Certificate # 2861.01

TEST REPORT

Verified Code: 333915

Report No.:	E20201007701201-4-G1	**Application No.:**	E20201007701201
Client:	Fiberhome Telecommunication Technologies Co., Ltd.		
Address:	No.88 Youkeyuan Road, Hongshan District, Wuhan,Hubei, China		
Sample Description:	Wireless Router		
Model:	SR1041D		
Test Specification:	CFR 47, FCC Parts Subpart E Unlicensed National Information Infrastructure Devices		
Receipt Date:	2020-10-14		
Test Date:	2020-12-09 to 2020-12-10		
Issue Date:	2021-05-18		
Test Result:	Pass		

Prepared By:	**Reviewed By:**	**Approved By:**
Test Engineer	Technical Manager	Manager
Xie Fang	Jiang Tao	GUANGZHOU GRG METROLOGY & TEST CO.,LTD. APPROVED(03)

Other Aspects:

Note: This report instead the report E20201007701201-4, and from the date of issuance of this report, the report which being replaced become invalid.

Abbreviations: *ok / P = passed; fail / F = failed; n.a. / N = not applicable;*

DIRECTIONS OF TEST

1. **This station carries out test task according to the national regulation of verifications which can be traced to National Primary Standards and BIPM.**

2. **The test report merely corresponds to the test sample. It is not permitted to copy extracts of these test result without the written permission of the test laboratory.**

3. **If there is any objection concerning the test, the client should inform the laboratory within 15 days from the date of receiving the test report.**

TABLE OF CONTENTS

1. TEST RESULT SUMMARY

CFR 47, FCC Parts Subpart E (§15.407)			
Item	**Test Mode**	**FCC Standard Section**	**Result**
Channel Closing Transmission Time	IEEE 802.11n HT20 5540MHz IEEE 802.11n HT40 5550MHz IEEE 802.11ac VHT80 5530MHz	15.407(h)	PASS
Channel Move Time	IEEE 802.11n HT20 5540MHz IEEE 802.11n HT40 5550MHz IEEE 802.11ac VHT80 5530MHz	15.407(h)	PASS
Non-Occupancy Period	IEEE 802.11n HT20 5540MHz IEEE 802.11n HT40 5550MHz IEEE 802.11ac VHT80 5530MHz	15.407(h)	PASS
U-NII Detection Bandwidth	IEEE 802.11n HT20 5540MHz IEEE 802.11n HT40 5550MHz IEEE 802.11ac VHT80 5530MHz	15.407(h)	PASS

Note: Recorded the worst case results in this report

2. GENERAL DESCRIPTION OF EUT

2.1. APPLICANT

Name:	Fiberhome Telecommunication Technologies Co., Ltd.
Address:	No.88 Youkeyuan Road, Hongshan District, Wuhan,Hubei, China

2.2. MANUFACTURER

Name:	Fiberhome Telecommunication Technologies Co., Ltd.
Address:	No.88 Youkeyuan Road, Hongshan District, Wuhan,Hubei, China

2.3. FACTORY

Name:	Fiberhome Telecommunication Technologies Co.Ltd.
Address:	No.67,Chuangye Street,East Lake High-tech Development Zone,Wuhan City,Hubei Province,P.R.China

2.4. BASIC DESCRIPTION OF EQUIPMENT UNDER TEST

Equipment:	Wireless Router
Model No.:	SR1041D
Adding Model:	/
Trade Name:	FiberHome
FCC ID:	2AV2N-SR1041D
Power supply:	DC12V power supplied by adapter
Adapter Specification:	Model: RD1201000-C55-35MGD Input: 100-240V~50/60Hz 0.6A MAX Output: 12.0V ⎓ 1.0A
Operation Frequency:	U-NII-2A: 5250 MHz~5350 MHz U-NII-2C: 5470 MHz~5725 MHz
Modulation type:	OFDM
Number Of Channel	U-NII-2A: IEEE 802.11a / n HT20 / ac VHT20: 4 Channels IEEE 802.11n HT40 / ac VHT40: 2 Channels IEEE 802.11ac VHT80: 1 Channel U-NII-2C: IEEE 802.11a / n HT20 / ac VHT20: 11 Channels IEEE 802.11n HT40 / ac VHT40: 5 Channels IEEE 802.11ac VHT80: 2 Channel
Channels Spacing:	IEEE 802.11a: 20MHz IEEE 802.11n HT20/ ac VHT20: 20MHz IEEE 802.11n HT40/ ac VHT40: 40MHz

	IEEE 802.11ac VHT80: 80MHz
Antenna Specification:	External antenna 1 with 5.5dBi gain (Max.) External antenna 2 with 5.85dBi gain (Max.)
Temperature Range:	-5℃ ~ +45℃
Hardware Version:	SR1041D_R1A
Software Version:	RP0100
Sample No:	E20201007701201-0001
Note:	/

2.5. TEST OPERATION MODE

Mode No.	Description of the modes
1	5G wifi work normally

3. LABORATORY AND ACCREDITATIONS

3.1. LABORATORY

The tests & measurements refer to this report were performed by Shenzhen EMC Laboratory of Guangzhou GRG Metrology & Test Co,. Ltd.

Add : No.1301 Guanguang Road Xinlan Community, Guanlan Street, Longhua District Shenzhen, 518110, People's Republic of China

P.C. : 518000

Tel : 0755-61180008

Fax : 0755-61180008

3.2. ACCREDITATIONS

Our laboratories are accredited and approved by the following approval agencies according to GB/T 27025(ISO/IEC 17025:2017)

USA A2LA(Certificate #:2861.01)

The measuring facility of laboratories has been authorized or registered by the following approval agencies.

Canada Industry Canada
USA FCC

Copies of granted accreditation certificates are available for downloading from our web site, http://www.grgtest.com

3.3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

Measurement		Frequency	Uncertainty
Radiated Emission	Horizontal	30MHz～1000MHz	4.30dB
		1GHz～18GHz	5.60dB
		18GHz～26GHz	3.65dB
		26GHz～40GHz	4.00dB
	Vertical	30MHz～1000MHz	4.30dB
		1GHz～18GHz	5.60dB
		18GHz～26GHz	3.65dB
		26GHz～40GHz	4.00dB
Conduction Emission		9 kHz ~ 150 kHz	2.80dB
		150 kHz ~ 10 MHz	2.80dB
		10 MHz ~ 30 MHz	2.20dB

This uncertainty represents an expanded uncertainty factor of k=2.

4. LIST OF USED TEST EQUIPMENT AT GRGT

Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
Spectrum Analyzer	Agilent	N9020A	MY50510140	2021/12/15
Vector signal generator	Agilent	N5182A	MY60142870	2020/10/08

Note: The calibration interval of the above test instruments is 12 months.

5. EIRP POWER

Band	Test Mode	Maximum Conducted Power (dBm)		Antenna Gain (dBi)		Total EIRP Power (mW)
		Ant 1	Ant 2	Ant 1	Ant2	
UNII-2A (5250 MHz~5350 MHz)	IEEE 802.11 a	18.85	/	5.32	5.46	261.22
	IEEE 802.11n HT20	12.57	12.01			117.36
	IEEE 802.11ac VHT20	11.73	11.29			98.01
	IEEE 802.11n HT40	13.97	13.89			171.02
	IEEE 802.11ac VHT40	13.87	13.69			165.21
	IEEE 802.11ac VHT80	13.68	13.65			160.9
UNII-2C (5470 MHz~5725 MHz)	IEEE 802.11 a	18.84	/	4.56	5.01	218.78
	IEEE 802.11n HT20	12.73	12.83			114.39
	IEEE 802.11ac VHT20	12.53	11.86			99.81
	IEEE 802.11n HT40	13.97	13.90			149.09
	IEEE 802.11ac VHT40	13.84	13.81			145.39
	IEEE 802.11ac VHT80	13.93	13.95			149.34

6. DYNAMIC FREQUENCY SELECTION REQUIREMENTS

6.1. DFS OVERVIEW

Table 1: Applicability of DFS Requirements Prior to Use of a Channel

Requirement	Operational Mode		
	Master	Client Without Radar Detection	Client With Radar Detection
Non-Occupancy Period	Yes	Not required	Yes
DFS Detection Threshold	Yes	Not required	Yes
Channel Availability Check Time	Yes	Not required	Not required
U-NII Detection Bandwidth	Yes	Not required	Yes

Table 2: Applicability of DFS requirements during normal operation

Requirement	Operational Mode	
	Master Device or Client with Radar Detection	Client Without Radar Detection
DFS Detection Threshold	Yes	Not required
Channel Closing Transmission Time	Yes	Yes
Channel Move Time	Yes	Yes
U-NII Detection Bandwidth	Yes	Not required

Additional requirements for devices with multiple bandwidth modes	Master Device or Client with Radar Detection	Client Without Radar Detection
U-NII Detection Bandwidth and Statistical Performance Check	All BW modes must be tested	Not required
Channel Move Time and Channel Closing Transmission Time	Test using widest BW mode available	Test using the widest BW mode available for the link
All other tests	Any single BW mode	Not required

Note: Frequencies selected for statistical performance check (Section 7.8.4) should include several frequencies within the radar detection bandwidth and frequencies near the edge of the radar detection bandwidth. For 802.11 devices it is suggested to select frequencies in each of the bonded 20 MHz channels and the channel center frequency.

6.2. DFS DETECTION THRESHOLDS

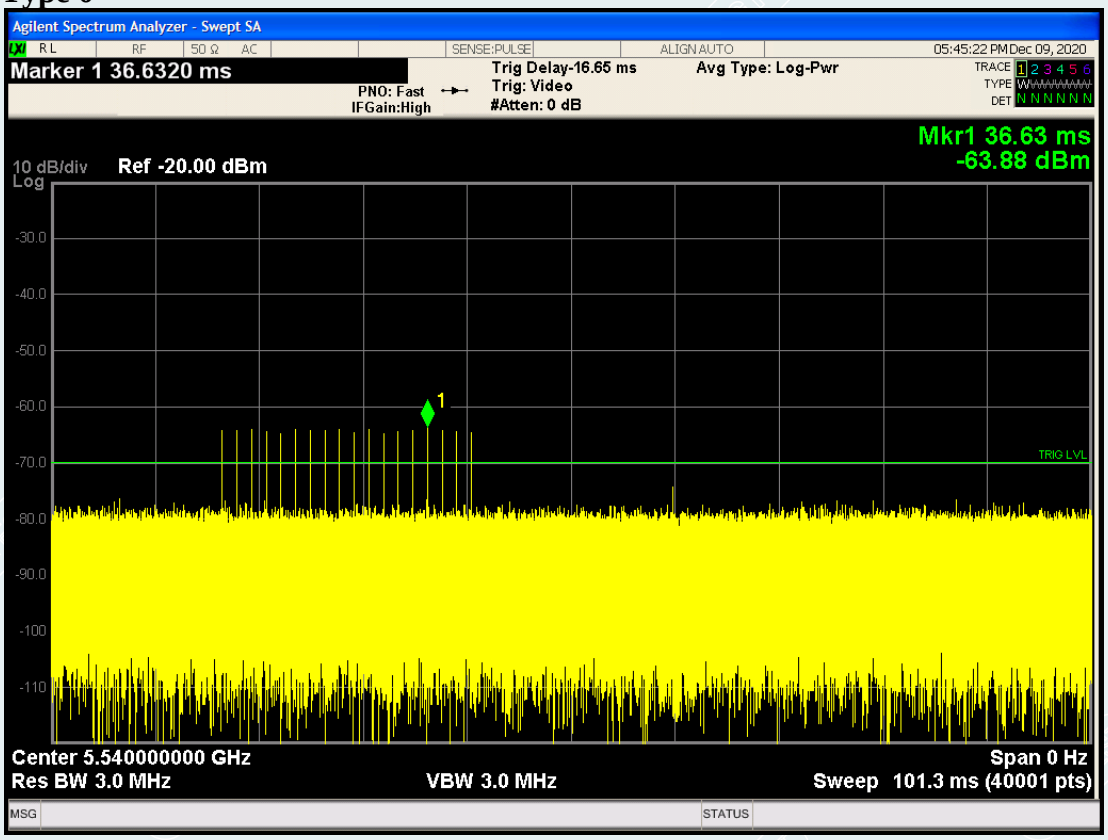
Table 3: DFS Detection Thresholds for Master Devices and Client Devices with Radar Detection

Maximum Transmit Power	Value (See Notes 1, 2, and 3)
EIRP ≥ 200 milliwatt	-64 dBm
EIRP < 200 milliwatt and power spectral density < 10 dBm/MHz	-62 dBm
EIRP < 200 milliwatt that do not meet the power spectral density requirement	-64 dBm
Note 1: This is the level at the input of the receiver assuming a 0 dBi receive antenna. **Note 2:** Throughout these test procedures an additional 1 dB has been added to the amplitude of the test transmission waveforms to account for variations in measurement equipment. This will ensure that the test signal is at or above the detection threshold level to trigger a DFS response. **Note 3:** EIRP is based on the highest antenna gain. For MIMO devices refer to KDB Publication 662911 D01.	

TEST PLOTS

IEEE 802.11n HT20 5540MHz

Type 0



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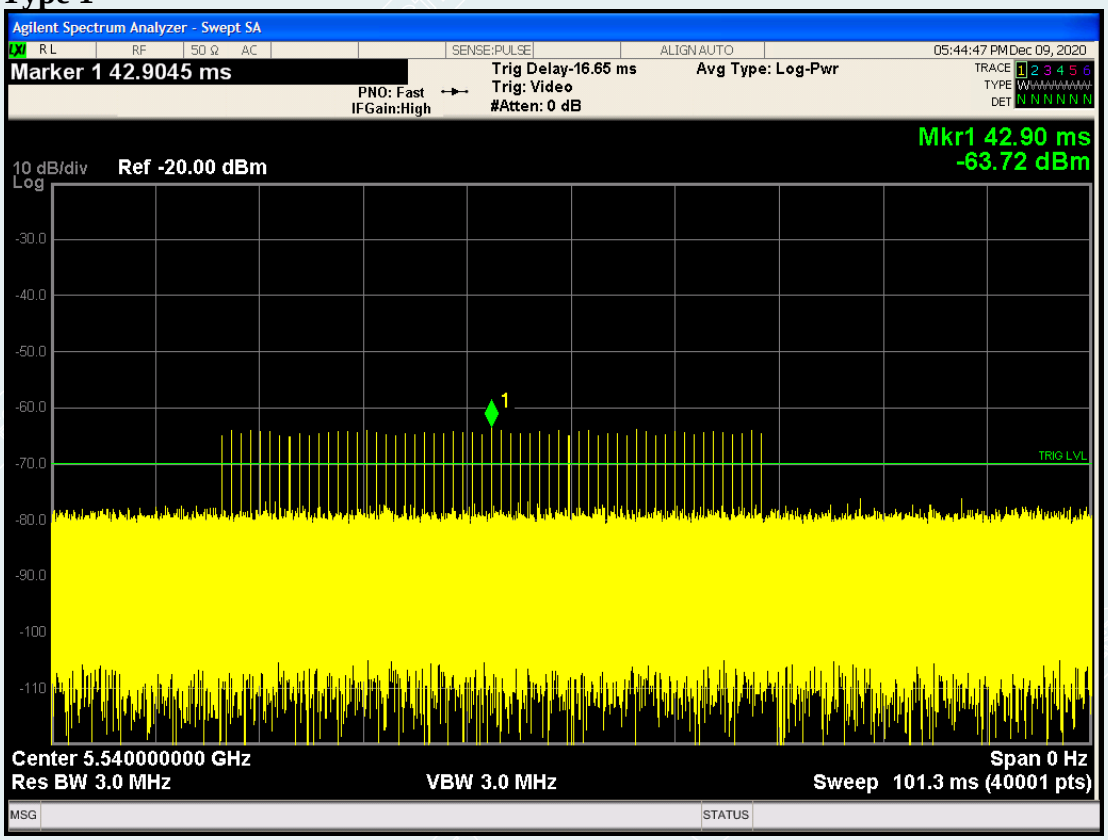
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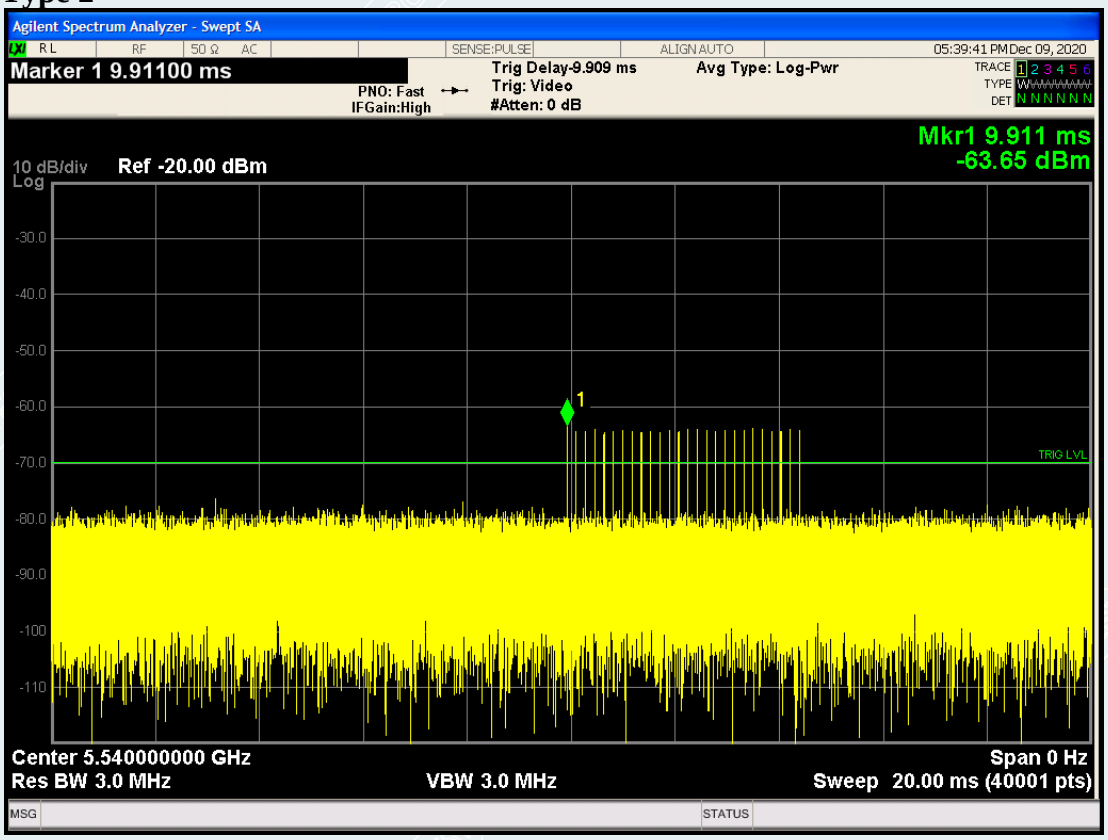
PNO: Fast
IFGain:High
Trig Delay-16.65 ms
Trig: Video
#Atten: 0 dB
Avg Type: Log-Pwr
TRACE 1 2 3 4 5 6
TYPE W
DET N N N N N
Mkr1 42.90 ms
-63.72 dBm
10 dB/div
Log
Ref -20.00 dBm
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
-90.0
-100
-110
1
TRIG LVL
Center 5.540000000 GHz
Res BW 3.0 MHz
VBW 3.0 MHz
Span 0 Hz
Sweep 101.3 ms (40001 pts)
MSG
STATUS

Type 2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10 dB/div
Log
Ref -20.00 dBm
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-40.0
-50.0
-60.0
-70.0
-80.0
-90.0
-100
-110
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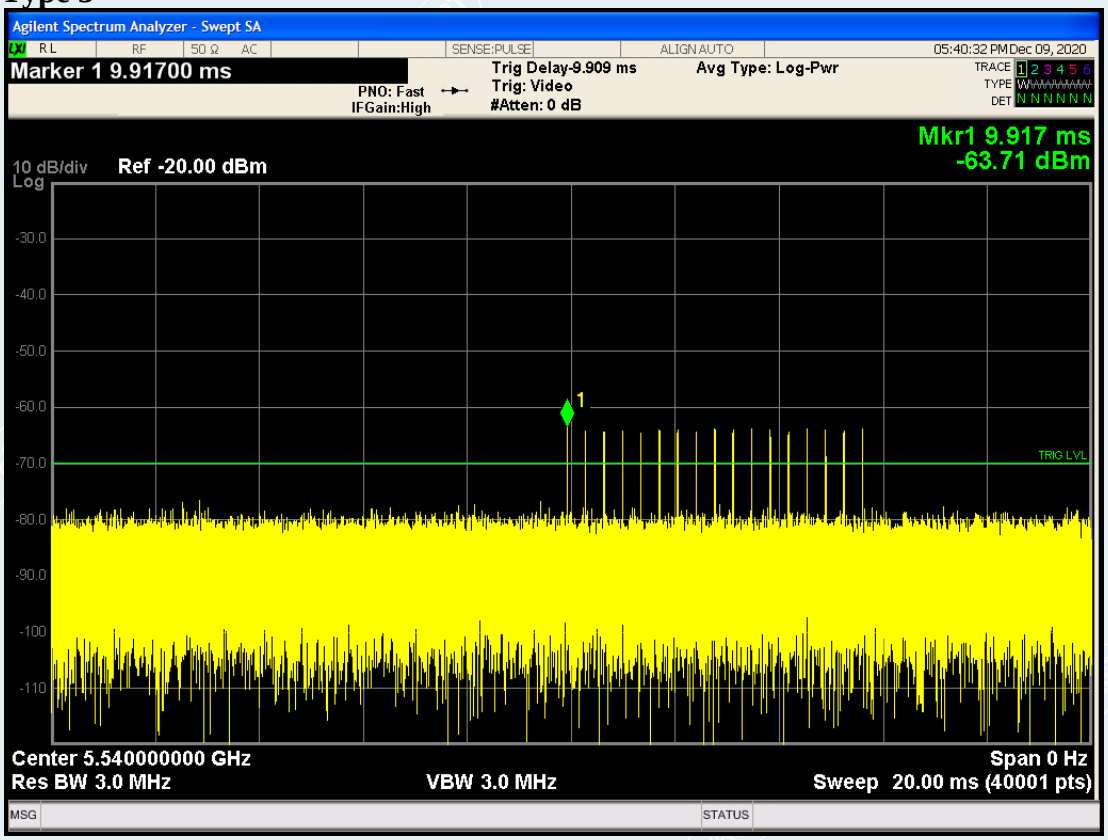
TRIG LVL
Center 5.540000000 GHz
Res BW 3.0 MHz
VBW 3.0 MHz
Span 0 Hz
Sweep 20.00 ms (40001 pts)
MSG
STATUS

Type 3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Trig: Video
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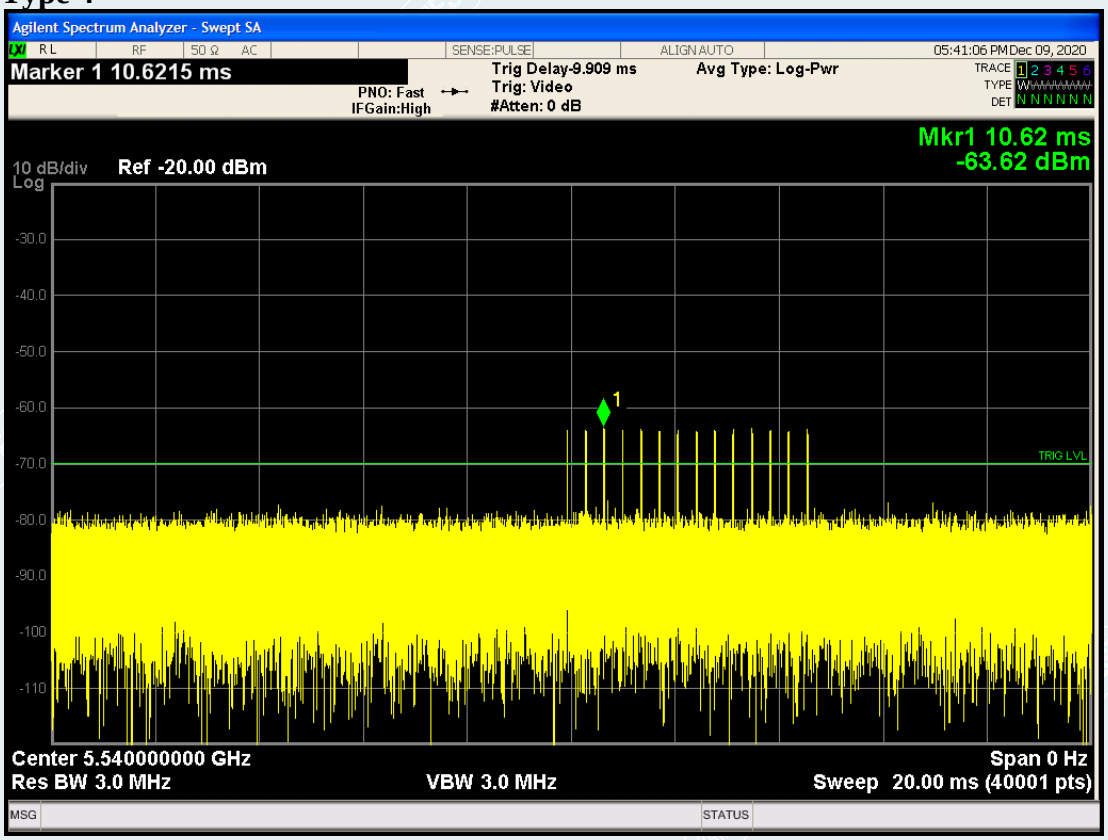
Avg Type: Log-Pwr
TRACE 1 2 3 4 5 6
TYPE W
DET N N N N N
Mkr1 9.917 ms
-63.71 dBm
10 dB/div
Log
Ref -20.00 dBm
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
-90.0
-100
-110
1
TRIG LVL
Center 5.540000000 GHz
Res BW 3.0 MHz
VBW 3.0 MHz
Span 0 Hz
Sweep 20.00 ms (40001 pts)
MSG
STATUS

Type 4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-100
-110
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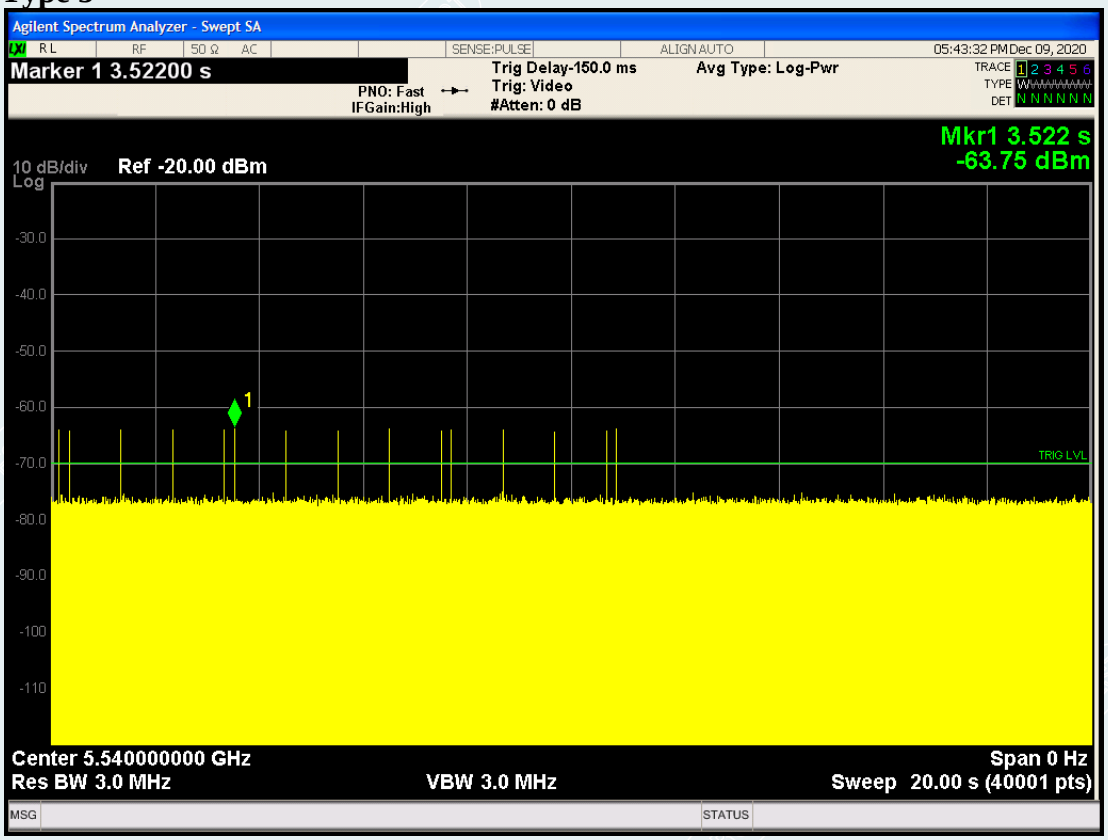
TRIG LVL
Center 5.540000000 GHz
Res BW 3.0 MHz
VBW 3.0 MHz
Span 0 Hz
Sweep 20.00 ms (40001 pts)
MSG
STATUS

Type 5



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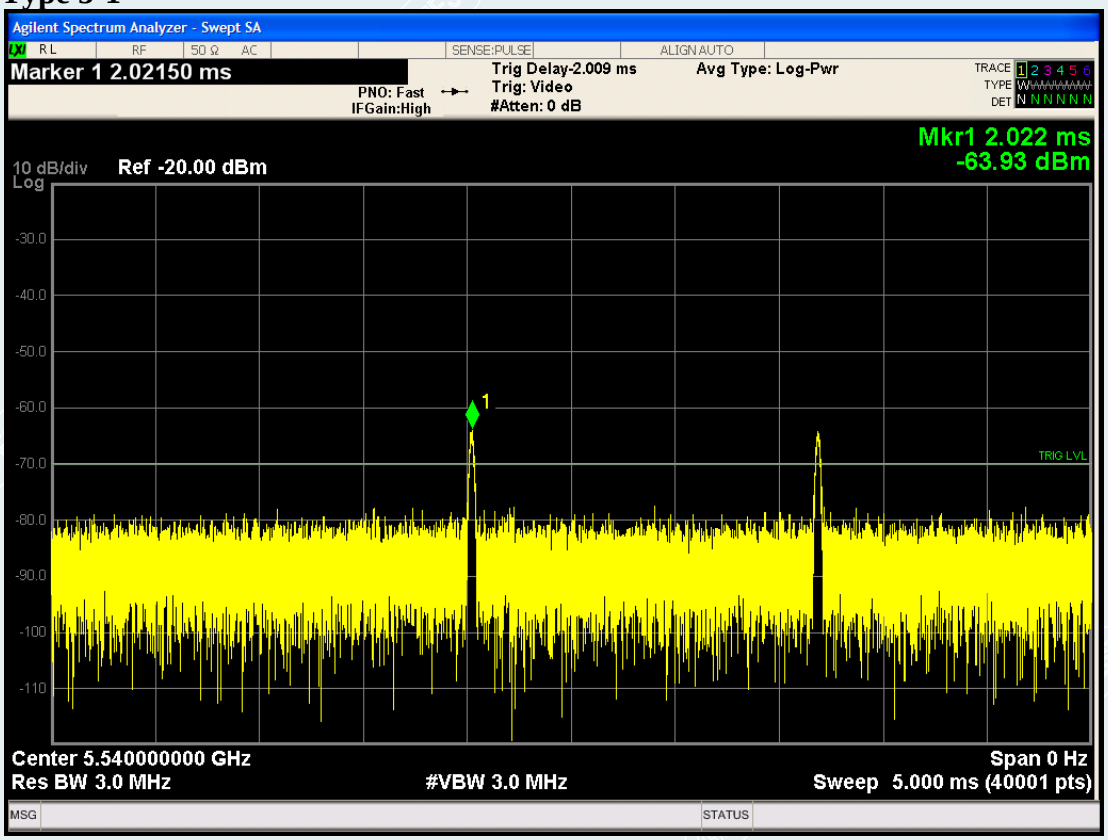

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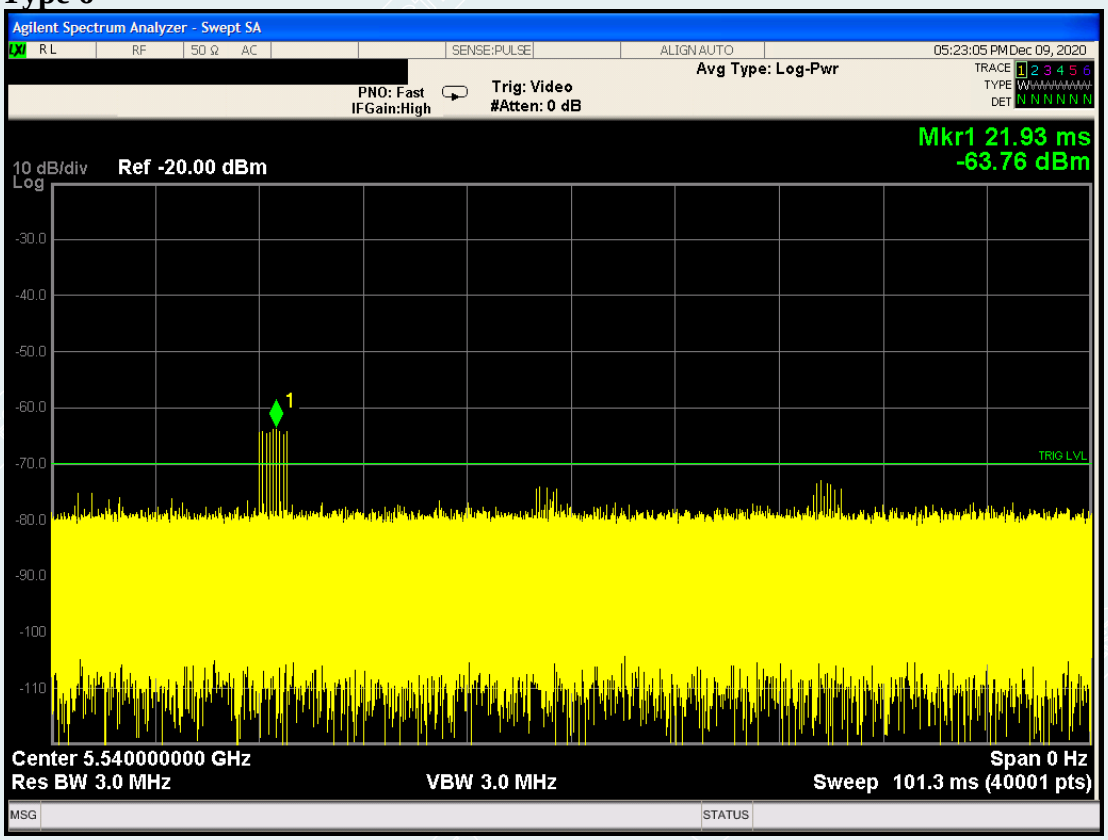

IEEE 802.11n HT40 5550MHz

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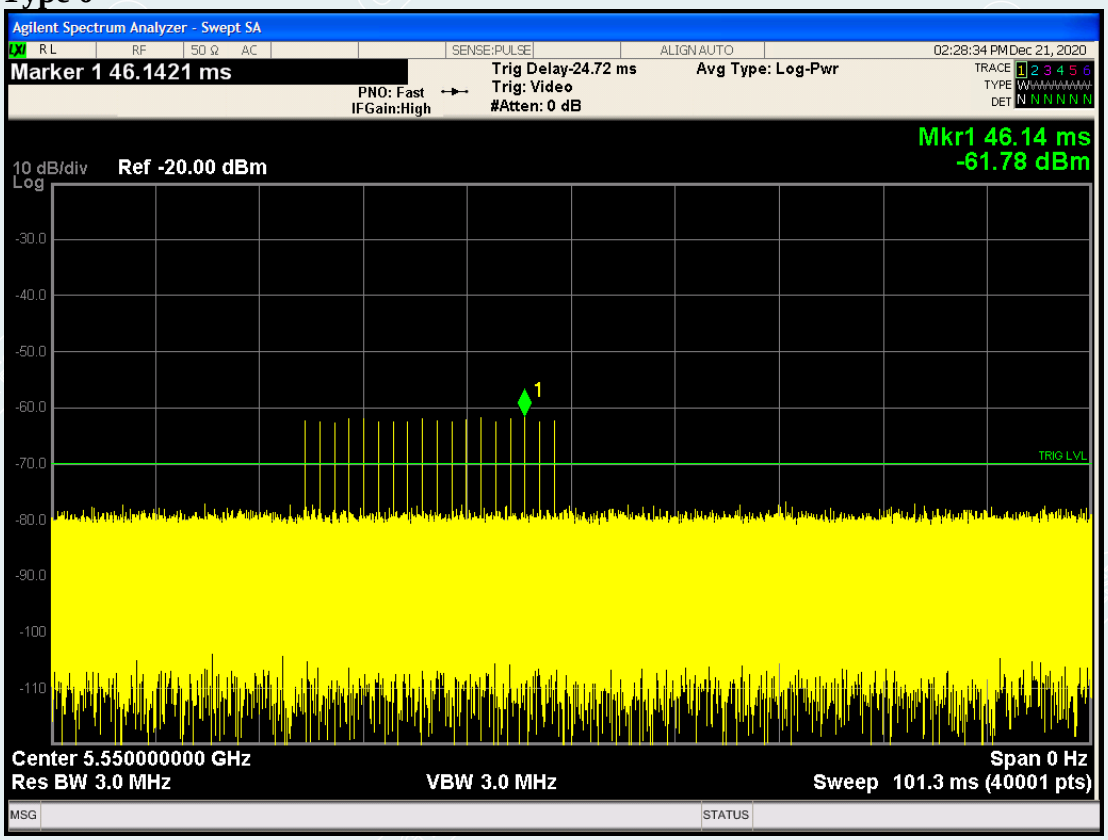

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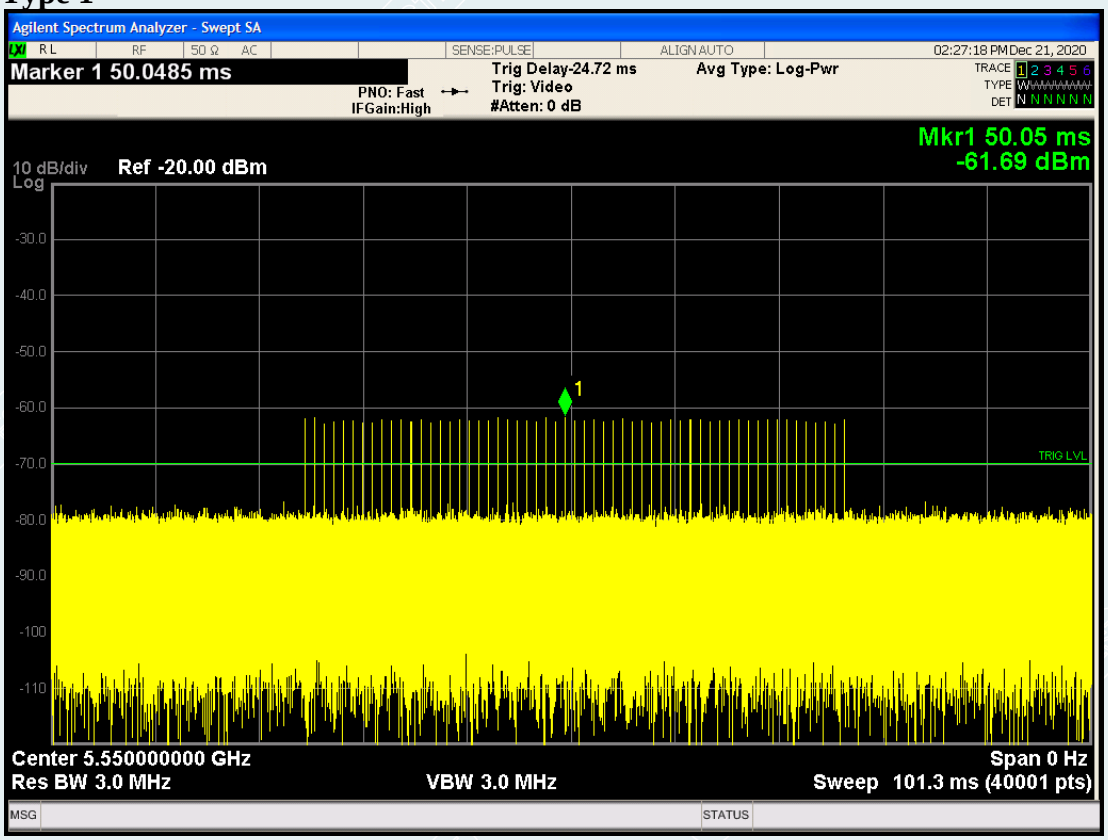
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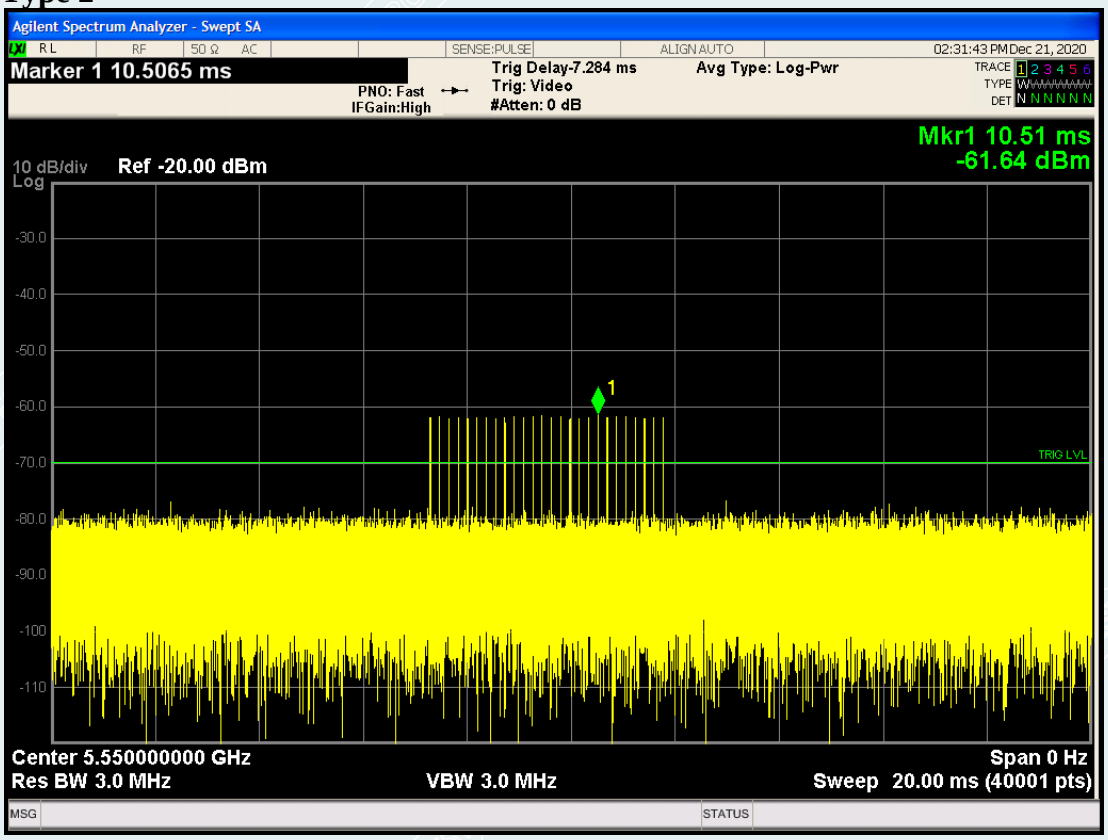
PNO: Fast
IFGain:High
Trig Delay-24.72 ms
Trig: Video
#Atten: 0 dB
Avg Type: Log-Pwr
TRACE 1 2 3 4 5 6
TYPE W
DET N N N N N
Mkr1 50.05 ms
-61.69 dBm
10 dB/div
Log
Ref -20.00 dBm
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
-90.0
-100
-110
1
TRIG LVL
Center 5.550000000 GHz
Res BW 3.0 MHz
VBW 3.0 MHz
Span 0 Hz
Sweep 101.3 ms (40001 pts)
MSG
STATUS

Type 2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PNO: Fast
IFGain:High
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Trig: Video
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10 dB/div
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Ref -20.00 dBm
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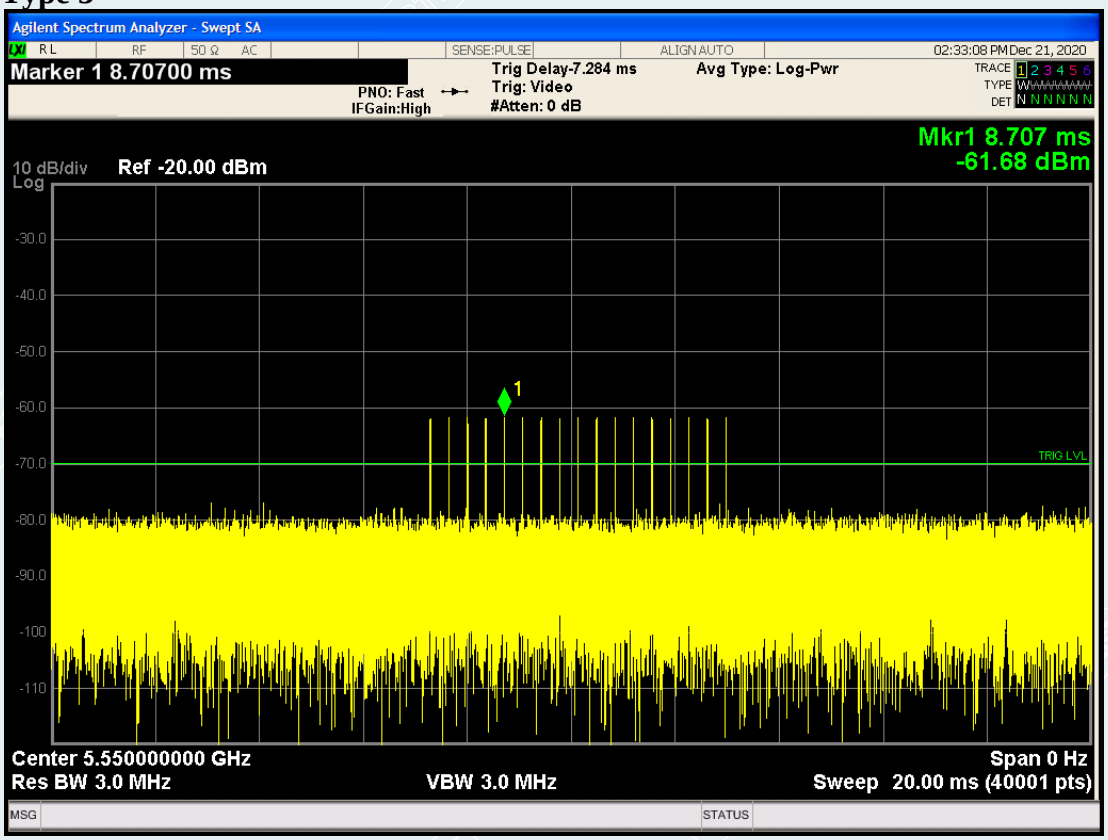
-100
-110
1
TRIG LVL
Center 5.550000000 GHz
Res BW 3.0 MHz
VBW 3.0 MHz
Span 0 Hz
Sweep 20.00 ms (40001 pts)
MSG
STATUS

Type 3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IFGain:High
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Trig: Video
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Avg Type: Log-Pwr
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Mkr1 8.707 ms
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10 dB/div
Log
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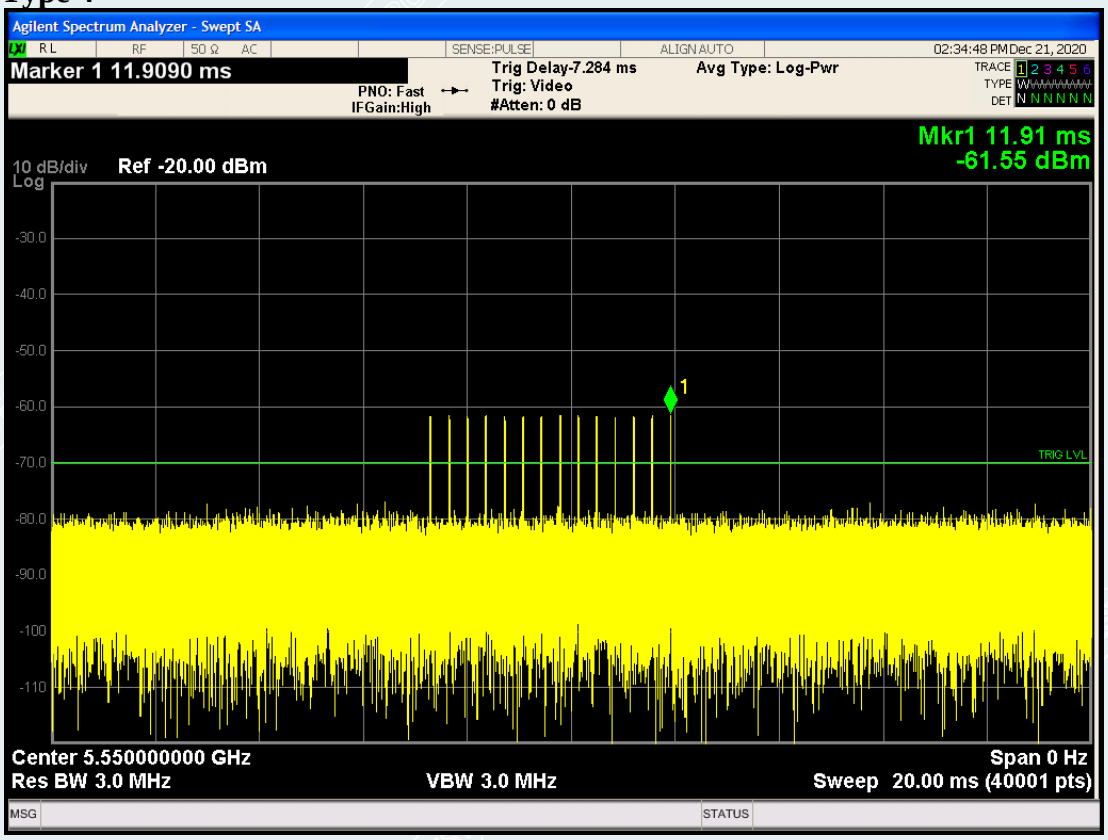
-100
-110
1
TRIG LVL
Center 5.550000000 GHz
Res BW 3.0 MHz
VBW 3.0 MHz
Span 0 Hz
Sweep 20.00 ms (40001 pts)
MSG
STATUS

Type 4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IFGain:High
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Trig: Video
#Atten: 0 dB
Avg Type: Log-Pwr
TRACE 1 2 3 4 5 6
TYPE W
DET N N N N N
Mkr1 11.91 ms
-61.55 dBm
10 dB/div
Log
Ref -20.00 dBm
-30.0
-40.0
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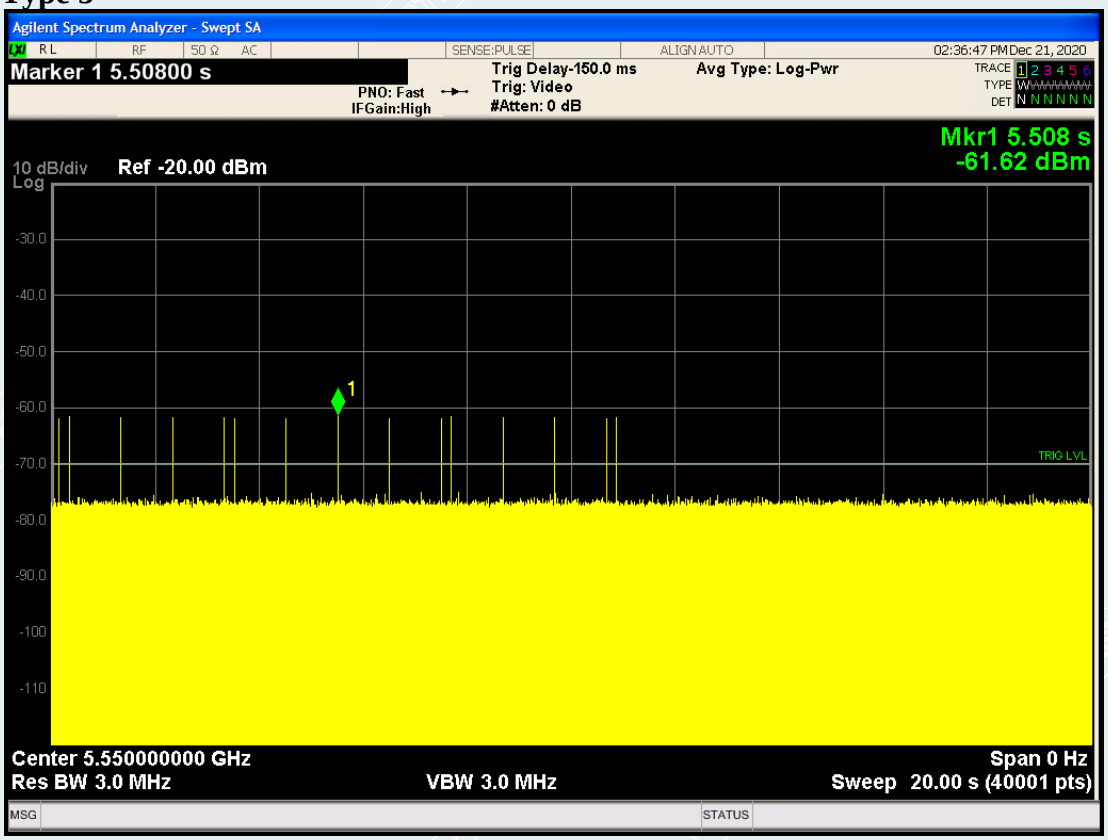
-100
-110
1
TRIG LVL
Center 5.550000000 GHz
Res BW 3.0 MHz
VBW 3.0 MHz
Span 0 Hz
Sweep 20.00 ms (40001 pts)
MSG
STATUS

Type 5



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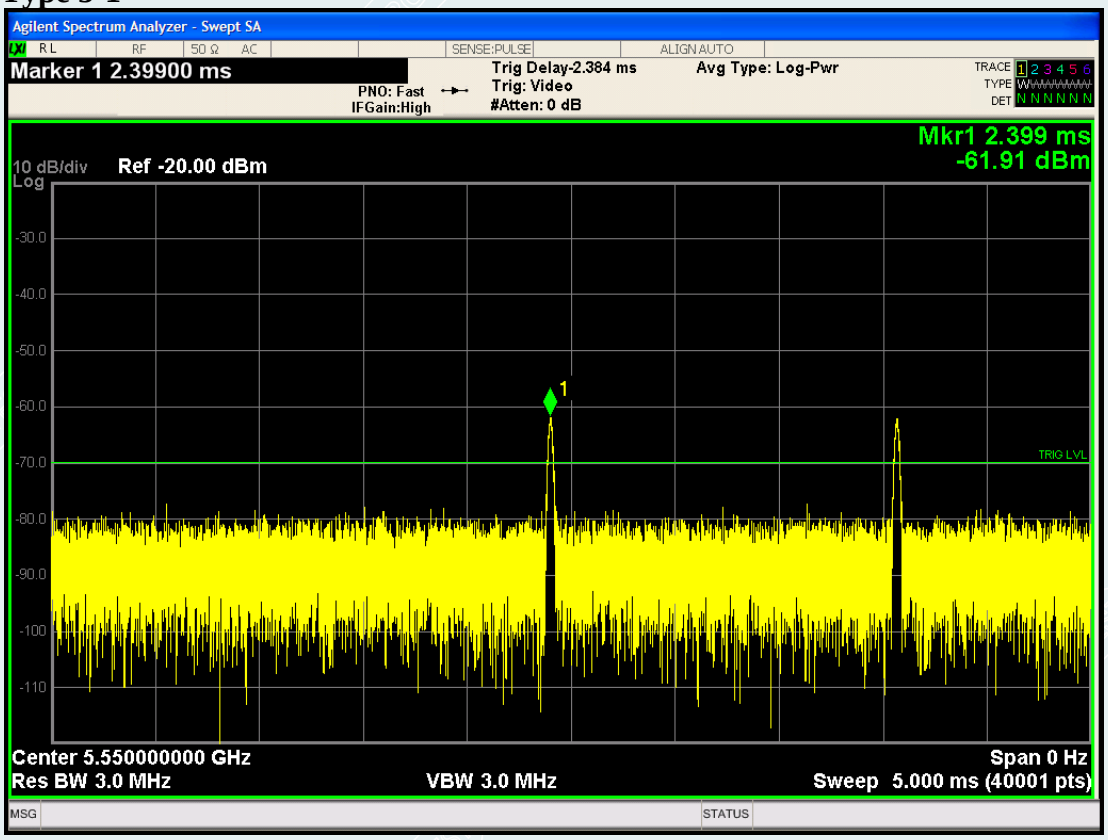

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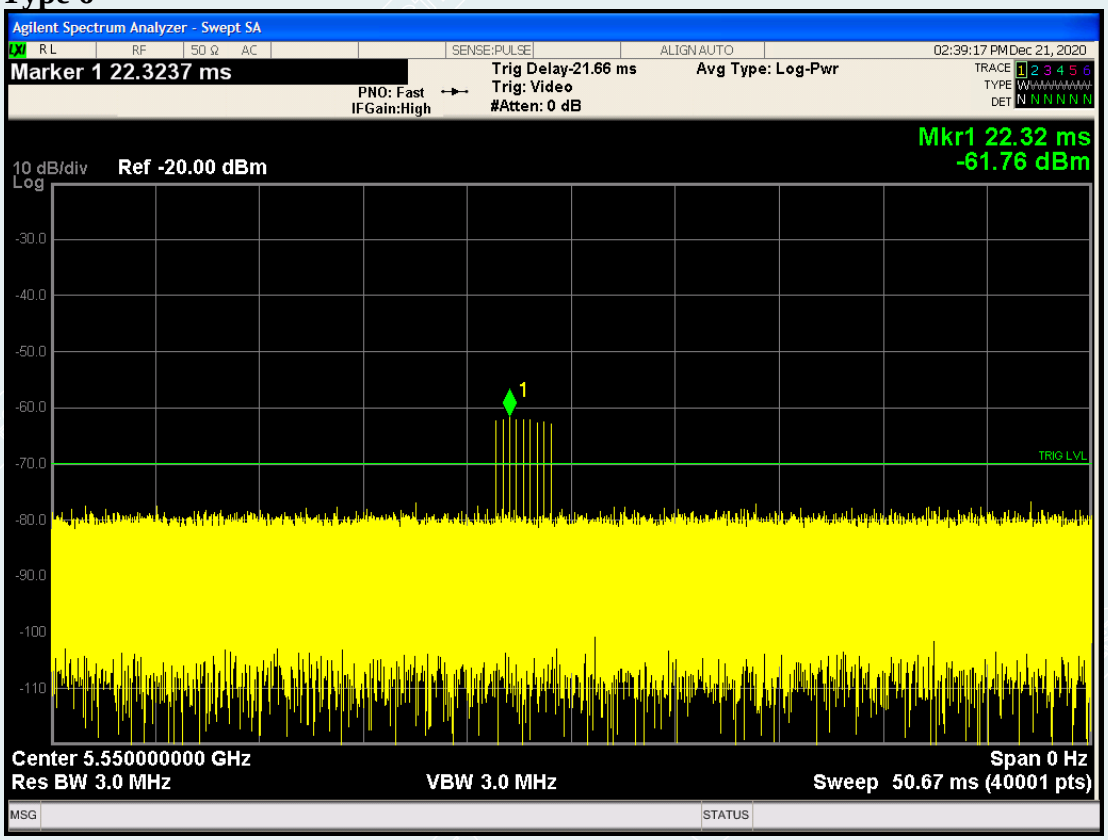

IEEE 802.11n HT80 5530MHz

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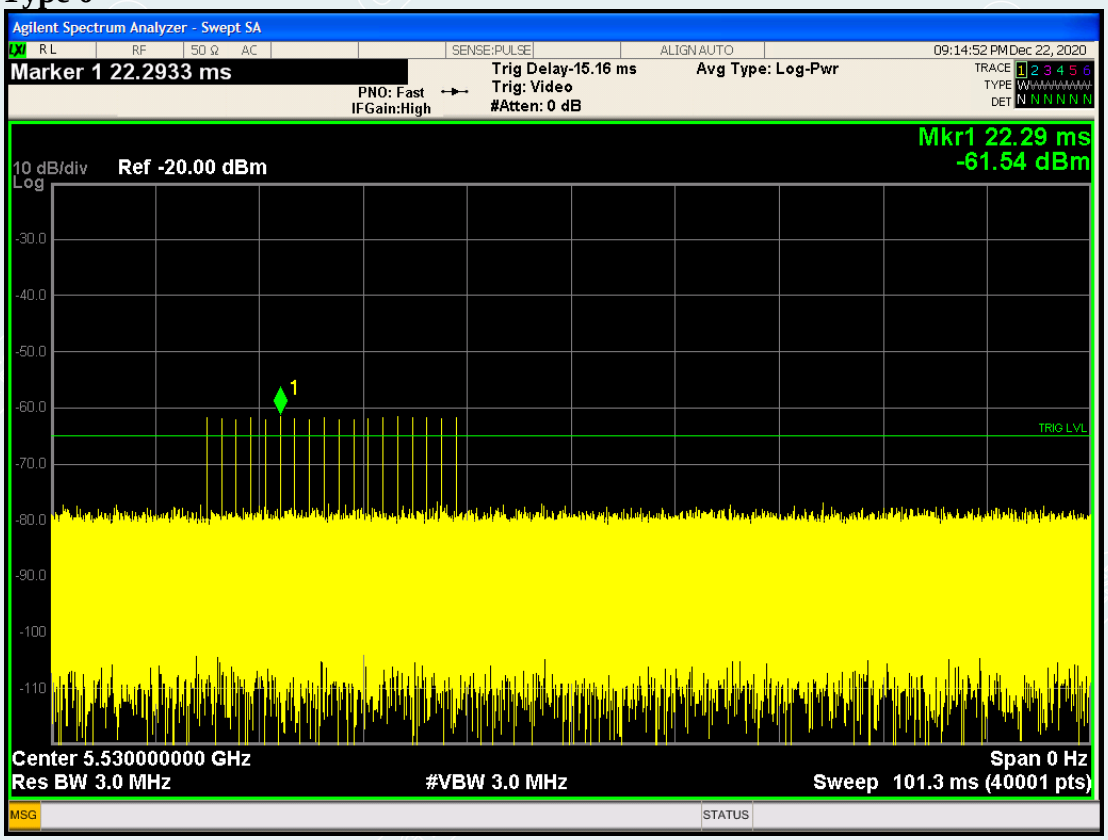

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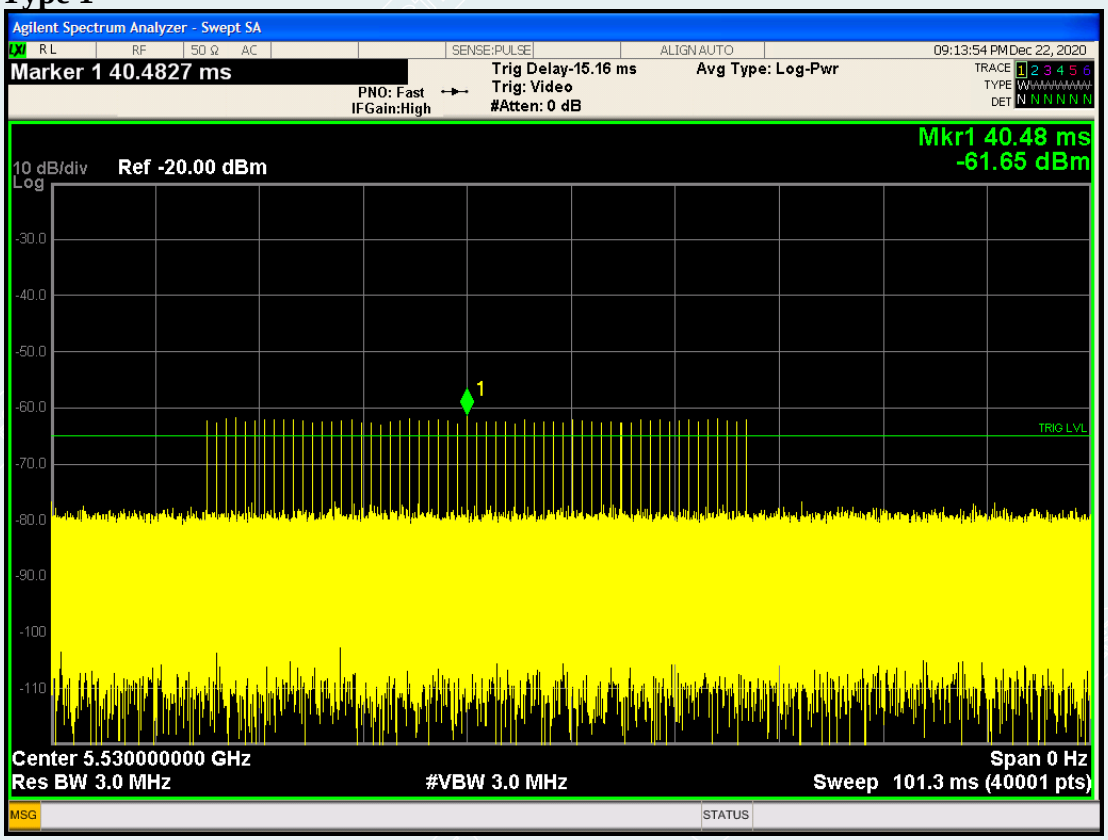
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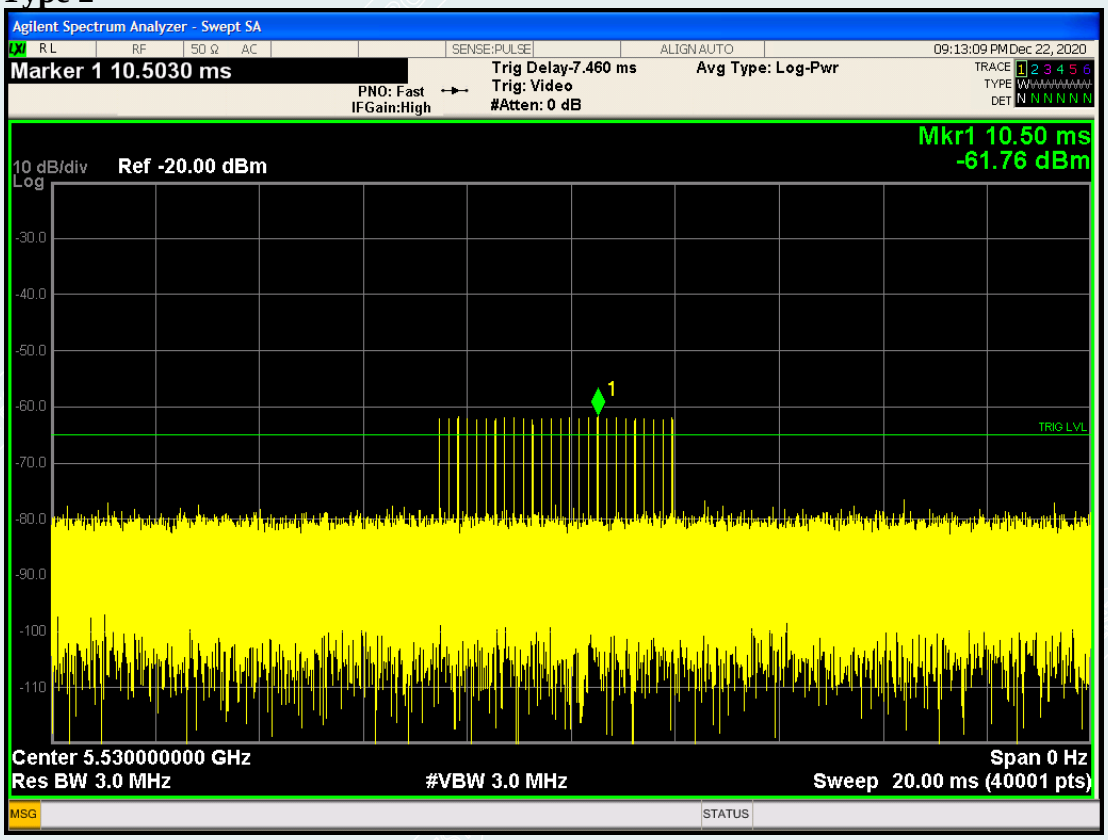
PNO: Fast
IFGain:High
Trig Delay-15.16 ms
Trig: Video
#Atten: 0 dB
Avg Type: Log-Pwr
TRACE 1 2 3 4 5 6
TYPE W
DET N N N N N
Mkr1 40.48 ms
-61.65 dBm
10 dB/div
Log
Ref -20.00 dBm
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
-90.0
-100
-110
1
TRIG LVL
Center 5.530000000 GHz
Res BW 3.0 MHz
#VBW 3.0 MHz
Span 0 Hz
Sweep 101.3 ms (40001 pts)
MSG
STATUS

Type 2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RF
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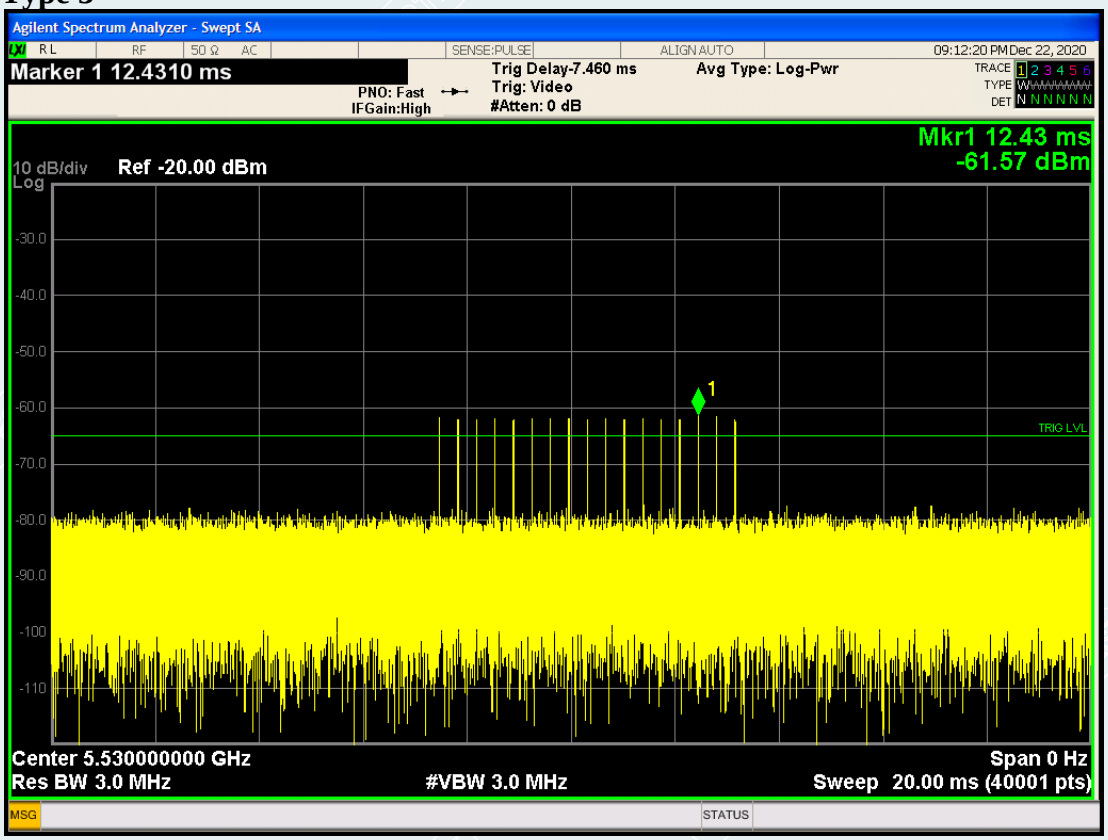
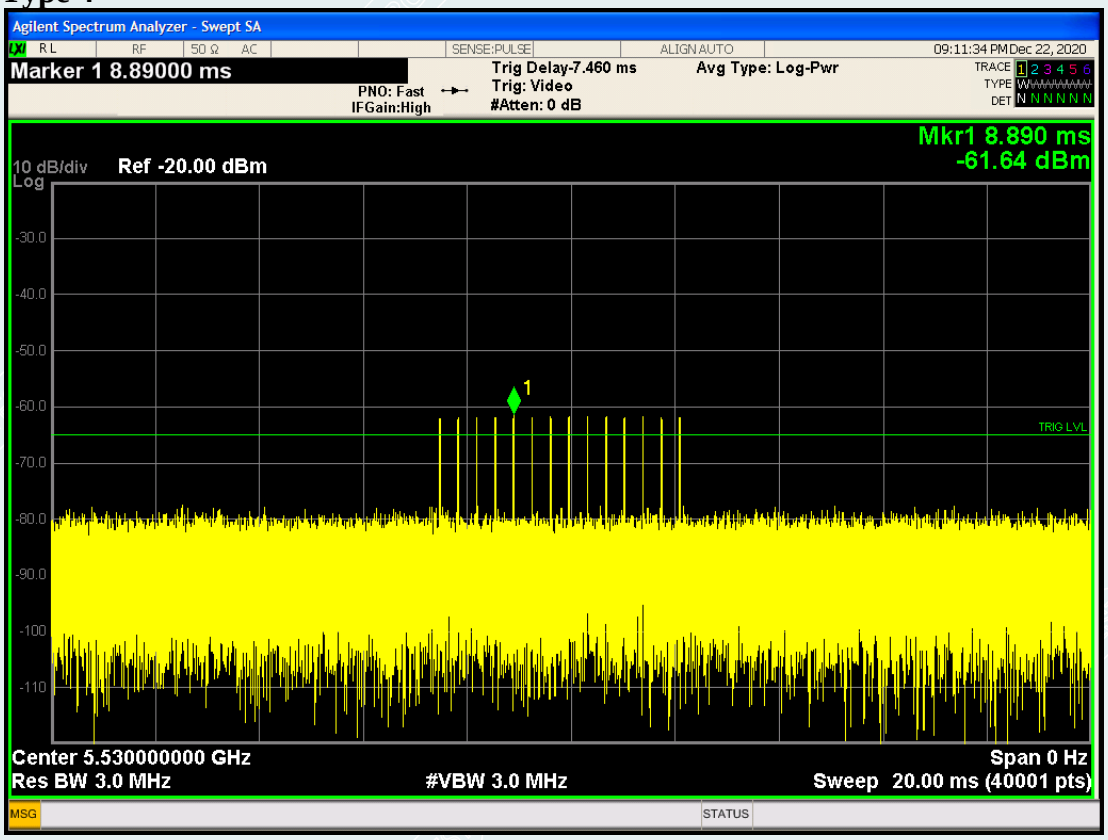
SENSE:PULSE
ALIGN AUTO
09:13:09 PM Dec 22, 2020
Marker 1 10.5030 ms
PNO: Fast
IFGain:High
Trig Delay-7.460 ms
Trig: Video
#Atten: 0 dB
Avg Type: Log-Pwr
TRACE 1 2 3 4 5 6
TYPE W
DET N N N N N
Mkr1 10.50 ms
-61.76 dBm
10 dB/div
Log
Ref -20.00 dBm
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
-90.0
-100
-110
1
TRIG LVL
Center 5.530000000 GHz
Res BW 3.0 MHz
#VBW 3.0 MHz
Span 0 Hz
Sweep 20.00 ms (40001 pts)
MSG
STATUS

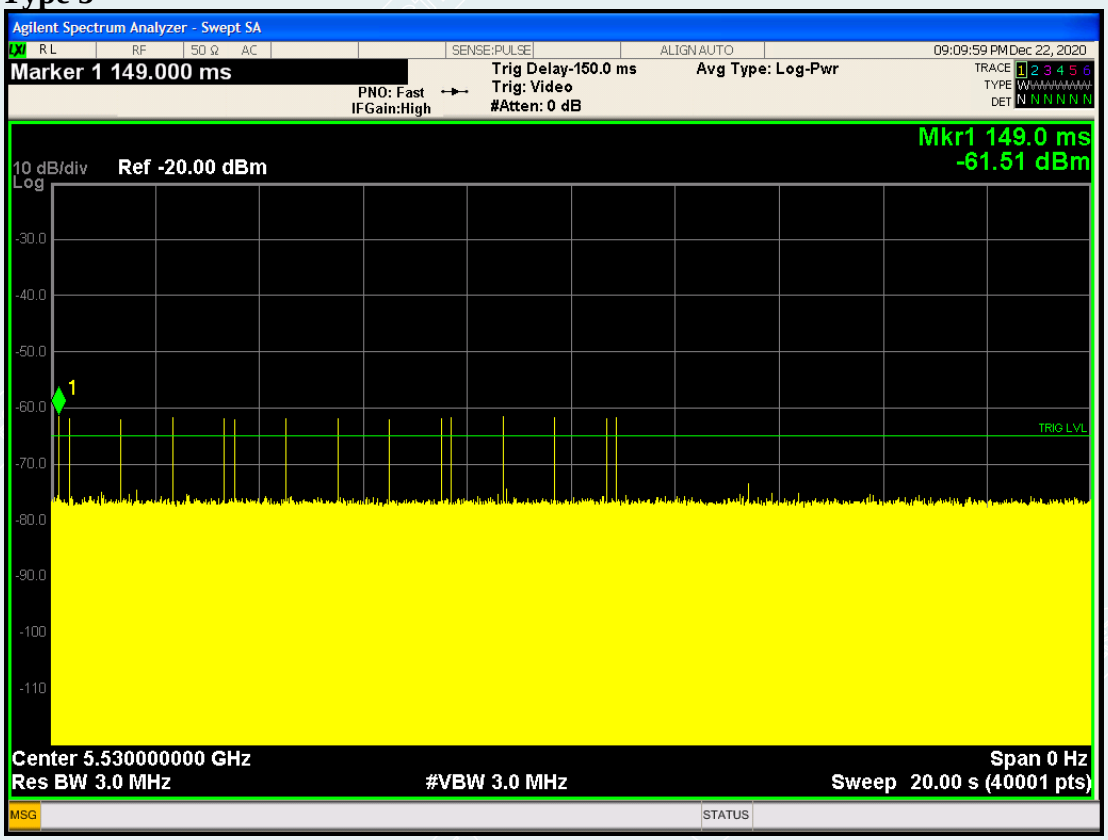
Type 3


Agilent Spectrum Analyzer - Swept SA
RL
RF
50 Ω AC
SENSE:PULSE
ALIGN AUTO
09:12:20 PM Dec 22, 2020
Marker 1 12.4310 ms
PNO: Fast
IFGain:High
Trig Delay-7.460 ms
Trig: Video
#Atten: 0 dB
Avg Type: Log-Pwr
TRACE 1 2 3 4 5 6
TYPE W
DET N N N N N
Mkr1 12.43 ms
-61.57 dBm
10 dB/div
Log
Ref -20.00 dBm
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
-90.0
-100
-110
1
TRIG LVL
Center 5.530000000 GHz
Res BW 3.0 MHz
#VBW 3.0 MHz
Span 0 Hz
Sweep 20.00 ms (40001 pts)
MSG
STATUS

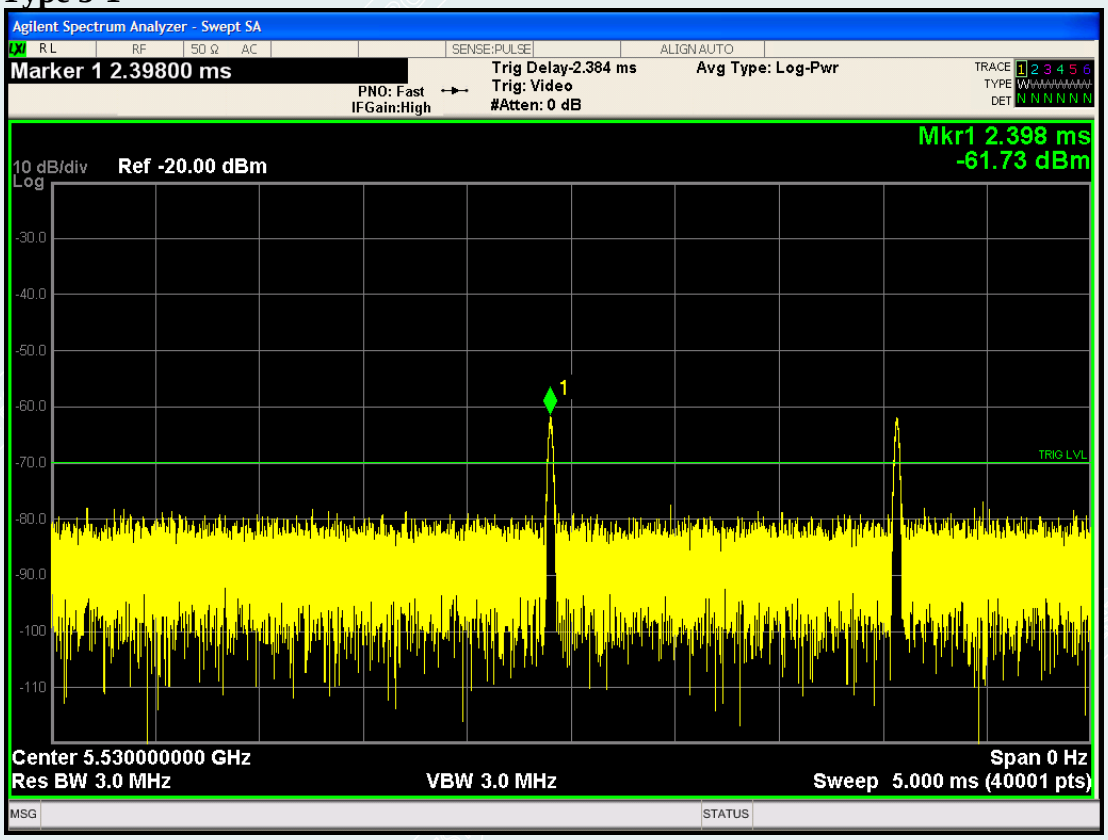
Type 4


Agilent Spectrum Analyzer - Swept SA
RL
RF
50 Ω AC
SENSE:PULSE
ALIGN AUTO
09:11:34 PM Dec 22, 2020
Marker 1 8.89000 ms
PNO: Fast
IFGain:High
Trig Delay-7.460 ms
Trig: Video
#Atten: 0 dB
Avg Type: Log-Pwr
TRACE 1 2 3 4 5 6
TYPE W
DET N N N N N
Mkr1 8.890 ms
-61.64 dBm
10 dB/div
Log
Ref -20.00 dBm
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
-90.0
-100
-110
1
TRIG LVL
Center 5.530000000 GHz
Res BW 3.0 MHz
#VBW 3.0 MHz
Span 0 Hz
Sweep 20.00 ms (40001 pts)
MSG
STATUS

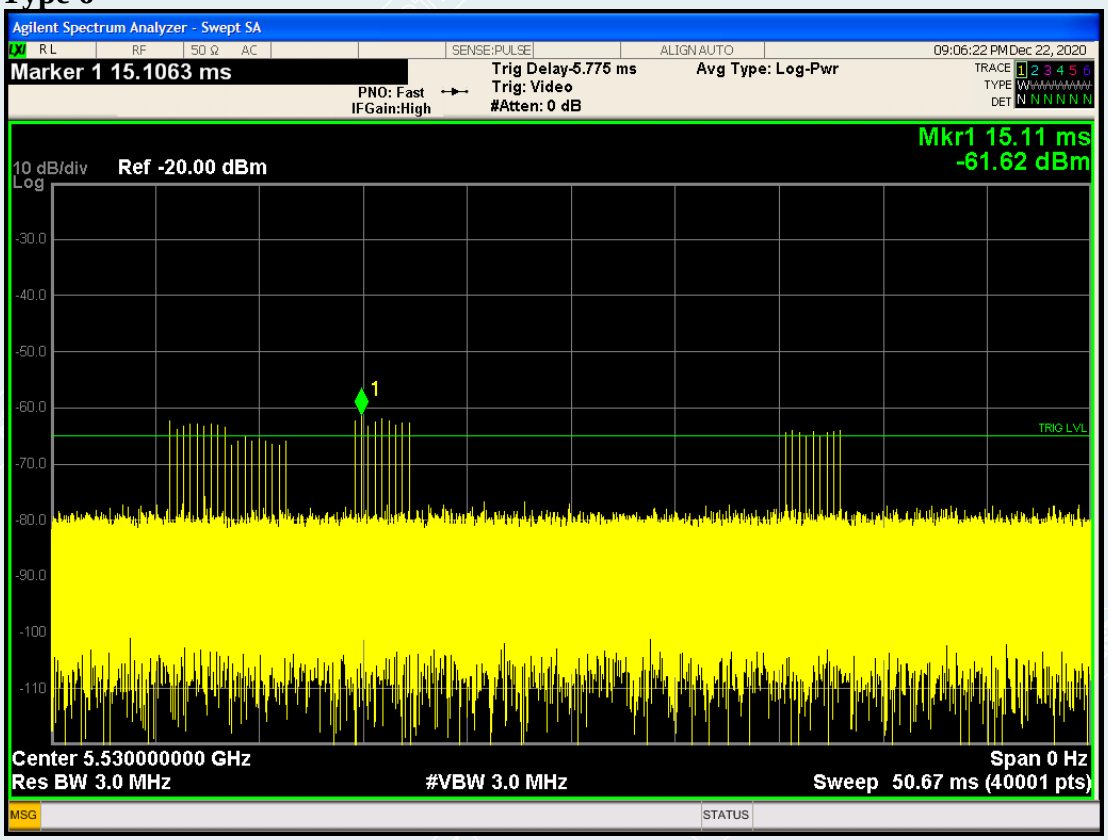
Type 5



Type 5-1



Type 6


Agilent Spectrum Analyzer - Swept SA
RL
RF
50 Ω AC
SENSE:PULSE
ALIGN AUTO
09:06:22 PM Dec 22, 2020
Marker 1 15.1063 ms
PNO: Fast
IFGain:High
Trig Delay-5.775 ms
Trig: Video
#Atten: 0 dB
Avg Type: Log-Pwr
TRACE 1 2 3 4 5 6
TYPE W
DET N N N N N
Mkr1 15.11 ms
-61.62 dBm
10 dB/div
Log
Ref -20.00 dBm
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
-90.0
-100
-110
1
TRIG LVL
Center 5.530000000 GHz
Res BW 3.0 MHz
#VBW 3.0 MHz
Span 0 Hz
Sweep 50.67 ms (40001 pts)
MSG
STATUS

Type 0

Trial Id	Radar Type	Pulse Width (us)	PRI (us)	Number of Pulses	Waveform Length (us)
0	Type 0	1.0	1428.0	18	25704.0
1	Type 0	1.0	1428.0	18	25704.0
2	Type 0	1.0	1428.0	18	25704.0
3	Type 0	1.0	1428.0	18	25704.0
4	Type 0	1.0	1428.0	18	25704.0
5	Type 0	1.0	1428.0	18	25704.0
6	Type 0	1.0	1428.0	18	25704.0
7	Type 0	1.0	1428.0	18	25704.0
8	Type 0	1.0	1428.0	18	25704.0
9	Type 0	1.0	1428.0	18	25704.0
10	Type 0	1.0	1428.0	18	25704.0
11	Type 0	1.0	1428.0	18	25704.0
12	Type 0	1.0	1428.0	18	25704.0
13	Type 0	1.0	1428.0	18	25704.0
14	Type 0	1.0	1428.0	18	25704.0
15	Type 0	1.0	1428.0	18	25704.0
16	Type 0	1.0	1428.0	18	25704.0
17	Type 0	1.0	1428.0	18	25704.0
18	Type 0	1.0	1428.0	18	25704.0
19	Type 0	1.0	1428.0	18	25704.0
20	Type 0	1.0	1428.0	18	25704.0
21	Type 0	1.0	1428.0	18	25704.0
22	Type 0	1.0	1428.0	18	25704.0
23	Type 0	1.0	1428.0	18	25704.0
24	Type 0	1.0	1428.0	18	25704.0
25	Type 0	1.0	1428.0	18	25704.0
26	Type 0	1.0	1428.0	18	25704.0
27	Type 0	1.0	1428.0	18	25704.0
28	Type 0	1.0	1428.0	18	25704.0
29	Type 0	1.0	1428.0	18	25704.0

Type 1

Trial Id	Radar Type	Pulse Width (us)	PRI (us)	Number of Pulses	Waveform Length (us)
0	Type 1	1.0	938.0	57	53466.0
1	Type 1	1.0	698.0	76	53048.0
2	Type 1	1.0	618.0	86	53148.0
3	Type 1	1.0	538.0	99	53262.0
4	Type 1	1.0	878.0	61	53558.0
5	Type 1	1.0	3066.0	18	55188.0
6	Type 1	1.0	638.0	83	52954.0
7	Type 1	1.0	918.0	58	53244.0
8	Type 1	1.0	838.0	63	52794.0
9	Type 1	1.0	858.0	62	53196.0
10	Type 1	1.0	798.0	67	53466.0
11	Type 1	1.0	718.0	74	53132.0
12	Type 1	1.0	578.0	92	53176.0
13	Type 1	1.0	598.0	89	53222.0
14	Type 1	1.0	558.0	95	53010.0
15	Type 1	1.0	2536.0	21	53256.0
16	Type 1	1.0	966.0	55	53130.0
17	Type 1	1.0	827.0	64	52928.0
18	Type 1	1.0	2501.0	22	55022.0
19	Type 1	1.0	2595.0	21	54495.0
20	Type 1	1.0	1114.0	48	53472.0
21	Type 1	1.0	1302.0	41	53382.0
22	Type 1	1.0	3045.0	18	54810.0
23	Type 1	1.0	1624.0	33	53592.0
24	Type 1	1.0	2878.0	19	54682.0
25	Type 1	1.0	1027.0	52	53404.0
26	Type 1	1.0	2485.0	22	54670.0
27	Type 1	1.0	1600.0	33	52800.0
28	Type 1	1.0	1172.0	46	53912.0
29	Type 1	1.0	1177.0	45	52965.0

Type 2

Trial Id	Radar Type	Pulse Width (us)	PRI (us)	Number of Pulses	Waveform Length (us)
0	Type 2	3.2	179.0	26	4654.0
1	Type 2	1.1	207.0	23	4761.0
2	Type 2	2.1	230.0	24	5520.0
3	Type 2	4.8	200.0	29	5800.0
4	Type 2	3.9	214.0	28	5992.0
5	Type 2	2.9	222.0	26	5772.0
6	Type 2	3.2	204.0	26	5304.0
7	Type 2	2.5	192.0	25	4800.0
8	Type 2	3.1	164.0	26	4264.0
9	Type 2	1.2	156.0	23	3588.0
10	Type 2	3.9	210.0	27	5670.0
11	Type 2	4.6	201.0	29	5829.0
12	Type 2	3.2	162.0	26	4212.0
13	Type 2	2.2	197.0	25	4925.0
14	Type 2	4.5	163.0	29	4727.0
15	Type 2	3.0	203.0	26	5278.0
16	Type 2	5.0	168.0	29	4872.0
17	Type 2	2.4	217.0	25	5425.0
18	Type 2	2.9	191.0	26	4966.0
19	Type 2	2.3	166.0	25	4150.0
20	Type 2	3.7	150.0	27	4050.0
21	Type 2	2.2	176.0	25	4400.0
22	Type 2	4.9	195.0	29	5655.0
23	Type 2	2.9	202.0	26	5252.0
24	Type 2	2.5	178.0	25	4450.0
25	Type 2	1.1	206.0	23	4738.0
26	Type 2	3.8	155.0	27	4185.0
27	Type 2	4.7	157.0	29	4553.0
28	Type 2	2.4	224.0	25	5600.0
29	Type 2	4.2	159.0	28	4452.0

Type 3

Trial Id	Radar Type	Pulse Width (us)	PRI (us)	Number of Pulses	Waveform Length (us)
0	Type 3	8.2	355.0	17	6035.0
1	Type 3	6.1	487.0	16	7792.0
2	Type 3	7.1	344.0	16	5504.0
3	Type 3	9.8	288.0	18	5184.0
4	Type 3	8.9	230.0	18	4140.0
5	Type 3	7.9	432.0	17	7344.0
6	Type 3	8.2	207.0	17	3519.0
7	Type 3	7.5	443.0	17	7531.0
8	Type 3	8.1	439.0	17	7463.0
9	Type 3	6.2	223.0	16	3568.0
10	Type 3	8.9	208.0	18	3744.0
11	Type 3	9.6	463.0	18	8334.0
12	Type 3	8.2	441.0	17	7497.0
13	Type 3	7.2	323.0	16	5168.0
14	Type 3	9.5	297.0	18	5346.0
15	Type 3	8.0	412.0	17	7004.0
16	Type 3	10.0	324.0	18	5832.0
17	Type 3	7.4	271.0	17	4607.0
18	Type 3	7.9	349.0	17	5933.0
19	Type 3	7.3	409.0	16	6544.0
20	Type 3	8.7	373.0	18	6714.0
21	Type 3	7.2	254.0	16	4064.0
22	Type 3	9.9	274.0	18	4932.0
23	Type 3	7.9	278.0	17	4726.0
24	Type 3	7.5	317.0	17	5389.0
25	Type 3	6.1	260.0	16	4160.0
26	Type 3	8.8	211.0	18	3798.0
27	Type 3	9.7	272.0	18	4896.0
28	Type 3	7.4	264.0	17	4488.0
29	Type 3	9.2	284.0	18	5112.0

Type 4

Trial Id	Radar Type	Pulse Width (us)	PRI (us)	Number of Pulses	Waveform Length (us)
0	Type 4	16.0	355.0	14	4970.0
1	Type 4	11.3	487.0	12	5844.0
2	Type 4	13.5	344.0	13	4472.0
3	Type 4	19.4	288.0	16	4608.0
4	Type 4	17.5	230.0	15	3450.0
5	Type 4	15.3	432.0	14	6048.0
6	Type 4	15.9	207.0	14	2898.0
7	Type 4	14.3	443.0	13	5759.0
8	Type 4	15.8	439.0	14	6146.0
9	Type 4	11.5	223.0	12	2676.0
10	Type 4	17.4	208.0	15	3120.0
11	Type 4	19.0	463.0	16	7408.0
12	Type 4	16.0	441.0	14	6174.0
13	Type 4	13.8	323.0	13	4199.0
14	Type 4	18.9	297.0	16	4752.0
15	Type 4	15.5	412.0	14	5768.0
16	Type 4	19.9	324.0	16	5184.0
17	Type 4	14.1	271.0	13	3523.0
18	Type 4	15.2	349.0	14	4886.0
19	Type 4	13.8	409.0	13	5317.0
20	Type 4	17.1	373.0	15	5595.0
21	Type 4	13.8	254.0	13	3302.0
22	Type 4	19.8	274.0	16	4384.0
23	Type 4	15.3	278.0	14	3892.0
24	Type 4	14.5	317.0	13	4121.0
25	Type 4	11.3	260.0	12	3120.0
26	Type 4	17.3	211.0	15	3165.0
27	Type 4	19.2	272.0	16	4352.0
28	Type 4	14.2	264.0	13	3432.0
29	Type 4	18.2	284.0	15	4260.0

Type 5

Trial Id	Radar Type	Number of Bursts	Burst Period (s)	Waveform Length (s)
0	Type 5	15	0.8000000	12.0000000
1	Type 5	8	1.5000000	12.0000000
2	Type 5	11	1.0909091	12.0000000
3	Type 5	20	0.6000000	12.0000000
4	Type 5	17	0.7058824	12.0000000
5	Type 5	14	0.8571429	12.0000000
6	Type 5	15	0.8000000	12.0000000
7	Type 5	12	1.0000000	12.0000000
8	Type 5	14	0.8571429	12.0000000
9	Type 5	8	1.5000000	12.0000000
10	Type 5	17	0.7058824	12.0000000
11	Type 5	19	0.6315789	12.0000000
12	Type 5	15	0.8000000	12.0000000
13	Type 5	12	1.0000000	12.0000000
14	Type 5	19	0.6315789	12.0000000
15	Type 5	14	0.8571429	12.0000000
16	Type 5	20	0.6000000	12.0000000
17	Type 5	12	1.0000000	12.0000000
18	Type 5	14	0.8571429	12.0000000
19	Type 5	12	1.0000000	12.0000000
20	Type 5	16	0.7500000	12.0000000
21	Type 5	12	1.0000000	12.0000000
22	Type 5	20	0.6000000	12.0000000
23	Type 5	14	0.8571429	12.0000000
24	Type 5	13	0.9230769	12.0000000
25	Type 5	8	1.5000000	12.0000000
26	Type 5	17	0.7058824	12.0000000
27	Type 5	19	0.6315789	12.0000000
28	Type 5	12	1.0000000	12.0000000
29	Type 5	18	0.6666667	12.0000000

Type 6

Trial Id	Radar Type	Pulse Width (us)	PRI (us)	Pulses per Hop	Hopping Rate (kHz)	Hopping Sequence Length (ms)	Visible Frequency Number
0	Type 6	1.0	333.3	9	0.3333	300.0000000	32
1	Type 6	1.0	333.3	9	0.3333	300.0000000	27
2	Type 6	1.0	333.3	9	0.3333	300.0000000	25
3	Type 6	1.0	333.3	9	0.3333	300.0000000	33
4	Type 6	1.0	333.3	9	0.3333	300.0000000	37
5	Type 6	1.0	333.3	9	0.3333	300.0000000	30
6	Type 6	1.0	333.3	9	0.3333	300.0000000	33
7	Type 6	1.0	333.3	9	0.3333	300.0000000	27
8	Type 6	1.0	333.3	9	0.3333	300.0000000	33
9	Type 6	1.0	333.3	9	0.3333	300.0000000	30
10	Type 6	1.0	333.3	9	0.3333	300.0000000	37
11	Type 6	1.0	333.3	9	0.3333	300.0000000	36
12	Type 6	1.0	333.3	9	0.3333	300.0000000	38
13	Type 6	1.0	333.3	9	0.3333	300.0000000	35
14	Type 6	1.0	333.3	9	0.3333	300.0000000	28
15	Type 6	1.0	333.3	9	0.3333	300.0000000	37
16	Type 6	1.0	333.3	9	0.3333	300.0000000	35
17	Type 6	1.0	333.3	9	0.3333	300.0000000	37
18	Type 6	1.0	333.3	9	0.3333	300.0000000	27
19	Type 6	1.0	333.3	9	0.3333	300.0000000	34
20	Type 6	1.0	333.3	9	0.3333	300.0000000	35
21	Type 6	1.0	333.3	9	0.3333	300.0000000	37
22	Type 6	1.0	333.3	9	0.3333	300.0000000	41
23	Type 6	1.0	333.3	9	0.3333	300.0000000	36
24	Type 6	1.0	333.3	9	0.3333	300.0000000	29
25	Type 6	1.0	333.3	9	0.3333	300.0000000	32
26	Type 6	1.0	333.3	9	0.3333	300.0000000	30
27	Type 6	1.0	333.3	9	0.3333	300.0000000	31
28	Type 6	1.0	333.3	9	0.3333	300.0000000	31
29	Type 6	1.0	333.3	9	0.3333	300.0000000	40

6.3. RESPONSE REQUIREMENTS

Table 4: DFS Response Requirement Values

Parameter	Value
Non-occupancy period	Minimum 30 minutes
Channel Availability Check Time	60 seconds
Channel Move Time	10 seconds See Note 1.
Channel Closing Transmission Time	200 milliseconds + an aggregate of 60 milliseconds over remaining 10 second period. See Notes 1 and 2.
U-NII Detection Bandwidth	Minimum 100% of the U-NII 99% transmission power bandwidth. See Note 3.
Note 1: Channel Move Time and the Channel Closing Transmission Time should be performed with Radar Type 0. The measurement timing begins at the end of the Radar Type 0 burst. Note 2: The Channel Closing Transmission Time is comprised of 200 milliseconds starting at the beginning of the Channel Move Time plus any additional intermittent control signals required to facilitate a Channel move (an aggregate of 60 milliseconds) during the remainder of the 10 second period. The aggregate duration of control signals will not count quiet periods in between transmissions. Note 3: During the U-NII Detection Bandwidth detection test, radar type 0 should be used. For each frequency step the minimum percentage of detection is 90 percent. Measurements are performed with no data traffic	

6.4. RADAR TEST WAVEFORMS

This section provides the parameters for required test waveforms, minimum percentage of successful detections, and the minimum number of trials that must be used for determining DFS conformance. Step intervals of 0.1 microsecond for Pulse Width, 1 microsecond for PRI, 1 MHz for chirp width and 1 for the number of pulses will be utilized for the random determination of specific test waveforms.

6.4.1 SHORT PULSE RADAR TEST WAVEFORMS

Table 5 – Short Pulse Radar Test Waveforms

Radar Type	Pulse Width (µsec)	PRI (µsec)	Number of Pulses	Minimum Percentage of Successful Detection	Minimum Number of Trials
0	1	1428	18	See Note 1	See Note 1
1	1	Test A: 15 unique PRI values randomly selected from the list of 23 PRI values in Table 5a	$\text{Roundup}\left\{\left(\frac{1}{360}\right)\cdot\left(\frac{19\cdot 10^6}{\text{PRI}_{\mu\text{sec}}}\right)\right\}$	60%	30
		Test B: 15 unique PRI values randomly selected within the range of 518-3066 µsec, with a minimum increment of 1 µsec, excluding PRI values selected in Test A			
2	1-5	150-230	23-29	60%	30
3	6-10	200-500	16-18	60%	30
4	11-20	200-500	12-16	60%	30
Aggregate (Radar Types 1-4)				80%	120
Note 1: Short Pulse Radar Type 0 should be used for the detection bandwidth test, channel move time, and channel closing time tests.					

A minimum of 30 unique waveforms are required for each of the Short Pulse Radar Types 2 through 4. If more than 30 waveforms are used for Short Pulse Radar Types 2 through 4, then each additional waveform must also be unique and not repeated from the previous waveforms. If more than 30 waveforms are used for Short Pulse Radar Type 1, then each additional waveform is generated with Test B and must also be unique and not repeated from the previous waveforms in Tests A or B.

For example if in Short Pulse Radar Type 1 Test B a PRI of 3066 µsec is selected, the number of pulses would be Roundup $\{(1/360)(19\times10^6/3066)\}$ = Round up {17.2} = 18.

Table 5a - Pulse Repetition Intervals Values for Test A

Repetition Frequency Number	Pulse Repetition Frequency (Pulses Per Second)	Pulse Repetition Interval (Microseconds
1	1930.5	518
2	1858.7	538
3	1792.1	558
4	1730.1	578
5	1672.2	598
6	1618.1	618
7	1567.4	638
8	1519.8	658
9	1474.9	678
10	1432.7	698
11	1392.8	718
12	1355	738
13	1319.3	758
14	1285.3	778
15	1253.1	798
16	1222.5	818
17	1193.3	838
18	1165.6	858
19	1139	878
20	1113.6	898
21	1089.3	918
22	1066.1	938
23	326.2	3066

The aggregate is the average of the percentage of successful detections of Short Pulse Radar Types 1-4. For example, the following table indicates how to compute the aggregate of percentage of successful detections.

Radar Type	Number of Trials	Number of Successful Detections	Minimum Percentage of Successful Detection
1	35	29	82.9%
2	30	18	60%
3	30	27	90%
4	50	44	88%
Aggregate (82.9% + 60% + 90% + 88%)/4 = 80.2%			

6.4.2 LONG PULSE RADAR TEST WAVEFORM

Table 6 – Long Pulse Radar Test Waveform

Radar Type	Pulse Width (μsec)	Chirp Width (MHz)	PRI (μsec)	Number of Pulses per *Burst*	Number of *Bursts*	Minimum Percentage of Successful Detection	Minimum Number of Trials
5	50-100	5-20	1000-2000	1-3	8-20	80%	30

The parameters for this waveform are randomly chosen. Thirty unique waveforms are required for the Long Pulse Radar Type waveforms. If more than 30 waveforms are used for the Long Pulse Radar Type waveforms, then each additional waveform must also be unique and not repeated from the previous waveforms.

Each waveform is defined as follows:

1) The transmission period for the Long Pulse Radar test signal is 12 seconds.
2) There are a total of 8 to 20 *Bursts* in the 12 second period, with the number of *Bursts* being randomly chosen. This number is *Burst Count*.
3) Each *Burst* consists of 1 to 3 pulses, with the number of pulses being randomly chosen. Each *Burst* within the 12 second sequence may have a different number of pulses.
4) The pulse width is between 50 and 100 microseconds, with the pulse width being randomly chosen. Each pulse within a *Burst* will have the same pulse width. Pulses in different *Bursts* may have different pulse widths.
5) Each pulse has a linear frequency modulated chirp between 5 and 20 MHz, with the chirp width being randomly chosen. Each pulse within a *transmission period* will have the same chirp width. The chirp is centered on the pulse. For example, with a radar frequency of 5300 MHz and a 20 MHz chirped signal, the chirp starts at 5290 MHz and ends at 5310 MHz.
6) If more than one pulse is present in a *Burst*, the time between the pulses will be between 1000 and 2000 microseconds, with the time being randomly chosen. If three pulses are present in a *Burst*, the random time interval between the first and second pulses is chosen independently of the random time interval between the second and third pulses.
7) The 12 second transmission period is divided into even intervals. The number of intervals is equal to *Burst Count*. Each interval is of length (12,000,000 / *Burst Count*) microseconds. Each interval contains one *Burst*. The start time for the *Burst*, relative to the beginning of the interval, is between 1 and [(12,000,000 / *Burst Count*) – (Total *Burst* Length) + (One Random PRI Interval)] microseconds, with the start time being randomly chosen. The step interval for the start time is 1 microsecond. The start time for each *Burst* is chosen randomly.

A representative example of a Long Pulse Radar Type waveform:

1) The total test waveform length is 12 seconds.
2) Eight (8) Bursts are randomly generated for the Burst Count.
3) Burst 1 has 2 randomly generated pulses.
4) The pulse width (for both pulses) is randomly selected to be 75 microseconds.
5) The PRI is randomly selected to be at 1213 microseconds.
6) Bursts 2 through 8 are generated using steps 3 – 5.
7) Each Burst is contained in even intervals of 1,500,000 microseconds. The starting location for Pulse 1, Burst 1 is randomly generated (1 to 1,500,000 minus the total Burst 1 length + 1

random PRI interval) at the 325,001 microsecond step. Bursts 2 through 8 randomly fall in successive 1,500,000 microsecond intervals (i.e. Burst 2 falls in the 1,500,001 – 3,000,000 microsecond range).

6.4.3 FREQUENCY HOPPING RADAR TEST WAVEFORM

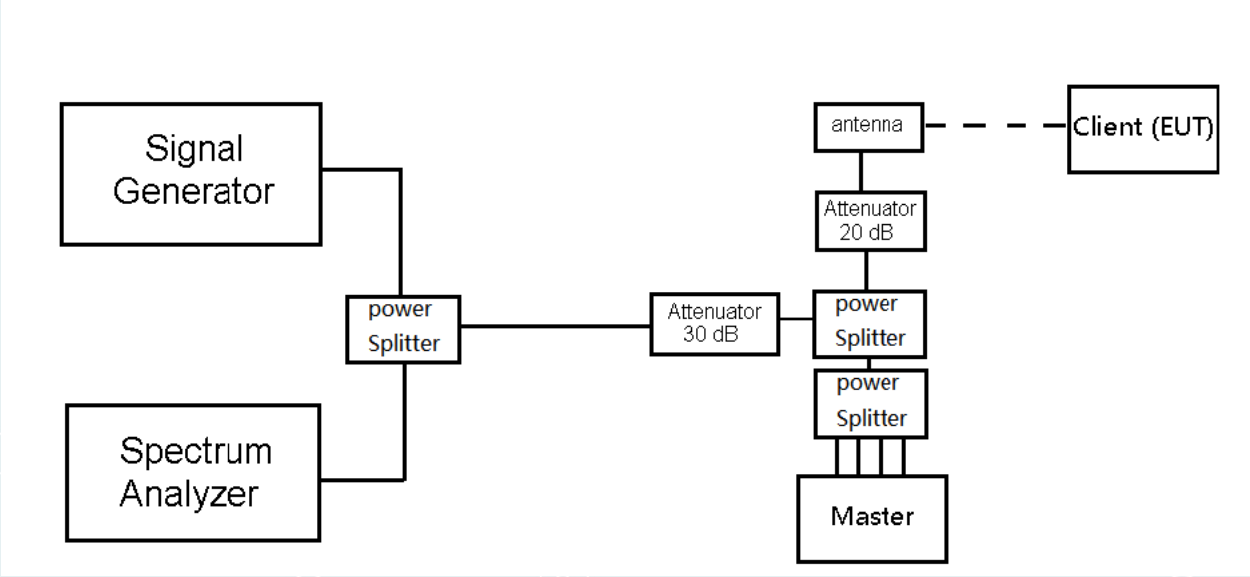
Table 7 – Frequency Hopping Radar Test Waveform

Radar Type	Pulse Width (µsec)	PRI (µsec)	Pulses per Hop	Hopping Rate (kHz)	Hopping Sequence Length (msec)	Minimum Percentage of Successful Detection	Minimum Number of Trials
6	1	333	9	0.333	300	70%	30

For the Frequency Hopping Radar Type, the same *Burst* parameters are used for each waveform. The hopping sequence is different for each waveform and a 100-length segment is selected from the hopping sequence defined by the following algorithm:

The first frequency in a hopping sequence is selected randomly from the group of 475 integer frequencies from 5250 – 5724 MHz. Next, the frequency that was just chosen is removed from the group and a frequency is randomly selected from the remaining 474 frequencies in the group. This process continues until all 475 frequencies are chosen for the set. For selection of a random frequency, the frequencies remaining within the group are always treated as equally likely.

6.5. TEST SETUP



6.6. RADAR WAVEFORM CALIBRATION RESULT

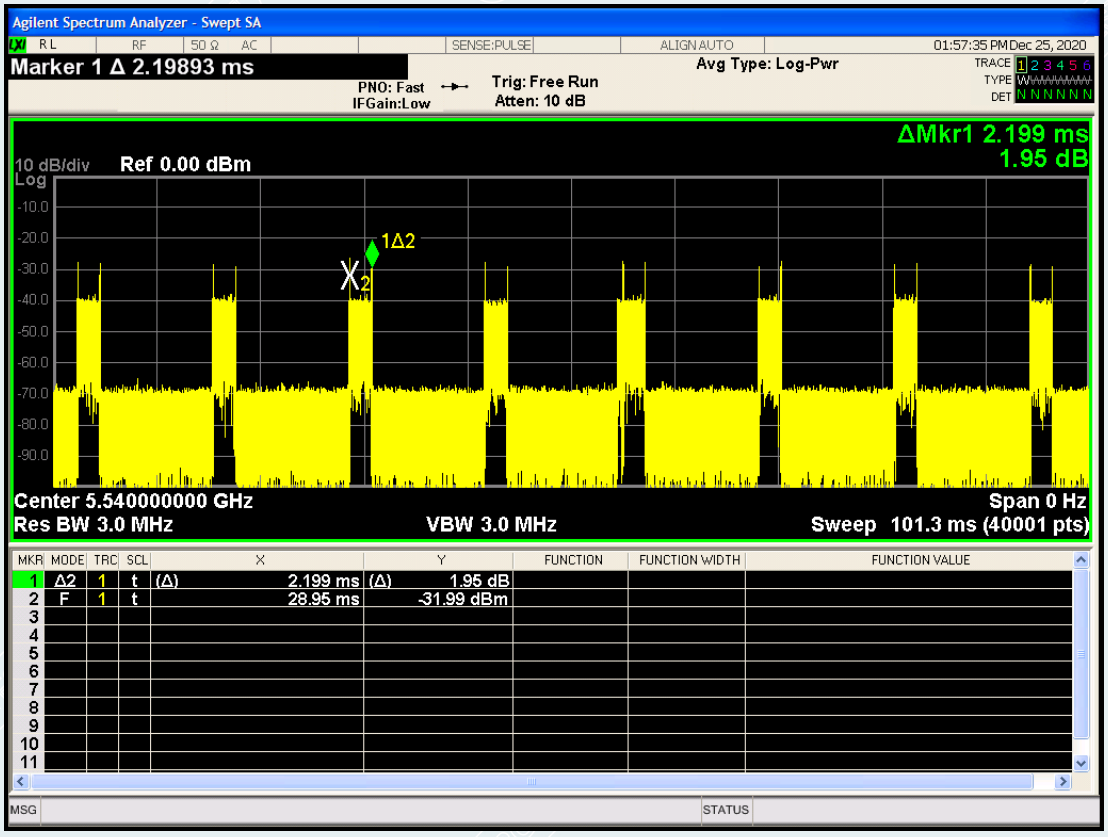
Radar Waveform Type 0

Description	Value	Unit
Configured DUT EIRP:	138	mW
Configured DUT PSD:	8.23	dBm/MHz
Requirement of the Detection threshold value for this given values acc. to FCC clause 5.2 / Table 3	-62	dBm
This results in the following radar signal level at the DUT	-61.53	dBm

6.7. CHANEL LOADING

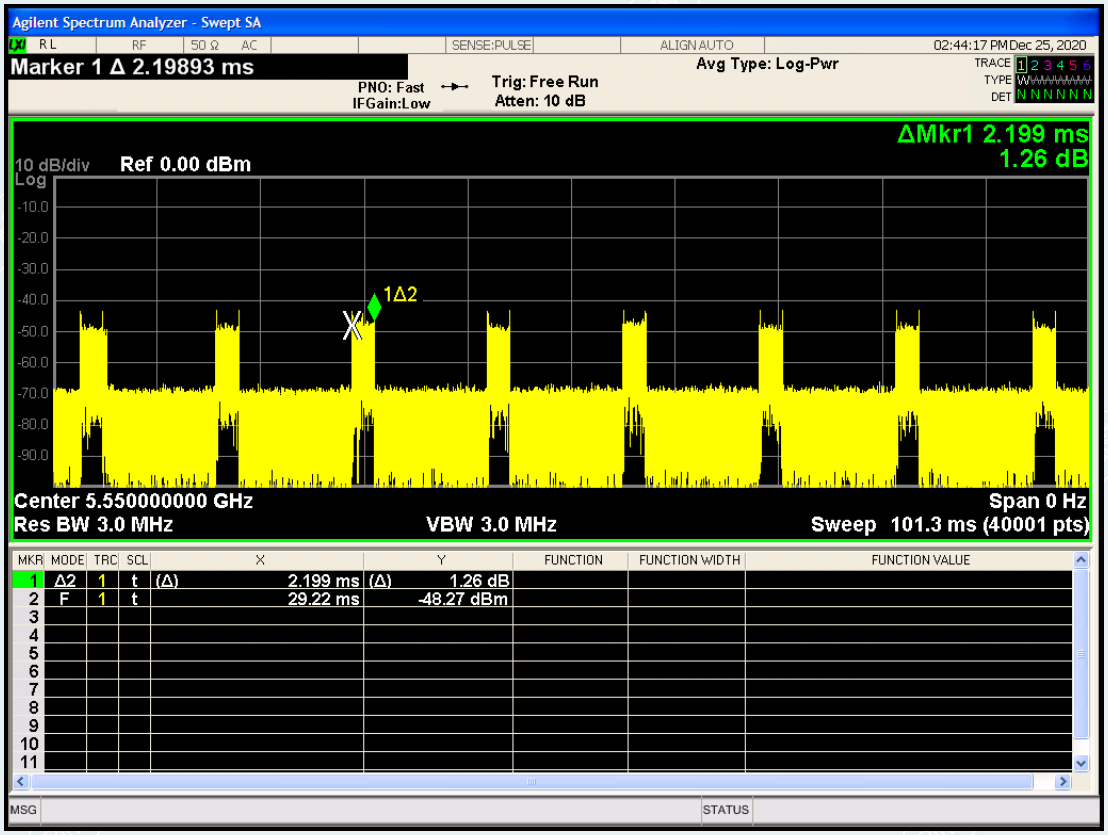
DUT Frequency (MHz)	Tx-Test Duty Cycle (%)	Tx-Test Duty Cycle Limit	Tx-Test Result
5540.000000	17.37	>=17 %	PASS

IEEE 802.11A 5540MHz



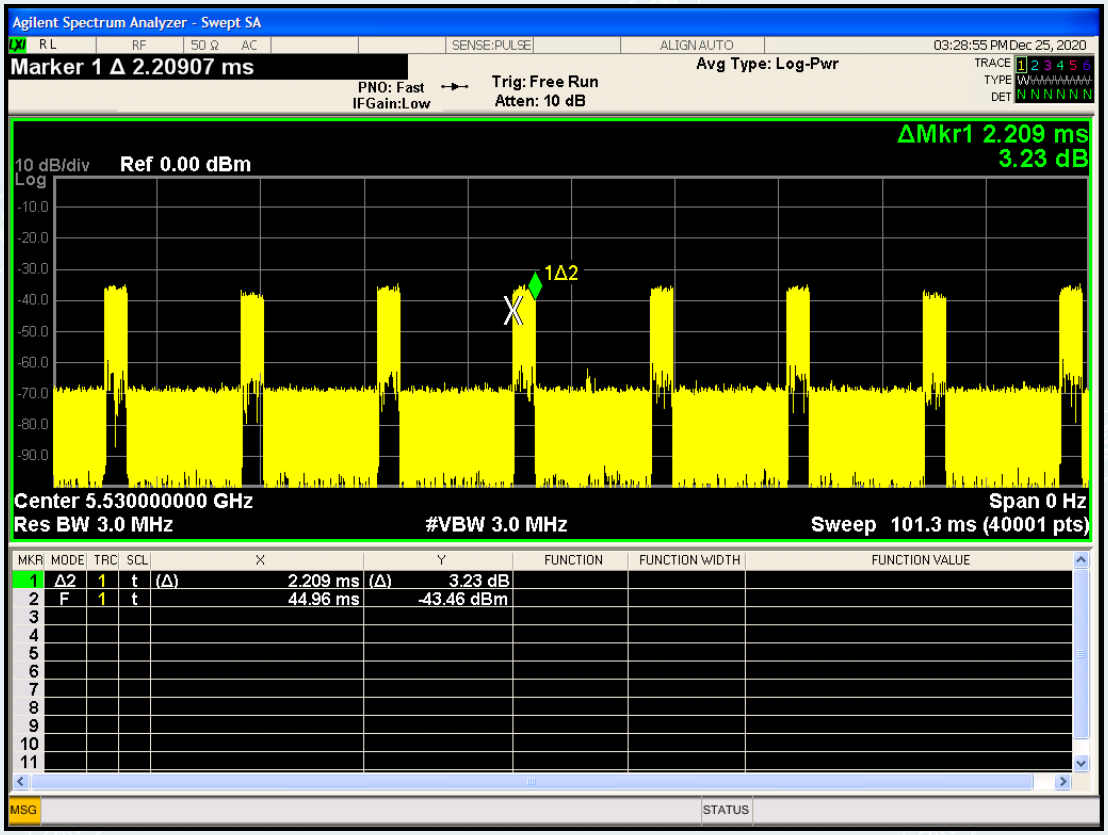
DUT Frequency (MHz)	Tx-Test Duty Cycle (%)	Tx-Test Duty Cycle Limit	Tx-Test Result
5550.000000	17.37	>=17 %	PASS

IEEE 802.11n HT40 5550MHz



DUT Frequency (MHz)	Tx-Test Duty Cycle (%)	Tx-Test Duty Cycle Limit	Tx-Test Result
5530.000000	17.45	>=17 %	PASS

IEEE 802.11ac VHT80 5530MHz



6.8. STATISTICAL PERFORMANCE CHECK

TX (11a Mode)

Table 1: Short Pulse Radar Test Waveforms.

Radar Type	Pulse Width (μsec)	PRI (μsec)	Number of Pulses	Pass times	Fail times	Percentage of Successful Detection (%)
1	1	Test A: 15 unique PRI values randomly selected from the list of 23 PRI values in Table 5a Test B: 15 unique PRI values randomly selected within the range of 518-3066 μsec, with a minimum increment of 1 μsec, excluding PRI values selected in Test A	$\text{Roundup}\left\{\left(\frac{1}{360}\right)\cdot\left(\frac{19\cdot 10^6}{\text{PRI}_{\mu\text{sec}}}\right)\right\}$	26	4	87
2	1-5	150-230	23-29	22	8	73
3	6-10	200-500	16-18	27	3	90
4	11-20	200-500	12-16	22	8	73
Aggregate (Radar Types 1-4)			-	97	23	81

Table 2: Long Pulse Radar Test Waveform

Radar Type	Pulse Width (μsec)	Chirp Width (MHz)	PRI (μsec)	Number of Pulses Per Burst	Number of Bursts	Pass times	Fail times	Percentage of Successful Detection (%)
5	50-100	5-20	1000-2000	1-3	8-20	25	5	83

Table 3: Frequency Hopping Radar Test Waveform

Radar Type	Pulse Width (μsec)	PRI (μsec)	Pulses per Hop	Hopping Rate (kHz)	Hopping Sequence Length (msec)	Pass times	Fail times	Percentage of Successful Detection (%)
6	1	333	9	0.333	300	29	1	97

TX (11n 40MHz Mode)

Table 1: Short Pulse Radar Test Waveforms.

Radar Type	Pulse Width (μsec)	PRI (μsec)	Number of Pulses	Pass times	Fail times	Percentage of Successful Detection (%)
1	1	Test A: 15 unique PRI values randomly selected from the list of 23 PRI values in Table 5a Test B: 15 unique PRI values randomly selected within the range of 518-3066 μsec, with a minimum increment of 1 μsec, excluding PRI values selected in Test A	$\text{Roundup}\left\{\left(\frac{1}{360}\right)\cdot\left(\frac{19\cdot10^6}{\text{PRI}_{\mu\text{sec}}}\right)\right\}$	29	1	97
2	1-5	150-230	23-29	29	1	97
3	6-10	200-500	16-18	28	2	93
4	11-20	200-500	12-16	29	1	97
Aggregate (Radar Types 1-4)			-	115	15	96

Table 2: Long Pulse Radar Test Waveform

Radar Type	Pulse Width (μsec)	PRI (μsec)	Pulses per Hop	Hopping Rate (kHz)	Hopping Sequence Length (msec)	Pass times	Fail times	Percentage of Successful Detection (%)
5	1	333	9	0.333	300	28	2	93

Table 3: Frequency Hopping Radar Test Waveform

Radar Type	Pulse Width (μsec)	PRI (μsec)	Pulses per Hop	Hopping Rate (kHz)	Hopping Sequence Length (msec)	Pass times	Fail times	Percentage of Successful Detection (%)
6	1	333	9	0.333	300	28	2	93

TX (11ac 80MHz Mode)

Table 1: Short Pulse Radar Test Waveforms.

Radar Type	Pulse Width (μsec)	PRI (μsec)	Number of Pulses	Pass times	Fail times	Percentage of Successful Detection (%)
1	1	Test A: 15 unique PRI values randomly selected from the list of 23 PRI values in Table 5a Test B: 15 unique PRI values randomly selected within the range of 518-3066 μsec, with a minimum increment of 1 μsec, excluding PRI values selected in Test A	$\text{Roundup}\left\{\left(\frac{1}{360}\right)\cdot\left(\frac{19\cdot10^6}{\text{PRI}_{\mu\text{sec}}}\right)\right\}$	29	1	97
2	1-5	150-230	23-29	26	4	87
3	6-10	200-500	16-18	28	2	93
4	11-20	200-500	12-16	24	6	80
Aggregate (Radar Types 1-4)			-	107	13	89

Table 2: Long Pulse Radar Test Waveform

Radar Type	Pulse Width (μsec)	Chirp Width (MHz)	PRI (μsec)	Numberof Pulses PerBurst	Number of Bursts	Pass times	Fail times	Percentage of Successful Detection (%)
5	50-100	5-20	1000-2000	1-3	8-20	29	1	97

Table 3: Frequency Hopping Radar Test Waveform

Radar Type	Pulse Width (μsec)	PRI (μsec)	Pulses per Hop	Hopping Rate (kHz)	Hopping Sequence Length (msec)	Pass times	Fail times	Percentage of Successful Detection (%)
6	1	333	9	0.333	300	27	3	90

7. IN-SERVICE MONITORING FOR CHANNEL MOVE TIME, CHANNEL CLOSING TRANSMISSION TIME AND NON-OCCUPANCY PERIOD

7.1 TEST PROCEDURE

The steps below define the procedure to determine the above mentioned parameters when a radar Burst with a level equal to the DFS Detection Threshold + 1dB is generated on the Operating Channel of the U-NII device (In- Service Monitoring).

a) One frequency will be chosen from the Operating Channels of the UUT within the 5250-5350 MHz or 5470-5725 MHz bands. For 802.11 devices, the test frequency must contain control signals. This can be verified by disabling channel loading and monitoring the spectrum analyzer. If no control signals are detected, another frequency must be selected within the emission bandwidth where control signals are detected.

b) In case the UUT is a U-NII device operating as a Client Device (with or without DFS), a U-NII device operating as a Master Device will be used to allow the UUT (Client device) to Associate with the Master Device. In case the UUT is a Master Device, a U-NII device operating as a Client Device will be used and it is assumed that the Client will Associate with the UUT (Master). In both cases for conducted tests, the Radar Waveform generator will be connected to the Master Device. For radiated tests, the emissions of the Radar Waveform generator will be directed towards the Master Device. If the Master Device has antenna gain, the main beam of the antenna will be directed toward the radar emitter. Vertical polarization is used for testing.

c) Stream the channel loading test file from the Master Device to the Client Device on the test Channel for the entire period of the test.

d) At time T0 the Radar Waveform generator sends a Burst of pulses for one of the Radar Type 0 in **Table 5** at levels defined in **Table 3**, on the Operating Channel. An additional 1 dB is added to the radar test signal to ensure it is at or above the DFS Detection Threshold, accounting for equipment variations/errors.

e) Observe the transmissions of the UUT at the end of the radar Burst on the Operating Channel for duration greater than 10 seconds. Measure and record the transmissions from the UUT during the observation time (Channel Move Time). Measure and record the Channel Move Time and Channel Closing Transmission Time if radar detection occurs. f) When operating as a Master Device, monitor the UUT for more than 30 minutes following instant T2 to verify that the UUT does not resume any transmissions on this Channel. Perform this test once and record the measurement result.

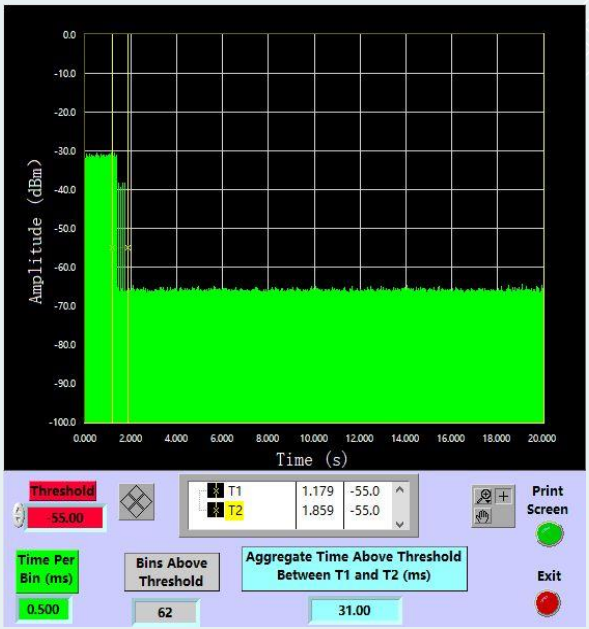
g) In case the UUT is a U-NII device operating as a Client Device with In-Service Monitoring, perform steps a) to f).

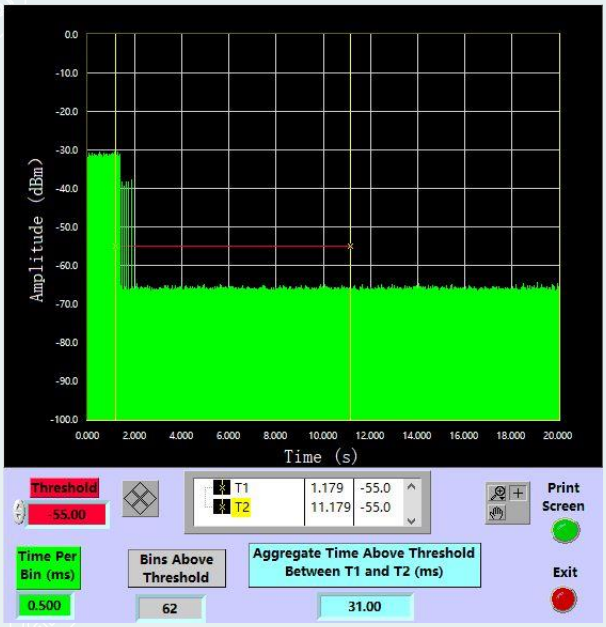
7.2 CHANNEL MOVE TIME&CHANNEL CLOSE TRANSMISSION TIME TEST RESULT

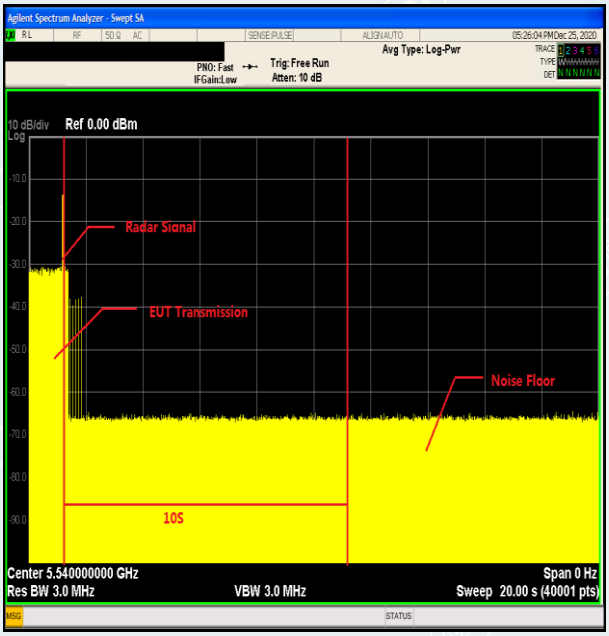
Frequency (MHz)	Radar Type No.	CMT Tx Time (s)	CMT Limit (s)	Result
5540.000000	0	0.68	10.000	PASS

Frequency (MHz)	Radar Type No.	CCTT Type of Value	CCTT No. of Pulses found	CCTT Tx Time (ms)	Limit (ms)	Result
5540.000000	0	remaining 10.0 second(s) period	62	31	260	PASS

IEEE 802.11A 5540MHz



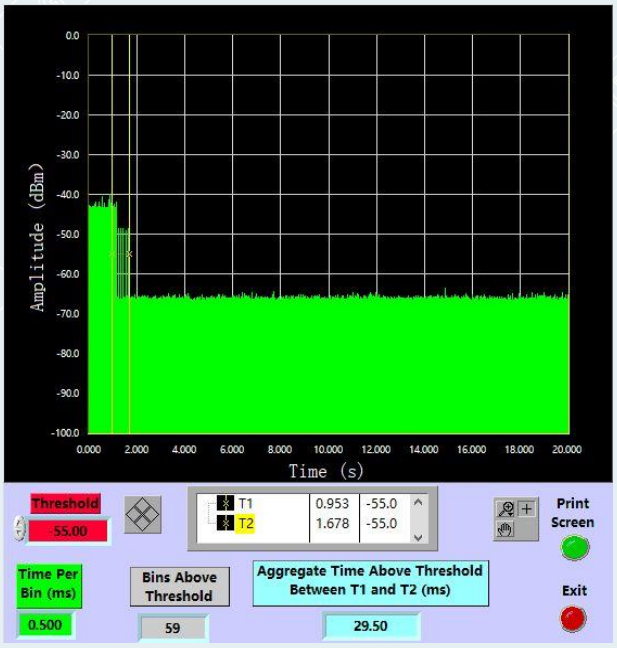


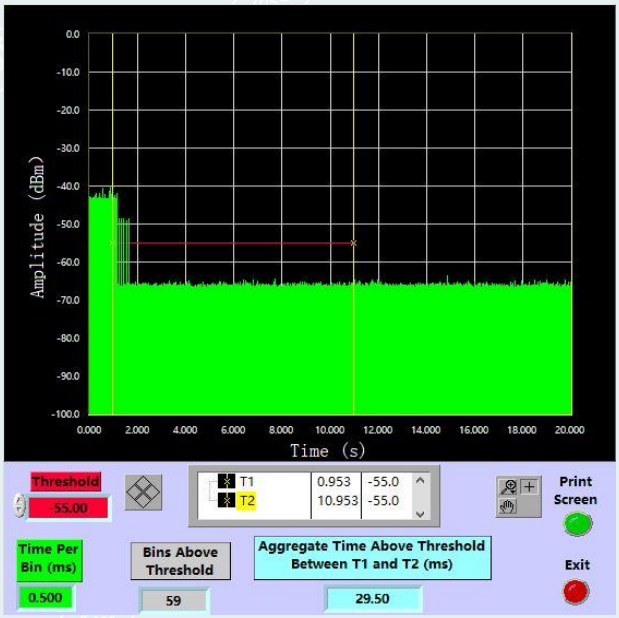


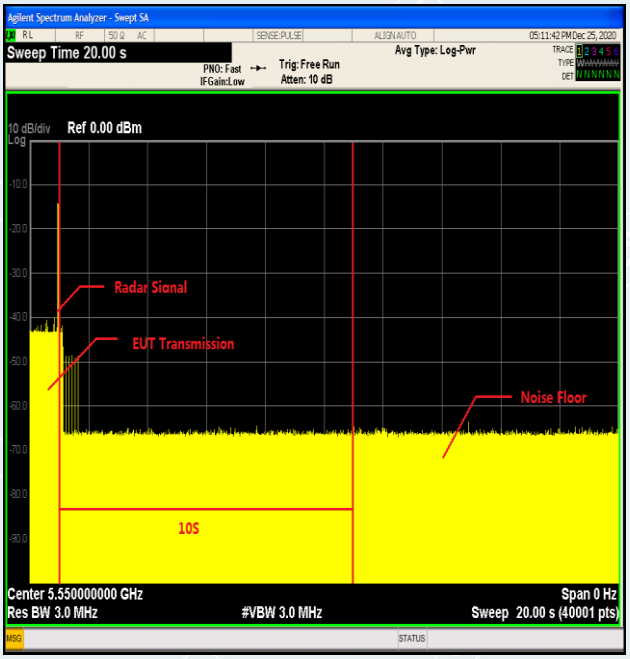
Frequency (MHz)	Radar Type No.	CMT Tx Time (s)	CMT Limit (s)	Result
5550.000000	0	0.725	10.000	PASS

Frequency (MHz)	Radar Type No.	CCTT Type of Value	CCTT No. of Pulses found	CCTT Tx Time (ms)	Limit (ms)	Result
5550.000000	0	remaining 10.0 second(s) period	59	29.5	260	PASS

IEEE 802.11n HT40 5550MHz



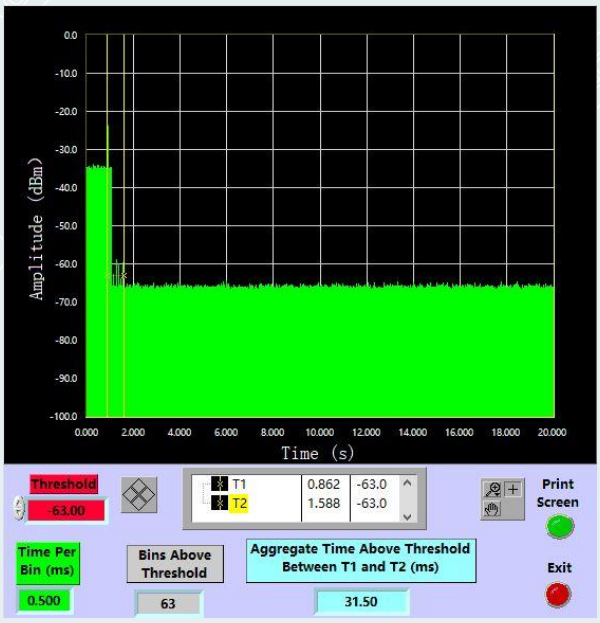


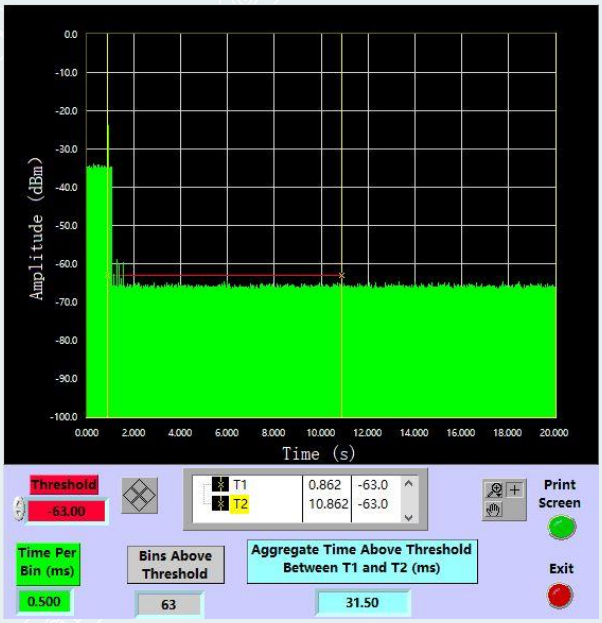


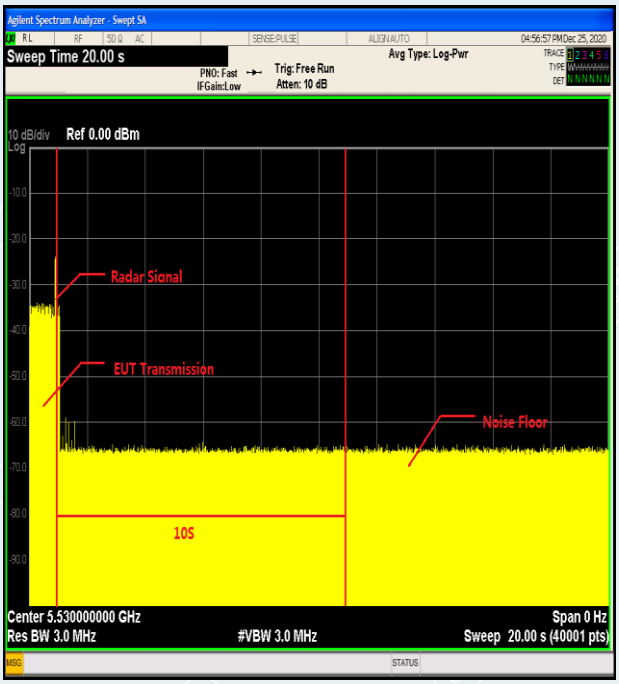
Frequency (MHz)	Radar Type No.	CMT Tx Time (s)	CMT Limit (s)	Result
5530.000000	0	0.726	10.000	PASS

Frequency (MHz)	Radar Type No.	CCTT Type of Value	CCTT No. of Pulses found	CCTT Tx Time (ms)	Limit (ms)	Result
5530.000000	0	remaining 10.0 second(s) period	63	31.5	260	PASS

IEEE 802.11ac VHT80 5530MHz





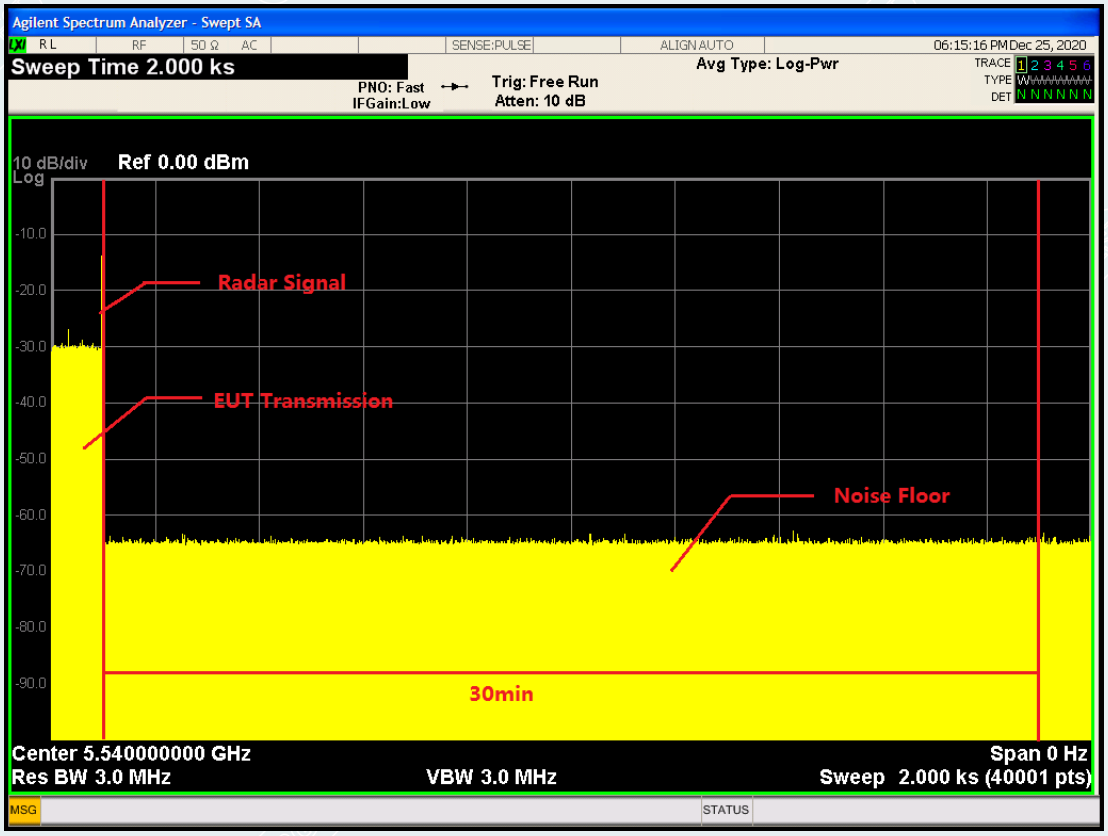


7.3 NON-OCCUPANCY PERIOD TEST RESULT

During the 30 minutes observation time, UUT did not make any transmissions on a channel after a radar signal was detected on that channel by either the Channel Availability Check or the In-Service Monitoring.

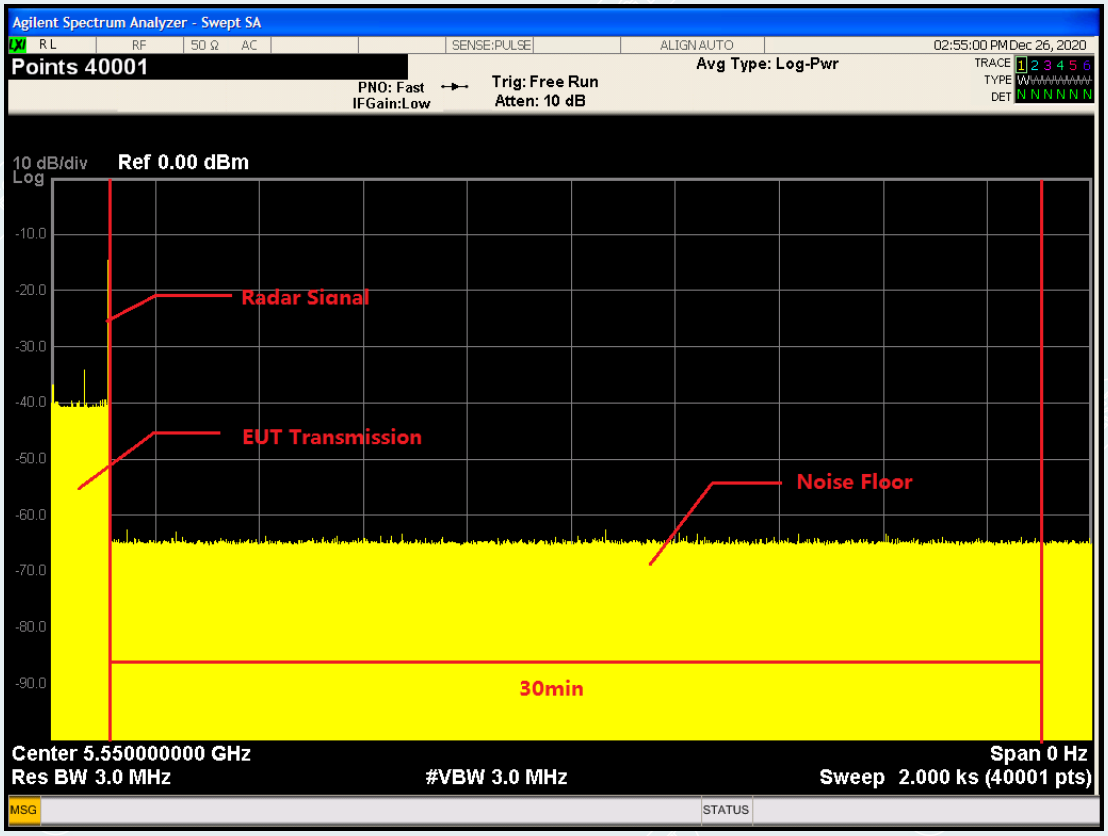
Frequency (MHz)	Radar Type No.	NOP No. of Pulses found	NOP No. of Pulses Limit	NOP Tx Time (s)	NOP Tx Time Limit (s)	Result
5540.000000	0	0	0	0.000	30.000	PASS

IEEE 802.11A 5540MHz



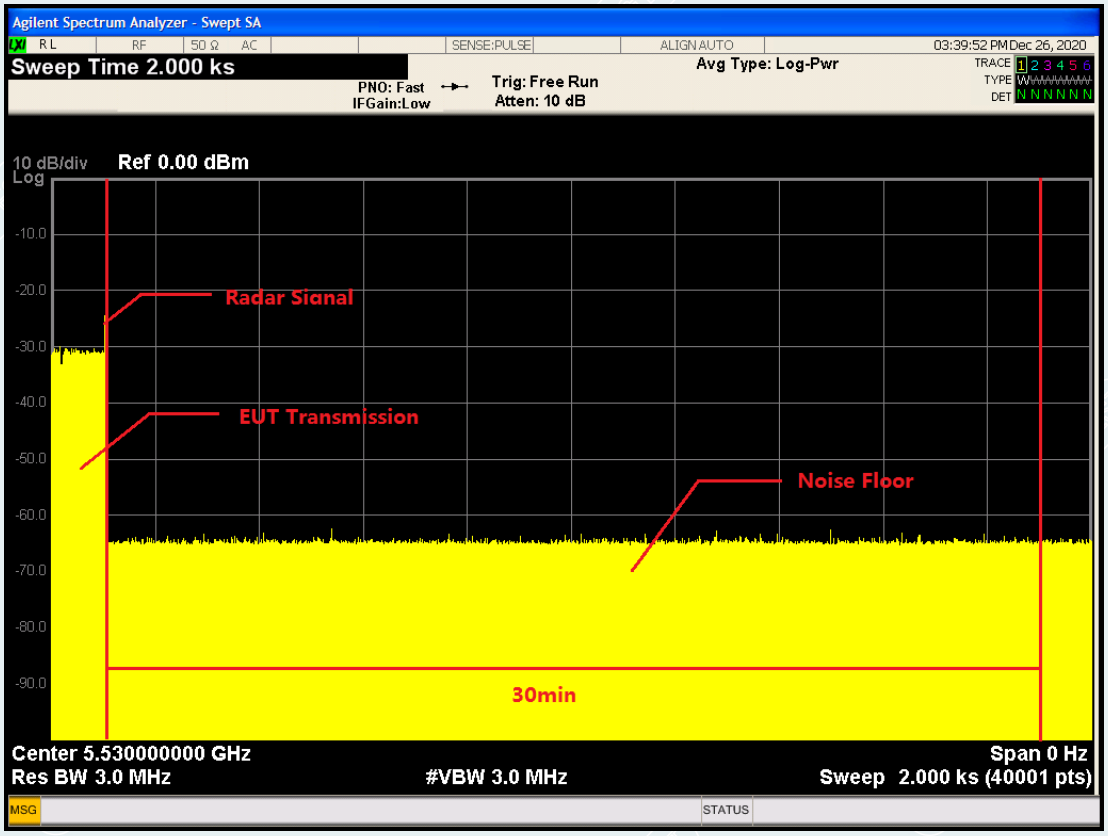
Frequency (MHz)	Radar Type No.	NOP No. of Pulses found	NOP No. of Pulses Limit	NOP Tx Time (s)	NOP Tx Time Limit (s)	Result
5550.000000	0	0	0	0.000	30.000	PASS

IEEE 802.11n HT40 5550MHz



Frequency (MHz)	Radar Type No.	NOP No. of Pulses found	NOP No. of Pulses Limit	NOP Tx Time (s)	NOP Tx Time Limit (s)	Result
5530.000000	0	0	0	0.000	30.000	PASS

IEEE 802.11ac VHT80 5530MHz



7.4 U-NII DETECTION BANDWIDTH TEST RESULT

IEEE 802.11A 5540MHz

Detection Bandwith test tranmission 20M											
EUT FREQUENCY	5540M										
EUT power bandwith	18.204MHz										
Detection Bandwith limit(100%of EUT 99% Power bandwith)	20										
Detection Bandwith(5550(FH)-5530(FL))	20										
Test Result	PASS										
Radar Freq (MHz)	DFS Detection Trials (1=Detection, 0= No Detection)										Detection Rate (%)
	1	2	3	4	5	6	7	8	9	10	
5529	0	0	0	0	0	0	0	0	0	0	90
5530(FL)	1	1	1	1	1	1	1	1	1	1	100
5531	1	1	1	1	1	1	1	1	1	1	100
5532	1	1	1	0	1	1	1	1	1	1	90
5533	1	1	1	1	1	1	1	1	1	1	100
5534	1	1	1	1	1	1	1	1	1	1	100
5535	1	1	1	1	1	1	1	1	1	1	100
5536	1	1	1	1	1	1	1	1	1	1	100
5537	1	1	1	1	1	1	1	1	1	1	100
5538	1	1	1	1	1	1	1	1	1	1	100
5539	1	1	1	1	1	1	1	1	1	1	100
5540	1	1	1	1	1	1	1	1	1	1	100
5541	1	1	1	1	1	1	1	1	1	1	100
5542	1	1	1	1	1	1	1	1	1	1	100
5543	1	1	1	1	1	1	1	1	1	1	100
5544	1	1	1	1	1	1	1	1	1	1	100
5545	1	1	1	1	1	1	1	1	1	1	100
5546	1	1	1	1	1	1	1	1	1	1	100
5547	1	1	1	1	1	1	1	1	1	1	100
5548	1	1	1	1	1	1	1	1	1	1	100
5549	1	1	1	1	1	1	1	1	1	1	100
5550(FH)	1	1	1	1	1	1	1	1	1	1	100
5551	0	0	0	0	0	0	0	0	0	0	90

IEEE 802.11n HT40 5550MHz

Detection Bandwith test tranmission	40M										
EUT FREQUENCY	5550M										
EUT power bandwith	36.59MHz										
Detection Bandwith limit(100%of EUT 99% Power bandwith)	38										
Detection Bandwith(5569(FH)-5531(FL))	38										
Test Result	PASS										
	DFS Detection Trials (1=Detection, 0= No Detection)										
Radar Freq (MHz)	1	2	3	4	5	6	7	8	9	10	Detection Rate (%)
5529	0	0	0	0	0	0	0	0	0	0	70
5530	0	0	0	0	0	0	0	0	0	0	80
5531(FL)	1	1	1	1	1	1	1	1	1	1	100
5532	1	1	1	1	1	1	1	1	1	1	100
5533	1	1	1	1	1	1	1	1	1	1	100
5534	1	1	1	1	1	1	1	1	1	1	100
5535	1	1	1	1	1	1	1	1	1	1	100
5536	1	1	1	1	1	1	1	1	1	1	100
5537	1	1	1	1	1	1	1	1	1	1	100
5538	1	1	1	1	1	1	1	1	1	1	100
5539	1	1	1	1	1	1	1	1	1	1	100
5540	1	1	1	1	1	1	1	1	1	1	100
5541	1	1	1	1	1	1	1	1	1	1	100
5542	1	1	1	1	1	1	1	1	1	1	100
5543	1	1	1	1	1	1	1	1	1	1	100
5544	1	1	1	1	1	1	1	1	1	1	100
5545	1	1	1	1	1	1	1	1	1	1	100
5546	1	1	1	1	1	1	1	1	1	1	100
5547	1	1	1	1	1	1	1	1	1	1	100
5548	1	1	1	1	1	1	1	1	1	1	100
5549	1	1	1	1	1	1	1	1	1	1	100
5550	1	1	1	1	1	1	1	1	1	1	100
5551	1	1	1	1	1	1	1	1	1	1	100
5552	1	1	1	1	1	1	1	1	1	1	100
5553	1	1	1	1	1	1	1	1	1	1	100
5554	1	1	1	1	1	1	1	1	1	1	100
5555	1	1	1	1	1	1	1	1	1	1	100
5556	1	1	1	1	1	1	1	1	1	1	100
5557	1	1	1	1	1	1	1	1	1	1	100
5558	1	1	1	1	1	1	1	1	1	1	100
5559	1	1	1	1	1	1	1	1	1	1	100
5560	1	1	1	1	1	1	1	1	1	1	100
5561	1	1	1	1	1	1	1	1	1	1	100
5562	1	1	1	1	1	1	1	1	1	1	100
5563	1	1	1	1	1	1	1	1	1	1	100
5564	1	1	1	1	1	1	1	1	1	1	100
5565	1	1	1	1	1	1	1	1	1	1	100
5566	1	1	1	1	1	1	1	1	1	1	100
5567	1	1	1	1	1	1	1	1	1	1	100
5568	1	1	1	1	1	1	1	1	1	1	100
5569(FL)	1	1	1	1	1	1	1	1	1	1	100
5570	0	0	0	0	0	0	0	0	0	0	70
5571	0	0	0	0	0	0	0	0	0	0	60

IEEE 802.11ac VHT80 5530MHz

Detection Bandwith test tranmission	80M
EUT FREQUENCY	5530M
EUT power bandwith	75.258
Detection Bandwith limit(100%of EUT 99% Power bandwith)	76
Detection Bandwith(5569(FH)-5491(FL))	76
Test Result	PASS

Radar Freq (MHz)	DFS Detection Trials (1=Detection, 0= No Detection)										Detection Rate (%)
	1	2	3	4	5	6	7	8	9	10	
5490	0	0	0	0	0	0	0	0	0	0	40
5491	0	0	0	0	0	0	0	0	0	0	50
5492(FL)	1	1	1	0	1	1	1	1	1	1	90
5493	1	1	1	1	1	1	1	1	1	1	100
5494	1	1	1	1	1	1	1	1	1	1	100
5495	1	0	1	1	1	1	1	1	1	1	90
5496	1	1	1	1	1	1	1	1	1	1	100
5497	1	1	1	1	1	1	1	1	1	1	100
5498	1	1	1	1	1	1	1	1	1	1	100
5499	1	1	1	1	1	1	1	1	1	1	100
5500	1	1	1	1	1	1	1	1	1	1	100
5501	1	1	1	1	1	1	1	1	1	1	100
5502	1	1	1	1	1	1	1	1	1	1	100
5503	1	1	1	1	1	1	1	1	1	1	100
5504	1	1	1	1	1	1	1	1	1	1	100
5505	1	1	1	1	1	1	1	1	1	1	100
5506	1	1	1	1	1	1	1	1	1	1	100
5507	1	1	1	1	1	1	1	1	1	1	100
5508	1	1	1	1	1	1	1	1	1	1	100
5509	1	1	1	1	1	1	1	1	1	1	100
5510	1	1	1	1	1	1	1	1	1	1	100
5511	1	1	1	1	1	1	1	1	1	1	100
5512	1	1	0	1	1	1	1	1	1	1	90
5513	1	1	1	1	1	1	1	1	1	1	100
5514	1	1	1	1	1	1	1	1	1	1	100
5515	1	1	1	1	1	1	1	1	1	1	100
5516	1	1	1	0	1	1	1	1	1	1	90
5517	1	1	1	1	1	1	1	1	1	1	100
5518	1	1	1	1	1	1	1	1	1	1	100
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5562	1	1	1	1	1	1	1	1	1	1	100
5563	1	1	1	1	1	1	1	1	1	1	100
5564	1	1	1	1	1	1	1	1	1	1	100
5565	1	1	1	1	1	1	1	1	1	1	100
5566	1	1	1	1	1	1	1	1	1	1	100
5567	1	1	1	1	1	1	1	1	1	1	100
5568(FH)	1	1	1	1	1	1	1	1	1	1	100
5569	0	0	0	0	0	0	0	0	0	0	60
5570	0	0	0	0	0	0	0	0	0	0	50

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