6. 6DB EMISSION BANDWIDTH

6.1. TEST CONDITIONS

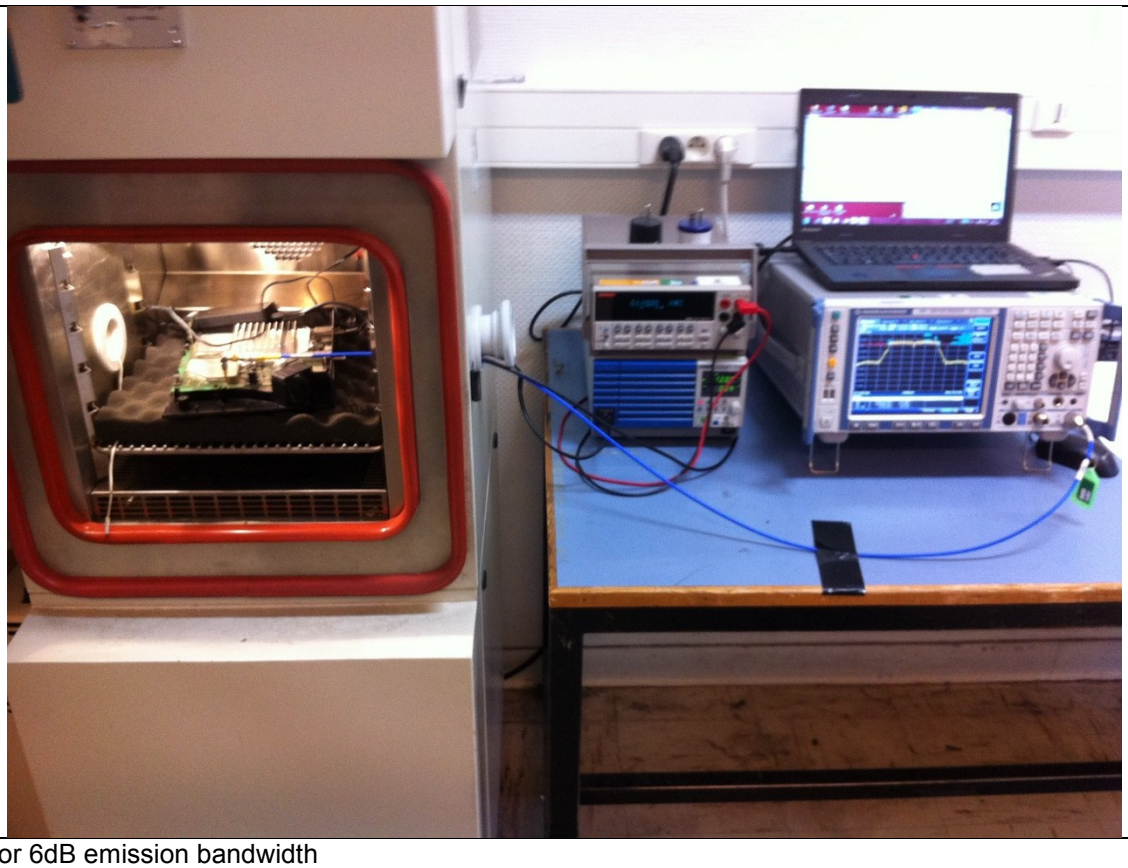
Test performed by	: Mathieu CERISIER
Date of test	: December 19, 2016
Ambient temperature	: 25 °C
Relative humidity	: 42 %

6.1. TEST SETUP

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

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

- Test Procedure:
☑ KDB 789033 D02 General UNII Test Procedures New Rules v01r02 § C2



Photograph for 6dB emission bandwidth

6.2. LIMIT

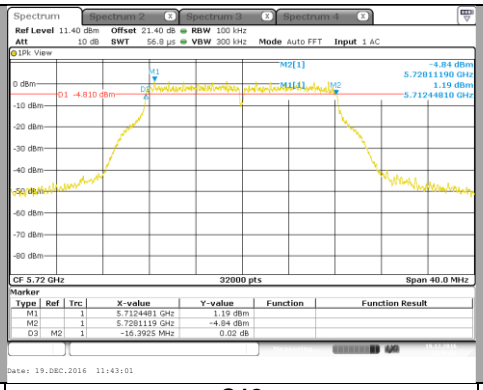
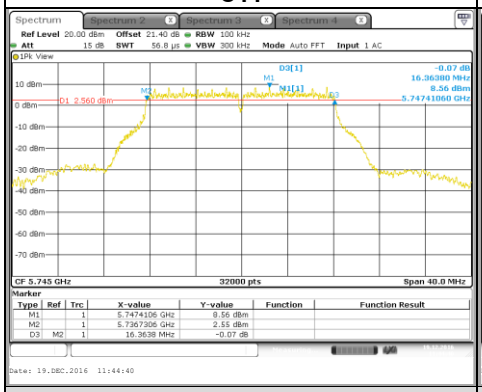
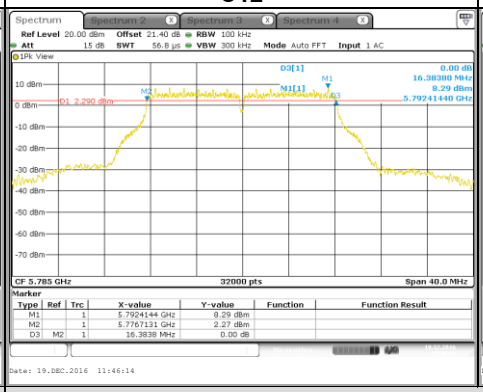
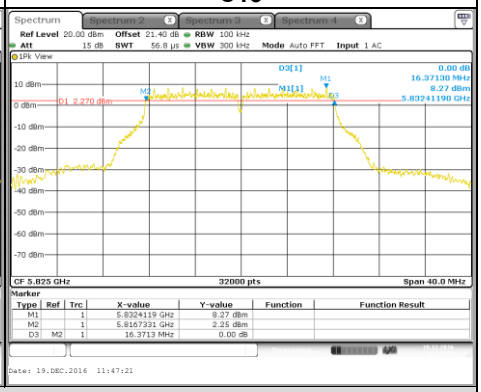
The 6dB bandwidth shall be at least 500kHz

6.3. TEST EQUIPMENT LIST

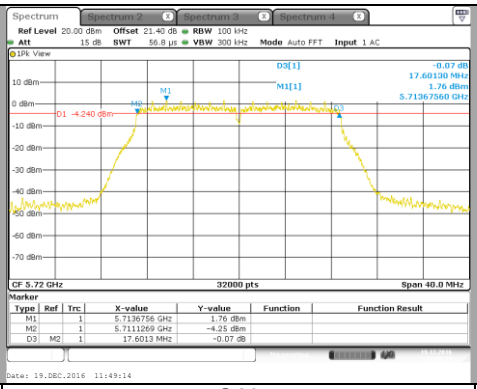
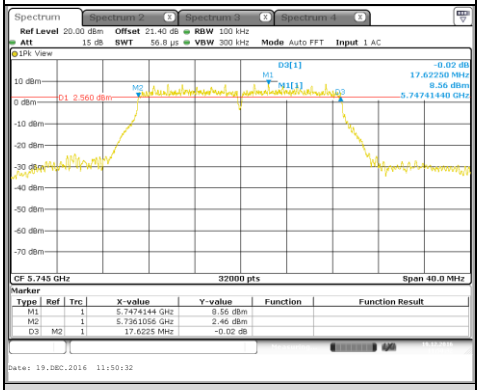
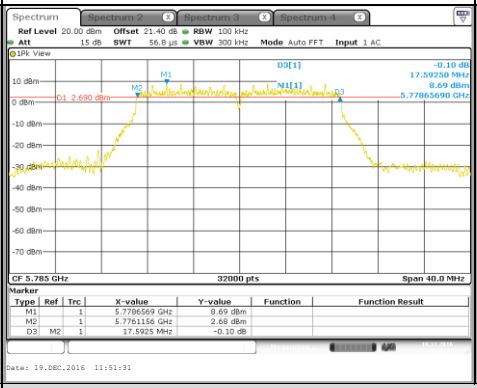
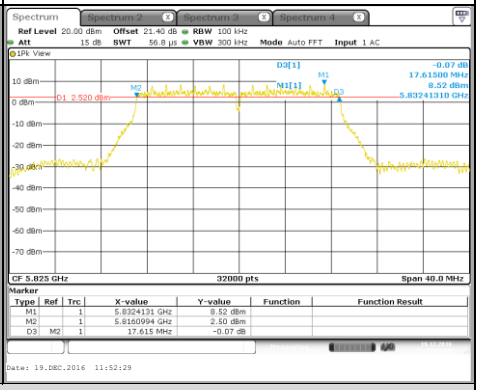
DESCRIPTION	MANUFACTURER	MODEL	N° LCIE	Calibration date	Calibration due
Multi-meter	KEITHLEY	2000	A1242090	2015/06	2017/06
Programmable AC/DC power supply	-; KIKUSUI	PCR500M	A7040079	Verified with calibrated multimeter	Verified with calibrated multimeter
EMI receiver	ROHDE & SCHWARZ	ESR 7	A2642023	2016/09	2017/09
RF cable & 20 dB attenuator	Télédyne	920-0202-048	A5329676	2016/09	2017/09

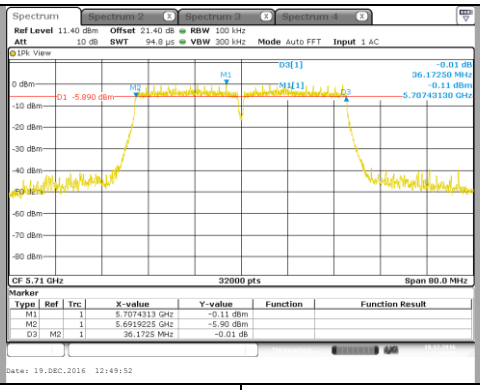
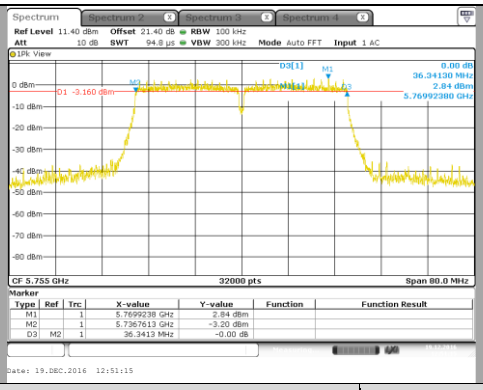
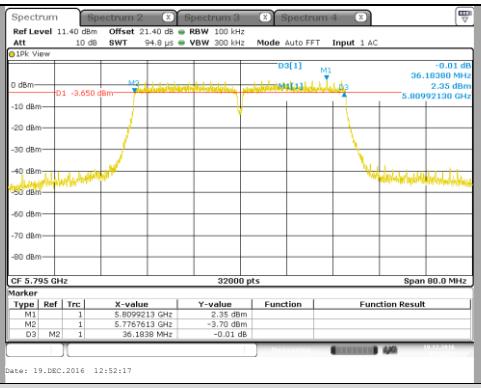
Note: In our quality system, the test equipment calibration due is more & less 2 months

6.4. RESULTS

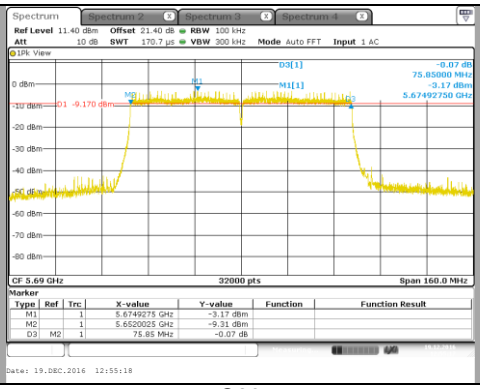
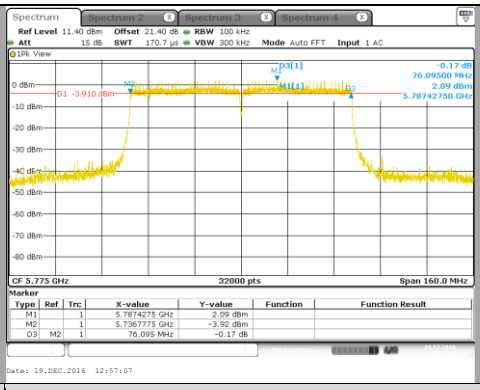
802.11a		
C10		
		
C11	**C12**	**C13**
		

Channel	6dB Emission Bandwidth (MHz)
C10	16,39
C11	16,36
C12	16,38
C13	16,37

802.11n HT20/ac VHT20	
C10	
	
C11	C12
	
C13	
	
Channel	6dB Emission Bandwidth (MHz)
C10	17,6
C11	17,62
C12	17,59
C13	17,62

802.11n HT40/ac VHT40	
C21	
	
C22	C23
	

Channel	6dB Emission Bandwidth (MHz)
C21	36,17
C22	36,34
C23	36,18

802.11ac VHT80	
C28	
	
C29	
	
Channel	6dB Emission Bandwidth (MHz)
C28	75,85
C29	76,1

6.5. CONCLUSION

6dB Emission Bandwidth measurement performed on the sample of the product **SAGEMCOM MiniBox (253697290)**, SN: **616476080862**, 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

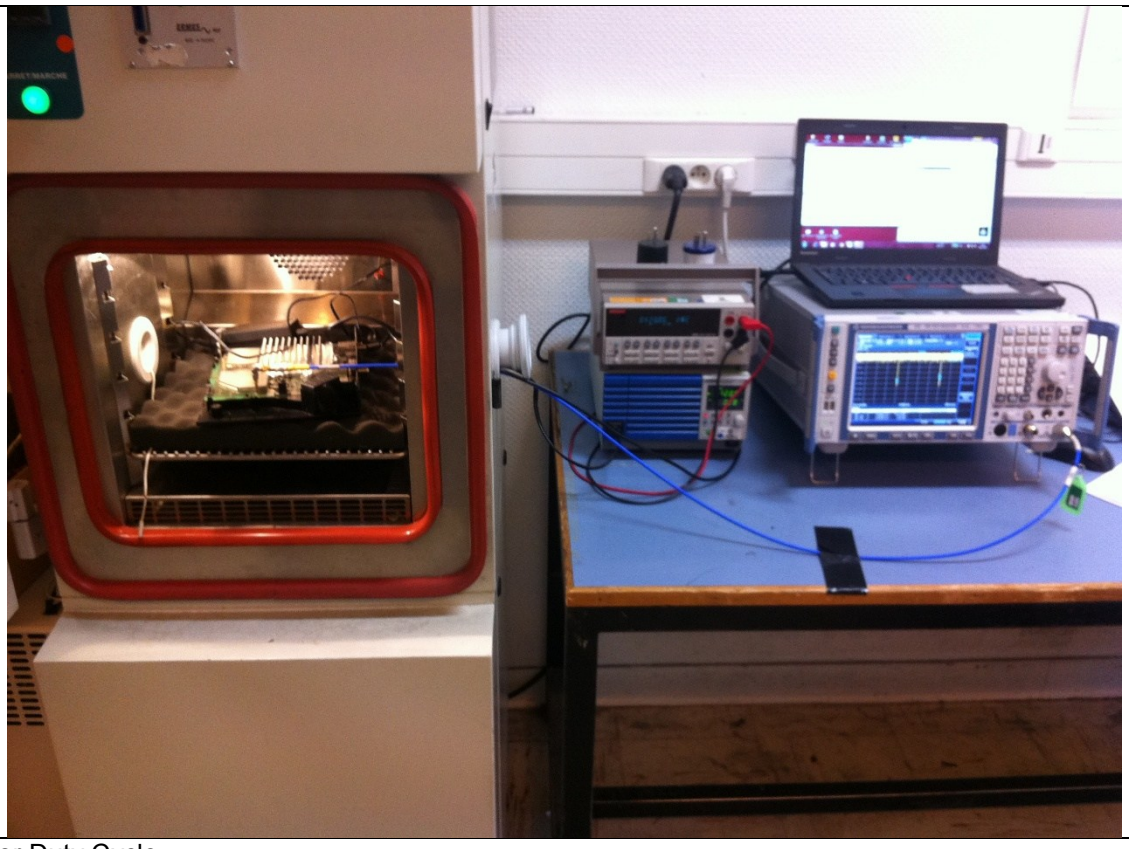
Test performed by	: Mathieu CERISIER
Date of test	: December 19, 2016
Ambient temperature	: 25 °C
Relative humidity	: 42 %

7.2. TEST SETUP

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

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

- Test Procedure:
☑ KDB 789033 D02 General UNII Test Procedures New Rules v01r02 § B2 b)



Photograph for Duty Cycle

7.3. LIMIT

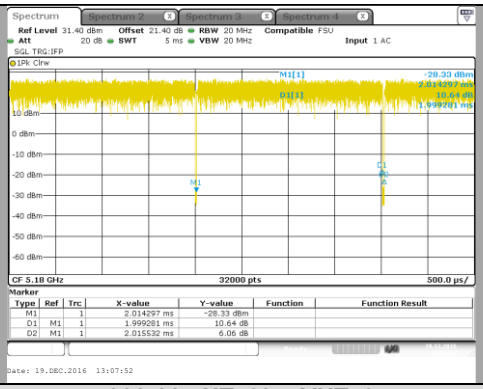
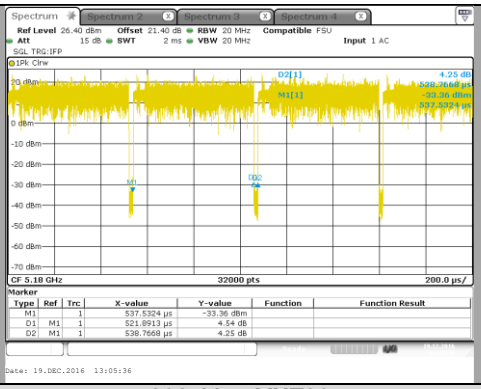
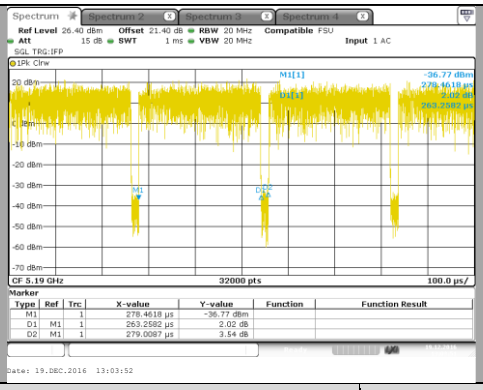
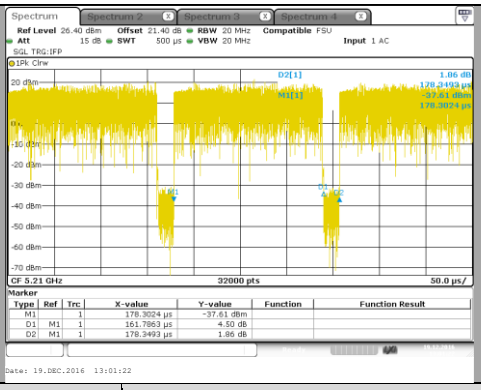
None

7.4. TEST EQUIPMENT LIST

DESCRIPTION	MANUFACTURER	MODEL	N° LCIE	Calibration date	Calibration due
Multi-meter	KEITHLEY	2000	A1242090	2015/06	2017/06
Programmable AC/DC power supply	-; KIKUSUI	PCR500M	A7040079	Verified with calibrated multimeter	Verified with calibrated multimeter
EMI receiver	ROHDE & SCHWARZ	ESR 7	A2642023	2016/09	2017/09
RF cable & 20 dB attenuator	Télédyne	920-0202-048	A5329676	2016/09	2017/09

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

7.5. RESULTS

802.11a	802.11n HT20/ac VHT20
C1	C1
	
802.11n HT40/ac VHT40	**802.11ac VHT80**
C14	C24
	

Mode	Duty Cycle (%)	
802.11a	99,2	0.035
802.11n HT20/ac VHT20	96,9	0.137
802.11n HT40/ac VHT40	94,4	0.250
802.11ac VHT80	90,7	0.424

7.6. CONCLUSION

Duty Cycle measurement performed on the sample of the product **SAGEMCOM MiniBox (253697290)**, SN: **616476080862**, 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

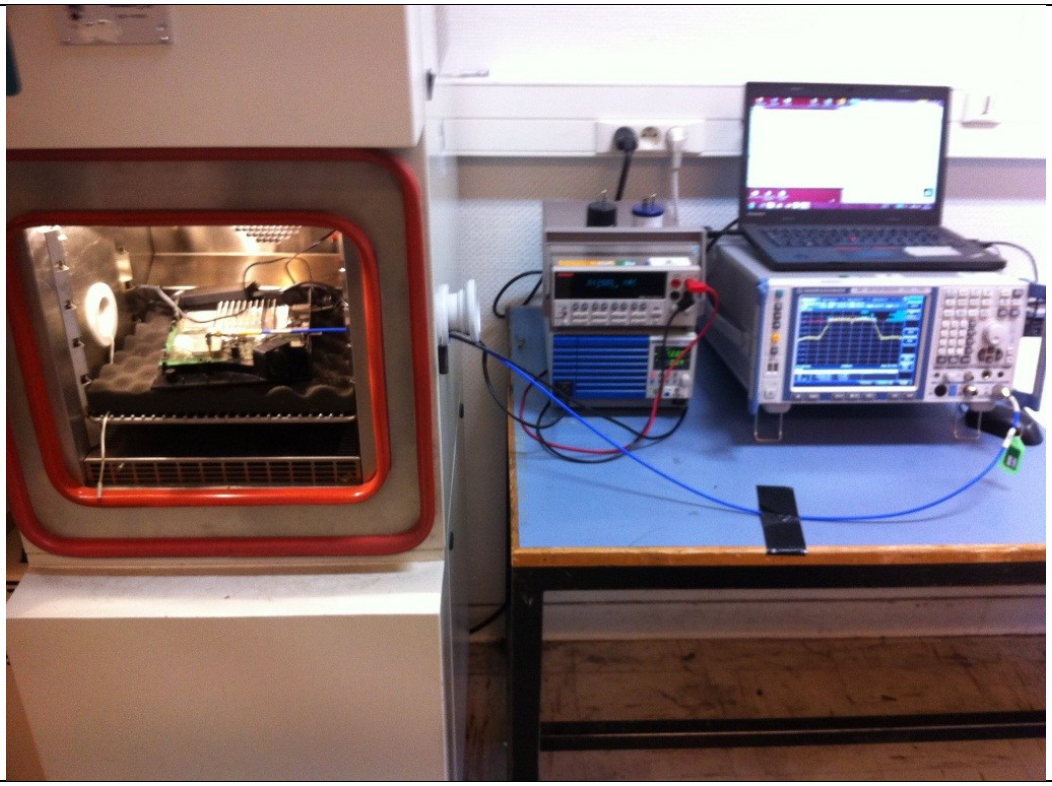
Test performed by	: Mathieu CERISIER
Date of test	: January 2, 2017 to January 6, 2017
Ambient temperature	: 23 °C
Relative humidity	: 45 %

8.2. TEST SETUP

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

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

- Test Procedure:
☑ KDB 789033 D02 General UNII Test Procedures New Rules v01r02 § E2 b) (Method SA-1) & F
☐ KDB 789033 D02 General UNII Test Procedures New Rules v01r02 § E2 c) (Method SA-2) & F
☑ KDB 662911 D01 Multiple Transmitter Output v02r01
☑ KDB 644545 D03 Guidance for IEEE 802.11ac v01



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

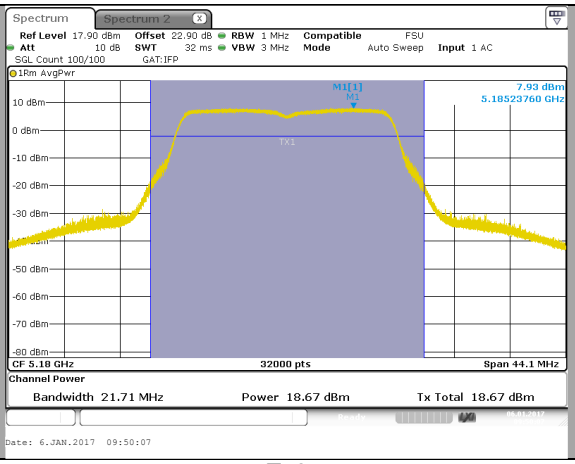
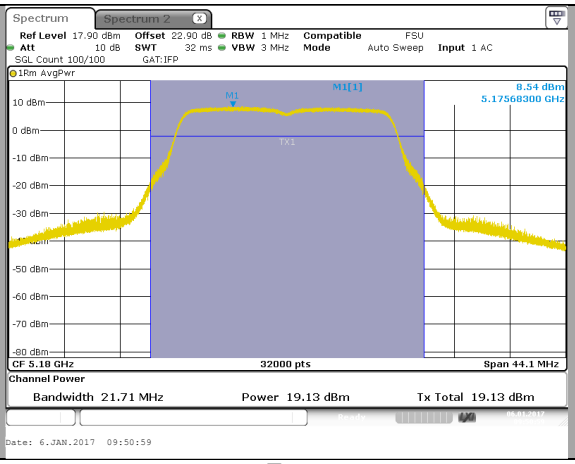
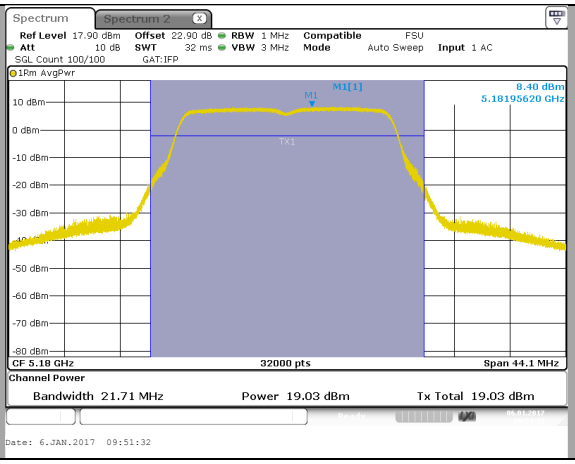
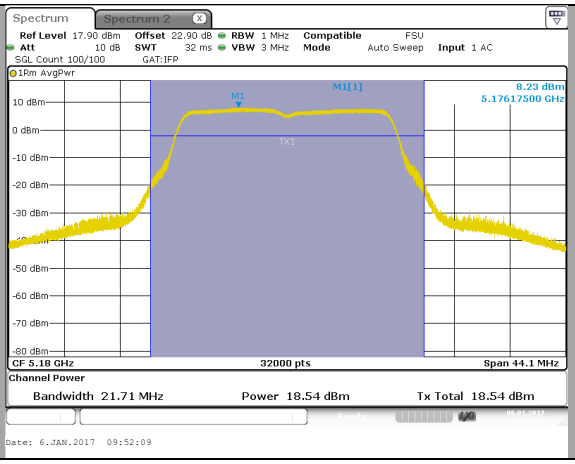
Maximum Power Spectral Density:
5150MHz-5250MHz: Shall not exceed 17dBm/MHz for Indoor Access Point & 11dBm/MHz for Client devices
5250MHz-5350MHz: Shall not exceed 11dBm/MHz
5470MHz-5725MHz: Shall not exceed 11dBm/MHz
5725MHz-5850MHz: Shall not exceed 30dBm/500kHz
Limits are reduced by G-6dBi if Overall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

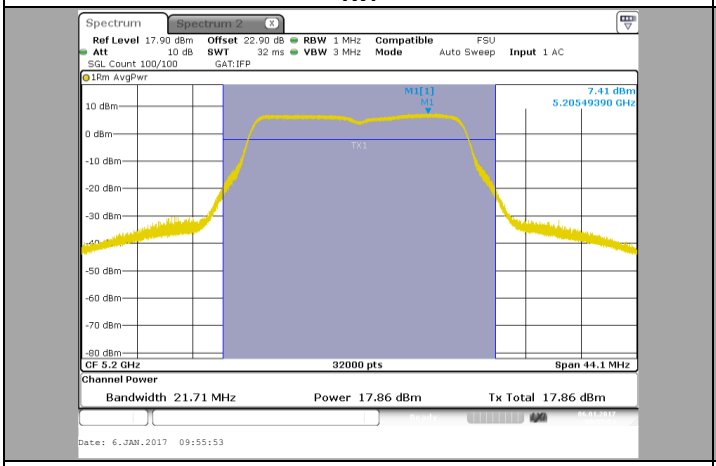
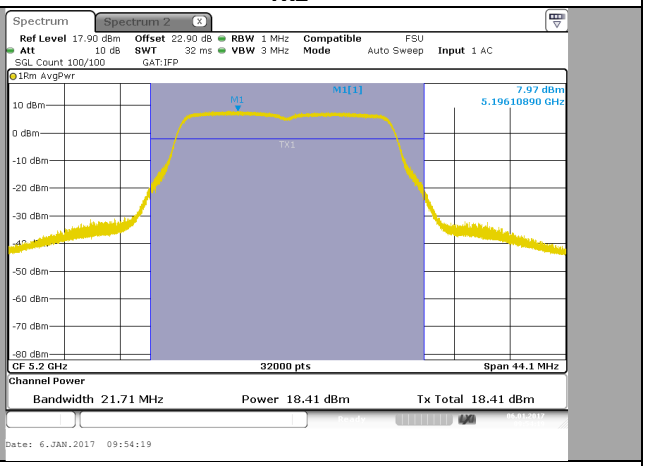
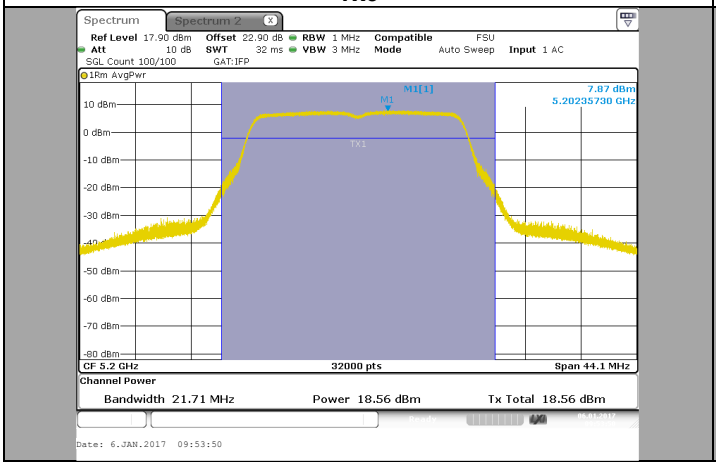
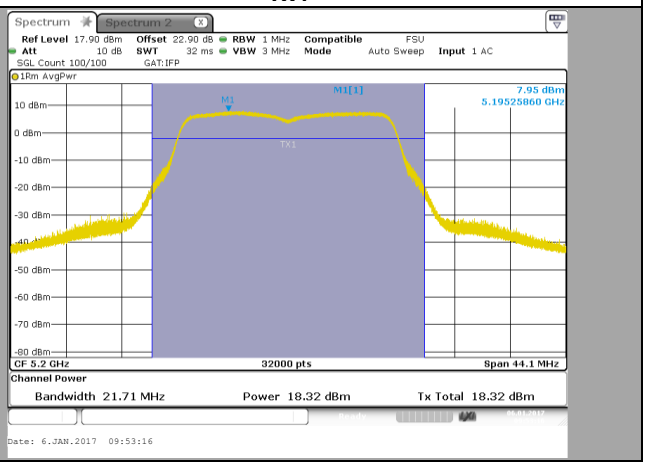
8.4. TEST EQUIPMENT LIST

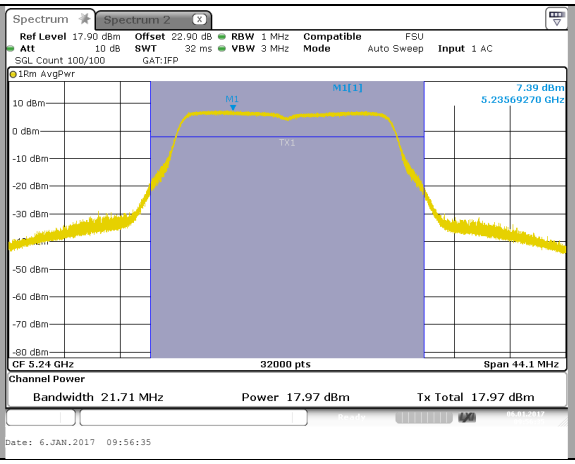
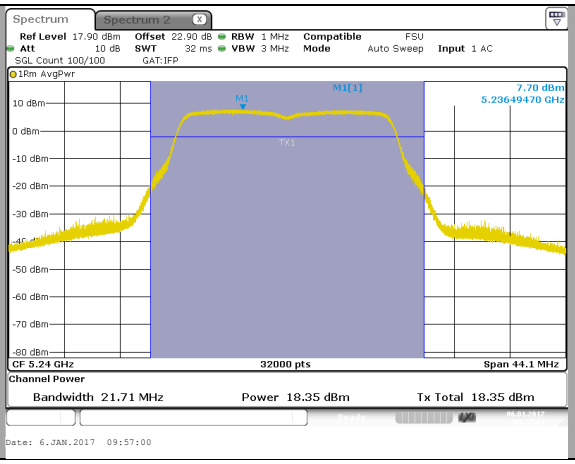
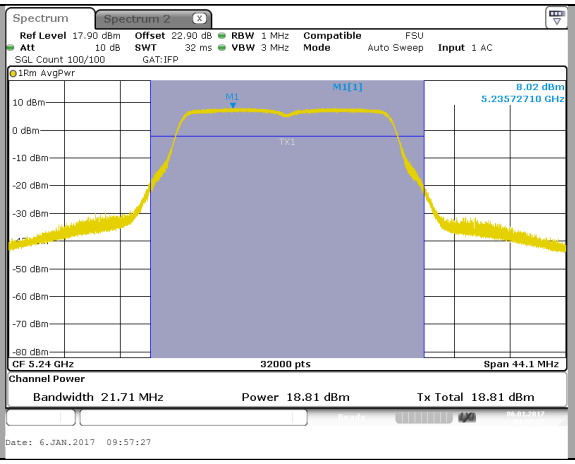
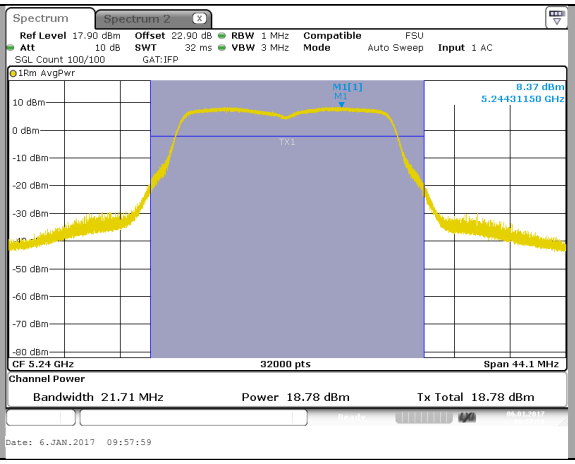
DESCRIPTION	MANUFACTURER	MODEL	N° LCIE	Calibration date	Calibration due
Multi-meter	KEITHLEY	2000	A1242090	2015/06	2017/06
Programmable AC/DC power supply	-; KIKUSUI	PCR500M	A7040079	Verified with calibrated multimeter	Verified with calibrated multimeter
EMI receiver	ROHDE & SCHWARZ	ESR 7	A2642023	2016/09	2017/09
RF cable & 20 dB attenuator	Télédyne	920-0202-048	A5329676	2016/09	2017/09

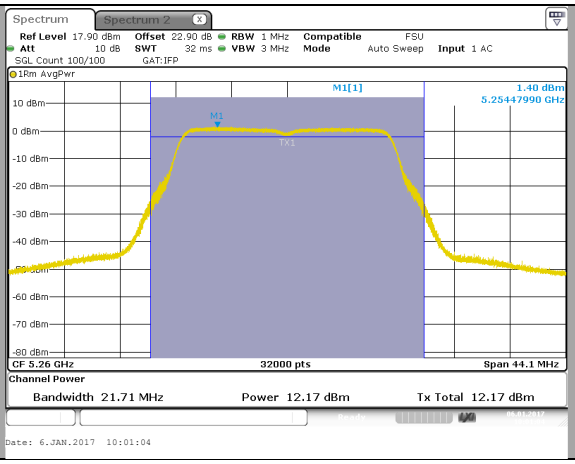
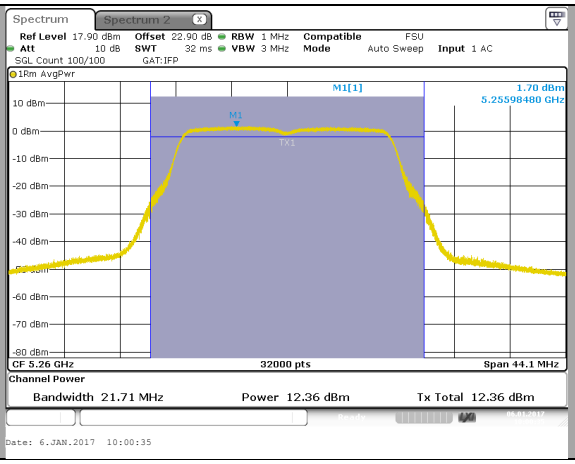
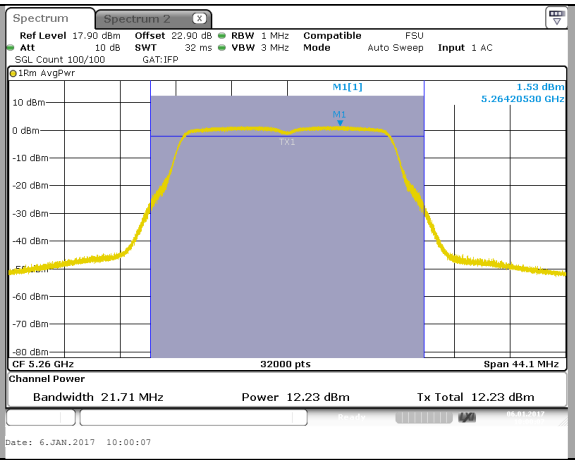
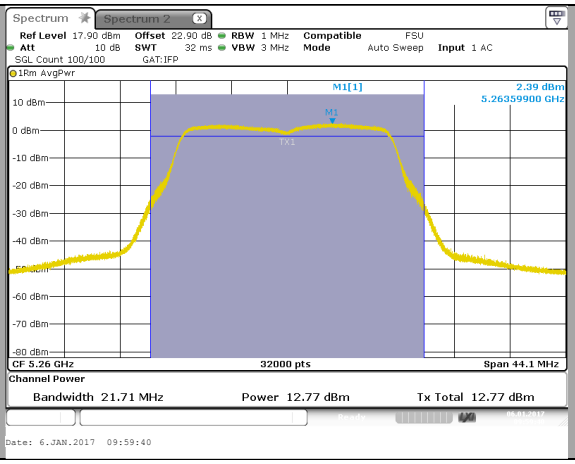
Note: In our quality system, the test equipment calibration due is more & less 2 months

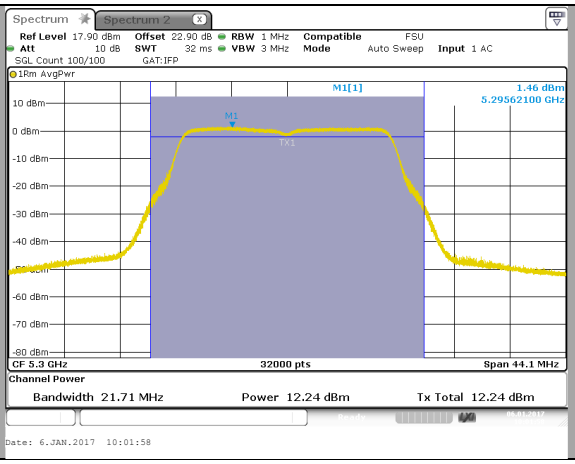
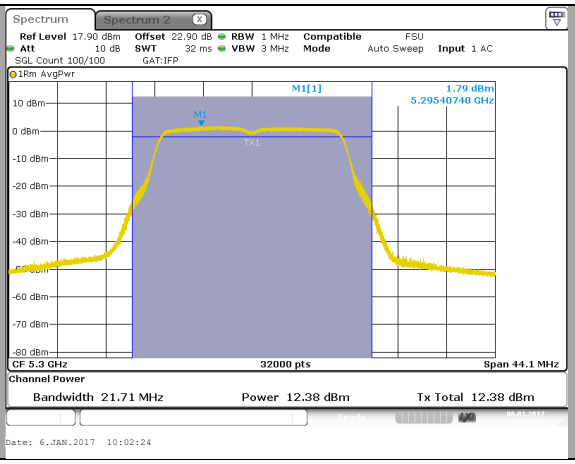
8.5. RESULTS

802.11a MASTER	
C1	
Tx1	Tx2
	
Tx3	Tx4
	

802.11a MASTER	
C2	
Tx1	Tx2
	
Tx3	Tx4
	

802.11a MASTER	
C3	
Tx1	Tx2
	
Tx3	Tx4
	

802.11a MASTER	
C4	
Tx1	Tx2
	
Tx3	Tx4
	

802.11a MASTER	
C5	
Tx1	Tx2
	
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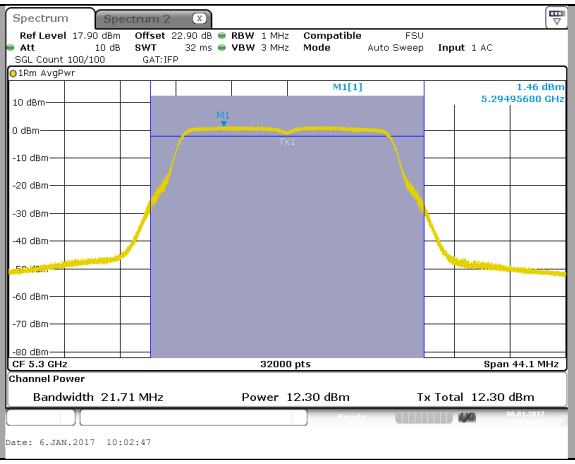
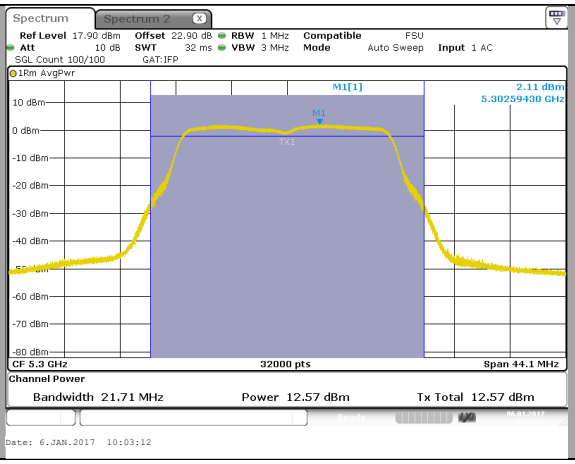
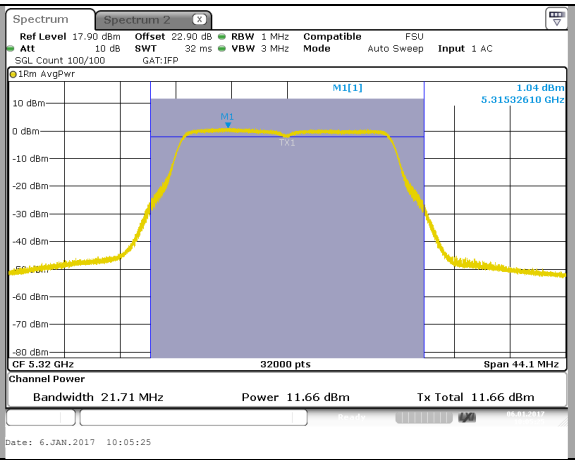
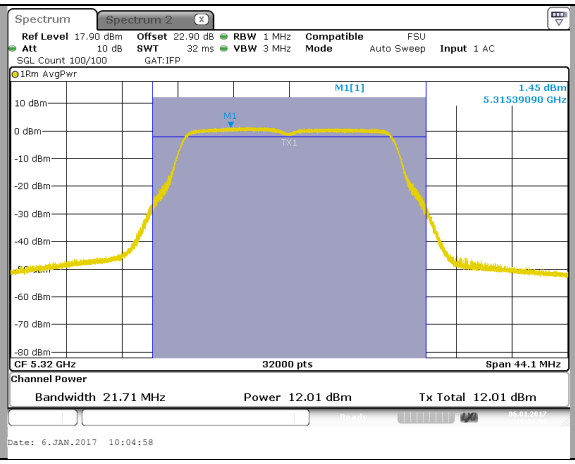
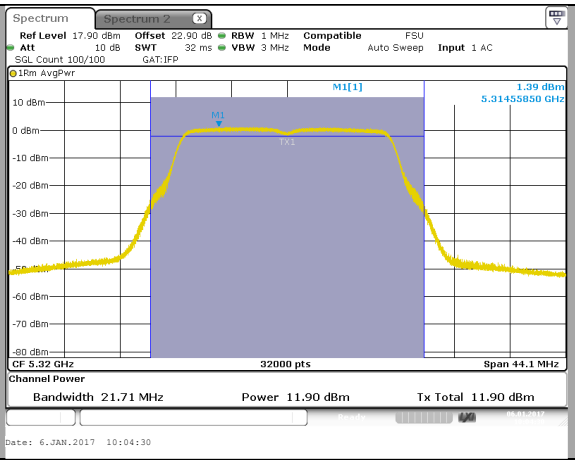
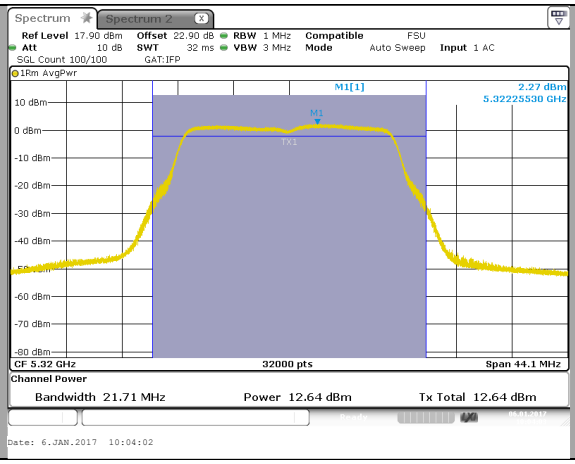
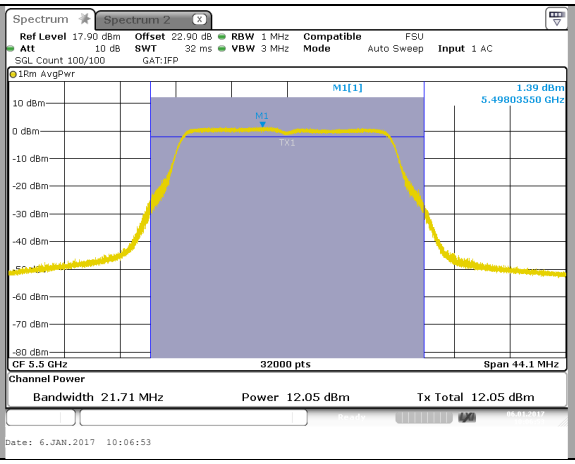
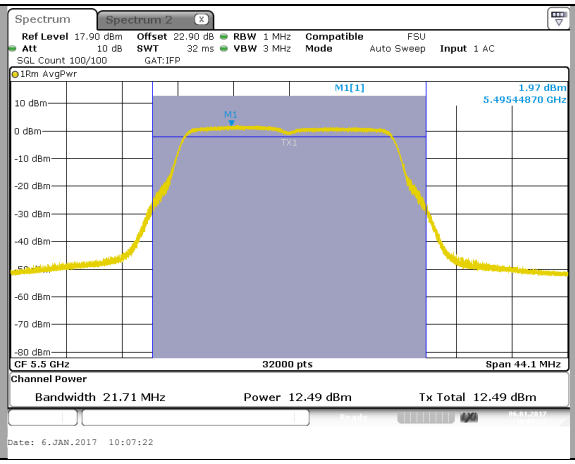
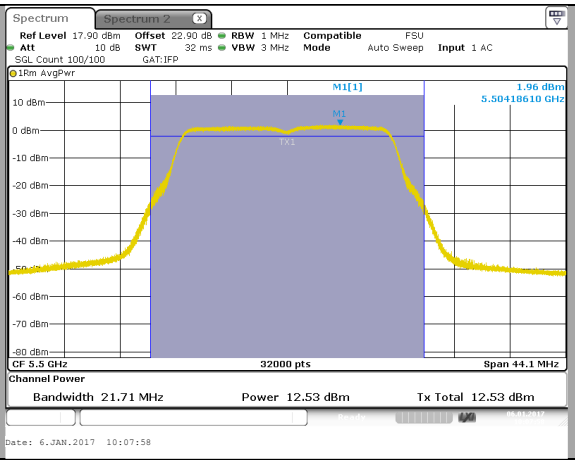
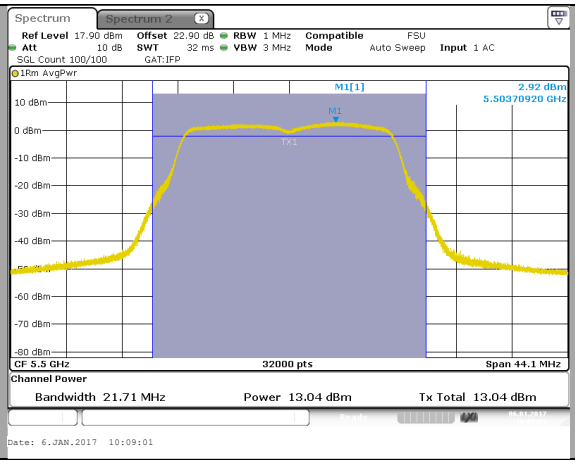
	

802.11a MASTER	
C6	
Tx1	Tx2
	
Tx3	Tx4
	

802.11a MASTER	
C7	
Tx1	Tx2
	
Tx3	Tx4
	

802.11a MASTER	
C8	
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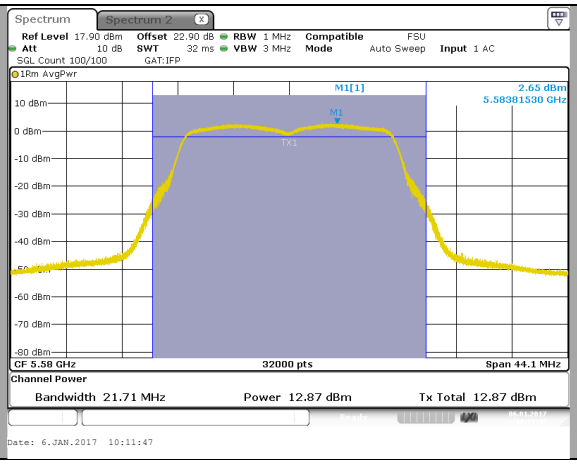
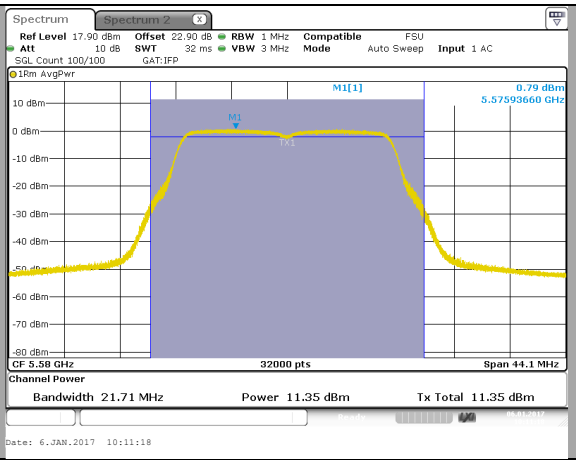
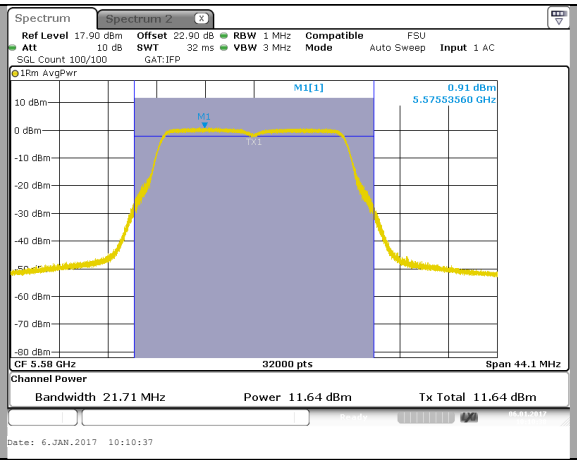
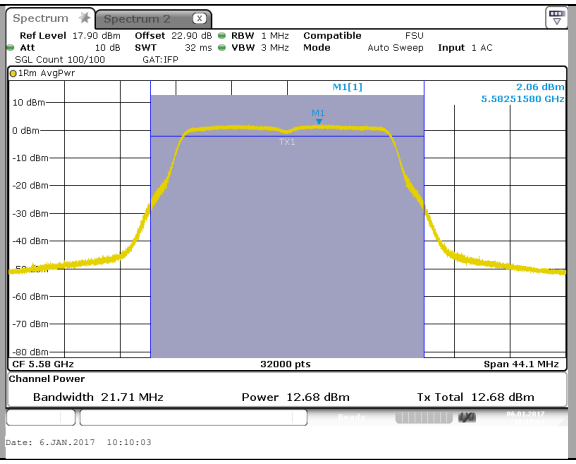
	
Tx3	Tx4
	

802.11a MASTER	
C9	
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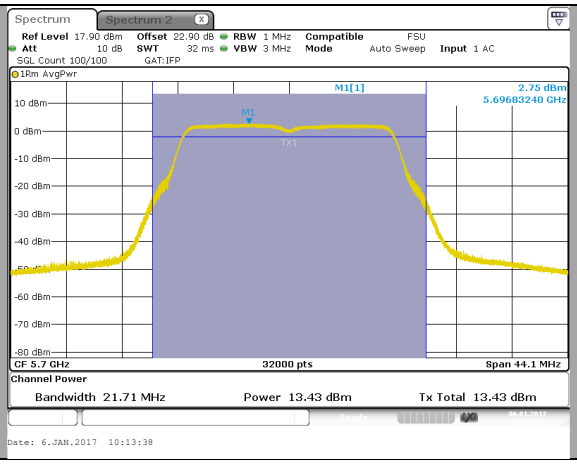
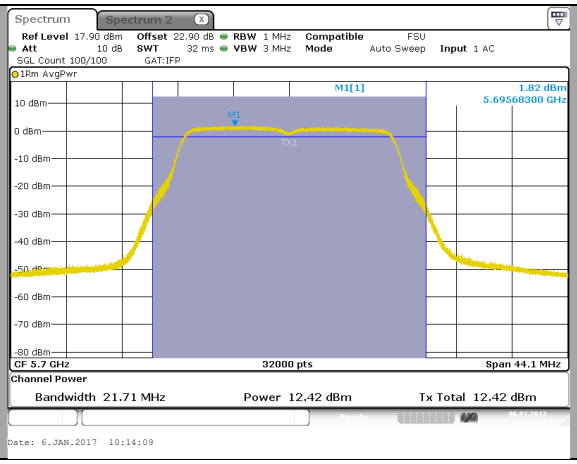
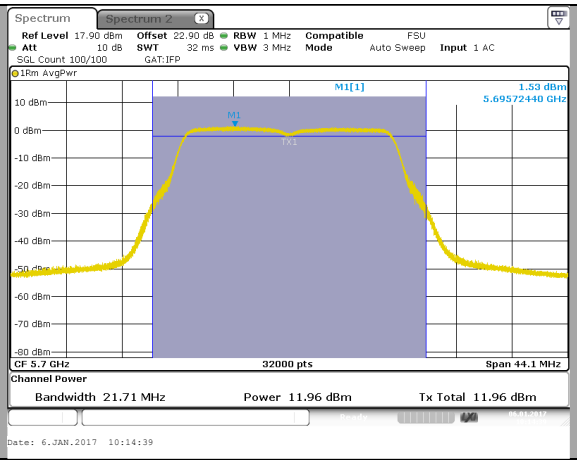
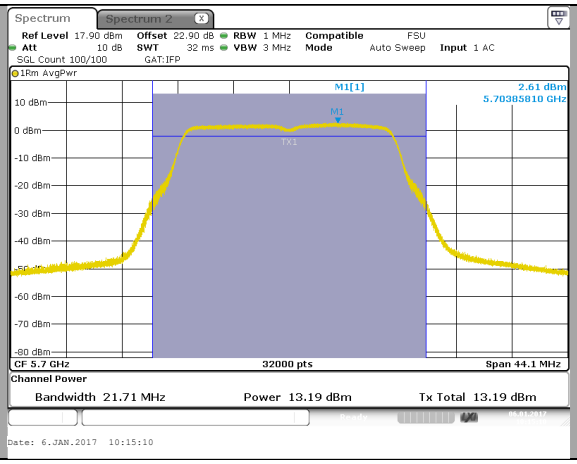
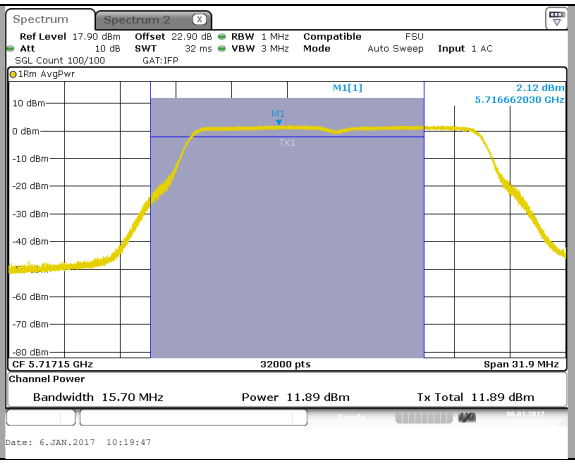
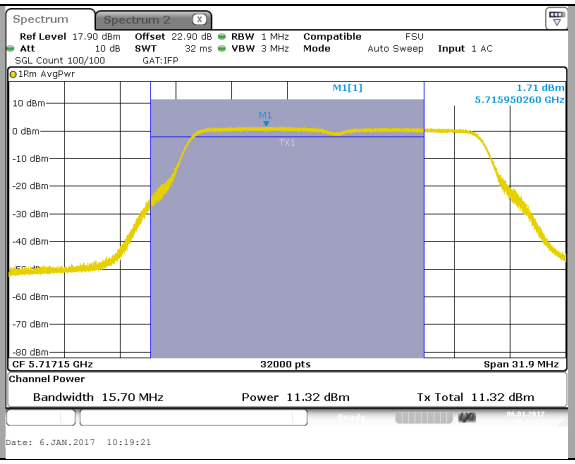
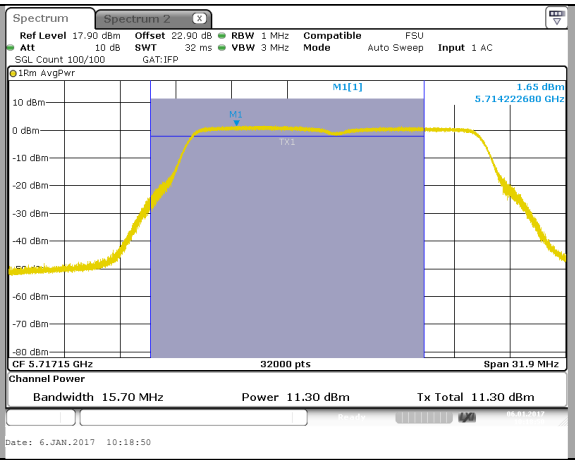
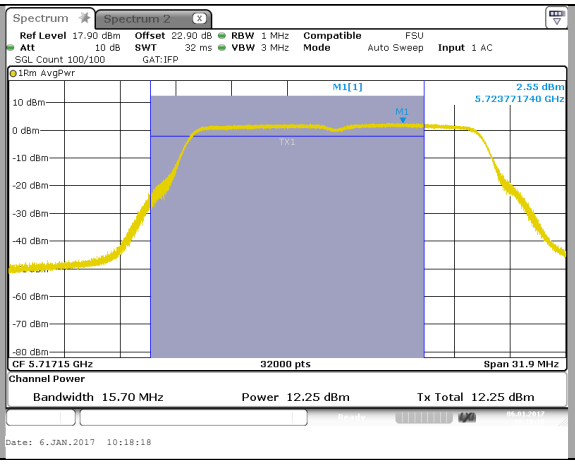
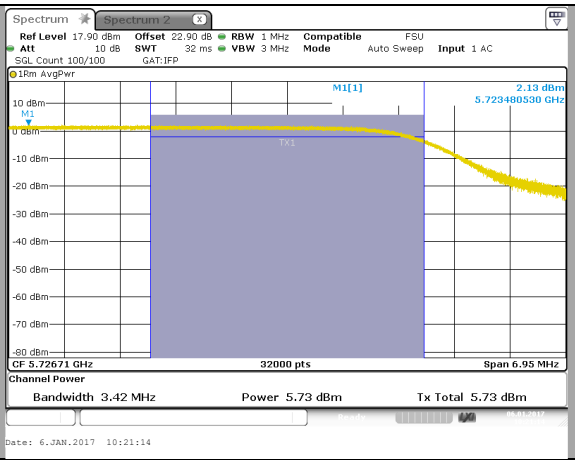
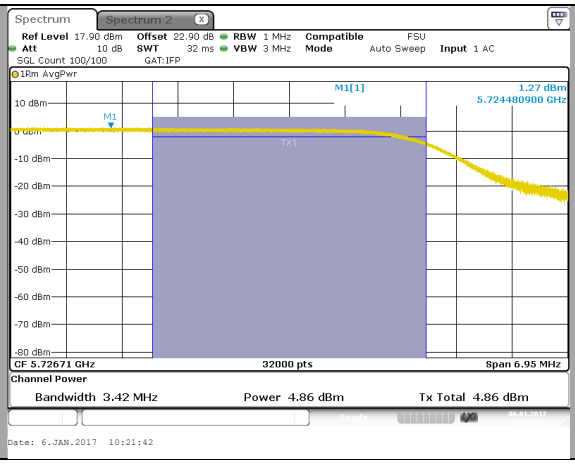
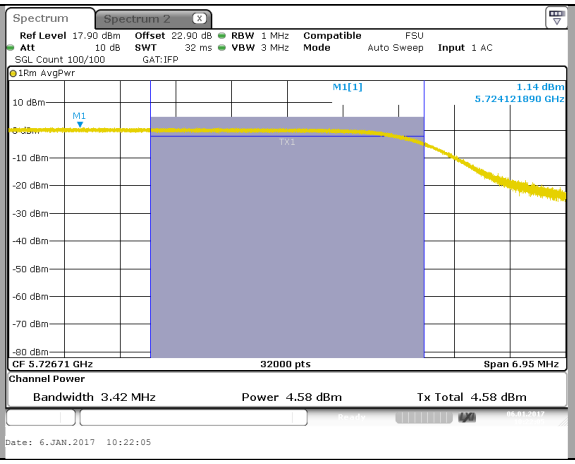
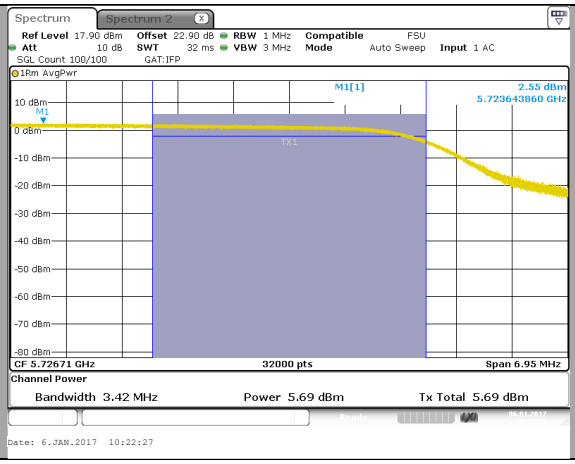
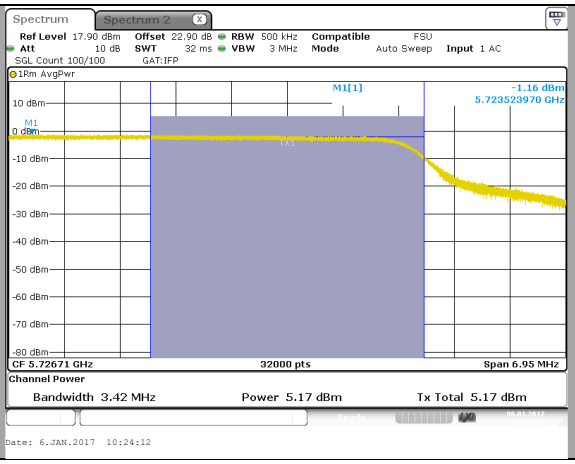
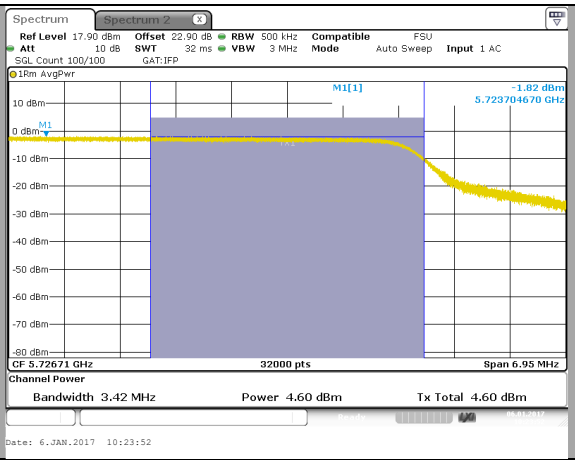
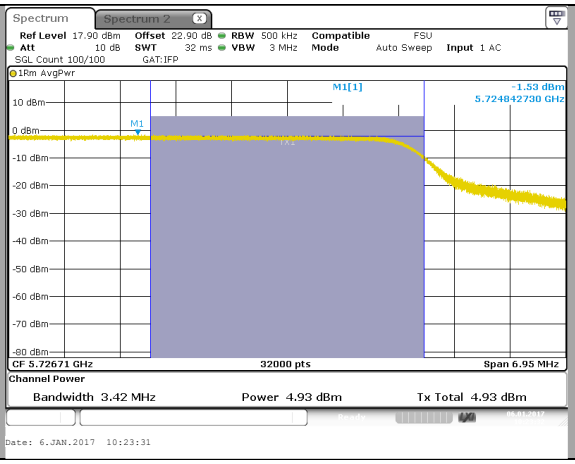
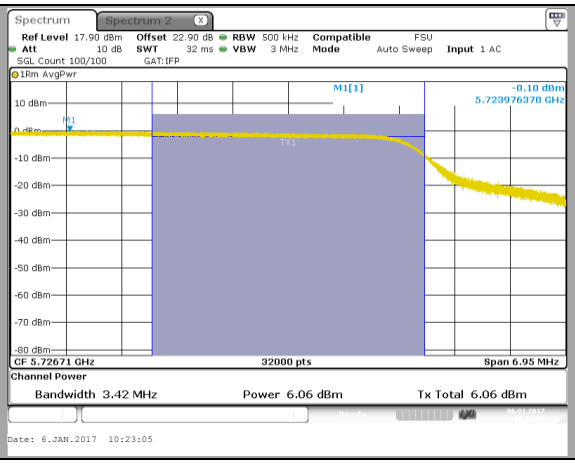
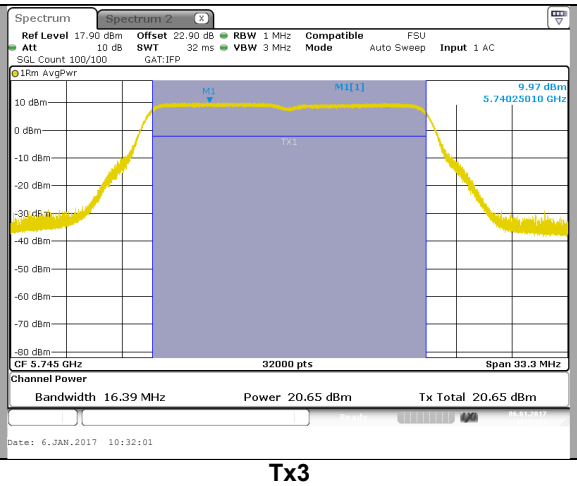
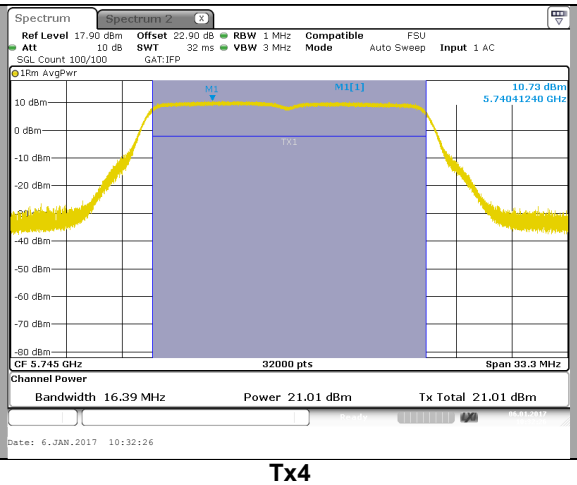
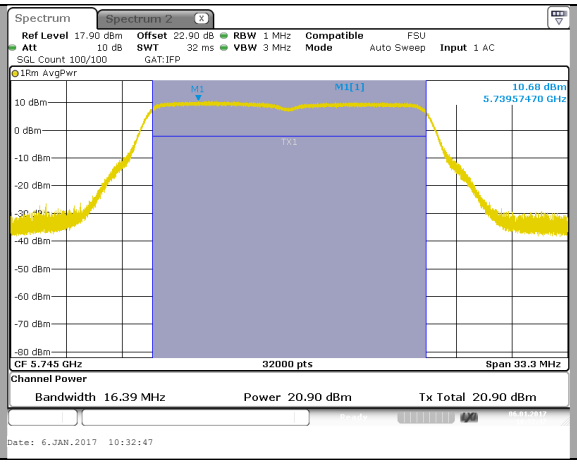
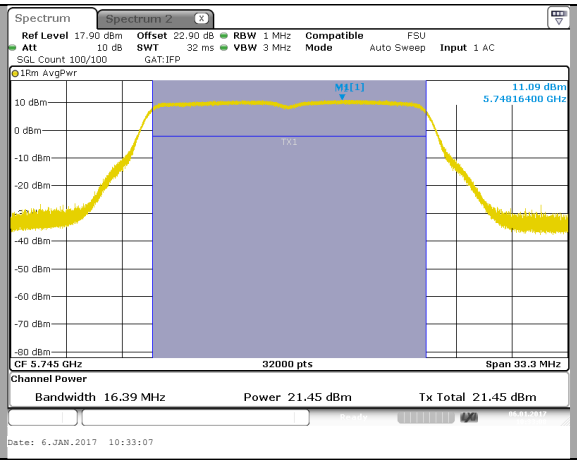
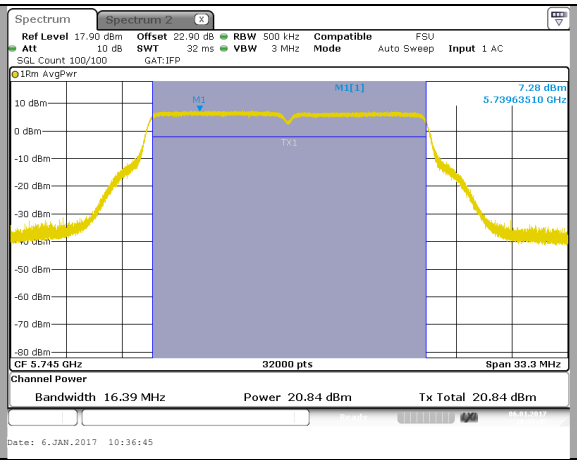
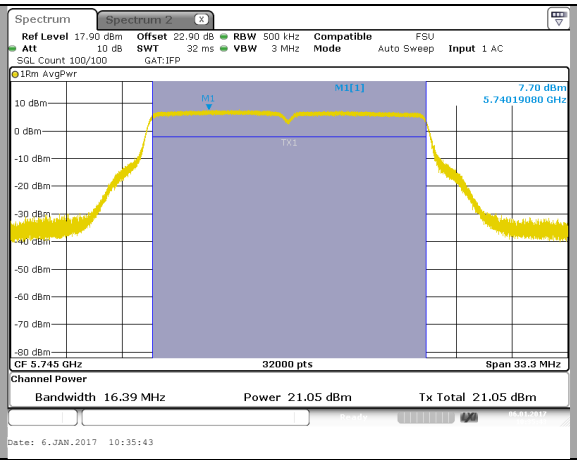
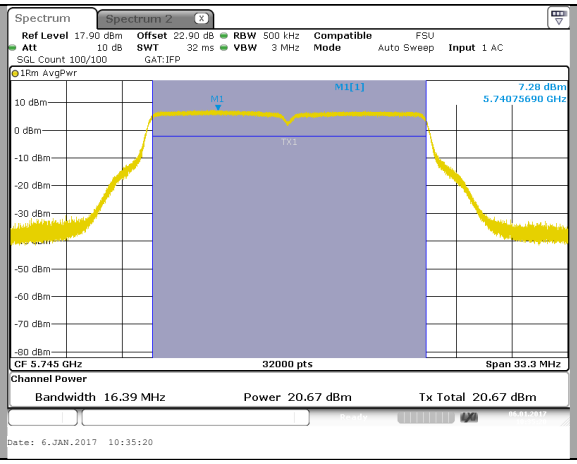
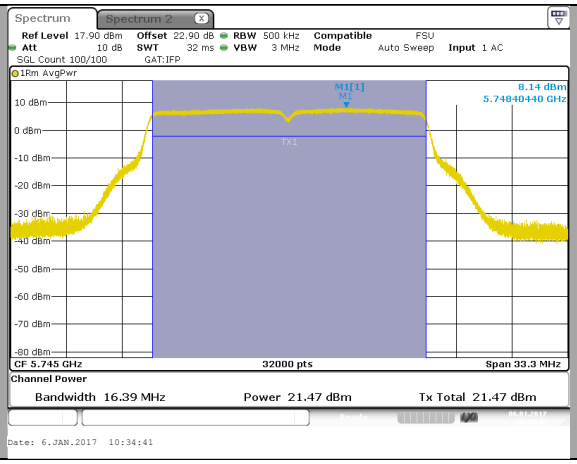
	
Tx3	Tx4
	

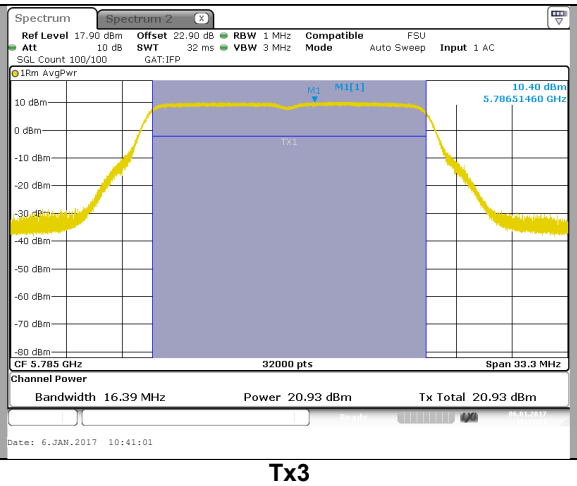
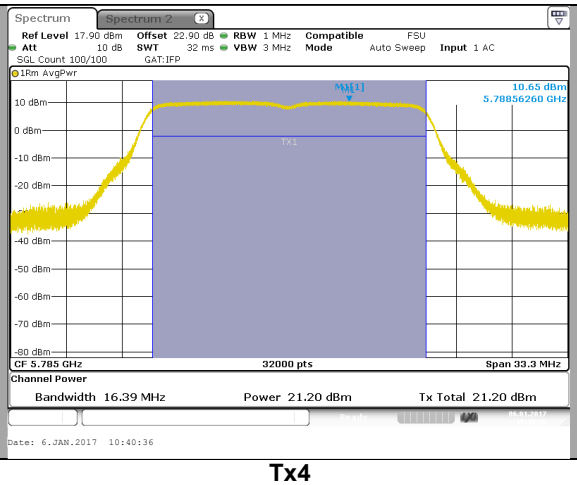
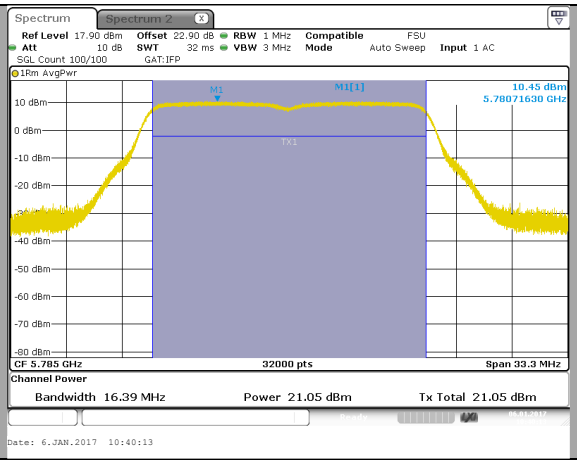
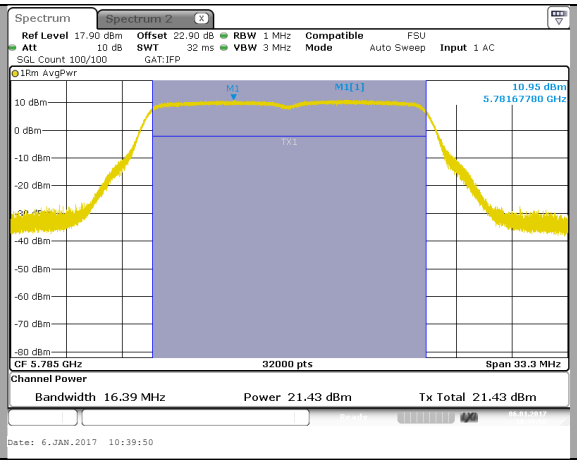
802.11a MASTER	
C10 Straddle 5470MHz-5725MHz	
Tx1	Tx2
	
Tx3	Tx4
	

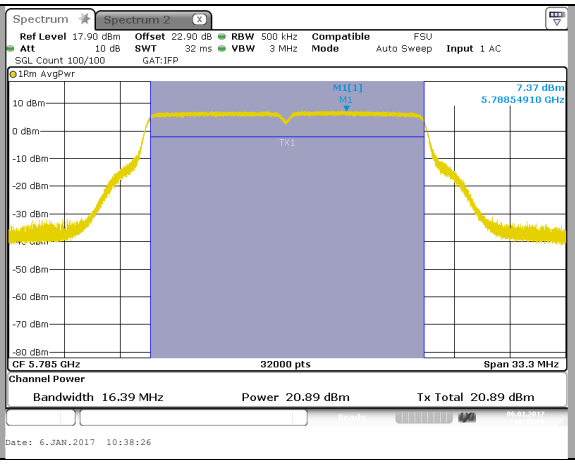
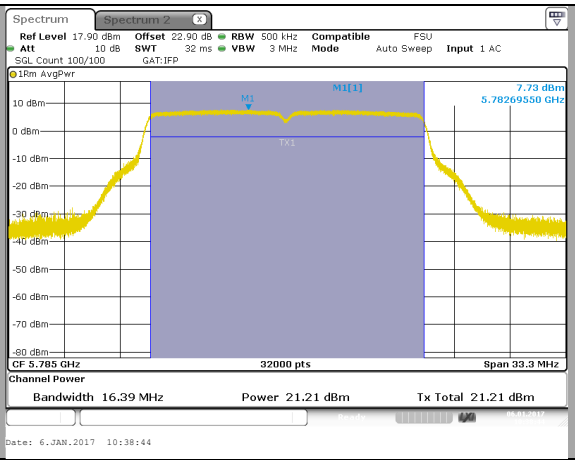
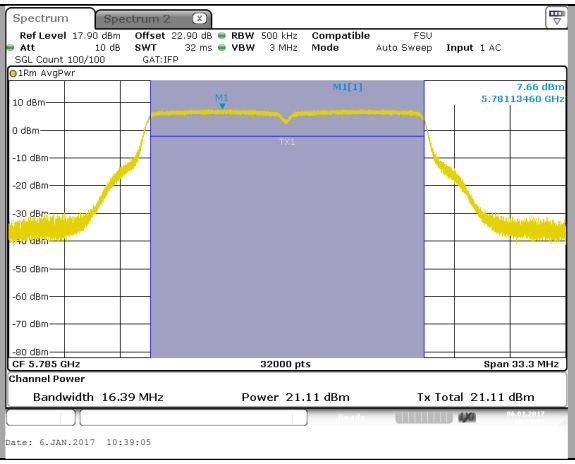
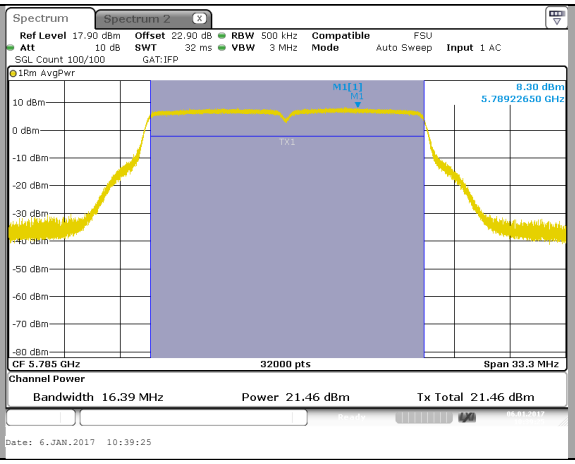
802.11a MASTER	
C10 Straddle 5725MHz-5850MHz Maximum Conducted power (RBW = 1MHz)	
Tx1	Tx2
	
Tx3	Tx4
	

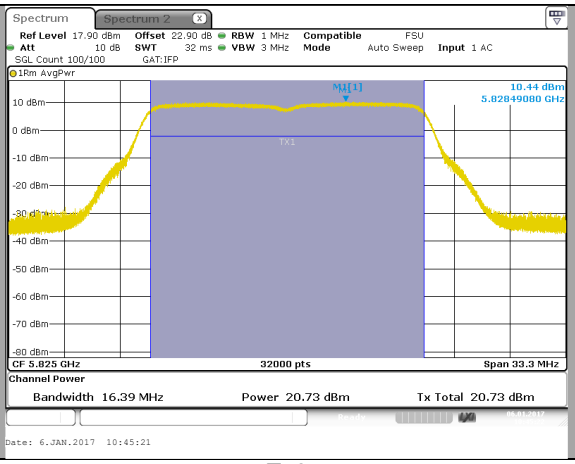
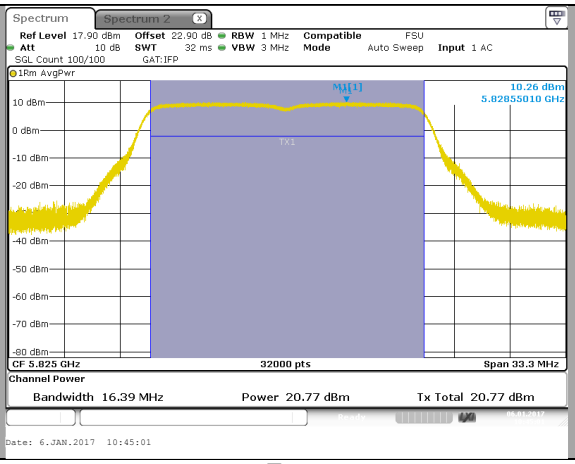
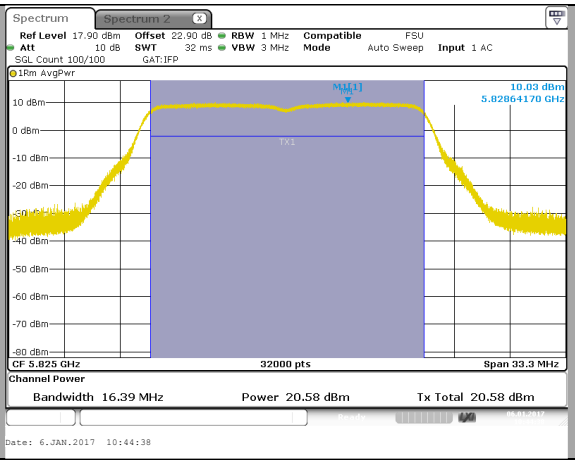
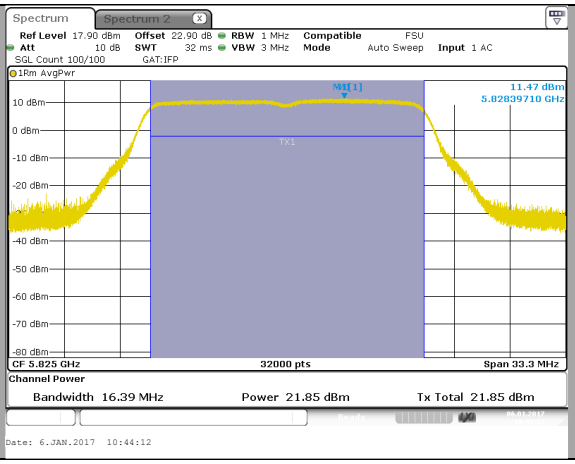
802.11a MASTER	
C10 Straddle 5725MHz-5850MHz Power Spectral Density (RBW = 500kHz)	
Tx1	Tx2
	
Tx3	Tx4
	

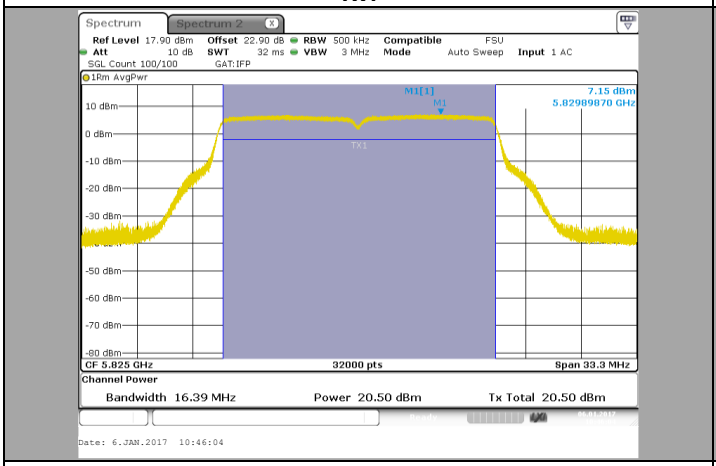
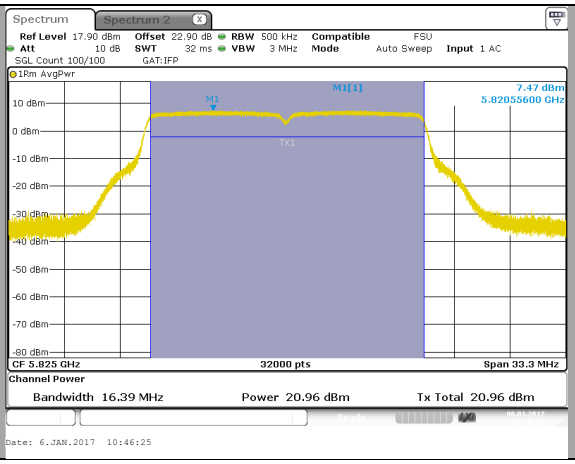
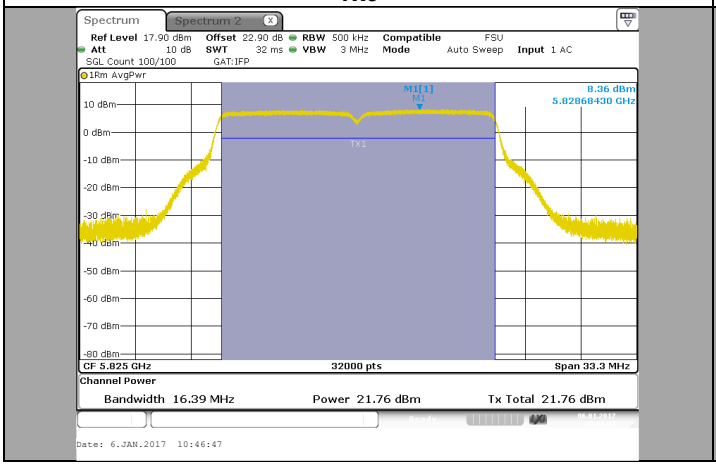
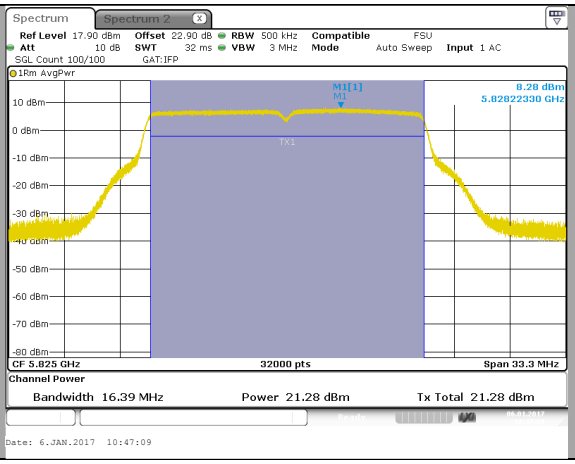
802.11a MASTER	
C11 Maximum Conducted power (RBW = 1MHz)	
Tx1	Tx2
	
Tx3	Tx4
	

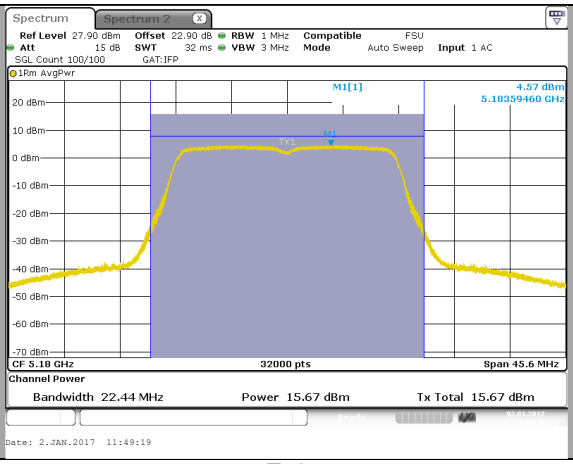
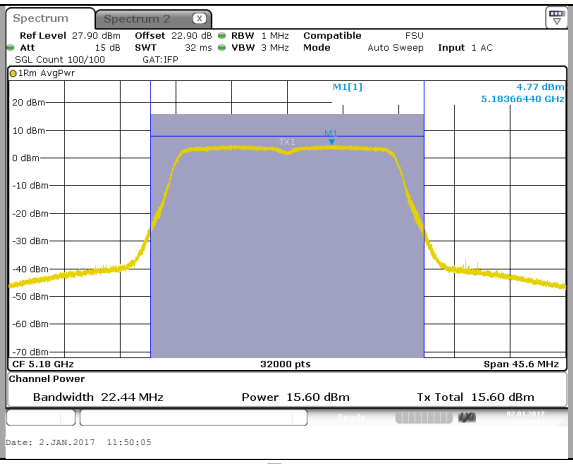
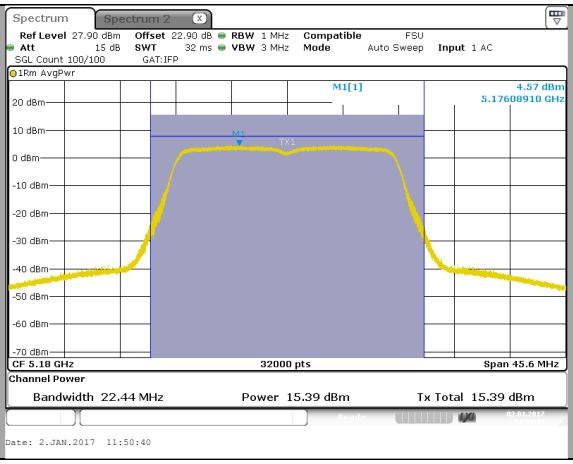
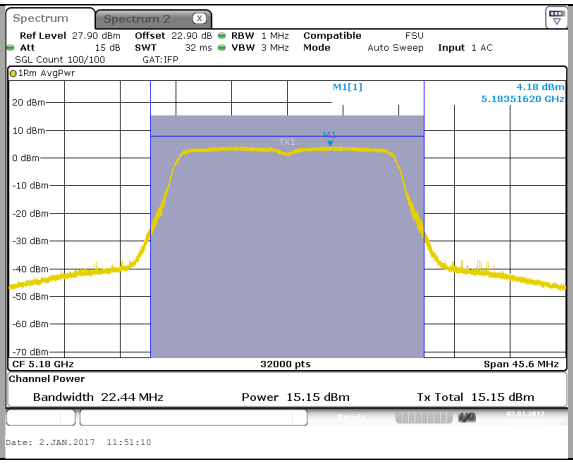
802.11a MASTER	
C11 Power Spectral Density (RBW = 500kHz)	
Tx1	Tx2
	
Tx3	Tx4
	

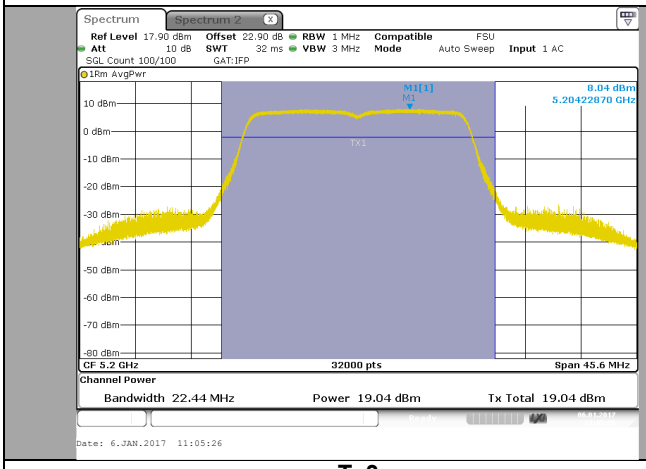
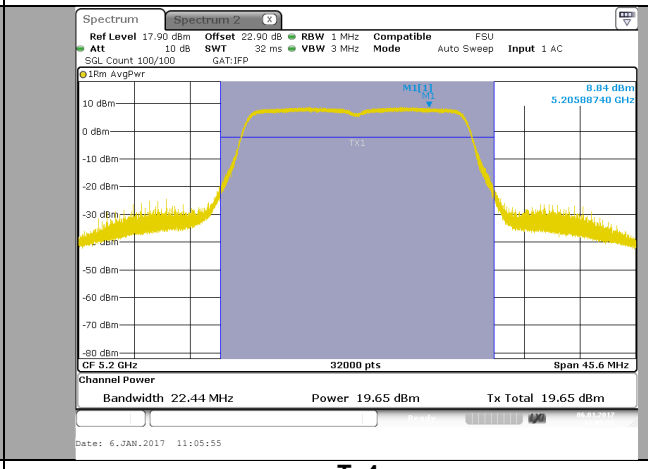
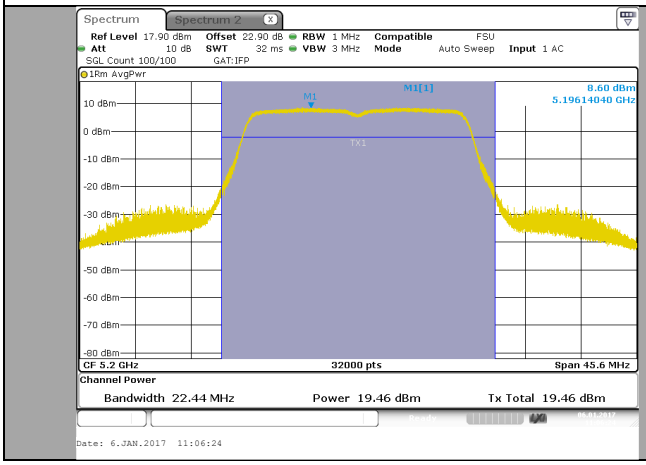
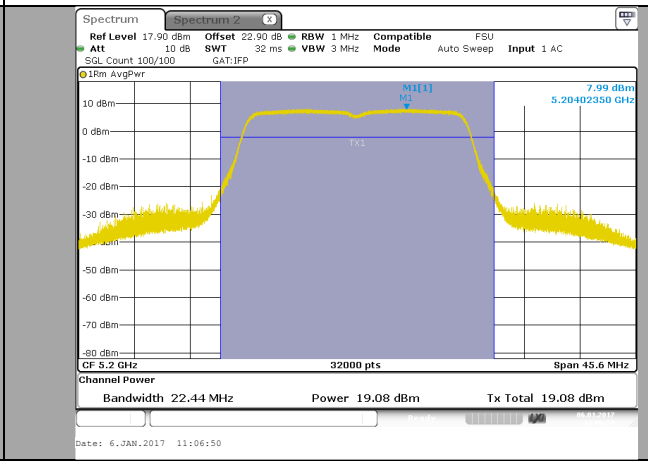
802.11a MASTER	
C12 Maximum Conducted power (RBW = 1MHz)	
Tx1	Tx2
	
Tx3	Tx4
	

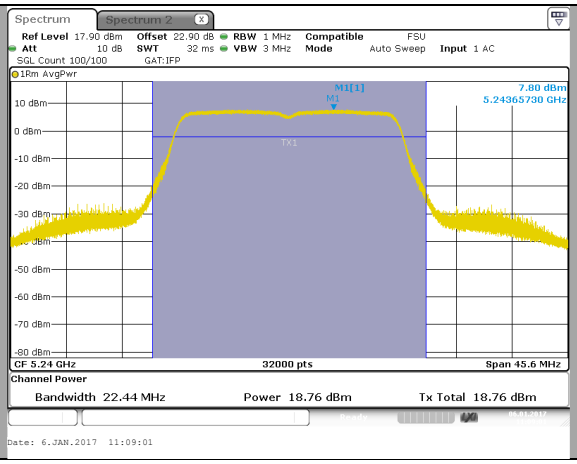
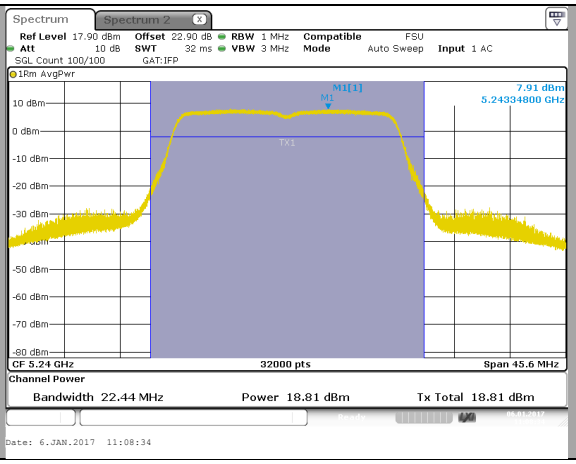
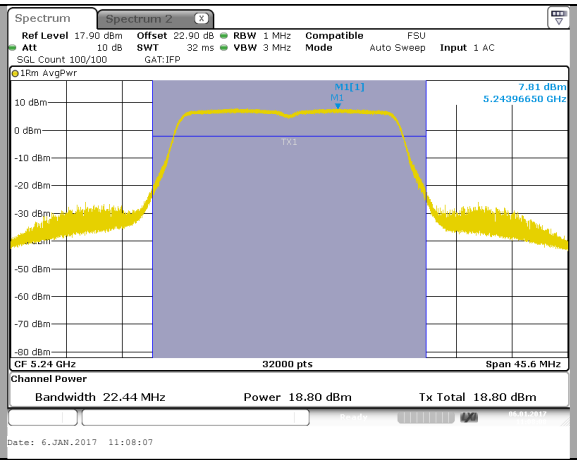
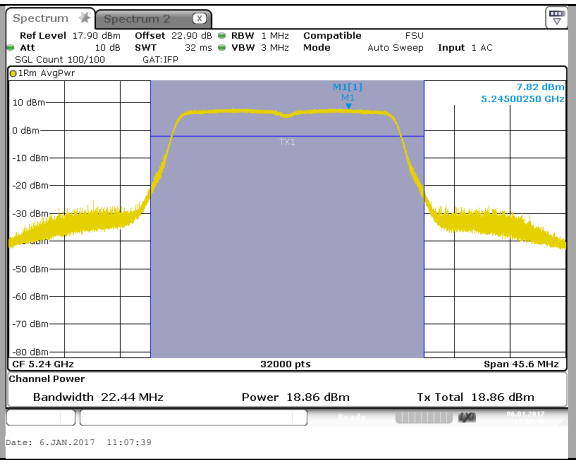
802.11a MASTER	
C12 Power Spectral Density (RBW = 500kHz)	
Tx1	Tx2
	
Tx3	Tx4
	

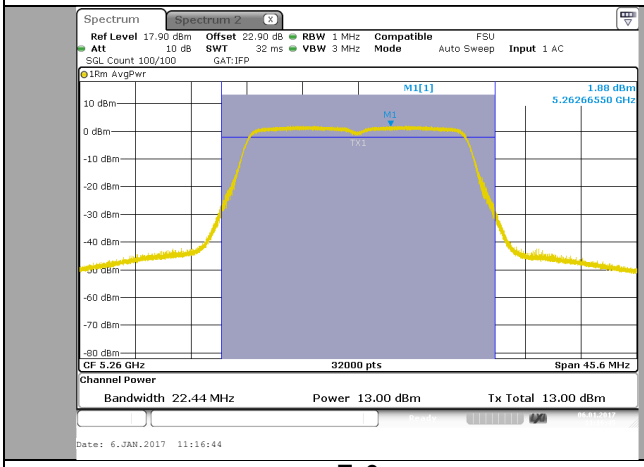
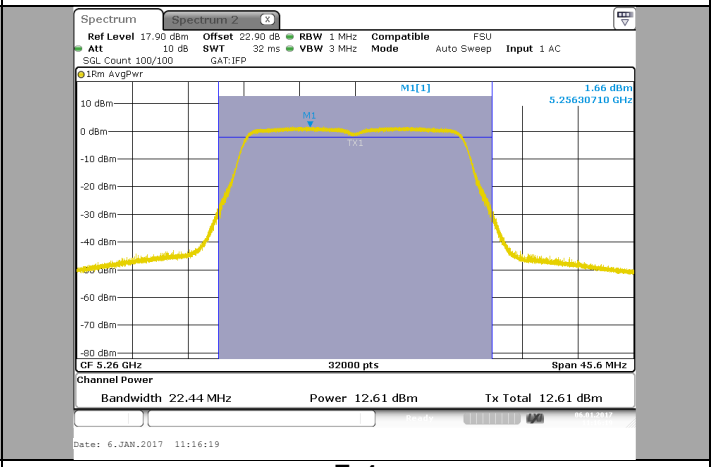
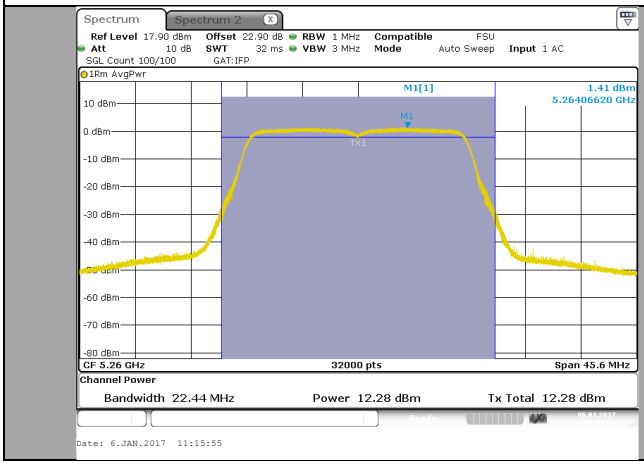
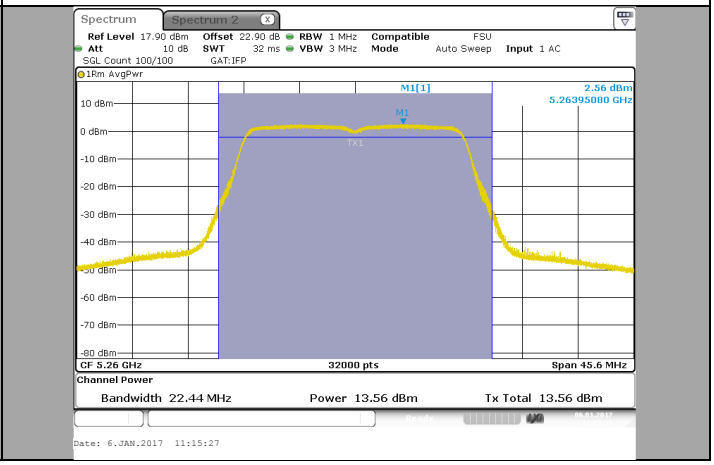
802.11a MASTER	
C13 Maximum Conducted power (RBW = 1MHz)	
Tx1	Tx2
	
Tx3	Tx4
	

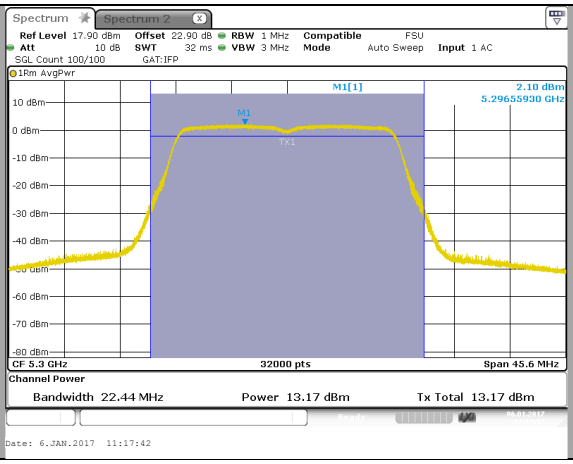
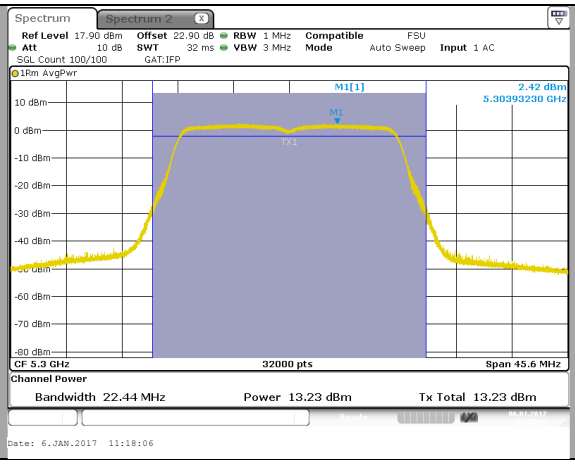
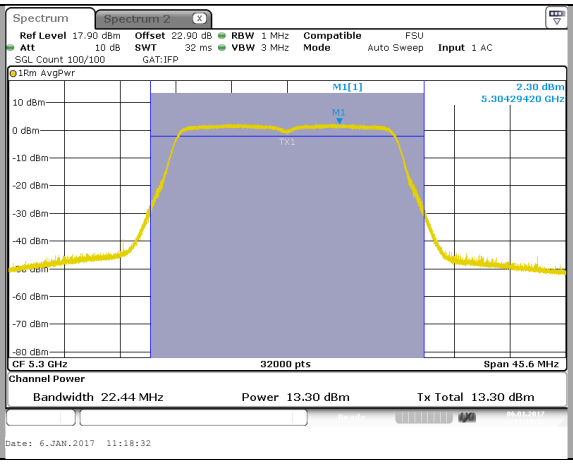
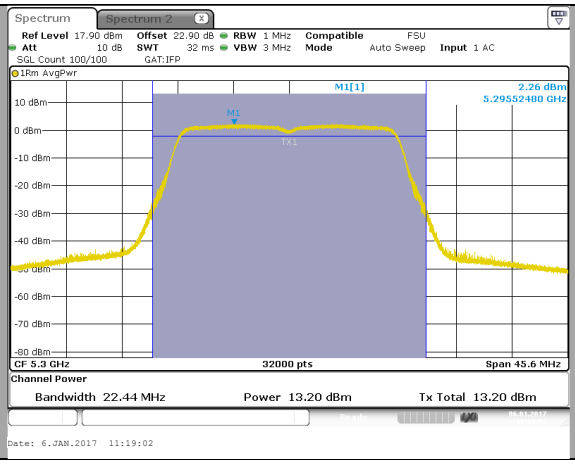
802.11a MASTER	
C13 Power Spectral Density (RBW = 500kHz)	
Tx1	Tx2
	
Tx3	Tx4
	

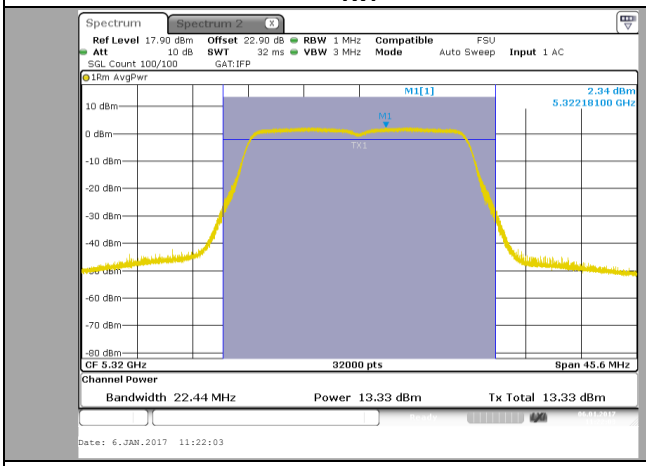
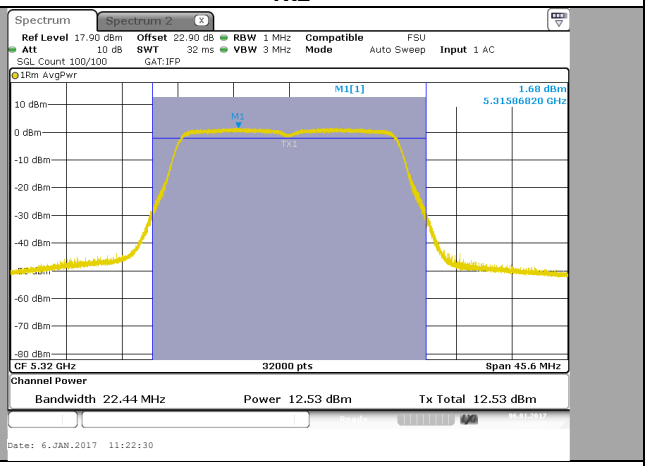
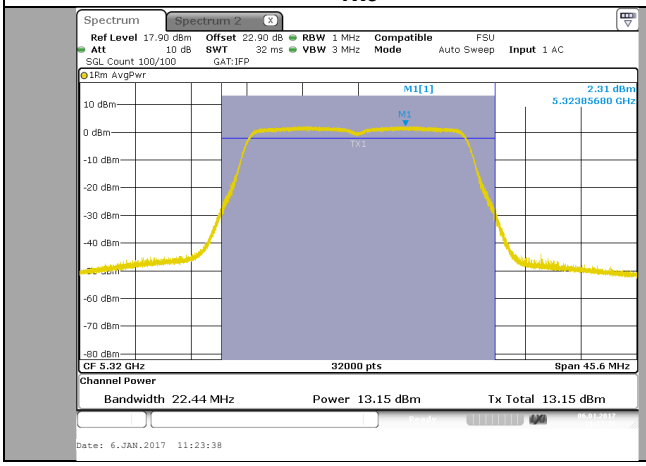
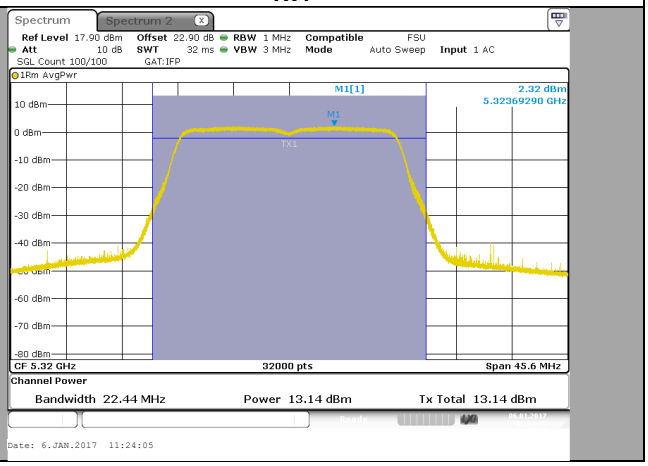
802.11n HT20/ac VHT20 MASTER	
C1	
Tx1	Tx2
	
Tx3	Tx4
	

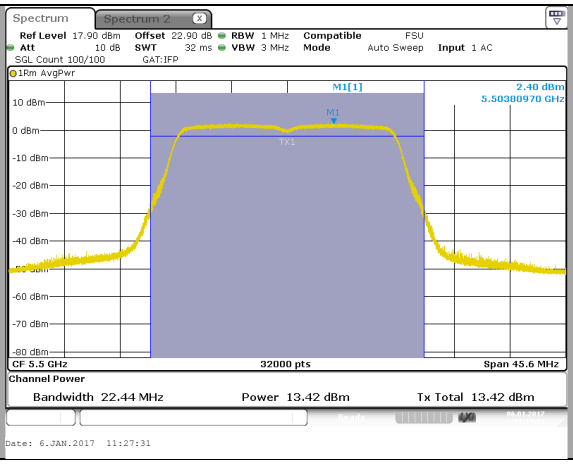
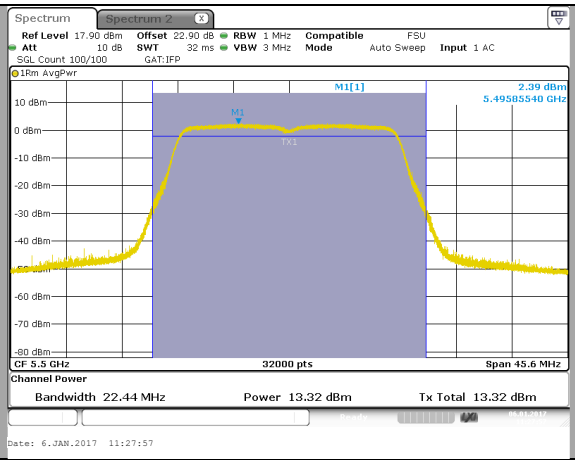
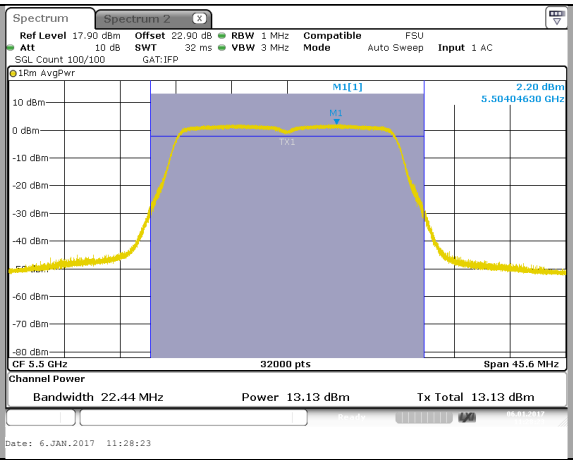
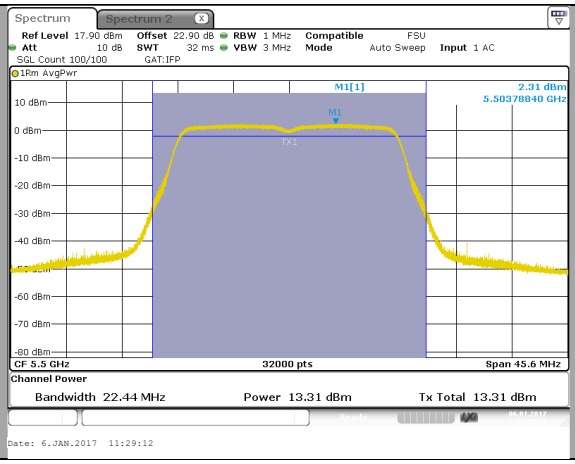
802.11n HT20/ac VHT20 MASTER	
C2	
Tx1	Tx2
	
Tx3	Tx4
	

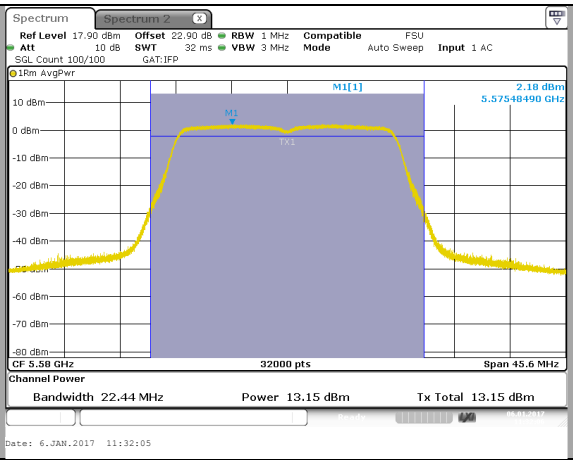
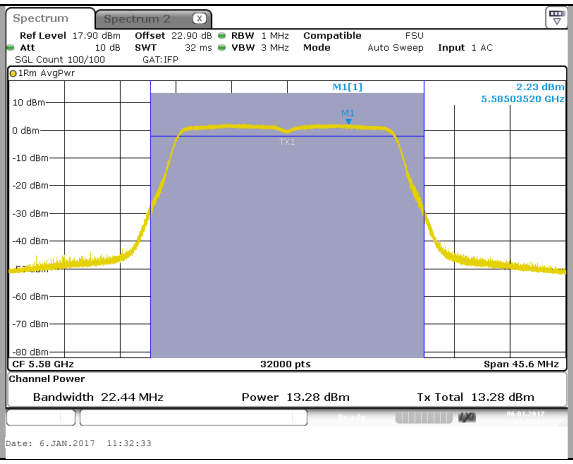
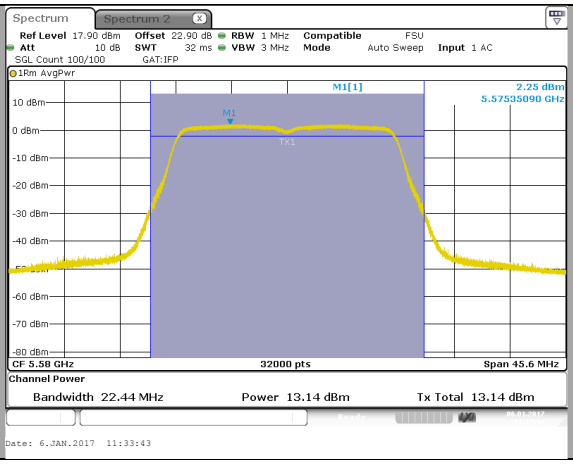
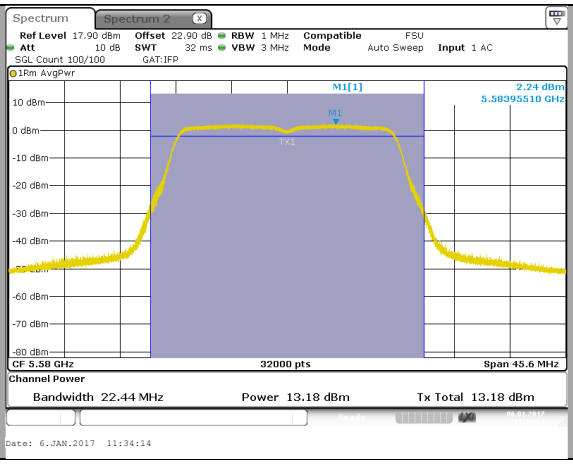
802.11n HT20/ac VHT20 MASTER	
C3	
Tx1	Tx2
	
Tx3	Tx4
	

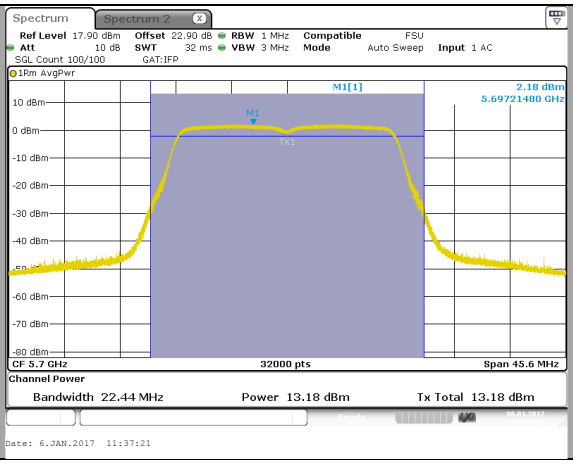
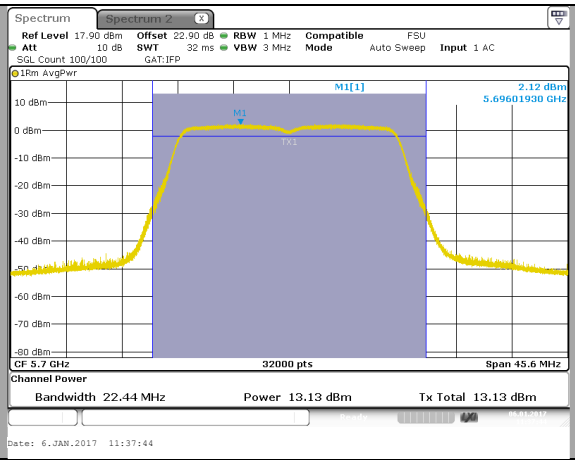
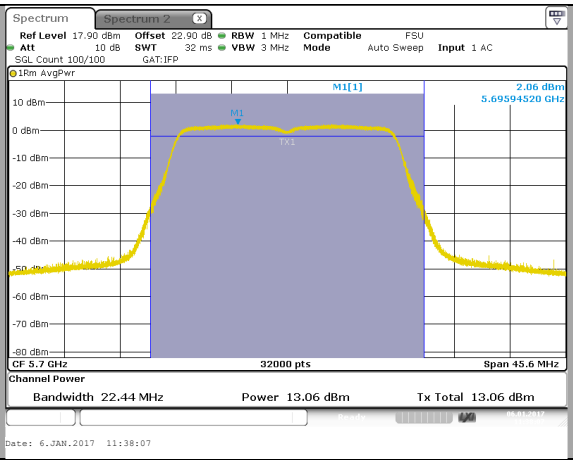
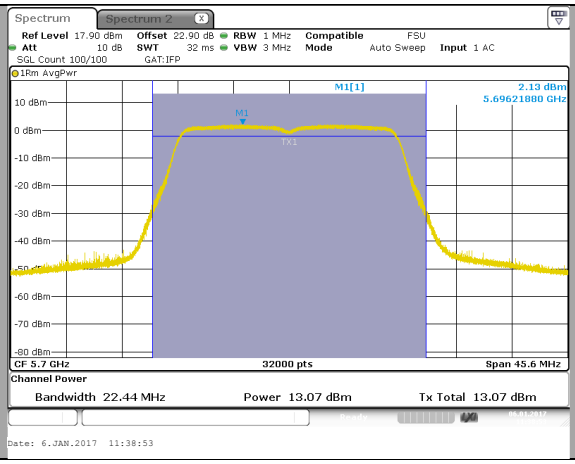
802.11n HT20/ac VHT20 MASTER	
C4	
Tx1	Tx2
	
Tx3	Tx4
	

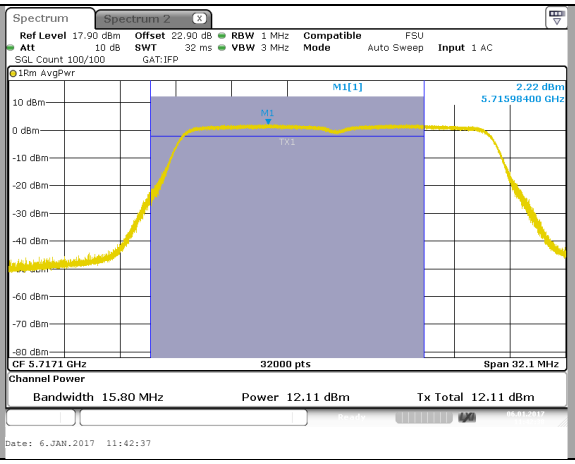
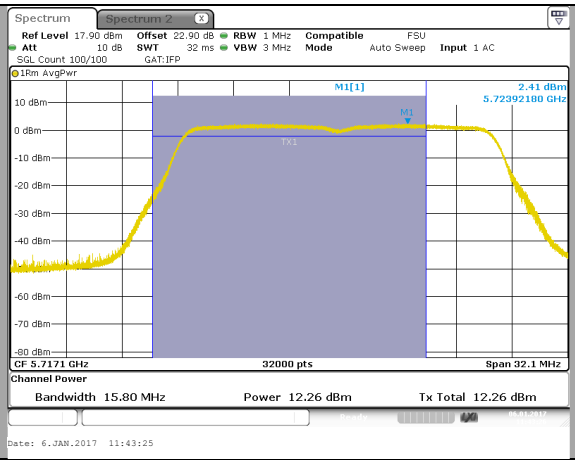
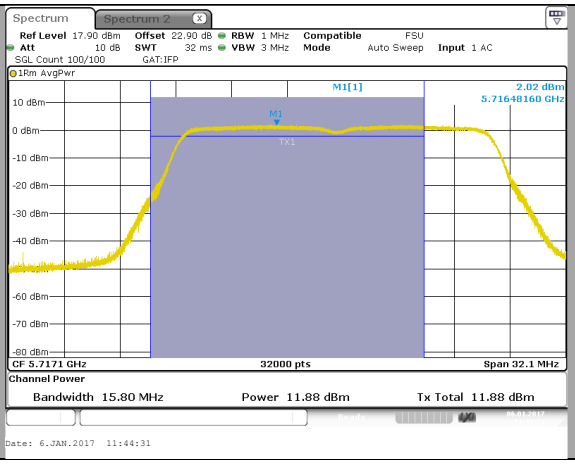
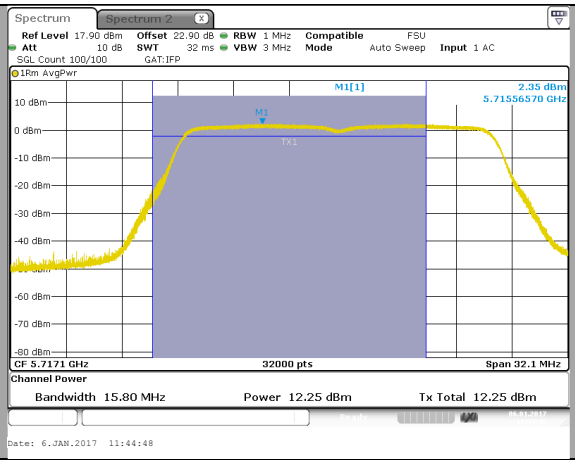
802.11n HT20/ac VHT20 MASTER	
C5	
Tx1	Tx2
	
Tx3	Tx4
	

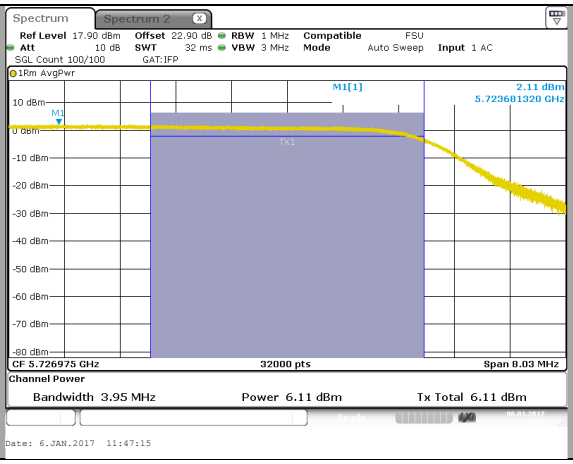
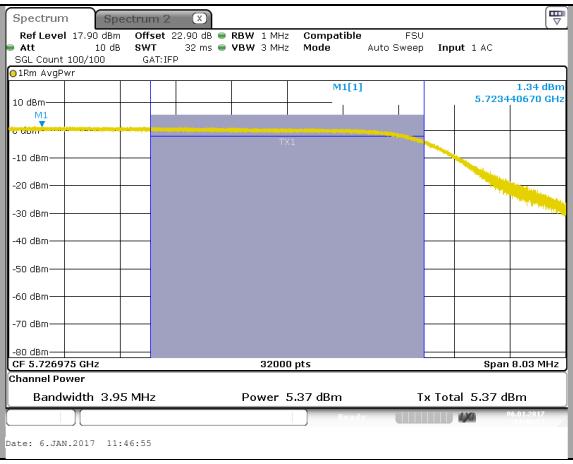
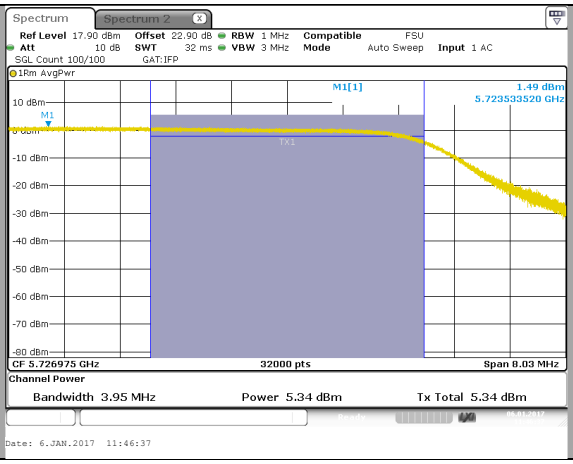
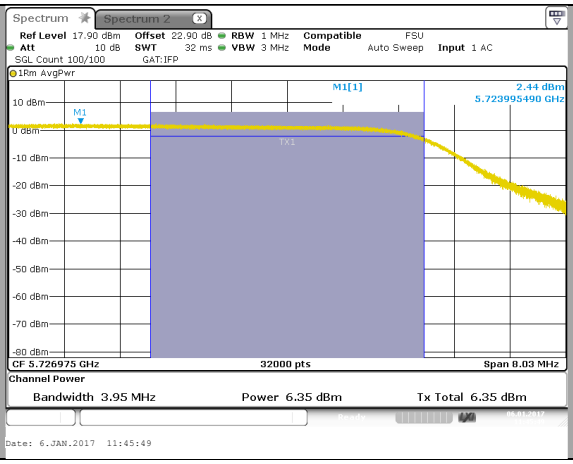
802.11n HT20/ac VHT20 MASTER	
C6	
Tx1	Tx2
	
Tx3	Tx4
	

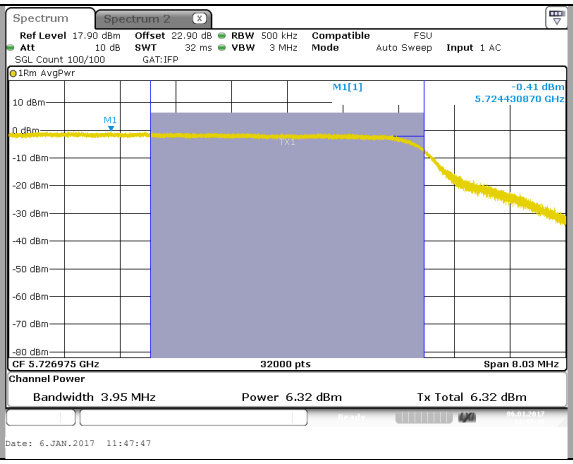
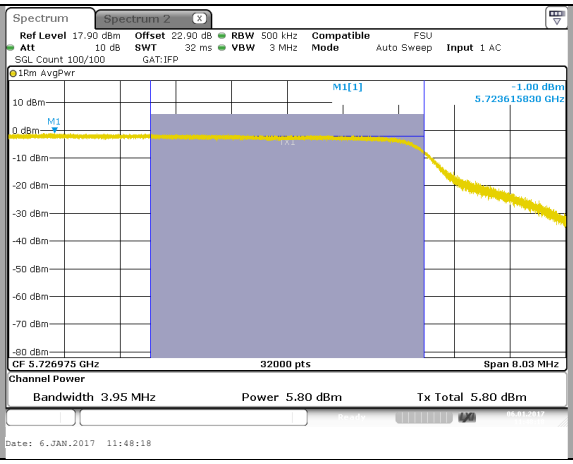
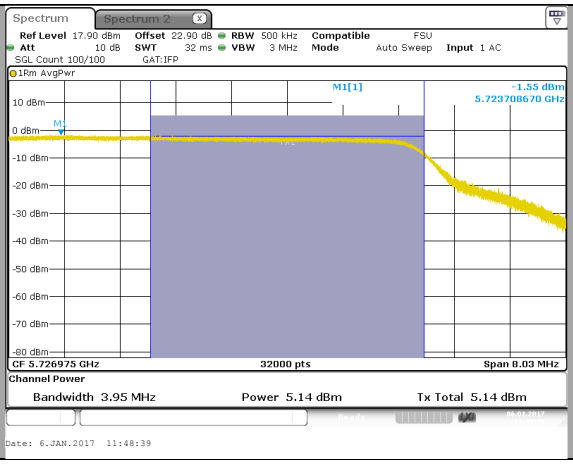
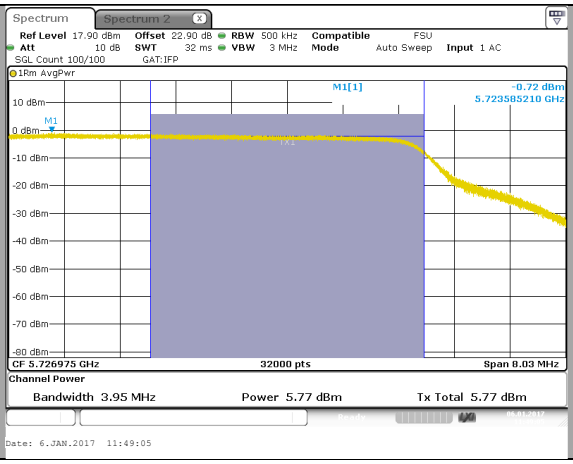
802.11n HT20/ac VHT20 MASTER	
C7	
Tx1	Tx2
	
Tx3	Tx4
	

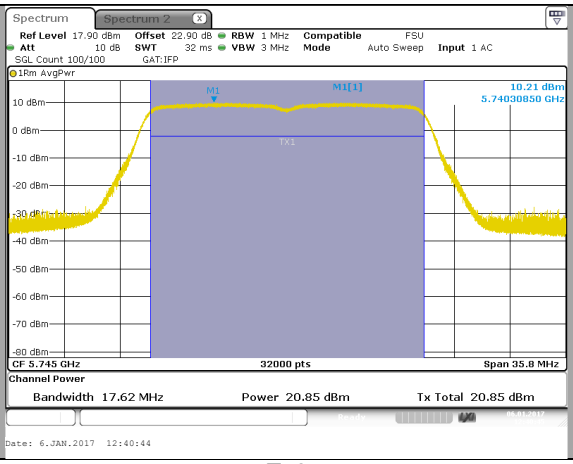
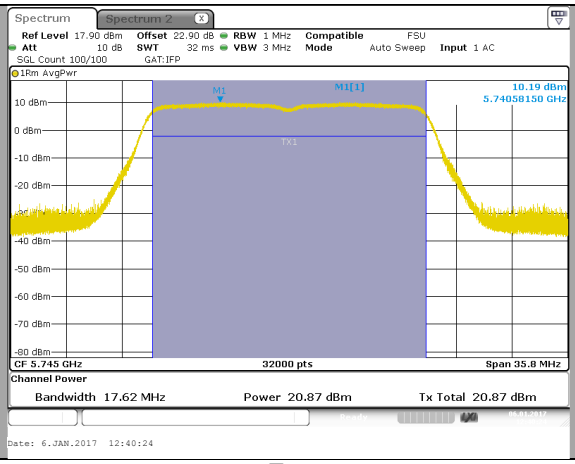
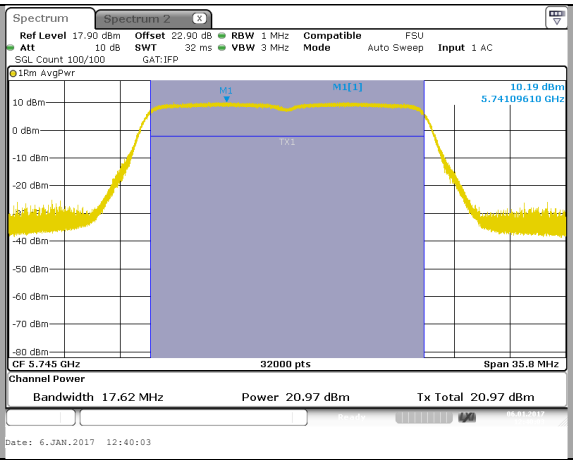
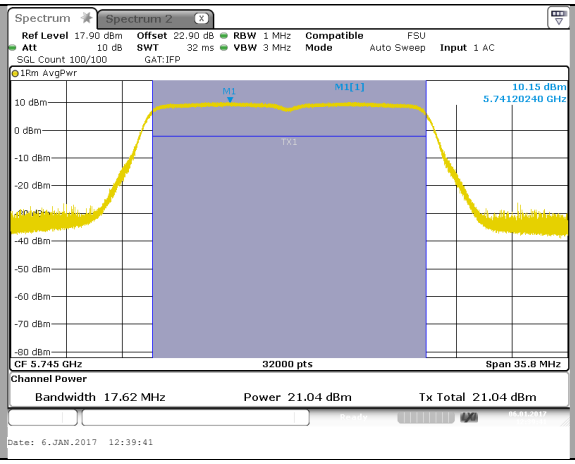
802.11n HT20/ac VHT20 MASTER	
C8	
Tx1	Tx2
	
Tx3	Tx4
	

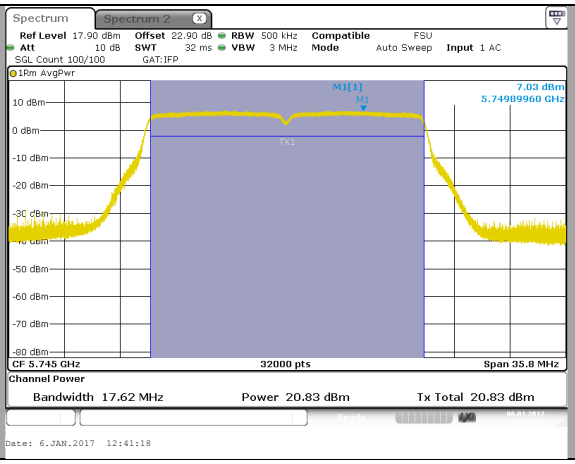
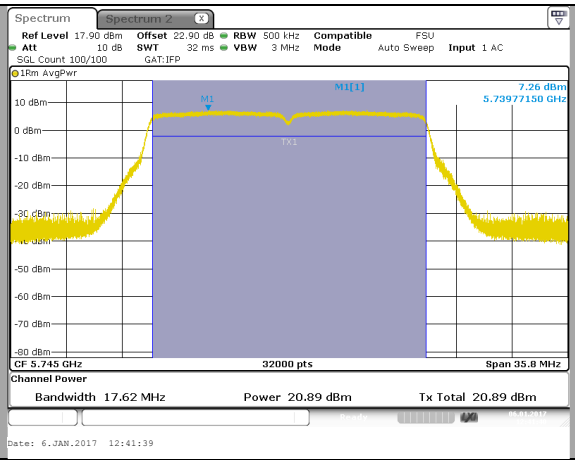
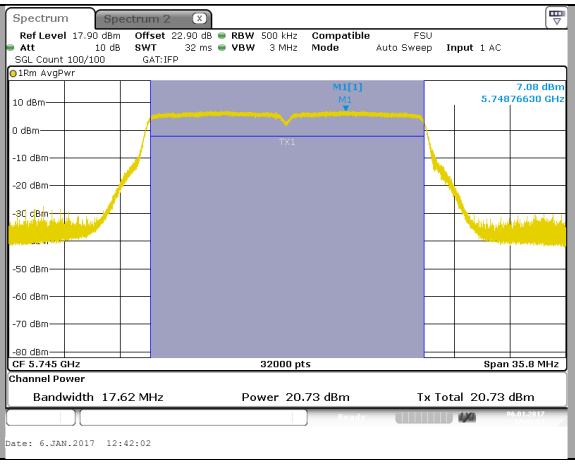
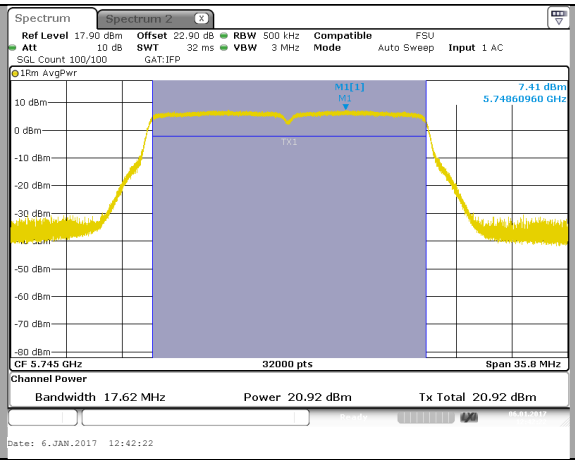
802.11n HT20/ac VHT20 MASTER	
C9	
Tx1	Tx2
	
Tx3	Tx4
	

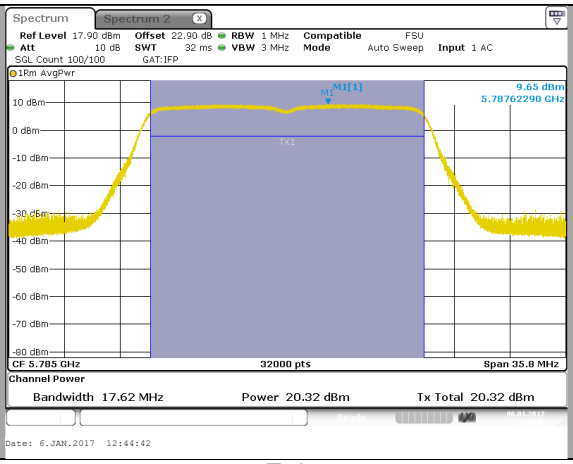
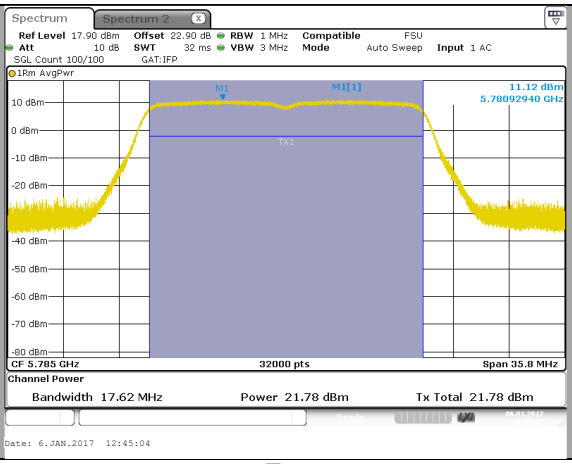
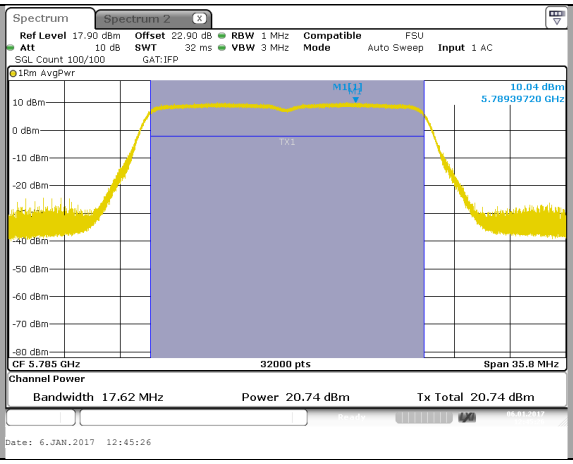
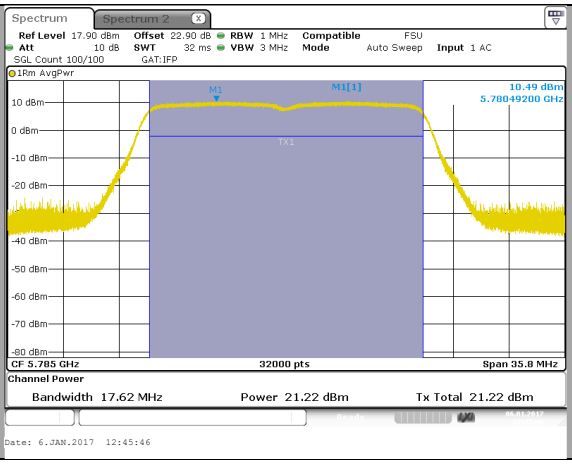
802.11n HT20/ac VHT20 MASTER	
C10 Straddle 5470MHz-5725MHz	
Tx1	Tx2
	
Tx3	Tx4
	

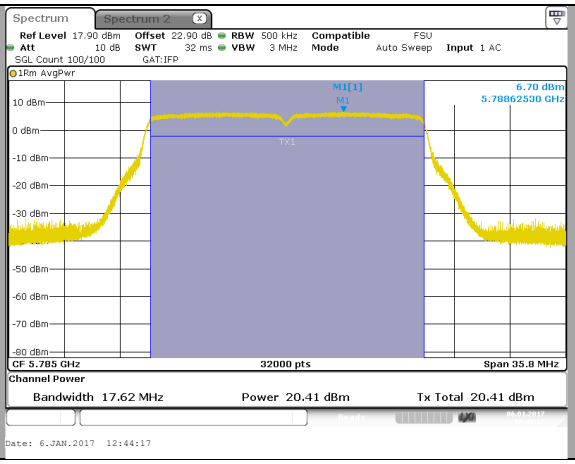
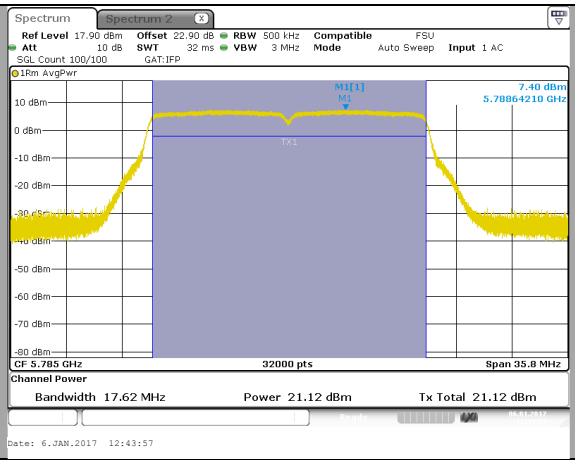
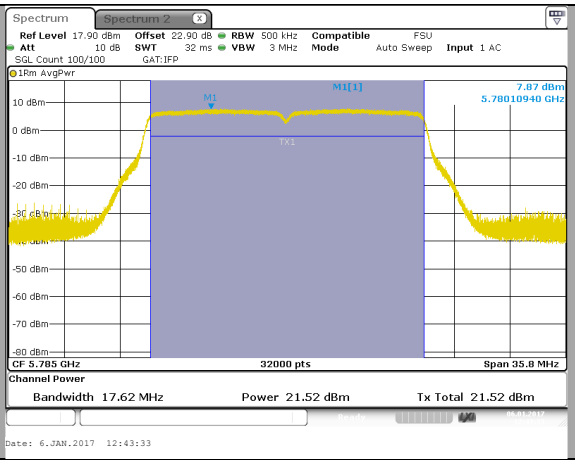
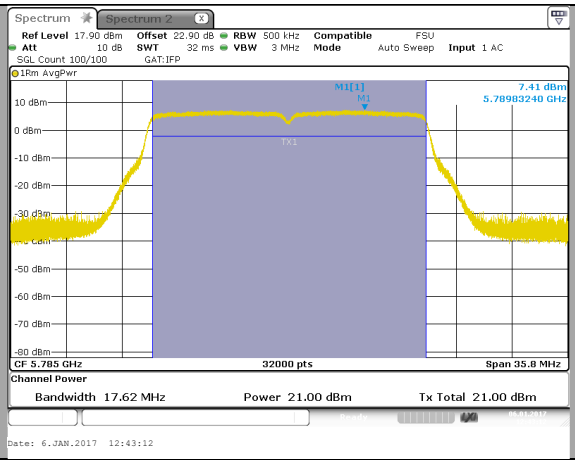
802.11n HT20/ac VHT20 MASTER	
C10 Straddle 5725MHz-5850MHz Maximum Conducted power (RBW = 1MHz)	
Tx1	Tx2
	
Tx3	Tx4
	

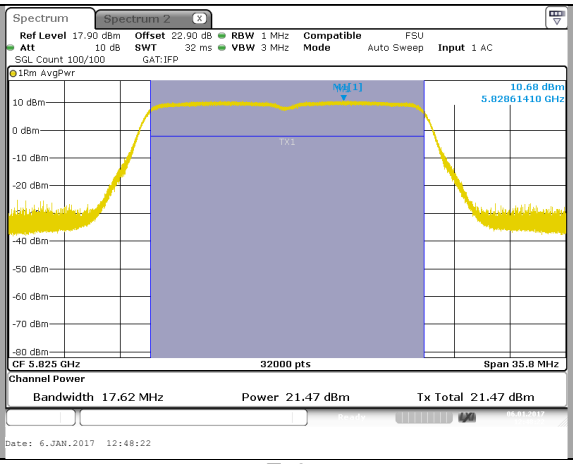
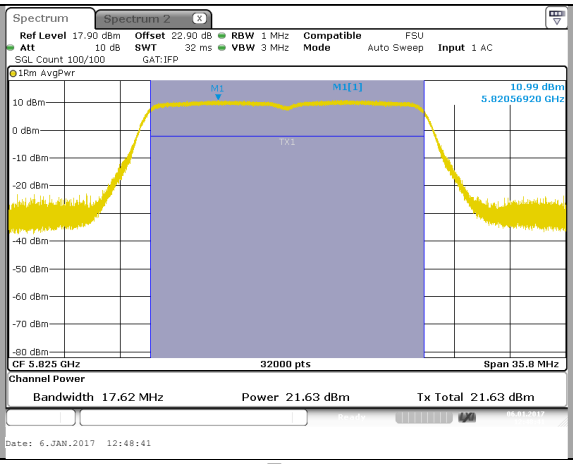
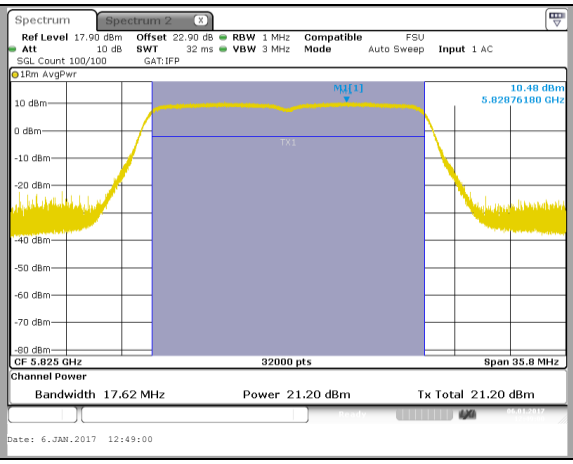
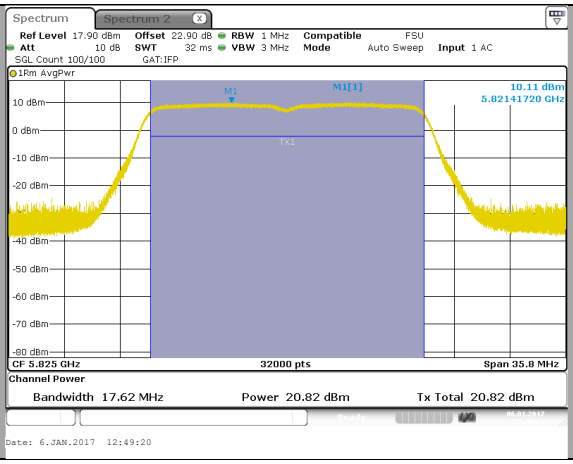
802.11n HT20/ac VHT20 MASTER	
C10 Straddle 5725MHz-5850MHz Power Spectral Density (RBW = 500kHz)	
Tx1	Tx2
	
Tx3	Tx4
	

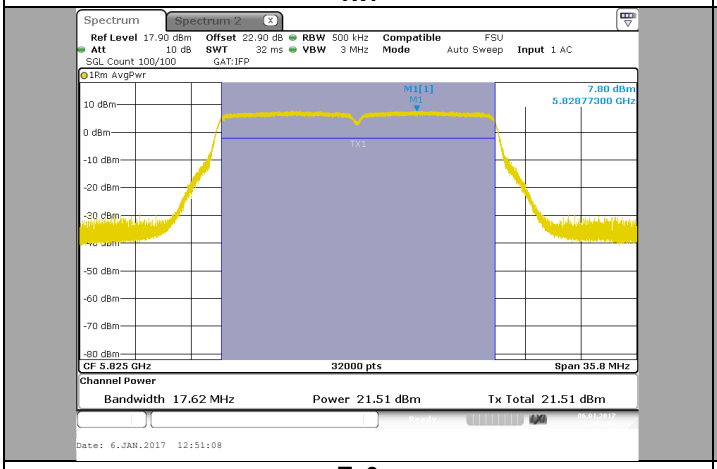
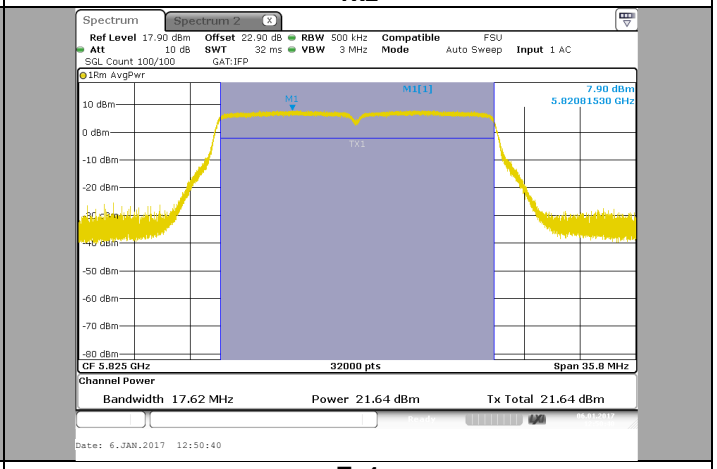
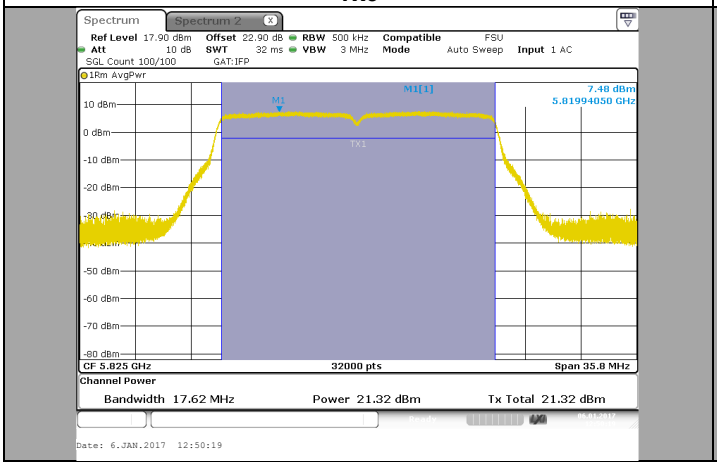
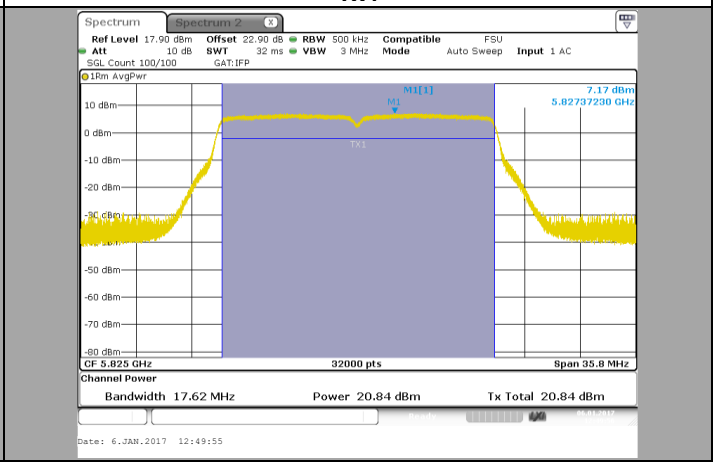
802.11n HT20/ac VHT20 MASTER	
C11 Maximum Conducted power (RBW = 1MHz)	
Tx1	Tx2
	
Tx3	Tx4
	

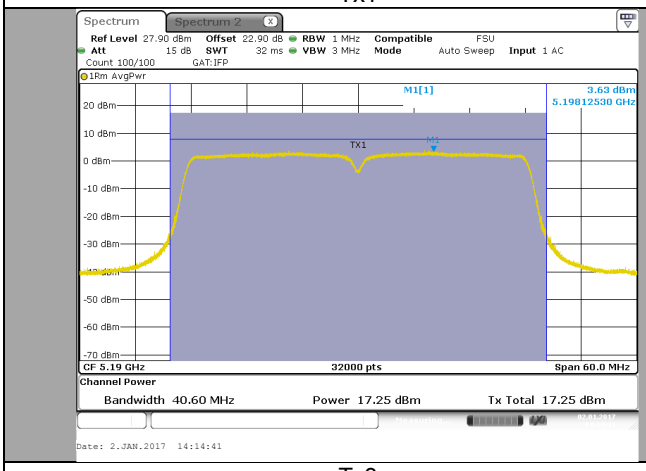
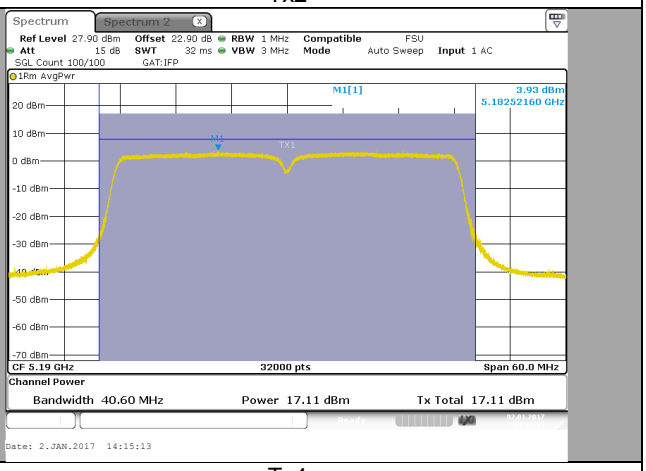
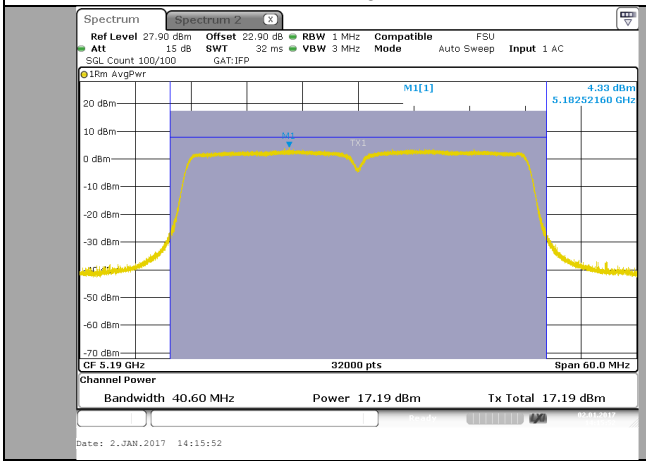
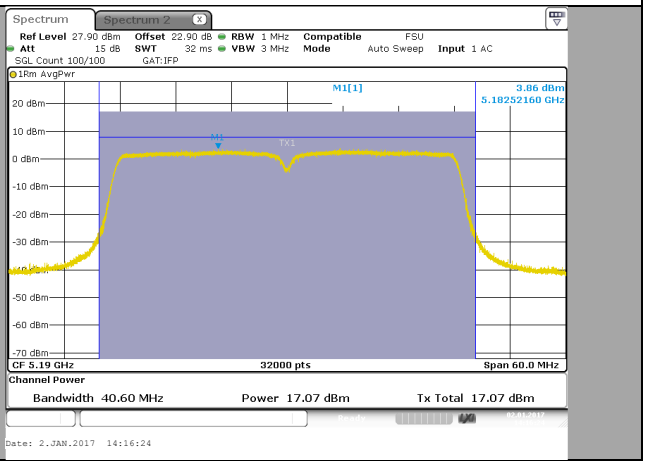
802.11n HT20/ac VHT20 MASTER	
C11 Power Spectral Density (RBW = 500kHz)	
Tx1	Tx2
	
Tx3	Tx4
	

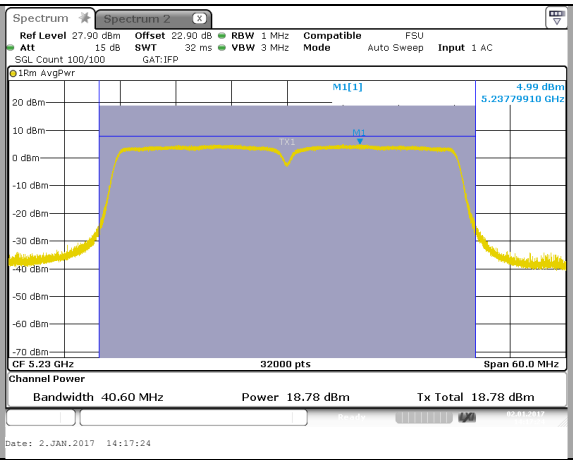
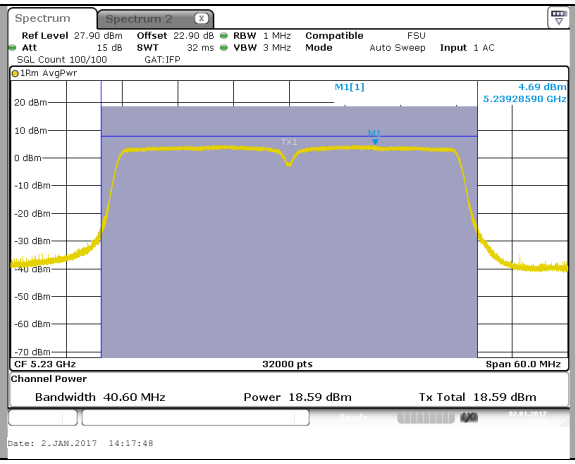
802.11n HT20/ac VHT20 MASTER	
C12 Maximum Conducted power (RBW = 1MHz)	
Tx1	Tx2
	
Tx3	Tx4
	

802.11n HT20/ac VHT20 MASTER	
C12 Power Spectral Density (RBW = 500kHz)	
Tx1	Tx2
	
Tx3	Tx4
	

802.11n HT20/ac VHT20 MASTER	
C13 Maximum Conducted power (RBW = 1MHz)	
Tx1	Tx2
	
Tx3	Tx4
	

802.11n HT20/ac VHT20 MASTER	
C13 Power Spectral Density (RBW = 500kHz)	
Tx1	Tx2
	
Tx3	Tx4
	

802.11n HT40/ac VHT40 MASTER	
C14	
Tx1	Tx2
	
Tx3	Tx4
	

802.11n HT40/ac VHT40 MASTER	
C15	
Tx1	Tx2
	
Tx3	Tx4