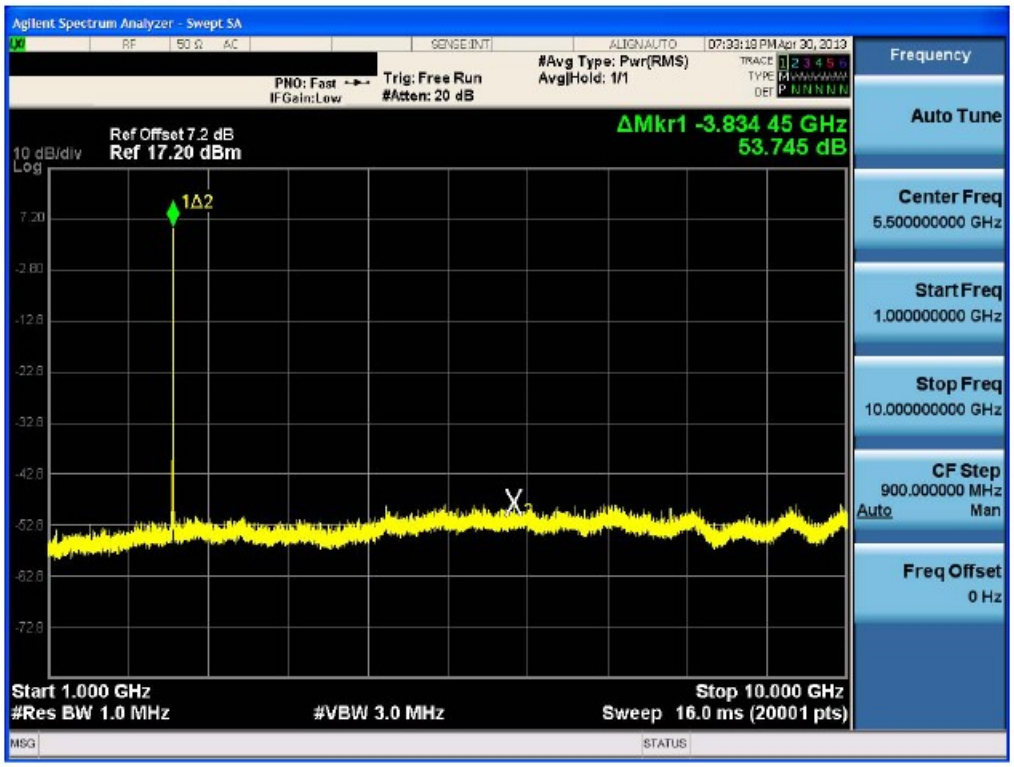
Test Plots (GFSK) - 1 GHz - 10 GHz
Spurious Emission (Low-CH)



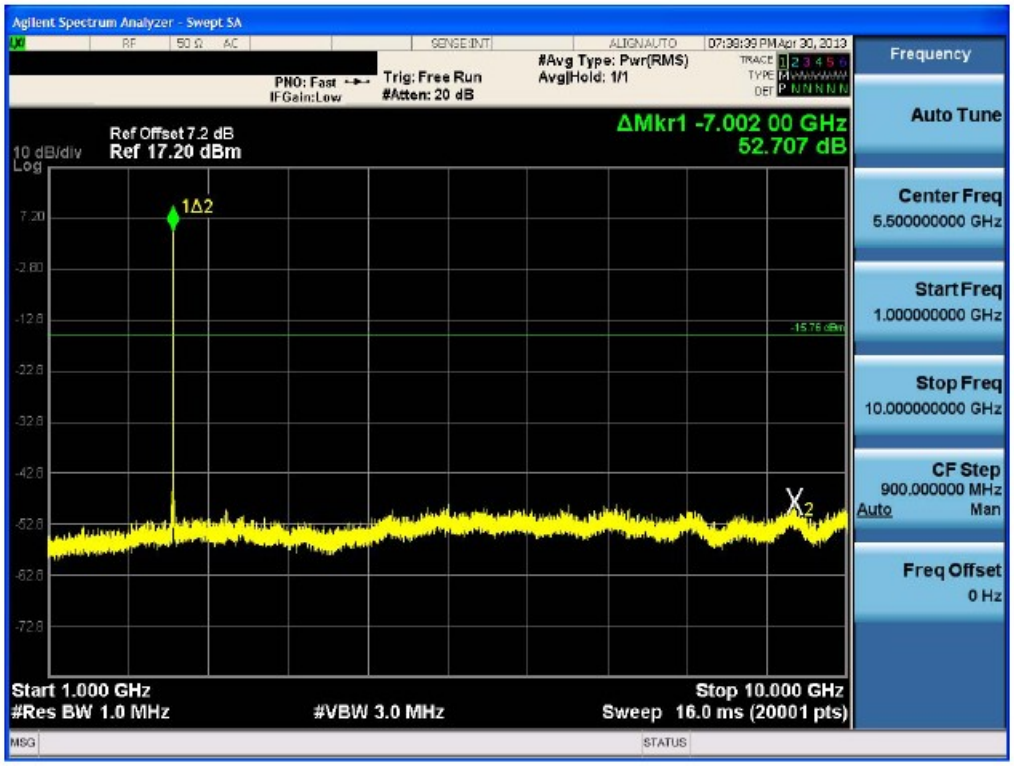
Test Plots (GFSK) - 1 GHz - 10 GHz
Spurious Emission (Mid-CH)

Test Plots (GFSK) - 1 GHz - 10 GHz

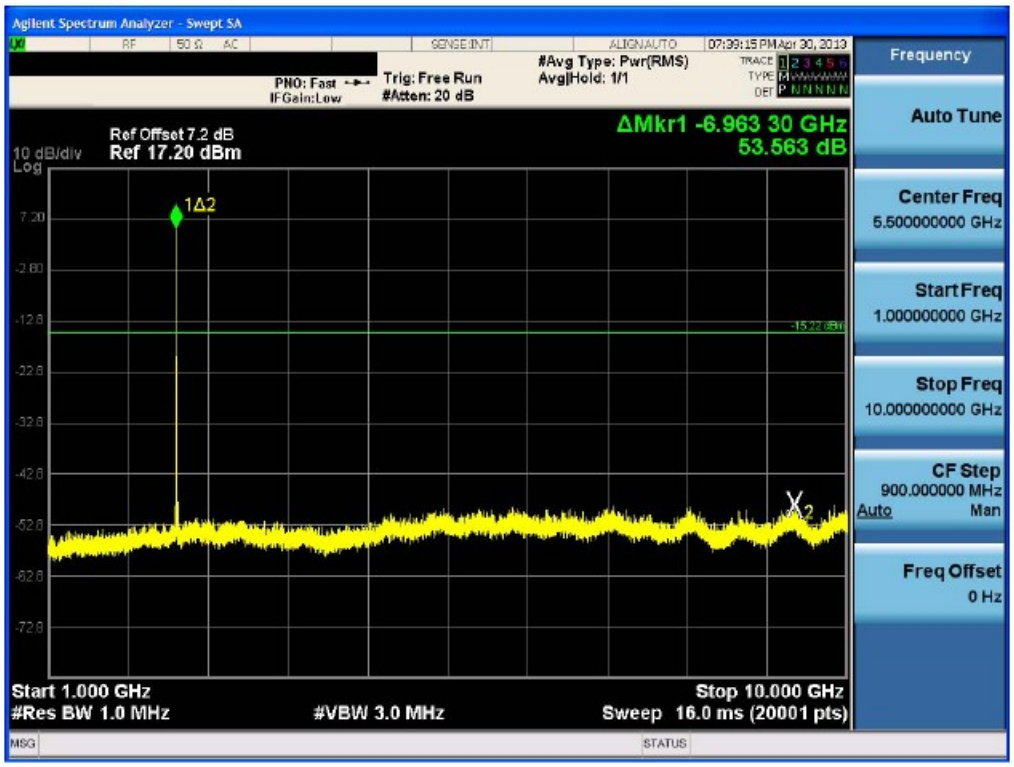
Spurious Emission (High-CH)

Test Plots (8DPSK) - 1 GHz - 10 GHz

Spurious Emission (Low-CH)

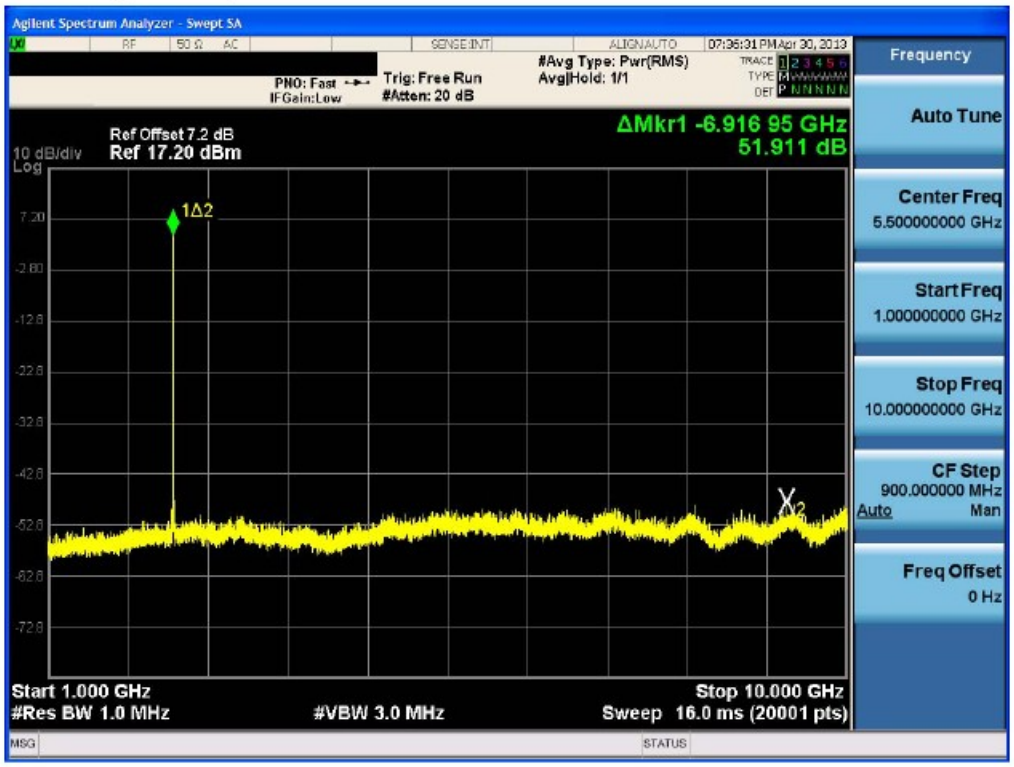


Test Plots (8DPSK) - 1 GHz - 10 GHz
Spurious Emission (Mid-CH)

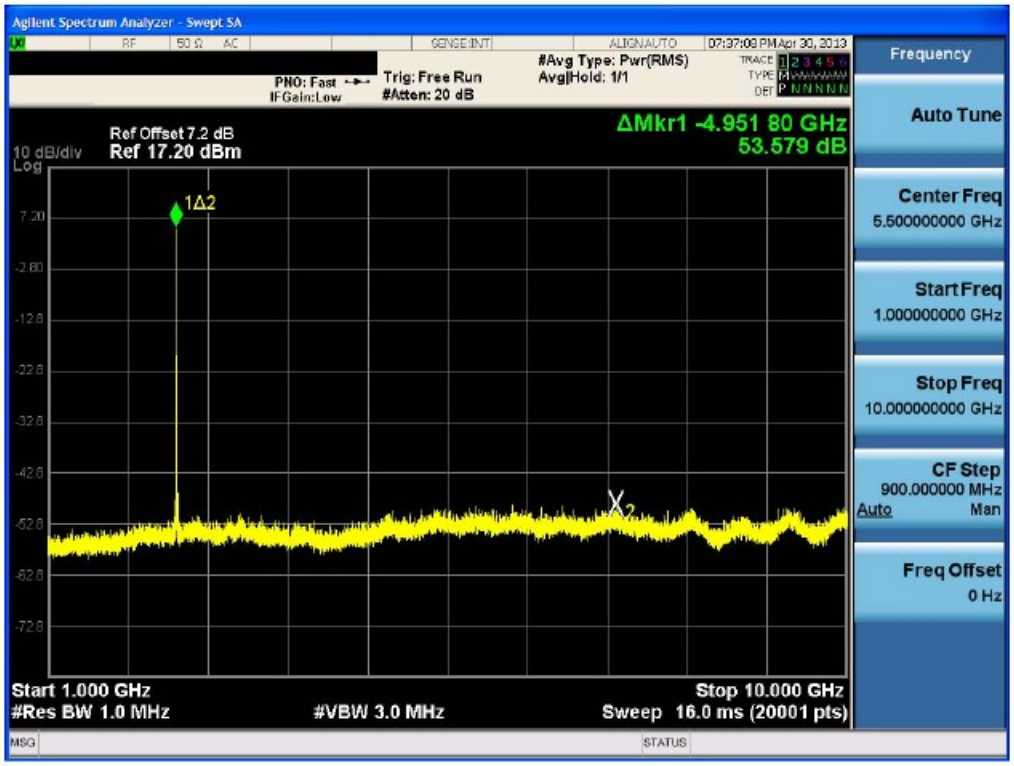


Test Plots (8DPSK) - 1 GHz - 10 GHz
Spurious Emission (High-CH)

Test Plots (π/4DQPSK) - 1 GHz - 10 GHz
Spurious Emission (Low-CH)

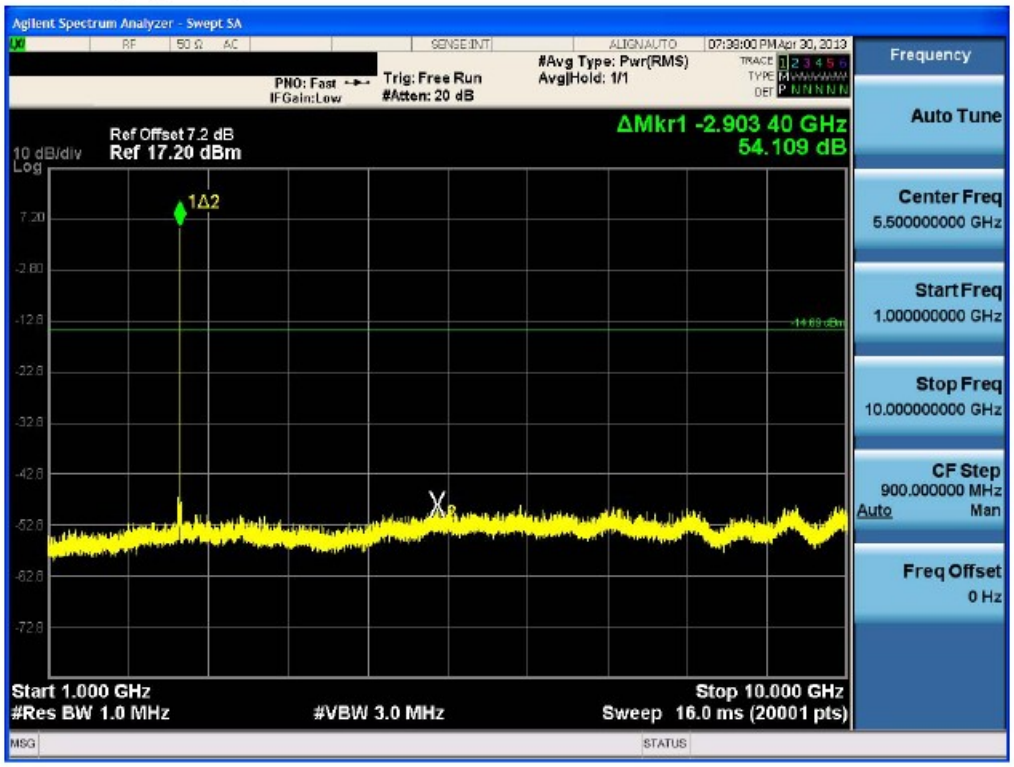


Test Plots (π/4DQPSK) - 1 GHz - 10 GHz
Spurious Emission (Mid-CH)

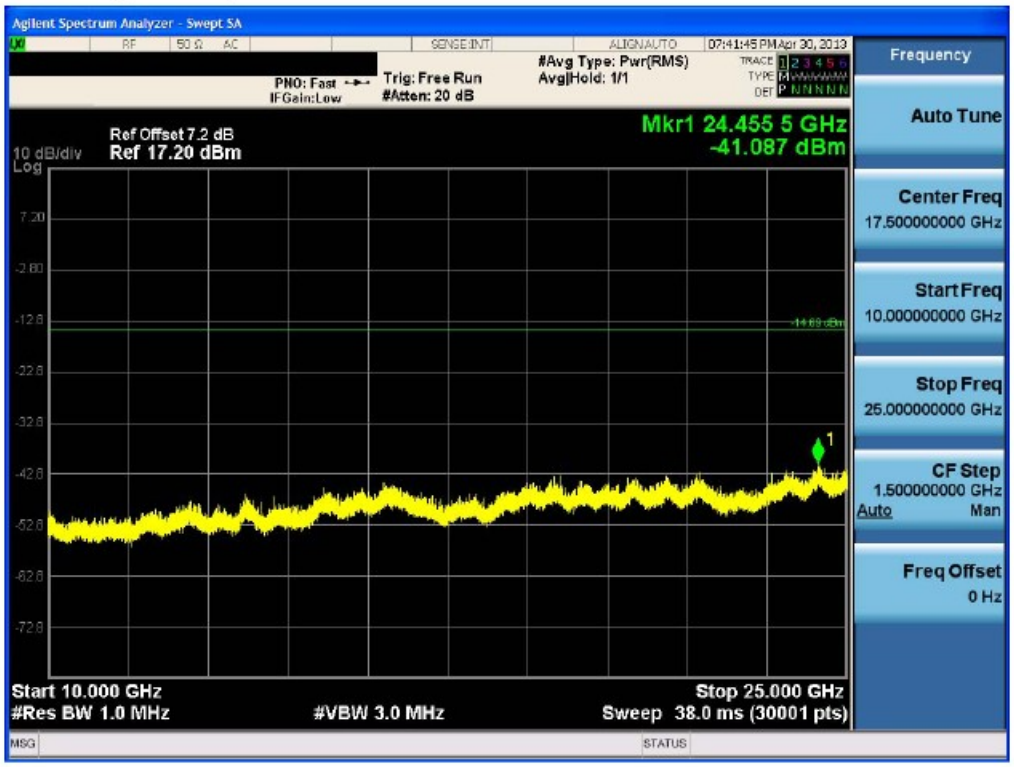


Test Plots (π/4DQPSK) - 1 GHz - 10 GHz

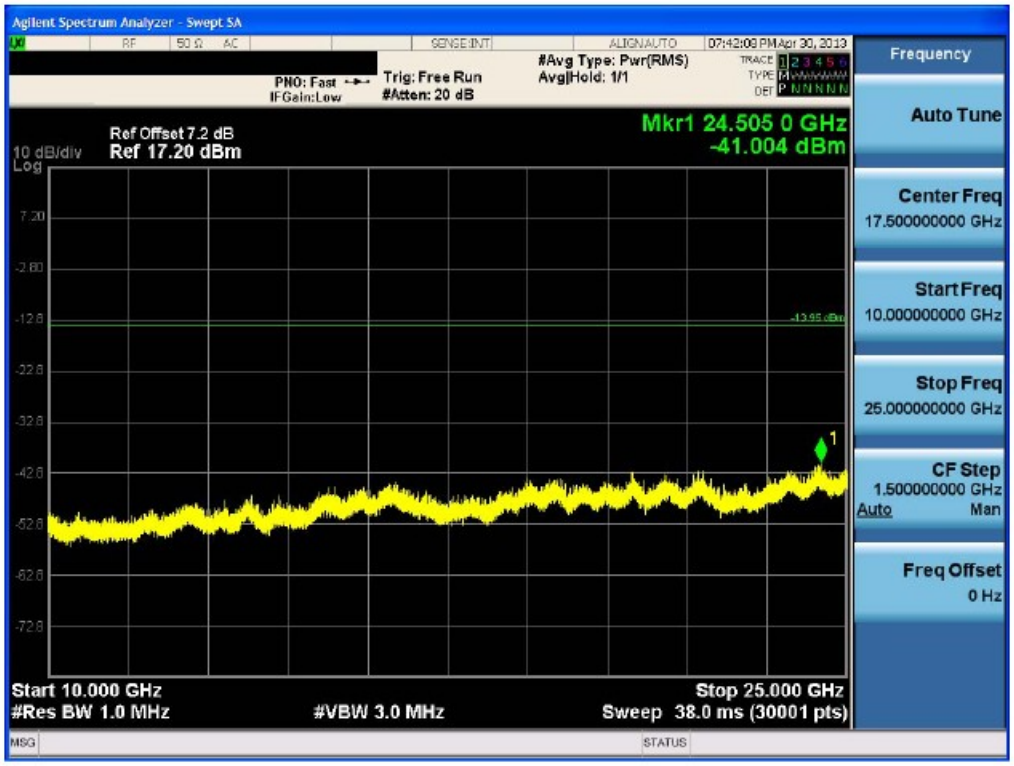
Spurious Emission (High-CH)



Test Plots (GFSK) - 10 GHz - 25 GHz
Spurious Emission (Low-CH)

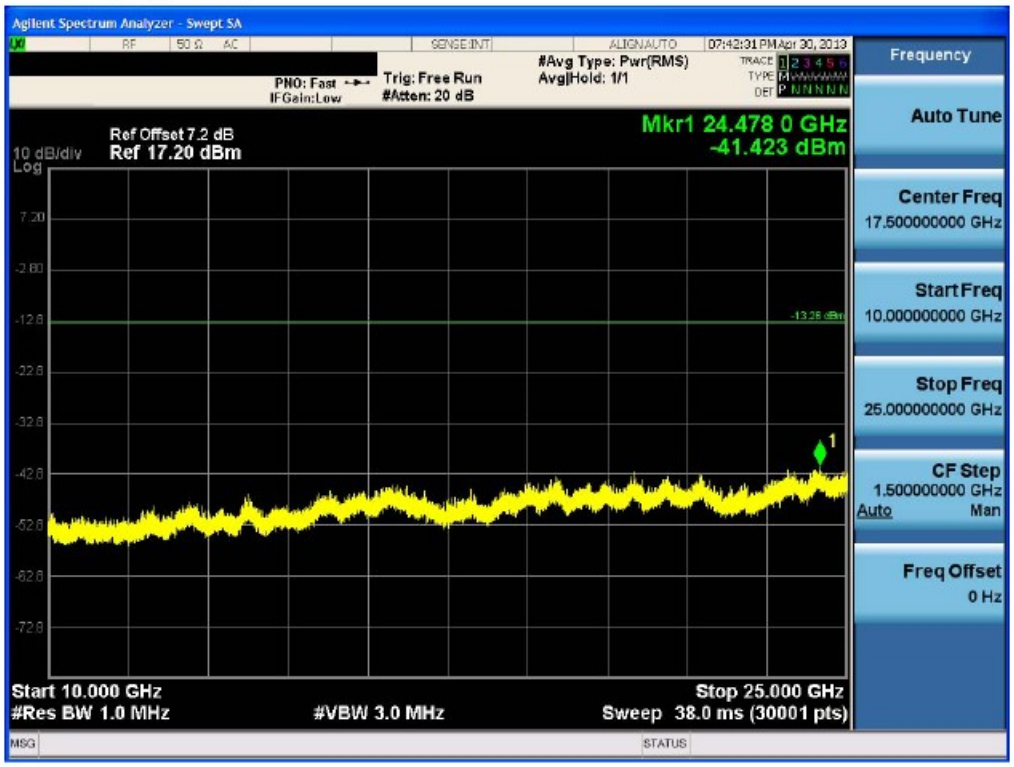


Test Plots (GFSK) - 10 GHz - 25 GHz
Spurious Emission (Mid-CH)



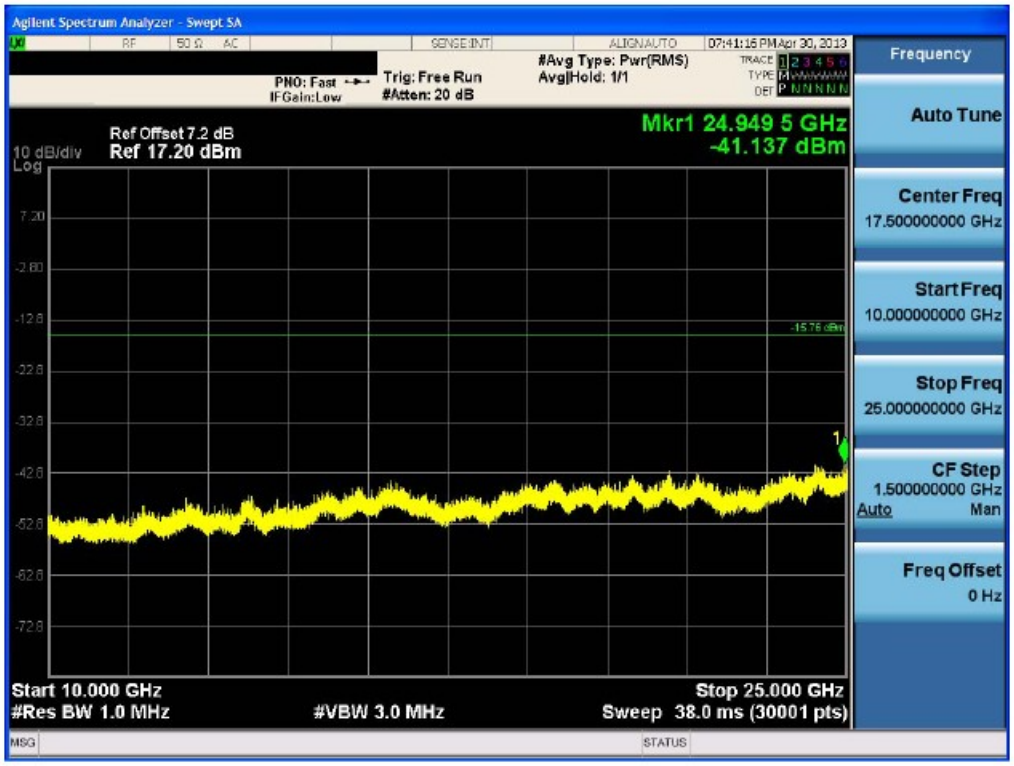
Test Plots (GFSK) - 10 GHz - 25 GHz

Spurious Emission (High-CH)

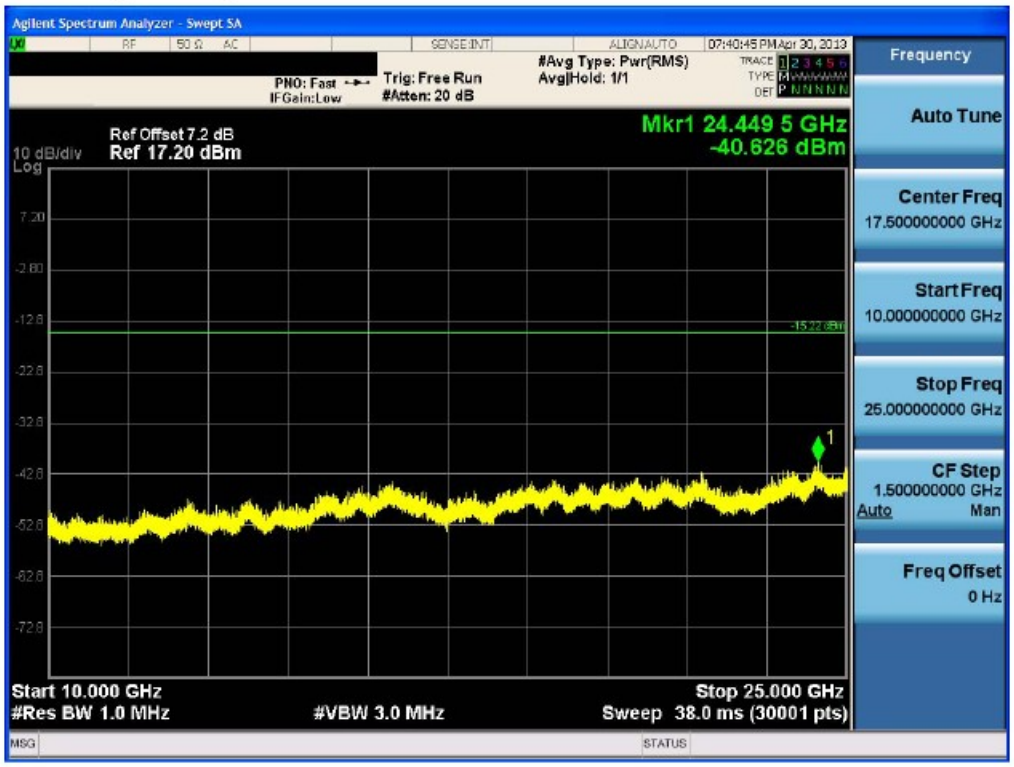


Test Plots (8DPSK) - 10 GHz - 25 GHz

Spurious Emission (Low-CH)

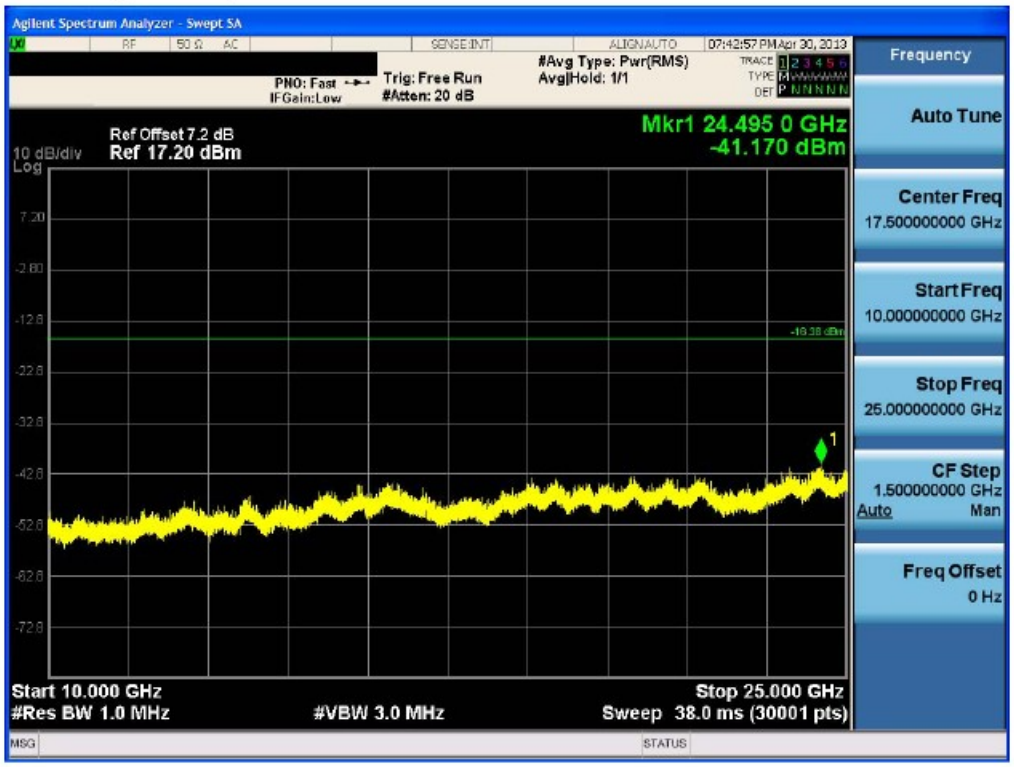


Test Plots (8DPSK) - 10 GHz - 25 GHz
Spurious Emission (Mid-CH)



Test Plots (8DPSK) - 10 GHz - 25 GHz
Spurious Emission (High-CH)

Test Plots (π/4DQPSK) - 10 GHz - 25 GHz
Spurious Emission (Low-CH)



Test Plots (π/4DQPSK) - 10 GHz - 25 GHz
Spurious Emission (Mid-CH)

Test Plots (π/4DQPSK) - 10 GHz - 25 GHz

Spurious Emission (High-CH)

8.6.2 RADIATED SPURIOUS EMISSIONS

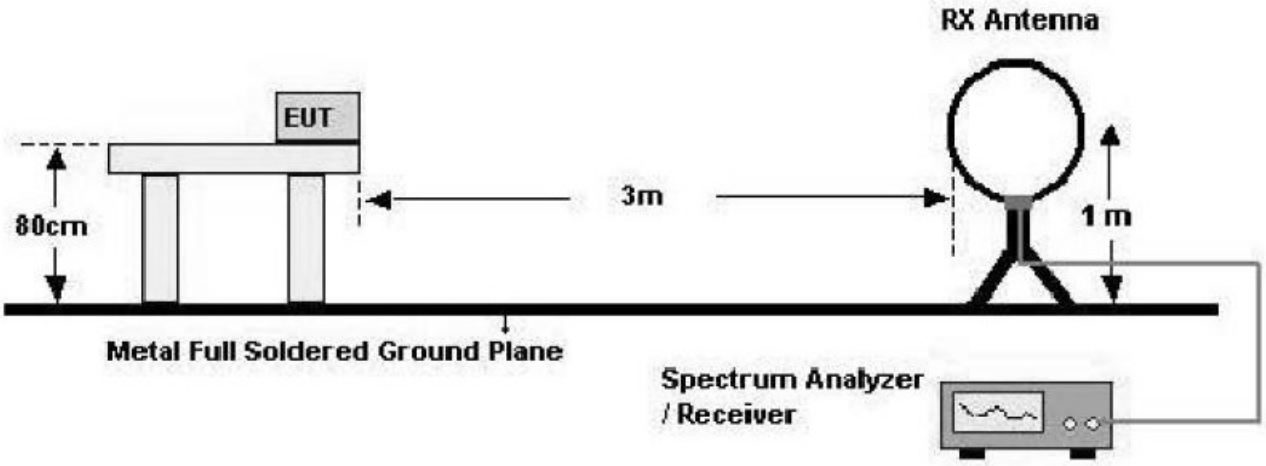
LIMIT : §15.247(d), §15.205, §15.209

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.

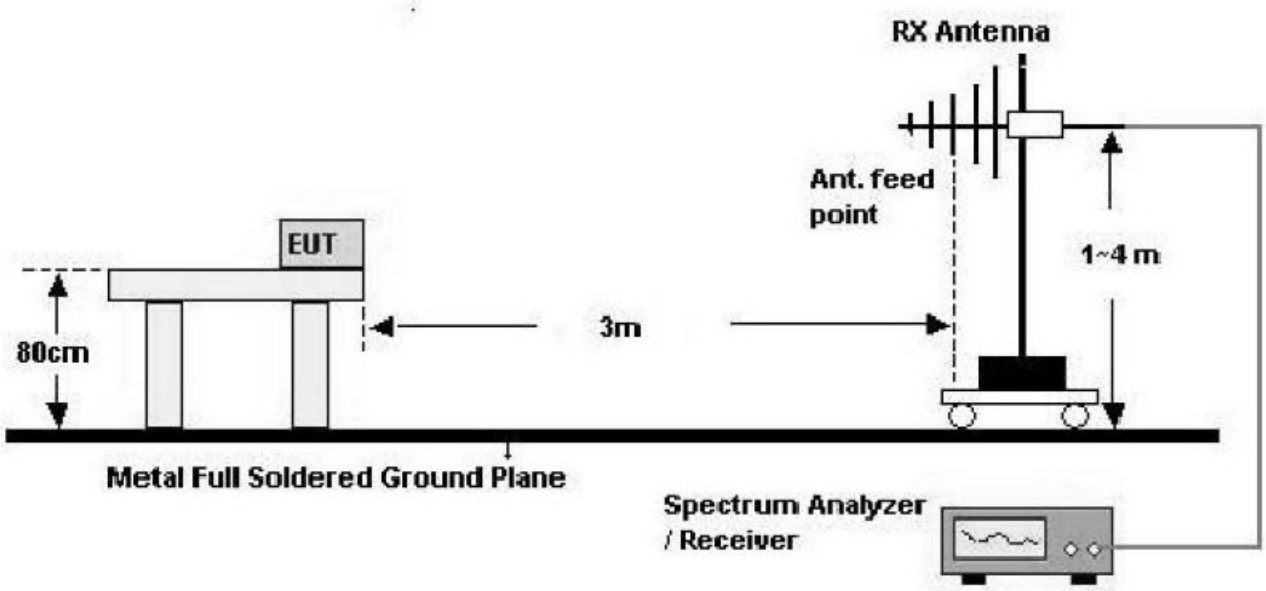
Frequency (MHz)	Field Strength (uV/m)	Measurement Distance (m)
0.009 – 0.490	2400/F(kHz)	300
0.490 – 1.705	24000/F(kHz)	30
1.705 – 30	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

Test Configuration

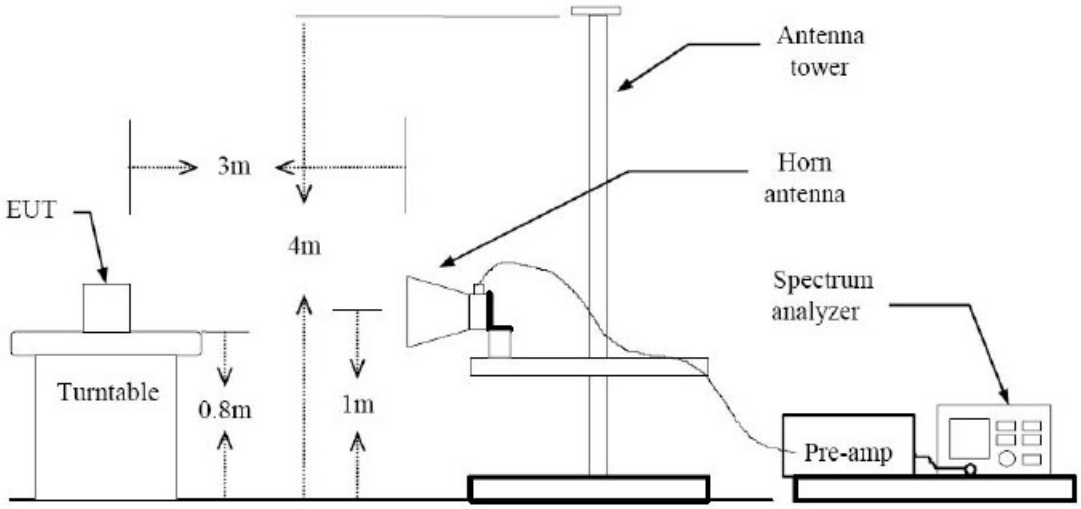
Below 30 MHz



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
MHz	dBμV	dB /m	dB	(H/V)	dBμV/m	dBμV/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
MHz	dBμV	dB /m	dB	(H/V)	dBμV/m	dBμV/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	51.24	-0.84	V	50.40	74	23.60	PK
4804	38.52	-0.84	V	37.68	54	16.32	AV
7206	49.58	9.15	V	58.73	74	15.27	PK
7206	36.57	9.15	V	45.72	54	8.28	AV
4804	51.66	-0.84	H	50.82	74	23.18	PK
4804	38.23	-0.84	H	37.39	54	16.61	AV
7206	49.75	9.15	H	58.90	74	15.10	PK
7206	36.60	9.15	H	45.75	54	8.25	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	50.42	-0.84	V	49.58	74	24.42	PK
4804	38.30	-0.84	V	37.46	54	16.54	AV
7206	49.22	9.15	V	58.37	74	15.63	PK
7206	36.68	9.15	V	45.83	54	8.17	AV
4804	51.06	-0.84	H	50.22	74	23.78	PK
4804	38.14	-0.84	H	37.30	54	16.70	AV
7206	49.06	9.15	H	58.21	74	15.79	PK
7206	36.64	9.15	H	45.79	54	8.21	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	49.16	0.50	V	49.66	74	24.34	PK
4960	36.21	0.50	V	36.71	54	17.29	AV
7440	49.42	8.95	V	58.37	74	15.63	PK
7440	36.98	8.95	V	45.93	54	8.07	AV
4960	48.38	0.50	H	48.88	74	25.12	PK
4960	36.24	0.50	H	36.74	54	17.26	AV
7440	49.70	8.95	H	58.65	74	15.35	PK
7440	36.92	8.95	H	45.87	54	8.13	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.**
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.**