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WIFI 5GHz Template: Release October 03rd, 2016

# TEST REPORT

N°: 157205-726501-E

Version : 02

## Subject

Radio spectrum matters  
tests according to standards:  
47 CFR Part 15.407 (DFS Only)

## Issued to

SAGEMCOM BROADBAND SAS  
250 Route de l' Empereur  
92500 – RUEIL MALMAISON  
FRANCE

## Apparatus under test

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

Sound Box  
Sagemcom®  
SAGEMCOM  
Sound Box SBDV01  
253770742  
VW3SBDV01

**Test date** : September 14, 2018 to October 5, 2018  
**Test location** Fontenay Aux Roses  
**Test Site** 6230B-1  
**Composition of document** 33 pages  
**Document issued on** November 19, 2018

Written by :  
**Armand MAHOUNGOU**  
Tests operator



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**LCIE**

Laboratoire Central des Industries Electriques  
Une société de Bureau Veritas

33, Av du Général Leclerc  
92266 Fontenay Aux Roses  
FRANCE

Tél : +33 1 40 95 60 60  
contact@lcie.fr  
www.lcie.fr



## PUBLICATION HISTORY

<b>Version</b>	<b>Date</b>	<b>Author</b>	<b>Modification</b>
01	October 8, 2018	Armand MAHOUNGOU	Creation of the document
02	November 19, 2018	Armand MAHOUNGOU	Customer request withdraw all picture of the EUT from test report



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## 1. TEST PROGRAM

### References

- 47 CFR Part 15.407 (DFS requirements)
- KDB 905462 D02 UNII DFS Compliance Procedures New Rules v02
- KDB 905462 D04 Test Mode New Rules v01
- KDB 905462 D03 Client Without DFS New Rules v01r02
- KDB 905462 D06 802.11 Channel Plans New Rules v02
- KDB 905462 D07 Overview UNII Rules v02

### Radio requirement:

Clause (47CFR Part 15.407) Test Description	Test result - Comments			
Channel Availability Check Time & DFS Detection Threshold <a href="#">P</a>	<input type="checkbox"/> PASS	<input type="checkbox"/> FAIL	<input checked="" type="checkbox"/> NA(1)(2)	<input type="checkbox"/> NP(3)
U-NII Detection Bandwidth <a href="#">P</a>	<input type="checkbox"/> PASS	<input type="checkbox"/> FAIL	<input checked="" type="checkbox"/> NA(1)	<input type="checkbox"/> NP(3)
Statistical Performance Check & DFS Detection Threshold <a href="#">P</a>	<input type="checkbox"/> PASS	<input type="checkbox"/> FAIL	<input checked="" type="checkbox"/> NA(1)	<input type="checkbox"/> NP(3)
Channel Closing Transmission Time & Channel Move Time <a href="#">P</a>	<input checked="" type="checkbox"/> PASS	<input type="checkbox"/> FAIL	<input type="checkbox"/> NA	<input type="checkbox"/> NP(3)
Non-occupancy period <a href="#">P</a>	<input checked="" type="checkbox"/> PASS	<input type="checkbox"/> FAIL	<input type="checkbox"/> NA	<input type="checkbox"/> NP(3)
This table is a summary of test report, see conclusion of each clause of this test report for detail.				

- (1): Client without radar detection  
 (2): Client with radar detection  
 (3): Limited program



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

### 2.1. HARDWARE IDENTIFICATION (EUT AND AUXILIARIES):

#### Equipment under test (EUT):

Sagemcom® Sound Box SBDV01

Power supply : NBC80A200400M2

Serial Number: 253770742

#### Inputs/outputs - Cable:

Access	Type	Length used (m)	Declared <3m	Shielded	Under test	Comments
Cable	Power supply	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	-
Ethernet cable	-	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	-

#### Auxiliary equipment used during test:

Type	Reference	Sn	Comments
Laptop computer	-	-	-



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**Equipment information:**

Type:	<b>WIFI</b>			
Frequency band:	<input checked="" type="checkbox"/> 5150MHz-5250MHz	<input checked="" type="checkbox"/> 5250MHz-5350MHz	<input checked="" type="checkbox"/> 5470MHz-5725MHz	
	<input checked="" type="checkbox"/> 5725MHz-5850MHz			
Standard:	<input checked="" type="checkbox"/> 802.11a	<input checked="" type="checkbox"/> 802.11n HT20	<input checked="" type="checkbox"/> 802.11n HT40	
	<input checked="" type="checkbox"/> 802.11ac VHT20	<input checked="" type="checkbox"/> 802.11ac VHT40	<input checked="" type="checkbox"/> 802.11ac VHT80	
	<input type="checkbox"/> 802.11ac VHT160			
Spectrum Modulation:	<input checked="" type="checkbox"/> OFDM			
Channel bandwidth:	<input checked="" type="checkbox"/> 20MHz	<input checked="" type="checkbox"/> 40MHz	<input checked="" type="checkbox"/> 80MHz	<input type="checkbox"/> 160MHz
Antenna Type:	<input checked="" type="checkbox"/> Integral	<input type="checkbox"/> External	<input type="checkbox"/> Dedicated	
Antenna connector:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Temporary for test	
Transmit chains:	<input type="checkbox"/> 1	<input checked="" type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
	<input type="checkbox"/> 5	<input type="checkbox"/> 6	<input type="checkbox"/> 7	<input type="checkbox"/> 8
TPC:	<input checked="" type="checkbox"/> Yes		<input type="checkbox"/> No	
Receiver chains	<input type="checkbox"/> 1	<input checked="" type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
	<input type="checkbox"/> 5	<input type="checkbox"/> 6	<input type="checkbox"/> 7	<input type="checkbox"/> 8
Type of equipment:	<input checked="" type="checkbox"/> Stand-alone	<input type="checkbox"/> Plug-in	<input type="checkbox"/> Combined	
Operating temperature range:	Tmin:	<input type="checkbox"/> -20°C	<input checked="" type="checkbox"/> 0°C	<input type="checkbox"/> X °C
	Tnom:	20°C		
	Tmax:	<input type="checkbox"/> 35°C	<input type="checkbox"/> 55°C	<input checked="" type="checkbox"/> 40°C
Type of power source:	<input checked="" type="checkbox"/> AC power supply	<input type="checkbox"/> DC power supply	<input type="checkbox"/> Battery Battery Type	
Operating voltage range:	Vmin:	<input checked="" type="checkbox"/> 100 V/60Hz	<input type="checkbox"/> X Vdc	
	Vnom:	<input checked="" type="checkbox"/> 110V/60Hz	<input type="checkbox"/> X Vdc	
	Vmax:	<input checked="" type="checkbox"/> 120 V/60Hz	<input type="checkbox"/> X Vdc	
Mode:	<input type="checkbox"/> Master	<input type="checkbox"/> Slave with radar detection	<input checked="" type="checkbox"/> Slave without radar detection	
	<input type="checkbox"/> Bridge		<input type="checkbox"/> Mesh	
Fixed outdoor P to P/M application:	<input type="checkbox"/> Yes		<input type="checkbox"/> No	
System architectures:	<input checked="" type="checkbox"/> IP based		<input type="checkbox"/> Frame based	
User access restriction:	<input checked="" type="checkbox"/> Yes (The manufacturer declares that information regarding the parameters of the detected Radar Waveforms is not available to the end user)		<input type="checkbox"/> No	

Antenna Characteristic			
Antenna assembly	Gain (dBi)	Frequency Band (MHz)	Impedance(Ω)
1	2.194	5150-5350	50
2	1.924	5150-5350	50
Accumulated	5.07	5150-5350	50
1	2.391	5470-5850	50
2	3.361	5470-5850	50
Accumulated	5.90	5470-5850	50



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Accumulated gain calculation		
Formula used for calculation	KDB	Correlated
$10 \log[(10G1 /20 + 10G2 /20 + \dots + 10GN /20)2 /NANT]dBi$	KDB 662911 D01 v02r01	<input checked="" type="checkbox"/> Yes / <input type="checkbox"/> No



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





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

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

No DFS Channel
DFS Channel
Weather DFS Channel



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DATA RATE		
802.11a		
Data Rate (Mbps)	Modulation Type	Modulation Worst Case
6	BPSK	<input checked="" type="checkbox"/>
9	BPSK	<input type="checkbox"/>
12	QPSK	<input type="checkbox"/>
18	QPSK	<input type="checkbox"/>
24	16-QAM	<input type="checkbox"/>
36	16-QAM	<input type="checkbox"/>
48	64-QAM	<input type="checkbox"/>
54	64-QAM	<input type="checkbox"/>



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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	<input checked="" type="checkbox"/>
	1	1	QPSK				13	14.4	<input type="checkbox"/>
	2	1	QPSK				19.5	21.7	<input type="checkbox"/>
	3	1	16-QAM				26	28.9	<input type="checkbox"/>
	4	1	16-QAM				39	43.3	<input type="checkbox"/>
	5	1	64-QAM				52	57.8	<input type="checkbox"/>
	6	1	64-QAM				58.5	65	<input type="checkbox"/>
	7	1	64-QAM				65	72.2	<input type="checkbox"/>
	8	2	BPSK				13	14.4	<input checked="" type="checkbox"/>
	9	2	QPSK				26	28.9	<input type="checkbox"/>
	10	2	QPSK				39	43.3	<input type="checkbox"/>
	11	2	16-QAM				52	57.8	<input type="checkbox"/>
	12	2	16-QAM				78	86.7	<input type="checkbox"/>
	13	2	64-QAM				104	115.6	<input type="checkbox"/>
	14	2	64-QAM				117	130.3	<input type="checkbox"/>
	15	2	64-QAM				130	144.4	<input type="checkbox"/>
	16	3	BPSK				19.5	21.7	<input type="checkbox"/>
	17	3	QPSK				39	43.3	<input type="checkbox"/>
	18	3	QPSK				58.5	65	<input type="checkbox"/>
	19	3	16-QAM				78	86.7	<input type="checkbox"/>
	20	3	16-QAM				117	130	<input type="checkbox"/>
	21	3	64-QAM				156	173.3	<input type="checkbox"/>
	22	3	64-QAM				175.5	195	<input type="checkbox"/>
	23	3	64-QAM				195	216.7	<input type="checkbox"/>
	24	4	BPSK				26	28.9	<input type="checkbox"/>
	25	4	QPSK				52	57.8	<input type="checkbox"/>
	26	4	QPSK				78	86.7	<input type="checkbox"/>
	27	4	16-QAM				104	115.6	<input type="checkbox"/>
	28	4	16-QAM				156	173.3	<input type="checkbox"/>
	29	4	64-QAM				208	231.1	<input type="checkbox"/>
	30	4	64-QAM				234	260	<input type="checkbox"/>
	31	4	64-QAM				260	288.9	<input type="checkbox"/>
	32	1	BPSK	-	-	-	-	<input type="checkbox"/>	
	33	2	16-QAM	QPSK	-	-	39	43.3	<input type="checkbox"/>
	34	2	64-QAM	QPSK	-	-	52	57.8	<input type="checkbox"/>
	35	2	64-QAM	16-QAM	-	-	65	72.2	<input type="checkbox"/>
	36	2	16-QAM	QPSK	-	-	58.5	65	<input type="checkbox"/>
	37	2	64-QAM	QPSK	-	-	78	86.7	<input type="checkbox"/>
	38	2	64-QAM	16-QAM	-	-	97.5	108.3	<input type="checkbox"/>
	39	3	16-QAM	QPSK	QPSK	-	52	57.8	<input type="checkbox"/>
	40	3	16-QAM	16-QAM	QPSK	-	65	72.2	<input type="checkbox"/>
	41	3	64-QAM	QPSK	QPSK	-	65	72.2	<input type="checkbox"/>
	42	3	64-QAM	16-QAM	QPSK	-	78	86.7	<input type="checkbox"/>
	43	3	64-QAM	16-QAM	16-QAM	-	91	101.1	<input type="checkbox"/>
	44	3	64-QAM	64-QAM	QPSK	-	91	101.1	<input type="checkbox"/>
	45	3	64-QAM	64-QAM	16-QAM	-	104	115.6	<input type="checkbox"/>
	46	3	16-QAM	QPSK	QPSK	-	78	86.7	<input type="checkbox"/>
	47	3	16-QAM	16-QAM	QPSK	-	97.5	108.3	<input type="checkbox"/>
	48	3	64-QAM	QPSK	QPSK	-	97.5	108.3	<input type="checkbox"/>
	49	3	64-QAM	16-QAM	QPSK	-	117	130	<input type="checkbox"/>
	50	3	64-QAM	16-QAM	16-QAM	-	136.5	151.7	<input type="checkbox"/>
	51	3	64-QAM	64-QAM	QPSK	-	136.5	151.7	<input type="checkbox"/>
	52	3	64-QAM	64-QAM	16-QAM	-	156	173.3	<input type="checkbox"/>
	53	4	16-QAM	QPSK	QPSK	QPSK	65	72.2	<input type="checkbox"/>
	54	4	16-QAM	16-QAM	QPSK	QPSK	78	86.7	<input type="checkbox"/>
	55	4	16-QAM	16-QAM	16-QAM	QPSK	91	101.1	<input type="checkbox"/>
	56	4	64-QAM	QPSK	QPSK	QPSK	78	86.7	<input type="checkbox"/>
	57	4	64-QAM	16-QAM	QPSK	QPSK	91	101.1	<input type="checkbox"/>
	58	4	64-QAM	16-QAM	16-QAM	QPSK	104	115.6	<input type="checkbox"/>
	59	4	64-QAM	16-QAM	16-QAM	16-QAM	117	130	<input type="checkbox"/>
	60	4	64-QAM	QPSK	QPSK	QPSK	104	115.6	<input type="checkbox"/>
	61	4	64-QAM	16-QAM	16-QAM	QPSK	117	130	<input type="checkbox"/>
	62	4	64-QAM	16-QAM	16-QAM	16-QAM	130	144.4	<input type="checkbox"/>
	63	4	64-QAM	64-QAM	64-QAM	QPSK	130	144.4	<input type="checkbox"/>
	64	4	64-QAM	64-QAM	64-QAM	16-QAM	143	158.9	<input type="checkbox"/>
	65	4	16-QAM	QPSK	QPSK	QPSK	97.5	108.3	<input type="checkbox"/>
	66	4	16-QAM	16-QAM	QPSK	QPSK	117	130	<input type="checkbox"/>
	67	4	16-QAM	16-QAM	16-QAM	QPSK	136.5	151.7	<input type="checkbox"/>
	68	4	64-QAM	QPSK	QPSK	QPSK	117	130	<input type="checkbox"/>
	69	4	64-QAM	16-QAM	QPSK	QPSK	136.5	151.7	<input type="checkbox"/>
	70	4	64-QAM	16-QAM	16-QAM	QPSK	156	173.3	<input type="checkbox"/>
	71	4	64-QAM	16-QAM	16-QAM	16-QAM	175.5	195	<input type="checkbox"/>
	72	4	64-QAM	64-QAM	QPSK	QPSK	156	173.3	<input type="checkbox"/>
	73	4	64-QAM	64-QAM	16-QAM	QPSK	175.5	195	<input type="checkbox"/>
	74	4	64-QAM	64-QAM	16-QAM	16-QAM	195	216.7	<input type="checkbox"/>
	75	4	64-QAM	64-QAM	64-QAM	QPSK	195	216.7	<input type="checkbox"/>
	76	4	64-QAM	64-QAM	64-QAM	16-QAM	214.5	238.3	<input type="checkbox"/>



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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	☐	



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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
<input checked="" type="checkbox"/>	0	1	BPSK	1/2	6,5	7,2	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	1	1	QPSK	1/2	13	14,4	<input type="checkbox"/>
<input checked="" type="checkbox"/>	2	1	QPSK	3/4	19,5	21,7	<input type="checkbox"/>
<input checked="" type="checkbox"/>	3	1	16-QAM	1/2	26	28,9	<input type="checkbox"/>
<input checked="" type="checkbox"/>	4	1	16-QAM	3/4	39	43,3	<input type="checkbox"/>
<input checked="" type="checkbox"/>	5	1	64-QAM	2/3	52	57,8	<input type="checkbox"/>
<input checked="" type="checkbox"/>	6	1	64-QAM	3/4	58,5	65	<input type="checkbox"/>
<input checked="" type="checkbox"/>	7	1	64-QAM	5/6	65	72,2	<input type="checkbox"/>
<input checked="" type="checkbox"/>	8	1	256-QAM	3/4	78	86,7	<input type="checkbox"/>
<input checked="" type="checkbox"/>	9	1	256-QAM	5/6	N/A	N/A	<input type="checkbox"/>
<input checked="" type="checkbox"/>	10	2	BPSK	1/2	13	14,4	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	11	2	QPSK	1/2	26	28,8	<input type="checkbox"/>
<input checked="" type="checkbox"/>	12	2	QPSK	3/4	39	43,4	<input type="checkbox"/>
<input checked="" type="checkbox"/>	13	2	16-QAM	1/2	52	57,8	<input type="checkbox"/>
<input checked="" type="checkbox"/>	14	2	16-QAM	3/4	78	86,6	<input type="checkbox"/>
<input checked="" type="checkbox"/>	15	2	64-QAM	2/3	104	115,6	<input type="checkbox"/>
<input checked="" type="checkbox"/>	16	2	64-QAM	3/4	117	130	<input type="checkbox"/>
<input checked="" type="checkbox"/>	17	2	64-QAM	5/6	130	144,4	<input type="checkbox"/>
<input checked="" type="checkbox"/>	18	2	256-QAM	3/4	156	173,4	<input type="checkbox"/>
<input checked="" type="checkbox"/>	19	2	256-QAM	5/6	N/A	N/A	<input type="checkbox"/>
<input type="checkbox"/>	20	3	BPSK	1/2	19,5	21,6	<input type="checkbox"/>
<input type="checkbox"/>	21	3	QPSK	1/2	39	43,2	<input type="checkbox"/>
<input type="checkbox"/>	22	3	QPSK	3/4	58,5	65,1	<input type="checkbox"/>
<input type="checkbox"/>	23	3	16-QAM	1/2	78	86,7	<input type="checkbox"/>
<input type="checkbox"/>	24	3	16-QAM	3/4	117	129,9	<input type="checkbox"/>
<input type="checkbox"/>	25	3	64-QAM	2/3	156	173,4	<input type="checkbox"/>
<input type="checkbox"/>	26	3	64-QAM	3/4	175,5	195	<input type="checkbox"/>
<input type="checkbox"/>	27	3	64-QAM	5/6	195	216,6	<input type="checkbox"/>
<input type="checkbox"/>	28	3	256-QAM	3/4	234	260,1	<input type="checkbox"/>
<input type="checkbox"/>	29	3	256-QAM	5/6	N/A	N/A	<input type="checkbox"/>
<input type="checkbox"/>	30	4	BPSK	1/2	26	28,8	<input type="checkbox"/>
<input type="checkbox"/>	31	4	QPSK	1/2	52	57,6	<input type="checkbox"/>
<input type="checkbox"/>	32	4	QPSK	3/4	78	86,8	<input type="checkbox"/>
<input type="checkbox"/>	33	4	16-QAM	1/2	104	115,6	<input type="checkbox"/>
<input type="checkbox"/>	34	4	16-QAM	3/4	156	173,2	<input type="checkbox"/>
<input type="checkbox"/>	35	4	64-QAM	2/3	208	231,2	<input type="checkbox"/>
<input type="checkbox"/>	36	4	64-QAM	3/4	234	260	<input type="checkbox"/>
<input type="checkbox"/>	37	4	64-QAM	5/6	260	288,8	<input type="checkbox"/>
<input type="checkbox"/>	38	4	256-QAM	3/4	312	346,8	<input type="checkbox"/>
<input type="checkbox"/>	39	4	256-QAM	5/6	N/A	N/A	<input type="checkbox"/>
<input type="checkbox"/>	40	5	BPSK	1/2	32,5	36	<input type="checkbox"/>
<input type="checkbox"/>	41	5	QPSK	1/2	65	72	<input type="checkbox"/>
<input type="checkbox"/>	42	5	QPSK	3/4	97,5	108,5	<input type="checkbox"/>
<input type="checkbox"/>	43	5	16-QAM	1/2	130	144,5	<input type="checkbox"/>
<input type="checkbox"/>	44	5	16-QAM	3/4	195	216,5	<input type="checkbox"/>
<input type="checkbox"/>	45	5	64-QAM	2/3	260	289	<input type="checkbox"/>
<input type="checkbox"/>	46	5	64-QAM	3/4	292,5	325	<input type="checkbox"/>
<input type="checkbox"/>	47	5	64-QAM	5/6	325	361	<input type="checkbox"/>
<input type="checkbox"/>	48	5	256-QAM	3/4	390	433,5	<input type="checkbox"/>
<input type="checkbox"/>	49	5	256-QAM	5/6	N/A	N/A	<input type="checkbox"/>
<input type="checkbox"/>	50	6	BPSK	1/2	39	43,2	<input type="checkbox"/>
<input type="checkbox"/>	51	6	QPSK	1/2	78	86,4	<input type="checkbox"/>
<input type="checkbox"/>	52	6	QPSK	3/4	117	130,2	<input type="checkbox"/>
<input type="checkbox"/>	53	6	16-QAM	1/2	156	173,4	<input type="checkbox"/>
<input type="checkbox"/>	54	6	16-QAM	3/4	234	259,8	<input type="checkbox"/>
<input type="checkbox"/>	55	6	64-QAM	2/3	312	346,8	<input type="checkbox"/>
<input type="checkbox"/>	56	6	64-QAM	3/4	351	390	<input type="checkbox"/>
<input type="checkbox"/>	57	6	64-QAM	5/6	390	433,2	<input type="checkbox"/>
<input type="checkbox"/>	58	6	256-QAM	3/4	468	520,2	<input type="checkbox"/>
<input type="checkbox"/>	59	6	256-QAM	5/6	N/A	N/A	<input type="checkbox"/>
<input type="checkbox"/>	60	7	BPSK	1/2	45,5	50,4	<input type="checkbox"/>
<input type="checkbox"/>	61	7	QPSK	1/2	91	100,8	<input type="checkbox"/>
<input type="checkbox"/>	62	7	QPSK	3/4	136,5	151,9	<input type="checkbox"/>
<input type="checkbox"/>	63	7	16-QAM	1/2	182	202,3	<input type="checkbox"/>
<input type="checkbox"/>	64	7	16-QAM	3/4	273	303,1	<input type="checkbox"/>
<input type="checkbox"/>	65	7	64-QAM	2/3	364	404,6	<input type="checkbox"/>
<input type="checkbox"/>	66	7	64-QAM	3/4	409,5	455	<input type="checkbox"/>
<input type="checkbox"/>	67	7	64-QAM	5/6	455	505,4	<input type="checkbox"/>
<input type="checkbox"/>	68	7	256-QAM	3/4	546	606,9	<input type="checkbox"/>
<input type="checkbox"/>	69	7	256-QAM	5/6	N/A	N/A	<input type="checkbox"/>
<input type="checkbox"/>	70	8	BPSK	1/2	52	57,6	<input type="checkbox"/>
<input type="checkbox"/>	71	8	QPSK	1/2	104	115,2	<input type="checkbox"/>
<input type="checkbox"/>	72	8	QPSK	3/4	156	173,6	<input type="checkbox"/>
<input type="checkbox"/>	73	8	16-QAM	1/2	208	231,2	<input type="checkbox"/>
<input type="checkbox"/>	74	8	16-QAM	3/4	312	346,4	<input type="checkbox"/>
<input type="checkbox"/>	75	8	64-QAM	2/3	416	462,4	<input type="checkbox"/>
<input type="checkbox"/>	76	8	64-QAM	3/4	468	520	<input type="checkbox"/>
<input type="checkbox"/>	77	8	64-QAM	5/6	520	577,6	<input type="checkbox"/>
<input type="checkbox"/>	78	8	256-QAM	3/4	624	693,6	<input type="checkbox"/>
<input type="checkbox"/>	79	8	256-QAM	5/6	N/A	N/A	<input type="checkbox"/>



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



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



Test report reference: N° 157205-726501-D

802.11a		
Antenna 1		
Channel	C6	C7
EIRP TPC Max (dBm)	16.86	16.80
Occupied Bandwidth (MHz)	16.84	16.78

802.11a		
Antenna 2		
Channel	C6	C7
EIRP TPC Max (dBm)	17.58	14.59
Occupied Bandwidth (MHz)	16.88	16.78

802.11n HT20/ac VHT20		
Channel	C6	C7
EIRP TPC Max (dBm)	19.80	20.40
Occupied Bandwidth (MHz)	17.95	17.81

802.11n HT40/ac VHT40		
Channel	C17	C18
EIRP TPC Max (dBm)	15.40	15.00
Occupied Bandwidth (MHz)	36.65	36.76

802.11ac VHT80		
Channel	C25	C26
EIRP TPC Max (dBm)	15.60	13.30
Occupied Bandwidth (MHz)	76.21	75.99

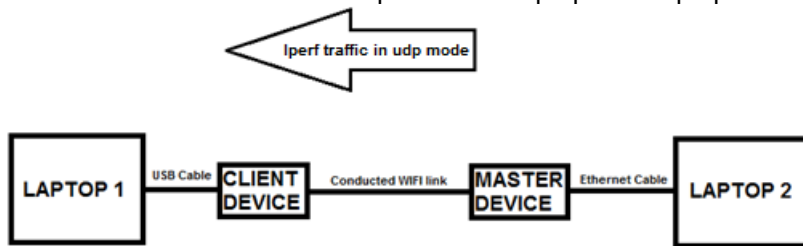


## 2.2. RUNNING MODE

The EUT is set in the following modes during tests:

- Emission-reception with a duty cycle above 17% in the data rate that produced the highest output power

-System testings is performed with iperf test software in udp mode from the Master Device to the Client Device on the test channel. The data traffic is performed Laptop 2 to Laptop 1



## 2.3. EQUIPMENT LABELLING

**SAGEMCOM** SWITCH MODE POWER SUPPLY


P/N:191433971-XX  
 MODEL:NBC80A200400M2  
 INPUT:100-240V~, 50/60Hz,1.5A  
 OUTPUT:20.0V  $\equiv$  4.0A

This device complies with part 15 of the FCC Rules.  
 Operation is subject to the following two conditions:  
 (1)This device may not cause harmful interference, and  
 (2)This device must accept any interference received,  
 including interference that may cause undesired operation.

MADE IN CHINA BY **NetBit®**

Factory S/N  
 Code barre type 128

Code barre type 128  
 MSO Part Number: 12345  
 Code barre type 128  
 SGC S/N: 123456789012  
 MAC Address : aa:bb:cc:dd:ee  
 TYM S/N : XXXXXXXXXX



**LISTED**  
I.T.E.  
E308616

**FCC ID: VW3SBDV01**

Manufactured under license from Dolby Laboratories. Dolby, Dolby Audio and the double-D symbol are trademarks of Dolby Laboratories.

**SAGEMCOM**

Sound Box SBDV01  
 253770742-ind  
 20V  $\equiv$  4A  
 Date Code: WW/YY  
 SSID : amplify-CCDDEE  
 Made in CZECH Republic

## 2.4. EQUIPMENT MODIFICATION

None       Modification:

### 3. DFS DETECTION THRESHOLDS DETERMINATION, REFERENCE NOISE LEVEL & CHANNEL LOADING

#### 3.1. TEST CONDITIONS

Test performed by : Armand MAHOUNGOU  
 Date of test : October 3, 2018 to October 4, 2018  
 Ambient temperature : 27°C  
 Relative humidity : 44%

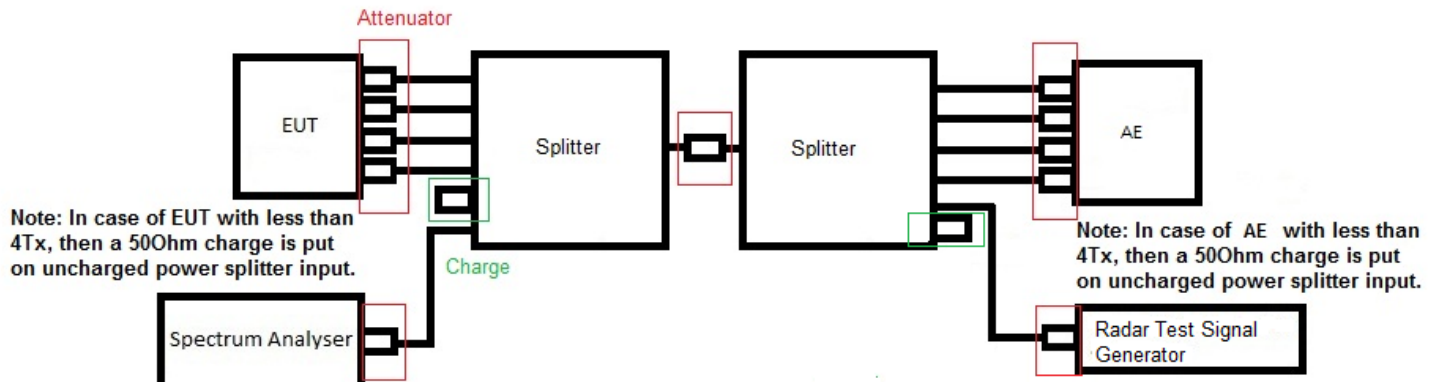
#### 3.2. TEST SETUP

- The Equipment Under Test is:

- On a table
- In an anechoic chamber

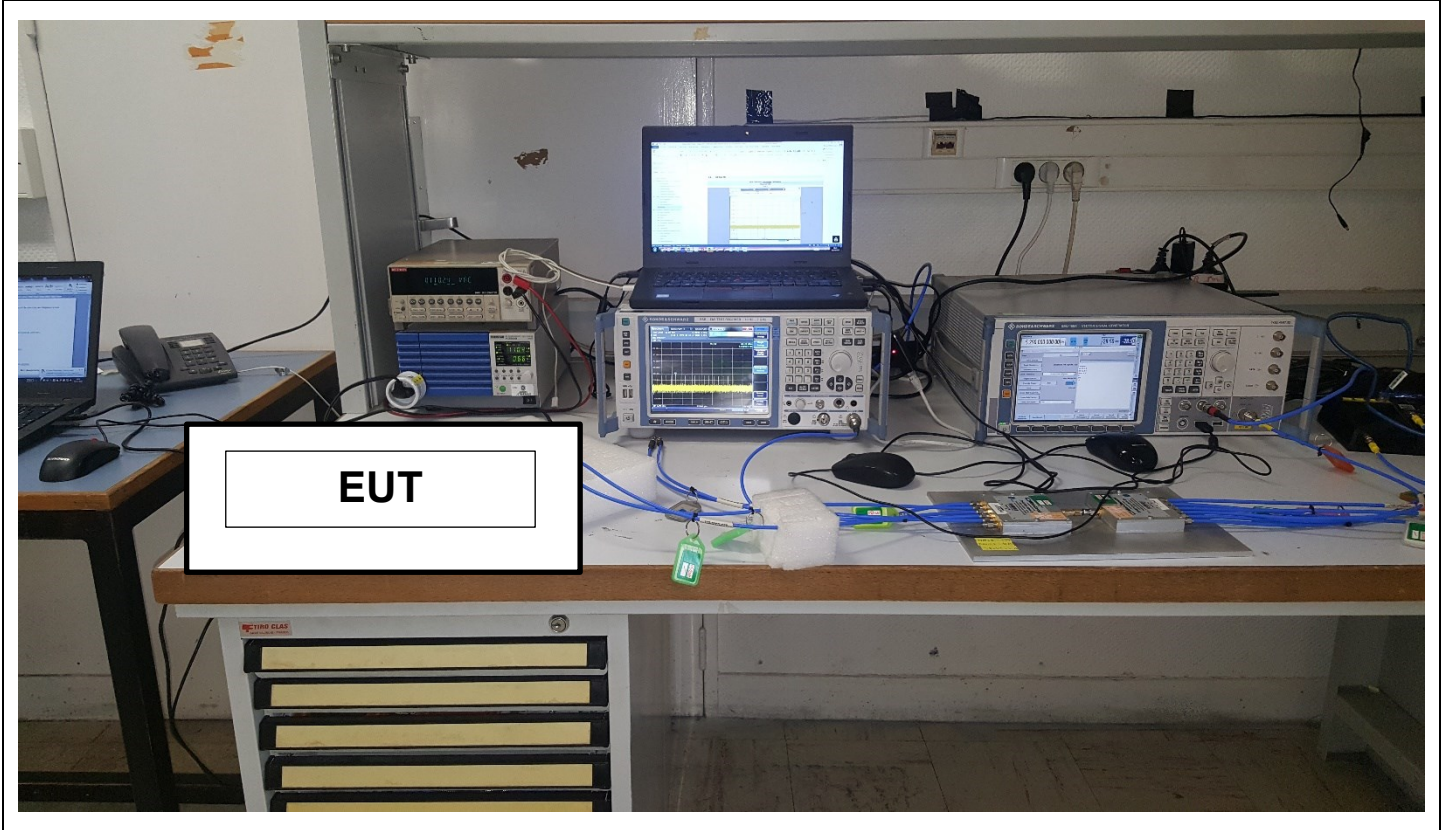
- Measurement is performed with a spectrum analyzer:

- On the EUT conducted access
- On the EUT with a test fixture





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Photograph for DFS Detection Thresholds Determination, Reference Noise Level, Channel Loading



### 3.3. TEST EQUIPMENT LIST

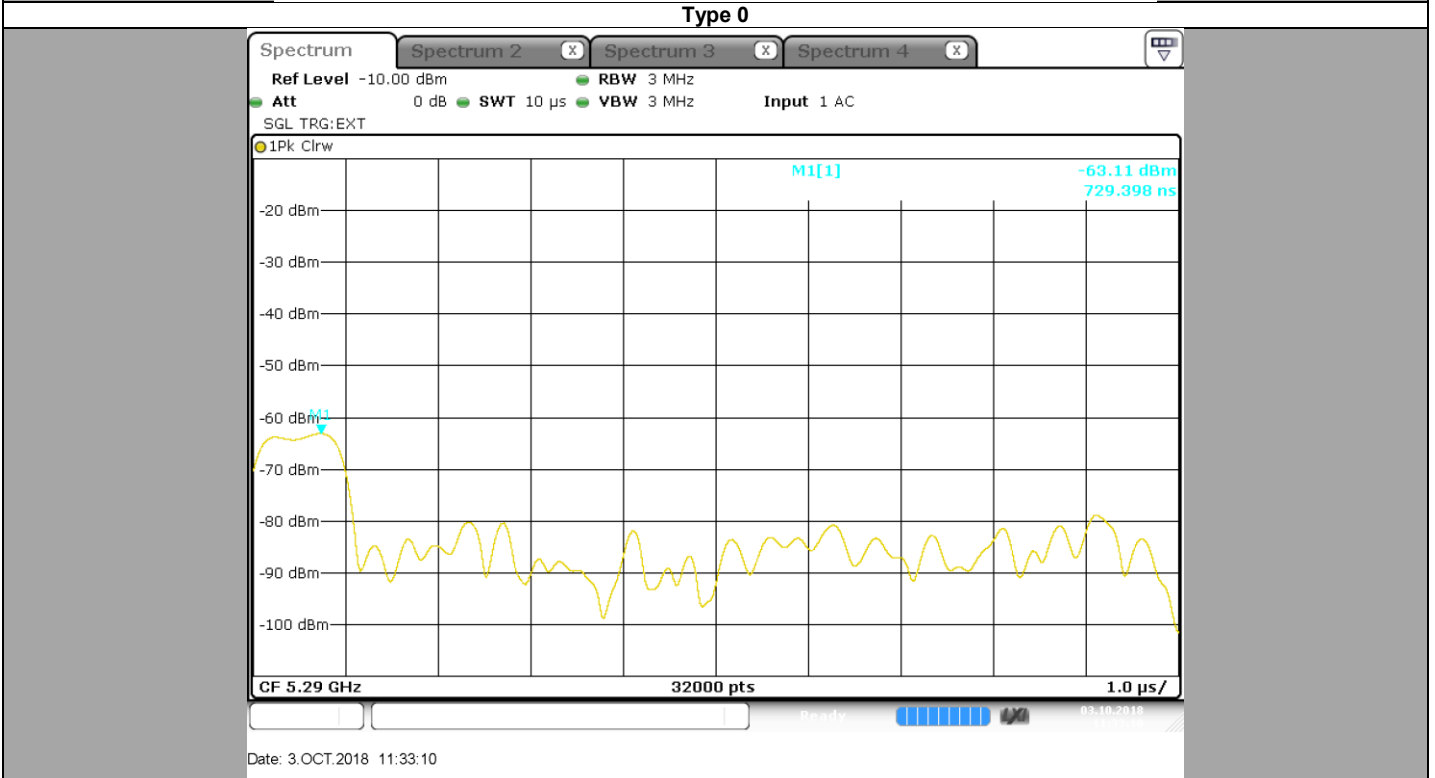
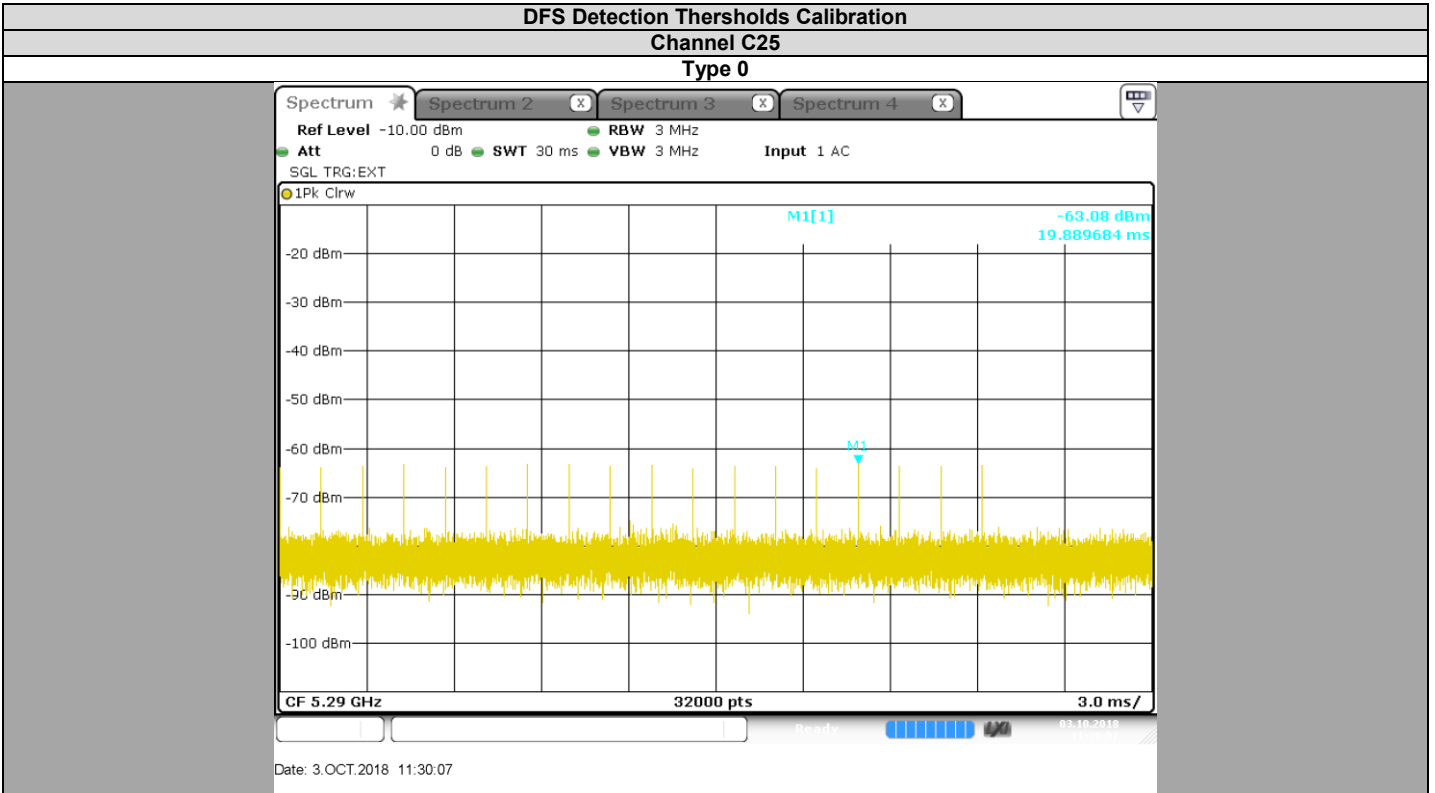
DESCRIPTION	MANUFACTURER	MODEL	N° LCIE	Cal_Date	Cal_Due
Multimeter	KEITHLEY	2000	A1242090	2017/05	2019/05
EMI receiver	ROHDE & SCHWARZ	ESR 7	A2642023	2016/11	2018/11
RF cable	Télédyne	920-0202-024	A5329663	2018/05	2020/05
RF cable	Télédyne	920-0202-024	A5329664	2018/05	2020/05
RF cable	Télédyne	920-0202-024	A5329665	2018/05	2020/05
RF cable	Télédyne	920-0202-024	A5329668	2018/05	2020/05
RF cable	Télédyne	920-0202-024	A5329669	2018/05	2020/05
RF cable	Télédyne	920-0202-024	A5329670	2018/05	2020/05
RF cable	Télédyne	920-0202-024	A5329672	2018/05	2020/05
RF cable	Télédyne	920-0202-024	A5329673	2018/05	2020/05
Vector signal generator	ROHDE & SCHWARZ	SMJ100A	A5444007	Verified with calibrated EMI receiver/ Spectrum analyzer before testing	
Programmable AC/DC power supply	KIKUSUI	PCR500M	A7040079	Verified with calibrated multimeter before testing	
Attenuator 10dB	MINI CIRCUITS	BW-S10W2+	A7122229	2018/05	2020/05
Attenuator 10dB	MINI CIRCUITS	BW-S10W2+	A7122230	2018/05	2020/05
RF cable & Attenuator 20dB	Télédyne & MINI CIRCUITS	920-0202-024 & FW-20+	A5329661	2018/05	2020/05
RF cable & Attenuator 20dB	Télédyne & MINI CIRCUITS	920-0202-024 & FW-20+	A5329676	2018/05	2020/05
RF cable & Attenuator 20dB	Télédyne & MINI CIRCUITS	920-0202-024 & FW-20+	A5329674	2018/05	2020/05
RF cable & Attenuator 20dB	Télédyne & MINI CIRCUITS	920-0202-024 & FW-20+	A5329675	2018/05	2020/05
Attenuator 3dB	MINI CIRCUITS	BW-S3W2+	A7122238	2018/05	2020/05
Attenuator 3dB	MINI CIRCUITS	BW-S3W2+	A7122239	2018/05	2020/05
Attenuator 3dB	MINI CIRCUITS	BW-S3W2+	A7122240	2018/05	2020/05
Attenuator 3dB	MINI CIRCUITS	BW-S3W2+	A7122241	2018/05	2020/05
Attenuator 3dB	MINI CIRCUITS	BW-S3W2+	A7122242	2018/05	2020/05
Attenuator 3dB	MINI CIRCUITS	BW-S3W2+	A7122243	2018/05	2020/05
Power splitter	Mini-Circuits	ZN6PD-63W-S+	A7132040	2018/05	2020/05
Power splitter	Mini-Circuits	ZN6PD-63W-S+	A7132041	2018/05	2020/05
Load 50 ohms	Fairview Microwave	ST0635F	A7152075	2018/05	2020/05
Load 50 ohms	Fairview Microwave	ST0635F	A7152076	2018/05	2020/05
Load 50 ohms	Fairview Microwave	ST0635F	A7152077	2018/05	2020/05
Load 50 ohms	Fairview Microwave	ST0635F	A7152078	2018/05	2020/05

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



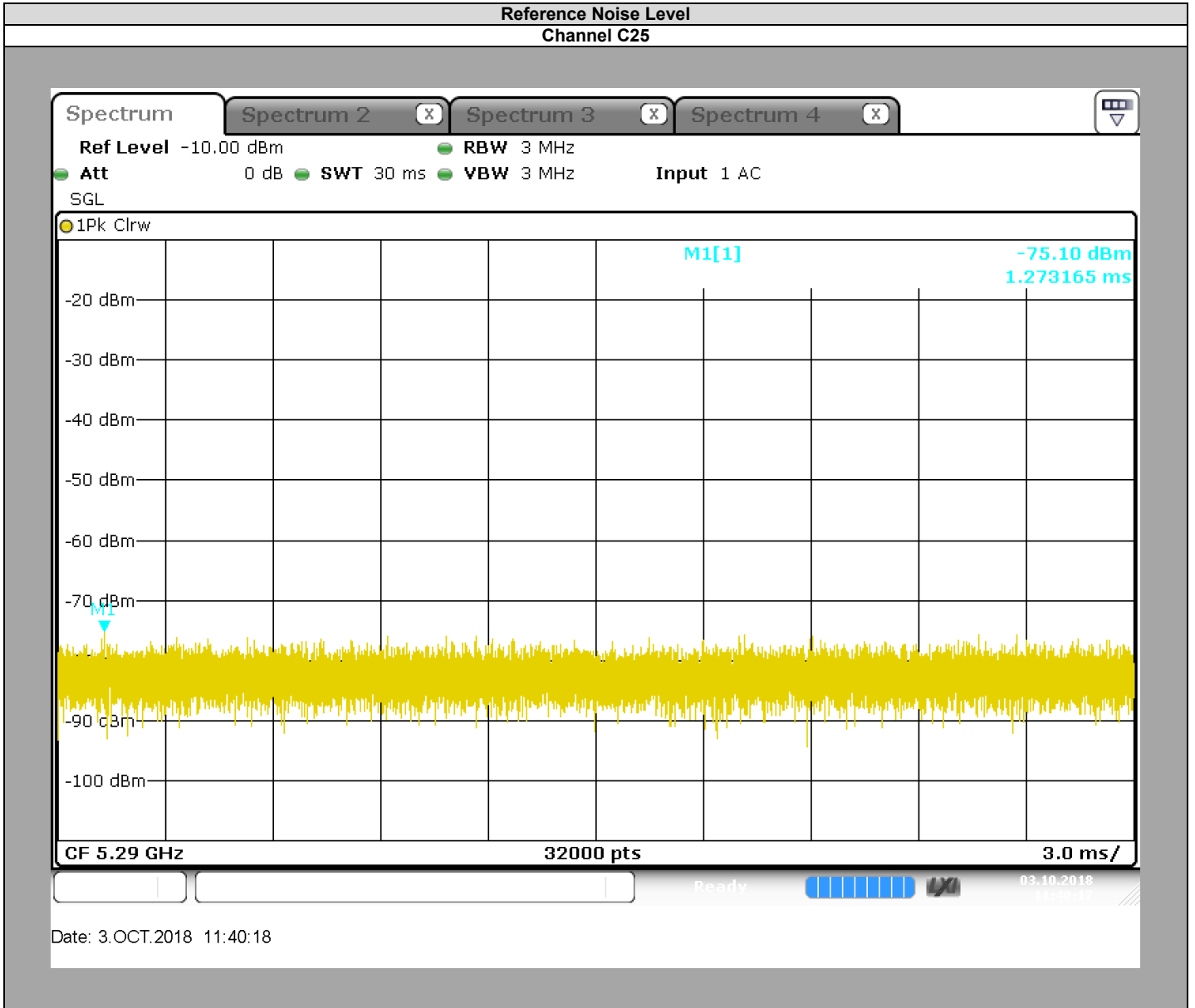
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### 3.4. RESULTS



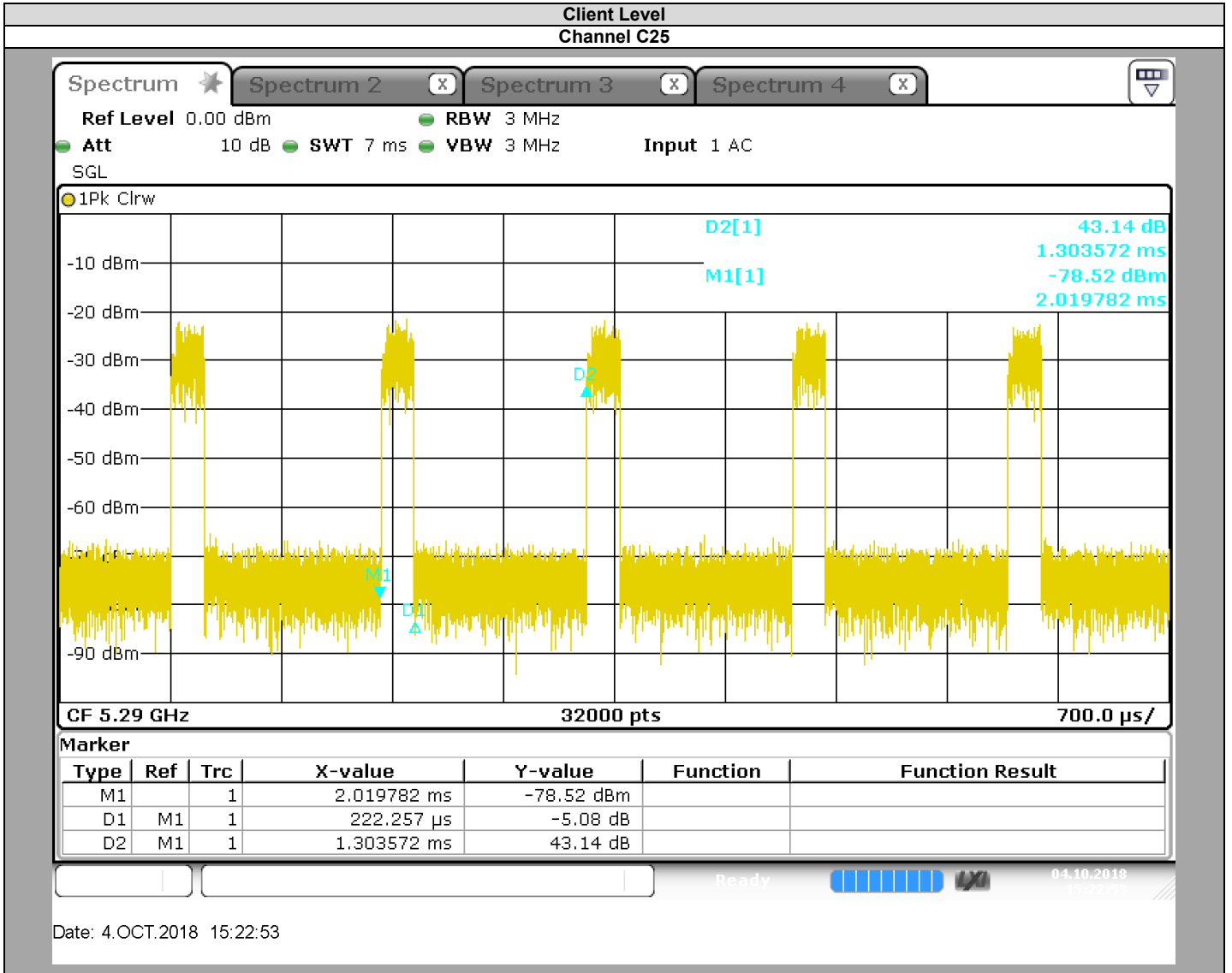


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Channel	Channel
EIRP (See test report from FCC ID: RRK2012060056-1)	338,065mW
DFS Detection thresholds applied	-64dBm
Additional Level (dB)	1
DFS Detection thresholds applied	-63dBm

## 4. DYNAMIC FREQUENCY SELECTION (DFS): CHANNEL CLOSING TRANSMISSION TIME & CHANNEL MOVE TIME

### 4.1. TEST CONDITIONS

Test performed by : Armand MAHOUNGOU  
 Date of test : October 4, 2018  
 Ambient temperature : 26 °C  
 Relative humidity : 47 %

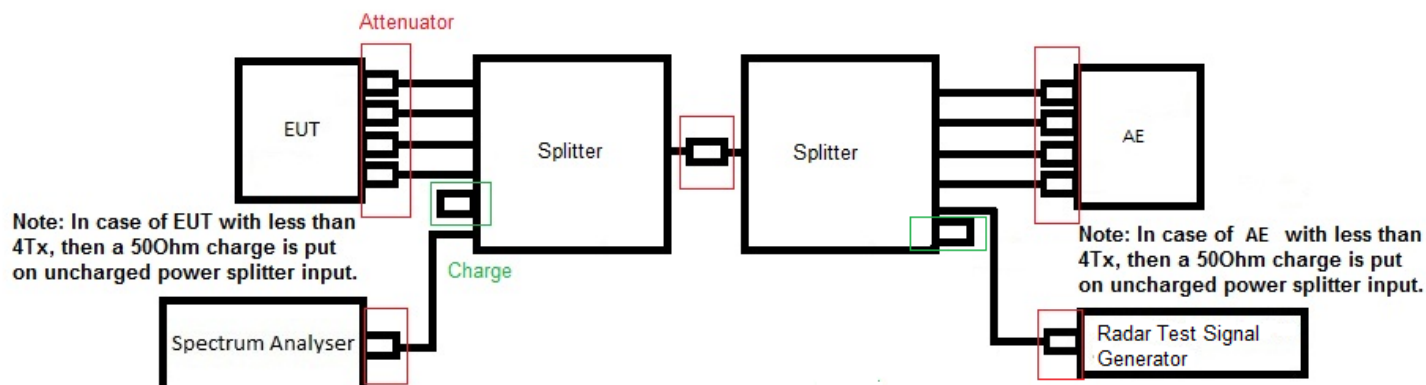
### 4.2. TEST SETUP

- The Equipment Under Test is:

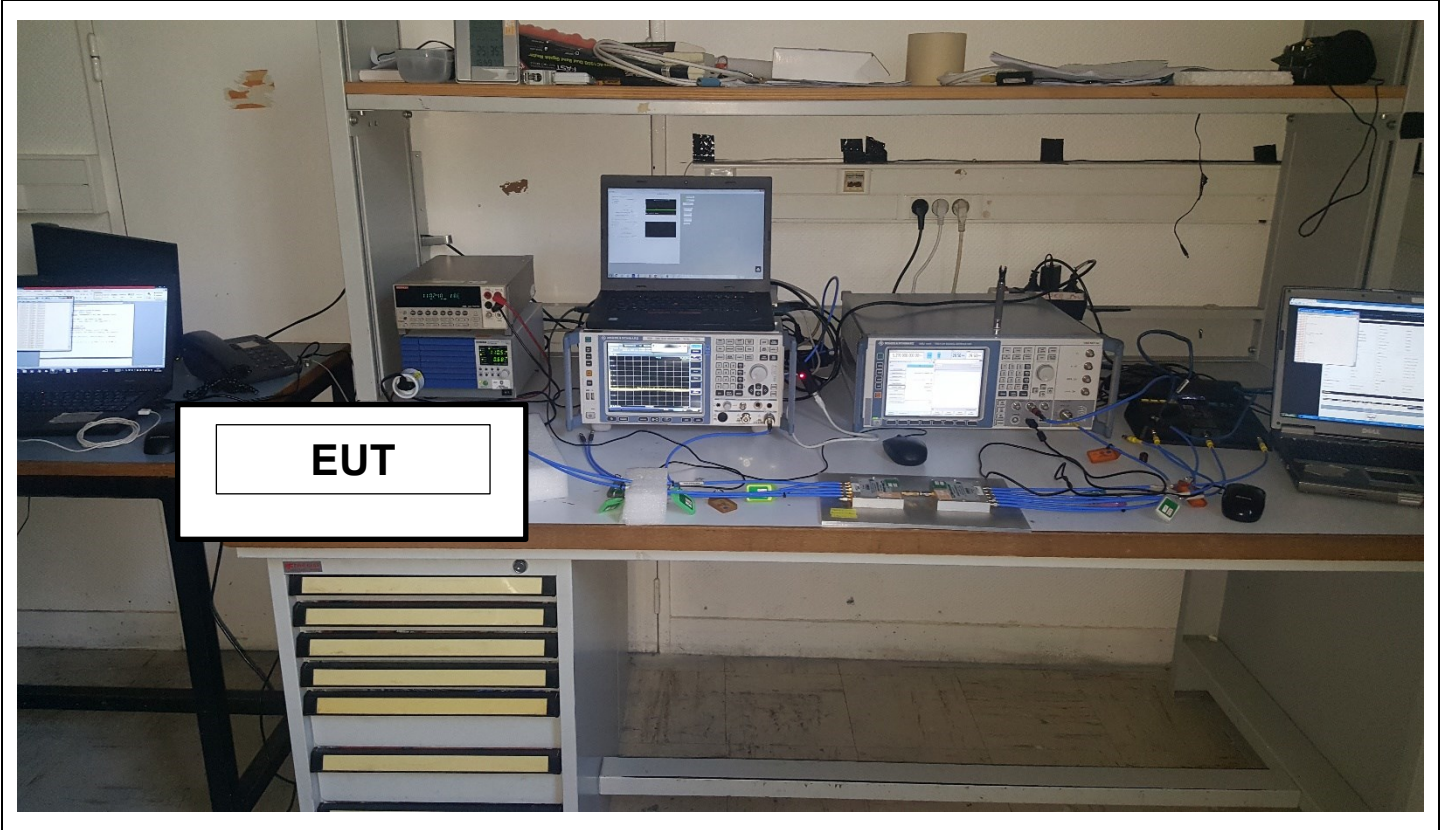
- On a table
- In an anechoic chamber

- Measurement is performed with a spectrum analyzer:

- On the EUT conducted access
- On the EUT with a test fixture







Photograph for DFS Channel Closing Transmission Time & Channel Move Time



### 4.3. LIMIT

Channel Closing Transmission Time shall not exceed 0.26second  
 Channel Move Time shall not exceed 10seconds

### 4.4. TEST EQUIPMENT LIST

DESCRIPTION	MANUFACTURER	MODEL	N° LCIE	Cal_Date	Cal_Due
Multimeter	KEITHLEY	2000	A1242090	2017/05	2019/05
EMI receiver	ROHDE & SCHWARZ	ESR 7	A2642023	2016/11	2018/11
RF cable	Télédyne	920-0202-024	A5329663	2018/05	2020/05
RF cable	Télédyne	920-0202-024	A5329664	2018/05	2020/05
RF cable	Télédyne	920-0202-024	A5329665	2018/05	2020/05
RF cable	Télédyne	920-0202-024	A5329668	2018/05	2020/05
RF cable	Télédyne	920-0202-024	A5329669	2018/05	2020/05
RF cable	Télédyne	920-0202-024	A5329670	2018/05	2020/05
RF cable	Télédyne	920-0202-024	A5329672	2018/05	2020/05
RF cable	Télédyne	920-0202-024	A5329673	2018/05	2020/05
Vector signal generator	ROHDE & SCHWARZ	SMJ100A	A5444007	Verified with calibrated EMI receiver/ Spectrum analyzer before testing	
Programmable AC/DC power supply	KIKUSUI	PCR500M	A7040079	Verified with calibrated multimeter before testing	
Attenuator 10dB	MINI CIRCUITS	BW-S10W2+	A7122229	2018/05	2020/05
Attenuator 10dB	MINI CIRCUITS	BW-S10W2+	A7122230	2018/05	2020/05
RF cable & Attenuator 20dB	Télédyne & MINI CIRCUITS	920-0202-024 & FW-20+	A5329661	2018/05	2020/05
RF cable & Attenuator 20dB	Télédyne & MINI CIRCUITS	920-0202-024 & FW-20+	A5329676	2018/05	2020/05
RF cable & Attenuator 20dB	Télédyne & MINI CIRCUITS	920-0202-024 & FW-20+	A5329674	2018/05	2020/05
RF cable & Attenuator 20dB	Télédyne & MINI CIRCUITS	920-0202-024 & FW-20+	A5329675	2018/05	2020/05
Attenuator 3dB	MINI CIRCUITS	BW-S3W2+	A7122238	2018/05	2020/05
Attenuator 3dB	MINI CIRCUITS	BW-S3W2+	A7122239	2018/05	2020/05
Attenuator 3dB	MINI CIRCUITS	BW-S3W2+	A7122240	2018/05	2020/05
Attenuator 3dB	MINI CIRCUITS	BW-S3W2+	A7122241	2018/05	2020/05
Attenuator 3dB	MINI CIRCUITS	BW-S3W2+	A7122242	2018/05	2020/05
Attenuator 3dB	MINI CIRCUITS	BW-S3W2+	A7122243	2018/05	2020/05
Power splitter	Mini-Circuits	ZN6PD-63W-S+	A7132040	2018/05	2020/05
Power splitter	Mini-Circuits	ZN6PD-63W-S+	A7132041	2018/05	2020/05
Load 50 ohms	Fairview Microwave	ST0635F	A7152075	2018/05	2020/05
Load 50 ohms	Fairview Microwave	ST0635F	A7152076	2018/05	2020/05
Load 50 ohms	Fairview Microwave	ST0635F	A7152077	2018/05	2020/05
Load 50 ohms	Fairview Microwave	ST0635F	A7152078	2018/05	2020/05

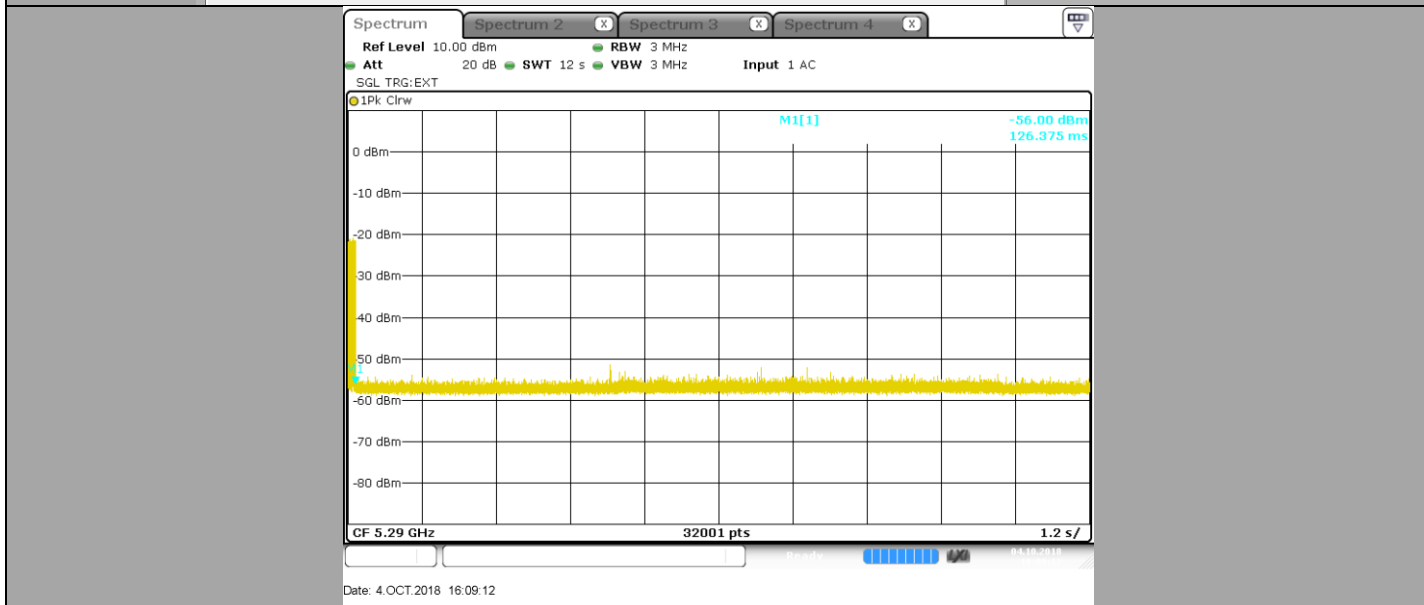
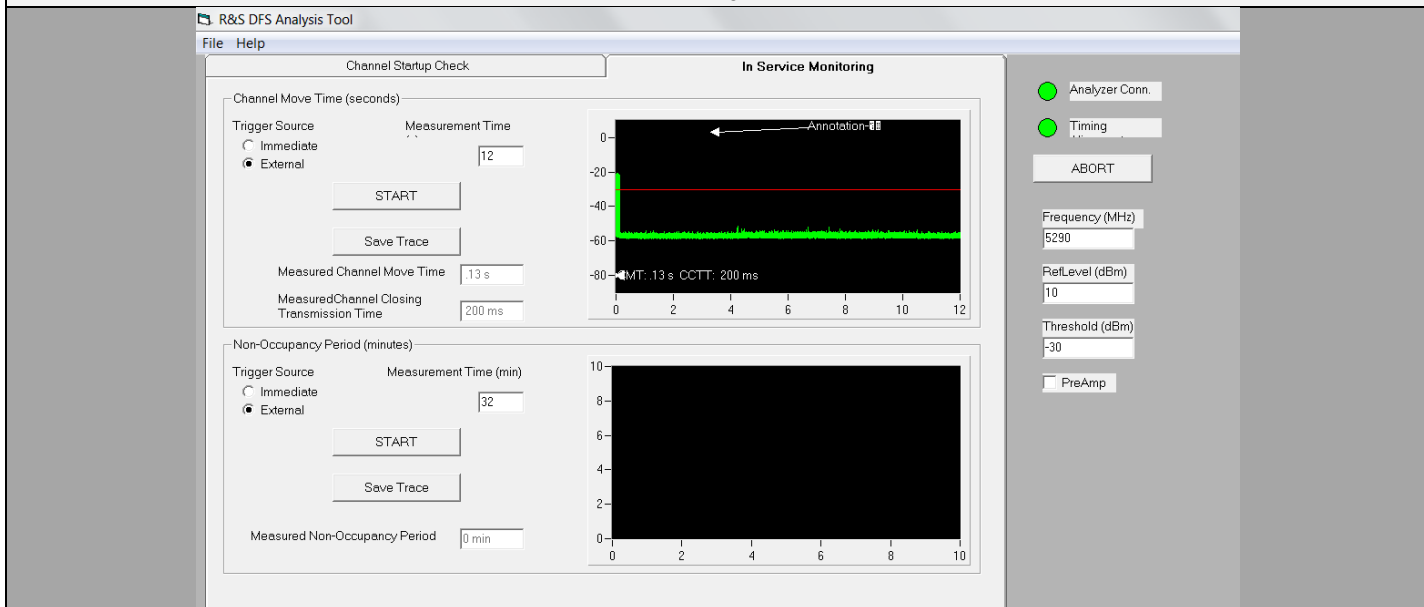
Note: In our quality system, the test equipment calibration due is more & less 2 months

### 4.5. DIVERGENCE, ADDITION OR SUPPRESSION ON THE TEST SPECIFICATION

None       Divergence:

#### 4.6. RESULTS

### Channel Closing Transmission Time & Channel Move Time 802.11ac VHT80 C25



Channel Closing Transmission Time (s)	0.200
Channel Move Time (s)	0.13

#### 4.7. CONCLUSION

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

## 5. DYNAMIC FREQUENCY SELECTION (DFS): NON-OCCUPANCY PERIOD

### 5.1. TEST CONDITIONS

Test performed by : Armand MAHOUNGOU  
 Date of test : October 4, 2018  
 Ambient temperature : 26 °C  
 Relative humidity : 47 %

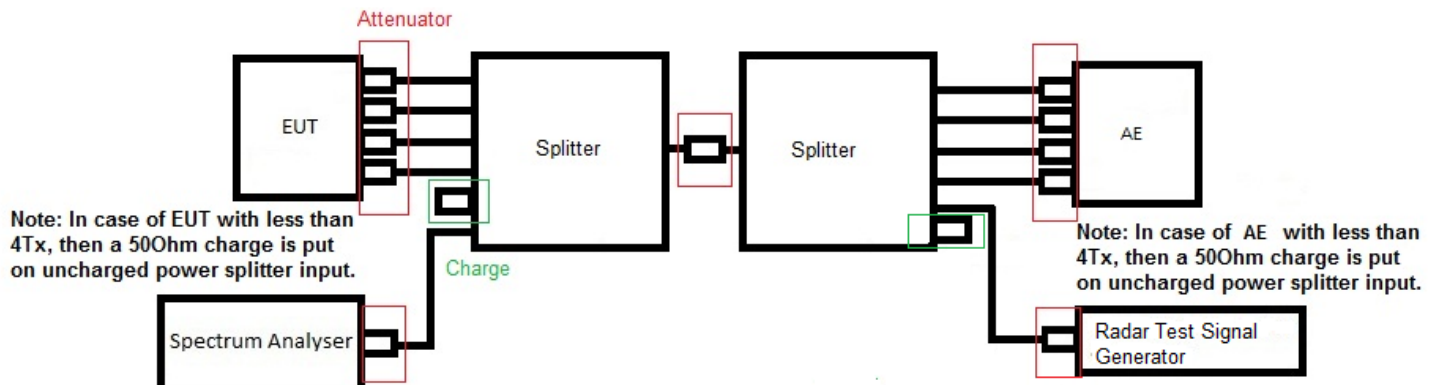
### 5.2. TEST SETUP

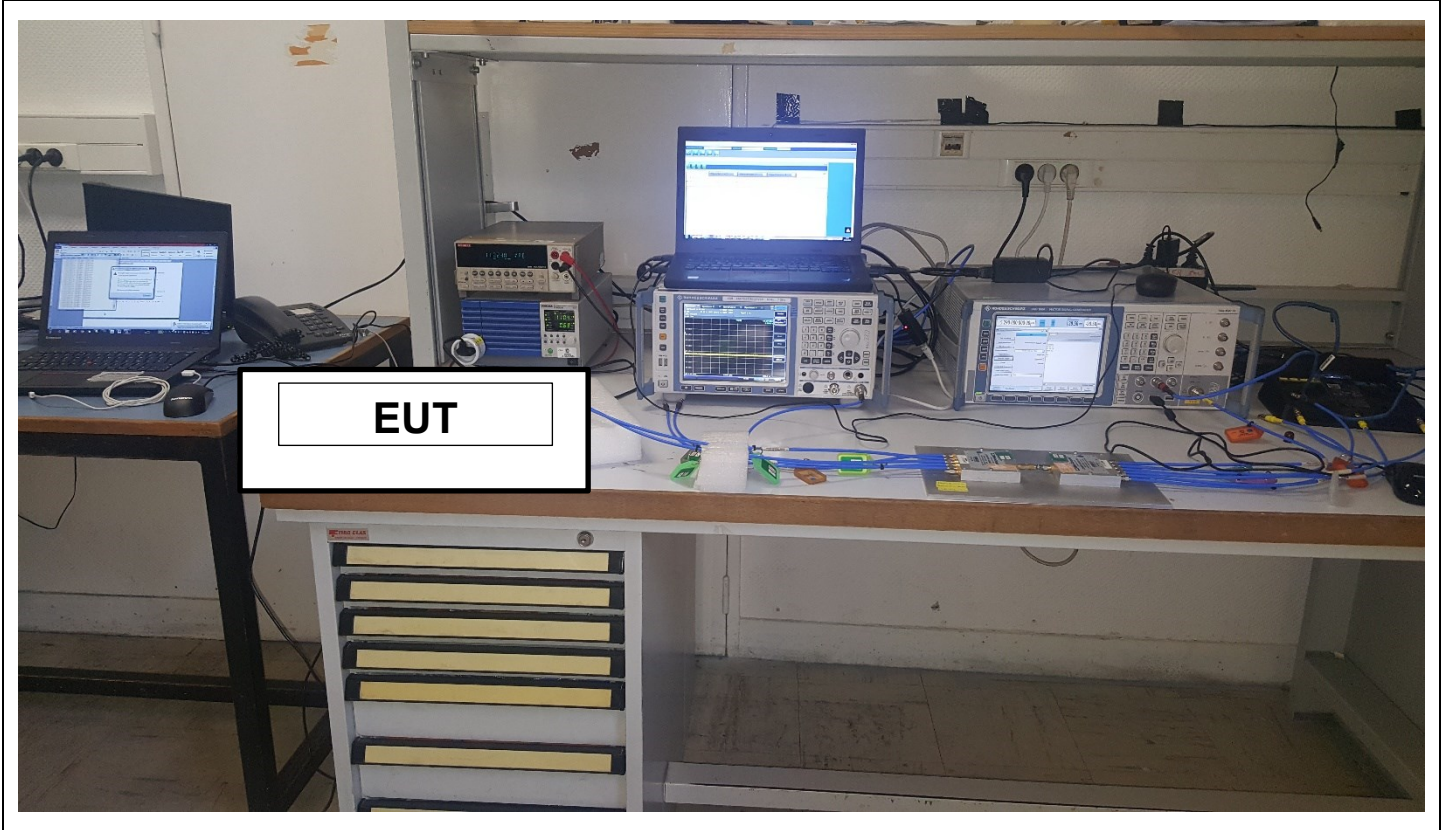
- The Equipment Under Test is:

- On a table
- In an anechoic chamber

- Measurement is performed with a spectrum analyzer:

- On the EUT conducted access
- On the EUT with a test fixture





Photograph for DFS Non-Occupancy Period

### 5.3. LIMIT

Non-Occupancy Period shall exceed 1800 seconds



#### 5.4. TEST EQUIPMENT LIST

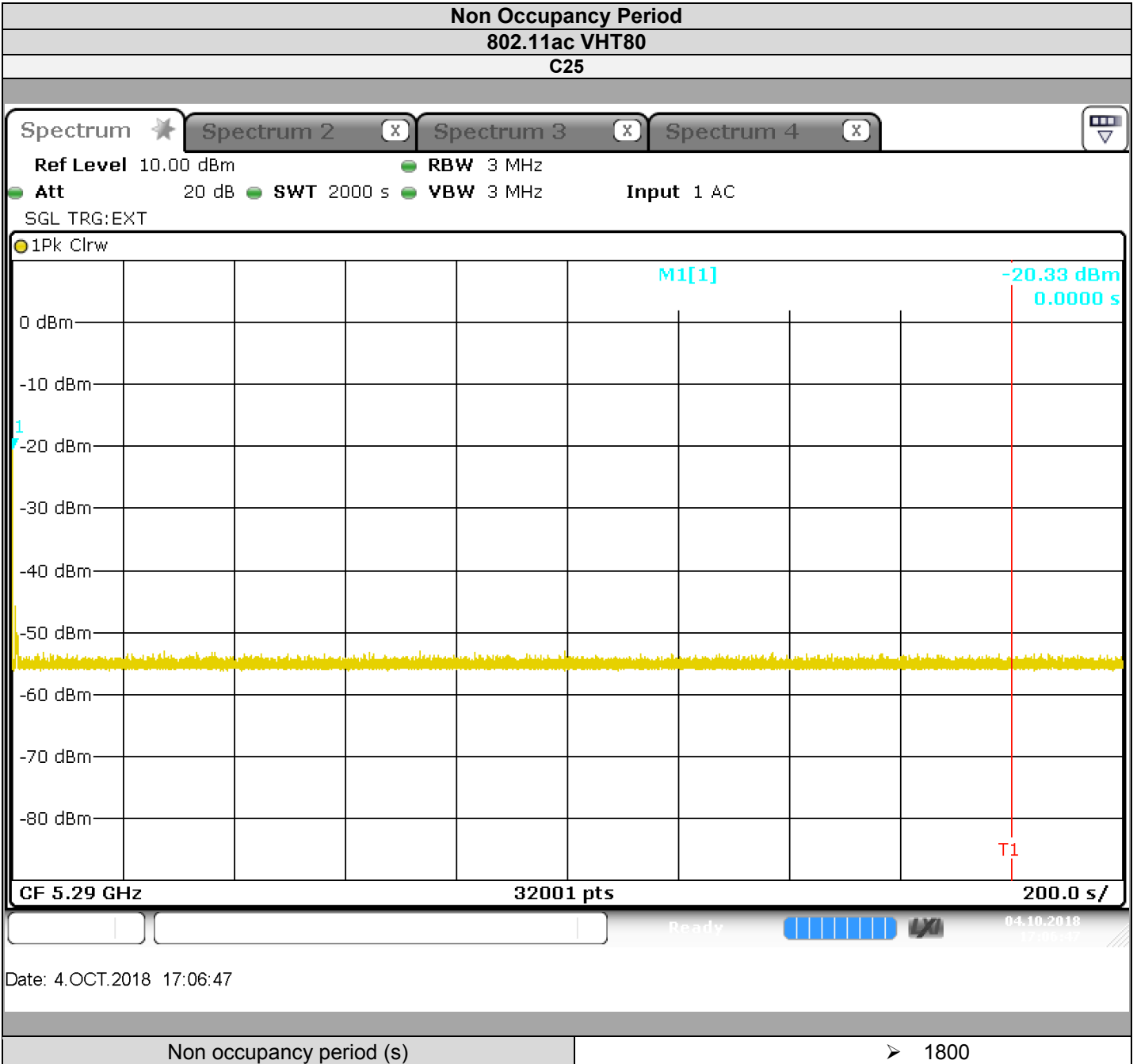
DESCRIPTION	MANUFACTURER	MODEL	N° LCIE	Cal_Date	Cal_Due
Multimeter	KEITHLEY	2000	A1242090	2017/05	2019/05
EMI receiver	ROHDE & SCHWARZ	ESR 7	A2642023	2016/11	2018/11
RF cable	Télédyne	920-0202-024	A5329663	2018/05	2020/05
RF cable	Télédyne	920-0202-024	A5329664	2018/05	2020/05
RF cable	Télédyne	920-0202-024	A5329665	2018/05	2020/05
RF cable	Télédyne	920-0202-024	A5329668	2018/05	2020/05
RF cable	Télédyne	920-0202-024	A5329669	2018/05	2020/05
RF cable	Télédyne	920-0202-024	A5329670	2018/05	2020/05
RF cable	Télédyne	920-0202-024	A5329672	2018/05	2020/05
RF cable	Télédyne	920-0202-024	A5329673	2018/05	2020/05
Vector signal generator	ROHDE & SCHWARZ	SMJ100A	A5444007	Verified with calibrated EMI receiver/ Spectrum analyzer before testing	
Programmable AC/DC power supply	KIKUSUI	PCR500M	A7040079	Verified with calibrated multimeter before testing	
Attenuator 10dB	MINI CIRCUITS	BW-S10W2+	A7122229	2018/05	2020/05
Attenuator 10dB	MINI CIRCUITS	BW-S10W2+	A7122230	2018/05	2020/05
RF cable & Attenuator 20dB	Télédyne & MINI CIRCUITS	920-0202-024 & FW-20+	A5329661	2018/05	2020/05
RF cable & Attenuator 20dB	Télédyne & MINI CIRCUITS	920-0202-024 & FW-20+	A5329676	2018/05	2020/05
RF cable & Attenuator 20dB	Télédyne & MINI CIRCUITS	920-0202-024 & FW-20+	A5329674	2018/05	2020/05
RF cable & Attenuator 20dB	Télédyne & MINI CIRCUITS	920-0202-024 & FW-20+	A5329675	2018/05	2020/05
Attenuator 3dB	MINI CIRCUITS	BW-S3W2+	A7122238	2018/05	2020/05
Attenuator 3dB	MINI CIRCUITS	BW-S3W2+	A7122239	2018/05	2020/05
Attenuator 3dB	MINI CIRCUITS	BW-S3W2+	A7122240	2018/05	2020/05
Attenuator 3dB	MINI CIRCUITS	BW-S3W2+	A7122241	2018/05	2020/05
Attenuator 3dB	MINI CIRCUITS	BW-S3W2+	A7122242	2018/05	2020/05
Attenuator 3dB	MINI CIRCUITS	BW-S3W2+	A7122243	2018/05	2020/05
Power splitter	Mini-Circuits	ZN6PD-63W-S+	A7132040	2018/05	2020/05
Power splitter	Mini-Circuits	ZN6PD-63W-S+	A7132041	2018/05	2020/05
Load 50 ohms	Fairview Microwave	ST0635F	A7152075	2018/05	2020/05
Load 50 ohms	Fairview Microwave	ST0635F	A7152076	2018/05	2020/05
Load 50 ohms	Fairview Microwave	ST0635F	A7152077	2018/05	2020/05
Load 50 ohms	Fairview Microwave	ST0635F	A7152078	2018/05	2020/05

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

#### 5.5. DIVERGENCE, ADDITION OR SUPPRESSION ON THE TEST SPECIFICATION

None       Divergence:

## 5.6. RESULTS



## 5.7. CONCLUSION

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



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**6. ANNEX 3: RADAR TEST SIGNAL TYPE 0**

TYPE 0		
Pulses per Burst	Pulse Width ( $\mu\text{sec}$ )	PRI ( $\mu\text{s}$ )
18	1	1428



## 7. UNCERTAINTIES CHART

47 CFR Part 15.209 & 15.207 Kind of test	Wide uncertainty laboratory (k=2) ±x(dB) / (Hz)/ ms	Uncertainty limit
Measurement of conducted disturbances in voltage on the AC power port (9 kHz – 150 kHz)	2,67	3.8
Measurement of conducted disturbances in voltage on the AC power port (150 kHz – 30 MHz)	2,67	3.4
Measurement of conducted disturbances in voltage on the telecommunication port. (AAN)	3,67	5.0
Measurement of conducted disturbances in current (current clamp)	2,73	2.9
Measurement of disturbance power	2,67	4.5
Measurement of radiated magnetic field from 10kHz to 30MHz in SAC V01	4,48	/
Measurement of radiated magnetic field from 10kHz to 30MHz in SAC C01	4,48	/
Measurement of radiated electric field from 30 to 1000MHz in horizontal position on the OATS (Ecuellas)	4,88	6.3
Measurement of radiated electric field from 1 to 18GHz on the Ecuellas site	5.16	/
Measurement of radiated electric field from 30 to 1000MHz in vertical position on the OATS (Ecuellas)	4,99	6.3
Measurement of radiated electric field from 30 to 1000MHz in horizontal position in SAC C01	5,08	6.3
Measurement of radiated electric field from 30 to 1000MHz in vertical position in SAC C01	5,16	6.3
Measurement of radiated electric field from 30 to 1000MHz in horizontal position in SAC V01	5,08	6.3
Measurement of radiated electric field from 30 to 1000MHz in vertical position in SAC V01	5,15	6.3
Measurement of radiated electric field from 1 to 6 GHz C01	5,1	5.2
Measurement of radiated electric field from 1 to 6 GHz V01	4,85	5.2
Measurement of radiated magnetic field from 10kHz to 30MHz on the OATS (Ecuellas)	4,48	/

The uncertainty values calculated by the laboratory are lower than limit uncertainty values defined by the CISPR. The conformity of the sample is directly established by the applicable limits values. This table includes all uncertainties maximum feasible for testing in the laboratory, whether or not made in this report