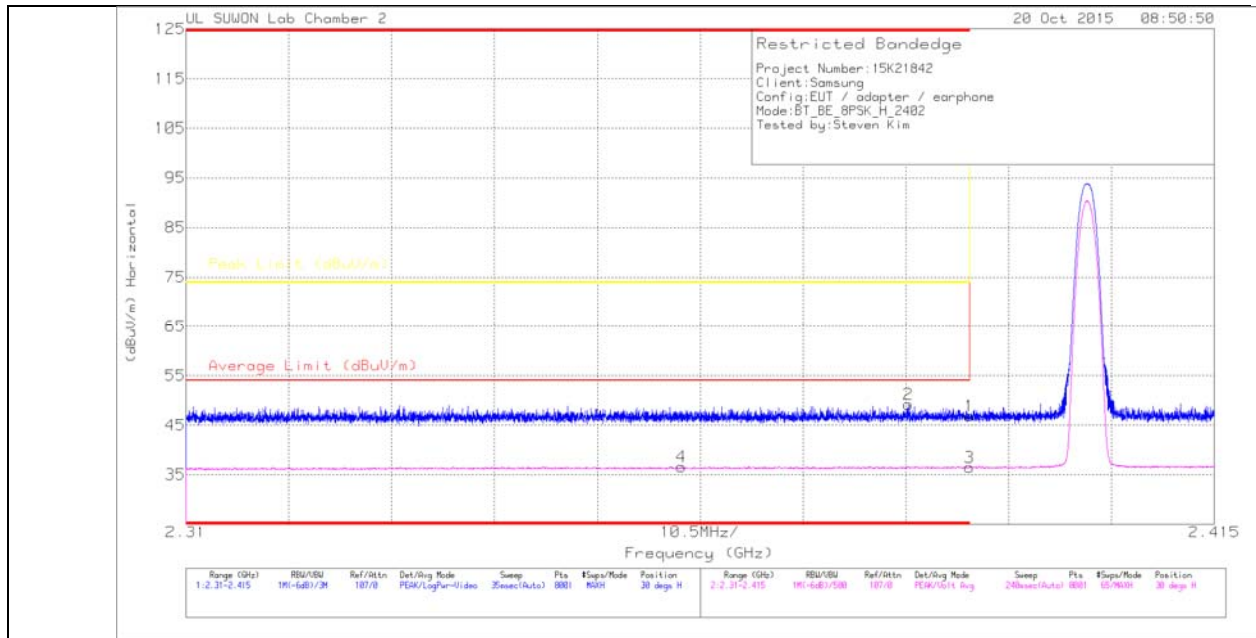


### 9.2.2. ENHANCED DATA RATE 8PSK MODULATION RESTRICTED BANDEDGE (LOW CHANNEL)

#### HORIZONTAL PEAK AND AVERAGE PLOT



#### HORIZONTAL DATA

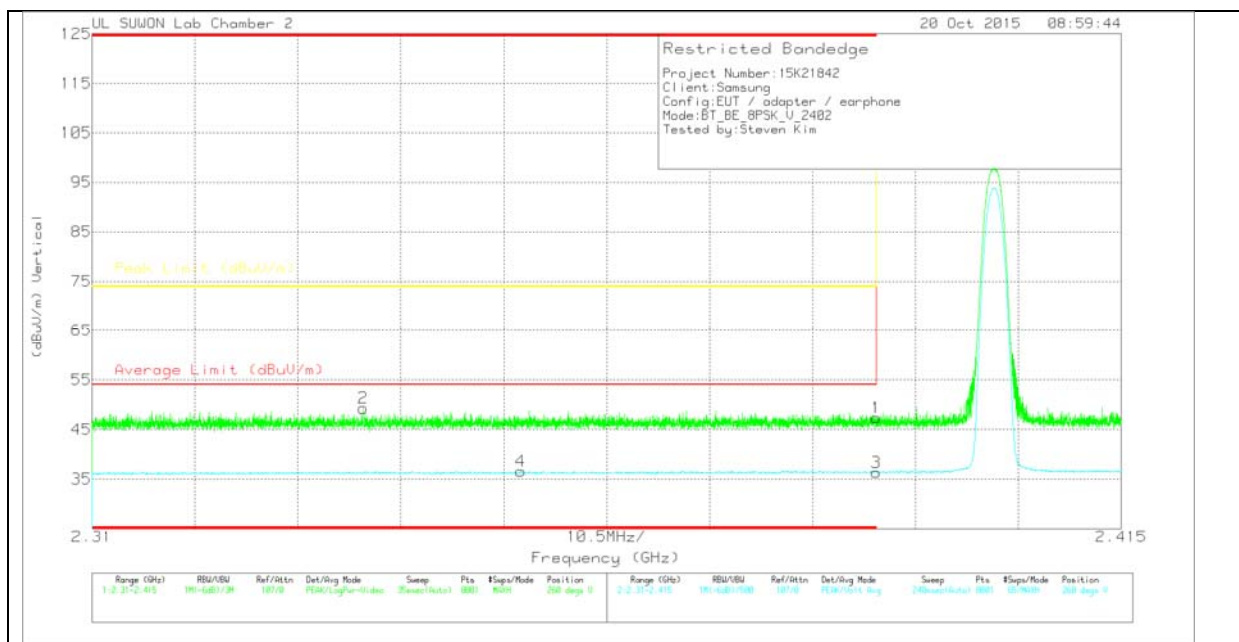
##### Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(0016 8717)_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	37.85	Pk	31.8	-22.8	46.85	-	-	74	-27.15	30	157	H
2	* 2.384	40.25	Pk	31.8	-22.8	49.25	-	-	74	-24.75	30	157	H
3	* 2.39	27.44	V1TV	31.8	-22.8	36.44	54	-17.56	-	-	30	157	H
4	* 2.361	27.74	V1TV	31.7	-22.8	36.64	54	-17.36	-	-	30	157	H

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

Pk - Peak detector

**VERTICAL PEAK AND AVERAGE PLOT**



**VERTICAL DATA**

Trace Markers

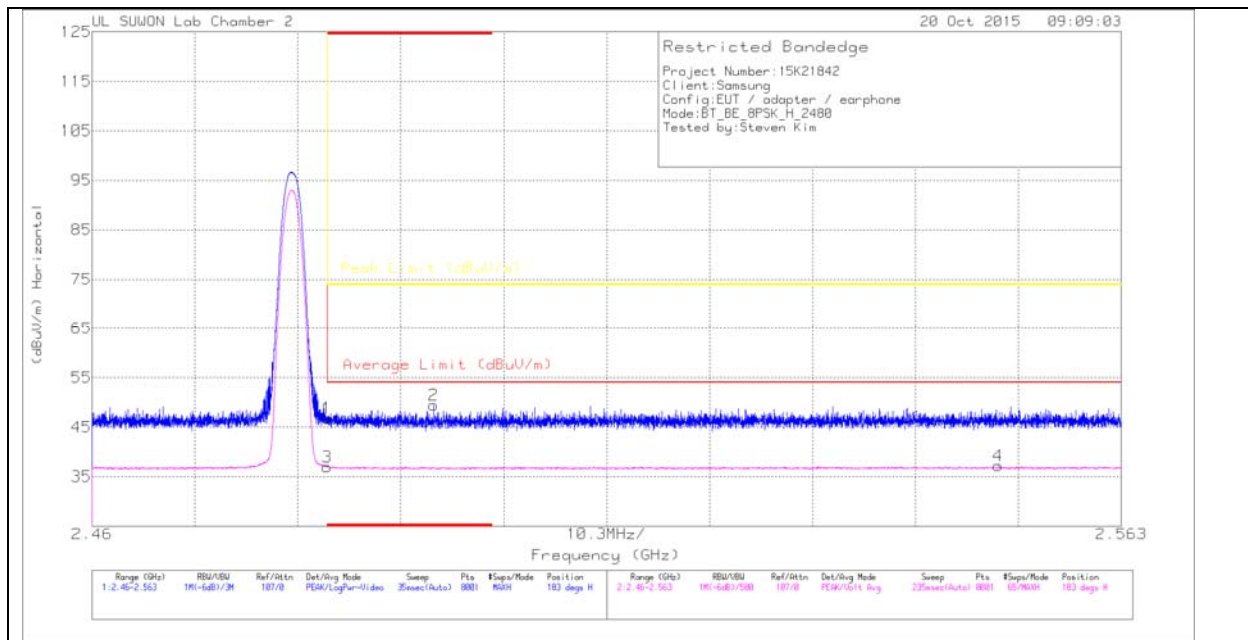
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(0016 8717)_150 619	Path_2_10 dB	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	38.31	Pk	31.8	-22.8	47.31	-	-	74	-26.69	260	288	V
2	* 2.338	40.48	Pk	31.7	-22.9	49.28	-	-	74	-24.72	260	288	V
3	* 2.39	27.36	V1TV	31.8	-22.8	36.36	54	-17.64	-	-	260	288	V
4	* 2.354	27.84	V1TV	31.7	-22.9	36.64	54	-17.36	-	-	260	288	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**

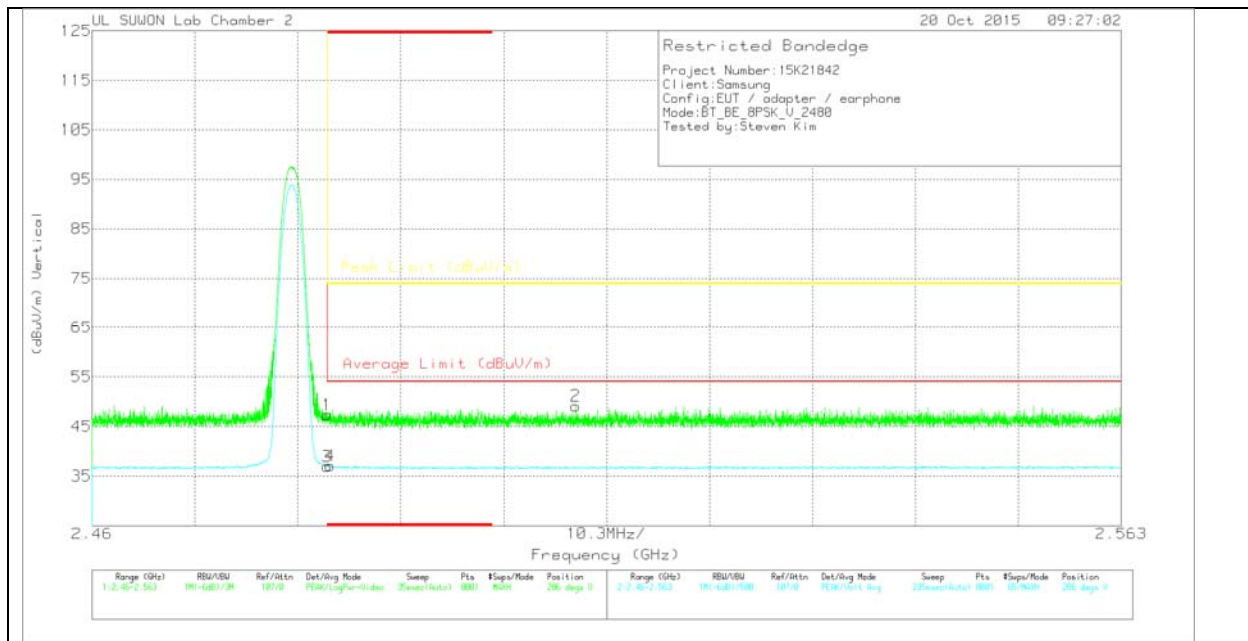
**Trace Markers**

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(0016 8717)_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	37.45	Pk	32	-22.6	46.85	-	-	74	-27.15	183	304	H
2	* 2.494	40.02	Pk	32	-22.6	49.42	-	-	74	-24.58	183	304	H
3	* 2.484	27.54	V1TV	32	-22.6	36.94	54	-17.06	-	-	183	304	H
4	2.551	27.76	V1TV	32	-22.6	37.16	54	-16.84	-	-	183	304	H

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

Pk - Peak detector

**VERTICAL PEAK AND AVERAGE PLOT**



**VERTICAL DATA**

**Trace Markers**

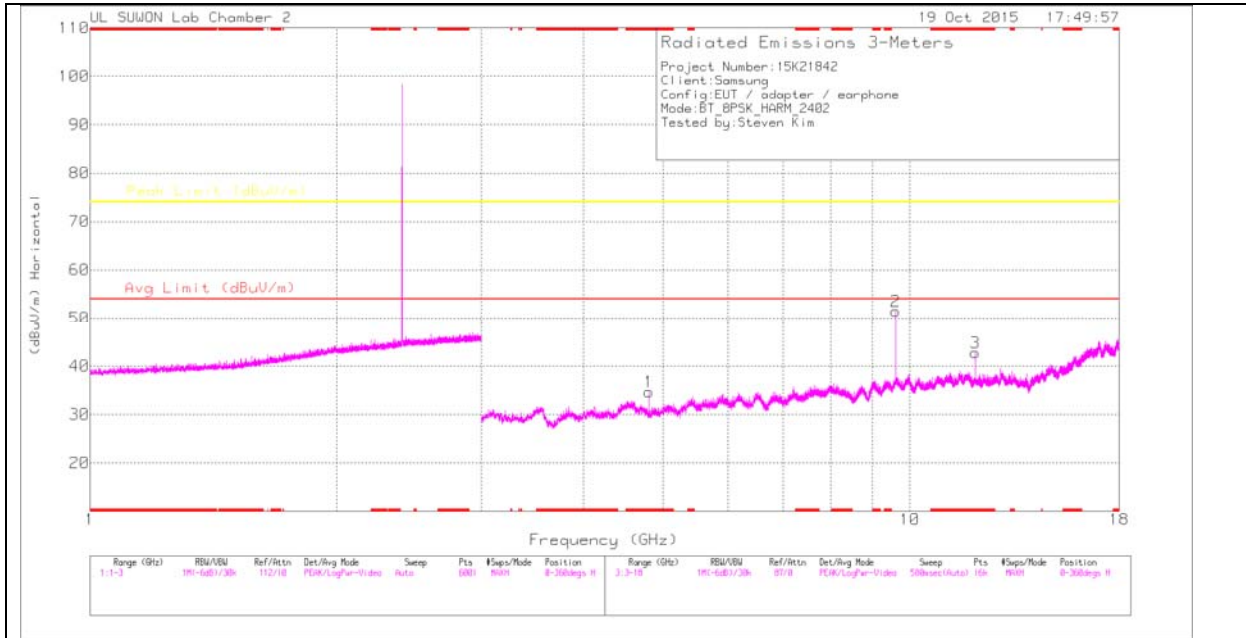
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117/0016 8717_150 619	Path_2_10 dB	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	37.92	Pk	32	-22.6	47.32	-	-	74	-26.68	286	279	V
2	2.508	39.75	Pk	32	-22.6	49.15	-	-	74	-24.85	286	279	V
3	* 2.484	27.58	V1TV	32	-22.6	36.98	54	-17.02	-	-	286	279	V
4	* 2.484	27.71	V1TV	32	-22.6	37.11	54	-16.89	-	-	286	279	V

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

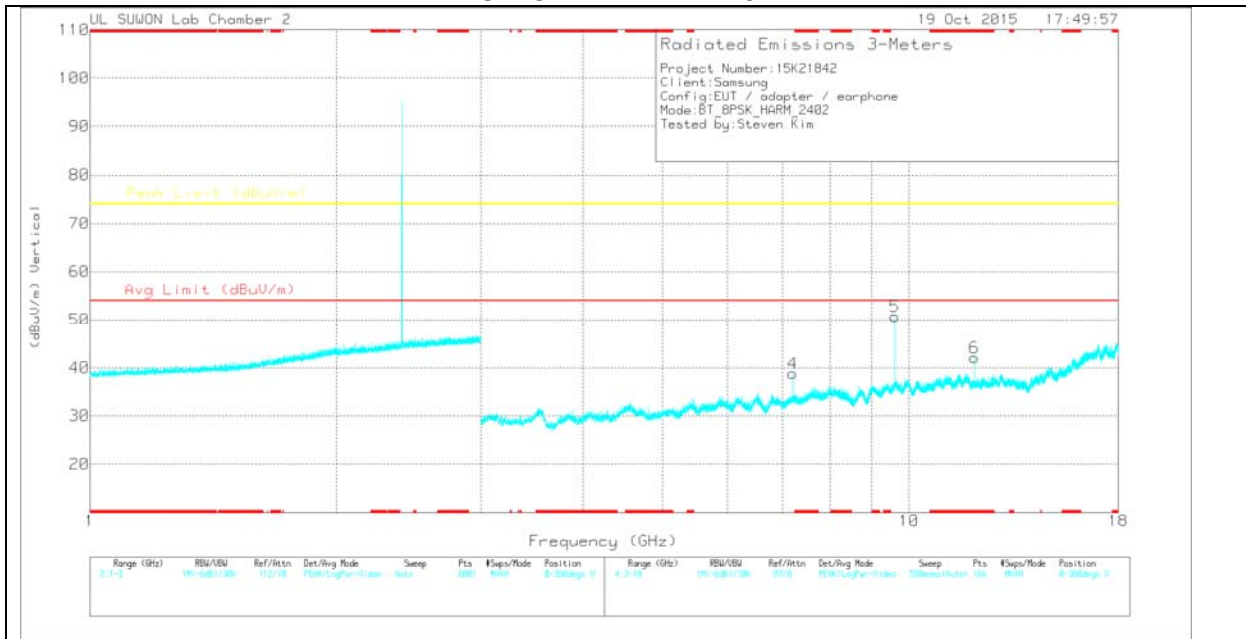
Pk - Peak detector

### 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(0016 8717)_150 619	Path_3_3G HP	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.804	30.47	PK	34	-29.8	34.67	-	-	74	-39.33	0-360	100	H
2	9.608	35.5	PK	37	-21	51.5	-	-	74	-22.5	0-360	100	H
3	* 12.01	24.59	PK	38.9	-20.7	42.79	-	-	74	-31.21	0-360	100	H
4	7.206	28.55	PK	35.7	-25.4	38.85	-	-	74	-35.15	0-360	100	V
5	9.608	34.68	PK	37	-21	50.68	-	-	74	-23.32	0-360	100	V
6	* 12.01	23.9	PK	38.9	-20.7	42.1	-	-	74	-31.9	0-360	100	V

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

PK – Peak detector

Radiated Emissions

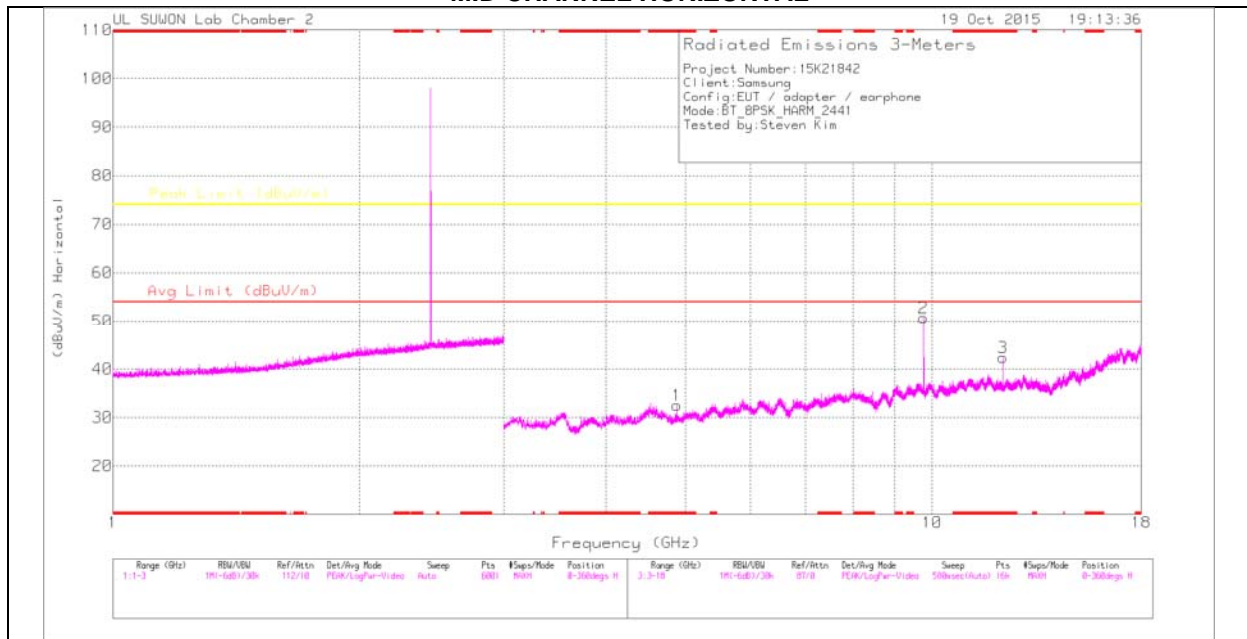
Frequency (GHz)	Meter Reading (dBuV)	Det	3117(0016 8717)_150 619	Path_3_3G HP	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.804	38.4	PK-U	34	-29.8	42.6	-	-	74	-31.4	317	291	H
* 4.804	25.67	VA1T	34	-29.8	29.87	54	-24.13	-	-	317	291	H
9.608	37.75	PK-U	37	-21	53.75	-	-	74	-20.25	158	269	H
* 12.01	33.3	PK-U	38.9	-20.7	51.5	-	-	74	-22.5	351	101	H
* 12.01	23.59	VA1T	38.9	-20.7	41.79	54	-12.21	-	-	351	101	H
7.206	39.24	PK-U	35.7	-25.4	49.54	-	-	74	-24.46	16	194	V
9.608	38.46	PK-U	37	-21	54.46	-	-	74	-19.54	314	226	V
* 12.01	31.64	PK-U	38.9	-20.7	49.84	-	-	74	-24.16	4	275	V
* 12.01	20.13	VA1T	38.9	-20.7	38.33	54	-15.67	-	-	4	275	V

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

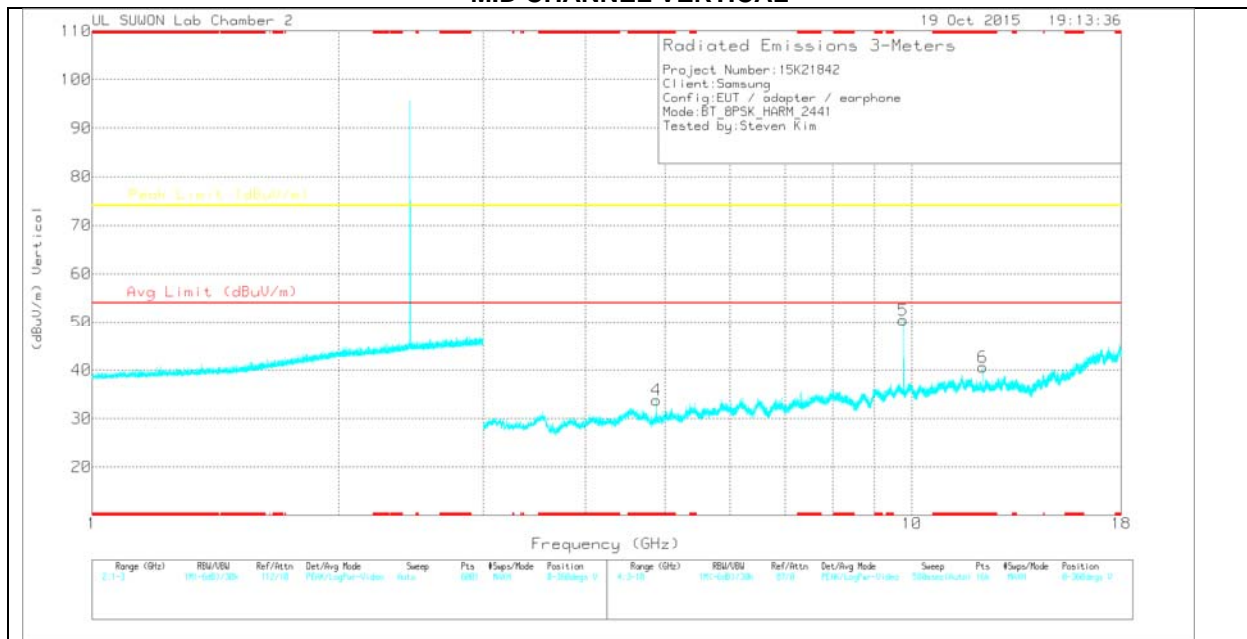
PK-U - Maximum Peak

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(0016 8717)_150 619	Path_3_3G HP	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.881	27.62	PK	34	-29.1	32.52	-	-	74	-41.48	0-360	200	H
2	9.764	35.49	PK	37.2	-22	50.69	-	-	74	-23.31	0-360	200	H
3	* 12.206	24.79	PK	38.9	-21.3	42.39	-	-	74	-31.61	0-360	200	H
4	* 4.881	28.95	PK	34	-29.1	33.85	-	-	74	-40.15	0-360	200	V
5	9.764	35.23	PK	37.2	-22	50.43	-	-	74	-23.57	0-360	200	V
6	* 12.205	23.01	PK	38.9	-21.3	40.61	-	-	74	-33.39	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(0016 8717)_150 619	Path_3_3G HP	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.882	39.77	PK-U	34	-29.1	44.67	-	-	74	-29.33	241	184	H
* 4.882	27.32	VA1T	34	-29.1	32.22	54	-21.78	-	-	241	184	H
9.764	38.76	PK-U	37.2	-22	53.96	-	-	74	-20.04	85	271	H
* 12.205	31.99	PK-U	38.9	-21.3	49.59	-	-	74	-24.41	273	348	H
* 12.205	21.4	VA1T	38.9	-21.3	39	54	-15	-	-	273	348	H
* 4.882	40.21	PK-U	34	-29.1	45.11	-	-	74	-28.89	279	248	V
* 4.882	28.31	VA1T	34	-29.1	33.21	54	-20.79	-	-	279	248	V
9.764	38.39	PK-U	37.2	-22	53.59	-	-	74	-20.41	315	217	V
* 12.205	31.09	PK-U	38.9	-21.3	48.69	-	-	74	-25.31	15	293	V
* 12.205	17.29	VA1T	38.9	-21.3	34.89	54	-19.11	-	-	15	293	V

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

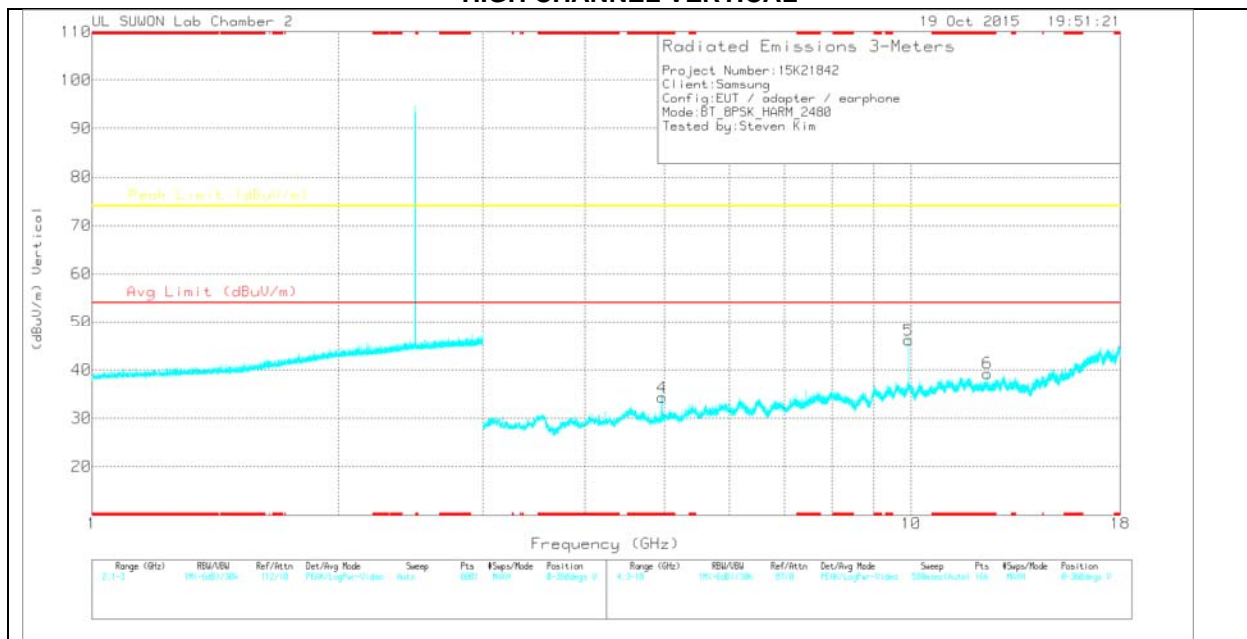
PK-U - Maximum Peak

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(0016 8717)_150 619	Path_3_3G HP	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.96	30.19	PK	34	-28.9	35.29	-	-	74	-38.71	0-360	199	H
2	9.92	31.61	PK	37.4	-20.4	48.61	-	-	74	-25.39	0-360	199	H
3	* 12.401	25.13	PK	38.9	-20.9	43.13	-	-	74	-30.87	0-360	199	H
4	* 4.96	29.19	PK	34	-28.9	34.29	-	-	74	-39.71	0-360	199	V
5	9.92	29.15	PK	37.4	-20.4	46.15	-	-	74	-27.85	0-360	199	V
6	* 12.401	21.29	PK	38.9	-20.9	39.29	-	-	74	-34.71	0-360	199	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_3G HP	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.96	40.39	PK-U	34	-28.9	45.49	-	-	74	-28.51	317	279	H
* 4.96	29.03	VA1T	34	-28.9	34.13	54	-19.87	-	-	317	279	H
9.92	27.31	PK-U	37.4	-20.4	44.31	-	-	74	-29.69	146	268	H
* 12.4	34.23	PK-U	38.9	-20.9	52.23	-	-	74	-21.77	273	219	H
* 12.4	24.31	VA1T	38.9	-20.9	42.31	54	-11.69	-	-	273	219	H
* 4.96	40.03	PK-U	34	-28.9	45.13	-	-	74	-28.87	298	242	V
* 4.96	28.35	VA1T	34	-28.9	33.45	54	-20.55	-	-	298	242	V
9.92	34.81	PK-U	37.4	-20.4	51.81	-	-	74	-22.19	290	185	V
* 12.4	32.1	PK-U	38.9	-20.9	50.1	-	-	74	-23.9	23	301	V
* 12.4	21.38	VA1T	38.9	-20.9	39.38	54	-14.62	-	-	23	301	V

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

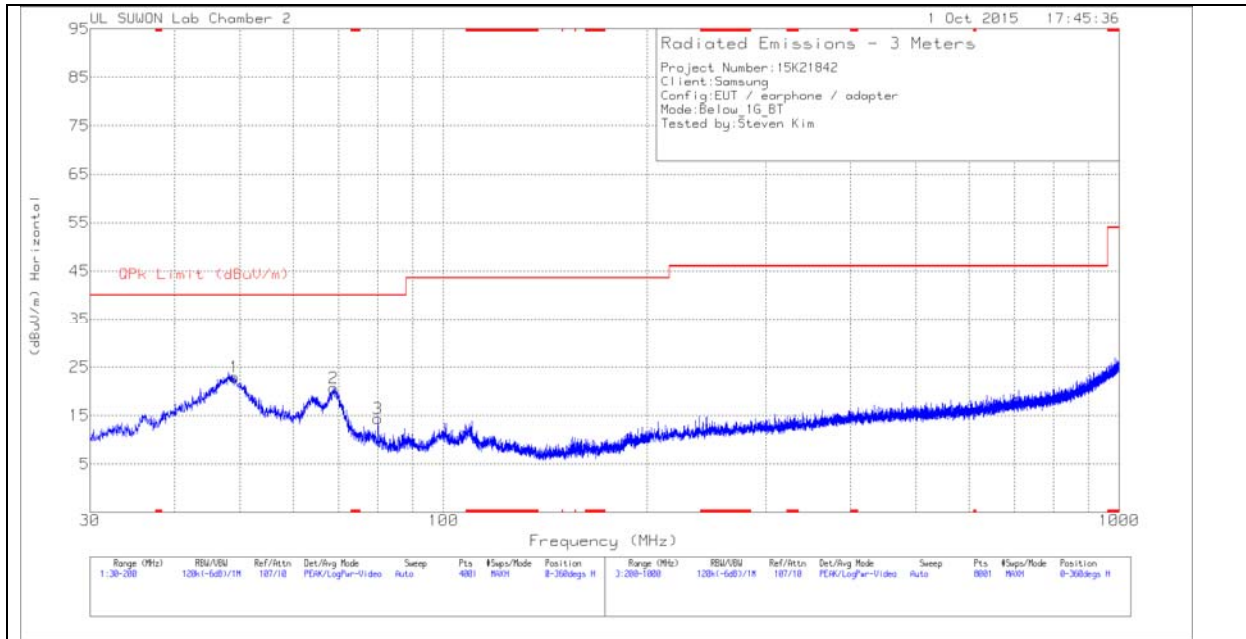
PK-U - Maximum Peak

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

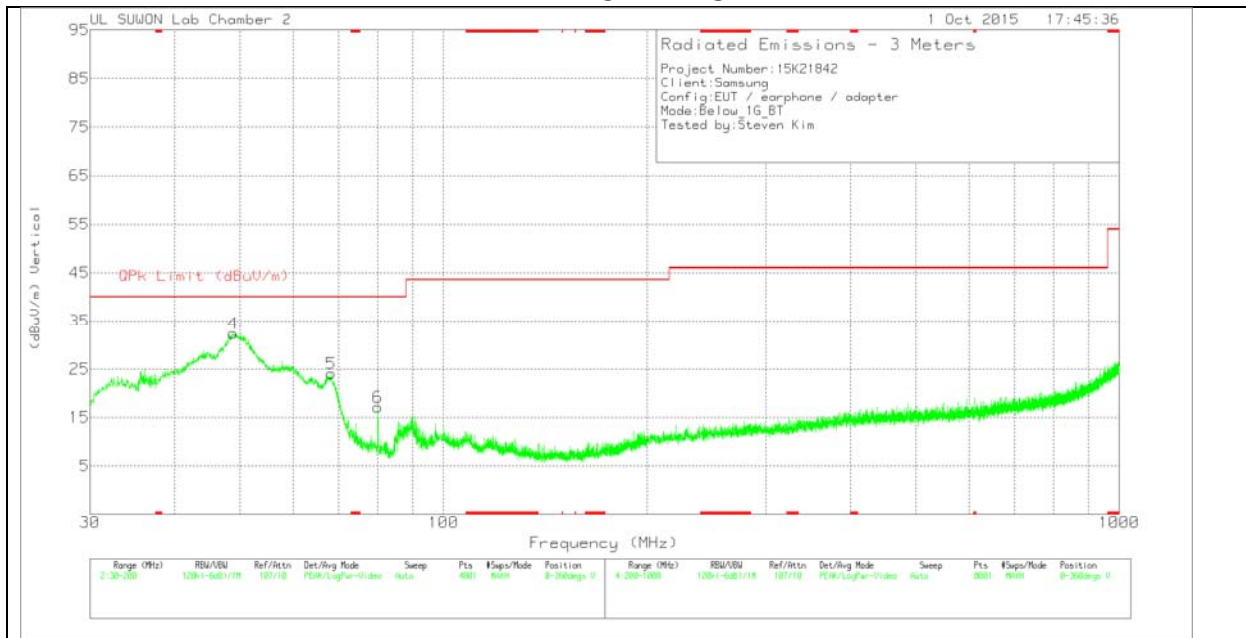
### 9.3. WORST-CASE BELOW 1 GHz

#### 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	49.04	39.58	Pk	14.1	-30.7	22.98	40	-17.02	0-360	400	H
2	68.8025	41.33	Pk	10	-30.6	20.73	40	-19.27	0-360	300	H
3	80.0225	37.91	Pk	7.1	-30.6	14.41	40	-25.59	0-360	400	H
4	48.9125	49.03	Pk	14.1	-30.7	32.43	40	-7.57	0-360	100	V
5	68.165	44.51	Pk	10.2	-30.6	24.11	40	-15.89	0-360	200	V
6	80.0225	40.7	Pk	7.1	-30.6	17.2	40	-22.8	0-360	200	V

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.

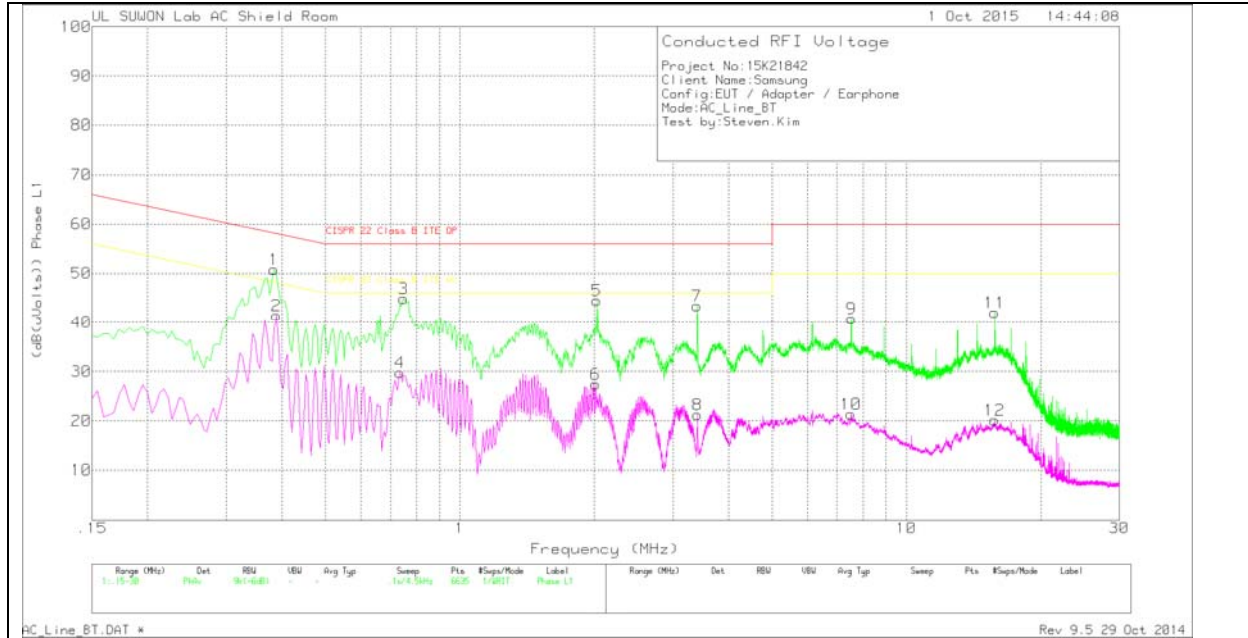
The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

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	.384	40.67	Pk	10.1	0	50.77	58.19	-7.42	-	-
2	.3885	31.32	Av	10.1	0	41.42	-	-	48.1	-6.68
3	.7485	34.87	Pk	10	0	44.87	56	-11.13	-	-
4	.735	19.79	Av	10	0	29.79	-	-	46	-16.21
5	2.0265	34.6	Pk	9.8	.1	44.5	56	-11.5	-	-
6	2.013	17.54	Av	9.8	.1	27.44	-	-	46	-18.56
7	3.399	33.46	Pk	9.8	.1	43.36	56	-12.64	-	-
8	3.4035	11.38	Av	9.8	.1	21.28	-	-	46	-24.72
9	7.53	30.75	Pk	9.9	.1	40.75	60	-19.25	-	-
10	7.5255	11.38	Av	9.9	.1	21.38	-	-	50	-28.62
11	15.7875	31.58	Pk	10.2	.2	41.98	60	-18.02	-	-
12	15.7785	9.75	Av	10.2	.2	20.15	-	-	50	-29.85

Pk - Peak detector

Av - Average detection

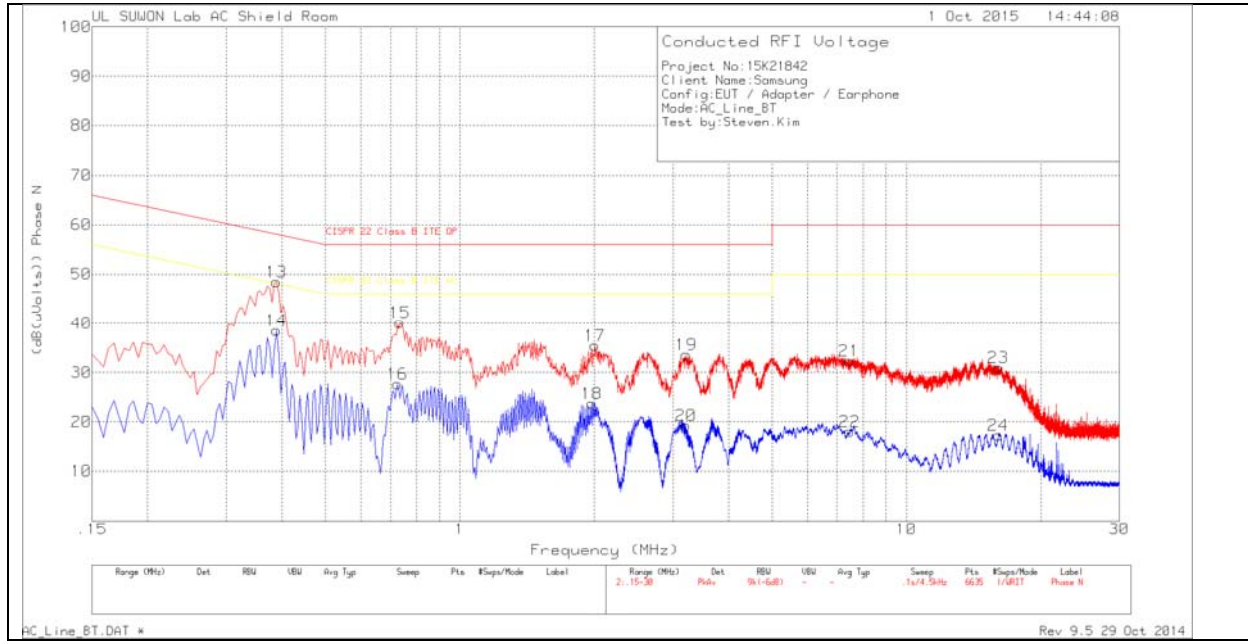
Quasi-Peak Emissions

Phase L1 .15 - 30MHz

Frequency (MHz)	Meter Reading (dBuV)	Det	101837_wit h 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)
.3858	36.88	Qp	10.1	0	46.98	58.15	-11.17	-	-

Qp - Quasi-Peak detector

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	.3885	38.38	Pk	10.1	0	48.48	58.1	-9.62	-	-
14	.3885	28.46	Av	10.1	0	38.56	-	-	48.1	-9.54
15	.735	30.2	Pk	10	0	40.2	56	-15.8	-	-
16	.726	17.71	Av	10	0	27.71	-	-	46	-18.29
17	2.0085	25.58	Pk	9.8	.1	35.48	56	-20.52	-	-
18	1.9725	13.85	Av	9.8	.1	23.75	-	-	46	-22.25
19	3.2145	23.72	Pk	9.8	.1	33.62	56	-22.38	-	-
20	3.21	9.33	Av	9.8	.1	19.23	-	-	46	-26.77
21	7.4355	22.38	Pk	9.9	.1	32.38	60	-27.62	-	-
22	7.4625	8.02	Av	9.9	.1	18.02	-	-	50	-31.98
23	16.08	20.38	Pk	10.4	.2	30.98	60	-29.02	-	-
24	16.0665	6.64	Av	10.4	.2	17.24	-	-	50	-32.76

Pk - Peak detector

Av - Average detection

Quasi-Peak Emissions

Phase N .15 - 30MHz

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)
.384	34.13	Qp	10.1	0	44.23	58.19	-13.96	-	-

Qp - Quasi-Peak detector