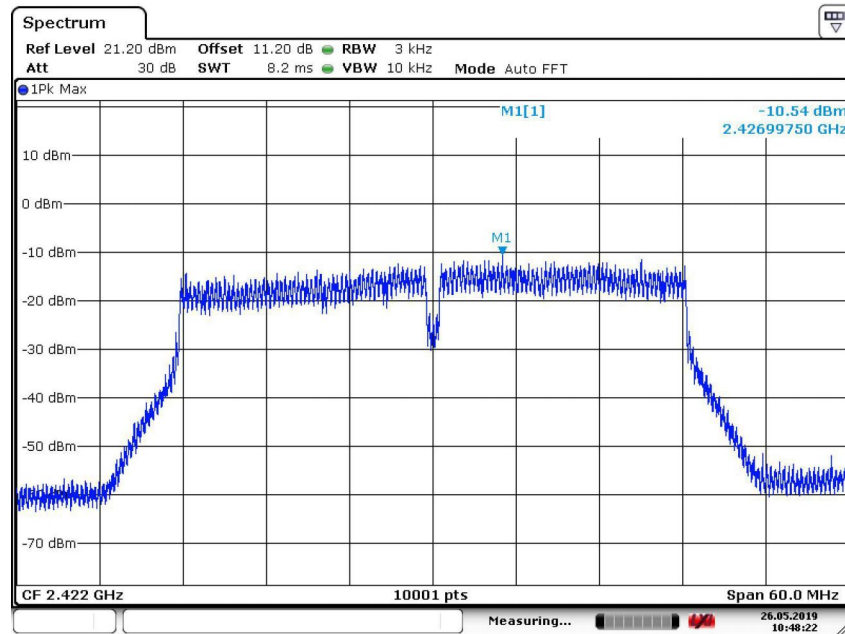


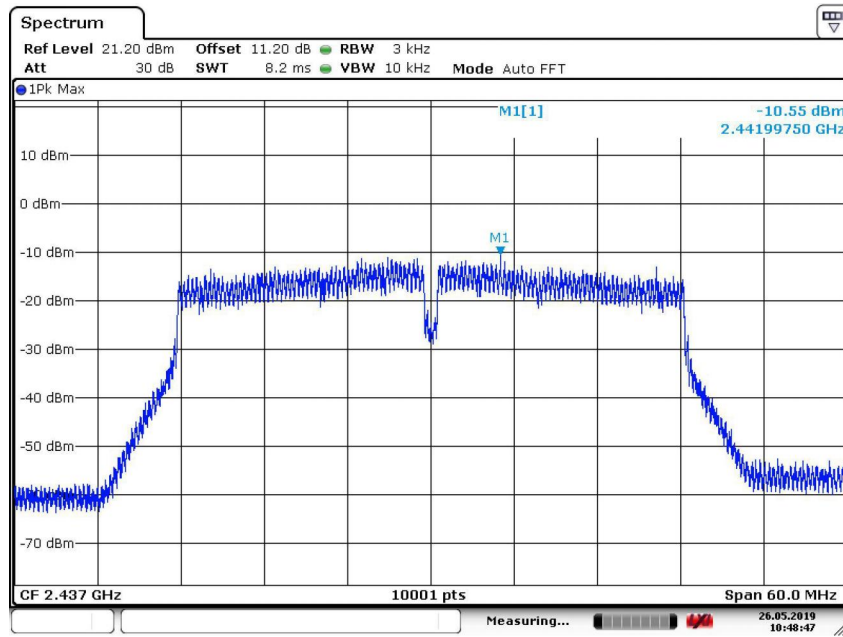
Test Mode: 802.11n (HT40) (MIMO Ant1 + Ant 2)

Carrier frequency (MHz)	Channel No	Power Density (dBm)(Ant1)	Power Density (dBm)(Ant2)	Total Corr'd (dBm)
2422	3	-10.54	-10.26	-7.39
2437	6	-10.55	-11.46	-7.97
2452	9	-11.30	-10.88	-8.07



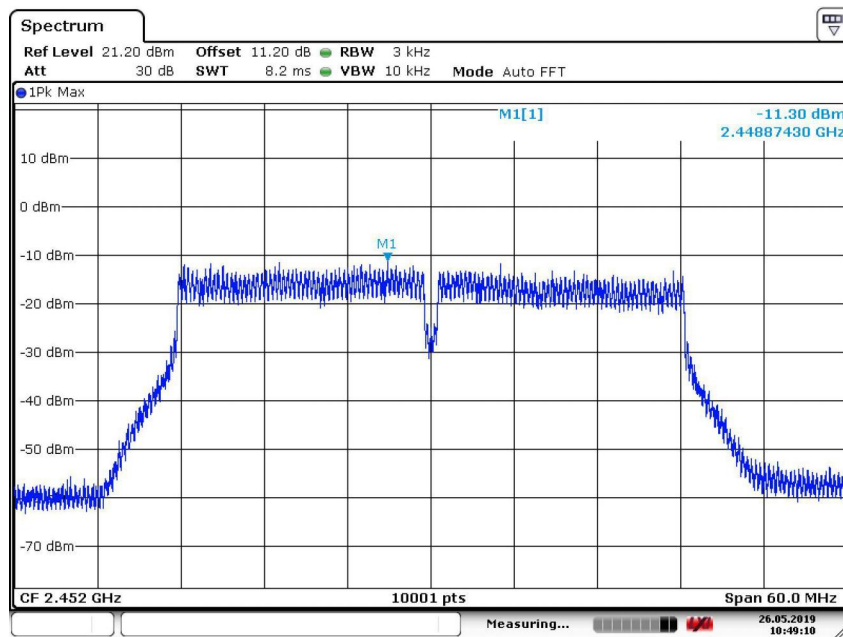
Date: 26.MAY.2019 10:48:22

Carrier frequency (MHz): 2422
Channel No.3
Test Mode: 802.11n (HT40 MIMO Ant1)



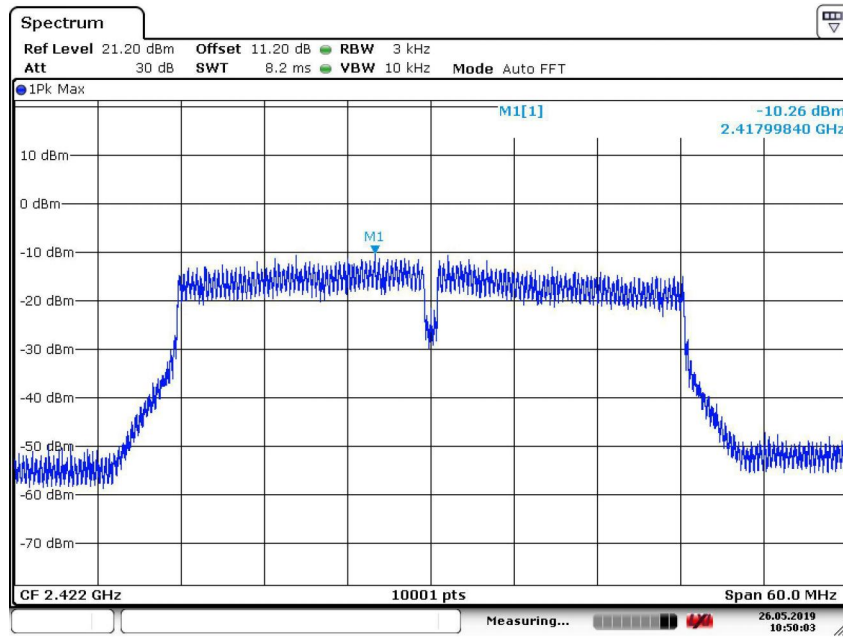
Date: 26.MAY.2019 10:48:47

Carrier frequency (MHz): 2437
 Channel No.6
 Test Mode: 802.11n (HT40 MIMO Ant1)



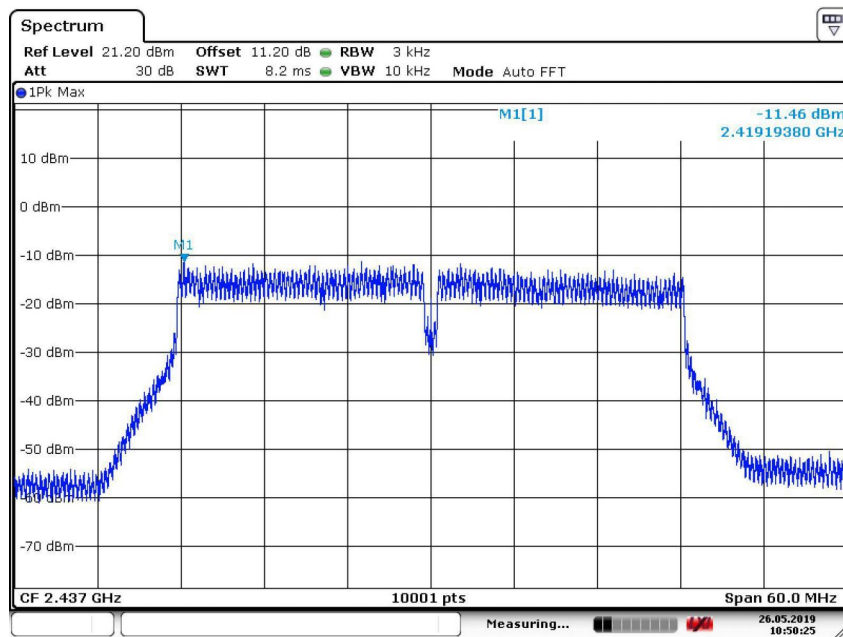
Date: 26.MAY.2019 10:49:10

Carrier frequency (MHz): 2452
 Channel No.9
 Test Mode: 802.11n (HT40 MIMO Ant1)



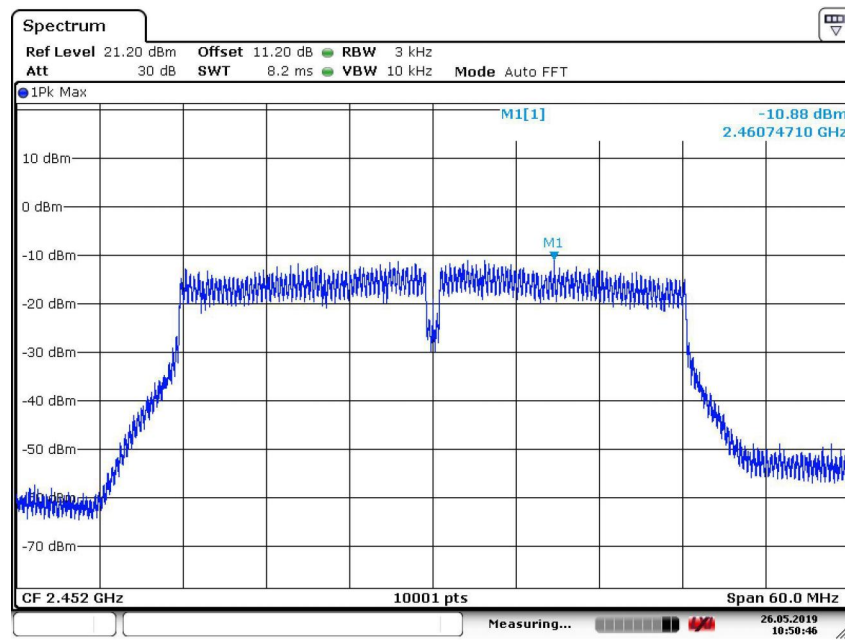
Date: 26.MAY.2019 10:50:03

Carrier frequency (MHz): 2422
 Channel No.3
 Test Mode: 802.11n (HT40 MIMO Ant2)



Date: 26.MAY.2019 10:50:24

Carrier frequency (MHz): 2437
 Channel No.6
 Test Mode: 802.11n (HT40 MIMO Ant2)



Date: 26.MAY.2019 10:50:46

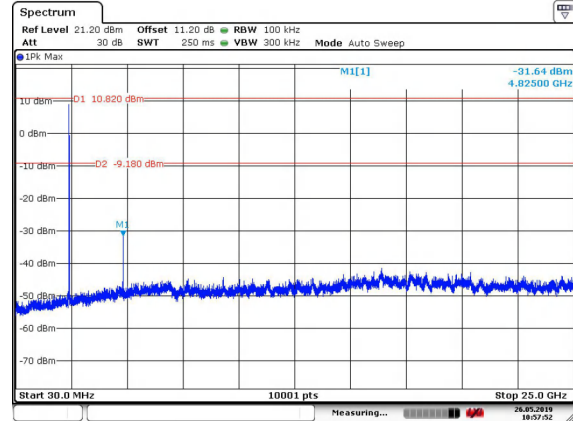
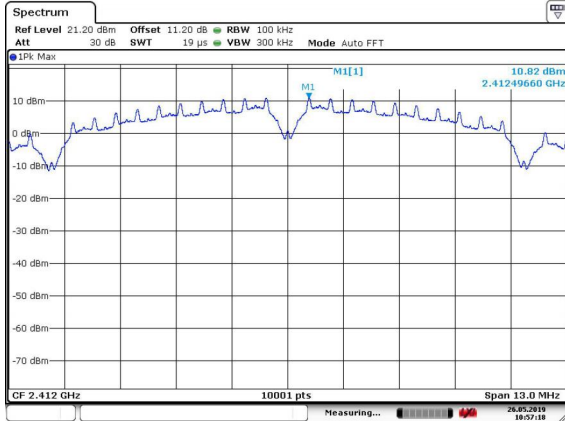
Carrier frequency (MHz): 2452
 Channel No.9
 Test Mode: 802.11n (HT40 MIMO Ant2)

Conducted Out of band emission measurement

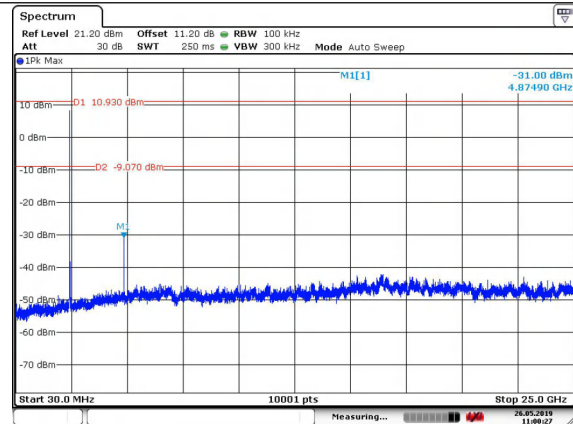
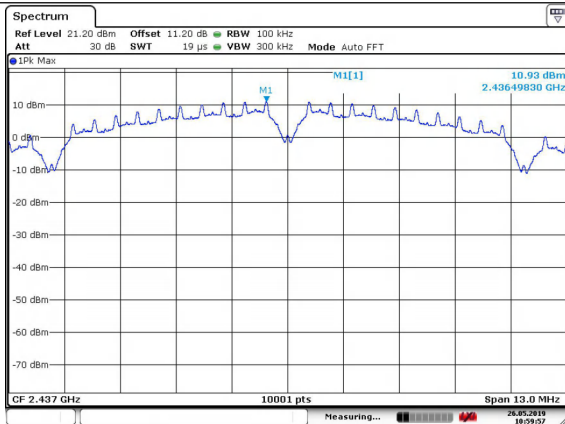
Offset 11.2dB = Attenuator 10dB+ Temporary antenna connector loss 0.2dB+ Cable loss 1.0dB

802.11b (SISO Ant2)

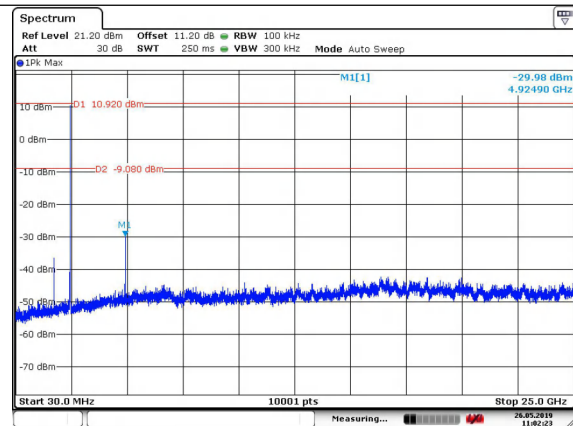
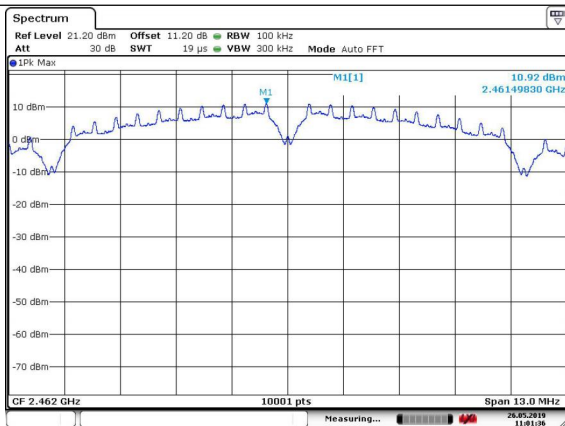
CH1



CH6

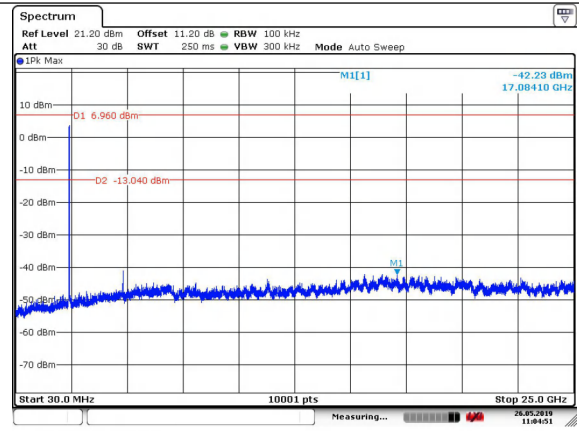
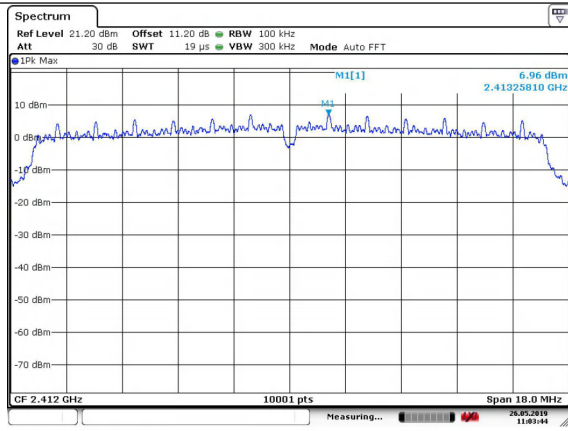


CH11

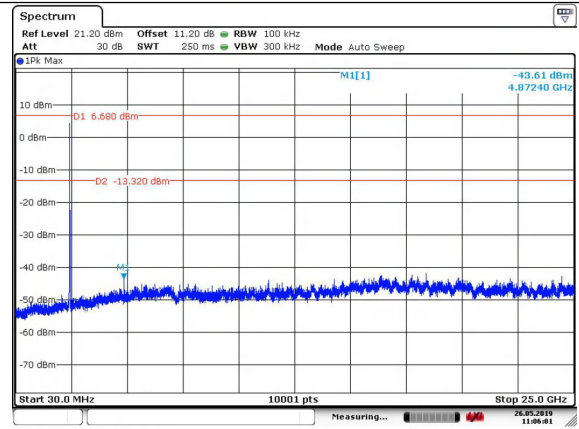
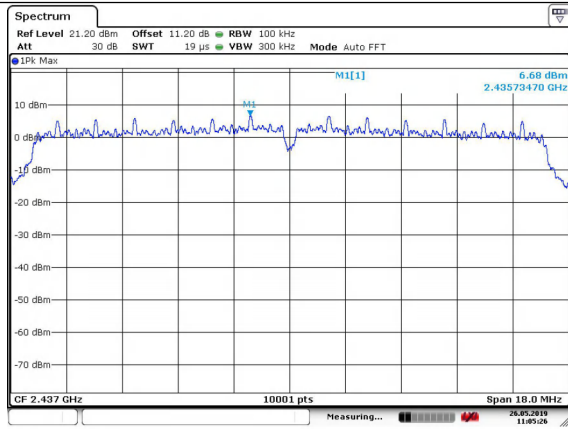


802.11g (SISO Ant2)

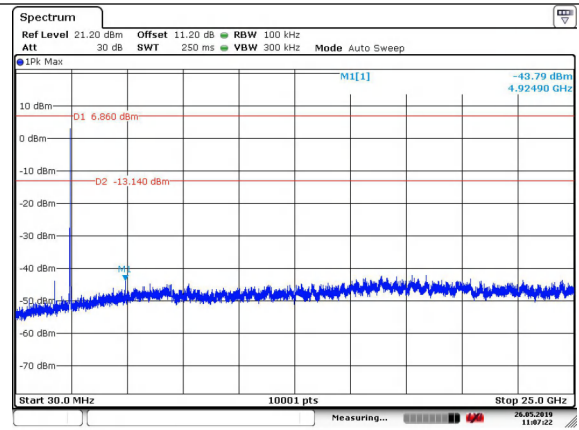
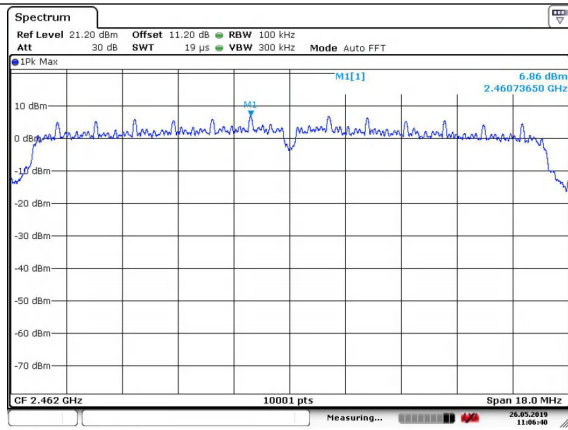
CH1



CH6

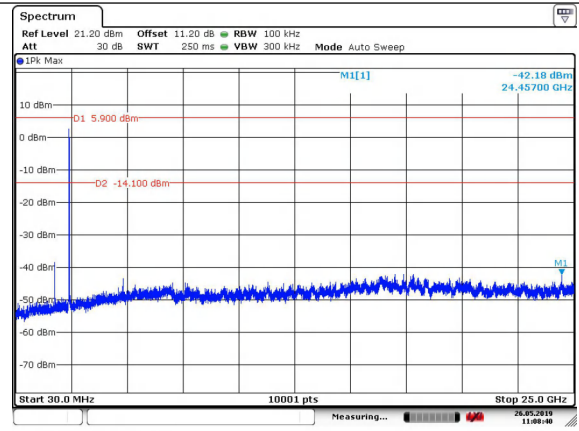
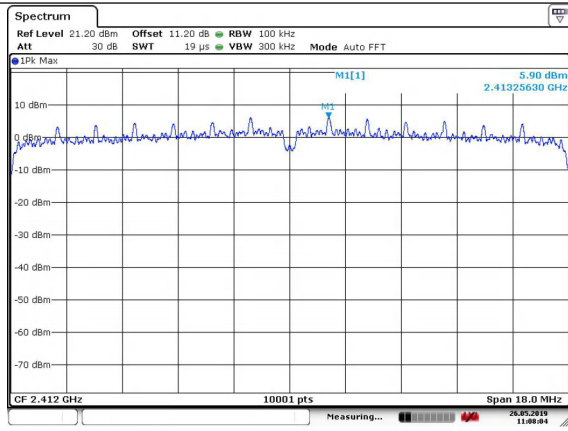


CH11

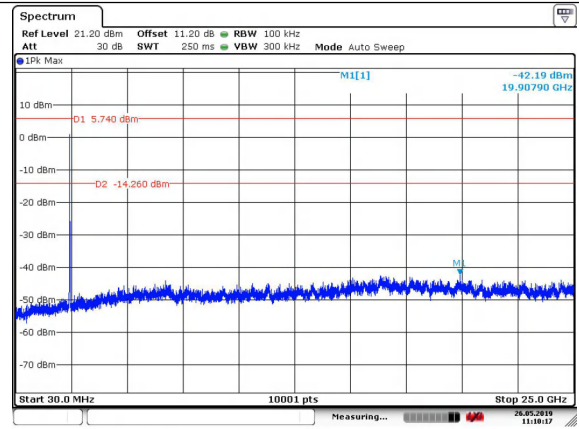
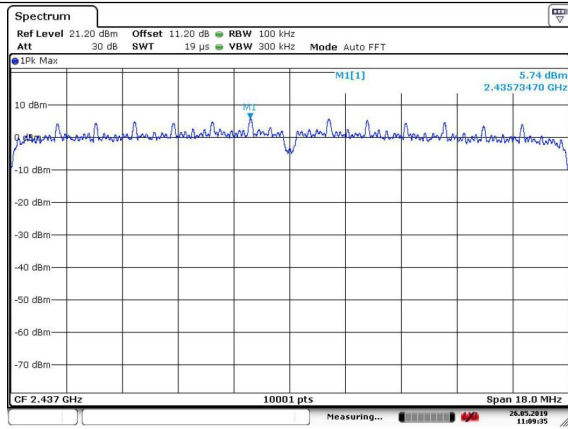


802.11n (20MHz) (SISO Ant2)

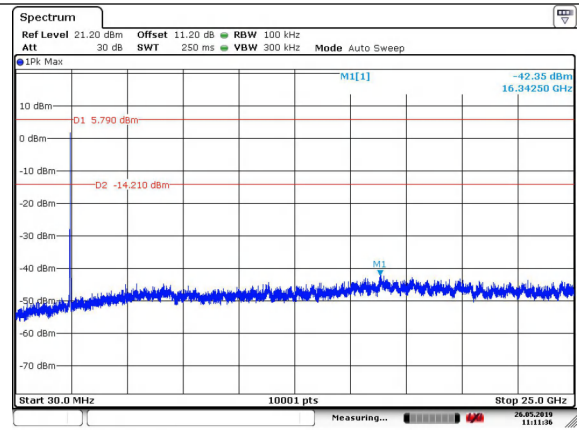
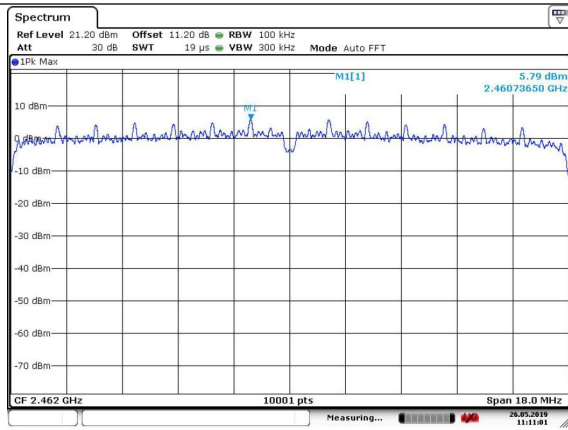
CH1



CH6

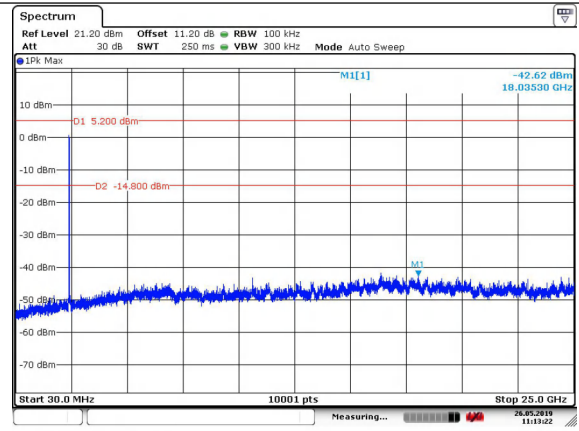
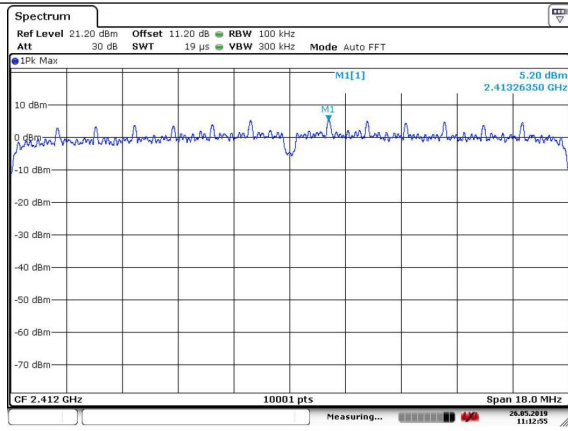


CH11

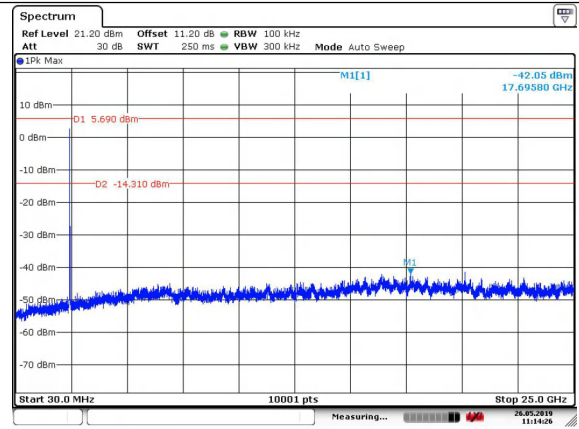
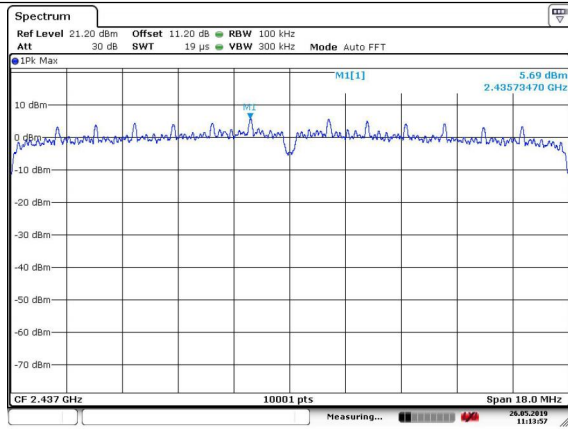


802.11n (20MHz) (MIMO Ant1)

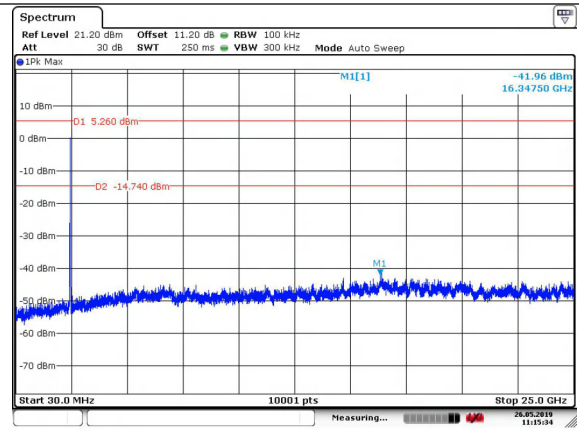
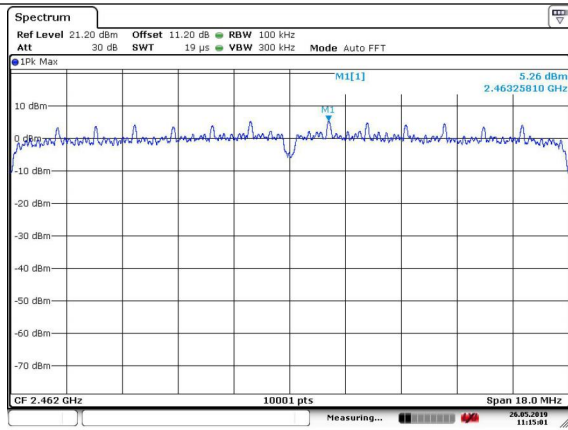
CH1



CH6

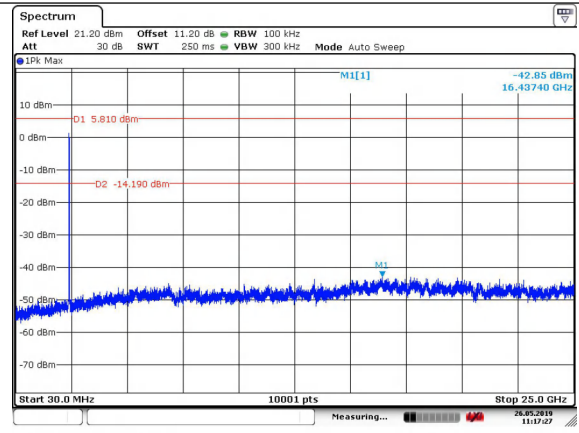
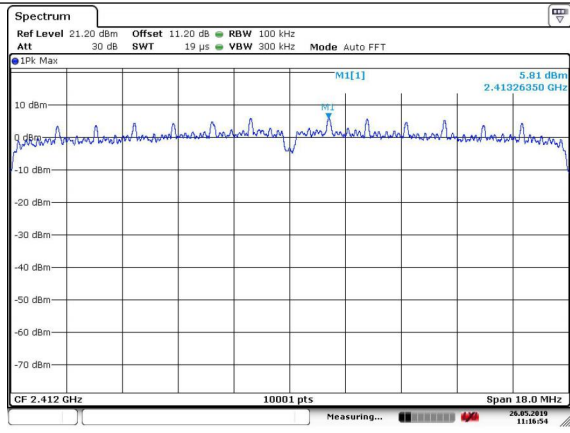


CH11

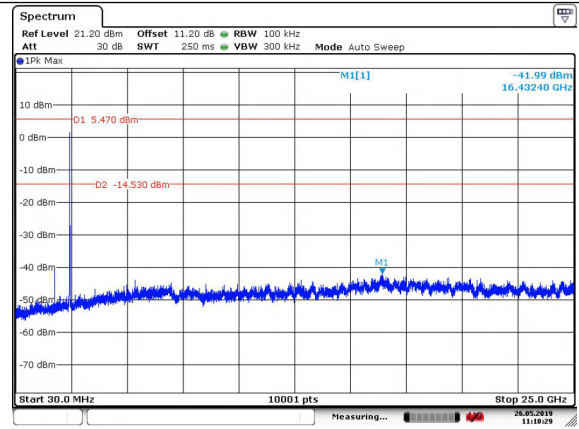
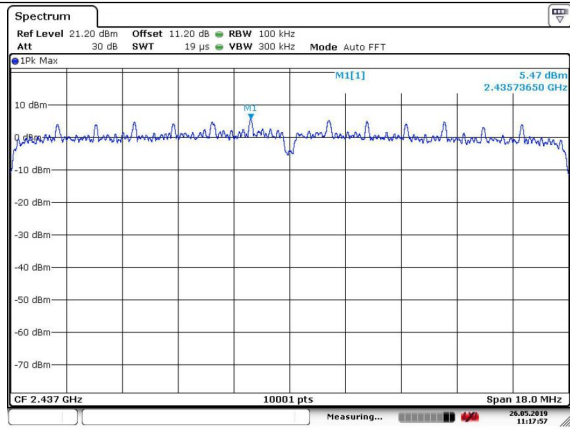


802.11n (20MHz) (MIMO Ant2)

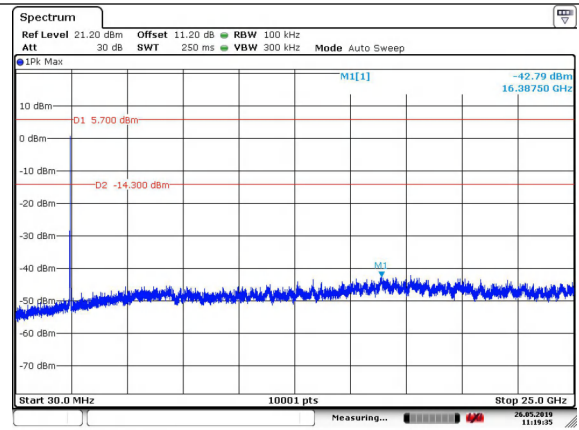
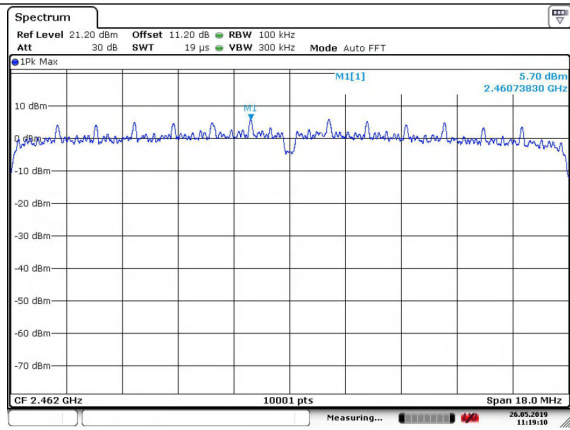
CH1



CH6

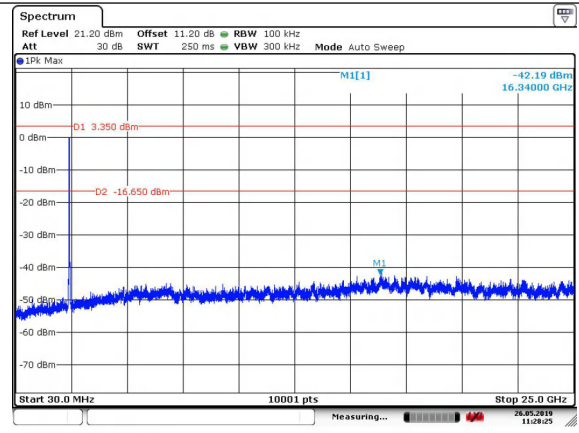
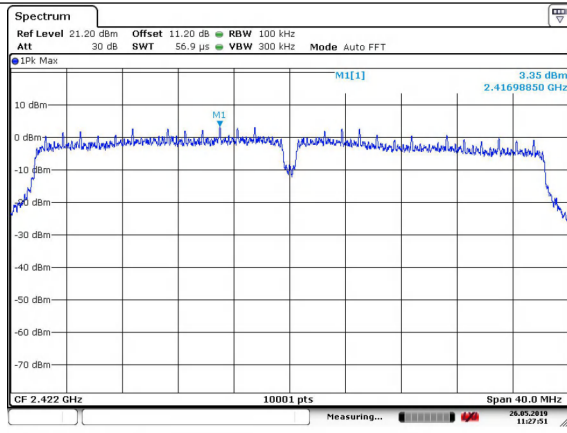


CH11

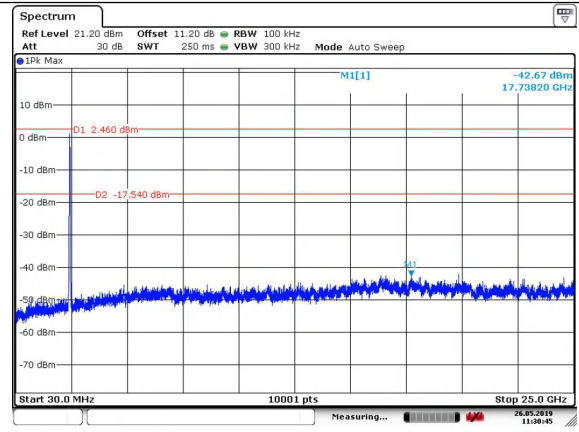
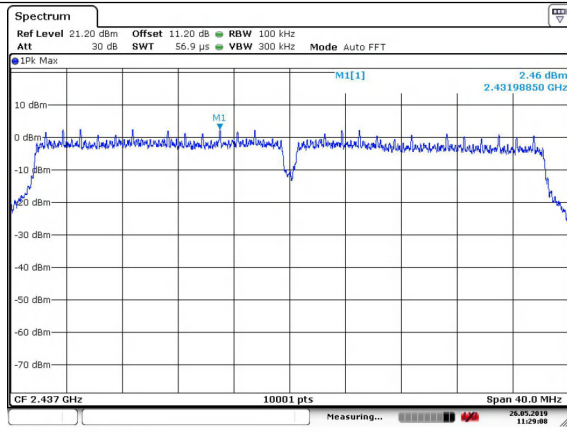


802.11n (40MHz) (SISO Ant2)

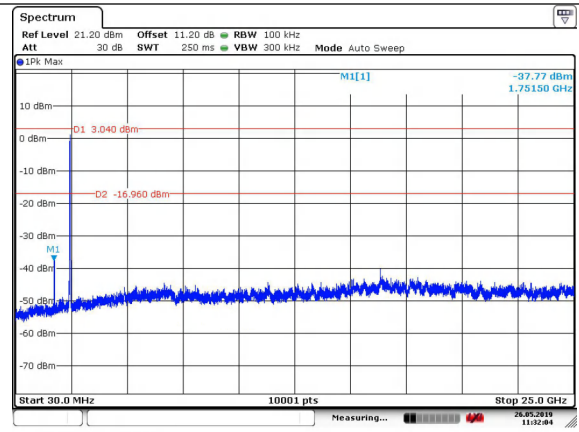
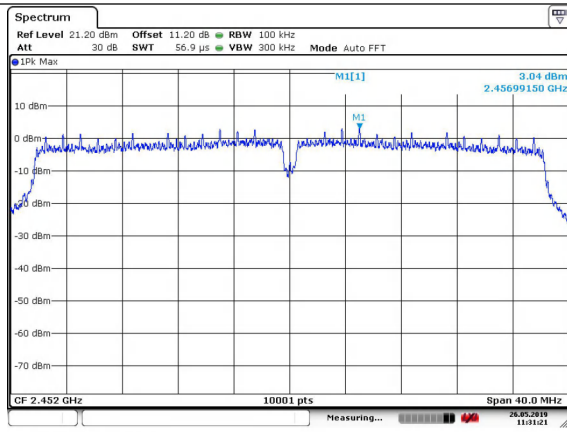
CH3



CH6

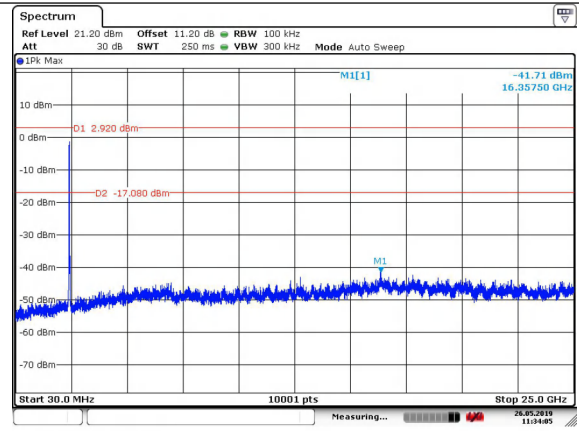
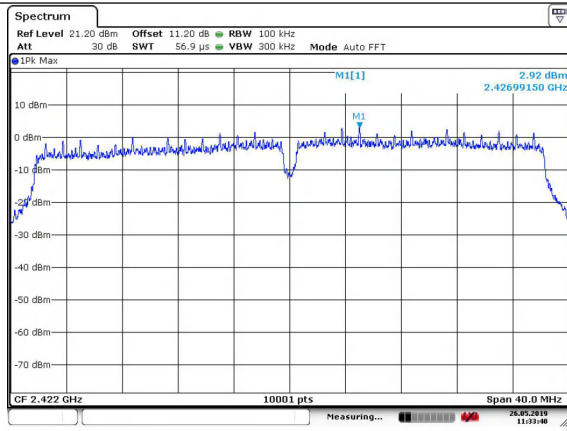


CH9

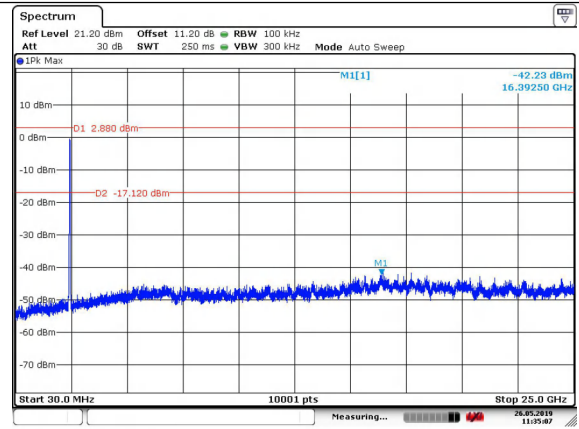
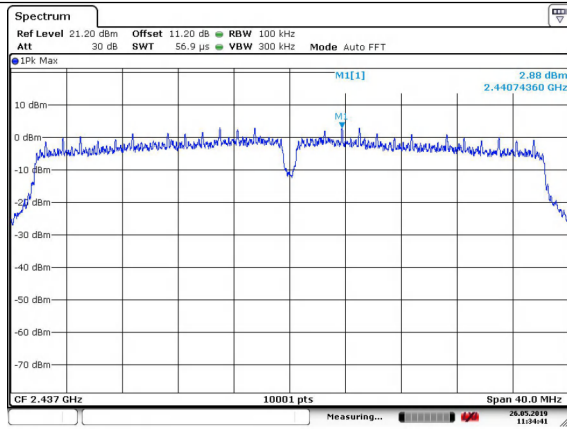


802.11n (40MHz) (MIMO Ant1)

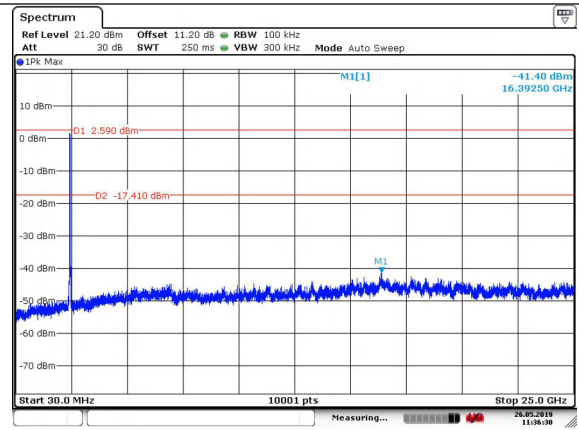
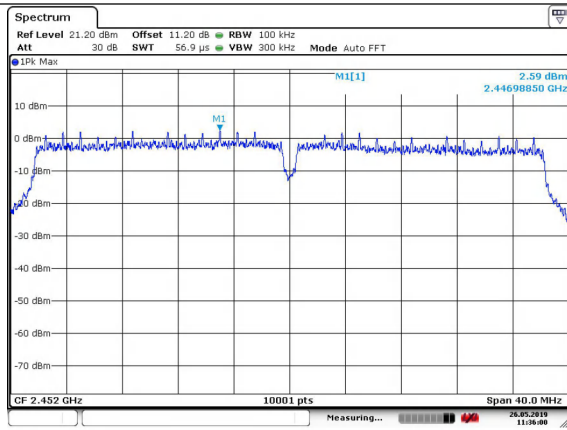
CH3



CH6

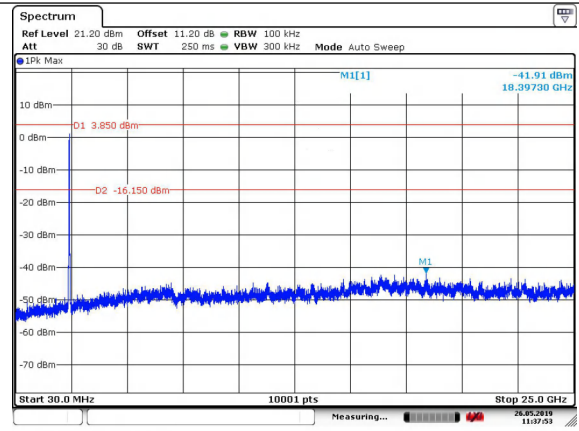
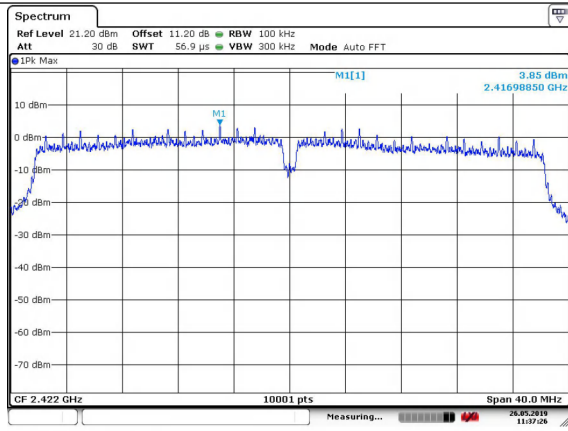


CH9



802.11n (40MHz) (MIMO Ant2)

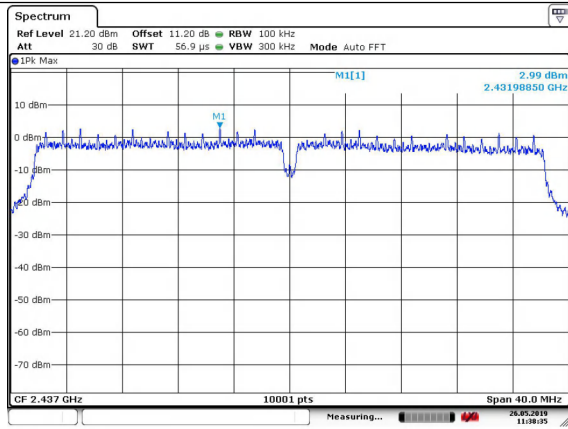
CH3



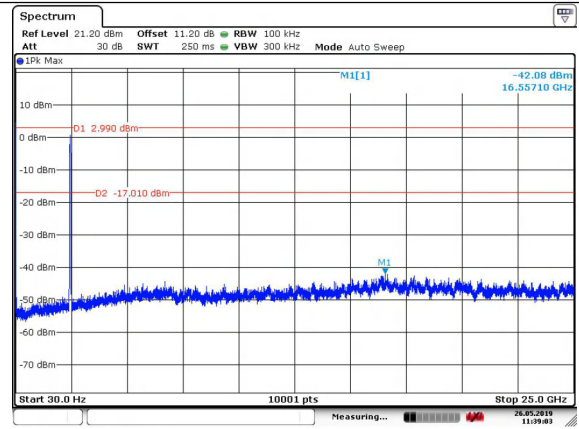
Date: 26.MAY.2019 11:37:26

Date: 26.MAY.2019 11:37:52

CH6

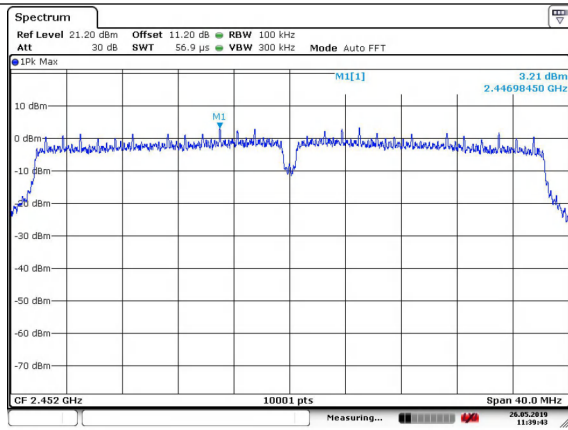


Date: 26.MAY.2019 11:38:04

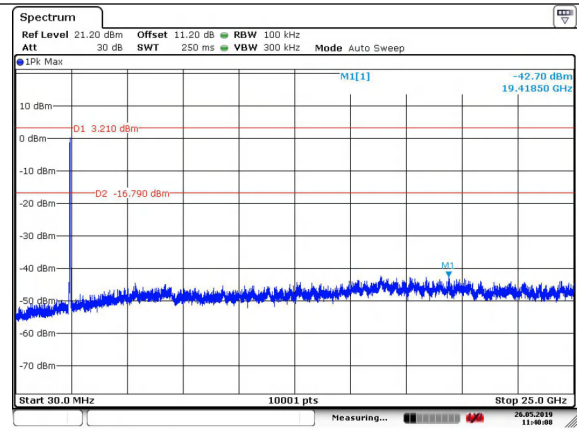


Date: 26.MAY.2019 11:38:02

CH9



Date: 26.MAY.2019 11:39:43



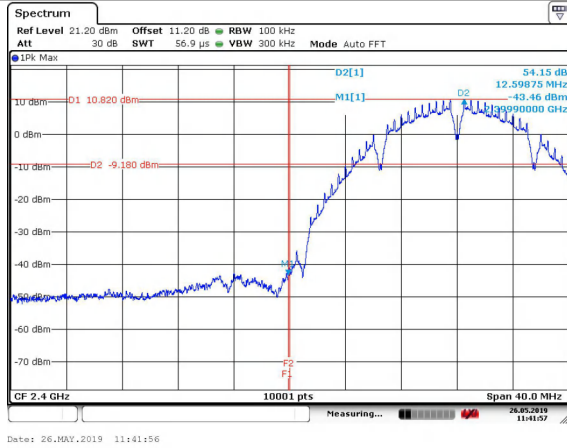
Date: 26.MAY.2019 11:40:07

Band edge measurement (RF Conducted measurement)

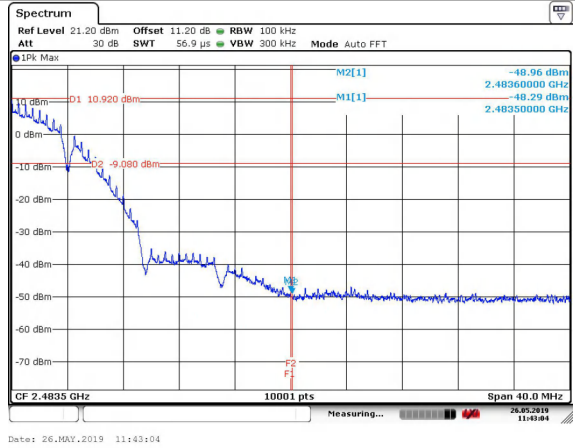
Offset 11.2dB = Attenuator 10dB+ Temporary antenna connector loss 0.2dB+ Cable loss 1.0dB

802.11b (SISO Ant2)

CH1

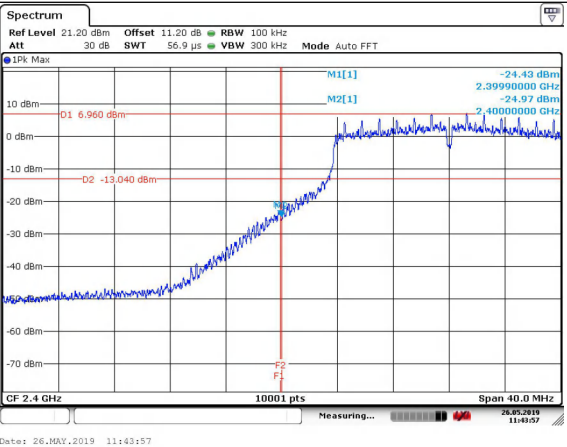


CH11

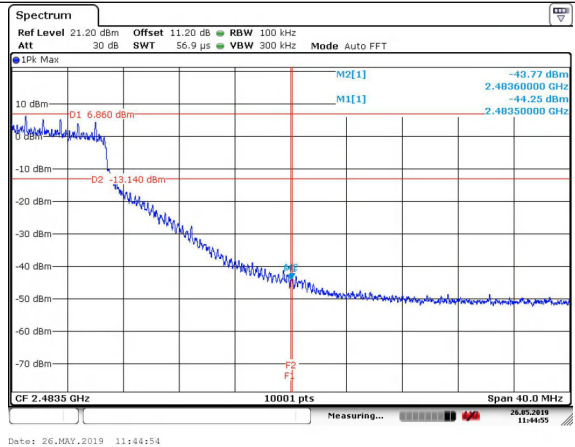


802.11g (SISO Ant2)

CH1

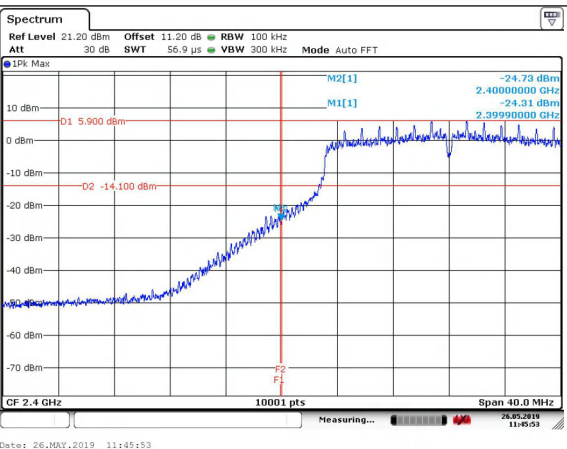


CH11

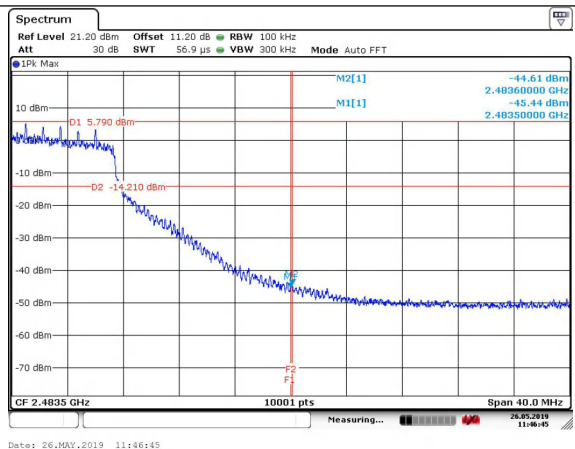


802.11n (20MHz) (SISO Ant2)

CH1

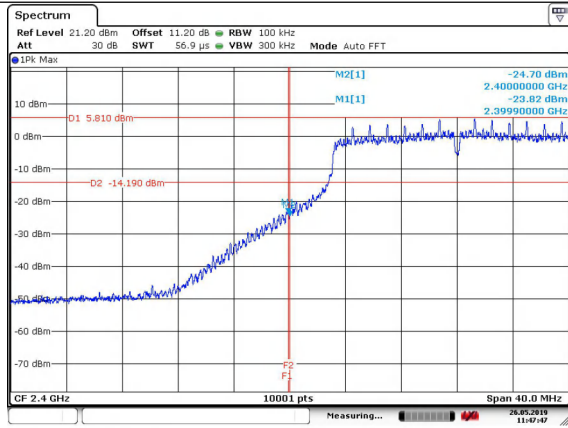


CH11



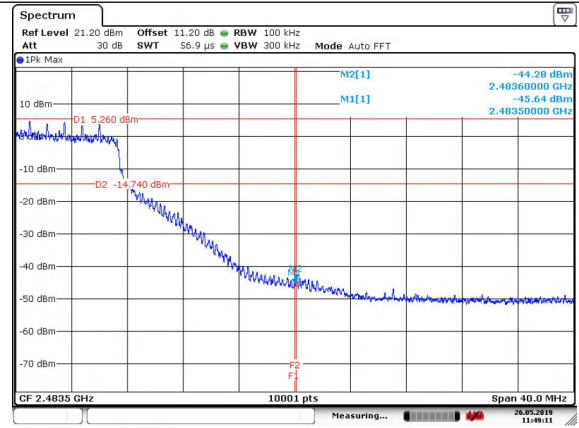
802.11n (20MHz)(MIMO Ant1)

CH1



Date: 26.MAY.2019 11:47:46

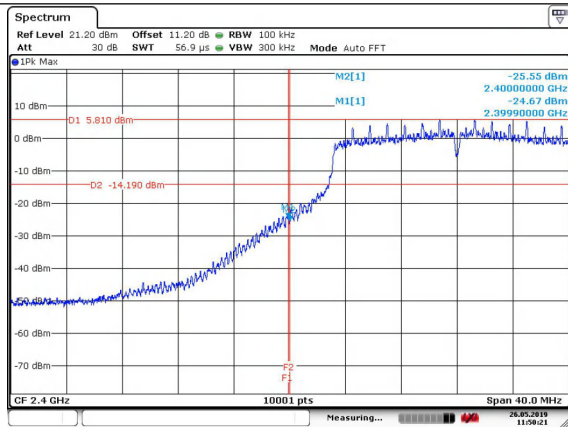
CH11



Date: 26.MAY.2019 11:49:10

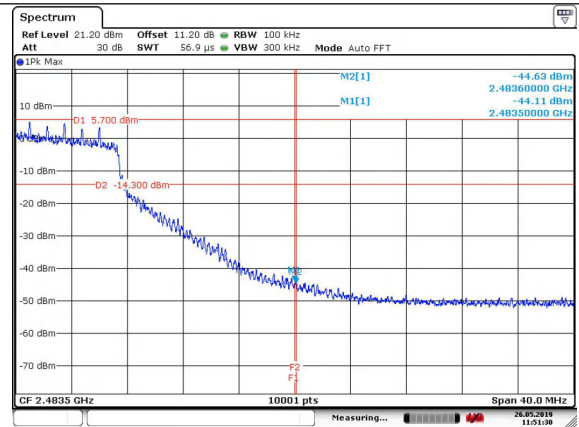
802.11n (20MHz) (MIMO Ant2)

CH1



Date: 26.MAY.2019 11:50:20

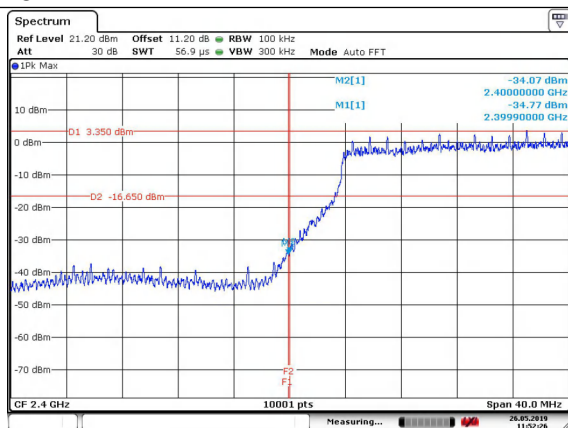
CH11



Date: 26.MAY.2019 11:51:29

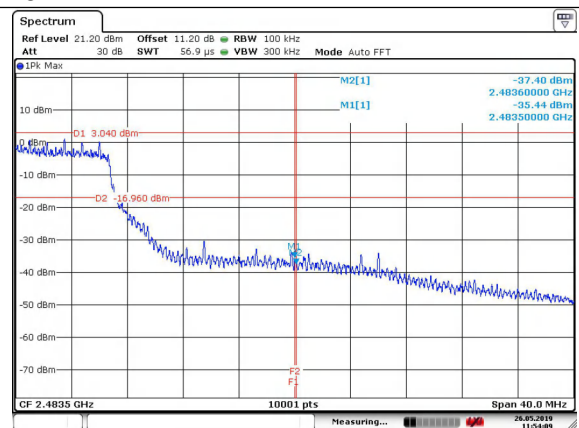
802.11n (40MHz) (SISO Ant2)

CH3



Date: 26.MAY.2019 11:52:25

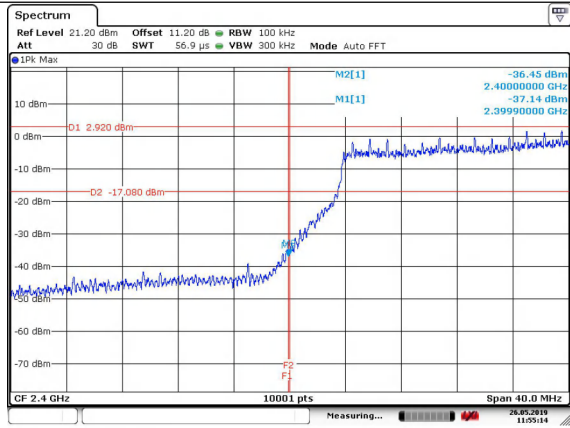
CH9



Date: 26.MAY.2019 11:54:08

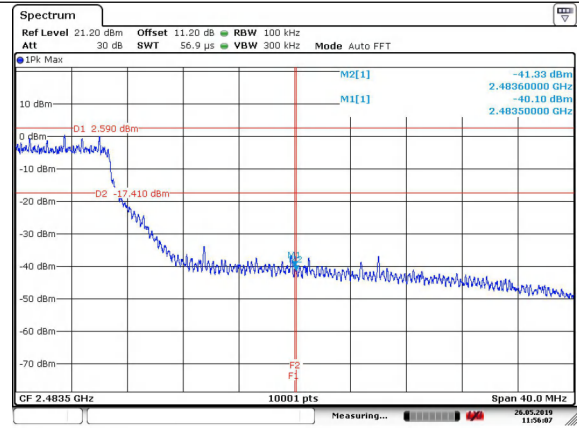
802.11n (40MHz)(MIMO Ant1)

CH3



Date: 26.MAY.2019 11:55:13

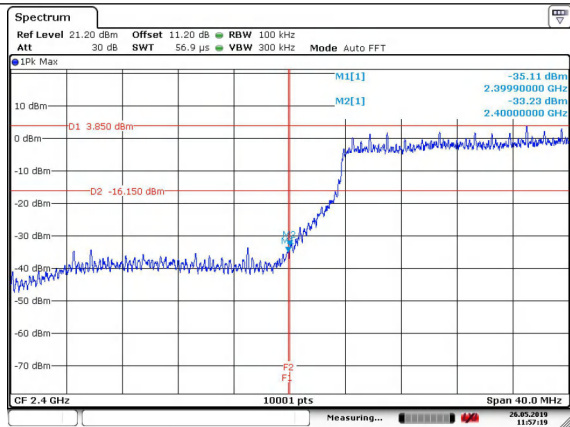
CH9



Date: 26.MAY.2019 11:56:06

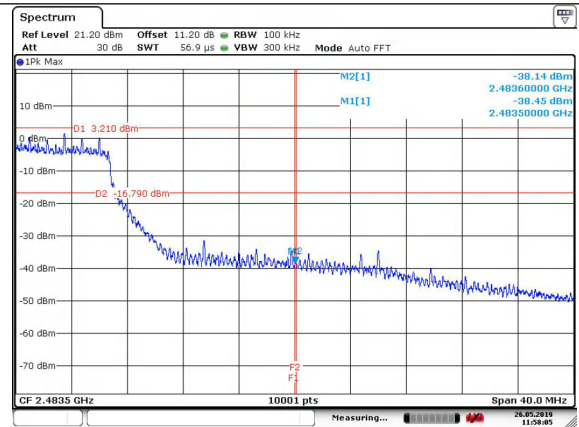
802.11n (40MHz) (MIMO Ant2)

CH3



Date: 26.MAY.2019 11:57:18

CH9



Date: 26.MAY.2019 11:58:04

APPENDIX B – TEST DATA OF RADIATED EMISSION

Radiated Emission Band Edge

The worst case attitude: The mobile lay down. MIMO Ant1+Ant2

For Test Mode: 802.11b and 802.11g, The worst case was emitted by Ant1.

For Test Mode: 802.11n(HT20) and 802.11n(HT40), The worst case was emitted by MIMO.

The measurement results are obtained as described below:

Measure Level = Reading Level + cable loss + antenna factor

Sample calculation: (99.44 dBuV/m) = (65.44 dB μ V) + (8.90 dB) + (25.10 dB), the corresponding frequency is 2412MHz.

Carrier frequency (MHz): 2412

Channel No.:1

Test Mode: 802.11b

Polarity:Vertical

Detector: Peak

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (dB)
1	2412	104.38	70.38	N/A	N/A	8.90	25.10
2	2390	50.36	16.36	-23.64	74.00	8.90	25.10

Carrier frequency (MHz): 2412

Channel No.:1

Test Mode: 802.11b

Polarity:Horizontal

Detector: Peak

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (dB)
1	2412	100.36	66.36	N/A	N/A	8.90	25.10
2	2390	46.71	12.71	-27.29	74.00	8.90	25.10

Carrier frequency (MHz): 2412

Channel No.:1

Test Mode: 802.11b

Polarity:Vertical

Detector: Average

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (dB)
1	2412	92.02	58.02	N/A	N/A	8.90	25.10
2	2390	42.09	8.09	-11.91	54.00	8.90	25.10

Carrier frequency (MHz): 2412
Channel No.:1
Test Mode: 802.11b
Polarity:Horizontal
Detector: Average

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (dB)
1	2412	90.31	56.31	N/A	N/A	8.90	25.10
2	2390	41.15	7.15	-12.85	54.00	8.90	25.10

Carrier frequency (MHz): 2462
Channel No.:11
Test Mode: 802.11b
Polarity:Vertical
Detector: Peak

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (dB)
1	2462	103.68	69.68	N/A	N/A	8.90	25.10
2	2483.5	51.08	17.08	-22.92	74.00	8.90	25.10

Carrier frequency (MHz): 2462
Channel No.:11
Test Mode: 802.11b
Polarity:Horizontal
Detector: Peak

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (dB)
1	2462	98.73	64.73	N/A	N/A	8.90	25.10
2	2483.5	44.37	10.37	-29.63	74.00	8.90	25.10

Carrier frequency (MHz): 2462
Channel No.:11
Test Mode: 802.11b
Polarity:Vertical
Detector: Average

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (dB)
1	2462	95.34	61.34	N/A	N/A	8.90	25.10
2	2483.5	39.75	5.75	-14.25	54.00	8.90	25.10

Carrier frequency (MHz): 2462
Channel No.:11
Test Mode: 802.11b
Polarity:Horizontal
Detector: Average

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (dB)
1	2462	91.21	57.21	N/A	N/A	8.90	25.10
2	2483.5	39.57	5.57	-14.43	54.00	8.90	25.10

Carrier frequency (MHz): 2412
Channel No.:1
Test Mode: 802.11g
Polarity: Vertical
Detector: Peak

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (dB)
1	2412	103.91	69.91	N/A	N/A	8.90	25.10
2	2390	51.77	17.77	-22.23	74.00	8.90	25.10

Carrier frequency (MHz): 2412
Channel No.:1
Test Mode: 802.11g
Polarity:Horizontal
Detector: Peak

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (dB)
1	2412	96.80	62.80	N/A	N/A	8.90	25.10
2	2390	44.20	10.20	-29.80	74.00	8.90	25.10

Carrier frequency (MHz): 2412
Channel No.:1
Test Mode: 802.11g
Polarity: Vertical
Detector: Average

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (dB)
1	2412	93.58	59.58	N/A	N/A	8.90	25.10
2	2390	40.85	6.85	-13.15	54.00	8.90	25.10

Carrier frequency (MHz): 2412
Channel No.:1
Test Mode: 802.11g
Polarity:Horizontal
Detector: Average

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuv/m)	cable loss (dB)	antenna factor (dB)
1	2412	87.56	53.56	N/A	N/A	8.90	25.10
2	2390	40.49	6.49	-13.51	54.00	8.90	25.10

Carrier frequency (MHz): 2462
Channel No.:11
Test Mode: 802.11g
Polarity: Vertical
Detector: Peak

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuv/m)	cable loss (dB)	antenna factor (dB)
1	2462	103.33	69.33	N/A	N/A	8.90	25.10
2	2483.5	52.02	18.02	-21.98	74.00	8.90	25.10

Carrier frequency (MHz): 2462
Channel No.:11
Test Mode: 802.11g
Polarity:Horizontal
Detector: Peak

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuv/m)	cable loss (dB)	antenna factor (dB)
1	2462	100.40	66.40	N/A	N/A	8.90	25.10
2	2483.5	45.37	11.37	-28.63	74.00	8.90	25.10

Carrier frequency (MHz): 2462
Channel No.:11
Test Mode: 802.11g
Polarity: Vertical
Detector: Average

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuv/m)	cable loss (dB)	antenna factor (dB)
1	2462	92.08	58.08	N/A	N/A	8.90	25.10
2	2483.5	41.21	7.21	-12.79	54.00	8.90	25.10

Carrier frequency (MHz): 2462
Channel No.:11
Test Mode: 802.11g
Polarity:Horizontal
Detector: Average

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (dB)
1	2462	89.63	55.63	N/A	N/A	8.90	25.10
2	2483.5	40.86	6.86	-13.14	54.00	8.90	25.10

Carrier frequency (MHz): 2412
Channel No.:1
Test Mode: 802.11n(HT20)
Polarity: Vertical
Detector: Peak

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (dB)
1	2412	104.58	70.58	N/A	N/A	8.90	25.10
2	2390	51.99	17.99	-22.01	74.00	8.90	25.10

Carrier frequency (MHz): 2412
Channel No.:1
Test Mode: 802.11n(HT20 MIMO)
Polarity:Horizontal
Detector: Peak

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (dB)
1	2412	97.03	63.03	N/A	N/A	8.90	25.10
2	2390	44.03	10.03	-29.97	74.00	8.90	25.10

Carrier frequency (MHz): 2412
Channel No.:1
Test Mode: 802.11n(HT20 MIMO)
Polarity: Vertical
Detector: Average

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (dB)
1	2412	92.65	58.65	N/A	N/A	8.90	25.10
2	2390	39.61	5.61	-14.39	54.00	8.90	25.10

Carrier frequency (MHz): 2412
Channel No.:1
Test Mode: 802.11n(HT20 MIMO)
Polarity:Horizontal
Detector: Average

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (dB)
1	2412	88.14	54.14	N/A	N/A	8.90	25.10
2	2390	39.11	5.11	-14.89	54.00	8.90	25.10

Carrier frequency (MHz): 2462
Channel No.:11
Test Mode: 802.11n(HT20 MIMO)
Polarity: Vertical
Detector: Peak

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (dB)
1	2462	104.59	70.59	N/A	N/A	8.90	25.10
2	2483.5	50.88	16.88	-23.12	74.00	8.90	25.10

Carrier frequency (MHz): 2462
Channel No.:11
Test Mode: 802.11n(HT20 MIMO)
Polarity:Horizontal
Detector: Peak

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (dB)
1	2462	99.50	65.50	N/A	N/A	8.90	25.10
2	2483.5	45.32	11.32	-28.68	74.00	8.90	25.10

Carrier frequency (MHz): 2462
Channel No.:11
Test Mode: 802.11n(HT20 MIMO)
Polarity: Vertical
Detector: Average

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (dB)
1	2462	94.63	60.63	N/A	N/A	8.90	25.10
2	2483.5	41.42	7.42	-12.58	54.00	8.90	25.10

Carrier frequency (MHz): 2462
Channel No.:11
Test Mode: 802.11n(HT20 MIMO)
Polarity:Horizontal
Detector: Average

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (dB)
1	2462	88.93	54.93	N/A	N/A	8.90	25.10
2	2483.5	41.06	7.06	-12.94	54.00	8.90	25.10

Carrier frequency (MHz): 2422
Channel No.:1
Test Mode: 802.11n(HT40 MIMO)
Polarity: Vertical
Detector: Peak

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (dB)
1	2422	102.56	68.56	N/A	N/A	8.90	25.10
2	2390	51.30	17.30	-22.70	74.00	8.90	25.10

Carrier frequency (MHz): 2422
Channel No.:1
Test Mode: 802.11n(HT40 MIMO)
Polarity:Horizontal
Detector: Peak

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (dB)
1	2422	97.85	63.85	N/A	N/A	8.90	25.10
2	2390	47.04	13.04	-26.96	74.00	8.90	25.10

Carrier frequency (MHz): 2422
Channel No.:1
Test Mode: 802.11n(HT40 MIMO)
Polarity: Vertical
Detector: Average

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (dB)
1	2422	93.84	59.84	N/A	N/A	8.90	25.10
2	2390	38.68	4.68	-15.32	54.00	8.90	25.10

Carrier frequency (MHz): 2422
Channel No.:1
Test Mode: 802.11n(HT40 MIMO)
Polarity:Horizontal
Detector: Average

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (dB)
1	2422	91.30	57.30	N/A	N/A	8.90	25.10
2	2390	37.90	3.90	-16.10	54.00	8.90	25.10

Carrier frequency (MHz): 2452
Channel No.:11
Test Mode: 802.11n(HT40 MIMO)
Polarity: Vertical
Detector: Peak

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (dB)
1	2452	102.67	68.67	N/A	N/A	8.90	25.10
2	2483.5	52.24	18.24	-21.76	74.00	8.90	25.10

Carrier frequency (MHz): 2452
Channel No.:11
Test Mode: 802.11n(HT40 MIMO)
Polarity:Horizontal
Detector: Peak

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (dB)
1	2452	98.70	64.70	N/A	N/A	8.90	25.10
2	2483.5	43.92	9.92	-30.08	74.00	8.90	25.10

Carrier frequency (MHz): 2452
Channel No.:11
Test Mode: 802.11n(HT40 MIMO)
Polarity: Vertical
Detector: Average

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (dB)
1	2452	92.40	58.40	N/A	N/A	8.90	25.10
2	2483.5	39.75	5.75	-14.25	54.00	8.90	25.10

Carrier frequency (MHz): 2452
Channel No.:11
Test Mode: 802.11n(HT40 MIMO)
Polarity:Horizontal
Detector: Average

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (dB)
1	2452	88.37	54.37	N/A	N/A	8.90	25.10
2	2483.5	39.43	5.43	-14.57	54.00	8.90	25.10

Sample Calculations

Determining Spurious Emissions Levels

A “reference path loss” is established and the A_{Rpl} is the attenuation of “reference path loss”, and including the gain of receive antenna, the gain of the preamplifier, the cable loss.

The measurement results are obtained as described below:

$$\text{Result} = P_{\text{mea}} + A_{Rpl}$$

Sample calculation: (15.90 dBuV/m) = (33.6 dBuV) + (-17.7 dB/m), the corresponding frequency is 51.980417MHz.

The worst case attitude: The EUT lay down.

For Test Mode: 802.11b and 802.11g, The worst case was emitted by Ant1.

For Test Mode: 802.11n(HT20) and 802.11n(HT40), The worst case was emitted by MIMO.

For 802.11b Channel No.:1

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)
30.525417	25.2	-21.6	46.8	Vertical	40.00
42.084583	28.37	-18.1	46.47	Vertical	40.00
45.479583	30.81	-17.5	48.31	Vertical	40.00
55.543333	20.7	-18	38.7	Vertical	40.00
58.655417	14.82	-18.6	33.42	Horizontal	40.00
62.37375	17.3	-19.5	36.8	Vertical	40.00

For 802.11g Channel No.:1

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)
30.36375	25.1	-21.6	46.7	Vertical	40.00
42.48875	28.92	-18.1	47.02	Vertical	40.00
45.196667	31.29	-17.5	48.79	Vertical	40.00
55.907083	20.59	-18.1	38.69	Horizontal	40.00
69.285	19.15	-21.7	40.85	Vertical	40.00
84.481667	16.74	-23.3	40.04	Vertical	40.00