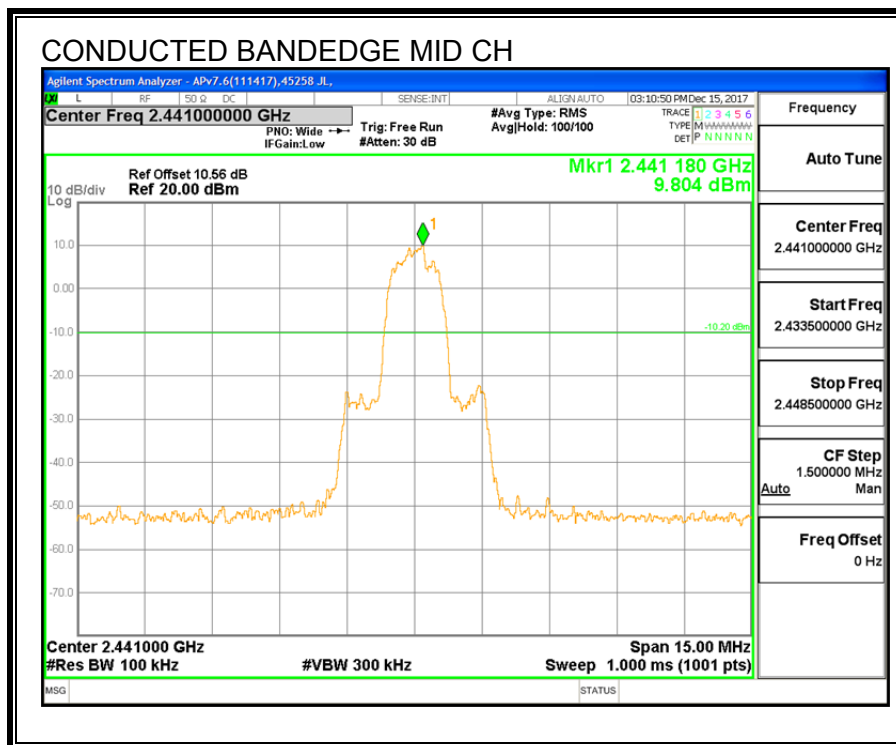
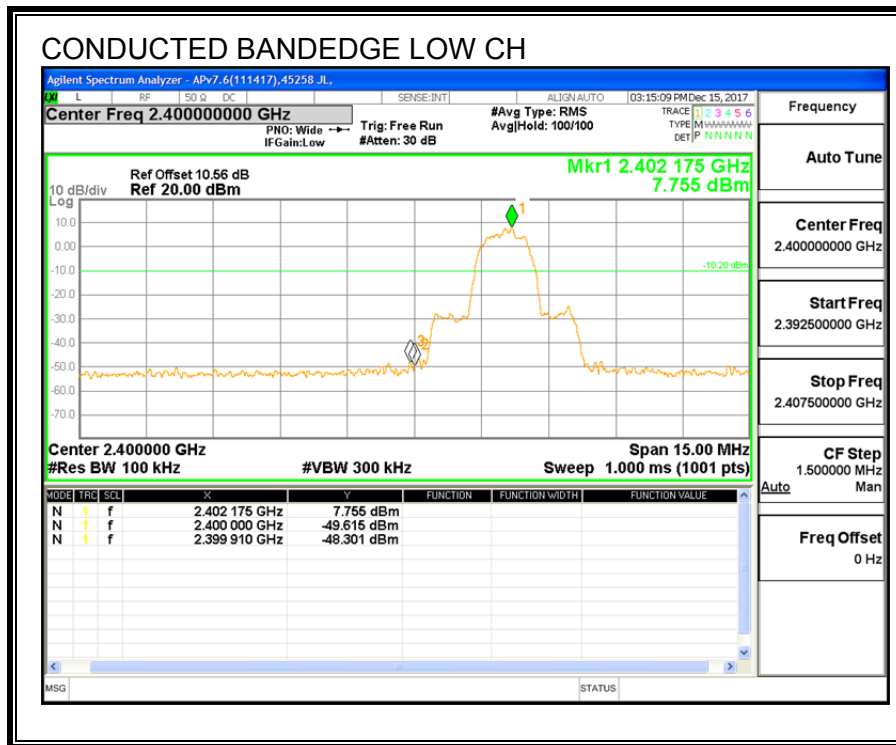
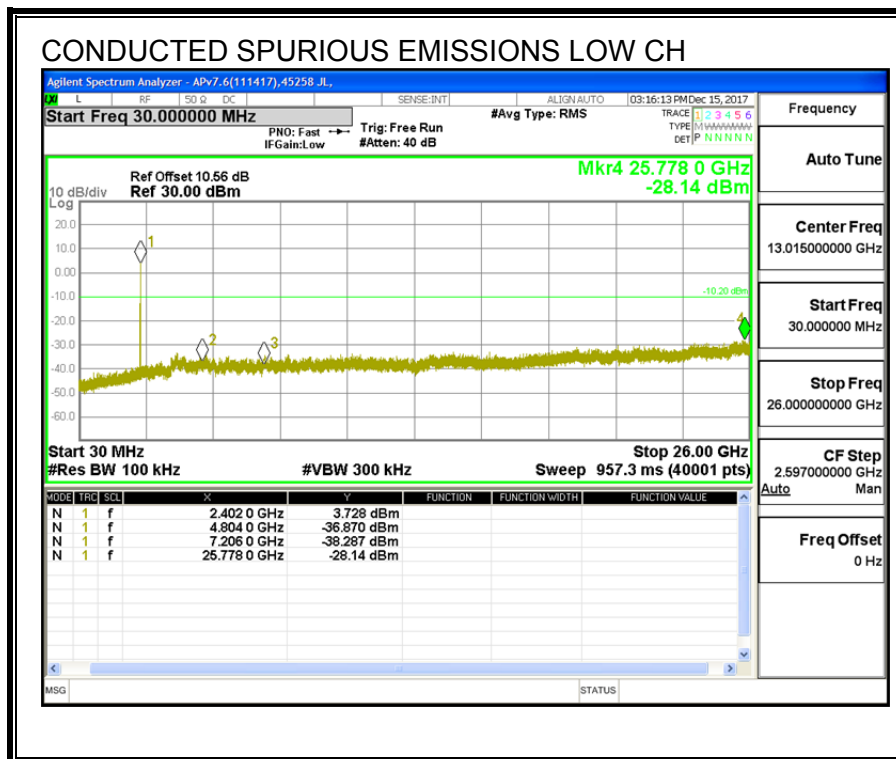
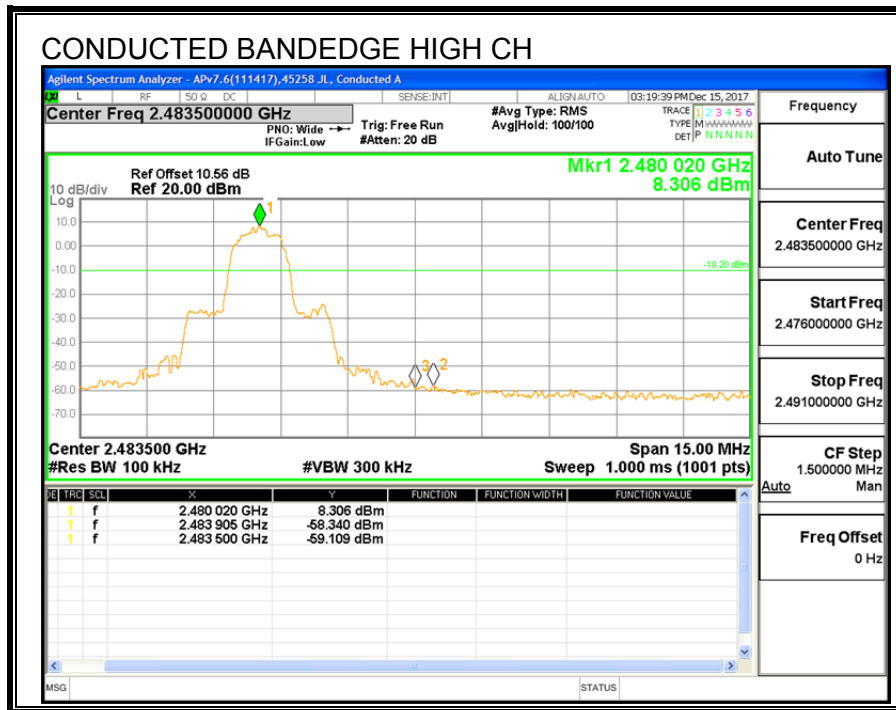
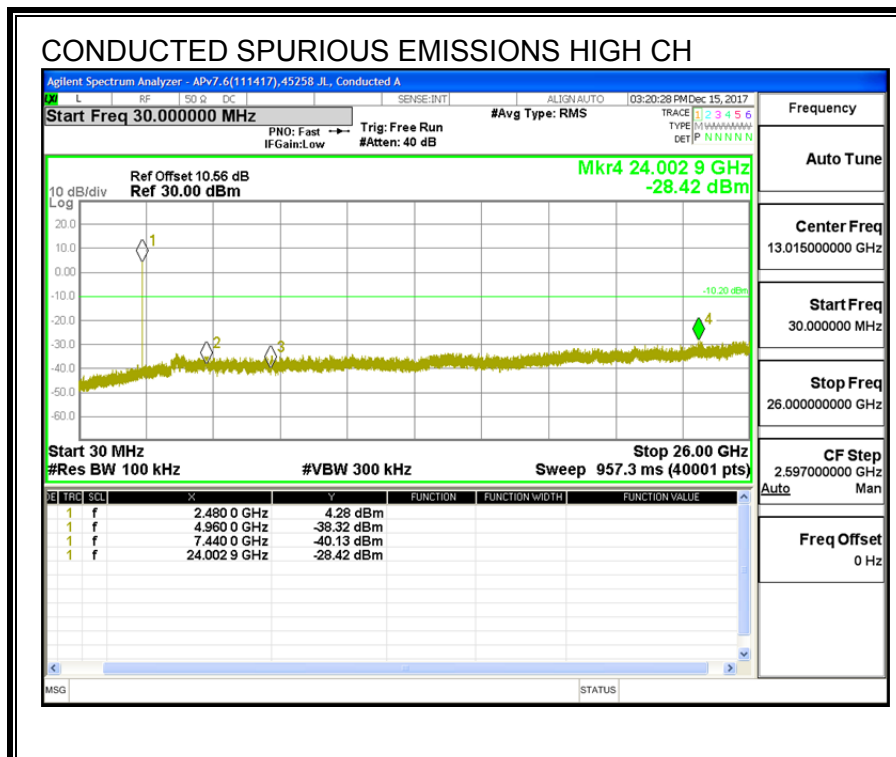
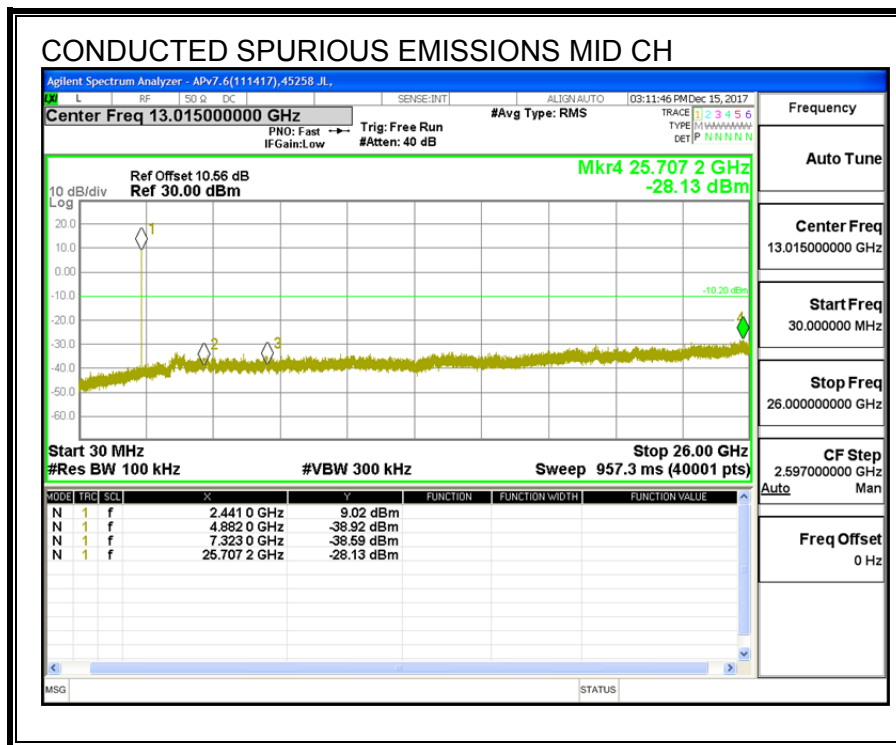
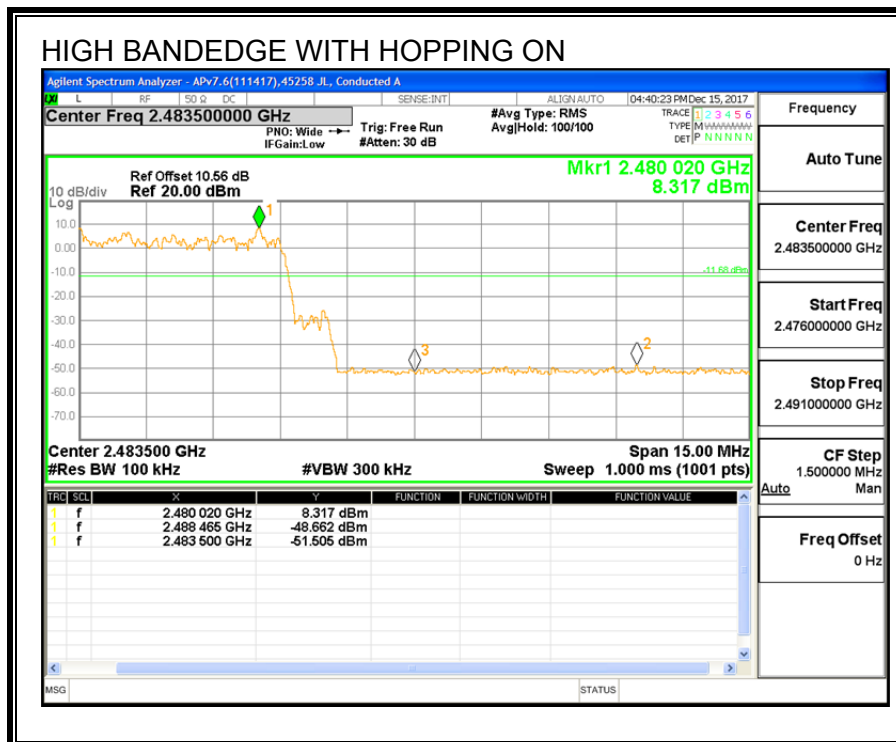
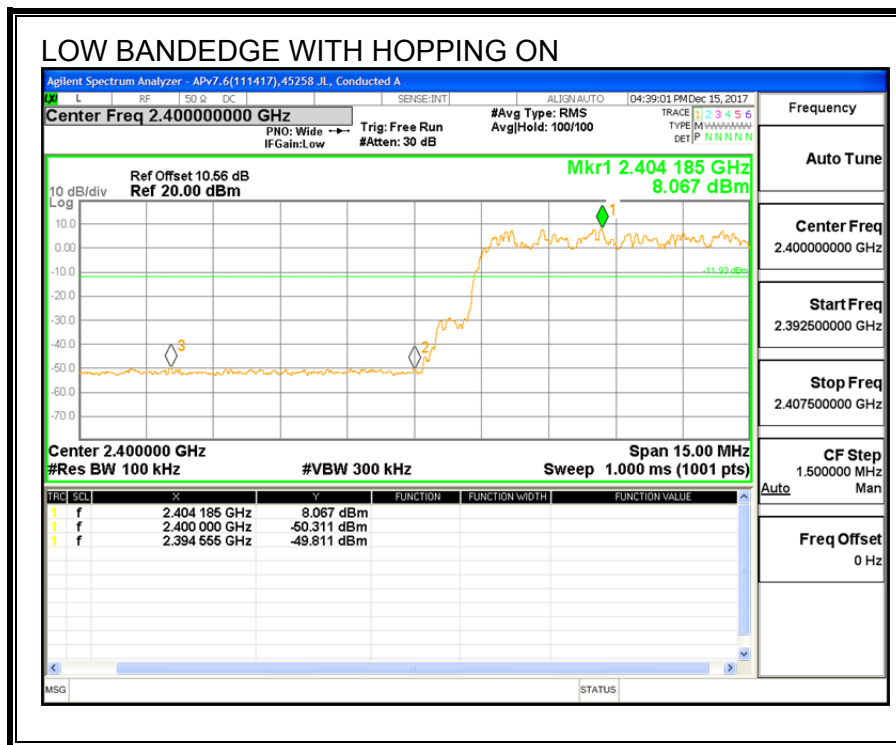


7.2.7. CONDUCTED BANDEDGE AND SPURIOUS EMISSIONS









8. RADIATED TEST RESULTS

8.1. LIMITS AND PROCEDURE

LIMITS

FCC §15.205 and §15.209

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 measurements above 1 GHz the resolution bandwidth is set to 1 MHz, then the video bandwidth is set to 3 MHz for peak measurements and 1 MHz resolution bandwidth with 1/T (10 Hz) video bandwidth with peak detector for average measurements.

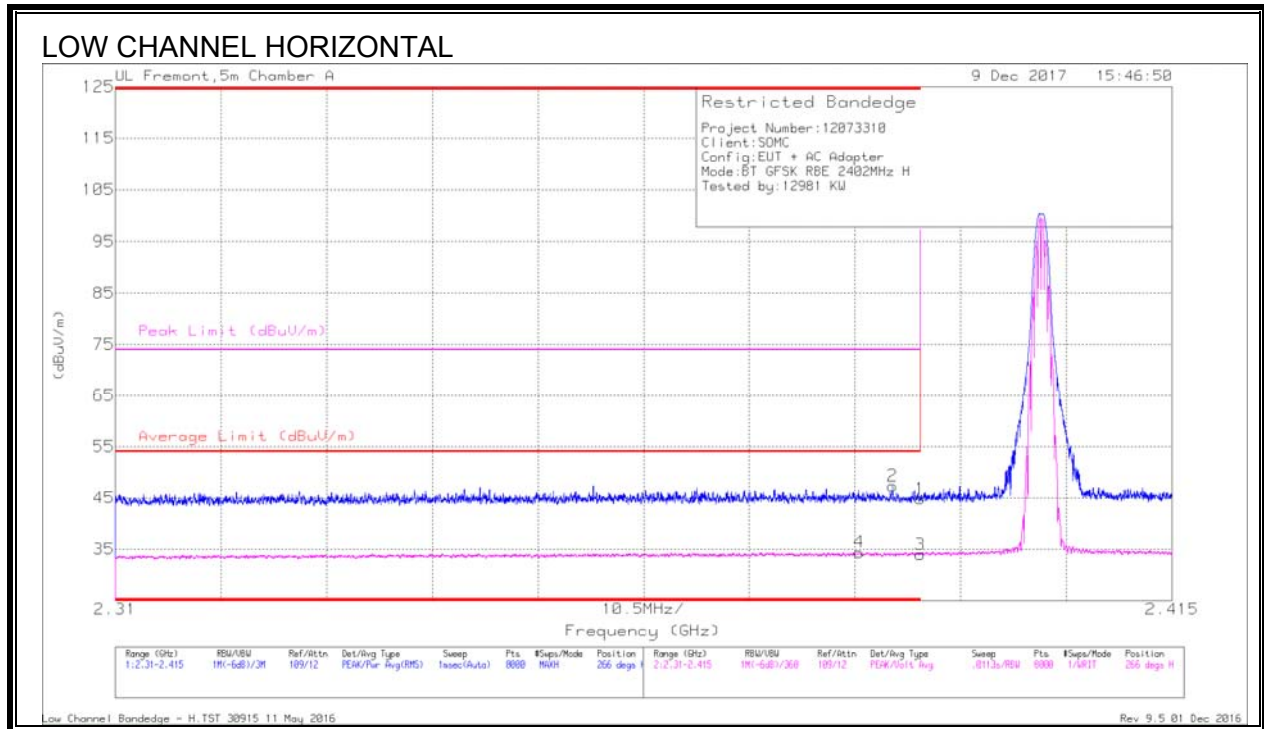
The spectrum from 1 GHz to 18 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in each applicable band. Below 1GHz and above 18GHz emissions, the channel with the highest output power was tested.

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.

RESULTS

8.2. BASIC DATA RATE GFSK MODULATION

8.2.1. RESTRICTED BANDEDGE (LOW CHANNEL)



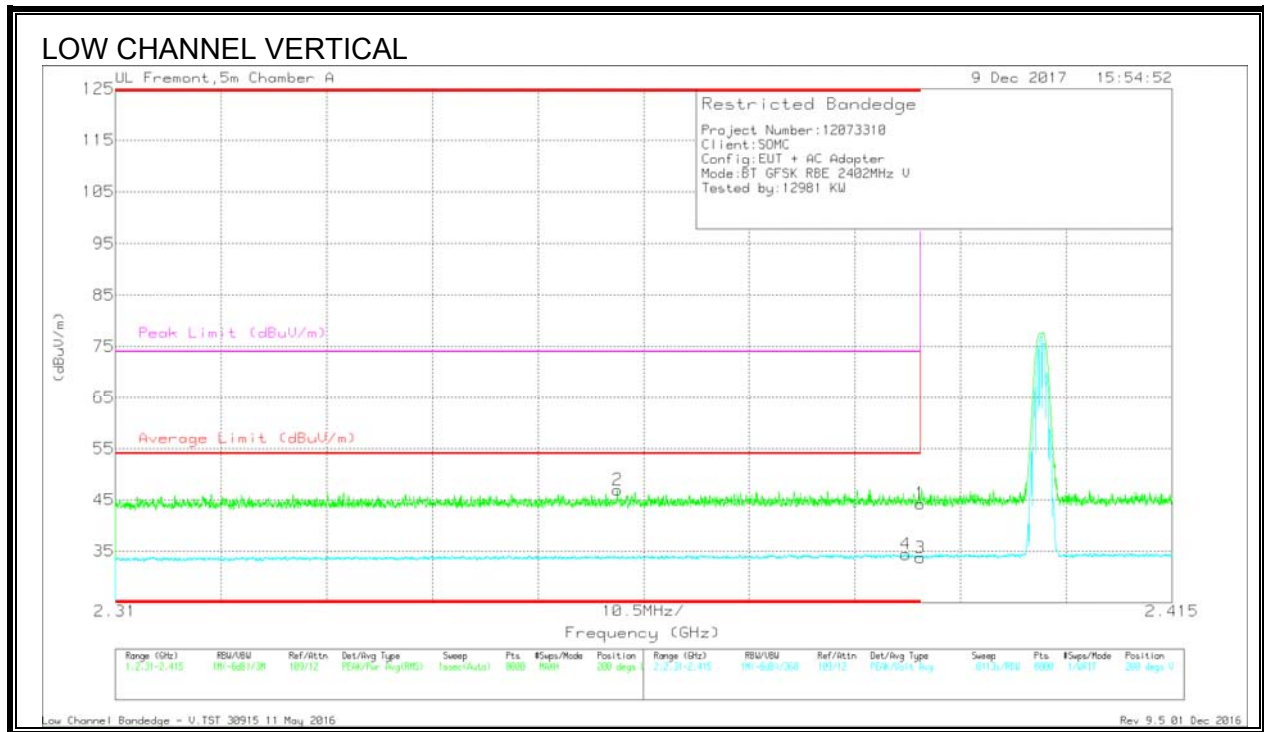
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cb/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	* 2.39	36.31	Pk	31.8	-23.3	44.81	-	-	74	-29.19	266	107	H
2	* 2.387	38.81	Pk	31.8	-23.3	47.31	-	-	74	-26.69	266	107	H
3	* 2.39	25.45	VA1T	31.8	-23.3	33.95	54	-20.05	-	-	266	107	H
4	* 2.384	25.98	VA1T	31.8	-23.4	34.38	54	-19.62	-	-	266	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



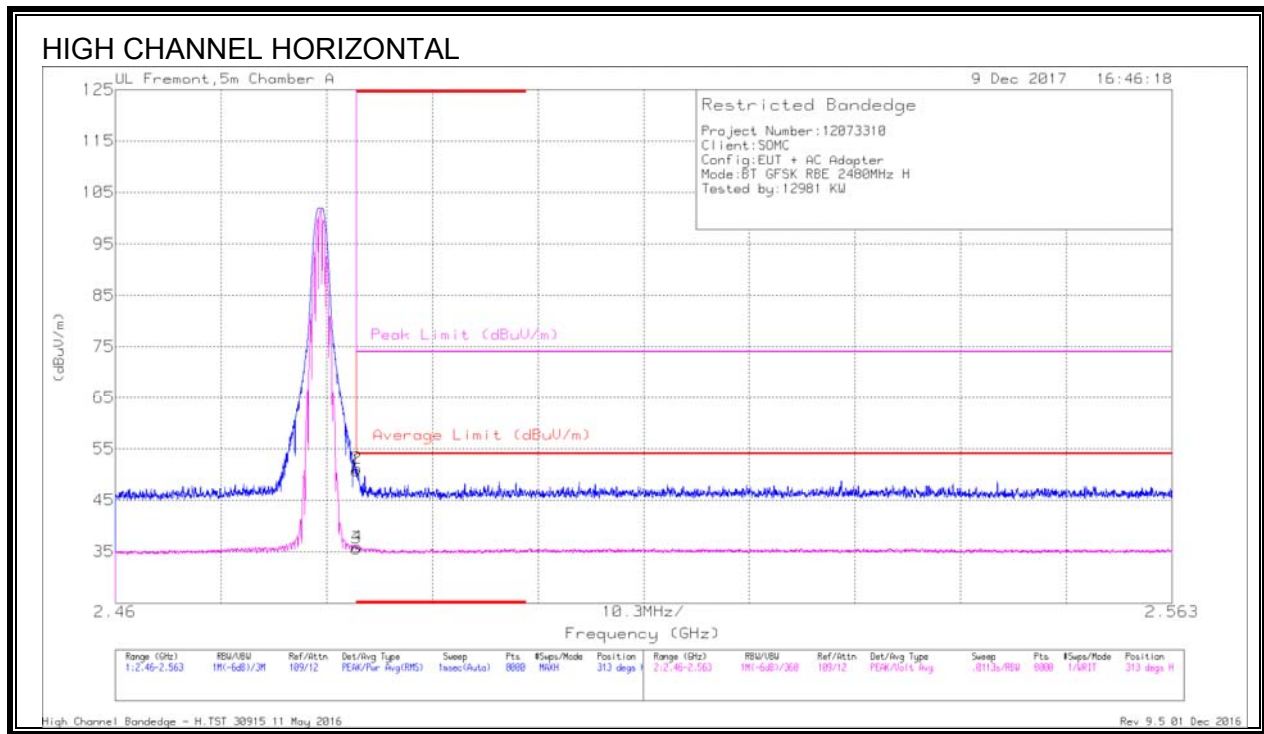
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Filtr/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	* 2.39	35.74	Pk	31.8	-23.3	44.24	-	-	74	-29.76	200	161	V
2	* 2.36	38.72	Pk	31.6	-23.4	46.92	-	-	74	-27.08	200	161	V
3	* 2.39	25.22	VA1T	31.8	-23.3	33.72	54	-20.28	-	-	200	161	V
4	* 2.389	25.9	VA1T	31.8	-23.3	34.4	54	-19.6	-	-	200	161	V

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

Pk - Peak detector

8.2.2. AUTHORIZED BANDEDGE (HIGH CHANNEL)



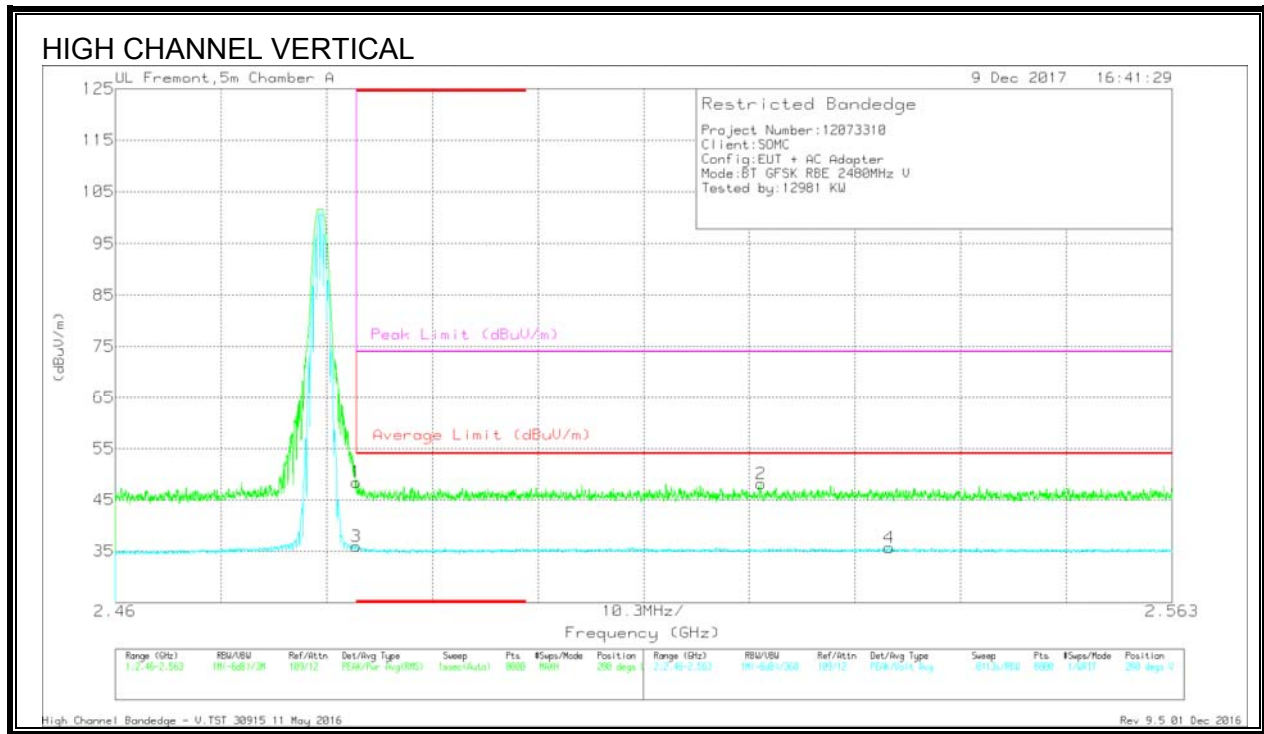
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Ftr/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	41.63	Pk	32.3	-23.2	50.73	-	-	74	-23.27	313	353	H
2	* 2.484	42.08	Pk	32.3	-23.2	51.18	-	-	74	-22.82	313	353	H
3	* 2.484	26.5	VA1T	32.3	-23.2	35.6	54	-18.4	-	-	313	353	H
4	* 2.484	26.82	VA1T	32.3	-23.2	35.92	54	-18.08	-	-	313	353	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



Trace Markers

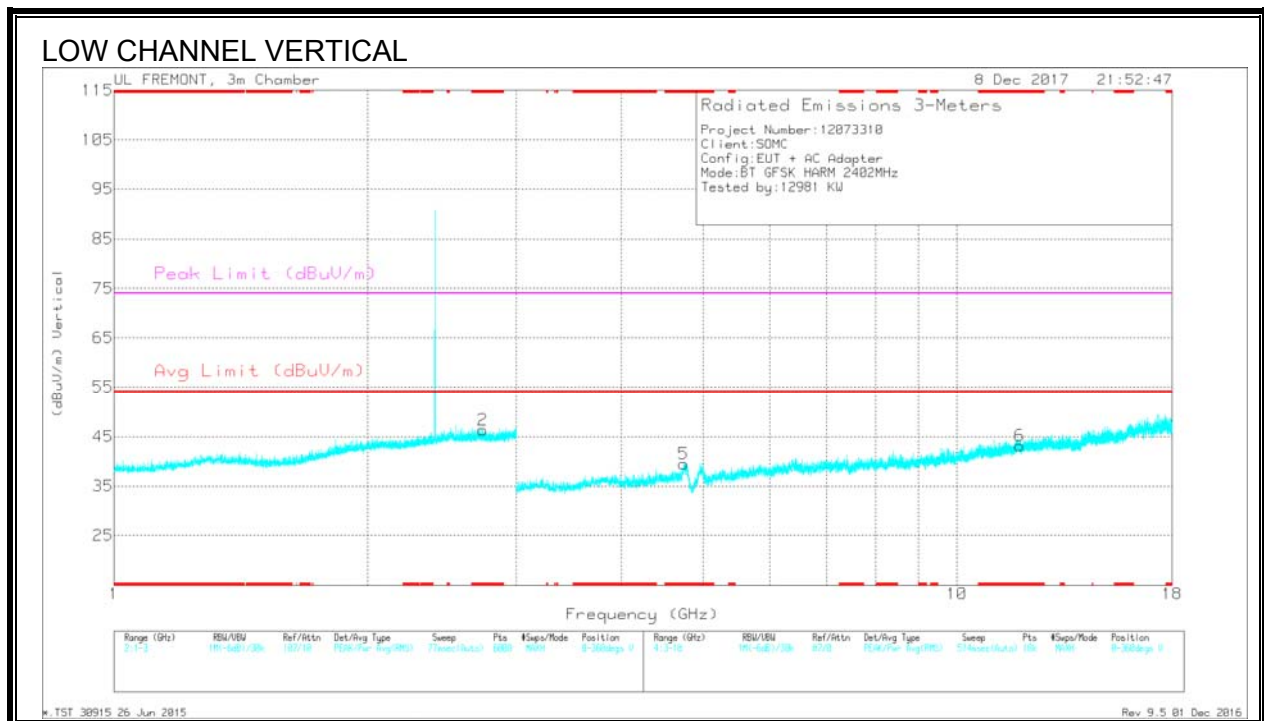
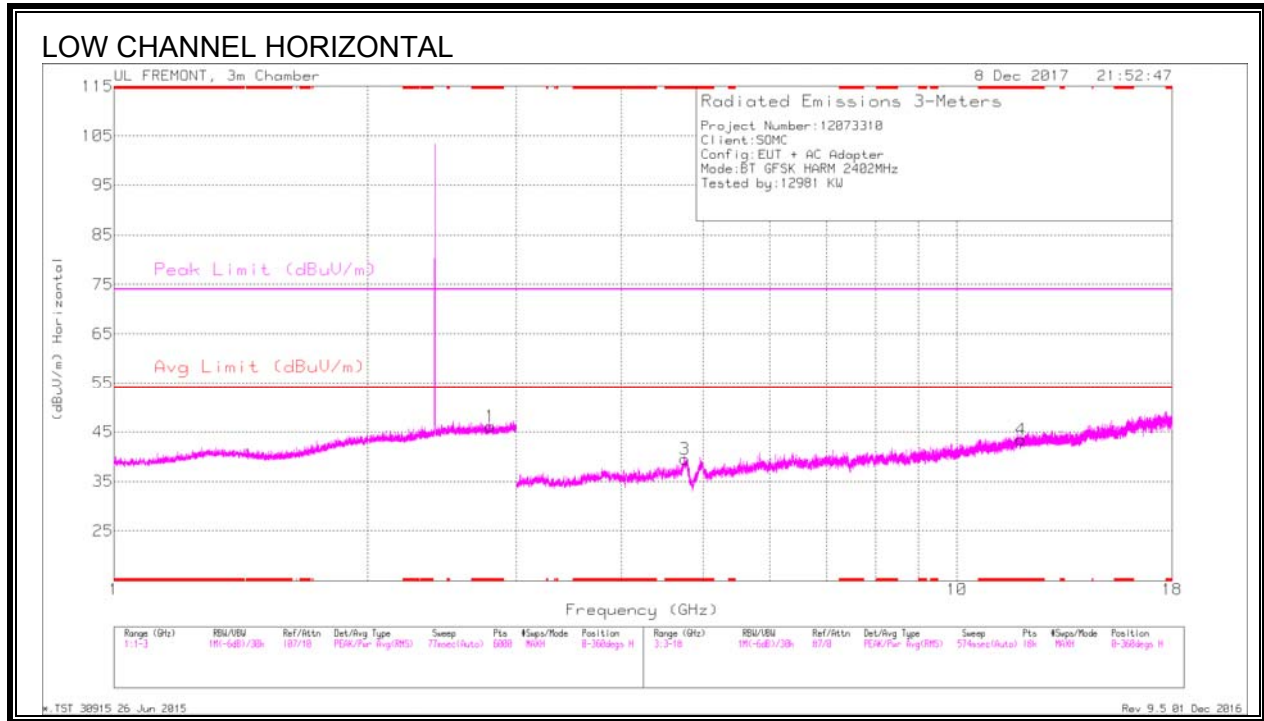
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	39.33	Pk	32.3	-23.2	48.43	-	-	74	-25.57	280	361	V
3	* 2.484	26.79	VA1T	32.3	-23.2	35.89	54	-18.11	-	-	280	361	V
2	2.523	38.94	Pk	32.4	-23.2	48.14	-	-	74	-25.86	280	361	V
4	2.535	26.34	VA1T	32.4	-23.1	35.64	54	-18.36	-	-	280	361	V

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

Pk - Peak detector

VA1T - FHSS: Linear Voltage Average $V_B = 1/T_{on}$ where: T_{on} is transmit duration

8.2.3. HARMONICS AND SPURIOUS EMISSIONS



Radiated Emissions

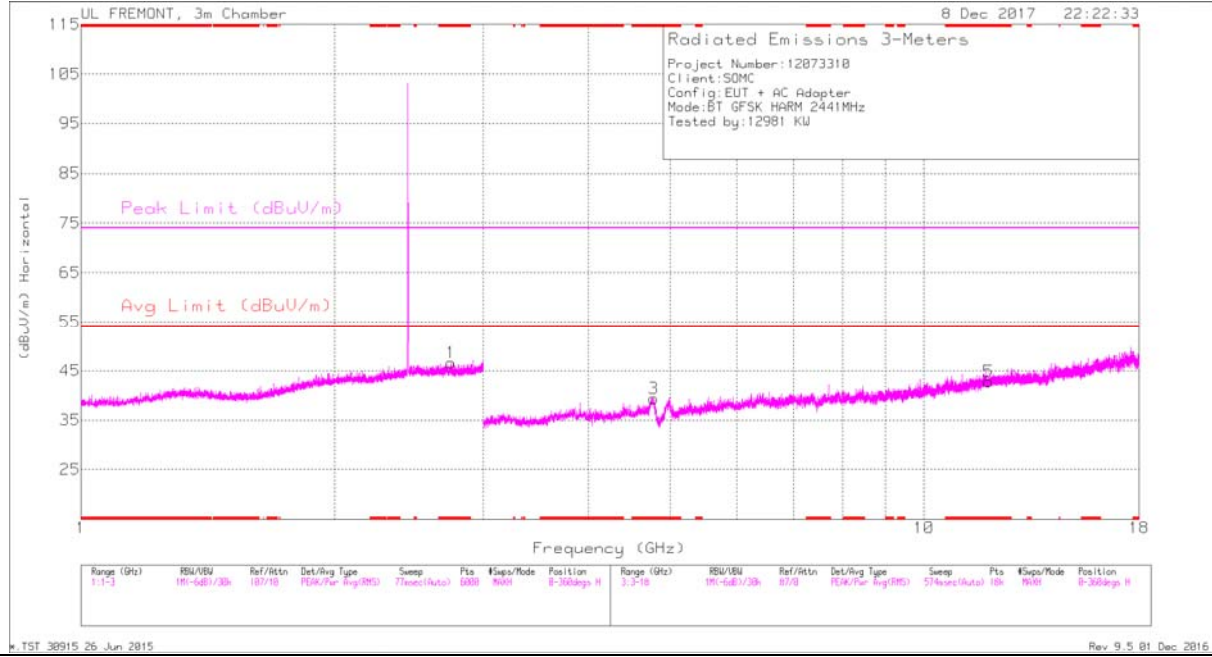
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 2.796	38.5	PKFH	32.3	-21	49.8	-	-	74	-24.2	274	118	H
* 2.797	26.87	VA1T	32.3	-21	38.17	54	-15.83	-	-	274	118	H
* 2.737	39.29	PKFH	32.4	-21.2	50.49	-	-	74	-23.51	222	168	V
* 2.737	26.96	VA1T	32.4	-21.2	38.16	54	-15.84	-	-	222	168	V
* 4.752	40.1	PKFH	34	-28.7	45.4	-	-	74	-28.6	269	119	H
* 4.752	28.4	VA1T	34	-28.7	33.7	54	-20.3	-	-	269	119	H
* 11.912	33.39	PKFH	38.6	-23.5	48.49	-	-	74	-25.51	271	208	H
* 11.914	21.74	VA1T	38.6	-23.5	36.84	54	-17.16	-	-	271	208	H
* 4.742	39.35	PKFH	34	-28.4	44.95	-	-	74	-29.05	139	142	V
* 4.745	27.53	VA1T	34	-28.3	33.23	54	-20.77	-	-	139	142	V
* 11.869	34.82	PKFH	38.5	-23.4	49.92	-	-	74	-24.08	237	154	V
* 11.87	21.6	VA1T	38.5	-23.4	36.7	54	-17.3	-	-	237	154	V

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

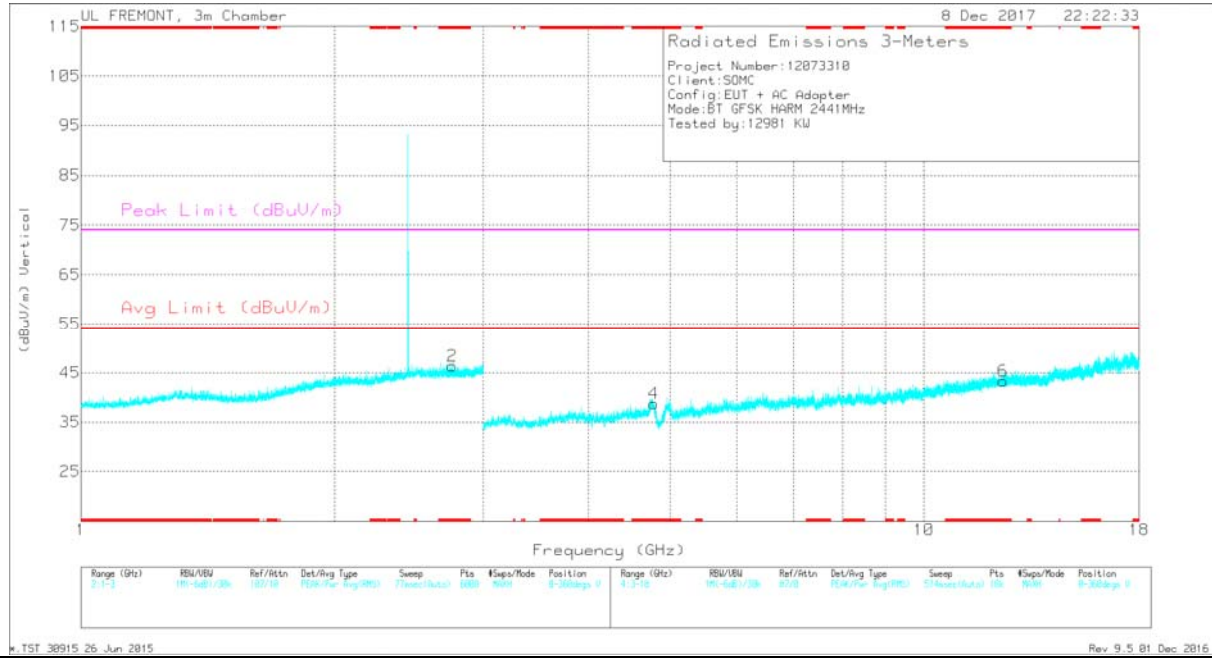
PKFH - FHSS: RB=100k/1MHz VB=3 x RB, Peak

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

MID CHANNEL HORIZONTAL



MID CHANNEL VERTICAL



Radiated Emissions

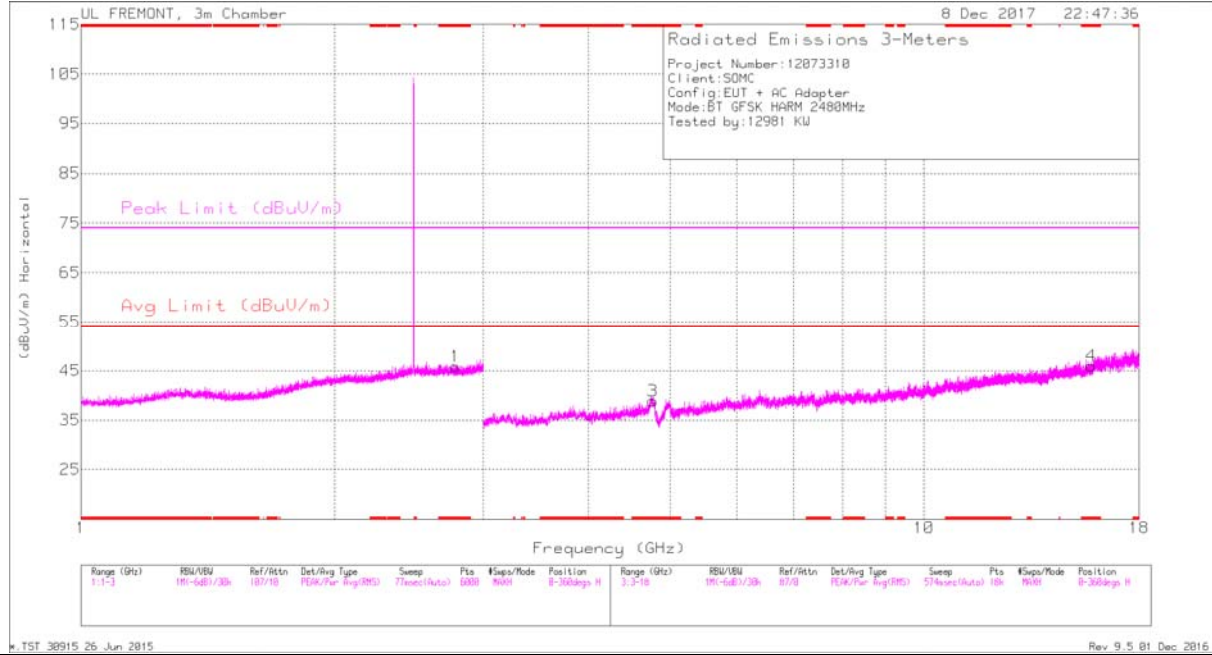
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 2.749	39.28	PKFH	32.4	-21.1	50.58	-	-	74	-23.42	78	154	H
* 2.748	26.74	VA1T	32.4	-21.1	38.04	54	-15.96	-	-	78	154	H
* 2.759	40.27	PKFH	32.4	-21.2	51.47	-	-	74	-22.53	113	191	V
* 2.758	26.94	VA1T	32.4	-21.2	38.14	54	-15.86	-	-	113	191	V
* 4.783	39.26	PKFH	34	-28.2	45.06	-	-	74	-28.94	155	221	H
* 4.783	27.85	VA1T	34	-28.2	33.65	54	-20.35	-	-	155	221	H
* 11.929	34.13	PKFH	38.6	-23.8	48.93	-	-	74	-25.07	99	129	H
* 11.929	21.86	VA1T	38.6	-23.8	36.66	54	-17.34	-	-	99	129	H
* 4.78	39.93	PKFH	34	-28.4	45.53	-	-	74	-28.47	239	177	V
* 4.782	27.74	VA1T	34	-28.3	33.44	54	-20.56	-	-	239	177	V
* 12.411	34.25	PKFH	38.9	-23.9	49.25	-	-	74	-24.75	257	182	V
* 12.411	22.28	VA1T	38.9	-23.9	37.28	54	-16.72	-	-	257	182	V

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

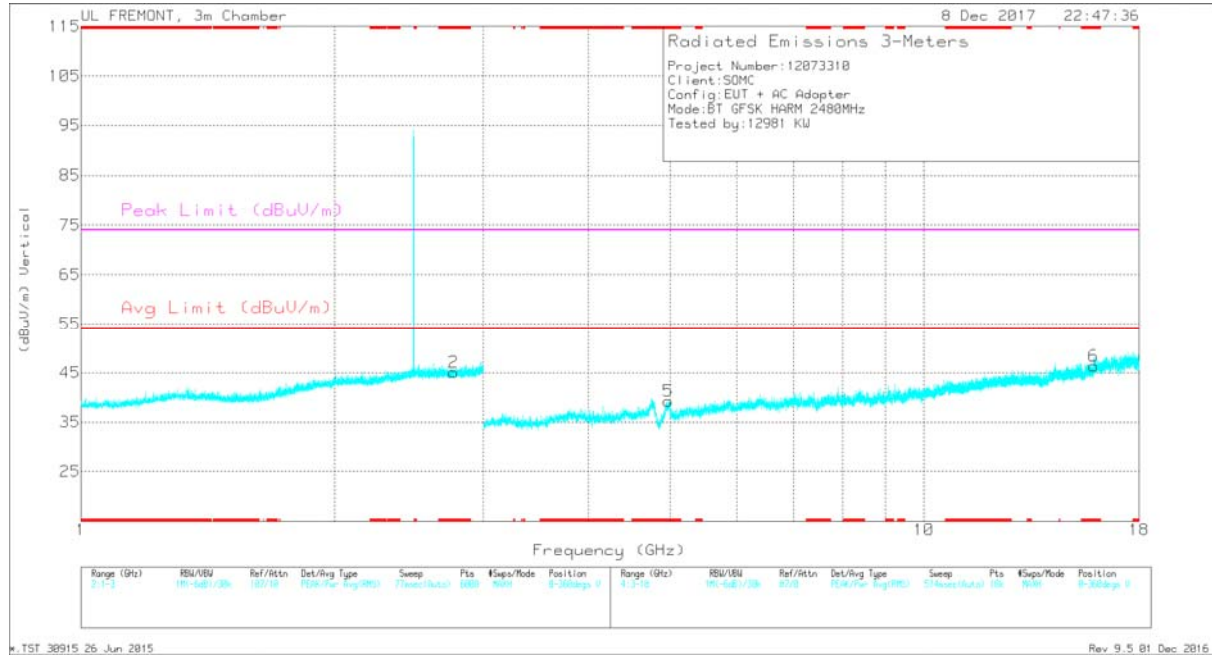
PKFH - FHSS: RB=100k/1MHz VB=3 x RB, Peak

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

HIGH CHANNEL HORIZONTAL



HIGH CHANNEL VERTICAL



Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 2.78	39.38	PKFH	32.3	-21	50.68	-	-	74	-23.32	117	167	H
* 2.783	26.72	VA1T	32.3	-21.1	37.92	54	-16.08	-	-	117	167	H
* 2.764	39.92	PKFH	32.4	-21.1	51.22	-	-	74	-22.78	56	124	V
* 2.764	26.64	VA1T	32.4	-21.1	37.94	54	-16.06	-	-	56	124	V
* 4.768	39.2	PKFH	34	-28.5	44.7	-	-	74	-29.3	287	183	H
* 4.766	27.88	VA1T	34	-28.5	33.38	54	-20.62	-	-	287	183	H
* 15.792	34.65	PKFH	40.3	-23.4	51.55	-	-	74	-22.45	339	259	H
* 15.793	22.57	VA1T	40.3	-23.4	39.47	54	-14.53	-	-	339	259	H
* 4.975	38.71	PKFH	34.1	-29	43.81	-	-	74	-30.19	65	155	V
* 4.976	27.24	VA1T	34.1	-28.9	32.44	54	-21.56	-	-	65	155	V
* 15.902	34.15	PKFH	40.4	-22.1	52.45	-	-	74	-21.55	112	171	V
* 15.903	21.85	VA1T	40.4	-22.3	39.95	54	-14.05	-	-	112	171	V

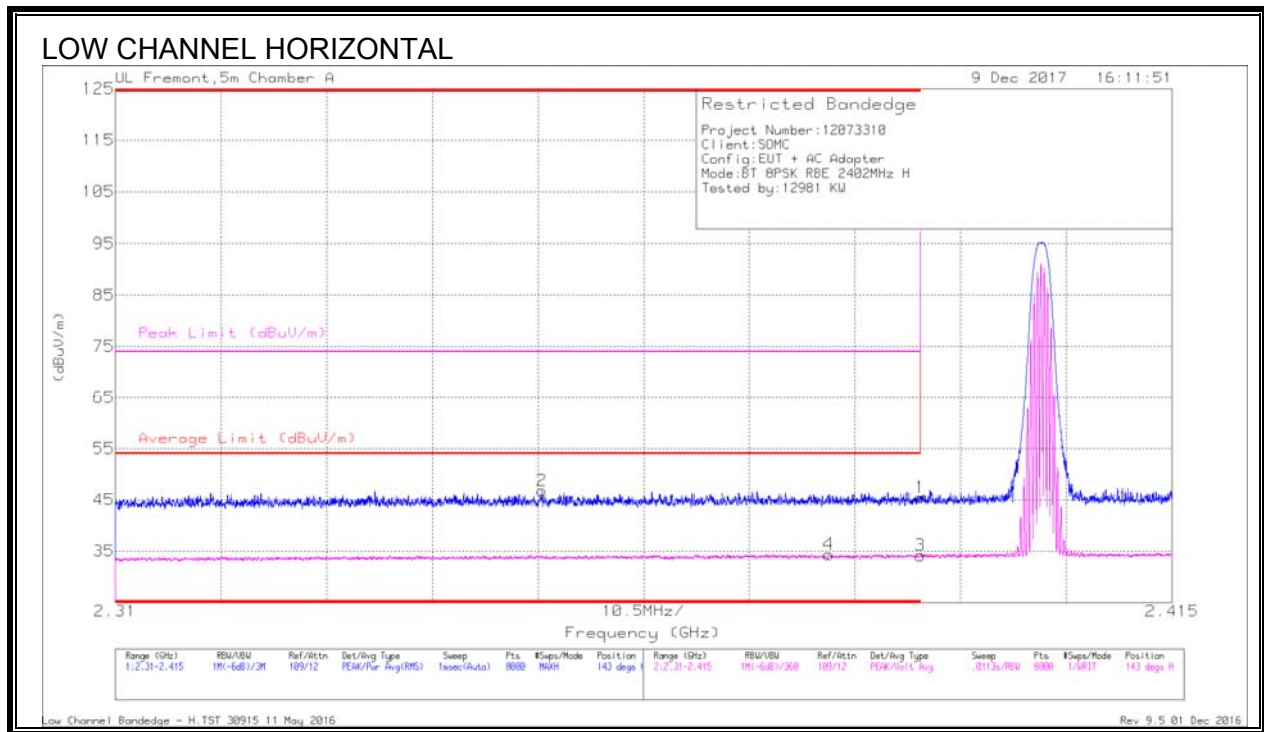
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

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

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

8.3. ENHANCED DATA RATE 8PSK MODULATION

8.3.1. RESTRICTED BANDEDGE (LOW CHANNEL)



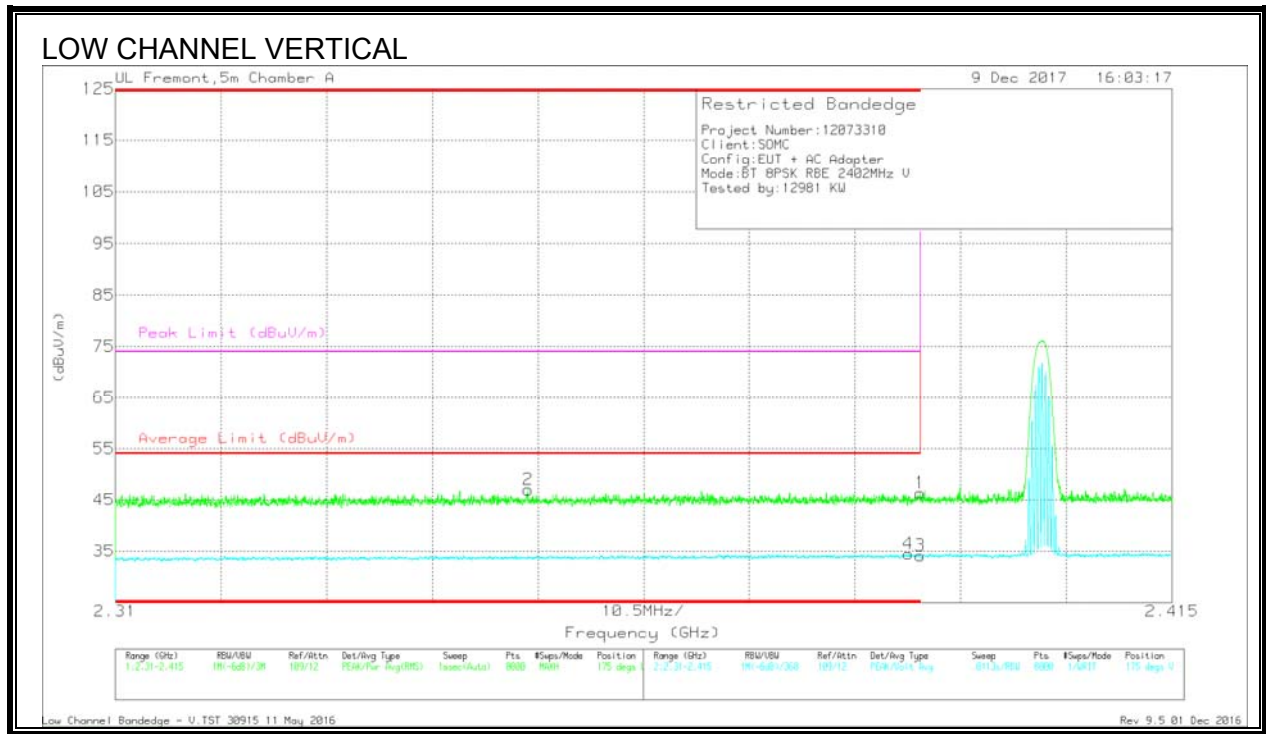
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Ftr/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	* 2.352	38.59	Pk	31.6	-23.4	46.79	-	-	74	-27.21	143	209	H
4	* 2.381	26.06	VA1T	31.7	-23.4	34.36	54	-19.64	-	-	143	209	H
1	* 2.39	36.96	Pk	31.8	-23.3	45.46	-	-	74	-28.54	143	209	H
3	* 2.39	25.65	VA1T	31.8	-23.3	34.15	54	-19.85	-	-	143	209	H

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

Pk - Peak detector

VA1T - FHSS: Linear Voltage Average $V_B = 1/T_{on}$ where: T_{on} is transmit duration



Trace Markers

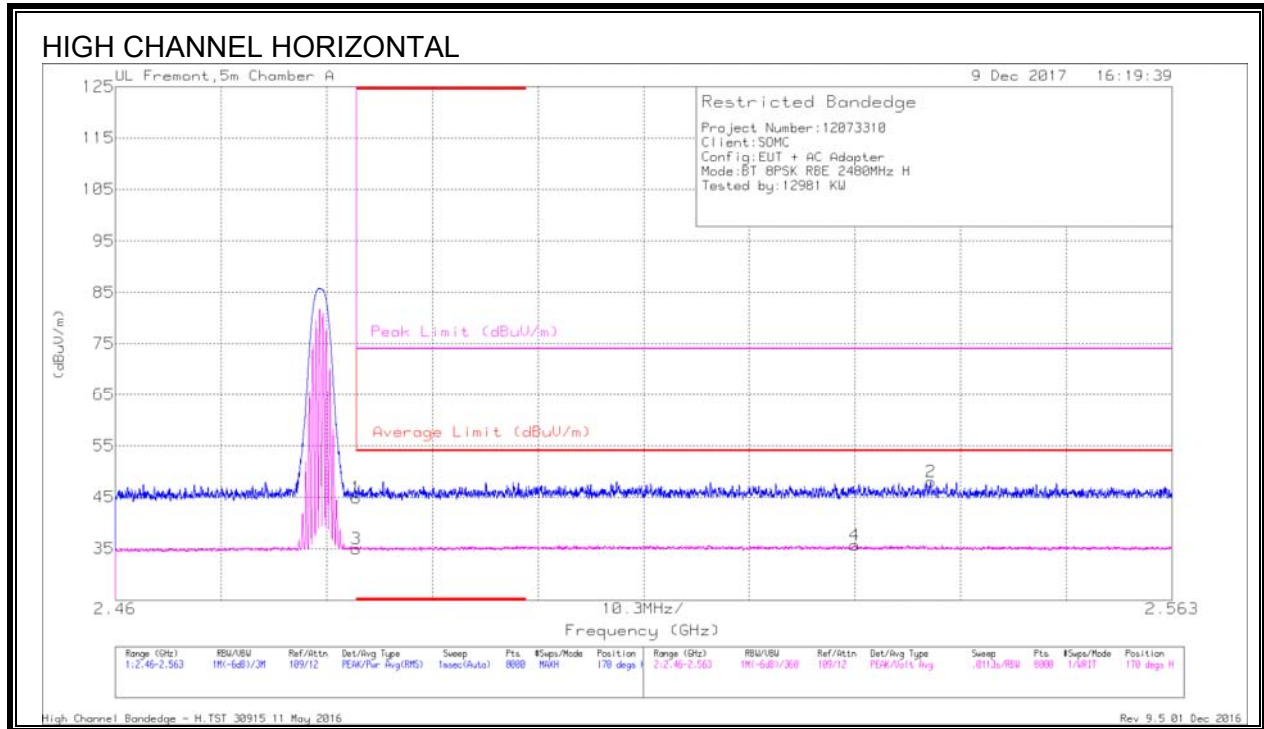
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Filtr/Pa d (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	37.82	Pk	31.8	-23.3	46.32	-	-	74	-27.68	175	187	V
2	* 2.351	38.78	Pk	31.6	-23.4	46.98	-	-	74	-27.02	175	187	V
3	* 2.39	25.62	VA1T	31.8	-23.3	34.12	54	-19.88	-	-	175	187	V
4	* 2.389	25.98	VA1T	31.8	-23.3	34.48	54	-19.52	-	-	175	187	V

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

Pk - Peak detector

VA1T - FHSS: Linear Voltage Average $V_B = 1/T_{on}$ where: T_{on} is transmit duration

8.3.2. AUTHORIZED BANDEDGE (HIGH CHANNEL)



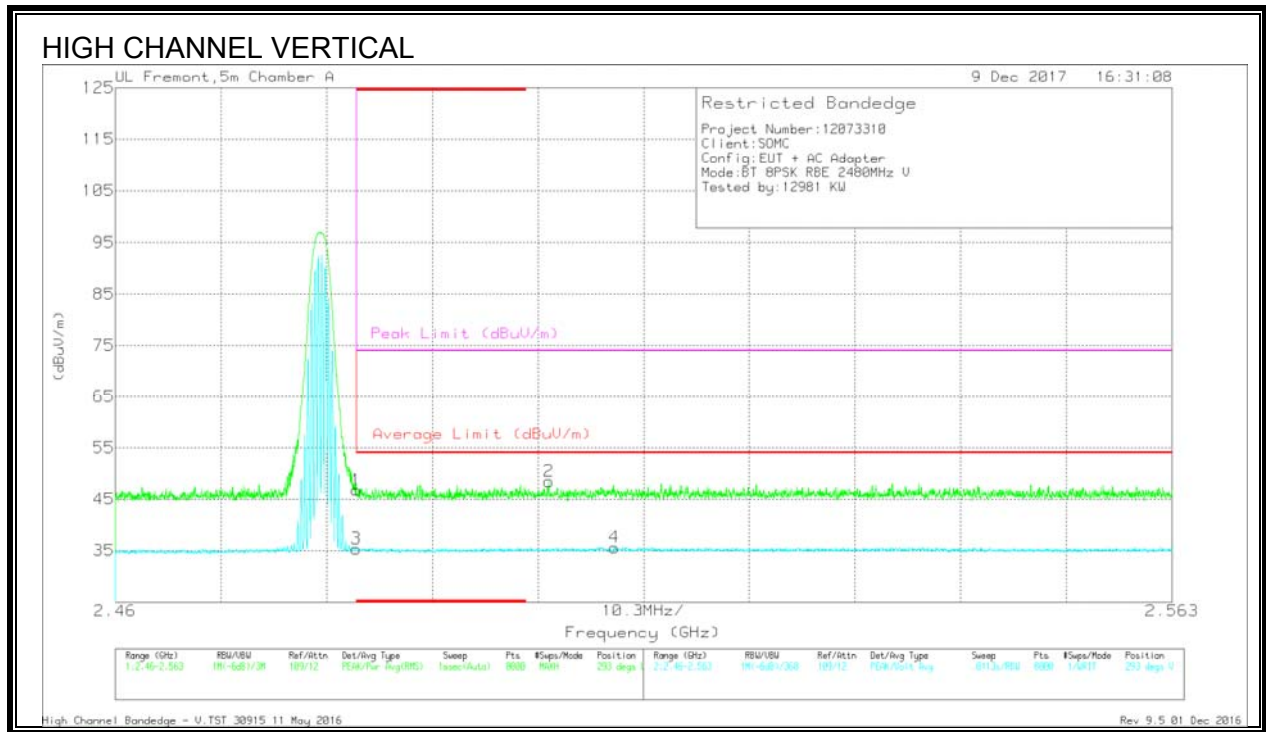
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Ftr/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	35.75	Pk	32.3	-23.2	44.85	-	-	74	-29.15	170	190	H
3	* 2.484	25.82	VA1T	32.3	-23.2	34.92	54	-19.08	-	-	170	190	H
4	2.532	26.45	VA1T	32.4	-23.2	35.65	54	-18.35	-	-	170	190	H
2	2.539	38.71	Pk	32.4	-23.1	48.01	-	-	74	-25.99	170	190	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



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AFT862 (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	* 2.484	37.68	Pk	32.3	-23.2	46.78	-	-	74	-27.22	293	352	V
3	* 2.484	26.25	VA1T	32.3	-23.2	35.35	54	-18.65	-	-	293	352	V
2	2.502	39.25	Pk	32.4	-23.2	48.45	-	-	74	-25.55	293	352	V
4	2.509	26.4	VA1T	32.4	-23.2	35.6	54	-18.4	-	-	293	352	V

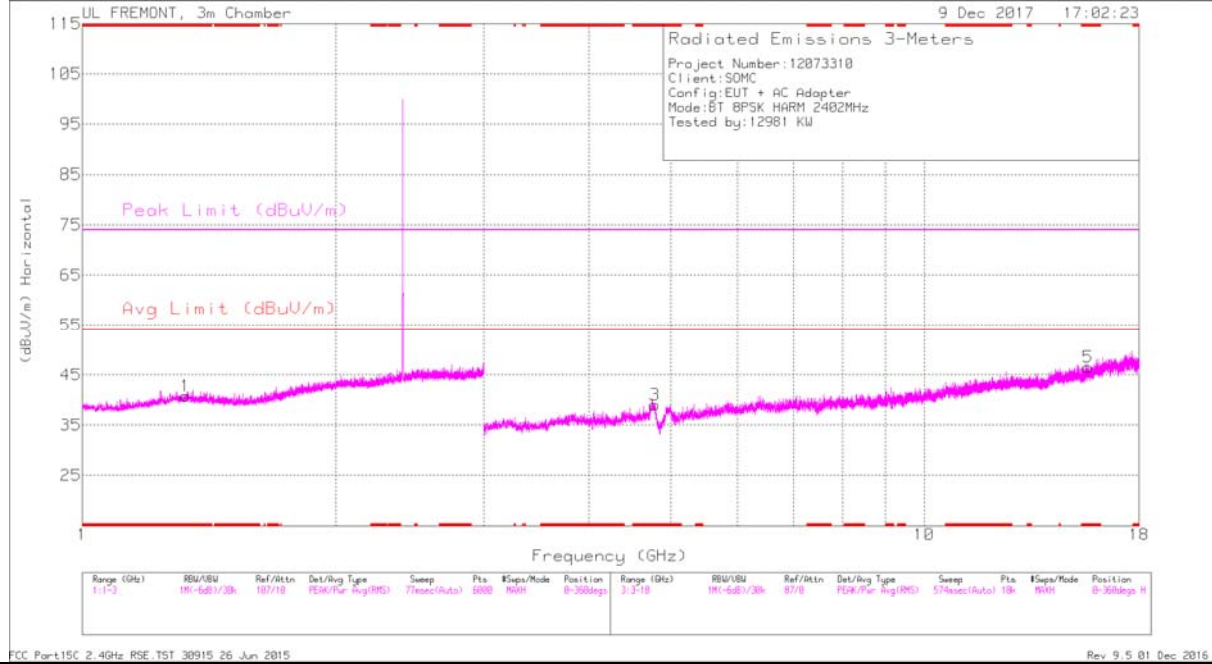
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

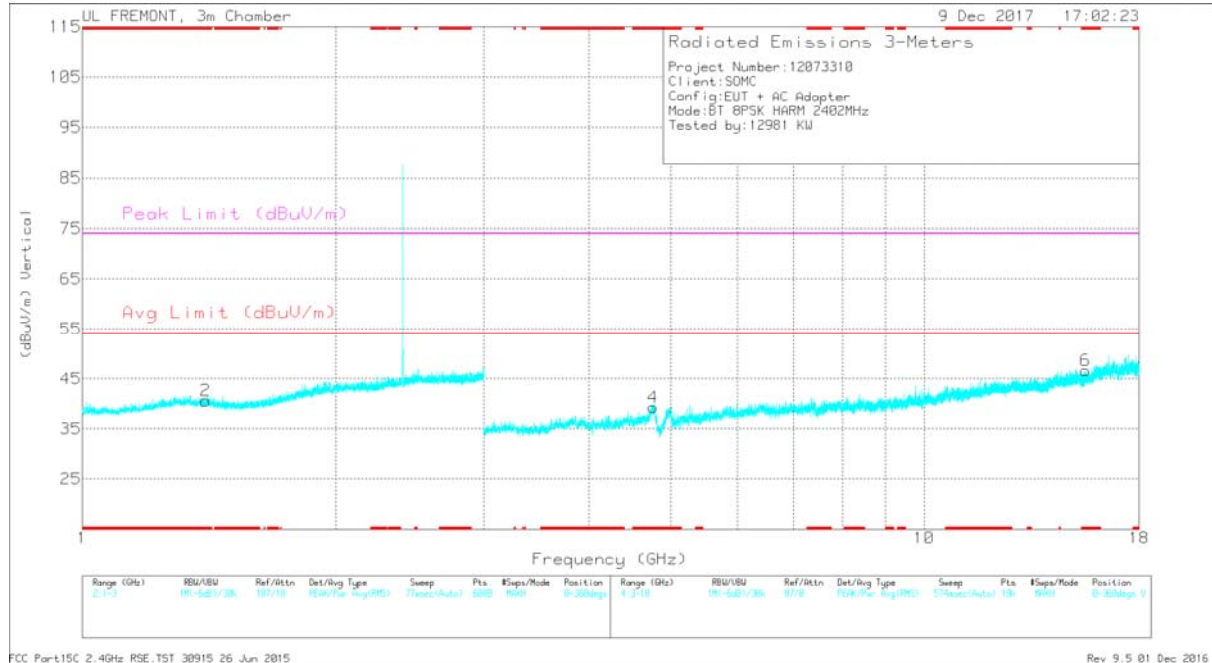
VA1T - FHSS: Linear Voltage Average $VB=1/Ton$ where: Ton is transmit duration

8.3.3. HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



LOW CHANNEL VERTICAL



Radiated Emissions

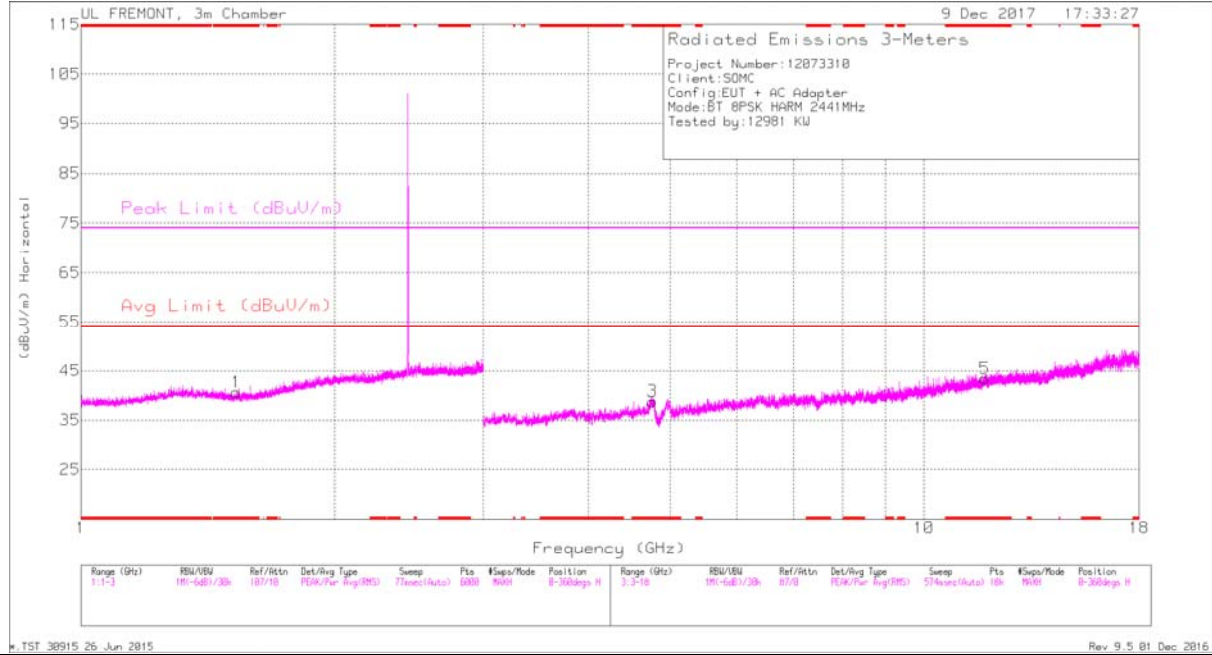
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 1.329	38.98	PKFH	29	-22.6	45.38	-	-	74	-28.62	114	134	H
* 1.327	27.88	VA1T	29	-22.6	34.28	54	-19.72	-	-	114	134	H
* 1.4	39.93	PKFH	28.8	-22.4	46.33	-	-	74	-27.67	297	159	V
* 1.402	27.84	VA1T	28.8	-22.4	34.24	54	-19.76	-	-	297	159	V
* 4.786	39.22	PKFH	34	-27.9	45.32	-	-	74	-28.68	55	172	H
* 4.785	27.13	VA1T	34	-27.9	33.23	54	-20.77	-	-	55	172	H
* 15.651	34.33	PKFH	40.2	-23.6	50.93	-	-	74	-23.07	111	164	H
* 15.652	22.94	VA1T	40.2	-23.6	39.54	54	-14.46	-	-	111	164	H
* 4.768	39.14	PKFH	34	-28.5	44.64	-	-	74	-29.36	328	223	V
* 4.766	28.02	VA1T	34	-28.5	33.52	54	-20.48	-	-	328	223	V
* 15.546	34.93	PKFH	40.1	-23.9	51.13	-	-	74	-22.87	92	103	V
* 15.545	22.89	VA1T	40.1	-23.9	39.09	54	-14.91	-	-	92	103	V

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

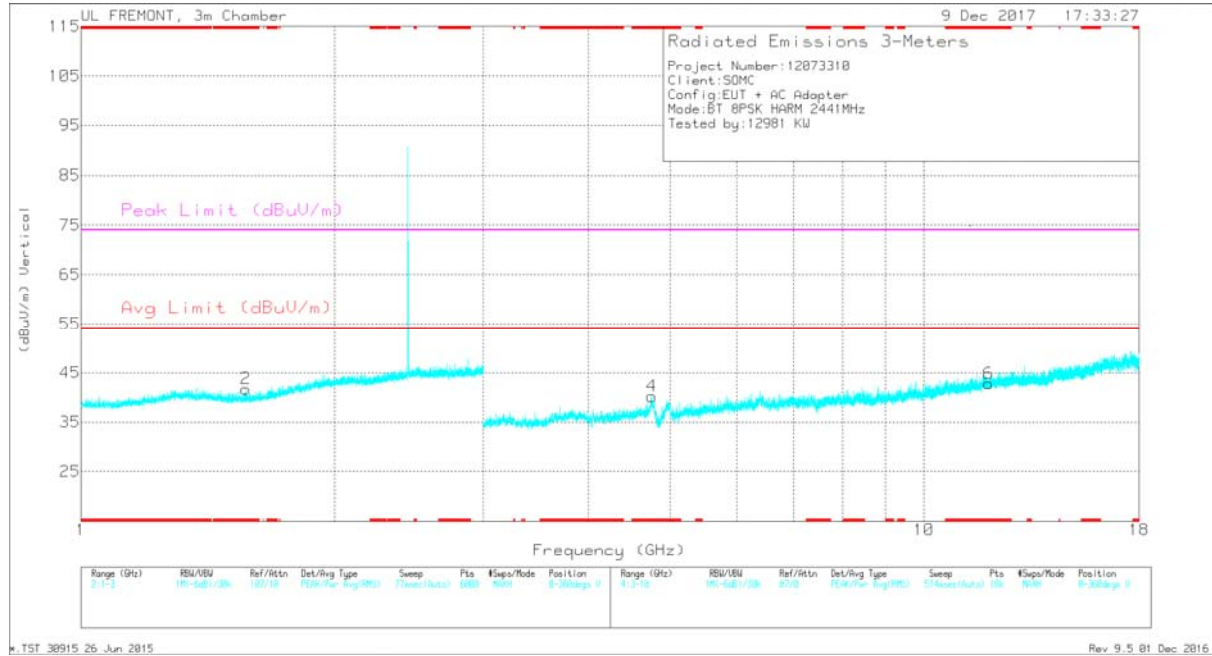
PKFH - FHSS: RB=100k/1MHz VB=3 x RB, Peak

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

MID CHANNEL HORIZONTAL



MID CHANNEL VERTICAL



Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 1.526	39.4	PKFH	28.2	-22.3	45.3	-	-	74	-28.7	222	161	H
* 1.529	27.84	VA1T	28.2	-22.3	33.74	54	-20.26	-	-	222	161	H
* 1.527	39.34	PKFH	28.2	-22.3	45.24	-	-	74	-28.76	351	113	H
* 1.528	27.68	VA1T	28.2	-22.3	33.58	54	-20.42	-	-	351	113	H
* 1.568	39.2	PKFH	28.2	-22.2	45.2	-	-	74	-28.8	45	187	V
* 1.568	27.61	VA1T	28.2	-22.2	33.61	54	-20.39	-	-	45	187	V
* 4.761	38.86	PKFH	34	-28.6	44.26	-	-	74	-29.74	97	262	H
* 4.758	27.37	VA1T	34	-28.6	32.77	54	-21.23	-	-	97	262	H
* 11.809	33.39	PKFH	38.5	-22.8	49.09	-	-	74	-24.91	116	169	H
* 11.81	21.27	VA1T	38.5	-22.8	36.97	54	-17.03	-	-	116	169	H
* 4.754	40.25	PKFH	34	-28.6	45.65	-	-	74	-28.35	326	188	V
* 4.753	28.27	VA1T	34	-28.6	33.67	54	-20.33	-	-	326	188	V
* 11.93	34.51	PKFH	38.6	-23.8	49.31	-	-	74	-24.69	78	325	V
* 11.929	21.87	VA1T	38.6	-23.8	36.67	54	-17.33	-	-	78	325	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

UL FREMONT, 3m Chamber

9 Dec 2017 18:23:29

Radiated Emissions 3-Meters

Project Number: 12073318
 Client: SOMC
 Config: EUT + AC Adapter
 Mode: BT 8PSK HARM 2400MHz
 Tested by: 12981 KW

Peak Limit (dBU/m)

Avg Limit (dBU/m)

(dBU/m) Horizontal

Frequency (GHz)

Range (GHz)	RBW/VBW	Ref/Att'n	Det/Rvg Type	Sweep	Pls	#Sps/Mode	Position	Range (GHz)	RBW/VBW	Ref/Att'n	Det/Rvg Type	Sweep	Pls	#Sps/Mode	Position
1-13	1Hz-6dB/30k	107/10	PEAK/Pre Avg(RMS)	77sec(Auto)	6000	1600	0-360deg H	1-13	1Hz-6dB/30k	107/10	PEAK/Pre Avg(RMS)	57sec(Auto)	10k	1600	0-360deg H

TST 30915 26 Jun 2015

Rev 9.5 B1 Dec 2015

UL FREMONT, 3m Chamber

9 Dec 2017 18:23:29

Radiated Emissions 3-Meters

Project Number: 12073318
Client: SGM
Config: EUT + AC Adapter
Mode: BT BPSK HARM 2400MHz
Tested by: 12981 KW

Peak Limit (dBU/m)

Avg Limit (dBU/m)

(dBU/m) Vertical

Frequency (GHz)

Range (GHz)	RBW/VBW	Ref/Attn	Det/Avg Type	Sweep	Pts	#Spts/Mode	Position	Range (GHz)	RBW/VBW	Ref/Attn	Det/Avg Type	Sweep	Pts	#Spts/Mode	Position
2-18	100-Hz/30k	180/10	Peak/Fac Avg (PBD)	77ms/100Hz	1000	2000	8-300deg V	2-18	100-Hz/30k	180/10	Peak/Fac Avg (PBD)	57ms/100Hz	100	2000	8-300deg V

* TST 30915 26 Jun 2015

Rev 9.5 01 Dec 2017

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 1.52	39.02	PKFH	28.2	-22.2	45.02	-	-	74	-28.98	312	168	H
* 1.521	27.83	VA1T	28.2	-22.2	33.83	54	-20.17	-	-	312	168	H
* 1.457	39.76	PKFH	28.4	-22.2	45.96	-	-	74	-28.04	267	361	V
* 1.456	27.7	VA1T	28.4	-22.2	33.9	54	-20.1	-	-	267	361	V
* 4.753	40.74	PKFH	34	-28.6	46.14	-	-	74	-27.86	118	271	H
* 4.752	28.25	VA1T	34	-28.7	33.55	54	-20.45	-	-	118	271	H
* 12.179	33.69	PKFH	38.8	-23.9	48.59	-	-	74	-25.41	54	119	H
* 12.181	22.16	VA1T	38.8	-23.9	37.06	54	-16.94	-	-	54	119	H
* 4.763	40.08	PKFH	34	-28.6	45.48	-	-	74	-28.52	79	211	V
* 4.764	27.63	VA1T	34	-28.6	33.03	54	-20.97	-	-	79	211	V
* 12.115	34.86	PKFH	38.8	-23.5	50.16	-	-	74	-23.84	182	186	V
* 12.116	22.03	VA1T	38.8	-23.5	37.33	54	-16.67	-	-	182	186	V

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

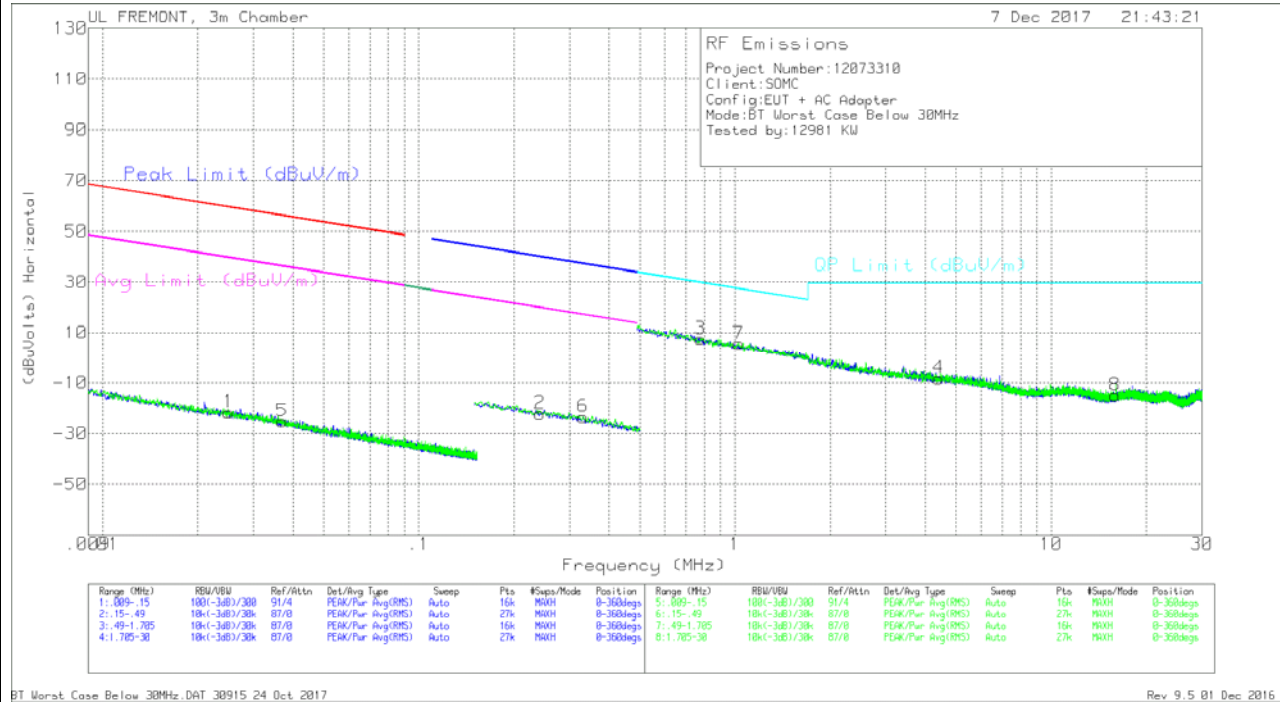
PKFH - FHSS: RB=100k/1MHz VB=3 x RB, Peak

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

8.4. WORST-CASE BELOW 30 MHz

SPURIOUS EMISSIONS BELOW 30 MHz (WORST-CASE CONFIGURATION)

FACE ON AND FACE OFF PLOTS



NOTE: KDB 414788 OATS and Chamber Correlation Justification

- Based 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.
- OATs and chamber correlation testing had been performed and chamber measured test result is the worst case test result.

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Cbl (dB)	Dist Corr 300m	Corrected Reading (dBuVolts)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
1	.02503	43.13	Pk	15.1	.1	-80	-21.67	59.62	-81.29	39.62	-61.29	-	-	-	-	0-360
5	.03699	39.67	Pk	15.1	.1	-80	-25.13	56.22	-81.35	36.22	-61.35	-	-	-	-	0-360
2	.24181	43.85	Pk	13.9	.1	-80	-22.15	-	-	-	-	39.95	-62.1	19.95	-42.1	0-360
6	.33086	42.67	Pk	13.8	.1	-80	-23.43	-	-	-	-	37.22	-60.65	17.22	-40.65	0-360

Pk - Peak detector

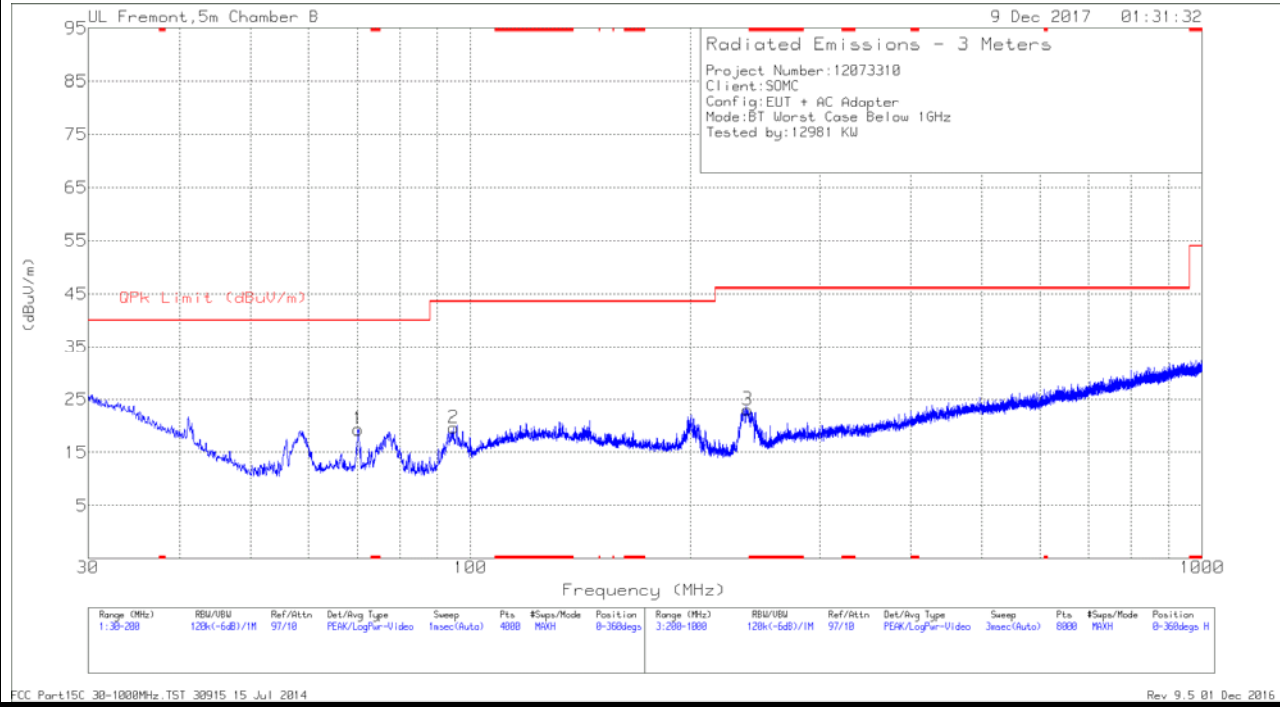
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Cbl (dB)	Dist Corr 30m	Corrected Reading (dBuVolts)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
3	.7766	33.53	Pk	14	.1	-40	7.63	29.81	-22.18	0-360
7	1.02717	31.24	Pk	14.3	.2	-40	5.74	27.39	-21.65	0-360
4	4.40465	16.93	Pk	14.5	.3	-40	-8.27	29.5	-37.77	0-360
8	15.94837	10.04	Pk	14.4	.6	-40	-14.96	29.5	-44.46	0-360

Pk - Peak detector

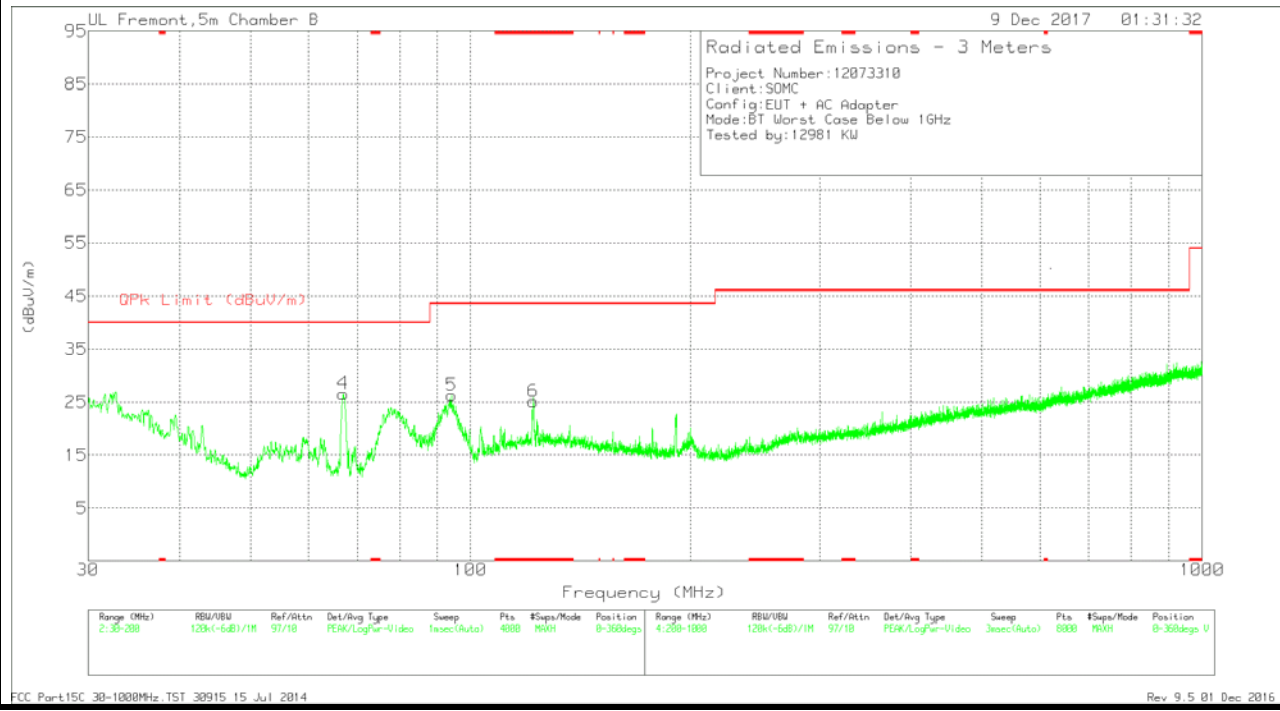
8.5. WORST-CASE BELOW 1 GHz

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

HORIZONTAL PLOT



VERTICAL PLOT



DATA

Trace Markers

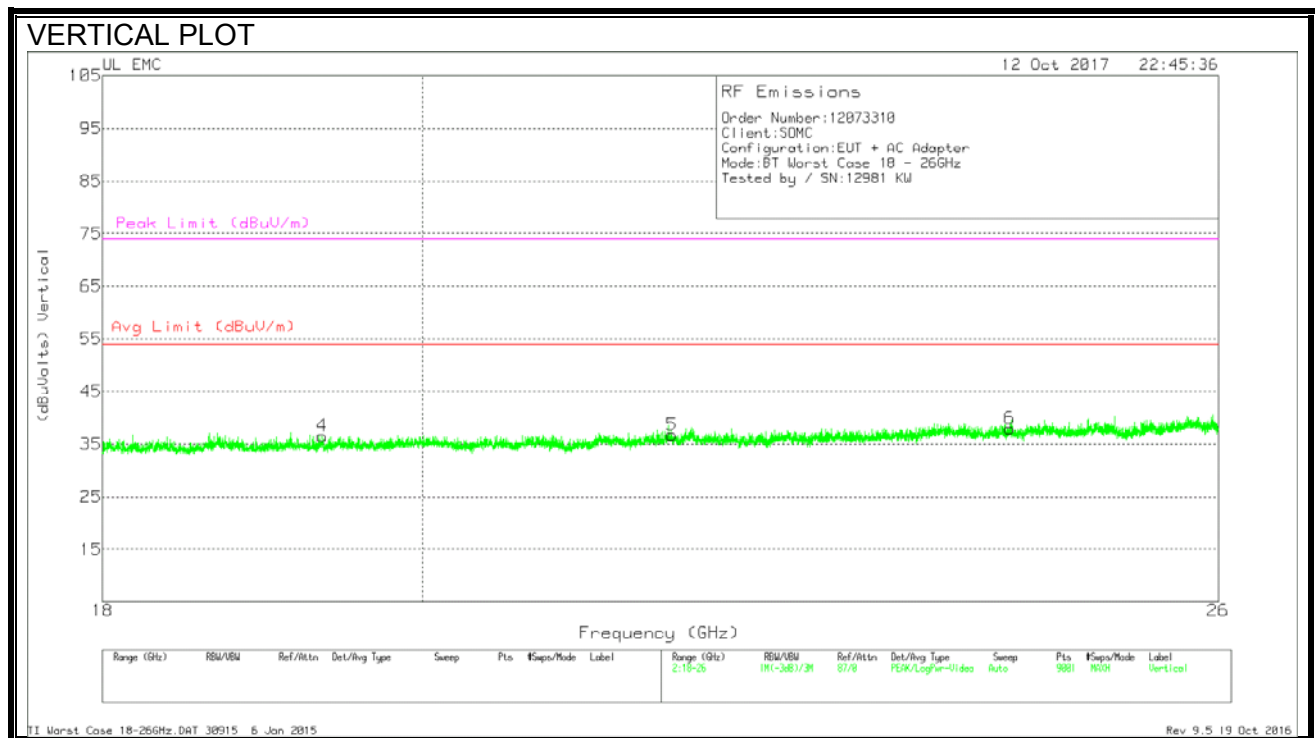
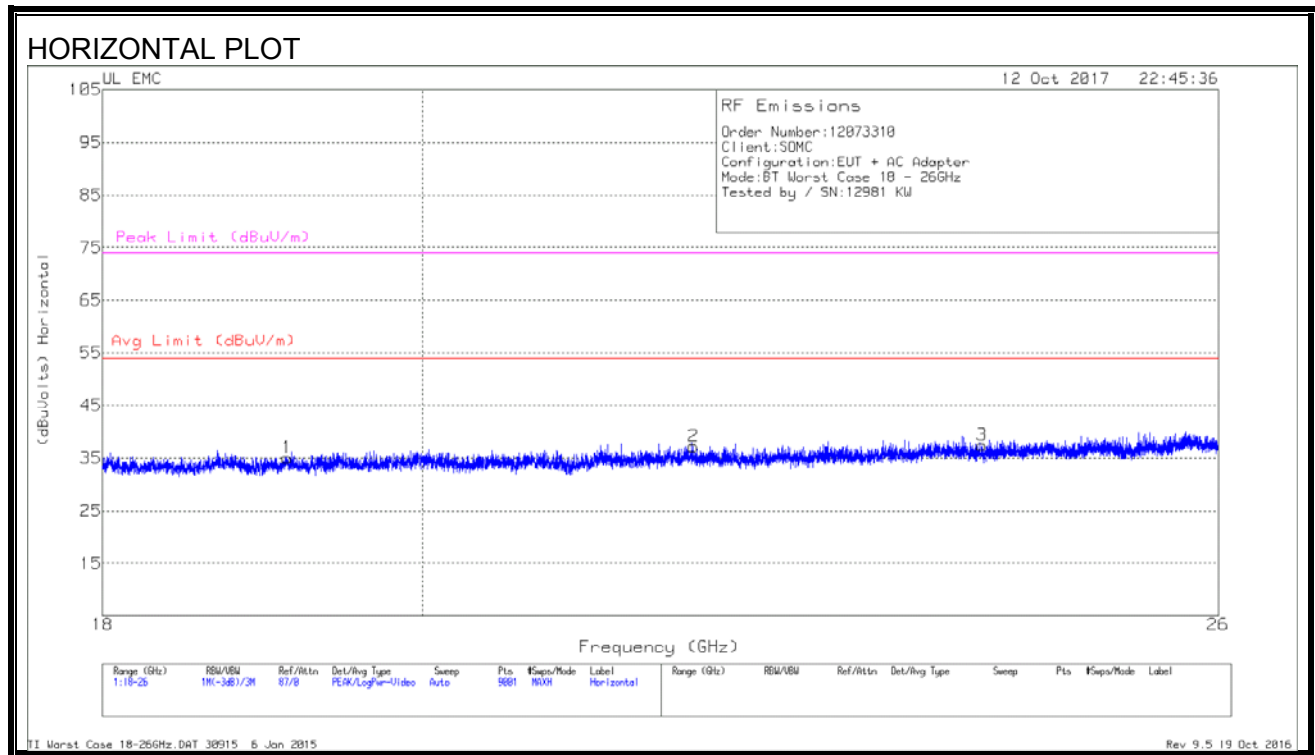
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T899 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
6	* 121.7812	35.15	Pk	17.7	-27.7	25.15	43.52	-18.37	0-360	100	V
4	66.9846	42.77	Pk	12.1	-28.3	26.57	40	-13.43	0-360	100	V
1	70.2579	35.45	Pk	12.1	-28.2	19.35	40	-20.65	0-360	400	H
5	94.2341	41.67	Pk	12.6	-28	26.27	43.52	-17.25	0-360	100	V
2	94.8293	34.83	Pk	12.8	-28	19.63	43.52	-23.89	0-360	300	H
3	239.1051	34.05	Pk	15.4	-26.4	23.05	46.02	-22.97	0-360	100	H

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

Pk - Peak detector

8.6. WORST-CASE ABOVE 18 GHz

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



Data

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	T89 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	19.129	36.82	Pk	32.2	-24.5	-9.5	35.02	54	-18.98	74	-38.98
2	21.87	38.12	Pk	33.3	-24.7	-9.5	37.22	54	-16.78	74	-36.78
3	24.054	38.04	Pk	33.3	-24.4	-9.5	37.44	54	-16.56	74	-36.56
4	19.351	38.34	Pk	32.4	-24.7	-9.5	36.54	54	-17.46	74	-37.46
5	21.716	37.76	Pk	33.3	-24.8	-9.5	36.76	54	-17.24	74	-37.24
6	24.275	37.94	Pk	33.6	-24.1	-9.5	37.94	54	-16.06	74	-36.06

Pk - Peak detector

9. AC POWER LINE CONDUCTED EMISSIONS

LIMITS

FCC §15.207 (a)

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

LINE 1 RESULTS



WORST EMISSIONS

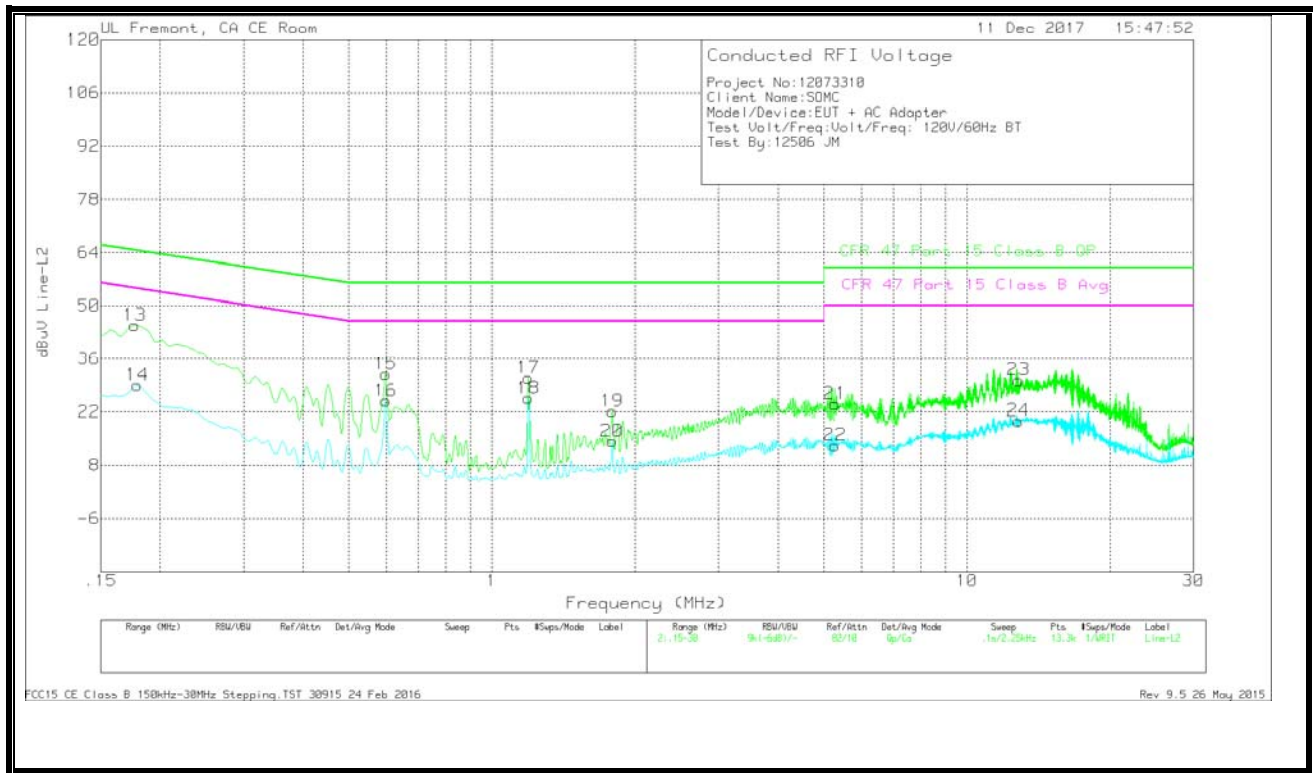
Range 1: Line-L1 .15 - 30MHz

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)M argin (dB)
1	.18375	34.89	Qp	0	0	10.1	44.99	64.31	-19.32	-	-
2	.17925	19.28	Ca	0	0	10.1	29.38	-	-	54.52	-25.14
3	.5955	21.7	Qp	0	0	10.1	31.8	56	-24.2	-	-
4	.5955	15.13	Ca	0	0	10.1	25.23	-	-	46	-20.77
5	1.19175	20.01	Qp	0	.1	10.1	30.21	56	-25.79	-	-
6	1.19175	15.02	Ca	0	.1	10.1	25.22	-	-	46	-20.78
7	1.79025	8.9	Qp	0	.1	10.1	19.1	56	-36.9	-	-
8	1.788	4.44	Ca	0	.1	10.1	14.64	-	-	46	-31.36
9	5.3115	18.76	Qp	0	.1	10.2	29.06	60	-30.94	-	-
10	5.3115	6.73	Ca	0	.1	10.2	17.03	-	-	50	-32.97
11	12.78375	17.18	Qp	.1	.2	10.2	27.68	60	-32.32	-	-
12	12.78825	5.11	Ca	.1	.2	10.2	15.61	-	-	50	-34.39

Qp - Quasi-Peak detector

Ca - CISPR average detection

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)M argin (dB)
13	.177	34.8	Qp	0	0	10.1	44.9	64.63	-19.73	-	-
14	.17925	18.87	Ca	0	0	10.1	28.97	-	-	54.52	-25.55
15	.59775	21.76	Qp	0	0	10.1	31.86	56	-24.14	-	-
16	.59775	14.73	Ca	0	0	10.1	24.83	-	-	46	-21.17
17	1.194	20.64	Qp	0	.1	10.1	30.84	56	-25.16	-	-
18	1.194	15.34	Ca	0	.1	10.1	25.54	-	-	46	-20.46
19	1.79025	11.94	Qp	0	.1	10.1	22.14	56	-33.86	-	-
20	1.79025	4.06	Ca	0	.1	10.1	14.26	-	-	46	-31.74
21	5.28	13.74	Qp	0	.1	10.2	24.04	60	-35.96	-	-
22	5.27775	2.85	Ca	0	.1	10.2	13.15	-	-	50	-36.85
23	12.8445	19.77	Qp	.1	.2	10.2	30.27	60	-29.73	-	-
24	12.8445	9.11	Ca	.1	.2	10.2	19.61	-	-	50	-30.39

Qp - Quasi-Peak detector

Ca - CISPR average detection