

9. RADIATED TEST RESULTS

9.1. 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
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. 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 band edge measurements above 1 GHz the resolution bandwidth is set to 1 MHz, then the video bandwidth is set to 1 MHz for peak measurements and 1/T (on time) for average measurement.

$GFSK = 1/T = 1 / 0.0029S = 350Hz.$

The spectrum from 1GHzHz to 26 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in the 2.4 GHz band.

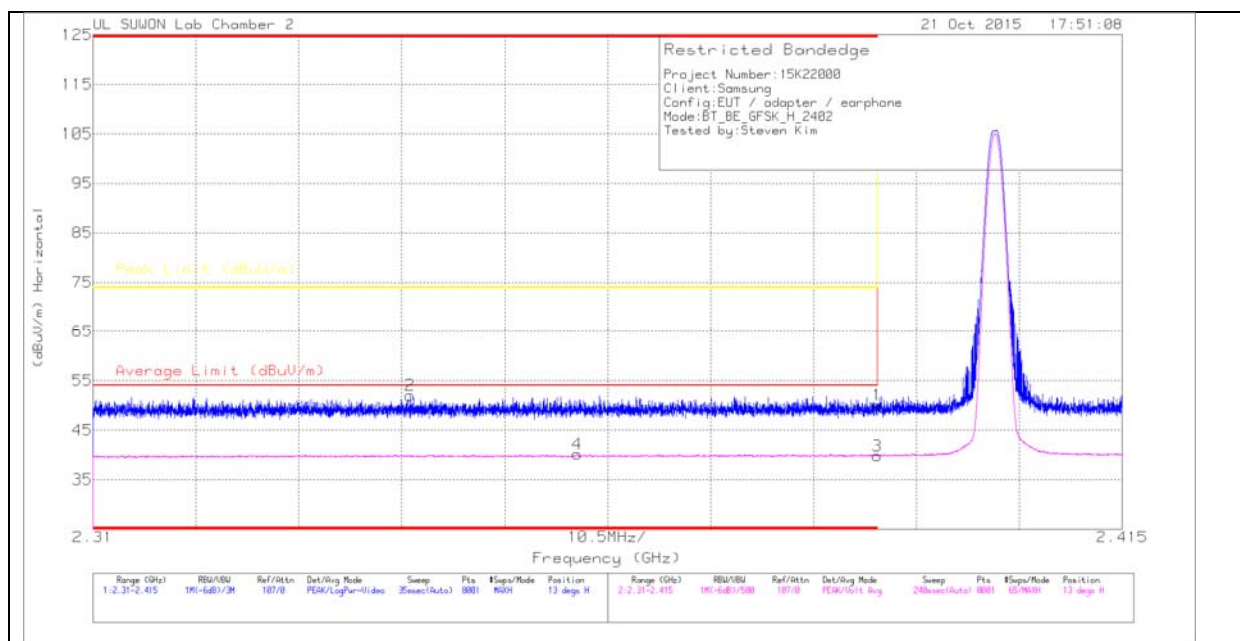
The frequency range of interest is monitored at a fixed antenna height and EUT azimuth. The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are made with the antenna polarized in both the vertical and the horizontal positions.

9.2. TRANSMITTER ABOVE 1 GHz

9.2.1. BASIC DATA RATE GFSK MODULATION

RESTRICTED BANDEDGE (LOW CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

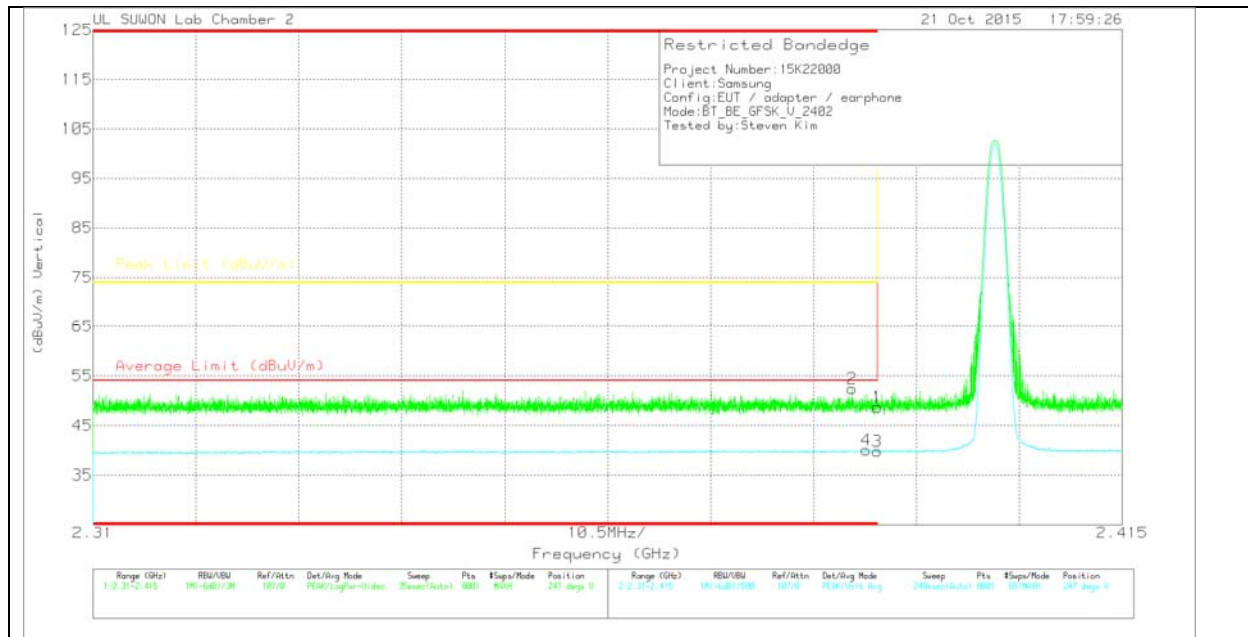
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(0016 8724)_150 619	Path_2_10 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	37.89	Pk	31.7	-19.5	50.09	-	-	74	-23.91	13	310	H
2	* 2.342	40	Pk	31.6	-19.6	52	-	-	74	-22	13	310	H
3	* 2.39	27.63	V1TV	31.7	-19.5	39.83	54	-14.17	-	-	13	310	H
4	* 2.359	28.06	V1TV	31.7	-19.6	40.16	54	-13.84	-	-	13	310	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Trace Markers

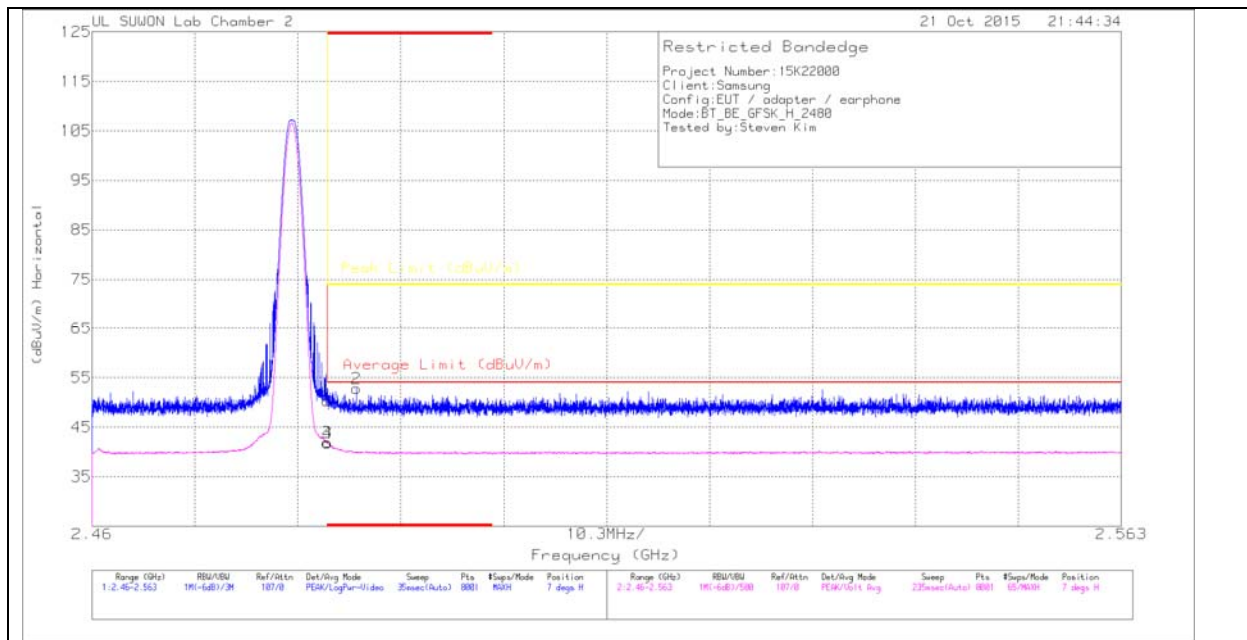
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(0016 8724)_150 619	Path_2_10 dB	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	36.46	Pk	31.7	-19.5	48.66	-	-	74	-25.34	247	364	V
2	* 2.387	40.2	Pk	31.7	-19.5	52.4	-	-	74	-21.6	247	364	V
3	* 2.39	27.6	V1TV	31.7	-19.5	39.8	54	-14.2	-	-	247	364	V
4	* 2.389	27.81	V1TV	31.7	-19.5	40.01	54	-13.99	-	-	247	364	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

AUTHORIZED BANDEDGE (HIGH CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

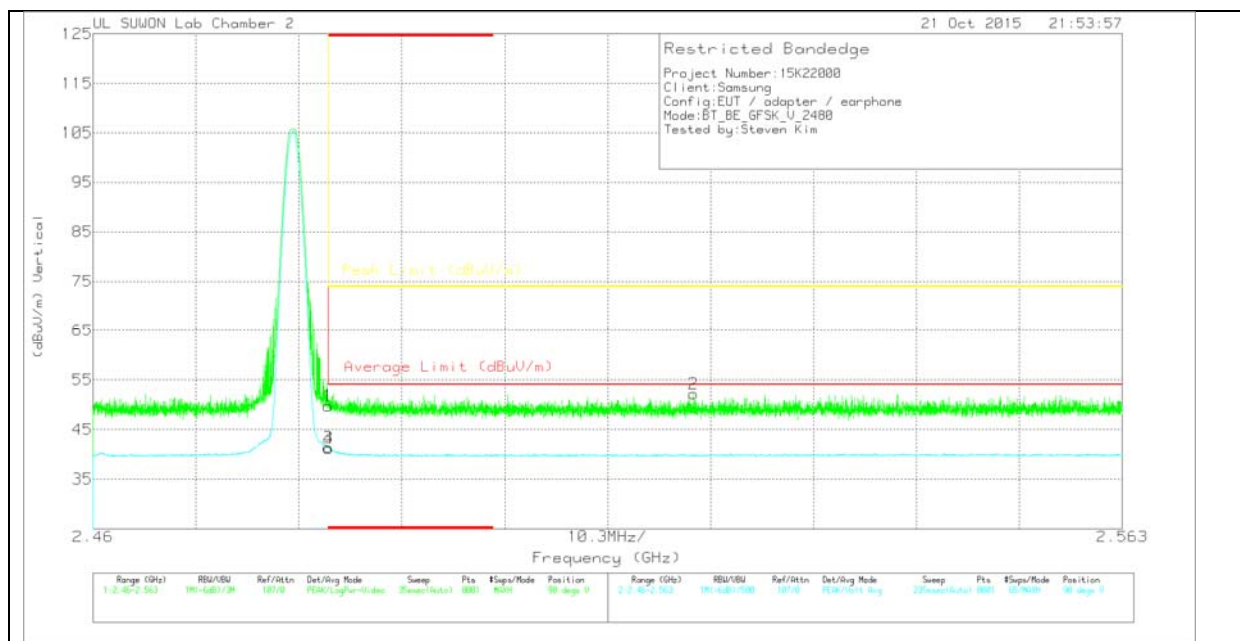
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(0016 8724)_150 619	Path_2_10 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	37.99	Pk	31.8	-19.4	50.39	-	-	74	-23.61	7	362	H
2	* 2.486	40.38	Pk	31.8	-19.4	52.78	-	-	74	-21.22	7	362	H
3	* 2.484	29.47	V1TV	31.8	-19.4	41.87	54	-12.13	-	-	7	362	H
4	* 2.484	29.37	V1TV	31.8	-19.4	41.77	54	-12.23	-	-	7	362	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Trace Markers

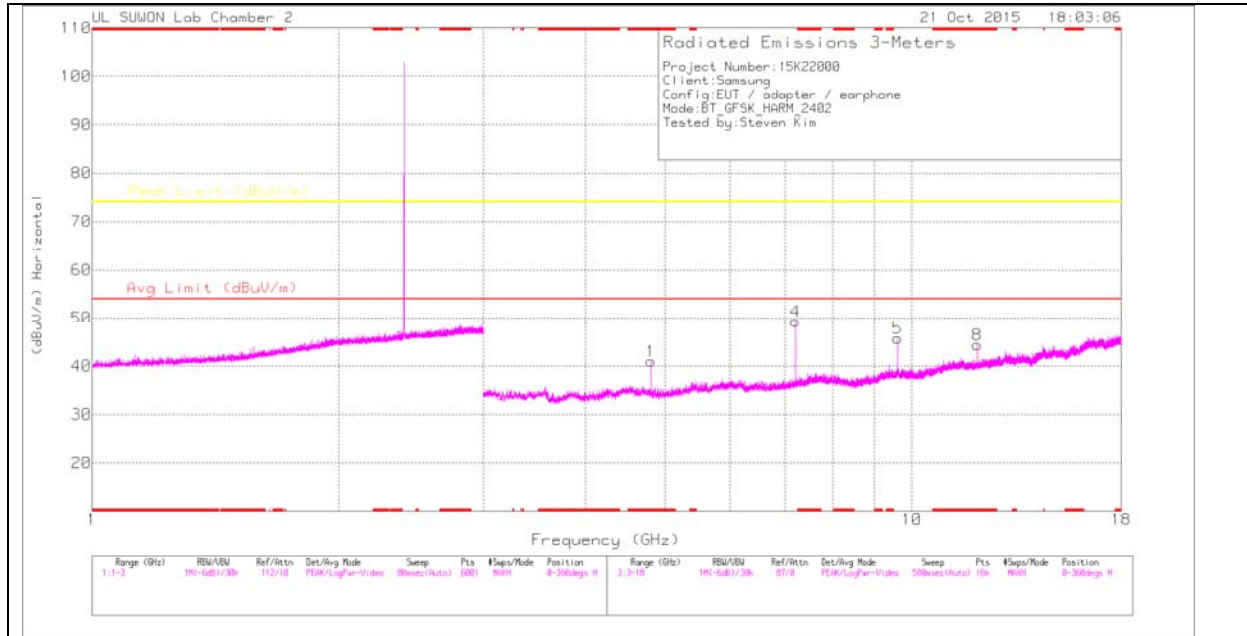
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(0016 8724)_150 619	Path_2_10 dB	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	37.37	Pk	31.8	-19.4	49.77	-	-	74	-24.23	90	341	V
2	2.52	39.61	Pk	31.9	-19.3	52.21	-	-	74	-21.79	90	341	V
3	* 2.484	29.06	V1TV	31.8	-19.4	41.46	54	-12.54	-	-	90	341	V
4	* 2.484	28.83	V1TV	31.8	-19.4	41.23	54	-12.77	-	-	90	341	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

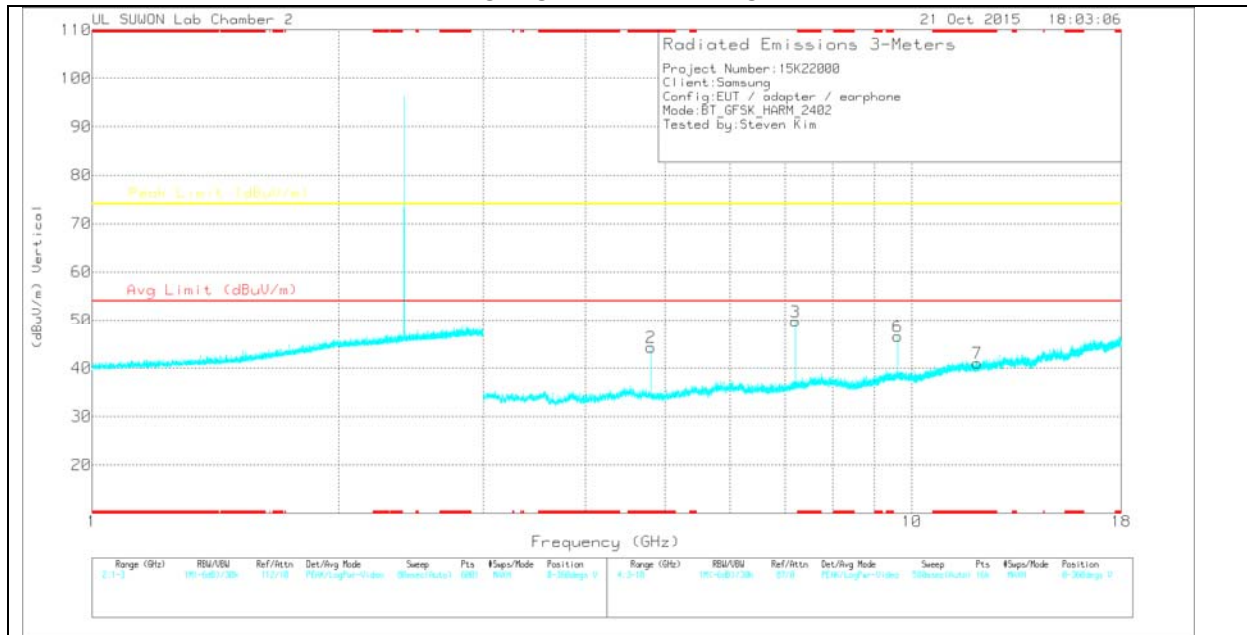
Pk - Peak detector

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



LOW CHANNEL VERTICAL



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

LOW CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168 724)_15061 9	Path_3	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.804	32.34	PK	33.9	-25.3	40.94	-	-	74	-33.06	0-360	200	H
4	7.206	36.59	PK	35.8	-23	49.39	-	-	74	-24.61	0-360	200	H
5	9.608	27.96	PK	36.9	-19.1	45.76	-	-	74	-28.24	0-360	200	H
8	* 12.01	23.19	PK	38.7	-17.5	44.39	-	-	74	-29.61	0-360	200	H
2	* 4.804	35.68	PK	33.9	-25.3	44.28	-	-	74	-29.72	0-360	200	V
3	7.205	36.79	PK	35.8	-22.9	49.69	-	-	74	-24.31	0-360	100	V
6	9.608	28.72	PK	36.9	-19.1	46.52	-	-	74	-27.48	0-360	200	V
7	* 12.011	19.85	PK	38.7	-17.5	41.05	-	-	74	-32.95	0-360	100	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK – Peak detector

Radiated Emissions

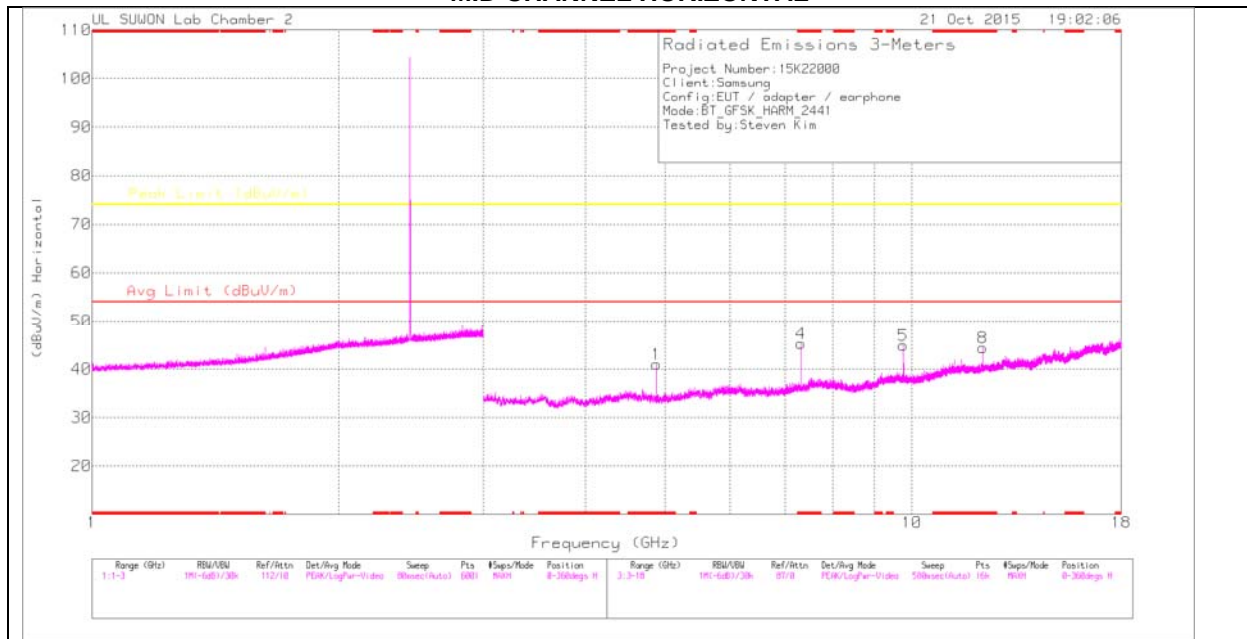
Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168 724)_15061 9	Path_3	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.804	37.76	PK2	33.9	-25.3	46.36	-	-	74	-27.64	161	256	H
* 4.804	27.76	VA1T	33.9	-25.3	36.36	54	-17.64	-	-	161	256	H
* 4.804	42.46	PK2	33.9	-25.3	51.06	-	-	74	-22.94	169	352	V
* 4.804	37.34	VA1T	33.9	-25.3	45.94	54	-8.06	-	-	169	352	V
7.206	43.06	PK2	35.8	-22.9	55.96	-	-	74	-18.04	191	296	V
7.206	40.29	PK2	35.8	-22.9	53.19	-	-	74	-20.81	172	183	H
9.608	34.75	PK2	36.9	-19.1	52.55	-	-	74	-21.45	218	132	H
9.608	34.93	PK2	36.9	-19.1	52.73	-	-	74	-21.27	176	194	V
* 12.01	30.63	PK2	38.7	-17.5	51.83	-	-	74	-22.17	196	228	V
* 12.01	18.03	VA1T	38.7	-17.5	39.23	54	-14.77	-	-	196	228	V
* 12.01	30.86	PK2	38.7	-17.5	52.06	-	-	74	-21.94	188	154	V
* 12.01	18.07	VA1T	38.7	-17.5	39.27	54	-14.73	-	-	188	154	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

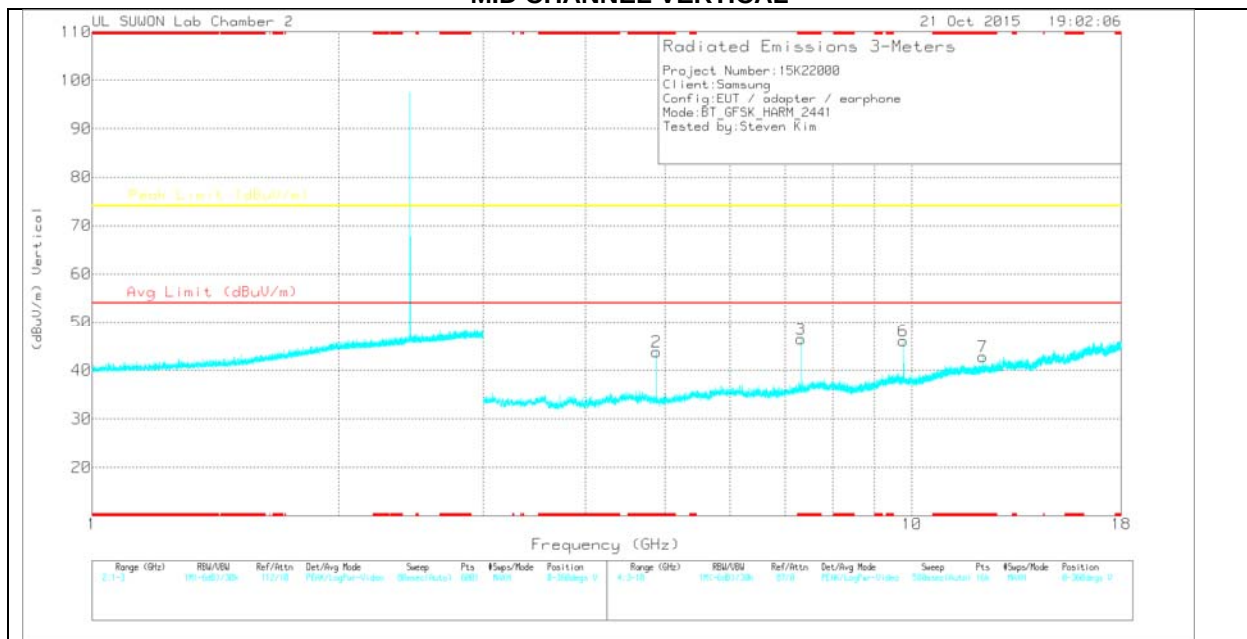
PK2 - Maximum Peak

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

MID CHANNEL HORIZONTAL



MID CHANNEL VERTICAL



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

MID CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168 724)_15061 9	Path_3	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.882	32.26	PK	33.9	-25.2	40.96	-	-	74	-33.04	0-360	200	H
4	* 7.323	31.88	PK	35.9	-22.5	45.28	-	-	74	-28.72	0-360	200	H
5	9.764	27.26	PK	37	-19.3	44.96	-	-	74	-29.04	0-360	200	H
8	* 12.205	22.77	PK	38.8	-17.2	44.37	-	-	74	-29.63	0-360	200	H
2	* 4.881	35.1	PK	33.9	-25.2	43.8	-	-	74	-30.2	0-360	100	V
3	* 7.323	33.03	PK	35.9	-22.5	46.43	-	-	74	-27.57	0-360	200	V
6	9.764	28.36	PK	37	-19.3	46.06	-	-	74	-27.94	0-360	200	V
7	* 12.206	21.18	PK	38.8	-17.2	42.78	-	-	74	-31.22	0-360	200	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK – Peak detector

Radiated Emissions

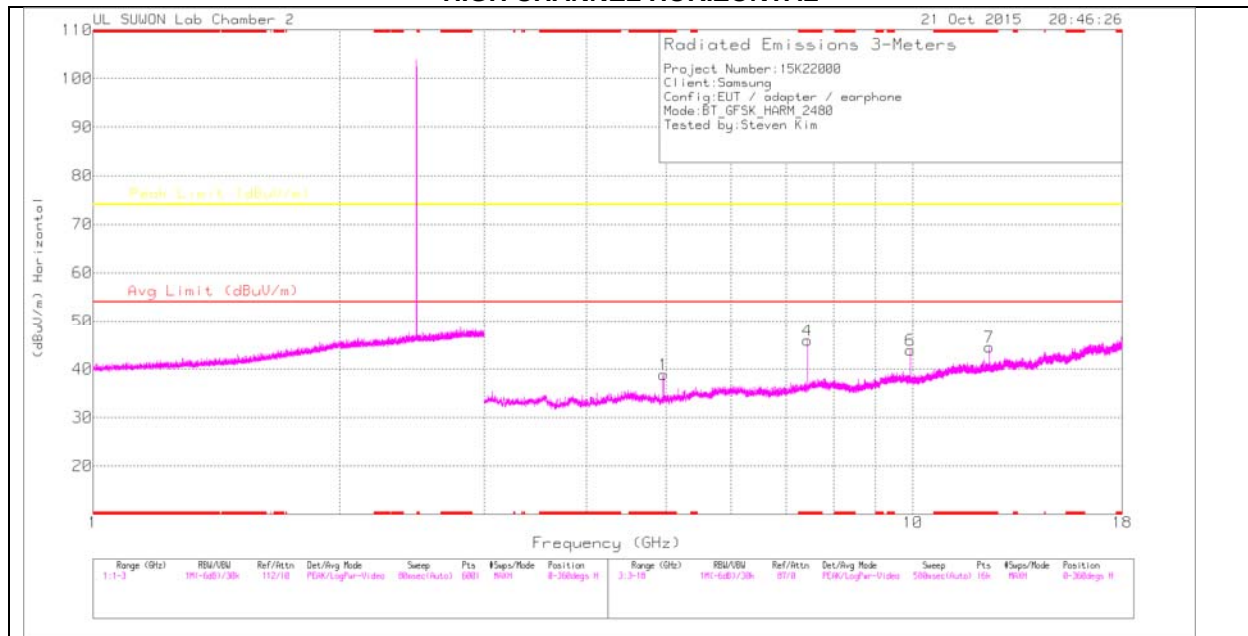
Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168 724)_15061 9	Path_3	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.882	39.02	PK2	33.9	-25.2	47.72	-	-	74	-26.28	149	309	H
* 4.882	30.42	VA1T	33.9	-25.2	39.12	54	-14.88	-	-	149	309	H
* 4.882	40.5	PK2	33.9	-25.2	49.2	-	-	74	-24.8	203	268	V
* 4.882	33.7	VA1T	33.9	-25.2	42.4	54	-11.6	-	-	203	268	V
* 7.323	40.2	PK2	35.9	-22.5	53.6	-	-	74	-20.4	208	217	V
* 7.323	32.47	VA1T	35.9	-22.5	45.87	54	-8.13	-	-	208	217	V
* 7.323	40.37	PK2	35.9	-22.5	53.77	-	-	74	-20.23	124	274	H
* 7.323	32.64	VA1T	35.9	-22.5	46.04	54	-7.96	-	-	124	274	H
9.764	35.16	PK2	37	-19.3	52.86	-	-	74	-21.14	219	159	H
9.764	34.24	PK2	37	-19.3	51.94	-	-	74	-22.06	162	395	V
* 12.205	30.77	PK2	38.8	-17.2	52.37	-	-	74	-21.63	183	157	V
* 12.205	19.37	VA1T	38.8	-17.2	40.97	54	-13.03	-	-	183	157	V
* 12.205	30.74	PK2	38.8	-17.2	52.34	-	-	74	-21.66	261	217	H
* 12.205	20.47	VA1T	38.8	-17.2	42.07	54	-11.93	-	-	261	217	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

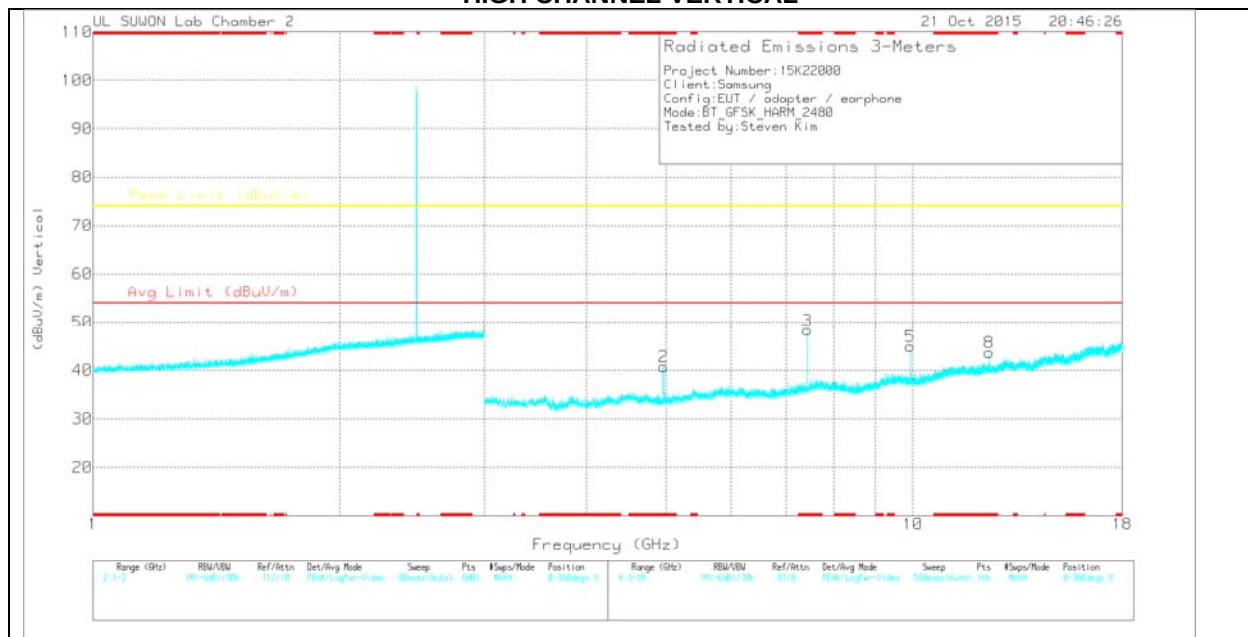
PK2 - Maximum Peak

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

HIGH CHANNEL HORIZONTAL



HIGH CHANNEL VERTICAL



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

HIGH CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168 724)_15061 9	Path_3	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.96	29.92	PK	33.9	-25	38.82	-	-	74	-35.18	0-360	200	H
4	* 7.44	32.05	PK	36	-22.1	45.95	-	-	74	-28.05	0-360	200	H
6	9.92	25.79	PK	37.1	-19	43.89	-	-	74	-30.11	0-360	200	H
7	* 12.4	23.02	PK	38.8	-17.3	44.52	-	-	74	-29.48	0-360	200	H
2	* 4.96	31.79	PK	33.9	-25	40.69	-	-	74	-33.31	0-360	100	V
3	* 7.44	34.39	PK	36	-22.1	48.29	-	-	74	-25.71	0-360	200	V
5	9.92	26.84	PK	37.1	-19	44.94	-	-	74	-29.06	0-360	200	V
8	* 12.401	22.18	PK	38.8	-17.3	43.68	-	-	74	-30.32	0-360	200	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK – Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168 724)_15061 9	Path_3	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.96	37.51	PK2	33.9	-25	46.41	-	-	74	-27.59	159	275	H
* 4.96	26.75	VA1T	33.9	-25	35.65	54	-18.35	-	-	159	275	H
* 4.96	39.38	PK2	33.9	-25	48.28	-	-	74	-25.72	187	326	V
* 4.96	32.17	VA1T	33.9	-25	41.07	54	-12.93	-	-	187	326	V
* 7.44	41.28	PK2	36	-22.1	55.18	-	-	74	-18.82	189	303	V
* 7.44	33.92	VA1T	36	-22.1	47.82	54	-6.18	-	-	189	303	V
* 7.44	39.69	PK2	36	-22.1	53.59	-	-	74	-20.41	124	286	H
* 7.44	32.2	VA1T	36	-22.1	46.1	54	-7.9	-	-	124	286	H
9.92	33.8	PK2	37.1	-19	51.9	-	-	74	-22.1	208	268	H
9.92	34.21	PK2	37.1	-19	52.31	-	-	74	-21.69	160	291	V
* 12.4	31.28	PK2	38.8	-17.3	52.78	-	-	74	-21.22	175	216	V
* 12.4	20.73	VA1T	38.8	-17.3	42.23	54	-11.77	-	-	175	216	V
* 12.4	31.97	PK2	38.8	-17.3	53.47	-	-	74	-20.53	269	189	H
* 12.4	22.65	VA1T	38.8	-17.3	44.15	54	-9.85	-	-	269	189	H

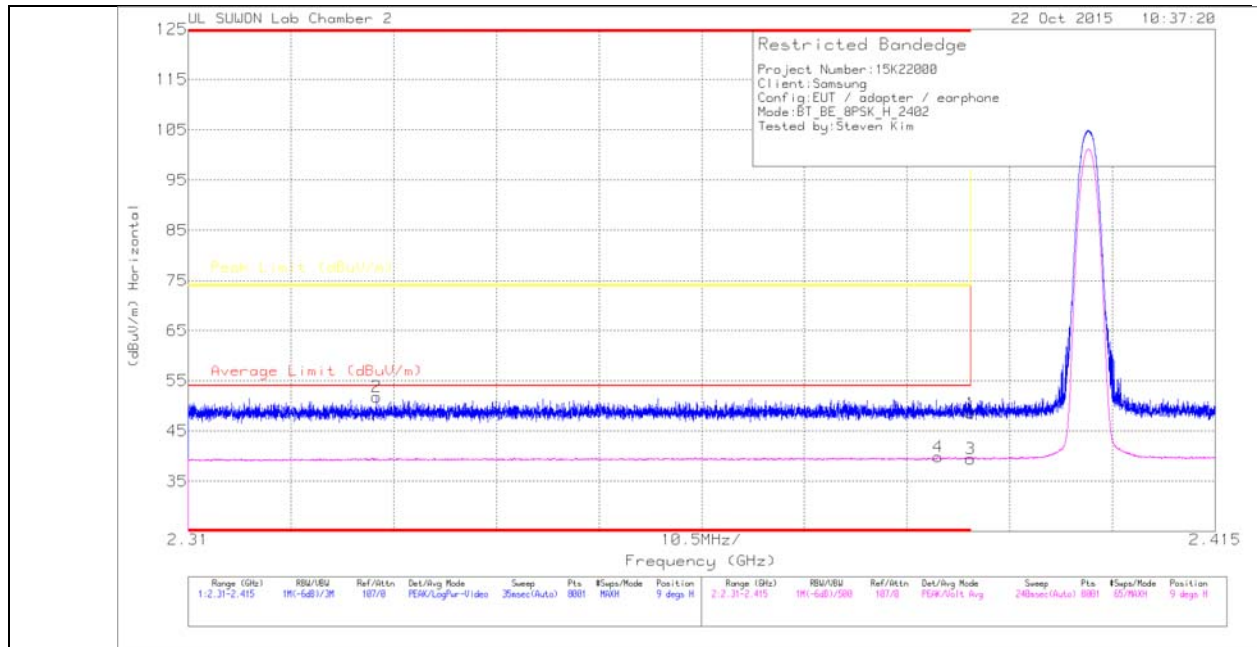
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK2 - Maximum Peak

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

9.2.2. ENHANCED DATA RATE 8PSK MODULATION RESTRICTED BANDEDGE (LOW CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

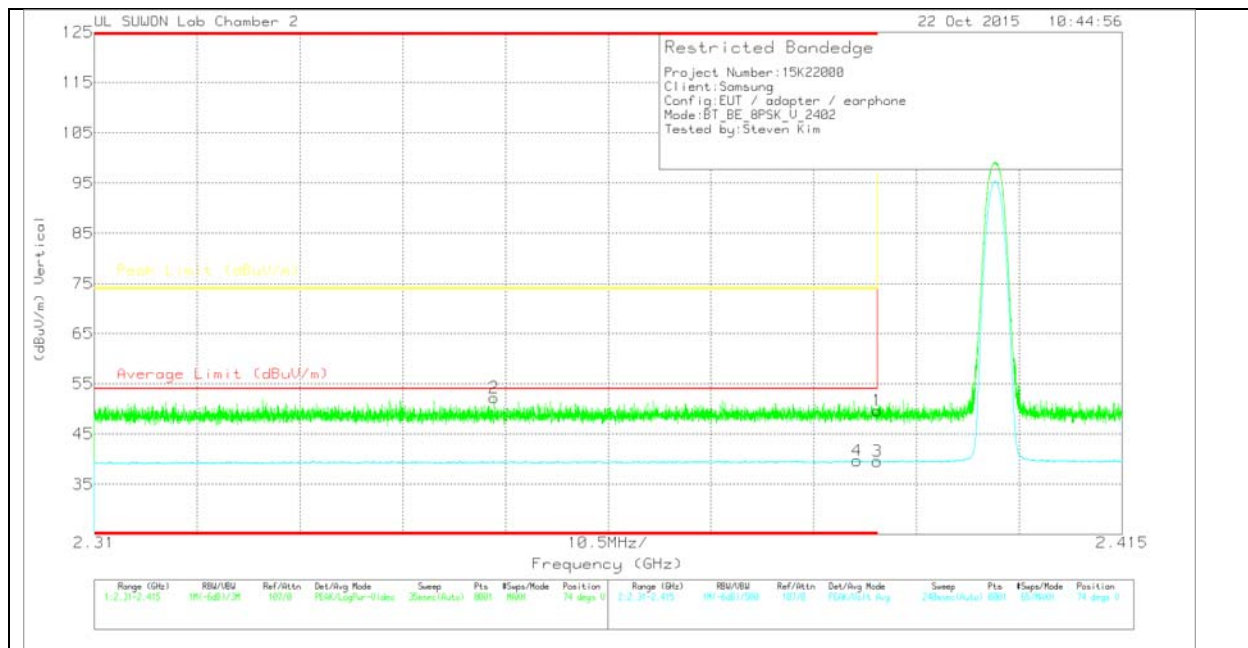
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(0016 8724)_150 619	Path_2_10 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	36.32	Pk	31.7	-19.5	48.52	-	-	74	-25.48	9	392	H
2	* 2.329	39.88	Pk	31.6	-19.7	51.78	-	-	74	-22.22	9	392	H
3	* 2.39	27.28	V1TV	31.7	-19.5	39.48	54	-14.52	-	-	9	392	H
4	* 2.387	27.68	V1TV	31.7	-19.5	39.88	54	-14.12	-	-	9	392	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Trace Markers

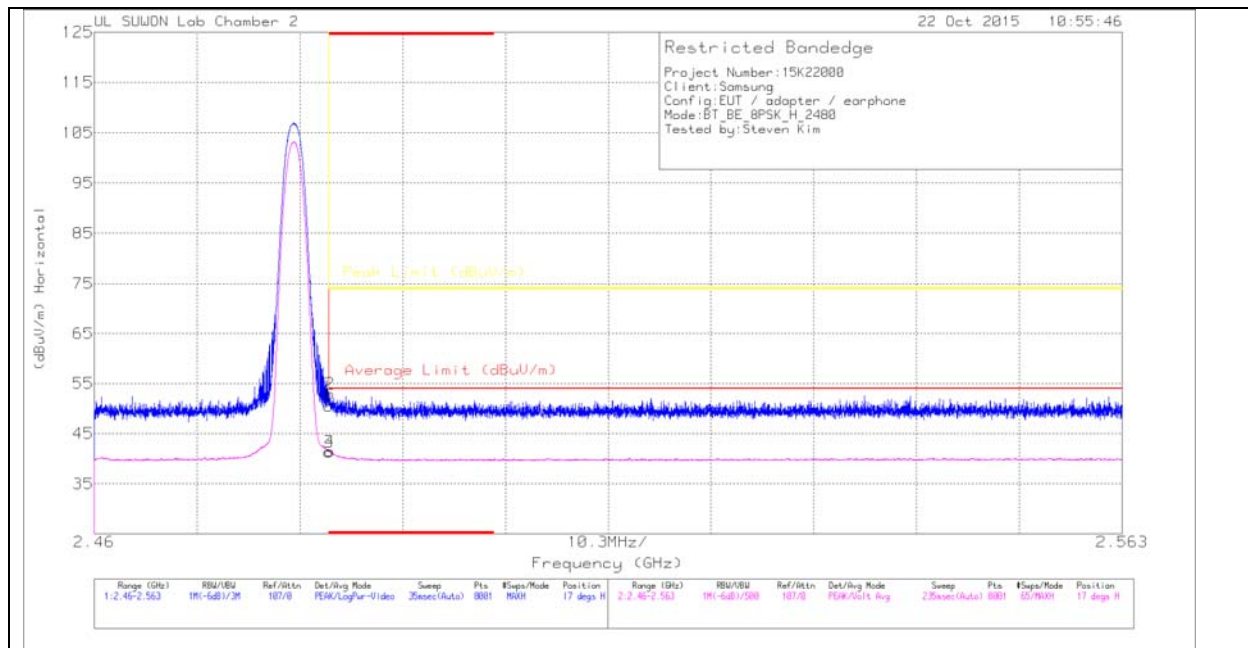
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117/0016 8724_150 619	Path_2_10 dB	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	37.48	Pk	31.7	-19.5	49.68	-	-	74	-24.32	74	293	V
2	* 2.351	40.2	Pk	31.6	-19.6	52.2	-	-	74	-21.8	74	293	V
3	* 2.39	27.4	V1TV	31.7	-19.5	39.6	54	-14.4	-	-	74	293	V
4	* 2.388	27.53	V1TV	31.7	-19.5	39.73	54	-14.27	-	-	74	293	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

AUTHORIZED BANDEDGE (HIGH CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

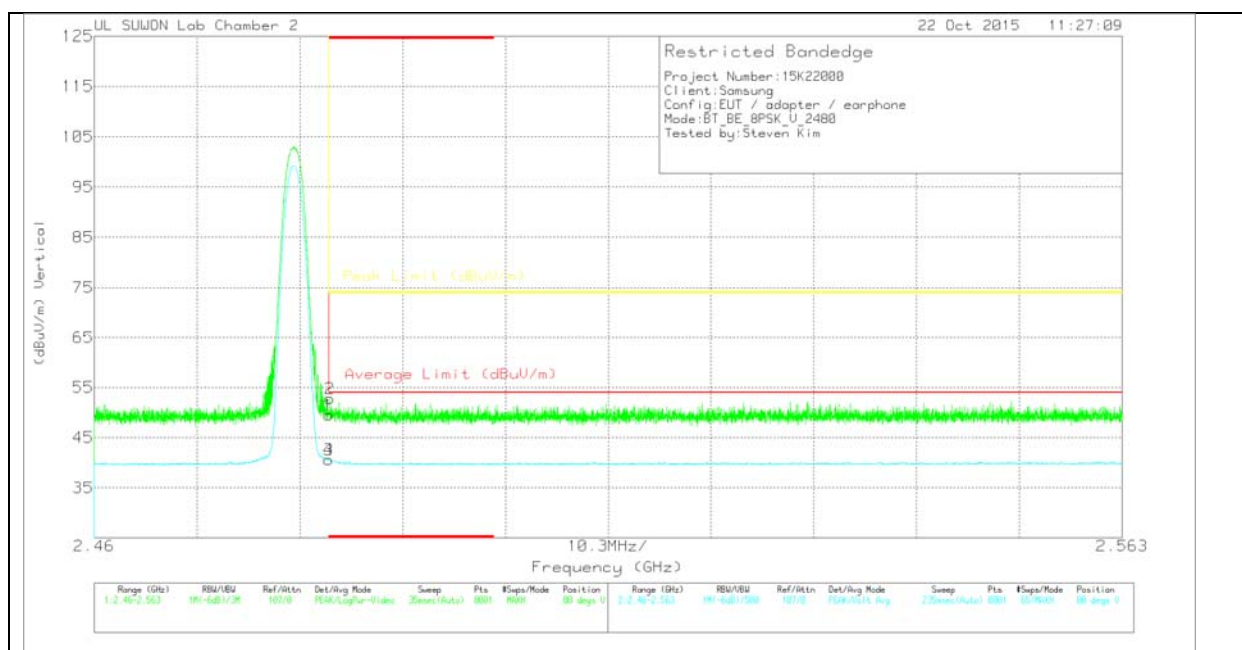
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(0016 8724)_150 619	Path_2_10 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	38.16	Pk	31.8	-19.4	50.56	-	-	74	-23.44	17	368	H
2	* 2.484	40.55	Pk	31.8	-19.4	52.95	-	-	74	-21.05	17	368	H
3	* 2.484	28.99	V1TV	31.8	-19.4	41.39	54	-12.61	-	-	17	368	H
4	* 2.484	29.08	V1TV	31.8	-19.4	41.48	54	-12.52	-	-	17	368	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Trace Markers

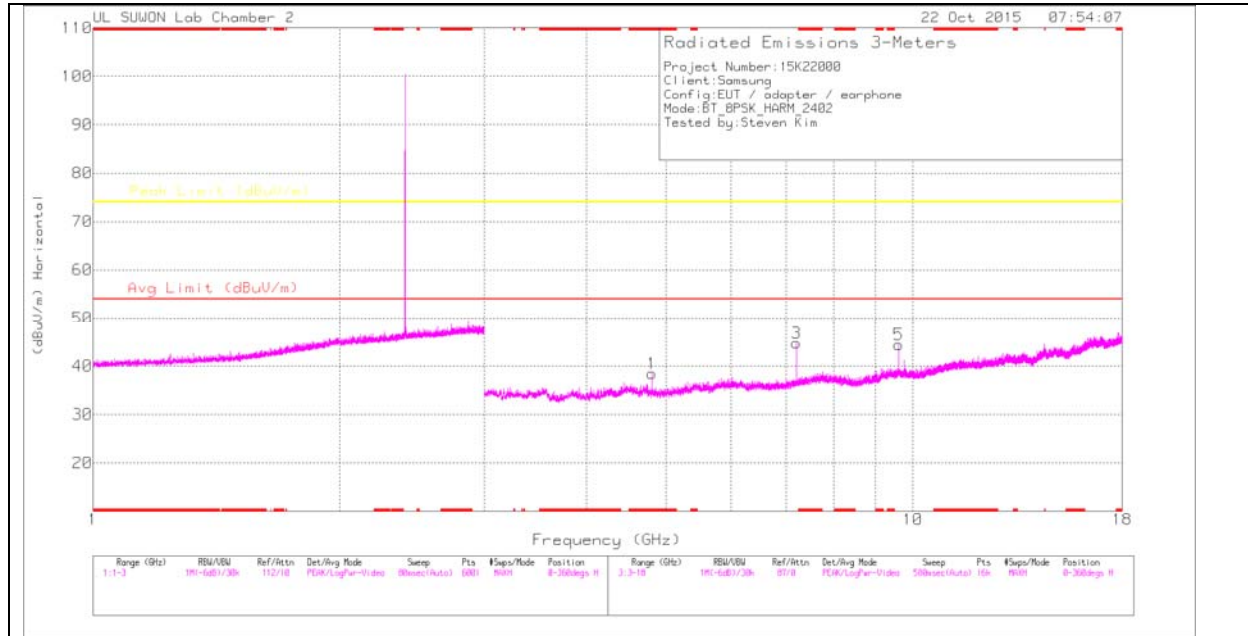
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(0016 8724)_150 619	Path_2_10 dB	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	37.11	Pk	31.8	-19.4	49.51	-	-	74	-24.49	88	267	V
2	* 2.484	40.38	Pk	31.8	-19.4	52.78	-	-	74	-21.22	88	267	V
3	* 2.484	28.21	V1TV	31.8	-19.4	40.61	54	-13.39	-	-	88	267	V
4	* 2.484	28.21	V1TV	31.8	-19.4	40.61	54	-13.39	-	-	88	267	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

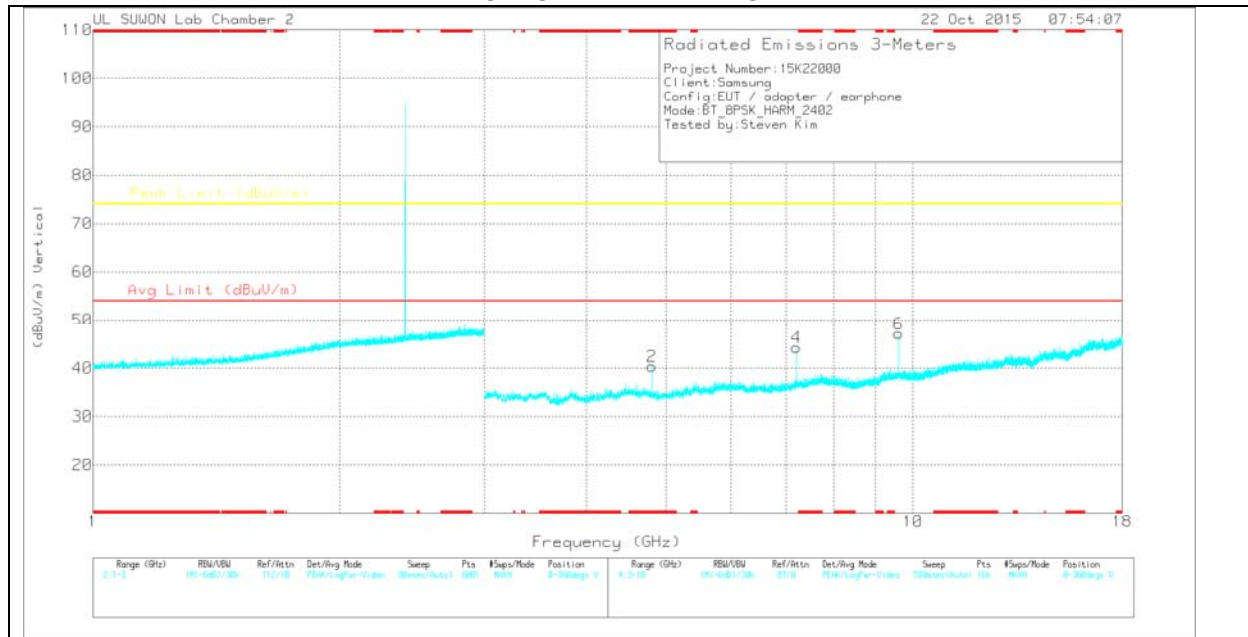
Pk - Peak detector

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



LOW CHANNEL VERTICAL



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

LOW CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168 724)_15061 9	Path_3	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.804	29.88	PK	33.9	-25.3	38.48	-	-	74	-35.52	0-360	200	H
3	7.205	31.9	PK	35.8	-22.9	44.8	-	-	74	-29.2	0-360	200	H
5	9.608	26.67	PK	36.9	-19.1	44.47	-	-	74	-29.53	0-360	200	H
2	* 4.804	31.82	PK	33.9	-25.3	40.42	-	-	74	-33.58	0-360	200	V
4	7.205	31.33	PK	35.8	-22.9	44.23	-	-	74	-29.77	0-360	200	V
6	9.608	29.35	PK	36.9	-19.1	47.15	-	-	74	-26.85	0-360	200	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK – Peak detector

Radiated Emissions

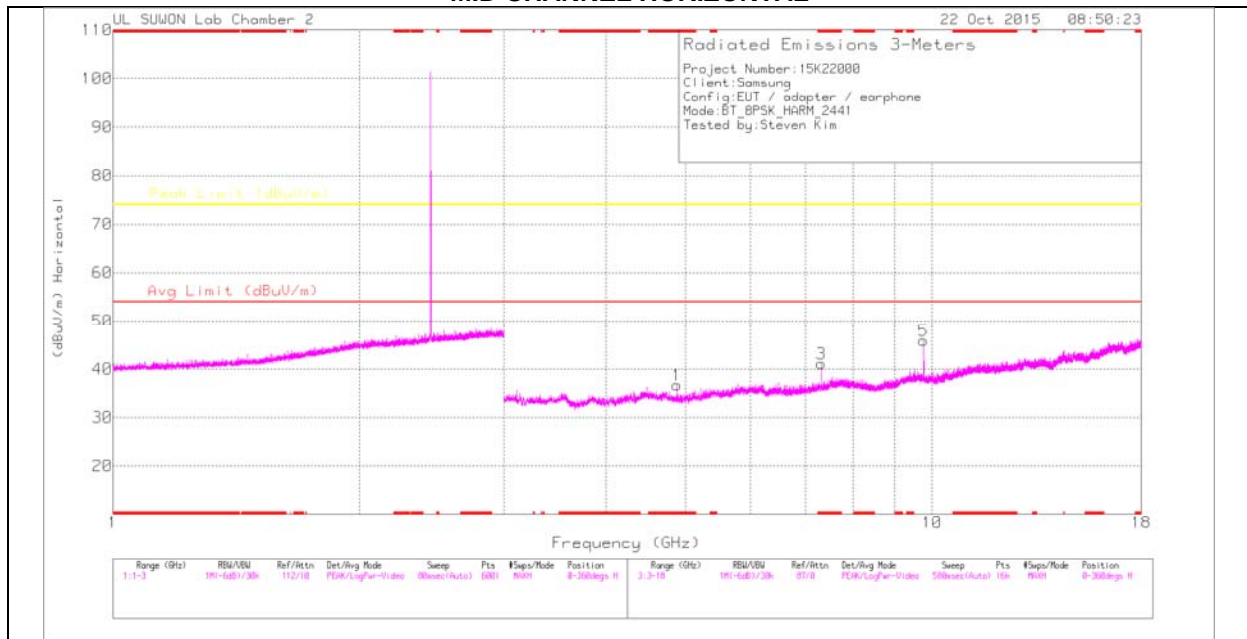
Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168 724)_15061 9	Path_3	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.804	38.19	PK2	33.9	-25.3	46.79	-	-	74	-27.21	55	258	H
* 4.804	24.95	VA1T	33.9	-25.3	33.55	54	-20.45	-	-	55	258	H
7.206	42.1	PK2	35.8	-22.9	55	-	-	74	-19	121	214	H
9.608	35.43	PK2	36.9	-19.1	53.23	-	-	74	-20.77	224	166	H
* 4.804	41.25	PK2	33.9	-25.3	49.85	-	-	74	-24.15	204	254	V
* 4.804	29.76	VA1T	33.9	-25.3	38.36	54	-15.64	-	-	204	254	V
7.206	43.16	PK2	35.8	-22.9	56.06	-	-	74	-17.94	193	347	V
9.608	35.21	PK2	36.9	-19.1	53.01	-	-	74	-20.99	163	173	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

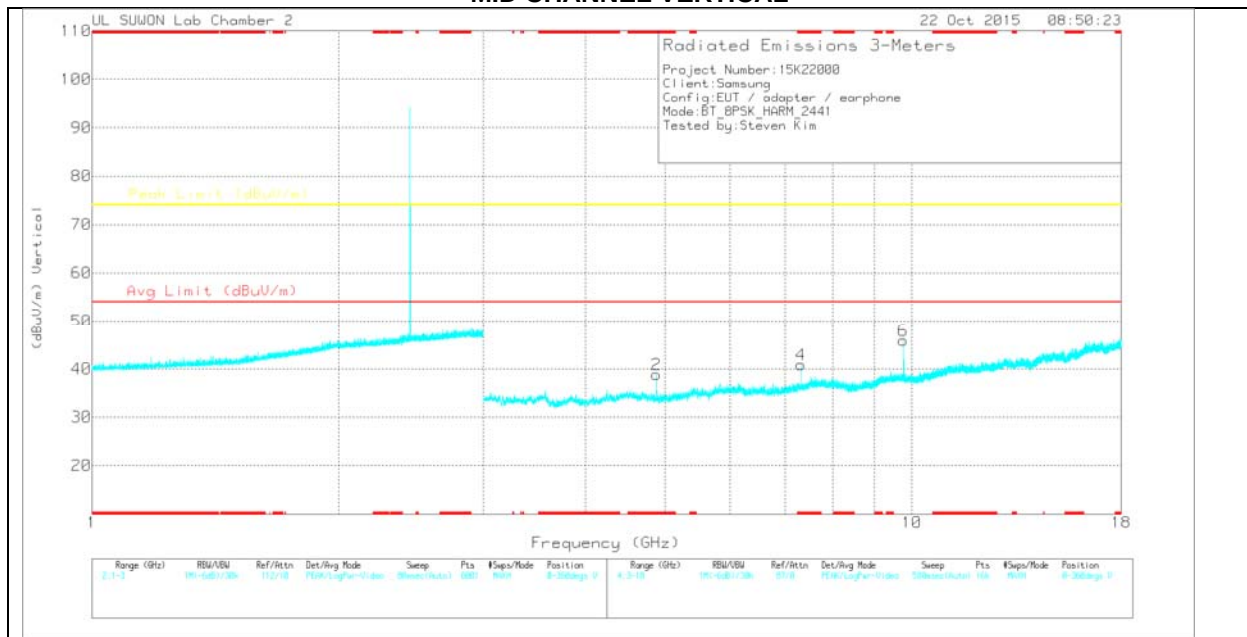
PK2 - Maximum Peak

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

MID CHANNEL HORIZONTAL



MID CHANNEL VERTICAL



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

MID CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168 724)_15061 9	Path_3	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.881	28	PK	33.9	-25.2	36.7	-	-	74	-37.3	0-360	200	H
3	* 7.323	27.77	PK	35.9	-22.5	41.17	-	-	74	-32.83	0-360	200	H
5	9.764	28.17	PK	37	-19.3	45.87	-	-	74	-28.13	0-360	200	H
2	* 4.881	30.2	PK	33.9	-25.2	38.9	-	-	74	-35.1	0-360	100	V
4	* 7.323	27.48	PK	35.9	-22.5	40.88	-	-	74	-33.12	0-360	200	V
6	9.764	28.24	PK	37	-19.3	45.94	-	-	74	-28.06	0-360	100	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK – Peak detector

Radiated Emissions

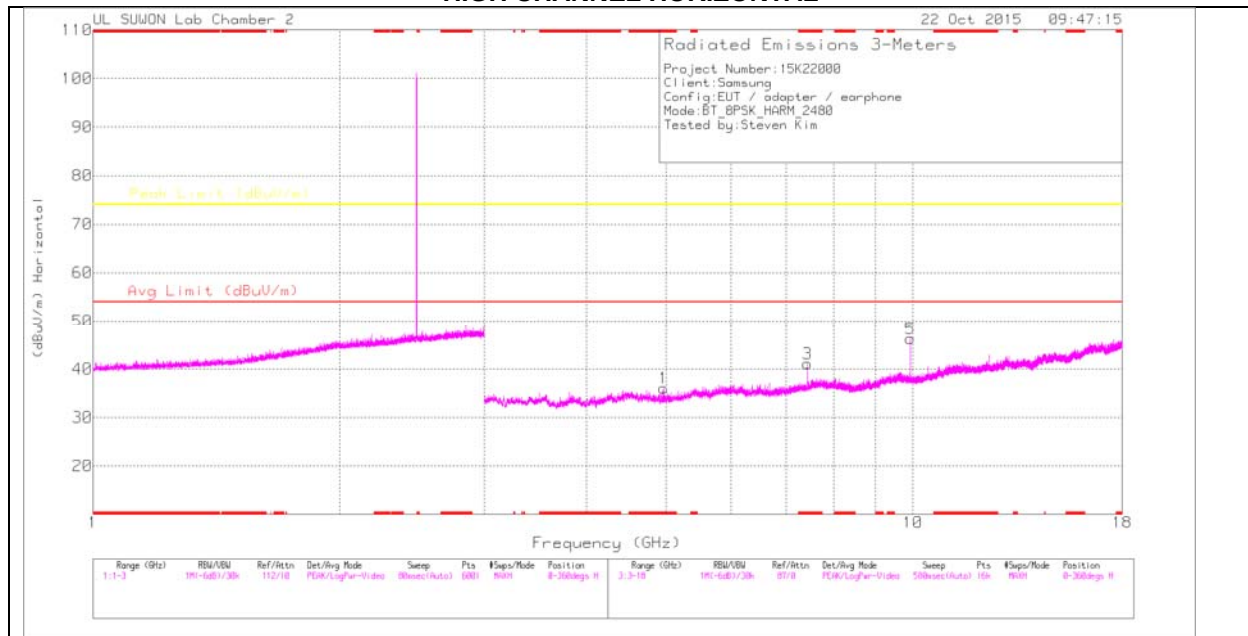
Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168 724)_15061 9	Path_3	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.882	38.9	PK2	33.9	-25.2	47.6	-	-	74	-26.4	244	374	H
* 4.882	26.34	VA1T	33.9	-25.2	35.04	54	-18.96	-	-	244	374	H
* 7.323	39.97	PK2	35.9	-22.5	53.37	-	-	74	-20.63	125	203	H
* 7.323	26.56	VA1T	35.9	-22.5	39.96	54	-14.04	-	-	125	203	H
9.764	33.79	PK2	37	-19.3	51.49	-	-	74	-22.51	220	233	H
* 4.882	39.98	PK2	33.9	-25.2	48.68	-	-	74	-25.32	150	242	V
* 4.882	27.35	VA1T	33.9	-25.2	36.05	54	-17.95	-	-	150	242	V
* 7.323	40.09	PK2	35.9	-22.5	53.49	-	-	74	-20.51	196	217	V
* 7.323	26.96	VA1T	35.9	-22.5	40.36	54	-13.64	-	-	196	217	V
9.764	34.78	PK2	37	-19.3	52.48	-	-	74	-21.52	162	188	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

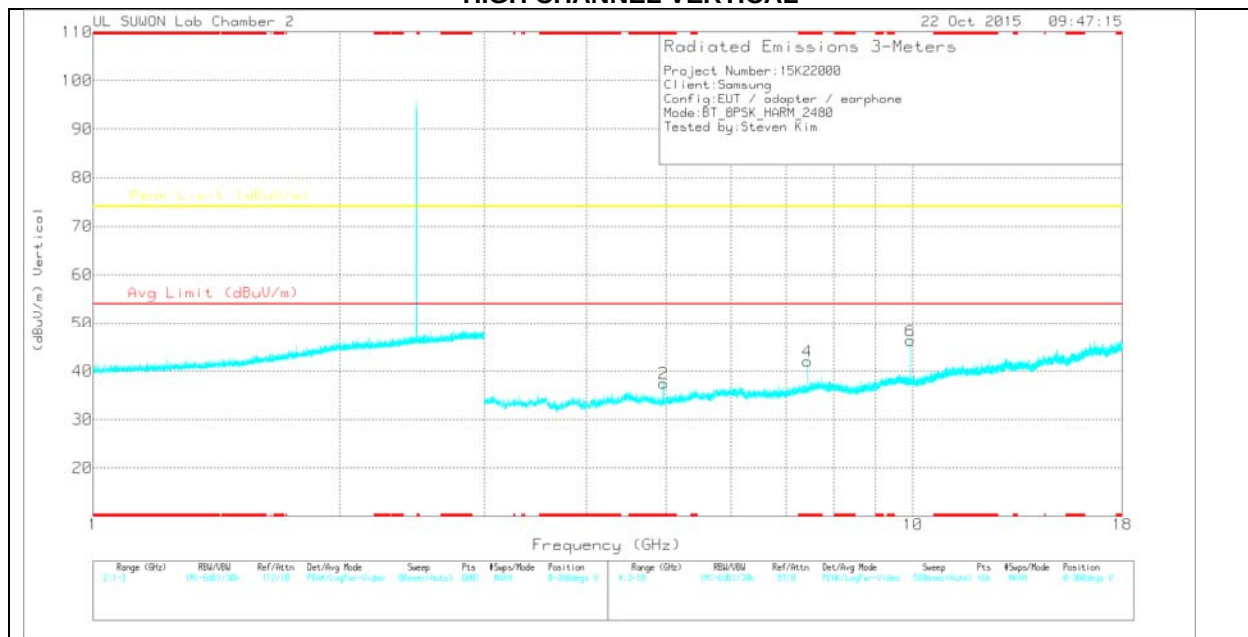
PK2 - Maximum Peak

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

HIGH CHANNEL HORIZONTAL



HIGH CHANNEL VERTICAL



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

HIGH CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168 724)_15061 9	Path_3	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.96	27.15	PK	33.9	-25	36.05	-	-	74	-37.95	0-360	200	H
3	* 7.44	27.21	PK	36	-22.1	41.11	-	-	74	-32.89	0-360	200	H
5	9.92	28.26	PK	37.1	-19	46.36	-	-	74	-27.64	0-360	200	H
2	* 4.96	28.57	PK	33.9	-25	37.47	-	-	74	-36.53	0-360	100	V
4	* 7.44	28.12	PK	36	-22.1	42.02	-	-	74	-31.98	0-360	200	V
6	9.92	28.26	PK	37.1	-19	46.36	-	-	74	-27.64	0-360	200	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK – Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168 724)_15061 9	Path_3	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.96	36.8	PK2	33.9	-25	45.7	-	-	74	-28.3	85	239	H
* 4.96	23.45	VA1T	33.9	-25	32.35	54	-21.65	-	-	85	239	H
* 7.44	38.15	PK2	36	-22.1	52.05	-	-	74	-21.95	121	247	H
* 7.44	25.15	VA1T	36	-22.1	39.05	54	-14.95	-	-	121	247	H
9.92	34.07	PK2	37.1	-19	52.17	-	-	74	-21.83	219	268	H
* 4.96	39.49	PK2	33.9	-25	48.39	-	-	74	-25.61	214	295	V
* 4.96	26.93	VA1T	33.9	-25	35.83	54	-18.17	-	-	214	295	V
* 7.44	40.02	PK2	36	-22.1	53.92	-	-	74	-20.08	179	352	V
* 7.44	27.84	VA1T	36	-22.1	41.74	54	-12.26	-	-	179	352	V
9.92	34.38	PK2	37.1	-19	52.48	-	-	74	-21.52	154	105	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

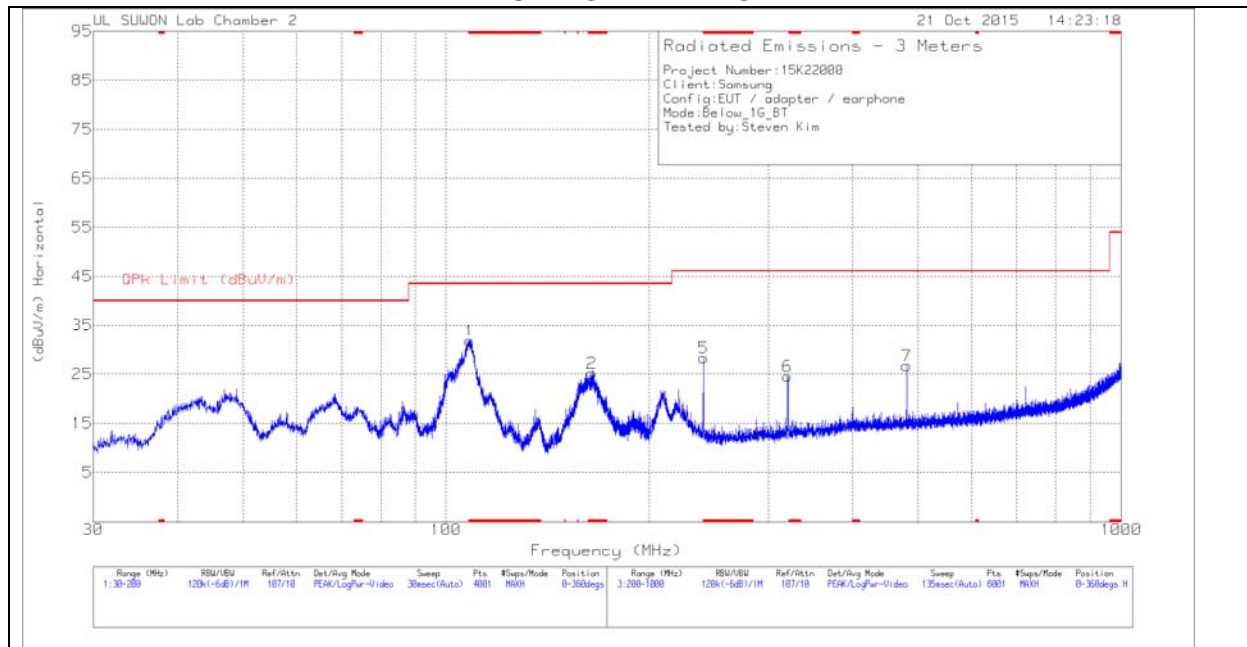
PK2 - Maximum Peak

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

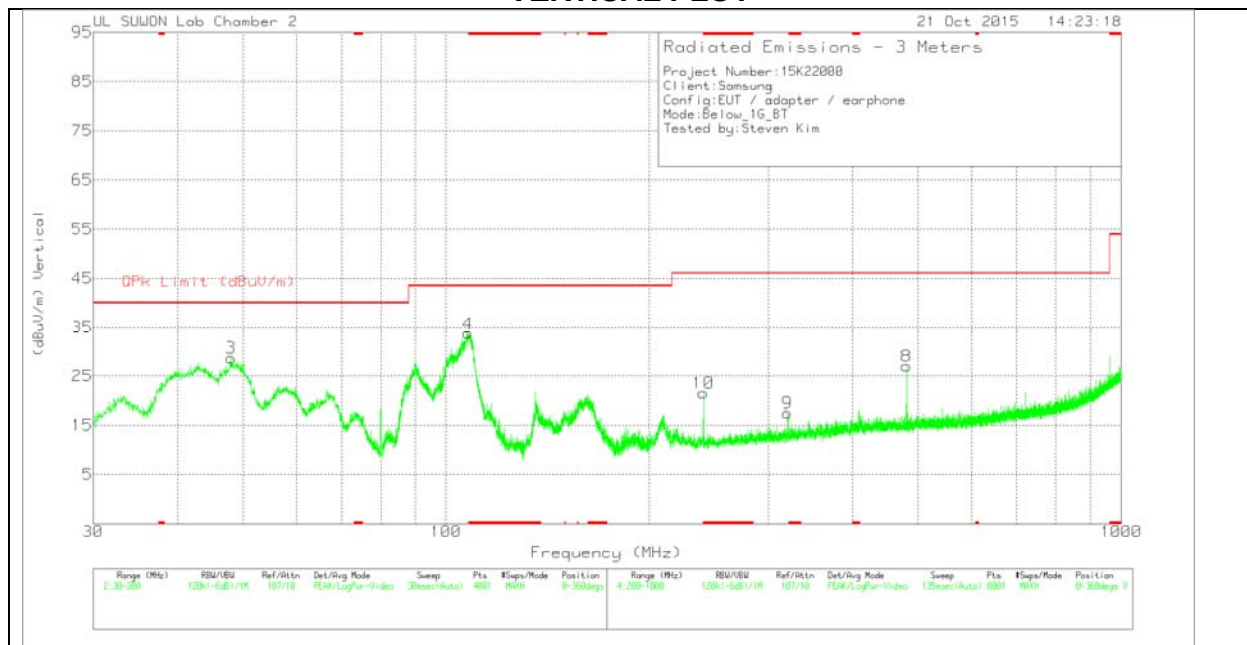
9.3. WORST-CASE BELOW 1 GHz

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

HORIZONTAL PLOT



VERTICAL PLOT



BELOW 1 GHz TABLE

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	VULB9163-749	Below_1G	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 108.37	51.42	Pk	10.9	-30.5	31.82	43.52	-11.7	0-360	300	H
2	* 164.385	46.84	Pk	8.7	-30.4	25.14	43.52	-18.38	0-360	100	H
3	47.9775	45.5	Pk	14	-30.8	28.7	40	-11.3	0-360	101	V
4	107.775	53.35	Pk	10.9	-30.5	33.75	43.52	-9.77	0-360	101	V
5	* 240.5	46.29	Pk	12.2	-30.2	28.29	46.02	-17.73	0-360	101	H
6	320.6	40.65	Pk	13.8	-29.9	24.55	46.02	-21.47	0-360	101	H
7	481	40.54	Pk	15.7	-29.6	26.64	46.02	-19.38	0-360	200	H
8	481	40.92	Pk	15.7	-29.6	27.02	46.02	-19	0-360	101	V
9	320.6	33.58	Pk	13.8	-29.9	17.48	46.02	-28.54	0-360	101	V
10	* 240.4	39.55	Pk	12.2	-30.2	21.55	46.02	-24.47	0-360	200	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

10. AC POWER LINE CONDUCTED EMISSIONS

LIMITS

FCC §15.207 (a)

Frequency of Emission (MHz)	Conducted Limit (dBuV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

* Decreases with the logarithm of the frequency.

TEST PROCEDURE

The EUT is placed on a non-conducting table 40 cm from the vertical ground plane and 80 cm above the horizontal ground plane. The EUT is configured in accordance with ANSI C63.10.

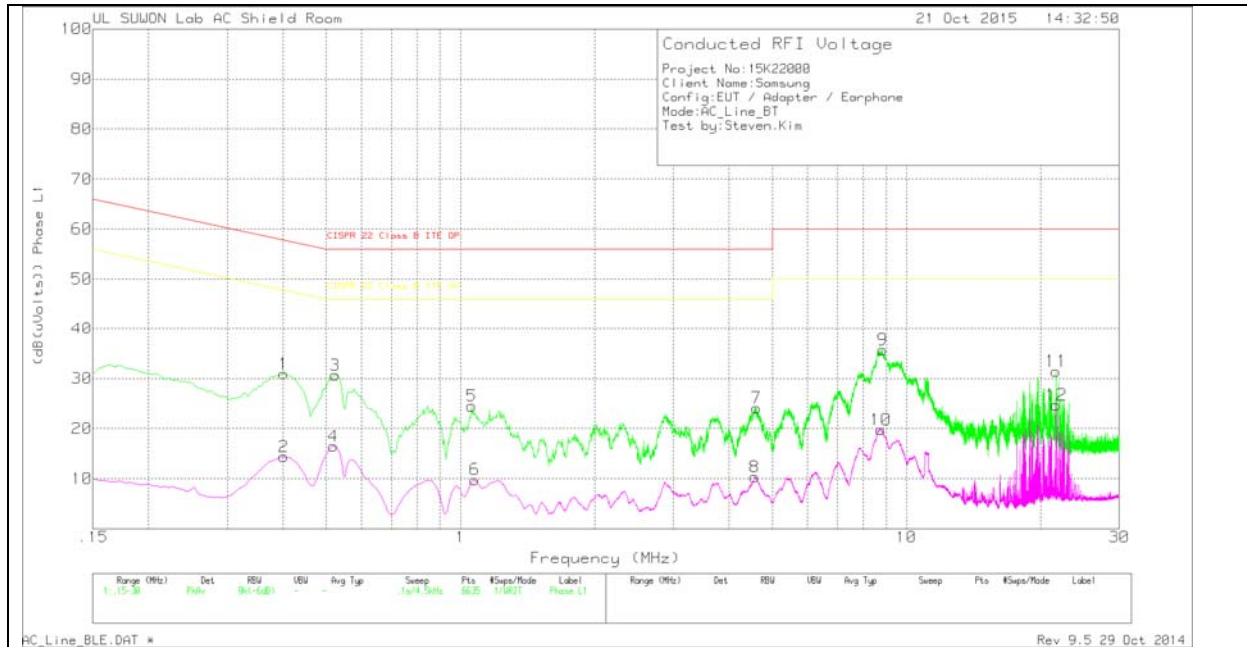
The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

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

RESULTS

6 WORST EMISSIONS

LINE 1 PLOT



LINE 1 RESULTS

Trace Markers

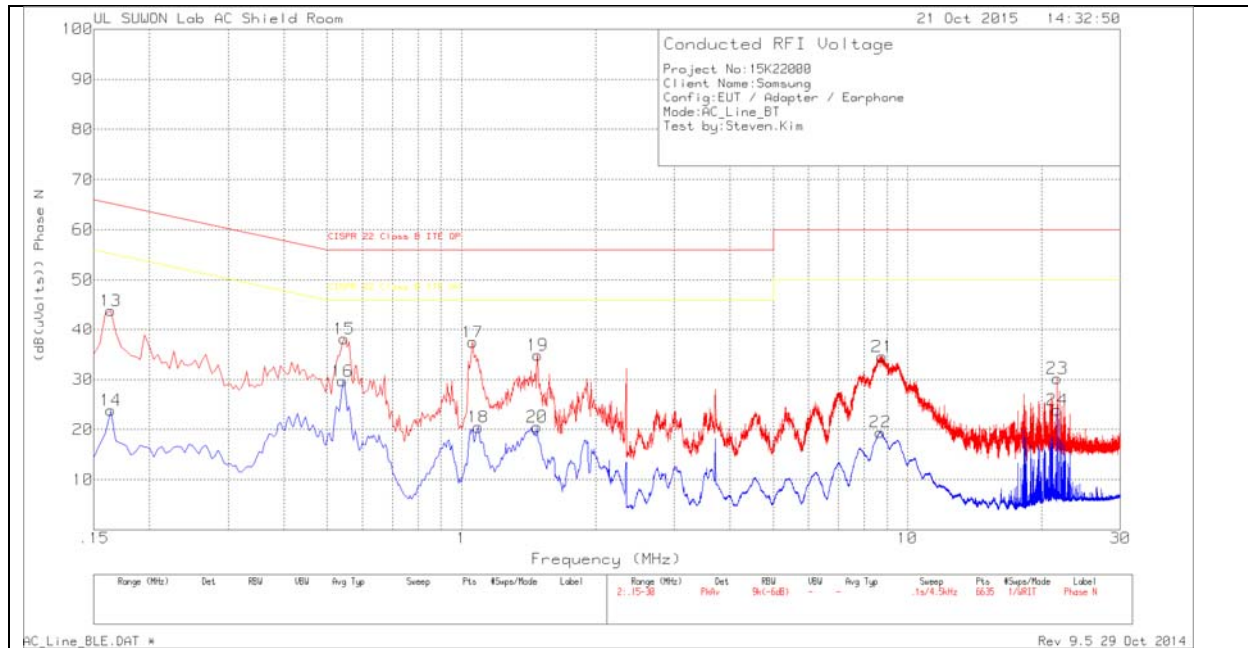
Phase L1 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	101837_w ith ex- cord_L1	CE Shield Room	Corrected Reading (dB(uVolts)	CISPR 22 Class B ITE QP	Margin (dB)	CISPR 22 Class B ITE AV	Margin (dB)
1	.402	20.84	Pk	10.1	0	30.94	57.81	-26.87	-	-
2	.402	4.29	Av	10.1	0	14.39	-	-	47.81	-33.42
3	.5235	20.59	Pk	10.1	0	30.69	56	-25.31	-	-
4	.519	6.4	Av	10.1	0	16.5	-	-	46	-29.5
5	1.059	14.61	Pk	9.9	0	24.51	56	-31.49	-	-
6	1.077	-.07	Av	9.9	0	9.83	-	-	46	-36.17
7	4.6095	14.2	Pk	9.8	.1	24.1	56	-31.9	-	-
8	4.569	.45	Av	9.8	.1	10.35	-	-	46	-35.65
9	8.835	25.73	Pk	9.9	.1	35.73	60	-24.27	-	-
10	8.754	9.81	Av	9.9	.1	19.81	-	-	50	-30.19
11	21.6645	20.85	Pk	10.4	.2	31.45	60	-28.55	-	-
12	21.6645	14.11	Av	10.4	.2	24.71	-	-	50	-25.29

Pk - Peak detector

Av - Average detection

LINE 2 PLOT



LINE 2 RESULTS

Trace Markers

Phase N .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	101837_w ith ex- cord_N	CE Shield Room	Corrected Reading (dB(uVolts)	CISPR 22 Class B ITE QP	Margin (dB)	CISPR 22 Class B ITE AV	Margin (dB)
13	.1635	33.78	Pk	10.1	0	43.88	65.28	-21.4	-	-
14	.1635	13.75	Av	10.1	0	23.85	-	-	55.28	-31.43
15	.546	28.07	Pk	10.1	0	38.17	56	-17.83	-	-
16	.5415	19.61	Av	10.1	0	29.71	-	-	46	-16.29
17	1.059	27.57	Pk	9.9	0	37.47	56	-18.53	-	-
18	1.0905	10.68	Av	9.8	0	20.48	-	-	46	-25.52
19	1.482	24.95	Pk	9.8	.1	34.85	56	-21.15	-	-
20	1.4775	10.65	Av	9.8	.1	20.55	-	-	46	-25.45
21	8.7765	24.47	Pk	10	.1	34.57	60	-25.43	-	-
22	8.691	9.39	Av	10	.1	19.49	-	-	50	-30.51
23	21.6645	19.42	Pk	10.6	.2	30.22	60	-29.78	-	-
24	21.6645	13.1	Av	10.6	.2	23.9	-	-	50	-26.1

Pk - Peak detector

Av - Average detection