

# ELECTROMAGNETIC EMISSIONS COMPLIANCE REPORT

**FCC Applicant:** LINFINY CORPORATION  
No. 199, Huaya 2nd Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.)

**Product Name:** eNote

**Brand Name:** Avalue

**Model No.:** ENT-13T1

**Model Difference:** N/A

**Report Number:** ER/2020/20054

**FCC ID:** 2AUEH-DB133MU2

**FCC Rule Part:** §15.407, Cat: NII

**Issue Date:** Mar. 20, 2020

**Date of Test:** Feb. 24, 2020 ~ Mar. 17, 2020

**Date of EUT Received:** Feb. 19, 2020

**We hereby certify that:**

The above equipment was tested by SGS Taiwan Ltd. Electronics & Communication Laboratory. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.10: 2013 and the energy emitted by the sample EUT tested as described in this report is in compliance with conducted and radiated emission limits.

The test results of this report relate only to the tested sample identified in this report.

**Approved By:**



**Jim Chang / Manager**



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## Revision History

Report Number	Revision	Description	Issue Date	Remark
ER/2020/20054	Rev.00	Original.	Mar. 20, 2020	Revised By: Karen Huang

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## 1 GENERAL INFORMATION

### 1.1 Product Description

Product Name:	eNote	
Brand Name:	Avalue	
Model No.:	ENT-13T1	
Model Difference:	N/A	
Hardware Version:	N/A	
Software Version:	N/A	
Power Supply:	3.7Vdc from Rechargeable Li-polymer Battery	
	Battery:	Model No.: LIS1633RDPC(SY6) Supplier: Sony Corp.
Modulation type	64QAM, 16QAM, QPSK, BPSK for OFDM 256QAM for OFDM in 802.11ac only	
Transition Rate:	802.11 a: 6/9/12/18/24/36/48/54 Mbps 802.11 n_20MHz: 6.5 – 144.4Mbps 802.11 n_40MHz: 13.5 – 300.0Mbps	802.11 ac_20MHz: 6.5 – 173.3Mbps 802.11 ac_40MHz: 13.5 – 400.0Mbps 802.11 ac_80MHz: 29.3 – 866.7Mbps

### 1.2 Antenna Designation

Antenna Type	Supplier	Antenna Part No.	ANT-A / ANT-B	Freq. (MHz)	Peak Antenna Gain (dBi)	Worst Antenna Gain
PCB	N/A	ANT162442DT-2001A2	ANT-A	5150~5250	2.81	
				5250~5350	2.81	
				5470~5725	2.81	
				5725~5850	2.81	
			ANT-B	5150~5250	4.29	V
				5250~5350	4.29	V
				5470~5725	4.29	V
				5725~5850	4.29	V
		Note: Pre-scanned was done on the above 4 antennas, the ANT-B results higher emission at 5GHz. Therefore, the completed set of measurement was done on the antenna to be presented on this test report.				

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### 1.3 FCC worst power

Wi-Fi 802.11	Frequency Range	Channels	Rated Power (Avg.) (dBm) (Worst case)	Modulation Technology
a	5150~5250	4	9.99	OFDM
	5250~5350	4	9.98	
	5470~5725	12	9.97	
	5725-5850	5	8.83	
n_HT ac_VHT 20M	5150~5250	4	HT: 9.85	OFDM
	5250~5350	4	HT: 9.91	
	5470~5725	12	HT: 9.88	
	5725-5850	5	HT: 8.92	
n_HT ac_VHT 40M	5150~5250	2	HT: 9.88	OFDM
	5250~5350	2	HT: 9.86	
	5470~5725	5	HT: 9.87	
	5725-5850	2	HT: 8.95	
ac_VHT 80M	5150~5250	1	VHT: 7.88	OFDM
	5250~5350	1	VHT: 7.73	
	5470~5725	2	VHT: 7.92	
	5725-5850	1	VHT: 7.99	

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#### 1.4 Test Methodology of Applied Standards

FCC Part 15, Subpart E §15.407  
FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01  
FCC KDB 662911 D01 Multiple Transmitter Output v02r01  
ANSI C63.10:2013

#### 1.5 Test Facility

SGS Taiwan Ltd. Electronics & Communication Laboratory (TAF code 0513)  
No.134, Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan  
24803

FCC Designation number: TW0001

#### 1.6 Special Accessories

There are no special accessories used while test was conducted.

#### 1.7 Equipment Modifications

There was no modification incorporated into the EUT.

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## 2 SYSTEM TEST CONFIGURATION

### 2.1 EUT Configuration

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner which intends to maximize its emission characteristics in a continuous normal application.

### 2.2 EUT Exercise

An engineering test mode (software/firmware) that applicant provided was utilized to manipulate the EUT into transmit, selection of the test channel, and modulation scheme.

### 2.3 Test Procedure

#### 2.3.1 Conducted Emissions

The EUT is placed on a table which is 0.8 m above ground plane. Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30 MHz. The CISPR Quasi-Peak and Average detector mode is employed. The two LISNs provide 50  $\mu$ H/50 ohm of coupling impedance for the measuring instrument. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

#### 2.3.2 Conducted Test (RF)

The active antenna port of the unlicensed wireless device is connected to the spectrum analyzer with attenuator to protect the instrumentation. If a second antenna port is available, it is tested at one operating frequency, with other port(s) appropriately terminated, to verify it has similar output characteristics as the fully tested port.

#### 2.3.3 Radiated Emissions

The EUT is placed on a turn table. For emissions testing at or below 1 GHz, the table height shall be 0.8 m above the reference ground plane. For emission measurements above 1 GHz, the table height shall be 1.5 m. The turn table shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3m away from the receiving antenna which varied from 1m to 4m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. In order to find out the max. emission, the relative positions of this transmitter (EUT) was rotated through three orthogonal axes and measurement procedures for electric field radiated emissions above 1 GHz the EUT measurement is to be made "while keeping the antenna in the 'cone of radiation' from that area and pointed at the area both in azimuth and elevation, with polarization oriented for maximum response." is still within the 3dB illumination BW of the measurement antenna.

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## 2.4 Measurement Results Explanation Example

### 2.4.1 Radiated Emission Test Sites For Measurements From 9 kHz To 30 MHz

Radiated emission below 30MHz is measured in a 9m\*9m\*6m semi-anechoic chamber, the measurements correspond to those obtained at an open-field test site.

There is a comparison data of both open-field test site and semi-Anechoic chamber, and the result came out very similar.

### 2.4.2 For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuation factor between EUT conducted port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly EUT RF output level.

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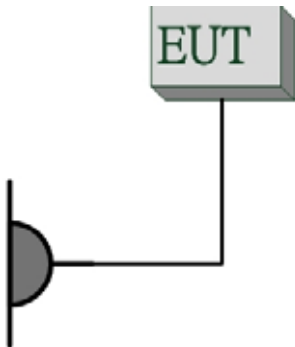
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## 2.5 Configuration of Tested System

**Fig. 2-1 Radiated and Conducted (AC Power line) Emission Configuration**



**Fig. 2-2 Conducted (Antenna Port) Emission Configuration**



**Table 2-1 Equipment Used in Tested System**

Item	Equipment	Mfr/Brand	Model/Type No.	Series No.	Data Cable	Power Cord
1.	WLAN Test Software	N/A	N/A	N/A	N/A	N/A
2.	Notebook	Lenovo	T440P	P0000564	N/A	N/A
3.	Notebook	Lenovo	T440P	PB-02Y6RK	N/A	N/A
4.	DC Power Supply	Agilent	E3640A	MY40005907	N/A	N/A
5.	Adapter	Apple	A1385	N/A	N/A	N/A

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### 3 SUMMARY OF TEST RESULT

FCC Rules	Description Of Test	Result
§15.207	AC Power Line Conducted Emission	Compliant
§15.403(i) §15.407(e)	26 dB & 6dB Emission Bandwidth	Compliant
§15.407(a)	Maximum Conducted Output Power	Compliant
§15.407(a)	Power Spectral Density	Compliant
§15.205 §15.209 §15.407(b)	Undesirable Radiated Emissions	Compliant
§15.407(c)	Transmission in case of Absence of Information	Compliant
§15.407(g)	Frequency Stability	Compliant
§15.203 §15.407(a)	Antenna Requirement	Compliant

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## 4 DESCRIPTION OF TEST MODES

### 4.1 802.11a/n/ac operated in U-NII Bands

#### Operated band in 5150 MHz ~5250 MHz:

20 M	
CH	Freq (MHz)
36	5180
40	5200
44	5220
48	5240

40 M	
CH	Freq (MHz)
38	5190
46	5230

80 M	
CH	Freq (MHz)
42	5210

#### Operated band in 5250 MHz ~5350 MHz:

20 M	
CH	Freq (MHz)
52	5260
56	5280
60	5300
64	5320

40 M	
CH	Freq (MHz)
54	5270
62	5310

80 M	
CH	Freq (MHz)
58	5290

#### Operated band in 5470 MHz ~5725 MHz:

20 M	
CH	Freq (MHz)
100	5500
104	5520
108	5540
112	5560
116	5580
120	5600
124	5620
128	5640
132	5660
136	5680
140	5700
144	5720

40 M	
CH	Freq (MHz)
102	5510
110	5550
118	5590
126	5630
134	5670
142	5710

80 M	
CH	Freq (MHz)
106	5530
122	5610
138	5690

#### Operated band in 5745 MHz ~5850 MHz:

20 M	
CH	Freq (MHz)
149	5745
153	5765
157	5785
161	5805
165	5825

40 M	
CH	Freq (MHz)
151	5755
159	5795

80 M	
CH	Freq (MHz)
155	5775

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## 4.2 The Worst Test Modes and Channel Details

1. The EUT has been tested under operating condition.
2. Test program used to control the EUT for staying in continuous transmitting mode is programmed.
3. Investigation has been done on all the possible configurations for searching the worst case. The given UE is pre-scanned among below modes.

Modulation	Transmission Chain				Multiple Transmission Spatial
<input checked="" type="checkbox"/> 802.11 a	<input checked="" type="checkbox"/> Ch0	<input checked="" type="checkbox"/> Ch1	<input type="checkbox"/> Ch2	<input type="checkbox"/> Ch3	<input checked="" type="checkbox"/> 2TX
<input checked="" type="checkbox"/> 802.11 n	<input checked="" type="checkbox"/> Ch0	<input checked="" type="checkbox"/> Ch1	<input type="checkbox"/> Ch2	<input type="checkbox"/> Ch3	<input checked="" type="checkbox"/> MIMO
<input checked="" type="checkbox"/> 802.11 ac	<input checked="" type="checkbox"/> Ch0	<input checked="" type="checkbox"/> Ch1	<input type="checkbox"/> Ch2	<input type="checkbox"/> Ch3	<input checked="" type="checkbox"/> MIMO
<input type="checkbox"/> 802.11 ax	<input type="checkbox"/> Ch0	<input type="checkbox"/> Ch1	<input type="checkbox"/> Ch2	<input type="checkbox"/> Ch3	<input type="checkbox"/> MIMO

4. Therefore, below summary is the modes of test configuration that yield the highest reading and generate the highest emission chosen to carry out the relevantly mandatory test items.

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## 4.2.1 RADIATED EMISSION TEST:

RADIATED EMISSION TEST (BELOW 1 GHz)						
MODE	FREQUENCY BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION	DATA RATE (Mbps)	AN-TENNA PORT
802.11a	5180~5240	36 to 48	44	OFDM	6	2TX
	5260~5320	52 to 64	60			
	5500~5720	100 to 144	116			
	5745~5825	149 to 165	157			
802.11ac_VHT80	5210	42	42		MCS0	MIMO
	5290	58	58			
	5530~5690	106 to 138	106			
	5775	155	155			

RADIATED EMISSION TEST (ABOVE 1 GHz)						
MODE	FREQUENCY BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION	DATA RATE (Mbps)	AN-TENNA PORT
802.11a	5180~5240	36 to 48	36,44,48	OFDM	6	2TX
	5260~5320	52 to 64	52,60,64			
	5500~5720	100 to 144	100,116,140,144			
	5745~5825	149 to 165	149,157,165			
802.11n_HT20	5180~5240	36 to 48	36,44,48		MCS8	MIMO
	5260~5320	52 to 64	52,60,64			
	5500~5720	100 to 144	100,116,140,144			
	5745~5825	149 to 165	149,157,165			
802.11n_HT40	5190~5230	38 to 46	38,46		MCS8	MIMO
	5270~5310	54 to 62	54,62			
	5510~5710	102 to 142	102,110,134,142			
	5755~5795	151 to 159	151,159			
802.11ac_VHT80	5210	42	42		MCS0	MIMO
	5290	58	58			
	5530~5690	106 to 138	106,122,138			
	5775	155	155			

**Note:**

The field strength of radiation emission was measured as EUT stand-up position (H mode) and lie down position (E1, E2 mode) for 802.11a/n WLAN Transmitter for channel Low, Mid and High, the worst case H position was reported.

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## 4.2.2 ANTENNA PORT CONDUCTED MEASUREMENT:

CONDUCTED TEST						
MODE	FREQUENCY BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION	DATA RATE (Mbps)	AN-TENNA PORT
802.11a	5180~5240	36 to 48	36,44,48	OFDM	6	2TX
	5260~5320	52 to 64	52,60,64			
	5500~5720	100 to 144	100,116,140,144			
	5745~5825	149 to 165	149,157,165			
802.11n_HT20	5180~5240	36 to 48	36,44,48		MCS8	MIMO
	5260~5320	52 to 64	52,60,64			
	5500~5720	100 to 144	100,116,140,144			
	5745~5825	149 to 165	149,157,165			
802.11n_HT40	5190~5230	38 to 46	38,46		MCS8	MIMO
	5270~5310	54 to 62	54,62			
	5510~5710	102 to 142	102,110,134,142			
	5755~5795	151 to 159	151,159			
802.11ac_VHT80	5210	42	42		MCS0	MIMO
	5290	58	58			
	5530~5690	106 to 138	106,122,138			
	5775	155	155			

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## 5 MEASUREMENT UNCERTAINTY

Test Items	Uncertainty
AC Power Line Conducted Emission	+/- 2.586 dB
26dB & 6dB Emission Bandwidth	+/- 123.36 Hz
The Maximum Output Power Measurement	+/- 0.96 dB
Peak Power Spectral Density Measurement	+/- 1.67 dB
Frequency Stability	+/- 123.36 Hz
Temperature	+/- 0.65 °C
Humidity	+/- 4.6 %
DC / AC Power Source	DC= +/- 0.13%, AC=+/- 0.2%

Radiated Spurious Emission Measurement Uncertainty	
Polarization: Vertical	9kHz~30MHz: +/-2.3dB
	30MHz - 180MHz: +/- 3.37dB
	180MHz -417MHz: +/- 3.19dB
	0.417GHz-1GHz: +/- 3.19dB
	1GHz - 18GHz: +/- 4.04dB
	18GHz - 40GHz: +/- 4.04dB
Polarization: Horizontal	9kHz~30MHz: +/-2.3dB
	30MHz - 167MHz: +/- 4.22dB
	167MHz -500MHz: +/- 3.44dB
	0.5GHz-1GHz: +/- 3.39dB
	1GHz - 18GHz: +/- 4.08dB
	18GHz - 40GHz: +/- 4.08dB

### Note:

1. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.
2. The conformity assessment statement in this report is based solely on the test results, measurement uncertainty is excluded.

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## 6 CONDUCTED EMISSION TEST

### 6.1 Standard Applicable

Frequency range within 150 kHz to 30 MHz shall not exceed the Limit table as below.

Frequency range MHz	Limits dB(μV)	
	Quasi-peak	Average
0.15 to 0.50	66 to 56	56 to 46
0.50 to 5	56	46
5 to 30	60	50

Note

- 1.The lower limit shall apply at the transition frequencies
- 2.The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz.

### 6.2 Measurement Equipment Used

Conducted Emission Test Site					
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
EMI Test Receiver	R&S	ESCI 7	1166.5950.07	07/04/2019	07/03/2020
LISN	SCHWARZBECK	NSLK 8127	8127-649	04/02/2019	04/01/2020
Test Software	Farad	EZ-EMC	Ver. SGS-03A2	N.C.R	N.C.R
Coaxial Cables	N/A	WK CE Cable	N/A	01/02/2020	01/01/2021

### 6.3 EUT Setup

1. The conducted emission tests were performed in the test site, using the setup in accordance with the ANSI C63.10:2013.
2. The AC/DC Power adaptor of EUT was plug-in LISN. The rear of the EUT and peripherals were placed flushed with the rear of the tabletop.
3. The LISN was connected with 120Vac/60Hz power source.

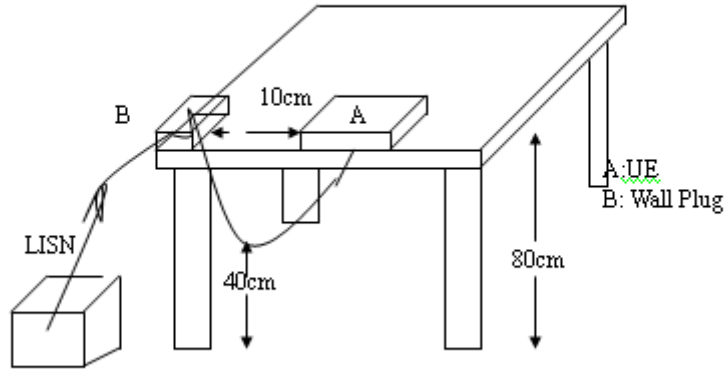
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## 6.4 Test SET-UP



## 6.5 Measurement Procedure

1. The EUT was placed on a table which is 0.8m above ground plane.
2. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
3. Repeat above procedures until all phases of power being supplied by given UE are completed.

## 6.6 Measurement Result

Note: Refer to next page for measurement data and plots.

Note2: The \* reveals the worst-case results that closet to the limit.

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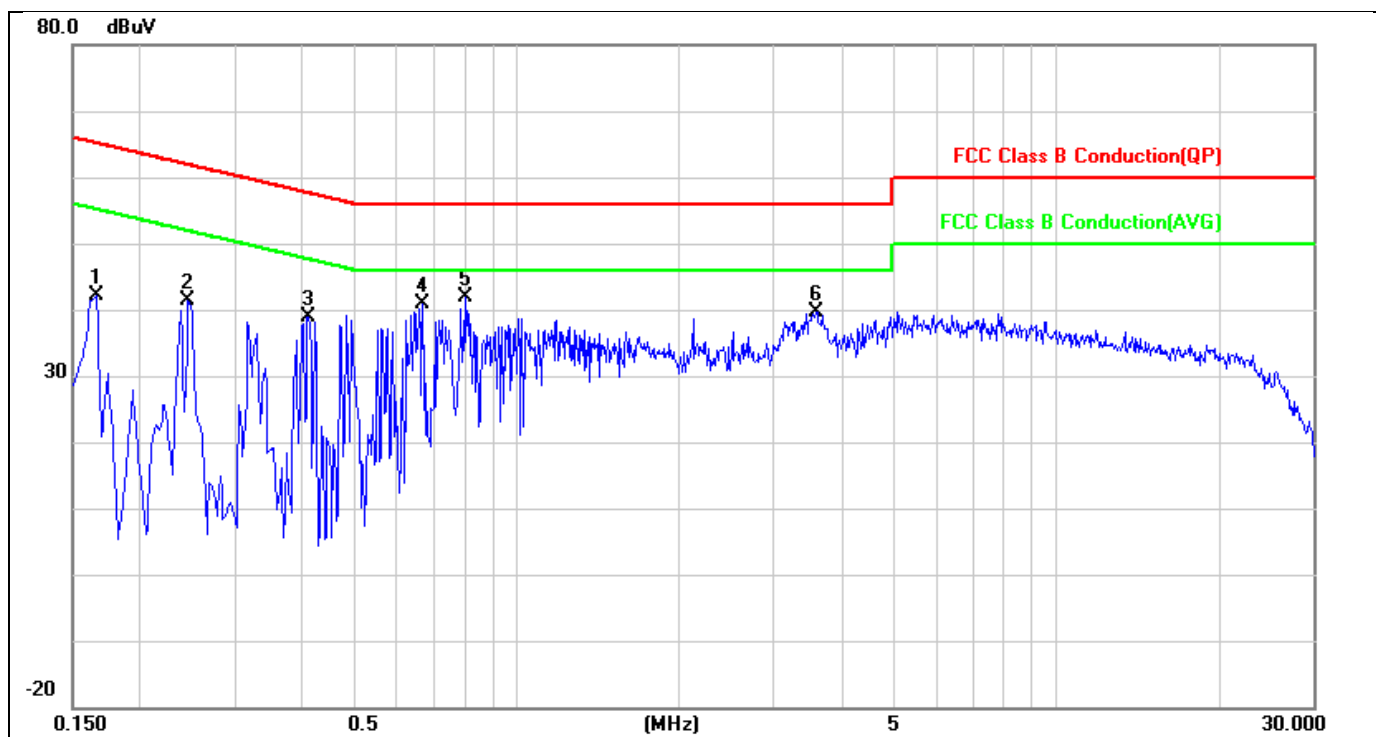
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## AC POWER LINE CONDUCTED EMISSION TEST DATA

Description:	Operation	Date:	2020/03/17
Line:	L1	Temp.( )/Hum.(%):	23( )/54%
Test Voltage:	AC 120V/60Hz	Test By:	Thomas
Report Number	ER/2020/20054		



No.	Mk.	Freq. ( MHz )	Reading ( dBuV )	Factor ( dB )	Measure- ment ( dBuV )	Limit ( dBuV )	Over ( dB )	Detector	Comment
1		0.1660	42.02	0.03	42.05	65.16	-23.11	peak	
2		0.2460	41.41	0.03	41.44	61.89	-20.45	peak	
3		0.4100	38.93	0.03	38.96	57.65	-18.69	peak	
4		0.6700	40.80	0.03	40.83	56.00	-15.17	peak	
5	*	0.8020	41.80	0.04	41.84	56.00	-14.16	peak	
6		3.5860	39.62	0.13	39.75	56.00	-16.25	peak	

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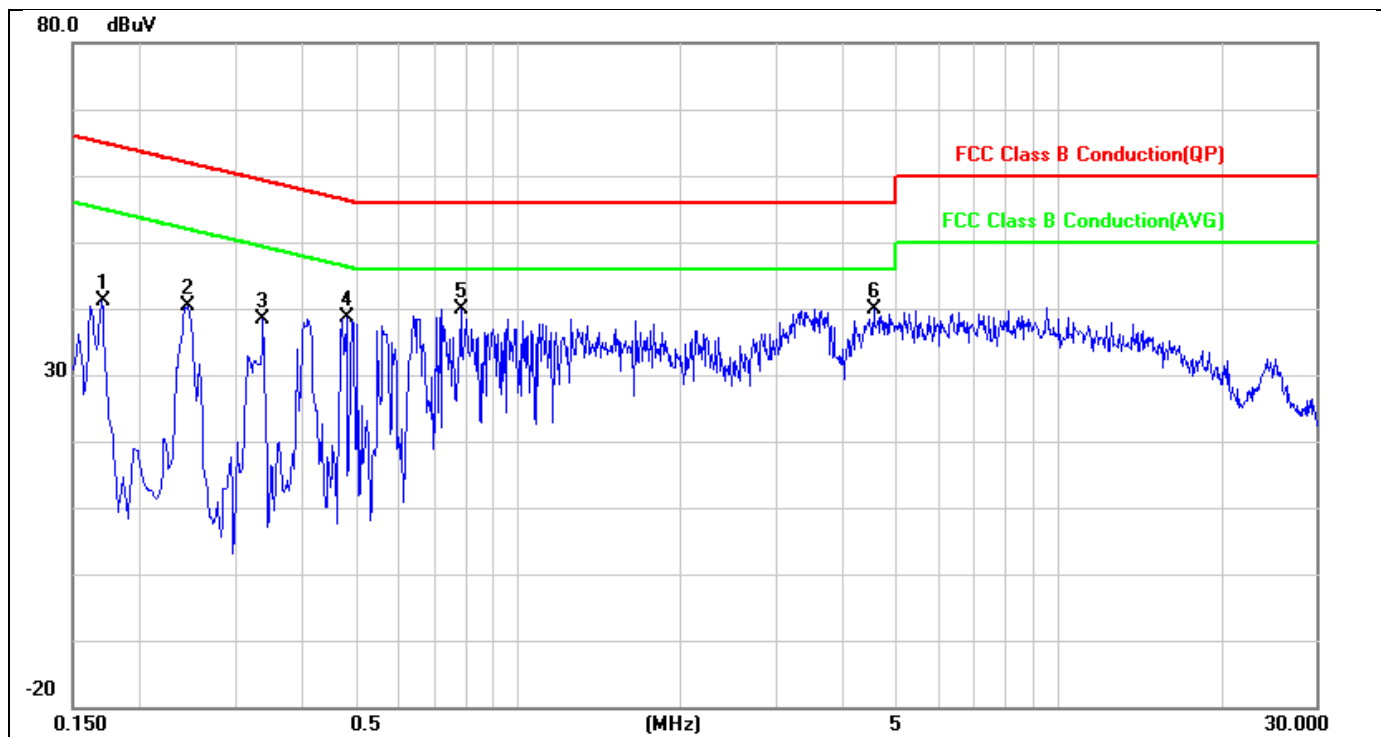
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**Description:** Operation  
**Line:** N  
**Test Voltage:** AC 120V/60Hz  
**Report Number:** ER/2020/20054

**Date:** 2020/03/17  
**Temp.( )/Hum.(%):** 23( )/54%  
**Test By:** Thomas



No.	Mk.	Freq. ( MHz )	Reading ( dBuV )	Factor ( dB )	Measurement ( dBuV )	Limit ( dBuV )	Over ( dB )	Detector	Comment
1		0.1700	41.20	0.03	41.23	64.96	-23.73	peak	
2		0.2460	40.42	0.03	40.45	61.89	-21.44	peak	
3		0.3380	38.42	0.03	38.45	59.25	-20.80	peak	
4		0.4820	38.50	0.03	38.53	56.30	-17.77	peak	
5		0.7860	39.80	0.04	39.84	56.00	-16.16	peak	
6	*	4.5700	39.80	0.18	39.98	56.00	-16.02	peak	

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## 7 DUTY CYCLE TEST SIGNAL

Pre-analysis Check: While conducting average power measurement, duty cycle of each mode shall be checked to ensure its duty cycle in order to compensate for the loss due to insufficient ratio of duty cycle. All duty cycle is pre-scanned, and result as obtained below shows only the most representative ones where duty cycle is conducted as the given transmission with given virtual operation that expresses the percentage.

### 7.1 Measurement Procedure:

1. Set span = Zero
2. RBW = 8MHz
3. VBW = 8MHz,
4. Detector = Peak

Duty Cycle:

Mode	Duty Cycle (%) =Ton / (Ton+Toff)	Duty Factor (dB) =10*log ( 1/Duty Cycle )	1/T (kHz)	VBW setting (kHz)
802.11a	94.10	0.26	2.45	3.00
802.11n_20	93.29	0.30	2.81	3.00
802.11n_40	88.40	0.54	5.25	6.00
802.11ac_80	87.34	0.59	12.08	13.00

Duty Cycle Factor:  $10 * \log(1/0.941) = 0.26$

Duty Cycle Factor:  $10 * \log(1/0.9329) = 0.3$

Duty Cycle Factor:  $10 * \log(1/0.884) = 0.54$

Duty Cycle Factor:  $10 * \log(1/0.8734) = 0.59$

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## 7.2 DUTY CYCLE TEST SIGNAL MEASUREMENT RESULT

802.11a 20MHz\5180 MHz-5180



802.11n 20MHz\5180 MHz-5180



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## 802.11n 40MHz\5190 MHz-5190



## 802.11ac 80MHz\5210 MHz-5210



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## 8 26DB & 6DB EMISSION BANDWIDTH MEASUREMENT

### 8.1 Standard Applicable

There is no limit bandwidth for U-NII-1, U-NII-2-A and U-NII-2-C.

The minimum of 6dB Bandwidth measurement is 0.5 MHz for U-NII-3

### 8.2 Measurement Procedure

1. Place the EUT on the table and set it in transmitting mode.
2. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules.
3. Remove the antenna from the EUT and then connect a low loss RF cable from the Antenna port to the spectrum analyzer.
  - 3.a. 26dB Band width Measurement: Set the spectrum analyzer as 1% of emission BW  
Sweep=auto,  
Detector = Peak,  
Trace Mode = Max Hold,  
Manually readjust RBW until the RBW/EBW ratio is 1% based on EBW as observed on the result of pre-sequence measurement.
  - 3.b. Mark the peak frequency and -26dB (upper and lower) frequency.
4. Repeat the procedures as list above until all test default channels (low, middle, and high) are completed.
5. Minimum Emission Bandwidth for the band 5.725-5.850GHz.
  - a. Set the spectrum analyzer as  
RBW = 100 kHz,  
VBW = 3\*RBW,  
Span = 30M/50MHz,  
Detector=Peak,  
Sweep=auto
  - b. Mark the peak frequency and -6dB (upper and lower) frequency.

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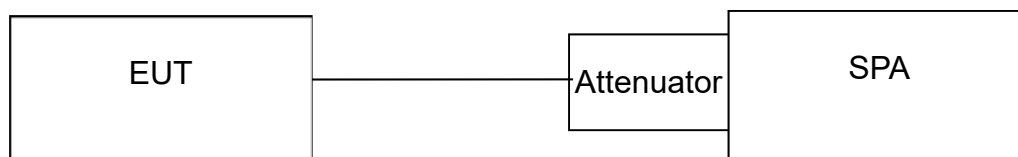
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### 8.3 Measurement Equipment Used

SGS Conducted Room					
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due
EXA Spectrum Analyzer	Agilent	N9010A	MY50420195	05/02/2019	05/01/2020
DC Power Supply	Agilent	E3640A	MY40005907	10/22/2019	10/21/2020
Temperature Chamber	TERCHY	MHG-120LF	911009	05/17/2019	05/16/2020
Attenuator	Mini-Circuit	BW-S10W2+	2	01/02/2020	01/01/2021

### 8.4 Test Set-up



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## 8.5 Measurement Result

### 8.5.1 FCC 26dB Bandwidth

802.11a_Ch0			802.11a_Ch1		
Freq. (MHz)	26dB BW (MHz)	10 Log (B) (dB)	Freq. (MHz)	26dB BW (MHz)	10 Log (B) (dB)
5180	19.71	12.947	5180	19.73	12.951
5220	19.52	12.905	5220	19.91	12.991
5240	19.94	12.997	5240	20	13.010
5260	19.67	12.938	5260	19.94	12.997
5300	19.9	12.989	5300	19.63	12.929
5320	19.93	12.995	5320	19.86	12.980
5500	19.66	12.936	5500	19.76	12.958
5580	19.68	12.940	5580	19.77	12.960
5700	20	13.010	5700	19.74	12.953
5720	19.62	12.927	5720	19.62	12.927

802.11n_HT20_Ch0			802.11n_HT20_Ch1		
Freq. (MHz)	26dB BW (MHz)	10 Log (B) (dB)	Freq. (MHz)	26dB BW (MHz)	10 Log (B) (dB)
5180	19.9	12.989	5180	20.1	13.032
5220	19.98	13.006	5220	20.3	13.075
5240	20.02	13.015	5240	20.05	13.021
5260	20.01	13.012	5260	19.98	13.006
5300	19.97	13.004	5300	20.2	13.054
5320	20.08	13.028	5320	20.09	13.030
5500	19.91	12.991	5500	20.22	13.058
5580	20.12	13.036	5580	19.97	13.004
5700	20.01	13.012	5700	20.18	13.049
5720	20.05	13.021	5720	20.07	13.025

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802.11n\_HT40\_Ch0

Freq. (MHz)	26dB BW (MHz)	10 Log (B) (dB)	Freq. (MHz)	26dB BW (MHz)	10 Log (B) (dB)
5190	40.15	16.037	5190	40.44	16.068
5230	39.92	16.012	5230	40	16.021
5270	39.86	16.005	5270	39.89	16.009
5310	40.08	16.029	5310	39.93	16.013
5510	39.84	16.003	5510	39.87	16.006
5550	40.1	16.031	5550	40.15	16.037
5670	39.97	16.017	5670	39.99	16.020
5710	39.99	16.020	5710	40.01	16.022

802.11n\_HT40\_Ch1

802.11ac\_VHT80\_Ch0

Freq. (MHz)	26dB BW (MHz)	10 Log (B) (dB)	Freq. (MHz)	26dB BW (MHz)	10 Log (B) (dB)
5210	87.99	19.444	5210	81.92	19.134
5290	85.15	19.302	5290	83.06	19.194
5530	84.67	19.277	5530	94.74	19.765
5610	82.99	19.190	5610	83.24	19.203
5690	85.08	19.298	5690	86.5	19.370

802.11ac\_VHT80\_Ch1

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## 8.5.2 6dB Bandwidth (5725 MHz~ 5850 MHz) measure with Peak detector for FCC

802.11a_Ch0			802.11a_Ch1		
Freq. (MHz)	6dB BW (MHz)	10 Log (B) (dB)	Freq. (MHz)	6dB BW (MHz)	10 Log (B) (dB)
5745	16.36	12.138	5745	16.37	12.140
5785	16.36	12.138	5785	16.35	12.135
5825	16.36	12.138	5825	16.36	12.138

802.11n_HT20_Ch0			802.11n_HT20_Ch1		
Freq. (MHz)	6dB BW (MHz)	10 Log (B) (dB)	Freq. (MHz)	6dB BW (MHz)	10 Log (B) (dB)
5745	17.2	12.355	5745	17.29	12.378
5785	17.32	12.385	5785	17.3	12.380
5825	17.39	12.403	5825	17.25	12.368

802.11n_HT40_Ch0			802.11n_HT40_Ch1		
Freq. (MHz)	6dB BW (MHz)	10 Log (B) (dB)	Freq. (MHz)	6dB BW (MHz)	10 Log (B) (dB)
5755	35.75	15.533	5755	35.71	15.528
5795	35.74	15.532	5795	35.5	15.502

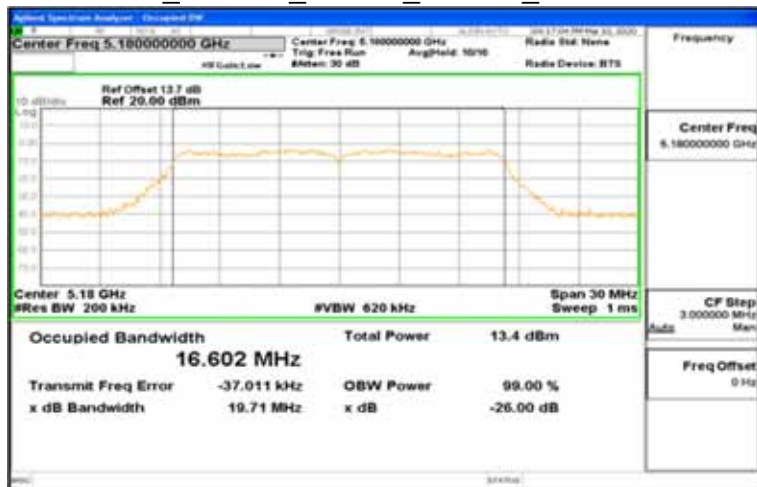
802.11ac_VHT80_Ch0			802.11ac_VHT80_Ch1		
Freq. (MHz)	6dB BW (MHz)	10 Log (B) (dB)	Freq. (MHz)	6dB BW (MHz)	10 Log (B) (dB)
5775	76.26	18.823	5775	76.44	18.833

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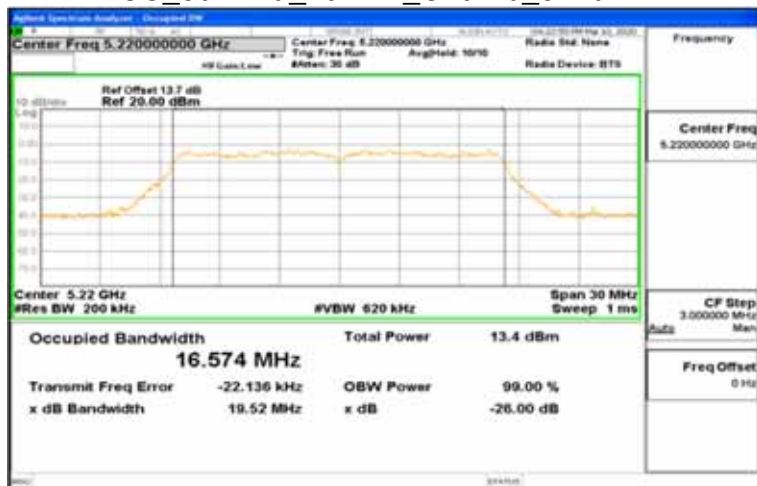
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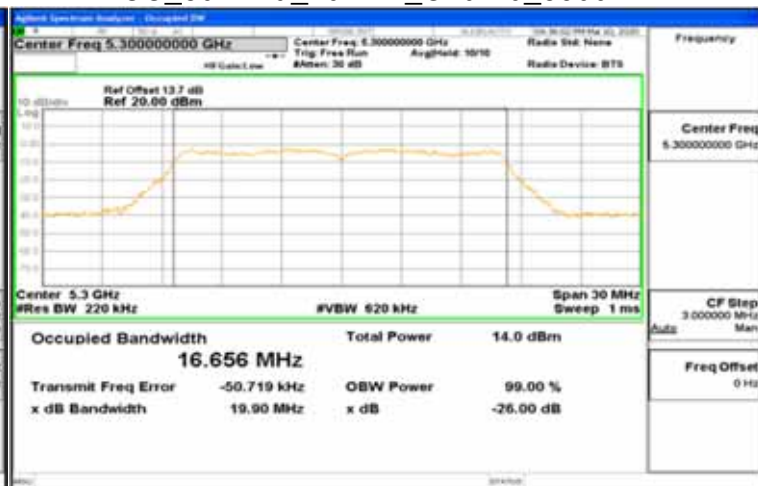
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FCC\_802.11a\_20MHz\_Chain0\_5220MHz



FCC\_802.11a\_20MHz\_Chain0\_5300MHz



FCC\_802.11a\_20MHz\_Chain0\_5240MHz



FCC\_802.11a\_20MHz\_Chain0\_5320MHz



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FCC\_802.11a\_20MHz\_Chain0\_5720MHz



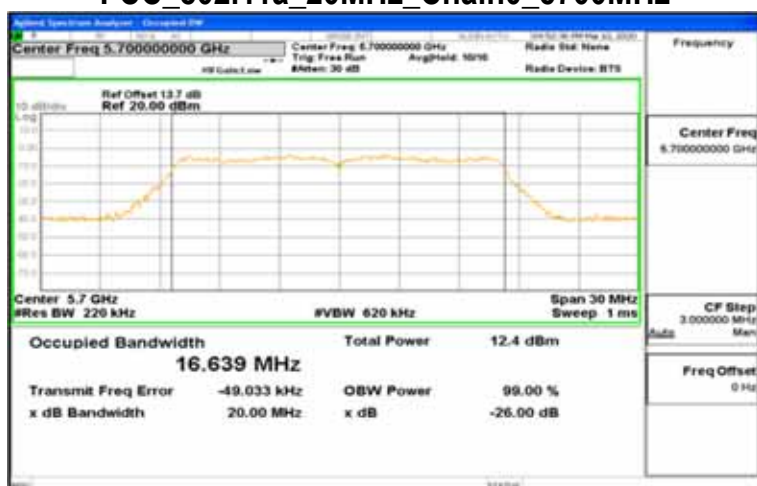
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FCC\_802.11a\_20MHz\_Chain0\_5745MHz



FCC\_802.11a\_20MHz\_Chain0\_5700MHz



FCC\_802.11a\_20MHz\_Chain0\_5785MHz



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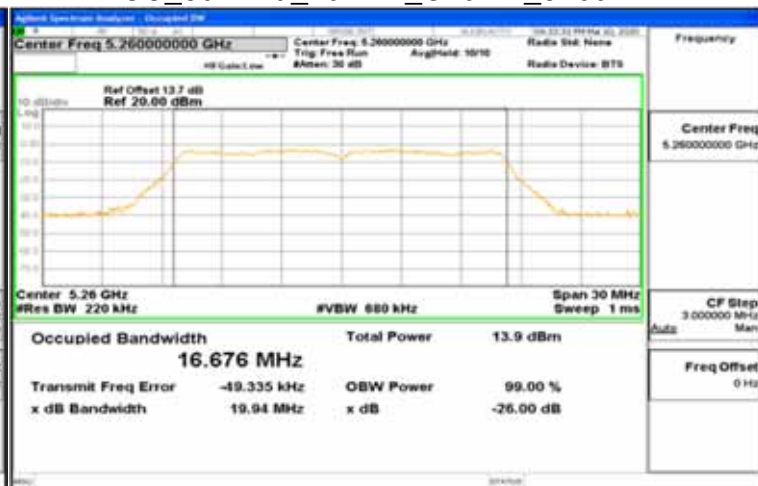
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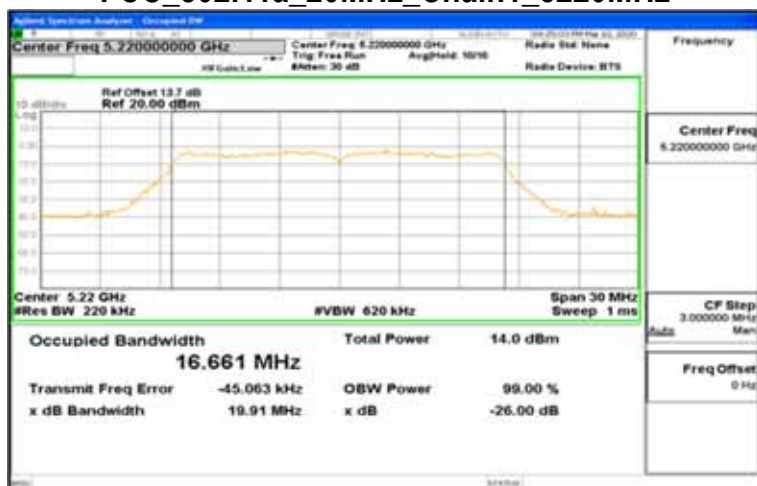
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FCC\_802.11a\_20MHz\_Chain1\_5260MHz



FCC\_802.11a\_20MHz\_Chain1\_5220MHz



FCC\_802.11a\_20MHz\_Chain1\_5300MHz



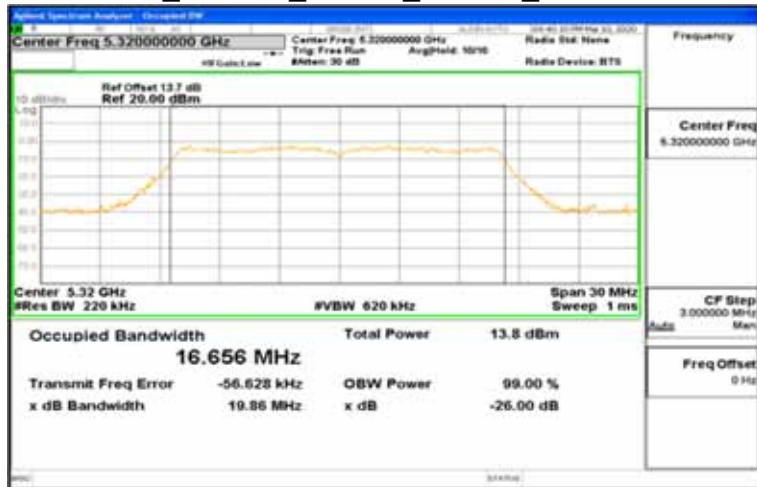
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FCC\_802.11a\_20MHz\_Chain1\_5320MHz



FCC\_802.11a\_20MHz\_Chain1\_5700MHz



FCC\_802.11a\_20MHz\_Chain1\_5500MHz



FCC\_802.11a\_20MHz\_Chain1\_5720MHz



FCC\_802.11a\_20MHz\_Chain1\_5580MHz



FCC\_802.11a\_20MHz\_Chain1\_5745MHz



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FCC\_802.11n\_20MHz\_Chain0\_5240MHz



FCC\_802.11n\_20MHz\_Chain0\_5180MHz



FCC\_802.11n\_20MHz\_Chain0\_5260MHz



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FCC\_802.11n\_20MHz\_Chain0\_5320MHz



FCC\_802.11n\_20MHz\_Chain0\_5700MHz



FCC\_802.11n\_20MHz\_Chain0\_5500MHz



FCC\_802.11n\_20MHz\_Chain0\_5720MHz



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FCC\_802.11n\_20MHz\_Chain0\_5745MHz



FCC\_802.11n\_20MHz\_Chain1\_5180MHz



FCC\_802.11n\_20MHz\_Chain0\_5785MHz



FCC\_802.11n\_20MHz\_Chain1\_5220MHz



FCC\_802.11n\_20MHz\_Chain0\_5825MHz



FCC\_802.11n\_20MHz\_Chain1\_5240MHz



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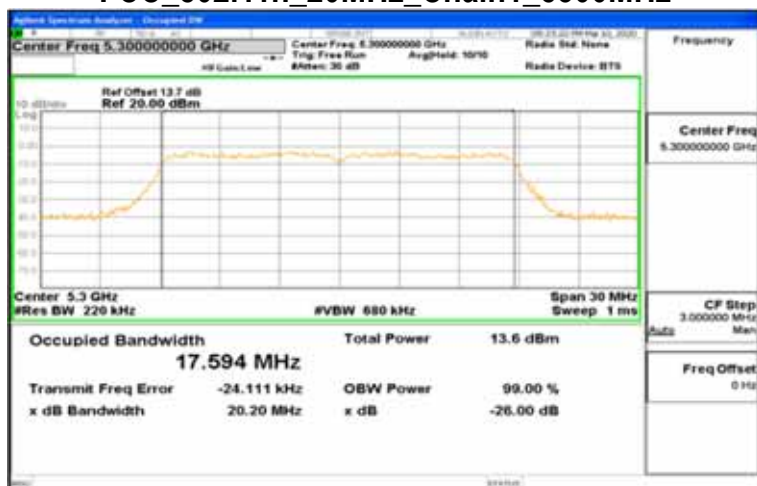
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FCC\_802.11n\_20MHz\_Chain1\_5500MHz



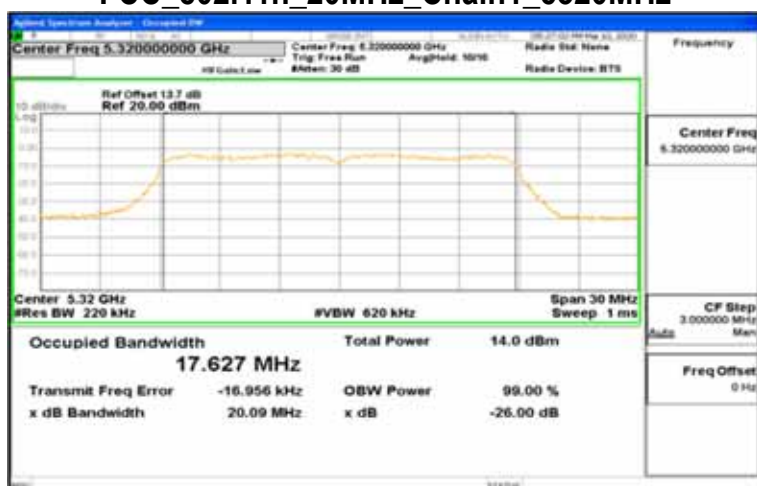
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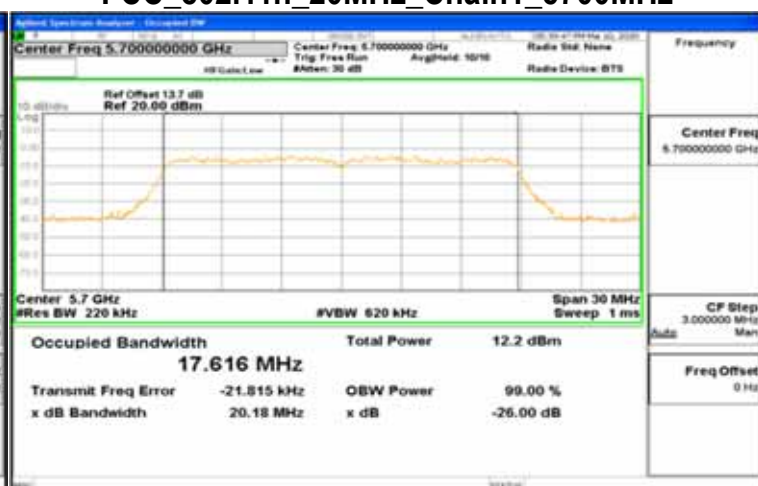
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FCC\_802.11n\_20MHz\_Chain1\_5320MHz



FCC\_802.11n\_20MHz\_Chain1\_5700MHz



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FCC 802.11n 20MHz\_Chain1\_5720MHz



FCC 802.11n 20MHz\_Chain1\_5825MHz



FCC 802.11n 20MHz\_Chain1\_5745MHz



FCC 802.11n 40MHz\_Chain0\_5190MHz



FCC 802.11n 20MHz\_Chain1\_5785MHz



FCC 802.11n 40MHz\_Chain0\_5230MHz



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FCC\_802.11n\_40MHz\_Chain0\_5270MHz



FCC\_802.11n\_40MHz\_Chain0\_5550MHz



FCC\_802.11n\_40MHz\_Chain0\_5310MHz



FCC\_802.11n\_40MHz\_Chain0\_5670MHz



FCC\_802.11n\_40MHz\_Chain0\_5510MHz



FCC\_802.11n\_40MHz\_Chain0\_5710MHz



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FCC\_802.11n\_40MHz\_Chain0\_5755MHz



FCC\_802.11n\_40MHz\_Chain1\_5230MHz



FCC\_802.11n\_40MHz\_Chain0\_5795MHz



FCC\_802.11n\_40MHz\_Chain1\_5270MHz



FCC\_802.11n\_40MHz\_Chain1\_5190MHz



FCC\_802.11n\_40MHz\_Chain1\_5310MHz



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### FCC\_802.11n\_40MHz\_Chain1\_5510MHz



### FCC\_802.11n\_40MHz\_Chain1\_5710MHz



### FCC\_802.11n\_40MHz\_Chain1\_5550MHz



### FCC\_802.11n\_40MHz\_Chain1\_5755MHz



### FCC\_802.11n\_40MHz\_Chain1\_5670MHz



### FCC\_802.11n\_40MHz\_Chain1\_5795MHz



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### FCC\_802.11ac\_80MHz\_Chain0\_5210MHz



### FCC\_802.11ac\_80MHz\_Chain0\_5610MHz



### FCC\_802.11ac\_80MHz\_Chain0\_5290MHz



### FCC\_802.11ac\_80MHz\_Chain0\_5690MHz



### FCC\_802.11ac\_80MHz\_Chain0\_5530MHz



### FCC\_802.11ac\_80MHz\_Chain0\_5775MHz



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FCC\_802.11ac\_80MHz\_Chain1\_5210MHz



FCC\_802.11ac\_80MHz\_Chain1\_5610MHz



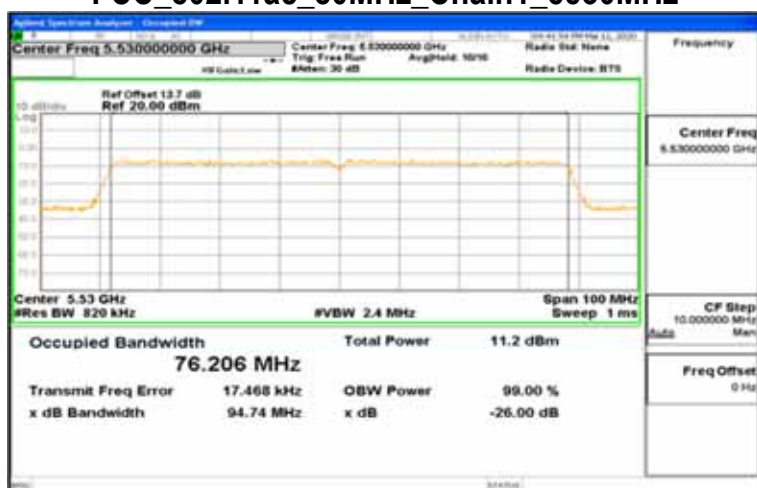
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FCC\_802.11ac\_80MHz\_Chain1\_5690MHz



FCC\_802.11ac\_80MHz\_Chain1\_5530MHz



FCC\_802.11ac\_80MHz\_Chain1\_5775MHz



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### 8.5.3 99% BW Verification for DFS Function

802.11a\_Ch0

Freq. (MHz)	Measured Freq. (MHz)	Limit (MHz)
5240	5248.33	< 5250
5745	5736.78	> 5725

802.11a\_Ch1

Freq. (MHz)	Measured Freq. (MHz)	Limit (MHz)
5240	5248.32	< 5250
5745	5736.78	> 5725

802.11n\_HT20\_Ch0

Freq. (MHz)	Measured Freq. (MHz)	Limit (MHz)
5240	5248.81	< 5250
5745	5736.21	> 5725

802.11n\_HT20\_Ch1

Freq. (MHz)	Measured Freq. (MHz)	Limit (MHz)
5240	5248.81	< 5250
5745	5736.21	> 5725

802.11n\_HT40\_Ch0

Freq. (MHz)	Measured Freq. (MHz)	Limit (MHz)
5230	5248.01	< 5250
5755	5737.01	> 5725

802.11n\_HT40\_Ch1

Freq. (MHz)	Measured Freq. (MHz)	Limit (MHz)
5230	5248.04	< 5250
5755	5737.03	> 5725

802.11ac\_VHT80\_Ch0

Freq. (MHz)	Measured Freq. (MHz)	Limit (MHz)
5210	5248.09	< 5250
5775	5737.08	> 5725

802.11ac\_VHT80\_Ch1

Freq. (MHz)	Measured Freq. (MHz)	Limit (MHz)
5210	5248.08	< 5250
5775	5737.07	> 5725

Please see next page for test plots.

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802.11a\_5240MHz (Ch0)



802.11a\_5240MHz (Ch1)



802.11a\_5745MHz



802.11a\_5745MHz

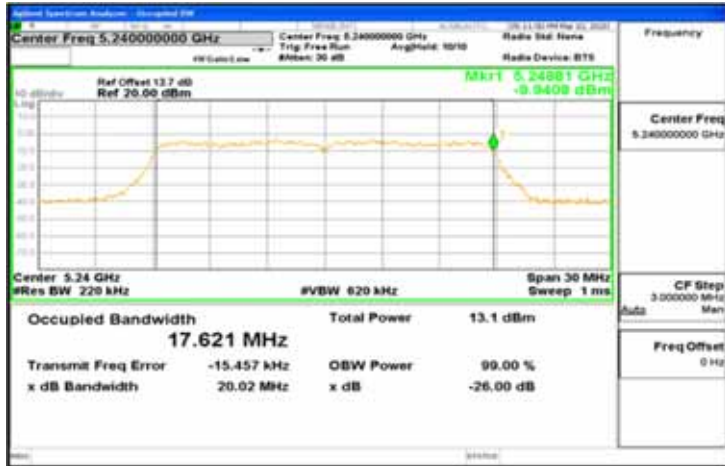


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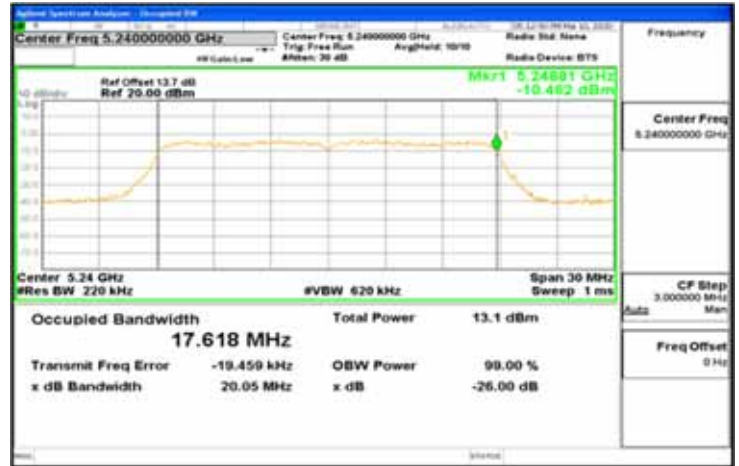
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802.11n\_20MHz\_5240MHz (Ch0)



802.11n\_20MHz\_5240MHz (Ch1)



802.11n\_20MHz\_5745MHz



802.11n\_20MHz\_5745MHz



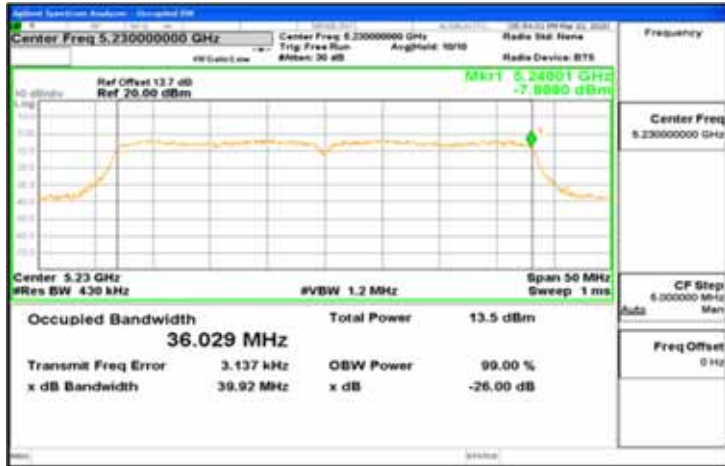
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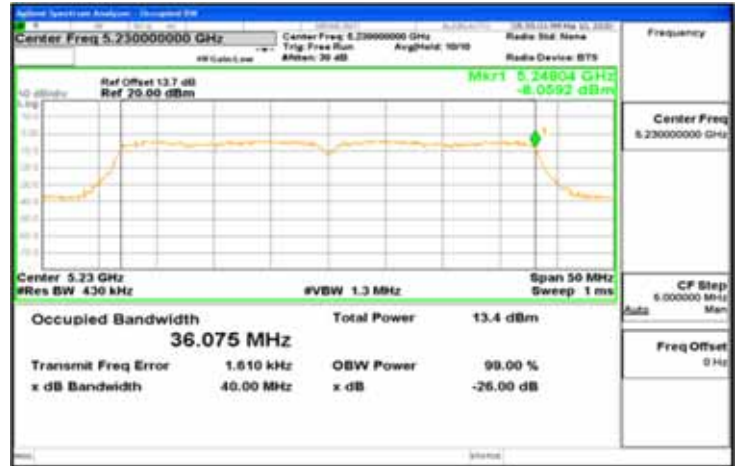
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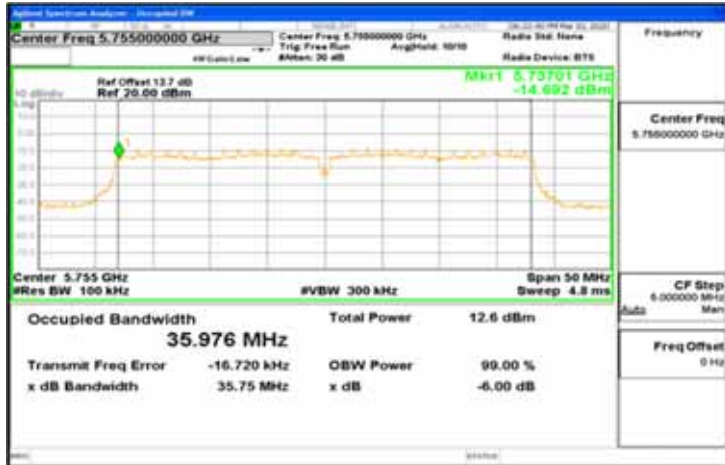
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802.11n\_40MHz\_5230MHz (Ch1)



802.11n\_40MHz\_5755MHz



802.11n\_40MHz\_5755MHz

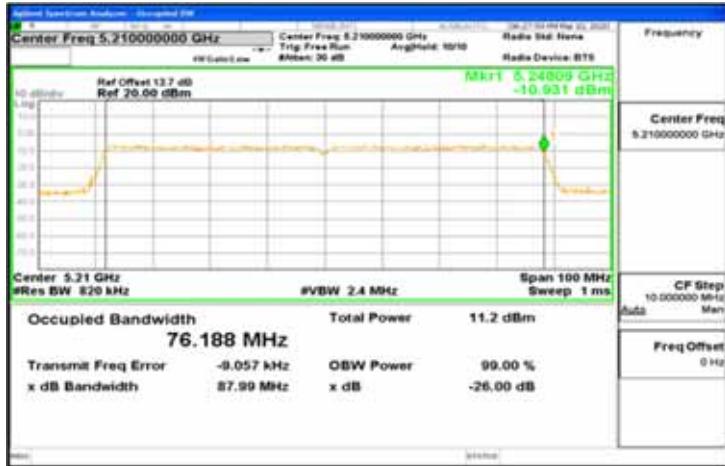


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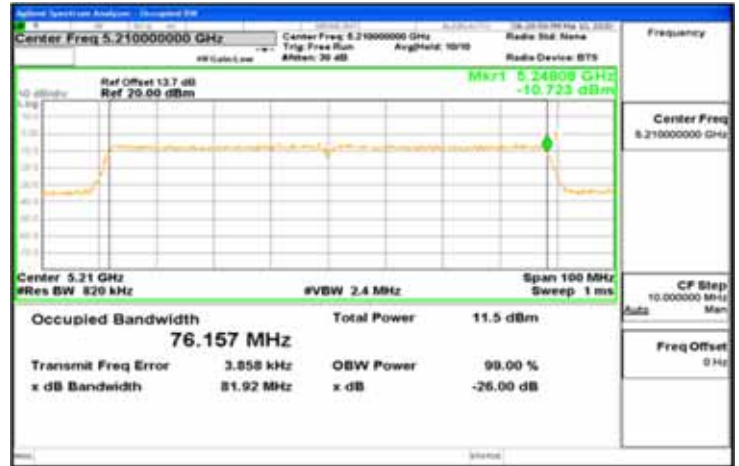
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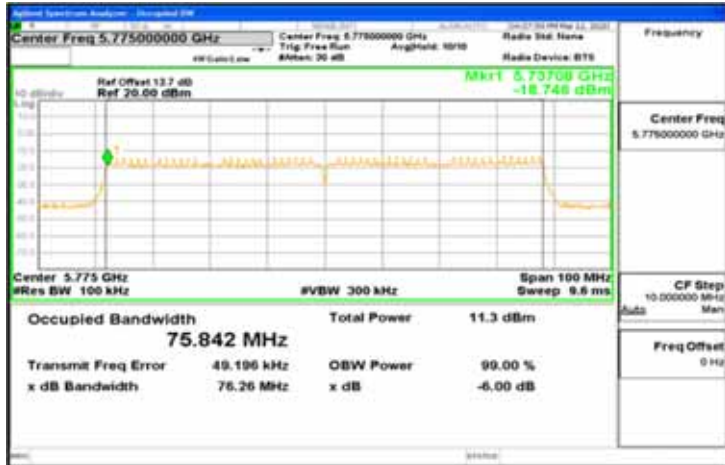
802.11ac\_80MHz\_5210MHz (Ch0)



802.11ac\_80MHz\_5210MHz (Ch1)



802.11ac\_80MHz\_5775MHz



802.11ac\_80MHz\_5775MHz



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## 9 MAXIMUM CONDUCTED OUTPUT POWER MEASUREMENT

### 9.1 Standard Applicable

#### FCC

OPERZTION Band	EUT CATEGORY		LIMIT
U-NII-1		Access Point (Master device )	1 Watt(30dBm)
		Fixed point-to-point Access Ponit	1 Watt(30dBm)
	√	Mobile and portable client device	250mW(23.98dBm)
U-NII-2A	√		250mW(23.98dBm) or 11dBm+10 log B
U-NII-2C	√		250mW(23.98dBm) or 11dBm+10 log B
U-NII-3	√		1 Watt(30dBm)
If transmitting antennas of directional gain greater than 6 dBi are used, the Maximum transmit power shall be reduced by the amount in dB that the direction-al gain of the antenna exceeds 6 dBi.			

#### Note:

As per FCC KDB 662911 D01

Unequal antenna gains, with equal transmit powers. For antenna gains given by G1, G2, ..., GN dBi.

(i) If transmit signals are correlated, then Directional gain

$$= 10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{ANT}] \text{ dBi}$$

[Note the "20"s in the denominator of each exponent and the square of the sum of terms; the object is to combine the signal levels coherently.]

The antenna gain is not granter than 6 dBi. Therefore, reduction of power is not required.

### 9.2 Measurement Procedure

1. Place the EUT on the table and set it in transmitting mode.
2. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules .
3. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the power meter
4. Power Meter is used as the auxiliary test equipment to conduct the output power measurement.
5. Record the max. reading and add 10 log(1/duty cycle).
6. Repeat above procedures until all frequency (low, middle, and high channel) measured were complete.

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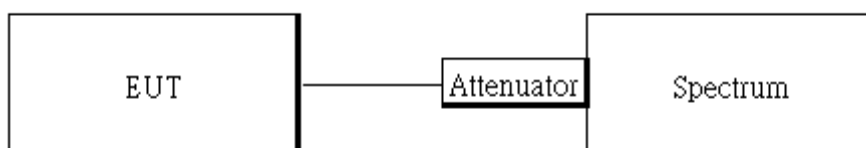
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### 9.3 Measurement Equipment Used

SGS Conducted Room					
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due
Power Meter	Anritsu	ML2496A	1804001	02/20/2020	02/19/2021
Power Sensor	Anritsu	MA2411B	1726104	02/20/2020	02/19/2021
Power Sensor	Anritsu	MA2411B	1726107	02/20/2020	02/19/2021
DC Power Supply	Agilent	E3640A	MY40005907	10/22/2019	10/21/2020
Attenuator	Mini-Circuit	BW-S10W2+	2	01/02/2020	01/01/2021

### 9.4 Test Set-up



Note:

Cable Loss=

13.7 dB

### 9.5 Measurement Result

#### 9.5.1 Conducted output power (FCC)

##### 802.11a\_Ch0

CH	Frequency (MHz)	Data Rate	TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
36	5180	6	9.94	9.872	23.98	PASS
44	5220	6	9.91	9.804	23.98	PASS
48	5240	6	9.83	9.625	23.98	PASS
52	5260	6	9.94	9.872	23.98 or $11+10\log(B) = 23.94$	PASS
60	5300	6	9.84	9.647	23.98 or $11+10\log(B) = 23.99$	PASS
64	5320	6	9.80	9.559	23.98 or $11+10\log(B) = 24.00$	PASS
100	5500	6	9.90	9.782	23.98 or $11+10\log(B) = 23.94$	PASS
116	5580	6	9.96	9.918	23.98 or $11+10\log(B) = 23.94$	PASS
140	5700	6	8.82	7.628	23.98 or $11+10\log(B) = 24.01$	PASS
144	5720(U-NII 2C)	6	7.58	5.73	23.98 or $11+10\log(B) = 23.93$	PASS
144	5720 (U-NII 3)	6	2.70	1.86	30	PASS
149	5745	6	8.75	7.506	30	PASS
157	5785	6	8.80	7.593	30	PASS
165	5825	6	8.74	7.489	30	PASS

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## 802.11a\_Ch1

CH	Frequency (MHz)	Data Rate	TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
36	5180	6	9.71	9.363	23.98	PASS
44	5220	6	<b>9.89</b>	9.759	23.98	PASS
48	5240	6	9.55	9.024	23.98	PASS
52	5260	6	9.74	9.428	23.98 or $11+10\log(B) = 24.00$	PASS
60	5300	6	<b>9.77</b>	9.493	23.98 or $11+10\log(B) = 23.93$	PASS
64	5320	6	9.68	9.298	23.98 or $11+10\log(B) = 23.98$	PASS
100	5500	6	<b>9.80</b>	9.559	23.98 or $11+10\log(B) = 23.96$	PASS
116	5580	6	9.59	9.108	23.98 or $11+10\log(B) = 23.96$	PASS
140	5700	6	8.77	7.541	23.98 or $11+10\log(B) = 23.95$	PASS
144	5720(U-NII 2C)	6	<b>7.54</b>	5.68	23.98 or $11+10\log(B) = 23.93$	PASS
144	5720 (U-NII 3)	6	<b>2.66</b>	1.84	30	PASS
149	5745	6	<b>8.74</b>	7.489	30	PASS
157	5785	6	8.70	7.420	30	PASS
165	5825	6	8.57	7.201	30	PASS

## 802.11a\_2Tx

CH	Frequency (MHz)	Data Rate	Avg. POWER (dBm)		TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
			CH 0	CH 1				
36	5180	6	6.75	6.65	9.97	9.942	23.39	PASS
44	5220	6	6.68	6.67	9.95	9.884	23.39	PASS
48	5240	6	6.81	6.62	<b>9.99</b>	9.978	23.39	PASS
52	5260	6	6.81	6.6	<b>9.98</b>	9.956	23.39 or $11+10\log(B) = 23.94$	PASS
60	5300	6	6.93	6.25	9.88	9.722	23.39 or $11+10\log(B) = 23.93$	PASS
64	5320	6	6.84	6.3	9.85	9.667	23.39 or $11+10\log(B) = 23.98$	PASS
100	5500	6	6.71	6.65	9.95	9.896	23.39 or $11+10\log(B) = 23.94$	PASS
116	5580	6	6.75	6.65	<b>9.97</b>	9.942	23.39 or $11+10\log(B) = 23.94$	PASS
140	5700	6	6.04	5.13	8.88	7.732	23.39 or $11+10\log(B) = 23.95$	PASS
144	5720(U-NII 2C)	6	4.71	4.18	7.73	5.924	23.39 or $11+10\log(B) = 23.93$	PASS
144	5720 (U-NII 3)	6	-0.18	-0.71	2.84	1.924	29.41	PASS
149	5745	6	5.76	5.34	8.83	7.637	29.41	PASS
157	5785	6	5.25	5.85	<b>8.83</b>	7.647	29.41	PASS
165	5825	6	5.48	5.57	8.80	7.585	29.41	PASS

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## 802.11n\_HT20\_Ch0

CH	Frequency (MHz)	Data Rate	TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
36	5180	MCS0	<b>9.81</b>	9.576	23.98	PASS
44	5220	MCS0	9.78	9.510	23.98	PASS
48	5240	MCS0	9.76	9.466	23.98	PASS
52	5260	MCS0	9.77	9.488	23.98 or $11+10\log(B) = 24.01$	PASS
60	5300	MCS0	<b>9.83</b>	9.620	23.98 or $11+10\log(B) = 24.00$	PASS
64	5320	MCS0	9.74	9.422	23.98 or $11+10\log(B) = 24.03$	PASS
100	5500	MCS0	9.68	9.293	23.98 or $11+10\log(B) = 23.99$	PASS
116	5580	MCS0	<b>9.73</b>	9.401	23.98 or $11+10\log(B) = 24.04$	PASS
140	5700	MCS0	8.81	7.606	23.98 or $11+10\log(B) = 24.01$	PASS
144	5720(U-NII 2C)	MCS0	<b>7.54</b>	5.67	23.98 or $11+10\log(B) = 24.02$	PASS
144	5720 (U-NII 3)	MCS0	<b>2.78</b>	1.90	30	PASS
149	5745	MCS0	<b>8.89</b>	7.748	30	PASS
157	5785	MCS0	8.88	7.730	30	PASS
165	5825	MCS0	8.80	7.589	30	PASS

## 802.11n\_HT20\_Ch1

CH	Frequency (MHz)	Data Rate	TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
36	5180	MCS0	<b>9.72</b>	9.379	23.98	PASS
44	5220	MCS0	9.68	9.293	23.98	PASS
48	5240	MCS0	9.71	9.358	23.98	PASS
52	5260	MCS0	9.63	9.187	23.98 or $11+10\log(B) = 24.01$	PASS
60	5300	MCS0	<b>9.82</b>	9.598	23.98 or $11+10\log(B) = 24.05$	PASS
64	5320	MCS0	9.71	9.358	23.98 or $11+10\log(B) = 24.03$	PASS
100	5500	MCS0	<b>9.60</b>	9.124	23.98 or $11+10\log(B) = 24.06$	PASS
116	5580	MCS0	9.55	9.019	23.98 or $11+10\log(B) = 24.00$	PASS
140	5700	MCS0	8.78	7.554	23.98 or $11+10\log(B) = 24.05$	PASS
144	5720(U-NII 2C)	MCS0	<b>7.46</b>	5.57	23.98 or $11+10\log(B) = 24.03$	PASS
144	5720 (U-NII 3)	MCS0	<b>2.71</b>	1.86	30	PASS
149	5745	MCS0	8.76	7.519	30	PASS
157	5785	MCS0	<b>8.85</b>	7.677	30	PASS
165	5825	MCS0	8.76	7.519	30	PASS

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## 802.11n\_HT20\_MIMO

CH	Frequency (MHz)	Data Rate	Avg. POWER (dBm)		TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
			CH 0	CH 1				
36	5180	MCS8	6.57	6.44	9.82	9.588	23.39	PASS
44	5220	MCS8	6.56	6.42	9.80	9.555	23.39	PASS
48	5240	MCS8	6.56	6.51	<b>9.85</b>	9.654	23.39	PASS
52	5260	MCS8	6.65	6.47	9.87	9.712	23.39 or 11+10log(B) = 24.01	PASS
60	5300	MCS8	6.68	6.39	9.85	9.659	23.39 or 11+10log(B) = 24.00	PASS
64	5320	MCS8	6.73	6.46	<b>9.91</b>	9.793	23.39 or 11+10log(B) = 24.03	PASS
100	5500	MCS8	6.58	6.46	9.83	9.621	23.39 or 11+10log(B) = 23.99	PASS
116	5580	MCS8	6.76	6.36	<b>9.88</b>	9.720	23.39 or 11+10log(B) = 24.00	PASS
140	5700	MCS8	5.57	5.46	8.83	7.634	23.39 or 11+10log(B) = 24.01	PASS
144	5720(U-NII 2C)	MCS8	4.46	4.13	<b>7.61</b>	5.764	23.39 or 11+10log(B) = 24.02	PASS
144	5720 (U-NII 3)	MCS8	-0.30	-0.63	<b>2.85</b>	1.928	29.41	PASS
149	5745	MCS8	6.01	5.17	<b>8.92</b>	7.802	29.41	PASS
157	5785	MCS8	6.23	4.83	8.90	7.759	29.41	PASS
165	5825	MCS8	5.63	5.38	8.82	7.619	29.41	PASS

## 802.11n\_HT40\_Ch0

CH	Frequency (MHz)	Data Rate	TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
38	5190	MCS0	9.79	9.532	23.98	PASS
46	5230	MCS0	<b>9.86</b>	9.686	23.98	PASS
54	5270	MCS0	9.74	9.422	23.98 or 11+10log(B) = 27.01	PASS
62	5310	MCS0	<b>9.81</b>	9.576	23.98 or 11+10log(B) = 27.03	PASS
102	5510	MCS0	9.68	9.293	23.98 or 11+10log(B) = 27.00	PASS
110	5550	MCS0	<b>9.74</b>	9.422	23.98 or 11+10log(B) = 27.03	PASS
134	5670	MCS0	8.85	7.677	23.98 or 11+10log(B) = 27.02	PASS
142	5710(U-NII 2C)	MCS0	<b>8.26</b>	6.70	23.98 or 11+10log(B) = 27.02	PASS
142	5710 (U-NII 3)	MCS0	<b>-0.19</b>	0.96	30	PASS
151	5755	MCS0	<b>8.88</b>	7.730	30	PASS
159	5795	MCS0	8.87	7.712	30	PASS

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## 802.11n\_HT40\_Ch1

CH	Frequency (MHz)	Data Rate	TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
38	5190	MCS0	9.77	9.488	23.98	PASS
46	5230	MCS0	9.73	9.401	23.98	PASS
54	5270	MCS0	9.68	9.293	23.98 or $11+10\log(B) = 27.01$	PASS
62	5310	MCS0	9.66	9.250	23.98 or $11+10\log(B) = 27.01$	PASS
102	5510	MCS0	9.63	9.187	23.98 or $11+10\log(B) = 27.01$	PASS
110	5550	MCS0	9.58	9.082	23.98 or $11+10\log(B) = 27.04$	PASS
134	5670	MCS0	8.67	7.365	23.98 or $11+10\log(B) = 27.02$	PASS
142	5710(U-NII 2C)	MCS0	8.04	6.37	23.98 or $11+10\log(B) = 27.02$	PASS
142	5710 (U-NII 3)	MCS0	-0.41	0.91	23.98	PASS
151	5755	MCS0	8.72	7.450	23.98	PASS
159	5795	MCS0	8.73	7.467	30	PASS

## 802.11n\_HT40\_MIMO

CH	Frequency (MHz)	Data Rate	Avg. POWER (dBm)		TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
			CH 0	CH 1				
38	5190	MCS8	6.54	6.45	9.81	9.566	23.39	PASS
46	5230	MCS8	6.64	6.49	9.88	9.722	23.39	PASS
54	5270	MCS8	6.63	6.38	9.82	9.591	23.39 or $11+10\log(B) = 27.01$	PASS
62	5310	MCS8	6.66	6.43	9.86	9.679	23.39 or $11+10\log(B) = 27.01$	PASS
102	5510	MCS8	6.58	6.53	9.87	9.698	23.39 or $11+10\log(B) = 27.00$	PASS
110	5550	MCS8	6.52	6.45	9.80	9.544	23.39 or $11+10\log(B) = 27.03$	PASS
134	5670	MCS8	5.79	5.33	8.88	7.723	23.39 or $11+10\log(B) = 27.02$	PASS
142	5710(U-NII 2C)	MCS8	5.20	4.71	8.27	6.721	23.39 or $11+10\log(B) = 27.02$	PASS
142	5720 (U-NII 3)	MCS8	-3.25	-3.74	-0.18	0.959	29.41	PASS
151	5755	MCS8	5.82	5.37	8.91	7.785	29.41	PASS
159	5795	MCS8	5.76	5.51	8.95	7.850	29.41	PASS

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## 802.11ac VHT80 Ch0

CH	Frequency (MHz)	Data Rate	TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
42	5210	MCS0	7.84	6.078	23.98	PASS
58	5290	MCS0	7.67	5.845	23.98 or $11+10\log(B) = 30.30$	PASS
106	5530	MCS0	7.78	5.995	23.98 or $11+10\log(B) = 30.28$	PASS
122	5610	MCS0	7.90	6.163	23.98 or $11+10\log(B) = 30.19$	PASS
138	5690(U-NII 2C)	MCS0	7.35	5.44	23.98 or $11+10\log(B) = 30.30$	PASS
138	5690 (U-NII 3)	MCS0	-2.77	0.53	30	PASS
155	5775	MCS0	7.74	5.940	30	PASS

## 802.11ac VHT80 Ch1

CH	Frequency (MHz)	Data Rate	TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
42	5210	MCS0	7.54	5.673	23.98	PASS
58	5290	MCS0	7.61	5.765	23.98 or $11+10\log(B) = 30.19$	PASS
106	5530	MCS0	7.67	5.845	23.98 or $11+10\log(B) = 30.77$	PASS
122	5610	MCS0	7.64	5.805	23.98 or $11+10\log(B) = 30.20$	PASS
138	5690(U-NII 2C)	MCS0	7.26	5.32	23.98 or $11+10\log(B) = 30.37$	PASS
138	5690 (U-NII 3)	MCS0	-2.51	0.56	23.98	PASS
155	5775	MCS0	7.61	5.765	23.98	PASS

## 802.11ac VHT80 MIMO

CH	Frequency (MHz)	Data Rate	Avg. POWER (dBm)		TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
			CH 0	CH 1				
42	5210	MCS0	4.35	4.22	7.88	6.143	23.39	PASS
58	5290	MCS0	4.39	3.86	7.73	5.931	23.39 or $11+10\log(B) = 30.19$	PASS
106	5530	MCS0	4.42	4.15	7.89	6.145	23.39 or $11+10\log(B) = 30.28$	PASS
122	5610	MCS0	4.57	4.06	7.92	6.195	23.39 or $11+10\log(B) = 30.19$	PASS
138	5690(U-NII 2C)	MCS0	4.07	3.47	7.39	5.488	23.39 or $11+10\log(B) = 30.30$	PASS
138	5690 (U-NII 3)	MCS0	-6.05	-6.30	-2.73	0.534	29.41	PASS
155	5775	MCS0	4.79	3.96	7.99	6.299	29.41	PASS

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## 10 MAXIMUM POWER SPECTRAL DENSITY

### 10.1 Standard Applicable

#### FCC

OPERZTION Band	EUT CATEGORY		LIMIT
U-NII-1		Access Point (Master device )	17dBm/ MHz
		Fixed point-to-point Access Ponit	
	√	Mobile and portable client device	11dBm/ MHz
U-NII-2A	√		11dBm/ MHz
U-NII-2C	√		11dBm/ MHz
U-NII-3	√		30dBm/ 500kHz
If transmitting antennas of directional gain greater than 6 dBi are used, the Maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.			

#### Note:

As per FCC KDB 662911 D01

Unequal antenna gains, with equal transmit powers. For antenna gains given by G1, G2, ..., GN dBi.

(i) If transmit signals are correlated, then Directional gain

$$= 10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{ANT}] \text{ dBi}$$

[Note the "20"s in the denominator of each exponent and the square of the sum of terms; the object is to combine the signal levels coherently.]

The antenna gain is not grater than 6 dBi. Therefore, reduction of power is not required.

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## 10.2 Measurement Procedure

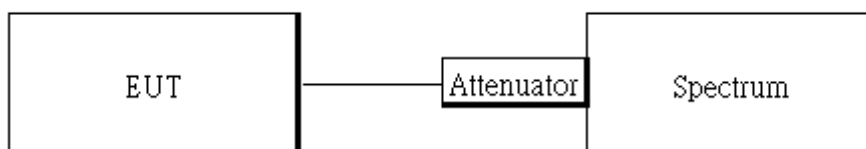
1. Place the EUT on the table and set it in transmitting mode.
2. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules .
3. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to Spectrum.
4. **For U-NII1, U-NII-2A, U-NII-2C Band:**  
Set RBW=1MHz, VBW=3MHz, where span is enough to capture the entire bandwidth, Sweep time = Auto (601 pts), detector = sample, traces 100 sweeps of video averaging. (SA-2 with the omission of procedure x, the integration with 26dB EBW bandwidth)  
**For U-NII-3 Band:**  
Set RBW=500 kHz, VBW $\geq$  3RBW, where span is enough to capture the entire bandwidth, Sweep time = Auto (601 pts), detector = sample, traces 100 sweeps of video averaging. (SA-2 with the omission of procedure x, the integration with 26dB EBW bandwidth)
5. Use the cursor on spectrum to peak search the highest level of trace
6. Record the max. reading and add 10 log(1/duty cycle).
7. Repeat above procedures until all default test channel (low, middle, and high) was complete.
8. 802.11n/ac MIMO mode: offset is set following “measure and add 10 Log (N)” on spectrum to measure the PSD for MIMO mode. Offset = cable loss + 10 log (N), where N is number of transmitting antenna. N=3 for this given application.

**Note: For the test of PSD at MIMO mode, the highest emission of worst case employing Measure and add 10 log (N) technical is reported on this report after the comparison between Main Antenna at single transmitting mode and Aux that yields the higher value. The MIMO transmitting mode produces higher value of outcome**

## 10.3 Measurement Equipment Used

SGS Conducted Room					
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due
EXA Spectrum Analyzer	Agilent	N9010A	MY50420195	05/02/2019	05/01/2020
DC Power Supply	Agilent	E3640A	MY40005907	10/22/2019	10/21/2020
Temperature Chamber	TERCHY	MHG-120LF	911009	05/17/2019	05/16/2020
Attenuator	Mini-Circuit	BW-S10W2+	2	01/02/2020	01/01/2021

## 10.4 Test Set-up



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## 10.5 Measurement Result

### 10.5.1 Power spectral density

POWER DENSITY 802.11a MODE					
Frequency (MHz)	PSD W/O Duty Factor (dBm)	Duty Factor	PSD With Duty Factor (dBm)	Limit (dBm)	Margin (dB)
5180.00	-1.60	0.26	-1.34	10.41	-11.74
5220.00	-1.61	0.26	-1.35	10.41	-11.75
5240.00	-1.48	0.26	-1.22	10.41	-11.62
5260.00	-0.93	0.26	-0.67	10.41	-11.07
5300.00	-1.16	0.26	-0.90	10.41	-11.30
5320.00	-1.23	0.26	-0.97	10.41	-11.37
5500.00	-2.10	0.26	-1.84	10.41	-12.24
5580.00	-0.96	0.26	-0.70	10.41	-11.10
5700.00	-2.60	0.26	-2.34	10.41	-12.74
5720 (U-NII 2C)	-2.60	0.26	-2.34	10.41	-12.74
5720 (U-NII 3)	-6.02	0.26	-5.76	29.41	-35.16
5745.00	-5.40	0.26	-5.14	29.41	-34.54
5785.00	-6.14	0.26	-5.88	29.41	-35.28
5825.00	-5.48	0.26	-5.22	29.41	-34.62
POWER DENSITY 802.11n HT20 MODE					
Frequency (MHz)	PSD W/O Duty Factor (dBm)	Duty Factor	PSD With Duty Factor (dBm)	Limit (dBm)	Margin (dB)
5180	-2.31	0.30	-2.01	10.41	-12.42
5220	-1.89	0.30	-1.59	10.41	-12.00
5240	-2.36	0.30	-2.06	10.41	-12.47
5260	-1.60	0.30	-1.30	10.41	-11.71
5300	-2.08	0.30	-1.78	10.41	-12.19
5320	-1.45	0.30	-1.15	10.41	-11.56
5500	-2.30	0.30	-2.00	10.41	-12.41
5580	-1.88	0.30	-1.58	10.41	-11.99
5700	-2.99	0.30	-2.69	10.41	-13.10
5720 (U-NII 2C)	-2.02	0.30	-1.72	10.41	-12.13
5720 (U-NII 3)	-5.31	0.30	-5.01	29.41	-34.42
5745	-5.83	0.30	-5.53	29.41	-34.94
5785	-5.20	0.30	-4.90	29.41	-34.31
5825	-4.90	0.30	-4.60	29.41	-34.01

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POWER DENSITY 802.11n HT40 MODE					
Frequency (MHz)	PSD W/O Duty Factor (dBm)	Duty Factor	PSD With Duty Factor (dBm)	Limit (dBm)	Margin (dB)
5190	-5.59	0.54	-5.05	10.41	-15.46
5230	-5.52	0.54	-4.98	10.41	-15.39
5270	-5.15	0.54	-4.61	10.41	-15.02
5310	-5.13	0.54	-4.59	10.41	-15.00
5510	-5.55	0.54	-5.01	10.41	-15.42
5550	-5.41	0.54	-4.87	10.41	-15.28
5670	-7.20	0.54	-6.66	10.41	-17.07
5710 (U-NII 2C)	-6.42	0.54	-5.88	10.41	-16.29
5710 (U-NII 3)	-10.08	0.54	-9.54	29.41	-38.95
5755	-9.56	0.54	-9.02	29.41	-38.43
5795	-9.07	0.54	-8.53	29.41	-37.94
POWER DENSITY 802.11ac VHT80 MODE					
Frequency (MHz)	PSD W/O Duty Factor (dBm)	Duty Factor	PSD With Duty Factor (dBm)	Limit (dBm)	Margin (dB)
5210	-12.01	0.59	-11.42	11	-22.42
5290	-11.51	0.59	-10.92	11	-21.92
5530	-11.32	0.59	-10.73	11	-21.73
5610	-11.56	0.59	-10.97	11	-21.97
5690 (U-NII 2C)	-11.58	0.59	-10.99	11	-21.99
5690 (U-NII 3)	-15.09	0.59	-14.50	30	-44.50
5775	-13.45	0.59	-12.86	30	-42.86

**Note:**

Cable Loss=

13.7 dB

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802.11a\_20MHz\_5180MHz



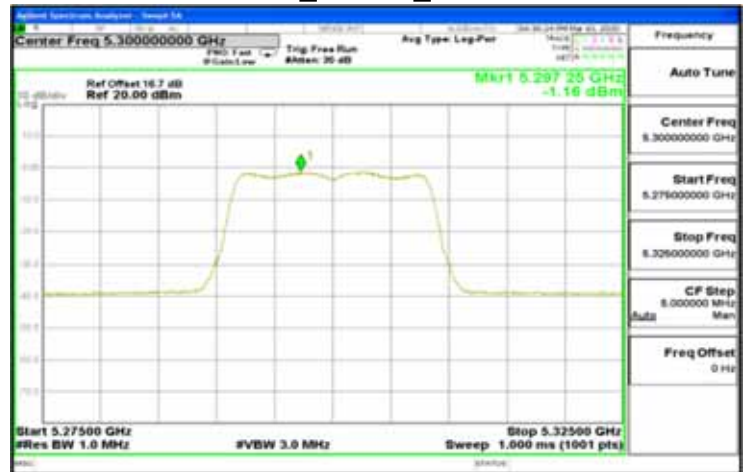
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802.11a\_20MHz\_5220MHz



802.11a\_20MHz\_5300MHz



802.11a\_20MHz\_5240MHz



802.11a\_20MHz\_5320MHz



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802.11a\_20MHz\_5500MHz



802.11a\_20MHz\5720 MHz-5720\5720MHz\_UNII 2C



802.11a\_20MHz\_5580MHz



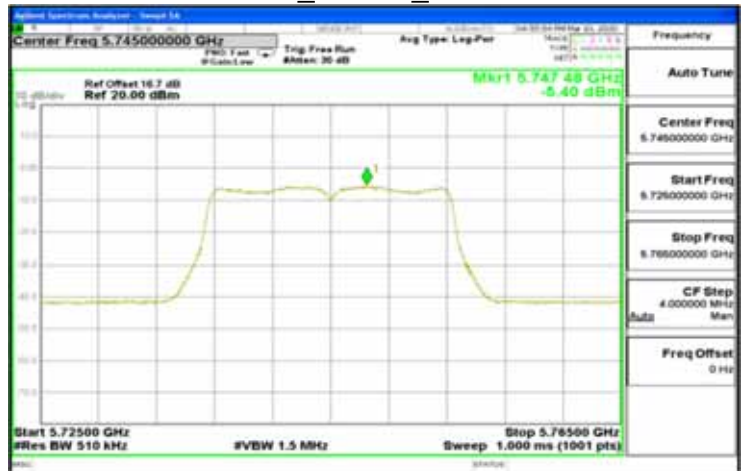
802.11a\_20MHz\5720 MHz-5720\5720MHz\_UNII 3



802.11a\_20MHz\_5700MHz



802.11a\_20MHz\_5745MHz



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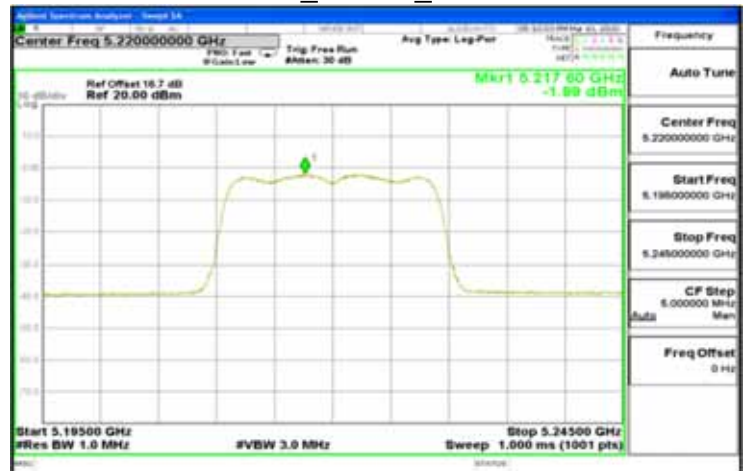
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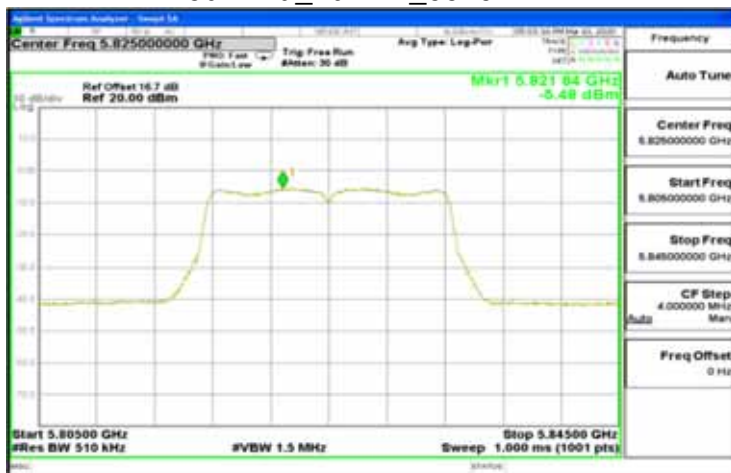
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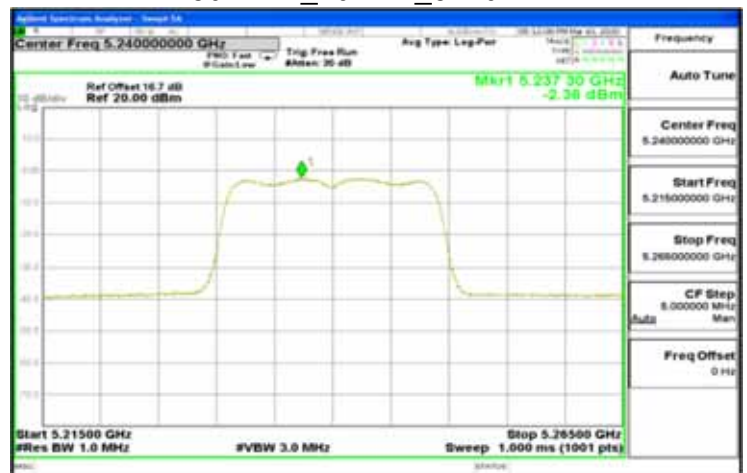
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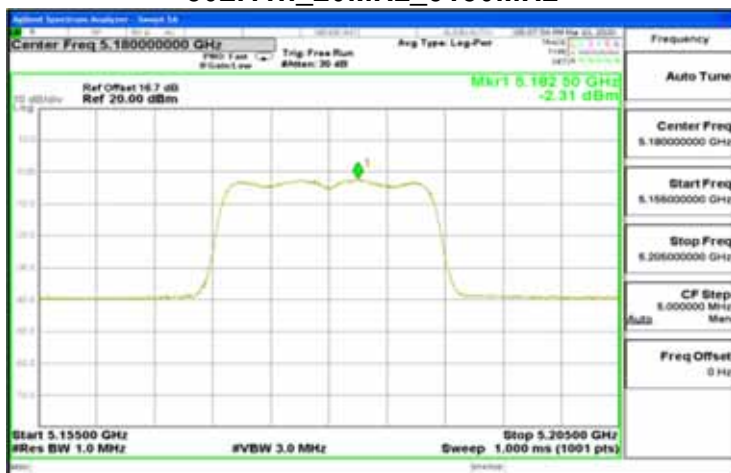
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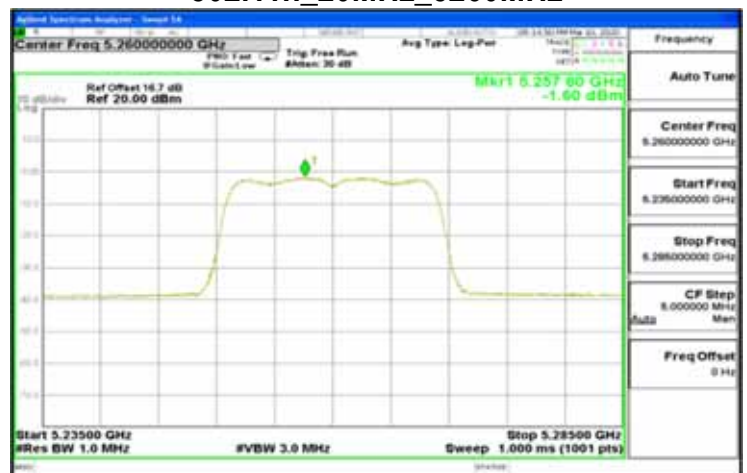
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802.11n\_20MHz\_5180MHz



802.11n\_20MHz\_5260MHz

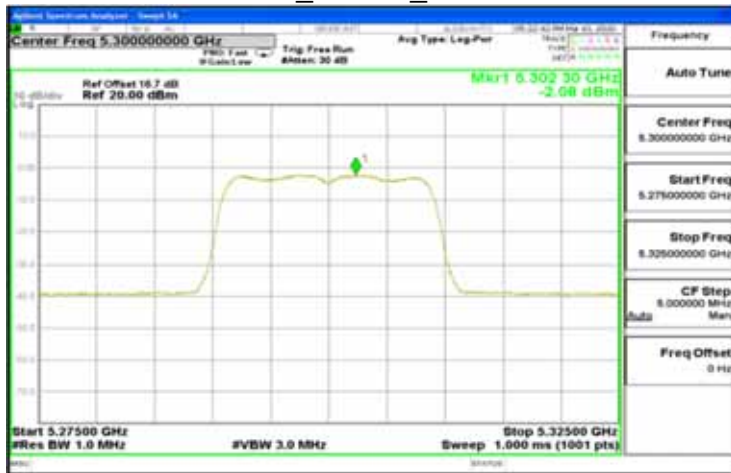


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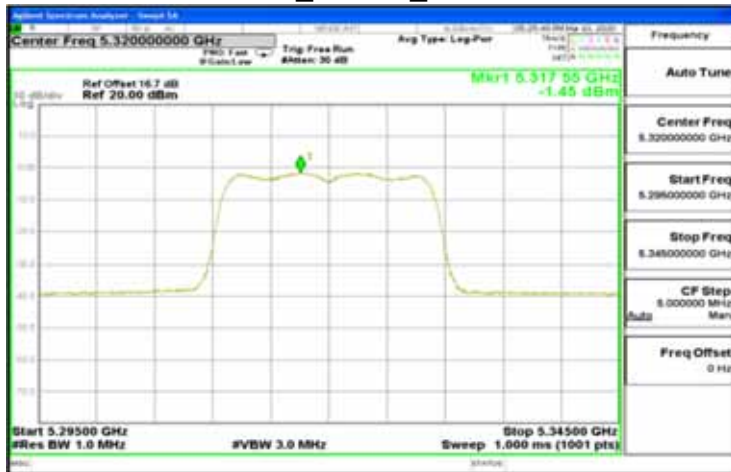
802.11n\_20MHz\_5300MHz



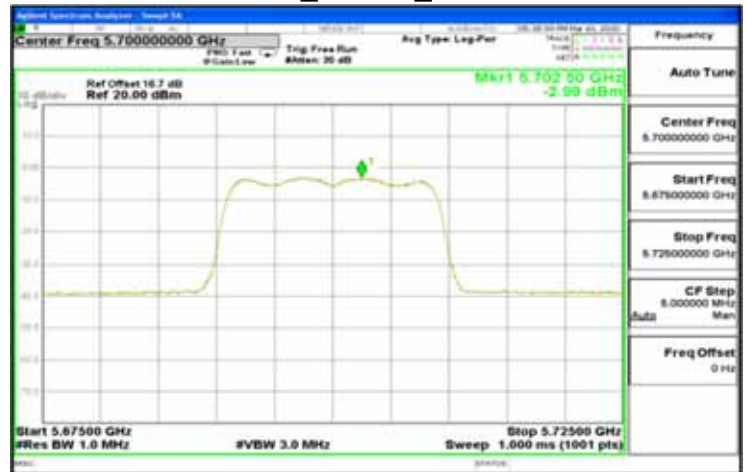
802.11n\_20MHz\_5580MHz



802.11n\_20MHz\_5320MHz



802.11n\_20MHz\_5700MHz



802.11n\_20MHz\_5500MHz



802.11n\_20MHz\5720 MHz-5720\5720MHz\_UNII 2C



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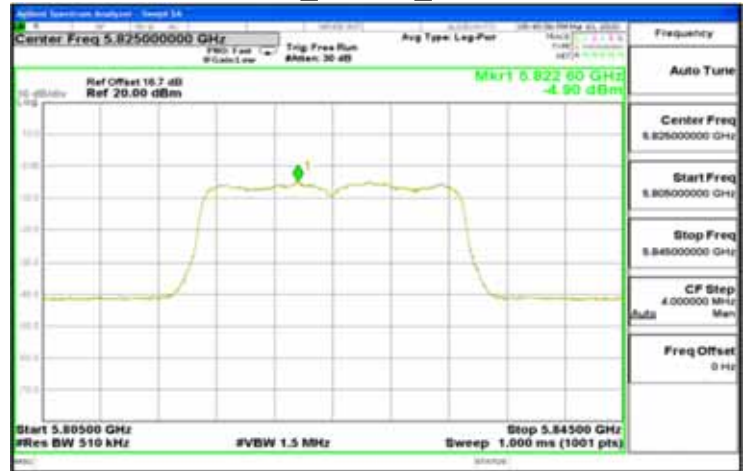
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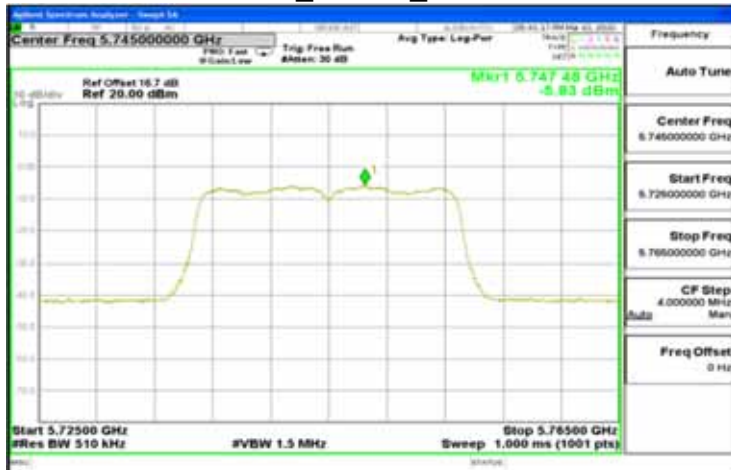
802.11n\_20MHz\5720 MHz-5720\5720MHz\_UNII 3



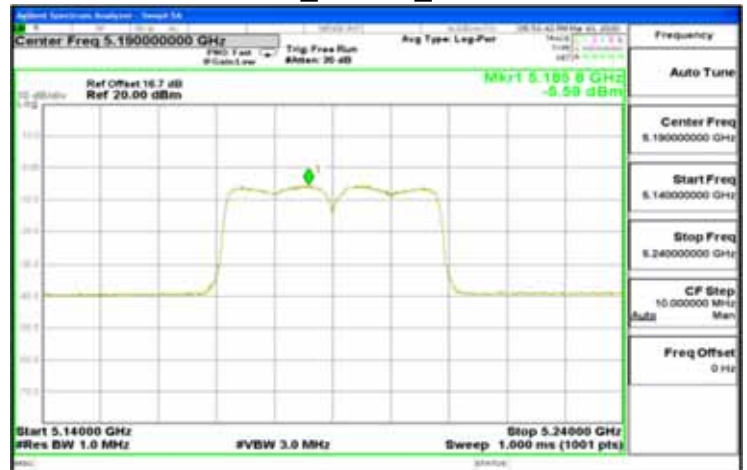
802.11n\_20MHz\_5825MHz



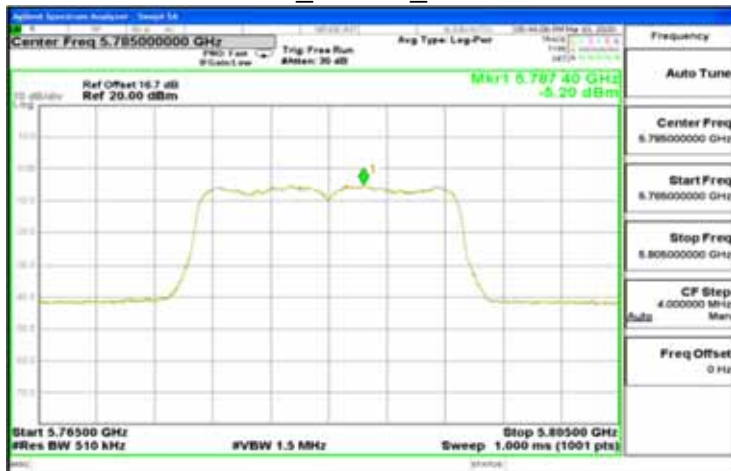
802.11n\_20MHz\_5745MHz



802.11n\_40MHz\_5190MHz



802.11n\_20MHz\_5785MHz



802.11n\_40MHz\_5230MHz



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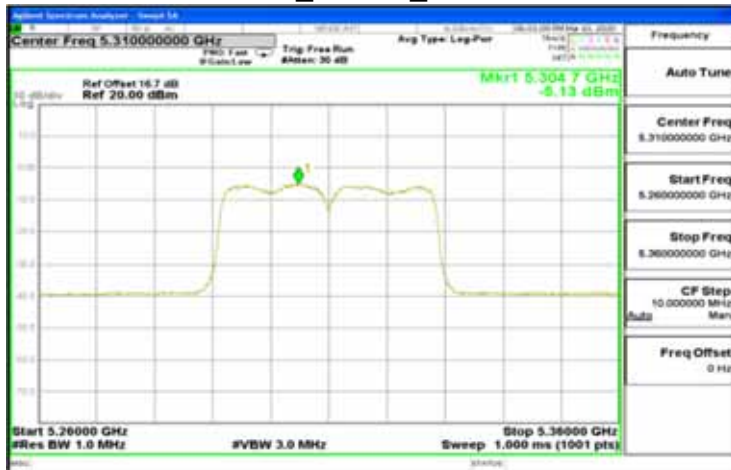
802.11n\_40MHz\_5270MHz



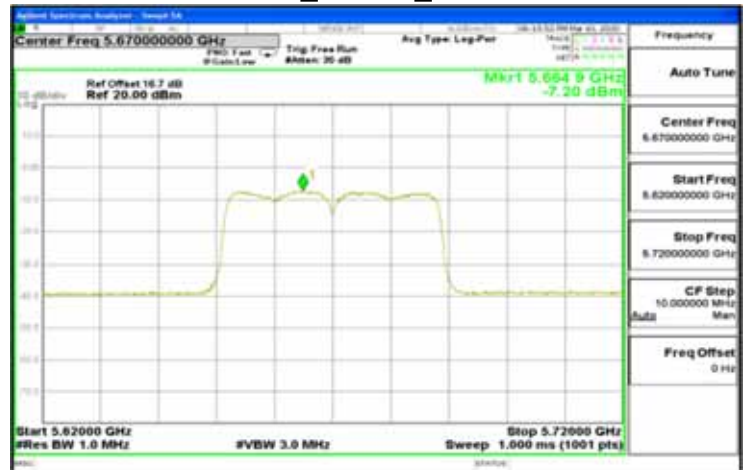
802.11n\_40MHz\_5550MHz



802.11n\_40MHz\_5310MHz



802.11n\_40MHz\_5670MHz



802.11n\_40MHz\_5510MHz



802.11n\_40MHz\5710 MHz-5710\5710MHz\_UNII 2C



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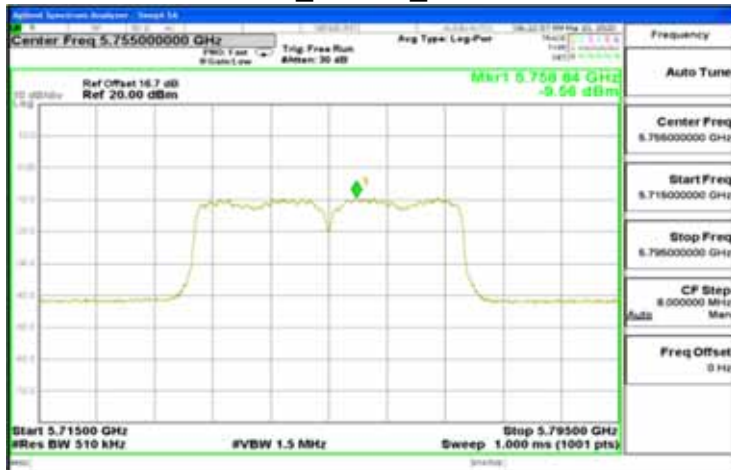
802.11n\_40MHz\5710 MHz-5710\5710MHz\_UNII 3



802.11ac\_80MHz\_5210MHz



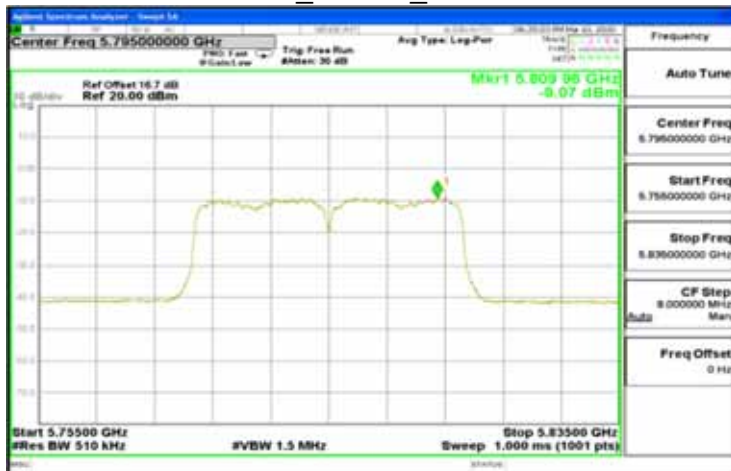
802.11n\_40MHz\_5755MHz



802.11ac\_80MHz\_5290MHz



802.11n\_40MHz\_5795MHz



802.11ac\_80MHz\_5530MHz



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## 802.11ac\_80MHz\_5610MHz



## 802.11ac\_80MHz\_5775MHz



## 802.11ac\_80MHz\5690 MHz-5690\5690MHz\_UNII 2C



## 802.11ac\_80MHz\5690 MHz-5690\5690MHz\_UNII 3



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## 11 UNDESIRABLE RADIATED EMISSION MEASUREMENT

### 11.1 Standard Applicable

#### 11.1.1 Band Edge

The maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:

1. For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.
2. For transmitters operating in the 5.725-5.85 GHz band: All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

APPLICABLE TO	EIRP LIMIT	FIELD STRENGTH AT 3m
15.407(b)(1) RSS-247 §6.2.1.2	PK: -27 (dBm/MHz)	PK: 68.3 (dBμV/m)
15.407(b)(2) RSS-247 §6.2.2.2		
15.407(b)(3) RSS-247 §6.2.3.2		
15.407(b)(4)(i) RSS-247 §6.2.4.2	PK:-27 (dBm/MHz) *1 PK:10 (dBm/MHz) *2 PK:15.6 (dBm/MHz) *3 PK:27 (dBm/MHz) *4	PK: 68.2(dBμV/m) *1 PK:105.2 (dBμV/m) *2 PK: 110.8(dBμV/m) *3 PK:122.2 (dBμV/m) *4
*1 beyond 75 MHz or more above of the bandedge. *2 below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above. *3 below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above. *4 from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.		

$EIRP = (E \cdot d)^2 / 30$ , where  $E$  is the field in V/m,  $d$  is the measurement distance (3m),  $EIRP$  is the equivalent isotropically radiated power in Watts.

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### 11.1.2 Spurious Emission

Unwanted spurious emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table:

Frequency (MHz)	Field strength (microvolts/meter)	Distance (meters)
0.009-0.490	2400/F(KHz)	300
0.490-1.705	24000/F(KHz)	30
1.705-30	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

**Note:**

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBμV/m) = 20 log Emission level (μV/m)

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## 11.2 Measurement Equipment Used

SGS SAC-III					
Name of Equip-ment	Manufacturer	Model	Serial Num-ber	Calibration Date	Calibration Due
Horn Antenna	Schwarzbeck	BBHA9170	184	12/25/2019	12/24/2020
Horn Antenna	Schwarzbeck	BBHA9120D	D803	12/20/2019	12/19/2020
Bi-log Antenna	TESEO	CBL 6112D	35242 & AT-N0555	01/13/2020	01/12/2021
Loop Antenna	ETS.LINDGREN	6502	148045	10/15/2019	10/14/2020
Spectrum Analyzer	Agilent	E4446A	MY51100003	10/23/2019	10/22/2020
EMI Test Receiver	R&S	ESCI 7	1166.5950.07	07/04/2019	07/03/2020
Pre-Amplifier	EMC Instruments	EMC184045B	980135	01/02/2020	01/01/2021
Pre-Amplifier	EMC Instruments	EMC051825	980152	01/02/2020	01/01/2021
Pre-Amplifier	HP	8447D	2944A09469	01/02/2020	01/01/2021
Attenuator	Mini-Circuit	BW-S10W2+	4	01/02/2020	01/01/2021
Filter 5150-5350 MHz	Micro-Tronics	BRM50703	1	01/02/2020	01/01/2021
Filter 5470-5725 MHz	Micro-Tronics	BRM50704	1	01/02/2020	01/01/2021
Filter 5725-5875 MHz	Micro-Tronics	BRM50705	1	01/02/2020	01/01/2021
High Pass Filter	WI	WHKX7.0/18G-8SS	45	01/02/2020	01/01/2021
Coaxial Cable	Huber Suhner	succoflex 102	MY2622/2	01/02/2020	01/01/2021
Coaxial Cable	Huber Suhner	succoflex 104A	800086/4a	01/02/2020	01/01/2021
Coaxial Cable	Huber Suhner	EMC 104-SM-SM-2000	160123	01/02/2020	01/01/2021

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台灣檢驗科技股份有限公司

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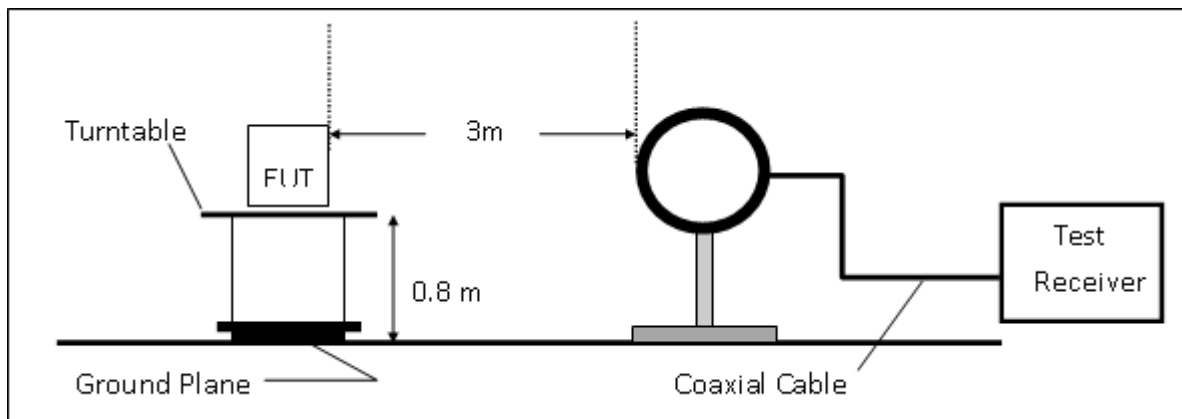
f (886-2) 2298-0488

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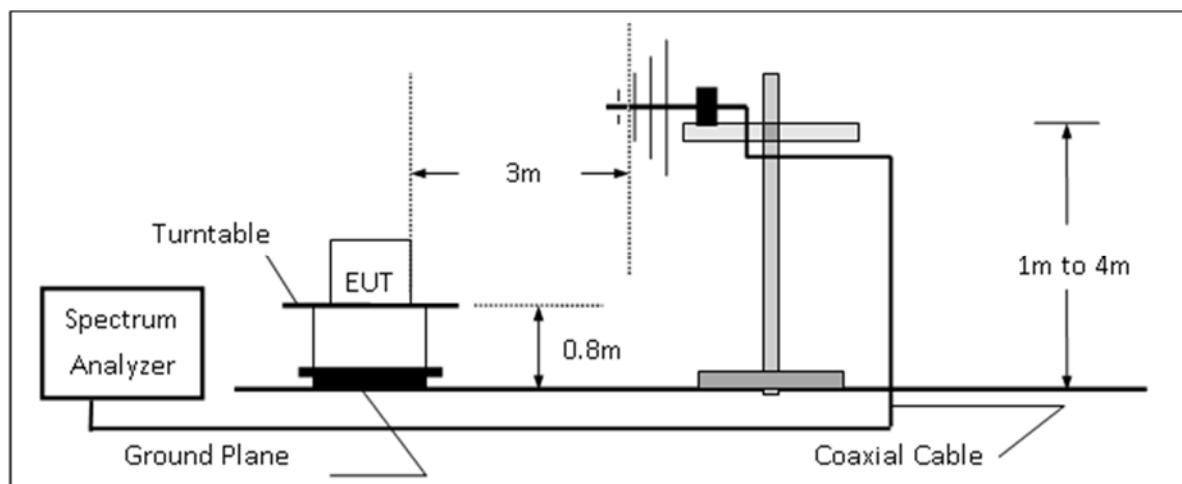
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## 11.3 Test SET-UP

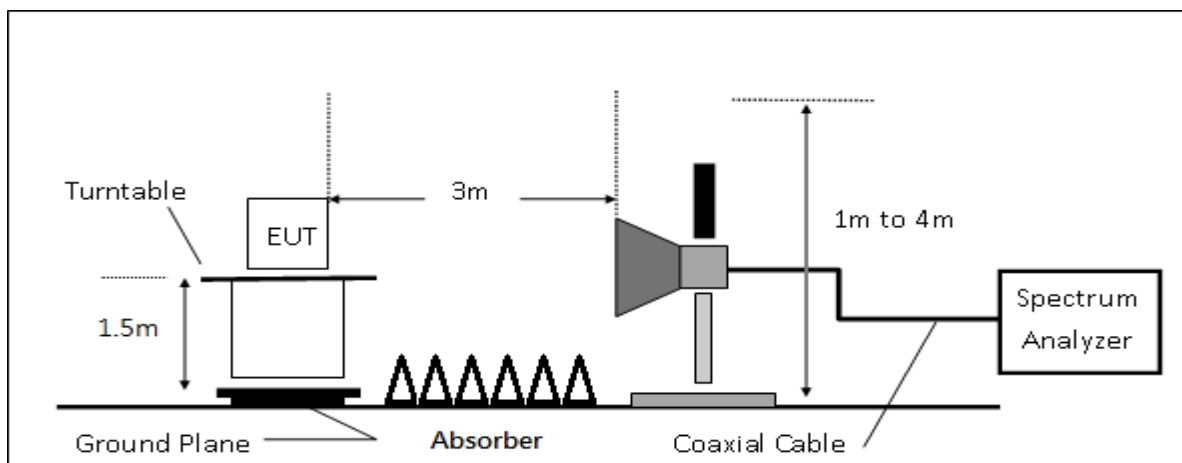
### (A) Radiated Emission Test Set-UP Frequency Below 30MHz.



### (B) Radiated Emission Test Set-Up, Frequency form 30MHz to 1000MHz



### (C) Radiated Emission Test Set-UP Frequency Over 1 GHz



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## 11.4 Measurement Procedure

1. The EUT was placed on a turn table which is 0.8m above ground plane.
2. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules .
3. The EUT was placed on a turn table with 0.8m for frequency < 1GHz and 1.5m for frequency > 1GHz above ground plane.
4. The turn table shall rotate 360 degrees to determine the position of maximum emission level.
5. EUT is set 3m away from the receiving antenna which varied from 1m to 4m to find out the highest emissions.
6. Set the spectrum analyzer as RBW=120 kHz and VBW=300 kHz for Peak Detector (PK) and Quasi-peak (QP) at frequency below 1 GHz.
7. At frequency above 1 GHz, Set the spectrum analyzer:
  - A. RBW=1 MHz, VBW=3 MHz for **Peak** Detector.
  - B. Set the spectrum analyzer as RBW=1 MHz, VBW=10 Hz (Duty cycle > 98%) or VBW  $\geq 1/T$  (Duty cycle < 98%) for **Average** Detector.
8. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
9. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
10. Repeat above procedures until all frequency measured were complete.

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### 11.5 Field Strength Calculation

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

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

**Where** *FS* = Field Strength

*CL* = Cable Attenuation Factor (Cable Loss)

*RA* = Reading Amplitude

*AG* = Amplifier Gain

*AF* = Antenna Factor

The limit of the emission level is expressed in dBuV/m, which converts  $20 \cdot \log(uV/m)$

Actual FS(dBuV/m) = SPA. Reading level(dBuV) + Factor(dB)

Factor(dB) = Antenna Factor(dBuV/m) + Cable Loss(dB) – Pre\_Amplifier Gain(dB)

### 11.6 Test Results of Radiated Spurious Emissions form 9 KHz to 30 MHz

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit per 15.31(o) was not reported.

Pre-scanned was done at frequency 5.47 GHz and 5.85 GHz for bandedge measurement of straddle channels 138, 142 and 144 which was 20dB lower than the limit per 15.31(o) & RSS-GEN §6.13.2 was not reported.

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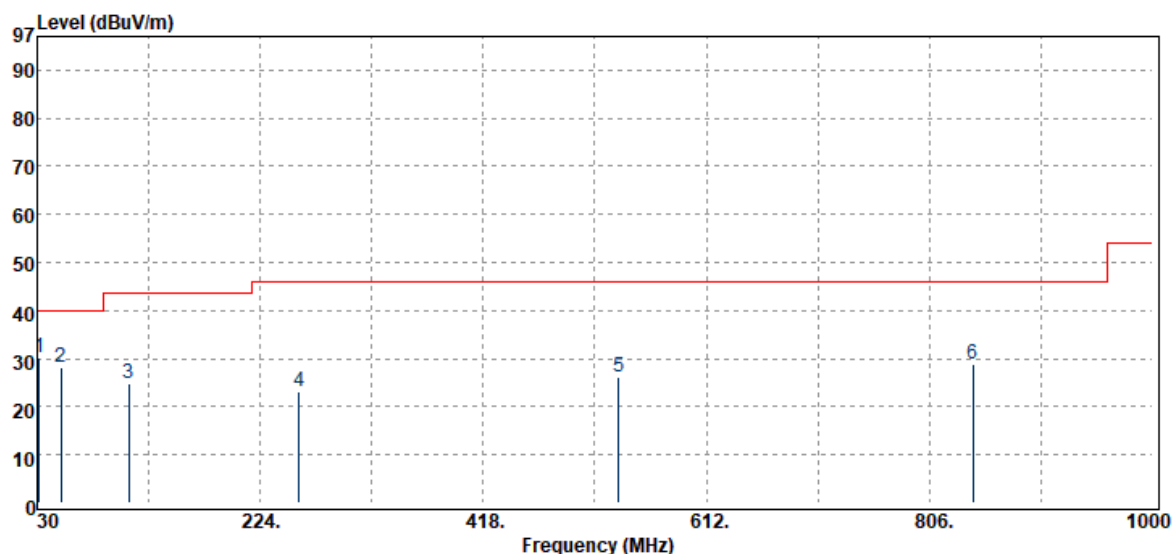
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## 11.7 Radiated Spurious Emission Measurement Result

### 11.7.1 Below 1GHz Worst-Case Data:

Report Number :ER/2020/20054  
 Operation Mode :802.11a B1  
 Test Frequency :5220 MHz  
 Test Mode :Tx CH Mid  
 EUT Pol :H Plane

Test Date :2020-03-14  
 Temp./Humi. :21.9/65  
 Antenna Pol. :VERTICAL  
 Engineer :Thomas



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
31.94	Peak	35.49	-5.32	30.17	40.00	-9.83
50.37	Peak	42.98	-14.86	28.12	40.00	-11.88
109.54	Peak	36.51	-11.73	24.78	43.50	-18.72
257.95	Peak	31.67	-8.45	23.22	46.00	-22.78
535.37	Peak	30.67	-4.54	26.13	46.00	-19.87
843.83	Peak	28.48	0.31	28.79	46.00	-17.21

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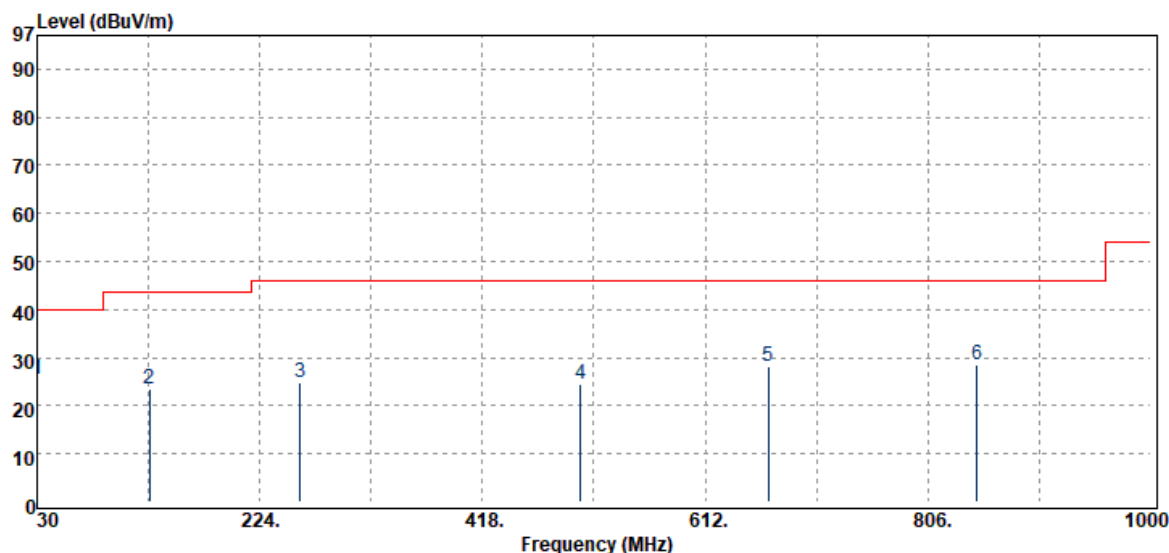
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Report Number :ER/2020/20054  
 Operation Mode :802.11a B1  
 Test Frequency :5220 MHz  
 Test Mode :Tx CH Mid  
 EUT Pol :H Plane

Test Date :2020-03-14  
 Temp./Humi. :21.9/65  
 Antenna Pol. :HORIZONTAL  
 Engineer :Thomas



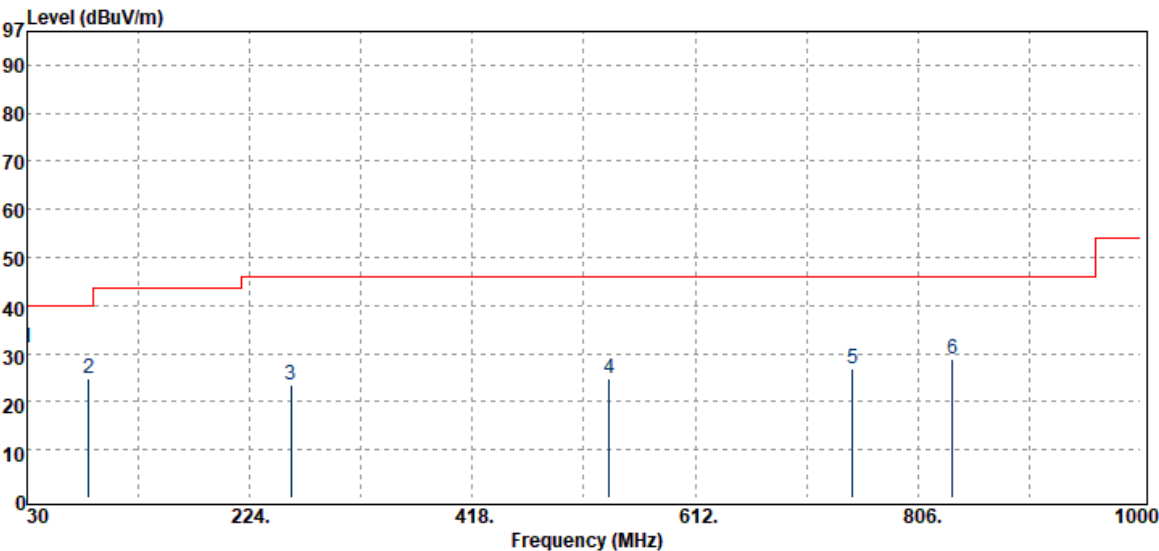
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
30.00	Peak	29.93	-4.56	25.37	40.00	-14.63
127.97	Peak	34.76	-11.18	23.58	43.50	-19.92
258.92	Peak	33.02	-8.34	24.68	46.00	-21.32
503.36	Peak	29.48	-4.97	24.51	46.00	-21.49
667.29	Peak	30.85	-2.73	28.12	46.00	-17.88
848.68	Peak	28.25	0.33	28.58	46.00	-17.42

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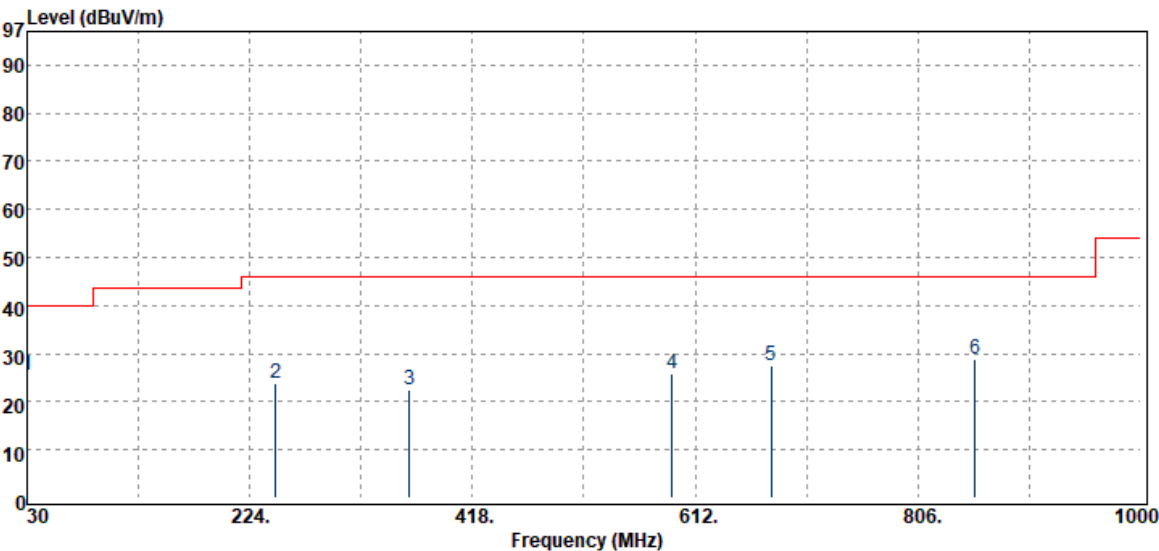
Report Number	:ER/2020/20054	Test Date	:2020-03-14
Operation Mode	:802.11a B2	Temp./Humi.	:21.9/65
Test Frequency	:5300 MHz	Antenna Pol.	:VERTICAL
Test Mode	:Tx CH Mid	Engineer	:Thomas
EUT Pol	:H Plane		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
30.00	Peak	35.90	-4.56	31.34	40.00	-8.66
83.35	Peak	40.72	-15.93	24.79	40.00	-15.21
259.89	Peak	31.58	-8.21	23.37	46.00	-22.63
537.31	Peak	29.31	-4.48	24.83	46.00	-21.17
748.77	Peak	27.98	-1.29	26.69	46.00	-19.31
836.07	Peak	28.81	0.20	29.01	46.00	-16.99

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Report Number	:ER/2020/20054	Test Date	:2020-03-14
Operation Mode	:802.11a B2	Temp./Humi.	:21.9/65
Test Frequency	:5300 MHz	Antenna Pol.	:HORIZONTAL
Test Mode	:Tx CH Mid	Engineer	:Thomas
EUT Pol	:H Plane		

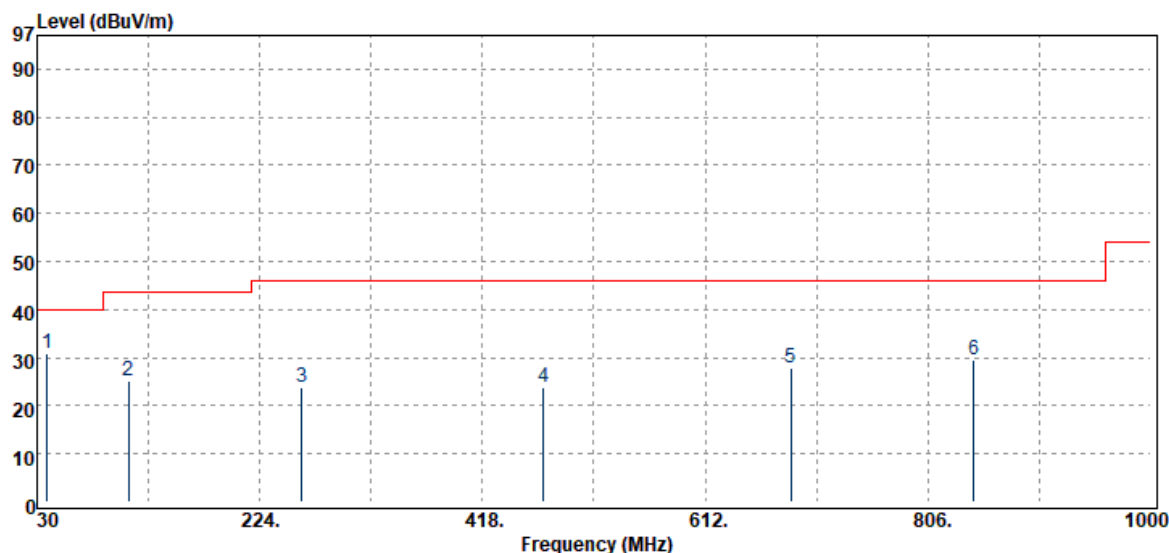


Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
30.00	Peak	30.17	-4.56	25.61	40.00	-14.39
246.31	Peak	33.57	-9.64	23.93	46.00	-22.07
362.71	Peak	29.19	-6.80	22.39	46.00	-23.61
591.63	Peak	29.28	-3.57	25.71	46.00	-20.29
677.96	Peak	29.82	-2.21	27.61	46.00	-18.39
855.47	Peak	28.90	0.05	28.95	46.00	-17.05

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Report Number :ER/2020/20054  
 Operation Mode :802.11a B3  
 Test Frequency :5580 MHz  
 Test Mode :Tx CH Mid  
 EUT Pol :H Plane

Test Date :2020-03-14  
 Temp./Humi. :21.9/65  
 Antenna Pol. :VERTICAL  
 Engineer :Thomas



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
38.73	Peak	40.27	-9.36	30.91	40.00	-9.09
109.54	Peak	36.77	-11.73	25.04	43.50	-18.46
260.86	Peak	32.12	-8.22	23.90	46.00	-22.10
471.35	Peak	29.40	-5.49	23.91	46.00	-22.09
686.69	Peak	29.79	-2.08	27.71	46.00	-18.29
845.77	Peak	29.19	0.31	29.50	46.00	-16.50

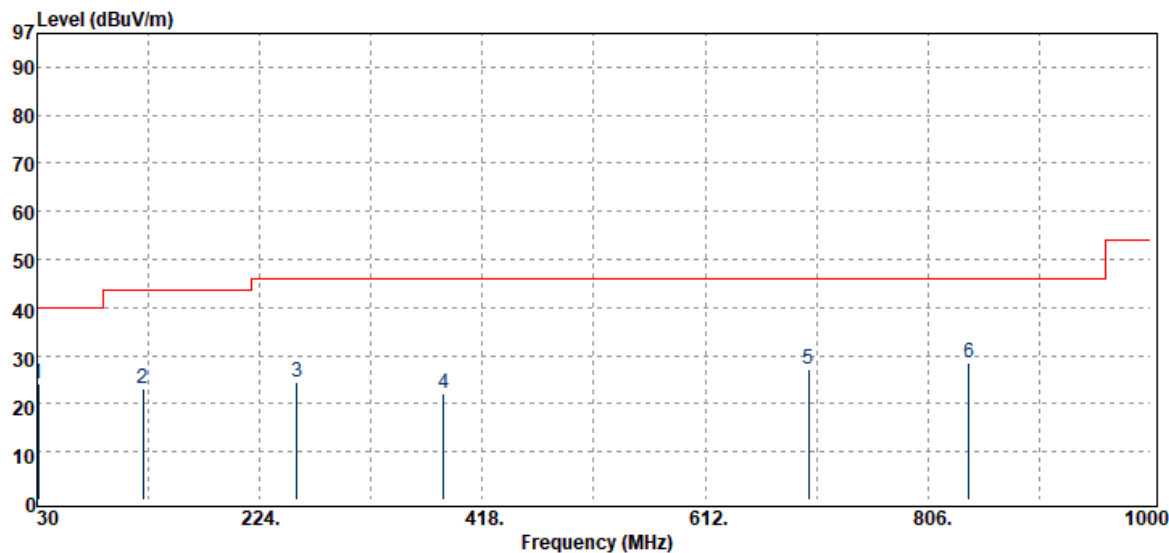
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Report Number :ER/2020/20054  
 Operation Mode :802.11a B3  
 Test Frequency :5580 MHz  
 Test Mode :Tx CH Mid  
 EUT Pol :H Plane

Test Date :2020-03-14  
 Temp./Humi. :21.9/65  
 Antenna Pol. :HORIZONTAL  
 Engineer :Thomas



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBUV	Factor dB	Actual FS dBUV/m	Limit @3m dBUV/m	Margin dB
30.97	Peak	29.19	-4.94	24.25	40.00	-15.75
122.15	Peak	34.40	-11.22	23.18	43.50	-20.32
256.01	Peak	33.30	-8.70	24.60	46.00	-21.40
384.05	Peak	29.01	-6.80	22.21	46.00	-23.79
702.21	Peak	29.47	-2.21	27.26	46.00	-18.74
841.89	Peak	28.25	0.34	28.59	46.00	-17.41

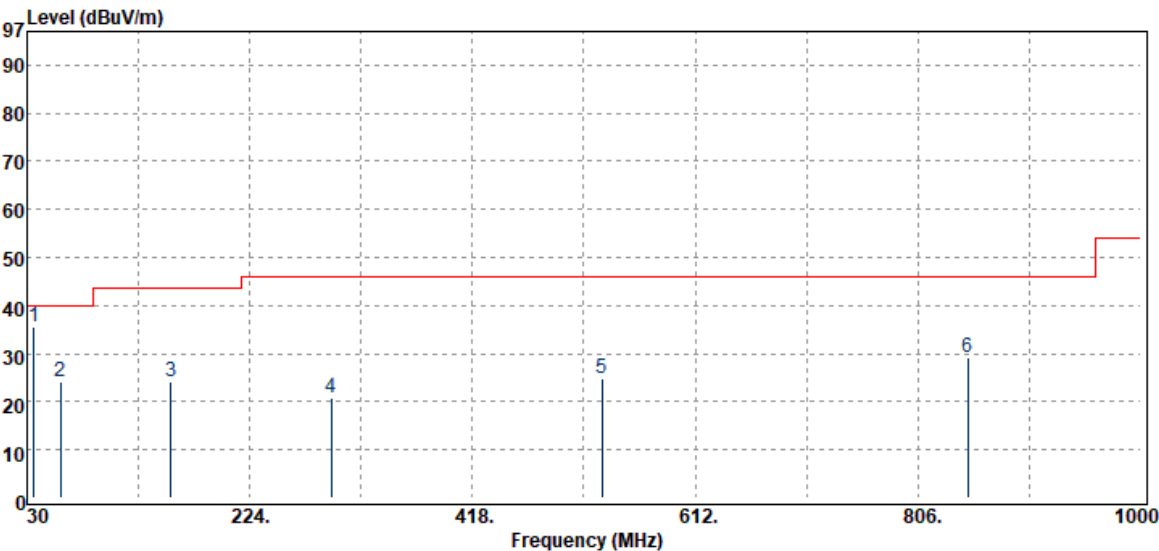
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Report Number	:ER/2020/20054	Test Date	:2020-03-14
Operation Mode	:802.11a B4	Temp./Humi.	:21.9/65
Test Frequency	:5785 MHz	Antenna Pol.	:VERTICAL
Test Mode	:Tx CH Mid	Engineer	:Thomas
EUT Pol	:H Plane		

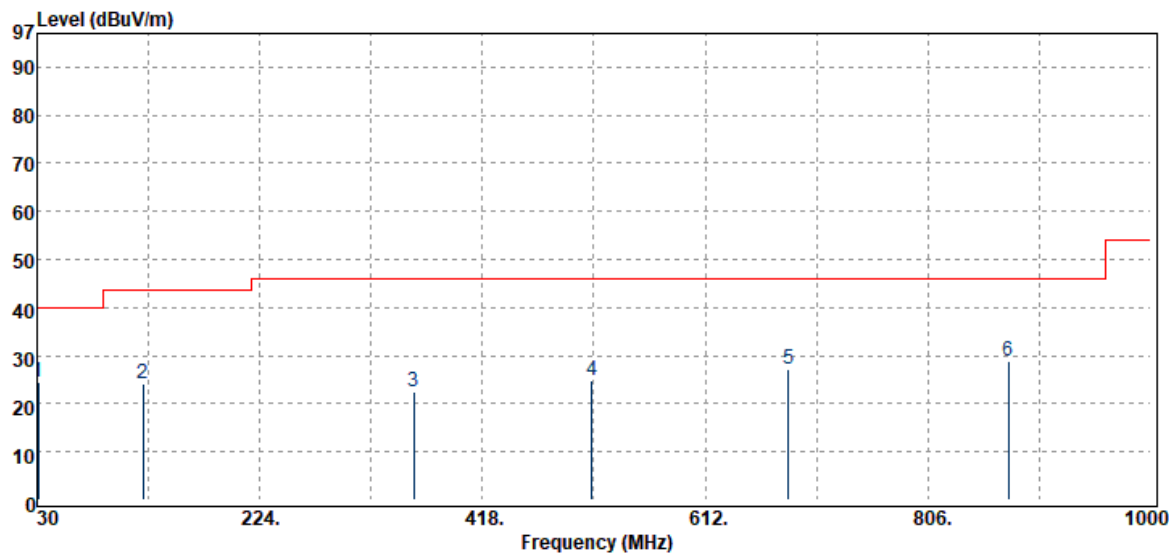


Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
35.82	Peak	43.32	-7.69	35.63	40.00	-4.37
59.10	Peak	41.39	-17.08	24.31	40.00	-15.69
155.13	Peak	36.46	-12.17	24.29	43.50	-19.21
294.81	Peak	29.33	-8.59	20.74	46.00	-25.26
530.52	Peak	29.62	-4.71	24.91	46.00	-21.09
849.65	Peak	28.71	0.35	29.06	46.00	-16.94

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Report Number :ER/2020/20054  
Operation Mode :802.11a B4  
Test Frequency :5785 MHz  
Test Mode :Tx CH Mid  
EUT Pol :H Plane

Test Date :2020-03-14  
Temp./Humi. :21.9/65  
Antenna Pol. :HORIZONTAL  
Engineer :Thomas



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
30.97	Peak	29.53	-4.94	24.59	40.00	-15.41
122.15	Peak	35.23	-11.22	24.01	43.50	-19.49
357.86	Peak	29.42	-6.92	22.50	46.00	-23.50
513.06	Peak	29.36	-4.66	24.70	46.00	-21.30
684.75	Peak	29.10	-2.04	27.06	46.00	-18.94
875.84	Peak	28.44	0.49	28.93	46.00	-17.07

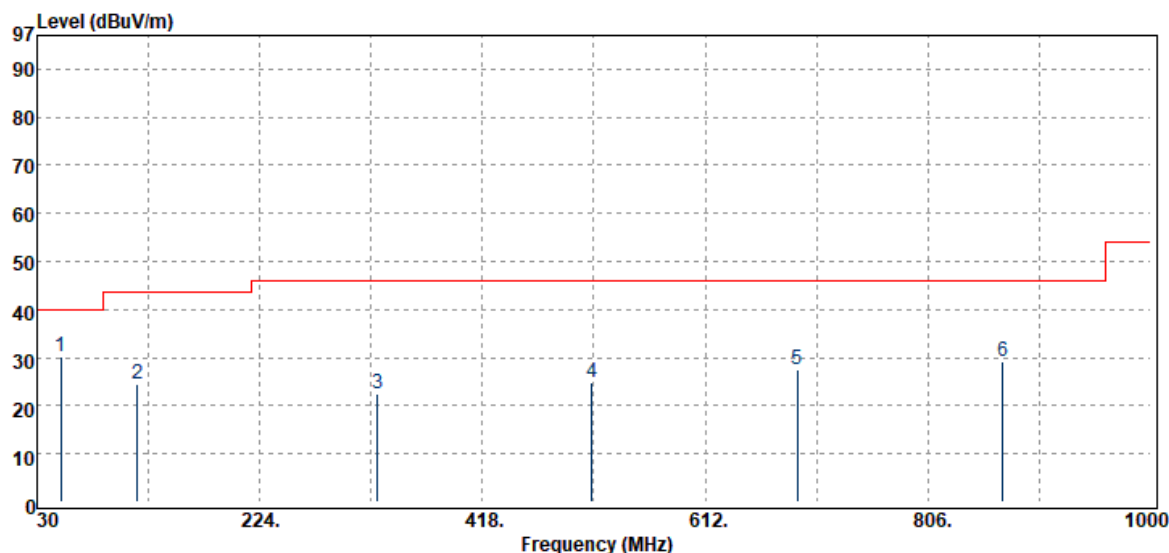
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Report Number :ER/2020/20054  
 Operation Mode :802.11ac80 B1  
 Test Frequency :5210 MHz  
 Test Mode :Tx CH Low  
 EUT Pol :H Plane

Test Date :2020-03-14  
 Temp./Humi. :21.9/65  
 Antenna Pol. :VERTICAL  
 Engineer :Thomas



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
50.37	Peak	45.06	-14.86	30.20	40.00	-9.80
117.30	Peak	35.98	-11.45	24.53	43.50	-18.97
326.82	Peak	30.25	-7.70	22.55	46.00	-23.45
513.06	Peak	29.50	-4.66	24.84	46.00	-21.16
692.51	Peak	29.76	-2.19	27.57	46.00	-18.43
870.99	Peak	28.92	0.33	29.25	46.00	-16.75

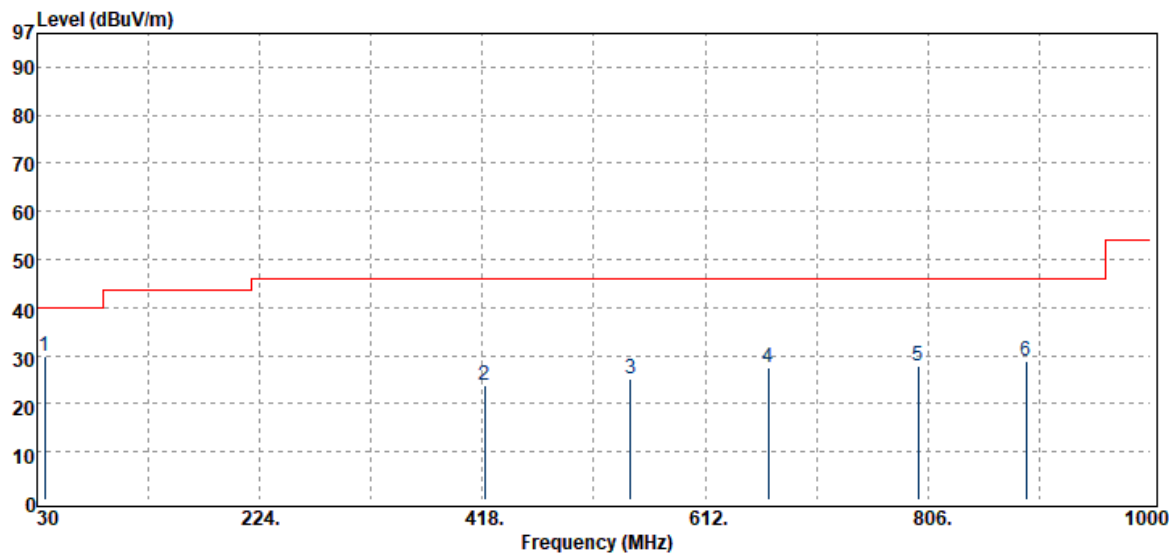
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Report Number :ER/2020/20054  
 Operation Mode :802.11ac80 B1  
 Test Frequency :5210 MHz  
 Test Mode :Tx CH Low  
 EUT Pol :H Plane

Test Date :2020-03-14  
 Temp./Humi. :21.9/65  
 Antenna Pol. :HORIZONTAL  
 Engineer :Thomas



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
36.79	Peak	37.81	-8.04	29.77	40.00	-10.23
419.94	Peak	29.16	-5.22	23.94	46.00	-22.06
547.01	Peak	29.36	-4.27	25.09	46.00	-20.91
667.29	Peak	30.31	-2.73	27.58	46.00	-18.42
797.27	Peak	28.88	-0.97	27.91	46.00	-18.09
891.36	Peak	27.90	1.08	28.98	46.00	-17.02

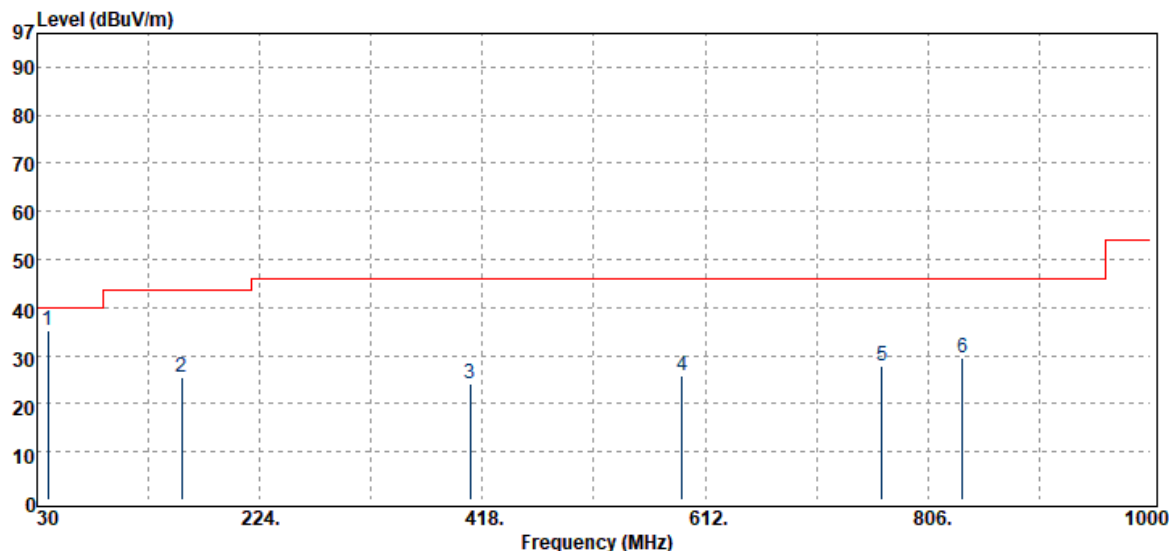
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Report Number :ER/2020/20054  
Operation Mode :802.11ac80 B2  
Test Frequency :5290 MHz  
Test Mode :Tx CH High  
EUT Pol :H Plane

Test Date :2020-03-14  
Temp./Humi. :21.9/65  
Antenna Pol. :VERTICAL  
Engineer :Thomas



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
39.70	Peak	44.93	-9.69	35.24	40.00	-4.76
156.10	Peak	37.67	-12.16	25.51	43.50	-17.99
407.33	Peak	29.64	-5.58	24.06	46.00	-21.94
591.63	Peak	29.41	-3.57	25.84	46.00	-20.16
766.23	Peak	29.00	-1.16	27.84	46.00	-18.16
836.07	Peak	29.31	0.20	29.51	46.00	-16.49

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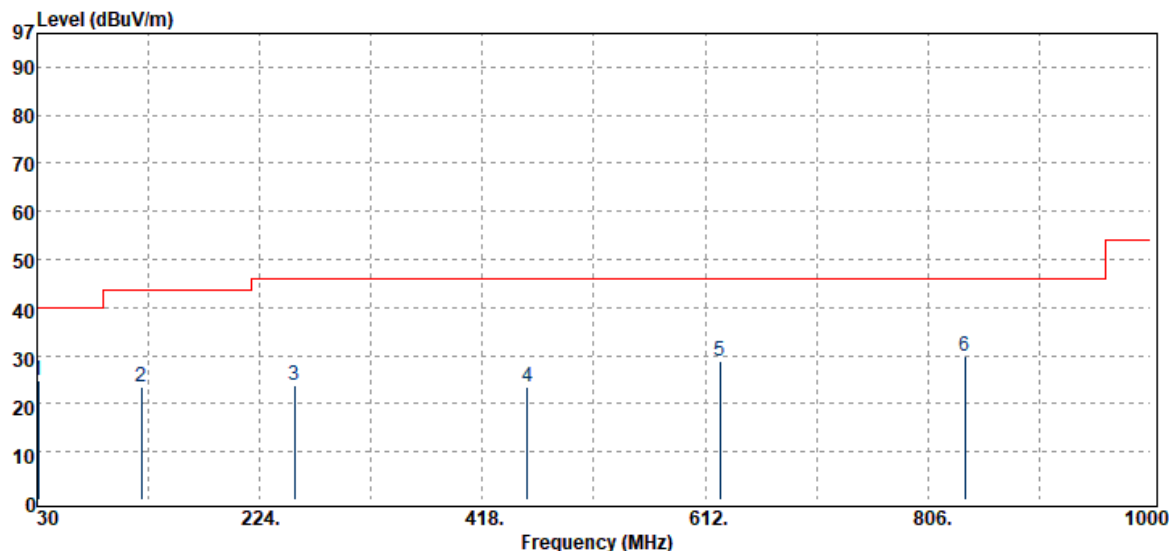
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Report Number :ER/2020/20054  
Operation Mode :802.11ac80 B2  
Test Frequency :5290 MHz  
Test Mode :Tx CH High  
EUT Pol :H Plane

Test Date :2020-03-14  
Temp./Humi. :21.9/65  
Antenna Pol. :HORIZONTAL  
Engineer :Thomas



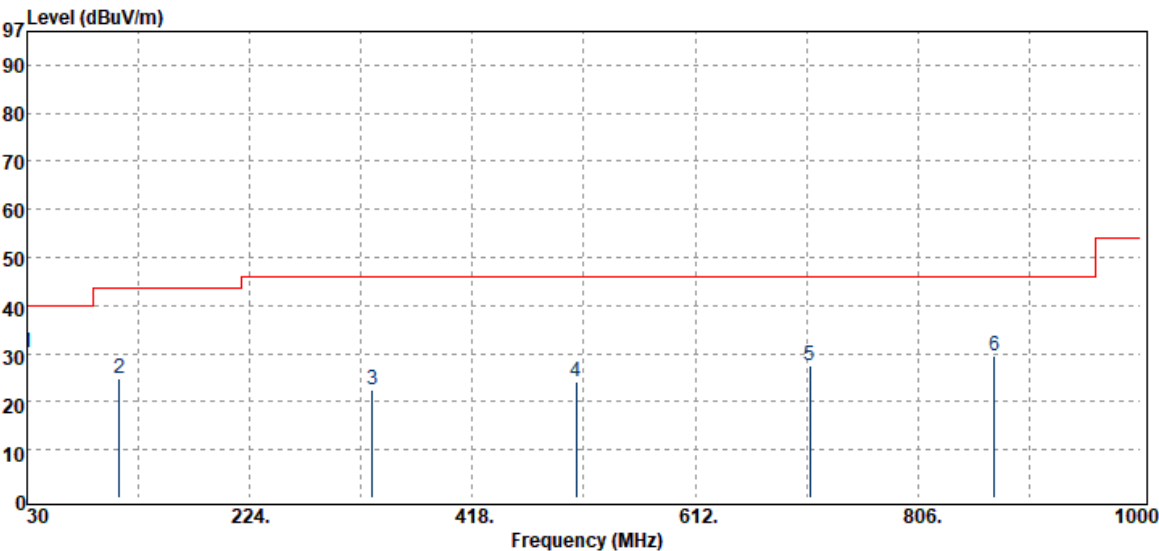
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
30.97	Peak	29.67	-4.94	24.73	40.00	-15.27
121.18	Peak	34.56	-11.23	23.33	43.50	-20.17
254.07	Peak	32.80	-8.92	23.88	46.00	-22.12
456.80	Peak	29.08	-5.62	23.46	46.00	-22.54
624.61	Peak	32.36	-3.62	28.74	46.00	-17.26
838.01	Peak	29.52	0.28	29.80	46.00	-16.20

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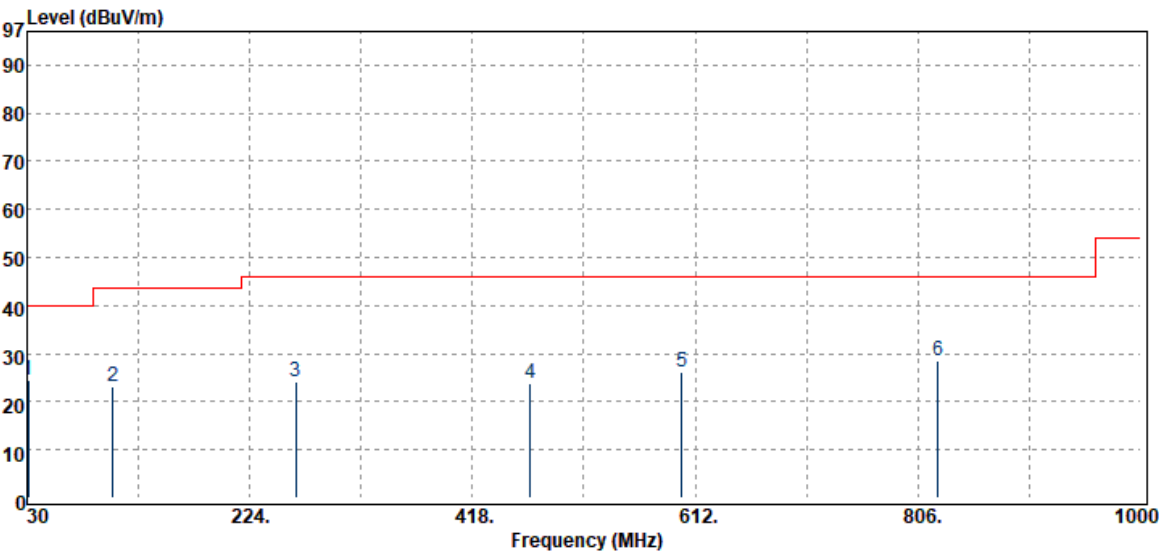
Report Number	:ER/2020/20054	Test Date	:2020-03-14
Operation Mode	:802.11ac80 B3	Temp./Humi.	:21.9/65
Test Frequency	:5530 MHz	Antenna Pol.	:VERTICAL
Test Mode	:Tx CH Low	Engineer	:Thomas
EUT Pol	:H Plane		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
30.00	Peak	34.92	-4.56	30.36	40.00	-9.64
110.51	Peak	36.65	-11.73	24.92	43.50	-18.58
330.70	Peak	30.02	-7.68	22.34	46.00	-23.66
508.21	Peak	28.99	-4.72	24.27	46.00	-21.73
711.91	Peak	29.96	-2.31	27.65	46.00	-18.35
872.93	Peak	29.17	0.39	29.56	46.00	-16.44

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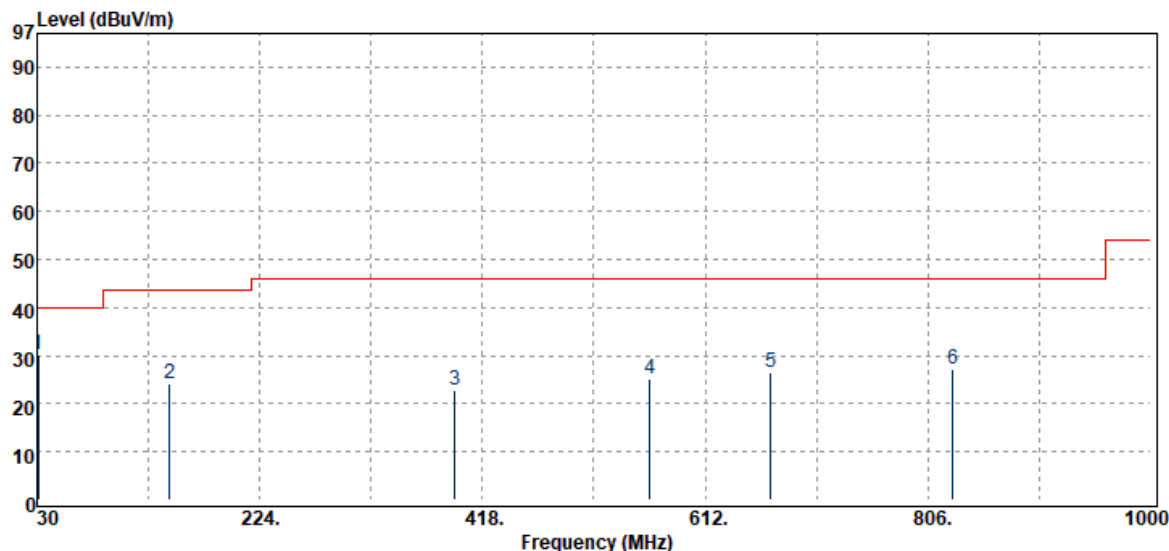
Report Number	:ER/2020/20054	Test Date	:2020-03-14
Operation Mode	:802.11ac80 B3	Temp./Humi.	:21.9/65
Test Frequency	:5530 MHz	Antenna Pol.	:HORIZONTAL
Test Mode	:Tx CH Low	Engineer	:Thomas
EUT Pol	:H Plane		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
30.97	Peak	29.57	-4.94	24.63	40.00	-15.37
104.69	Peak	35.30	-12.05	23.25	43.50	-20.25
263.77	Peak	32.53	-8.31	24.22	46.00	-21.78
468.44	Peak	29.25	-5.51	23.74	46.00	-22.26
600.36	Peak	29.54	-3.40	26.14	46.00	-19.86
823.46	Peak	29.19	-0.78	28.41	46.00	-17.59

Report Number :ER/2020/20054  
Operation Mode :802.11ac80 B4  
Test Frequency :5775 MHz  
Test Mode :Tx CH Low  
EUT Pol :H Plane

Test Date :2020-03-14  
Temp./Humi. :21.9/65  
Antenna Pol. :VERTICAL  
Engineer :Thomas



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
30.97	Peak	35.13	-4.94	30.19	40.00	-9.81
145.43	Peak	35.99	-11.87	24.12	43.50	-19.38
393.75	Peak	29.12	-6.36	22.76	46.00	-23.24
563.50	Peak	29.73	-4.51	25.22	46.00	-20.78
669.23	Peak	29.05	-2.57	26.48	46.00	-19.52
827.34	Peak	27.91	-0.57	27.34	46.00	-18.66

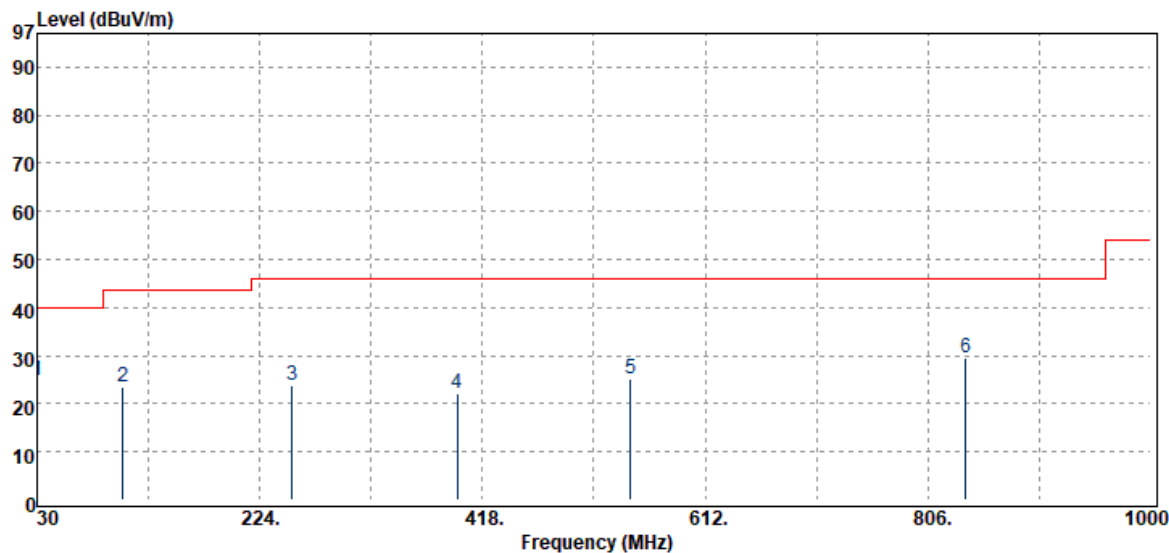
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Report Number :ER/2020/20054  
Operation Mode :802.11ac80 B4  
Test Frequency :5775 MHz  
Test Mode :Tx CH Low  
EUT Pol :H Plane

Test Date :2020-03-14  
Temp./Humi. :21.9/65  
Antenna Pol. :HORIZONTAL  
Engineer :Thomas



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
30.00	Peak	29.26	-4.56	24.70	40.00	-15.30
104.69	Peak	35.45	-12.05	23.40	43.50	-20.10
252.13	Peak	32.96	-9.13	23.83	46.00	-22.17
395.69	Peak	28.40	-6.25	22.15	46.00	-23.85
547.01	Peak	29.53	-4.27	25.26	46.00	-20.74
838.98	Peak	29.31	0.32	29.63	46.00	-16.37

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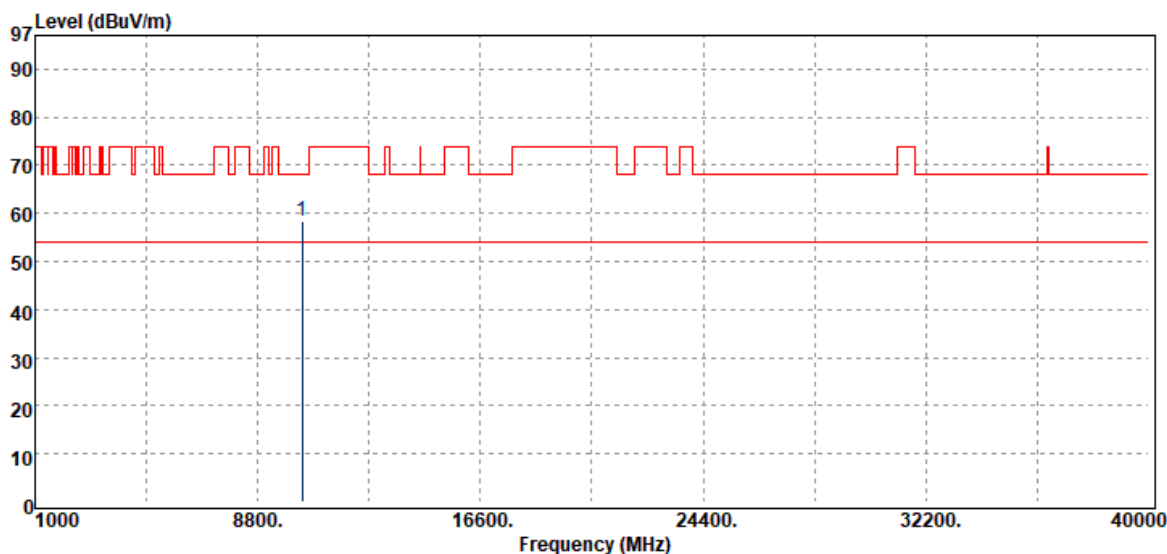
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## 11.7.2 Above 1GHz Worst-Case Data:

Report Number	:ER/2020/20054	Test Date	:2020-03-12
Operation Mode	:802.11a B1	Temp./Humi.	:22.1/56
Test Frequency	:5180 MHz	Antenna Pol.	:VERTICAL
Test Mode	:Tx CH Low	Engineer	:Thomas
EUT Pol	:H Plane		



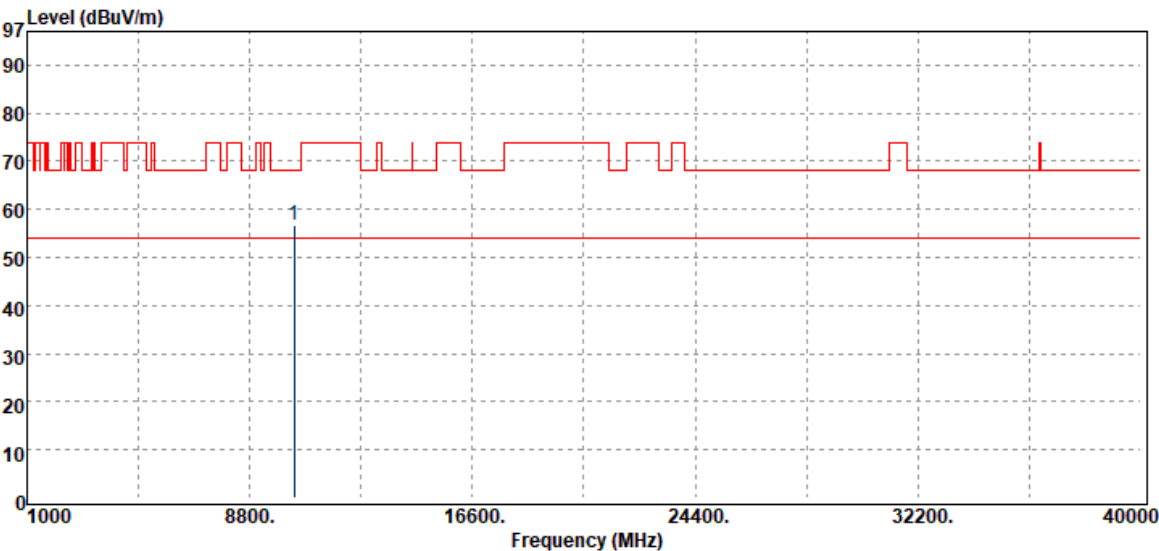
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dB $\mu$ V	Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
10360.00	Peak	32.19	26.38	58.57	68.20	-9.63

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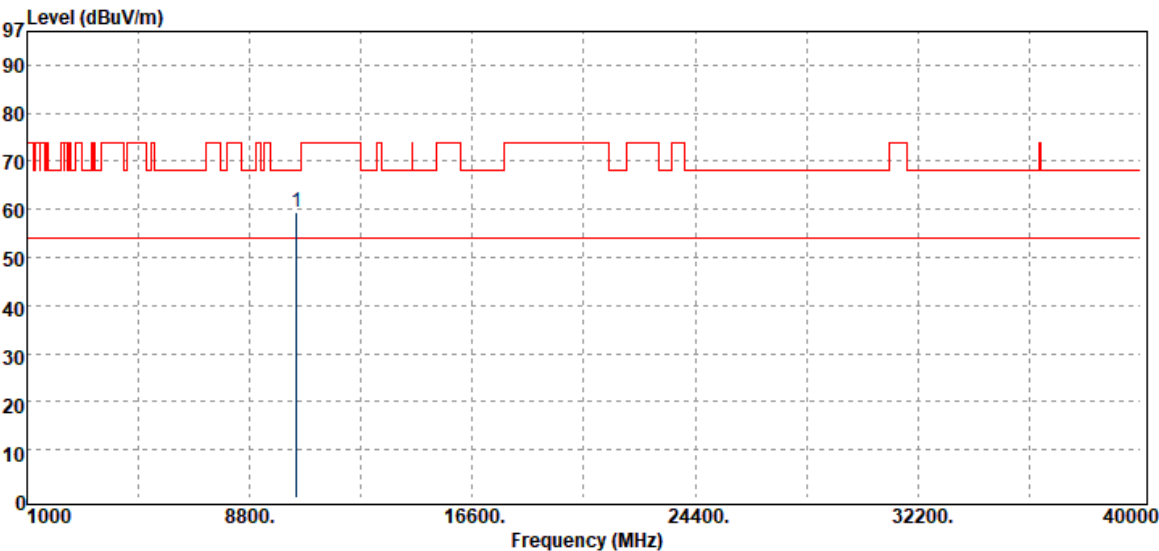
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Report Number	:ER/2020/20054	Test Date	:2020-03-12
Operation Mode	:802.11a B1	Temp./Humi.	:22.1/56
Test Frequency	:5180 MHz	Antenna Pol.	:HORIZONTAL
Test Mode	:Tx CH Low	Engineer	:Thomas
EUT Pol	:H Plane		



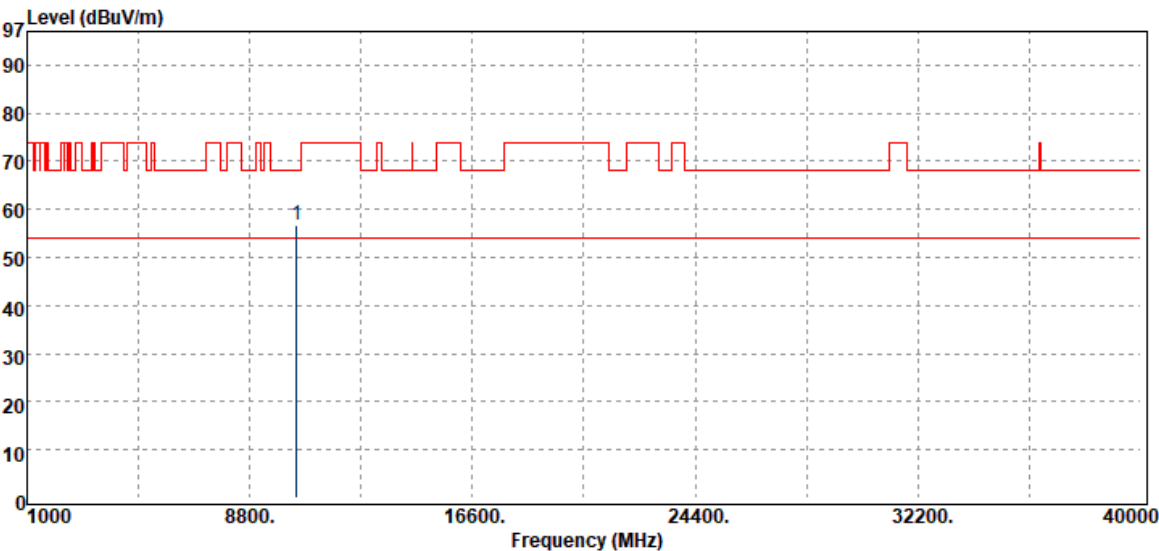
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
10360.00	Peak	30.20	26.38	56.58	68.20	-11.62

Report Number	:ER/2020/20054	Test Date	:2020-03-12
Operation Mode	:802.11a B1	Temp./Humi.	:22.1/56
Test Frequency	:5220 MHz	Antenna Pol.	:VERTICAL
Test Mode	:Tx CH Mid	Engineer	:Thomas
EUT Pol	:H Plane		



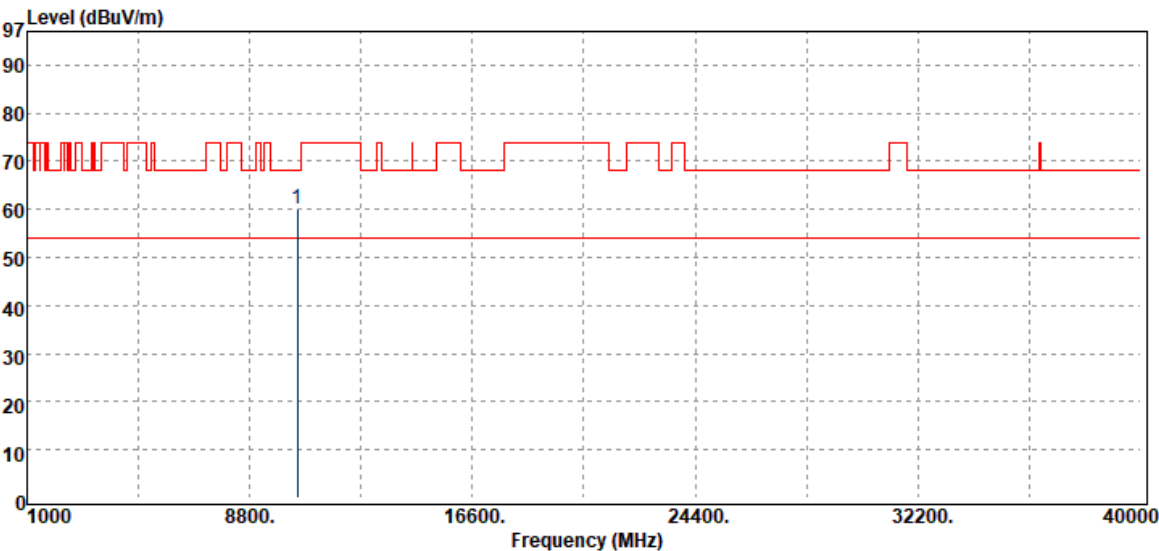
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
10443.00	Peak	32.63	26.76	59.39	68.20	-8.81

Report Number	:ER/2020/20054	Test Date	:2020-03-12
Operation Mode	:802.11a B1	Temp./Humi.	:22.1/56
Test Frequency	:5220 MHz	Antenna Pol.	:HORIZONTAL
Test Mode	:Tx CH Mid	Engineer	:Thomas
EUT Pol	:H Plane		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
10440.00	Peak	29.87	26.76	56.63	68.20	-11.57

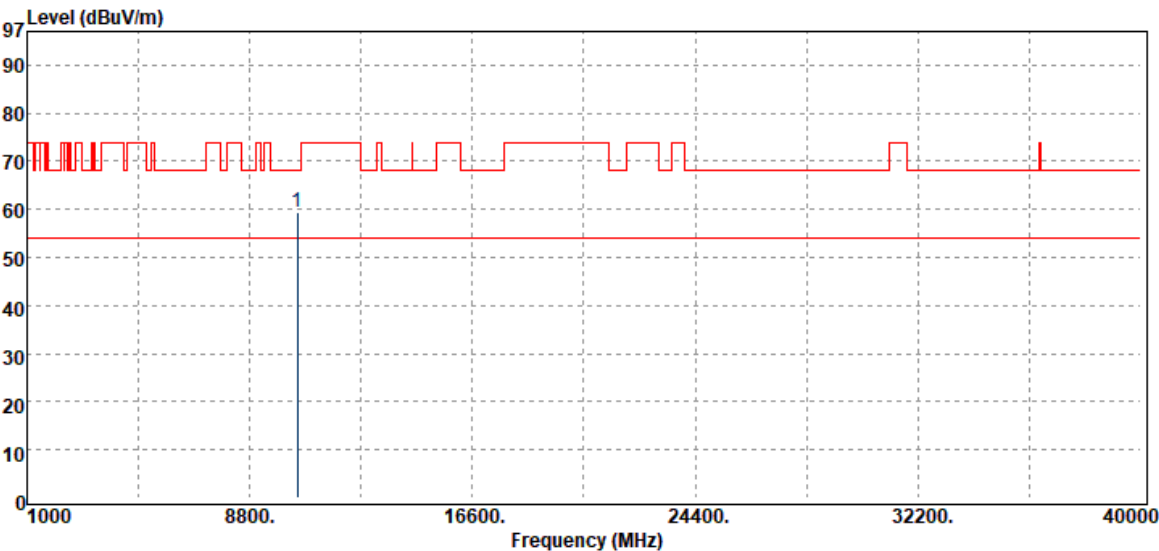
Report Number	:ER/2020/20054	Test Date	:2020-03-12
Operation Mode	:802.11a B1	Temp./Humi.	:22.1/56
Test Frequency	:5240 MHz	Antenna Pol.	:VERTICAL
Test Mode	:Tx CH High	Engineer	:Thomas
EUT Pol	:H Plane		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
10480.00	Peak	33.64	26.40	60.04	68.20	-8.16

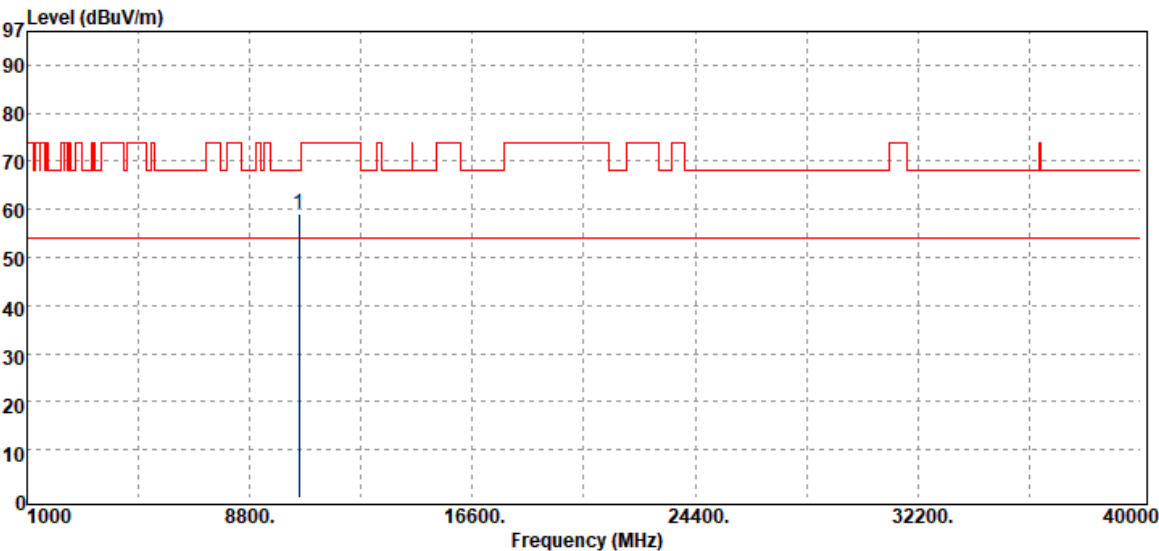


Report Number	:ER/2020/20054	Test Date	:2020-03-12
Operation Mode	:802.11a B1	Temp./Humi.	:22.1/56
Test Frequency	:5240 MHz	Antenna Pol.	:HORIZONTAL
Test Mode	:Tx CH High	Engineer	:Thomas
EUT Pol	:H Plane		



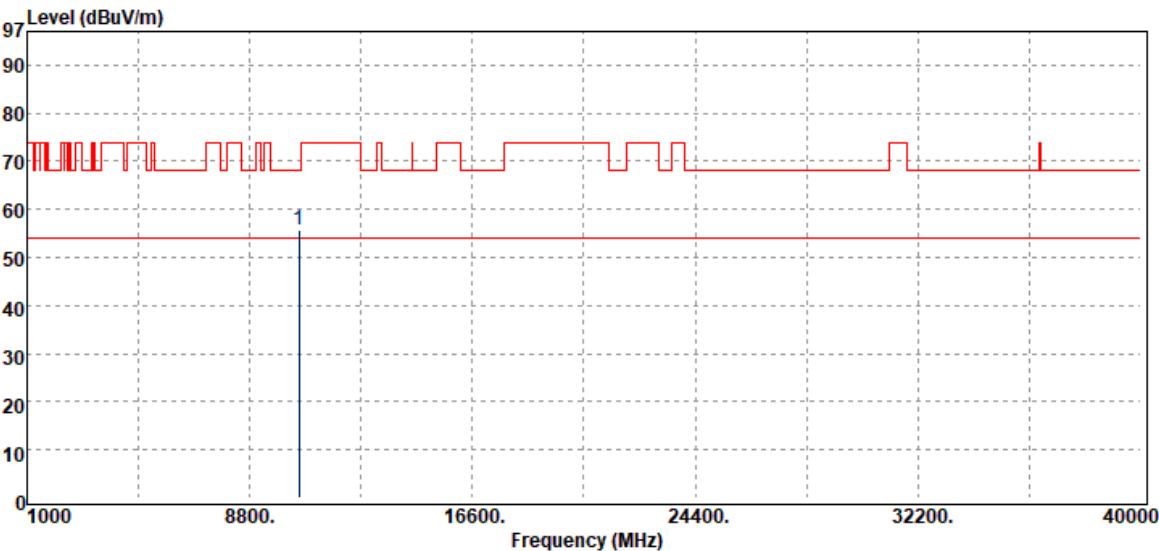
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
10480.00	Peak	33.09	26.40	59.49	68.20	-8.71

Report Number	:ER/2020/20054	Test Date	:2020-03-12
Operation Mode	:802.11a B2	Temp./Humi.	:22.1/56
Test Frequency	:5260 MHz	Antenna Pol.	:VERTICAL
Test Mode	:Tx CH Low	Engineer	:Thomas
EUT Pol	:H Plane		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
10520.00	Peak	32.61	26.32	58.93	68.20	-9.27

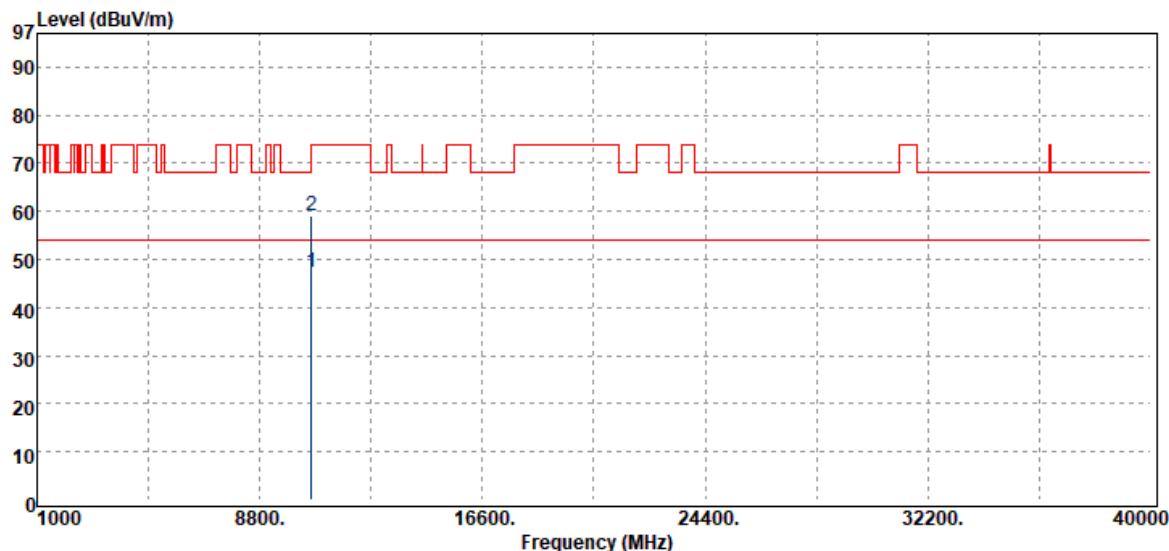
Report Number	:ER/2020/20054	Test Date	:2020-03-12
Operation Mode	:802.11a B2	Temp./Humi.	:22.1/56
Test Frequency	:5260 MHz	Antenna Pol.	:HORIZONTAL
Test Mode	:Tx CH Low	Engineer	:Thomas
EUT Pol	:H Plane		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
10520.00	Peak	29.35	26.32	55.67	68.20	-12.53

Report Number :ER/2020/20054  
Operation Mode :802.11a B2  
Test Frequency :5300 MHz  
Test Mode :Tx CH Mid  
EUT Pol :H Plane

Test Date :2020-03-12  
Temp./Humi. :22.1/56  
Antenna Pol. :VERTICAL  
Engineer :Thomas



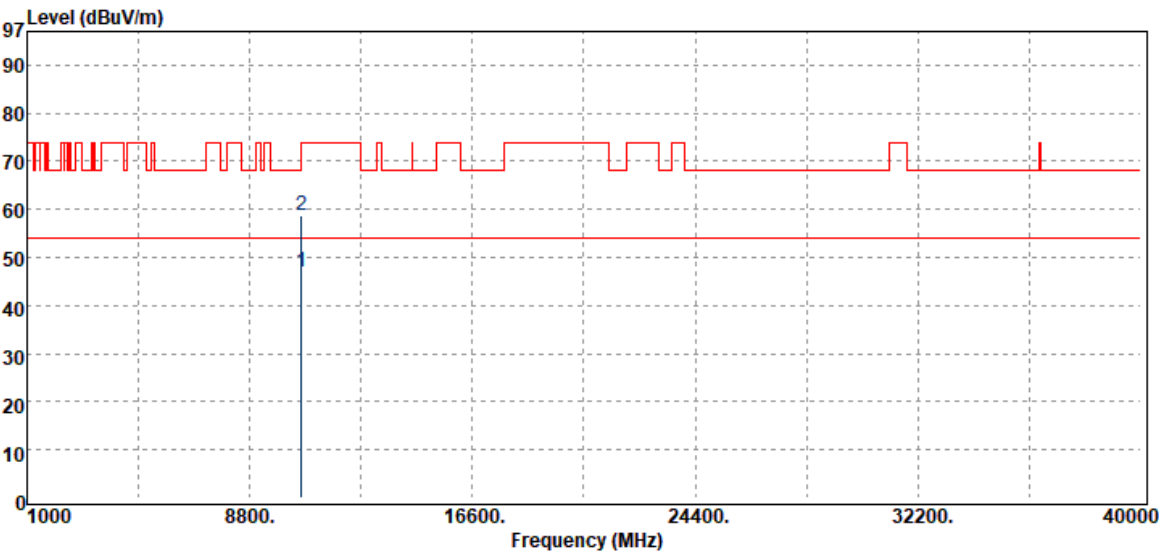
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dB $\mu$ V	Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
10600.00	Average	20.40	26.78	47.18	54.00	-6.82
10600.00	Peak	32.32	26.78	59.10	74.00	-14.90

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Report Number	:ER/2020/20054	Test Date	:2020-03-12
Operation Mode	:802.11a B2	Temp./Humi.	:22.1/56
Test Frequency	:5300 MHz	Antenna Pol.	:HORIZONTAL
Test Mode	:Tx CH Mid	Engineer	:Thomas
EUT Pol	:H Plane		

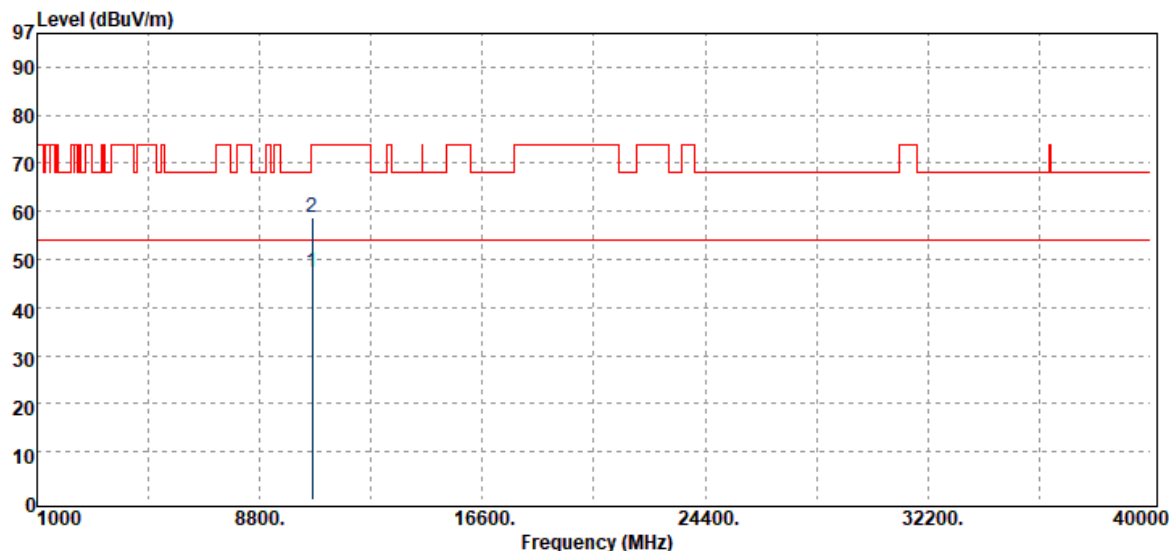


Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
10600.00	Average	20.28	26.78	47.06	54.00	-6.94
10600.00	Peak	31.91	26.78	58.69	74.00	-15.31



Report Number :ER/2020/20054  
Operation Mode :802.11a B2  
Test Frequency :5320 MHz  
Test Mode :Tx CH High  
EUT Pol :H Plane

Test Date :2020-03-12  
Temp./Humi. :22.1/56  
Antenna Pol. :VERTICAL  
Engineer :Thomas



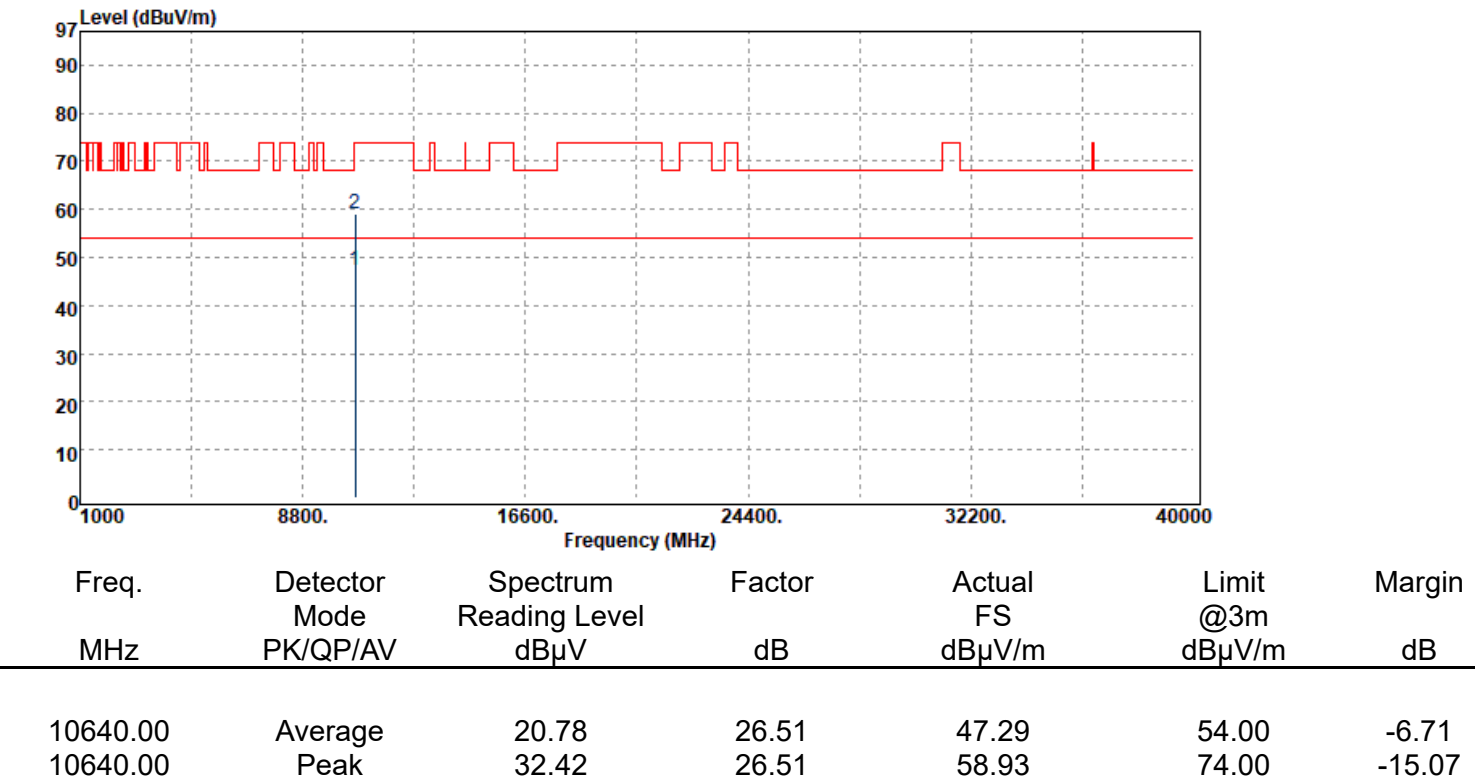
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
10640.00	Average	20.88	26.51	47.39	54.00	-6.61
10640.00	Peak	32.09	26.51	58.60	74.00	-15.40

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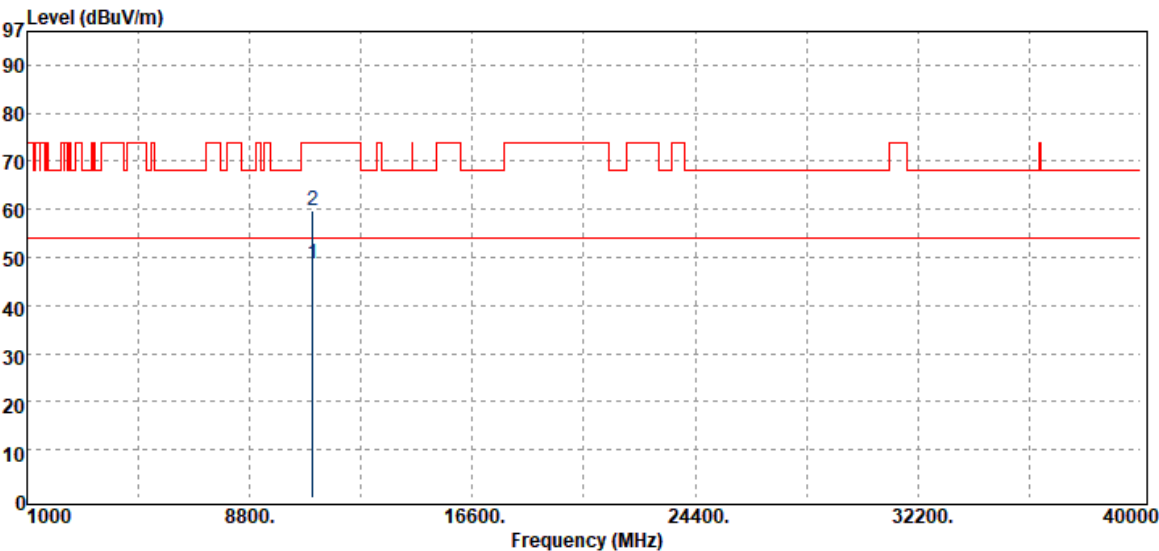
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Report Number	:ER/2020/20054	Test Date	:2020-03-12
Operation Mode	:802.11a B2	Temp./Humi.	:22.1/56
Test Frequency	:5320 MHz	Antenna Pol.	:HORIZONTAL
Test Mode	:Tx CH High	Engineer	:Thomas
EUT Pol	:H Plane		

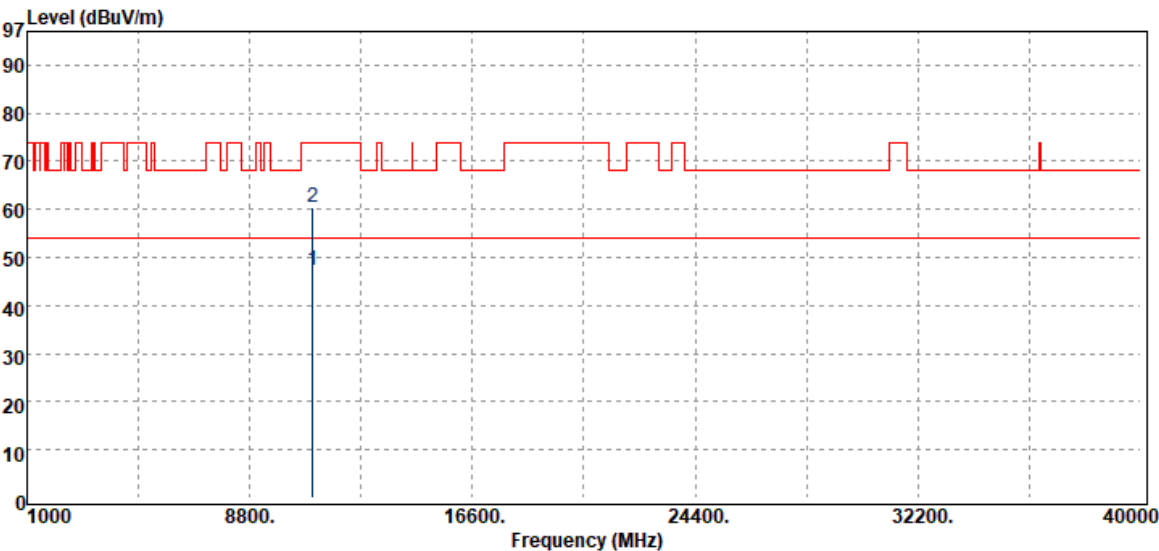


Report Number	:ER/2020/20054	Test Date	:2020-03-12
Operation Mode	:802.11a B3	Temp./Humi.	:22.1/56
Test Frequency	:5500 MHz	Antenna Pol.	:VERTICAL
Test Mode	:Tx CH Low	Engineer	:Thomas
EUT Pol	:H Plane		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
11000.00	Average	21.28	27.32	48.60	54.00	-5.40
11000.00	Peak	32.59	27.32	59.91	74.00	-14.09

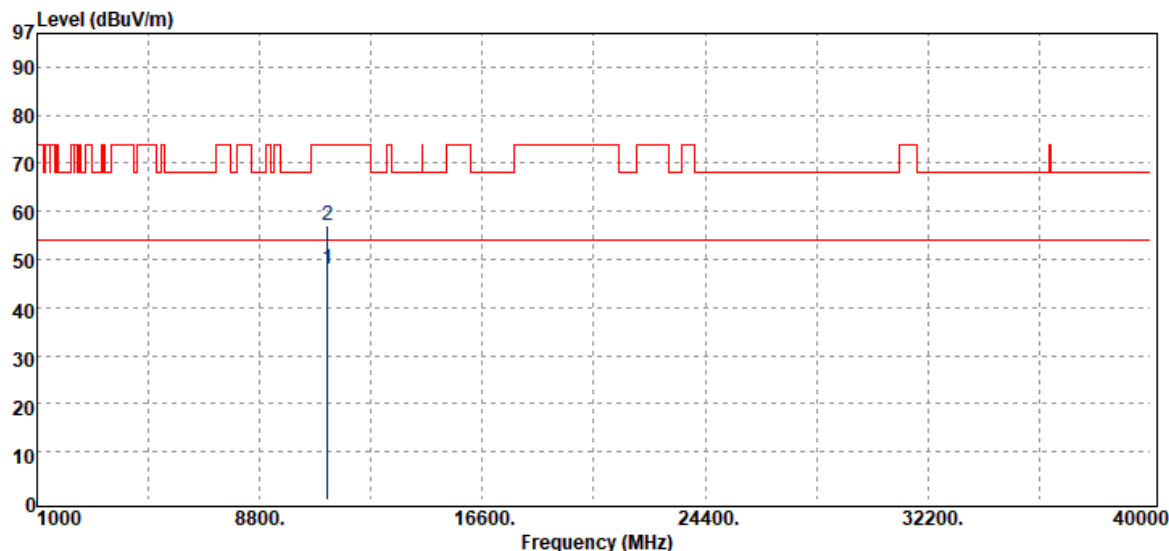
Report Number	:ER/2020/20054	Test Date	:2020-03-12
Operation Mode	:802.11a B3	Temp./Humi.	:22.1/56
Test Frequency	:5500 MHz	Antenna Pol.	:HORIZONTAL
Test Mode	:Tx CH Low	Engineer	:Thomas
EUT Pol	:H Plane		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
11000.00	Average	20.12	27.32	47.44	54.00	-6.56
11000.00	Peak	33.04	27.32	60.36	74.00	-13.64

Report Number :ER/2020/20054  
 Operation Mode :802.11a B3  
 Test Frequency :5580 MHz  
 Test Mode :Tx CH Mid  
 EUT Pol :H Plane

Test Date :2020-03-12  
 Temp./Humi. :22.1/56  
 Antenna Pol. :VERTICAL  
 Engineer :Thomas



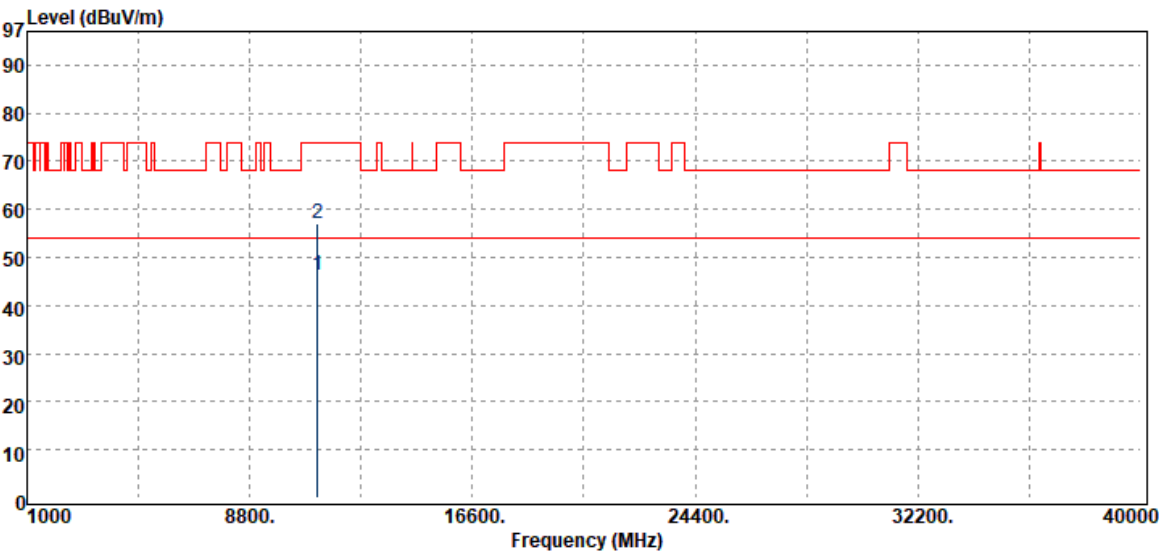
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
11160.00	Average	20.88	26.98	47.86	54.00	-6.14
11160.00	Peak	30.09	26.98	57.07	74.00	-16.93

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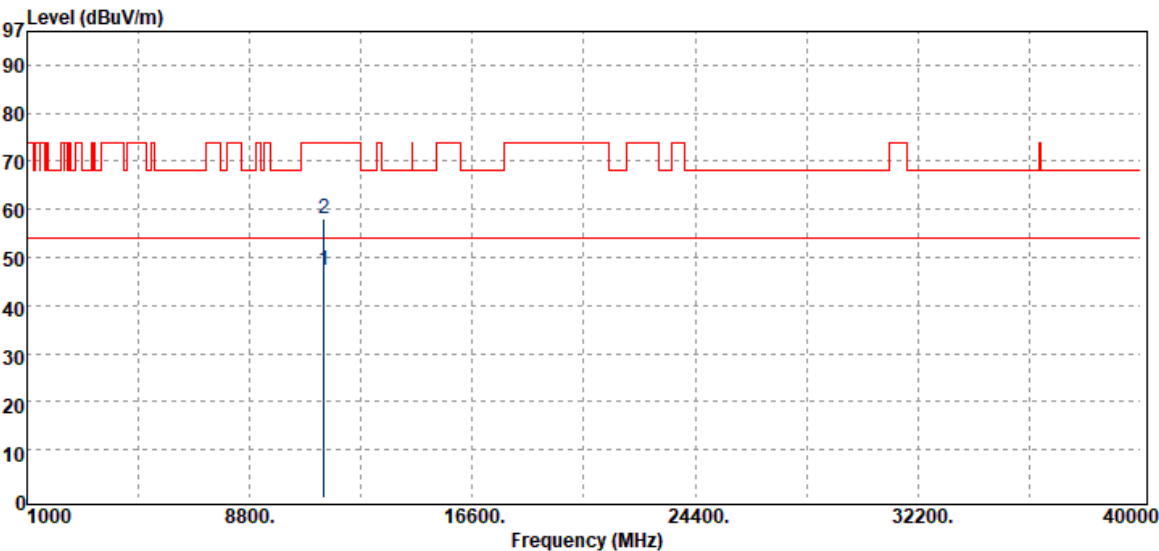
Report Number	:ER/2020/20054	Test Date	:2020-03-12
Operation Mode	:802.11a B3	Temp./Humi.	:22.1/56
Test Frequency	:5580 MHz	Antenna Pol.	:HORIZONTAL
Test Mode	:Tx CH Mid	Engineer	:Thomas
EUT Pol	:H Plane		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
11160.00	Average	19.37	26.98	46.35	54.00	-7.65
11160.00	Peak	30.07	26.98	57.05	74.00	-16.95

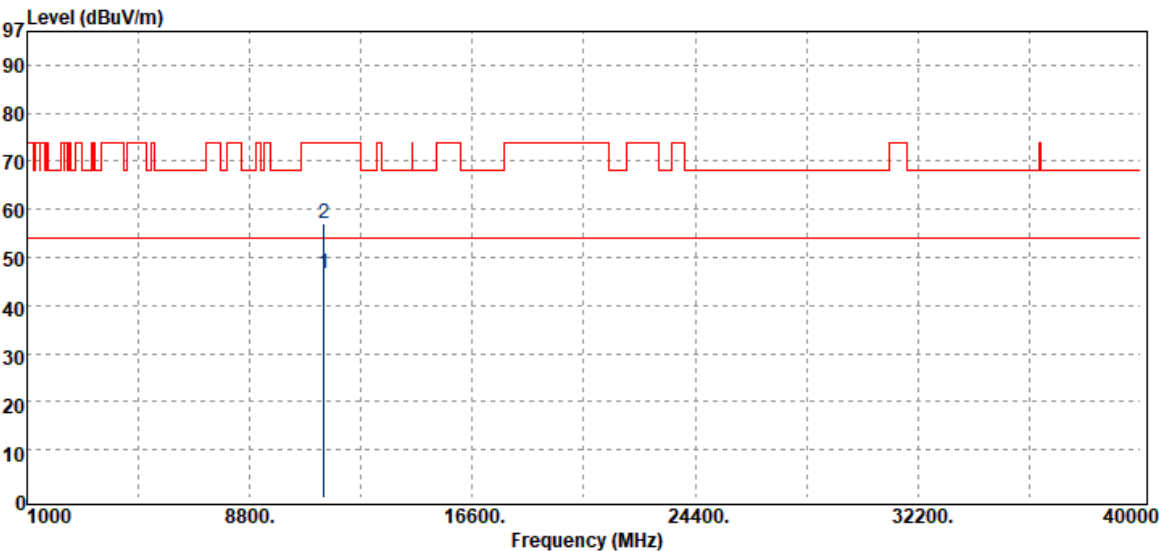


Report Number	:ER/2020/20054	Test Date	:2020-03-12
Operation Mode	:802.11a B3	Temp./Humi.	:22.1/56
Test Frequency	:5700 MHz	Antenna Pol.	:VERTICAL
Test Mode	:Tx CH High	Engineer	:Thomas
EUT Pol	:H Plane		



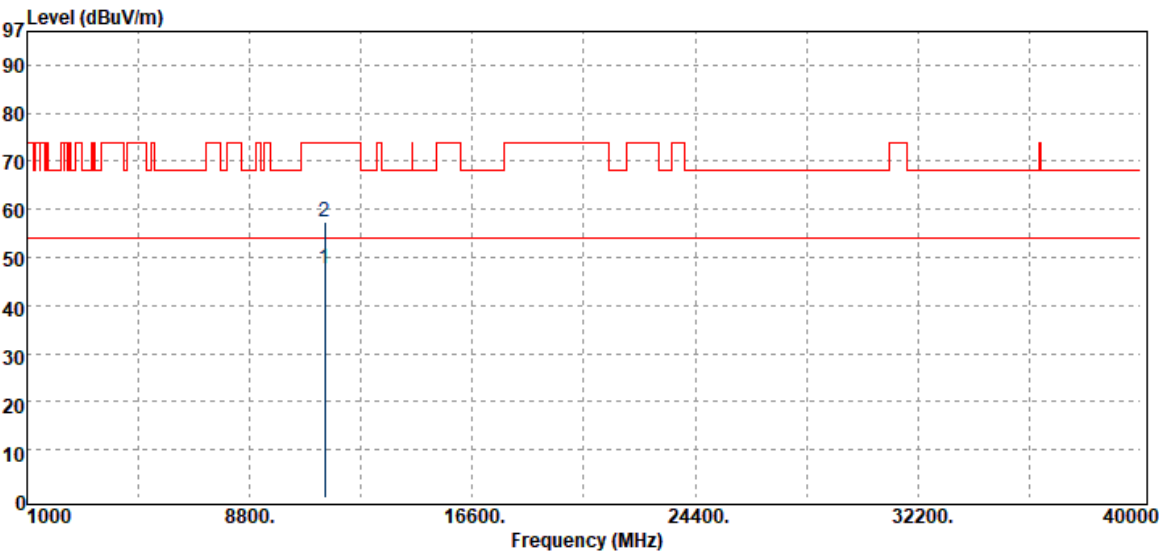
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
11400.00	Average	19.89	27.54	47.43	54.00	-6.57
11400.00	Peak	30.51	27.54	58.05	74.00	-15.95

Report Number	:ER/2020/20054	Test Date	:2020-03-12
Operation Mode	:802.11a B3	Temp./Humi.	:22.1/56
Test Frequency	:5700 MHz	Antenna Pol.	:HORIZONTAL
Test Mode	:Tx CH High	Engineer	:Thomas
EUT Pol	:H Plane		



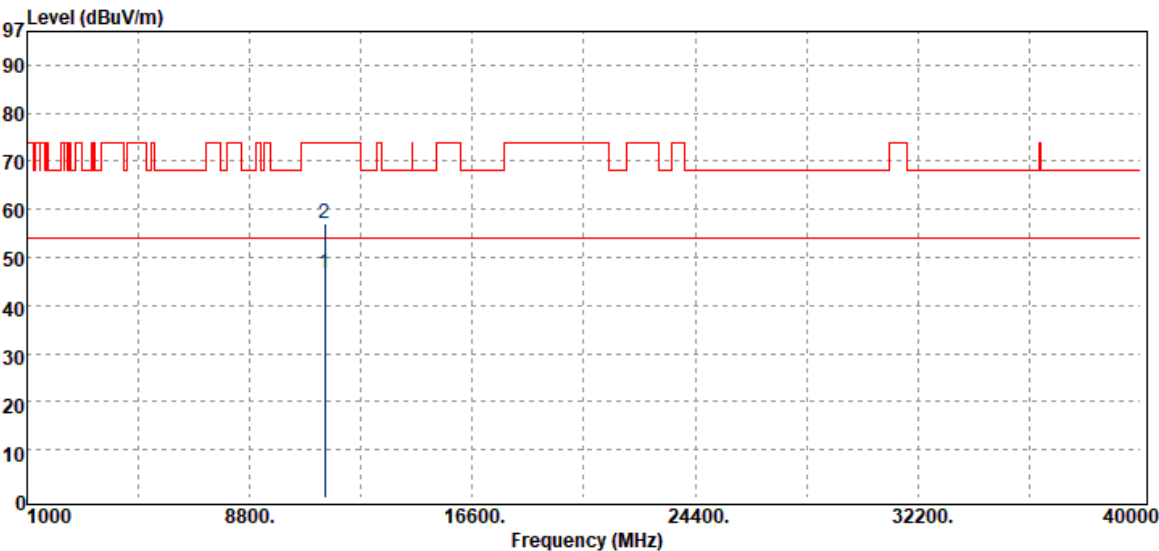
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
11400.00	Average	19.21	27.54	46.75	54.00	-7.25
11400.00	Peak	29.43	27.54	56.97	74.00	-17.03

Report Number	:ER/2020/20054	Test Date	:2020-03-12
Operation Mode	:802.11a B3-B4	Temp./Humi.	:22.1/56
Test Frequency	:5720 MHz	Antenna Pol.	:VERTICAL
Test Mode	:Tx CH High	Engineer	:Thomas
EUT Pol	:H Plane		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBµV	Factor dB	Actual FS dBµV/m	Limit @3m dBµV/m	Margin dB
11440.00	Average	19.76	27.76	47.52	54.00	-6.48
11440.00	Peak	29.65	27.76	57.41	74.00	-16.59

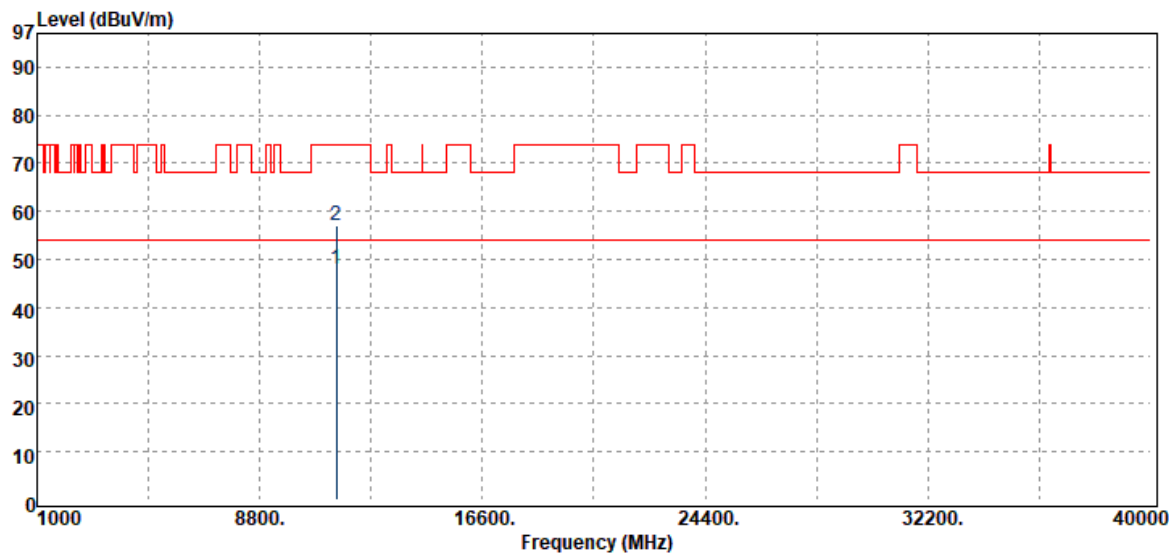
Report Number	:ER/2020/20054	Test Date	:2020-03-12
Operation Mode	:802.11a B3-B4	Temp./Humi.	:22.1/56
Test Frequency	:5720 MHz	Antenna Pol.	:HORIZONTAL
Test Mode	:Tx CH High	Engineer	:Thomas
EUT Pol	:H Plane		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
11440.00	Average	19.05	27.76	46.81	54.00	-7.19
11440.00	Peak	29.22	27.76	56.98	74.00	-17.02

Report Number :ER/2020/20054  
 Operation Mode :802.11a B4  
 Test Frequency :5745 MHz  
 Test Mode :Tx CH Low  
 EUT Pol :H Plane

Test Date :2020-03-12  
 Temp./Humi. :22.1/56  
 Antenna Pol. :VERTICAL  
 Engineer :Thomas



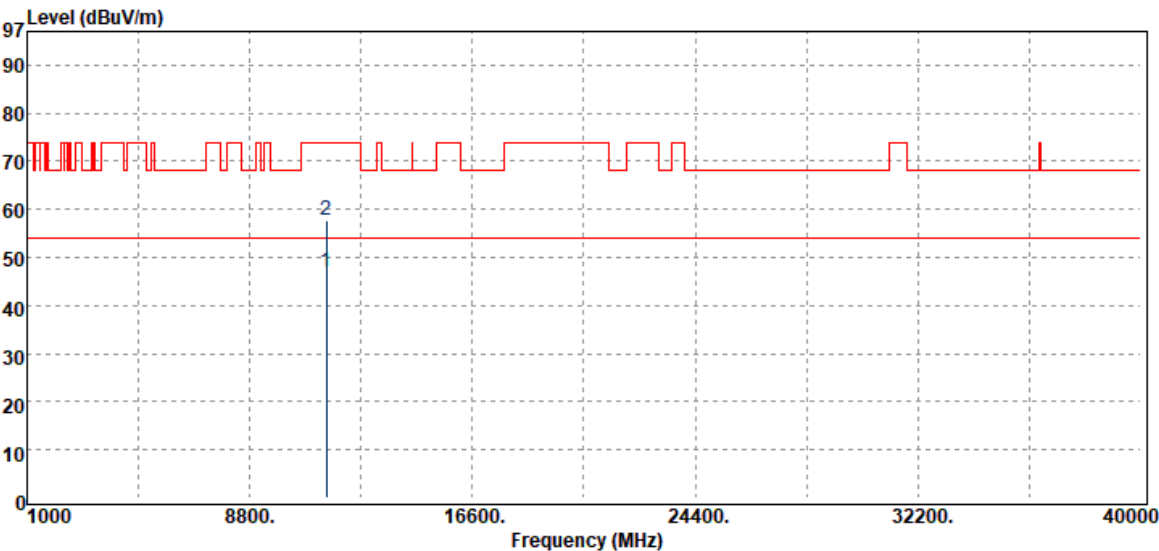
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
11490.00	Average	19.94	28.07	48.01	54.00	-5.99
11490.00	Peak	29.15	28.07	57.22	74.00	-16.78

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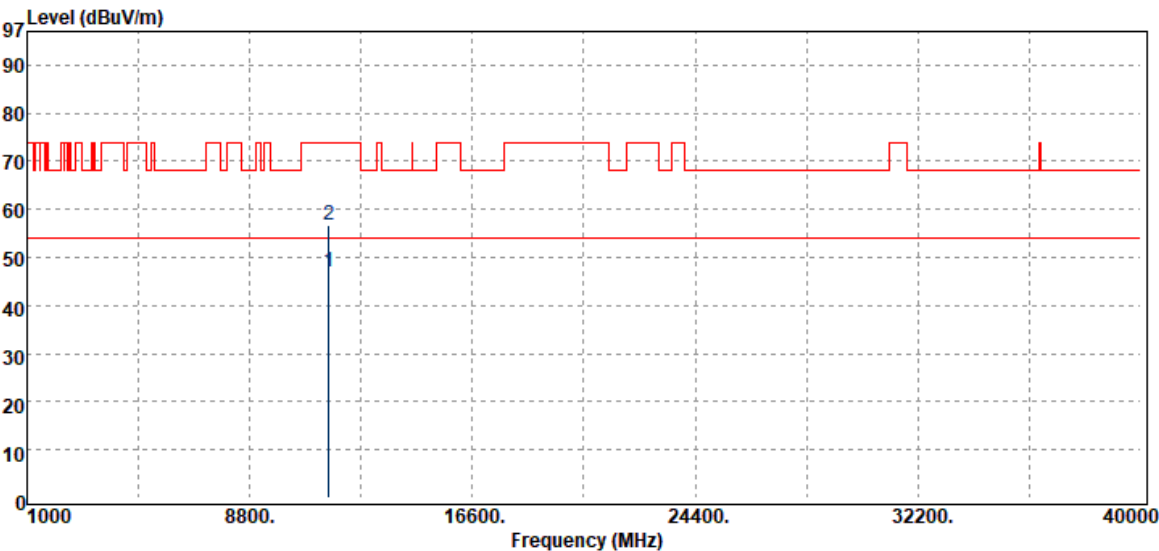
Report Number	:ER/2020/20054	Test Date	:2020-03-12
Operation Mode	:802.11a B4	Temp./Humi.	:22.1/56
Test Frequency	:5745 MHz	Antenna Pol.	:HORIZONTAL
Test Mode	:Tx CH Low	Engineer	:Thomas
EUT Pol	:H Plane		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
11490.00	Average	18.95	28.07	47.02	54.00	-6.98
11490.00	Peak	29.62	28.07	57.69	74.00	-16.31

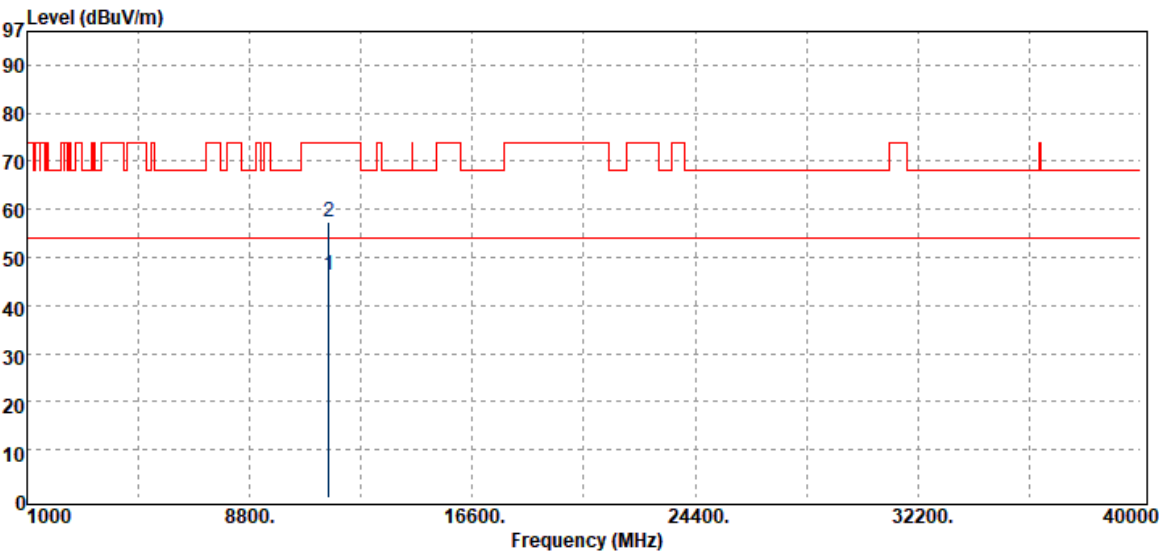


Report Number	:ER/2020/20054	Test Date	:2020-03-12
Operation Mode	:802.11a B4	Temp./Humi.	:22.1/56
Test Frequency	:5785 MHz	Antenna Pol.	:VERTICAL
Test Mode	:Tx CH Mid	Engineer	:Thomas
EUT Pol	:H Plane		



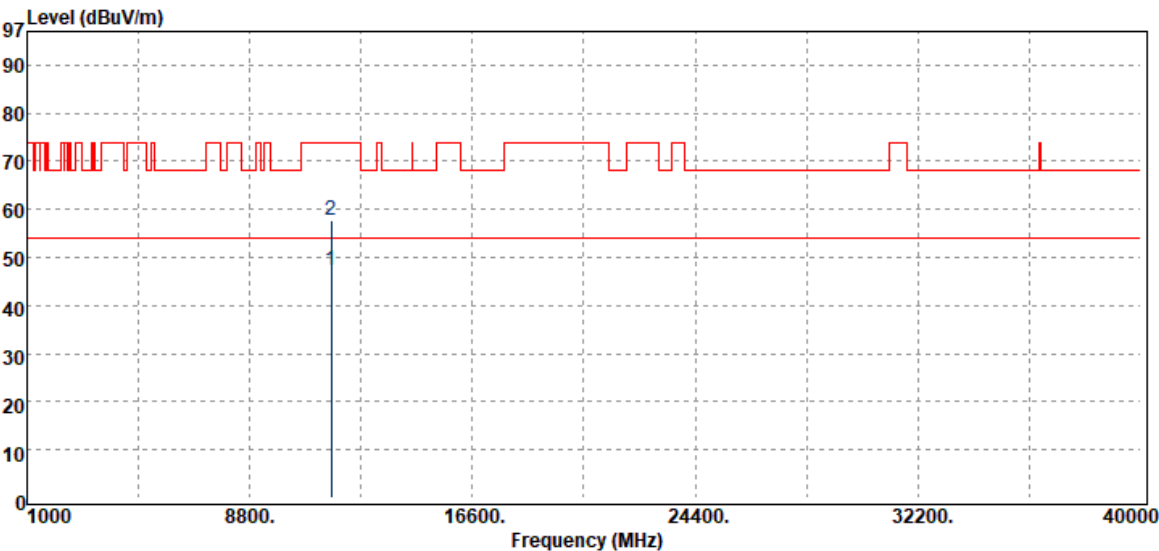
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
11570.00	Average	19.71	27.18	46.89	54.00	-7.11
11570.00	Peak	29.46	27.18	56.64	74.00	-17.36

Report Number	:ER/2020/20054	Test Date	:2020-03-12
Operation Mode	:802.11a B4	Temp./Humi.	:22.1/56
Test Frequency	:5785 MHz	Antenna Pol.	:HORIZONTAL
Test Mode	:Tx CH Mid	Engineer	:Thomas
EUT Pol	:H Plane		



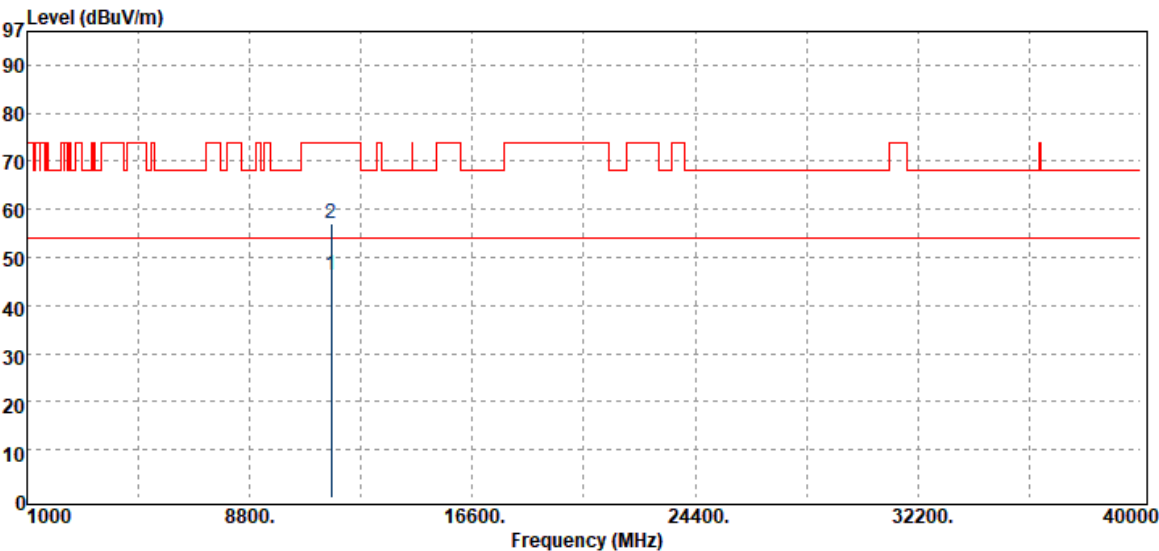
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
11570.00	Average	19.03	27.18	46.21	54.00	-7.79
11570.00	Peak	30.10	27.18	57.28	74.00	-16.72

Report Number	:ER/2020/20054	Test Date	:2020-03-12
Operation Mode	:802.11a B4	Temp./Humi.	:22.1/56
Test Frequency	:5825 MHz	Antenna Pol.	:VERTICAL
Test Mode	:Tx CH High	Engineer	:Thomas
EUT Pol	:H Plane		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
11650.00	Average	19.69	27.69	47.38	54.00	-6.62
11650.00	Peak	29.94	27.69	57.63	74.00	-16.37

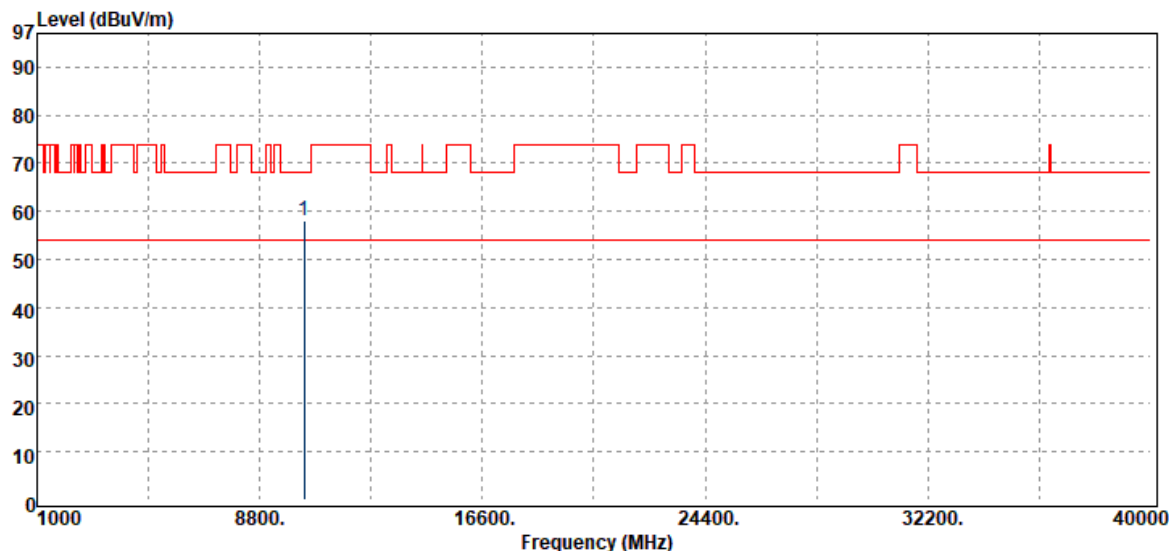
Report Number	:ER/2020/20054	Test Date	:2020-03-12
Operation Mode	:802.11a B4	Temp./Humi.	:22.1/56
Test Frequency	:5825 MHz	Antenna Pol.	:HORIZONTAL
Test Mode	:Tx CH High	Engineer	:Thomas
EUT Pol	:H Plane		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBµV	Factor dB	Actual FS dBµV/m	Limit @3m dBµV/m	Margin dB
11650.00	Average	18.79	27.69	46.48	54.00	-7.52
11650.00	Peak	29.36	27.69	57.05	74.00	-16.95

Report Number :ER/2020/20054  
Operation Mode :802.11n20 B1  
Test Frequency :5180 MHz  
Test Mode :Tx CH Low  
EUT Pol :H Plane

Test Date :2020-03-12  
Temp./Humi. :22.1/56  
Antenna Pol. :VERTICAL  
Engineer :Thomas



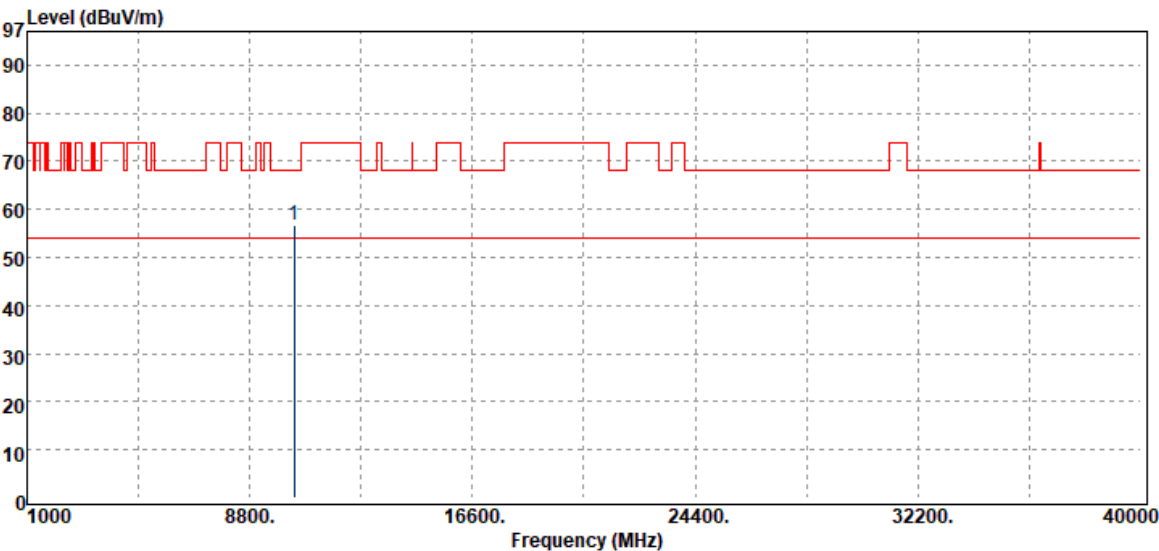
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dB $\mu$ V	Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
10360.00	Peak	31.54	26.38	57.92	68.20	-10.28

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Report Number	:ER/2020/20054	Test Date	:2020-03-12
Operation Mode	:802.11n20 B1	Temp./Humi.	:22.1/56
Test Frequency	:5180 MHz	Antenna Pol.	:HORIZONTAL
Test Mode	:Tx CH Low	Engineer	:Thomas
EUT Pol	:H Plane		

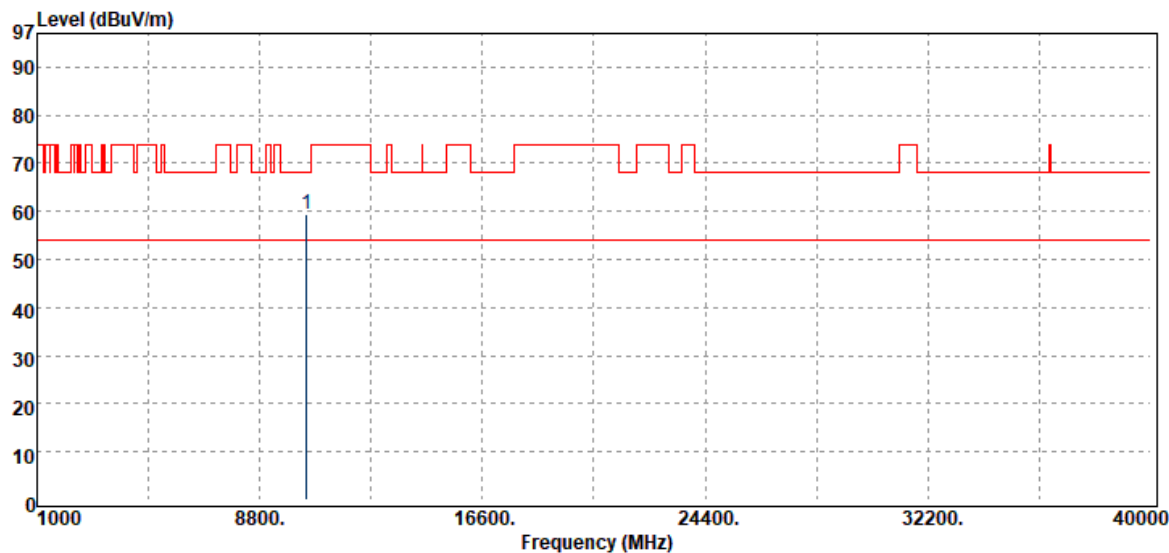


Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
10360.00	Peak	30.21	26.38	56.59	68.20	-11.61



Report Number :ER/2020/20054  
Operation Mode :802.11n20 B1  
Test Frequency :5220 MHz  
Test Mode :Tx CH Mid  
EUT Pol :H Plane

Test Date :2020-03-12  
Temp./Humi. :22.1/56  
Antenna Pol. :VERTICAL  
Engineer :Thomas



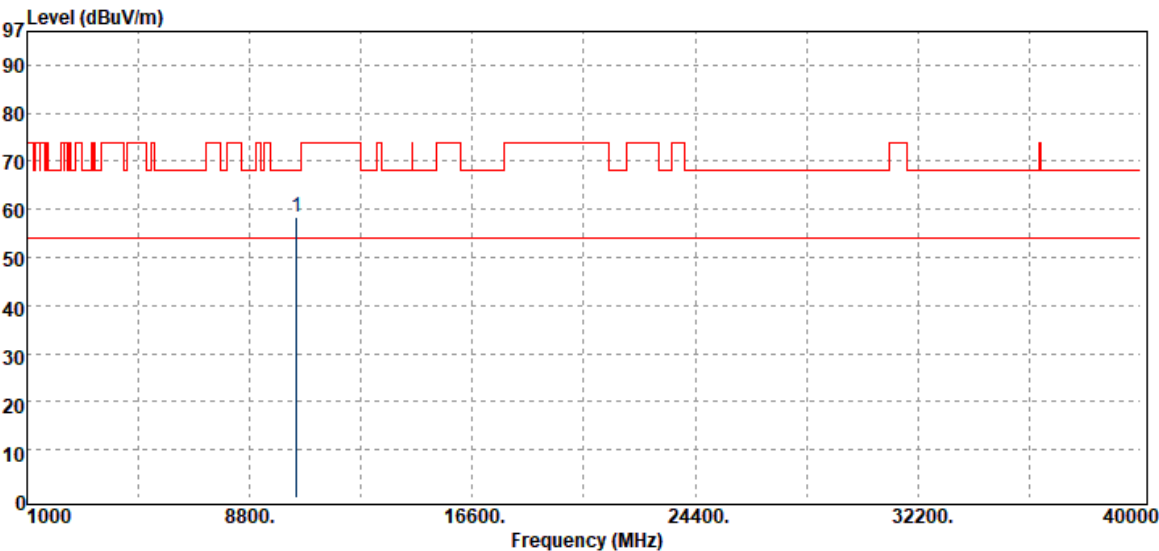
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
10440.00	Peak	32.56	26.76	59.32	68.20	-8.88

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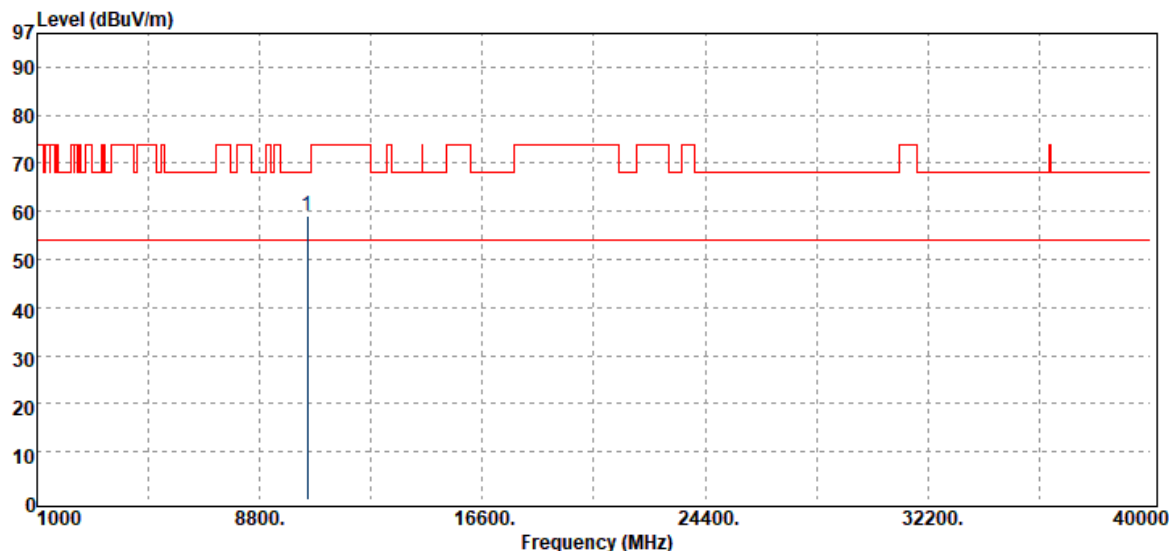
Report Number	:ER/2020/20054	Test Date	:2020-03-12
Operation Mode	:802.11n20 B1	Temp./Humi.	:22.1/56
Test Frequency	:5220 MHz	Antenna Pol.	:HORIZONTAL
Test Mode	:Tx CH Mid	Engineer	:Thomas
EUT Pol	:H Plane		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
10440.00	Peak	31.75	26.76	58.51	68.20	-9.69

Report Number :ER/2020/20054  
Operation Mode :802.11n20 B1  
Test Frequency :5240 MHz  
Test Mode :Tx CH High  
EUT Pol :H Plane

Test Date :2020-03-12  
Temp./Humi. :22.1/56  
Antenna Pol. :VERTICAL  
Engineer :Thomas



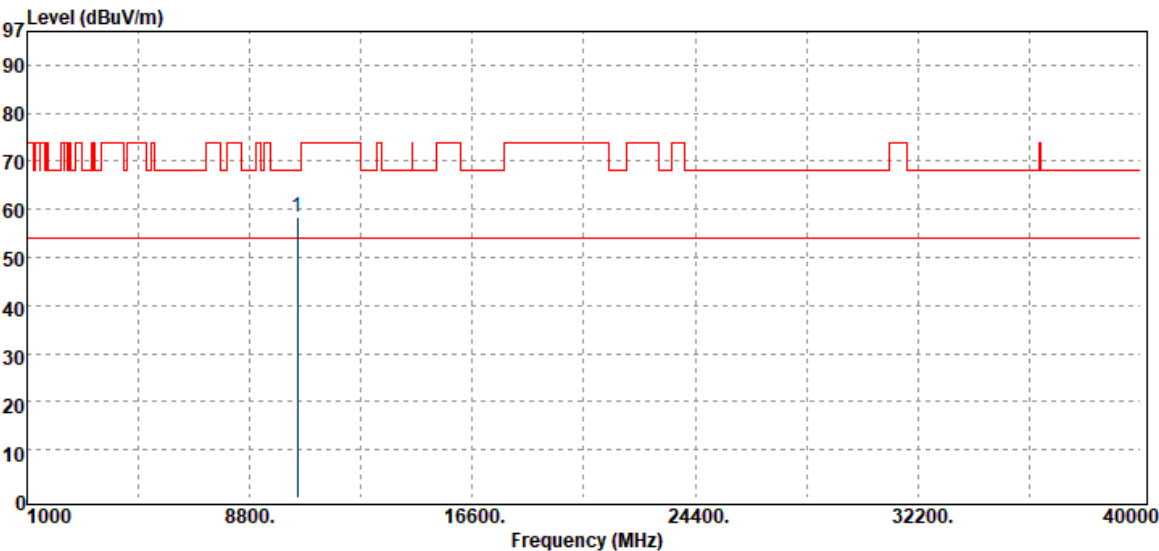
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dB $\mu$ V	Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
10480.00	Peak	32.65	26.40	59.05	68.20	-9.15

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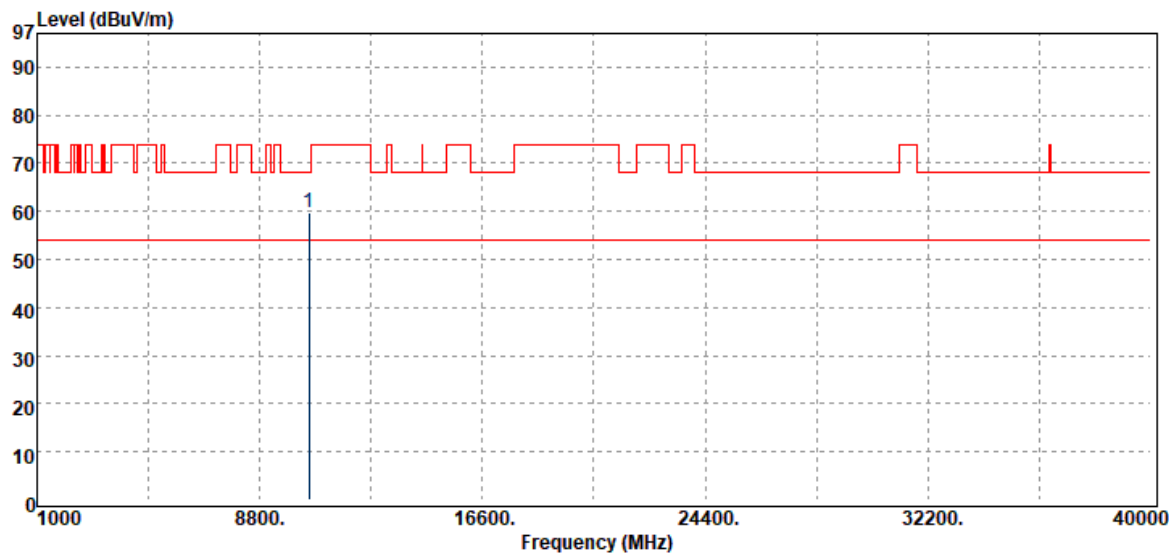
Report Number	:ER/2020/20054	Test Date	:2020-03-12
Operation Mode	:802.11n20 B1	Temp./Humi.	:22.1/56
Test Frequency	:5240 MHz	Antenna Pol.	:HORIZONTAL
Test Mode	:Tx CH High	Engineer	:Thomas
EUT Pol	:H Plane		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
10480.00	Peak	31.86	26.40	58.26	68.20	-9.94

Report Number :ER/2020/20054  
 Operation Mode :802.11n20 B2  
 Test Frequency :5260 MHz  
 Test Mode :Tx CH Low  
 EUT Pol :H Plane

Test Date :2020-03-12  
 Temp./Humi. :22.1/56  
 Antenna Pol. :VERTICAL  
 Engineer :Thomas



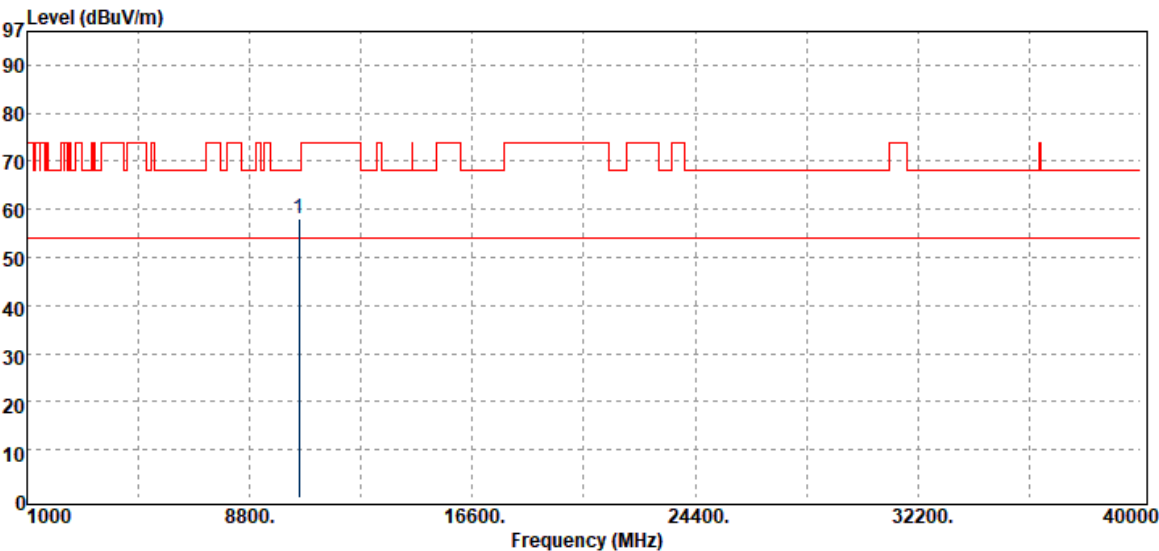
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
10520.00	Peak	33.37	26.32	59.69	68.20	-8.51

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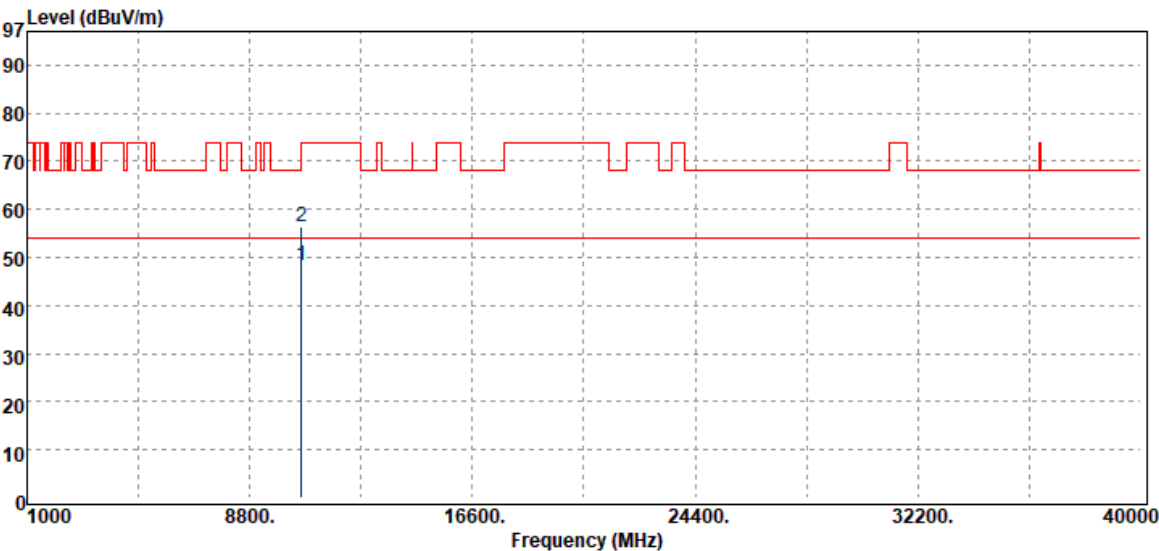
Report Number	:ER/2020/20054	Test Date	:2020-03-12
Operation Mode	:802.11n20 B2	Temp./Humi.	:22.1/56
Test Frequency	:5260 MHz	Antenna Pol.	:HORIZONTAL
Test Mode	:Tx CH Low	Engineer	:Thomas
EUT Pol	:H Plane		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
10520.00	Peak	31.78	26.32	58.10	68.20	-10.10



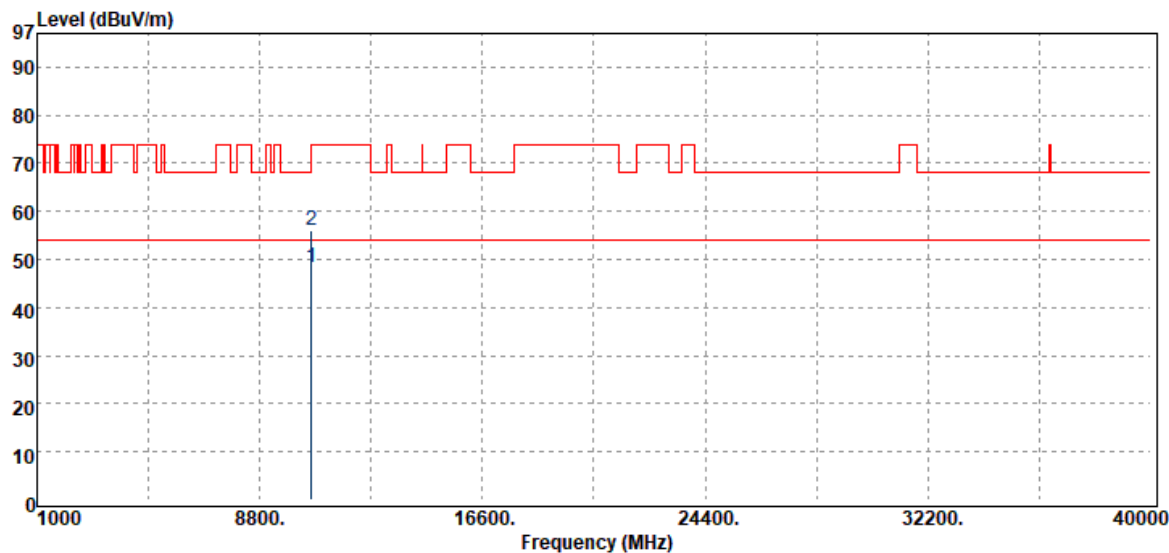
Report Number	:ER/2020/20054	Test Date	:2020-03-12
Operation Mode	:802.11n20 B2	Temp./Humi.	:22.1/56
Test Frequency	:5300 MHz	Antenna Pol.	:VERTICAL
Test Mode	:Tx CH Mid	Engineer	:Thomas
EUT Pol	:H Plane		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
10600.00	Average	21.59	26.78	48.37	54.00	-5.63
10600.00	Peak	29.49	26.78	56.27	74.00	-17.73

Report Number :ER/2020/20054  
 Operation Mode :802.11n20 B2  
 Test Frequency :5300 MHz  
 Test Mode :Tx CH Mid  
 EUT Pol :H Plane

Test Date :2020-03-12  
 Temp./Humi. :22.1/56  
 Antenna Pol. :HORIZONTAL  
 Engineer :Thomas



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
10600.00	Average	21.46	26.78	48.24	54.00	-5.76
10600.00	Peak	29.22	26.78	56.00	74.00	-18.00

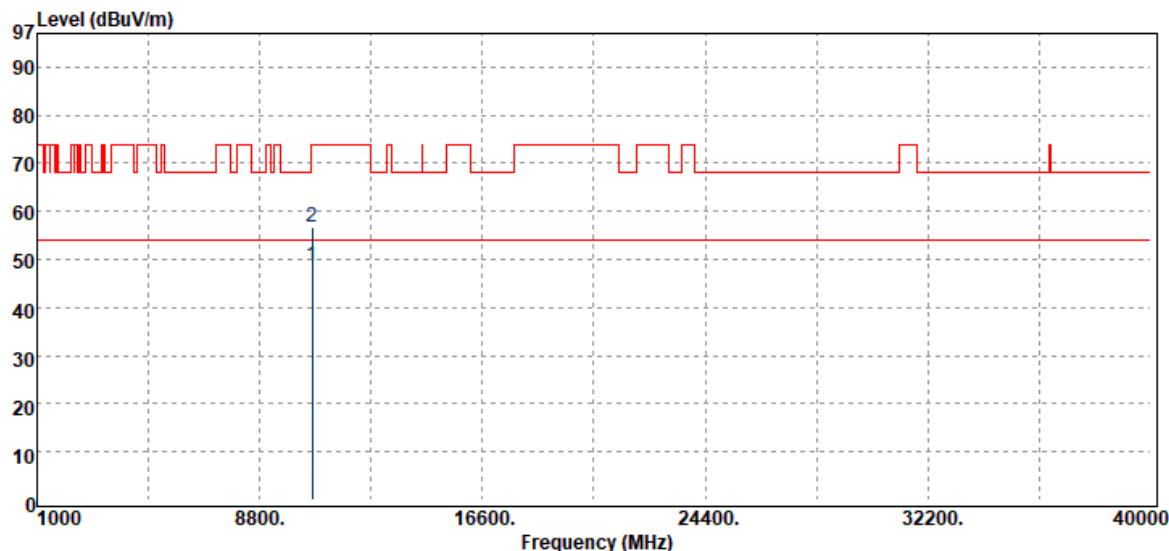
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Report Number :ER/2020/20054  
 Operation Mode :802.11n20 B2  
 Test Frequency :5320 MHz  
 Test Mode :Tx CH High  
 EUT Pol :H Plane

Test Date :2020-03-12  
 Temp./Humi. :22.1/56  
 Antenna Pol. :VERTICAL  
 Engineer :Thomas



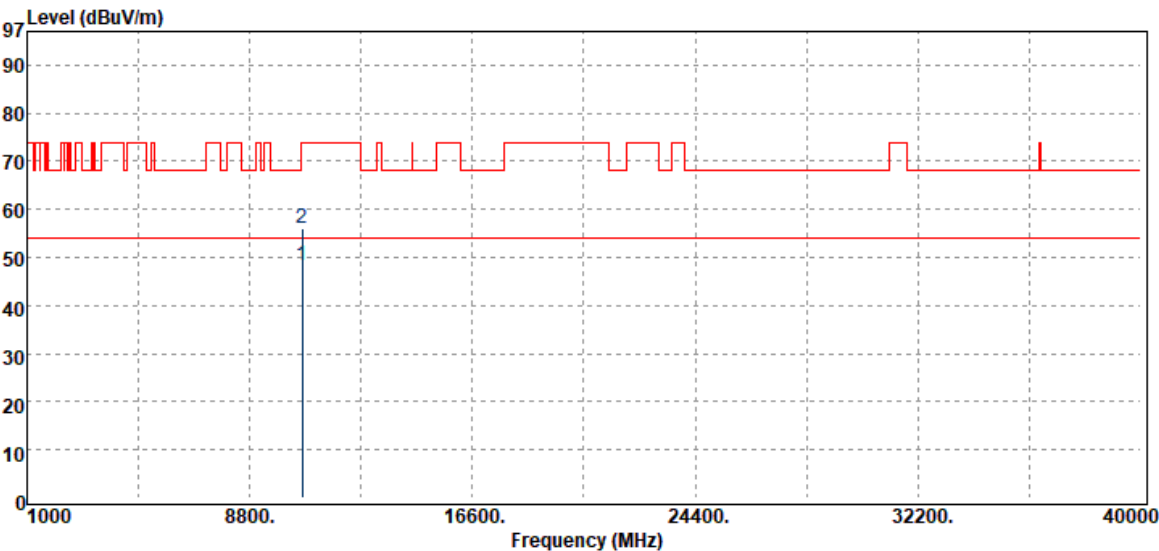
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
10640.00	Average	22.03	26.51	48.54	54.00	-5.46
10640.00	Peak	30.33	26.51	56.84	74.00	-17.16

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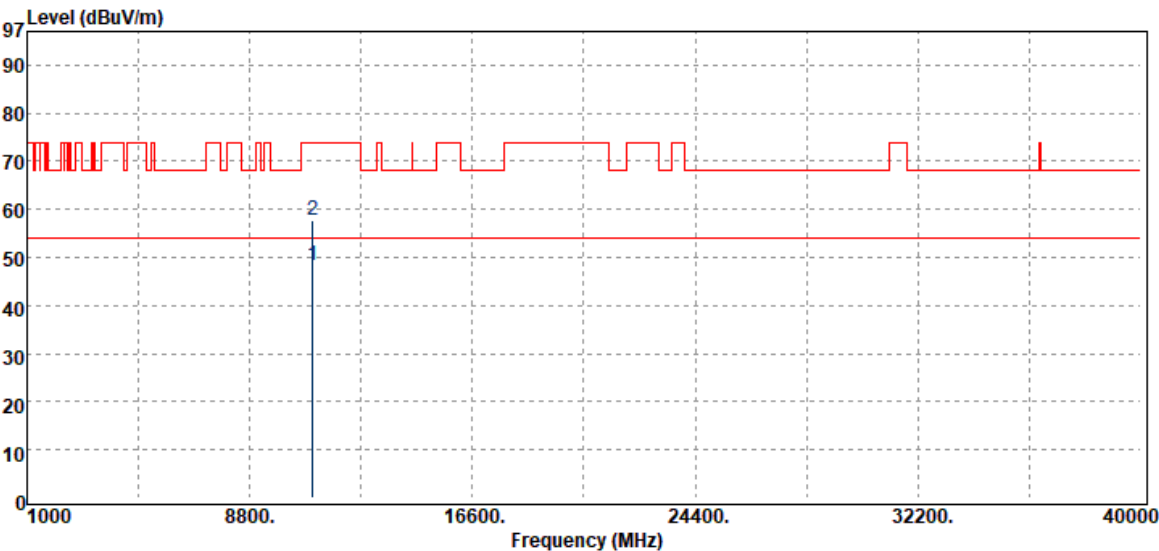
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Report Number	:ER/2020/20054	Test Date	:2020-03-12
Operation Mode	:802.11n20 B2	Temp./Humi.	:22.1/56
Test Frequency	:5320 MHz	Antenna Pol.	:HORIZONTAL
Test Mode	:Tx CH High	Engineer	:Thomas
EUT Pol	:H Plane		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
10640.00	Average	21.69	26.51	48.20	54.00	-5.80
10640.00	Peak	29.45	26.51	55.96	74.00	-18.04

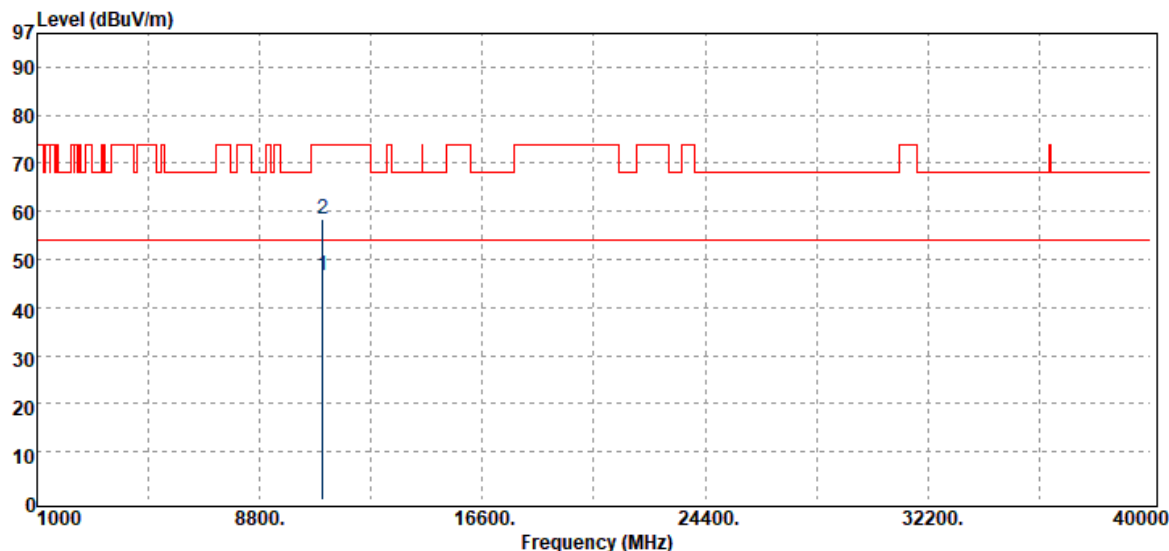
Report Number	:ER/2020/20054	Test Date	:2020-03-13
Operation Mode	:802.11n20 B3	Temp./Humi.	:22.3/67
Test Frequency	:5500 MHz	Antenna Pol.	:VERTICAL
Test Mode	:Tx CH Low	Engineer	:Thomas
EUT Pol	:H Plane		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dB $\mu$ V	Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
11000.00	Average	21.00	27.32	48.32	54.00	-5.68
11000.00	Peak	30.51	27.32	57.83	74.00	-16.17

Report Number :ER/2020/20054  
Operation Mode :802.11n20 B3  
Test Frequency :5500 MHz  
Test Mode :Tx CH Low  
EUT Pol :H Plane

Test Date :2020-03-13  
Temp./Humi. :22.3/67  
Antenna Pol. :HORIZONTAL  
Engineer :Thomas



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
11000.00	Average	19.33	27.32	46.65	54.00	-7.35
11000.00	Peak	31.06	27.32	58.38	74.00	-15.62

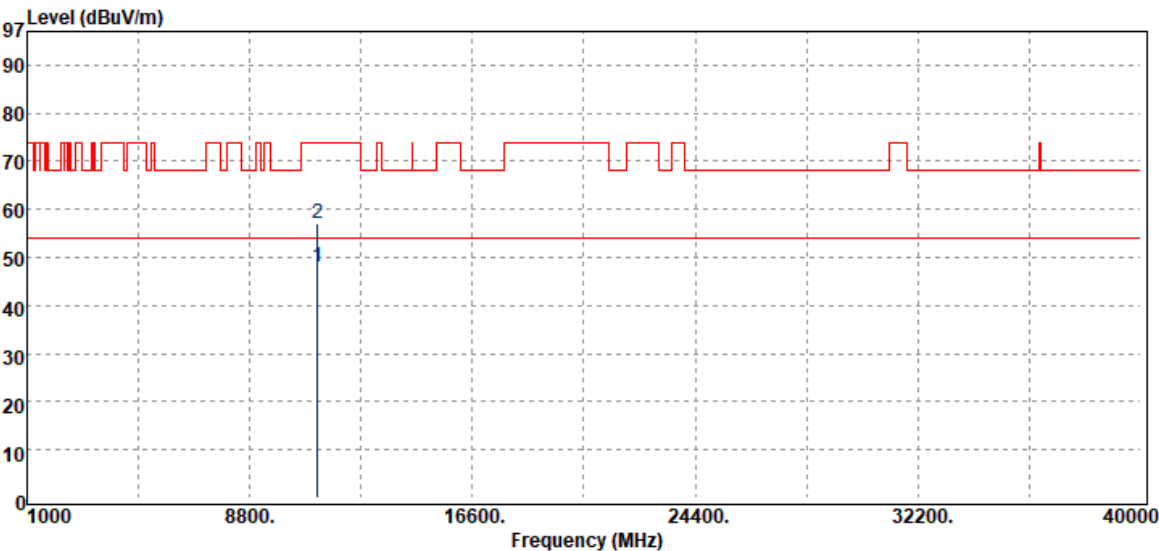
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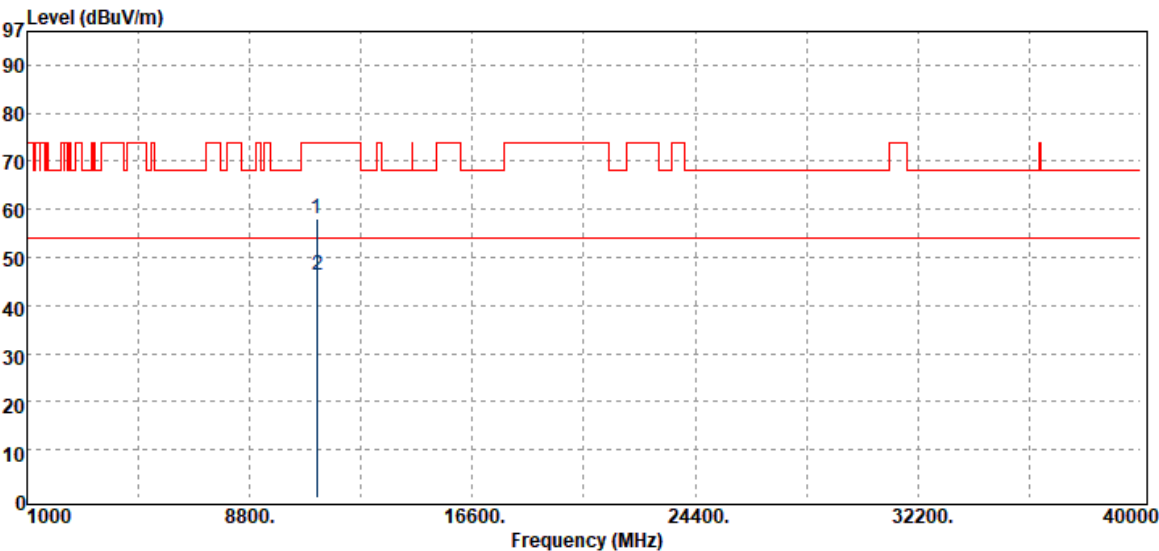


Report Number	:ER/2020/20054	Test Date	:2020-03-13
Operation Mode	:802.11n20 B3	Temp./Humi.	:22.3/67
Test Frequency	:5580 MHz	Antenna Pol.	:VERTICAL
Test Mode	:Tx CH Mid	Engineer	:Thomas
EUT Pol	:H Plane		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
11160.00	Average	21.05	26.98	48.03	54.00	-5.97
11160.00	Peak	29.96	26.98	56.94	74.00	-17.06

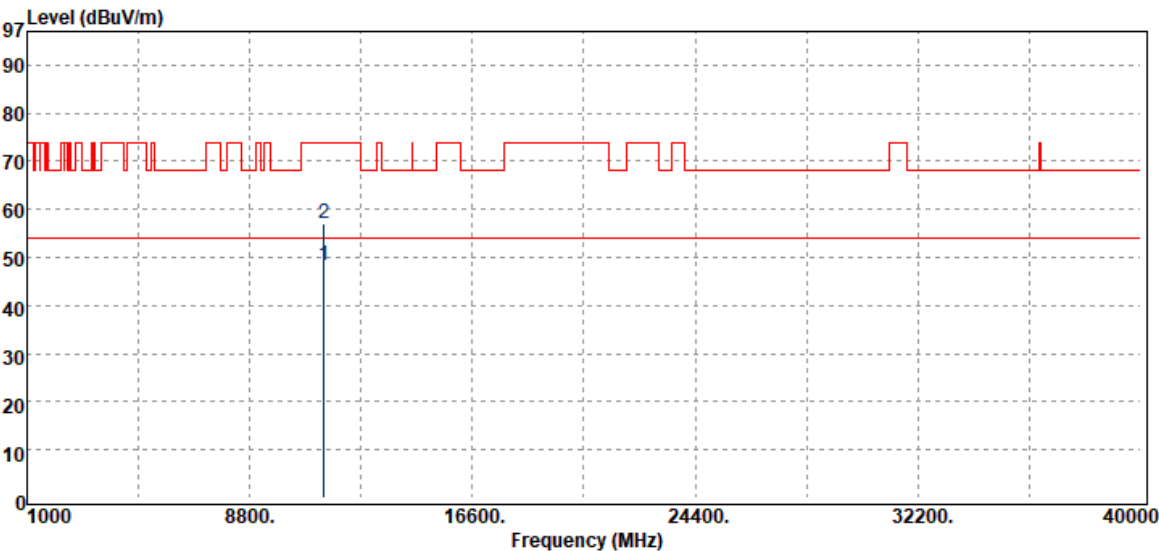
Report Number	:ER/2020/20054	Test Date	:2020-03-13
Operation Mode	:802.11n20 B3	Temp./Humi.	:22.3/67
Test Frequency	:5580 MHz	Antenna Pol.	:HORIZONTAL
Test Mode	:Tx CH Mid	Engineer	:Thomas
EUT Pol	:H Plane		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
11158.00	Peak	30.94	26.98	57.92	74.00	-16.08
11160.00	Average	19.40	26.98	46.38	54.00	-7.62

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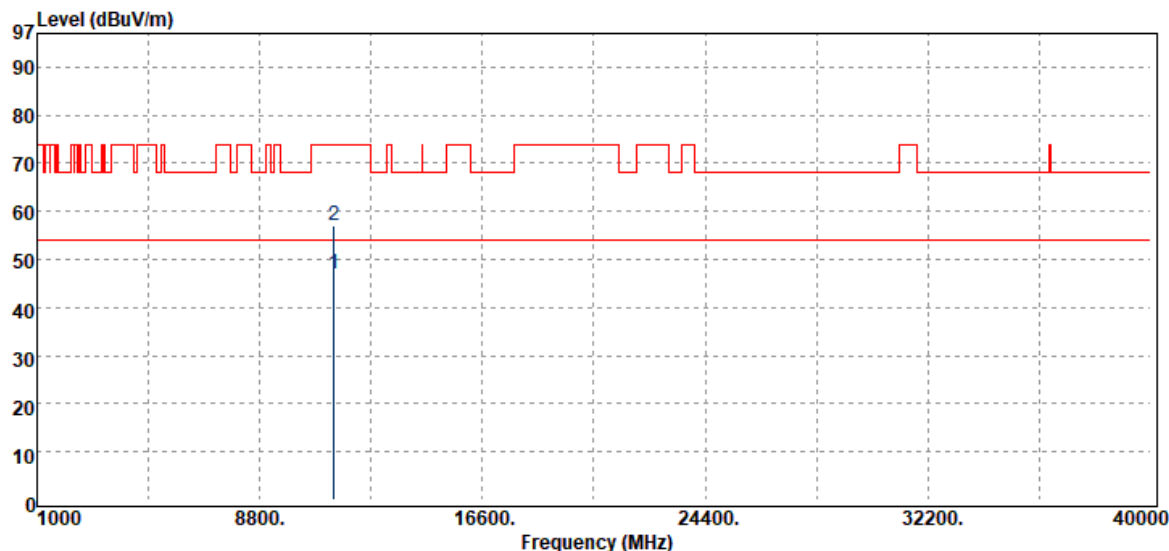
Report Number	:ER/2020/20054	Test Date	:2020-03-13
Operation Mode	:802.11n20 B3	Temp./Humi.	:22.3/67
Test Frequency	:5700 MHz	Antenna Pol.	:VERTICAL
Test Mode	:Tx CH High	Engineer	:Thomas
EUT Pol	:H Plane		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
11400.00	Average	20.88	27.54	48.42	54.00	-5.58
11400.00	Peak	29.45	27.54	56.99	74.00	-17.01

Report Number :ER/2020/20054  
 Operation Mode :802.11n20 B3  
 Test Frequency :5700 MHz  
 Test Mode :Tx CH High  
 EUT Pol :H Plane

Test Date :2020-03-13  
 Temp./Humi. :22.3/67  
 Antenna Pol. :HORIZONTAL  
 Engineer :Thomas



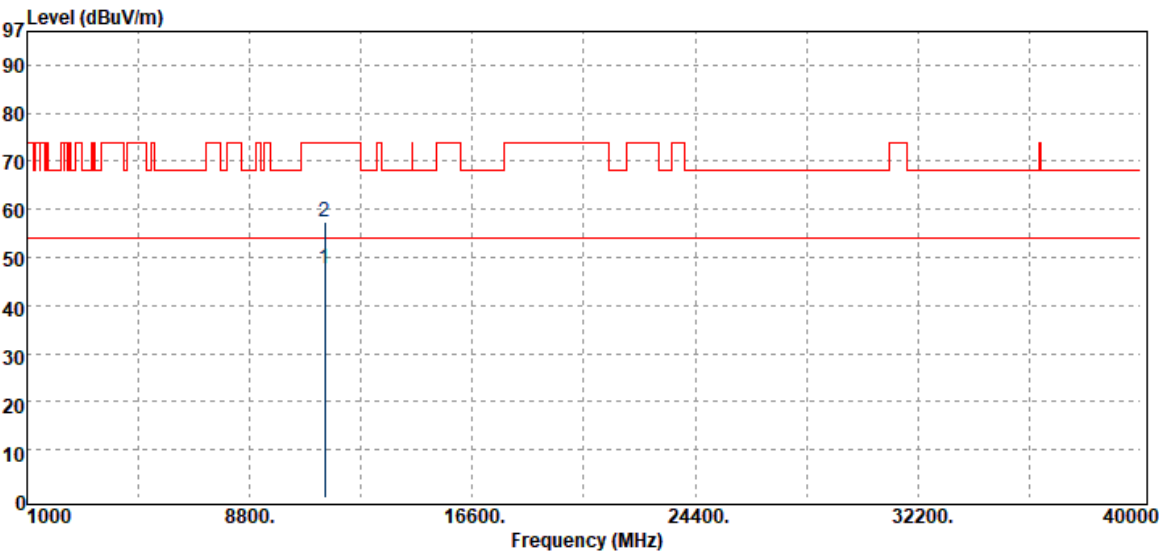
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
11400.00	Average	19.29	27.54	46.83	54.00	-7.17
11400.00	Peak	29.44	27.54	56.98	74.00	-17.02

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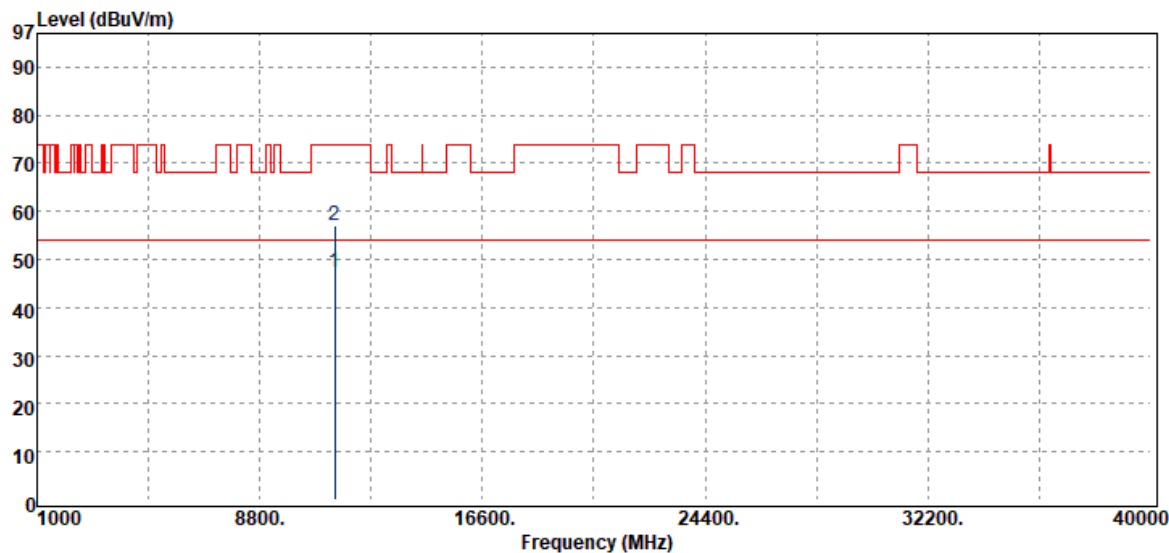
Report Number	:ER/2020/20054	Test Date	:2020-03-13
Operation Mode	:802.11n20 B3-B4	Temp./Humi.	:22.3/67
Test Frequency	:5720 MHz	Antenna Pol.	:VERTICAL
Test Mode	:Tx CH High	Engineer	:Thomas
EUT Pol	:H Plane		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
11440.00	Average	19.85	27.76	47.61	54.00	-6.39
11440.00	Peak	29.77	27.76	57.53	74.00	-16.47

Report Number :ER/2020/20054  
 Operation Mode :802.11n20 B3-B4  
 Test Frequency :5720 MHz  
 Test Mode :Tx CH High  
 EUT Pol :H Plane

Test Date :2020-03-13  
 Temp./Humi. :22.3/67  
 Antenna Pol. :HORIZONTAL  
 Engineer :Thomas



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
11440.00	Average	19.53	27.76	47.29	54.00	-6.71
11440.00	Peak	29.22	27.76	56.98	74.00	-17.02

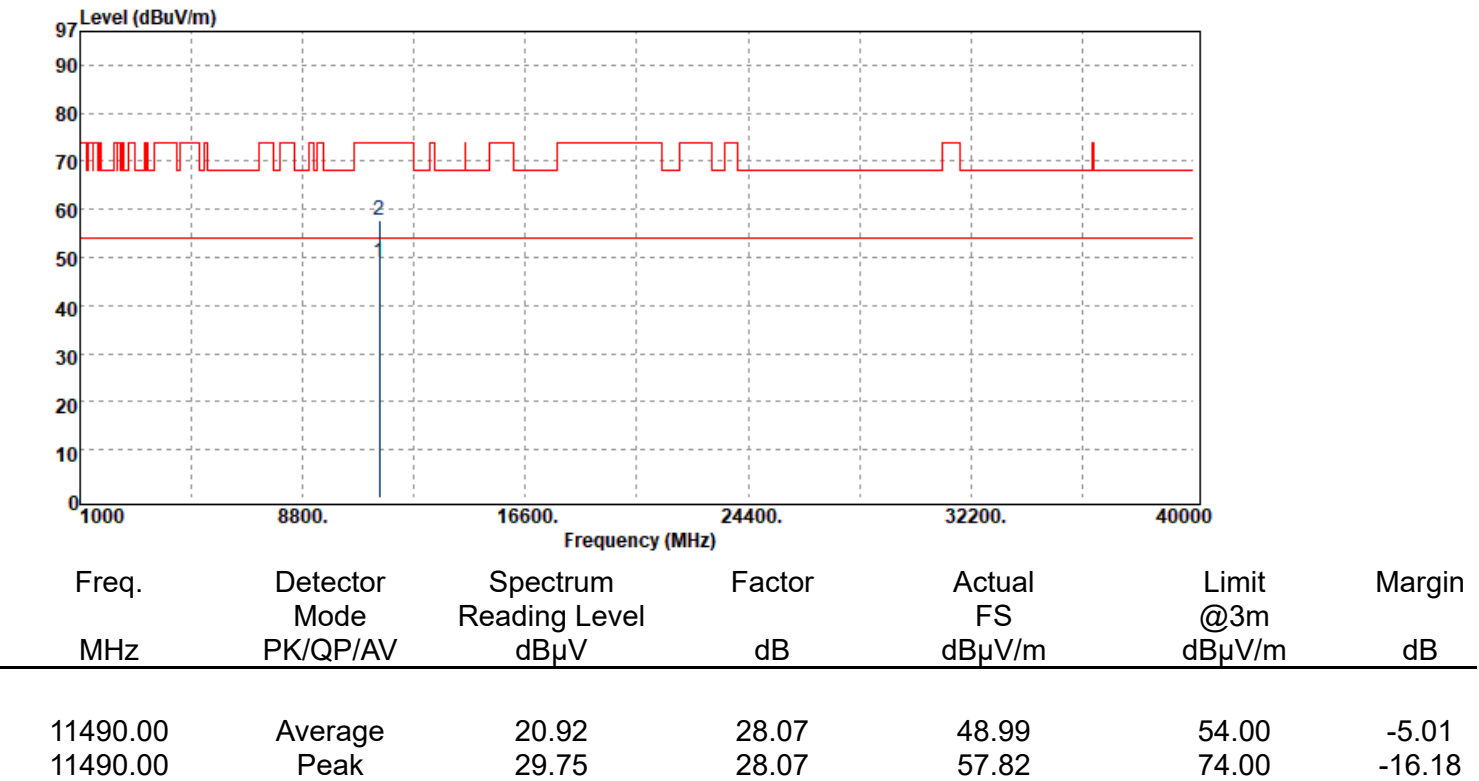
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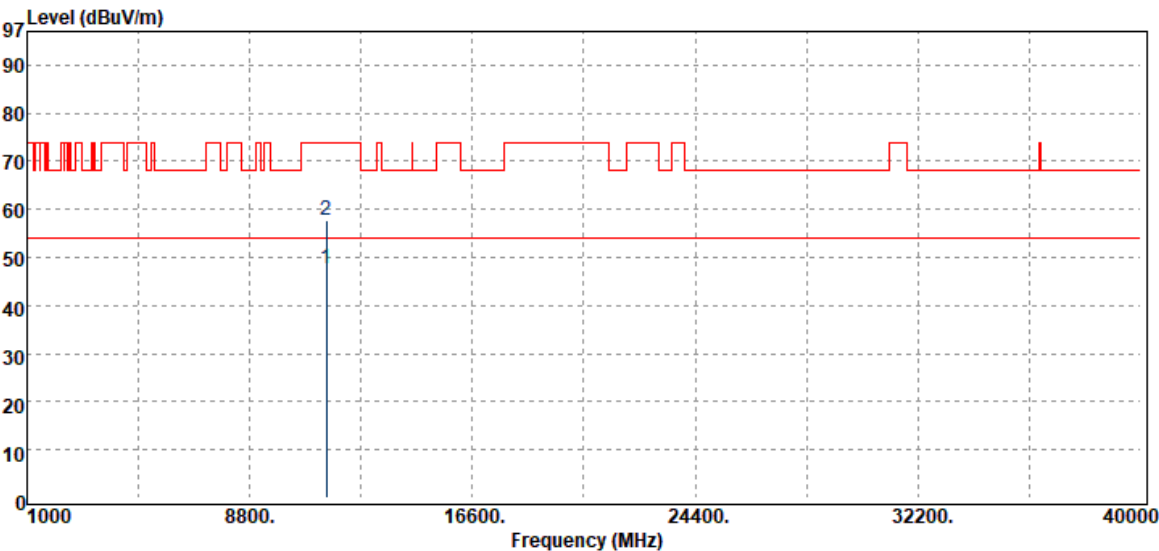
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Report Number	:ER/2020/20054	Test Date	:2020-03-13
Operation Mode	:802.11n20 B4	Temp./Humi.	:22.3/67
Test Frequency	:5745 MHz	Antenna Pol.	:VERTICAL
Test Mode	:Tx CH Low	Engineer	:Thomas
EUT Pol	:H Plane		

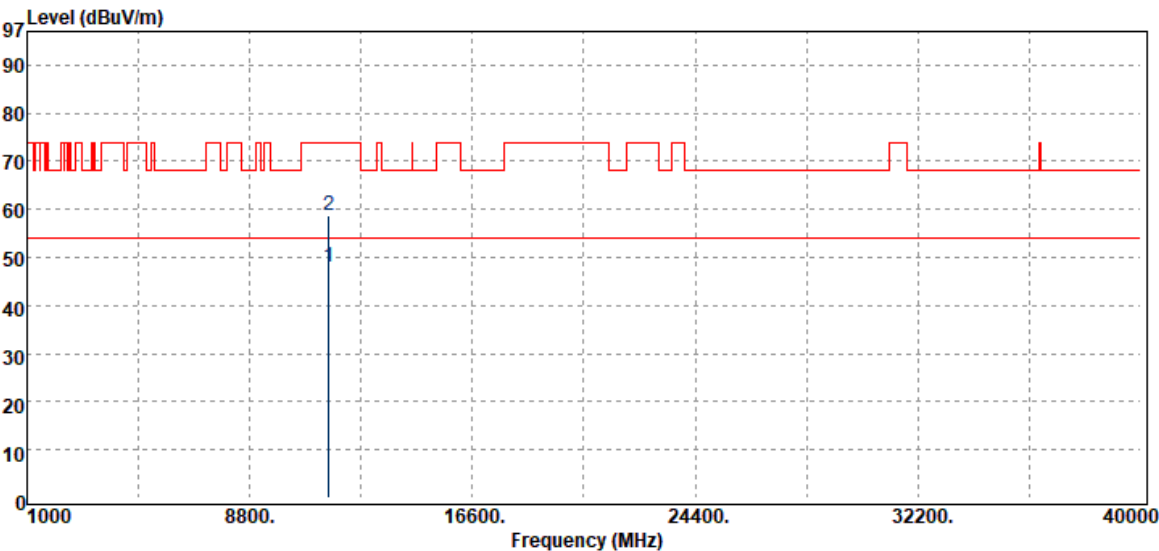


Report Number	:ER/2020/20054	Test Date	:2020-03-13
Operation Mode	:802.11n20 B4	Temp./Humi.	:22.3/67
Test Frequency	:5745 MHz	Antenna Pol.	:HORIZONTAL
Test Mode	:Tx CH Low	Engineer	:Thomas
EUT Pol	:H Plane		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
11490.00	Average	19.57	28.07	47.64	54.00	-6.36
11490.00	Peak	29.61	28.07	57.68	74.00	-16.32

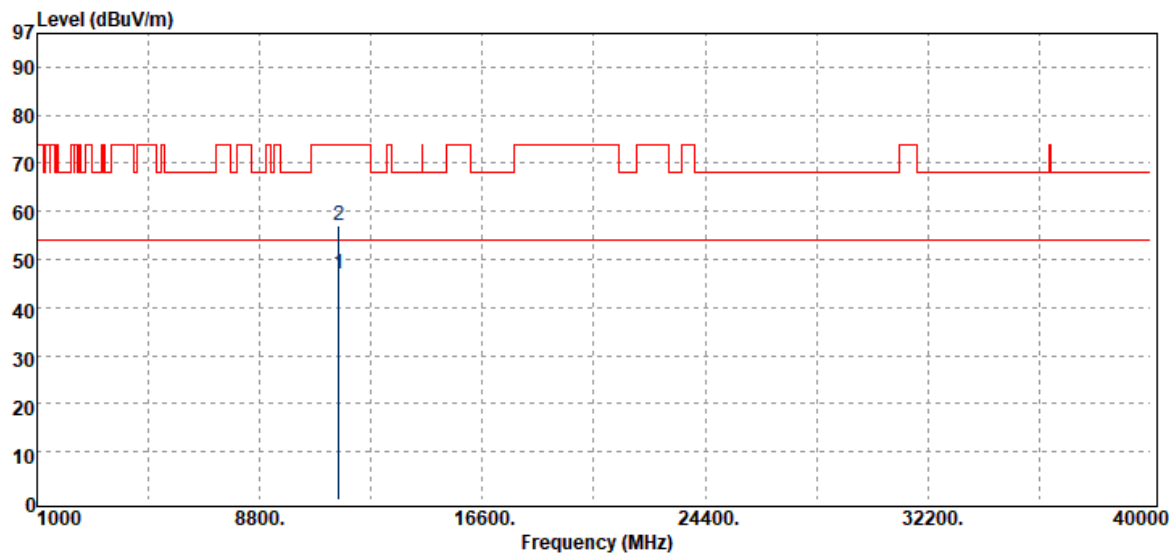
Report Number	:ER/2020/20054	Test Date	:2020-03-13
Operation Mode	:802.11n20 B4	Temp./Humi.	:22.3/67
Test Frequency	:5785 MHz	Antenna Pol.	:VERTICAL
Test Mode	:Tx CH Mid	Engineer	:Thomas
EUT Pol	:H Plane		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
11570.00	Average	20.84	27.18	48.02	54.00	-5.98
11570.00	Peak	31.41	27.18	58.59	74.00	-15.41

Report Number :ER/2020/20054  
 Operation Mode :802.11n20 B4  
 Test Frequency :5785 MHz  
 Test Mode :Tx CH Mid  
 EUT Pol :H Plane

Test Date :2020-03-13  
 Temp./Humi. :22.3/67  
 Antenna Pol. :HORIZONTAL  
 Engineer :Thomas



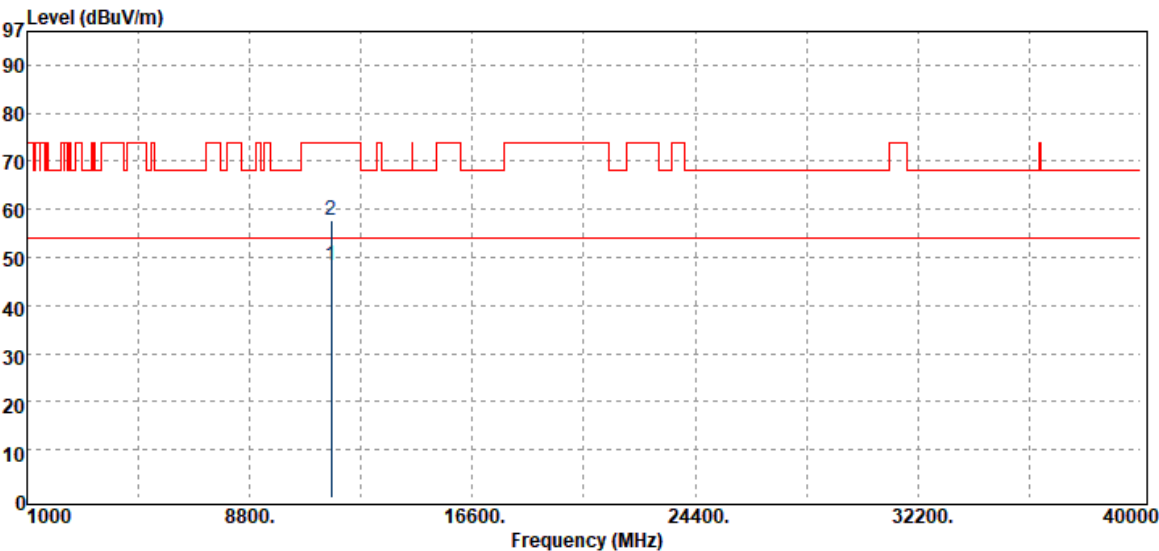
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
11570.00	Average	19.72	27.18	46.90	54.00	-7.10
11570.00	Peak	29.72	27.18	56.90	74.00	-17.10

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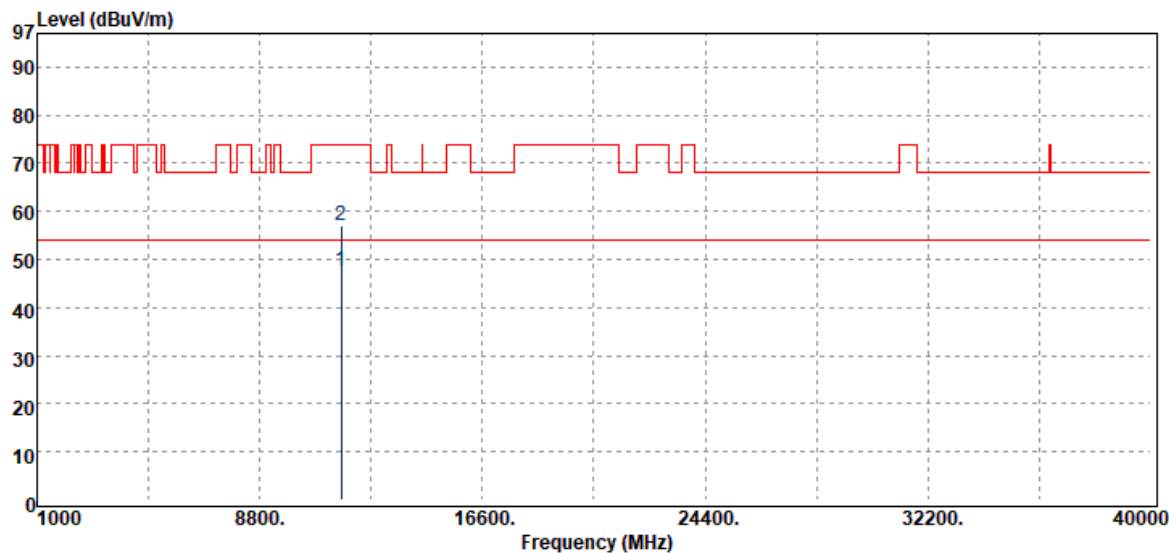
Report Number	:ER/2020/20054	Test Date	:2020-03-13
Operation Mode	:802.11n20 B4	Temp./Humi.	:22.3/67
Test Frequency	:5825 MHz	Antenna Pol.	:VERTICAL
Test Mode	:Tx CH High	Engineer	:Thomas
EUT Pol	:H Plane		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
11650.00	Average	20.71	27.69	48.40	54.00	-5.60
11650.00	Peak	29.92	27.69	57.61	74.00	-16.39

Report Number :ER/2020/20054  
 Operation Mode :802.11n20 B4  
 Test Frequency :5825 MHz  
 Test Mode :Tx CH High  
 EUT Pol :H Plane

Test Date :2020-03-13  
 Temp./Humi. :22.3/67  
 Antenna Pol. :HORIZONTAL  
 Engineer :Thomas



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
11650.00	Average	19.88	27.69	47.57	54.00	-6.43
11650.00	Peak	29.25	27.69	56.94	74.00	-17.06

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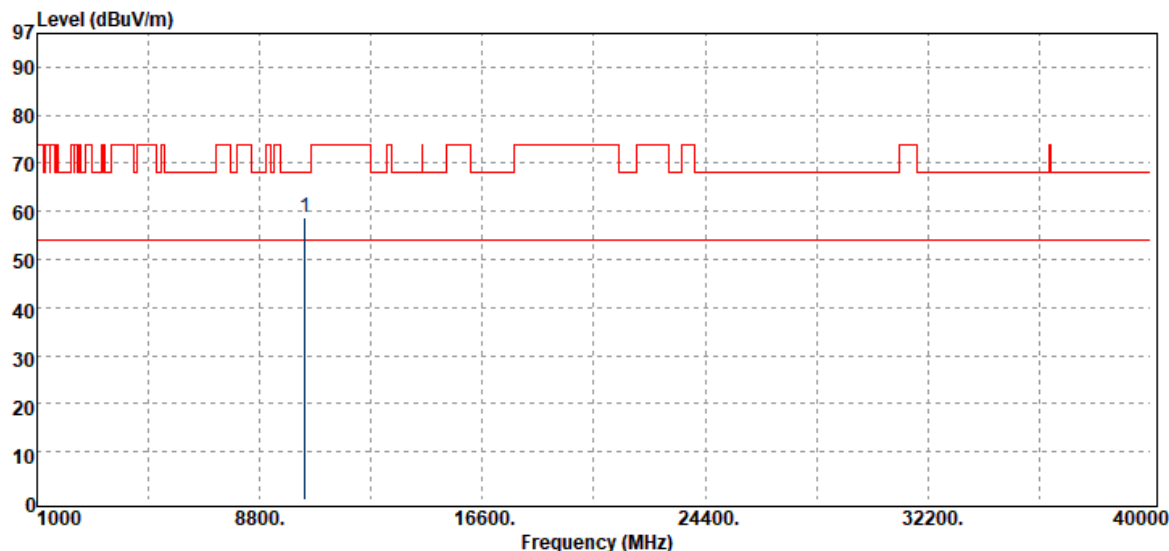
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Report Number :ER/2020/20054  
Operation Mode :802.11n40 B1  
Test Frequency :5190 MHz  
Test Mode :Tx CH Low  
EUT Pol :H Plane

Test Date :2020-03-13  
Temp./Humi. :22.3/67  
Antenna Pol. :VERTICAL  
Engineer :Thomas



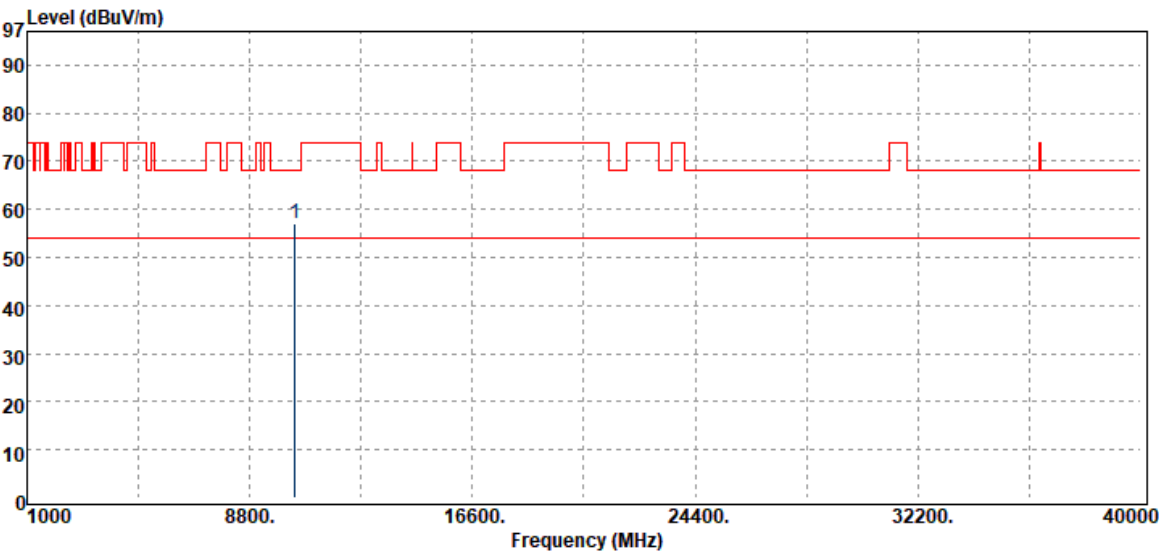
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
10380.00	Peak	32.03	26.61	58.64	68.20	-9.56

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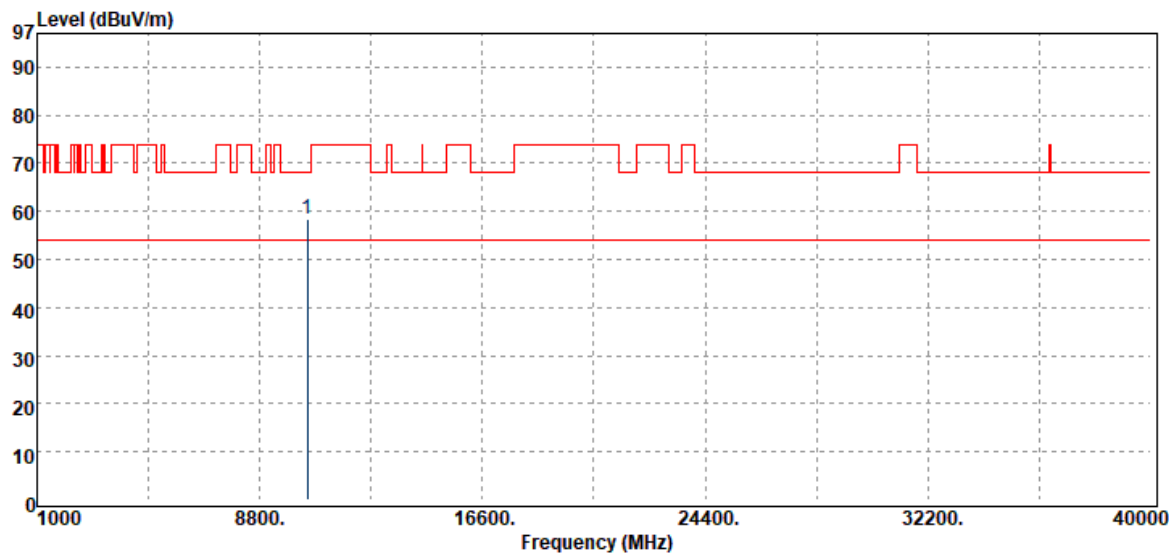
Report Number	:ER/2020/20054	Test Date	:2020-03-13
Operation Mode	:802.11n40 B1	Temp./Humi.	:22.3/67
Test Frequency	:5190 MHz	Antenna Pol.	:HORIZONTAL
Test Mode	:Tx CH Low	Engineer	:Thomas
EUT Pol	:H Plane		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBµV	Factor dB	Actual FS dBµV/m	Limit @3m dBµV/m	Margin dB
10380.00	Peak	30.36	26.61	56.97	68.20	-11.23

Report Number :ER/2020/20054  
 Operation Mode :802.11n40 B1  
 Test Frequency :5230 MHz  
 Test Mode :Tx CH High  
 EUT Pol :H Plane

Test Date :2020-03-13  
 Temp./Humi. :22.3/67  
 Antenna Pol. :VERTICAL  
 Engineer :Thomas



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
10460.00	Peak	31.89	26.63	58.52	68.20	-9.68

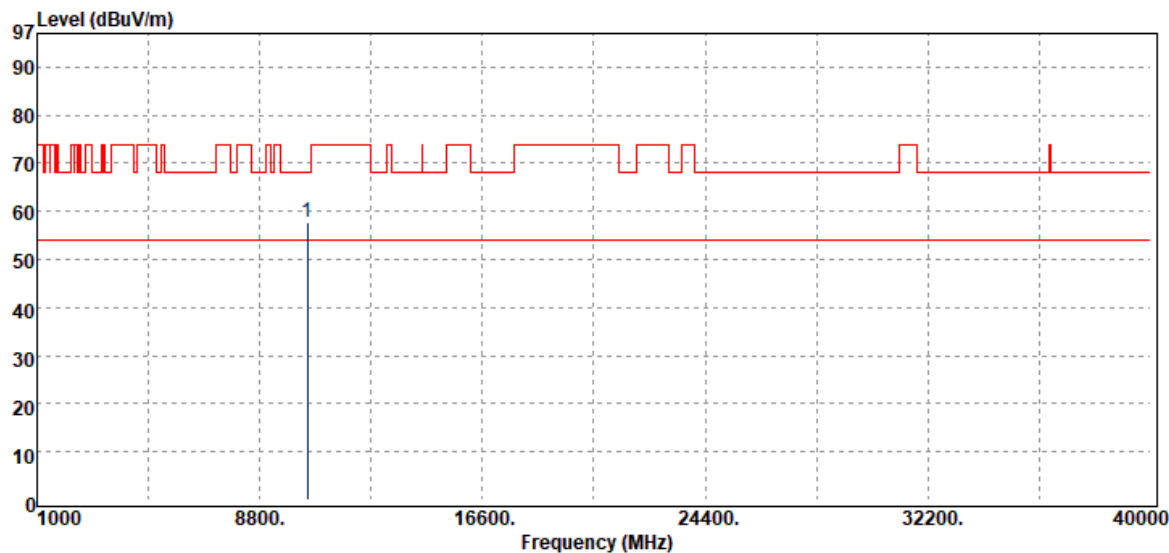
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Report Number :ER/2020/20054  
Operation Mode :802.11n40 B1  
Test Frequency :5230 MHz  
Test Mode :Tx CH High  
EUT Pol :H Plane

Test Date :2020-03-13  
Temp./Humi. :22.3/67  
Antenna Pol. :HORIZONTAL  
Engineer :Thomas



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
10460.00	Peak	31.26	26.63	57.89	68.20	-10.31

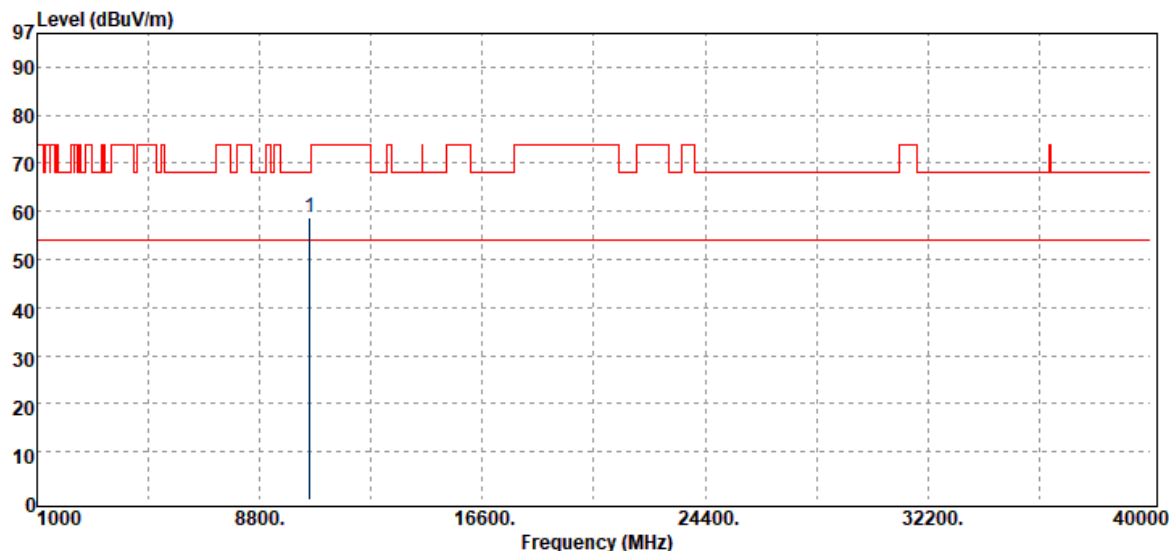
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Report Number :ER/2020/20054  
Operation Mode :802.11n40 B2  
Test Frequency :5270 MHz  
Test Mode :Tx CH Low  
EUT Pol :H Plane

Test Date :2020-03-13  
Temp./Humi. :22.3/67  
Antenna Pol. :VERTICAL  
Engineer :Thomas



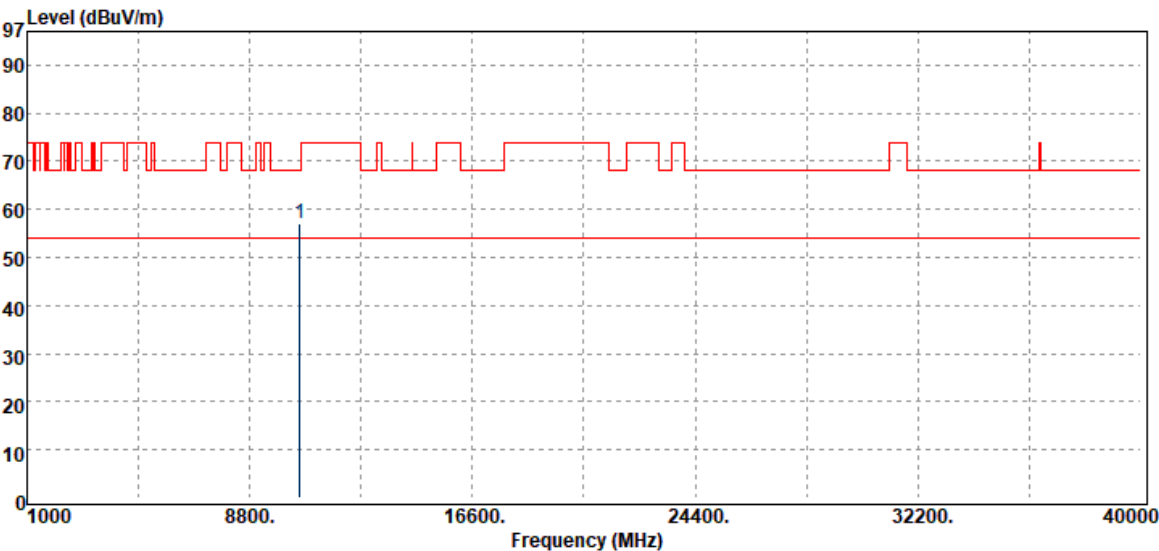
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
10540.00	Peak	32.18	26.47	58.65	68.20	-9.55

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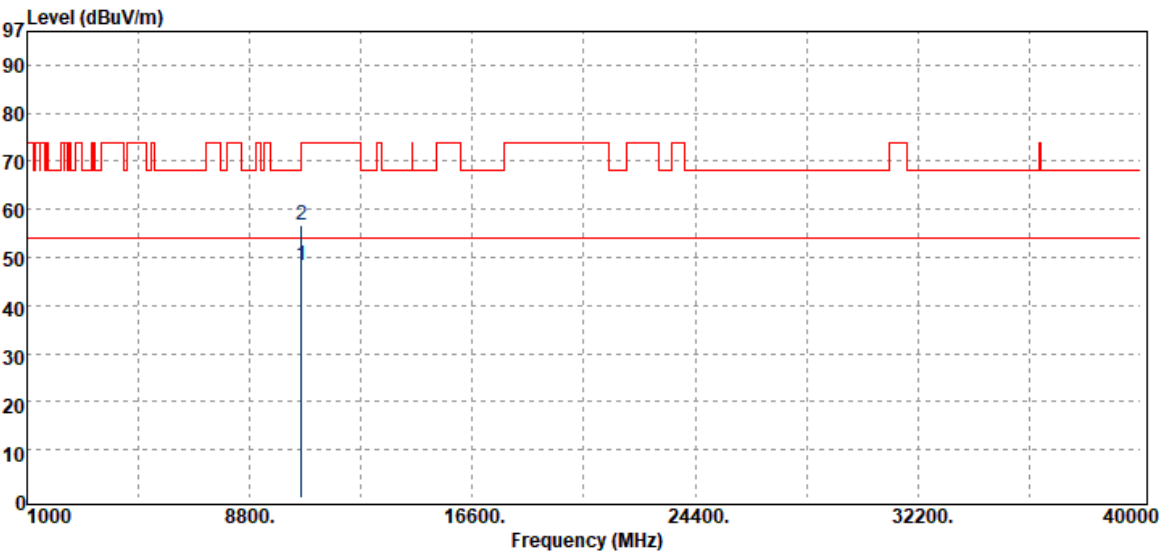
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Report Number	:ER/2020/20054	Test Date	:2020-03-13
Operation Mode	:802.11n40 B2	Temp./Humi.	:22.3/67
Test Frequency	:5270 MHz	Antenna Pol.	:HORIZONTAL
Test Mode	:Tx CH Low	Engineer	:Thomas
EUT Pol	:H Plane		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
10540.00	Peak	30.51	26.47	56.98	68.20	-11.22

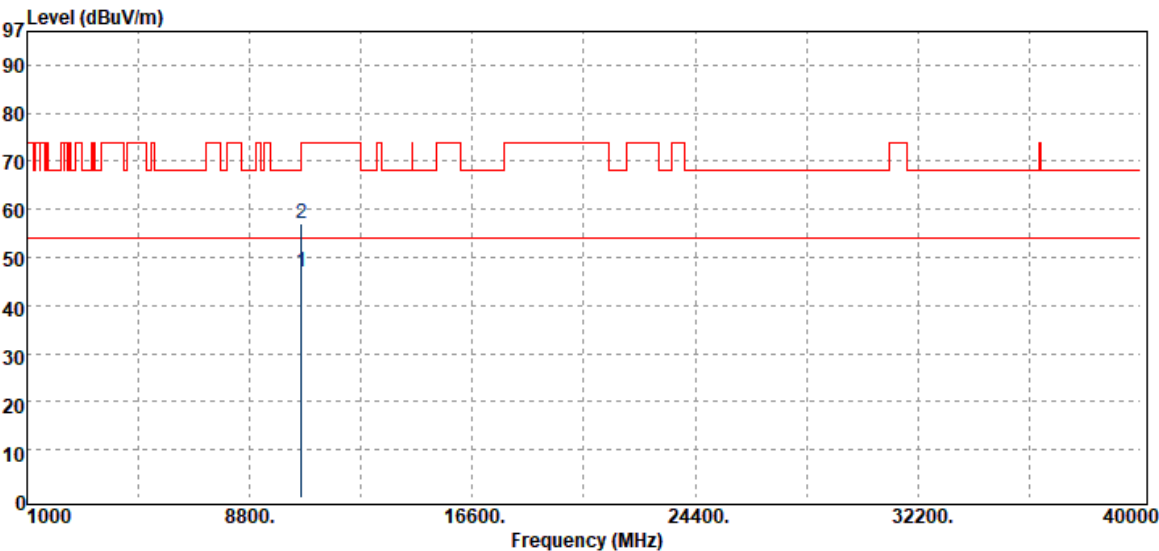
Report Number	:ER/2020/20054	Test Date	:2020-03-13
Operation Mode	:802.11n40 B2	Temp./Humi.	:22.3/67
Test Frequency	:5310 MHz	Antenna Pol.	:VERTICAL
Test Mode	:Tx CH High	Engineer	:Thomas
EUT Pol	:H Plane		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
10620.00	Average	21.56	26.64	48.20	54.00	-5.80
10620.00	Peak	30.00	26.64	56.64	74.00	-17.36



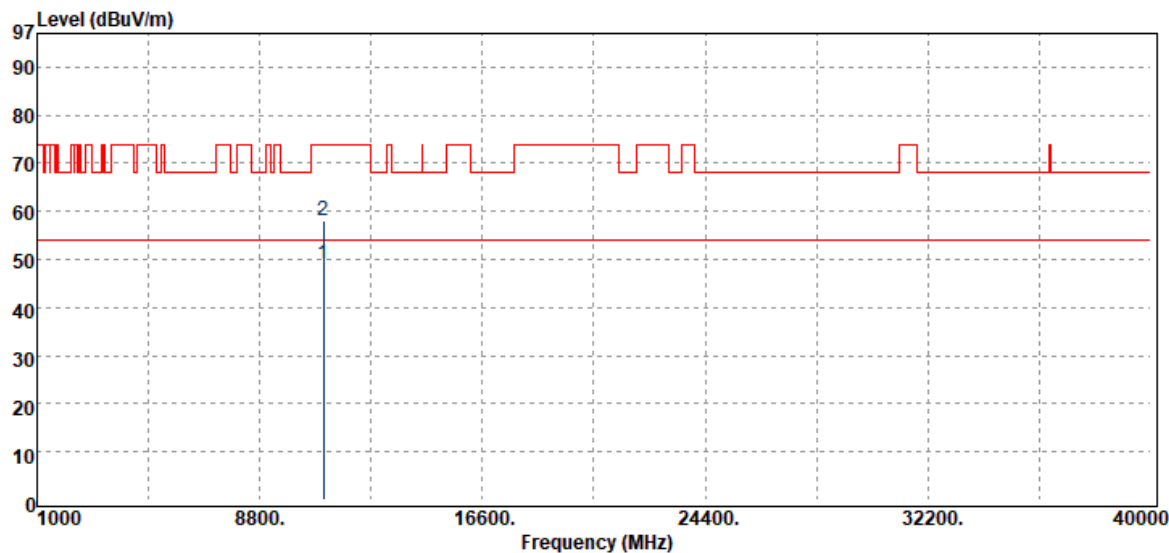
Report Number	:ER/2020/20054	Test Date	:2020-03-13
Operation Mode	:802.11n40 B2	Temp./Humi.	:22.3/67
Test Frequency	:5310 MHz	Antenna Pol.	:HORIZONTAL
Test Mode	:Tx CH High	Engineer	:Thomas
EUT Pol	:H Plane		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
10620.00	Average	20.44	26.64	47.08	54.00	-6.92
10620.00	Peak	30.41	26.64	57.05	74.00	-16.95

Report Number :ER/2020/20054  
Operation Mode :802.11n40 B3  
Test Frequency :5510 MHz  
Test Mode :Tx CH Low  
EUT Pol :H Plane

Test Date :2020-03-13  
Temp./Humi. :22.3/67  
Antenna Pol. :VERTICAL  
Engineer :Thomas



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
11020.00	Average	21.85	27.09	48.94	54.00	-5.06
11020.00	Peak	31.09	27.09	58.18	74.00	-15.82

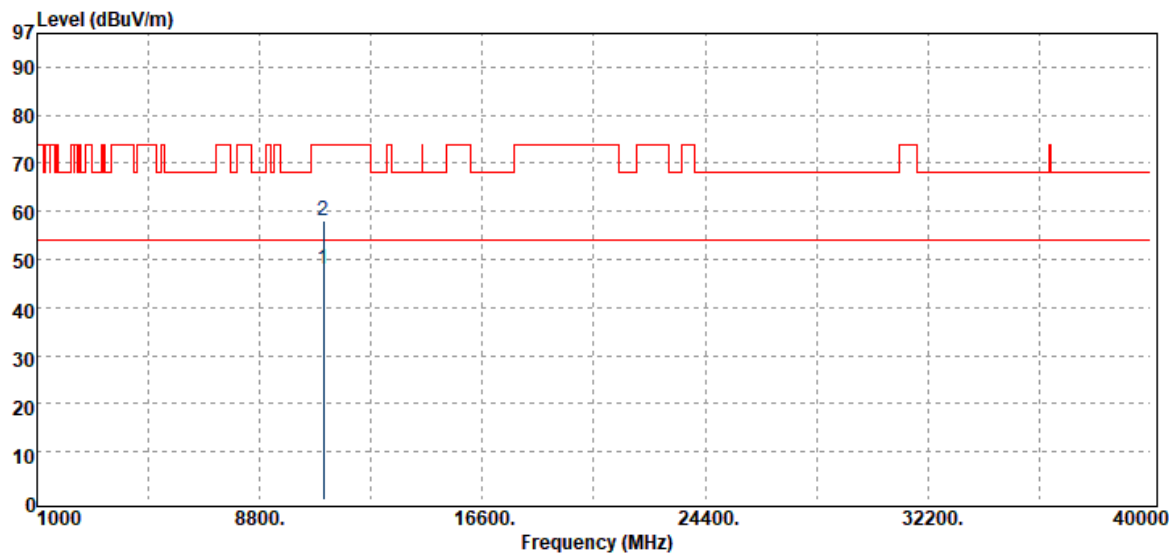
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Report Number :ER/2020/20054  
 Operation Mode :802.11n40 B3  
 Test Frequency :5510 MHz  
 Test Mode :Tx CH Low  
 EUT Pol :H Plane

Test Date :2020-03-13  
 Temp./Humi. :22.3/67  
 Antenna Pol. :HORIZONTAL  
 Engineer :Thomas



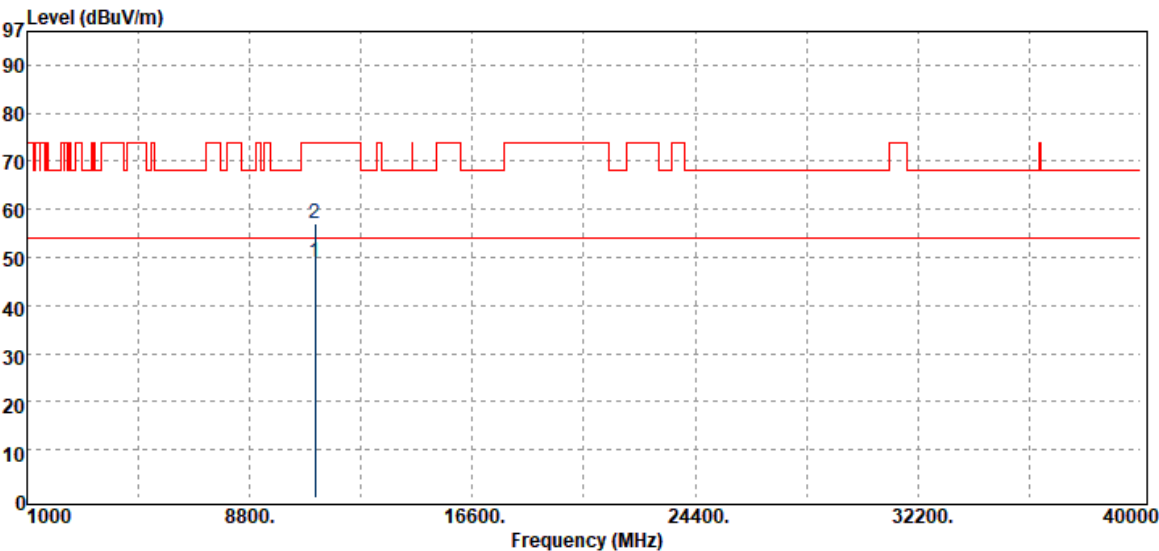
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
11020.00	Average	20.89	27.09	47.98	54.00	-6.02
11020.00	Peak	31.08	27.09	58.17	74.00	-15.83

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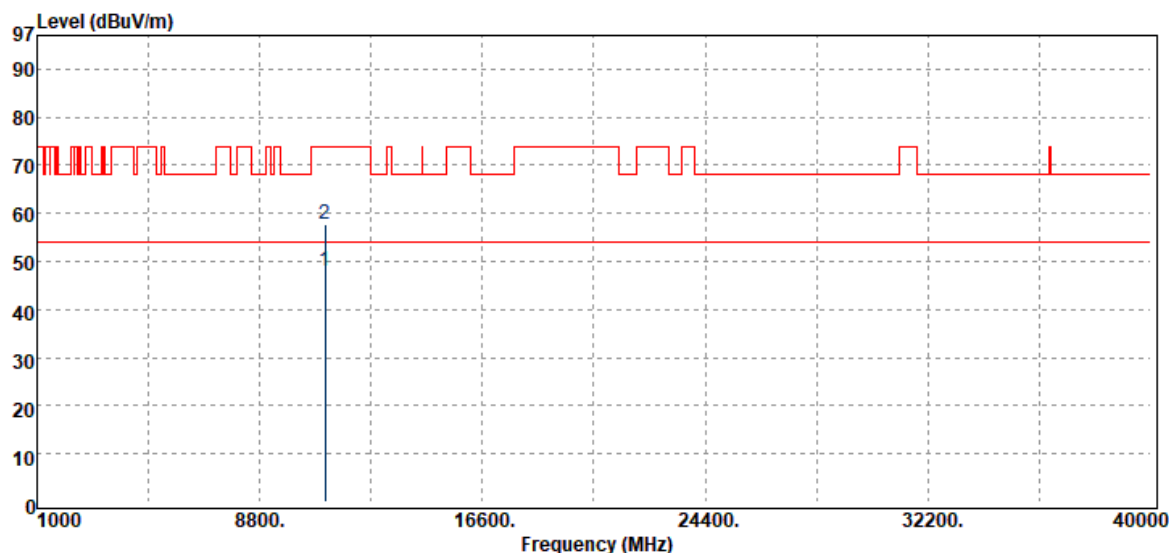
Report Number	:ER/2020/20054	Test Date	:2020-03-13
Operation Mode	:802.11n40 B3	Temp./Humi.	:22.3/67
Test Frequency	:5550 MHz	Antenna Pol.	:VERTICAL
Test Mode	:Tx CH Mid	Engineer	:Thomas
EUT Pol	:H Plane		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
11100.00	Average	21.65	27.23	48.88	54.00	-5.12
11100.00	Peak	29.89	27.23	57.12	74.00	-16.88

Report Number :ER/2020/20054  
 Operation Mode :802.11n40 B3  
 Test Frequency :5550 MHz  
 Test Mode :Tx CH Mid  
 EUT Pol :H Plane

Test Date :2020-03-13  
 Temp./Humi. :22.3/67  
 Antenna Pol. :HORIZONTAL  
 Engineer :Thomas



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
11100.00	Average	20.72	27.23	47.95	54.00	-6.05
11100.00	Peak	30.62	27.23	57.85	74.00	-16.15

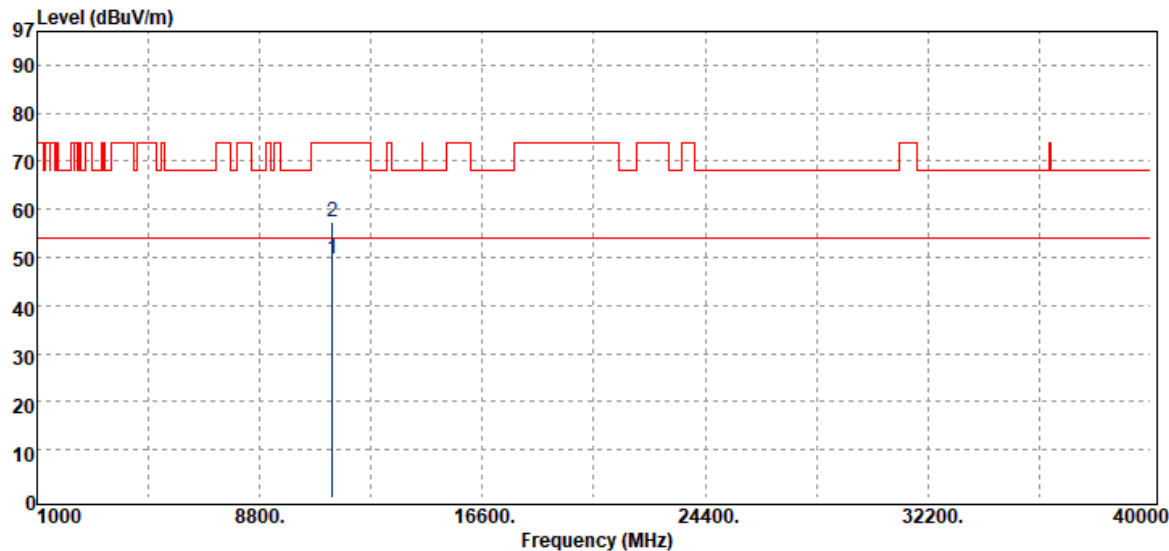
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Report Number :ER/2020/20054  
 Operation Mode :802.11n40 B3  
 Test Frequency :5670 MHz  
 Test Mode :Tx CH High  
 EUT Pol :H Plane

Test Date :2020-03-13  
 Temp./Humi. :22.3/67  
 Antenna Pol. :VERTICAL  
 Engineer :Thomas



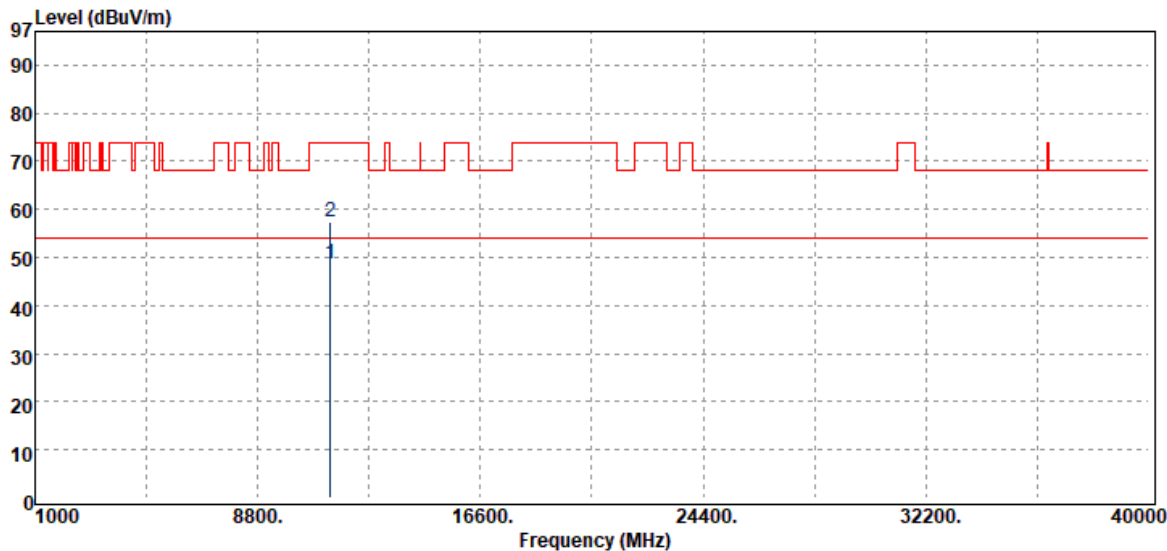
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
11340.00	Average	21.90	27.77	49.67	54.00	-4.33
11340.00	Peak	29.71	27.77	57.48	74.00	-16.52

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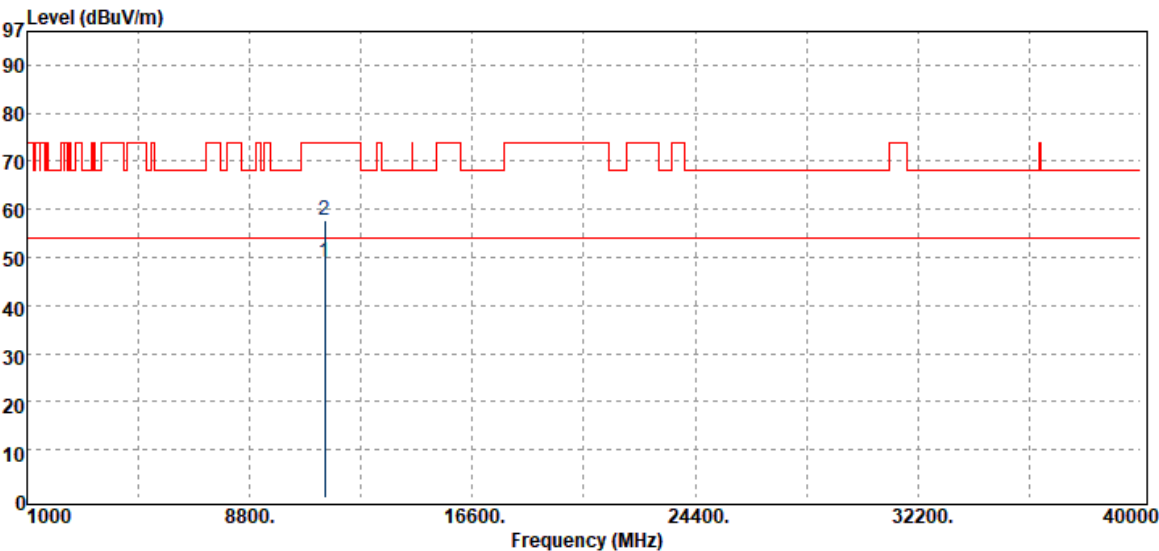
Report Number	:ER/2020/20054	Test Date	:2020-03-13
Operation Mode	:802.11n40 B3	Temp./Humi.	:22.3/67
Test Frequency	:5670 MHz	Antenna Pol.	:HORIZONTAL
Test Mode	:Tx CH High	Engineer	:Thomas
EUT Pol	:H Plane		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
11340.00	Average	20.78	27.77	48.55	54.00	-5.45
11340.00	Peak	29.70	27.77	57.47	74.00	-16.53



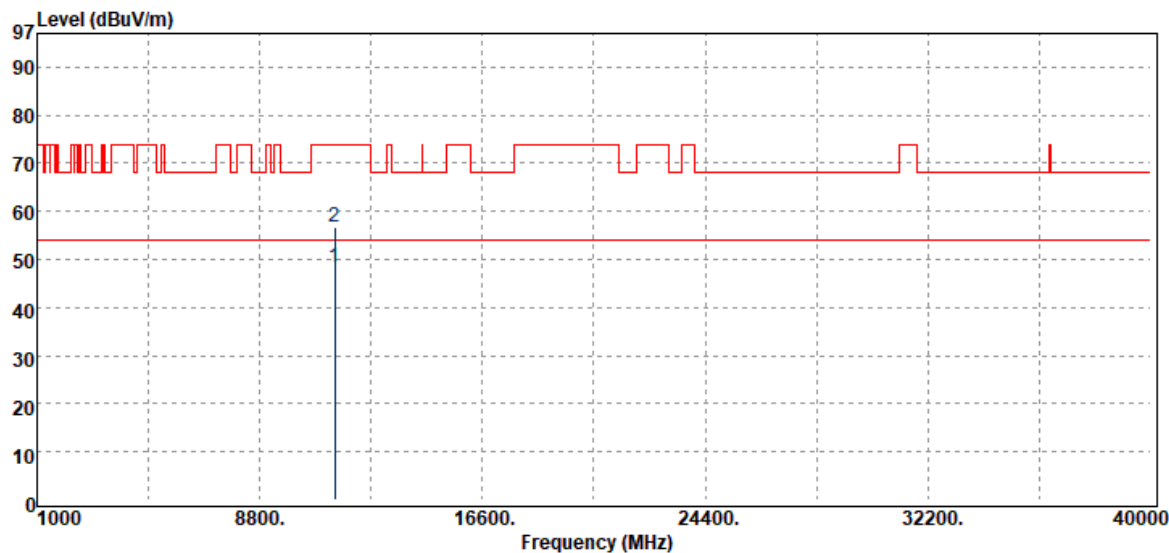
Report Number	:ER/2020/20054	Test Date	:2020-03-13
Operation Mode	:802.11n40 B3-B4	Temp./Humi.	:22.3/67
Test Frequency	:5710 MHz	Antenna Pol.	:VERTICAL
Test Mode	:Tx CH High	Engineer	:Thomas
EUT Pol	:H Plane		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
11420.00	Average	21.20	27.66	48.86	54.00	-5.14
11420.00	Peak	30.08	27.66	57.74	74.00	-16.26

Report Number :ER/2020/20054  
 Operation Mode :802.11n40 B3-B4  
 Test Frequency :5710 MHz  
 Test Mode :Tx CH High  
 EUT Pol :H Plane

Test Date :2020-03-13  
 Temp./Humi. :22.3/67  
 Antenna Pol. :HORIZONTAL  
 Engineer :Thomas



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
11420.00	Average	20.67	27.66	48.33	54.00	-5.67
11420.00	Peak	29.20	27.66	56.86	74.00	-17.14

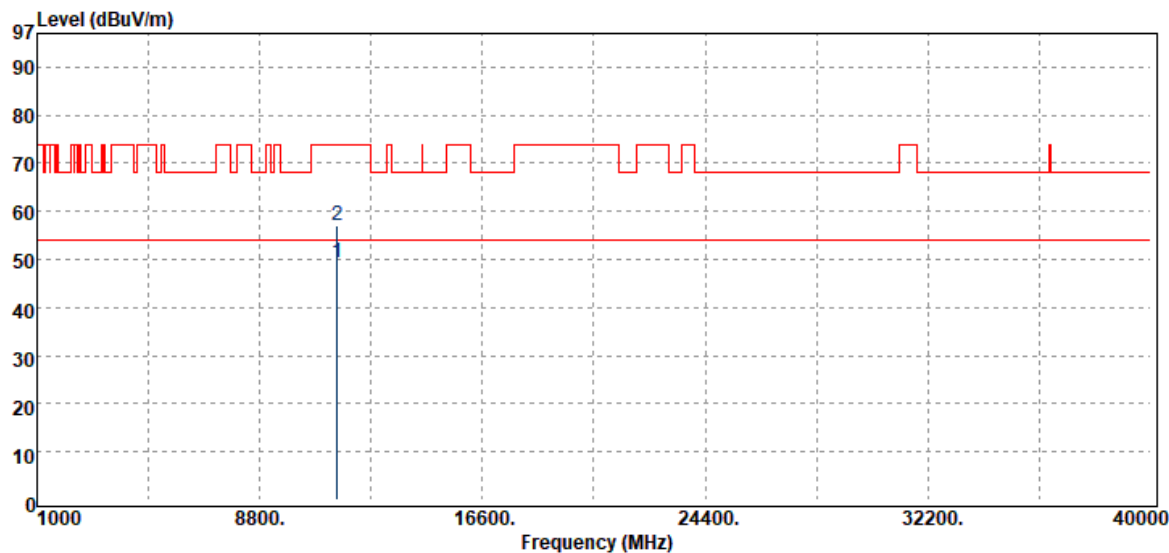
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Report Number :ER/2020/20054  
 Operation Mode :802.11n40 B4  
 Test Frequency :5755 MHz  
 Test Mode :Tx CH Low  
 EUT Pol :H Plane

Test Date :2020-03-13  
 Temp./Humi. :22.3/67  
 Antenna Pol. :VERTICAL  
 Engineer :Thomas



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
11510.00	Average	21.49	27.96	49.45	54.00	-4.55
11510.00	Peak	29.17	27.96	57.13	74.00	-16.87

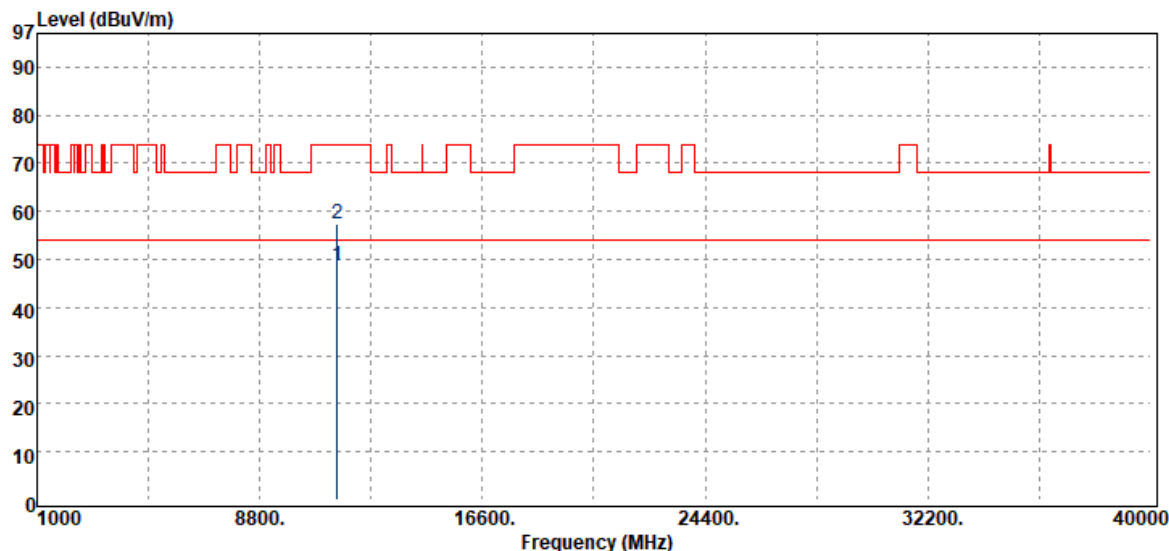
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Report Number :ER/2020/20054  
 Operation Mode :802.11n40 B4  
 Test Frequency :5755 MHz  
 Test Mode :Tx CH Low  
 EUT Pol :H Plane

Test Date :2020-03-13  
 Temp./Humi. :22.3/67  
 Antenna Pol. :HORIZONTAL  
 Engineer :Thomas



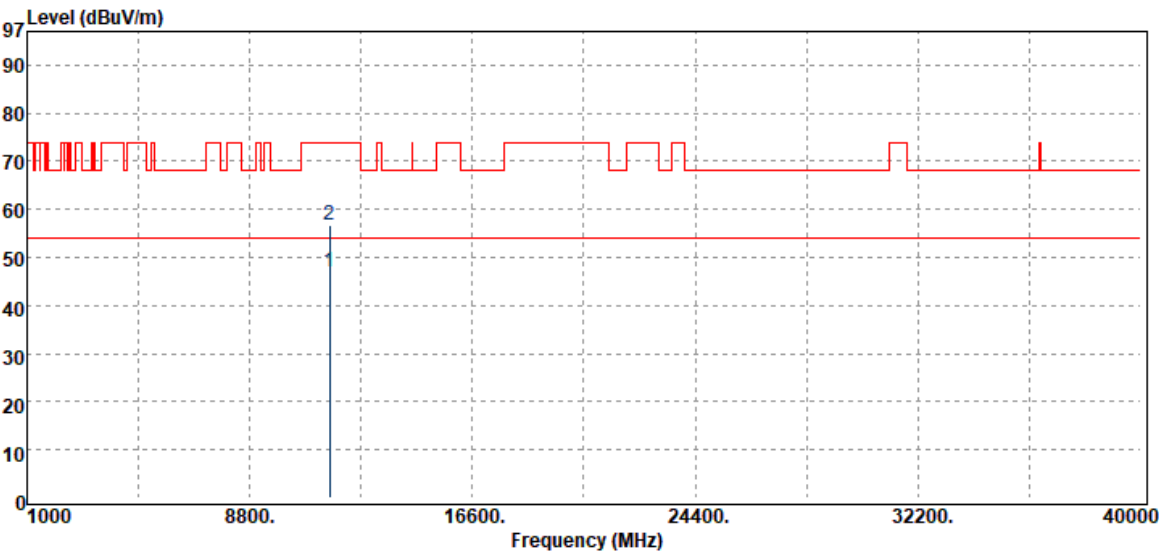
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
11510.00	Average	20.72	27.96	48.68	54.00	-5.32
11510.00	Peak	29.50	27.96	57.46	74.00	-16.54

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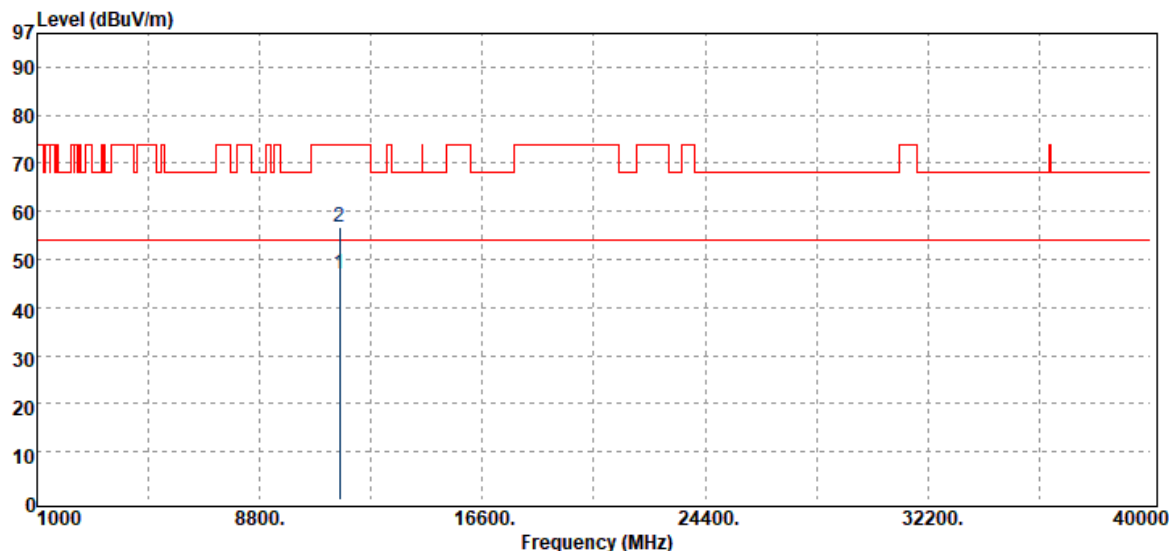
Report Number	:ER/2020/20054	Test Date	:2020-03-13
Operation Mode	:802.11n40 B4	Temp./Humi.	:22.3/67
Test Frequency	:5795 MHz	Antenna Pol.	:VERTICAL
Test Mode	:Tx CH High	Engineer	:Thomas
EUT Pol	:H Plane		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
11590.00	Average	19.76	27.12	46.88	54.00	-7.12
11590.00	Peak	29.59	27.12	56.71	74.00	-17.29

Report Number :ER/2020/20054  
 Operation Mode :802.11n40 B4  
 Test Frequency :5795 MHz  
 Test Mode :Tx CH High  
 EUT Pol :H Plane

Test Date :2020-03-13  
 Temp./Humi. :22.3/67  
 Antenna Pol. :HORIZONTAL  
 Engineer :Thomas



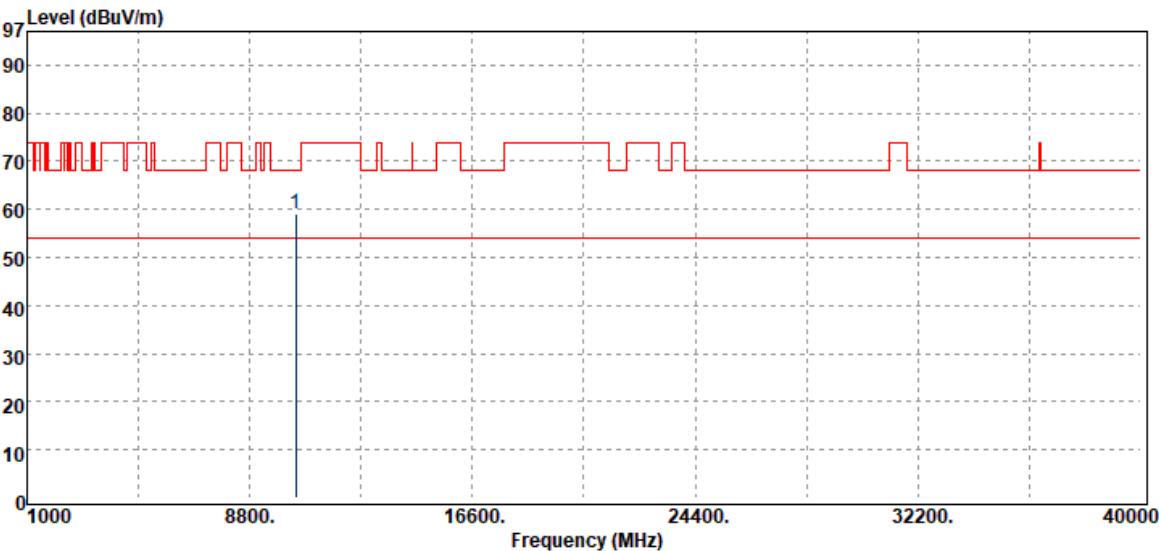
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
11590.00	Average	19.72	27.12	46.84	54.00	-7.16
11590.00	Peak	29.63	27.12	56.75	74.00	-17.25

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Report Number	:ER/2020/20054	Test Date	:2020-03-13
Operation Mode	:802.11ac80 B1	Temp./Humi.	:22.3/67
Test Frequency	:5210 MHz	Antenna Pol.	:VERTICAL
Test Mode	:Tx CH Low	Engineer	:Thomas
EUT Pol	:H Plane		

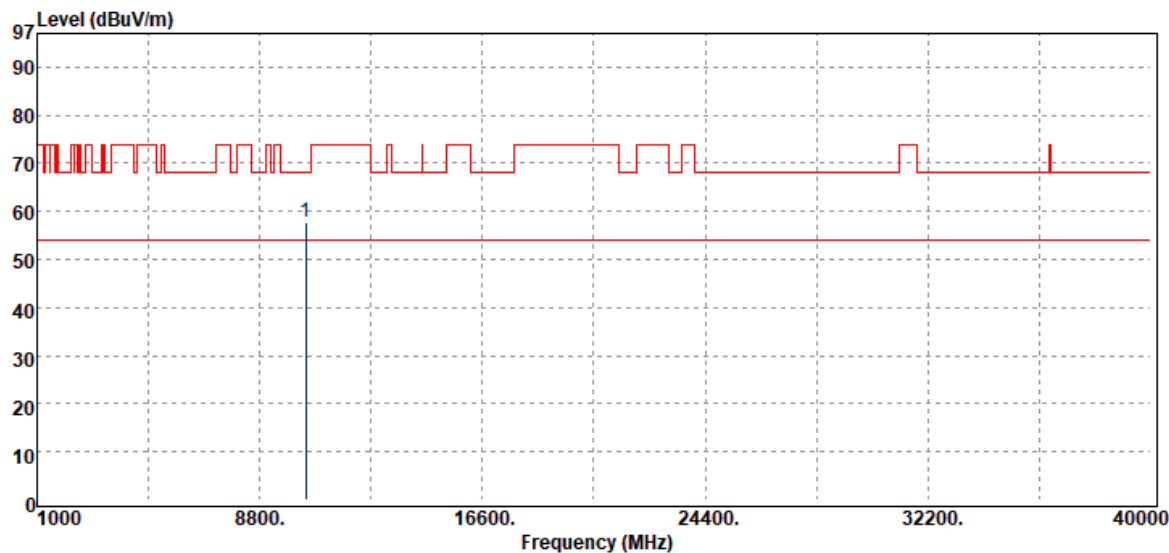


Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBµV	Factor dB	Actual FS dBµV/m	Limit @3m dBµV/m	Margin dB
10420.00	Peak	32.17	26.81	58.98	68.20	-9.22



Report Number :ER/2020/20054  
 Operation Mode :802.11ac80 B1  
 Test Frequency :5210 MHz  
 Test Mode :Tx CH Low  
 EUT Pol :H Plane

Test Date :2020-03-13  
 Temp./Humi. :22.3/67  
 Antenna Pol. :HORIZONTAL  
 Engineer :Thomas



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
10420.00	Peak	31.03	26.81	57.84	68.20	-10.36

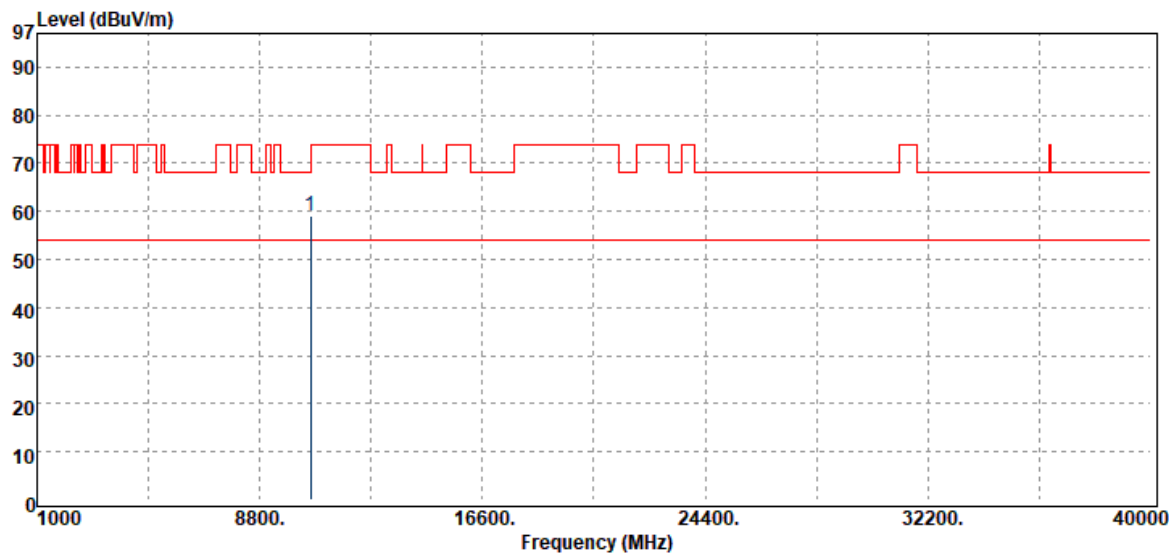
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Report Number :ER/2020/20054  
 Operation Mode :802.11ac80 B2  
 Test Frequency :5290 MHz  
 Test Mode :Tx CH High  
 EUT Pol :H Plane

Test Date :2020-03-13  
 Temp./Humi. :22.3/67  
 Antenna Pol. :VERTICAL  
 Engineer :Thomas



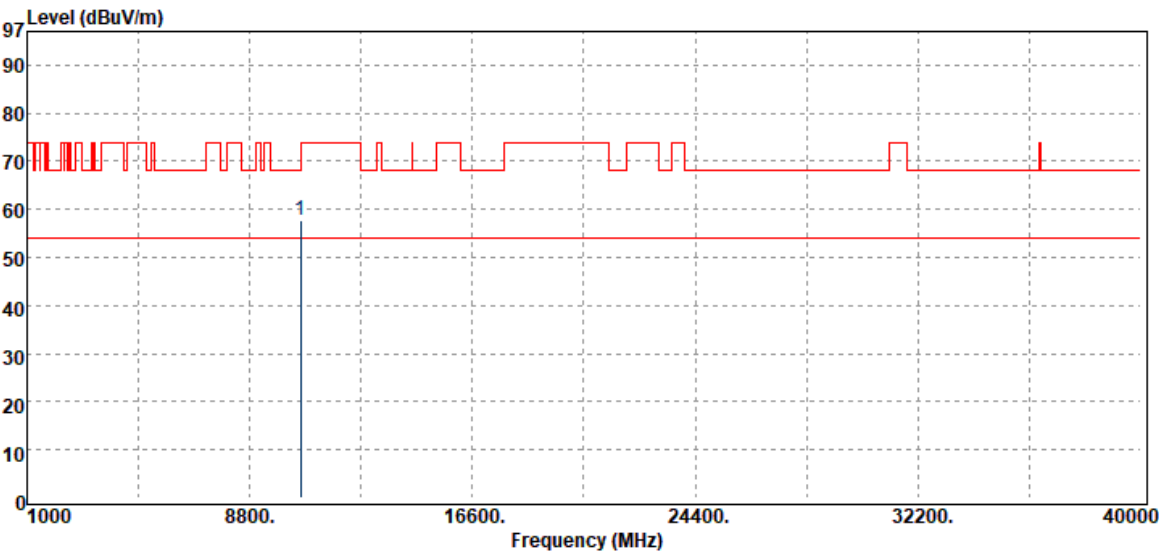
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
10580.00	Peak	32.30	26.69	58.99	68.20	-9.21

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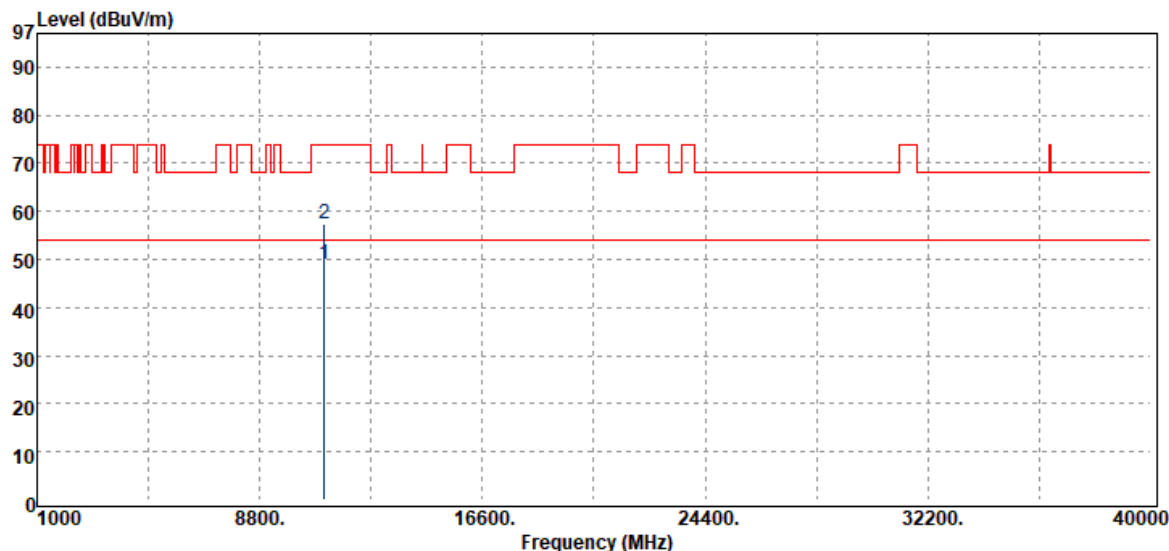
Report Number	:ER/2020/20054	Test Date	:2020-03-13
Operation Mode	:802.11ac80 B2	Temp./Humi.	:22.3/67
Test Frequency	:5290 MHz	Antenna Pol.	:HORIZONTAL
Test Mode	:Tx CH High	Engineer	:Thomas
EUT Pol	:H Plane		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
10580.00	Peak	30.97	26.69	57.66	68.20	-10.54

Report Number :ER/2020/20054  
 Operation Mode :802.11ac80 B3  
 Test Frequency :5530 MHz  
 Test Mode :Tx CH Low  
 EUT Pol :H Plane

Test Date :2020-03-13  
 Temp./Humi. :22.3/67  
 Antenna Pol. :VERTICAL  
 Engineer :Thomas



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
11060.00	Average	22.27	26.84	49.11	54.00	-4.89
11060.00	Peak	30.51	26.84	57.35	74.00	-16.65

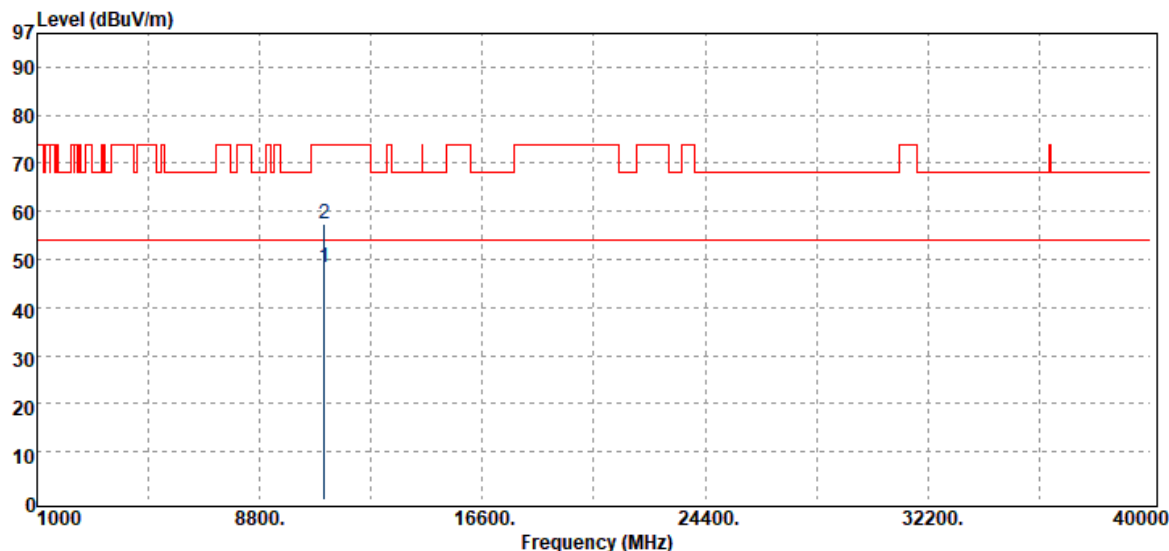
Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

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Report Number :ER/2020/20054  
Operation Mode :802.11ac80 B3  
Test Frequency :5530 MHz  
Test Mode :Tx CH Low  
EUT Pol :H Plane

Test Date :2020-03-13  
Temp./Humi. :22.3/67  
Antenna Pol. :HORIZONTAL  
Engineer :Thomas



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
11060.00	Average	21.62	26.84	48.46	54.00	-5.54
11060.00	Peak	30.61	26.84	57.45	74.00	-16.55

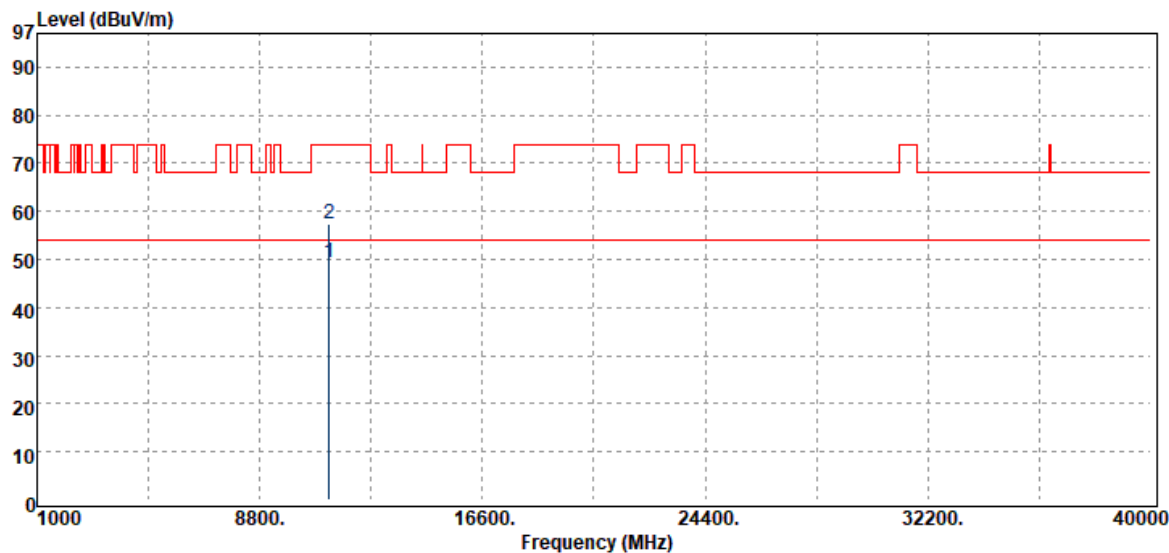
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Report Number :ER/2020/20054  
 Operation Mode :802.11ac80 B3  
 Test Frequency :5610 MHz  
 Test Mode :Tx CH High  
 EUT Pol :H Plane

Test Date :2020-03-13  
 Temp./Humi. :22.3/67  
 Antenna Pol. :VERTICAL  
 Engineer :Thomas



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
11220.00	Average	22.56	26.68	49.24	54.00	-4.76
11220.00	Peak	30.82	26.68	57.50	74.00	-16.50

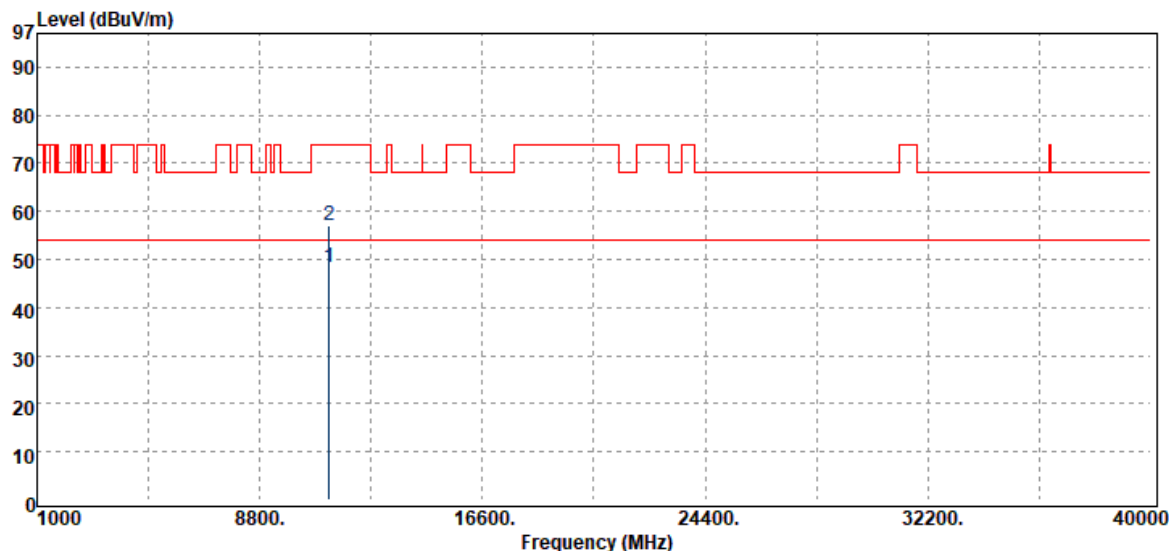
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Report Number :ER/2020/20054  
 Operation Mode :802.11ac80 B3  
 Test Frequency :5610 MHz  
 Test Mode :Tx CH High  
 EUT Pol :H Plane

Test Date :2020-03-13  
 Temp./Humi. :22.3/67  
 Antenna Pol. :HORIZONTAL  
 Engineer :Thomas



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
11220.00	Average	21.69	26.68	48.37	54.00	-5.63
11220.00	Peak	30.29	26.68	56.97	74.00	-17.03

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

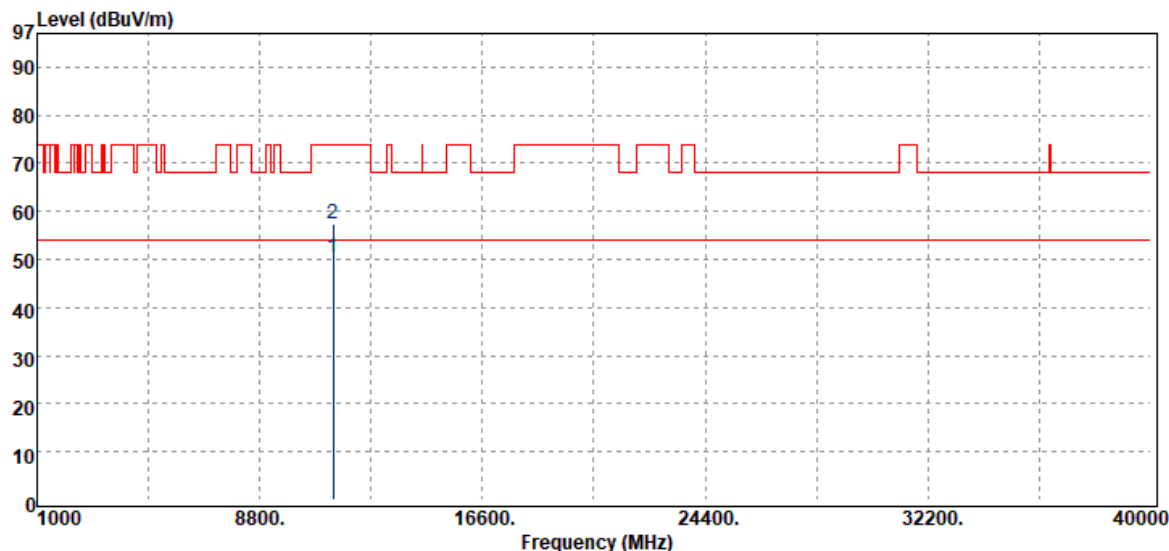
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Report Number :ER/2020/20054  
 Operation Mode :802.11ac80 B3-B4  
 Test Frequency :5690 MHz  
 Test Mode :Tx CH High  
 EUT Pol :H Plane

Test Date :2020-03-13  
 Temp./Humi. :22.3/67  
 Antenna Pol. :VERTICAL  
 Engineer :Thomas



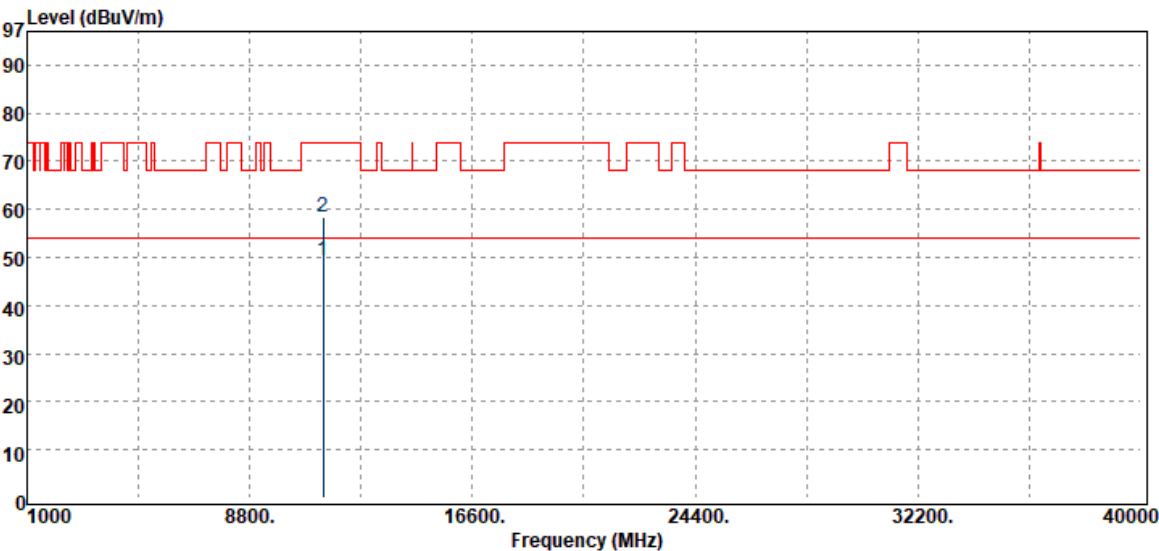
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
11380.00	Average	22.62	27.63	50.25	54.00	-3.75
11380.00	Peak	29.88	27.63	57.51	74.00	-16.49

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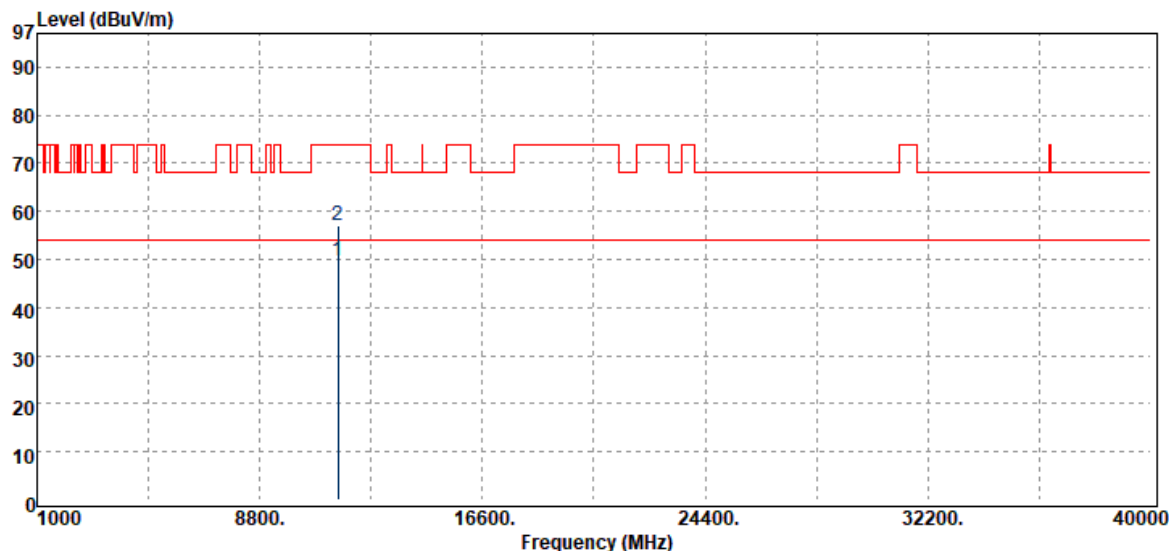
Report Number	:ER/2020/20054	Test Date	:2020-03-13
Operation Mode	:802.11ac80 B3-B4	Temp./Humi.	:22.3/67
Test Frequency	:5690 MHz	Antenna Pol.	:HORIZONTAL
Test Mode	:Tx CH High	Engineer	:Thomas
EUT Pol	:H Plane		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
11380.00	Average	21.75	27.63	49.38	54.00	-4.62
11380.00	Peak	30.67	27.63	58.30	74.00	-15.70

Report Number :ER/2020/20054  
 Operation Mode :802.11ac80 B4  
 Test Frequency :5775 MHz  
 Test Mode :Tx CH Low  
 EUT Pol :H Plane

Test Date :2020-03-13  
 Temp./Humi. :22.3/67  
 Antenna Pol. :VERTICAL  
 Engineer :Thomas



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
11550.00	Average	22.35	27.23	49.58	54.00	-4.42
11550.00	Peak	29.96	27.23	57.19	74.00	-16.81

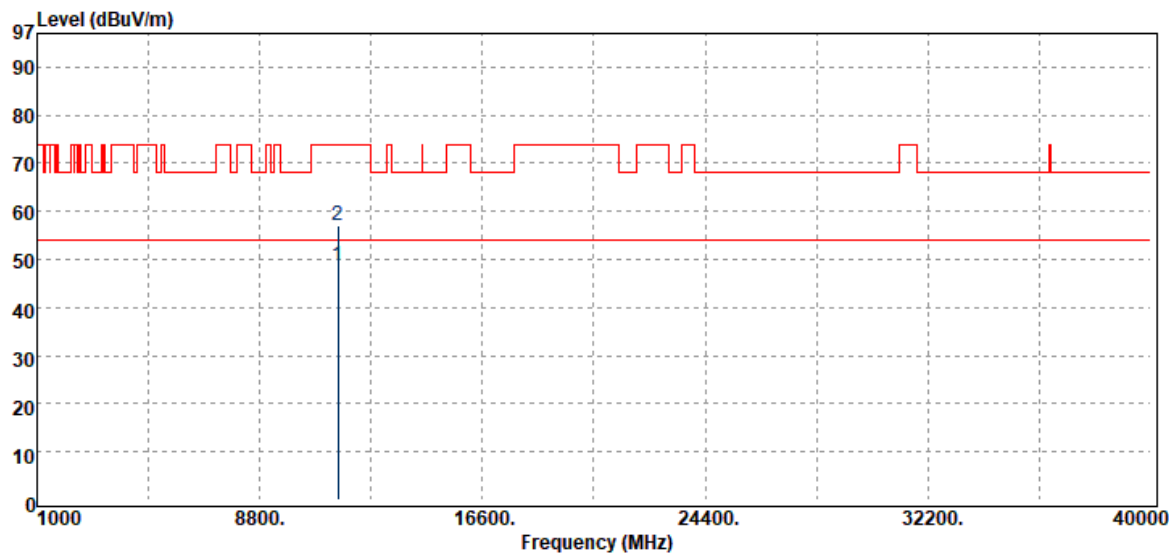
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Report Number :ER/2020/20054  
 Operation Mode :802.11ac80 B4  
 Test Frequency :5775 MHz  
 Test Mode :Tx CH Low  
 EUT Pol :H Plane

Test Date :2020-03-13  
 Temp./Humi. :22.3/67  
 Antenna Pol. :HORIZONTAL  
 Engineer :Thomas



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
11550.00	Average	21.54	27.23	48.77	54.00	-5.23
11550.00	Peak	29.86	27.23	57.09	74.00	-16.91

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

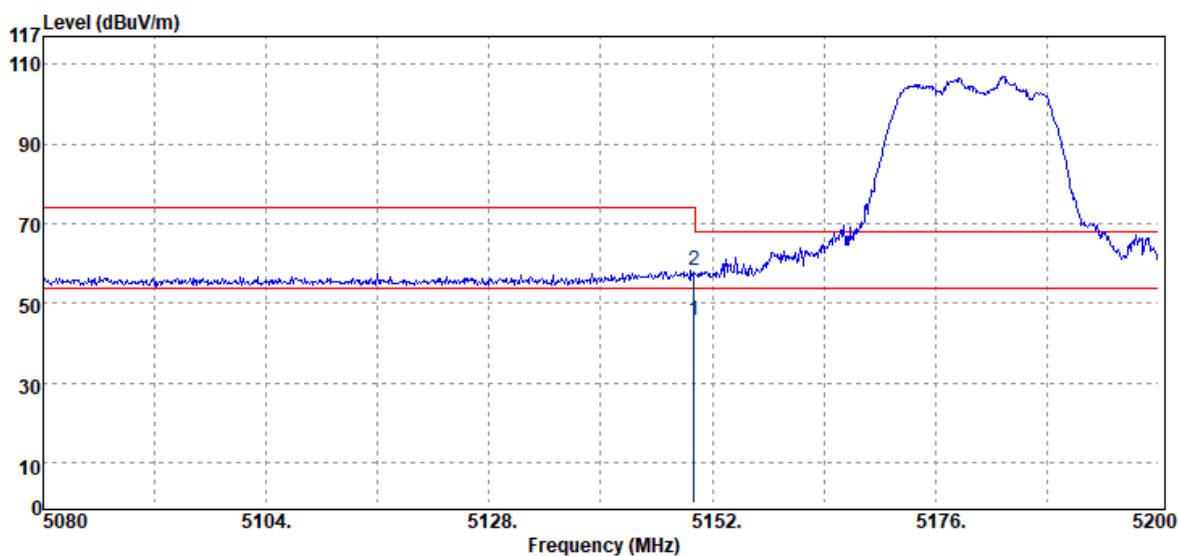
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### 11.7.3 Band edge falling to restricted band

Report Number :ER/2020/20054  
 Operation Mode :802.11aB1  
 Test Frequency :5180 MHz  
 Test Mode :Bandedge CH Low  
 EUT Pol :H Plane

Test Date :2020-03-10  
 Temp./Humi. :23.1/71  
 Antenna Pol. :VERTICAL  
 Engineer :Thomas



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBUV	Factor dB	Actual FS dBUV/m	Limit @3m dBUV/m	Margin dB
5150.00	Average	30.94	14.83	45.77	54.00	-8.23
5150.00	Peak	43.27	14.83	58.10	74.00	-15.90

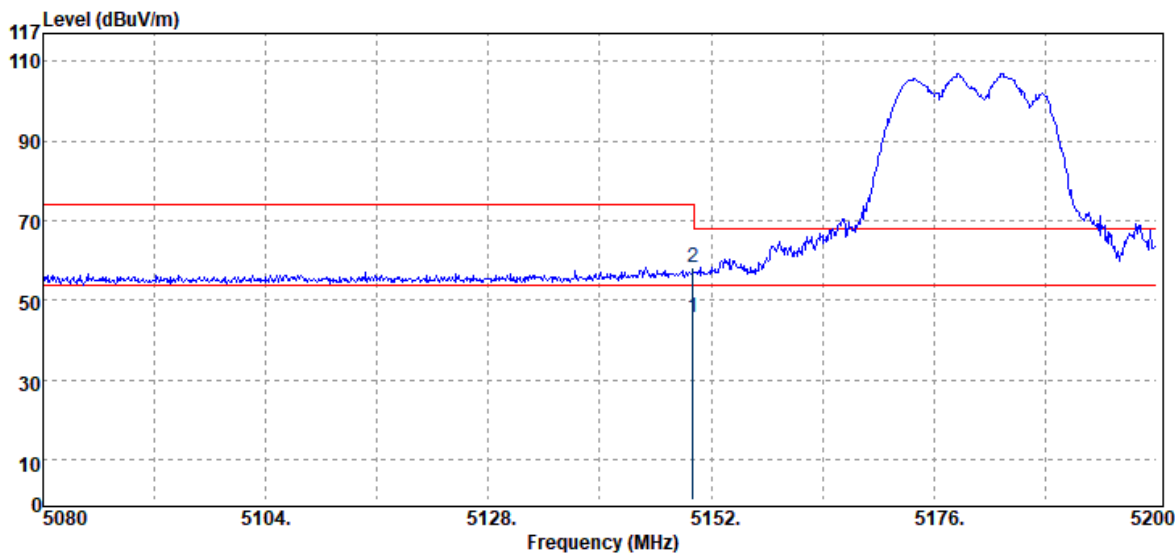
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Report Number :ER/2020/20054  
Operation Mode :802.11aB1  
Test Frequency :5180 MHz  
Test Mode :Bandedge CH Low  
EUT Pol :H Plane

Test Date :2020-03-10  
Temp./Humi. :23.1/71  
Antenna Pol. :HORIZONTAL  
Engineer :Thomas



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
5150.00	Average	31.01	14.83	45.84	54.00	-8.16
5150.00	Peak	43.32	14.83	58.15	74.00	-15.85

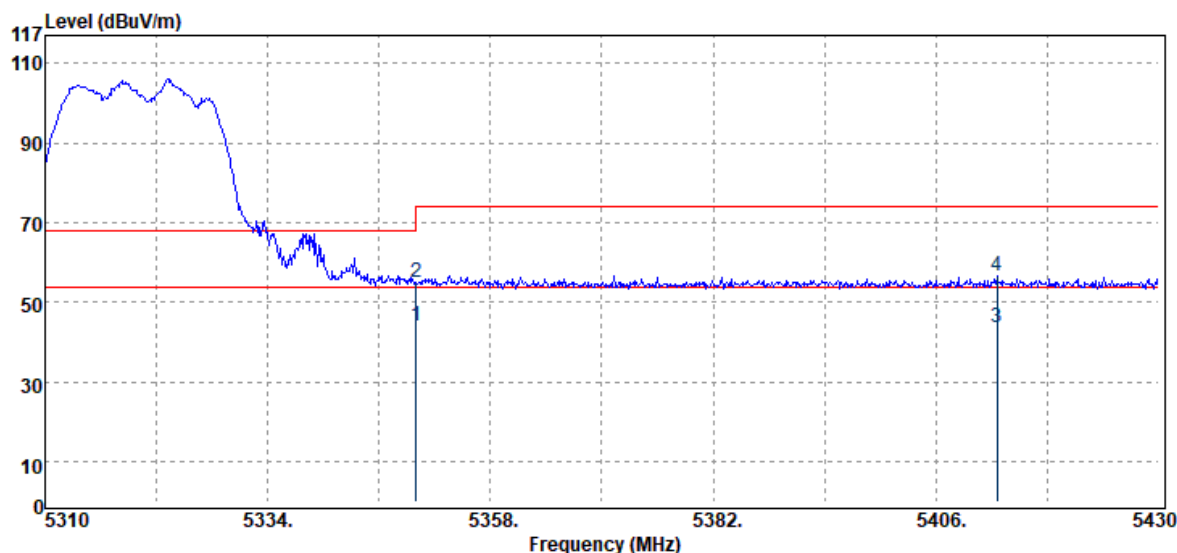
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Report Number :ER/2020/20054  
 Operation Mode :802.11aB2  
 Test Frequency :5320MHz  
 Test Mode :Bandedge CH High  
 EUT Pol :H Plane

Test Date :2020-03-11  
 Temp./Humi. :22.1/57  
 Antenna Pol. :VERTICAL  
 Engineer :Thomas



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
5349.96	Average	29.98	14.20	44.18	54.00	-9.82
5349.96	Peak	41.05	14.20	55.25	74.00	-18.75
5412.60	Average	29.13	14.65	43.78	54.00	-10.22
5412.60	Peak	42.03	14.65	56.68	74.00	-17.32

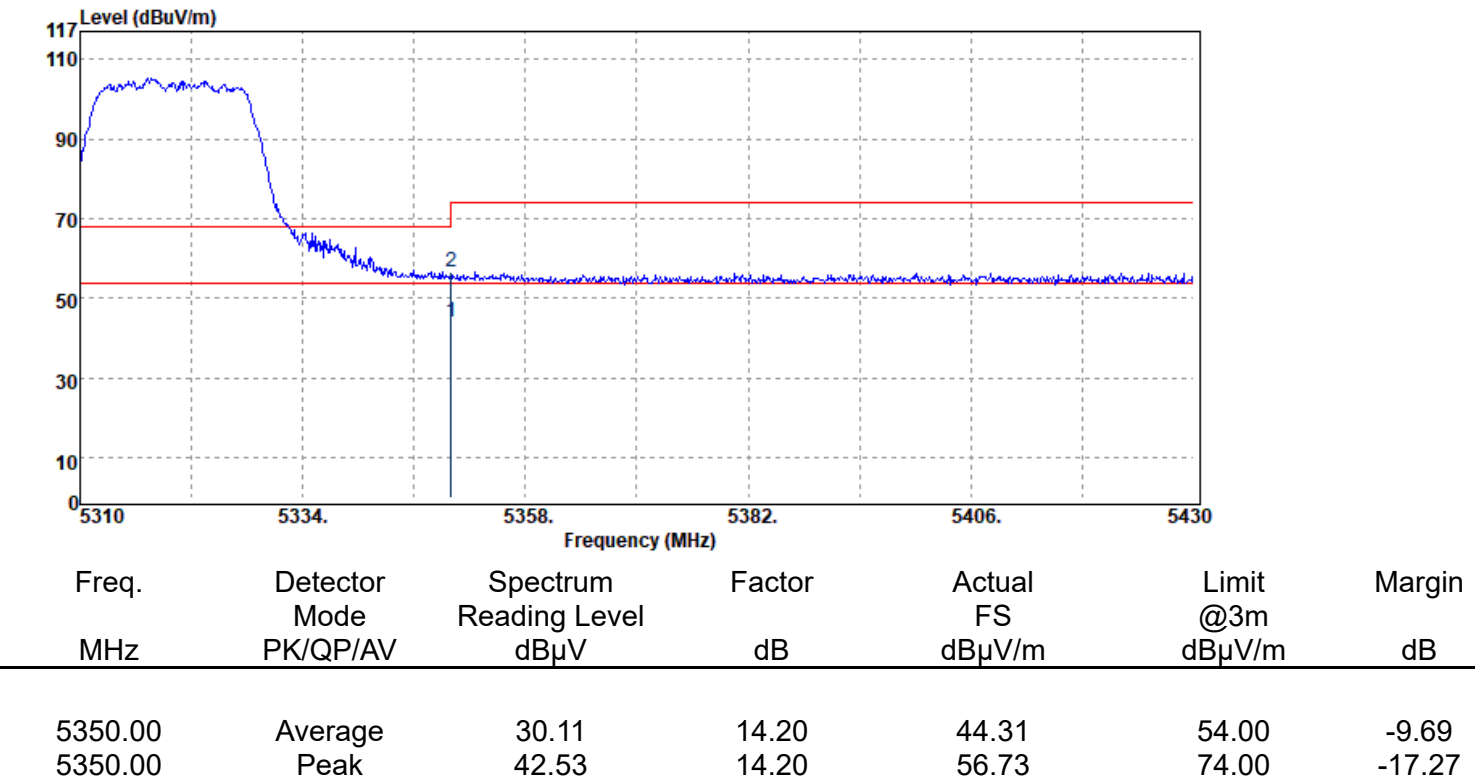
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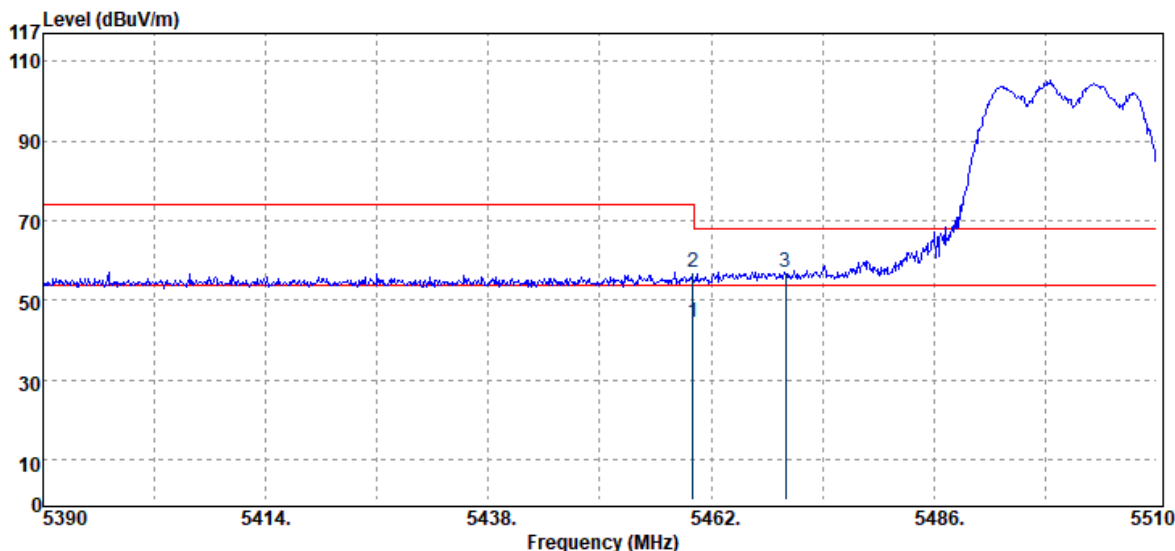


Report Number	:ER/2020/20054	Test Date	:2020-03-11
Operation Mode	:802.11aB2	Temp./Humi.	:22.1/57
Test Frequency	:5320MHz	Antenna Pol.	:HORIZONTAL
Test Mode	:Bandedge CH High	Engineer	:Thomas
EUT Pol	:H Plane		



Report Number :ER/2020/20054  
 Operation Mode :802.11aB3  
 Test Frequency :5500MHz  
 Test Mode :Bandedge CH Low  
 EUT Pol :H Plane

Test Date :2020-03-11  
 Temp./Humi. :22.1/57  
 Antenna Pol. :VERTICAL  
 Engineer :Thomas



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
5460.00	Average	30.11	14.57	44.68	54.00	-9.32
5460.00	Peak	42.47	14.57	57.04	74.00	-16.96
5470.00	Peak	42.49	14.61	57.10	68.20	-11.10

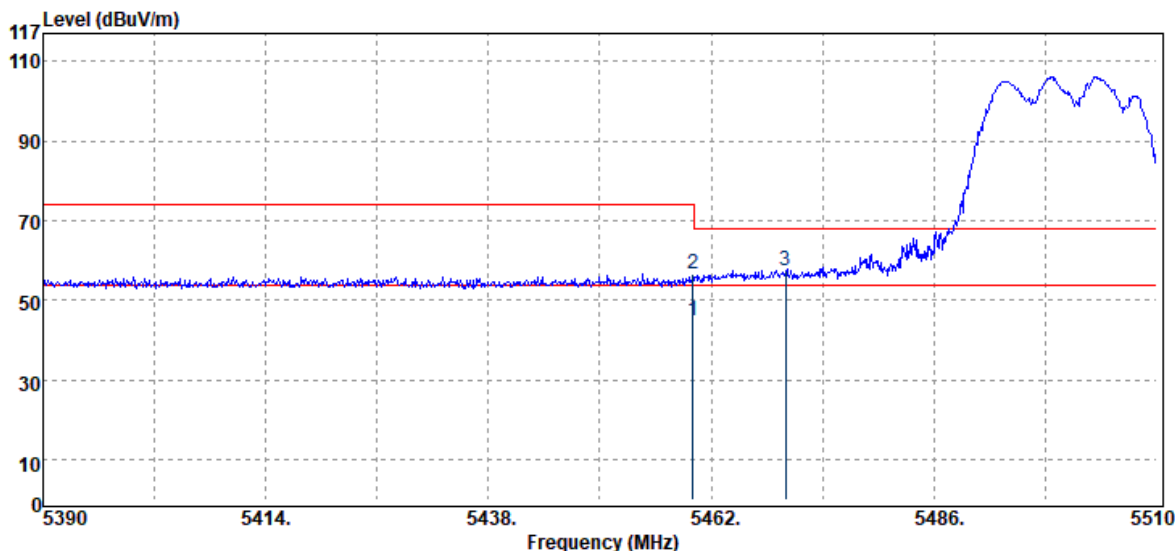
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Report Number :ER/2020/20054  
 Operation Mode :802.11aB3  
 Test Frequency :5500MHz  
 Test Mode :Bandedge CH Low  
 EUT Pol :H Plane

Test Date :2020-03-11  
 Temp./Humi. :22.1/57  
 Antenna Pol. :HORIZONTAL  
 Engineer :Thomas



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
5460.00	Average	30.32	14.57	44.89	54.00	-9.11
5460.00	Peak	42.01	14.57	56.58	74.00	-17.42
5470.00	Peak	43.05	14.61	57.66	68.20	-10.54

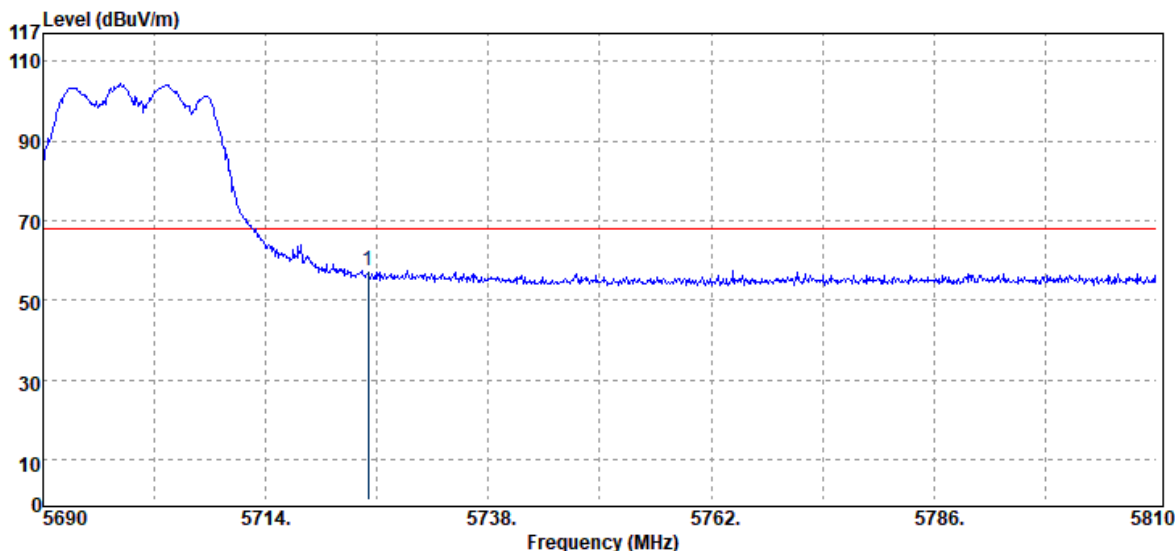
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Report Number :ER/2020/20054  
Operation Mode :802.11aB3  
Test Frequency :5700MHz  
Test Mode :Bandedge CH High  
EUT Pol :H Plane

Test Date :2020-03-11  
Temp./Humi. :22.1/57  
Antenna Pol. :VERTICAL  
Engineer :Thomas



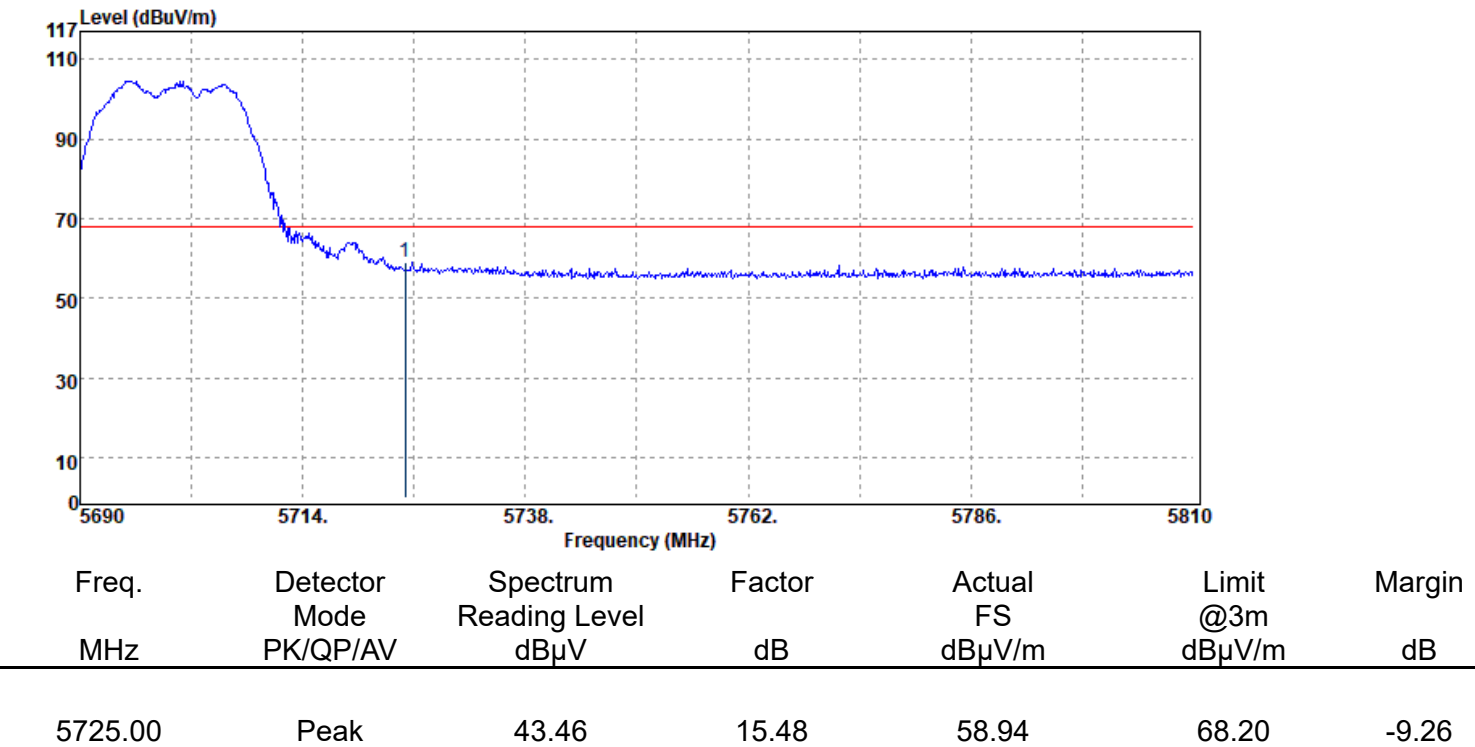
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
5725.00	Peak	41.88	15.48	57.36	68.20	-10.84

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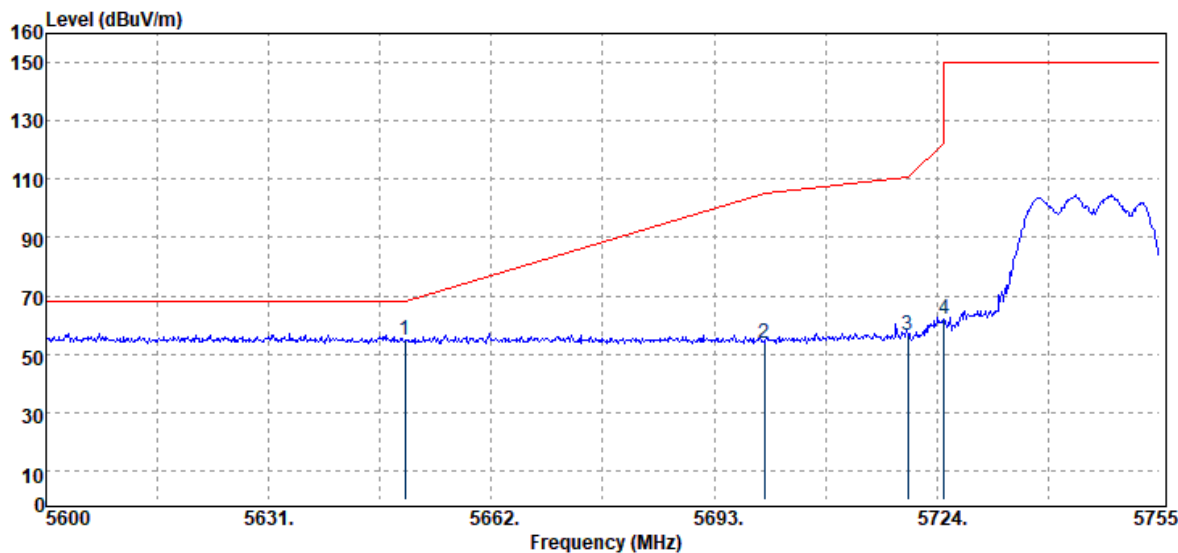
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Report Number	:ER/2020/20054	Test Date	:2020-03-11
Operation Mode	:802.11aB3	Temp./Humi.	:22.1/57
Test Frequency	:5700MHz	Antenna Pol.	:HORIZONTAL
Test Mode	:Bandedge CH High	Engineer	:Thomas
EUT Pol	:H Plane		



Report Number :ER/2020/20054  
 Operation Mode :802.11aB4  
 Test Frequency :5745MHz  
 Test Mode :Bandedge CH Low  
 EUT Pol :H Plane

Test Date :2020-03-12  
 Temp./Humi. :22.1/57  
 Antenna Pol. :VERTICAL  
 Engineer :Thomas



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
5650.00	Peak	39.89	15.16	55.05	68.20	-13.15
5700.00	Peak	38.50	15.42	53.92	105.20	-51.28
5720.00	Peak	41.00	15.47	56.47	110.80	-54.33
5725.00	Peak	46.41	15.48	61.89	122.20	-60.31

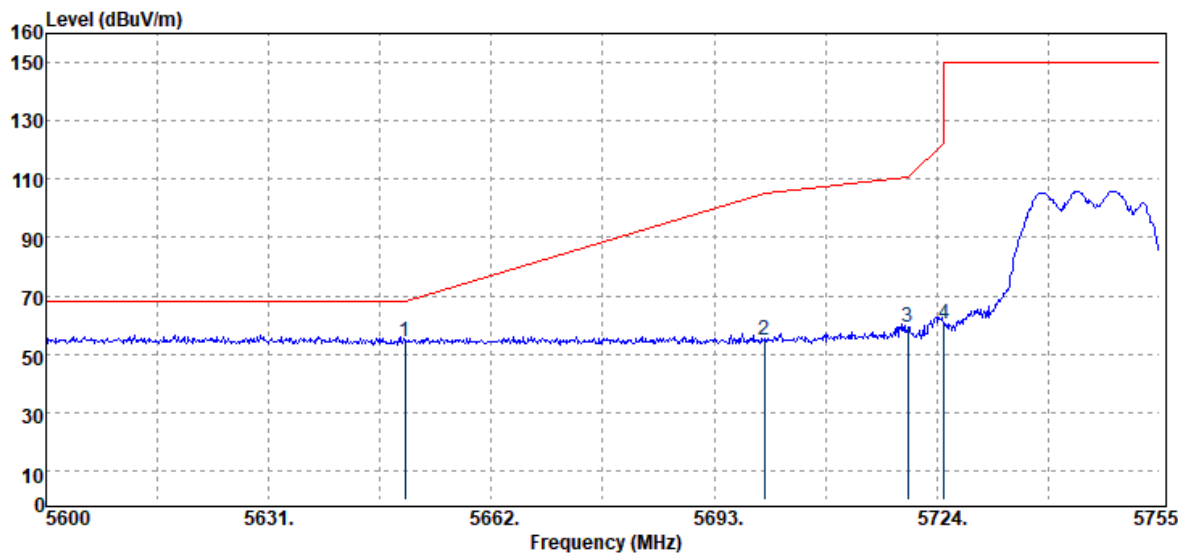
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Report Number :ER/2020/20054  
 Operation Mode :802.11aB4  
 Test Frequency :5745MHz  
 Test Mode :Bandedge CH Low  
 EUT Pol :H Plane

Test Date :2020-03-12  
 Temp./Humi. :22.1/57  
 Antenna Pol. :HORIZONTAL  
 Engineer :Thomas



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
5650.00	Peak	39.12	15.16	54.28	68.20	-13.92
5700.00	Peak	39.23	15.42	54.65	105.20	-50.55
5720.00	Peak	43.98	15.47	59.45	110.80	-51.35
5725.00	Peak	44.99	15.48	60.47	122.20	-61.73

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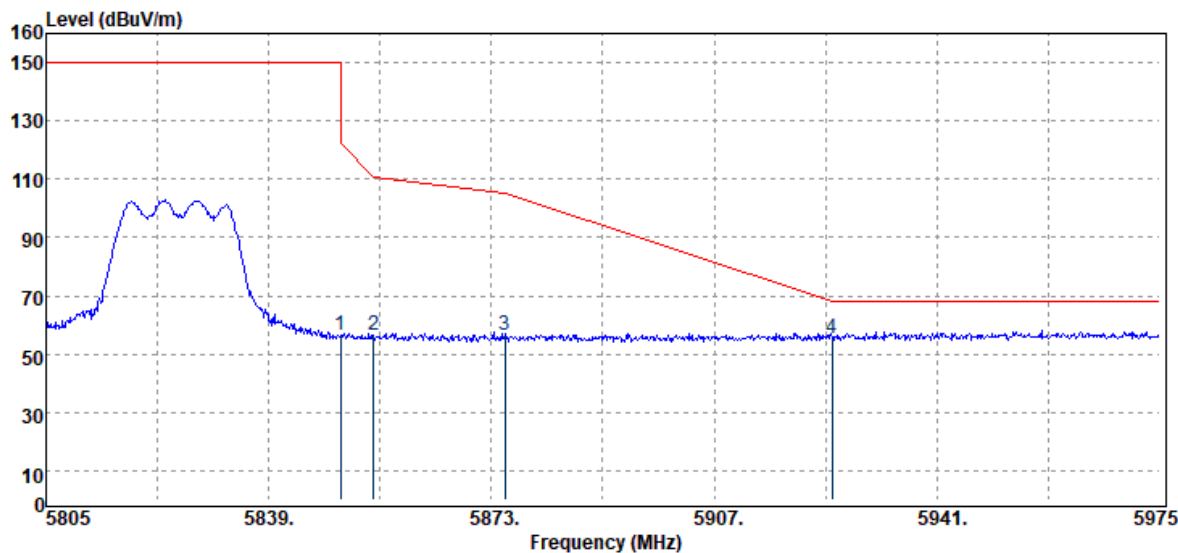
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Report Number :ER/2020/20054  
 Operation Mode :802.11aB4  
 Test Frequency :5825MHz  
 Test Mode :Bandedge CH High  
 EUT Pol :H Plane

Test Date :2020-03-12  
 Temp./Humi. :22.1/57  
 Antenna Pol. :VERTICAL  
 Engineer :Thomas



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
5850.00	Peak	40.53	15.75	56.28	122.20	-65.92
5855.00	Peak	40.51	15.75	56.26	110.80	-54.54
5875.00	Peak	40.73	15.75	56.48	105.20	-48.72
5925.00	Peak	39.47	16.06	55.53	68.20	-12.67

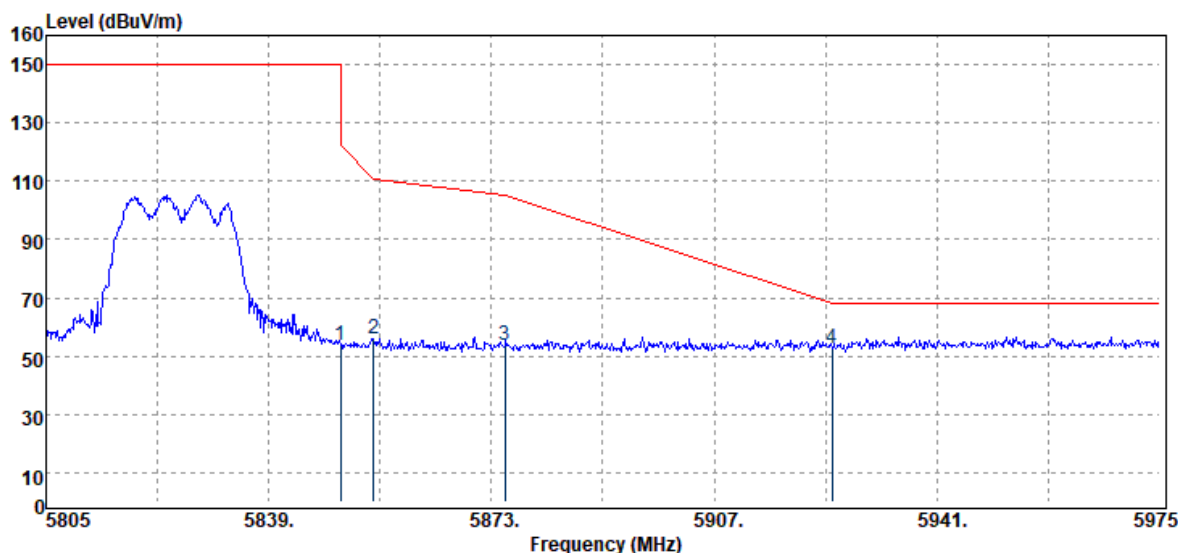
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Report Number :ER/2020/20054  
 Operation Mode :802.11aB4  
 Test Frequency :5825MHz  
 Test Mode :Bandedge CH High  
 EUT Pol :H Plane

Test Date :2020-03-12  
 Temp./Humi. :22.1/57  
 Antenna Pol. :HORIZONTAL  
 Engineer :Thomas



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
5850.00	Peak	37.81	15.75	53.56	122.20	-68.64
5855.00	Peak	40.24	15.75	55.99	110.80	-54.81
5875.00	Peak	38.16	15.75	53.91	105.20	-51.29
5925.00	Peak	36.61	16.06	52.67	68.20	-15.53

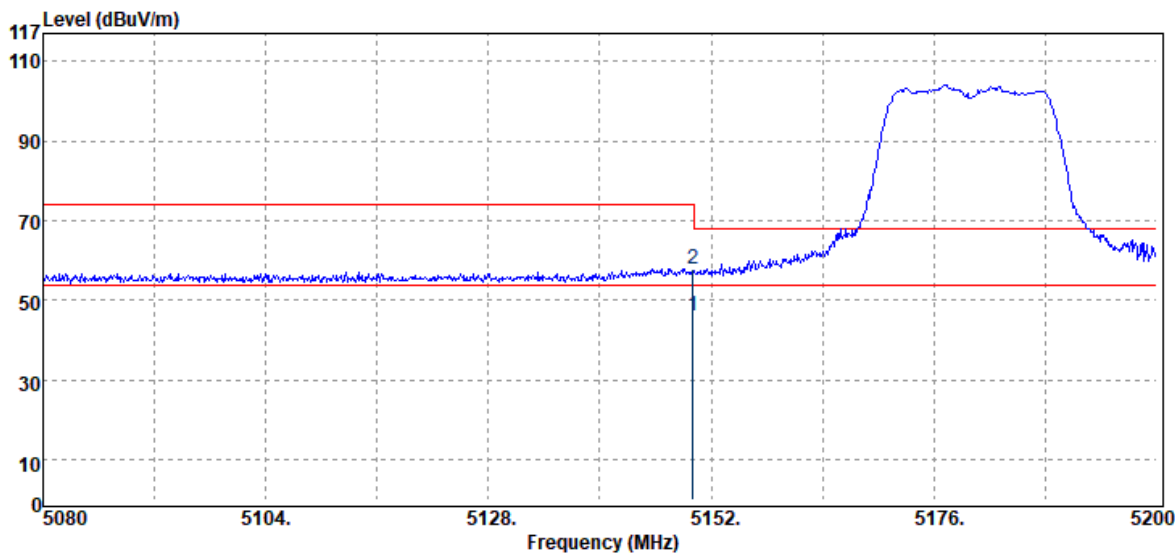
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Report Number :ER/2020/20054  
 Operation Mode :802.11n20B1  
 Test Frequency :5180 MHz  
 Test Mode :Bandedge CH Low  
 EUT Pol :H Plane

Test Date :2020-03-10  
 Temp./Humi. :23.1/71  
 Antenna Pol. :VERTICAL  
 Engineer :Thomas



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
5150.00	Average	31.36	14.83	46.19	54.00	-7.81
5150.00	Peak	43.26	14.83	58.09	74.00	-15.91

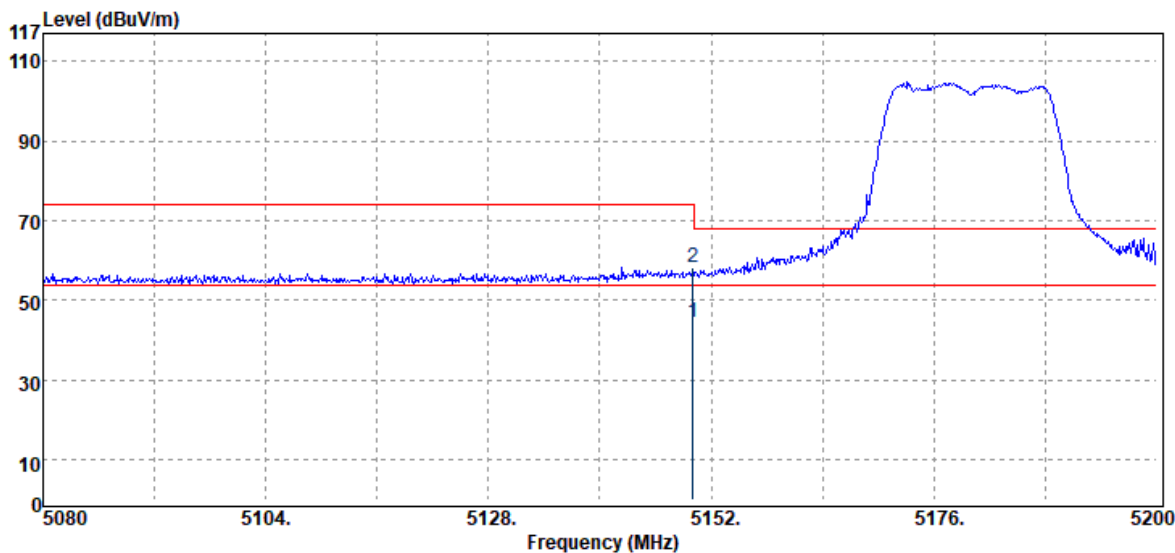
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Report Number :ER/2020/20054  
Operation Mode :802.11n20B1  
Test Frequency :5180 MHz  
Test Mode :Bandedge CH Low  
EUT Pol :H Plane

Test Date :2020-03-10  
Temp./Humi. :23.1/71  
Antenna Pol. :HORIZONTAL  
Engineer :Thomas



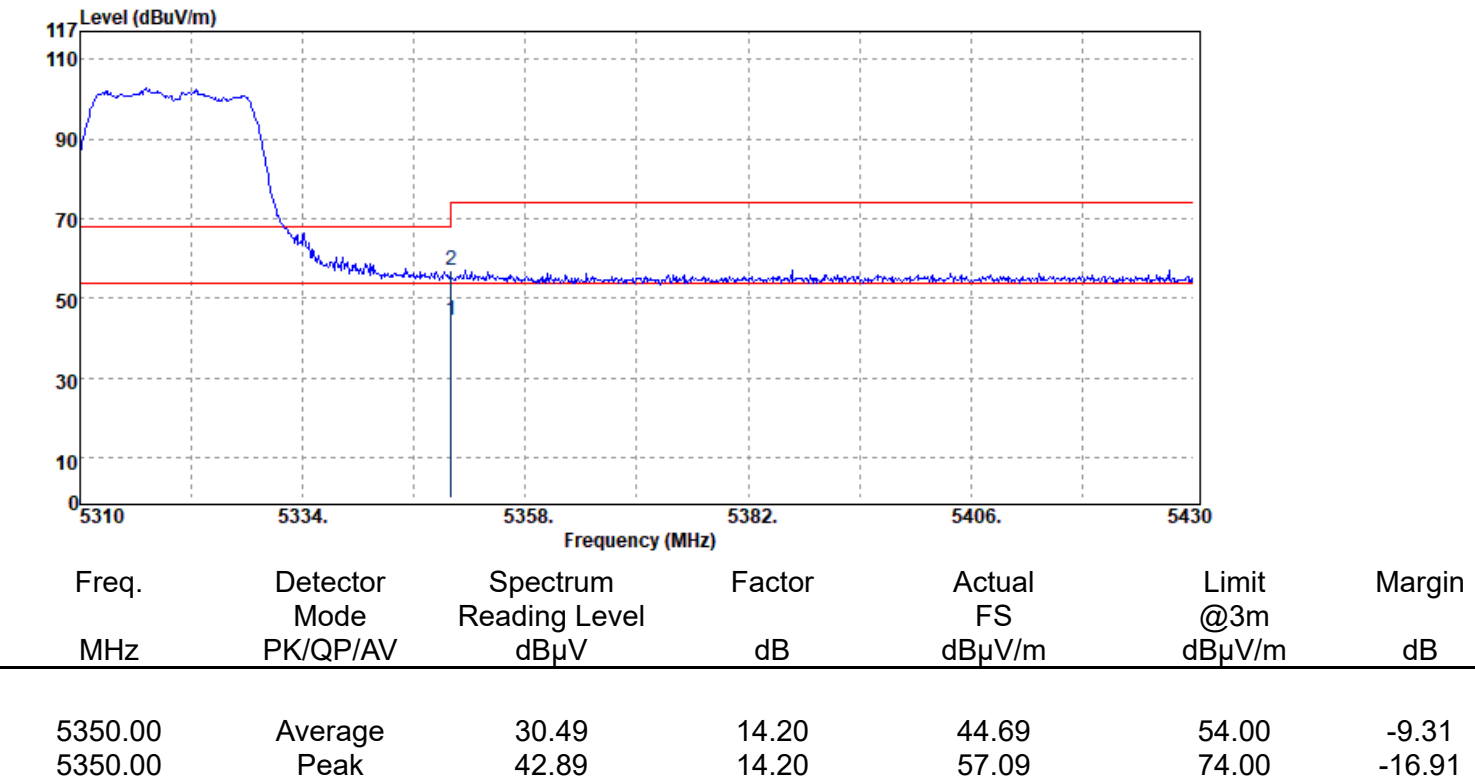
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
5150.00	Average	29.82	14.83	44.65	54.00	-9.35
5150.00	Peak	43.31	14.83	58.14	74.00	-15.86

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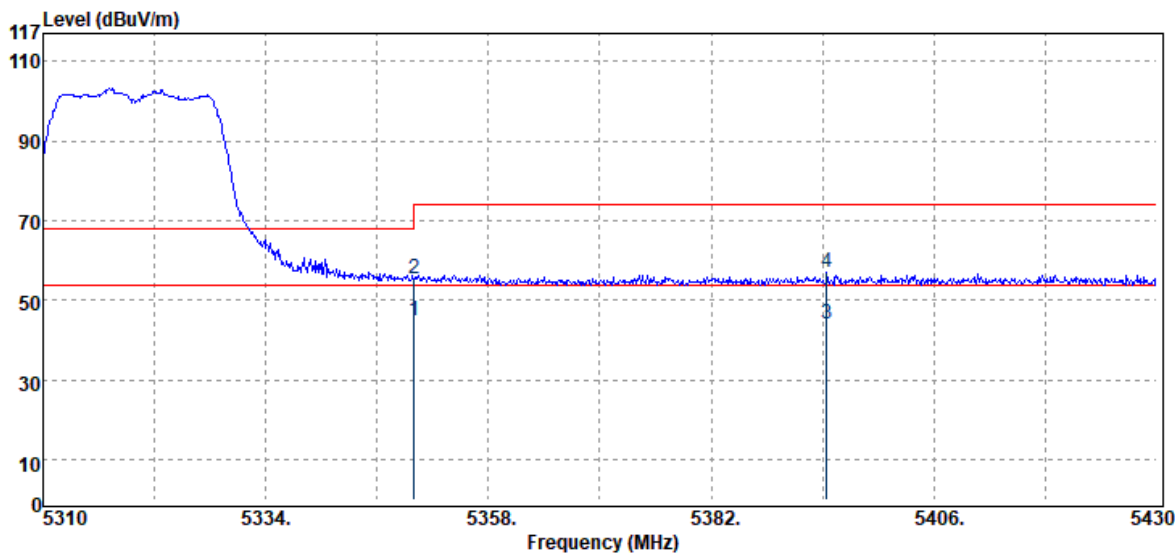
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Report Number	:ER/2020/20054	Test Date	:2020-03-11
Operation Mode	:802.11n20B2	Temp./Humi.	:22.1/57
Test Frequency	:5320MHz	Antenna Pol.	:VERTICAL
Test Mode	:Bandedge CH High	Engineer	:Thomas
EUT Pol	:H Plane		



Report Number :ER/2020/20054  
 Operation Mode :802.11n20B2  
 Test Frequency :5320MHz  
 Test Mode :Bandedge CH High  
 EUT Pol :H Plane

Test Date :2020-03-11  
 Temp./Humi. :22.1/57  
 Antenna Pol. :HORIZONTAL  
 Engineer :Thomas



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
5350.00	Average	30.77	14.20	44.97	54.00	-9.03
5350.00	Peak	41.26	14.20	55.46	74.00	-18.54
5394.48	Average	29.56	14.64	44.20	54.00	-9.80
5394.48	Peak	42.56	14.64	57.20	74.00	-16.80

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t (886-2) 2299-3279

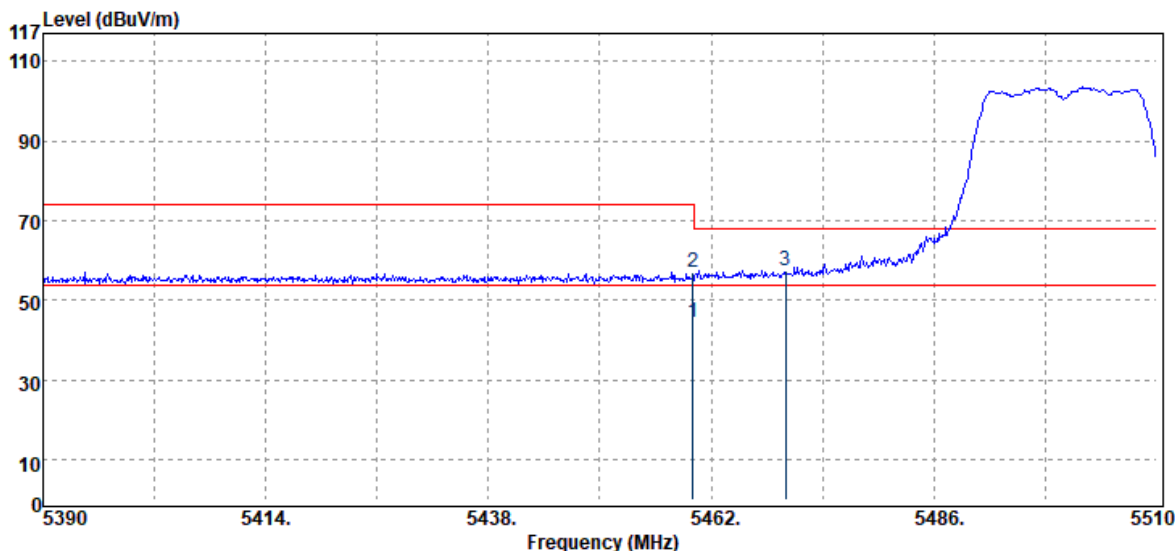
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Report Number :ER/2020/20054  
 Operation Mode :802.11n20B3  
 Test Frequency :5500MHz  
 Test Mode :Bandedge CH Low  
 EUT Pol :H Plane

Test Date :2020-03-11  
 Temp./Humi. :22.1/57  
 Antenna Pol. :VERTICAL  
 Engineer :Thomas



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
5460.00	Average	30.01	14.57	44.58	54.00	-9.42
5460.00	Peak	42.70	14.57	57.27	74.00	-16.73
5470.00	Peak	43.02	14.61	57.63	68.20	-10.57

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

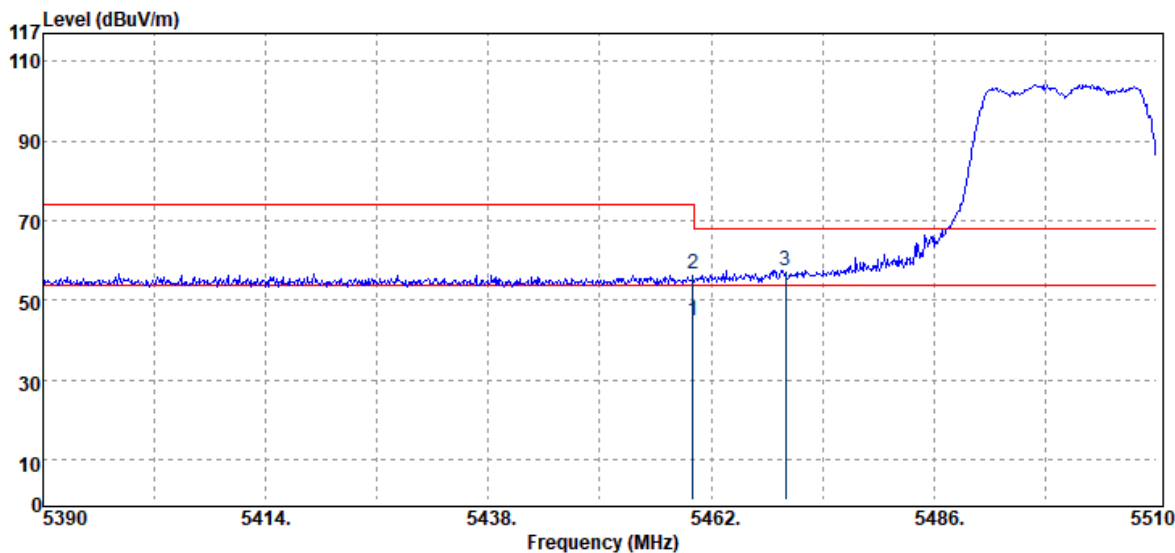
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Report Number :ER/2020/20054  
Operation Mode :802.11n20B3  
Test Frequency :5500MHz  
Test Mode :Bandedge CH Low  
EUT Pol :H Plane

Test Date :2020-03-11  
Temp./Humi. :22.1/57  
Antenna Pol. :HORIZONTAL  
Engineer :Thomas



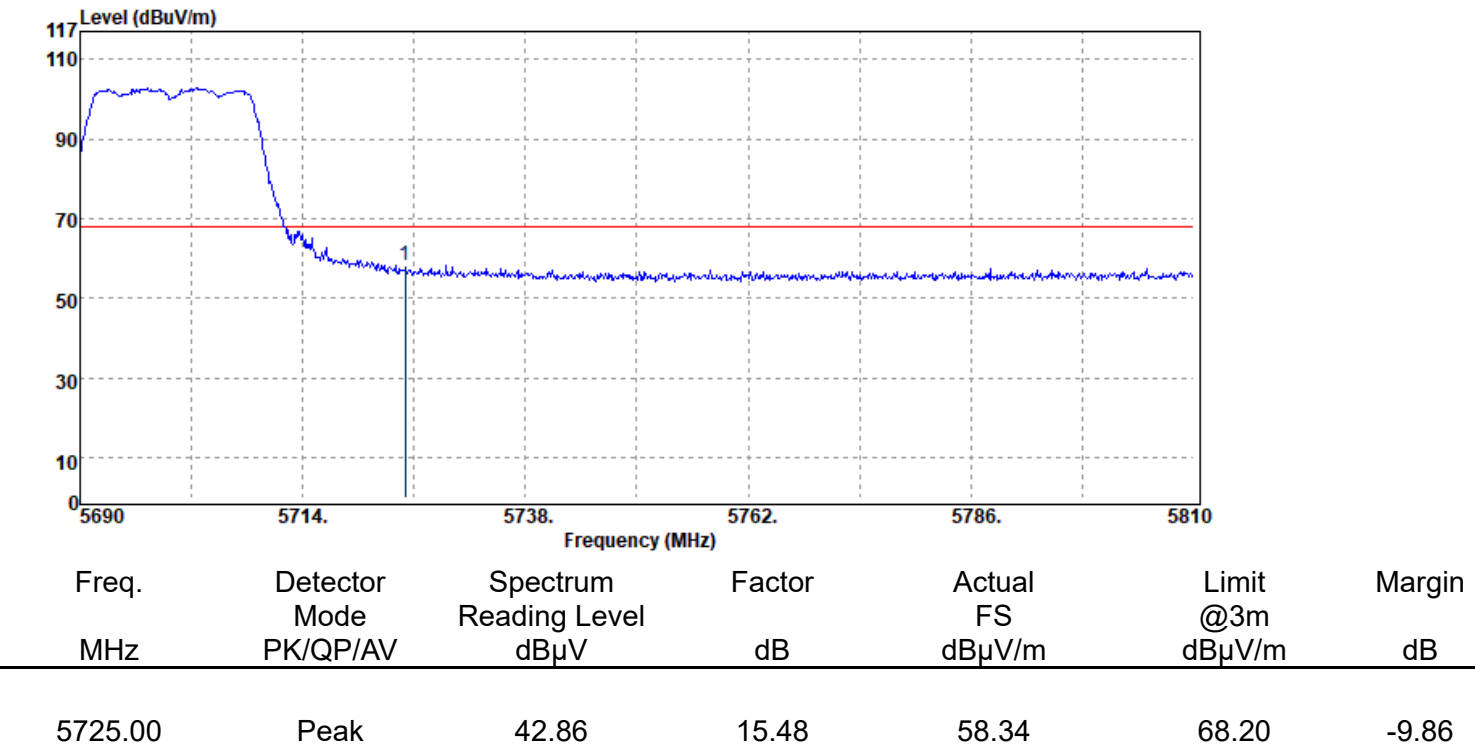
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
5460.00	Average	30.33	14.57	44.90	54.00	-9.10
5460.00	Peak	42.10	14.57	56.67	74.00	-17.33
5470.00	Peak	43.04	14.61	57.65	68.20	-10.55

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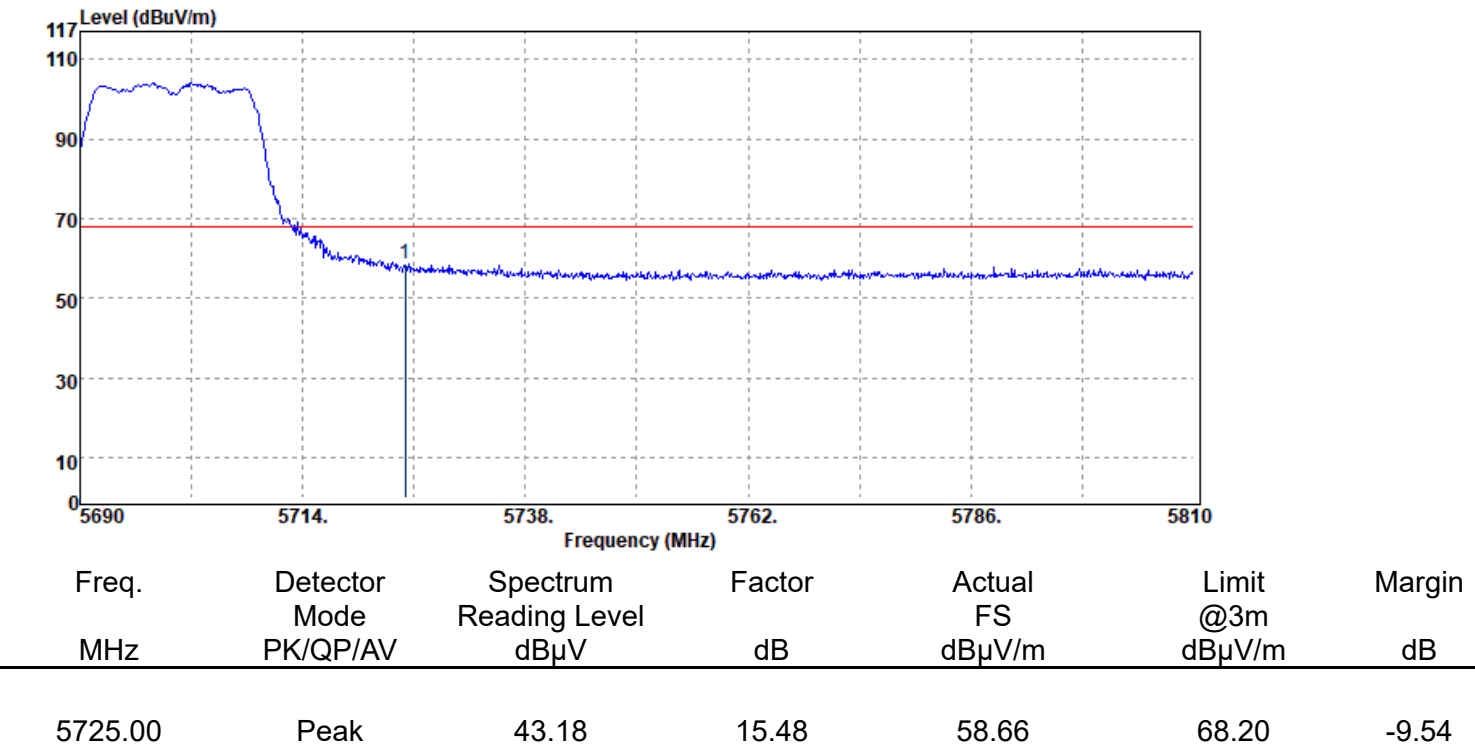
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Report Number	:ER/2020/20054	Test Date	:2020-03-11
Operation Mode	:802.11n20B3	Temp./Humi.	:22.1/57
Test Frequency	:5700MHz	Antenna Pol.	:VERTICAL
Test Mode	:Bandedge CH High	Engineer	:Thomas
EUT Pol	:H Plane		

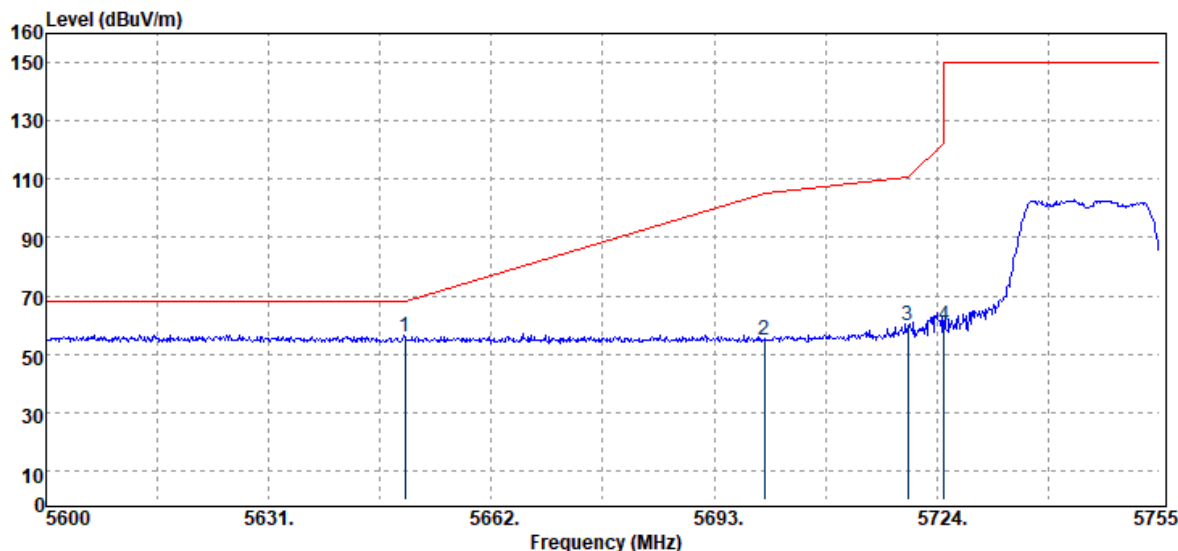


Report Number	:ER/2020/20054	Test Date	:2020-03-11
Operation Mode	:802.11n20B3	Temp./Humi.	:22.1/57
Test Frequency	:5700MHz	Antenna Pol.	:HORIZONTAL
Test Mode	:Bandedge CH High	Engineer	:Thomas
EUT Pol	:H Plane		



Report Number :ER/2020/20054  
Operation Mode :802.11n20B4  
Test Frequency :5745MHz  
Test Mode :Bandedge CH Low  
EUT Pol :H Plane

Test Date :2020-03-12  
Temp./Humi. :22.1/57  
Antenna Pol. :VERTICAL  
Engineer :Thomas



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
5650.00	Peak	40.52	15.16	55.68	68.20	-12.52
5700.00	Peak	39.13	15.42	54.55	105.20	-50.65
5720.00	Peak	44.21	15.47	59.68	110.80	-51.12
5725.00	Peak	44.53	15.48	60.01	122.20	-62.19

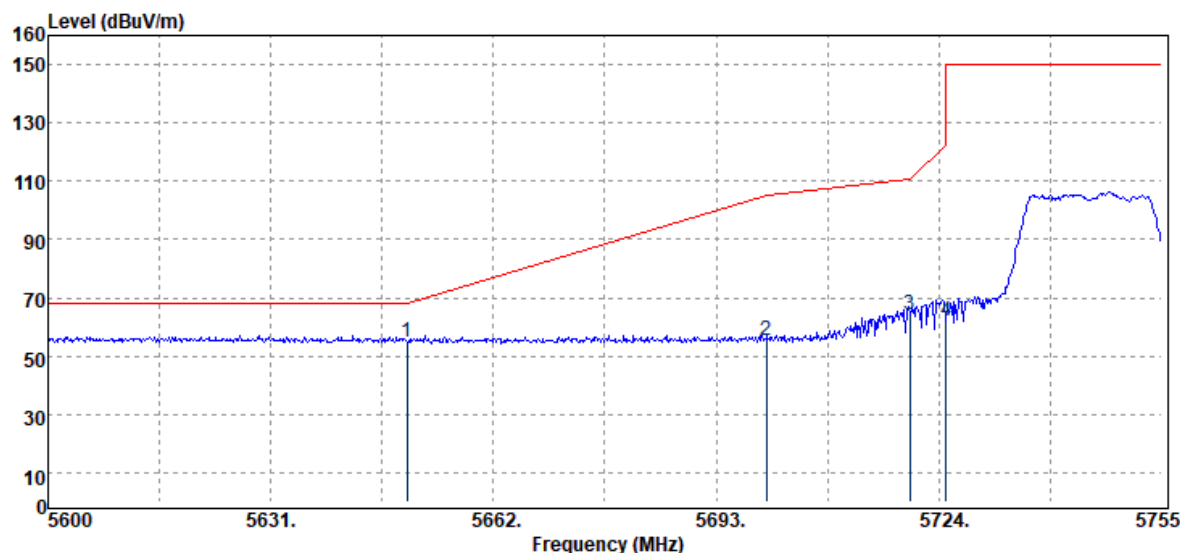
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Report Number :ER/2020/20054  
 Operation Mode :802.11n20B4  
 Test Frequency :5745MHz  
 Test Mode :Bandedge CH Low  
 EUT Pol :H Plane

Test Date :2020-03-12  
 Temp./Humi. :22.1/57  
 Antenna Pol. :HORIZONTAL  
 Engineer :Thomas



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
5650.00	Peak	39.91	15.16	55.07	68.20	-13.13
5700.00	Peak	39.70	15.42	55.12	105.20	-50.08
5720.00	Peak	49.00	15.47	64.47	110.80	-46.33
5725.00	Peak	46.79	15.48	62.27	122.20	-59.93

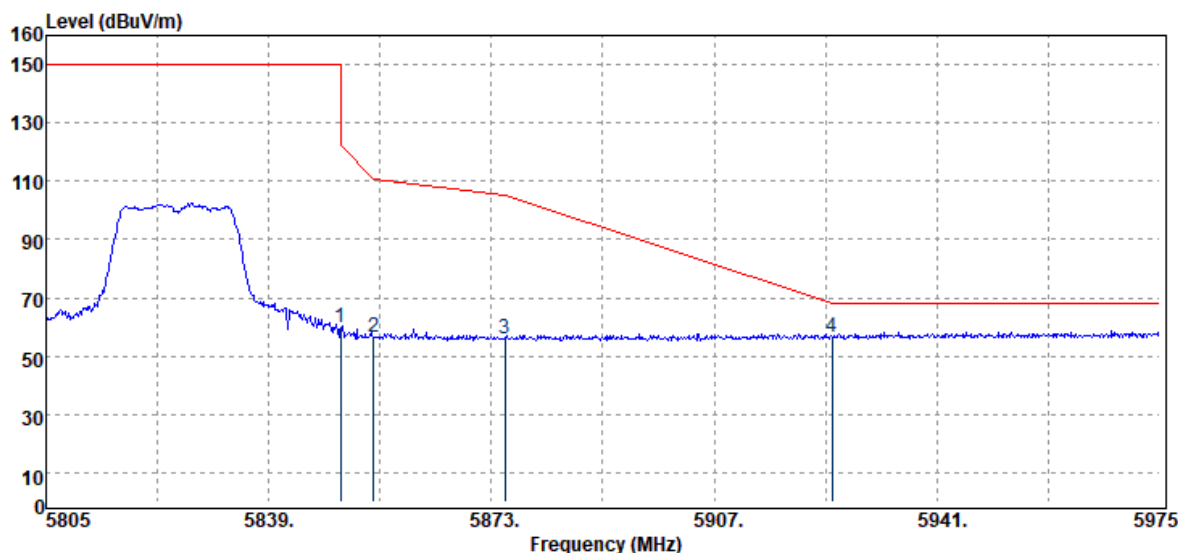
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Report Number :ER/2020/20054  
Operation Mode :802.11n20B4  
Test Frequency :5825MHz  
Test Mode :Bandedge CH High  
EUT Pol :H Plane

Test Date :2020-03-12  
Temp./Humi. :22.1/57  
Antenna Pol. :VERTICAL  
Engineer :Thomas



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
5850.00	Peak	43.97	15.75	59.72	122.20	-62.48
5855.00	Peak	40.52	15.75	56.27	110.80	-54.53
5875.00	Peak	39.94	15.75	55.69	105.20	-49.51
5925.00	Peak	40.62	16.06	56.68	68.20	-11.52

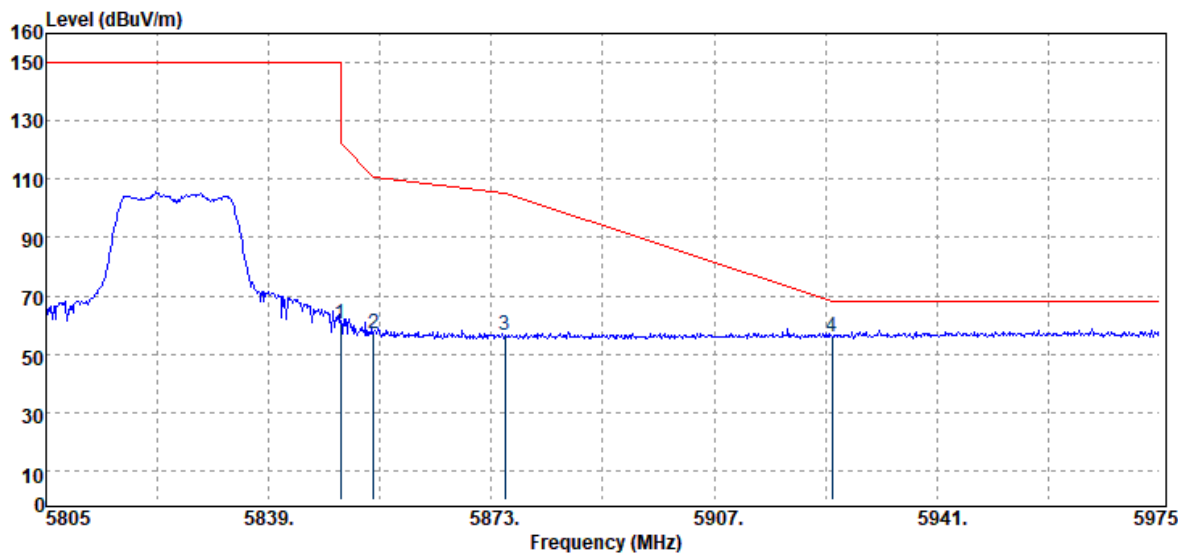
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Report Number :ER/2020/20054  
 Operation Mode :802.11n20B4  
 Test Frequency :5825MHz  
 Test Mode :Bandedge CH High  
 EUT Pol :H Plane

Test Date :2020-03-12  
 Temp./Humi. :22.1/57  
 Antenna Pol. :HORIZONTAL  
 Engineer :Thomas



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
5850.00	Peak	44.72	15.75	60.47	122.20	-61.73
5855.00	Peak	41.18	15.75	56.93	110.80	-53.87
5875.00	Peak	40.48	15.75	56.23	105.20	-48.97
5925.00	Peak	40.06	16.06	56.12	68.20	-12.08

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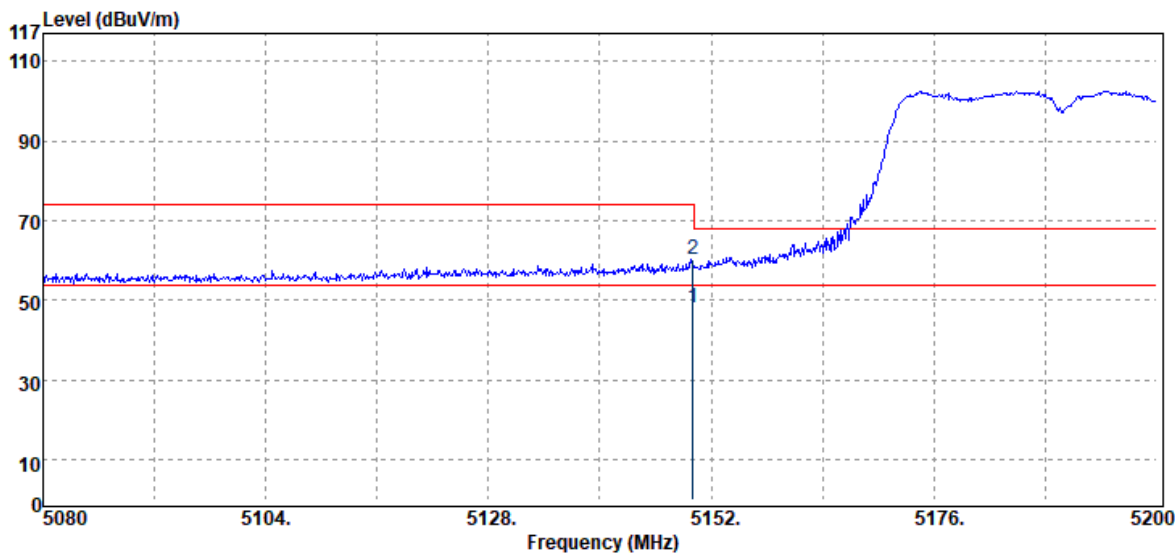
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Report Number :ER/2020/20054  
 Operation Mode :802.11n40B1  
 Test Frequency :5190 MHz  
 Test Mode :Bandedge CH Low  
 EUT Pol :H Plane

Test Date :2020-03-10  
 Temp./Humi. :23.1/71  
 Antenna Pol. :VERTICAL  
 Engineer :Thomas



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
5150.00	Average	33.37	14.83	48.20	54.00	-5.80
5150.00	Peak	45.64	14.83	60.47	74.00	-13.53

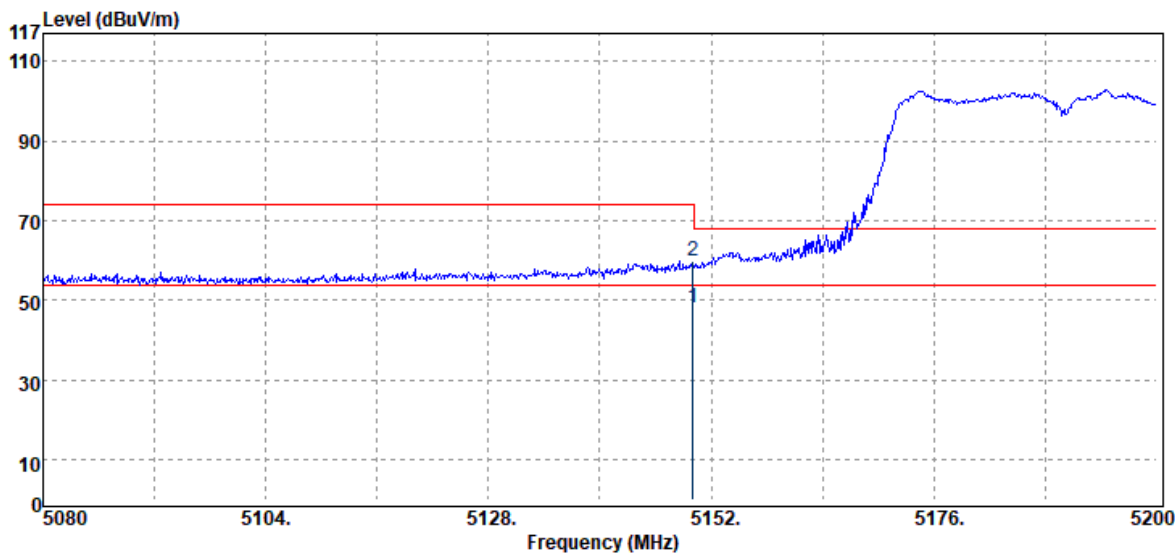
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Report Number :ER/2020/20054  
 Operation Mode :802.11n40B1  
 Test Frequency :5190 MHz  
 Test Mode :Bandedge CH Low  
 EUT Pol :H Plane

Test Date :2020-03-10  
 Temp./Humi. :23.1/71  
 Antenna Pol. :HORIZONTAL  
 Engineer :Thomas



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
5150.00	Average	33.23	14.83	48.06	54.00	-5.94
5150.00	Peak	45.14	14.83	59.97	74.00	-14.03

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

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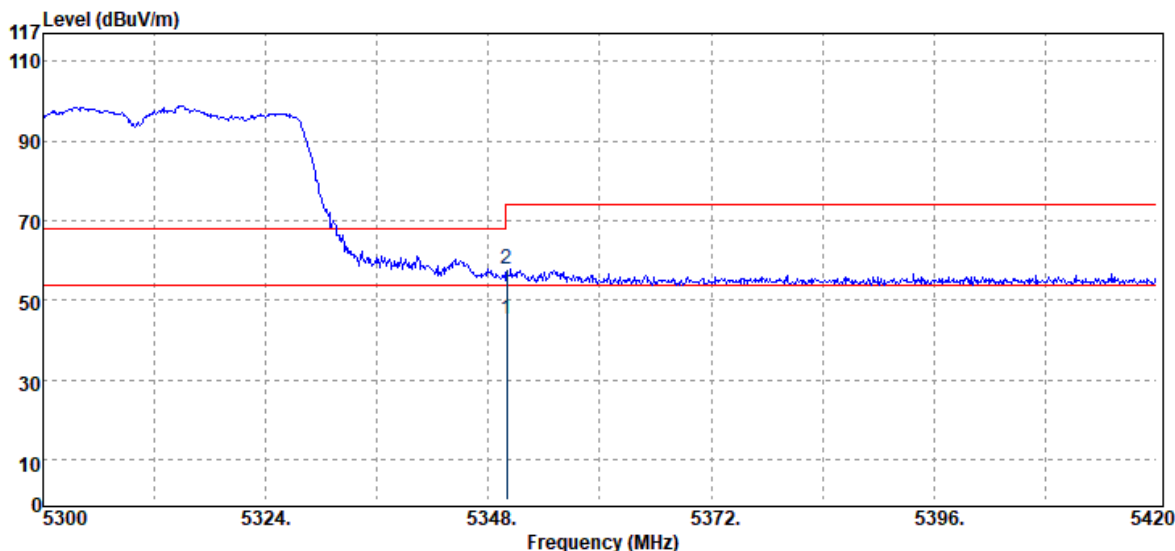
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Report Number :ER/2020/20054  
 Operation Mode :802.11n40B2  
 Test Frequency :5310MHz  
 Test Mode :Bandedge CH High  
 EUT Pol :H Plane

Test Date :2020-03-11  
 Temp./Humi. :22.1/57  
 Antenna Pol. :VERTICAL  
 Engineer :Thomas



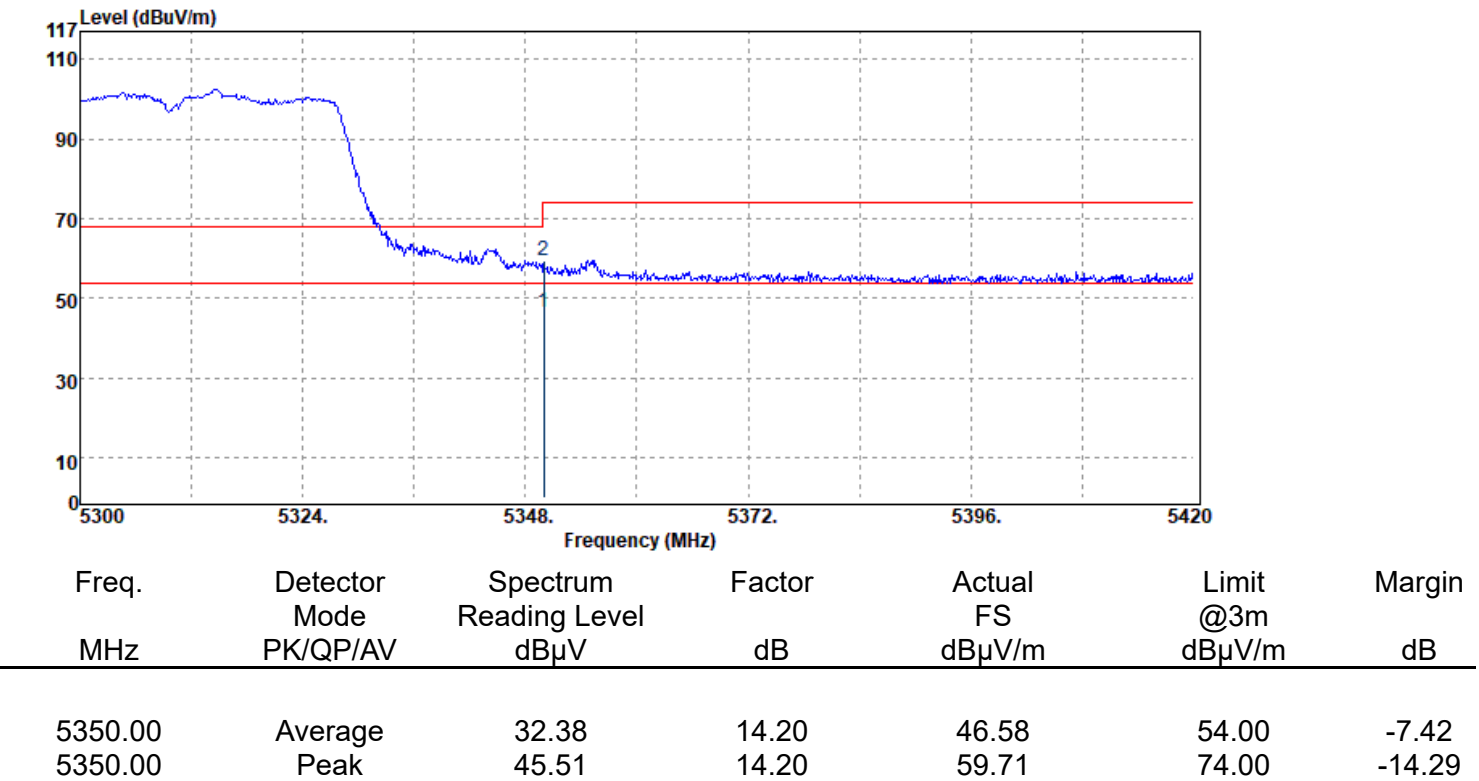
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
5350.00	Average	31.17	14.20	45.37	54.00	-8.63
5350.00	Peak	43.69	14.20	57.89	74.00	-16.11

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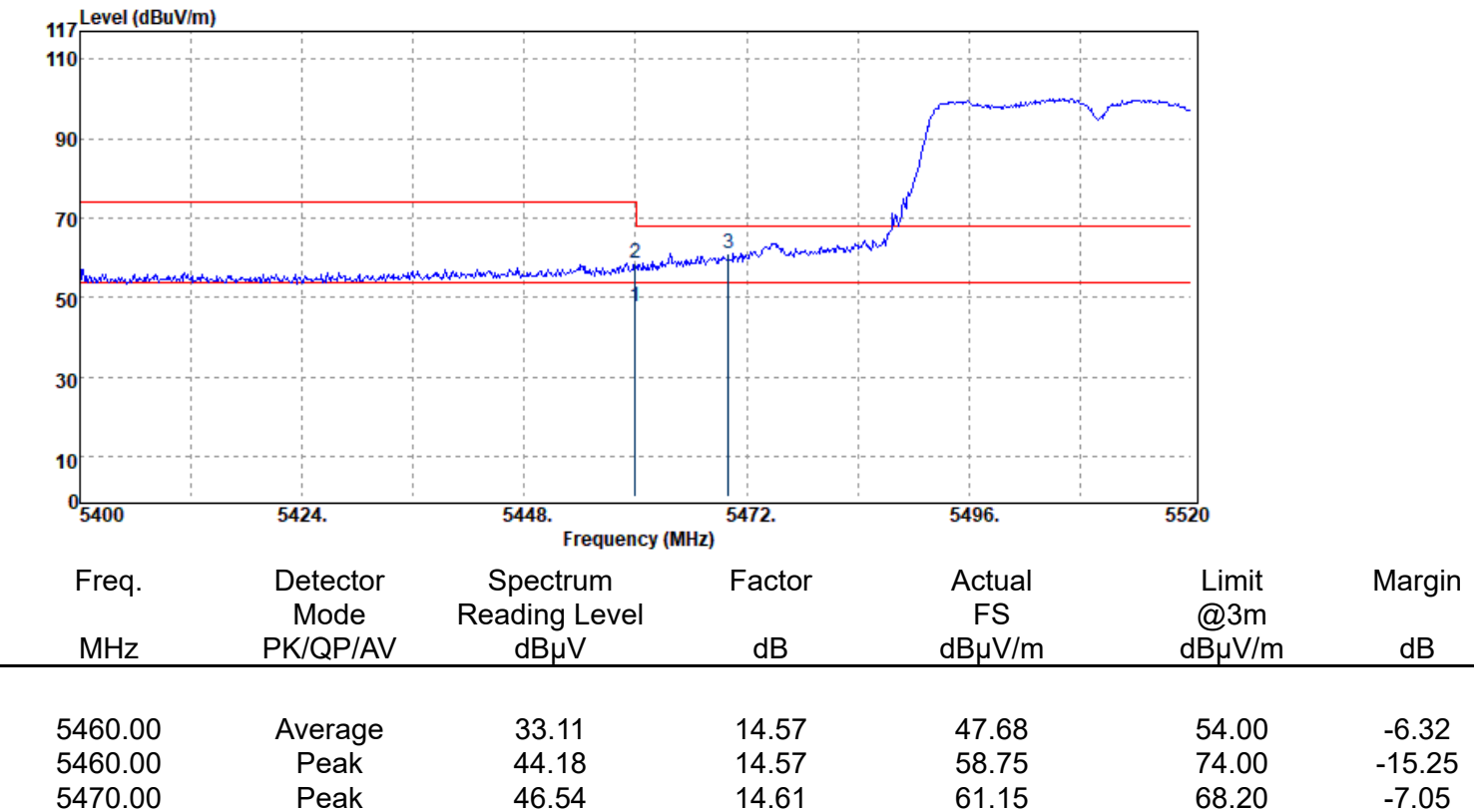
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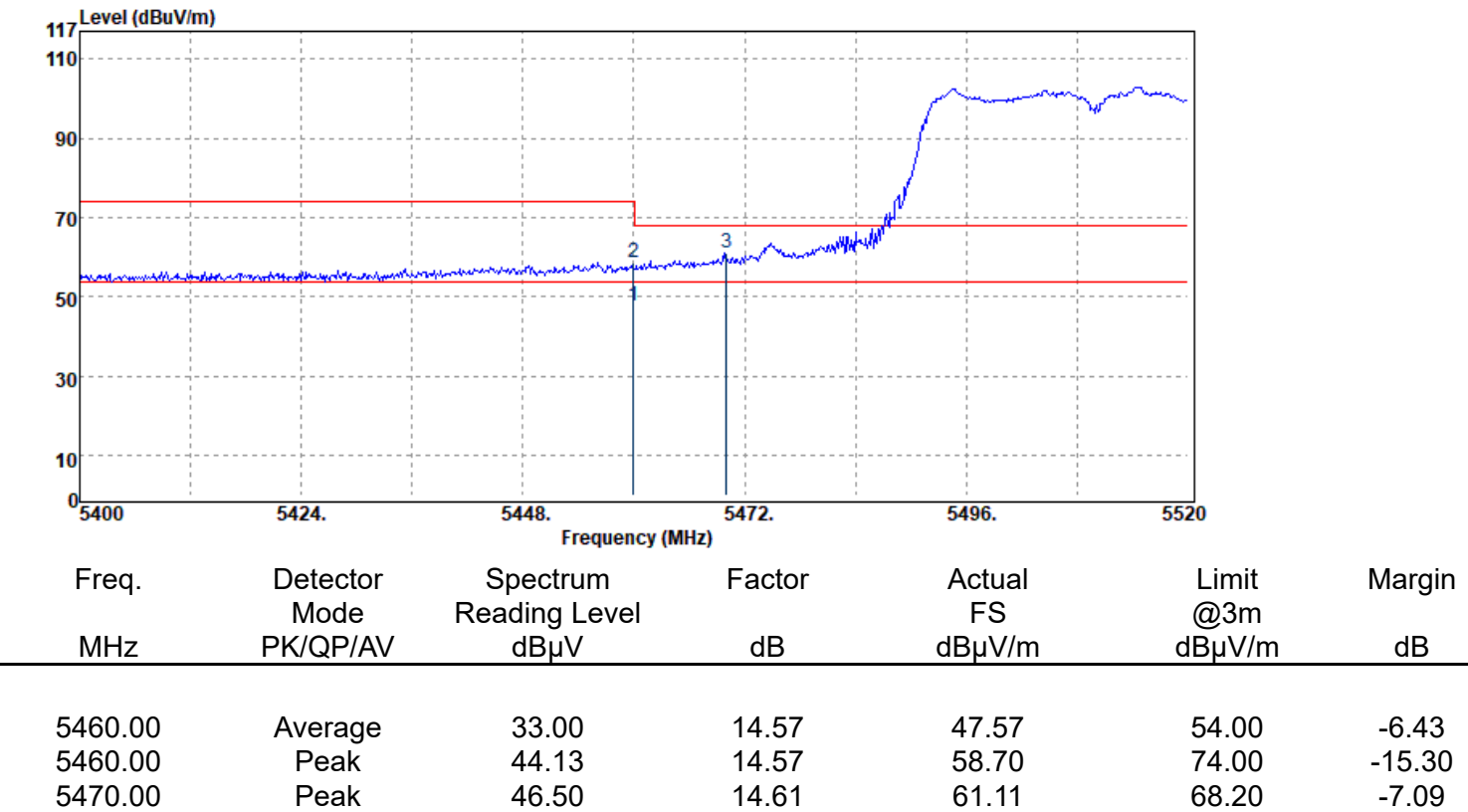
Report Number	:ER/2020/20054	Test Date	:2020-03-11
Operation Mode	:802.11n40B2	Temp./Humi.	:22.1/57
Test Frequency	:5310MHz	Antenna Pol.	:HORIZONTAL
Test Mode	:Bandedge CH High	Engineer	:Thomas
EUT Pol	:H Plane		



Report Number	:ER/2020/20054	Test Date	:2020-03-11
Operation Mode	:802.11n40B3	Temp./Humi.	:22.1/57
Test Frequency	:5510MHz	Antenna Pol.	:VERTICAL
Test Mode	:Bandedge CH Low	Engineer	:Thomas
EUT Pol	:H Plane		



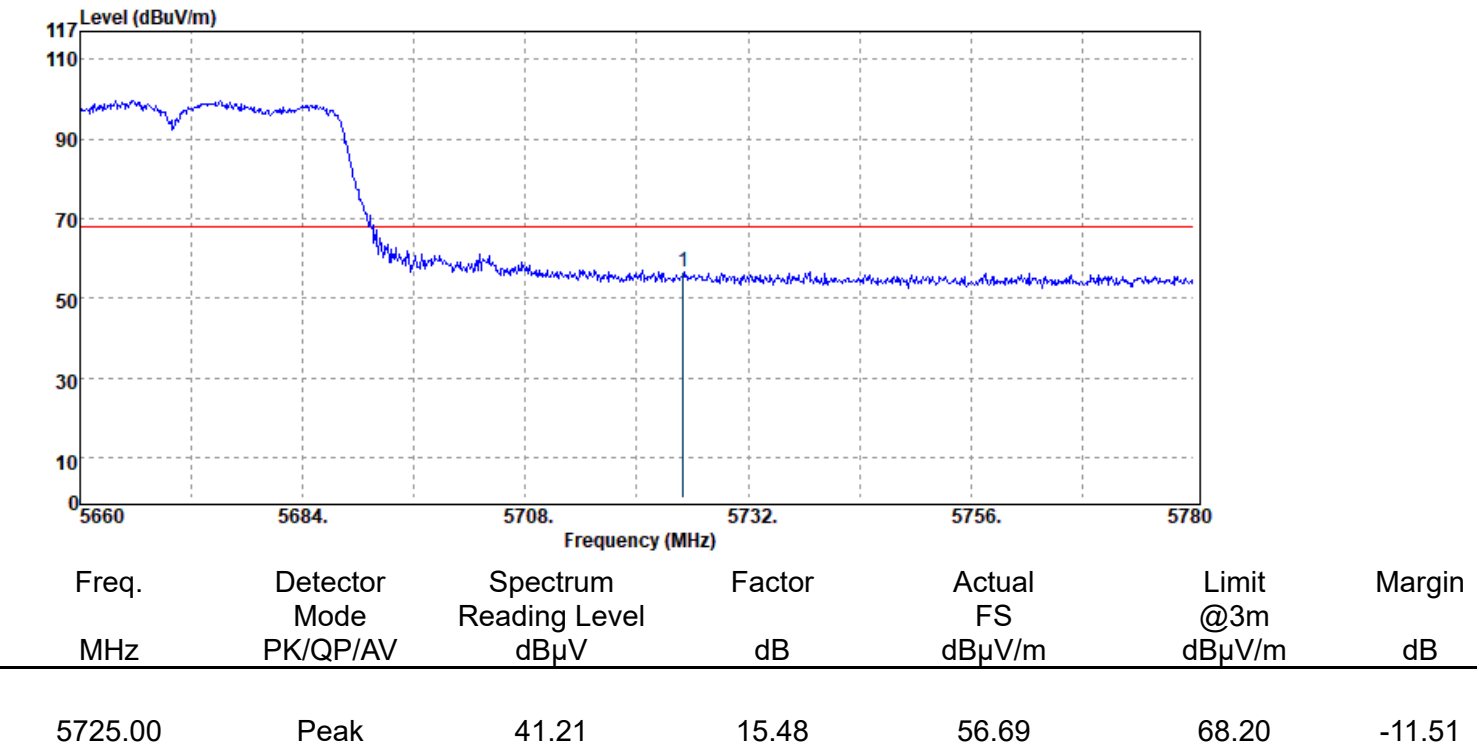
Report Number	:ER/2020/20054	Test Date	:2020-03-11
Operation Mode	:802.11n40B3	Temp./Humi.	:22.1/57
Test Frequency	:5510MHz	Antenna Pol.	:HORIZONTAL
Test Mode	:Bandedge CH Low	Engineer	:Thomas
EUT Pol	:H Plane		



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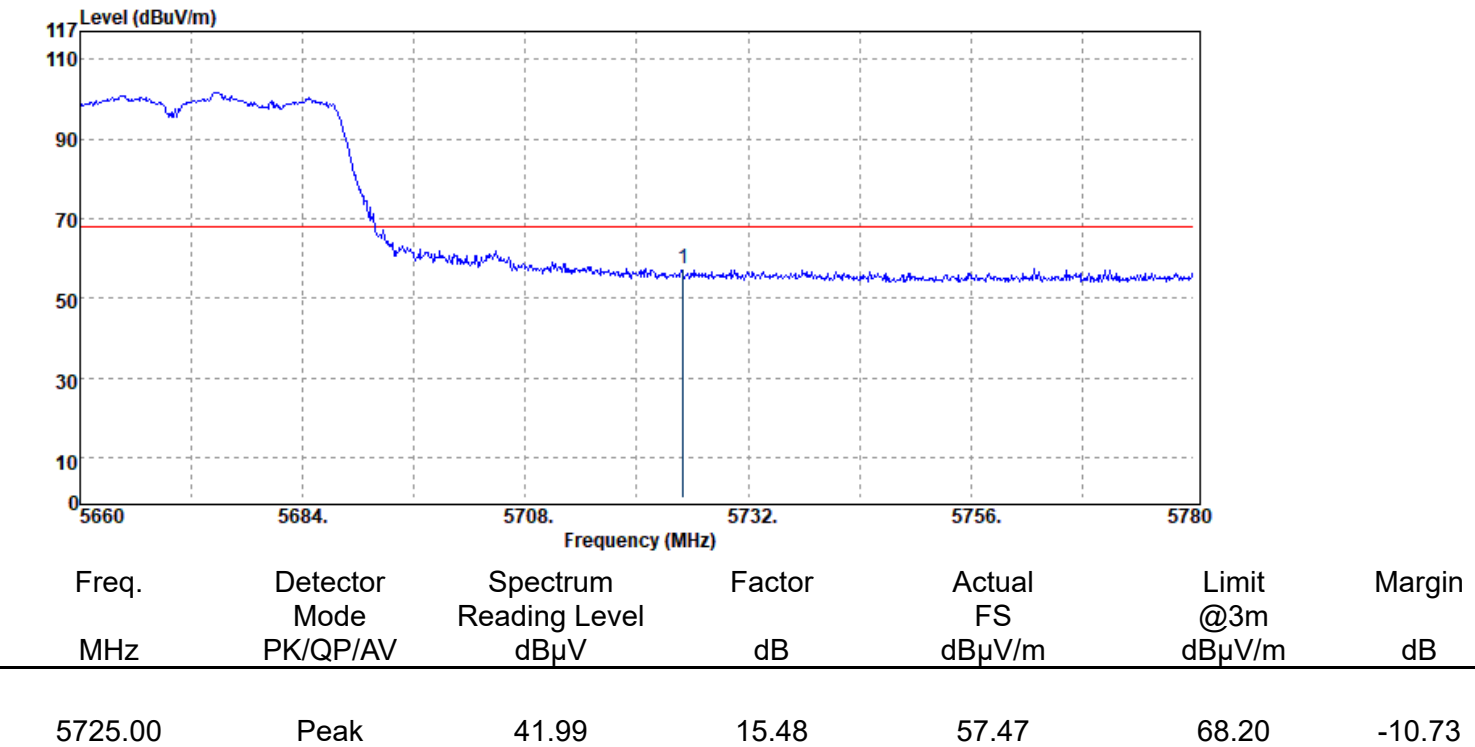
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Report Number	:ER/2020/20054	Test Date	:2020-03-11
Operation Mode	:802.11n40B3	Temp./Humi.	:22.1/57
Test Frequency	:5670MHz	Antenna Pol.	:VERTICAL
Test Mode	:Bandedge CH High	Engineer	:Thomas
EUT Pol	:H Plane		



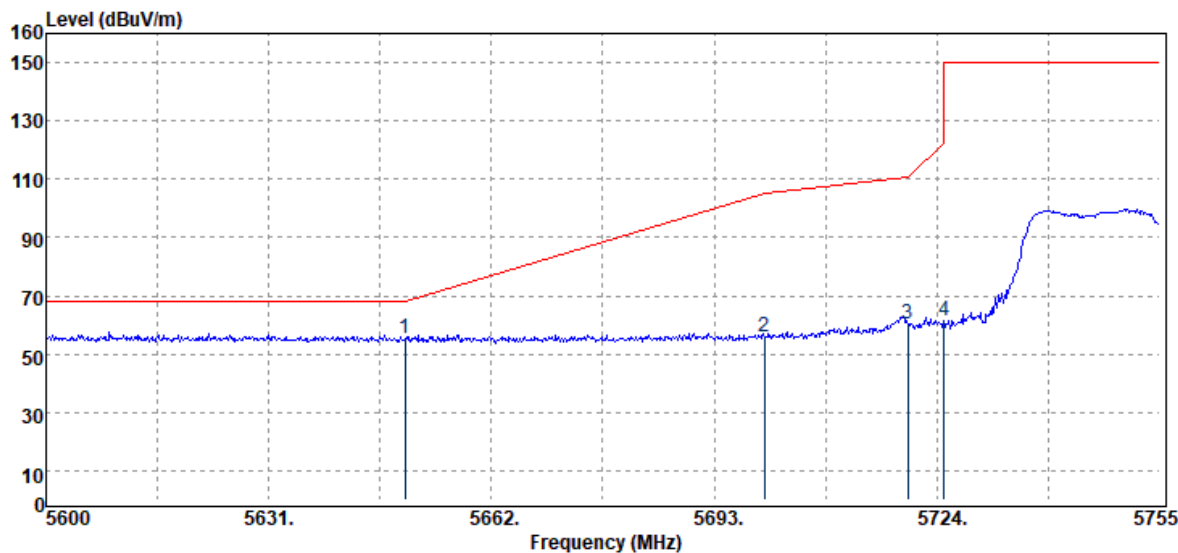


Report Number	:ER/2020/20054	Test Date	:2020-03-11
Operation Mode	:802.11n40B3	Temp./Humi.	:22.1/57
Test Frequency	:5670MHz	Antenna Pol.	:HORIZONTAL
Test Mode	:Bandedge CH High	Engineer	:Thomas
EUT Pol	:H Plane		



Report Number :ER/2020/20054  
 Operation Mode :802.11n40B4  
 Test Frequency :5755MHz  
 Test Mode :Bandedge CH Low  
 EUT Pol :H Plane

Test Date :2020-03-12  
 Temp./Humi. :22.1/56  
 Antenna Pol. :VERTICAL  
 Engineer :Thomas



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
5650.00	Peak	40.34	15.16	55.50	68.20	-12.70
5700.00	Peak	40.68	15.42	56.10	105.20	-49.10
5720.00	Peak	44.84	15.47	60.31	110.80	-50.49
5725.00	Peak	45.97	15.48	61.45	122.20	-60.75

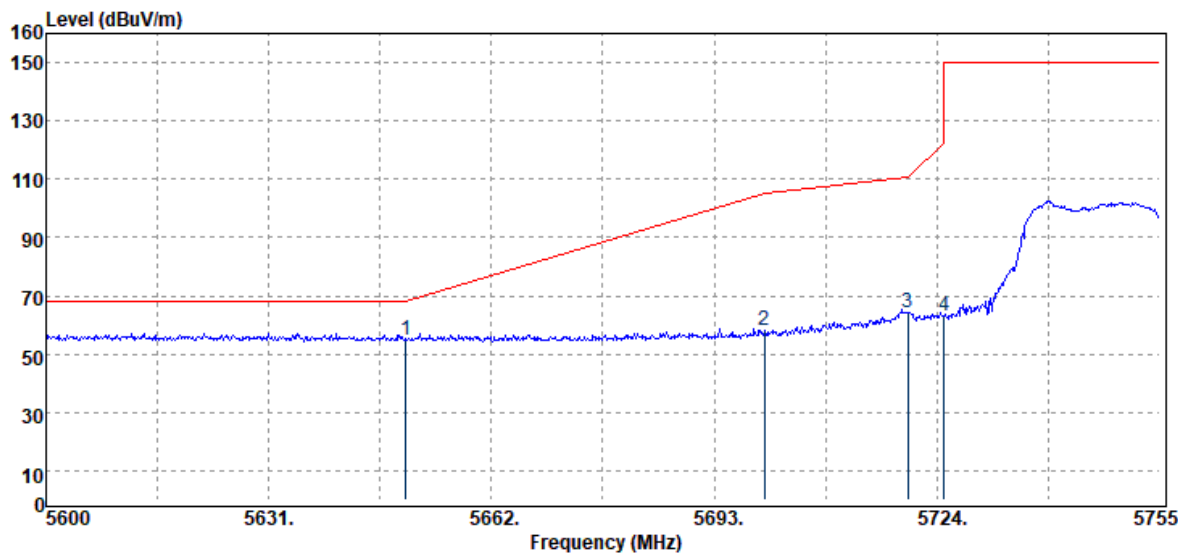
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Report Number :ER/2020/20054  
 Operation Mode :802.11n40B4  
 Test Frequency :5755MHz  
 Test Mode :Bandedge CH Low  
 EUT Pol :H Plane

Test Date :2020-03-12  
 Temp./Humi. :22.1/56  
 Antenna Pol. :HORIZONTAL  
 Engineer :Thomas



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
5650.07	Peak	39.76	15.16	54.92	68.25	-13.33
5699.98	Peak	42.70	15.42	58.12	105.18	-47.06
5720.00	Peak	48.73	15.47	64.20	110.80	-46.60
5725.00	Peak	47.75	15.48	63.23	122.20	-58.97

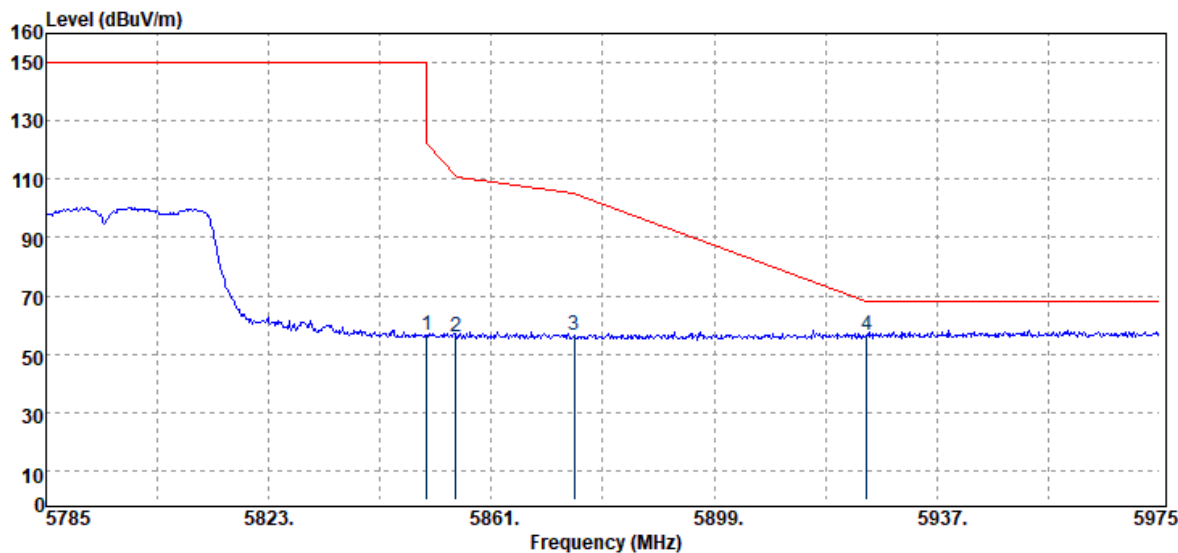
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Report Number :ER/2020/20054  
 Operation Mode :802.11n40B4  
 Test Frequency :5795MHz  
 Test Mode :Bandedge CH High  
 EUT Pol :H Plane

Test Date :2020-03-12  
 Temp./Humi. :22.1/56  
 Antenna Pol. :VERTICAL  
 Engineer :Thomas



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
5849.98	Peak	40.73	15.75	56.48	150.00	-93.52
5854.92	Peak	40.30	15.75	56.05	110.98	-54.93
5875.06	Peak	40.84	15.75	56.59	105.16	-48.57
5925.03	Peak	40.58	16.06	56.64	68.20	-11.56

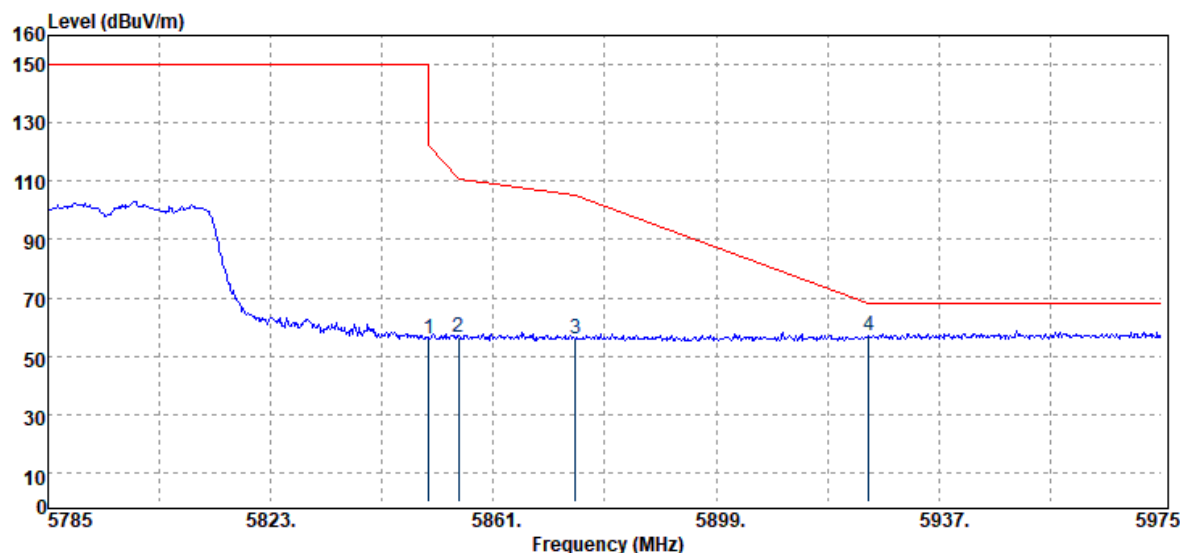
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Report Number :ER/2020/20054  
 Operation Mode :802.11n40B4  
 Test Frequency :5795MHz  
 Test Mode :Bandedge CH High  
 EUT Pol :H Plane

Test Date :2020-03-12  
 Temp./Humi. :22.1/56  
 Antenna Pol. :HORIZONTAL  
 Engineer :Thomas



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
5850.00	Peak	40.31	15.75	56.06	122.20	-66.14
5855.00	Peak	40.57	15.75	56.32	110.80	-54.48
5875.00	Peak	39.91	15.75	55.66	105.20	-49.54
5925.00	Peak	40.82	16.06	56.88	68.20	-11.32

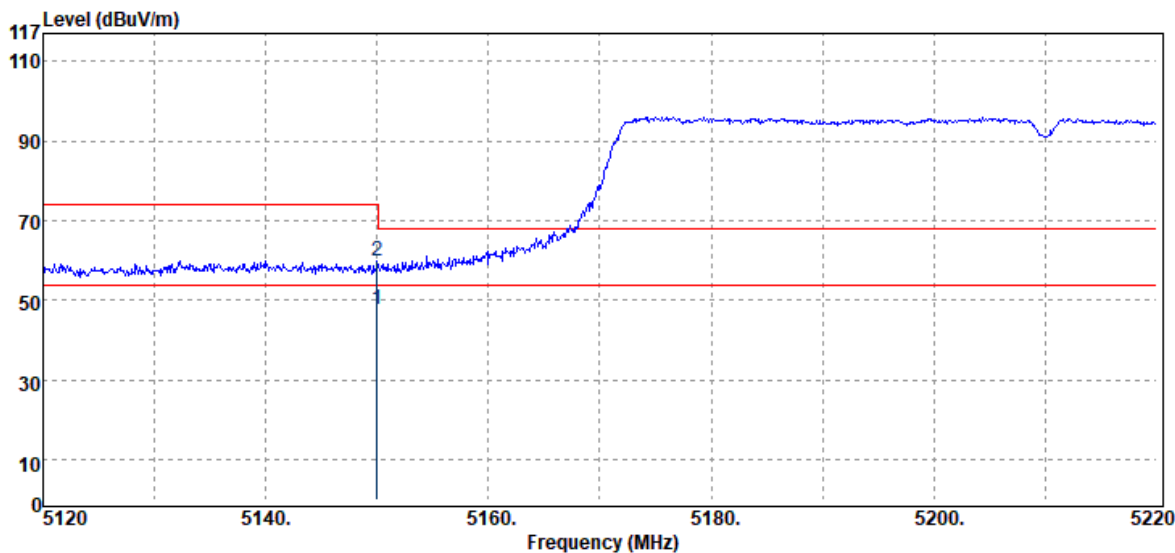
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Report Number :ER/2020/20054  
Operation Mode :802.11ac80B1  
Test Frequency :5210 MHz  
Test Mode :Bandedge CH Low  
EUT Pol :H Plane

Test Date :2020-03-10  
Temp./Humi. :23.1/71  
Antenna Pol. :VERTICAL  
Engineer :Thomas



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dB $\mu$ V	Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
5150.00	Average	33.10	14.83	47.93	54.00	-6.07
5150.00	Peak	45.09	14.83	59.92	74.00	-14.08

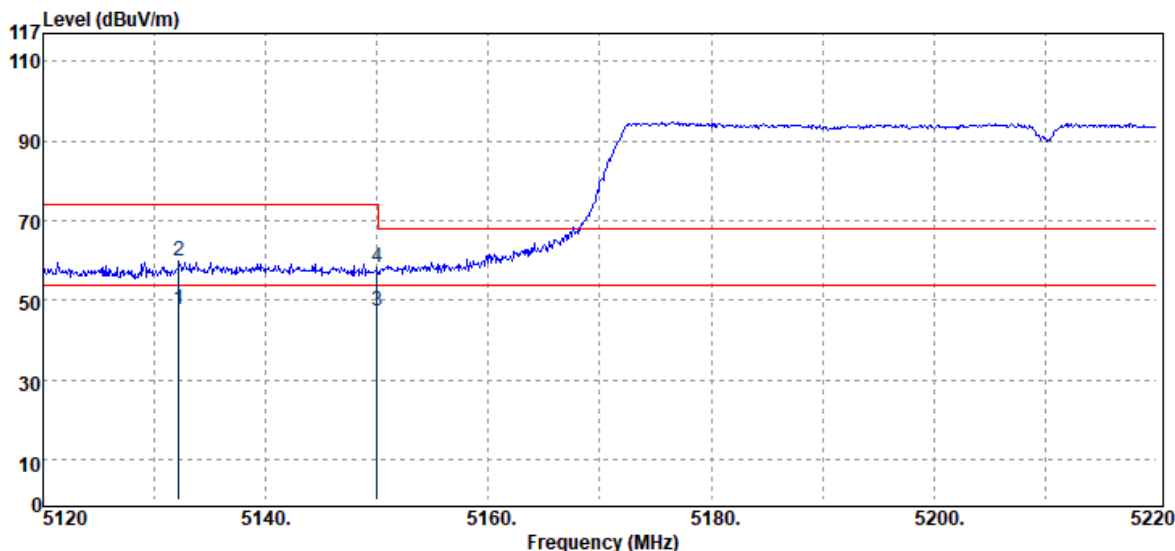
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Report Number :ER/2020/20054  
Operation Mode :802.11ac80B1  
Test Frequency :5210 MHz  
Test Mode :Bandedge CH Low  
EUT Pol :H Plane

Test Date :2020-03-10  
Temp./Humi. :23.1/71  
Antenna Pol. :HORIZONTAL  
Engineer :Thomas



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
5132.20	Average	33.02	14.85	47.87	54.00	-6.13
5132.20	Peak	45.06	14.85	59.91	74.00	-14.09
5150.00	Average	32.62	14.83	47.45	54.00	-6.55
5150.00	Peak	43.54	14.83	58.37	74.00	-15.63

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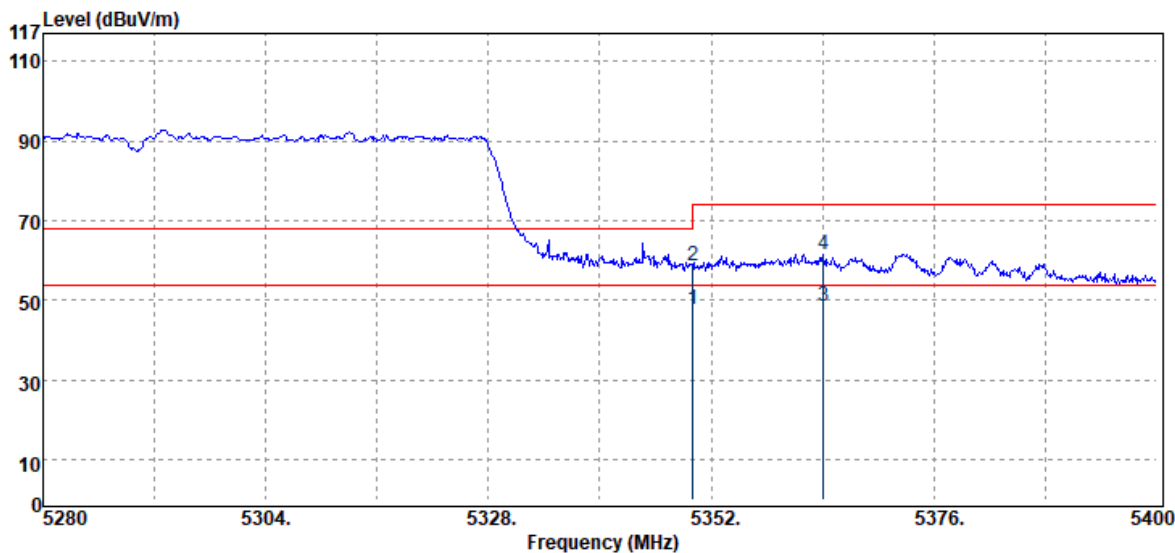
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Report Number :ER/2020/20054  
 Operation Mode :802.11ac80B2  
 Test Frequency :5290MHz  
 Test Mode :Bandedge CH High  
 EUT Pol :H Plane

Test Date :2020-03-11  
 Temp./Humi. :22.1/57  
 Antenna Pol. :VERTICAL  
 Engineer :Thomas



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
5350.00	Average	33.46	14.20	47.66	54.00	-6.34
5350.00	Peak	44.33	14.20	58.53	74.00	-15.47
5364.12	Average	34.09	14.35	48.44	54.00	-5.56
5364.12	Peak	47.27	14.35	61.62	74.00	-12.38

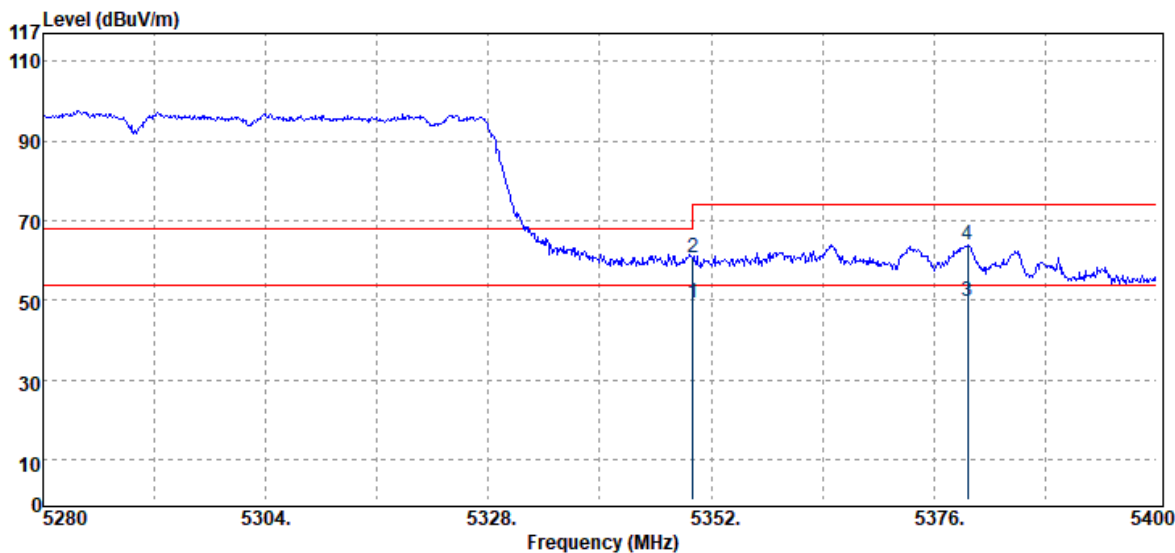
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Report Number :ER/2020/20054  
 Operation Mode :802.11ac80B2  
 Test Frequency :5290MHz  
 Test Mode :Bandedge CH High  
 EUT Pol :H Plane

Test Date :2020-03-11  
 Temp./Humi. :22.1/57  
 Antenna Pol. :HORIZONTAL  
 Engineer :Thomas



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
5350.00	Average	35.04	14.20	49.24	54.00	-4.76
5350.00	Peak	46.66	14.20	60.86	74.00	-13.14
5379.60	Average	35.45	14.50	49.95	54.00	-4.05
5379.60	Peak	49.49	14.50	63.99	74.00	-10.01

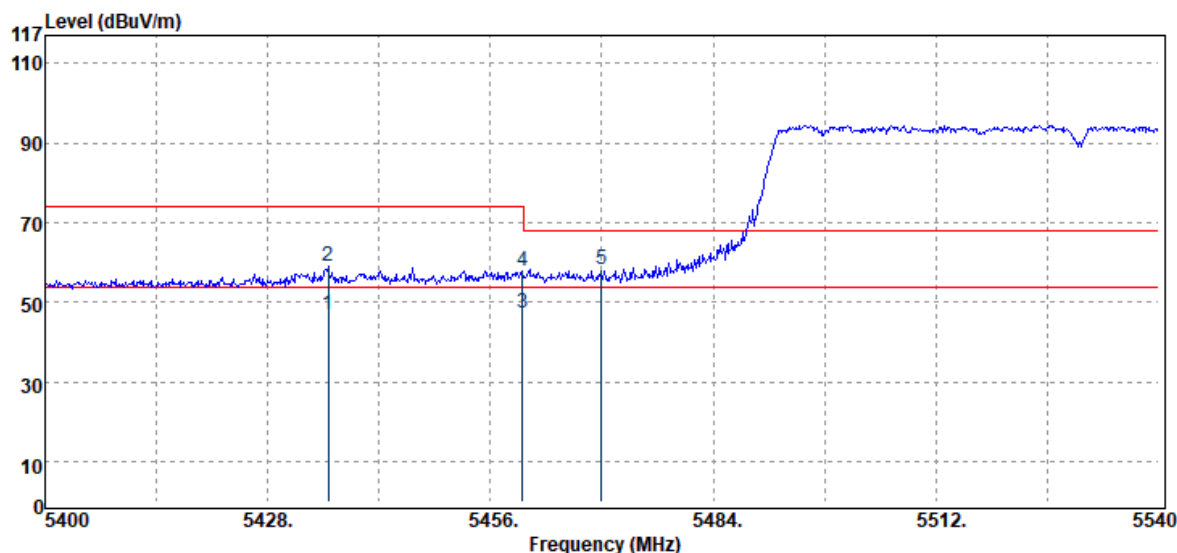
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Report Number :ER/2020/20054  
 Operation Mode :802.11ac80B3  
 Test Frequency :5530MHz  
 Test Mode :Bandedge CH Low  
 EUT Pol :H Plane

Test Date :2020-03-11  
 Temp./Humi. :22.1/57  
 Antenna Pol. :VERTICAL  
 Engineer :Thomas



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
5435.56	Average	32.42	14.57	46.99	54.00	-7.01
5435.56	Peak	44.44	14.57	59.01	74.00	-14.99
5460.00	Average	32.89	14.57	47.46	54.00	-6.54
5460.00	Peak	43.43	14.57	58.00	74.00	-16.00
5470.00	Peak	43.63	14.61	58.24	68.20	-9.96

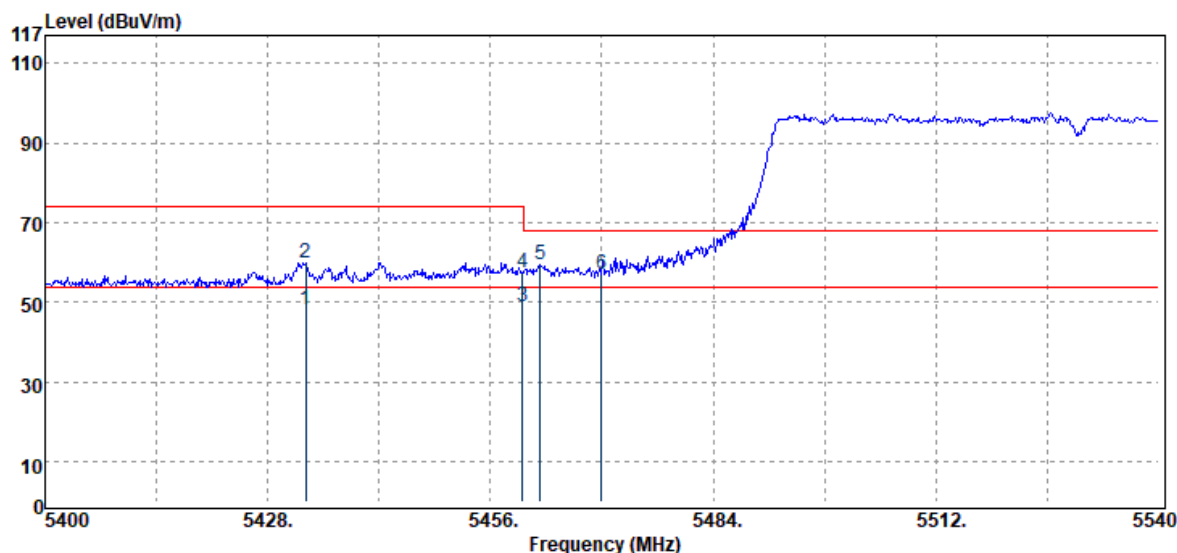
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Report Number :ER/2020/20054  
Operation Mode :802.11ac80B3  
Test Frequency :5530MHz  
Test Mode :Bandedge CH Low  
EUT Pol :H Plane

Test Date :2020-03-11  
Temp./Humi. :22.1/57  
Antenna Pol. :HORIZONTAL  
Engineer :Thomas



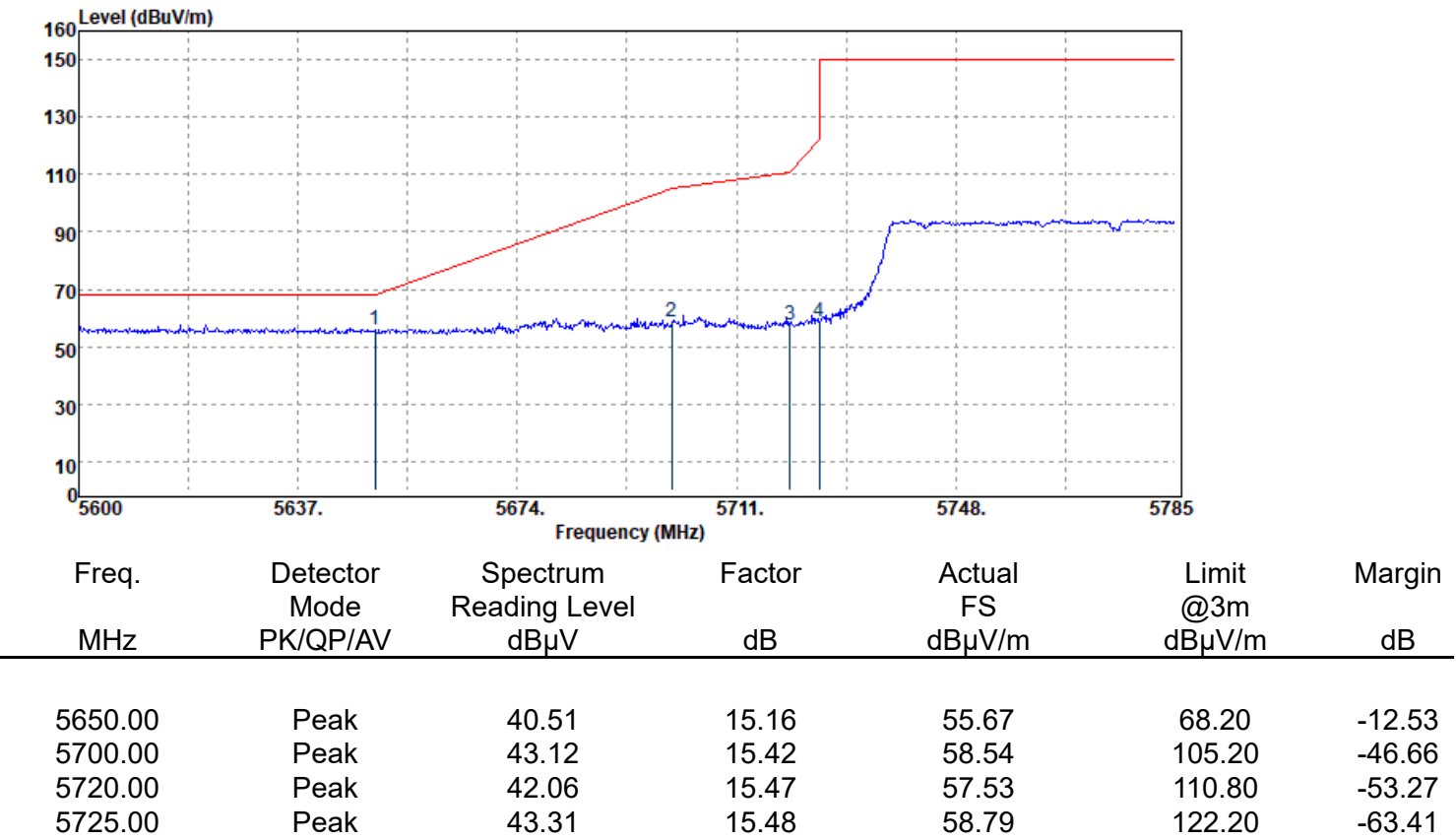
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
5432.76	Average	33.41	14.58	47.99	54.00	-6.01
5432.76	Peak	45.47	14.58	60.05	74.00	-13.95
5460.00	Average	34.25	14.57	48.82	54.00	-5.18
5460.00	Peak	43.04	14.57	57.61	74.00	-16.39
5462.30	Peak	44.96	14.58	59.54	68.20	-8.66
5470.00	Peak	42.53	14.61	57.14	68.20	-11.06

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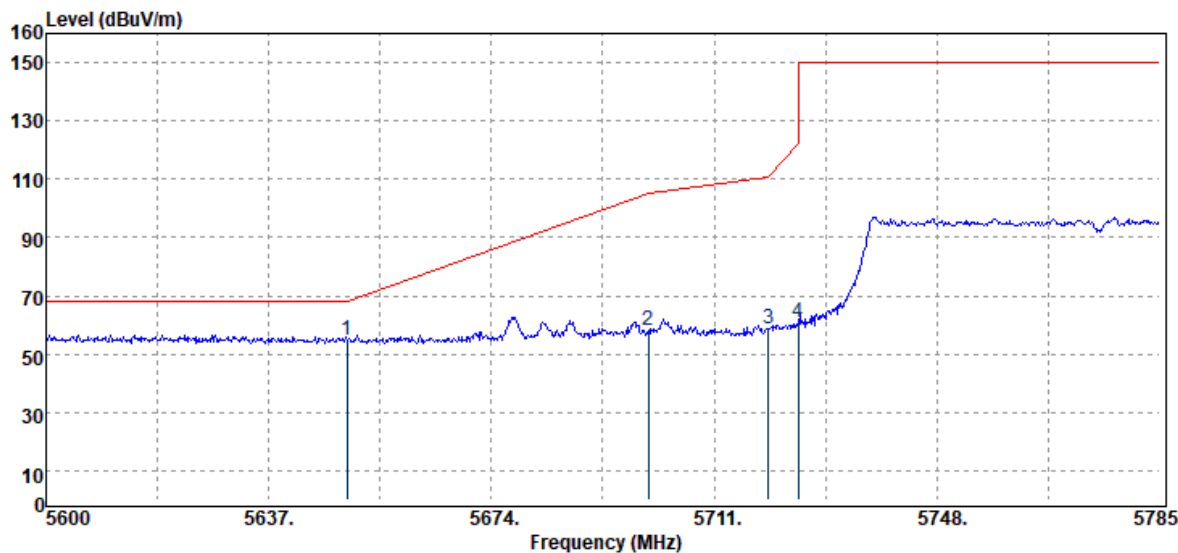
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Report Number	:ER/2020/20054	Test Date	:2020-03-12
Operation Mode	:802.11ac80B4	Temp./Humi.	:22.1/56
Test Frequency	:5775MHz	Antenna Pol.	:VERTICAL
Test Mode	:Bandedge CH Low	Engineer	:Thomas
EUT Pol	:H Plane		



Report Number :ER/2020/20054  
 Operation Mode :802.11ac80B4  
 Test Frequency :5775MHz  
 Test Mode :Bandedge CH Low  
 EUT Pol :H Plane

Test Date :2020-03-12  
 Temp./Humi. :22.1/56  
 Antenna Pol. :HORIZONTAL  
 Engineer :Thomas



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
5650.00	Peak	39.89	15.16	55.05	68.20	-13.15
5700.00	Peak	42.71	15.42	58.13	105.20	-47.07
5720.00	Peak	43.35	15.47	58.82	110.80	-51.98
5725.00	Peak	45.44	15.48	60.92	122.20	-61.28

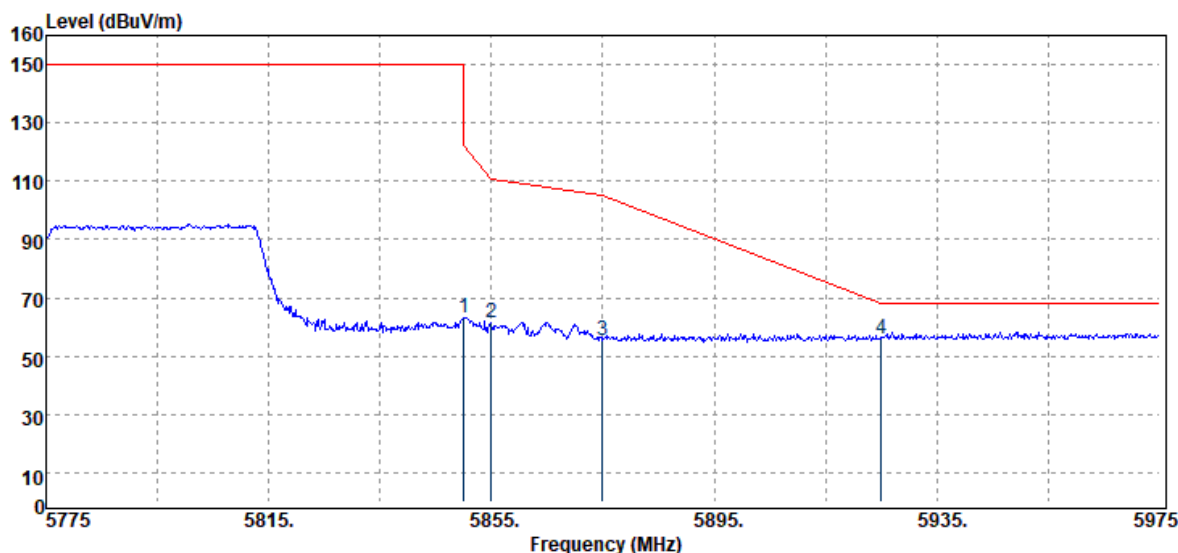
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Report Number :ER/2020/20054  
Operation Mode :802.11ac80B4  
Test Frequency :5775MHz  
Test Mode :Bandedge CH High  
EUT Pol :H Plane

Test Date :2020-03-12  
Temp./Humi. :22.1/56  
Antenna Pol. :VERTICAL  
Engineer :Thomas



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dB $\mu$ V	Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
5850.00	Peak	47.52	15.75	63.27	122.20	-58.93
5855.00	Peak	45.88	15.75	61.63	110.80	-49.17
5875.00	Peak	39.73	15.75	55.48	105.20	-49.72
5925.00	Peak	39.82	16.06	55.88	68.20	-12.32

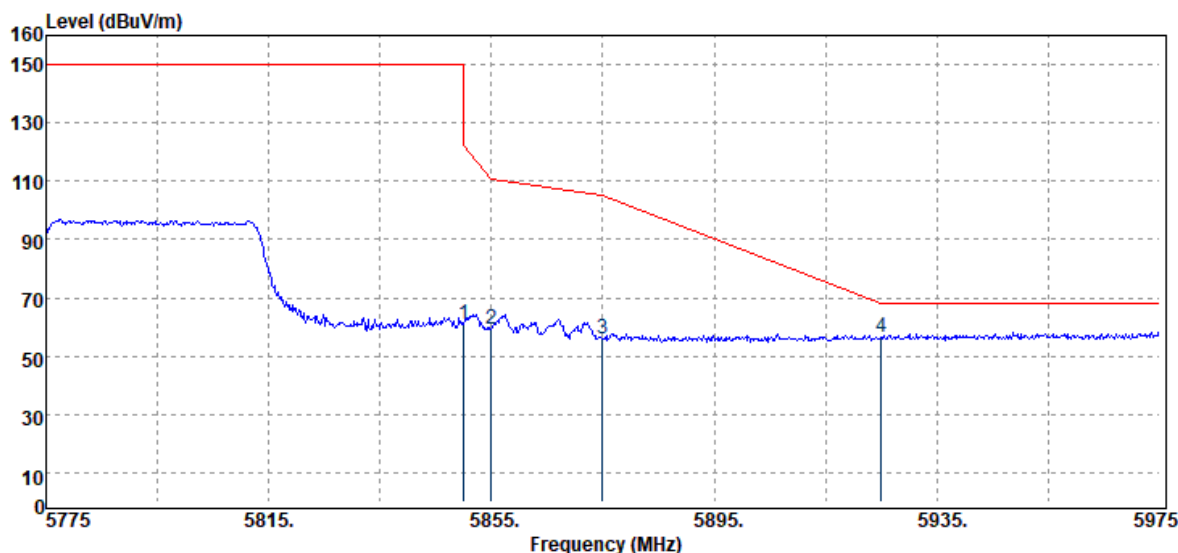
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Report Number :ER/2020/20054  
 Operation Mode :802.11ac80B4  
 Test Frequency :5775MHz  
 Test Mode :Bandedge CH High  
 EUT Pol :H Plane

Test Date :2020-03-12  
 Temp./Humi. :22.1/56  
 Antenna Pol. :HORIZONTAL  
 Engineer :Thomas



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
5850.00	Peak	45.40	15.75	61.15	122.20	-61.05
5855.00	Peak	43.54	15.75	59.29	110.80	-51.51
5875.00	Peak	40.39	15.75	56.14	105.20	-49.06
5925.00	Peak	40.51	16.06	56.57	68.20	-11.63

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## 12 TRANSMISSION IN THE ABSENCE OF DATA

### 12.1 Standard Applicable

According to §15.407(c)

The device shall automatically discontinue transmission in case of either absence of information to transmit or operational failure. These provisions are not intended to preclude the transmission of control or signaling information or the use of repetitive codes used by certain digital technologies to complete frame or burst intervals. Applicants shall include in their application for equipment authorization a description of how this requirement is met.

### 12.2 Result

While the EUT is not transmitting any information, the EUT can automatically discontinue transmission and become standby mode for power saving. The EUT can detect the controlling signal of ASK message transmitting from remote device and verify whether it shall resend or discontinue transmission.

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## 13 FREQUENCY STABILITY

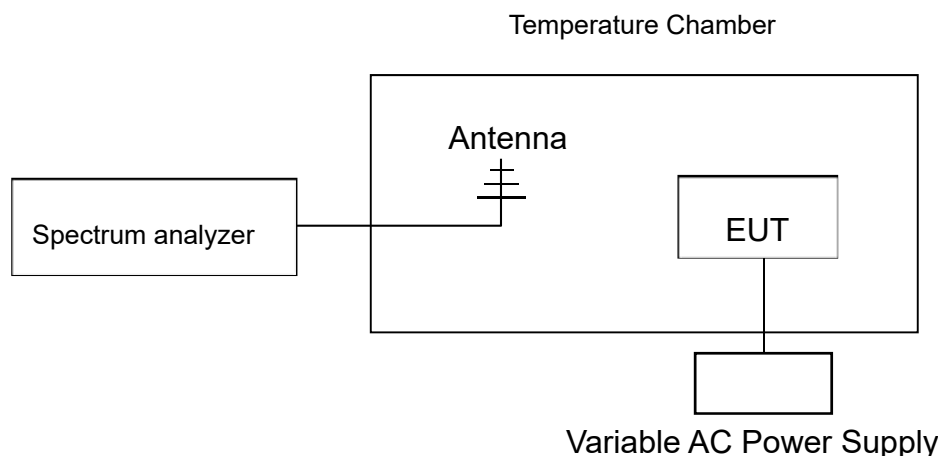
### 13.1 Standard Applicable

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

### 13.2 Measurement Procedure

1. The EUT was placed inside temperature chamber and powered and powered by nominal DC voltage.
2. Set EUT as normal operation.
3. Turn the EUT on and couple its output to spectrum.
4. Turn the EUT off and set the chamber to the highest temperature specified.
5. Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize, turn the EUT and measure the operating frequency.
6. Repeat step with the temperature chamber set to the lowest temperature.

### 13.3 Test SET-UP



### 13.4 Measurement Equipment Used:

SGS Conducted Room					
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due
EXA Spectrum Analyzer	Agilent	N9010A	MY50420195	05/02/2019	05/01/2020
DC Power Supply	Agilent	E3640A	MY40005907	10/22/2019	10/21/2020
Temperature Chamber	TERCHY	MHG-120LF	911009	05/17/2019	05/16/2020
Attenuator	Mini-Circuit	BW-S10W2+	2	01/02/2020	01/01/2021

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## 13.5 Measurement Result

### Start up

Operation Mode	802.11 a	Test Date	2020.03.12
Temperature	: 23.8	Test By	Tom
Humidity	: 54%		

Test Temp.( )	Test Voltage(V)	Channel	Measured Frequency (MHz)	Spectrum Frequency (MHz)	ΔFrequency (MHz)
5	4.2	36	5180	5,179.98200	0.00000347
	3.55	36	5180	5,179.91300	0.00001680
25	3.7	36	5180	5,180.01000	-0.00000193
35	4.2	36	5180	5,180.03500	-0.00000676
	3.55	36	5180	5,180.08800	-0.00001699

### 2 minutes

Operation Mode	802.11 a	Test Date	2020.03.12
Temperature	: 23.8	Test By	Tom
Humidity	: 54%		

Test Temp.( )	Test Voltage(V)	Channel	Measured Frequency (MHz)	Spectrum Frequency (MHz)	ΔFrequency (MHz)
5	4.2	36	5180	5,179.91700	0.00001602
	3.55	36	5180	5,180.05600	-0.00001081
25	3.7	36	5180	5,179.90300	0.00001873
35	4.2	36	5180	5,180.09200	-0.00001776
	3.55	36	5180	5,179.91400	0.00001660

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## 5 minutes

Operation Mode	802.11 a	Test Date	2020.03.12
Temperature	: 23.8	Test By	Tom
Humidity	: 54%		

Test Temp.( )	Test Voltage(V)	Channel	Measured Frequency (MHz)	Spectrum Frequency (MHz)	ΔFrequency (MHz)
5	4.2	36	5180	5,180.01500	-0.00000290
	3.55	36	5180	5,179.90500	0.00001834
25	3.7	36	5180	5,180.05600	-0.00001081
35	4.2	36	5180	5,180.02200	-0.00000425
	3.55	36	5180	5,179.98700	0.00000251

## 10 minutes

Operation Mode	802.11 a	Test Date	2020.03.12
Temperature	: 23.8	Test By	Tom
Humidity	: 54%		

Test Temp.( )	Test Voltage(V)	Channel	Measured Frequency (MHz)	Spectrum Frequency (MHz)	ΔFrequency (MHz)
5	4.2	36	5180	5,179.92100	0.00001525
	3.55	36	5180	5,179.95900	0.00000792
25	3.7	36	5180	5,180.08100	-0.00001564
35	4.2	36	5180	5,179.99500	0.00000097
	3.55	36	5180	5,179.98300	0.00000328

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## 14 ANTENNA REQUIREMENT

### 14.1 Standard Applicable

According to §15.203, an intentional radiator shall be designed to ensure that no antenna other than furnished by the responsible party shall be used with the device.

According to §15.407, If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

### 14.2 Antenna Connected Construction

The antenna is designed as permanently attached and no consideration of replacement. Please see EUT photo for details.

*~ End of Report ~*

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