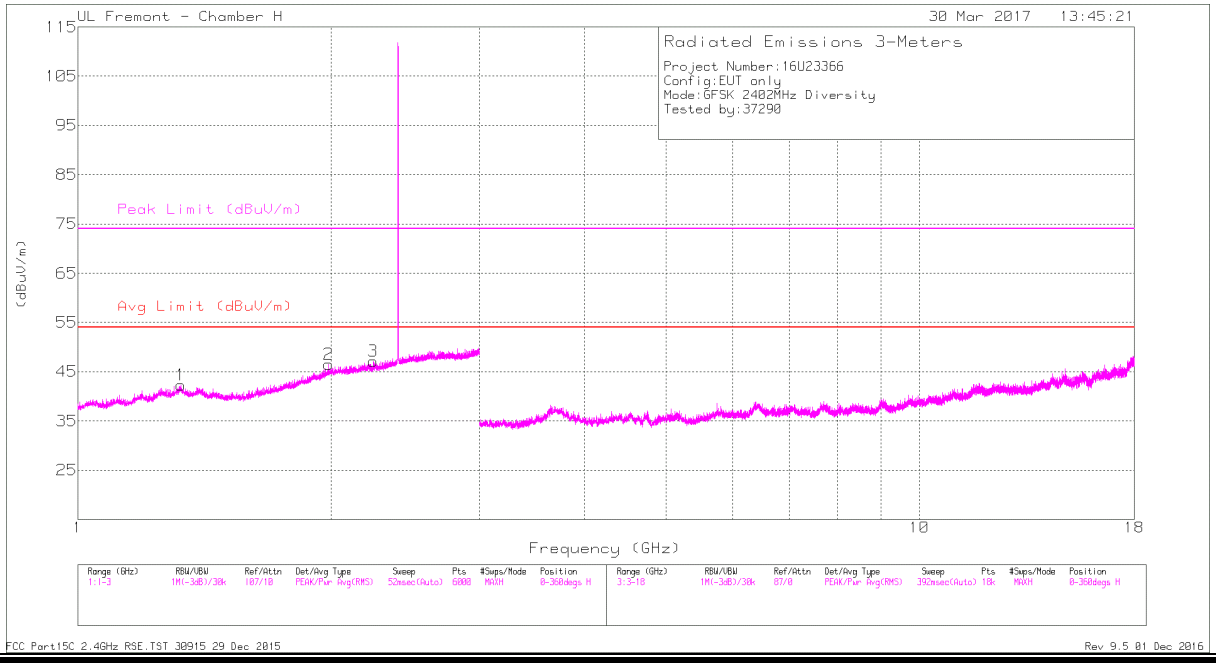
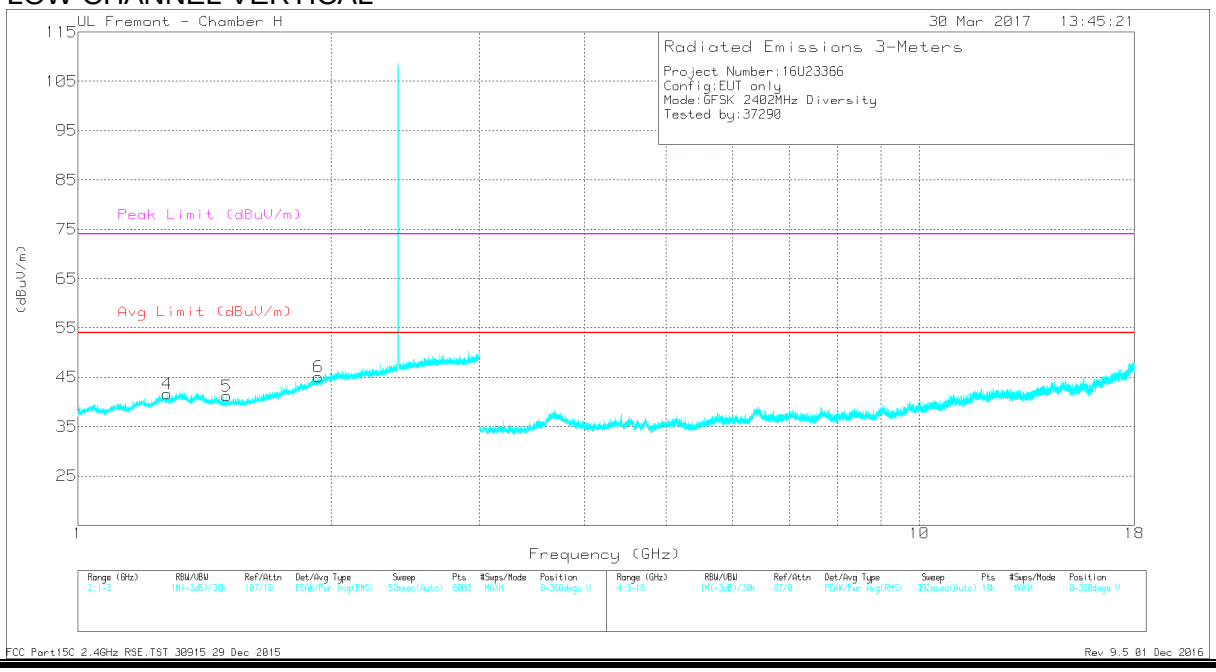
9.8.3. HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



LOW CHANNEL VERTICAL



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DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T120 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.329	36.55	PKFH	29.6	-18.7	47.45	-	-	74	-26.55	54	100	H
	* 1.328	24.57	VA1T	29.6	-18.7	35.47	54	-18.53	-	-	54	100	H
3	* 2.241	37.13	PKFH	31.6	-16.8	51.93	-	-	74	-22.07	65	100	H
	* 2.242	24.81	VA1T	31.6	-16.9	39.51	54	-14.49	-	-	65	100	H
4	* 1.278	35.87	PKFH	29.5	-18.7	46.67	-	-	74	-27.33	72	100	V
	* 1.275	24.18	VA1T	29.5	-18.7	34.98	54	-19.02	-	-	72	100	V
5	* 1.501	35.42	PKFH	28	-18.1	45.32	-	-	74	-28.68	35	202	V
	* 1.503	24.05	VA1T	28	-18	34.05	54	-19.95	-	-	35	202	V
6	1.931	24.3	VA1T	31.3	-17.7	37.9	-	-	-	-	115	100	V
	1.934	36.71	PKFH	31.3	-17.7	50.31	-	-	-	-	115	100	V
2	1.987	36.96	PKFH	31.8	-17.4	51.36	-	-	-	-	230	100	H
	1.987	24.61	VA1T	31.8	-17.4	39.01	-	-	-	-	230	100	H

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

PKFH - FHSS: RB=100k/1MHz VB=3 x RB, Peak

VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration

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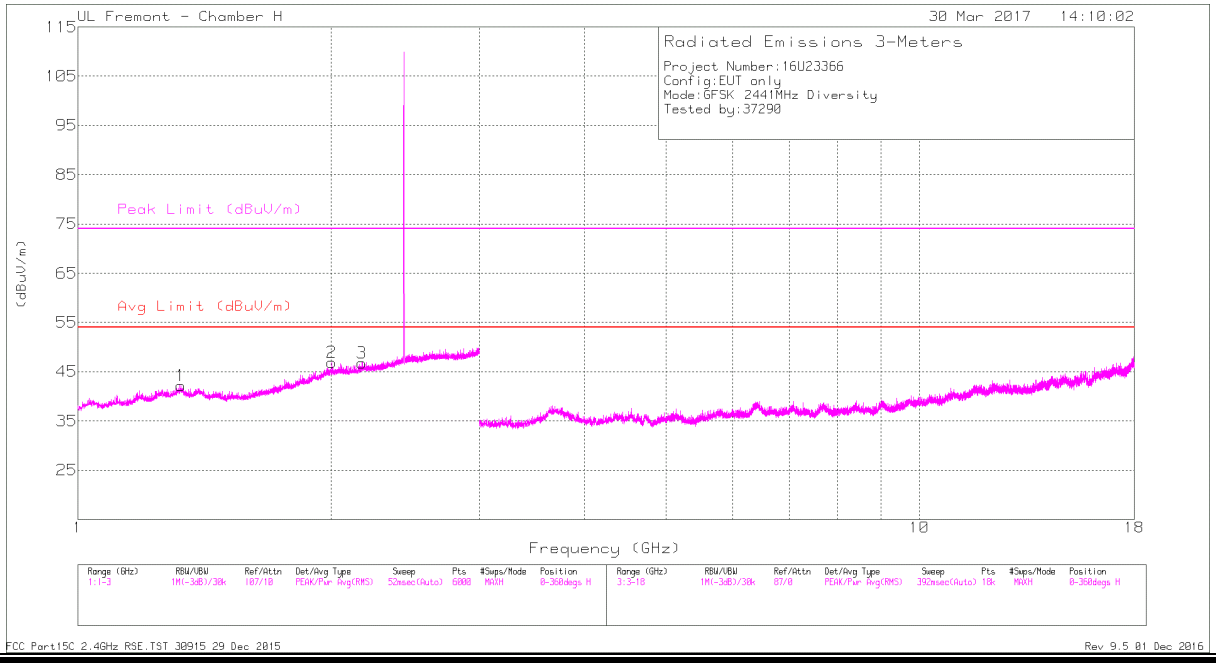
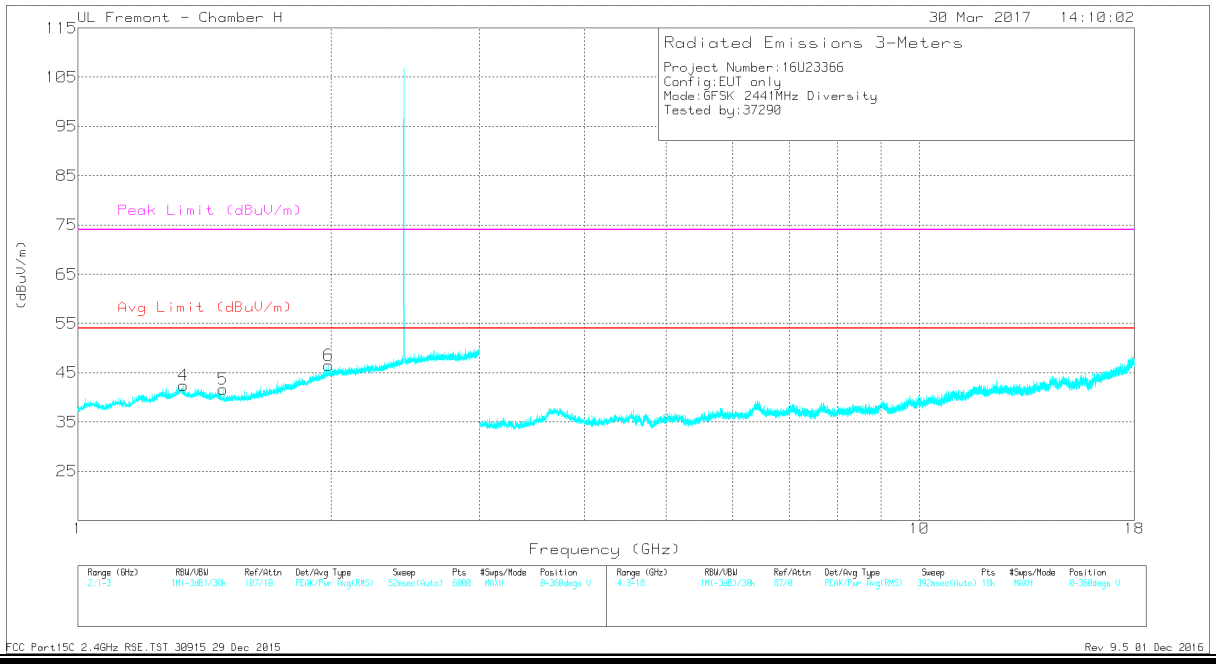
MID CHANNEL HORIZONTAL



MID CHANNEL VERTICAL



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DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T120 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.328	36.4	PKFH	29.6	-18.7	47.3	-	-	74	-26.7	35	100	H
	* 1.326	24.61	VA1T	29.7	-18.6	35.71	54	-18.29	-	-	35	100	H
4	* 1.334	36.37	PKFH	29.6	-18.6	47.37	-	-	74	-26.63	52	202	V
	* 1.334	24.49	VA1T	29.6	-18.7	35.39	54	-18.61	-	-	52	202	V
5	* 1.486	37.17	PKFH	28.2	-18.1	47.27	-	-	74	-26.73	65	100	V
	* 1.486	24.11	VA1T	28.2	-18.1	34.21	54	-19.79	-	-	65	100	V
6	1.986	36.3	PKFH	31.8	-17.4	50.7	-	-	-	-	112	202	V
	1.986	24.66	VA1T	31.8	-17.4	39.06	-	-	-	-	112	202	V
2	2.004	24.52	VA1T	31.9	-17.4	39.02	-	-	-	-	25	201	H
	2.006	36.52	PKFH	31.9	-17.3	51.12	-	-	-	-	25	201	H
3	2.174	37.03	PKFH	31.6	-17	51.63	-	-	-	-	85	100	H
	2.176	24.88	VA1T	31.6	-17	39.48	-	-	-	-	85	100	H

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

PKFH - FHSS: RB=100k/1MHz VB=3 x RB, Peak

VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration

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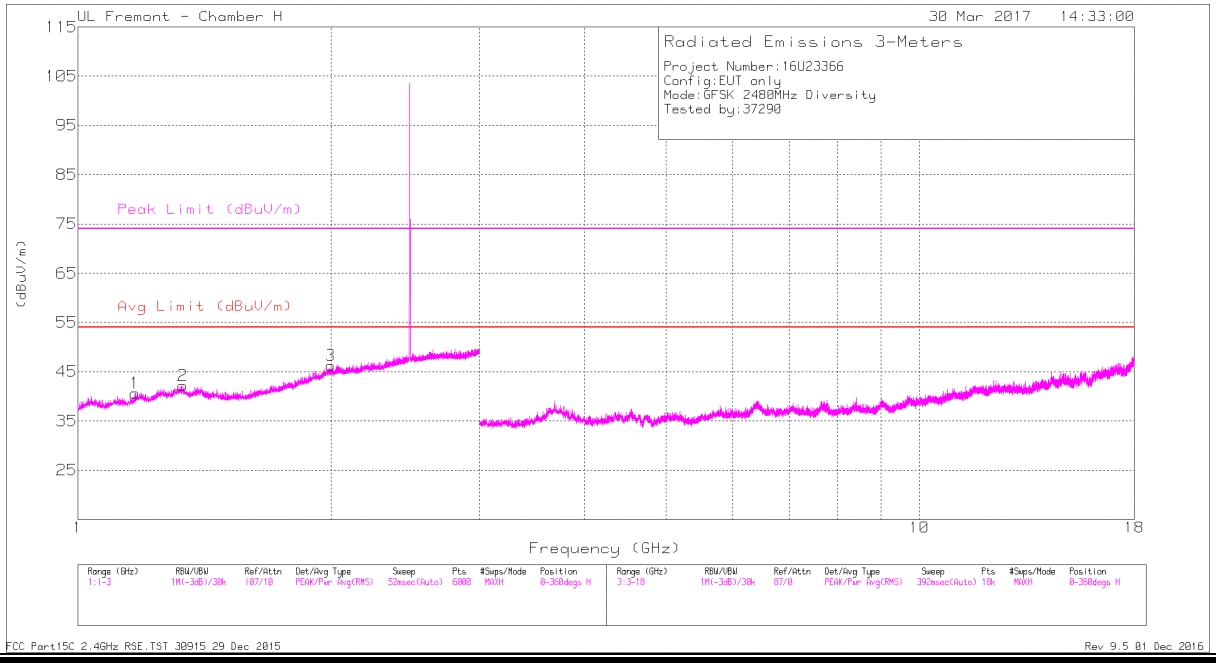
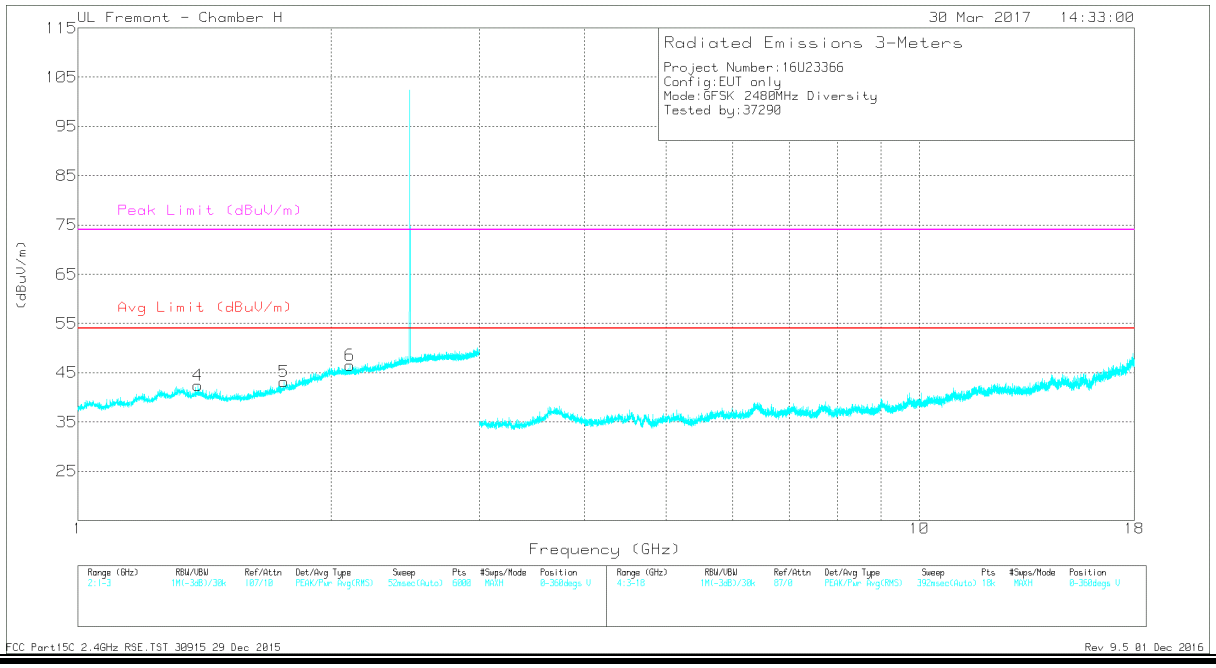
HIGH CHANNEL HORIZONTAL



HIGH CHANNEL VERTICAL



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DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T120 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.17	36.07	PKFH	28.4	-18.8	45.67	-	-	74	-28.33	35	201	H
	* 1.173	24.38	VA1T	28.4	-18.7	34.08	54	-19.92	-	-	35	201	H
2	* 1.333	36.88	PKFH	29.6	-18.7	47.78	-	-	74	-26.22	52	201	H
	* 1.333	24.54	VA1T	29.6	-18.7	35.44	54	-18.56	-	-	52	201	H
4	* 1.389	36.66	PKFH	29.4	-18.4	47.66	-	-	74	-26.34	55	100	V
	* 1.391	24.39	VA1T	29.3	-18.4	35.29	54	-18.71	-	-	55	100	V
5	1.756	36.13	PKFH	29.4	-17.6	47.93	-	-	-	-	25	100	V
	1.76	24.53	VA1T	29.5	-17.7	36.33	-	-	-	-	25	100	V
3	1.997	24.56	VA1T	31.9	-17.4	39.06	-	-	-	-	84	201	H
	2	37.01	PKFH	31.9	-17.5	51.41	-	-	-	-	84	201	H
6	2.104	37.38	PKFH	31.4	-17.2	51.58	-	-	-	-	96	100	V
	2.107	24.97	VA1T	31.5	-17.2	39.27	-	-	-	-	96	100	V

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

PKFH - FHSS: RB=100k/1MHz VB=3 x RB, Peak

VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration

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Rev 9.5 01 Dec 2016

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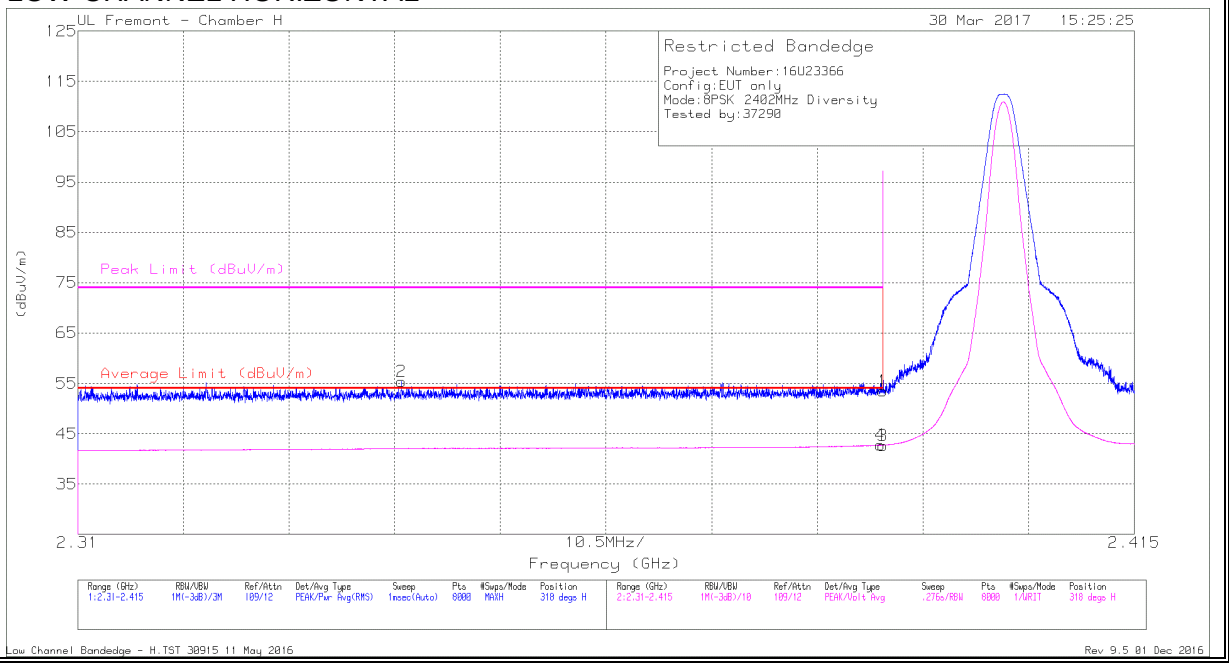
9.9. LAT 3, PLOW ENHANCED DATA RATE 8PSK MODULATION

9.9.1. RESTRICTED BANDEDGE (LOW CHANNEL)

LOW CHANNEL HORIZONTAL



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T120 (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	38.18	Pk	31.9	-16.6	53.48	-	-	74	-20.52	318	108	H
2	* 2.342	40.34	Pk	31.7	-16.6	55.44	-	-	74	-18.56	318	108	H
3	* 2.39	27.41	VA1T	31.9	-16.6	42.71	54	-11.29	-	-	318	108	H
4	* 2.39	27.43	VA1T	31.9	-16.6	42.73	54	-11.27	-	-	318	108	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration
Low Channel Bandedge - H.TST 30915 11 May 2016
Rev 9.5 01 Dec 2016

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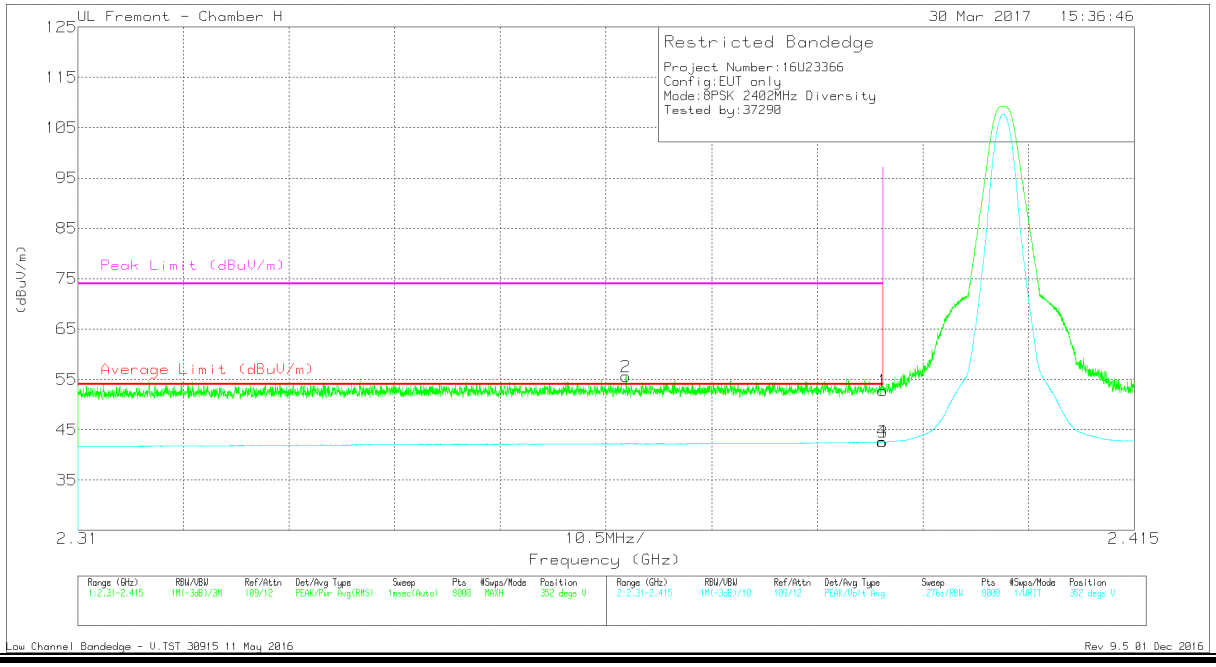
LOW CHANNEL VERTICAL



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T120 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	37.48	Pk	31.9	-16.6	52.78	-	-	74	-21.22	352	243	V
2	* 2.365	40.37	Pk	31.8	-16.6	55.57	-	-	74	-18.43	352	243	V
3	* 2.39	27.29	VA1T	31.9	-16.6	42.59	54	-11.41	-	-	352	243	V
4	* 2.39	27.31	VA1T	31.9	-16.6	42.61	54	-11.39	-	-	352	243	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration
Low Channel Bandedge - V.TST 30915 11 May 2016
Rev 9.5 01 Dec 2016

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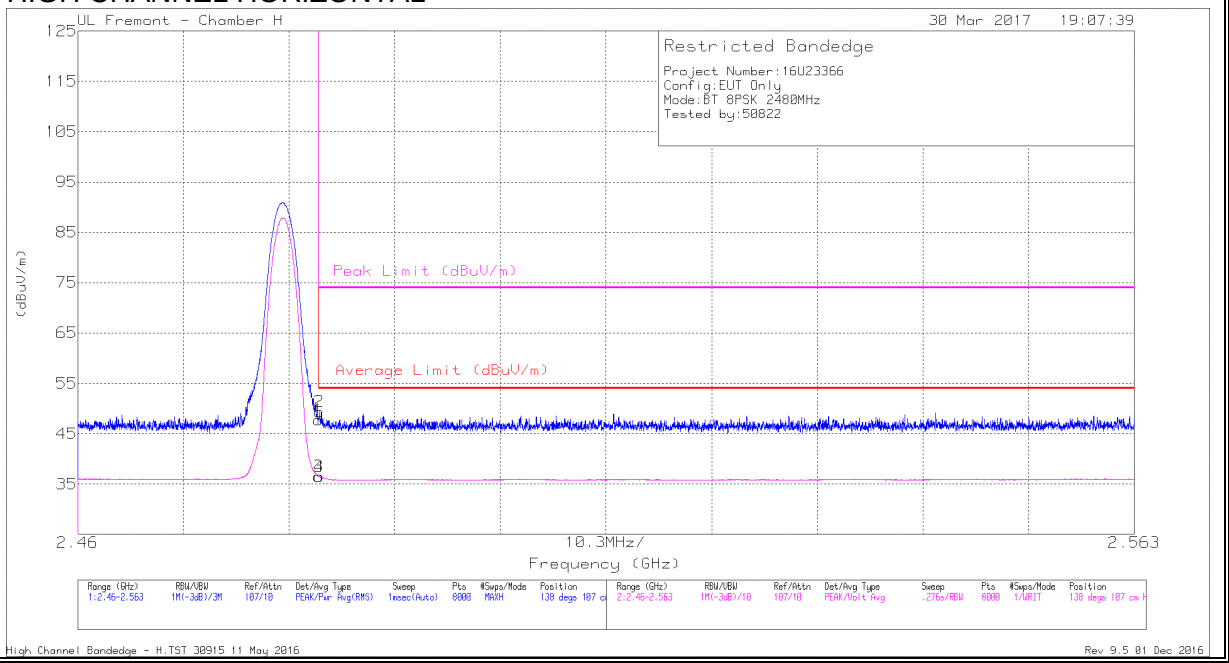
9.9.2. AUTHORIZED BANDEDGE (HIGH CHANNEL)

HIGH CHANNEL HORIZONTAL



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T120 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	44.08	Pk	32.2	-28.5	47.78	-	-	74	-26.22	138	107	H
2	* 2.484	45.66	Pk	32.2	-28.5	49.36	-	-	74	-24.64	138	107	H
3	* 2.484	32.8	VA1T	32.2	-28.5	36.5	54	-17.5	-	-	138	107	H
4	* 2.484	32.78	VA1T	32.2	-28.5	36.48	54	-17.52	-	-	138	107	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration
High Channel Bandedge - H.TST 30915 11 May 2016
Rev 9.5 01 Dec 2016

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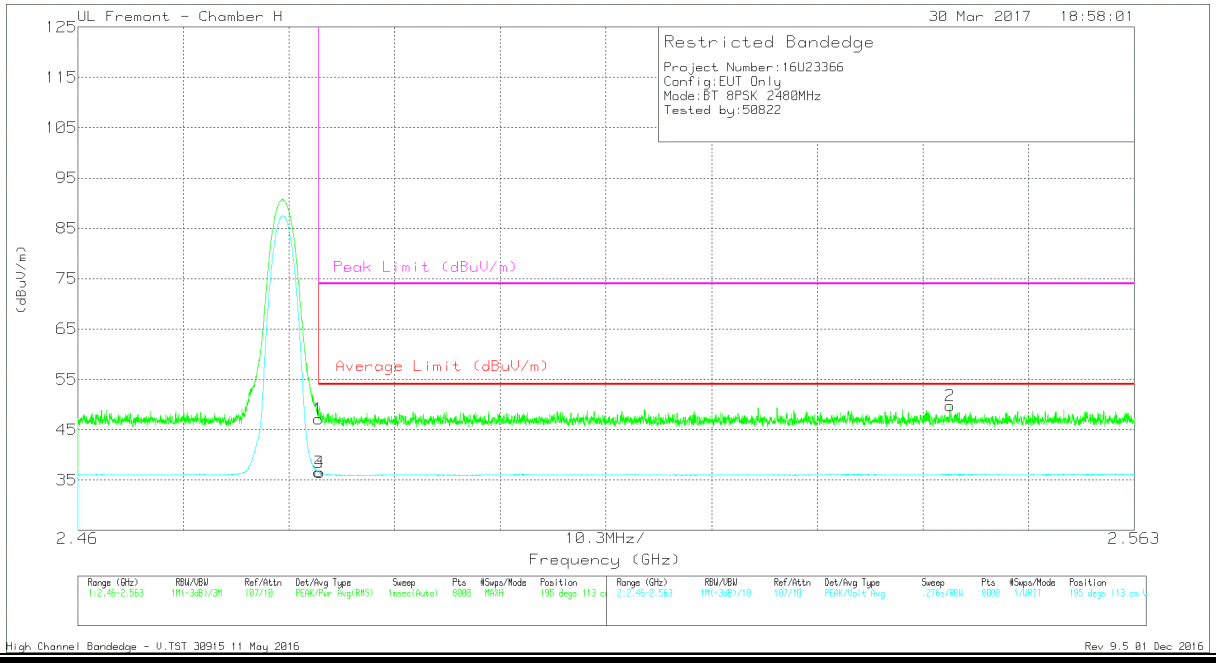
HIGH CHANNEL VERTICAL



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T120 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	43.5	Pk	32.2	-28.5	47.2	-	-	74	-26.8	195	113	V
3	* 2.484	32.9	VA1T	32.2	-28.5	36.6	54	-17.4	-	-	195	113	V
4	* 2.484	32.8	VA1T	32.2	-28.5	36.5	54	-17.5	-	-	195	113	V
2	2.545	46.09	Pk	32.2	-28.5	49.79	-	-	74	-24.21	195	113	V

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

Pk - Peak detector

VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration

High Channel Bandedge - V.TST 30915 11 May 2016

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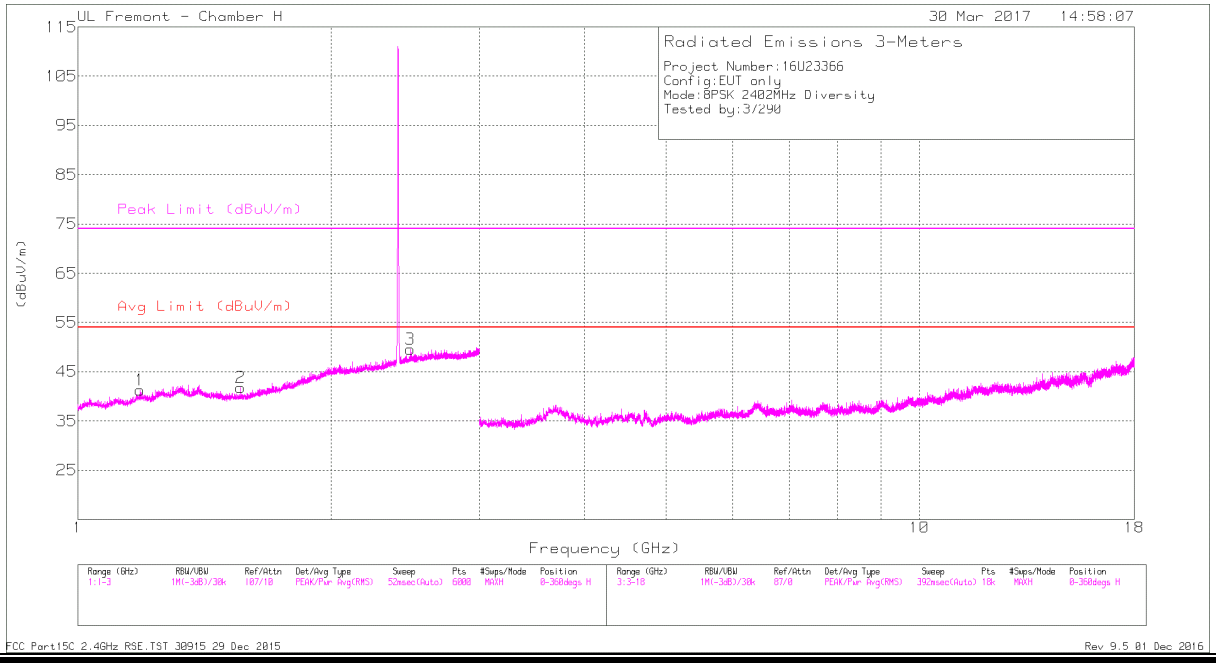
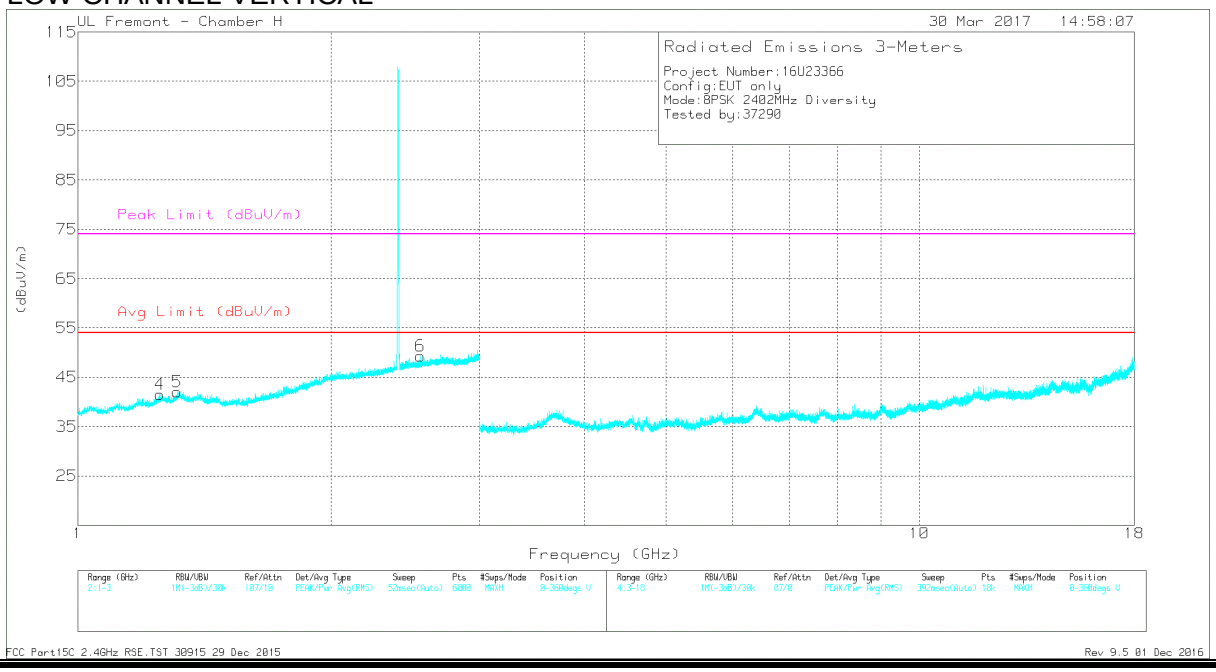
9.9.3. HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



LOW CHANNEL VERTICAL



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DATA
Radiated Emissions

MArker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T120 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.188	37.32	PKFH	28.5	-18.8	47.02	-	-	74	-26.98	0	201	H
	* 1.186	24.66	VA1T	28.5	-18.8	34.36	54	-19.64	-	-	0	201	H
2	* 1.562	36.66	PKFH	27.9	-17.9	46.66	-	-	74	-27.34	52	100	H
	* 1.561	24.17	VA1T	27.9	-17.9	34.17	54	-19.83	-	-	52	100	H
3	* 2.484	37.15	PKFH	32.2	-16.4	52.95	-	-	74	-21.05	85	100	H
	* 2.488	25.42	VA1T	32.2	-16.4	41.22	54	-12.78	-	-	85	100	H
4	* 1.253	36.89	PKFH	29.2	-18.8	47.29	-	-	74	-26.71	45	202	V
	* 1.253	24.72	VA1T	29.2	-18.8	35.12	54	-18.88	-	-	45	202	V
5	* 1.315	37.06	PKFH	29.7	-18.7	48.06	-	-	74	-25.94	47	100	V
	* 1.315	24.41	VA1T	29.7	-18.7	35.41	54	-18.59	-	-	47	100	V
6	2.555	25.37	VA1T	32.2	-16.3	41.27	-	-	-	-	180	100	V
	2.556	37.99	PKFH	32.2	-16.3	53.89	-	-	-	-	180	100	V

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

PKFH - FHSS: RB=100k/1MHz VB=3 x RB, Peak

VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration

FCC Part15C 2.4GHz RSE.TST 30915 29 Dec 2015
Rev 9.5 01 Dec 2016

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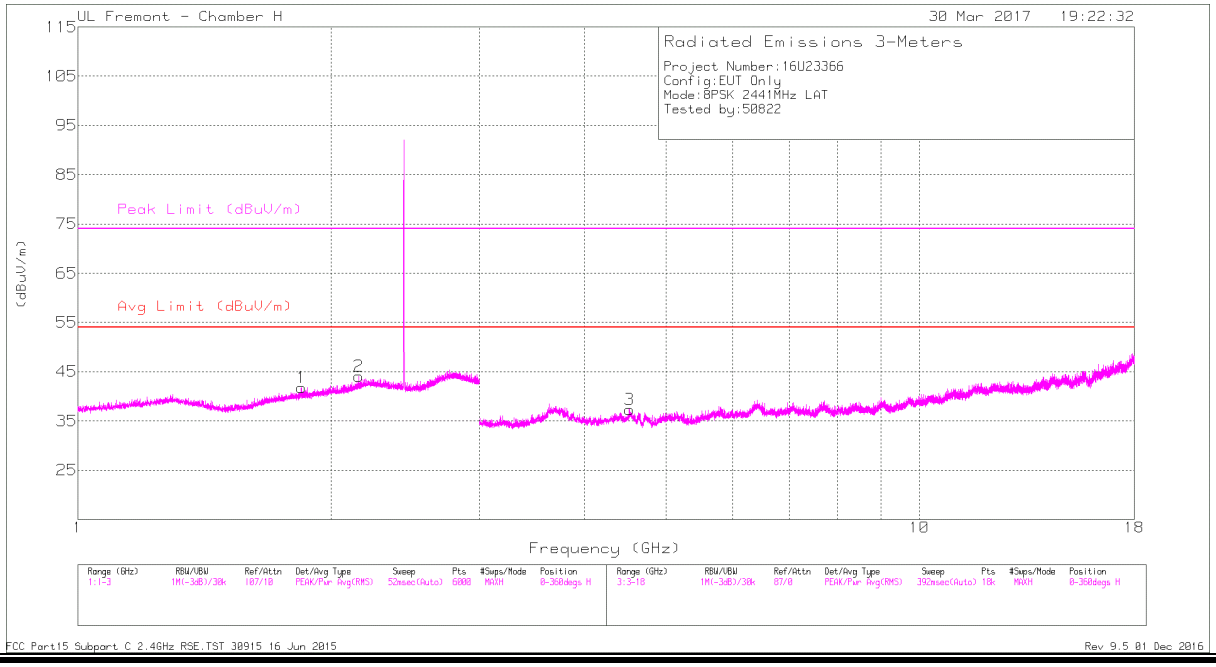
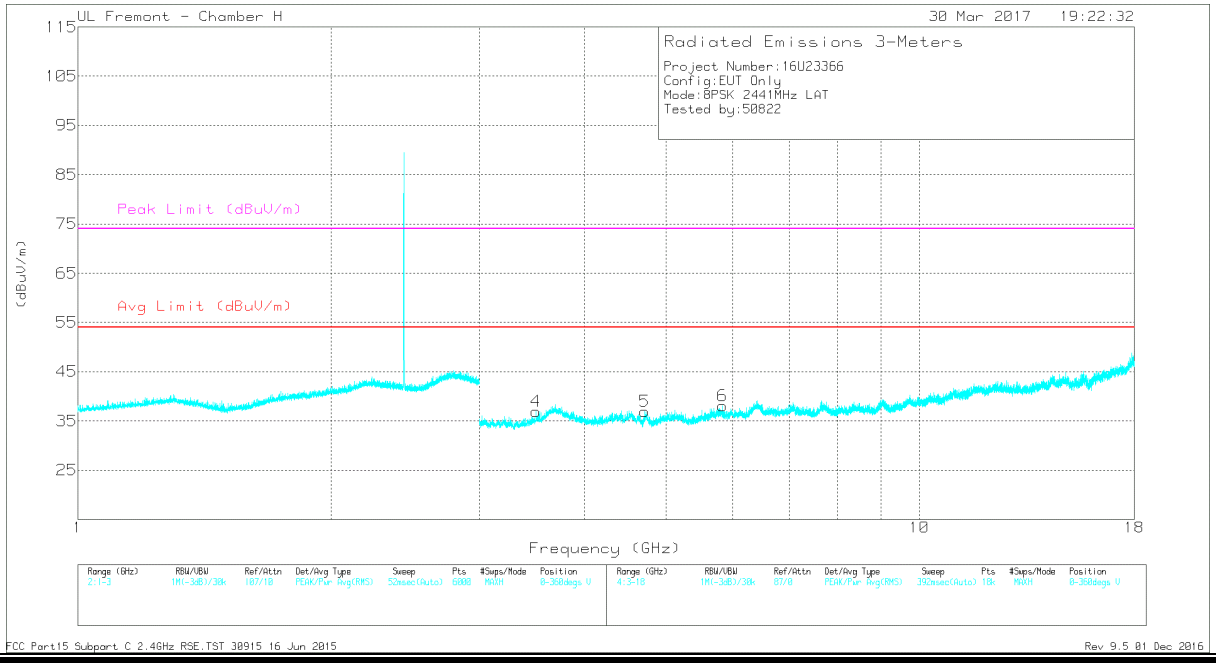
MID CHANNEL HORIZONTAL



MID CHANNEL VERTICAL



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DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T120 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
3	* 4.523	44.62	PKFH	33.8	-35.2	43.22	-	-	74	-30.78	344	287	H
	* 4.523	32.01	VA1T	33.8	-35.2	30.61	54	-23.39	-	-	344	287	H
4	* 3.507	45.12	PKFH	34.2	-36.1	43.22	-	-	74	-30.78	141	283	V
	* 3.504	32.02	VA1T	34.2	-36.1	30.12	54	-23.88	-	-	141	283	V
5	* 4.716	42.68	PKFH	34	-34.3	42.38	-	-	74	-31.62	171	347	V
	* 4.719	29.91	VA1T	34	-34.4	29.51	54	-24.49	-	-	171	347	V
1	1.843	32.45	VA1T	30.4	-28.1	34.75	-	-	-	-	64	372	H
	1.845	46.9	PKFH	30.4	-28.1	49.2	-	-	-	-	64	372	H
2	2.156	47.26	PKFH	31.6	-28.3	50.56	-	-	-	-	91	266	H
	2.157	33.43	VA1T	31.6	-28.3	36.73	-	-	-	-	91	266	H
6	5.834	28.34	VA1T	35	-32.2	31.14	-	-	-	-	189	107	V
	5.837	41.07	PKFH	35	-32.5	43.57	-	-	-	-	189	107	V

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

PKFH - FHSS: RB=100k/1MHz VB=3 x RB, Peak

VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration

FCC Part15C 2.4GHz RSE.TST 30915 29 Dec 2015

Rev 9.5 01 Dec 2016

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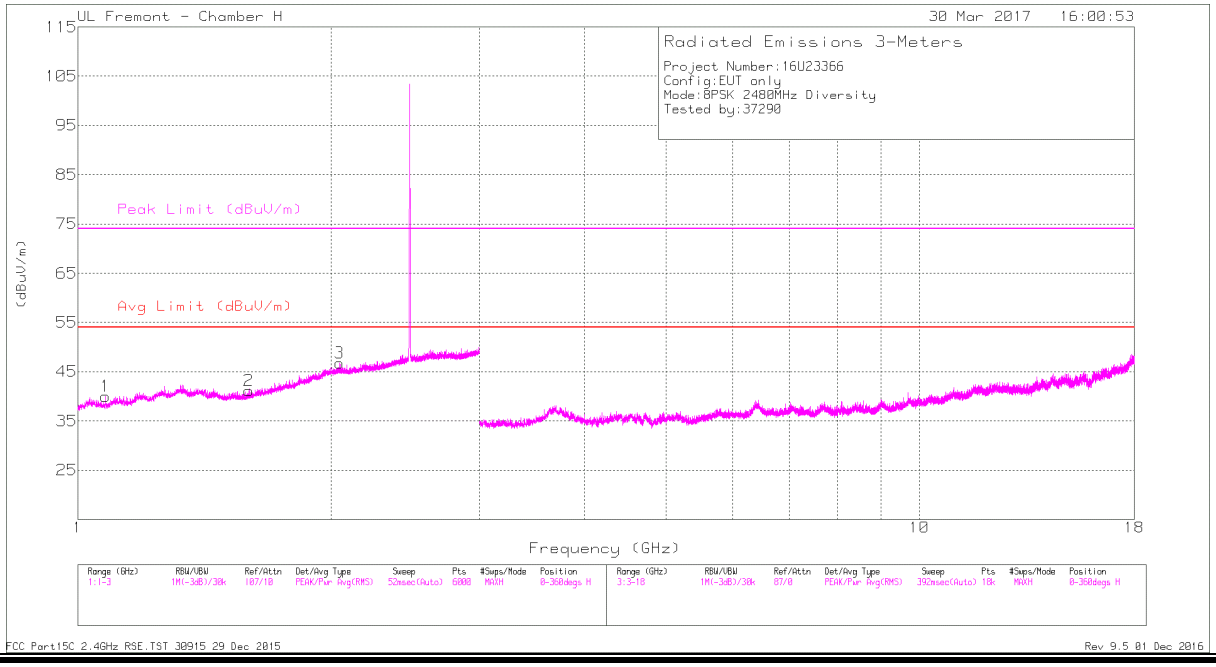
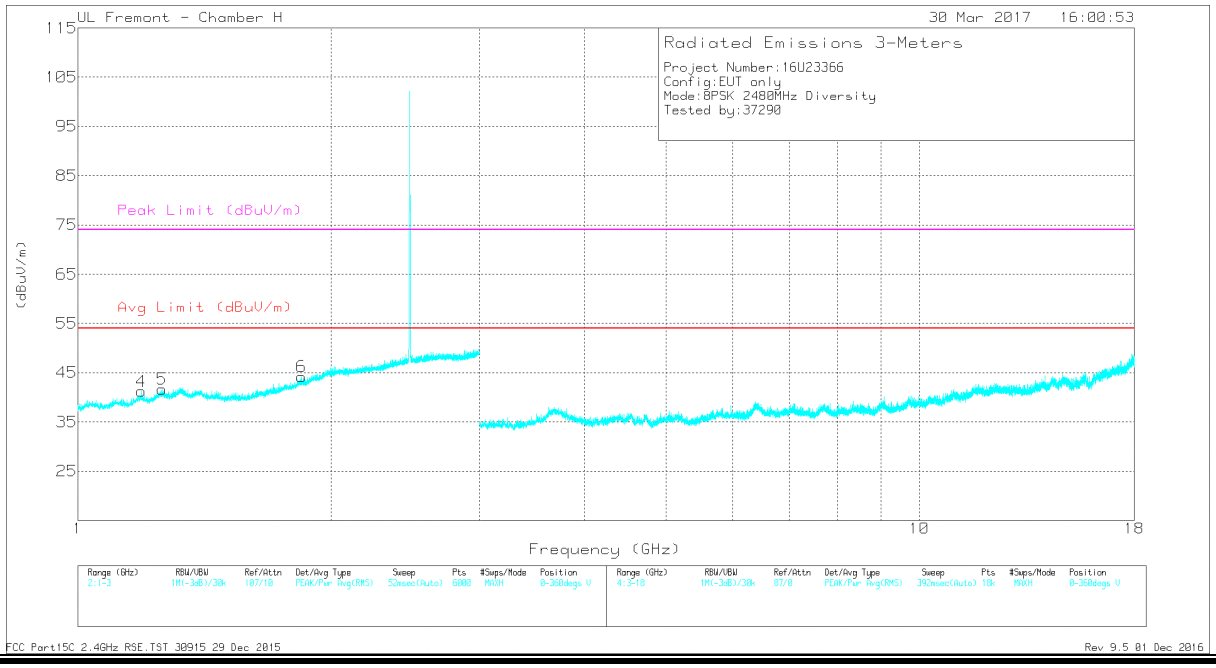
HIGH CHANNEL HORIZONTAL



HIGH CHANNEL VERTICAL



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DATA

MArker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T120 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
11	* 1.077	36.1	PKFH	27.8	-19	44.9	-	-	74	-29.1	45	100	H
	* 1.08	23.88	VA1T	27.8	-18.9	32.78	54	-21.22	-	-	45	100	H
2	* 1.598	36.65	PKFH	27.8	-17.7	46.75	-	-	74	-27.25	15	201	H
	* 1.598	24.24	VA1T	27.8	-17.7	34.34	54	-19.66	-	-	15	201	H
4	* 1.19	36.72	PKFH	28.6	-18.7	46.62	-	-	74	-27.38	56	100	V
	* 1.189	24.64	VA1T	28.6	-18.7	34.54	54	-19.46	-	-	56	100	V
5	* 1.262	36.84	PKFH	29.4	-18.7	47.54	-	-	74	-26.46	82	100	V
	* 1.259	24.71	VA1T	29.3	-18.8	35.21	54	-18.79	-	-	82	100	V
6	1.842	24.42	VA1T	30.4	-17.7	37.12	-	-	-	-	105	202	V
	1.843	35.78	PKFH	30.4	-17.7	48.48	-	-	-	-	105	202	V
3	2.046	24.94	VA1T	31.7	-17.3	39.34	-	-	-	-	75	100	H
	2.047	37	PKFH	31.7	-17.3	51.4	-	-	-	-	75	100	H

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

PKFH - FHSS: RB=100k/1MHz VB=3 x RB, Peak

VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration

FCC Part15C 2.4GHz RSE.TST 30915 29 Dec 2015

Rev 9.5 01 Dec 2016

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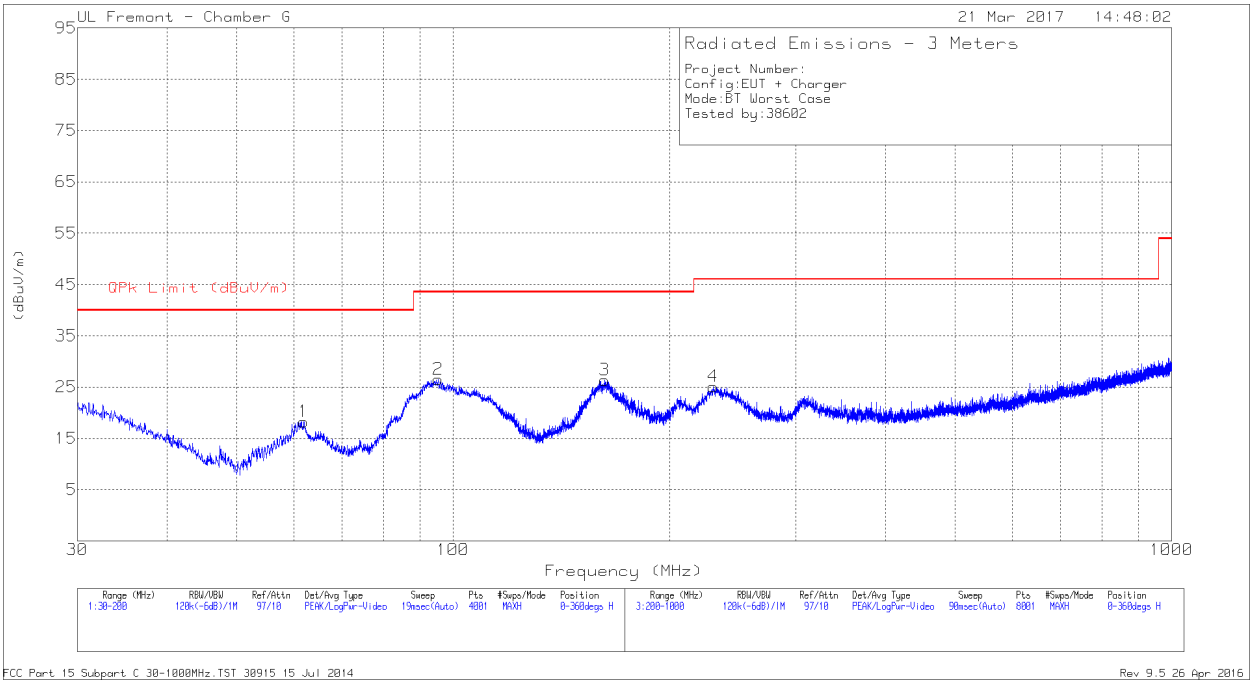
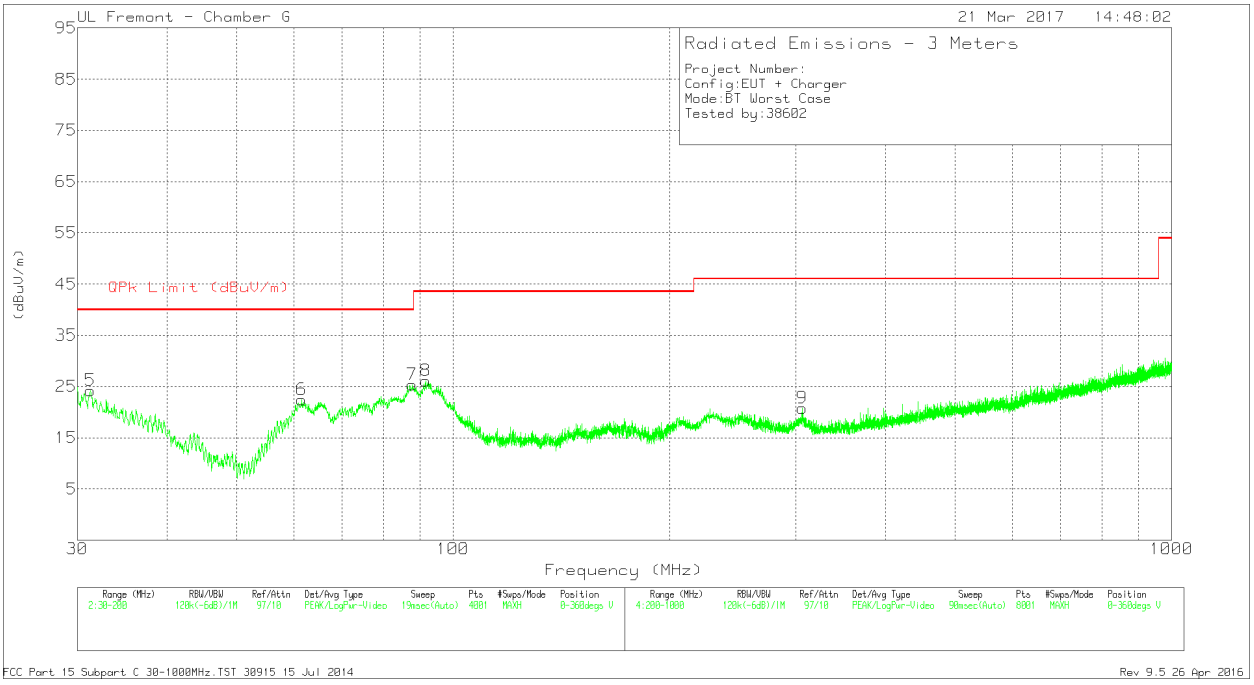
9.10. WORST-CASE BELOW 1 GHz

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

HORIZONTAL PLOT



VERTICAL PLOT



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DATA

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T900 (dB/m)	Amp Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
3	* 162.6	40.42	Pk	15.9	-30	26.32	43.52	-17.2	0-360	200	H
5	31.275	30.76	Pk	24.7	-31.3	24.16	40	-15.84	0-360	100	V
6	61.535	41.51	Pk	11.8	-30.9	22.41	40	-17.59	0-360	100	V
1	61.96	37.34	Pk	11.8	-30.9	18.24	40	-21.76	0-360	400	H
7	87.7575	44.56	Pk	11.4	-30.6	25.36	40	-14.64	0-360	100	V
8	91.54	44.72	Pk	11.9	-30.5	26.12	43.52	-17.4	0-360	100	V
2	95.365	44.12	Pk	12.9	-30.5	26.52	43.52	-17	0-360	200	H
4	230	39.55	Pk	14.9	-29.4	25.05	46.02	-20.97	0-360	100	H
9	305.9	32.02	Pk	17.5	-28.8	20.72	46.02	-25.3	0-360	200	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
FCC Part 15 Subpart C 30-1000MHz.TST 30915 15 Jul 2014
Rev 9.5 26 Apr 2016

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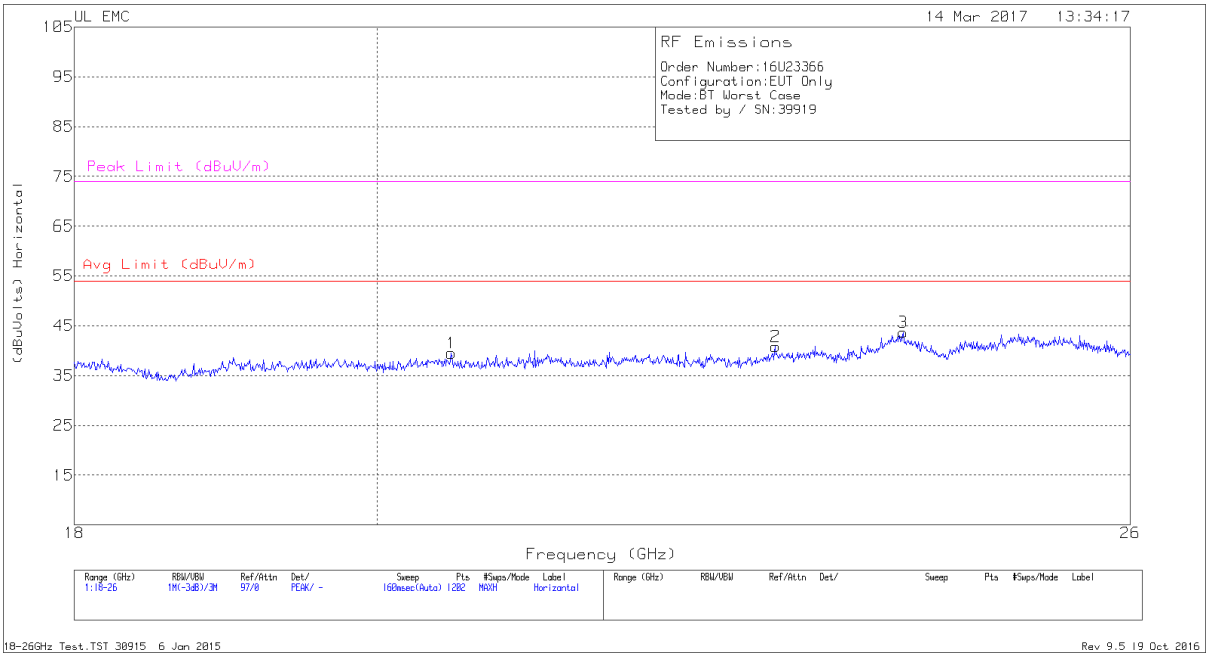
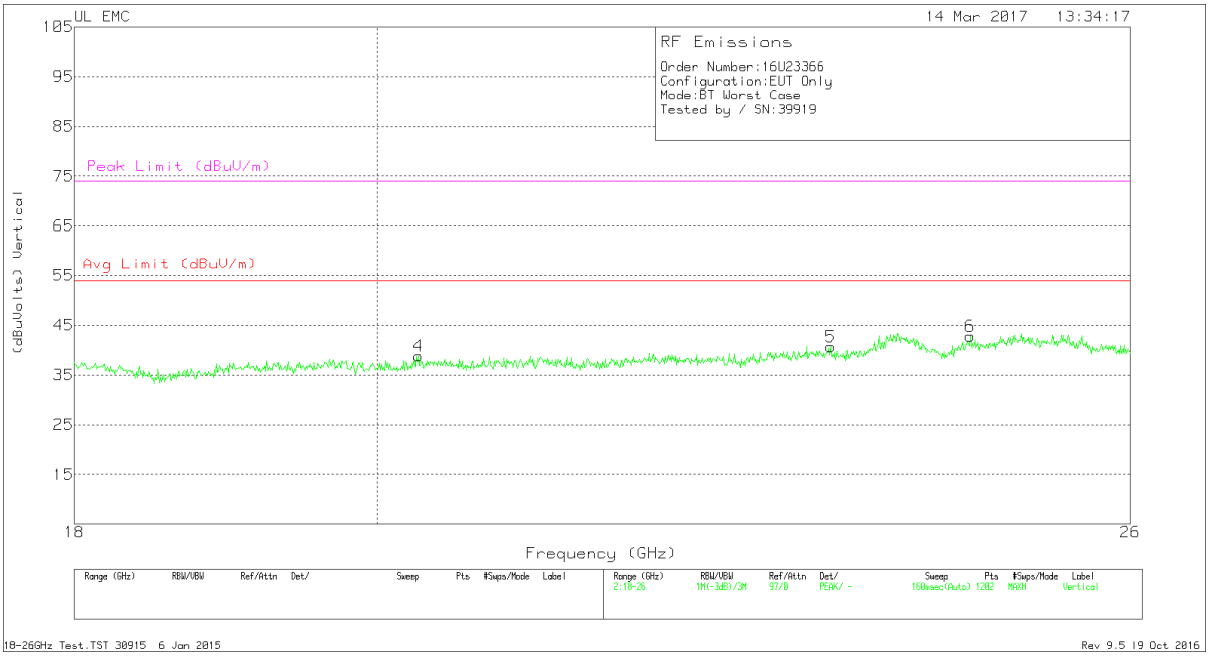
9.11. WORST-CASE ABOVE 18 GHz

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

HORIZONTAL PLOT



VERTICAL PLOT



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Data

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T449 (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	20.525	41.5	Pk	32.9	-25.4	-9.5	39.5	54	-14.5	74	-34.5
2	22.976	41.93	Pk	33.4	-25	-9.5	40.83	54	-13.17	74	-33.17
3	24.022	43.37	Pk	34	-24.2	-9.5	43.67	54	-10.33	74	-30.33
4	20.291	40.73	Pk	32.8	-25.2	-9.5	38.83	54	-15.17	74	-35.17
5	23.422	40.87	Pk	33.7	-24.4	-9.5	40.67	54	-13.333	74	-33.33
6	24.588	42.33	Pk	34.1	-24.1	-9.5	42.83	54	-11.17	74	-31.17

Pk - Peak detector
18-26GHz Test.TST 30915 6 Jan 2015
Rev 9.5 19 Oct 2016

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10. 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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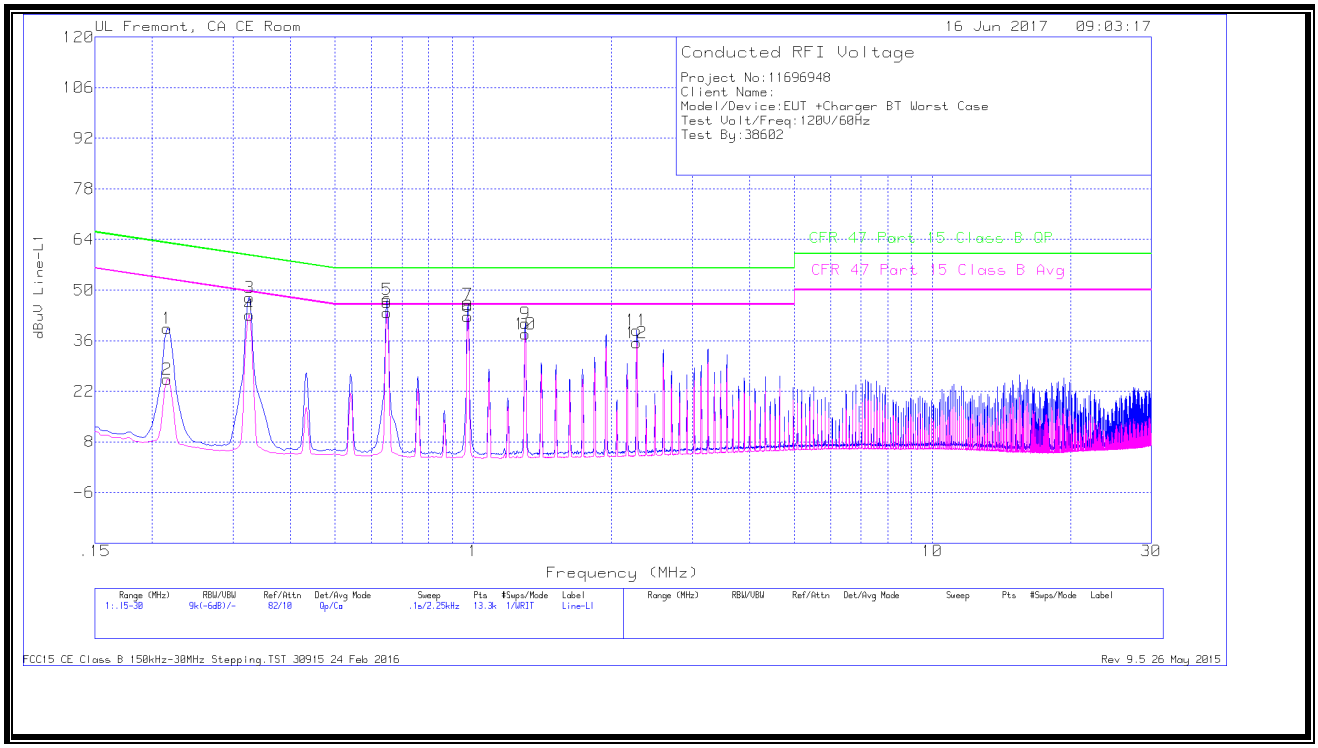
10.1. EUT POWERED BY AC/DC ADAPTER VIA USB CABLE

LINE 1 RESULTS



WORST EMISSIONS

Range 1: Line-L1 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL 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	.21525	28.43	Qp	.8	.1	10.1	39.43	63	-23.57	-	-
2	.21525	14.35	Ca	.8	.1	10.1	25.35	-	-	53	-27.65
3	.3255	37.27	Qp	.5	.1	10.1	47.97	59.57	-11.6	-	-
4	.3255	32.41	Ca	.5	.1	10.1	43.11	-	-	49.57	-6.46
5	.6495	36.87	Qp	.3	.1	10.1	47.37	56	-8.63	-	-
6	.6495	33.19	Ca	.3	.1	10.1	43.69	-	-	46	-2.31
7	.9735	35.67	Qp	.2	.1	10.1	46.07	56	-9.93	-	-
8	.9735	32.28	Ca	.2	.1	10.1	42.68	-	-	46	-3.32
9	1.2975	30.44	Qp	.2	.1	10.1	40.84	56	-15.16	-	-
10	1.2975	27.41	Ca	.2	.1	10.1	37.81	-	-	46	-8.19
11	2.27175	28.45	Qp	.2	.1	10.1	38.85	56	-17.15	-	-
12	2.27175	25.02	Ca	.2	.1	10.1	35.42	-	-	46	-10.58

Qp - Quasi-Peak detector

Ca - CISPR average detection

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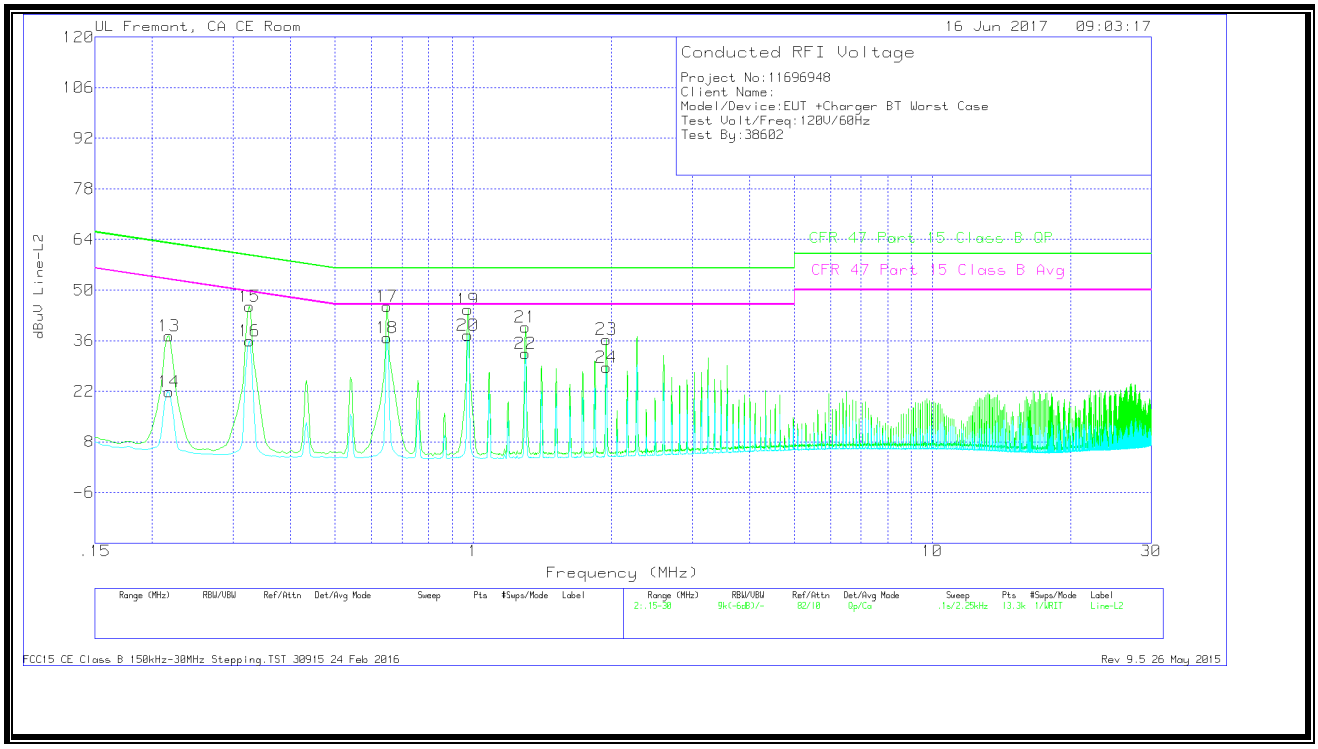
LINE 2 RESULTS



WORST EMISSIONS

Range 2: Line-L2 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL 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	.2175	26.29	Qp	.9	0	10.1	37.29	62.91	-25.62	-	-
14	.2175	10.9	Ca	.9	0	10.1	21.9	-	-	52.91	-31.01
15	.3255	34.83	Qp	.5	.1	10.1	45.53	59.57	-14.04	-	-
16	.3255	25.25	Ca	.5	.1	10.1	35.95	-	-	49.57	-13.62
17	.6495	34.94	Qp	.3	.1	10.1	45.44	56	-10.56	-	-
18	.6495	26.35	Ca	.3	.1	10.1	36.85	-	-	46	-9.15
19	.9735	34.14	Qp	.3	.1	10.1	44.64	56	-11.36	-	-
20	.9735	27	Ca	.3	.1	10.1	37.5	-	-	46	-8.5
21	1.29975	29.38	Qp	.2	.1	10.1	39.78	56	-16.22	-	-
22	1.29975	22.09	Ca	.2	.1	10.1	32.49	-	-	46	-13.51
23	1.95	25.95	Qp	.2	.1	10.1	36.35	56	-19.65	-	-
24	1.95	18.21	Ca	.2	.1	10.1	28.61	-	-	46	-17.39

Qp - Quasi-Peak detector

Ca - CISPR average detection

FCC15 CE Class B 150kHz-30MHz Stepping.TST 30915 24 Feb 2016

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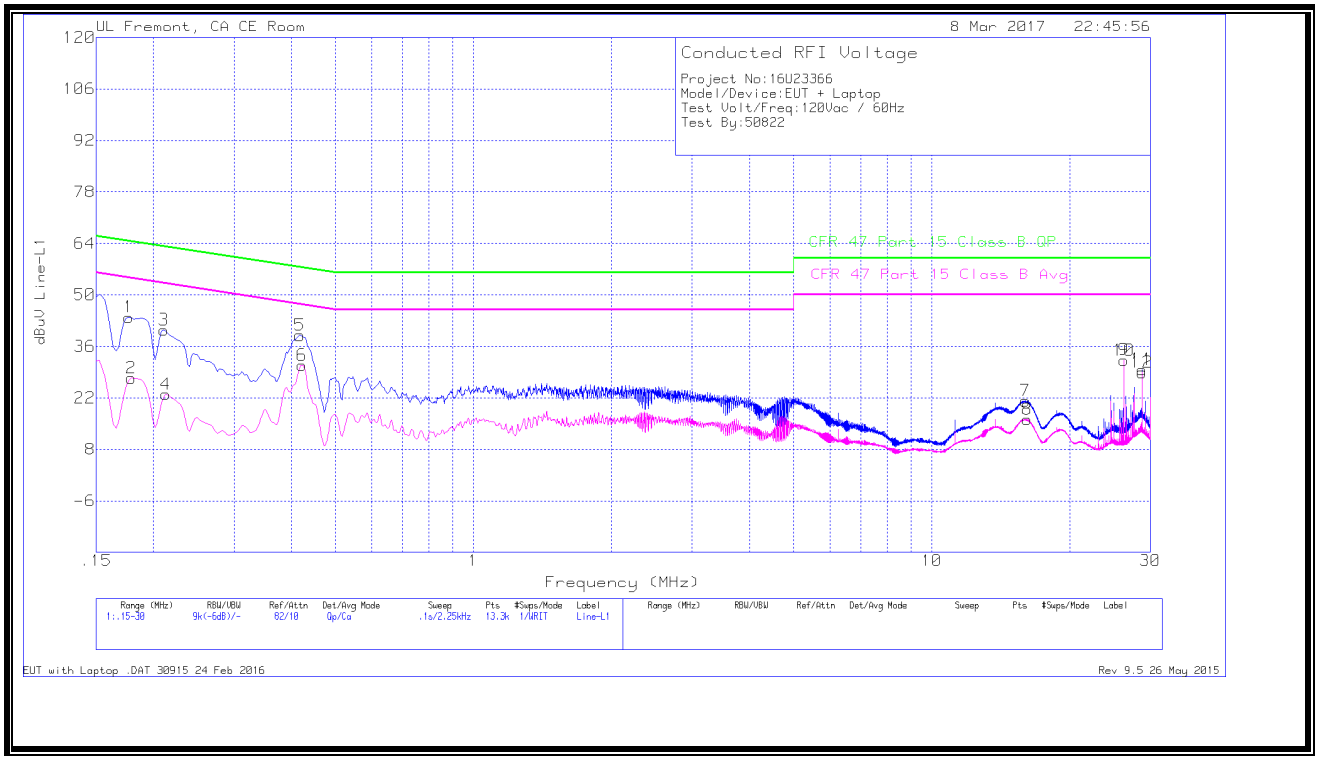
10.2. EUT POWERED BY HOST PC VIA USB CABLE

LINE 1 RESULTS



WORST EMISSIONS

Range 1: Line-L1 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	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	.177	33.74	Qp	0	.1	10.1	43.94	64.63	-20.69	-	-
2	.17925	17.18	Ca	0	.1	10.1	27.38	-	-	54.52	-27.14
3	.21075	30.36	Qp	0	0	10.1	40.46	63.18	-22.72	-	-
4	.213	12.86	Ca	0	0	10.1	22.96	-	-	53.09	-30.13
5	.41775	28.8	Qp	0	.1	10.1	39	57.49	-18.49	-	-
6	.42225	20.69	Ca	0	.1	10.1	30.89	-	-	47.4	-16.51
7	15.999	10.61	Qp	0	.3	10.3	21.21	60	-38.79	-	-
8	16.17	5.64	Ca	0	.2	10.3	16.14	-	-	50	-33.86
9	26.25	21.41	Qp	.1	.3	10.5	32.31	60	-27.69	-	-
10	26.25	21.29	Ca	.1	.3	10.5	32.19	-	-	50	-17.81
11	28.7498	18.79	Qp	.1	.3	10.5	29.69	60	-30.31	-	-
12	28.7498	18.02	Ca	.1	.3	10.5	28.92	-	-	50	-21.08

Qp - Quasi-Peak detector

Ca - CISPR average detection

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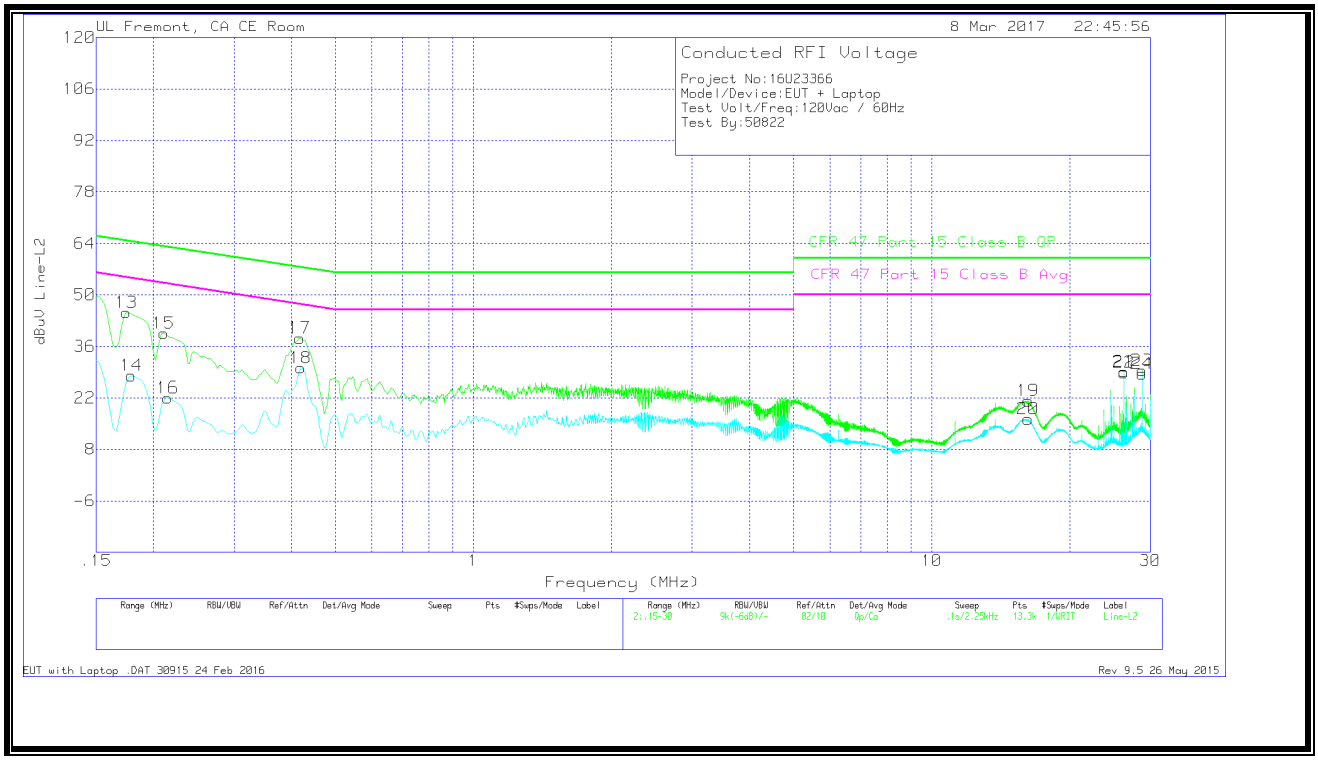
LINE 2 RESULTS



WORST EMISSIONS

Range 2: Line-L2 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	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	.17475	35.02	Qp	0	.1	10.1	45.22	64.73	-19.51	-	-
14	.17925	17.84	Ca	0	.1	10.1	28.04	-	-	54.52	-26.48
15	.21075	29.44	Qp	0	0	10.1	39.54	63.18	-23.64	-	-
16	.21525	11.78	Ca	0	.1	10.1	21.98	-	-	53	-31.02
17	.41775	28.06	Qp	0	.1	10.1	38.26	57.49	-19.23	-	-
18	.42	19.94	Ca	0	.1	10.1	30.14	-	-	47.45	-17.31
19	16.2308	10.71	Qp	0	.2	10.3	21.21	60	-38.79	-	-
20	16.2308	5.75	Ca	0	.2	10.3	16.25	-	-	50	-33.75
21	26.25	18.25	Qp	.1	.3	10.5	29.15	60	-30.85	-	-
22	26.25	18.01	Ca	.1	.3	10.5	28.91	-	-	50	-21.09
23	28.7498	18.55	Qp	.1	.3	10.5	29.45	60	-30.55	-	-
24	28.7498	17.66	Ca	.1	.3	10.5	28.56	-	-	50	-21.44

Qp - Quasi-Peak detector

Ca - CISPR average detection

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