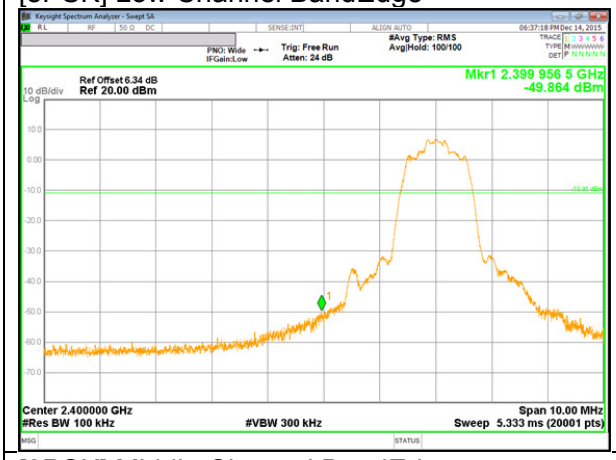
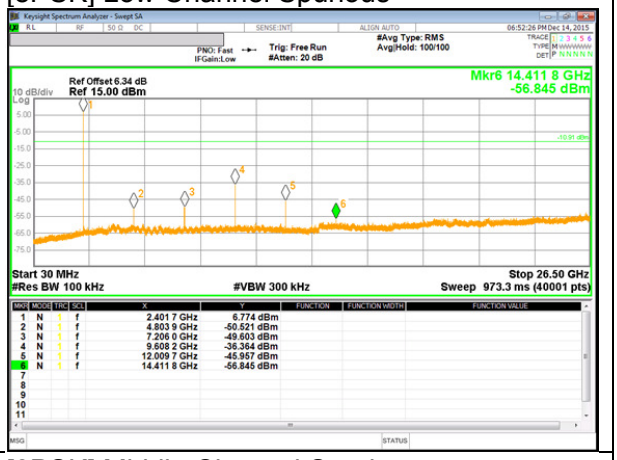
8PSK Mode

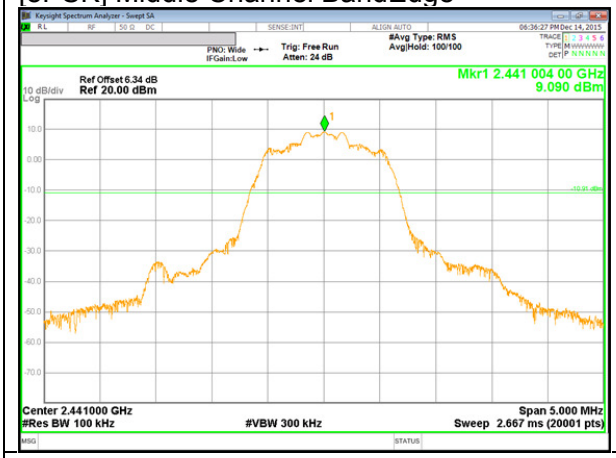
[8PSK] Low Channel BandEdge



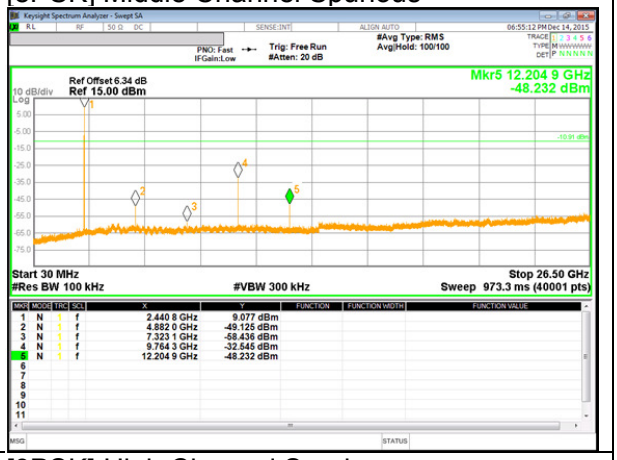
[8PSK] Low Channel Spurious



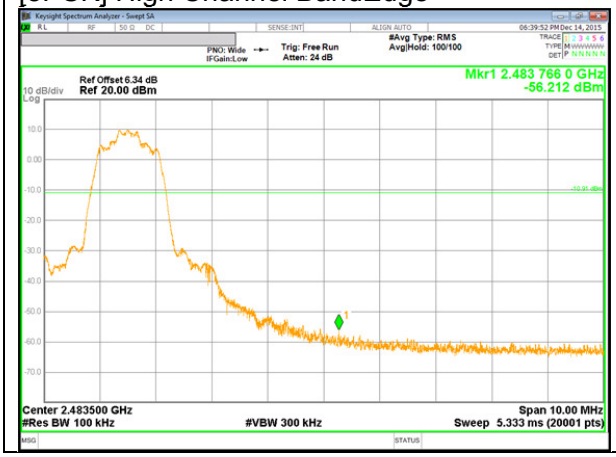
[8PSK] Middle Channel BandEdge



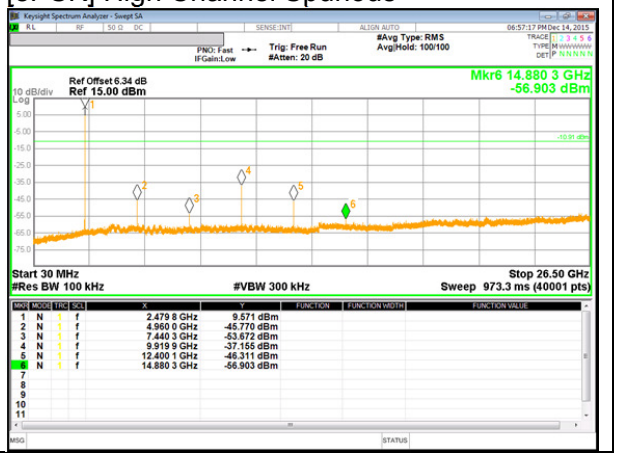
[8PSK] Middle Channel Spurious



[8PSK] High Channel BandEdge



[8PSK] High Channel Spurious



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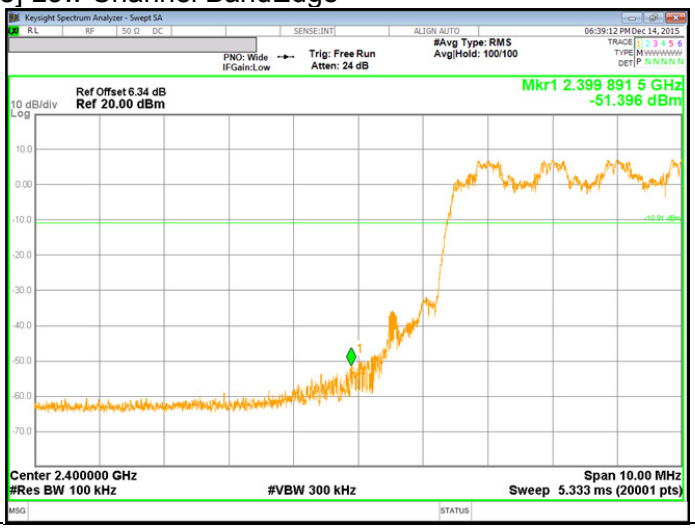
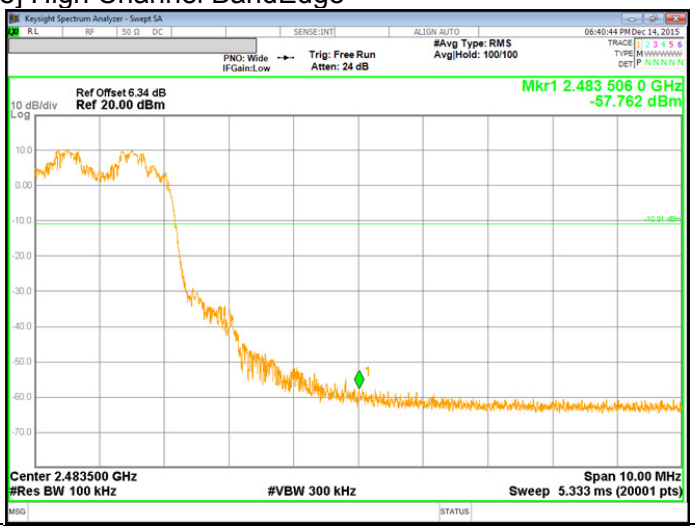
BandEdge Emission at 8PSK Hopping Mode

[8PSK Hopping Mode] Low Channel BandEdge



[8PSK Hopping Mode] High Channel BandEdge



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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.

Note : Emission was pre-scanned from 9KHz to 30MHz; No emissions were detected which was at least 20dB below the specification limit. Per FCC part 15.31(o), test results were not reported.

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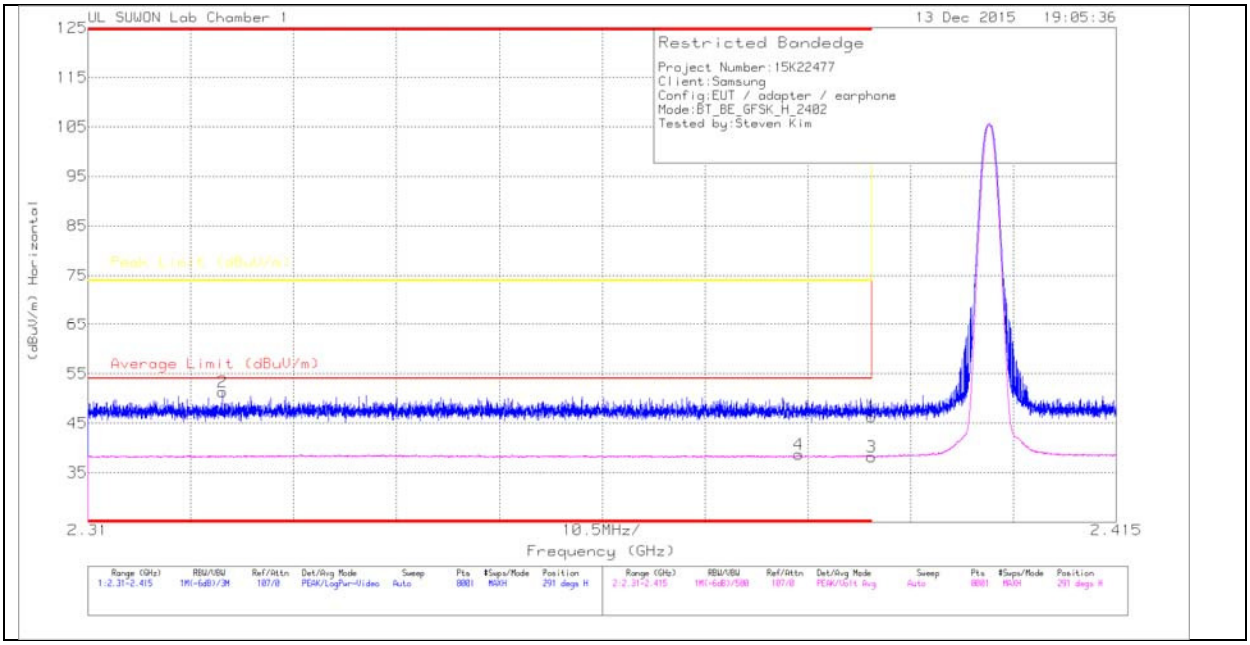
9.2. TRANSMITTER ABOVE 1 GHz

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(00168717)_150619	Path_2	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	43.39	Pk	31.8	-29	46.19	-	-	74	-27.81	291	101	H
2	* 2.324	48.59	Pk	31.7	-29	51.29	-	-	74	-22.71	291	101	H
3	* 2.39	35.38	V1TV	31.8	-29	38.18	54	-15.82	-	-	291	101	H
4	* 2.383	35.85	V1TV	31.8	-29	38.65	54	-15.35	-	-	291	101	H

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

Pk - Peak detector

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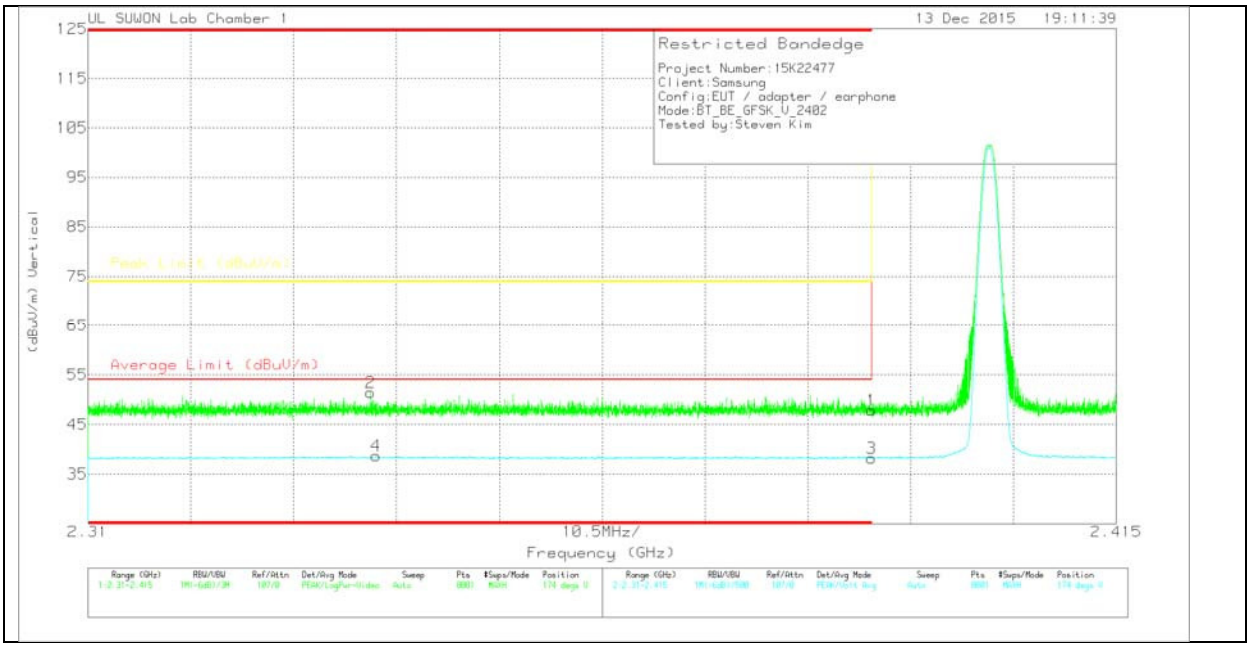
VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(0016 8717)_150 619	Path_2	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	45.08	Pk	31.8	-29	47.88	-	-	74	-26.12	174	370	V
2	* 2.339	48.75	Pk	31.7	-29	51.45	-	-	74	-22.55	174	370	V
3	* 2.39	35.44	V1TV	31.8	-29	38.24	54	-15.76	-	-	174	370	V
4	* 2.339	36.01	V1TV	31.7	-29	38.71	54	-15.29	-	-	174	370	V

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

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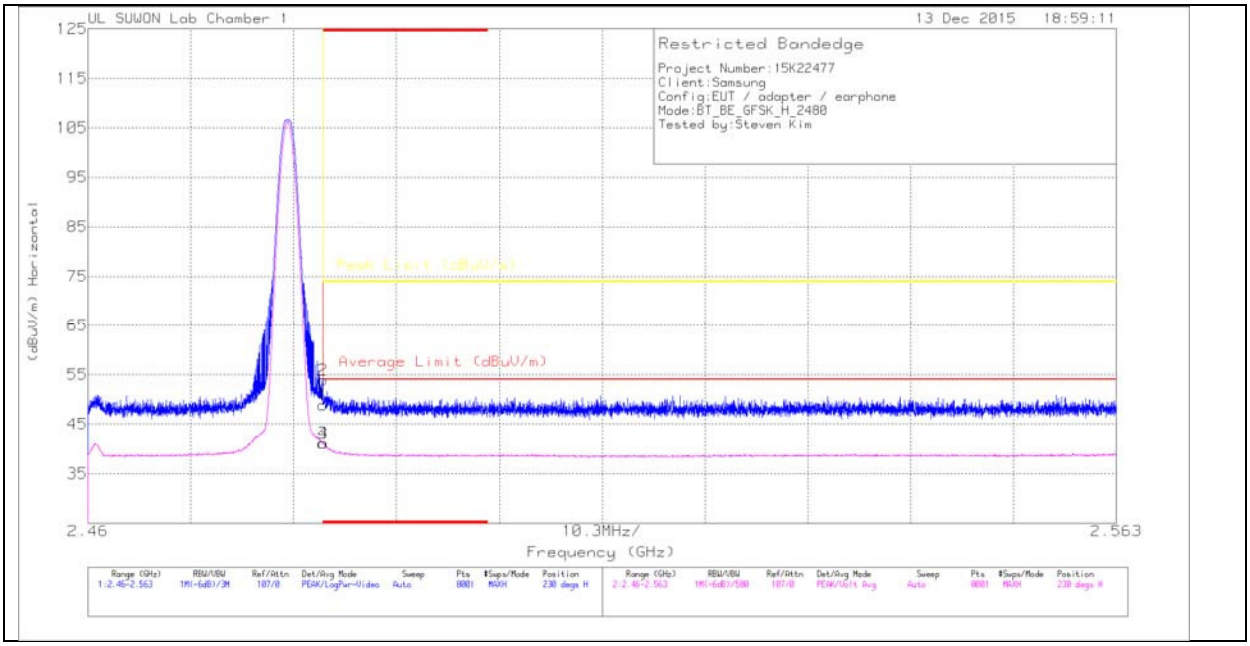
AUTHORIZED BANDEDGE (HIGH CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168717)_150619	Path_2	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	45.8	Pk	32	-28.9	48.9	-	-	74	-25.1	230	100	H
2	* 2.484	50.82	Pk	32	-28.9	53.92	-	-	74	-20.08	230	100	H
3	* 2.484	38.07	V1TV	32	-28.9	41.17	54	-12.83	-	-	230	100	H
4	* 2.484	38.03	V1TV	32	-28.9	41.13	54	-12.87	-	-	230	100	H

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

Pk - Peak detector

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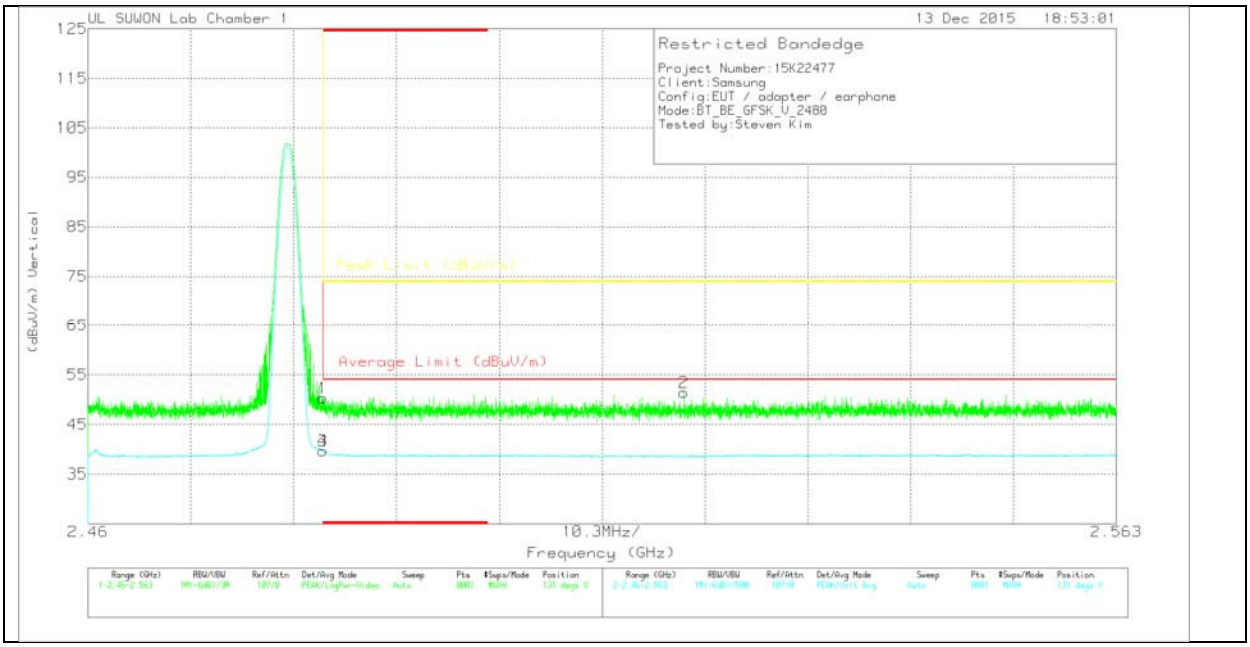
VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168717)_150619	Path_2	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	47.21	Pk	32	-28.9	50.31	-	-	74	-23.69	131	226	V
2	2.52	48.29	Pk	32	-28.9	51.39	-	-	74	-22.61	131	226	V
3	* 2.484	36.54	V1TV	32	-28.9	39.64	54	-14.36	-	-	131	226	V
4	* 2.484	36.57	V1TV	32	-28.9	39.67	54	-14.33	-	-	131	226	V

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

Pk - Peak detector

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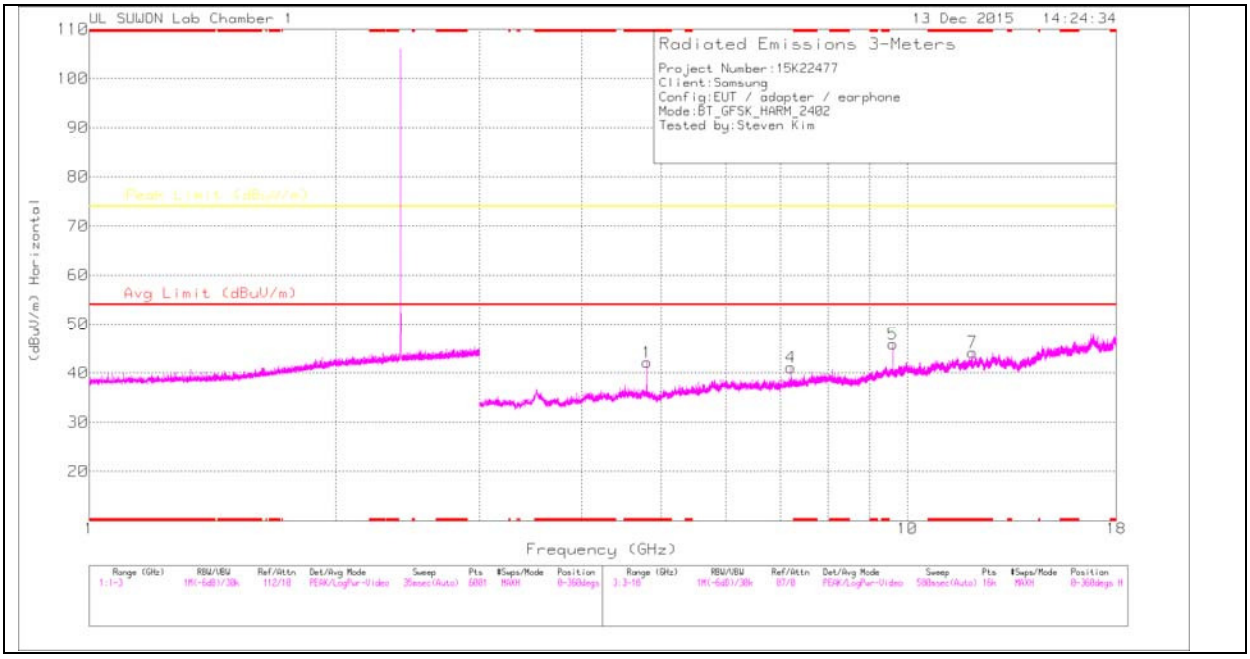
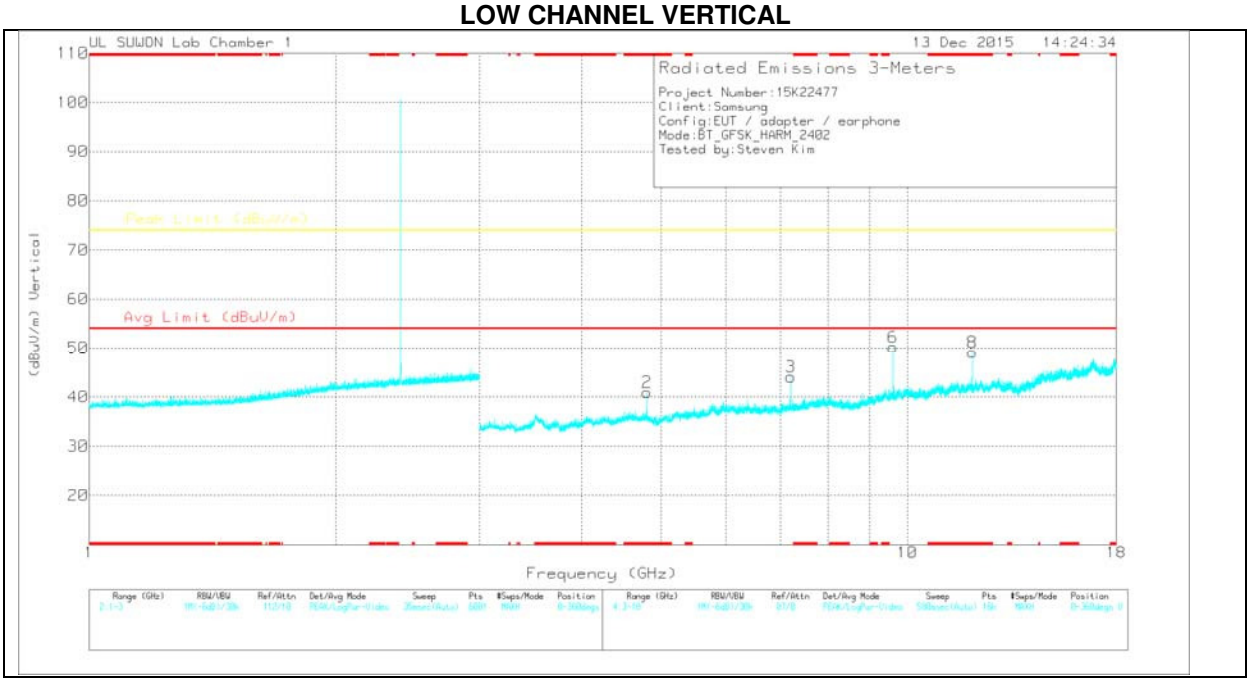
HARMONICS AND SPURIOUS EMISSIONS

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.

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LOW CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168717)_150619	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	41.95	PK	34	-33.8	42.15	-	-	74	-31.85	0-360	100	H
4	7.205	36.22	PK	35.7	-30.8	41.12	-	-	74	-32.88	0-360	200	H
5	9.608	36.16	PK	37	-27.3	45.86	-	-	74	-28.14	0-360	200	H
7	* 12.01	32.77	PK	38.9	-27.5	44.17	-	-	74	-29.83	0-360	200	H
2	* 4.804	40.76	PK	34	-33.8	40.96	-	-	74	-33.04	0-360	100	V
3	7.205	39.21	PK	35.7	-30.8	44.11	-	-	74	-29.89	0-360	100	V
6	9.608	40.49	PK	37	-27.3	50.19	-	-	74	-23.81	0-360	200	V
8	* 12.011	37.75	PK	38.9	-27.5	49.15	-	-	74	-24.85	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(00168717)_150619	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	48.6	PK2	34	-33.8	48.8	-	-	74	-25.2	34	115	H
* 4.804	36.73	VA1T	34	-33.8	36.93	54	-17.07	-	-	34	115	H
7.203	44.23	PK2	35.7	-30.8	49.13	-	-	74	-24.87	319	231	H
7.204	29.07	VA1T	35.7	-30.8	33.97	-	-	-	-	319	231	H
9.608	45.66	PK2	37	-27.3	55.36	-	-	74	-18.64	14	369	H
9.608	36.8	VA1T	37	-27.3	46.5	-	-	-	-	14	369	H
* 12.01	42.67	PK2	38.9	-27.5	54.07	-	-	74	-19.93	151	399	H
* 12.01	31.01	VA1T	38.9	-27.5	42.41	54	-11.59	-	-	151	399	H
* 4.804	49.62	PK2	34	-33.8	49.82	-	-	74	-24.18	310	245	V
* 4.804	38.5	VA1T	34	-33.8	38.7	54	-15.3	-	-	310	245	V
7.206	48.4	PK2	35.7	-30.8	53.3	-	-	74	-20.7	40	345	V
7.206	39.19	VA1T	35.7	-30.8	44.09	-	-	-	-	40	345	V
9.608	45.85	PK2	37	-27.3	55.55	-	-	74	-18.45	69	193	V
9.608	39.06	VA1T	37	-27.3	48.76	-	-	-	-	69	193	V
* 12.01	44.61	PK2	38.9	-27.5	56.01	-	-	74	-17.99	219	101	V
* 12.01	36.43	VA1T	38.9	-27.5	47.83	54	-6.17	-	-	219	101	V

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

PK2 - KDB558074 Method: Maximum Peak

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

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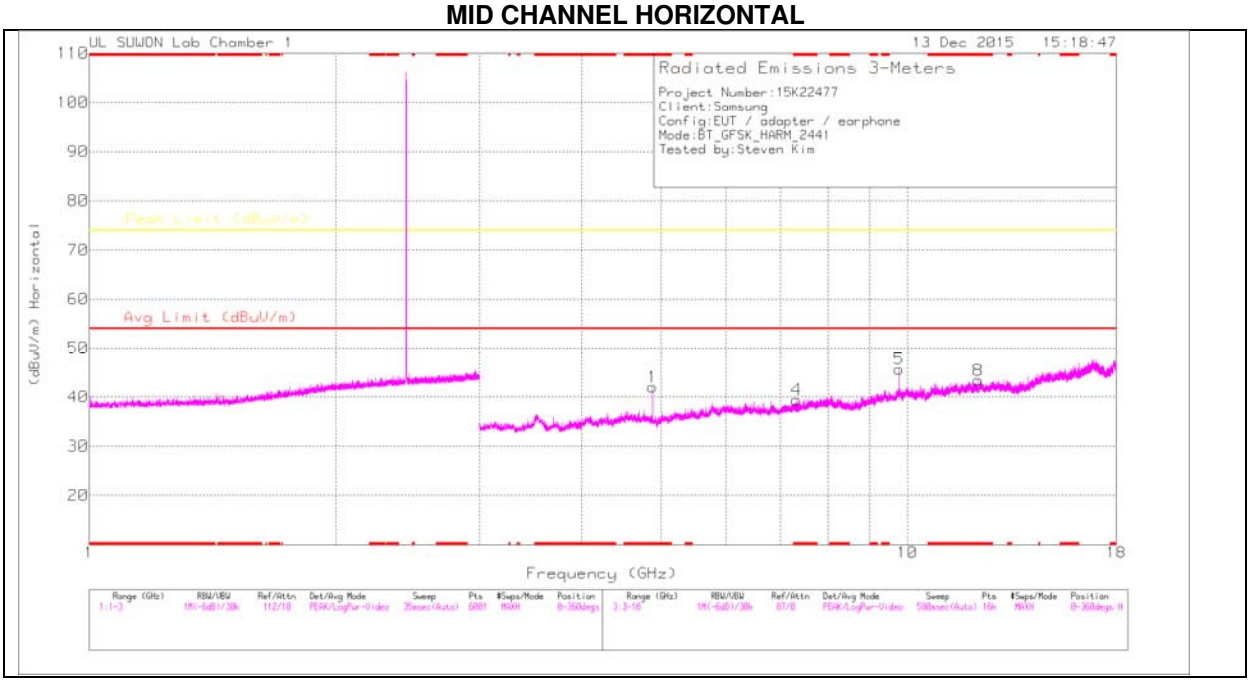
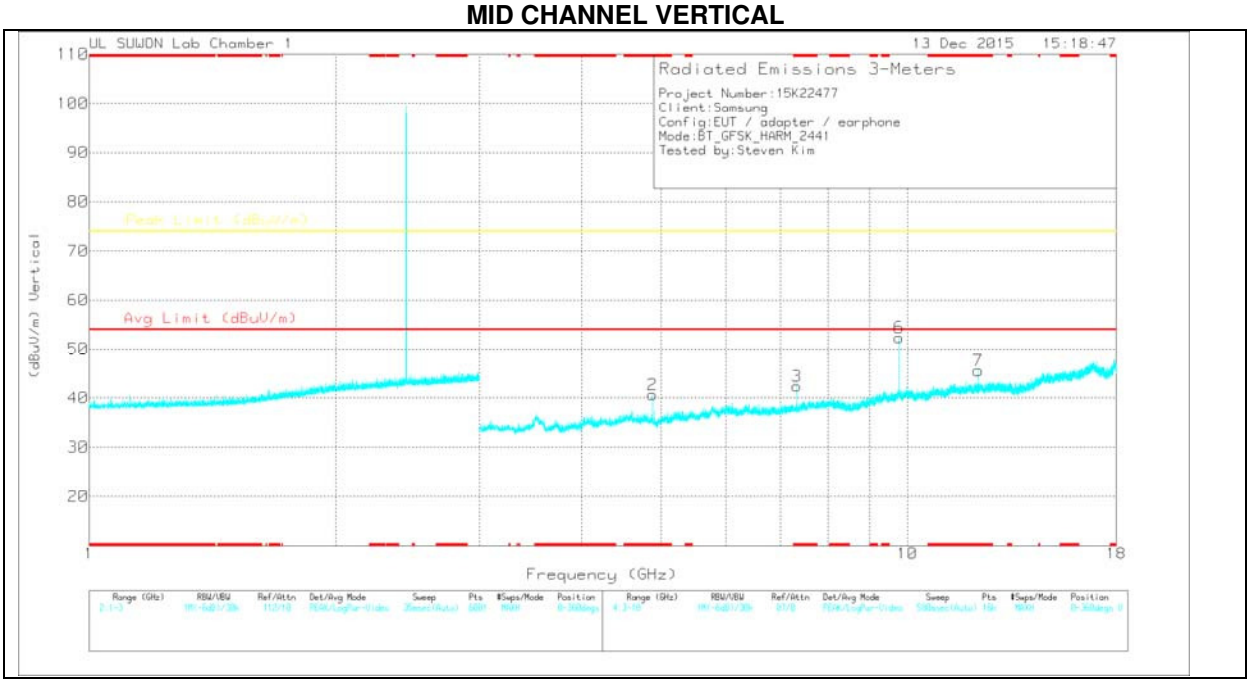
MID CHANNEL HORIZONTAL



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.

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MID CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168717)_150619	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	42.04	PK	34	-34	42.04	-	-	74	-31.96	0-360	100	H
4	* 7.323	34.54	PK	35.8	-30.9	39.44	-	-	74	-34.56	0-360	200	H
5	9.764	35.1	PK	37.2	-26.6	45.7	-	-	74	-28.3	0-360	200	H
8	* 12.206	31.81	PK	38.9	-27.3	43.41	-	-	74	-30.59	0-360	200	H
2	* 4.881	40.64	PK	34	-34	40.64	-	-	74	-33.36	0-360	100	V
3	* 7.323	37.48	PK	35.8	-30.9	42.38	-	-	74	-31.62	0-360	100	V
6	9.764	41.8	PK	37.2	-26.6	52.4	-	-	74	-21.6	0-360	100	V
7	* 12.206	34	PK	38.9	-27.3	45.6	-	-	74	-28.4	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(00168717)_150619	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	49.51	PK2	34	-34	49.51	-	-	74	-24.49	316	191	H
* 4.882	41.16	VA1T	34	-34	41.16	54	-12.84	-	-	316	191	H
9.764	44.5	PK2	37.2	-26.6	55.1	-	-	74	-18.9	12	318	H
9.764	37.23	VA1T	37.2	-26.6	47.83	-	-	-	-	12	318	H
* 4.882	49.7	PK2	34	-34	49.7	-	-	74	-24.3	163	103	V
* 4.882	40.84	VA1T	34	-34	40.84	54	-13.16	-	-	163	103	V
* 7.323	46.23	PK2	35.8	-30.9	51.13	-	-	74	-22.87	13	285	V
* 7.323	34.77	VA1T	35.8	-30.9	39.67	54	-14.33	-	-	13	285	V
9.764	47.27	PK2	37.2	-26.6	57.87	-	-	74	-16.13	35	101	V
9.764	41.23	VA1T	37.2	-26.6	51.83	-	-	-	-	35	101	V
* 12.205	44.78	PK2	38.9	-27.3	56.38	-	-	74	-17.62	229	101	V
* 12.205	36.46	VA1T	38.9	-27.3	48.06	54	-5.94	-	-	229	101	V

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

PK2 - KDB558074 Method: Maximum Peak

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

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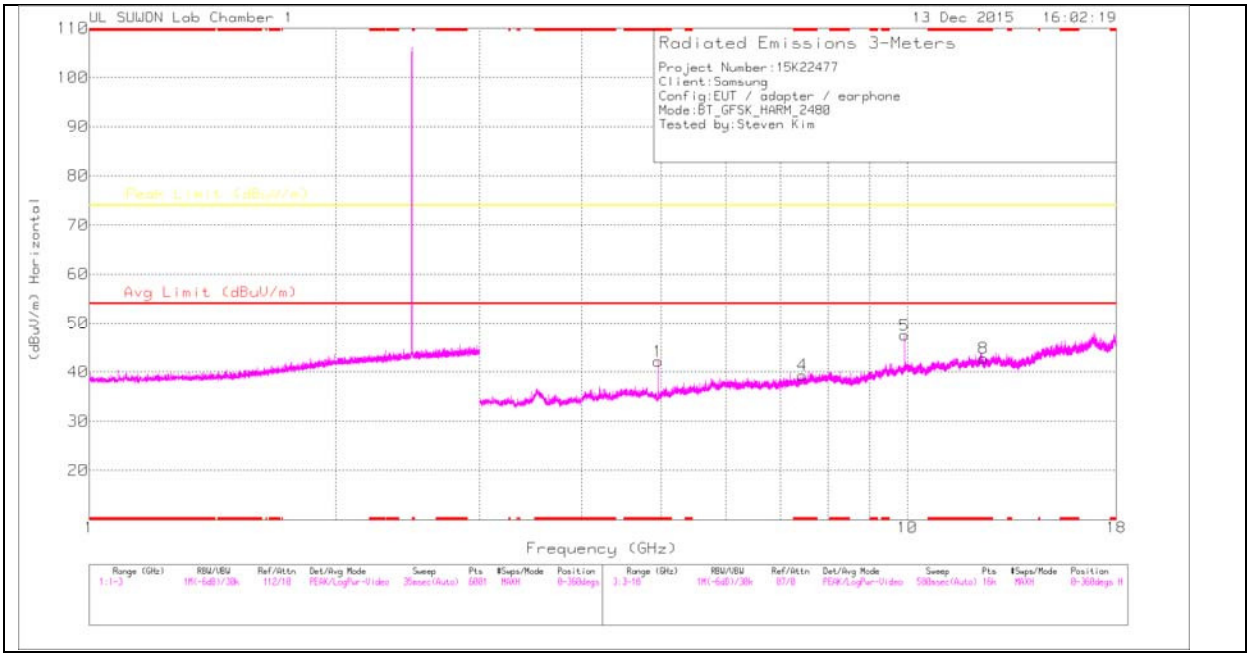
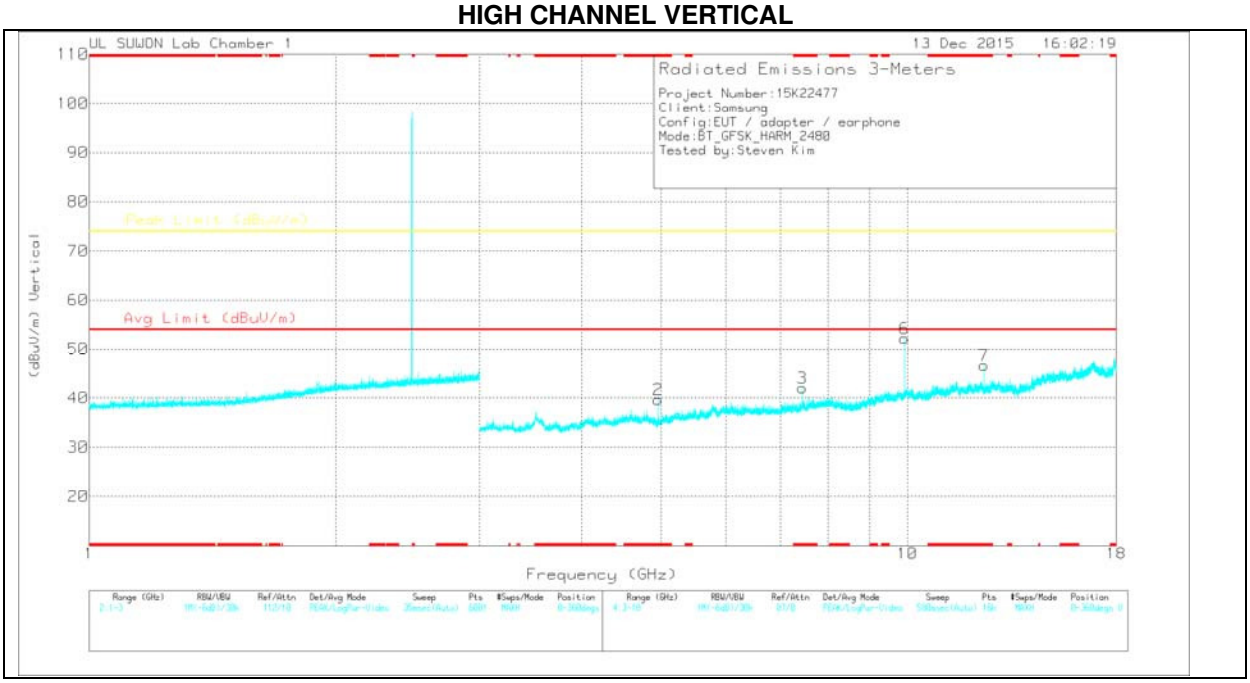
HIGH CHANNEL HORIZONTAL



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.

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HIGH CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168717)_150619	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	42.17	PK	34	-34	42.17	-	-	74	-31.83	0-360	100	H
4	* 7.441	34.22	PK	35.8	-30.7	39.32	-	-	74	-34.68	0-360	200	H
5	9.92	37.29	PK	37.4	-27.2	47.49	-	-	74	-26.51	0-360	200	H
8	* 12.383	30.78	PK	38.9	-26.9	42.78	-	-	74	-31.22	0-360	100	H
2	* 4.96	39.66	PK	34	-34	39.66	-	-	74	-34.34	0-360	100	V
3	* 7.44	36.92	PK	35.8	-30.7	42.02	-	-	74	-31.98	0-360	100	V
6	9.92	42.01	PK	37.4	-27.2	52.21	-	-	74	-21.79	0-360	100	V
7	* 12.401	34.98	PK	38.9	-27.2	46.68	-	-	74	-27.32	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(00168717)_150619	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	50.65	PK2	34	-34	50.65	-	-	74	-23.35	306	100	H
* 4.96	42.04	VA1T	34	-34	42.04	54	-11.96	-	-	306	100	H
9.92	42.57	PK2	37.4	-27.2	52.77	-	-	74	-21.23	269	203	H
9.92	30.22	VA1T	37.4	-27.2	40.42	-	-	-	-	269	203	H
* 4.96	49.75	PK2	34	-34	49.75	-	-	74	-24.25	178	125	V
* 4.96	40.33	VA1T	34	-34	40.33	54	-13.67	-	-	178	125	V
* 7.44	46.44	PK2	35.8	-30.7	51.54	-	-	74	-22.46	9	100	V
* 7.44	35.76	VA1T	35.8	-30.7	40.86	54	-13.14	-	-	9	100	V
9.92	47	PK2	37.4	-27.2	57.2	-	-	74	-16.8	34	102	V
9.92	41.14	VA1T	37.4	-27.2	51.34	-	-	-	-	34	102	V
* 12.4	43.37	PK2	38.9	-27.2	55.07	-	-	74	-18.93	295	100	V
* 12.4	32.6	VA1T	38.9	-27.2	44.3	54	-9.7	-	-	295	100	V

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

PK2 - KDB558074 Method: Maximum Peak

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

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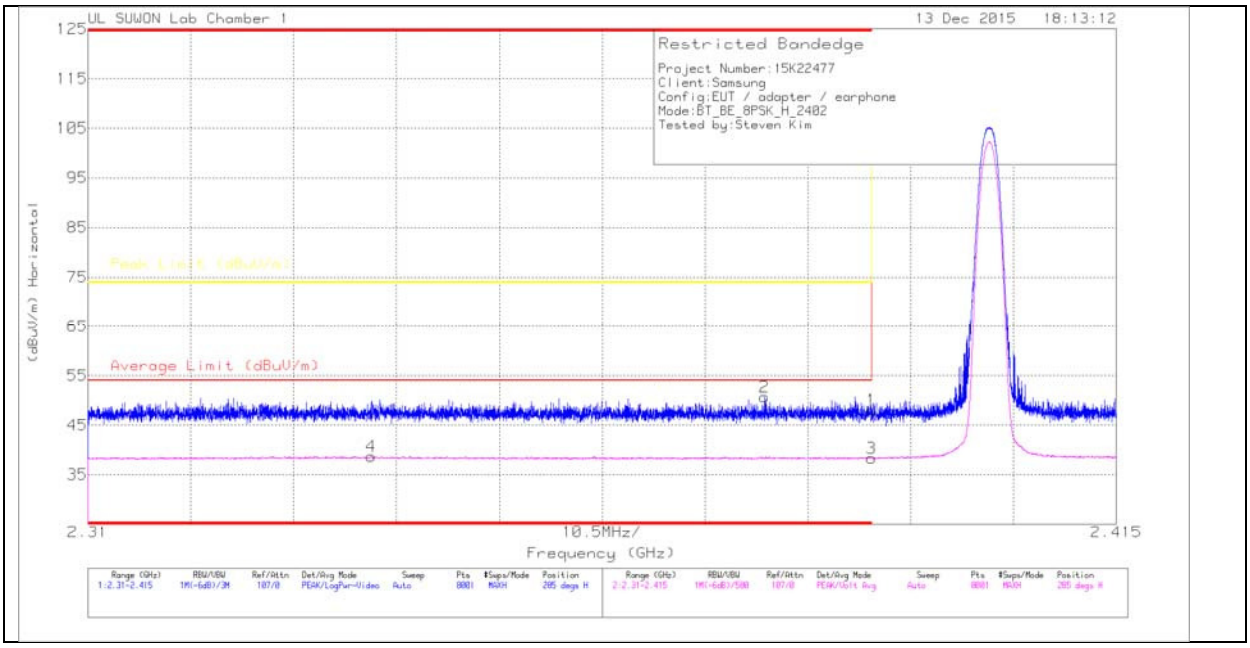
9.2.2. ENHANCED DATA RATE 8PSK MODULATION RESTRICTED BANDEDGE (LOW CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168717)_150619	Path_2	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	45.27	Pk	31.8	-29	48.07	-	-	74	-25.93	285	104	H
2	* 2.379	47.88	Pk	31.8	-29	50.68	-	-	74	-23.32	285	104	H
3	* 2.39	35.51	V1TV	31.8	-29	38.31	54	-15.69	-	-	285	104	H
4	* 2.339	35.97	V1TV	31.7	-29	38.67	54	-15.33	-	-	285	104	H

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

Pk - Peak detector

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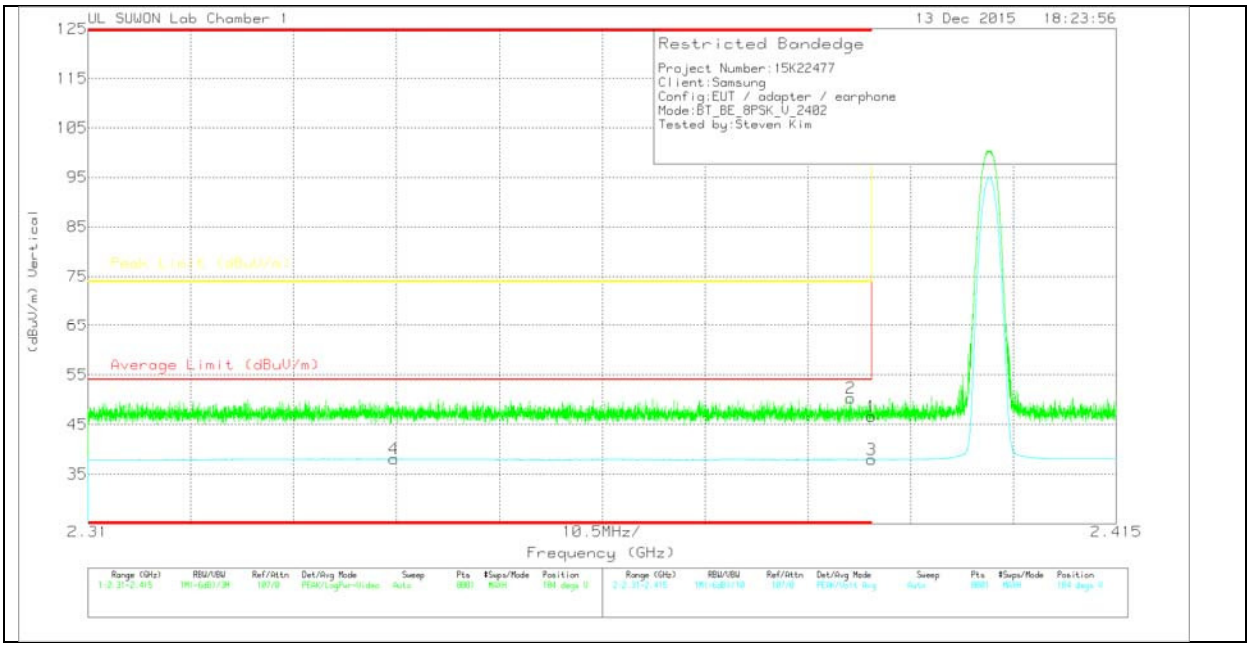
VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168717)_150619	Path_2	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	43.86	Pk	31.8	-29	46.66	-	-	74	-27.34	184	376	V
2	* 2.388	47.57	Pk	31.8	-29	50.37	-	-	74	-23.63	184	376	V
3	* 2.39	35.14	V1TV	31.8	-29	37.94	54	-16.06	-	-	184	376	V
4	* 2.341	35.35	V1TV	31.7	-29	38.05	54	-15.95	-	-	184	376	V

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

Pk - Peak detector

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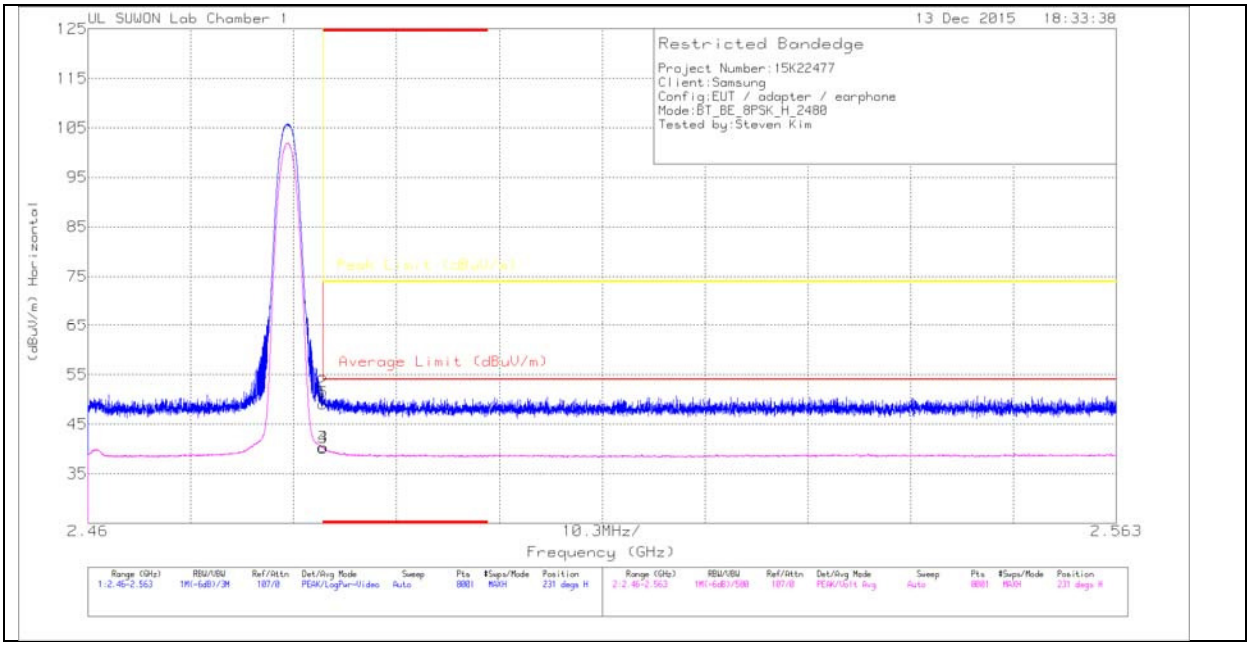
AUTHORIZED BANDEDGE (HIGH CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168717)_150619	Path_2	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	45.98	Pk	32	-28.9	49.08	-	-	74	-24.92	231	100	H
2	* 2.484	48.42	Pk	32	-28.9	51.52	-	-	74	-22.48	231	100	H
3	* 2.484	37.15	V1TV	32	-28.9	40.25	54	-13.75	-	-	231	100	H
4	* 2.484	37.19	V1TV	32	-28.9	40.29	54	-13.71	-	-	231	100	H

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

Pk - Peak detector

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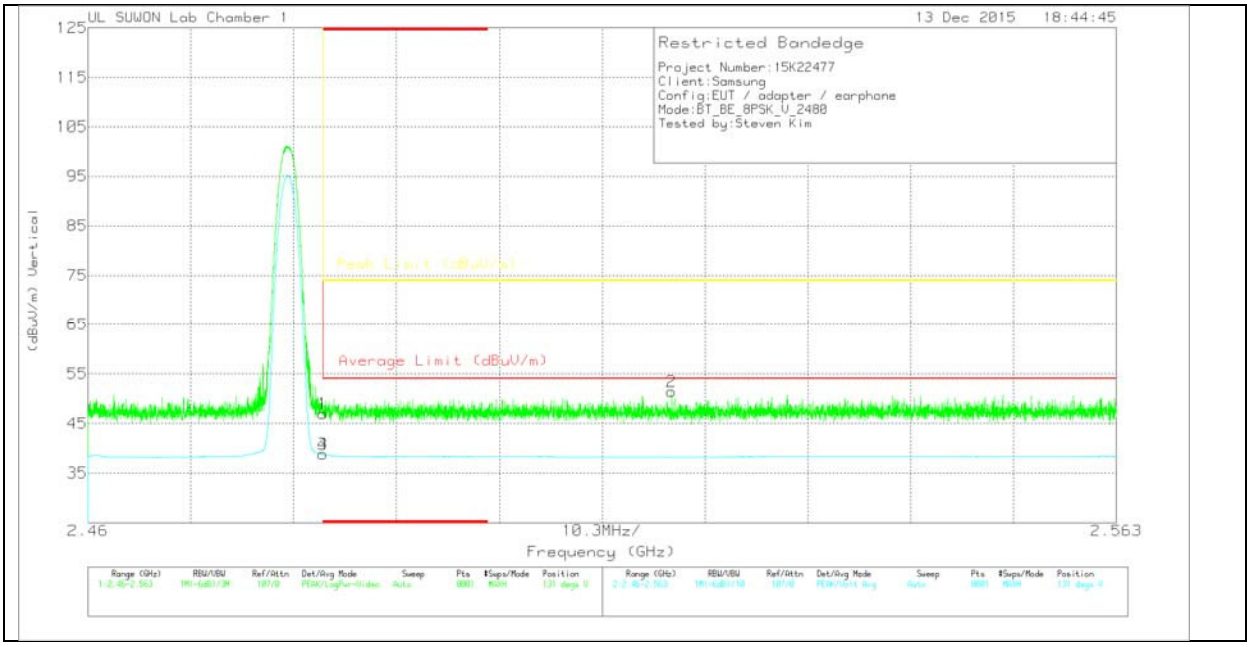
VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168717)_150619	Path_2	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	43.91	Pk	32	-28.9	47.01	-	-	74	-26.99	131	226	V
2	2.518	48.31	Pk	32	-28.9	51.41	-	-	74	-22.59	131	226	V
3	* 2.484	35.67	V1TV	32	-28.9	38.77	54	-15.23	-	-	131	226	V
4	* 2.484	35.67	V1TV	32	-28.9	38.77	54	-15.23	-	-	131	226	V

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

Pk - Peak detector

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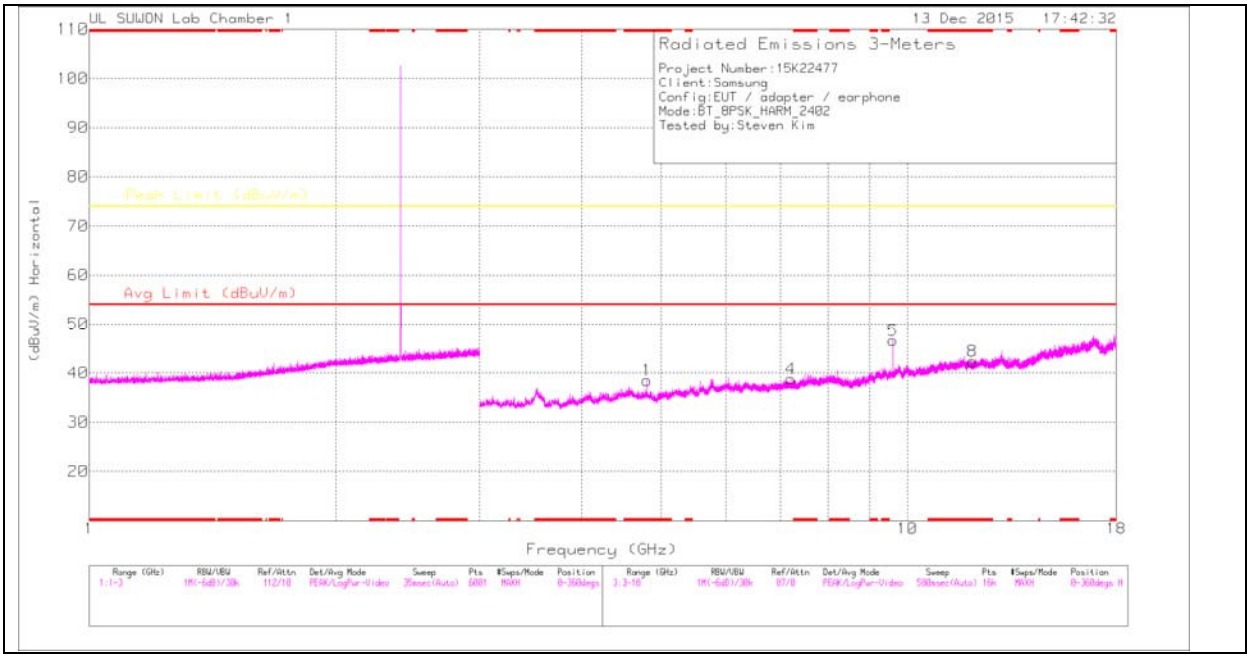
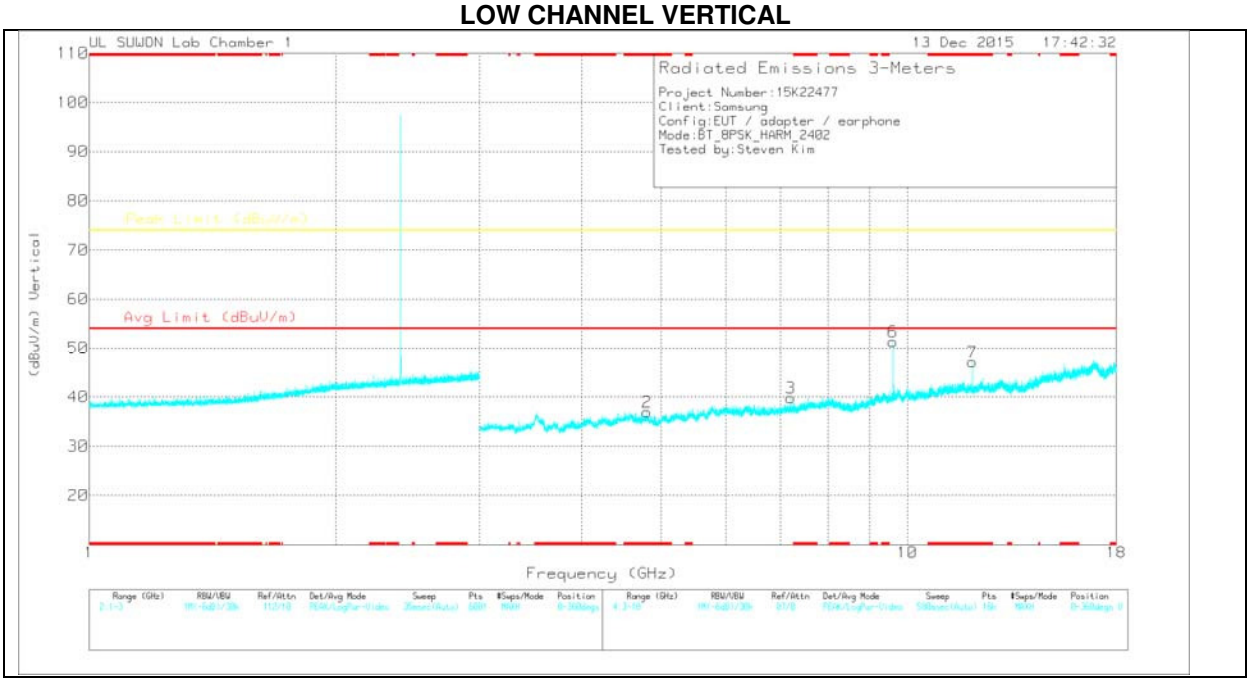
HARMONICS AND SPURIOUS EMISSIONS

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.

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LOW CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168717)_150619	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	38.3	PK	34	-33.8	38.5	-	-	74	-35.5	0-360	100	H
4	7.206	33.9	PK	35.7	-30.8	38.8	-	-	74	-35.2	0-360	200	H
5	9.608	36.91	PK	37	-27.3	46.61	-	-	74	-27.39	0-360	200	H
8	* 12.01	30.96	PK	38.9	-27.5	42.36	-	-	74	-31.64	0-360	200	H
2	* 4.804	36.71	PK	34	-33.8	36.91	-	-	74	-37.09	0-360	200	V
3	7.205	34.9	PK	35.7	-30.8	39.8	-	-	74	-34.2	0-360	200	V
6	9.608	41.66	PK	37	-27.3	51.36	-	-	74	-22.64	0-360	100	V
7	* 12.01	35.73	PK	38.9	-27.5	47.13	-	-	74	-26.87	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(00168717)_150619	Path_3	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
9.608	45.07	PK2	37	-27.3	54.77	-	-	74	-19.23	4	391	H
9.608	38.72	VA1T	37	-27.3	48.42	-	-	-	-	4	391	H
9.608	46.83	PK2	37	-27.3	56.53	-	-	74	-17.47	29	103	V
9.608	41.24	VA1T	37	-27.3	50.94	-	-	-	-	29	103	V
* 12.01	45.11	PK2	38.9	-27.5	56.51	-	-	74	-17.49	229	100	V
* 12.01	35.35	VA1T	38.9	-27.5	46.75	54	-7.25	-	-	229	100	V

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

PK2 - KDB558074 Method: Maximum Peak

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

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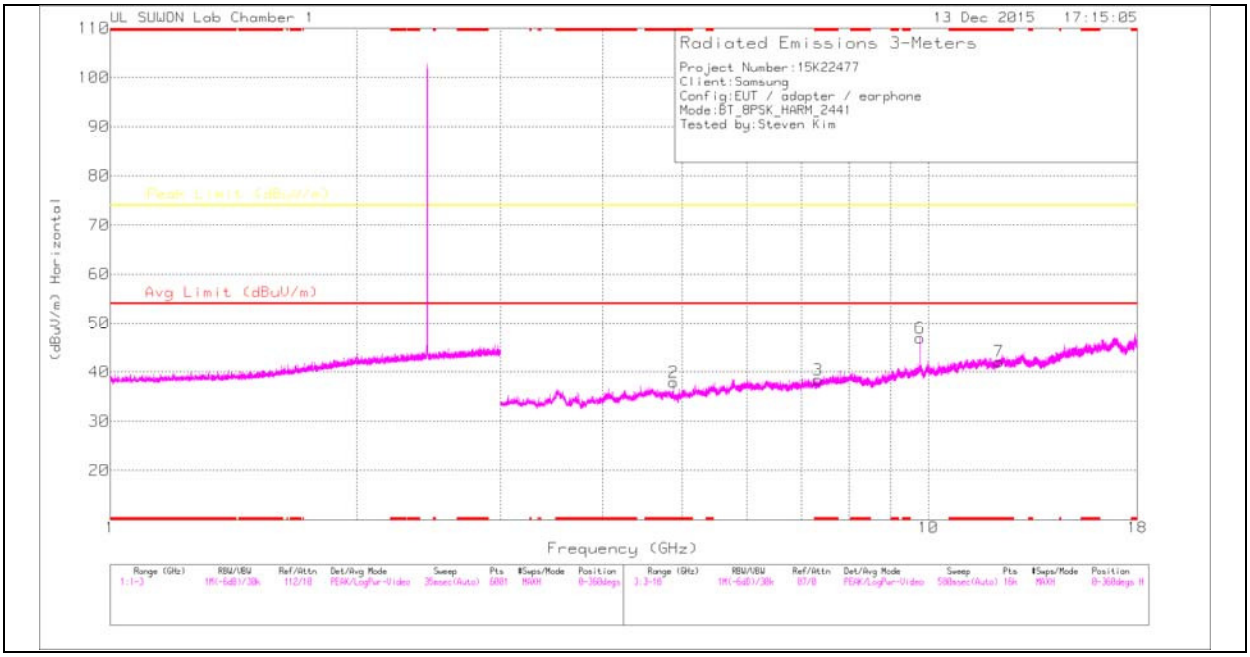
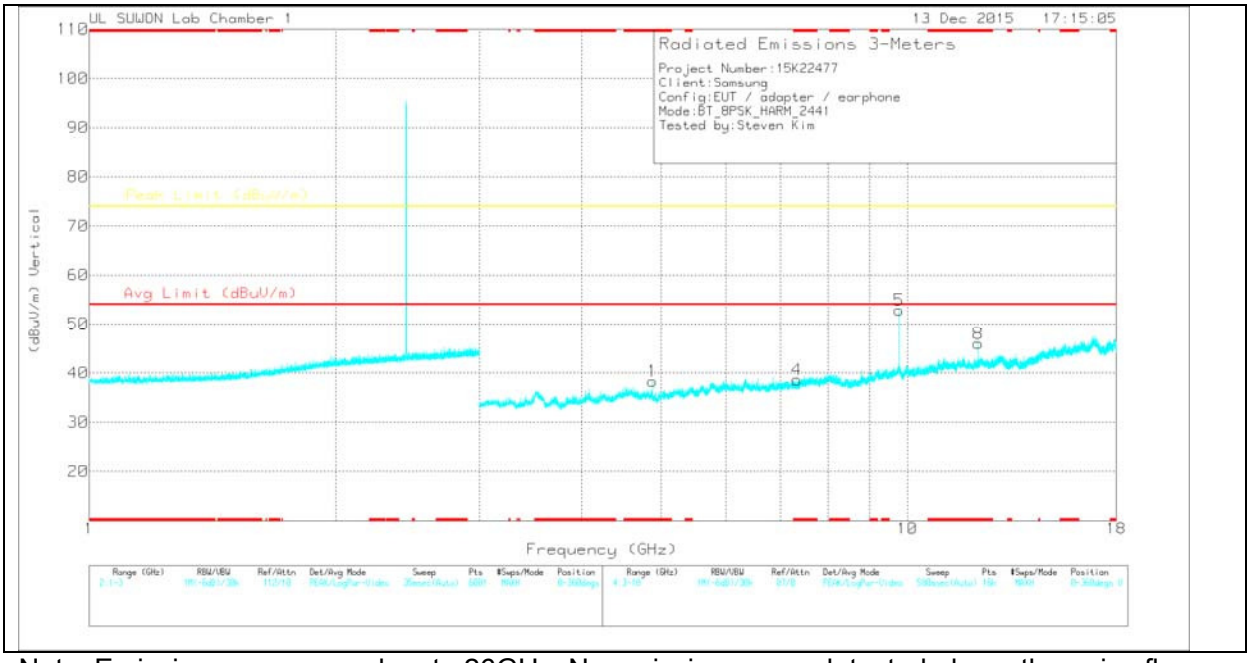
MID CHANNEL HORIZONTAL



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.

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MID CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168717)_150619	Path_3	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 4.881	37.91	PK	34	-34	37.91	-	-	74	-36.09	0-360	100	H
3	* 7.333	33.4	PK	35.8	-30.8	38.4	-	-	74	-35.6	0-360	200	H
6	9.764	36.34	PK	37.2	-26.6	46.94	-	-	74	-27.06	0-360	200	H
7	* 12.205	30.49	PK	38.9	-27.3	42.09	-	-	74	-31.91	0-360	200	H
1	* 4.881	38.35	PK	34	-34	38.35	-	-	74	-35.65	0-360	100	V
4	* 7.323	33.73	PK	35.8	-30.9	38.63	-	-	74	-35.37	0-360	100	V
5	9.764	42.28	PK	37.2	-26.6	52.88	-	-	74	-21.12	0-360	100	V
8	* 12.206	34.42	PK	38.9	-27.3	46.02	-	-	74	-27.98	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(00168717)_150619	Path_3	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
9.764	43.07	PK2	37.2	-26.6	53.67	-	-	74	-20.33	162	362	H
9.764	34.8	VA1T	37.2	-26.6	45.4	-	-	-	-	162	362	H
9.764	46.96	PK2	37.2	-26.6	57.56	-	-	74	-16.44	34	100	V
9.764	42.32	VA1T	37.2	-26.6	52.92	-	-	-	-	34	100	V
* 12.205	43.36	PK2	38.9	-27.3	54.96	-	-	74	-19.04	229	100	V
* 12.205	33.22	VA1T	38.9	-27.3	44.82	54	-9.18	-	-	229	100	V

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

PK2 - KDB558074 Method: Maximum Peak

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

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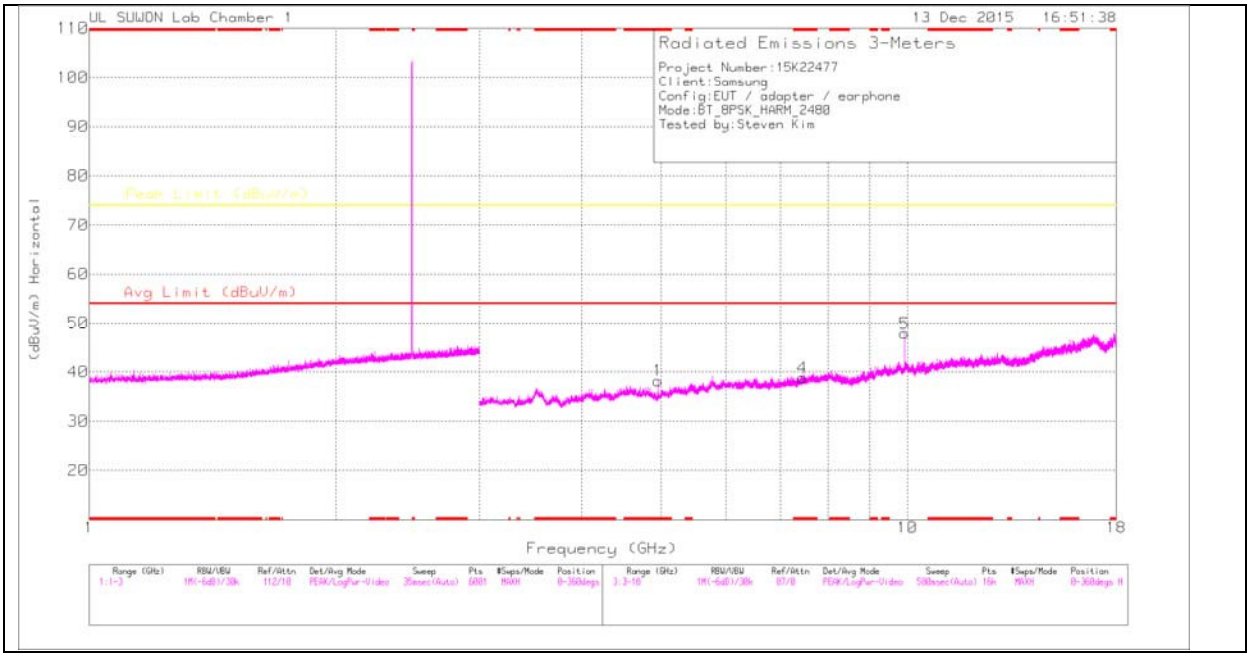
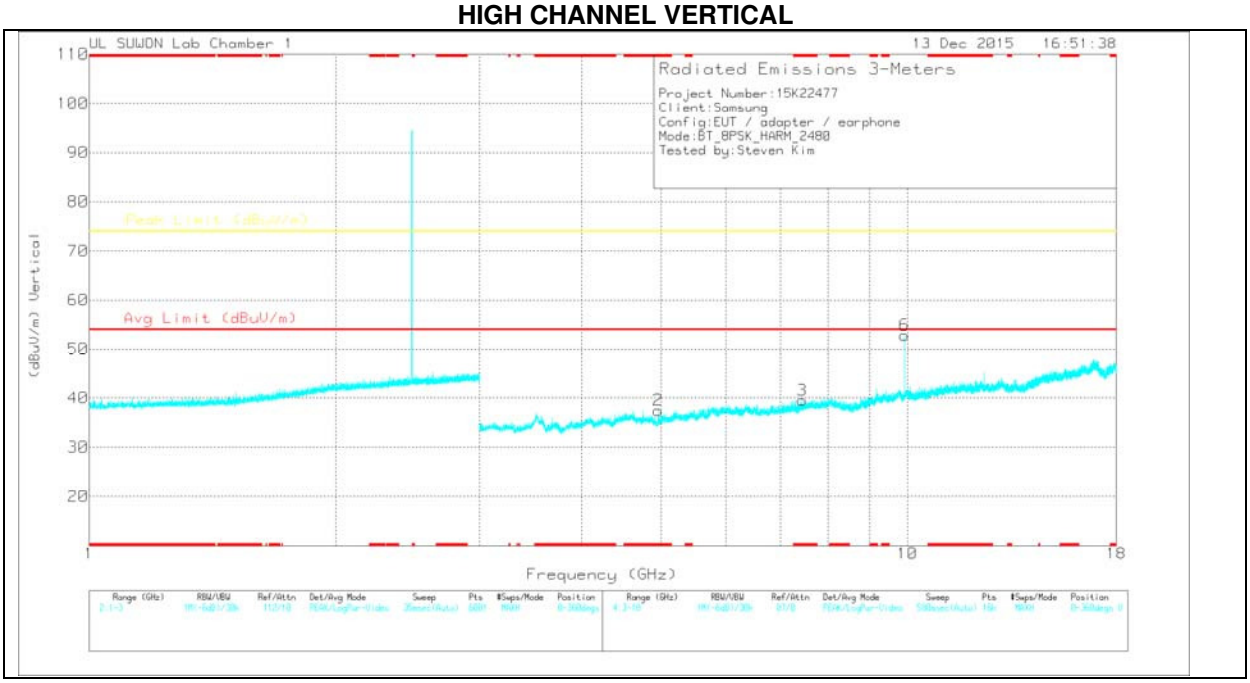
HIGH CHANNEL HORIZONTAL



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.

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HIGH CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(0016 8717)_150 619	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	38.24	PK	34	-34	38.24	-	-	74	-35.76	0-360	100	H
4	* 7.443	33.6	PK	35.8	-30.6	38.8	-	-	74	-35.2	0-360	200	H
5	9.92	37.66	PK	37.4	-27.2	47.86	-	-	74	-26.14	0-360	200	H
2	* 4.959	37.49	PK	34	-34	37.49	-	-	74	-36.51	0-360	100	V
3	* 7.44	34.45	PK	35.8	-30.7	39.55	-	-	74	-34.45	0-360	100	V
6	9.92	42.71	PK	37.4	-27.2	52.91	-	-	74	-21.09	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(0016 8717)_150 619	Path_3	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
9.92	43.73	PK2	37.4	-27.2	53.93	-	-	74	-20.07	328	272	H
9.92	34.83	VA1T	37.4	-27.2	45.03	-	-	-	-	328	272	H
9.92	47.38	PK2	37.4	-27.2	57.58	-	-	74	-16.42	41	100	V
9.92	41.56	VA1T	37.4	-27.2	51.76	-	-	-	-	41	100	V
* 12.205	43.36	PK2	38.9	-27.3	54.96	-	-	74	-19.04	229	100	V
* 12.205	33.22	VA1T	38.9	-27.3	44.82	54	-9.18	-	-	229	100	V

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

PK2 - KDB558074 Method: Maximum Peak

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

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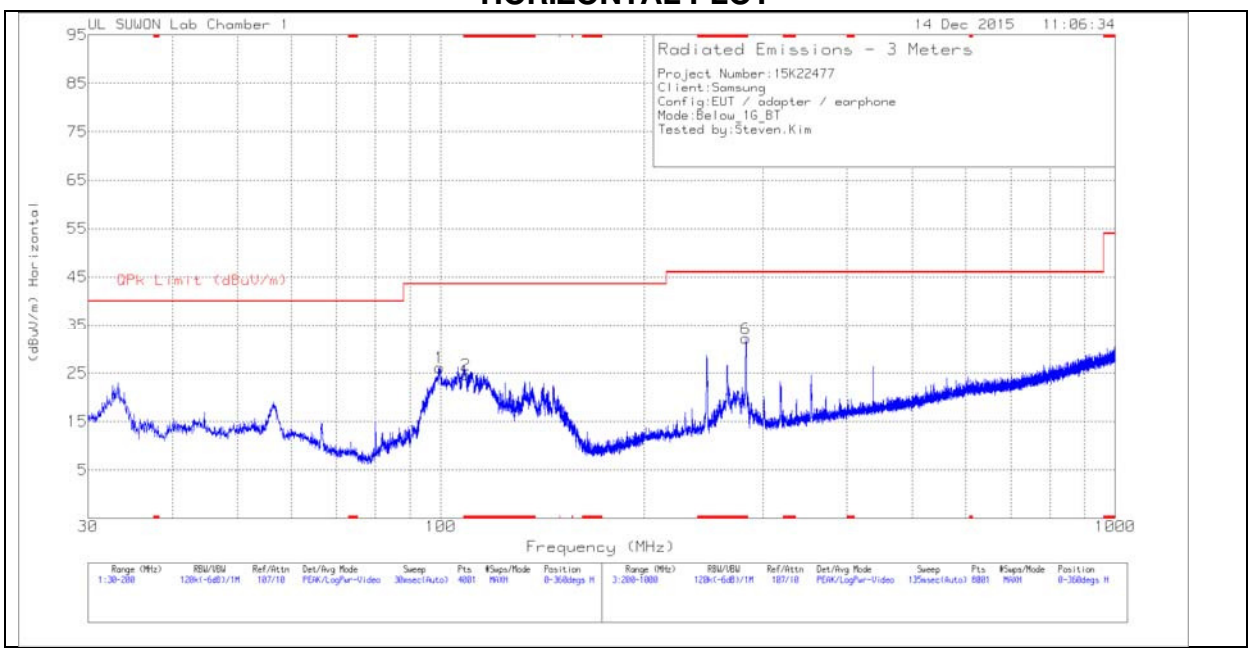
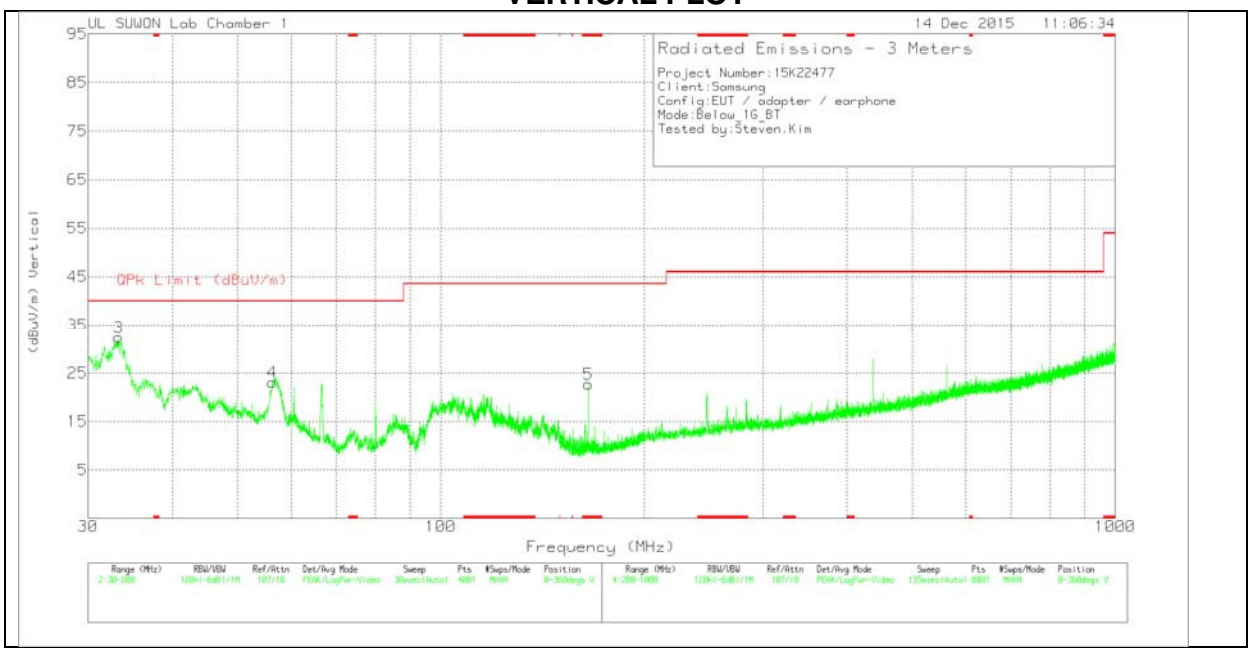
9.3. WORST-CASE BELOW 1 GHz

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

HORIZONTAL PLOT



VERTICAL PLOT



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BELOW 1 GHz TABLE

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	VULB9163-750	Bi-Log	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	99.615	43.92	Pk	11.5	-29.3	26.12	43.52	-17.4	0-360	300	H
2	* 108.8375	42.86	Pk	10.9	-29.2	24.56	43.52	-18.96	0-360	300	H
3	33.2725	52.52	Pk	10.4	-30.5	32.42	40	-7.58	0-360	100	V
4	56.3075	40.03	Pk	13.1	-30	23.13	40	-16.87	0-360	100	V
5	* 165.575	42.46	Pk	8.7	-28.5	22.66	43.52	-20.86	0-360	100	V
6	* 283.4	46.83	Pk	13	-27.6	32.23	46.02	-13.79	0-360	100	H

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

Pk - Peak detector

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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

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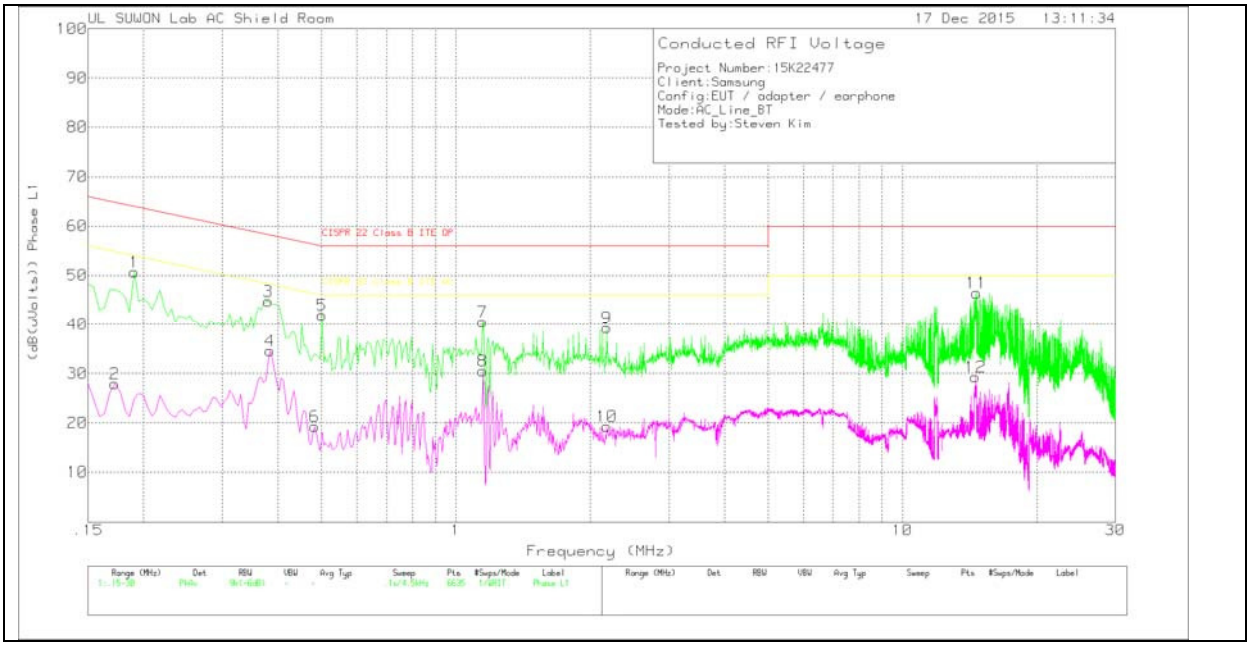
6 WORST EMISSIONS

LINE 1 PLOT



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LINE 1 RESULTS

Trace Markers

Phase L1 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	101837_with 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	.1905	40.7	Pk	10	0	50.7	64.01	-13.31	-	-
2	.1725	17.74	Av	10.2	0	27.94	-	-	54.84	-26.9
3	.3795	34.6	Pk	10.1	0	44.7	58.29	-13.59	-	-
4	.384	24.46	Av	10.1	0	34.56	-	-	48.19	-13.63
5	.501	31.72	Pk	10.2	0	41.92	56	-14.08	-	-
6	.483	9.06	Av	10.2	0	19.26	-	-	46.29	-27.03
7	1.149	30.66	Pk	9.9	0	40.56	56	-15.44	-	-
8	1.149	20.58	Av	9.9	0	30.48	-	-	46	-15.52
9	2.1795	29.39	Pk	9.8	.1	39.29	56	-16.71	-	-
10	2.1795	9.33	Av	9.8	.1	19.23	-	-	46	-26.77
11	14.6445	36.12	Pk	10.1	.2	46.42	60	-13.58	-	-
12	14.5905	19.04	Av	10.1	.2	29.34	-	-	50	-20.66

Pk - Peak detector

Av - Average detection

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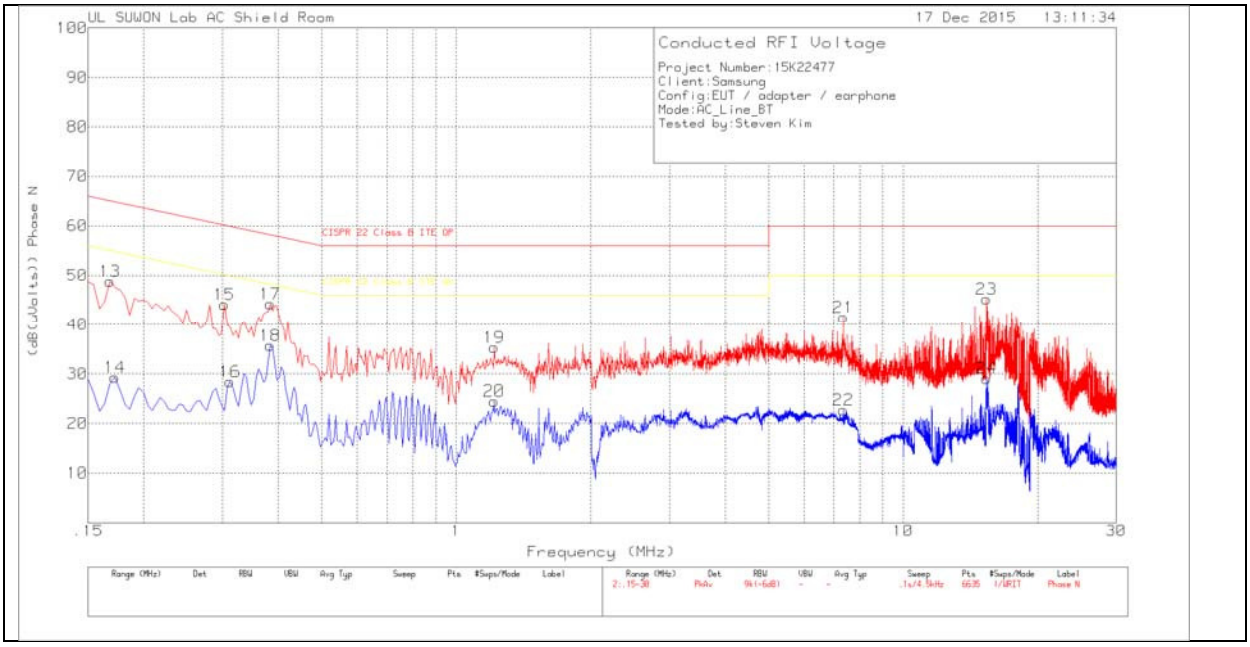
LINE 2 PLOT



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LINE 2 RESULTS

Trace Markers

Phase N .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	101837_with 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	.168	38.59	Pk	10.2	0	48.79	65.06	-16.27	-	-
14	.1725	19.08	Av	10.2	0	29.28	-	-	54.84	-25.56
15	.303	34.23	Pk	9.9	0	44.13	60.16	-16.03	-	-
16	.312	18.54	Av	9.9	0	28.44	-	-	49.92	-21.48
17	.384	34.11	Pk	10.1	0	44.21	58.19	-13.98	-	-
18	.384	25.58	Av	10.1	0	35.68	-	-	48.19	-12.51
19	1.2165	25.42	Pk	9.8	.1	35.32	56	-20.68	-	-
20	1.2165	14.62	Av	9.8	.1	24.52	-	-	46	-21.48
21	7.3455	31.5	Pk	9.9	.1	41.5	60	-18.5	-	-
22	7.3455	12.68	Av	9.9	.1	22.68	-	-	50	-27.32
23	15.36	34.69	Pk	10.3	.2	45.19	60	-14.81	-	-
24	15.36	18.6	Av	10.3	.2	29.1	-	-	50	-20.9

Pk - Peak detector

Av - Average detection

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