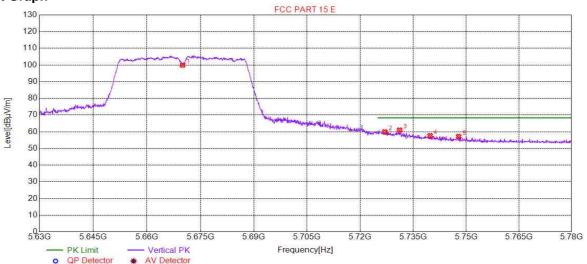


Report No.: AR/2020/C000405

Page: 219 of 465

## 4.10.1.73 802.11AC40\_Channel 134

### **Test Graph**



**Suspected List** 

Suspe	Suspected List										
NO.	Freq. [MHz]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity				
1	5670.000	99.94	0.00	-99.94	300	206	Vertical				
2	5726.948	59.95	68.30	8.35	300	192	Vertical				
3	5731.150	61.02	68.30	7.28	300	203	Vertical				
4	5739.779	57.66	68.30	10.64	300	185	Vertical				
5	5747.883	57.15	68.30	11.15	300	196	Vertical				



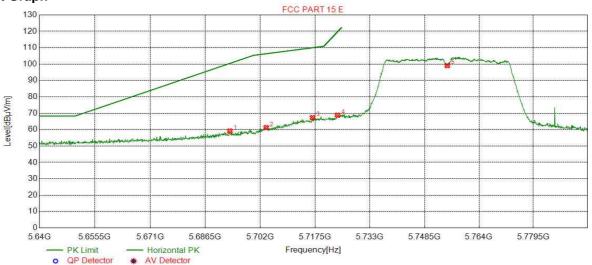


Report No.: AR/2020/C000405

Page: 220 of 465

#### 802.11AC40\_Channel 151 4.10.1.74

### **Test Graph**



**Suspected List** 

Suspe	Suspected List										
NO.	Freq. [MHz]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity				
1	5693.424	59.14	100.43	41.29	150	343	Horizontal				
2	5703.659	61.22	106.32	45.10	150	23	Horizontal				
3	5716.763	67.31	109.99	42.68	150	339	Horizontal				
4	5723.819	68.78	119.61	50.83	150	339	Horizontal				
5	5755.000	99.08	0.00	-99.08	150	44	Horizontal				



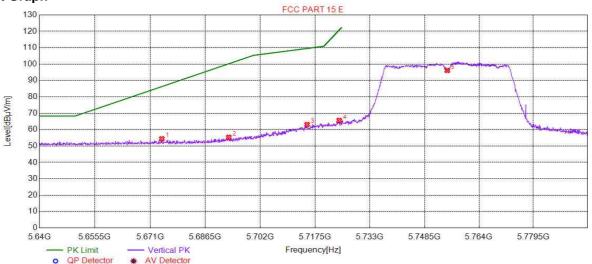


Report No.: AR/2020/C000405

Page: 221 of 465

## 4.10.1.75 802.11AC40\_Channel 151

### **Test Graph**



### **Suspected List**

Suspe	Suspected List										
NO.	Freq. [MHz]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity				
1	5674.272	54.40	86.26	31.86	150	20	Vertical				
2	5693.114	55.34	100.20	44.86	150	27	Vertical				
3	5715.212	63.15	109.56	46.41	150	34	Vertical				
4	5724.284	65.62	120.67	55.05	150	23	Vertical				
5	5755.000	96.11	0.00	-96.11	150	34	Vertical				



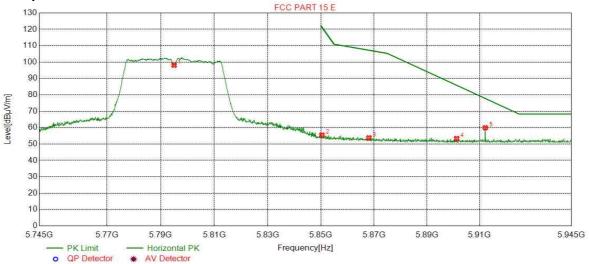


Report No.: AR/2020/C000405

Page: 222 of 465

#### 802.11AC40\_Channel 159 4.10.1.76

### **Test Graph**



**Suspected List** 

Suspe	Suspected List										
NO.	Freq. [MHz]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity				
1	5795.000	98.09	0.00	-98.09	150	44	Horizontal				
2	5850.352	55.46	121.50	66.04	150	212	Horizontal				
3	5868.061	53.75	107.24	53.49	150	212	Horizontal				
4	5901.278	53.34	85.85	32.51	150	212	Horizontal				
5	5912.183	59.93	77.78	17.85	150	265	Horizontal				

**Final Data List** 



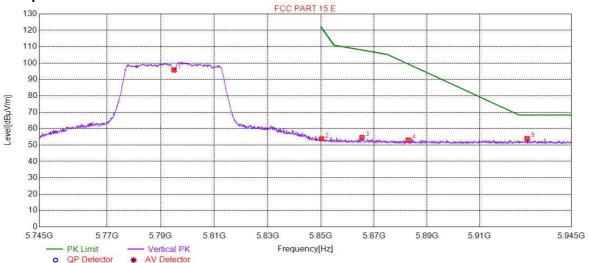


Report No.: AR/2020/C000405

Page: 223 of 465

#### 802.11AC40\_Channel 159 4.10.1.77

### **Test Graph**



**Suspected List** 

Suspe	Suspected List										
NO.	Freq. [MHz]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity				
1	5795.000	95.69	0.00	-95.69	150	28	Vertical				
2	5850.252	53.80	121.72	67.92	150	18	Vertical				
3	5865.460	54.66	107.97	53.31	150	35	Vertical				
4	5882.969	53.05	99.40	46.35	150	138	Vertical				
5	5928.091	53.96	68.30	14.34	150	49	Vertical				



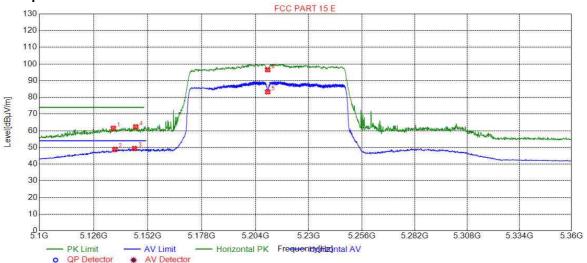


Report No.: AR/2020/C000405

Page: 224 of 465

#### 802.11AC80\_Channel 42 4.10.1.78

### **Test Graph**



**Suspected List** 

Suspe	Suspected List										
NO.	Freq. [MHz]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity				
1	5135.377	61.50	74.00	12.50	100	214	Horizontal				
2	5136.158	48.78	54.00	5.22	100	214	Horizontal				
3	5145.522	49.36	54.00	4.64	100	214	Horizontal				
4	5146.173	62.36	74.00	11.64	100	214	Horizontal				
5	5210.000	83.30	0.00	-83.30	100	224	Horizontal				
6	5210.000	96.54	0.00	-96.54	100	219	Horizontal				

Final Data List





Report No.: AR/2020/C000405

Page: 225 of 465

## 4.10.1.79 802.11AC80\_Channel 42

### **Test Graph**



**Suspected List** 

Suspe	Suspected List										
NO.	Freq. [MHz]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity				
1	5129.524	46.78	54.00	7.22	300	193	Vertical				
2	5132.126	60.87	74.00	13.13	300	198	Vertical				
3	5142.011	48.33	54.00	5.67	300	193	Vertical				
4	5148.254	60.64	74.00	13.36	300	198	Vertical				
5	5210.000	95.04	0.00	-95.04	300	193	Vertical				
6	5210.000	82.68	0.00	-82.68	300	188	Vertical				



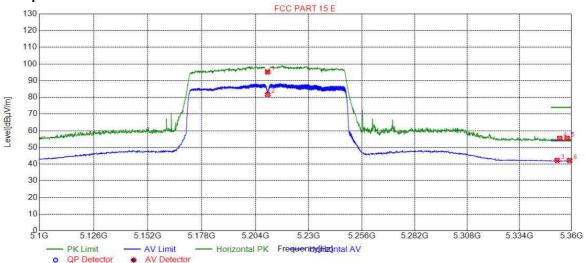


Report No.: AR/2020/C000405

Page: 226 of 465

## 4.10.1.80 802.11AC80\_Channel 42

### **Test Graph**



### **Suspected List**

Suspe	Suspected List										
NO.	Freq. [MHz]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity				
1	5210.000	95.18	0.00	-95.18	150	217	Horizontal				
2	5210.000	81.70	0.00	-81.70	150	226	Horizontal				
3	5352.846	42.26	54.00	11.74	150	173	Horizontal				
4	5354.147	55.47	74.00	18.53	150	221	Horizontal				
5	5357.919	55.45	74.00	18.55	150	307	Horizontal				
6	5359.089	42.18	54.00	11.82	150	231	Horizontal				



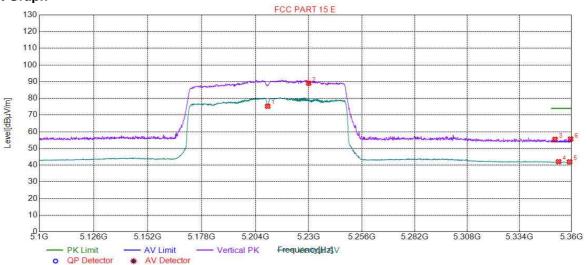


Report No.: AR/2020/C000405

Page: 227 of 465

## 4.10.1.81 802.11AC80\_Channel 42

### **Test Graph**



**Suspected List** 

Suspe	Suspected List									
NO.	Freq. [MHz]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity			
1	5210.000	75.29	0.00	-75.29	150	49	Vertical			
2	5230.000	89.11	0.00	-89.11	150	78	Vertical			
3	5351.805	55.46	74.00	18.54	150	34	Vertical			
4	5353.626	42.11	54.00	11.89	150	278	Vertical			
5	5359.089	41.97	54.00	12.03	150	344	Vertical			
6	5359.609	55.66	74.00	18.34	150	111	Vertical			



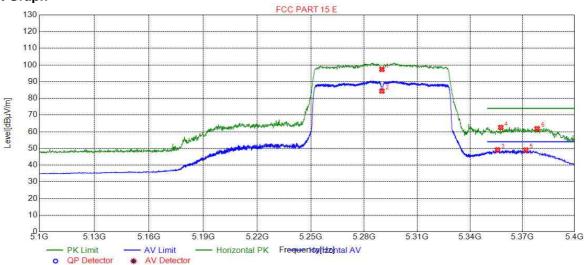


Report No.: AR/2020/C000405

Page: 228 of 465

## 4.10.1.82 802.11AC80\_Channel 58

### **Test Graph**



**Suspected List** 

Suspe	Suspected List										
NO.	Freq. [MHz]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity				
1	5290.000	97.38	0.00	-97.38	100	210	Horizontal				
2	5290.000	84.34	0.00	-84.34	100	204	Horizontal				
3	5355.727	49.16	54.00	4.84	100	204	Horizontal				
4	5357.528	62.60	74.00	11.40	100	190	Horizontal				
5	5371.936	49.06	54.00	4.94	100	210	Horizontal				
6	5378.389	61.84	74.00	12.16	100	204	Horizontal				



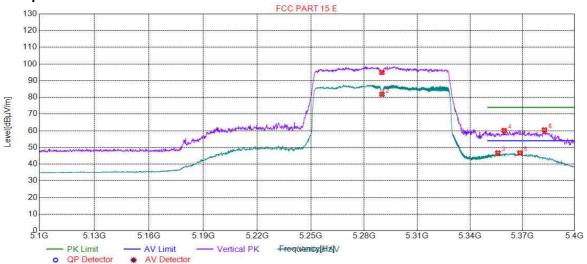


Report No.: AR/2020/C000405

Page: 229 of 465

## 4.10.1.83 802.11AC80\_Channel 58

### **Test Graph**



**Suspected List** 

Suspe	Suspected List										
NO.	Freq. [MHz]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity				
1	5290.000	94.97	0.00	-94.97	300	186	Vertical				
2	5290.000	81.84	0.00	-81.84	300	186	Vertical				
3	5355.877	46.70	54.00	7.30	300	191	Vertical				
4	5359.479	60.15	74.00	13.85	300	186	Vertical				
5	5368.484	46.68	54.00	7.32	300	191	Vertical				
6	5382.591	60.46	74.00	13.54	300	186	Vertical				

**Final Data List** 



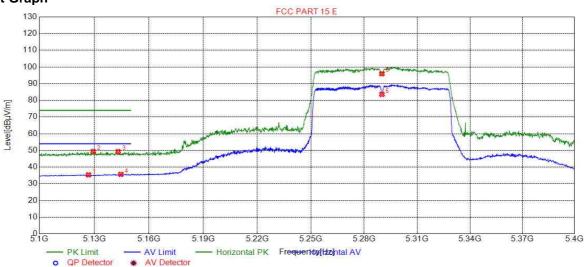


Report No.: AR/2020/C000405

Page: 230 of 465

#### 802.11AC80\_Channel 58 4.10.1.84

### **Test Graph**



**Suspected List** 

Suspe	Suspected List										
NO.	Freq. [MHz]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity				
1	5126.863	35.37	54.00	18.63	150	217	Horizontal				
2	5129.414	49.36	74.00	24.64	150	202	Horizontal				
3	5143.071	49.31	74.00	24.69	150	86	Horizontal				
4	5144.572	35.68	54.00	18.32	150	208	Horizontal				
5	5290.000	95.99	0.00	-95.99	150	208	Horizontal				
6	5290.000	83.62	0.00	-83.62	150	208	Horizontal				



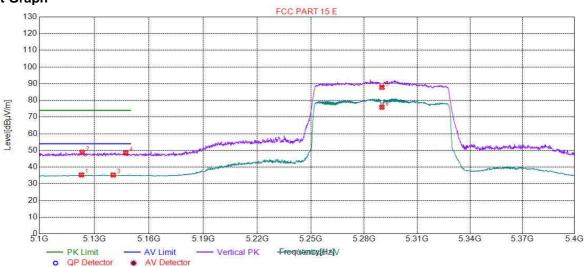


Report No.: AR/2020/C000405

Page: 231 of 465

#### 802.11AC80\_Channel 58 4.10.1.85

### **Test Graph**



**Suspected List** 

Suspe	Suspected List							
NO.	Freq. [MHz]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	
1	5122.961	35.34	54.00	18.66	150	79	Vertical	
2	5123.411	48.90	74.00	25.10	150	136	Vertical	
3	5140.370	35.29	54.00	18.71	150	266	Vertical	
4	5147.273	48.51	74.00	25.49	150	16	Vertical	
5	5290.000	87.86	0.00	-87.86	150	84	Vertical	
6	5290.000	75.94	0.00	-75.94	150	79	Vertical	



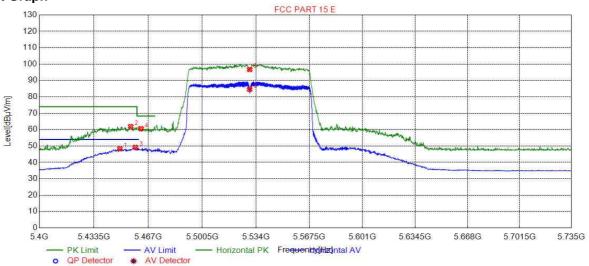


Report No.: AR/2020/C000405

Page: 232 of 465

#### 802.11AC80\_Channel 106 4.10.1.86

### **Test Graph**



**Suspected List** 

Suspe	Suspected List							
NO.	Freq. [MHz]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	
1	5449.437	48.27	54.00	5.73	100	206	Horizontal	
2	5456.140	61.87	74.00	12.13	100	197	Horizontal	
3	5458.989	49.20	54.00	4.80	100	206	Horizontal	
4	5462.508	60.55	68.30	7.75	100	206	Horizontal	
5	5530.000	96.72	0.00	-96.72	100	206	Horizontal	
6	5530.000	84.60	0.00	-84.60	100	206	Horizontal	

**Final Data List** 



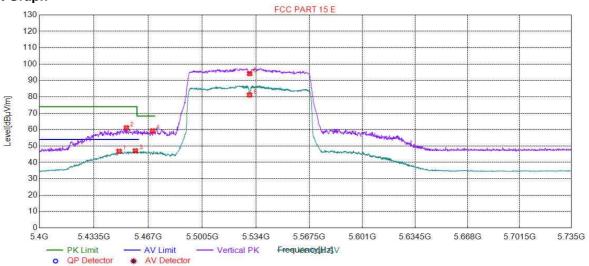


Report No.: AR/2020/C000405

Page: 233 of 465

#### 802.11AC80\_Channel 106 4.10.1.87

### **Test Graph**



**Suspected List** 

Suspe	Suspected List							
NO.	Freq. [MHz]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	
1	5448.934	46.78	54.00	7.22	300	188	Vertical	
2	5453.459	61.09	74.00	12.91	300	188	Vertical	
3	5458.989	47.05	54.00	6.95	300	188	Vertical	
4	5469.547	59.22	68.30	9.08	300	193	Vertical	
5	5530.000	94.20	0.00	-94.20	300	188	Vertical	
6	5530.000	81.15	0.00	-81.15	300	193	Vertical	



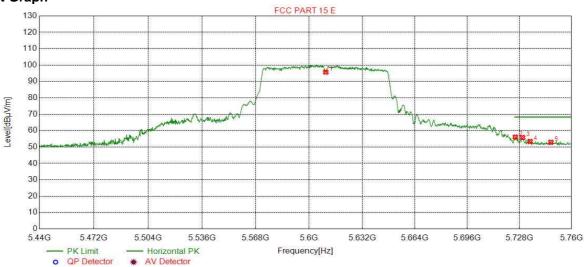


Report No.: AR/2020/C000405

Page: 234 of 465

#### 802.11AC80\_Channel 122 4.10.1.88

### **Test Graph**



### **Suspected List**

Suspe	Suspected List								
NO.	Freq. [MHz]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity		
1	5610.000	95.70	0.00	-95.70	150	202	Horizontal		
2	5725.422	56.04	68.30	12.26	150	28	Horizontal		
3	5729.905	55.77	68.30	12.53	150	21	Horizontal		
4	5734.547	53.39	68.30	14.91	150	46	Horizontal		
5	5747.353	52.90	68.30	15.40	150	344	Horizontal		



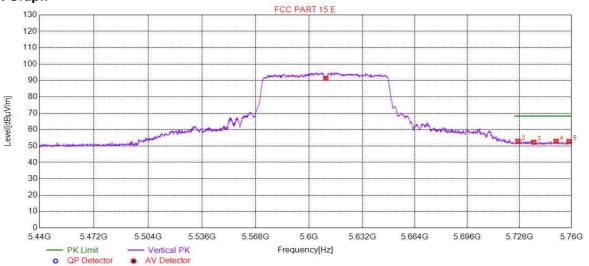


Report No.: AR/2020/C000405

Page: 235 of 465

#### 802.11AC80\_Channel 122 4.10.1.89

### **Test Graph**



### **Suspected List**

Suspe	Suspected List								
NO.	Freq. [MHz]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity		
1	5610.000	91.37	0.00	-91.37	150	19	Vertical		
2	5727.023	52.88	68.30	15.42	150	340	Vertical		
3	5736.788	52.35	68.30	15.95	150	33	Vertical		
4	5750.555	52.90	68.30	15.40	150	97	Vertical		
5	5758.559	52.73	68.30	15.57	150	40	Vertical		



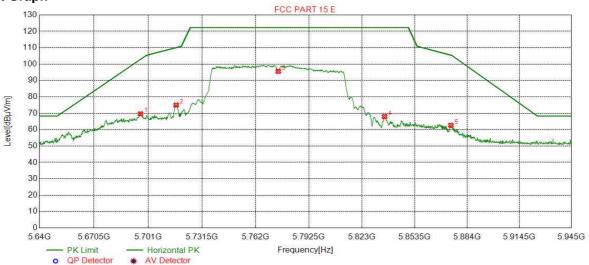


Report No.: AR/2020/C000405

Page: 236 of 465

#### 802.11AC80\_Channel 155 4.10.1.90

### **Test Graph**



**Suspected List** 

Suspe	Suspected List								
NO.	Freq. [MHz]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity		
1	5696.758	69.60	102.90	33.30	150	20	Horizontal		
2	5716.898	74.98	110.03	35.05	150	337	Horizontal		
3	5775.000	95.59	122.30	26.71	150	45	Horizontal		
4	5836.060	67.97	122.30	54.33	150	211	Horizontal		
5	5874.509	62.63	105.44	42.81	150	207	Horizontal		



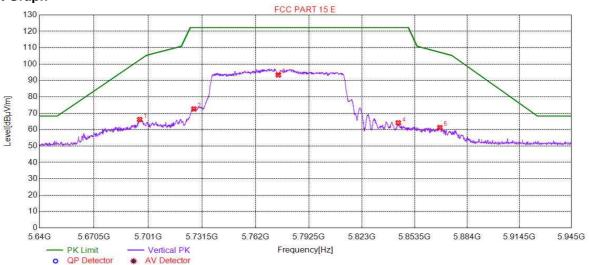


Report No.: AR/2020/C000405

237 of 465 Page:

#### 802.11AC80\_Channel 155 4.10.1.91

### **Test Graph**



### **Suspected List**

Suspe	Suspected List								
NO.	Freq. [MHz]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity		
1	5696.300	66.17	102.56	36.39	150	34	Vertical		
2	5726.968	72.63	122.30	49.67	150	30	Vertical		
3	5775.000	93.40	122.30	28.90	150	30	Vertical		
4	5843.994	64.16	122.30	58.14	150	95	Vertical		
5	5868.101	61.27	107.23	45.96	150	34	Vertical		

## Final Data List

#### Remark:

The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level = Receiver Reading + Antenna Factor + Cable Factor - Preamplifier Factor All modes have been tested, but only the worst case data displayed in this report.



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Report No.: AR/2020/C000405

Page: 238 of 465

## 4.11 Frequencies Stability

4.11.1 Frequency Error vs. Voltage

Test Conditions	Measured Frequency (MHz)			
lest Conditions	5180	5825		
V nom(V)	5180.009345	5825.001199		
V max(V)	5180.012295	5825.009792		
V min(V)	5180.018533	5825.011026		
Max. Deviation Frequency	0.018533	0.011026		
Max. Frequency Error (ppm)	3.577893	1.892941		

4.11.2 Frequency Error vs. Temperature

Toot Conditions	Measured Frequency (MHz)				
Test Conditions	5180	5825			
-5	5180.000734	5825.004603			
5	5180.010448	5825.014376			
15	5180.018875	5825.019858			
25	5180.025197	5825.026784			
35	5180.027947	5825.028960			
45	5180.031161	5825.032557			
50	5180.036126	5825.038227			
Max. Deviation Frequency	0.036126	0.038227			
fax. Frequency Error (ppm)	6.974128	6.562510			





Report No.: AR/2020/C000405

239 of 465 Page:

## 4.12 Dynamic Frequency Selection 4.12.1 DFS Overview

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

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

Table 2: Applicability of DFS requirements during normal operation

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

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



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Report No.: AR/2020/C000405

Page: 240 of 465

### 4.12.2 DFS Detection Thresholds

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

Maximum Transmit Power	Value
	(See Notes 1, 2, and 3)
EIRP ≥ 200 milliwatt	-64 dBm
EIRP < 200 milliwatt and	-62 dBm
power spectral density < 10 dBm/MHz	
EIRP < 200 milliwatt that do not meet the power spectral density	-64 dBm
requirement	

Note 1: This is the level at the input of the receiver assuming a 0 dBi receive antenna.

Note 2: Throughout these test procedures an additional 1 dB has been added to the amplitude of the test transmission waveforms to account for variations in measurement equipment. This will ensure that the test signal is at or above the detection threshold level to trigger a DFS response.

Note3: EIRP is based on the highest antenna gain. For MIMO devices refer to KDB Publication 662911 D01.

## 4.12.3 Response Requirements

**Table 4: DFS Response Requirement Values** 

Parameter	Value
Non-occupancy period	Minimum 30 minutes
Channel Availability Check Time	60 seconds
Channel Move Time	10 seconds
	See Note 1.
Channel Closing Transmission Time	200 milliseconds + an
	aggregate of 60
	milliseconds over remaining
	10 second period.
	See Notes 1 and 2.
U-NII Detection Bandwidth	Minimum 100% of the U-
	NII 99% transmission
	power bandwidth. See Note
	$\overline{3}$ .

Note 1: Channel Move Time and the Channel Closing Transmission Time should be performed with Radar Type 0. The measurement timing begins at the end of the Radar Type 0 burst.

Note 2: The Channel Closing Transmission Time is comprised of 200 milliseconds starting at the beginning of the Channel Move Time plus any additional intermittent control signals required to facilitate a Channel move (an aggregate of 60 milliseconds) during the remainder of the 10 second period. The aggregate duration of control signals will not count quiet periods in between transmissions.

Note 3: During the *U-NII Detection Bandwidth* detection test, radar type 0 should be used. For each frequency step the minimum percentage of detection is 90 percent. Measurements are performed with no data traffic.





Report No.: AR/2020/C000405

Page: 241 of 465

# 4.12.4 Test plots DFS Detection Thresholds

### 4.12.4.1.1 Test Result

4.12.4.1

TestMode	Channel	Radar Type	Result	Limit[dbm]	Verdict
444000000	5320	Type0	-62.09	-62.00	PASS
11AC20SISO 5500	5500	Type0	-63.10	-62.00	PASS
	5290	Type0	-64.07	-62.00	PASS
11AC80SISO	5530	Type0	-63.32	-62.00	PASS

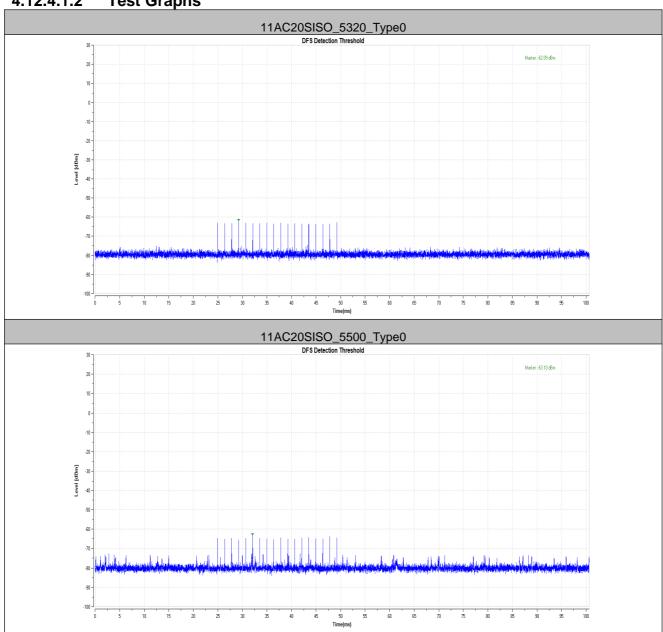




Report No.: AR/2020/C000405

Page: 242 of 465

#### 4.12.4.1.2 **Test Graphs**





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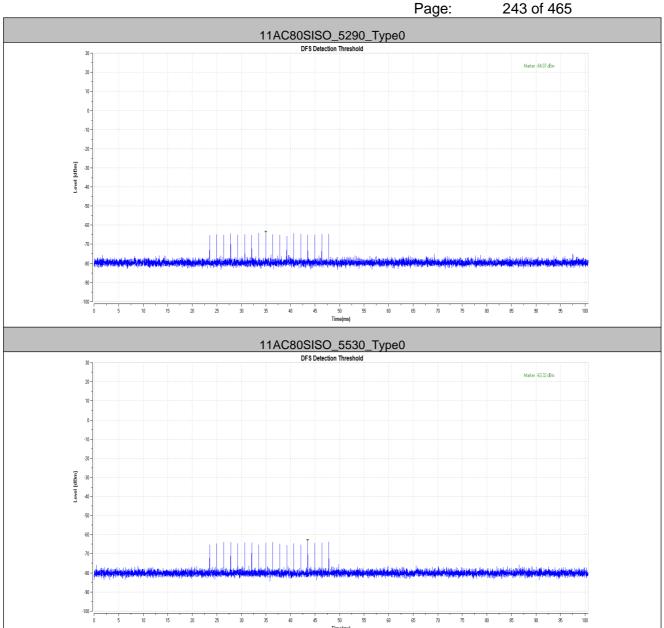
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Report No.: AR/2020/C000405 243 of 465







Report No.: AR/2020/C000405

Page: 244 of 465

#### **Channel Move Time and Channel Closing Transmission Time** 4.12.4.2

#### 4.12.4.2.1 **Test Result**

TestMode	Channel	CCT[ms]	Limit[ms]	CMT[ms]	Limit[ms]	Verdict
	5320	0	60	1128.4	10000	PASS
11AC20SISO	5500	0	60	1402	10000	PASS
	5290	0	60	203.8	10000	PASS
11AC80SISO	5530	0	60	206.7	10000	PASS

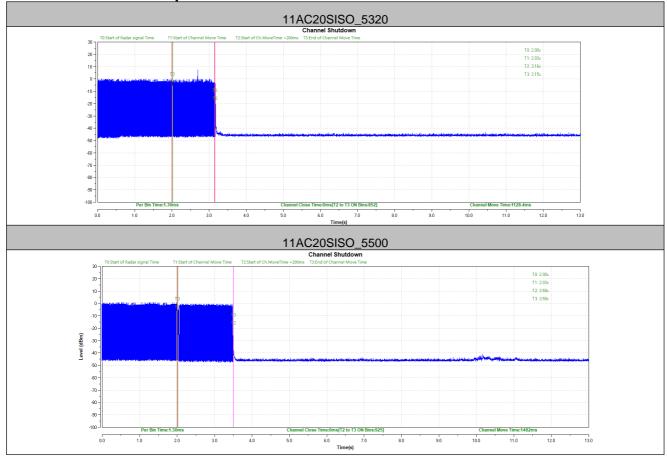




Report No.: AR/2020/C000405

245 of 465 Page:

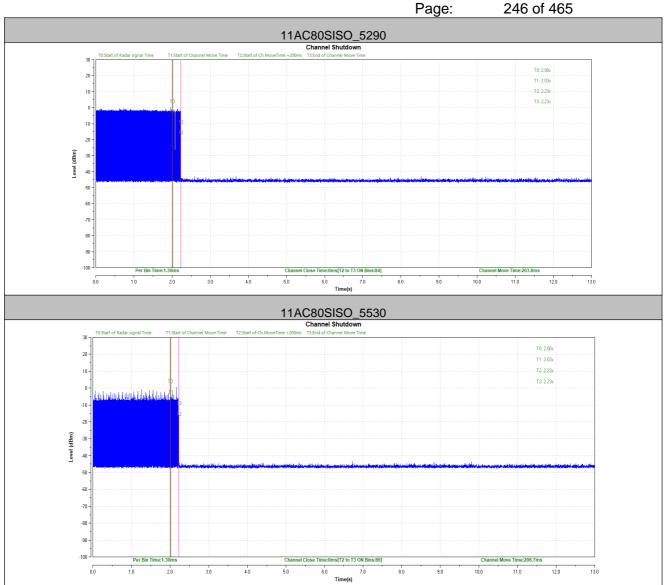
#### 4.12.4.2.2 **Test Graphs**







Report No.: AR/2020/C000405 246 of 465







Report No.: AR/2020/C000405

Page: 247 of 465

#### **Non-Occupancy Period** 4.12.4.3

#### 4.12.4.3.1 **Test Result**

TestMode	Channel	Result	Limit[s]	Verdict
	5320	see test graph	>=1800	PASS
11AC20SISO	5500	see test graph	>=1800	PASS
	5290	see test graph	>=1800	PASS
11AC80SISO	5530	see test graph	>=1800	PASS

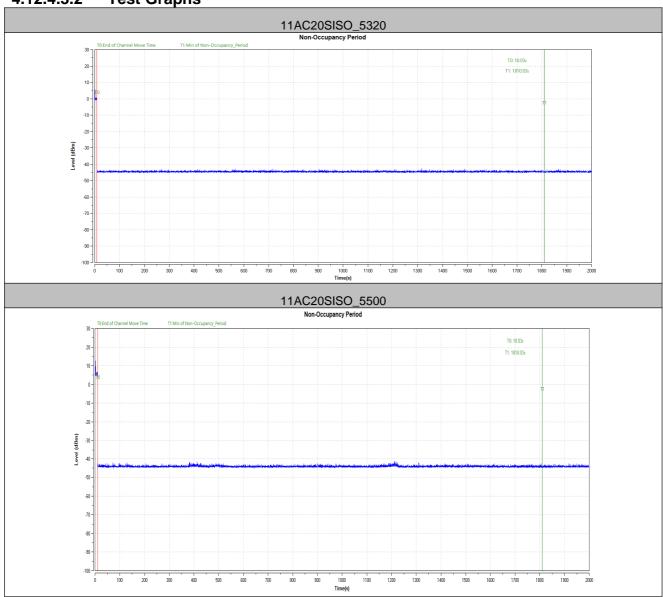




Report No.: AR/2020/C000405

248 of 465 Page:

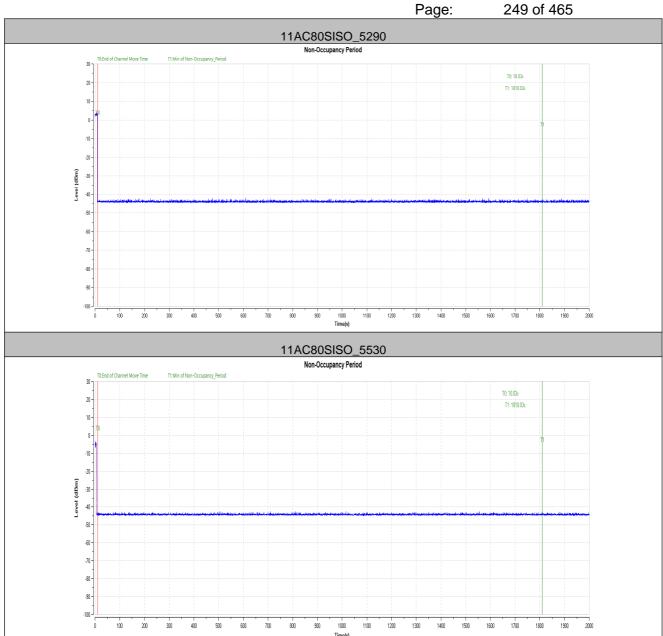
#### 4.12.4.3.2 **Test Graphs**







Report No.: AR/2020/C000405







Report No.: AR/2020/C000405

Page: 250 of 465

## 5 Measurement Uncertainty (95% confidence levels, k=2)

No.	Item	Measurement Uncertainty
1	Total RF power, conducted	±0.75dB
2	RF power density, conducted	±2.84dB
3	Spurious emissions, conducted	±0.75dB
4	Radiated Spurious emission test	±4.5dB (30MHz-1GHz)
4		±4.8dB (1GHz-25GHz)
5	Conduct emission test	±3.12 dB(9KHz- 30MHz)
6	Temperature test	±1°C
7	Humidity test	±3%
8	DC and low frequency voltages	±0.5%





Report No.: AR/2020/C000405

Page: 251 of 465

**Equipment List** 

Conducted Emission						
Test Equipment	Manufacturer	Model No.	Inventory No.	Cal. Date (yyyy-mm-dd)	Cal. Due date (yyyy-mm-dd)	
Shielding Room	ZhongYu Electron	GB-88	SEM001-06	2020/5/10	2023/5/9	
LISN	Rohde & Schwarz	ENV216	SEM007-01	2020/7/14	2021/7/14	
LISN	ETS-LINDGREN	Feb-16	SEM007-02	2020/3/2	2021/3/1	
Measurement Software	AUDIX	e3 V5.4.1221d	N/A	N/A	N/A	
Coaxial Cable	SGS	N/A	SEM024-01	2020/6/12	2021/6/11	
8 Line ISN	Fischer Custom Communications Inc.	FCC-TLISN-T8- 02	EMC0120	2020/2/11	2021/2/10	
4 Line ISN	Fischer Custom Communications Inc.	FCC-TLISN-T4- 02	EMC0121	2020/2/11	2021/2/10	
2 Line ISN	Fischer Custom Communications Inc.	FCC-TLISN-T2- 02	EMC0122	2020/2/11	2021/2/10	
EMI Test Receiver	Rohde & Schwarz	ESCI	SEM004-02	2020/3/2	2021/3/1	
	F	RF conducted te	est			
Test Equipment	Manufacturer	Model No.	Inventory No.	Cal. Date (yyyy-mm-dd)	Cal. Due date (yyyy-mm-dd)	
DC Power Supply	ZhaoXin	RXN-305D	SEM011-02	2020/7/14	2021/7/14	
Signal Analyzer	Rohde & Schwarz	FSV	W025-05	2020/3/2	2021/3/1	
Coaxial Cable	SGS	N/A	SEM031-01	2020/6/12	2021/6/11	
Attenuator	Weinschel Associates	WA41	SEM021-09	N/A	N/A	
Signal Generator	KEYSIGHT	N5173B	SEM006-05	2020/7/14	2021/7/14	
Temperature Chamber	GIANT FORCE	ICT-150-40-CP- AR	W027-03	2020/10/27	2021/10/27	
Power Meter	Rohde & Schwarz	NRVS	SEM014-02	2020/7/14	2021/7/14	
Master Device	Linksys pte.Ltd	WRT32X	FCC ID:Q87- WRT3200ACM IC ID:3839A- WRT3200ACM	N/A	N/A	





Report No.: AR/2020/C000405

Page: 252 of 465

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	RE in Chamber				
Test Equipment	Manufacturer	Model No.	Inventory No.	Cal. Date (yyyy-mm-dd)	Cal. Due date (yyyy-mm-dd)
3m Semi-Anechoic Chamber	ETS-LINDGREN	N/A	SEM001-01	2020/8/5	2023/8/4
Measurement Software	AUDIX	e3 V8.2014-6- 27	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM025-01	2020/6/12	2021/6/11
MXE EMI Receiver (20Hz- 8.4GHz)	Agilent Technologies	N9038A	SEM004-05	2020/7/14	2021/7/14
BiConiLog Antenna (26- 3000MHz)	ETS-LINDGREN	3142C	SEM003-01	2020/6/27	2023/6/26
Pre-amplifier (0.1-1.3GHz)	Agilent Technologies	8447D	SEM005-01	2020/3/2	2021/3/1
		RE in Chambe	r		
Test Equipment	Manufacturer	Model No.	Inventory No.	Cal. Date (yyyy-mm-dd)	Cal. Due date (yyyy-mm-dd)
3m Semi-Anechoic Chamber	AUDIX	N/A	SEM001-02	2018/3/13	2021/3/12
Spectrum Analyzer (20Hz- 43GHz)	Rohde & Schwarz	FSU43	SEM004-08	2020/3/2	2021/3/1
BiConiLog Antenna (26- 3000MHz)	ETS-Lindgren	3142C	SEM003-01	2020/6/27	2023/6/26
Horn Antenna (800MHz- 18GHz)	Rohde & Schwarz	HF907	SEM003-07	2018/413	2021/412
Horn Antenna (15-40GHz)	Schwarzbeck	BBHA 9170	SEM003-15	2020/10/17	2023/10/16
Amplifier(0.1-1300MHz)	HP	8447D	SEM005-02	2020/7/14	2021/7/14
Low Noise Amplifier (100MHz-18GHz)	Black Diamond Series	BDLNA-0118- 352810	SEM005-05	2020/7/14	2021/7/14
Pre-Amplifier(0.1- 26.5GHz)	Compliance Directions Systems Inc.	PAP-0126	EMC2063	2020/10/20	2021/10/19
Pre-amplifier(26-40GHz)	Compliance Directions Systems Inc.	PAP-2640-50	SEM005-08	2020/3/2	2021/3/1
Band filter	N/A	N/A	N/A	N/A	N/A
Measurement Software	AUDIX	e3 V8.2014-6- 27	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM026-01	2020/6/12	2021/6/11
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Report No.: AR/2020/C000405

Page: 253 of 465

#### 7 **Photographs - EUT Constructional Details**

Refer to Appendix A - Photographs of Set-Up for AR/2020/C0004.





Report No.: AR/2020/C000405

Page: 254 of 465

# **Appendix**





Report No.: AR/2020/C000405

Page: 255 of 465

#### 26db Emission Bandwidth

#### **Test Result**

TestMode	Antenna	Channel	26db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5180	22.830	5168.630	5191.460		PASS
		5200	22.860	5188.690	5211.550		PASS
		5240	22.920	5228.630	5251.550		PASS
		5260	23.250	5248.630	5271.880		PASS
		5300	24.180	5288.240	5312.420		PASS
		5320	23.970	5308.540	5332.510		PASS
		5500	23.820	5488.570	5512.390		PASS
		5580	22.680	5568.960	5591.640		PASS
		5700	23.490	5688.840	5712.330		PASS
		5745	21.720	5734.200	5755.920		PASS
		5785	21.870	5774.110	5795.980		PASS
		5825	21.660	5814.230	5835.890		PASS
11N20SISO	Ant1	5180	23.460	5168.480	5191.940		PASS
		5200	23.640	5188.450	5212.090		PASS
		5240	23.460	5228.360	5251.820		PASS
		5260	23.340	5248.480	5271.820		PASS
		5300	24.450	5288.570	5313.020		PASS
		5320	24.570	5308.360	5332.930		PASS
		5500	28.650	5486.320	5514.970		PASS
		5580	23.460	5568.540	5592.000		PASS
		5700	24.450	5688.480	5712.930		PASS
		5745	22.890	5733.690	5756.580		PASS
		5785	22.980	5773.660	5796.640		PASS
		5825	23.100	5813.720	5836.820		PASS
11N40SISO	Ant1	5190	41.700	5169.360	5211.060		PASS
		5230	41.460	5209.300	5250.760		PASS
		5270	41.760	5249.300	5291.060		PASS
		5310	41.880	5289.240	5331.120		PASS
		5510	42.000	5489.060	5531.060		PASS
		5550	42.240	5528.880	5571.120		PASS



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Report No.: AR/2020/C000405 256 of 465 Page:

		1		raye. 230 01 403					
		5670	43.500	5647.560	5691.060		PASS		
		5755	42.180	5733.580	5775.760		PASS		
		5795	41.820	5773.880	5815.700		PASS		
11AC20SISO	Ant1	5180	23.760	5168.060	5191.820		PASS		
		5200	23.340	5188.450	5211.790		PASS		
		5240	22.650	5228.720	5251.370		PASS		
		5260	24.780	5248.390	5273.170		PASS		
		5300	23.430	5288.540	5311.970		PASS		
		5320	24.510	5308.390	5332.900		PASS		
		5500	22.860	5488.600	5511.460		PASS		
		5580	23.280	5568.510	5591.790		PASS		
		5700	24.390	5688.510	5712.900		PASS		
		5745	23.640	5733.060	5756.700		PASS		
		5745	23.670	5733.270	5756.940		PASS		
		5785	22.710	5773.660	5796.370		PASS		
		5825	23.400	5813.510	5836.910		PASS		
	Ant1	5190	41.940	5169.180	5211.120		PASS		
11AC40SISO		5230	41.880	5209.240	5251.120		PASS		
		5270	48.240	5243.060	5291.300		PASS		
		5310	51.240	5280.180	5331.420		PASS		
		5510	50.820	5480.420	5531.240		PASS		
		5550	50.700	5520.480	5571.180		PASS		
		5670	45.060	5646.120	5691.180		PASS		
		5755	41.880	5733.820	5775.700		PASS		
		5795	41.820	5773.880	5815.700		PASS		
11AC80SISO	Ant1	5210	83.400	5168.240	5251.640		PASS		
		5290	83.040	5248.720	5331.760		PASS		
		5530	110.520	5471.320	5581.840		PASS		
		5610	94.440	5562.480	5656.920		PASS		
		5775	84.240	5732.520	5816.760		PASS		



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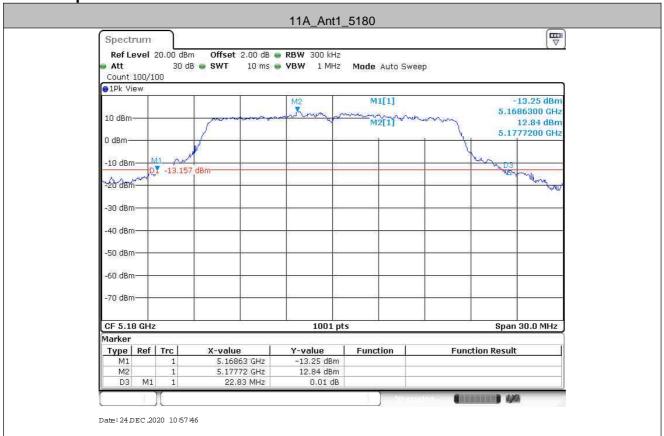
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Report No.: AR/2020/C000405

257 of 465 Page:

**Test Graphs** 







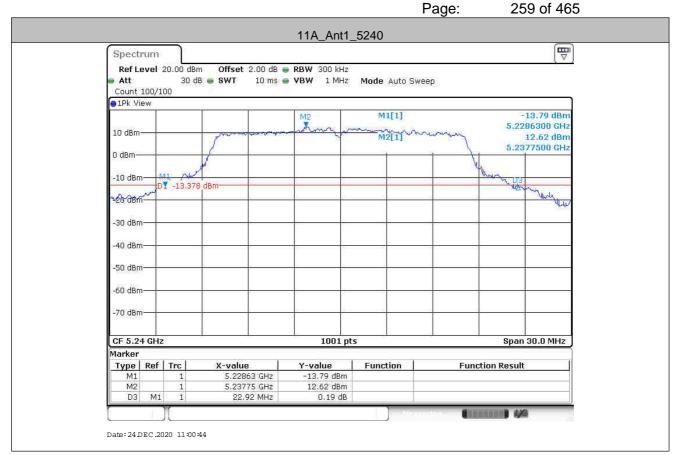
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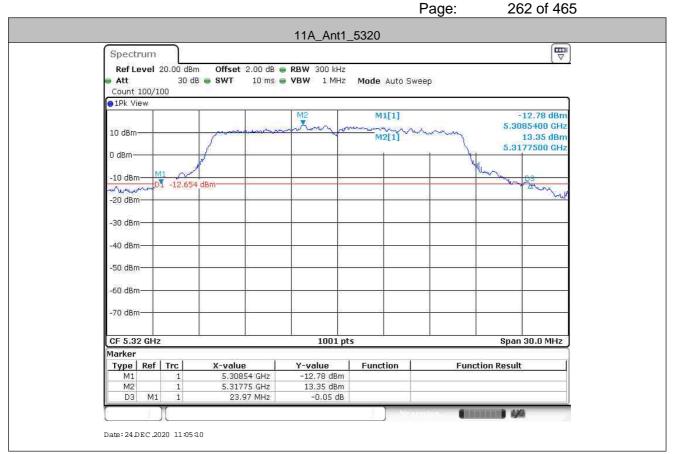
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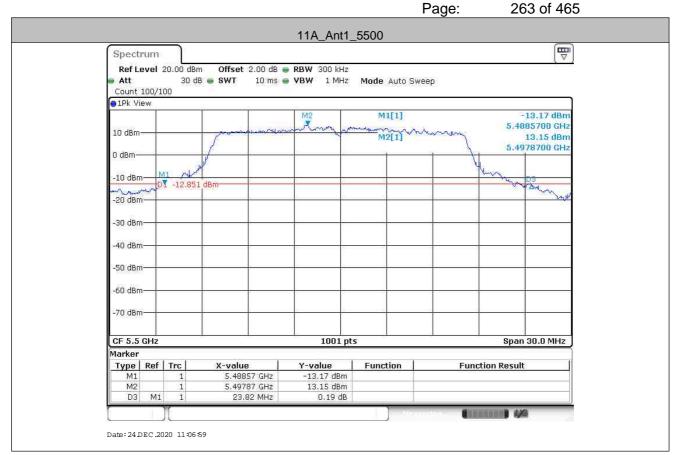
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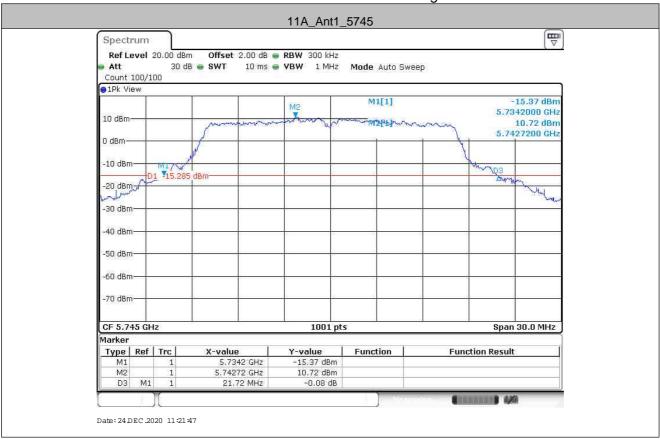






Report No.: AR/2020/C000405

266 of 465 Page:







Report No.: AR/2020/C000405







Report No.: AR/2020/C000405

268 of 465 Page:







Report No.: AR/2020/C000405







Report No.: AR/2020/C000405







Report No.: AR/2020/C000405







Report No.: AR/2020/C000405







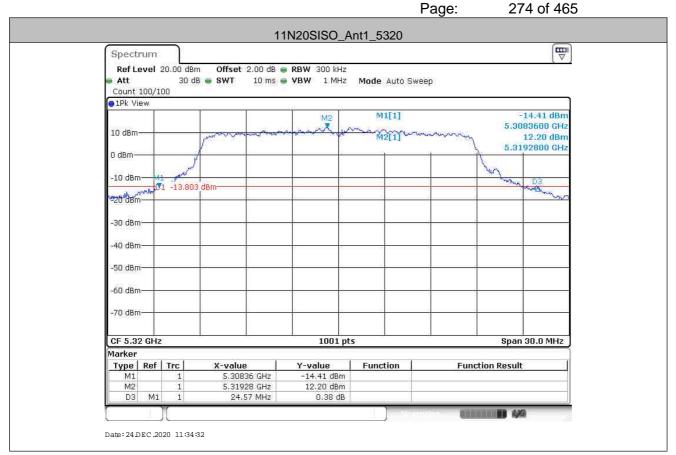
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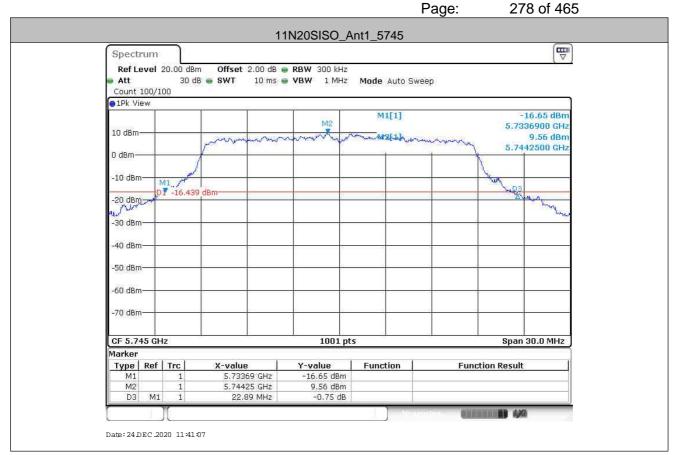
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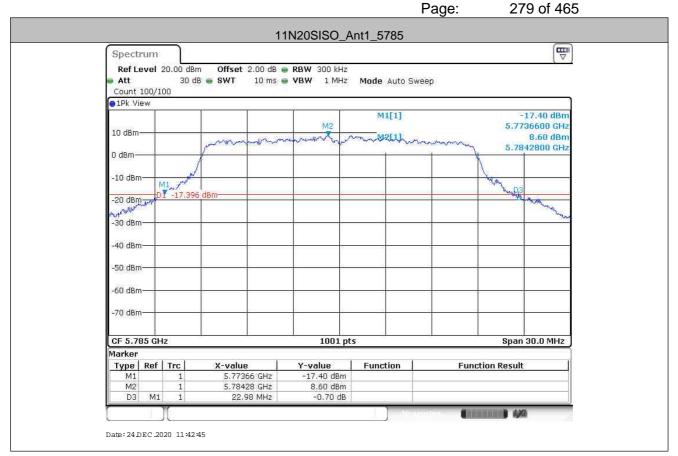
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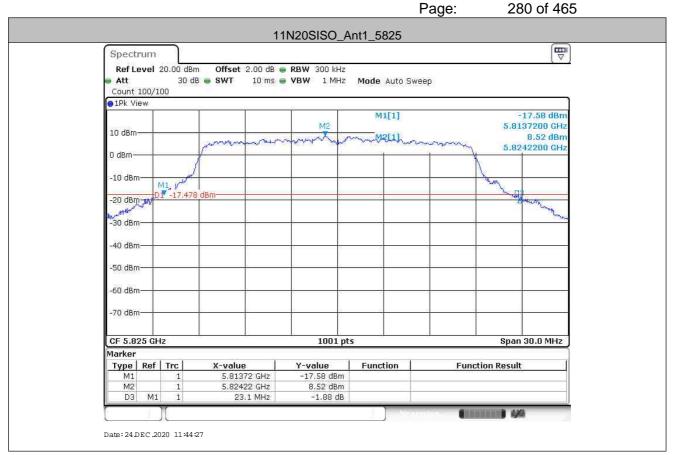
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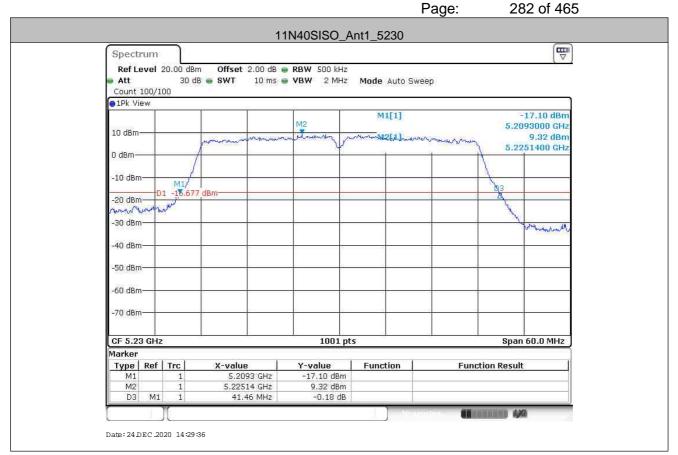
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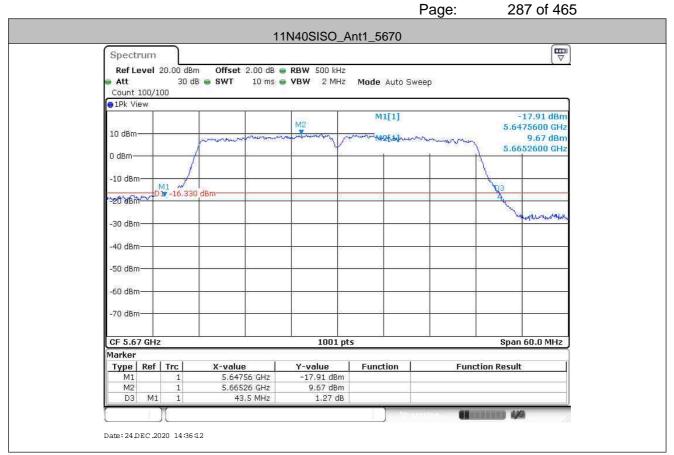
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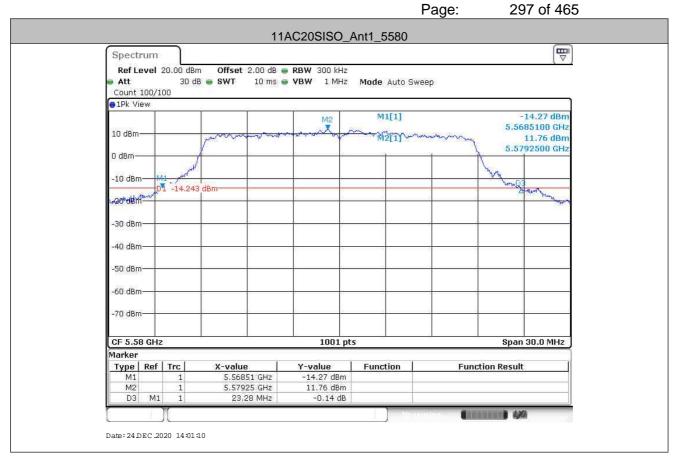
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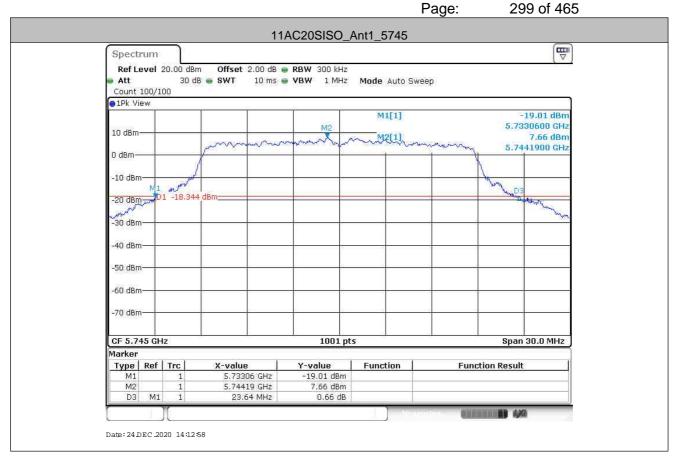
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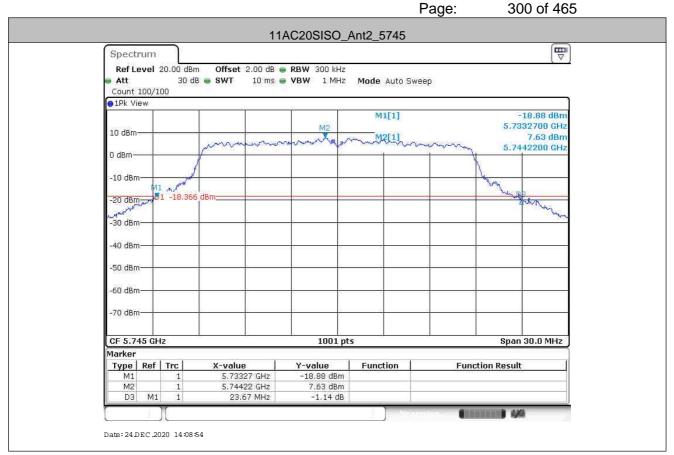
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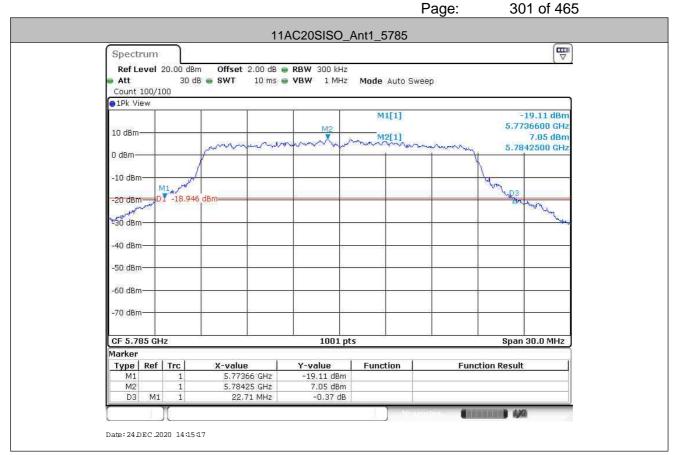
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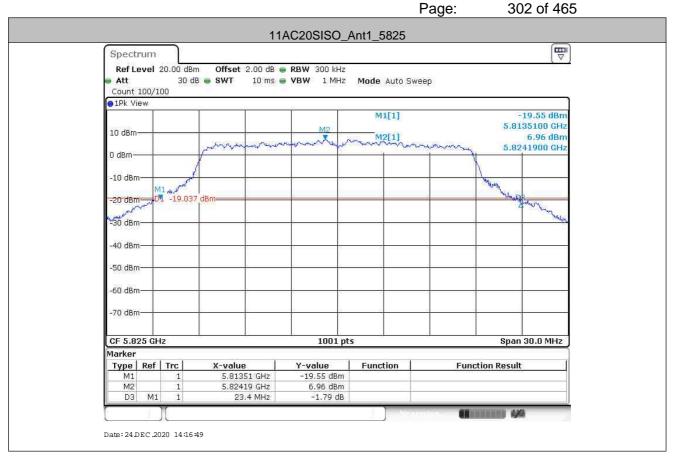
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Report No.: AR/2020/C000405







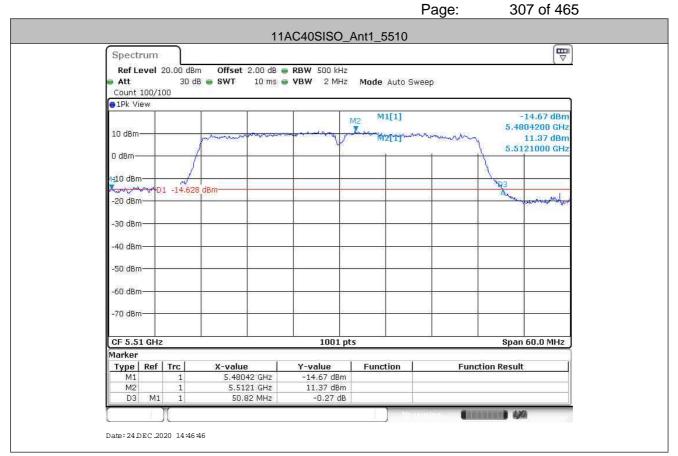
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Report No.: AR/2020/C000405







Report No.: AR/2020/C000405







Report No.: AR/2020/C000405







Report No.: AR/2020/C000405







Report No.: AR/2020/C000405

Page: 317 of 465

#### Occupied channel bandwidth

#### **Test Result**

TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5180	16.723	5171.638	5188.362		PASS
		5200	16.723	5191.638	5208.362		PASS
		5240	16.723	5231.638	5248.362		PASS
		5260	16.753	5251.608	5268.362		PASS
		5300	16.783	5291.608	5308.392		PASS
		5320	16.783	5311.608	5328.392		PASS
		5500	16.753	5491.608	5508.362		PASS
		5580	16.723	5571.608	5588.332		PASS
		5700	16.783	5691.578	5708.362		PASS
		5745	16.693	5736.608	5753.302		PASS
		5785	16.663	5776.638	5793.302		PASS
		5825	16.693	5816.608	5833.302		PASS
		5180	17.892	5171.069	5188.961		PASS
11N20SISO	Ant1	5200	17.892	5191.069	5208.961		PASS
		5240	17.892	5231.069	5248.961		PASS
		5260	17.892	5251.069	5268.961		PASS
		5300	17.892	5291.099	5308.991		PASS
		5320	17.892	5311.099	5328.991		PASS
		5500	17.892	5491.069	5508.961		PASS
		5580	17.892	5571.069	5588.961		PASS
		5700	17.922	5691.039	5708.961		PASS
		5745	17.832	5736.069	5753.901		PASS
		5785	17.862	5776.069	5793.931		PASS
		5825	17.832	5816.069	5833.901		PASS
11N40SISO	Ant1	5190	36.324	5171.838	5208.162		PASS
		5230	36.384	5211.838	5248.222		PASS
		5270	36.324	5251.898	5288.222		PASS
		5310	36.384	5291.838	5328.222		PASS
		5510	36.324	5491.838	5528.162		PASS





Report No.: AR/2020/C000405 Page: 318 of 465

				Page: 318 01 465				
		5550	36.384	5531.778	5568.162		PASS	
		5670	36.384	5651.778	5688.162		PASS	
		5755	36.384	5736.778	5773.162		PASS	
		5795	36.324	5776.838	5813.162		PASS	
	Ant1	5180	17.892	5171.069	5188.961		PASS	
		5200	17.892	5191.069	5208.961		PASS	
		5240	17.892	5231.069	5248.961		PASS	
		5260	17.892	5251.069	5268.961		PASS	
		5300	17.922	5291.069	5308.991		PASS	
		5320	17.922	5311.069	5328.991		PASS	
11AC20SISO		5500	17.892	5491.069	5508.961		PASS	
		5580	17.892	5571.069	5588.961		PASS	
		5700	17.922	5691.039	5708.961		PASS	
		5745	17.892	5736.039	5753.931		PASS	
		5745	17.892	5736.039	5753.931		PASS	
		5785	17.832	5776.069	5793.901		PASS	
		5825	17.862	5816.069	5833.931		PASS	
	Ant1	5190	36.324	5171.838	5208.162		PASS	
		5230	36.324	5211.838	5248.162		PASS	
11AC40SISO		5270	36.384	5251.838	5288.222		PASS	
		5310	36.384	5291.838	5328.222		PASS	
		5510	36.384	5491.778	5528.162		PASS	
		5550	36.384	5531.778	5568.162		PASS	
		5670	36.384	5651.778	5688.162		PASS	
		5755	36.384	5736.778	5773.162		PASS	
		5795	36.384	5776.778	5813.162		PASS	
11AC80SISO	Ant1	5210	75.644	5172.238	5247.882		PASS	
		5290	75.644	5252.238	5327.882		PASS	
		5530	75.884	5491.998	5567.882		PASS	
		5610	75.884	5571.998	5647.882		PASS	
		5775	75.764	5736.998	5812.762		PASS	





Report No.: AR/2020/C000405

319 of 465 Page:

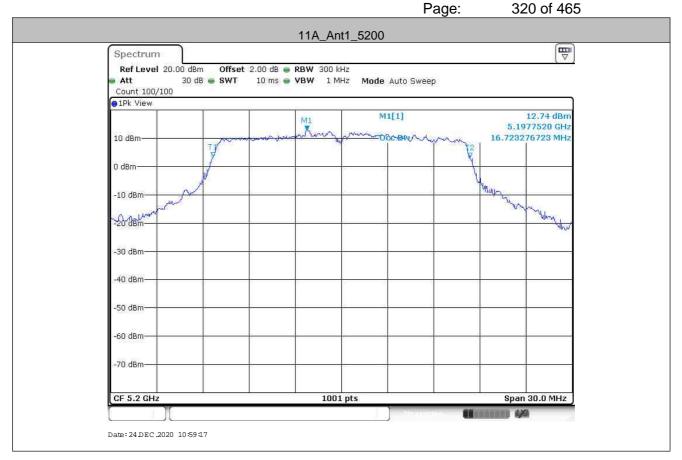
**Test Graphs** 







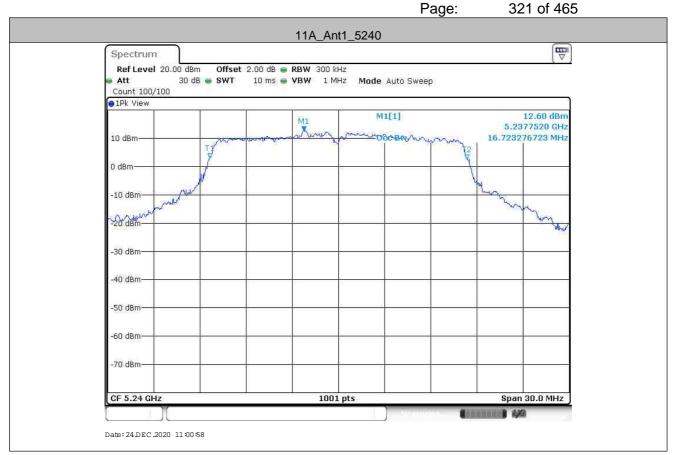
Report No.: AR/2020/C000405







Report No.: AR/2020/C000405







Report No.: AR/2020/C000405

