



FCC RADIO TEST REPORT

FCC ID : MSQAI2205
Equipment : ASUS Phone (Mobile Phone)
Brand Name : ASUS
Model Name : ASUS_AI2205_E 、 ASUS_AI2205_F
Applicant : ASUSTeK COMPUTER INC.
1F., No. 15, Lide Rd., Beitou Dist., Taipei City 112, Taiwan
Manufacturer : ASUSTeK COMPUTER INC.
1F., No. 15, Lide Rd., Beitou Dist., Taipei City 112, Taiwan
Standard : FCC Part 15 Subpart E §15.407

The product was received on Jan. 19, 2023 and testing was performed from Feb. 24, 2023 to Mar. 15, 2023. We, Sporton International Inc. EMC & Wireless Communications Laboratory, would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

The test results in this partial report apply exclusively to the tested model / sample. Without written approval from Sporton International Inc. EMC & Wireless Communications Laboratory, the test report shall not be reproduced except in full.

Louis Wu

Approved by: Louis Wu

Sporton International Inc. EMC & Wireless Communications Laboratory

No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333



Table of Contents

History of this test report.....3

Summary of Test Result.....4

1 General Description5

 1.1 Product Feature of Equipment Under Test.....5

 1.2 Modification of EUT7

 1.3 Testing Location7

 1.4 Applicable Standards.....7

2 Test Configuration of Equipment Under Test8

 2.1 Carrier Frequency and Channel8

3 Test Result11

 3.1 Contention Based Protocol11

4 List of Measuring Equipment.....34

Appendix A. Setup Photographs



Summary of Test Result

| Report Clause | Ref Std. Clause | Test Items | Result (PASS/FAIL) | Remark |
|---------------|----------------------------|------------------------------------|--------------------|--------------------|
| - | 15.403(i) 15.407(a)(10) | 26dB Emission Bandwidth | Pass | Refer to FR2D3005F |
| - | 2.1049 | 99% Occupied Bandwidth | Reporting only | Refer to FR2D3005F |
| - | 15.407(a)(8) | Fundamental Maximum EIRP | Pass | Refer to FR2D3005F |
| - | 15.407(a)(8) | Fundamental Power Spectral Density | Pass | Refer to FR2D3005F |
| - | 15.407(b)(6) | In-Band Emissions (Channel Mask) | Pass | Refer to FR2D3005F |
| 3.1 | 15.407(d)(6) | Contention Based Protocol | Pass | - |
| - | 15.407(b) | Unwanted Emissions | Pass | Refer to FR2D3005F |
| - | 15.207 | AC Conducted Emission | Pass | Refer to FR2D3005F |
| - | 15.203 15.407(a) | Antenna Requirement | Pass | Refer to FR2D3005F |

Note: This partial report would only report the normal mode worst case data.

| |
|---|
| Conformity Assessment Condition: |
| The test results (PASS/FAIL) with all measurement uncertainty excluded are presented against the regulation limits or in accordance with the requirements stipulated by the applicant/manufacture who shall bear all the risks of non-compliance that may potentially occur if measurement uncertainty is taken into account. |
| Disclaimer: |
| 1. The product specifications of the EUT presented in the test report that may affect the test assessments are declared by the manufacturer who shall take full responsibility for the authenticity. |
| 2. The differences between ASUS_AI2205_E and ASUS_AI2205_F are back cover (E: Entry; F: Pro) and EE BOM. |

Reviewed by: Avis Chuang

Report Producer: Clio Lo



1 General Description

1.1 Product Feature of Equipment Under Test

GSM/WCDMA/LTE/5G NR, Bluetooth, Wi-Fi 2.4GHz 802.11b/g/n/ac/ax, Wi-Fi 5GHz 802.11a/n/ac/ax, Wi-Fi 6GHz 802.11a/n/ac/ax, NFC, and GNSS.

| Product Feature | |
|-----------------|--|
| Sample 1 | SKU 1 |
| Sample 2 | SKU 2 |
| Sample 3 | SKU 3 |
| Sample 4 | SKU 4 |
| Antenna Type | WWAN: PIFA Antenna WLAN: <Ant. 4>: PIFA Antenna <Ant. 5>: PIFA Antenna <Ant. 6>: PIFA Antenna Bluetooth: <Ant. 4>: PIFA Antenna <Ant. 5>: PIFA Antenna <Ant. 6>: PIFA Antenna GPS / Glonass / BDS / Galileo / SBAS: PIFA Antenna NFC: Loop Antenna |

| Antenna information | | |
|---------------------|-----------------|---|
| 5925 MHz ~ 6425 MHz | Peak Gain (dBi) | Ant. 4: -0.50 Ant. 5: 0.59 Ant. 6: -0.22 |
| 6425 MHz ~ 6525 MHz | Peak Gain (dBi) | Ant. 4: -4.20 Ant. 5: -0.51 Ant. 6: -0.47 |
| 6525 MHz ~ 6875 MHz | Peak Gain (dBi) | Ant. 4: -4.50 Ant. 5: -0.51 Ant. 6: -0.53 |
| 6875 MHz ~ 7125 MHz | Peak Gain (dBi) | Ant. 4: -2.70 Ant. 5: -1.22 Ant. 6: -1.30 |

Remark: The EUT's information above is declared by manufacturer. Please refer to Disclaimer in report summary.



| Sample Information | | |
|-------------------------|--|---|
| SKU | SKU 1 | SKU 2 |
| Model name | ASUS_AI2205_F | ASUS_AI2205_E |
| Config. | US(Pro) | US(Entry) |
| RF module board | US(Pro) | US(Entry) |
| LCD + Touch front frame | AI2205 FRONT CASE ASSY WW | AI2205 FRONT CASE ASSY WW |
| DDR | 16G(Micron) Micron / MT62F2G64D8CL-023 WT:B | 16G(Micron) Micron / MT62F2G64D8CL-023 WT:B |
| UFS | 512G(Kioxia)(UFS4.0) Kioxia / THGJFJT2T85BAT0 | 512G(Samsung)(UFS4.0) Samsung /KLUFG8RHHD-B0G1 |
| MB | AI2205_MB | AI2205_MB |
| Back Cover SKU | WW-Dark-Ult | WW-Light-Entry |
| Battery | SCUD / C21P2101 | SWD / C21P2101 |
| Rear Camera 50+13M | SHINETECH/CDN60B | TRIPLEWIN/CASDA-002A1 |
| Front Camera 32M | TSPRECISION/TVHF2170 | SHINETECH/ST-CMG07B |
| Rear Camera 5M | HUNAN KINGCOME/KBFE378 | TSPRECISION/TV8F2224 |
| PCB | COMPEQ | COMPEQ |
| CPU | QUALCOMM MPSP1581 / SM-8550 MPSP1581 CS | QUALCOMM MPSP1581 / SM-8550 MPSP1581 CS |

| Sample Information | | |
|-------------------------|--|---|
| SKU | SKU3 | SKU4 |
| Model name | ASUS_AI2205_F | ASUS_AI2205_E |
| Config. | US(Pro) | US(Entry) |
| RF module board | US(Pro) | US(Entry) |
| LCD + Touch front frame | AI2205 FRONT CASE ASSY WW | AI2205 FRONT CASE ASSY WW |
| DDR | 16G(Micron) Micron / MT62F2G64D8CL-023 WT:B | 16G(Micron) Micron / MT62F2G64D8CL-023 WT:B |
| UFS | 512G(Kioxia)(UFS4.0) Kioxia / THGJFJT2T85BAT0 | 512G(Samsung)(UFS4.0) Samsung /KLUFG8RHHD-B0G1 |
| MB | AI2205_MB | AI2205_MB |
| Back Cover SKU | WW-Dark-Ult | WW-Light-Entry |
| Battery | SWD / C21P2101 | SCUD / C21P2101 |
| Rear Camera 50+13M | TRIPLEWIN/CASDA-002A1 | SHINETECH/CDN60B |
| Front Camera 32M | SHINETECH/ST-CMG07B | TSPRECISION/TVHF2170 |
| Rear Camera 5M | TSPRECISION/TV8F2224 | HUNAN KINGCOME/KBFE378 |
| PCB | COMPEQ | COMPEQ |
| CPU | QUALCOMM MPSP1581 / SM-8550 MPSP1581 CS | QUALCOMM MPSP1581 / SM-8550 MPSP1581 CS |



1.2 Modification of EUT

No modifications made to the EUT during the testing.

1.3 Testing Location

| | |
|---------------------------|---|
| Test Site | Sporton International Inc. EMC & Wireless Communications Laboratory |
| Test Site Location | No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333 TEL: +886-3-327-3456 FAX: +886-3-328-4978 |
| Test Site No. | Sporton Site No. DF02-HY |

FCC designation No.: TW1190

1.4 Applicable Standards

According to the specifications declared by the manufacturer, the EUT must comply with the requirements of the following standards:

- ♦ FCC Part 15 Subpart E
- ♦ FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.
- ♦ FCC KDB 987594 D02 U-NII 6 GHz EMC Measurement v01r01
- ♦ FCC KDB 662911 D01 Multiple Transmitter Output v02r01.
- ♦ ANSI C63.10-2013

Remark:

1. All the test items were validated and recorded in accordance with the standards without any modification during the testing.
2. The TAF code is not including all the FCC KDB listed without accreditation.
3. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.



2 Test Configuration of Equipment Under Test

2.1 Carrier Frequency and Channel

| | | | | | | | | | |
|---------|-------------|------|------|------|------|------|------|------|------|
| BW 20M | Channel | 2 | | | | | | | |
| | Freq. (MHz) | 5935 | | | | | | | |
| BW 20M | Channel | 1 | 5 | 9 | 13 | 17 | 21 | 25 | 29 |
| | Freq. (MHz) | 5955 | 5975 | 5995 | 6015 | 6035 | 6055 | 6075 | 6095 |
| BW 40M | Channel | 3 | | 11 | | 19 | | 27 | |
| | Freq. (MHz) | 5965 | | 6005 | | 6045 | | 6085 | |
| BW 80M | Channel | 7 | | | | 23 | | | |
| | Freq. (MHz) | 5985 | | | | 6065 | | | |
| BW 160M | Channel | 15 | | | | | | | |
| | Freq. (MHz) | 6025 | | | | | | | |
| BW 20M | Channel | 33 | 37 | 41 | 45 | 49 | 53 | 57 | 61 |
| | Freq. (MHz) | 6115 | 6135 | 6155 | 6175 | 6195 | 6215 | 6235 | 6255 |
| BW 40M | Channel | 35 | | 43 | | 51 | | 59 | |
| | Freq. (MHz) | 6125 | | 6165 | | 6205 | | 6245 | |
| BW 80M | Channel | 39 | | | | 55 | | | |
| | Freq. (MHz) | 6145 | | | | 6225 | | | |
| BW 160M | Channel | 47 | | | | | | | |
| | Freq. (MHz) | 6185 | | | | | | | |



| | | | | | | | | | |
|----------------|--------------------|------|------|------|------|------|------|------|------|
| BW 20M | Channel | 65 | 69 | 73 | 77 | 81 | 85 | 89 | 93 |
| | Freq. (MHz) | 6275 | 6295 | 6315 | 6335 | 6355 | 6375 | 6395 | 6415 |
| BW 40M | Channel | 67 | | 75 | | 83 | | 91 | |
| | Freq. (MHz) | 6285 | | 6325 | | 6365 | | 6405 | |
| BW 80M | Channel | 71 | | | | 87 | | | |
| | Freq. (MHz) | 6305 | | | | 6385 | | | |
| BW 160M | Channel | 79 | | | | | | | |
| | Freq. (MHz) | 6345 | | | | | | | |

| | | | | | | | | | |
|----------------|--------------------|------|------|------|------|------|------|------|------|
| BW 20M | Channel | 97 | 101 | 105 | 109 | 113 | 117 | 121 | 125 |
| | Freq. (MHz) | 6435 | 6455 | 6475 | 6495 | 6515 | 6535 | 6555 | 6575 |
| BW 40M | Channel | 99 | | 107 | | 115 | | 123 | |
| | Freq. (MHz) | 6445 | | 6485 | | 6525 | | 6565 | |
| BW 80M | Channel | 103 | | | | 119 | | | |
| | Freq. (MHz) | 6465 | | | | 6545 | | | |
| BW 160M | Channel | 111 | | | | | | | |
| | Freq. (MHz) | 6505 | | | | | | | |

| | | | | | | | | | |
|----------------|--------------------|------|------|------|------|------|------|------|------|
| BW 20M | Channel | 129 | 133 | 137 | 141 | 145 | 149 | 153 | 157 |
| | Freq. (MHz) | 6595 | 6615 | 6635 | 6655 | 6675 | 6695 | 6715 | 6735 |
| BW 40M | Channel | 131 | | 139 | | 147 | | 155 | |
| | Freq. (MHz) | 6605 | | 6645 | | 6685 | | 6725 | |
| BW 80M | Channel | 135 | | | | 151 | | | |
| | Freq. (MHz) | 6625 | | | | 6705 | | | |
| BW 160M | Channel | 143 | | | | | | | |
| | Freq. (MHz) | 6665 | | | | | | | |

| | | | | | | | | | |
|----------------|--------------------|------|------|------|------|------|------|------|------|
| BW 20M | Channel | 161 | 165 | 169 | 173 | 177 | 181 | 185 | 189 |
| | Freq. (MHz) | 6755 | 6775 | 6795 | 6815 | 6835 | 6855 | 6875 | 6895 |
| BW 40M | Channel | 163 | | 171 | | 179 | | 187 | |
| | Freq. (MHz) | 6765 | | 6805 | | 6845 | | 6885 | |
| BW 80M | Channel | 167 | | | | 183 | | | |
| | Freq. (MHz) | 6785 | | | | 6865 | | | |
| BW 160M | Channel | 175 | | | | | | | |
| | Freq. (MHz) | 6825 | | | | | | | |



| | | | | | | | | | |
|----------------|--------------------|------|------|------|------|------|------|------|------|
| BW 20M | Channel | 193 | 197 | 201 | 205 | 209 | 213 | 217 | 221 |
| | Freq. (MHz) | 6915 | 6935 | 6955 | 6975 | 6995 | 7015 | 7035 | 7055 |
| BW 40M | Channel | 195 | | 203 | | 211 | | 219 | |
| | Freq. (MHz) | 6925 | | 6965 | | 7005 | | 7045 | |
| BW 80M | Channel | 199 | | | | 215 | | | |
| | Freq. (MHz) | 6945 | | | | 7025 | | | |
| BW 160M | Channel | 207 | | | | | | | |
| | Freq. (MHz) | 6985 | | | | | | | |
| BW 20M | Channel | 225 | | | | 229 | | | |
| | Freq. (MHz) | 7075 | | | | 7095 | | | |
| BW 40M | Channel | 227 | | | | | | | |
| | Freq. (MHz) | 7085 | | | | | | | |
| BW 20M | Channel | 233 | | | | | | | |
| | Freq. (MHz) | 7115 | | | | | | | |



3 Test Result

3.1 Contention Based Protocol

3.1.1 Limit of Contention Based Protocol

<FCC 14-30 CFR 15.407>

(d)(6) Indoor access points, subordinate devices and client devices operating in the 5.925-7.125 GHz band must employ a contention-based protocol.

FCC KDB 987594 D02 U-NII 6GHz EMC Measurement v01

Unlicensed low-power indoor devices must detect co-channel radio frequency power that is at least -62 dBm or lower. Upon detection of energy in the band, unlicensed low power indoor devices must vacate the channel and stay off the channel as long as detected radio frequency power is equal to or greater than the threshold (-62 dBm). The -62 dBm (or lower) threshold is referenced to a 0 dBi antenna gain. To ensure incumbent operations are reliably detected in the band, low power indoor devices must detect RF energy throughout their intended operating channel. For example, an 802.11 device that plans to transmit a 40 MHz- wide signal (on a primary 20 MHz channel and a secondary 20 MHz channel) must detect energy throughout the entire 40 MHz channel. Additionally, low-power indoor devices must detect co-channel energy with 90% or greater certainty.

Table 1. Criteria to determine number of times detection threshold test may be performed

| If | Number of Tests | Placement of Incumbent Transmission |
|---------------------------------------|--|--|
| $BW_{EUT} \leq BW_{Inc}$ | Once | Tune incumbent and EUT transmissions ($f_{c1} = f_{c2}$) |
| $BW_{Inc} < BW_{EUT} \leq 2BW_{Inc}$ | Once | Incumbent transmission is contained within BW_{EUT} |
| $2BW_{Inc} < BW_{EUT} \leq 4BW_{Inc}$ | Twice. Incumbent transmission is contained within BW_{EUT} | Incumbent transmission is located as closely as possible to the lower edge and upper edge, respectively, of the EUT channel |
| $BW_{EUT} > 4BW_{Inc}$ | Three times | Incumbent transmission is located as closely as possible to the lower edge of the EUT channel, in the middle of EUT channel, and as closely as possible to the upper edge of the EUT channel |

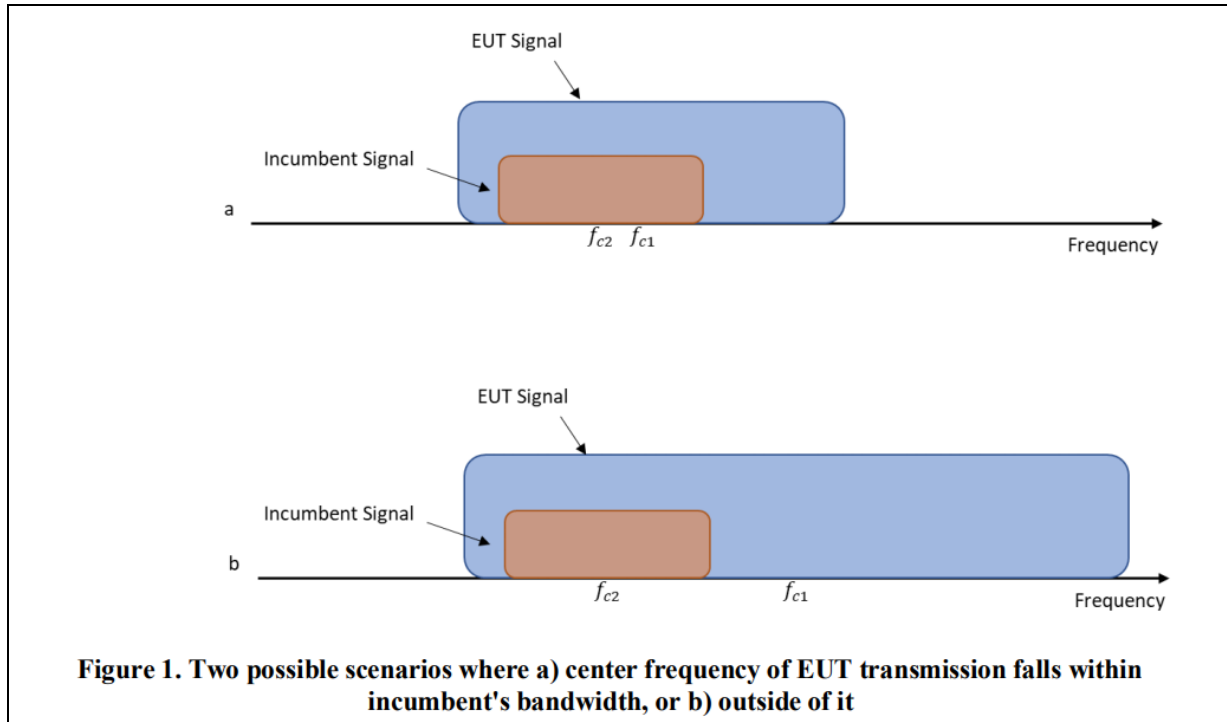
where:

BW_{EUT} : Transmission bandwidth of EUT signal

BW_{Inc} : Transmission bandwidth of the simulated incumbent signal (10 MHz wide AWGN signal)

f_{c1} : Center frequency of EUT transmission

f_{c2} : Center frequency of simulated incumbent signal



3.1.2 Measuring Instruments

Please refer to the measuring equipment list in this test report.

3.1.3 Test Procedures

The testing follows FCC KDB 987594 D02 U-NII 6GHz EMC Measurement v01.

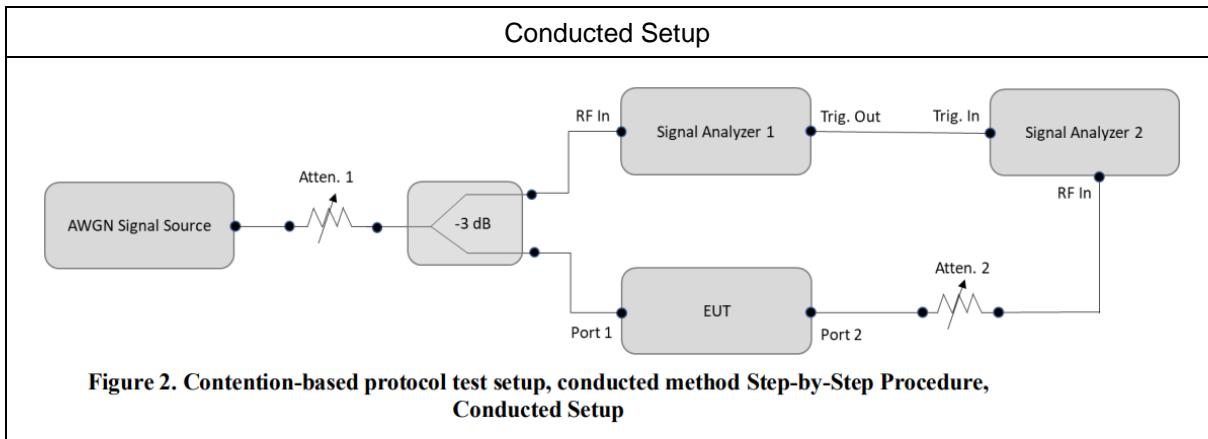
Section I) Contention Based Protocol

Conducted method Step-by-Step Procedure, Conducted Setup

1. Configure the EUT to transmit with a constant duty cycle.
2. Set the operating parameters of the EUT including power level, operating frequency, modulation and bandwidth.
3. Set the signal analyzer center frequency to the nominal EUT channel center frequency. The span range of the signal analyzer shall be between two times and five times the OBW of the EUT.
4. Connect the output port of the EUT to the signal analyzer 2, as shown in test setup Figure 2. Ensure that the attenuator 2 provides enough attenuation to not overload the signal analyzer 2 receiver.
5. Monitoring the signal analyzer 2, verify the EUT is operating and transmitting with the parameters set at step two.
6. Using an AWGN signal source, generate (but do not transmit, i.e., RF OFF) a 10 MHz-wide AWGN signal. Use Table 1 to determine the center frequency of the 10 MHz AWGN signal relative to the EUT's channel bandwidth and center frequency.
7. Set the AWGN signal power to an extremely low level (more than 20 dB below the -62 dBm threshold). Connect the AWGN signal source, via a 3-dB splitter, to the signal analyzer 1 and the EUT as shown in test setup Figure 2.
8. Transmit the AWGN signal (RF ON) and verify its characteristics on the signal analyzer 1.

9. Monitor the signal analyzer 2 to verify if the AWGN signal has been detected and the EUT has ceased transmission. If the EUT continues to transmit, then incrementally increase the AWGN signal power level until the EUT stops transmitting.
10. (Including all losses in the RF paths) Determine and record the AWGN signal power level (at the EUT's antenna port) at which the EUT ceased transmission. Repeat the procedure at least 10 times to verify the EUT can detect an AWGN signal with 90% (or better) level of certainty.
11. Refer to Table 1 to determine number of times the detection threshold testing needs to be repeated. If testing is required more than once, then go back to step 5, choose a different center frequency for the AWGN signal and repeat the process.
12. For the contention-based protocol test where only one channel in each supported sub-band needs to be tested. The narrowest and widest bandwidth in each channel shall be measured EUT was driven in MIMO mode, the interferer level was injected to both chains to monitor the performance, while the interferer level is determined according the lowest antenna gain among both antennas (i.e, lower interferer level).

3.1.4 Test Setup



3.1.5 Support Unit used in test configuration and system

| Instrument | Brand Name | Model No. | Characteristics |
|------------|------------|-----------|-----------------|
| WLAN AP | Qualcomm | RDP433 | Dual Band AP |
| Notebook | Acer | N15C1 | LAN |



3.1.6 Test Summary of Contention Based Protocol Test

| Band | Channel Freq. (MHz) | Channel BW (MHz) | Incumbent freq. (MHz) | Injected AWGN Level (dBm) | Detection Rate (%) | Regulated Threshold level (dBm) | Adjusted Power (dBm) | Margin (dB) |
|-------------|---------------------------|------------------|-----------------------|---------------------------|--------------------|---------------------------------|----------------------|-------------|
| UNII Band 5 | 6135 | 20 | 6135 | -75.16 | 100 | -62 | -74.66 | 12.66 |
| | | | | Result: Stop Transmission | | | | |
| | | | | -76.16 | < 90 | -62 | -75.66 | 13.66 |
| | | | | Result: Minimal Operation | | | | |
| | | | | -77.16 | 0 | -62 | -76.66 | 14.66 |
| | | | | Result: Normal Operation | | | | |
| UNII Band 5 | 6105 | 320 | 5950 | -68.17 | 100 | -62 | -67.67 | 5.67 |
| | | | | Result: Stop Transmission | | | | |
| | | | | -83.17 | < 90 | -62 | -82.67 | 20.67 |
| | | | | Result: Minimal Operation | | | | |
| | | | | -84.17 | 0 | -62 | -83.67 | 21.67 |
| | | | | Result: Normal Operation | | | | |
| | | | 6105 | -68.13 | 100 | -62 | -67.63 | 5.63 |
| | | | | Result: Stop Transmission | | | | |
| | | | | -75.13 | < 90 | -62 | -74.63 | 12.63 |
| | | | | Result: Minimal Operation | | | | |
| | | | | -76.13 | 0 | -62 | -75.63 | 13.63 |
| | | | | Result: Normal Operation | | | | |
| 6260 | -74.22 | 100 | -62 | -73.72 | 11.72 | | | |
| | Result: Stop Transmission | | | | | | | |
| | -75.22 | < 90 | -62 | -74.72 | 12.72 | | | |
| | Result: Minimal Operation | | | | | | | |
| | -76.22 | 0 | -62 | -75.72 | 13.72 | | | |
| | Result: Normal Operation | | | | | | | |

Note 1: Adjusted Power = Injected AWGN Level - minimum antenna gain (-0.5 dBi) for BW 20MHz.

Note 2: Adjusted Power = Injected AWGN Level - minimum antenna gain (-0.5 dBi) for BW 320MHz.

Note 3: The antenna gain has included the path loss between RF connector and antenna.

Note 4: Margin = Regulated Threshold level - Adjusted Power.



| Band | Channel Freq. (MHz) | Channel BW (MHz) | Incumbent freq. (MHz) | Injected AWGN Level (dBm) | Detection Rate (%) | Regulated Threshold level (dBm) | Adjusted Power (dBm) | Margin (dB) |
|---------------------------|---------------------|------------------|-----------------------|---------------------------|--------------------|---------------------------------|----------------------|-------------|
| UNII Band 6 | 6455 | 20 | 6455 | -73.47 | 100 | -62 | -69.27 | 7.27 |
| | | | | Result: Stop Transmission | | | | |
| | | | | -74.47 | < 90 | -62 | -70.27 | 8.27 |
| | | | | Result: Minimal Operation | | | | |
| | | | | -75.47 | 0 | -62 | -71.27 | 9.27 |
| | | | | Result: Normal Operation | | | | |
| UNII Band 5~7 | 6425 | 320 | 6270 | -69.72 | 100 | -62 | -65.22 | 3.22 |
| | | | | Result: Stop Transmission | | | | |
| | | | | -74.72 | < 90 | -62 | -70.22 | 8.22 |
| | | | | Result: Minimal Operation | | | | |
| | | | | -75.72 | 0 | -62 | -71.22 | 9.22 |
| | | | | Result: Normal Operation | | | | |
| | | | 6425 | -71.7 | 100 | -62 | -67.2 | 5.2 |
| | | | | Result: Stop Transmission | | | | |
| | | | | -74.7 | < 90 | -62 | -70.2 | 8.2 |
| | | | | Result: Minimal Operation | | | | |
| | | | | -75.7 | 0 | -62 | -71.2 | 9.2 |
| | | | | Result: Normal Operation | | | | |
| | | | 6580 | -71.63 | 100 | -62 | -67.13 | 5.13 |
| | | | | Result: Stop Transmission | | | | |
| | | | | -76.63 | < 90 | -62 | -72.13 | 10.13 |
| Result: Minimal Operation | | | | | | | | |
| -77.63 | 0 | -62 | | -73.13 | 11.13 | | | |
| Result: Normal Operation | | | | | | | | |

Note 1: Adjusted Power = Injected AWGN Level - minimum antenna gain (-4.2 dBi) for BW 20MHz.

Note 2: Adjusted Power = Injected AWGN Level - minimum antenna gain (-4.5 dBi) for BW 320MHz.

Note 3: The antenna gain has included the path loss between RF connector and antenna.

Note 4: Margin = Regulated Threshold level - Adjusted Power.



| Band | Channel Freq. (MHz) | Channel BW (MHz) | Incumbent freq. (MHz) | Injected AWGN Level (dBm) | Detection Rate (%) | Regulated Threshold level (dBm) | Adjusted Power (dBm) | Margin (dB) |
|---------------------------|---------------------|------------------|-----------------------|---------------------------|--------------------|---------------------------------|----------------------|-------------|
| UNII Band 7 | 6695 | 20 | 6695 | -74.47 | 100 | -62 | -69.97 | 7.97 |
| | | | | Result: Stop Transmission | | | | |
| | | | | -76.47 | < 90 | -62 | -71.97 | 9.97 |
| | | | | Result: Minimal Operation | | | | |
| | | | | -77.47 | 0 | -62 | -72.97 | 10.97 |
| | | | | Result: Normal Operation | | | | |
| UNII Band 7~8 | 6745 | 320 | 6590 | -67.53 | 100 | -62 | -63.03 | 1.03 |
| | | | | Result: Stop Transmission | | | | |
| | | | | -79.53 | < 90 | -62 | -84.03 | 13.03 |
| | | | | Result: Minimal Operation | | | | |
| | | | | -80.53 | 0 | -62 | -85.03 | 14.03 |
| | | | | Result: Normal Operation | | | | |
| | | | 6745 | -71.81 | 100 | -62 | -67.31 | 5.31 |
| | | | | Result: Stop Transmission | | | | |
| | | | | -75.81 | < 90 | -62 | -71.31 | 9.31 |
| | | | | Result: Minimal Operation | | | | |
| | | | | -76.81 | 0 | -62 | -72.31 | 10.31 |
| | | | | Result: Normal Operation | | | | |
| | | | 6900 | -72.64 | 100 | -62 | -68.14 | 6.14 |
| | | | | Result: Stop Transmission | | | | |
| | | | | -77.64 | < 90 | -62 | -73.14 | 11.14 |
| Result: Minimal Operation | | | | | | | | |
| -78.64 | 0 | -62 | | -74.14 | 12.14 | | | |
| Result: Normal Operation | | | | | | | | |

Note 1: Adjusted Power = Injected AWGN Level - minimum antenna gain (-4.5 dBi) for BW 20MHz.

Note 2: Adjusted Power = Injected AWGN Level - minimum antenna gain (-4.5 dBi) for BW 320MHz.

Note 3: The antenna gain has included the path loss between RF connector and antenna.

Note 4: Margin = Regulated Threshold level - Adjusted Power.



| Band | Channel Freq. (MHz) | Channel BW (MHz) | Incumbent freq. (MHz) | Injected AWGN Level (dBm) | Detection Rate (%) | Regulated Threshold level (dBm) | Adjusted Power (dBm) | Margin (dB) |
|---------------------------|---------------------|------------------|-----------------------|---------------------------|--------------------|---------------------------------|----------------------|-------------|
| UNII Band 8 | 7015 | 20 | 7015 | -72.67 | 100 | -62 | -69.97 | 7.97 |
| | | | | Result: Stop Transmission | | | | |
| | | | | -79.67 | < 90 | -62 | -76.97 | 14.97 |
| | | | | Result: Minimal Operation | | | | |
| | | | | -80.67 | 0 | -62 | -77.97 | 15.97 |
| | | | | Result: Normal Operation | | | | |
| UNII Band 7~8 | 6905 | 320 | 6750 | -67.53 | 100 | -62 | -63.03 | 1.03 |
| | | | | Result: Stop Transmission | | | | |
| | | | | -77.53 | < 90 | -62 | -73.03 | 11.03 |
| | | | | Result: Minimal Operation | | | | |
| | | | | -78.53 | 0 | -62 | -74.03 | 12.03 |
| | | | | Result: Normal Operation | | | | |
| | | | 6905 | -69.46 | 100 | -62 | -64.96 | 2.96 |
| | | | | Result: Stop Transmission | | | | |
| | | | | -73.46 | < 90 | -62 | -68.96 | 6.96 |
| | | | | Result: Minimal Operation | | | | |
| | | | | -74.46 | 0 | -62 | -69.96 | 7.96 |
| | | | | Result: Normal Operation | | | | |
| | | | 7060 | -69.67 | 100 | -62 | -65.17 | 3.17 |
| | | | | Result: Stop Transmission | | | | |
| | | | | -73.67 | < 90 | -62 | -69.17 | 7.17 |
| Result: Minimal Operation | | | | | | | | |
| -74.67 | 0 | -62 | | -70.17 | 8.17 | | | |
| Result: Normal Operation | | | | | | | | |

Note 1: Adjusted Power = Injected AWGN Level - minimum antenna gain (-2.7 dBi) for BW 20MHz

Note 2: Adjusted Power = Injected AWGN Level - minimum antenna gain (-4.5 dBi) for BW 320MHz.

Note 3: The antenna gain has included the path loss between RF connector and antenna.

Note 4: Margin = Regulated Threshold level - Adjusted Power.



3.1.7 Test Plots of Contention Based Protocol Test

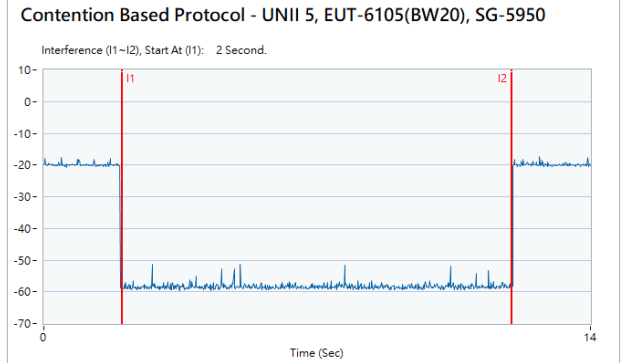
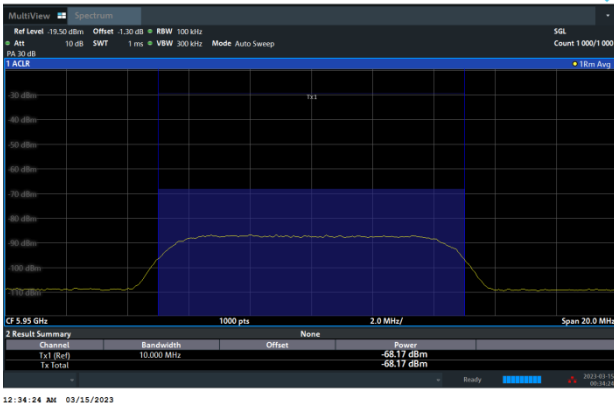
| Contention Based Protocol Result Plots on U-NII 5 (AWGN Interference) | |
|---|---|
| <p>802.11ax (HE20) / 6135MHz Threshold Level (TL) = -75.16dBm</p> | <p>802.11ax (HE20) / CH37 Test result is pass due to no transmission occur.</p> |
| | |
| <p>802.11ax (HE20) / 6135MHz Threshold Level (TL) = -76.16dBm</p> | <p>802.11ax (HE20) / CH37 Transmit when the interferer is 1dB lower.</p> |
| | |



Contention Based Protocol Result Plots on U-NII 5 (AWGN Interference)

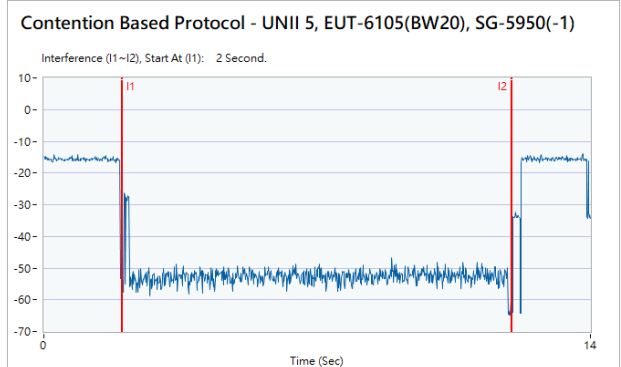
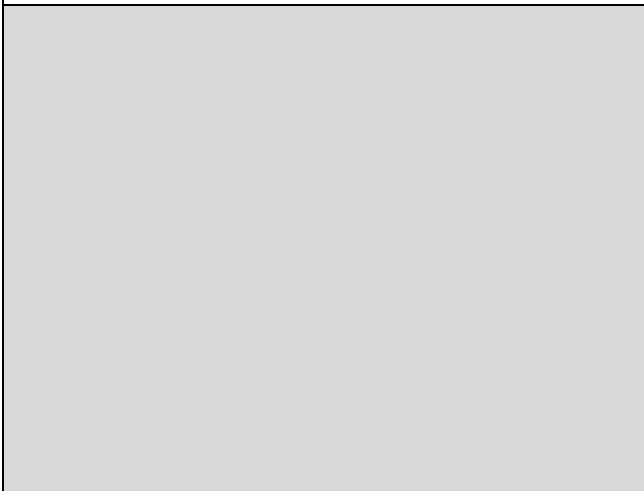
802.11ax (HE320) / 5905MHz (Lower edge)
Threshold Level (TL) =-68.17dBm

802.11ax (HE320) / CH31 (Lower edge)
Test result is pass due to no transmission occur.



802.11ax (HE320) / 5905MHz (Lower edge)
Threshold Level (TL) =-69.17dBm

802.11ax (HE320) / CH31 (Lower edge)
Transmit when the interferer is 1dB lower.



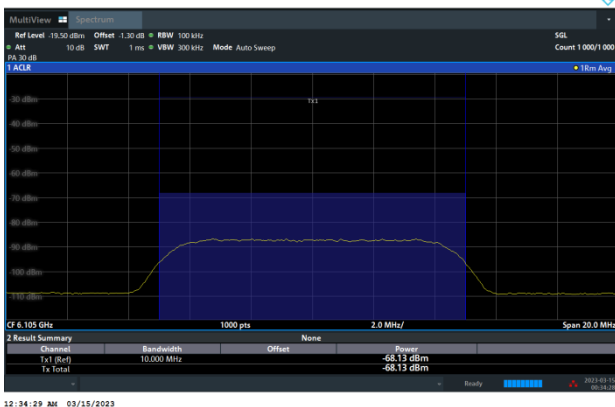


Contention Based Protocol Result Plots on U-NII 5 (AWGN Interference)

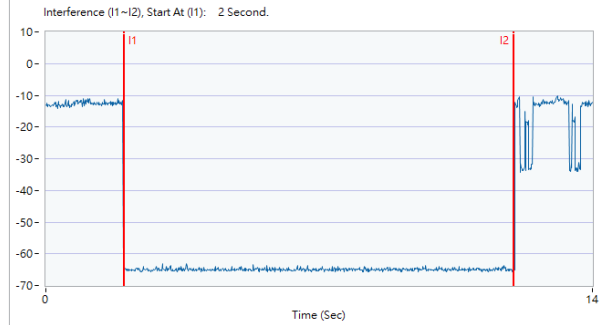
802.11ax (HE320) / 6105MHz (Middle)
Threshold Level (TL) =-68.13dBm

802.11ax (HE320) / CH31 (Middle)

Test result is pass due to no transmission occur.



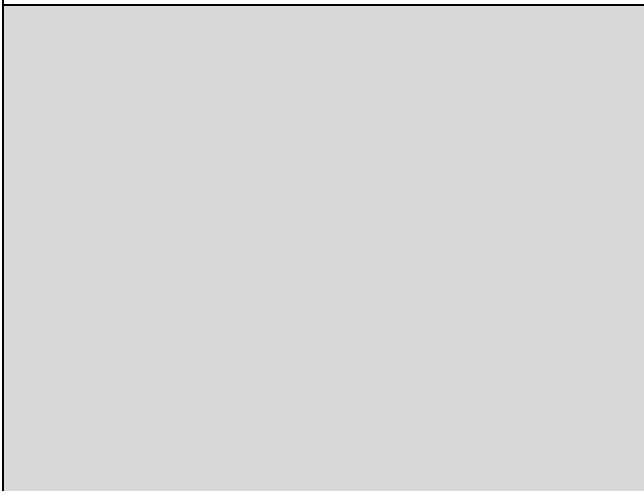
Contention Based Protocol - UNII 5, EUT-6105(BW20), SG-6105



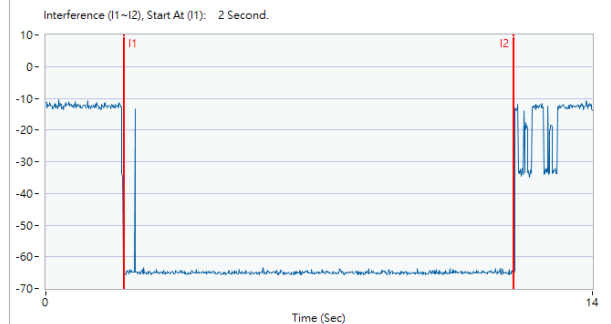
802.11ax (HE320) / 6105MHz (Middle)
Threshold Level (TL) =-69.13dBm

802.11ax (HE320) / CH31 (Middle)

Transmit when the interferer is 1dB lower.



Contention Based Protocol - UNII 5, EUT-6105(BW20), SG-6105(-1)

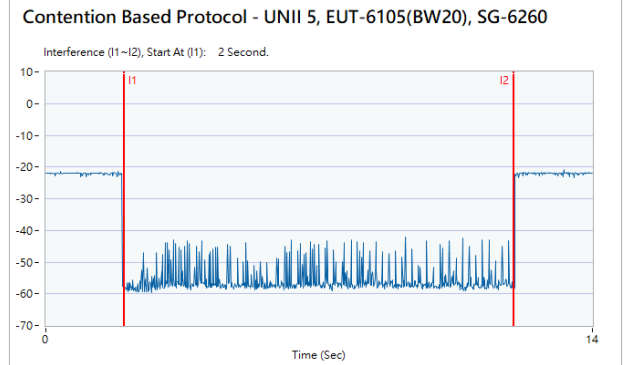
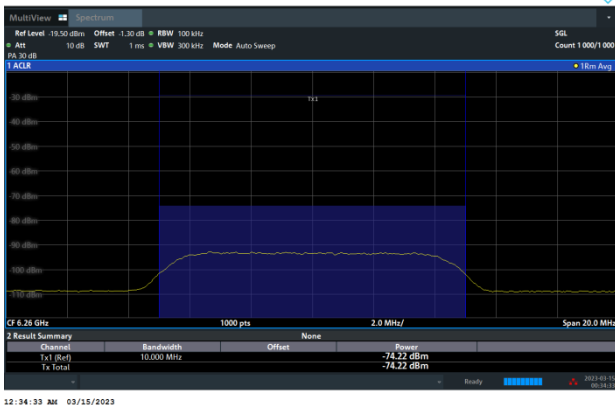




Contention Based Protocol Result Plots on U-NII 5 (AWGN Interference)

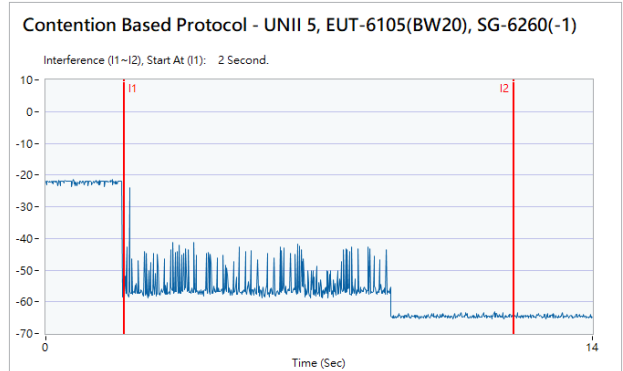
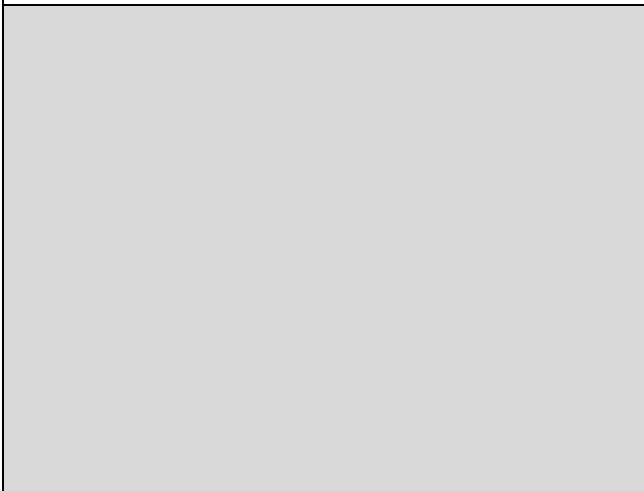
802.11ax (HE320) / 6260MHz (Upper edge)
Threshold Level (TL) = -74.22dBm

802.11ax (HE320) / CH31 (Upper edge)
Test result is pass due to no transmission occur.



802.11ax (HE320) / 6260MHz (Upper edge)
Threshold Level (TL) = -75.22dBm

802.11ax (HE320) / CH31 (Upper edge)
Transmit when the interferer is 1dB lower.

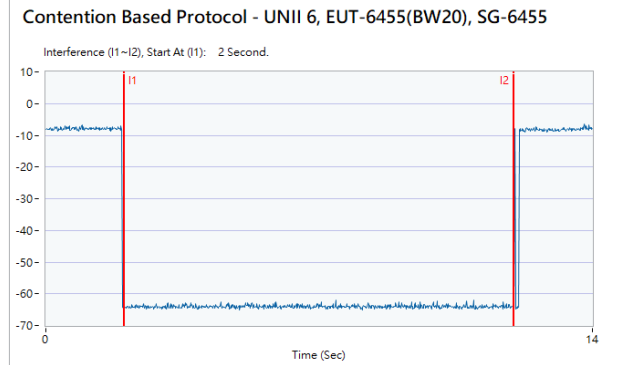
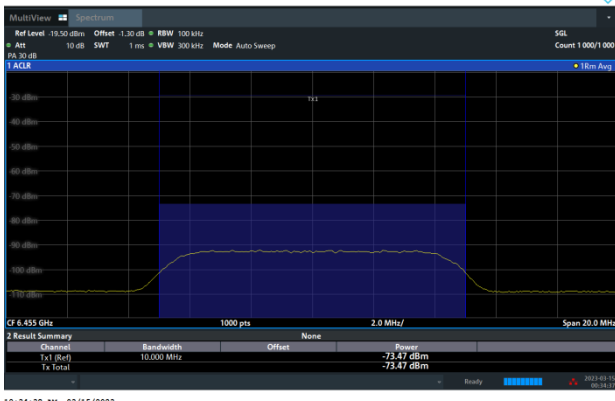




Contention Based Protocol Result Plots on U-NII 6 (AWGN Interference)

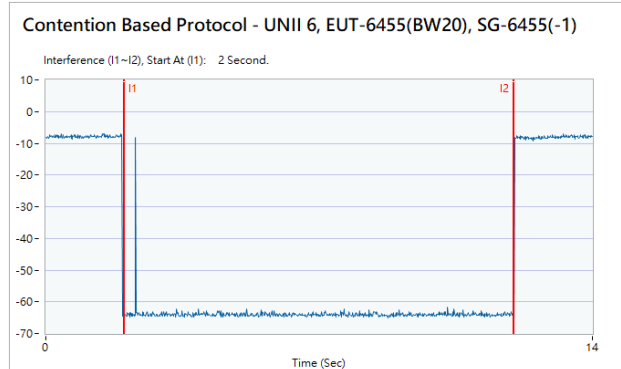
802.11ax (HE20) / 6455MHz
Threshold Level (TL) = -73.47dBm

802.11ax (HE20) / CH101
Test result is pass due to no transmission occur.



802.11ax (HE20) / 6455MHz
Threshold Level (TL) = -74.47dBm

802.11ax (HE20) / CH101
Transmit when the interferer is 1dB lower.

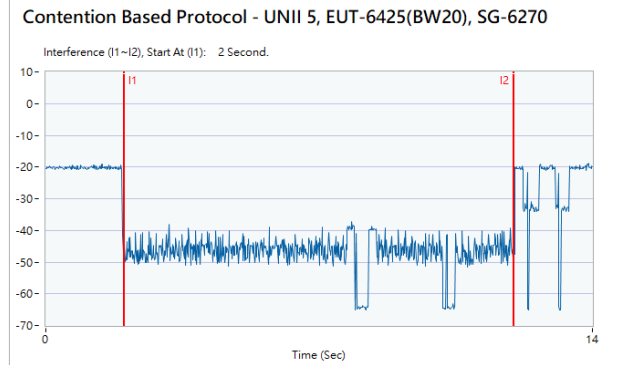
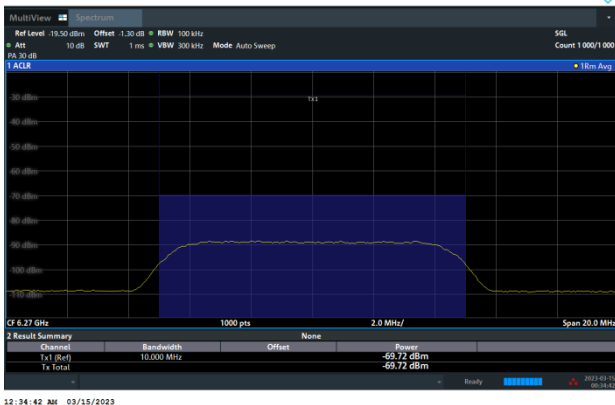




Contention Based Protocol Result Plots on U-NII 5~7 (AWGN Interference)

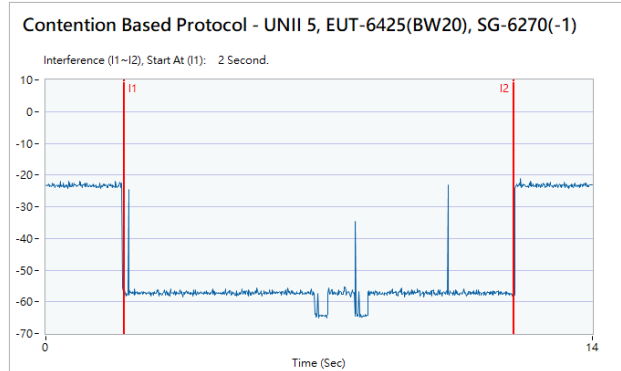
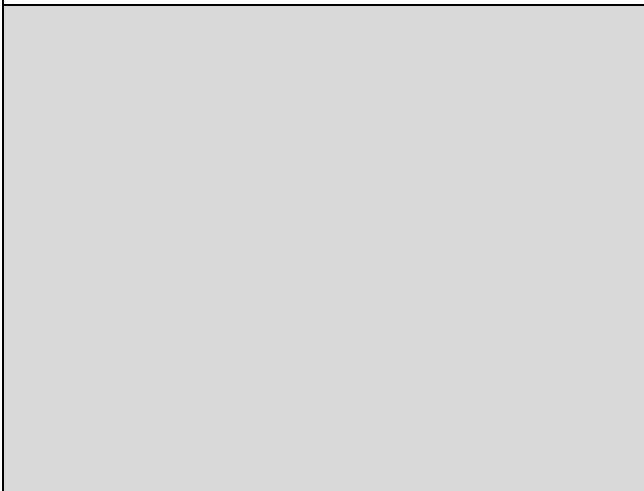
802.11ax (HE320) / 6270MHz (Lower edge)
Threshold Level (TL) =-69.72dBm

802.11ax (HE320) / CH95 (Lower edge)
Test result is pass due to no transmission occur.



802.11ax (HE320) / 6270MHz (Lower edge)
Threshold Level (TL) =-70.72dBm

802.11ax (HE320) / CH95 (Lower edge)
Transmit when the interferer is 1dB lower.

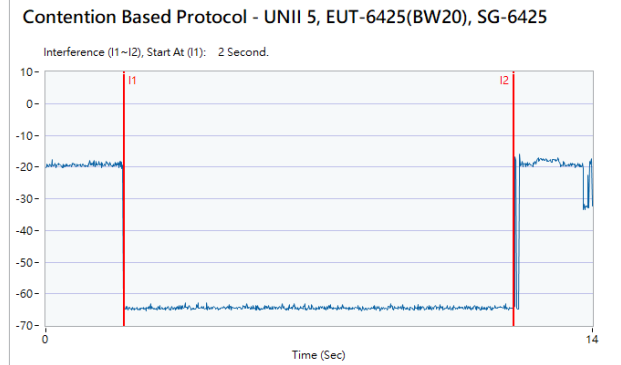
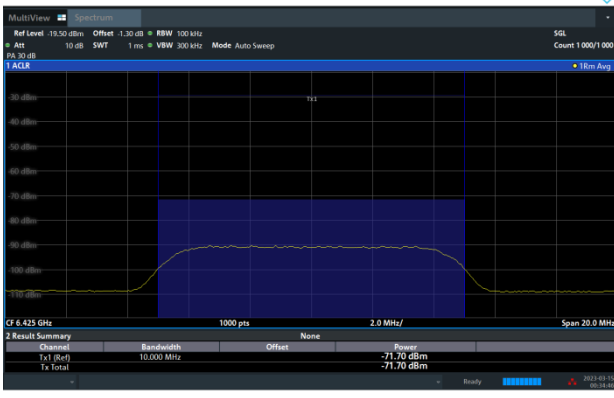




Contention Based Protocol Result Plots on U-NII 5~7 (AWGN Interference)

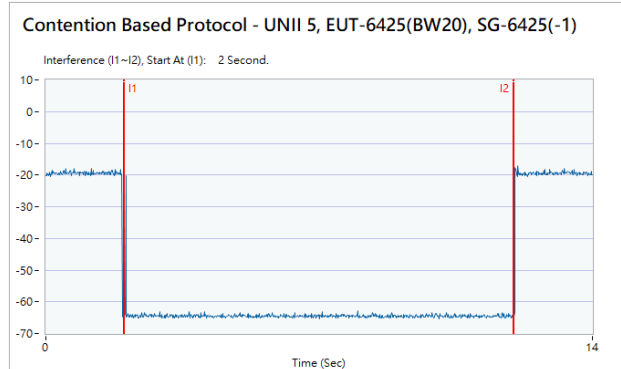
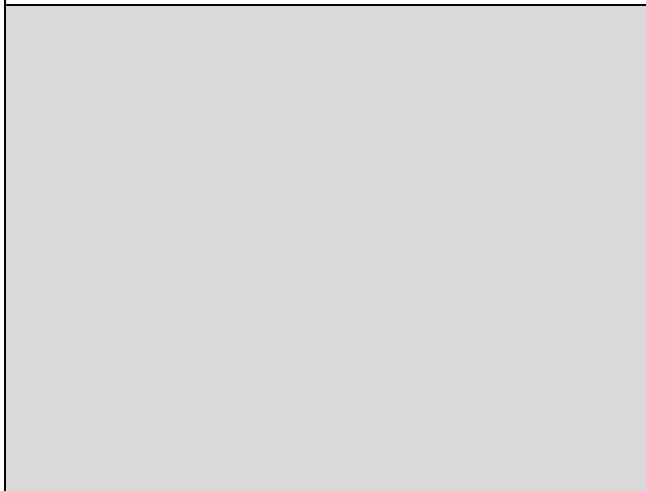
802.11ax (HE320) / 6425MHz (Middle)
Threshold Level (TL) = -71.70dBm

802.11ax (HE320) / CH95 (Middle)
Test result is pass due to no transmission occur.



802.11ax (HE320) / 6425MHz (Middle)
Threshold Level (TL) = -72.70dBm

802.11ax (HE320) / CH95 (Middle)
Transmit when the interferer is 1dB lower.

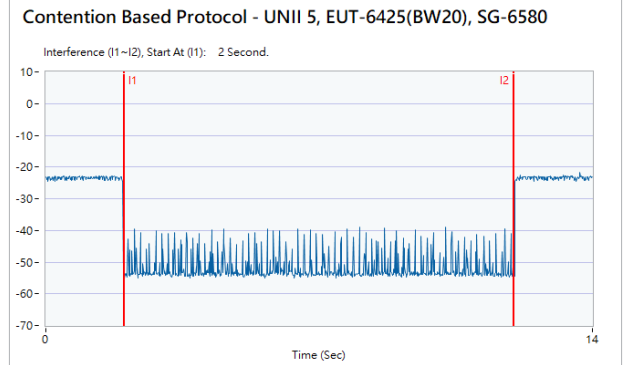
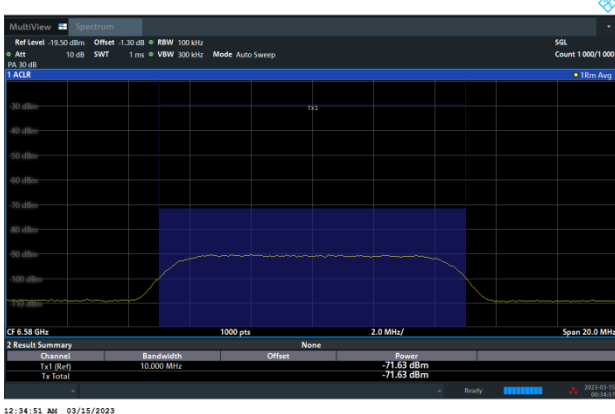




Contention Based Protocol Result Plots on U-NII 5~7 (AWGN Interference)

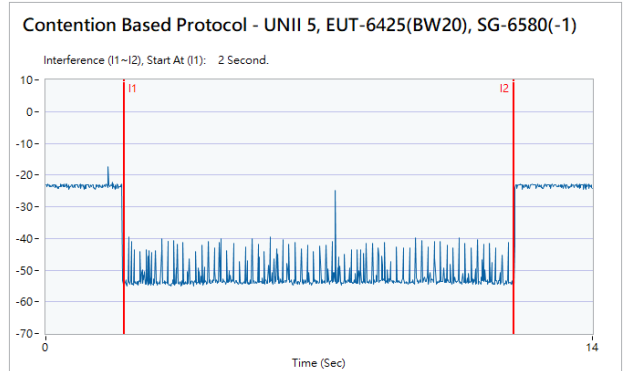
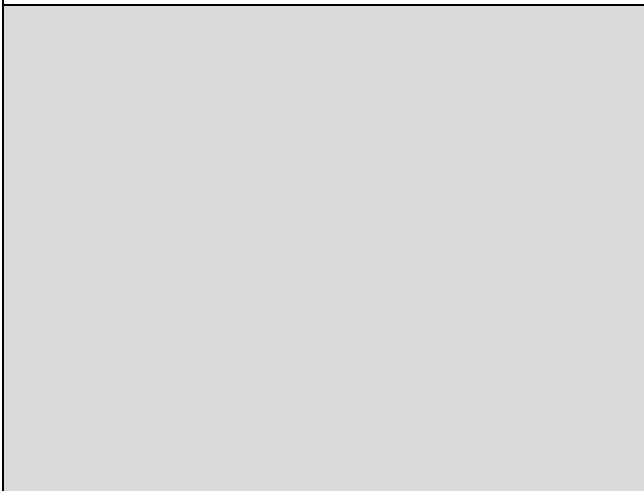
802.11ax (HE320) / 6580MHz (Upper edge)
Threshold Level (TL) = -71.63dBm

802.11ax (HE320) / CH95 (Upper edge)
Test result is pass due to no transmission occur.



802.11ax (HE320) / 6580MHz (Upper edge)
Threshold Level (TL) = -72.63dBm

802.11ax (HE320) / CH95 (Upper edge)
Transmit when the interferer is 1dB lower.

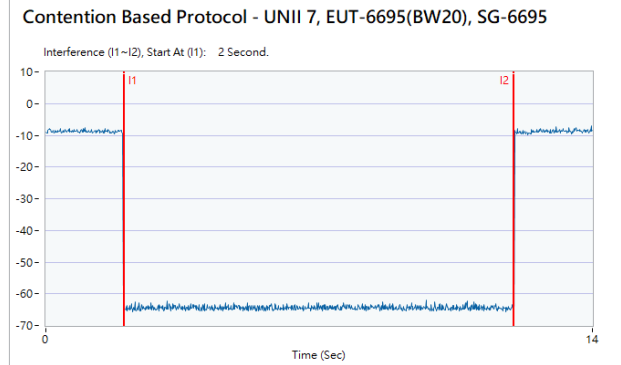
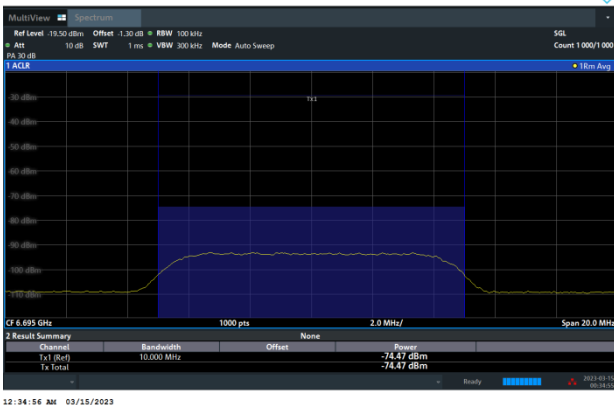




Contention Based Protocol Result Plots on U-NII 7 (AWGN Interference)

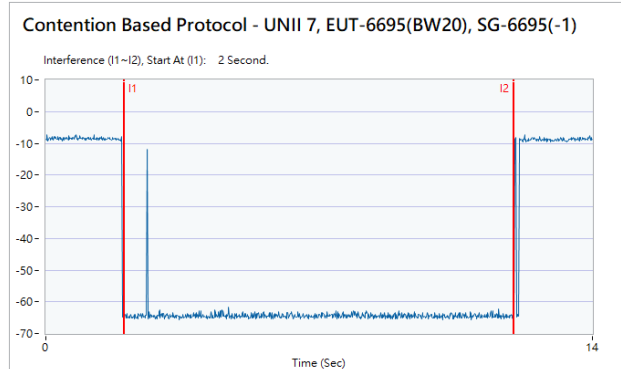
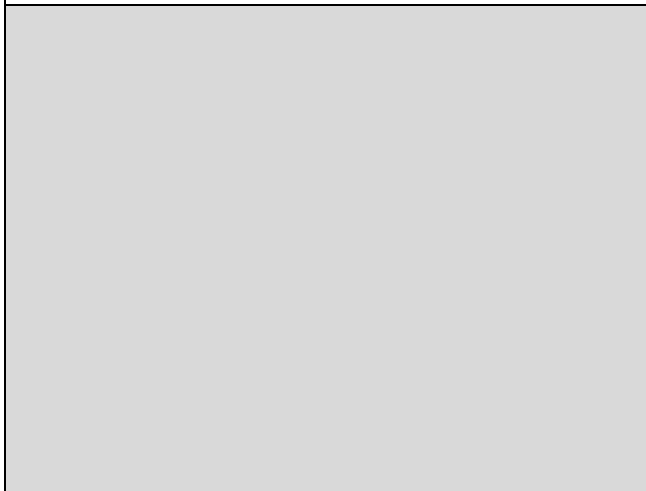
802.11ax (HE20) / 6695MHz
Threshold Level (TL) =-74.47dBm

802.11ax (HE20) / CH149
Test result is pass due to no transmission occur.



802.11ax (HE20) / 6695MHz
Threshold Level (TL) =-75.47dBm

802.11ax (HE20) / CH149
Transmit when the interferer is 1dB lower.

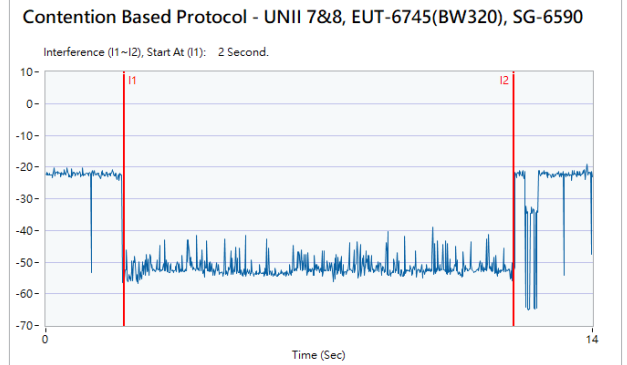
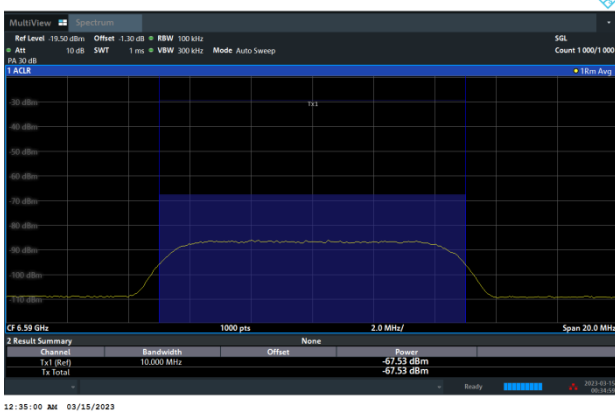




Contention Based Protocol Result Plots on U-NII 7~8 (AWGN Interference)

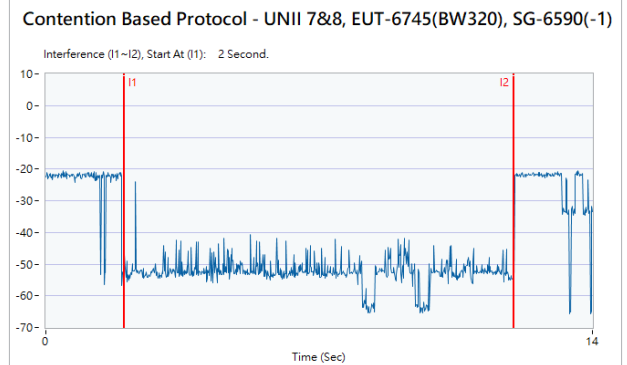
802.11ax (HE320) / 6590MHz (Lower edge)
Threshold Level (TL) =-67.53dBm

802.11ax (HE320) / CH159 (Lower edge)
Test result is pass due to no transmission occur.



802.11ax (HE320) / 6590MHz (Lower edge)
Threshold Level (TL) =-68.53dBm

802.11ax (HE320) / CH159 (Lower edge)
Transmit when the interferer is 1dB lower.

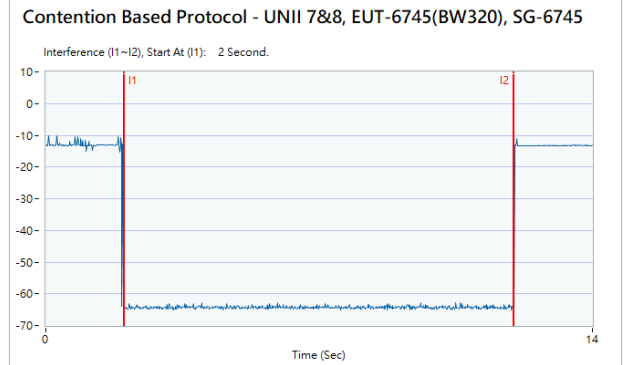
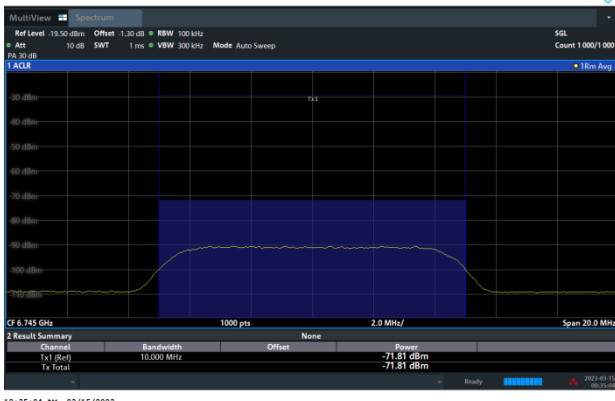




Contention Based Protocol Result Plots on U-NII 7~8 (AWGN Interference)

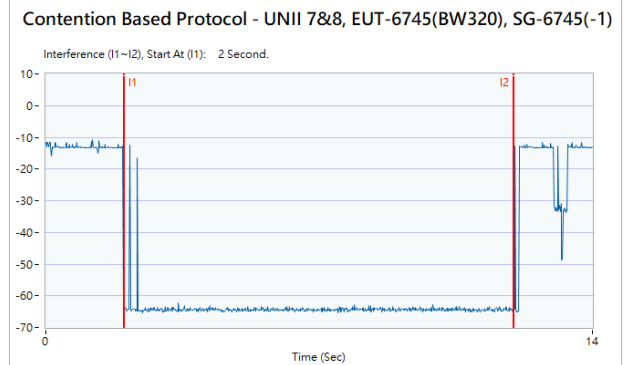
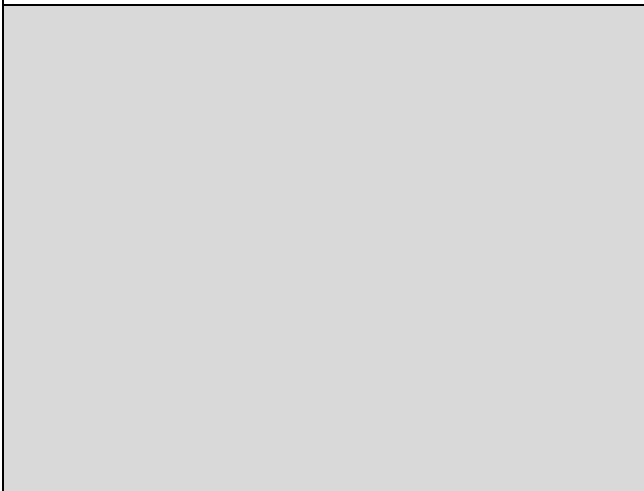
802.11ax (HE320) / 6745MHz (Middle)
Threshold Level (TL) =-71.81dBm

802.11ax (HE320) / CH159 (Middle)
Test result is pass due to no transmission occur.



802.11ax (HE320) / 6745MHz (Middle)
Threshold Level (TL) =-72.81dBm

802.11ax (HE320) / CH159 (Middle)
Transmit when the interferer is 1dB lower.

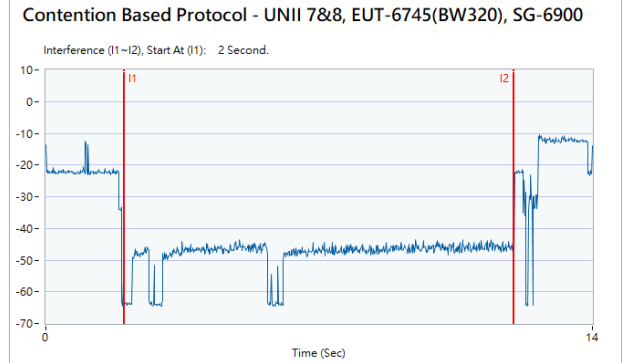
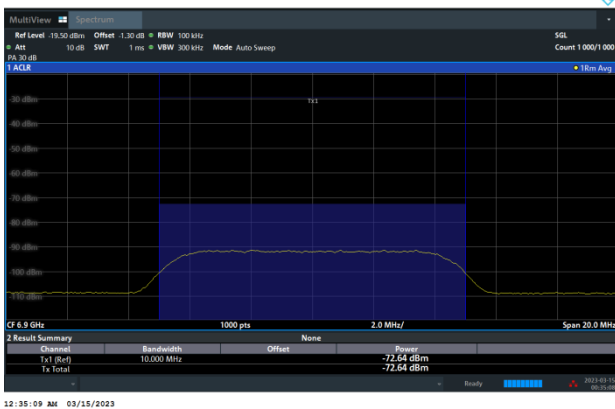




Contention Based Protocol Result Plots on U-NII 7~8 (AWGN Interference)

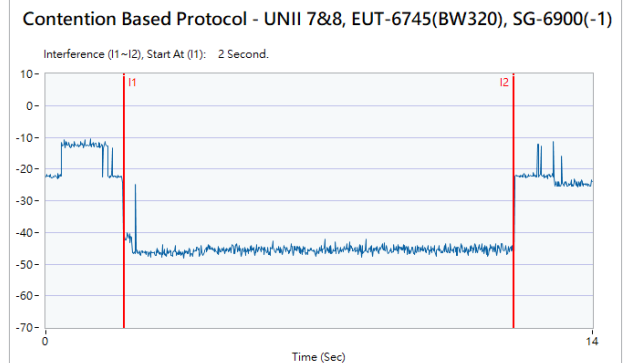
802.11ax (HE320) / 6900MHz (Upper edge)
Threshold Level (TL) = -72.64dBm

802.11ax (HE320) / CH159 (Upper edge)
Test result is pass due to no transmission occur.



802.11ax (HE320) / 6900MHz (Upper edge)
Threshold Level (TL) = -73.64dBm

802.11ax (HE320) / CH159 (Upper edge)
Transmit when the interferer is 1dB lower.

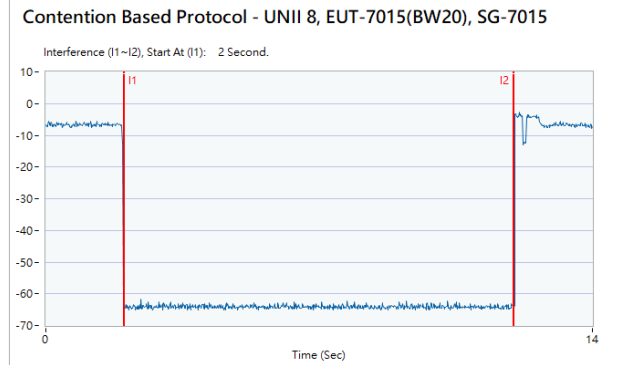
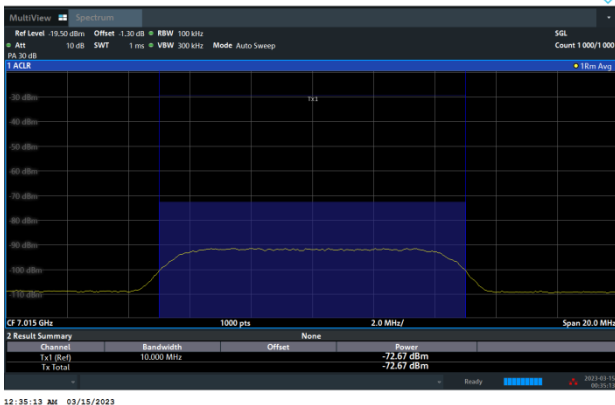




Contention Based Protocol Result Plots on U-NII 8 (AWGN Interference)

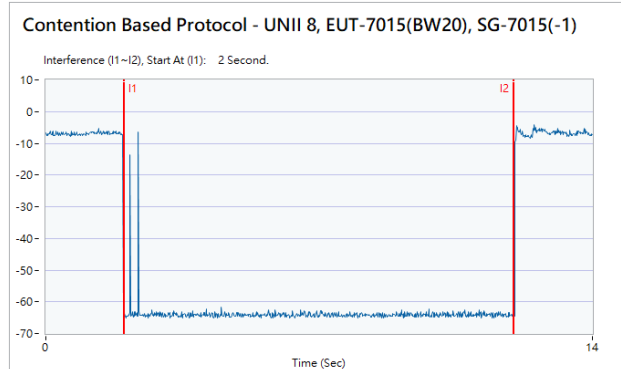
802.11ax (HE20) / 7015MHz
Threshold Level (TL) = -72.67dBm

802.11ax (HE20) / CH213
Test result is pass due to no transmission occur.



802.11ax (HE20) / 7015MHz
Threshold Level (TL) = -73.67dBm

802.11ax (HE20) / CH213
Transmit when the interferer is 1dB lower.

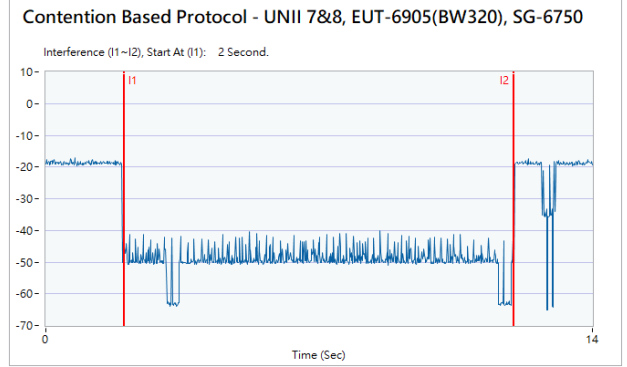
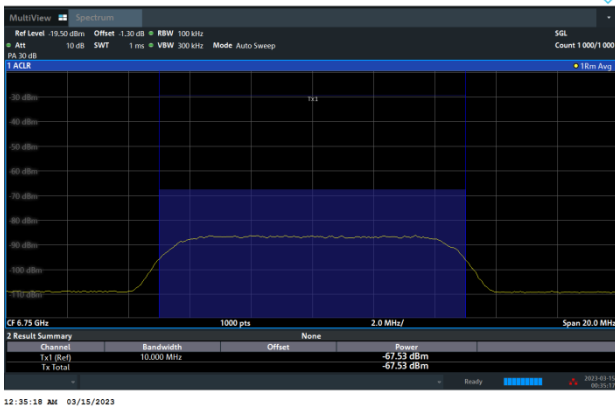




Contention Based Protocol Result Plots on U-NII 7~8 (AWGN Interference)

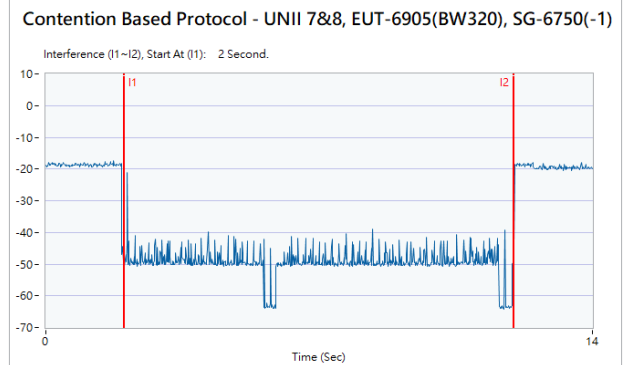
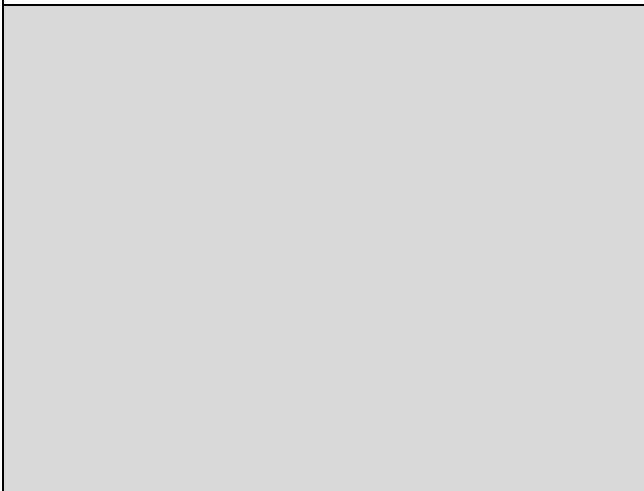
802.11ax (HE320) / 6750MHz (Lower edge)
Threshold Level (TL) = -67.53dBm

802.11ax (HE320) / CH191 (Lower edge)
Test result is pass due to no transmission occur.



802.11ax (HE320) / 6750MHz (Lower edge)
Threshold Level (TL) = -68.53dBm

802.11ax (HE320) / CH191 (Lower edge)
Transmit when the interferer is 1dB lower.

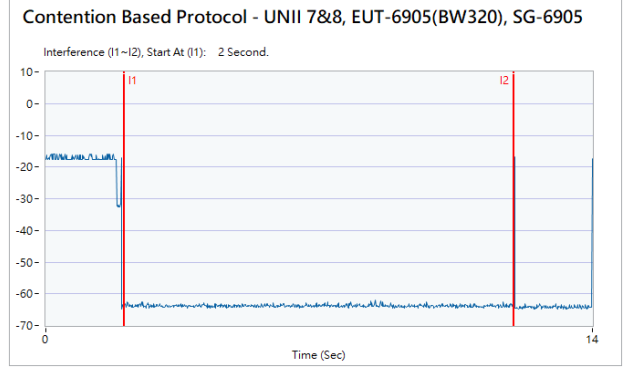
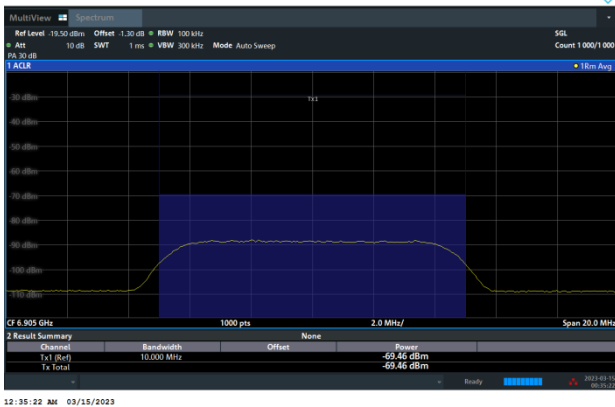




Contention Based Protocol Result Plots on U-NII 7~8 (AWGN Interference)

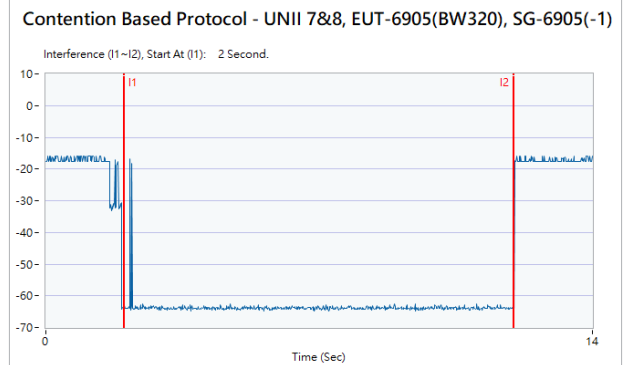
802.11ax (HE320) / 6905MHz (Middle)
Threshold Level (TL) = -69.46dBm

802.11ax (HE320) / CH191 (Middle)
Test result is pass due to no transmission occur.



802.11ax (HE320) / 6905MHz (Middle)
Threshold Level (TL) = -70.46dBm

802.11ax (HE320) / CH191 (Middle)
Transmit when the interferer is 1dB lower.

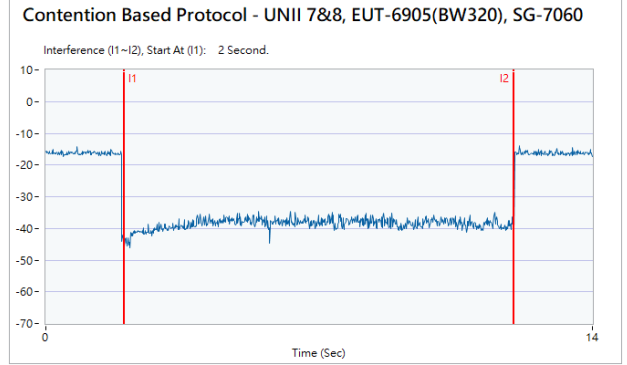
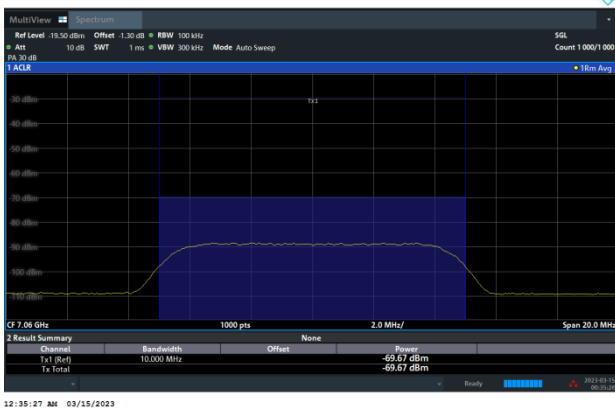




Contention Based Protocol Result Plots on U-NII 7~8 (AWGN Interference)

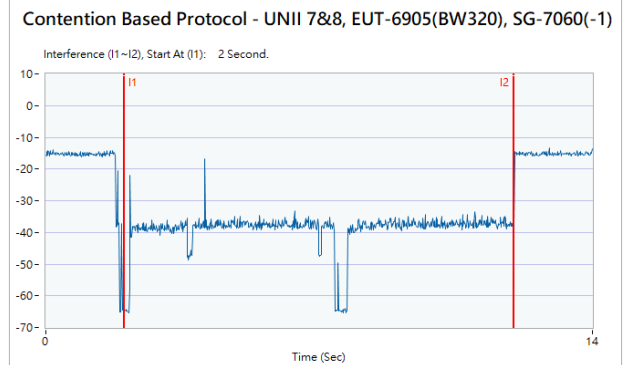
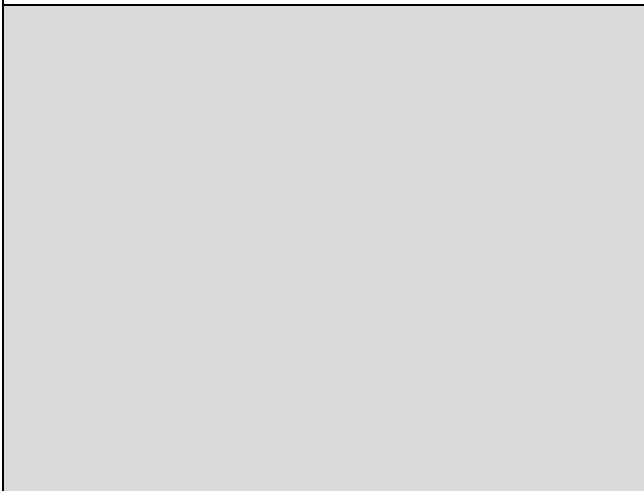
802.11ax (HE320) / 7060MHz (Upper edge)
Threshold Level (TL) = -69.67dBm

802.11ax (HE320) / CH191 (Upper edge)
Test result is pass due to no transmission occur.



802.11ax (HE320) / 7060MHz (Upper edge)
Threshold Level (TL) = -70.67dBm

802.11ax (HE320) / CH191 (Upper edge)
Transmit when the interferer is 1dB lower.





4 List of Measuring Equipment

| Instrument | Brand Name | Model No. | Serial No. | Characteristics | Calibration Date | Test Date | Due Date | Remark |
|-------------------------------|-----------------|---------------------------|----------------|-----------------|----------------------------|---------------------------------|----------------------------|------------------|
| Signal Generator (Interferer) | Rohde & Schwarz | SMW200A | 109425 | 100kHz~7.5GHz | Dec. 23, 2022 | Feb. 24,2023~ Mar. 15,2023 | Dec. 22, 2023 | CBP (DF02-HY) |
| Spectrum Analyzer | Rohde & Schwarz | FSV3013 | 101550 | 10Hz~13.6GHz | Jan. 30, 2023 | Feb. 24, 2023~ Mar. 15, 2023 | Jan. 29, 2024 | CBP (DF02-HY) |
| Power Divider | Woken | 2Way Divider | DCMB1KW7A1 | 0.5GHz-18GHz | Calibration from System | Feb. 24, 2023~ Mar. 15, 2023 | Calibration from System | CBP (DF02-HY) |
| Power Divider | Woken | SMA 4Way Power Divider | 0120A04056002D | 0.5-6GHz | Calibration from System | Feb. 24, 2023~ Mar. 15, 2023 | Calibration from System | CBP (DF02-HY) |