



L C I E

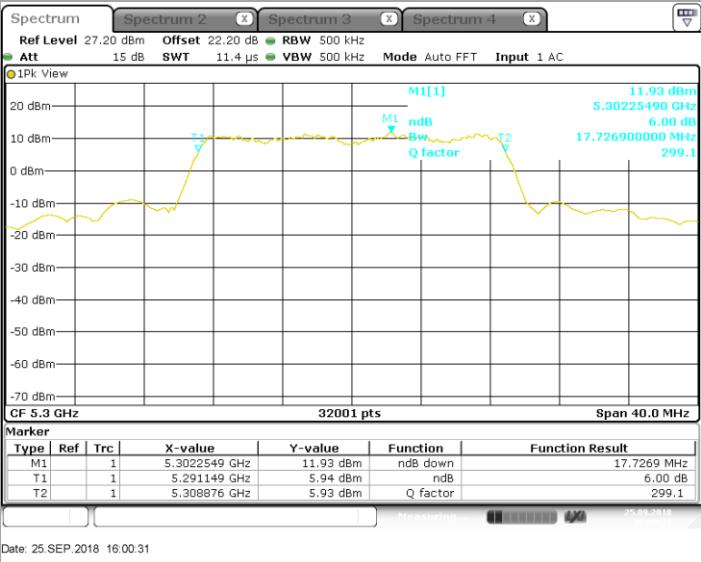
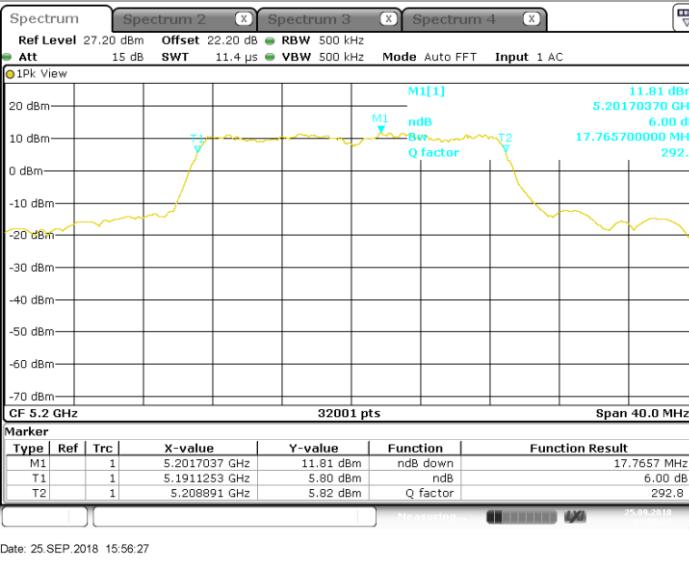
## 802.11a/802.11nHT20/ac VHT20

Tmax

Vnom

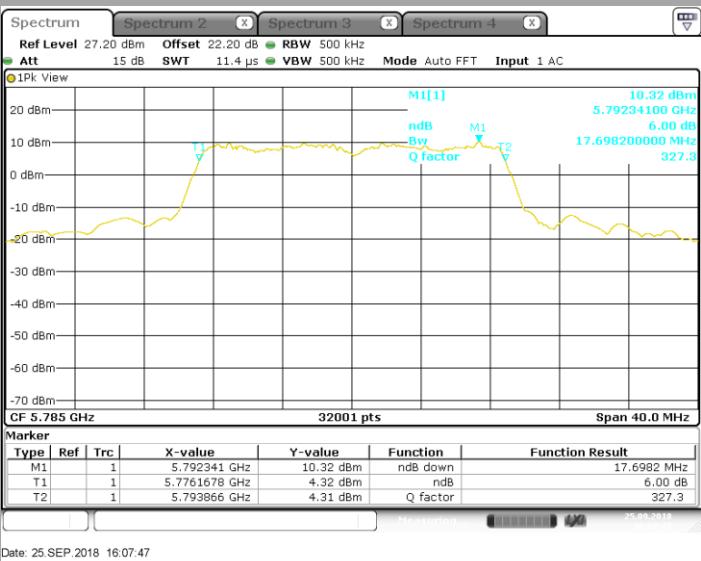
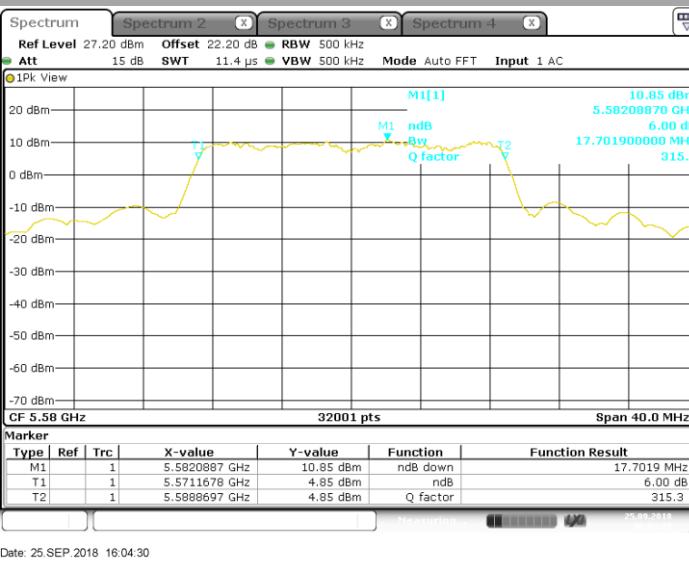
C2

C5



C8

C12



## TEST REPORT

N° 157205-726501-D

Version : 02

Page 39/202



L C I E

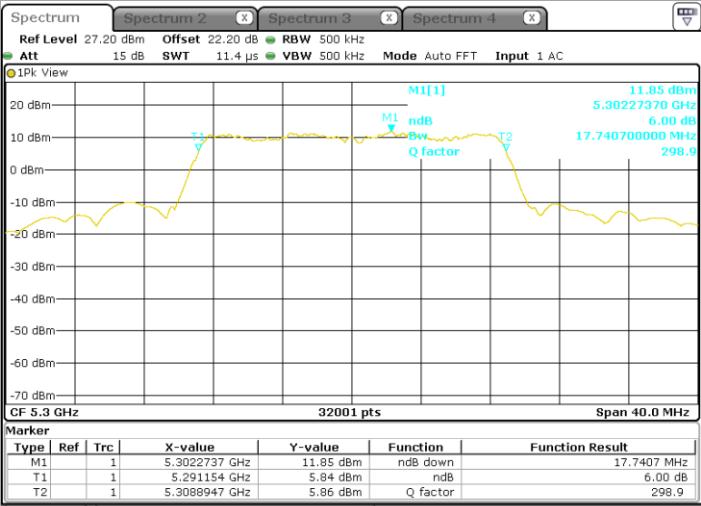
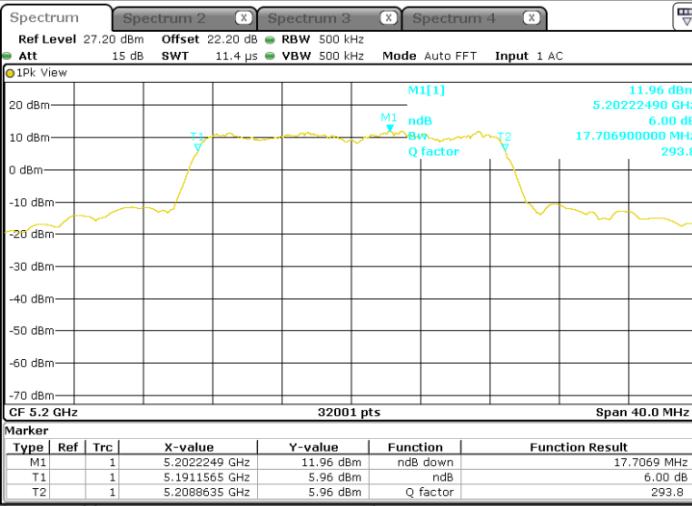
## 802.11a/802.11nHT20/ac VHT20

Tmax

Vmax

C2

C5

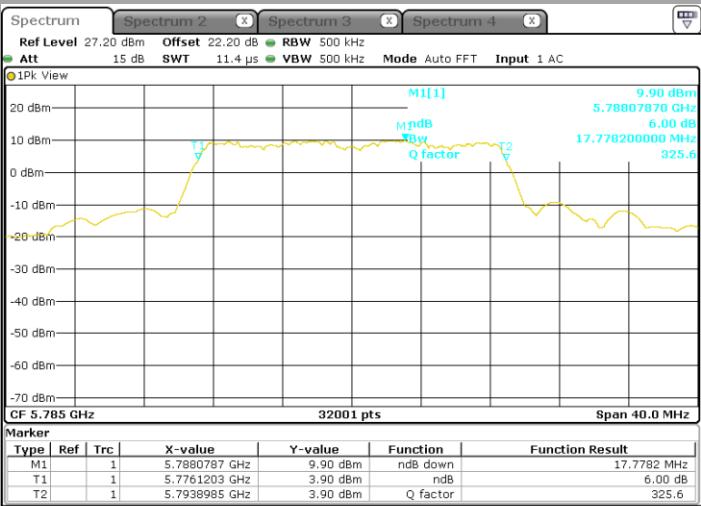
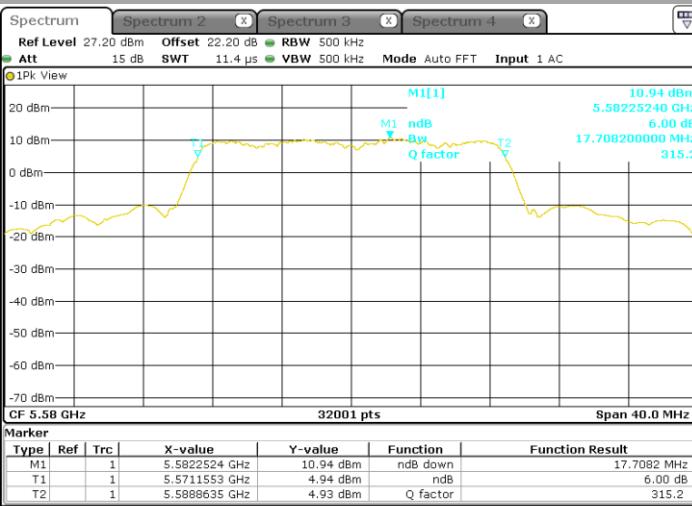


Date: 25 SEP 2018 15:57:55

Date: 25 SEP 2018 15:59:46

C8

C12



Date: 25 SEP 2018 16:03:42

Date: 25 SEP 2018 16:08:39

## TEST REPORT

Version : 02

N° 157205-726501-D

Page 40/202



L C I E

### 802.11a/802.11nHT20/ac VHT20

Temperature	Tmin				Tnom				Tmax			
Voltage	Vmin											
Channel	C2	C5	C8	C12	C2	C5	C8	C12	C2	C5	C8	C12
Frequency drift (ppm)	12,6	13,7	12,5	10,2	3,2	4,0	4,6	-1,3	3,1	2,5	3,9	3,7
Voltage	Vnom											
Channel	C2	C5	C8	C12	C2	C5	C8	C12	C2	C5	C8	C12
Frequency drift (ppm)	10,3	11,1	15,7	6,1	-0,1	-0,9	3,3	3,3	1,5	2,4	3,3	2,9
Voltage	Vmax											
Channel	C2	C5	C8	C12	C2	C5	C8	C12	C2	C5	C8	C12
Frequency drift (ppm)	12,8	13,4	9,1	11,7	2,5	4,1	0,5	0,1	1,8	4,6	1,6	1,6

### 4.7. CONCLUSION

Carrier frequencies measurement performed on the sample of the product **Sagemcom® Sound Box SBDV01**, SN: **253770742**, in configuration and description presented in this test report, show levels **compliant** to the 47 CFR PART 15.407 limits.



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## 5. 26dB EMISSION BANDWIDTH

### 5.1. TEST CONDITIONS

Test performed by : Armand MAHOUNGOU  
Date of test : September 21, 2018 to September 24, 2018  
Ambient temperature : 27°C & 29°C  
Relative humidity : 48% & 47%

### 5.2. TEST SETUP

- The Equipment Under Test is installed:

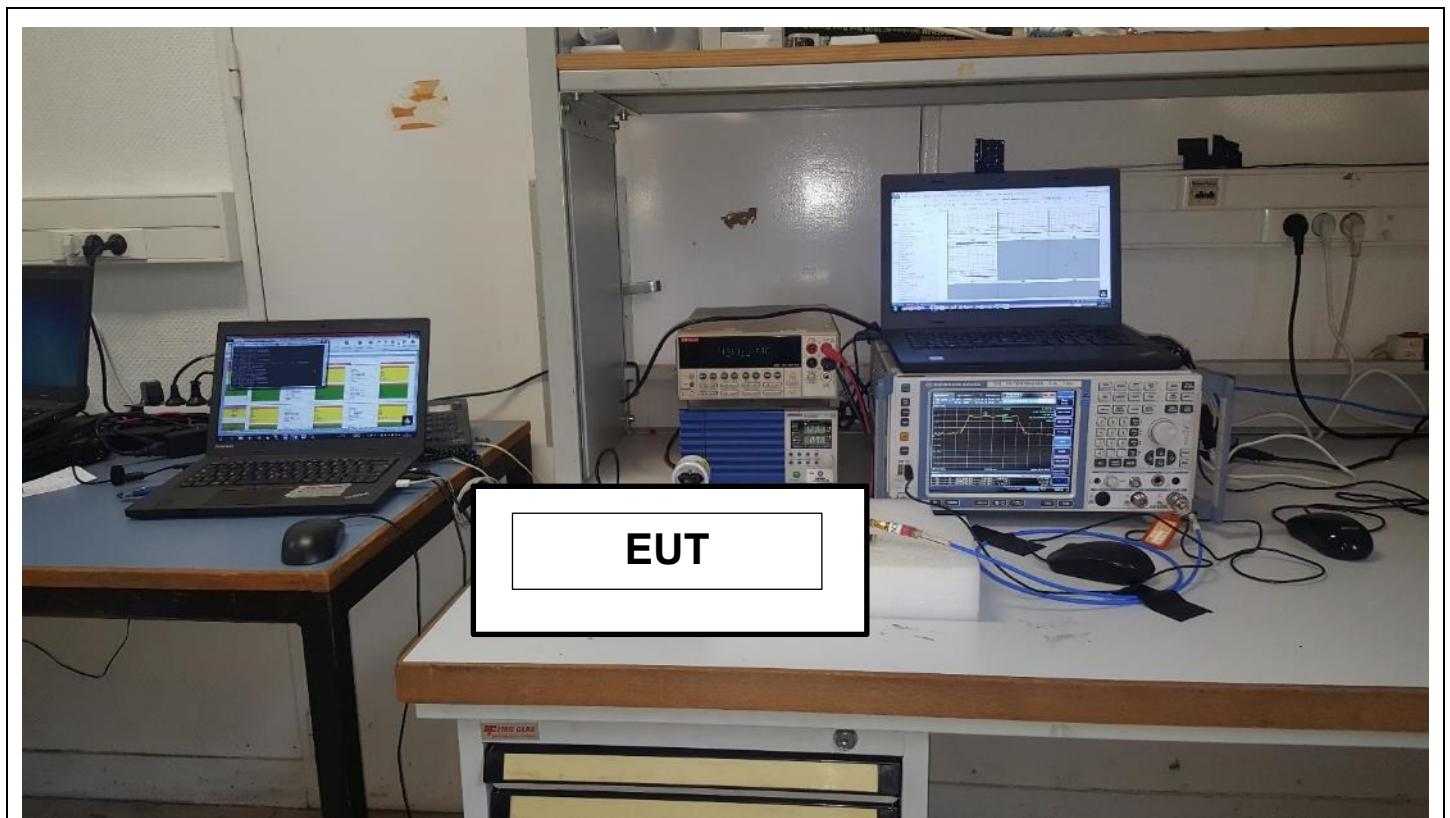
- On a table
- In an anechoic chamber

- Measurement is performed with a spectrum analyzer in:

- Conducted Method
- Radiated Method

- Test Procedure:

- KDB 789033 D02 General UNII Test Procedures New Rules v02r01 § C1



Photograph for 26dB emission bandwidth



### 5.3. LIMIT

None

### 5.4. TEST EQUIPMENT LIST

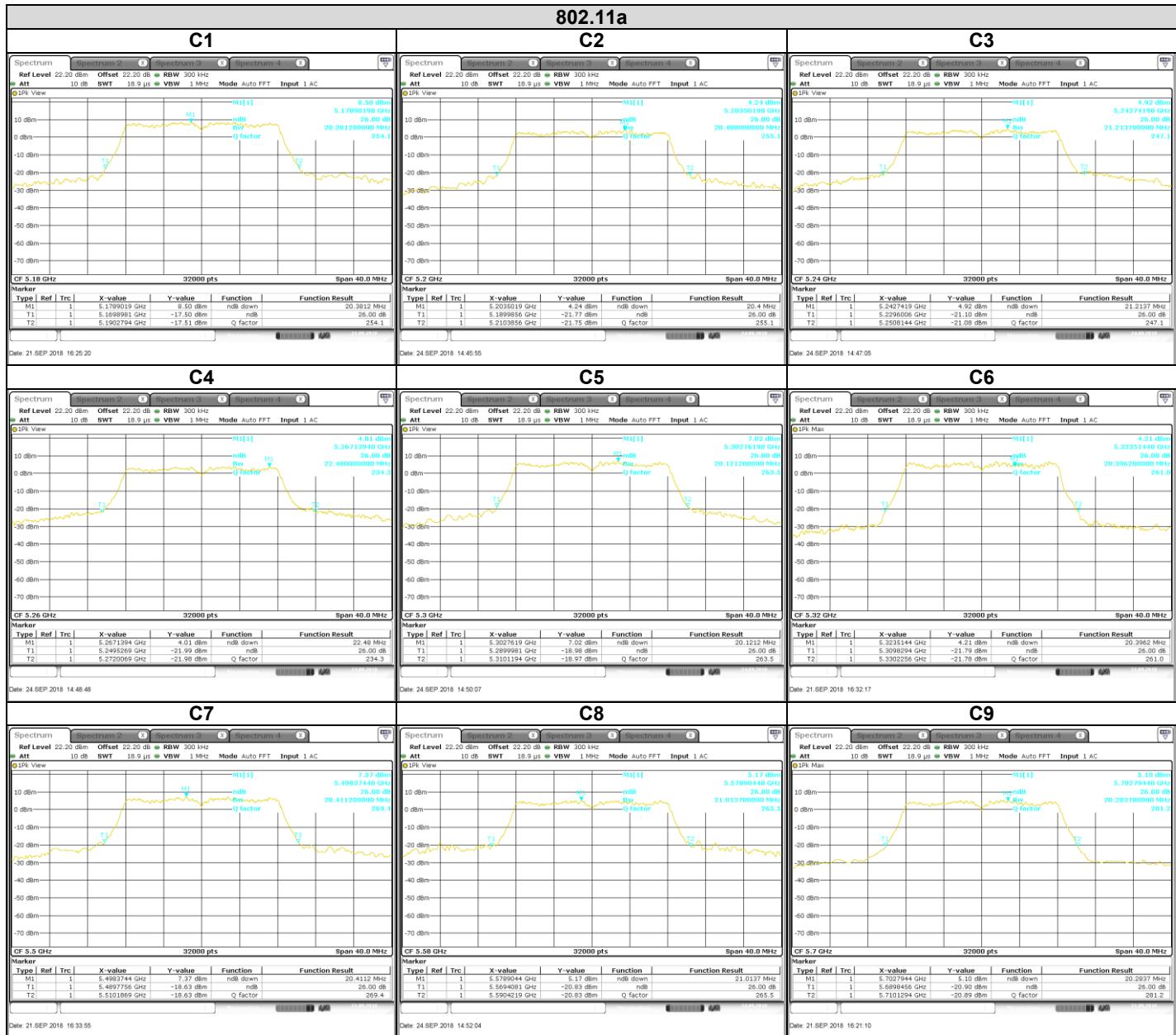
DESCRIPTION	MANUFACTURER	MODEL	N° LCIE	Cal_Date	Cal_Due
EMI receiver	ROHDE & SCHWARZ	ESR 7	A2642023	2016/11	2018/11
Multimeter	KEITHLEY	2000	A1242090	2017/05	2019/05
Power supply	KIKUSUI	PCR500M	A7040079	Cal with Multimeter	Cal with Multimeter
Cable	TELEDYNE	920-0202-048	A5329674	2017/10	2018/10

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



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## 5.5. RESULTS



## TEST REPORT

N° 157205-726501-D

Version : 02

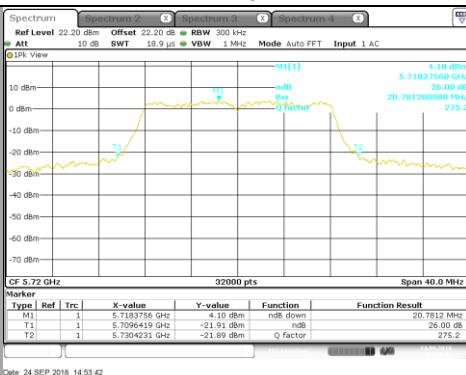
Page 44/202



L C I E

## 802.11a

C10



Date: 24-SEP-2018 14:53:42

Channel	26dB Emission Bandwidth (MHz)
C1	20.38
C2	20.40
C3	21.21
C4	22.48
C5	20.12
C6	20.39
C7	20.41
C8	21.01
C9	20.28
C10	20.78



L C I E

## 802.11n HT20/ac VHT20

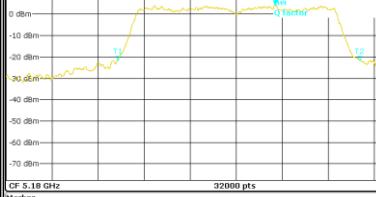
C1

Spectrum Spectrum 2 Spectrum 3 Spectrum 4

Ref Level 22.20 dBm Offset 22.20 dB RBW 300 kHz

Att 10 dB SWT 18.9 µs VBW 1 MHz Mode Auto FFT Input 1 AC

1pk View



Date: 24/SEP/2018 15:00:23

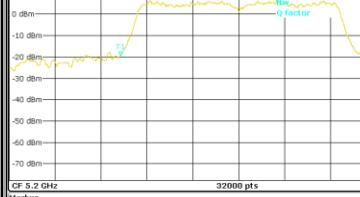
C2

Spectrum Spectrum 2 Spectrum 3 Spectrum 4

Ref Level 22.20 dBm Offset 22.20 dB RBW 300 kHz

Att 10 dB SWT 18.9 µs VBW 1 MHz Mode Auto FFT Input 1 AC

1pk View



Date: 24/SEP/2018 15:01:26

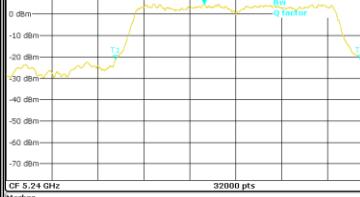
C3

Spectrum Spectrum 2 Spectrum 3 Spectrum 4

Ref Level 22.20 dBm Offset 22.20 dB RBW 300 kHz

Att 10 dB SWT 18.9 µs VBW 1 MHz Mode Auto FFT Input 1 AC

1pk View



Date: 24/SEP/2018 15:02:17

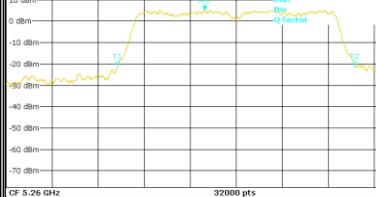
C4

Spectrum Spectrum 2 Spectrum 3 Spectrum 4

Ref Level 22.20 dBm Offset 22.20 dB RBW 300 kHz

Att 10 dB SWT 18.9 µs VBW 1 MHz Mode Auto FFT Input 1 AC

1pk View



Date: 24/SEP/2018 15:03:21

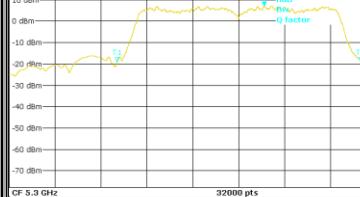
C5

Spectrum Spectrum 2 Spectrum 3 Spectrum 4

Ref Level 22.20 dBm Offset 22.20 dB RBW 300 kHz

Att 10 dB SWT 18.9 µs VBW 1 MHz Mode Auto FFT Input 1 AC

1pk View



Date: 24/SEP/2018 15:04:06

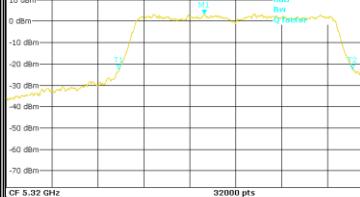
C6

Spectrum Spectrum 2 Spectrum 3 Spectrum 4

Ref Level 22.20 dBm Offset 22.20 dB RBW 300 kHz

Att 10 dB SWT 18.9 µs VBW 1 MHz Mode Auto FFT Input 1 AC

1pk View



Date: 24/SEP/2018 15:04:51

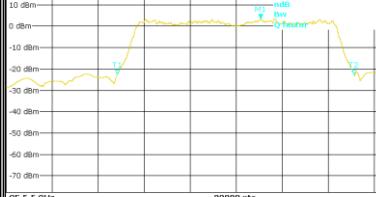
C7

Spectrum Spectrum 2 Spectrum 3 Spectrum 4

Ref Level 22.20 dBm Offset 22.20 dB RBW 300 kHz

Att 10 dB SWT 18.9 µs VBW 1 MHz Mode Auto FFT Input 1 AC

1pk View



Date: 24/SEP/2018 15:05:55

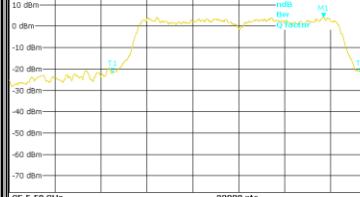
C8

Spectrum Spectrum 2 Spectrum 3 Spectrum 4

Ref Level 22.20 dBm Offset 22.20 dB RBW 300 kHz

Att 10 dB SWT 18.9 µs VBW 1 MHz Mode Auto FFT Input 1 AC

1pk View



Date: 24/SEP/2018 15:06:45

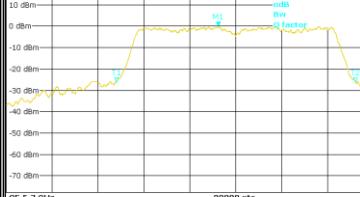
C9

Spectrum Spectrum 2 Spectrum 3 Spectrum 4

Ref Level 22.20 dBm Offset 22.20 dB RBW 300 kHz

Att 10 dB SWT 18.9 µs VBW 1 MHz Mode Auto FFT Input 1 AC

1pk View



Date: 24/SEP/2018 15:07:36

## TEST REPORT

N° 157205-726501-D

Version : 02

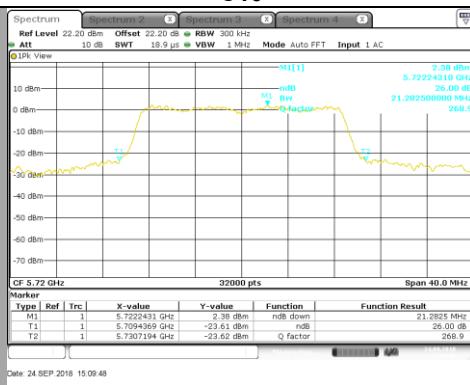
Page 46/202



L C I E

## 802.11n HT20/ac VHT20

C10



Channel	26dB Emission Bandwidth (MHz)
C1	21.05
C2	21.38
C3	21.30
C4	20.63
C5	21.20
C6	20.35
C7	20.57
C8	21.64
C9	20.79
C10	21.28

## TEST REPORT

N° 157205-726501-D

Version : 02

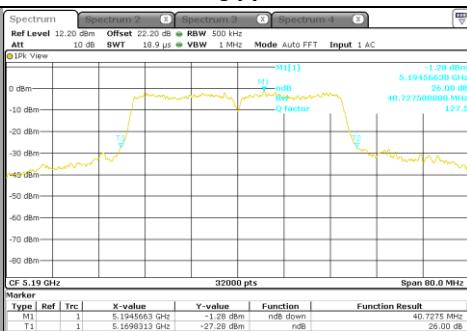
Page 47/202



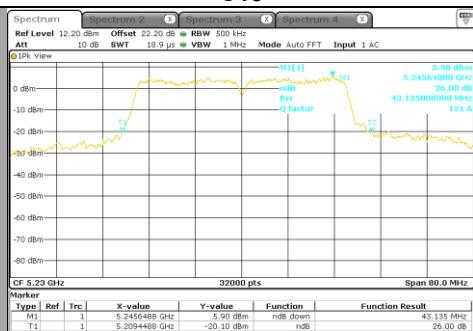
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## 802.11n HT40/ac VHT40

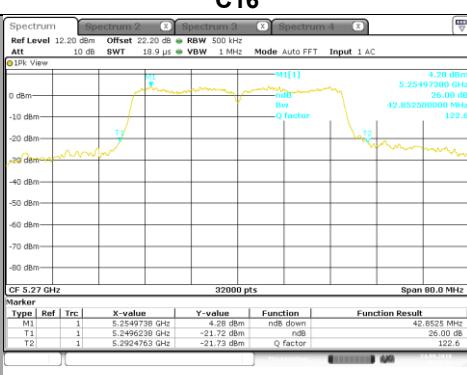
C14



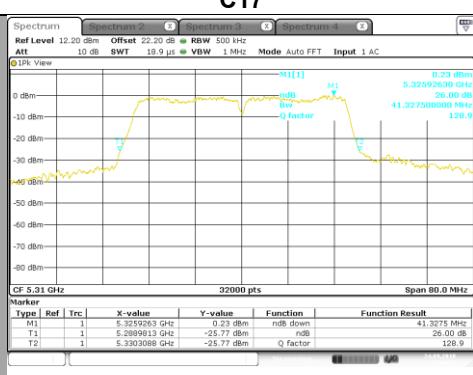
C15



C16



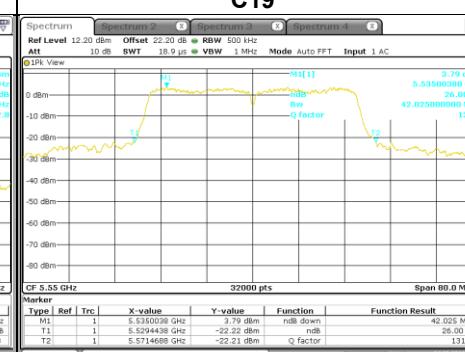
C17



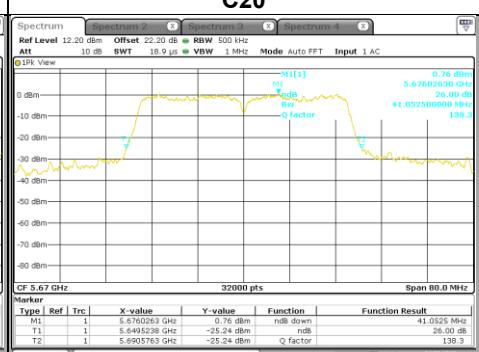
C18



C19



C20



## TEST REPORT

N° 157205-726501-D

Version : 02

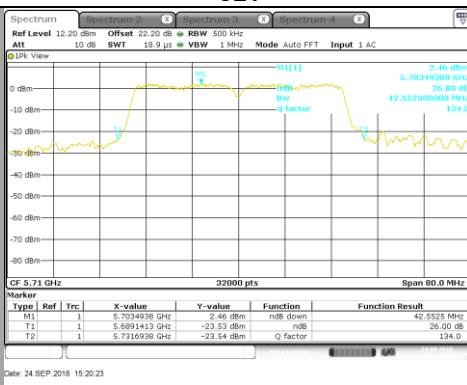
Page 48/202



L C I E

## 802.11n HT40/ac VHT40

C21



Channel	26dB Emission Bandwidth (MHz)
C14	40.73
C15	43.13
C16	42.85
C17	41.33
C18	41.58
C19	42.02
C20	41.05
C21	42.55

## TEST REPORT

N° 157205-726501-D

Version : 02

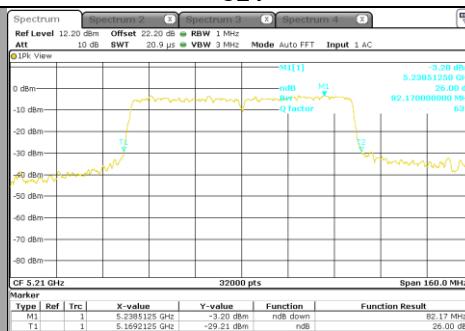
Page 49/202



L C I E

## 802.11ac VHT80

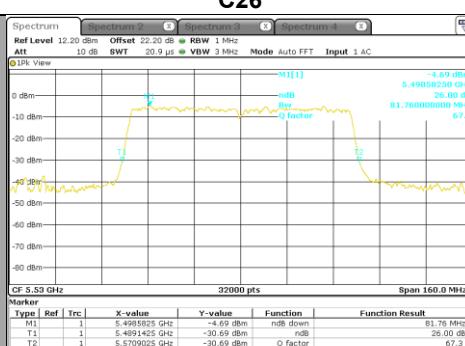
C24



C25



C26



C27



## TEST REPORT

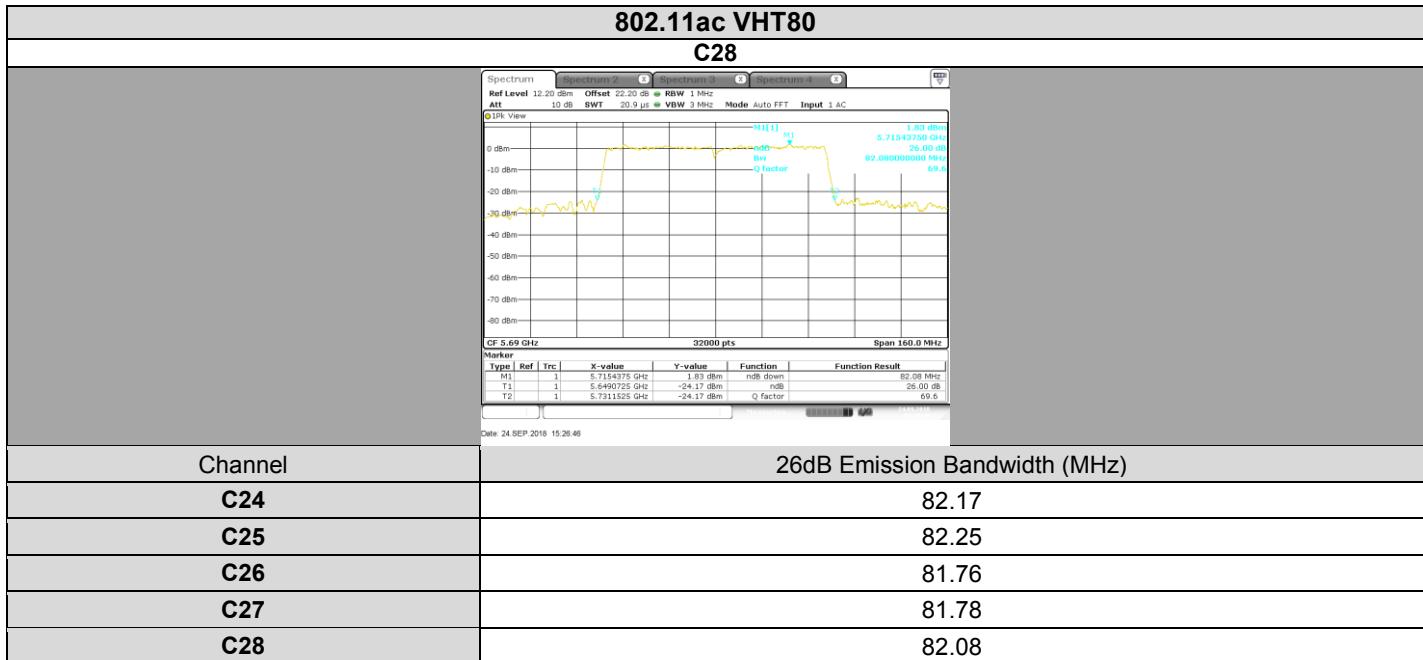
N° 157205-726501-D

Version : 02

Page 50/202



L C I E



## 5.6. CONCLUSION

26dB Emission Bandwidth measurement performed on the sample of the product **Sagemcom® Sound Box SBDV01**, SN: **253770742**, 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 : Armand MAHOUNGOU  
Date of test : September 24, 2018  
Ambient temperature : 26°C  
Relative humidity : 45%

### 6.2. TEST SETUP

- The Equipment Under Test is installed:

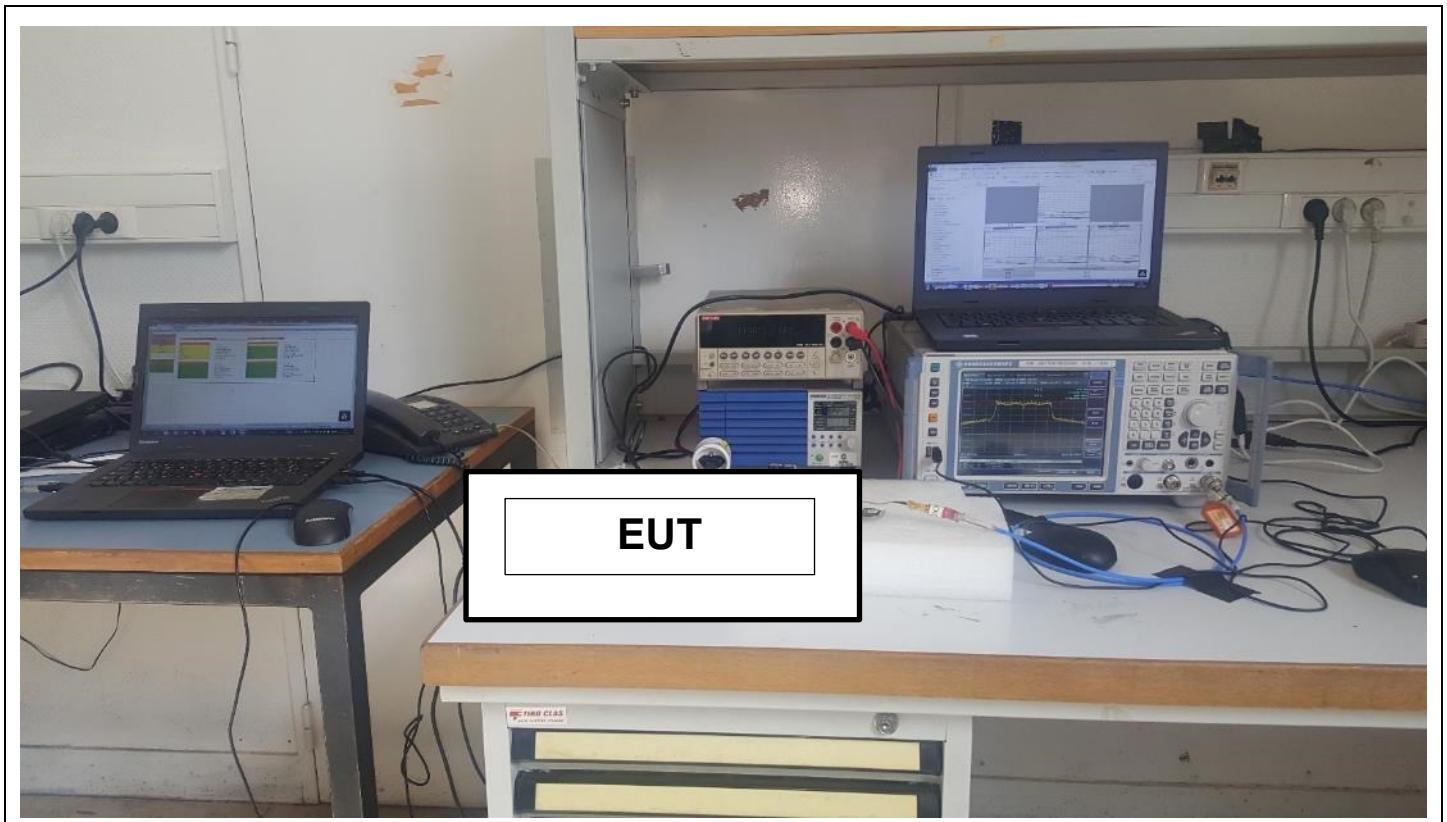
- On a table
- In an anechoic chamber

- 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

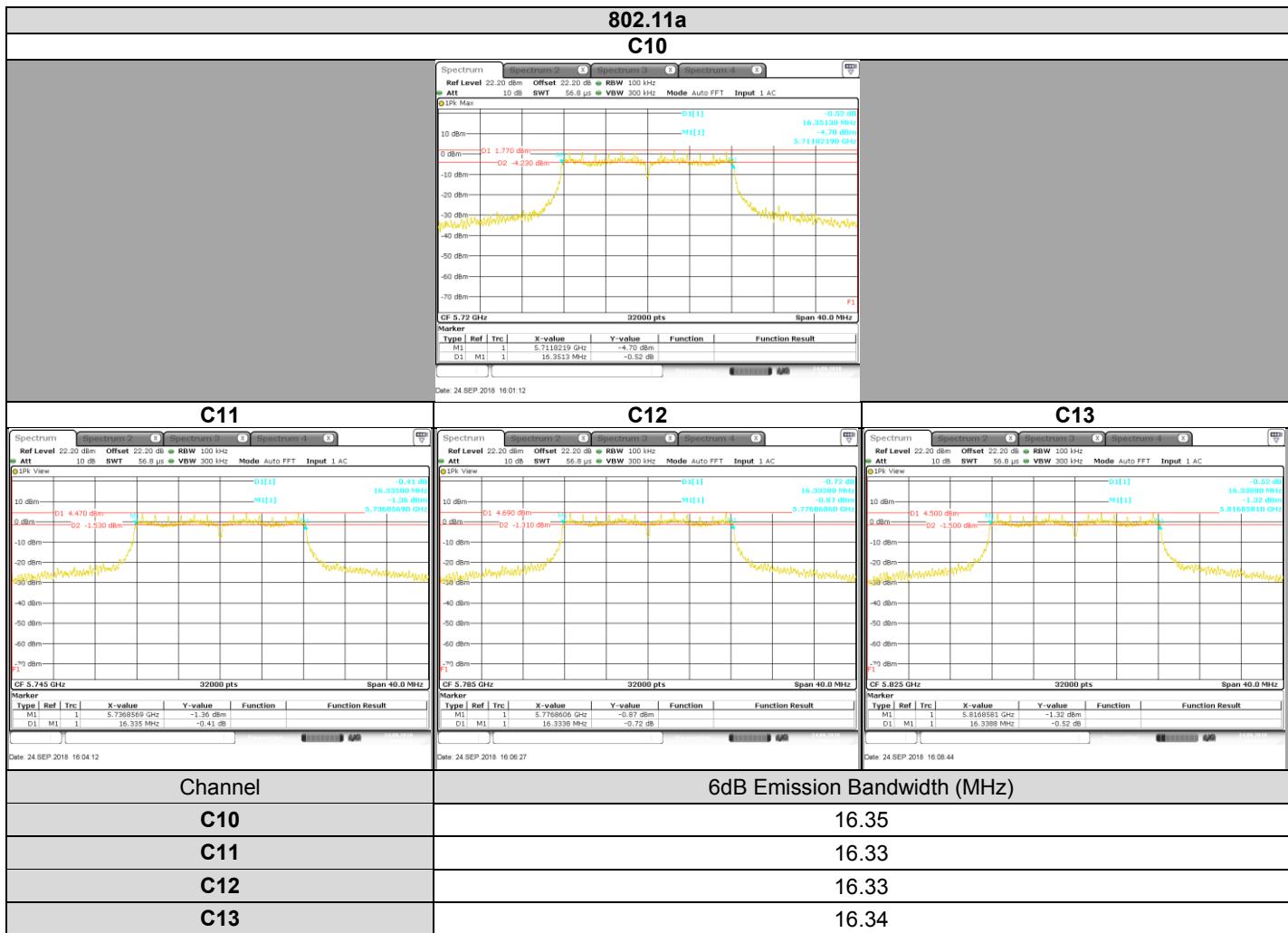
DESCRIPTION	MANUFACTURER	MODEL	N° LCIE	Cal_Date	Cal_Due
EMI receiver	ROHDE & SCHWARZ	ESR 7	A2642023	2016/11	2018/11
Multimeter	KEITHLEY	2000	A1242090	2017/05	2019/05
Power supply	KIKUSUI	PCR500M	A7040079	Cal with Multimeter	Cal with Multimeter
Cable	TELEDYNE	920-0202-048	A5329674	2017/10	2018/10

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



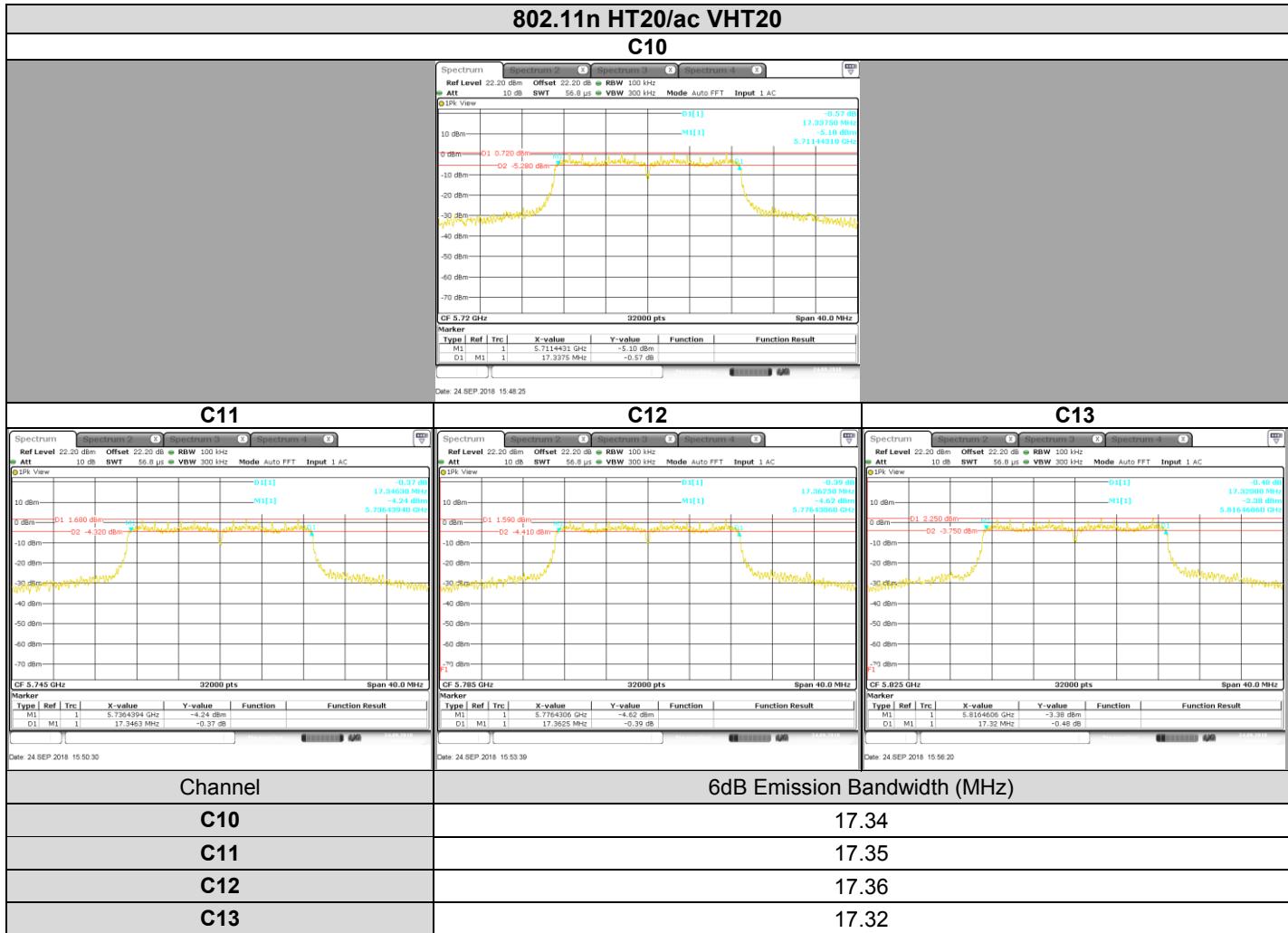
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## 6.5. RESULTS





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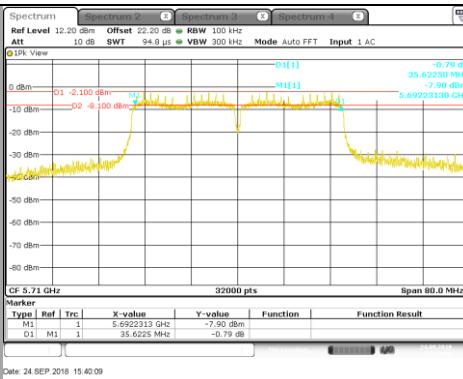




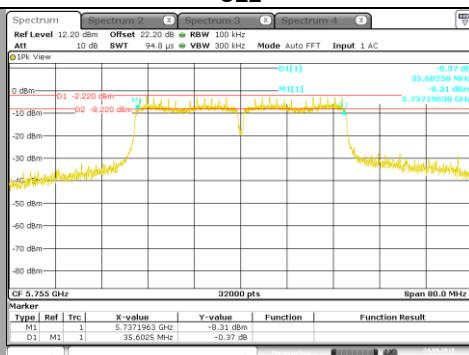
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### 802.11n HT40/ac VHT40

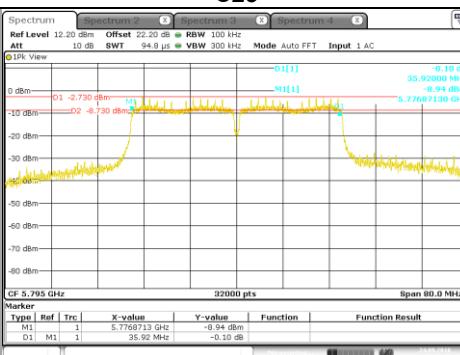
C21



C22



C23



Channel

6dB Emission Bandwidth (MHz)

C21

35.62

C22

35.60

C23

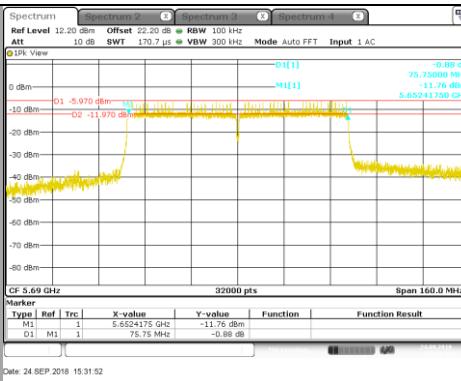
35.92



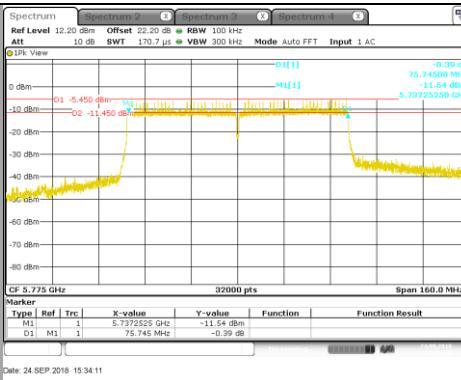
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## 802.11ac VHT80

C28



C29



Channel

6dB Emission Bandwidth (MHz)

C28

75.75

C29

75.74

## 6.6. CONCLUSION

6dB Emission Bandwidth measurement performed on the sample of the product **Sagemcom® Sound Box SBDV01**, SN: **253770742**, in configuration and description presented in this test report, show levels **compliant** to the **47 CFR PART 15.407** limits.

## 7. DUTY CYCLE

### 7.1. TEST CONDITIONS

Test performed by : Armand MAHOUNGOU  
Date of test : September 21, 2018  
Ambient temperature : 27 °C  
Relative humidity : 48 %

### 7.2. TEST SETUP

- The Equipment Under Test is installed:

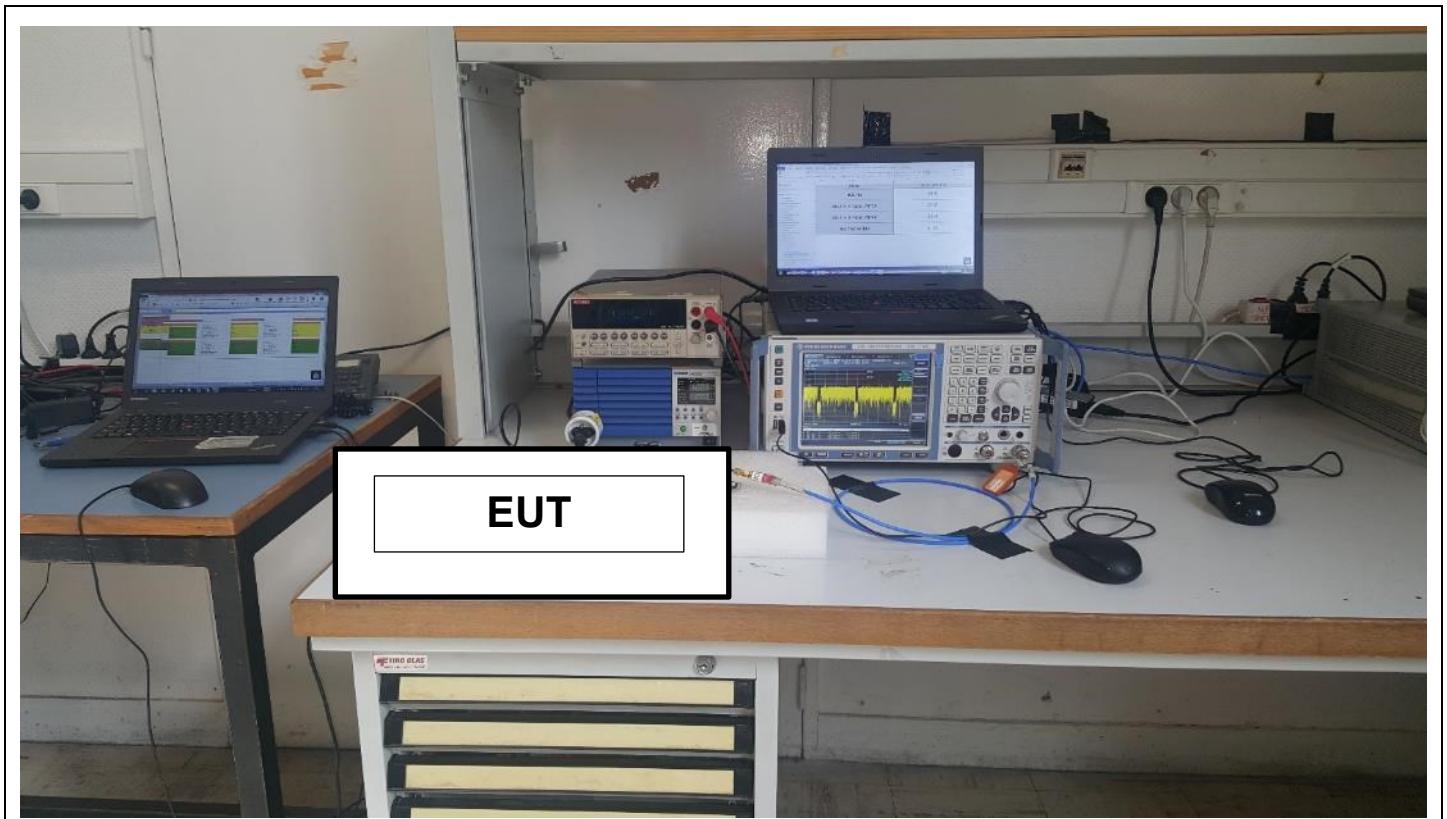
- On a table
- In an anechoic chamber

- 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	2016/11	2018/11
Multimeter	KEITHLEY	2000	A1242090	2017/05	2019/05
Power supply	KIKUSUI	PCR500M	A7040079	Cal with Multimeter	Cal with Multimeter
Cable	TELEDYNE	920-0202-048	A5329674	2017/10	2018/10

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



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## 7.5. RESULTS

802.11a C1		802.11n HT20/ac VHT20 Channel	
802.11n HT40/ac VHT40 C14		802.11ac VHT80 Channel	
Mode	Duty Cycle (%)	Duty Cycle Correction (dB)	
802.11a	98.83	0.102	
802.11n HT20/ac VHT20	97.67	0.205	
802.11n HT40/ac VHT40	95.44	0.405	
802.11ac VHT80	91.89	0.735	

## 7.6. CONCLUSION

Duty Cycle measurement performed on the sample of the product **Sagemcom® Sound Box SBDV01**, SN: **253770742**, 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 : Armand MAHOUNGOU  
Date of test : September 25, 2018  
Ambient temperature : 26 °C  
Relative humidity : 44 %

### 8.2. TEST SETUP

- The Equipment Under Test is installed:

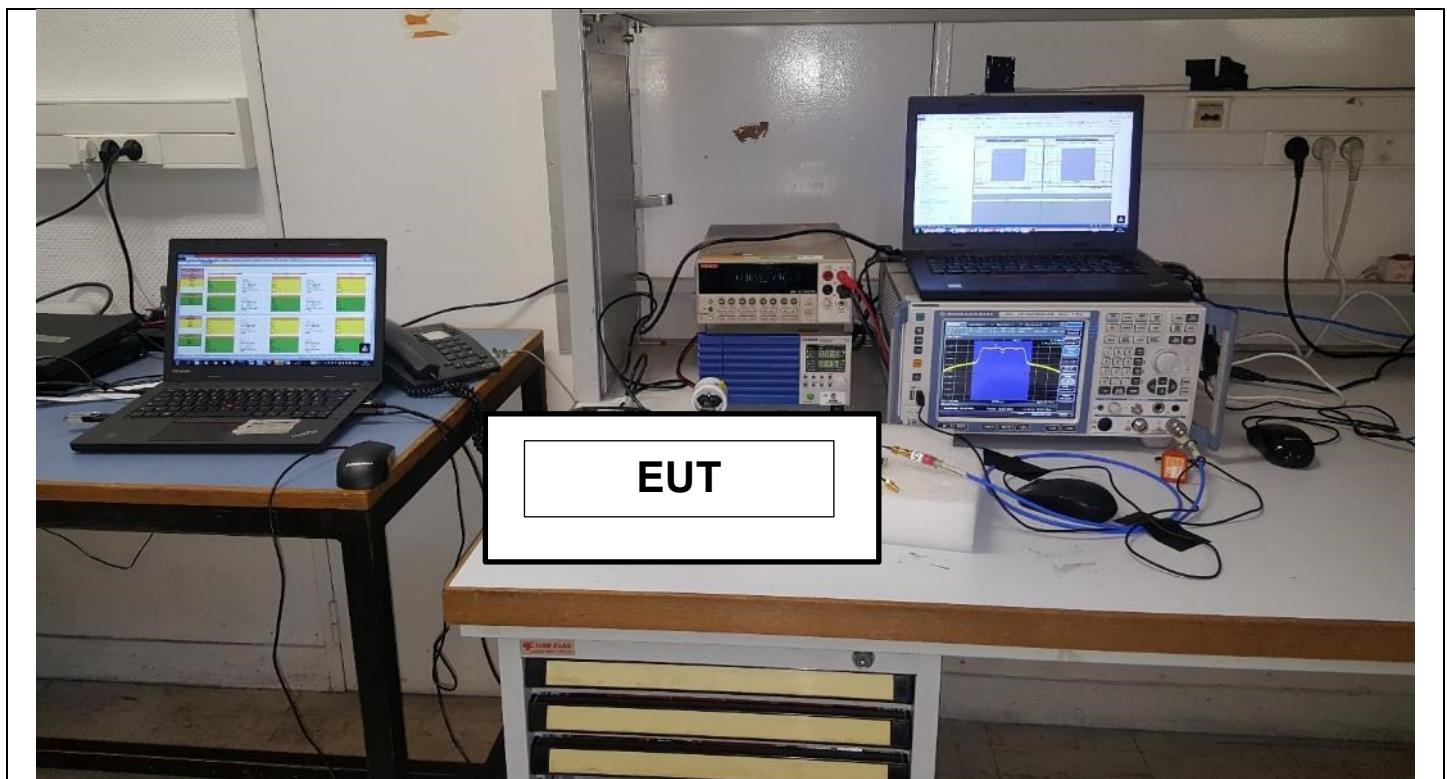
- On a table
- In an anechoic chamber

- 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



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

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

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



#### 8.4. TEST EQUIPMENT LIST

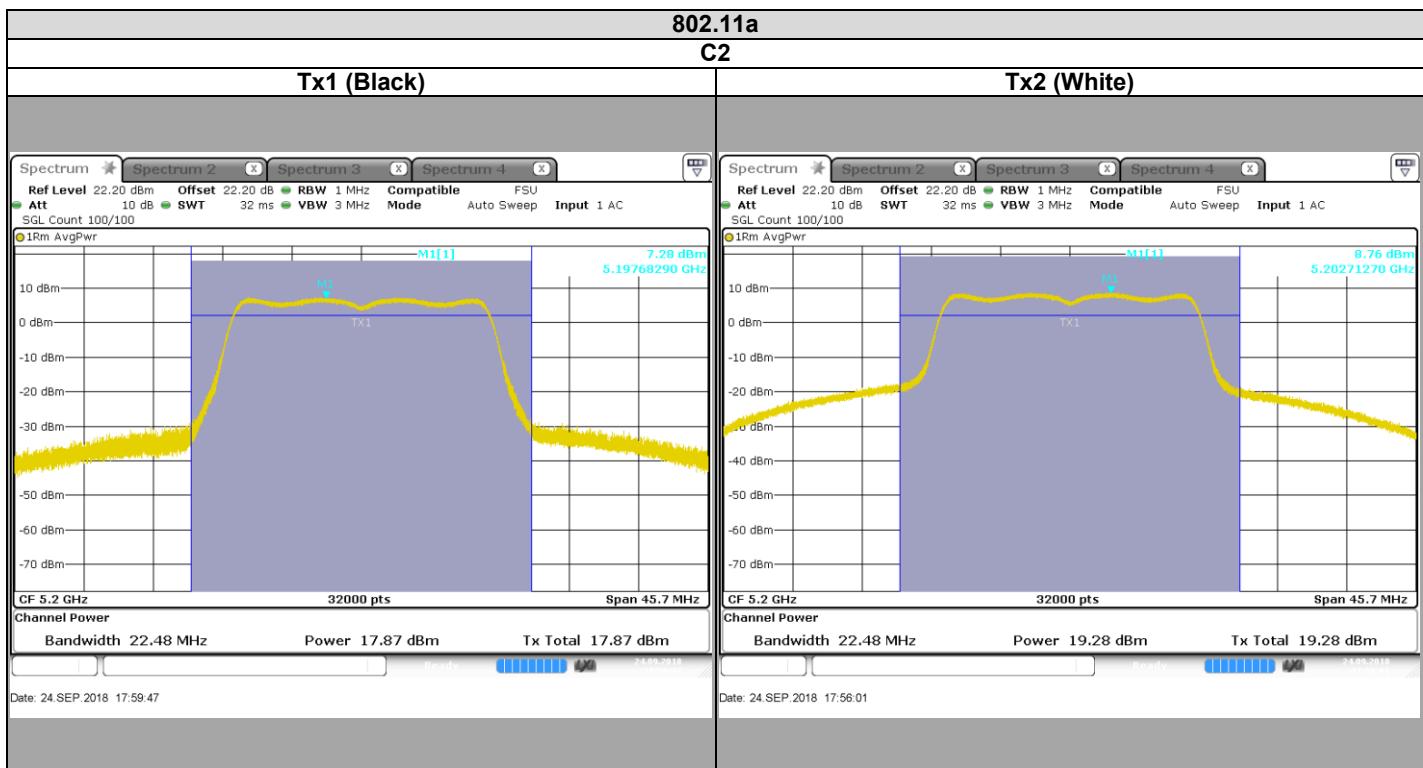
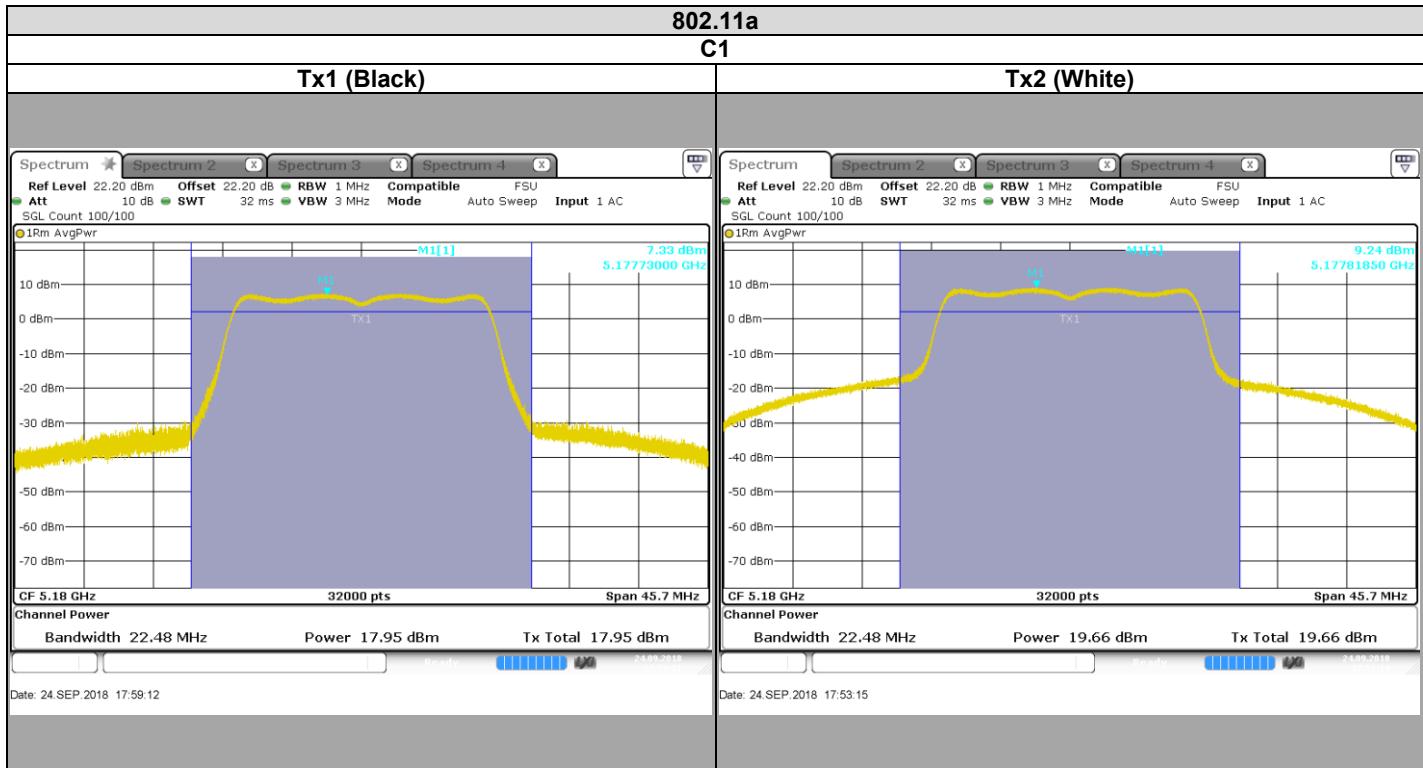
DESCRIPTION	MANUFACTURER	MODEL	N° LCIE	Cal_Date	Cal_Due
EMI receiver	ROHDE & SCHWARZ	ESR 7	A2642023	2016/11	2018/11
Multimeter	KEITHLEY	2000	A1242090	2017/05	2019/05
Power supply	KIKUSUI	PCR500M	A7040079	Cal with Multimeter	Cal with Multimeter
Cable	TELEDYNE	920-0202-048	A5329674	2017/10	2018/10

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



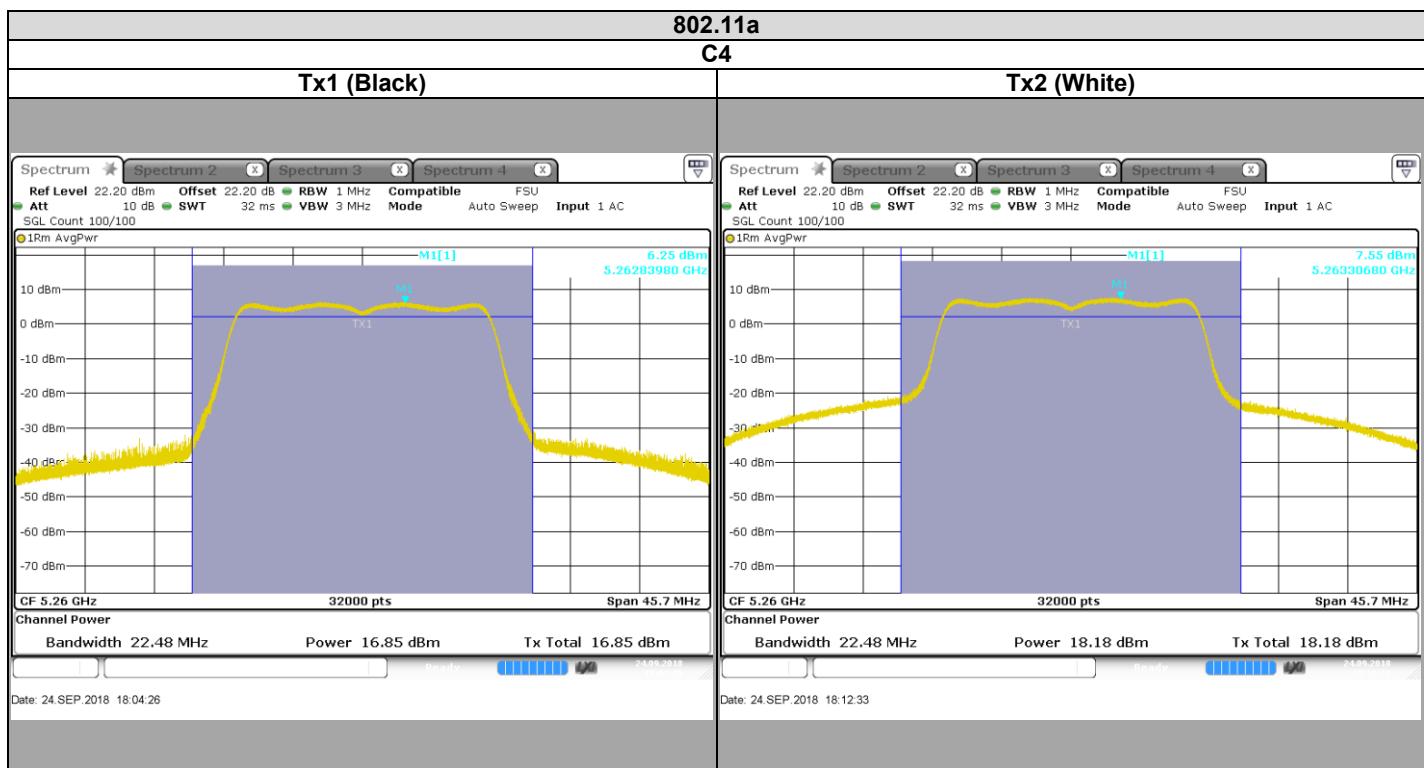
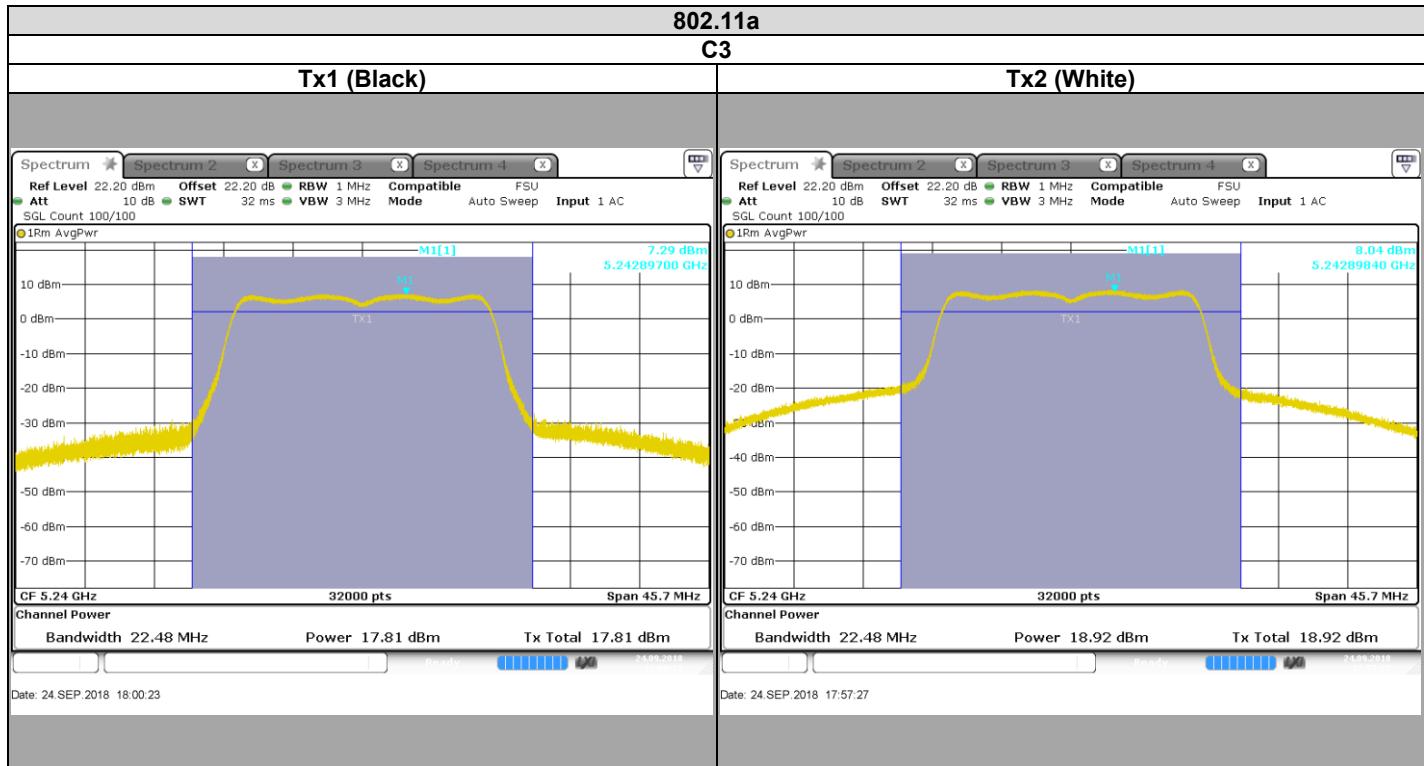
L C I E

## 8.1. RESULTS





L C I E



## TEST REPORT

Version : 02

N° 157205-726501-D

Page 65/202



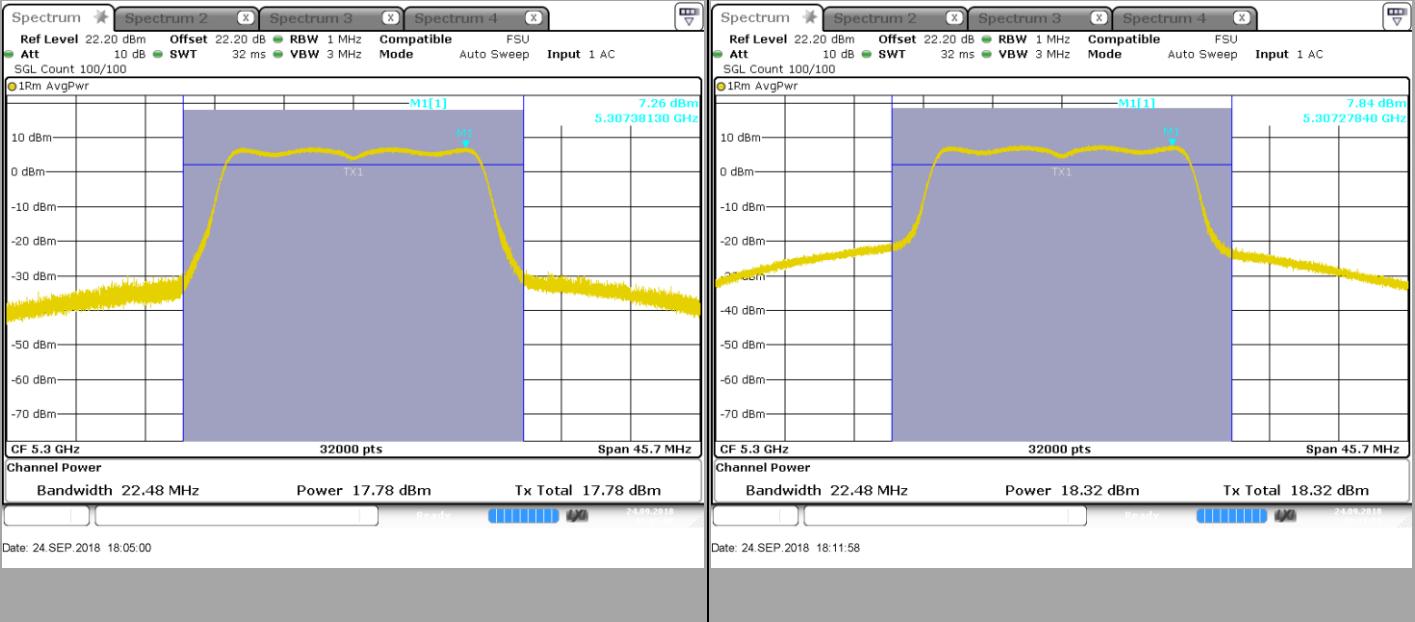
L C I E

## 802.11a

C5

## Tx1 (Black)

## Tx2 (White)

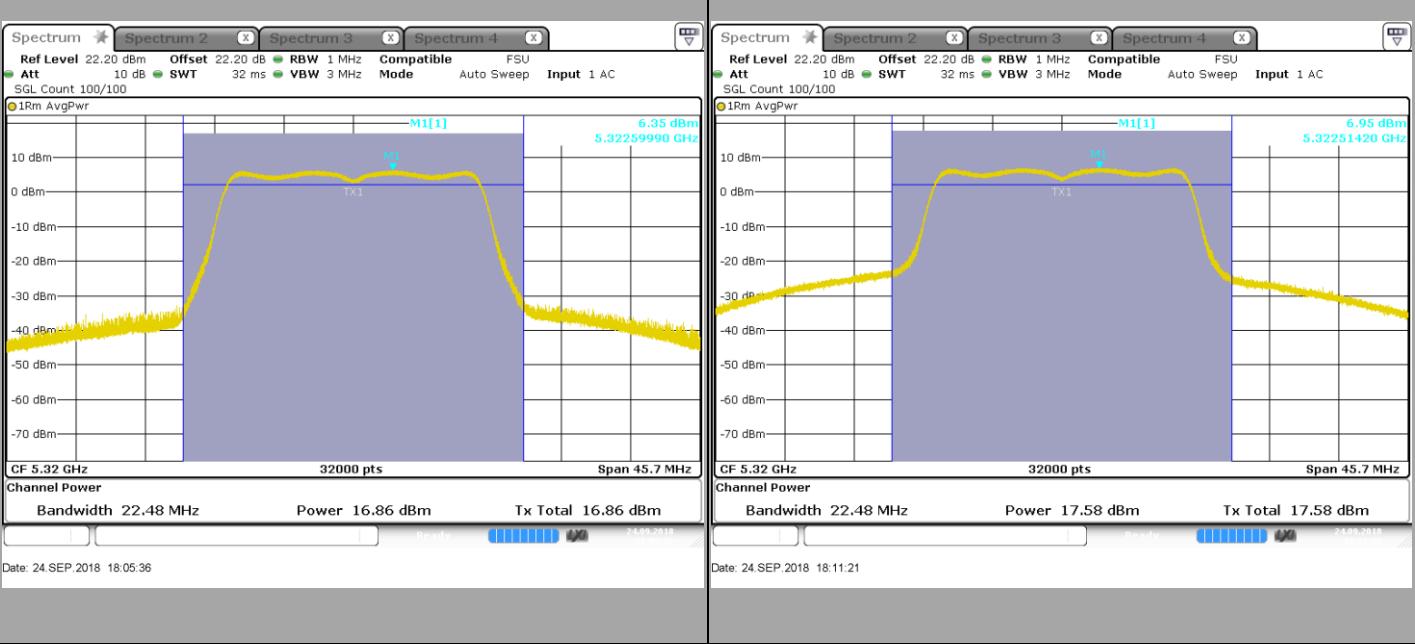


## 802.11a

C6

## Tx1 (Black)

## Tx2 (White)



## TEST REPORT

N° 157205-726501-D

Version : 02

Page 66/202



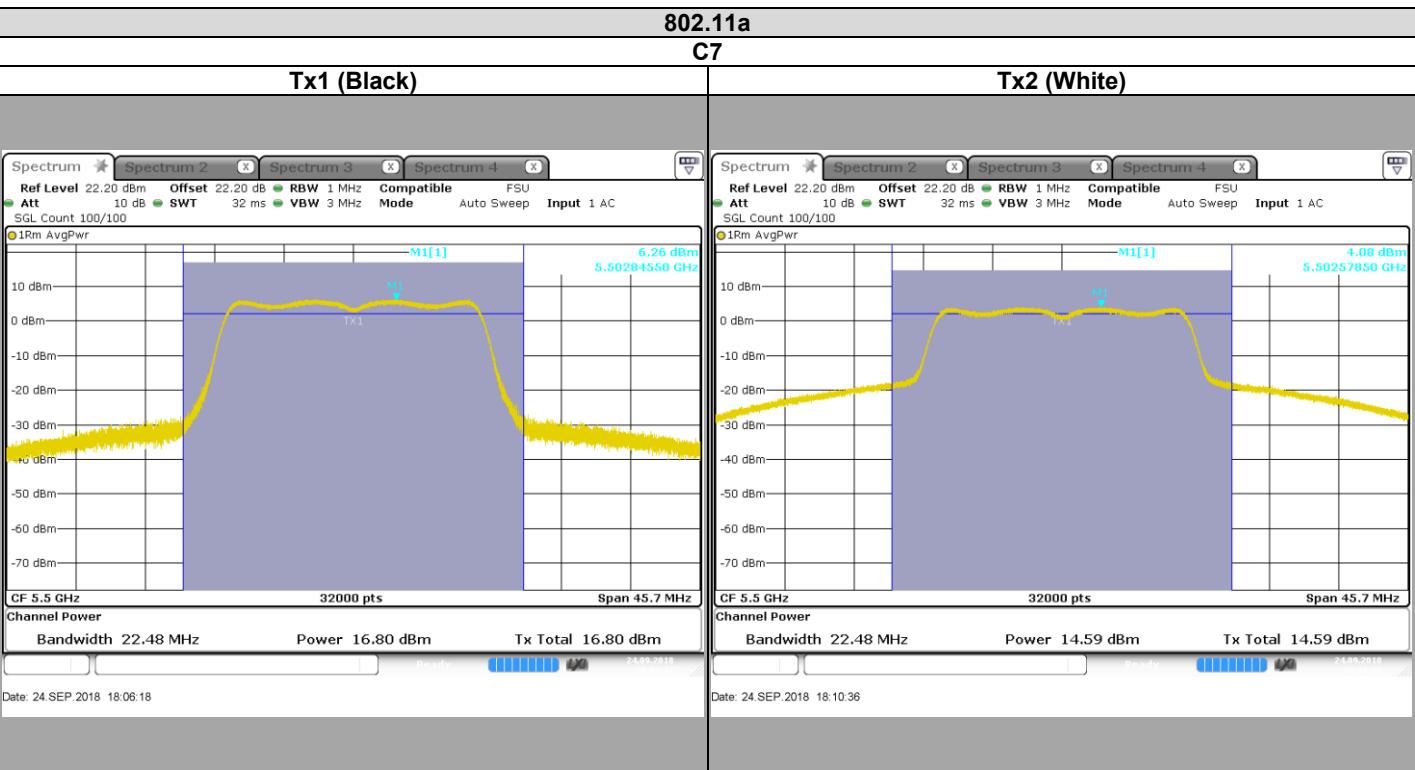
L C I E

## 802.11a

C7

## Tx1 (Black)

## Tx2 (White)

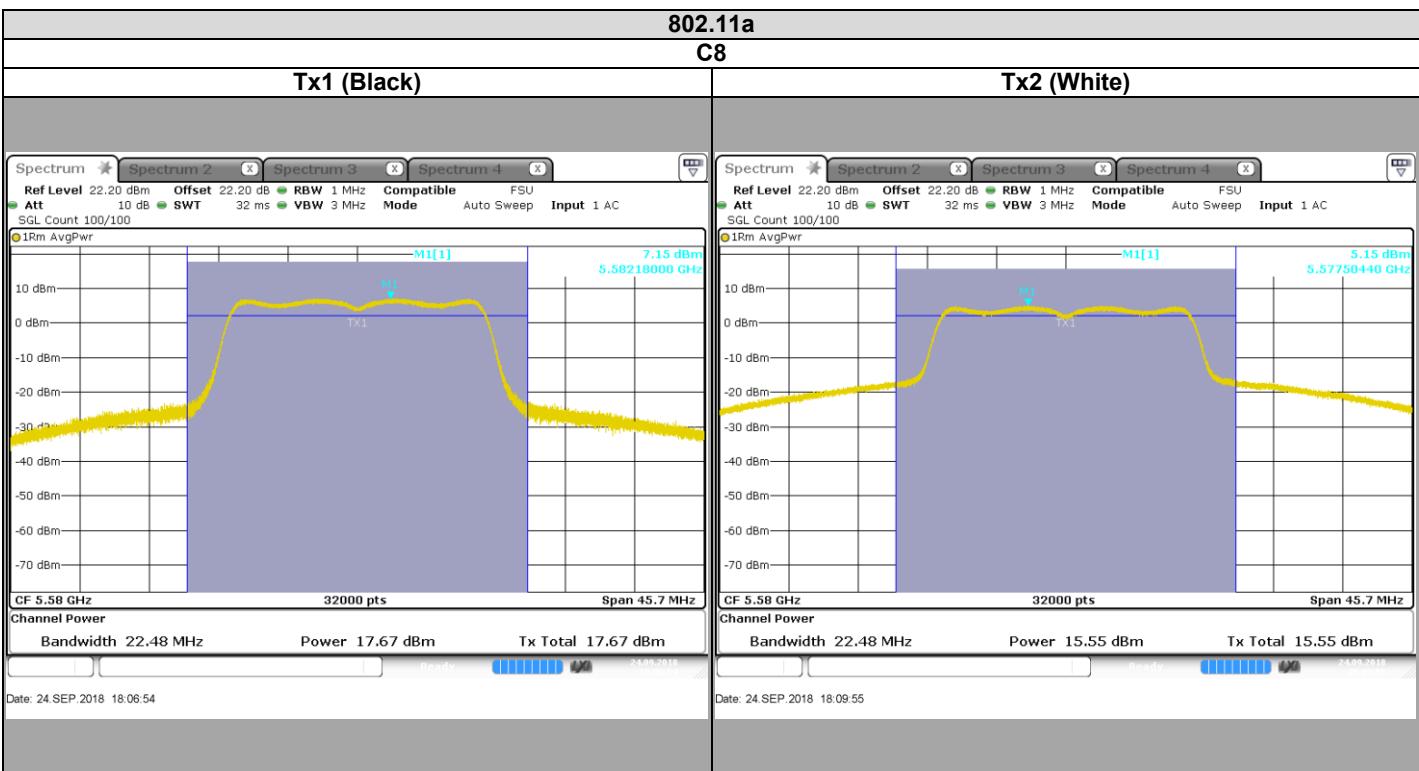


## 802.11a

C8

## Tx1 (Black)

## Tx2 (White)



## TEST REPORT

Version : 02

N° 157205-726501-D

Page 67/202



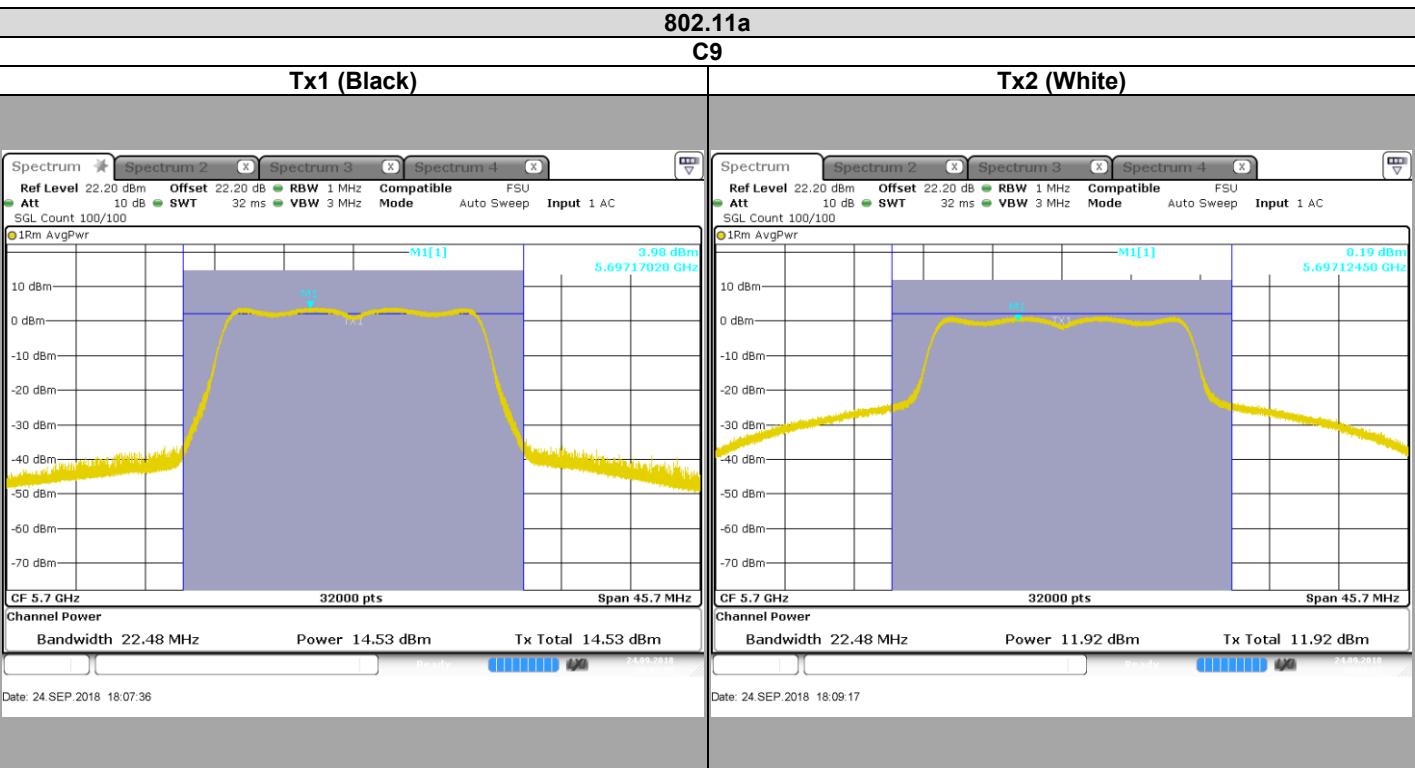
L C I E

## 802.11a

C9

## Tx1 (Black)

## Tx2 (White)

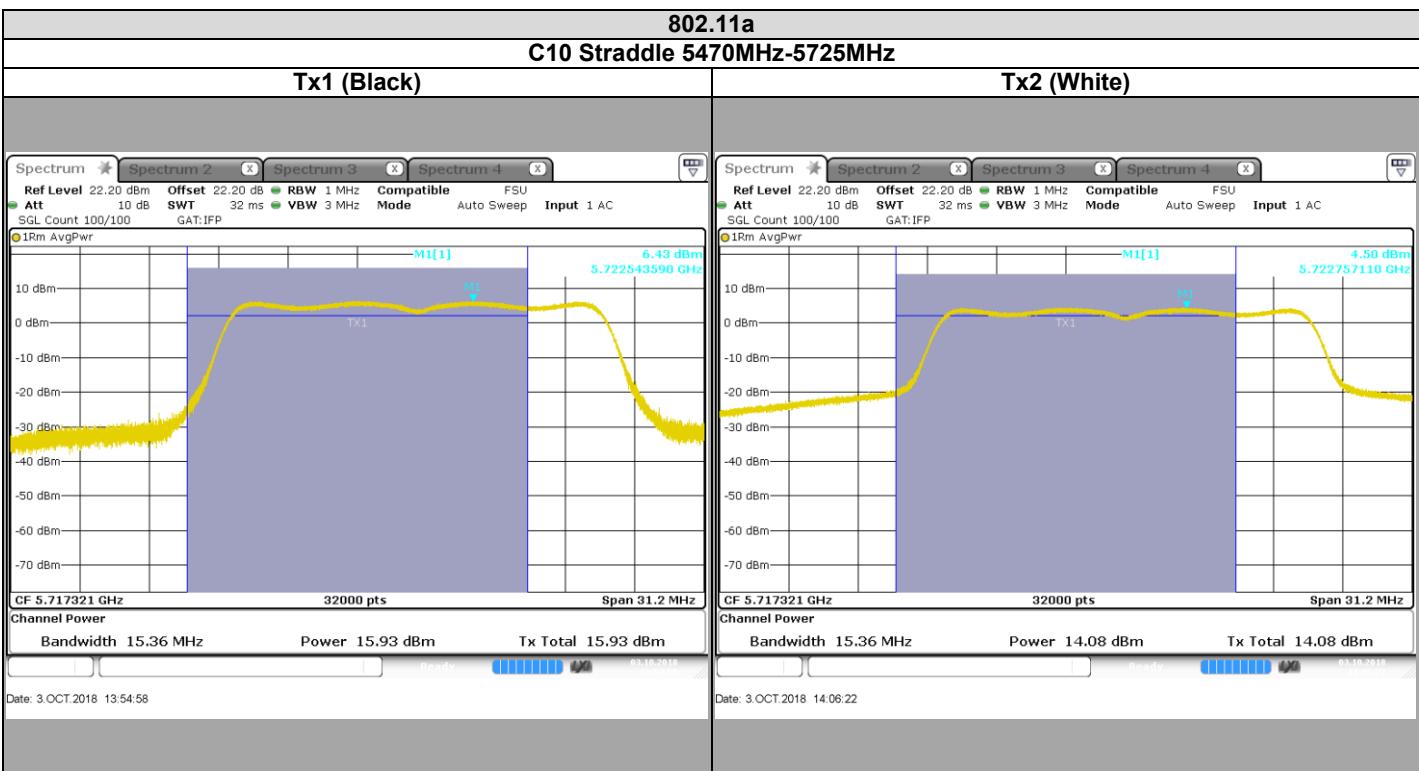


## 802.11a

## C10 Straddle 5470MHz-5725MHz

## Tx1 (Black)

## Tx2 (White)



## TEST REPORT

N° 157205-726501-D

Version : 02

Page 68/202



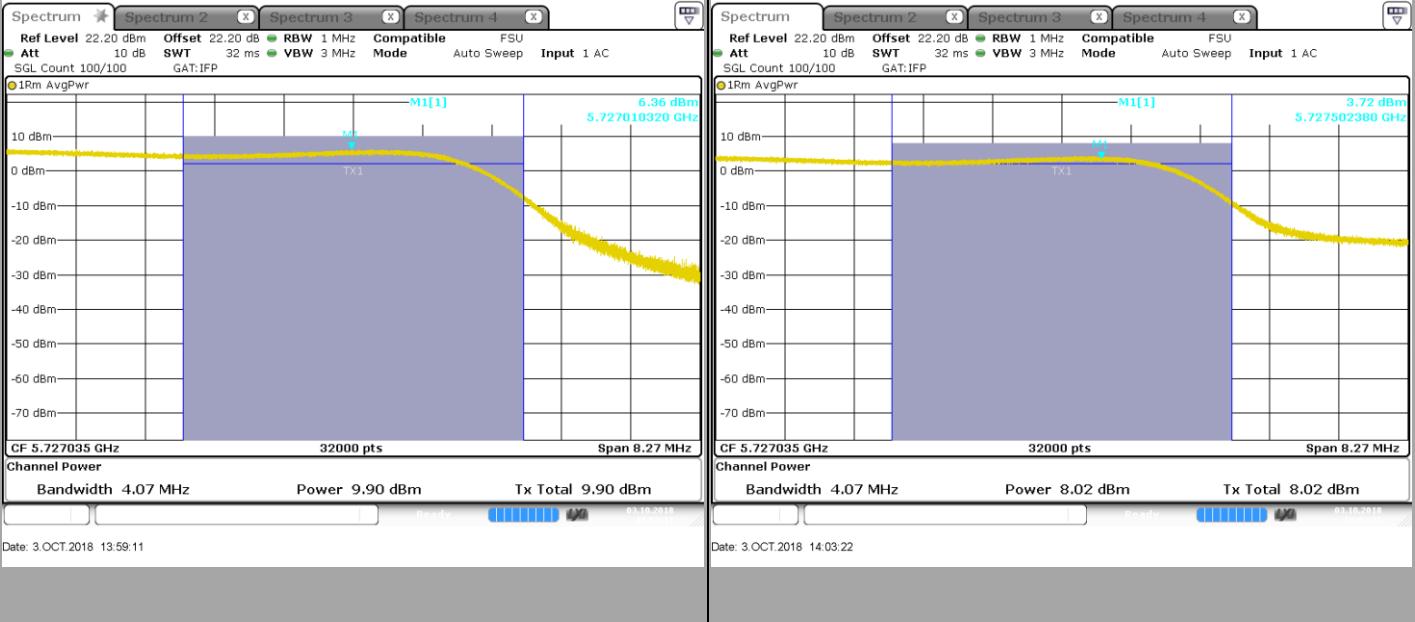
L C I E

## 802.11a

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

## Tx1 (Black)

## Tx2 (White)

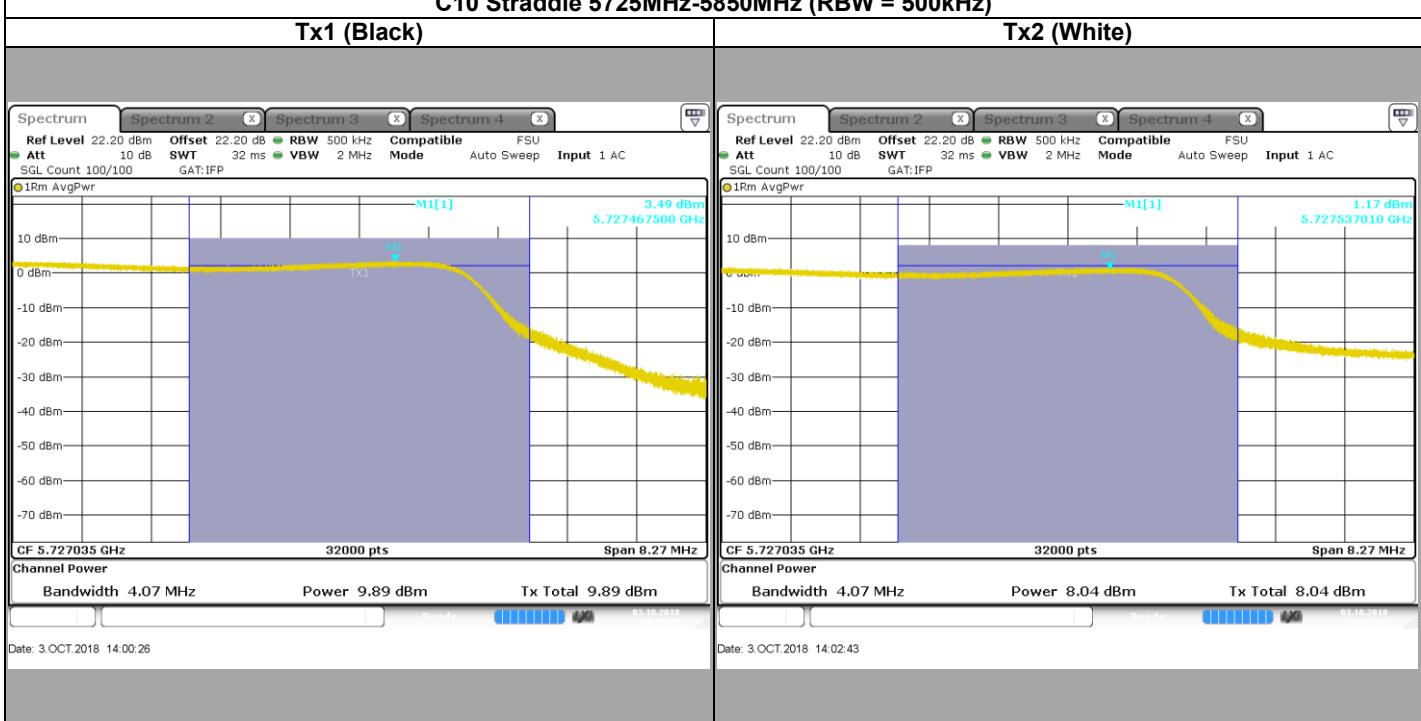


## 802.11a

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

## Tx1 (Black)

## Tx2 (White)



## TEST REPORT

Version : 02

N° 157205-726501-D

Page 69/202



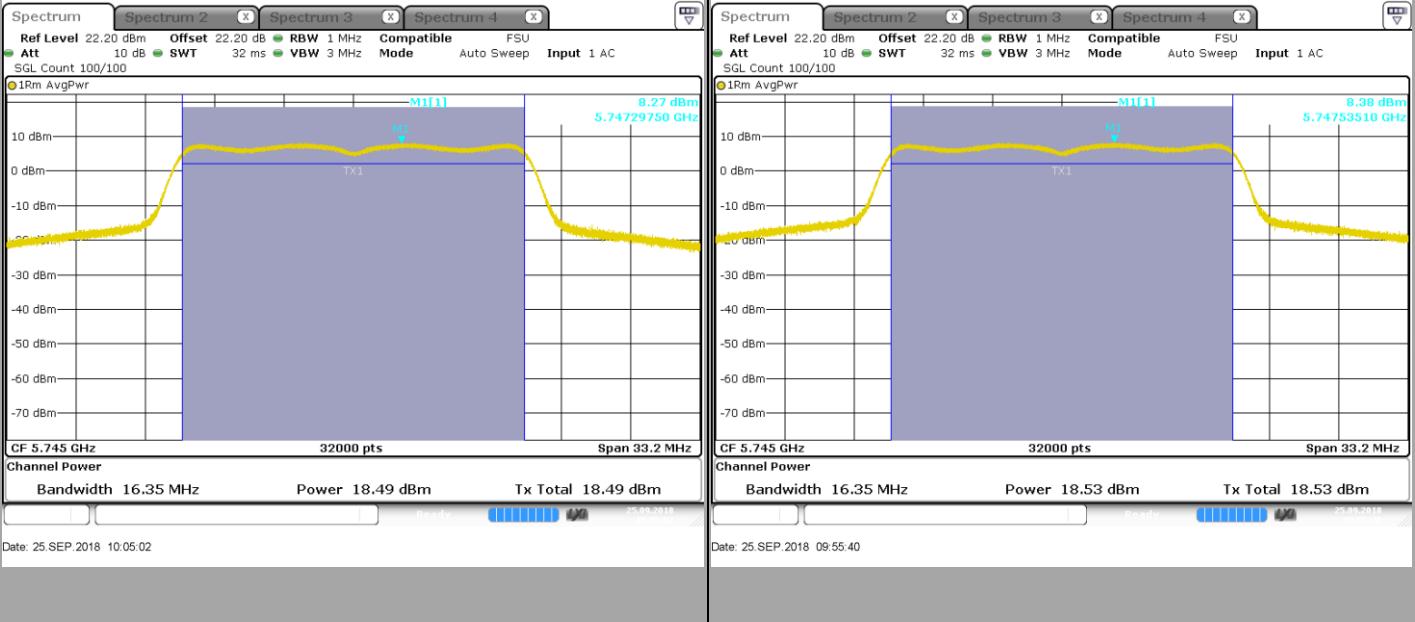
L C I E

## 802.11a

## C11 (RBW = 1MHz)

## Tx1 (Black)

## Tx2 (White)

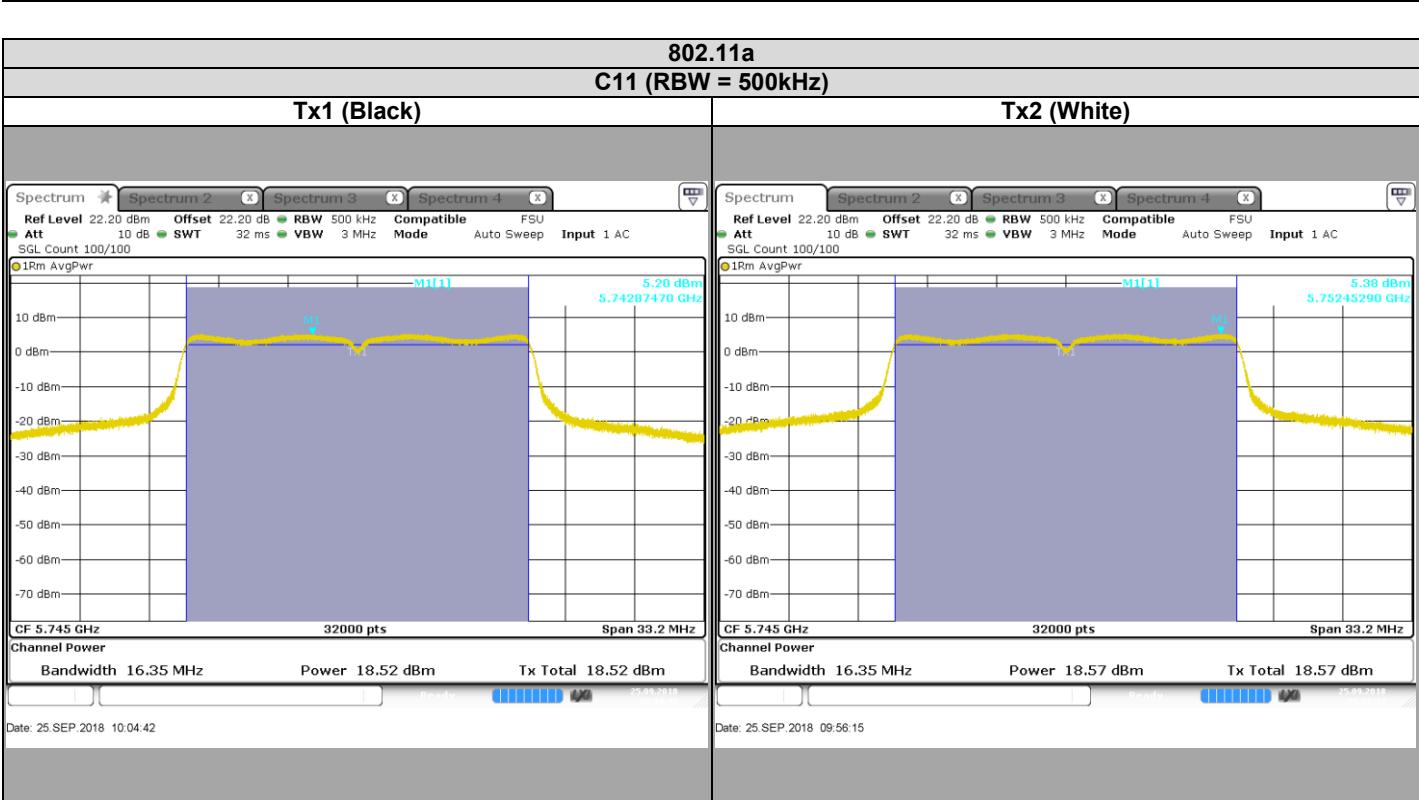


## 802.11a

## C11 (RBW = 500kHz)

## Tx1 (Black)

## Tx2 (White)



## TEST REPORT

N° 157205-726501-D

Version : 02

Page 70/202



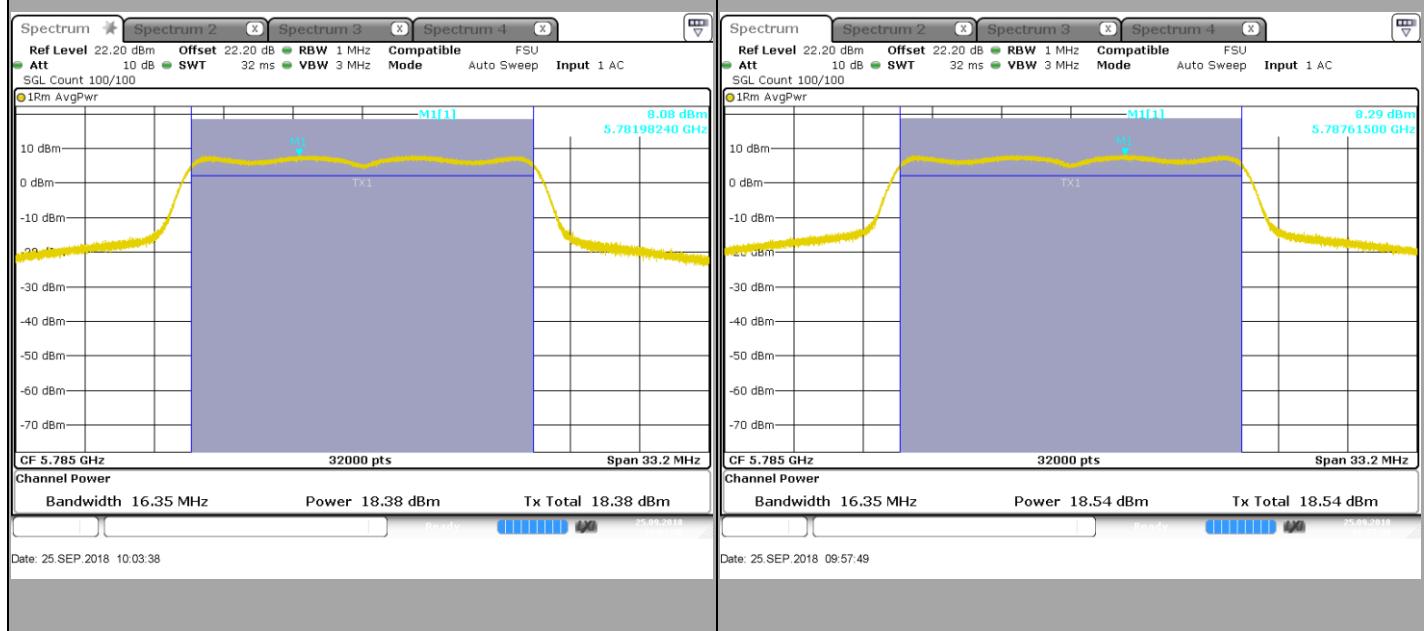
L C I E

## 802.11a

## C12 (RBW = 1MHz)

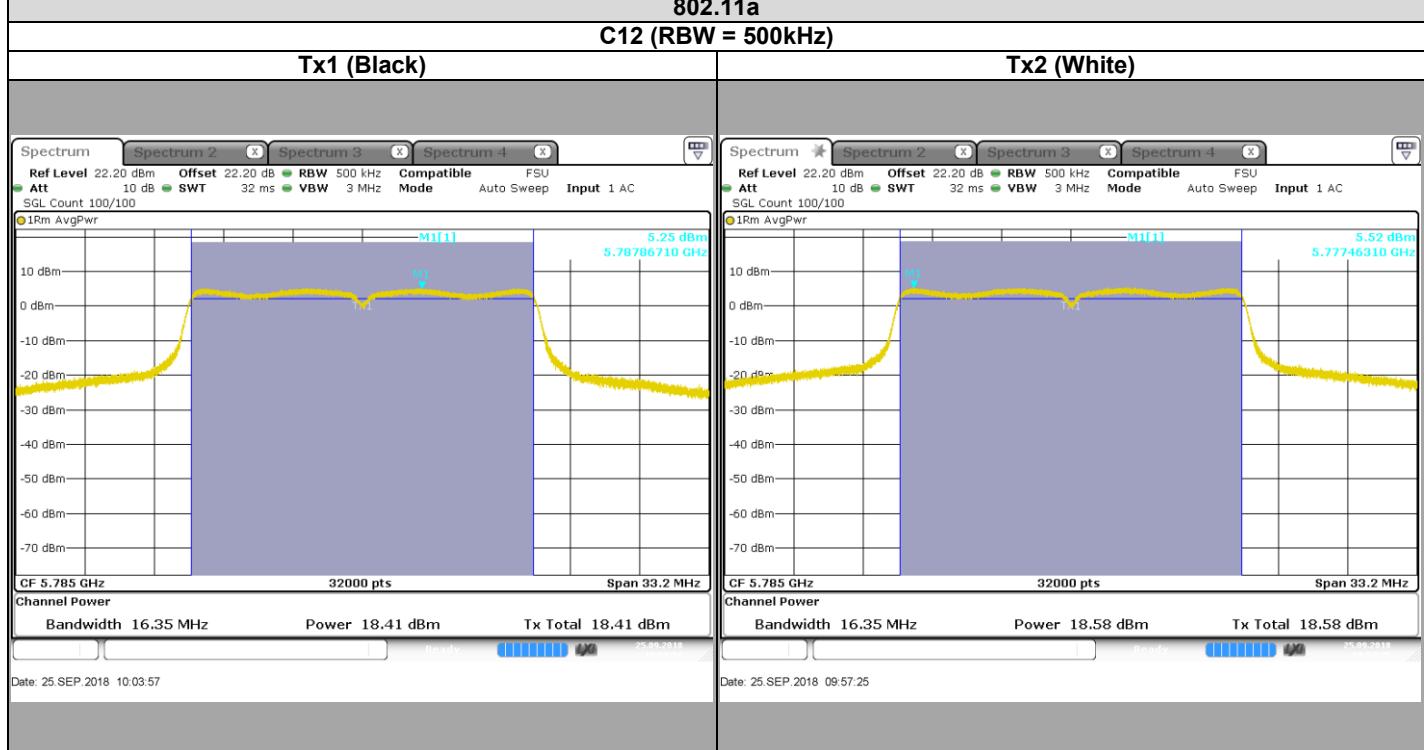
## Tx1 (Black)

## Tx2 (White)

802.11a  
C12 (RBW = 500kHz)

## Tx1 (Black)

## Tx2 (White)



## TEST REPORT

Version : 02

N° 157205-726501-D

Page 71/202