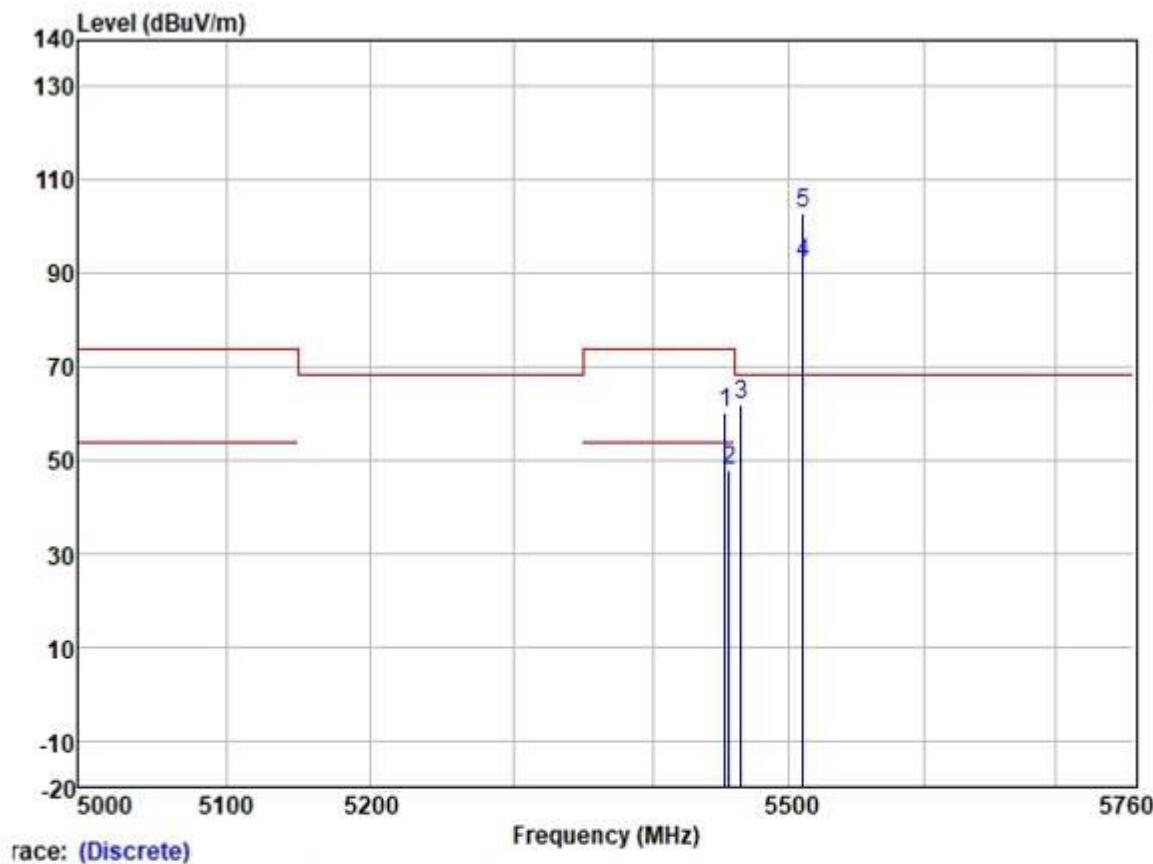


Test Mode: 17; Polarity: Horizontal; Modulation:802.11ac; Bandwidth:40MHz; Channel:Low



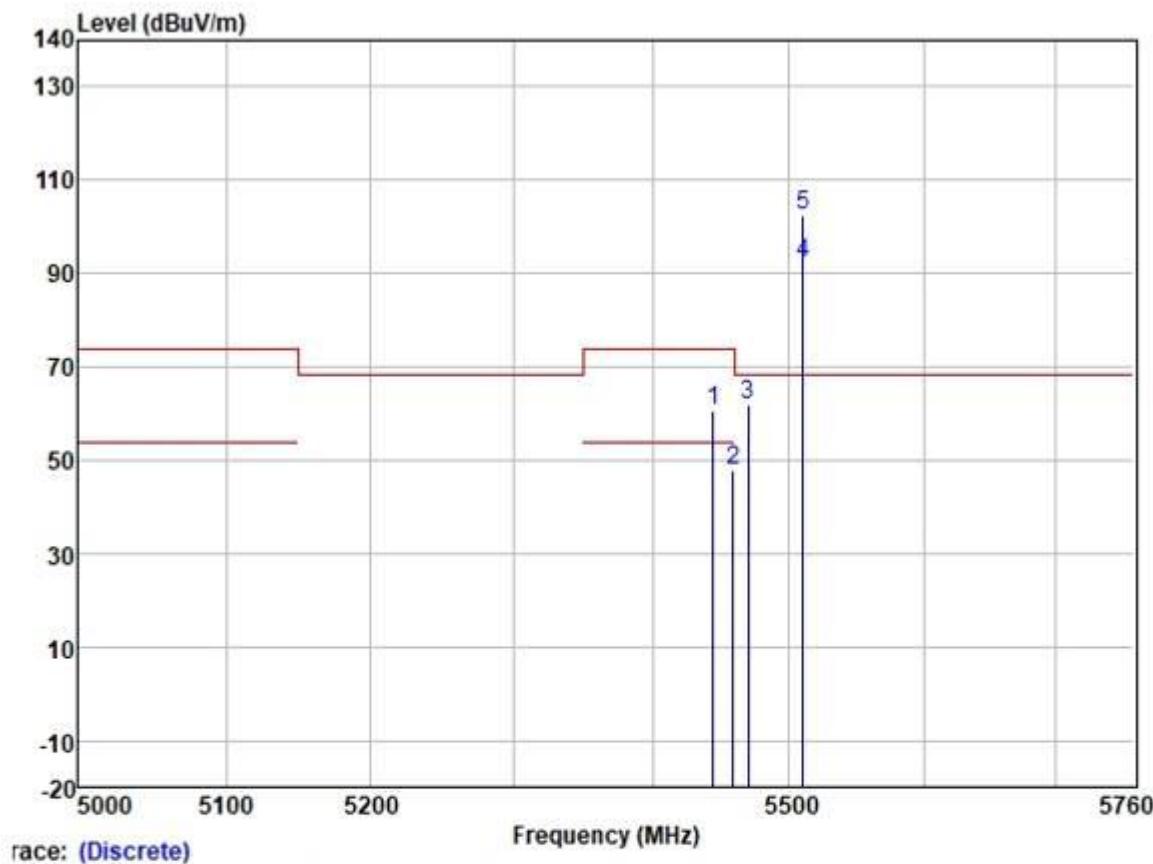
Freq	ReadAntenna		Cable		Preamp	Limit	Over	Line	Limit	Pol/Phase	Remark
	Level	Factor	Loss	Factor							
MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB				
1 5452.918	59.16	31.79	6.26	36.88	60.33	74.00	-13.67	HORIZONTAL	Peak		
2 5455.850	46.88	31.79	6.26	36.88	48.05	54.00	-5.95	HORIZONTAL	Average		
3 5464.654	60.64	31.80	6.31	36.88	61.87	68.20	-6.33	HORIZONTAL	Peak		
4 5510.000	90.94	31.80	6.40	36.88	92.26	-----	-----	HORIZONTAL	Average		
5 * 5510.000	101.66	31.80	6.40	36.88	102.98	68.20	34.78	HORIZONTAL	Peak		

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Test Mode: 17; Polarity: Vertical; Modulation:802.11ac; Bandwidth:40MHz; Channel:Low

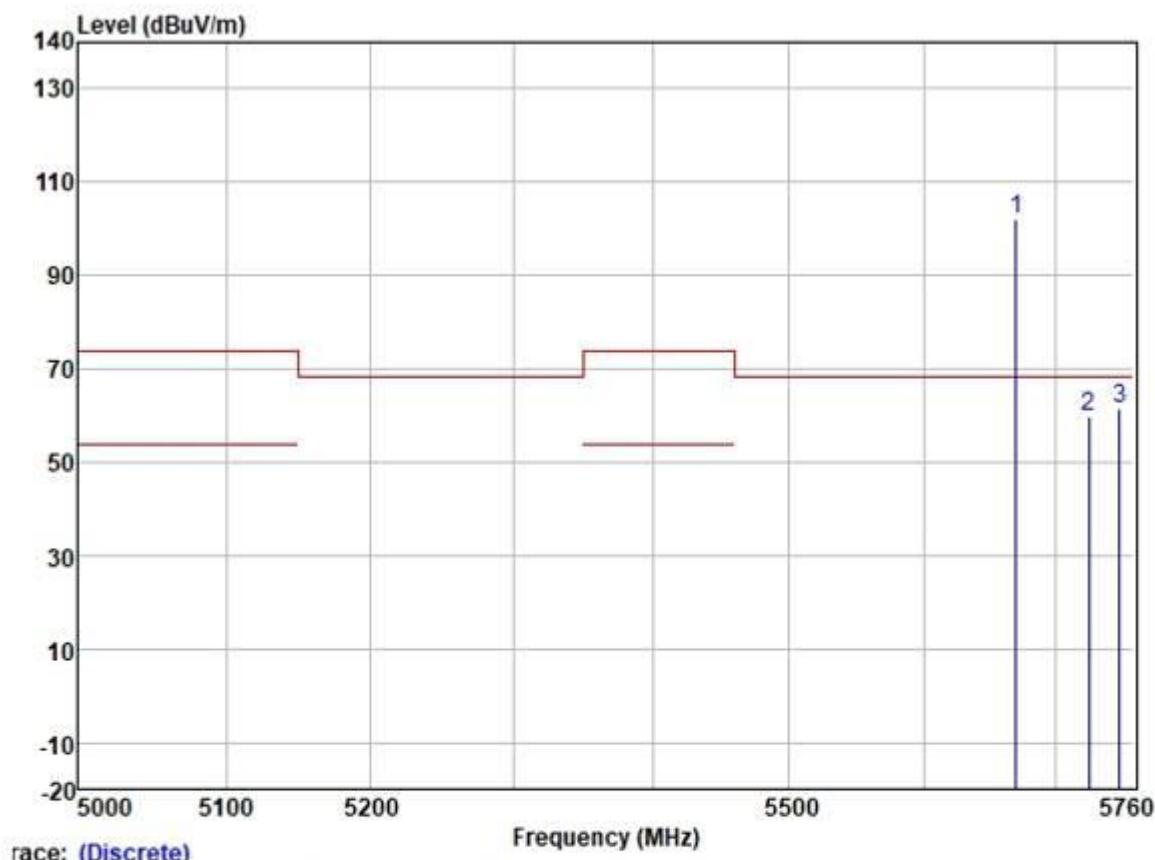


Race: (Discrete)	ReadAntenna		Cable		Preamp	Limit	Over	Limit	Pol/Phase	Remark
	Freq	Level	Factor	Loss						
	MHz	dBuV	dB/m		dB	dBuV/m	dBuV/m			
1	5443.854	59.39	31.79	6.20	36.88	60.50	74.00	-13.50	VERTICAL	Peak
2	5458.923	46.55	31.79	6.26	36.88	47.72	54.00	-6.28	VERTICAL	Average
3	5469.832	60.52	31.80	6.31	36.88	61.75	68.20	-6.45	VERTICAL	Peak
4	5510.000	90.91	31.80	6.40	36.88	92.23	-----	-----	VERTICAL	Average
5 *	5510.000	100.98	31.80	6.40	36.88	102.30	68.20	34.10	VERTICAL	Peak

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Test Mode: 17; Polarity: Horizontal; Modulation:802.11ac; Bandwidth:40MHz; Channel:High



Mode: (Discrete)

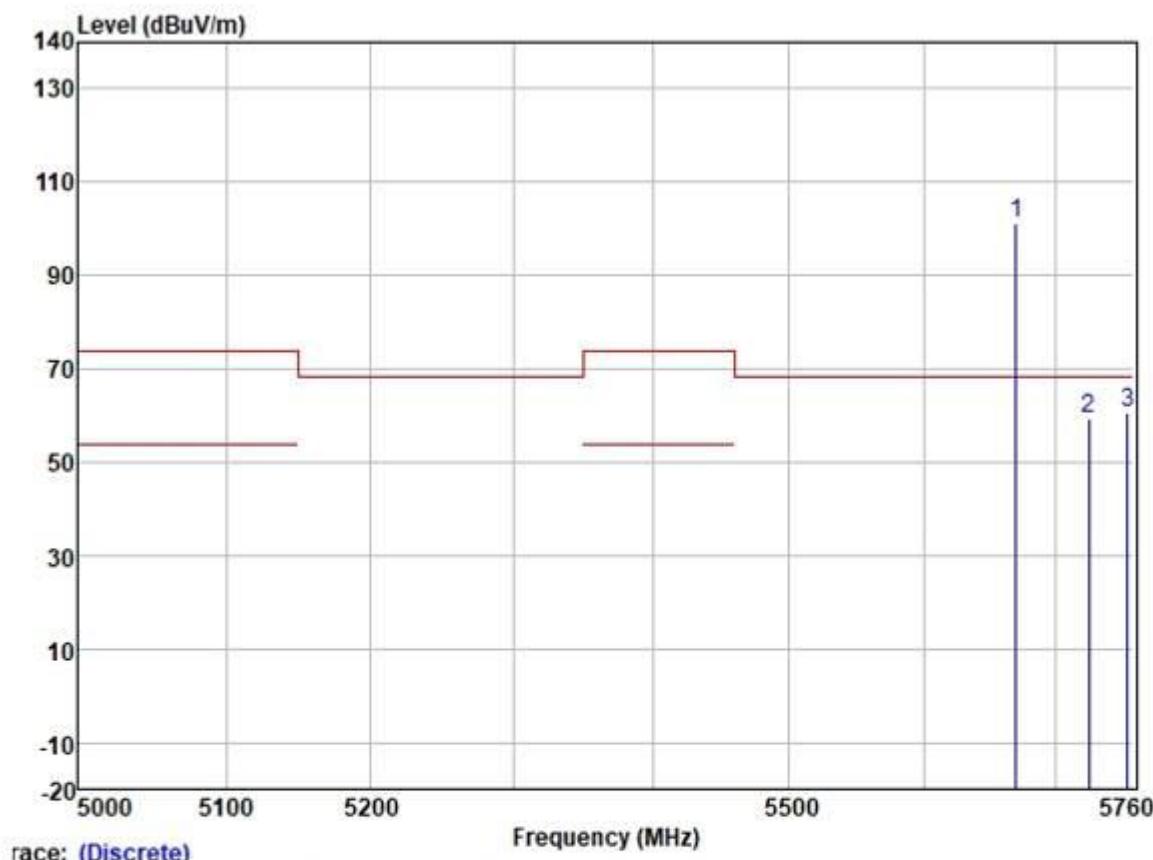
Index	Freq	ReadAntenna		Cable		Preamp	Limit	Over	Pol/Phase	Remark
		Level	Factor	Loss	Factor					
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	5670.000	100.40	31.97	6.37	36.89	101.85	68.20	33.65	HORIZONTAL	Peak
2	5725.000	58.43	32.07	6.25	36.89	59.86	68.20	-8.34	HORIZONTAL	Peak
3	5749.046	59.88	32.10	6.20	36.89	61.29	68.20	-6.91	HORIZONTAL	Peak



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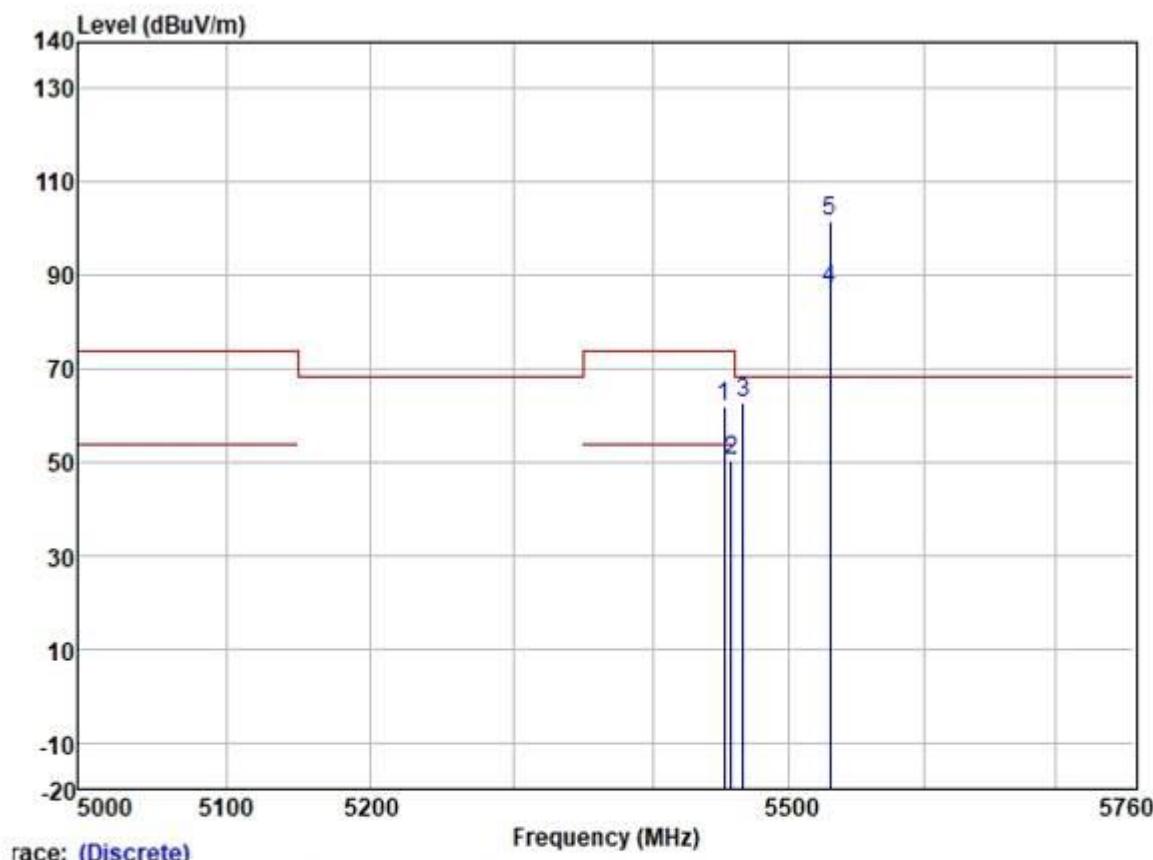
Test Mode: 17; Polarity: Vertical; Modulation:802.11ac; Bandwidth:40MHz; Channel:High



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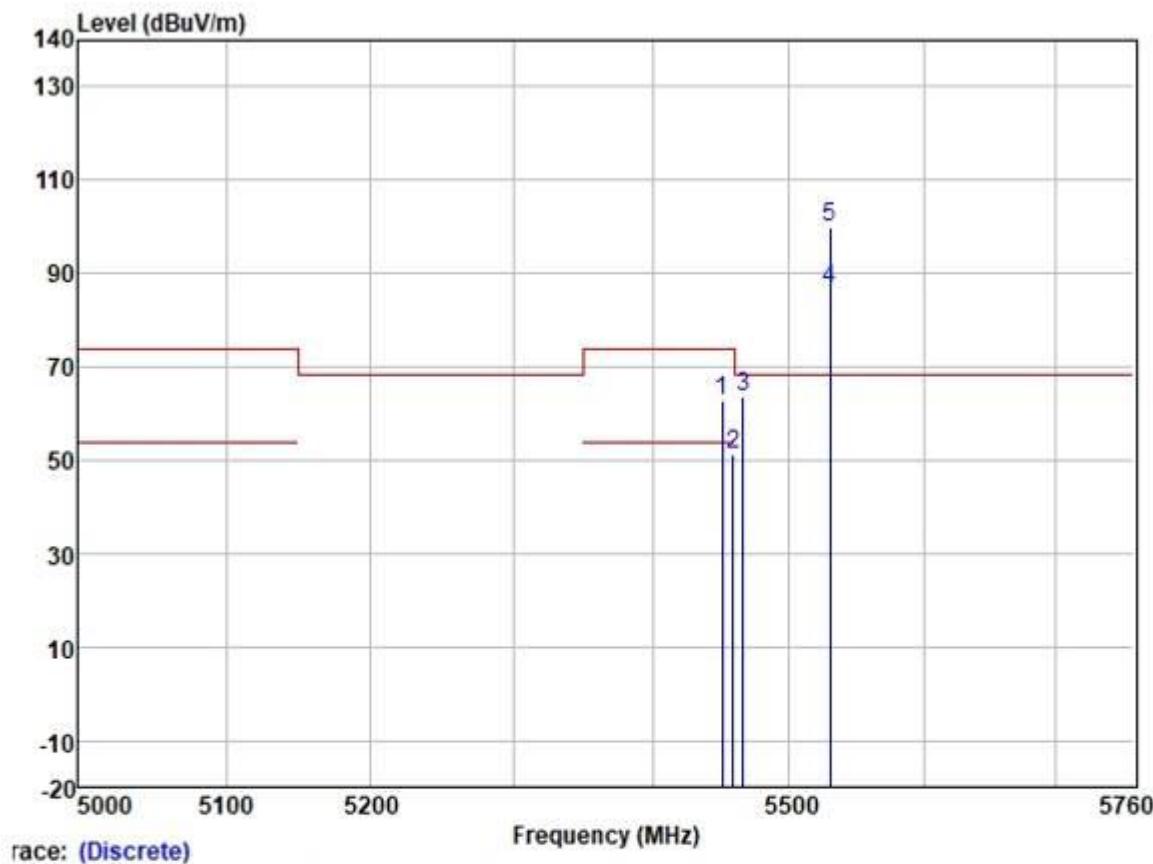
Test Mode: 17; Polarity: Horizontal; Modulation:802.11ac; Bandwidth:80MHz; Channel:Low



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Test Mode: 17; Polarity: Vertical; Modulation:802.11ac; Bandwidth:80MHz; Channel:Low



Race: (Discrete)

	Freq	ReadAntenna		Cable		Preamp	Limit	Over	Line	Limit	Pol/Phase	Remark
		MHz	dBuV	Level	Factor							
		MHz	dB	dB	dBuV/m	dBuV/m	dB					
1	5450.770	61.51	31.79	6.26	36.88	62.68	74.00	-11.32	VERTICAL		Peak	
2	5458.722	50.16	31.79	6.26	36.88	51.33	54.00	-2.67	VERTICAL		Average	
3	5466.171	62.50	31.80	6.31	36.88	63.73	68.20	-4.47	VERTICAL		Peak	
4	5530.000	85.38	31.83	6.37	36.89	86.69	-----	-----	VERTICAL		Average	
5 *	5530.000	98.40	31.83	6.37	36.89	99.71	68.20	31.51	VERTICAL		Peak	

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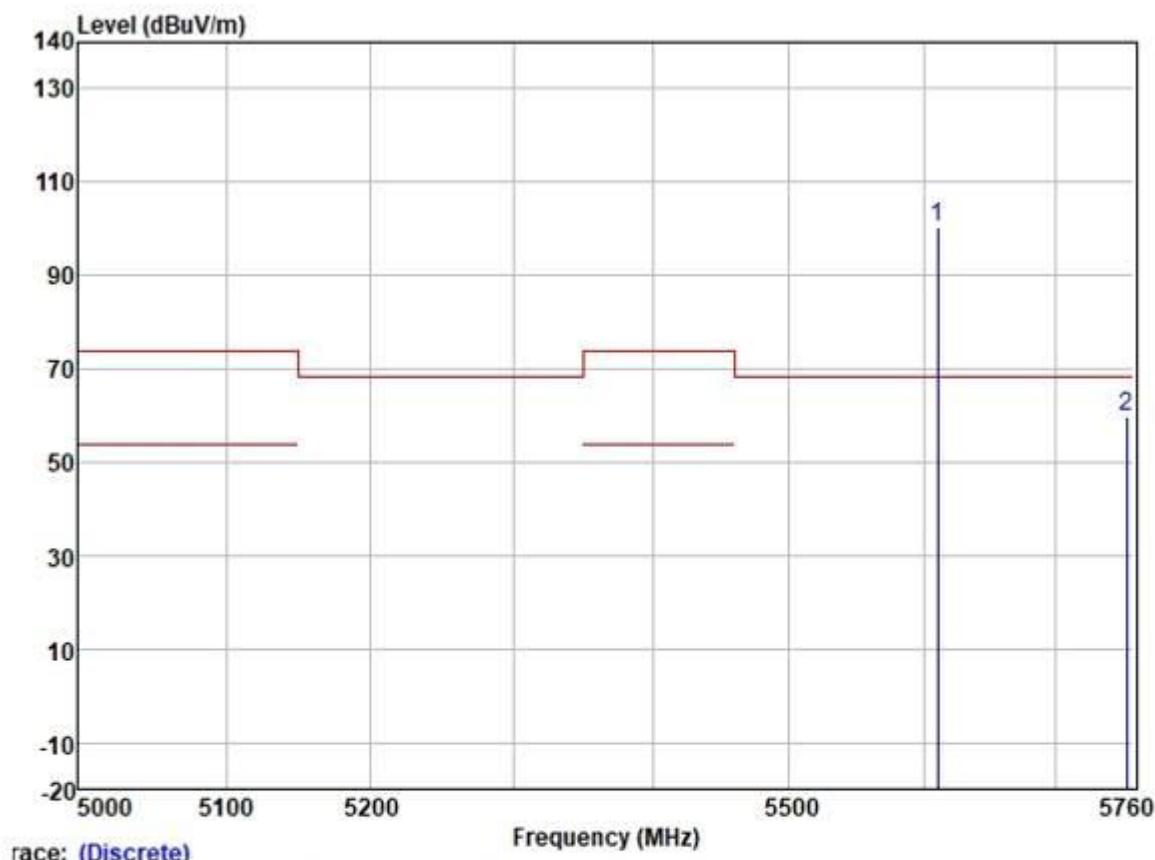
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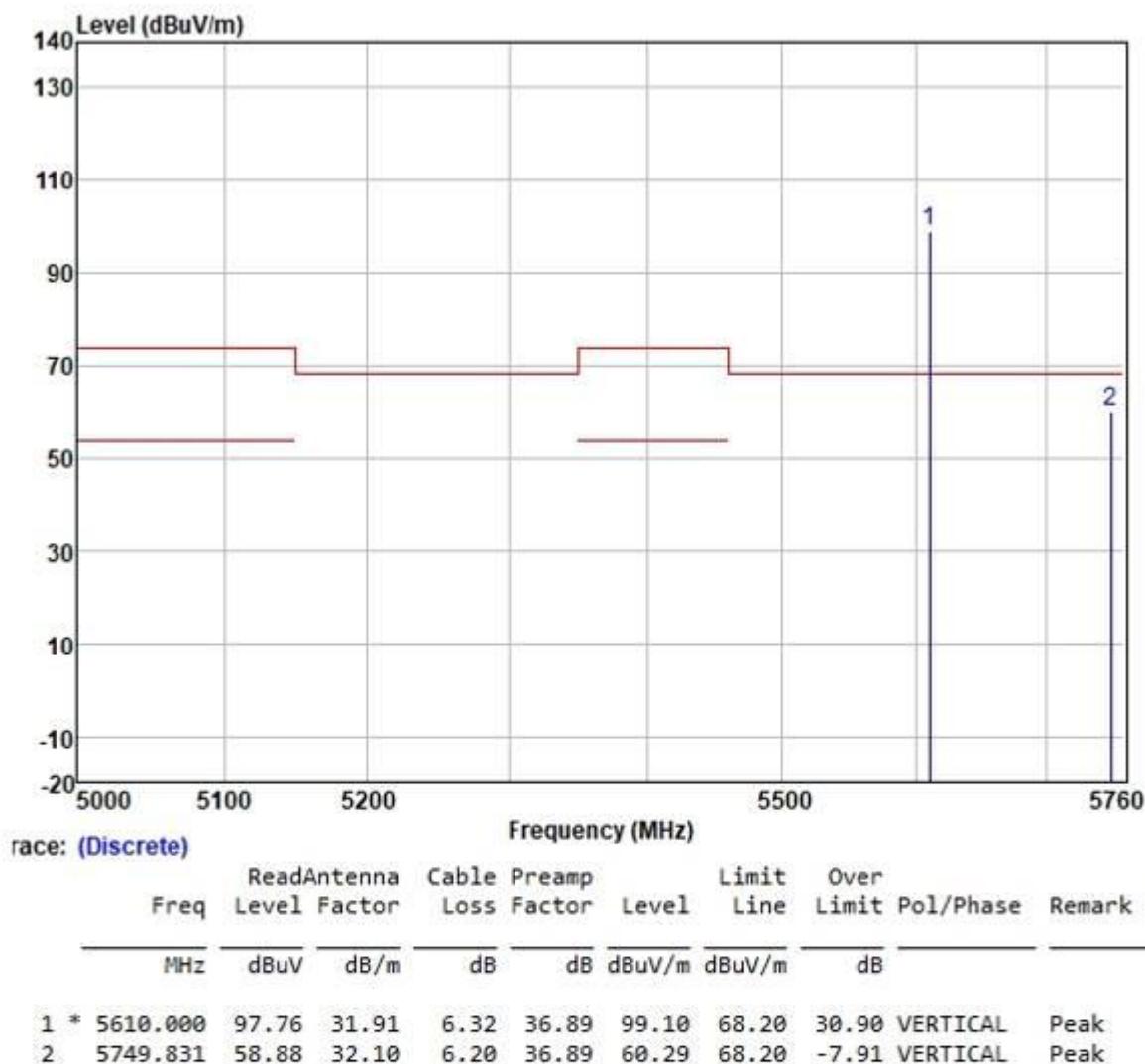
Test Mode: 17; Polarity: Horizontal; Modulation:802.11ac; Bandwidth:80MHz; Channel:High



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Test Mode: 17; Polarity: Vertical; Modulation:802.11ac; Bandwidth:80MHz; Channel:High

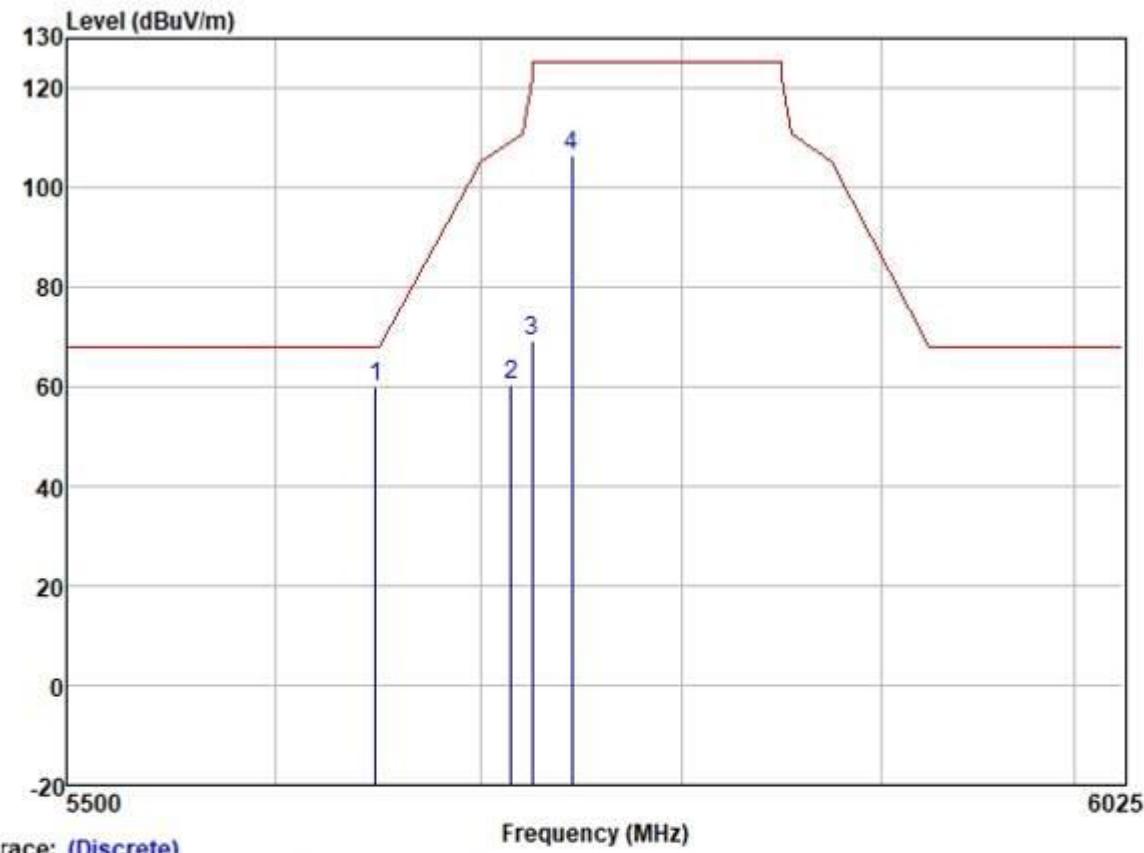


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Test Mode: 19; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:Low



Race:	Freq	ReadAntenna		Cable		Preamp	Limit	Over	Limit	Pol/Phase	Remark
		Level	Factor	Loss	Factor						
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB			
1	5648.165	58.54	31.95	6.35	36.89	59.95	68.20	-8.25	HORIZONTAL	Peak	
2	5715.000	58.79	32.04	6.33	36.89	60.27	109.40	-49.13	HORIZONTAL	Peak	
3	5725.000	67.68	32.07	6.25	36.89	69.11	122.20	-53.09	HORIZONTAL	Peak	
4	5745.000	105.06	32.10	6.20	36.89	106.47	125.20	-18.73	HORIZONTAL	Peak	

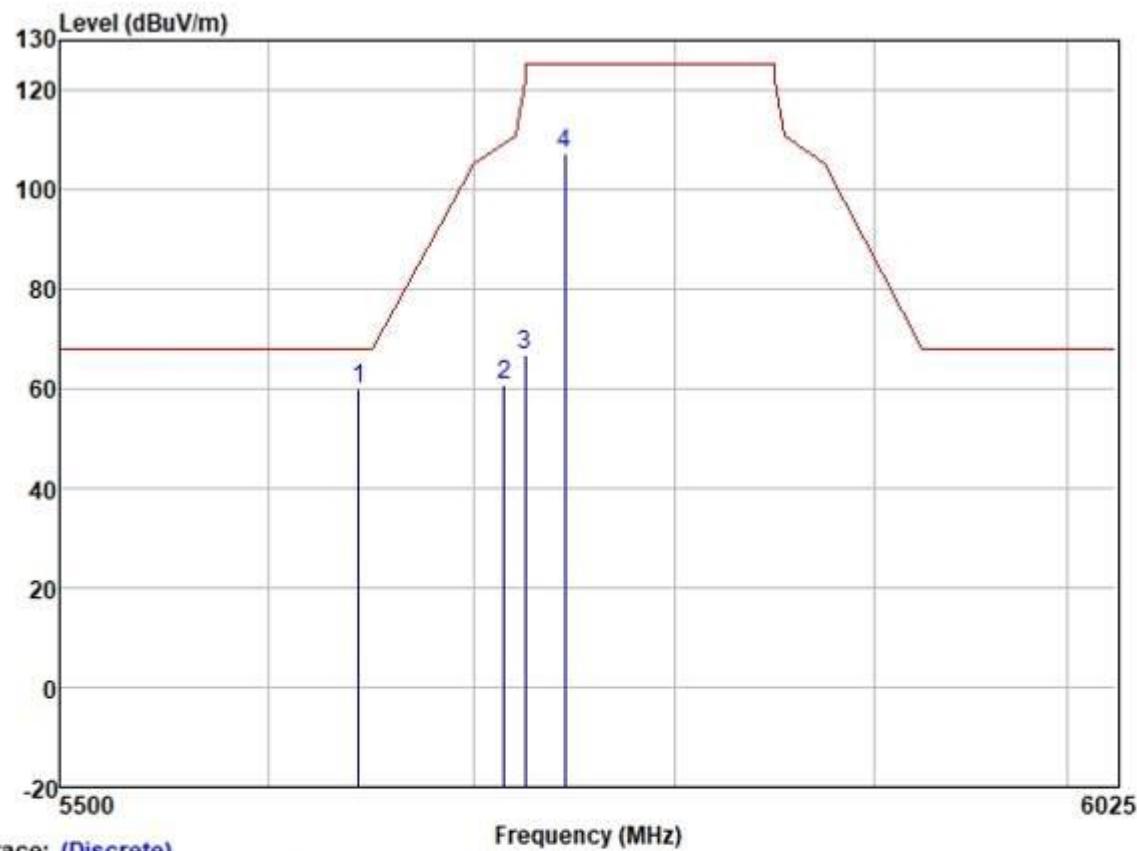
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Test Mode: 19; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:Low



Race: (Discrete)

Freq	ReadAntenna		Cable		Preamp	Limit	Over	Limit	Pol/Phase	Remark
	MHz	dBuV	Level	Factor						
1	5643.458	58.76	31.95	6.35	36.89	60.17	68.20	-8.03	VERTICAL	Peak
2	5715.000	59.13	32.04	6.33	36.89	60.61	109.40	-48.79	VERTICAL	Peak
3	5725.000	65.31	32.07	6.25	36.89	66.74	122.20	-55.46	VERTICAL	Peak
4	5745.000	105.63	32.10	6.20	36.89	107.04	125.20	-18.16	VERTICAL	Peak

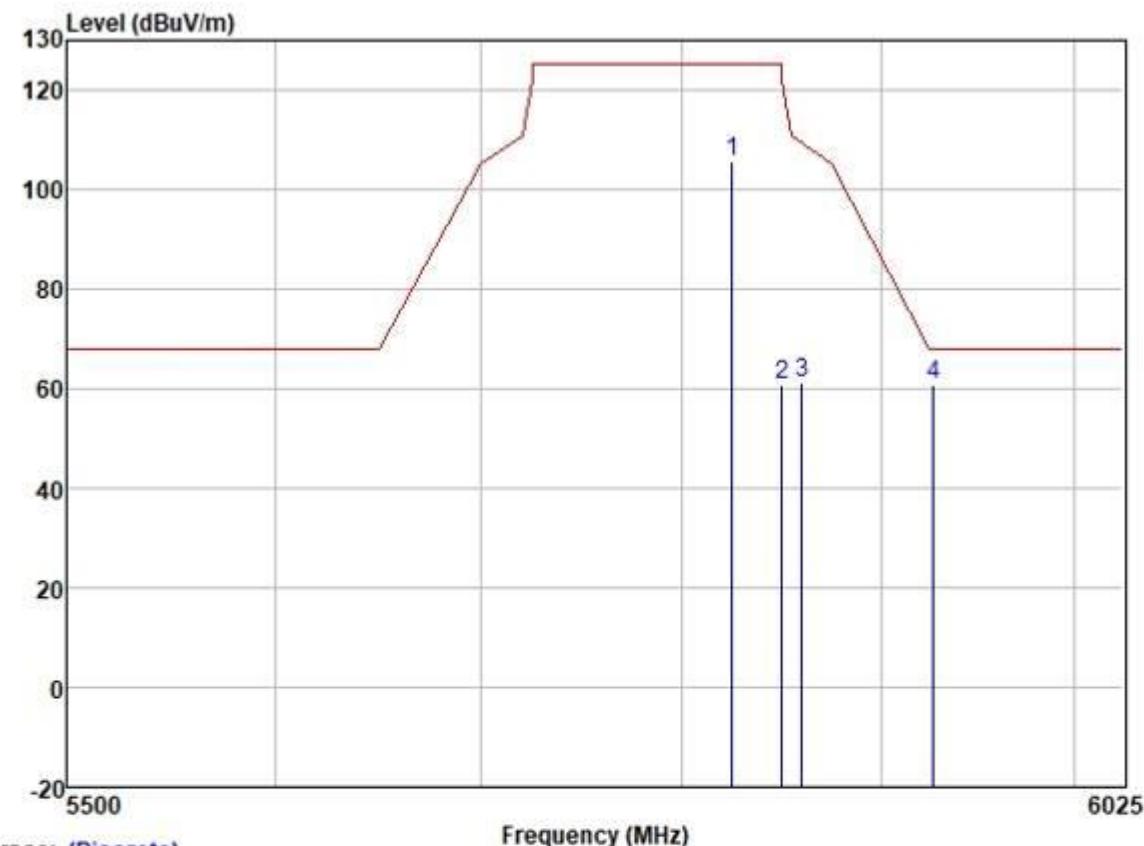
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Test Mode: 19; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:High



Race: (Discrete)

Freq	ReadAntenna		Cable		Preamp	Loss Factor	Level	Limit	Line	Over	Limit	Pol/Phase	Remark
	MHz	dBuV	Level	Factor									
1	5825.000	104.20	32.23	32.23	6.04	36.90	105.57	125.20	-19.63	HORIZONTAL	Peak		
2	5850.000	59.40	32.25	32.25	6.00	36.90	60.75	122.20	-61.45	HORIZONTAL	Peak		
3	5860.000	60.00	32.27	32.27	5.96	36.90	61.33	109.40	-48.07	HORIZONTAL	Peak		
4	5926.966	59.49	32.34	32.34	6.00	36.90	60.93	68.20	-7.27	HORIZONTAL	Peak		

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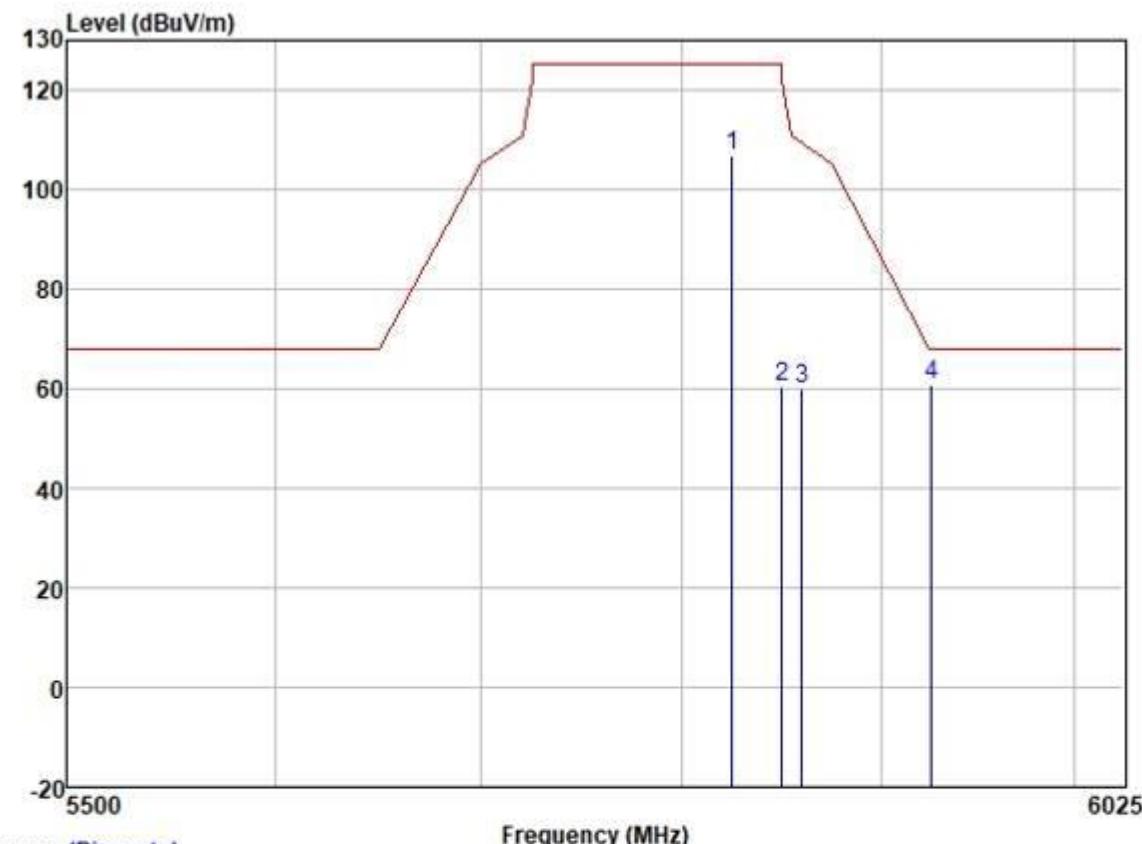
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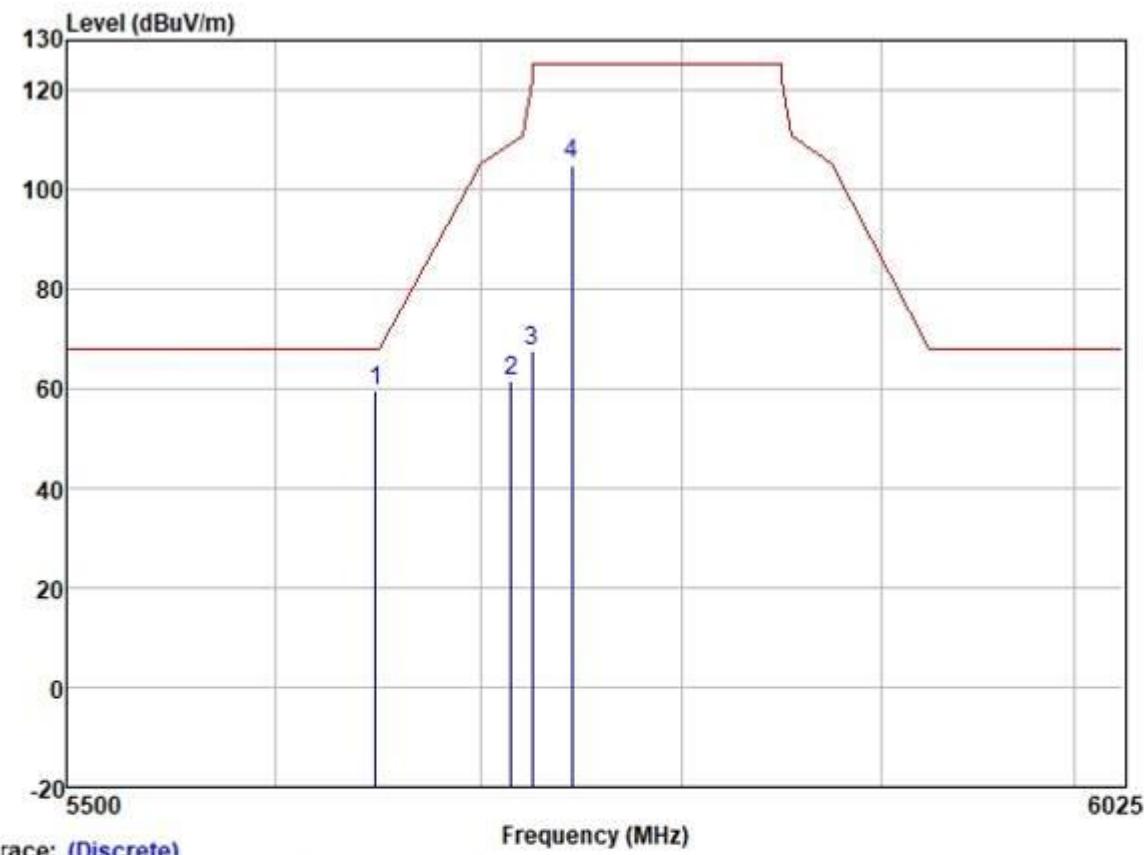
Test Mode: 19; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:High



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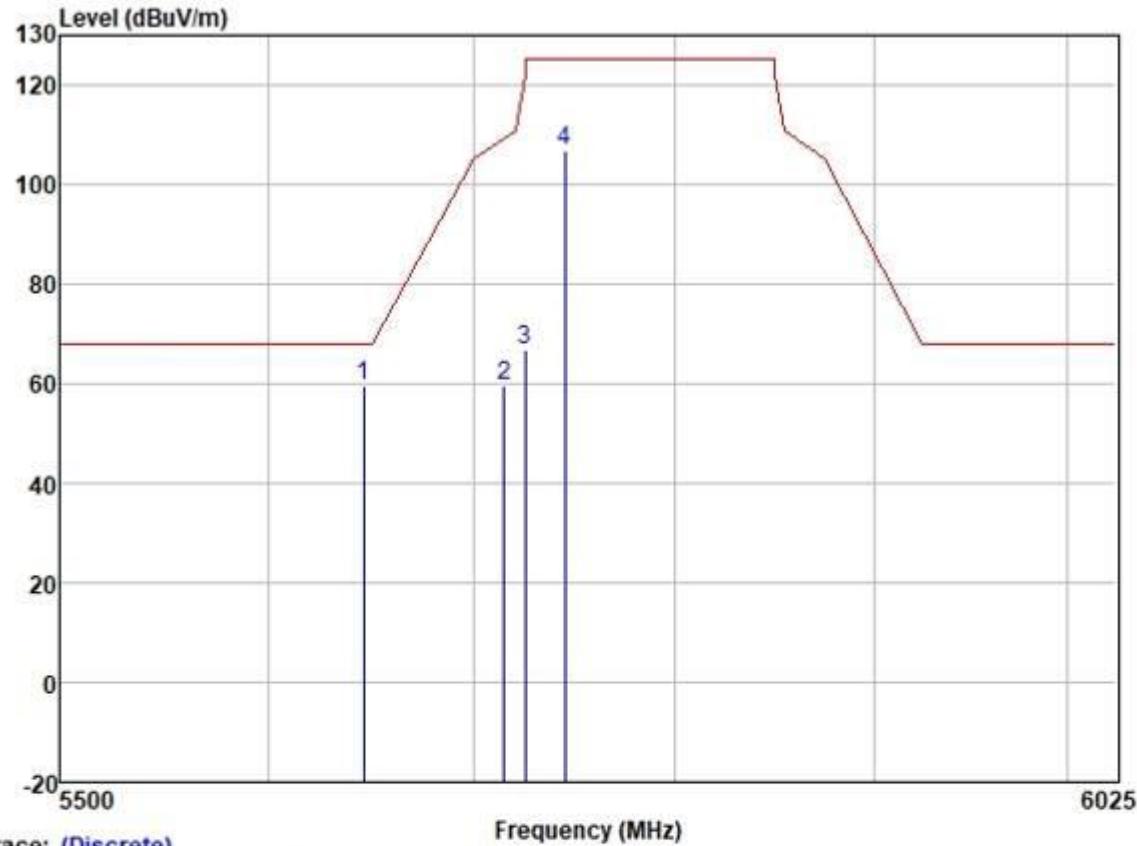
Test Mode: 19; Polarity: Horizontal; Modulation:802.11n; Bandwidth:20MHz; Channel:Low



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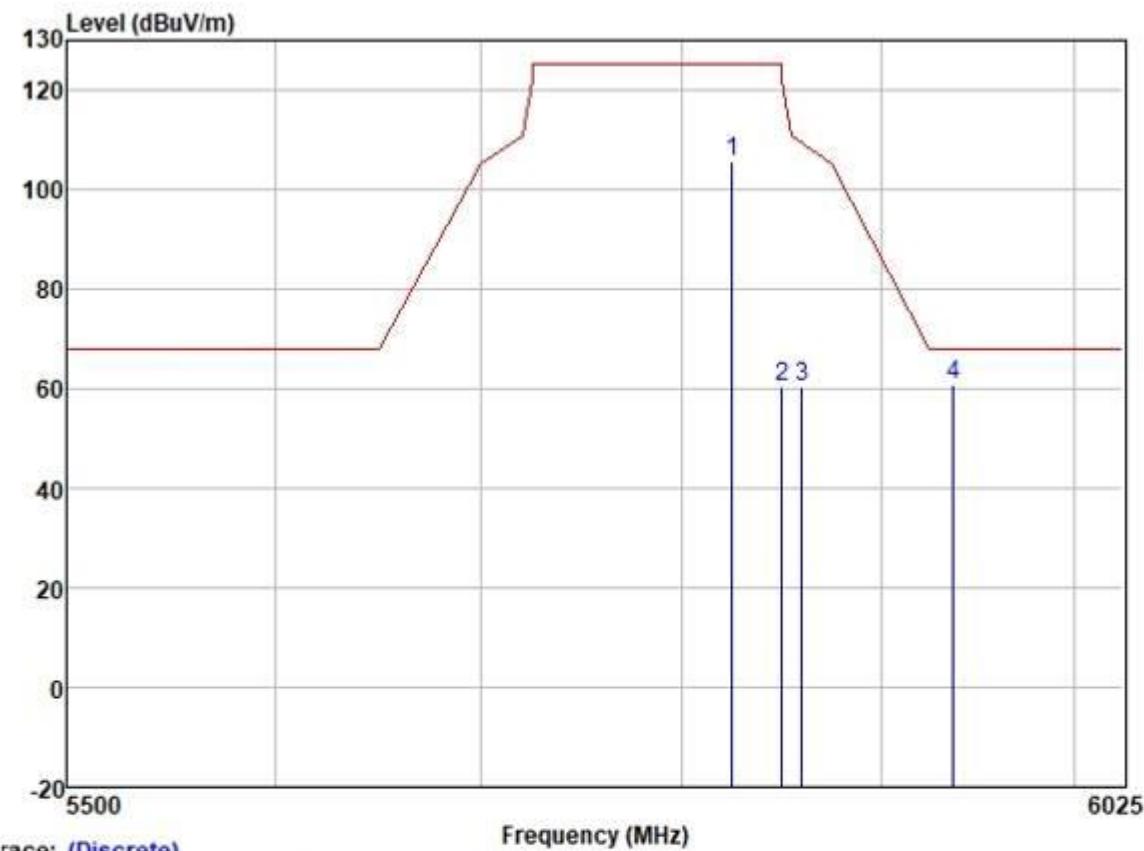
Test Mode: 19; Polarity: Vertical; Modulation:802.11n; Bandwidth:20MHz; Channel:Low



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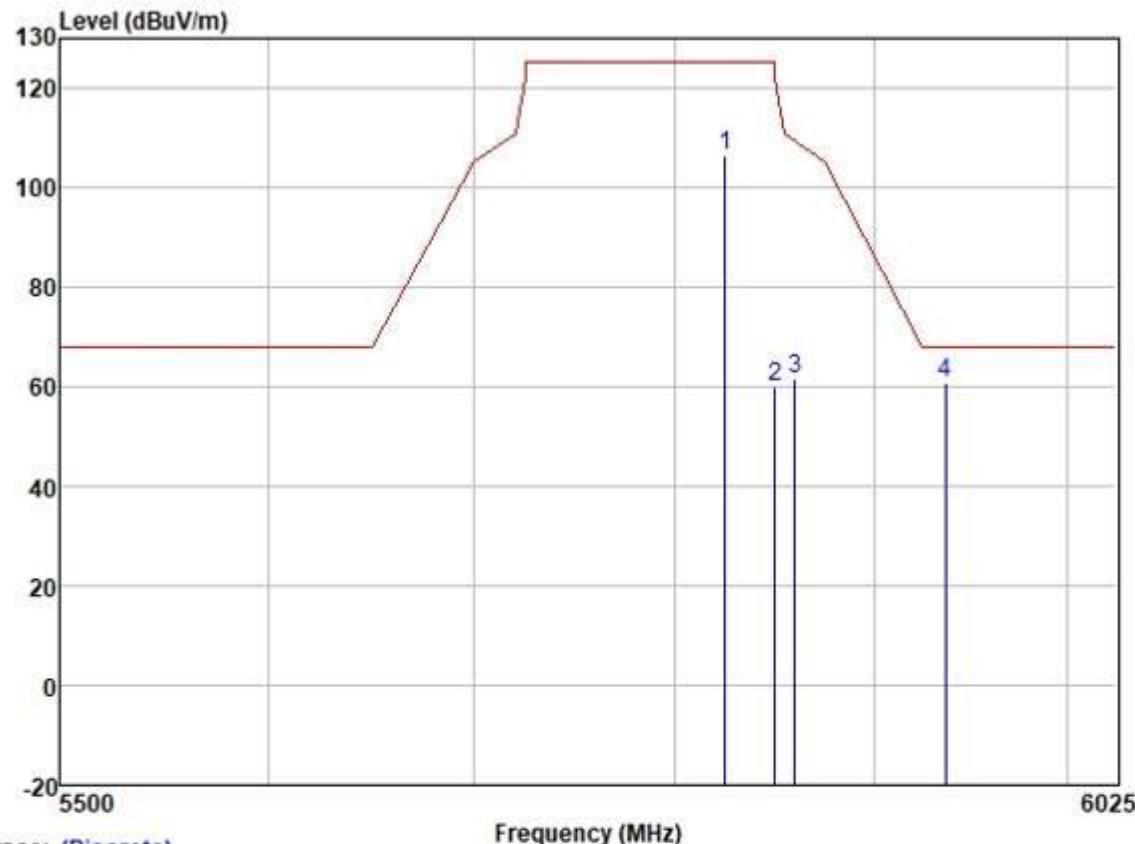
Test Mode: 19; Polarity: Horizontal; Modulation:802.11n; Bandwidth:20MHz; Channel:High



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Test Mode: 19; Polarity: Vertical; Modulation:802.11n; Bandwidth:20MHz; Channel:High



Race: (Discrete)

Freq	ReadAntenna		Cable		Preamp	Limit	Over	Limit	Pol/Phase	Remark
	MHz	dBuV	Level	Factor						
1	5825.000	105.21	32.23	6.04	36.90	106.58	125.20	-18.62	VERTICAL	Peak
2	5850.000	58.68	32.25	6.00	36.90	60.03	122.20	-62.17	VERTICAL	Peak
3	5860.000	60.23	32.27	5.96	36.90	61.56	109.40	-47.84	VERTICAL	Peak
4	5936.996	59.44	32.34	6.00	36.90	60.88	68.20	-7.32	VERTICAL	Peak

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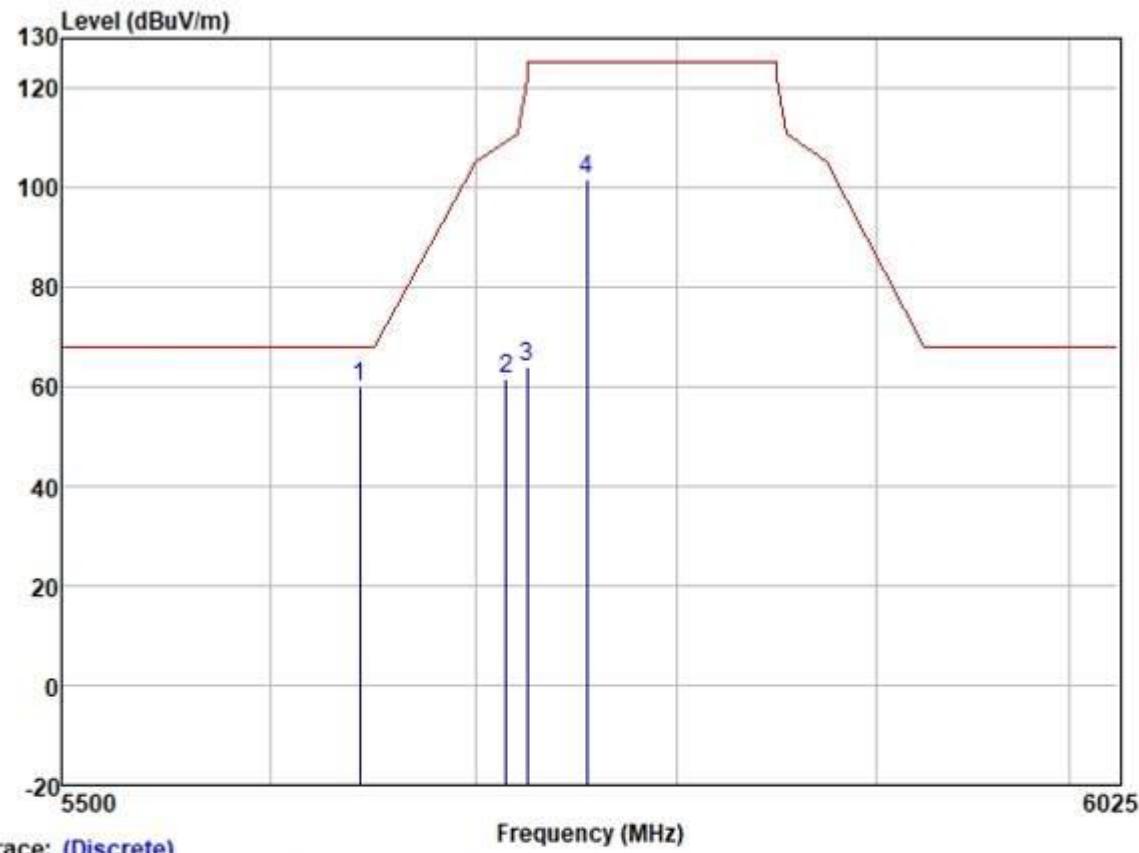
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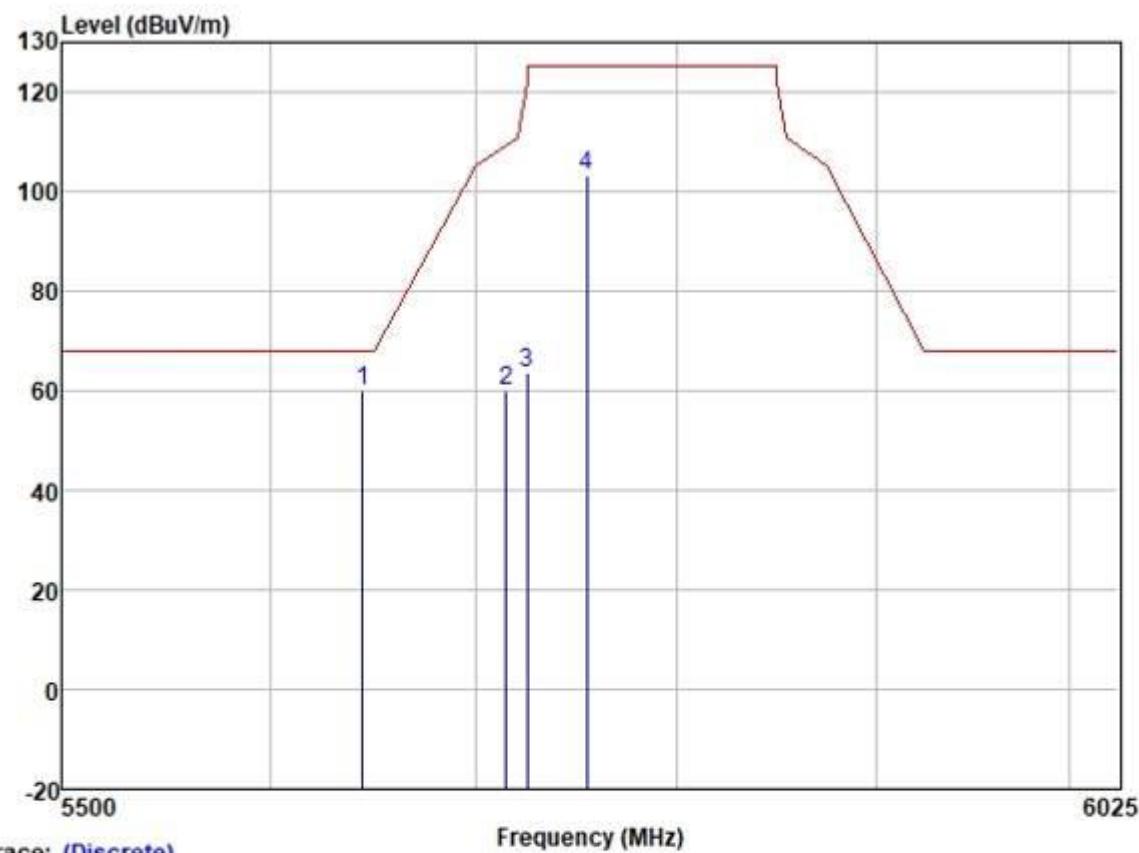
Test Mode: 19; Polarity: Horizontal; Modulation:802.11n; Bandwidth:40MHz; Channel:Low



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Test Mode: 19; Polarity: Vertical; Modulation:802.11n; Bandwidth:40MHz; Channel:Low



Race: (Discrete)

Freq	ReadAntenna		Cable		Preamp	Limit	Over	Limit	Pol/Phase	Remark
	Level	Factor	Loss	Factor						
MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB			
1 5644.589	58.74	31.95	6.35	36.89	60.15	68.20	-8.05	VERTICAL	Peak	
2 5715.000	58.53	32.04	6.33	36.89	60.01	109.40	-49.39	VERTICAL	Peak	
3 5725.000	62.26	32.07	6.25	36.89	63.69	122.20	-58.51	VERTICAL	Peak	
4 5755.000	101.74	32.10	6.20	36.89	103.15	125.20	-22.05	VERTICAL	Peak	

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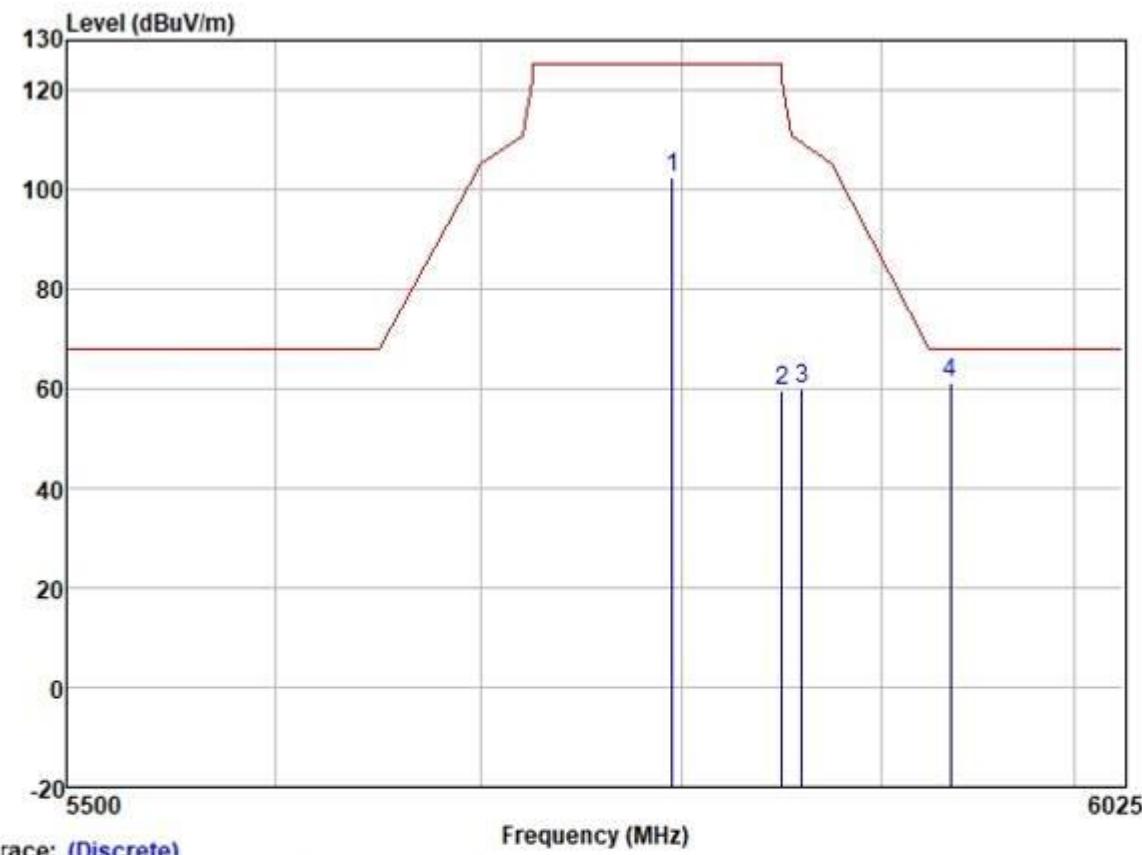
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Test Mode: 19; Polarity: Horizontal; Modulation:802.11n; Bandwidth:40MHz; Channel:High



Race: (Discrete)

Freq	ReadAntenna		Cable		Preamp	Limit	Over	Limit	Pol/Phase	Remark
	Level	Factor	Loss	Factor						
MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	dB	dB	dB
1 5795.000	100.86	32.19	6.10	36.89	102.26	125.20	-22.94	HORIZONTAL	Peak	
2 5850.000	58.30	32.25	6.00	36.90	59.65	122.20	-62.55	HORIZONTAL	Peak	
3 5860.000	58.86	32.27	5.96	36.90	60.19	109.40	-49.21	HORIZONTAL	Peak	
4 5935.649	59.82	32.34	6.00	36.90	61.26	68.20	-6.94	HORIZONTAL	Peak	

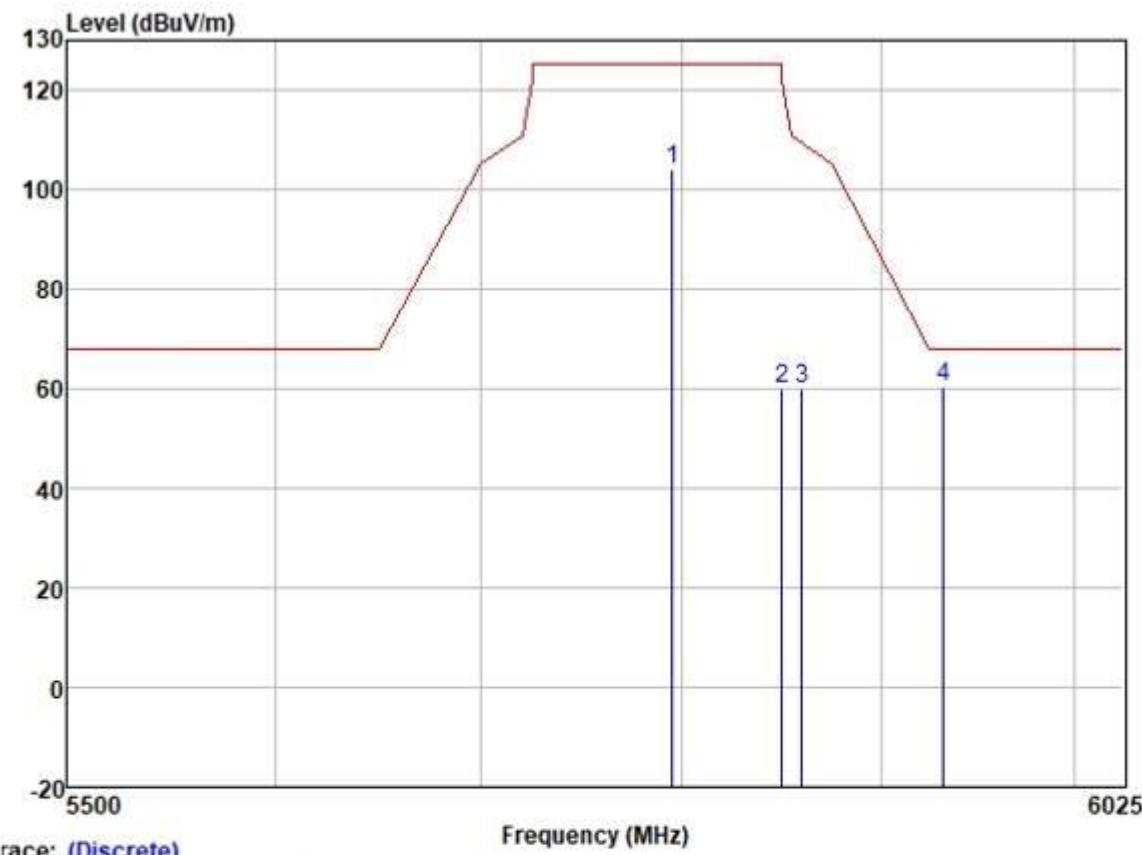
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Test Mode: 19; Polarity: Vertical; Modulation:802.11n; Bandwidth:40MHz; Channel:High



Race: (Discrete)

Freq	ReadAntenna		Cable		Preamp	Limit	Over	Limit	Pol/Phase	Remark
	Level	Factor	Loss	Factor						
MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB			
1 5795.000	102.77	32.19	6.10	36.89	104.17	125.20	-21.03	VERTICAL	Peak	
2 5850.000	58.56	32.25	6.00	36.90	59.91	122.20	-62.29	VERTICAL	Peak	
3 5860.000	58.75	32.27	5.96	36.90	60.08	109.40	-49.32	VERTICAL	Peak	
4 5932.197	59.08	32.34	6.00	36.90	60.52	68.20	-7.68	VERTICAL	Peak	

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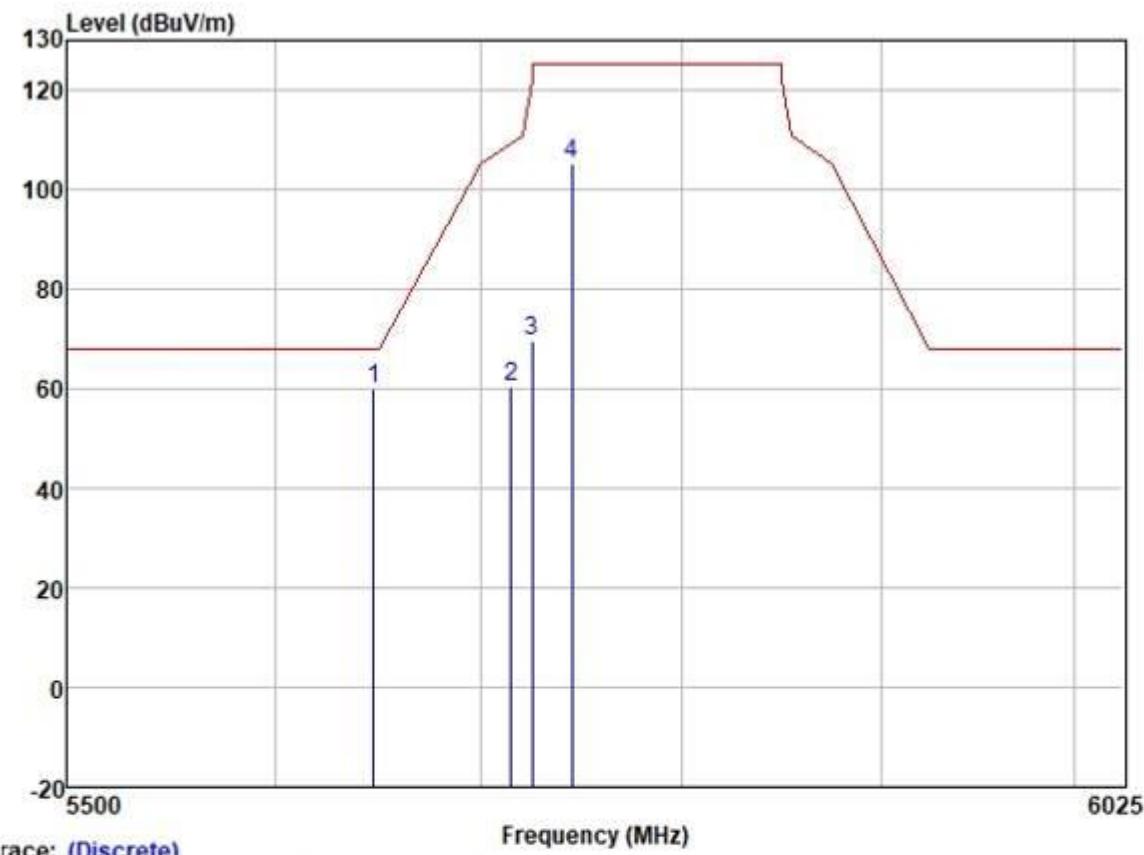
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Test Mode: 19; Polarity: Horizontal; Modulation:802.11ac; Bandwidth:20MHz; Channel:Low



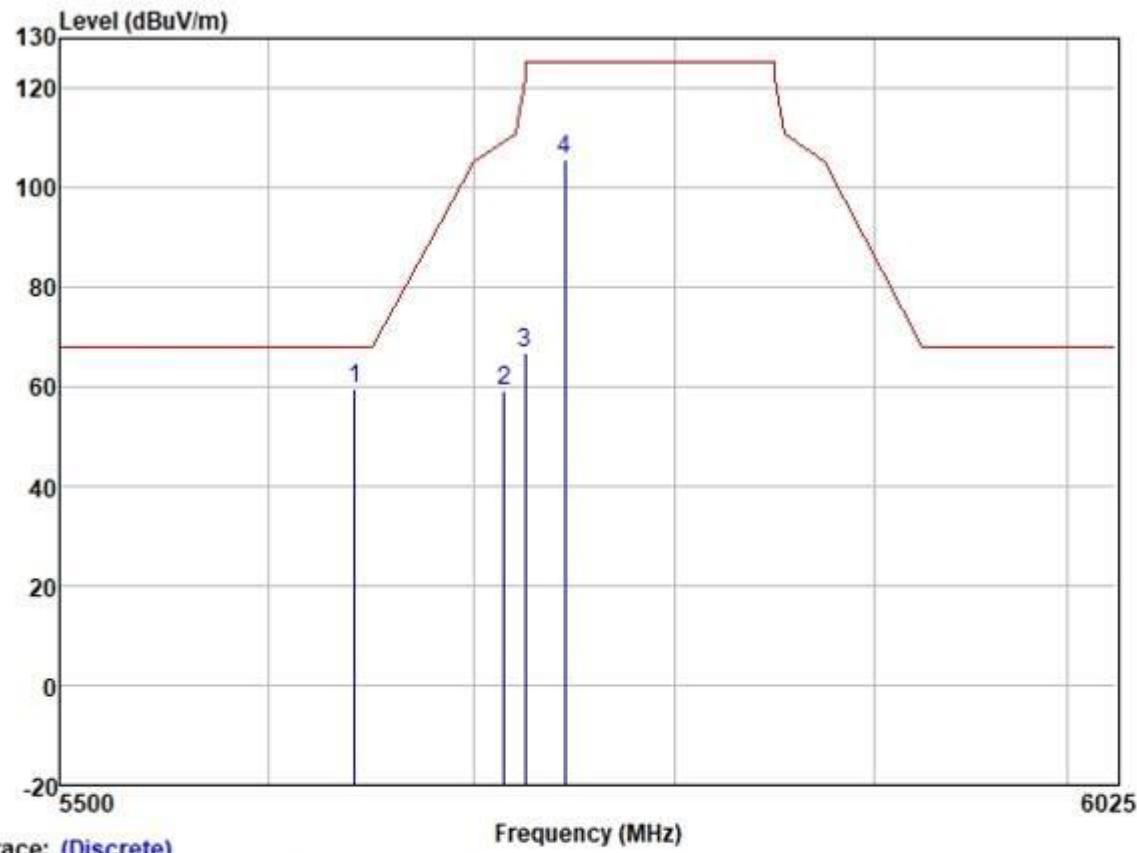
Race:	Freq	ReadAntenna		Cable		Preamp	Limit	Over	Limit	Pol/Phase	Remark
		Level	Factor	Loss	Factor						
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB			
1	5647.196	58.46	31.95	6.35	36.89	59.87	68.20	-8.33	HORIZONTAL	Peak	
2	5715.000	59.02	32.04	6.33	36.89	60.50	109.40	-48.90	HORIZONTAL	Peak	
3	5725.000	68.01	32.07	6.25	36.89	69.44	122.20	-52.76	HORIZONTAL	Peak	
4	5745.000	103.87	32.10	6.20	36.89	105.28	125.20	-19.92	HORIZONTAL	Peak	

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Test Mode: 19; Polarity: Vertical; Modulation:802.11ac; Bandwidth:20MHz; Channel:Low

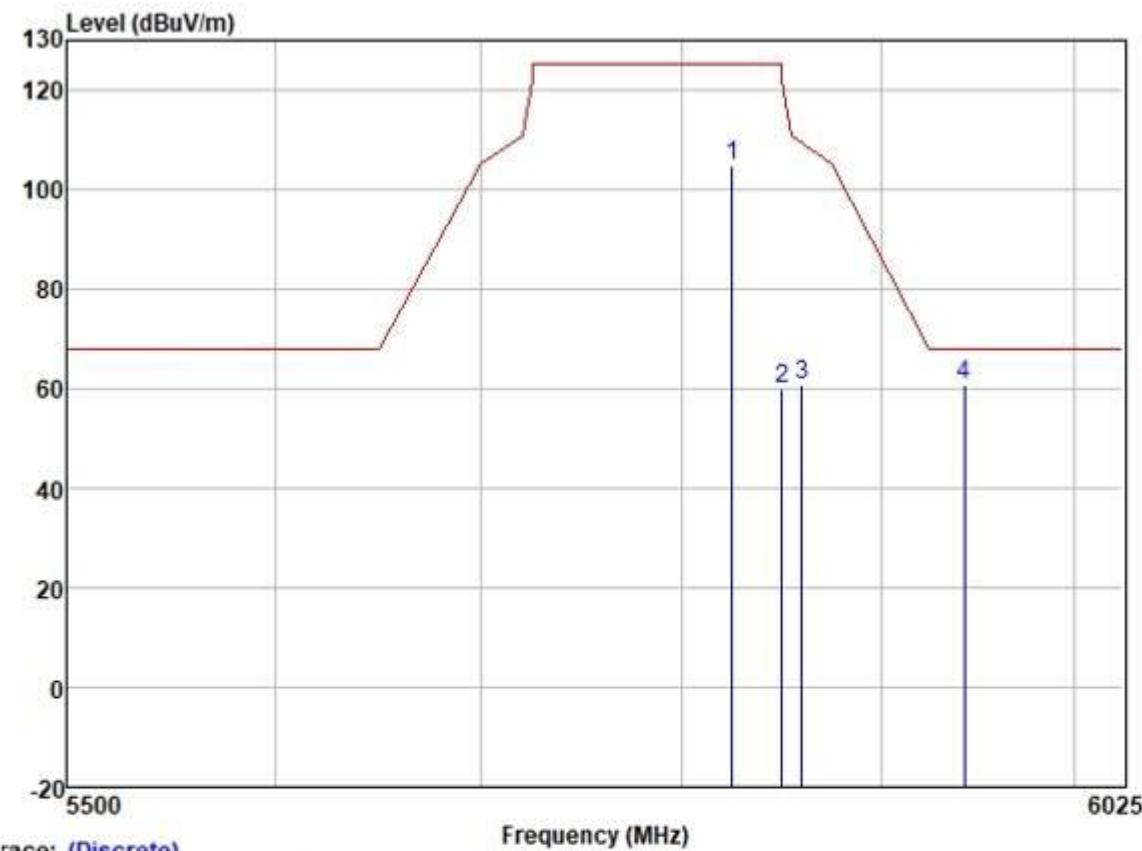


Race	Freq	ReadAntenna		Cable		Preamp	Limit	Over	Limit	Pol/Phase	Remark
		Level	Factor	Loss	Factor						
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB			
1	5641.383	58.27	31.95	6.35	36.89	59.68	68.20	-8.52	VERTICAL	Peak	
2	5715.000	57.87	32.04	6.33	36.89	59.35	109.40	-50.05	VERTICAL	Peak	
3	5725.000	65.50	32.07	6.25	36.89	66.93	122.20	-55.27	VERTICAL	Peak	
4	5745.000	104.37	32.10	6.20	36.89	105.78	125.20	-19.42	VERTICAL	Peak	

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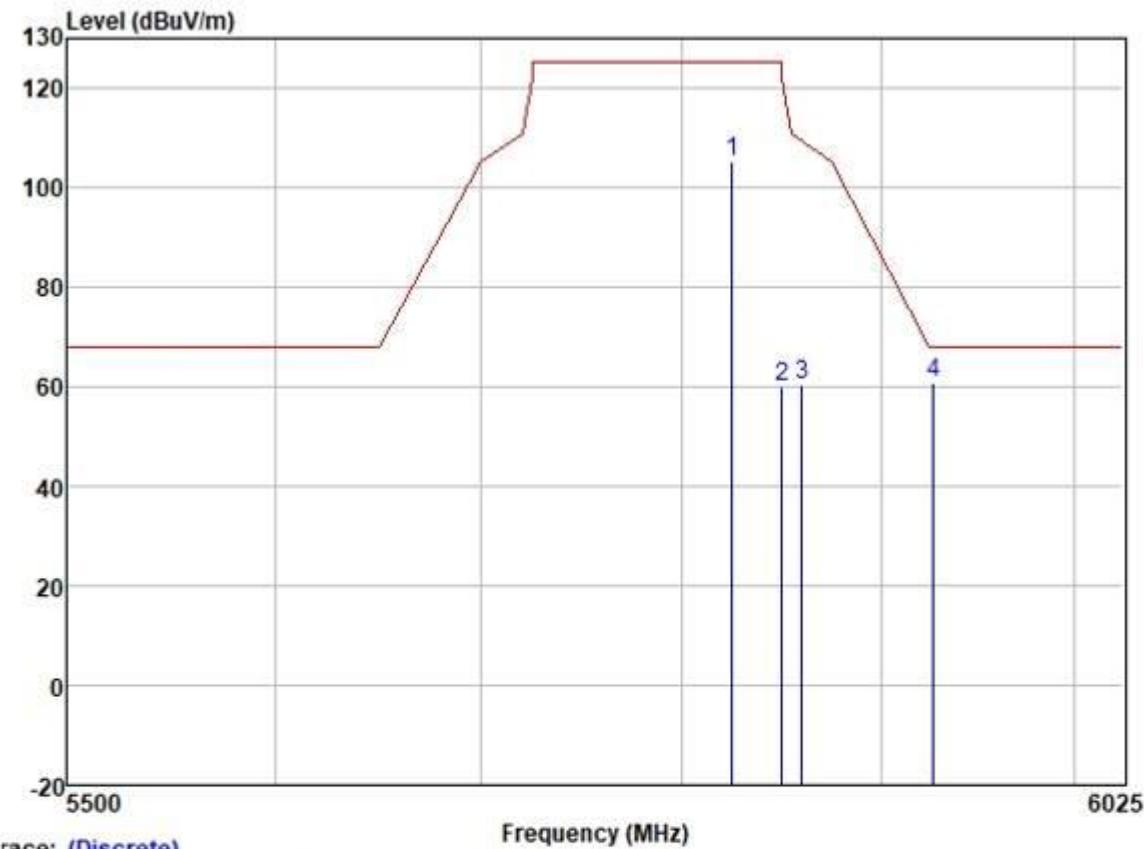
Test Mode: 19; Polarity: Horizontal; Modulation:802.11ac; Bandwidth:20MHz; Channel:High



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Test Mode: 19; Polarity: Vertical; Modulation:802.11ac; Bandwidth:20MHz; Channel:High



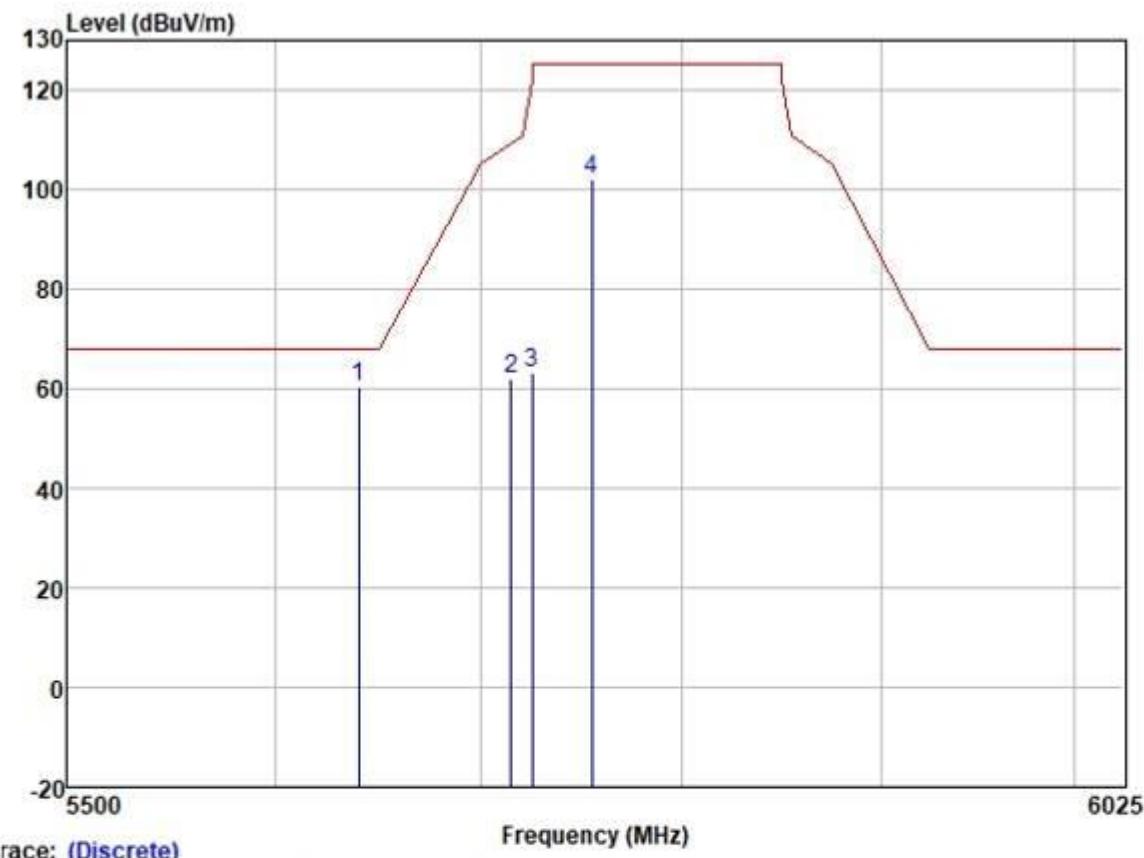
Freq	ReadAntenna		Cable		Preamp	Limit	Over	Limit	Pol/Phase	Remark
	MHz	dBuV	Level Factor	Loss Factor						
1	5825.000	103.72	32.23	6.04	36.90	105.09	125.20	-20.11	VERTICAL	Peak
2	5850.000	58.73	32.25	6.00	36.90	60.08	122.20	-62.12	VERTICAL	Peak
3	5860.000	59.21	32.27	5.96	36.90	60.54	109.40	-48.86	VERTICAL	Peak
4	5927.279	59.42	32.34	6.00	36.90	60.86	68.20	-7.34	VERTICAL	Peak

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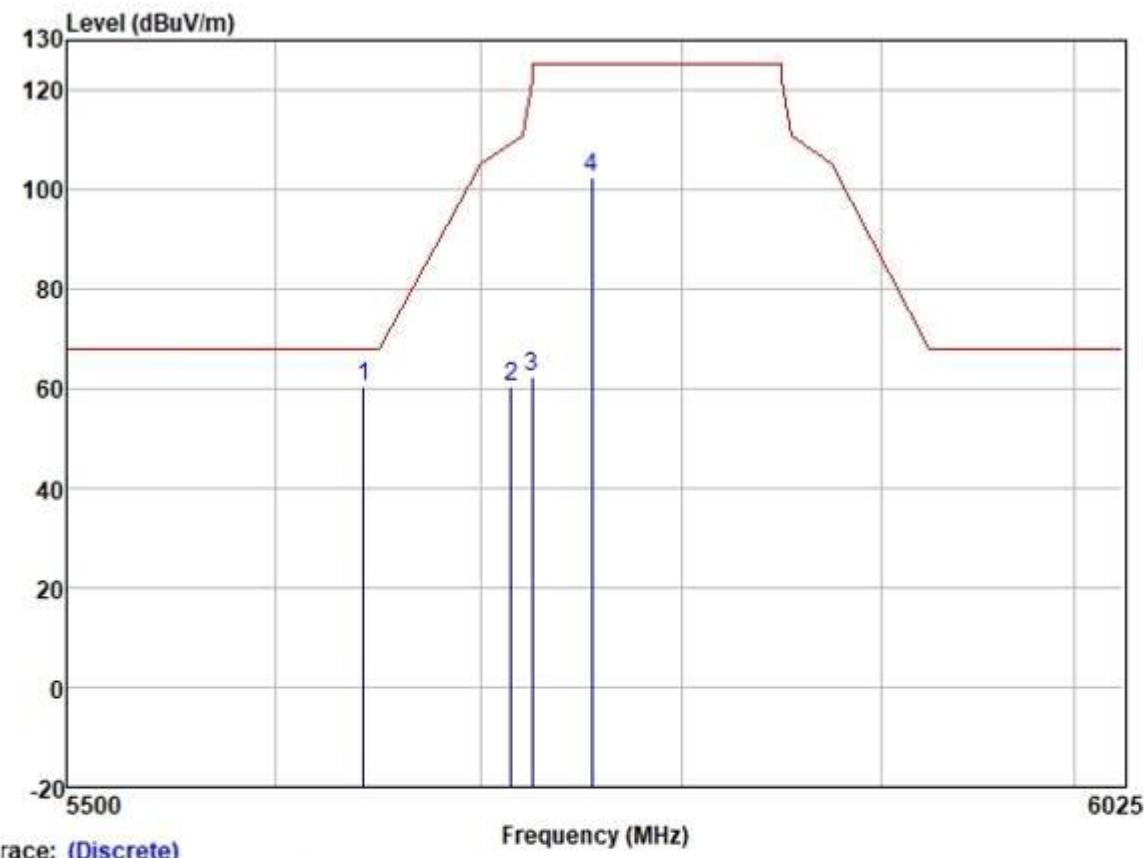
Test Mode: 19; Polarity: Horizontal; Modulation:802.11ac; Bandwidth:40MHz; Channel:Low



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Test Mode: 19; Polarity: Vertical; Modulation:802.11ac; Bandwidth:40MHz; Channel:Low



Race: (Discrete)

Freq	ReadAntenna		Cable		Preamp	Limit	Over	Limit	Pol/Phase	Remark
	MHz	dBuV	Level	Factor						
1	5642.447	58.84	31.95	6.35	36.89	60.25	68.20	-7.95	VERTICAL	Peak
2	5715.000	58.79	32.04	6.33	36.89	60.27	109.40	-49.13	VERTICAL	Peak
3	5725.000	60.96	32.07	6.25	36.89	62.39	122.20	-59.81	VERTICAL	Peak
4	5755.000	100.91	32.10	6.20	36.89	102.32	125.20	-22.88	VERTICAL	Peak

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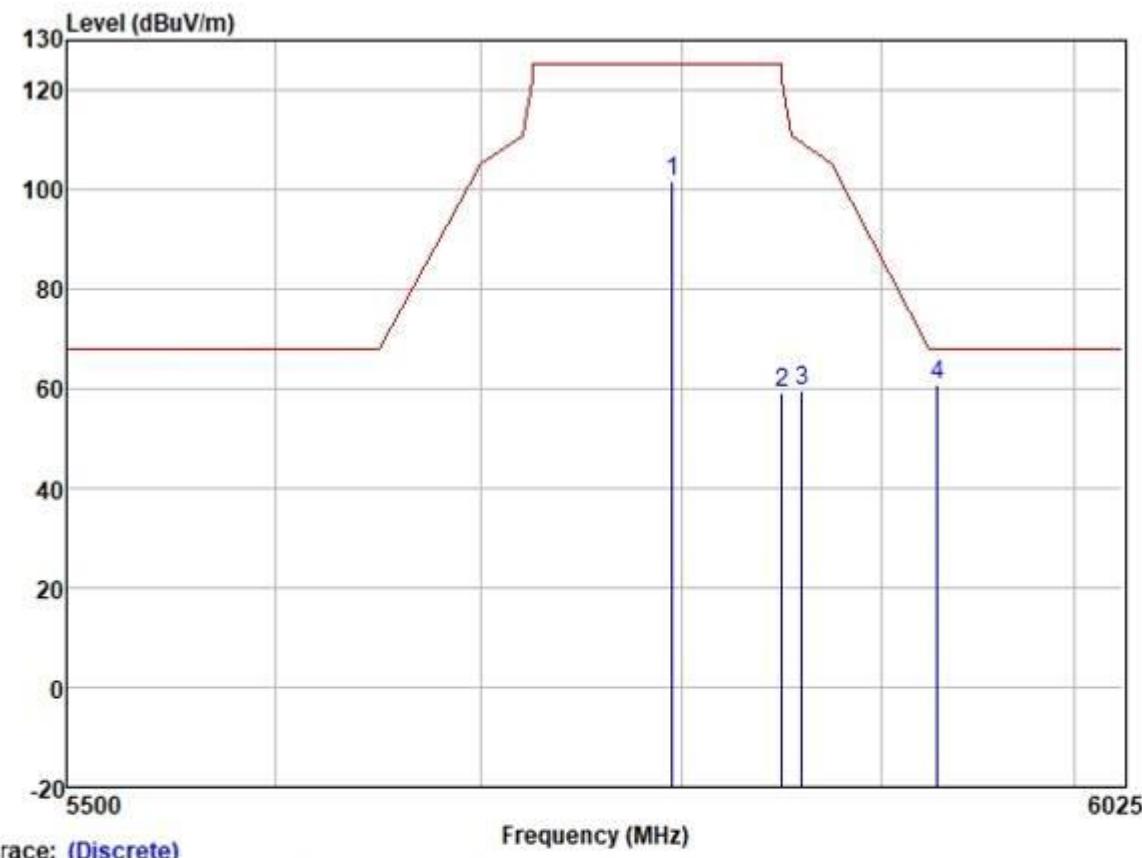
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Test Mode: 19; Polarity: Horizontal; Modulation:802.11ac; Bandwidth:40MHz; Channel:High



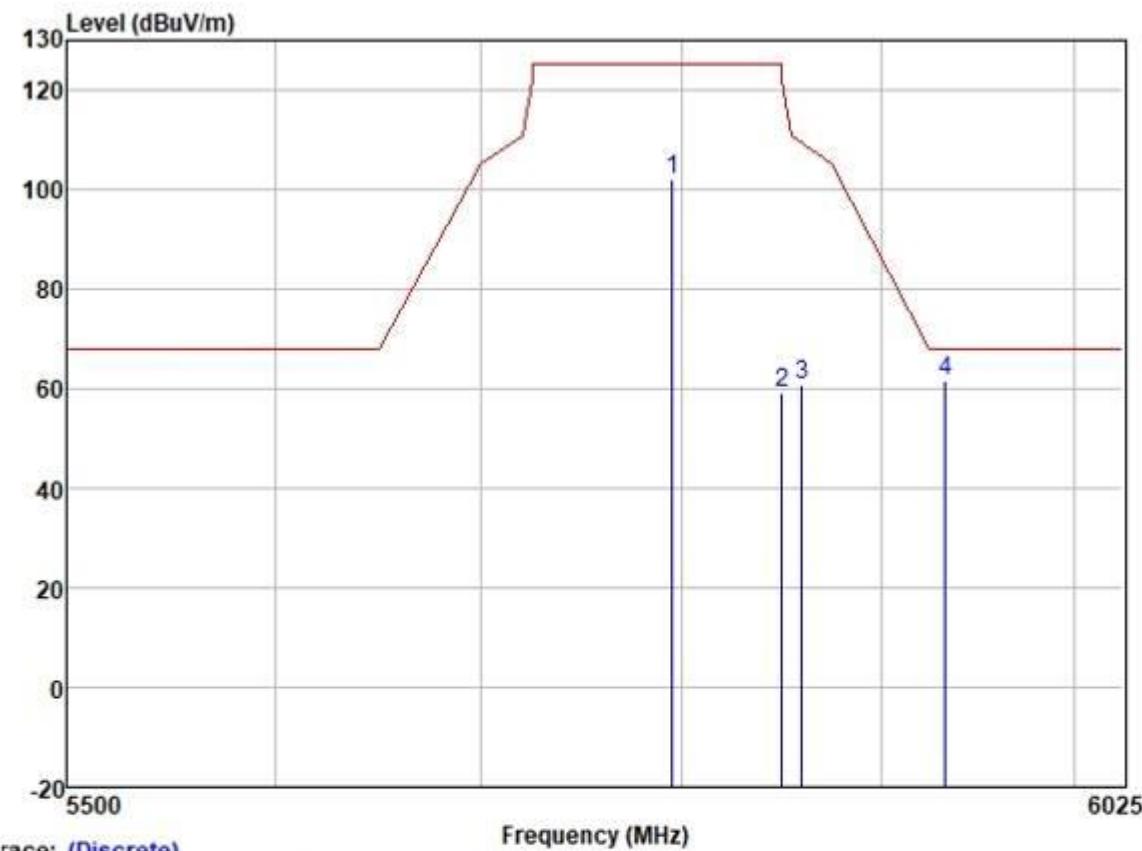
Race: (Discrete)	Freq	ReadAntenna		Cable		Preamp	Loss Factor	Level	Limit	Line	Over Limit	Pol/Phase	Remark
		Freq	Level	Factor	dB								
	MHz	MHz	dBuV	dB/m									
1	5795.000	100.26	32.19	6.10	36.89	101.66	125.20	-23.54	HORIZONTAL	Peak			
2	5850.000	58.02	32.25	6.00	36.90	59.37	122.20	-62.83	HORIZONTAL	Peak			
3	5860.000	58.20	32.27	5.96	36.90	59.53	109.40	-49.87	HORIZONTAL	Peak			
4	5929.355	59.42	32.34	6.00	36.90	60.86	68.20	-7.34	HORIZONTAL	Peak			

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Test Mode: 19; Polarity: Vertical; Modulation:802.11ac; Bandwidth:40MHz; Channel:High



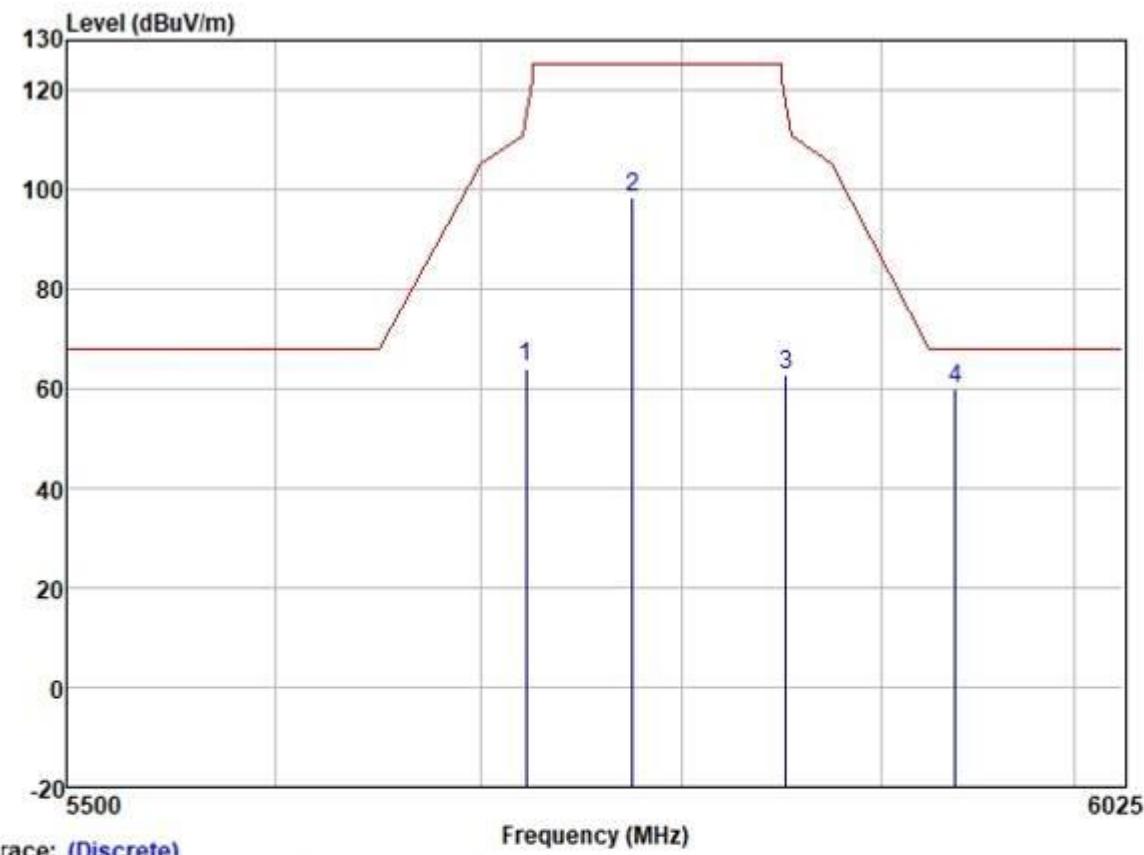
Race: (Discrete)

Freq	ReadAntenna		Cable		Preamp	Limit	Over	Limit	Pol/Phase	Remark
	Level	Factor	Loss	Factor						
MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB			
1 5795.000	100.52	32.19	6.10	36.89	101.92	125.20	-23.28	VERTICAL	Peak	
2 5850.000	58.02	32.25	6.00	36.90	59.37	122.20	-62.83	VERTICAL	Peak	
3 5860.000	59.33	32.27	5.96	36.90	60.66	109.40	-48.74	VERTICAL	Peak	
4 5933.415	60.08	32.34	6.00	36.90	61.52	68.20	-6.68	VERTICAL	Peak	

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Test Mode: 19; Polarity: Horizontal; Modulation:802.11ac; Bandwidth:80MHz; Channel:middle



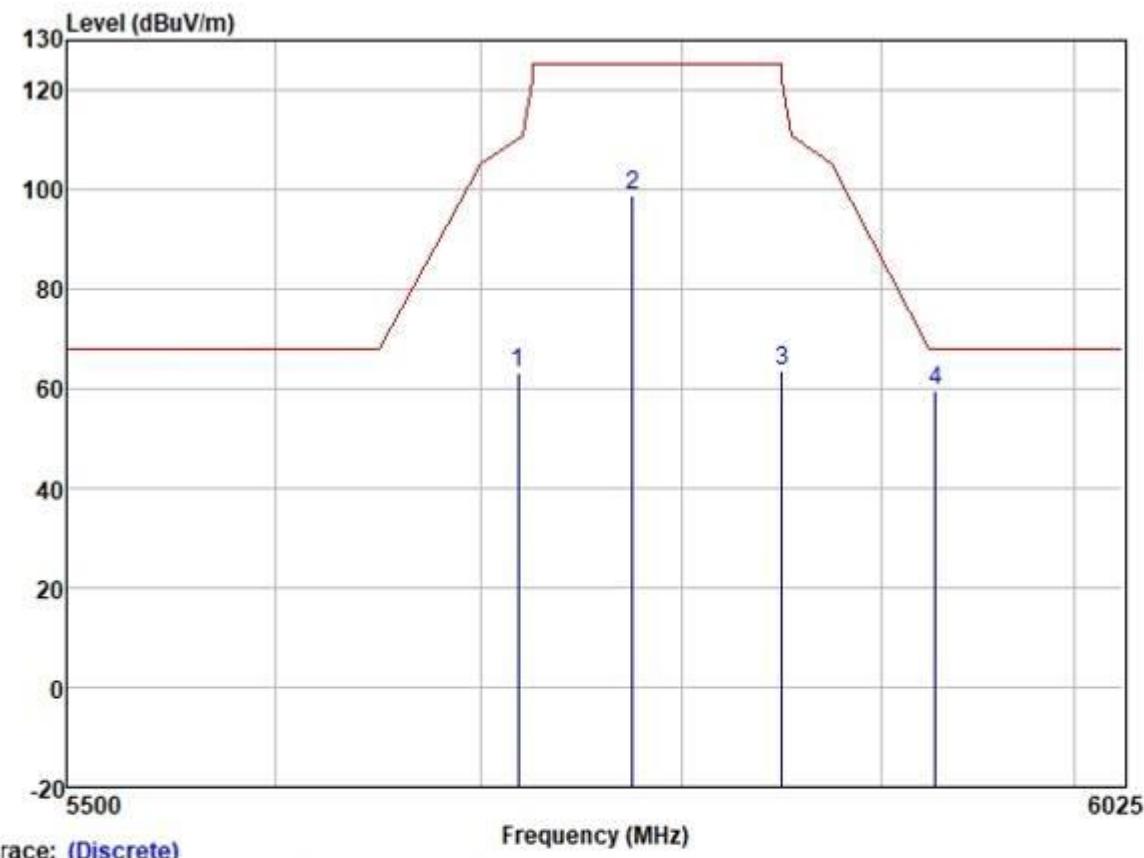
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Test Mode: 19; Polarity: Vertical; Modulation:802.11ac; Bandwidth:80MHz; Channel:middle



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**7.5 Non-occupancy period**

Test Requirement KDB 905462 D02 Section 5.1

Test Method: KDB 905462 D02 Section 7.8.3

Limit:

Test item	Limit	Applicability	
		Master Device or client with Radar Detection	Client without Radar Detection
Non-occupancy period	Minimum 30 minutes	Yes	Not required
Channel Availability Check Time	60 seconds	Yes	Not required
Channel Move Time	10 seconds See Note 1.	Yes	Yes
Channel Closing Transmission Time	200 milliseconds + an aggregate of 60 milliseconds over remaining 10 second period. See Notes 1 and 2.	Yes	Yes
U-NII Detection Bandwidth	Minimum 100% of the U-NII 99% transmission power bandwidth. See Note 3.	Yes	Not required

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.

**7.5.1 E.U.T. Operation**

Operating Environment:

Temperature: 23.7 °C      Humidity: 55.1 % RH      Atmospheric Pressure: 1010 mbar

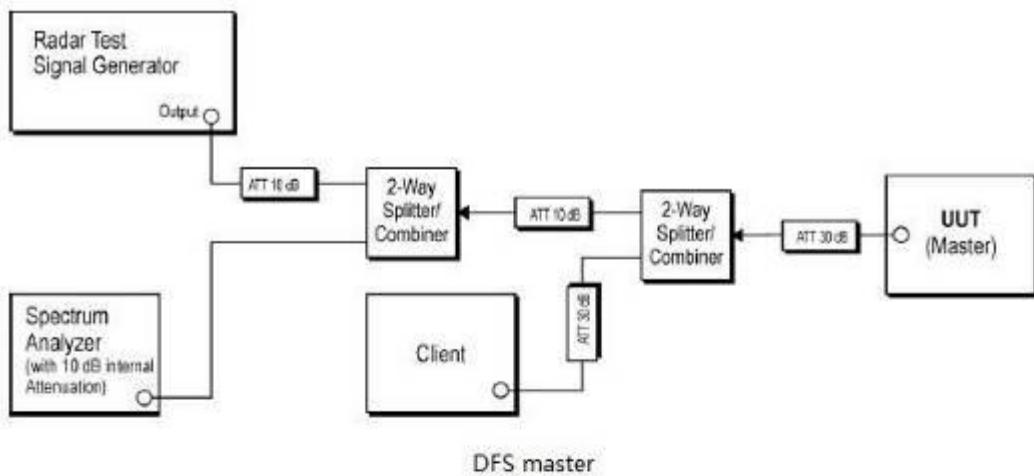
**7.5.2 Test Mode Description**

Pre-scan / Final test	Mode / Code	Description
Final test	20	Normal operating_Keep the EUT communication with the companion device.

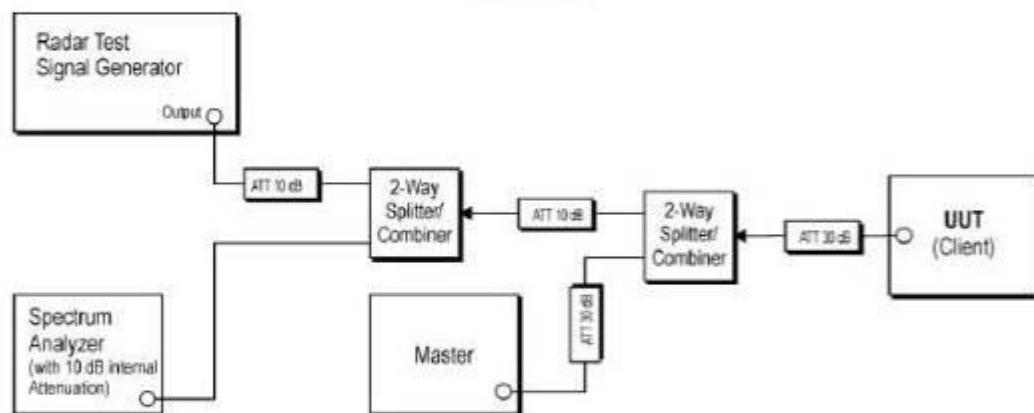
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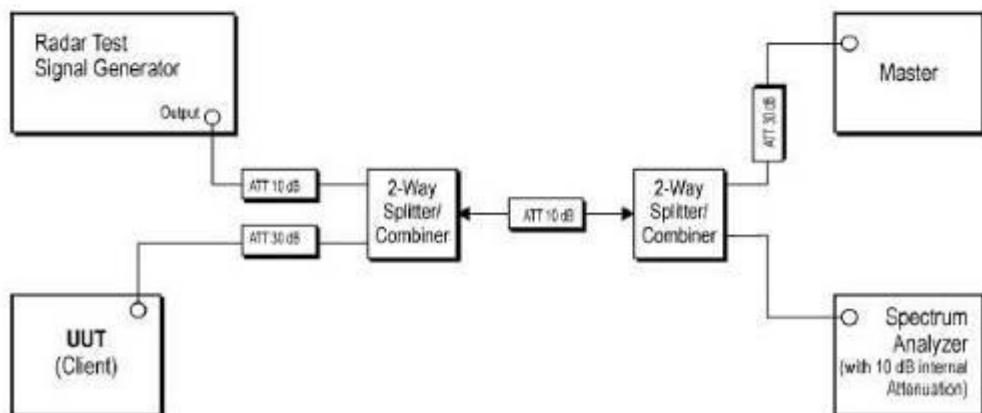
## 7.5.3 Test Setup Diagram



DFS master



DFS slave with radar detection



DFS slave without radar detection

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**7.5.4 Measurement Procedure and Data**

- 1) The radar pulse generator is setup to provide a pulse at frequency that the master and client are operating. A type 0 radar pulse with a 1us pulse width and a 1428us PRI is used for the testing.
- 2) The vector signal generator is adjusted to provide the radar burst (18 pulses) at the level of approximately -61dBm at the antenna port of the master device.
- 3) A trigger is provided from the pulse generator to the DFS monitoring system in order to capture the traffic and the occurrence of the radar pulse.
- 4) EUT will associate with the master at channel. The file "iperf.exe" specified by the FCC is streamed from the PC 2 through the master and the client device to the PC 1 and played in full motion video using Media Player Classic Ver. 6.4.8.6 in order to properly load the network for the entire period of the test.
- 5) When radar burst with a level equal to the DFS Detection Threshold +1dB is generated on the operating channel of the U-NII device. At time T0 the radar waveform generator sends a burst of pulse of the radar waveform at Detection Threshold +1dB.
- 6) Observe the transmissions of the EUT at the end of the radar Burst on the Operating Channel. Measure and record the transmissions from the UUT during the observation time (Channel Move Time). One 15 seconds plot is reported for the Short Pulse Radar Type 0. The plot for the Short Pulse Radar Types start at the end of the radar burst. The Channel Move Time will be calculated based on the zoom in 600ms plot of the Short Pulse Radar Type.
- 7) Measurement of the aggregate duration of the Channel Closed Transmission Time method. With the spectrum analyzer set to zero span tuned to the center frequency of the EUT operating channel at the radar simulated frequency, peak detection, and max hold, the dwell time per bin is given by: Dwell (0.3ms) =  $S$  (12000ms) /  $B$  (4000); where Dwell is the dwell time per spectrum analyzer sampling bin,  $S$  is sweep time and  $B$  is the number of spectrum analyzer sampling bins. An upper bound of the aggregate duration of the intermittent control signals of Channel Closing Transmission Time is calculated by:  $C$  (ms) =  $N$  X Dwell (0.3ms); where  $C$  is the Closing Time,  $N$  is the number of spectrum analyzer sampling bins (intermittent control signals) showing a U-NII transmission and Dwell is the dwell time per bin.
- 8) Measurement the EUT for more than 30 minutes following the channel move time to verify that no transmission or beacons occur on this channel.

Please Refer to Appendix for Details



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**7.6 Channel Move Time**

Test Requirement KDB 905462 D02 Section 5.1

Test Method: KDB 905462 D02 Section 7.8.3

Limit:

Test item	Limit	Applicability	
		Master Device or client with Radar Detection	Client without Radar Detection
Non-occupancy period	Minimum 30 minutes	Yes	Not required
Channel Availability Check Time	60 seconds	Yes	Not required
Channel Move Time	10 seconds See Note 1.	Yes	Yes
Channel Closing Transmission Time	200 milliseconds + an aggregate of 60 milliseconds over remaining 10 second period. See Notes 1 and 2.	Yes	Yes
U-NII Detection Bandwidth	Minimum 100% of the U-NII 99% transmission power bandwidth. See Note 3.	Yes	Not required

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.

**7.6.1 E.U.T. Operation**

Operating Environment:

Temperature: 23.7 °C      Humidity: 55.1 % RH      Atmospheric Pressure: 1010 mbar

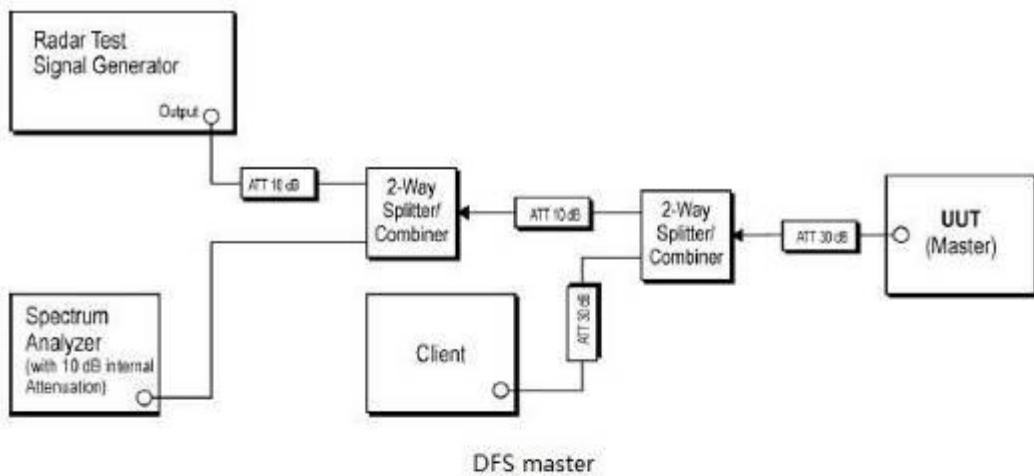
**7.6.2 Test Mode Description**

Pre-scan / Final test	Mode / Code	Description
Final test	20	Normal operating_Keep the EUT communication with the companion device.

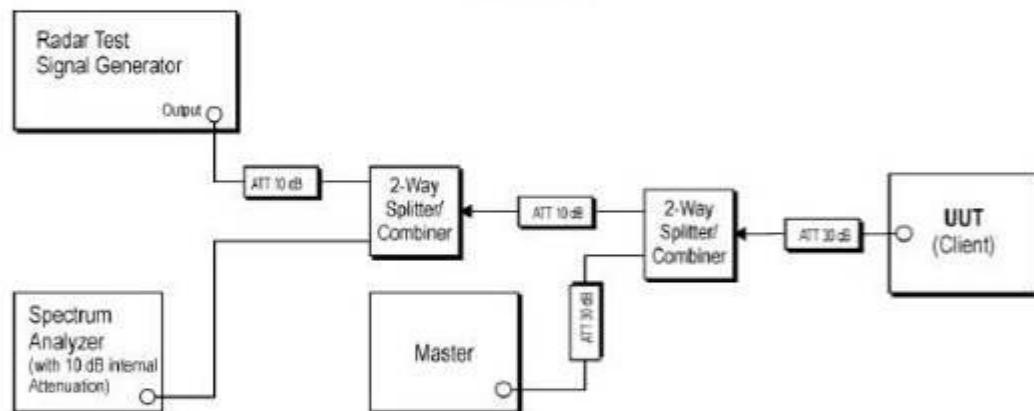
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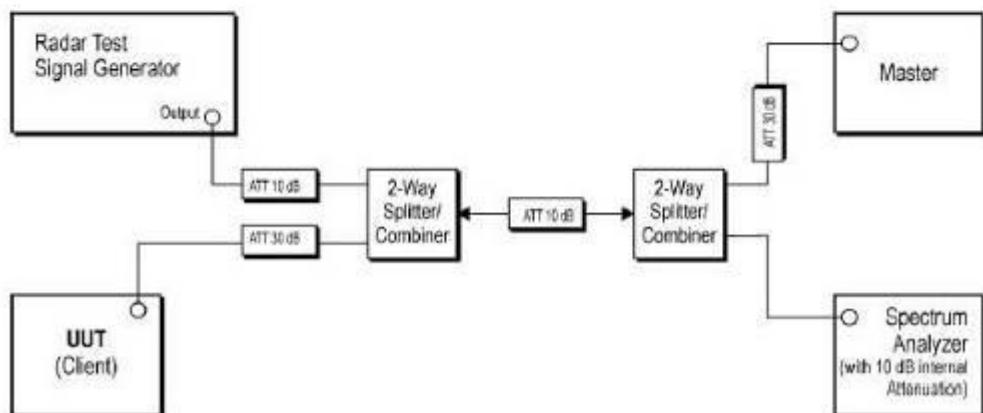
## 7.6.3 Test Setup Diagram



DFS master



DFS slave with radar detection



DFS slave without radar detection

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**7.6.4 Measurement Procedure and Data**

- 1) The radar pulse generator is setup to provide a pulse at frequency that the master and client are operating. A type 0 radar pulse with a 1us pulse width and a 1428us PRI is used for the testing.
- 2) The vector signal generator is adjusted to provide the radar burst (18 pulses) at the level of approximately -61dBm at the antenna port of the master device.
- 3) A trigger is provided from the pulse generator to the DFS monitoring system in order to capture the traffic and the occurrence of the radar pulse.
- 4) EUT will associate with the master at channel. The file "iperf.exe" specified by the FCC is streamed from the PC 2 through the master and the client device to the PC 1 and played in full motion video using Media Player Classic Ver. 6.4.8.6 in order to properly load the network for the entire period of the test.
- 5) When radar burst with a level equal to the DFS Detection Threshold +1dB is generated on the operating channel of the U-NII device. At time T0 the radar waveform generator sends a burst of pulse of the radar waveform at Detection Threshold +1dB.
- 6) Observe the transmissions of the EUT at the end of the radar Burst on the Operating Channel. Measure and record the transmissions from the UUT during the observation time (Channel Move Time). One 15 seconds plot is reported for the Short Pulse Radar Type 0. The plot for the Short Pulse Radar Types start at the end of the radar burst. The Channel Move Time will be calculated based on the zoom in 600ms plot of the Short Pulse Radar Type.
- 7) Measurement of the aggregate duration of the Channel Closed Transmission Time method. With the spectrum analyzer set to zero span tuned to the center frequency of the EUT operating channel at the radar simulated frequency, peak detection, and max hold, the dwell time per bin is given by: Dwell (0.3ms) =  $S$  (12000ms) /  $B$  (4000); where Dwell is the dwell time per spectrum analyzer sampling bin,  $S$  is sweep time and  $B$  is the number of spectrum analyzer sampling bins. An upper bound of the aggregate duration of the intermittent control signals of Channel Closing Transmission Time is calculated by:  $C$  (ms) =  $N$  X Dwell (0.3ms); where  $C$  is the Closing Time,  $N$  is the number of spectrum analyzer sampling bins (intermittent control signals) showing a U-NII transmission and Dwell is the dwell time per bin.
- 8) Measurement the EUT for more than 30 minutes following the channel move time to verify that no transmission or beacons occur on this channel.

Please Refer to Appendix for Details



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**7.7 Channel Closing Transmission Time**

Test Requirement KDB 905462 D02 Section 5.1  
 Test Method: KDB 905462 D02 Section 7.8.3  
 Limit:

Test item	Limit	Applicability	
		Master Device or client with Radar Detection	Client without Radar Detection
Non-occupancy period	Minimum 30 minutes	Yes	Not required
Channel Availability Check Time	60 seconds	Yes	Not required
Channel Move Time	10 seconds See Note 1.	Yes	Yes
Channel Closing Transmission Time	200 milliseconds + an aggregate of 60 milliseconds over remaining 10 second period. See Notes 1 and 2.	Yes	Yes
U-NII Detection Bandwidth	Minimum 100% of the U-NII 99% transmission power bandwidth. See Note 3.	Yes	Not required

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.

**7.7.1 E.U.T. Operation**

Operating Environment:

Temperature: 23.7 °C      Humidity: 55.1 % RH      Atmospheric Pressure: 1010 mbar

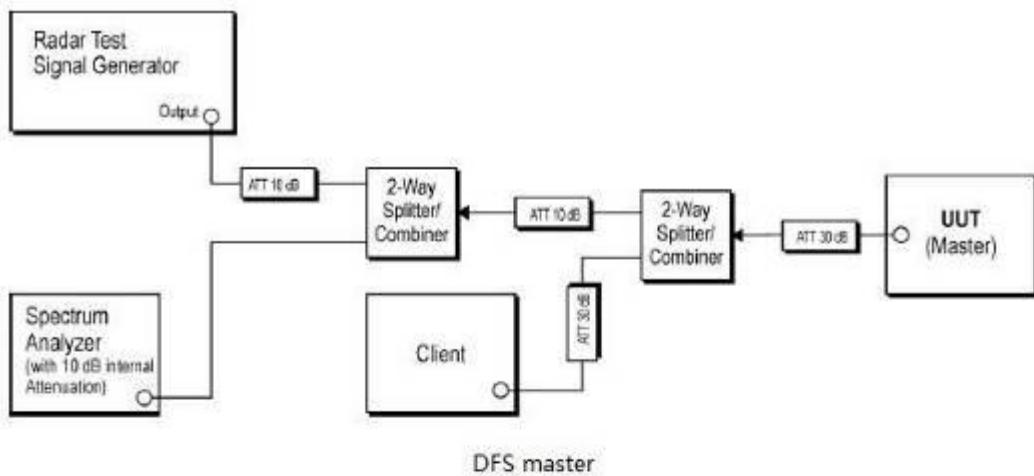
**7.7.2 Test Mode Description**

Pre-scan / Final test	Mode / Code	Description
Final test	20	Normal operating_Keep the EUT communication with the companion device.

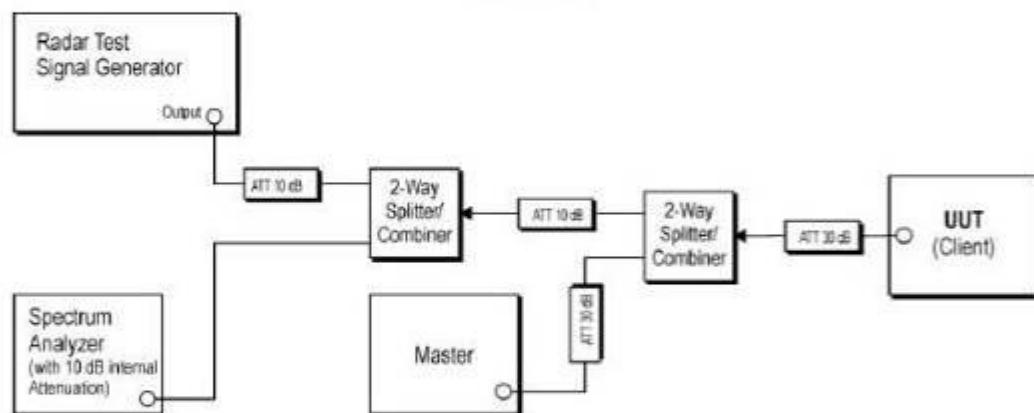
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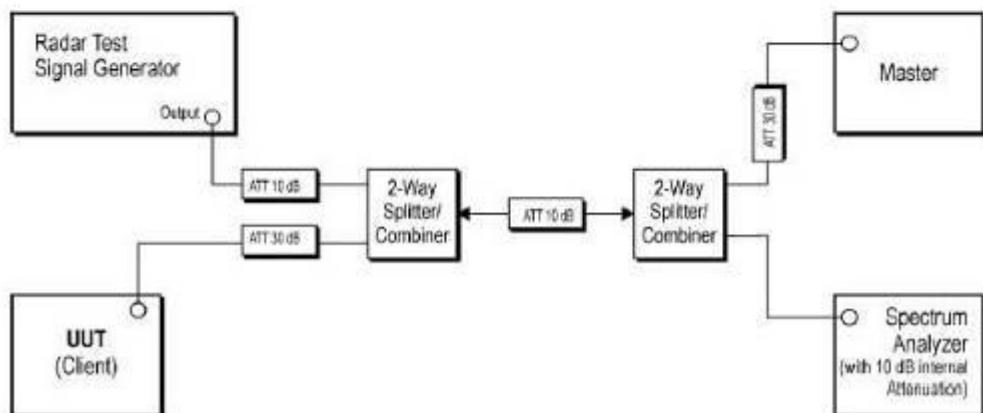
## 7.7.3 Test Setup Diagram



DFS master



DFS slave with radar detection



DFS slave without radar detection

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**7.7.4 Measurement Procedure and Data**

- 1) The radar pulse generator is setup to provide a pulse at frequency that the master and client are operating. A type 0 radar pulse with a 1us pulse width and a 1428us PRI is used for the testing.
- 2) The vector signal generator is adjusted to provide the radar burst (18 pulses) at the level of approximately -61dBm at the antenna port of the master device.
- 3) A trigger is provided from the pulse generator to the DFS monitoring system in order to capture the traffic and the occurrence of the radar pulse.
- 4) EUT will associate with the master at channel. The file "iperf.exe" specified by the FCC is streamed from the PC 2 through the master and the client device to the PC 1 and played in full motion video using Media Player Classic Ver. 6.4.8.6 in order to properly load the network for the entire period of the test.
- 5) When radar burst with a level equal to the DFS Detection Threshold +1dB is generated on the operating channel of the U-NII device. At time T0 the radar waveform generator sends a burst of pulse of the radar waveform at Detection Threshold +1dB.
- 6) Observe the transmissions of the EUT at the end of the radar Burst on the Operating Channel. Measure and record the transmissions from the UUT during the observation time (Channel Move Time). One 15 seconds plot is reported for the Short Pulse Radar Type 0. The plot for the Short Pulse Radar Types start at the end of the radar burst. The Channel Move Time will be calculated based on the zoom in 600ms plot of the Short Pulse Radar Type.
- 7) Measurement of the aggregate duration of the Channel Closed Transmission Time method. With the spectrum analyzer set to zero span tuned to the center frequency of the EUT operating channel at the radar simulated frequency, peak detection, and max hold, the dwell time per bin is given by: Dwell (0.3ms) =  $S$  (12000ms) /  $B$  (4000); where Dwell is the dwell time per spectrum analyzer sampling bin,  $S$  is sweep time and  $B$  is the number of spectrum analyzer sampling bins. An upper bound of the aggregate duration of the intermittent control signals of Channel Closing Transmission Time is calculated by:  $C$  (ms) =  $N$  X Dwell (0.3ms); where  $C$  is the Closing Time,  $N$  is the number of spectrum analyzer sampling bins (intermittent control signals) showing a U-NII transmission and Dwell is the dwell time per bin.
- 8) Measurement the EUT for more than 30 minutes following the channel move time to verify that no transmission or beacons occur on this channel.

Please Refer to Appendix for Details



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## 8 Test Setup Photo

Conducted Emissions at AC Power Line (150kHz-30MHz)



Radiated Emissions which fall in the restricted bands

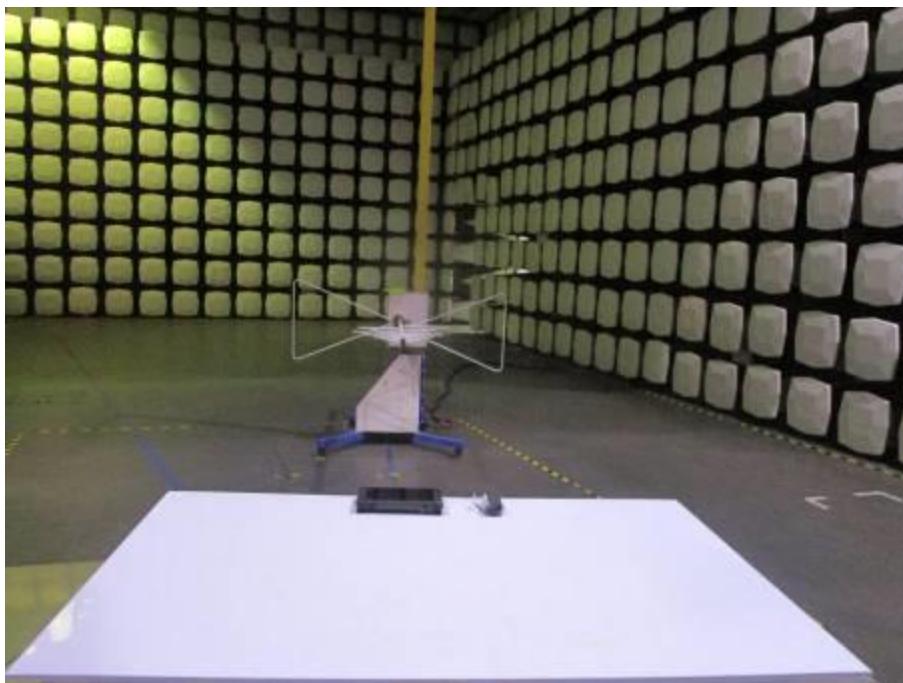


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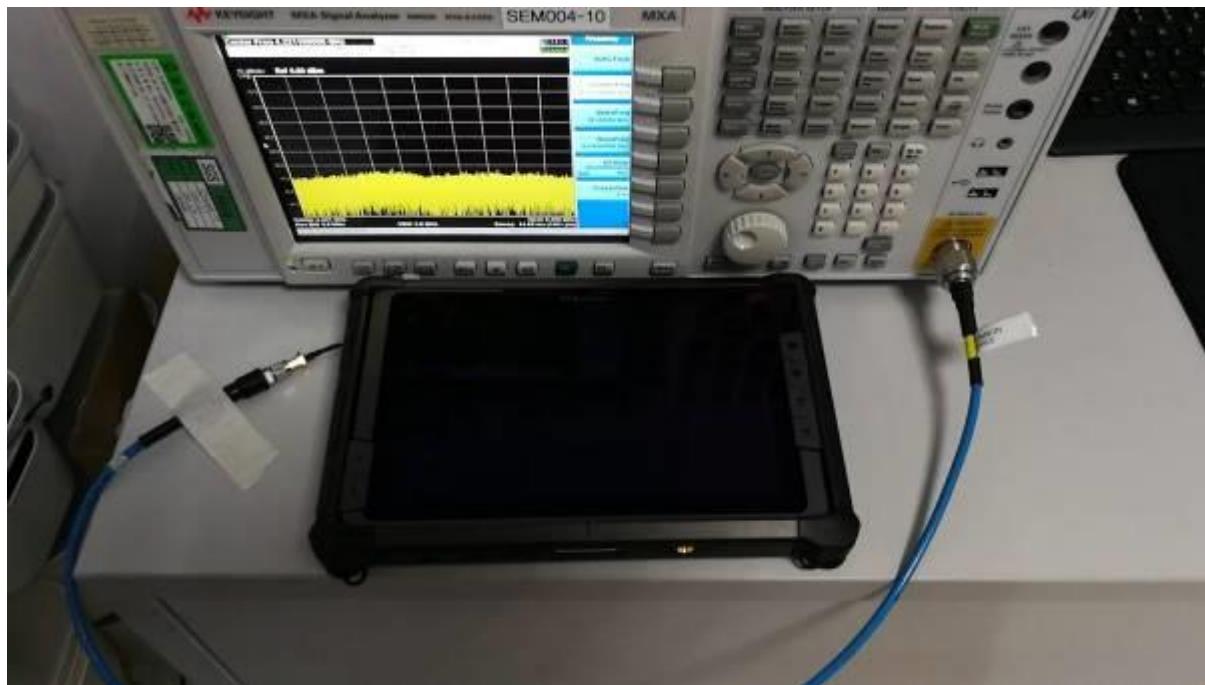
**Radiated Emissions below 1GHz****Radiated Emissions above 1GHz**

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**DFS**

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## 9 EUT Constructional Details (EUT Photos)

Refer to Appendix - external and internal photos for GZCR2108020806AT



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## 10 Appendix

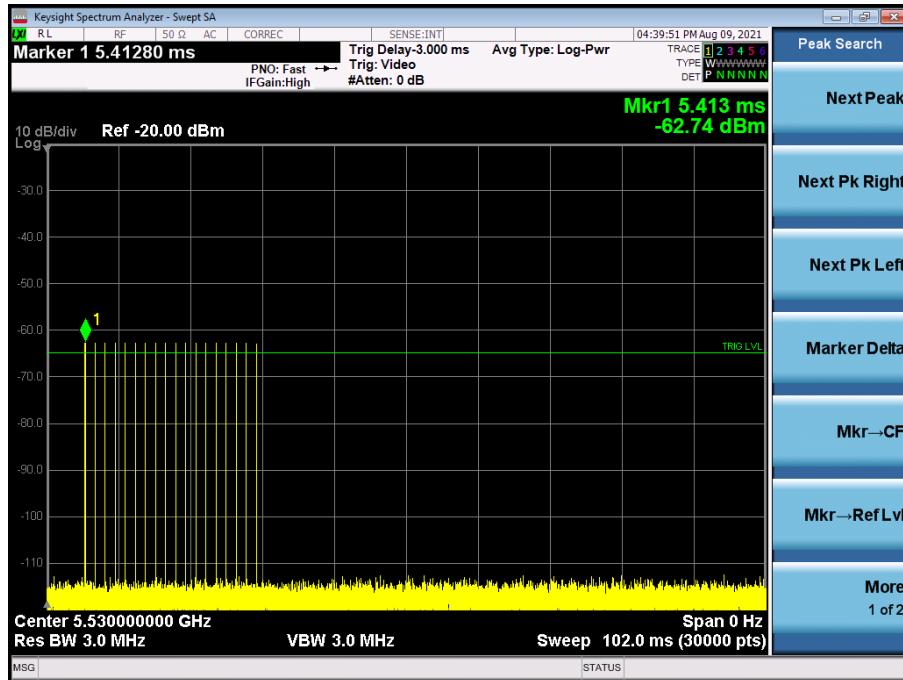
(DFS: Non-occupancy period; Channel Move Time; Channel Closing Transmission Time)

Note: All antennas type has been tested and we found the antenna 1 has the worst result.  
Only record the worst test result.

Test plots as follows:

Radar Waveform Calibration Result

Radar Type 0

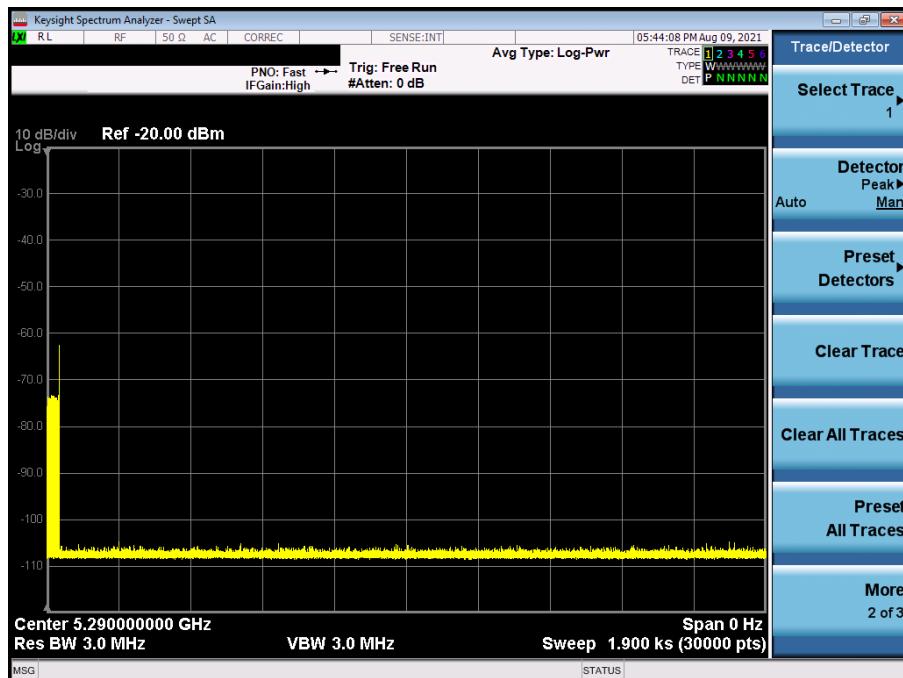
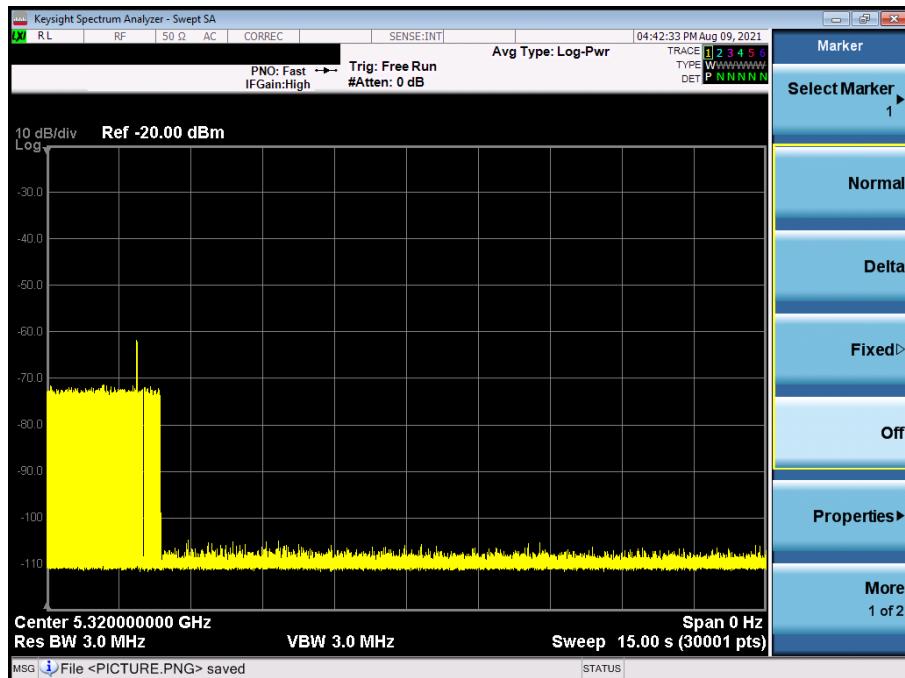


Test Data:

BW/Channel	Test Item	Test data	Limit	Results
80MHz/ 5530MHz	Non-occupancy period	Refer to test plots	>30 min	pass
	Channel Move Time	0.4789s	<10 s	Pass
	Channel Closing Transmission Time	0.0884s	<60ms	Pass

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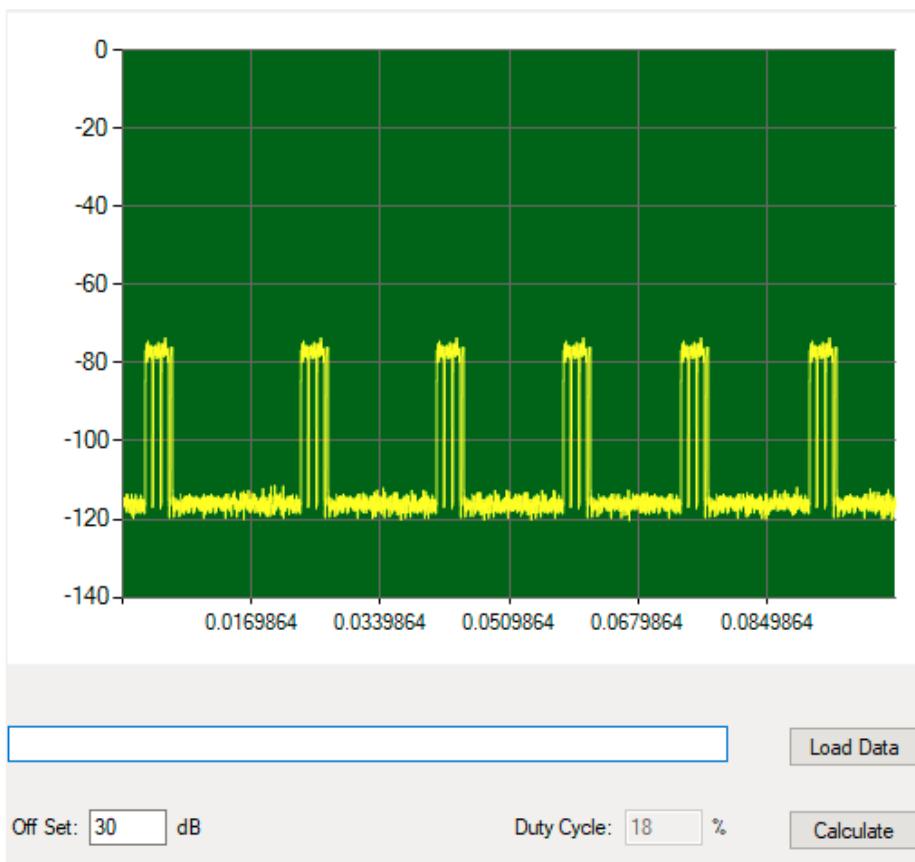
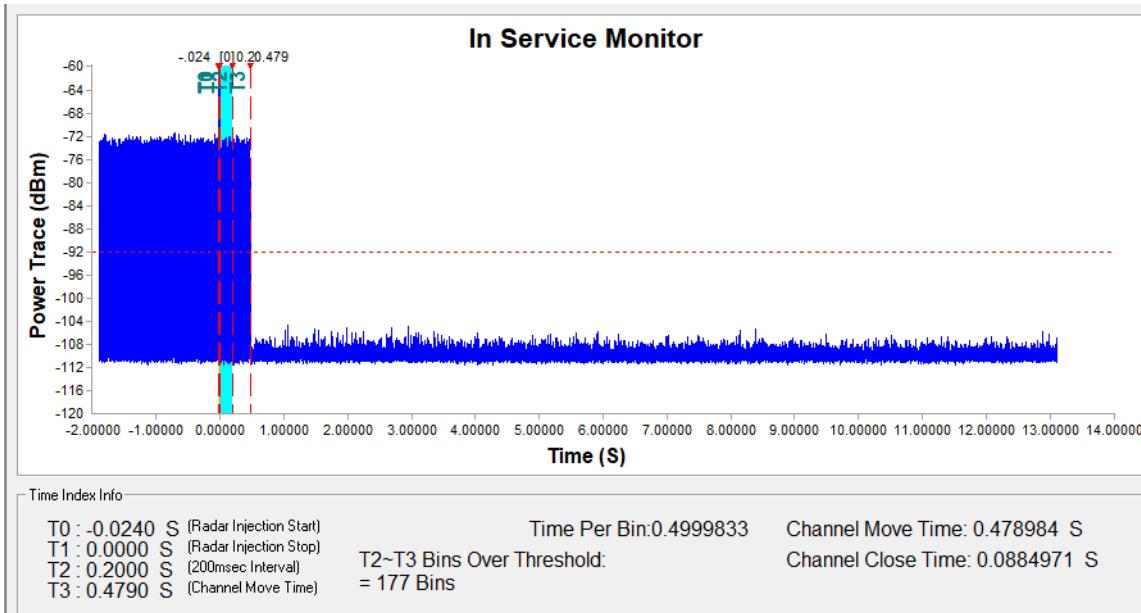
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**Test plots as follows:**

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- End of the Report -



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