

APPENDIX A – TEST DATA OF CONDUCTED EMISSION

In order to find the worst case condition, Pre-tests are needed at the presence of different data rate. Data rate below means worst-case rate of each test item.

Worst-case data rates are shown as following table.

Test Mode	Data Rate
802.11b	1Mbps
802.11g	6Mbps
802.11n HT20	MCS0(6.5Mbps)
802.11n HT40	MCS0(13.5Mbps)

Directional gain

Band	Ant7 Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm/3kHz)
2.4GHz	-3.1	30.0	8.0

Duty cycle

Test Mode	Duty Cycle (%)	Correction Factor(dB)
802.11b	99.27	0.03
802.11g	98.54	0.06
802.11n HT20	98.44	0.07
802.11n HT40	94.90	0.23

Conducted power

Mode	Tones/ RU Index	Freq(MHz)	Ant	Peak power output (dBm)
802.11b	NA	2412MHz	Ant7	20.92
	NA	2437MHz	Ant7	20.93
	NA	2462MHz	Ant7	20.65
802.11g	NA	2412MHz	Ant7	25.13
	NA	2437MHz	Ant7	24.85
	NA	2462MHz	Ant7	25.08
802.11n20M	NA	2412MHz	Ant7	25.04
	NA	2437MHz	Ant7	24.66
	NA	2462MHz	Ant7	24.87
802.11n40M	NA	2422MHz	Ant7	24.53
	NA	2437MHz	Ant7	24.33
	NA	2452MHz	Ant7	24.27

Test on the worst case:

Modulation type	Conducted Peak Power(dBm)		
	2412MHz	2437MHz	2462MHz
11g	24.77	--	--

6dB Bandwidth

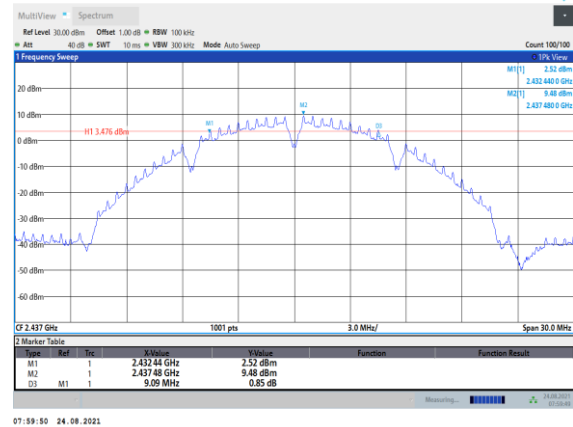
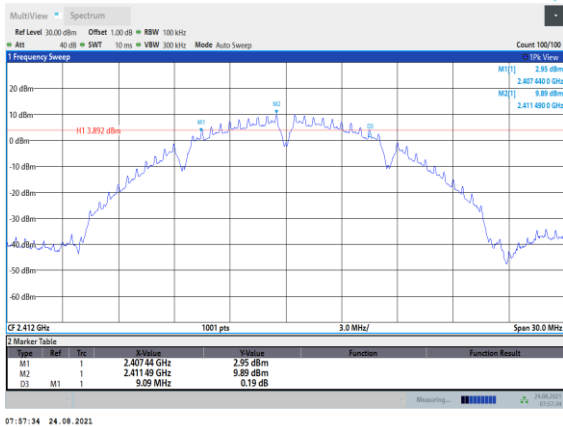
Offset 11.2dB =Attenuator 10dB+ Temporary antenna connector loss 0.2dB+ Cable loss 1dB

Test Mode:802.11b

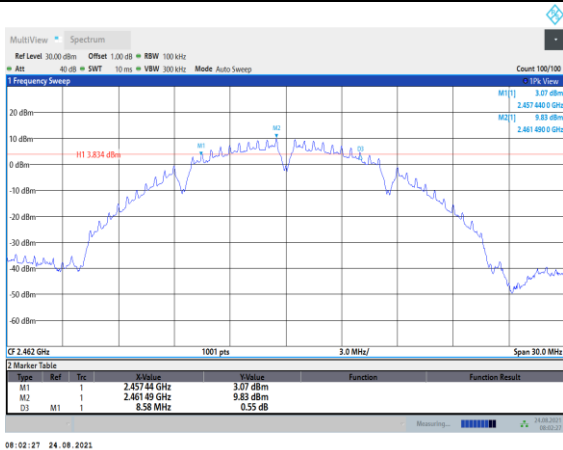
Carrier frequency (MHz)	Channel No.	Ant	6 dB bandwidth (MHz)
2412MHz	1	Ant7	9.090
2437MHz	6	Ant7	9.090
2462MHz	11	Ant7	8.580

Test Mode:802.11b Ant7

Test Mode:802.11b Ant7



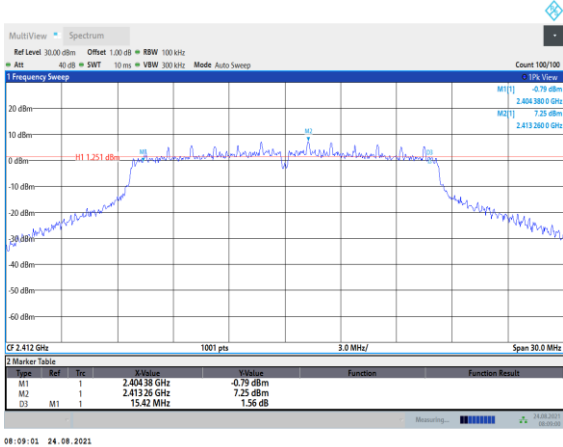
Test Mode:802.11b Ant7



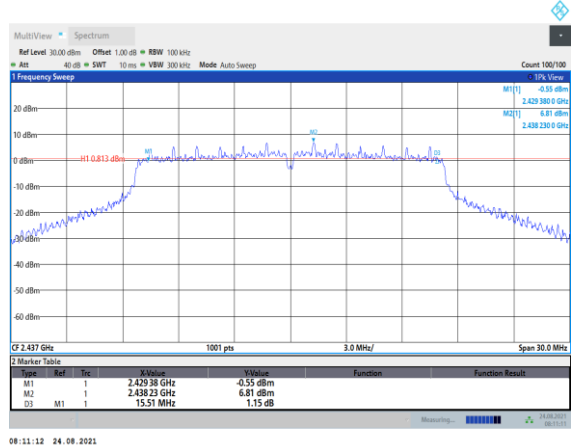
Test Mode:802.11g

Carrier frequency (MHz)	Channel No.	Ant	6 dB bandwidth (MHz)
2412MHz	1	Ant7	15.420
2437MHz	6	Ant7	15.510
2462MHz	11	Ant7	15.690

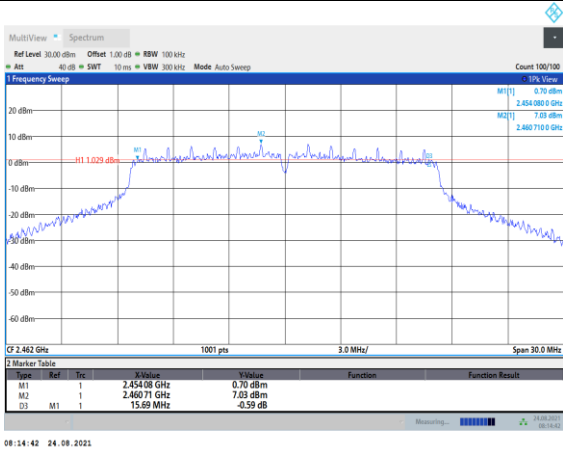
Test Mode:802.11g Ant7



Test Mode:802.11g Ant7



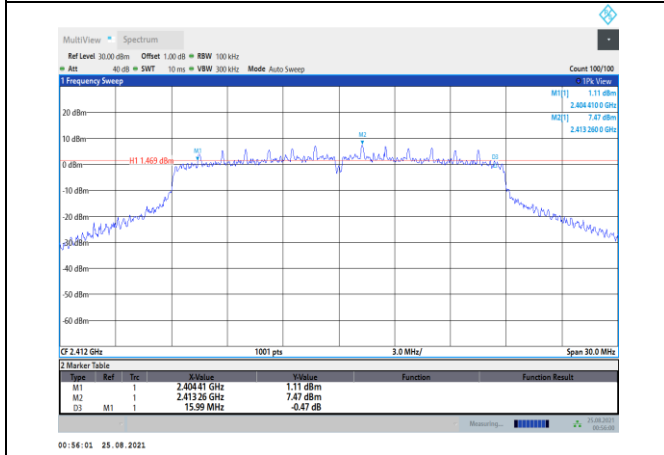
Test Mode:802.11g Ant7



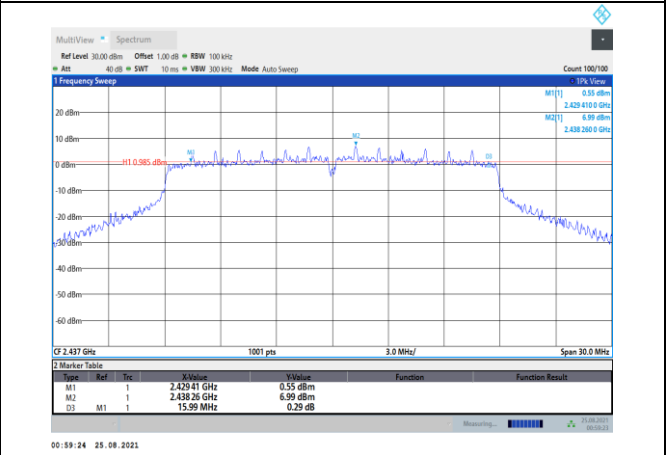
Test Mode:802. 11n HT20

Carrier frequency (MHz)	Channel No.	Ant	6 dB bandwidth (MHz)
2412MHz	1	Ant7	15.990
2437MHz	6	Ant7	15.990
2462MHz	11	Ant7	15.780

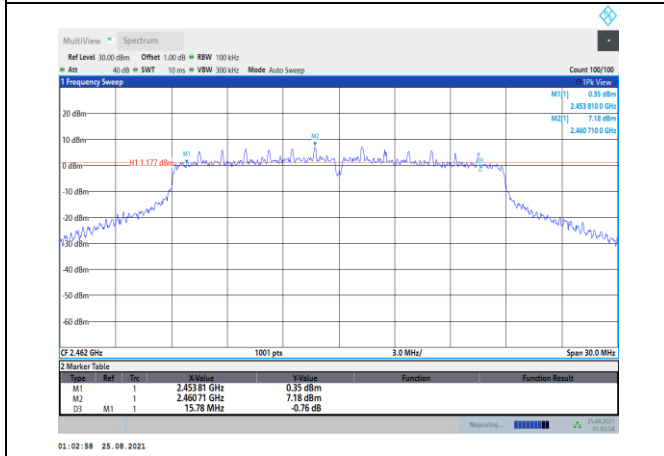
Test Mode:802. 11n HT20 Ant7



Test Mode:802. 11n HT20 Ant7



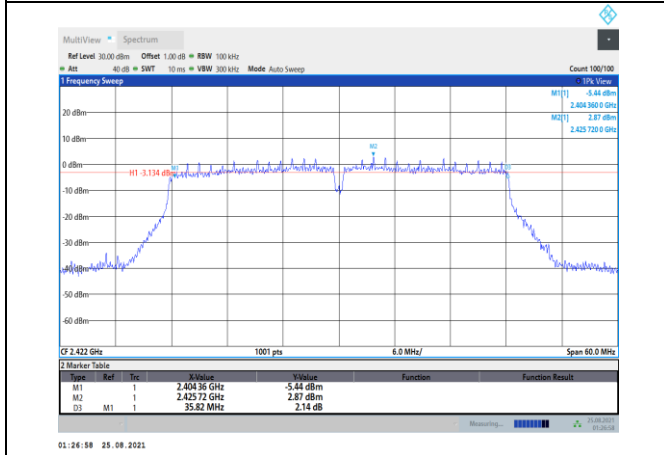
Test Mode:802. 11n HT20 Ant7



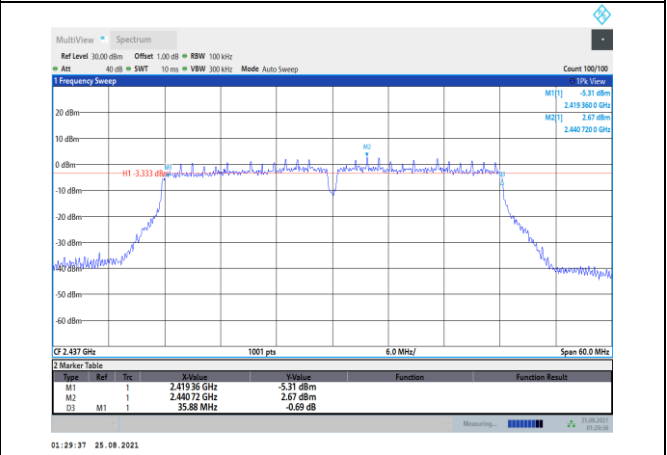
Test Mode:802. 11n HT40

Carrier frequency (MHz)	Channel No.	Ant	6 dB bandwidth (MHz)
2422MHz	3	Ant7	35.820
2437MHz	6	Ant7	35.880
2452MHz	9	Ant7	35.280

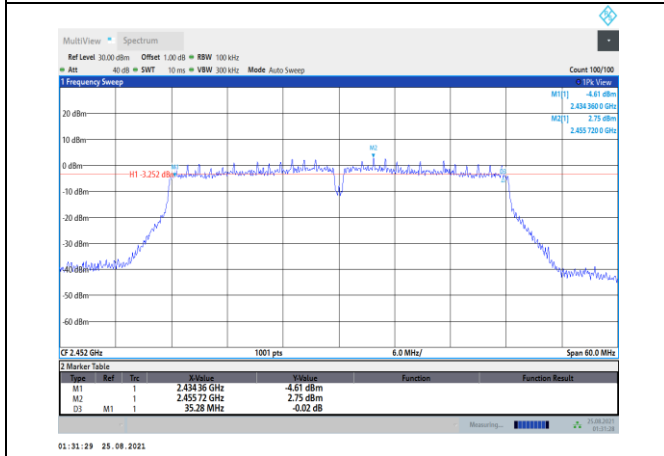
Test Mode:802. 11n HT40 Ant7



Test Mode:802. 11n HT40 Ant7



Test Mode:802. 11n HT40 Ant7



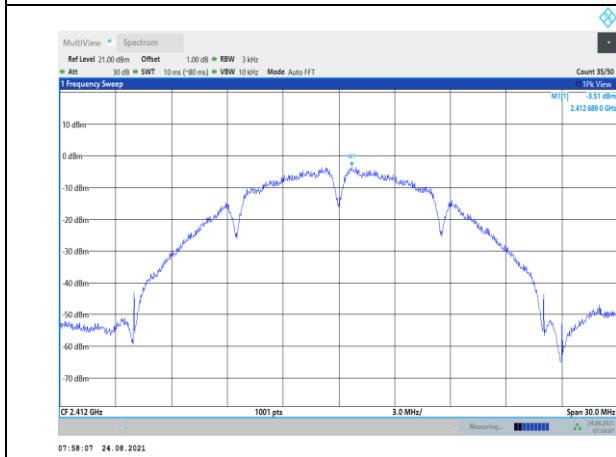
Transmitter Power Spectral Density

Offset 11.2dB =Attenuator 10dB+ Temporary antenna connector loss 0.2dB+ Cable loss 1dB

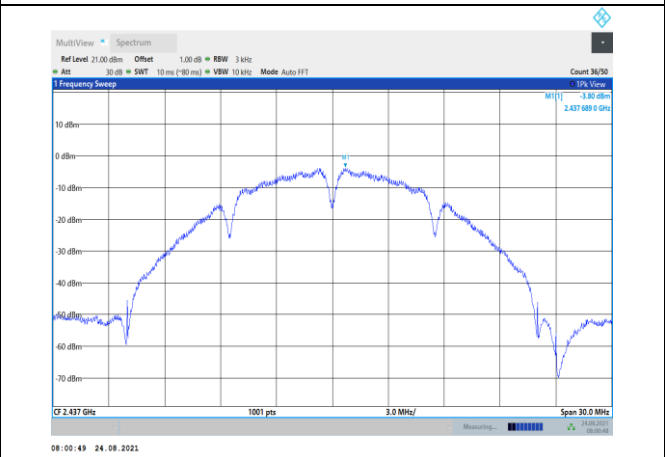
Test Mode:802.11b

Carrier frequency (MHz)	Channel No.	Ant	Power Density (dBm)
2412MHz	1	Ant7	-3.51
2437MHz	6	Ant7	-3.8
2462MHz	11	Ant7	-3.37

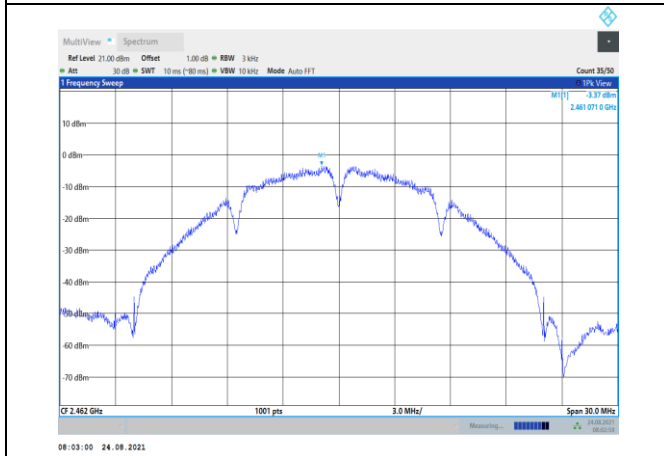
Test Mode:802.11b Ant7



Test Mode:802.11b Ant7



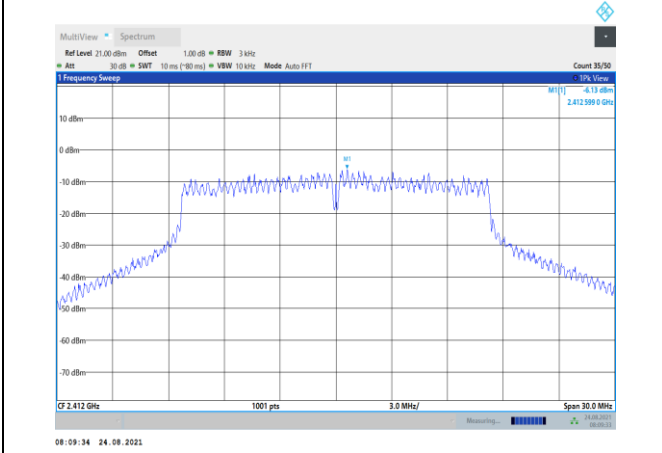
Test Mode:802.11b Ant7



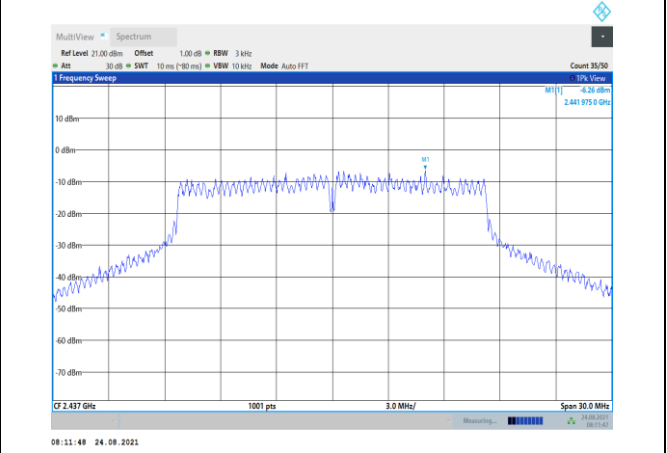
Test Mode:802.11g

Carrier frequency (MHz)	Channel No.	Ant	Power Density (dBm)
2412MHz	1	Ant7	-6.13
2437MHz	6	Ant7	-6.26
2462MHz	11	Ant7	-6.35

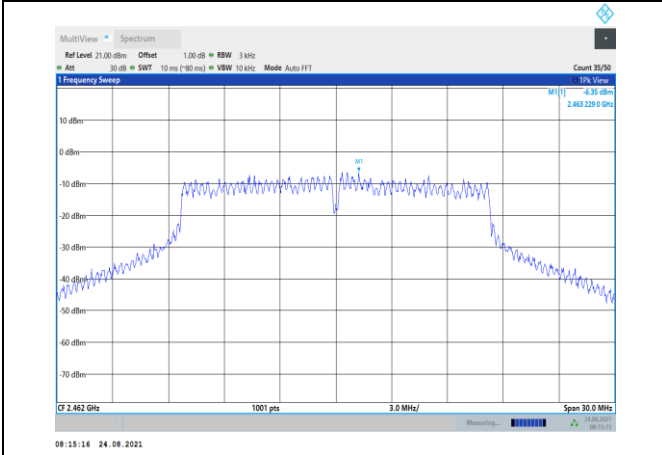
Test Mode:802.11g Ant7



Test Mode:802.11g Ant7



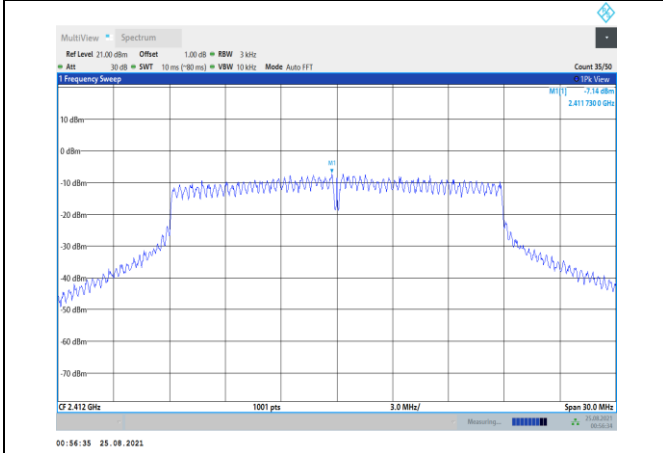
Test Mode:802.11g Ant7



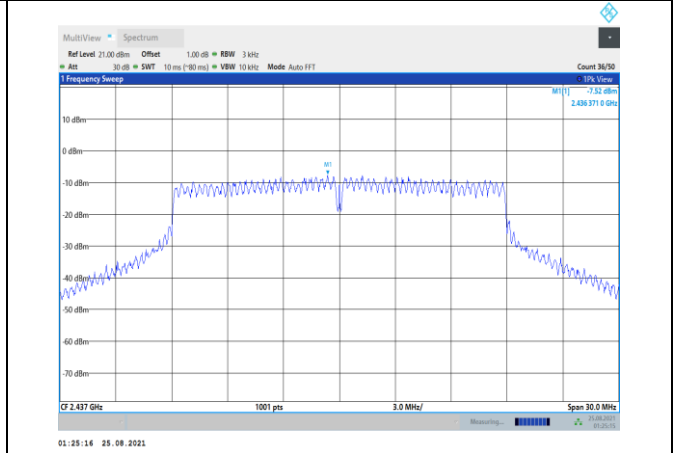
Test Mode:802. 11n HT20

Carrier frequency (MHz)	Channel No.	Ant	Power Density (dBm)
2412MHz	1	Ant7	-7.14
2437MHz	6	Ant7	-7.52
2462MHz	11	Ant7	-6.93

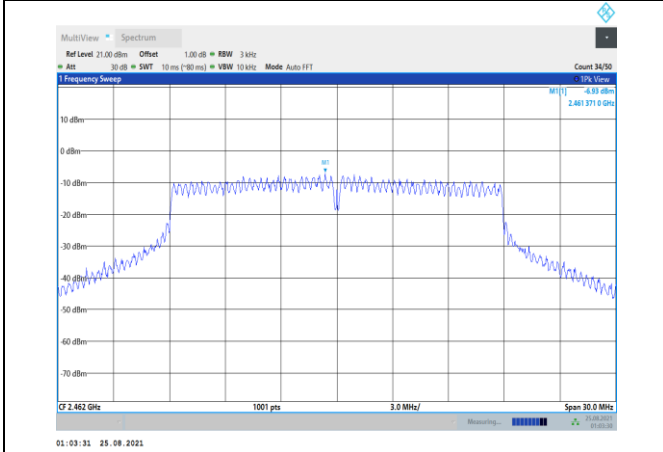
Test Mode:802. 11n HT20 Ant7



Test Mode:802. 11n HT20 Ant7



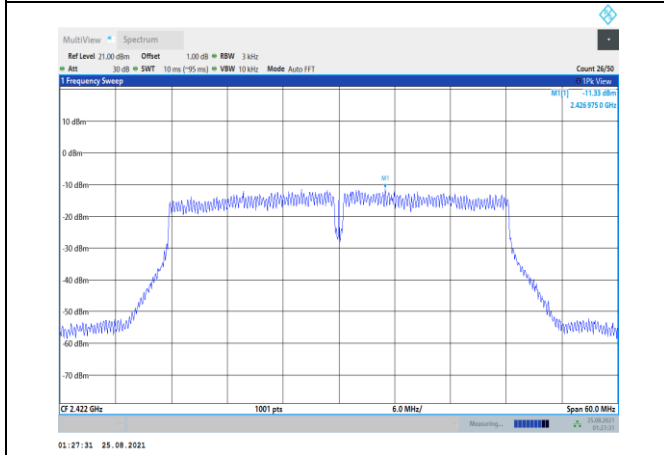
Test Mode:802. 11n HT20 Ant7



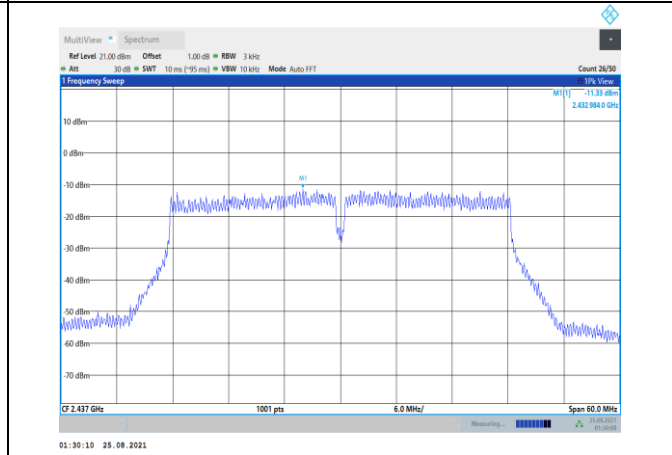
Test Mode:802. 11n HT40

Carrier frequency (MHz)	Channel No.	Ant	Power Density (dBm)
2422MHz	3	Ant7	-11.33
2437MHz	6	Ant7	-11.33
2452MHz	9	Ant7	-11.12

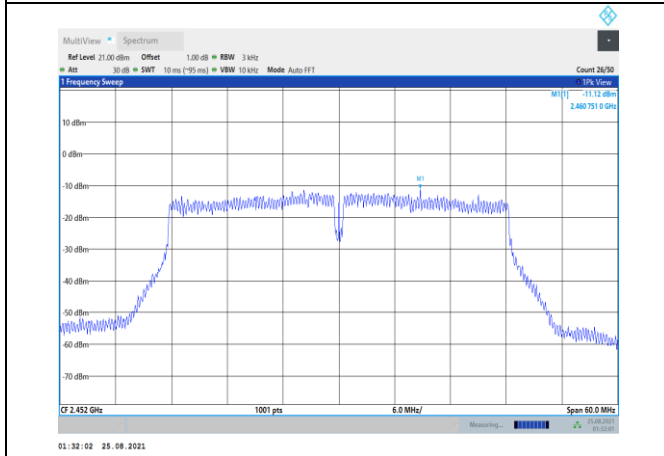
Test Mode:802. 11n HT40 Ant7



Test Mode:802. 11n HT40 Ant7



Test Mode:802. 11n HT40 Ant7

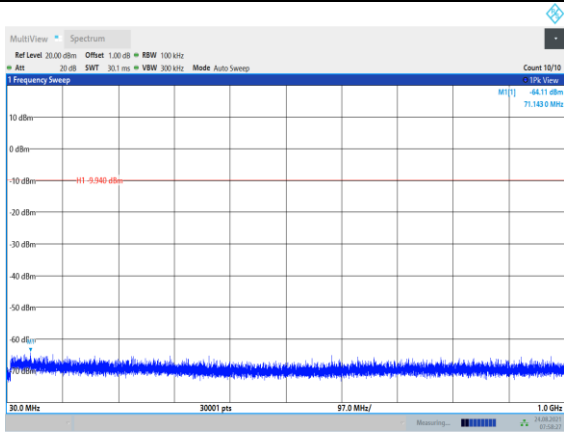


Conducted Out of band emission measurement

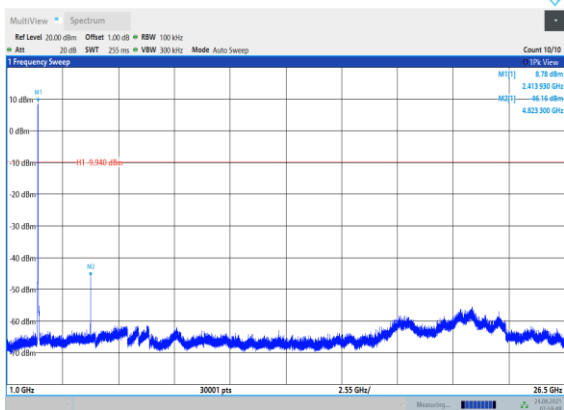
Offset 11.2dB =Attenuator 10dB+ Temporary antenna connector loss 0.2dB+ Cable loss 1.0dB

Test Mode:802.11b

Test Mode:802.11b Ant7 CH1

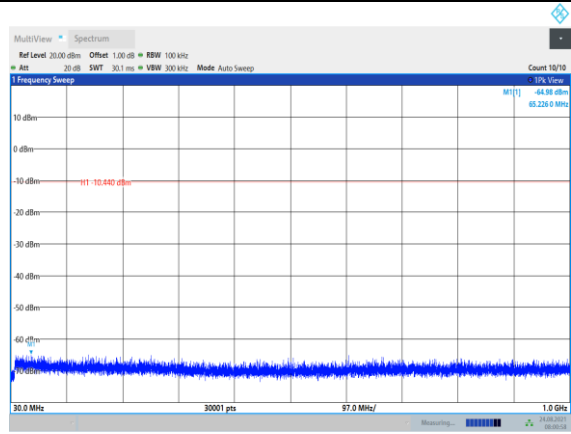


07:58:27 24. 08. 2021

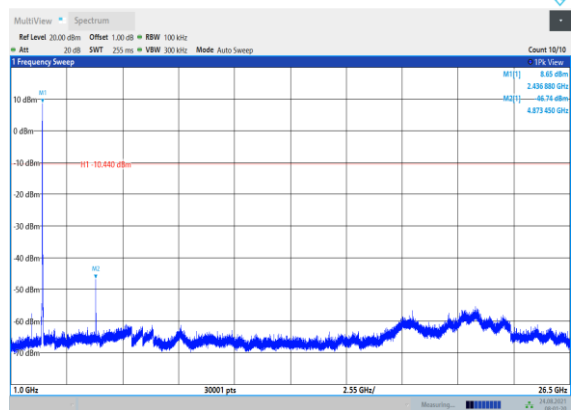


07:58:49 24. 08. 2021

Test Mode:802.11b Ant7 CH6

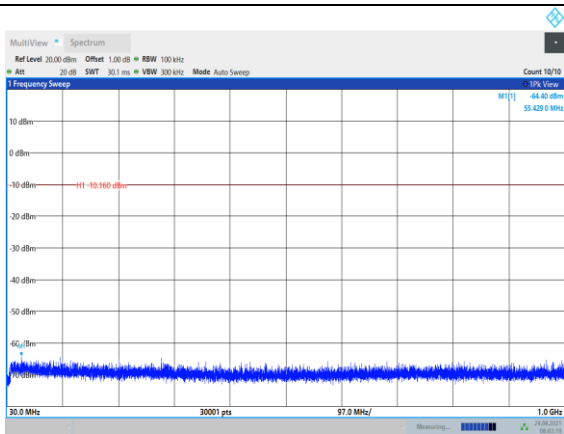


08:00:59 24. 08. 2021

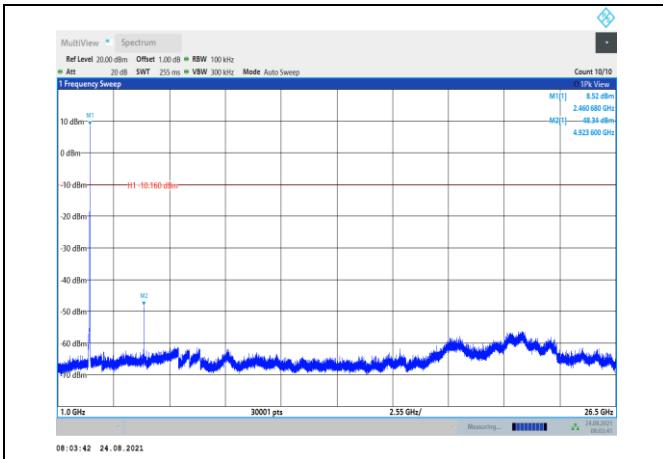


08:01:20 24. 08. 2021

Test Mode:802.11b Ant7 CH11

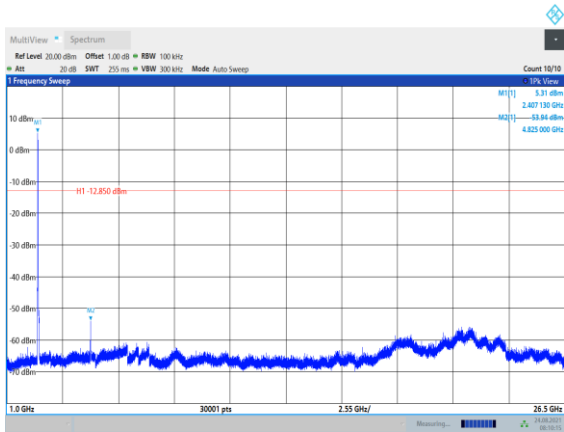
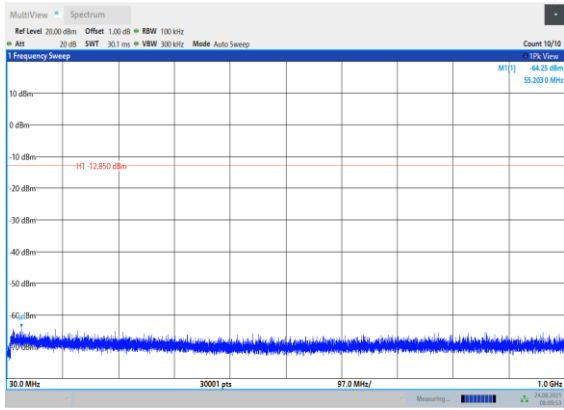


08:03:20 24. 08. 2021

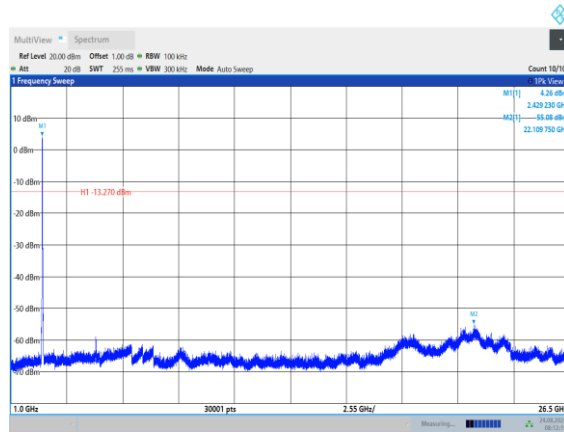
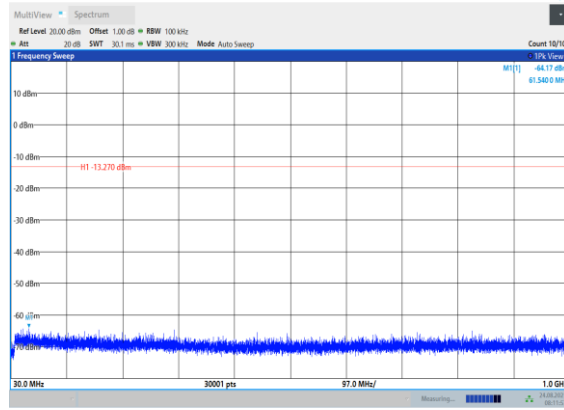


Test Mode:802.11g

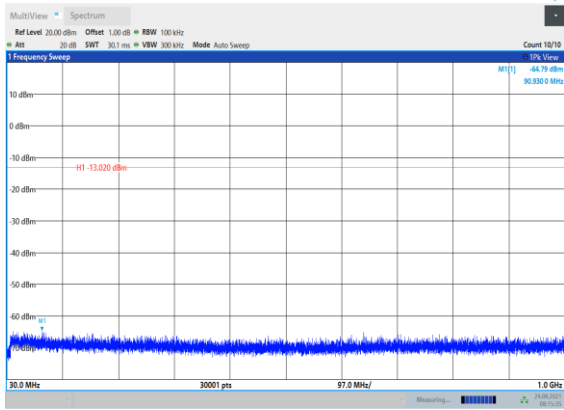
Test Mode:802.11g Ant7 CH1

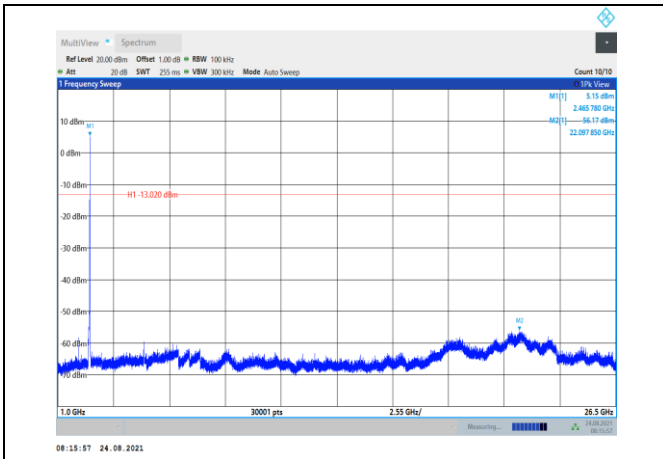


Test Mode:802.11g Ant7 CH6



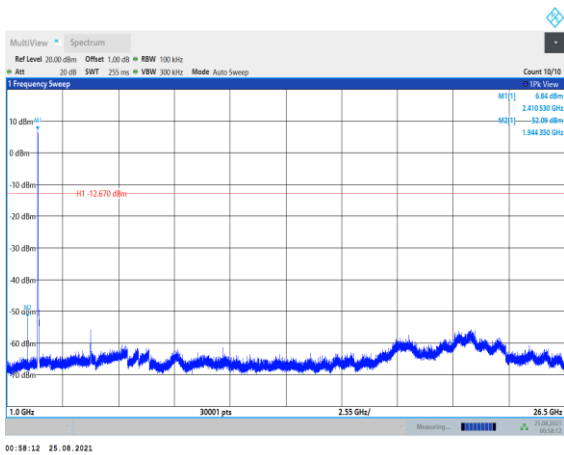
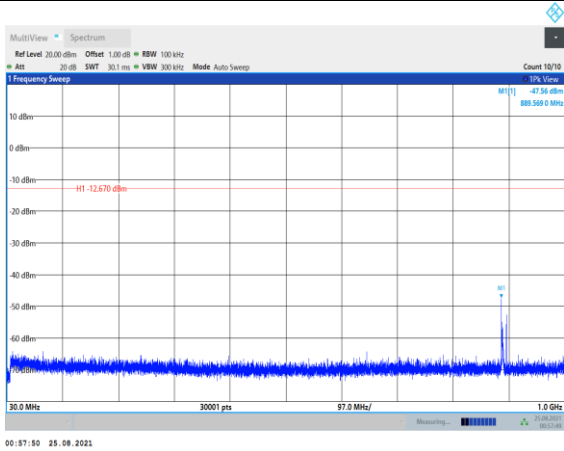
Test Mode:802.11g Ant7 CH11



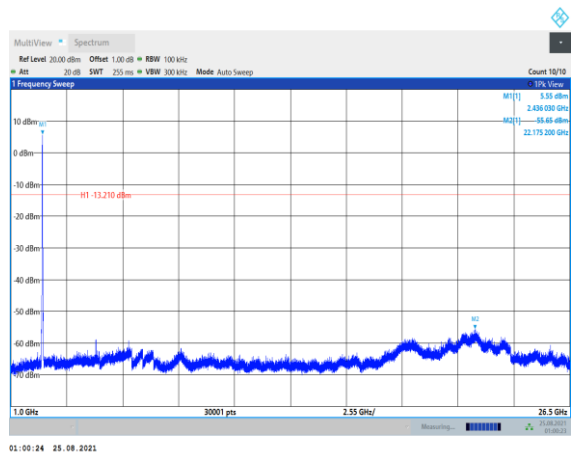
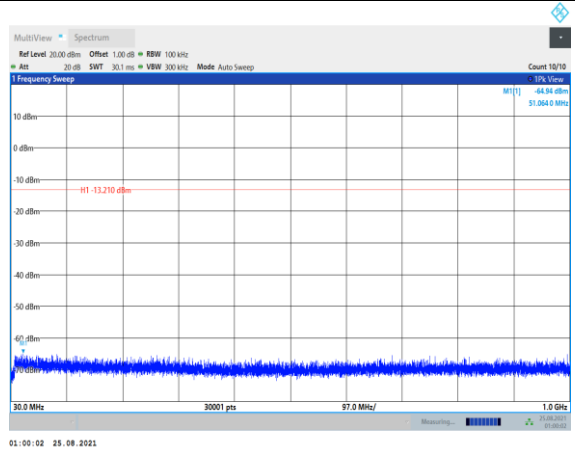


Test Mode:802. 11n HT20

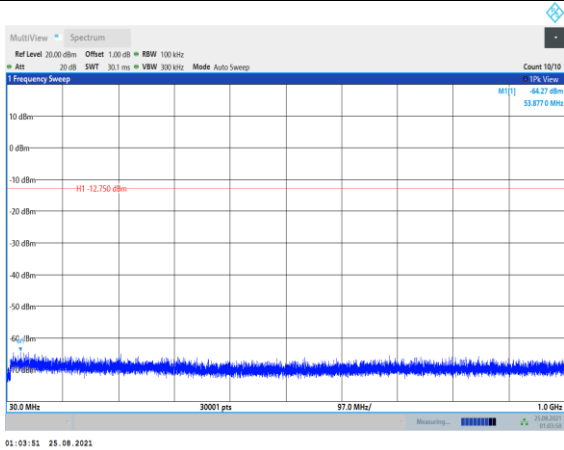
Test Mode:802. 11n HT20 Ant7 CH1

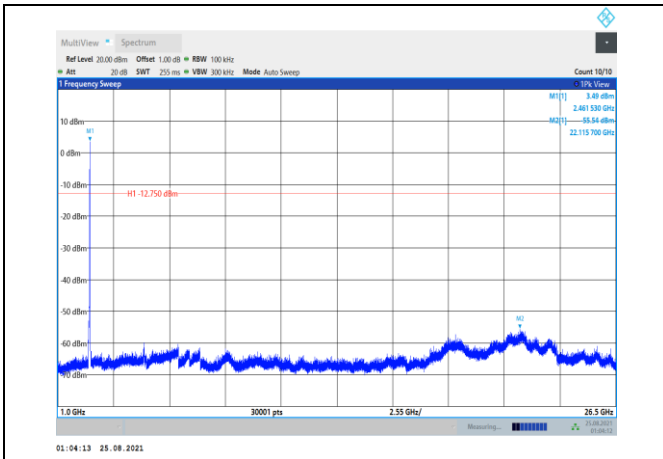


Test Mode:802. 11n HT20 Ant7 CH6



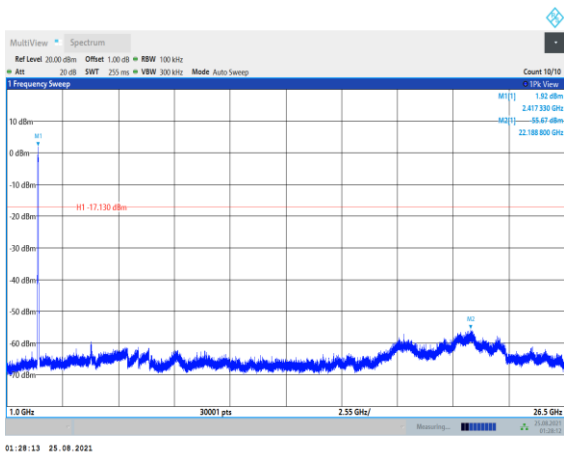
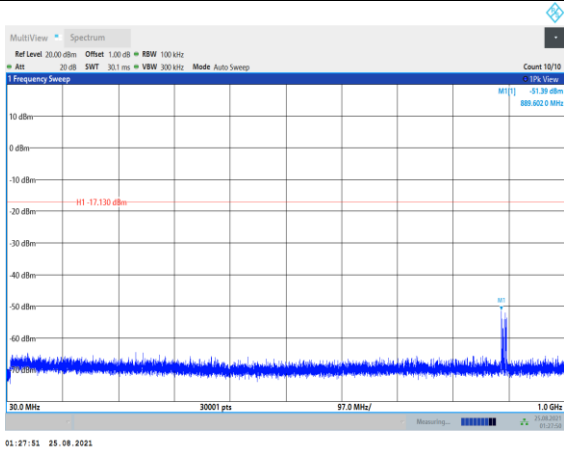
Test Mode:802. 11n HT20 Ant7 CH11



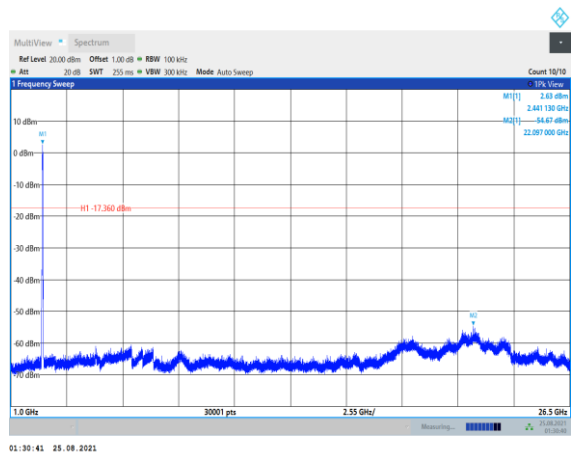
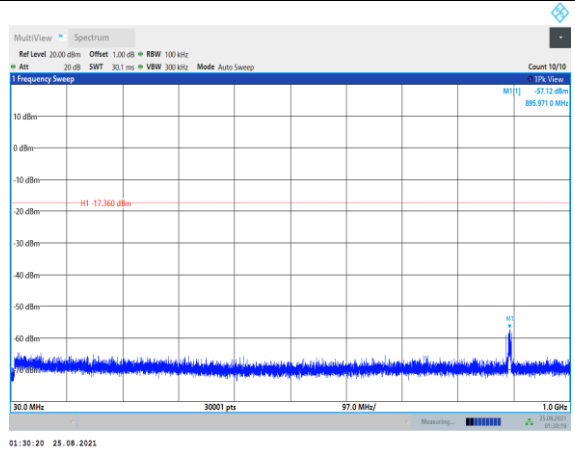


Test Mode:802. 11n HT40

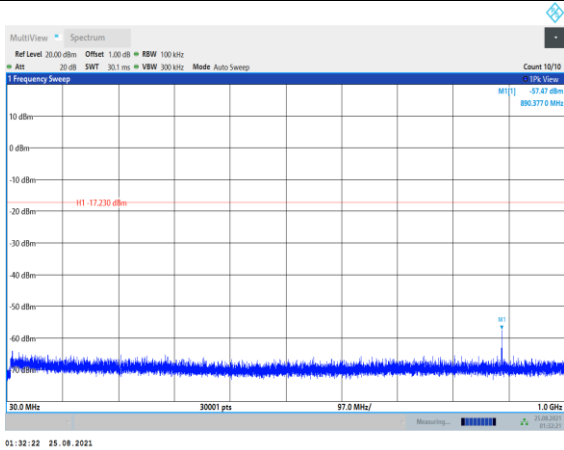
Test Mode:802. 11n HT40 Ant7 CH3

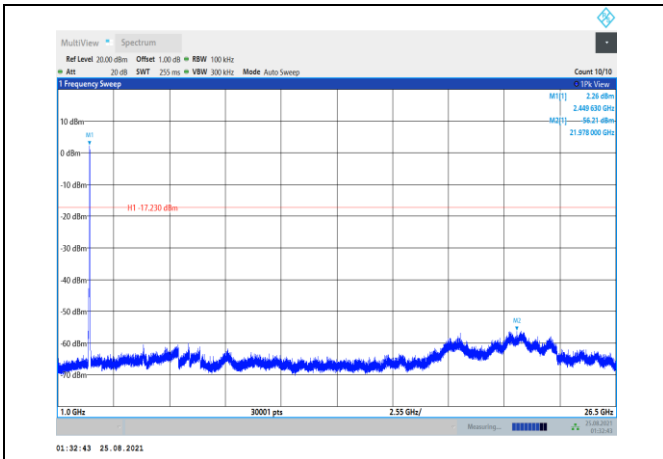


Test Mode:802. 11n HT40 Ant7 CH6



Test Mode:802. 11n HT40 Ant7 CH9



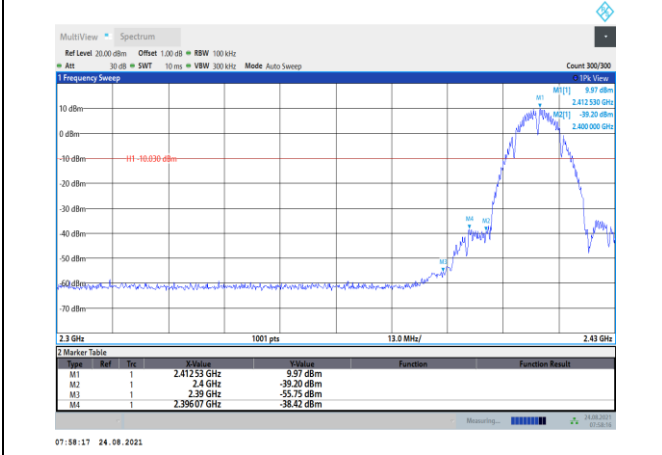


Band edge measurement (RF Conducted measurement)

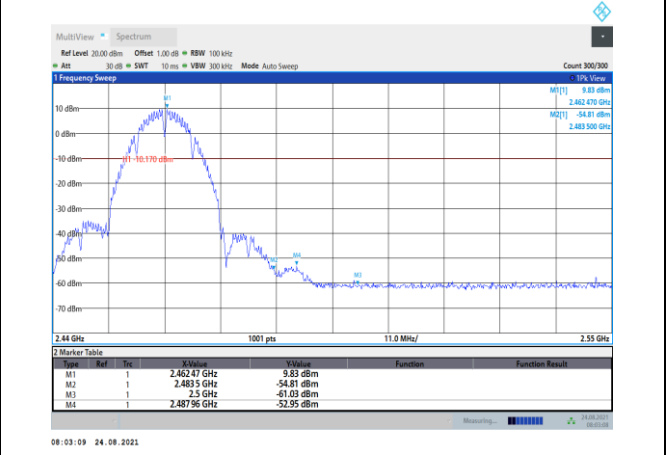
Offset 11.2dB = Attenuator 10dB+ Temporary antenna connector loss 0.2dB+ Cable loss 1.0dB

Test Mode:802.11b

Test Mode:802.11b Ant7 CH1



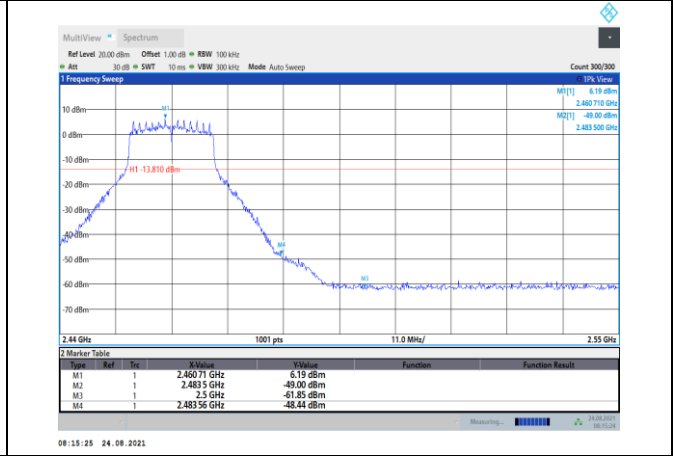
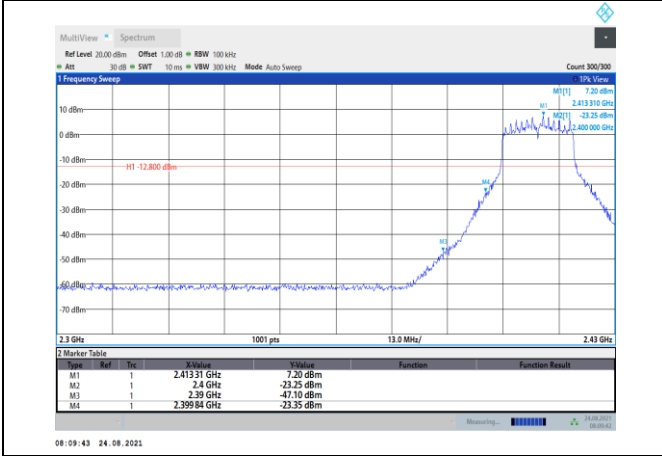
Test Mode:802.11b Ant7 CH1



Test Mode:802.11g

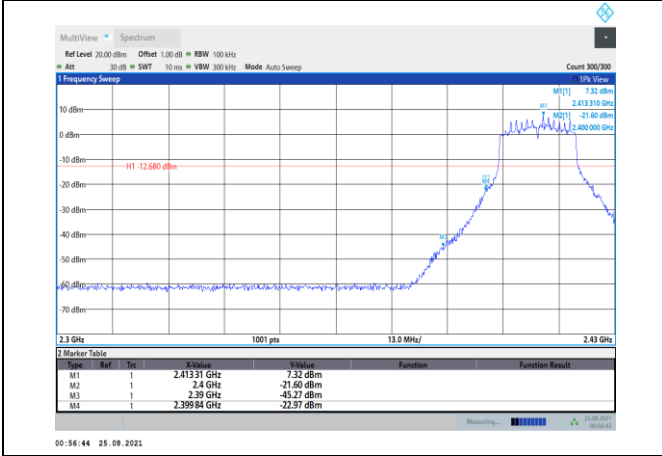
Test Mode:802.11g Ant7 CH1

Test Mode:802.11g Ant7 CH1

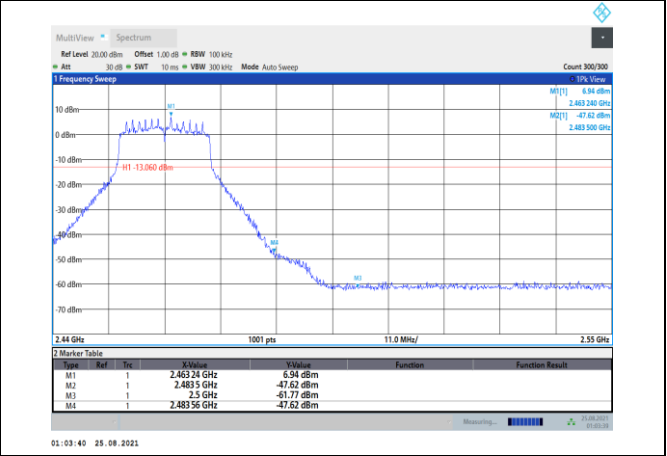


Test Mode:802. 11n HT20

Test Mode:802. 11n HT20 Ant7 CH1



Test Mode:802. 11n HT20 Ant7 CH11



Test Mode:802. 11n HT40

Test Mode:802. 11n HT40 Ant7 CH3

Test Mode:802. 11n HT40 Ant7 CH9

