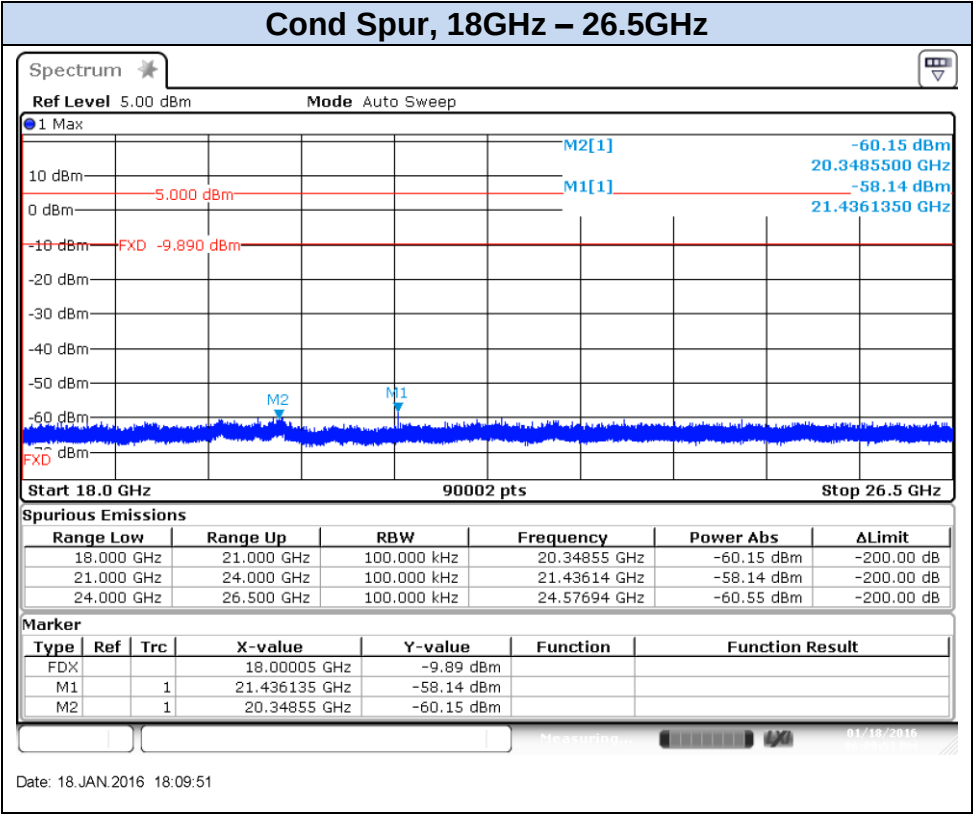
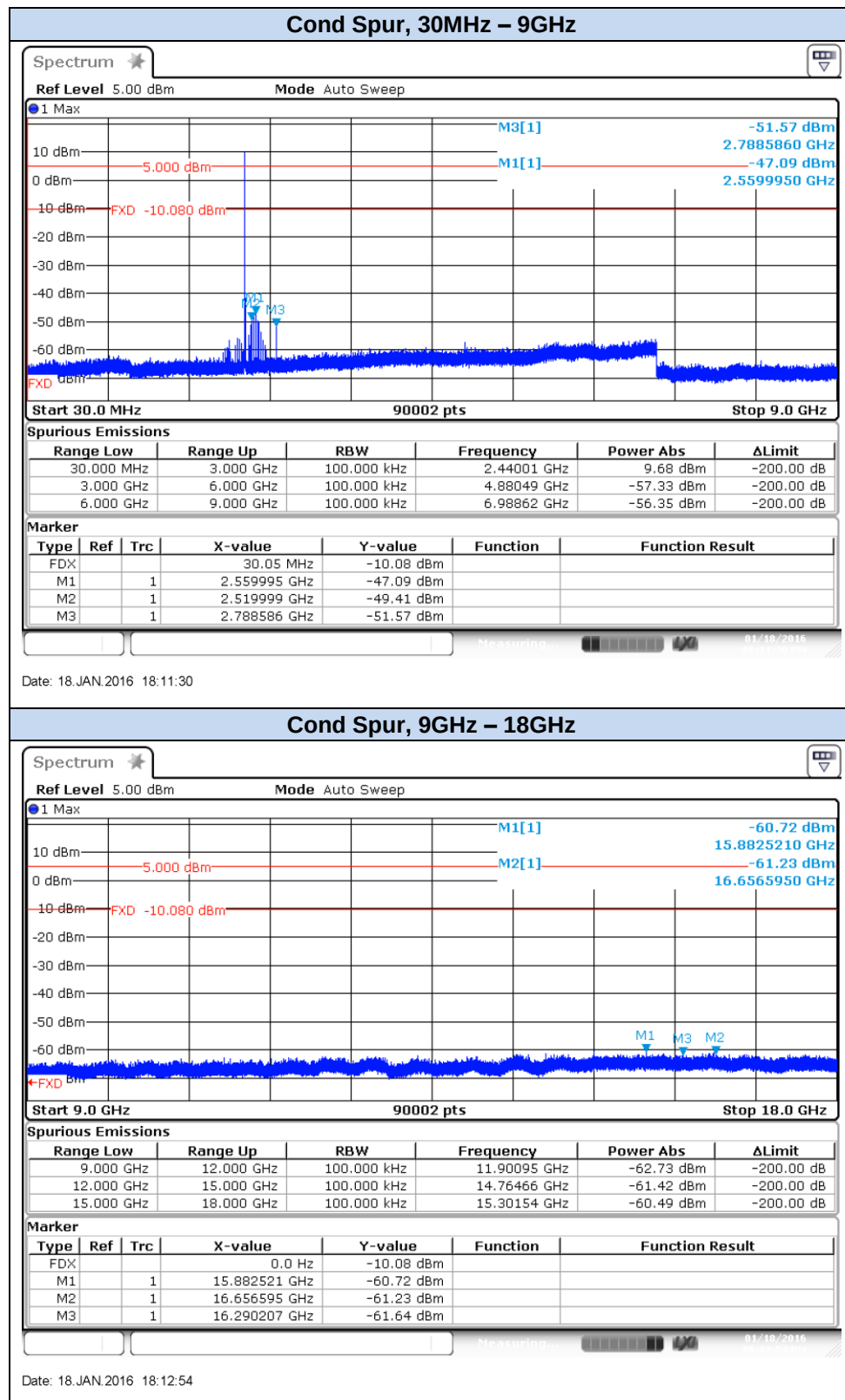
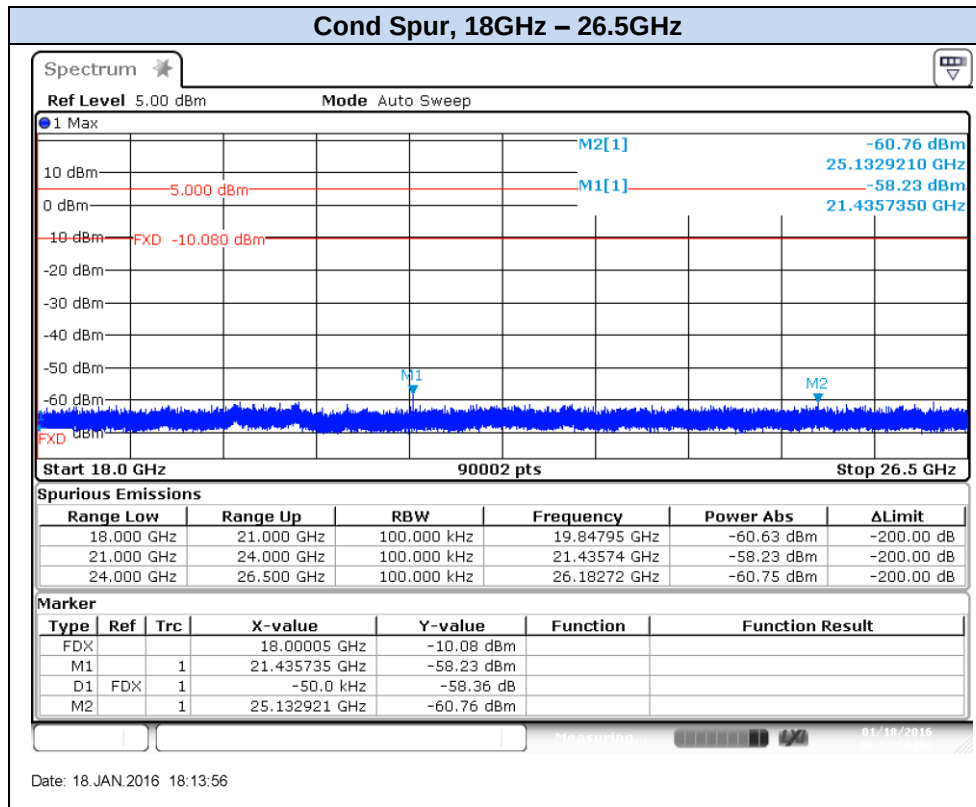


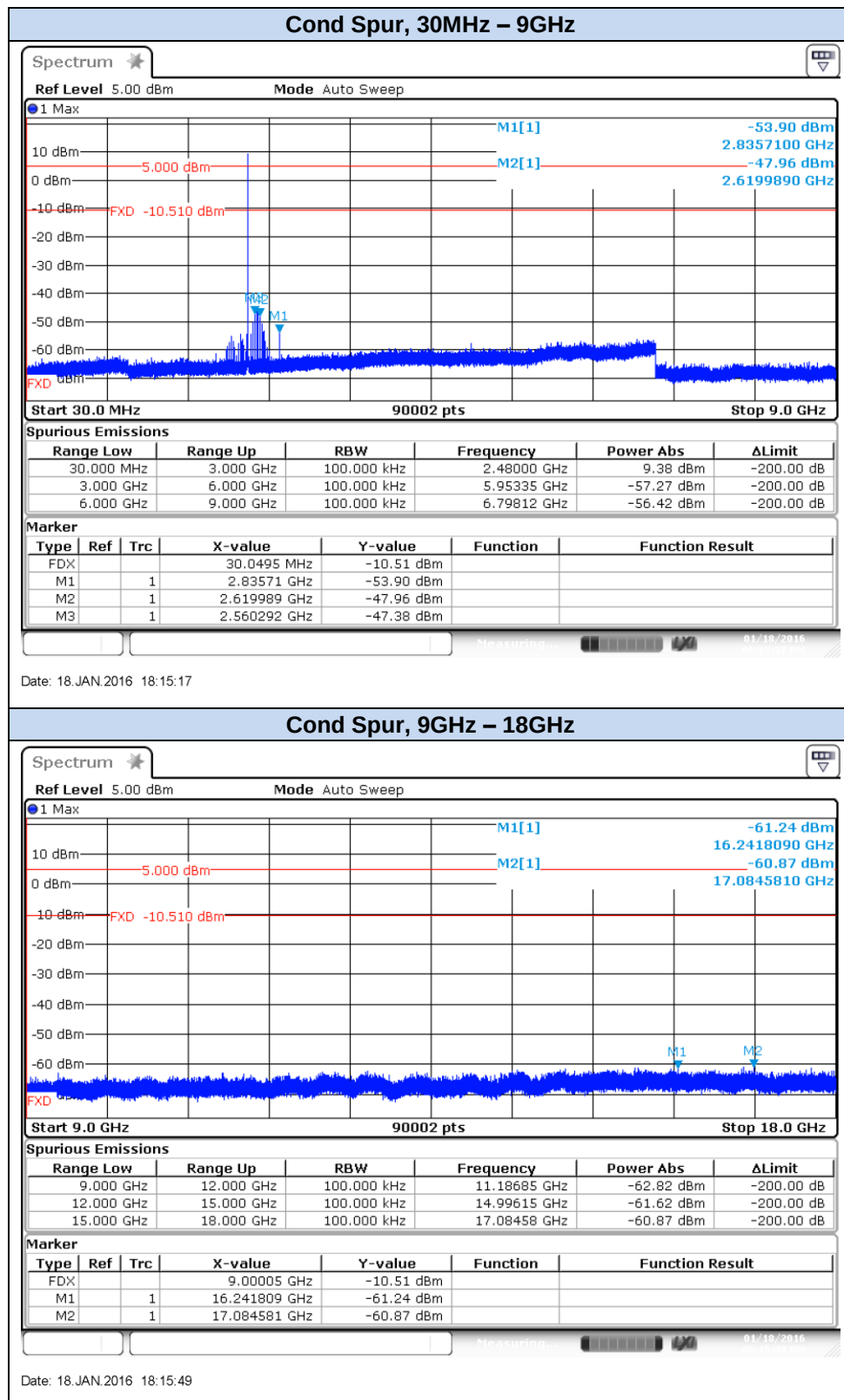


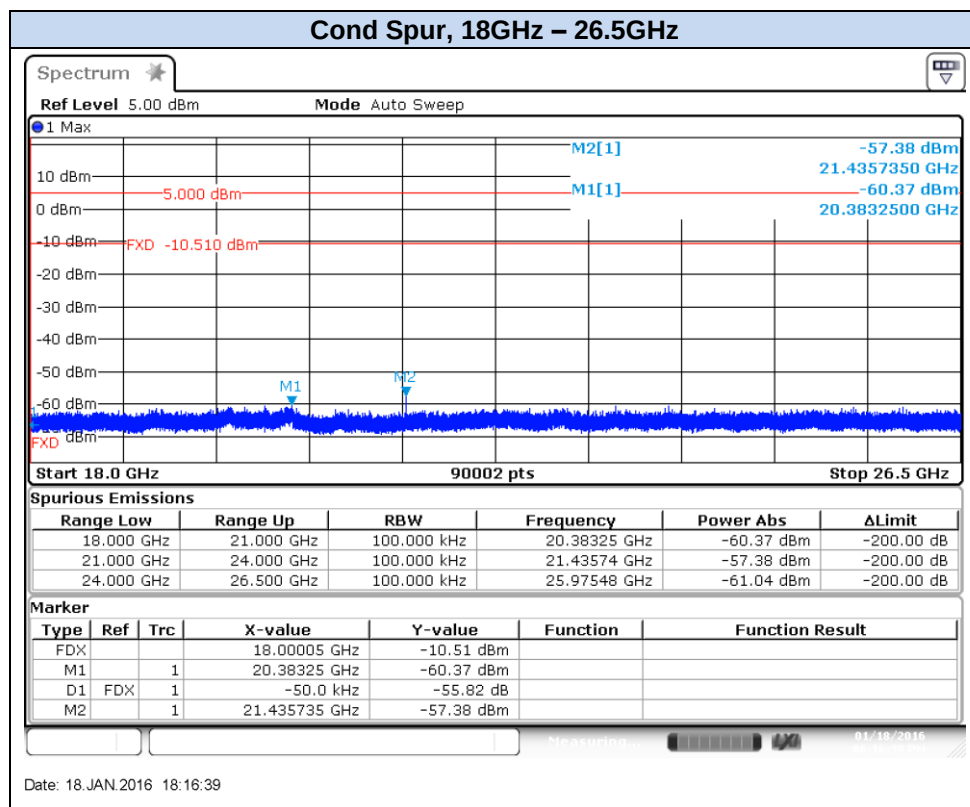
BLE, CH19





BLE, CH39





D.4 Power Spectral Density

Test limits:

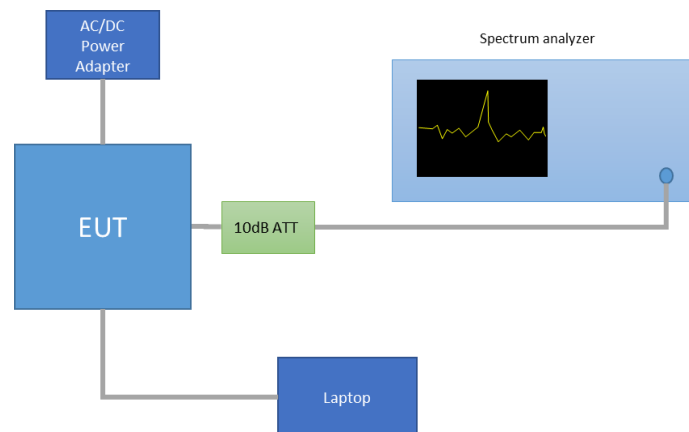
FCC part	RSS part	Limits
15.247 (e)	RSS-247 Clause 5.2 (2)	For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission. This power spectral density shall be determined in accordance with the provisions of paragraph (b) of this section. The same method of determining the conducted output power shall be used to determine the power spectral density.

Test procedure:

The maximum peak power spectral density level of the fundamental emission was measured using the method PKPSD, defined in paragraph 10.2 of FCC KDB 558074 D01.

The setup below was used to measure the power spectral density. The antenna terminal of the EUT is connected to the spectrum analyzer through an attenuator, and the spectrum analyzer reading is compensated to include the RF path loss.

The declared maximum antenna gain is 3dBi.

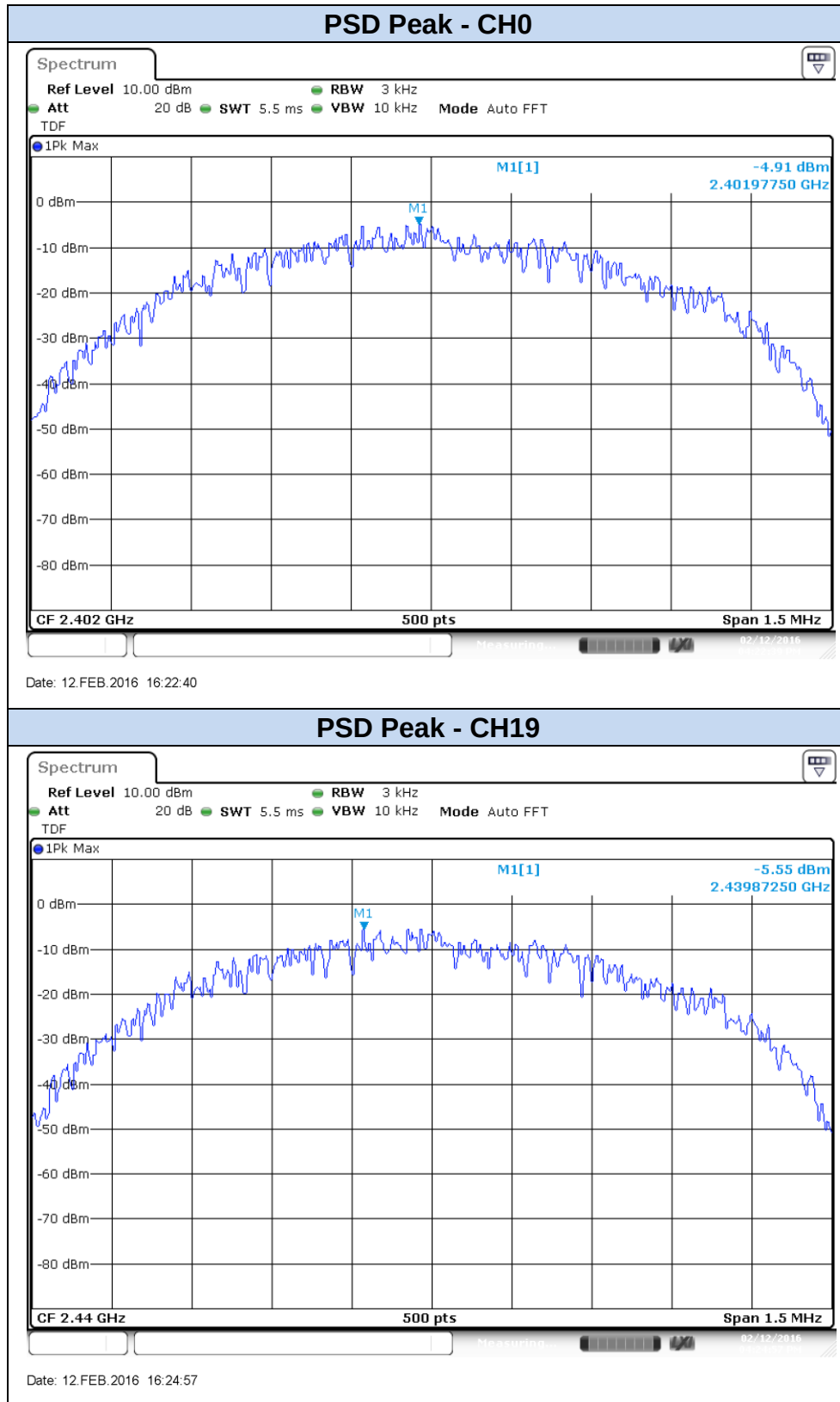


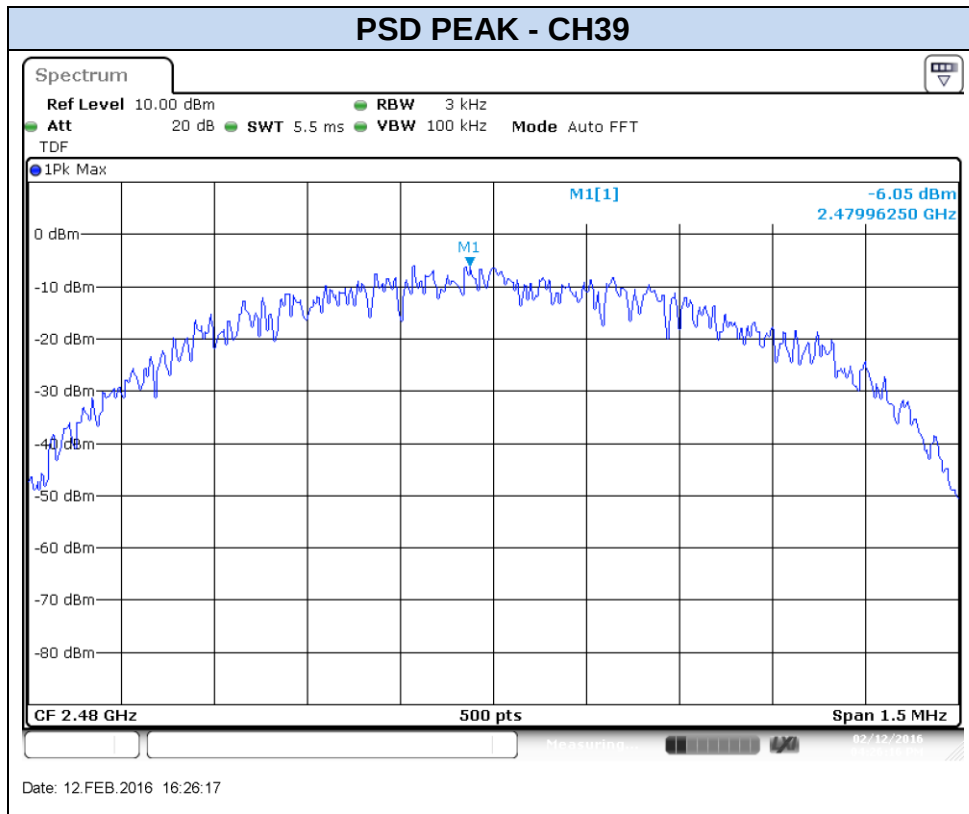
Results tables:

Mode	CH	Frequency [MHz]	PSD PEAK [dBm]
			Measured Conducted
BLE	0	2402	-4.91
	19	2440	-5.55
	39	2480	-6.05

Results screenshot:

BLE





D.5 Radiated spurious emission

Standard references:

FCC part	RSS part	Limits			
15.247 (d)	RSS-247 Clause 5.5	Radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a):			
		Freq Range (MHz)	Field Strength (μV/m)	Field Strength (dBμV/m)	Meas. Distance (m)
		0.009-0.490	2400/f(kHz)	-	300
		0.490-1.705	24000/f(kHz)	-	300
		1.705-30.0	30	-	30
		30-88	100	40	3
		88-216	150	43.5	3
		216-960	200	46	3
		Above 960	500	54	3
		The emission limits shown in the above table are based on measurements employing CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector. For average radiated emission measurements above 1000 MHz, there is also a limit specified when measuring with peak detector function, corresponding to 20 dB above the indicated values in the table.			

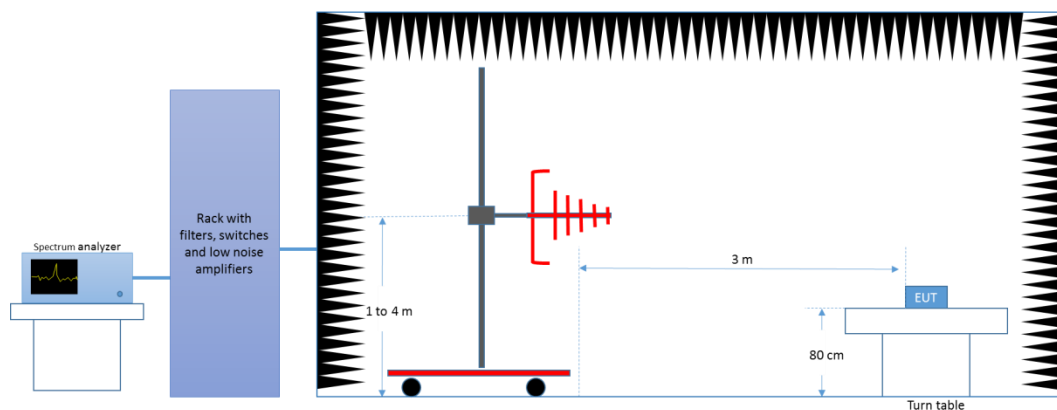
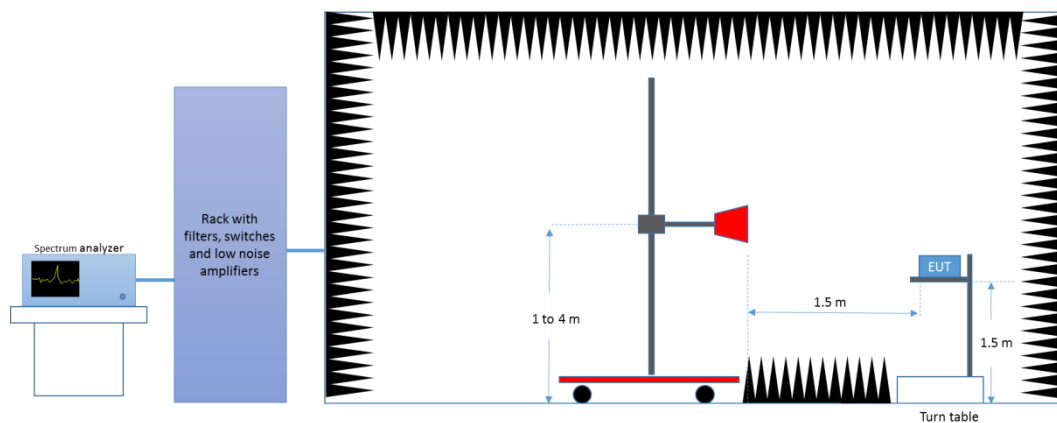
Test procedure:

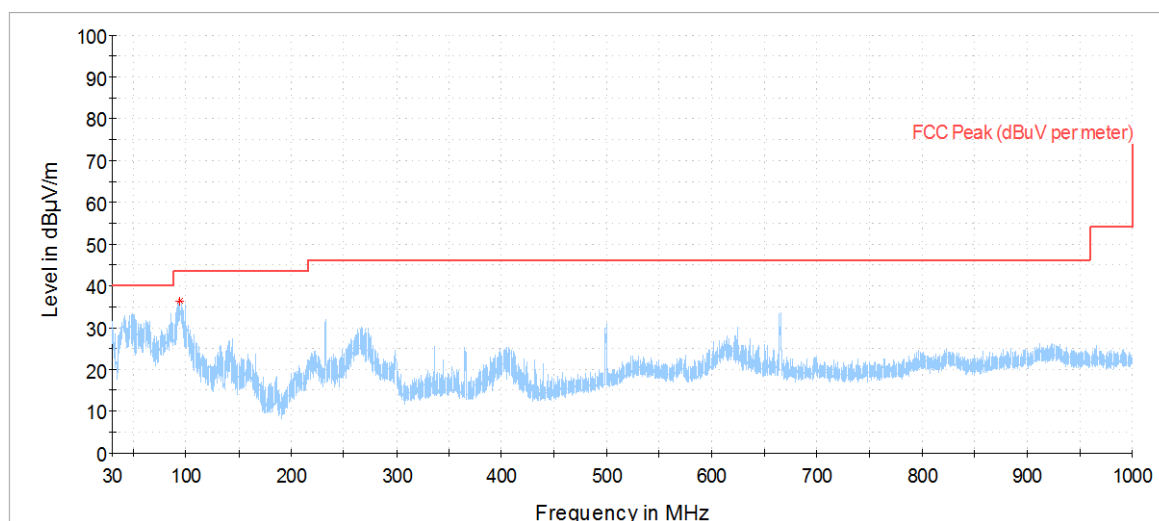
The setups below were used to measure the radiated spurious emissions.

Depending of the frequency range and bands being tested, different antennas and filters were used.

The final measurement is done by varying the antenna height from 1 to 4 meters, the EUT azimuth over 360° and for both Vertical and Horizontal polarizations.

The radiated spurious emissions were measured on the worst case configuration selected from the chapter *D.2 Maximum Output Power and E.I.R.P.* and using the lowest, middle and highest channels.

Radiated Setup < 1GHz*Radiated Setup > 1GHz*

Test Results:**Radiated Spurious – 30MHz – 1GHz****Radiated Spurious – All Modes**

Peak measurements

AVG measurements

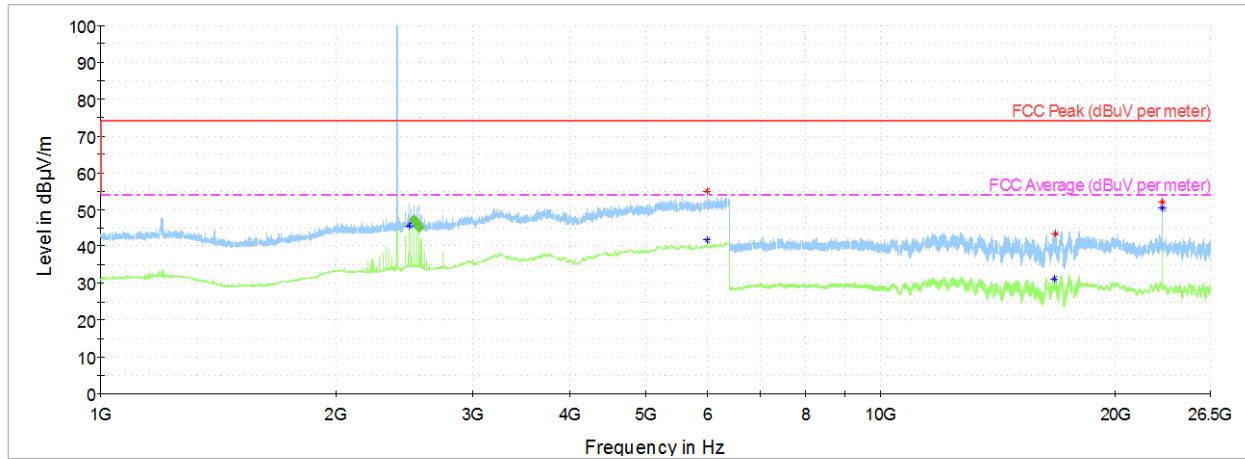
Limit FCC Peak

Frequency	Max Peak	Limit	Margin
MHz	dBuV/m	dBuV/m	dB
94.87	36.40	43.56	7.15

Note 1: The spurious signals detected do not depend on either the operating channel or the modulation mode.

1 GHz – 26.5GHz, BLE

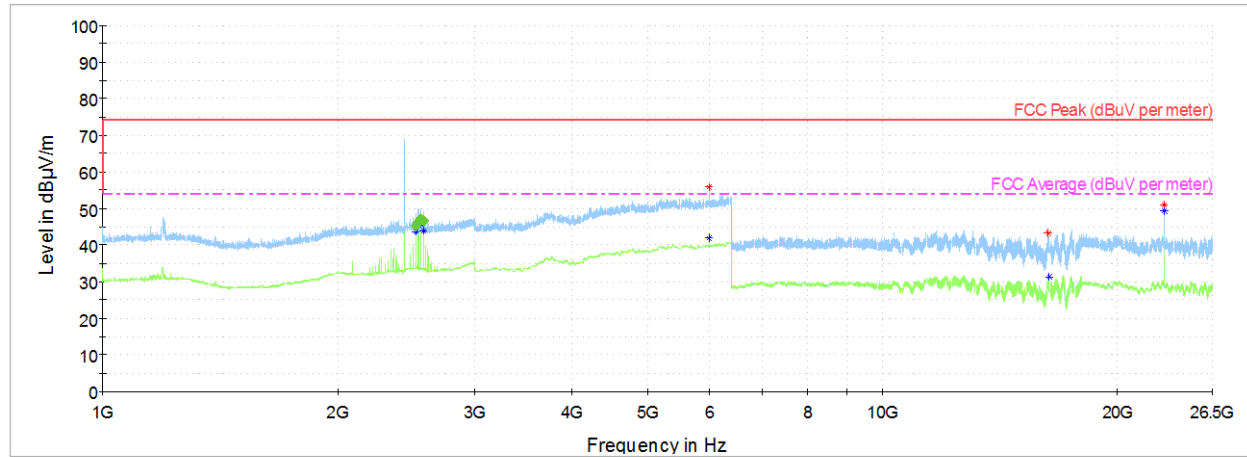
Radiated Spurious – CH0



— Peak measurements
 — AVG measurements
 — Limit FCC Peak
 - - - Limit FCC Avg

Frequency	MaxPeak	AvG	Limit	Margin
MHz	dBuV/m	dBuV/m	dBuV/m	dB
2482.29	---	45.53	54.06	8.52
2522.00	---	46.32	54.06	7.74
2542.00	---	45.61	54.06	8.44
2562.00	---	44.96	54.06	9.09
5997.34	---	41.75	54.06	12.31
6000.26	54.97	---	74.06	19.09
16702.38	---	31.22	54.06	22.84
16753.00	43.39	---	74.06	30.67
23020.02	---	50.54	54.06	3.52
23020.02	52.06	---	74.06	22.00

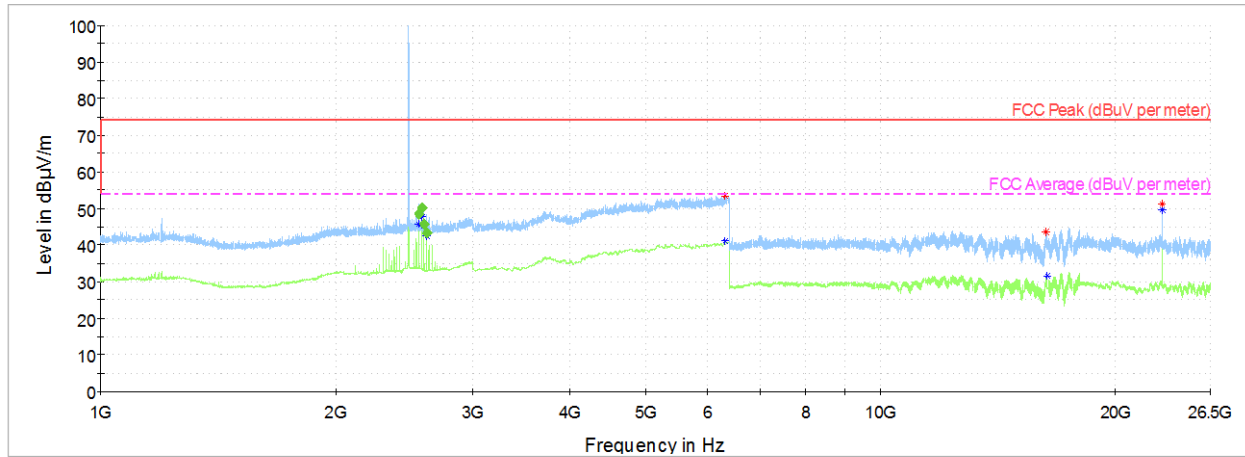
Radiated Spurious – CH19



— Peak measurements
 — AVG measurements
 — Limit FCC Peak
 - - - Limit FCC Avg

Frequency	MaxPeak	AvG	Limit	Margin
MHz	dBuV/m	dBuV/m	dBuV/m	dB
2520.00	---	43.52	54.06	10.54
2540.00	---	45.65	54.06	8.41
2560.00	---	45.82	54.06	8.24
2580.00	---	43.94	54.06	10.12
5994.43	---	41.94	54.06	12.12
5994.91	55.87	---	74.06	18.19
16344.36	43.21	---	74.06	30.84
16351.22	---	31.23	54.06	22.82
23020.02	---	49.36	54.06	4.70
23020.02	51.08	---	74.06	22.98

Radiated Spurious – CH39



— Peak measurements
 — AVG measurements
 — Limit FCC Peak
 - - - Limit FCC Avg

Frequency	MaxPeak	AvG	Limit	Margin
MHz	dBuV/m	dBuV/m	dBuV/m	dB
2560.00	---	45.78	54.06	8.28
2580.00	---	47.75	54.06	6.31
2600.00	---	45.29	54.06	8.76
2620.00	---	42.45	54.06	11.60
6319.37	---	41.05	54.06	13.01
6323.26	53.53	---	74.06	20.53
16331.18	43.56	---	74.06	30.50
16358.07	---	31.59	54.06	22.47
23019.64	51.16	---	74.06	22.90
23020.02	---	49.65	54.06	4.41