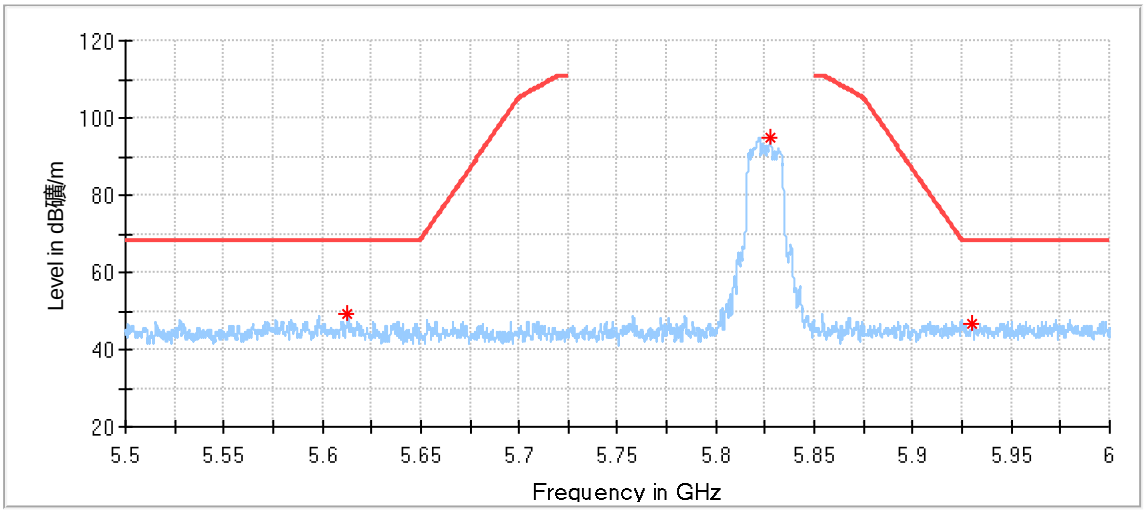
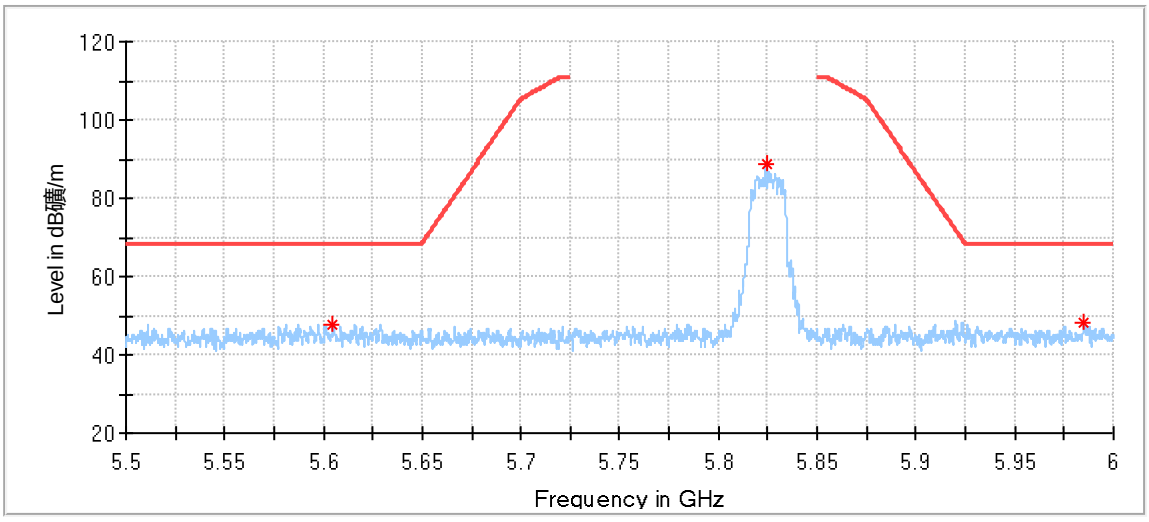
802.11ac20 Modulation 5825MHz Band edge test result



Critical_Freqs

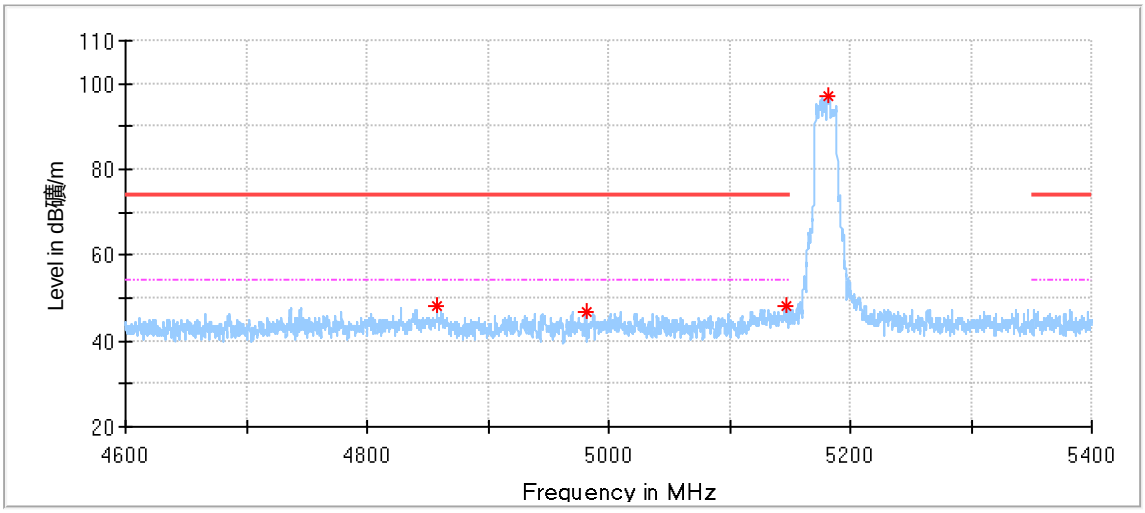
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
5612.958333	48.99	68.20	19.21	150.0	H	34.0	4.95
5827.375000	94.86	---	---	150.0	H	56.0	4.95
5930.125000	46.83	68.20	21.37	150.0	H	19.0	5.28



Critical_Freqs

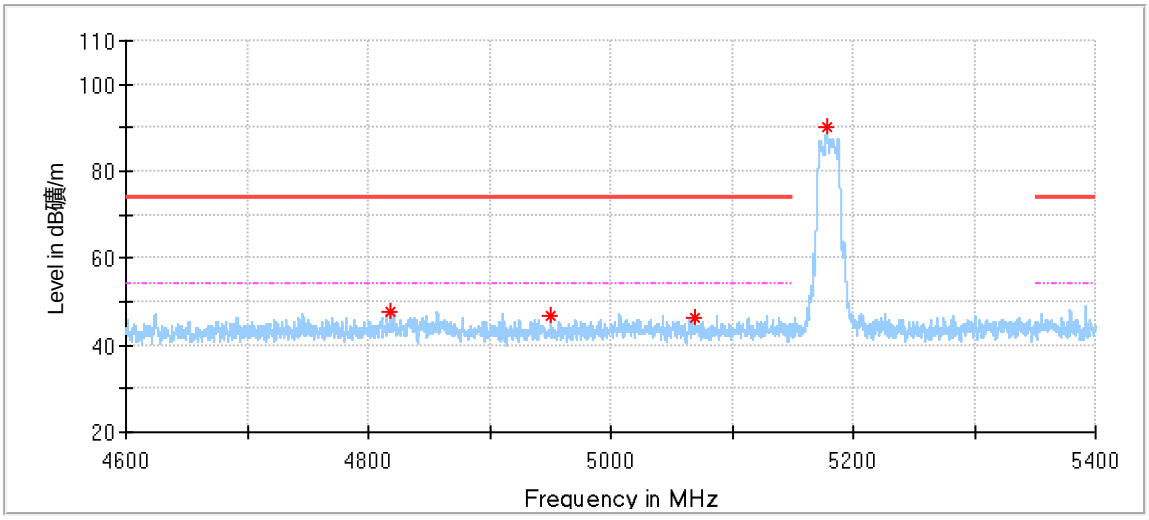
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
5604.958333	47.82	68.20	20.38	150.0	V	74.0	5.04
5824.083333	88.70	---	---	150.0	V	111.0	4.93
5984.791667	48.33	68.20	19.87	150.0	V	192.0	5.69

802.11ac40 Modulation 5190MHz Band edge test result



Critical_Freqs

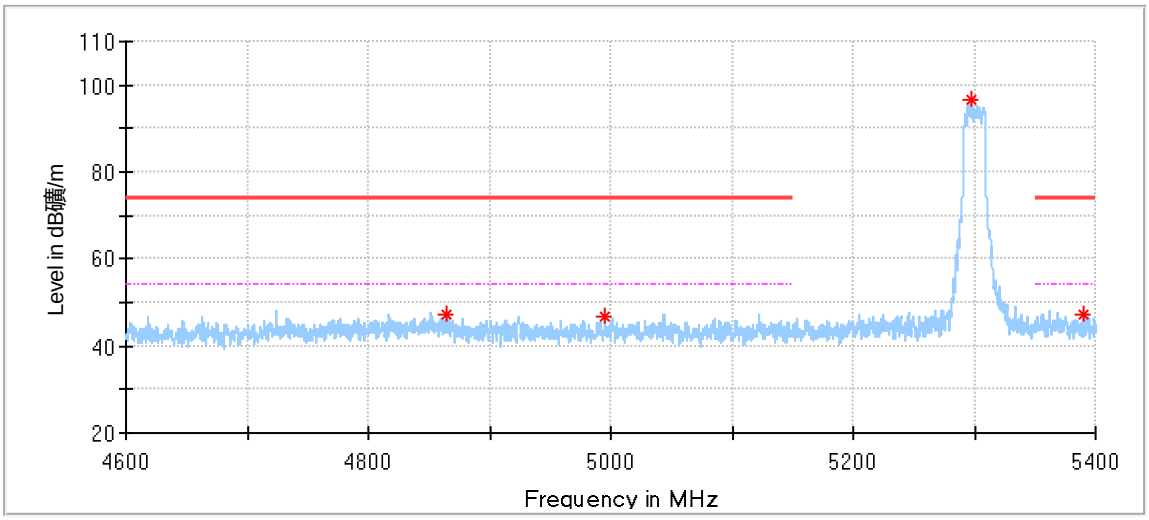
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4857.666667	48.18	74.00	25.82	150.0	H	215.0	3.30
4981.200000	46.88	74.00	27.12	150.0	H	83.0	3.65
5147.600000	48.24	74.00	25.76	150.0	H	208.0	3.72
5182.533333	97.12	---	---	150.0	H	359.0	3.82



Critical_Freqs

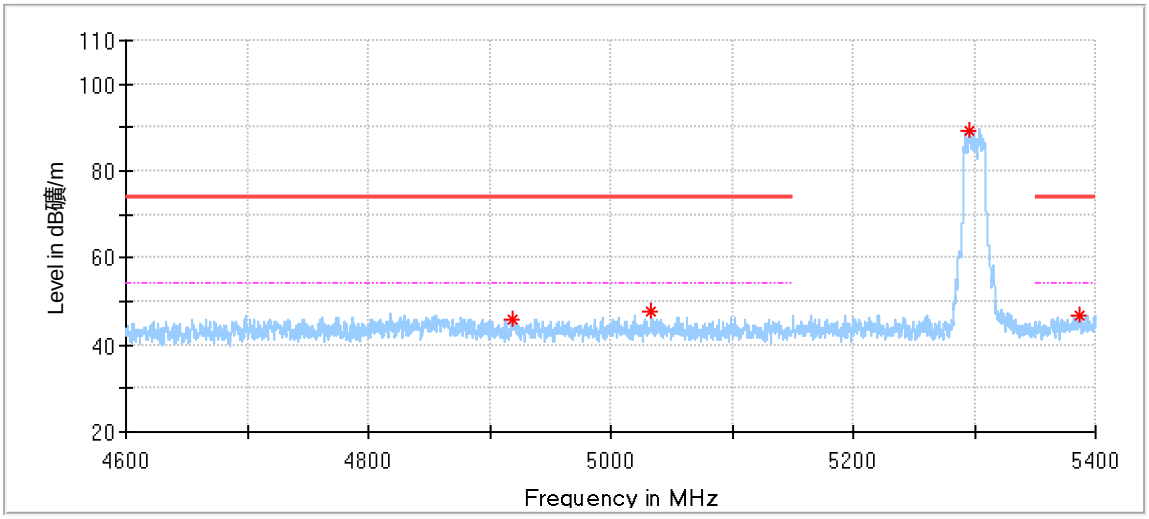
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4818.400000	47.58	74.00	26.42	150.0	V	29.0	2.84
4950.200000	46.82	74.00	27.18	150.0	V	11.0	3.61
5069.733333	46.19	74.00	27.81	150.0	V	340.0	3.41
5178.333333	90.16	---	---	150.0	V	23.0	3.83

802.11ac40 Modulation 5310MHz Band edge test result



Critical_Freqs

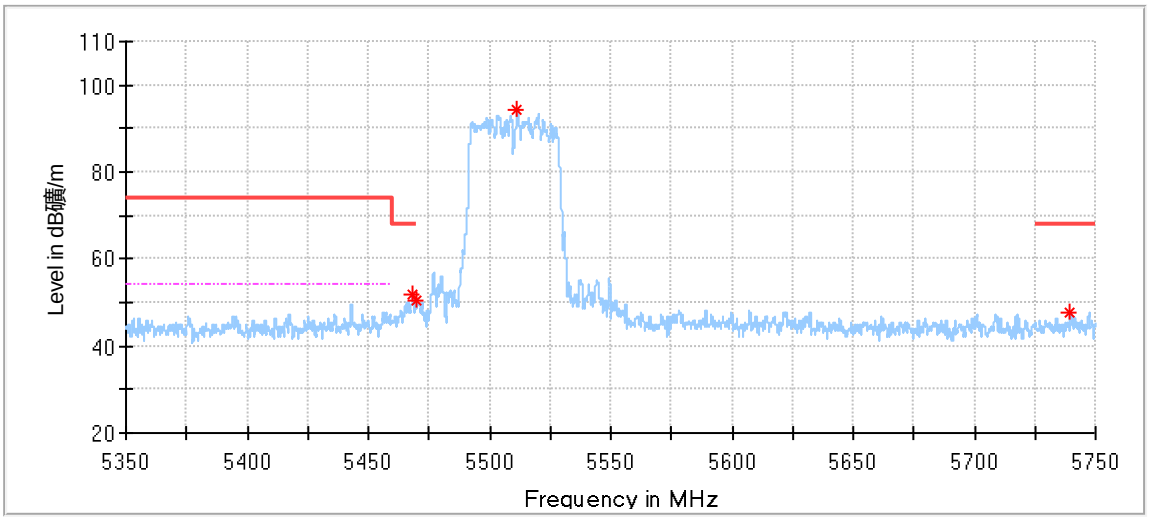
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4864.000000	47.12	74.00	26.88	150.0	H	86.0	3.35
4994.800000	46.87	74.00	27.13	150.0	H	93.0	3.67
5297.133333	96.61	---	---	150.0	H	358.0	3.90
5390.666667	47.29	74.00	26.71	150.0	H	262.0	4.22



Critical_Freqs

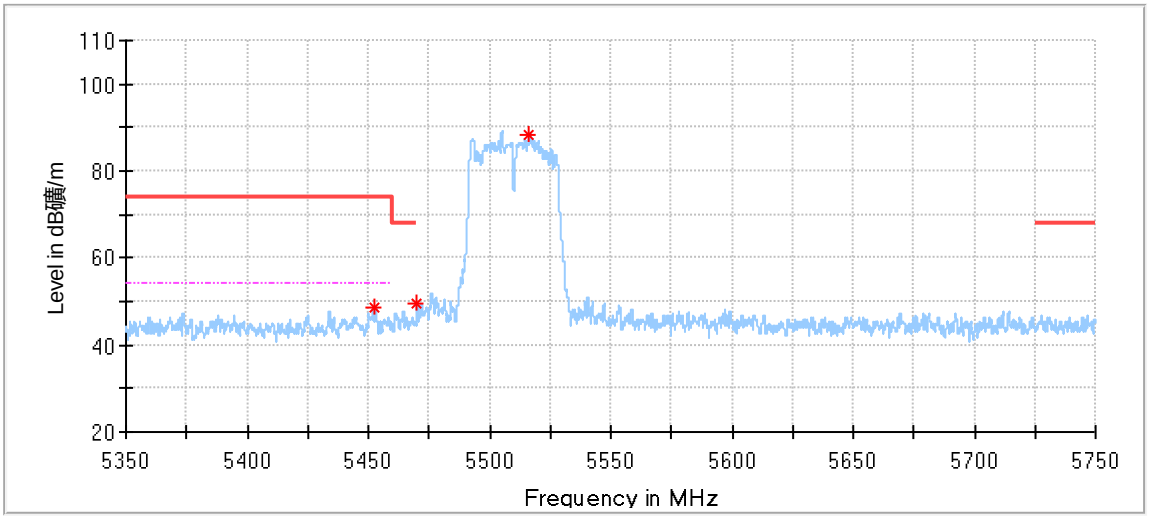
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4919.533333	45.96	74.00	28.04	150.0	V	90.0	3.57
5032.866667	47.74	74.00	26.26	150.0	V	225.0	3.49
5295.733333	89.09	---	---	150.0	V	32.0	3.88
5386.333333	46.73	74.00	27.27	150.0	V	244.0	4.20

802.11ac40 Modulation 5510MHz Band edge test result



Critical_Freqs

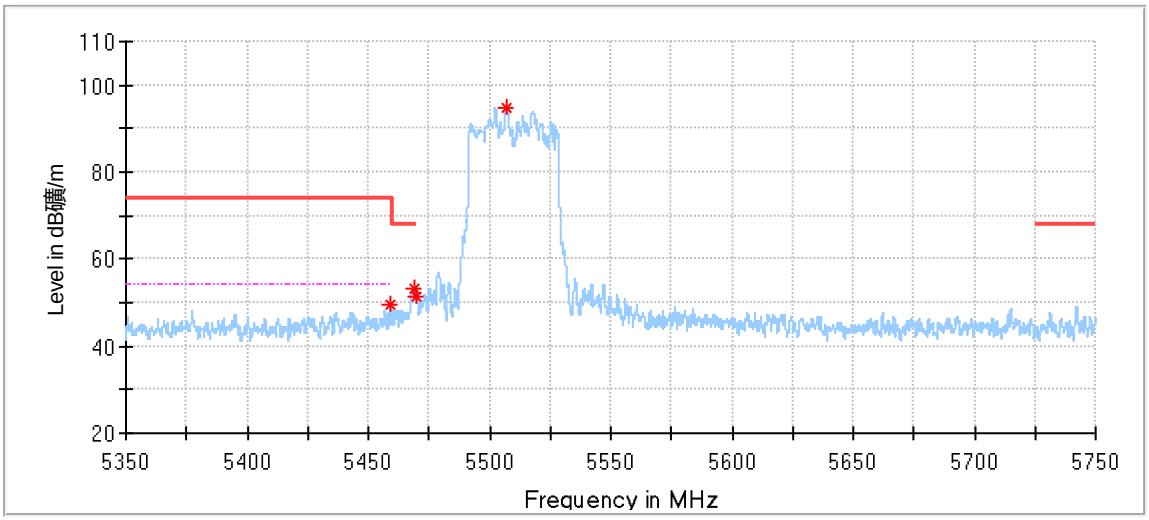
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
5468.333333	51.76	68.20	16.44	150.0	H	37.0	5.05
5470.000000	50.25	---	---	150.0	H	108.0	5.08
5511.433333	94.28	---	---	150.0	H	67.0	5.13
5739.600000	47.57	68.20	20.63	150.0	H	255.0	4.73



Critical_Freqs

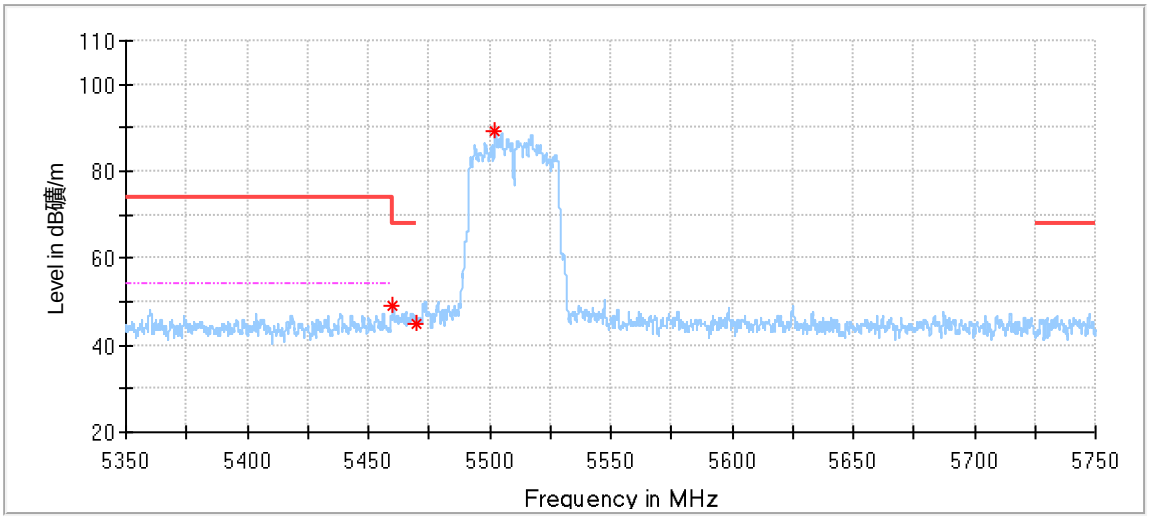
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
5452.066667	48.39	74.00	25.61	150.0	V	138.0	4.84
5469.966667	49.41	68.20	18.79	150.0	V	0.0	5.08
5516.433333	88.40	---	---	150.0	V	353.0	5.09

802.11ac40 Modulation 5670MHz Band edge test result



Critical_Freqs

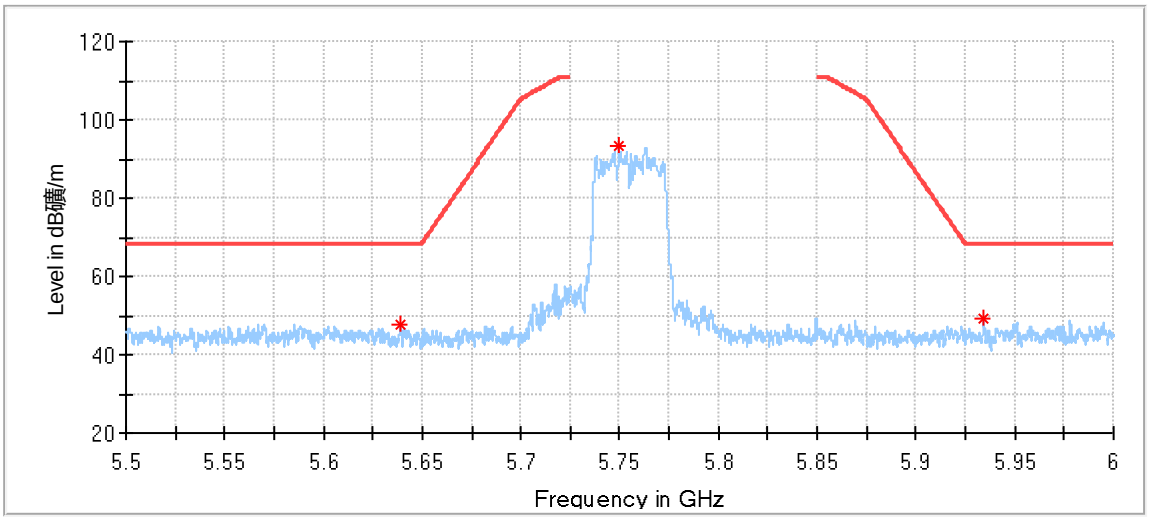
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
5459.233333	49.68	74.00	24.32	150.0	H	58.0	4.93
5468.700000	53.06	68.20	15.14	150.0	H	71.0	5.06
5470.000000	51.45	---	---	150.0	H	64.0	5.08
5507.300000	94.75	---	---	150.0	H	64.0	5.16



Critical_Freqs

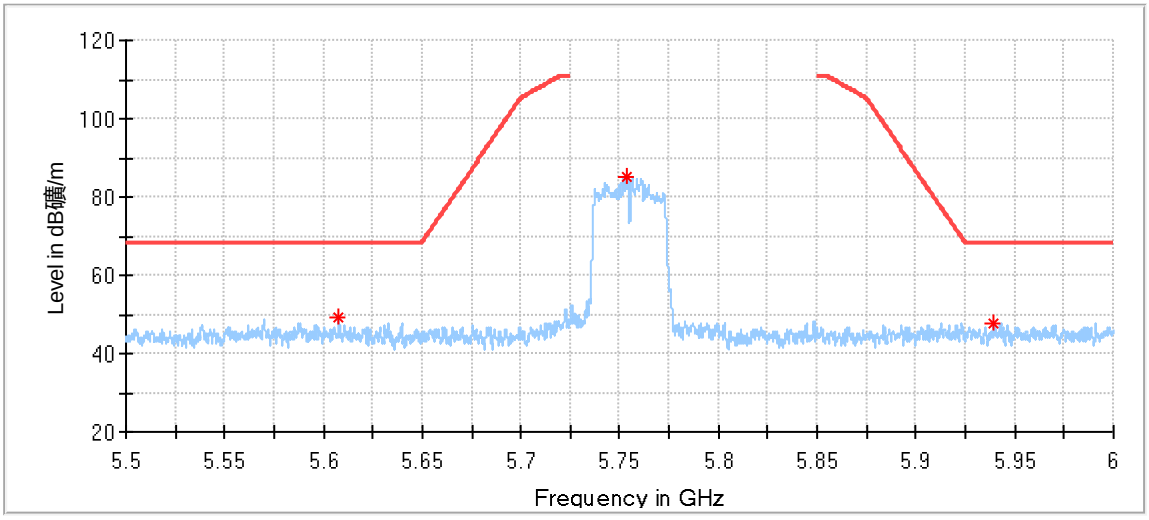
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
5460.266667	49.22	68.20	18.98	150.0	V	53.0	4.95
5469.966667	44.83	68.20	23.37	150.0	V	353.0	5.08
5502.300000	89.11	---	---	150.0	V	0.0	5.20

802.11ac40 Modulation 5755MHz Band edge test result



Critical_Freqs

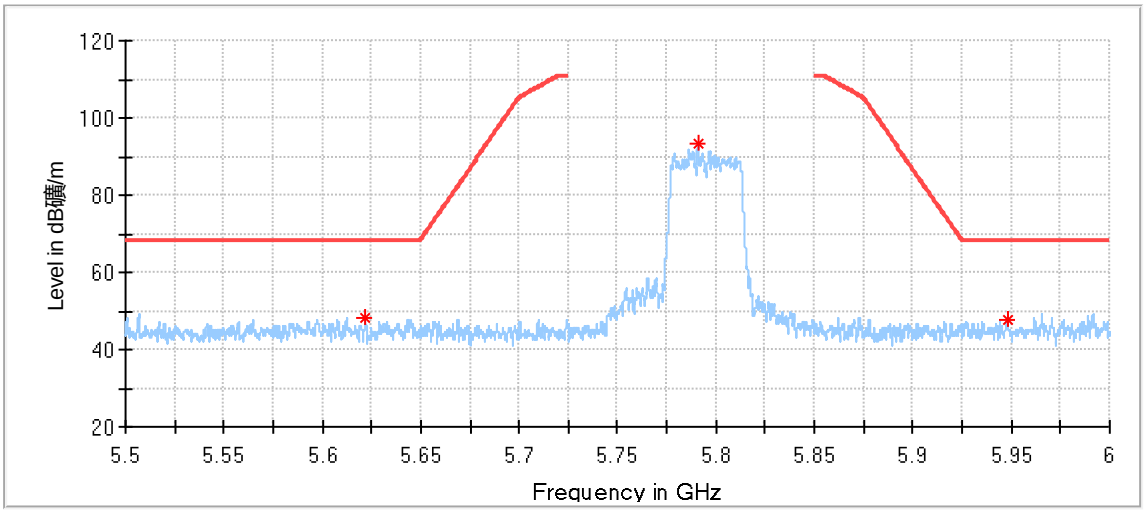
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
5638.833333	47.58	68.20	20.62	150.0	H	34.0	4.69
5749.583333	93.43	---	---	150.0	H	63.0	4.78
5934.083333	49.21	68.20	18.99	150.0	H	188.0	5.29



Critical_Freqs

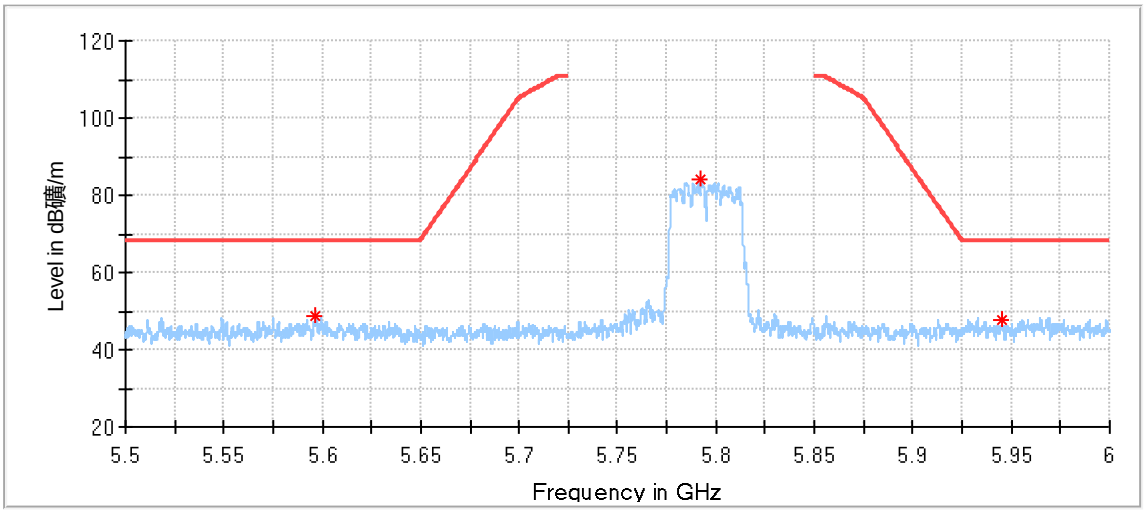
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
5607.708333	49.12	68.20	19.08	150.0	V	159.0	5.01
5753.875000	85.27	---	---	150.0	V	166.0	4.79
5939.333333	47.92	68.20	20.28	150.0	V	0.0	5.32

802.11ac40 Modulation 5795MHz Band edge test result



Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
5621.541667	47.95	68.20	20.25	150.0	H	44.0	4.86
5790.791667	93.29	---	---	150.0	H	58.0	4.84
5947.916667	47.70	68.20	20.50	150.0	H	88.0	5.39



Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
5596.166667	48.51	68.20	19.69	150.0	V	144.0	5.11
5792.416667	84.23	---	---	150.0	V	159.0	4.84
5945.208333	47.82	68.20	20.38	150.0	V	130.0	5.37

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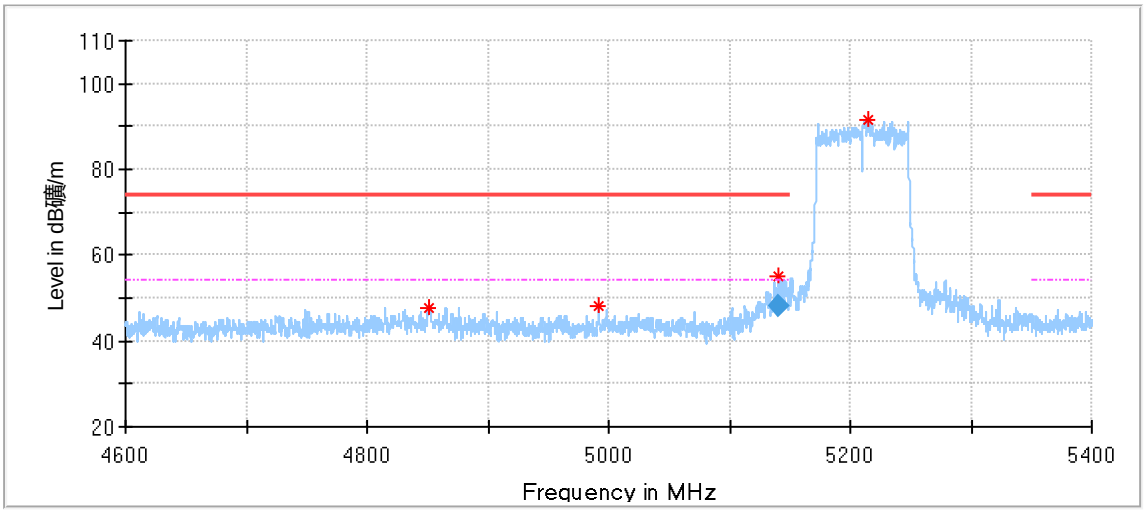
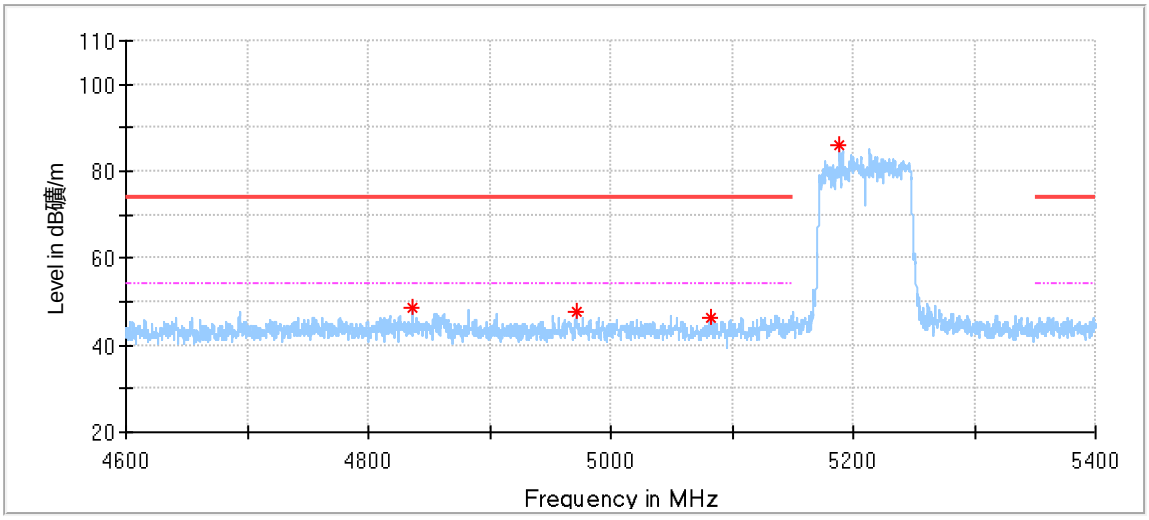
802.11ac80 Modulation 5210MHz Band edge test result



Critical_Freqs

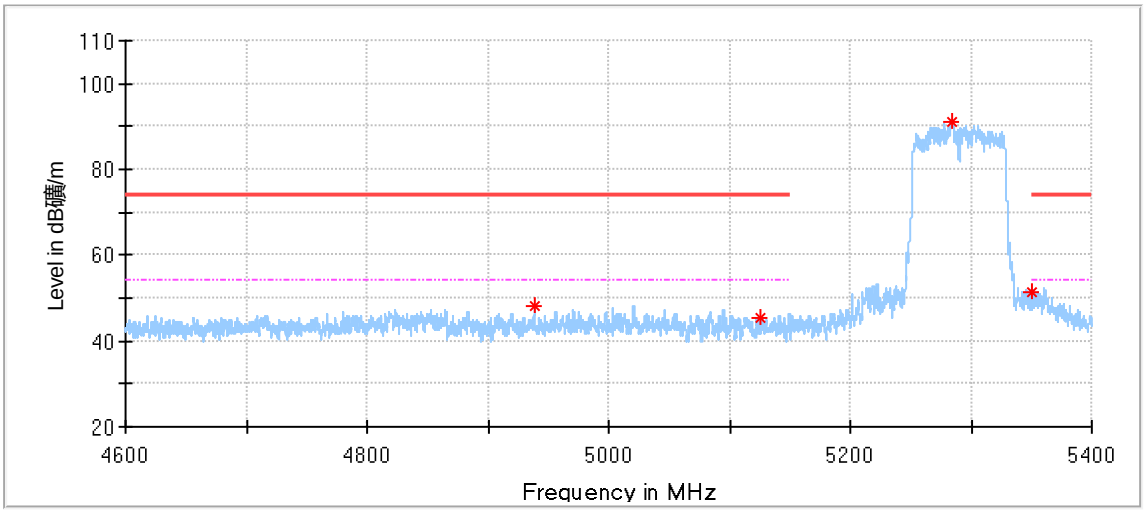
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4850.800000	47.55	74.00	26.45	150.0	H	271.0	3.24
4991.666667	48.22	74.00	25.78	150.0	H	158.0	3.66
5141.266667	55.01	74.00	18.99	150.0	H	340.0	3.69
5215.533333	91.31	---	---	150.0	H	224.0	3.79



Critical_Freqs

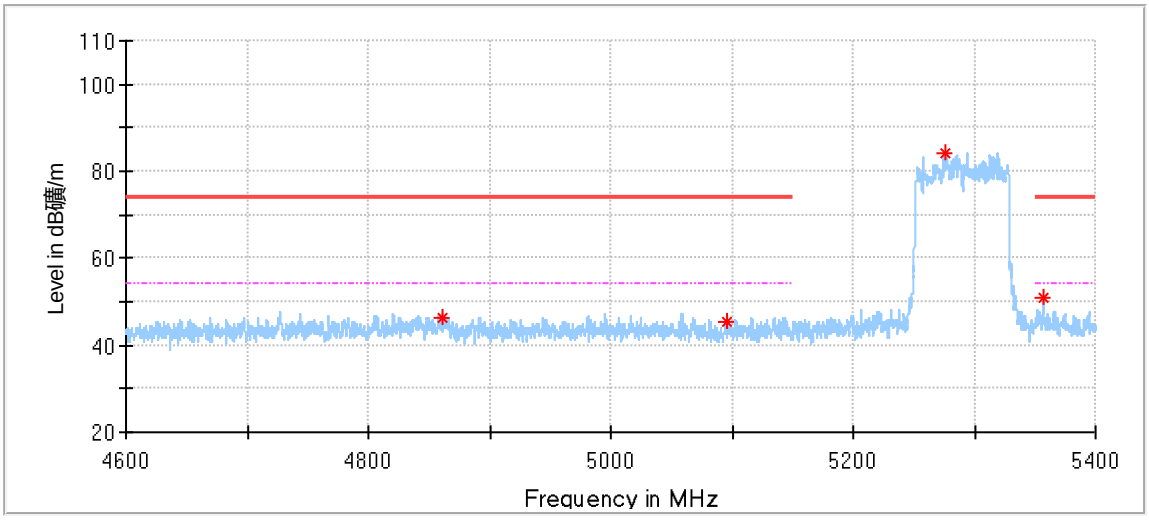
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4836.266667	48.57	74.00	25.43	150.0	V	130.0	3.06
4971.400000	47.76	74.00	26.24	150.0	V	34.0	3.64
5082.866667	46.51	74.00	27.49	150.0	V	79.0	3.47
5188.600000	85.81	---	---	150.0	V	21.0	3.82

802.11ac80 Modulation 5290MHz Band edge test result



Critical_Freqs

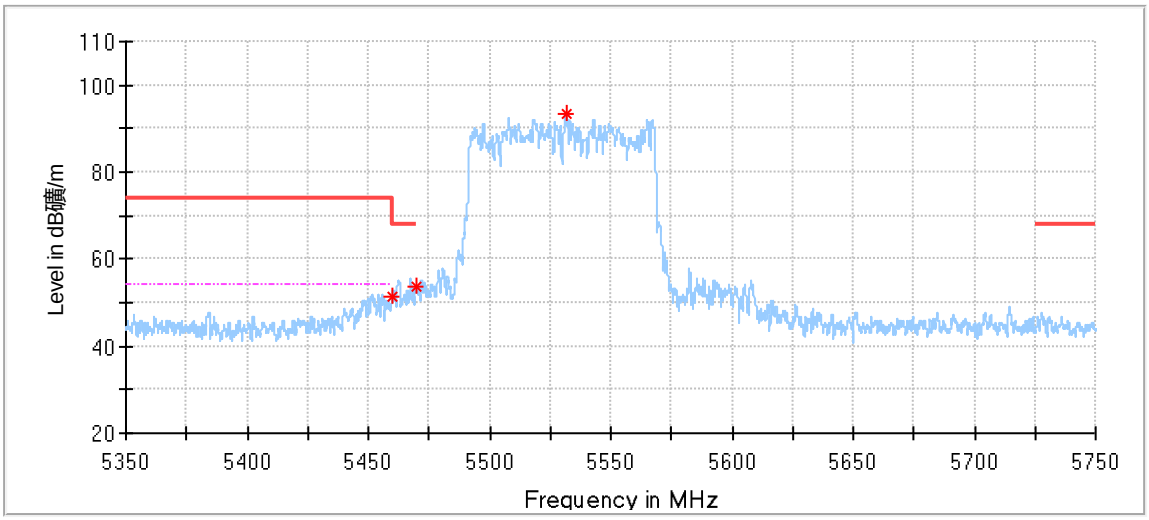
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4938.466667	48.00	74.00	26.00	150.0	H	240.0	3.60
5126.400000	45.36	74.00	28.64	150.0	H	353.0	3.63
5283.533333	91.28	---	---	150.0	H	225.0	3.73
5350.933333	51.42	74.00	20.58	150.0	H	342.0	4.17



Critical_Freqs

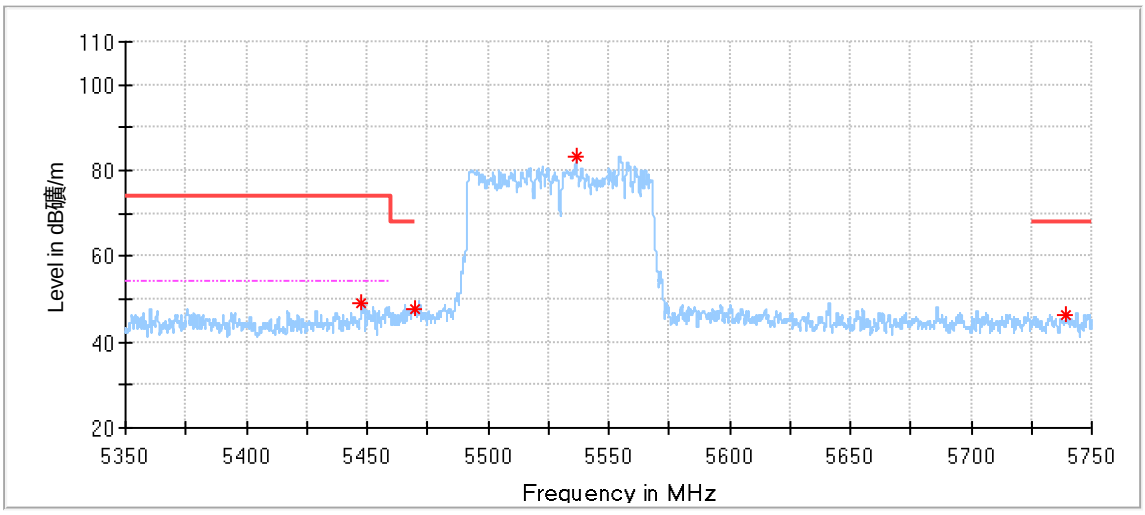
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4860.800000	46.50	74.00	27.50	150.0	V	14.0	3.32
5095.333333	45.50	74.00	28.50	150.0	V	82.0	3.53
5276.800000	83.93	---	---	150.0	V	275.0	3.64
5356.866667	50.81	74.00	23.19	150.0	V	5.0	4.15

802.11ac80 Modulation 5530MHz Band edge test result



Critical_Freqs

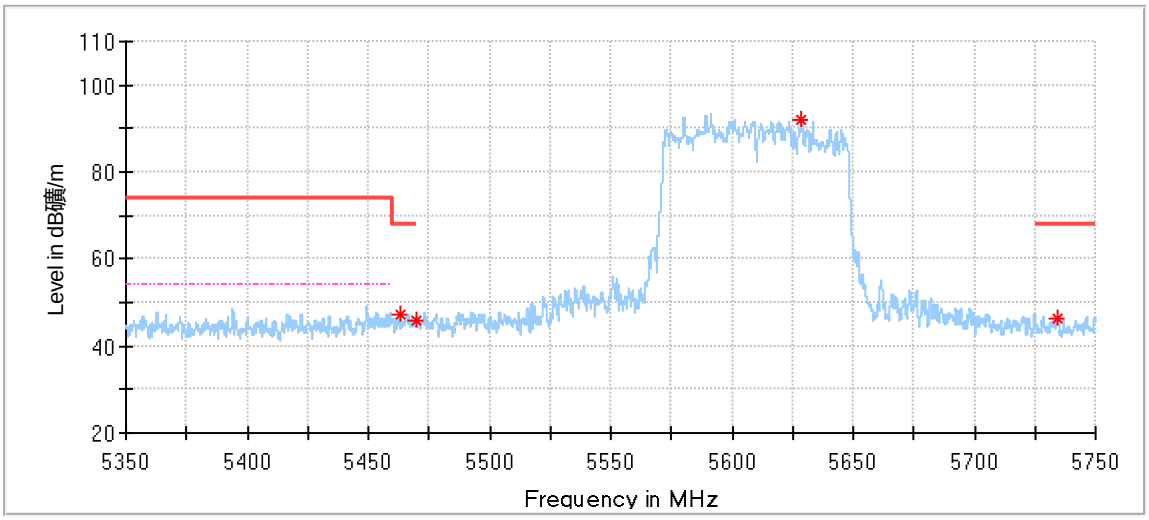
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
5459.766667	51.51	74.00	22.49	150.0	H	197.0	4.94
5470.000000	53.67	---	---	150.0	H	249.0	5.08
5531.600000	93.53	---	---	150.0	H	249.0	4.98



Critical_Freqs

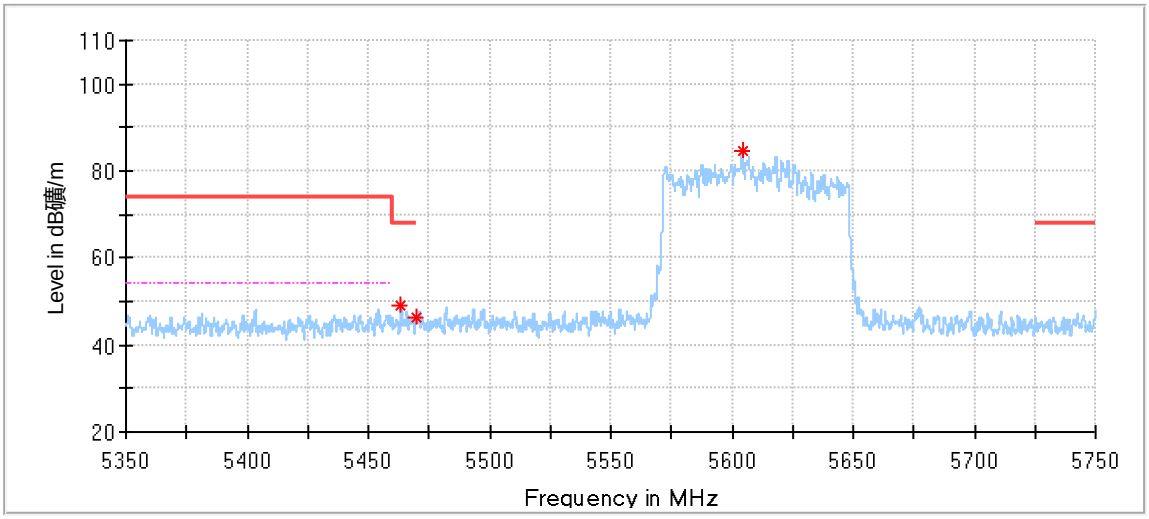
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
5447.833333	49.11	74.00	24.89	150.0	V	277.0	4.79
5469.933333	47.68	68.20	20.52	150.0	V	206.0	5.08
5536.600000	83.41	---	---	150.0	V	298.0	4.95
5739.600000	46.45	68.20	21.75	150.0	V	264.0	4.73

802.11ac80 Modulation 5610MHz Band edge test result



Critical_Freqs

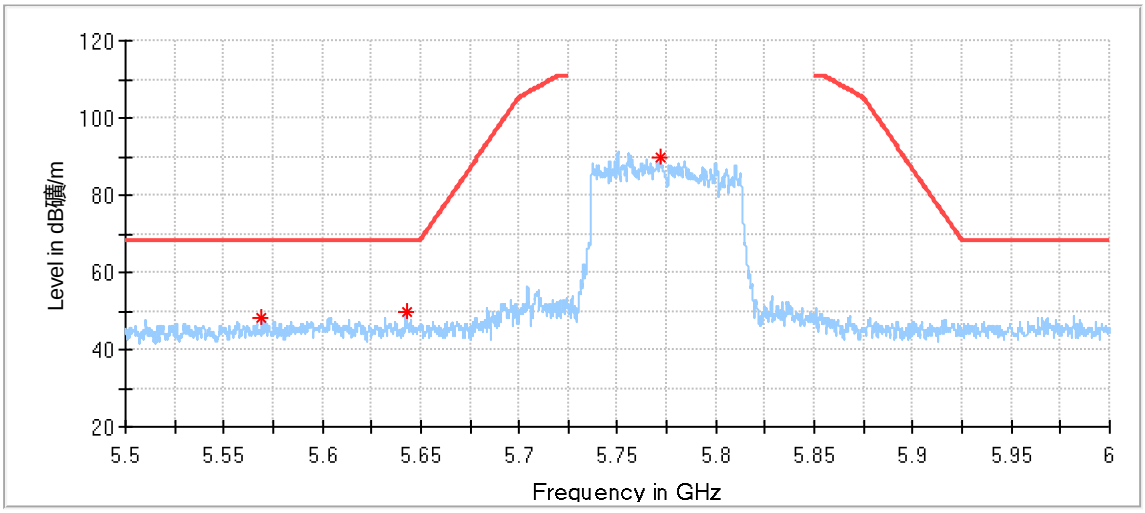
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
5463.000000	47.31	68.20	20.89	150.0	H	46.0	4.98
5470.000000	45.74	---	---	150.0	H	159.0	5.08
5628.800000	92.21	---	---	150.0	H	242.0	4.79
5734.400000	46.51	68.20	21.69	150.0	H	207.0	4.71



Critical_Freqs

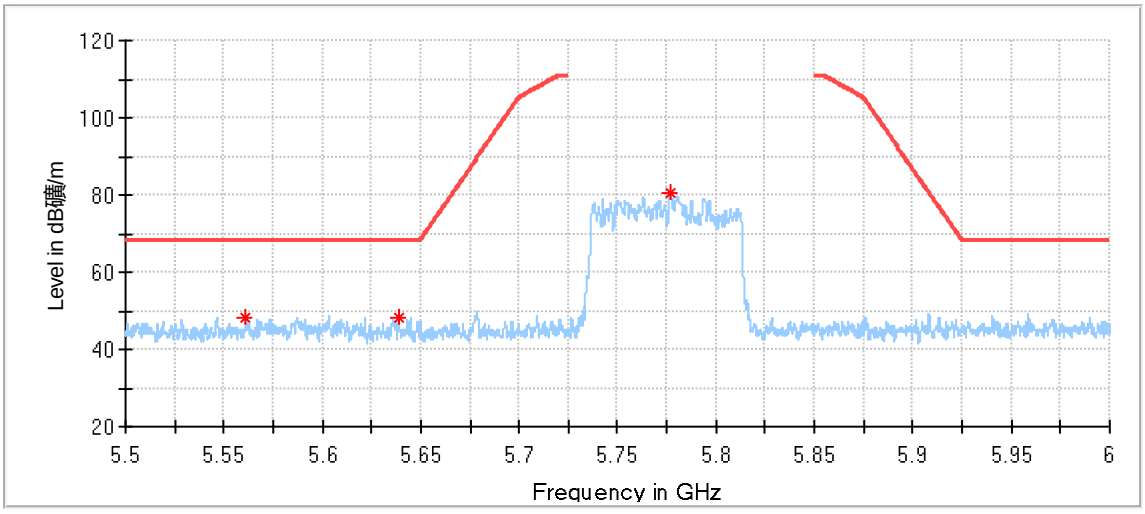
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
5463.500000	49.07	68.20	19.13	150.0	V	169.0	4.99
5469.966667	46.47	68.20	21.73	150.0	V	152.0	5.08
5604.333333	84.77	---	---	150.0	V	295.0	5.04

802.11ac80 Modulation 5775MHz Band edge test result



Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
5569.375000	48.10	68.20	20.10	150.0	H	47.0	5.07
5642.666667	49.70	68.20	18.50	150.0	H	9.0	4.65
5771.750000	89.80	---	---	150.0	H	210.0	4.82



Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
5561.166667	48.38	68.20	19.82	150.0	V	350.0	5.04
5638.583333	48.38	68.20	19.82	150.0	V	211.0	4.69
5776.583333	80.38	---	---	150.0	V	218.0	4.82

Remark:

(1) Data of measurement within frequency ranges 9kHz-30MHz are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured, so test data does not present in this report,

(2) Level= Reading Level + Correction Factor

(3) Above 1GHz: Corrector factor = Antenna Factor + Cable Loss- Amplifier Gain
Below 1GHz: Corrector factor = Antenna Factor + Cable Loss

(The Reading Level is recorded by software which is not shown in the sheet)

9.6 Frequencies Stability

Test Method:

1, Frequency stability with respect to ambient temperature

a) Supply the EUT with a nominal ac voltage or install a new or fully charged battery in the EUT. If possible, a dummy load shall be connected to the EUT because an antenna near the metallic walls of an environmental test chamber could affect the output frequency of the EUT. If the EUT is equipped with a permanently attached, adjustable-length antenna, then the EUT shall be placed in the center of the chamber with the antenna adjusted to the shortest length possible. Turn on the EUT and tune it to one of the number of frequency shown in section 8.
b) Couple the unlicensed wireless device output to the measuring instrument by connecting an antenna to the measuring instrument with a suitable length of coaxial cable and placing the measuring antenna near the EUT, or by connecting a dummy load to the measuring instrument, through an attenuator if necessary.
c) Adjust the location of the measurement antenna and the controls on the measurement instrument to obtain a suitable signal level
d) Turn the EUT OFF and place it inside the environmental temperature chamber. For devices that have oscillator heaters, energize only the heater circuit
e) Set the temperature control on the chamber to the highest specified in the regulatory requirements for the type of device and allow the oscillator heater and the chamber temperature to stabilize
f) While maintaining a control on the chamber to the environmental chamber, turn the EUT ON and record the operating frequency at startup, and at 2 minutes, 5 minutes, and 10 minutes after the EUT is energized. Four measurements in total are made.
g) Measure the frequency at each of frequency specified in section 8.
h) Switch OFF the EUT but do not switch OFF the oscillator heater.
i) Lower the chamber temperature by not more that -20℃, and allow the temperature inside the chamber to stabilize.
j) Repeat step f) through step i) down to the lowest specified temperature.

2, Frequency stability when varying supply voltage

Unless otherwise specified, these tests shall be made at ambient room temperature. An antenna shall be connected to the antenna output terminals of the EUT if possible. If the EUT is equipped with or uses an adjustable-length antenna, then it shall be fully extended.

a) Supply the EUT with nominal voltage or install a new or fully charged battery in the EUT. Turn ON the EUT and couple its output to a frequency counter or other frequency-measuring instrument.
b) Turn the EUT to one of the number if frequencies required in Section8. Adjust the location of the measurement antenna and the controls on the measurement instrument to obtain a suitable signal level.
c) Measure the frequency at each of the frequencies specified in section 8.
d) Repeat the above procedure at 85% and 115% of the nominal supply voltage.

Limit: It is required that that the emissions are maintained within the band of operation under all conditions of normal operation as specified in the user's manual.

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Frequency Error vs. Voltage:

Test Conditions	Measured Frequency (MHz)
	5180
V nom(V)	5180.041
V max(V)	5180.042
V min(V)	5180.041
Max. Deviation Frequency	0.042
Max. Frequency Error (ppm)	8.11

Frequency Error vs. Temperature:

Test Conditions (°C)	Measured Frequency (MHz)
	5180
-20	5180.042
-10	5180.043
0	5180.042
10	5180.042
20	5180.042
30	5180.043
40	5180.043
50	5180.042
Max. Deviation Frequency	0.043
Max. Frequency Error (ppm)	8.30

Frequency Error vs. Voltage:

Test Conditions	Measured Frequency (MHz)
	5500
V nom(V)	5500.046
V max(V)	5500.046
V min(V)	5500.046
Max. Deviation Frequency	0.046
Max. Frequency Error (ppm)	8.36

Frequency Error vs. Temperature:

Test Conditions (°C)	Measured Frequency (MHz)
	5500
-20	5500.046
-10	5500.046
0	5500.046
10	5500.045
20	5500.045
30	5500.046
40	5500.046
50	5500.046
Max. Deviation Frequency	0.046
Max. Frequency Error (ppm)	8.36

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Frequency Error vs. Voltage:

Test Conditions	Measured Frequency (MHz)
	5745
V nom(V)	5745.048
V max(V)	5745.048
V min(V)	5745.048
Max. Deviation Frequency	0.048
Max. Frequency Error (ppm)	8.36

Frequency Error vs. Temperature:

Test Conditions (°C)	Measured Frequency (MHz)
	5745
-20	5745.048
-10	5745.048
0	5745.047
10	5745.047
20	5745.047
30	5745.047
40	5745.048
50	5745.048
Max. Deviation Frequency	0.048
Max. Frequency Error (ppm)	8.36

Remark 1: V min(V) = 85% of the nominal supply voltage
V max(V)=115% of the nominal supply voltage

Remark 2: we test all frequencies which specified in section 8 and only show these representative frequencies.

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9.7 Dynamic Frequency Selection (DFS)

Mode of Operation:

Parameters of EUT	
Frequency	5250-5350MHz 5470-5600MHz 5650-5725MHz
Operational Mode	☐Master ☒Client without Radar Detection ☐Client with Radar Detection
Modulation	OFDM
Channel Bandwidth	20MHz, 40MHz, 80MHz

Working Modes and required Test Items

The manufacturer shall whether the EUT is capable of operating as a master and a client. If the EUT is capable of operating in more than one operating mode then each operating mode shall be tested separately.

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

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

Table 2: Applicability of DFS requirements during normal operation

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

Additional requirements for devices with multiple bandwidth modes	Master Device or Client with Radar Detection	Client Without Radar Detection
U-NII Detection Bandwidth and Statistical Performance Check	All BW modes must be tested	Not required
Channel Move Time and Channel Closing Transmission Time	Test using widest BW mode available	Test using the widest BW mode available for the link
All other tests	Any single BW mode	Not required
Note: Frequencies selected for statistical performance check (Section 7.8.4) should include several frequencies within the radar detection bandwidth and frequencies near the edge of the radar detection bandwidth. For 802.11 devices it is suggested to select frequencies in each of the bonded 20 MHz channels and the channel center frequency.		

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Requirement:
Per KDB 905462 D02 v02 the following are the requirements for client Devices:
a) A Client Device will not transmit before having received appropriate control signals from a Master Device.
b) A Client Device will stop all its transmissions whenever instructed by a Master Device to which it is associated and will meet the Channel Move Time and Channel Closing Transmission Time requirements. The Client Device will not resume any transmissions until it has again received control signals from a Master Device.
c) If a Client Device is performing In-Service Monitoring and detects a Radar Waveform above the DFS Detection Threshold, it will inform the Master Device. This is equivalent to the Master Device detecting the Radar Waveform and d) through f) of section 5.1.1 apply.
d) Irrespective of Client Device or Master Device detection the Channel Move Time and Channel Closing Transmission Time requirements remain the same.
e) The client test frequency must be monitored to ensure no transmission of any type has occurred for 30 minutes. Note: If the client moves with the master, the device is considered compliant if nothing appears in the client non-occupancy period test. For devices that shut down (rather than moving channels), no beacons should appear**.**

Table 3: DFS Response Requirement Values

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

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DFS Detection Thresholds Values

Table 4 below provides the DFS Detection Thresholds for Master Devices as well as Client Devices incorporating In-Service Monitoring.

Table 4: DFS Detection Thresholds for Master Devices and Client Devices with Radar Detection

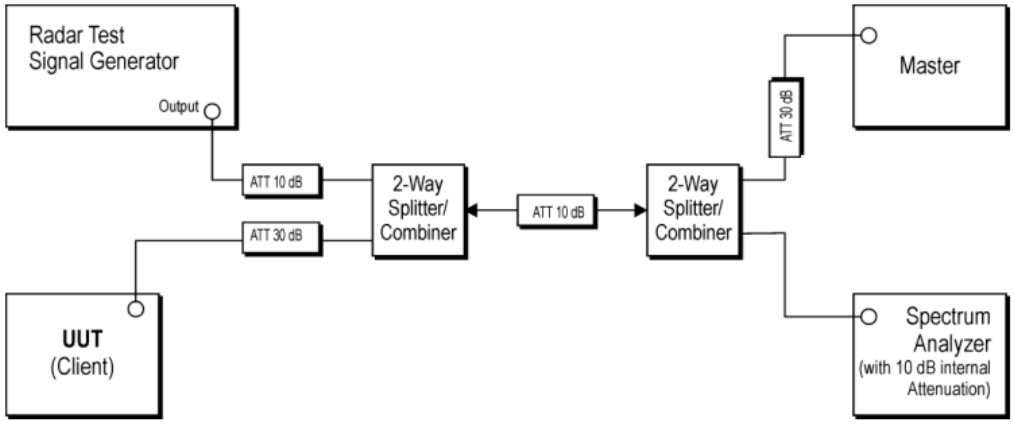
Maximum Transmit Power	Value (See Notes 1, 2, and 3)
EIRP ≥ 200 milliwatt	-64 dBm
EIRP < 200 milliwatt and power spectral density < 10 dBm/MHz	-62 dBm
EIRP < 200 milliwatt that do not meet the power spectral density requirement	-64 dBm
Note 1: This is the level at the input of the receiver assuming a 0 dBi receive antenna. **Note 2:** Throughout these test procedures an additional 1 dB has been added to the amplitude of the test transmission waveforms to account for variations in measurement equipment. This will ensure that the test signal is at or above the detection threshold level to trigger a DFS response. **Note3:** EIRP is based on the highest antenna gain. For MIMO devices refer to KDB Publication 662911 D01.	

Test Procedure

The FCC KDB 905462 D02 v02 describes a radiated test setup and a conducted test setup. A conducted test setup was used for this testing. Figure 1 shows the typical test setup. One channel selected between 5260 and 5350 MHz is chosen for the testing.

Figure 1. Test Setup for DFS

Setup for client with injection at the master.



Channel Closing Transmission Time, Channel Move Time and Non-Occupancy Period.

Block Diagram of test setup test procedure.

(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 is used for the testing.
(2) The vector signal generator is adjusted to provide the radar burst (18 pulses) at the level of approximately -62dBm at the antenna 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) The Client Device (EUT) is set up per the diagram in Figure 1 and communications between the Master device and the Client is established.
(5) Iperf software is used to properly load the test channel.
(6) The real ime spectrum analyzer is set to record a 16sec window to any transmissions occurring up to and after 10sec.

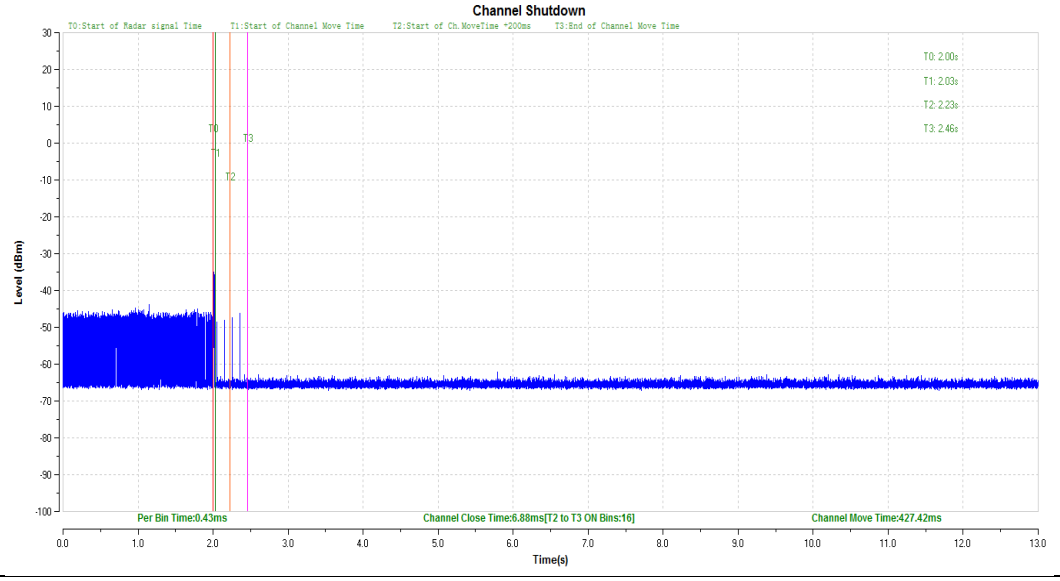
(7) The system is again setup and the monitoring time is shortened in order to capture the Channel Closing Transmission Time. This time is measured to ensure that the Client ceases transmission within 200ms and the aggregate of emissions occurring after 200ms up to 10 sec do not exceed 60ms.
(Note: the channel may be different since the Master and Client have changed channels due to the detection of e initial radar pulse.)
(8) After the initial radar burst the channel is monitored for 30 minutes to ensure no transmissions or beacons occur. A second monitoring setup is used to verify that the Master and Client have both moved to different channels.

Test Result

Clause	Test Parameter	Remarks	Pass/Fail
15.407	DFS Detection Threshold	Not Applicable	N/A
15.407	Channel Availability Check time	Not Applicable	N/A
15.407	Channel Move time	Applicable	Pass
15.407	Channel Closing Transmission time	Applicable	Pass
15.407	Non-occupancy Period	Not Applicable	N/A
15.407	Uniform Spreading	Not Applicable	N/A
15.407	U-NII Detection Bandwidth	Not Applicable	N/A

TestMode	Channel	CCT[s]	Limit[s]	CMT[s]	Limit[s]	Verdict
11AC	5290	6.88	60	427.42	10000	PASS

11AC_5290



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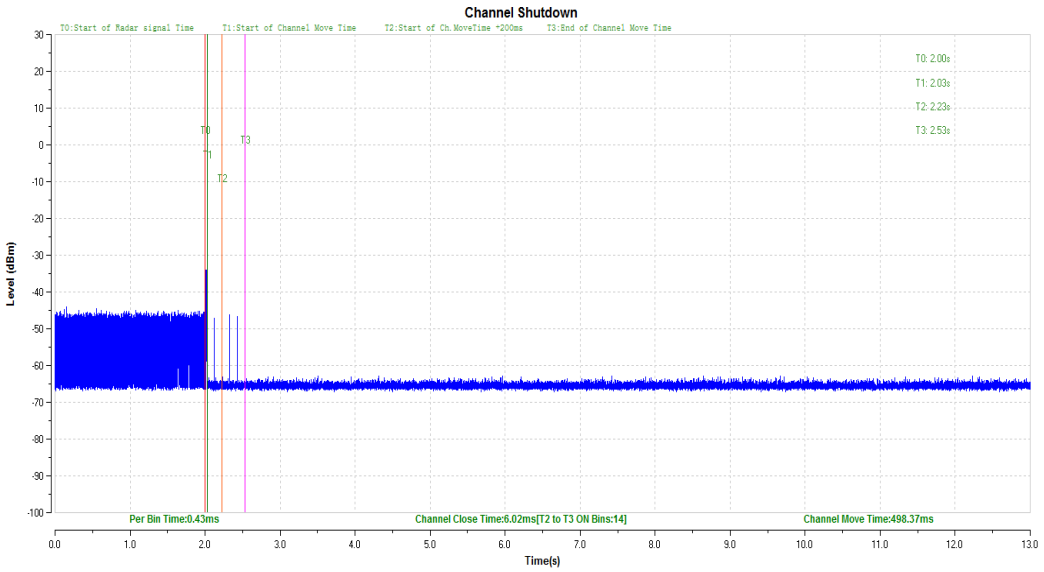
TestMode	Channel	CCT[s]	Limit[s]	CMT[s]	Limit[s]	Verdict
11AC	5530	6.02	60	498.37	10000	PASS

11AC_5530


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10 Test Equipment List

Conducted Emission Test

Description	Manufacturer	Model no.	Equipment ID	Serial no.	Cal. due date
EMI Test Receiver	Rohde & Schwarz	ESR 3	68-4-74-19-002	102590	2024-5-19
LISN	Rohde & Schwarz	ENV216	68-4-87-19-001	102472	2024-5-20
Attenuator	Shanghai Huaxiang	TS2-26-3	68-4-81-16-003	080928189	2024-5-19
Test software	Rohde & Schwarz	EMC32	68-4-90-19-005-A01	Version 10.35.02	N/A
Shielding Room	TDK	CSR #2	68-4-90-19-005	----	2025-10-15

Radiated Emission Test, SAC-3 #1

Description	Manufacturer	Model no.	Equipment ID	Serial no.	Cal. due date
EMI Test Receiver	Rohde & Schwarz	ESR 7	68-4-74-19-001	102176	2024-5-20
Loop Antenna	Rohde & Schwarz	HFH2-Z2	68-4-80-14-006	100398	2024-8-7
3m Semi-anechoic chamber	TDK	SAC-3 #1	68-4-90-14-001	----	2024-5-28
Test software	Rohde & Schwarz	EMC32	68-4-90-14-001-A10	Version 10.35.02	N/A

Radiated Emission Test, SAC-3 #2

Description	Manufacturer	Model no.	Equipment ID	Serial no.	Cal. due date
EMI Test Receiver	Rohde & Schwarz	ESR 26	68-4-74-14-002	101269	2024-5-20
Trilog Super Broadband Test Antenna	Schwarzbeck	VULB 9162	68-4-80-19-003	284	2024-3-5
Wave Guide Antenna	ETS	3117	68-4-80-19-001	00218954	2024-4-26
Pre-amplifier	Rohde & Schwarz	SCU 18F	68-4-29-19-001	100745	2024-5-19
Pre-amplifier	Rohde & Schwarz	SCU 18F	68-4-29-19-002	100746	2024-5-19
Sideband Horn Antenna	Q-PAR	QWH-SL-18-40-K-SG	68-4-80-14-008	12827	2024-7-11
Pre-amplifier	Rohde & Schwarz	SCU 40A	68-4-29-14-002	100432	2024-8-1
Attenuator	Mini-circuits	UNAT-6+	68-4-81-21-002	15542	2024-5-19
3m Semi-anechoic chamber	TDK	SAC-3 #2	68-4-90-19-006	----	2024-5-28
Test software	Rohde & Schwarz	EMC32	68-4-90-19-006-A01	Version 10.35.02	N/A

RF Conducted Test

Description	Manufacturer	Model no.	Equipment ID	Serial no.	Cal. due date
Signal Analyzer	Rohde & Schwarz	FSV40	68-4-74-14-004	101030	2024-5-19
RF Switch Module	Rohde & Schwarz	OSP120/OSP-B157W	68-4-93-14-003	101226/100929	2024-5-20
Power Splitter	Weinschel	1580	68-4-85-14-001	SC319	2024-5-20
10dB Attenuator	Weinschel	4M-10	68-4-81-14-003	43152	2024-5-19
10dB Attenuator	R&S	DNF	68-4-81-14-004	DNF-001	2024-5-19
10dB Attenuator	R&S	DNF	68-4-81-14-005	DNF-002	2024-5-19
10dB Attenuator	R&S	DNF	68-4-81-14-006	DNF-003	2024-5-19
10dB Attenuator	R&S	DNF	68-4-81-14-007	DNF-004	2024-5-19
Test software	Rohde & Schwarz	EMC32	68-4-48-14-003-A10	Version 10.60.10	N/A
Test software	Tonscend	System for BT/WIFI	68-4-74-14-006-A13	Version 2.6.77.0518	N/A
Shielding Room	TDK	TS8997	68-4-90-19-003	----	2025-10-15

11 System Measurement Uncertainly

For a 95% confidence level, the measurement expanded uncertainties for defined systems, in accordance with the recommendations of ISO 17025 were:

System Measurement Uncertainty	
Test Items	Extended Uncertainty
Uncertainty for Conducted Emission in new shielding room (68-4-90-19-005) 150kHz-30MHz (for test using AMN ENV216)	3.15dB
Uncertainty for Radiated Emission in 3m chamber (68-4-90-14-001) 9kHz-30MHz	4.70dB
Uncertainty for Radiated Emission in new 3m chamber (68-4-90-19-006) 30MHz-1000MHz	Horizontal: 4.63dB; Vertical: 4.78dB
Uncertainty for Radiated Emission in new 3m chamber (68-4-90-19-006) 1000MHz-18000MHz	Horizontal: 5.38dB; Vertical: 5.38dB
Uncertainty for Radiated Emission in new 3m chamber (68-4-90-19-006) above 18000MHz	5.29dB
Uncertainty for Conducted RF test with TS 8997	RF Power Conducted: 1.31dB Frequency test involved: 0.6×10^{-8} or 1%

Measurement Uncertainty Decision Rule:
Determination of conformity with the specification limits is based on the decision rule according to IEC Guide 115: 2023, clause 4.3.3 and 4.3.4.

---END OF REPORT---

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