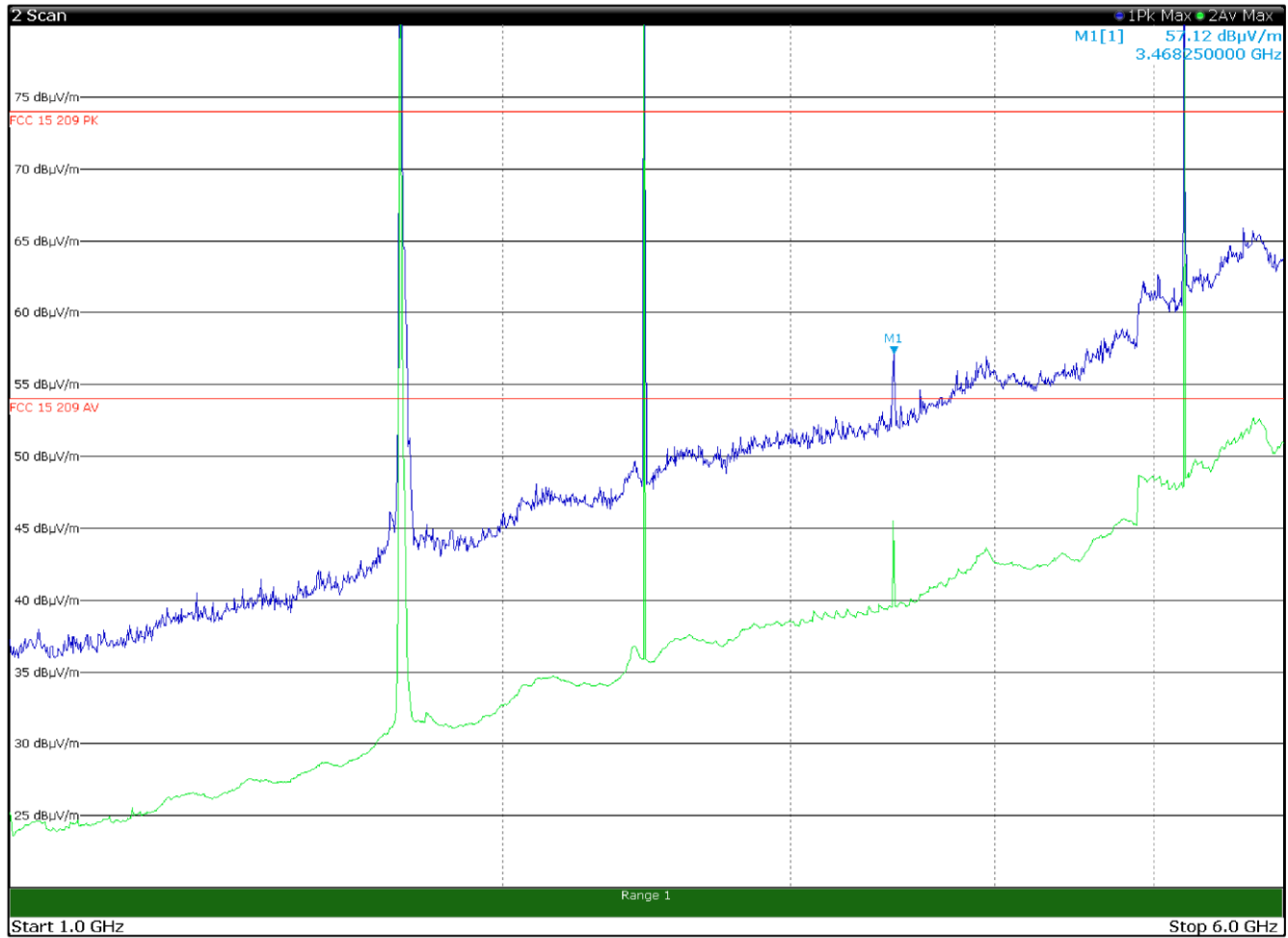


8.1.4 Test data, continued

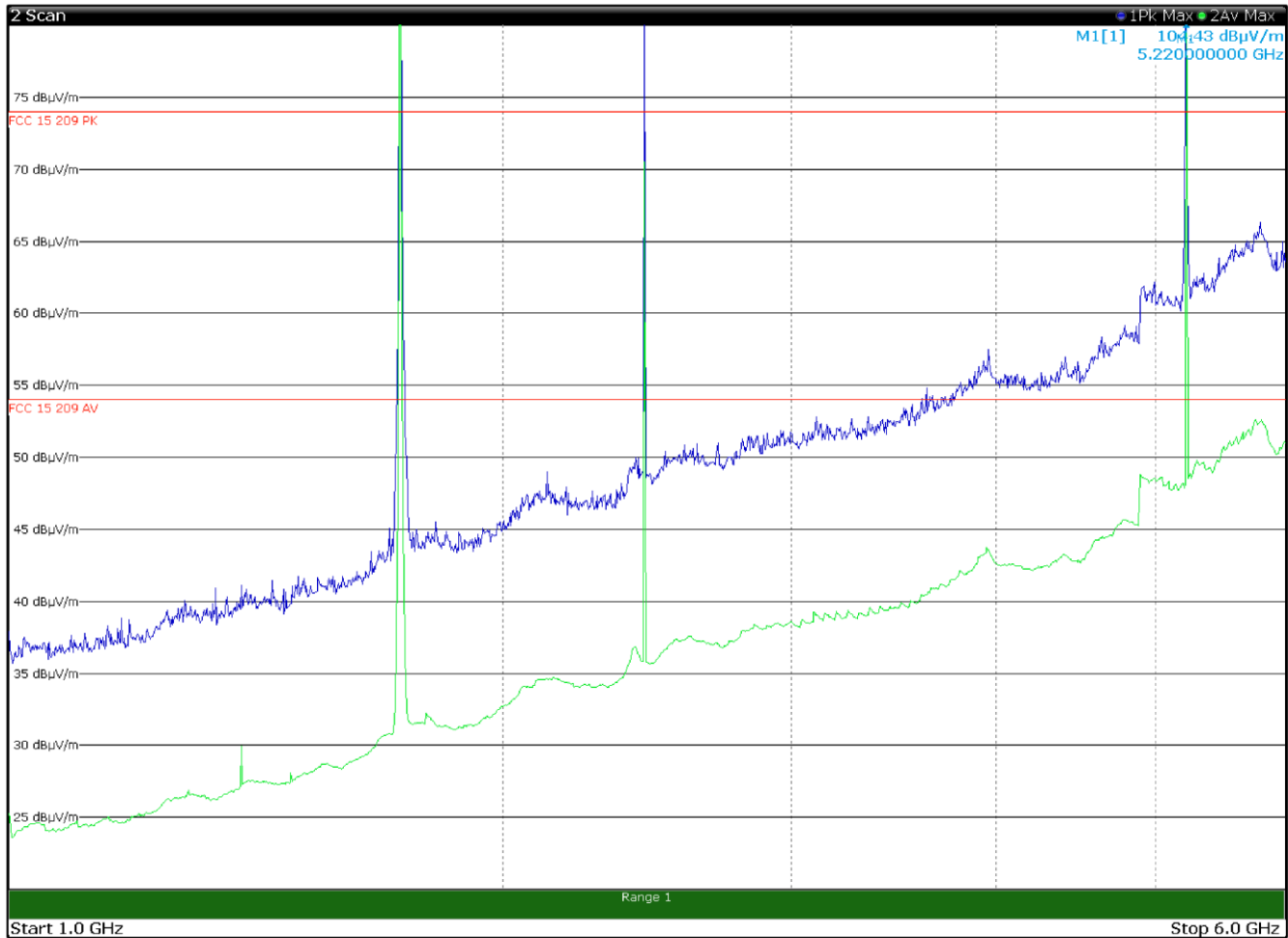


Radiated spurious emissions with antenna in horizontal polarization and with
LTE Tx at 1732.5 MHz, UHF Tx at 915 MHz, WIFI Tx at 5220 MHz and BT Tx at 2441 MHz (antenna configuration 1)

Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1732.5000	110.4	--	--	Pk
2441.0000	98.5	--	--	Pk
3465.0000	57.2	82.2	-25.0	Pk
5220.0000	116.0	--	--	Pk

Limit exceeded by the carriers

8.1.4 Test data, continued

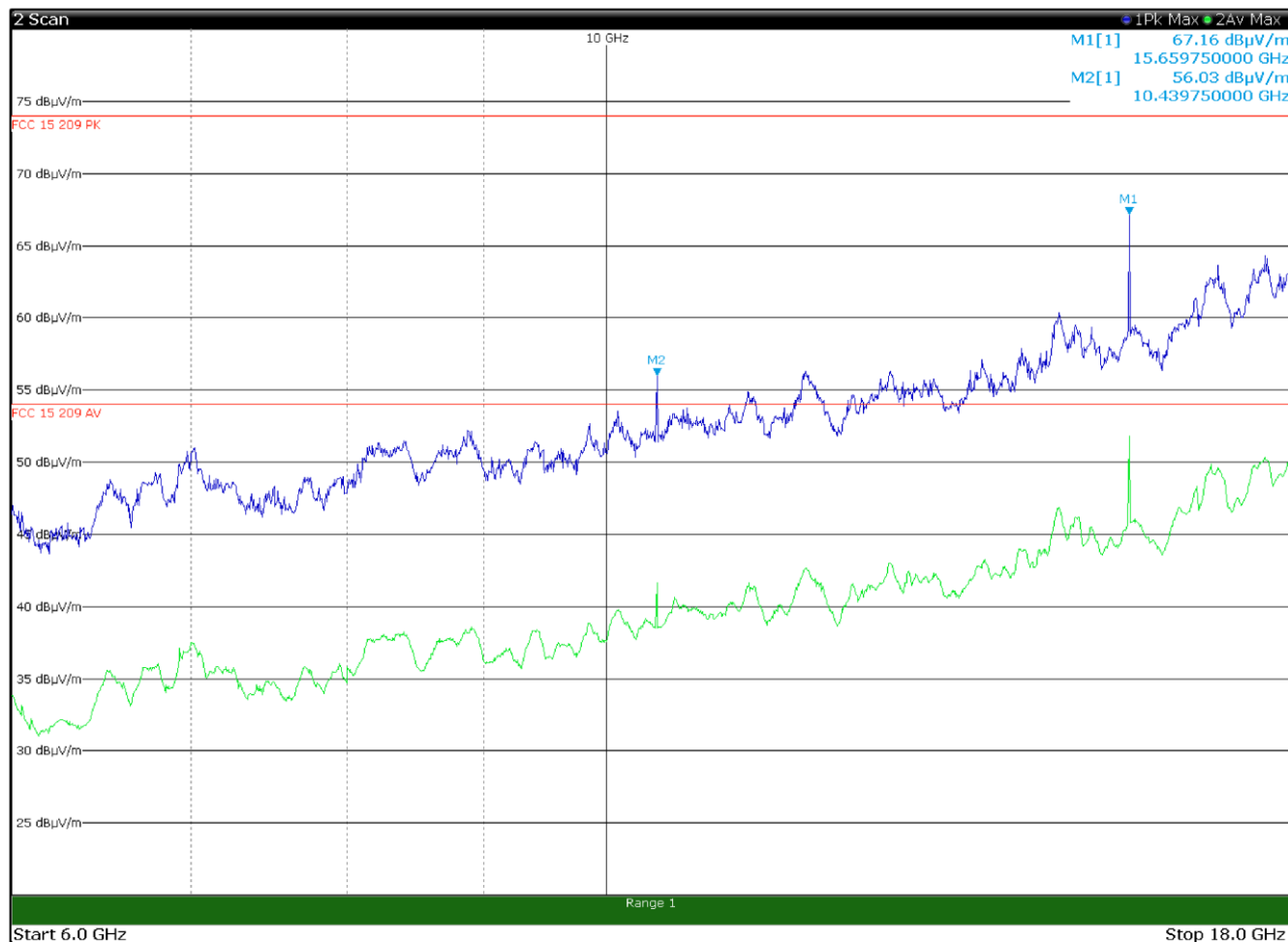


Radiated spurious emissions with antenna in vertical polarization and with
LTE Tx at 1732.5 MHz, UHF Tx at 915 MHz, WIFI Tx at 5220 MHz and BT Tx at 2441 MHz (antenna configuration 1)

Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1732.5000	109.5	--	--	Pk
2441.0000	89.2	--	--	Pk
5220.0000	105.4	--	--	Pk

Limit exceeded by the carriers

8.1.4 Test data, continued



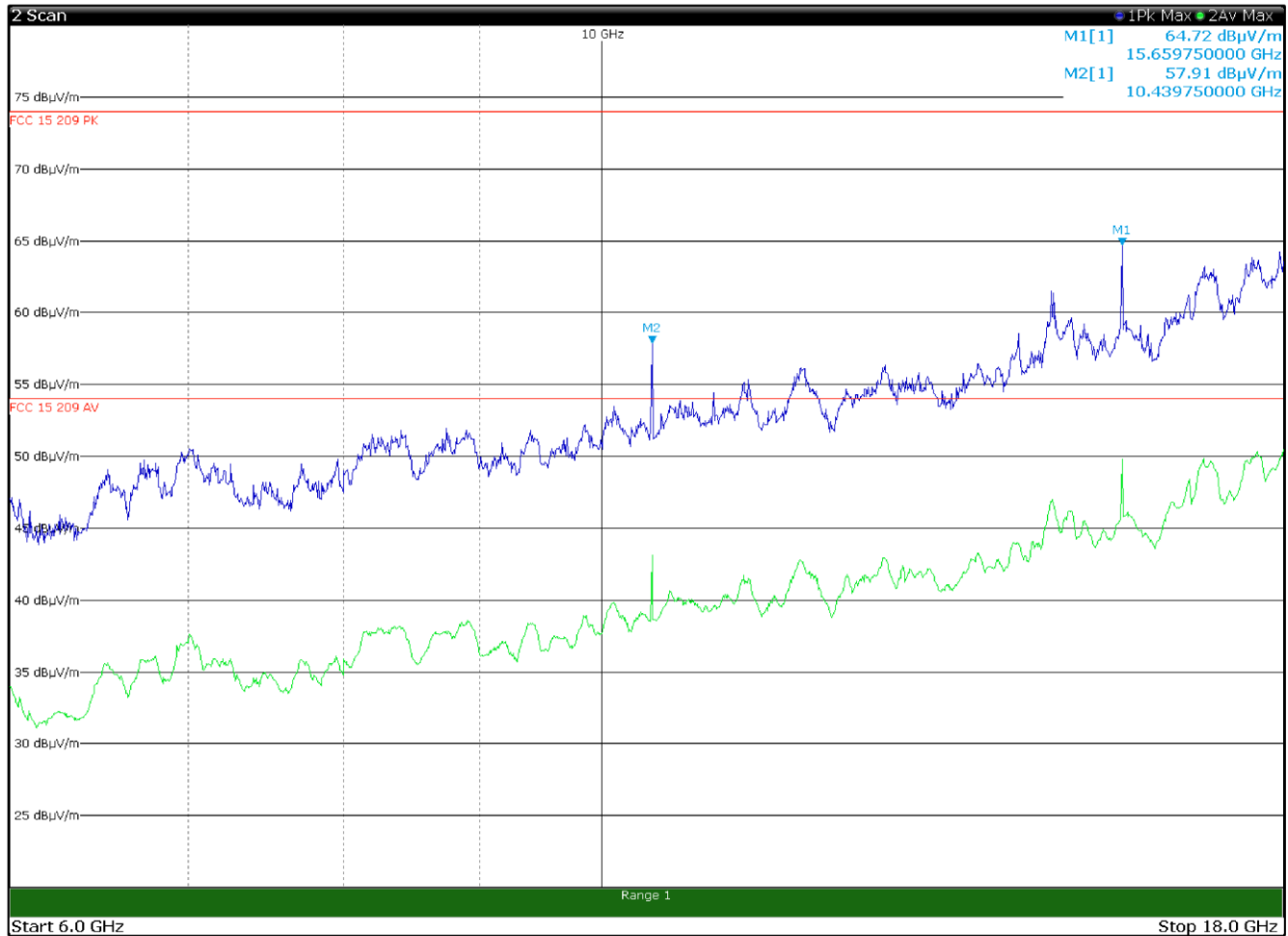
Radiated spurious emissions with antenna in horizontal polarization and with
LTE Tx at 1732.5 MHz, UHF Tx at 915 MHz, WIFI Tx at 5220 MHz and BT Tx at 2441 MHz (antenna configuration 1)

Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
10439.7500	56.1	68.2	-12.1	Pk
15659.7500	67.2	74.0	-6.8	Pk
15659.7500	52.3	54.0	-1.7	Av

The limit for FCC 15.407 is -27 dBm. Limit (dBμV/m) = limit (dBm) + 95.23 = 68.2 dBμV/m

The correction factor for the average value of pulsed emissions is $20 \log (DC) = 20 \log (0.18) = 14.9 \text{ dB}$

8.1.4 Test data, continued



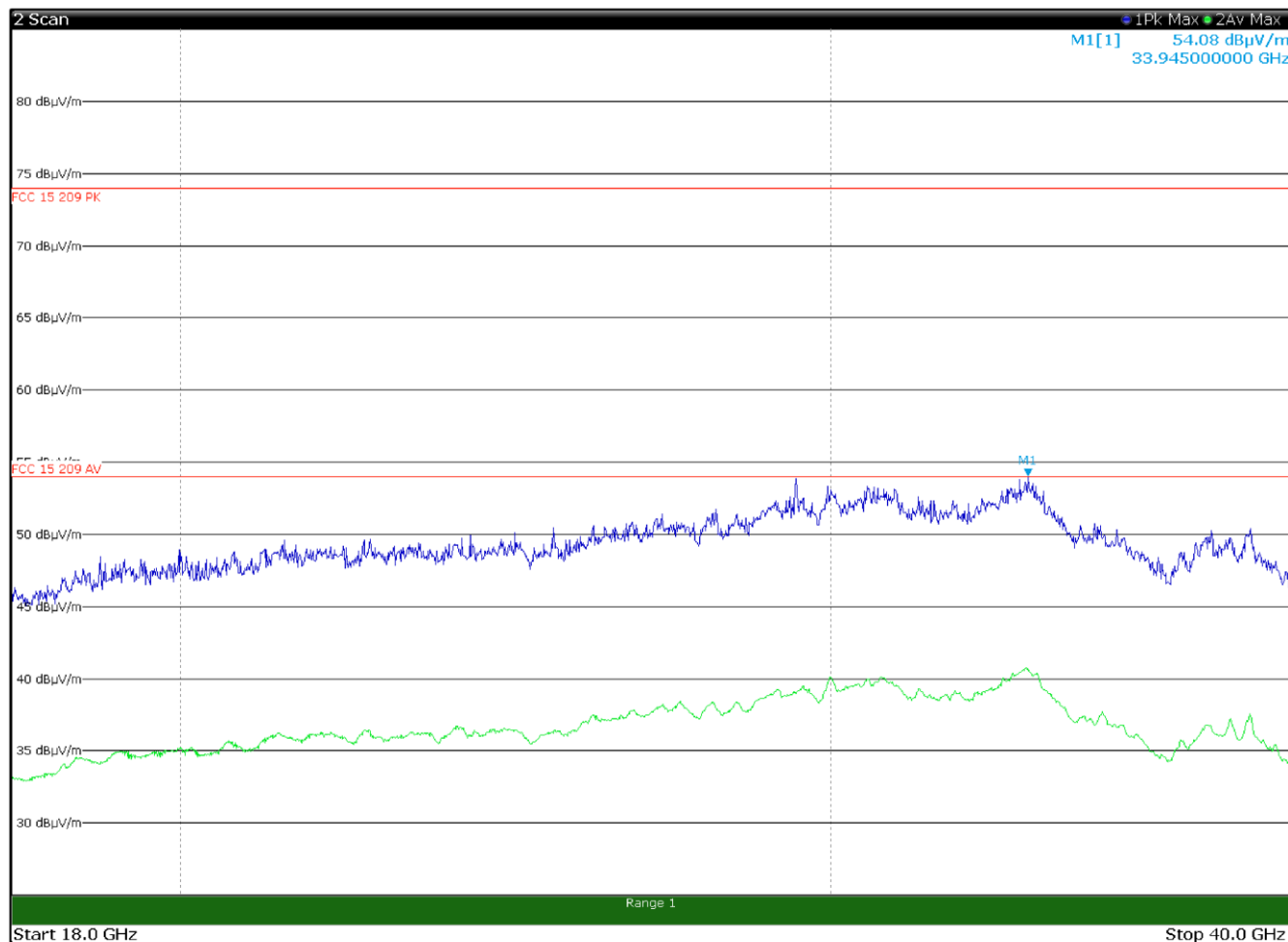
Radiated spurious emissions with antenna in vertical polarization and with
LTE Tx at 1732.5 MHz, UHF Tx at 915 MHz, WIFI Tx at 5220 MHz and BT Tx at 2441 MHz (antenna configuration 1)

Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
10439.7500	58.1	68.2	-10.1	Pk
15659.7500	64.8	74.0	-9.2	Pk
15659.7500	49.9	54.0	-4.1	Av

The limit for FCC 15.407 is -27 dBm. Limit (dBμV/m) = limit (dBm) + 95.23 = 68.2 dBμV/m

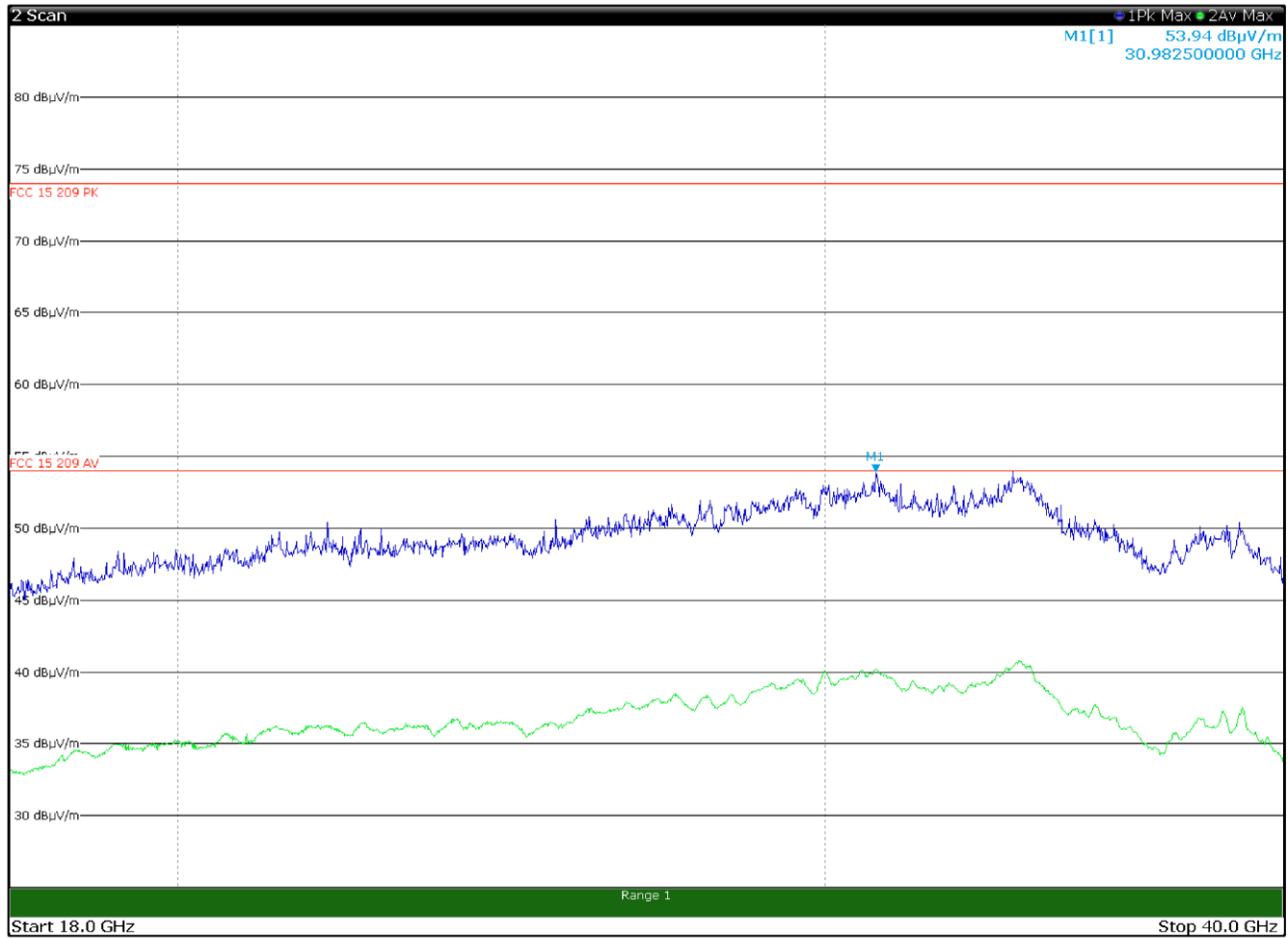
The correction factor for the average value of pulsed emissions is $20 \log (DC) = 20 \log (0.18) = 14.9 \text{ dB}$

8.1.4 Test data, continued



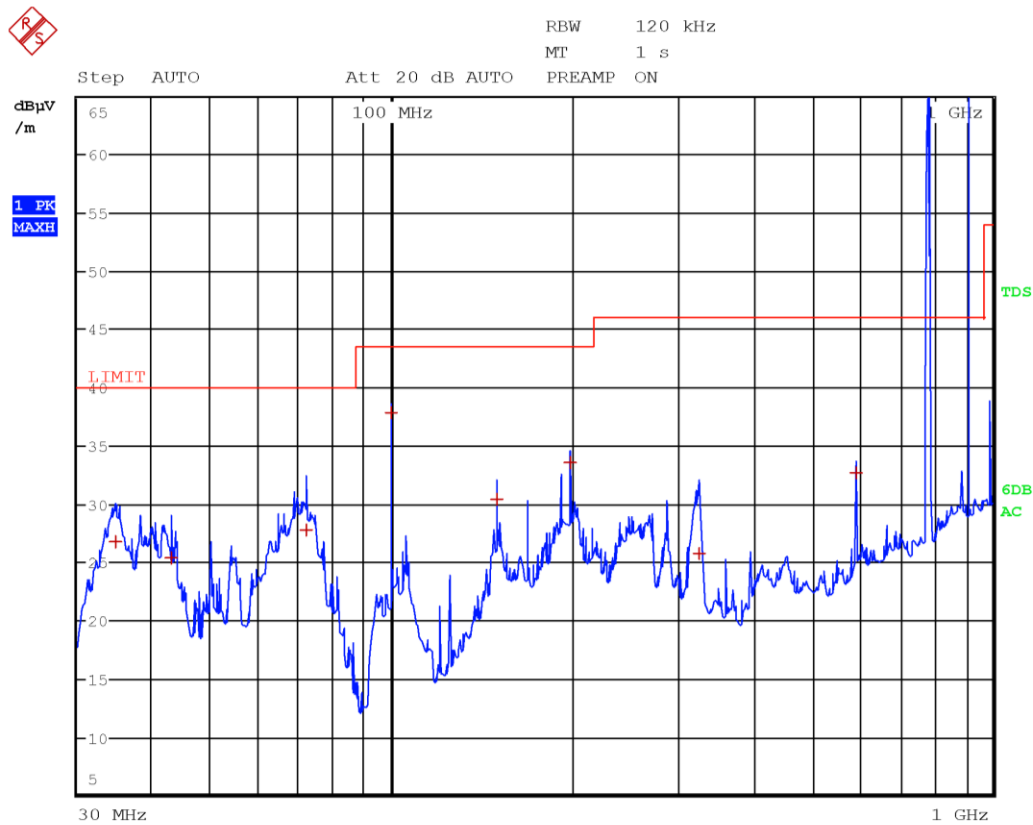
Radiated spurious emissions with antenna in horizontal polarization and with
 LTE Tx at 1732.5 MHz, UHF Tx at 915 MHz, WIFI Tx at 5220 MHz and BT Tx at 2441 MHz (antenna configuration 1)

8.1.4 Test data, continued



Radiated spurious emissions with antenna in vertical polarization and with
LTE Tx at 1732.5 MHz, UHF Tx at 915 MHz, WIFI Tx at 5220 MHz and BT Tx at 2441 MHz (antenna configuration 1)

8.1.4 Test data, continued

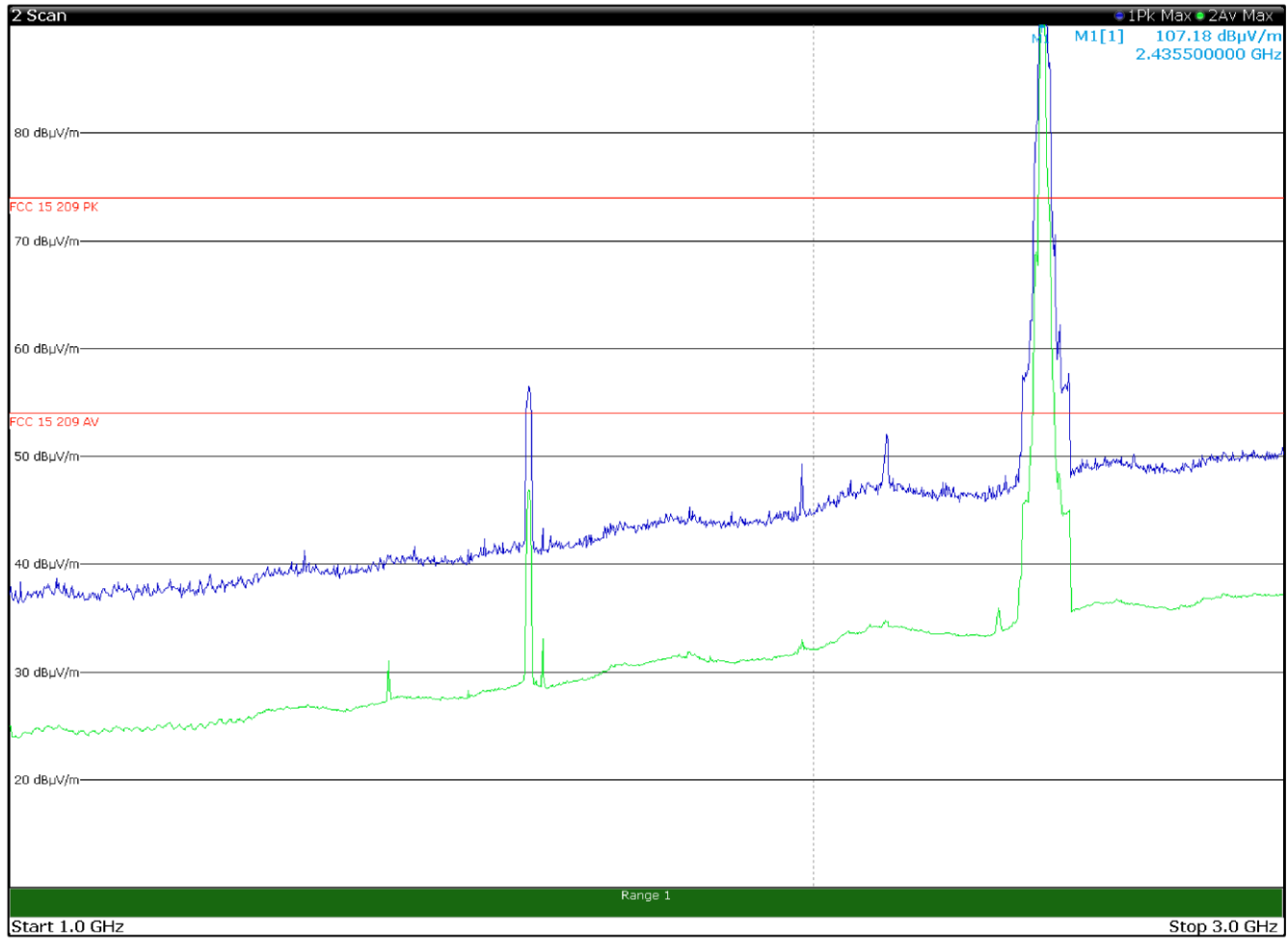


Radiated spurious emissions with antenna in vertical polarization and with
LTE Tx at 782 MHz, UHF Tx at 915 MHz, WIFI Tx at 2437 MHz and BT Tx at 2441 MHz (antenna configuration 2)

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
34.6200	26.8	40.0	-13.2	QP
42.9300	25.4	40.0	-14.6	QP
72.0600	27.8	40.0	-12.2	QP
99.9900	37.8	43.5	-5.7	QP
150.0000	30.4	43.5	-13.1	QP
198.0000	33.6	43.5	-9.9	QP
324.5400	25.8	46.0	-20.2	QP
594.0000	32.8	46.0	-13.2	QP
782.0000	111.5	--	--	PK
915.0000	127.9	--	--	PK

Limit exceeded by the carriers

8.1.4 Test data, continued



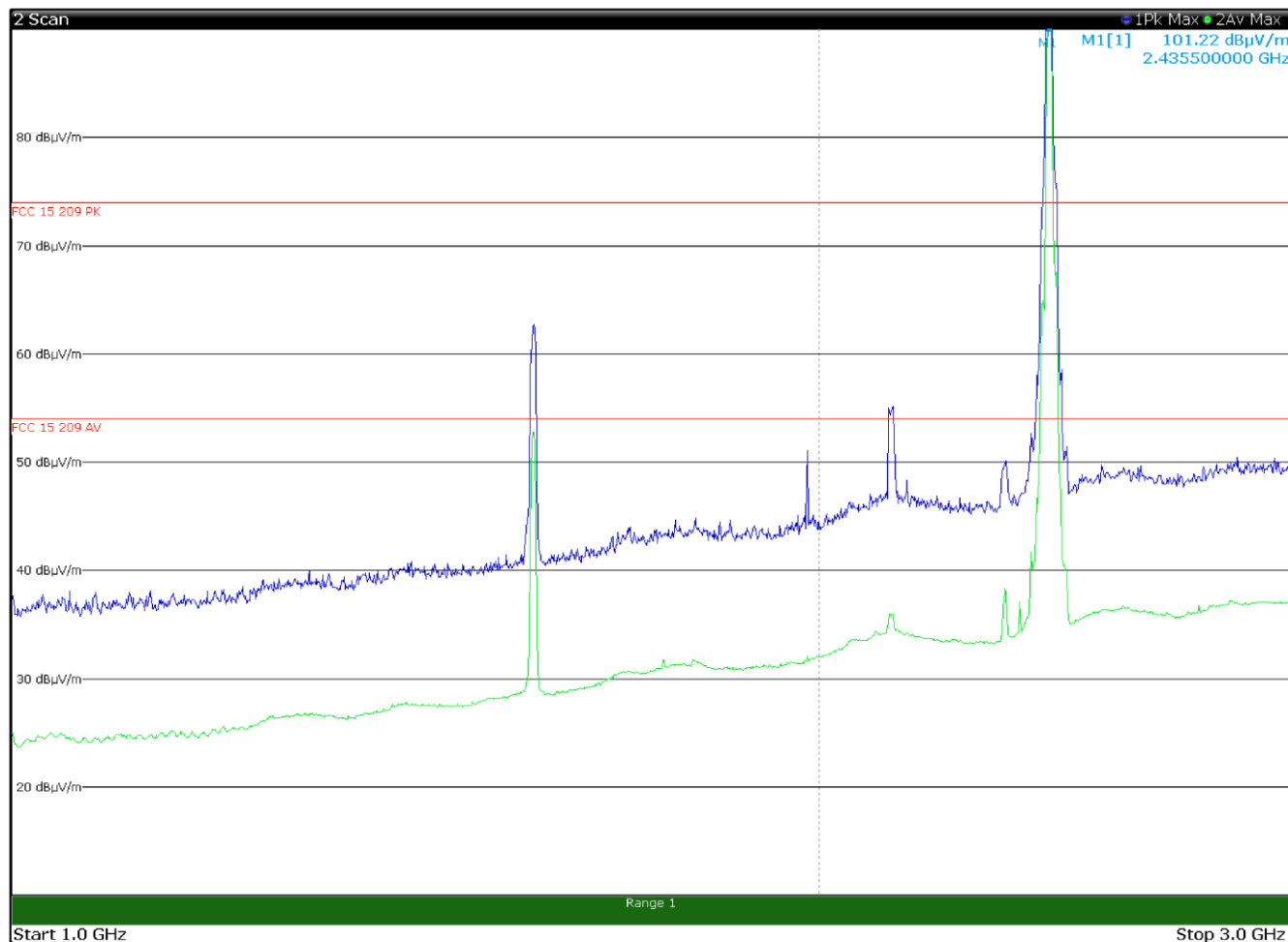
Radiated spurious emissions with antenna in horizontal polarization and with
LTE Tx at 782 MHz, UHF Tx at 915 MHz, WIFI Tx at 2437 MHz and BT Tx at 2441 MHz (antenna configuration 2)

Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1564.0000	56.6	82.2	-25.6	Pk
2130.7500	52.1	74.0	-21.9	Pk
2437.0000	114.3	--	--	Pk

Limit exceeded by the carriers

The limit for FCC 27.53 is -13 dBm. Limit (dBμV/m) = limit (dBm) + 95.23 = 82.2 dBμV/m

8.1.4 Test data, continued



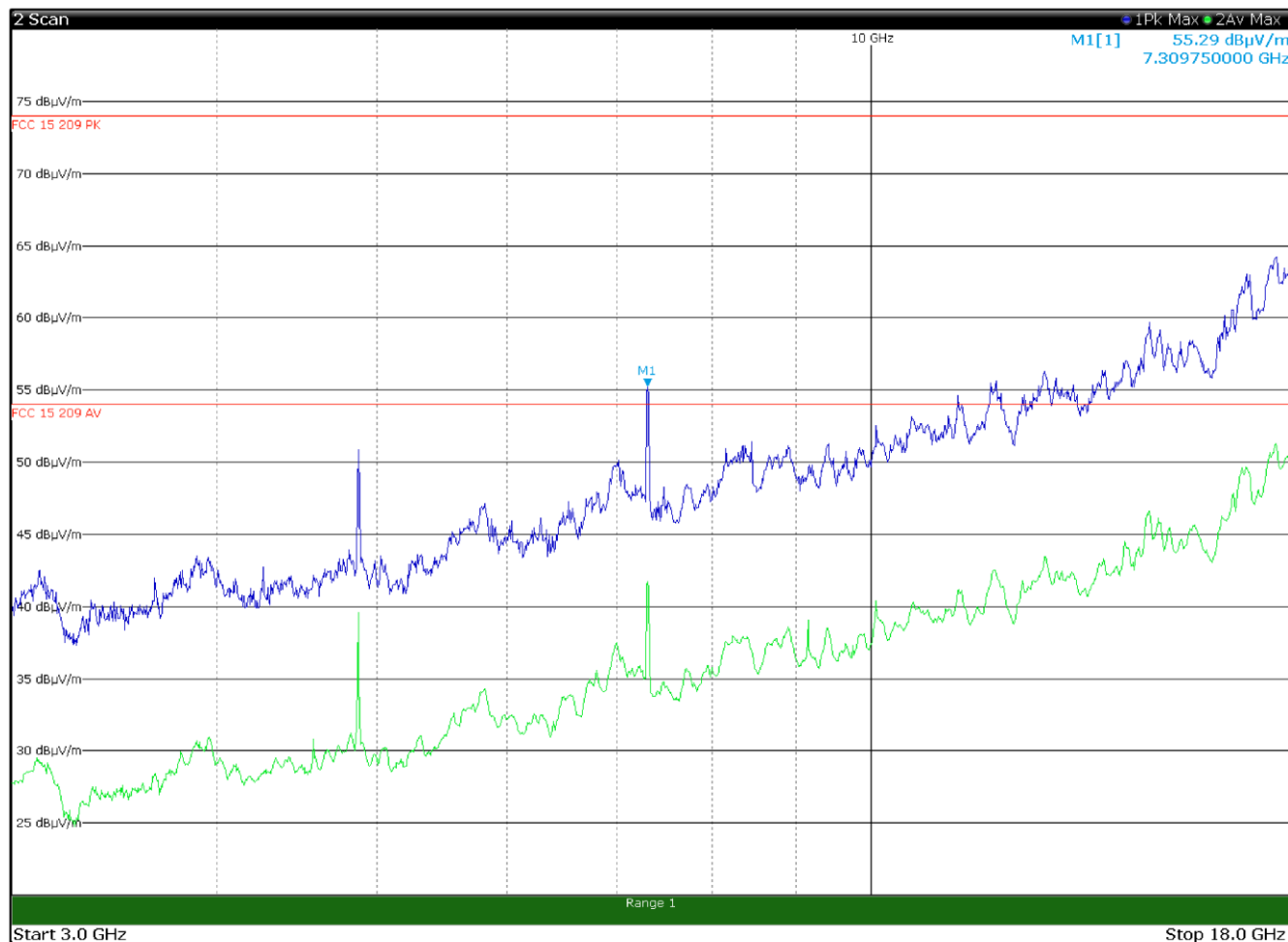
Radiated spurious emissions with antenna in vertical polarization and with
 LTE Tx at 782 MHz, UHF Tx at 915 MHz, WIFI Tx at 2437 MHz and BT Tx at 2441 MHz (antenna configuration 2)

Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1564.0000	62.8	82.2	-19.4	Pk
1980.0000	51.1	74.0	-22.9	Pk
2132.0000	55.2	74.0	-18.8	Pk
2437.0000	106.9	--	--	Pk

Limit exceeded by the carriers

The limit for FCC 27.53 is -13 dBm. Limit (dBμV/m) = limit (dBm) + 95.23 = 82.2 dBμV/m

8.1.4 Test data, continued

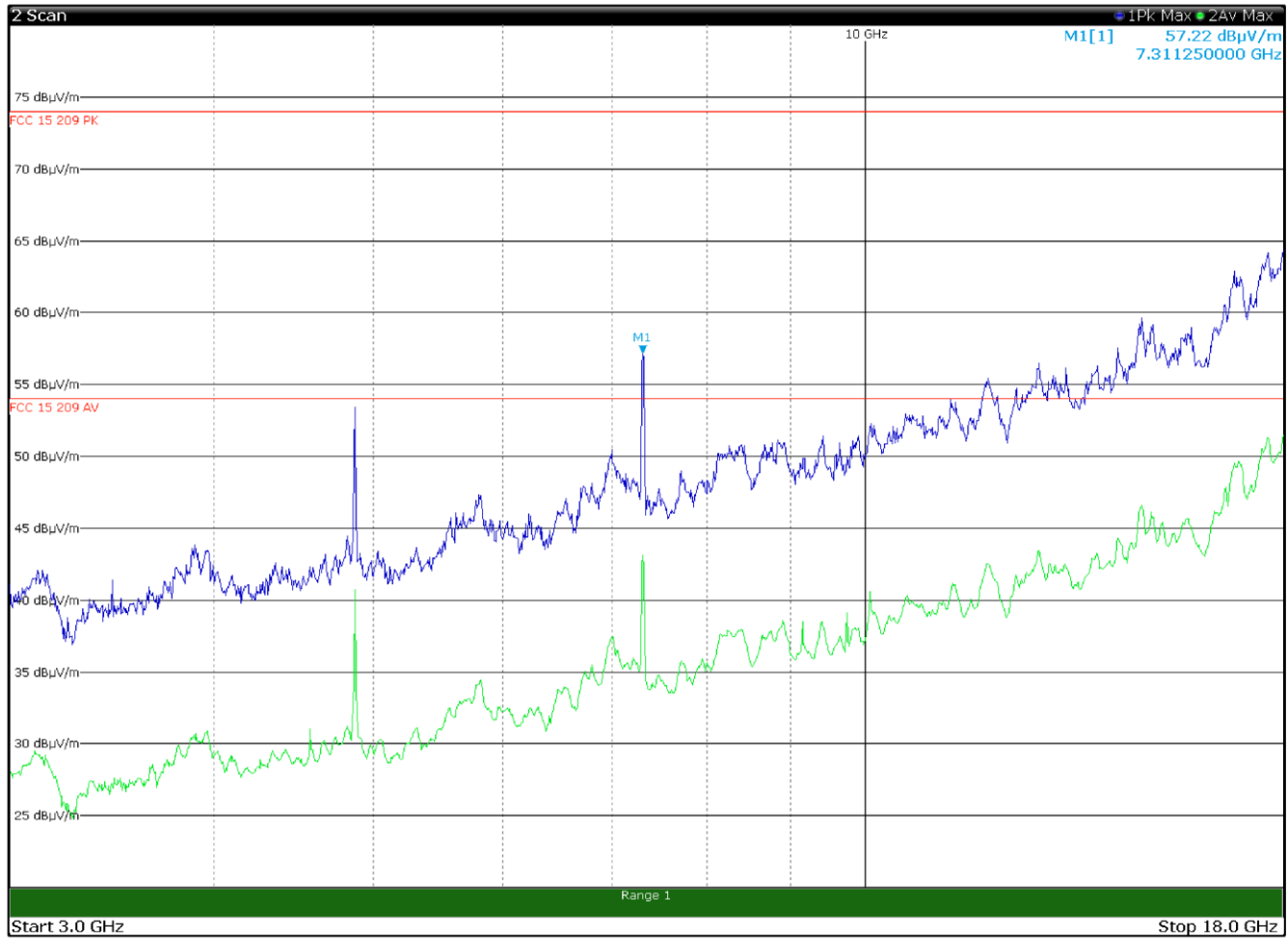


Radiated spurious emissions with antenna in horizontal polarization and with
LTE Tx at 782 MHz, UHF Tx at 915 MHz, WIFI Tx at 2437 MHz and BT Tx at 2441 MHz (antenna configuration 2)

Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
4874.0000	50.5	74.0	-23.5	Pk
4874.0000	42.1	54.0	-11.9	Av
7309.7500	55.3	74.0	-18.7	Pk
7309.7500	46.9	54.0	-7.1	Av

The correction factor for the average value of pulsed emissions is $20 \log (DC) = 20 \log (0.38) = 8.4 \text{ dB}$

8.1.4 Test data, continued

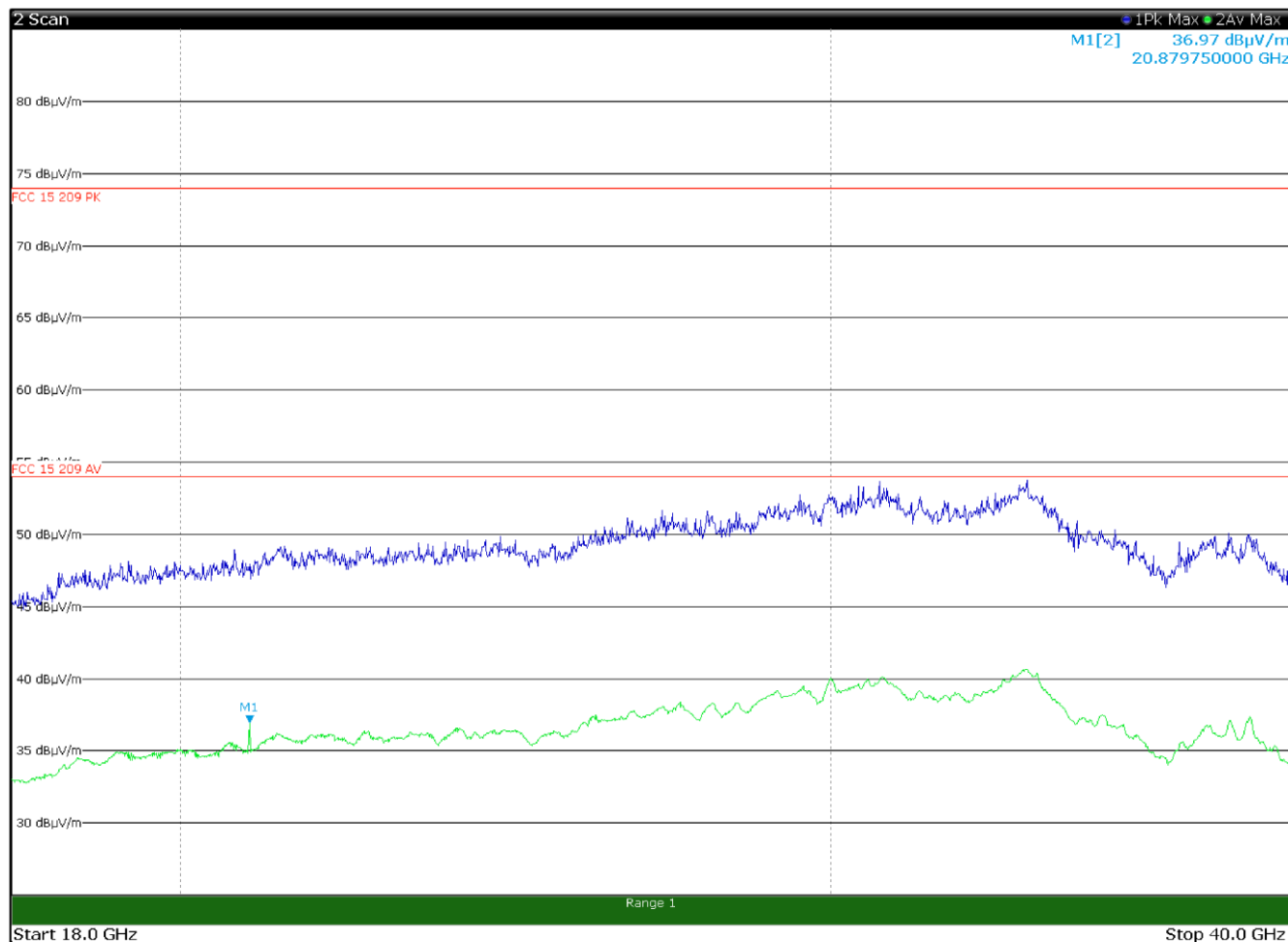


Radiated spurious emissions with antenna in vertical polarization and with
LTE Tx at 782 MHz, UHF Tx at 915 MHz, WIFI Tx at 2437 MHz and BT Tx at 2441 MHz (antenna configuration 2)

Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
4874.0000	53.8	74.0	-20.2	Pk
4874.0000	45.4	54.0	-8.6	Av
7311.2500	57.3	74.0	-16.7	Pk
7311.2500	48.9	54.0	-5.1	Av

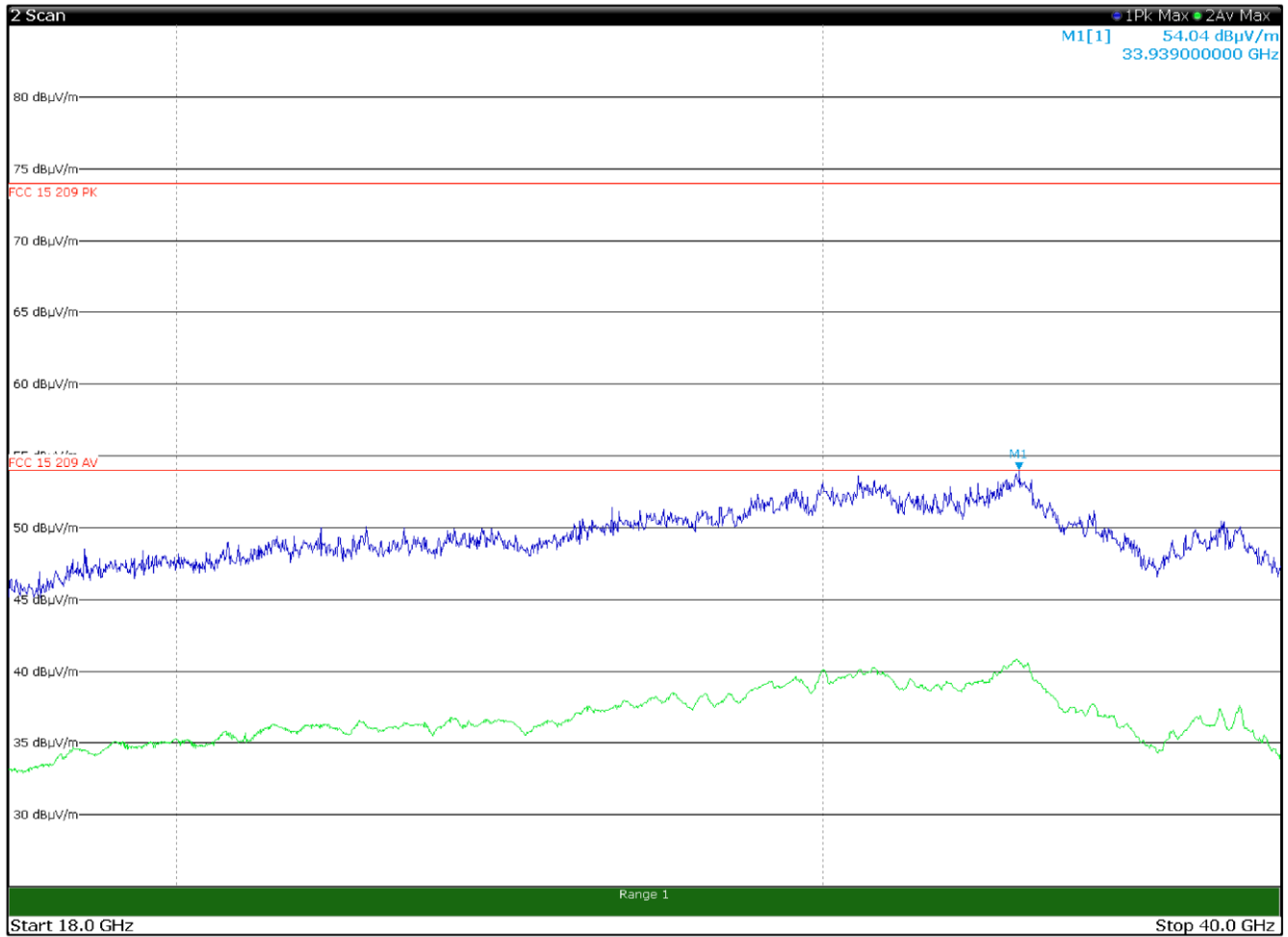
The correction factor for the average value of pulsed emissions is $20 \log (DC) = 20 \log (0.38) = 8.4 \text{ dB}$

8.1.4 Test data, continued



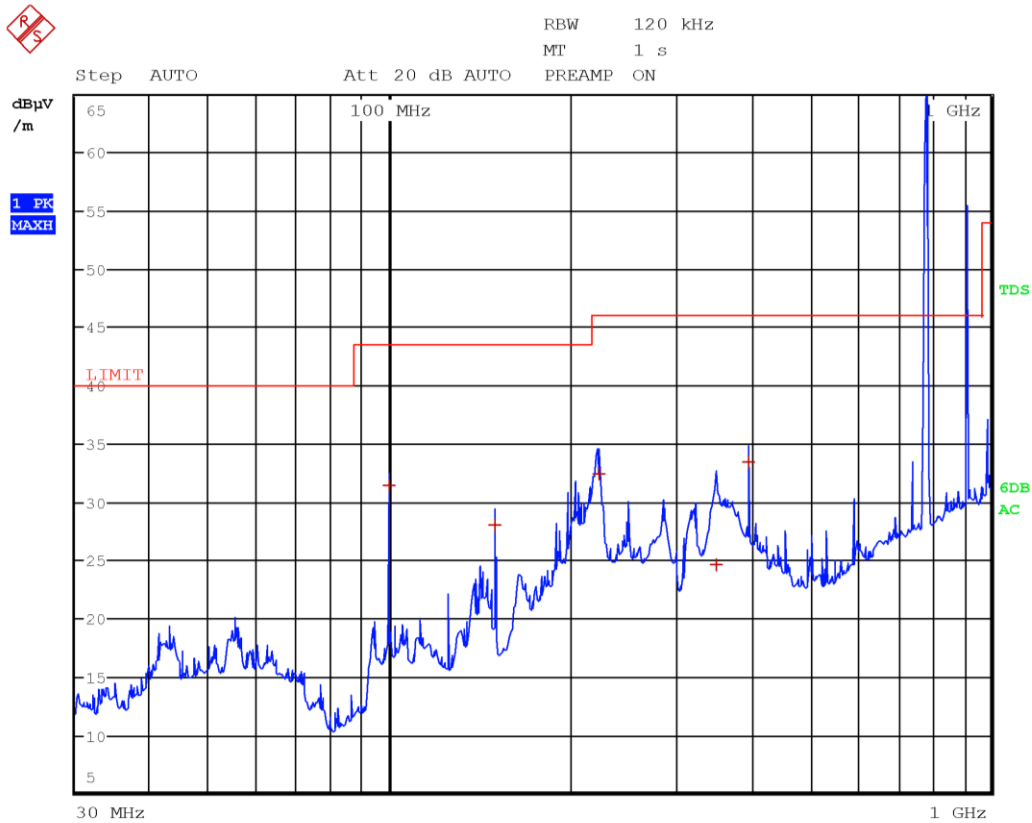
Radiated spurious emissions with antenna in horizontal polarization and with
 LTE Tx at 782 MHz, UHF Tx at 915 MHz, WIFI Tx at 2437 MHz and BT Tx at 2441 MHz (antenna configuration 2)

8.1.4 Test data, continued



Radiated spurious emissions with antenna in vertical polarization and with
 LTE Tx at 782 MHz, UHF Tx at 915 MHz, WIFI Tx at 2437 MHz and BT Tx at 2441 MHz (antenna configuration 2)

8.1.4 Test data, continued

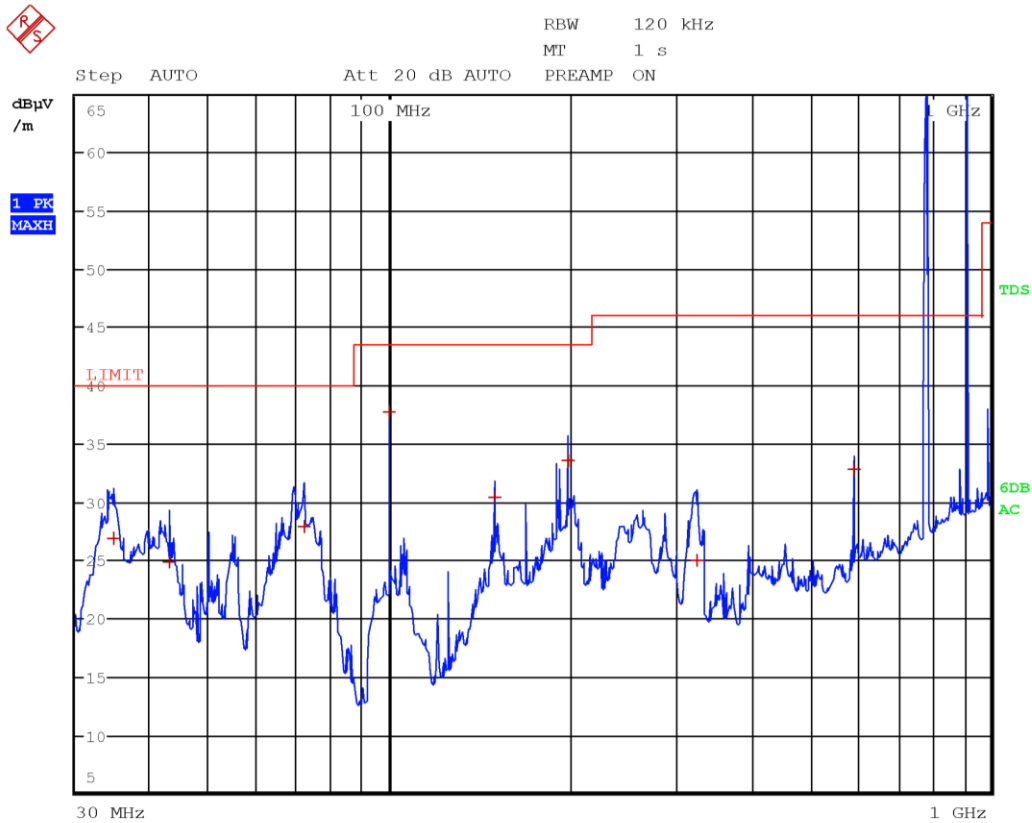


Radiated spurious emissions with antenna in horizontal polarization and with
LTE Tx at 782 MHz, UHF Tx at 915 MHz, WIFI Tx at 5220 MHz and BT Tx at 2441 MHz (antenna configuration 2)

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
99.9900	31.5	43.5	-12.0	QP
150.0000	28.0	43.5	-15.5	QP
223.1400	32.4	46.0	-13.6	QP
349.0200	24.7	46.0	-21.3	QP
396.0000	33.5	46.0	-12.5	QP
782.0000	114.4	--	--	PK
915.0000	116.9	--	--	PK

Limit exceeded by the carriers

8.1.4 Test data, continued

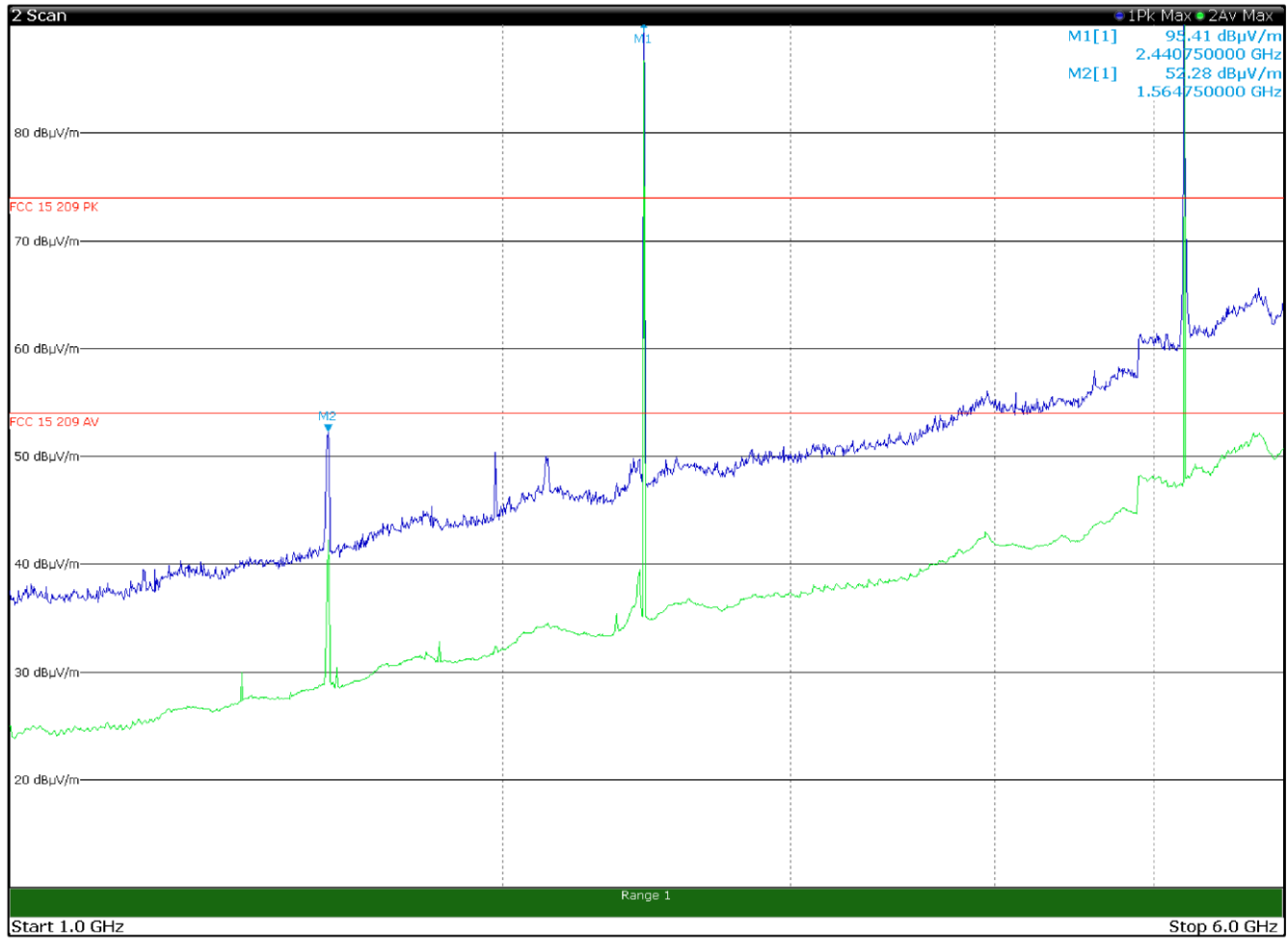


Radiated spurious emissions with antenna in vertical polarization and with
LTE Tx at 782 MHz, UHF Tx at 915 MHz, WIFI Tx at 5220 MHz and BT Tx at 2441 MHz (antenna configuration 2)

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
34.6200	27.0	40.0	-13.0	QP
42.9000	24.9	40.0	-15.1	QP
72.0000	27.9	40.0	-12.1	QP
99.9900	37.8	43.5	-5.7	QP
150.0000	30.5	43.5	-13.0	QP
198.0000	33.6	43.5	-9.9	QP
325.5900	25.1	46.0	-20.9	QP
594.0000	32.8	46.0	-13.2	QP
782.0000	111.7	--	--	PK
915.0000	127.7	--	--	PK

Limit exceeded by the carriers

8.1.4 Test data, continued



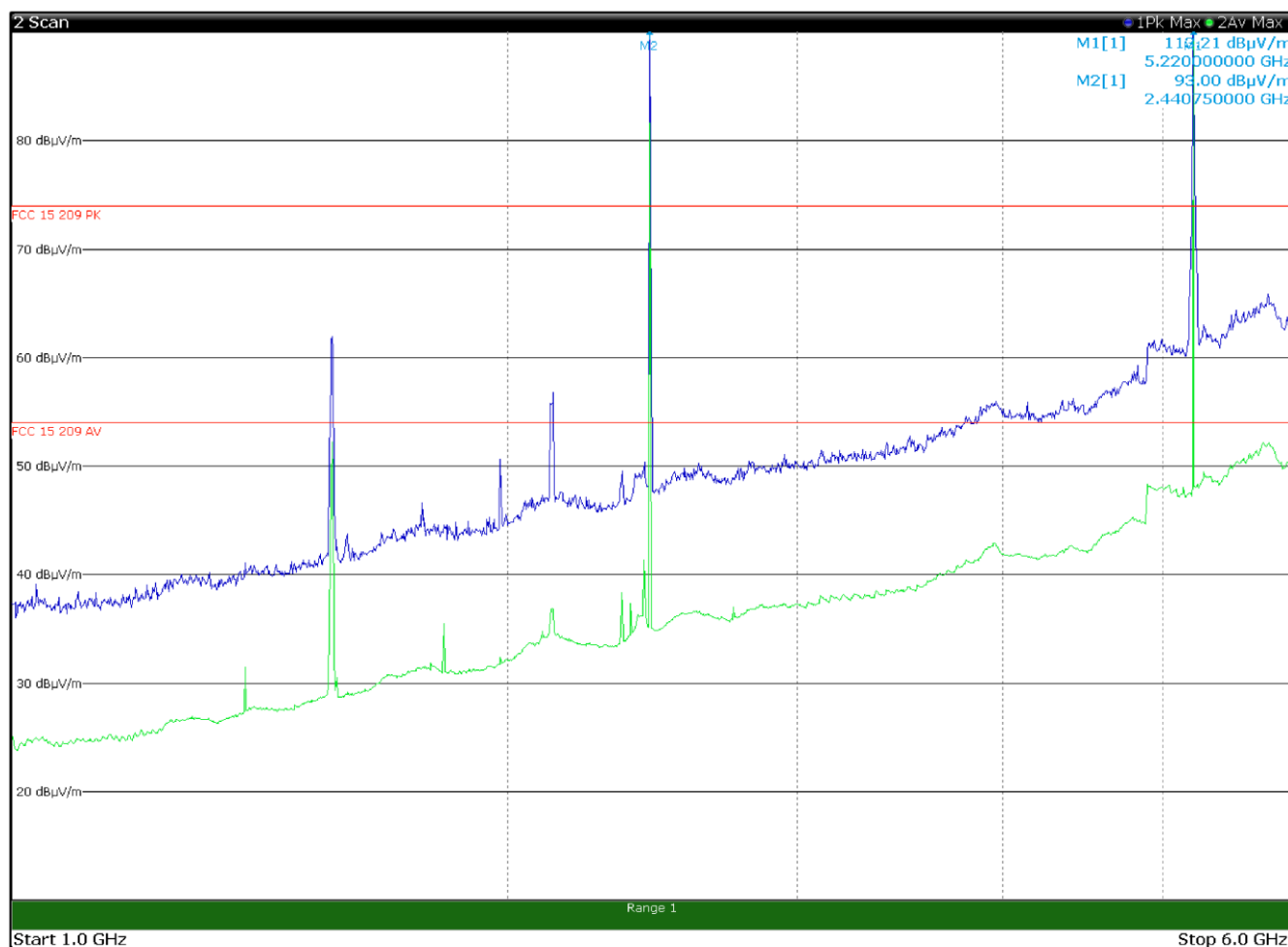
Radiated spurious emissions with antenna in horizontal polarization and with
LTE Tx at 782 MHz, UHF Tx at 915 MHz, WIFI Tx at 5220 MHz and BT Tx at 2441 MHz (antenna configuration 2)

Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1564.0000	56.4	82.2	-25.8	Pk
1980.0000	50.4	74.0	-23.6	Pk
2441.0000	99.8	--	--	Pk
5220.0000	118.6	--	--	Pk

Limit exceeded by the carriers

The limit for FCC 27.53 is -13 dBm. Limit (dBμV/m) = limit (dBm) + 95.23 = 82.2 dBμV/m

8.1.4 Test data, continued



Radiated spurious emissions with antenna in vertical polarization and with
LTE Tx at 782 MHz, UHF Tx at 915 MHz, WIFI Tx at 5220 MHz and BT Tx at 2441 MHz (antenna configuration 2)

Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1564.0000	62.5	82.2	-19.7	Pk
1980.0000	50.7	74.0	-23.3	Pk
2131.7500	56.8	74.0	-17.2	Pk
2441.0000	91.1	--	--	Pk
5220.0000	107.3	--	--	Pk

Limit exceeded by the carriers

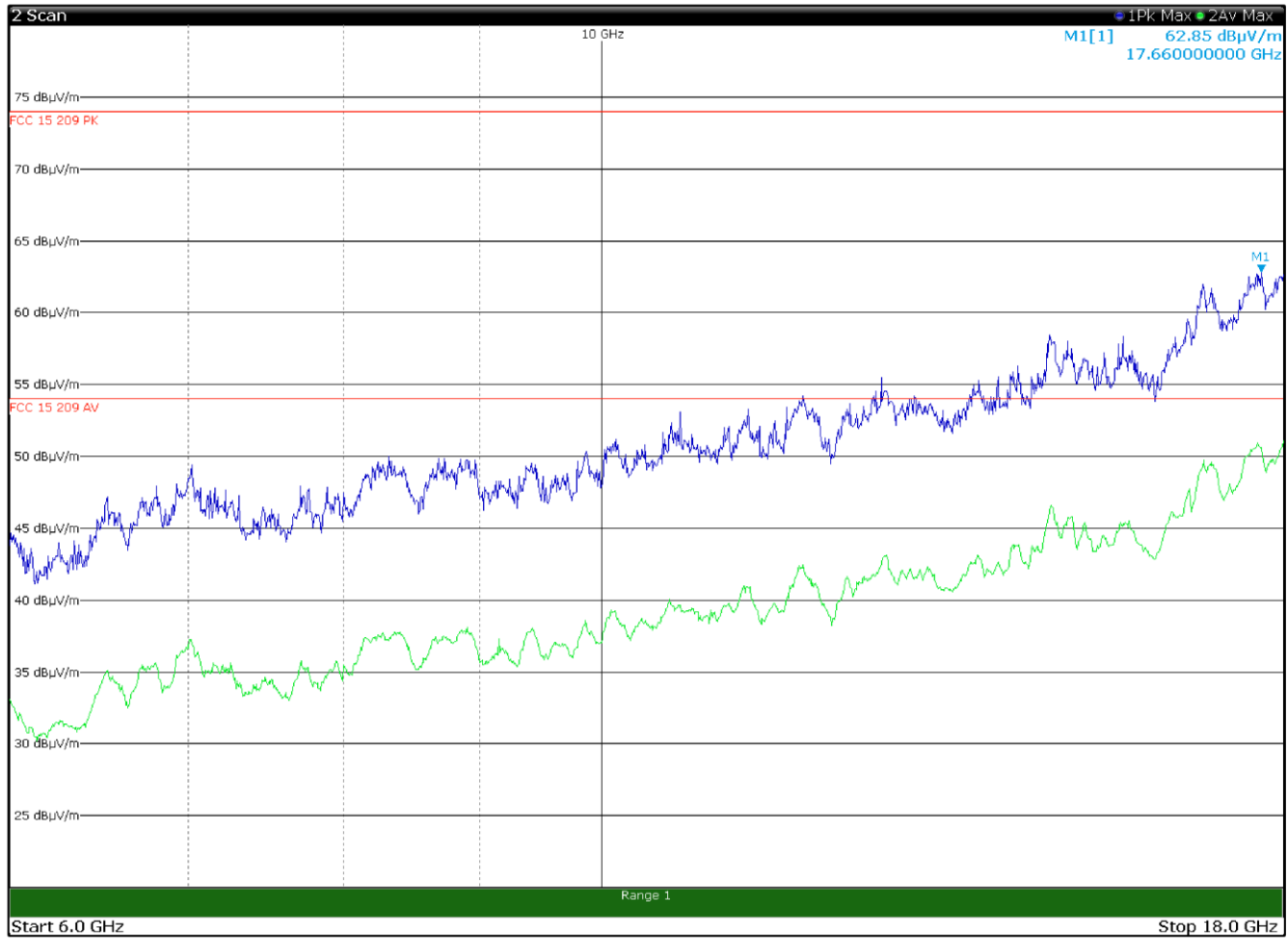
The limit for FCC 27.53 is -13 dBm. Limit (dBμV/m) = limit (dBm) + 95.23 = 82.2 dBμV/m

Section 8
Test name
Specification

Testing data
Radiated emission limits
FCC §15.209 (f), §15.247 (d), §15.407 (b), §27.53 (c), §27.53 (h)
RSS-Gen Issue 5 §8.9, RSS-247 Issue 3 §5.5, RSS-247 Issue 3 §6.2

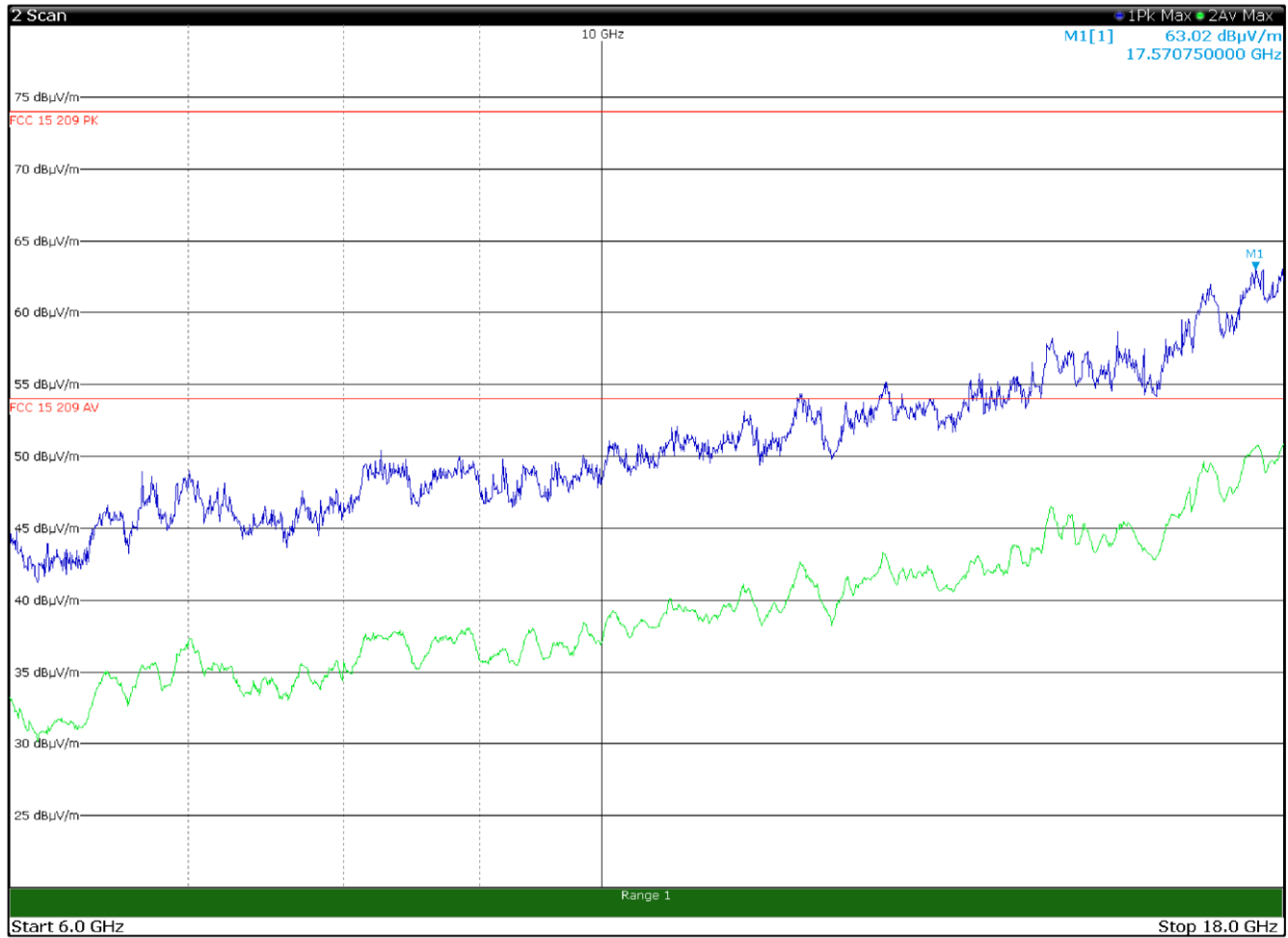


8.1.4 Test data, continued



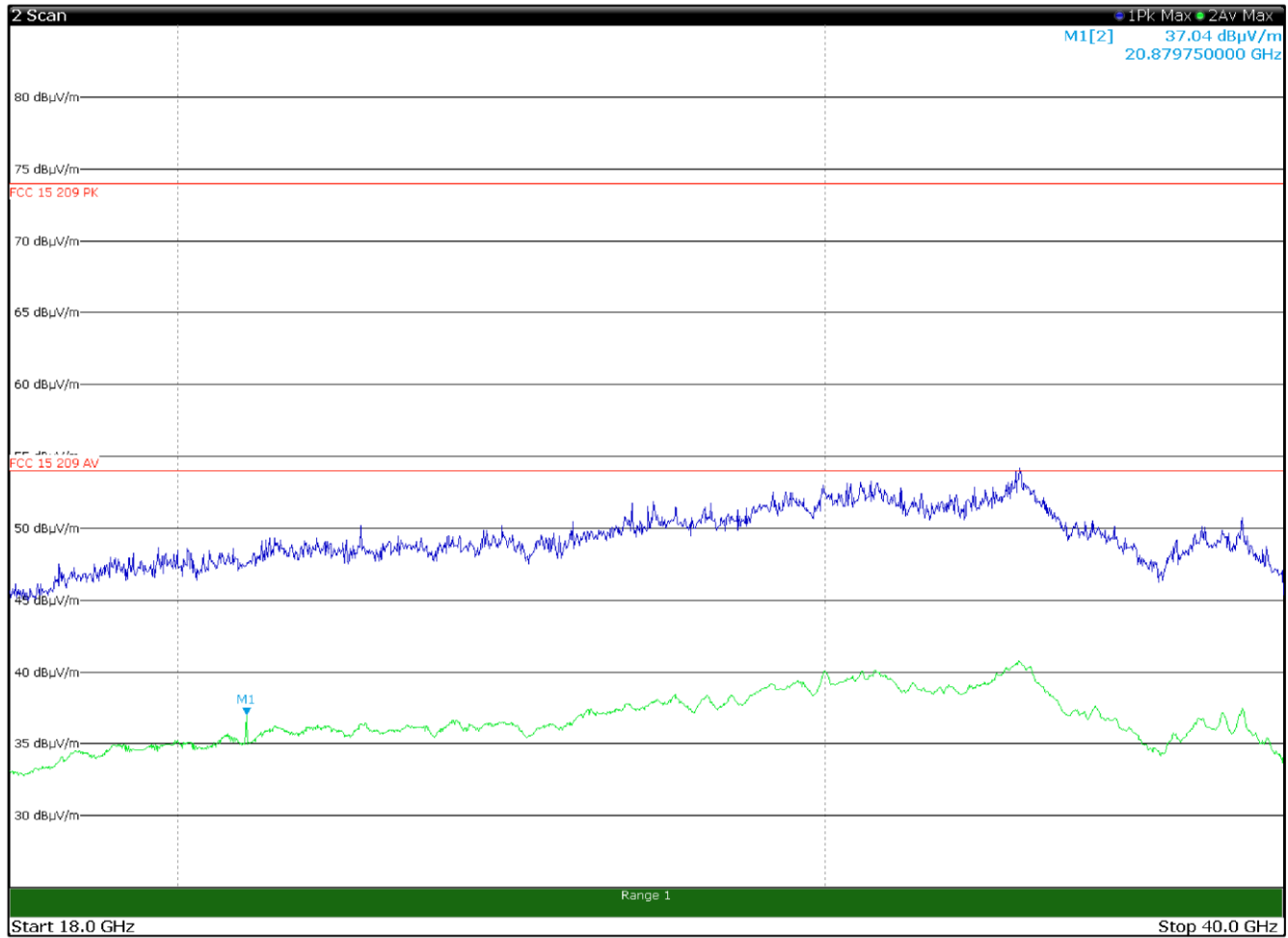
Radiated spurious emissions with antenna in horizontal polarization and with
LTE Tx at 782 MHz, UHF Tx at 915 MHz, WIFI Tx at 5220 MHz and BT Tx at 2441 MHz (antenna configuration 2)

8.1.4 Test data, continued



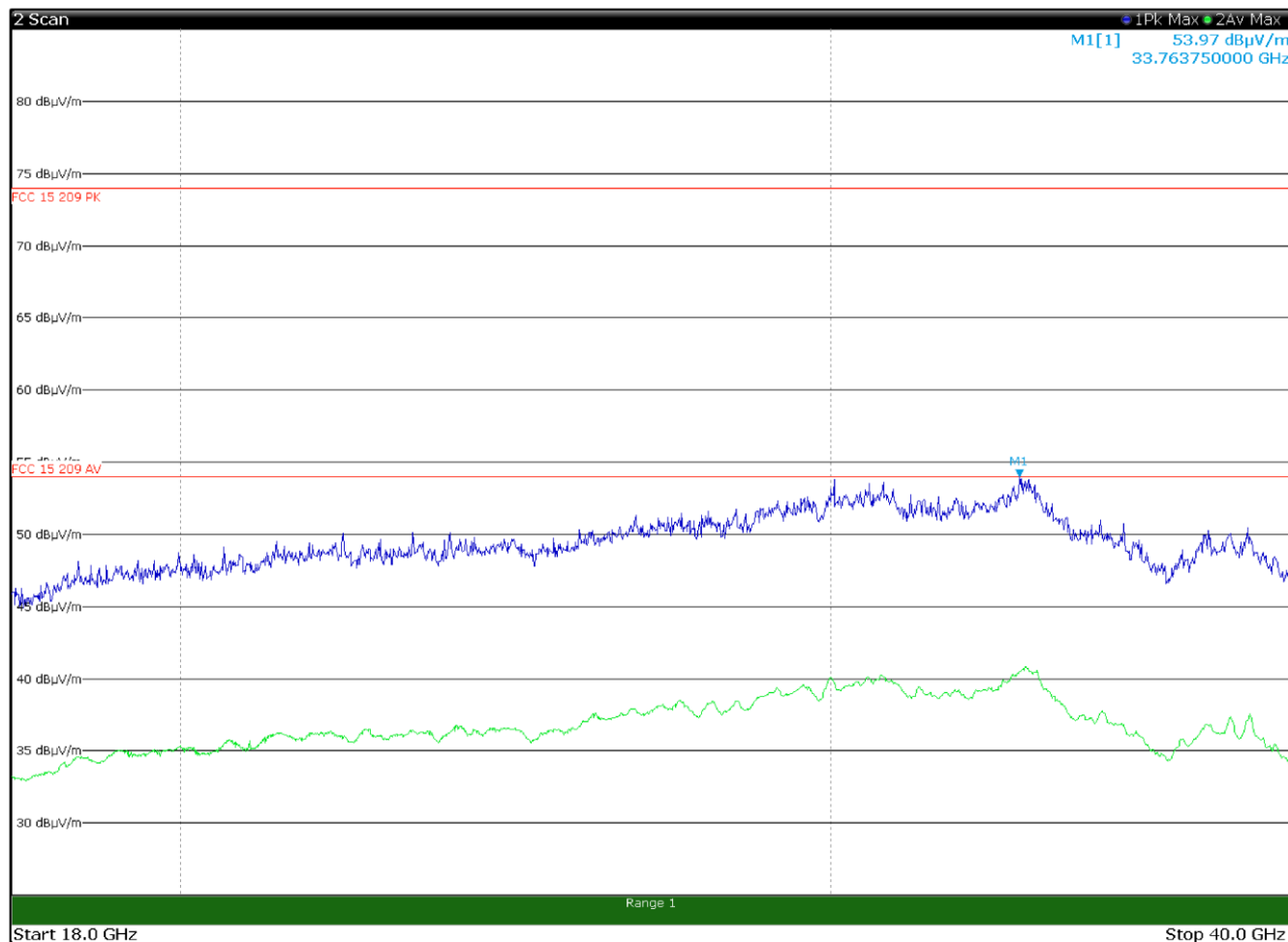
Radiated spurious emissions with antenna in vertical polarization and with
LTE Tx at 782 MHz, UHF Tx at 915 MHz, WIFI Tx at 5220 MHz and BT Tx at 2441 MHz (antenna configuration 2)

8.1.4 Test data, continued



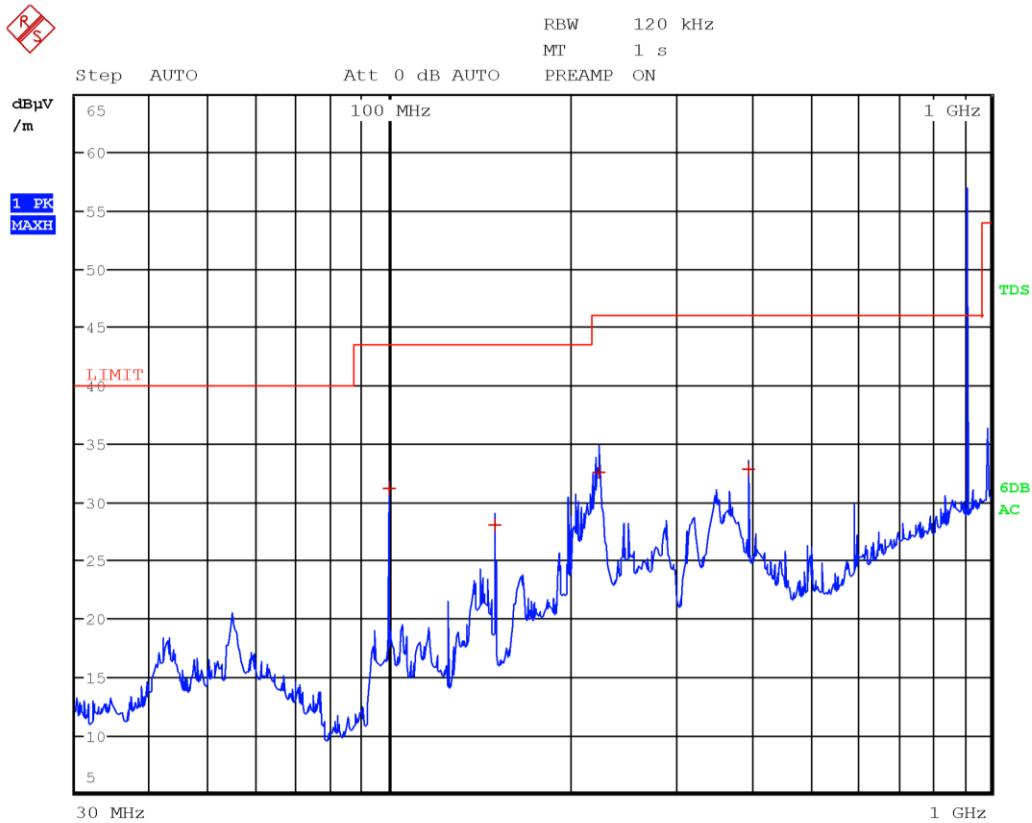
Radiated spurious emissions with antenna in horizontal polarization and with
 LTE Tx at 782 MHz, UHF Tx at 915 MHz, WIFI Tx at 5220 MHz and BT Tx at 2441 MHz (antenna configuration 2)

8.1.4 Test data, continued



Radiated spurious emissions with antenna in vertical polarization and with
 LTE Tx at 782 MHz, UHF Tx at 915 MHz, WIFI Tx at 5220 MHz and BT Tx at 2441 MHz (antenna configuration 2)

8.1.4 Test data, continued

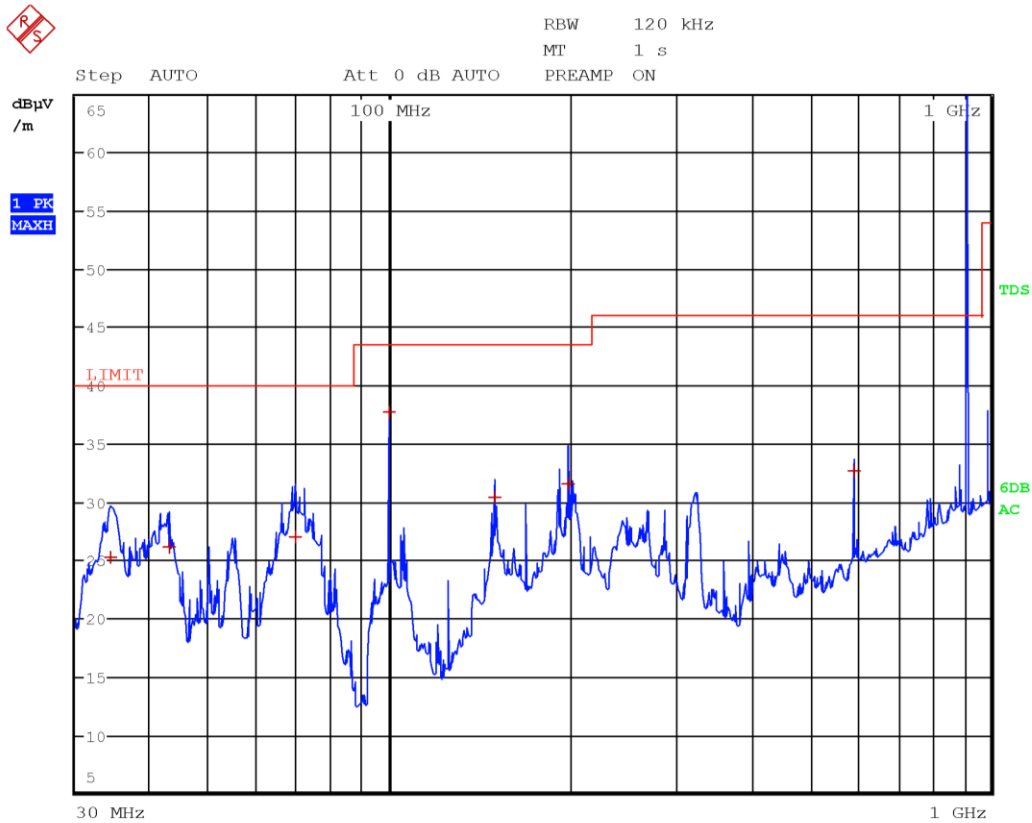


Radiated spurious emissions with antenna in horizontal polarization and with
LTE Tx at 1732.5 MHz, UHF Tx at 915 MHz, WIFI Tx at 2437 MHz and BT Tx at 2441 MHz (antenna configuration 2)

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
99.9900	31.2	43.5	-12.3	QP
150.0000	28.0	43.5	-15.5	QP
222.8400	32.6	46.0	-13.4	QP
396.0000	32.9	46.0	-13.1	QP
915.0000	116.9	--	--	PK

Limit exceeded by the carriers

8.1.4 Test data, continued

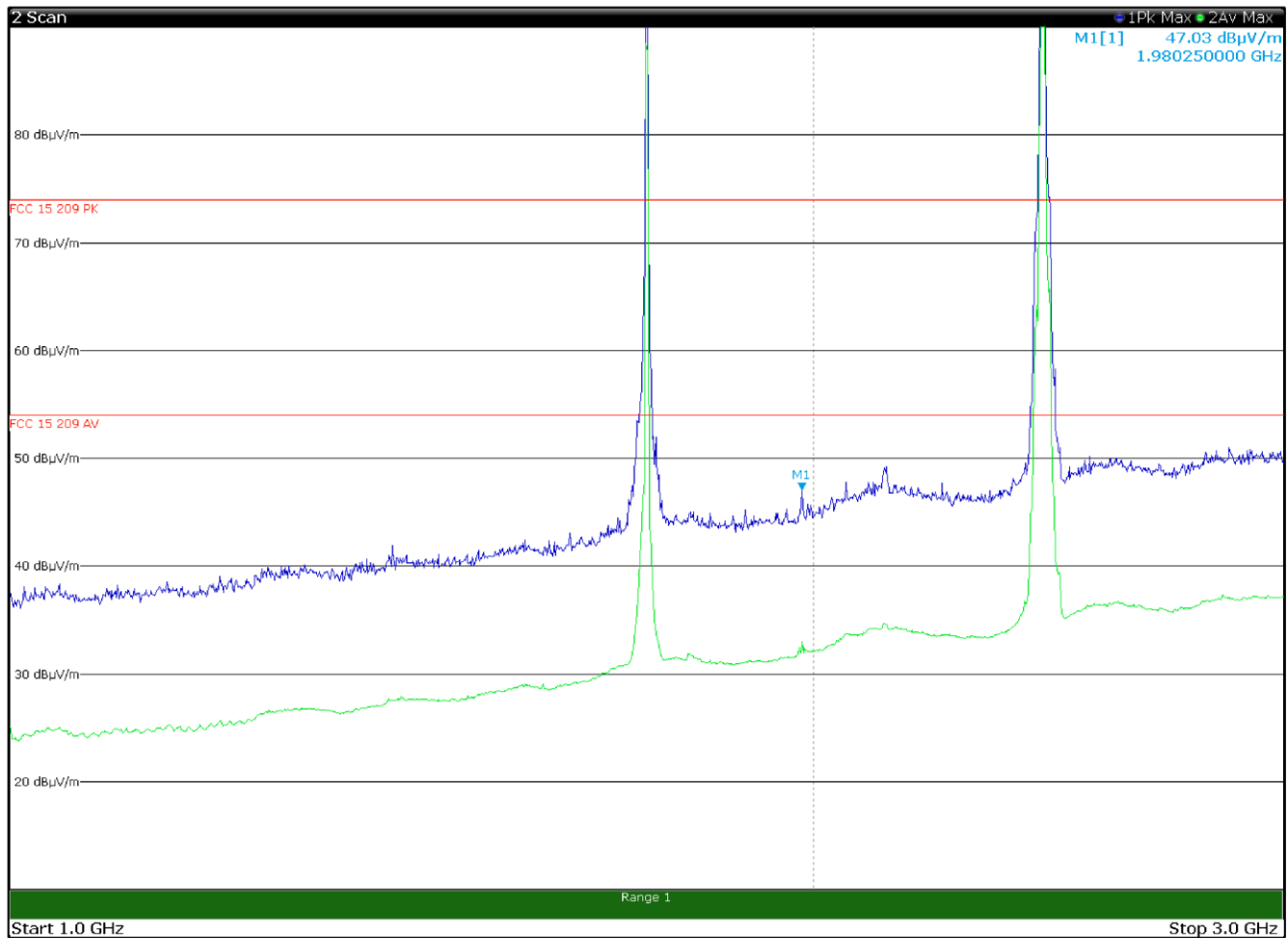


Radiated spurious emissions with antenna in vertical polarization and with
LTE Tx at 1732.5 MHz, UHF Tx at 915 MHz, WIFI Tx at 2437 MHz and BT Tx at 2441 MHz (antenna configuration 2)

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
34.2900	25.3	40.0	-14.7	QP
42.8400	26.2	40.0	-13.8	QP
69.6900	27.1	40.0	-12.9	QP
99.9900	37.7	43.5	-5.8	QP
150.0000	30.4	43.5	-13.1	QP
197.9700	31.6	43.5	-11.9	QP
594.0000	32.8	46.0	-13.2	QP
915.0000	127.5	--	--	PK

Limit exceeded by the carriers

8.1.4 Test data, continued

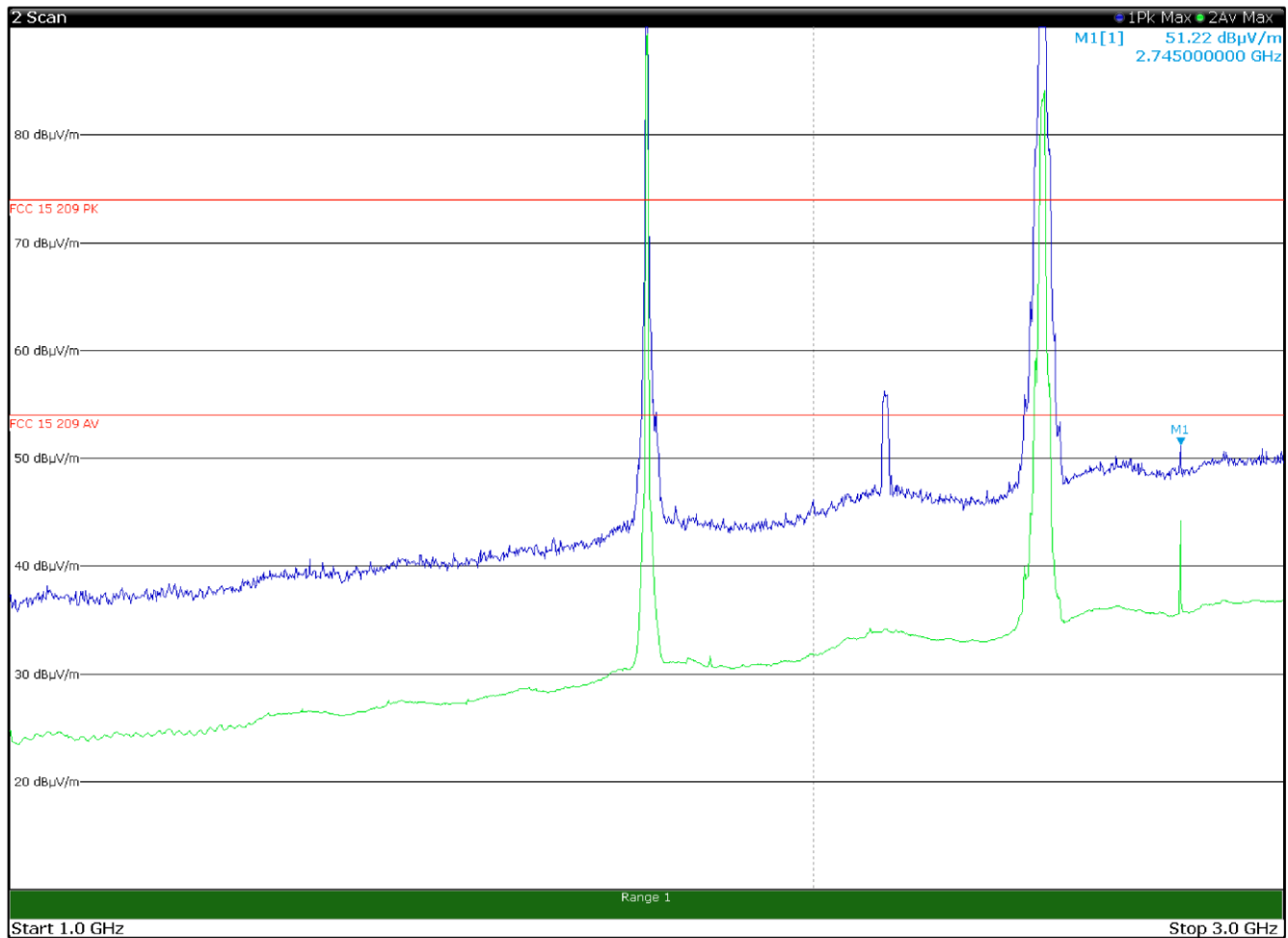


Radiated spurious emissions with antenna in horizontal polarization and with
 LTE Tx at 1732.5 MHz, UHF Tx at 915 MHz, WIFI Tx at 2437 MHz and BT Tx at 2441 MHz (antenna configuration 2)

Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1732.5000	111.6	--	--	Pk
1980.2000	47.1	74.0	-36.9	Pk
2437.0000	114.1	--	--	Pk

Limit exceeded by the carriers

8.1.4 Test data, continued

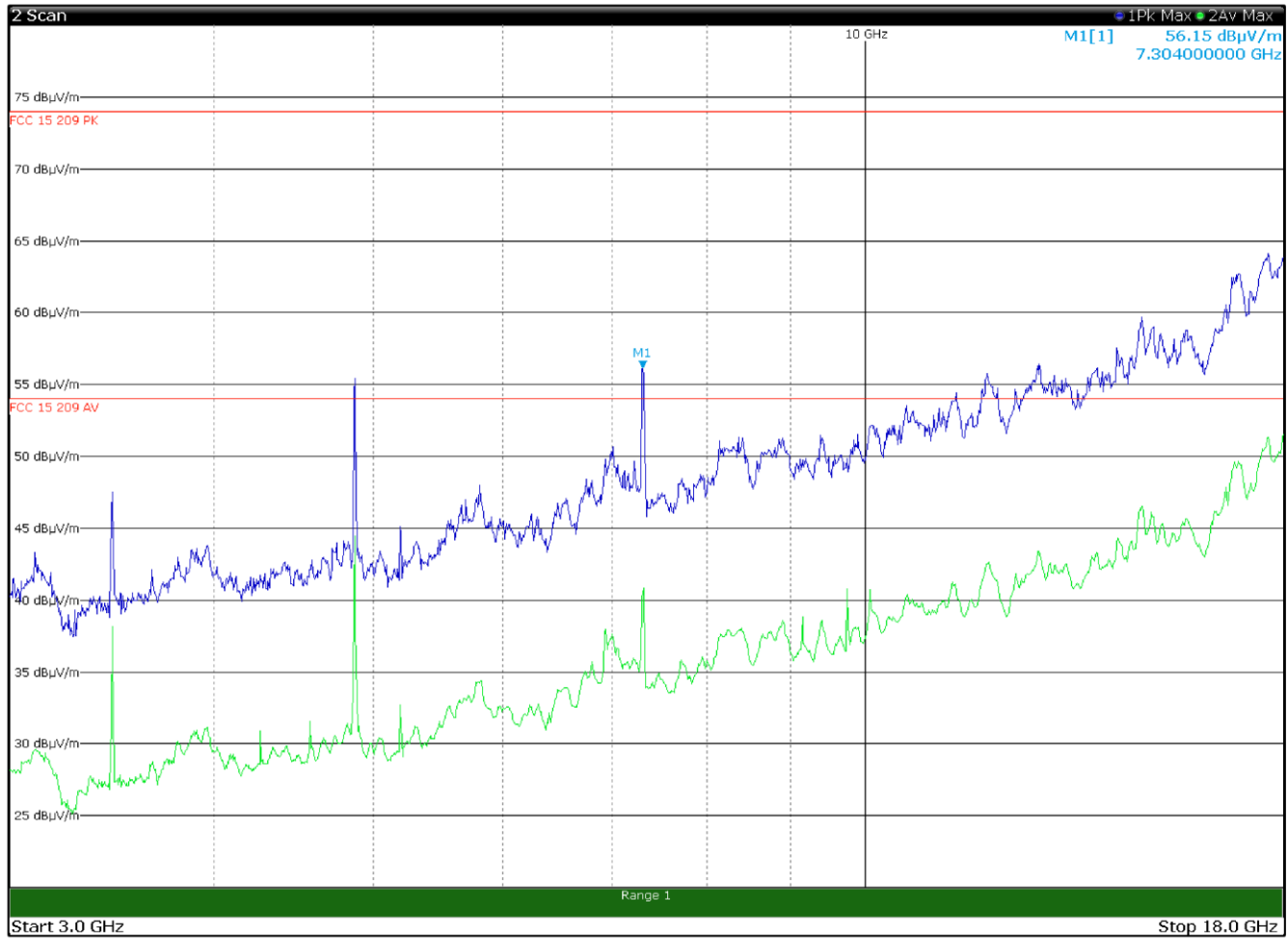


Radiated spurious emissions with antenna in vertical polarization and with
LTE Tx at 1732.5 MHz, UHF Tx at 915 MHz, WIFI Tx at 2437 MHz and BT Tx at 2441 MHz (antenna configuration 2)

Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1732.5000	111.0	--	--	Pk
2437.0000	106.8	--	--	Pk
2745.0000	51.3	74.0	-22.7	Pk
2745.0000	44.5	54.0	-9.5	Av

Limit exceeded by the carriers

8.1.4 Test data, continued



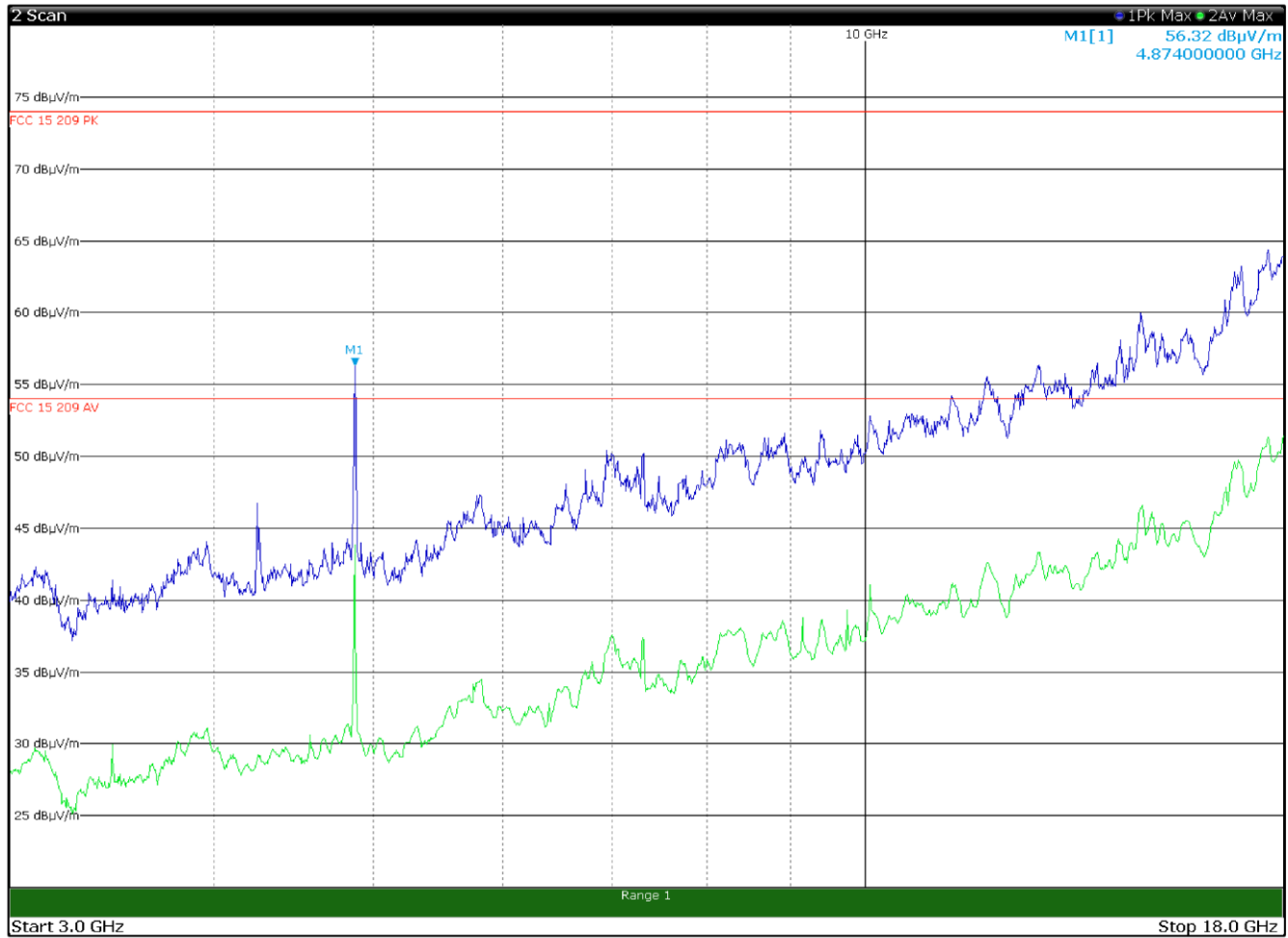
Radiated spurious emissions with antenna in horizontal polarization and with
LTE Tx at 1732.5 MHz, UHF Tx at 915 MHz, WIFI Tx at 2437 MHz and BT Tx at 2441 MHz (antenna configuration 2)

Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
3465.0000	56.5	82.2	-25.7	Pk
4874.0000	55.7	74.0	-18.3	Pk
4874.0000	47.3	54.0	-6.7	Av
7309.7500	56.2	74.0	-17.8	Pk
7309.7500	47.8	54.0	-6.2	Av

The limit for FCC 27.53 is -13 dBm. Limit (dBμV/m) = limit (dBm) + 95.23 = 82.2 dBμV/m

The correction factor for the average value of pulsed emissions is $20 \log (DC) = 20 \log (0.38) = 8.4 \text{ dB}$

8.1.4 Test data, continued

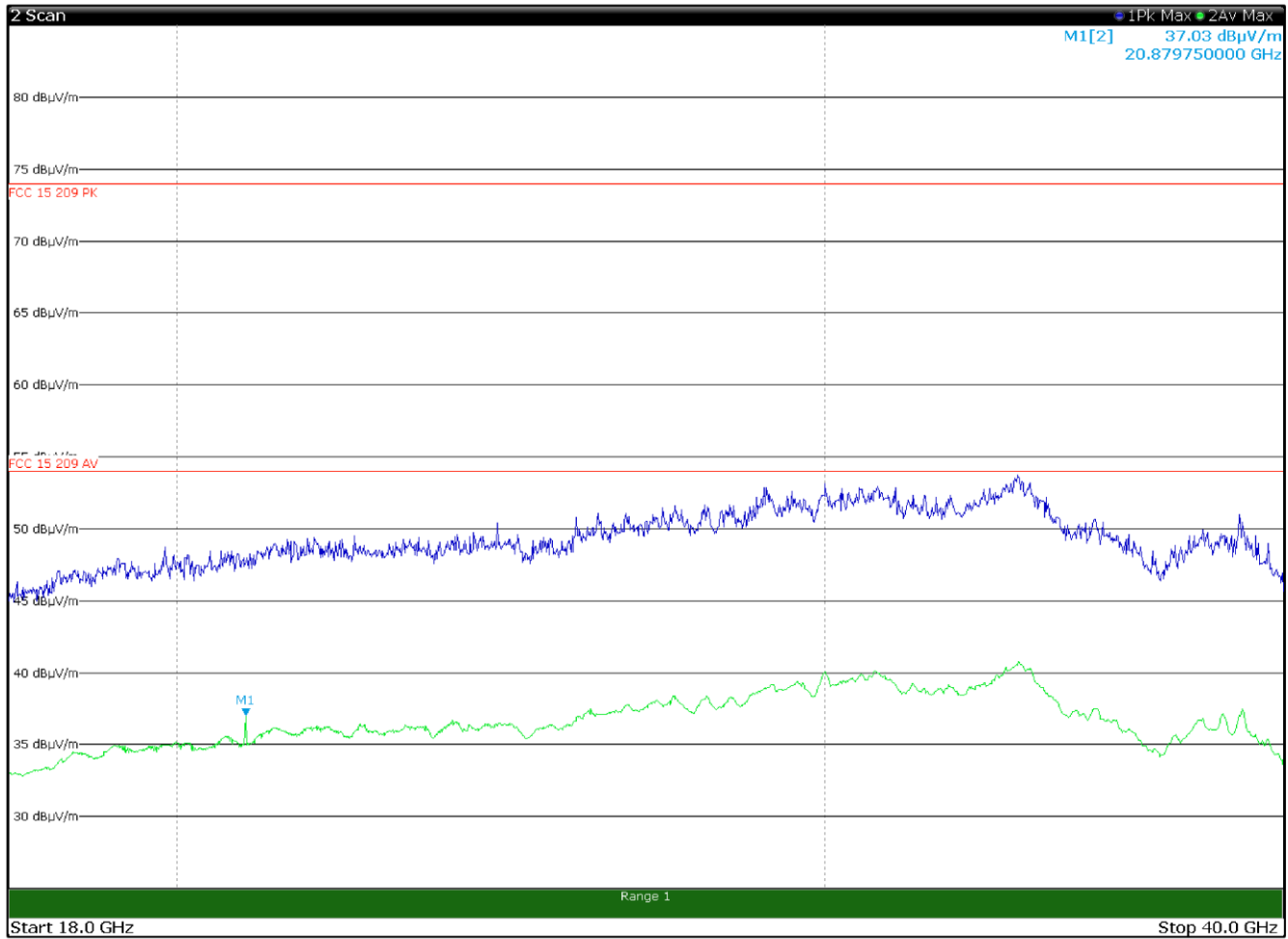


Radiated spurious emissions with antenna in vertical polarization and with
LTE Tx at 1732.5 MHz, UHF Tx at 915 MHz, WIFI Tx at 2437 MHz and BT Tx at 2441 MHz (antenna configuration 2)

Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
4874.0000	56.3	74.0	-17.7	Pk
4874.0000	47.9	54.0	-6.1	Av
7311.2500	53.9	74.0	-20.1	Pk
7311.2500	45.5	54.0	-8.5	Av

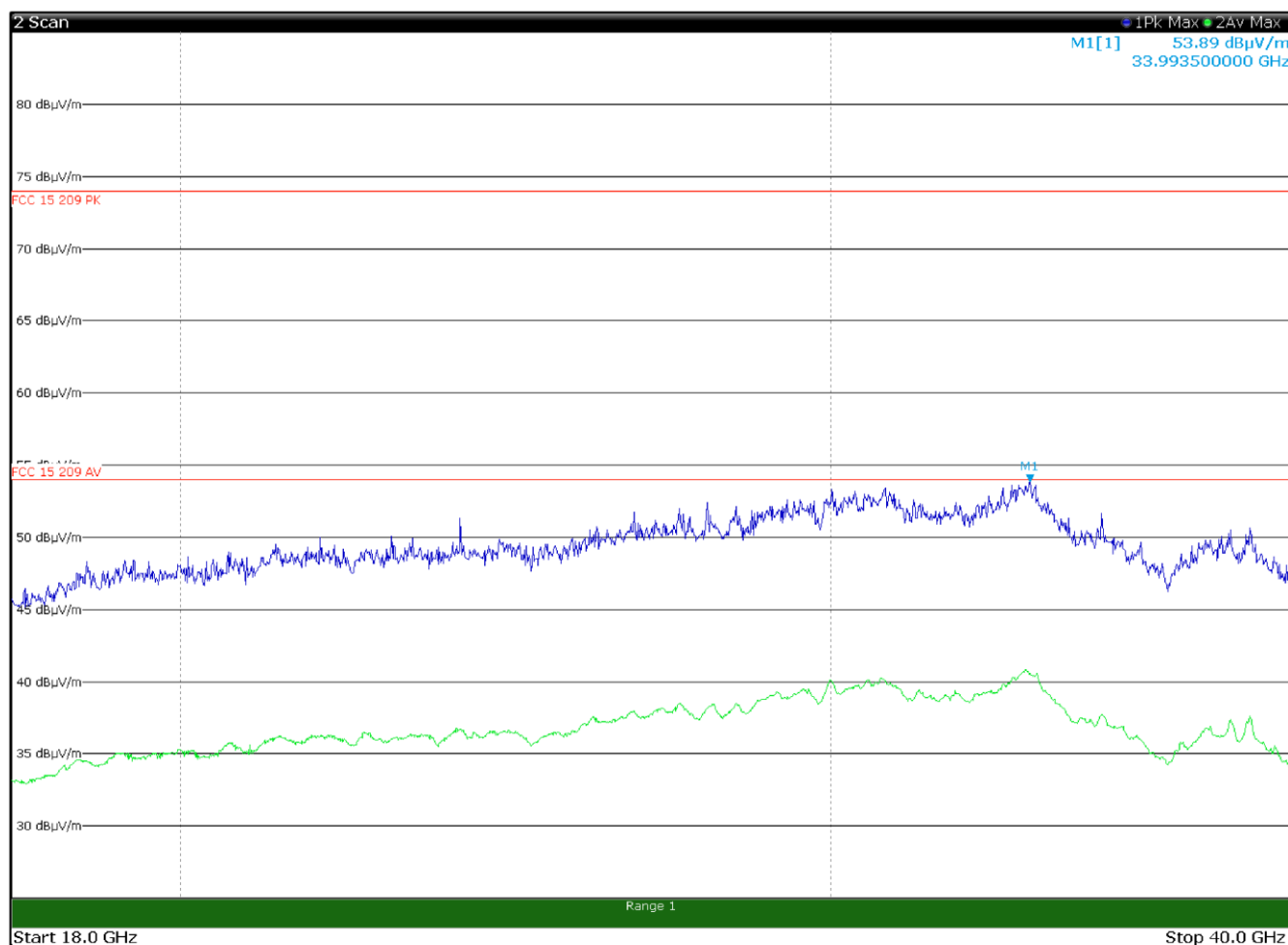
The correction factor for the average value of pulsed emissions is $20 \log (DC) = 20 \log (0.38) = 8.4 \text{ dB}$

8.1.4 Test data, continued



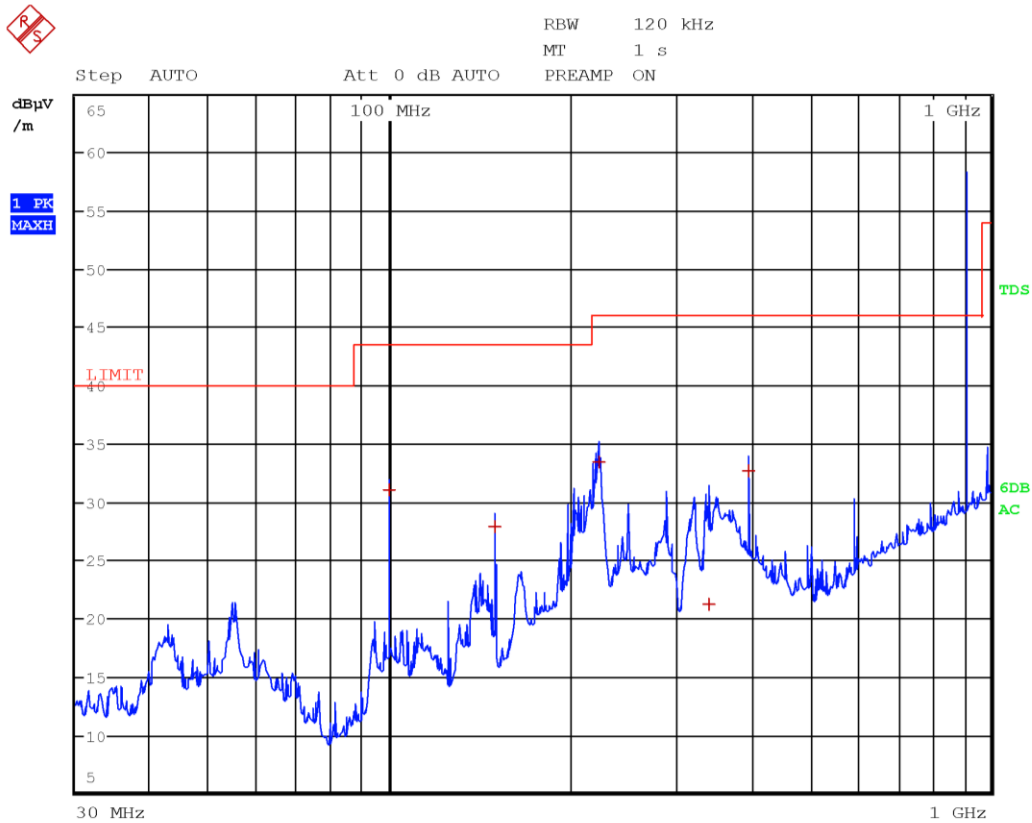
Radiated spurious emissions with antenna in horizontal polarization and with
 LTE Tx at 1732.5 MHz, UHF Tx at 915 MHz, WIFI Tx at 2437 MHz and BT Tx at 2441 MHz (antenna configuration 2)

8.1.4 Test data, continued



Radiated spurious emissions with antenna in vertical polarization and with
LTE Tx at 1732.5 MHz, UHF Tx at 915 MHz, WIFI Tx at 2437 MHz and BT Tx at 2441 MHz (antenna configuration 2)

8.1.4 Test data, continued

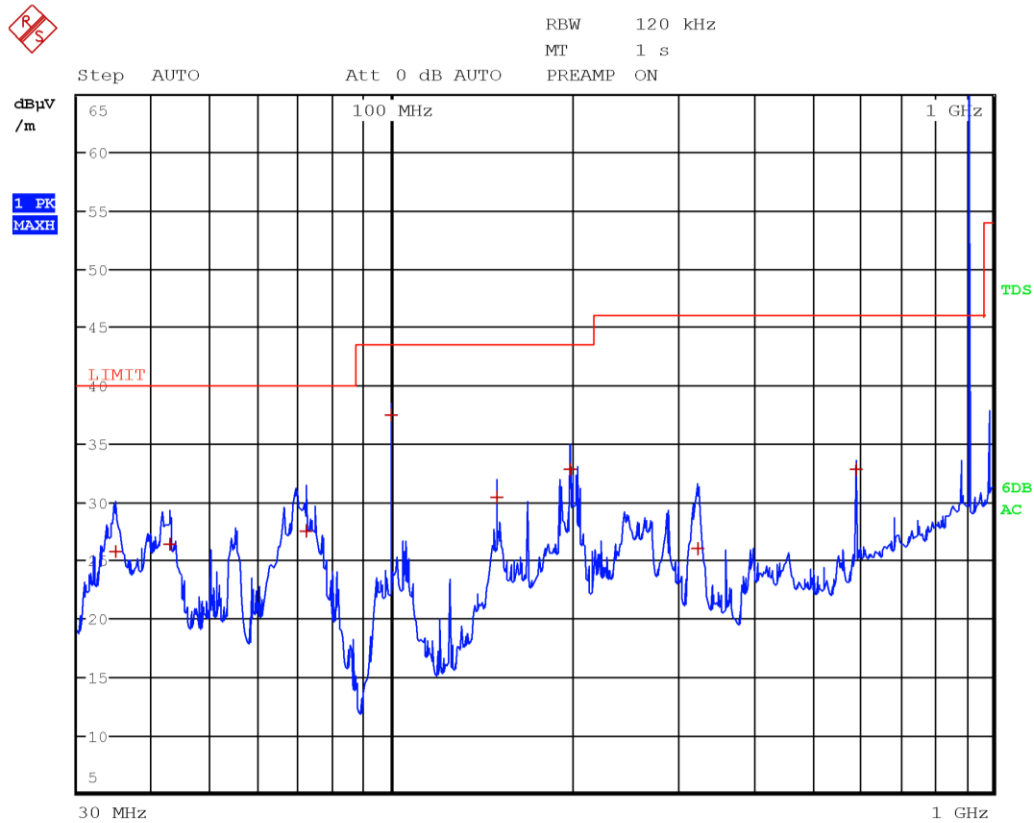


Radiated spurious emissions with antenna in horizontal polarization and with
LTE Tx at 1732.5 MHz, UHF Tx at 915 MHz, WIFI Tx at 5220 MHz and BT Tx at 2441 MHz (antenna configuration 2)

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
99.9900	31.1	43.5	-12.4	QP
150.0000	27.9	43.5	-15.6	QP
222.6900	33.5	46.0	-12.5	QP
339.5100	21.2	46.0	-24.8	QP
396.0000	32.7	46.0	-13.3	QP
915.0000	116.3	--	--	PK

Limit exceeded by the carriers

8.1.4 Test data, continued

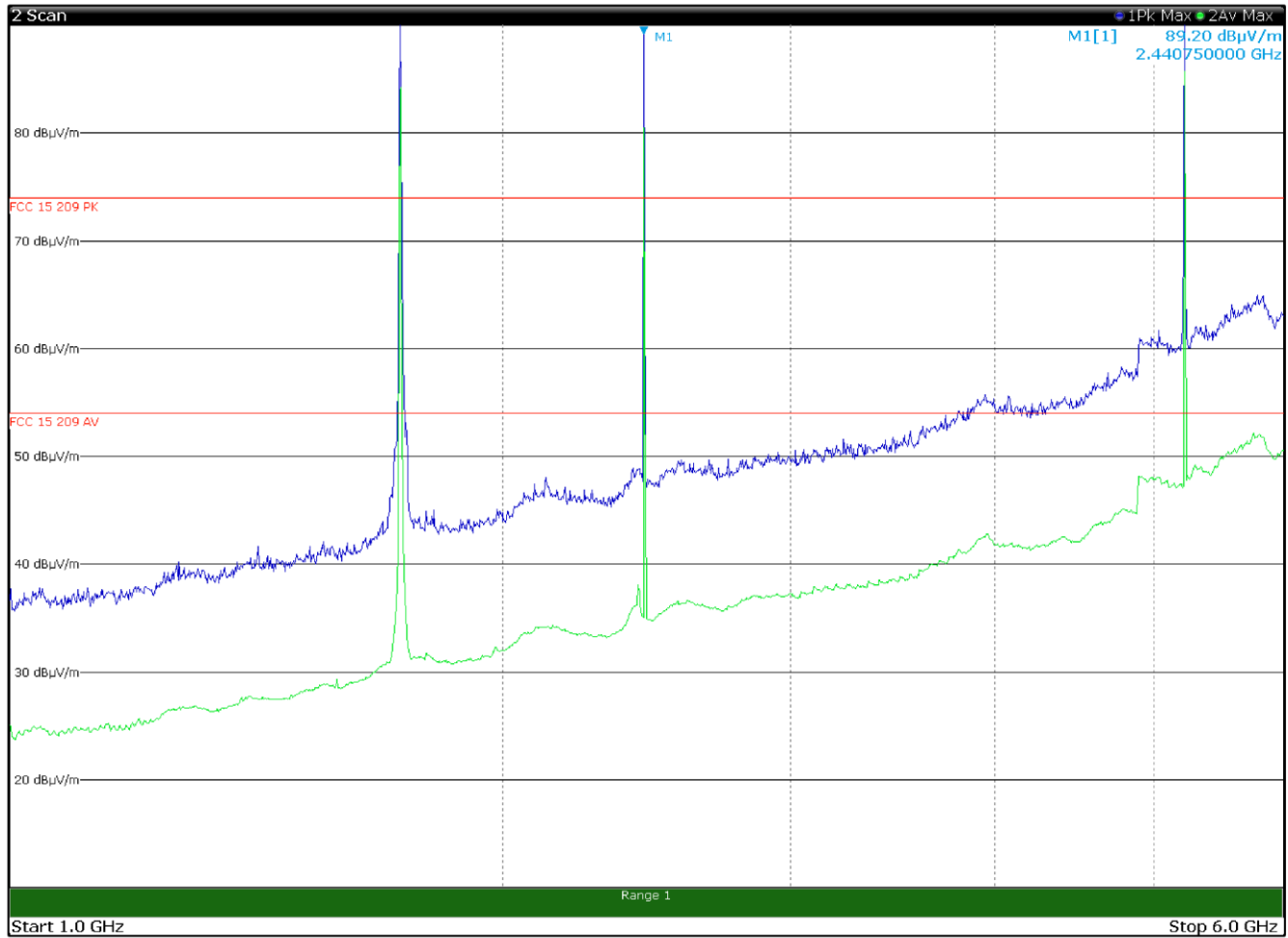


Radiated spurious emissions with antenna in vertical polarization and with
 LTE Tx at 1732.5 MHz, UHF Tx at 915 MHz, WIFI Tx at 5220 MHz and BT Tx at 2441 MHz (antenna configuration 2)

Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
34.6200	25.8	40.0	-14.2	QP
42.8100	26.4	40.0	-13.6	QP
72.0300	27.5	40.0	-12.5	QP
99.9900	37.5	43.5	-6.0	QP
150.0000	30.4	43.5	-13.1	QP
198.0000	32.8	43.5	-10.7	QP
323.9400	26.0	46.0	-20.0	QP
594.0000	32.8	46.0	-13.2	QP
915.0000	127.9	--	--	PK

Limit exceeded by the carriers

8.1.4 Test data, continued

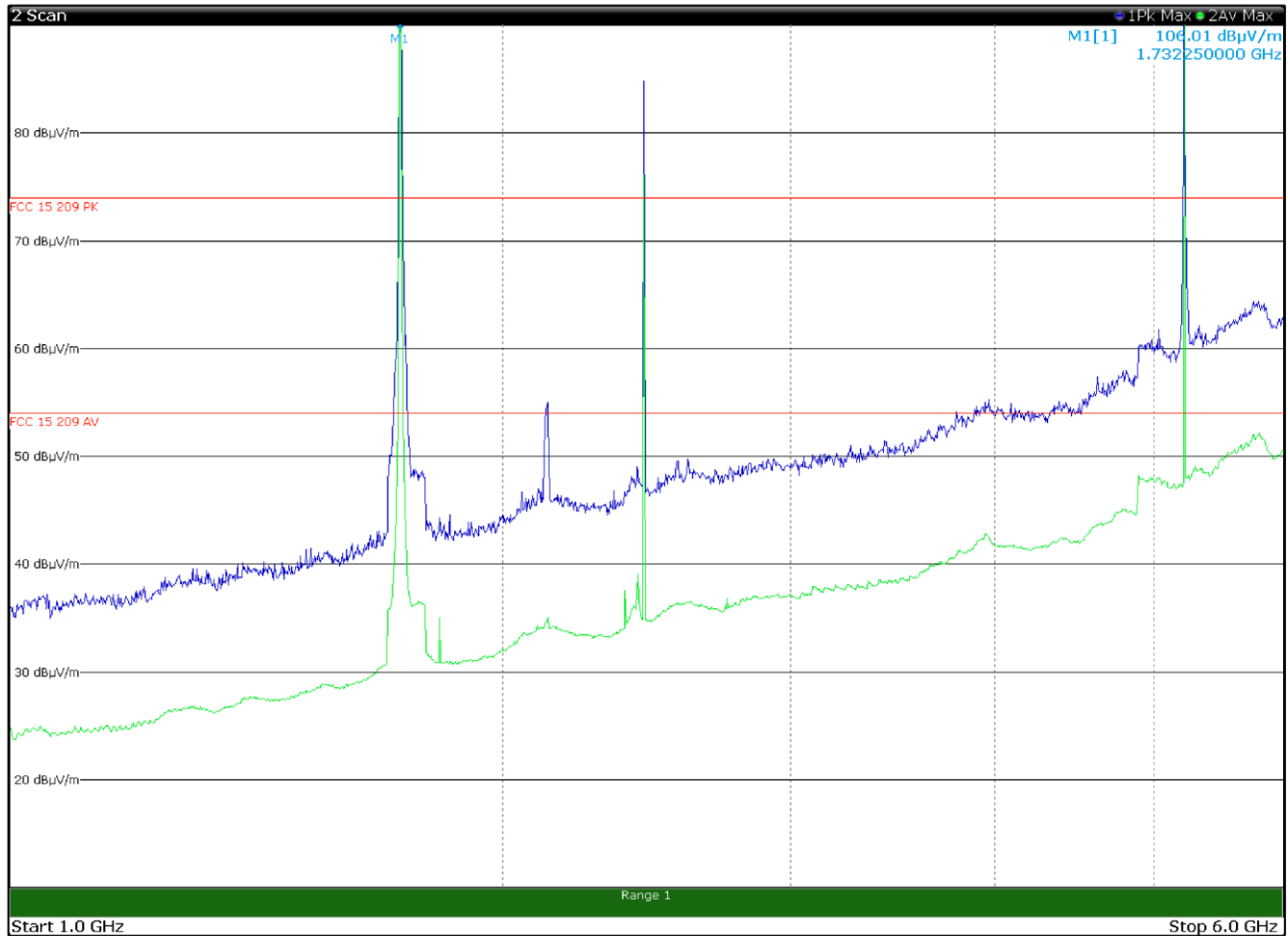


Radiated spurious emissions with antenna in horizontal polarization and with
LTE Tx at 1732.5 MHz, UHF Tx at 915 MHz, WIFI Tx at 5220 MHz and BT Tx at 2441 MHz (antenna configuration 2)

Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1732.5000	111.8	--	--	Pk
2441.0000	99.9	--	--	Pk
5220.0000	118.4	--	--	Pk

Limit exceeded by the carriers

8.1.4 Test data, continued

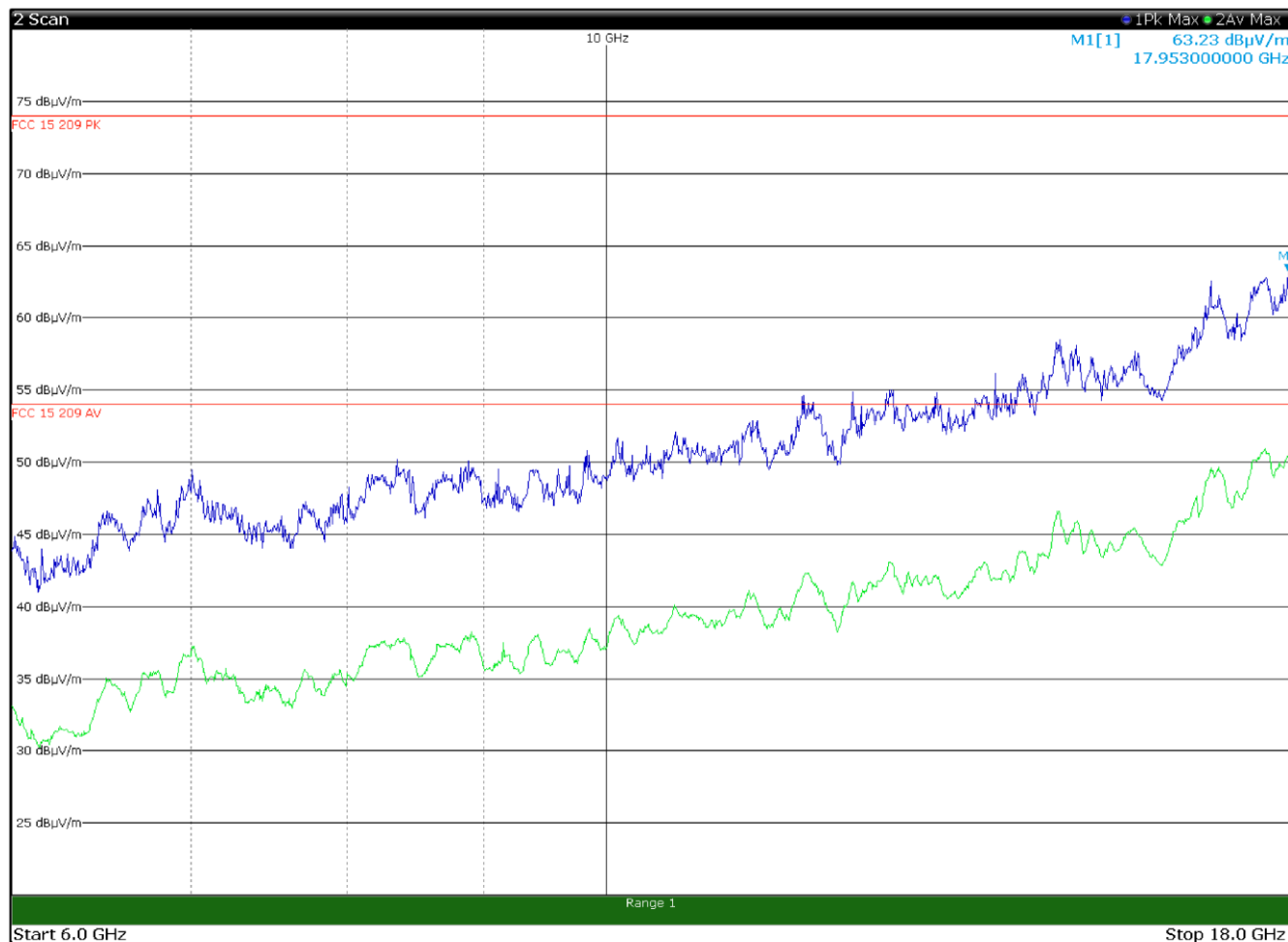


Radiated spurious emissions with antenna in vertical polarization and with
LTE Tx at 1732.5 MHz, UHF Tx at 915 MHz, WIFI Tx at 5220 MHz and BT Tx at 2441 MHz (antenna configuration 2)

Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1732.5000	110.9	--	--	Pk
2131.0000	55.0	74.0	-19.0	Pk
2441.0000	90.3	--	--	Pk
5220.0000	107.0	--	--	Pk

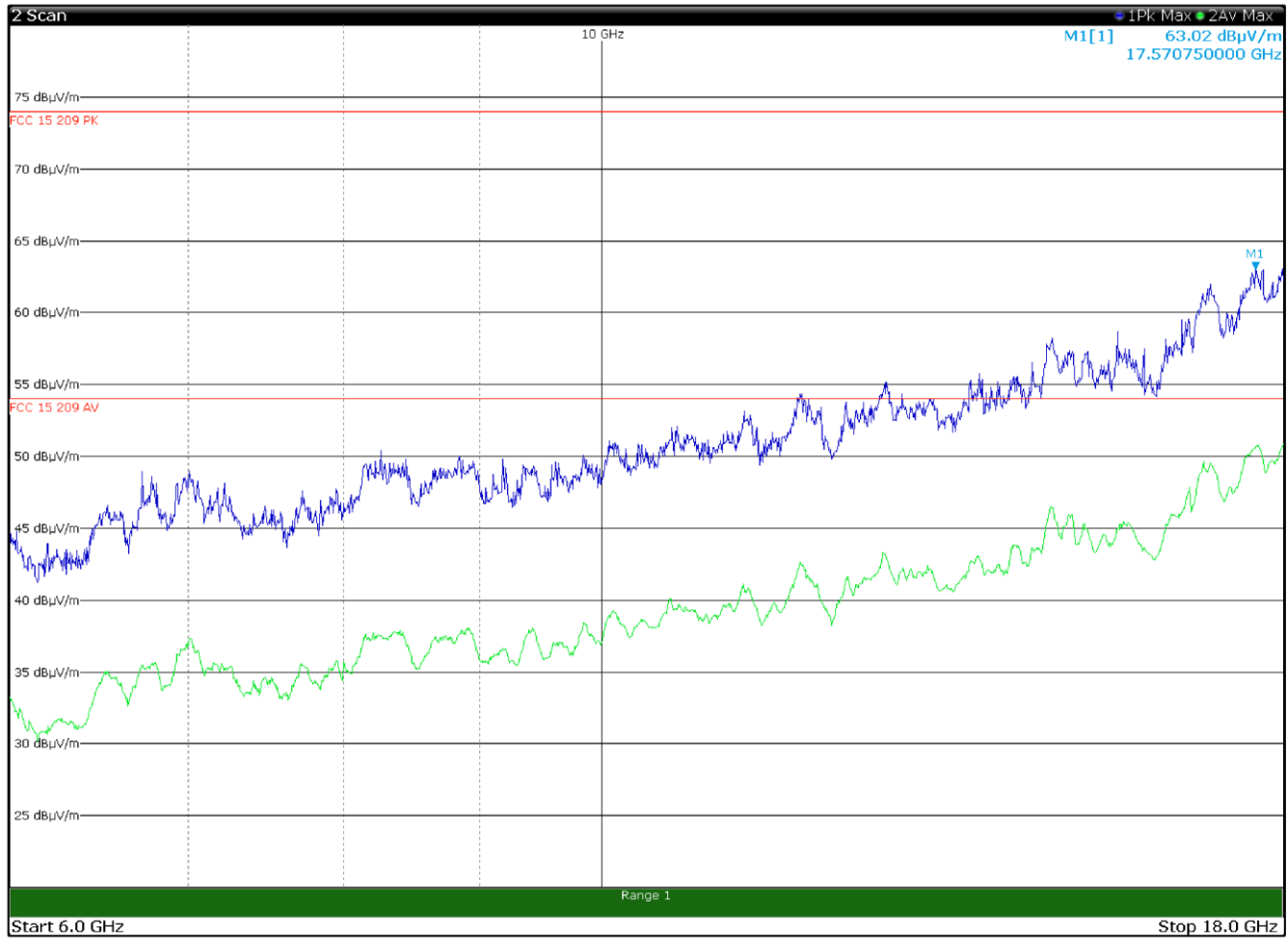
Limit exceeded by the carriers

8.1.4 Test data, continued



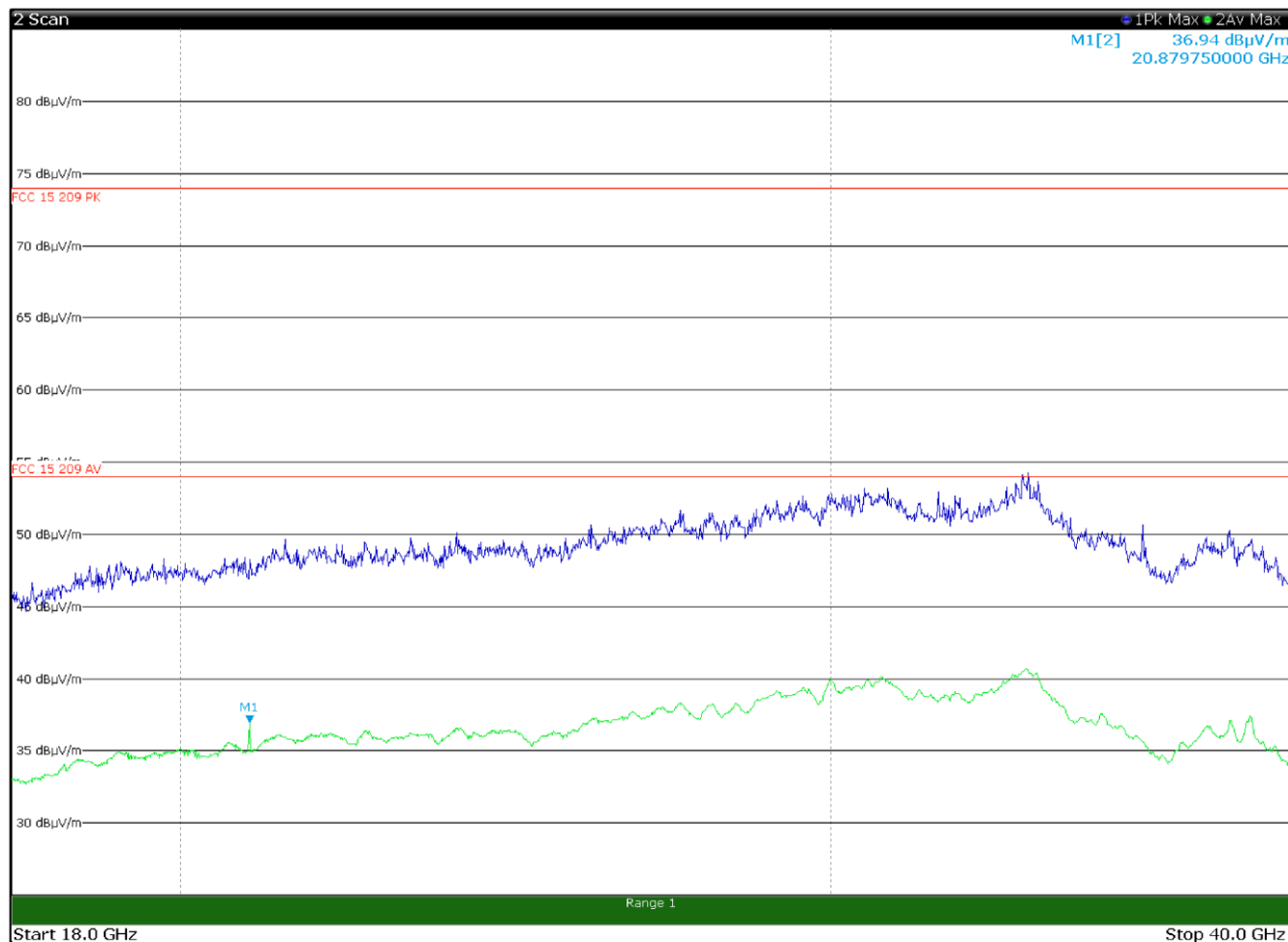
Radiated spurious emissions with antenna in horizontal polarization and with
LTE Tx at 1732.5 MHz, UHF Tx at 915 MHz, WIFI Tx at 5220 MHz and BT Tx at 2441 MHz (antenna configuration 2)

8.1.4 Test data, continued



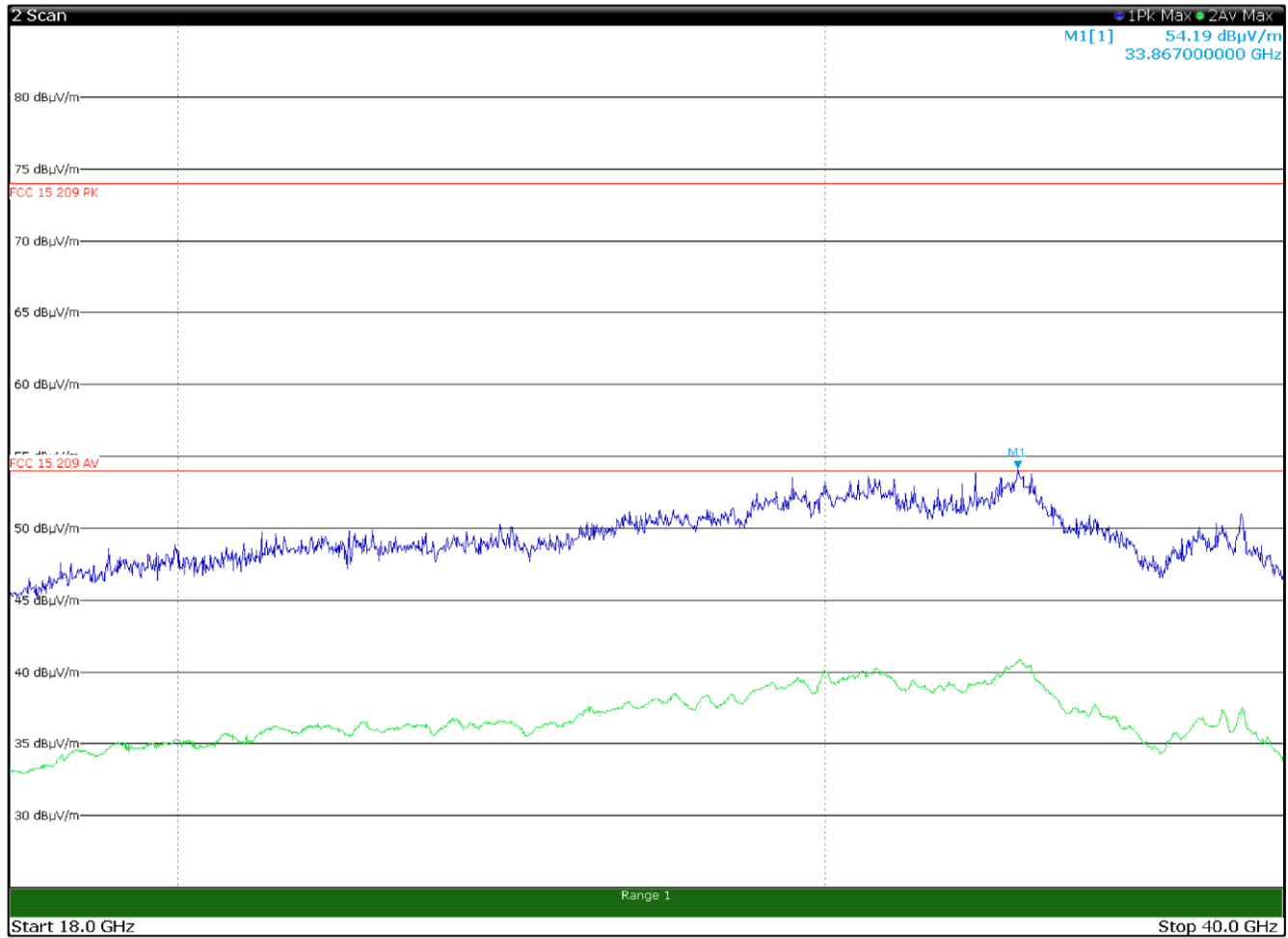
Radiated spurious emissions with antenna in vertical polarization and with
LTE Tx at 1732.5 MHz, UHF Tx at 915 MHz, WIFI Tx at 5220 MHz and BT Tx at 2441 MHz (antenna configuration 2)

8.1.4 Test data, continued



Radiated spurious emissions with antenna in horizontal polarization and with
 LTE Tx at 1732.5 MHz, UHF Tx at 915 MHz, WIFI Tx at 5220 MHz and BT Tx at 2441 MHz (antenna configuration 2)

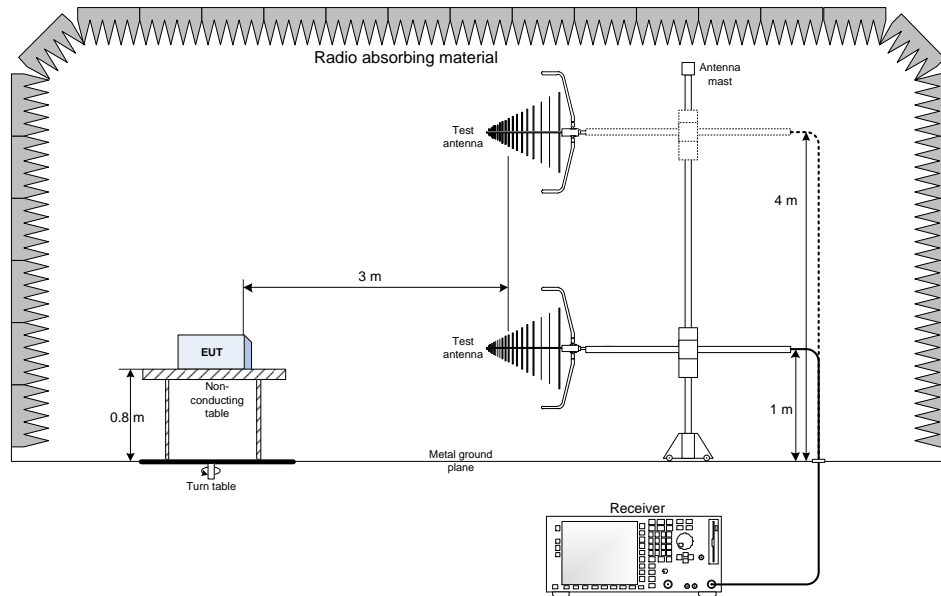
8.1.4 Test data, continued



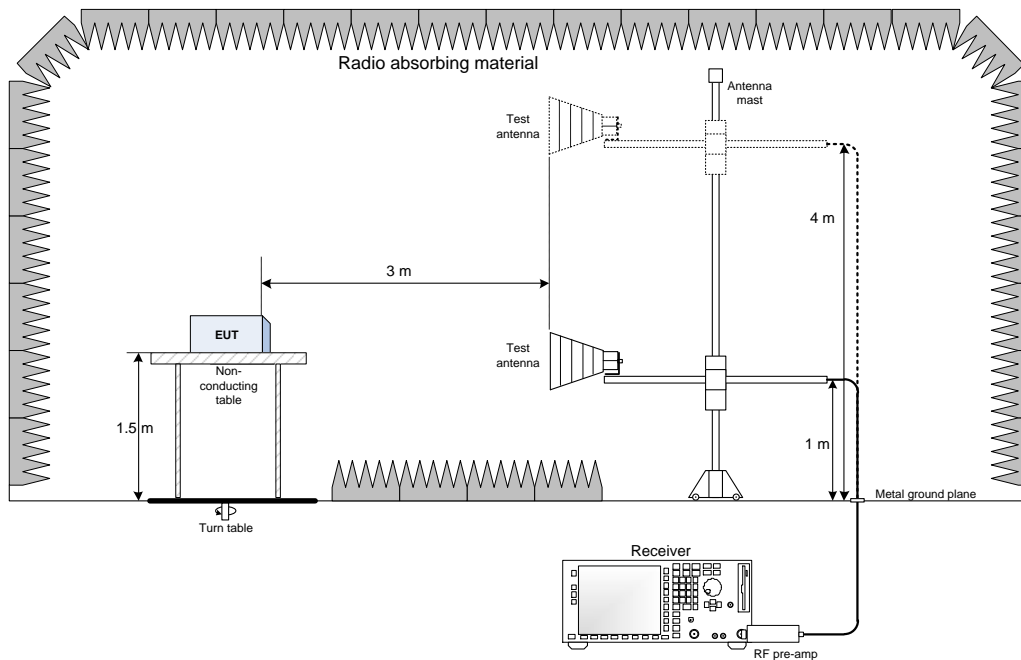
Radiated spurious emissions with antenna in vertical polarization and with
LTE Tx at 1732.5 MHz, UHF Tx at 915 MHz, WIFI Tx at 5220 MHz and BT Tx at 2441 MHz (antenna configuration 2)

Section 9. Block diagrams of test set-ups

9.1 Radiated emissions set-up for frequencies below 1 GHz



9.2 Radiated emissions set-up for frequencies above 1 GHz

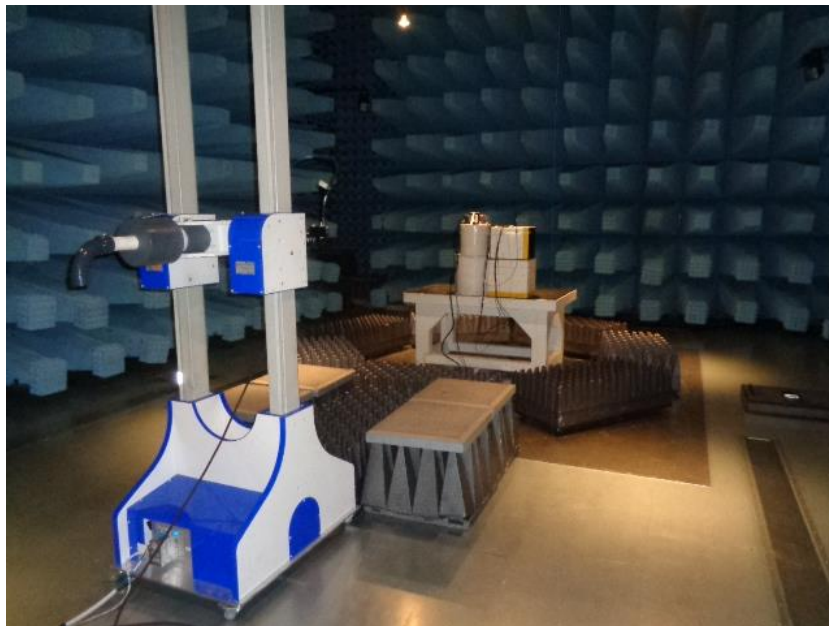


Section 10. Photos

10.1 Photos of the test set-up



Radiated emission below 1 GHz



Radiated emission above 1 GHz

10.2 Photos of the EUT



CL-55 LTE VZW+RADIO (front)

CL-55 LTE VZW+RADIO (rear; with draft label)
(End of report)