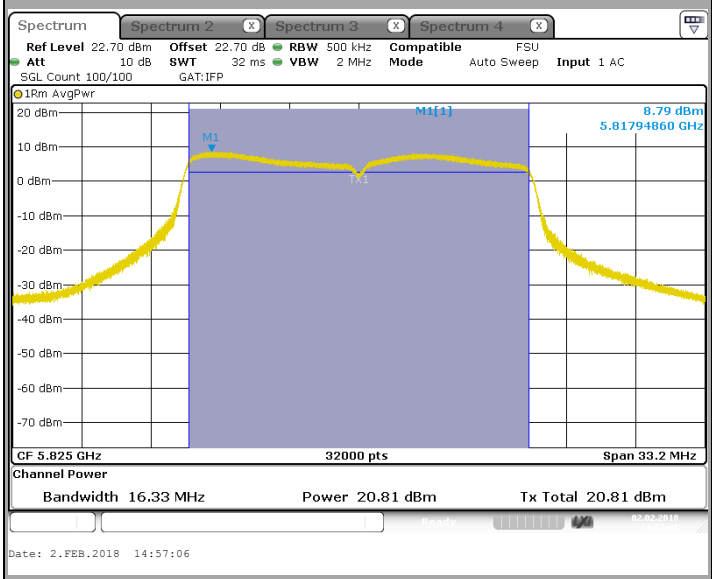
802.11a

C13 (RBW = 500kHz)

Tx1



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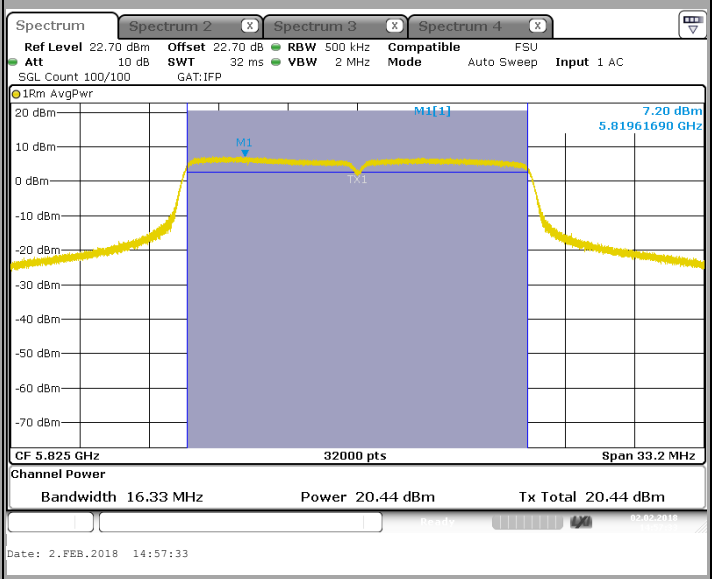

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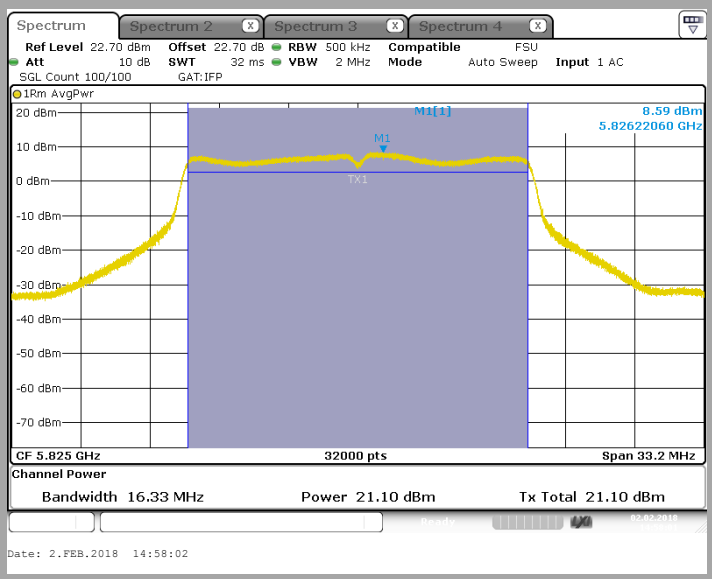
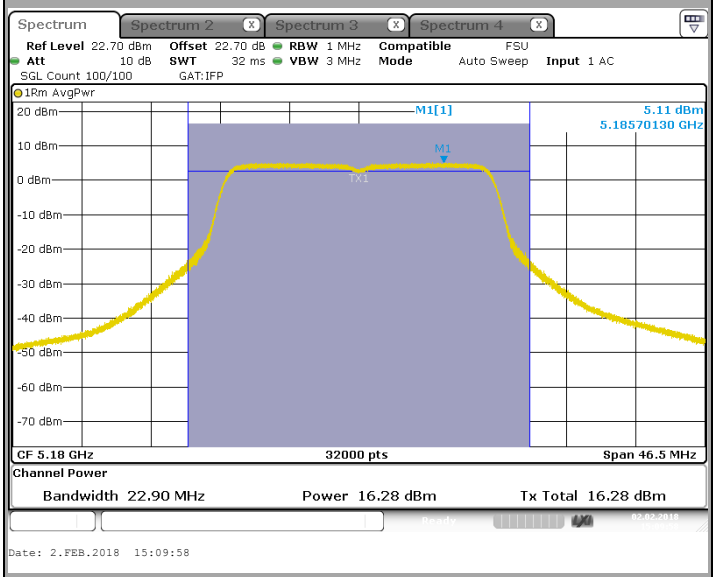


802.11n HT20/ac VHT20

C1

Tx1



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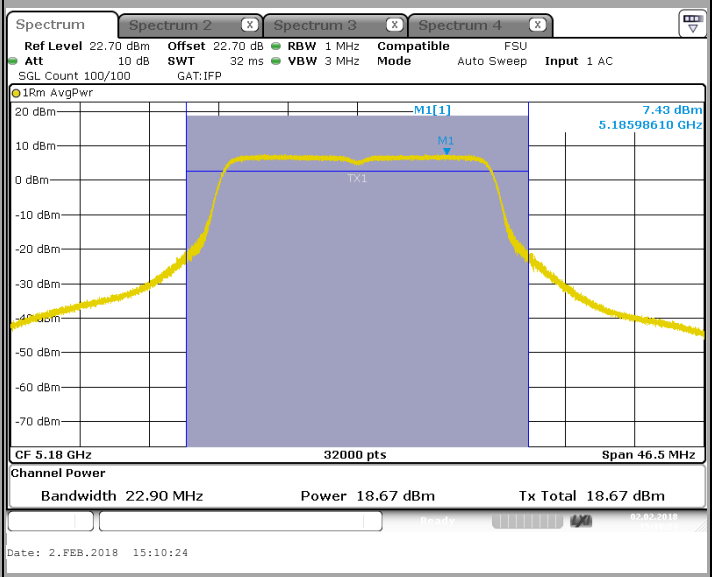

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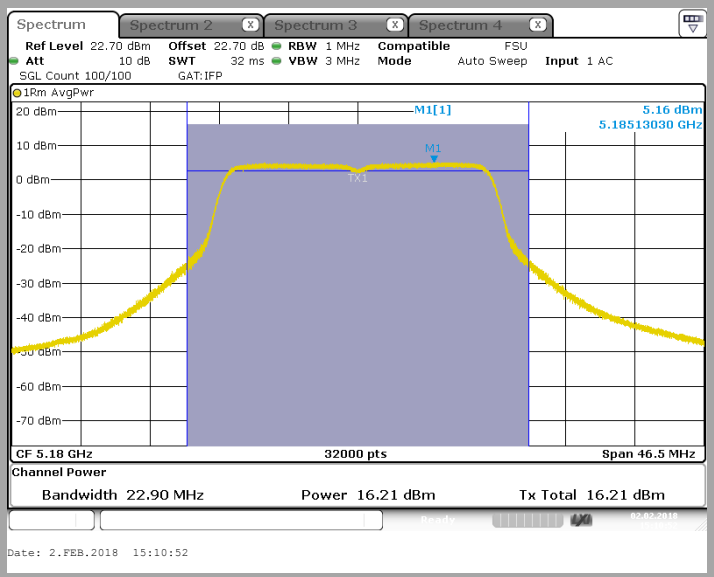
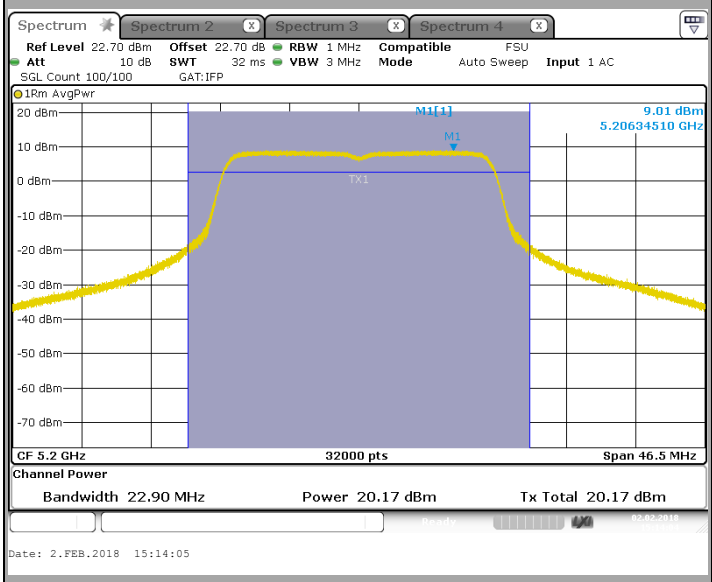
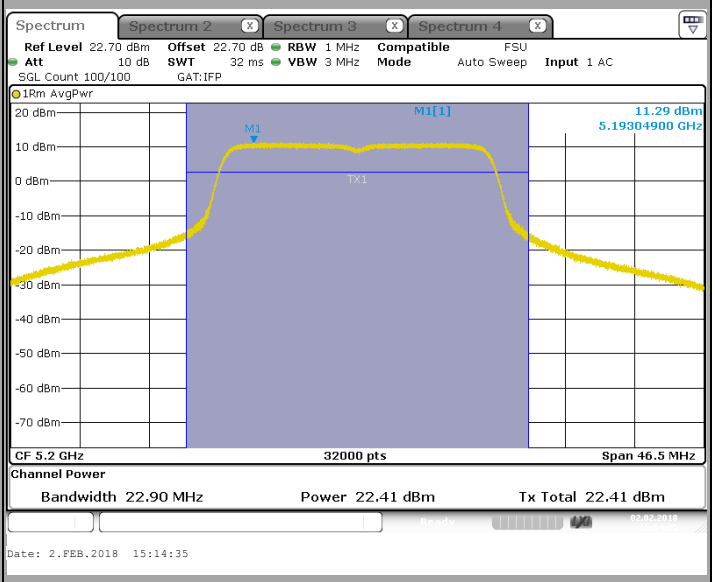


802.11n HT20/ac VHT20	
C2	
Tx1	Tx2
	
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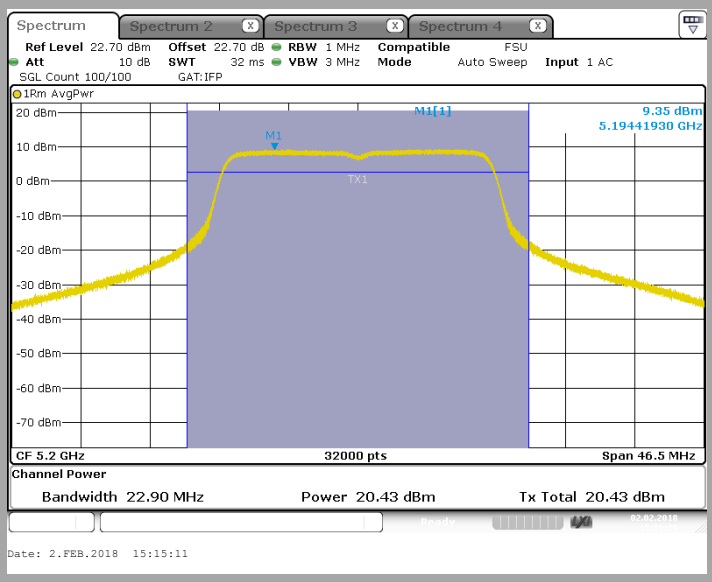
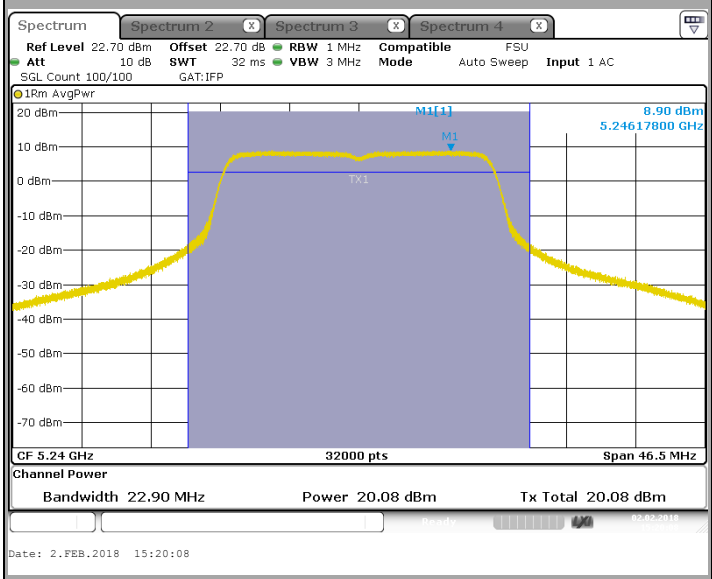
	

802.11n HT20/ac VHT20

C3

Tx1



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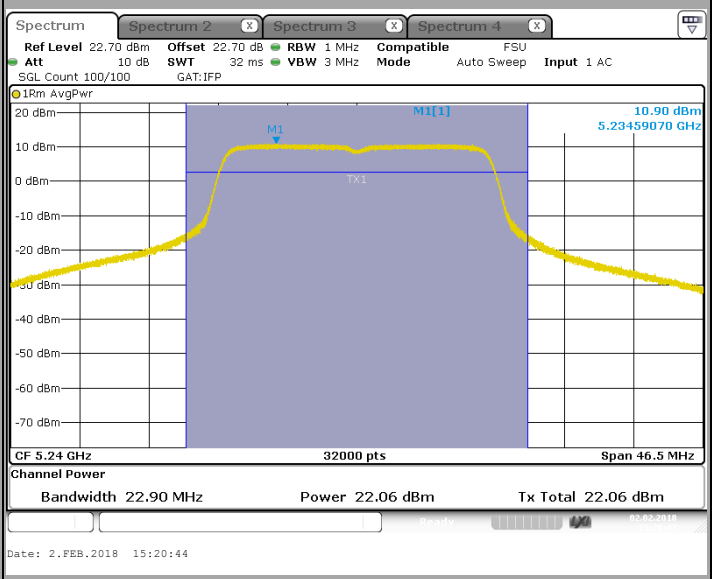

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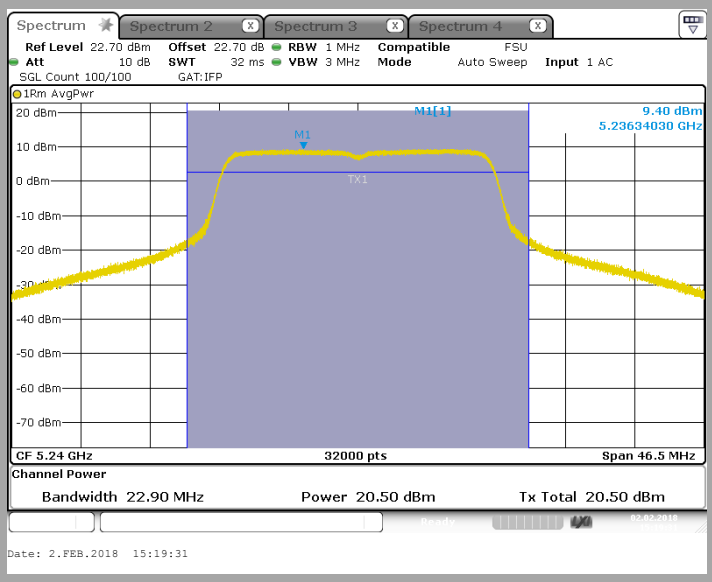
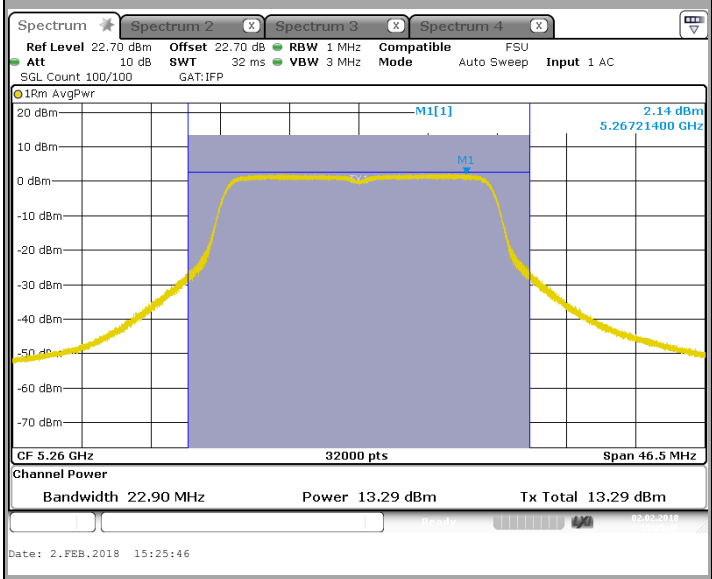


802.11n HT20/ac VHT20

C4

Tx1



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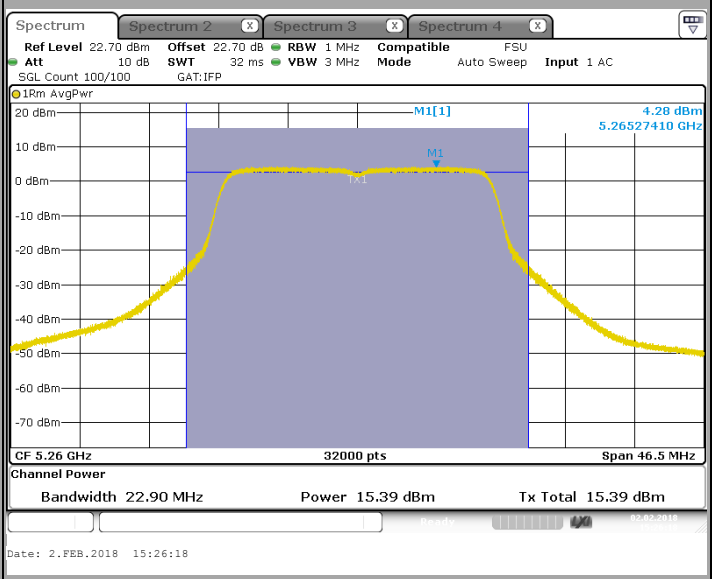

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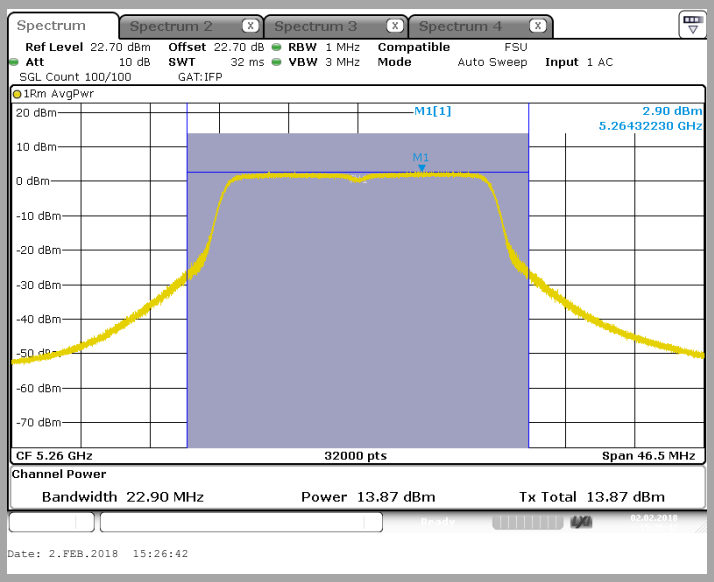

802.11n HT20/ac VHT20

C5

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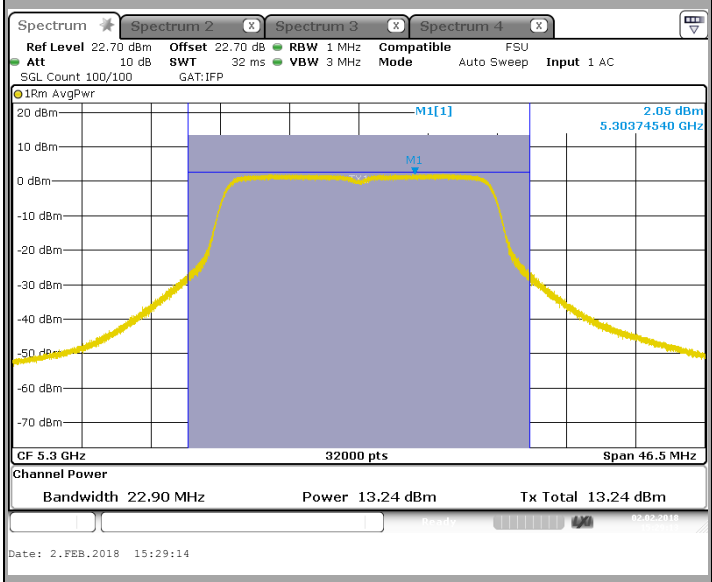

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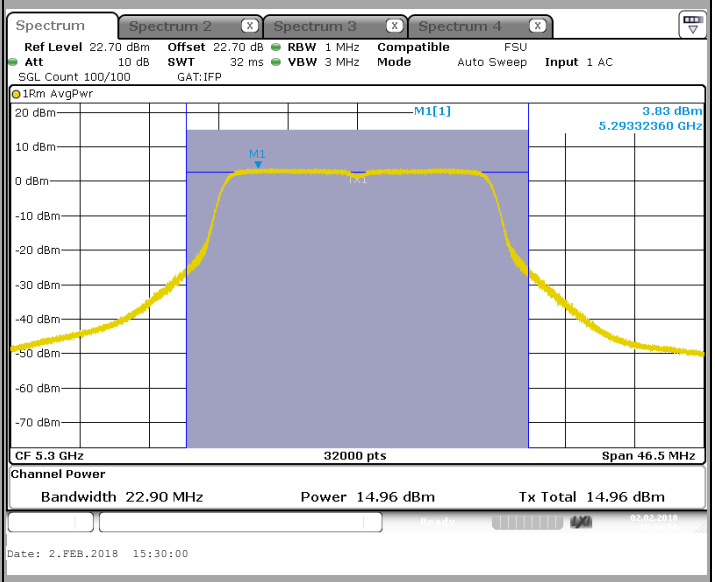

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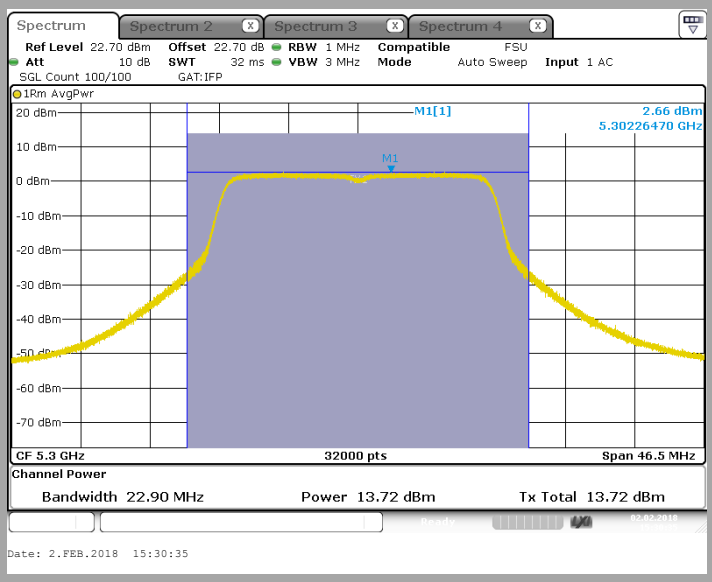
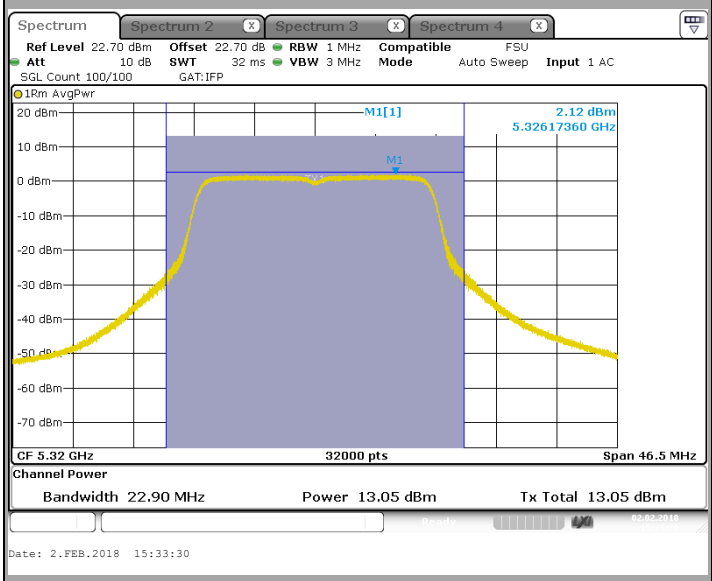


802.11n HT20/ac VHT20

C6

Tx1



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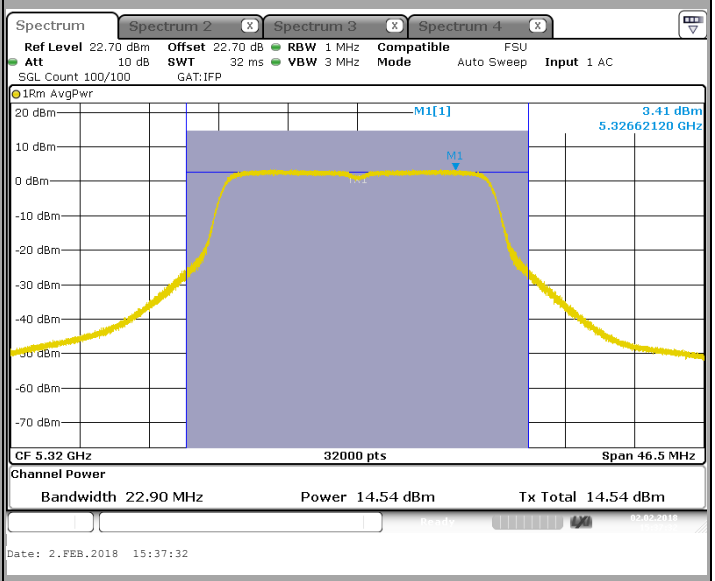

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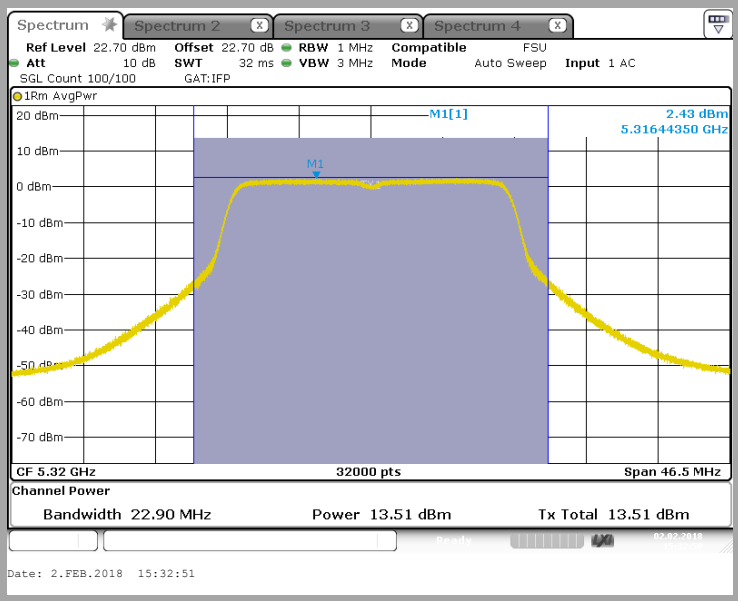
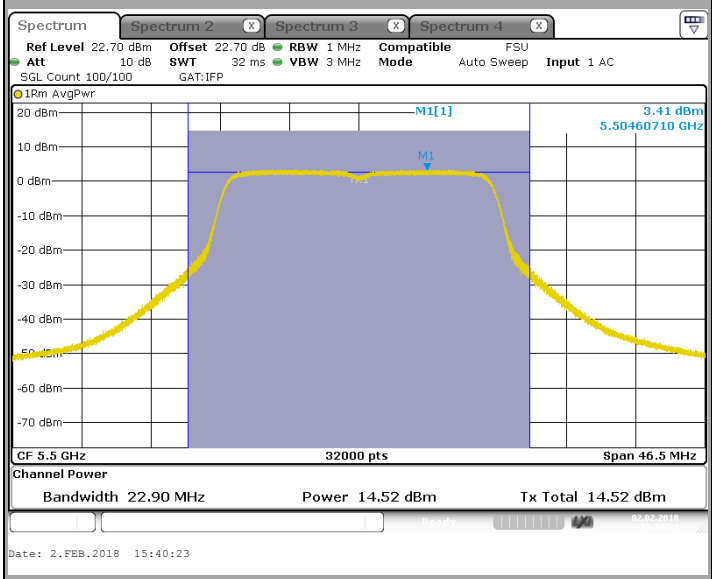


802.11n HT20/ac VHT20

C7

Tx1



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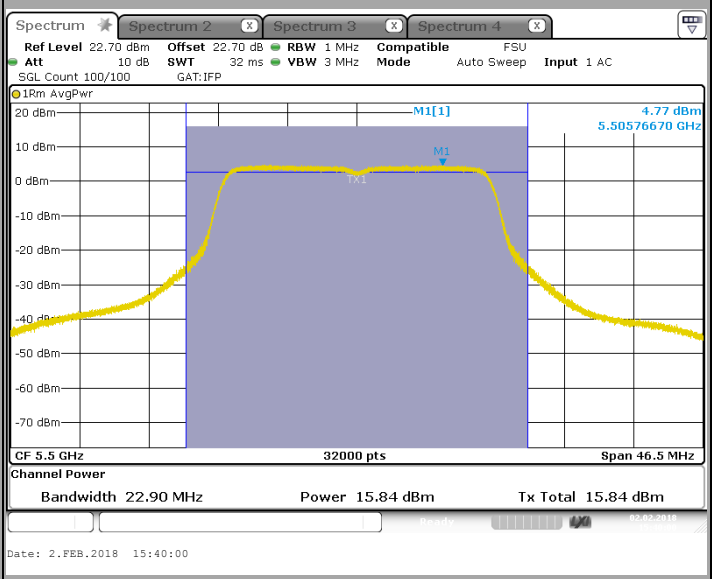

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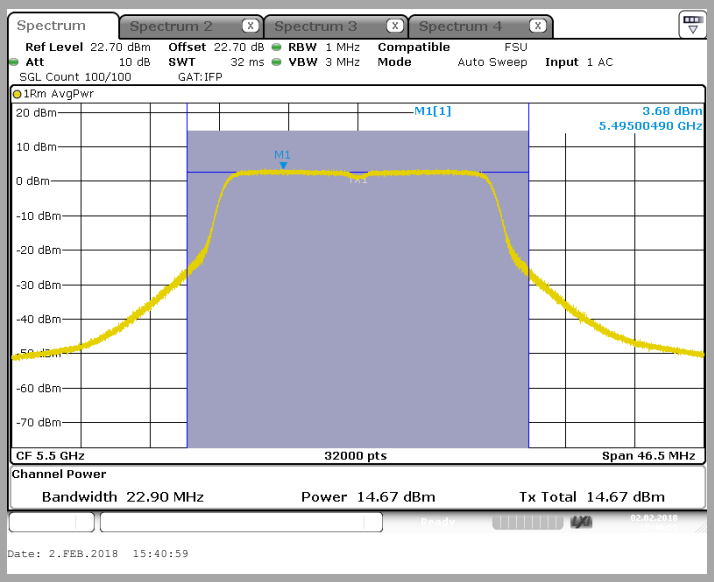
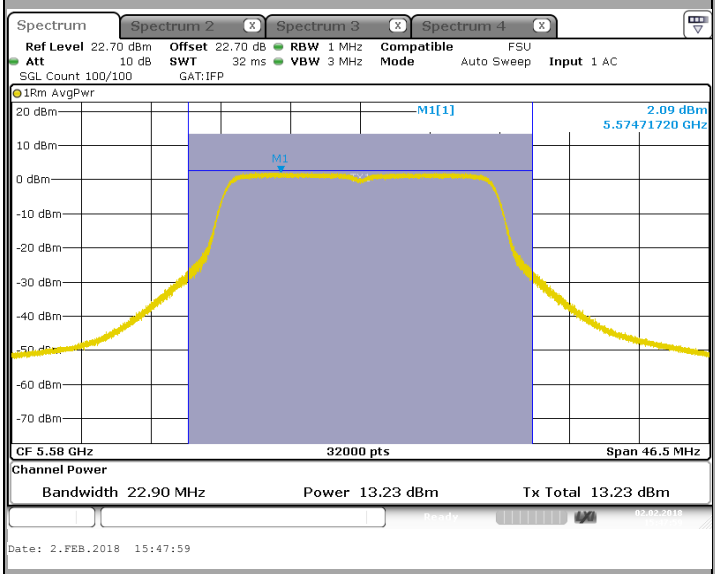


802.11n HT20/ac VHT20

C8

Tx1



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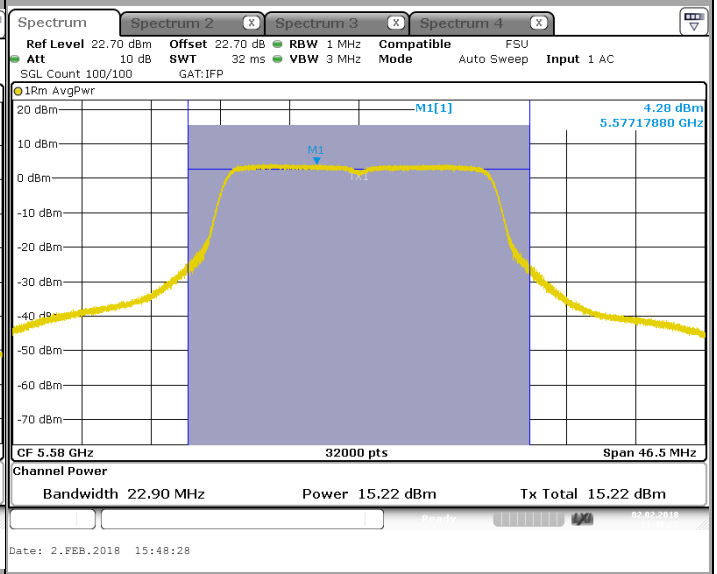

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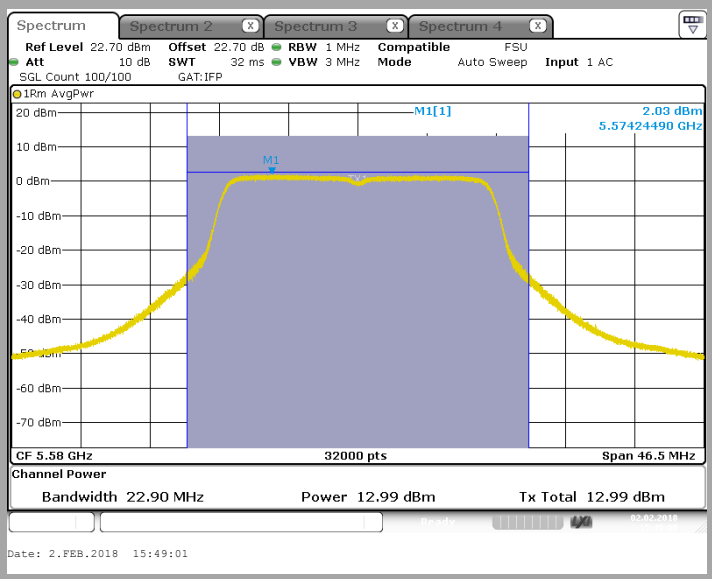
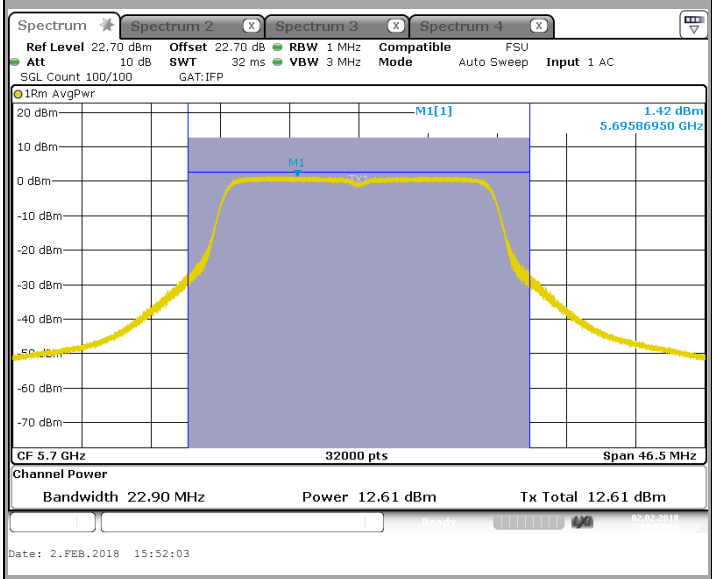


802.11n HT20/ac VHT20

C9

Tx1



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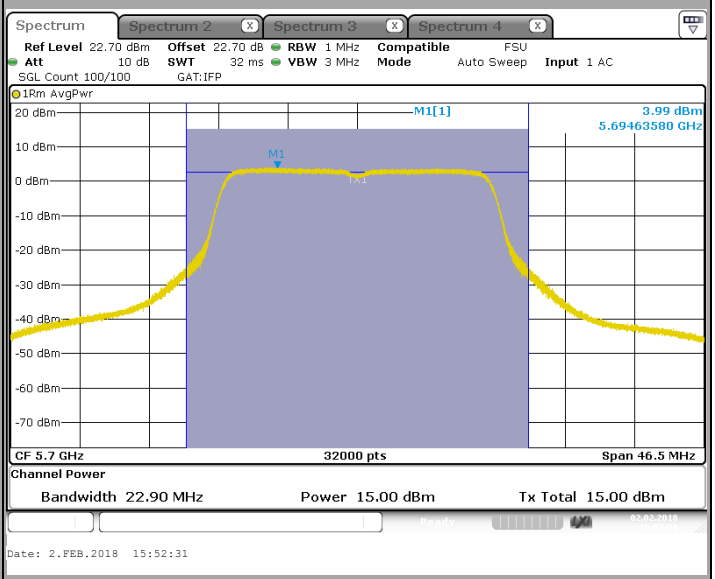
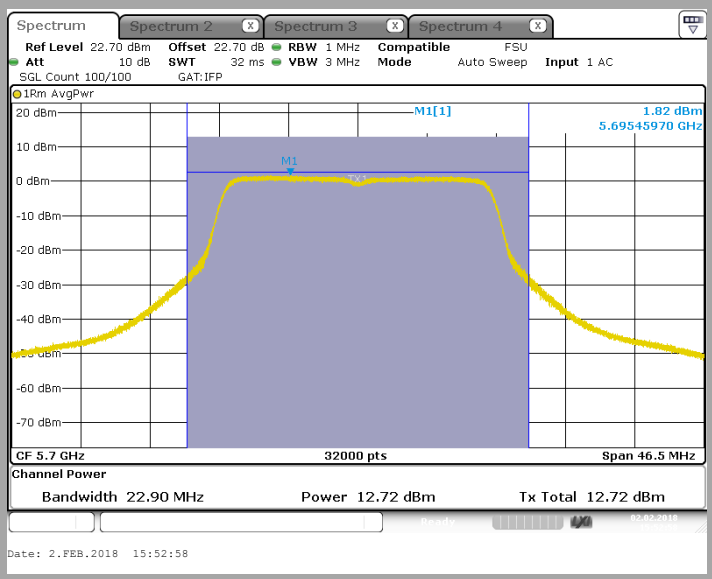


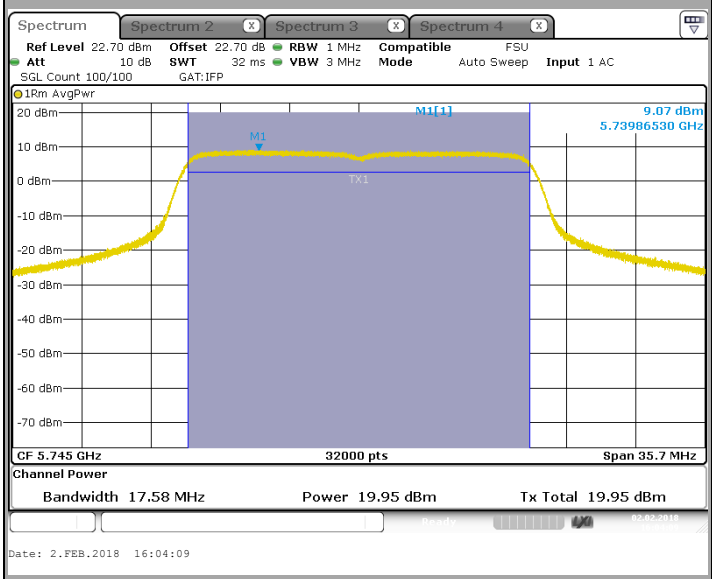
Tx3



802.11n HT20/ac VHT20

C11 (RBW = 1MHz)

Tx1



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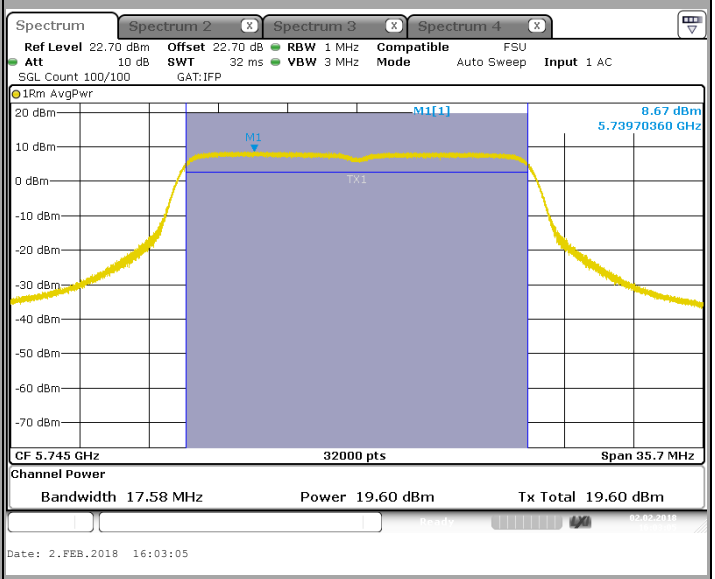

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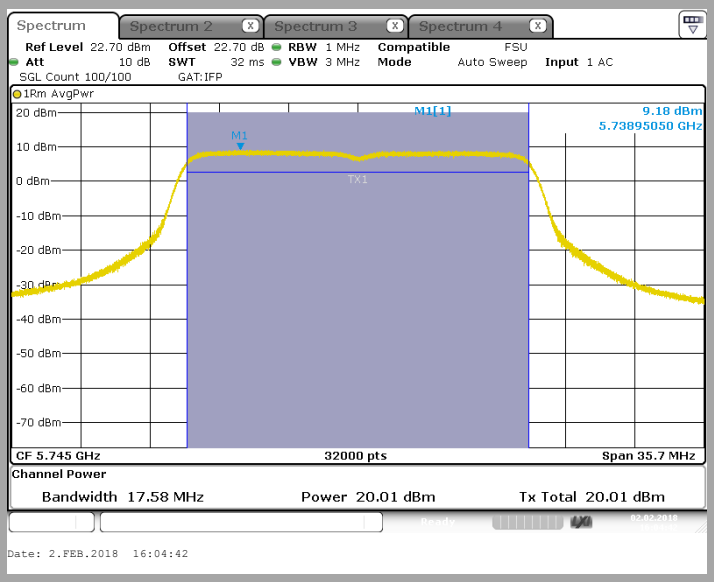
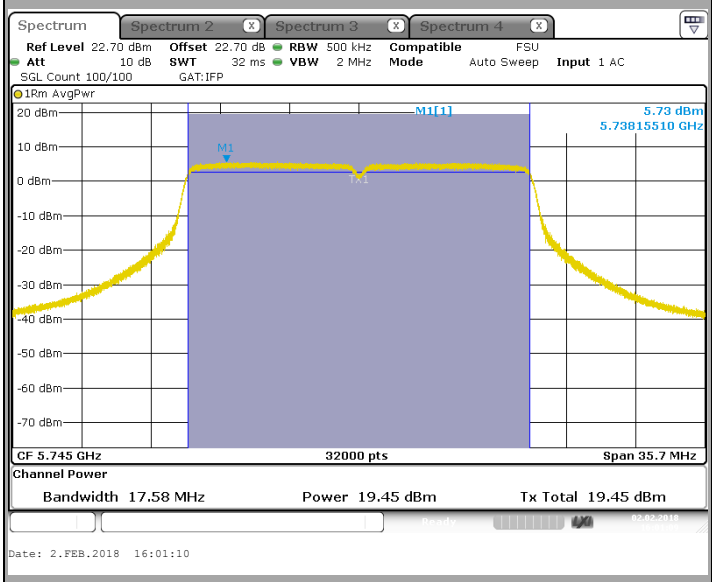
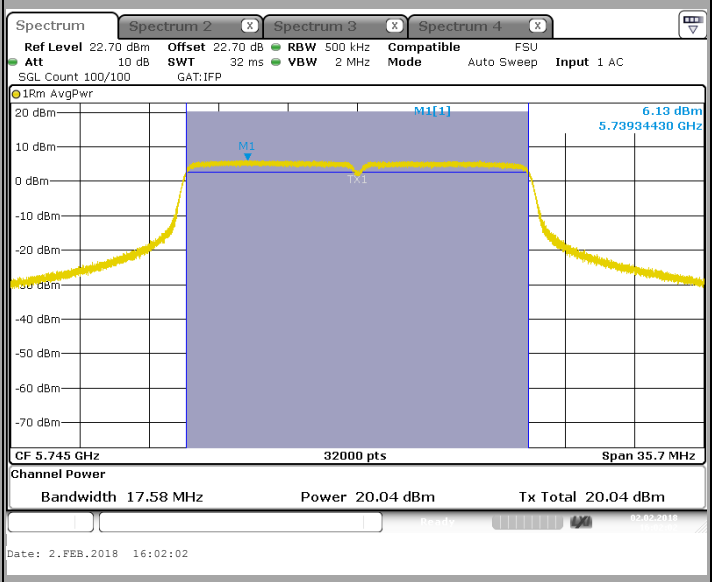


802.11n HT20/ac VHT20	
C11 (RBW = 500kHz)	
Tx1	Tx2
	
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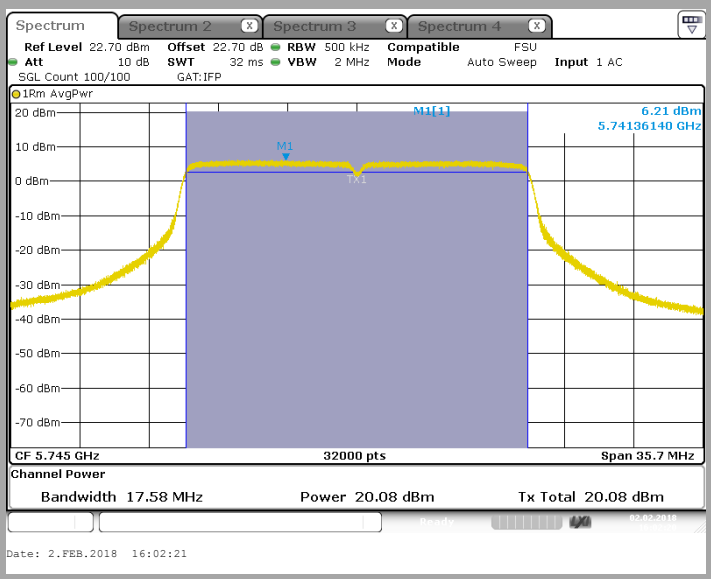
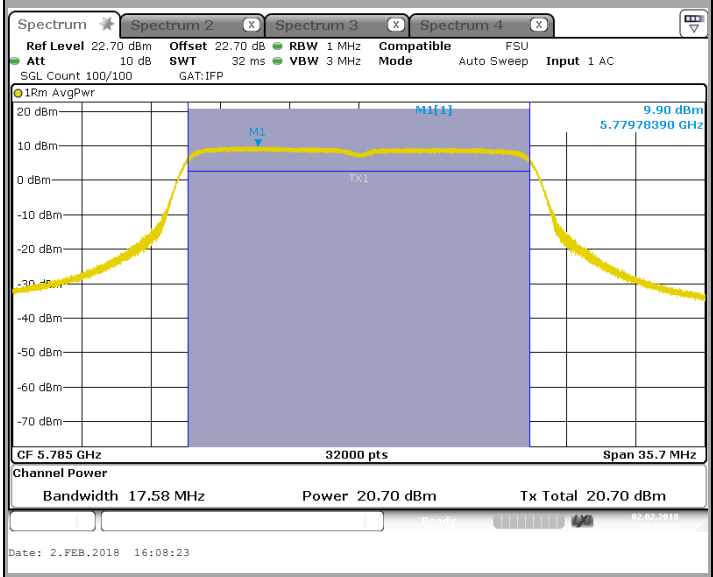
	

802.11n HT20/ac VHT20

C12 (RBW = 1MHz)

Tx1



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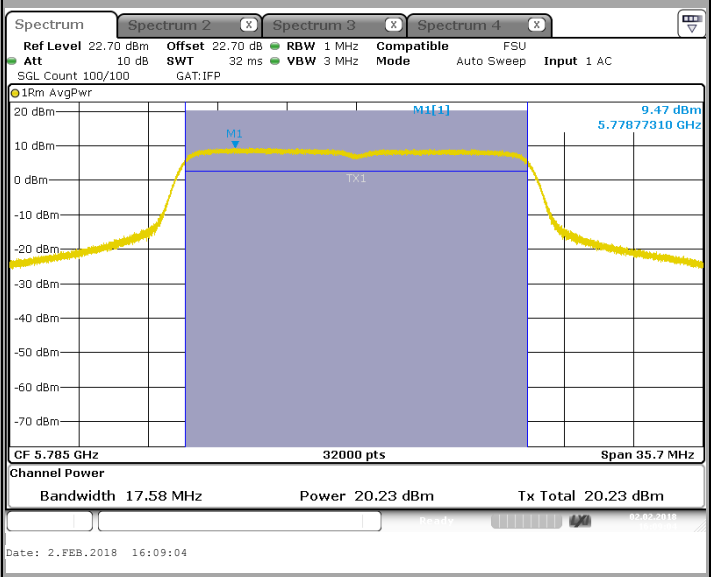
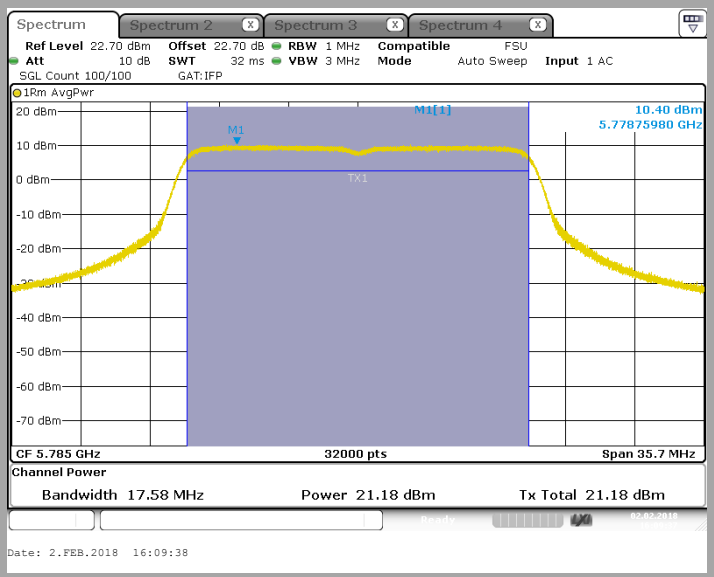


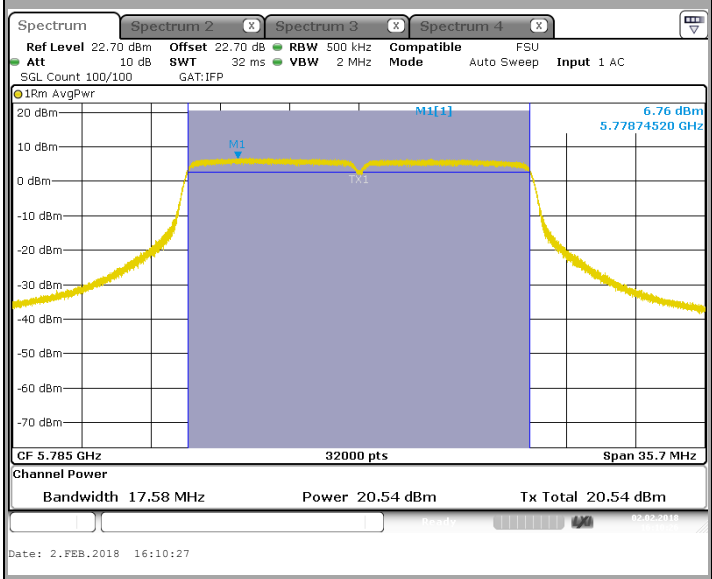
Tx3



802.11n HT20/ac VHT20

C12 (RBW = 500kHz)

Tx1



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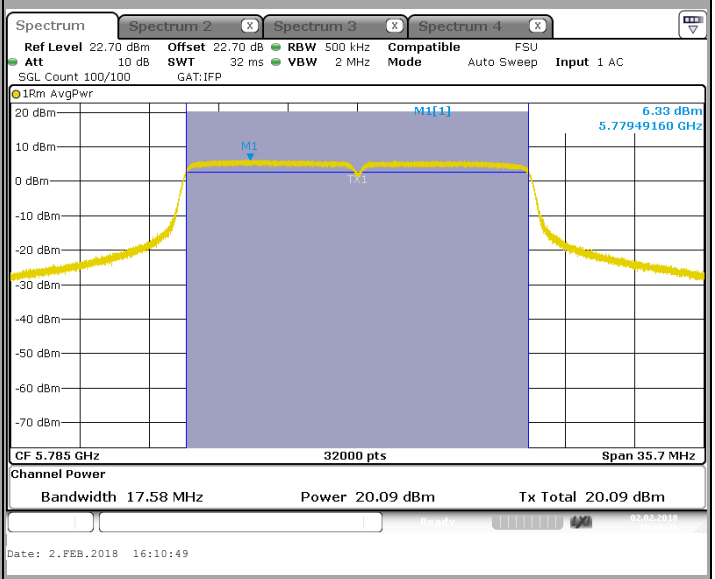
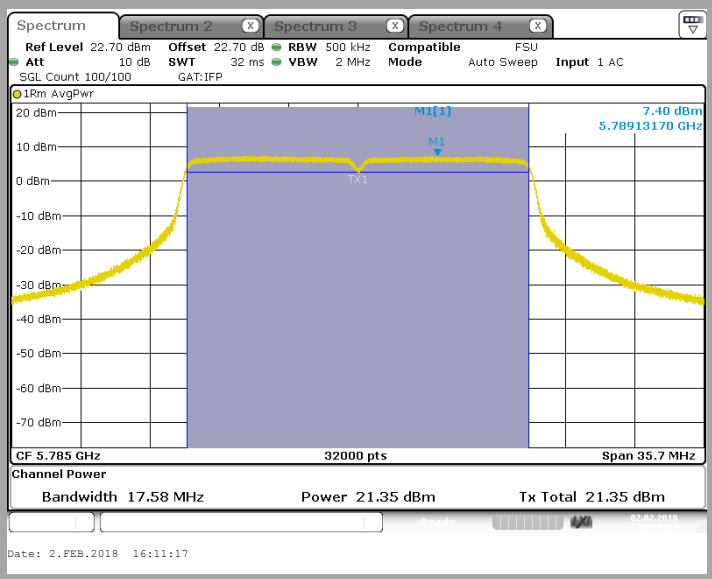


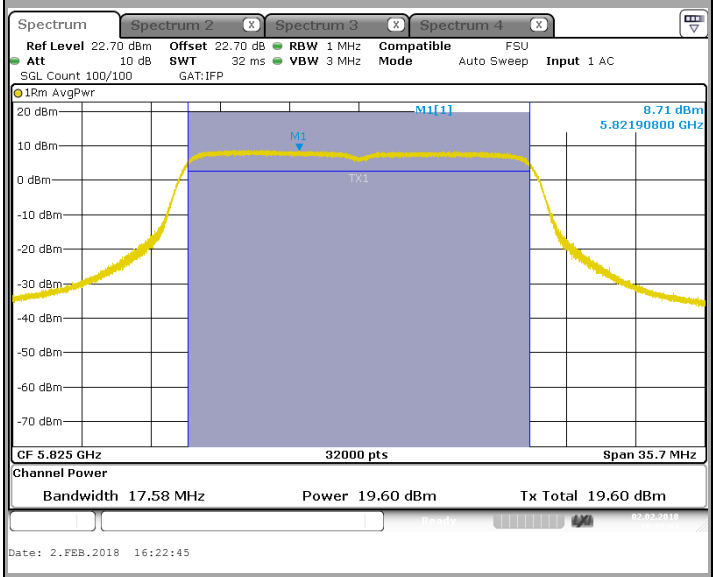
Tx3



802.11n HT20/ac VHT20

C13 (RBW = 1MHz)

Tx1



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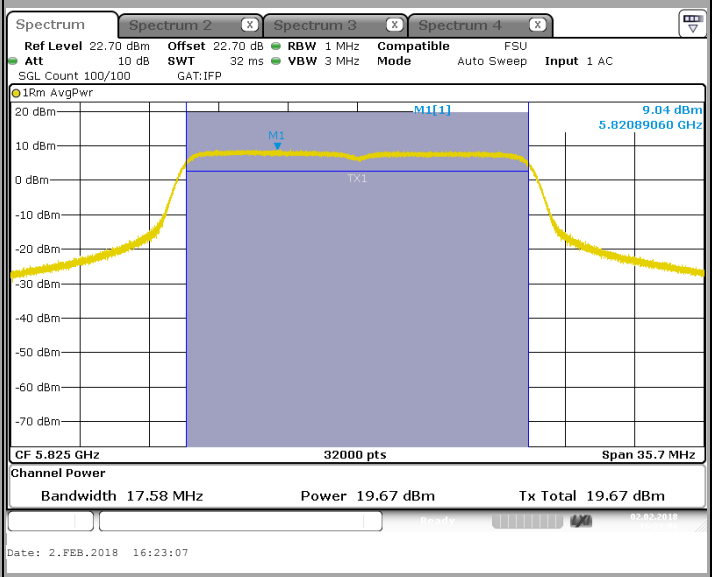
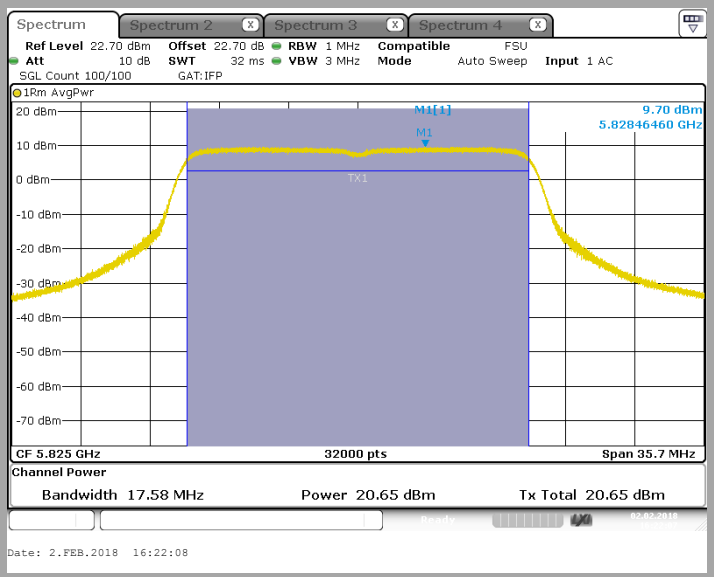


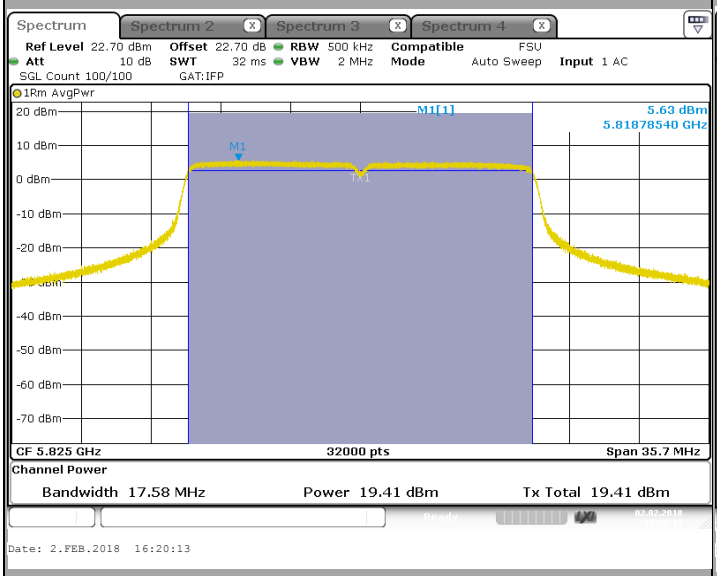
Tx3



802.11n HT20/ac VHT20

C13 (RBW = 500kHz)

Tx1



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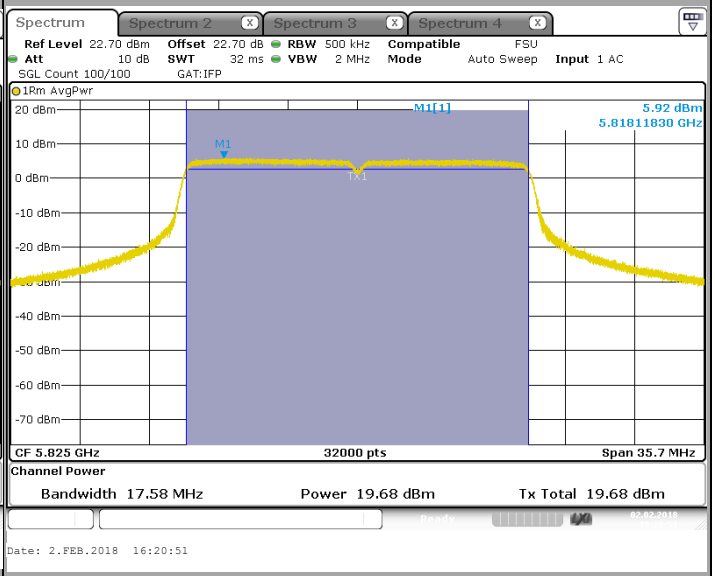
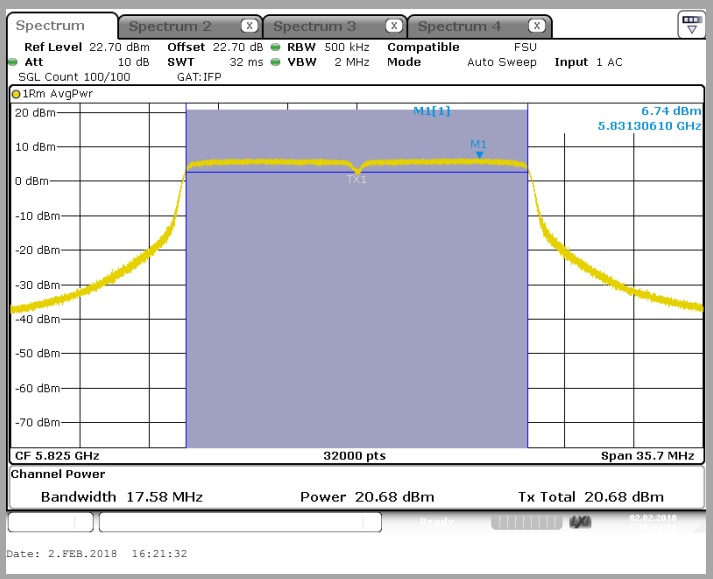


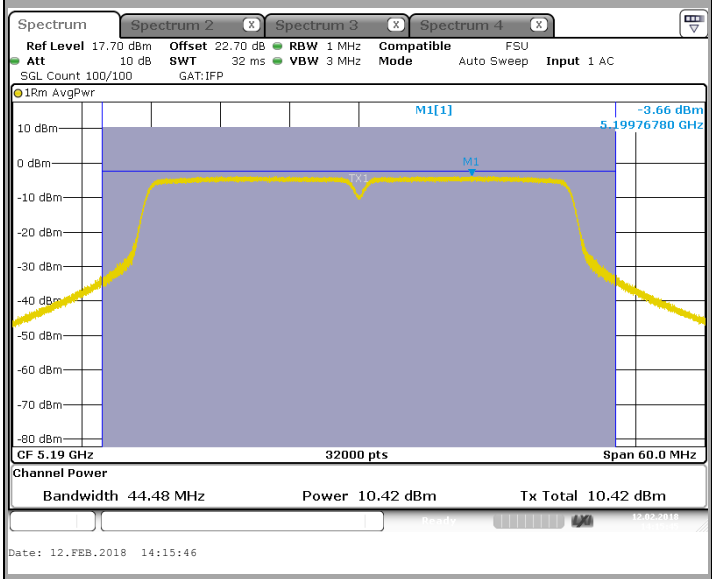
Tx3



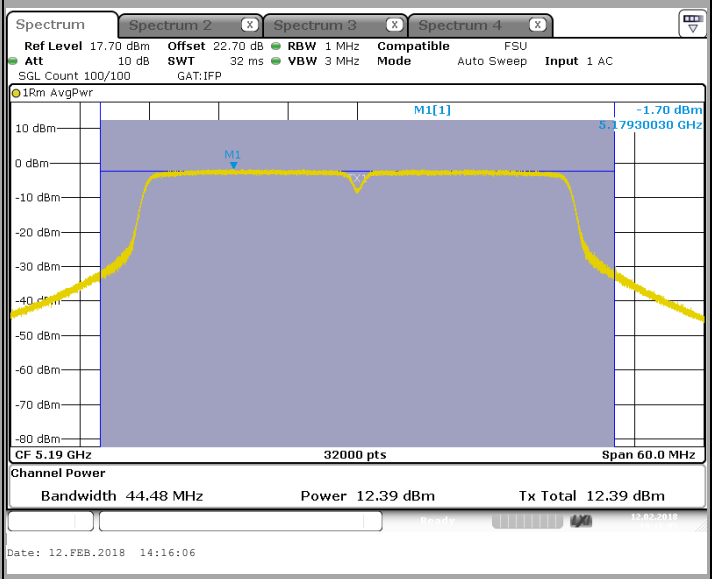
802.11n HT40/ac VHT40

C14

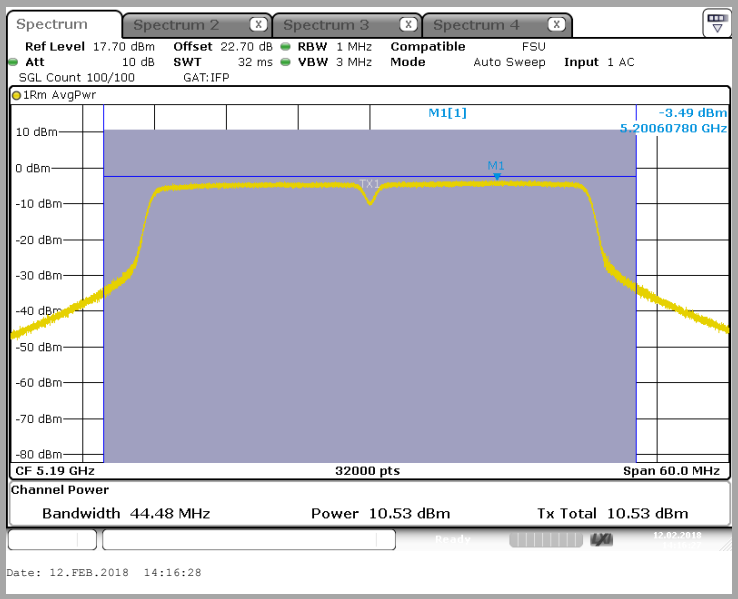
Tx1



Tx2



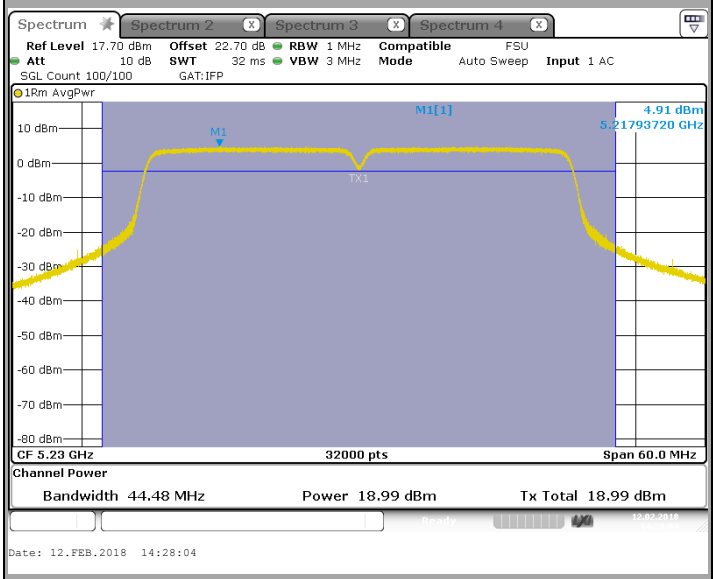
Tx3



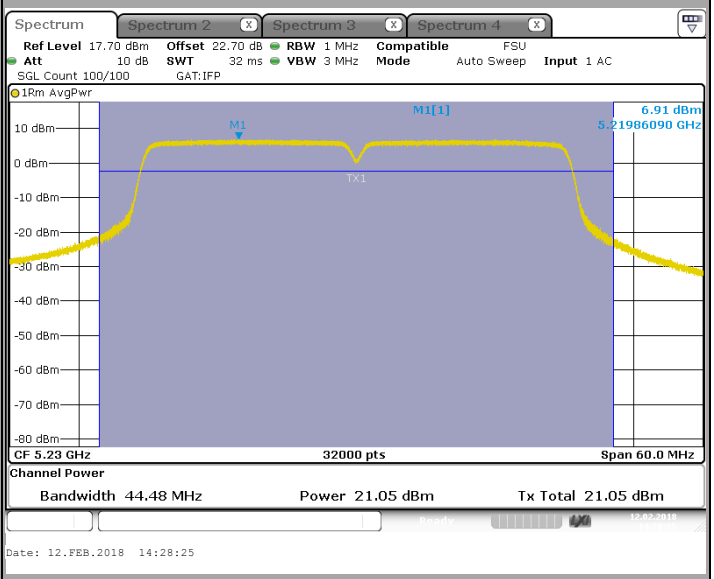
802.11n HT40/ac VHT40

C15

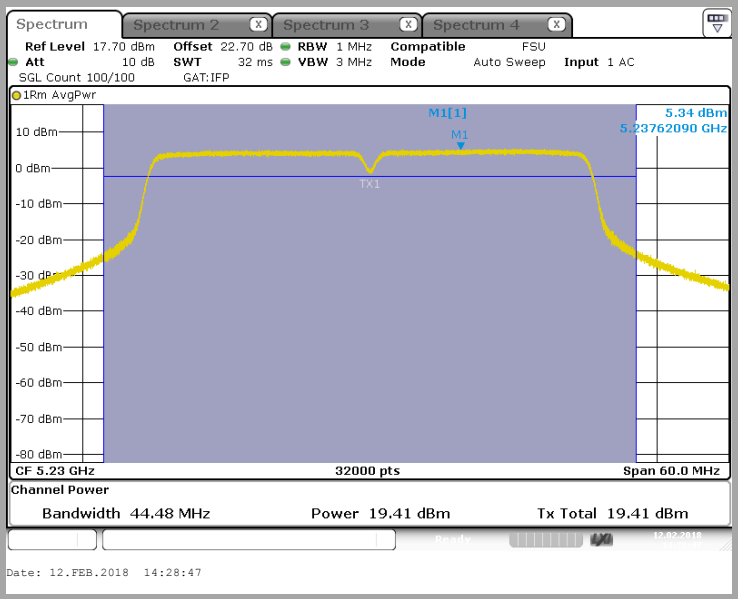
Tx1



Tx2



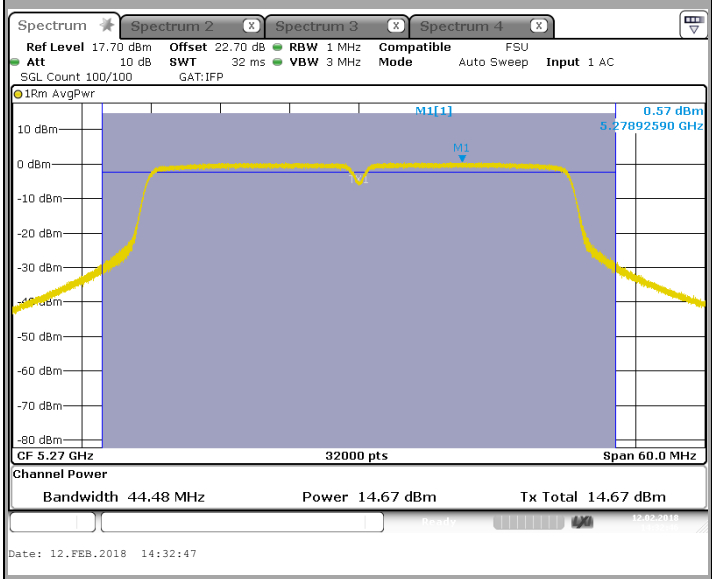
Tx3



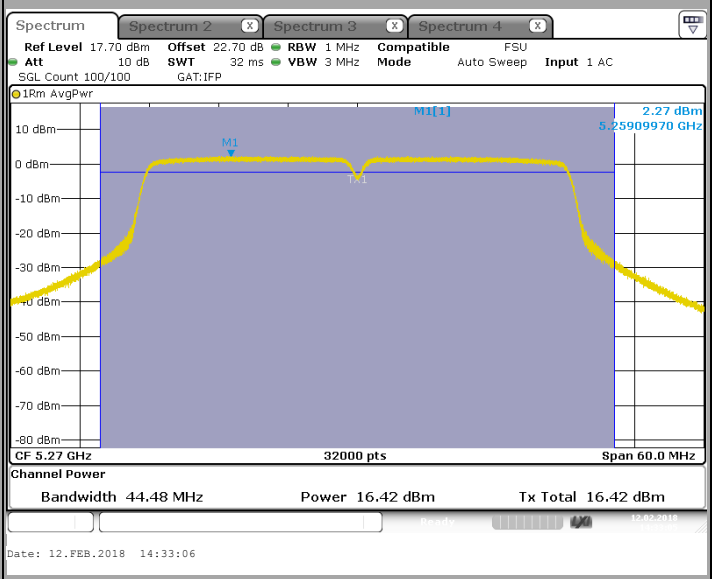
802.11n HT40/ac VHT40

C16

Tx1



Tx2



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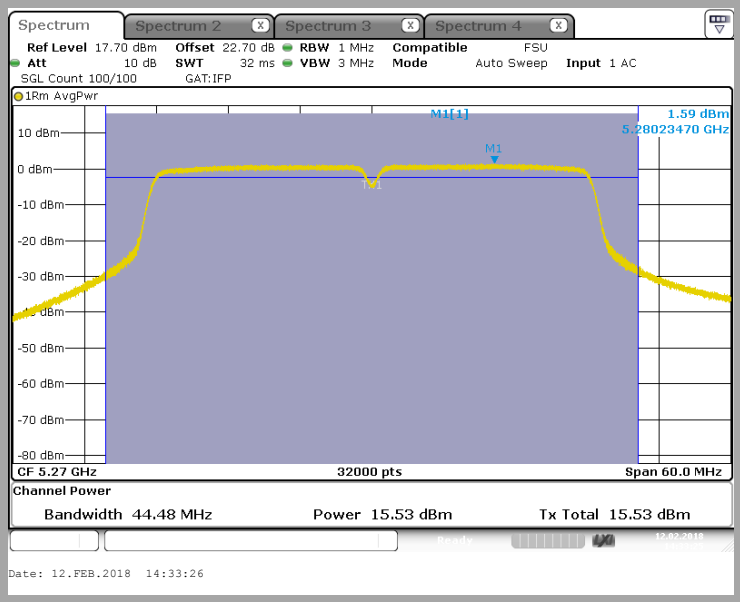
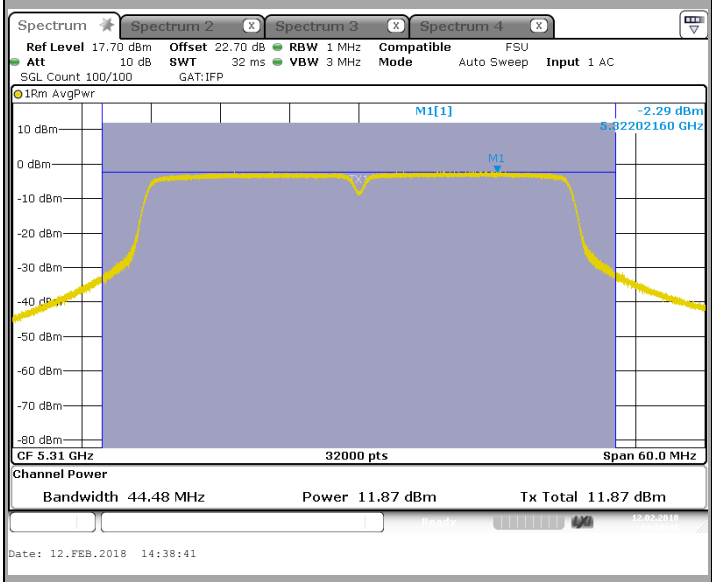


802.11n HT40/ac VHT40

C17

Tx1



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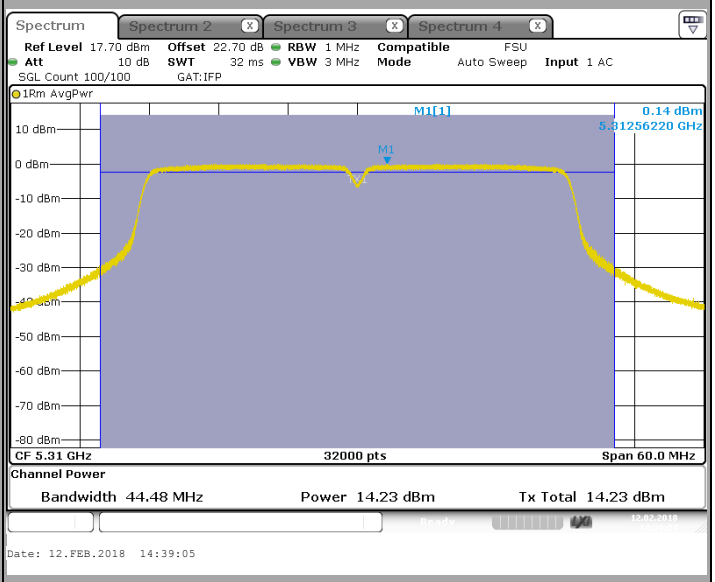

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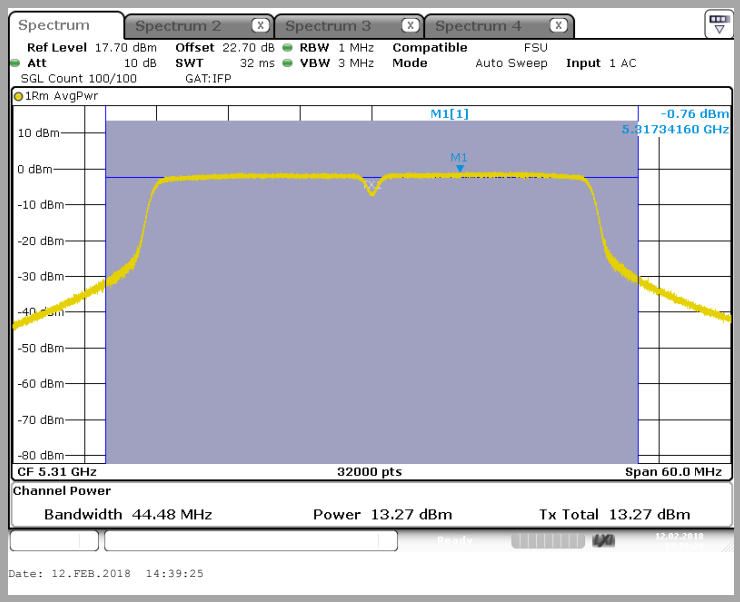
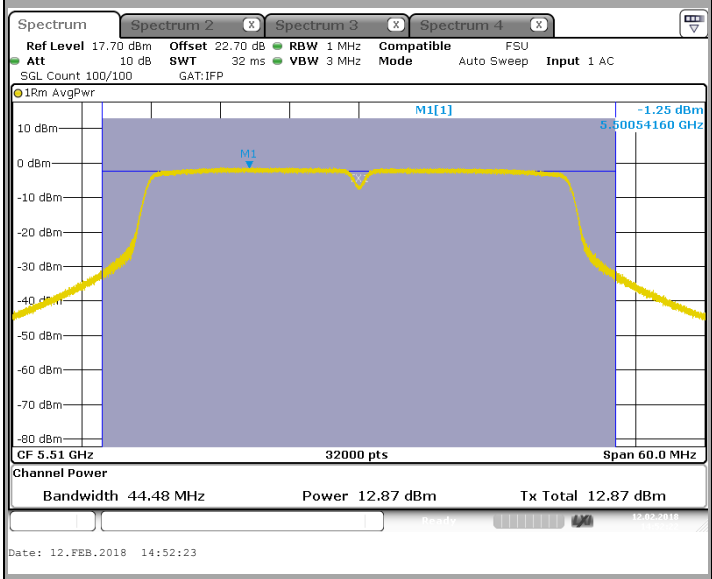


802.11n HT40/ac VHT40

C18

Tx1



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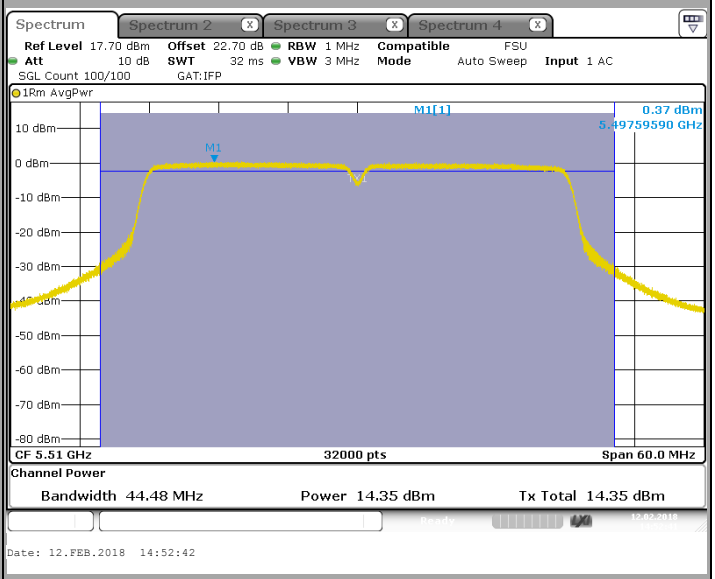
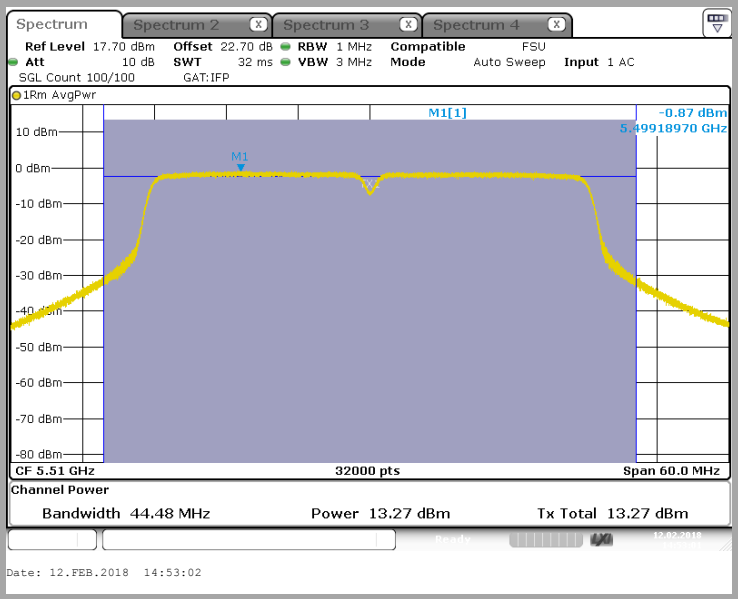


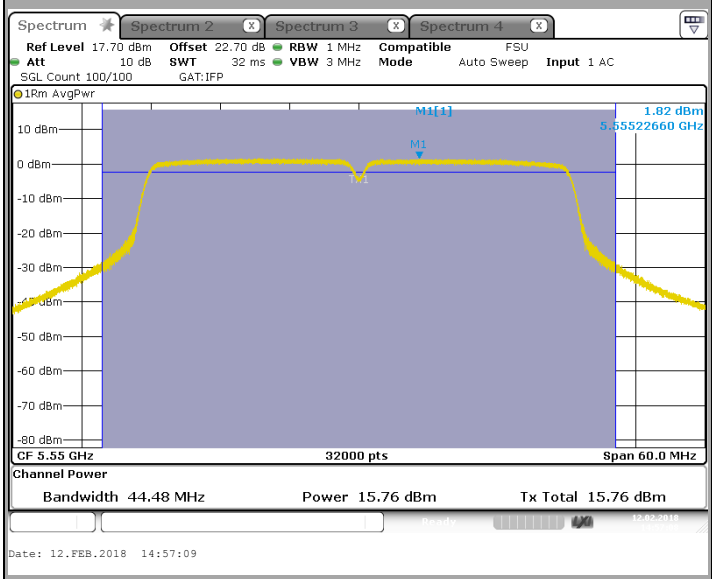
Tx3



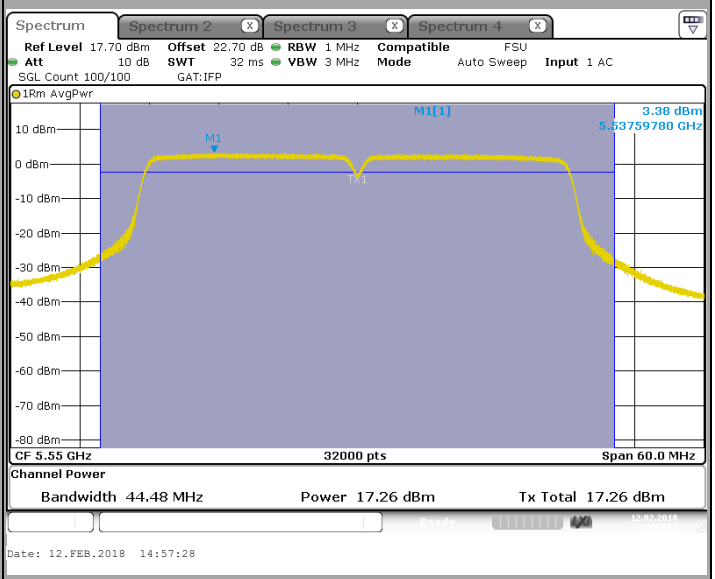
802.11n HT40/ac VHT40

C19

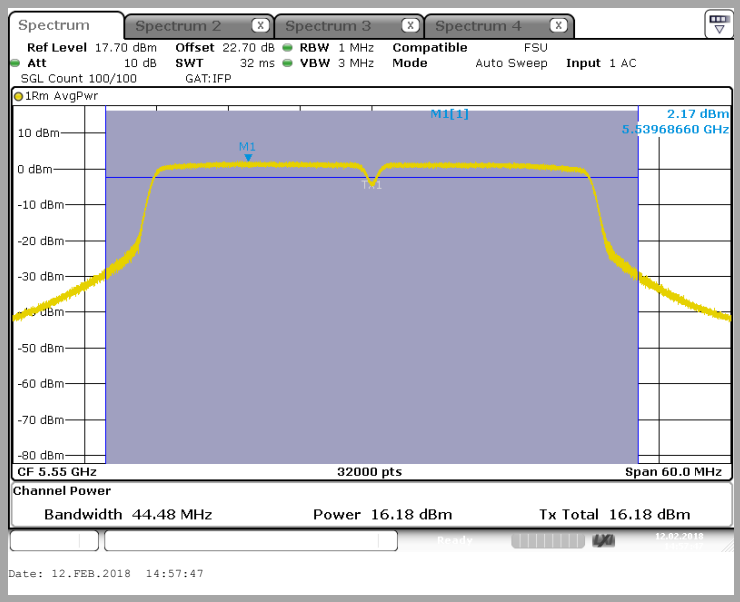
Tx1

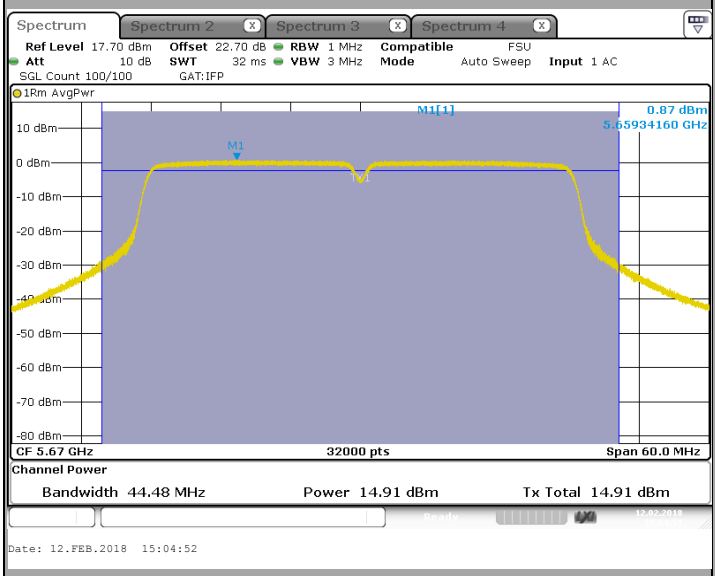
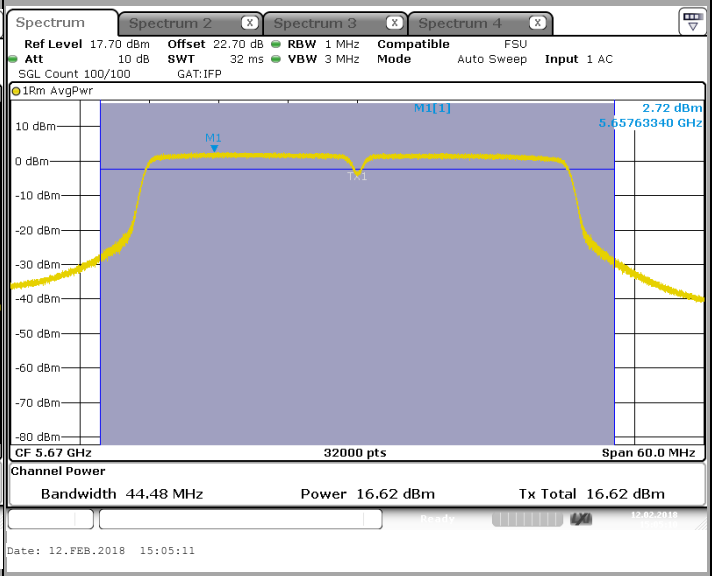
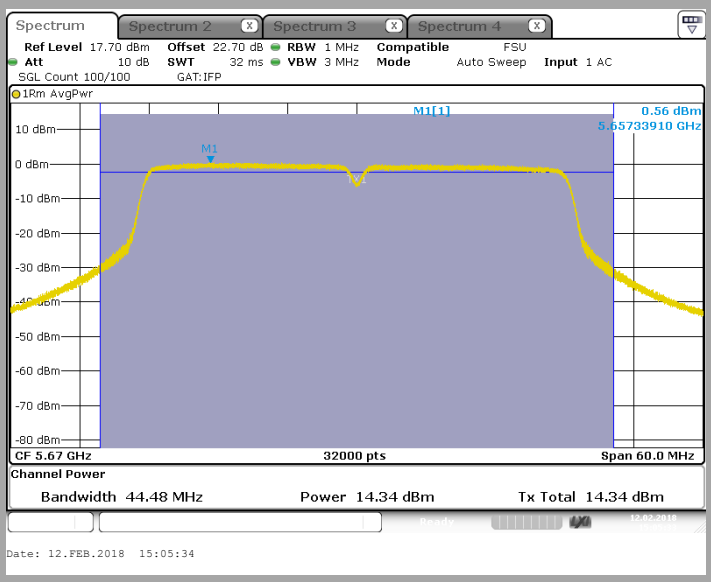


Tx2

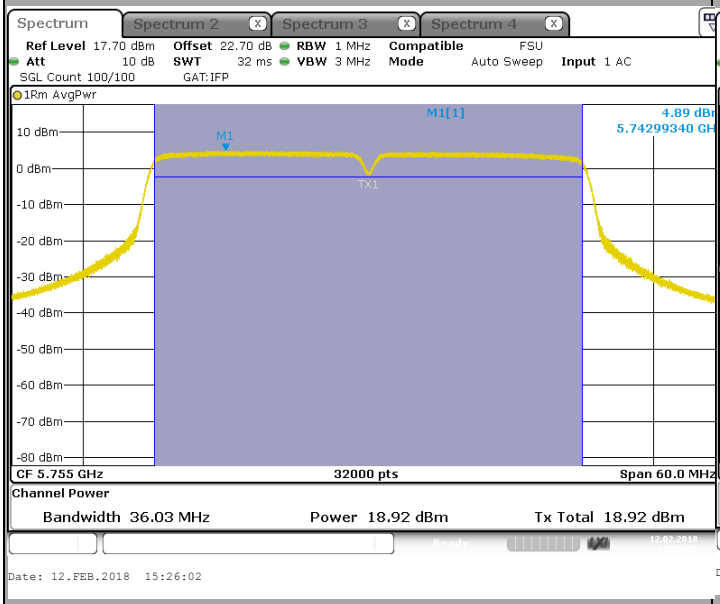


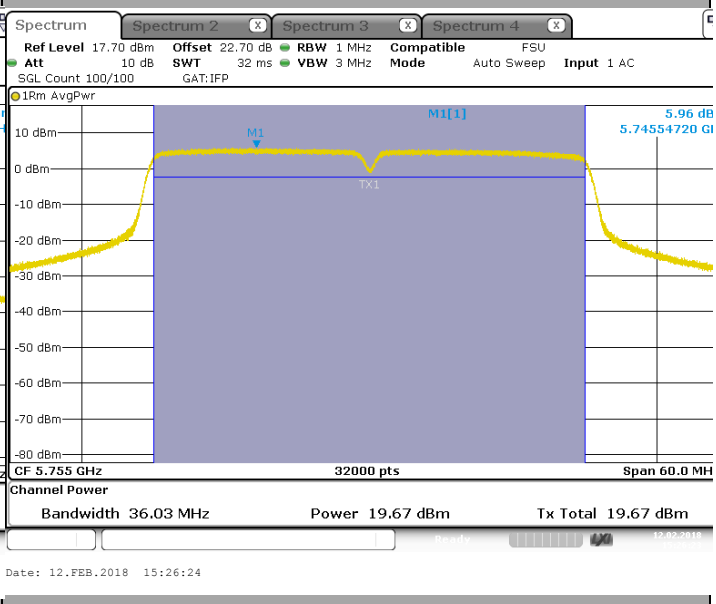
Tx3



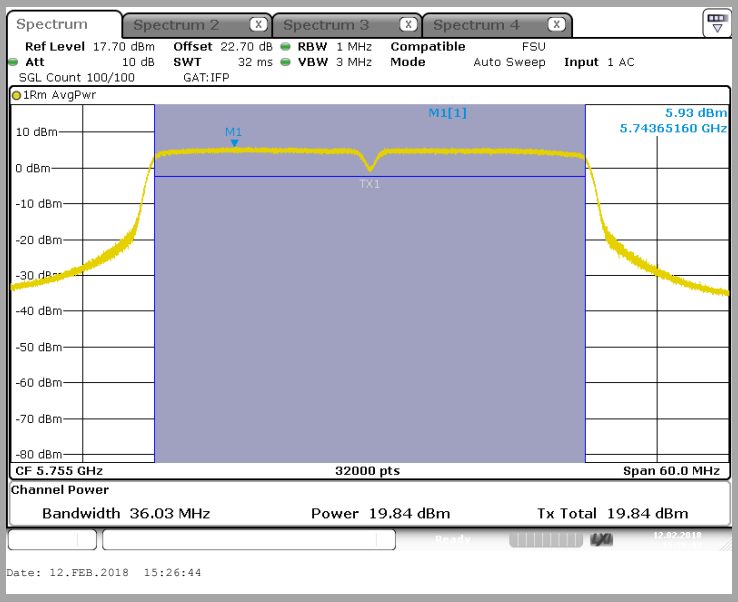
802.11n HT40/ac VHT40	
C20	
Tx1	Tx2
	
Tx3	
	

802.11n HT40/ac VHT40	
C22 (RBW = 1MHz)	
Tx1	Tx2





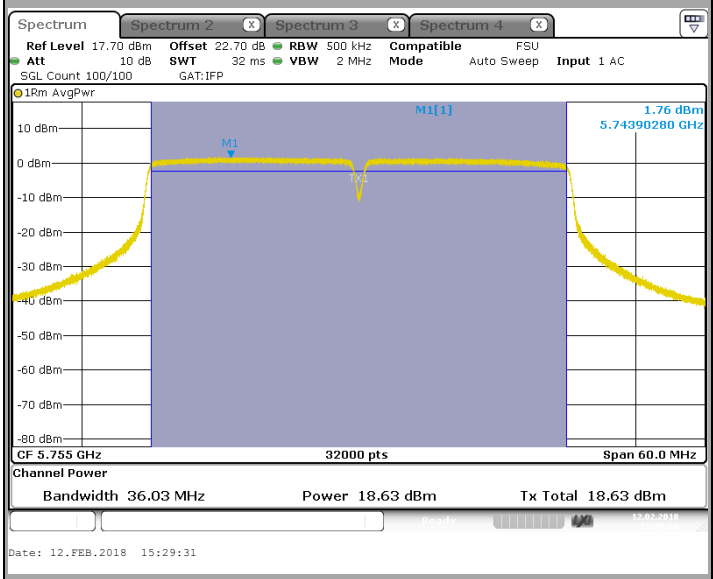
Tx3



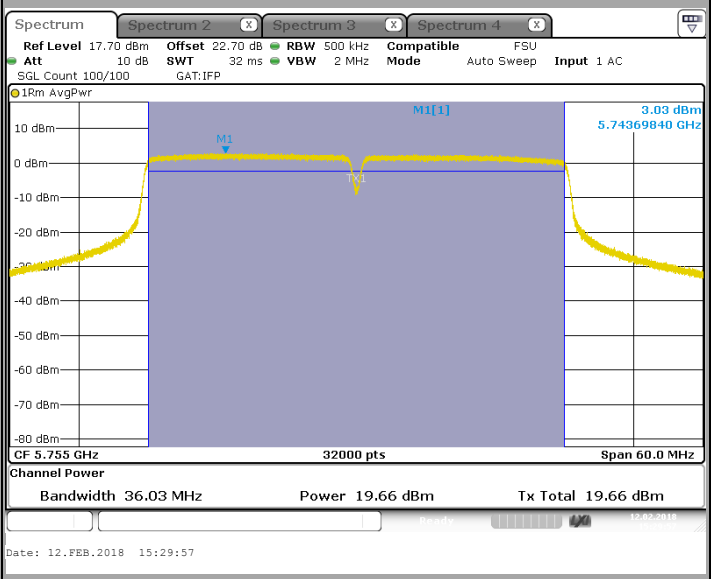
802.11n HT40/ac VHT40

C22 (RBW = 500kHz)

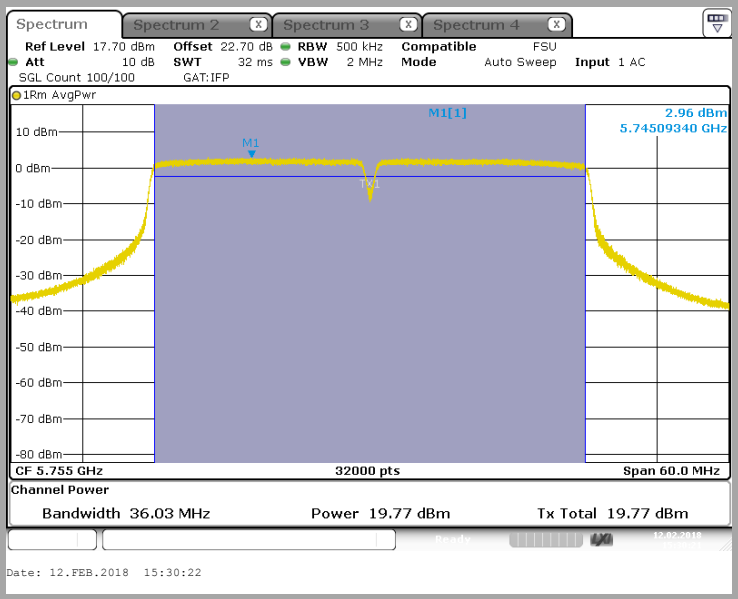
Tx1

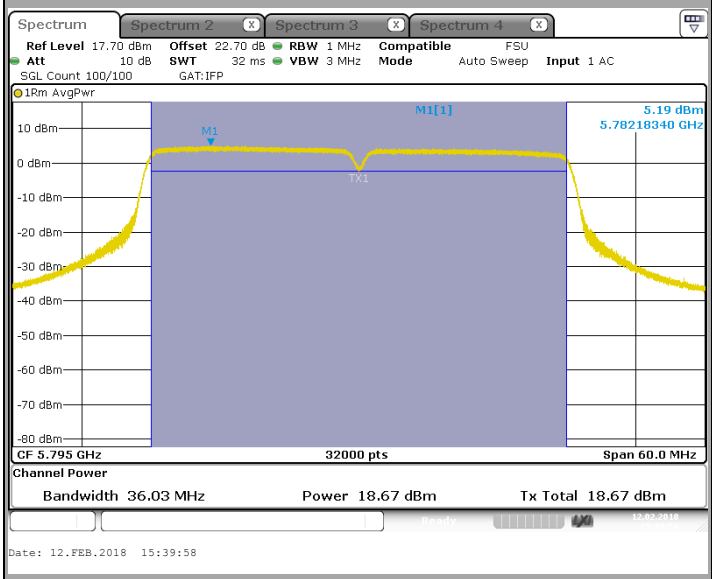
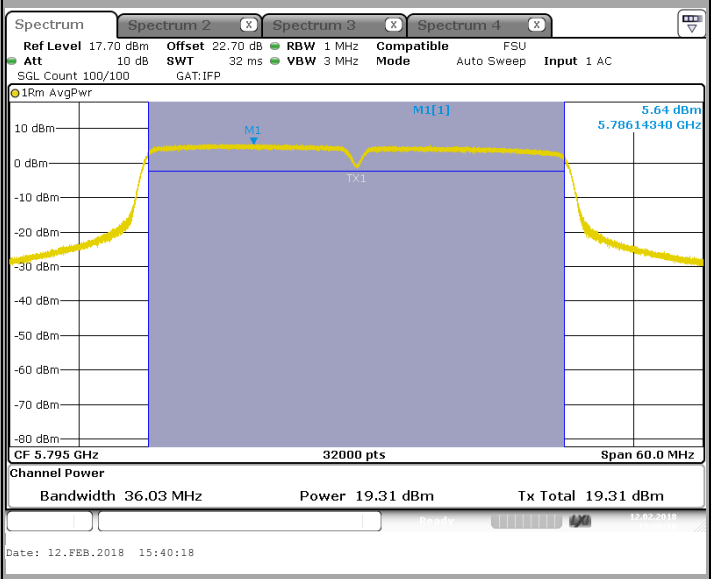
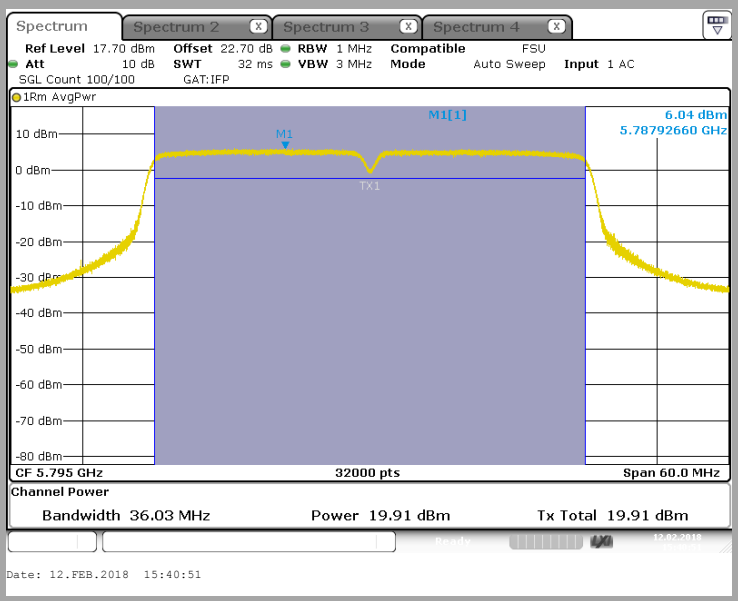


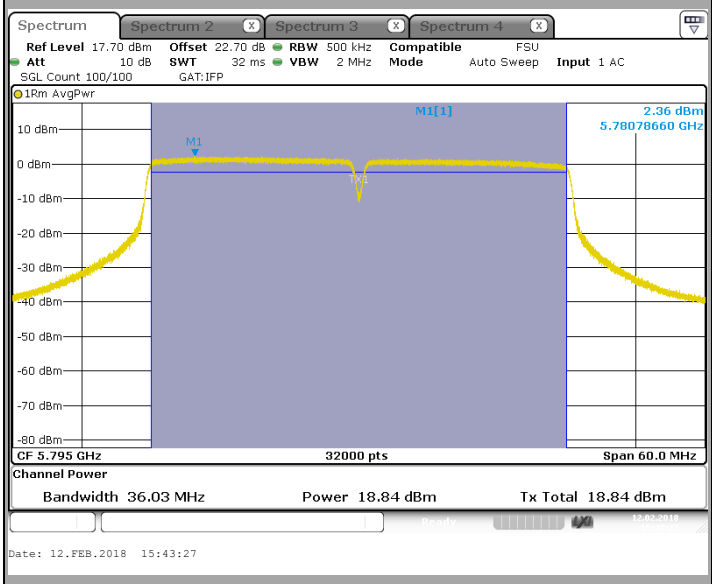
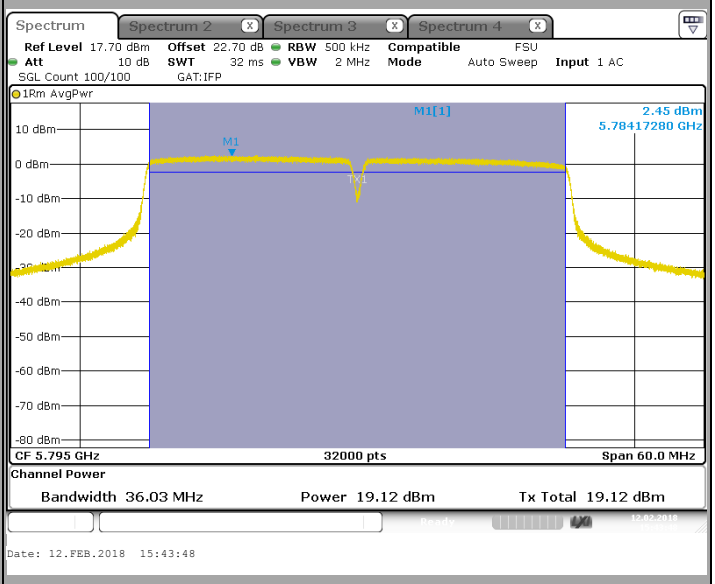
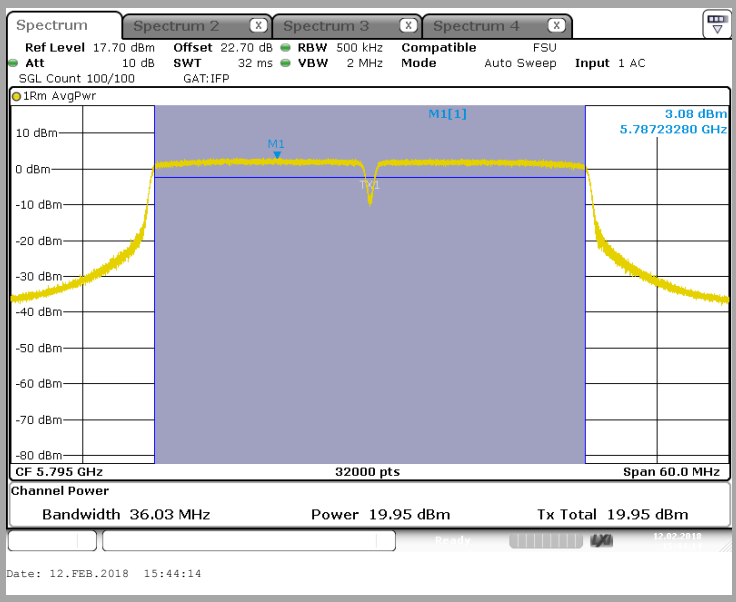
Tx2



Tx3



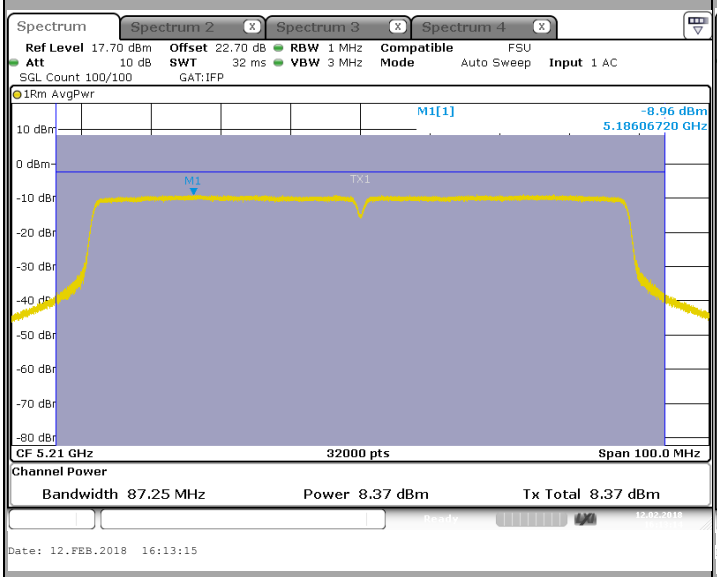
802.11n HT40/ac VHT40	
C23 (RBW = 1MHz)	
Tx1	Tx2
	
Tx3	
	

802.11n HT40/ac VHT40	
C23 (RBW = 500kHz)	
Tx1	Tx2
	
Tx3	
	

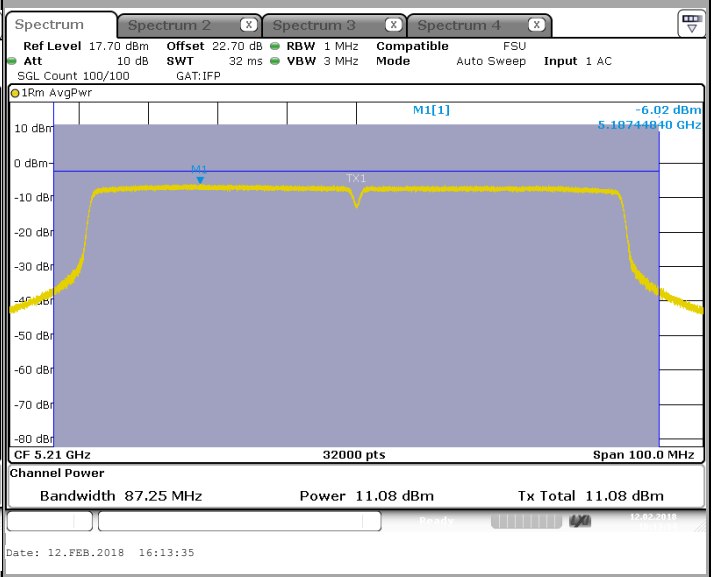
802.11ac VHT80

C24

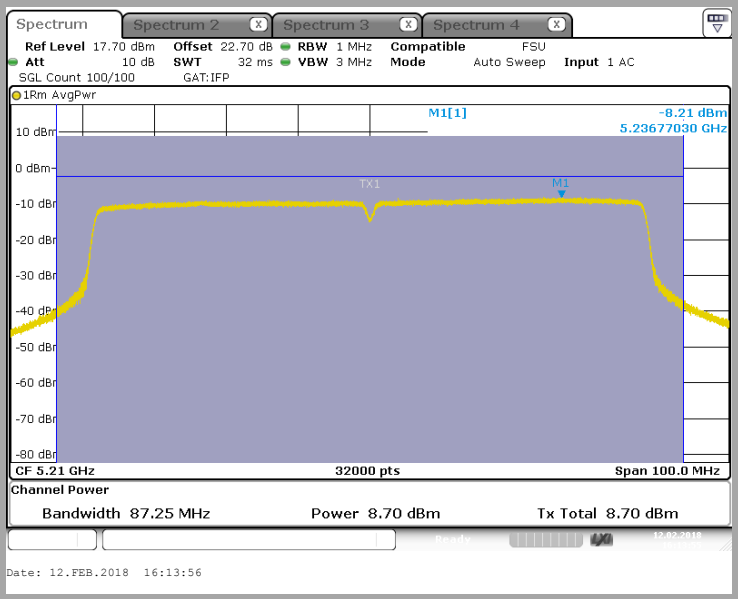
Tx1

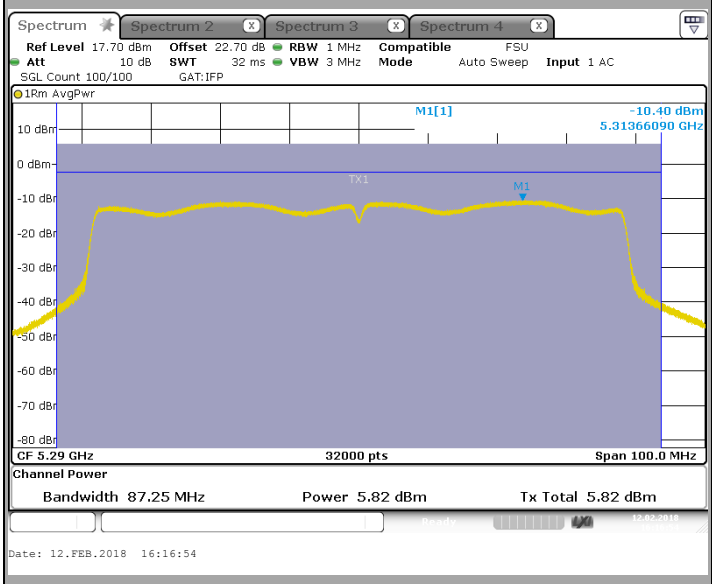
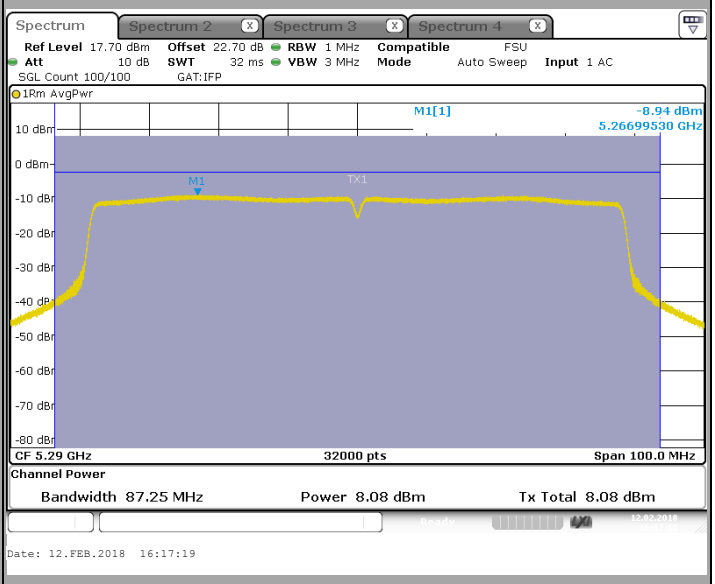


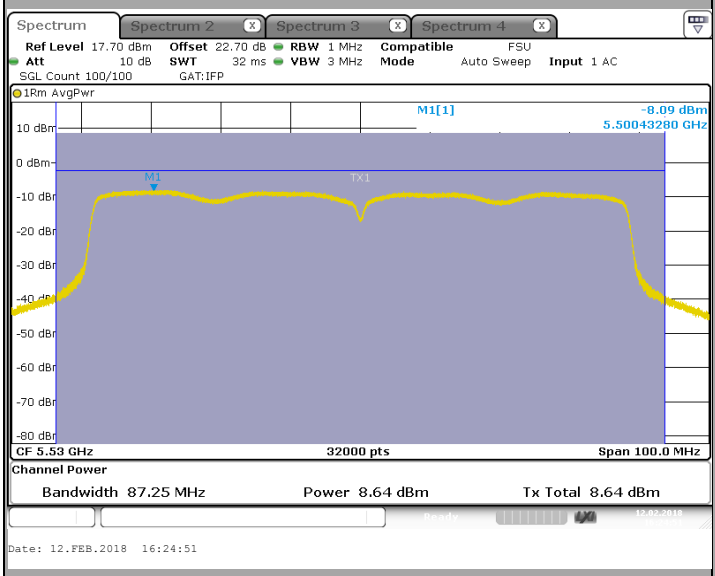
Tx2

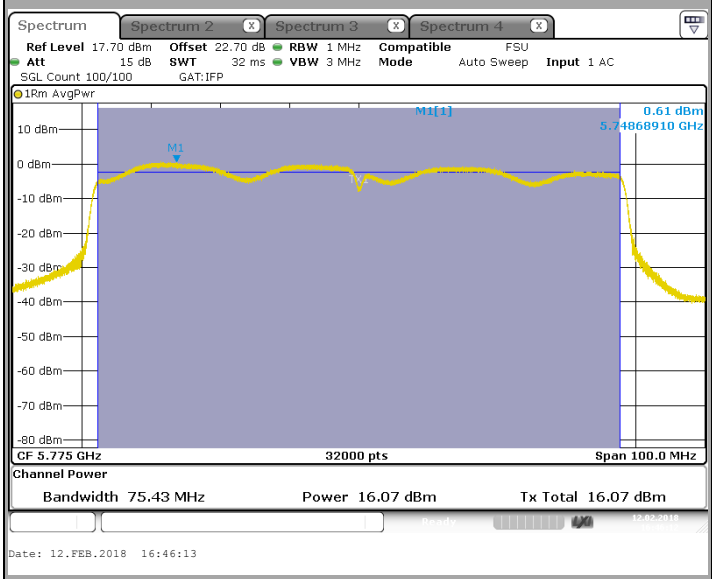
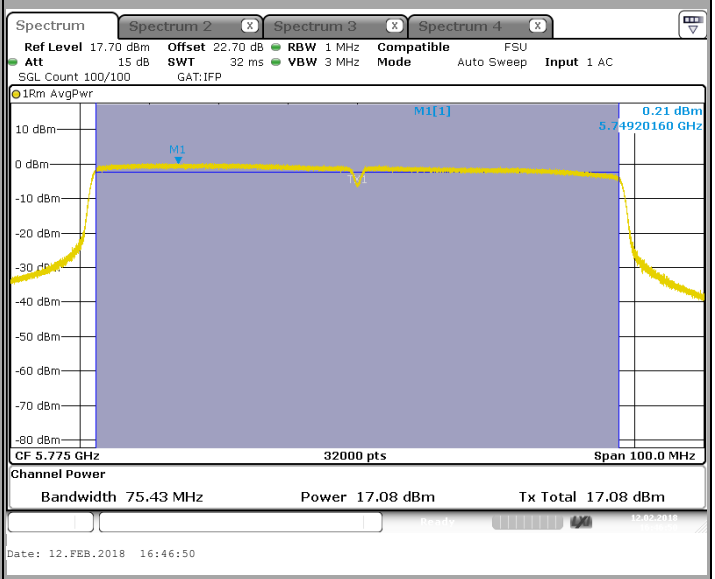
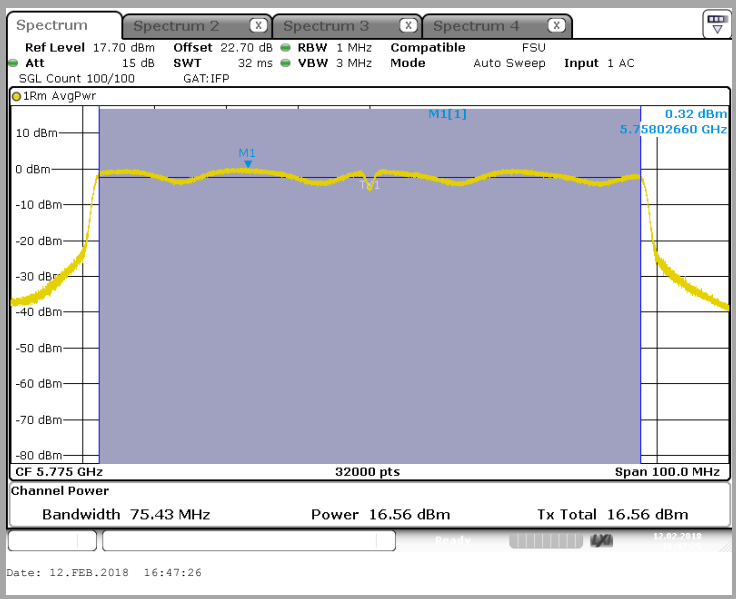


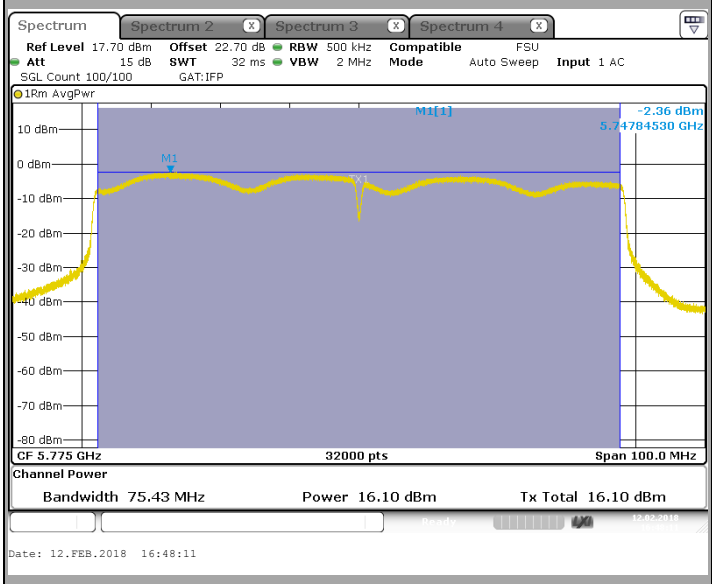
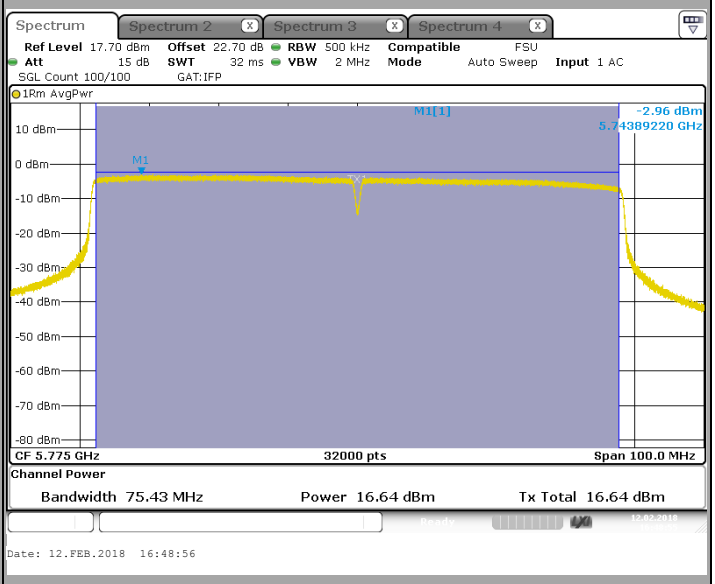
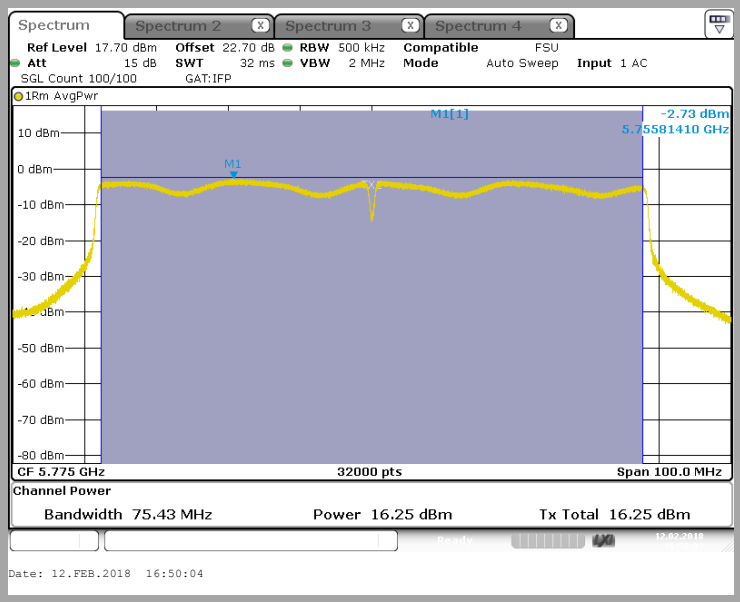
Tx3



802.11ac VHT80	
C25	
Tx1	Tx2
	
Tx3	

802.11ac VHT80	
C26	
Tx1	Tx2
	
Tx3	

802.11ac VHT80	
C29 (RBW = 1MHz)	
Tx1	Tx2
	
Tx3	
	

802.11ac VHT80	
C29 (RBW = 500kHz)	
Tx1	Tx2
	
Tx3	
	

802.11a Output power

Channel	Tx1 (dBm)	Tx2 (dBm)	Tx3 (dBm)	TxAll (dBm)	AG (dBi)	Tx Limit FCC (dBm)	Tx Limit RSS (dBm)	Tx EIRP (dBm)	TPC requirement	EIRP Limit RSS (dBm)
C1	17,2	19,93	17,75	23,2314	7,0	29,0		30,2		23
C2	19,47	21,7	19,87	25,2306	7,0	29,0		32,2		23
C3	19,35	21,58	20,44	25,3	7,0	29,0		32,3		23
C4	13,13	15,63	13,36	19,0	7,0	23	23	26,0	TPC si EIRP>27dBm	30
C5	13,23	14,85	14	18,8	7,0	23	23	25,8	TPC si EIRP>27dBm	30
C6	12,94	14,94	13,45	18,6	7,0	23	23	25,6	TPC si EIRP>27dBm	30
C7	13,73	15,04	13,46	18,9	7,0	23	23	25,9	TPC si EIRP>27dBm	30
C8	13,37	15,15	13,6	18,9	7,0	23	23	25,9	TPC si EIRP>27dBm	30
C9	13,29	15,15	12,87	18,7	7,0	23	23	25,7	TPC si EIRP>27dBm	30
C11	19,36	20,42	20,2	24,8	7,0	29	29			
C12	20,34	20,35	21,13	25,4	7,0	29	29			
C13	20,7	20,29	20,9	25,4	7,0	29	29			

802.11 nHT 20 Output power

Channel	Tx1 (dBm)	Tx2 (dBm)	Tx3 (dBm)	TxAll (dBm)	AG (dBi)	Tx Limit FCC (dBm)	Tx Limit RSS (dBm)	Tx EIRP (dBm)	EIRP Limit FCC (dBm)	EIRP Limit RSS (dBm)
C1	16,58	18,67	16,21	22,0656	7,0	29,0		29,1		23
C2	20,17	22,41	20,43	25,8948	7,0	29,0		32,9		23
C3	20,08	22,06	20,5	25,7375	7,0	29,0		32,7		23
C4	13,29	15,39	13,87	19,0473	7,0	23	23	26,0	TPC si EIRP>27dBm	30
C5	13,24	14,96	13,72	18,8064	7,0	23	23	25,8	TPC si EIRP>27dBm	30
C6	13,05	14,54	13,51	18,5167	7,0	23	23	25,5	TPC si EIRP>27dBm	30
C7	14,52	15,84	14,67	19,8224	7,0	23	23	26,8	TPC si EIRP>27dBm	30
C8	13,23	15,22	12,99	18,7047	7,0	23	23	25,7	TPC si EIRP>27dBm	30
C9	12,61	15	12,72	18,3612	7,0	23	23	25,4	TPC si EIRP>27dBm	30
C11	19,6	19,95	20,01	24,6283	7,0	29	29			
C12	20,7	20,23	21,18	25,4919	7,0	29	29			
C13	19,6	19,67	20,65	24,7716	7,0	29	29			

802.11 nHT40 Output power

Channel	Tx1 (dBm)	Tx2 (dBm)	Tx3 (dBm)	TxAll (dBm)	AG (dBi)	Tx Limit FCC (dBm)	Tx Limit RSS (dBm)	Tx EIRP (dBm)	EIRP Limit FCC (dBm)	EIRP Limit RSS (dBm)
C14	10,42	12,39	10,53	16,0	7,0	29,0		23,0		23
C15	18,99	21,05	19,41	24,7	7,0	29,0		31,7		23
C16	14,67	16,42	15,53	20,4	7,0	23	23	27,4	TPC si EIRP>27dBm	30
C17	11,87	14,23	13,27	18,0	7,0	23	23	25,0	TPC si EIRP>27dBm	30
C18	12,87	14,35	13,27	18,3	7,0	23	23	25,3	TPC si EIRP>27dBm	30
C19	15,76	17,26	16,18	21,2	7,0	23	23	28,2	TPC si EIRP>27dBm	30
C20	14,91	16,62	14,34	20,2	7,0	23	23	27,2	TPC si EIRP>27dBm	30
C22	18,92	19,67	19,84	24,3	7,0	29,0	29,0			
C23	18,67	19,31	19,91	24,1	7,0	29,0	29,0			

802.11 vHT80 Output power

Channel	Tx1 (dBm)	Tx2 (dBm)	Tx3 (dBm)	TxAll (dBm)	AG (dBi)	Tx Limit FCC (dBm)	Tx Limit RSS (dBm)	Tx EIRP (dBm)	EIRP Limit FCC (dBm)	EIRP Limit RSS (dBm)
C24	8,37	11,08	8,7	14,3	7,0	29,0		21,3		23
C25	5,82	8,08	7,26	11,9	7,0	23	23	18,9	TPC si EIRP>27dBm	30
C26	8,64	9,85	9,08	14,0	7,0	23	23	21,0	TPC si EIRP>27dBm	30
C29	16,07	17,08	16,56	21,4	7,0	29,0	29,0	28,4		30

802.11a Spectral Density

Channel	Tx1 (dBm/MHz)	Tx2 (dBm/MHz)	Tx3 (dBm/MHz)	TxAll (dBmMHz)	AG (dBi)	Tx Limit FCC (dBm/MHz)	Tx Limit RSS (dBm/MHz)	Tx EIRP (dBm/MHz)	EIRP Limit RSS (dBm/MHz)
C1	7,21	9,76	7,37	13,0492	7,0	16,0		20,0	10
C2	9,6	11,2	9,7	15,0017	7,0	16,0		22,0	10
C3	9,39	10,95	10,15	14,9812	7,0	16,0		22,0	10
C4	2,52	5,24	3,38	8,6369	7,0	10	10	15,6	
C5	3,06	4,12	3,73	8,4297	7,0	10	10	15,4	
C6	3,31	4,63	3,31	8,5672	7,0	10	10	15,6	
C7	3,99	4,31	3,23	8,6378	7,0	10	10	15,6	
C8	3,13	3,57	3,87	8,3051	7,0	10	10	15,3	
C9	3,47	4,3	3,32	8,4897	7,0	10	10	15,5	
C11	7,28	6,61	7,44	11,8958	7,0	29 (/500kHz)	29 (/500kHz)		
C12	8,44	6,89	8,71	12,8554	7,0	29 (/500kHz)	29 (/500kHz)		
C13	8,79	7,2	8,59	13,0199	7,0	29 (/500kHz)	29 (/500kHz)		

802.11 nHT20 Spectral Density

Channel	Tx1 (dBm/MHz)	Tx2 (dBm/MHz)	Tx3 (dBm/MHz)	TxAll (dBmMHz)	AG (dBi)	Tx Limit FCC (dBm/MHz)	Tx Limit RSS (dBm/MHz)	Tx EIRP (dBm/MHz)	EIRP Limit RSS (dBm/MHz)
C1	5,11	7,43	5,16	10,8127	7,0	16,0		17,8	10
C2	9,01	11,29	9,35	14,7756	7,0	16,0		21,8	10
C3	8,9	10,9	9,4	14,5901	7,0	16,0		21,6	10
C4	2,14	4,28	2,9	7,9698	7,0	10	10	15,0	
C5	2,05	3,83	2,66	7,6817	7,0	10	10	14,7	
C6	2,12	3,41	2,43	7,4601	7,0	10	10	14,5	
C7	3,41	4,77	3,68	8,7653	7,0	10	10	15,8	
C8	2,09	4,28	2,03	7,7035	7,0	10	10	14,7	
C9	1,42	3,99	1,82	7,3347	7,0	10	10	14,3	
C11	5,73	6,13	6,21	10,7996	7,0	29 (/500kHz)	29 (/500kHz)		
C12	6,76	6,33	7,4	11,6236	7,0	29 (/500kHz)	29 (/500kHz)		
C13	6,05	5,92	6,74	11,0230	7,0	29 (/500kHz)	29 (/500kHz)		

802.11 nHT40 Spectral Density

Channel	Tx1 (dBm/MHz)	Tx2 (dBm/MHz)	Tx3 (dBm/MHz)	TxAll (dBmMHz)	AG (dBi)	Tx Limit FCC (dBm/MHz)	Tx Limit RSS (dBm/MHz)	Tx EIRP (dBm/MHz)	EIRP Limit RSS (dBm/MHz)
C14	-3,66	-1,7	-3,49	1,9	7,0	16,0		8,9	10
C15	4,91	6,91	5,34	10,6	7,0	16,0		17,6	10
C16	0,57	2,27	1,59	6,3	7,0	10	10	13,3	
C17	-2,29	0,14	-0,76	3,9	7,0	10	10	10,9	
C18	-1,25	0,37	-0,87	4,2	7,0	10	10	11,2	
C19	1,82	3,38	2,17	7,3	7,0	10	10	14,3	
C20	0,87	2,72	0,56	6,3	7,0	10	10	13,3	
C22	1,76	3,03	2,96	7,4	7,0	29 (/500kHz)	29 (/500kHz)		
C23	2,36	2,45	3,08	7,4	7,0	29 (/500kHz)	29 (/500kHz)		

802.11 vHT80 Spectral Density

Channel	Tx1 (dBm/MHz)	Tx2 (dBm/MHz)	Tx3 (dBm/MHz)	TxAll (dBmMHz)	AG (dBi)	Tx Limit FCC (dBm/MHz)	Tx Limit RSS (dBm/MHz)	Tx EIRP (dBm/MHz)	EIRP Limit RSS (dBm/MHz)
C24	-8,96	-6,02	-8,21	-2,8	7,0	16,0		4,2	10
C25	-10,4	-8,94	-9,53	-4,8	7,0	10	10	2,2	
C26	-8,09	-6,55	-6,77	-2,3	7,0	10	10	4,7	
C29	-2,36	-2,96	-2,73	2,1	7,0	29 (/500kHz)	29 (/500kHz)		

8.6. CONCLUSION

Maximum Conducted Output Power, Maximum Power Spectral Density, Maximum EIRP, Maximum EIRP Power Spectral Density measurement performed on the sample of the product **SAGEMCOM FAST 5260**, SN: **NQ1736013023187**, in configuration and description presented in this test report, show levels **compliant** to the **47 CFR PART 15.407 & RSS 247 ISSUE 2** limits.

9. TRANSMIT POWER CONTROL

9.1. TEST CONDITIONS

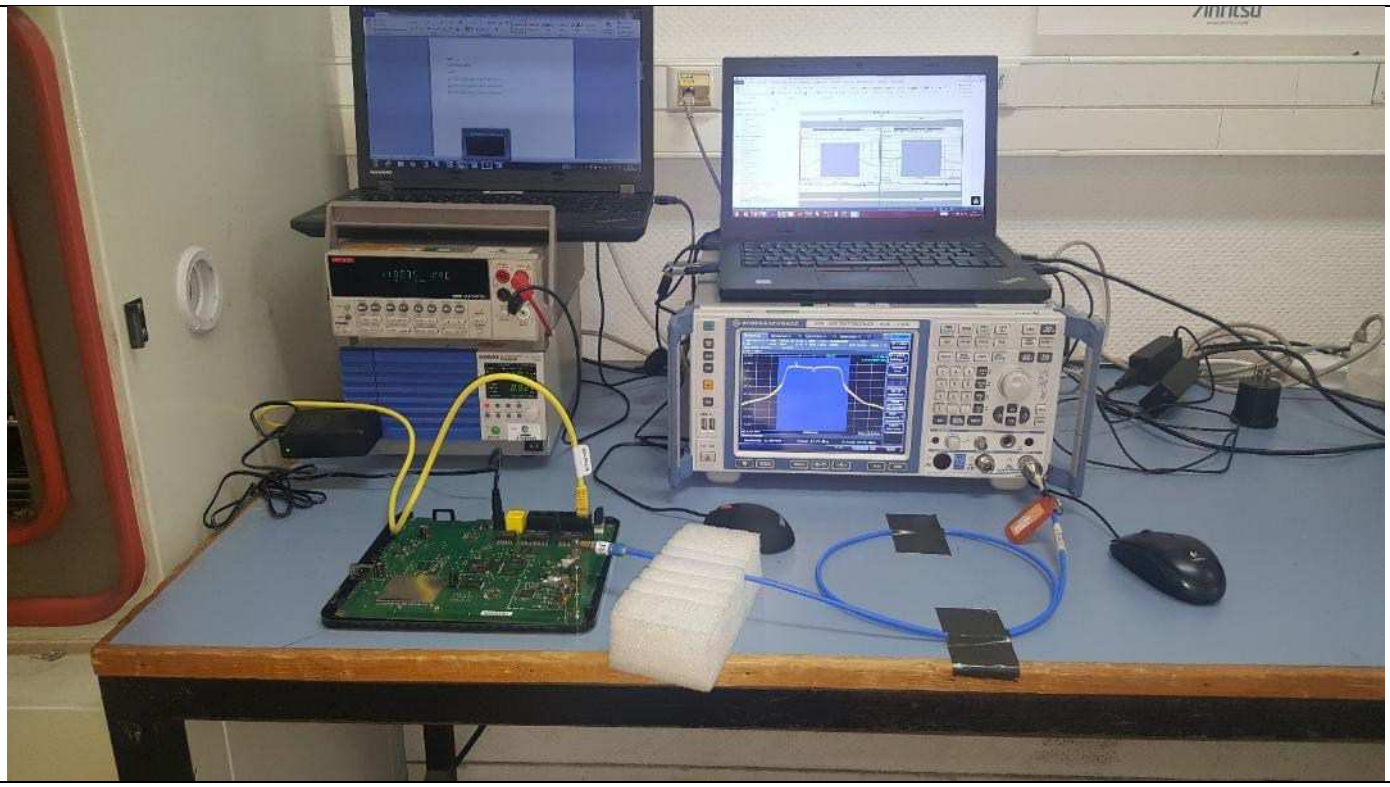
Test performed by	: Armand MAHOUNGOU
Date of test	: February 13, 2018
Ambient temperature	: 26 °C
Relative humidity	: 43 %

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



Photograph for Transmit Power Control

9.3. LIMIT

FCC Part 15.407 & RSS-247
TPC Min (EIRP):
5250MHz-5350MHz: Shall not exceed 24dBm
5470MHz-5725MHz: Shall not exceed 24dBm

9.4. 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	2016/06	2018/06
Programmable AC/DC power supply	KIKUSUI	PCR500M	A7040079	2016/06	2018/06
Load 50 ohms	TELEGARTNER	-	A7150104	2017/12	2018/12
Load 50 ohms	TELEGARTNER	-	A7150105	2017/12	2018/12
RF cable & 20 dB attenuator	Télédyne	920-0202-048	A5329675	2017/09	2018/09

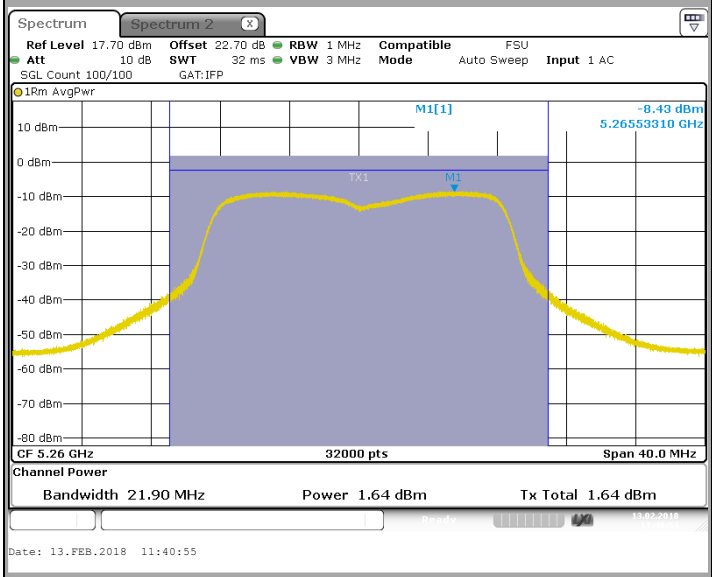
Note: In our quality system, the test equipment calibration due is more & less 2 months

9.5. RESULTS

802.11a

C4

Tx1



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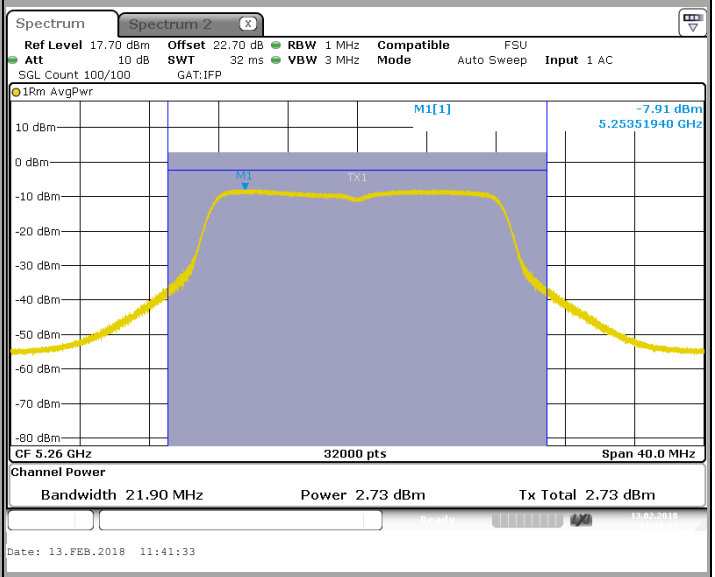

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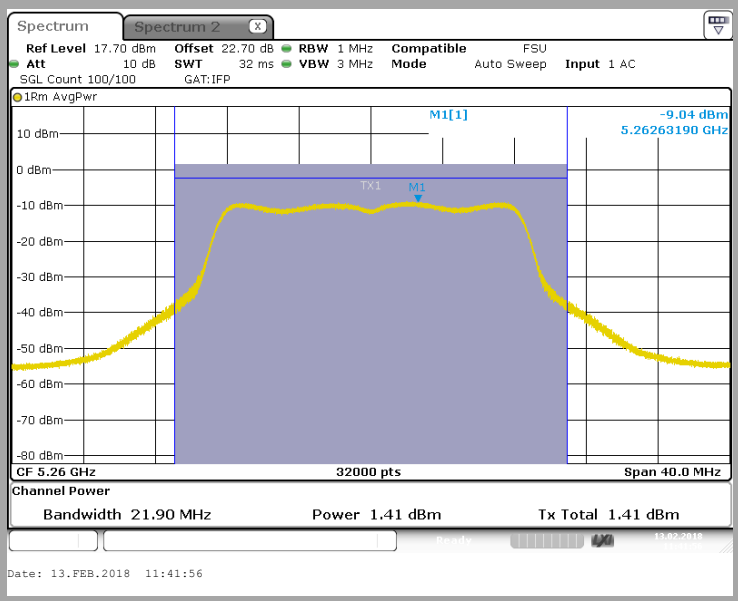

802.11a	
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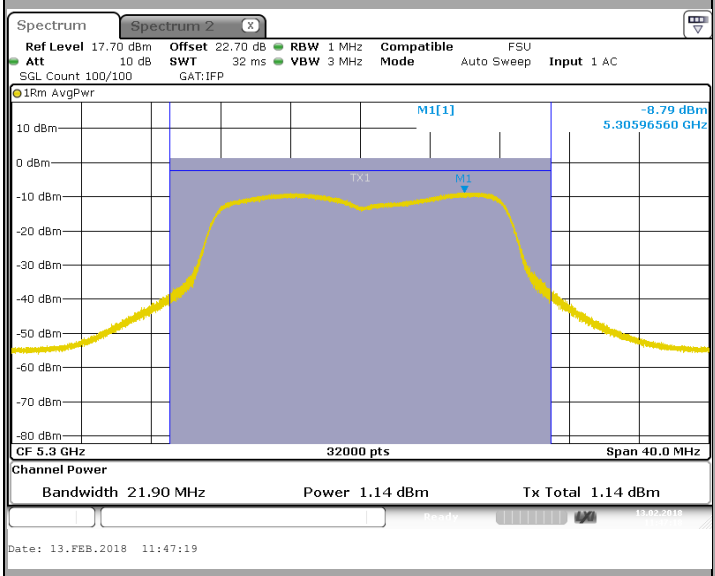	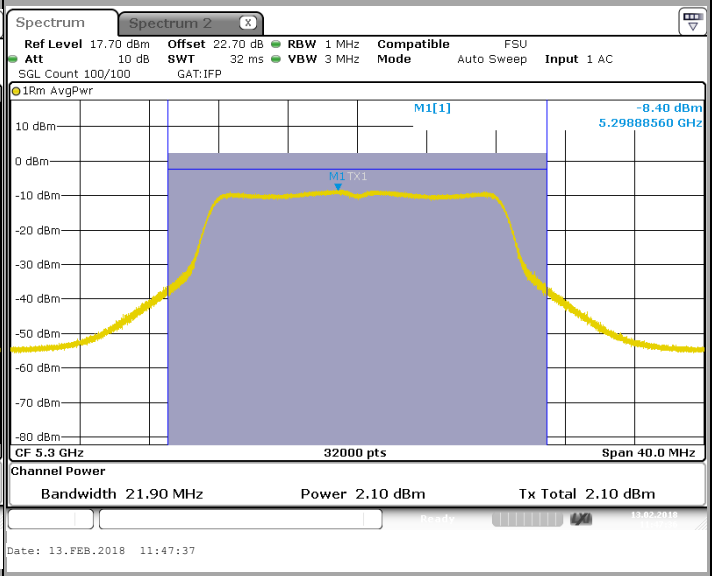

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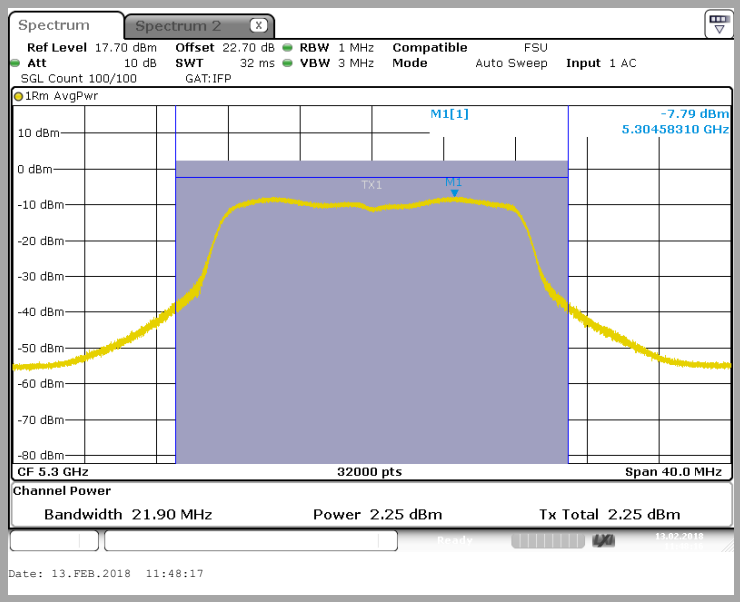

802.11a	
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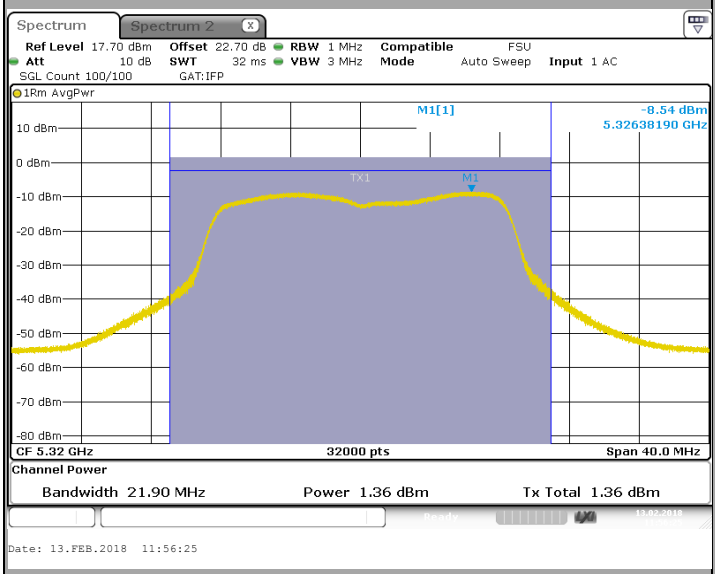	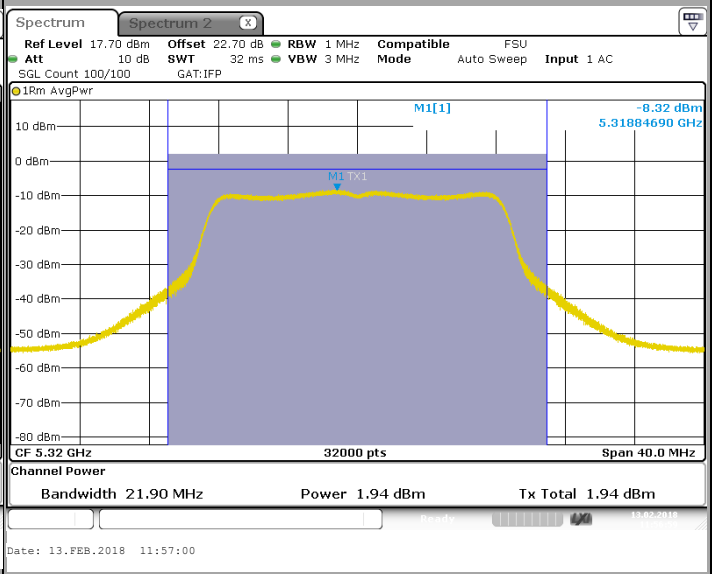
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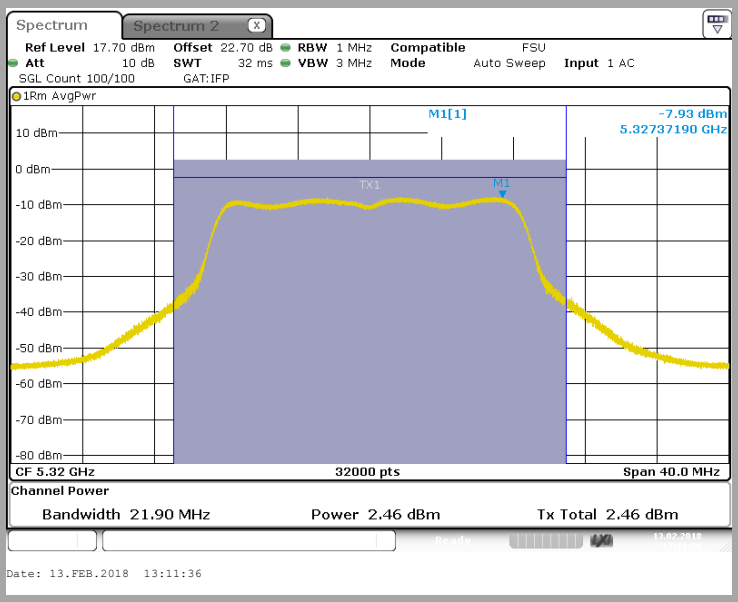	

802.11a

C7

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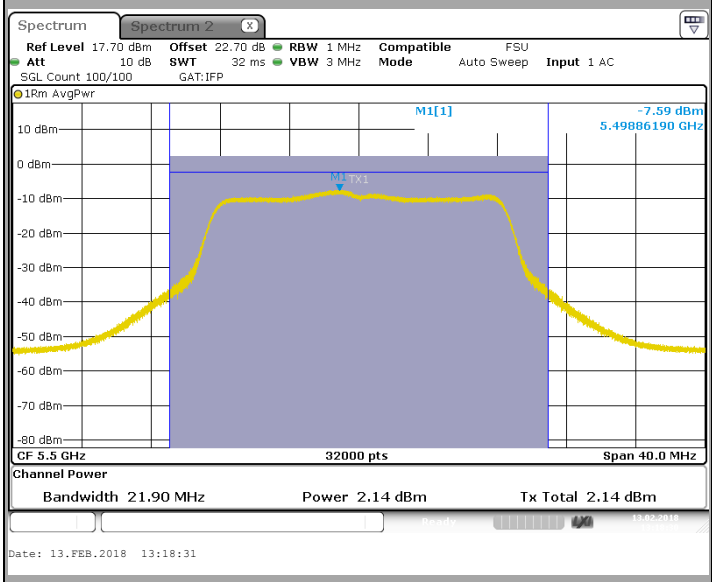

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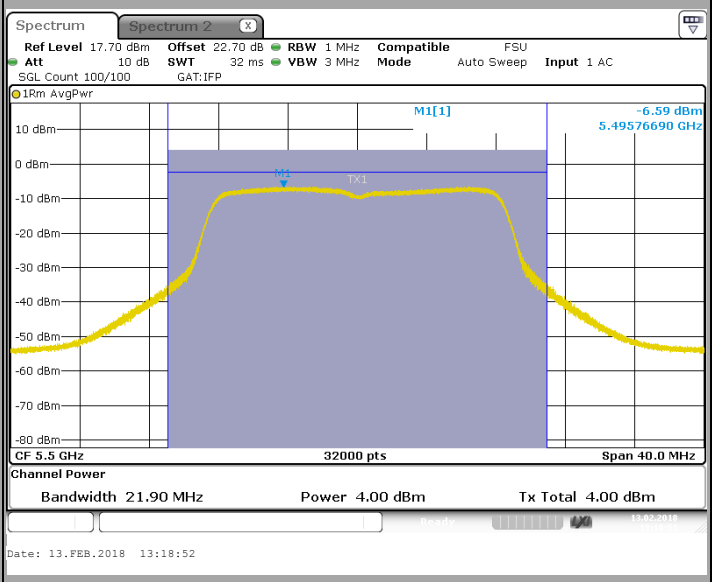

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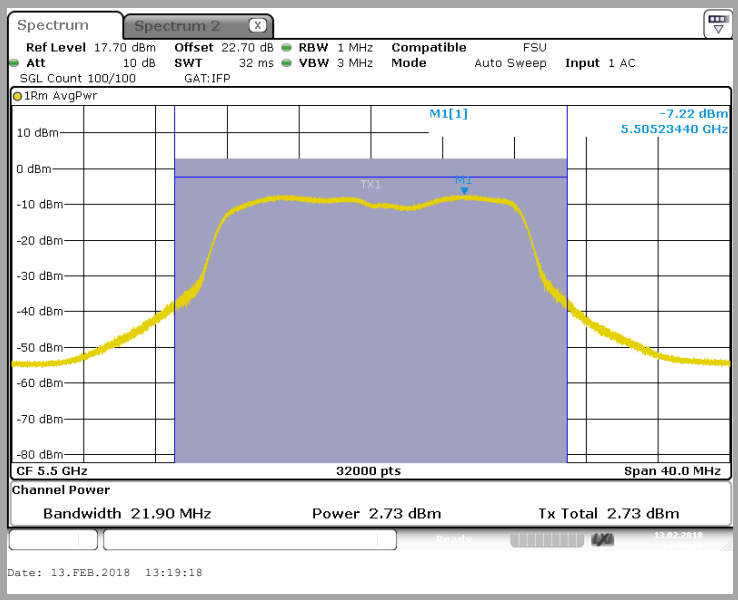

802.11a	
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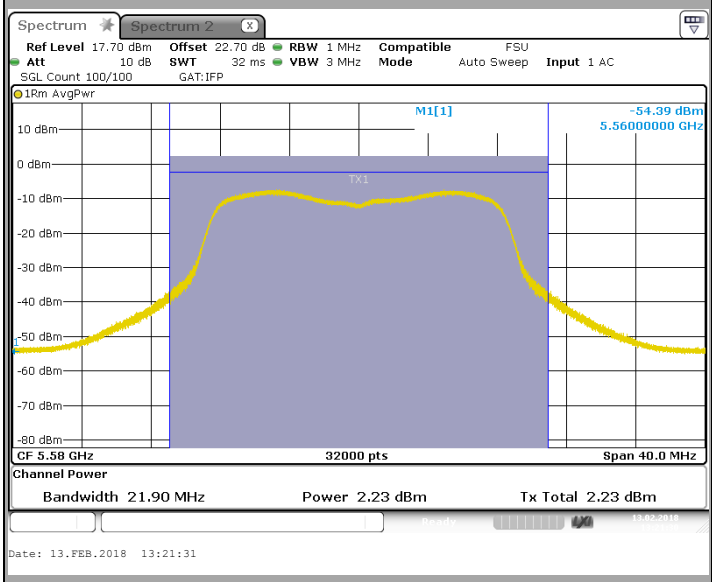	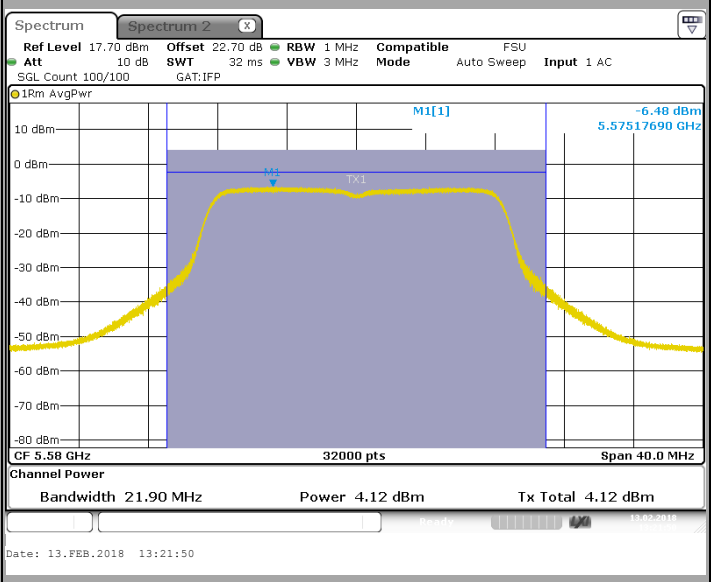
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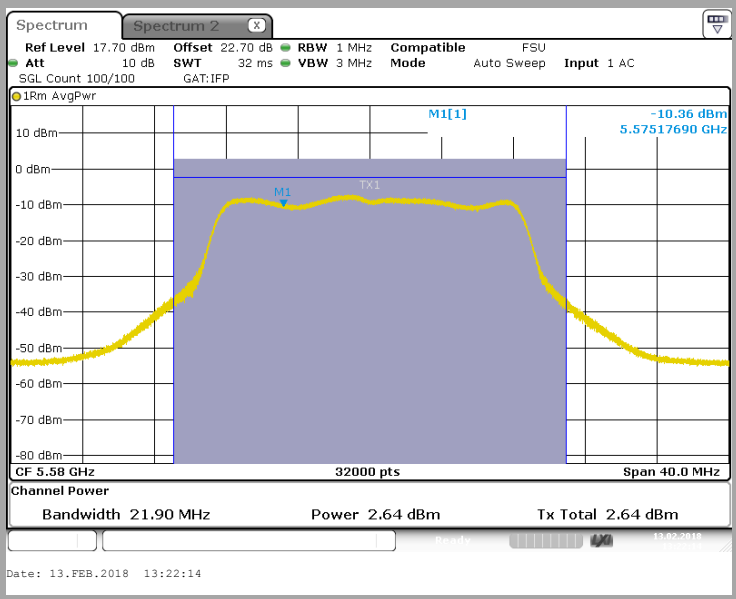	

802.11a

C9

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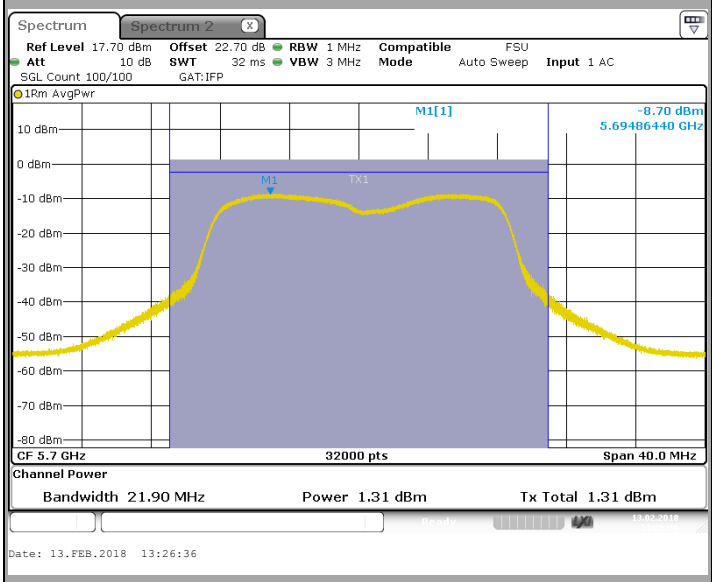

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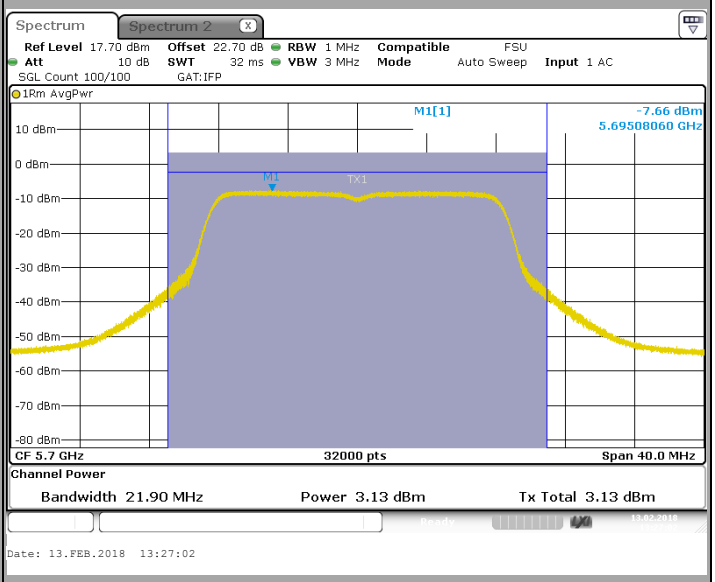

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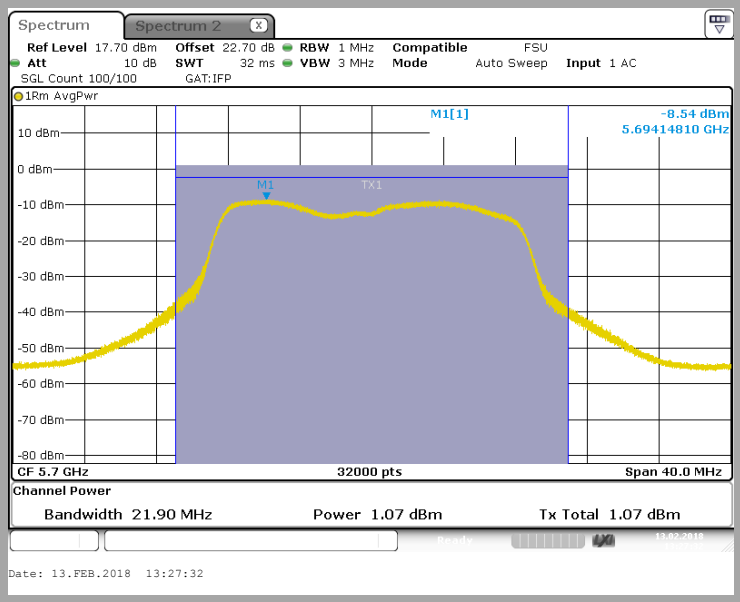

802.11n HT20/ac VHT20	
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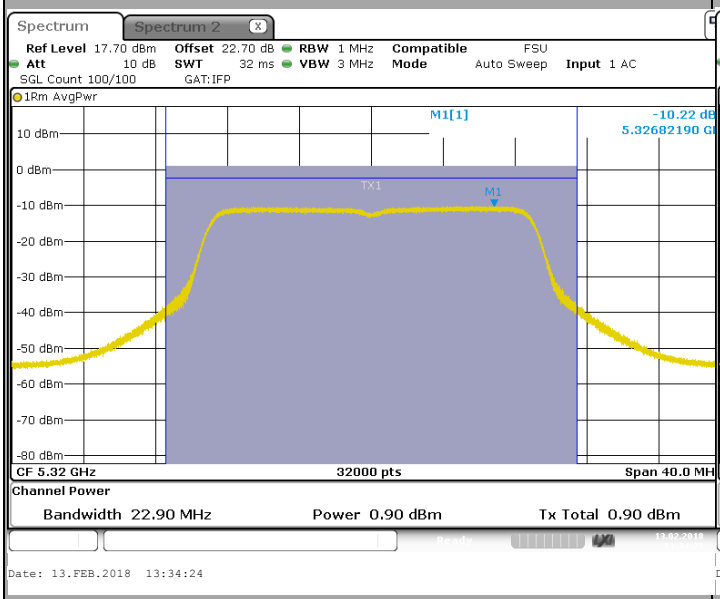
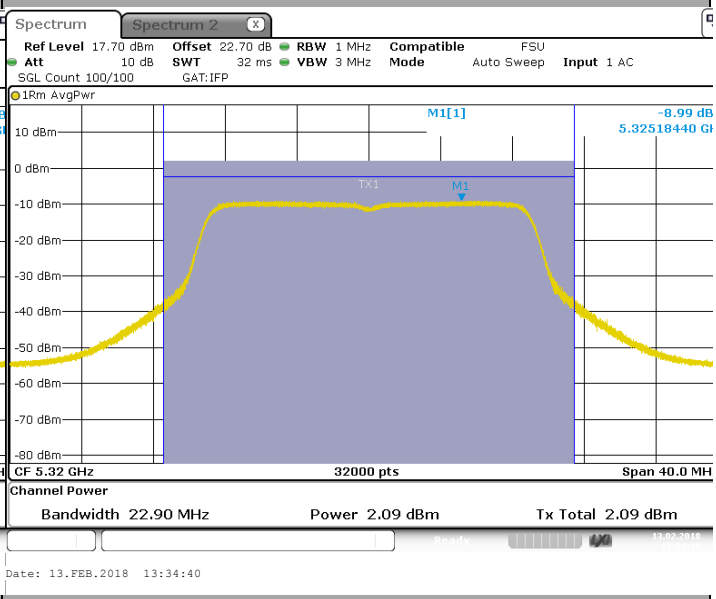
Tx1	Tx2





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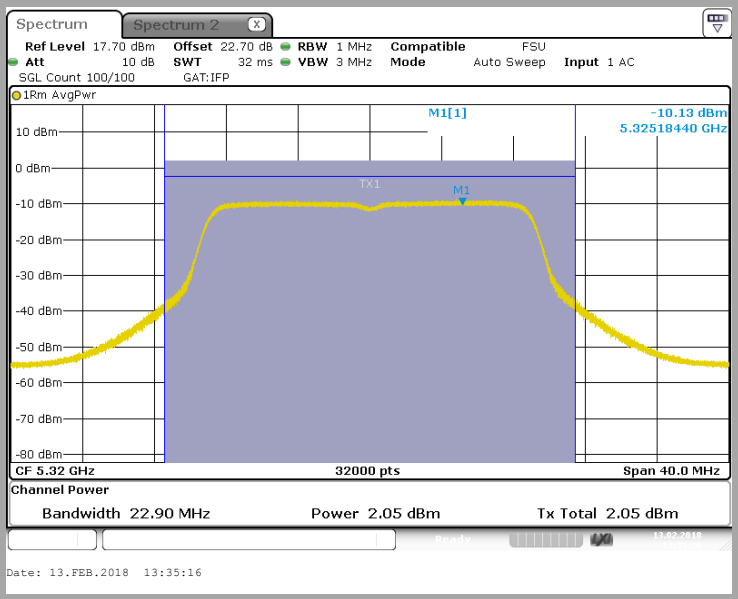
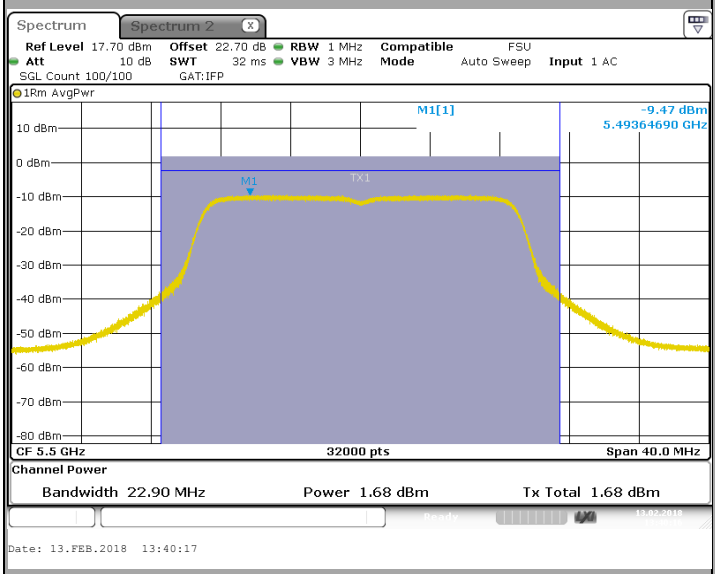


802.11n HT20/ac VHT20

C7

Tx1



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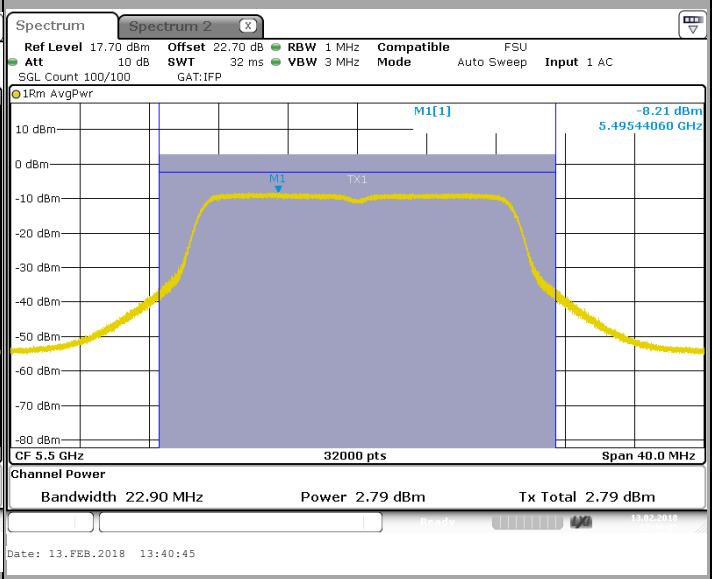

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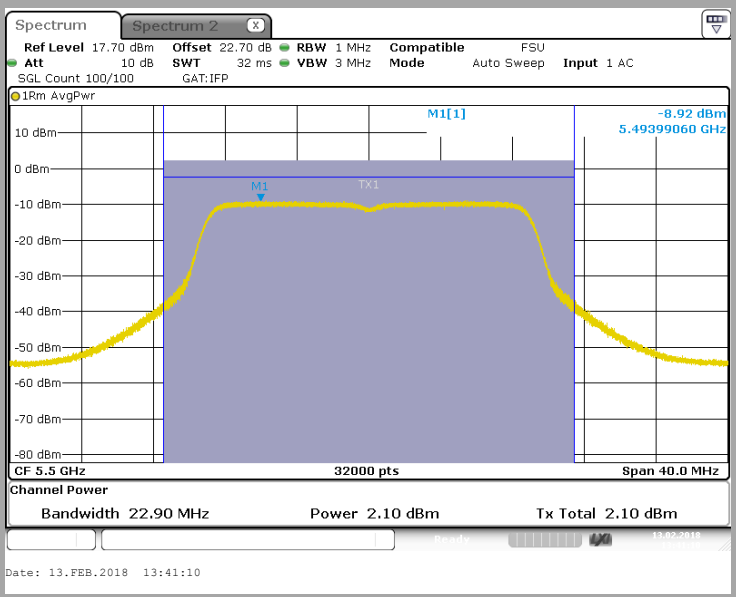

802.11n HT20/ac VHT20

C8

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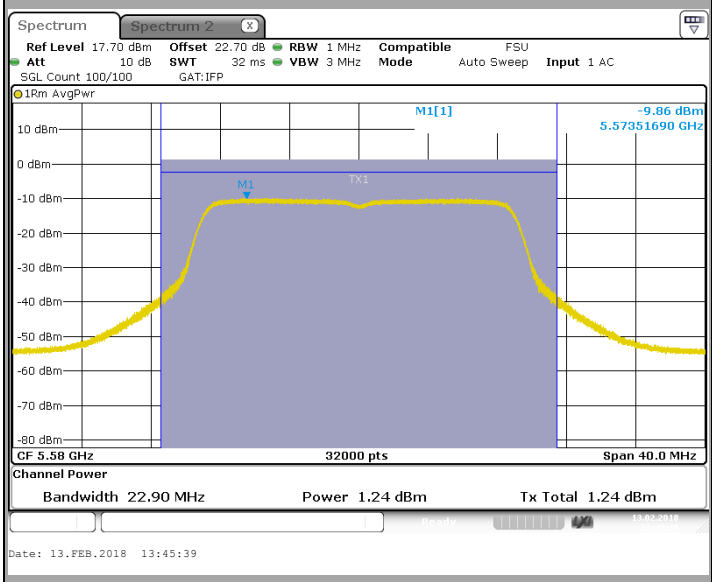

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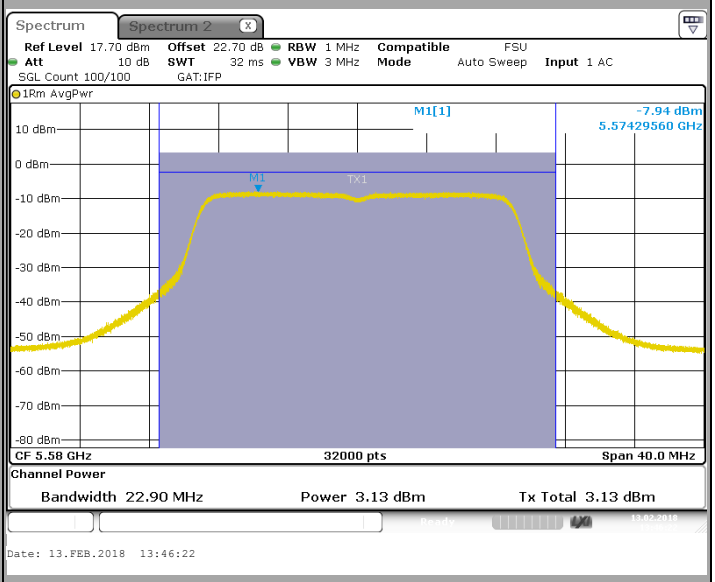

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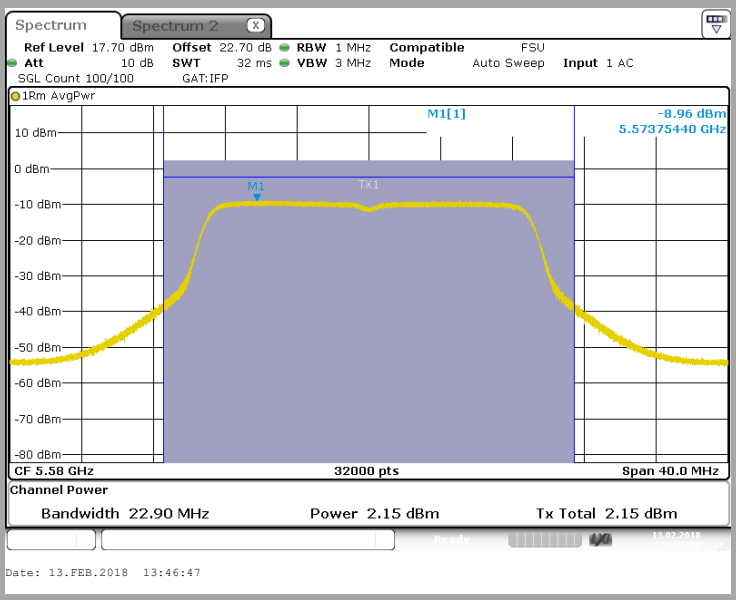

802.11n HT40/ac VHT40

C16

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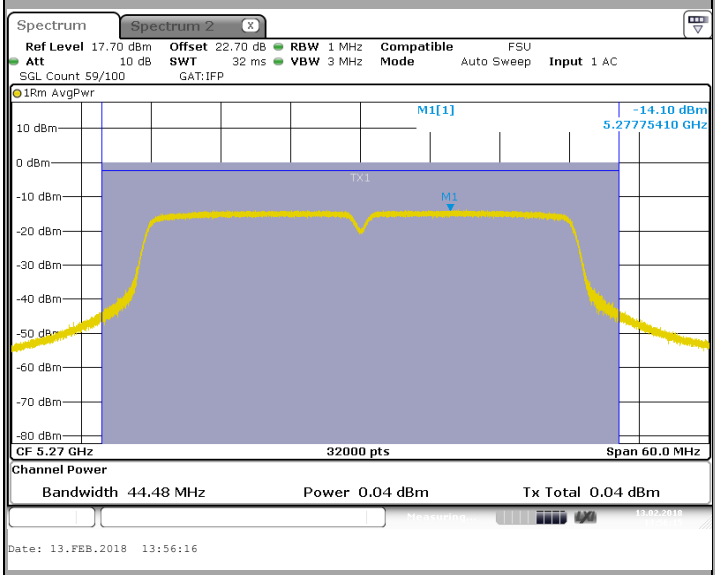

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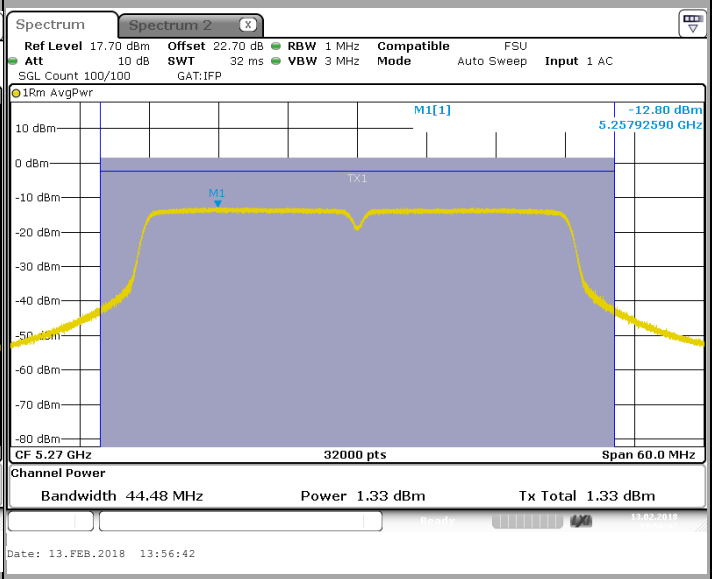

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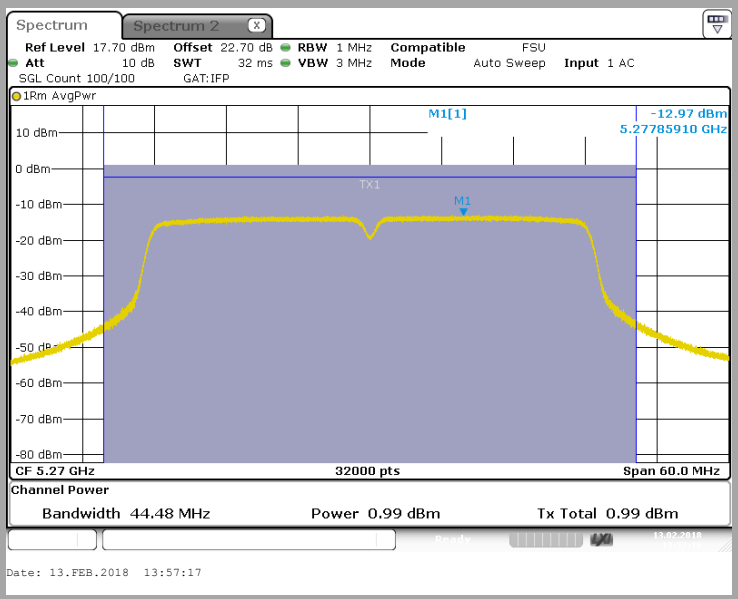

802.11n HT40/ac VHT40

C19

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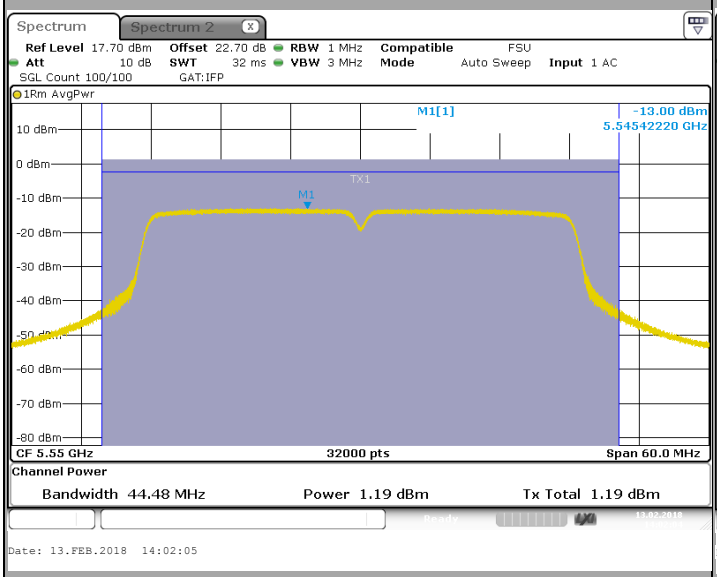

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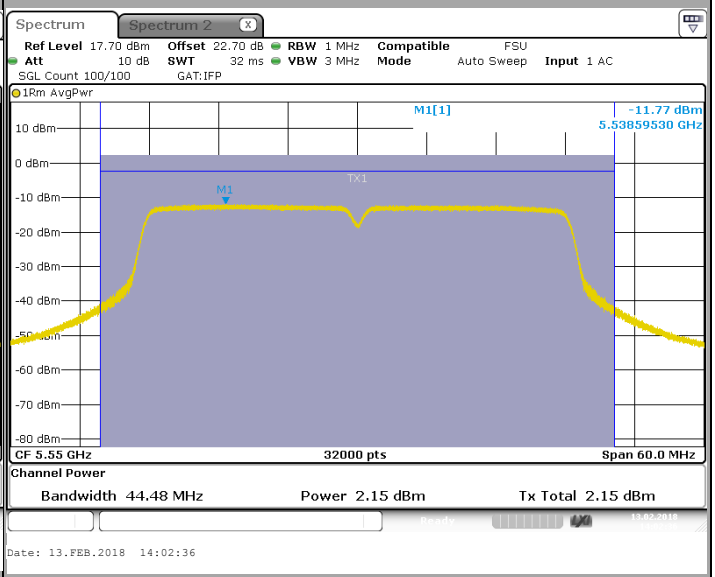

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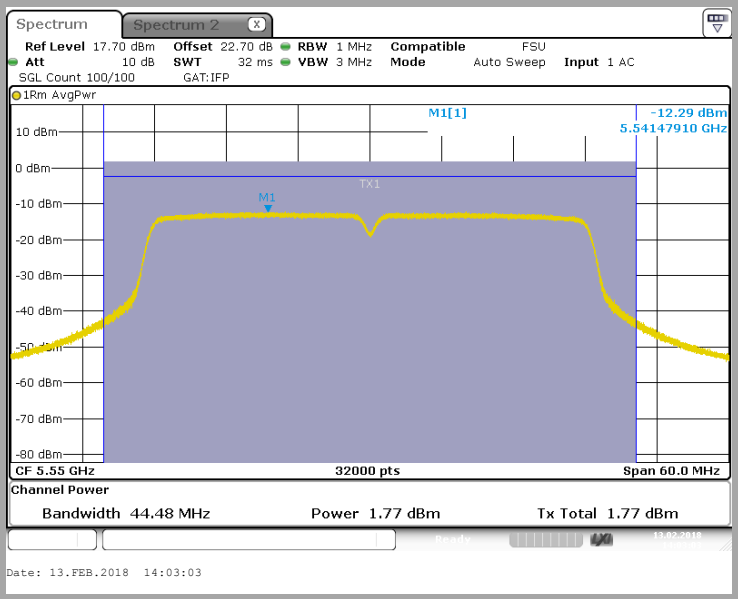

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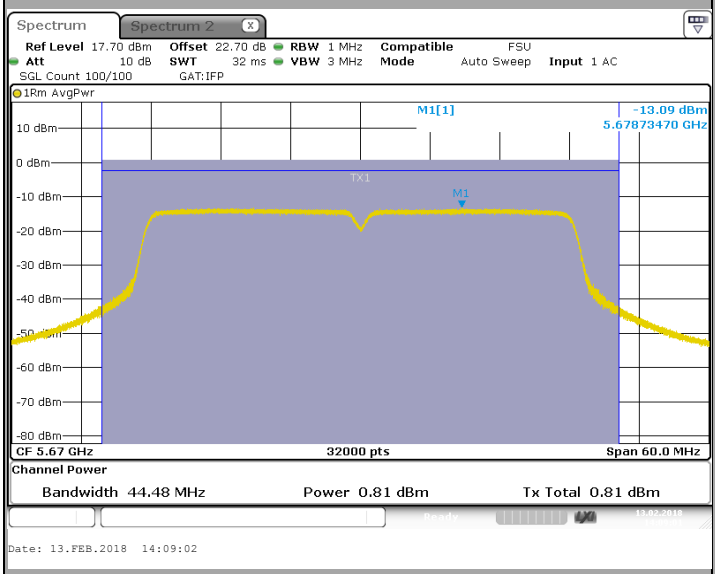	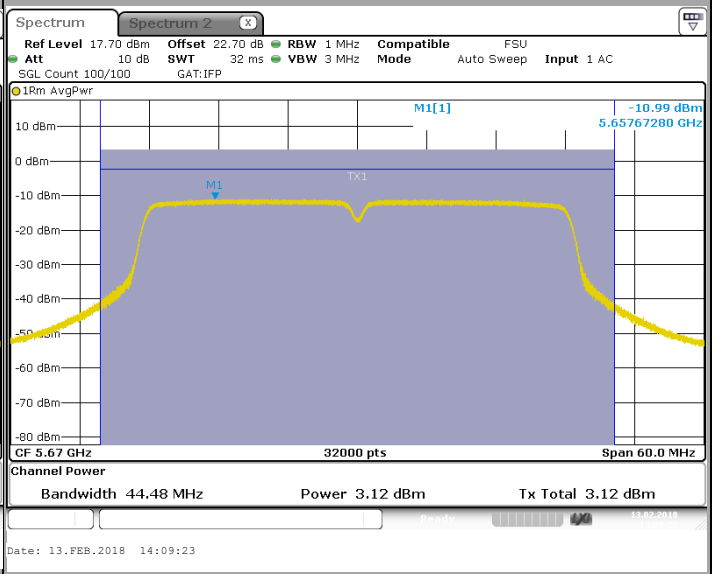
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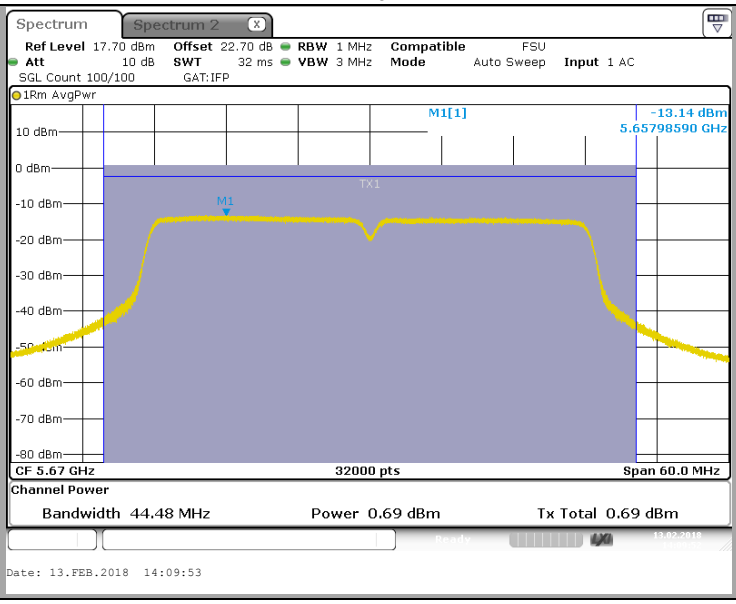
	

802.11a

Channel	Tx1 (dBm)	Tx2 (dBm)	Tx3 (dBm)	TxAll (dBm)	AG (dBi)	TPC Min (dBm)	TPC Min Limit (dBm)
C4	1,64	2,73	1,41	6,7	7	13,7	24
C5	1,14	2,1	2,25	6,6	7	13,6	24
C6	1,36	1,94	2,46	6,7	7	13,7	24
C7	2,14	4	2,73	7,8	7	14,8	24
C8	2,23	4,12	2,64	7,8	7	14,8	24
C9	1,31	3,13	1,07	6,7	7	13,7	24

802.11 nHT 20

Channel	Tx1 (dBm)	Tx2 (dBm)	Tx3 (dBm)	TxAll (dBm)	AG (dBi)	TPC Min (dBm)	TPC Min Limit (dBm)
C4				-91,0	7	-84,0	24
C5				-91,0	7	-84,0	24
C6	0,9	2,09	2,05	6,5	7	13,5	24
C7	1,68	2,79	2,1	7,0	7	14,0	24
C8	1,24	3,13	2,15	7,0	7	14,0	24
C9				-91,0	7	-84,0	24

802.11 nHT40

Channel	Tx1 (dBm)	Tx2 (dBm)	Tx3 (dBm)	TxAll (dBm)	AG (dBi)	TPC Min (dBm)	TPC Min Limit (dBm)
C16	0,04	1,33	0,99	5,6	7	12,6	24
C17					7	-84,0	24
C18					7	-84,0	24
C19	1,19	2,15	1,77	6,5	7	13,5	24
C20	0,81	3,12	0,69	6,5	7	13,46	24

9.6. CONCLUSION

Transmit Power Control measurement performed on the sample of the product **SAGEMCOM FAST 5260**, SN: **NQ1736013023187**, in configuration and description presented in this test report, show levels **compliant** to the **47 CFR PART 15.407 & RSS 247 ISSUE 2** limits.

10. AC POWER LINE CONDUCTED EMISSIONS

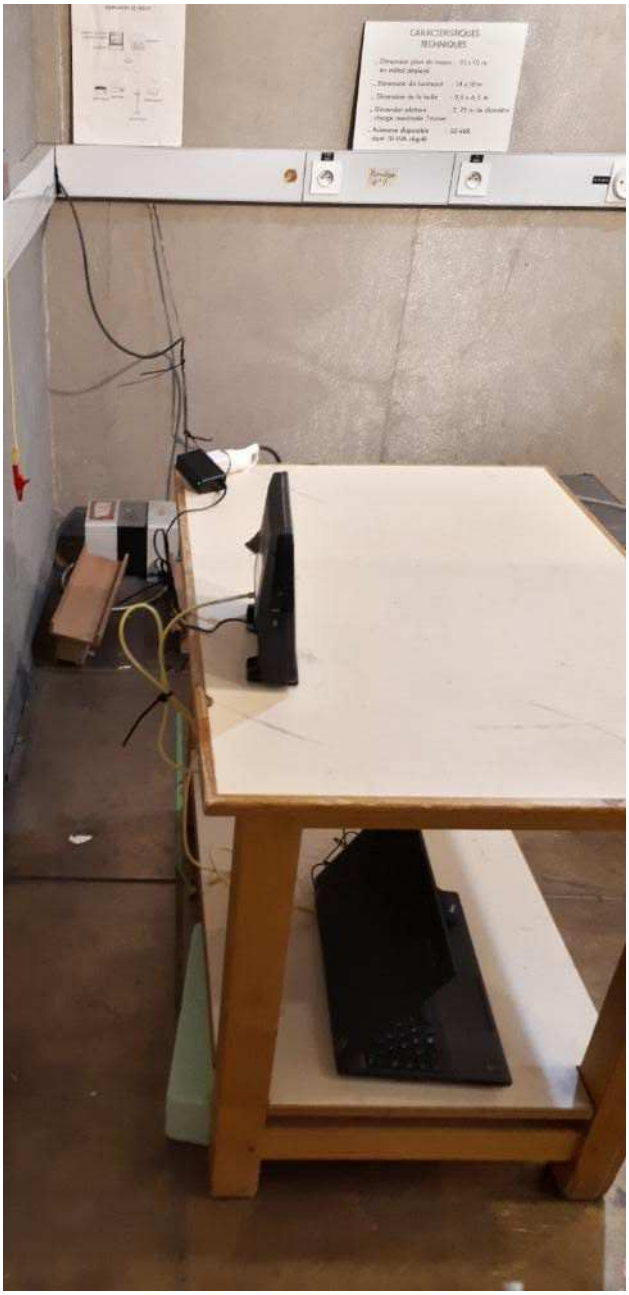
10.1. TEST CONDITIONS

Test performed by	: Laurent DENEUX
Date of test	: February 5, 2018
Ambient temperature	: 20 °C
Relative humidity	: 50 %

10.2. TEST SETUP

The product has been tested according to ANSI C63.10 (2013) method. The EUT is placed on the ground reference plane, at 80cm from the LISN. The distance between the EUT and the vertical ground plane is 40cm. Auxiliaries are powered by another LISN. The cable has been shorted to 1meter length. The EUT is powered through the LISN. Measurement is made with a receiver in peak mode. This was followed by a Quasi-Peak, i.e. CISPR measurement for any strong signal. If the average limit is met when using a Quasi-Peak detector, the EUT shall be deemed to meet both limits and measurement with the average detector is unnecessary. The LISN (measure) is 50Ω / 50µH. Interconnecting cables and equipment's were moved to position that maximized emission.

Photograph for AC Power Line Conducted Emissions (Front view)



Photograph for AC Power Line Conducted Emissions (Rear view)

10.3. LIMIT

Quasi-Peak
0,15kHz to 0,5MHz: 66dBµV to 56dBµV*
0,5MHz to 5MHz: 56dBµV
5MHz to 30MHz: 60dBµV

Average
0,15kHz to 0,5MHz: 56dBµV to 46dBµV*
0,5MHz to 5MHz: 46dBµV
5MHz to 30MHz: 50dBµV

*Decreases with the logarithm of the frequency

10.4. TEST EQUIPMENT LIST

Test Equipment Used					
Description	**Manufacturer**	**Model**	**Identifier**	**Cal. Date**	**Cal. Due**
Receiver	RHODE & SCHWARZ	ESIB26	A2642021	2016/12	2018/12
V ISLN	ROHDE & SCHWARZ	ESH2-Z5	C2322001	2017/08	2018/08
Pulse limiter	ROHDE & SCHWARZ	ESH3-Z2	A2649008	2017/09	2018/09
Cable	-	-	A5329417	2017/10	2018/10
Cable	-	-	A5329589	2017/08	2018/08
Reference ground plan 2 x 3m	L.C.I.E.	-	-	-	-
Supplementary information:					

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

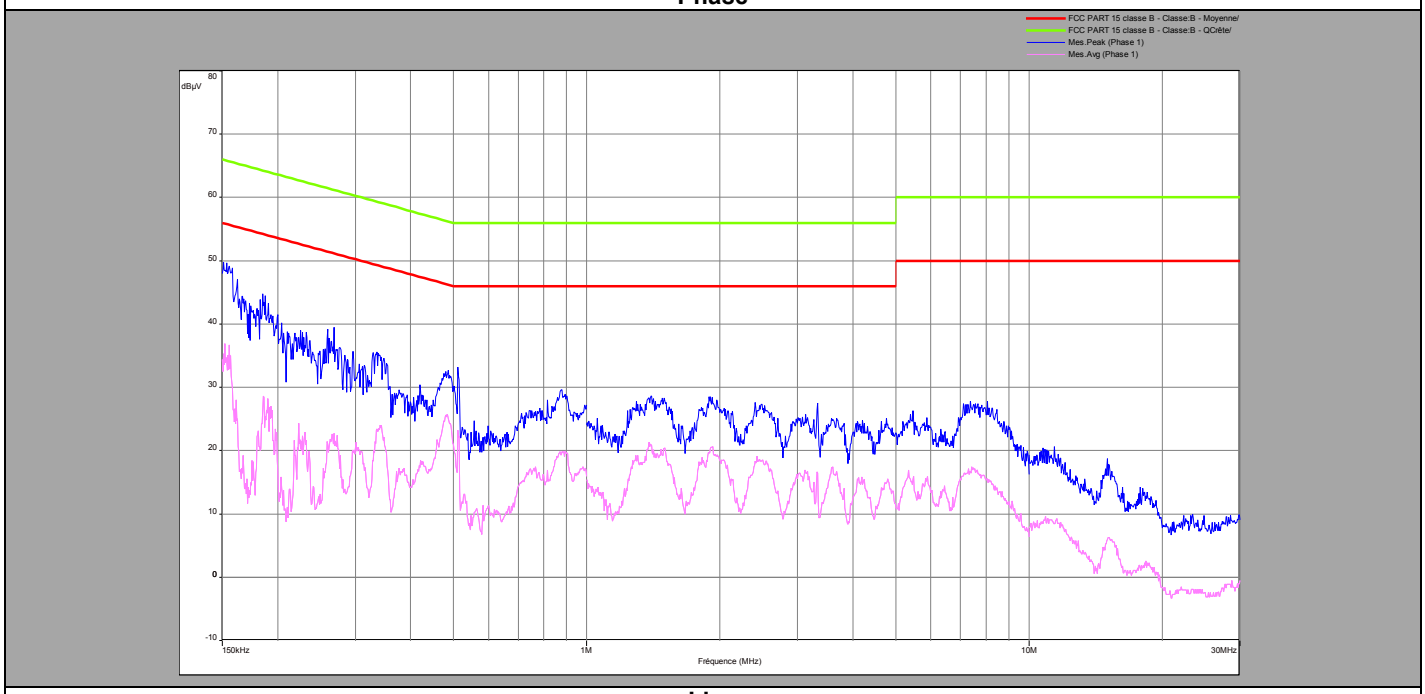
10.5. DIVERGENCE, ADDITION OR SUPPRESSION ON THE TEST SPECIFICATION

☑ None ☐ Divergence:

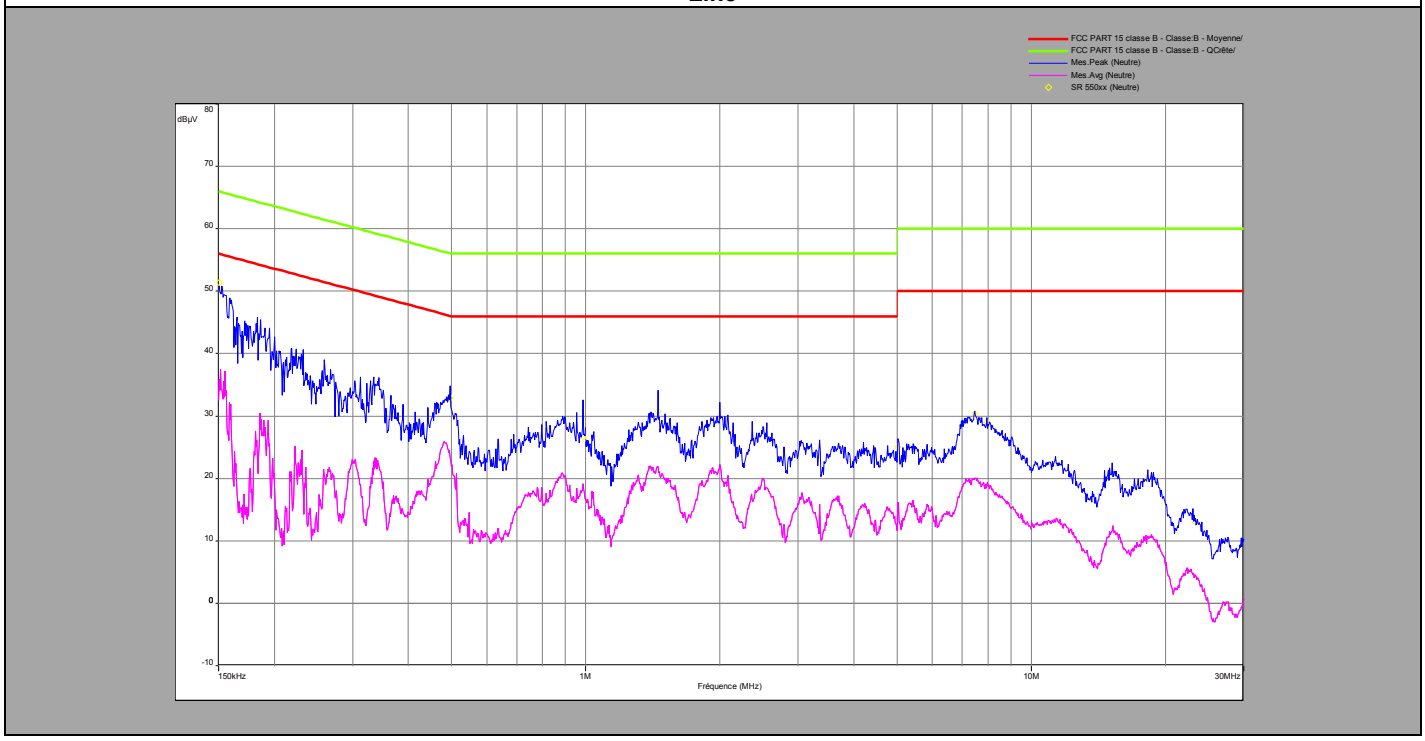
10.6. RESULTS

802.11a

Phase



Line



Phase

Frequency (MHz)	Peak Level (dBµV)	Quasi-Peak Limit (dBµV)	Margin peak level (dBµV)	Average Level (dBµV)	Average Limit (dBµV)	Margin average level (dBµV)
0.150	48	66	18.0	34.4	56	21.6
0.511	33.3	56	22.7	23.3	46	22.7
1.474	28	56	28.0	25.8	46	20.2
10.75	20.5	60	39.5	8.5	50	41.5
15.12	17.7	60	42.3	7.5	50	42.5

Neutral

Frequency (MHz)	Peak Level (dBµV)	Quasi-Peak Limit (dBµV)	Margin peak level (dBµV)	Average Level (dBµV)	Average Limit (dBµV)	Margin average level (dBµV)
0.150	50.4	66	15.6	37.5	56	18.5
0.496	34.8	56	21.2	25.6	46	20.4
2.0	32.2	56	23.8	22.5	46	23.5
7.52	28.7	60	31.3	20	50	30
15.2	22.5	60	37.5	12.4	50	37.6

10.7. CONCLUSION

Ac Power Line Conducted Emission measurement performed on the sample of the product **SAGEMCOM FAST 5260**, SN: **NQ1736013023187**, in configuration and description presented in this test report, show levels **compliant** to the 47 CFR PART 15.407 & RSS 247 ISSUE 2 limits.