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WIFI 5GHz (RF test) Template: Release April 14th, 2021

TEST REPORT

N°: 172911-765736-C

Version : 02

Subject

Radio spectrum matters
tests according to standards:
47 CFR Part 15.407 & RSS-247 Issue 2 & RSS-Gen Issue 5 (RF Test Only)

Issued to

SAGEMCOM
250 Route de l'Empereur
92848 – RUEIL MALMAISON
FRANCE

Apparatus under test

- ↳ Product
- ↳ Trade mark
- ↳ Manufacturer
- ↳ Model under test
- ↳ Serial number
- ↳ FCC ID
- ↳ IC

TV Set Top Box
COGECO
SAGEMCOM
DIW3930 COGECO
6211130035003
VW3DIW3930
9140A-DIW3930

Conclusion

See Test Program chapter

Test date

: June 17, 2021 to June 24, 2021

Test location

Moirans

Test Site

6500A-1 & 6500A-3

Registration Number

197516

Designation Number

FR0008

Sample receipt date

June 7, 2021

Composition of document

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Written by :
Armand MAHOUNGOU
Tests operator

Approved by :
Annaud FAVETTE
Technical manager

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LCIE

Laboratoire Central des Industries Electriques
Une société de Bureau Veritas

ZI Centr'alp
170 rue de Chatagnon
38430 Moirans FRANCE

Tél : +33 4 76 07 36 36
contact@lcie.fr
www.lcie.fr



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01	August 3, 2021	Armand MAHOUNGOU	Creation of the document
02	September 30, 2021	Armand MAHOUNGOU	Customer request withdraw the pictures of equipment

Each new edition of this test report replaces and cancels the previous edition. The control of the old editions of report is under responsibility of client.



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1. TEST PROGRAM

References

- 47 CFR Part 15.407
- RSS 247 Issue 2
- RSS Gen Issue 5
- KDB 789033 D02 General U-NII Tests Procedures New Rules v02r01
- KDB 662911 D01 Multiple Transmitter Output v02r01
- ANSI C63.10-2013

Radio requirement:

Clause (47CFR Part 15.407 & RSS-247 Issue 2 & RSS-Gen Issue 5) Test Description	Test result - Comments			
Occupied Bandwidth	☒ PASS	☐ FAIL	☐ NA	☐ NP(1)
26dB Bandwidth	☒ PASS	☐ FAIL	☐ NA(2)	☐ NP(1)
6dB Bandwidth	☒ PASS	☐ FAIL	☐ NA(3)	☐ NP(1)
Duty Cycle	☒ PASS	☐ FAIL	☐ NA	☐ NP(1)
EIRP	☒ PASS	☐ FAIL	☐ NA	☐ NP(1)
Maximum Conducted Output Power	☒ PASS	☐ FAIL	☐ NA	☐ NP(1)
Power Spectral Density	☒ PASS	☐ FAIL	☐ NA	☐ NP(1)
Transmit Power Control	☒ PASS	☐ FAIL	☐ NA(4)	☐ NP(1)
AC Power Line Conducted Emission	☒ PASS	☐ FAIL	☐ NA(5)	☐ NP(1)
Unwanted Emissions & Undesirable Emission	☒ PASS	☐ FAIL	☐ NA	☐ NP(1)
Frequency Stability	☒ PASS	☐ FAIL	☐ NA	☐ NP(1)
This table is a summary of test report, see conclusion of each clause of this test report for detail.				

(1): Limited program

(2): EUT only operates outside the 5725MHz-5850MHz band

(3): EUT only operates inside the 5725MHz-5850MHz band

(4): EIRP below 27dBm or EUT only operates inside 5150MHz-5250MHz or/and 5725MHz-5850MHz bands

(5): EUT not directly or indirectly connected to the AC Power Public Network



2. EQUIPMENT UNDER TEST: CONFIGURATION (DECLARED BY PROVIDER)

2.1. HARDWARE IDENTIFICATION (EUT AND AUXILIARIES):

Equipment under test (EUT):
COGECO DIW3930 COGECO

Serial Number: 6211130035003

Power supply:

Name	Type	Rating	Reference / Sn	Comments
Supply1	☒ AC ☐ DC ☐ Battery	100-127Vac; 50/60Hz; 0.3A	NBC12B120100VU / 191636225-xx	

Inputs/outputs - Cable:

Access	Type	Length used (m)	Declared <3m	Shielded	Under test	Comments
1	Main power supply cable	-	☒	☐	☐	-
2	HDMI cable	-	☒	☐	☐	-
3	USB cable	-	☒	☐	☐	-
4	Ethernet cable	-	☒	☐	☐	-

Auxiliary equipment used during test:

Type	Reference	Sn	Comments
Laptop	-	-	Use to set the EUT



Equipment information:

Type:	WIFI			
Chipset Ref :	BCM72180			
Frequency band:	☒ 5150MHz-5250MHz	☒ 5250MHz-5350MHz	☒ 5470MHz-5725MHz	
	☒ 5725MHz-5850MHz			
Standard:	☒ 802.11a	☒ 802.11n HT20	☒ 802.11n HT40	
	☒ 802.11ac VHT20	☒ 802.11ac VHT40	☒ 802.11ac VHT80	
	☐ 802.11ac VHT160			
Spectrum Modulation:	☒ OFDM			
Channel bandwidth:	☒ 20MHz	☒ 40MHz	☒ 80MHz	☐ 160MHz
Antenna Type:	☒ Integral	☐ External	☐ Dedicated	
Antenna connector:	☒ Yes	☐ No	☐ Temporary for test	
Antenna Requirements §15.203	The transmitter uses an integral antenna with a u.fl connector which is classified as a unique connector			
Transmit chains:	☐ 1	☒ 2	☐ 3	☐ 4
	☐ 5	☐ 6	☐ 7	☐ 8
TPC:	☐ Yes		☐ No	
Receiver chains	☐ 1	☒ 2	☐ 3	☐ 4
	☐ 5	☐ 6	☐ 7	☐ 8
Type of equipment:	☒ Stand-alone	☐ Plug-in	☐ Combined	
Equipment arrangement:	☒ Tabletop	☐ Floor-standing	☐ Multiple orientations	
Operating temperature range:	Tmin:	☐ -20°C	☒ 0°C	☐ X °C
	Tnom:	20°C		
	Tmax:	☐ 35°C	☐ 55°C	☒ 45°C
Type of power source:	☒ AC power supply	☐ DC power supply	☐ Battery Battery Type	
Operating voltage range:	Vmin:	☒ 110 V/60Hz	☐ X VDC	
	Vnom:	☒ 120V/60Hz	☐ X VDC	
	Vmax:	☒ 130 V/60Hz	☐ X VDC	
Mode:	☐ Master	☐ Slave with radar detection	☒ Slave without radar detection	
	☐ Bridge		☐ Mesh	
Fixed outdoor P to P/M application:	☐ Yes		☒ No	
System architectures:	☒ IP based		☐ Frame based	
User access restriction:	☒ Yes (The manufacturer declares that information regarding the parameters of the detected Radar Waveforms is not available to the end user)		☐ No	

Antenna Characteristic			
Antenna assembly	Gain (dBi)	Frequency Band (MHz)	Impedance(Ω)
1	1.37	5150-5250	50
	2.76	5250-5875	50
2	1	5150-5250	50
	0.84	5250-5875	50
Accumulated	4.2	5150-5250	50
	4.86	5250-5875	50

Accumulated gain calculation		
Formula used for calculation	KDB	Correlated
$10 \log[(10G1/20 + 10G2/20 + \dots + 10GN/20)^2 / NANT] \text{dBi}$	KDB 662911 D01 v02r01	☒ Yes / ☐ No

Hardware information		
Software (if applicable):	V. :	1.1000 RC12.0 wI0: Sep 23 2020 13:56:05 version 18.40.16.20 (189d91e10512e80bb2d12b1a62f0685df28f3968 WLTEST) FWID 01-5932f5f2

CHANNEL PLAN & Target		
802.11a / 802.11n HT20/ 802.11ac VHT20 / 802.11ax20		
Channel	Frequency (MHz)	Available Channel
C1=36	5180	☒
C2=40	5200	☒
44	5220	☒
C3=48	5240	☒
C4=52	5260	☒
56	5280	☒
C5=60	5300	☒
C6=64	5320	☒
C7=100	5500	☒
104	5520	☒
108	5540	☒
112	5560	☒
C8=116	5580	☒
120	5600	☒
124	5620	☒
128	5640	☒
132	5660	☒
136	5680	☒
C9=140	5700	☒
C10=144	5720	☒
C11=149	5745	☒
153	5765	☒
C12=157	5785	☒
161	5805	☒
C13=165	5825	☒

CHANNEL PLAN		
802.11n HT40/ 802.11ac VHT40/ 802.11ax 40		
Channel	Frequency (MHz)	Available Channel
C14=36+40	5190	☒
C15=44+48	5230	☒
C16=52+56	5270	☒
C17=60+64	5310	☒
C18=100+104	5510	☒
C19=108+112	5550	☒
116+120	5590	☒
124+128	5630	☒
C20=132+136	5670	☒
C21=140+144	5710	☒
C22=149+153	5755	☒
C23=157+161	5795	☒

CHANNEL PLAN		
802.11ac VHT80/ 802.11 ax80		
Channel	Frequency (MHz)	Available Channel
C24=36+40+44+48	5210	☒
C25=52+56+60+64	5290	☒
C26=100+104+108+112	5530	☒
C27=116+120+124+128	5610	☒
C28=132+136+140+144	5690	☒
C29=149+153+157+161	5775	☒

No DFS Channel
DFS Channel
Weather DFS Channel (Not Authorised for RSS-247)

Wifi 5GHz		Wifi 5GHz		Wifi 5GHz	
Mode A		Mode n HT20 / ac HT20		Mode ax HT20	
Channel	Target	Channel	Target	Channel	Target
C1	52	C1	54	C1	60
C2	56	C2	56	C2	58
C3	56	C3	56	C3	58
C4	60	C4	60	C4	60
C5	62	C5	60	C5	60
C6	60	C6	60	C6	60
C7	76	C7	76	C7	80
C8	78	C8	76	C8	80
C9	78	C9	76	C9	74
C10	78	C10	78	C10	76
C11	96	C11	96	C11	96
C12	96	C12	96	C12	96
C13	96	C13	96	C13	96

Wifi 5GHz		Wifi 5GHz	
Mode n HT40/ac VHT40		Mode ax 40	
Channel	Target	Channel	Target
C14	64	C14	64
C15	64	C15	64
C16	62	C16	62
C17	62	C17	62
C18	78	C18	76
C19	84	C19	84
C20	84	C20	80
C21	84	C21	84
C22	96	C22	92
C23	96	C23	96

Wifi 5GHz		Wifi 5GHz	
Mode VHT80		Mode ax VHT80	
Channel	Target	Channel	Target
C24	64	C24	64
C25	72	C25	64
C26	76	C26	74
C27	84	C27	84
C28	84	C28	84
C29	90	C29	88



DATA RATE		
802.11a		
Data Rate (Mbps)	Modulation Type	Modulation Worst Case
6	BPSK	☒
9	BPSK	☐
12	QPSK	☐
18	QPSK	☐
24	16-QAM	☐
36	16-QAM	☐
48	64-QAM	☐
54	64-QAM	☐



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DATA RATE									
802.11n HT20									
Available for EUT	MCS Index	Spatial streams	Modulation				Data Rate (Mbps)		Worst Case Modulation
							(GI = 800ns)	(GI = 400ns)	
☑	0	1	BPSK				6.5	7.2	☐
	1	1	QPSK				13	14.4	☐
	2	1	QPSK				19.5	21.7	☐
	3	1	16-QAM				26	28.9	☐
	4	1	16-QAM				39	43.3	☐
	5	1	64-QAM				52	57.8	☐
	6	1	64-QAM				58.5	65	☐
☑	7	1	64-QAM				65	72.2	☐
	8	2	BPSK				13	14.4	☒
	9	2	QPSK				26	28.9	☐
	10	2	QPSK				39	43.3	☐
	11	2	16-QAM				52	57.8	☐
	12	2	16-QAM				78	86.7	☐
	13	2	64-QAM				104	115.6	☐
☐	14	2	64-QAM				117	130.3	☐
	15	2	64-QAM				130	144.4	☐
	16	3	BPSK				19.5	21.7	☐
	17	3	QPSK				39	43.3	☐
	18	3	QPSK				58.5	65	☐
	19	3	16-QAM				78	86.7	☐
	20	3	16-QAM				117	130	☐
☐	21	3	64-QAM				156	173.3	☐
	22	3	64-QAM				175.5	195	☐
	23	3	64-QAM				195	216.7	☐
	24	4	BPSK				26	28.9	☐
	25	4	QPSK				52	57.8	☐
	26	4	QPSK				78	86.7	☐
	27	4	16-QAM				104	115.6	☐
☐	28	4	16-QAM				156	173.3	☐
	29	4	64-QAM				208	231.1	☐
	30	4	64-QAM				234	260	☐
	31	4	64-QAM				260	288.9	☐
☐	32	1	BPSK	-	-	-	-	-	☐
	33	2	16-QAM	QPSK	-	-	39	43.3	☐
	34	2	64-QAM	QPSK	-	-	52	57.8	☐
	35	2	64-QAM	16-QAM	-	-	65	72.2	☐
	36	2	16-QAM	QPSK	-	-	58.5	65	☐
	37	2	64-QAM	QPSK	-	-	78	86.7	☐
	38	2	64-QAM	16-QAM	-	-	97.5	108.3	☐
☐	39	3	16-QAM	QPSK	QPSK	-	52	57.8	☐
	40	3	16-QAM	16-QAM	QPSK	-	65	72.2	☐
	41	3	64-QAM	QPSK	QPSK	-	65	72.2	☐
	42	3	64-QAM	16-QAM	QPSK	-	78	86.7	☐
	43	3	64-QAM	16-QAM	16-QAM	-	91	101.1	☐
	44	3	64-QAM	64-QAM	QPSK	-	91	101.1	☐
	45	3	64-QAM	64-QAM	16-QAM	-	104	115.6	☐
☐	46	3	16-QAM	QPSK	QPSK	-	78	86.7	☐
	47	3	16-QAM	16-QAM	QPSK	-	97.5	108.3	☐
	48	3	64-QAM	QPSK	QPSK	-	97.5	108.3	☐
	49	3	64-QAM	16-QAM	QPSK	-	117	130	☐
	50	3	64-QAM	16-QAM	16-QAM	-	136.5	151.7	☐
	51	3	64-QAM	64-QAM	QPSK	-	136.5	151.7	☐
	52	3	64-QAM	64-QAM	16-QAM	-	156	173.3	☐
☐	53	4	16-QAM	QPSK	QPSK	QPSK	65	72.2	☐
	54	4	16-QAM	16-QAM	QPSK	QPSK	78	86.7	☐
	55	4	16-QAM	16-QAM	16-QAM	QPSK	91	101.1	☐
	56	4	64-QAM	QPSK	QPSK	QPSK	78	86.7	☐
	57	4	64-QAM	16-QAM	QPSK	QPSK	91	101.1	☐
	58	4	64-QAM	16-QAM	16-QAM	QPSK	104	115.6	☐
	59	4	64-QAM	16-QAM	16-QAM	16-QAM	117	130	☐
☐	60	4	64-QAM	QPSK	QPSK	QPSK	104	115.6	☐
	61	4	64-QAM	16-QAM	16-QAM	QPSK	117	130	☐
	62	4	64-QAM	16-QAM	16-QAM	16-QAM	130	144.4	☐
	63	4	64-QAM	64-QAM	64-QAM	QPSK	130	144.4	☐
	64	4	64-QAM	64-QAM	64-QAM	16-QAM	143	158.9	☐
	65	4	16-QAM	QPSK	QPSK	QPSK	97.5	108.3	☐
	66	4	16-QAM	16-QAM	QPSK	QPSK	117	130	☐
☐	67	4	16-QAM	16-QAM	16-QAM	QPSK	136.5	151.7	☐
	68	4	64-QAM	QPSK	QPSK	QPSK	117	130	☐
	69	4	64-QAM	16-QAM	QPSK	QPSK	136.5	151.7	☐
	70	4	64-QAM	16-QAM	16-QAM	QPSK	156	173.3	☐
	71	4	64-QAM	16-QAM	16-QAM	16-QAM	175.5	195	☐
	72	4	64-QAM	64-QAM	QPSK	QPSK	156	173.3	☐
	73	4	64-QAM	64-QAM	16-QAM	QPSK	175.5	195	☐
☐	74	4	64-QAM	64-QAM	16-QAM	16-QAM	195	216.7	☐
	75	4	64-QAM	64-QAM	64-QAM	QPSK	195	216.7	☐
	76	4	64-QAM	64-QAM	64-QAM	16-QAM	214.5	238.3	☐



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DATA RATE									
802.11n HT40									
Available for EUT	MCS Index	Spatial streams	Modulation				Data Rate (Mbps)		Worst Case Modulation
							(GI = 800ns)	(GI = 400ns)	
☑	0	1	BPSK				13	15	☐
	1	1	QPSK				27	30	☐
	2	1	QPSK				40.5	45	☐
	3	1	16-QAM				54	60	☐
	4	1	16-QAM				81	90	☐
	5	1	64-QAM				108	120	☐
	6	1	64-QAM				121.5	135	☐
☑	7	1	64-QAM				135	150	☐
	8	2	BPSK				27	30	☒
	9	2	QPSK				54	60	☐
	10	2	QPSK				81	90	☐
	11	2	16-QAM				108	120	☐
	12	2	16-QAM				162	180	☐
	13	2	64-QAM				216	240	☐
☐	14	2	64-QAM				243	270	☐
	15	2	64-QAM				270	300	☐
	16	3	BPSK				40.5	45	☐
	17	3	QPSK				81	90	☐
	18	3	QPSK				121.5	135	☐
	19	3	16-QAM				162	180	☐
	20	3	16-QAM				243	270	☐
☐	21	3	64-QAM				324	360	☐
	22	3	64-QAM				364.5	405	☐
	23	3	64-QAM				405	450	☐
	24	4	BPSK				54	60	☐
	25	4	QPSK				108	120	☐
	26	4	QPSK				162	180	☐
	27	4	16-QAM				216	240	☐
☐	28	4	16-QAM				324	360	☐
	29	4	64-QAM				432	480	☐
	30	4	64-QAM				486	540	☐
	31	4	64-QAM				540	600	☐
	32	1	BPSK	-	-	-	6.0	6.7	☐
	33	2	16-QAM	QPSK	-	-	81	90.0	☐
	34	2	64-QAM	QPSK	-	-	108	120	☐
☐	35	2	64-QAM	16-QAM	-	-	135	150	☐
	36	2	16-QAM	QPSK	-	-	121.5	135	☐
	37	2	64-QAM	QPSK	-	-	162	180	☐
	38	2	64-QAM	16-QAM	-	-	202.5	225	☐
	39	3	16-QAM	QPSK	QPSK	-	108	120	☐
	40	3	16-QAM	16-QAM	QPSK	-	135	150	☐
	41	3	64-QAM	QPSK	QPSK	-	135	150	☐
☐	42	3	64-QAM	16-QAM	QPSK	-	162	180	☐
	43	3	64-QAM	16-QAM	16-QAM	-	189	210	☐
	44	3	64-QAM	64-QAM	QPSK	-	189	210	☐
	45	3	64-QAM	64-QAM	16-QAM	-	216	240	☐
	46	3	16-QAM	QPSK	QPSK	-	162	180	☐
	47	3	16-QAM	16-QAM	QPSK	-	202.5	225	☐
	48	3	64-QAM	QPSK	QPSK	-	202.5	225	☐
☐	49	3	64-QAM	16-QAM	QPSK	-	243	270	☐
	50	3	64-QAM	16-QAM	16-QAM	-	283.5	315	☐
	51	3	64-QAM	64-QAM	QPSK	-	283.5	315	☐
	52	3	64-QAM	64-QAM	16-QAM	-	324	360	☐
	53	4	16-QAM	QPSK	QPSK	QPSK	135	150	☐
	54	4	16-QAM	16-QAM	QPSK	QPSK	162	180	☐
	55	4	16-QAM	16-QAM	16-QAM	QPSK	189	210	☐
☐	56	4	64-QAM	QPSK	QPSK	QPSK	162	180	☐
	57	4	64-QAM	16-QAM	QPSK	QPSK	189	210	☐
	58	4	64-QAM	16-QAM	16-QAM	QPSK	216	240	☐
	59	4	64-QAM	16-QAM	16-QAM	16-QAM	243	270	☐
	60	4	64-QAM	QPSK	QPSK	QPSK	216	240	☐
	61	4	64-QAM	16-QAM	16-QAM	QPSK	243	270	☐
	62	4	64-QAM	16-QAM	16-QAM	16-QAM	270	300	☐
☐	63	4	64-QAM	64-QAM	64-QAM	QPSK	270	300	☐
	64	4	64-QAM	64-QAM	64-QAM	16-QAM	297	330	☐
	65	4	16-QAM	QPSK	QPSK	QPSK	202.5	225	☐
	66	4	16-QAM	16-QAM	QPSK	QPSK	243	270	☐
	67	4	16-QAM	16-QAM	16-QAM	QPSK	283.5	315	☐
	68	4	64-QAM	QPSK	QPSK	QPSK	243	270	☐
	69	4	64-QAM	16-QAM	QPSK	QPSK	283.5	315	☐
☐	70	4	64-QAM	16-QAM	16-QAM	QPSK	324	360	☐
	71	4	64-QAM	16-QAM	16-QAM	16-QAM	364.5	405	☐
	72	4	64-QAM	64-QAM	QPSK	QPSK	324	360	☐
	73	4	64-QAM	64-QAM	16-QAM	QPSK	364.5	405	☐
	74	4	64-QAM	64-QAM	16-QAM	16-QAM	405	450	☐
	75	4	64-QAM	64-QAM	64-QAM	QPSK	405	450	☐
	76	4	64-QAM	64-QAM	64-QAM	16-QAM	445.5	495	☐



L C I E

DATA RATE: 802.11ac VHT20							
Available for EUT	MCS Index	Nbr of spatial streams	Modulation (Stream 1/2/3/4)	Coding rate	GI = 800ns	GI = 400ns	Worst Case Modulation
☒	0	1	BPSK	1/2	6,5	7,2	☐
	1	1	QPSK	1/2	13	14,4	☐
	2	1	QPSK	3/4	19,5	21,7	☐
	3	1	16-QAM	1/2	26	28,9	☐
	4	1	16-QAM	3/4	39	43,3	☐
	5	1	64-QAM	2/3	52	57,8	☐
	6	1	64-QAM	3/4	58,5	65	☐
	7	1	64-QAM	5/6	65	72,2	☐
	8	1	256-QAM	3/4	78	86,7	☐
☒	9	1	256-QAM	5/6	N/A	N/A	☐
	10	2	BPSK	1/2	13	14,4	☒
	11	2	QPSK	1/2	26	28,8	☐
	12	2	QPSK	3/4	39	43,4	☐
	13	2	16-QAM	1/2	52	57,8	☐
	14	2	16-QAM	3/4	78	86,6	☐
	15	2	64-QAM	2/3	104	115,6	☐
	16	2	64-QAM	3/4	117	130	☐
	17	2	64-QAM	5/6	130	144,4	☐
☐	18	2	256-QAM	3/4	156	173,4	☐
	19	2	256-QAM	5/6	N/A	N/A	☐
	20	3	BPSK	1/2	19,5	21,6	☐
	21	3	QPSK	1/2	39	43,2	☐
	22	3	QPSK	3/4	58,5	65,1	☐
	23	3	16-QAM	1/2	78	86,7	☐
	24	3	16-QAM	3/4	117	129,9	☐
	25	3	64-QAM	2/3	156	173,4	☐
	26	3	64-QAM	3/4	175,5	195	☐
☐	27	3	64-QAM	5/6	195	216,6	☐
	28	3	256-QAM	3/4	234	260,1	☐
	29	3	256-QAM	5/6	N/A	N/A	☐
	30	4	BPSK	1/2	26	28,8	☐
	31	4	QPSK	1/2	52	57,6	☐
	32	4	QPSK	3/4	78	86,8	☐
	33	4	16-QAM	1/2	104	115,6	☐
	34	4	16-QAM	3/4	156	173,2	☐
	35	4	64-QAM	2/3	208	231,2	☐
☐	36	4	64-QAM	3/4	234	260	☐
	37	4	64-QAM	5/6	260	288,8	☐
	38	4	256-QAM	3/4	312	346,8	☐
	39	4	256-QAM	5/6	N/A	N/A	☐
	40	5	BPSK	1/2	32,5	36	☐
	41	5	QPSK	1/2	65	72	☐
	42	5	QPSK	3/4	97,5	108,5	☐
	43	5	16-QAM	1/2	130	144,5	☐
	44	5	16-QAM	3/4	195	216,5	☐
☐	45	5	64-QAM	2/3	260	289	☐
	46	5	64-QAM	3/4	292,5	325	☐
	47	5	64-QAM	5/6	325	361	☐
	48	5	256-QAM	3/4	390	433,5	☐
	49	5	256-QAM	5/6	N/A	N/A	☐
	50	6	BPSK	1/2	39	43,2	☐
	51	6	QPSK	1/2	78	86,4	☐
	52	6	QPSK	3/4	117	130,2	☐
	53	6	16-QAM	1/2	156	173,4	☐
☐	54	6	16-QAM	3/4	234	259,8	☐
	55	6	64-QAM	2/3	312	346,8	☐
	56	6	64-QAM	3/4	351	390	☐
	57	6	64-QAM	5/6	390	433,2	☐
	58	6	256-QAM	3/4	468	520,2	☐
	59	6	256-QAM	5/6	N/A	N/A	☐
	60	7	BPSK	1/2	45,5	50,4	☐
	61	7	QPSK	1/2	91	100,8	☐
	62	7	QPSK	3/4	136,5	151,9	☐
☐	63	7	16-QAM	1/2	182	202,3	☐
	64	7	16-QAM	3/4	273	303,1	☐
	65	7	64-QAM	2/3	364	404,6	☐
	66	7	64-QAM	3/4	409,5	455	☐
	67	7	64-QAM	5/6	455	505,4	☐
	68	7	256-QAM	3/4	546	606,9	☐
	69	7	256-QAM	5/6	N/A	N/A	☐
	70	8	BPSK	1/2	52	57,6	☐
	71	8	QPSK	1/2	104	115,2	☐
☐	72	8	QPSK	3/4	156	173,6	☐
	73	8	16-QAM	1/2	208	231,2	☐
	74	8	16-QAM	3/4	312	346,4	☐
	75	8	64-QAM	2/3	416	462,4	☐
	76	8	64-QAM	3/4	468	520	☐
	77	8	64-QAM	5/6	520	577,6	☐
	78	8	256-QAM	3/4	624	693,6	☐
	79	8	256-QAM	5/6	N/A	N/A	☐



L C I E

DATA RATE: 802.11ac VHT40							
Available for EUT	MCS Index	Nbr of spatial streams	Modulation (Stream 1/2/3/4)	Coding rate	GI = 800ns	GI = 400ns	Worst Case Modulation
☒	0	1	BPSK	1/2	13,5	15	☐
	1	1	QPSK	1/2	27	30	☐
	2	1	QPSK	3/4	40,5	45	☐
	3	1	16-QAM	1/2	54	60	☐
	4	1	16-QAM	3/4	81	90	☐
	5	1	64-QAM	2/3	108	120	☐
	6	1	64-QAM	3/4	121,5	135	☐
	7	1	64-QAM	5/6	135	150	☐
	8	1	256-QAM	3/4	162	180	☐
☒	9	1	256-QAM	5/6	180	200	☐
	10	2	BPSK	1/2	27	30	☒
	11	2	QPSK	1/2	54	60	☐
	12	2	QPSK	3/4	81	90	☐
	13	2	16-QAM	1/2	108	120	☐
	14	2	16-QAM	3/4	162	180	☐
	15	2	64-QAM	2/3	216	240	☐
	16	2	64-QAM	3/4	243	270	☐
	17	2	64-QAM	5/6	270	300	☐
☐	18	2	256-QAM	3/4	324	360	☐
	19	2	256-QAM	5/6	360	400	☐
	20	3	BPSK	1/2	40,5	45	☐
	21	3	QPSK	1/2	81	90	☐
	22	3	QPSK	3/4	121,5	135	☐
	23	3	16-QAM	1/2	162	180	☐
	24	3	16-QAM	3/4	243	270	☐
	25	3	64-QAM	2/3	324	360	☐
	26	3	64-QAM	3/4	364,5	405	☐
☐	27	3	64-QAM	5/6	405	450	☐
	28	3	256-QAM	3/4	486	540	☐
	29	3	256-QAM	5/6	540	600	☐
	30	4	BPSK	1/2	54	60	☐
	31	4	QPSK	1/2	108	120	☐
	32	4	QPSK	3/4	162	180	☐
	33	4	16-QAM	1/2	216	240	☐
	34	4	16-QAM	3/4	324	360	☐
	35	4	64-QAM	2/3	432	480	☐
☐	36	4	64-QAM	3/4	486	540	☐
	37	4	64-QAM	5/6	540	600	☐
	38	4	256-QAM	3/4	648	720	☐
	39	4	256-QAM	5/6	720	800	☐
	40	5	BPSK	1/2	67,5	75	☐
	41	5	QPSK	1/2	135	150	☐
	42	5	QPSK	3/4	202,5	225	☐
	43	5	16-QAM	1/2	270	300	☐
	44	5	16-QAM	3/4	405	450	☐
☐	45	5	64-QAM	2/3	540	600	☐
	46	5	64-QAM	3/4	607,5	675	☐
	47	5	64-QAM	5/6	675	750	☐
	48	5	256-QAM	3/4	810	900	☐
	49	5	256-QAM	5/6	900	1000	☐
	50	6	BPSK	1/2	81	90	☐
	51	6	QPSK	1/2	162	180	☐
	52	6	QPSK	3/4	243	270	☐
	53	6	16-QAM	1/2	324	360	☐
☐	54	6	16-QAM	3/4	486	540	☐
	55	6	64-QAM	2/3	648	720	☐
	56	6	64-QAM	3/4	729	810	☐
	57	6	64-QAM	5/6	810	900	☐
	58	6	256-QAM	3/4	972	1080	☐
	59	6	256-QAM	5/6	1080	1200	☐
	60	7	BPSK	1/2	94,5	105	☐
	61	7	QPSK	1/2	189	210	☐
	62	7	QPSK	3/4	283,5	315	☐
☐	63	7	16-QAM	1/2	378	420	☐
	64	7	16-QAM	3/4	567	630	☐
	65	7	64-QAM	2/3	756	840	☐
	66	7	64-QAM	3/4	850,5	945	☐
	67	7	64-QAM	5/6	945	1050	☐
	68	7	256-QAM	3/4	1134	1260	☐
	69	7	256-QAM	5/6	1260	1400	☐
	70	8	BPSK	1/2	108	120	☐
	71	8	QPSK	1/2	216	240	☐
☐	72	8	QPSK	3/4	324	360	☐
	73	8	16-QAM	1/2	432	480	☐
	74	8	16-QAM	3/4	648	720	☐
	75	8	64-QAM	2/3	864	960	☐
	76	8	64-QAM	3/4	972	1080	☐
	77	8	64-QAM	5/6	1080	1200	☐
	78	8	256-QAM	3/4	1296	1440	☐
	79	8	256-QAM	5/6	1440	1600	☐



L C I E

DATA RATE: 802.11ac VHT80							
Available for EUT	MCS Index	Nbr of spatial streams	Modulation (Stream 1/2/3/4)	Coding rate	GI = 800ns	GI = 400ns	Worst Case Modulation
☑	0	1	BPSK	1/2	29.3	32.5	☐
	1	1	QPSK	1/2	58.5	65	☐
	2	1	QPSK	3/4	87.8	97.5	☐
	3	1	16-QAM	1/2	117	130	☐
	4	1	16-QAM	3/4	175.5	195	☐
	5	1	64-QAM	2/3	234	260	☐
	6	1	64-QAM	3/4	263.3	292.5	☐
	7	1	64-QAM	5/6	292.5	325	☐
	8	1	256-QAM	3/4	351	390	☐
☑	9	1	256-QAM	5/6	390	433.3	☐
	10	2	BPSK	1/2	58.6	65	☒
	11	2	QPSK	1/2	117	130	☐
	12	2	QPSK	3/4	175.6	195	☐
	13	2	16-QAM	1/2	234	260	☐
	14	2	16-QAM	3/4	351	390	☐
	15	2	64-QAM	2/3	468	520	☐
	16	2	64-QAM	3/4	526.6	585	☐
	17	2	64-QAM	5/6	585	650	☐
☐	18	2	256-QAM	3/4	702	780	☐
	19	2	256-QAM	5/6	780	866.6	☐
	20	3	BPSK	1/2	87.9	97.5	☐
	21	3	QPSK	1/2	175.5	195	☐
	22	3	QPSK	3/4	263.4	292.5	☐
	23	3	16-QAM	1/2	351	390	☐
	24	3	16-QAM	3/4	526.5	585	☐
	25	3	64-QAM	2/3	702	780	☐
	26	3	64-QAM	3/4	789.9	877.5	☐
☐	27	3	64-QAM	5/6	877.5	975	☐
	28	3	256-QAM	3/4	1053	1170	☐
	29	3	256-QAM	5/6	1170	1299.9	☐
	30	4	BPSK	1/2	117.2	130	☐
	31	4	QPSK	1/2	234	260	☐
	32	4	QPSK	3/4	351.2	390	☐
	33	4	16-QAM	1/2	468	520	☐
	34	4	16-QAM	3/4	702	780	☐
	35	4	64-QAM	2/3	936	1040	☐
☐	36	4	64-QAM	3/4	1053.2	1170	☐
	37	4	64-QAM	5/6	1170	1300	☐
	38	4	256-QAM	3/4	1404	1560	☐
	39	4	256-QAM	5/6	1560	1733.2	☐
	40	5	BPSK	1/2	146.5	162.5	☐
	41	5	QPSK	1/2	292.5	325	☐
	42	5	QPSK	3/4	439	487.5	☐
	43	5	16-QAM	1/2	585	650	☐
	44	5	16-QAM	3/4	877.5	975	☐
☐	45	5	64-QAM	2/3	1170	1300	☐
	46	5	64-QAM	3/4	1316.5	1462.5	☐
	47	5	64-QAM	5/6	1462.5	1625	☐
	48	5	256-QAM	3/4	1755	1950	☐
	49	5	256-QAM	5/6	1950	2166.5	☐
	50	6	BPSK	1/2	175.8	195	☐
	51	6	QPSK	1/2	351	390	☐
	52	6	QPSK	3/4	526.8	585	☐
	53	6	16-QAM	1/2	702	780	☐
☐	54	6	16-QAM	3/4	1053	1170	☐
	55	6	64-QAM	2/3	1404	1560	☐
	56	6	64-QAM	3/4	1579.8	1755	☐
	57	6	64-QAM	5/6	1755	1950	☐
	58	6	256-QAM	3/4	2106	2340	☐
	59	6	256-QAM	5/6	2340	2599.8	☐
	60	7	BPSK	1/2	205.1	227.5	☐
	61	7	QPSK	1/2	409.5	455	☐
	62	7	QPSK	3/4	614.6	682.5	☐
☐	63	7	16-QAM	1/2	819	910	☐
	64	7	16-QAM	3/4	1228.5	1365	☐
	65	7	64-QAM	2/3	1638	1820	☐
	66	7	64-QAM	3/4	1843.1	2047.5	☐
	67	7	64-QAM	5/6	2047.5	2275	☐
	68	7	256-QAM	3/4	2457	2730	☐
	69	7	256-QAM	5/6	2730	3033.1	☐
	70	8	BPSK	1/2	234.4	260	☐
	71	8	QPSK	1/2	468	520	☐
☐	72	8	QPSK	3/4	702.4	780	☐
	73	8	16-QAM	1/2	936	1040	☐
	74	8	16-QAM	3/4	1404	1560	☐
	75	8	64-QAM	2/3	1872	2080	☐
	76	8	64-QAM	3/4	2106.4	2340	☐
	77	8	64-QAM	5/6	2340	2600	☐
	78	8	256-QAM	3/4	2808	3120	☐
	79	8	256-QAM	5/6	3120	3466.4	☐

2.2. RUNNING MODE

Test mode	Description of test mode
Test mode 1	Permanent emission with modulation on a fixed channel in the data rate that produced the highest power
Test mode 2	Permanent emission with modulation on a fixed channel in the data rate that produced the lowest power

Test	Running mode	
Occupied Bandwidth	☒ Test mode 1 (1)	☐ Alternative test mode()
26dB Bandwidth	☒ Test mode 1 (1)	☐ Alternative test mode()
6dB Bandwidth	☒ Test mode 1 (1)	☐ Alternative test mode()
Duty Cycle	☒ Test mode 1 (1)	☐ Alternative test mode()
EIRP	☒ Test mode 1 (1)	☐ Alternative test mode()
Maximum Conducted Output Power	☒ Test mode 1 (1)	☐ Alternative test mode()
Power Spectral Density	☒ Test mode 1 (1)	☐ Alternative test mode()
Transmit Power Control	☒ Test mode 2 (1)	☐ Alternative test mode()
AC Power Line Conducted Emission	☒ Test mode 1 (1)	☐ Alternative test mode()
Unwanted Emissions & Undesirable Emission	☒ Test mode 1 (1)	☐ Alternative test mode()
Frequency Stability	☒ Test mode 1 (1)	☐ Alternative test mode()

(1) Following commands with the specific test software "MTool V3.1.0.2" are used to set the product:

- a. – See document "AVS31005949_WIFI test commands of M393 COGECO.docx"(provided by customer) for the command used during test.

2.3. EQUIPMENT LABELLING



2.4. EQUIPMENT MODIFICATION

☒ None ☐ Modification:



2.5. FIELD STRENGTH CALCULATION

The field strength is calculated by adding the Antenna Factor and Cable Factor, and subtracting the Amplifier Gain (if any) from the measured reading. The basic equation with a sample calculation is as follow:

$$FS = RA + AF + CF - AG$$

Where
FS = Field Strength
RA = Receiver Amplitude
AF = Antenna Factor
CF = Cable Factor
AG = Amplifier Gain

Assume a receiver reading of 52.5dB μ V is obtained. The antenna factor of 7.4 and a cable factor of 1.1 are added. The amplifier gain of 29dB is subtracted, giving a field strength of 32 dB μ V/m.

$$FS = 52.5 + 7.4 + 1.1 - 29 = 32 \text{ dB}\mu\text{V/m}$$

The 32 dB μ V/m value can be mathematically converted to its corresponding level in μ V/m.

$$\text{Level in } \mu\text{V/m} = \text{Common Antilogarithm } [(32\text{dB}\mu\text{V/m})/20] = 39.8 \mu\text{V/m}.$$

2.6. CALIBRATION DATE

The calibration intervals are extended at 12+2 months. This extended interval is based on the fact that there is sufficient calibration data to statistically establish a trend or based on experience of use of the test equipment to assure good measurement results for a longer period.

3. OCCUPIED BANDWIDTH

3.1. TEST CONDITIONS

Test performed by : Armand MAHOUNGOU
Date of test : June 15, 2021
Ambient temperature : 26°C
Relative humidity : 44%

3.2. TEST SETUP

- The Equipment Under Test is installed:

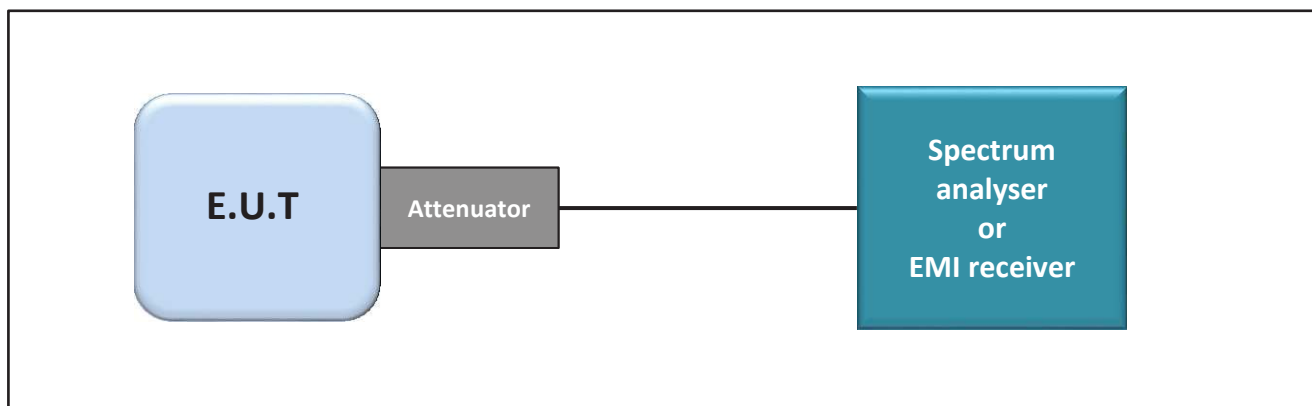
- ☒ On a table
- ☐ In an anechoic chamber

- Measurement is performed with a spectrum analyzer in:

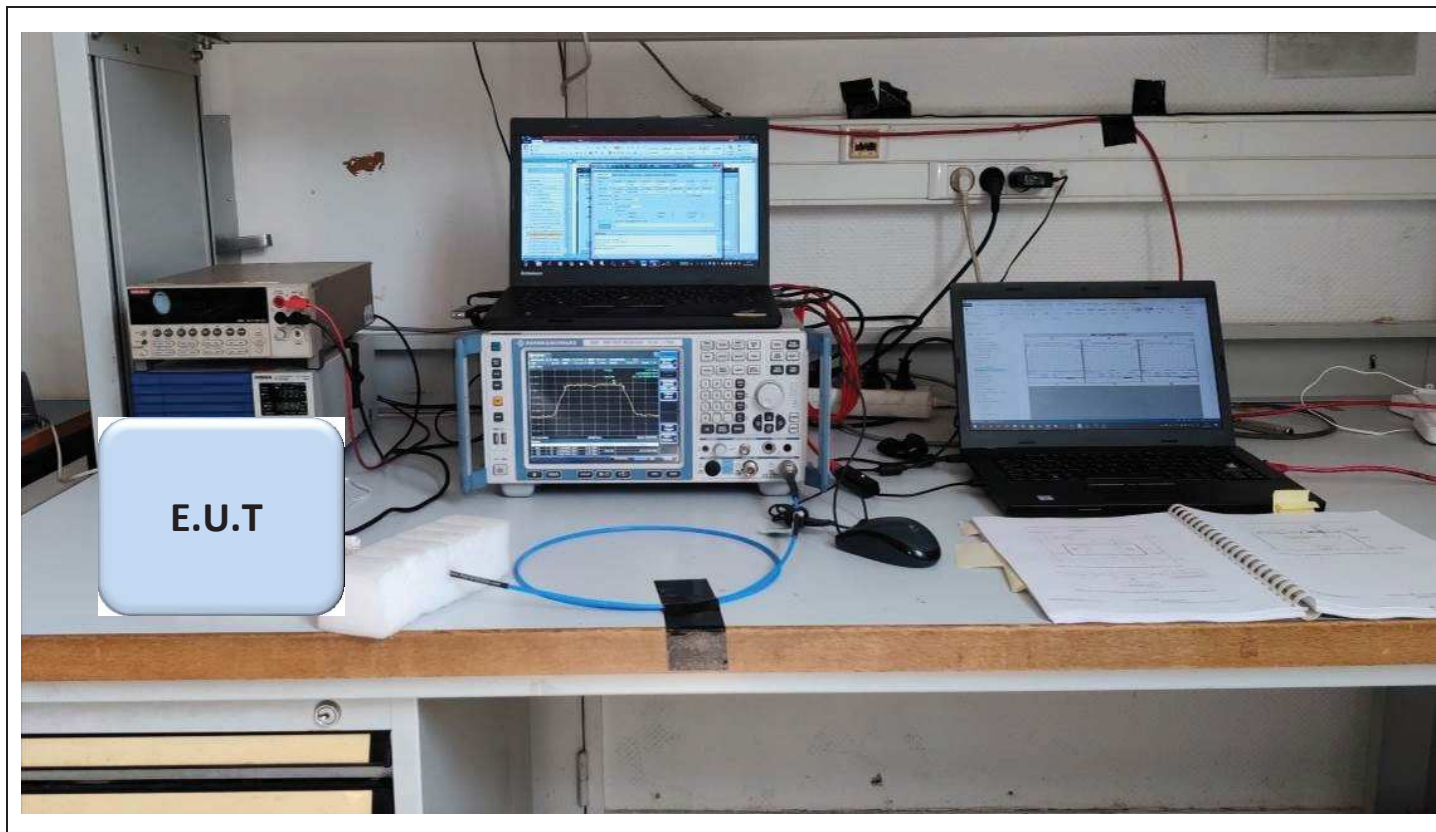
- ☒ Conducted Method
- ☐ Radiated Method

- Test Procedure:

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



Test set up of Occupied Bandwidth



Photograph for Occupied bandwidth

3.3. LIMIT

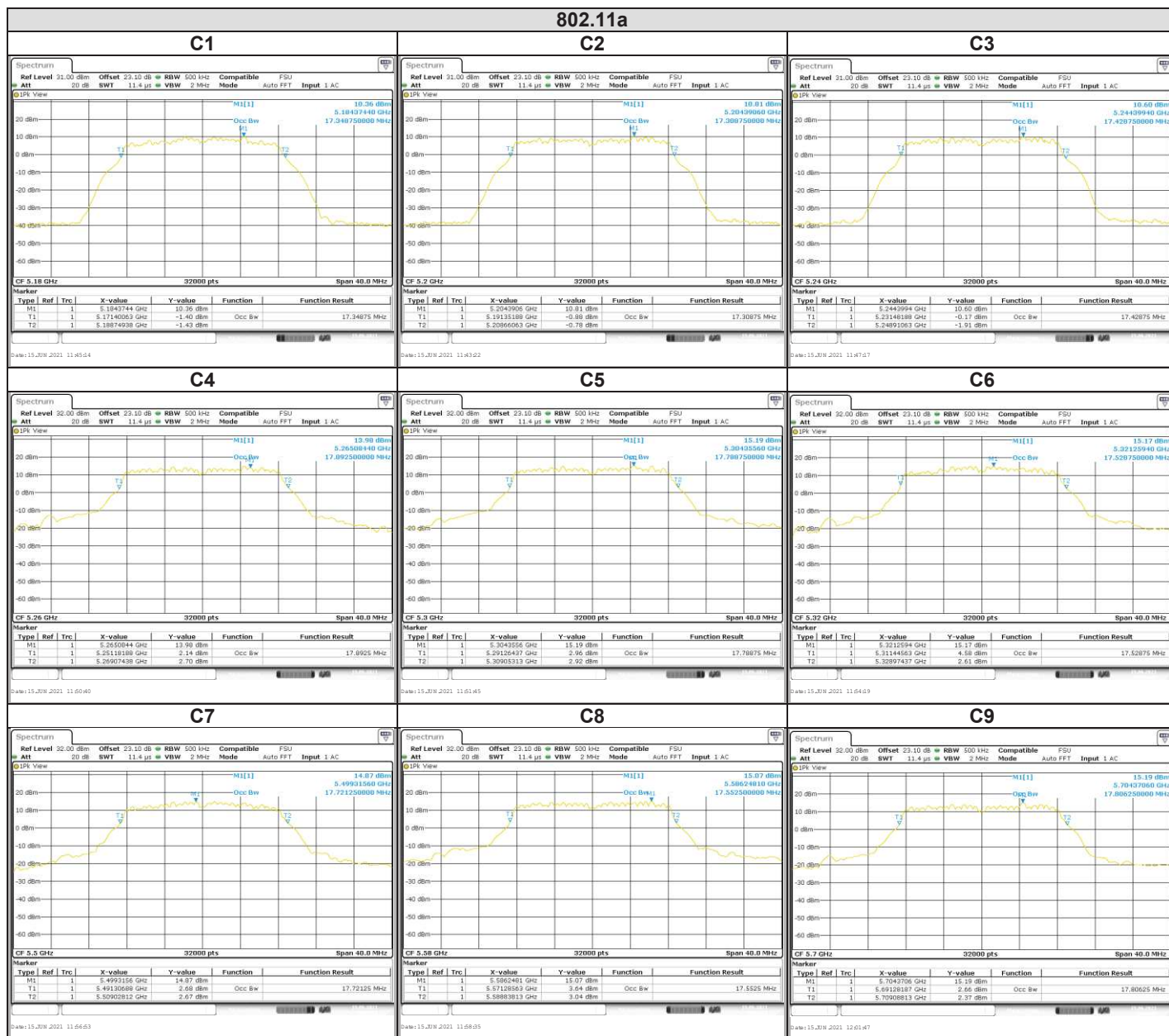
None

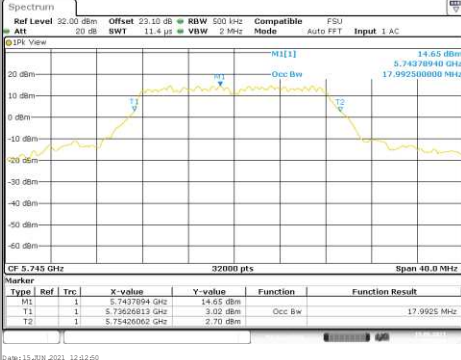
3.4. TEST EQUIPMENT LIST

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

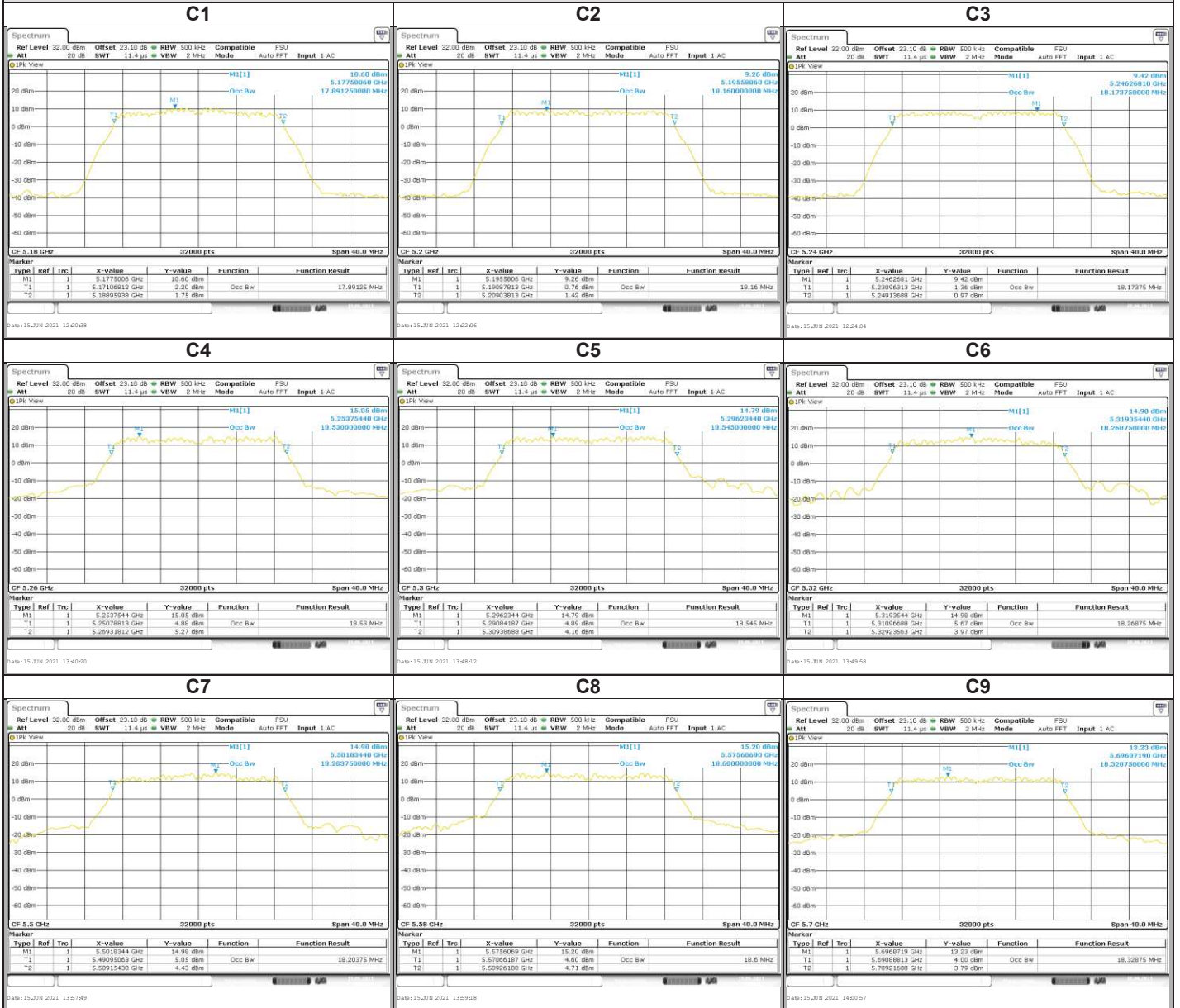
Note: In our quality system, the test equipment calibration due is more & less 2 months

3.5. RESULTS



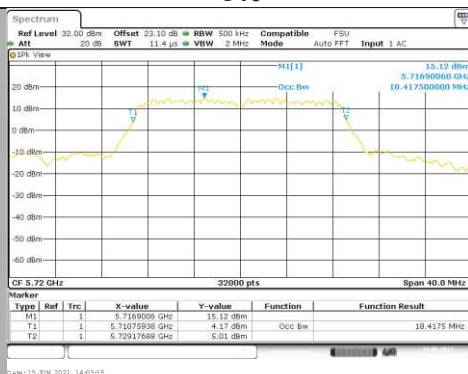
802.11a C10	
	
C11	C12
	
C13	
	
Channel	Occupied Channel Bandwidth (MHz)
C1	17.348
C2	17.309
C3	17.429
C4	17.892
C5	17.788
C6	17.529
C7	17.721
C8	17.552
C9	17.806
C10	17.652
C11	17.992
C12	17.875
C13	17.724

802.11n HT20/ac VHT20

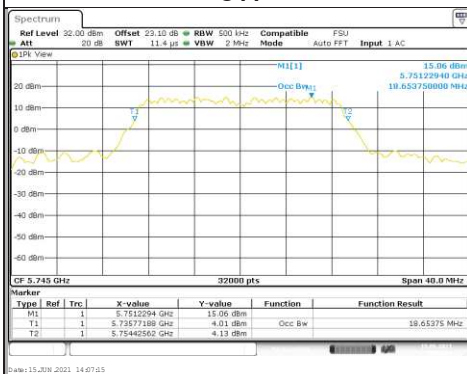


802.11n HT20/ac VHT20

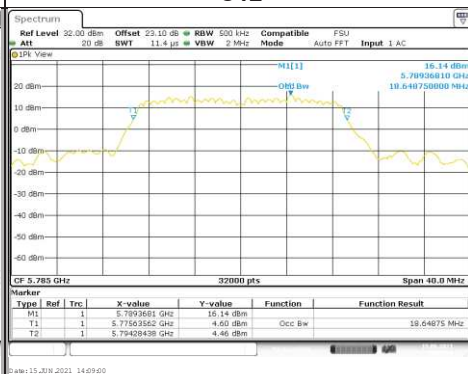
C10



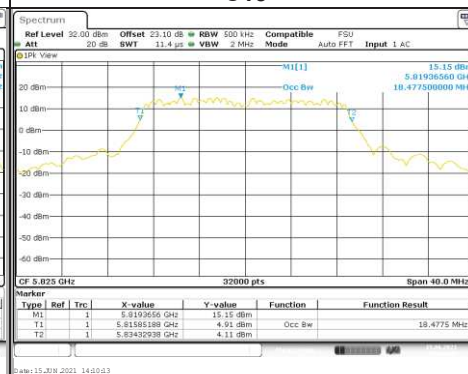
C11



C12



C13

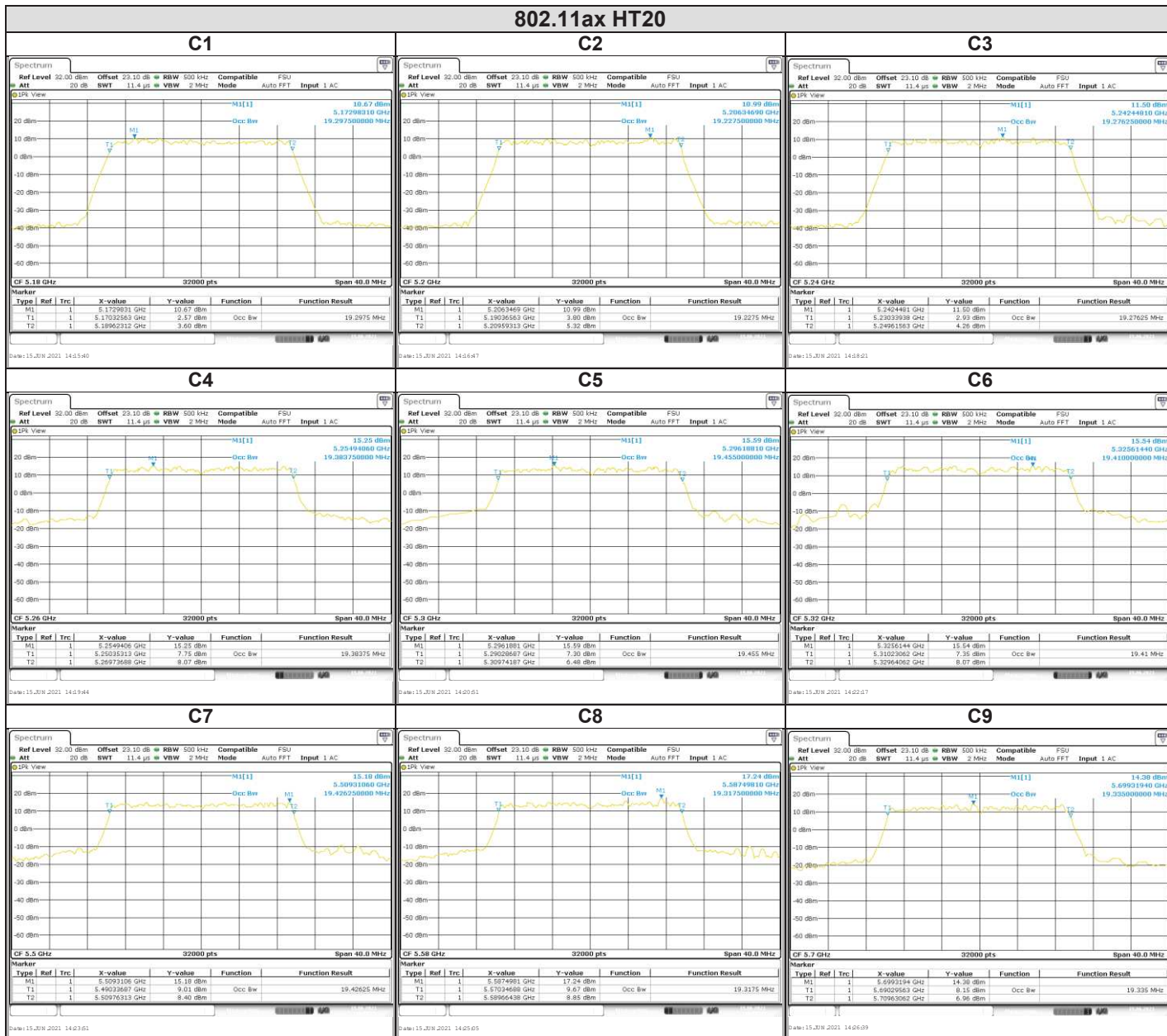


Channel

Occupied Channel Bandwidth (MHz)

Channel	Occupied Channel Bandwidth (MHz)
C1	17.891
C2	18.16
C3	18.174
C4	18.53
C5	18.545
C6	18.269
C7	18.204
C8	18.6
C9	18.329
C10	18.417
C11	18.654
C12	18.649
C13	18.477

802.11ax HT20

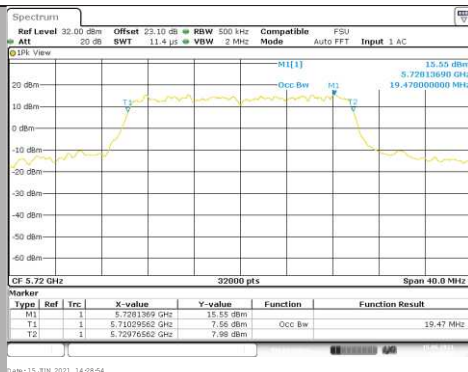




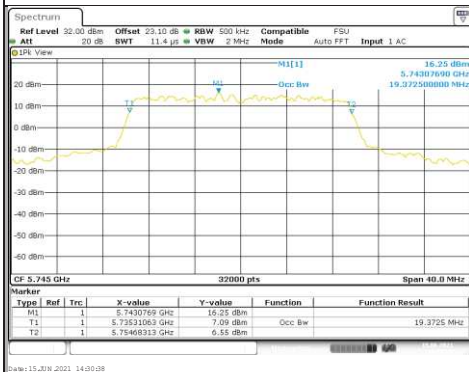
L C I E

802.11ax HT20

C10



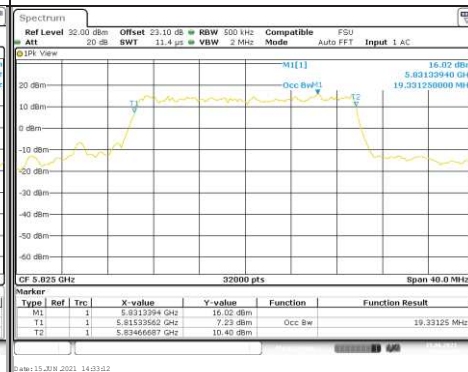
C11



C12



C13



Channel

Occupied Channel Bandwidth (MHz)

C1

19.297

C2

19.227

C3

19.276

C4

19.384

C5

19.455

C6

19.41

C7

19.426

C8

19.317

C9

19.335

C10

19.47

C11

19.372

C12

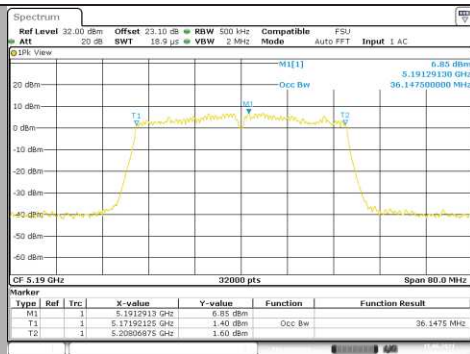
19.329

C13

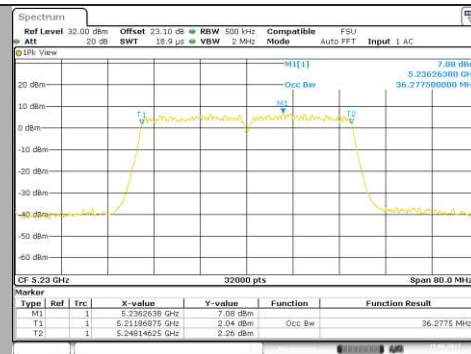
19.331

802.11n HT40/ac VHT40

C14



C15



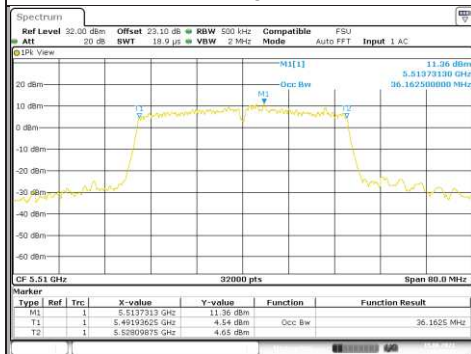
C16



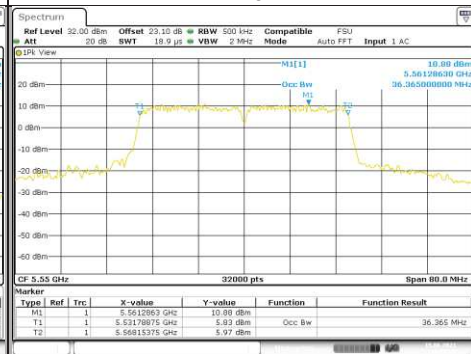
C17



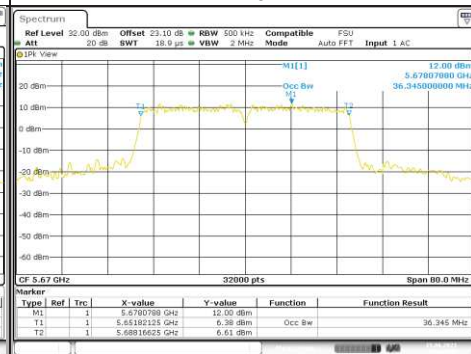
C18



C19

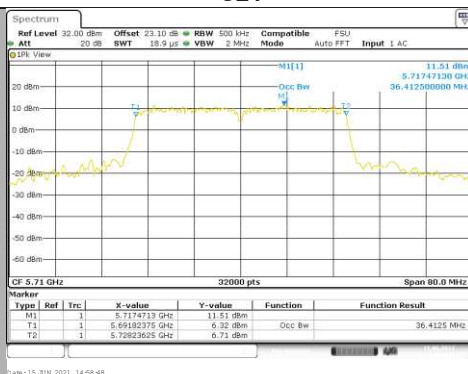


C20

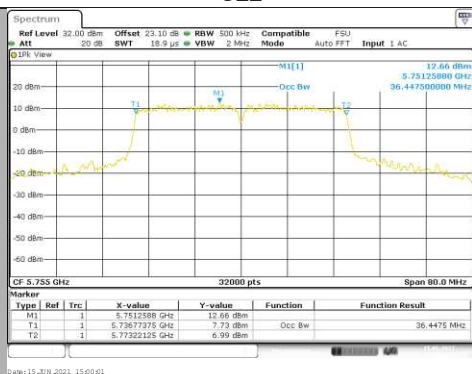


802.11n HT40/ac VHT40

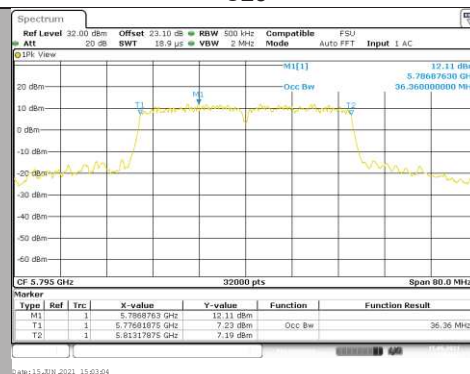
C21



C22



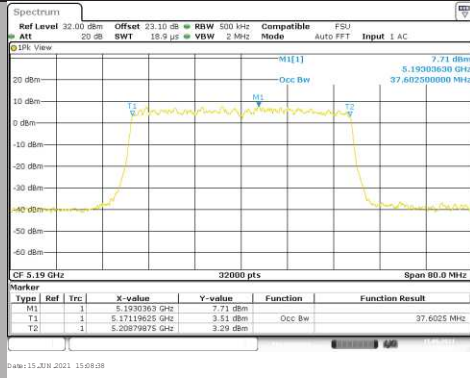
C23



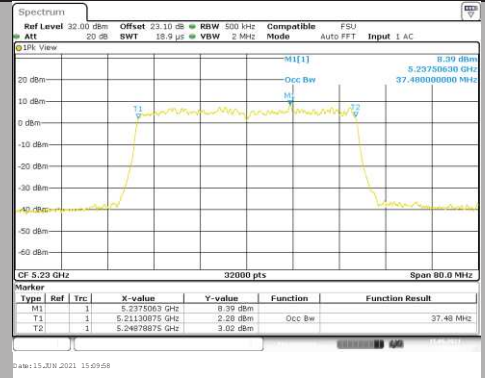
Channel	Occupied Channel Bandwidth (MHz)
C14	36.147
C15	36.277
C16	36.34
C17	36.17
C18	36.162
C19	36.365
C20	36.345
C21	36.412
C22	36.447
C23	36.36

802.11ax VHT40

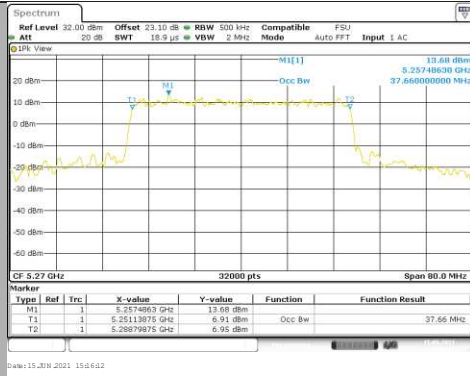
C14



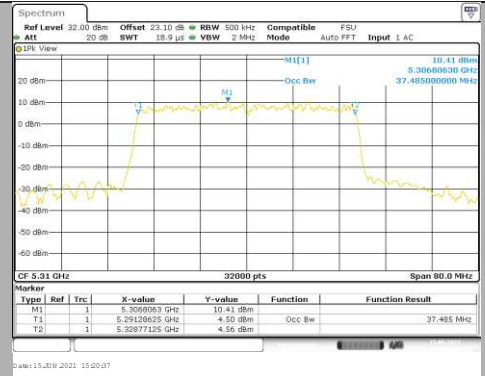
C15



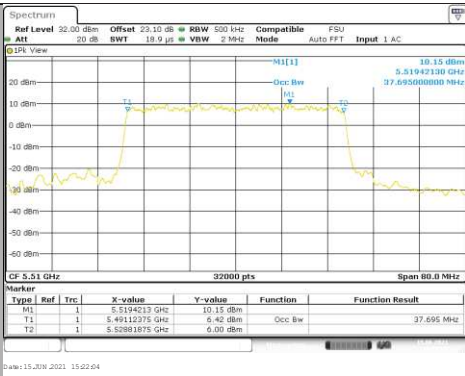
C16



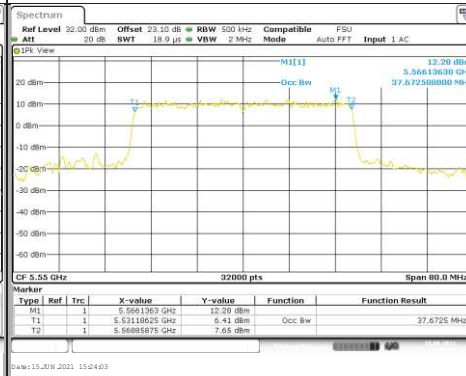
C17



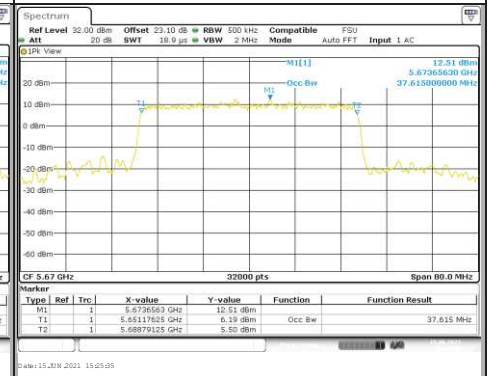
C18



C19



C20

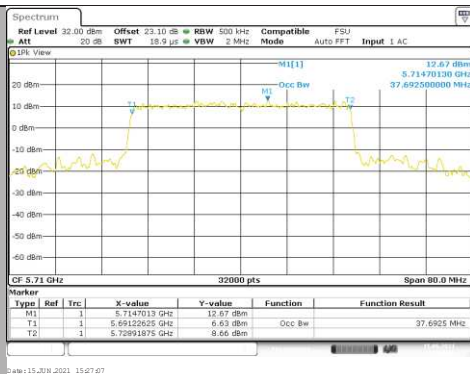




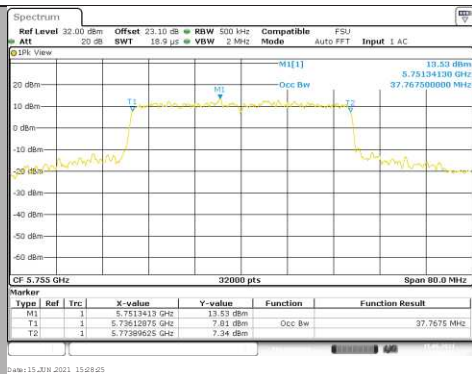
L C I E

802.11ax VHT40

C21



C22



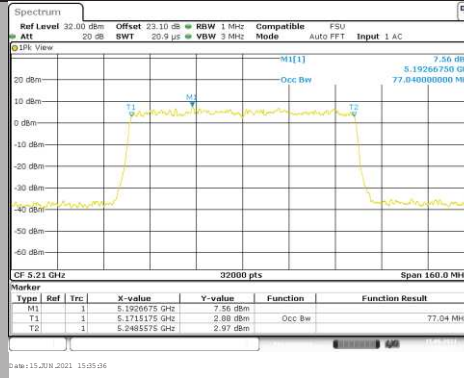
C23



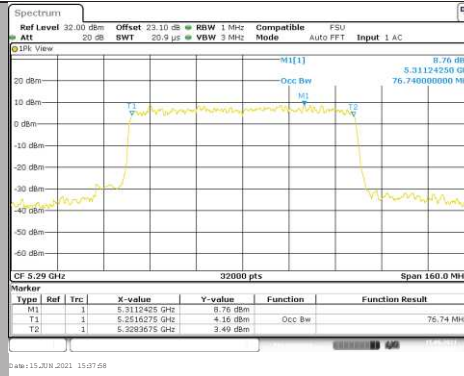
Channel	Occupied Channel Bandwidth (MHz)
C14	37.602
C15	37.48
C16	37.66
C17	37.485
C18	37.695
C19	37.672
C20	37.615
C21	37.692
C22	37.767
C23	37.577

802.11ac VHT80

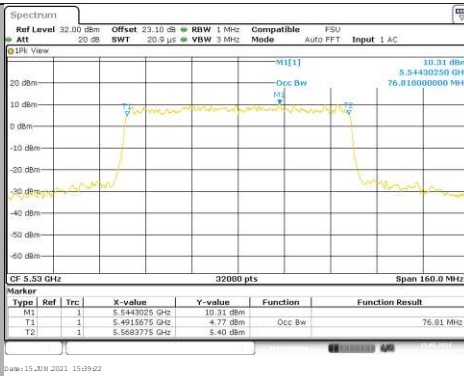
C24



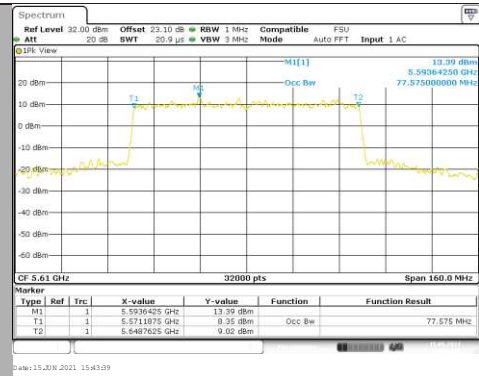
C25



C26



C27

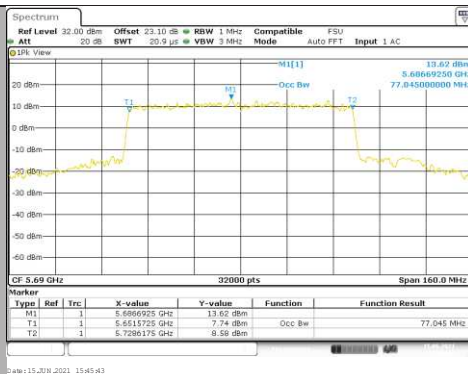




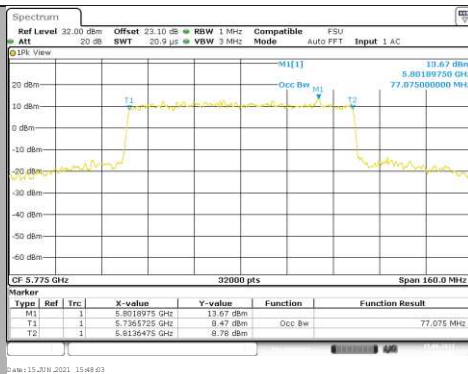
L C I E

802.11ac VHT80

C28



C29



Channel

Occupied Channel Bandwidth (MHz)

C24

77.04

C25

76.74

C26

76.81

C27

77.575

C28

77.045

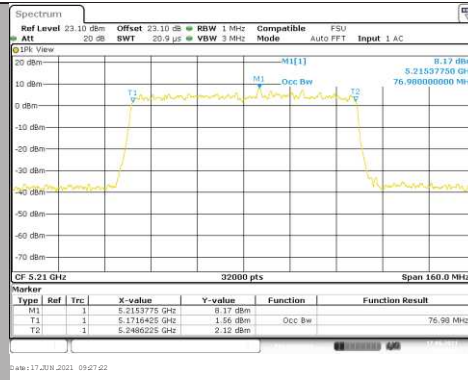
C29

77.075

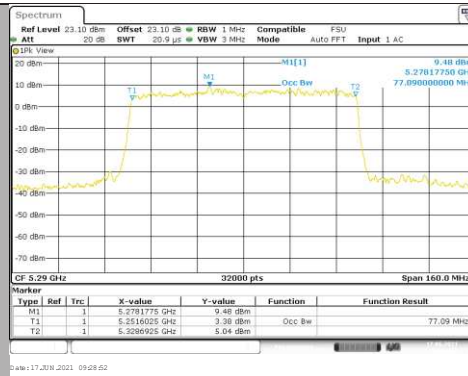


802.11ax VHT80

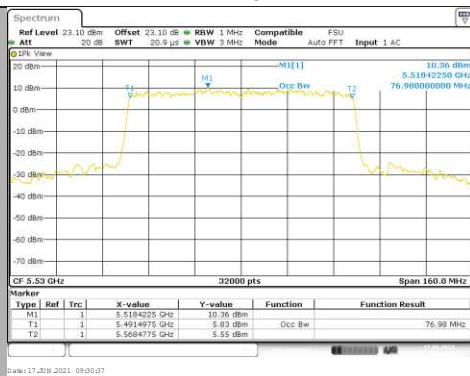
C24



C25

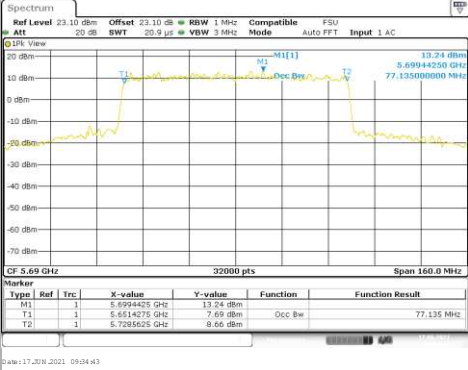
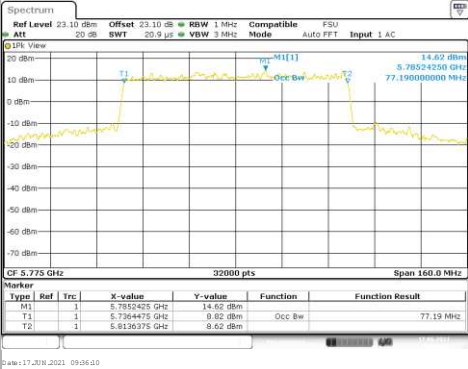


C26



C27



802.11ax VHT80	
C28	
	
C29	
	
Channel	Occupied Channel Bandwidth (MHz)
C24	76.980
C25	77.090
C26	76.980
C27	77.135
C28	77.135
C29	77.190

3.6. CONCLUSION

Occupied Channel Bandwidth measurement performed on the sample of the product **COGECO DIW3930 COGECO**, SN: **6211130035003**, in configuration and description presented in this test report, show levels **compliant** to the **47 CFR PART 15.407 & RSS-GEN ISSUE 5** limits.

4. CARRIER FREQUENCIES

4.1. TEST CONDITIONS

Test performed by : Armand MAHOUNGOU
Date of test : June 22, 2021
Ambient temperature : 26°C
Relative humidity : 41%

4.2. TEST SETUP

- The Equipment under Test is installed:

- ☒ In the climatic chamber
- ☐ On a table
- ☐ In an anechoic chamber

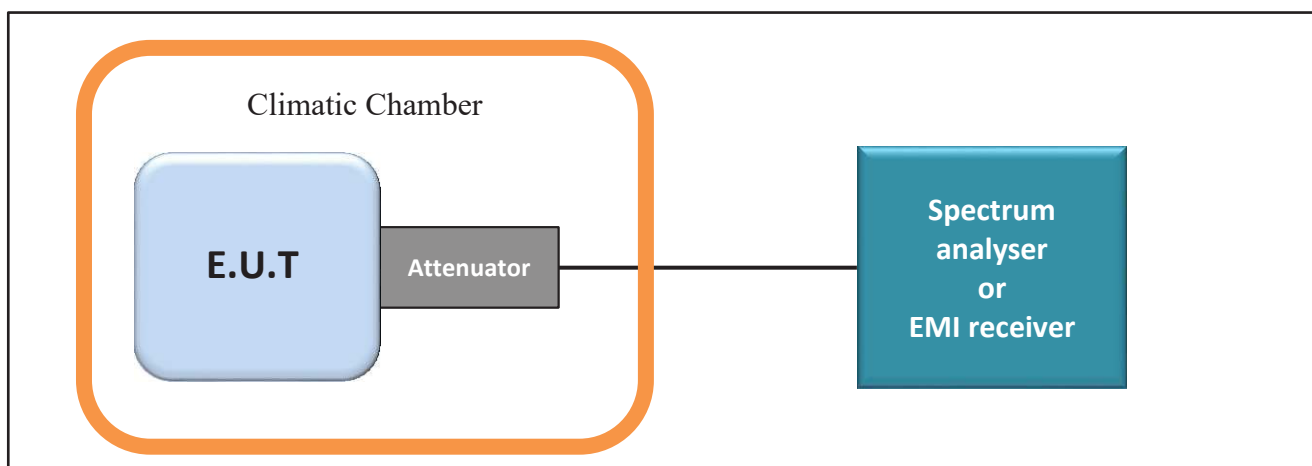
-Measurement is performed with a spectrum analyzer

- ☒ On the EUT conducted access
- ☐ With a test fixture

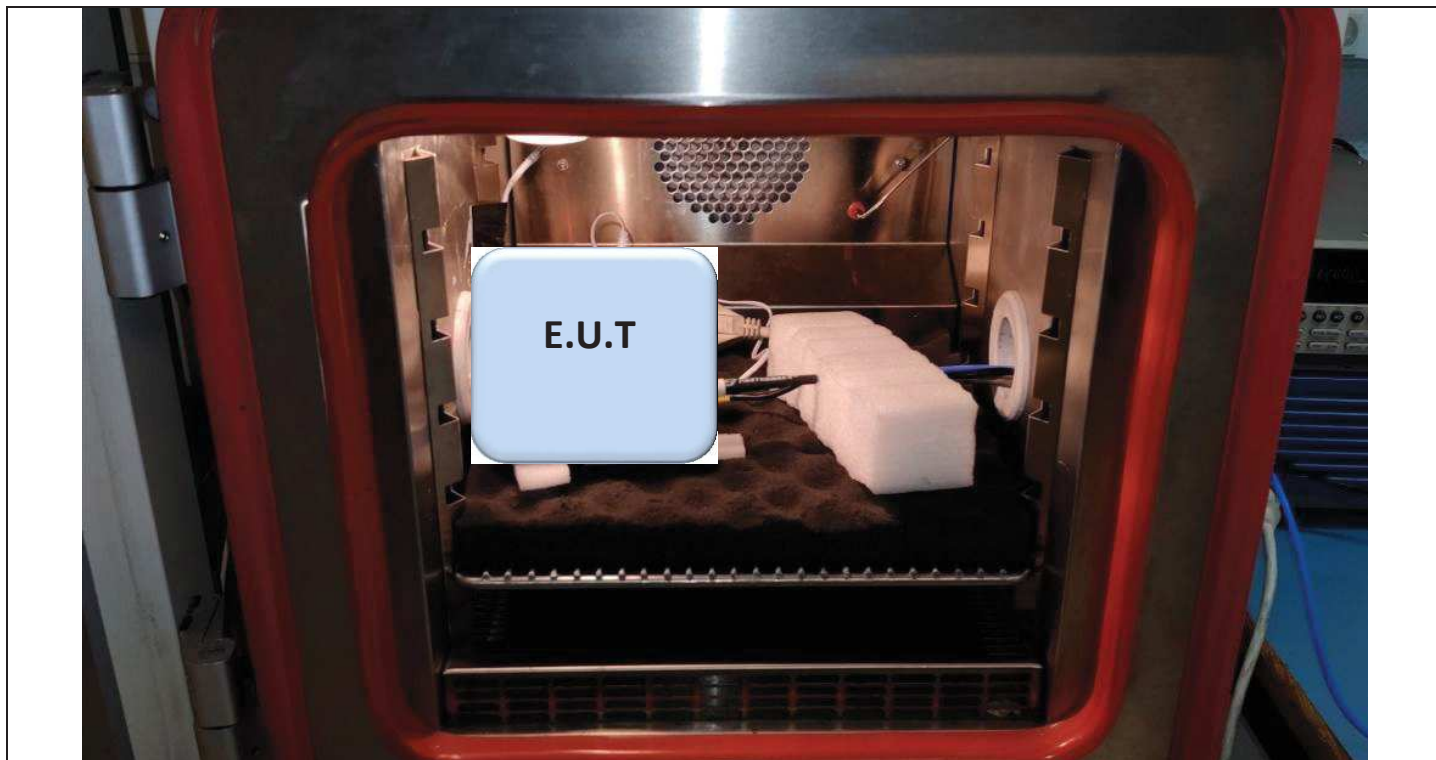
-Method of measurement

- ☐ Unmodulated (Spectrum Analyzer Counter Function)
- ☒ Modulated (Spectrum Analyzer NdB down Function)

In case of smart antenna systems operating in a multiple transmit chains active simultaneously, the measurement is only performed on one of the active transmit chains.



Test set up of Carrier Frequencies



Photograph for Carrier Frequencies



Photograph for Carrier Frequencies



Photograph for Carrier Frequencies

4.3. LIMIT

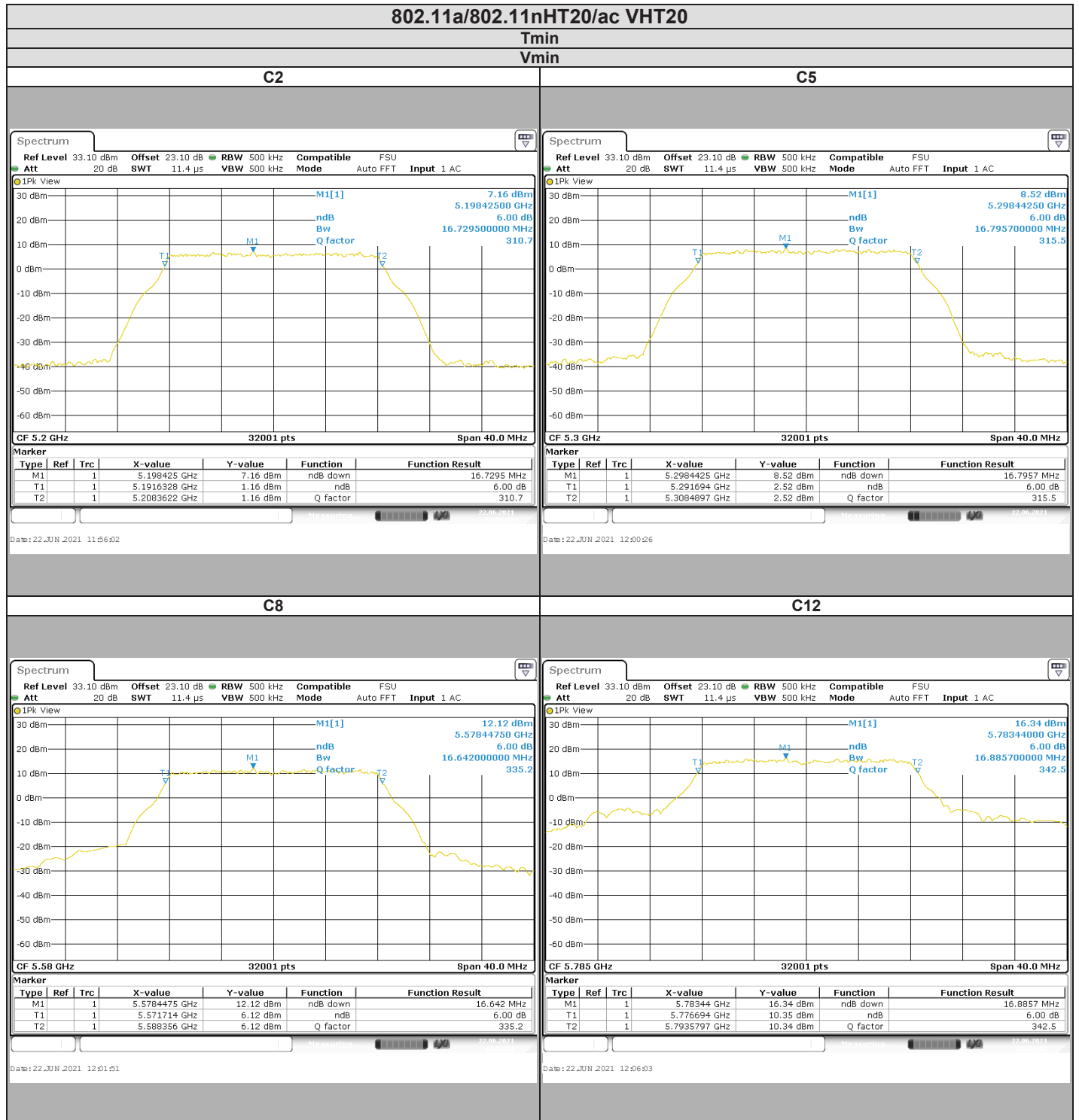
Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the users manual.

4.4. TEST EQUIPMENT LIST

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

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

4.5. RESULTS



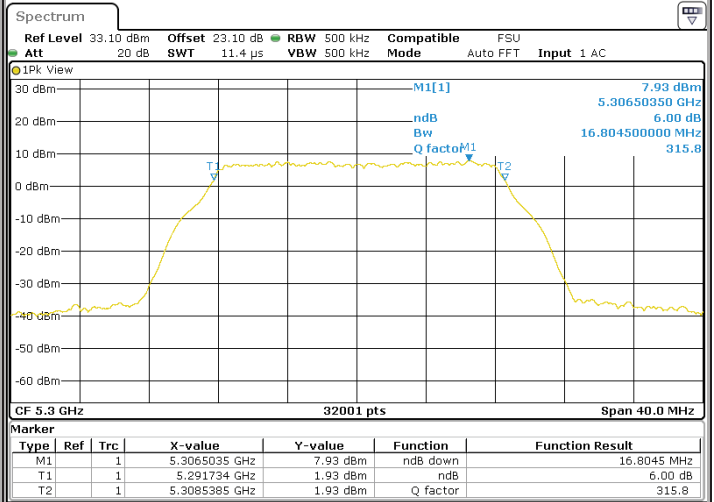
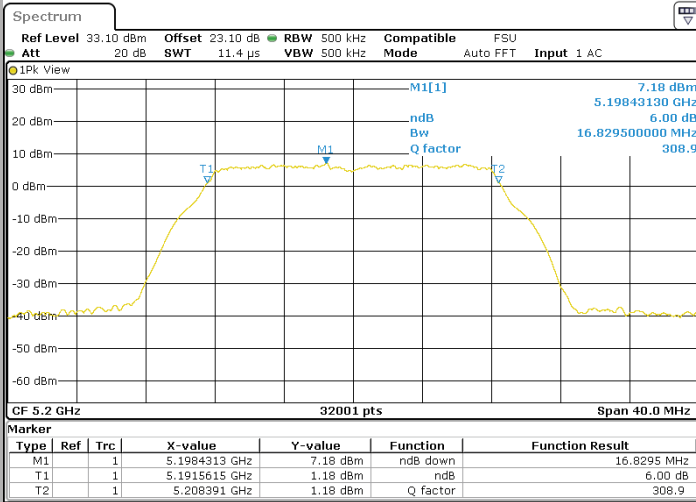
802.11a/802.11nHT20/ac VHT20

Tmin

Vnom

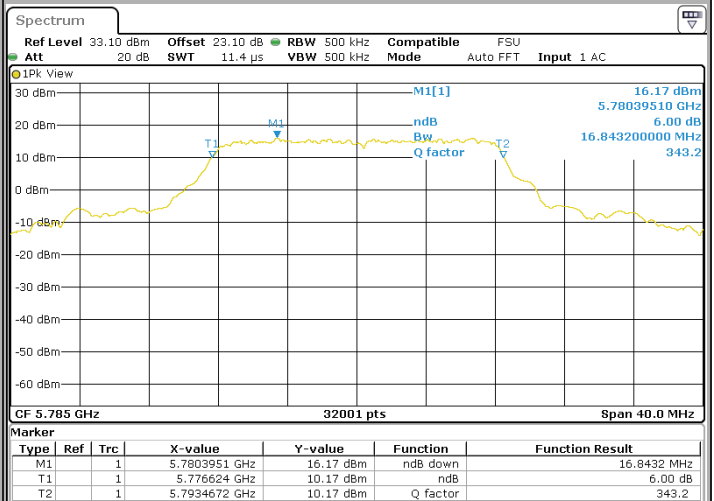
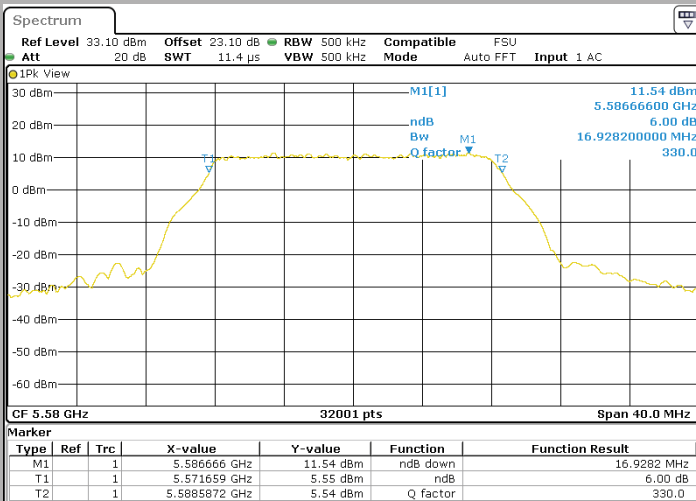
C2

C5



C8

C12



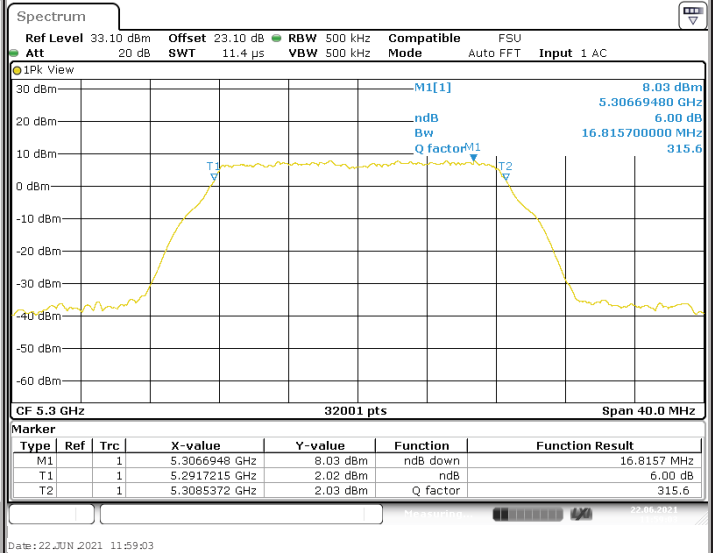
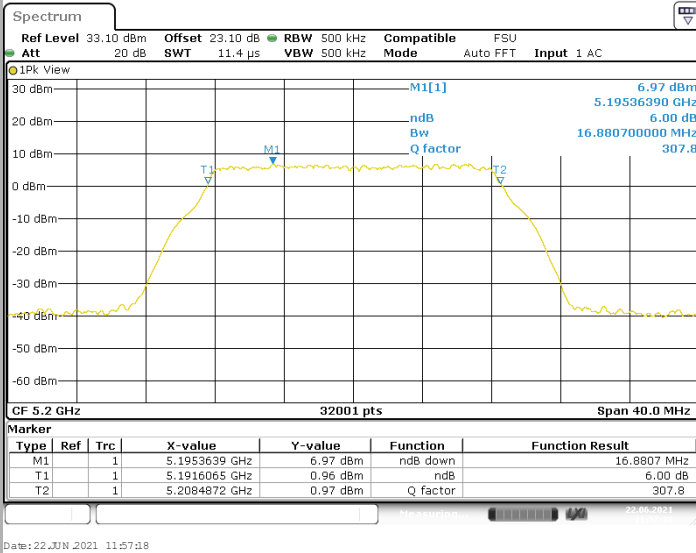
802.11a/802.11nHT20/ac VHT20

Tmin

Vmax

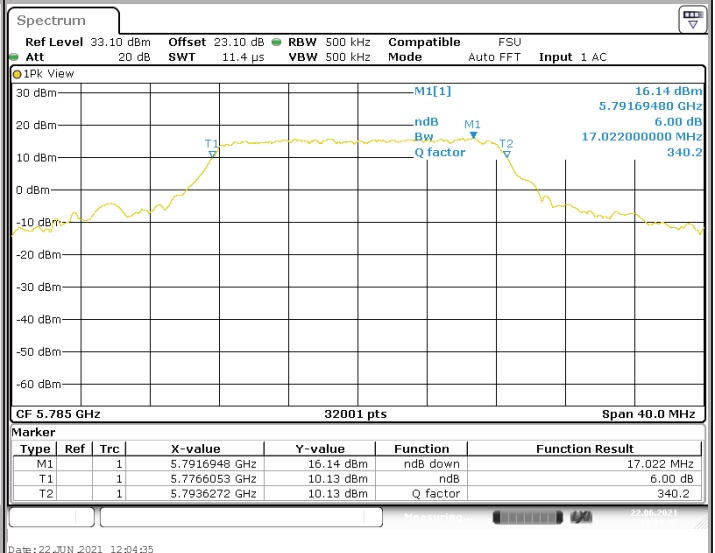
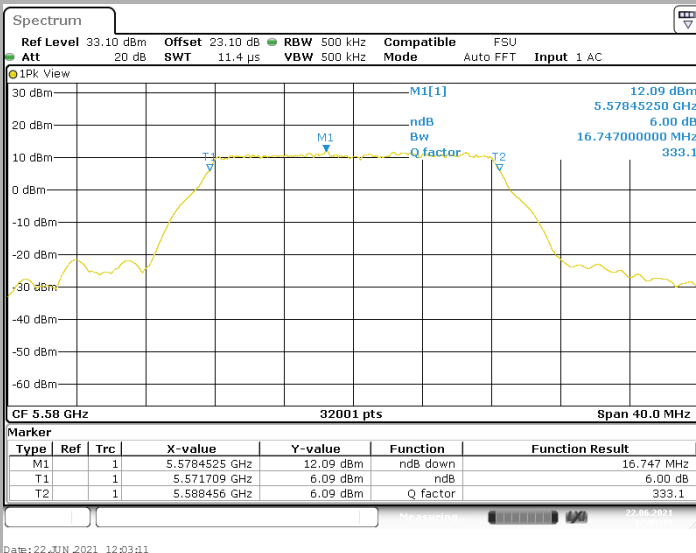
C2

C5



C8

C12



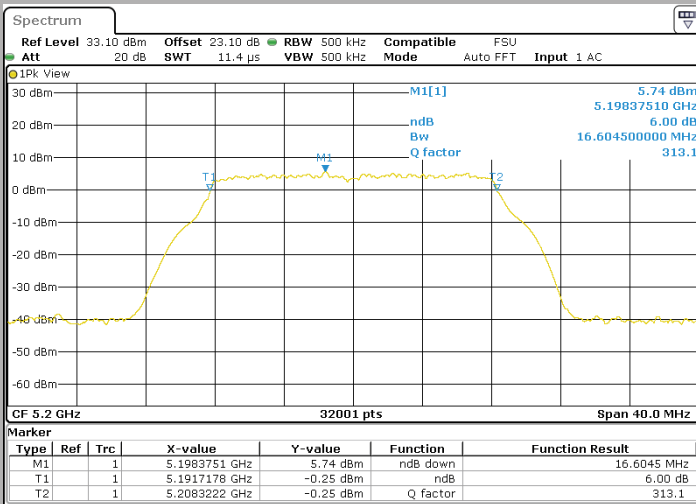
802.11a/802.11nHT20/ac VHT20

Tnom

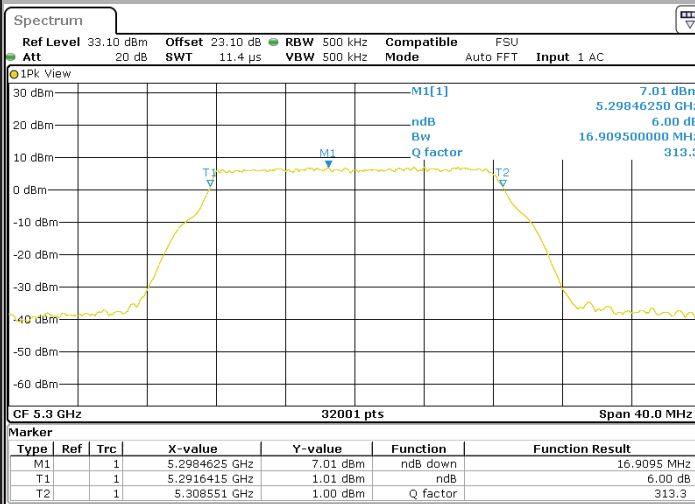
Vmin

C2

C5



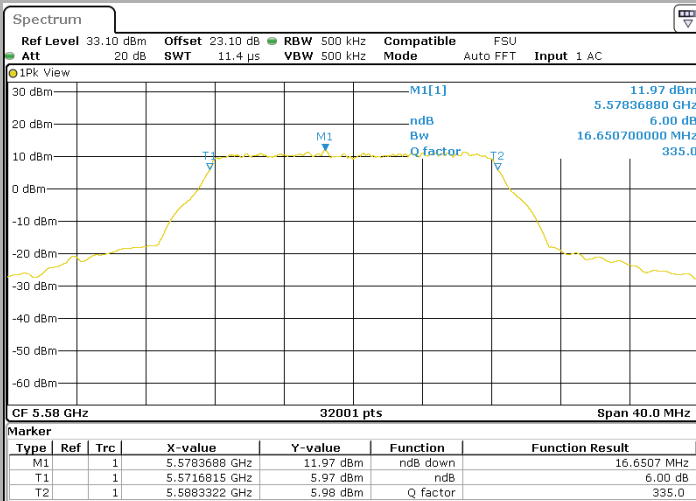
Date: 22 JUN 2021 10:40:13



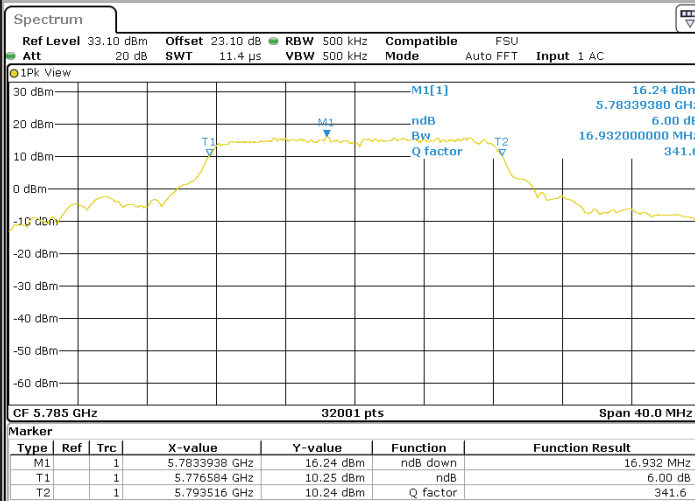
Date: 22 JUN 2021 10:44:47

C8

C12



Date: 22 JUN 2021 10:48:54



Date: 22 JUN 2021 10:51:24

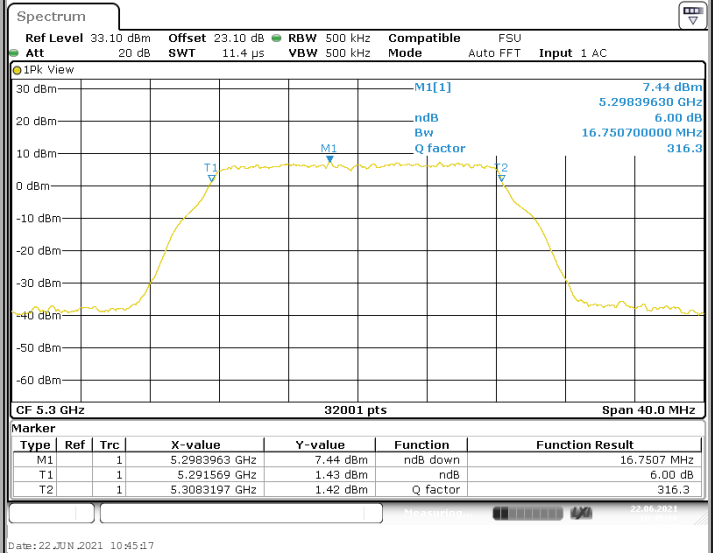
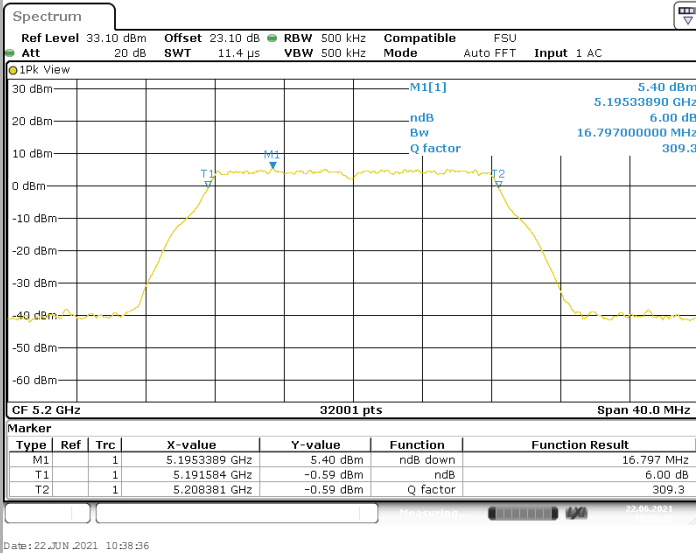
802.11a/802.11nHT20/ac VHT20

Tnom

Vnom

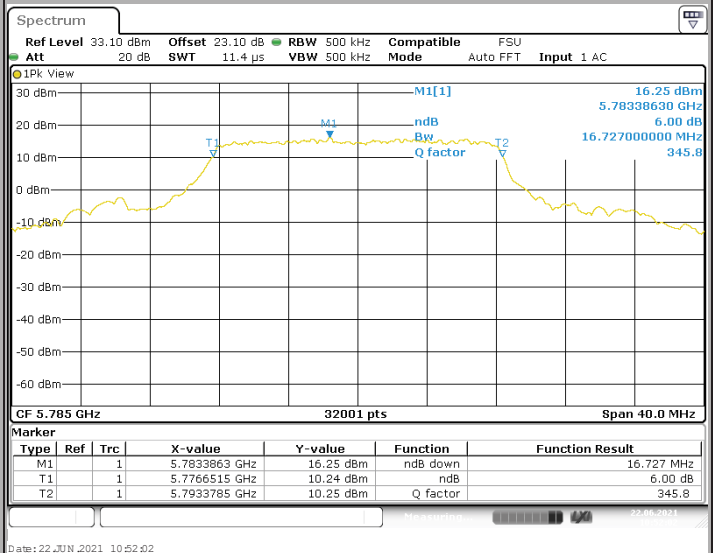
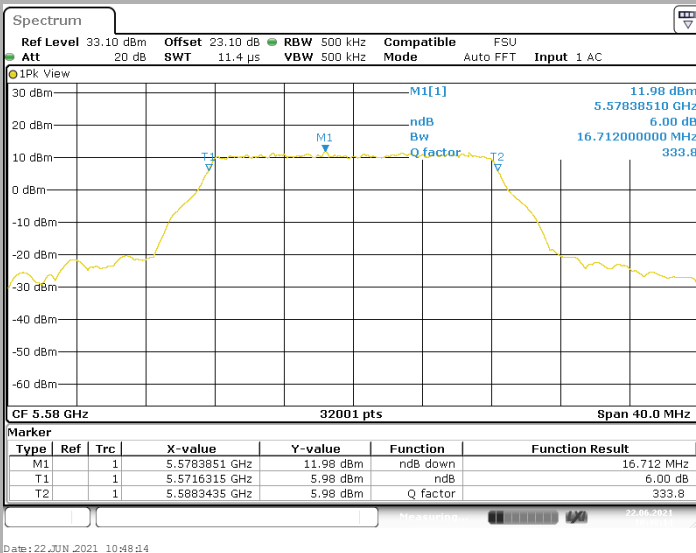
C2

C5



C8

C12



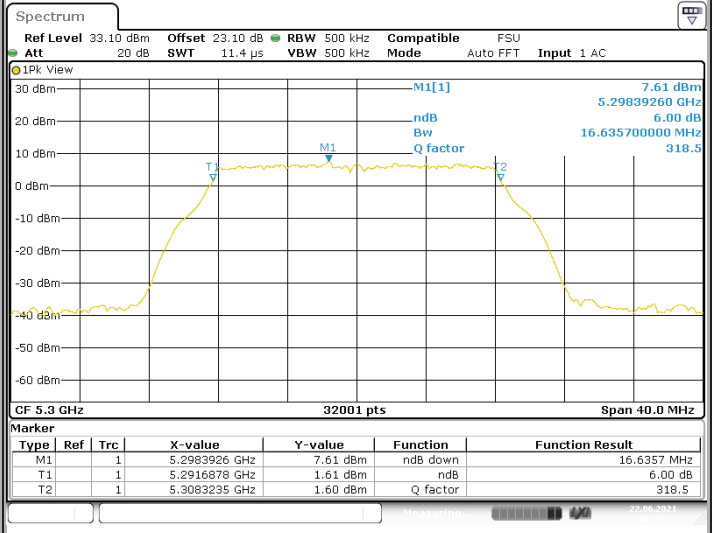
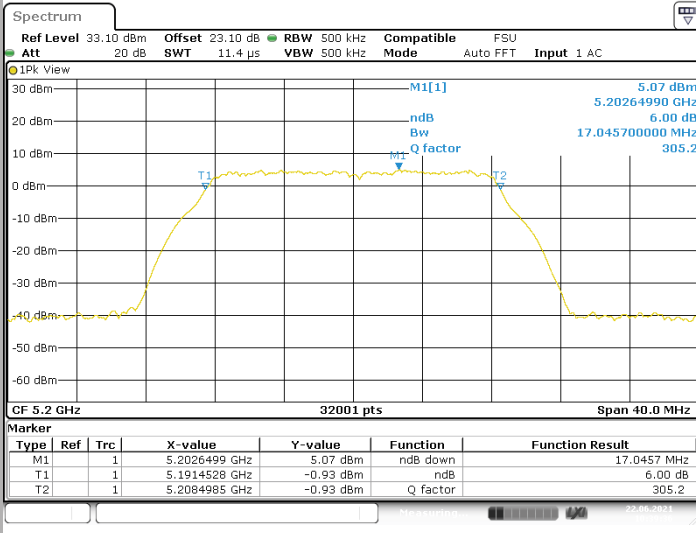
802.11a/802.11nHT20/ac VHT20

Tnom

Vmax

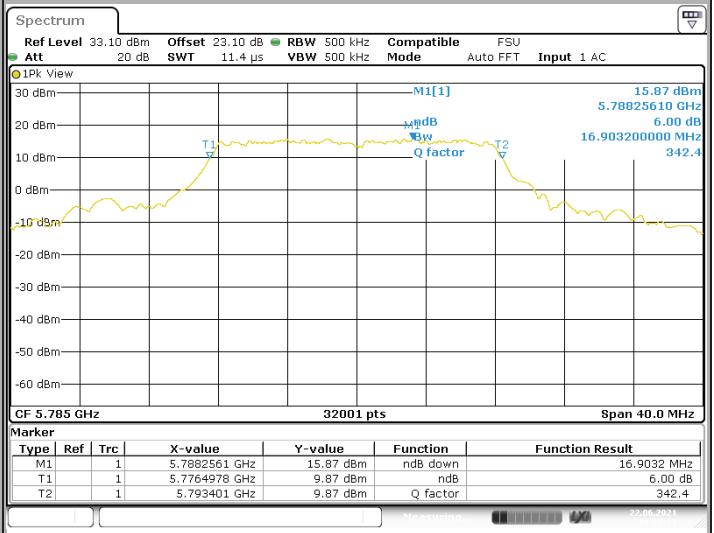
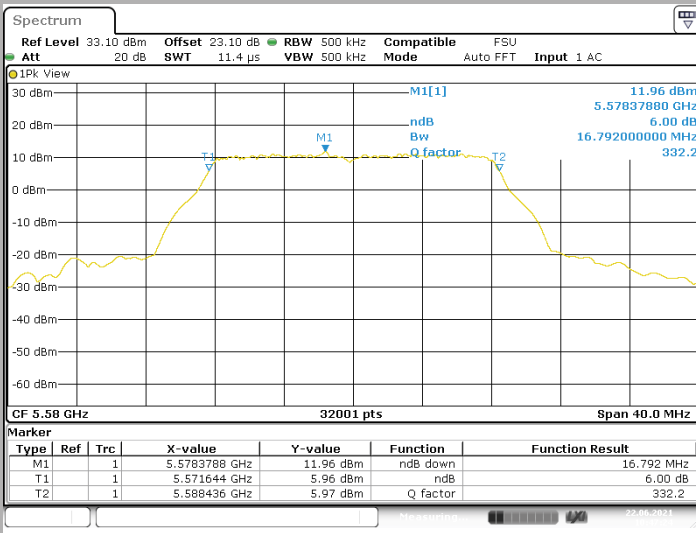
C2

C5



C8

C12







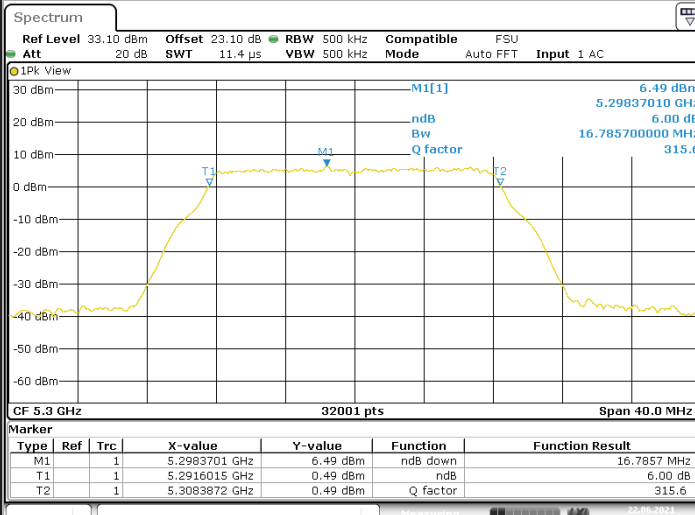
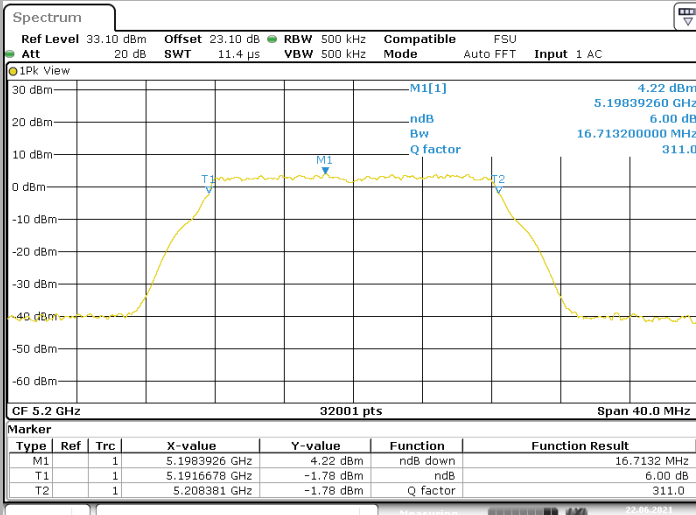
802.11a/802.11nHT20/ac VHT20

Tmax

Vnom

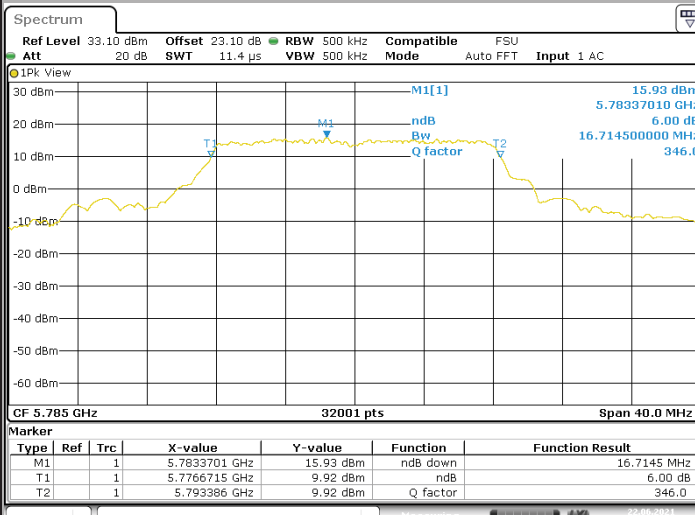
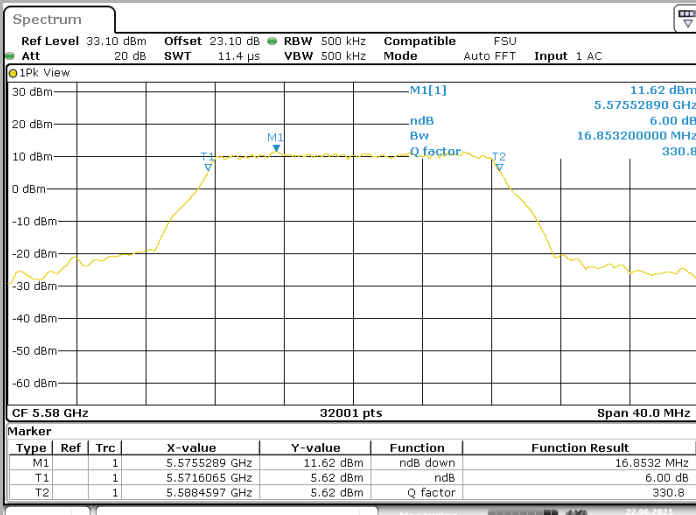
C2

C5



C8

C12





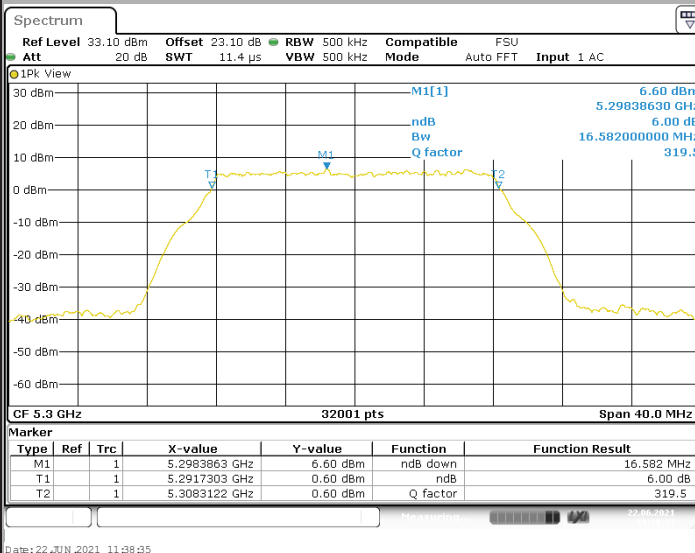
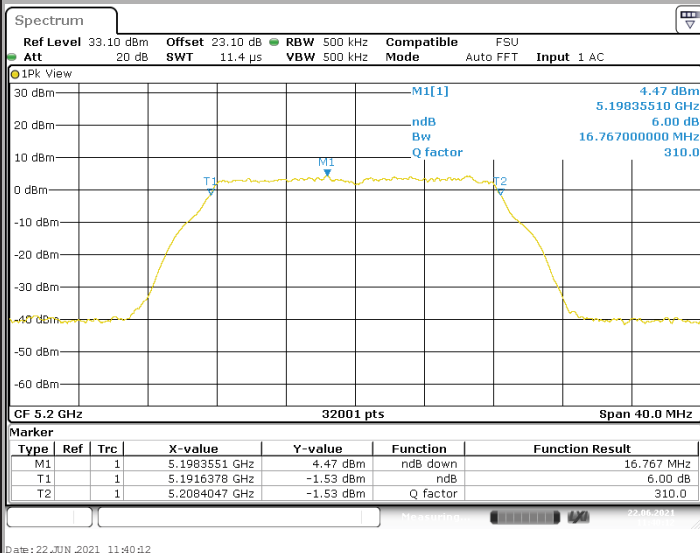
802.11a/802.11nHT20/ac VHT20

Tmax

Vmax

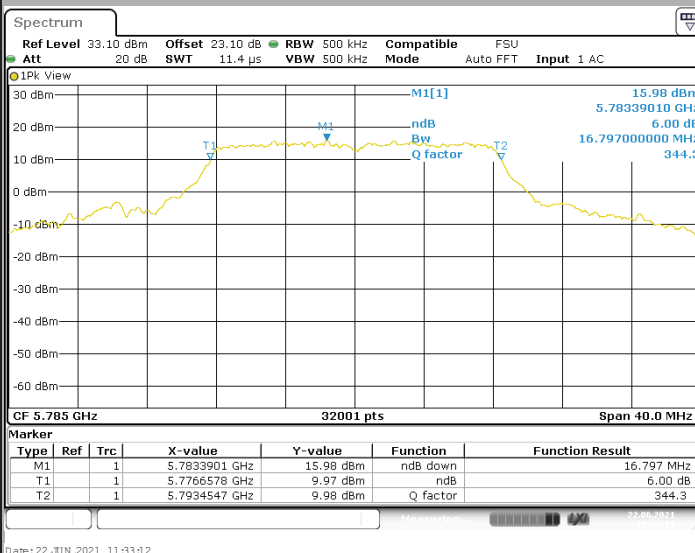
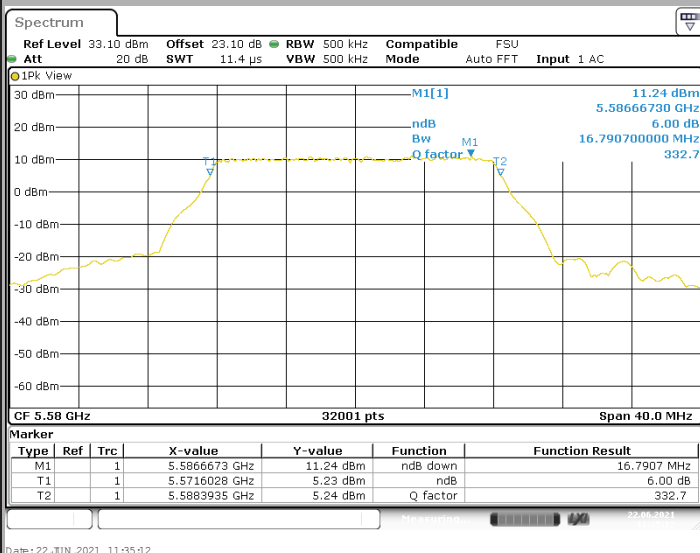
C2

C5



C8

C12





802.11a/802.11nHT20/ac VHT20

Temperature	Tmin				Tnom				Tmax			
Voltage	Vmin											
Channel	C2	C5	C8	C12	C2	C5	C8	C12	C2	C5	C8	C12
Frequency drift (ppm)	-0,5	17,3	6,3	23,7	3,8	14,4	1,2	8,6	-8,3	-2,9	0,0	11,7
Voltage	Vnom											
Channel	C2	C5	C8	C12	C2	C5	C8	C12	C2	C5	C8	C12
Frequency drift (ppm)	-4,6	25,7	21,8	7,9	-3,4	-10,5	-2,2	2,6	4,7	-1,1	5,9	5,0
Voltage	Vmax											
Channel	C2	C5	C8	C12	C2	C5	C8	C12	C2	C5	C8	C12
Frequency drift (ppm)	9,0	24,4	14,8	20,1	-4,7	1,1	7,2	-8,7	4,1	4,0	-0,3	9,7

4.6. CONCLUSION

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

5. 26dB EMISSION BANDWIDTH

5.1. TEST CONDITIONS

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

5.2. TEST SETUP

- The Equipment Under Test is installed:

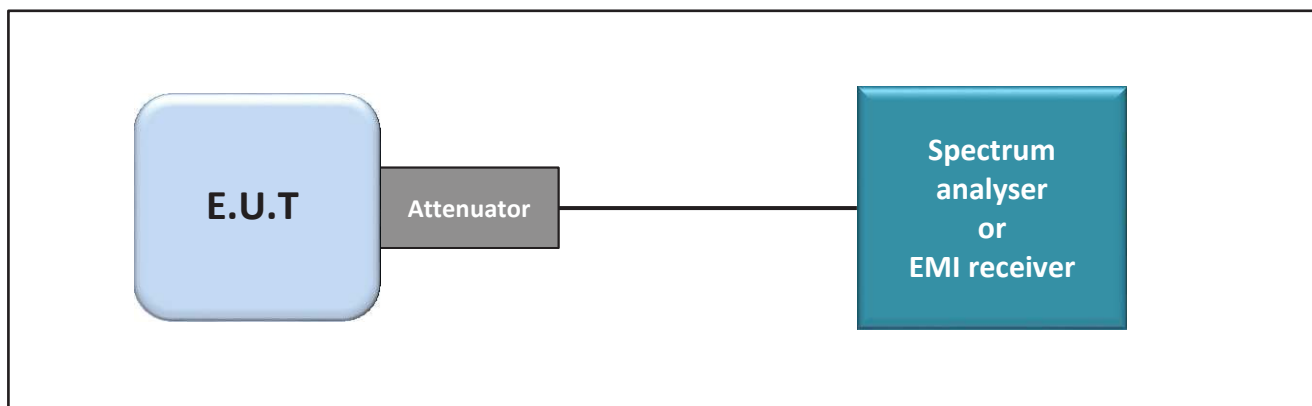
- ☒ On a table
- ☐ In an anechoic chamber

- Measurement is performed with a spectrum analyzer in:

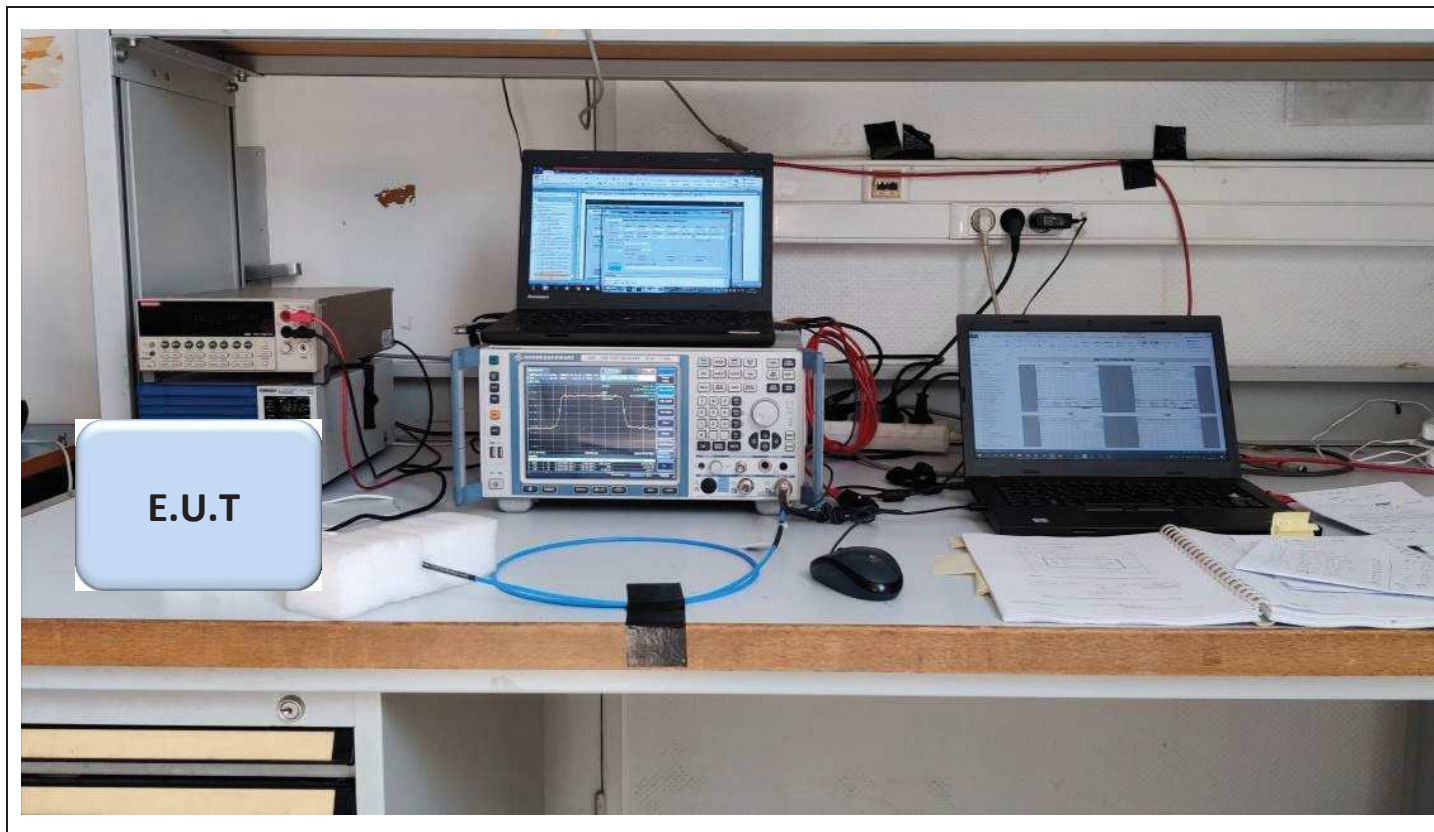
- ☒ Conducted Method
- ☐ Radiated Method

- Test Procedure:

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



Test set up of 26dB Emission Bandwidth



Photograph for 26dB emission bandwidth

5.3. LIMIT

None

5.4. TEST EQUIPMENT LIST

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

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