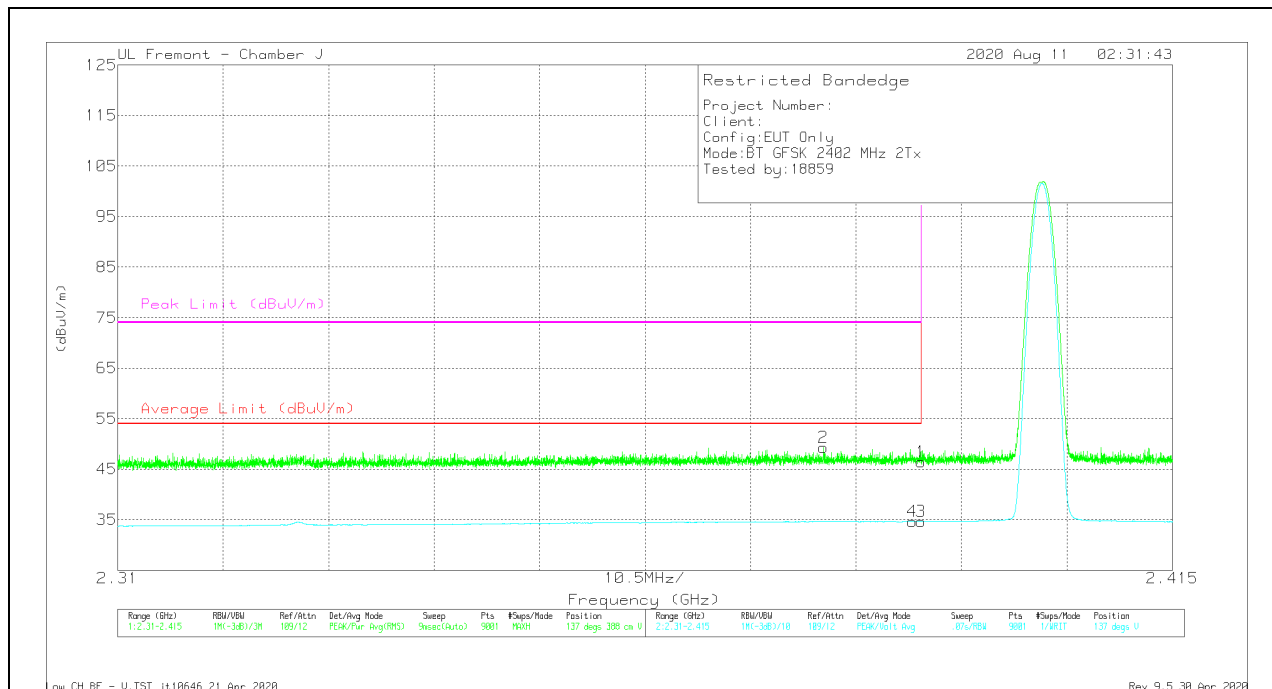


VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T963 (dB/m)	Amp/Cbl/Fitri/Pa d (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.38999	32.16	Pk	29	-14.7	46.46	-	-	74	-27.54	137	388	V
2	* 2.38025	35	Pk	29	-14.7	49.3	-	-	74	-24.7	137	388	V
3	* 2.38999	20.35	VA1T	29	-14.7	34.65	54	-19.35	-	-	137	388	V
4	* 2.38909	20.4	VA1T	29	-14.7	34.7	54	-19.3	-	-	137	388	V

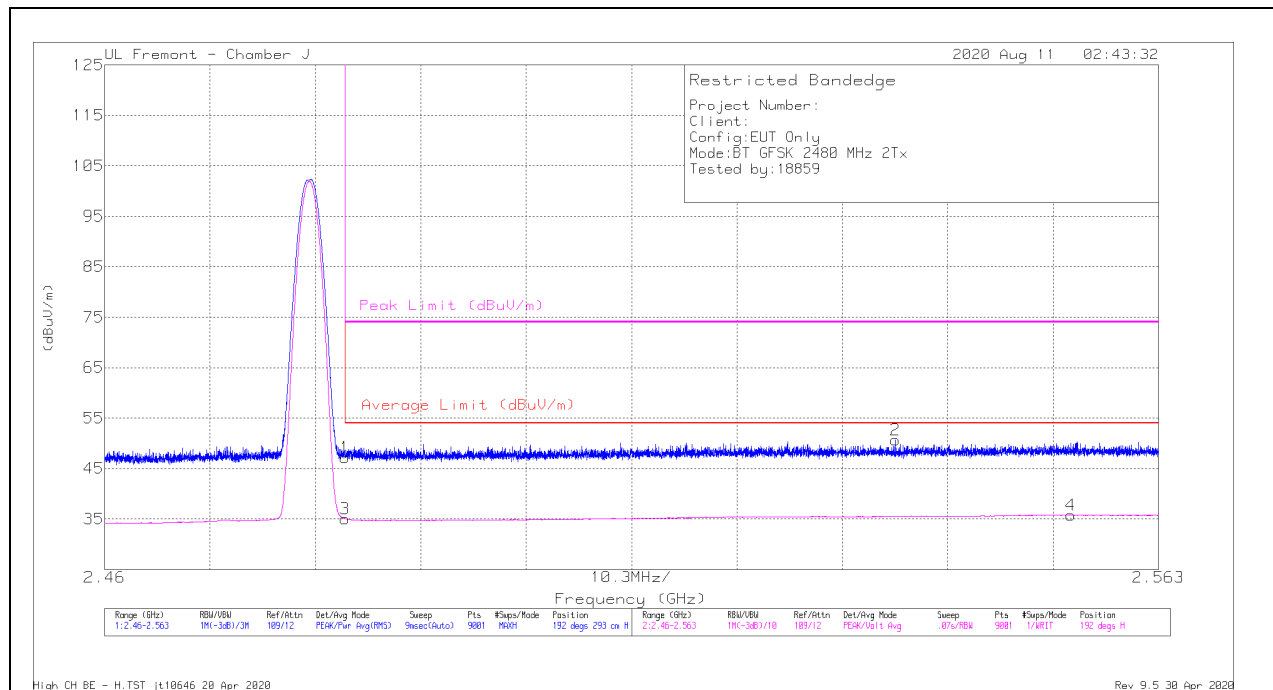
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

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

BANDEDGE (HIGH CHANNEL)

HORIZONTAL RESULT



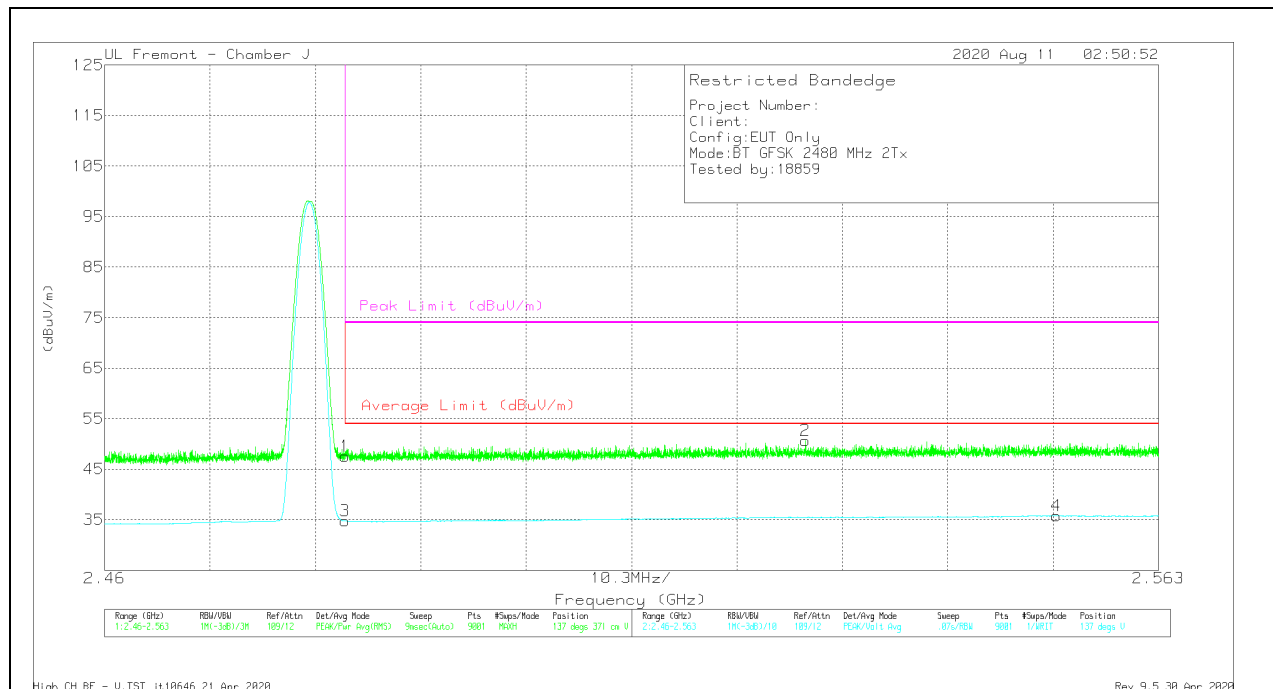
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T963 (dB/m)	Amp/Cbl/Fitr/Pa d (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.48351	32.26	Pk	29.5	-14.6	47.16	-	-	74	-26.84	192	293	H
2	2.53732	35.4	Pk	29.8	-14.5	50.7	-	-	74	-23.3	192	293	H
3	* 2.48351	20.13	VA1T	29.5	-14.6	35.03	54	-18.97	-	-	192	293	H
4	2.55446	20.28	VA1T	29.9	-14.4	35.78	54	-18.22	-	-	192	293	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

VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T963 (dB/m)	Amp/Cbl/Fitr/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	32.7	Pk	29.5	-14.6	47.6	-	-	74	-26.4	137	371	V
2	2.52849	35.42	Pk	29.8	-14.5	50.72	-	-	74	-23.28	137	371	V
3	* 2.48351	19.83	VA1T	29.5	-14.6	34.73	54	-19.27	-	-	137	371	V
4	2.55301	20.28	VA1T	29.9	-14.4	35.78	54	-18.22	-	-	137	371	V

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

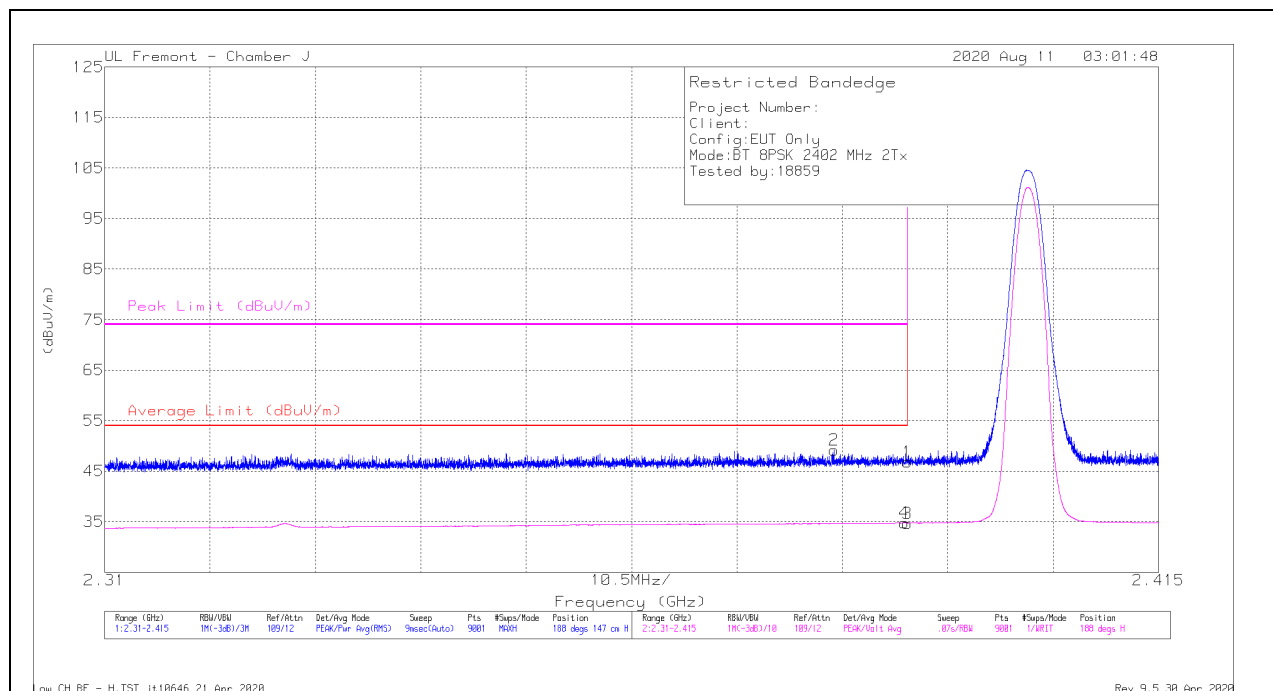
Pk - Peak detector

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

10.1.8. LOW POWER BASIC DATA RATE TXBF 8PSK MODULATION

BANDEDGE (LOW CHANNEL)

HORIZONTAL RESULT



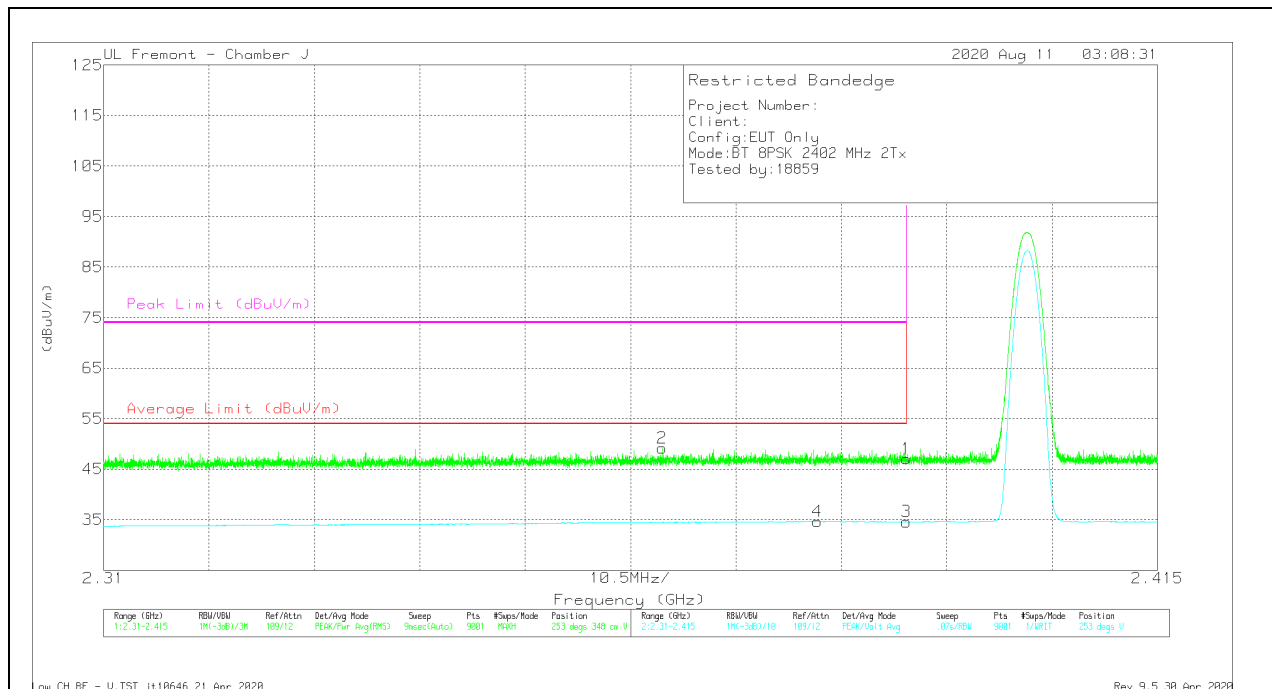
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T963 (dB/m)	Amp/Cbl/Fitr/Pa d (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.38999	32.5	Pk	29	-14.7	46.8	-	-	74	-27.2	188	147	H
2	* 2.38265	34.87	Pk	29	-14.7	49.17	-	-	74	-24.83	188	147	H
3	* 2.38999	20.4	VA1T	29	-14.7	34.7	54	-19.3	-	-	188	147	H
4	* 2.38966	20.46	VA1T	29	-14.7	34.76	54	-19.24	-	-	188	147	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

VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T963 (dB/m)	Amp/Cbl/Fitr/Pa d (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.38999	32.78	Pk	29	-14.7	47.08	-	-	74	-26.92	253	348	V
2	* 2.36565	35	Pk	29	-14.8	49.2	-	-	74	-24.8	253	348	V
3	* 2.38999	20.29	VA1T	29	-14.7	34.59	54	-19.41	-	-	253	348	V
4	* 2.3811	20.37	VA1T	29	-14.7	34.67	54	-19.33	-	-	253	348	V

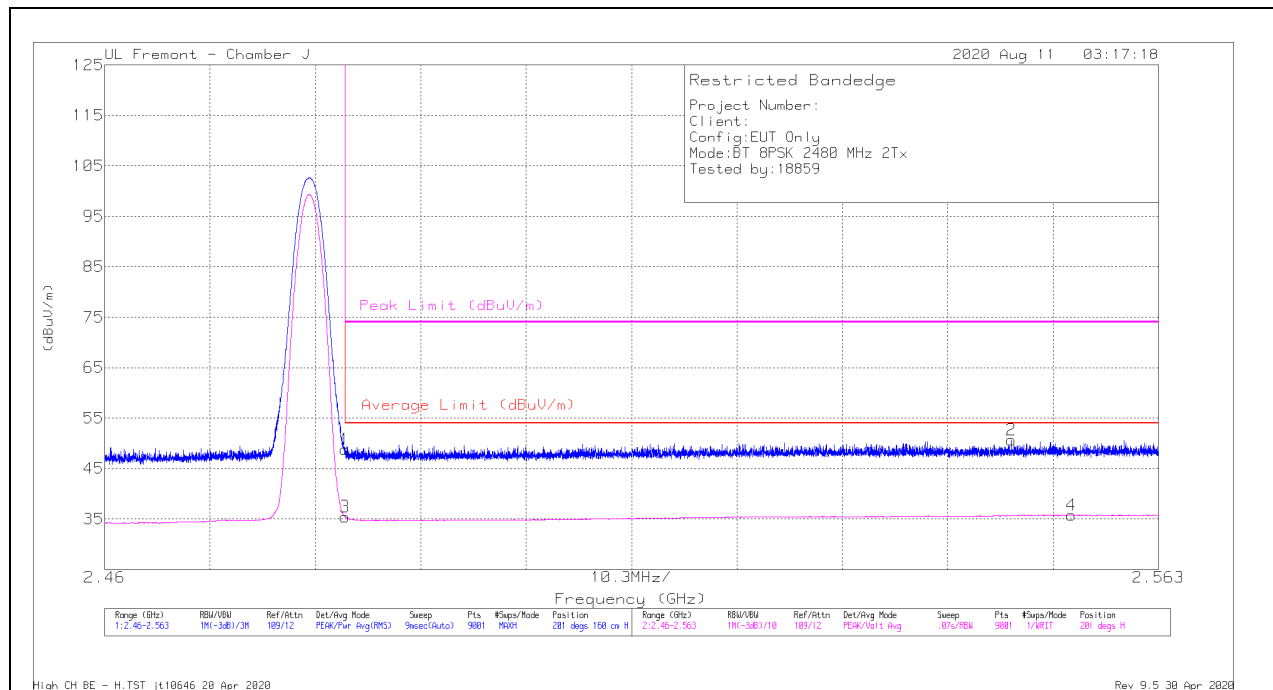
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

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

BANDEDGE (HIGH CHANNEL)

HORIZONTAL RESULT



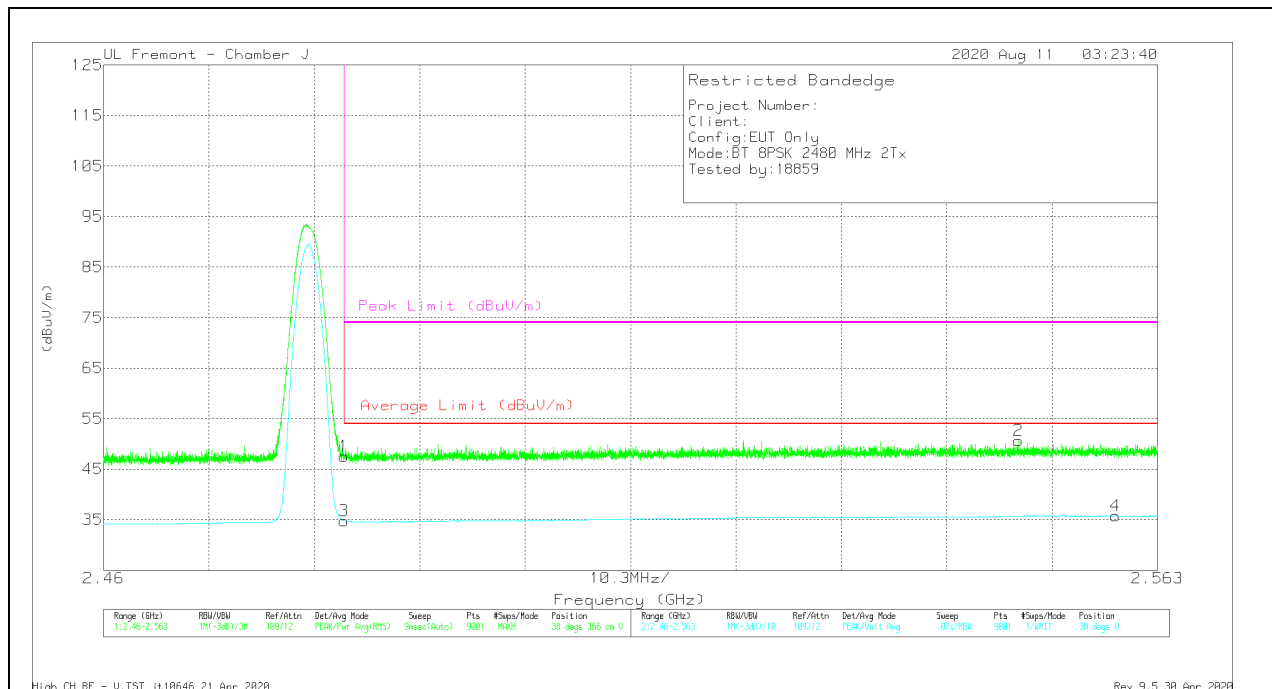
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T963 (dBm)	Amp/Cbl/Ftr/Pa d (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.48351	33.89	Pk	29.5	-14.6	48.79	-	-	74	-25.21	201	160	H
2	2.5486	35.27	Pk	29.9	-14.5	50.67	-	-	74	-23.33	201	160	H
3	* 2.48351	20.55	VA1T	29.5	-14.6	35.45	54	-18.55	-	-	201	160	H
4	2.55448	20.3	VA1T	29.9	-14.4	35.8	54	-18.2	-	-	201	160	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

VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T963 (dB/m)	Amp/Cbl/Fittr/Pa d (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.48351	32.64	Pk	29.5	-14.6	47.54	-	-	74	-26.46	38	366	V
2	2.5494	35.27	Pk	29.9	-14.5	50.67	-	-	74	-23.33	38	366	V
3	* 2.48351	19.87	VA1T	29.5	-14.6	34.77	54	-19.23	-	-	38	366	V
4	2.55888	20.37	VA1T	29.8	-14.4	35.77	54	-18.23	-	-	38	366	V

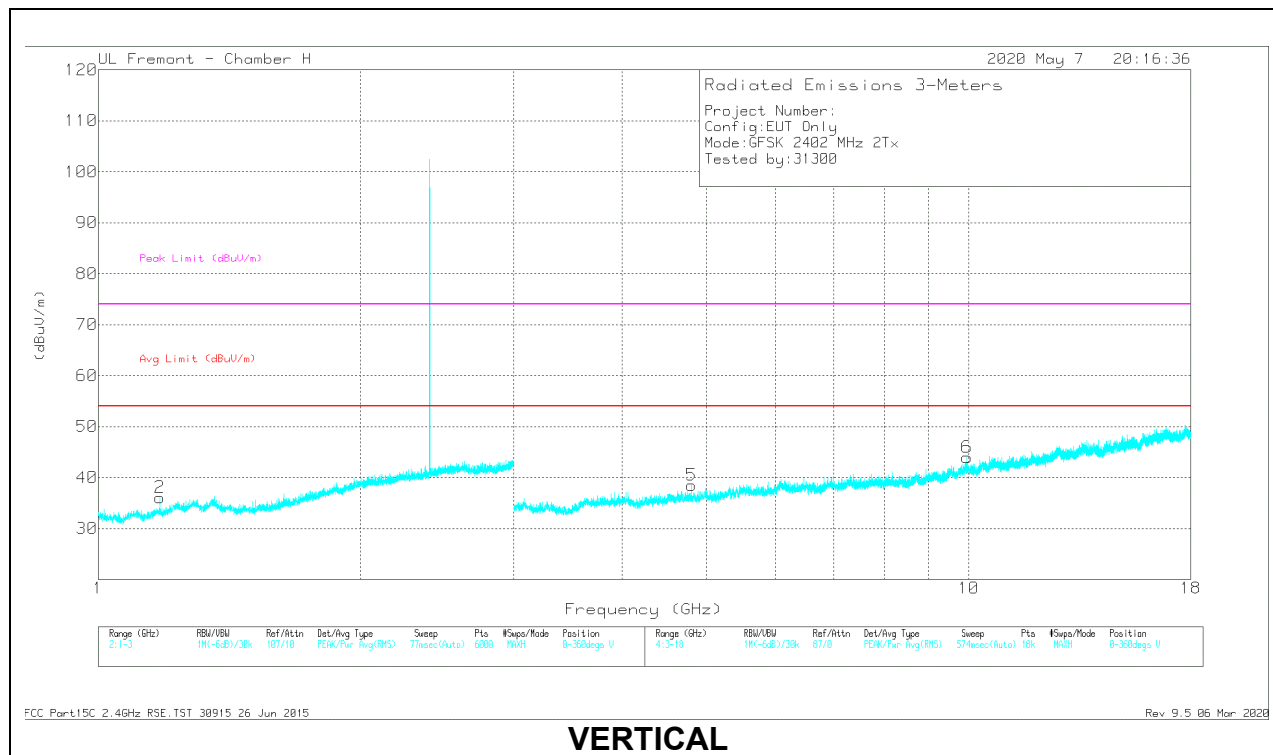
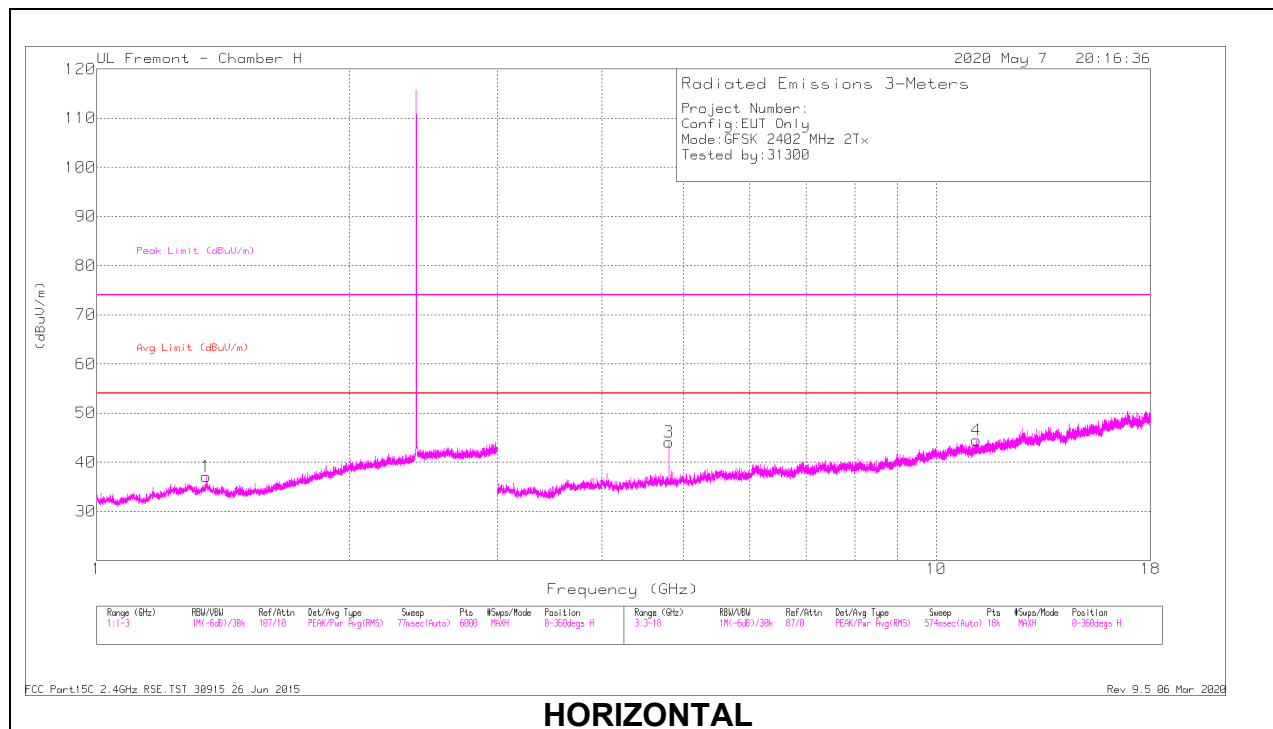
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

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

10.1.9. HIGH POWER HARMONICS AND SPURIOUS TXBF GFSK MODULATION

LOW CHANNEL RESULTS



RADIATED EMISSIONS

Radiated Emissions

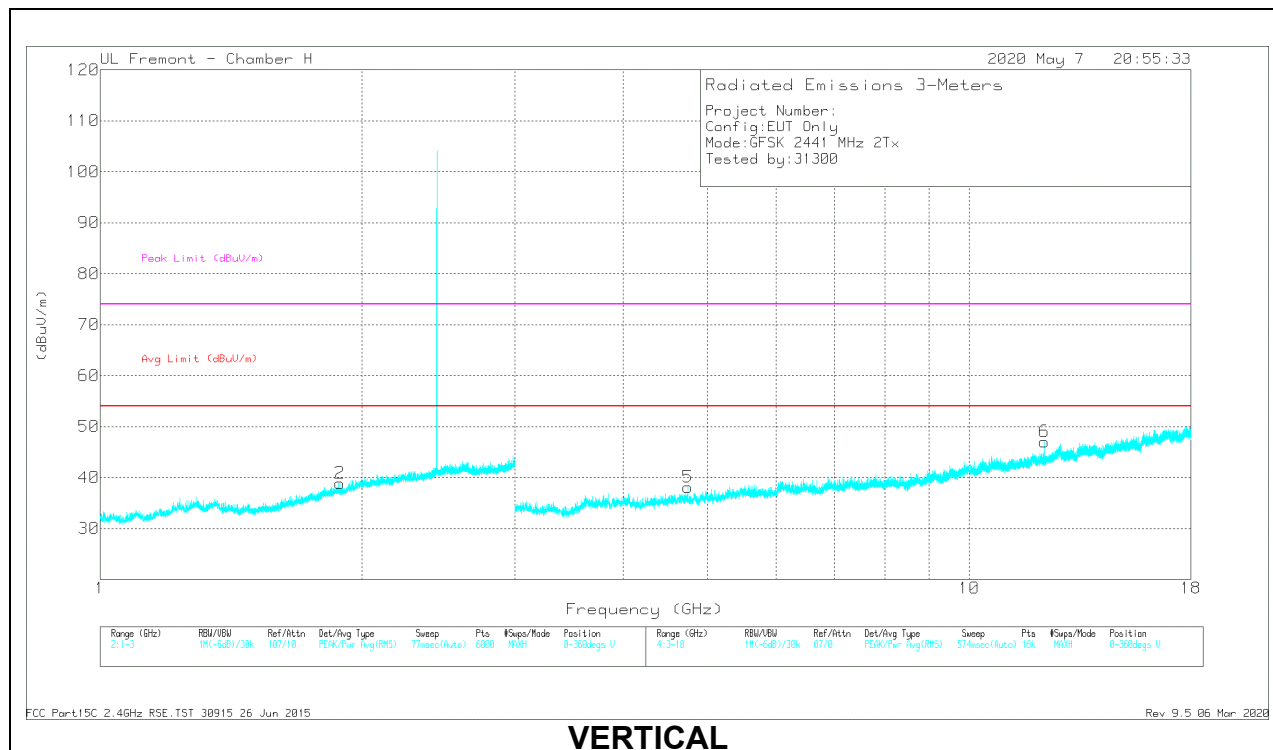
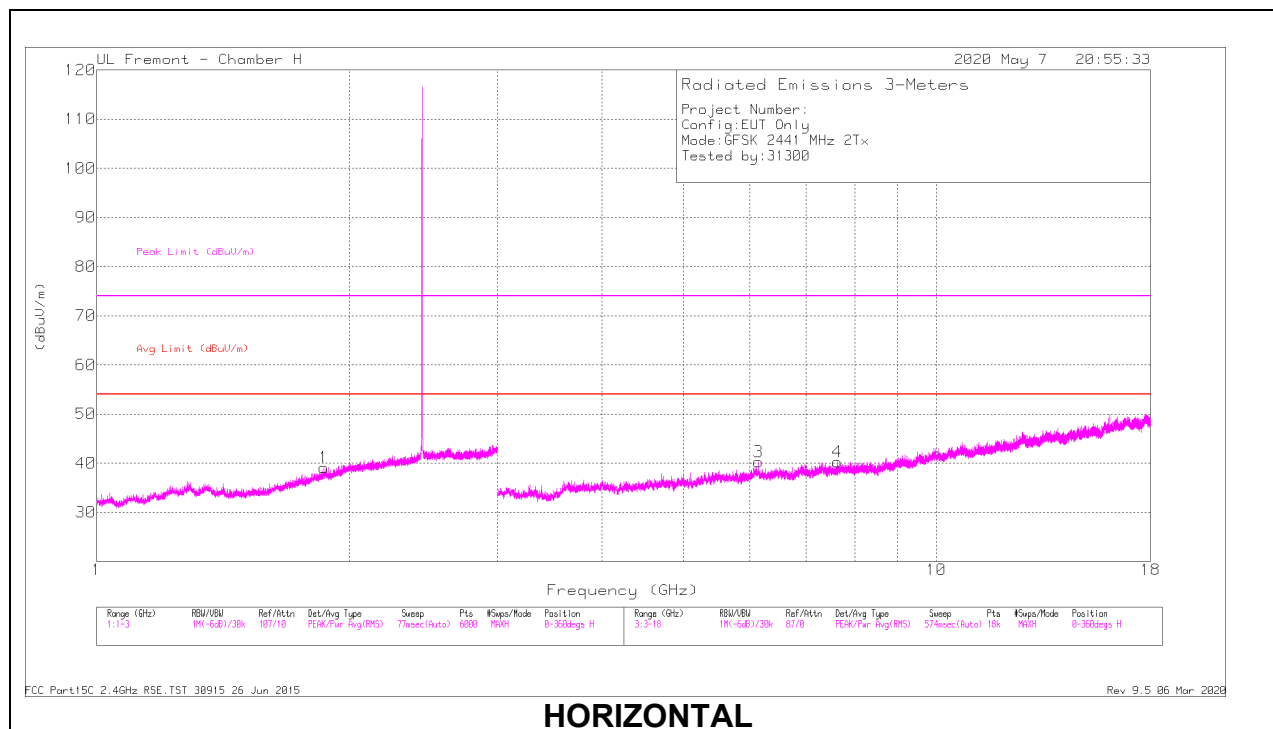
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Filtr/P ad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.35131	34.55	PKFH	29	-22.7	40.85	-	-	74	-33.15	309	101	H
	* 1.35107	22.67	VA1T	29	-22.8	28.87	54	-25.13	-	-	309	101	H
2	* 1.17743	33.83	PKFH	28.1	-23.1	38.83	-	-	74	-35.17	26	200	V
	* 1.17519	22.18	VA1T	28	-23.1	27.08	54	-26.92	-	-	26	200	V
3	* 4.80076	45.58	PKFH	34.4	-31.5	48.48	-	-	74	-25.52	204	130	H
	* 4.80282	35.96	VA1T	34.4	-31.5	38.86	54	-15.14	-	-	204	130	H
4	* 11.16282	34.01	PKFH	37.8	-23.3	48.51	-	-	74	-25.49	118	200	H
	* 11.16528	22.4	VA1T	37.8	-23.4	36.8	54	-17.2	-	-	118	200	H
5	* 4.80091	45.29	PKFH	34.4	-31.5	48.19	-	-	74	-25.81	185	330	V
	* 4.80245	33.8	VA1T	34.4	-31.5	36.7	54	-17.3	-	-	185	330	V
6	9.95852	33.84	PKFH	36.9	-23.4	47.34	-	-	-	-	308	101	V

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

PKFH FHSS/BT RB=100k for Frequencies<1GHz / RB=1MHz for Frequencies>1GHz, VB=3 x RB, Peak

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

MID CHANNEL RESULTS



RADIATED EMISSIONS

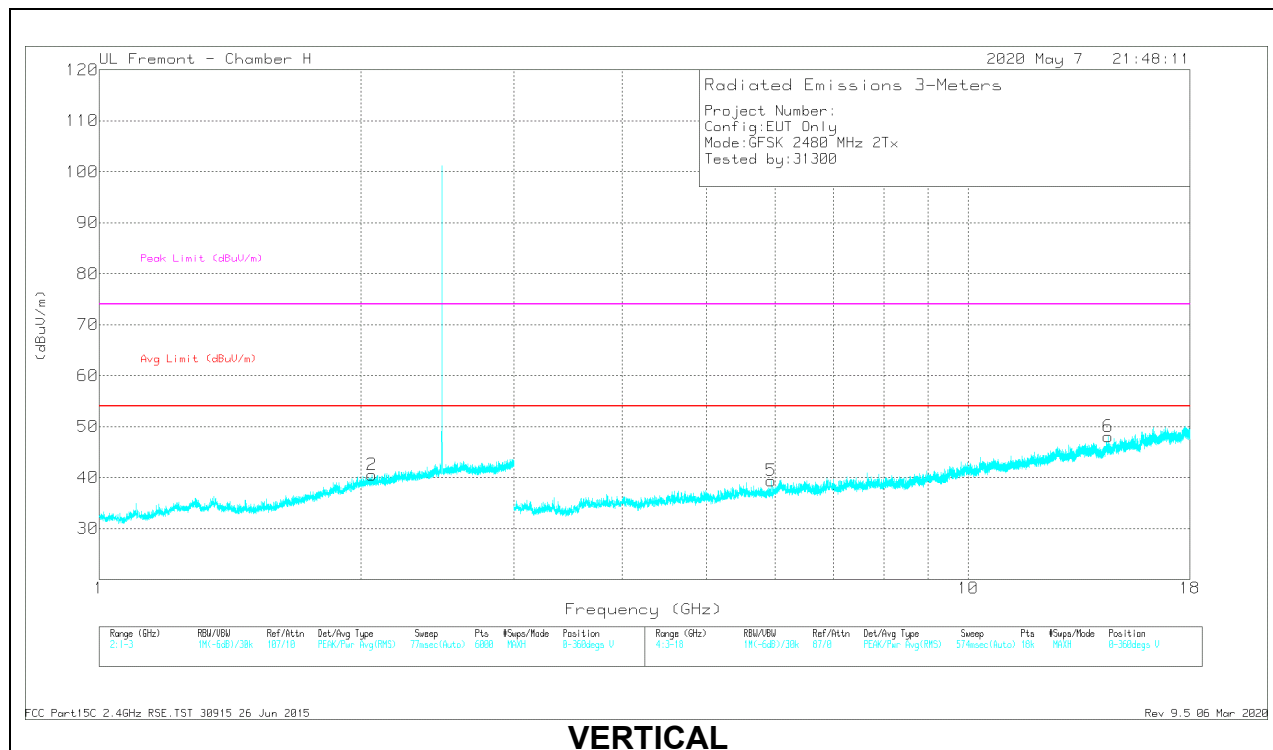
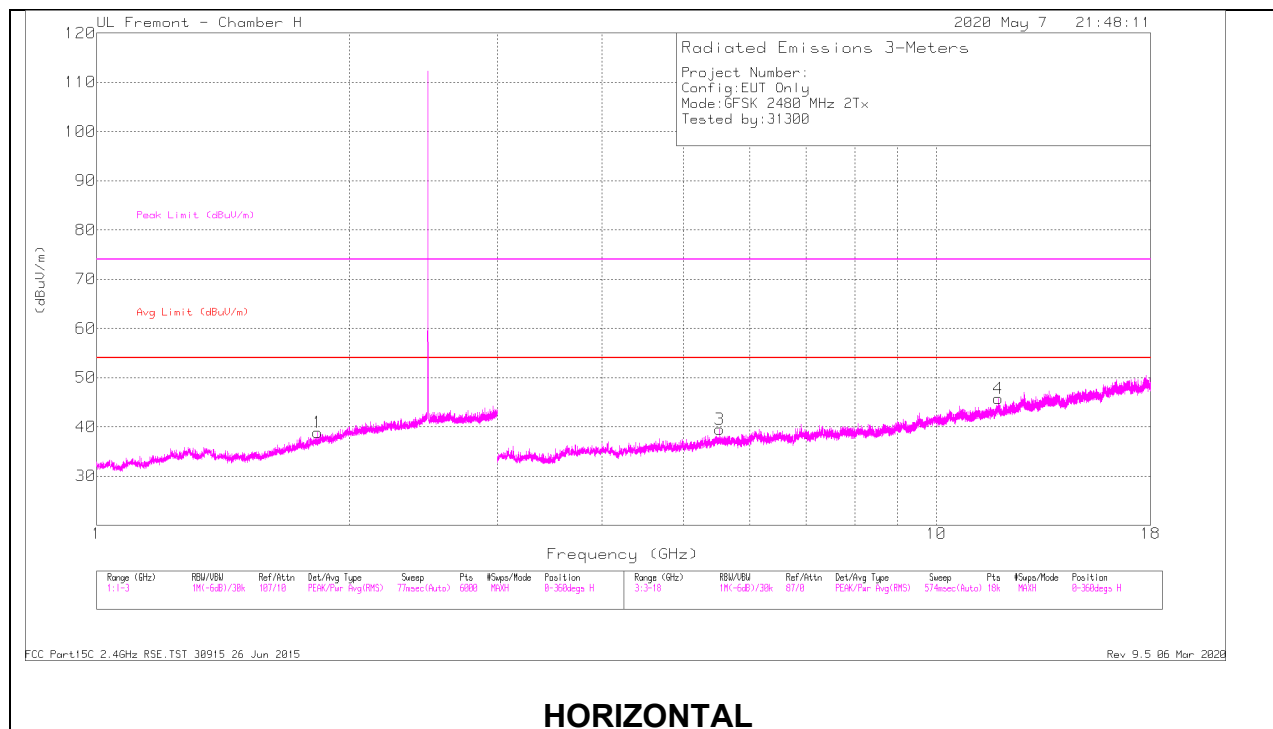
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Filtr/P ad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	* 7.63235	36.42	PKFH	36.2	-27.9	44.72	-	-	74	-29.28	231	101	H
	* 7.6303	24.65	VA1T	36.2	-27.9	32.95	54	-21.05	-	-	231	101	H
5	* 4.74253	38.76	PKFH	34.2	-31.2	41.76	-	-	74	-32.24	73	101	V
	* 4.74422	27.33	VA1T	34.2	-31.2	30.33	54	-23.67	-	-	73	101	V
6	* 12.20545	36.73	PKFH	38.9	-23.5	52.13	-	-	74	-21.87	33	101	V
	* 12.20437	26.07	VA1T	38.9	-23.4	41.57	54	-12.43	-	-	33	101	V
1	1.86498	34.45	PKFH	31	-22.5	42.95	-	-	-	-	360	200	H
2	1.89045	33.82	PKFH	31	-22.4	42.42	-	-	-	-	357	101	V
3	6.14093	37.38	PKFH	35.6	-28.5	44.48	-	-	-	-	199	101	H

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

PKFH FHSS/BT RB=100k for Frequencies<1GHz / RB=1MHz for Frequencies>1GHz, VB=3 x RB, Peak

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

HIGH CHANNEL RESULTS



RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Fitr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	* 11.85142	35.01	PKFH	38.5	-23.1	50.41	-	-	74	-23.59	308	101	H
	* 11.84946	22.67	VA1T	38.5	-23.1	38.07	54	-15.93	-	-	308	101	H
1	1.83238	33.8	PKFH	30.8	-22.5	42.1	-	-	-	-	360	200	H
2	2.05778	34.14	PKFH	31.6	-22	43.74	-	-	-	-	75	362	V
3	5.51859	39.08	PKFH	35.3	-30.5	43.88	-	-	-	-	99	200	H
5	5.93209	38.85	PKFH	35.1	-30.4	43.55	-	-	-	-	26	200	V
6	14.50068	35.48	PKFH	39.8	-22.7	52.58	-	-	-	-	44	101	V

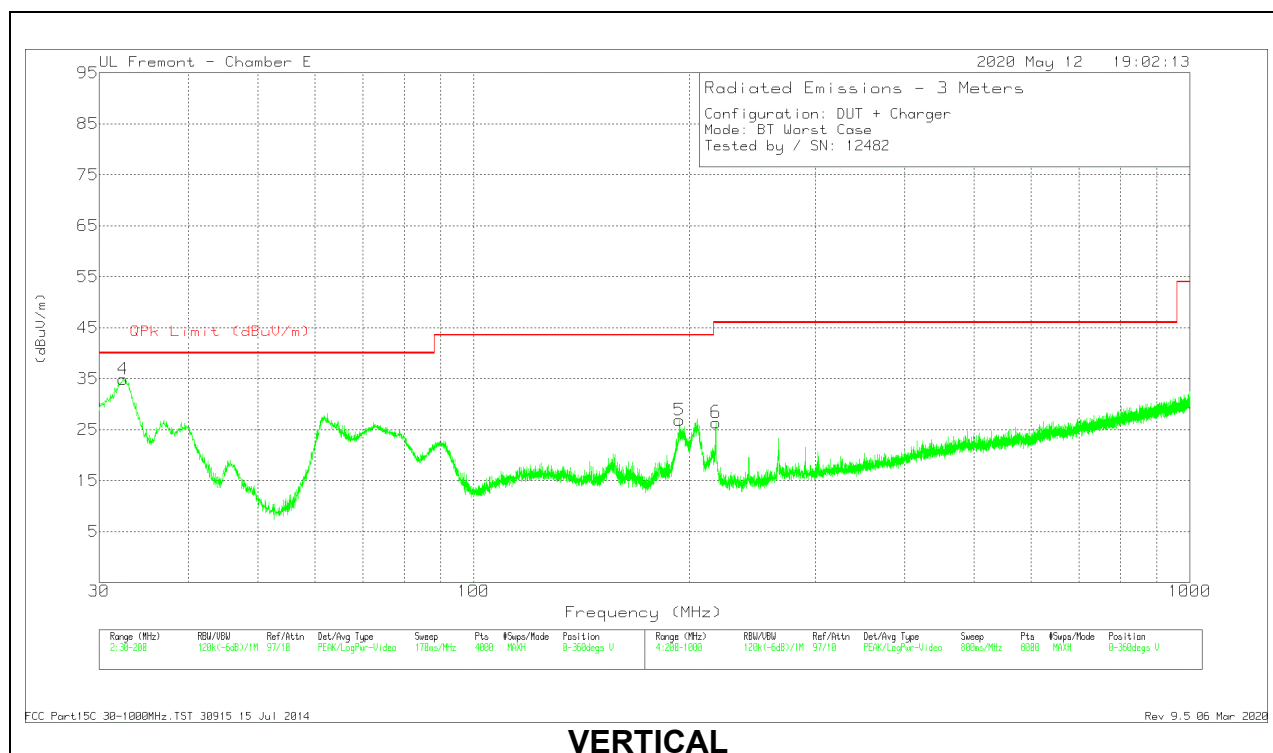
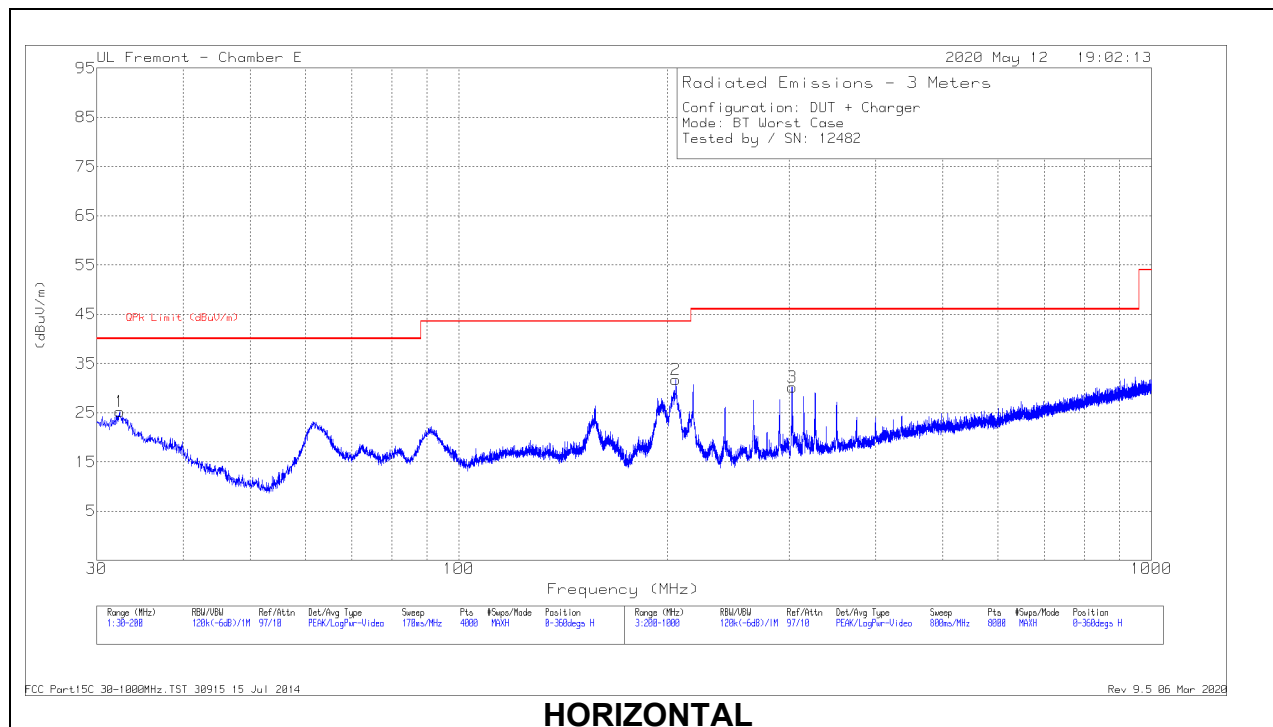
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

PKFH FHSS/BT RB=100k for Frequencies<1GHz / RB=1MHz for Frequencies>1GHz, VB=3 x RB, Peak

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

10.2. WORST CASE BELOW 1 GHz

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



Below 1GHz Data

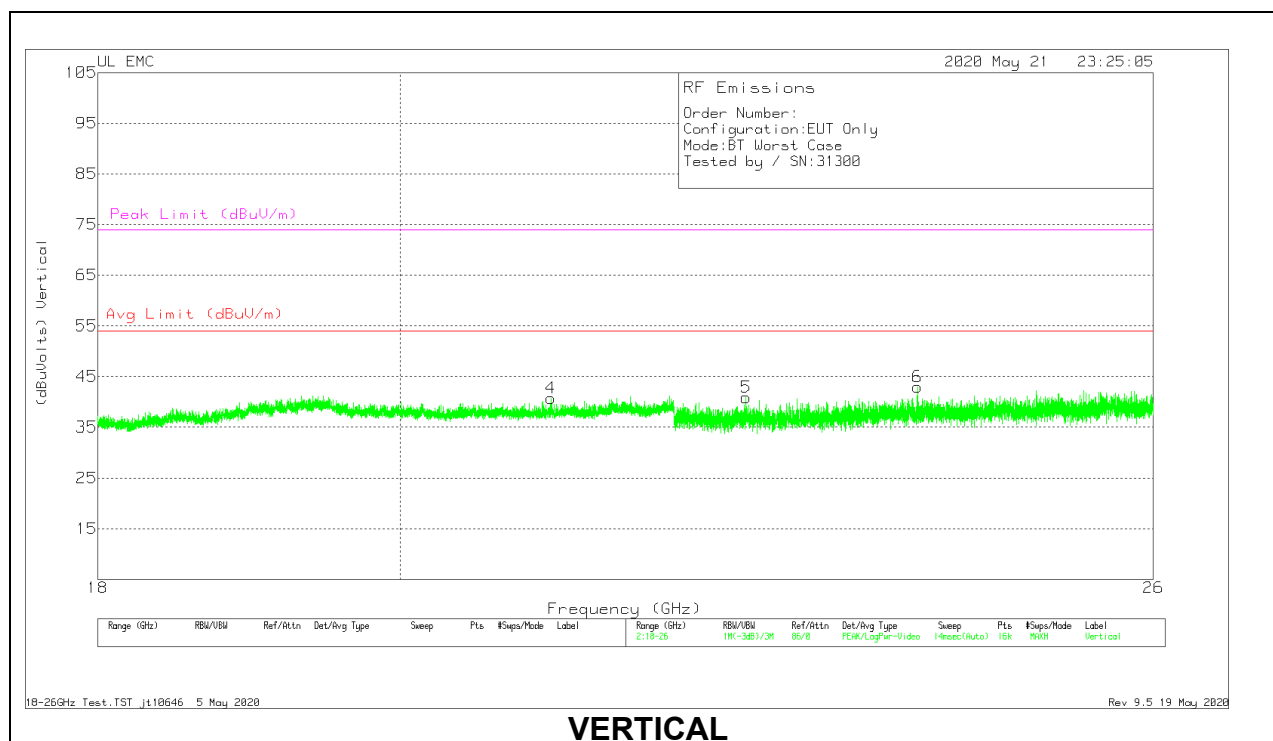
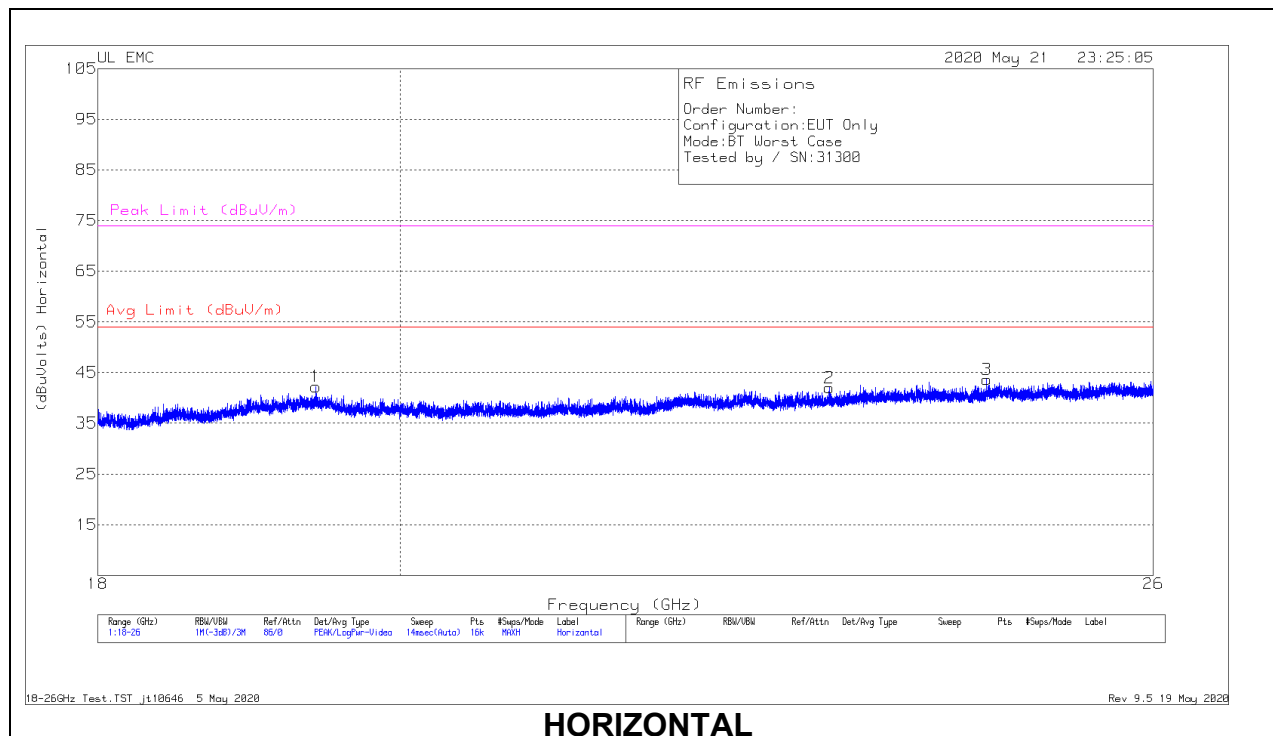
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T130 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	32.3806	31.47	Pk	25.2	-31.5	25.17	40	-14.83	0-360	301	H
4	32.6081	41.53	Pk	25	-31.5	35.03	40	-4.97	121	106	V
	32.7041	37.63	Qp	24.9	-31.6	30.93	40	-9.07	121	106	V
5	193.7949	39.08	Pk	17.8	-30	26.88	43.52	-16.64	0-360	100	V
2	205.8008	45.22	Pk	16.4	-29.9	31.72	43.52	-11.8	0-360	99	H
6	217.8023	39.71	Pk	16.5	-29.8	26.41	46.02	-19.61	0-360	201	V
3	302.7134	40.14	Pk	19.3	-29.3	30.14	46.02	-15.88	0-360	99	H

Pk - Peak detector

Qp - Quasi-Peak detector

10.3. WORST CASE 18-26 GHZ

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



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	19.42091	37.71	Pk	32.6	-18.6	-9.5	42.21	54	-11.79	74	-31.79
2	23.22568	38.2	Pk	33.7	-20.4	-9.5	42	54	-12	74	-32
3	24.53359	38.24	Pk	34.1	-19.2	-9.5	43.64	54	-10.36	74	-30.36
4	21.07831	38.14	Pk	33	-20.9	-9.5	40.74	54	-13.26	74	-33.26
5	22.56022	36.91	Pk	33.4	-19.9	-9.5	40.91	54	-13.09	74	-33.09
6	23.94913	37.94	Pk	33.9	-19.4	-9.5	42.94	54	-11.06	74	-31.06

Pk - Peak detector

11. AC POWER LINE CONDUCTED EMISSIONS

LIMITS

FCC §15.207 (a)

RSS-Gen 8.8

Frequency of Emission (MHz)	Conducted Limit (dB μ V)	
	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.

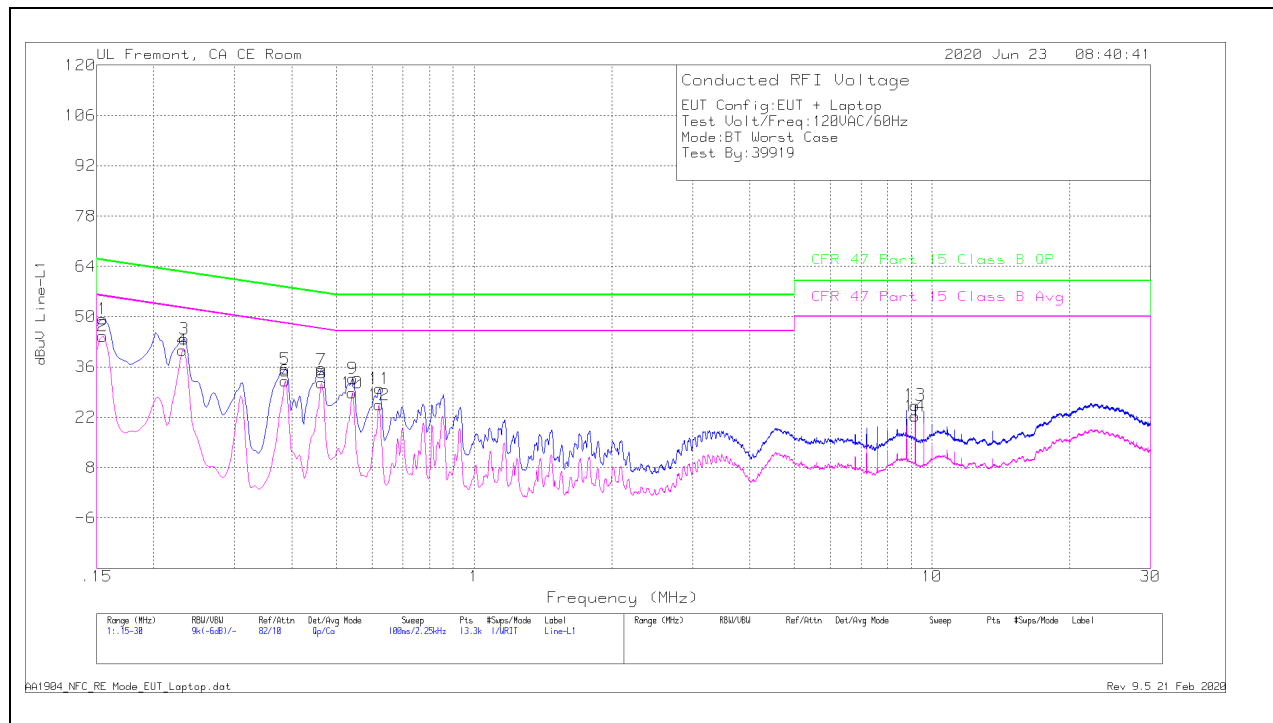
The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

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

RESULTS

11.1. AC Power Line With Laptop

LINE 1 RESULTS



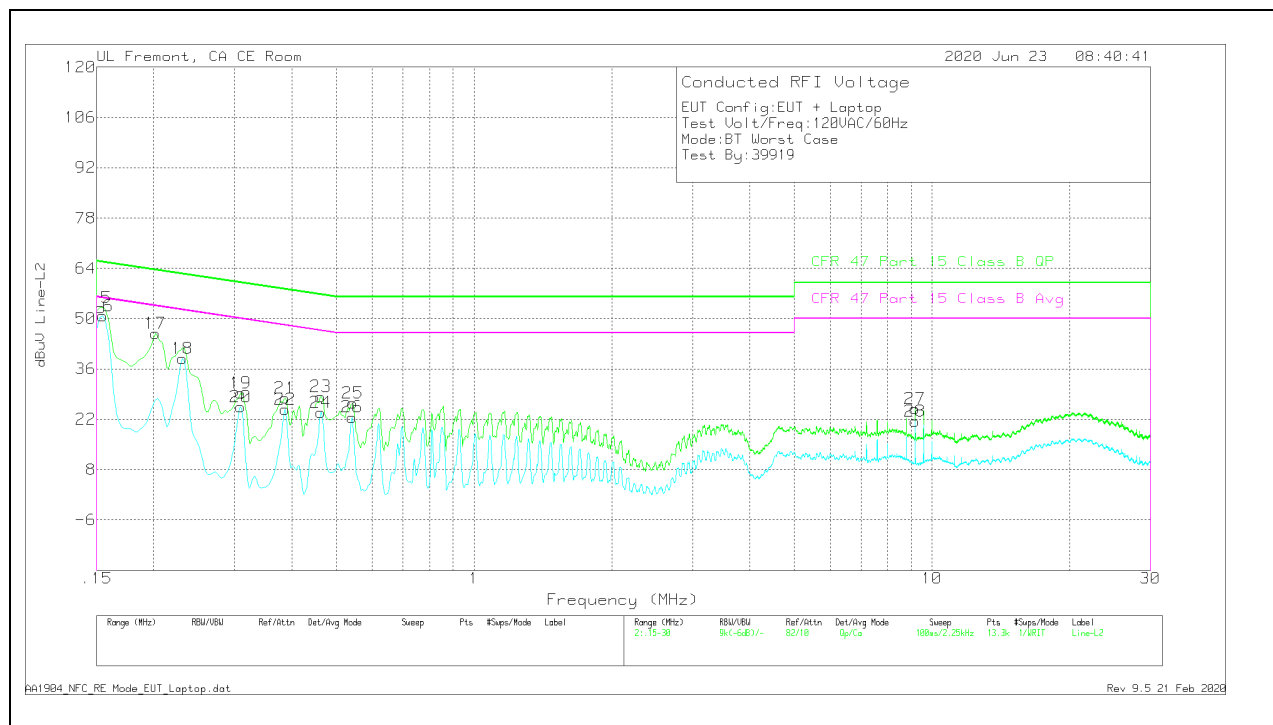
Range 1: Line-L1 .15 - 30MHz

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	.1545	39.21	Qp	.1	0	10	49.31	65.75	-16.44	-	-
2	.1545	34.49	Ca	.1	0	10	44.59	-	-	55.75	-11.16
3	.23325	33.84	Qp	0	0	10	43.84	62.33	-18.49	-	-
4	.231	30.7	Ca	0	0	10	40.7	-	-	52.41	-11.71
5	.38625	25.48	Qp	0	0	10	35.48	58.14	-22.66	-	-
6	.38625	22.14	Ca	0	0	10	32.14	-	-	48.14	-16
7	.465	25.23	Qp	0	0	10	35.23	56.6	-21.37	-	-
8	.465	21.53	Ca	0	0	10	31.53	-	-	46.6	-15.07
9	.54375	22.8	Qp	0	0	10	32.8	56	-23.2	-	-
10	.5415	18.81	Ca	0	0	10	28.81	-	-	46	-17.19
11	.6225	19.94	Qp	0	0	10	29.94	56	-26.06	-	-
12	.62025	15.53	Ca	0	0	10	25.53	-	-	46	-20.47
13	9.195	15.09	Qp	0	.2	10.1	25.39	60	-34.61	-	-
14	9.195	12.04	Ca	0	.2	10.1	22.34	-	-	50	-27.66

Qp - Quasi-Peak detector

Ca - CISPR average detection

LINE 2 RESULTS

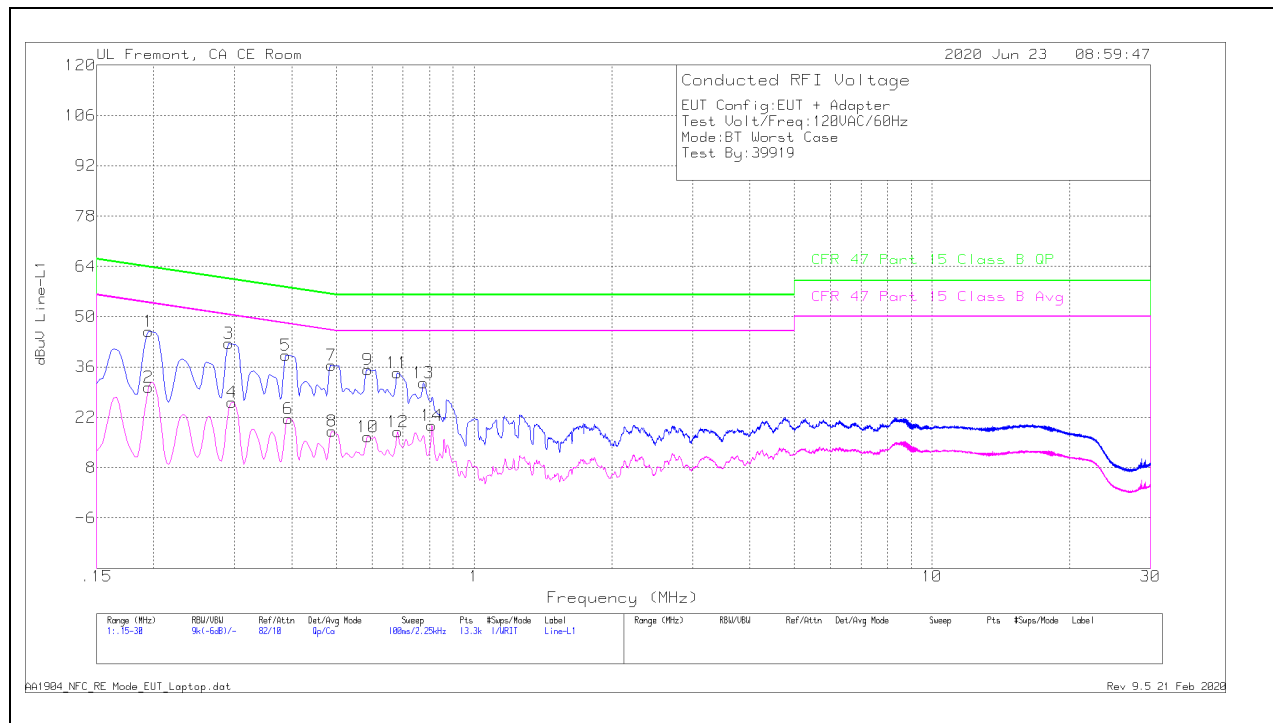


Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	PRE018644 6 LISN L2	LC Cables C2&C3	Limiter (dB)	Corrected Reading dBuV	CFR 47 Part 15 Class B QP	QP Margin (dB)	CFR 47 Part 15 Class B Avg	Av(CISPR)M argin (dB)
15	.15338	43.08	Qp	0	0	10	53.08	65.81	-12.73	-	-
16	.1545	40.83	Ca	0	0	10	50.83	-	-	55.75	-4.92
17	.20175	35.91	Qp	0	0	10	45.91	63.54	-17.63	-	-
18	.231	28.9	Ca	0	0	10	38.9	-	-	52.41	-13.51
19	.30975	19.25	Qp	0	0	10	29.25	59.98	-30.73	-	-
20	.30975	15.48	Ca	0	0	10	25.48	-	-	49.98	-24.5
21	.38625	17.97	Qp	0	0	10	27.97	58.14	-30.17	-	-
22	.38625	14.74	Ca	0	0	10	24.74	-	-	48.14	-23.4
23	.46275	18.35	Qp	0	0	10	28.35	56.64	-28.29	-	-
24	.46275	13.96	Ca	0	0	10	23.96	-	-	46.64	-22.68
25	.54375	16.48	Qp	0	0	10	26.48	56	-29.52	-	-
26	.5415	12.6	Ca	0	0	10	22.6	-	-	46	-23.4
27	9.18825	14.7	Qp	0	.2	10.1	25	60	-35	-	-
28	9.18825	11.19	Ca	0	.2	10.1	21.49	-	-	50	-28.51

Qp - Quasi-Peak detector
Ca - CISPR average detection

11.2. AC Power Line With AC/DC Adapter

LINE 1 RESULTS



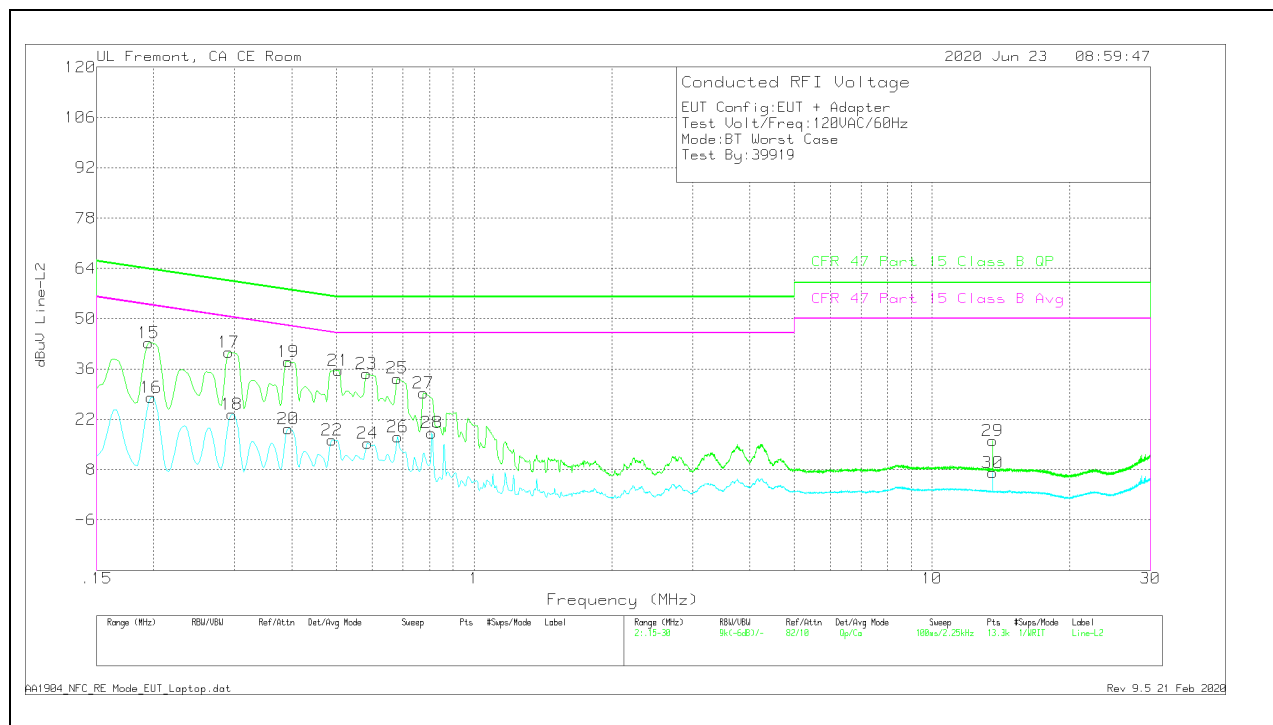
Range 1: Line-L1 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	PRE018644 6 LISN L1	LC Cables C1&C3	Limiter (dB)	Corrected Reading dBuV	CFR 47 Part 15 Class B QP	QP Margin (dB)	CFR 47 Part 15 Class B Avg	Av(CISPR)M argin (dB)
1	.195	35.87	Qp	0	0	10	45.87	63.82	-17.95	-	-
2	.195	20.33	Ca	0	0	10	30.33	-	-	53.82	-23.49
3	.29175	32.51	Qp	0	0	10	42.51	60.47	-17.96	-	-
4	.29625	16.2	Ca	0	0	10	26.2	-	-	50.35	-24.15
5	.3885	29.31	Qp	0	0	10	39.31	58.1	-18.79	-	-
6	.393	11.71	Ca	0	0	10	21.71	-	-	48	-26.29
7	.48863	26.45	Qp	0	0	10	36.45	56.19	-19.74	-	-
8	.48975	8.12	Ca	0	0	10	18.12	-	-	46.17	-28.05
9	.5865	25.23	Qp	0	0	10	35.23	56	-20.77	-	-
10	.5865	6.65	Ca	0	0	10	16.65	-	-	46	-29.35
11	.67875	24.43	Qp	0	0	10	34.43	56	-21.57	-	-
12	.681	7.91	Ca	0	0	10	17.91	-	-	46	-28.09
13	.7755	21.59	Qp	0	0	10	31.59	56	-24.41	-	-
14	.80925	9.67	Ca	0	0	10	19.67	-	-	46	-26.33

Qp - Quasi-Peak detector

Ca - CISPR average detection

*Indicates UL RFID signal. Not from device.

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)
15	.195	33.3	Qp	0	0	10	43.3	63.82	-20.52	-	-
16	.19725	18.13	Ca	0	0	10	28.13	-	-	53.73	-25.6
17	.29175	30.68	Qp	0	0	10	40.68	60.47	-19.79	-	-
18	.29625	13.4	Ca	0	0	10	23.4	-	-	50.35	-26.95
19	.393	28	Qp	0	0	10	38	58	-20	-	-
20	.393	9.37	Ca	0	0	10	19.37	-	-	48	-28.63
21	.5055	25.66	Qp	0	0	10	35.66	56	-20.34	-	-
22	.48975	6.23	Ca	0	0	10	16.23	-	-	46.17	-29.94
23	.582	24.77	Qp	0	0	10	34.77	56	-21.23	-	-
24	.5865	5.34	Ca	0	0	10	15.34	-	-	46	-30.66
25	.67875	23.42	Qp	0	0	10	33.42	56	-22.58	-	-
26	.681	7.13	Ca	0	0	10	17.13	-	-	46	-28.87
27	.7755	19.26	Qp	0	0	10	29.26	56	-26.74	-	-
28	.80925	8.24	Ca	0	0	10	18.24	-	-	46	-27.76
*29	13.56	5.65	Qp	.1	.2	10.1	16.05	60	-43.95	-	-
*30	13.56	-3.29	Ca	.1	.2	10.1	7.11	-	-	50	-42.89

Qp - Quasi-Peak detector

Ca - CISPR average detection

*Indicates UL RFID signal. Not from device.

12. SETUP PHOTOS

Please refer to 13335182-EP1 for setup photos

END OF TEST REPORT