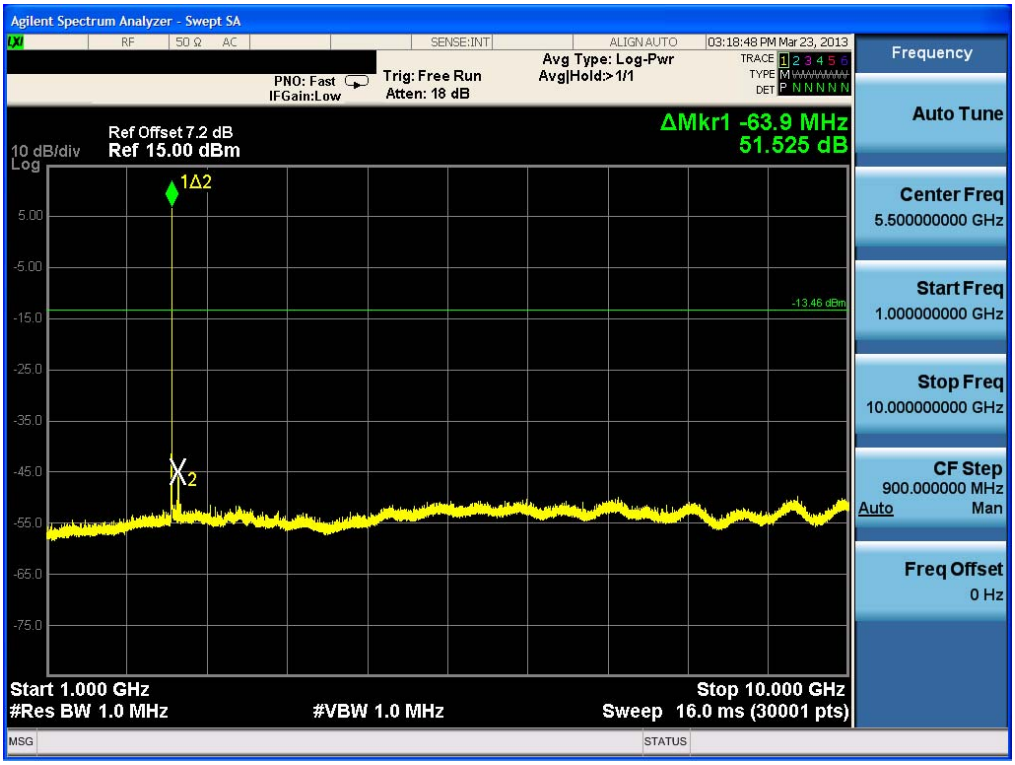
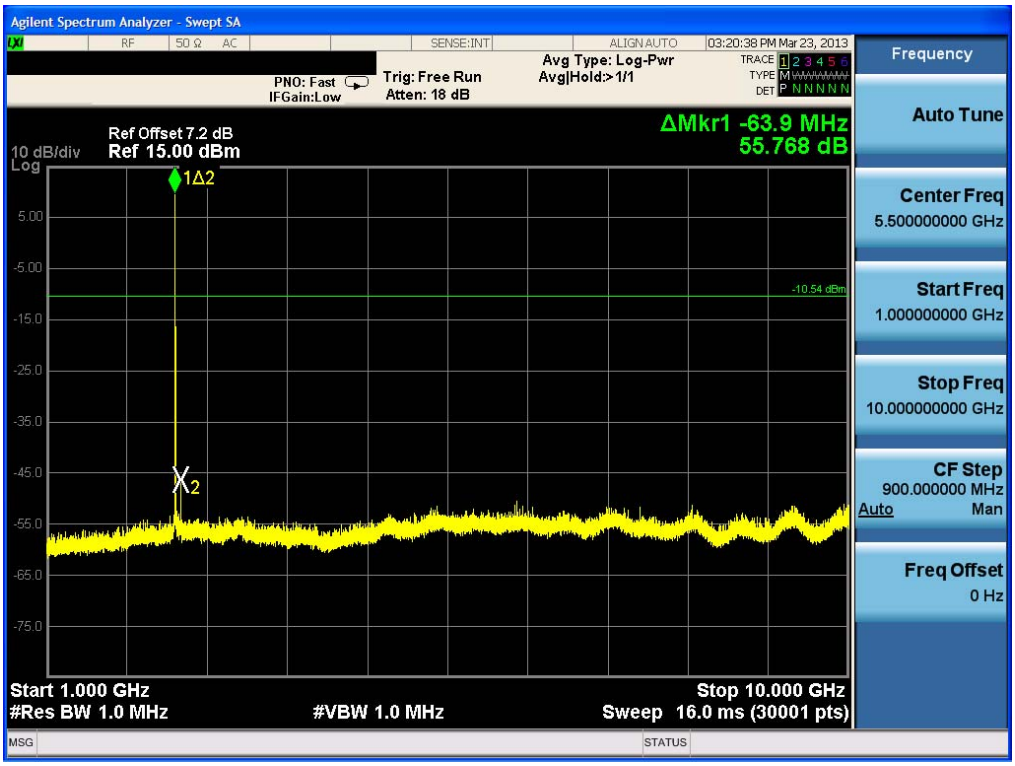
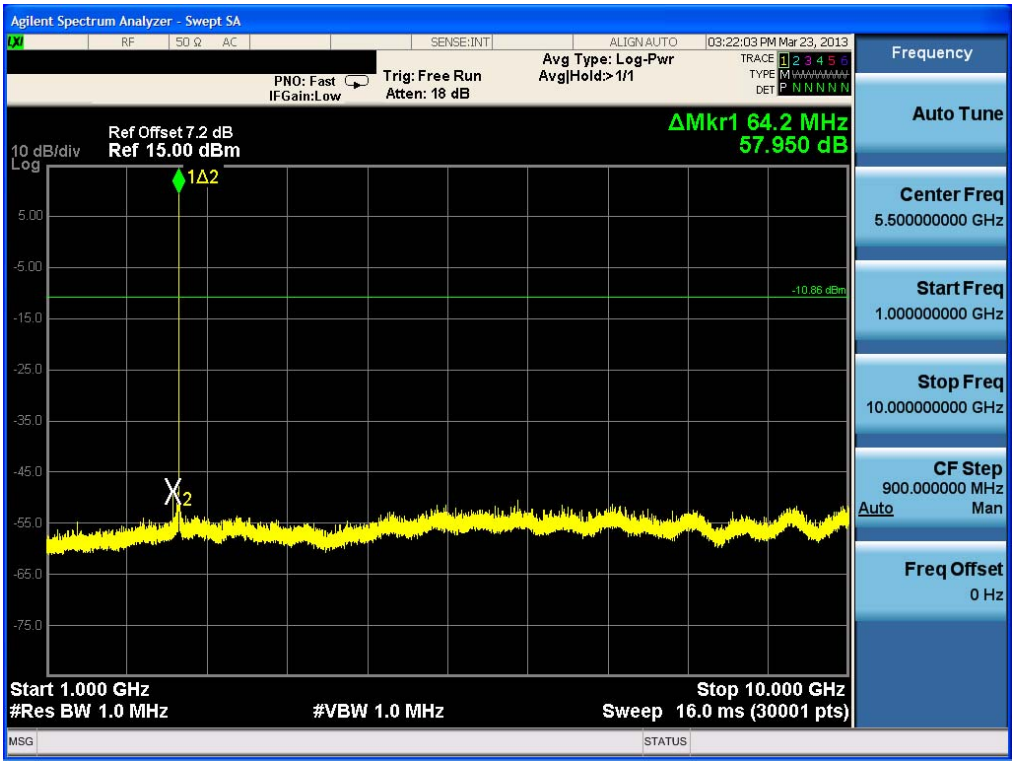
Test Plots (GFSK) - 1 GHz - 10 GHz (RBW:1 MHz, VBW: 1 MHz)
Spurious Emission (Low-CH)



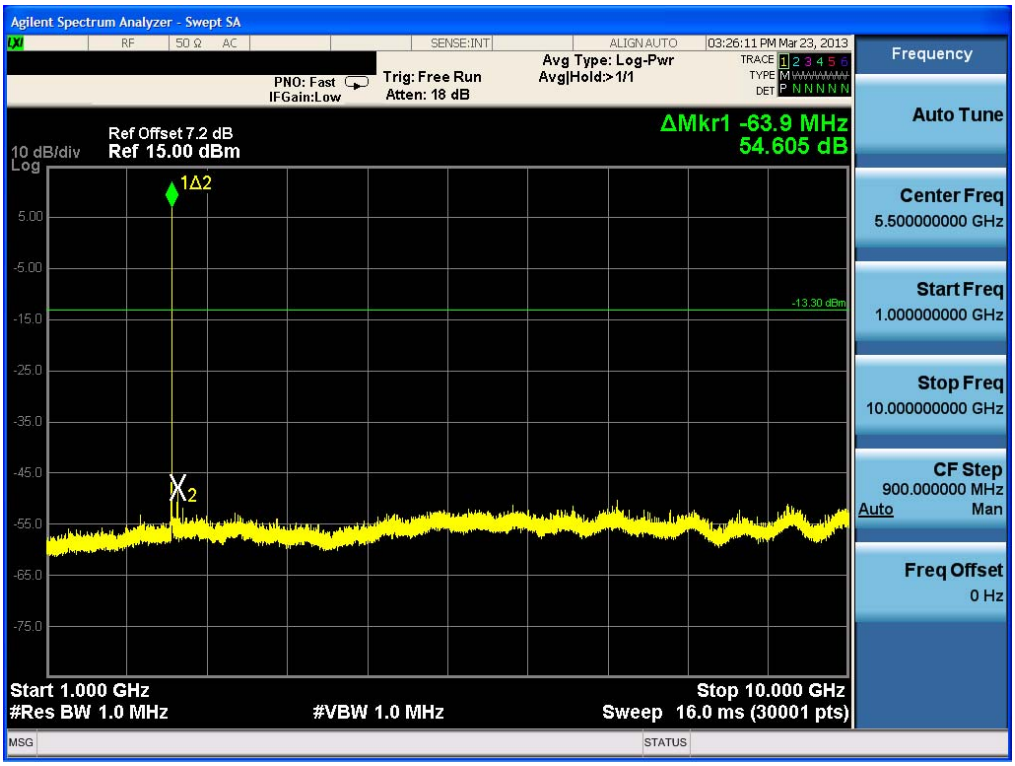
Test Plots (GFSK) - 1 GHz - 10 GHz (RBW:1 MHz, VBW: 1 MHz)
Spurious Emission (Mid-CH)



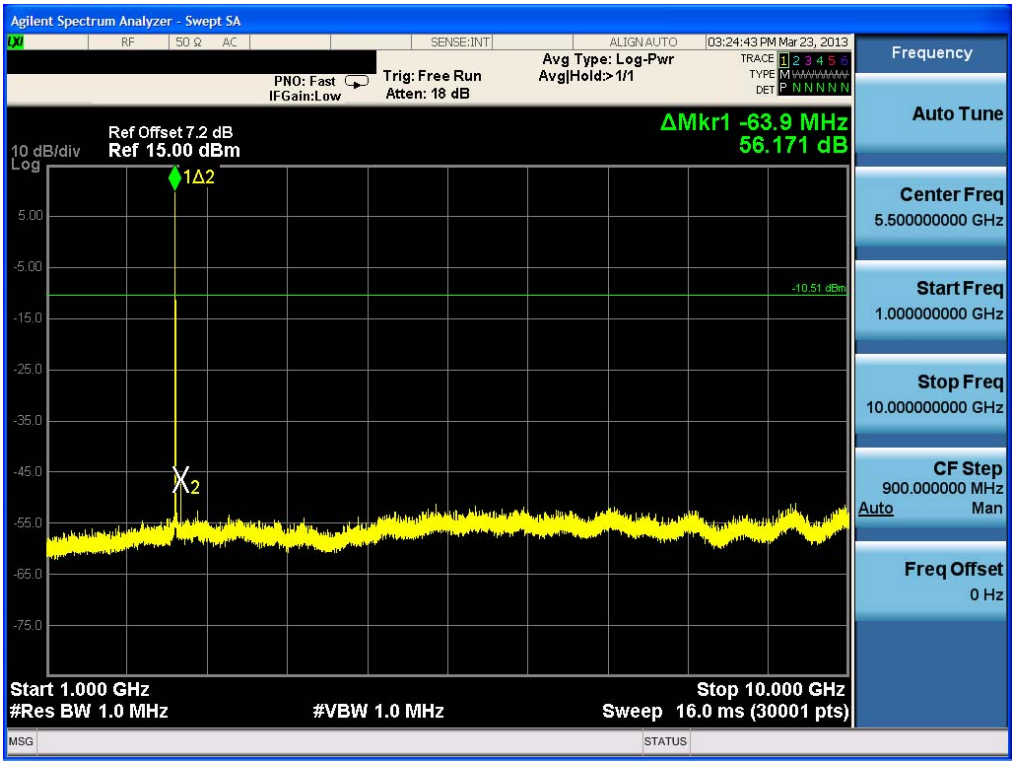
Test Plots (GFSK) - 1 GHz - 10 GHz (RBW:1 MHz, VBW: 1 MHz)
Spurious Emission (High-CH)



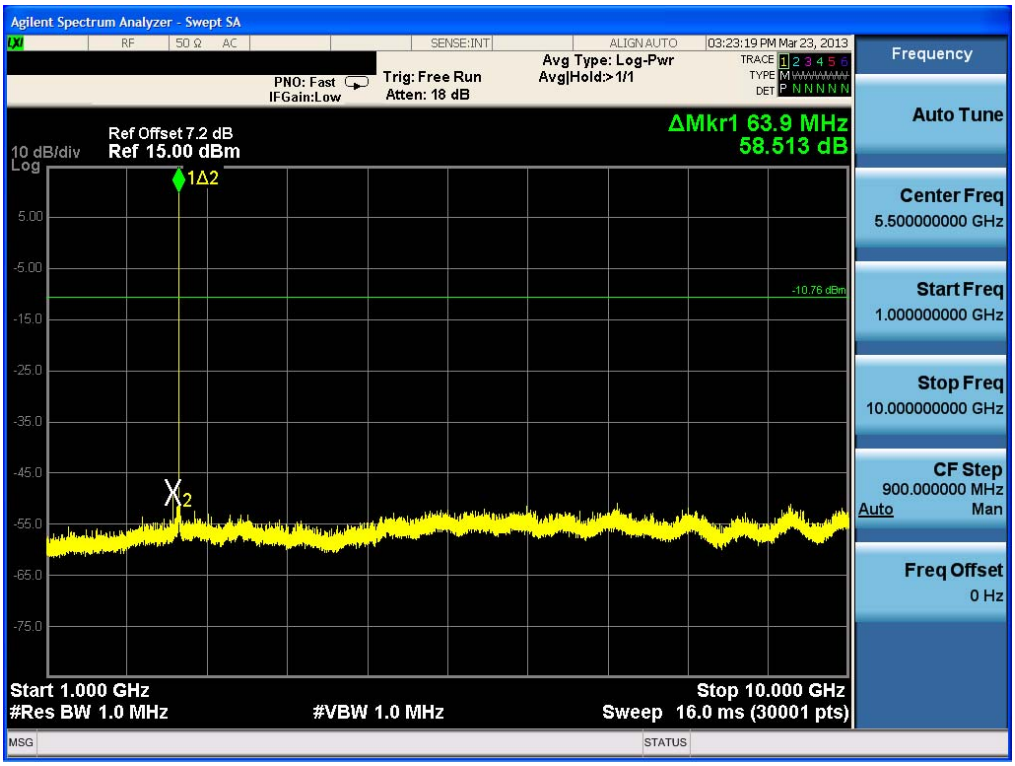
Test Plots (8DPSK) - 1 GHz - 10 GHz (RBW:1 MHz, VBW: 1 MHz)
Spurious Emission (Low-CH)



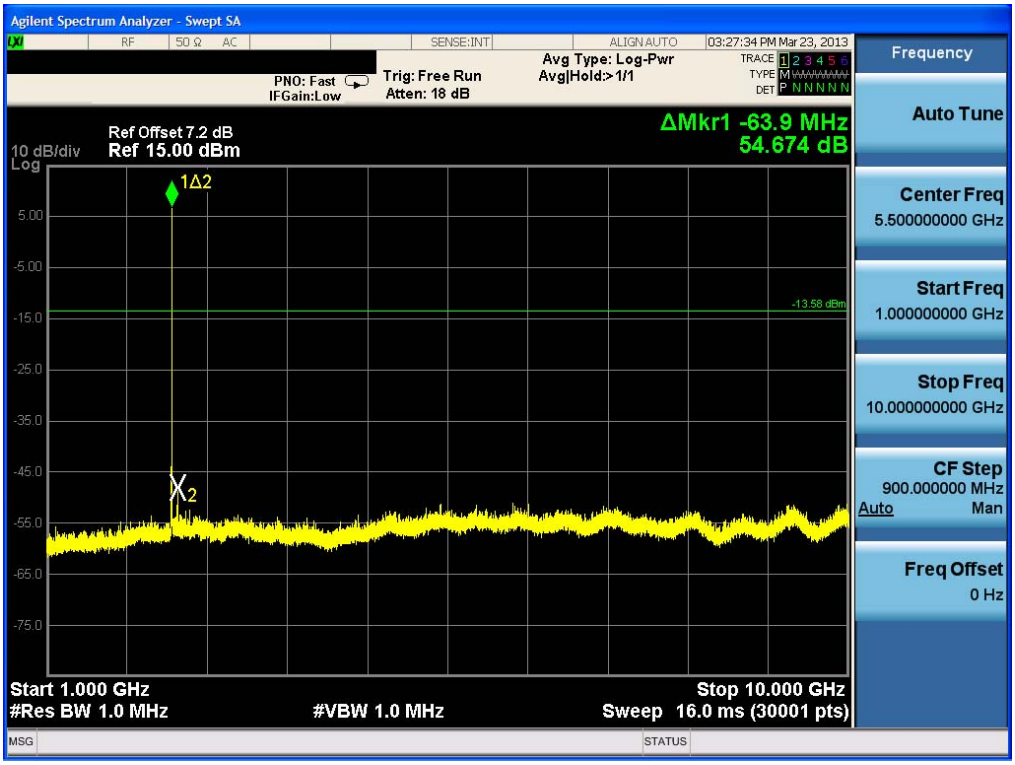
Test Plots (8DPSK) - 1 GHz - 10 GHz (RBW:1 MHz, VBW: 1 MHz)
Spurious Emission (Mid-CH)



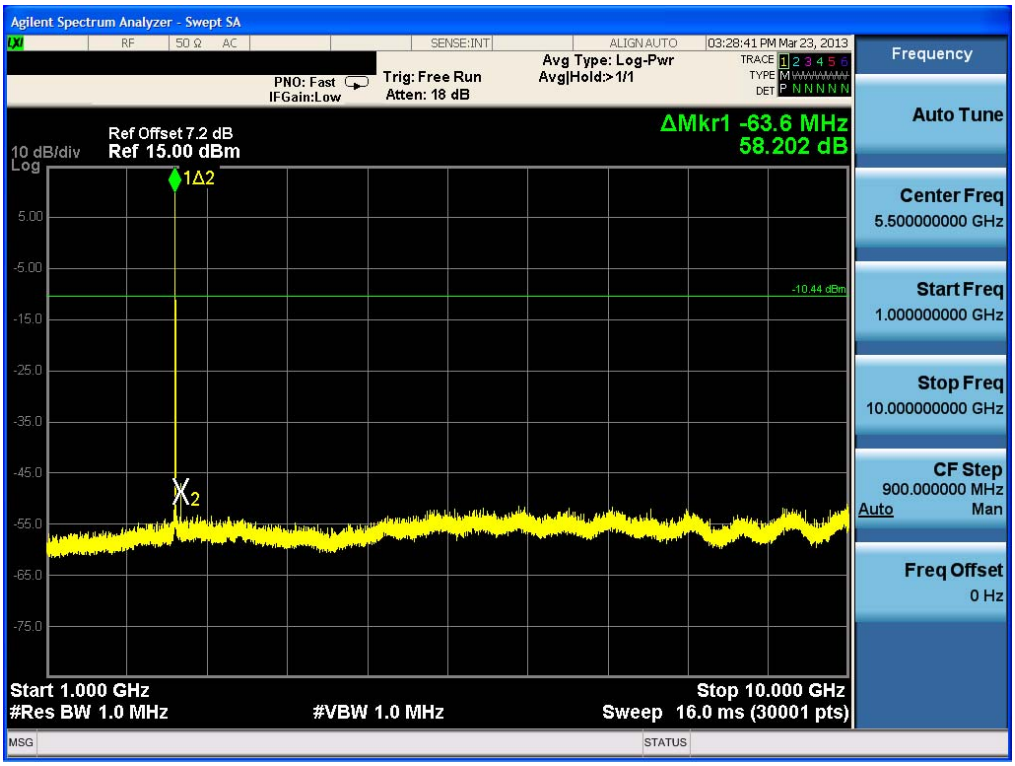
Test Plots (8DPSK) - 1 GHz - 10 GHz (RBW:1 MHz, VBW: 1 MHz)
Spurious Emission (High-CH)



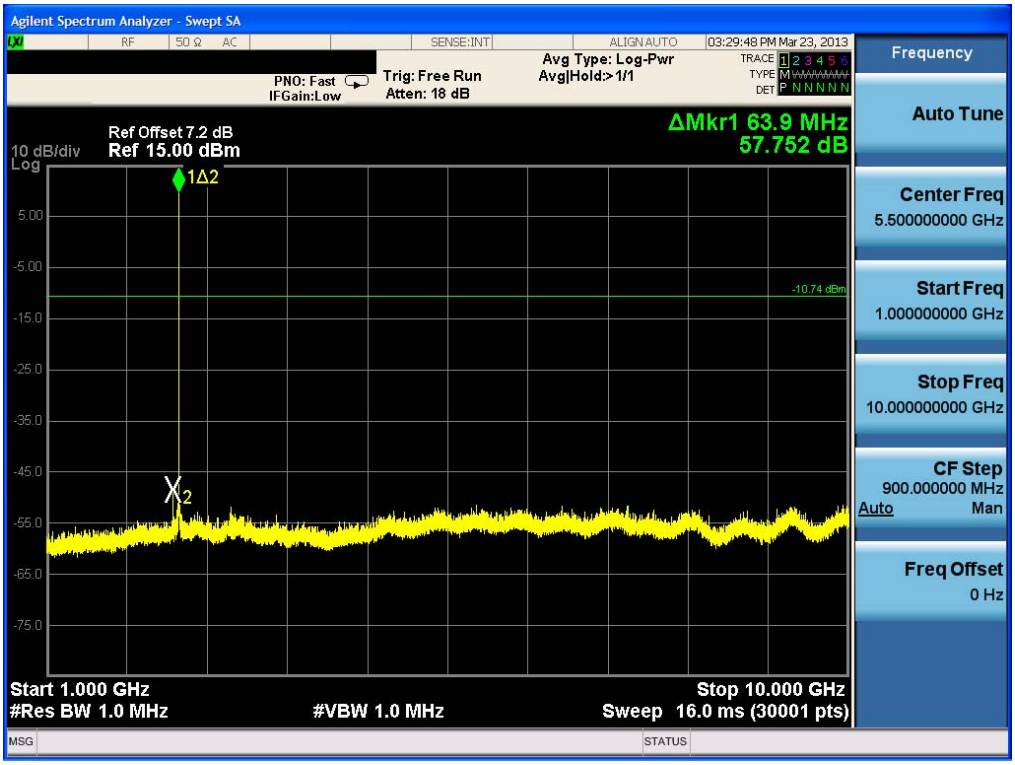
Test Plots (π/4DQPSK) - 1 GHz - 10 GHz (RBW:1 MHz, VBW: 1 MHz)
Spurious Emission (Low-CH)



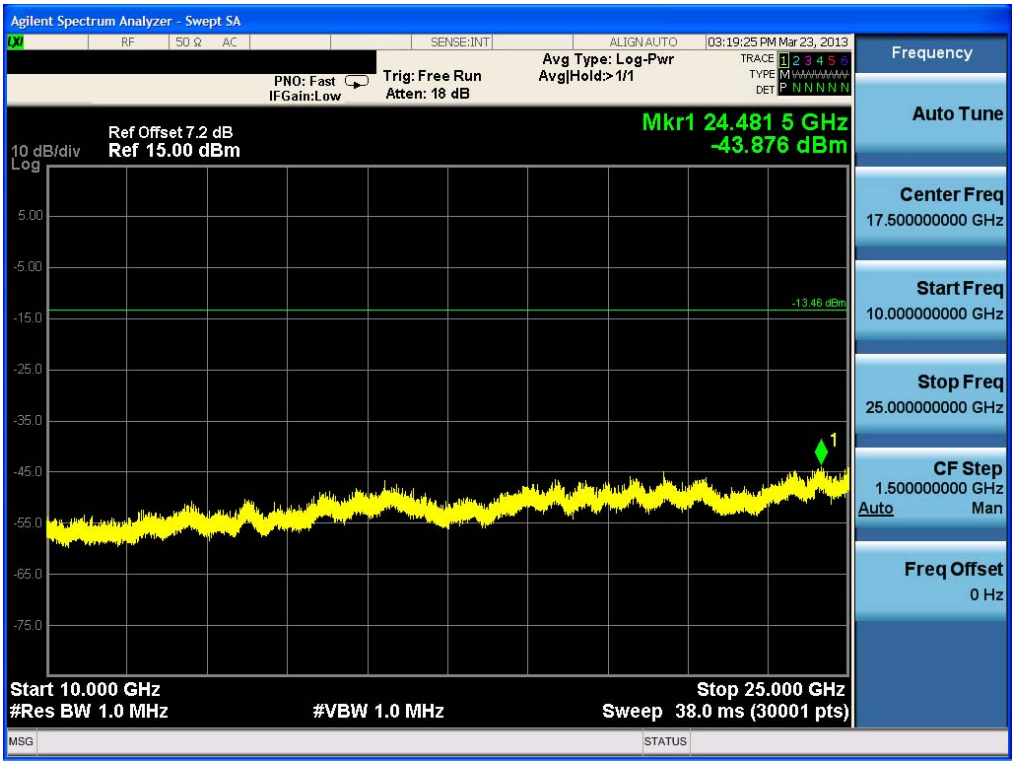
Test Plots (π/4DQPSK) - 1 GHz - 10 GHz (RBW:1 MHz, VBW: 1 MHz)
Spurious Emission (Mid-CH)



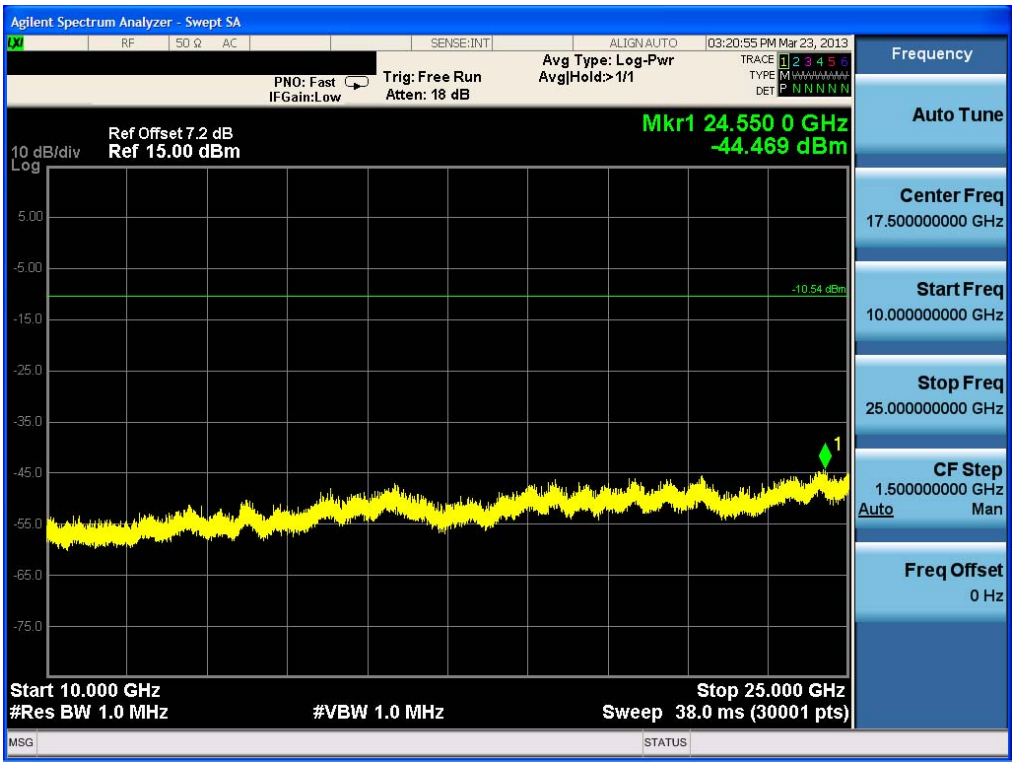
Test Plots (π/4DQPSK) - 1 GHz - 10 GHz (RBW:1 MHz, VBW: 1 MHz)
Spurious Emission (High-CH)



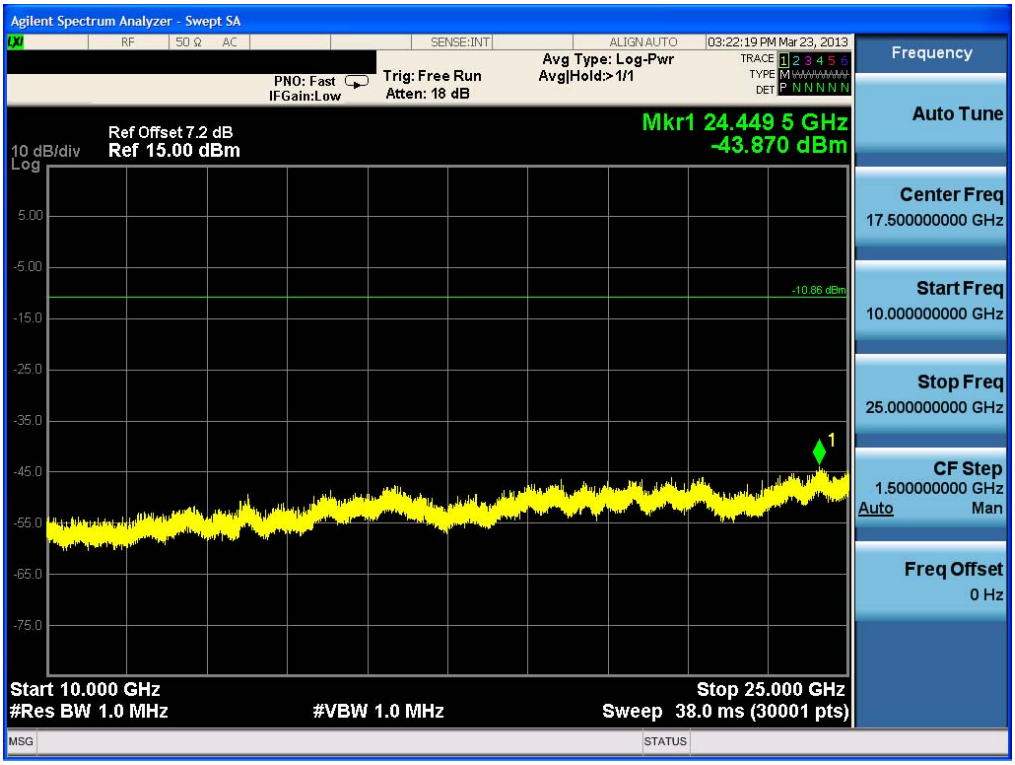
Test Plots (GFSK) - 10 GHz - 25 GHz (RBW:1 MHz, VBW: 1 MHz)
Spurious Emission (Low-CH)



Test Plots (GFSK) - 10 GHz - 25 GHz (RBW:1 MHz, VBW: 1 MHz)
Spurious Emission (Mid-CH)

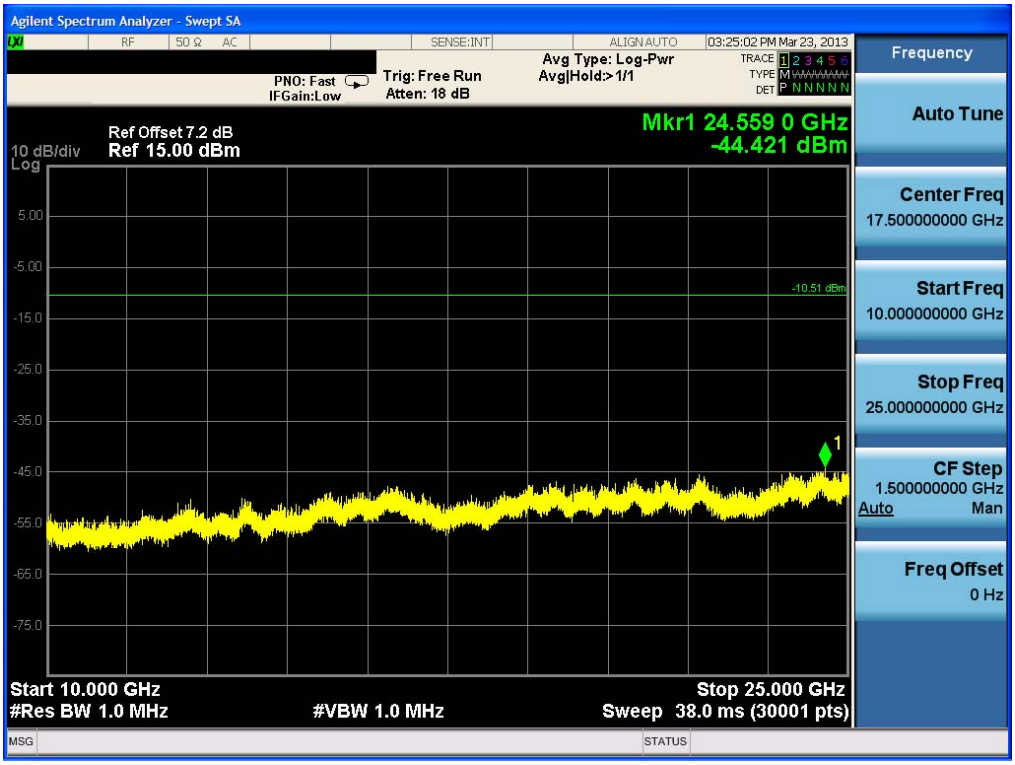


Test Plots (GFSK) - 10 GHz - 25 GHz (RBW:1 MHz, VBW: 1 MHz)
Spurious Emission (High-CH)

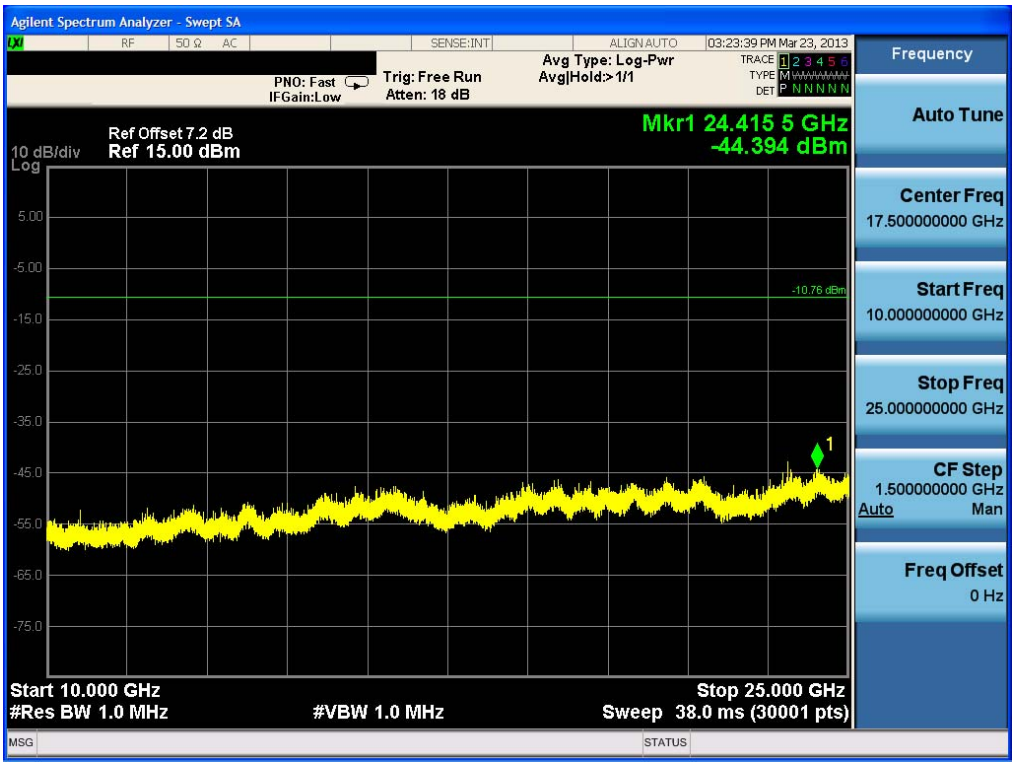


Test Plots (8DPSK) - 10 GHz - 25 GHz (RBW:1 MHz, VBW: 1 MHz)
Spurious Emission (Low-CH)

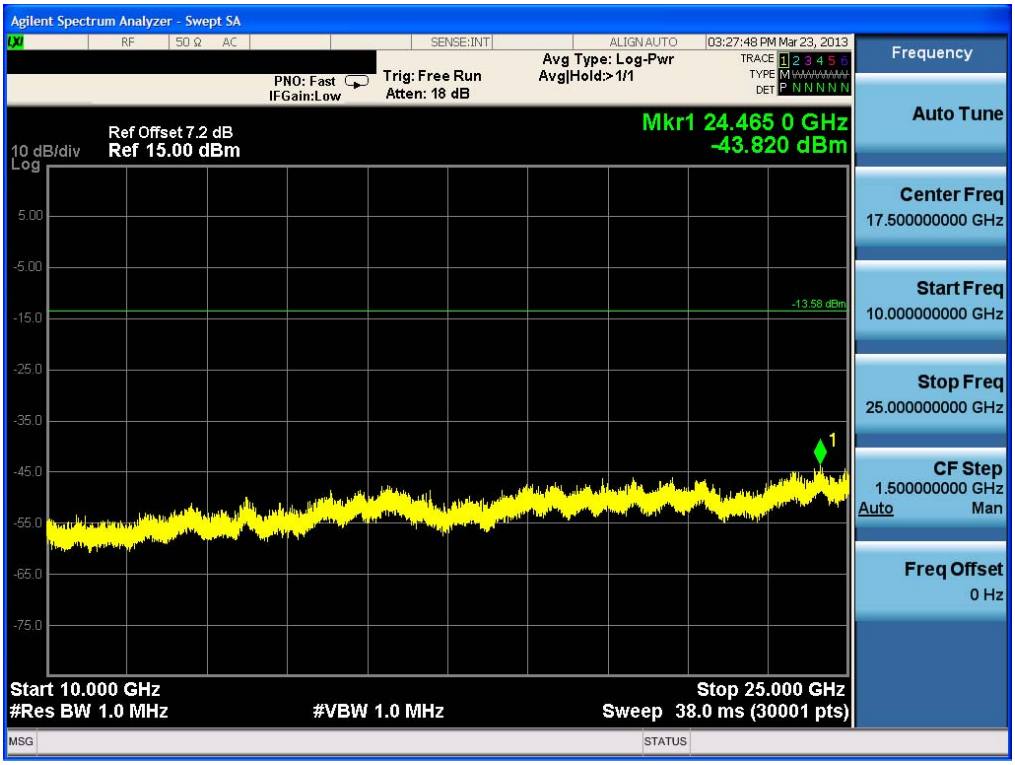
Test Plots (8DPSK) - 10 GHz - 25 GHz (RBW:1 MHz, VBW: 1 MHz)
Spurious Emission (Mid-CH)



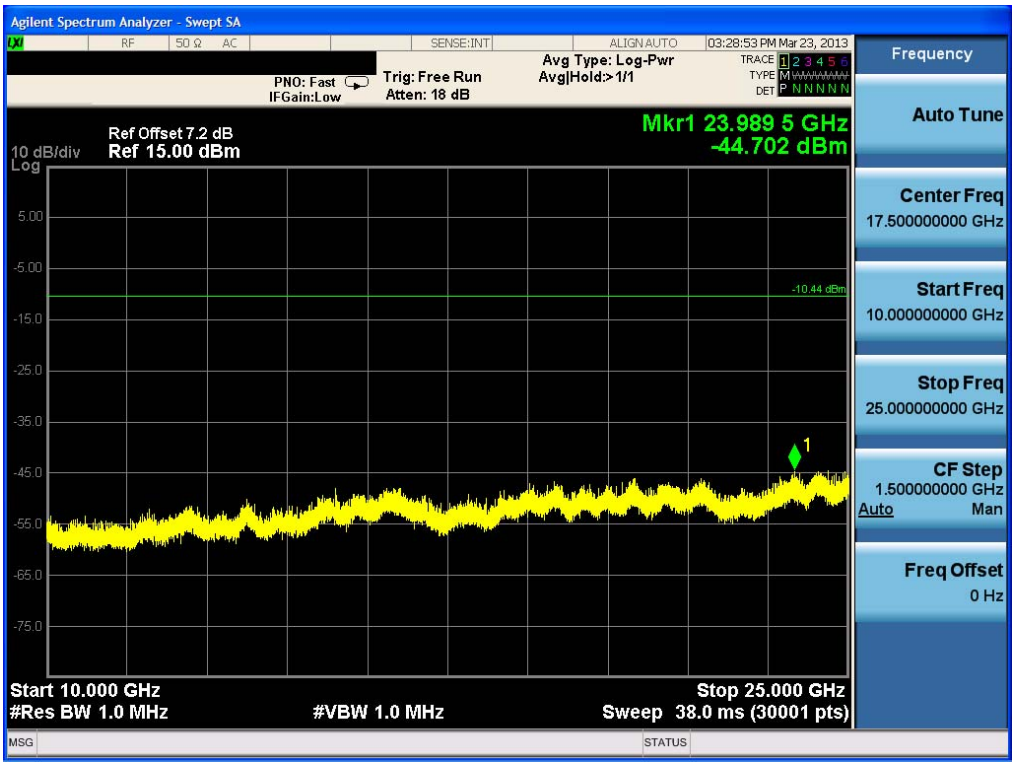
Test Plots (8DPSK) - 10 GHz - 25 GHz (RBW:1 MHz, VBW: 1 MHz)
Spurious Emission (High-CH)



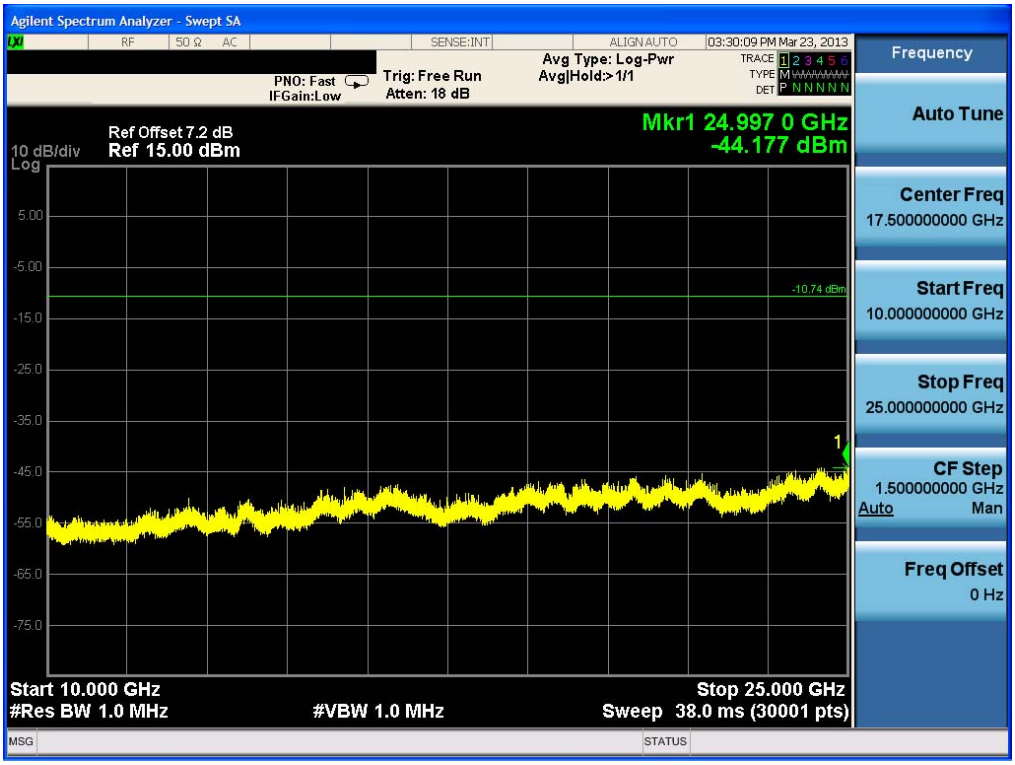
Test Plots (π/4DQPSK) - 10 GHz - 25 GHz (RBW:1 MHz, VBW: 1 MHz)
Spurious Emission (Low-CH)



Test Plots (π/4DQPSK) - 10 GHz - 25 GHz (RBW:1 MHz, VBW: 1 MHz)
Spurious Emission (Mid-CH)



Test Plots (π/4DQPSK) - 10 GHz - 25 GHz (RBW:1 MHz, VBW: 1 MHz)
Spurious Emission (High-CH)



8.6.2 RADIATED SPURIOUS EMISSIONS

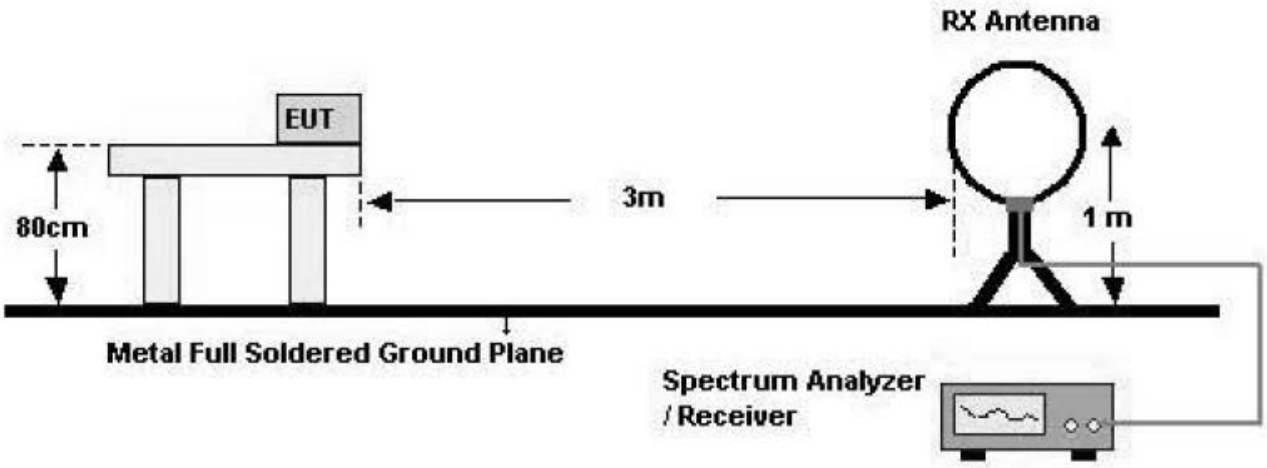
LIMIT : §15.247(d), §15.205, §15.209

1. 20dBc in any 100kHz bandwidth outside the operating frequency band. In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.

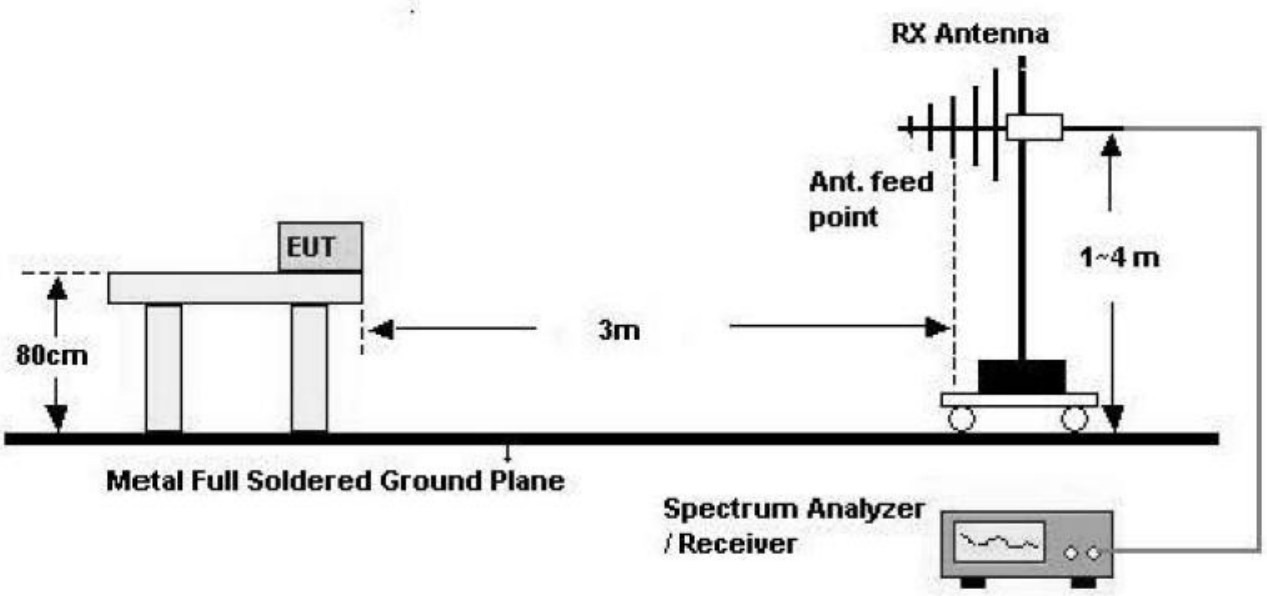
Frequency (MHz)	Field Strength (uV/m)	Measurement Distance (m)
0.009 – 0.490	2400/F(kHz)	300
0.490 – 1.705	24000/F(kHz)	30
1.705 – 30	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

Test Configuration

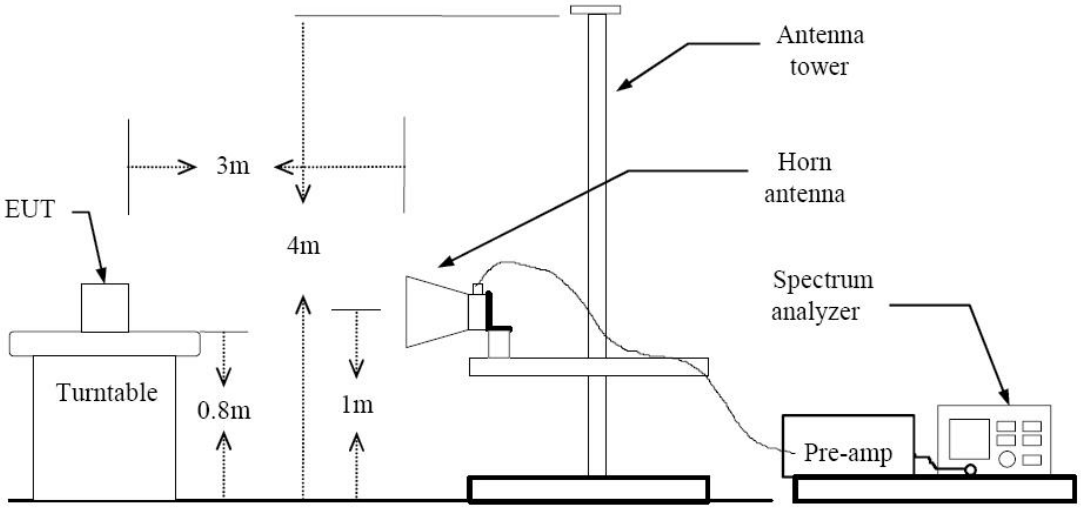
Below 30 MHz



30 MHz - 1 GHz



Above 1 GHz



TEST PROCEDURE

1. The EUT is placed on a turntable, which is 0.8 m above ground plane.
2. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level.
3. EUT is set 3 m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emissions.
4. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
5. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
6. Repeat above procedures until the measurements for all frequencies are complete.
7. Spectrum Setting

   a. Peak Setting 1 GHz – 26 GHz, RBW = 1 MHz, VBW = 1 MHz.

   b. AV Setting 1 GHz – 26 GHz, RBW = 1 MHz, VBW = 1 kHz ≥ 1/τ Hz, where τ = pulse width in seconds.

TEST RESULTS

9 kHz – 30MHz

Operation Mode: Normal Mode

Frequency	Reading	Ant. factor	Cable loss	Ant. POL	Total	Limit	Margin
㎒	dB㎶	dB /m	dB	(H/V)	dB㎶/m	dB㎶/m	dB
No Critical peaks found							

Notes:

1. Measuring frequencies from 9 kHz to the 30MHz.
2. The reading of emissions are attenuated more than 20 dB below the permissible limits or the field strength is too small to be measured.
3. Distance extrapolation factor = 40 log (specific distance / test distance) (dB)
4. Limit line = specific Limits (dBuV) + Distance extrapolation factor
5. This test is performed with hopping off.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

TEST RESULTS

Below 1 GHz

Operation Mode: Normal Mode

Frequency	Reading	Ant. factor	Cable loss	Ant. POL	Total	Limit	Margin
㎒	dB㎶	dB /m	dB	(H/V)	dB㎶/m	dB㎶/m	dB
No Critical peaks found							

Notes:

1. Measuring frequencies from 30 MHz to the 1 GHz.
2. Radiated emissions measured in frequency range from 30 MHz to 1000 MHz were made with an instrument using Quasi peak detector mode.
3. This test is performed with hopping off.
4. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Above 1 GHz

Operation Mode: CH Low(GFSK)

Frequency [MHz]	Reading DBuV	※A.F+CL-AMP GAIN [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
4804	52.95	-0.84	V	52.11	74	21.89	PK
4804	41.14	-0.84	V	40.30	54	13.70	AV
7206	49.70	9.15	V	58.85	74	15.15	PK
7206	36.87	9.15	V	46.02	54	7.98	AV
4804	52.88	-0.84	H	52.04	74	21.96	PK
4804	39.78	-0.84	H	38.94	54	15.06	AV
7206	49.62	9.15	H	58.77	74	15.23	PK
7206	36.90	9.15	H	46.05	54	7.95	AV

Operation Mode: CH Low(8DPSK)

Frequency [MHz]	Reading DBuV	※A.F+CL-AMP GAIN [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
4804	50.39	-0.84	V	49.55	74	24.45	PK
4804	38.06	-0.84	V	37.22	54	16.78	AV
7206	49.40	9.15	V	58.55	74	15.45	PK
7206	36.61	9.15	V	45.76	54	8.24	AV
4804	51.99	-0.84	H	51.15	74	22.85	PK
4804	38.17	-0.84	H	37.33	54	16.67	AV
7206	49.12	9.15	H	58.27	74	15.73	PK
7206	36.63	9.15	H	45.78	54	8.22	AV

Operation Mode: CH Low(π/4DQPSK)

Frequency [MHz]	Reading DBuV	※A.F+CL-AMP GAIN [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
4804	50.79	-0.84	V	49.95	74	24.05	PK
4804	38.00	-0.84	V	37.16	54	16.84	AV
7206	49.19	9.15	V	58.34	74	15.66	PK
7206	36.58	9.15	V	45.73	54	8.27	AV
4804	51.26	-0.84	H	50.42	74	23.58	PK
4804	37.99	-0.84	H	37.15	54	16.85	AV
7206	49.27	9.15	H	58.42	74	15.58	PK
7206	36.68	9.15	H	45.83	54	8.17	AV

※ A·F: ANTENNA FACTOR
C·L: CABLE LOSS
AMP GAIN: AMPLIFIER GAIN

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000 MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. Spectrum setting:
   a. Peak Setting 1 GHz – 26 GHz, RBW = 1 MHz, VBW = 1 MHz.
   b. AV Setting 1 GHz – 26 GHz, RBW = 1 MHz, VBW = 1 kHz ≥ 1/τ Hz, where τ = pulse width in seconds.
   We performed using a reduced video BW method was done with the analyzer in linear mode.
6. We have done Normal Mode and EDR Mode test. Worst case of EUT is Normal Mode.
7. This test is performed with hopping off.
8. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Operation Mode: CH Mid(GFSK)

Frequency [MHz]	Reading dBuV	※A.F+CL-AMP GAIN [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
4882	51.64	-0.37	V	51.27	74	22.73	PK
4882	40.54	-0.37	V	40.17	54	13.83	AV
7323	51.37	8.72	V	60.09	74	13.92	PK
7323	38.66	8.72	V	47.38	54	6.63	AV
4882	50.74	-0.37	H	50.37	74	23.63	PK
4882	38.07	-0.37	H	37.70	54	16.30	AV
7323	49.47	8.72	H	58.19	74	15.82	PK
7323	36.37	8.72	H	45.09	54	8.92	AV

Operation Mode: CH Mid(8DPSK)

Frequency [MHz]	Reading DBuV	※A.F+CL-AMP GAIN [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
4882	51.17	-0.37	V	50.80	74	23.20	PK
4882	38.83	-0.37	V	38.46	54	15.54	AV
7323	48.87	8.72	V	57.59	74	16.42	PK
7323	36.30	8.72	V	45.02	54	8.99	AV
4882	50.34	-0.37	H	49.97	74	24.03	PK
4882	37.70	-0.37	H	37.33	54	16.67	AV
7323	48.81	8.72	H	57.53	74	16.48	PK
7323	36.26	8.72	H	44.98	54	9.03	AV

Operation Mode: CH Mid(π/4DQPSK)

Frequency [MHz]	Reading DBuV	※A.F+CL-AMP GAIN [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
4882	51.64	-0.37	V	51.27	74	22.73	PK
4882	38.78	-0.37	V	38.41	54	15.59	AV
7323	49.17	8.72	V	57.89	74	16.12	PK
7323	36.33	8.72	V	45.05	54	8.96	AV
4882	50.25	-0.37	H	49.88	74	24.12	PK
4882	37.72	-0.37	H	37.35	54	16.65	AV
7323	48.83	8.72	H	57.55	74	16.46	PK
7323	36.15	8.72	H	44.87	54	9.14	AV

※ A·F: ANTENNA FACTOR
C·L: CABLE LOSS
AMP GAIN: AMPLIFIER GAIN

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000 MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. Spectrum setting:
   a. Peak Setting 1 GHz – 26 GHz, RBW = 1 MHz, VBW = 1 MHz.
   b. AV Setting 1 GHz – 26 GHz, RBW = 1 MHz, VBW = 1 kHz ≥ 1/τ Hz, where τ = pulse width in seconds.
   We performed using a reduced video BW method was done with the analyzer in linear mode.
6. We have done Normal Mode and EDR Mode test. Worst case of EUT is Normal Mode.
7. This test is performed with hopping off.
8. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Operation Mode: CH High(GFSK)

Frequency [MHz]	Reading dBuV	※A.F+CL-AMP GAIN [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
4960	49.79	0.50	V	50.29	74	23.71	PK
4960	37.20	0.50	V	37.70	54	16.30	AV
7440	50.40	8.95	V	59.35	74	14.65	PK
7440	37.44	8.95	V	46.39	54	7.61	AV
4960	49.91	0.50	H	50.41	74	23.59	PK
4960	36.80	0.50	H	37.30	54	16.70	AV
7440	50.04	8.95	H	58.99	74	15.01	PK
7440	37.29	8.95	H	46.24	54	7.76	AV

Operation Mode: CH High(8DPSK)

Frequency [MHz]	Reading DBuV	※A.F+CL-AMP GAIN [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
4960	49.91	0.50	V	50.41	74	23.59	PK
4960	36.55	0.50	V	37.05	54	16.95	AV
7440	50.51	8.95	V	59.46	74	14.54	PK
7440	37.01	8.95	V	45.96	54	8.04	AV
4960	49.06	0.50	H	49.56	74	24.44	PK
4960	36.57	0.50	H	37.07	54	16.93	AV
7440	50.54	8.95	H	59.49	74	14.51	PK
7440	37.22	8.95	H	46.17	54	7.83	AV

Operation Mode: CH High (π/4DQPSK)

Frequency [MHz]	Reading DBuV	※A.F+CL-AMP GAIN [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
4960	49.39	0.50	V	49.89	74	24.11	PK
4960	36.42	0.50	V	36.92	54	17.08	AV
7440	49.56	8.95	V	58.51	74	15.49	PK
7440	37.03	8.95	V	45.98	54	8.02	AV
4960	49.79	0.50	H	50.29	74	23.71	PK
4960	36.72	0.50	H	37.22	54	16.78	AV
7440	49.31	8.95	H	58.26	74	15.74	PK
7440	36.99	8.95	H	45.94	54	8.06	AV

※ A·F: ANTENNA FACTOR
C·L: CABLE LOSS
AMP GAIN: AMPLIFIER GAIN

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000 MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. Spectrum setting:
   a. Peak Setting 1 GHz – 26 GHz, RBW = 1 MHz, VBW = 1 MHz.
   b. AV Setting 1 GHz – 26 GHz, RBW = 1 MHz, VBW = 1 kHz ≥ 1/τ Hz, where τ = pulse width in seconds.
   We performed using a reduced video BW method was done with the analyzer in linear mode.
6. We have done Normal Mode and EDR Mode test. Worst case of EUT is Normal Mode.
7. This test is performed with hopping off.
8. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

8.6.3 RADIATED RESTRICTED BAND EDGES

Test Requirements and limit, §15.247(d), §15.205, §15.209

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in section 15.209(a) (See section 15.205(c).

Operation Mode: Normal(GFSK)

Operating Frequency: 2402 MHz

Channel No: CH 0

Frequency [MHz]	Reading dBuV	※A.F+CL [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
2390.0	23.63	33.90	H	57.53	74	16.47	PK
2390.0	11.89	33.90	H	45.79	54	8.21	AV
2390.0	24.95	33.90	V	58.85	74	15.15	PK
2390.0	11.93	33.90	V	45.83	54	8.17	AV

Operation Mode: EDR(8DPSK)

Operating Frequency: 2402 MHz

Channel No: CH 0

Frequency [MHz]	Reading dBuV	※A.F+CL [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
2390.0	23.94	33.90	H	57.84	74	16.16	PK
2390.0	11.84	33.90	H	45.74	54	8.26	AV
2390.0	23.60	33.90	V	57.50	74	16.50	PK
2390.0	11.74	33.90	V	45.64	54	8.36	AV

Operation Mode	EDR(π/4DQPSK)
Operating Frequency	2402 MHz
Channel No	CH 0

Frequency [MHz]	Reading dBuV	※A.F+CL [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
2390.0	24.35	33.90	H	58.25	74	15.75	PK
2390.0	12.07	33.90	H	45.97	54	8.03	AV
2390.0	23.64	33.90	V	57.54	74	16.46	PK
2390.0	11.92	33.90	V	45.82	54	8.18	AV

※ A·F: ANTENNA FACTOR

C·L: CABLE LOSS

Notes:

1.. Frequency range of measurement = 2310 MHz ~ 2900 MHz

2. Total = Fundamental Reading Value + Antenna Factor + Cable Loss

3. Spectrum setting:

a. Peak Setting 1 GHz – 26 GHz, RBW = 1 MHz, VBW = 1 MHz.

b. AV Setting 1 GHz – 26 GHz, RBW = 1 MHz, VBW = 1 kHz ≥ 1/τ Hz, where τ = pulse width in seconds.

We performed using a reduced video BW method was done with the analyzer in linear mode.

4. We have done Normal Mode and EDR Mode. Worst case of EUT is Normal Mode.

5. This test is performed with hopping off.

6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna

Operation Mode	Normal(GFSK)
Operating Frequency	2480 MHz
Channel No	CH 78

Frequency	Reading	※ A.F.+CL	Ant. Pol.	Duty Cycle Correction	Total	Limit	Margin	Detect
[MHz]	dBuV	[dB]	[H/V]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
2483.5	31.42	33.99	H	0	65.41	74	8.59	PK
2483.5	28.97	33.99	H	-24.78	38.18	54	15.82	AV
2483.5	30.42	33.99	V	0	64.41	74	9.59	PK
2483.5	27.72	33.99	V	-24.78	36.93	54	17.07	AV

Operation Mode	EDR(8DPSK)
Operating Frequency	2480 MHz
Channel No	CH 78

Frequency	Reading	※ A.F.+CL	Ant. Pol.	Duty Cycle Correction	Total	Limit	Margin	Detect
[MHz]	dBuV	[dB]	[H/V]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
2483.5	32.23	33.99	H	0	66.22	74	7.78	PK
2483.5	27.85	33.99	H	-24.76	37.08	54	16.92	AV
2483.5	30.82	33.99	V	0	64.81	74	9.19	PK
2483.5	26.68	33.99	V	-24.76	35.91	54	18.09	AV

Operation Mode	EDR(π/4DQPSK)
Operating Frequency	2480 MHz
Channel No	CH 78

Frequency	Reading	※ A.F.+CL	Ant. Pol.	Duty Cycle Correction	Total	Limit	Margin	Detect
[MHz]	dBuV	[dB]	[H/V]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
2483.5	31.84	33.99	H	0	65.83	74	8.17	PK
2483.5	27.53	33.99	H	-24.76	36.76	54	17.24	AV
2483.5	30.82	33.99	V	0	64.81	74	9.19	PK
2483.5	26.35	33.99	V	-24.76	35.58	54	18.42	AV

※ A·F: ANTENNA FACTOR
C·L: CABLE LOSS
AMP GAIN: AMPLIFIER GAIN

Notes:

1. Frequency range of measurement = 2483.5 MHz ~ 2485.5 MHz
2. Total = Fundamental Reading Value + Antenna Factor + Cable Loss – Delta Value + Duty Cycle Correction Factor
3. Spectrum setting:
   a. Peak Setting 1 GHz – 26 GHz, RBW = 1 MHz, VBW = 1 MHz.
   b. AV Setting 1 GHz – 26 GHz, RBW = 1 MHz, VBW = 1 kHz ≥ 1/τ Hz, where τ = pulse width in seconds.
   We performed using a reduced video BW method was done with the analyzer in linear mode.
4. FYI : Duty Cycle Correction Factor (79 channel hopping)
   a. Time to cycle through all channels= Δ t= τ [ms] x 79 channels = 227.915 ms, where τ = pulse width
   b. 100 ms/ Δt [ms] = *H* → Round up to next highest integer, *H ' =1*
   c. Worst Case Dwell Time = τ [ms] x *H '* = 2.885 ms
   d. Duty Cycle Correction = 20log (Worst Case Dwell Time/ 100ms) dB = -30.797 dB
5. Duty Cycle Correction Factor(AFH mode – minimum channel number case - 20 channels)
   a. Time to cycle through all channels= Δ t= τ [ms] x 20 channels = 57.70 ms, where τ = pulse width
   b. 100 ms/ Δt [ms] = *H* → Round up to next highest integer, *H ' = 2*
   c. Worst Case Dwell Time = τ [ms] x *H '* = 5.770 ms
   d. Duty Cycle Correction(AFH) = 20log (Worst Case Dwell Time/ 100ms) dB = -24.7765 dB
   e. We applied DCCF in the test result which hopping channel number is 20.
6. We have done Normal Mode, EDR Mode. Worst case of EUT is Normal Mode.
7. This test is performed with hopping off.
8. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

8.7 POWERLINE CONDUCTED EMISSIONS

LIMIT

For an intentional radiator which is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed 250 microvolt (The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz). The limits at specific frequency range is listed as follows:

Frequency Range (MHz)	Limits (dBμV)	
	Quasi-peak	Average
0.15 to 0.50	66 to 56	56 to 46
0.50 to 5	56	46
5 to 30	60	50

Compliance with this provision shall be based on the measurement of the radio frequency voltage between each power line (LINE and NEUTRAL) and ground at the power terminals.

Test Configuration

See test photographs attached in Appendix 1 for the actual connections between EUT and support equipment.

TEST PROCEDURE

1. The EUT is placed on a wooden table 80 cm above the reference ground plane.
2. The EUT is connected via LISN to a test power supply.
3. The measurement results are obtained as described below:
4. Detectors – Quasi Peak and Average Detector.
5. This test is performed with hopping on.

▣ RESULT PLOTS

Conducted Emissions (Line 1)

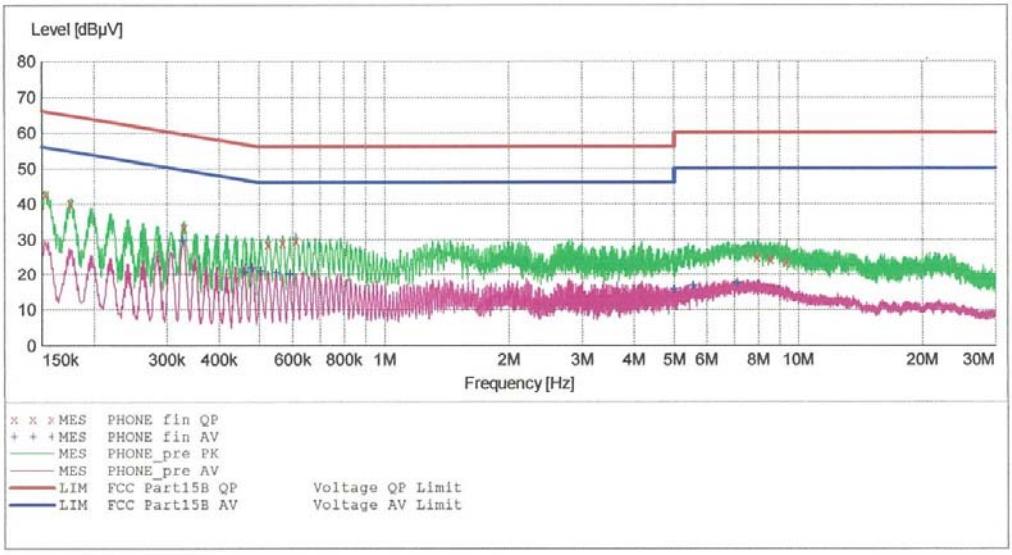
HCT

EMC

```
EUT:                  LG-P716
Manufacturer:         LG
Operating Condition:  BT MODE
Test Site:            SHIELD ROOM
Operator:             JS LEE
Test Specification:   FCC PART 15 B
Comment:              H
```

SCAN TABLE: "FCC PART 15 B(H)"

```
Short Description:                FCC PART 15 CLASS B
Start      Stop       Step       Detector   Meas.     IF       Transducer
Frequency  Frequency  Width                 Time      Bandw.
150.0 kHz  500.0 kHz  1.0 kHz    MaxPeak    10.0 ms   9 kHz    None
                                 Average
500.0 kHz  5.0 MHz    4.0 kHz    MaxPeak    10.0 ms   9 kHz    None
                                 Average
5.0 MHz    30.0 MHz   4.0 kHz    MaxPeak    10.0 ms   9 kHz    None
                                 Average
```



MEASUREMENT RESULT: "PHONE_fin QP"

3/25/2013 5:09PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
0.153010	42.70	9.8	66	23.1	---	---
0.176010	40.00	9.7	65	24.6	---	---
0.329010	33.40	9.7	60	26.1	---	---
0.524000	28.70	9.8	56	27.3	---	---
0.568000	29.10	9.8	56	26.9	---	---
0.612000	29.70	9.8	56	26.3	---	---
7.968000	25.20	10.3	60	34.8	---	---
8.580000	24.50	10.4	60	35.5	---	---
9.360000	23.60	10.4	60	36.4	---	---

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MEASUREMENT RESULT: "PHONE_fin AV"

3/25/2013 5:09PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
0.327010	29.70	9.7	50	19.8	---	---
0.461010	20.60	9.8	47	26.1	---	---
0.480010	22.00	9.8	46	24.3	---	---
0.504000	21.00	9.8	46	25.0	---	---
0.548000	20.40	9.8	46	25.6	---	---
0.592000	19.90	9.8	46	26.1	---	---
5.000000	15.70	10.2	46	30.3	---	---
5.568000	16.70	10.2	50	33.3	---	---
7.116000	17.40	10.3	50	32.6	---	---

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Conducted Emissions (Line 2)

HCT

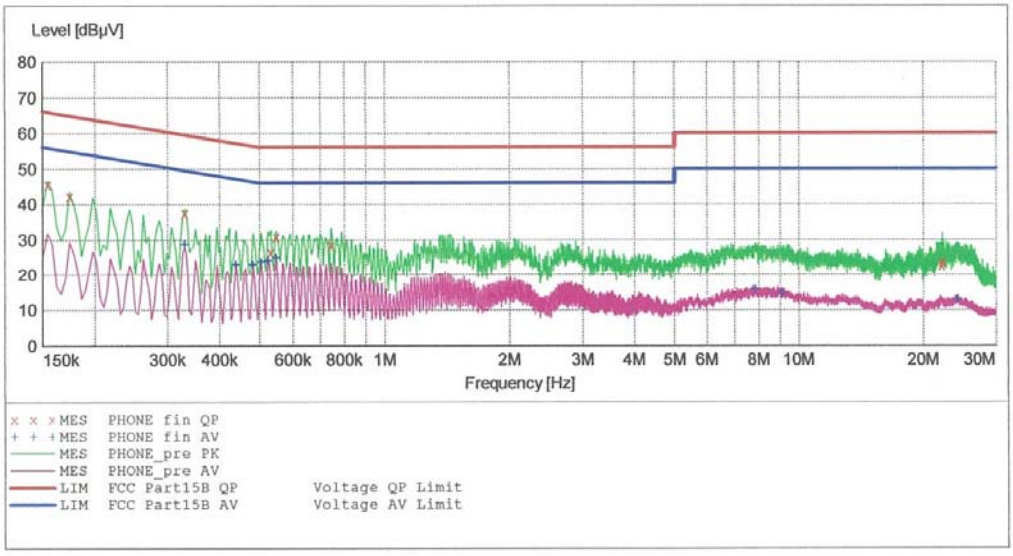
EMC

```
EUT:                    LG-P716
Manufacturer:           LG
Operating Condition:    BT MODE
Test Site:              SHIELD ROOM
Operator:               JS LEE
Test Specification:     FCC PART 15 CLASS B
Comment:                N
```

SCAN TABLE: "FCC PART 15 B(N)"

Short Description: FCC PART 15 CLASS B

Start Frequency	Stop Frequency	Step Width	Detector	Meas. Time	IF Bandw.	Transducer
150.0 kHz	500.0 kHz	4.0 kHz	MaxPeak Average	10.0 ms	9 kHz	None
500.0 kHz	5.0 MHz	4.0 kHz	MaxPeak Average	10.0 ms	9 kHz	None
5.0 MHz	30.0 MHz	4.0 kHz	MaxPeak Average	10.0 ms	9 kHz	None



MEASUREMENT RESULT: "PHONE_fin QP"

3/25/2013 5:01PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
0.154010	45.60	10.0	66	20.2	---	---
0.174010	42.10	9.9	65	22.7	---	---
0.330010	37.60	9.9	60	21.9	---	---
0.532000	26.50	10.0	56	29.5	---	---
0.548000	30.90	10.0	56	25.1	---	---
0.744000	28.60	10.0	56	27.4	---	---
22.092000	22.70	12.2	60	37.3	---	---
22.152000	23.70	12.2	60	36.3	---	---
22.164000	23.80	12.2	60	36.2	---	---

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MEASUREMENT RESULT: "PHONE_fin AV"

3/25/2013 5:01PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
0.330010	28.70	9.9	50	20.7	---	---
0.438010	23.10	10.0	47	24.0	---	---
0.482010	22.90	10.0	46	23.4	---	---
0.504000	23.70	10.0	46	22.3	---	---
0.524000	24.10	10.0	46	21.9	---	---
0.548000	24.80	10.0	46	21.2	---	---
7.848000	15.70	10.5	50	34.3	---	---
9.120000	14.50	10.6	50	35.5	---	---
24.288000	12.80	12.3	50	37.2	---	---

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9. LIST OF TEST EQUIPMENT

Manufacturer	Model / Equipment	Calibration Interval	Calibration Due	Serial No.
Rohde & Schwarz	ENV216/ LISN	Annual	02/06/2014	100073
Schwarzbeck	VULB 9160/ TRILOG Antenna	Biennial	05/03/2015	3125
Rohde & Schwarz	ESI 40 / EMI TEST RECEIVER	Annual	05/03/2013	831564103
Agilent	E4440A/ Spectrum Analyzer	Annual	05/02/2013	US45303008
Agilent	N9020A/ SIGNAL ANALYZER	Annual	07/31/2013	MY51110020
HD	MA240/ Antenna Position Tower	N/A	N/A	556
EMCO	1050/ Turn Table	N/A	N/A	114
HD GmbH	HD 100/ Controller	N/A	N/A	13
HD GmbH	KMS 560/ SlideBar	N/A	N/A	12
Rohde & Schwarz	SCU-18/ Signal Conditioning Unit	Annual	09/11/2013	10094
MITEQ	AMF-6B-180265-35-10P / POWER AMP	Annual	04/16/2013	667624
CERNEX	CBL26405040 / POWER AMP	Annual	04/16/2013	19660
Schwarzbeck	BBHA 9120D/ Horn Antenna	Biennial	10/17/2013	937
Schwarzbeck	BBHA9170 / Horn Antenna(15 GHz ~ 40 GHz)	Biennial	10/30/2014	BBHA9170124
Rohde & Schwarz	FSP / Spectrum Analyzer	Annual	02/08/2014	839117/011
Agilent	E4416A /Power Meter	Annual	11/07/2013	GB41291412
Agilent	E9327A /POWER SENSOR	Annual	05/02/2013	MY4442009
Wainwright Instrument	WHF3.3/18G-10EF / High Pass Filter	Annual	05/02/2013	1
Wainwright Instrument	WRCJ2400/2483.5-2370/2520-60/14SS / Band Reject Filter	Annual	05/02/2013	1
Hewlett Packard	11636B/Power Divider	Annual	11/07/2013	11377
Agilent	87300B/Directional Coupler	Annual	12/24/2013	3116A03621
Hewlett Packard	11667B / Power Splitter	Annual	06/05/2013	05001
DIGITAL	EP-3010 /DC POWER SUPPLY	Annual	11/07/2013	3110117
ITECH	IT6720 / DC POWER SUPPLY	Annual	11/07/2013	010002156287001199
TESCOM	TC-3000C / BLUETOOTH TESTER	Annual	11/07/2013	3000C000276
Rohde & Schwarz	CBT / BLUETOOTH TESTER	Annual	05/02/2013	100422
EMCO	6502.LOOP ANTENNA	Biennial	01/11/2014	9009-2536
CERNEX	CBLU1183540 / POWER AMP	Annual	07/27/2013	21691