



Test report No.: 23B0393R-RFUSV03S-A

TEST REPORT (Class II Permissive Change)

| Product Name | Radio-Navigation-System |
|---|---|
| Trademark | Bosch |
| Model and /or type reference | AIVI2SBXM |
| FCC ID | 2AUXS-AIVI2SBXM |
| Applicant's name / address | Robert Bosch GmbH Robert Bosch-Str. 200 31139 Hildesheim, Germany |
| Manufacturer's name | Robert Bosch GmbH |
| Test method requested, standard | FCC CFR Title 47 Part 15 Subpart E ANSI C63.4: 2014, ANSI C63.10: 2013 KDB Publication 789033 |
| Verdict Summary | IN COMPLIANCE |
| Documented By (Senior Project Specialist / April Chen) | April Chen |
| Tested By (Senior Engineer / Ivan Chuang) | Ivan Chuang |
| Approved By (Senior Engineer / Jack Hsu) | Jack Hsu |
| Date of Receipt | 2023/11/13 |
| Date of Issue | 2024/01/15 |
| Report Version | V1.0 |



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Appendix 1: EUT Test Photographs

Appendix 2: Product Photos-Please refer to the file: 23B0393R-Product Photos

Competences and Guarantees

DEKRA is a testing laboratory competent to carry out the tests described in this report.

In order to assure the traceability to other national and international laboratories, DEKRA has a calibration and maintenance program for its measurement equipment.

DEKRA guarantees the reliability of the data presented in this report, which is the result of the measurements and the tests performed to the item under test on the date and under the conditions stated in the report and it is based on the knowledge and technical facilities available at DEKRA at the time of performance of the test.

DEKRA is liable to the client for the maintenance of the confidentiality of all information related to the item under test and the results of the test.

The results presented in this Test Report apply only to the particular item under test established in this document.

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General conditions

- 1. The test results relate only to the samples tested.
- 2. The test results shown in the test report are traceable to the national/international standard through the calibration report of the equipment and evaluated measurement uncertainty herein.
- 3. This report must not be used to claim product endorsement by TAF or any agency of the government.
- 4. The test report shall not be reproduced without the written approval of DEKRA Testing and Certification Co., Ltd.
- 5. Measurement uncertainties evaluated for each testing system and associated connections are given here to provide the system information for reference. Compliance determinations do not take into account measurement uncertainties for each testing system, but are based on the results of the compliance measurement.



Revision History

| Report No. | Version | Description | Issued Date |
|---------------------|---------|--------------------------|-------------|
| 23B0393R-RFUSV03S-A | V1.0 | Initial issue of report. | 2024/01/15 |



1. General Information

1.1. EUT Description

| Product Name | Radio-Navigation-System |
|--------------------|---|
| Trade Name | Bosch |
| Model No. | AIVI2SBXM |
| EUT Rated Voltage | DC 13.5V (Power by battery) |
| EUT Test Voltage | DC 13.5V (Power by battery) |
| Frequency Range | 802.11a/n-20 MHz: 5180-5320 MHz, 5500-5700 MHz, 5745-5825 MHz |
| | 802.11n-40 MHz: 5190-5310, 5510-5670 MHz, 5755-5795 MHz |
| | 802.11ac-80 MHz: 5210-5290 MHz, 5530-5690 MHz, 5775 MHz |
| Number of Channels | 802.11a/n-20MHz: 24; 802.11n-40MHz: 11, 802.11ac-80MHz: 6 |
| Data Rate | 802.11a: 6 – 54 Mbps |
| | 802.11n: up to 150 Mbps |
| | 802.11ac-80 MHz: up to 433.3 Mbps |
| Type of Modulation | 802.11a/n/ac: OFDM, BPSK, QPSK, 16QAM, 64QAM, 256QAM |
| Channel Control | Auto |

Antenna List

| No. | Manufacturer | Part No. | Antenna Type | Peak Gain |
|-----|------------------|-----------------|--------------|-----------------------------|
| 1 | NISSEI ELECTRIC | 28090 HS00A | Metal Plate | -0.94 dBi for 5150~5250 MHz |
| | | | | 1.68 dBi for 5250~5350 MHz |
| | | | | 0.10 dBi for 5470~5725 MHz |
| | | | | -0.51 dBi for 5725~5850 MHz |
| 2 | INPAQ TECHNOLOGY | 28091 7LA0A | Metal Plate | -3.71 dBi for 5150~5250 MHz |
| | | | | -1.48 dBi for 5250~5350 MHz |
| | | | | -0.40 dBi for 5470~5725 MHz |
| | | | | -1.57 dBi for 5725~5850 MHz |
| 3 | NISSEI ELECTRIC | 28090 9HF0A/B | Metal Plate | -5.42 dBi for 5150~5250 MHz |
| | | | | -2.26 dBi for 5250~5350 MHz |
| | | | | -4.12 dBi for 5470~5725 MHz |
| | | | | -3.97 dBi for 5725~5850 MHz |
| 4 | Harada Industry | VPPASF-10849-ZA | Metal Plate | 2.28 dBi for 5150~5250 MHz |
| | | | | 1.75 dBi for 5250~5350 MHz |
| | | | | 2.18 dBi for 5470~5725 MHz |
| | | | | 0.12 dBi for 5725~5850 MHz |

Note:

- 1. The antenna of EUT is conforming to FCC 15.203.
- 2. The antenna gain as by the manufacturer provided.
- 3. Each antenna has been evaluated and only the worst case (higher gain antenna) is presented in the report.



| Channel | Frequency | Channel | Frequency | Channel | Frequency | Channel | Frequency |
|---------|-----------|---------|-----------|---------|-----------|---------|-----------|
| | (MHz) | | (MHz) | | (MHz) | | (MHz) |
| 36 | 5180 | 40 | 5200 | 44 | 5220 | 48 | 5240 |
| 52 | 5260 | 56 | 5280 | 60 | 5300 | 64 | 5320 |
| 100 | 5500 | 104 | 5520 | 108 | 5540 | 112 | 5560 |
| 116 | 5580 | 120 | 5600 | 124 | 5620 | 128 | 5640 |
| 132 | 5660 | 136 | 5680 | 140 | 5700 | 149 | 5745 |
| 153 | 5765 | 157 | 5785 | 161 | 5805 | 165 | 5825 |

802.11a/n-20 MHz Center Working Frequency of Each Channel:

802.11n-40 MHz Center Working Frequency of Each Channel:

| Channel | Frequency | Channel | Frequency | Channel | Frequency | Channel | Frequency |
|---------|-----------|---------|-----------|---------|-----------|---------|-----------|
| | (MHz) | | (MHz) | | (MHz) | | (MHz) |
| 38 | 5190 | 46 | 5230 | 54 | 5270 | 62 | 5310 |
| 102 | 5510 | 110 | 5550 | 118 | 5590 | 126 | 5630 |
| 134 | 5670 | 151 | 5755 | 159 | 5795 | | |

802.11ac-80 MHz Center Working Frequency of Each Channel:

| Channel | Frequency | Channel | Frequency | Channel | Frequency | Channel | Frequency |
|---------|-----------|---------|-----------|---------|-----------|---------|-----------|
| | (MHz) | | (MHz) | | (MHz) | | (MHz) |
| 42 | 5210 | 58 | 5290 | 106 | 5530 | 122 | 5610 |
| 138 | 5690 | 155 | 5775 | | | | |

Note:

- 1. This device is a Radio-Navigation-System with built-in WLAN and Bluetooth transceiver, this report for 5GHz WLAN.
- 2. Regarding to the operation frequency, the lowest, middle and highest frequency are selected to perform the test.
- 3. Lowest and highest data rates are tested in each mode. Only worst case is shown in the report.
- 4. The spectrum plot against conducted item only shows the worst case.
- 5. DEKRA has evaluated each test mode. Only the worst case is shown in the report.
- 6. This is to request a Class II permissive change for FCC ID: 2AUXS-AIVI2SBXM, originally granted on 11/19/2020.

According to the major change, DEKRA tests Radiated Emission and Radiated Band Edge items, and other testing data refer to original reports.

The major change filed under this application is: Additional antenna for WLAN which type is same as original grant and the antenna gain is higher than original grant.

7. These tests were conducted on a sample of the equipment for the purpose of demonstrating compliance of transmitter with Part 15 Subpart E for Unlicensed National Information Infrastructure devices.

| Test Mode | Mode 1 | Transmit (802.11a) Transmit (802.11n-20 MHz) |
|-----------|--------|---|
| | | Transmit (802.11n-40 MHz) |
| | | Transmit (802.11ac-80 MHZ) |

1.2. Tested System Datails

The types for all equipment, plus descriptions of all cables used in the tested system (including inserted cards) are:

| Pr | oduct | Manufacturer | Model No. | Serial No. | Power Cord |
|----|------------------|--------------|-----------|------------|------------|
| 1 | Load Box A-IVI 2 | BOSCH | N/A | N/A | N/A |
| 2 | Notebook PC | Lenovo | TP00067C | PF-0EW0C3 | N/A |
| 3 | Battery | BOSCH | 60044 | N/A | N/A |

| Cable Type | | Cable Description |
|------------|--------------|-------------------|
| А | Signal Cable | Non-shielded, 2m |
| В | Power Cable | Non-shielded, 2m |

1.3. Configuration of tested System



1.4. EUT Exercise Software

| 1 | Setup the EUT as shown in Section 1.3. |
|---|--|
| 2 | Execute software "Dut labtool Ver. 2.0.0.89" on the Notebook PC. |
| 3 | Configure the test mode, the test channel, and the data rate. |
| 4 | Press "OK" to start the continuous transmit. |
| 5 | Verify that the EUT works properly. |



1.5. Test Facility

Ambient conditions in the laboratory:

| Performed Item | Items | Required | Actual |
|-------------------|------------------|----------|---------|
| Radiated Emission | Temperature (°C) | 10~40 °C | 20.5 °C |
| | Humidity (%RH) | 10~90 % | 65.0 % |

| USA | FCC Registration Number: TW0033 |
|--------|---|
| Canada | CAB Identifier Number: TW3023 / Company Number: 26930 |

| Site Description | Accredited by TAF |
|------------------|-------------------------|
| | Accredited Number: 3023 |

| Test Laboratory | DEKRA Testing and Certification Co., Ltd. | | |
|--------------------|--|--|--|
| | Linkou Laboratory | | |
| Address | No.5-22, Ruishukeng Linkou District, New Taipei City, 24451, Taiwan, R.O.C | | |
| Performed Location | No. 26, Huaya 1st Rd., Guishan Dist.,Taoyuan City 333411, Taiwan, R.O.C. | | |
| Phone Number | +886-3-275-7255 | | |
| Fax Number | +886-3-327-8031 | | |



1.6. List of Test Equipment

| TU | Yor Kaulateu Measurements / H1-CB05 | | | | | | | |
|----|-------------------------------------|---------------|-------------------|--------------|------------|------------|--|--|
| | Equipment | Manufacturer | Model No. | Serial No. | Cal. Date | Due Date | | |
| v | Loop Antenna | AMETEK | HLA6121 | 49611 | 2023/02/21 | 2024/02/20 | | |
| v | Bi-Log Antenna | SCHWARZBECK | VULB9168 | 9168-0675 | 2023/08/09 | 2025/08/08 | | |
| v | Horn Antenna | Com-Power | AH-840 | 101100 | 2023/10/02 | 2025/10/01 | | |
| v | Horn Antenna | RF SPIN | DRH18-E | 210507A18ES | 2023/05/11 | 2024/05/10 | | |
| v | Pre-Amplifier | SGH | SGH0301-9 | 20211007-11 | 2023/01/10 | 2024/01/09 | | |
| v | Pre-Amplifier | SGH | PRAMP118 | 20200701 | 2023/01/10 | 2024/01/09 | | |
| v | Pre-Amplifier | EMCI | EMC05820SE | 980310 | 2023/01/10 | 2024/01/09 | | |
| | Pre-Amplifier | EMCI | EMC184045SE | 980369 | 2023/01/10 | 2024/01/09 | | |
| v | Coaxial Cable | EMCI | EMC102-KM-KM-600 | 1160314 | | | | |
| | Coaxial Cable | EMCI | EMC102-KM-KM-7000 | 170242 | | | | |
| | Filter | MICRO TRONICS | BRM50702 | G269 | 2023/01/05 | 2024/01/04 | | |
| v | Filter | MICRO TRONICS | BRM50716 | G196 | 2023/01/05 | 2024/01/04 | | |
| v | EMI Test Receiver | R&S | ESR3 | 102792 | 2022/12/29 | 2023/12/28 | | |
| v | Spectrum Analyzer | R&S | FSV3044 | 101113 | 2023/02/04 | 2024/02/03 | | |
| | Coaxial Cable | SGH | SGH18 | 2021005-1 | 2023/01/10 | 2024/01/09 | | |
| | Coaxial Cable | SGH | SGH18 | 202108-4 | | | | |
| V | Coaxial Cable | SGH | HA800 | GD20110223-1 |] | | | |
| | Coaxial Cable | SGH | HA800 | GD20110222-3 | | | | |

For Radiated Measurements / HY-CB03

Note:

- 1. Bi-Log Antenna and Horn Antenna(AH-840) is calibrated every two years, the other equipments are calibrated every one year.
- 2. The test instruments marked with "V" are used to measure the final test results.
- 3. Test Software Version: e3 230303 dekra V9.

1.7. Uncertainty

Uncertainties have been calculated according to the DEKRA internal document.

The reported expanded uncertainties are based on a standard uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95%.

Measurement uncertainties evaluated for each testing system and associated connections are given here to provide the system information for reference. Compliance determinations do not take into account measurement uncertainties for each testing system, but are based on the results of the compliance measurement.

| Test item | Uncertainty |
|-------------------|-------------------------|
| | 9 kHz~30 MHz: ±3.88 dB |
| | 30 MHz~1 GHz: ±4.42 dB |
| Radiated Emission | 1 GHz~18 GHz: ±4.28 dB |
| | 18 GHz~40 GHz: ±3.90 dB |
| | 9 kHz~30 MHz: ±3.88 dB |
| | 30 MHz~1 GHz: ±4.42 dB |
| Band Edge | 1 GHz~18 GHz: ±4.28 dB |
| | 18 GHz~40 GHz: ±3.90 dB |
| Duty Cycle | ±0.53 % |



2. Radiated Emission

2.1. Test Setup



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2.2. Limits

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 20dB below the level of the fundamental or to the general radiated emission limits in paragraph 15.209, whichever is the lesser attenuation.

| FCC Part 15 Subpart C Paragraph 15.209(a) Limits | | | | | |
|--|--------------------|------------------------------|--|--|--|
| Frequency | Field strength | | | | |
| MHz | (microvolts/meter) | Measurement distance (meter) | | | |
| 0.009-0.490 | 2400/F(kHz) | 300 | | | |
| 0.490-1.705 | 24000/F(kHz) | 30 | | | |
| 1.705-30 | 30 | 30 | | | |
| 30-88 | 100 | 3 | | | |
| 88-216 | 150 | 3 | | | |
| 216-960 | 200 | 3 | | | |
| Above 960 | 500 | 3 | | | |

Remarks: E field strength $(dB\mu V/m) = 20 \log E$ field strength $(\mu V/m)$

- For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.
- For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.
- For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.
- For transmitters operating in the 5.725-5.85 GHz band: All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.
- For transmitters operating within the 5.925-7.125 GHz band: Any emissions outside of the 5.925-7.125 GHz band must not exceed an e.i.r.p. of -27 dBm/MHz.

Based on ANSI C63.10-2013 Section 12.7.3 d) provides the conversion formula between field strength and EIRP, if distance is 3m, -27dBm is equivalent to 68.22dBuV/m.

2.3. Test Procedure

The EUT was setup according to ANSI C63.10, 2013 and tested according to FCC KDB-789033 test procedure for compliance to FCC 47CFR 15. 407 requirements.

Measuring the frequency range below 1 GHz, the EUT is placed on a turn table which is 0.8 meter above ground, when measuring the frequency range above 1 GHz, the EUT is placed on a turn table which is 1.5 meter above ground.

The turn table is rotated 360 degrees to determine the position of the maximum emission level.

The EUT was positioned such that the distance from antenna to the EUT was 3 meters.

The antenna is scanned between 1 meter and 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.10: 2013 on radiated measurement.

The resolution bandwidth below 30 MHz setting on the field strength meter is 9kHz and 30 MHz~1 GHz is 120 kHz and above 1 GHz is 1 MHz.

Radiated emission measurements below 30 MHz are made using Loop Antenna and 30 MHz~1 GHz are made using broadband Bi-Log antenna and above 1 GHz are made using Horn Antennas.

The measurement is divided into the Preliminary Measurement and the Final Measurement.

The suspected frequencies are searched for in Preliminary Measurement with the measurement antenna kept pointed at the source of the emission both in azimuth and elevation, with the polarization of the antenna oriented for maximum response. The antenna is pointed at an angle towards the source of the emission, and the EUT is rotated in both height and polarization to maximize the measured emission. The emission is kept within the illumination area of the 3 dB bandwidth of the antenna.

The measurement frequency range form 9 kHz - 10th Harmonic of fundamental was investigated.

RBW and VBW Parameter setting:

According to KDB 789033 section II.G.5 Procedure for Unwanted Maximum Emissions Measurements above 1000 MHz.

RBW = 1 MHz.

 $VBW \ge 3 MHz.$

According to KDB 789033 section II.G.6 Procedures for Average Unwanted Emissions Measurements above 1000 MHz.

RBW = 1 MHz.

VBW = 10 Hz, when duty cycle \ge 98 %

VBW $\geq 1/T$, when duty cycle < 98 %

(T refers to the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.)

| 5 GHz band | Duty Cycle | Т | 1/T | VBW |
|-----------------|------------|------|------|------|
| | (%) | (ms) | (Hz) | (Hz) |
| 802.11a | 100.00 | | | 10 |
| 802.11n-20 MHz | 100.00 | | | 10 |
| 802.11n-40 MHz | 100.00 | | | 10 |
| 802.11ac-80 MHz | 100.00 | | | 10 |

Note: Duty Cycle Refer to Section 4.



2.4. Test Result of Radiated Emission













































3. Band Edge

3.1. Test Setup

RF Conducted Measurement:



RF Radiated Measurement:



3.2. Limits

The provisions of Section 15.205 of this part apply to intentional radiators operating under this section. Radiated emissions which fall in the restricted bands, as defined in Section 15.205, must also comply with the radiated emission limits specified in Section 15.209:

| FCC Part 15 Subpart C Paragraph 15.209 Limits | | | | |
|---|----------|-----------|--|--|
| Frequency MHz | μV/m @3m | dBµV/m@3m | | |
| 30-88 | 100 | 40 | | |
| 88-216 | 150 | 43.5 | | |
| 216-960 | 200 | 46 | | |
| Above 960 | 500 | 54 | | |

Remarks : 1. RF Voltage $(dB\mu V) = 20 \log RF$ Voltage (μV)

- 2. In the Above Table, the tighter limit applies at the band edges.
- 3. Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.
- For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.
- For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.
- For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.
- For transmitters operating in the 5.725-5.85 GHz band: All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.
- For transmitters operating within the 5.925-7.125 GHz band: Any emissions outside of the 5.925-7.125 GHz band must not exceed an e.i.r.p. of -27 dBm/MHz.

Based on ANSI C63.10-2013 Section 12.7.3 d) provides the conversion formula between field strength and EIRP, if distance is 3m, -27dBm is equivalent to 68.22dBuV/m.

3.3. Test Procedure

The EUT is placed on a turn table which is 1.5 meter above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.

The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level.

Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated according to ANSI C63.10:2013 on radiated measurement.

The bandwidth below 1 GHz setting on the field strength meter is 120 kHz, above 1 GHz are 1 MHz. The EUT was setup to ANSI C63.10, 2013; tested to UNII test procedure of FCC KDB-789033 for compliance to FCC 47CFR Subpart E requirements.

RBW and VBW Parameter setting:

According to KDB 789033 section II.G.5 Procedure for Unwanted Maximum Emissions Measurements above 1000 MHz.

RBW = 1 MHz. $VBW \ge 3 MHz.$

According to KDB 789033 section II.G.6 Procedures for Average Unwanted Emissions Measurements above 1000 MHz.

RBW = 1 MHz.

VBW = 10 Hz, when duty cycle \ge 98 %

VBW $\geq 1/T$, when duty cycle < 98 %

(T refers to the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.)

| 5 GHz band | Duty Cycle | Т | 1/T | VBW | |
|-----------------|------------|------|------|------|--|
| | (%) | (ms) | (Hz) | (Hz) | |
| 802.11a | 100.00 | | | 10 | |
| 802.11n-20 MHz | 100.00 | | | 10 | |
| 802.11n-40 MHz | 100.00 | | | 10 | |
| 802.11ac-80 MHz | 100.00 | | | 10 | |

Note: Duty Cycle Refer to Section 4.



3.4. Test Result of Band Edge































4. Duty Cycle

4.1. Test Setup



4.2. Test Procedure

The EUT was setup according to ANSI C63.10 2013; tested according to U-NII test procedure of KDB789033 for compliance to FCC 47CFR 15.407 requirements.



4.3. Test Result of Duty Cycle

| Product | : | Radio-Navigation-System |
|-----------|---|-------------------------|
| Test Item | : | Duty Cycle |
| Test Mode | : | Transmit |

Duty Cycle Formula:

Duty Cycle = Ton / (Ton + Toff)

Duty Factor = 10 Log (1/Duty Cycle)

Results:

| 5 GHz band | Ton | Ton + Toff | Duty Cycle | Duty Factor |
|-----------------|--------|------------|------------|-------------|
| | (ms) | (ms) | (%) | (dB) |
| 802.11a | 1.0000 | 1.0000 | 100.00 | 0.00 |
| 802.11n-20 MHz | 1.0000 | 1.0000 | 100.00 | 0.00 |
| 802.11n-40 MHz | 1.0000 | 1.0000 | 100.00 | 0.00 |
| 802.11ac-80 MHz | 1.0000 | 1.0000 | 100.00 | 0.00 |

802.11a

| Spectrum | | | | | | |
|------------|---------------|---|---|--------------------------|----------------------------------|-----------------------------|
| Ref Level | -20.00 | dBm | RBW 1 MHz | | | |
| Att | 20 |) dB 👄 SWT 100 ms | VBW 3 MHz | | | |
| ●1AP Clrw | | | | | | |
| | | | | D3[1] | | -0.03 dB |
| 00 d0 | | | | | | 20.855 ms |
| -30 dBm | | | | M1[1] | | -46.27 dBm |
| 40 d9m | | | | | 1 | 1.000 ms |
| AT UBIN | | D2 D3 | | | | |
| AL HUBBLE | والمسام والما | فاستعل ولوبية لتصافق وتروي والمنا التابع المالا التستاه | aliti alifik dhi diga aliyo ata siste aliyo | والمتراط المترجب المراجع | والأوج فانتقسو المستقدرين | |
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| ban and a | alda a | 1.1.1 .1.1. | يتابق المرابية المراجلة | لم برويين القرالية | فليلتها فاندياء | . מהרכולה להיציא ביו לא ה |
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| -90 d8m | 1 | 1 P 1 P 1 P 1 P 1 P 1 P 1 P 1 P 1 P 1 P | N II I I I I I I I I I I I I I I I I I | | 11.0 | |
| | | 111 | | | | |
| -100 dBm | | | | | | |
| | | | | | | |
| -110 dBm | | | | | | |
| | | | | | | |
| | | | | | | |
| CF 5.18 GH | z | | 691 pts | | | 10.0 ms/ |
| Marker | | | | | | |
| Type Ref | Trc | X-value | Y-value | Function | Fun | |
| | | 1.0 | 46 07 -0. | | | ction Result |
| M1 | 1 | 1.0 ms | -46.27 dBm | | | ction Result |
| D2 M: | | 1.0 ms 18.391 ms 20.855 ms | -46.27 dBm -0.25 dB | | | ction Result |

Date: 15.OCT.2020 17:47:24

802.11n-40 MHz

| Spect | rum | | | | | | Ē |
|----------|-------------------|--------|---|--------------------------|------------------------------|---------------------------|--------------------------------------|
| Refl | evel | -20.00 | dBm | RBW 1 MHz | | | (. |
| - 4++ | 6461 | 20.00 | 0 d9 = 9WT 100 mc | | | | |
| FCI | | , | 50 GB - 8 WT 100 HB | TON STINE | | | |
| SGL | | | | | | | |
| ●1AP C | arve . | | | | | | |
| | | | | | D3[1] | | 1.53 dB |
| -30 dBr | | | | | | | 16.319 ms |
| -30 ubi | | | | | M1[1] | | -50.61 dBm |
| 10.10 | | | | | | | 1.000 ms |
| -40 GBT | n—— | | | | | | |
| 11 | | 22 J P | يد اد محما 9 | يتأر فتستلق بتنافع | بالصابية المتنا | مصير بيان الما | a distant son son a |
| first an | 1. Jul 1. J | | and the state of the state of the state of the | The second second second | COULD AND GIAL ON TH | | stroke eine some desigte birter |
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| litelt. | 1.11 | al ata | aliana di kala di katika di kat | فأشتر ومراقع الألال أألأ | وتقاربها بالالبارية بأربارية | الالالتقاليا والالتقا | leha keritalah di buli di buli di bu |
| 112 | 1.144 | 1.1.1 | dia di La La La Canada di La La La Canada di Canada | I WE I KAN MARKED IN | 1 0 1 1 1 1 1 1 | e si klansk de fil fil sa | իների հետի ինչերի հետի հետի |
| -90 MB1 | n _111 | | | | | | |
| • | | | | | T. L. | 1 1 | |
| -100 dB | 3m+ | | | | | | |
| | | | | | | | |
| -110 dF | 3m+ | | | | | | |
| | | | | | | | |
| | | | | | | | |
| CF 5.1 | 9 GHz | | | 691 p | ts | | 10.0 ms/ |
| Marker | | | | | | | 2010 |
| Tumo | Def | Trol | V ushue | I v uslue | L Cupation | | ation Desult |
| Type | K61 | IIC | x-value | T-Value | Function | Fund | CION RUSUIC |
| M1 | | 1 | 1.U MS | -50.61 dBm | | | |
| D2 | M1 | 1 | 11.391 ms | 1.55 dB | | | |
| D3 | M1 | 1 | 16.319 ms | 1.53 dB | | | |

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802.11n-20 MHz

| Spect | rum | | | | | | (|
|----------------------------|-----------|-----------------|--|----------------------------------|----------------------------|---------------------------|-------------------------|
| Ref Lo Att | evel · | -20.00 di 30 | 3m dB 👄 SWT 100 ms 🖷 | VBW 1 MHz | | | |
| 1AP C | lrw | | - | | | | |
| -30 dBr | , | | | | D3[1] | | -0.58 20.130 |
| | | | | | mili | | 1.000 |
| -40 dBn 11 44 i 14 | | | للار ديريو يار وريو ريو ايورياني الار | والتربية ومساوية والمراجع | Marine a Julian La Kauting | والاروا الالتواد المراجع | معتامي فطعة ولتمع وزاهم |
| 90 dBn | | | a jamata na jita ja ang ja | al val jelet, wie skylijk, de se | telenter al Mit | n janji ali qi prava kara | |
| -100 dB | m | | | | | | |
| 110 00 | | | | | | | |
| CF 5.1 | B GHz | | | 691 pts | | | 10.0 m |
| | | | | | | | |
| 1arker | | | | Y-value | Function | Func | tion Decult |
| 1arker Type | Ref | Trc | X-value | 46.00 -10 | | | LION RESUL |
| 1arker Type M1 | Ref | Trc 1 | X-value 1.0 ms | -46.29 dBm | | | |
| Marker Type M1 D2 | Ref M1 | Trc 1 | X-value 1.0 ms 14.768 ms | -46.29 dBm -1.59 dB | | | |

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802.11ac-80 MHz

| 00000 | rum | | | | | | | | | E |
|----------------------------|-----------|-----------|--------------------------|----------------|-----------------------|-------------------------|---------------|------------------|--|---------------|
| Ref L | evel | -20.00 c | IBm | RB\ | V 1 MHz | | | | | (. |
| Att | | 30 | dB 🖷 SWT 100 | ms e VB | N 3 MHz | | | | | |
| SGI | | | | | | | | | | |
| 1 AP C | Inv | | | | | | | | | |
| Unit Of | | | | | | | 9[1] | | | -1 51 dB |
| | | | | | | 0 | 3[1] | | | 17 222 me |
| -30 dBm | n — | | + + | | | | 1111 | | _ | 17.252 mg |
| | | | | | | 141 | 1[1] | | | 1 000 mc |
| -40 dBm | n | | | | | | | | 1 | 1.000 ms |
| M1 | | | | | | | | | | |
| Tro Here | طابيتانه | . D2 . D | المطابقة فعرف مشابك | فقالتمعا ستقد | أبريا بالالتمريز أبرا | ليدين والم | م مادر دار ما | La determination | فاستعامت تعط | سه دينه مهادا |
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| litens | ն մել է | لأذر علقت | tat mailar has le r | القار الطرياطي | المع الالالة | برابته أساتية | نا تشامان ال | աներ են հետ | الاستعدادا | بالارية مارية |
| 10100 | i i Midi | i i Marr | ALMAN TRADITION | | י די אויי | 1) WY 1 F 1 (17) | a final data | | 1. | t alla de la |
| PBO OBI | "-TT | 1 1 | al to thus | 1.1.1.1 | | 1.110 | | - with a - 1 | | |
| | | | 'I I | | · · | | L ' | [| 11.4.5 | |
| -100 dB | sm – | | | | | | | | 1. | |
| | | | | | | | | | | |
| -110 dB | sm — | | + | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| CF 5.2 | 1 GHz | | | | 691 | pts | | | | 10.0 ms/ |
| | | | | | | | | | | |
| Marker | | | | 1 . | -value | Func | tion | Fun | ction Result | |
| Marker Type | Ref | Trc | X-value | | 10.00 | | | | | |
| Marker Type M1 | Ref | Trc 1 | X-value 1.0 | ms | -48.46 dB | m | | | | |
| Marker Type M1 D2 | Ref M1 | 1 1 | X-value 1.0 13.464 | ms ms | -48.46 dB -1.35 d | m IB | | | | |

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