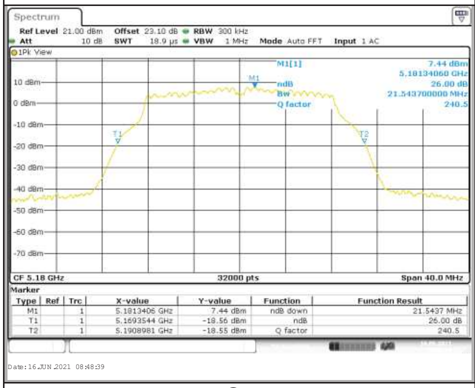
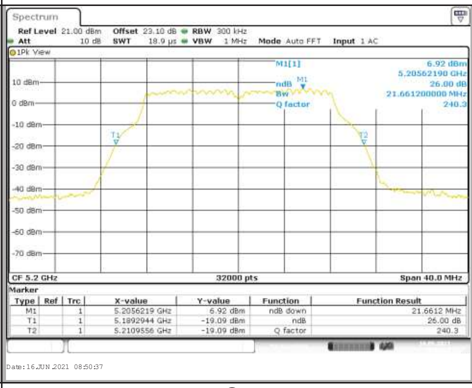
5.5. RESULTS

802.11a

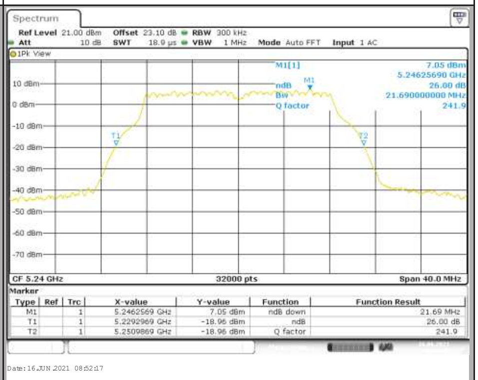
C1



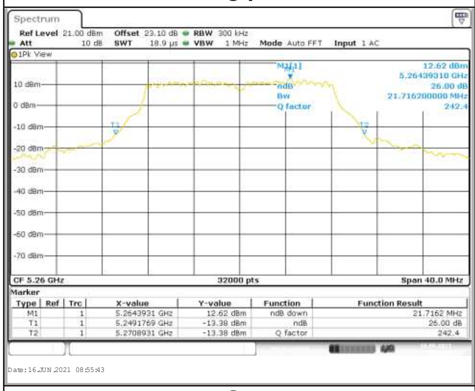
C2



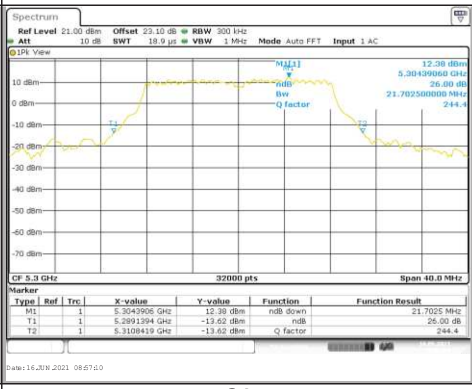
C3



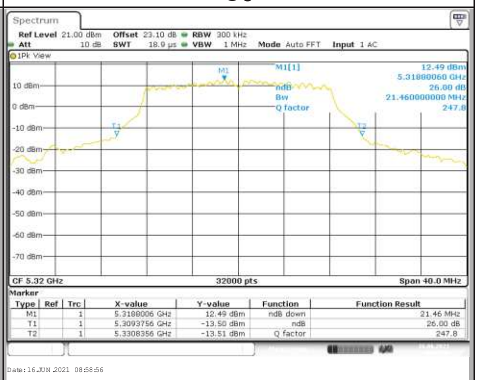
C4



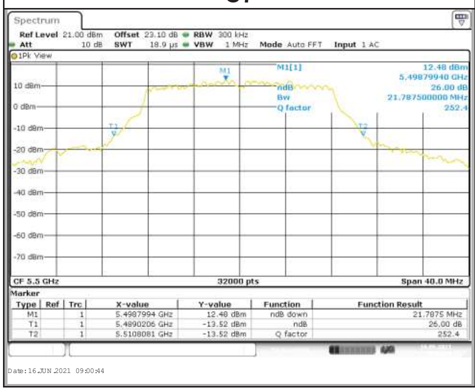
C5



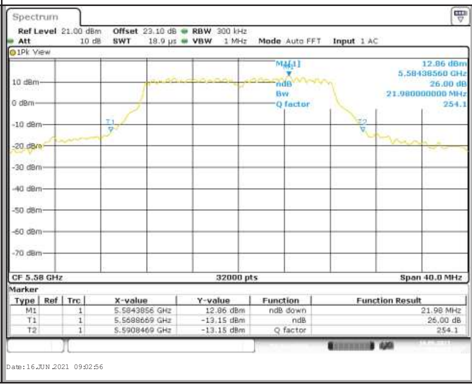
C6



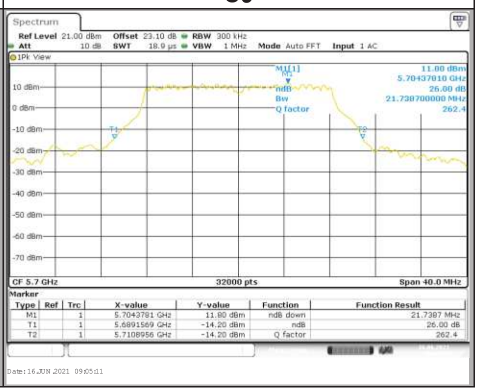
C7

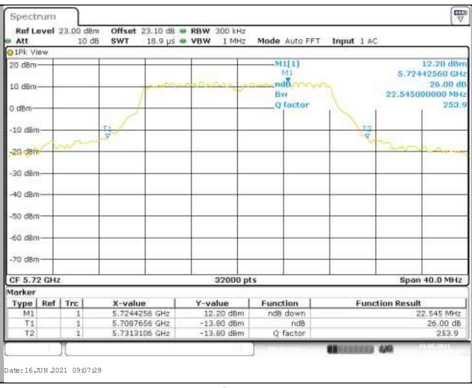
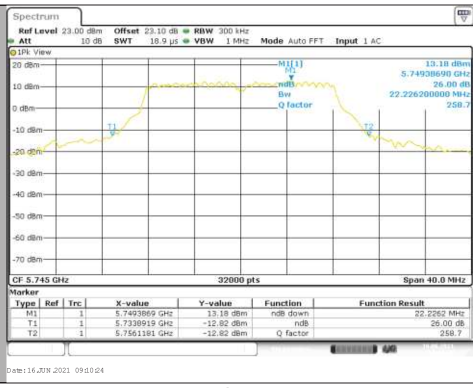
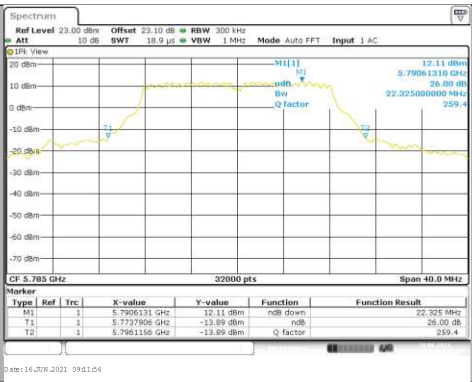
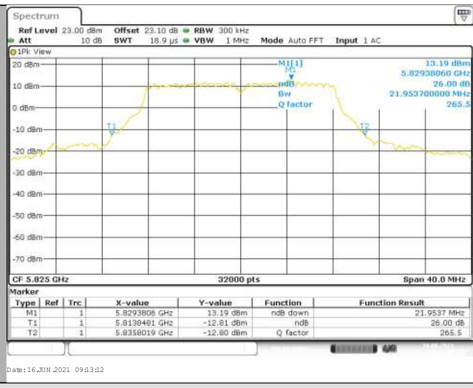


C8

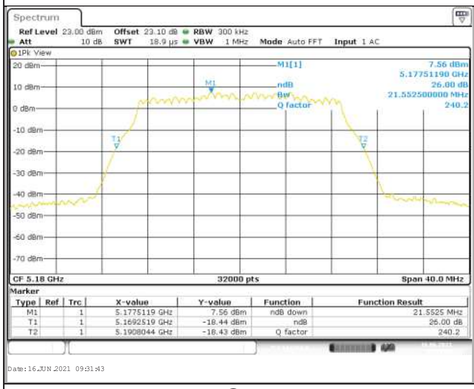
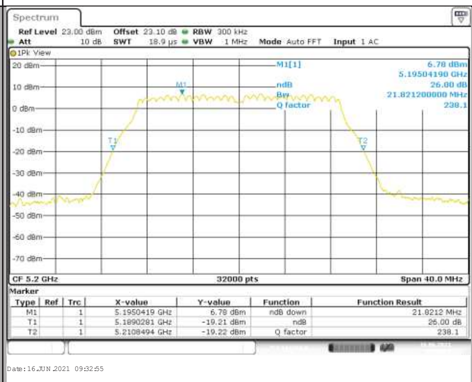
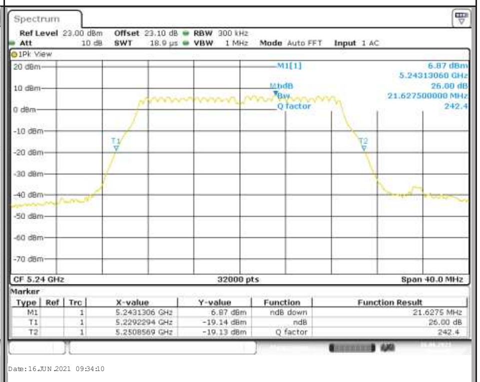
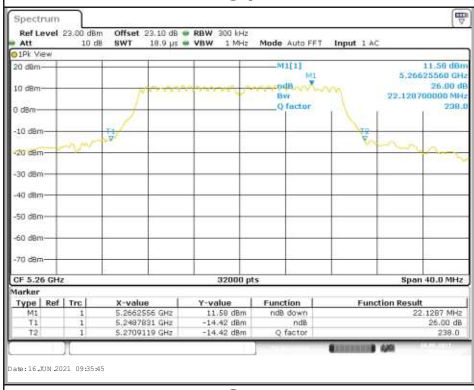
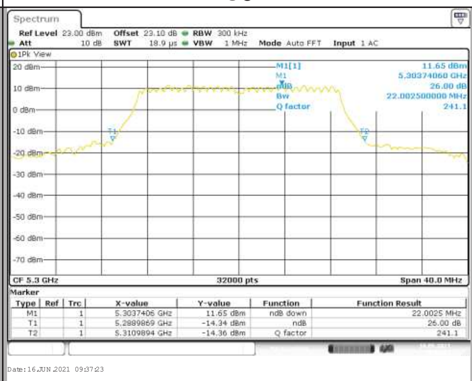
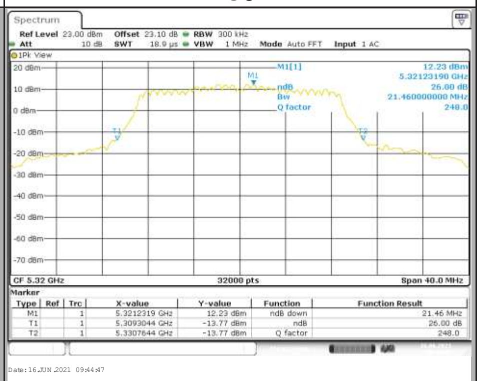
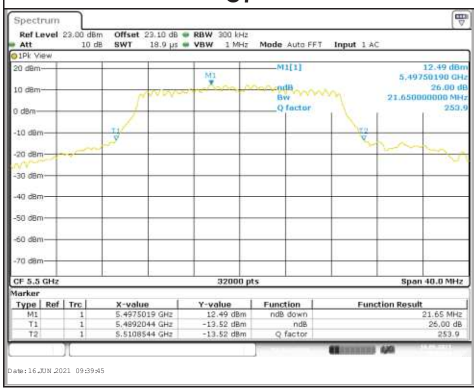
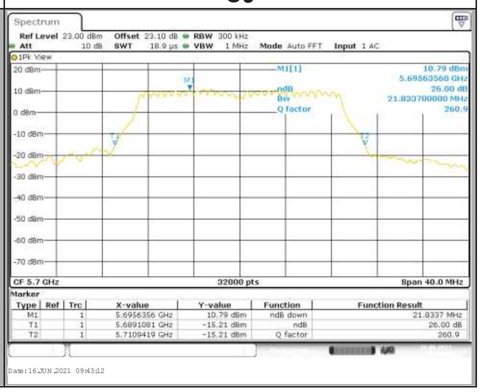


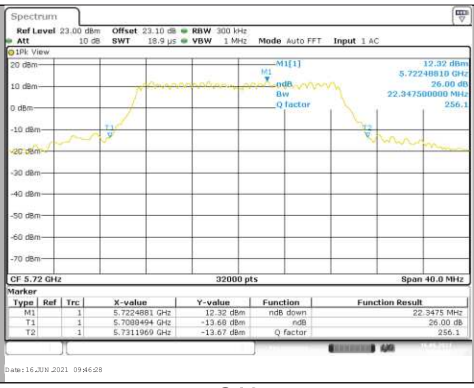
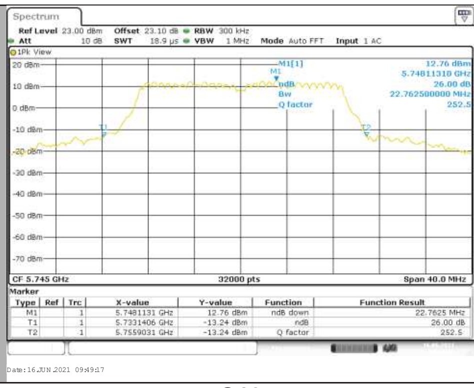
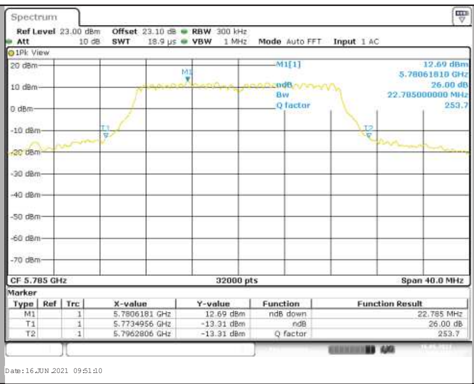
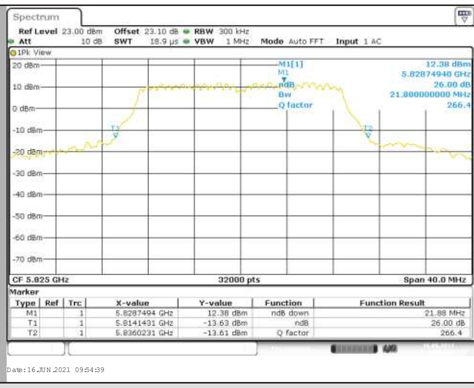
C9



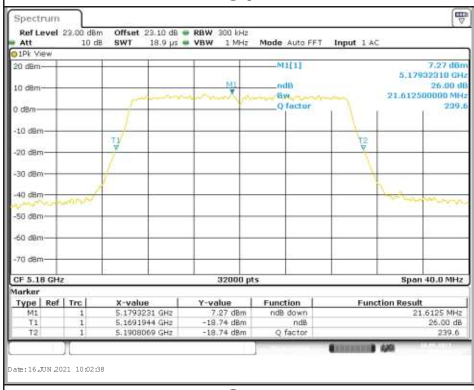
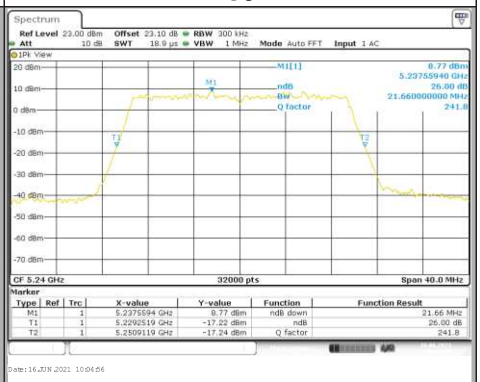
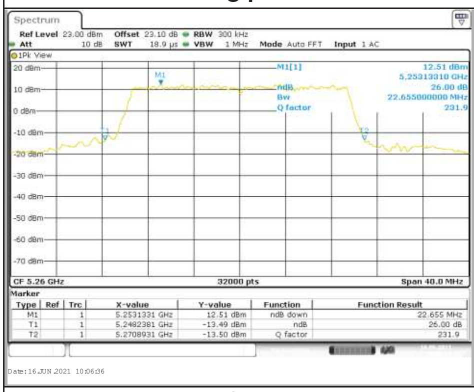
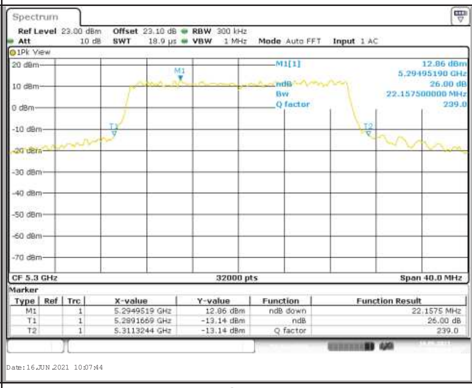
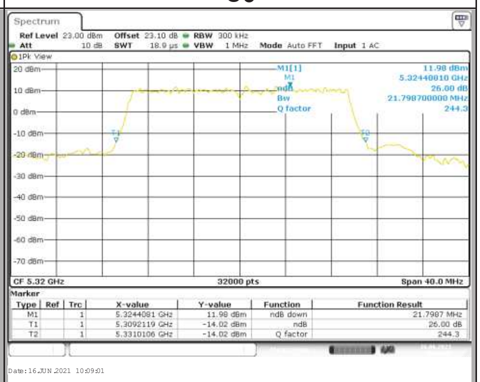
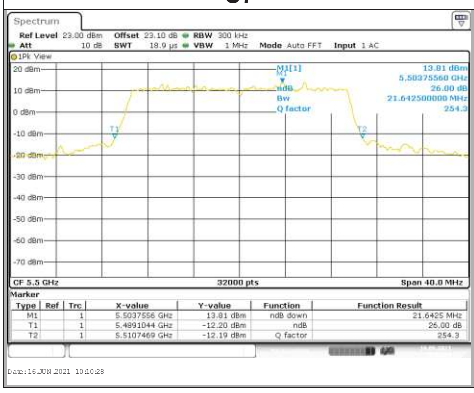
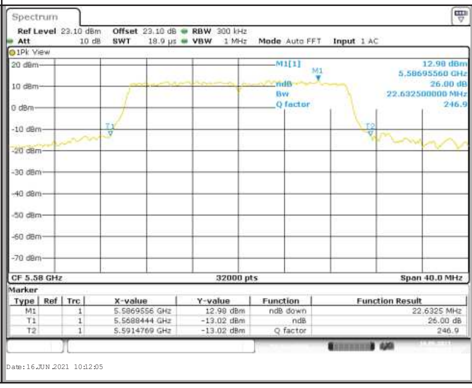
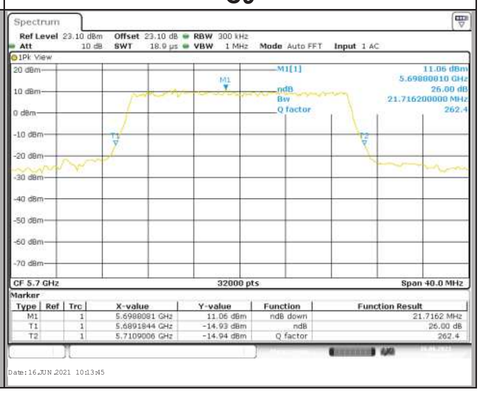
802.11a	
C10	C11
	
C12	C13
	

Channel	26dB Emission Bandwidth (MHz)
C1	21.544
C2	21.661
C3	21.690
C4	21.716
C5	21.702
C6	21.460
C7	21.787
C8	21.980
C9	21.739
C10	22.545
C11	22.226
C12	22.325
C13	21.954

802.11n HT20/ac VHT20		
C1	C2	C3
		
C4	C5	C6
		
C7	C8	C9
		

802.11n HT20/ac VHT20	
C10	C11
	
C12	C13
	

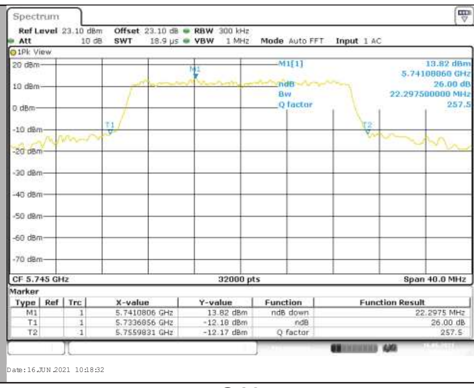
Channel	26dB Emission Bandwidth (MHz)
C1	21.552
C2	21.821
C3	21.627
C4	22.129
C5	22.002
C6	22.460
C7	21.650
C8	21.746
C9	21.834
C10	22.347
C11	22.762
C12	22.785
C13	21.880

802.11ax HT20		
C1	C2	C3
		
C4	C5	C6
		
C7	C8	C9
		

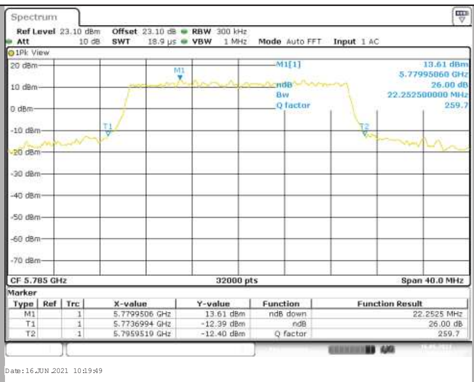
802.11ax HT20

C10

C11

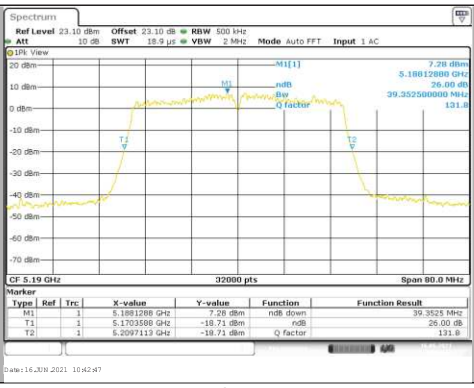
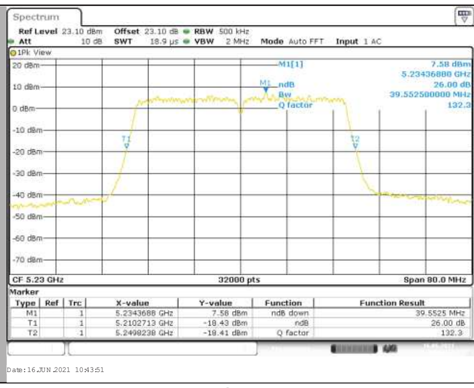
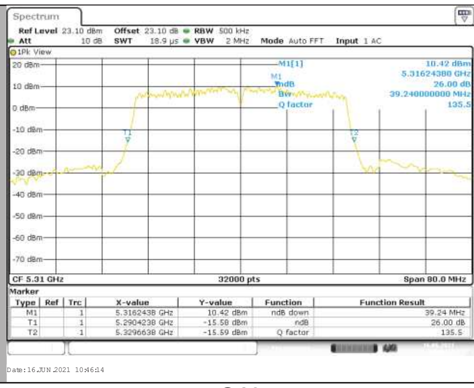
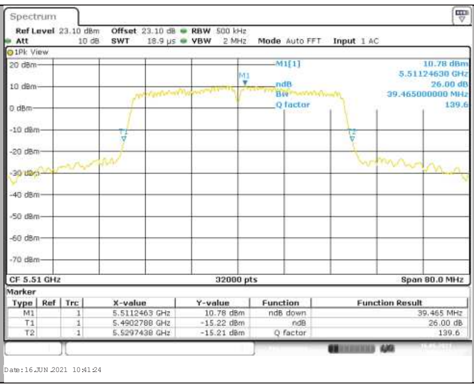
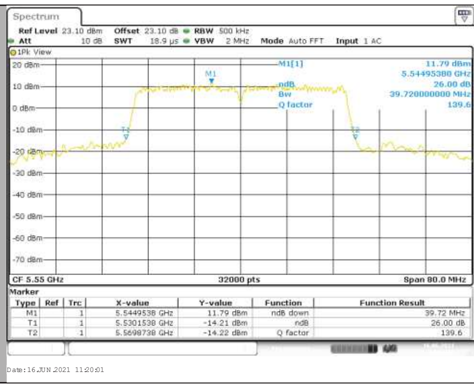


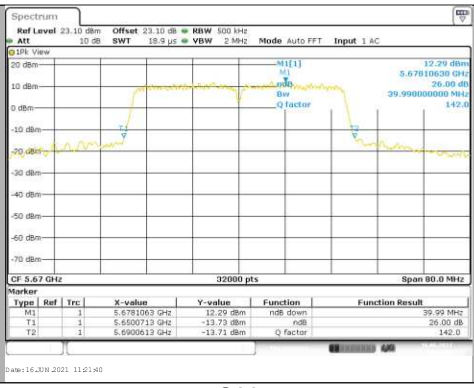
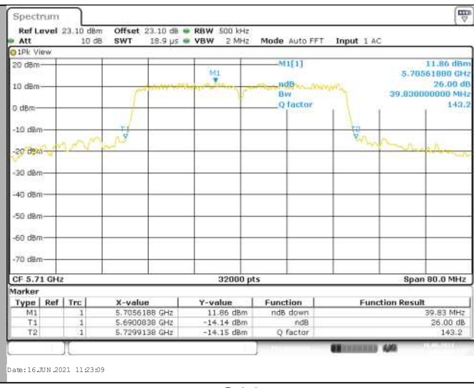
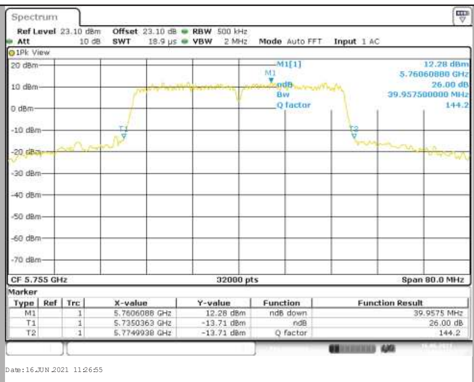
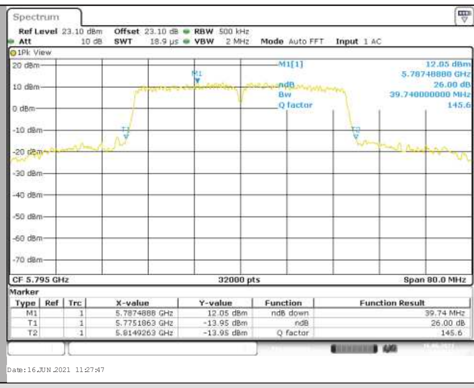
C12



C13

Channel	26dB Emission Bandwidth (MHz)
C1	21.612
C2	21.629
C3	21.660
C4	22.655
C5	22.157
C6	21.799
C7	21.642
C8	22.632
C9	21.716
C10	22.459
C11	22.297
C12	22.252
C13	21.884

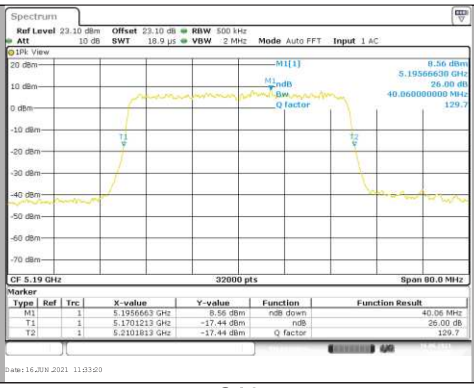
802.11n HT40/ac VHT40	
C14	C15
	
C16	C17
	
C18	C19
	

802.11n HT40/ac VHT40	
C20	C21
	
C22	C23
	

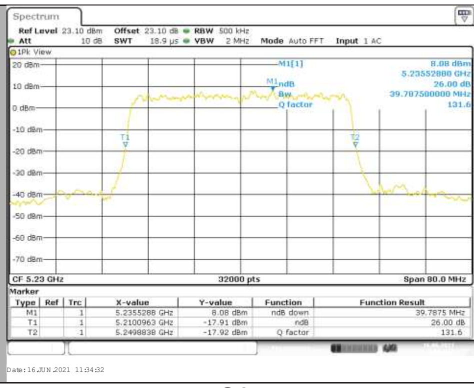
Channel	26dB Emission Bandwidth (MHz)
C14	39.352
C15	39.552
C16	39.865
C17	39.240
C18	39.465
C19	39.720
C20	39.990
C21	39.830
C22	39.957
C23	39.740

802.11ax HT40

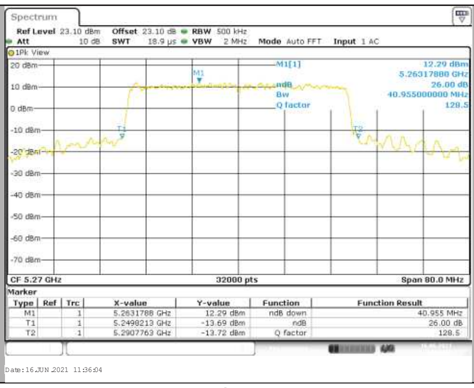
C14



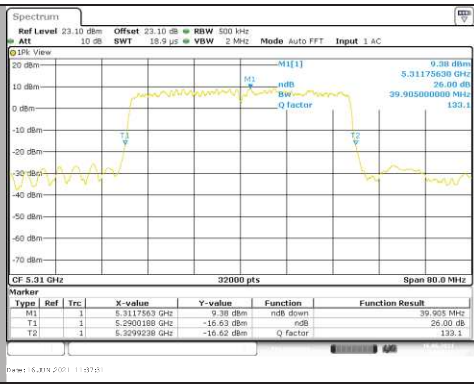
C15



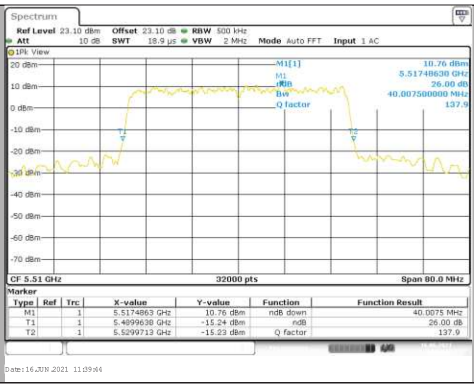
C16



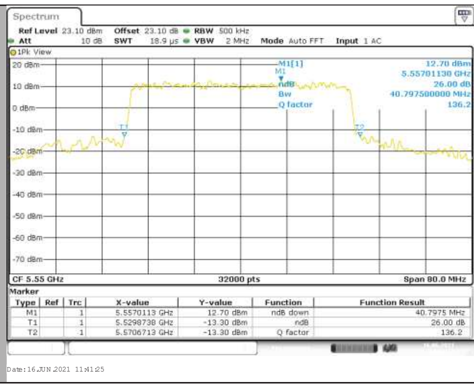
C17



C18



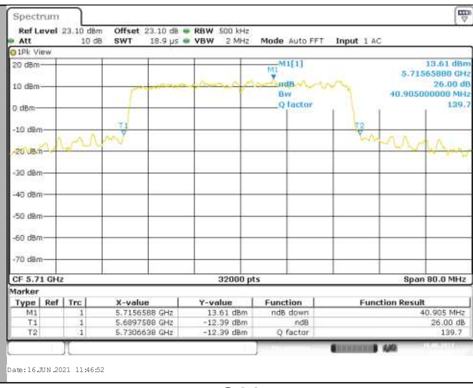
C19



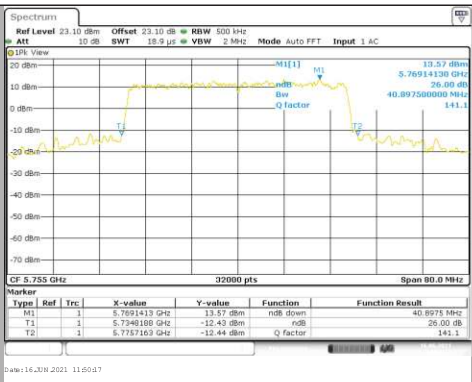
802.11ax HT40

C20

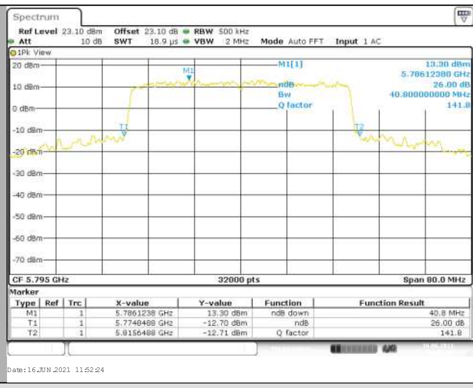
C21



C22

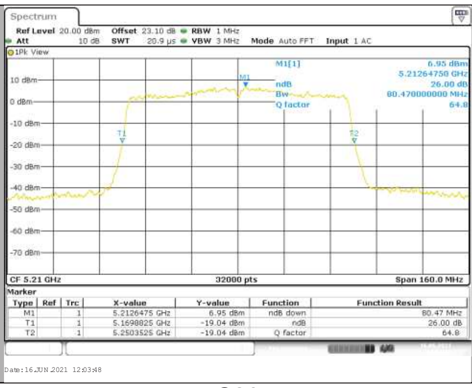
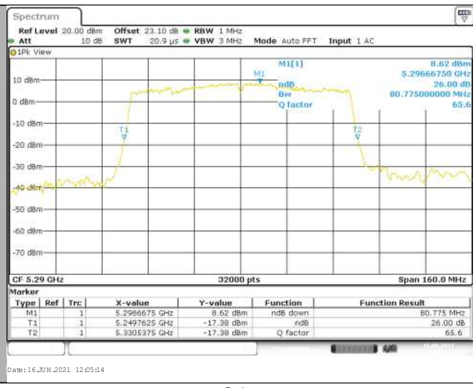
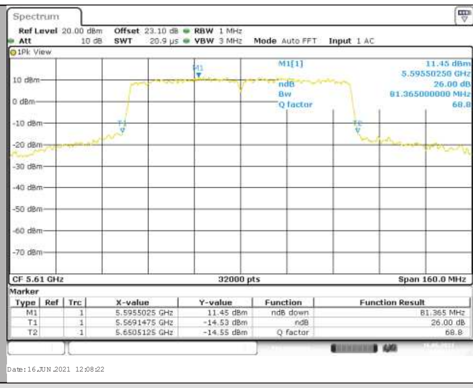


C23

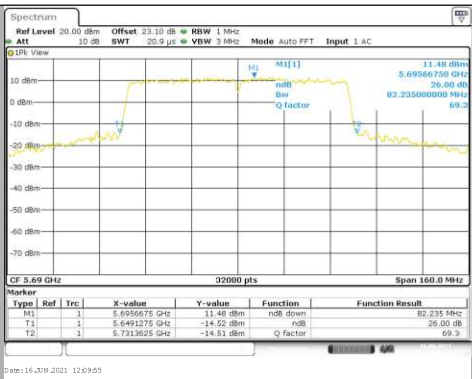
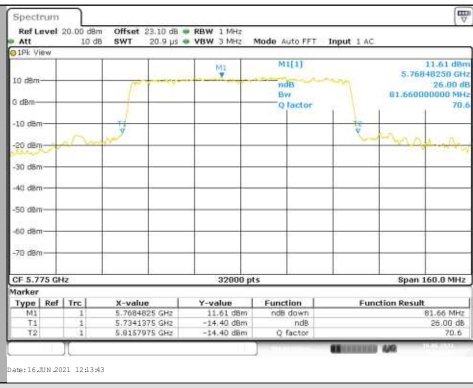


Channel	26dB Emission Bandwidth (MHz)
C14	40.060
C15	39.787
C16	40.955
C17	39.905
C18	40.007
C19	40.797
C20	40.385
C21	40.905
C22	40.897
C23	40.800

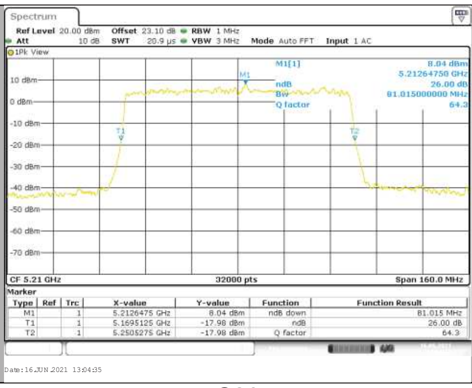
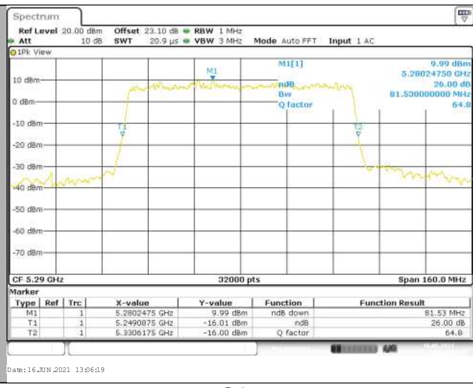
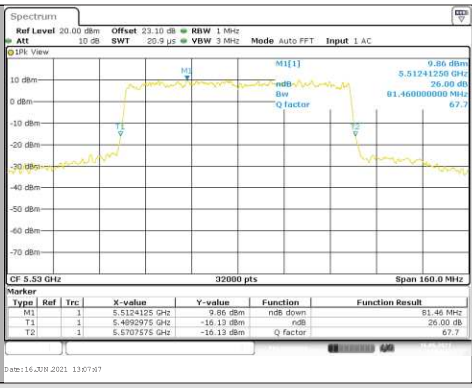
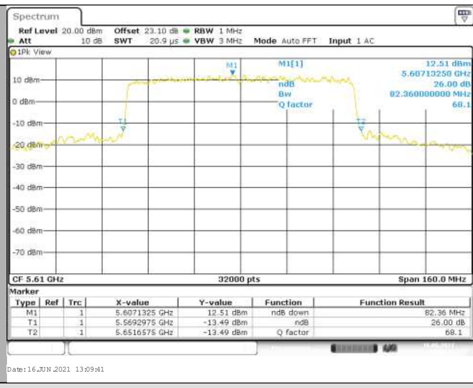
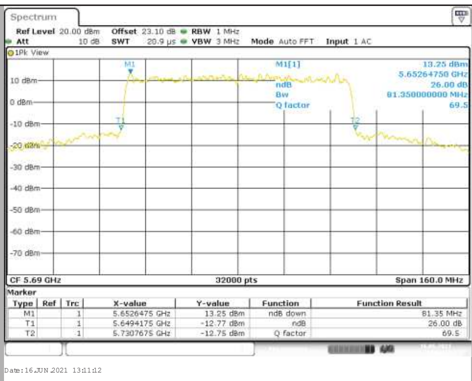
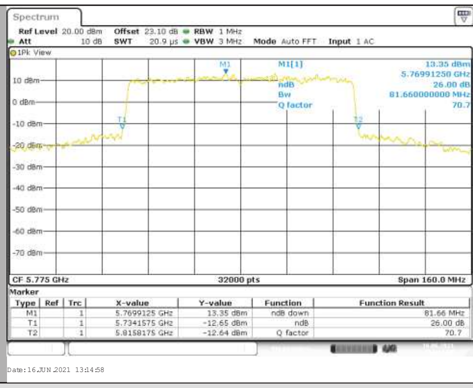
802.11ac VHT80

C24	C25
	
C26	**C27**
	

802.11ac VHT80

C28	C29
	

Channel	26dB Emission Bandwidth (MHz)
C24	80.470
C25	80.775
C26	80.575
C27	81.365
C28	82.235
C29	81.660

802.11ax VHT80	
C24	C25
	
C26	C27
	
802.11ax VHT80	
C28	C29
	

Channel	26dB Emission Bandwidth (MHz)
C24	81.015
C25	81.530
C26	81.460
C27	82.360
C28	81.350
C29	81.660

5.6. CONCLUSION

26dB Emission Bandwidth measurement performed on the sample of the product **COGECO DIW3930 COGECO**, SN: **6211130035003**, in configuration and description presented in this test report, show levels **compliant** to the **47 CFR PART 15.407 & RSS 247 ISSUE 2** limits.

6. 6dB Emission Bandwidth

6.1. TEST CONDITIONS

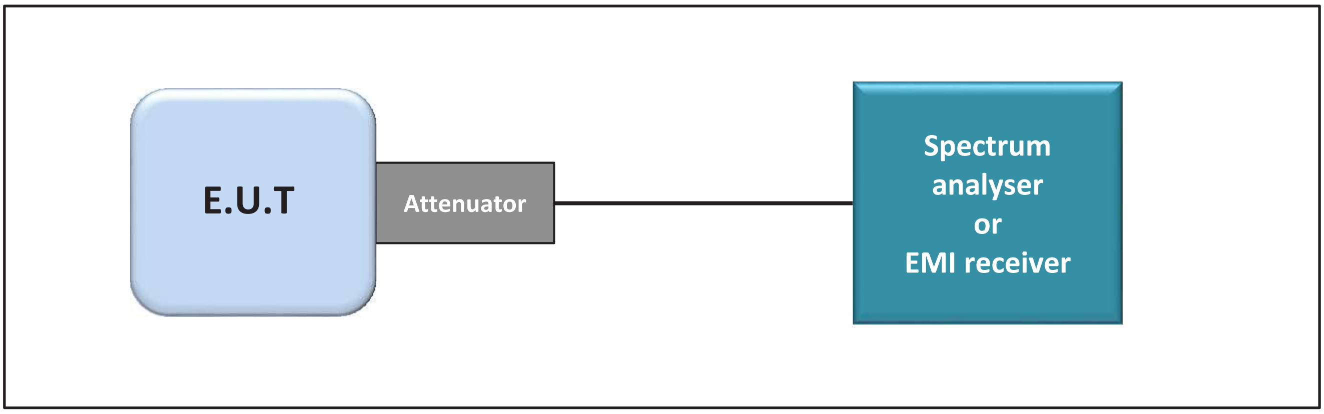
Test performed by	: Armand MAHOUNGOU
Date of test	: June 16, 2021
Ambient temperature	: 25°C
Relative humidity	: 44%

6.2. TEST SETUP

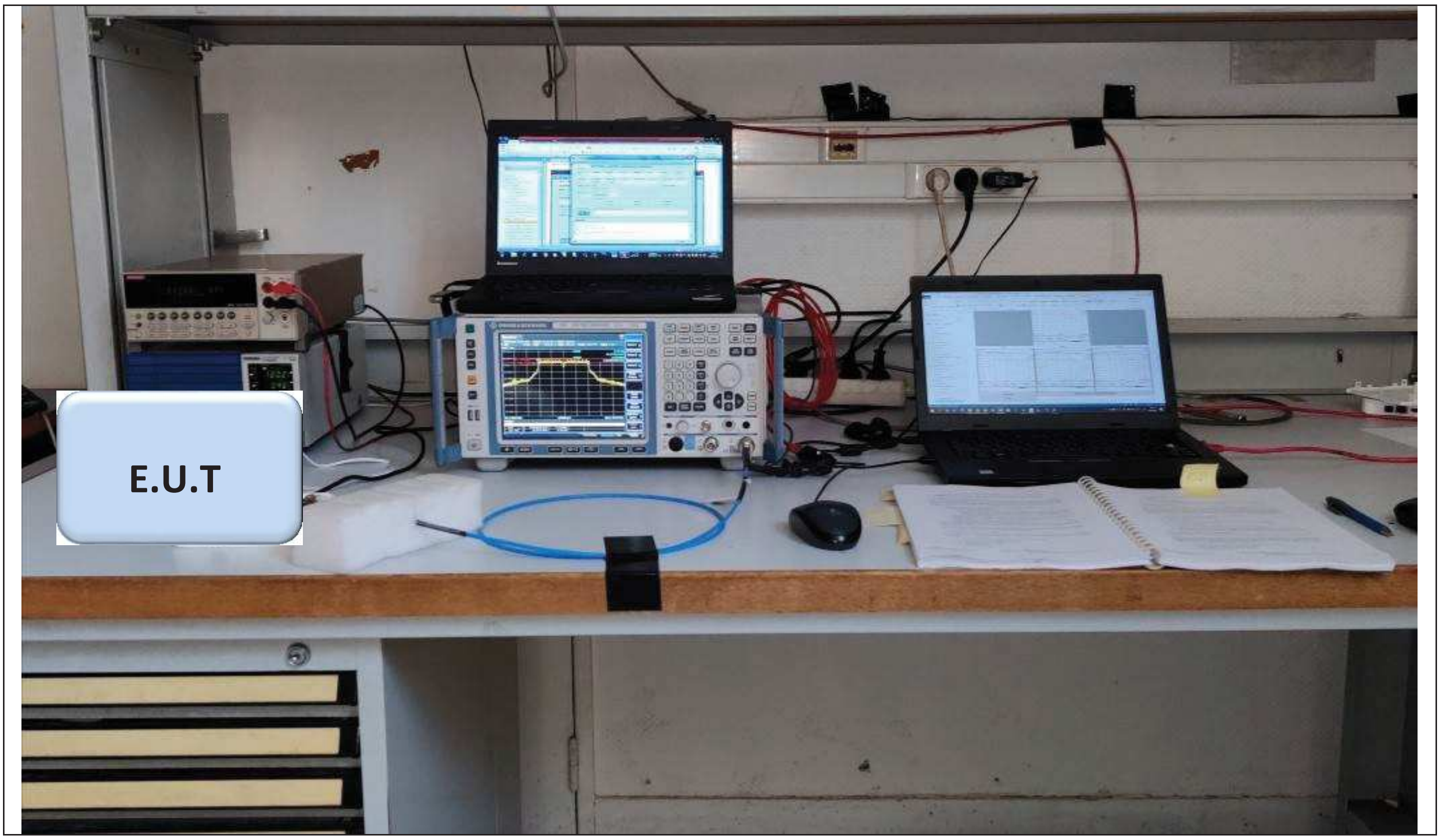
- The Equipment Under Test is installed:
☑ On a table
☐ In an anechoic chamber

- Measurement is performed with a spectrum analyzer in:
☑ Conducted Method
☐ Radiated Method

- Test Procedure:
☑ KDB 789033 D02 General UNII Test Procedures New Rules v02r01 § C2



Test set up of 6dB Emission Bandwidth



Photograph for 6dB emission bandwidth

6.3. LIMIT

The 6dB bandwidth shall be at least 500kHz

6.4. TEST EQUIPMENT LIST

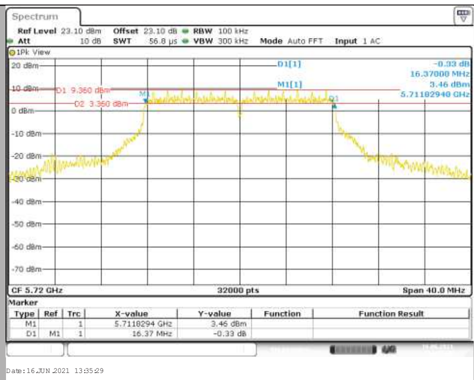
DESCRIPTION	MANUFACTURER	MODEL	N° LCIE	Cal_Date	Cal_Due
EMI receiver	ROHDE & SCHWARZ	ESR7	A2642026	2019/07	2021/07
Cable + Attenuateur 20dB	PASTERNACK	PE350-150CM	A5329970	2020/09	2021/09
Power supply	KIKUSUI	PCR500M	A7049006	See Multimeter	See Multimeter
Multimeter	KEITHLEY	2000	A1242090	2021/03	2023/03
R&S Commander Software	ROHDE & SCHWARZ	Version 1,6,4	-	-	-
Load 50 ohms	TELEGARTNER	-	A7150103	2021/04	2023/04
Load 50 ohms	TELEGARTNER	-	A7150104	2021/04	2023/04

Note: In our quality system, the test equipment calibration due is more & less 2 months

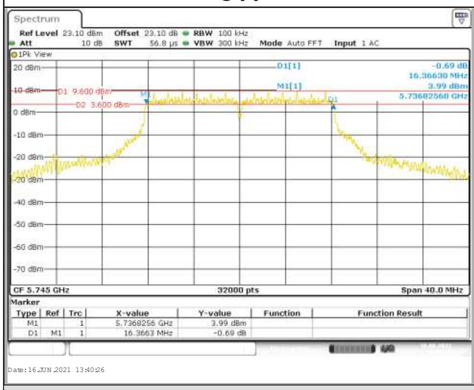
6.5. RESULTS

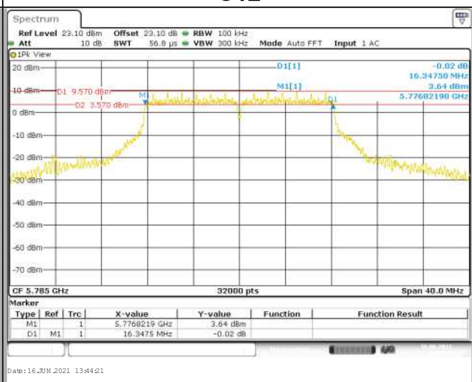
802.11a

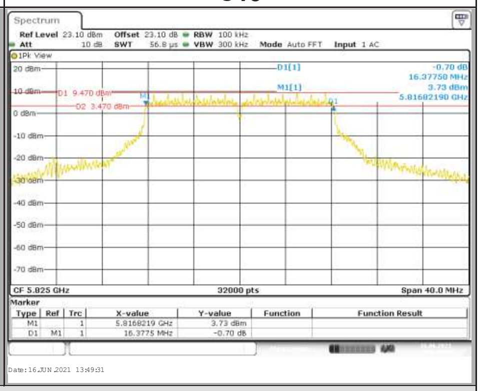
C10



C11	C12	C13



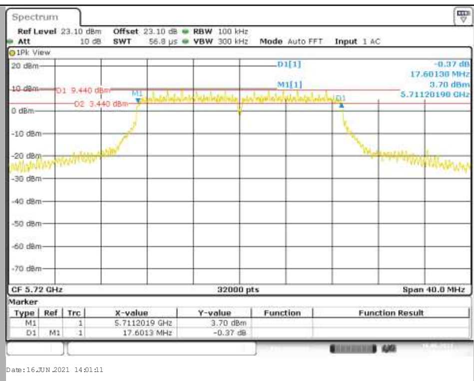


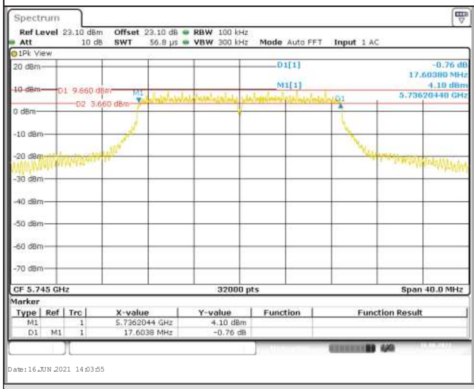
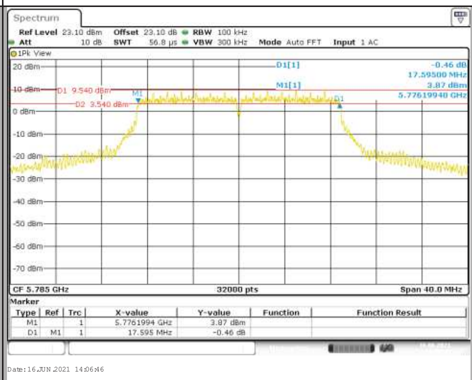
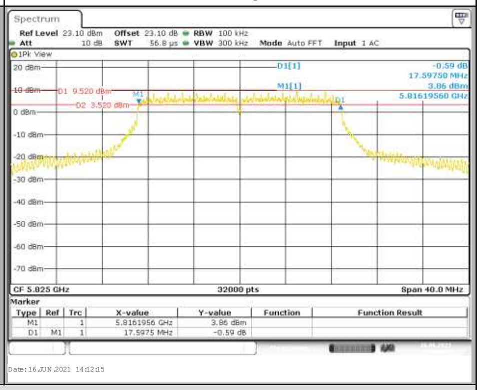


Channel	6dB Emission Bandwidth (MHz)
C10	16.370
C11	16.366
C12	16.347
C13	16.377

802.11n HT20/ac VHT20

C10

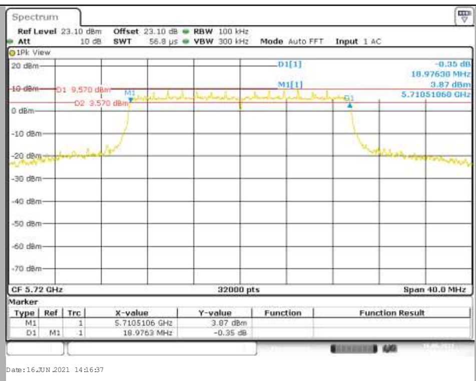


C11	C12	C13
		

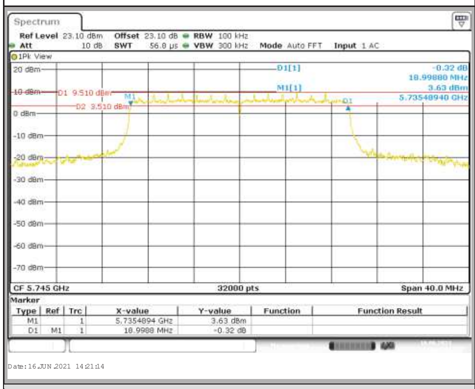
Channel	6dB Emission Bandwidth (MHz)
C10	17.601
C11	17.604
C12	17.595
C13	17.597

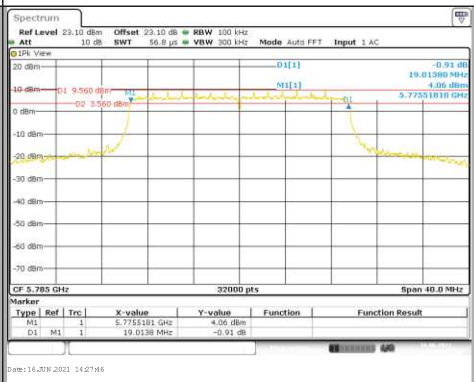
802.11ax HT20

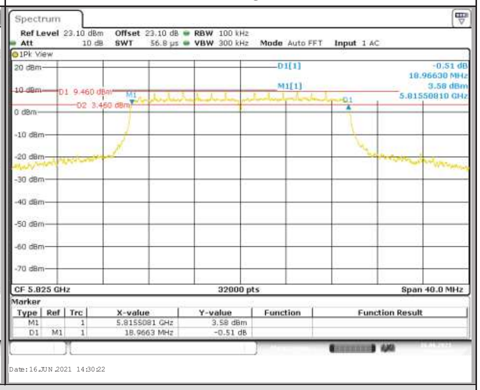
C10



C11	C12	C13

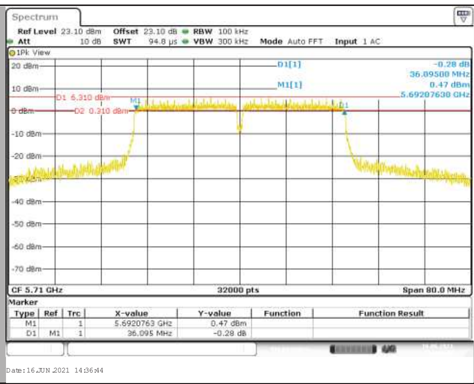




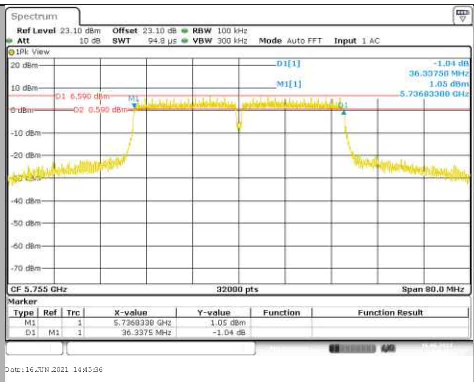


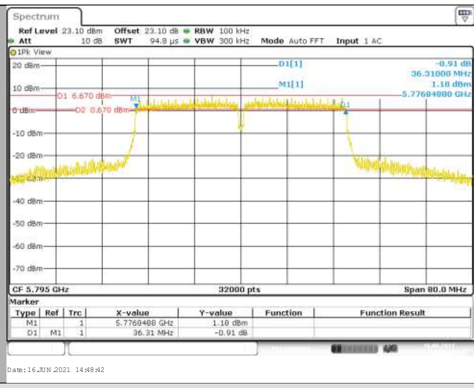
Channel	6dB Emission Bandwidth (MHz)
C10	18.976
C11	18.999
C12	19.014
C13	18.966

802.11n HT40/ac VHT40
C21



C22	C23

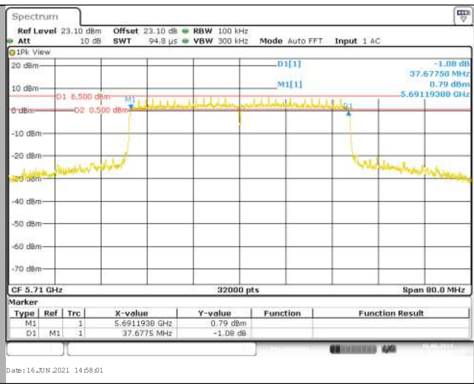


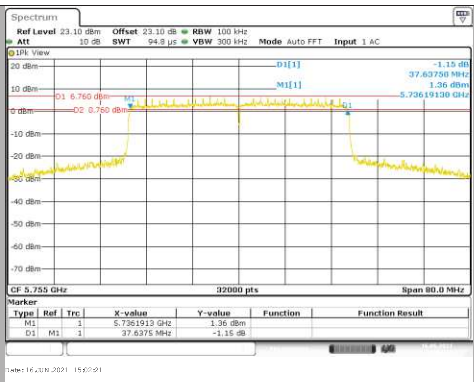
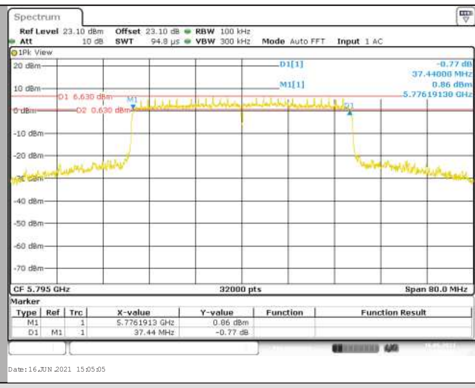


Channel	6dB Emission Bandwidth (MHz)
C21	36.095
C22	36.337
C23	36.310

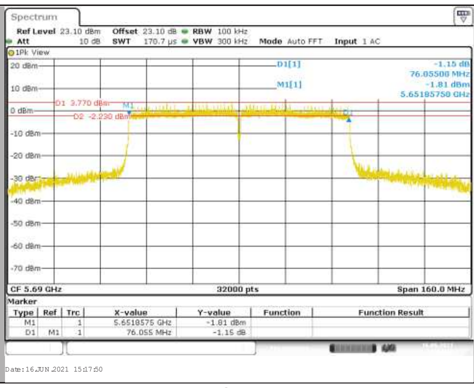
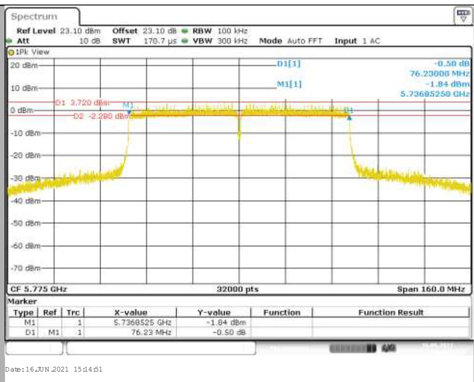
802.11ax HT40

C21

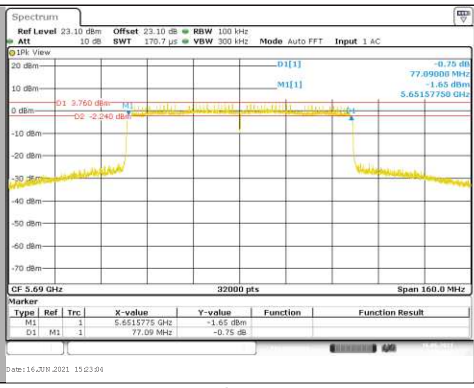


C22	**C23**
	

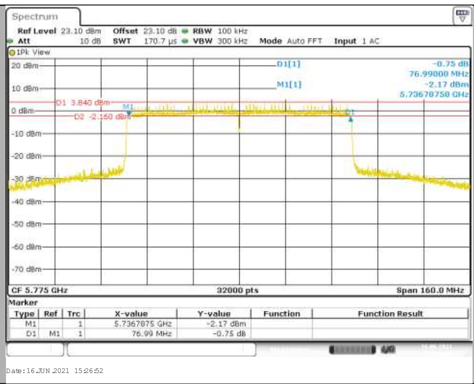
Channel	6dB Emission Bandwidth (MHz)
C21	37.677
C22	37.637
C23	37.440

802.11ac VHT80	
C28	
	
C29	
	
Channel	6dB Emission Bandwidth (MHz)
C28	76.055
C29	76.230

802.11ax VHT80	
C28	



C29	



Channel	6dB Emission Bandwidth (MHz)
C28	77.090
C29	76.990

6.6. CONCLUSION

6dB Emission Bandwidth measurement performed on the sample of the product **COGECO DIW3930 COGECO**, SN: **6211130035003**, in configuration and description presented in this test report, show levels **compliant** to the **47 CFR PART 15.407 & RSS 247 ISSUE 2** limits.

7. DUTY CYCLE

7.1. TEST CONDITIONS

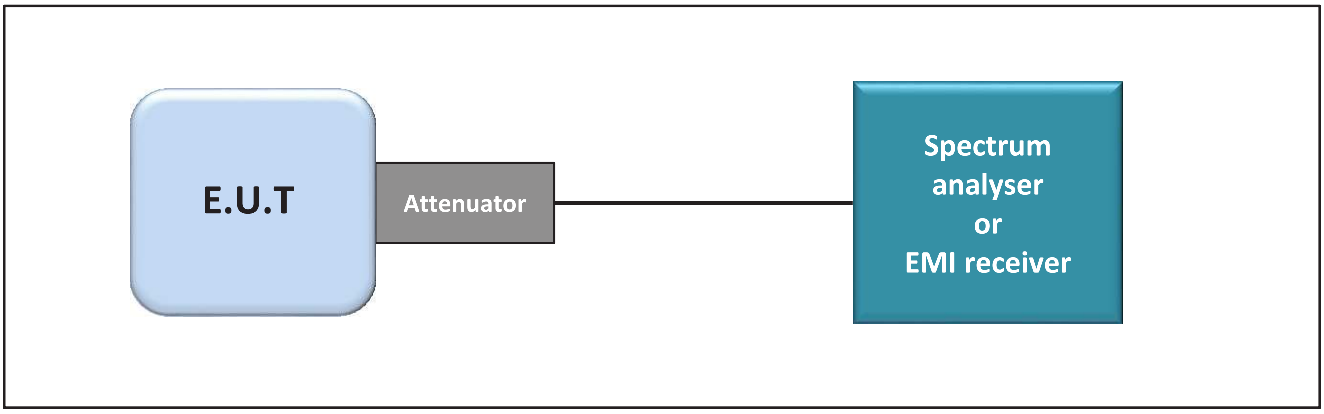
Test performed by	: Armand MAHOUNGOU
Date of test	: June 7, 2021
Ambient temperature	: 24°C
Relative humidity	: 42%

7.2. TEST SETUP

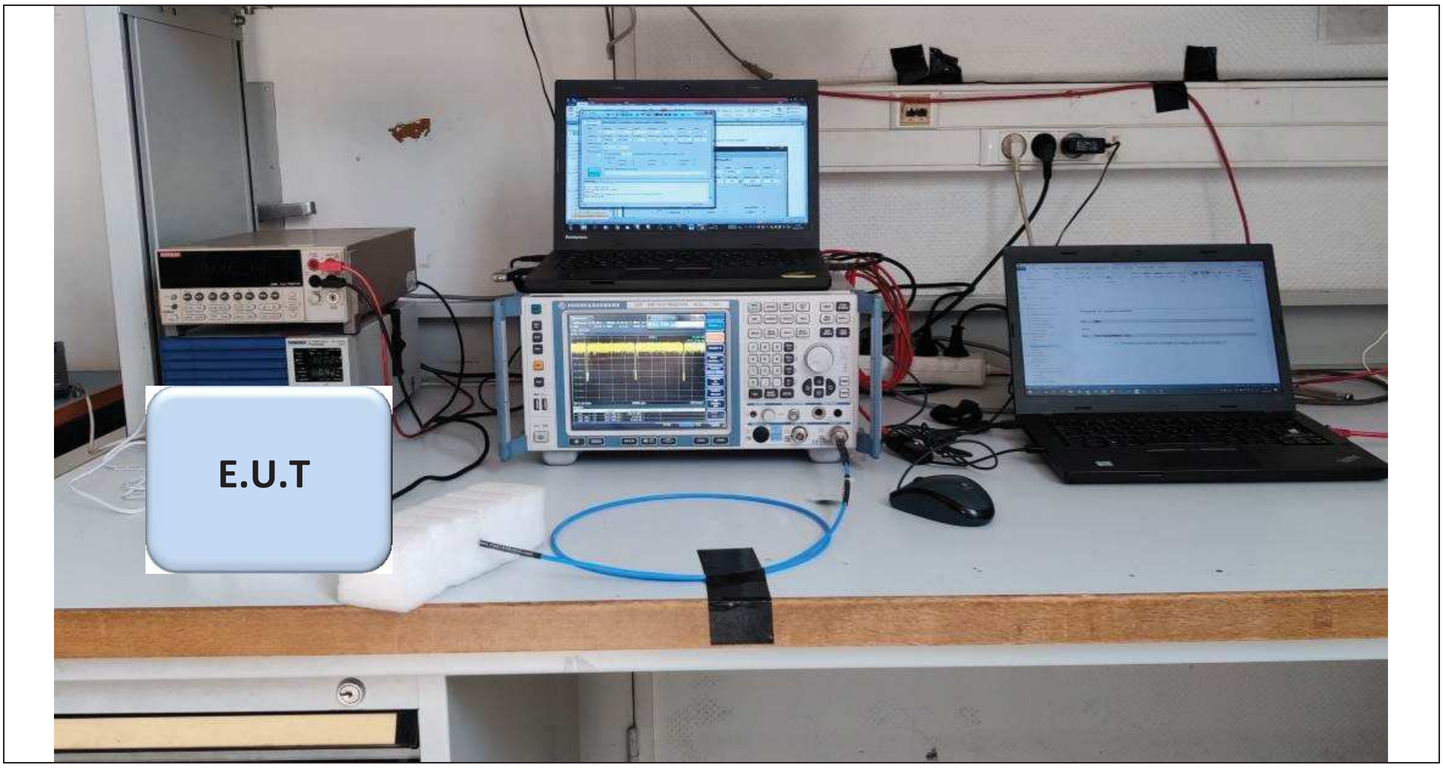
- The Equipment Under Test is installed:
☑ On a table
☐ In an anechoic chamber

- Measurement is performed with a spectrum analyzer in:
☑ Conducted Method
☐ Radiated Method

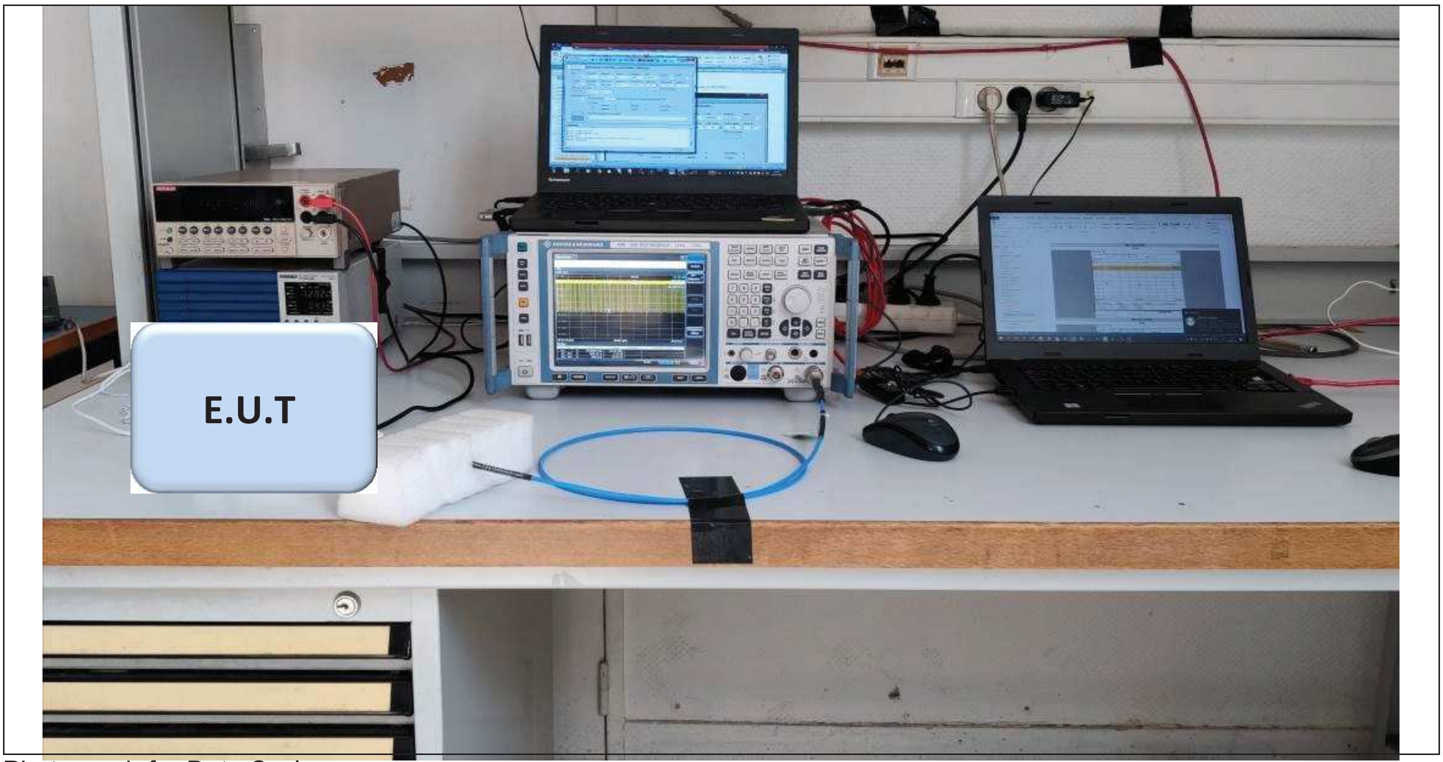
- Test Procedure:
☑ KDB 789033 D02 General UNII Test Procedures New Rules v02r01 § B2 b)



Test set up of Duty Cycle



Photograph for Duty Cycle



Photograph for Duty Cycle

7.3. LIMIT

None

7.4. TEST EQUIPMENT LIST

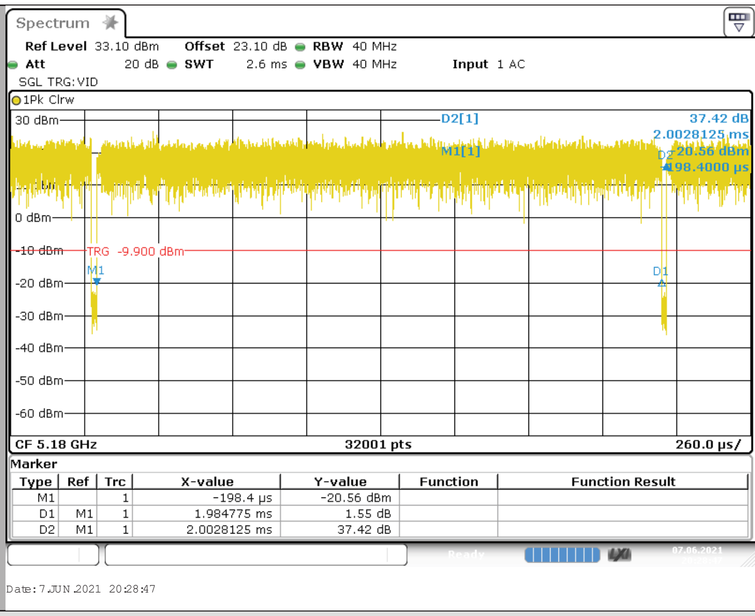
DESCRIPTION	MANUFACTURER	MODEL	N° LCIE	Cal_Date	Cal_Due
EMI receiver	ROHDE & SCHWARZ	ESR7	A2642026	2019/07	2021/07
Cable + Attenuateur 20dB	PASTERNACK	PE350-150CM	A5329970	2020/09	2021/09
Power supply	KIKUSUI	PCR500M	A7049006	See Multimeter	See Multimeter
Multimeter	KEITHLEY	2000	A1242090	2021/03	2023/03
R&S Commander Software	ROHDE & SCHWARZ	Version 1,6,4	-	-	-
Load 50 ohms	TELEGARTNER	-	A7150103	2021/04	2023/04
Load 50 ohms	TELEGARTNER	-	A7150104	2021/04	2023/04

Note: In our quality system, the test equipment calibration due is more & less 2 months

7.5. RESULTS

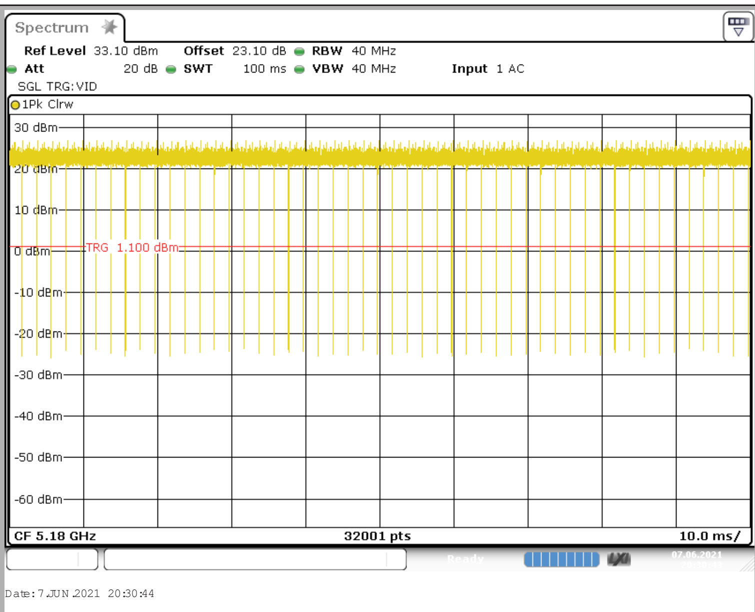
802.11a

C1



802.11a

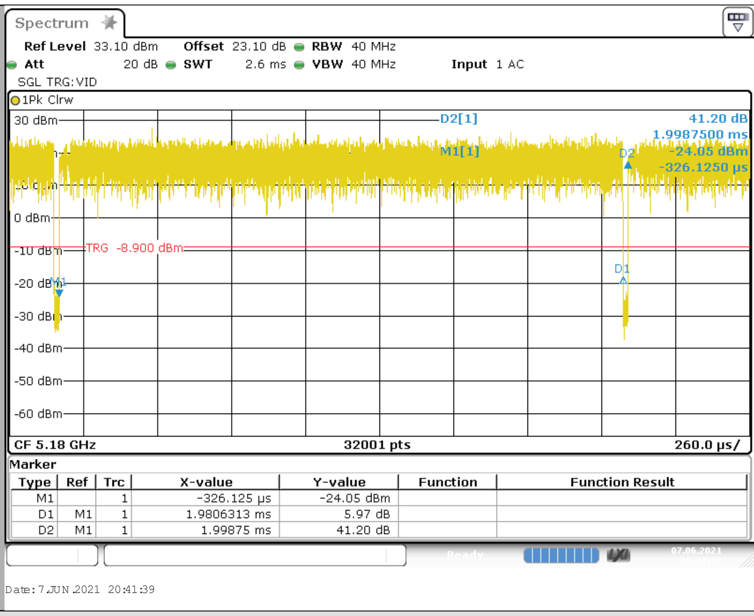
C1



Mode	Duty Cycle (%)	Duty Cycle Correction (dB)
802.11a	99.099	$20\log(\frac{1}{duty\ cycle})$ = 0.00786

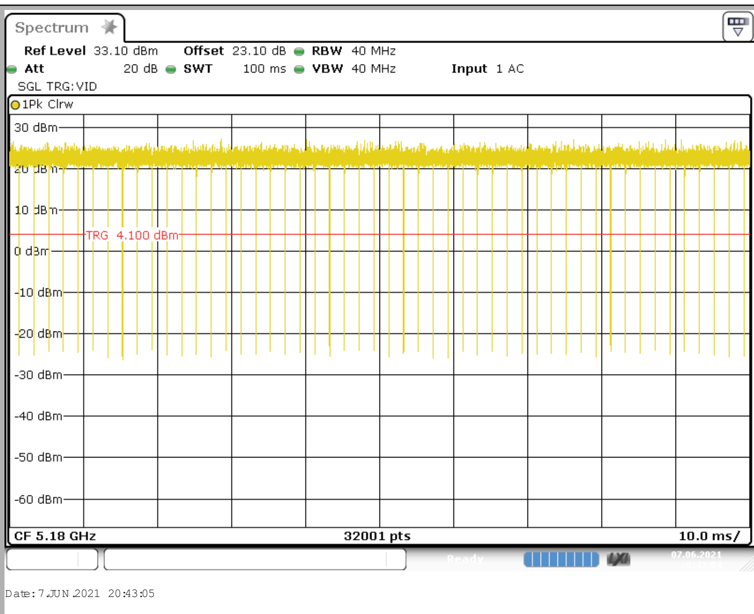
802.11n HT20/ac VHT20

C1



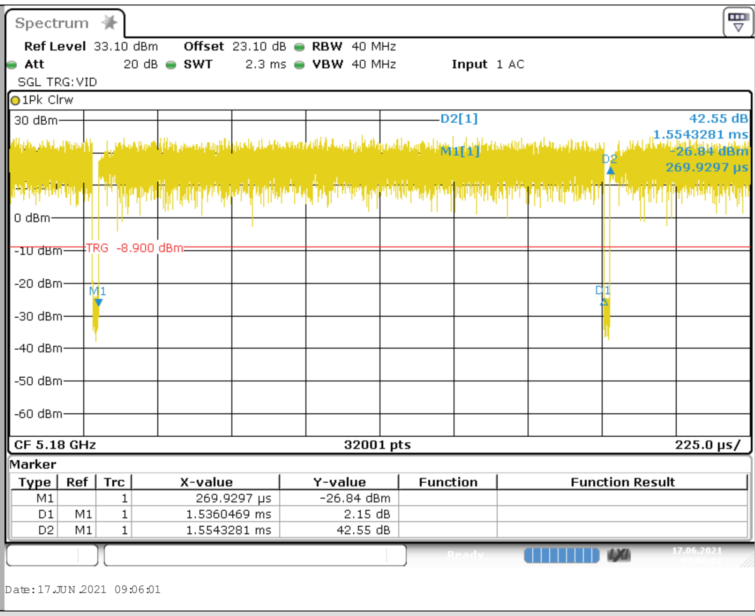
802.11n HT20/ac VHT20

C1

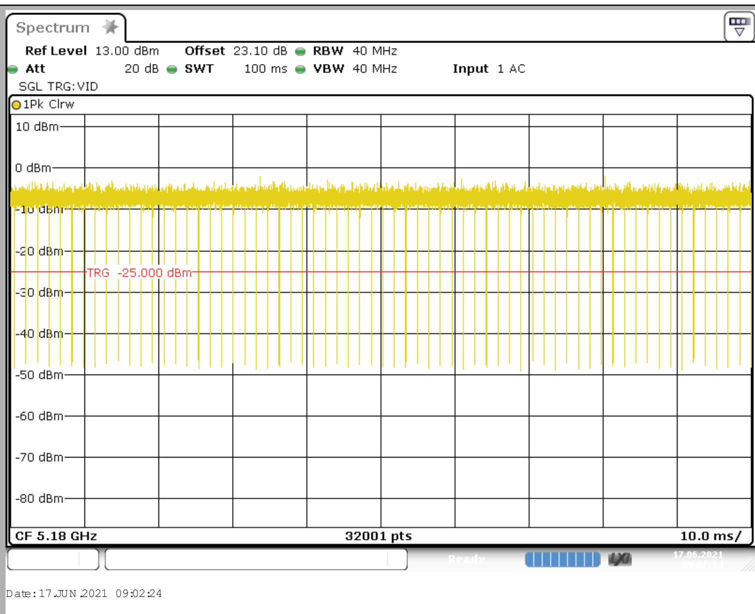


Mode	Duty Cycle (%)	Duty Cycle Correction (dB)
802.11n HT20/ac VHT20	99.093	$20\log(\frac{1}{duty\ cycle})$ = 0.00791

802.11ax HT20
C1

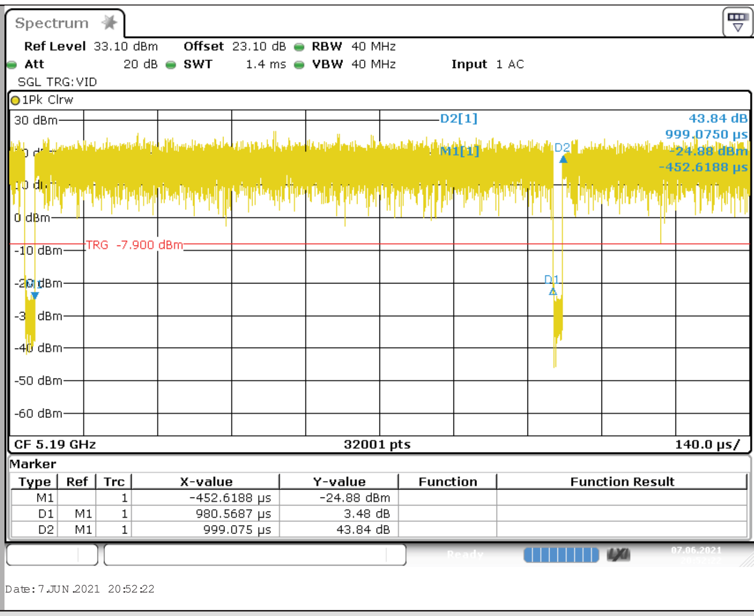


802.11ax HT20
C1

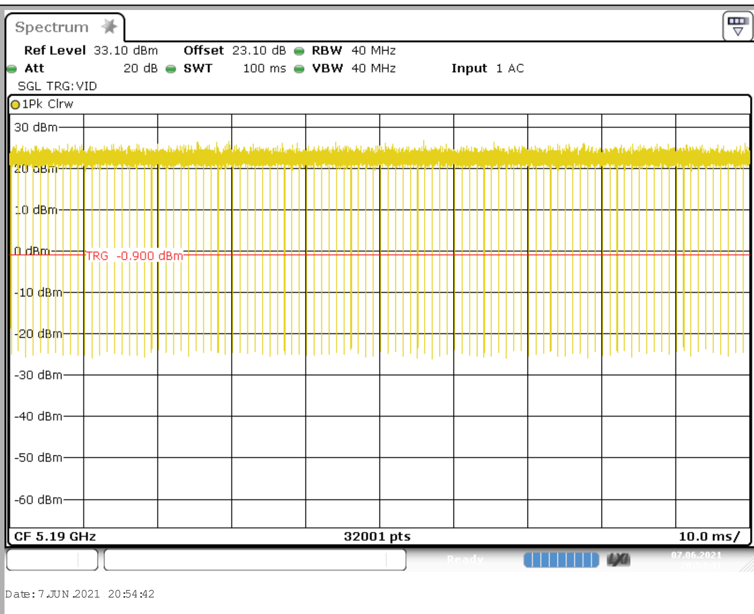


Mode	Duty Cycle (%)	Duty Cycle Correction (dB)
802.11ax HT20	98.823	$20\log(\frac{1}{duty\ cycle})$ = 0.103

802.11n HT40/ac VHT40
C14



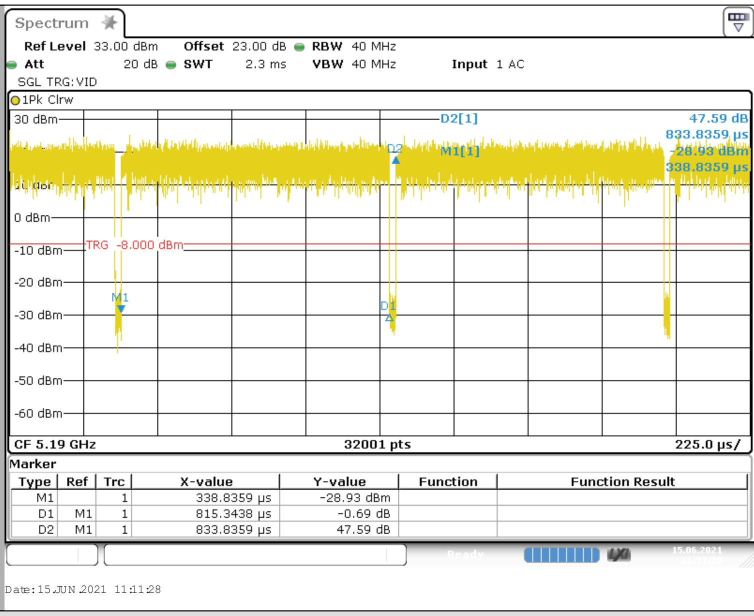
802.11n HT40/ac VHT40
C14



Mode	Duty Cycle (%)	Duty Cycle Correction (dB)
802.11n HT40/ac VHT40	98.147	$20\log(\frac{1}{duty\ cycle})$ = 0.1624

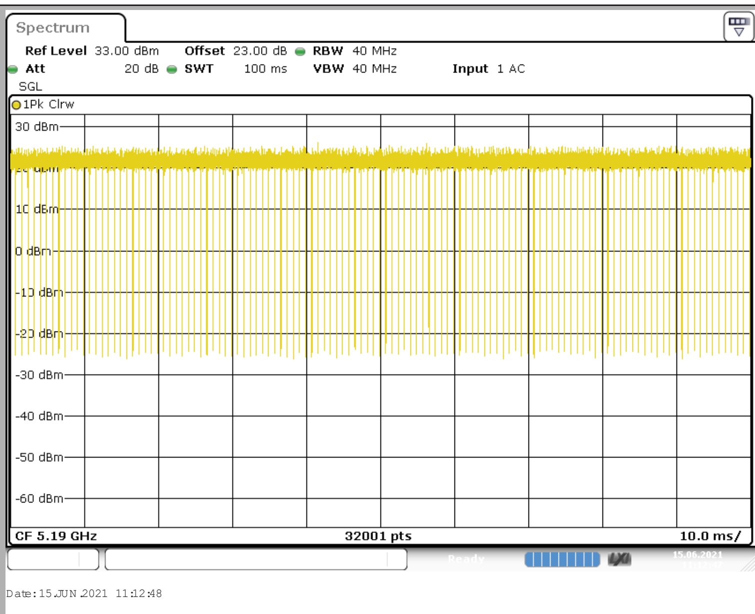
802.11ax HT40

C14



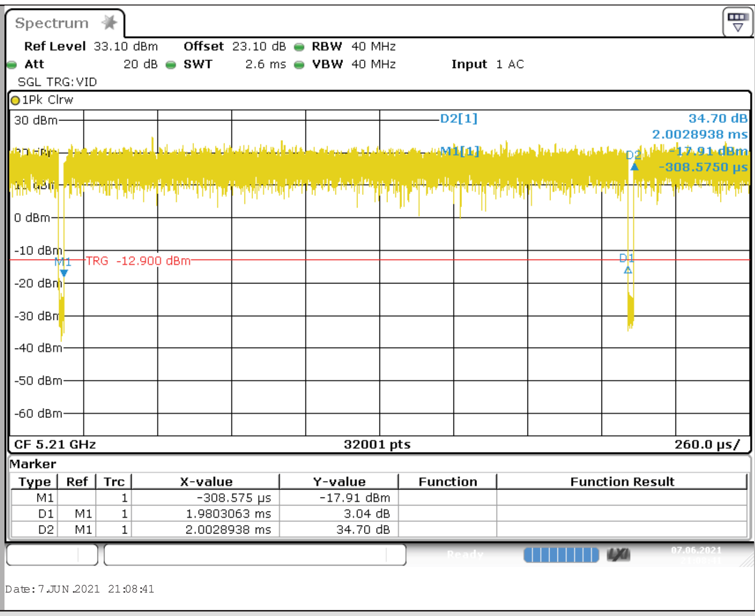
802.11ax HT40

C14

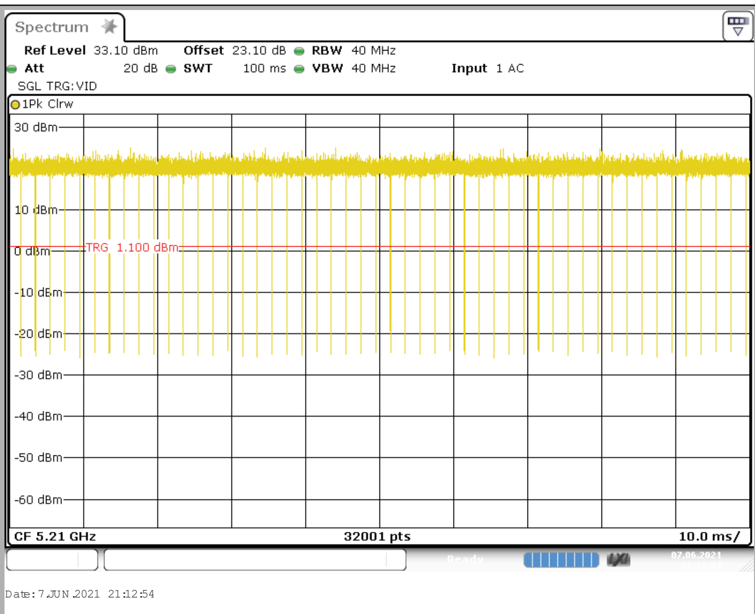


Mode	Duty Cycle (%)	Duty Cycle Correction (dB)
802.11ax HT40	97.782	$20\log(\frac{1}{duty\ cycle}) = 0.1948$

802.11ac VHT80
C24

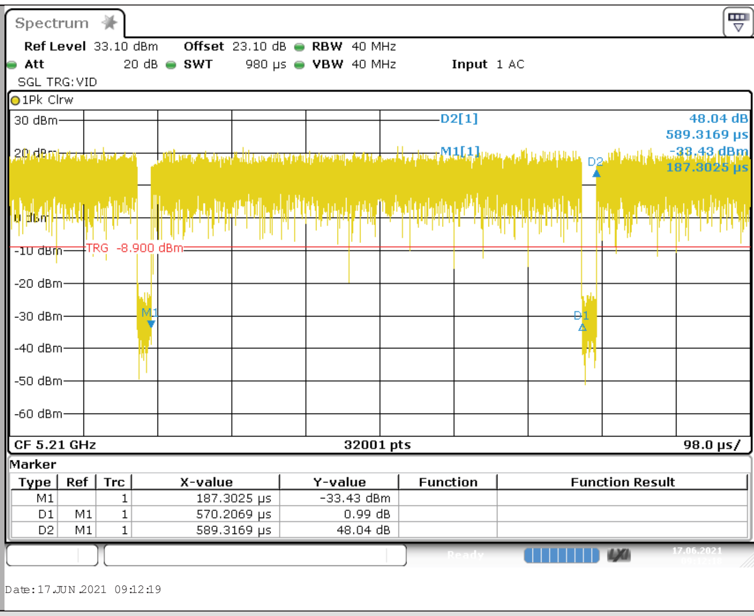


802.11ac VHT80
C24

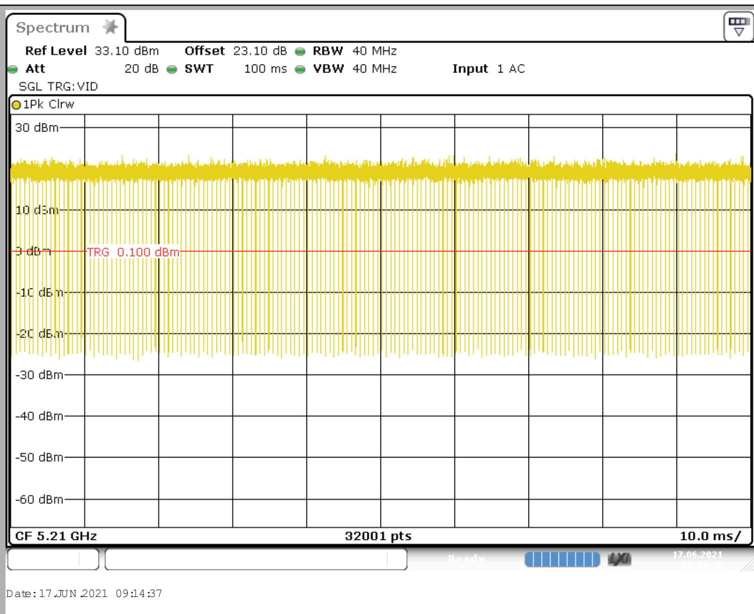


Mode	Duty Cycle (%)	Duty Cycle Correction (dB)
802.11ac VHT80	98.872	$20\log(\frac{1}{duty\ cycle}) = 0.0985$

802.11ax VHT80
C24



802.11ax VHT80
C24



Mode	Duty Cycle (%)	Duty Cycle Correction (dB)
802.11ax VHT80	96.757	$20\log(\frac{1}{duty\ cycle}) = 0.286$

7.6. CONCLUSION

Duty Cycle measurement performed on the sample of the product **COGECO DIW3930 COGECO**, SN: **6211130035003**, in configuration and description presented in this test report, show levels **compliant** to the **47 CFR PART 15.407 & RSS 247 ISSUE 2** limits.

8. MAXIMUM CONDUCTED OUTPUT POWER, MAXIMUM POWER SPECTRAL DENSITY, MAXIMUM EIRP, MAXIMUM EIRP SPECTRAL DENSITY

8.1. TEST CONDITIONS

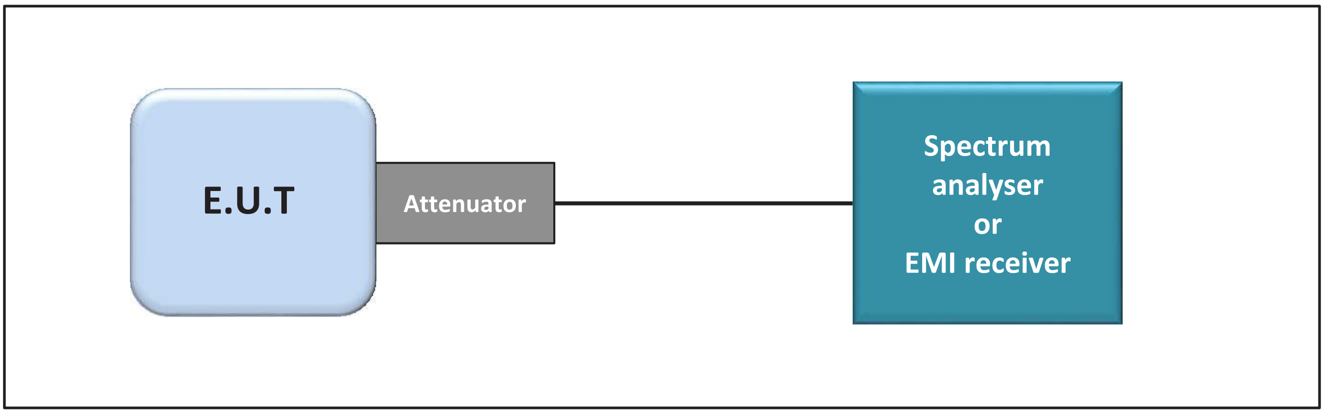
Test performed by	: Armand MAHOUNGOU
Date of test	: June 17, 2021 to June 22, 2021
Ambient temperature	: 27°C & 25°C
Relative humidity	: 46% & 48%

8.2. TEST SETUP

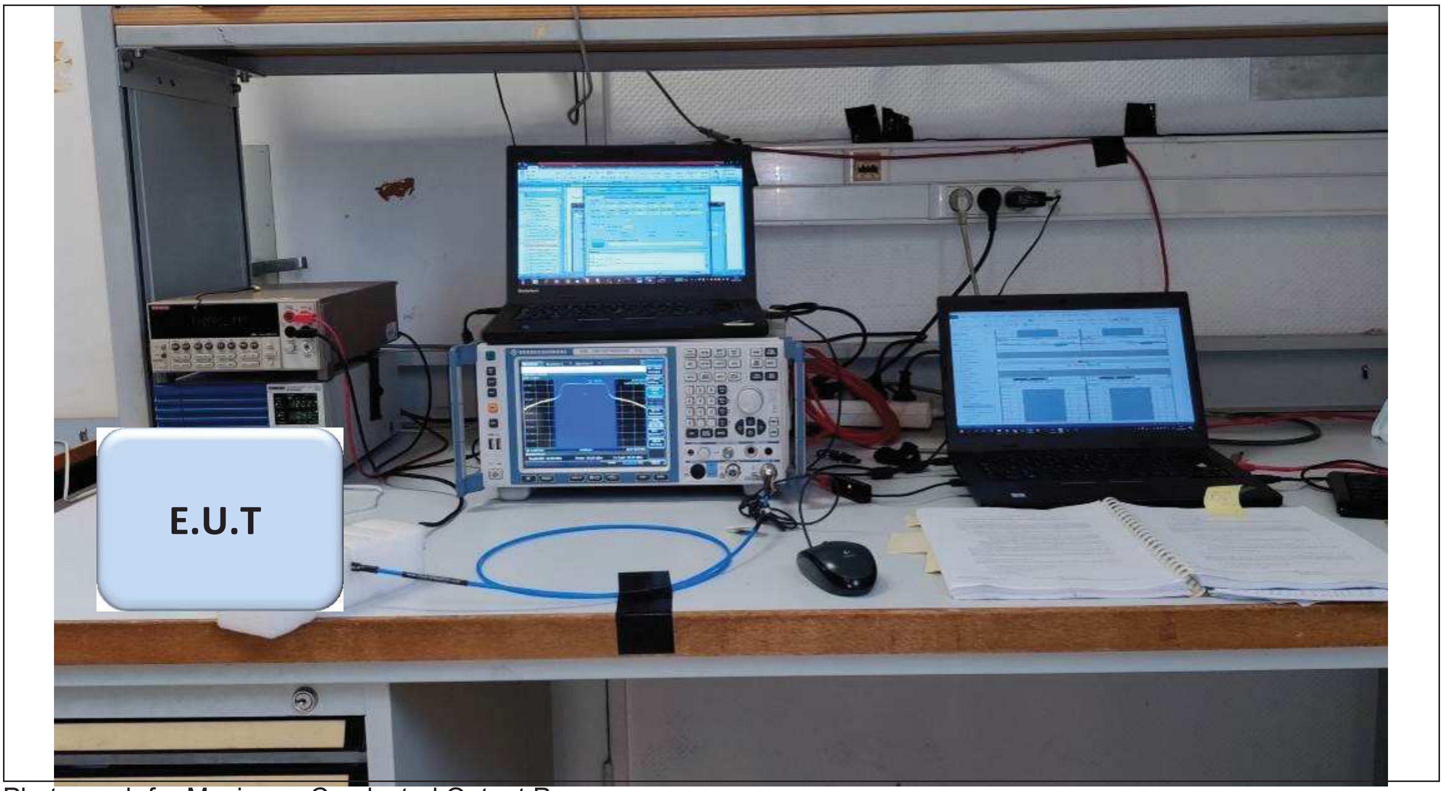
- The Equipment Under Test is installed:
☑ On a table
☐ In an anechoic chamber

- Measurement is performed with a spectrum analyzer in:
☑ Conducted Method
☐ Radiated Method

- Test Procedure:
☑ KDB 789033 D02 General UNII Test Procedures New Rules v02r01 § E2 b) (Method SA-1) & F
☑ KDB 789033 D02 General UNII Test Procedures New Rules v02r01 § E2 c) (Method SA-2) & F
☑ KDB 662911 D01 Multiple Transmitter Output v02r01



Test set up of Maximum Conducted Output Power



Photograph for Maximum Conducted Output Power

8.3. LIMIT

FCC Part 15.407
Maximum Conducted Output power:
5150MHz-5250MHz: Shall not exceed 30dBm for Indoor Access Point devices & 24dBm for Client devices
5250MHz-5350MHz: Shall not exceed 24dBm or 11dBm +10*log (-26dB Bandwidth (MHz))
5470MHz-5725MHz: Shall not exceed 24dBm or 11dBm +10*log (-26dB Bandwidth (MHz))
5725MHz-5850MHz: Shall not exceed 30dBm
Limits are reduced by G-6dBi if Overall Antenna Gain above 6dBi

Maximum Power Spectral Density:
5150MHz-5250MHz: Shall not exceed 17dBm/MHz for Indoor Access Point & 11dBm/MHz for Client devices
5250MHz-5350MHz: Shall not exceed 11dBm/MHz
5470MHz-5725MHz: Shall not exceed 11dBm/MHz
5725MHz-5850MHz: Shall not exceed 30dBm/500kHz
Limits are reduced by G-6dBi if Overall Antenna Gain above 6dBi

RSS-247
Maximum Conducted Output power:
5250MHz-5350MHz: Shall not exceed 24dBm or 11dBm +10*log (-26dB Bandwidth (MHz))
5470MHz-5725MHz: Shall not exceed 24dBm or 11dBm +10*log (-26dB Bandwidth (MHz))
5725MHz-5850MHz: Shall not exceed 30dBm
Limits are reduced by G-6dBi if Overall Antenna Gain above 6dBi

Maximum Power Spectral Density:
5250MHz-5350MHz: Shall not exceed 11dBm/MHz
5470MHz-5725MHz: Shall not exceed 11dBm/MHz
5725MHz-5850MHz: Shall not exceed 30dBm/500kHz
Limits are reduced by G-6dBi if Overall Antenna Gain above 6dBi

Maximum EIRP:
5150MHz-5250MHz: Shall not exceed 23dBm or 10dBm +10*log (-26dB Bandwidth (MHz))
5250MHz-5350MHz: Shall not exceed 30dBm or 17dBm +10*log (-26dB Bandwidth (MHz)) (Above 23dBm Antenna pattern)
5470MHz-5725MHz : Shall not exceed 30dBm or 17dBm +10*log (-26dB Bandwidth (MHz))

Maximum EIRP Power Spectral Density:
5150MHz-5250MHz: Shall not exceed 10dBm/MHz

8.4. TEST EQUIPMENT LIST

DESCRIPTION	MANUFACTURER	MODEL	N° LCIE	Cal_Date	Cal_Due
EMI receiver	ROHDE & SCHWARZ	ESR7	A2642026	2019/07	2021/07
Cable + Attenuateur 20dB	PASTERNACK	PE350-150CM	A5329970	2020/09	2021/09
Power supply	KIKUSUI	PCR500M	A7049006	See Multimeter	See Multimeter
Multimeter	KEITHLEY	2000	A1242090	2021/03	2023/03
R&S Commander Software	ROHDE & SCHWARZ	Version 1,6,4	-	-	-
Load 50 ohms	TELEGARTNER	-	A7150103	2021/04	2023/04
Load 50 ohms	TELEGARTNER	-	A7150104	2021/04	2023/04

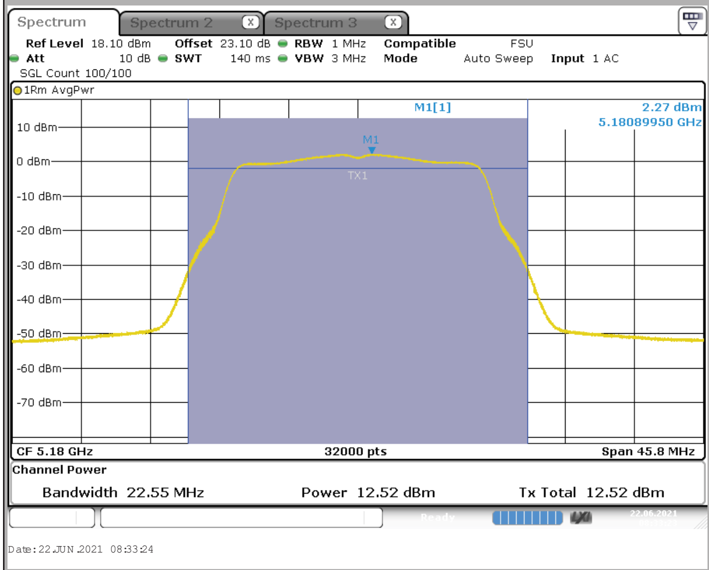
Note: In our quality system, the test equipment calibration due is more & less 2 months

8.5. RESULTS

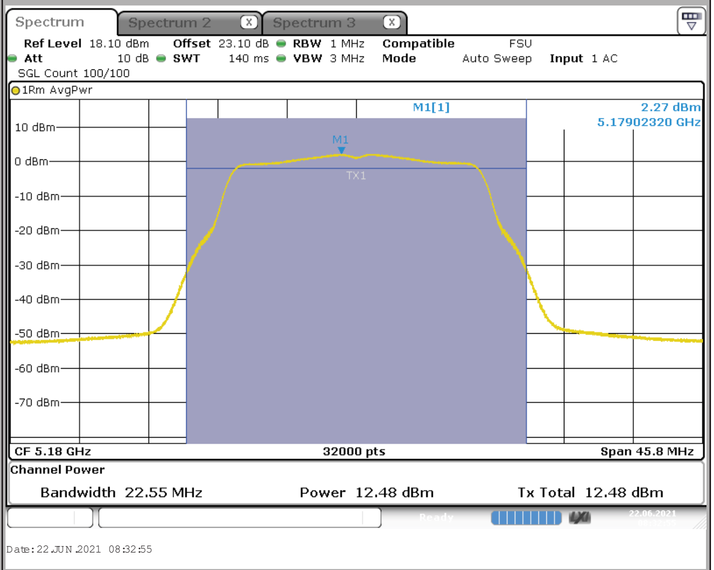
802.11a

C1

Tx1



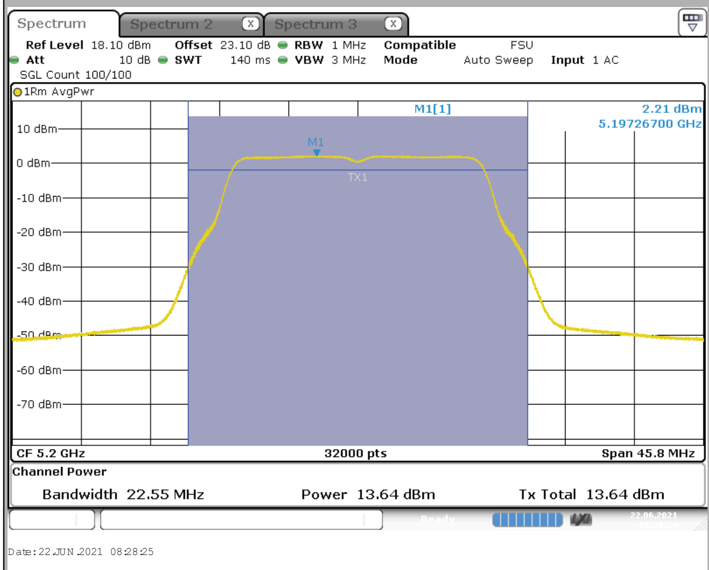
Tx2



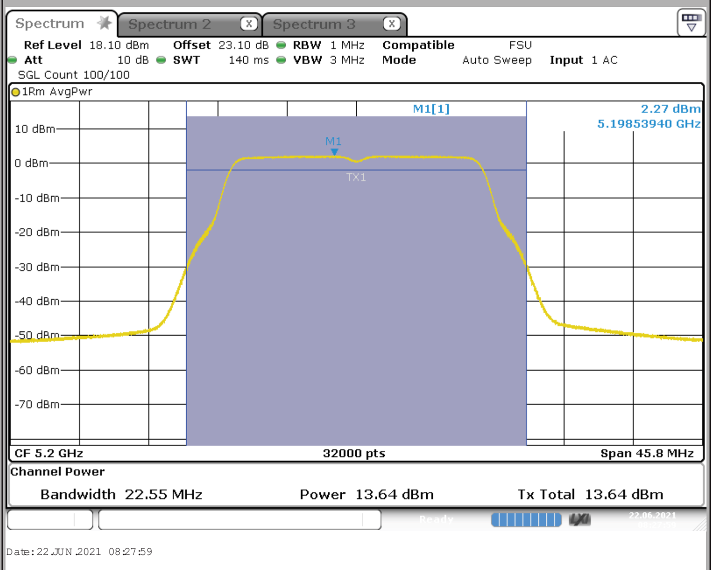
802.11a

C2

Tx1

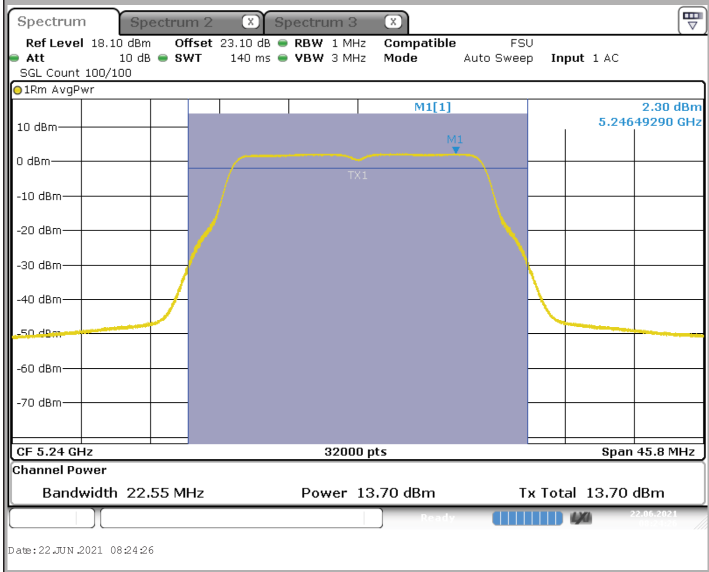
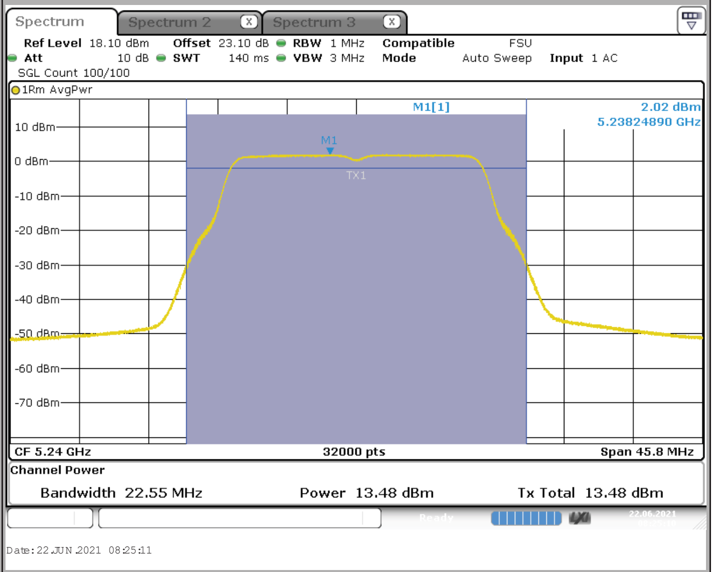


Tx2



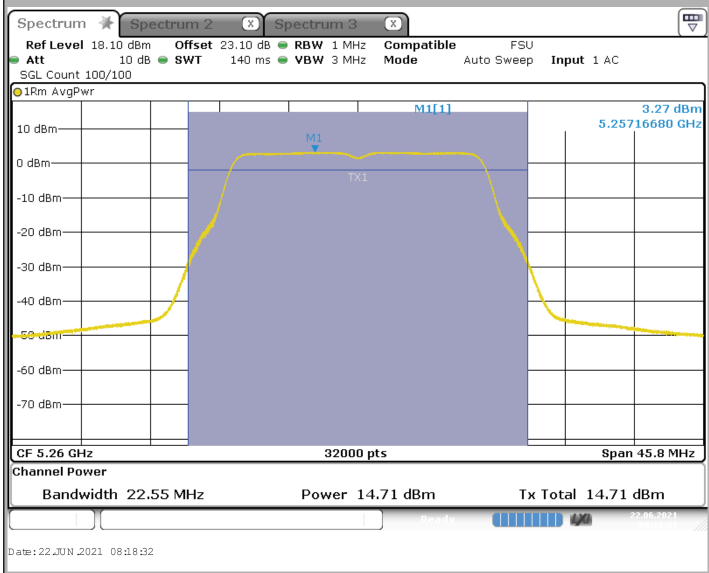
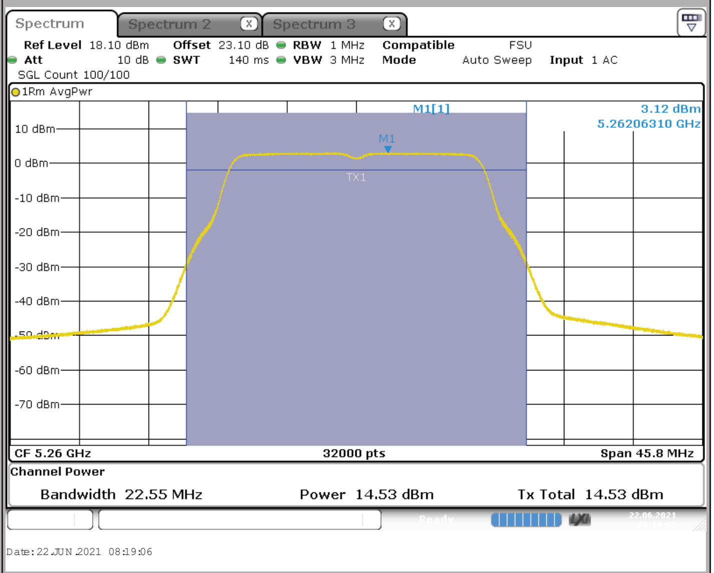
802.11a

C3

Tx1	Tx2
	

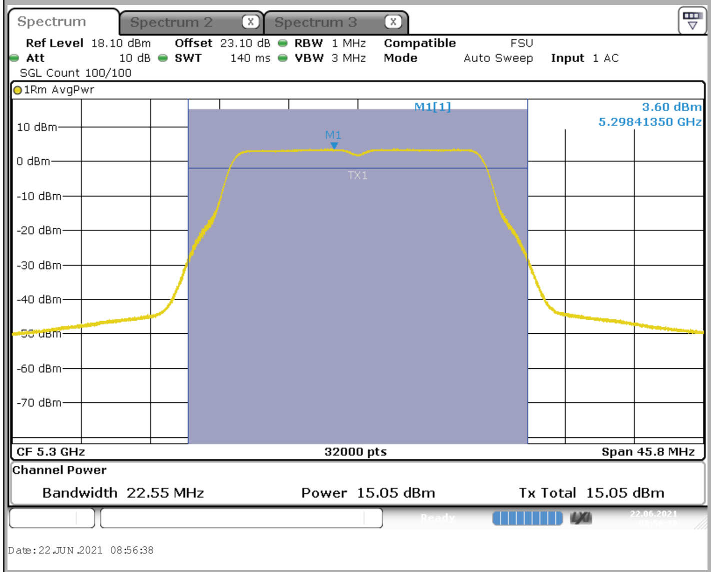
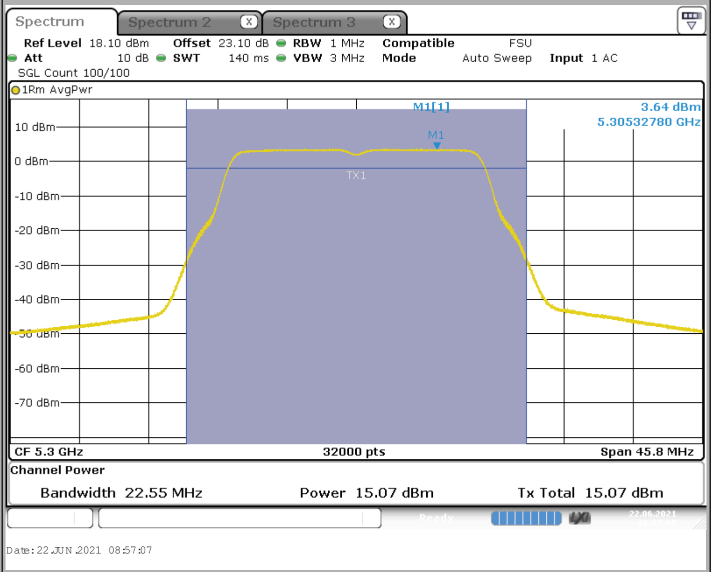
802.11a

C4

Tx1	Tx2
	

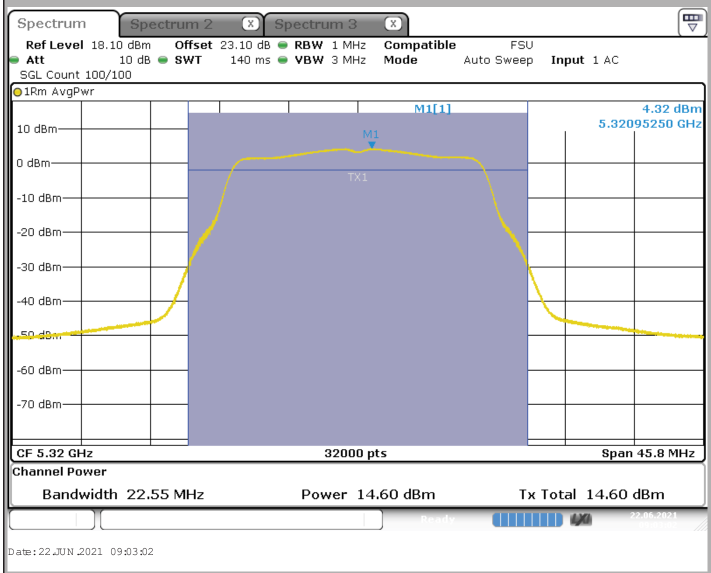
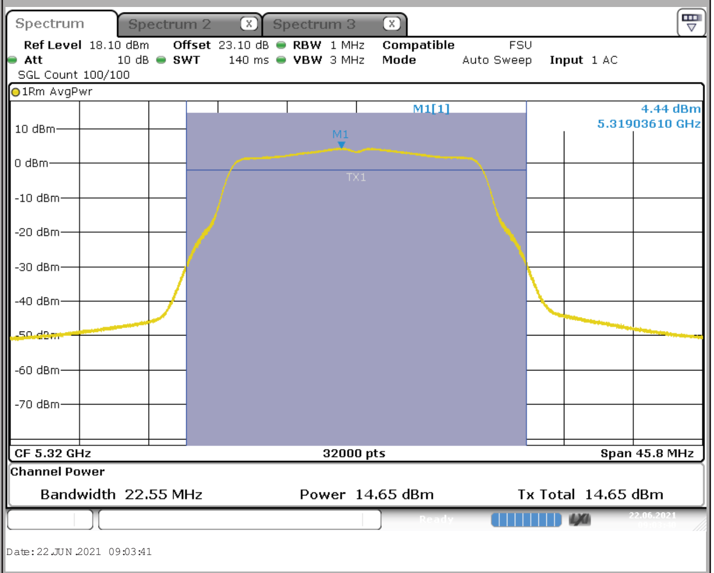
802.11a

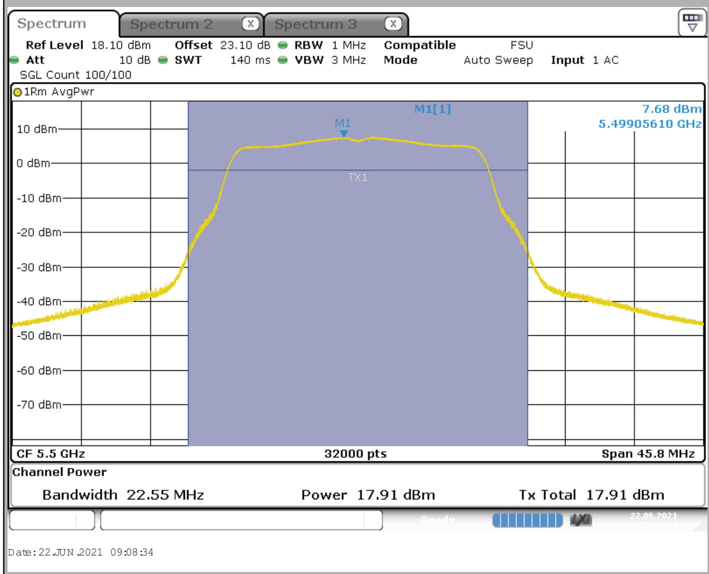
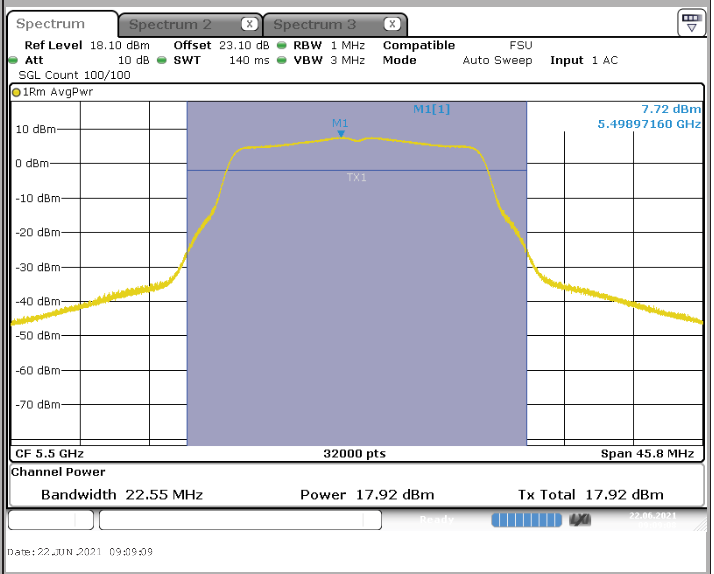
C5

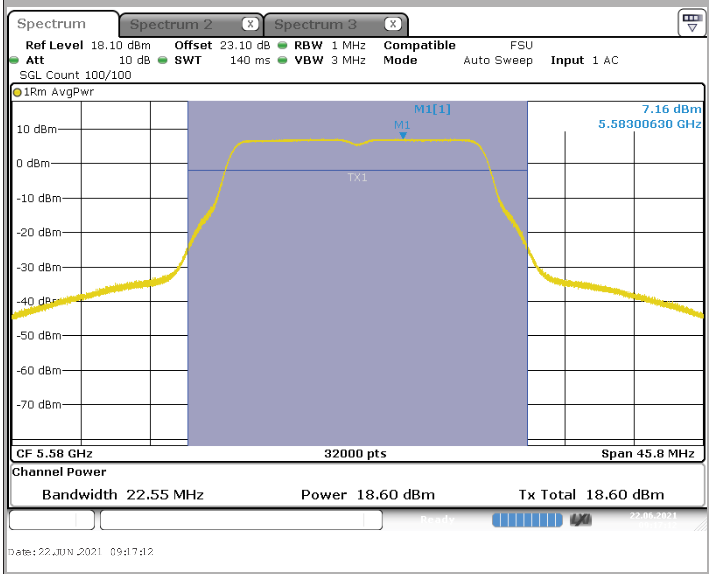
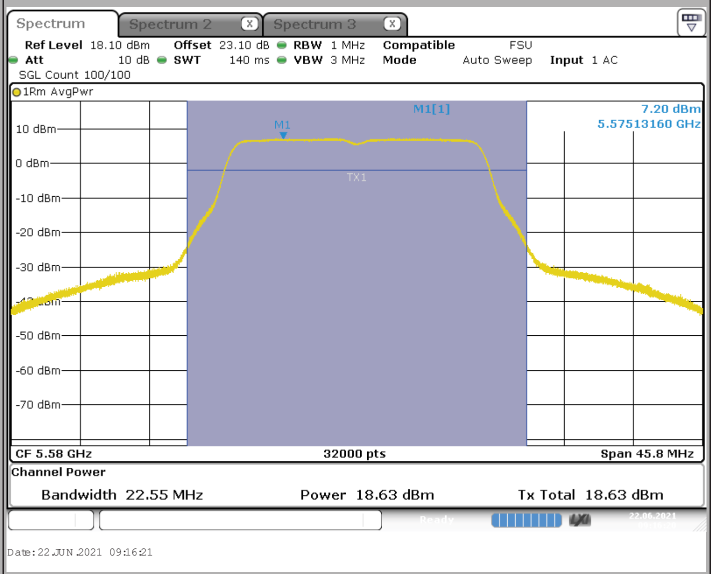
Tx1	Tx2
	

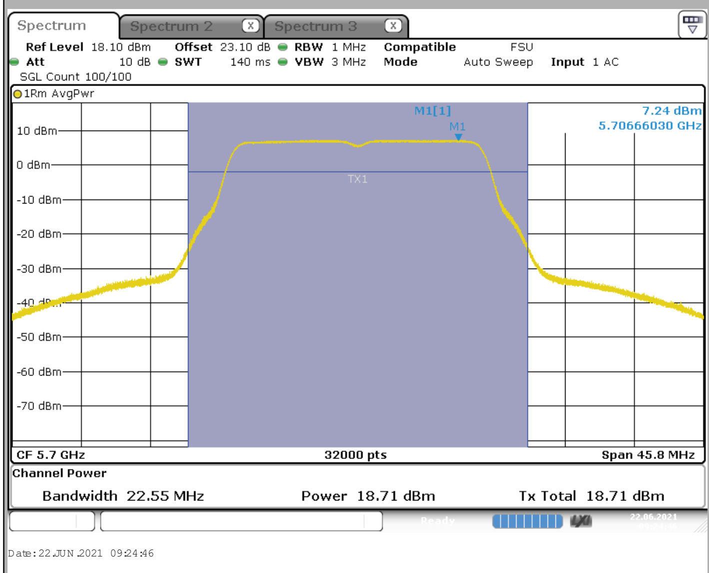
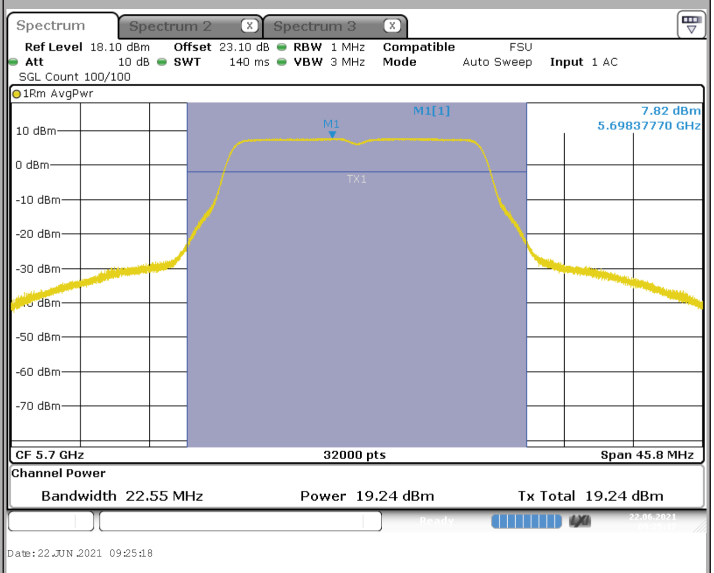
802.11a

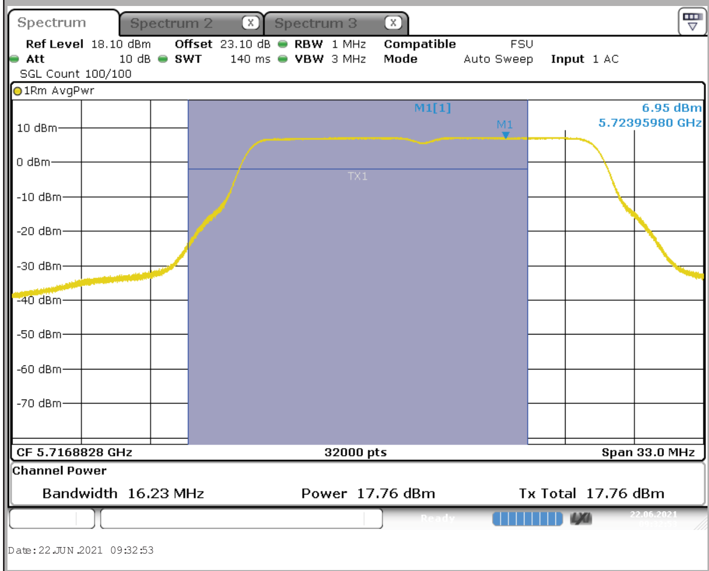
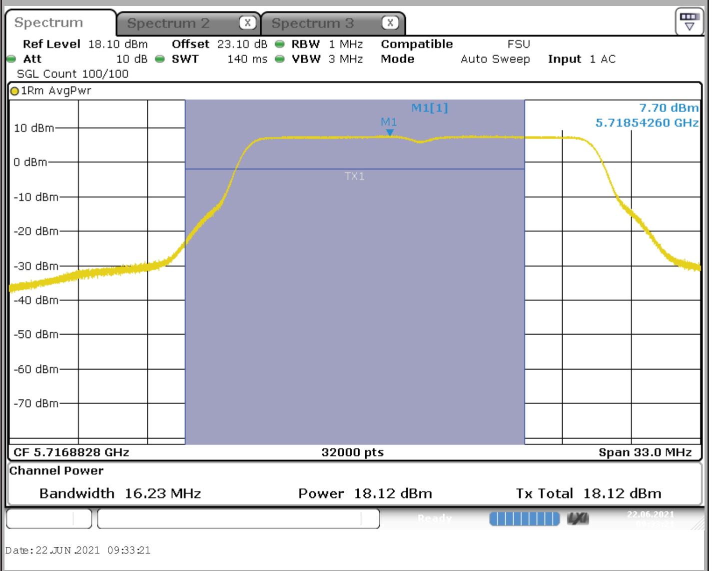
C6

Tx1	Tx2
	

802.11a	
C7	
Tx1	Tx2
	

802.11a	
C8	
Tx1	Tx2
	

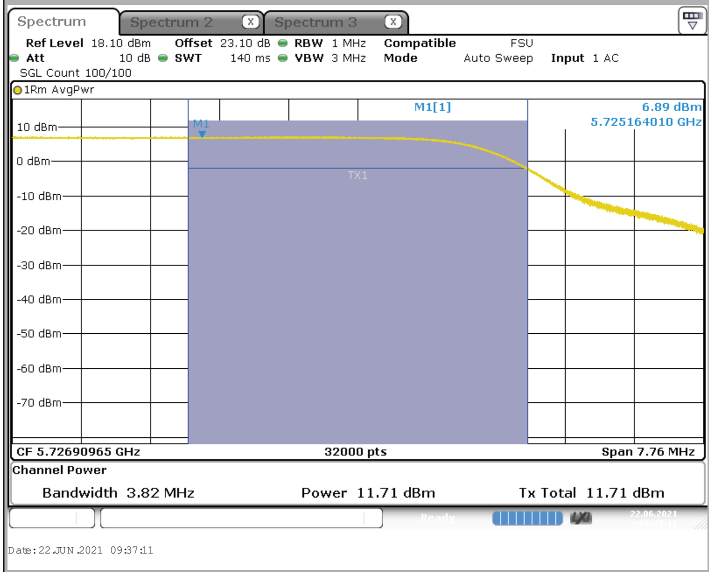
802.11a	
C9	
Tx1	Tx2
	

802.11a	
C10 Straddle 5470MHz-5725MHz	
Tx1	Tx2
	

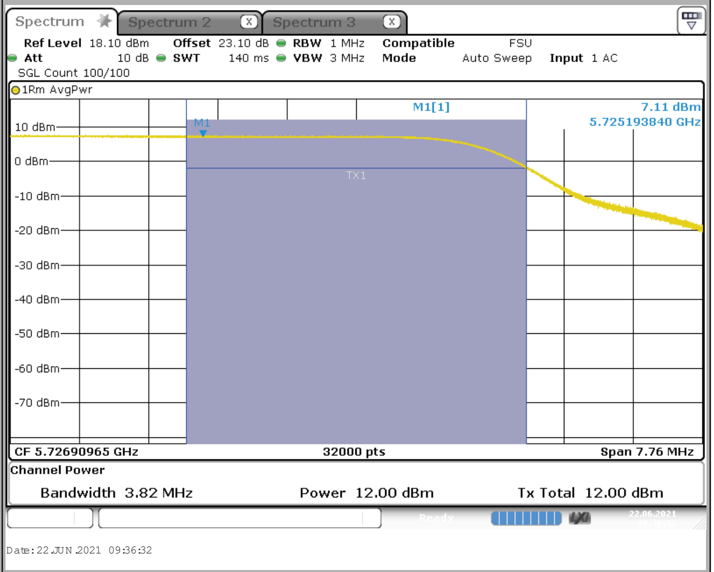
802.11a

C10 Straddle 5725MHz-5850MHz (RBW = 1MHz)

Tx1



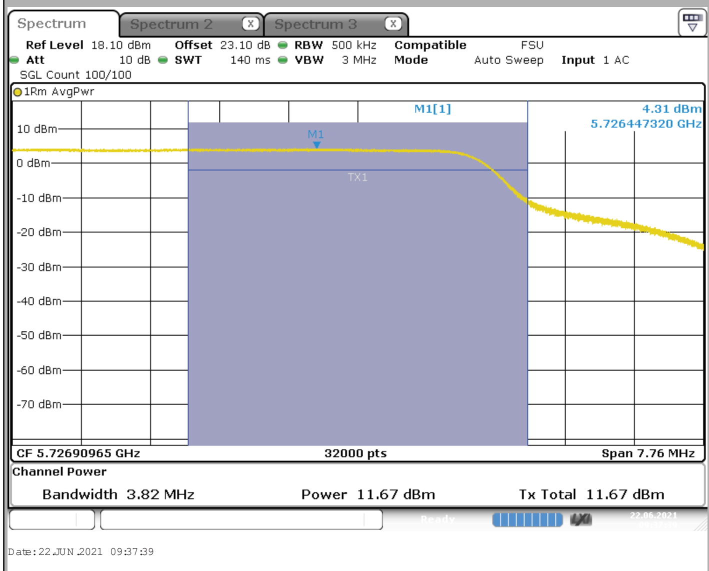
Tx2



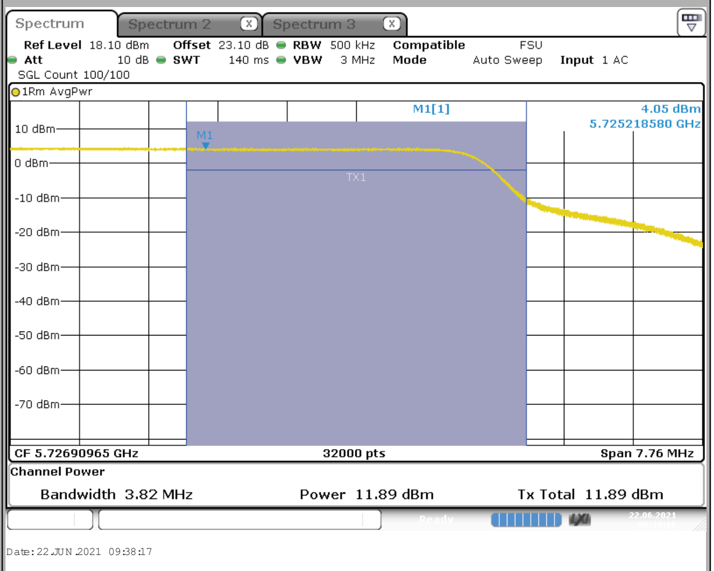
802.11a

C10 Straddle 5725MHz-5850MHz (RBW = 500kHz)

Tx1

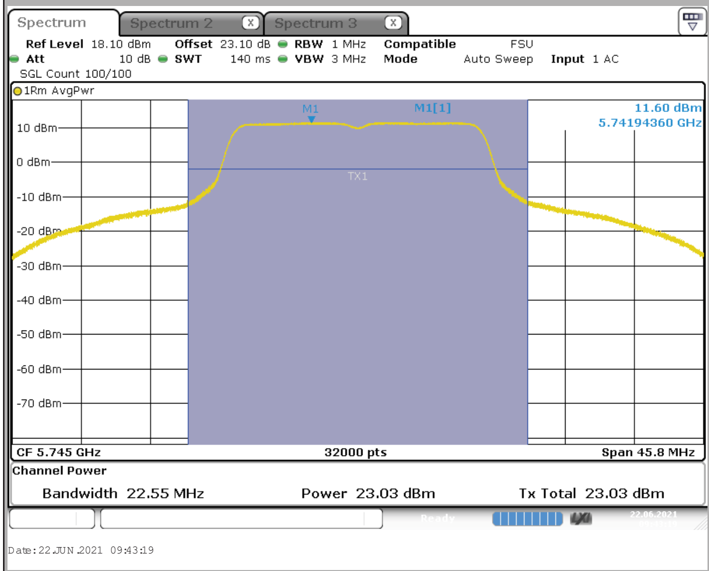
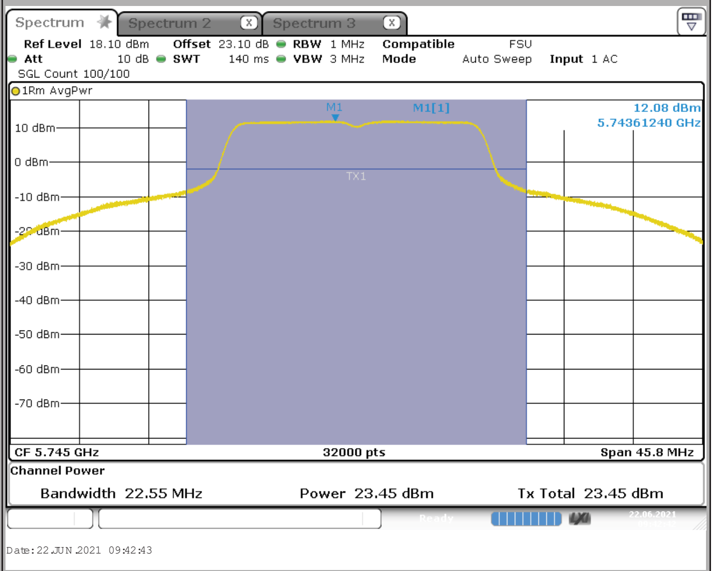


Tx2



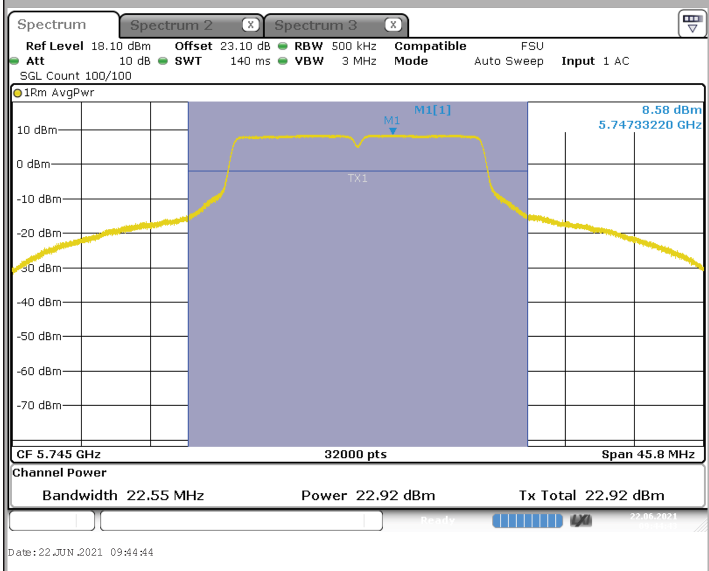
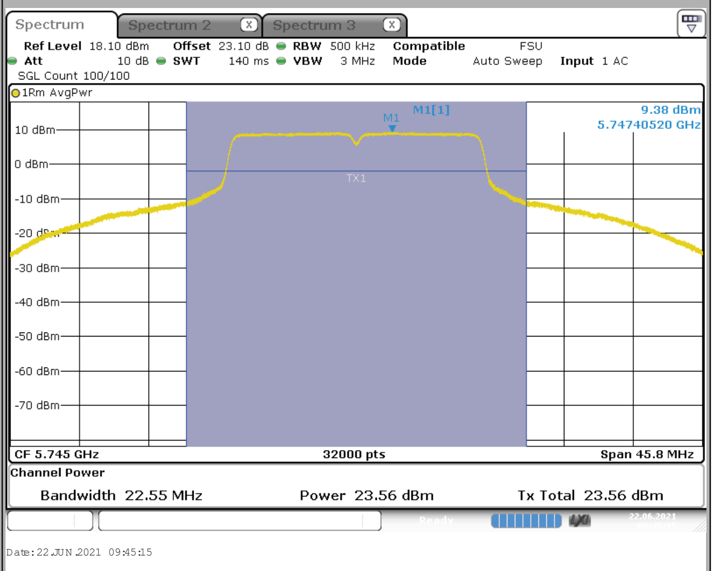
802.11a

C11 (RBW = 1MHz)

Tx1	Tx2
	

802.11a

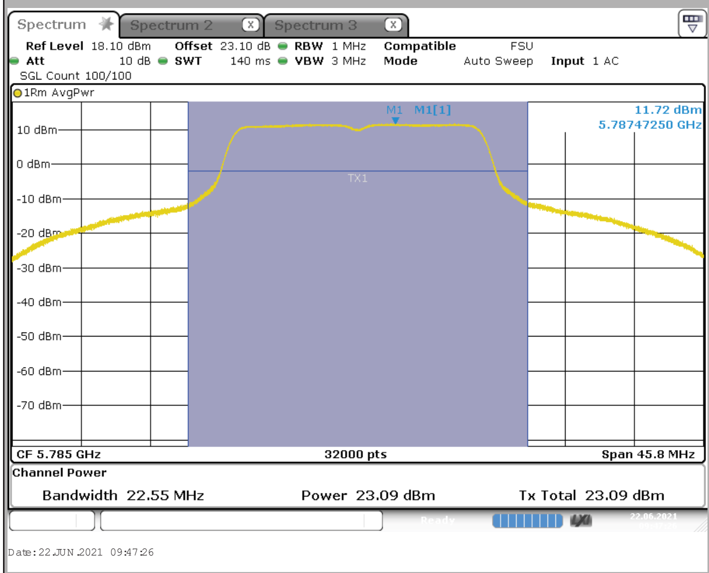
C11 (RBW = 500kHz)

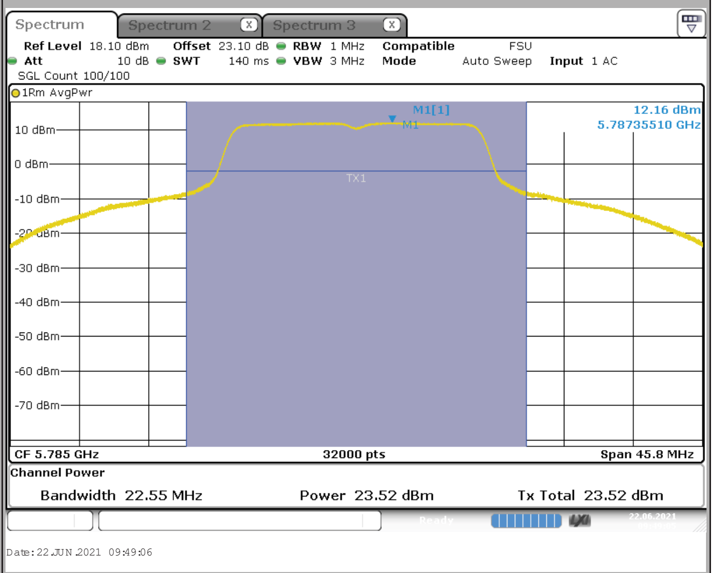
Tx1	Tx2
	

802.11a

C12 (RBW = 1MHz)

Tx1	Tx2

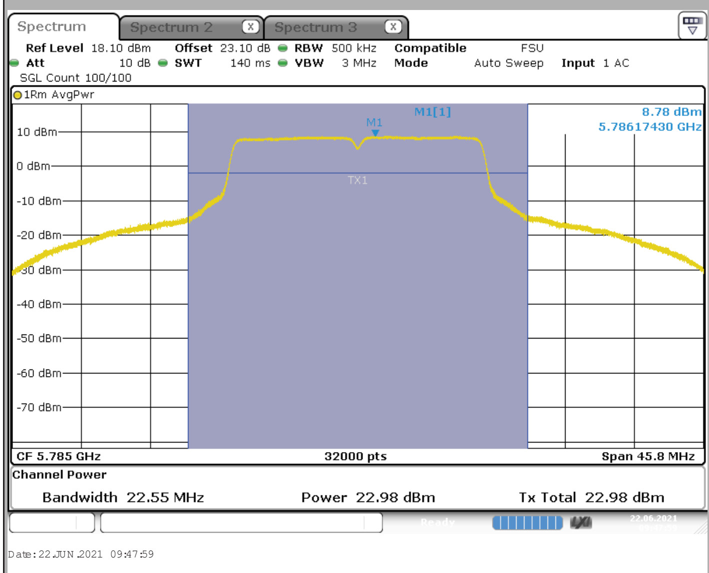


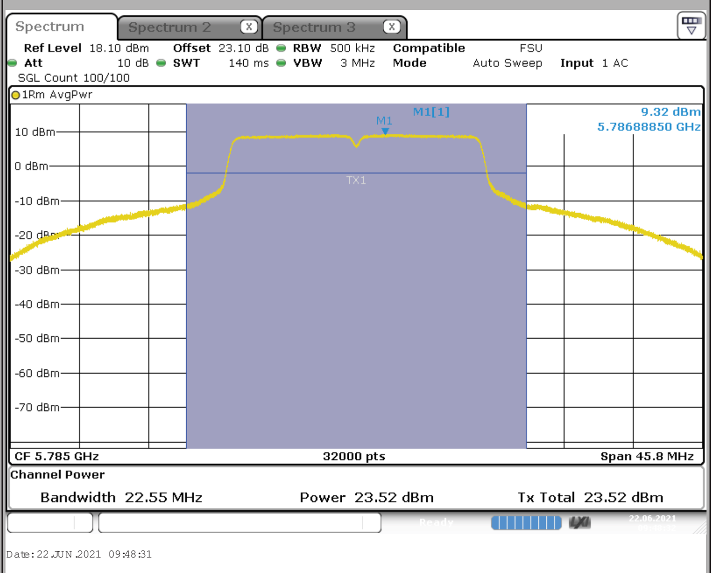


802.11a

C12 (RBW = 500kHz)

Tx1	Tx2

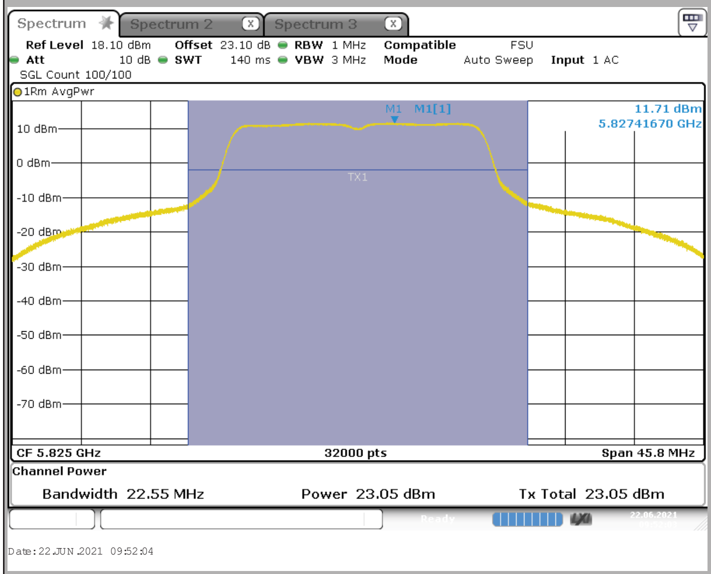


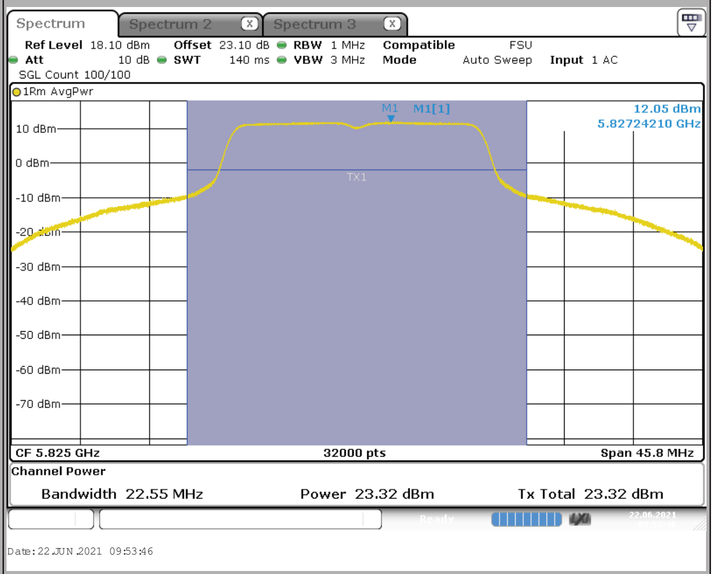


802.11a

C13 (RBW = 1MHz)

Tx1	Tx2

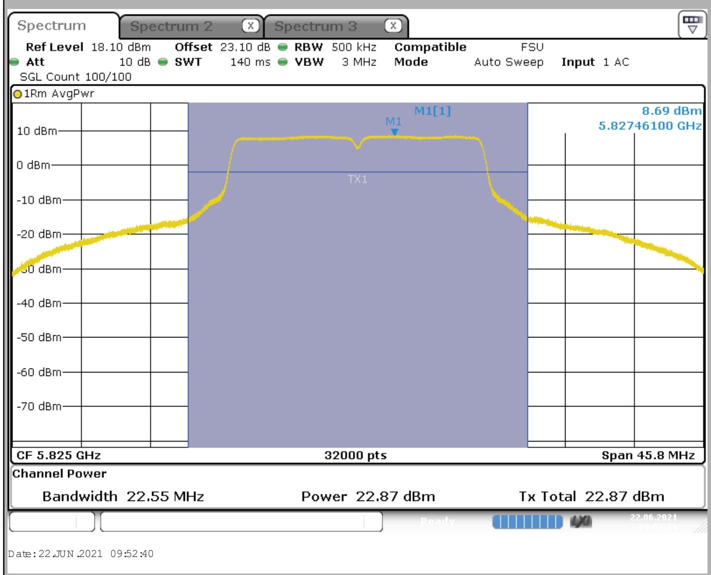


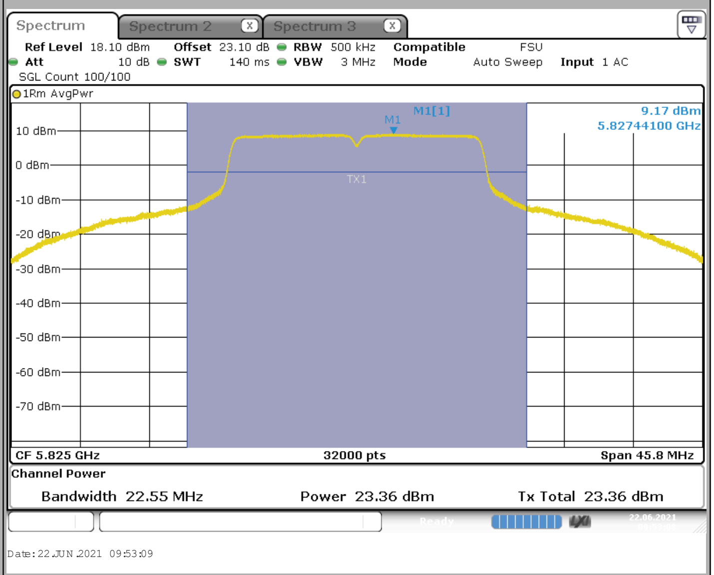


802.11a

C13 (RBW = 500kHz)

Tx1	Tx2

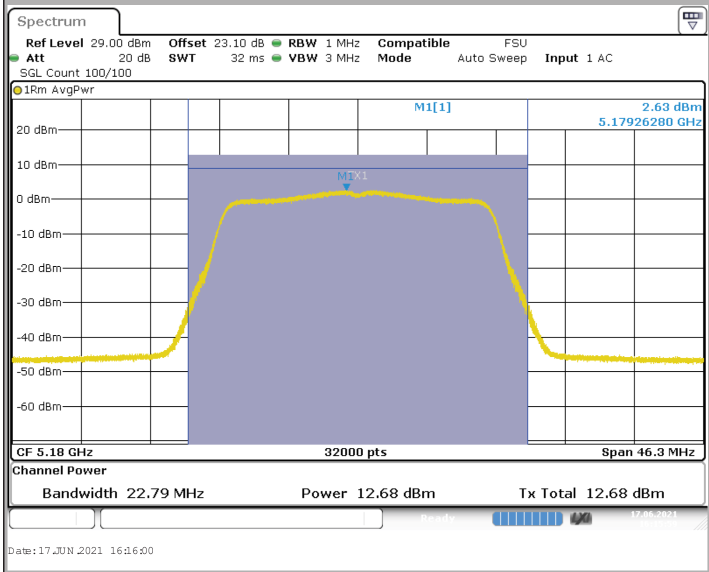




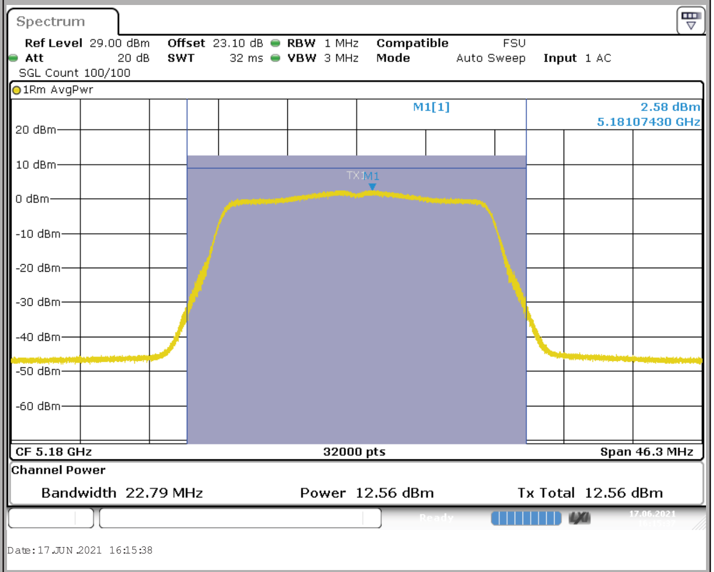
802.11n HT20/ac VHT20

C1

Tx1



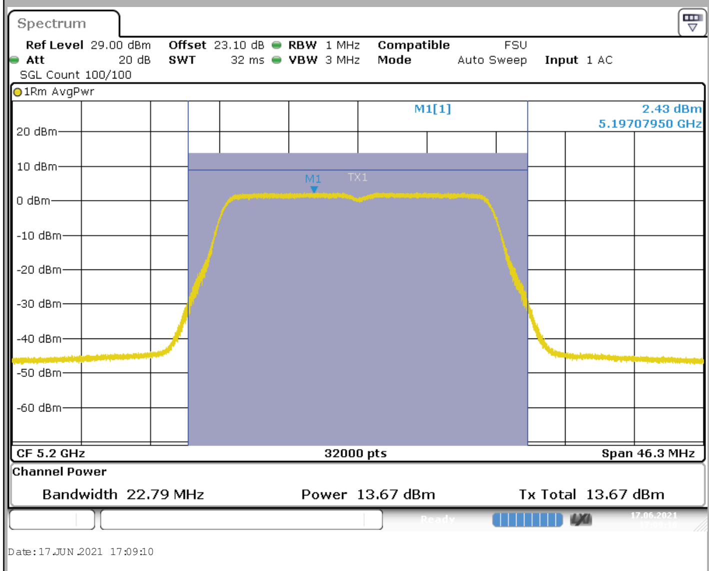
Tx2



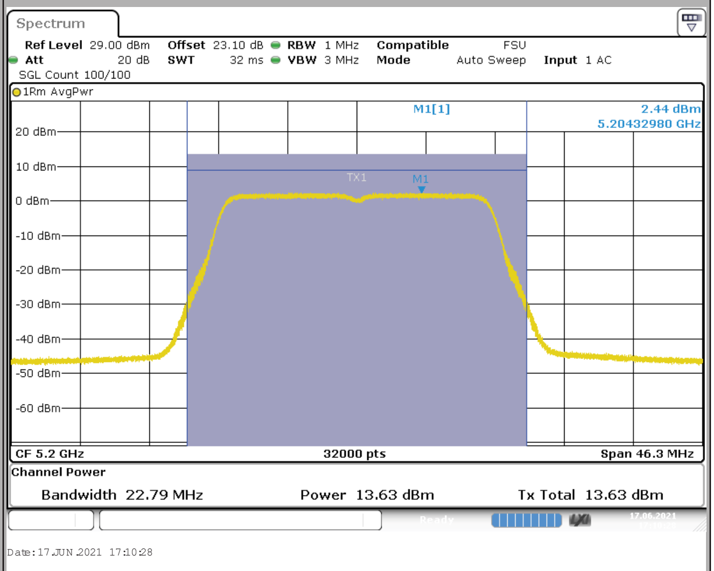
802.11n HT20/ac VHT20

C2

Tx1



Tx2

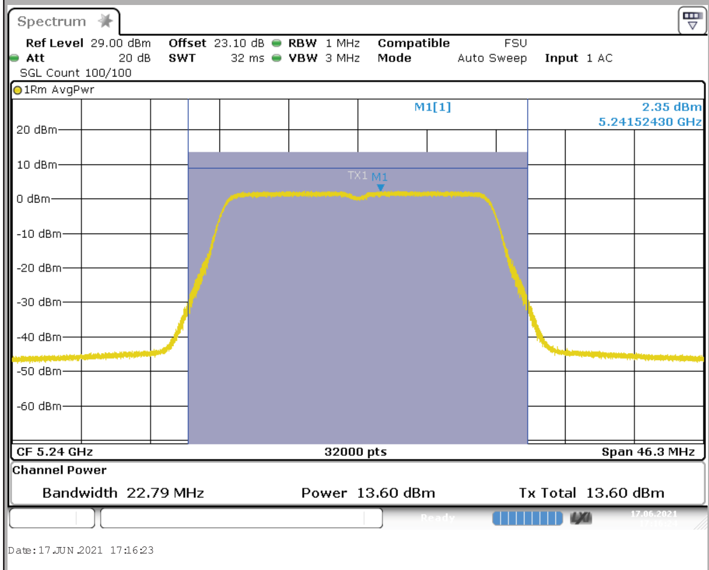


802.11n HT20/ac VHT20

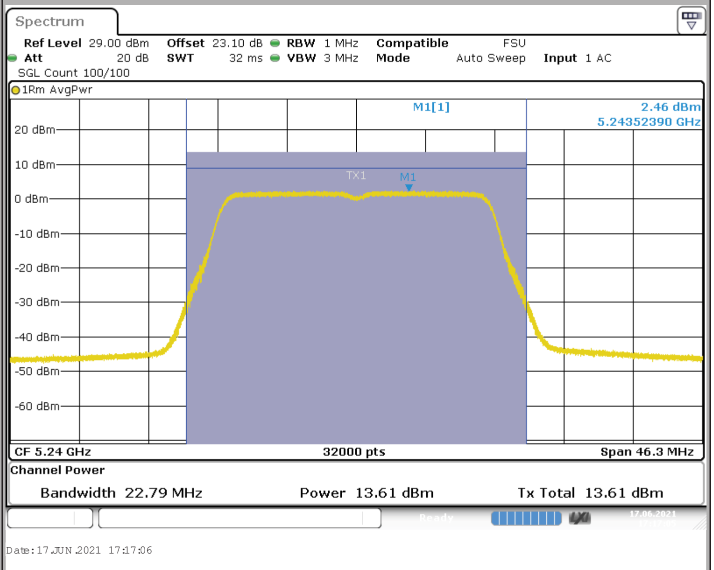
C3

Tx1	Tx2

Tx1



Tx2

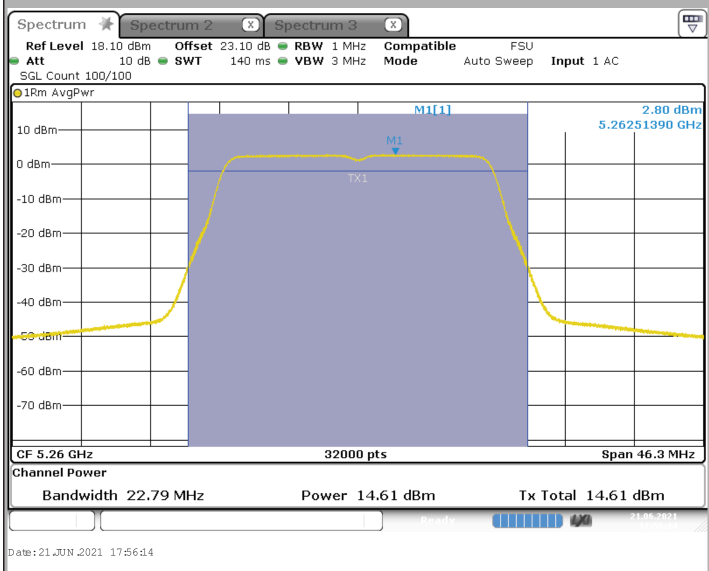


802.11n HT20/ac VHT20

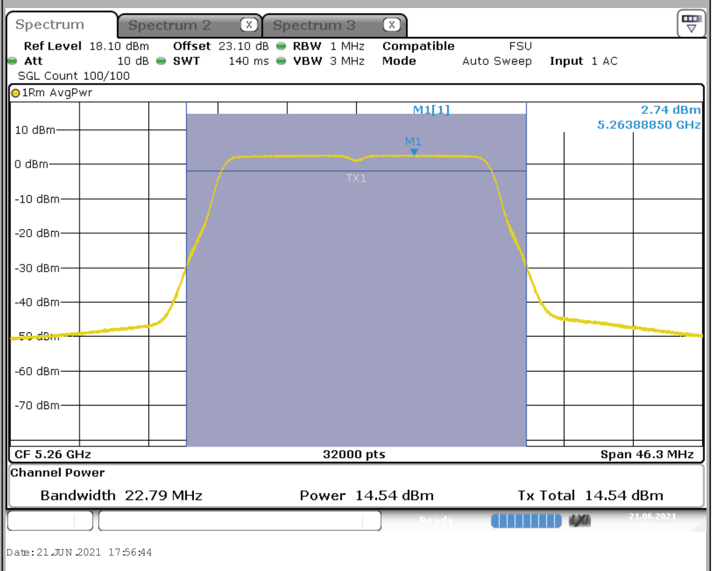
C4

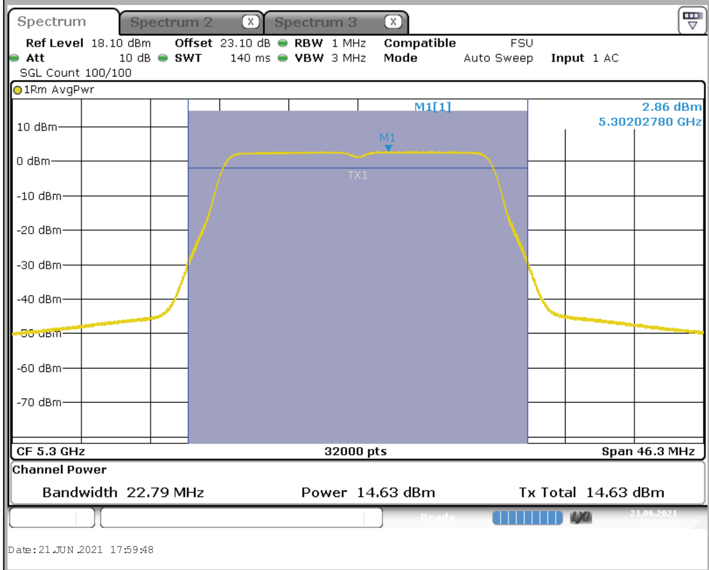
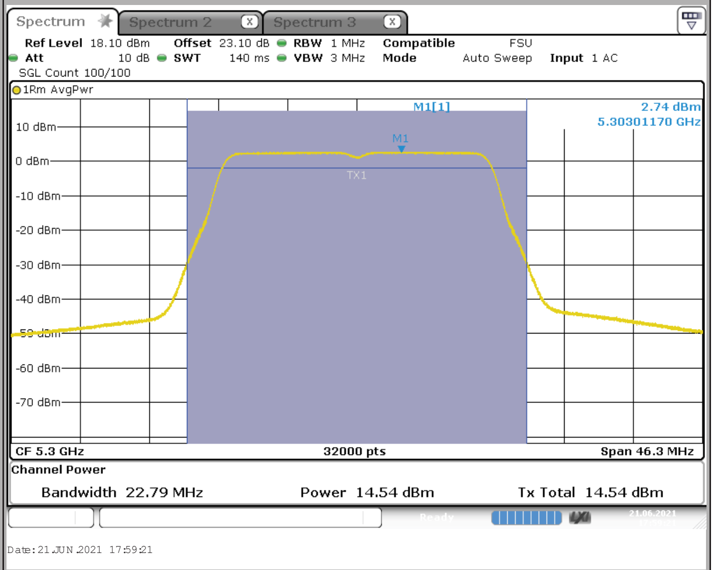
Tx1	Tx2

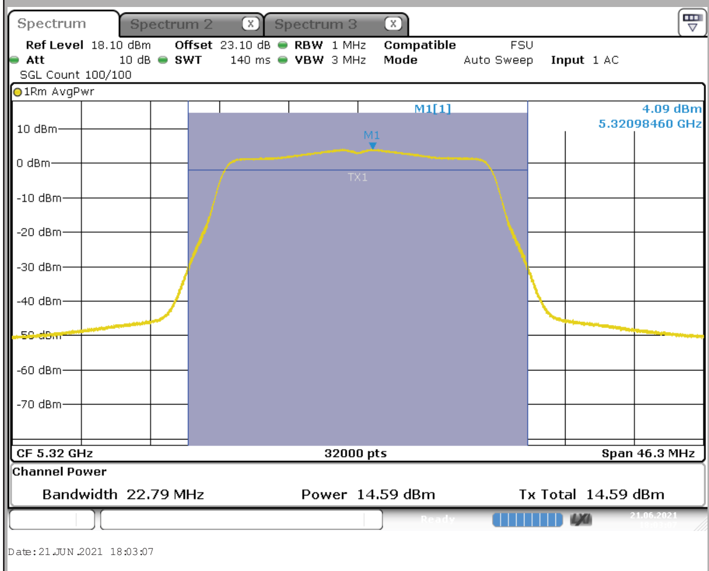
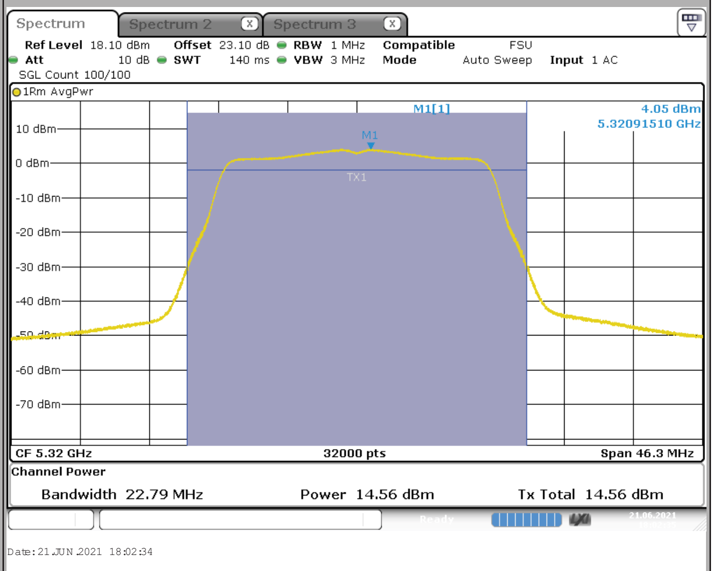
Tx1



Tx2

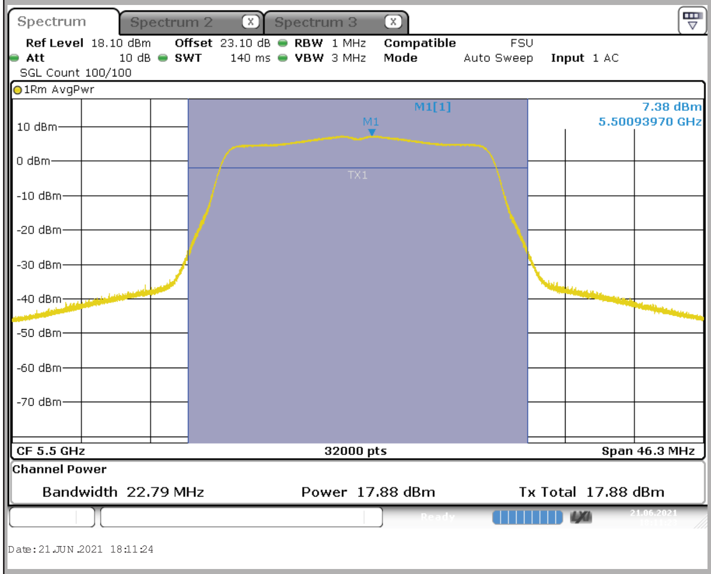
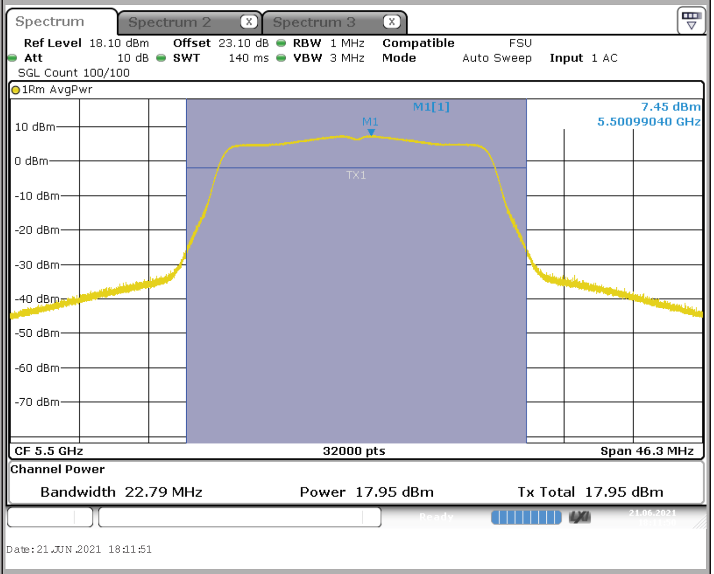


802.11n HT20/ac VHT20	
C5	
Tx1	Tx2
	

802.11n HT20/ac VHT20	
C6	
Tx1	Tx2
	

802.11n HT20/ac VHT20

C7

Tx1	Tx2
	

802.11n HT20/ac VHT20

C8

Tx1	Tx2