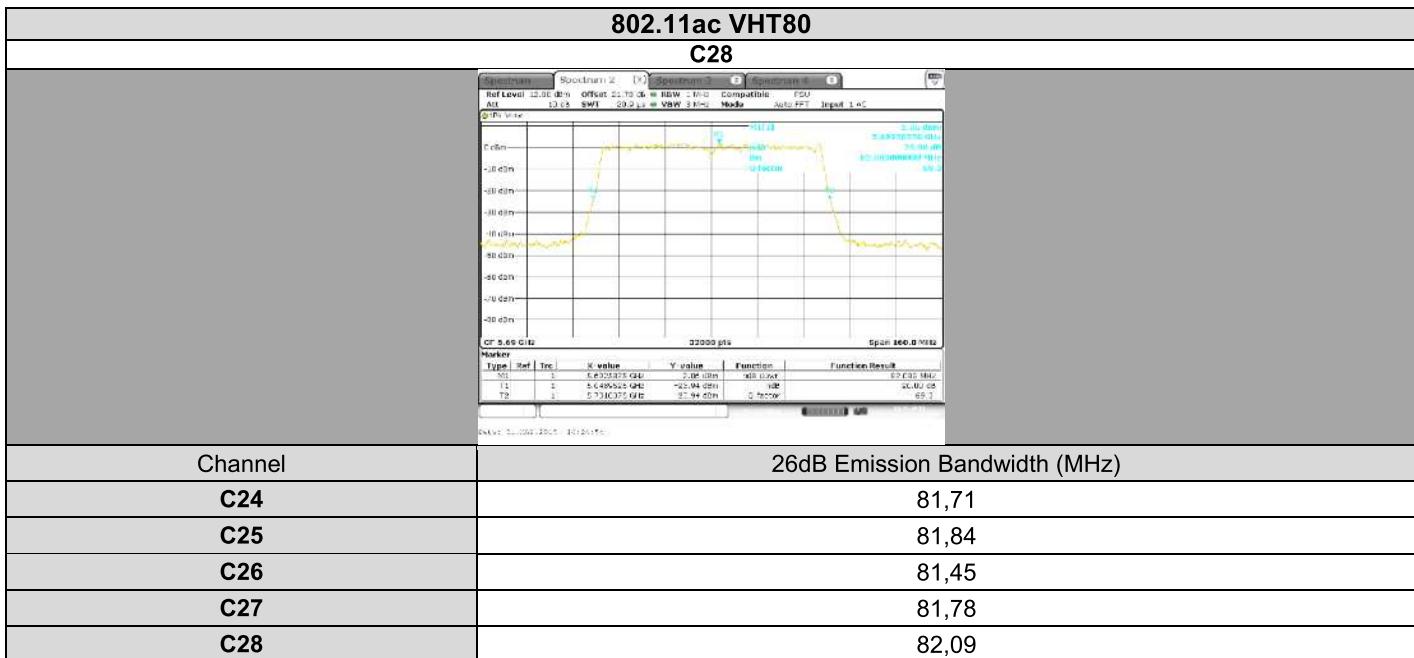




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## 5.6. CONCLUSION

26dB Emission Bandwidth measurement performed on the sample of the product **SAGEMCOM DCIWA384 UHD Alt US V2**, SN: **253764997**, in configuration and description presented in this test report, show levels compliant to the **47 CFR PART 15.407** limits.



## 6. 6dB EMISSION BANDWIDTH

### 6.1. TEST CONDITIONS

Test performed by : Mathieu CERISIER  
Date of test : May 31, 2018  
Ambient temperature : 26 °C  
Relative humidity : 42 %

### 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



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	ESR 7	A2642023	2017/09	2018/09
Multi-meter	KEITHLEY	2000	A1242090	2017/05	2019/05
Programmable AC/DC power supply	KIKUSUI	PCR500M	A7040079	2017/05	2019/05
RF cable & 20 dB attenuator	Télédynne	920-0202-048	A5329676	2017/09	2018/09



L C I E

## 6.5. RESULTS

802.11a			
C10			
<b>C11</b>	<b>C12</b>	<b>C13</b>	
<b>Channel</b>	6dB Emission Bandwidth (MHz)		
<b>C10</b>	16,32		
<b>C11</b>	16,31		
<b>C12</b>	16,34		
<b>C13</b>	15,72		

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L C I E

802.11n HT20/ac VHT20					
C10					
Type	Ref.	Tr.	X-value	Y-value	Function
K1	1	5.720000 GHz	-70.62 dBm		
M2	1	5.711445 GHz	-40.12 dBm		
E3	1	5.710545 GHz	-35.65 dBm		
Date: 5-May-2018 10:05:40					
C11					
Type	Ref.	Tr.	X-value	Y-value	Function
K1	1	5.714915 GHz	-14.61 dBm		
M2	1	5.710545 GHz	-20.05 dBm		
E3	1	5.712525 GHz	-0.05 dBm		
Date: 5-May-2018 10:05:40					
C12					
Type	Ref.	Tr.	X-value	Y-value	Function
K1	1	5.710545 GHz	-14.18 dBm		
M2	1	5.710545 GHz	-20.05 dBm		
E3	1	5.712525 GHz	0.00 dBm		
Date: 5-May-2018 10:05:40					
C13					
Type	Ref.	Tr.	X-value	Y-value	Function
K1	1	5.710545 GHz	-13.44 dBm		
M2	1	5.710545 GHz	-19.00 dBm		
E3	1	5.712525 GHz	0.05 dBm		
Date: 5-May-2018 10:12:03					
Channel		6dB Emission Bandwidth (MHz)			
C10		17,58			
C11		17,57			
C12		17,58			
C13		17,57			

## TEST REPORT

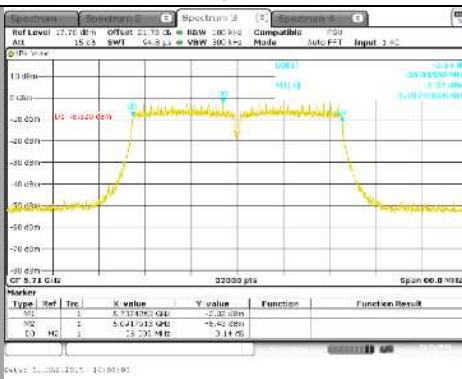
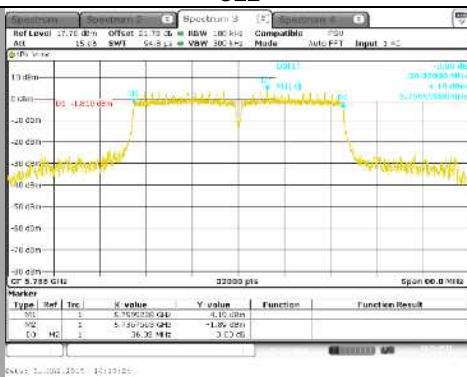
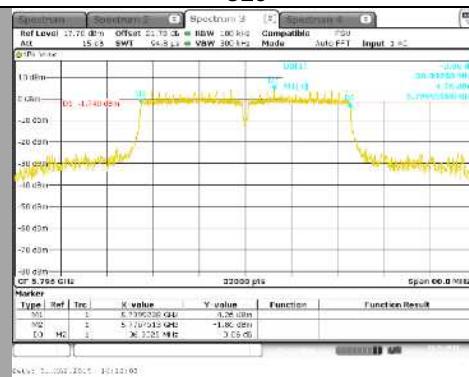
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L C I E

**802.11n HT40/ac VHT40****C21****C22****C23**

Channel

6dB Emission Bandwidth (MHz)

**C21**

36,34

**C22**

36,32

**C23**

36,33

## TEST REPORT

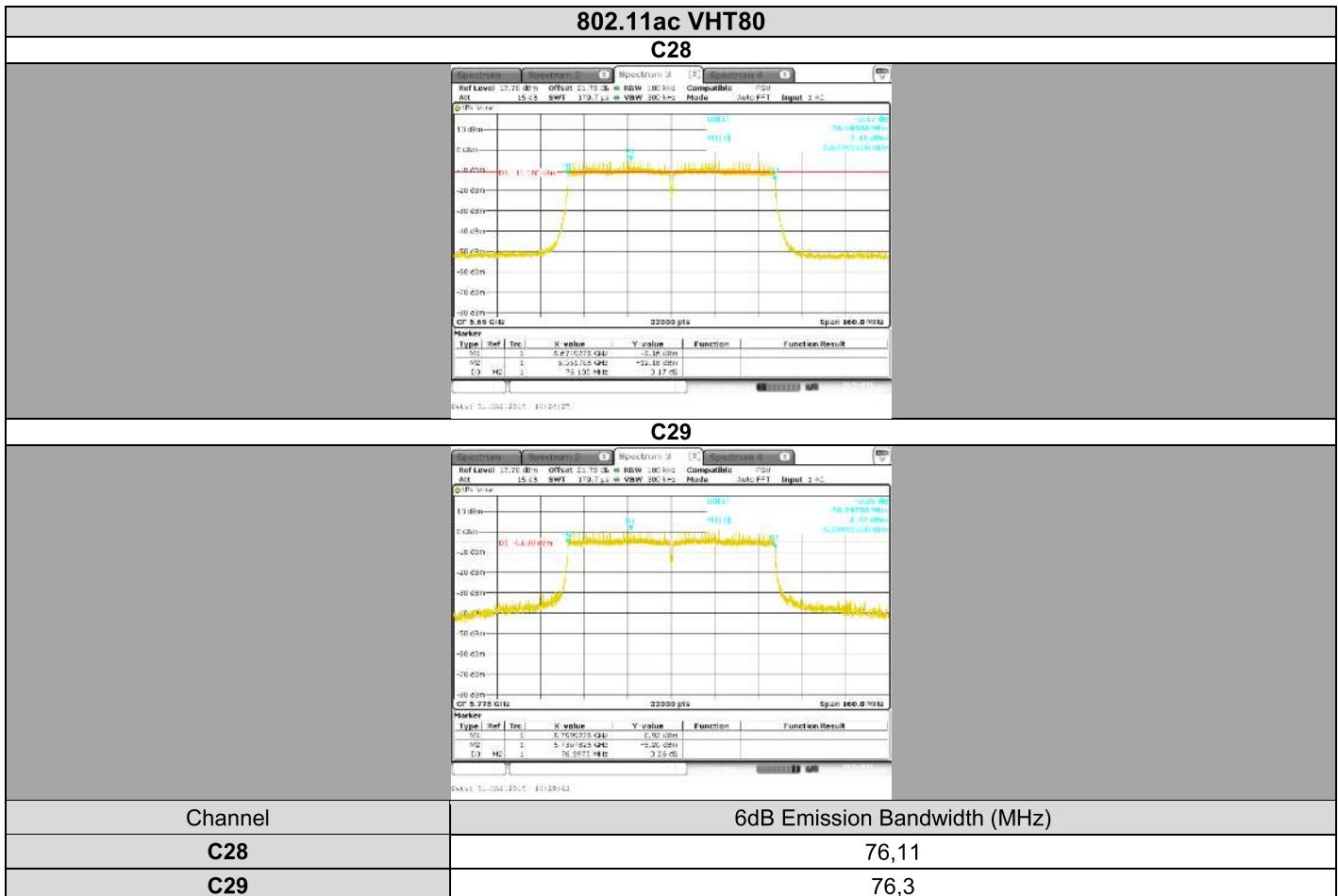
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L C I E



## 6.6. CONCLUSION

6dB Emission Bandwidth measurement performed on the sample of the product **SAGEMCOM DCIWA384 UHD Alt US V2**, SN: **253764997**, in configuration and description presented in this test report, show levels compliant to the **47 CFR PART 15.407** limits.



L C I E

## 7. DUTY CYCLE

### 7.1. TEST CONDITIONS

Test performed by : Mathieu CERISIER  
Date of test : May 31, 2018  
Ambient temperature : 26 °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)



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	ESR 7	A2642023	2017/09	2018/09
Multi-meter	KEITHLEY	2000	A1242090	2017/05	2019/05
Programmable AC/DC power supply	KIKUSUI	PCR500M	A7040079	2017/05	2019/05
RF cable & 20 dB attenuator	Télédynne	920-0202-048	A5329676	2017/09	2018/09



L C I E

## 7.5. RESULTS

802.11a C13	802.11n HT20/ac VHT20 C13	
802.11n HT40/ac VHT40 C23	802.11ac VHT80 C29	
Mode	Duty Cycle (%)	Duty Cycle Correction (dB)
802.11a	99.15	0.074
802.11n HT20/ac VHT20	96.79	0.2833
802.11n HT40/ac VHT40	93.92	0.5448
802.11ac VHT80	90.95	0.8239

## 7.6. CONCLUSION

Duty Cycle measurement performed on the sample of the product **SAGEMCOM DCIWA384 UHD Alt US V2**, SN: **253764997**, in configuration and description presented in this test report, show levels compliant to the **47 CFR PART 15.407** limits.



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

### 8.1. TEST CONDITIONS

Test performed by : Mathieu CERISIER  
Date of test : June 4, 2018 to June 13, 2018  
Ambient temperature : 24 °C  
Relative humidity : 41 %

### 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



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  $11\text{dBm} + 10 \cdot \log_{10}(\text{Bandwidth})$  (-26dB Bandwidth (MHz))

5470MHz-5725MHz: Shall not exceed 24dBm or  $11\text{dBm} + 10 \cdot \log_{10}(\text{Bandwidth})$  (-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  $11\text{dBm} + 10 \cdot \log_{10}(\text{Bandwidth})$  (-26dB Bandwidth (MHz))

5470MHz-5725MHz: Shall not exceed 24dBm or  $11\text{dBm} + 10 \cdot \log_{10}(\text{Bandwidth})$  (-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  $10\text{dBm} + 10 \cdot \log_{10}(\text{Bandwidth})$  (-26dB Bandwidth (MHz))

5250MHz-5350MHz: Shall not exceed 30dBm or  $17\text{dBm} + 10 \cdot \log_{10}(\text{Bandwidth})$  (-26dB Bandwidth (MHz)) (Above 23dBm Antenna pattern)

5470MHz-5725MHz : Shall not exceed 30dBm or  $17\text{dBm} + 10 \cdot \log_{10}(\text{Bandwidth})$  (-26dB Bandwidth (MHz))

Maximum EIRP Power Spectral Density:

5150MHz-5250MHz: Shall not exceed 10dBm/MHz



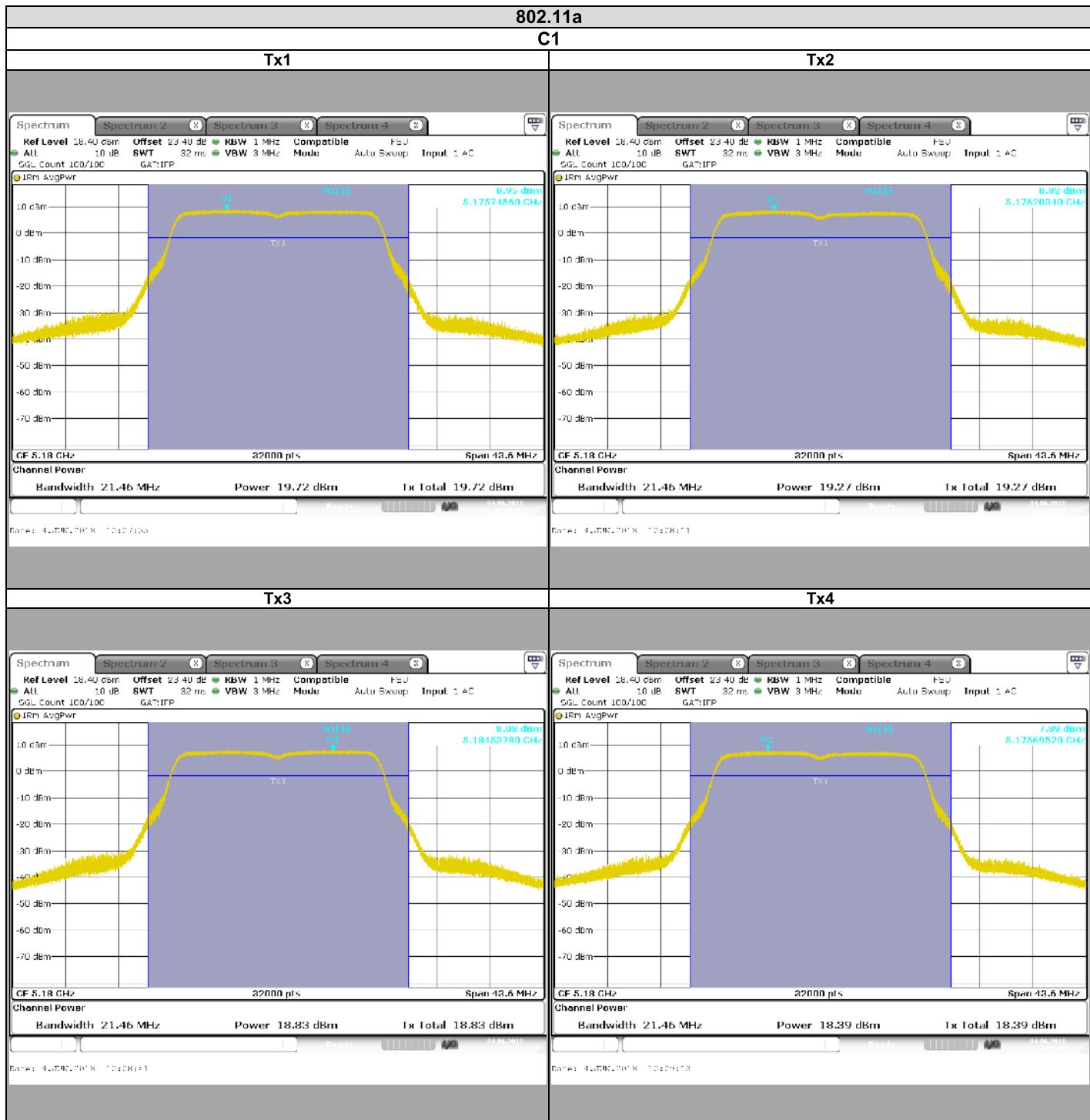
#### 8.4. TEST EQUIPMENT LIST

DESCRIPTION	MANUFACTURER	MODEL	N° LCIE	Cal Date	Cal Due
EMI receiver	ROHDE & SCHWARZ	ESR 7	A2642023	2017/09	2018/09
Multi-meter	KEITHLEY	2000	A1242090	2017/05	2019/05
Programmable AC/DC power supply	KIKUSUI	PCR500M	A7040079	2017/05	2019/05
RF cable & 20 dB attenuator	Télédynne	920-0202-048	A5329676	2017/09	2018/09



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## 8.5. RESULTS



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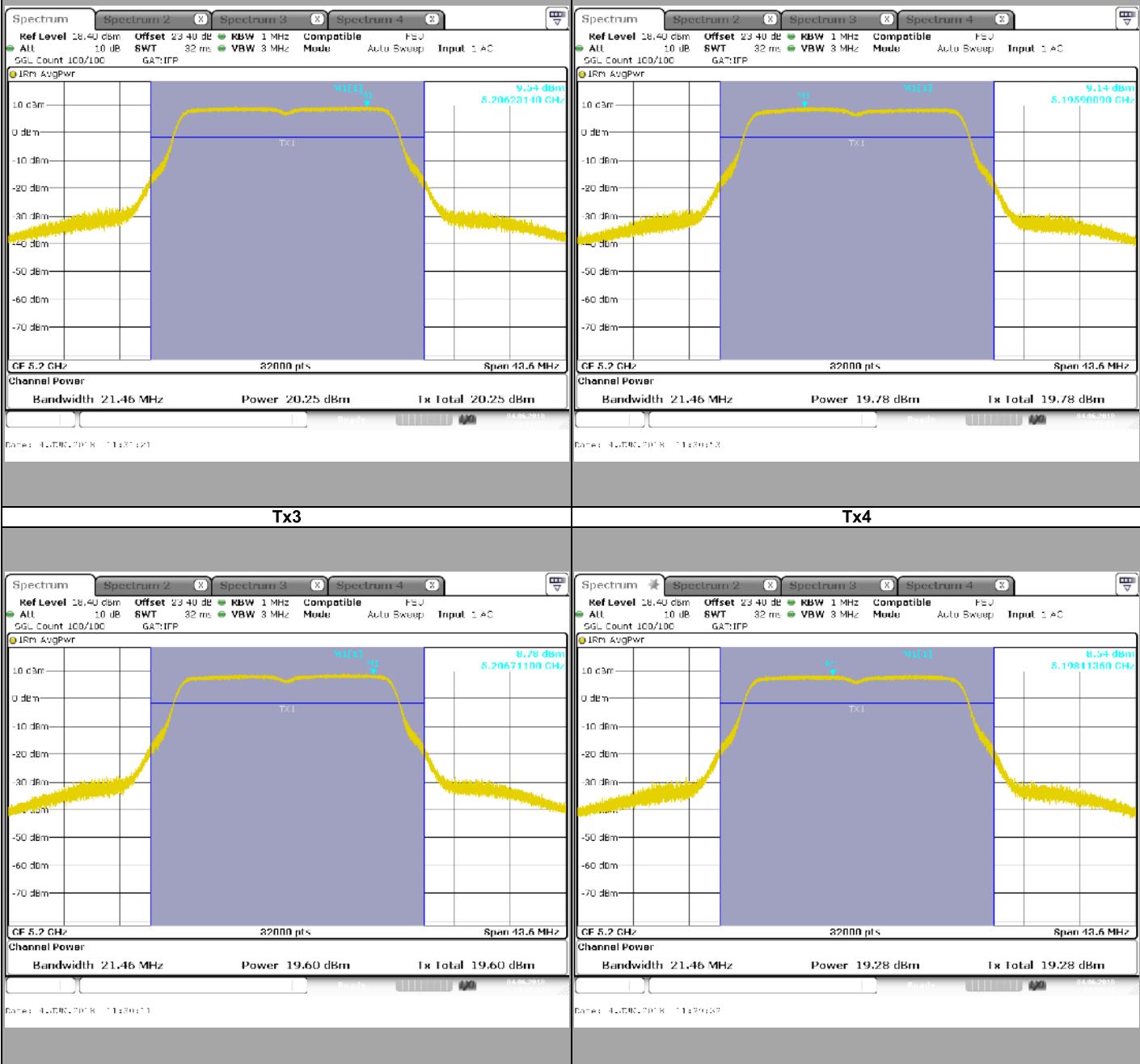
L C I E

## 802.11a

C2

Tx1

Tx2



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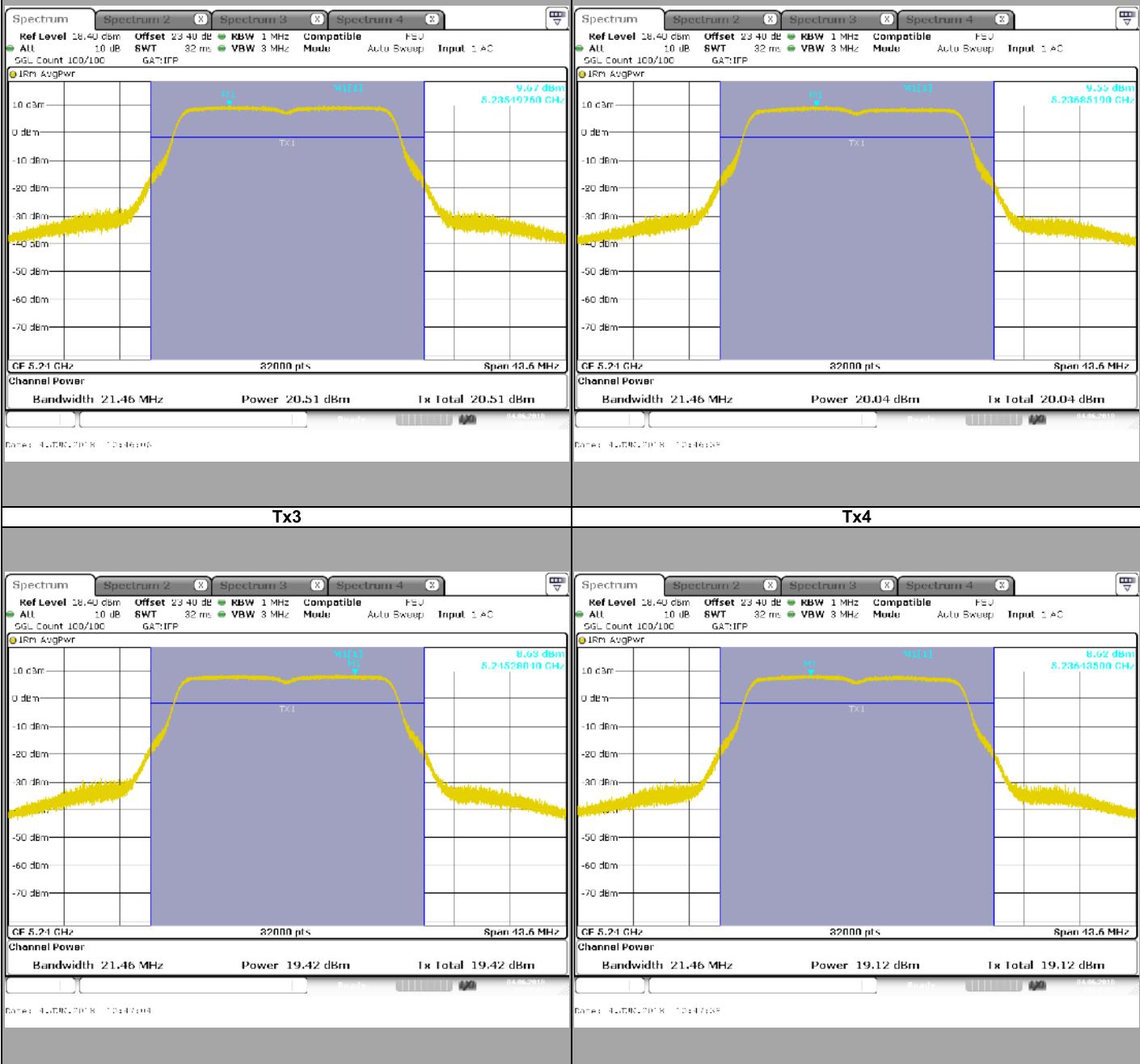
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## 802.11a

C3

Tx1

Tx2



## TEST REPORT

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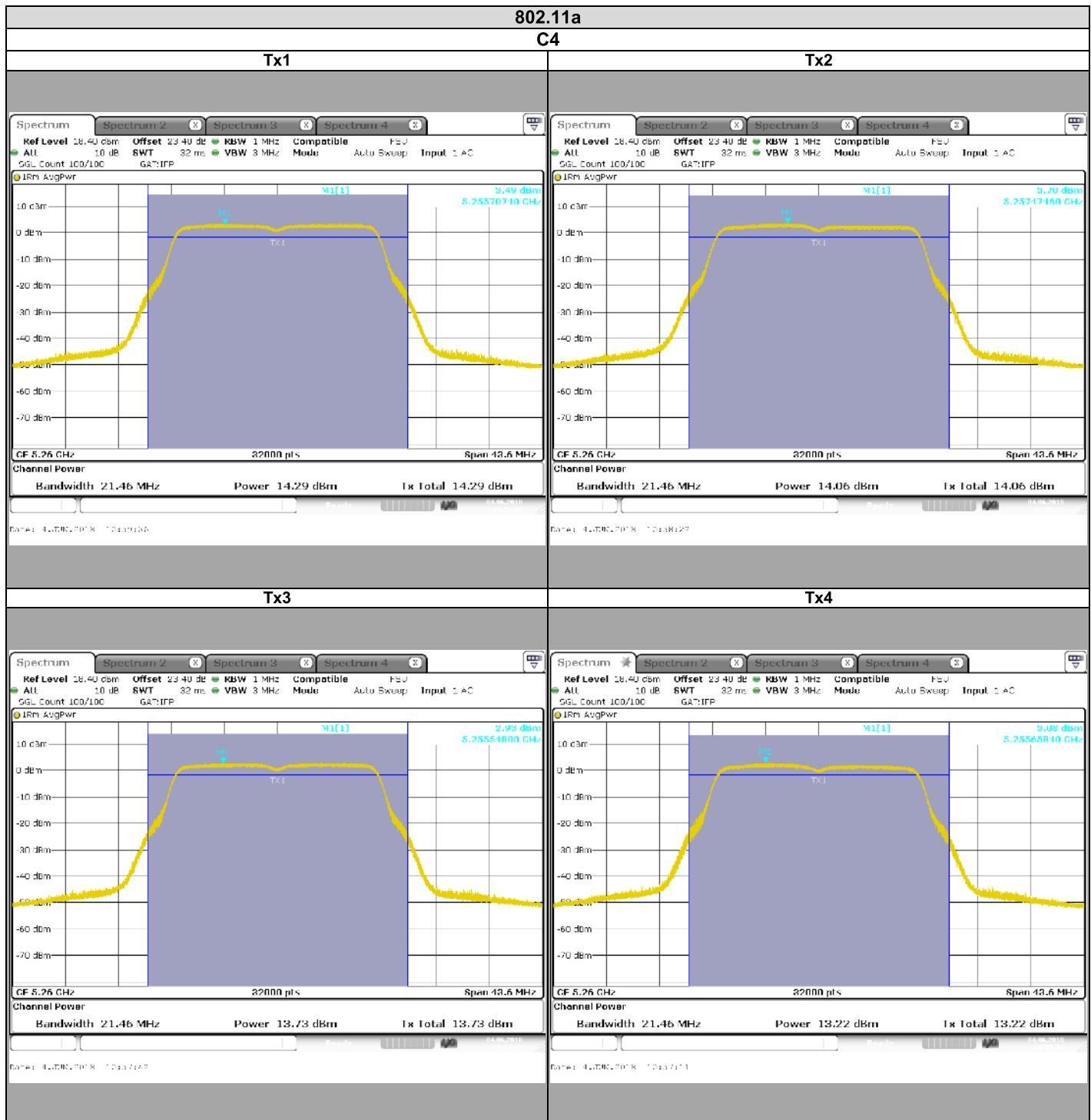
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## 802.11a

C4



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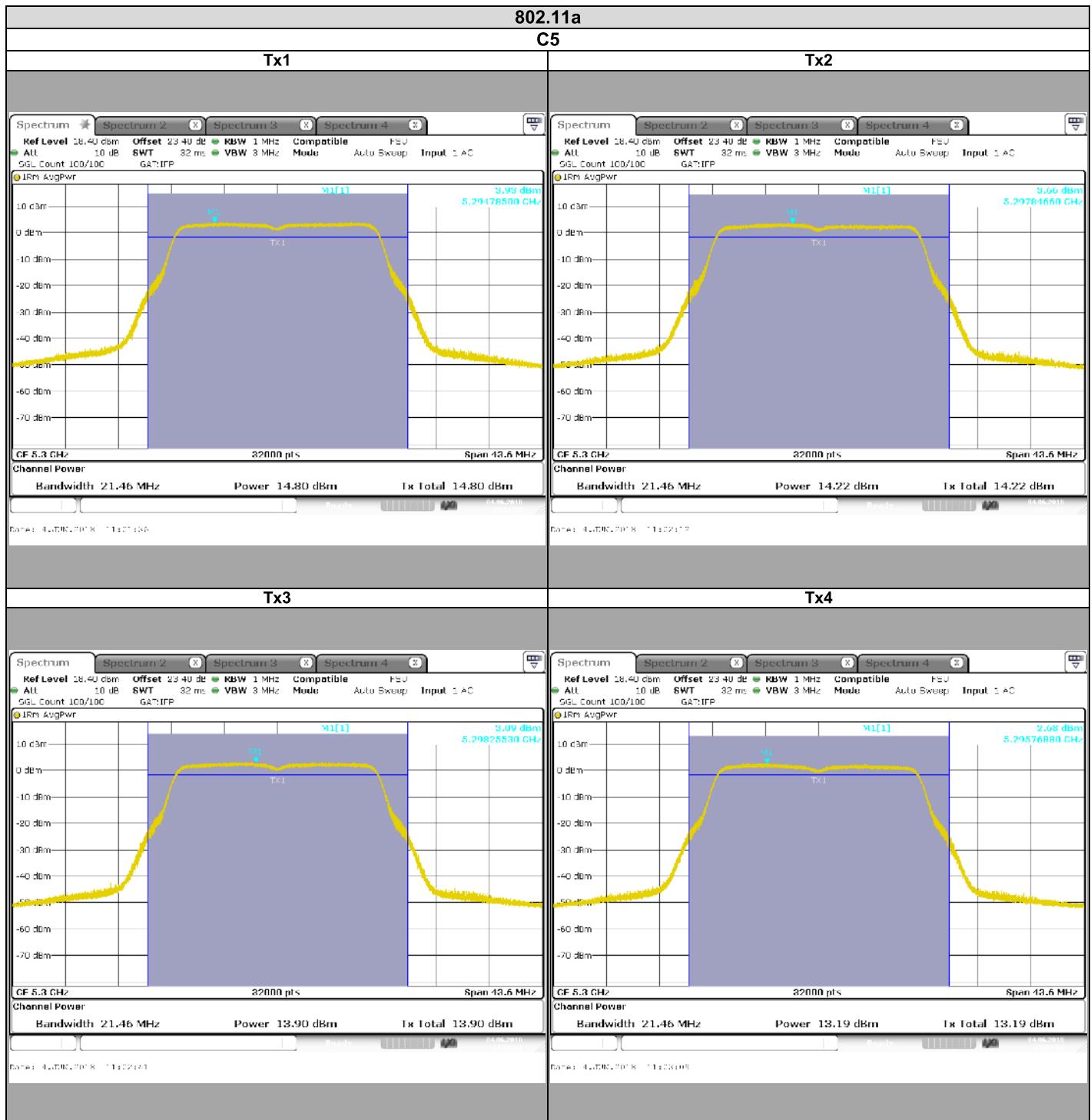
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L C I E

## 802.11a

C5



## TEST REPORT

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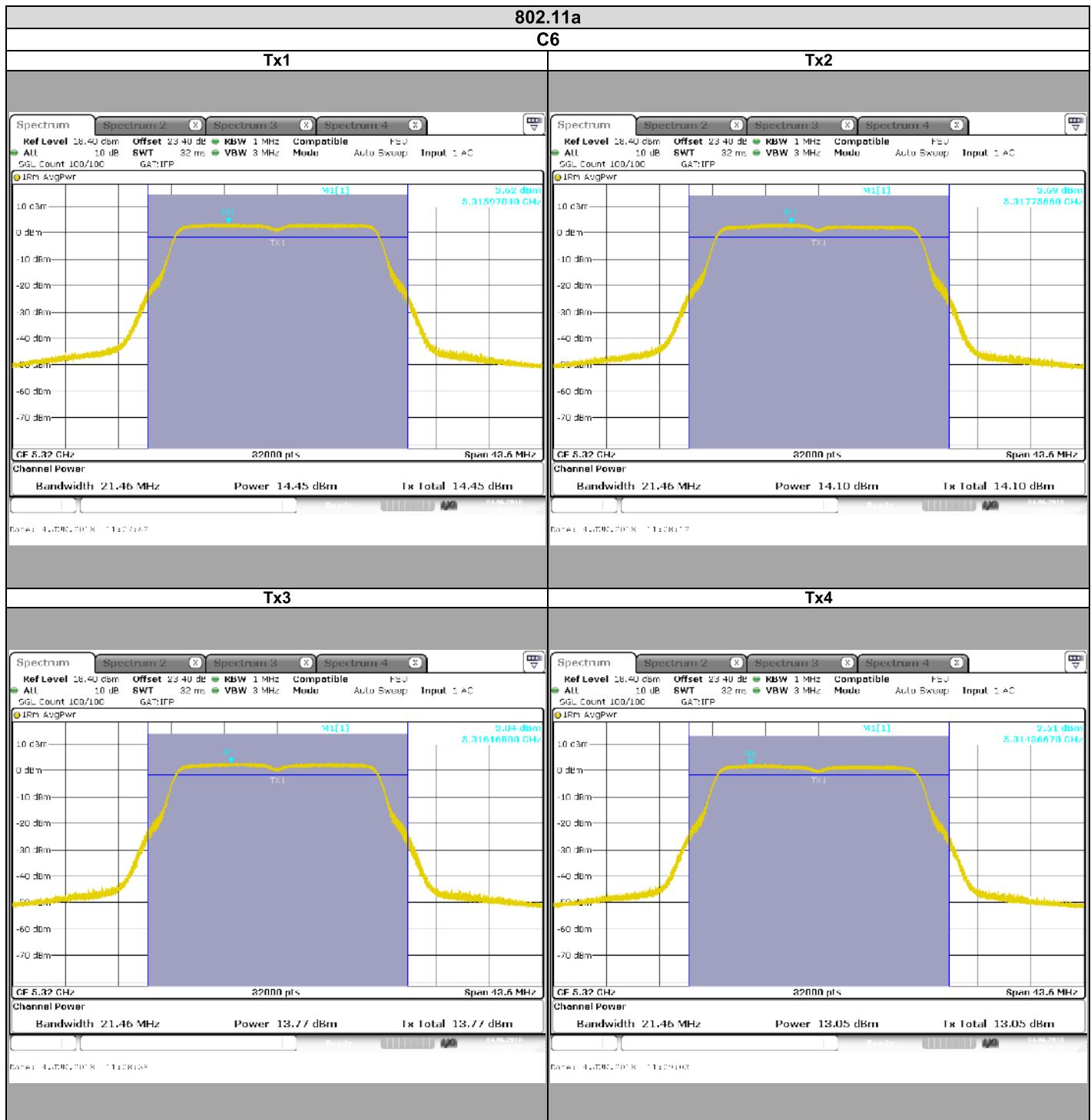
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L C I E

## 802.11a

C6



## TEST REPORT

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Version : 01

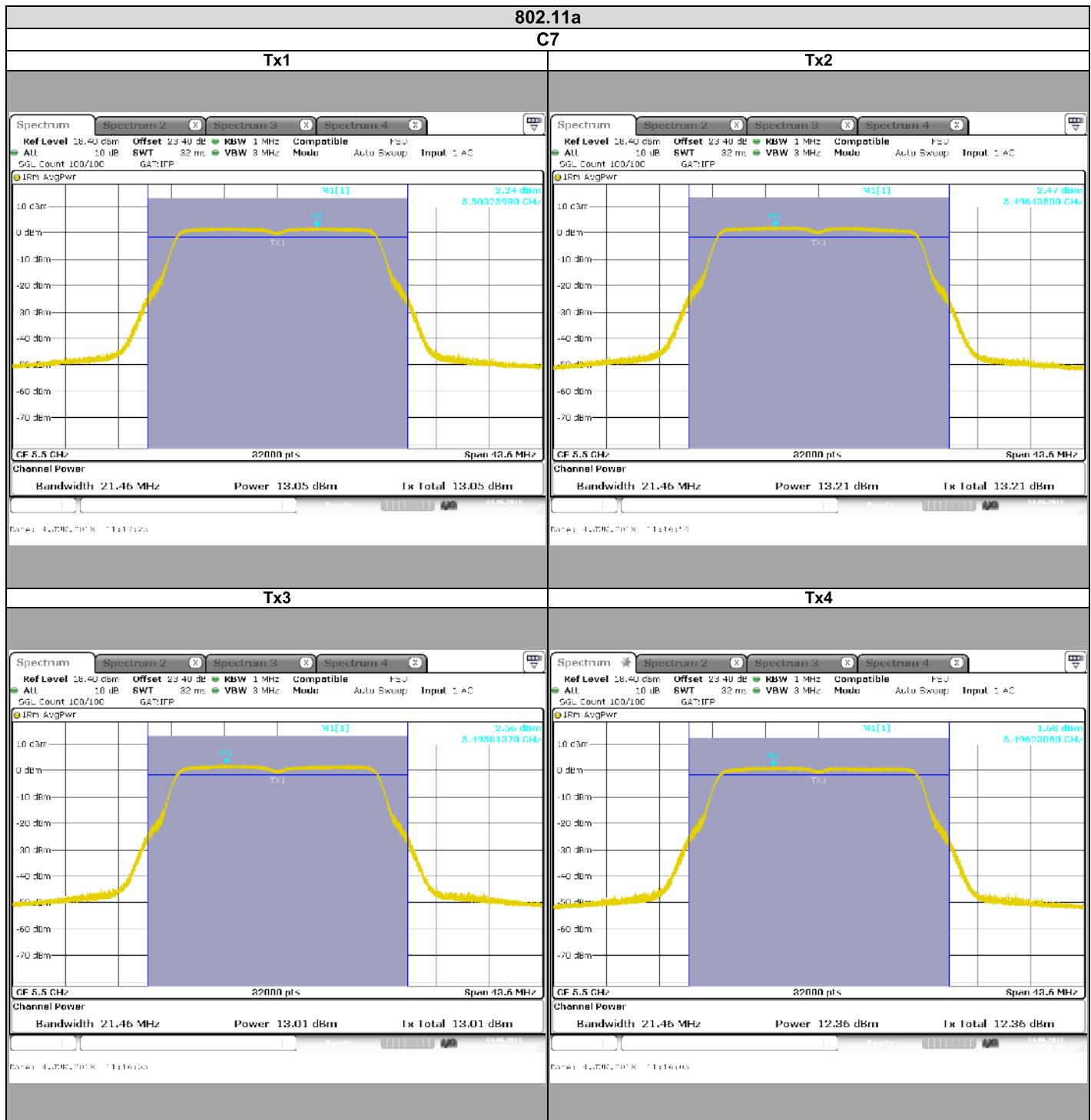
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L C I E

## 802.11a

C7



## TEST REPORT

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Version : 01

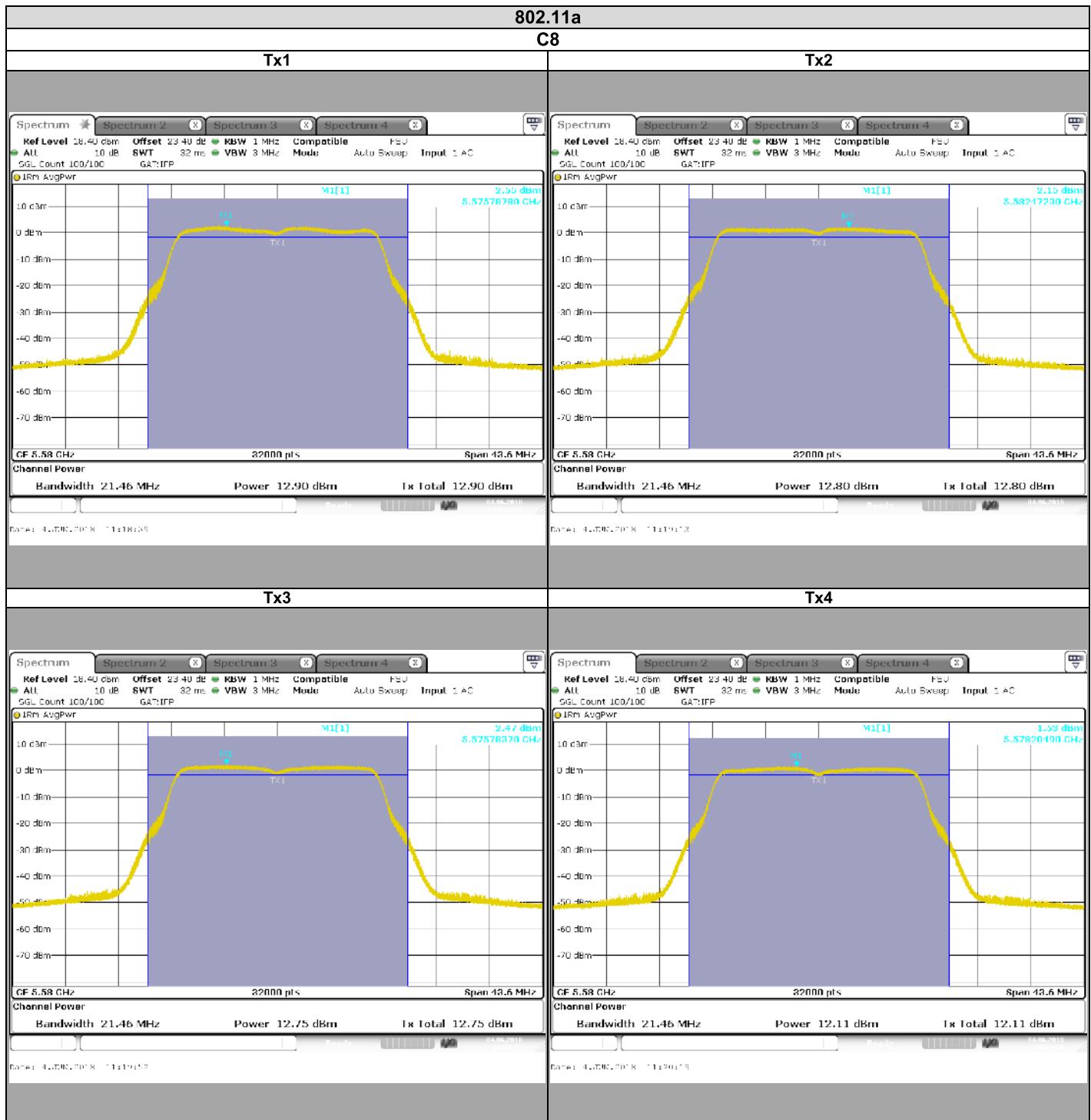
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## 802.11a

C8



## TEST REPORT

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Version : 01

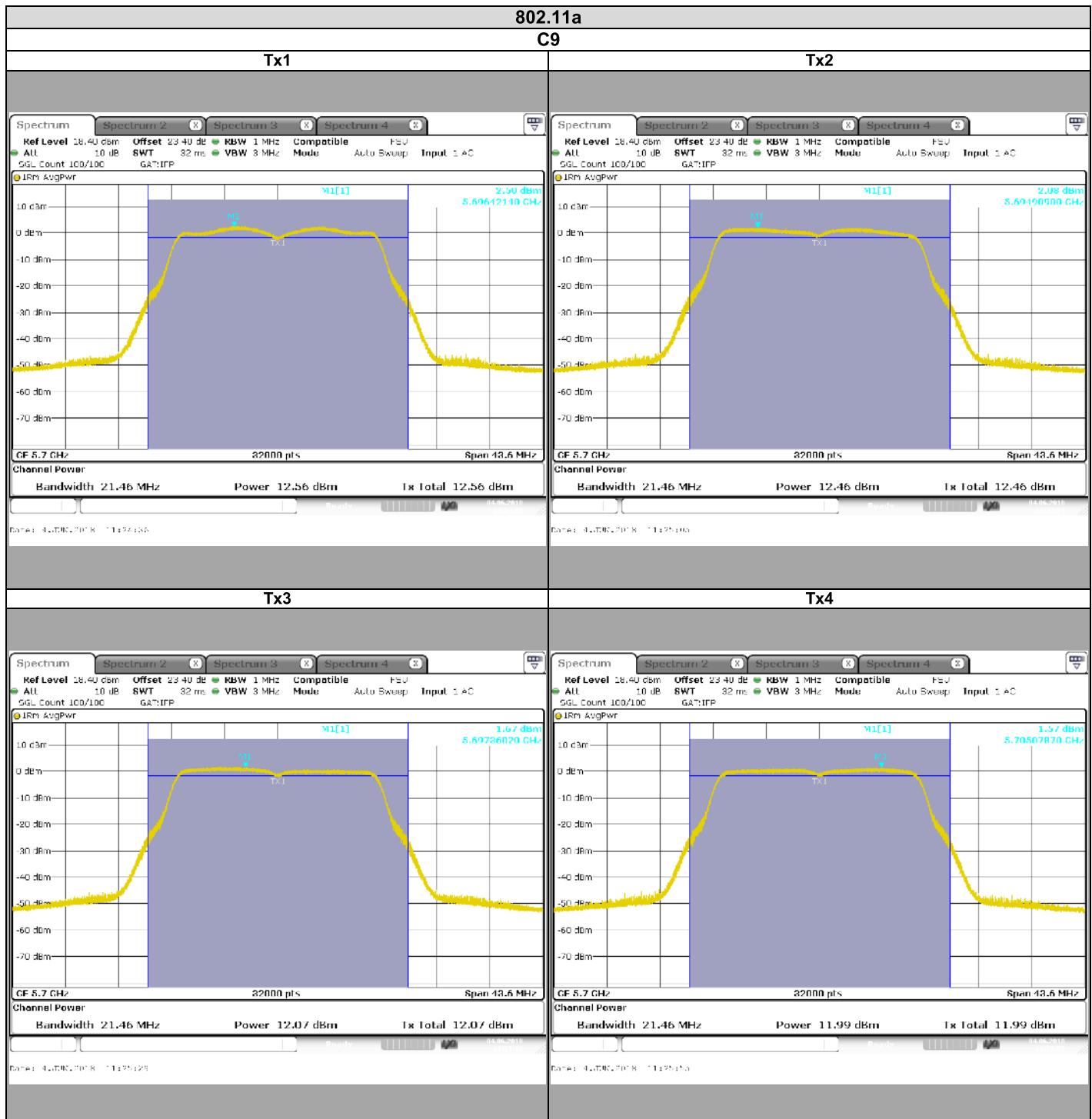
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L C I E

## 802.11a

C9



## TEST REPORT

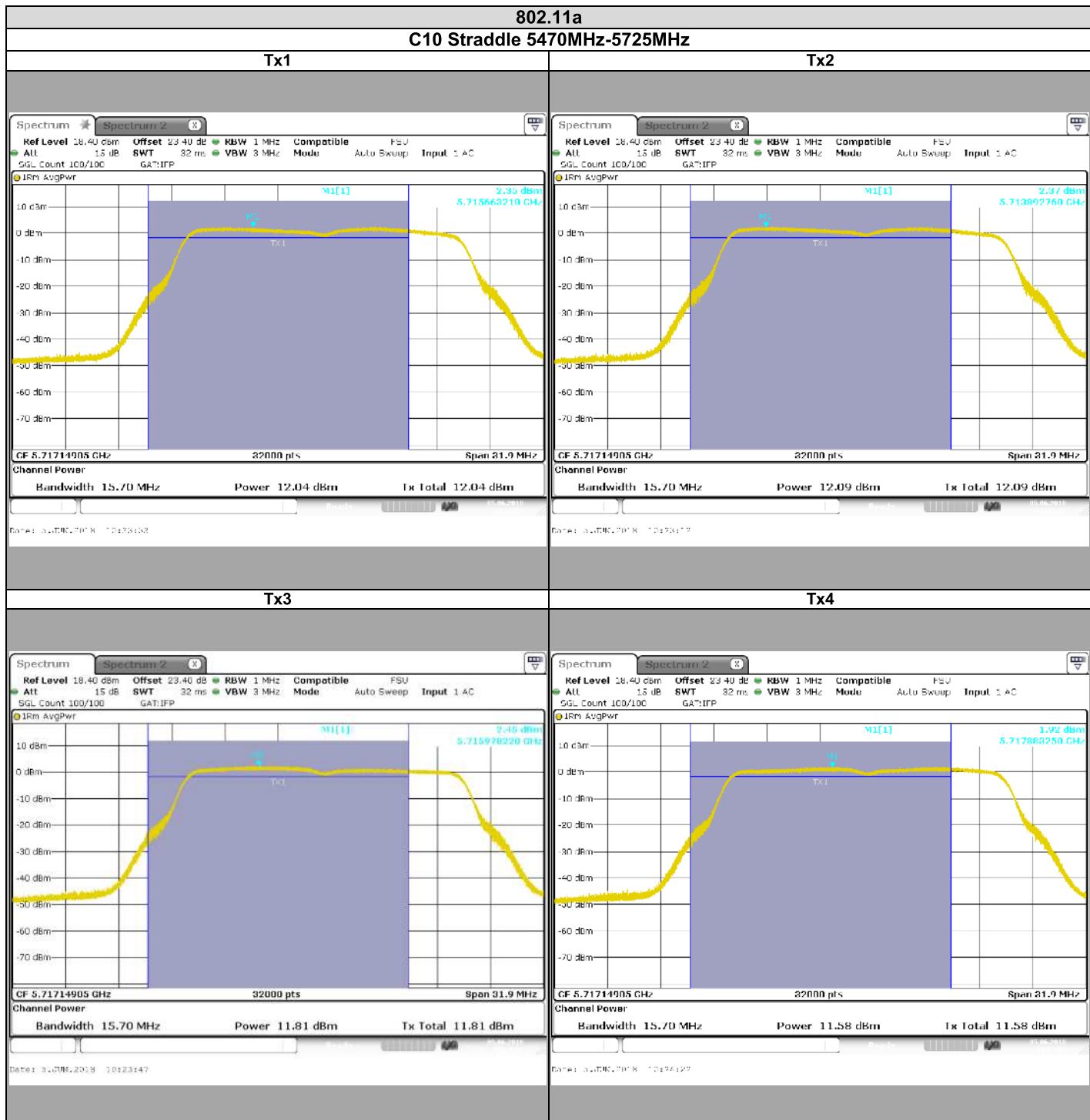
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## TEST REPORT

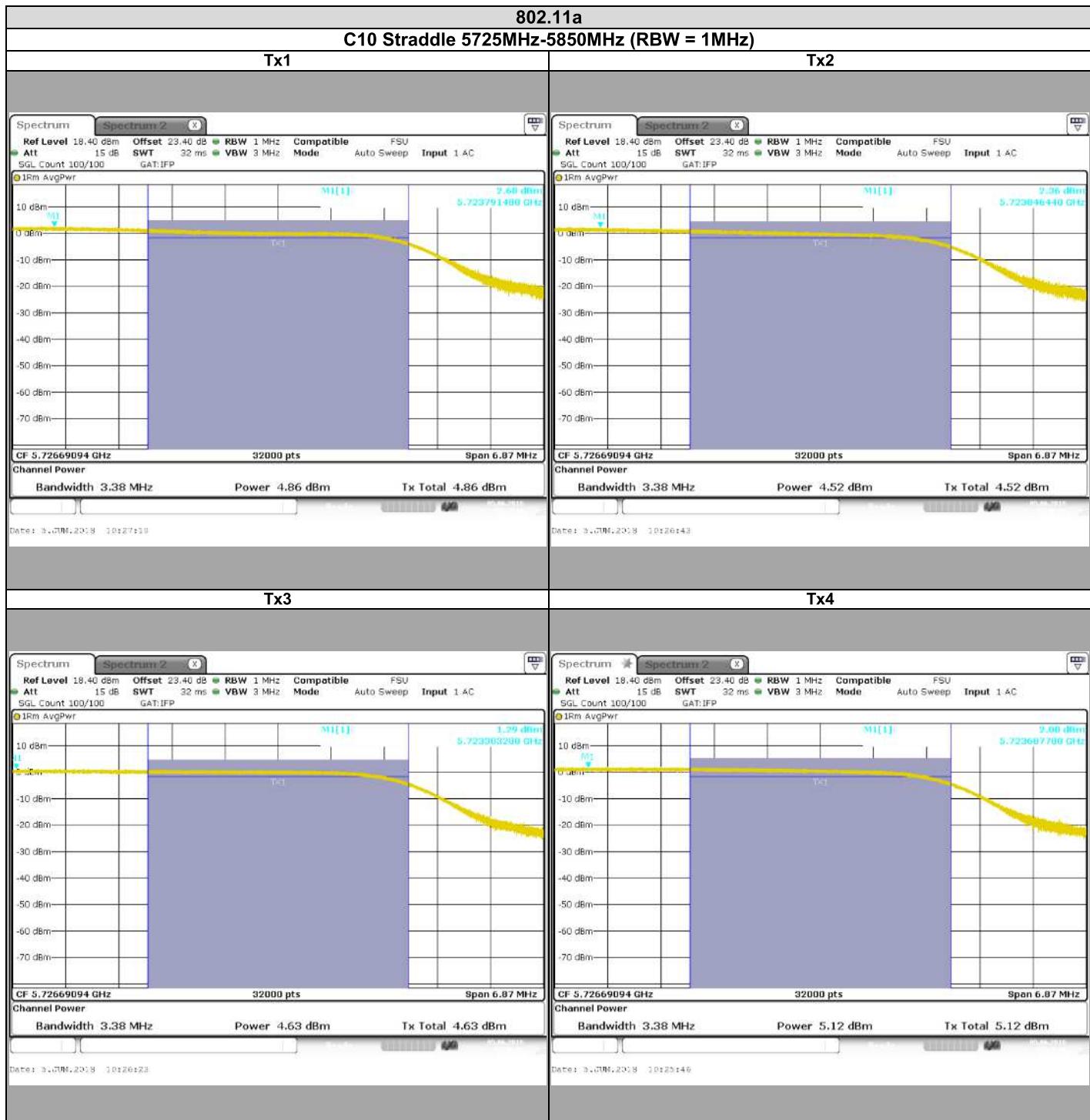
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## TEST REPORT

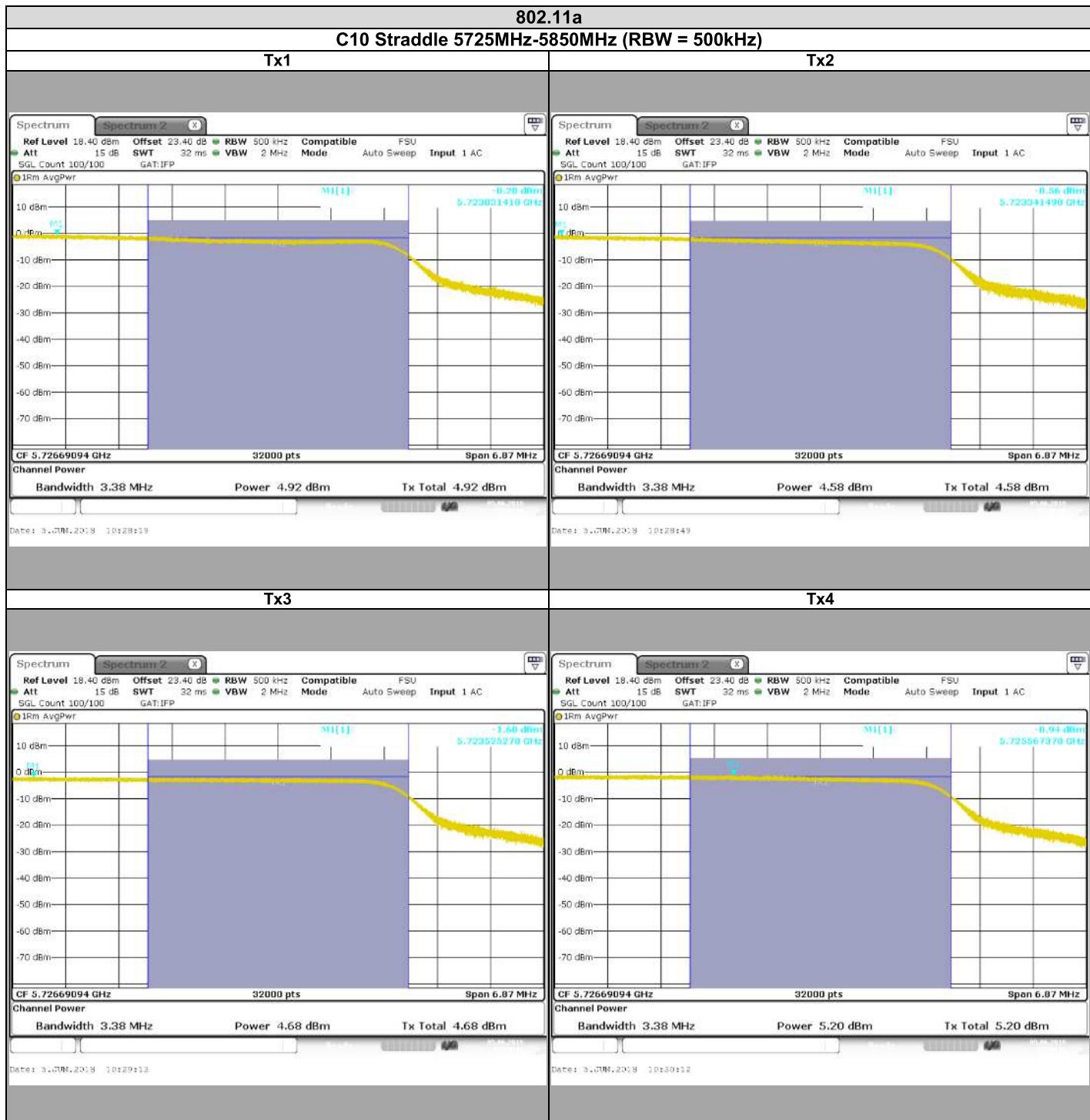
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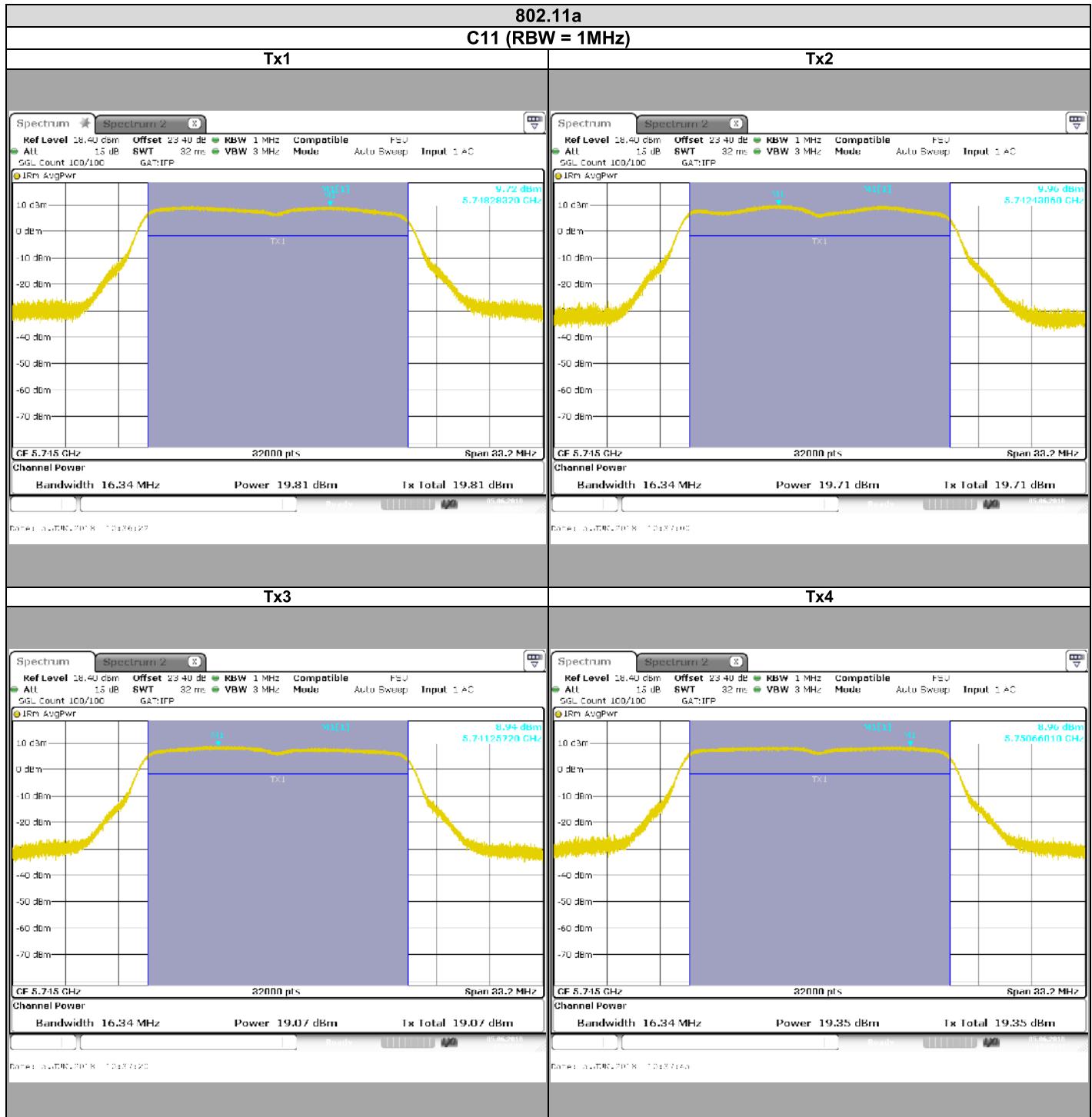
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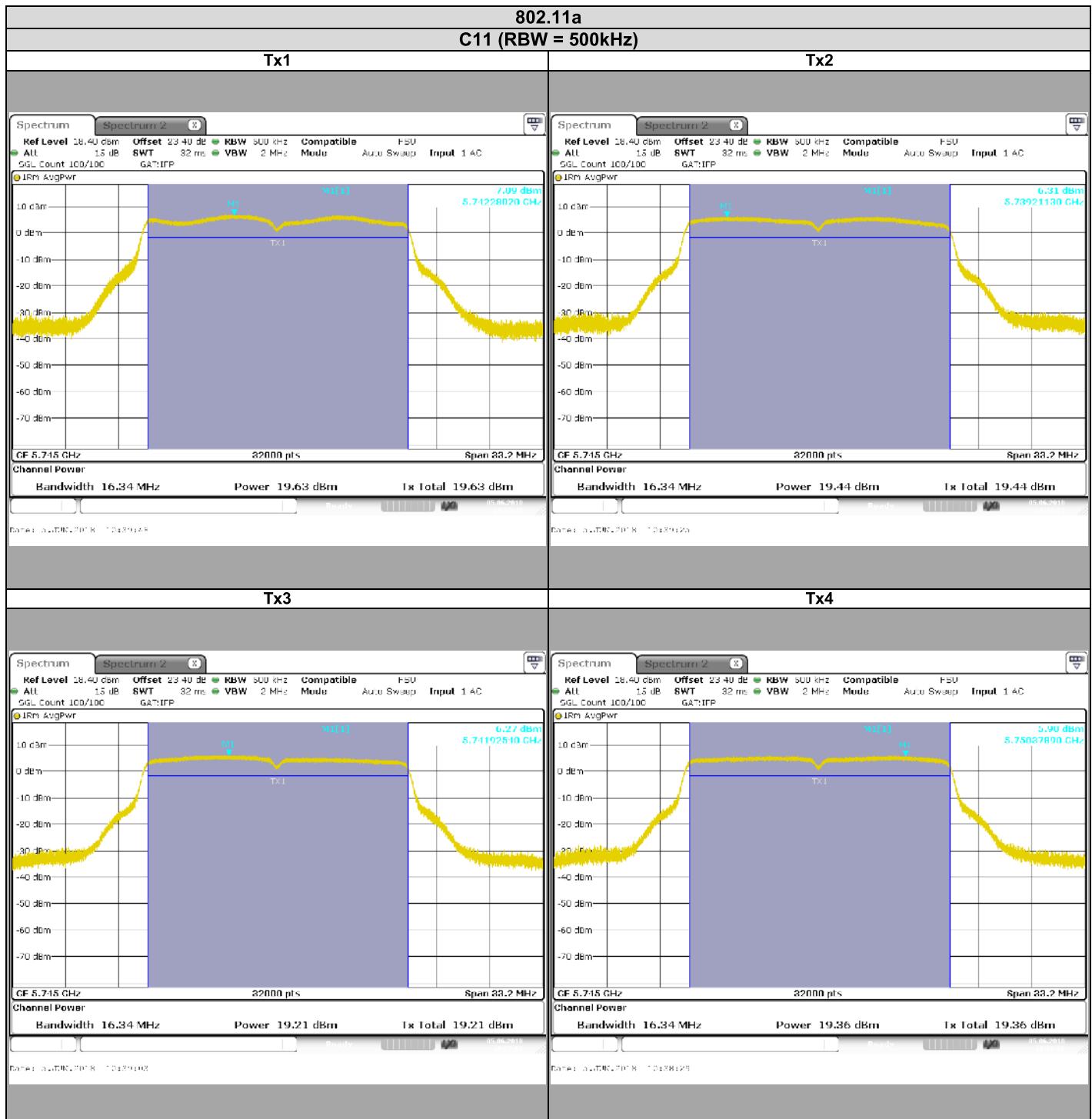
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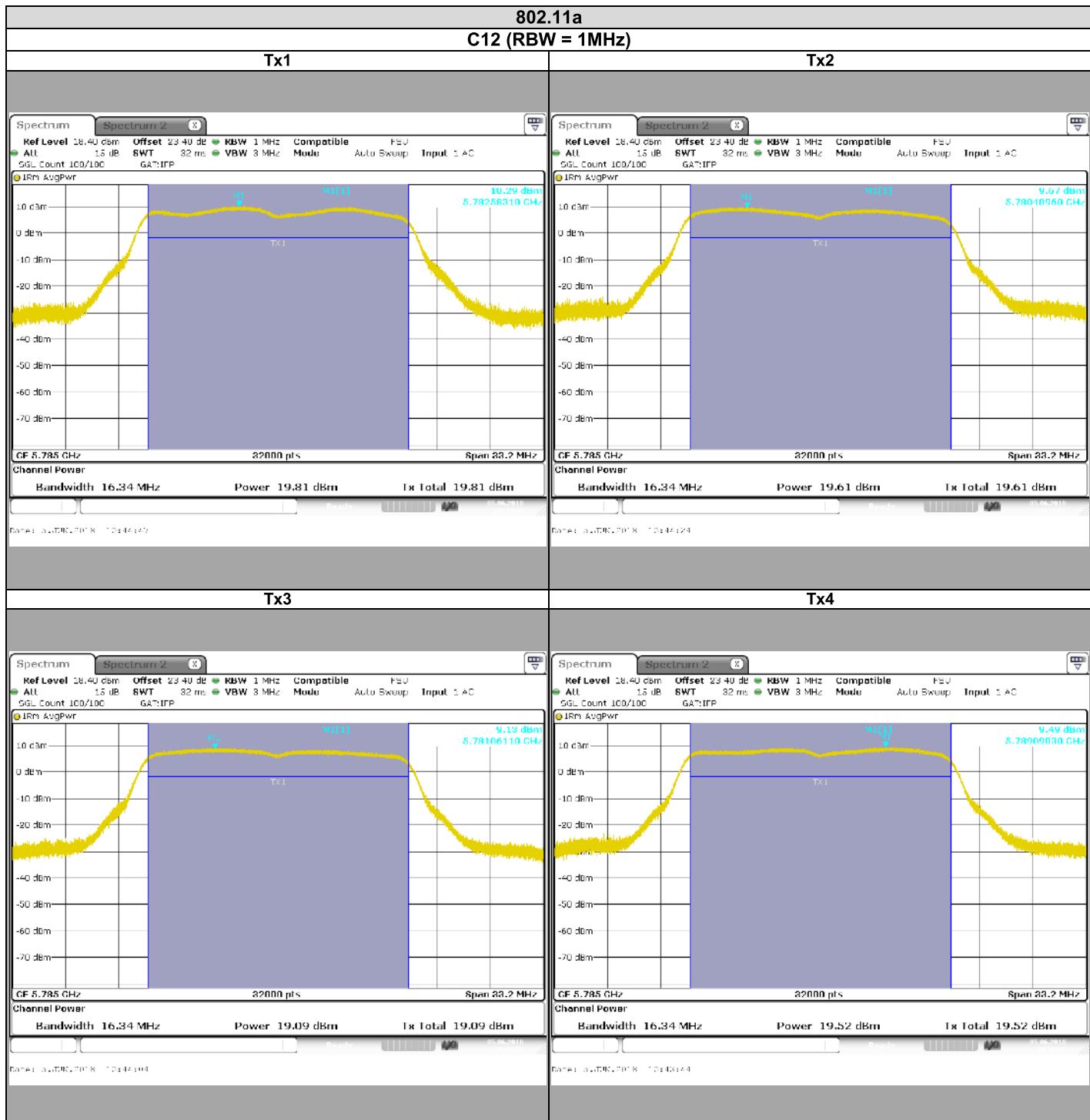
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802.11a  
C12 (RBW = 1MHz)

## TEST REPORT

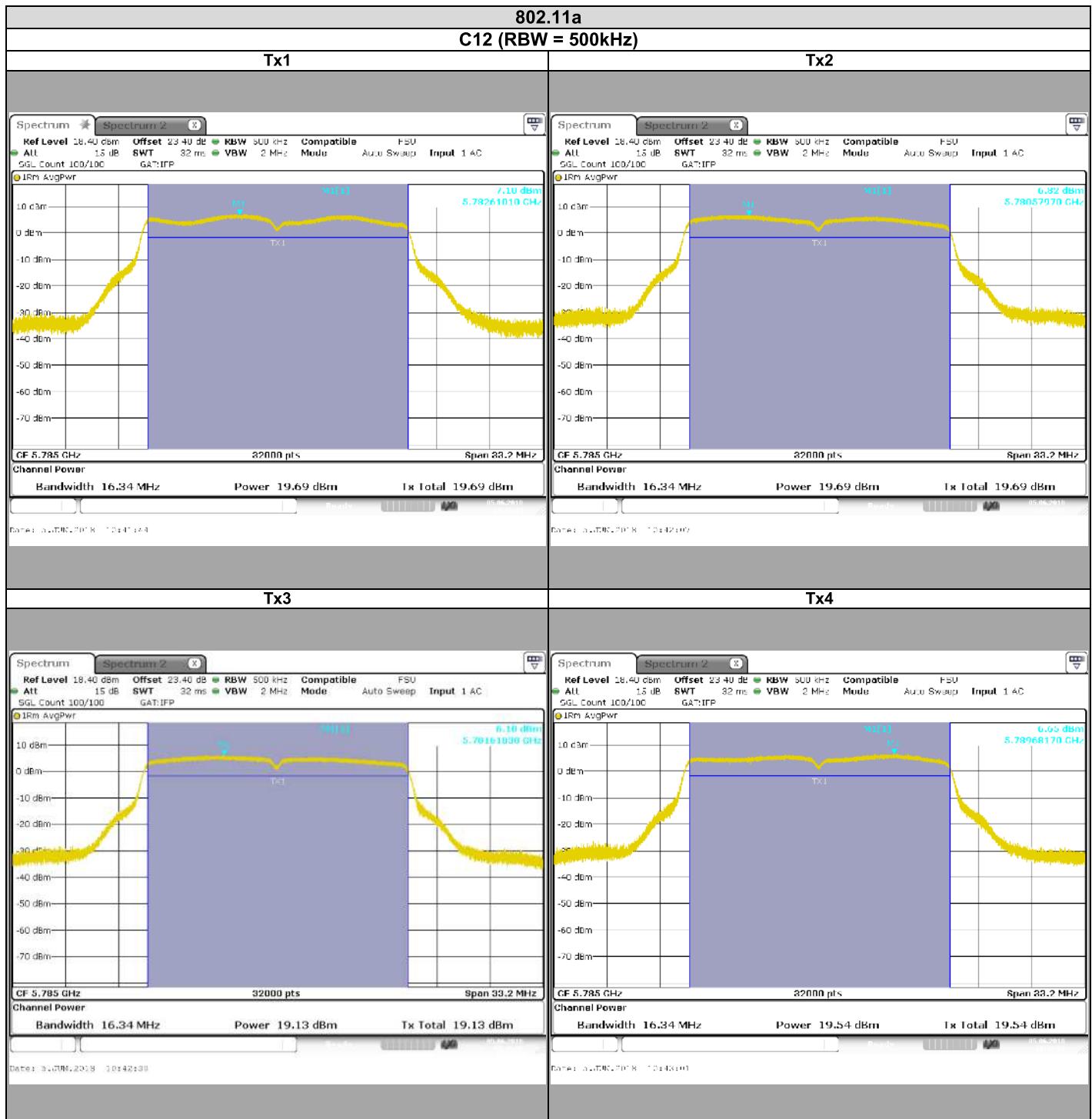
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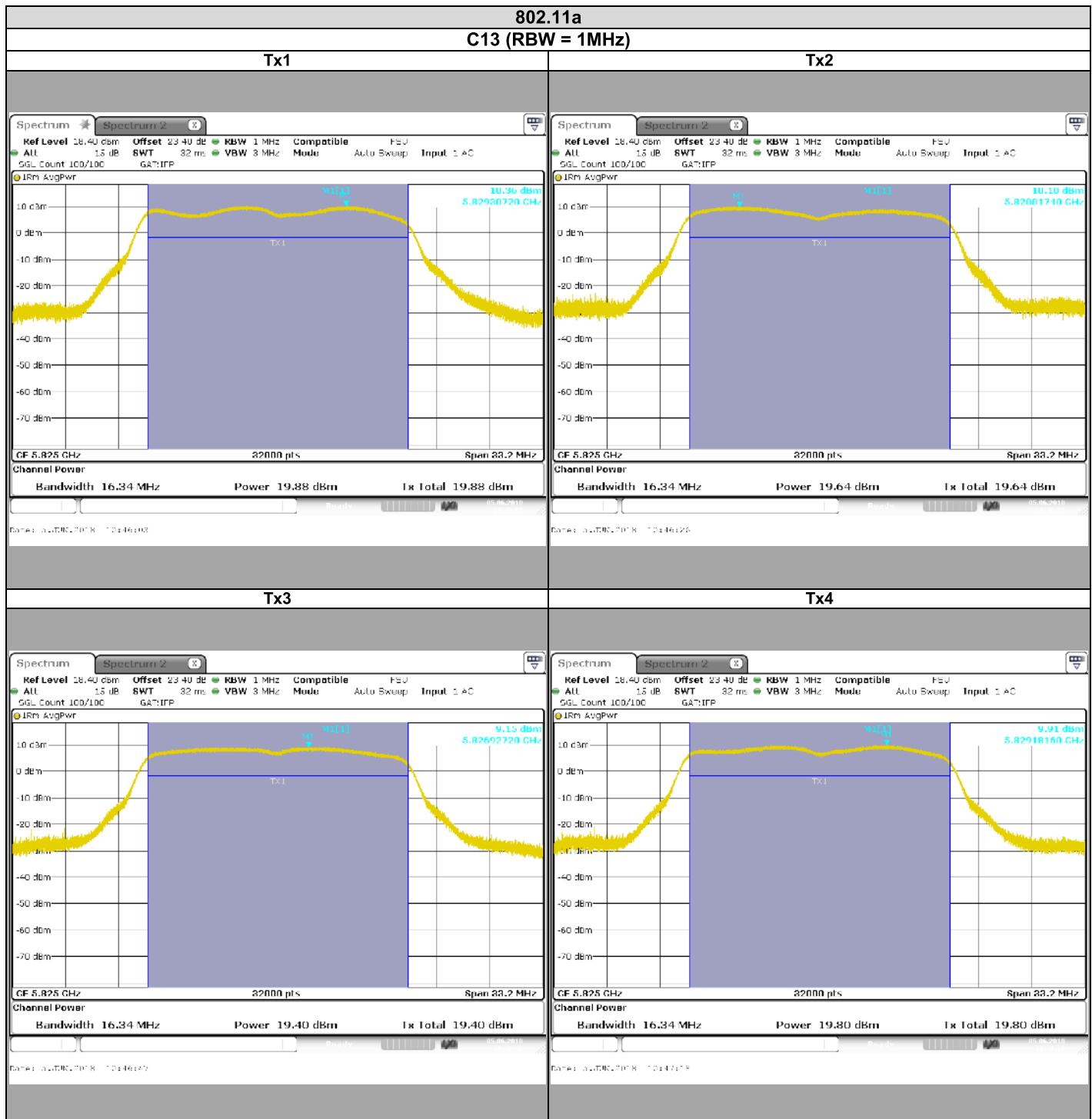
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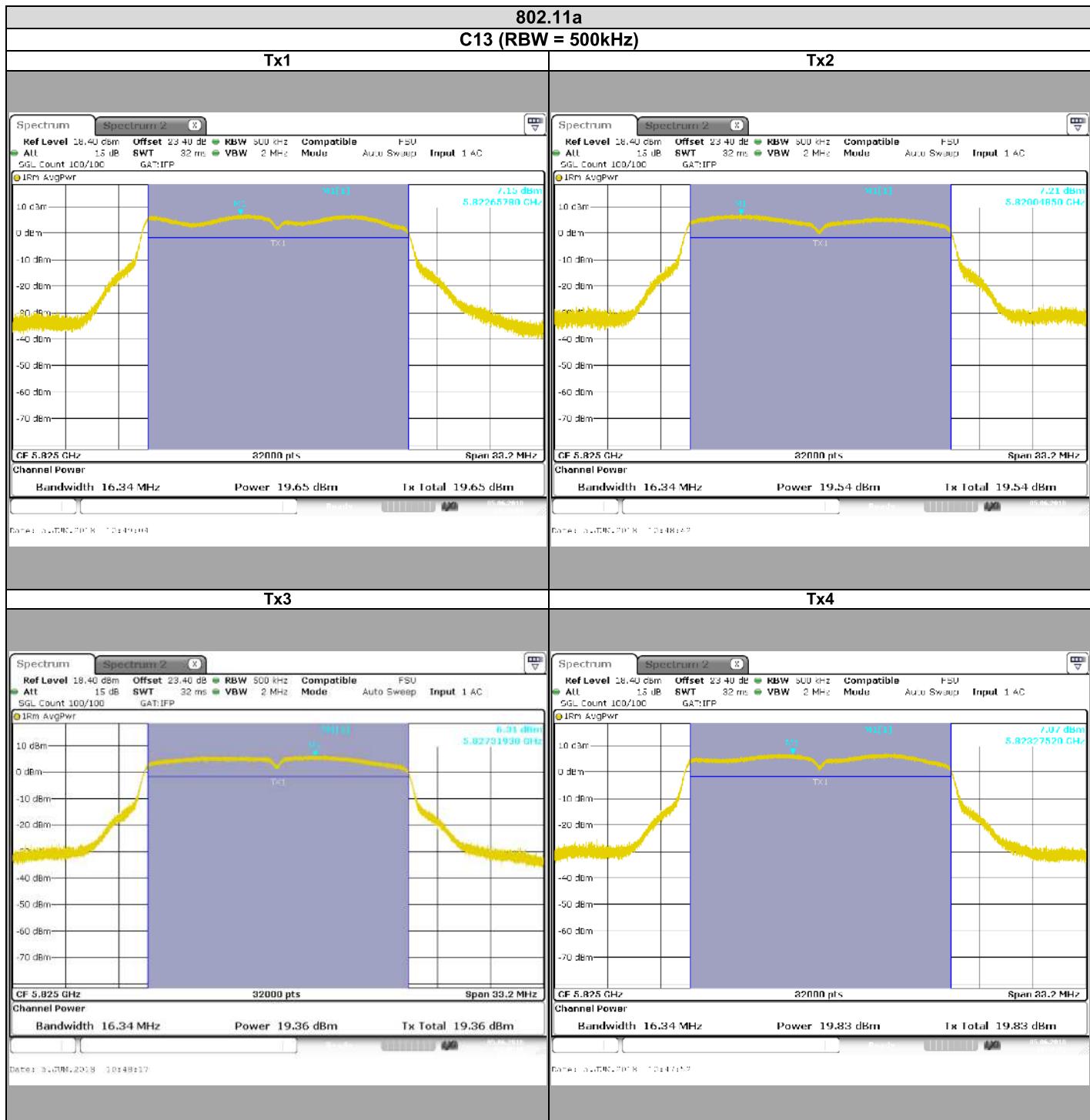
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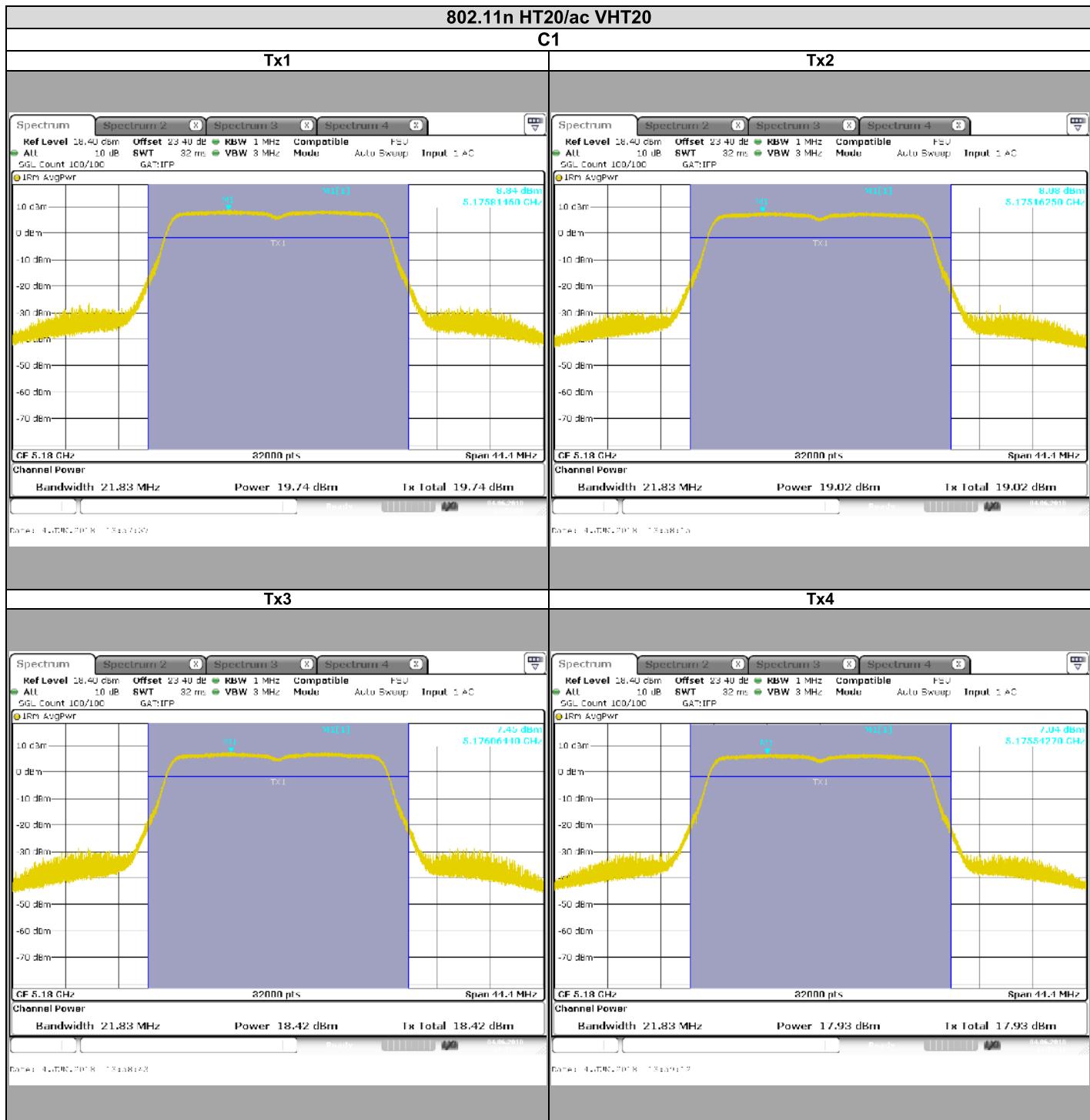
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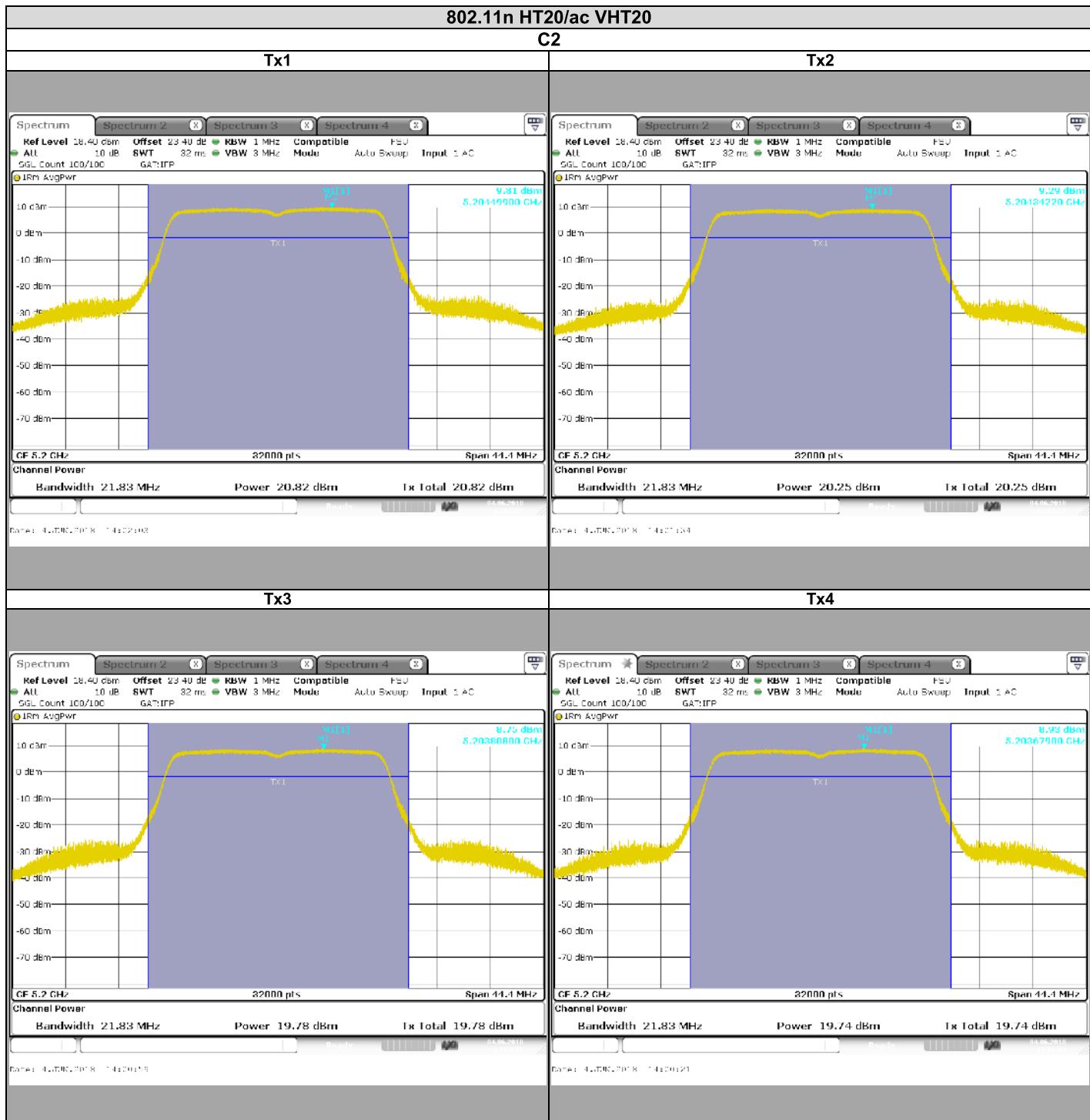
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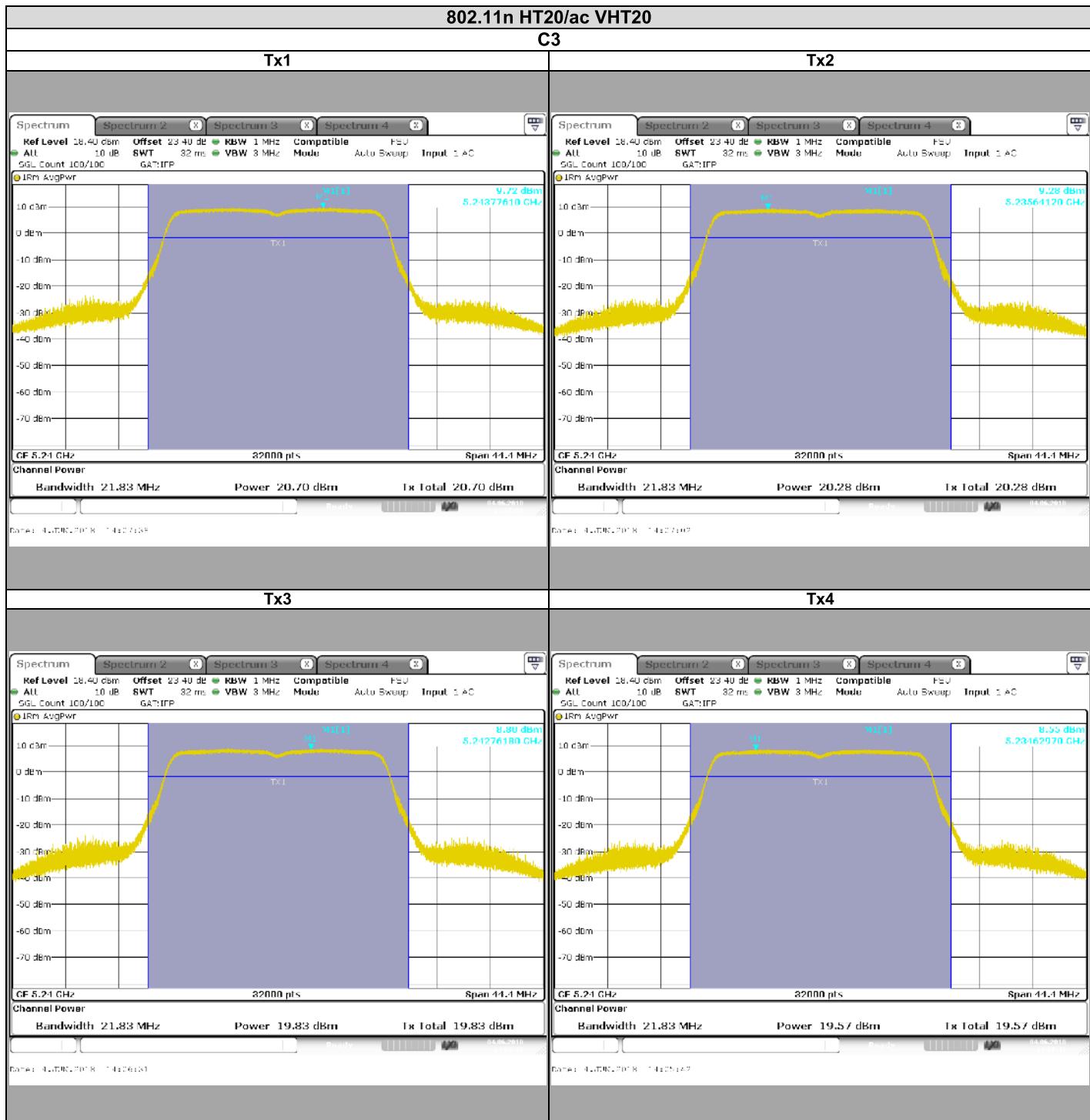
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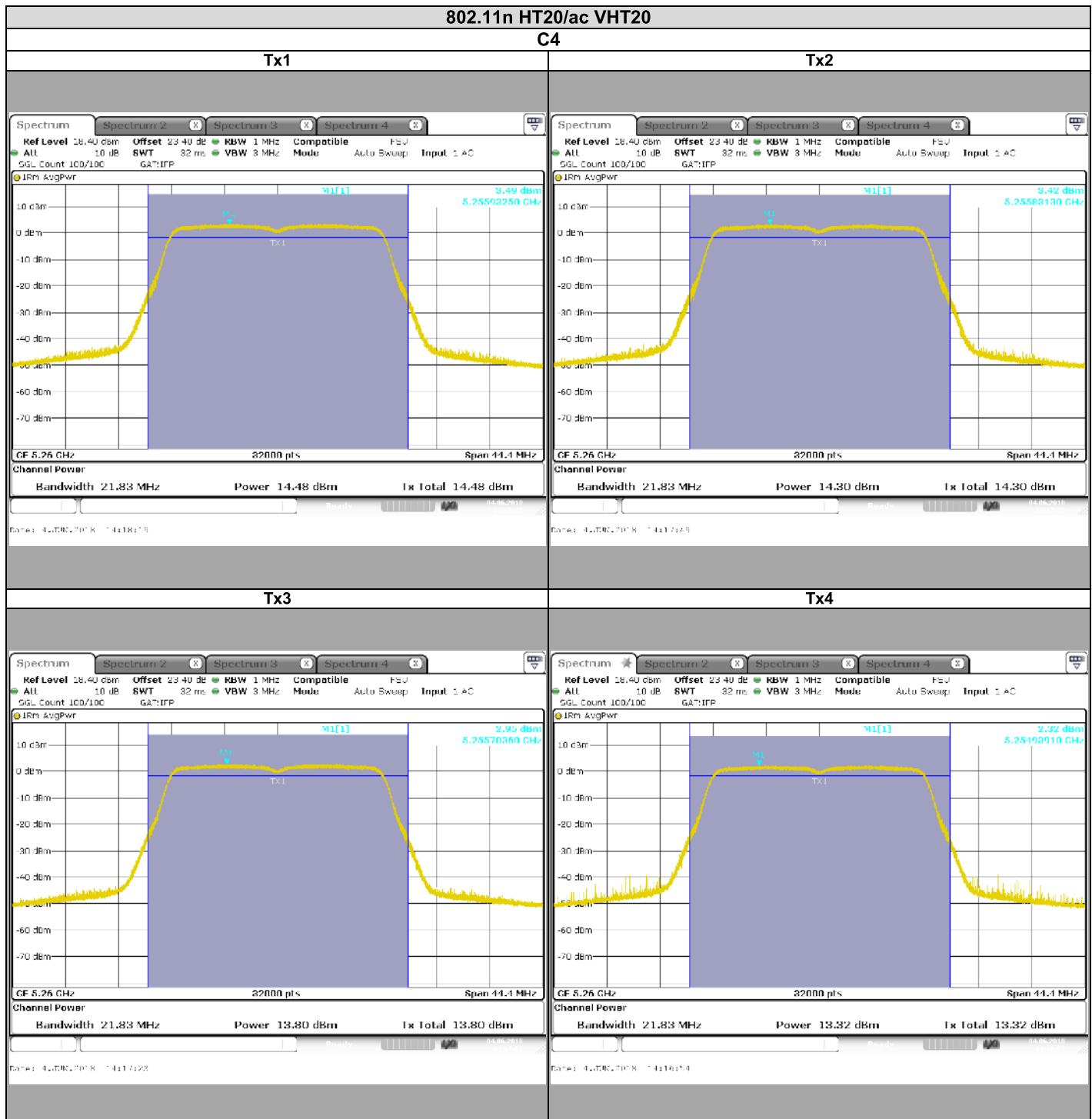
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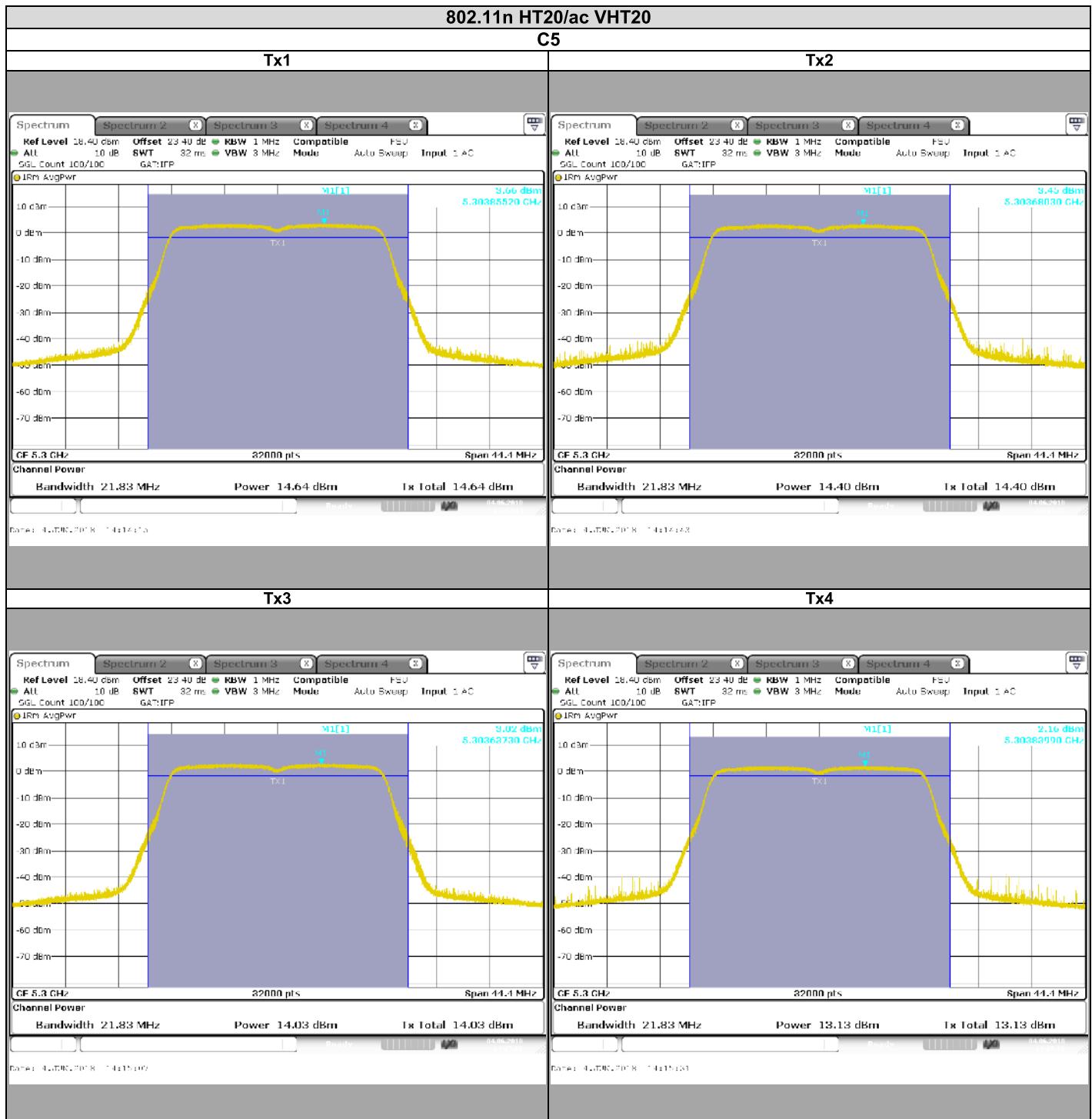
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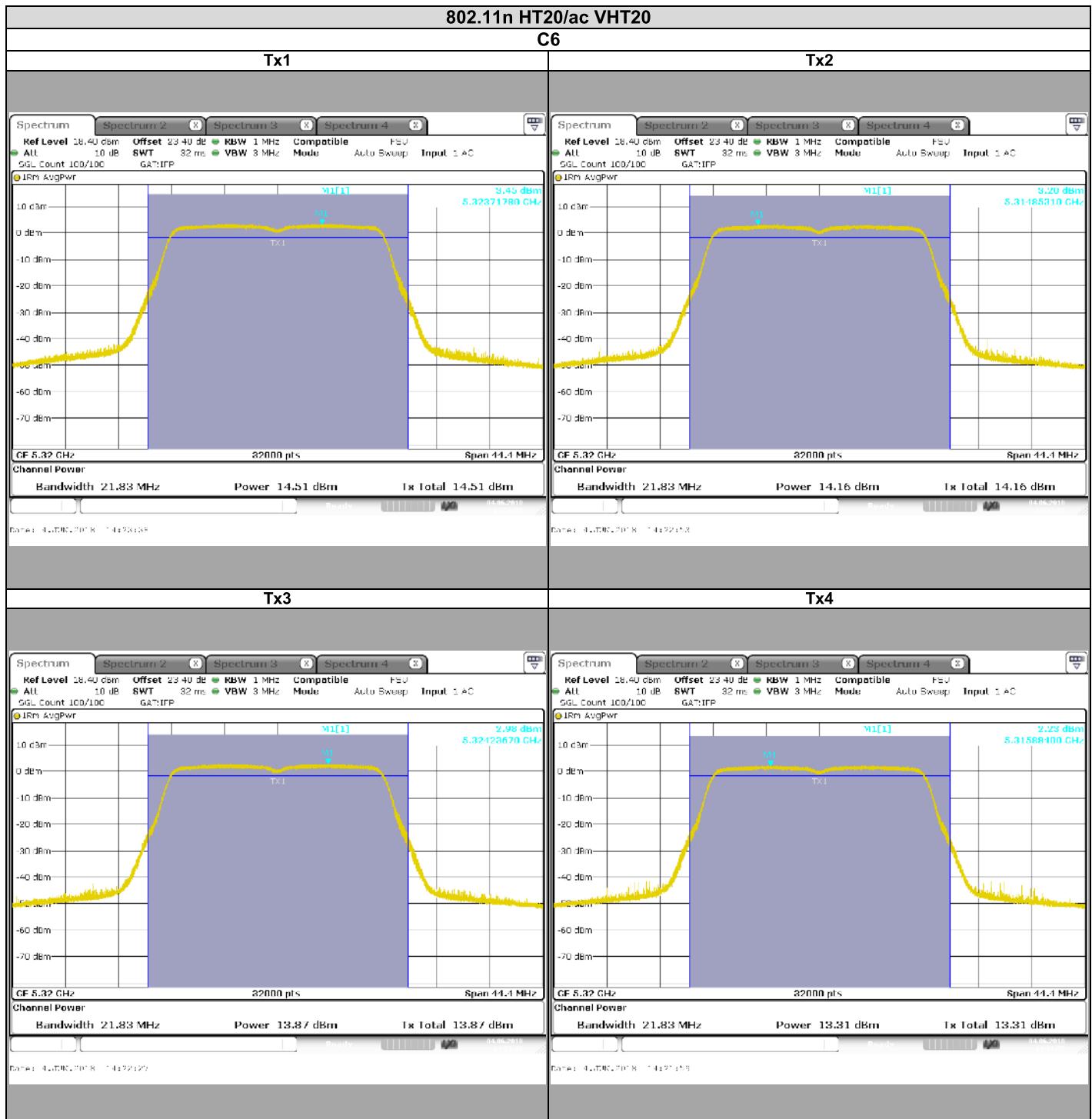
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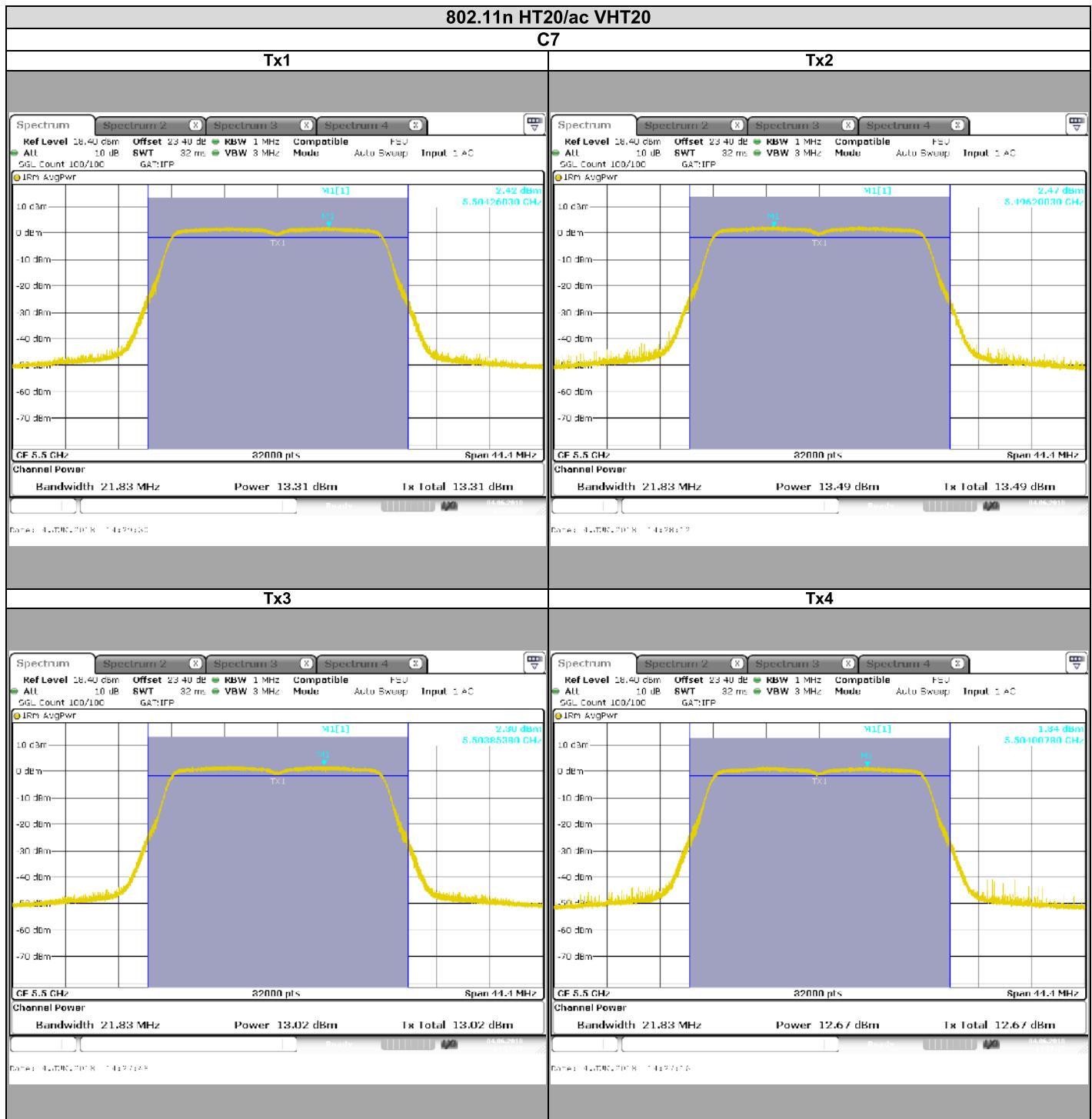
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## TEST REPORT

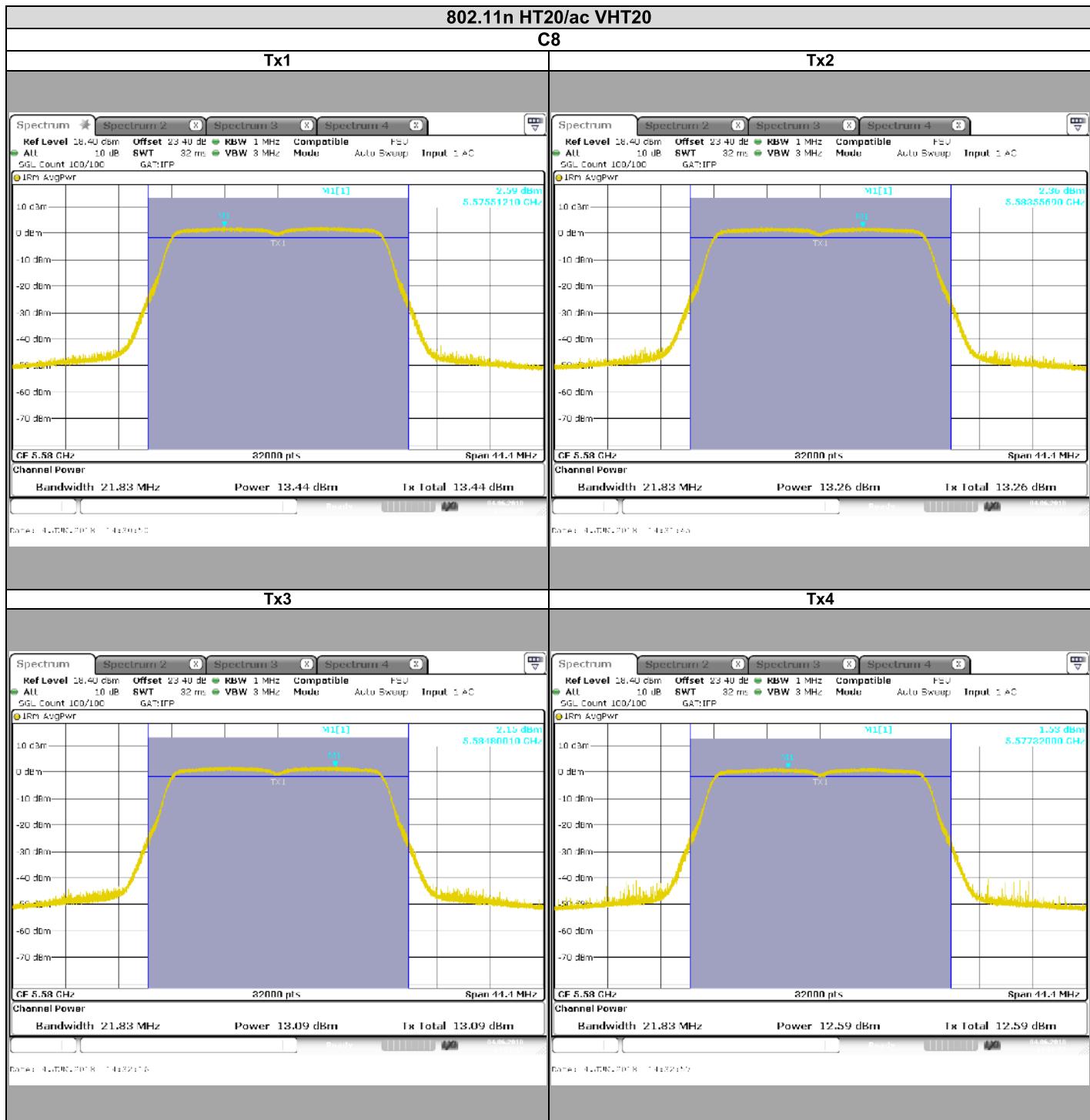
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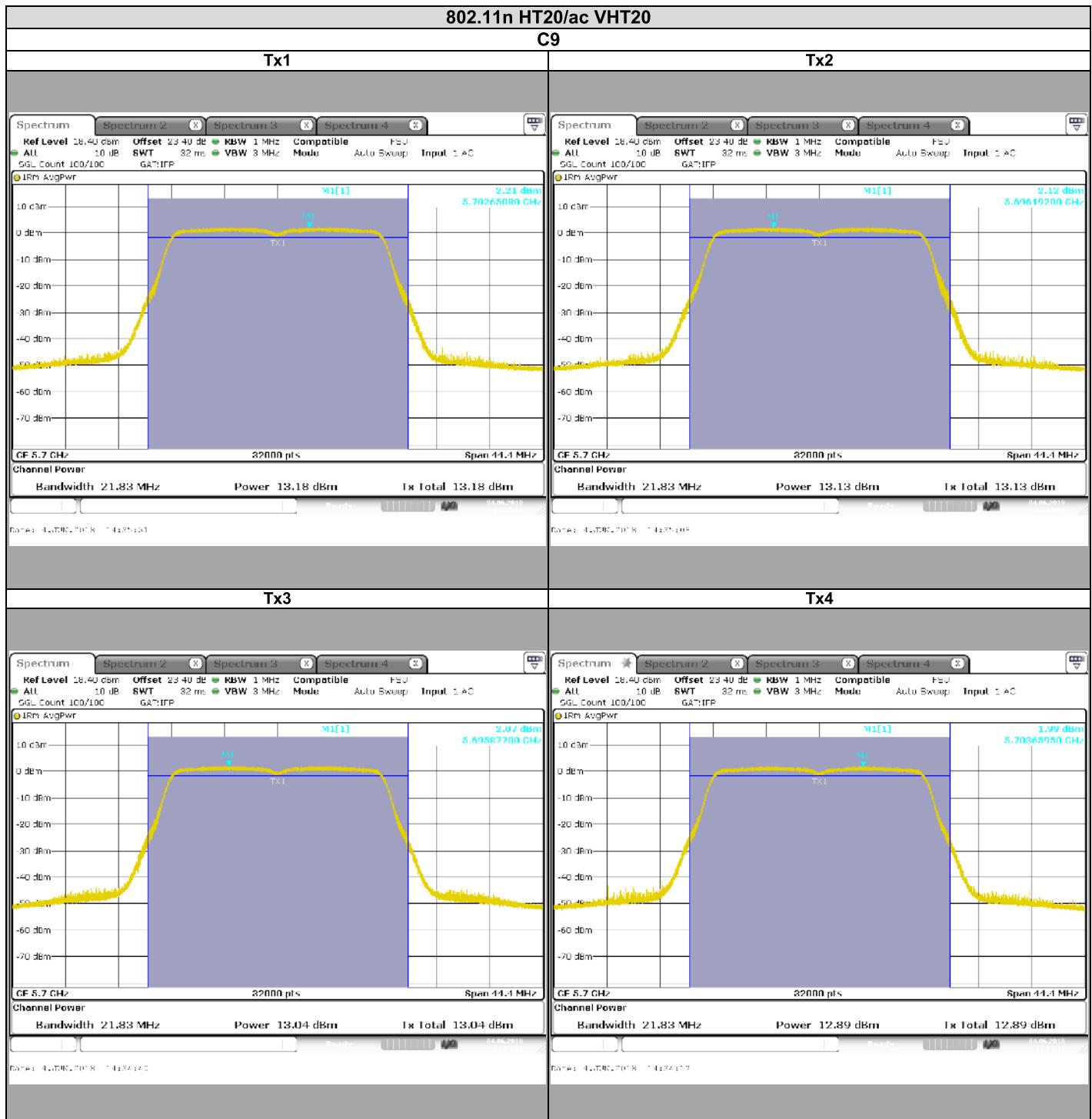
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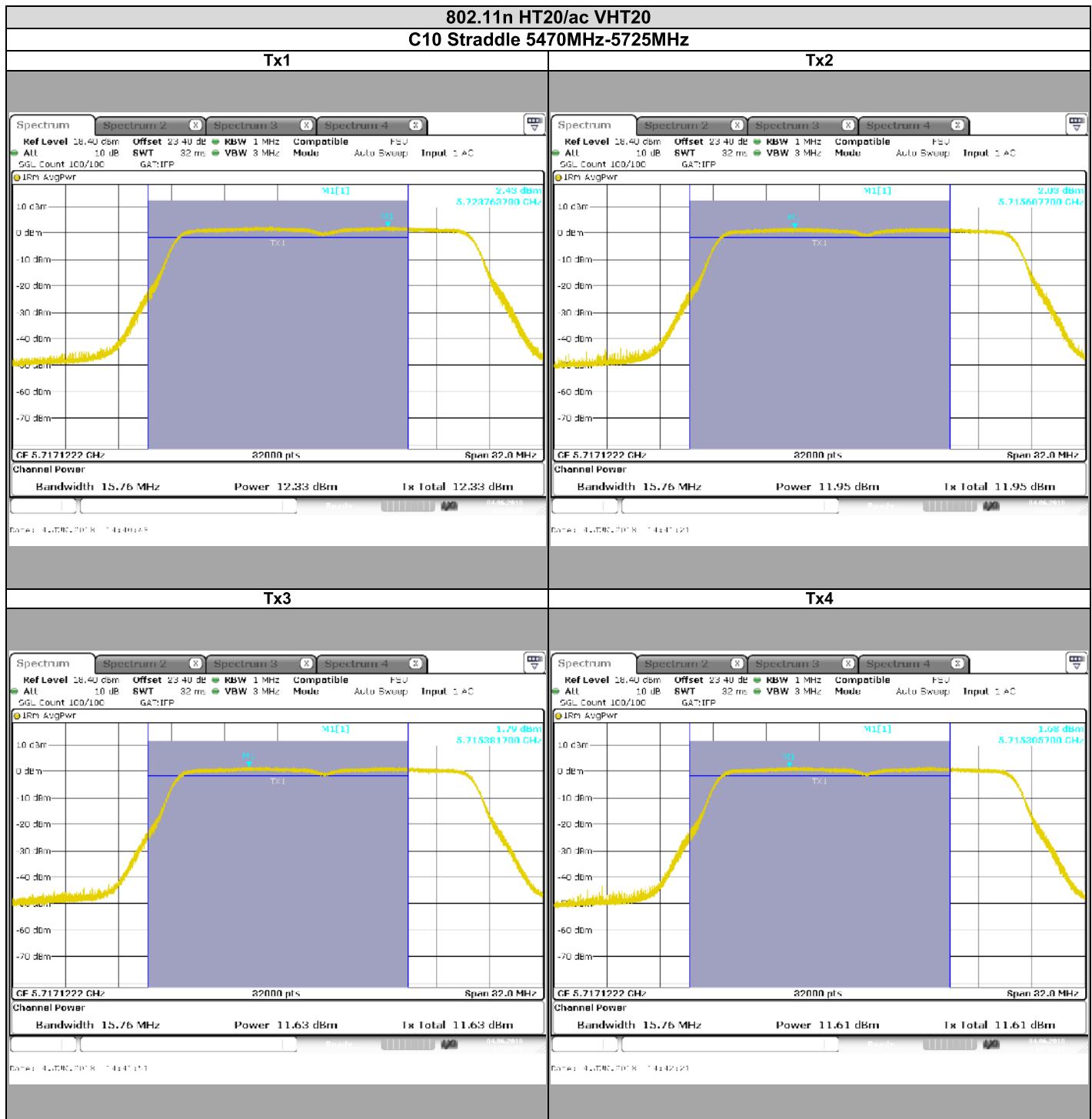
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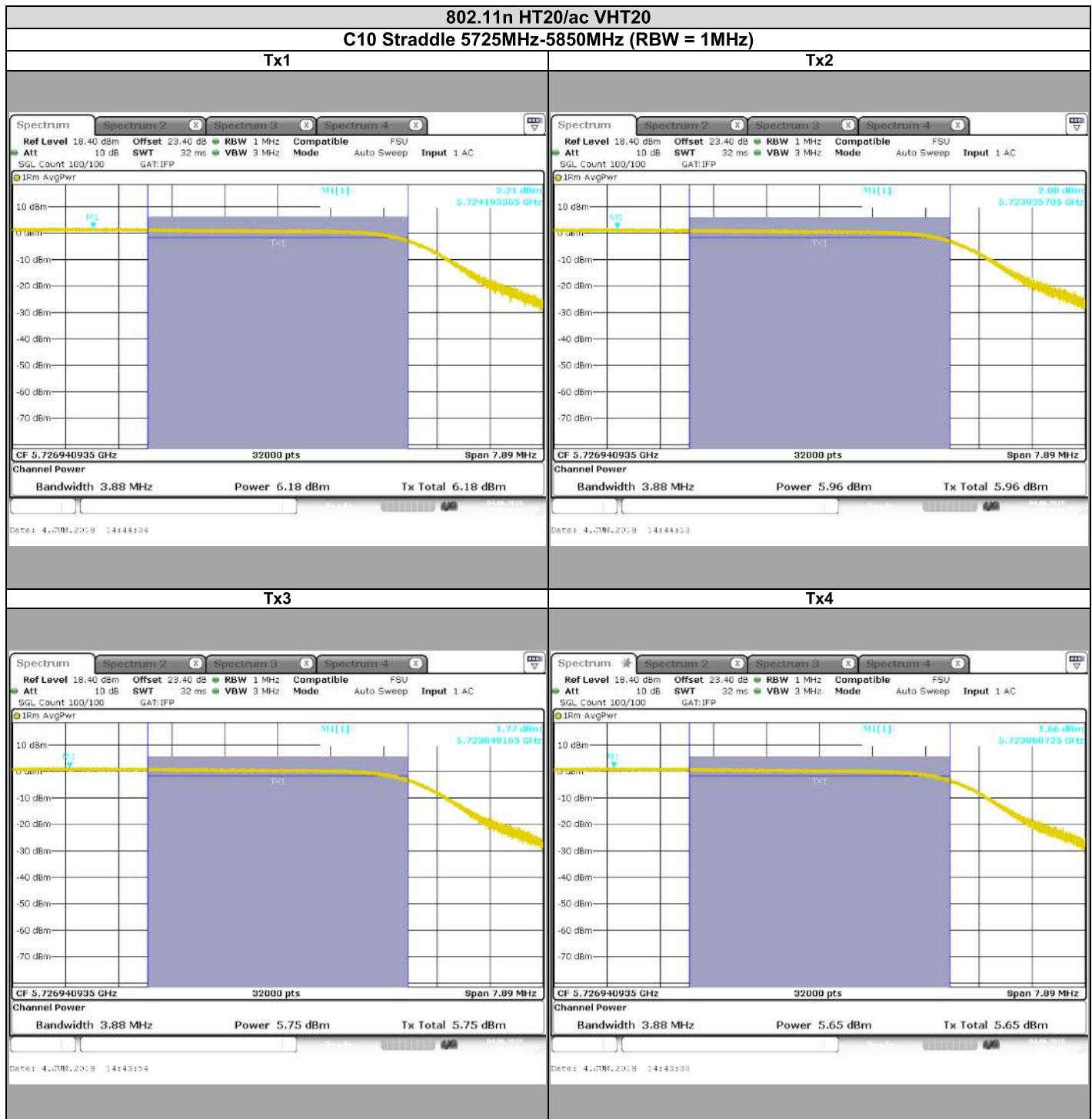
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## TEST REPORT

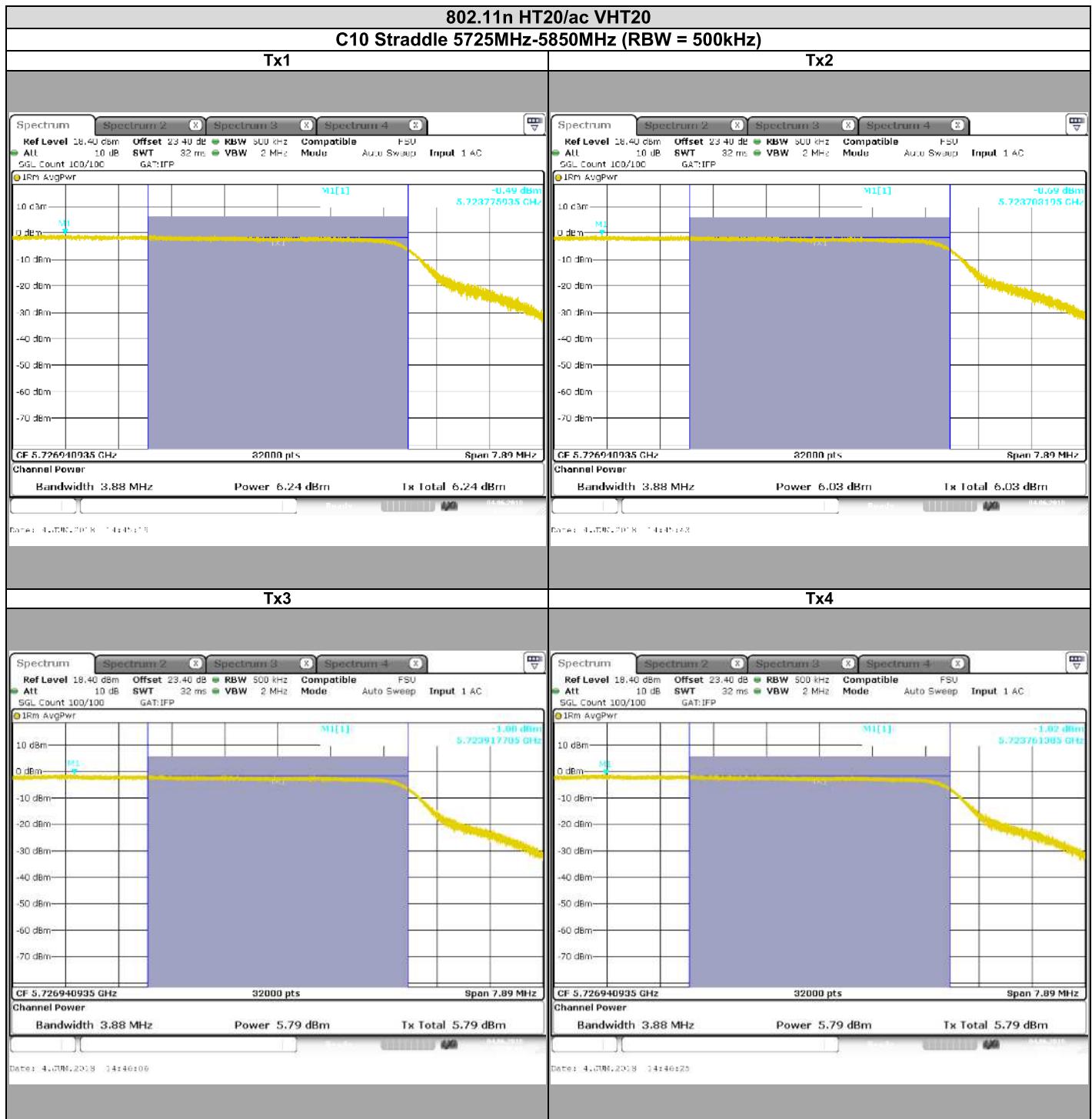
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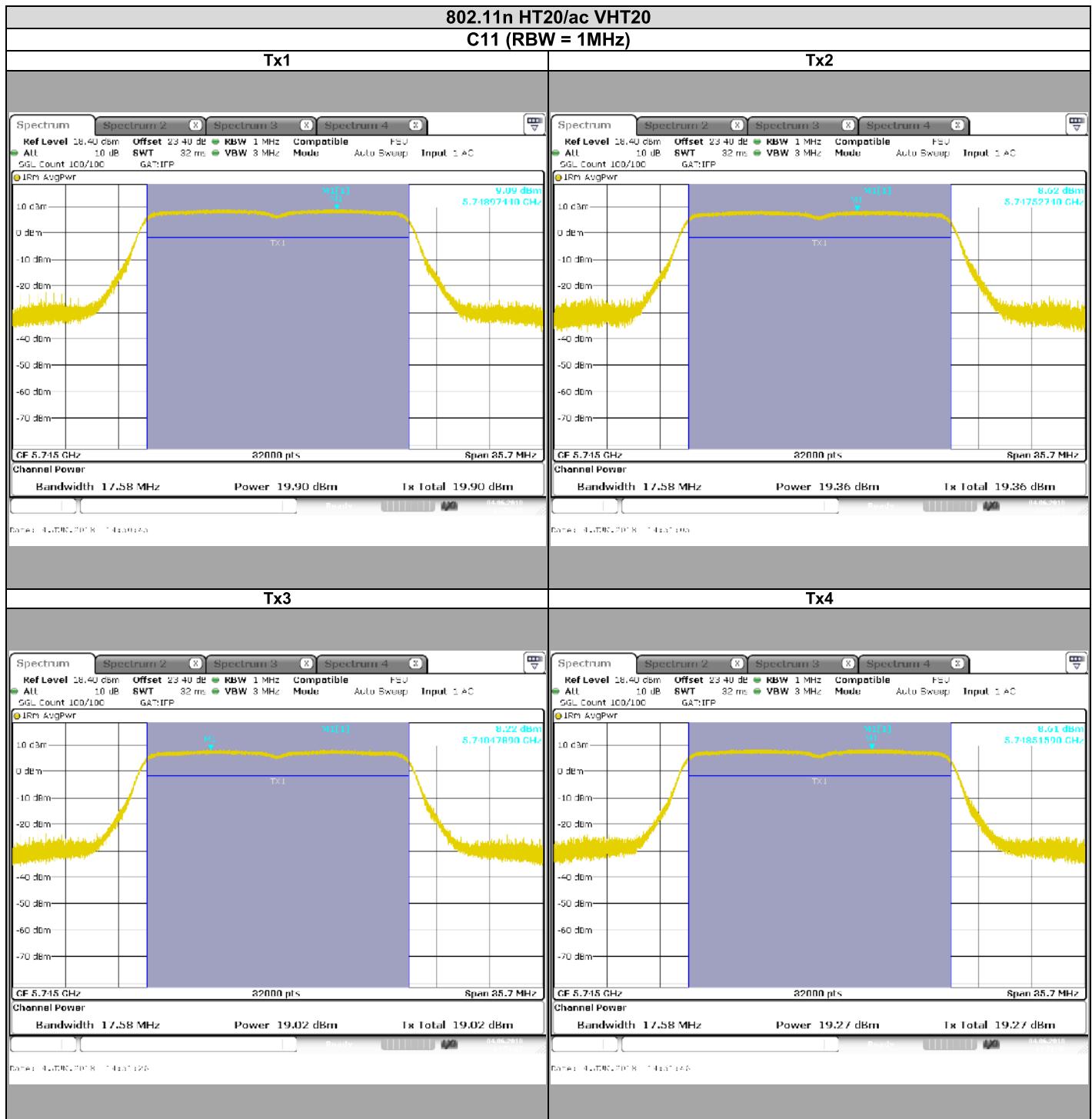
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**802.11n HT20/ac VHT20  
C11 (RBW = 1MHz)****TEST REPORT**

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Version : 01

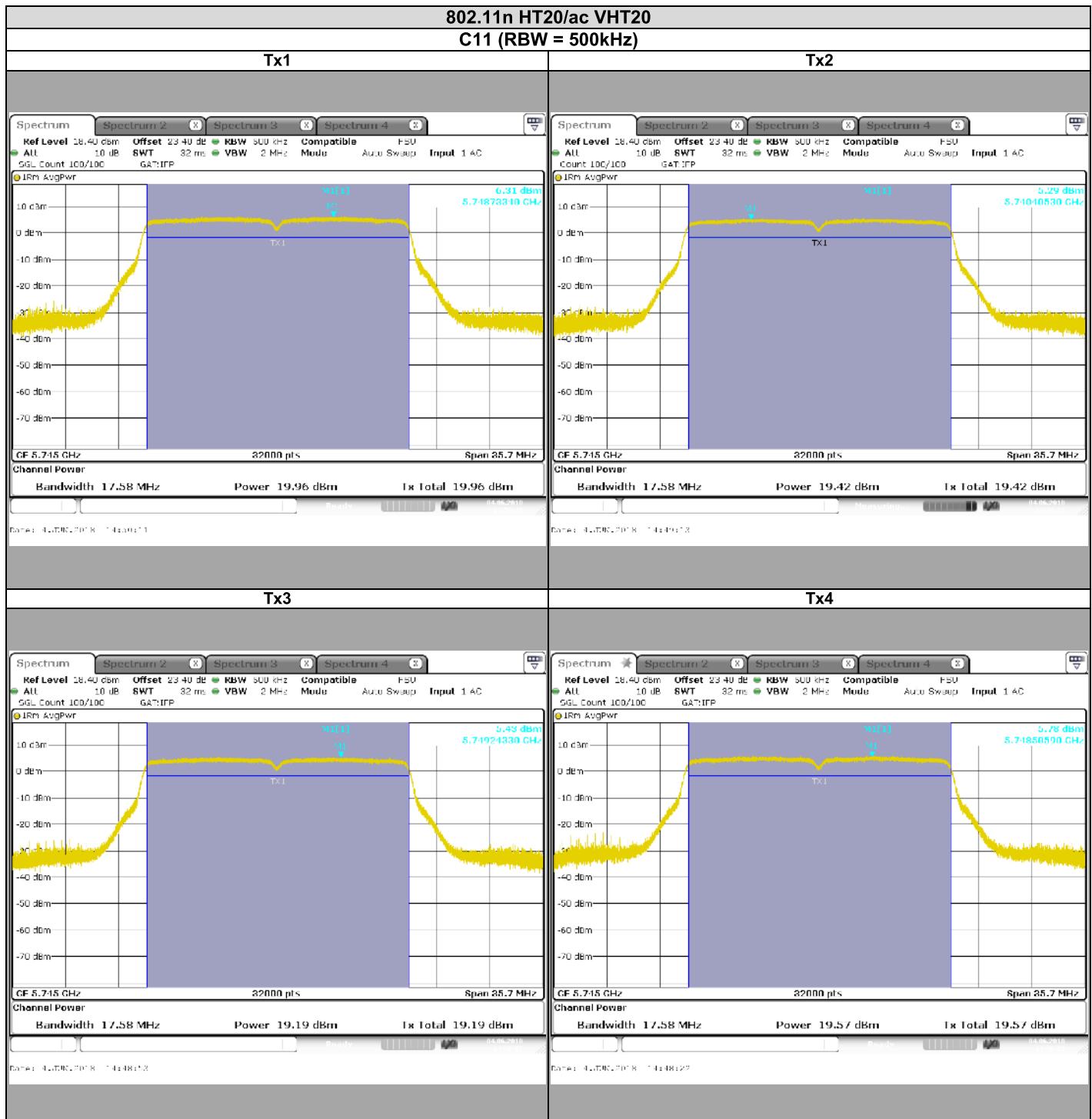
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L C I E

## 802.11n HT20/ac VHT20

C11 (RBW = 500kHz)



## TEST REPORT

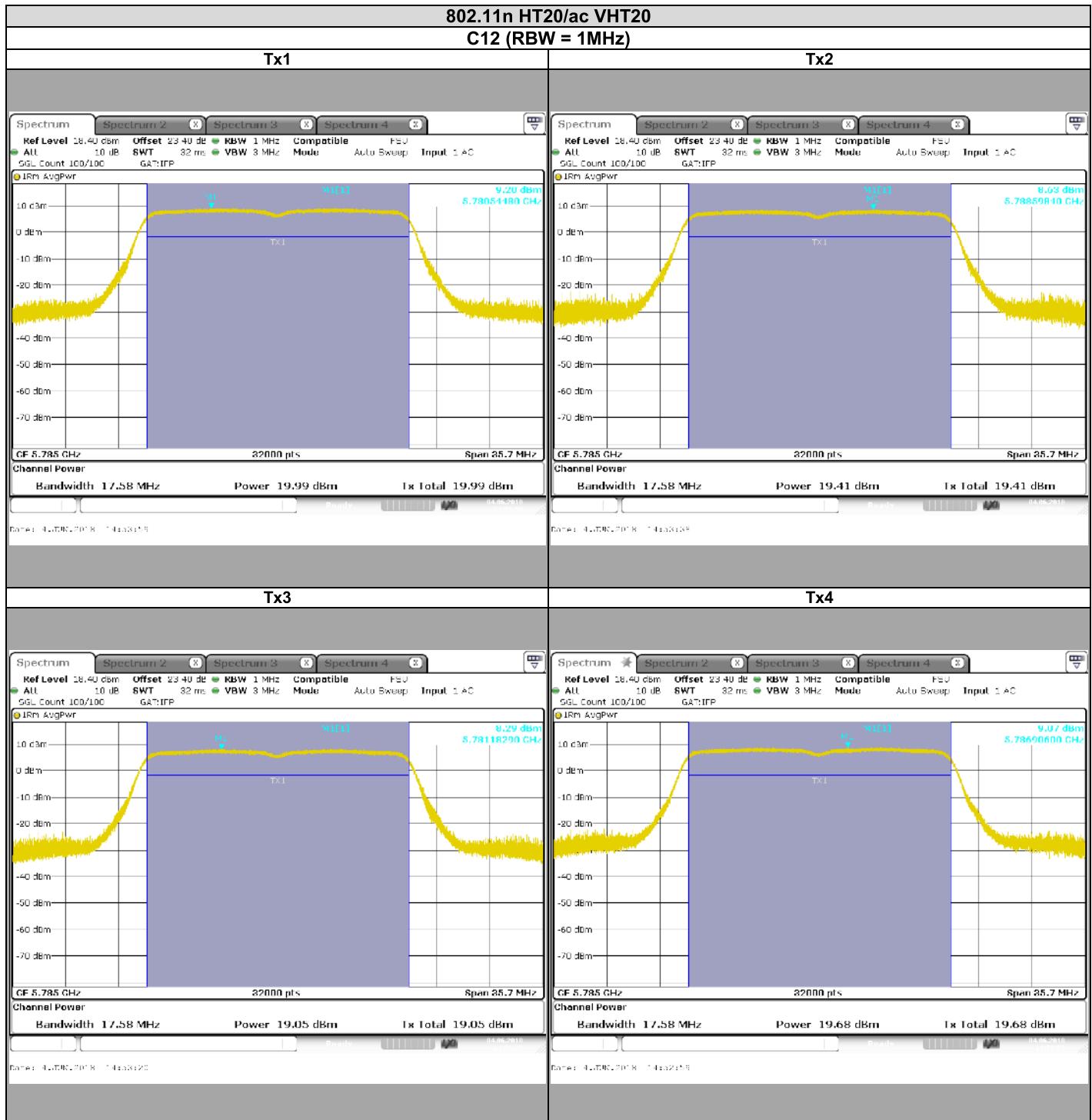
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## TEST REPORT

N° 155636-721608-D

Version : 01

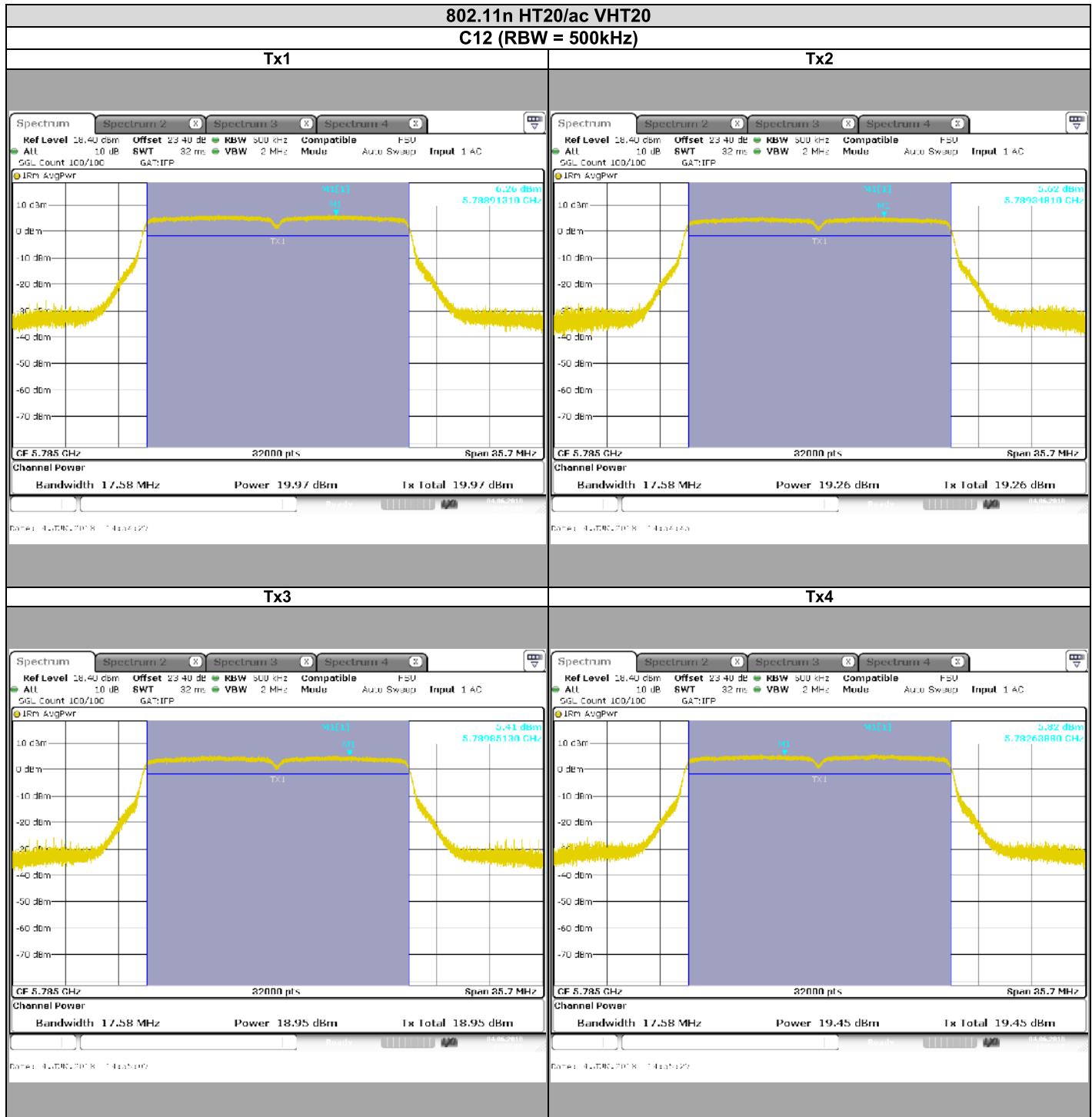
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L C I E

## 802.11n HT20/ac VHT20

C12 (RBW = 500kHz)



## TEST REPORT

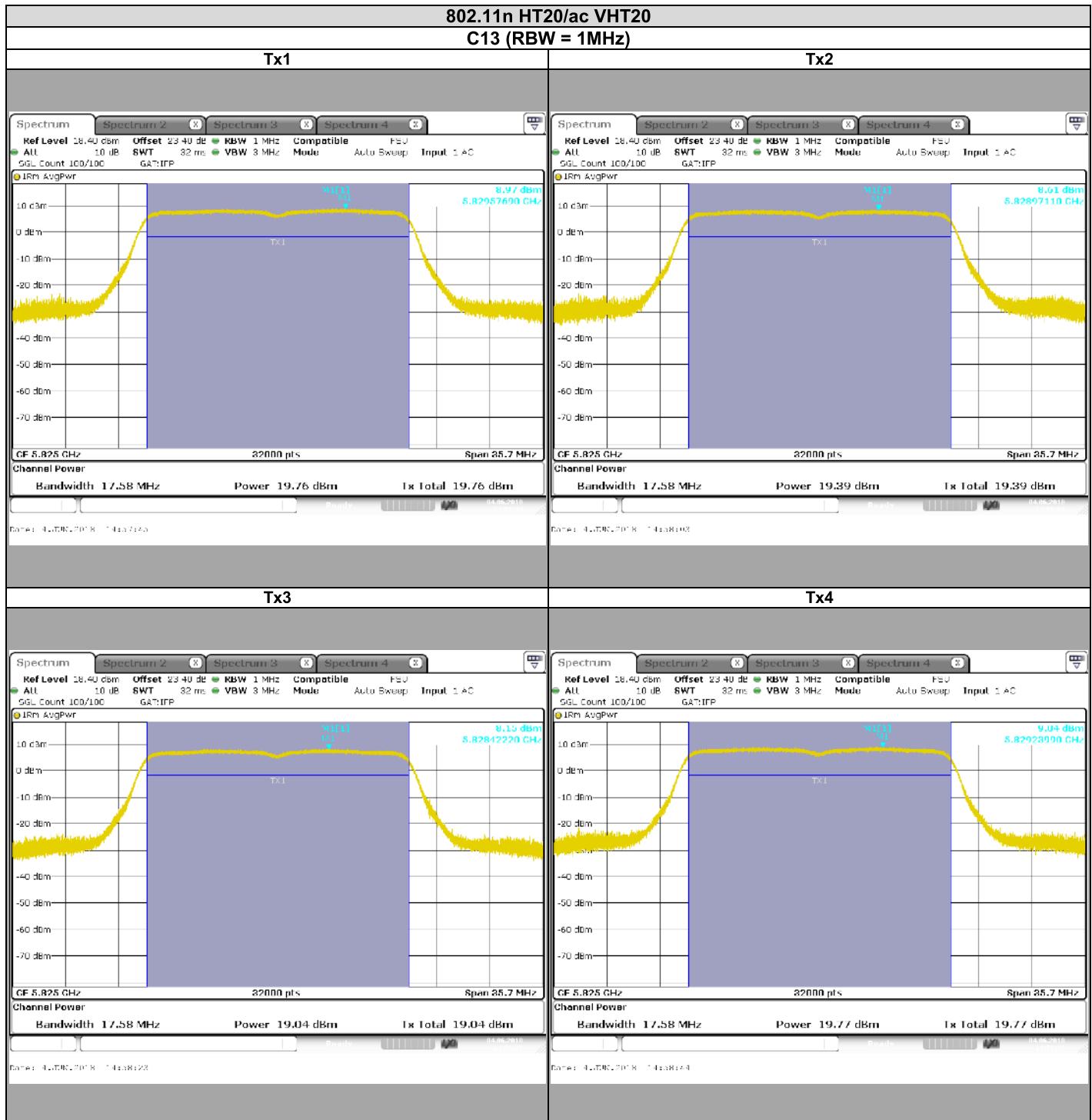
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## TEST REPORT

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Version : 01

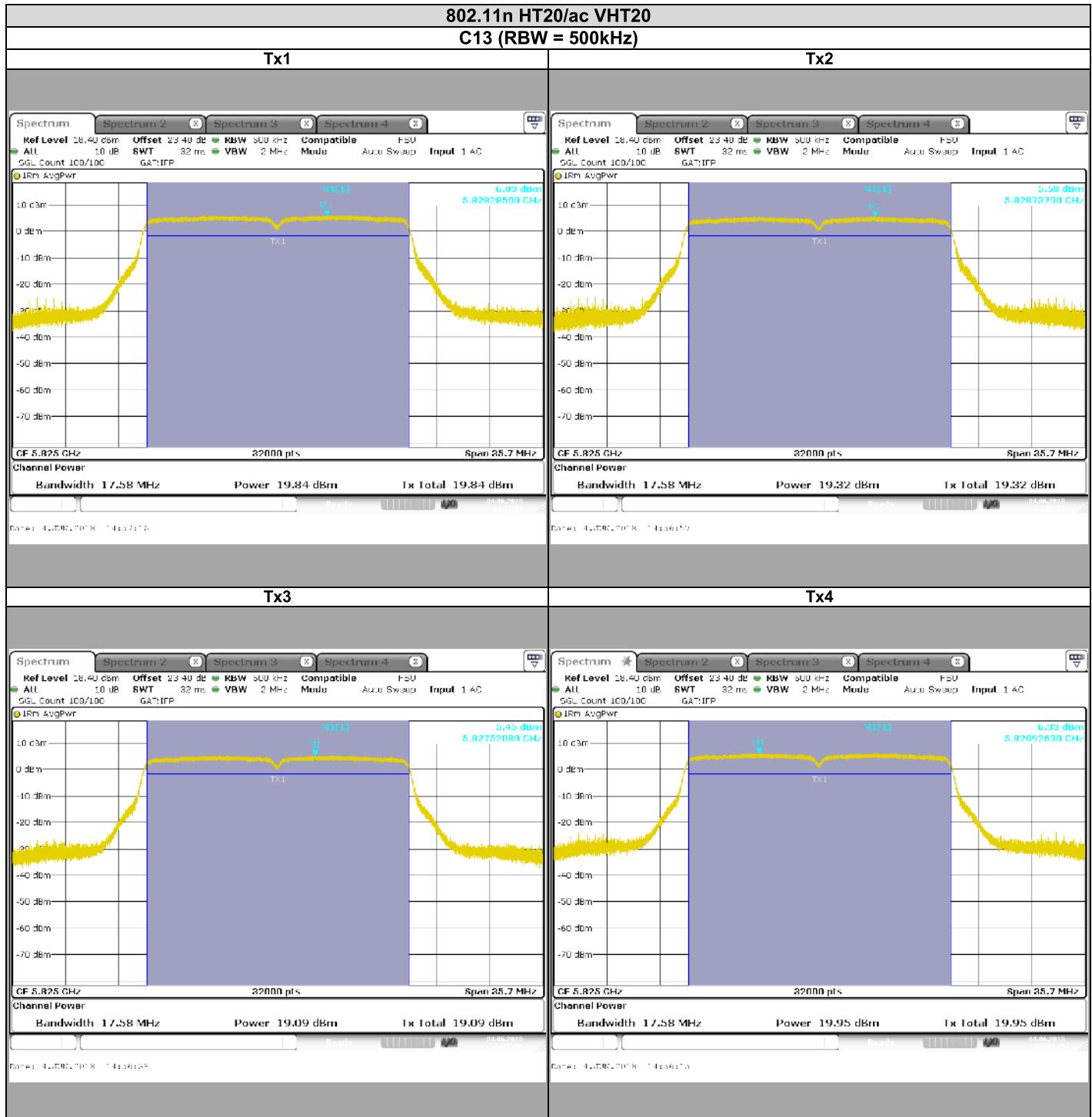
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L C I E

## 802.11n HT20/ac VHT20

C13 (RBW = 500kHz)



## TEST REPORT

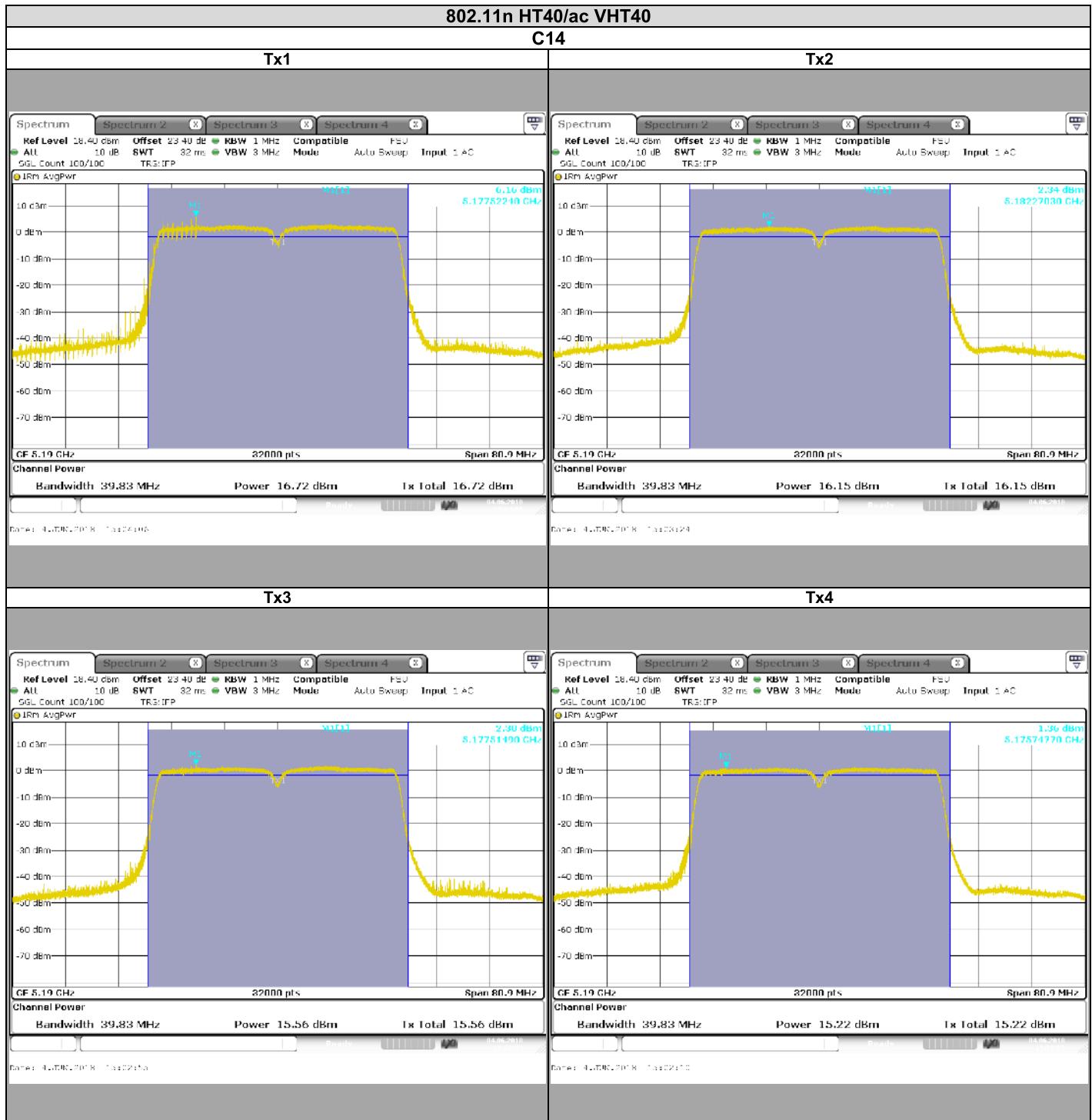
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