

# FCC Measurement/Technical Report on

## Industrial WLAN Access Point / Client

### SCALANCE W700 / MSAX

### MSAX-W1-RJ-E2

FCC ID: LYHMSAXV1  
IC: 267AA-MSAXV1

**Test Report Reference:** MDE\_SIEM\_2207\_FCC\_02\_rev01

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D-PL-12140-01-01  
D-PL-12140-01-02  
D-PL-12140-01-03

**Note:**

The following test results relate only to the devices specified in this document. This report shall not be reproduced in parts without the written approval of the test laboratory.

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## 1 APPLIED STANDARDS AND TEST SUMMARY

### 1.1 APPLIED STANDARDS

#### **Type of Authorization**

Certification for an Intentional Radiator (Digital Device / Spread Spectrum).

#### **Applicable FCC Rules**

Prepared in accordance with the requirements of FCC Rules and Regulations as listed in 47 CFR Ch.1 Parts 2 (10-1-21 Edition) and 15 (10-1-21 Edition). The following subparts are applicable to the results in this test report.

Part 2, Subpart J - Equipment Authorization Procedures, Certification

Part 15, Subpart C – Intentional Radiators

§ 15.201 Equipment authorization requirement

§ 15.207 Conducted limits

§ 15.209 Radiated emission limits; general requirements

Part 15, Subpart E – Unlicensed National Information Infrastructure Devices

§ 15.403 Definitions

§ 15.407 General technical requirements

#### Note:

The tests were selected and performed with reference to the FCC Public Notice “Guidelines for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices - Part 15, Subpart E, 789033 D02 General U-NII Test Procedures New Rules v02r01, 2017-12-14”.

ANSI C63.10-2013 is applied.

## 1.2 FCC-IC CORRELATION TABLE

### Correlation of measurement requirements for UNII / LE-LAN (e.g. WLAN 5 GHz) equipment from FCC and IC

#### UNII equipment

Measurement	FCC reference	IC reference
Conducted emissions on AC Mains	§ 15.207	RSS-Gen Issue 5: 8.8
Occupied bandwidth	§ 15.403 (26 dB) / § 15.407 (e) (6 dB)	RSS-247 Issue 2: 6.2.1.1, 6.2.2.1, 6.2.3.1 (99%) RSS-247 Issue 2: 6.2.4.1 (6 dB)
Maximum conducted output power	§ 15.407 (a) (1) to (8), (11)	RSS-247 Issue 2: 6.2.1.1, 6.2.2.1, 6.2.3.1, 6.2.4.1
Maximum power spectral density	§ 15.407 (a) (1) to (8), (12)	RSS-247 Issue 2: 6.2.1.1, 6.2.2.1, 6.2.3.1, 6.2.4.1
Transmitter undesirable emissions; General Field Strength Limits, Restricted Bands	§ 15.407 (b) § 15.209 (a)	RSS-Gen Issue 5: 6.13/8.9/8.10; RSS-247 Issue 2: 3.3/6.2 6.2.1.2, 6.2.2.2, 6.2.3.2, 6.2.4.2
Frequency stability	§ 15.407 (g)	RSS-Gen Issue 5: 6.11/8.11
Transmit Power Control (TPC) and Dynamic Frequency Selection (DFS)	§ 15.407 (h)	RSS-247 Issue 2: 6.2.2.1, 6.2.3.1, 6.3
Antenna requirement	§ 15.203 / 15.204 § 15.407 (a) (9)	RSS-Gen Issue 5: 8.3
Receiver spurious emissions	-	-

### 1.3 MEASUREMENT SUMMARY

**47 CFR CHAPTER I FCC PART 15                      FCC §15.207**  
**Subpart E §15.407**

AC Conducted Emissions

The measurement was performed according to ANSI C63.10, chapter 6.2 **Final Result**

<b>OP-Mode</b>	<b>Setup</b>	<b>Date</b>	<b>FCC</b>	<b>IC</b>
Operating mode worst case	S03_AC_AC02	2022-12-13	Passed	Passed

**47 CFR CHAPTER I FCC PART 15                      FCC §15.31, §15.403 (i)**  
**Subpart E §15.407**

26 dB Bandwidth

The measurement was performed according to ANSI C63.10, chapter 12.4.1 **Final Result**

<b>OP-Mode</b>	<b>Setup</b>	<b>Date</b>	<b>FCC</b>	<b>IC</b>
Radio Technology, Operating Frequency, Subband				
WLAN a, high, U-NII-1	S01_AD02	2022-10-20	Performed	N/A
WLAN a, low, U-NII-1	S01_AD02	2022-10-20	Performed	N/A
WLAN a, mid, U-NII-1	S01_AD02	2022-10-20	Performed	N/A
WLAN ac 20 MHz, high, U-NII-1	S01_AD02	2022-10-21	Performed	N/A
WLAN ac 20 MHz, low, U-NII-1	S01_AD02	2022-10-21	Performed	N/A
WLAN ac 20 MHz, mid, U-NII-1	S01_AD02	2022-10-21	Performed	N/A
WLAN ac 40 MHz, high, U-NII-1	S01_AD02	2022-10-24	Performed	N/A
WLAN ac 40 MHz, low, U-NII-1	S01_AD02	2022-10-24	Performed	N/A
WLAN ac 80 MHz, mid, U-NII-1	S01_AD02	2022-10-25	Performed	N/A
WLAN ax 20 MHz, high, U-NII-1	S01_AD02	2022-10-21	Performed	N/A
WLAN ax 20 MHz, low, U-NII-1	S01_AD02	2022-10-21	Performed	N/A
WLAN ax 20 MHz, mid, U-NII-1	S01_AD02	2022-10-21	Performed	N/A
WLAN ax 40 MHz, high, U-NII-1	S01_AD02	2022-10-24	Performed	N/A
WLAN ax 40 MHz, low, U-NII-1	S01_AD02	2022-10-24	Performed	N/A
WLAN ax 80 MHz, mid, U-NII-1	S01_AD02	2022-10-27	Performed	N/A
WLAN n 20 MHz, high, U-NII-1	S01_AD02	2022-10-21	Performed	N/A
WLAN n 20 MHz, low, U-NII-1	S01_AD02	2022-10-21	Performed	N/A
WLAN n 20 MHz, mid, U-NII-1	S01_AD02	2022-10-21	Performed	N/A
WLAN n 40 MHz, high, U-NII-1	S01_AD02	2022-10-21	Performed	N/A
WLAN n 40 MHz, low, U-NII-1	S01_AD02	2022-10-21	Performed	N/A

**47 CFR CHAPTER I FCC PART 15  
Subpart E §15.407**

**FCC §15.31, §15.407 (e)**

6 dB Bandwidth

The measurement was performed according to ANSI C63.10, chapter 6.9.2

**Final Result**

<b>OP-Mode</b> Radio Technology, Operating Frequency, Subband	<b>Setup</b>	<b>Date</b>	<b>FCC</b>	<b>IC</b>
WLAN a, high, U-NII-3	S01_AD02	2022-10-20	Passed	Passed
WLAN a, low, U-NII-3	S01_AD02	2022-10-20	Passed	Passed
WLAN a, mid, U-NII-3	S01_AD02	2022-10-20	Passed	Passed
WLAN ac 20 MHz, high, U-NII-3	S01_AD02	2022-10-21	Passed	Passed
WLAN ac 20 MHz, low, U-NII-3	S01_AD02	2022-10-21	Passed	Passed
WLAN ac 20 MHz, mid, U-NII-3	S01_AD02	2022-10-21	Passed	Passed
WLAN ac 40 MHz, high, U-NII-3	S01_AD02	2022-10-24	Passed	Passed
WLAN ac 40 MHz, low, U-NII-3	S01_AD02	2022-10-24	Passed	Passed
WLAN ac 80 MHz, mid, U-NII-3	S01_AD02	2022-10-25	Passed	Passed
WLAN ax 20 MHz, high, U-NII-3	S01_AD02	2022-10-21	Passed	Passed
WLAN ax 20 MHz, low, U-NII-3	S01_AD02	2022-10-21	Passed	Passed
WLAN ax 20 MHz, mid, U-NII-3	S01_AD02	2022-10-21	Passed	Passed
WLAN ax 40 MHz, high, U-NII-3	S01_AD02	2022-10-24	Passed	Passed
WLAN ax 40 MHz, low, U-NII-3	S01_AD02	2022-10-24	Passed	Passed
WLAN ax 80 MHz, mid, U-NII-3	S01_AD02	2022-10-27	Passed	Passed
WLAN n 20 MHz, high, U-NII-3	S01_AD02	2022-10-21	Passed	Passed
WLAN n 20 MHz, low, U-NII-3	S01_AD02	2022-10-21	Passed	Passed
WLAN n 20 MHz, mid, U-NII-3	S01_AD02	2022-10-21	Passed	Passed
WLAN n 40 MHz, high, U-NII-3	S01_AD02	2022-10-21	Passed	Passed
WLAN n 40 MHz, low, U-NII-3	S01_AD02	2022-10-27	Passed	Passed

**47 CFR CHAPTER I FCC PART 15  
Subpart E §15.407**

**FCC §15.31, IC RSS 247 Ch. 6.2.x**

99 % Bandwidth

The measurement was performed according to ANSI C63.10, chapter 12.4.2 (6.9.3)

**Final Result**

<b>OP-Mode</b> Radio Technology, Operating Frequency, Subband	<b>Setup</b>	<b>Date</b>	<b>FCC</b>	<b>IC</b>
WLAN a, high, U-NII-1	S01_AD02	2022-10-20	N/A	Performed
WLAN a, high, U-NII-3	S01_AD02	2022-10-20	N/A	Performed
WLAN a, low, U-NII-1	S01_AD02	2022-10-20	N/A	Performed
WLAN a, low, U-NII-3	S01_AD02	2022-10-20	N/A	Performed
WLAN a, mid, U-NII-1	S01_AD02	2022-10-20	N/A	Performed
WLAN a, mid, U-NII-3	S01_AD02	2022-10-20	N/A	Performed
WLAN ac 20 MHz, high, U-NII-1	S01_AD02	2022-10-21	N/A	Performed
WLAN ac 20 MHz, high, U-NII-3	S01_AD02	2022-10-21	N/A	Performed
WLAN ac 20 MHz, low, U-NII-1	S01_AD02	2022-10-21	N/A	Performed
WLAN ac 20 MHz, low, U-NII-3	S01_AD02	2022-10-21	N/A	Performed
WLAN ac 20 MHz, mid, U-NII-1	S01_AD02	2022-10-21	N/A	Performed



**47 CFR CHAPTER I FCC PART 15  
Subpart E §15.407**

**FCC §15.31, IC RSS 247 Ch. 6.2.x**

99 % Bandwidth

The measurement was performed according to ANSI C63.10, chapter 12.4.2 (6.9.3)

**Final Result**

<b>OP-Mode</b> Radio Technology, Operating Frequency, Subband	<b>Setup</b>	<b>Date</b>	<b>FCC</b>	<b>IC</b>
WLAN ac 20 MHz, mid, U-NII-3	S01_AD02	2022-10-21	N/A	Performed
WLAN ac 40 MHz, high, U-NII-1	S01_AD02	2022-10-24	N/A	Performed
WLAN ac 40 MHz, high, U-NII-3	S01_AD02	2022-10-24	N/A	Performed
WLAN ac 40 MHz, low, U-NII-1	S01_AD02	2022-10-24	N/A	Performed
WLAN ac 40 MHz, low, U-NII-3	S01_AD02	2022-10-24	N/A	Performed
WLAN ac 80 MHz, mid, U-NII-1	S01_AD02	2022-10-25	N/A	Performed
WLAN ac 80 MHz, mid, U-NII-3	S01_AD02	2022-10-25	N/A	Performed
WLAN ax 20 MHz, high, U-NII-1	S01_AD02	2022-10-21	N/A	Performed
WLAN ax 20 MHz, high, U-NII-3	S01_AD02	2022-10-21	N/A	Performed
WLAN ax 20 MHz, low, U-NII-1	S01_AD02	2022-10-21	N/A	Performed
WLAN ax 20 MHz, low, U-NII-3	S01_AD02	2022-10-21	N/A	Performed
WLAN ax 20 MHz, mid, U-NII-1	S01_AD02	2022-10-21	N/A	Performed
WLAN ax 20 MHz, mid, U-NII-3	S01_AD02	2022-10-21	N/A	Performed
WLAN ax 40 MHz, high, U-NII-1	S01_AD02	2022-10-24	N/A	Performed
WLAN ax 40 MHz, high, U-NII-3	S01_AD02	2022-10-24	N/A	Performed
WLAN ax 40 MHz, low, U-NII-1	S01_AD02	2022-10-24	N/A	Performed
WLAN ax 40 MHz, low, U-NII-3	S01_AD02	2022-10-24	N/A	Performed
WLAN ax 80 MHz, mid, U-NII-1	S01_AD02	2022-10-27	N/A	Performed
WLAN ax 80 MHz, mid, U-NII-3	S01_AD02	2022-10-27	N/A	Performed
WLAN n 20 MHz, high, U-NII-1	S01_AD02	2022-10-21	N/A	Performed
WLAN n 20 MHz, high, U-NII-3	S01_AD02	2022-10-21	N/A	Performed
WLAN n 20 MHz, low, U-NII-1	S01_AD02	2022-10-21	N/A	Performed
WLAN n 20 MHz, low, U-NII-3	S01_AD02	2022-10-21	N/A	Performed
WLAN n 20 MHz, mid, U-NII-1	S01_AD02	2022-10-21	N/A	Performed
WLAN n 20 MHz, mid, U-NII-3	S01_AD02	2022-10-21	N/A	Performed
WLAN n 40 MHz, high, U-NII-1	S01_AD02	2022-10-21	N/A	Performed
WLAN n 40 MHz, high, U-NII-3	S01_AD02	2022-10-21	N/A	Performed
WLAN n 40 MHz, low, U-NII-1	S01_AD02	2022-10-21	N/A	Performed
WLAN n 40 MHz, low, U-NII-3	S01_AD02	2022-10-27	N/A	Performed

**47 CFR CHAPTER I FCC PART 15  
Subpart E §15.407**

**FCC §15.31, §15.407 (a)(1)**

Maximum Conducted Output Power

The measurement was performed according to ANSI C63.10, chapter 12.3.3.2

**Final Result**

<b>OP-Mode</b> Radio Technology, Operating Frequency, Subband	<b>Setup</b>	<b>Date</b>	<b>FCC</b>	<b>IC</b>
<b>Conducted Power Setting for antenna gain ≤ 8 dBi</b>				
<b>FCC power setting Band 1, FCC and ISED power setting Band 3</b>				
WLAN a DIVERSITY, high, U-NII-1	S01_AD02	2022-10-25	Passed	N/A
WLAN a DIVERSITY, high, U-NII-3	S01_AD02	2022-10-25	Passed	Passed
WLAN a DIVERSITY, low, U-NII-1	S01_AD02	2022-10-25	Passed	N/A
WLAN a DIVERSITY, low, U-NII-3	S01_AD02	2022-10-25	Passed	Passed
WLAN a DIVERSITY, mid, U-NII-1	S01_AD02	2022-10-25	Passed	N/A
WLAN a DIVERSITY, mid, U-NII-3	S01_AD02	2022-10-25	Passed	Passed
WLAN a, high, U-NII-1	S01_AD02	2022-10-20	Passed	N/A
WLAN a, high, U-NII-3	S01_AD02	2022-10-20	Passed	Passed
WLAN a, low, U-NII-1	S01_AD02	2022-10-20	Passed	N/A
WLAN a, low, U-NII-3	S01_AD02	2022-10-20	Passed	Passed
WLAN a, mid, U-NII-1	S01_AD02	2022-10-20	Passed	N/A
WLAN a, mid, U-NII-3	S01_AD02	2022-10-20	Passed	Passed
WLAN ac 20 MHz MIMO, high, U-NII-1	S01_AD02	2022-10-25	Passed	N/A
WLAN ac 20 MHz MIMO, high, U-NII-3	S01_AD02	2022-10-25	Passed	Passed
WLAN ac 20 MHz MIMO, low, U-NII-1	S01_AD02	2022-10-25	Passed	N/A
WLAN ac 20 MHz MIMO, low, U-NII-3	S01_AD02	2022-10-25	Passed	Passed
WLAN ac 20 MHz MIMO, mid, U-NII-1	S01_AD02	2022-10-25	Passed	N/A
WLAN ac 20 MHz MIMO, mid, U-NII-3	S01_AD02	2022-10-25	Passed	Passed
WLAN ac 20 MHz, high, U-NII-1	S01_AD02	2022-10-21	Passed	N/A
WLAN ac 20 MHz, high, U-NII-3	S01_AD02	2022-10-21	Passed	Passed
WLAN ac 20 MHz, low, U-NII-1	S01_AD02	2022-10-21	Passed	N/A
WLAN ac 20 MHz, low, U-NII-3	S01_AD02	2022-10-21	Passed	Passed
WLAN ac 20 MHz, mid, U-NII-1	S01_AD02	2022-10-21	Passed	N/A
WLAN ac 20 MHz, mid, U-NII-3	S01_AD02	2022-10-21	Passed	Passed
WLAN ac 40 MHz MIMO, high, U-NII-1	S01_AD02	2022-10-28	Passed	N/A
WLAN ac 40 MHz MIMO, high, U-NII-3	S01_AD02	2022-10-28	Passed	Passed
WLAN ac 40 MHz MIMO, low, U-NII-1	S01_AD02	2022-10-28	Passed	N/A
WLAN ac 40 MHz MIMO, low, U-NII-3	S01_AD02	2022-10-28	Passed	Passed
WLAN ac 40 MHz, high, U-NII-1	S01_AD02	2022-10-24	Passed	N/A
WLAN ac 40 MHz, high, U-NII-3	S01_AD02	2022-10-24	Passed	Passed
WLAN ac 40 MHz, low, U-NII-1	S01_AD02	2022-10-24	Passed	N/A
WLAN ac 40 MHz, low, U-NII-3	S01_AD02	2022-10-24	Passed	Passed
WLAN ac 80 MHz MIMO, mid, U-NII-1	S01_AD02	2022-10-27	Passed	N/A
WLAN ac 80 MHz MIMO, mid, U-NII-3	S01_AD02	2022-10-31	Passed	Passed
WLAN ac 80 MHz, mid, U-NII-1	S01_AD02	2022-10-25	Passed	N/A
WLAN ac 80 MHz, mid, U-NII-3	S01_AD02	2022-10-25	Passed	Passed
WLAN ax 20 MHz MIMO, high, U-NII-1	S01_AD02	2022-10-27	Passed	N/A
WLAN ax 20 MHz MIMO, high, U-NII-3	S01_AD02	2022-10-27	Passed	Passed





**47 CFR CHAPTER I FCC PART 15  
Subpart E §15.407**

**FCC §15.31, §15.407 (a)(1)**

Maximum Conducted Output Power

The measurement was performed according to ANSI C63.10, chapter 12.3.3.2

**Final Result**

<b>OP-Mode</b> Radio Technology, Operating Frequency, Subband	<b>Setup</b>	<b>Date</b>	<b>FCC</b>	<b>IC</b>
WLAN ax 20 MHz MIMO, low, U-NII-1	S01_AD02	2022-10-31	Passed	N/A
WLAN ax 20 MHz MIMO, low, U-NII-3	S01_AD02	2022-10-27	Passed	Passed
WLAN ax 20 MHz MIMO, mid, U-NII-1	S01_AD02	2022-10-27	Passed	N/A
WLAN ax 20 MHz MIMO, mid, U-NII-3	S01_AD02	2022-10-27	Passed	Passed
WLAN ax 20 MHz, high, U-NII-1	S01_AD02	2022-10-21	Passed	N/A
WLAN ax 20 MHz, high, U-NII-3	S01_AD02	2022-10-21	Passed	Passed
WLAN ax 20 MHz, low, U-NII-1	S01_AD02	2022-10-21	Passed	N/A
WLAN ax 20 MHz, low, U-NII-3	S01_AD02	2022-10-21	Passed	Passed
WLAN ax 20 MHz, mid, U-NII-1	S01_AD02	2022-10-21	Passed	N/A
WLAN ax 20 MHz, mid, U-NII-3	S01_AD02	2022-10-21	Passed	Passed
WLAN ax 40 MHz MIMO, high, U-NII-1	S01_AD02	2022-10-28	Passed	N/A
WLAN ax 40 MHz MIMO, high, U-NII-3	S01_AD02	2022-10-28	Passed	Passed
WLAN ax 40 MHz MIMO, low, U-NII-1	S01_AD02	2022-10-28	Passed	N/A
WLAN ax 40 MHz MIMO, low, U-NII-3	S01_AD02	2022-10-28	Passed	Passed
WLAN ax 40 MHz, high, U-NII-1	S01_AD02	2022-10-24	Passed	N/A
WLAN ax 40 MHz, high, U-NII-3	S01_AD02	2022-10-24	Passed	Passed
WLAN ax 40 MHz, low, U-NII-1	S01_AD02	2022-10-24	Passed	N/A
WLAN ax 40 MHz, low, U-NII-3	S01_AD02	2022-10-24	Passed	Passed
WLAN ax 80 MHz MIMO, mid, U-NII-1	S01_AD02	2022-10-31	Passed	N/A
WLAN ax 80 MHz MIMO, mid, U-NII-3	S01_AD02	2022-10-31	Passed	Passed
WLAN ax 80 MHz, mid, U-NII-1	S01_AD02	2022-10-27	Passed	N/A
WLAN ax 80 MHz, mid, U-NII-3	S01_AD02	2022-10-27	Passed	Passed
WLAN n 20 MHz MIMO, high, U-NII-1	S01_AD02	2022-10-25	Passed	N/A
WLAN n 20 MHz MIMO, high, U-NII-3	S01_AD02	2022-10-25	Passed	Passed
WLAN n 20 MHz MIMO, low, U-NII-1	S01_AD02	2022-10-25	Passed	N/A
WLAN n 20 MHz MIMO, low, U-NII-3	S01_AD02	2022-10-25	Passed	Passed
WLAN n 20 MHz MIMO, mid, U-NII-1	S01_AD02	2022-10-25	Passed	N/A
WLAN n 20 MHz MIMO, mid, U-NII-3	S01_AD02	2022-10-25	Passed	Passed
WLAN n 20 MHz, high, U-NII-1	S01_AD02	2022-10-21	Passed	N/A
WLAN n 20 MHz, high, U-NII-3	S01_AD02	2022-10-21	Passed	Passed
WLAN n 20 MHz, low, U-NII-1	S01_AD02	2022-10-21	Passed	N/A
WLAN n 20 MHz, low, U-NII-3	S01_AD02	2022-10-21	Passed	Passed
WLAN n 20 MHz, mid, U-NII-1	S01_AD02	2022-10-21	Passed	N/A
WLAN n 20 MHz, mid, U-NII-3	S01_AD02	2022-10-21	Passed	Passed
WLAN n 40 MHz MIMO, high, U-NII-1	S01_AD02	2022-10-28	Passed	N/A
WLAN n 40 MHz MIMO, high, U-NII-3	S01_AD02	2022-10-28	Passed	Passed
WLAN n 40 MHz MIMO, low, U-NII-1	S01_AD02	2022-10-31	Passed	N/A
WLAN n 40 MHz MIMO, low, U-NII-3	S01_AD02	2022-10-28	Passed	Passed
WLAN n 40 MHz, high, U-NII-1	S01_AD02	2022-10-21	Passed	N/A
WLAN n 40 MHz, high, U-NII-3	S01_AD02	2022-10-21	Passed	Passed

**47 CFR CHAPTER I FCC PART 15  
Subpart E §15.407**

**FCC §15.31, §15.407 (a)(1)**

Maximum Conducted Output Power

The measurement was performed according to ANSI C63.10, chapter 12.3.3.2

**Final Result**

<b>OP-Mode</b>	<b>Setup</b>	<b>Date</b>	<b>FCC</b>	<b>IC</b>
Radio Technology, Operating Frequency, Subband				
WLAN n 40 MHz, low, U-NII-1	S01_AD02	2022-10-21	Passed	N/A
WLAN n 40 MHz, low, U-NII-3	S01_AD02	2022-10-27	Passed	Passed

**Conducted Power Setting for antenna gain ≤ 8 dBi  
ISED power setting Band 1**

<b>OP-Mode</b>	<b>Setup</b>	<b>Date</b>	<b>FCC</b>	<b>IC</b>
Radio Technology, Operating Frequency, Subband				
WLAN a DIVERSITY, high, U-NII-1	S01_AD02	2022-11-14	N/A	Passed
WLAN a DIVERSITY, low, U-NII-1	S01_AD02	2022-11-14	N/A	Passed
WLAN a DIVERSITY, mid, U-NII-1	S01_AD02	2022-11-14	N/A	Passed
WLAN a, high, U-NII-1	S01_AD02	2022-11-08	N/A	Passed
WLAN a, low, U-NII-1	S01_AD02	2022-11-08	N/A	Passed
WLAN a, mid, U-NII-1	S01_AD02	2022-11-08	N/A	Passed
WLAN ac 20 MHz MIMO, high, U-NII-1	S01_AD02	2022-11-16	N/A	Passed
WLAN ac 20 MHz MIMO, low, U-NII-1	S01_AD02	2022-11-16	N/A	Passed
WLAN ac 20 MHz MIMO, mid, U-NII-1	S01_AD02	2022-11-16	N/A	Passed
WLAN ac 20 MHz, high, U-NII-1	S01_AD02	2022-11-08	N/A	Passed
WLAN ac 20 MHz, low, U-NII-1	S01_AD02	2022-11-08	N/A	Passed
WLAN ac 20 MHz, mid, U-NII-1	S01_AD02	2022-11-08	N/A	Passed
WLAN ac 40 MHz MIMO, high, U-NII-1	S01_AD02	2022-11-17	N/A	Passed
WLAN ac 40 MHz MIMO, low, U-NII-1	S01_AD02	2022-11-17	N/A	Passed
WLAN ac 40 MHz, high, U-NII-1	S01_AD02	2022-11-08	N/A	Passed
WLAN ac 40 MHz, low, U-NII-1	S01_AD02	2022-11-08	N/A	Passed
WLAN ac 80 MHz MIMO, mid, U-NII-1	S01_AD02	2022-11-17	N/A	Passed
WLAN ac 80 MHz, mid, U-NII-1	S01_AD02	2022-11-08	N/A	Passed
WLAN ax 20 MHz MIMO, high, U-NII-1	S01_AD02	2022-11-16	N/A	Passed
WLAN ax 20 MHz MIMO, low, U-NII-1	S01_AD02	2022-11-16	N/A	Passed
WLAN ax 20 MHz MIMO, mid, U-NII-1	S01_AD02	2022-11-16	N/A	Passed
WLAN ax 20 MHz, high, U-NII-1	S01_AD02	2022-11-08	N/A	Passed
WLAN ax 20 MHz, low, U-NII-1	S01_AD02	2022-11-08	N/A	Passed
WLAN ax 20 MHz, mid, U-NII-1	S01_AD02	2022-11-08	N/A	Passed
WLAN ax 40 MHz MIMO, high, U-NII-1	S01_AD02	2022-11-17	N/A	Passed
WLAN ax 40 MHz MIMO, low, U-NII-1	S01_AD02	2022-11-17	N/A	Passed
WLAN ax 40 MHz, high, U-NII-1	S01_AD02	2022-11-08	N/A	Passed
WLAN ax 40 MHz, low, U-NII-1	S01_AD02	2022-11-08	N/A	Passed
WLAN ax 80 MHz MIMO, mid, U-NII-1	S01_AD02	2022-11-17	N/A	Passed
WLAN ax 80 MHz, mid, U-NII-1	S01_AD02	2022-11-08	N/A	Passed
WLAN n 20 MHz MIMO, high, U-NII-1	S01_AD02	2022-11-14	N/A	Passed
WLAN n 20 MHz MIMO, low, U-NII-1	S01_AD02	2022-11-14	N/A	Passed
WLAN n 20 MHz MIMO, mid, U-NII-1	S01_AD02	2022-11-14	N/A	Passed

**47 CFR CHAPTER I FCC PART 15  
Subpart E §15.407**

**FCC §15.31, §15.407 (a)(1)**

Maximum Conducted Output Power

The measurement was performed according to ANSI C63.10, chapter 12.3.3.2

**Final Result**

<b>OP-Mode</b> Radio Technology, Operating Frequency, Subband	<b>Setup</b>	<b>Date</b>	<b>FCC</b>	<b>IC</b>
WLAN n 20 MHz, high, U-NII-1	S01_AD02	2022-11-08	N/A	Passed
WLAN n 20 MHz, low, U-NII-1	S01_AD02	2022-11-08	N/A	Passed
WLAN n 20 MHz, mid, U-NII-1	S01_AD02	2022-11-08	N/A	Passed
WLAN n 40 MHz MIMO, high, U-NII-1	S01_AD02	2022-11-17	N/A	Passed
WLAN n 40 MHz MIMO, low, U-NII-1	S01_AD02	2022-11-17	N/A	Passed
WLAN n 40 MHz, high, U-NII-1	S01_AD02	2022-11-08	N/A	Passed
WLAN n 40 MHz, low, U-NII-1	S01_AD02	2022-11-08	N/A	Passed

**Conducted Power Setting for antenna gain ≤ 9 dBi  
FCC power setting Band 1, FCC and ISED power setting Band 3**

<b>OP-Mode</b> Radio Technology, Operating Frequency, Subband	<b>Setup</b>	<b>Date</b>	<b>FCC</b>	<b>IC</b>
WLAN a DIVERSITY, high, U-NII-1	S01_AD02	2022-11-07	Passed	N/A
WLAN a DIVERSITY, high, U-NII-3	S01_AD02	2022-10-25	Passed	Passed
WLAN a DIVERSITY, low, U-NII-1	S01_AD02	2022-11-07	Passed	N/A
WLAN a DIVERSITY, low, U-NII-3	S01_AD02	2022-10-25	Passed	Passed
WLAN a DIVERSITY, mid, U-NII-1	S01_AD02	2023-01-12	Passed	N/A
WLAN a DIVERSITY, mid, U-NII-3	S01_AD02	2022-10-25	Passed	Passed
WLAN a, high, U-NII-1	S01_AD02	2022-10-20	Passed	N/A
WLAN a, high, U-NII-3	S01_AD02	2022-10-20	Passed	Passed
WLAN a, low, U-NII-1	S01_AD02	2022-10-20	Passed	N/A
WLAN a, low, U-NII-3	S01_AD02	2022-10-20	Passed	Passed
WLAN a, mid, U-NII-1	S01_AD02	2022-10-20	Passed	N/A
WLAN a, mid, U-NII-3	S01_AD02	2022-10-20	Passed	Passed
WLAN ac 20 MHz MIMO, high, U-NII-1	S01_AD02	2022-11-04	Passed	N/A
WLAN ac 20 MHz MIMO, high, U-NII-3	S01_AD02	2022-10-25	Passed	Passed
WLAN ac 20 MHz MIMO, low, U-NII-1	S01_AD02	2022-11-04	Passed	N/A
WLAN ac 20 MHz MIMO, low, U-NII-3	S01_AD02	2022-10-25	Passed	Passed
WLAN ac 20 MHz MIMO, mid, U-NII-1	S01_AD02	2022-11-04	Passed	N/A
WLAN ac 20 MHz MIMO, mid, U-NII-3	S01_AD02	2022-10-25	Passed	Passed
WLAN ac 20 MHz, high, U-NII-1	S01_AD02	2022-10-21	Passed	N/A
WLAN ac 20 MHz, high, U-NII-3	S01_AD02	2022-10-21	Passed	Passed
WLAN ac 20 MHz, low, U-NII-1	S01_AD02	2022-10-21	Passed	N/A
WLAN ac 20 MHz, low, U-NII-3	S01_AD02	2022-10-21	Passed	Passed
WLAN ac 20 MHz, mid, U-NII-1	S01_AD02	2022-10-21	Passed	N/A
WLAN ac 20 MHz, mid, U-NII-3	S01_AD02	2022-10-21	Passed	Passed
WLAN ac 40 MHz MIMO, high, U-NII-1	S01_AD02	2022-11-07	Passed	N/A
WLAN ac 40 MHz MIMO, high, U-NII-3	S01_AD02	2022-10-28	Passed	Passed
WLAN ac 40 MHz MIMO, low, U-NII-1	S01_AD02	2022-11-07	Passed	N/A
WLAN ac 40 MHz MIMO, low, U-NII-3	S01_AD02	2022-10-28	Passed	Passed



**47 CFR CHAPTER I FCC PART 15  
Subpart E §15.407**

**FCC §15.31, §15.407 (a)(1)**

Maximum Conducted Output Power

The measurement was performed according to ANSI C63.10, chapter 12.3.3.2

**Final Result**

<b>OP-Mode</b> Radio Technology, Operating Frequency, Subband	<b>Setup</b>	<b>Date</b>	<b>FCC</b>	<b>IC</b>
WLAN ac 40 MHz, high, U-NII-1	S01_AD02	2022-10-24	Passed	N/A
WLAN ac 40 MHz, high, U-NII-3	S01_AD02	2022-10-24	Passed	Passed
WLAN ac 40 MHz, low, U-NII-1	S01_AD02	2022-10-31	Passed	N/A
WLAN ac 40 MHz, low, U-NII-3	S01_AD02	2022-10-24	Passed	Passed
WLAN ac 80 MHz MIMO, mid, U-NII-1	S01_AD02	2022-11-07	Passed	N/A
WLAN ac 80 MHz MIMO, mid, U-NII-3	S01_AD02	2022-11-07	Passed	Passed
WLAN ac 80 MHz, mid, U-NII-1	S01_AD02	2022-10-31	Passed	N/A
WLAN ac 80 MHz, mid, U-NII-3	S01_AD02	2022-10-31	Passed	Passed
WLAN ax 20 MHz MIMO, high, U-NII-1	S01_AD02	2022-11-04	Passed	N/A
WLAN ax 20 MHz MIMO, high, U-NII-3	S01_AD02	2022-10-27	Passed	Passed
WLAN ax 20 MHz MIMO, low, U-NII-1	S01_AD02	2022-11-04	Passed	N/A
WLAN ax 20 MHz MIMO, low, U-NII-3	S01_AD02	2022-10-27	Passed	Passed
WLAN ax 20 MHz MIMO, mid, U-NII-1	S01_AD02	2022-11-04	Passed	N/A
WLAN ax 20 MHz MIMO, mid, U-NII-3	S01_AD02	2022-10-27	Passed	Passed
WLAN ax 20 MHz, high, U-NII-1	S01_AD02	2022-10-21	Passed	N/A
WLAN ax 20 MHz, high, U-NII-3	S01_AD02	2022-10-21	Passed	Passed
WLAN ax 20 MHz, low, U-NII-1	S01_AD02	2022-10-21	Passed	N/A
WLAN ax 20 MHz, low, U-NII-3	S01_AD02	2022-10-21	Passed	Passed
WLAN ax 20 MHz, mid, U-NII-1	S01_AD02	2022-10-21	Passed	N/A
WLAN ax 20 MHz, mid, U-NII-3	S01_AD02	2022-10-21	Passed	Passed
WLAN ax 40 MHz MIMO, high, U-NII-1	S01_AD02	2022-11-07	Passed	N/A
WLAN ax 40 MHz MIMO, high, U-NII-3	S01_AD02	2022-10-28	Passed	Passed
WLAN ax 40 MHz MIMO, low, U-NII-1	S01_AD02	2022-11-07	Passed	N/A
WLAN ax 40 MHz MIMO, low, U-NII-3	S01_AD02	2022-10-28	Passed	Passed
WLAN ax 40 MHz, high, U-NII-1	S01_AD02	2022-10-24	Passed	N/A
WLAN ax 40 MHz, high, U-NII-3	S01_AD02	2022-10-24	Passed	Passed
WLAN ax 40 MHz, low, U-NII-1	S01_AD02	2022-10-31	Passed	N/A
WLAN ax 40 MHz, low, U-NII-3	S01_AD02	2022-10-24	Passed	Passed
WLAN ax 80 MHz MIMO, mid, U-NII-1	S01_AD02	2022-11-07	Passed	N/A
WLAN ax 80 MHz MIMO, mid, U-NII-3	S01_AD02	2022-11-07	Passed	Passed
WLAN ax 80 MHz, mid, U-NII-1	S01_AD02	2022-11-14	Passed	N/A
WLAN ax 80 MHz, mid, U-NII-3	S01_AD02	2022-11-14	Passed	Passed
WLAN n 20 MHz MIMO, high, U-NII-1	S01_AD02	2022-10-31	Passed	N/A
WLAN n 20 MHz MIMO, high, U-NII-3	S01_AD02	2022-10-25	Passed	Passed
WLAN n 20 MHz MIMO, low, U-NII-1	S01_AD02	2022-10-31	Passed	N/A
WLAN n 20 MHz MIMO, low, U-NII-3	S01_AD02	2022-10-25	Passed	Passed
WLAN n 20 MHz MIMO, mid, U-NII-1	S01_AD02	2022-10-31	Passed	N/A
WLAN n 20 MHz MIMO, mid, U-NII-3	S01_AD02	2022-10-25	Passed	Passed
WLAN n 20 MHz, high, U-NII-1	S01_AD02	2022-10-21	Passed	N/A
WLAN n 20 MHz, high, U-NII-3	S01_AD02	2022-10-21	Passed	Passed



**47 CFR CHAPTER I FCC PART 15  
Subpart E §15.407**

**FCC §15.31, §15.407 (a)(1)**

Maximum Conducted Output Power

The measurement was performed according to ANSI C63.10, chapter 12.3.3.2

**Final Result**

<b>OP-Mode</b> Radio Technology, Operating Frequency, Subband	<b>Setup</b>	<b>Date</b>	<b>FCC</b>	<b>IC</b>
WLAN n 20 MHz, low, U-NII-1	S01_AD02	2022-10-21	Passed	N/A
WLAN n 20 MHz, low, U-NII-3	S01_AD02	2022-10-21	Passed	Passed
WLAN n 20 MHz, mid, U-NII-1	S01_AD02	2022-10-21	Passed	N/A
WLAN n 20 MHz, mid, U-NII-3	S01_AD02	2022-10-21	Passed	Passed
WLAN n 40 MHz MIMO, high, U-NII-1	S01_AD02	2022-11-07	Passed	N/A
WLAN n 40 MHz MIMO, high, U-NII-3	S01_AD02	2022-10-28	Passed	Passed
WLAN n 40 MHz MIMO, low, U-NII-1	S01_AD02	2022-11-07	Passed	N/A
WLAN n 40 MHz MIMO, low, U-NII-3	S01_AD02	2022-10-28	Passed	Passed
WLAN n 40 MHz, high, U-NII-1	S01_AD02	2022-10-21	Passed	N/A
WLAN n 40 MHz, high, U-NII-3	S01_AD02	2022-10-21	Passed	Passed
WLAN n 40 MHz, low, U-NII-1	S01_AD02	2022-10-31	Passed	N/A
WLAN n 40 MHz, low, U-NII-3	S01_AD02	2022-10-27	Passed	Passed

**Conducted Power Setting for antenna gain ≤ 9 dBi  
ISED power setting Band 1**

<b>OP-Mode</b> Radio Technology, Operating Frequency, Subband	<b>Setup</b>	<b>Date</b>	<b>FCC</b>	<b>IC</b>
WLAN a DIVERSITY, high, U-NII-1	S01_AD02	2022-11-16	N/A	Passed
WLAN a DIVERSITY, low, U-NII-1	S01_AD02	2022-11-16	N/A	Passed
WLAN a DIVERSITY, mid, U-NII-1	S01_AD02	2022-11-16	N/A	Passed
WLAN a, high, U-NII-1	S01_AD02	2022-11-08	N/A	Passed
WLAN a, low, U-NII-1	S01_AD02	2022-11-08	N/A	Passed
WLAN a, mid, U-NII-1	S01_AD02	2022-11-08	N/A	Passed
WLAN ac 20 MHz MIMO, high, U-NII-1	S01_AD02	2022-11-17	N/A	Passed
WLAN ac 20 MHz MIMO, low, U-NII-1	S01_AD02	2022-11-17	N/A	Passed
WLAN ac 20 MHz MIMO, mid, U-NII-1	S01_AD02	2022-11-17	N/A	Passed
WLAN ac 20 MHz, high, U-NII-1	S01_AD02	2022-11-08	N/A	Passed
WLAN ac 20 MHz, low, U-NII-1	S01_AD02	2022-11-08	N/A	Passed
WLAN ac 20 MHz, mid, U-NII-1	S01_AD02	2022-11-08	N/A	Passed
WLAN ac 40 MHz MIMO, high, U-NII-1	S01_AD02	2022-11-17	N/A	Passed
WLAN ac 40 MHz MIMO, low, U-NII-1	S01_AD02	2022-11-17	N/A	Passed
WLAN ac 40 MHz, high, U-NII-1	S01_AD02	2022-11-10	N/A	Passed
WLAN ac 40 MHz, low, U-NII-1	S01_AD02	2022-11-10	N/A	Passed
WLAN ac 80 MHz MIMO, mid, U-NII-1	S01_AD02	2022-11-17	N/A	Passed
WLAN ac 80 MHz, mid, U-NII-1	S01_AD02	2022-11-14	N/A	Passed
WLAN ax 20 MHz MIMO, high, U-NII-1	S01_AD02	2022-11-17	N/A	Passed
WLAN ax 20 MHz MIMO, low, U-NII-1	S01_AD02	2022-11-17	N/A	Passed
WLAN ax 20 MHz MIMO, mid, U-NII-1	S01_AD02	2022-11-17	N/A	Passed
WLAN ax 20 MHz, high, U-NII-1	S01_AD02	2022-11-08	N/A	Passed
WLAN ax 20 MHz, low, U-NII-1	S01_AD02	2022-11-08	N/A	Passed



**47 CFR CHAPTER I FCC PART 15**  
**Subpart E §15.407**

**FCC §15.31, §15.407 (a)(1)**

Maximum Conducted Output Power

The measurement was performed according to ANSI C63.10, chapter 12.3.3.2

**Final Result**

<b>OP-Mode</b>	<b>Setup</b>	<b>Date</b>	<b>FCC</b>	<b>IC</b>
Radio Technology, Operating Frequency, Subband				
WLAN ax 20 MHz, mid, U-NII-1	S01_AD02	2022-11-08	N/A	Passed
WLAN ax 40 MHz MIMO, high, U-NII-1	S01_AD02	2022-11-17	N/A	Passed
WLAN ax 40 MHz MIMO, low, U-NII-1	S01_AD02	2022-11-17	N/A	Passed
WLAN ax 40 MHz, high, U-NII-1	S01_AD02	2022-11-10	N/A	Passed
WLAN ax 40 MHz, low, U-NII-1	S01_AD02	2022-11-10	N/A	Passed
WLAN ax 80 MHz MIMO, mid, U-NII-1	S01_AD02	2022-11-17	N/A	Passed
WLAN ax 80 MHz, mid, U-NII-1	S01_AD02	2022-11-14	N/A	Passed
WLAN n 20 MHz MIMO, high, U-NII-1	S01_AD02	2022-11-16	N/A	Passed
WLAN n 20 MHz MIMO, low, U-NII-1	S01_AD02	2022-11-16	N/A	Passed
WLAN n 20 MHz MIMO, mid, U-NII-1	S01_AD02	2022-11-16	N/A	Passed
WLAN n 20 MHz, high, U-NII-1	S01_AD02	2022-11-08	N/A	Passed
WLAN n 20 MHz, low, U-NII-1	S01_AD02	2022-11-08	N/A	Passed
WLAN n 20 MHz, mid, U-NII-1	S01_AD02	2022-11-08	N/A	Passed
WLAN n 40 MHz MIMO, high, U-NII-1	S01_AD02	2022-11-17	N/A	Passed
WLAN n 40 MHz MIMO, low, U-NII-1	S01_AD02	2022-11-17	N/A	Passed
WLAN n 40 MHz, high, U-NII-1	S01_AD02	2022-11-10	N/A	Passed
WLAN n 40 MHz, low, U-NII-1	S01_AD02	2022-11-10	N/A	Passed





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Subpart E §15.407**

**FCC §15.31, §15.407 (a) (1),(5)**

Peak Power Spectral Density

The measurement was performed according to ANSI C63.10, chapter 12.5 (SA-3)

**Final Result**

<b>OP-Mode</b> Radio Technology, Operating Frequency, Subband	<b>Setup</b>	<b>Date</b>	<b>FCC</b>	<b>IC</b>
<b>Conducted Power Setting for antenna gain ≤ 8 dBi</b>				
<b>FCC power setting Band 1, FCC and ISED power setting Band 3</b>				
WLAN a DIVERSITY, high, U-NII-1	S01_AD02	2022-10-25	Passed	N/A
WLAN a DIVERSITY, high, U-NII-3	S01_AD02	2022-10-25	Passed	Passed
WLAN a DIVERSITY, low, U-NII-1	S01_AD02	2022-10-25	Passed	N/A
WLAN a DIVERSITY, low, U-NII-3	S01_AD02	2022-10-25	Passed	Passed
WLAN a DIVERSITY, mid, U-NII-1	S01_AD02	2022-10-25	Passed	N/A
WLAN a DIVERSITY, mid, U-NII-3	S01_AD02	2022-10-25	Passed	Passed
WLAN a, high, U-NII-1	S01_AD02	2022-10-20	Passed	N/A
WLAN a, high, U-NII-3	S01_AD02	2022-10-20	Passed	Passed
WLAN a, low, U-NII-1	S01_AD02	2022-10-20	Passed	N/A
WLAN a, low, U-NII-3	S01_AD02	2022-10-20	Passed	Passed
WLAN a, mid, U-NII-1	S01_AD02	2022-10-20	Passed	N/A
WLAN a, mid, U-NII-3	S01_AD02	2022-10-20	Passed	Passed
WLAN ac 20 MHz MIMO, high, U-NII-1	S01_AD02	2022-10-25	Passed	N/A
WLAN ac 20 MHz MIMO, high, U-NII-3	S01_AD02	2022-10-25	Passed	Passed
WLAN ac 20 MHz MIMO, low, U-NII-1	S01_AD02	2022-10-25	Passed	N/A
WLAN ac 20 MHz MIMO, low, U-NII-3	S01_AD02	2022-10-25	Passed	Passed
WLAN ac 20 MHz MIMO, mid, U-NII-1	S01_AD02	2022-10-25	Passed	N/A
WLAN ac 20 MHz MIMO, mid, U-NII-3	S01_AD02	2022-10-25	Passed	Passed
WLAN ac 20 MHz, high, U-NII-1	S01_AD02	2022-10-21	Passed	N/A
WLAN ac 20 MHz, high, U-NII-3	S01_AD02	2022-10-21	Passed	Passed
WLAN ac 20 MHz, low, U-NII-1	S01_AD02	2022-10-21	Passed	N/A
WLAN ac 20 MHz, low, U-NII-3	S01_AD02	2022-10-21	Passed	Passed
WLAN ac 20 MHz, mid, U-NII-1	S01_AD02	2022-10-21	Passed	N/A
WLAN ac 20 MHz, mid, U-NII-3	S01_AD02	2022-10-21	Passed	Passed
WLAN ac 40 MHz MIMO, high, U-NII-1	S01_AD02	2022-10-28	Passed	N/A
WLAN ac 40 MHz MIMO, high, U-NII-3	S01_AD02	2022-10-28	Passed	Passed
WLAN ac 40 MHz MIMO, low, U-NII-1	S01_AD02	2022-10-28	Passed	N/A
WLAN ac 40 MHz MIMO, low, U-NII-3	S01_AD02	2022-10-28	Passed	Passed
WLAN ac 40 MHz, high, U-NII-1	S01_AD02	2022-10-24	Passed	N/A
WLAN ac 40 MHz, high, U-NII-3	S01_AD02	2022-10-24	Passed	Passed
WLAN ac 40 MHz, low, U-NII-1	S01_AD02	2022-10-24	Passed	N/A
WLAN ac 40 MHz, low, U-NII-3	S01_AD02	2022-10-24	Passed	Passed
WLAN ac 80 MHz MIMO, mid, U-NII-1	S01_AD02	2022-10-31	Passed	N/A
WLAN ac 80 MHz MIMO, mid, U-NII-3	S01_AD02	2022-10-31	Passed	Passed
WLAN ac 80 MHz, mid, U-NII-1	S01_AD02	2022-10-25	Passed	N/A
WLAN ac 80 MHz, mid, U-NII-3	S01_AD02	2022-10-25	Passed	Passed
WLAN ax 20 MHz MIMO, high, U-NII-1	S01_AD02	2022-10-27	Passed	N/A
WLAN ax 20 MHz MIMO, high, U-NII-3	S01_AD02	2022-10-27	Passed	Passed

**47 CFR CHAPTER I FCC PART 15**  
**Subpart E §15.407**

**FCC §15.31, §15.407 (a) (1),(5)**

Peak Power Spectral Density

The measurement was performed according to ANSI C63.10, chapter 12.5 (SA-3)

**Final Result**

<b>OP-Mode</b> Radio Technology, Operating Frequency, Subband	<b>Setup</b>	<b>Date</b>	<b>FCC</b>	<b>IC</b>
WLAN ax 20 MHz MIMO, low, U-NII-1	S01_AD02	2022-10-27	Passed	N/A
WLAN ax 20 MHz MIMO, low, U-NII-3	S01_AD02	2022-10-27	Passed	Passed
WLAN ax 20 MHz MIMO, mid, U-NII-1	S01_AD02	2022-10-27	Passed	N/A
WLAN ax 20 MHz MIMO, mid, U-NII-3	S01_AD02	2022-10-27	Passed	Passed
WLAN ax 20 MHz, high, U-NII-1	S01_AD02	2022-10-21	Passed	N/A
WLAN ax 20 MHz, high, U-NII-3	S01_AD02	2022-10-21	Passed	Passed
WLAN ax 20 MHz, low, U-NII-1	S01_AD02	2022-10-21	Passed	N/A
WLAN ax 20 MHz, low, U-NII-3	S01_AD02	2022-10-21	Passed	Passed
WLAN ax 20 MHz, mid, U-NII-1	S01_AD02	2022-10-21	Passed	N/A
WLAN ax 20 MHz, mid, U-NII-3	S01_AD02	2022-10-21	Passed	Passed
WLAN ax 40 MHz MIMO, high, U-NII-1	S01_AD02	2022-10-28	Passed	N/A
WLAN ax 40 MHz MIMO, high, U-NII-3	S01_AD02	2022-10-28	Passed	Passed
WLAN ax 40 MHz MIMO, low, U-NII-1	S01_AD02	2022-10-28	Passed	N/A
WLAN ax 40 MHz MIMO, low, U-NII-3	S01_AD02	2022-10-28	Passed	Passed
WLAN ax 40 MHz, high, U-NII-1	S01_AD02	2022-10-24	Passed	N/A
WLAN ax 40 MHz, high, U-NII-3	S01_AD02	2022-10-24	Passed	Passed
WLAN ax 40 MHz, low, U-NII-1	S01_AD02	2022-10-24	Passed	N/A
WLAN ax 40 MHz, low, U-NII-3	S01_AD02	2022-10-24	Passed	Passed
WLAN ax 80 MHz MIMO, mid, U-NII-1	S01_AD02	2022-10-31	Passed	N/A
WLAN ax 80 MHz MIMO, mid, U-NII-3	S01_AD02	2022-10-31	Passed	Passed
WLAN ax 80 MHz, mid, U-NII-1	S01_AD02	2022-10-27	Passed	N/A
WLAN ax 80 MHz, mid, U-NII-3	S01_AD02	2022-10-27	Passed	Passed
WLAN n 20 MHz MIMO, high, U-NII-1	S01_AD02	2022-10-25	Passed	N/A
WLAN n 20 MHz MIMO, high, U-NII-3	S01_AD02	2022-10-25	Passed	Passed
WLAN n 20 MHz MIMO, low, U-NII-1	S01_AD02	2022-10-25	Passed	N/A
WLAN n 20 MHz MIMO, low, U-NII-3	S01_AD02	2022-10-25	Passed	Passed
WLAN n 20 MHz MIMO, mid, U-NII-1	S01_AD02	2022-10-25	Passed	N/A
WLAN n 20 MHz MIMO, mid, U-NII-3	S01_AD02	2022-10-25	Passed	Passed
WLAN n 20 MHz, high, U-NII-1	S01_AD02	2022-10-21	Passed	N/A
WLAN n 20 MHz, high, U-NII-3	S01_AD02	2022-10-21	Passed	Passed
WLAN n 20 MHz, low, U-NII-1	S01_AD02	2022-10-21	Passed	N/A
WLAN n 20 MHz, low, U-NII-3	S01_AD02	2022-10-21	Passed	Passed
WLAN n 20 MHz, mid, U-NII-1	S01_AD02	2022-10-21	Passed	N/A
WLAN n 20 MHz, mid, U-NII-3	S01_AD02	2022-10-21	Passed	Passed
WLAN n 40 MHz MIMO, high, U-NII-1	S01_AD02	2022-10-28	Passed	N/A
WLAN n 40 MHz MIMO, high, U-NII-3	S01_AD02	2022-10-28	Passed	Passed
WLAN n 40 MHz MIMO, low, U-NII-1	S01_AD02	2022-10-31	Passed	N/A
WLAN n 40 MHz MIMO, low, U-NII-3	S01_AD02	2022-10-28	Passed	Passed
WLAN n 40 MHz, high, U-NII-1	S01_AD02	2022-10-21	Passed	N/A
WLAN n 40 MHz, high, U-NII-3	S01_AD02	2022-10-21	Passed	Passed



**47 CFR CHAPTER I FCC PART 15  
Subpart E §15.407**

**FCC §15.31, §15.407 (a) (1),(5)**

Peak Power Spectral Density

The measurement was performed according to ANSI C63.10, chapter 12.5 (SA-3)

**Final Result**

<b>OP-Mode</b> Radio Technology, Operating Frequency, Subband	<b>Setup</b>	<b>Date</b>	<b>FCC</b>	<b>IC</b>
WLAN n 40 MHz, low, U-NII-1	S01_AD02	2022-10-21	Passed	N/A
WLAN n 40 MHz, low, U-NII-3	S01_AD02	2022-10-27	Passed	Passed

**Conducted Power Setting for antenna gain ≤ 8 dBi  
ISED power setting Band 1**

<b>OP-Mode</b> Radio Technology, Operating Frequency, Subband	<b>Setup</b>	<b>Date</b>	<b>FCC</b>	<b>IC</b>
WLAN a DIVERSITY, high, U-NII-1	S01_AD02	2022-11-14	N/A	Passed
WLAN a DIVERSITY, low, U-NII-1	S01_AD02	2022-11-14	N/A	Passed
WLAN a DIVERSITY, mid, U-NII-1	S01_AD02	2022-11-14	N/A	Passed
WLAN a, high, U-NII-1	S01_AD02	2022-11-08	N/A	Passed
WLAN a, low, U-NII-1	S01_AD02	2022-11-08	N/A	Passed
WLAN a, mid, U-NII-1	S01_AD02	2022-11-08	N/A	Passed
WLAN ac 20 MHz MIMO, high, U-NII-1	S01_AD02	2022-11-16	N/A	Passed
WLAN ac 20 MHz MIMO, low, U-NII-1	S01_AD02	2022-11-16	N/A	Passed
WLAN ac 20 MHz MIMO, mid, U-NII-1	S01_AD02	2022-11-16	N/A	Passed
WLAN ac 20 MHz, high, U-NII-1	S01_AD02	2022-11-08	N/A	Passed
WLAN ac 20 MHz, low, U-NII-1	S01_AD02	2022-11-08	N/A	Passed
WLAN ac 20 MHz, mid, U-NII-1	S01_AD02	2022-11-08	N/A	Passed
WLAN ac 40 MHz MIMO, high, U-NII-1	S01_AD02	2022-11-17	N/A	Passed
WLAN ac 40 MHz MIMO, low, U-NII-1	S01_AD02	2022-11-17	N/A	Passed
WLAN ac 40 MHz, high, U-NII-1	S01_AD02	2022-11-08	N/A	Passed
WLAN ac 40 MHz, low, U-NII-1	S01_AD02	2022-11-08	N/A	Passed
WLAN ac 80 MHz MIMO, mid, U-NII-1	S01_AD02	2022-11-17	N/A	Passed
WLAN ac 80 MHz, mid, U-NII-1	S01_AD02	2022-11-08	N/A	Passed
WLAN ax 20 MHz MIMO, high, U-NII-1	S01_AD02	2022-11-16	N/A	Passed
WLAN ax 20 MHz MIMO, low, U-NII-1	S01_AD02	2022-11-16	N/A	Passed
WLAN ax 20 MHz MIMO, mid, U-NII-1	S01_AD02	2022-11-16	N/A	Passed
WLAN ax 20 MHz, high, U-NII-1	S01_AD02	2022-11-08	N/A	Passed
WLAN ax 20 MHz, low, U-NII-1	S01_AD02	2022-11-08	N/A	Passed
WLAN ax 20 MHz, mid, U-NII-1	S01_AD02	2022-11-08	N/A	Passed
WLAN ax 40 MHz MIMO, high, U-NII-1	S01_AD02	2022-11-17	N/A	Passed
WLAN ax 40 MHz MIMO, low, U-NII-1	S01_AD02	2022-11-17	N/A	Passed
WLAN ax 40 MHz, high, U-NII-1	S01_AD02	2022-11-08	N/A	Passed
WLAN ax 40 MHz, low, U-NII-1	S01_AD02	2022-11-08	N/A	Passed
WLAN ax 80 MHz MIMO, mid, U-NII-1	S01_AD02	2022-11-17	N/A	Passed
WLAN ax 80 MHz, mid, U-NII-1	S01_AD02	2022-11-08	N/A	Passed
WLAN n 20 MHz MIMO, high, U-NII-1	S01_AD02	2022-11-14	N/A	Passed
WLAN n 20 MHz MIMO, low, U-NII-1	S01_AD02	2022-11-14	N/A	Passed
WLAN n 20 MHz MIMO, mid, U-NII-1	S01_AD02	2022-11-14	N/A	Passed

**47 CFR CHAPTER I FCC PART 15  
Subpart E §15.407**

**FCC §15.31, §15.407 (a) (1),(5)**

Peak Power Spectral Density

The measurement was performed according to ANSI C63.10, chapter 12.5 (SA-3)

**Final Result**

<b>OP-Mode</b> Radio Technology, Operating Frequency, Subband	<b>Setup</b>	<b>Date</b>	<b>FCC</b>	<b>IC</b>
WLAN n 20 MHz, high, U-NII-1	S01_AD02	2022-11-08	N/A	Passed
WLAN n 20 MHz, low, U-NII-1	S01_AD02	2022-11-08	N/A	Passed
WLAN n 20 MHz, mid, U-NII-1	S01_AD02	2022-11-08	N/A	Passed
WLAN n 40 MHz MIMO, high, U-NII-1	S01_AD02	2022-11-17	N/A	Passed
WLAN n 40 MHz MIMO, low, U-NII-1	S01_AD02	2022-11-17	N/A	Passed
WLAN n 40 MHz, high, U-NII-1	S01_AD02	2022-11-08	N/A	Passed
WLAN n 40 MHz, low, U-NII-1	S01_AD02	2022-11-08	N/A	Passed

**Conducted Power Setting for antenna gain ≤ 9 dBi  
FCC power setting Band 1, FCC and ISED power setting Band 3**

<b>OP-Mode</b> Radio Technology, Operating Frequency, Subband	<b>Setup</b>	<b>Date</b>	<b>FCC</b>	<b>IC</b>
WLAN a DIVERSITY, high, U-NII-1	S01_AD02	2022-11-07	Passed	N/A
WLAN a DIVERSITY, high, U-NII-3	S01_AD02	2022-10-25	Passed	Passed
WLAN a DIVERSITY, low, U-NII-1	S01_AD02	2022-11-07	Passed	N/A
WLAN a DIVERSITY, low, U-NII-3	S01_AD02	2022-10-25	Passed	Passed
WLAN a DIVERSITY, mid, U-NII-1	S01_AD02	2023-01-12	Passed	N/A
WLAN a DIVERSITY, mid, U-NII-3	S01_AD02	2022-10-25	Passed	Passed
WLAN a, high, U-NII-1	S01_AD02	2022-10-20	Passed	N/A
WLAN a, high, U-NII-3	S01_AD02	2022-10-20	Passed	Passed
WLAN a, low, U-NII-1	S01_AD02	2022-10-20	Passed	N/A
WLAN a, low, U-NII-3	S01_AD02	2022-10-20	Passed	Passed
WLAN a, mid, U-NII-1	S01_AD02	2022-10-20	Passed	N/A
WLAN a, mid, U-NII-3	S01_AD02	2022-10-20	Passed	Passed
WLAN ac 20 MHz MIMO, high, U-NII-1	S01_AD02	2022-11-04	Passed	N/A
WLAN ac 20 MHz MIMO, high, U-NII-3	S01_AD02	2022-10-25	Passed	Passed
WLAN ac 20 MHz MIMO, low, U-NII-1	S01_AD02	2022-11-04	Passed	N/A
WLAN ac 20 MHz MIMO, low, U-NII-3	S01_AD02	2022-10-25	Passed	Passed
WLAN ac 20 MHz MIMO, mid, U-NII-1	S01_AD02	2022-11-04	Passed	N/A
WLAN ac 20 MHz MIMO, mid, U-NII-3	S01_AD02	2022-10-25	Passed	Passed
WLAN ac 20 MHz, high, U-NII-1	S01_AD02	2022-10-21	Passed	N/A
WLAN ac 20 MHz, high, U-NII-3	S01_AD02	2022-10-21	Passed	Passed
WLAN ac 20 MHz, low, U-NII-1	S01_AD02	2022-10-21	Passed	N/A
WLAN ac 20 MHz, low, U-NII-3	S01_AD02	2022-10-21	Passed	Passed
WLAN ac 20 MHz, mid, U-NII-1	S01_AD02	2022-10-21	Passed	N/A
WLAN ac 20 MHz, mid, U-NII-3	S01_AD02	2022-10-21	Passed	Passed
WLAN ac 40 MHz MIMO, high, U-NII-1	S01_AD02	2022-11-07	Passed	N/A
WLAN ac 40 MHz MIMO, high, U-NII-3	S01_AD02	2022-10-28	Passed	Passed
WLAN ac 40 MHz MIMO, low, U-NII-1	S01_AD02	2022-11-07	Passed	N/A
WLAN ac 40 MHz MIMO, low, U-NII-3	S01_AD02	2022-10-28	Passed	Passed



**47 CFR CHAPTER I FCC PART 15  
Subpart E §15.407**

**FCC §15.31, §15.407 (a) (1),(5)**

Peak Power Spectral Density

The measurement was performed according to ANSI C63.10, chapter 12.5 (SA-3)

**Final Result**

<b>OP-Mode</b> Radio Technology, Operating Frequency, Subband	<b>Setup</b>	<b>Date</b>	<b>FCC</b>	<b>IC</b>
WLAN ac 40 MHz, high, U-NII-1	S01_AD02	2022-10-24	Passed	N/A
WLAN ac 40 MHz, high, U-NII-3	S01_AD02	2022-10-24	Passed	Passed
WLAN ac 40 MHz, low, U-NII-1	S01_AD02	2022-10-31	Passed	N/A
WLAN ac 40 MHz, low, U-NII-3	S01_AD02	2022-10-24	Passed	Passed
WLAN ac 80 MHz MIMO, mid, U-NII-1	S01_AD02	2022-11-07	Passed	N/A
WLAN ac 80 MHz MIMO, mid, U-NII-3	S01_AD02	2022-11-07	Passed	Passed
WLAN ac 80 MHz, mid, U-NII-1	S01_AD02	2022-10-31	Passed	N/A
WLAN ac 80 MHz, mid, U-NII-3	S01_AD02	2022-10-31	Passed	Passed
WLAN ax 20 MHz MIMO, high, U-NII-1	S01_AD02	2022-11-04	Passed	N/A
WLAN ax 20 MHz MIMO, high, U-NII-3	S01_AD02	2022-10-27	Passed	Passed
WLAN ax 20 MHz MIMO, low, U-NII-1	S01_AD02	2022-11-04	Passed	N/A
WLAN ax 20 MHz MIMO, low, U-NII-3	S01_AD02	2022-10-27	Passed	Passed
WLAN ax 20 MHz MIMO, mid, U-NII-1	S01_AD02	2022-11-04	Passed	N/A
WLAN ax 20 MHz MIMO, mid, U-NII-3	S01_AD02	2022-10-27	Passed	Passed
WLAN ax 20 MHz, high, U-NII-1	S01_AD02	2022-10-21	Passed	N/A
WLAN ax 20 MHz, high, U-NII-3	S01_AD02	2022-10-21	Passed	Passed
WLAN ax 20 MHz, low, U-NII-1	S01_AD02	2022-10-21	Passed	N/A
WLAN ax 20 MHz, low, U-NII-3	S01_AD02	2022-10-21	Passed	Passed
WLAN ax 20 MHz, mid, U-NII-1	S01_AD02	2022-10-21	Passed	N/A
WLAN ax 20 MHz, mid, U-NII-3	S01_AD02	2022-10-21	Passed	Passed
WLAN ax 40 MHz MIMO, high, U-NII-1	S01_AD02	2022-11-07	Passed	N/A
WLAN ax 40 MHz MIMO, high, U-NII-3	S01_AD02	2022-10-28	Passed	Passed
WLAN ax 40 MHz MIMO, low, U-NII-1	S01_AD02	2022-11-07	Passed	N/A
WLAN ax 40 MHz MIMO, low, U-NII-3	S01_AD02	2022-10-28	Passed	Passed
WLAN ax 40 MHz, high, U-NII-1	S01_AD02	2022-10-24	Passed	N/A
WLAN ax 40 MHz, high, U-NII-3	S01_AD02	2022-10-24	Passed	Passed
WLAN ax 40 MHz, low, U-NII-1	S01_AD02	2022-10-31	Passed	N/A
WLAN ax 40 MHz, low, U-NII-3	S01_AD02	2022-10-24	Passed	Passed
WLAN ax 80 MHz MIMO, mid, U-NII-1	S01_AD02	2022-11-07	Passed	N/A
WLAN ax 80 MHz MIMO, mid, U-NII-3	S01_AD02	2022-11-07	Passed	Passed
WLAN ax 80 MHz, mid, U-NII-1	S01_AD02	2022-11-14	Passed	N/A
WLAN ax 80 MHz, mid, U-NII-3	S01_AD02	2022-11-14	Passed	Passed
WLAN n 20 MHz MIMO, high, U-NII-1	S01_AD02	2022-10-31	Passed	N/A
WLAN n 20 MHz MIMO, high, U-NII-3	S01_AD02	2022-10-25	Passed	Passed
WLAN n 20 MHz MIMO, low, U-NII-1	S01_AD02	2022-10-31	Passed	N/A
WLAN n 20 MHz MIMO, low, U-NII-3	S01_AD02	2022-10-25	Passed	Passed
WLAN n 20 MHz MIMO, mid, U-NII-1	S01_AD02	2022-10-31	Passed	N/A
WLAN n 20 MHz MIMO, mid, U-NII-3	S01_AD02	2022-10-25	Passed	Passed
WLAN n 20 MHz, high, U-NII-1	S01_AD02	2022-10-21	Passed	N/A
WLAN n 20 MHz, high, U-NII-3	S01_AD02	2022-10-21	Passed	Passed

**47 CFR CHAPTER I FCC PART 15  
Subpart E §15.407**

**FCC §15.31, §15.407 (a) (1),(5)**

Peak Power Spectral Density

The measurement was performed according to ANSI C63.10, chapter 12.5 (SA-3)

**Final Result**

<b>OP-Mode</b> Radio Technology, Operating Frequency, Subband	<b>Setup</b>	<b>Date</b>	<b>FCC</b>	<b>IC</b>
WLAN n 20 MHz, low, U-NII-1	S01_AD02	2022-10-21	Passed	N/A
WLAN n 20 MHz, low, U-NII-3	S01_AD02	2022-10-21	Passed	Passed
WLAN n 20 MHz, mid, U-NII-1	S01_AD02	2022-10-21	Passed	N/A
WLAN n 20 MHz, mid, U-NII-3	S01_AD02	2022-10-21	Passed	Passed
WLAN n 40 MHz MIMO, high, U-NII-1	S01_AD02	2022-11-07	Passed	N/A
WLAN n 40 MHz MIMO, high, U-NII-3	S01_AD02	2022-10-28	Passed	Passed
WLAN n 40 MHz MIMO, low, U-NII-1	S01_AD02	2022-11-07	Passed	N/A
WLAN n 40 MHz MIMO, low, U-NII-3	S01_AD02	2022-10-28	Passed	Passed
WLAN n 40 MHz, high, U-NII-1	S01_AD02	2022-10-21	Passed	N/A
WLAN n 40 MHz, high, U-NII-3	S01_AD02	2022-10-21	Passed	Passed
WLAN n 40 MHz, low, U-NII-1	S01_AD02	2022-10-31	Passed	N/A
WLAN n 40 MHz, low, U-NII-3	S01_AD02	2022-10-27	Passed	Passed

**Conducted Power Setting for antenna gain ≤ 9 dBi  
ISED power setting Band 1**

<b>OP-Mode</b> Radio Technology, Operating Frequency, Subband	<b>Setup</b>	<b>Date</b>	<b>FCC</b>	<b>IC</b>
WLAN a DIVERSITY, high, U-NII-1	S01_AD02	2022-11-16	N/A	Passed
WLAN a DIVERSITY, low, U-NII-1	S01_AD02	2022-11-16	N/A	Passed
WLAN a DIVERSITY, mid, U-NII-1	S01_AD02	2022-11-16	N/A	Passed
WLAN a, high, U-NII-1	S01_AD02	2022-11-08	N/A	Passed
WLAN a, low, U-NII-1	S01_AD02	2022-11-08	N/A	Passed
WLAN a, mid, U-NII-1	S01_AD02	2022-11-08	N/A	Passed
WLAN ac 20 MHz MIMO, high, U-NII-1	S01_AD02	2022-11-17	N/A	Passed
WLAN ac 20 MHz MIMO, low, U-NII-1	S01_AD02	2022-11-17	N/A	Passed
WLAN ac 20 MHz MIMO, mid, U-NII-1	S01_AD02	2022-11-17	N/A	Passed
WLAN ac 20 MHz, high, U-NII-1	S01_AD02	2022-11-08	N/A	Passed
WLAN ac 20 MHz, low, U-NII-1	S01_AD02	2022-11-08	N/A	Passed
WLAN ac 20 MHz, mid, U-NII-1	S01_AD02	2022-11-08	N/A	Passed
WLAN ac 40 MHz MIMO, high, U-NII-1	S01_AD02	2022-11-17	N/A	Passed
WLAN ac 40 MHz MIMO, low, U-NII-1	S01_AD02	2022-11-17	N/A	Passed
WLAN ac 40 MHz, high, U-NII-1	S01_AD02	2022-11-10	N/A	Passed
WLAN ac 40 MHz, low, U-NII-1	S01_AD02	2022-11-10	N/A	Passed
WLAN ac 80 MHz MIMO, mid, U-NII-1	S01_AD02	2022-11-17	N/A	Passed
WLAN ac 80 MHz, mid, U-NII-1	S01_AD02	2022-11-14	N/A	Passed
WLAN ax 20 MHz MIMO, high, U-NII-1	S01_AD02	2022-11-17	N/A	Passed
WLAN ax 20 MHz MIMO, low, U-NII-1	S01_AD02	2022-11-17	N/A	Passed
WLAN ax 20 MHz MIMO, mid, U-NII-1	S01_AD02	2022-11-17	N/A	Passed
WLAN ax 20 MHz, high, U-NII-1	S01_AD02	2022-11-08	N/A	Passed
WLAN ax 20 MHz, low, U-NII-1	S01_AD02	2022-11-08	N/A	Passed



**47 CFR CHAPTER I FCC PART 15**  
**Subpart E §15.407**

**FCC §15.31, §15.407 (a) (1),(5)**

Peak Power Spectral Density

The measurement was performed according to ANSI C63.10, chapter 12.5 (SA-3)

**Final Result**

<b>OP-Mode</b>	<b>Setup</b>	<b>Date</b>	<b>FCC</b>	<b>IC</b>
Radio Technology, Operating Frequency, Subband				
WLAN ax 20 MHz, mid, U-NII-1	S01_AD02	2022-11-08	N/A	Passed
WLAN ax 40 MHz MIMO, high, U-NII-1	S01_AD02	2022-11-17	N/A	Passed
WLAN ax 40 MHz MIMO, low, U-NII-1	S01_AD02	2022-11-17	N/A	Passed
WLAN ax 40 MHz, high, U-NII-1	S01_AD02	2022-11-10	N/A	Passed
WLAN ax 40 MHz, low, U-NII-1	S01_AD02	2022-11-10	N/A	Passed
WLAN ax 80 MHz MIMO, mid, U-NII-1	S01_AD02	2022-11-17	N/A	Passed
WLAN ax 80 MHz, mid, U-NII-1	S01_AD02	2022-11-14	N/A	Passed
WLAN n 20 MHz MIMO, high, U-NII-1	S01_AD02	2022-11-16	N/A	Passed
WLAN n 20 MHz MIMO, low, U-NII-1	S01_AD02	2022-11-16	N/A	Passed
WLAN n 20 MHz MIMO, mid, U-NII-1	S01_AD02	2022-11-16	N/A	Passed
WLAN n 20 MHz, high, U-NII-1	S01_AD02	2022-11-08	N/A	Passed
WLAN n 20 MHz, low, U-NII-1	S01_AD02	2022-11-08	N/A	Passed
WLAN n 20 MHz, mid, U-NII-1	S01_AD02	2022-11-08	N/A	Passed
WLAN n 40 MHz MIMO, high, U-NII-1	S01_AD02	2022-11-17	N/A	Passed
WLAN n 40 MHz MIMO, low, U-NII-1	S01_AD02	2022-11-17	N/A	Passed
WLAN n 40 MHz, high, U-NII-1	S01_AD02	2022-11-10	N/A	Passed
WLAN n 40 MHz, low, U-NII-1	S01_AD02	2022-11-10	N/A	Passed

**47 CFR CHAPTER I FCC PART 15 Subpart E §15.407**

**FCC §15.407 (b), (1),(2),(3),(4); FCC §15.205, §15.209, §15.407 (b) (5),(6)**

Undesirable Emissions; General Field Strength Limits

The measurement was performed according to ANSI C63.10, chapter 6.4, 6.5, 6.6.5

**Final Result**

**OP-Mode**

Radio Technology, Operating Frequency, Measurement range, Subband

**Setup**

**Date**

**FCC**

**IC**

**Measurement with <8 dBi antenna**

WLAN a DIVERSITY, high, 1GHz - 26GHz, U-NII-1	S02_AC02	2022-09-27	Passed	Passed
WLAN a DIVERSITY, high, 1GHz - 26GHz, U-NII-3	S02_AC02	2022-09-28	Passed	Passed
WLAN a DIVERSITY, low, 1GHz - 26GHz, U-NII-1	S02_AC01	2022-09-16	Passed	Passed
WLAN a DIVERSITY, low, 1GHz - 26GHz, U-NII-3	S02_AC02	2022-09-27	Passed	Passed
WLAN a DIVERSITY, low, 9kHz - 30MHz, U-NII-1	S02_AC02	2022-10-06	Passed	Passed
WLAN a DIVERSITY, mid, 1GHz - 26GHz, U-NII-1	S02_AC01	2022-09-16	Passed	Passed
WLAN a DIVERSITY, mid, 1GHz - 26GHz, U-NII-3	S02_AC02	2022-09-27	Passed	Passed
WLAN a DIVERSITY, mid, 26GHz - 40GHz, U-NII-1	S02_AC02	2022-10-24	Passed	Passed
WLAN a DIVERSITY, mid, 26GHz - 40GHz, U-NII-3	S02_AC02	2022-10-24	Passed	Passed
WLAN a DIVERSITY, mid, 30MHz - 1GHz, U-NII-1	S02_AC02	2022-10-06	Passed	Passed
WLAN a DIVERSITY, mid, 30MHz - 1GHz, U-NII-3	S02_AC02	2022-10-06	Passed	Passed
WLAN ac 40 MHz, high, 1GHz - 26GHz, U-NII-1 Remark: Harmonics tested only	S02_AC02	2022-09-29	Passed	Passed
WLAN ac 40 MHz, high, 1GHz - 26GHz, U-NII-3	S02_AC02	2022-09-30	Passed	Passed
WLAN ac 40 MHz, low, 1GHz - 26GHz, U-NII-1 Remark: Harmonics tested only	S02_AC02	2022-09-29	Passed	Passed
WLAN ac 40 MHz, low, 1GHz - 26GHz, U-NII-3 Remark: Harmonics tested only	S02_AC02	2022-09-29	Passed	Passed
WLAN ax 40 MHz, high, 1GHz - 26GHz, U-NII-1 Remark: Harmonics tested only	S02_AC02	2022-09-29	Passed	Passed
WLAN ax 40 MHz, high, 1GHz - 26GHz, U-NII-3 Remark: Harmonics tested only	S02_AC02	2022-09-29	Passed	Passed
WLAN ax 40 MHz, low, 1GHz - 26GHz, U-NII-1 Remark: Range 1-18 GHz tested	S02_AC02	2023-01-09	Passed	Passed
WLAN ax 40 MHz, low, 1GHz - 26GHz, U-NII-3 Remark: Harmonics tested only	S02_AC02	2022-09-29	Passed	Passed
WLAN n 20 MHz MIMO, high, 1GHz - 26GHz, U-NII-1 Remark: Tested range: 1-18 GHz	S02_AC02	2022-09-26	Passed	Passed
WLAN n 20 MHz MIMO, high, 1GHz - 26GHz, U-NII-3 Remark: Tested range: 1-18 GHz	S02_AC02	2022-09-27	Passed	Passed
WLAN n 20 MHz MIMO, low, 1GHz - 26GHz, U-NII-1 Remark: Tested range: 1-18 GHz	S02_AC02	2022-09-27	Passed	Passed
WLAN n 20 MHz MIMO, low, 1GHz - 26GHz, U-NII-3 Remark: Tested range: 1-18 GHz	S02_AC02	2022-09-27	Passed	Passed
WLAN n 20 MHz MIMO, mid, 1GHz - 26GHz, U-NII-1 Remark: Tested range: 1-18 GHz	S02_AC02	2022-09-26	Passed	Passed
WLAN n 20 MHz MIMO, mid, 1GHz - 26GHz, U-NII-3 Remark: Tested range: 1-18 GHz	S02_AC02	2022-09-27	Passed	Passed
WLAN n 20 MHz MIMO, mid, 26GHz - 40GHz, U-NII-1	S02_AC02	2022-10-24	Passed	Passed
WLAN n 20 MHz MIMO, mid, 26GHz - 40GHz, U-NII-3	S02_AC02	2022-10-24	Passed	Passed
WLAN n 40 MHz MIMO, high, 1GHz - 26GHz, U-NII-1	S02_AC02	2022-10-05	Passed	Passed
WLAN n 40 MHz MIMO, high, 1GHz - 26GHz, U-NII-3	S02_AC02	2022-10-06	Passed	Passed



**47 CFR CHAPTER I FCC PART 15 Subpart E  
§15.407**

**FCC §15.407 (b), (1),(2),(3),(4); FCC  
§15.205, §15.209, §15.407 (b)  
(5),(6)**

Undesirable Emissions; General Field Strength Limits

The measurement was performed according to ANSI C63.10, chapter 6.4, 6.5, 6.6.5

**Final Result**

**OP-Mode**

Radio Technology, Operating Frequency,  
Measurement range, Subband

	<b>Setup</b>	<b>Date</b>	<b>FCC</b>	<b>IC</b>
WLAN n 40 MHz MIMO, high, 26GHz - 40GHz, U-NII-3	S02_AC02	2022-10-24	Passed	Passed
WLAN n 40 MHz MIMO, high, 30MHz - 1GHz, U-NII-3	S02_AC02	2022-10-06	Passed	Passed
WLAN n 40 MHz MIMO, low, 1GHz - 26GHz, U-NII-1	S02_AC02	2022-09-29	Passed	Passed
WLAN n 40 MHz MIMO, low, 1GHz - 26GHz, U-NII-3	S02_AC02	2022-10-05	Passed	Passed
WLAN n 40 MHz MIMO, low, 26GHz - 40GHz, U-NII-1	S02_AC02	2022-10-24	Passed	Passed
WLAN n 40 MHz MIMO, low, 30MHz - 1GHz, U-NII-1	S02_AC02	2022-10-06	Passed	Passed
WLAN n 40 MHz MIMO, low, 9kHz - 30MHz, U-NII-1	S02_AC02	2022-10-06	Passed	Passed

**Measurement with <9 dBi antenna**

**OP-Mode**

Radio Technology, Operating Frequency,  
Measurement range, Subband

	<b>Setup</b>	<b>Date</b>	<b>FCC</b>	<b>IC</b>
WLAN a, high, 1GHz - 26GHz, U-NII-1 Remark: Harmonics tested only	S03_AC02	2022-10-21	Passed	Passed
WLAN a, high, 1GHz - 26GHz, U-NII-3 Remark: Harmonics tested only	S03_AC02	2022-10-21	Passed	Passed
WLAN a, low, 1GHz - 26GHz, U-NII-1 Remark: Harmonics tested only	S03_AC02	2022-10-14	Passed	Passed
WLAN a, low, 1GHz - 26GHz, U-NII-3 Remark: Harmonics tested only	S03_AC02	2022-10-21	Passed	Passed
WLAN a, mid, 1GHz - 26GHz, U-NII-1 Remark: Harmonics tested only	S03_AC02	2022-10-14	Passed	Passed
WLAN a, mid, 1GHz - 26GHz, U-NII-3 Remark: Harmonics tested only	S03_AC02	2022-10-21	Passed	Passed



**47 CFR CHAPTER I FCC PART 15  
Subpart E §15.407**

**FCC §15.407 (b), (1),(2),(3),(4)**

Band Edge

The measurement was performed according to ANSI C63.10, chapter 6.6.5

**Final Result**

<b>OP-Mode</b> Radio Technology, Operating Frequency, Subband	<b>Setup</b>	<b>Date</b>	<b>FCC</b>	<b>IC</b>
<b>Measurement with &lt;8 dBi antenna</b>				
WLAN a DIVERSITY, high, U-NII-3	S02_AC02	2022-09-28	Passed	Passed
WLAN a DIVERSITY, low, U-NII-1	S02_AC01	2022-09-16	Passed	Passed
WLAN a DIVERSITY, low, U-NII-3	S02_AC02	2022-09-27	Passed	Passed
WLAN ac 20 MHz, high, U-NII-3	S02_AC02	2022-09-30	Passed	Passed
WLAN ac 20 MHz, low, U-NII-1	S02_AC02	2022-09-26	Passed	Passed
WLAN ac 20 MHz, low, U-NII-3	S02_AC02	2022-09-30	Passed	Passed
WLAN ac 40 MHz, high, U-NII-3	S02_AC02	2022-09-30	Passed	Passed
WLAN ac 40 MHz, low, U-NII-1	S02_AC02	2022-09-26	Passed	Passed
WLAN ac 40 MHz, low, U-NII-3	S02_AC02	2023-01-09	Passed	Passed
WLAN ac 80 MHz MIMO, mid, U-NII-1	S02_AC02	2022-09-26	Passed	Passed
WLAN ac 80 MHz MIMO, mid, U-NII-3	S02_AC02	2022-09-30	Passed	Passed
WLAN ax 20 MHz, high, U-NII-3	S02_AC02	2022-09-30	Passed	Passed
WLAN ax 20 MHz, low, U-NII-1	S02_AC02	2022-09-26	Passed	Passed
WLAN ax 20 MHz, low, U-NII-3	S02_AC02	2022-09-30	Passed	Passed
WLAN ax 40 MHz, high, U-NII-3	S02_AC02	2022-09-29	Passed	Passed
WLAN ax 40 MHz, low, U-NII-1	S02_AC02	2023-01-09	Passed	Passed
WLAN ax 40 MHz, low, U-NII-3	S02_AC02	2022-09-29	Passed	Passed
WLAN ax 80 MHz MIMO, mid, U-NII-1	S02_AC02	2022-09-26	Passed	Passed
WLAN ax 80 MHz MIMO, mid, U-NII-3	S02_AC02	2022-09-30	Passed	Passed
WLAN n 20 MHz MIMO, high, U-NII-3	S02_AC02	2022-09-27	Passed	Passed
WLAN n 20 MHz MIMO, low, U-NII-1	S02_AC02	2022-09-26	Passed	Passed
WLAN n 20 MHz MIMO, low, U-NII-3	S02_AC02	2022-09-27	Passed	Passed
WLAN n 40 MHz MIMO, high, U-NII-3	S02_AC02	2022-09-30	Passed	Passed
WLAN n 40 MHz MIMO, low, U-NII-1	S02_AC02	2022-09-29	Passed	Passed
WLAN n 40 MHz MIMO, low, U-NII-3	S02_AC02	2022-09-30	Passed	Passed

**Measurement with <9 dBi antenna**

<b>OP-Mode</b> Radio Technology, Operating Frequency, Subband	<b>Setup</b>	<b>Date</b>	<b>FCC</b>	<b>IC</b>
WLAN a, high, U-NII-3	S03_AC02	2022-10-21	Passed	Passed
WLAN a, low, U-NII-1	S03_AC02	2022-10-14	Passed	Passed
WLAN a, low, U-NII-3	S03_AC02	2022-10-21	Passed	Passed
WLAN ac 20 MHz MIMO, low, U-NII-1	S03_AC02	2022-10-17	Passed	Passed
WLAN ac 20 MHz MIMO, low, U-NII-3	S03_AC02	2022-10-17	Passed	Passed
WLAN ac 20 MHz, low, U-NII-1	S03_AC02	2022-10-21	Passed	Passed
WLAN ac 20 MHz, low, U-NII-3	S03_AC02	2022-10-21	Passed	Passed
WLAN ac 40 MHz MIMO, low, U-NII-1	S03_AC02	2022-10-17	Passed	Passed





**47 CFR CHAPTER I FCC PART 15  
Subpart E §15.407**

**FCC §15.407 (b), (1),(2),(3),(4)**

Band Edge

The measurement was performed according to ANSI C63.10, chapter 6.6.5

**Final Result**

<b>OP-Mode</b> Radio Technology, Operating Frequency, Subband	<b>Setup</b>	<b>Date</b>	<b>FCC</b>	<b>IC</b>
WLAN ac 40 MHz MIMO, low, U-NII-3	S03_AC02	2022-10-17	Passed	Passed
WLAN ac 40 MHz, low, U-NII-1	S03_AC02	2022-11-11	Passed	Passed
WLAN ac 40 MHz, low, U-NII-3	S03_AC02	2022-10-21	Passed	Passed
WLAN ac 80 MHz MIMO, mid, U-NII-1	S03_AC02	2022-10-17	Passed	Passed
WLAN ac 80 MHz MIMO, mid, U-NII-3	S03_AC02	2022-10-17	Passed	Passed
WLAN ac 80 MHz, mid, U-NII-1	S03_AC02	2022-10-21	Passed	Passed
WLAN ax 20 MHz MIMO, low, U-NII-1	S03_AC02	2022-10-17	Passed	Passed
WLAN ax 20 MHz MIMO, low, U-NII-3	S03_AC02	2022-10-17	Passed	Passed
WLAN ax 20 MHz, low, U-NII-1	S03_AC02	2023-01-12	Passed	Passed
WLAN ax 20 MHz, low, U-NII-3	S03_AC02	2022-10-21	Passed	Passed
WLAN ax 40 MHz MIMO, low, U-NII-1	S03_AC02	2022-10-17	Passed	Passed
WLAN ax 40 MHz, low, U-NII-1	S03_AC02	2022-11-11	Passed	Passed
WLAN ax 80 MHz MIMO, mid, U-NII-1	S03_AC02	2022-10-17	Passed	Passed
WLAN ax 80 MHz MIMO, mid, U-NII-3	S03_AC02	2022-10-17	Passed	Passed
WLAN ax 80 MHz, mid, U-NII-1	S03_AC02	2022-10-21	Passed	Passed
WLAN n 20 MHz MIMO, low, U-NII-1	S03_AC02	2022-10-17	Passed	Passed
WLAN n 20 MHz MIMO, low, U-NII-3	S03_AC02	2022-11-11	Passed	Passed
WLAN n 20 MHz, low, U-NII-1	S03_AC02	2023-01-12	Passed	Passed
WLAN n 20 MHz, low, U-NII-3	S03_AC02	2022-10-21	Passed	Passed
WLAN n 40 MHz MIMO, low, U-NII-1	S03_AC02	2022-10-17	Passed	Passed
WLAN n 40 MHz MIMO, low, U-NII-3	S03_AC02	2022-10-17	Passed	Passed
WLAN n 40 MHz, low, U-NII-1	S03_AC02	2022-11-11	Passed	Passed
WLAN n 40 MHz, low, U-NII-3	S03_AC02	2022-10-21	Passed	Passed

N/A: Not applicable

N/P: Not performed

## 2 REVISION HISTORY / SIGNATURES

Report version control			
Version	Release date	Change Description	Version validity
initial	2023-01-24	--	invalid
rev01	2023-03-17	Removed 14 dBi antenna, Added cable attenuation of 2m cable and respective combined antenna gain including comments	valid

COMMENT: This report covers only the 5 GHz WLAN bands UNII-1 and U-NII 3. According to the applicant there exists a second variant of the EUT with type MSAX-W1-RJ-E2-NO without the DI/DO port. Tested for this report is the MSAX-W1-RJ-E2 variant since it is the fully equipped variant and thus assumed worst case.




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(responsible for accreditation scope)  
Dipl.-Ing. Marco Kullik




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(responsible for testing and report)  
Dipl.-Ing. Daniel Gall



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40880 Ratingen, Germany  
Phone +49 (0)2102 749 0

### 3 ADMINISTRATIVE DATA

#### 3.1 TESTING LABORATORY

Company Name: 7layers GmbH  
Address: Borsigstr. 11  
40880 Ratingen  
Germany

The test facility is accredited by the following accreditation organisation:

Laboratory accreditation no: DAKKS D-PL-12140-01-01 | -02 | -03  
FCC Designation Number: DE0015  
FCC Test Firm Registration: 929146  
ISED CAB Identifier: DE0007; ISED#: 3699A  
Responsible for accreditation scope: Dipl.-Ing. Marco Kullik  
Report Template Version: 2022-05-25

#### 3.2 PROJECT DATA

Responsible for testing and report: Dipl.-Ing. Daniel Gall  
Employees who performed the tests: documented internally at 7Layers  
Date of Report: 2023-03-17  
Testing Period: 2022-09-16 to 2023-01-12

#### 3.3 APPLICANT DATA

Company Name: SIEMENS AG  
Address: Östliche Rheinbrückenstr. 50  
76187 Karlsruhe  
Germany  
Contact Person: Malgorzata Janson

### 3.4 MANUFACTURER DATA

Company Name: SIEMENS AG  
Address: 76181 Karlsruhe  
Germany  
Contact Person: Mr. Kilian Löser

## 4 TEST OBJECT DATA

### 4.1 GENERAL EUT DESCRIPTION

Kind of Device product description	Industrial WLAN Access Point / Client
Product name	SCALANCE W700 / MSAX
Type	MSAX-W1-RJ-E2
<b>Declared EUT data by the supplier</b>	
Voltage Type	DC
Voltage Level	24 V
Tested Modulation Type	WLAN a (6 Mbit): OFDM WLAN n (MCS0): OFDM WLAN ac (MCS0): OFDM WLAN ax (MCS0): OFDM
Specific product description	<p>The MSAX-W1-RJ-E2 device is a wireless LAN access point / client for industrial applications supporting following WLAN modes and frequency bands:</p> <ul style="list-style-type: none"> <li>• 802.11 ax/ac/a/h/n Mode: 5.15 - 5.35 GHz and 5.47 - 5.85 GHz</li> <li>• 802.11 ax/b/g/n Mode: 2400 - 2483.5 MHz</li> </ul> <p>2 reverse SMA connectors are available for usage with external antennas. 2x2 MIMO operation is possible in both bands. Simultaneous operation of the device in both frequency bands is supported. Module may be used either as Master or as Client WLAN device.</p> <p>The device supports 10/100/1000 Mbit/s Ethernet on 4 RJ45 ports. Additionally, the device features one digital input and one digital output signalling line, a configuration/licensing plug and a sleep timer. Supply power is 24Vdc.</p> <p>OFDMA for ax mode is not supported in the current firmware.</p>
Ports of the device	<ul style="list-style-type: none"> <li>• Enclosure</li> <li>• DC port: cable length appr. 1.0m</li> <li>• Digital I/O port: cable length 2.0m (terminated with DIDO box), only for radiated tests</li> <li>• LAN port: cable length (shielded), appr. 3.0m, only for radiated tests</li> <li>• USB C service port: cable length, appr. 2.0m, only for conducted tests</li> </ul> <p>2 Antenna ports, Reverse SMA-connector, appr. 1.0 m &amp; antenna</p>
Antenna Type	EUT has two permanent 50 Ohm antenna connectors. External antenna(s)

Antenna Gain	<p>For the radiated tests of this test report the EUT was tested with the following antennas:</p> <ul style="list-style-type: none"> <li>• ANT795-6MN, effective gain = 9.2 dBi (in the 5 GHz Band) including 2m cable: 7.4 dBi</li> <li>• ANT795-6DC, effective gain = 10.1 dBi (in the 5 GHz Band) including 2m cable: 8.3 dBi</li> </ul> <p>For details please see chapter 4.4 &amp; 4.5 of this report.</p>
Number of Transmit Chains	2
Number of Receive Chains	2
Type of TX / RX Chains	symmetrical
Nominal Bandwidth	20 MHz, 40 MHz, 80 MHz
Tested Datarates	WLAN a: 6 Mbit/s WLAN n: MCS0 WLAN ac: MCS0 WLAN ax: MCS0
Special software used for testing	Test commands in command line interface of EUT with connection by LAN Port of EUT

## 4.2 EUT MAIN COMPONENTS

Sample Name	Sample Code	Description
EUT ac01	DE1039038ac01	
<b>Sample Parameter</b>	<b>Value</b>	
Serial No.	VPP7205251	
HW Version	02	
SW Version	V02.00.00	
Comment		

Sample Name	Sample Code	Description
EUT ac02	DE1039038ac02	
<b>Sample Parameter</b>	<b>Value</b>	
Serial No.	VPP7205251	
HW Version	02	
SW Version	V02.00.00	
Comment		

Sample Name	Sample Code	Description
EUT ad02	DE1039038ad02	
<b>Sample Parameter</b>	<b>Value</b>	
Serial No.	VPP7205248	
HW Version	02	
SW Version	V02.00.00	
Comment		

NOTE: The short description is used to simplify the identification of the EUT in this test report.

### 4.3 ANCILLARY EQUIPMENT

For the purposes of this test report, ancillary equipment is defined as equipment which is used in conjunction with the EUT to provide operational and control features to the EUT. It is necessary to configure the system in a typical fashion, as a customer would normally use it. But nevertheless Ancillary Equipment can influence the test results.

<b>Device</b>	<b>Details (Manufacturer, Type Model, OUT Code)</b>	<b>Description</b>
-	-	-

### 4.4 AUXILIARY EQUIPMENT

For the purposes of this test report, auxiliary equipment is defined as equipment which is used temporarily to enable operational and control features especially used for the tests of the EUT which is not used during normal operation or equipment that is used during the tests in combination with the EUT but is not subject of this test report. It is necessary to configure the system in a typical fashion, as a customer would normally use it. But nevertheless Auxiliary Equipment can influence the test results.

<b>Device</b>	<b>Details (Manufacturer, Type Model, HW, SW, S/N)</b>	<b>Description</b>
6005D (30 V / 5 A)	PeakTech, 6005D (30 V / 5 A):Laboratory Power Supply 120 V 60 Hz, -, -, 81062045	Laboratory Power Supply 120 V 60 Hz
AUX100	Siemens, ANT795-6MN, -, - , -	Omni directional dipole antenna, linear polarisation, gain 9.2 dBi
AUX101	Siemens, ANT795-6MN, -, - , -	Omni directional dipole antenna, linear polarisation, gain 9.2 dBi
AUX102	Siemens, ANT795-6DC, -, - , -	Sector patch antenna, linear polarisation, gain 10.1 dBi
AUX103	Siemens, ANT795-6DC, -, - , -	Sector patch antenna, linear polarisation, gain 10.1 dBi
AUX201	Siemens, -, - , - , -	RF-Cable (1m, reverse sma-connector)
AUX202	Siemens, -, - , - , -	RF-Cable (1m, reverse sma-connector)
AUX301	Siemens, -, - , - , -	DI/DO Test box with cable

## 4.5 EUT SETUPS

This chapter describes the combination of EUTs and equipment used for testing. The rationale for selecting the EUTs, ancillary and auxiliary equipment and interconnecting cables, is to test a representative configuration meeting the requirements of the referenced standards.

<b>Setup</b>	<b>Combination of EUTs</b>	<b>Description and Rationale</b>
S01_AD02	EUT ad02,	Conducted Setup
S02_AC01	EUT ac01, AUX202, AUX101, AUX301, AUX100, AUX201,	Radiated Setup
S02_AC02	EUT ac02, AUX202, AUX101, AUX301, AUX100, AUX201,	Radiated Setup
S03_AC02	EUT ac02, AUX301, AUX202, AUX201, AUX103, AUX102,	Radiated Setup
S03_AC_AC02	EUT ac02, AUX103, AUX202, AUX102, AUX301, AUX201, 6005D (30 V / 5 A),	AC Conducted Emissions Setup

The setups S02 are antenna gain <8 dBi.

The setups S03 are antenna gain <9 dBi.

Note: The given gain represents the gain range that was used for power setting during testing, see next chapter for setting details. The same notation is also used in the respective test cases.



#### 4.6 OPERATING MODES / TEST CHANNELS

This chapter describes the operating modes of the EUTs used for testing.

##### For antenna gain $\leq 8$ dBi:

U-NII-Subband 1 5150 - 5250 MHz			U-NII-Subband 2A 5250 - 5350 MHz			U-NII-Subband 2C 5470 - 5725 MHz			U-NII-Subband 3 5725 - 5850 MHz			Nom. BW
low	mid	high	low	mid	high	low	mid	high	low	mid	high	20 MHz
36	40	48	-	-	-	-	-	-	149	157	165	Ch.-No.
5180	5200	5240	-	-	-	-	-	-	5745	5785	5825	MHz
20 US	20 US	20 US							20	20	20	Power SISO per chain
13 CA	13 CA	13 CA										
18 US	18 US	18 US							20	20	20	Power MIMO per chain
10 CA	10 CA	10 CA										

low	mid	high	low	mid	high	low	mid	high	low	mid	high	40 MHz
38	-	46	-	-	-	-	-	-	151	-	159	Ch.-No.
5190	-	5230	-	-	-	-	-	-	5755	-	5795	MHz
20 US		20 US							20		20	Power SISO per chain
13 CA		13 CA										
19 US		19 US							20		20	Power MIMO per chain
10 CA		10 CA										

low	mid	high	low	mid	high	low	mid	high	low	mid	high	80 MHz
-	42	-	-	-	-	-	-	-	-	155	-	Ch.-No.
-	5210	-	-	-	-	-	-	-	-	5775	-	MHz
	18 US									20		Power SISO per chain
	13 CA											
	18 US									20		Power MIMO per chain
	10 CA											

##### Note:

- All power values in dBm
- "US" power values are applicable for the FCC application
- "CA" power values are applicable for the ISED application

**For antenna gain > 8 dBi - ≤ 9 dBi:**

U-NII-Subband 1 5150 - 5250 MHz			U-NII-Subband 2A 5250 - 5350 MHz			U-NII-Subband 2C 5470 - 5725 MHz			U-NII-Subband 3 5725 - 5850 MHz			Nom. BW
low	mid	high	low	mid	high	low	mid	high	low	mid	high	20 MHz
36	40	48	-	-	-	-	-	-	149	157	165	Ch.-No.
5180	5200	5240	-	-	-	-	-	-	5745	5785	5825	MHz
20 US	20 US	20 US							20	20	20	Power SISO per chain
12 CA	12 CA	12 CA										
16 US	16 US	16 US							20	20	20	Power MIMO per chain
9 CA	9 CA	9 CA										

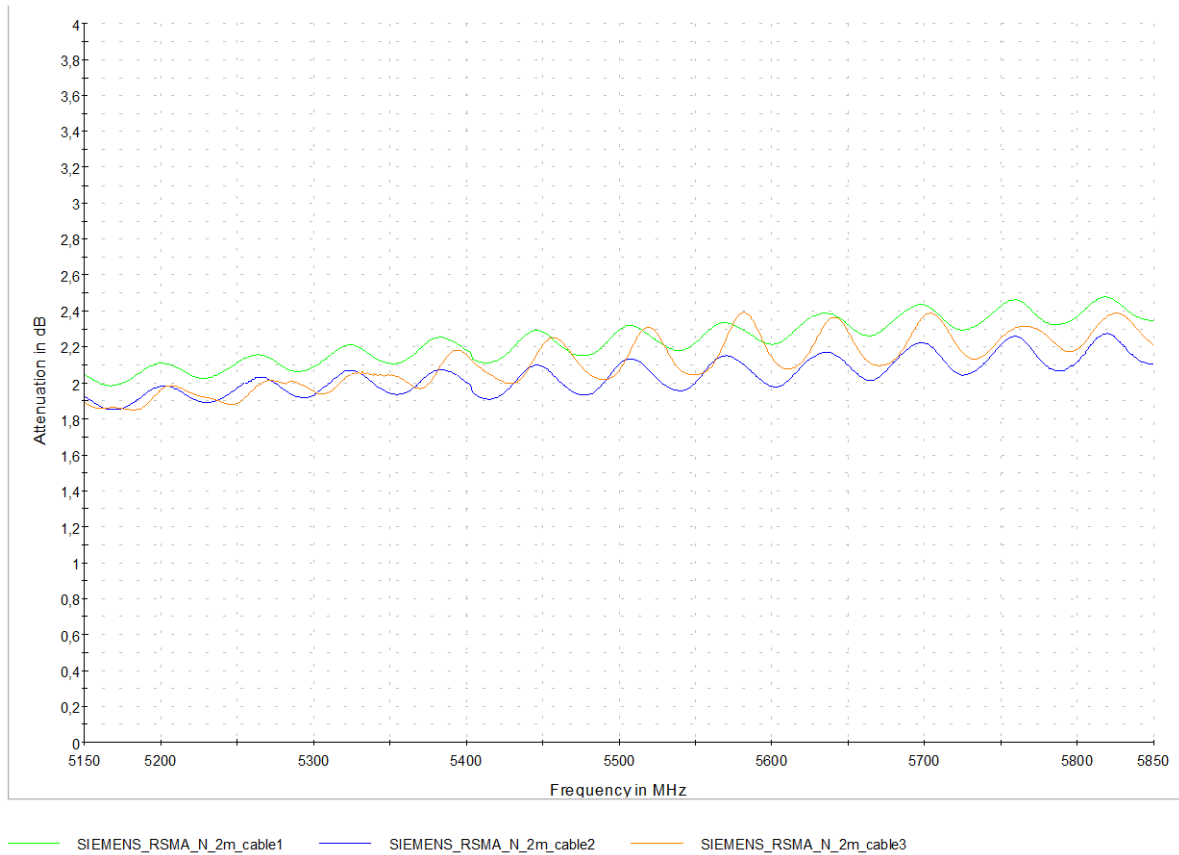
low	mid	high	low	mid	high	low	mid	high	low	mid	high	40 MHz
38	-	46	-	-	-	-	-	-	151	-	159	Ch.-No.
5190	-	5230	-	-	-	-	-	-	5755	-	5795	MHz
17 US		20 US							20		20	Power SISO per chain
12 CA		12 CA										
14 US		18 US							20		20	Power MIMO per chain
9 CA		9 CA										

low	mid	high	low	mid	high	low	mid	high	low	mid	high	80 MHz
-	42	-	-	-	-	-	-	-	-	155	-	Ch.-No.
-	5210	-	-	-	-	-	-	-	-	5775	-	MHz
	17 US									18		Power SISO per chain
	12 CA											
	14 US									18		Power MIMO per chain
	9 CA											

**Note:**

- All power values in dBm
- "US" power values are applicable for the FCC application
- "CA" power values are applicable for the ISED application

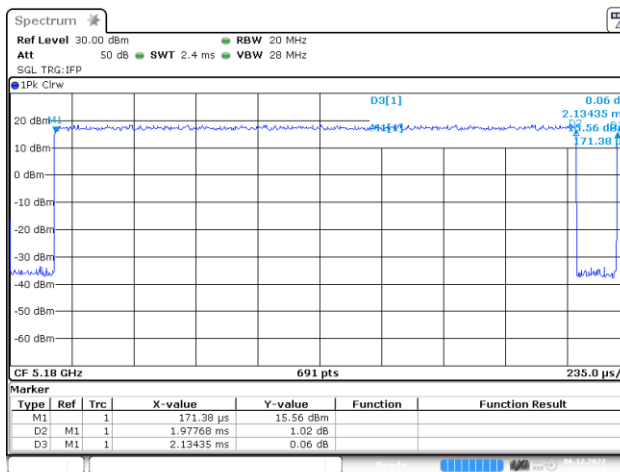
### Attenuation of 2m cable (3 cables measured)



Resulting attenuation assumed for antenna gain calculation: 1.8 dB.

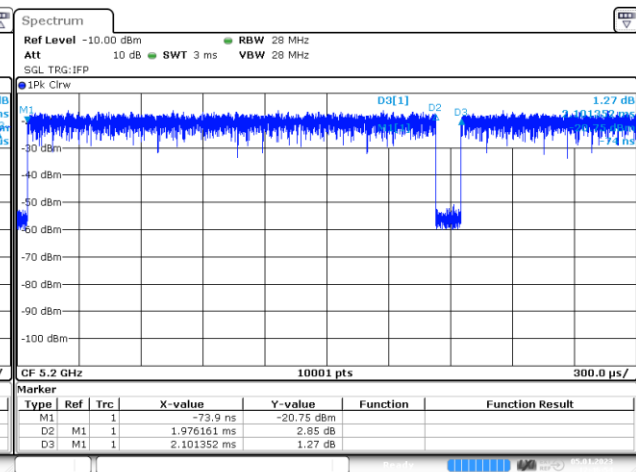
Note: The radiated measurements were performed with cables of 1m length, which is worse case compared to the 2m cable length, which is the minimum length to be used according to the applicant.

Duty Cycle							
Mode	BW	SISO			MIMO		
		20 MHz	40 MHz	80 MHz	20 MHz	40 MHz	80 MHz
a		0.927	-	-	0.940	-	-
n		0.924	0.943	-	0.949	0.947	-
ac		0.924	0.911	0.940	0.922	0.945	0.938
ax		0.866	0.868	0.865	0.937	0.928	0.938



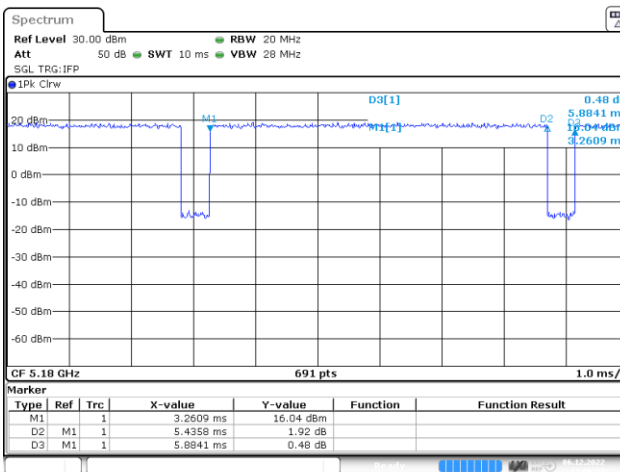
Date: 6 DEC 2022 10:46:59

WLAN a 6 Mbps SISO



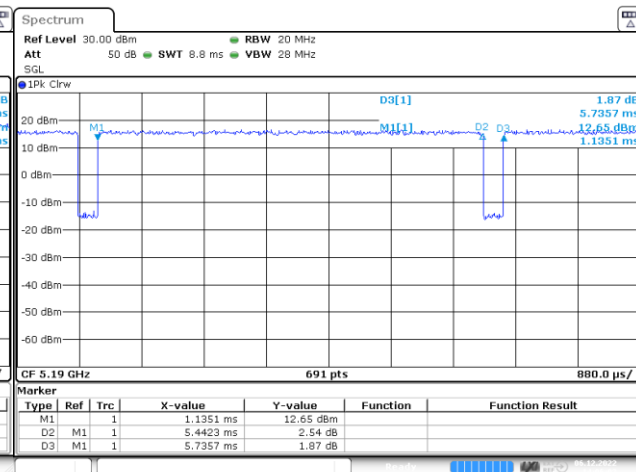
Date: 5 JAN 2023 12:46:54

WLAN a 6 Mbps Diversity



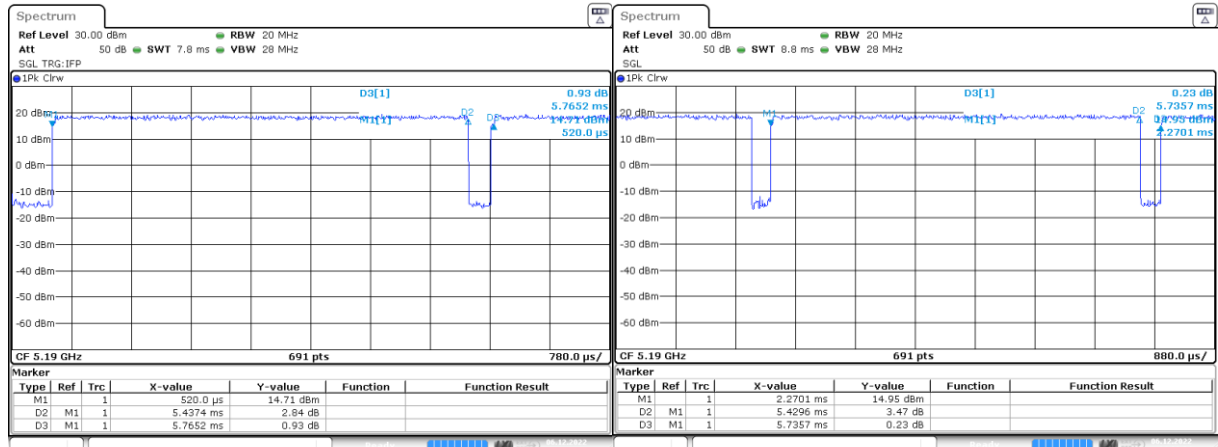
Date: 6 DEC 2022 11:06:39

WLAN n 20 MHz MCS0 SISO



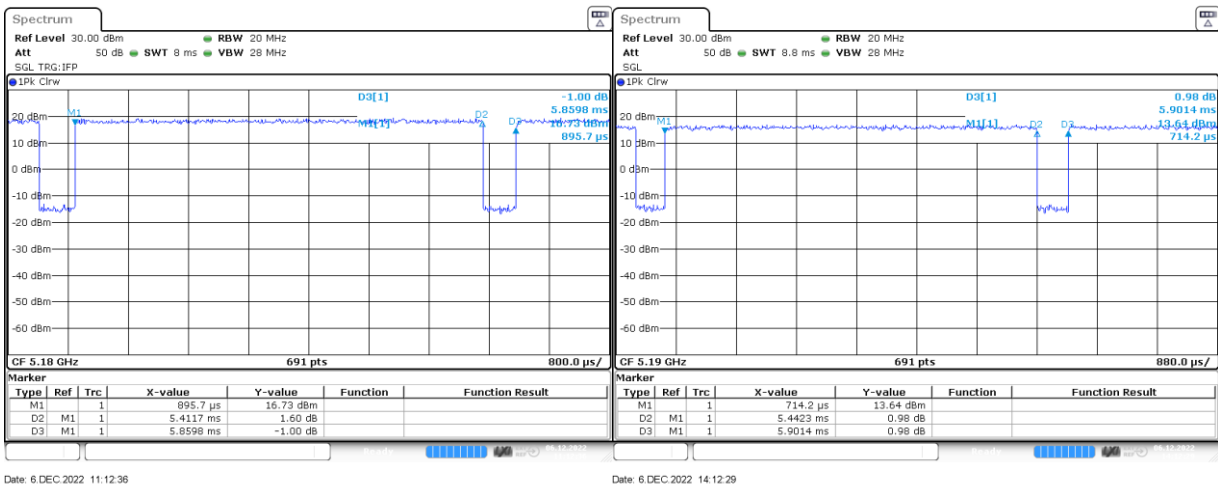
Date: 6 DEC 2022 14:06:03

WLAN n 20 MHz MCS8 MIMO



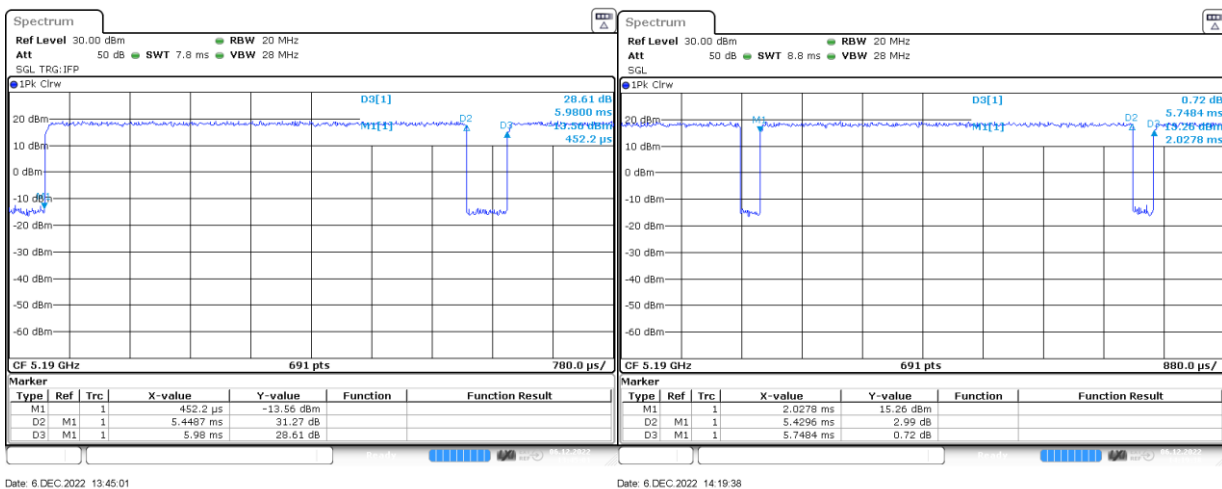
WLAN n 40 MHz MCS0 SISO

WLAN n 40 MHz MCS8 MIMO



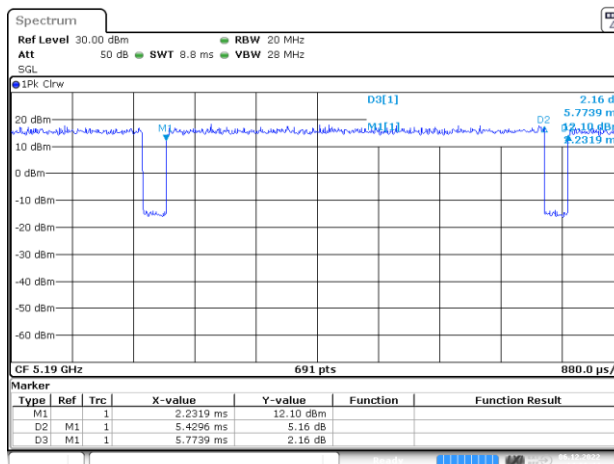
WLAN ac 20 MHz MCS0 SISO

WLAN ac 20 MHz MCS0 MIMO



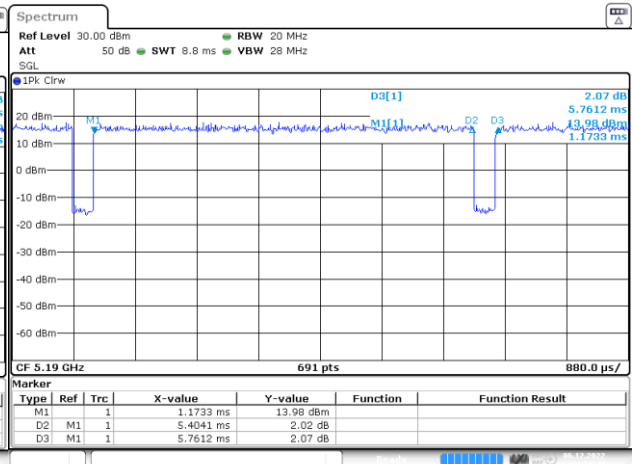
WLAN ac 40 MHz MCS0 SISO

WLAN ac 40 MHz MCS0 MIMO



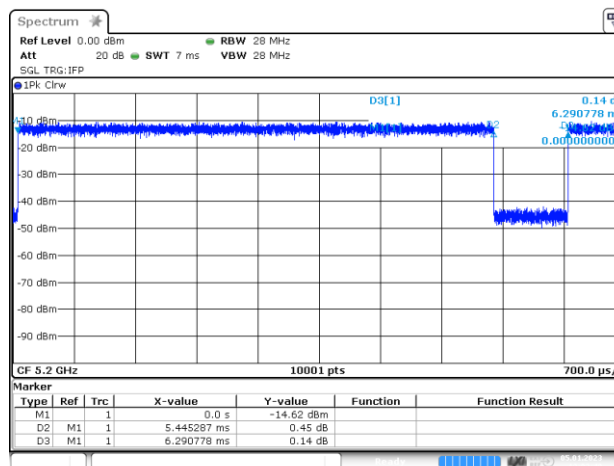
Date: 6 DEC 2022 14:00:45

WLAN ac 80 MHz MCS0 SISO



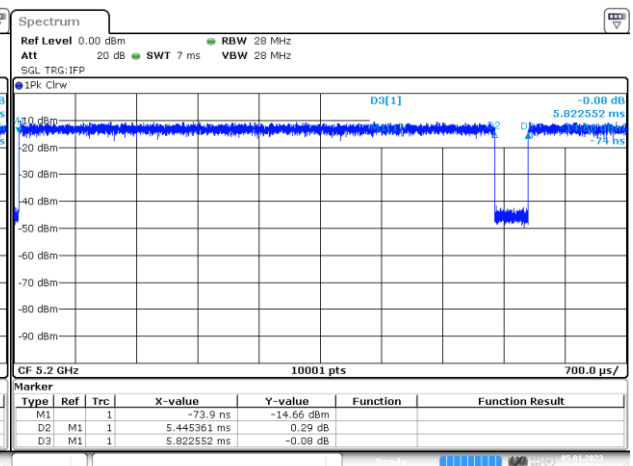
Date: 6 DEC 2022 14:24:46

WLAN ac 80 MHz MCS0 MIMO



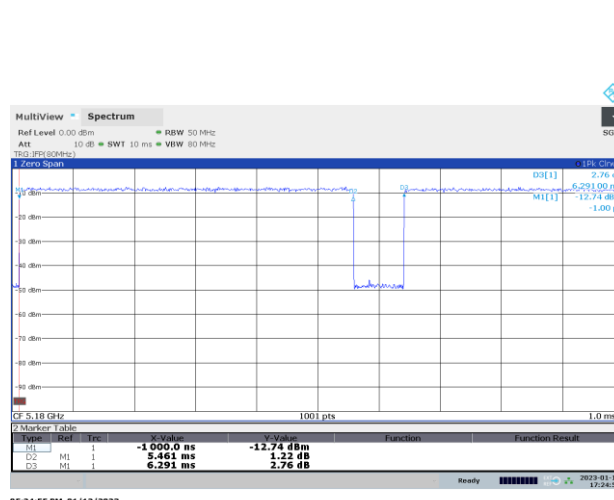
Date: 5 JAN 2023 13:03:48

WLAN ax 20 MHz MCS0 SISO



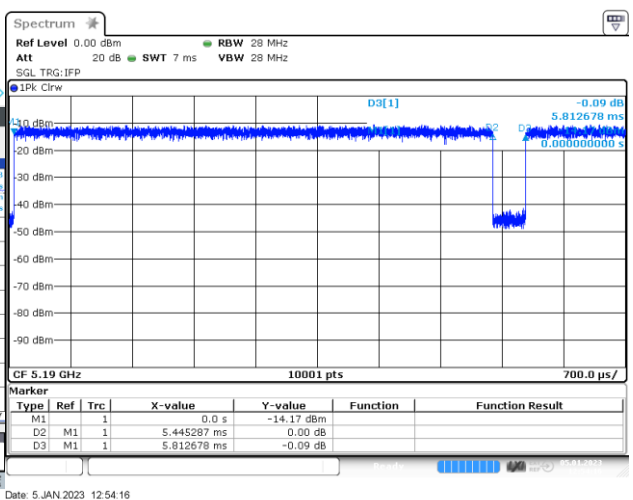
Date: 5 JAN 2023 12:49:49

WLAN ax 20 MHz MCS0 MIMO



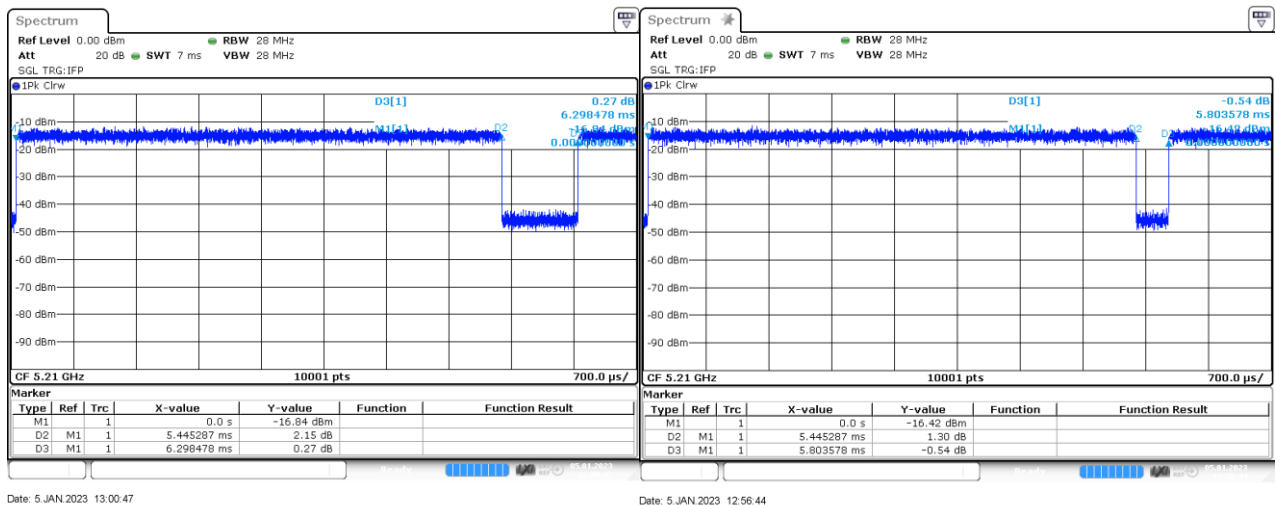
05:24:55 PM 01/12/2023

WLAN ax 40 MHz MCS0 SISO



Date: 5 JAN 2023 12:54:16

WLAN ax 40 MHz MCS0 MIMO



WLAN ax 80 MHz MCS0 SISO

WLAN ax 80 MHz MCS0 MIMO

#### 4.7 PRODUCT LABELLING

##### 4.7.1 FCC ID LABEL

Please refer to the documentation of the applicant.

##### 4.7.2 LOCATION OF THE LABEL ON THE EUT

Please refer to the documentation of the applicant.

## 5 TEST RESULTS

### 5.1 AC CONDUCTED EMISSIONS

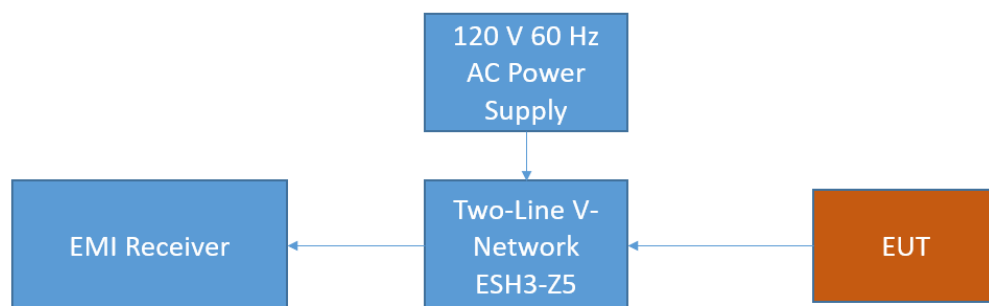
Standard **FCC Part 15 Subpart E**

**The test was performed according to:**

ANSI C63.10, chapter 6.2

#### 5.1.1 TEST DESCRIPTION

The test set-up was made in accordance to the general provisions of ANSI C 63.10. The Equipment Under Test (EUT) was setup in a shielded room to perform the conducted emissions measurements in a typical installation configuration. The EUT was powered from 50 $\mu$ H || 50 Ohm Line Impedance Stabilization Network (LISN). The LISN's unused connections were terminated with 50 Ohm loads.



FCC Conducted Emissions on AC

The measurement procedure consists of two steps. It is implemented into the EMI test software EMC-32 from R&S.

#### **Step 1: Preliminary scan**

Intention of this step is, to determine the conducted EMI-profile of the EUT.

EMI receiver settings:

- Detector: Peak – Maxhold & Average
- Frequency range: 150 kHz – 30 MHz
- Frequency steps: 2.5 kHz
- IF-Bandwidth: 9 kHz
- Measuring time / Frequency step: 100 ms (FFT-based)
- Measurement on phase + neutral lines of the power cords

On basis of this preliminary scan the highest amplitudes and the corresponding frequencies relative to the limit are identified. Emissions above the limit and emissions which are in the 10 dB range below the limit are considered.

#### **Step 2: Final measurement**

Intention of this step is, to determine the highest emissions with the settings defined in the test specification for the frequencies identified in step 1.

EMI receiver settings:

- Detector: Quasi-Peak & (CISPR) Average



- IF Bandwidth: 9 kHz
- Measuring time: 1 s / frequency

At each frequency determined in step 1, four measurements are performed in the following combinations:

- 1) Neutral lead - reference ground (PE grounded)
- 2) Phase lead - reference ground (PE grounded)
- 3) Neutral lead - reference ground (PE floating)
- 4) Phase lead - reference ground (PE floating)

The highest value is reported.

### 5.1.2 TEST REQUIREMENTS / LIMITS

FCC Part 15, Subpart C, §15.207

Frequency (MHz)	QP Limits (dB $\mu$ V)	AV Limits (dB $\mu$ V)
0.15 - 0.5	66 - 56	56 - 46
0.5 - 5	56	46
5 - 30	60	50

### 5.1.3 TEST PROTOCOL

Temperature: 19 °C  
 Air Pressure: 1004 hPa  
 Humidity: 32 %

Power line	PE	Frequency [MHz]	Measured value QP [dB $\mu$ V]	Measured value AV [dB $\mu$ V]	Limit [dB $\mu$ V]	Margin [dB]
-	-	-	-	-	-	-

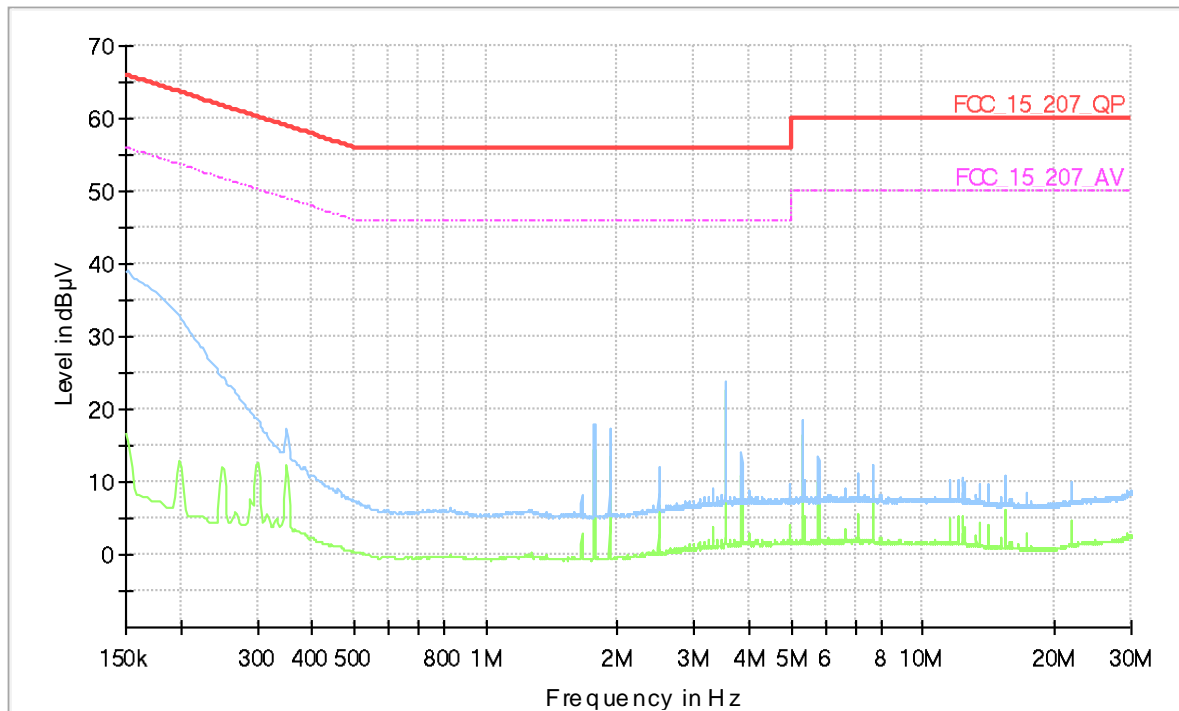
Remark: Please see next sub-clause for the measurement plot.

### 5.1.4 MEASUREMENT PLOT (EXAMPLE PLOT, SHOWING WORST CASE, IF APPLICABLE)

Operating mode = worst case  
(S03\_AC\_AC02)

#### Common Information

Test Description:	Conducted Emissions
Test Standard:	FCC §15.207, ANSI C63.10
EUT / Setup Code:	DE1039038ac02
Operating Conditions:	120 V 60 Hz, 24 V DC, WLAN a 6 Mbps Diversity ch. 36 pwr 18
Operator Name:	GAL
Comment:	
Legend:	Trace: blue = QP, green = CISPR AV; Star: red or blue = critical frequency; Rhombus: blue = final QP, green = final CISPR AV
Tested Port / used LISN:	AC mains => 1st LISN ESH3-Z5
Termination of other ports:	N/A



#### Final Result

Frequency (MHz)	QuasiPeak (dBµV)	CAverage (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Line	PE	Corr. (dB)
---	---	---	---	---	---	---	---	---	---

### 5.1.5 TEST EQUIPMENT USED

- Conducted Emissions FCC

## 5.2 26 DB BANDWIDTH

Standard **FCC Part 15 Subpart E**

**The test was performed according to:**

ANSI C63.10, chapter 12.4.1

### 5.2.1 TEST DESCRIPTION

The Equipment Under Test (EUT) was set up to perform the occupied bandwidth measurements.

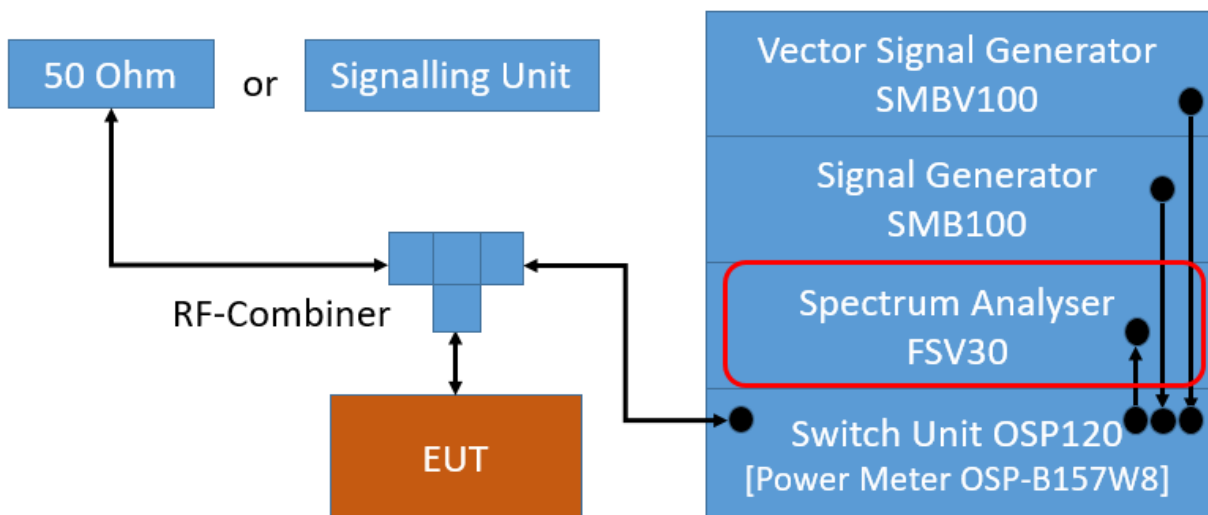
The reference level is the level of the highest amplitude signal observed from the transmitter at either the fundamental frequency or first-order modulation products in all typical modes of operation, including the unmodulated carrier, even if atypical.

The results recorded were measured with the modulation which produce the worst-case (widest) emission bandwidth.

The EUT was connected to the test system as described in the block diagram below. The complete attenuation of the measurement path is known and considered.

Analyzer settings:

- Resolution Bandwidth (RBW): initially approx. 1 % of nominal emission bandwidth
- Video Bandwidth (VBW): > RBW
- Span: 40 / 80 / 160 / 320 MHz (for 20 / 40 / 80 / 160 MHz nominal bandwidth)
- Trace: Maxhold
- Sweeps: Until the trace is stable
- Sweeptime: Auto
- Detector: Peak



TS8997; Occupied Channel Bandwidth 6 dB / 26 dB / 99 %

## 5.2.2 TEST REQUIREMENTS / LIMITS

FCC Part 15, Subpart E

There exist no applicable limits. The test was performed to determine the limits for the "Maximum Conducted Output Power" and DFS test cases.

Therefore no result was applied.

## 5.2.3 TEST PROTOCOL

Ambient temperature: 25 °C  
 Air Pressure: 1013 hPa  
 Humidity: 44 %

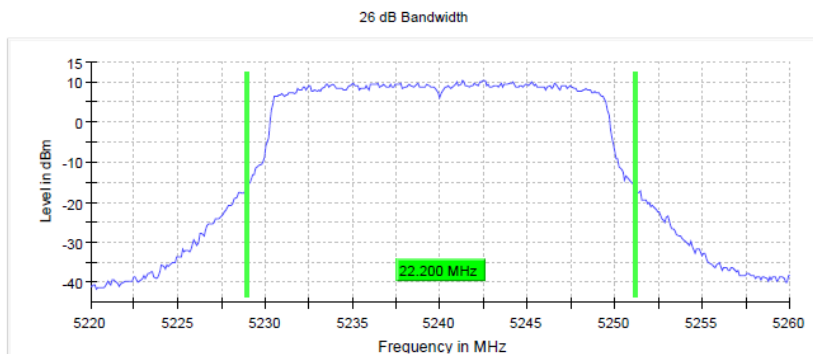
Radio Technology	Subband	Operating Frequency	26 dB Bandwidth [MHz]
WLAN a	U-NII-1	low	20.5
WLAN a	U-NII-1	mid	20.5
WLAN a	U-NII-1	high	20.4
WLAN n 20 MHz	U-NII-1	low	21.4
WLAN n 20 MHz	U-NII-1	mid	21.0
WLAN n 20 MHz	U-NII-1	high	21.5
WLAN n 40 MHz	U-NII-1	low	40.8
WLAN n 40 MHz	U-NII-1	high	41.1
WLAN ac 20 MHz	U-NII-1	low	21.5
WLAN ac 20 MHz	U-NII-1	mid	21.3
WLAN ac 20 MHz	U-NII-1	high	21.4
WLAN ac 40 MHz	U-NII-1	low	41.3
WLAN ac 40 MHz	U-NII-1	high	40.8
WLAN ac 80 MHz	U-NII-1	mid	83.5
WLAN ax 20 MHz	U-NII-1	low	21.9
WLAN ax 20 MHz	U-NII-1	mid	22.0
WLAN ax 20 MHz	U-NII-1	high	22.2
WLAN ax 40 MHz	U-NII-1	low	41.7
WLAN ax 40 MHz	U-NII-1	high	41.1
WLAN ax 80 MHz	U-NII-1	mid	84.5

Remark: Please see next sub-clause for the measurement plot.

### 5.2.4 MEASUREMENT PLOT (EXAMPLE PLOT, SHOWING WORST CASE, IF APPLICABLE)

Radio Technology = WLAN ax 20 MHz, Operating Frequency = high, Subband = U-NII-1 (S01\_AD02)

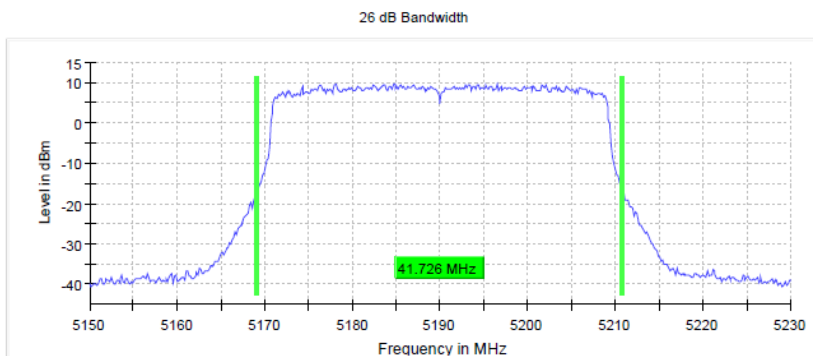
DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)	Max Level (dBm)	Result
5240.000000	22.200000	---	---	5228.950000	5251.150000	10.3	PASS



Setting	Instrument Value
Start Frequency	5.22000 GHz
Stop Frequency	5.26000 GHz
Span	40.000 MHz
RBW	200.000 kHz
VBW	1.000 MHz
SweepPoints	400
SweepTime	1.000 ms
Reference Level	10.000 dBm
Attenuation	20.000 dB
Detector	MaxPeak
SweepCount	200
Filter	3 dB
Trace Mode	Max Hold
SweepType	Sweep
Preamp	off
Stablemode	Trace
Stablevalue	0.30 dB
Run	115 / max. 150
Stable	5 / 5
Max Stable Difference	0.00 dB

Radio Technology = WLAN ax 40 MHz, Operating Frequency = low, Subband = U-NII-1 (S01\_AD02)

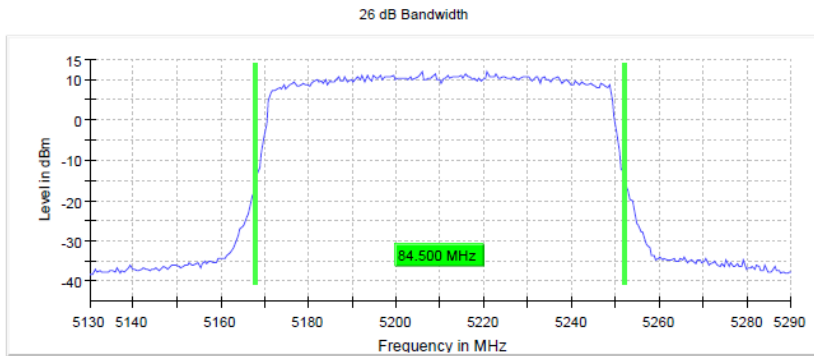
DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)	Max Level (dBm)	Result
5190.000000	41.726079	---	---	5168.986867	5210.712946	9.6	PASS



Setting	Instrument Value
Start Frequency	5.15000 GHz
Stop Frequency	5.23000 GHz
Span	80.000 MHz
RBW	300.000 kHz
VBW	1.000 MHz
SweepPoints	533
SweepTime	1.000 ms
Reference Level	10.000 dBm
Attenuation	20.000 dB
Detector	MaxPeak
SweepCount	200
Filter	3 dB
Trace Mode	Max Hold
SweepType	Sweep
Preamp	off
Stablemode	Trace
Stablevalue	0.30 dB
Run	113 / max. 150
Stable	5 / 5
Max Stable Difference	0.12 dB

Radio Technology = WLAN ax 80 MHz, Operating Frequency = mid, Subband = U-NII-1 (S01\_AD02)

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)	Max Level (dBm)	Result
5210.000000	84.500000	---	---	5167.750000	5252.250000	12.1	PASS



Setting	Instrument Value
Start Frequency	5.13000 GHz
Stop Frequency	5.29000 GHz
Span	160.000 MHz
RBW	1.000 MHz
VBW	3.000 MHz
SweepPoints	320
SweepTime	1.000 ms
Reference Level	10.000 dBm
Attenuation	20.000 dB
Detector	MaxPeak
SweepCount	200
Filter	3 dB
Trace Mode	Max Hold
SweepType	Sweep
Preamp	off
Stablemode	Trace
Stablevalue	0.30 dB
Run	123 / max. 150
Stable	5 / 5
Max Stable Difference	0.25 dB

## 5.2.5 TEST EQUIPMENT USED

- R&S TS8997

### 5.3 6 DB BANDWIDTH

Standard **FCC Part 15 Subpart E**

**The test was performed according to:**  
ANSI C63.10, chapter 6.9.2

#### 5.3.1 TEST DESCRIPTION

The Equipment Under Test (EUT) was setup in a shielded room to perform the occupied bandwidth measurements.

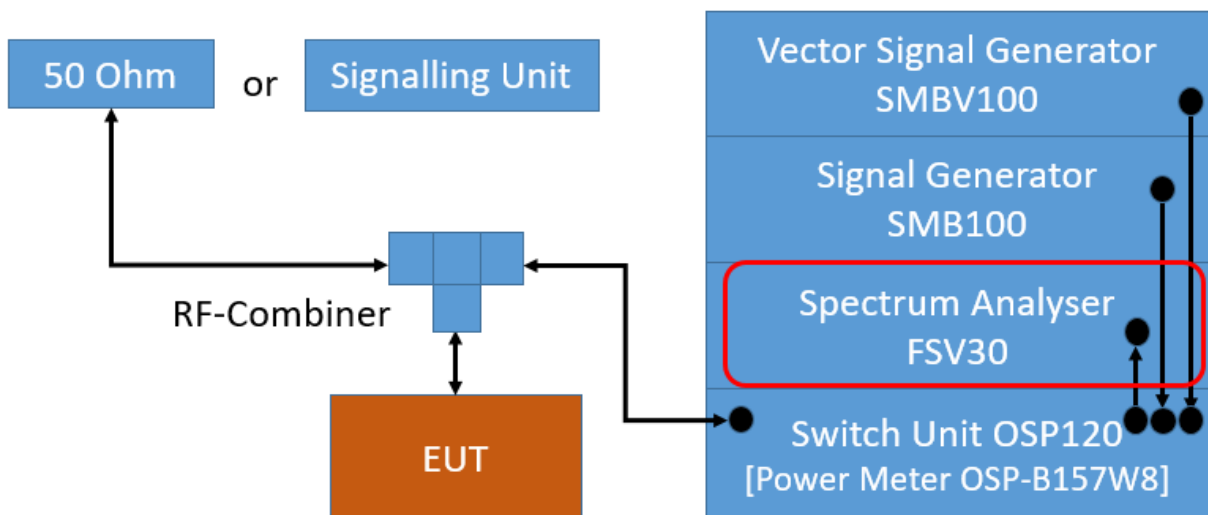
The reference level is the level of the highest amplitude signal observed from the transmitter at either the fundamental frequency or first-order modulation products in all typical modes of operation, including the unmodulated carrier, even if atypical.

The results recorded were measured with the modulation which produce the worst-case (smallest) emission bandwidth.

The EUT was connected to the test system as described in the block diagram below. The complete attenuation of the measurement path is known and considered.

Analyzer settings:

- Resolution Bandwidth (RBW): 100 kHz
- Video Bandwidth (VBW): 300 kHz
- Span: 40 / 80 / 160 / 320 MHz (for 20 / 40 / 80 / 160 MHz nominal bandwidth))
- Trace: Maxhold
- Sweeps: Until the trace is stable
- Sweeptime: Auto
- Detector: Peak



TS8997; Occupied Channel Bandwidth 6 dB / 26 dB / 99 %

### 5.3.2 TEST REQUIREMENTS / LIMITS

FCC Part 15, Subpart E, §15.407 (e)

Within the 5.725-5.850 GHz band, the minimum 6 dB bandwidth of U-NII devices shall be at least 500 kHz.

### 5.3.3 TEST PROTOCOL

Ambient temperature: 25 °C  
 Air Pressure: 1013 hPa  
 Humidity: 44 %

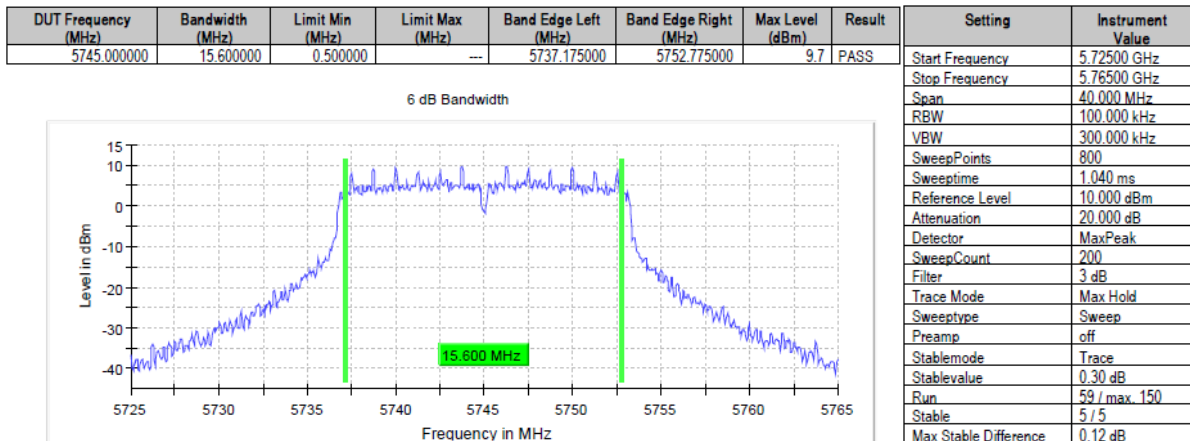
Radio Technology	Operating Frequency	6 dB Bandwidth [MHz]	Limit [MHz]	Margin [MHz]
WLAN a	low	15.6	0.5	15.10
WLAN a	mid	16.2	0.5	15.65
WLAN a	high	15.6	0.5	15.10
WLAN n 20 MHz	low	16.7	0.5	16.15
WLAN n 20 MHz	mid	16.4	0.5	15.90
WLAN n 20 MHz	high	17.0	0.5	16.50
WLAN n 40 MHz	low	36.4	0.5	35.90
WLAN n 40 MHz	high	36.4	0.5	35.90
WLAN ac 20 MHz	low	16.9	0.5	16.35
WLAN ac 20 MHz	mid	16.9	0.5	16.40
WLAN ac 20 MHz	high	16.7	0.5	16.15
WLAN ac 40 MHz	low	36.4	0.5	35.90
WLAN ac 40 MHz	high	36.4	0.5	35.90
WLAN ac 80 MHz	mid	75.2	0.5	74.70
WLAN ax 20 MHz	low	18.4	0.5	17.85
WLAN ax 20 MHz	mid	18.6	0.5	18.15
WLAN ax 20 MHz	high	18.4	0.5	17.90
WLAN ax 40 MHz	low	38.0	0.5	37.55
WLAN ax 40 MHz	high	38.1	0.5	37.60
WLAN ax 80 MHz	mid	77.0	0.5	76.50

Remark: Please see next sub-clause for the measurement plot.

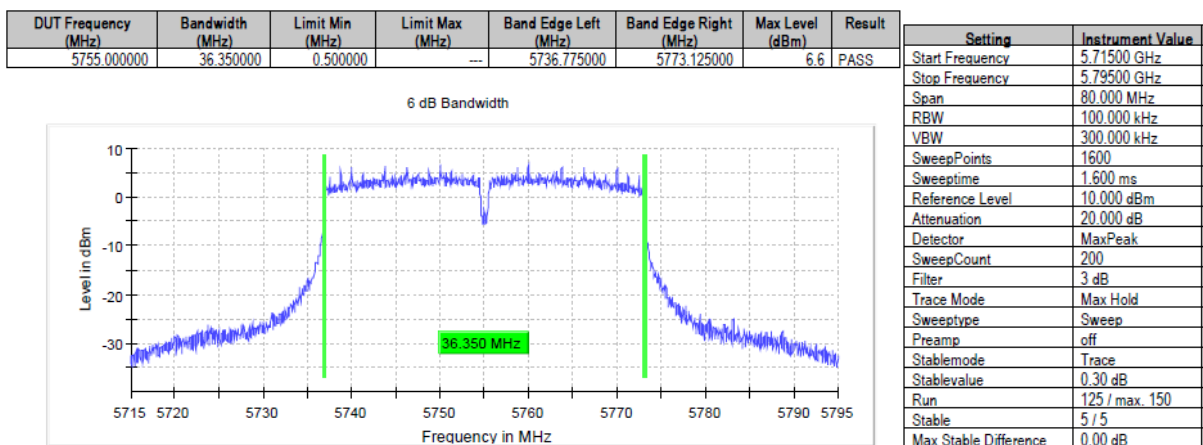


### 5.3.4 MEASUREMENT PLOT (EXAMPLE PLOT, SHOWING WORST CASE, IF APPLICABLE)

Radio Technology = WLAN a, Operating Frequency = low, Subband = U-NII-3 (S01\_AD02)

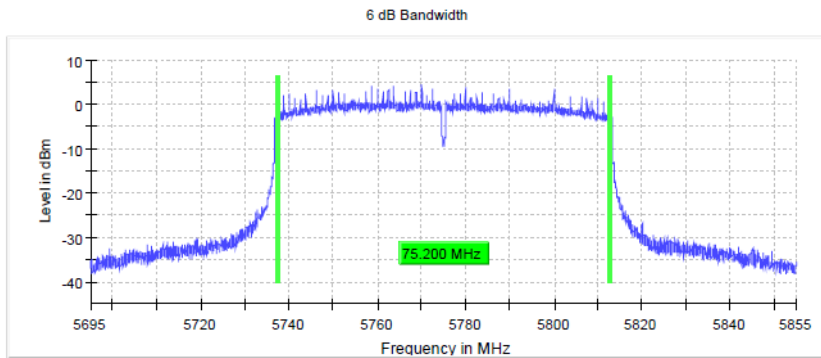


Radio Technology = WLAN n 40 MHz, Operating Frequency = low, Subband = U-NII-3 (S01\_AD02)



Radio Technology = WLAN ac 80 MHz, Operating Frequency = mid, Subband = U-NII-3 (S01\_AD02)

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)	Max Level (dBm)	Result
5775.000000	75.200000	0.500000	---	5737.425000	5812.625000	4.4	PASS



Setting	Instrument Value
Start Frequency	5.69500 GHz
Stop Frequency	5.85500 GHz
Span	160.000 MHz
RBW	100.000 kHz
VBW	300.000 kHz
SweepPoints	3200
Sweeptime	3.200 ms
Reference Level	0.000 dBm
Attenuation	10.000 dB
Detector	MaxPeak
SweepCount	200
Filter	3 dB
Trace Mode	Max Hold
Sweeptype	Sweep
Preamp	off
Stablemode	Trace
Stablevalue	0.30 dB
Run	110 / max. 150
Stable	5 / 5
Max Stable Difference	0.00 dB

### 5.3.5 TEST EQUIPMENT USED

- R&S TS8997

## 5.4 99 % BANDWIDTH

Standard **FCC Part 15 Subpart E**

**The test was performed according to:**  
ANSI C63.10, chapter 12.4.2 (6.9.3)

### 5.4.1 TEST DESCRIPTION

The Equipment Under Test (EUT) was set up to perform the occupied bandwidth measurements.

The reference level is the level of the highest amplitude signal observed from the transmitter at either the fundamental frequency or first-order modulation products in all typical modes of operation, including the unmodulated carrier, even if atypical.

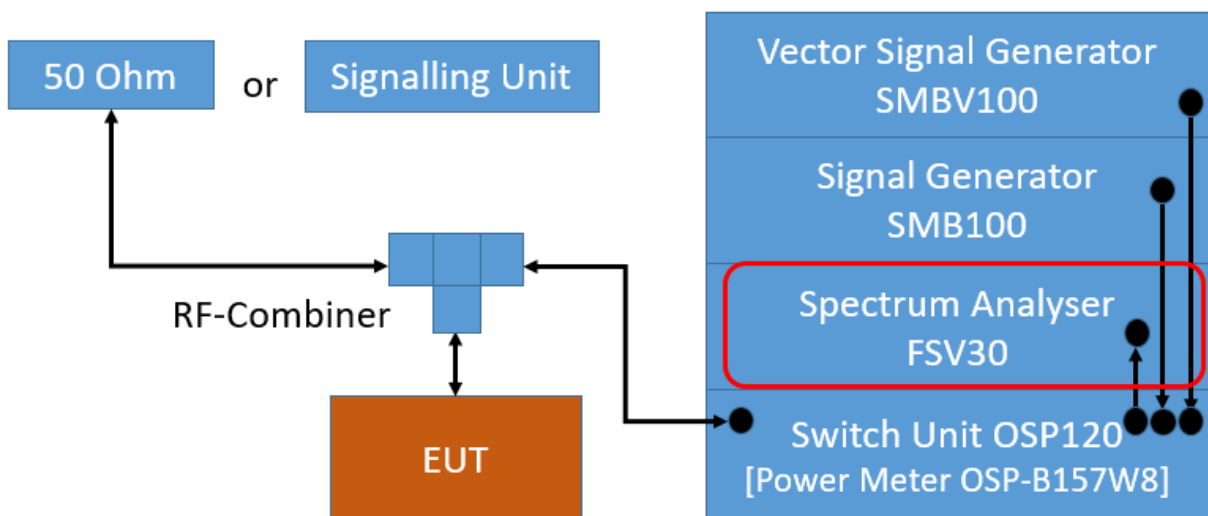
The results recorded were measured with the modulation which produce the worst-case (widest) emission bandwidth.

The EUT was connected to the test system as described in the block diagram below. The complete attenuation of the measurement path is known and considered.

Analyzer settings:

- Resolution Bandwidth (RBW): approx.  $\geq 1$  % of the span, but not below
- Video Bandwidth (VBW):  $\geq 3$  times the RBW
- Span: 40 / 80 / 160 / 320 MHz (for 20 / 40 / 80 / 160 MHz nominal bandwidth)
- Trace: Maxhold
- Sweeps: Until the trace is stable
- Sweeptime: Auto
- Detector: Peak

The 99 % measurement function of the spectrum analyser function was used to determine the 99 % bandwidth.



TS8997; Occupied Channel Bandwidth 6 dB / 26 dB / 99 %

## 5.4.2 TEST REQUIREMENTS / LIMITS

No applicable limit.

The test was performed to determine the limits for the "Maximum Conducted Output Power" and DFS test cases.

## 5.4.3 TEST PROTOCOL

Ambient temperature: 25 °C  
 Air Pressure: 1013 hPa  
 Humidity: 44 %

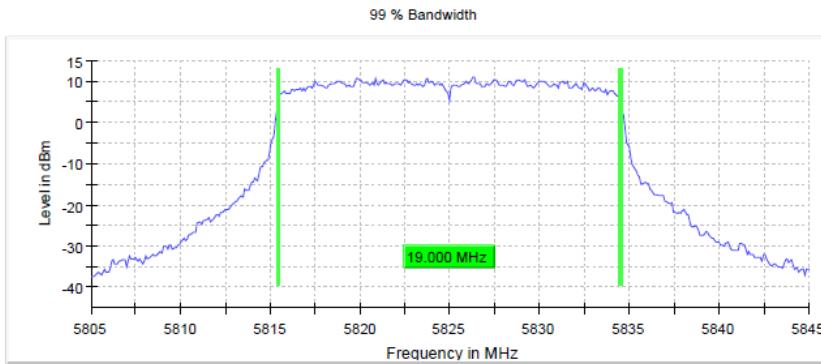
Radio Technology	Subband	Operating Frequency	99% Bandwidth [MHz]
WLAN a	U-NII-1	low	16.4
WLAN a	U-NII-1	mid	16.4
WLAN a	U-NII-1	high	16.4
WLAN a	U-NII-3	low	16.5
WLAN a	U-NII-3	mid	16.5
WLAN a	U-NII-3	high	16.4
WLAN n 20 MHz	U-NII-1	low	17.6
WLAN n 20 MHz	U-NII-1	mid	17.6
WLAN n 20 MHz	U-NII-1	high	17.6
WLAN n 20 MHz	U-NII-3	low	17.6
WLAN n 20 MHz	U-NII-3	mid	17.6
WLAN n 20 MHz	U-NII-3	high	17.6
WLAN n 40 MHz	U-NII-1	low	36.3
WLAN n 40 MHz	U-NII-1	high	36.3
WLAN n 40 MHz	U-NII-3	low	36.3
WLAN n 40 MHz	U-NII-3	high	36.3
WLAN ac 20 MHz	U-NII-1	low	17.6
WLAN ac 20 MHz	U-NII-1	mid	17.6
WLAN ac 20 MHz	U-NII-1	high	17.6
WLAN ac 20 MHz	U-NII-3	low	17.7
WLAN ac 20 MHz	U-NII-3	mid	17.6
WLAN ac 20 MHz	U-NII-3	high	17.6
WLAN ac 40 MHz	U-NII-1	low	36.3
WLAN ac 40 MHz	U-NII-1	high	36.3
WLAN ac 40 MHz	U-NII-3	low	36.3
WLAN ac 40 MHz	U-NII-3	high	36.3
WLAN ac 80 MHz	U-NII-1	mid	75.5
WLAN ac 80 MHz	U-NII-3	mid	75.5
WLAN ax 20 MHz	U-NII-1	low	19.0
WLAN ax 20 MHz	U-NII-1	mid	18.9
WLAN ax 20 MHz	U-NII-1	high	19.0
WLAN ax 20 MHz	U-NII-3	low	19.0
WLAN ax 20 MHz	U-NII-3	mid	19.0
WLAN ax 20 MHz	U-NII-3	high	19.0
WLAN ax 40 MHz	U-NII-1	low	37.8
WLAN ax 40 MHz	U-NII-1	high	37.8
WLAN ax 40 MHz	U-NII-3	low	37.8
WLAN ax 40 MHz	U-NII-3	high	38.0
WLAN ax 80 MHz	U-NII-1	mid	77.5
WLAN ax 80 MHz	U-NII-3	mid	77.5

Remark: Please see next sub-clause for the measurement plot.

### 5.4.4 MEASUREMENT PLOT (EXAMPLE PLOT, SHOWING WORST CASE, IF APPLICABLE)

Radio Technology = WLAN ax 20 MHz, Operating Frequency = high, Subband = U-NII-3 (S01\_AD02)

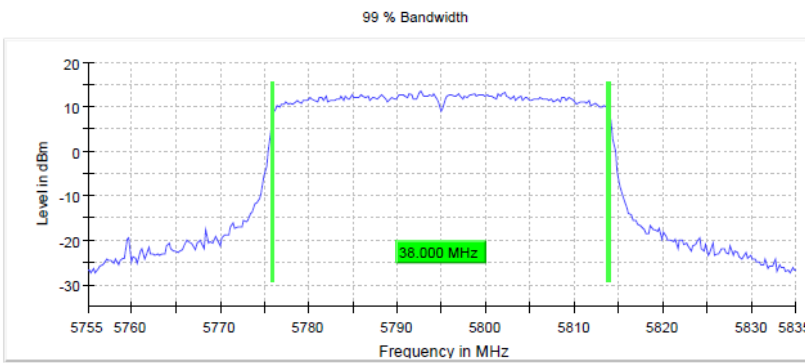
DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)	Result
5825.000000	19.000000	---	---	5815.450000	5834.450000	PASS



Setting	Instrument Value
Start Frequency	5.80500 GHz
Stop Frequency	5.84500 GHz
Span	40.000 MHz
RBW	200.000 kHz
VBW	1.000 MHz
SweepPoints	400
SweepTime	1.000 ms
Reference Level	10.000 dBm
Attenuation	20.000 dB
Detector	MaxPeak
SweepCount	200
Filter	3 dB
Trace Mode	Max Hold
SweepType	Sweep
Preamp	off
Stablemode	Trace
Stablevalue	0.30 dB
Run	132 / max. 150
Stable	5 / 5
Max Stable Difference	0.03 dB

Radio Technology = WLAN ax 40 MHz, Operating Frequency = high, Subband = U-NII-3 (S01\_AD02)

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)	Result
5795.000000	38.000000	---	---	5775.875000	5813.875000	PASS

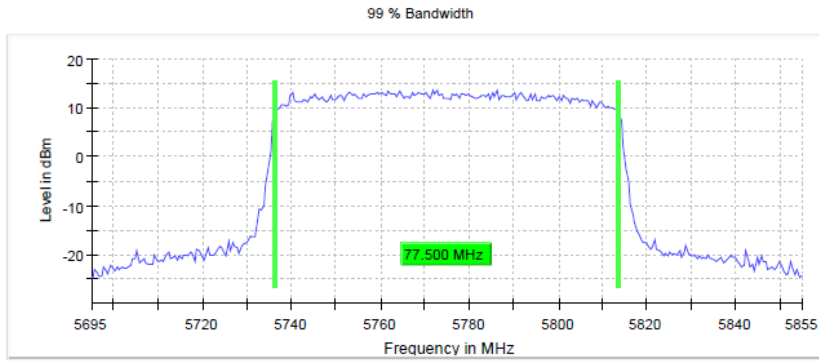


Setting	Instrument Value
Start Frequency	5.75500 GHz
Stop Frequency	5.83500 GHz
Span	80.000 MHz
RBW	500.000 kHz
VBW	2.000 MHz
SweepPoints	320
SweepTime	1.000 ms
Reference Level	10.000 dBm
Attenuation	20.000 dB
Detector	MaxPeak
SweepCount	200
Filter	3 dB
Trace Mode	Max Hold
SweepType	Sweep
Preamp	off
Stablemode	Trace
Stablevalue	0.30 dB
Run	102 / max. 150
Stable	5 / 5
Max Stable Difference	0.00 dB

Radio Technology = WLAN ax 80 MHz, Operating Frequency = mid, Subband = U-NII-3 (S01\_AD02)

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)	Result
5775.000000	77.500000	---	---	5736.250000	5813.750000	PASS

Setting	Instrument Value
Start Frequency	5.69500 GHz
Stop Frequency	5.85500 GHz
Span	160.000 MHz
RBW	1.000 MHz
VBW	3.000 MHz
SweepPoints	320
SweepTime	1.000 ms
Reference Level	10.000 dBm
Attenuation	20.000 dB
Detector	MaxPeak
SweepCount	200
Filter	3 dB
Trace Mode	Max Hold
SweepType	Sweep
Preamp	off
Stablemode	Trace
Stablevalue	0.30 dB
Run	97 / max. 150
Stable	5 / 5
Max Stable Difference	0.00 dB



#### 5.4.5 TEST EQUIPMENT USED

- R&S TS8997

## 5.5 MAXIMUM CONDUCTED OUTPUT POWER

Standard **FCC Part 15 Subpart E**

**The test was performed according to:**

ANSI C63.10, chapter 12.3.3.2

### 5.5.1 TEST DESCRIPTION

The Equipment Under Test (EUT) was set up to perform the output power measurements. The results recorded were measured with the modulation which produces the worst-case (highest) output power

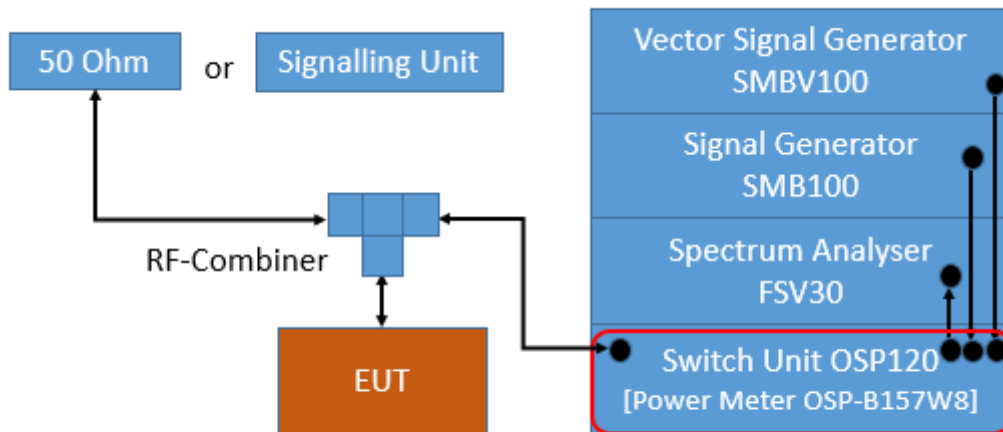
For U-NII bands 1, 2A, 2C, 3:

The EUT was connected to the test system as described in the block diagram below. The complete attenuation of the measurement path is known and considered.

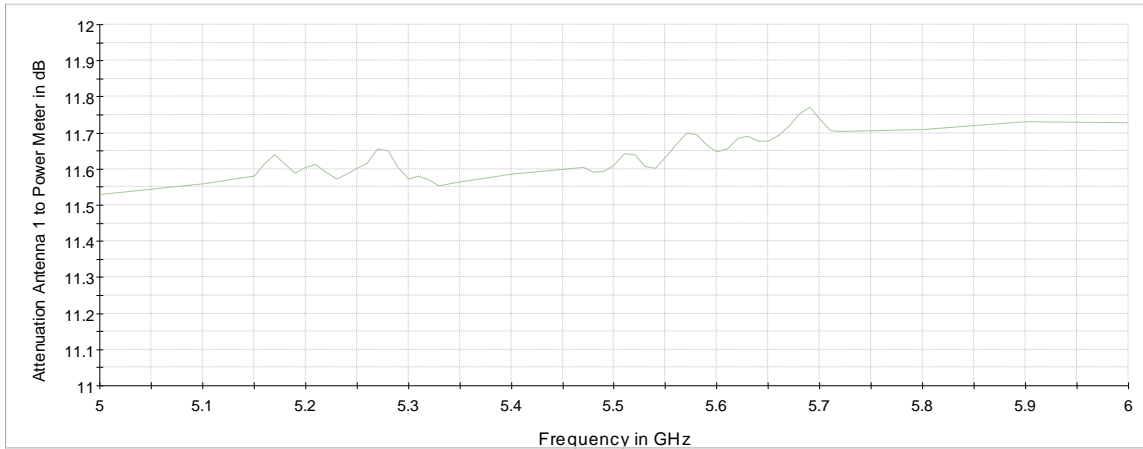
The OSP-B157W is a gated RF average power meter with a signal bandwidth > 300 MHz.

Note:

The measurement was performed according FCC Public Note "Guidelines for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices - Part 15, Subpart E, 789033 D02", method **PM-G**.



TS8997; Maximum Conducted Output Power



Attenuation of measurement path

For U-NII bands 5,6,7,8:

The EUT was connected to the test system as described in the block diagram below. The complete attenuation of the measurement path is known and considered.

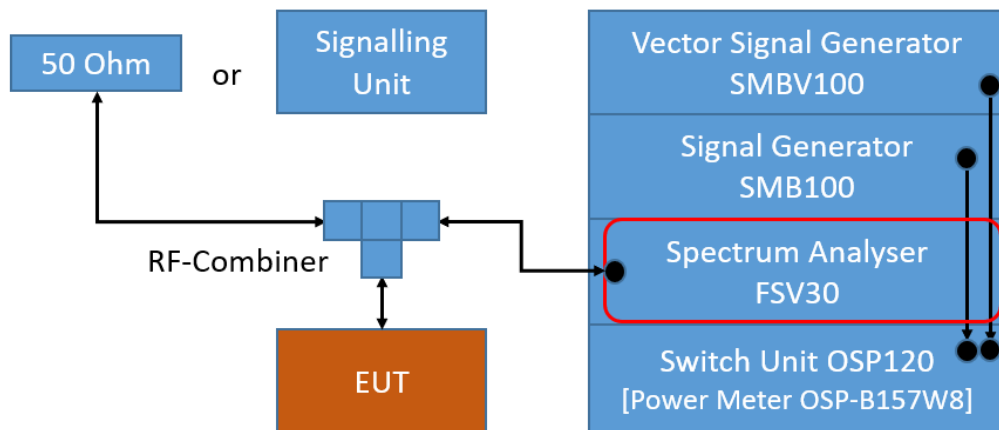
Analyzer settings:

- Resolution Bandwidth (RBW): 1 MHz
- Video Bandwidth (VBW): 3 MHz
- Trace: Average, RMS power averaging mode
- Sweeps: at least 100
- Sweeptime: Auto
- Detector: RMS
- Trigger: free run (DC >98 %) or gated mode (DC < 98 %)

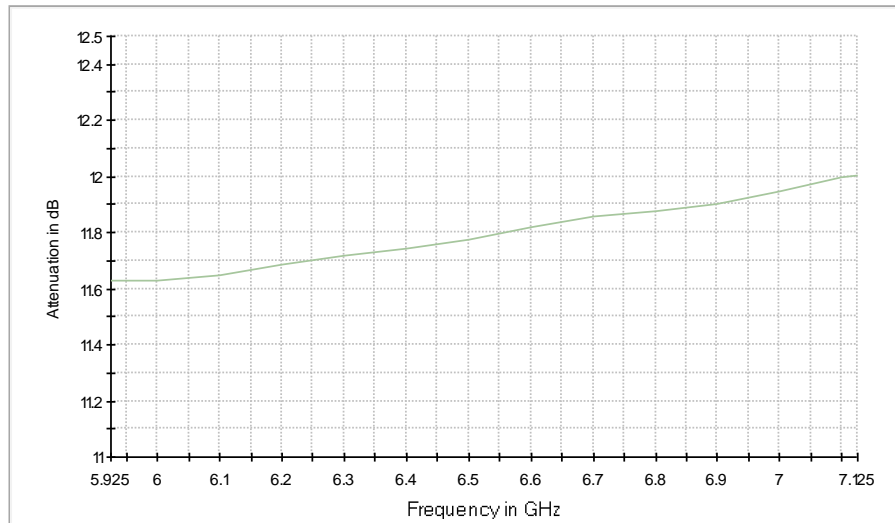
See worst case result plots for details

Note:

The measurement was performed according FCC Public Note "Guidelines for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices - Part 15, Subpart E, 789033 D02", method **SA-1**.







Attenuation of measurement path

## 5.5.2 TEST REQUIREMENTS / LIMITS

### A) FCC

FCC Part 15, Subpart E, §15.407 (a) (1) (i): Outdoor access point:

For systems using digital modulation techniques in the 5.15 – 5.25 GHz bands:

Limit: 1 W (30 dBm) provided the maximum antenna gain does not exceed 6 dBi.

The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).

§15.407 (a) (1) (ii): Indoor access point:

Limit: 1 W (30 dBm) provided the maximum antenna gain does not exceed 6 dBi.

§15.407 (a) (1) (iii): Fixed point-to-point access points:

Limit: 1 W (30 dBm) provided the maximum antenna gain does not exceed 23 dBi.

§15.407 (a) (1) (iv): Client devices:

Limit: 250 mW (24 dBm) provided the maximum antenna gain does not exceed 6 dBi.

FCC Part 15, Subpart E, §15.407 (a) (2)

For systems using digital modulation techniques in the 5.25 – 5.35 GHz and 5.47 – 5.725 GHz bands:

Limit: 250 mW (24 dBm) or  $11 \text{ dBm} + 10 \log (26 \text{ dB bandwidth/MHz})$  whatever is the lesser.

FCC Part 15, Subpart E, §15.407 (a) (3):

For systems using digital modulation techniques in the 5.725 – 5.850 GHz bands:

Limit: 1 W (30 dBm) provided the maximum antenna gain does not exceed 6 dBi. The antenna gain limitation is not applicable for fixed point-to-point devices.

FCC Part 15, Subpart E, §15.407 (a) (4):

For a standard power access point and fixed client devices in the 5.925 – 6.425 GHz and 6.525 – 6.875 GHz bands:

Limit: 4 W (36 dBm) e.i.r.p.

For outdoor devices, the maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).

FCC Part 15, Subpart E, §15.407 (a) (5):

For an indoor access point in the 5.925 – 7.125 GHz bands:

Limit: 1 W (30 dBm)e.i.r.p.

FCC Part 15, Subpart E, §15.407 (a) (6):

For a subordinate device operating under an indoor access point in the 5.925 – 7.125 GHz bands:

Limit: 1 W (30 dBm)e.i.r.p.

FCC Part 15, Subpart E, §15.407 (a) (7):

For a client device, except for fixed client devices, operating under standard power access point in the 5.925-6.425 GHz and 6.525-6.875 GHz bands:

Limit: 1 W (30 dBm)e.i.r.p.

The client device must limit its power to no more than 6 dB below its associated standard power access point's authorized transmit power.

FCC Part 15, Subpart E, §15.407 (a) (8):

For client devices operating under the control of an indoor access point in the 5.925 – 7.125 GHz bands:

Limit: 250 mW (24 dBm)e.i.r.p.

FCC Part 15, Subpart E, §15.407 (a) (11):

The maximum conducted output power must be measured over any interval of continuous transmission using instrumentation calibrated in terms of an rms-equivalent voltage.

## **B) IC**

Different frequency bands and limits apply, as compared to the FCC requirements.

All frequency bands: B is the 99% emission bandwidth in MHz.

### **RSS-247, 6.2.1.1, Band 5150-5250 MHz, indoor operation only, except for OEM devices installed by vehicle manufacturers:**

Limits:

For OEM devices installed in vehicles, the maximum e.i.r.p. shall not exceed 30 mW or  $1.76 + 10 \log_{10}B$ , dBm, whichever is less. Devices shall implement transmitter power control (TPC) in order to have the capability to operate at least 3 dB below the maximum permitted e.i.r.p. of 30 mW. (e.i.r.p.)

Other devices: 200 mW (23 dBm) or  $10 + 10 \log_{10}B$  [dBm], whichever power is less.

### **RSS-247, 6.2.2.1, Band 5250-5350 MHz:**

Limits:

For OEM devices installed in vehicles, the maximum e.i.r.p. shall not exceed 30 mW or  $1.76 + 10 \log_{10}B$ , dBm, whichever is less. Devices shall implement TPC in order to have the capability to operate at least 3 dB below the maximum permitted e.i.r.p. of 30 mW.

Devices, other devices than installed in vehicles:

Maximum conducted Power: 250 mW (24 dBm) or  $11 + 10 \log_{10} B$  [dBm], whichever power is less.

e.i.r.p.: 1.0 W (30 dBm) or  $17 + 10 \log_{10} B$  [dBm], whichever power is less.

Outdoor fixed devices with a maximum e.i.r.p. greater than 200 mW shall comply with the following e.i.r.p. at different elevations, where  $\theta$  is the angle above the local horizontal plane (of the Earth) as shown below:

- i. -13 dBW/MHz for  $0^\circ \leq \theta < 8^\circ$
- ii.  $-13 - 0.716 (\theta - 8)$  dBW/MHz for  $8^\circ \leq \theta < 40^\circ$
- iii.  $-35.9 - 1.22 (\theta - 40)$  dBW/MHz for  $40^\circ \leq \theta \leq 45^\circ$
- iv. -42 dBW/MHz for  $\theta > 45^\circ$

**RSS-247, 6.2.3.1, Bands 5470-5600 MHz and 5650-5725 MHz:**

Limits:

Maximum conducted Power: 250 mW (24 dBm) or  $11 + 10 \log_{10} B$  [dBm], whichever power is less.

e.i.r.p.: 1.0 W (30 dBm) or  $17 + 10 \log_{10} B$  [dBm], whichever power is less.

Note: Devices with a maximum e.i.r.p. greater than 500 mW shall implement TPC in order to have the capability to operate at least 6 dB below the maximum permitted e.i.r.p. of 1 W.

**RSS-247, 6.2.4.1, Band 5725-5850 MHz:**

Limits:

Maximum conducted Power: 1 W (30 dBm)

e.i.r.p.: 4 W (36 dBm)

### 5.5.3 TEST PROTOCOL

#### Power setting Antenna ≤ 8 dBi gain: FCC band 1 + 3 and ISED U-NII band 3 power setting:

Ambient temperature: 25 °C  
 Air Pressure: 1013 hPa  
 Humidity: 44 %  
 WLAN a-Mode; 20 MHz; 6 Mbit/s

U-NII-band	Ch. No.	Freq. [MHz]	Cond. Power [dBm]	EIRP [dBm]	FCC Cond. Limit [dBm]	Margin [dB]	FCC EIRP Limit [dBm]	Margin [dB]	ISED Cond. Limit [dBm]	Margin [dB]	ISED EIRP Limit [dBm]	Margin [dB]	
1	36	5180	19.7	27.7	22.0	2.3	30.0	2.3	N/A	-	22.1	N/A	2)
	44	5220	19.4	27.4	22.0	2.6	30.0	2.6	N/A	-	22.1	N/A	2)
	48	5240	19.6	27.6	22.0	2.4	30.0	2.4	N/A	-	22.1	N/A	2)
3	149	5745	19.7	27.7	28.0	8.3	36.0	8.3	28.0	8.3	36.0	8.3	
	157	5785	19.4	27.4	28.0	8.6	36.0	8.6	28.0	8.6	36.0	8.6	
	165	5825	19.6	27.6	28.0	8.4	36.0	8.4	28.0	8.4	36.0	8.4	

WLAN n-Mode; 20 MHz; MCS 0; SISO

U-NII-band	Ch. No.	Freq. [MHz]	Cond. Power [dBm]	EIRP [dBm]	FCC Cond. Limit [dBm]	Margin [dB]	FCC EIRP Limit [dBm]	Margin [dB]	ISED Cond. Limit [dBm]	Margin [dB]	ISED EIRP Limit [dBm]	Margin [dB]	
1	36	5180	18.8	26.8	22.0	3.2	30.0	3.2	N/A	-	22.5	N/A	2)
	44	5220	19.2	27.2	22.0	2.8	30.0	2.8	N/A	-	22.5	N/A	2)
	48	5240	18.9	26.9	22.0	3.1	30.0	3.1	N/A	-	22.5	N/A	2)
3	149	5745	19.2	27.2	28.0	8.8	36.0	8.8	28.0	8.8	36.0	8.8	
	157	5785	19.0	27.0	28.0	9.0	36.0	9.0	28.0	9.0	36.0	9.0	
	165	5825	19.3	27.3	28.0	8.7	36.0	8.7	28.0	8.7	36.0	8.7	

WLAN n-Mode; 40 MHz; MCS 0; SISO

U-NII-band	Ch. No.	Freq. [MHz]	Cond. Power [dBm]	EIRP [dBm]	FCC Cond. Limit [dBm]	Margin [dB]	FCC EIRP Limit [dBm]	Margin [dB]	ISED Cond. Limit [dBm]	Margin [dB]	ISED EIRP Limit [dBm]	Margin [dB]	
1	38	5190	19.7	27.7	22.0	2.3	30.0	2.3	N/A	-	23.0	N/A	2)
	46	5230	20.0	28.0	22.0	2.0	30.0	2.0	N/A	-	23.0	N/A	2)
3	151	5755	20.5	28.5	28.0	7.5	36.0	7.5	28.0	7.5	36.0	7.5	
	159	5795	20.3	28.3	28.0	7.7	36.0	7.7	28.0	7.7	36.0	7.7	

WLAN ac-Mode; 20 MHz; MCS 0; SISO

U-NII-band	Ch. No.	Freq. [MHz]	Cond. Power [dBm]	EIRP [dBm]	FCC Cond. Limit [dBm]	Margin [dB]	FCC EIRP Limit [dBm]	Margin [dB]	ISED Cond. Limit [dBm]	Margin [dB]	ISED EIRP Limit [dBm]	Margin [dB]	
1	36	5180	19.9	27.9	22.0	2.1	30.0	2.1	N/A	-	22.5	N/A	2)
	44	5220	19.3	27.3	22.0	2.7	30.0	2.7	N/A	-	22.5	N/A	2)
	48	5240	19.1	27.1	22.0	2.9	30.0	2.9	N/A	-	22.5	N/A	2)
3	149	5745	19.4	27.4	28.0	8.6	36.0	8.6	28.0	8.6	36.0	8.6	
	157	5785	19.2	27.2	28.0	8.8	36.0	8.8	28.0	8.8	36.0	8.8	
	165	5825	19.3	27.3	28.0	8.7	36.0	8.7	28.0	8.7	36.0	8.7	

WLAN ac-Mode; 40 MHz; MCS 0; SISO

U-NII-band	Ch. No.	Freq. [MHz]	Cond. Power [dBm]	EIRP [dBm]	FCC Cond. Limit [dBm]	Margin [dB]	FCC EIRP Limit [dBm]	Margin [dB]	ISED Cond. Limit [dBm]	Margin [dB]	ISED EIRP Limit [dBm]	Margin [dB]	
1	38	5190	19.6	27.6	22.0	2.4	30.0	2.4	N/A	-	23.0	N/A	2)
	46	5230	19.8	27.8	22.0	2.2	30.0	2.2	N/A	-	23.0	N/A	2)
3	151	5755	20.5	28.5	28.0	7.5	36.0	7.5	28.0	7.5	36.0	7.5	
	159	5795	20.3	28.3	28.0	7.7	36.0	7.7	28.0	7.7	36.0	7.7	

WLAN ac-Mode; 80 MHz; MCS 0; SISO

U-NII-band	Ch. No.	Freq. [MHz]	Cond. Power [dBm]	EIRP [dBm]	FCC Cond. Limit [dBm]	Margin [dB]	FCC EIRP Limit [dBm]	Margin [dB]	ISED Cond. Limit [dBm]	Margin [dB]	ISED EIRP Limit [dBm]	Margin [dB]	
1	42	5210	17.7	25.7	22.0	4.3	30.0	4.3	N/A	-	23.0	N/A	2)
3	155	5775	20.1	28.1	28.0	7.9	36.0	7.9	28.0	7.9	36.0	7.9	

WLAN ax-Mode; 20 MHz; MCS 0; SISO

U-NII-band	Ch. No.	Freq. [MHz]	Cond. Power [dBm]	EIRP [dBm]	FCC Cond. Limit [dBm]	Margin [dB]	FCC EIRP Limit [dBm]	Margin [dB]	ISED Cond. Limit [dBm]	Margin [dB]	ISED EIRP Limit [dBm]	Margin [dB]	
1	36	5180	18.8	26.8	22.0	3.2	30.0	3.2	N/A	-	22.8	N/A	2)
	44	5220	19.2	27.2	22.0	2.8	30.0	2.8	N/A	-	22.8	N/A	2)
	48	5240	18.9	26.9	22.0	3.1	30.0	3.1	N/A	-	22.8	N/A	2)
3	149	5745	19.2	27.2	28.0	8.8	36.0	8.8	28.0	8.8	36.0	8.8	
	157	5785	18.9	26.9	28.0	9.1	36.0	9.1	28.0	9.1	36.0	9.1	
	165	5825	19.1	27.1	28.0	8.9	36.0	8.9	28.0	8.9	36.0	8.9	

WLAN ax-Mode; 40 MHz; MCS 0; SISO

U-NII-band	Ch. No.	Freq. [MHz]	Cond. Power [dBm]	EIRP [dBm]	FCC Cond. Limit [dBm]	Margin [dB]	FCC EIRP Limit [dBm]	Margin [dB]	ISED Cond. Limit [dBm]	Margin [dB]	ISED EIRP Limit [dBm]	Margin [dB]	
1	38	5190	19.2	27.2	22.0	2.8	30.0	2.8	N/A	-	23.0	N/A	2)
	46	5230	19.5	27.5	22.0	2.5	30.0	2.5	N/A	-	23.0	N/A	2)
3	151	5755	20.1	28.1	28.0	7.9	36.0	7.9	28.0	7.9	36.0	7.9	
	159	5795	19.9	27.9	28.0	8.1	36.0	8.1	28.0	8.1	36.0	8.1	

WLAN ax-Mode; 80 MHz; MCS 0; SISO

U-NII-band	Ch. No.	Freq. [MHz]	Cond. Power [dBm]	EIRP [dBm]	FCC Cond. Limit [dBm]	Margin [dB]	FCC EIRP Limit [dBm]	Margin [dB]	ISED Cond. Limit [dBm]	Margin [dB]	ISED EIRP Limit [dBm]	Margin [dB]	
1	42	5210	17.4	25.4	22.0	4.6	30.0	4.6	N/A	-	23.0	N/A	2)
3	155	5775	19.7	27.7	28.0	8.3	36.0	8.3	28.0	8.3	36.0	8.3	

WLAN a-Mode; 20 MHz; 6 Mbit/s; Diversity

U-NII-band	Ch. No.	Freq. [MHz]	Cond. Power [dBm]	EIRP [dBm]	FCC Cond. Limit [dBm]	Margin [dB]	FCC EIRP Limit [dBm]	Margin [dB]	ISED Cond. Limit [dBm]	Margin [dB]	ISED EIRP Limit [dBm]	Margin [dB]	
1	36	5180	20.3	28.3	22.0	1.7	30.0	1.7	N/A	-	22.1	N/A	2)
	44	5220	20.7	28.7	22.0	1.3	30.0	1.3	N/A	-	22.1	N/A	2)
	48	5240	20.2	28.2	22.0	1.8	30.0	1.8	N/A	-	22.1	N/A	2)
3	149	5745	22.4	30.4	28.0	5.6	36.0	5.6	28.0	5.6	36.0	5.6	
	157	5785	22.2	30.2	28.0	5.8	36.0	5.8	28.0	5.8	36.0	5.8	
	165	5825	22.4	30.4	28.0	5.6	36.0	5.6	28.0	5.6	36.0	5.6	

WLAN n-Mode; 20 MHz; MCS 8; MIMO

U-NII-band	Ch. No.	Freq. [MHz]	Cond. Power [dBm]	EIRP [dBm]	FCC Cond. Limit [dBm]	Margin [dB]	FCC EIRP Limit [dBm]	Margin [dB]	ISED Cond. Limit [dBm]	Margin [dB]	ISED EIRP Limit [dBm]	Margin [dB]	
1	36	5180	19.9	27.9	22.0	2.1	30.0	2.1	N/A	-	22.5	N/A	2)
	44	5220	20.4	28.4	22.0	1.6	30.0	1.6	N/A	-	22.5	N/A	2)
	48	5240	19.9	27.9	22.0	2.1	30.0	2.1	N/A	-	22.5	N/A	2)
3	149	5745	22.0	30.0	28.0	6.0	36.0	6.0	28.0	6.0	36.0	6.0	
	157	5785	21.8	29.8	28.0	6.2	36.0	6.2	28.0	6.2	36.0	6.2	
	165	5825	21.9	29.9	28.0	6.1	36.0	6.1	28.0	6.1	36.0	6.1	

WLAN n-Mode; 40 MHz; MCS 8; MIMO

U-NII-band	Ch. No.	Freq. [MHz]	Cond. Power [dBm]	EIRP [dBm]	FCC Cond. Limit [dBm]	Margin [dB]	FCC EIRP Limit [dBm]	Margin [dB]	ISED Cond. Limit [dBm]	Margin [dB]	ISED EIRP Limit [dBm]	Margin [dB]	
1	38	5190	21.5	29.5	22.0	0.5	30.0	0.5	N/A	-	23.0	N/A	2)
	46	5230	21.8	29.8	22.0	0.2	30.0	0.2	N/A	-	23.0	N/A	2)
3	151	5755	23.1	31.1	28.0	4.9	36.0	4.9	28.0	4.9	36.0	4.9	
	159	5795	23.0	31.0	28.0	5.0	36.0	5.0	28.0	5.0	36.0	5.0	

WLAN ac-Mode; 20 MHz; MCS 0; MIMO

U-NII-band	Ch. No.	Freq. [MHz]	Cond. Power [dBm]	EIRP [dBm]	FCC Cond. Limit [dBm]	Margin [dB]	FCC EIRP Limit [dBm]	Margin [dB]	ISED Cond. Limit [dBm]	Margin [dB]	ISED EIRP Limit [dBm]	Margin [dB]	
1	36	5180	19.9	27.9	22.0	2.1	30.0	2.1	N/A	-	22.5	N/A	2)
	44	5220	20.4	28.4	22.0	1.6	30.0	1.6	N/A	-	22.5	N/A	2)
	48	5240	19.9	27.9	22.0	2.1	30.0	2.1	N/A	-	22.5	N/A	2)
3	149	5745	22.0	30.0	28.0	6.0	36.0	6.0	28.0	6.0	36.0	6.0	
	157	5785	21.7	29.7	28.0	6.3	36.0	6.3	28.0	6.3	36.0	6.3	
	165	5825	22.2	30.2	28.0	5.8	36.0	5.8	28.0	5.8	36.0	5.8	

WLAN ac-Mode; 40 MHz; MCS 0; MIMO

U-NII-band	Ch. No.	Freq. [MHz]	Cond. Power [dBm]	EIRP [dBm]	FCC Cond. Limit [dBm]	Margin [dB]	FCC EIRP Limit [dBm]	Margin [dB]	ISED Cond. Limit [dBm]	Margin [dB]	ISED EIRP Limit [dBm]	Margin [dB]	
1	38	5190	21.5	29.5	22.0	0.5	30.0	0.5	N/A	-	23.0	N/A	2)
	46	5230	21.8	29.8	22.0	0.2	30.0	0.2	N/A	-	23.0	N/A	2)
3	151	5755	23.2	31.2	28.0	4.8	36.0	4.8	28.0	4.8	36.0	4.8	
	159	5795	23.1	31.1	28.0	4.9	36.0	4.9	28.0	4.9	36.0	4.9	

WLAN ac-Mode; 80 MHz; MCS 0; MIMO

U-NII-band	Ch. No.	Freq. [MHz]	Cond. Power [dBm]	EIRP [dBm]	FCC Cond. Limit [dBm]	Margin [dB]	FCC EIRP Limit [dBm]	Margin [dB]	ISED Cond. Limit [dBm]	Margin [dB]	ISED EIRP Limit [dBm]	Margin [dB]	
1	42	5210	20.4	28.4	22.0	1.6	30.0	1.6	N/A	-	23.0	N/A	2)
3	155	5775	22.6	30.6	28.0	5.4	36.0	5.4	28.0	5.4	36.0	5.4	

WLAN ax-Mode; 20 MHz; MCS 0; MIMO

U-NII-band	Ch. No.	Freq. [MHz]	Cond. Power [dBm]	EIRP [dBm]	FCC Cond. Limit [dBm]	Margin [dB]	FCC EIRP Limit [dBm]	Margin [dB]	ISED Cond. Limit [dBm]	Margin [dB]	ISED EIRP Limit [dBm]	Margin [dB]	
1	36	5180	19.9	27.9	22.0	2.1	30.0	2.1	N/A	-	22.8	N/A	2)
	44	5220	20.1	28.1	22.0	1.9	30.0	1.9	N/A	-	22.8	N/A	2)
	48	5240	19.7	27.7	22.0	2.3	30.0	2.3	N/A	-	22.8	N/A	2)
3	149	5745	21.7	29.7	28.0	6.3	36.0	6.3	28.0	6.3	36.0	6.3	
	157	5785	21.6	29.6	28.0	6.4	36.0	6.4	28.0	6.4	36.0	6.4	
	165	5825	21.8	29.8	28.0	6.2	36.0	6.2	28.0	6.2	36.0	6.2	

WLAN ax-Mode; 40 MHz; MCS 0; MIMO

U-NII-band	Ch. No.	Freq. [MHz]	Cond. Power [dBm]	EIRP [dBm]	FCC Cond. Limit [dBm]	Margin [dB]	FCC EIRP Limit [dBm]	Margin [dB]	ISED Cond. Limit [dBm]	Margin [dB]	ISED EIRP Limit [dBm]	Margin [dB]	
1	38	5190	21.2	29.2	22.0	0.8	30.0	0.8	N/A	-	23.0	N/A	2)
	46	5230	21.5	29.5	22.0	0.5	30.0	0.5	N/A	-	23.0	N/A	2)
3	151	5755	22.7	30.7	28.0	5.3	36.0	5.3	28.0	5.3	36.0	5.3	
	159	5795	22.6	30.6	28.0	5.4	36.0	5.4	28.0	5.4	36.0	5.4	

WLAN ax-Mode; 80 MHz; MCS 0; MIMO

U-NII-band	Ch. No.	Freq. [MHz]	Cond. Power [dBm]	EIRP [dBm]	FCC Cond. Limit [dBm]	Margin [dB]	FCC EIRP Limit [dBm]	Margin [dB]	ISED Cond. Limit [dBm]	Margin [dB]	ISED EIRP Limit [dBm]	Margin [dB]	
1	42	5210	20.2	28.2	22.0	1.8	30.0	1.8	N/A	-	23.0	N/A	2)
3	155	5775	22.3	30.3	28.0	5.7	36.0	5.7	28.0	5.7	36.0	5.7	

**Power setting Antenna ≤ 8 dBi gain:  
ISED U-NII band 1 power setting:**

WLAN a-Mode; 20 MHz; 6 Mbit/s

U-NII-Subband	Ch. No.	Freq. [MHz]	Cond. Power [dBm]	EIRP [dBm]	ISED Cond. Limit [dBm]	Margin [dB]	ISED EIRP Limit [dBm]	Margin [dB]
1	36	5180	12.5	20.5	N/A	-	22.1	1.7
	44	5220	12.9	20.9	N/A	-	22.1	1.3
	48	5240	12.6	20.6	N/A	-	22.1	1.5

WLAN n-Mode; 20 MHz; MCS 0; SISO

U-NII-Subband	Ch. No.	Freq. [MHz]	Cond. Power [dBm]	EIRP [dBm]	ISED Cond. Limit [dBm]	Margin [dB]	ISED EIRP Limit [dBm]	Margin [dB]
1	36	5180	12.2	20.2	N/A	-	22.5	2.3
	44	5220	12.5	20.5	N/A	-	22.5	1.9
	48	5240	12.3	20.3	N/A	-	22.5	2.1

WLAN n-Mode; 40 MHz; MCS 0; SISO

U-NII-Subband	Ch. No.	Freq. [MHz]	Cond. Power [dBm]	EIRP [dBm]	ISED Cond. Limit [dBm]	Margin [dB]	ISED EIRP Limit [dBm]	Margin [dB]
1	38	5190	12.8	20.8	N/A	-	23.0	2.2
	46	5230	13.1	21.1	N/A	-	23.0	1.9

WLAN ac-Mode; 20 MHz; MCS 0; SISO

U-NII-Subband	Ch. No.	Freq. [MHz]	Cond. Power [dBm]	EIRP [dBm]	ISED Cond. Limit [dBm]	Margin [dB]	ISED EIRP Limit [dBm]	Margin [dB]
1	36	5180	12.1	20.1	N/A	-	22.5	2.3
	44	5220	12.5	20.5	N/A	-	22.5	2.0
	48	5240	12.3	20.3	N/A	-	22.5	2.1

WLAN ac-Mode; 40 MHz; MCS 0; SISO

U-NII-Subband	Ch. No.	Freq. [MHz]	Cond. Power [dBm]	EIRP [dBm]	ISED Cond. Limit [dBm]	Margin [dB]	ISED EIRP Limit [dBm]	Margin [dB]
1	38	5190	12.8	20.8	N/A	-	23.0	2.2
	46	5230	13.1	21.1	N/A	-	23.0	1.9

WLAN ac-Mode; 80 MHz; MCS 0; SISO

U-NII-Subband	Ch. No.	Freq. [MHz]	Cond. Power [dBm]	EIRP [dBm]	ISED Cond. Limit [dBm]	Margin [dB]	ISED EIRP Limit [dBm]	Margin [dB]
1	42	5210	12.7	20.7	N/A	-	23.0	2.3

WLAN ax-Mode; 20 MHz; MCS 0; SISO

U-NII-Subband	Ch. No.	Freq. [MHz]	Cond. Power [dBm]	EIRP [dBm]	ISED Cond. Limit [dBm]	Margin [dB]	ISED EIRP Limit [dBm]	Margin [dB]
1	36	5180	12.0	20.0	N/A	-	22.8	2.8
	44	5220	12.3	20.3	N/A	-	22.8	2.5
	48	5240	12.1	20.1	N/A	-	22.8	2.6

WLAN ax-Mode; 40 MHz; MCS 0; SISO

U-NII-Subband	Ch. No.	Freq. [MHz]	Cond. Power [dBm]	EIRP [dBm]	ISED Cond. Limit [dBm]	Margin [dB]	ISED EIRP Limit [dBm]	Margin [dB]
1	38	5190	12.5	20.5	N/A	-	23.0	2.5
	46	5230	12.8	20.8	N/A	-	23.0	2.2

WLAN ax-Mode; 80 MHz; MCS 0; SISO

U-NII-Subband	Ch. No.	Freq. [MHz]	Cond. Power [dBm]	EIRP [dBm]	ISED Cond. Limit [dBm]	Margin [dB]	ISED EIRP Limit [dBm]	Margin [dB]
1	42	5210	12.6	20.6	N/A	-	23.0	2.4

WLAN a-Mode; 20 MHz; 6 Mbit/s; Diversity

U-NII-Subband	Ch. No.	Freq. [MHz]	Cond. Power [dBm]	EIRP [dBm]	ISED Cond. Limit [dBm]	Margin [dB]	ISED EIRP Limit [dBm]	Margin [dB]
1	36	5180	12.5	20.5	N/A	-	22.1	1.6
	44	5220	12.9	20.9	N/A	-	22.1	1.2
	48	5240	12.3	20.3	N/A	-	22.1	1.8

WLAN n-Mode; 20 MHz; MCS 8; MIMO

U-NII-Subband	Ch. No.	Freq. [MHz]	Cond. Power [dBm]	EIRP [dBm]	ISED Cond. Limit [dBm]	Margin [dB]	ISED EIRP Limit [dBm]	Margin [dB]
1	36	5180	12.2	20.2	N/A	-	22.5	2.3
	44	5220	12.5	20.5	N/A	-	22.5	2.0
	48	5240	11.9	19.9	N/A	-	22.5	2.6

WLAN n-Mode; 40 MHz; MCS 8; MIMO

U-NII-Subband	Ch. No.	Freq. [MHz]	Cond. Power [dBm]	EIRP [dBm]	ISED Cond. Limit [dBm]	Margin [dB]	ISED EIRP Limit [dBm]	Margin [dB]
1	38	5190	13.0	21.0	N/A	-	23.0	2.0
	46	5230	13.3	21.3	N/A	-	23.0	1.7

WLAN ac-Mode; 20 MHz; MCS 0; MIMO

U-NII-Subband	Ch. No.	Freq. [MHz]	Cond. Power [dBm]	EIRP [dBm]	ISED Cond. Limit [dBm]	Margin [dB]	ISED EIRP Limit [dBm]	Margin [dB]
1	36	5180	12.1	20.1	N/A	-	22.5	2.4
	44	5220	12.6	20.6	N/A	-	22.5	1.9
	48	5240	12.2	20.2	N/A	-	22.5	2.3



WLAN ac-Mode; 40 MHz; MCS 0; MIMO

U-NII-Subband	Ch. No.	Freq. [MHz]	Cond. Power [dBm]	EIRP [dBm]	ISED Cond. Limit [dBm]	Margin [dB]	ISED EIRP Limit [dBm]	Margin [dB]
1	38	5190	12.9	20.9	N/A	-	23.0	2.1
	46	5230	13.3	21.3	N/A	-	23.0	1.7

WLAN ac-Mode; 80 MHz; MCS 0; MIMO

U-NII-Subband	Ch. No.	Freq. [MHz]	Cond. Power [dBm]	EIRP [dBm]	ISED Cond. Limit [dBm]	Margin [dB]	ISED EIRP Limit [dBm]	Margin [dB]
1	42	5210	12.9	20.9	N/A	-	23.0	2.1

WLAN ax-Mode; 20 MHz; MCS 0; MIMO

U-NII-Subband	Ch. No.	Freq. [MHz]	Cond. Power [dBm]	EIRP [dBm]	ISED Cond. Limit [dBm]	Margin [dB]	ISED EIRP Limit [dBm]	Margin [dB]
1	36	5180	12.0	20.0	N/A	-	22.8	2.8
	44	5220	12.4	20.4	N/A	-	22.8	2.4
	48	5240	12.0	20.0	N/A	-	22.8	2.8

WLAN ax-Mode; 40 MHz; MCS 0; MIMO

U-NII-Subband	Ch. No.	Freq. [MHz]	Cond. Power [dBm]	EIRP [dBm]	ISED Cond. Limit [dBm]	Margin [dB]	ISED EIRP Limit [dBm]	Margin [dB]
1	38	5190	12.6	20.6	N/A	-	23.0	2.4
	46	5230	12.8	20.8	N/A	-	23.0	2.2

WLAN ax-Mode; 80 MHz; MCS 0; MIMO

U-NII-Subband	Ch. No.	Freq. [MHz]	Cond. Power [dBm]	EIRP [dBm]	ISED Cond. Limit [dBm]	Margin [dB]	ISED EIRP Limit [dBm]	Margin [dB]
1	42	5210	12.6	20.6	N/A	-	23.0	2.4

**Power setting Antenna ≤ 9 dBi gain:**

**FCC band 1 + 3 and ISED U-NII band 3 power setting:**

WLAN a-Mode; 20 MHz; 6 Mbit/s

U-NII-band	Ch. No.	Freq. [MHz]	Cond. Power [dBm]	EIRP [dBm]	FCC Cond. Limit [dBm]	Margin [dB]	FCC EIRP Limit [dBm]	Margin [dB]	ISED Cond. Limit [dBm]	Margin [dB]	ISED EIRP Limit [dBm]	Margin [dB]	
1	36	5180	19.7	28.7	21.0	1.3	30.0	1.3	N/A	-	22.1	N/A	2)
	44	5220	19.4	28.4	21.0	1.6	30.0	1.6	N/A	-	22.1	N/A	2)
	48	5240	19.6	28.6	21.0	1.4	30.0	1.4	N/A	-	22.1	N/A	2)
3	149	5745	19.7	28.7	27.0	7.3	36.0	7.3	27.0	7.3	36.0	7.3	
	157	5785	19.4	28.4	27.0	7.6	36.0	7.6	27.0	7.6	36.0	7.6	
	165	5825	19.6	28.6	27.0	7.4	36.0	7.4	27.0	7.4	36.0	7.4	

WLAN n-Mode; 20 MHz; MCS 0; SISO

U-NII-band	Ch. No.	Freq. [MHz]	Cond. Power [dBm]	EIRP [dBm]	FCC Cond. Limit [dBm]	Margin [dB]	FCC EIRP Limit [dBm]	Margin [dB]	ISED Cond. Limit [dBm]	Margin [dB]	ISED EIRP Limit [dBm]	Margin [dB]	
1	36	5180	18.8	27.8	21.0	2.2	30.0	2.2	N/A	-	22.5	N/A	2)
	44	5220	19.2	28.2	21.0	1.8	30.0	1.8	N/A	-	22.5	N/A	2)
	48	5240	18.9	27.9	21.0	2.1	30.0	2.1	N/A	-	22.5	N/A	2)
3	149	5745	19.2	28.2	27.0	7.8	36.0	7.8	27.0	7.8	36.0	7.8	
	157	5785	19.0	28.0	27.0	8.0	36.0	8.0	27.0	8.0	36.0	8.0	
	165	5825	19.3	28.3	27.0	7.7	36.0	7.7	27.0	7.7	36.0	7.7	

WLAN n-Mode; 40 MHz; MCS 0; SISO

U-NII-band	Ch. No.	Freq. [MHz]	Cond. Power [dBm]	EIRP [dBm]	FCC Cond. Limit [dBm]	Margin [dB]	FCC EIRP Limit [dBm]	Margin [dB]	ISED Cond. Limit [dBm]	Margin [dB]	ISED EIRP Limit [dBm]	Margin [dB]	
1	38	5190	16.8	25.8	21.0	4.2	30.0	4.2	N/A	-	23.0	N/A	2)
	46	5230	20.0	29.0	21.0	1.0	30.0	1.0	N/A	-	23.0	N/A	2)
3	151	5755	20.5	29.5	27.0	6.5	36.0	6.5	27.0	6.5	36.0	6.5	
	159	5795	20.3	29.3	27.0	6.7	36.0	6.7	27.0	6.7	36.0	6.7	

WLAN ac-Mode; 20 MHz; MCS 0; SISO

U-NII-band	Ch. No.	Freq. [MHz]	Cond. Power [dBm]	EIRP [dBm]	FCC Cond. Limit [dBm]	Margin [dB]	FCC EIRP Limit [dBm]	Margin [dB]	ISED Cond. Limit [dBm]	Margin [dB]	ISED EIRP Limit [dBm]	Margin [dB]	
1	36	5180	19.9	28.9	21.0	1.1	30.0	1.1	N/A	-	22.5	N/A	2)
	44	5220	19.3	28.3	21.0	1.7	30.0	1.7	N/A	-	22.5	N/A	2)
	48	5240	19.1	28.1	21.0	1.9	30.0	1.9	N/A	-	22.5	N/A	2)
3	149	5745	19.4	28.4	27.0	7.6	36.0	7.6	27.0	7.6	36.0	7.6	
	157	5785	19.2	28.2	27.0	7.8	36.0	7.8	27.0	7.8	36.0	7.8	
	165	5825	19.3	28.3	27.0	7.7	36.0	7.7	27.0	7.7	36.0	7.7	

WLAN ac-Mode; 40 MHz; MCS 0; SISO

U-NII-band	Ch. No.	Freq. [MHz]	Cond. Power [dBm]	EIRP [dBm]	FCC Cond. Limit [dBm]	Margin [dB]	FCC EIRP Limit [dBm]	Margin [dB]	ISED Cond. Limit [dBm]	Margin [dB]	ISED EIRP Limit [dBm]	Margin [dB]	
1	38	5190	16.8	25.8	21.0	4.2	30.0	4.2	N/A	-	23.0	N/A	2)
	46	5230	19.8	28.8	21.0	1.2	30.0	1.2	N/A	-	23.0	N/A	2)
3	151	5755	20.5	29.5	27.0	6.5	36.0	6.5	27.0	6.5	36.0	6.5	
	159	5795	20.3	29.3	27.0	6.7	36.0	6.7	27.0	6.7	36.0	6.7	

WLAN ac-Mode; 80 MHz; MCS 0; SISO

U-NII-band	Ch. No.	Freq. [MHz]	Cond. Power [dBm]	EIRP [dBm]	FCC Cond. Limit [dBm]	Margin [dB]	FCC EIRP Limit [dBm]	Margin [dB]	ISED Cond. Limit [dBm]	Margin [dB]	ISED EIRP Limit [dBm]	Margin [dB]	
1	42	5210	16.6	25.6	21.0	4.4	30.0	4.4	N/A	-	23.0	N/A	2)
3	155	5775	17.8	26.8	27.0	9.2	36.0	9.2	27.0	9.2	36.0	9.2	

WLAN ax-Mode; 20 MHz; MCS 0; SISO

U-NII-band	Ch. No.	Freq. [MHz]	Cond. Power [dBm]	EIRP [dBm]	FCC Cond. Limit [dBm]	Margin [dB]	FCC EIRP Limit [dBm]	Margin [dB]	ISED Cond. Limit [dBm]	Margin [dB]	ISED EIRP Limit [dBm]	Margin [dB]	
1	36	5180	18.8	27.8	21.0	2.2	30.0	2.2	N/A	-	22.8	N/A	2)
	44	5220	19.2	28.2	21.0	1.8	30.0	1.8	N/A	-	22.8	N/A	2)
	48	5240	18.9	27.9	21.0	2.1	30.0	2.1	N/A	-	22.8	N/A	2)
3	149	5745	19.2	28.2	27.0	7.8	36.0	7.8	27.0	7.8	36.0	7.8	
	157	5785	18.9	27.9	27.0	8.1	36.0	8.1	27.0	8.1	36.0	8.1	
	165	5825	19.1	28.1	27.0	7.9	36.0	7.9	27.0	7.9	36.0	7.9	

WLAN ax-Mode; 40 MHz; MCS 0; SISO

U-NII-band	Ch. No.	Freq. [MHz]	Cond. Power [dBm]	EIRP [dBm]	FCC Cond. Limit [dBm]	Margin [dB]	FCC EIRP Limit [dBm]	Margin [dB]	ISED Cond. Limit [dBm]	Margin [dB]	ISED EIRP Limit [dBm]	Margin [dB]	
1	38	5190	16.4	25.4	21.0	4.6	30.0	4.6	N/A	-	23.0	N/A	2)
	46	5230	19.5	28.5	21.0	1.5	30.0	1.5	N/A	-	23.0	N/A	2)
3	151	5755	20.1	29.1	27.0	6.9	36.0	6.9	27.0	6.9	36.0	6.9	
	159	5795	19.9	28.9	27.0	7.1	36.0	7.1	27.0	7.1	36.0	7.1	

WLAN ax-Mode; 80 MHz; MCS 0; SISO

U-NII-band	Ch. No.	Freq. [MHz]	Cond. Power [dBm]	EIRP [dBm]	FCC Cond. Limit [dBm]	Margin [dB]	FCC EIRP Limit [dBm]	Margin [dB]	ISED Cond. Limit [dBm]	Margin [dB]	ISED EIRP Limit [dBm]	Margin [dB]	
1	42	5210	16.4	25.4	21.0	4.6	30.0	4.6	N/A	-	23.0	N/A	2)
3	155	5775	17.6	26.6	27.0	9.4	36.0	9.4	27.0	9.4	36.0	9.4	

WLAN a-Mode; 20 MHz; 6 Mbit/s; Diversity

U-NII-band	Ch. No.	Freq. [MHz]	Cond. Power [dBm]	EIRP [dBm]	FCC Cond. Limit [dBm]	Margin [dB]	FCC EIRP Limit [dBm]	Margin [dB]	ISED Cond. Limit [dBm]	Margin [dB]	ISED EIRP Limit [dBm]	Margin [dB]	
1	36	5180	19.4	28.4	21.0	1.6	30.0	1.6	N/A	-	22.1	N/A	2)
	44	5220	18.7	27.7	21.0	2.3	30.0	2.3	N/A	-	22.1	N/A	2)
	48	5240	19.3	28.3	21.0	1.7	30.0	1.7	N/A	-	22.1	N/A	2)
3	149	5745	22.4	31.4	27.0	4.6	36.0	4.6	27.0	4.6	36.0	4.6	
	157	5785	22.2	31.2	27.0	4.8	36.0	4.8	27.0	4.8	36.0	4.8	
	165	5825	22.4	31.4	27.0	4.6	36.0	4.6	27.0	4.6	36.0	4.6	

WLAN n-Mode; 20 MHz; MCS 8; MIMO

U-NII-band	Ch. No.	Freq. [MHz]	Cond. Power [dBm]	EIRP [dBm]	FCC Cond. Limit [dBm]	Margin [dB]	FCC EIRP Limit [dBm]	Margin [dB]	ISED Cond. Limit [dBm]	Margin [dB]	ISED EIRP Limit [dBm]	Margin [dB]	
1	36	5180	18.9	27.9	21.0	2.1	30.0	2.1	N/A	-	22.5	N/A	2)
	44	5220	19.3	28.3	21.0	1.7	30.0	1.7	N/A	-	22.5	N/A	2)
	48	5240	18.8	27.8	21.0	2.2	30.0	2.2	N/A	-	22.5	N/A	2)
3	149	5745	22.0	31.0	27.0	5.0	36.0	5.0	27.0	5.0	36.0	5.0	
	157	5785	21.8	30.8	27.0	5.2	36.0	5.2	27.0	5.2	36.0	5.2	
	165	5825	21.9	30.9	27.0	5.1	36.0	5.1	27.0	5.1	36.0	5.1	

WLAN n-Mode; 40 MHz; MCS 8; MIMO

U-NII-band	Ch. No.	Freq. [MHz]	Cond. Power [dBm]	EIRP [dBm]	FCC Cond. Limit [dBm]	Margin [dB]	FCC EIRP Limit [dBm]	Margin [dB]	ISED Cond. Limit [dBm]	Margin [dB]	ISED EIRP Limit [dBm]	Margin [dB]	
1	38	5190	16.8	25.8	21.0	4.2	30.0	4.2	N/A	-	23.0	N/A	2)
	46	5230	20.9	29.9	21.0	0.1	30.0	0.1	N/A	-	23.0	N/A	2)
3	151	5755	23.1	32.1	27.0	3.9	36.0	3.9	27.0	3.9	36.0	3.9	
	159	5795	23.0	32.0	27.0	4.0	36.0	4.0	27.0	4.0	36.0	4.0	

WLAN ac-Mode; 20 MHz; MCS 0; MIMO

U-NII-band	Ch. No.	Freq. [MHz]	Cond. Power [dBm]	EIRP [dBm]	FCC Cond. Limit [dBm]	Margin [dB]	FCC EIRP Limit [dBm]	Margin [dB]	ISED Cond. Limit [dBm]	Margin [dB]	ISED EIRP Limit [dBm]	Margin [dB]	
1	36	5180	18.9	27.9	21.0	2.1	30.0	2.1	N/A	-	22.5	N/A	2)
	44	5220	19.3	28.3	21.0	1.7	30.0	1.7	N/A	-	22.5	N/A	2)
	48	5240	18.8	27.8	21.0	2.2	30.0	2.2	N/A	-	22.5	N/A	2)
3	149	5745	22.0	31.0	27.0	5.0	36.0	5.0	27.0	5.0	36.0	5.0	
	157	5785	21.7	30.7	27.0	5.3	36.0	5.3	27.0	5.3	36.0	5.3	
	165	5825	22.2	31.2	27.0	4.8	36.0	4.8	27.0	4.8	36.0	4.8	

WLAN ac-Mode; 40 MHz; MCS 0; MIMO

U-NII-band	Ch. No.	Freq. [MHz]	Cond. Power [dBm]	EIRP [dBm]	FCC Cond. Limit [dBm]	Margin [dB]	FCC EIRP Limit [dBm]	Margin [dB]	ISED Cond. Limit [dBm]	Margin [dB]	ISED EIRP Limit [dBm]	Margin [dB]	
1	38	5190	16.0	25.0	21.0	5.0	30.0	5.0	N/A	-	23.0	N/A	2)
	46	5230	20.9	29.9	21.0	0.1	30.0	0.1	N/A	-	23.0	N/A	2)
3	151	5755	23.2	32.2	27.0	3.8	36.0	3.8	27.0	3.8	36.0	3.8	
	159	5795	23.1	32.1	27.0	3.9	36.0	3.9	27.0	3.9	36.0	3.9	

WLAN ac-Mode; 80 MHz; MCS 0; MIMO

U-NII-band	Ch. No.	Freq. [MHz]	Cond. Power [dBm]	EIRP [dBm]	FCC Cond. Limit [dBm]	Margin [dB]	FCC EIRP Limit [dBm]	Margin [dB]	ISED Cond. Limit [dBm]	Margin [dB]	ISED EIRP Limit [dBm]	Margin [dB]	
1	42	5210	16.7	25.7	21.0	4.3	30.0	4.3	N/A	-	23.0	N/A	2)
3	155	5775	26.0	35.0	27.0	1.0	36.0	1.0	27.0	1.0	36.0	1.0	

WLAN ax-Mode; 20 MHz; MCS 0; MIMO

U-NII-band	Ch. No.	Freq. [MHz]	Cond. Power [dBm]	EIRP [dBm]	FCC Cond. Limit [dBm]	Margin [dB]	FCC EIRP Limit [dBm]	Margin [dB]	ISED Cond. Limit [dBm]	Margin [dB]	ISED EIRP Limit [dBm]	Margin [dB]	
1	36	5180	18.8	27.8	21.0	2.2	30.0	2.2	N/A	-	22.8	N/A	2)
	44	5220	19.2	28.2	21.0	1.8	30.0	1.8	N/A	-	22.8	N/A	2)
	48	5240	18.7	27.7	21.0	2.3	30.0	2.3	N/A	-	22.8	N/A	2)
3	149	5745	21.7	30.7	27.0	5.3	36.0	5.3	27.0	5.3	36.0	5.3	
	157	5785	21.6	30.6	27.0	5.4	36.0	5.4	27.0	5.4	36.0	5.4	
	165	5825	21.8	30.8	27.0	5.2	36.0	5.2	27.0	5.2	36.0	5.2	

WLAN ax-Mode; 40 MHz; MCS 0; MIMO

U-NII-band	Ch. No.	Freq. [MHz]	Cond. Power [dBm]	EIRP [dBm]	FCC Cond. Limit [dBm]	Margin [dB]	FCC EIRP Limit [dBm]	Margin [dB]	ISED Cond. Limit [dBm]	Margin [dB]	ISED EIRP Limit [dBm]	Margin [dB]	
1	38	5190	16.4	25.4	21.0	4.6	30.0	4.6	N/A	-	23.0	N/A	2)
	46	5230	20.4	29.4	21.0	0.6	30.0	0.6	N/A	-	23.0	N/A	2)
3	151	5755	22.7	31.7	27.0	4.3	36.0	4.3	27.0	4.3	36.0	4.3	
	159	5795	22.6	31.6	27.0	4.4	36.0	4.4	27.0	4.4	36.0	4.4	

WLAN ax-Mode; 80 MHz; MCS 0; MIMO

U-NII-band	Ch. No.	Freq. [MHz]	Cond. Power [dBm]	EIRP [dBm]	FCC Cond. Limit [dBm]	Margin [dB]	FCC EIRP Limit [dBm]	Margin [dB]	ISED Cond. Limit [dBm]	Margin [dB]	ISED EIRP Limit [dBm]	Margin [dB]	
1	42	5210	16.5	25.5	21.0	4.5	30.0	4.5	N/A	-	23.0	N/A	2)
3	155	5775	20.5	29.5	27.0	6.5	36.0	6.5	27.0	6.5	36.0	6.5	

**Power setting Antenna ≤ 9 dBi gain:  
ISED U-NII band 1 power setting:**

WLAN a-Mode; 20 MHz; 6 Mbit/s

U-NII-Subband	Ch. No.	Freq. [MHz]	Cond. Power [dBm]	EIRP [dBm]	ISED Cond. Limit [dBm]	Margin [dB]	ISED EIRP Limit [dBm]	Margin [dB]
1	36	5180	11.4	20.4	N/A	-	22.1	1.8
	44	5220	11.9	20.9	N/A	-	22.1	1.3
	48	5240	11.5	20.5	N/A	-	22.1	1.6

WLAN n-Mode; 20 MHz; MCS 0; SISO

U-NII-Subband	Ch. No.	Freq. [MHz]	Cond. Power [dBm]	EIRP [dBm]	ISED Cond. Limit [dBm]	Margin [dB]	ISED EIRP Limit [dBm]	Margin [dB]
1	36	5180	11.1	20.1	N/A	-	22.5	2.4
	44	5220	11.5	20.5	N/A	-	22.5	1.9
	48	5240	11.3	20.3	N/A	-	22.5	2.2

WLAN n-Mode; 40 MHz; MCS 0; SISO

U-NII-Subband	Ch. No.	Freq. [MHz]	Cond. Power [dBm]	EIRP [dBm]	ISED Cond. Limit [dBm]	Margin [dB]	ISED EIRP Limit [dBm]	Margin [dB]
1	38	5190	11.9	20.9	N/A	-	23.0	2.1
	46	5230	12.1	21.1	N/A	-	23.0	1.9

WLAN ac-Mode; 20 MHz; MCS 0; SISO

U-NII-Subband	Ch. No.	Freq. [MHz]	Cond. Power [dBm]	EIRP [dBm]	ISED Cond. Limit [dBm]	Margin [dB]	ISED EIRP Limit [dBm]	Margin [dB]
1	36	5180	11.1	20.1	N/A	-	22.5	2.4
	44	5220	11.5	20.5	N/A	-	22.5	2.0
	48	5240	11.3	20.3	N/A	-	22.5	2.1

WLAN ac-Mode; 40 MHz; MCS 0; SISO

U-NII-Subband	Ch. No.	Freq. [MHz]	Cond. Power [dBm]	EIRP [dBm]	ISED Cond. Limit [dBm]	Margin [dB]	ISED EIRP Limit [dBm]	Margin [dB]
1	38	5190	11.8	20.8	N/A	-	23.0	2.2
	46	5230	12.2	21.2	N/A	-	23.0	1.8

WLAN ac-Mode; 80 MHz; MCS 0; SISO

U-NII-Subband	Ch. No.	Freq. [MHz]	Cond. Power [dBm]	EIRP [dBm]	ISED Cond. Limit [dBm]	Margin [dB]	ISED EIRP Limit [dBm]	Margin [dB]
1	42	5210	11.5	20.5	N/A	-	23.0	2.5

WLAN ax-Mode; 20 MHz; MCS 0; SISO

U-NII-Subband	Ch. No.	Freq. [MHz]	Cond. Power [dBm]	EIRP [dBm]	ISED Cond. Limit [dBm]	Margin [dB]	ISED EIRP Limit [dBm]	Margin [dB]
1	36	5180	10.9	19.9	N/A	-	22.8	2.8
	44	5220	11.4	20.4	N/A	-	22.8	2.3
	48	5240	11.1	20.1	N/A	-	22.8	2.7

WLAN ax-Mode; 40 MHz; MCS 0; SISO

U-NII-Subband	Ch. No.	Freq. [MHz]	Cond. Power [dBm]	EIRP [dBm]	ISED Cond. Limit [dBm]	Margin [dB]	ISED EIRP Limit [dBm]	Margin [dB]
1	38	5190	11.3	20.3	N/A	-	23.0	2.7
	46	5230	11.7	20.7	N/A	-	23.0	2.3

WLAN ax-Mode; 80 MHz; MCS 0; SISO

U-NII-Subband	Ch. No.	Freq. [MHz]	Cond. Power [dBm]	EIRP [dBm]	ISED Cond. Limit [dBm]	Margin [dB]	ISED EIRP Limit [dBm]	Margin [dB]
1	42	5210	11.4	20.4	N/A	-	23.0	2.6

WLAN a-Mode; 20 MHz; 6 Mbit/s; Diversity

U-NII-Subband	Ch. No.	Freq. [MHz]	Cond. Power [dBm]	EIRP [dBm]	ISED Cond. Limit [dBm]	Margin [dB]	ISED EIRP Limit [dBm]	Margin [dB]
1	36	5180	11.4	20.4	N/A	-	22.1	1.7
	44	5220	11.8	20.8	N/A	-	22.1	1.3
	48	5240	11.5	20.5	N/A	-	22.1	1.6

WLAN n-Mode; 20 MHz; MCS 8; MIMO

U-NII-Subband	Ch. No.	Freq. [MHz]	Cond. Power [dBm]	EIRP [dBm]	ISED Cond. Limit [dBm]	Margin [dB]	ISED EIRP Limit [dBm]	Margin [dB]
1	36	5180	11.1	20.1	N/A	-	22.5	2.4
	44	5220	11.6	20.6	N/A	-	22.5	1.9
	48	5240	11.2	20.2	N/A	-	22.5	2.3

WLAN n-Mode; 40 MHz; MCS 8; MIMO

U-NII-Subband	Ch. No.	Freq. [MHz]	Cond. Power [dBm]	EIRP [dBm]	ISED Cond. Limit [dBm]	Margin [dB]	ISED EIRP Limit [dBm]	Margin [dB]
1	38	5190	11.9	20.9	N/A	-	23.0	2.1
	46	5230	12.2	21.2	N/A	-	23.0	1.8

WLAN ac-Mode; 20 MHz; MCS 0; MIMO

U-NII-Subband	Ch. No.	Freq. [MHz]	Cond. Power [dBm]	EIRP [dBm]	ISED Cond. Limit [dBm]	Margin [dB]	ISED EIRP Limit [dBm]	Margin [dB]
1	36	5180	11.3	20.3	N/A	-	22.5	2.2
	44	5220	11.6	20.6	N/A	-	22.5	1.9
	48	5240	11.3	20.3	N/A	-	22.5	2.2

WLAN ac-Mode; 40 MHz; MCS 0; MIMO

U-NII-Subband	Ch. No.	Freq. [MHz]	Cond. Power [dBm]	EIRP [dBm]	ISED Cond. Limit [dBm]	Margin [dB]	ISED EIRP Limit [dBm]	Margin [dB]
1	38	5190	11.9	20.9	N/A	-	23.0	2.1
	46	5230	12.1	21.1	N/A	-	23.0	1.9

WLAN ac-Mode; 80 MHz; MCS 0; MIMO

U-NII-Subband	Ch. No.	Freq. [MHz]	Cond. Power [dBm]	EIRP [dBm]	ISED Cond. Limit [dBm]	Margin [dB]	ISED EIRP Limit [dBm]	Margin [dB]
1	42	5210	11.8	20.8	N/A	-	23.0	2.2

WLAN ax-Mode; 20 MHz; MCS 0; MIMO

U-NII-Subband	Ch. No.	Freq. [MHz]	Cond. Power [dBm]	EIRP [dBm]	ISED Cond. Limit [dBm]	Margin [dB]	ISED EIRP Limit [dBm]	Margin [dB]
1	36	5180	11.1	20.1	N/A	-	22.8	2.7
	44	5220	11.5	20.5	N/A	-	22.8	2.3
	48	5240	11.2	20.2	N/A	-	22.8	2.6

WLAN ax-Mode; 40 MHz; MCS 0; MIMO

U-NII-Subband	Ch. No.	Freq. [MHz]	Cond. Power [dBm]	EIRP [dBm]	ISED Cond. Limit [dBm]	Margin [dB]	ISED EIRP Limit [dBm]	Margin [dB]
1	38	5190	11.5	20.5	N/A	-	23.0	2.5
	46	5230	11.8	20.8	N/A	-	23.0	2.2

WLAN ax-Mode; 80 MHz; MCS 0; MIMO

U-NII-Subband	Ch. No.	Freq. [MHz]	Cond. Power [dBm]	EIRP [dBm]	ISED Cond. Limit [dBm]	Margin [dB]	ISED EIRP Limit [dBm]	Margin [dB]
1	42	5210	11.6	20.6	N/A	-	23.0	2.4

Remark: Since all measurements have been performed with a gated power meter (signal bandwidth > 300 MHz) no plots are available.

- 1) No additional limit regarding the elevation applies.
- 2) Additional limit regarding the elevation applies.

#### 5.5.4 TEST EQUIPMENT USED

- R&S TS8997

## 5.6 PEAK POWER SPECTRAL DENSITY

Standard **FCC Part 15 Subpart E**

**The test was performed according to:**

ANSI C63.10, chapter 12.5 (SA-3)

### 5.6.1 TEST DESCRIPTION

The Equipment Under Test (EUT) was set up in a shielded room to perform the Maximum Power Spectral Density measurements.

The results recorded were measured with the modulation which produces the worst-case (highest) output power.

For U-NII bands 1, 2A, 2C, 3:

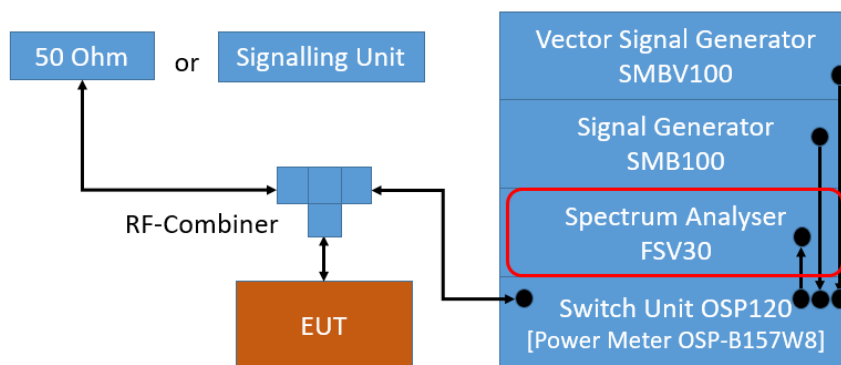
The EUT was connected to the test system as described in the block diagram below. The complete attenuation of the measurement path is known and considered.

Analyzer settings:

- Resolution Bandwidth (RBW): 1 MHz (for subband 3: 500 kHz)
- Video Bandwidth (VBW): 3 MHz (for subband 3: 2 MHz)
- Trace: Max Hold
- Sweeps: till stable (at least 180, max. 900)
- Sweep time:  $\leq$  Number of sweep points x Min. Transmitter on time
- Detector: RMS
- Trigger: free run

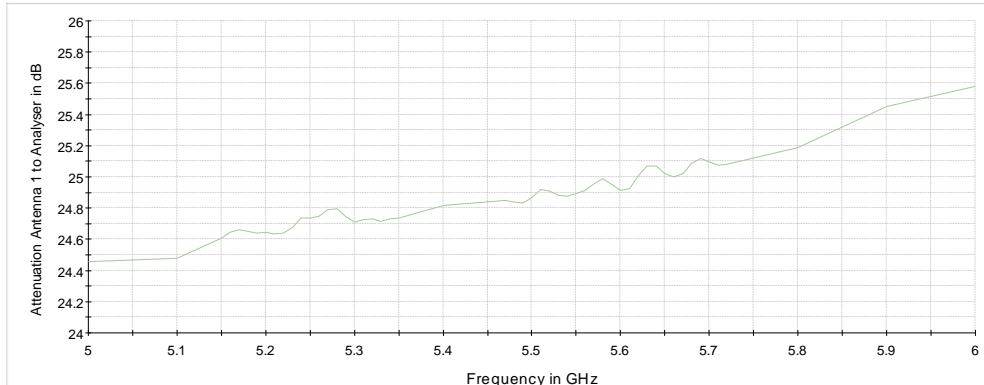
Note:

The analyser settings are according FCC Public Note "Guidelines for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices - Part 15, Subpart E, 789033 D02", method **SA-3**.



TS8997; Maximum Power Spectral Density





### Attenuation of the measurement path

For U-NII bands 5, 6, 7, 8:

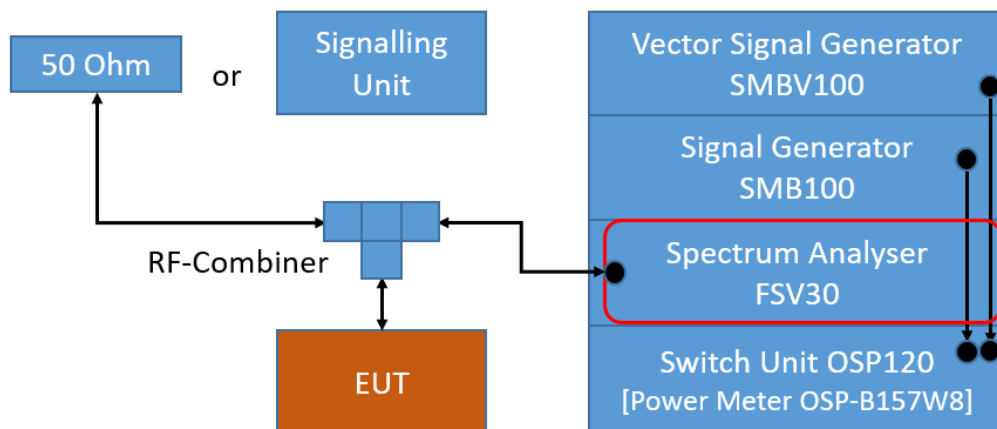
The EUT was connected to the test system as described in the block diagram below. The complete attenuation of the measurement path is known and considered.

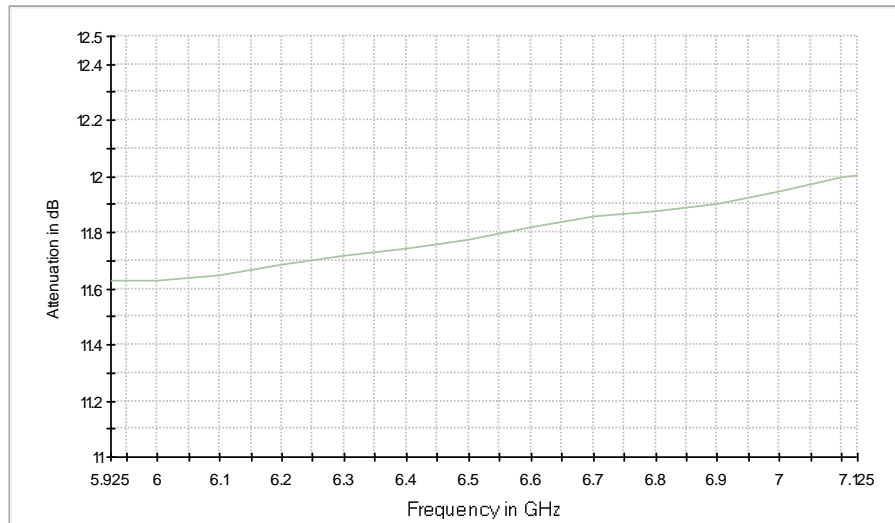
Analyzer settings:

- Resolution Bandwidth (RBW): 1 MHz
- Video Bandwidth (VBW): 3 MHz
- Trace: Average, RMS power averaging mode
- Sweeps: at least 100
- Sweptime: Auto
- Detector: RMS
- Trigger: free run (DC >98 %) or gated mode (DC < 98 %)

Note:

The analyser settings are according FCC Public Note "Guidelines for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices - Part 15, Subpart E, 789033 D02", method **SA-1**.





Attenuation of measurement path

## 5.6.2 TEST REQUIREMENTS / LIMITS

### A) FCC

FCC Part 15, Subpart E, §15.407 (a) (1)

For systems using digital modulation techniques in the 5.15 – 5.25 GHz bands:

(i) and (ii), outdoor and indoor access points: Limit: 17 dBm/MHz.

(iv), mobile and portable client devices: Limit: 11 dBm/MHz.

FCC Part 15, Subpart E, §15.407 (a) (2)

For systems using digital modulation techniques in the 5.25 – 5.35 GHz and 5.47 – 5.725 GHz bands:

Limit: 11 dBm/MHz.

FCC Part 15, Subpart E, §15.407 (a) (3)

For systems using digital modulation techniques in the 5.725 – 5.850 GHz bands:

Limit: 30 dBm/500 kHz.

FCC Part 15, Subpart E, §15.407 (a) (4):

For a standard power access point and fixed client devices in the 5.925 – 6.425 GHz and 6.525 – 6.875 GHz bands:

Limit: 23 dBm/MHz e.i.r.p.

FCC Part 15, Subpart E, §15.407 (a) (5):

For an indoor access point in the 5.925 – 7.125 GHz bands:

Limit: 5 dBm/MHz e.i.r.p.

FCC Part 15, Subpart E, §15.407 (a) (6):

For a subordinate device operating under an indoor access point in the 5.925 – 7.125 GHz bands:

Limit: 5 dBm/MHz e.i.r.p.

FCC Part 15, Subpart E, §15.407 (a) (7):

For a client device, except for fixed client devices, operating under standard power access point in the 5.925-6.425 GHz and 6.525-6.875 GHz bands:  
Limit: 17 dBm/MHz e.i.r.p.

FCC Part 15, Subpart E, §15.407 (a) (8):

For client devices operating under the control of an indoor access point in the 5.925 – 7.125 GHz bands:  
Limit: -1 dBm/MHz e.i.r.p.

## **B) IC**

Different frequency bands and limits apply, as compared to the FCC requirements.

RSS-247, 6.2.1 (1), Band 5150-5250 MHz, indoor operation only:  
Limit (e.i.r.p.): 10 dBm/MHz.

RSS-247, 6.2.2 (1), Band 5250-5350 MHz:  
Limit: 11 dBm/MHz.

RSS-247, 6.2.3 (1), Bands 5470-5600 MHz and 5650-5725 MHz:  
Limit: 11 dBm/MHz.

RSS-247, 6.2.4 (1), Band 5725-5850 MHz:  
Limit: 30 dBm/500 kHz.

### 5.6.3 TEST PROTOCOL

#### Power setting Antenna $\leq 8$ dBi gain: FCC band 1 + 3 and ISED U-NII band 3 power setting:

Ambient temperature: 25 °C  
 Air Pressure: 1013 hPa  
 Humidity: 44 %  
 WLAN a-Mode; 20 MHz; 6 Mbit/s

U-NII-band	Ch. No.	Freq. [MHz]	MPSD [dBm/MHz]	E.I.R.P MPSD [dBm/MHz]	FCC Limit [dBm/MHz] or [dBm/500kHz] (U-NII-3)	Margin [dB]	ISED Limit [dBm/MHz] or [dBm/500kHz] (U-NII-3)	Margin [dB]	ISED E.I.R.P limit [dBm/MHz] or [dBm/500kHz] (U-NII-3)	Margin [dB]
1	36	5180	7.5	15.5	9.0	1.5	N/A	-	10.0	N/A
	44	5220	7.9	15.9	9.0	1.1	N/A	-	10.0	N/A
	48	5240	7.6	15.6	9.0	1.4	N/A	-	10.0	N/A
3	149	5745	4.9	12.9	28.0	23.1	28.0	23.1	N/A	-
	157	5785	4.7	12.7	28.0	23.3	28.0	23.3	N/A	-
	165	5825	4.9	12.9	28.0	23.2	28.0	23.2	N/A	-

WLAN n-Mode; 20 MHz; MCS 0; SISO

U-NII-band	Ch. No.	Freq. [MHz]	MPSD [dBm/MHz]	E.I.R.P MPSD [dBm/MHz]	FCC Limit [dBm/MHz] or [dBm/500kHz] (U-NII-3)	Margin [dB]	ISED Limit [dBm/MHz] or [dBm/500kHz] (U-NII-3)	Margin [dB]	ISED E.I.R.P limit [dBm/MHz] or [dBm/500kHz] (U-NII-3)	Margin [dB]
1	36	5180	6.8	14.8	9.0	2.2	N/A	-	10.0	N/A
	44	5220	7.2	15.2	9.0	1.8	N/A	-	10.0	N/A
	48	5240	7.0	15.0	9.0	2.0	N/A	-	10.0	N/A
3	149	5745	4.2	12.2	28.0	23.8	28.0	23.8	N/A	-
	157	5785	3.9	11.9	28.0	24.1	28.0	24.1	N/A	-
	165	5825	4.1	12.1	28.0	23.9	28.0	23.9	N/A	-

WLAN n-Mode; 40 MHz; MCS 0; SISO

U-NII-band	Ch. No.	Freq. [MHz]	MPSD [dBm/MHz]	E.I.R.P MPSD [dBm/MHz]	FCC Limit [dBm/MHz] or [dBm/500kHz] (U-NII-3)	Margin [dB]	ISED Limit [dBm/MHz] or [dBm/500kHz] (U-NII-3)	Margin [dB]	ISED E.I.R.P limit [dBm/MHz] or [dBm/500kHz] (U-NII-3)	Margin [dB]
1	38	5190	4.7	12.7	9.0	4.3	N/A	-	10.0	N/A
	46	5230	5.0	13.0	9.0	4.0	N/A	-	10.0	N/A
3	151	5755	2.4	10.4	28.0	25.6	28.0	25.6	N/A	-
	159	5795	2.1	10.1	28.0	25.9	28.0	25.9	N/A	-

WLAN ac-Mode; 20 MHz; MCS 0; SISO

U-NII-band	Ch. No.	Freq. [MHz]	MPSD [dBm/MHz]	E.I.R.P MPSD [dBm/MHz]	FCC Limit [dBm/MHz] or [dBm/500kHz] (U-NII-3)	Margin [dB]	ISED Limit [dBm/MHz] or [dBm/500kHz] (U-NII-3)	Margin [dB]	ISED E.I.R.P limit [dBm/MHz] or [dBm/500kHz] (U-NII-3)	Margin [dB]
1	36	5180	6.8	14.8	9.0	2.2	N/A	-	10.0	N/A
	44	5220	7.1	15.1	9.0	1.9	N/A	-	10.0	N/A
	48	5240	7.0	15.0	9.0	2.0	N/A	-	10.0	N/A
3	149	5745	4.3	12.3	28.0	23.7	28.0	23.7	N/A	-
	157	5785	4.1	12.1	28.0	23.9	28.0	23.9	N/A	-
	165	5825	4.2	12.2	28.0	23.8	28.0	23.8	N/A	-

WLAN ac-Mode; 40 MHz; MCS 0; SISO

U-NII-band	Ch. No.	Freq. [MHz]	MPSD [dBm/MHz]	E.I.R.P MPSD [dBm/MHz]	FCC Limit [dBm/MHz] or [dBm/500kHz] (U-NII-3)	Margin [dB]	ISED Limit [dBm/MHz] or [dBm/500kHz] (U-NII-3)	Margin [dB]	ISED E.I.R.P limit [dBm/MHz] or [dBm/500kHz] (U-NII-3)	Margin [dB]
1	38	5190	4.3	12.3	9.0	4.7	N/A	-	10.0	N/A
	46	5230	4.7	12.7	9.0	4.3	N/A	-	10.0	N/A
3	151	5755	2.5	10.5	28.0	25.5	28.0	25.5	N/A	-
	159	5795	2.3	10.3	28.0	25.7	28.0	25.7	N/A	-

WLAN ac-Mode; 80 MHz; MCS 0; SISO

U-NII-band	Ch. No.	Freq. [MHz]	MPSD [dBm/MHz]	E.I.R.P MPSD [dBm/MHz]	FCC Limit [dBm/MHz] or [dBm/500kHz] (U-NII-3)	Margin [dB]	ISED Limit [dBm/MHz] or [dBm/500kHz] (U-NII-3)	Margin [dB]	ISED E.I.R.P limit [dBm/MHz] or [dBm/500kHz] (U-NII-3)	Margin [dB]
1	42	5210	2.0	10.0	9.0	7.0	N/A	-	10.0	N/A
3	155	5775	3.8	11.8	28.0	24.2	28.0	24.2	N/A	-

WLAN ax-Mode; 20 MHz; MCS 0; SISO

U-NII-band	Ch. No.	Freq. [MHz]	MPSD [dBm/MHz]	E.I.R.P MPSD [dBm/MHz]	FCC Limit [dBm/MHz] or [dBm/500kHz] (U-NII-3)	Margin [dB]	ISED Limit [dBm/MHz] or [dBm/500kHz] (U-NII-3)	Margin [dB]	ISED E.I.R.P limit [dBm/MHz] or [dBm/500kHz] (U-NII-3)	Margin [dB]
1	36	5180	6.2	14.2	9.0	2.8	N/A	-	10.0	N/A
	44	5220	6.5	14.5	9.0	2.5	N/A	-	10.0	N/A
	48	5240	6.2	14.2	9.0	2.8	N/A	-	10.0	N/A
3	149	5745	3.5	11.5	28.0	24.5	28.0	24.5	N/A	-
	157	5785	3.4	11.4	28.0	24.6	28.0	24.6	N/A	-
	165	5825	3.5	11.5	28.0	24.5	28.0	24.5	N/A	-

WLAN ax-Mode; 40 MHz; MCS 0; SISO

U-NII-band	Ch. No.	Freq. [MHz]	MPSD [dBm/MHz]	E.I.R.P MPSD [dBm/MHz]	FCC Limit [dBm/MHz] or [dBm/500kHz] (U-NII-3)	Margin [dB]	ISED Limit [dBm/MHz] or [dBm/500kHz] (U-NII-3)	Margin [dB]	ISED E.I.R.P limit [dBm/MHz] or [dBm/500kHz] (U-NII-3)	Margin [dB]
1	38	5190	3.6	11.6	9.0	5.4	N/A	-	10.0	N/A
	46	5230	3.9	11.9	9.0	5.1	N/A	-	10.0	N/A
3	151	5755	1.5	9.5	28.0	26.5	28.0	26.5	N/A	-
	159	5795	1.2	9.2	28.0	26.8	28.0	26.8	N/A	-

WLAN ax-Mode; 80 MHz; MCS 0; SISO

U-NII-band	Ch. No.	Freq. [MHz]	MPSD [dBm/MHz]	E.I.R.P MPSD [dBm/MHz]	FCC Limit [dBm/MHz] or [dBm/500kHz] (U-NII-3)	Margin [dB]	ISED Limit [dBm/MHz] or [dBm/500kHz] (U-NII-3)	Margin [dB]	ISED E.I.R.P limit [dBm/MHz] or [dBm/500kHz] (U-NII-3)	Margin [dB]
1	42	5210	4.5	12.5	9.0	4.5	N/A	-	10.0	N/A
3	155	5775	4.5	12.5	28.0	23.5	28.0	23.5	N/A	-

WLAN a-Mode; 20 MHz; 6 Mbit/s; Diversity

U-NII-band	Ch. No.	Freq. [MHz]	MPSD [dBm/MHz]	E.I.R.P MPSD [dBm/MHz]	FCC Limit [dBm/MHz] or [dBm/500kHz] (U-NII-3)	Margin [dB]	ISED Limit [dBm/MHz] or [dBm/500kHz] (U-NII-3)	Margin [dB]	ISED E.I.R.P limit [dBm/MHz] or [dBm/500kHz] (U-NII-3)	Margin [dB]
1	36	5180	8.7	16.7	9.0	0.3	N/A	-	10.0	N/A
	44	5220	9.0	17.0	9.0	0.0	N/A	-	10.0	N/A
	48	5240	8.7	16.7	9.0	0.3	N/A	-	10.0	N/A
3	149	5745	7.8	15.8	28.0	20.2	28.0	20.2	N/A	-
	157	5785	7.3	15.3	28.0	20.7	28.0	20.7	N/A	-
	165	5825	8.0	16.0	28.0	20.0	28.0	20.0	N/A	-

WLAN n-Mode; 20 MHz; MCS 8; MIMO

U-NII-band	Ch. No.	Freq. [MHz]	MPSD [dBm/MHz]	E.I.R.P MPSD [dBm/MHz]	FCC Limit [dBm/MHz] or [dBm/500kHz] (U-NII-3)	Margin [dB]	ISED Limit [dBm/MHz] or [dBm/500kHz] (U-NII-3)	Margin [dB]	ISED E.I.R.P limit [dBm/MHz] or [dBm/500kHz] (U-NII-3)	Margin [dB]
1	36	5180	8.2	16.2	9.0	0.8	N/A	-	10.0	N/A
	44	5220	8.5	16.5	9.0	0.5	N/A	-	10.0	N/A
	48	5240	8.2	16.2	9.0	0.8	N/A	-	10.0	N/A
3	149	5745	7.5	15.5	28.0	20.5	28.0	20.5	N/A	-
	157	5785	7.1	15.1	28.0	20.9	28.0	20.9	N/A	-
	165	5825	7.3	15.3	28.0	20.7	28.0	20.7	N/A	-

WLAN n-Mode; 40 MHz; MCS 8; MIMO

U-NII-band	Ch. No.	Freq. [MHz]	MPSD [dBm/MHz]	E.I.R.P MPSD [dBm/MHz]	FCC Limit [dBm/MHz] or [dBm/500kHz] (U-NII-3)	Margin [dB]	ISED Limit [dBm/MHz] or [dBm/500kHz] (U-NII-3)	Margin [dB]	ISED E.I.R.P limit [dBm/MHz] or [dBm/500kHz] (U-NII-3)	Margin [dB]
1	38	5190	8.3	16.3	9.0	0.7	N/A	-	10.0	N/A
	46	5230	8.8	16.8	9.0	0.2	N/A	-	10.0	N/A
3	151	5755	8.6	16.6	28.0	19.4	28.0	19.4	N/A	-
	159	5795	7.8	15.8	28.0	20.2	28.0	20.2	N/A	-

WLAN ac-Mode; 20 MHz; MCS 0; MIMO

U-NII-band	Ch. No.	Freq. [MHz]	MPSD [dBm/MHz]	E.I.R.P MPSD [dBm/MHz]	FCC Limit [dBm/MHz] or [dBm/500kHz] (U-NII-3)	Margin [dB]	ISED Limit [dBm/MHz] or [dBm/500kHz] (U-NII-3)	Margin [dB]	ISED E.I.R.P limit [dBm/MHz] or [dBm/500kHz] (U-NII-3)	Margin [dB]
1	36	5180	8.2	16.2	9.0	0.8	N/A	-	10.0	N/A
	44	5220	8.7	16.7	9.0	0.3	N/A	-	10.0	N/A
	48	5240	8.1	16.1	9.0	0.9	N/A	-	10.0	N/A
3	149	5745	7.4	15.4	28.0	20.6	28.0	20.6	N/A	-
	157	5785	7.3	15.3	28.0	20.7	28.0	20.7	N/A	-
	165	5825	7.7	15.7	28.0	20.3	28.0	20.3	N/A	-

WLAN ac-Mode; 40 MHz; MCS 0; MIMO

U-NII-band	Ch. No.	Freq. [MHz]	MPSD [dBm/MHz]	E.I.R.P MPSD [dBm/MHz]	FCC Limit [dBm/MHz] or [dBm/500kHz] (U-NII-3)	Margin [dB]	ISED Limit [dBm/MHz] or [dBm/500kHz] (U-NII-3)	Margin [dB]	ISED E.I.R.P limit [dBm/MHz] or [dBm/500kHz] (U-NII-3)	Margin [dB]
1	38	5190	8.1	16.1	9.0	0.9	N/A	-	10.0	N/A
	46	5230	8.8	16.8	9.0	0.2	N/A	-	10.0	N/A
3	151	5755	8.6	16.6	28.0	19.4	28.0	19.4	N/A	-
	159	5795	8.0	16.0	28.0	20.0	28.0	20.0	N/A	-

WLAN ac-Mode; 80 MHz; MCS 0; MIMO

U-NII-band	Ch. No.	Freq. [MHz]	MPSD [dBm/MHz]	E.I.R.P MPSD [dBm/MHz]	FCC Limit [dBm/MHz] or [dBm/500kHz] (U-NII-3)	Margin [dB]	ISED Limit [dBm/MHz] or [dBm/500kHz] (U-NII-3)	Margin [dB]	ISED E.I.R.P limit [dBm/MHz] or [dBm/500kHz] (U-NII-3)	Margin [dB]
1	42	5210	4.6	12.6	9.0	4.4	N/A	-	10.0	N/A
3	155	5775	6.2	14.2	28.0	21.8	28.0	21.8	N/A	-

WLAN ax-Mode; 20 MHz; MCS 0; MIMO

U-NII-band	Ch. No.	Freq. [MHz]	MPSD [dBm/MHz]	E.I.R.P MPSD [dBm/MHz]	FCC Limit [dBm/MHz] or [dBm/500kHz] (U-NII-3)	Margin [dB]	ISED Limit [dBm/MHz] or [dBm/500kHz] (U-NII-3)	Margin [dB]	ISED E.I.R.P limit [dBm/MHz] or [dBm/500kHz] (U-NII-3)	Margin [dB]
1	36	5180	7.9	15.9	9.0	1.1	N/A	-	10.0	N/A
	44	5220	8.2	16.2	9.0	0.8	N/A	-	10.0	N/A
	48	5240	7.7	15.7	9.0	1.3	N/A	-	10.0	N/A
3	149	5745	6.7	14.7	28.0	21.3	28.0	21.3	N/A	-
	157	5785	6.7	14.7	28.0	21.3	28.0	21.3	N/A	-
	165	5825	7.0	15.0	28.0	21.0	28.0	21.0	N/A	-

WLAN ax-Mode; 40 MHz; MCS 0; MIMO

U-NII-band	Ch. No.	Freq. [MHz]	MPSD [dBm/MHz]	E.I.R.P MPSD [dBm/MHz]	FCC Limit [dBm/MHz] or [dBm/500kHz] (U-NII-3)	Margin [dB]	ISED Limit [dBm/MHz] or [dBm/500kHz] (U-NII-3)	Margin [dB]	ISED E.I.R.P limit [dBm/MHz] or [dBm/500kHz] (U-NII-3)	Margin [dB]
1	38	5190	8.3	16.3	9.0	0.7	N/A	-	10.0	N/A
	46	5230	8.2	16.2	9.0	0.8	N/A	-	10.0	N/A
3	151	5755	8.8	16.8	28.0	19.2	28.0	19.2	N/A	-
	159	5795	8.3	16.3	28.0	19.7	28.0	19.7	N/A	-

WLAN ax-Mode; 80 MHz; MCS 0; MIMO

U-NII-band	Ch. No.	Freq. [MHz]	MPSD [dBm/MHz]	E.I.R.P MPSD [dBm/MHz]	FCC Limit [dBm/MHz] or [dBm/500kHz] (U-NII-3)	Margin [dB]	ISED Limit [dBm/MHz] or [dBm/500kHz] (U-NII-3)	Margin [dB]	ISED E.I.R.P limit [dBm/MHz] or [dBm/500kHz] (U-NII-3)	Margin [dB]
1	42	5210	4.7	12.7	9.0	4.3	N/A	-	10.0	N/A
3	155	5775	6.2	14.2	28.0	21.8	28.0	21.8	N/A	-

**Power setting Antenna ≤ 8 dBi gain:  
ISED U-NII band 1 power setting:**

WLAN a-Mode; 20 MHz; 6 Mbit/s

U-NII-Subband	Ch. No.	Freq. [MHz]	MPSD [dBm/MHz]	E.I.R.P MPSD [dBm/MHz]	ISED Limit [dBm/MHz]	Margin [dB]	ISED E.I.R.P limit [dBm/MHz]	Margin [dB]
1	36	5180	0.7	8.7	N/A	-	10.0	1.3
	44	5220	1.0	9.0	N/A	-	10.0	1.0
	48	5240	0.9	8.9	N/A	-	10.0	1.1

WLAN n-Mode; 20 MHz; MCS 0; SISO

U-NII-Subband	Ch. No.	Freq. [MHz]	MPSD [dBm/MHz]	E.I.R.P MPSD [dBm/MHz]	ISED Limit [dBm/MHz]	Margin [dB]	ISED E.I.R.P limit [dBm/MHz]	Margin [dB]
1	36	5180	0.1	8.1	N/A	-	10.0	1.9
	44	5220	0.3	8.3	N/A	-	10.0	1.7
	48	5240	0.2	8.2	N/A	-	10.0	1.8

WLAN n-Mode; 40 MHz; MCS 0; SISO

U-NII-Subband	Ch. No.	Freq. [MHz]	MPSD [dBm/MHz]	E.I.R.P MPSD [dBm/MHz]	ISED Limit [dBm/MHz]	Margin [dB]	ISED E.I.R.P limit [dBm/MHz]	Margin [dB]
1	38	5190	-2.3	5.7	N/A	-	10.0	4.3
	46	5230	-2.0	6.1	N/A	-	10.0	4.0

WLAN ac-Mode; 20 MHz; MCS 0; SISO

U-NII-Subband	Ch. No.	Freq. [MHz]	MPSD [dBm/MHz]	E.I.R.P MPSD [dBm/MHz]	ISED Limit [dBm/MHz]	Margin [dB]	ISED E.I.R.P limit [dBm/MHz]	Margin [dB]
1	36	5180	0.1	8.1	N/A	-	10.0	1.9
	44	5220	0.3	8.3	N/A	-	10.0	1.7
	48	5240	0.2	8.2	N/A	-	10.0	1.8

WLAN ac-Mode; 40 MHz; MCS 0; SISO

U-NII-Subband	Ch. No.	Freq. [MHz]	MPSD [dBm/MHz]	E.I.R.P MPSD [dBm/MHz]	ISED Limit [dBm/MHz]	Margin [dB]	ISED E.I.R.P limit [dBm/MHz]	Margin [dB]
1	38	5190	-2.3	5.7	N/A	-	10.0	4.3
	46	5230	-2.0	6.0	N/A	-	10.0	4.0

WLAN ac-Mode; 80 MHz; MCS 0; SISO

U-NII-Subband	Ch. No.	Freq. [MHz]	MPSD [dBm/MHz]	E.I.R.P MPSD [dBm/MHz]	ISED Limit [dBm/MHz]	Margin [dB]	ISED E.I.R.P limit [dBm/MHz]	Margin [dB]
1	42	5210	-2.5	5.5	N/A	-	10.0	4.5

WLAN ax-Mode; 20 MHz; MCS 0; SISO

U-NII-Subband	Ch. No.	Freq. [MHz]	MPSD [dBm/MHz]	E.I.R.P MPSD [dBm/MHz]	ISED Limit [dBm/MHz]	Margin [dB]	ISED E.I.R.P limit [dBm/MHz]	Margin [dB]
1	36	5180	-0.6	7.4	N/A	-	10.0	2.6
	44	5220	-0.4	7.6	N/A	-	10.0	2.4
	48	5240	-0.6	7.4	N/A	-	10.0	2.6



WLAN ax-Mode; 40 MHz; MCS 0; SISO

U-NII-Subband	Ch. No.	Freq. [MHz]	MPSD [dBm/MHz]	E.I.R.P MPSD [dBm/MHz]	ISED Limit [dBm/MHz]	Margin [dB]	ISED E.I.R.P limit [dBm/MHz]	Margin [dB]
1	38	5190	-3.1	4.9	N/A	-	10.0	5.1
	46	5230	-2.6	5.4	N/A	-	10.0	4.6

WLAN ax-Mode; 80 MHz; MCS 0; SISO

U-NII-Subband	Ch. No.	Freq. [MHz]	MPSD [dBm/MHz]	E.I.R.P MPSD [dBm/MHz]	ISED Limit [dBm/MHz]	Margin [dB]	ISED E.I.R.P limit [dBm/MHz]	Margin [dB]
1	42	5210	-2.2	5.8	N/A	-	10.0	4.2

WLAN a-Mode; 20 MHz; 6 Mbit/s; Diversity

U-NII-Subband	Ch. No.	Freq. [MHz]	MPSD [dBm/MHz]	E.I.R.P MPSD [dBm/MHz]	ISED Limit [dBm/MHz]	Margin [dB]	ISED E.I.R.P limit [dBm/MHz]	Margin [dB]
1	36	5180	0.5	8.5	N/A	-	10.0	1.5
	44	5220	0.8	8.8	N/A	-	10.0	1.2
	48	5240	0.3	8.3	N/A	-	10.0	1.7

WLAN n-Mode; 20 MHz; MCS 8; MIMO

U-NII-Subband	Ch. No.	Freq. [MHz]	MPSD [dBm/MHz]	E.I.R.P MPSD [dBm/MHz]	ISED Limit [dBm/MHz]	Margin [dB]	ISED E.I.R.P limit [dBm/MHz]	Margin [dB]
1	36	5180	0.5	8.5	N/A	-	10.0	1.5
	44	5220	0.8	8.8	N/A	-	10.0	1.2
	48	5240	0.3	8.3	N/A	-	10.0	1.7

WLAN n-Mode; 40 MHz; MCS 8; MIMO

U-NII-Subband	Ch. No.	Freq. [MHz]	MPSD [dBm/MHz]	E.I.R.P MPSD [dBm/MHz]	ISED Limit [dBm/MHz]	Margin [dB]	ISED E.I.R.P limit [dBm/MHz]	Margin [dB]
1	38	5190	1.0	9.0	N/A	-	10.0	1.0
	46	5230	1.5	9.5	N/A	-	10.0	0.5

WLAN ac-Mode; 20 MHz; MCS 0; MIMO

U-NII-Subband	Ch. No.	Freq. [MHz]	MPSD [dBm/MHz]	E.I.R.P MPSD [dBm/MHz]	ISED Limit [dBm/MHz]	Margin [dB]	ISED E.I.R.P limit [dBm/MHz]	Margin [dB]
1	36	5180	0.4	8.4	N/A	-	10.0	1.6
	44	5220	1.0	9.0	N/A	-	10.0	1.0
	48	5240	0.5	8.5	N/A	-	10.0	1.5

WLAN ac-Mode; 40 MHz; MCS 0; MIMO

U-NII-Subband	Ch. No.	Freq. [MHz]	MPSD [dBm/MHz]	E.I.R.P MPSD [dBm/MHz]	ISED Limit [dBm/MHz]	Margin [dB]	ISED E.I.R.P limit [dBm/MHz]	Margin [dB]
1	38	5190	1.0	9.0	N/A	-	10.0	1.0
	46	5230	1.9	9.9	N/A	-	10.0	0.1

WLAN ac-Mode; 80 MHz; MCS 0; MIMO

U-NII-Subband	Ch. No.	Freq. [MHz]	MPSD [dBm/MHz]	E.I.R.P MPSD [dBm/MHz]	ISED Limit [dBm/MHz]	Margin [dB]	ISED E.I.R.P limit [dBm/MHz]	Margin [dB]
1	42	5210	-1.3	6.7	N/A	-	10.0	3.3

WLAN ax-Mode; 20 MHz; MCS 0; MIMO

U-NII-Subband	Ch. No.	Freq. [MHz]	MPSD [dBm/MHz]	E.I.R.P MPSD [dBm/MHz]	ISED Limit [dBm/MHz]	Margin [dB]	ISED E.I.R.P limit [dBm/MHz]	Margin [dB]
1	36	5180	-0.1	7.9	N/A	-	10.0	2.1
	44	5220	0.5	8.5	N/A	-	10.0	1.5
	48	5240	0.0	8.0	N/A	-	10.0	2.0

WLAN ax-Mode; 40 MHz; MCS 0; MIMO

U-NII-Subband	Ch. No.	Freq. [MHz]	MPSD [dBm/MHz]	E.I.R.P MPSD [dBm/MHz]	ISED Limit [dBm/MHz]	Margin [dB]	ISED E.I.R.P limit [dBm/MHz]	Margin [dB]
1	38	5190	1.4	9.4	N/A	-	10.0	0.6
	46	5230	1.6	9.6	N/A	-	10.0	0.4

WLAN ax-Mode; 80 MHz; MCS 0; MIMO

U-NII-Subband	Ch. No.	Freq. [MHz]	MPSD [dBm/MHz]	E.I.R.P MPSD [dBm/MHz]	ISED Limit [dBm/MHz]	Margin [dB]	ISED E.I.R.P limit [dBm/MHz]	Margin [dB]
1	42	5210	-0.8	7.2	N/A	-	10.0	2.8

**Power setting Antenna ≤ 9 dBi gain:**

**FCC band 1 + 3 and ISED U-NII band 3 power setting:**

WLAN a-Mode; 20 MHz; 6 Mbit/s

U-NII-band	Ch. No.	Freq. [MHz]	MPSD [dBm/MHz]	E.I.R.P MPSD [dBm/MHz]	FCC Limit [dBm/ MHz] or [dBm/ 500kHz] (U-NII-3)	Margin [dB]	ISED Limit [dBm/ MHz] or [dBm/ 500kHz] (U-NII-3)	Margin [dB]	ISED E.I.R.P limit [dBm/ MHz] or [dBm/ 500kHz] (U-NII-3)	Margin [dB]
1	36	5180	7.5	16.5	8.0	0.5	N/A	-	10.0	N/A
	44	5220	7.9	16.9	8.0	0.1	N/A	-	10.0	N/A
	48	5240	7.6	16.6	8.0	0.4	N/A	-	10.0	N/A
3	149	5745	4.9	13.9	27.0	22.1	27.0	22.1	N/A	-
	157	5785	4.7	13.7	27.0	22.3	27.0	22.3	N/A	-
	165	5825	4.9	13.9	27.0	22.2	27.0	22.2	N/A	-

WLAN n-Mode; 20 MHz; MCS 0; SISO

U-NII-band	Ch. No.	Freq. [MHz]	MPSD [dBm/MHz]	E.I.R.P MPSD [dBm/MHz]	FCC Limit [dBm/ MHz] or [dBm/ 500kHz] (U-NII-3)	Margin [dB]	ISED Limit [dBm/ MHz] or [dBm/ 500kHz] (U-NII-3)	Margin [dB]	ISED E.I.R.P limit [dBm/MHz] or [dBm/500kHz] (U-NII-3)	Margin [dB]
1	36	5180	6.8	15.8	8.0	1.2	N/A	-	10.0	N/A
	44	5220	7.2	16.2	8.0	0.8	N/A	-	10.0	N/A
	48	5240	7.0	16.0	8.0	1.0	N/A	-	10.0	N/A
3	149	5745	4.2	13.2	27.0	22.8	27.0	22.8	N/A	-
	157	5785	3.9	12.9	27.0	23.1	27.0	23.1	N/A	-
	165	5825	4.1	13.1	27.0	22.9	27.0	22.9	N/A	-

WLAN n-Mode; 40 MHz; MCS 0; SISO

U-NII-band	Ch. No.	Freq. [MHz]	MPSD [dBm/MHz]	E.I.R.P MPSD [dBm/MHz]	FCC Limit [dBm/ MHz] or [dBm/ 500kHz] (U-NII-3)	Margin [dB]	ISED Limit [dBm/ MHz] or [dBm/ 500kHz] (U-NII-3)	Margin [dB]	ISED E.I.R.P limit [dBm/MHz] or [dBm/500kHz] (U-NII-3)	Margin [dB]
1	38	5190	1.8	10.8	8.0	6.2	N/A	-	10.0	N/A
	46	5230	5.0	14.0	8.0	3.0	N/A	-	10.0	N/A
3	151	5755	2.4	11.4	27.0	24.6	27.0	24.6	N/A	-
	159	5795	2.1	11.1	27.0	24.9	27.0	24.9	N/A	-

WLAN ac-Mode; 20 MHz; MCS 0; SISO

U-NII-band	Ch. No.	Freq. [MHz]	MPSD [dBm/MHz]	E.I.R.P MPSD [dBm/MHz]	FCC Limit [dBm/ MHz] or [dBm/ 500kHz] (U-NII-3)	Margin [dB]	ISED Limit [dBm/ MHz] or [dBm/ 500kHz] (U-NII-3)	Margin [dB]	ISED E.I.R.P limit [dBm/MHz] or [dBm/500kHz] (U-NII-3)	Margin [dB]
1	36	5180	6.8	15.8	8.0	1.2	N/A	-	10.0	N/A
	44	5220	7.1	16.1	8.0	0.9	N/A	-	10.0	N/A
	48	5240	7.0	16.0	8.0	1.0	N/A	-	10.0	N/A
3	149	5745	4.3	13.3	27.0	22.7	27.0	22.7	N/A	-
	157	5785	4.1	13.1	27.0	22.9	27.0	22.9	N/A	-
	165	5825	4.2	13.2	27.0	22.8	27.0	22.8	N/A	-

WLAN ac-Mode; 40 MHz; MCS 0; SISO

U-NII-band	Ch. No.	Freq. [MHz]	MPSD [dBm/MHz]	E.I.R.P MPSD [dBm/MHz]	FCC Limit [dBm/ MHz] or [dBm/ 500kHz] (U-NII-3)	Margin [dB]	ISED Limit [dBm/ MHz] or [dBm/ 500kHz] (U-NII-3)	Margin [dB]	ISED E.I.R.P limit [dBm/MHz] or [dBm/500kHz] (U-NII-3)	Margin [dB]
1	38	5190	1.8	10.8	8.0	6.2	N/A	-	10.0	N/A
	46	5230	4.7	13.7	8.0	3.3	N/A	-	10.0	N/A
3	151	5755	2.5	11.5	27.0	24.5	27.0	24.5	N/A	-
	159	5795	2.3	11.3	27.0	24.7	27.0	24.7	N/A	-

WLAN ac-Mode; 80 MHz; MCS 0; SISO

U-NII-band	Ch. No.	Freq. [MHz]	MPSD [dBm/MHz]	E.I.R.P MPSD [dBm/MHz]	FCC Limit [dBm/ MHz] or [dBm/ 500kHz] (U-NII-3)	Margin [dB]	ISED Limit [dBm/ MHz] or [dBm/ 500kHz] (U-NII-3)	Margin [dB]	ISED E.I.R.P limit [dBm/MHz] or [dBm/500kHz] (U-NII-3)	Margin [dB]
1	42	5210	0.6	9.6	8.0	7.4	N/A	-	10.0	N/A
3	155	5775	0.6	9.6	27.0	26.4	27.0	26.4	N/A	-

WLAN ax-Mode; 20 MHz; MCS 0; SISO

U-NII-band	Ch. No.	Freq. [MHz]	MPSD [dBm/MHz]	E.I.R.P MPSD [dBm/MHz]	FCC Limit [dBm/ MHz] or [dBm/ 500kHz] (U-NII-3)	Margin [dB]	ISED Limit [dBm/ MHz] or [dBm/ 500kHz] (U-NII-3)	Margin [dB]	ISED E.I.R.P limit [dBm/MHz] or [dBm/500kHz] (U-NII-3)	Margin [dB]
1	36	5180	6.2	15.2	8.0	1.8	N/A	-	10.0	N/A
	44	5220	6.5	15.5	8.0	1.5	N/A	-	10.0	N/A
	48	5240	6.2	15.2	8.0	1.8	N/A	-	10.0	N/A
3	149	5745	3.5	12.5	27.0	23.5	27.0	23.5	N/A	-
	157	5785	3.4	12.4	27.0	23.6	27.0	23.6	N/A	-
	165	5825	3.5	12.5	27.0	23.5	27.0	23.5	N/A	-

WLAN ax-Mode; 40 MHz; MCS 0; SISO

U-NII-band	Ch. No.	Freq. [MHz]	MPSD [dBm/MHz]	E.I.R.P MPSD [dBm/MHz]	FCC Limit [dBm/ MHz] or [dBm/ 500kHz] (U-NII-3)	Margin [dB]	ISED Limit [dBm/ MHz] or [dBm/ 500kHz] (U-NII-3)	Margin [dB]	ISED E.I.R.P limit [dBm/MHz] or [dBm/500kHz] (U-NII-3)	Margin [dB]
1	38	5190	1.0	10.0	8.0	7.0	N/A	-	10.0	N/A
	46	5230	3.9	12.9	8.0	4.1	N/A	-	10.0	N/A
3	151	5755	1.5	10.5	27.0	25.5	27.0	25.5	N/A	-
	159	5795	1.2	10.2	27.0	25.8	27.0	25.8	N/A	-

WLAN ax-Mode; 80 MHz; MCS 0; SISO

U-NII-band	Ch. No.	Freq. [MHz]	MPSD [dBm/MHz]	E.I.R.P MPSD [dBm/MHz]	FCC Limit [dBm/ MHz] or [dBm/ 500kHz] (U-NII-3)	Margin [dB]	ISED Limit [dBm/ MHz] or [dBm/ 500kHz] (U-NII-3)	Margin [dB]	ISED E.I.R.P limit [dBm/MHz] or [dBm/500kHz] (U-NII-3)	Margin [dB]
1	42	5210	1.2	10.2	8.0	6.8	N/A	-	10.0	N/A
3	155	5775	2.0	11.0	27.0	25.0	27.0	25.0	N/A	-

WLAN a-Mode; 20 MHz; 6 Mbit/s; Diversity

U-NII-band	Ch. No.	Freq. [MHz]	MPSD [dBm/MHz]	E.I.R.P MPSD [dBm/MHz]	FCC Limit [dBm/ MHz] or [dBm/ 500kHz] (U-NII-3)	Margin [dB]	ISED Limit [dBm/ MHz] or [dBm/ 500kHz] (U-NII-3)	Margin [dB]	ISED E.I.R.P limit [dBm/MHz] or [dBm/500kHz] (U-NII-3)	Margin [dB]
1	36	5180	7.8	16.8	8.0	0.2	N/A	-	10.0	N/A
	44	5220	7.1	16.1	8.0	0.9	N/A	-	10.0	N/A
	48	5240	7.8	16.8	8.0	0.2	N/A	-	10.0	N/A
3	149	5745	7.8	16.8	27.0	19.2	27.0	19.2	N/A	-
	157	5785	7.3	16.3	27.0	19.7	27.0	19.7	N/A	-
	165	5825	8.0	17.0	27.0	19.0	27.0	19.0	N/A	-

WLAN n-Mode; 20 MHz; MCS 8; MIMO

U-NII-band	Ch. No.	Freq. [MHz]	MPSD [dBm/MHz]	E.I.R.P MPSD [dBm/MHz]	FCC Limit [dBm/ MHz] or [dBm/ 500kHz] (U-NII-3)	Margin [dB]	ISED Limit [dBm/ MHz] or [dBm/ 500kHz] (U-NII-3)	Margin [dB]	ISED E.I.R.P limit [dBm/MHz] or [dBm/500kHz] (U-NII-3)	Margin [dB]
1	36	5180	7.2	16.2	8.0	0.8	N/A	-	10.0	N/A
	44	5220	7.6	16.6	8.0	0.4	N/A	-	10.0	N/A
	48	5240	7.1	16.1	8.0	0.9	N/A	-	10.0	N/A
3	149	5745	7.5	16.5	27.0	19.5	27.0	19.5	N/A	-
	157	5785	7.1	16.1	27.0	19.9	27.0	19.9	N/A	-
	165	5825	7.3	16.3	27.0	19.7	27.0	19.7	N/A	-

WLAN n-Mode; 40 MHz; MCS 8; MIMO

U-NII-band	Ch. No.	Freq. [MHz]	MPSD [dBm/MHz]	E.I.R.P MPSD [dBm/MHz]	FCC Limit [dBm/ MHz] or [dBm/ 500kHz] (U-NII-3)	Margin [dB]	ISED Limit [dBm/ MHz] or [dBm/ 500kHz] (U-NII-3)	Margin [dB]	ISED E.I.R.P limit [dBm/MHz] or [dBm/500kHz] (U-NII-3)	Margin [dB]
1	38	5190	3.7	12.7	8.0	4.3	N/A	-	10.0	N/A
	46	5230	7.8	16.8	8.0	0.2	N/A	-	10.0	N/A
3	151	5755	8.6	17.6	27.0	18.4	27.0	18.4	N/A	-
	159	5795	7.8	16.8	27.0	19.2	27.0	19.2	N/A	-

WLAN ac-Mode; 20 MHz; MCS 0; MIMO

U-NII-band	Ch. No.	Freq. [MHz]	MPSD [dBm/MHz]	E.I.R.P MPSD [dBm/MHz]	FCC Limit [dBm/ MHz] or [dBm/ 500kHz] (U-NII-3)	Margin [dB]	ISED Limit [dBm/ MHz] or [dBm/ 500kHz] (U-NII-3)	Margin [dB]	ISED E.I.R.P limit [dBm/MHz] or [dBm/500kHz] (U-NII-3)	Margin [dB]
1	36	5180	7.2	16.2	8.0	0.8	N/A	-	10.0	N/A
	44	5220	7.6	16.6	8.0	0.4	N/A	-	10.0	N/A
	48	5240	7.1	16.1	8.0	0.9	N/A	-	10.0	N/A
3	149	5745	7.4	16.4	27.0	19.6	27.0	19.6	N/A	-
	157	5785	7.3	16.3	27.0	19.7	27.0	19.7	N/A	-
	165	5825	7.7	16.7	27.0	19.3	27.0	19.3	N/A	-

WLAN ac-Mode; 40 MHz; MCS 0; MIMO

U-NII-band	Ch. No.	Freq. [MHz]	MPSD [dBm/MHz]	E.I.R.P MPSD [dBm/MHz]	FCC Limit [dBm/ MHz] or [dBm/ 500kHz] (U-NII-3)	Margin [dB]	ISED Limit [dBm/ MHz] or [dBm/ 500kHz] (U-NII-3)	Margin [dB]	ISED E.I.R.P limit [dBm/MHz] or [dBm/500kHz] (U-NII-3)	Margin [dB]
1	38	5190	3.7	12.7	8.0	4.3	N/A	-	10.0	N/A
	46	5230	7.7	16.7	8.0	0.3	N/A	-	10.0	N/A
3	151	5755	8.6	17.6	27.0	18.4	27.0	18.4	N/A	-
	159	5795	8.0	17.0	27.0	19.0	27.0	19.0	N/A	-

WLAN ac-Mode; 80 MHz; MCS 0; MIMO

U-NII-band	Ch. No.	Freq. [MHz]	MPSD [dBm/MHz]	E.I.R.P MPSD [dBm/MHz]	FCC Limit [dBm/ MHz] or [dBm/ 500kHz] (U-NII-3)	Margin [dB]	ISED Limit [dBm/ MHz] or [dBm/ 500kHz] (U-NII-3)	Margin [dB]	ISED E.I.R.P limit [dBm/MHz] or [dBm/500kHz] (U-NII-3)	Margin [dB]
1	42	5210	0.6	9.6	8.0	7.4	N/A	-	10.0	N/A
3	155	5775	3.7	12.7	27.0	23.3	27.0	23.3	N/A	-

WLAN ax-Mode; 20 MHz; MCS 0; MIMO

U-NII-band	Ch. No.	Freq. [MHz]	MPSD [dBm/MHz]	E.I.R.P MPSD [dBm/MHz]	FCC Limit [dBm/ MHz] or [dBm/ 500kHz] (U-NII-3)	Margin [dB]	ISED Limit [dBm/ MHz] or [dBm/ 500kHz] (U-NII-3)	Margin [dB]	ISED E.I.R.P limit [dBm/MHz] or [dBm/500kHz] (U-NII-3)	Margin [dB]
1	36	5180	6.8	15.8	8.0	1.2	N/A	-	10.0	N/A
	44	5220	7.2	16.2	8.0	0.8	N/A	-	10.0	N/A
	48	5240	6.6	15.6	8.0	1.4	N/A	-	10.0	N/A
3	149	5745	6.7	15.7	27.0	20.3	27.0	20.3	N/A	-
	157	5785	6.7	15.7	27.0	20.3	27.0	20.3	N/A	-
	165	5825	7.0	16.0	27.0	20.0	27.0	20.0	N/A	-

WLAN ax-Mode; 40 MHz; MCS 0; MIMO

U-NII-band	Ch. No.	Freq. [MHz]	MPSD [dBm/MHz]	E.I.R.P MPSD [dBm/MHz]	FCC Limit [dBm/ MHz] or [dBm/ 500kHz] (U-NII-3)	Margin [dB]	ISED Limit [dBm/ MHz] or [dBm/ 500kHz] (U-NII-3)	Margin [dB]	ISED E.I.R.P limit [dBm/MHz] or [dBm/500kHz] (U-NII-3)	Margin [dB]
1	38	5190	2.7	11.7	8.0	5.3	N/A	-	10.0	N/A
	46	5230	7.2	16.2	8.0	0.8	N/A	-	10.0	N/A
3	151	5755	8.8	17.8	27.0	18.2	27.0	18.2	N/A	-
	159	5795	8.3	17.3	27.0	18.7	27.0	18.7	N/A	-

WLAN ax-Mode; 80 MHz; MCS 0; MIMO

U-NII-band	Ch. No.	Freq. [MHz]	MPSD [dBm/MHz]	E.I.R.P MPSD [dBm/MHz]	FCC Limit [dBm/ MHz] or [dBm/ 500kHz] (U-NII-3)	Margin [dB]	ISED Limit [dBm/ MHz] or [dBm/ 500kHz] (U-NII-3)	Margin [dB]	ISED E.I.R.P limit [dBm/MHz] or [dBm/500kHz] (U-NII-3)	Margin [dB]
1	42	5210	0.9	9.9	8.0	7.1	N/A	-	10.0	N/A
3	155	5775	4.9	13.9	27.0	22.1	27.0	22.1	N/A	-

**Power setting Antenna ≤ 9 dBi gain:  
ISED U-NII band 1 power setting:**

WLAN a-Mode; 20 MHz; 6 Mbit/s

U-NII-Subband	Ch. No.	Freq. [MHz]	MPSD [dBm/MHz]	E.I.R.P MPSD [dBm/MHz]	ISED Limit [dBm/MHz]	Margin [dB]	ISED E.I.R.P limit [dBm/MHz]	Margin [dB]
1	36	5180	-0.4	8.6	N/A	-	10.0	1.4
	44	5220	0.0	9.0	N/A	-	10.0	1.0
	48	5240	-0.2	8.8	N/A	-	10.0	1.2

WLAN n-Mode; 20 MHz; MCS 0; SISO

U-NII-Subband	Ch. No.	Freq. [MHz]	MPSD [dBm/MHz]	E.I.R.P MPSD [dBm/MHz]	ISED Limit [dBm/MHz]	Margin [dB]	ISED E.I.R.P limit [dBm/MHz]	Margin [dB]
1	36	5180	-1.1	7.9	N/A	-	10.0	2.1
	44	5220	-0.7	8.3	N/A	-	10.0	1.7
	48	5240	-0.7	8.3	N/A	-	10.0	1.7

WLAN n-Mode; 40 MHz; MCS 0; SISO

U-NII-Subband	Ch. No.	Freq. [MHz]	MPSD [dBm/MHz]	E.I.R.P MPSD [dBm/MHz]	ISED Limit [dBm/MHz]	Margin [dB]	ISED E.I.R.P limit [dBm/MHz]	Margin [dB]
1	38	5190	-3.3	5.7	N/A	-	10.0	4.3
	46	5230	-3.0	6.0	N/A	-	10.0	4.0

WLAN ac-Mode; 20 MHz; MCS 0; SISO

U-NII-Subband	Ch. No.	Freq. [MHz]	MPSD [dBm/MHz]	E.I.R.P MPSD [dBm/MHz]	ISED Limit [dBm/MHz]	Margin [dB]	ISED E.I.R.P limit [dBm/MHz]	Margin [dB]
1	36	5180	-0.9	8.1	N/A	-	10.0	1.9
	44	5220	-0.5	8.5	N/A	-	10.0	1.5
	48	5240	-0.7	8.3	N/A	-	10.0	1.7

WLAN ac-Mode; 40 MHz; MCS 0; SISO

U-NII-Subband	Ch. No.	Freq. [MHz]	MPSD [dBm/MHz]	E.I.R.P MPSD [dBm/MHz]	ISED Limit [dBm/MHz]	Margin [dB]	ISED E.I.R.P limit [dBm/MHz]	Margin [dB]
1	38	5190	-3.4	5.6	N/A	-	10.0	4.4
	46	5230	-3.0	6.0	N/A	-	10.0	4.0

WLAN ac-Mode; 80 MHz; MCS 0; SISO

U-NII-Subband	Ch. No.	Freq. [MHz]	MPSD [dBm/MHz]	E.I.R.P MPSD [dBm/MHz]	ISED Limit [dBm/MHz]	Margin [dB]	ISED E.I.R.P limit [dBm/MHz]	Margin [dB]
1	42	5210	-4.3	4.7	N/A	-	10.0	5.3

WLAN ax-Mode; 20 MHz; MCS 0; SISO

U-NII-Subband	Ch. No.	Freq. [MHz]	MPSD [dBm/MHz]	E.I.R.P MPSD [dBm/MHz]	ISED Limit [dBm/MHz]	Margin [dB]	ISED E.I.R.P limit [dBm/MHz]	Margin [dB]
1	36	5180	-1.6	7.4	N/A	-	10.0	2.6
	44	5220	-1.2	7.8	N/A	-	10.0	2.2
	48	5240	-1.4	7.6	N/A	-	10.0	2.4

WLAN ax-Mode; 40 MHz; MCS 0; SISO

U-NII-Subband	Ch. No.	Freq. [MHz]	MPSD [dBm/MHz]	E.I.R.P MPSD [dBm/MHz]	ISED Limit [dBm/MHz]	Margin [dB]	ISED E.I.R.P limit [dBm/MHz]	Margin [dB]
1	38	5190	-4.1	4.9	N/A	-	10.0	5.1
	46	5230	-3.8	5.2	N/A	-	10.0	4.8

WLAN ax-Mode; 80 MHz; MCS 0; SISO

U-NII-Subband	Ch. No.	Freq. [MHz]	MPSD [dBm/MHz]	E.I.R.P MPSD [dBm/MHz]	ISED Limit [dBm/MHz]	Margin [dB]	ISED E.I.R.P limit [dBm/MHz]	Margin [dB]
1	42	5210	-3.6	5.4	N/A	-	10.0	4.6

WLAN a-Mode; 20 MHz; 6 Mbit/s; Diversity

U-NII-Subband	Ch. No.	Freq. [MHz]	MPSD [dBm/MHz]	E.I.R.P MPSD [dBm/MHz]	ISED Limit [dBm/MHz]	Margin [dB]	ISED E.I.R.P limit [dBm/MHz]	Margin [dB]
1	36	5180	-0.1	8.9	N/A	-	10.0	1.1
	44	5220	0.3	9.3	N/A	-	10.0	0.7
	48	5240	-0.2	8.8	N/A	-	10.0	1.2

WLAN n-Mode; 20 MHz; MCS 8; MIMO

U-NII-Subband	Ch. No.	Freq. [MHz]	MPSD [dBm/MHz]	E.I.R.P MPSD [dBm/MHz]	ISED Limit [dBm/MHz]	Margin [dB]	ISED E.I.R.P limit [dBm/MHz]	Margin [dB]
1	36	5180	-0.5	8.5	N/A	-	10.0	1.5
	44	5220	-0.3	8.7	N/A	-	10.0	1.3
	48	5240	-0.5	8.5	N/A	-	10.0	1.5

WLAN n-Mode; 40 MHz; MCS 8; MIMO

U-NII-Subband	Ch. No.	Freq. [MHz]	MPSD [dBm/MHz]	E.I.R.P MPSD [dBm/MHz]	ISED Limit [dBm/MHz]	Margin [dB]	ISED E.I.R.P limit [dBm/MHz]	Margin [dB]
1	38	5190	0.4	9.4	N/A	-	10.0	0.6
	46	5230	0.8	9.8	N/A	-	10.0	0.2

WLAN ac-Mode; 20 MHz; MCS 0; MIMO

U-NII-Subband	Ch. No.	Freq. [MHz]	MPSD [dBm/MHz]	E.I.R.P MPSD [dBm/MHz]	ISED Limit [dBm/MHz]	Margin [dB]	ISED E.I.R.P limit [dBm/MHz]	Margin [dB]
1	36	5180	-0.6	8.4	N/A	-	10.0	1.6
	44	5220	-0.4	8.6	N/A	-	10.0	1.4
	48	5240	-0.5	8.5	N/A	-	10.0	1.5

WLAN ac-Mode; 40 MHz; MCS 0; MIMO

U-NII-Subband	Ch. No.	Freq. [MHz]	MPSD [dBm/MHz]	E.I.R.P MPSD [dBm/MHz]	ISED Limit [dBm/MHz]	Margin [dB]	ISED E.I.R.P limit [dBm/MHz]	Margin [dB]
1	38	5190	-0.4	8.6	N/A	-	10.0	1.4
	46	5230	0.7	9.7	N/A	-	10.0	0.3

WLAN ac-Mode; 80 MHz; MCS 0; MIMO

U-NII-Subband	Ch. No.	Freq. [MHz]	MPSD [dBm/MHz]	E.I.R.P MPSD [dBm/MHz]	ISED Limit [dBm/MHz]	Margin [dB]	ISED E.I.R.P limit [dBm/MHz]	Margin [dB]
1	42	5210	-2.0	7.0	N/A	-	10.0	3.0

WLAN ax-Mode; 20 MHz; MCS 0; MIMO

U-NII-Subband	Ch. No.	Freq. [MHz]	MPSD [dBm/MHz]	E.I.R.P MPSD [dBm/MHz]	ISED Limit [dBm/MHz]	Margin [dB]	ISED E.I.R.P limit [dBm/MHz]	Margin [dB]
1	36	5180	-1.1	7.9	N/A	-	10.0	2.1
	44	5220	-0.7	8.3	N/A	-	10.0	1.7
	48	5240	-0.9	8.1	N/A	-	10.0	1.9

WLAN ax-Mode; 40 MHz; MCS 0; MIMO

U-NII-Subband	Ch. No.	Freq. [MHz]	MPSD [dBm/MHz]	E.I.R.P MPSD [dBm/MHz]	ISED Limit [dBm/MHz]	Margin [dB]	ISED E.I.R.P limit [dBm/MHz]	Margin [dB]
1	38	5190	0.5	9.5	N/A	-	10.0	0.5
	46	5230	0.9	9.9	N/A	-	10.0	0.1

WLAN ax-Mode; 80 MHz; MCS 0; MIMO

U-NII-Subband	Ch. No.	Freq. [MHz]	MPSD [dBm/MHz]	E.I.R.P MPSD [dBm/MHz]	ISED Limit [dBm/MHz]	Margin [dB]	ISED E.I.R.P limit [dBm/MHz]	Margin [dB]
1	42	5210	-1.4	7.6	N/A	-	10.0	2.4

Remark: Please see next sub-clause for the measurement plot.



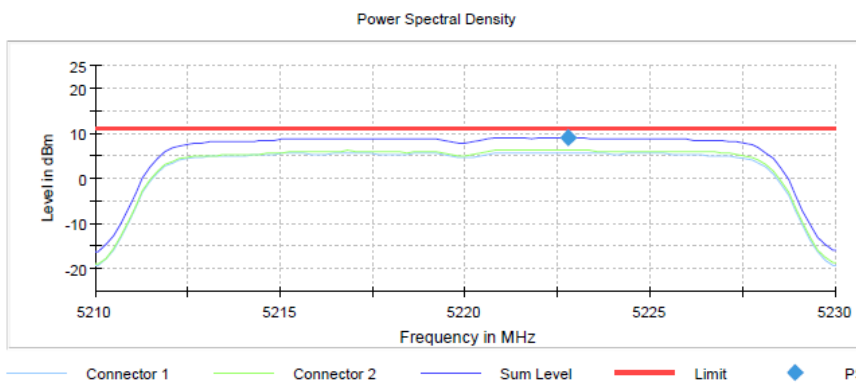
### 5.6.4 MEASUREMENT PLOT (EXAMPLE PLOT, SHOWING WORST CASE, IF APPLICABLE)

Radio Technology = WLAN a MIMO, Operating Frequency = mid, Subband = U-NII-1 (S01\_AD02)

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
5220.000000	5222.772277	9.029	11.0	PASS

#### Ports

Port	State
1	used
2	used



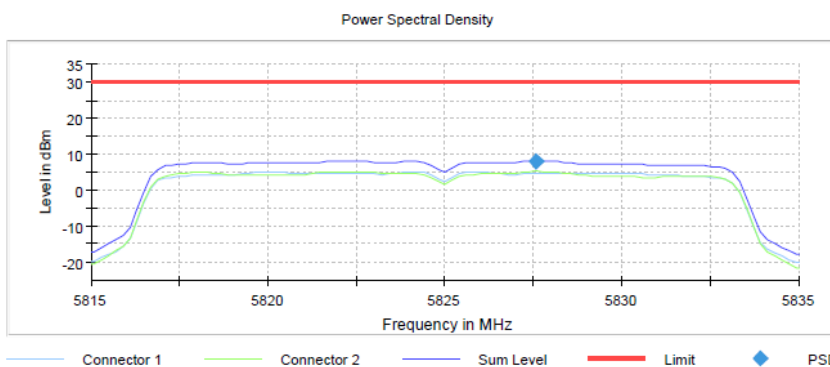
Setting	Instrument Value
Start Frequency	5.21000 GHz
Stop Frequency	5.23000 GHz
Span	20.000 MHz
RBW	1.000 MHz
VBW	3.000 MHz
SweepPoints	101
Sweeptime	505.000 ms
Reference Level	10.000 dBm
Attenuation	20.000 dB
Detector	RMS
SweepCount	119
Filter	3 dB
Trace Mode	Max Hold
Sweeptype	Sweep
Preamp	off
Stablemode	Trace
Stablevalue	0.30 dB
Run	4 / max. 15
Stable	3 / 3
Max Stable Difference	0.03 dB

Radio Technology = WLAN a MIMO, Operating Frequency = high, Subband = U-NII-3 (S01\_AD02)

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
5825.000000	5827.574257	7.999	30.0	PASS

#### Ports

Port	State
1	used
2	used



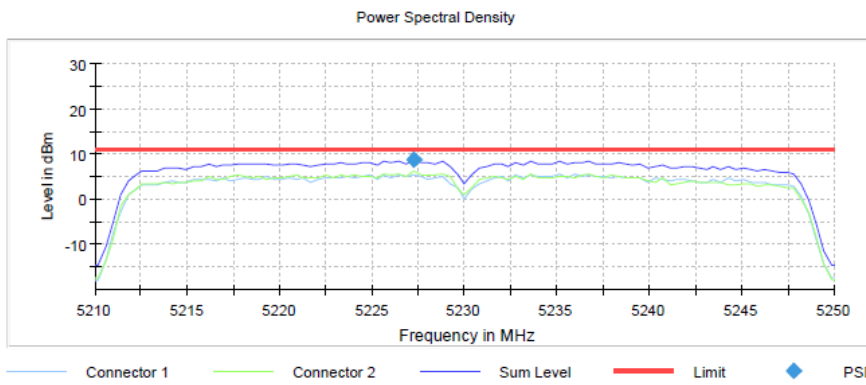
Setting	Instrument Value
Start Frequency	5.81500 GHz
Stop Frequency	5.83500 GHz
Span	20.000 MHz
RBW	500.000 kHz
VBW	2.000 MHz
SweepPoints	101
Sweeptime	505.000 ms
Reference Level	10.000 dBm
Attenuation	20.000 dB
Detector	RMS
SweepCount	119
Filter	3 dB
Trace Mode	Max Hold
Sweeptype	Sweep
Preamp	off
Stablemode	Trace
Stablevalue	0.30 dB
Run	4 / max. 15
Stable	3 / 3
Max Stable Difference	0.02 dB

Radio Technology = WLAN n 40 MHz MIMO, Operating Frequency = high, Subband = U-NII-1 (S01\_AD02)

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
5230.000000	5227.227723	8.792	11.0	PASS

**Ports**

Port	State
1	used
2	used



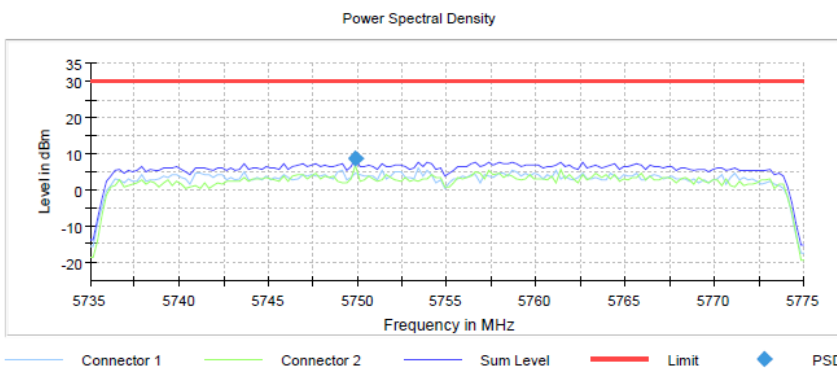
Setting	Instrument Value
Start Frequency	5.21000 GHz
Stop Frequency	5.25000 GHz
Span	40.000 MHz
RBW	1.000 MHz
VBW	3.000 MHz
SweepPoints	101
Sweeptime	1.000 ms
Reference Level	10.000 dBm
Attenuation	20.000 dB
Detector	RMS
SweepCount	0
Filter	3 dB
Trace Mode	Max Hold
Sweeptype	Sweep
Preamp	off
Stablemode	Trace
Stablevalue	0.30 dB
Run	15 / max. 15
Stable	1 / 3
Max Stable Difference	0.00 dB

Radio Technology = WLAN ax 40 MHz MIMO, Operating Frequency = low, Subband = U-NII-3 (S01\_AD02)

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
5755.000000	5749.875000	8.816	30.0	PASS

**Ports**

Port	State
1	used
2	used



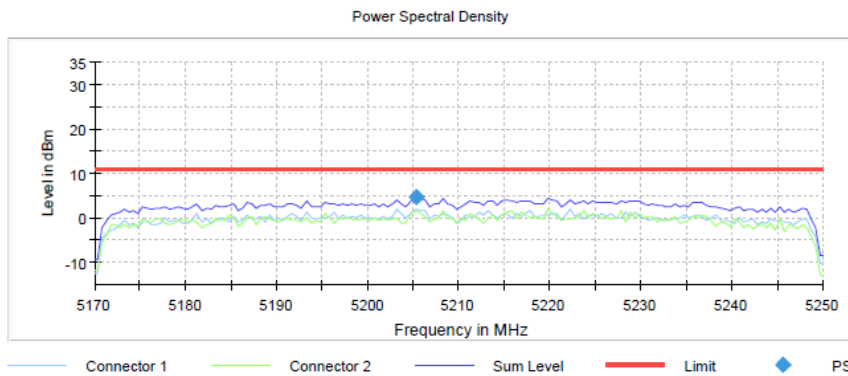
Setting	Instrument Value
Start Frequency	5.73500 GHz
Stop Frequency	5.77500 GHz
Span	40.000 MHz
RBW	500.000 kHz
VBW	2.000 MHz
SweepPoints	160
Sweeptime	1.000 ms
Reference Level	10.000 dBm
Attenuation	20.000 dB
Detector	RMS
SweepCount	0
Filter	3 dB
Trace Mode	Max Hold
Sweeptype	Sweep
Preamp	off
Stablemode	Trace
Stablevalue	0.30 dB
Run	15 / max. 15
Stable	0 / 3
Max Stable Difference	2.89 dB

Radio Technology = WLAN ax 80 MHz MIMO, Operating Frequency = mid, Subband = U-NII-1 (S01\_AD02)

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
5210.000000	5205.250000	4.680	11.0	PASS

**Ports**

Port	State
1	used
2	used



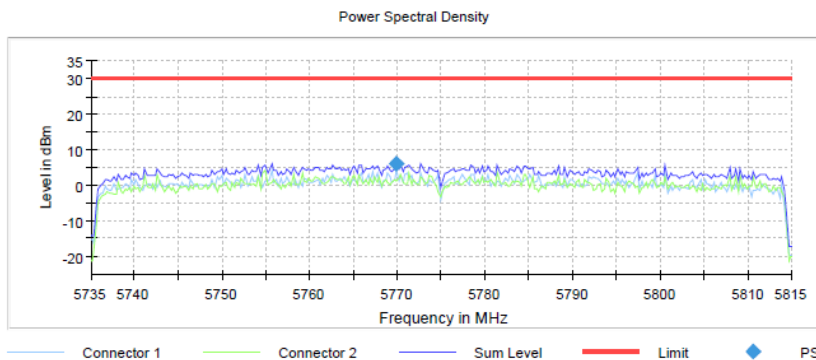
Setting	Instrument Value
Start Frequency	5.17000 GHz
Stop Frequency	5.25000 GHz
Span	80.000 MHz
RBW	1.000 MHz
VBW	3.000 MHz
SweepPoints	160
SweepTime	1.000 ms
Reference Level	10.000 dBm
Attenuation	20.000 dB
Detector	RMS
SweepCount	0
Filter	3 dB
Trace Mode	Max Hold
SweepType	Sweep
Preamplifier	off
Stablemode	Trace
Stablevalue	0.30 dB
Run	15 / max. 15
Stable	3 / 3
Max Stable Difference	0.00 dB

Radio Technology = WLAN ax 80 MHz MIMO, Operating Frequency = mid, Subband = U-NII-3 (S01\_AD02)

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
5775.000000	5769.875000	6.160	30.0	PASS

**Ports**

Port	State
1	used
2	used



Setting	Instrument Value
Start Frequency	5.73500 GHz
Stop Frequency	5.81500 GHz
Span	80.000 MHz
RBW	500.000 kHz
VBW	2.000 MHz
SweepPoints	320
SweepTime	1.000 ms
Reference Level	10.000 dBm
Attenuation	20.000 dB
Detector	RMS
SweepCount	0
Filter	3 dB
Trace Mode	Max Hold
SweepType	Sweep
Preamplifier	off
Stablemode	Trace
Stablevalue	0.30 dB
Run	15 / max. 15
Stable	1 / 3
Max Stable Difference	0.00 dB

5.6.5 TEST EQUIPMENT USED

- R&S TS8997

## 5.7 UNDESIRABLE EMISSIONS; GENERAL FIELD STRENGTH LIMITS

Standard **FCC Part 15 Subpart E**

**The test was performed according to:**

ANSI C63.10, chapter 6.4, 6.5, 6.6.5

### 5.7.1 TEST DESCRIPTION

The test set-up was made in accordance to the general provisions of ANSI C63.10 in a typical installation configuration. The measurements were performed according the following sub-chapters of ANSI C63.10:

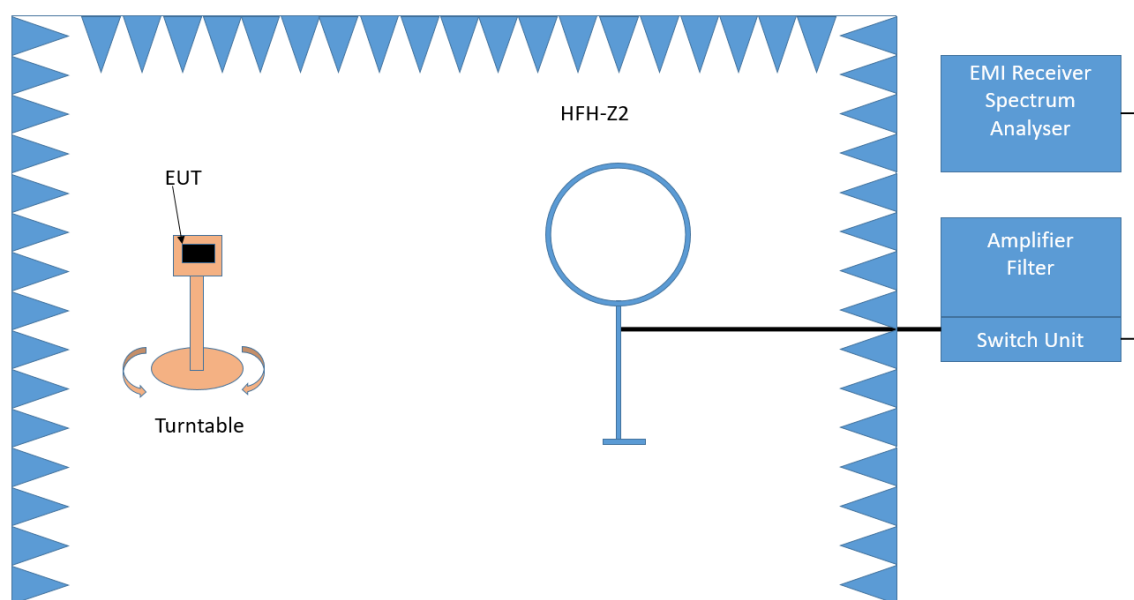
- < 30 MHz: Chapter 6.4
- 30 MHz – 1 GHz: Chapter 6.5
- > 1 GHz: Chapter 6.6 (procedure according 6.6.5 used)

The measurement procedure is implemented into the EMI test software EMC32 from R&S. Exploratory tests are performed at 3 orthogonal axes to determine the worst-case orientation of a body-worn or handheld EUT. The final test on all kind of EUTs is also performed at 3 axes. A pre-check is performed while the EUT is powered.

#### **Below 1 GHz:**

The Equipment Under Test (EUT) was set up on a non-conductive table in the semi-anechoic chamber. The influence of the EUT support table that is used between 30–1000 MHz was evaluated.

#### **1. Measurement up to 30 MHz**



Test Setup; Spurious Emission Radiated (SAC), 9 kHz – 30 MHz

The Loop antenna HFH2-Z2 is used.

**Step 1:** pre measurement

- Anechoic chamber
- Antenna distance: 3 m
- Detector: Peak-Maxhold
- Frequency range: 0.009 - 0.15 MHz and 0.15 – 30 MHz
- Frequency steps: 0.05 kHz and 2.25 kHz
- IF-Bandwidth: 0.2 kHz and 9 kHz
- Measuring time / Frequency step: 100 ms (FFT-based)

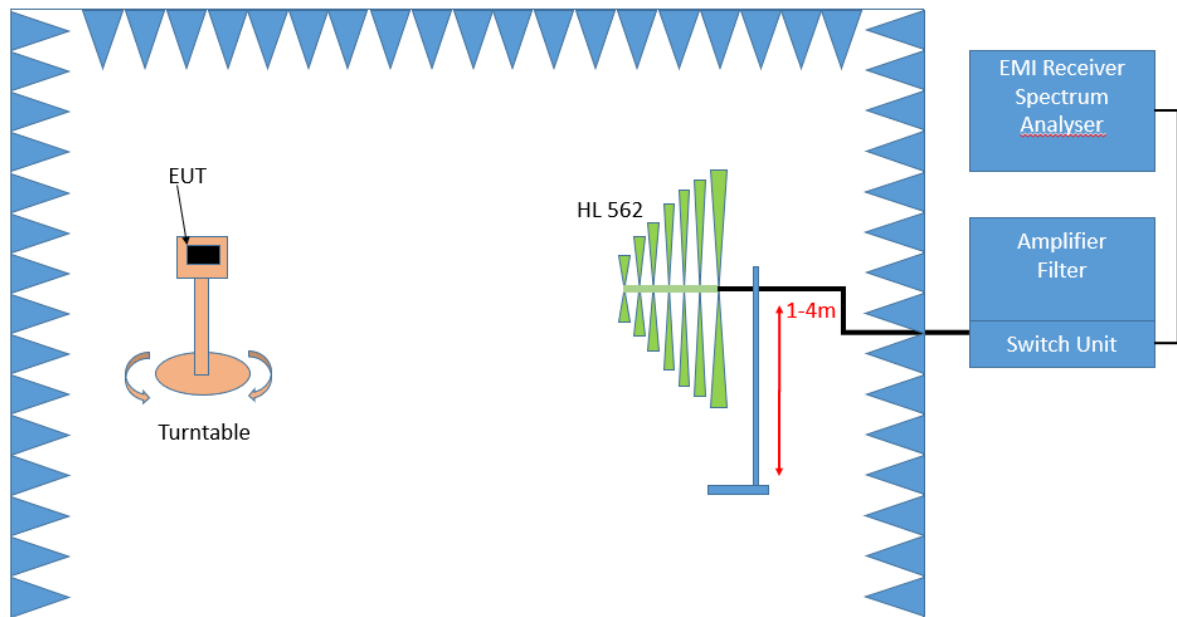
Intention of this step is, to determine the radiated EMI-profile of the EUT. Afterwards the relevant emissions for the final measurement are identified.

**Step 2:** final measurement

For the relevant emissions determined in step 1, an additional measurement with the following settings will be performed. Intention of this step is to find the maximum emission level.

- Open area test side
- Antenna distance: according to the Standard
- Detector: Quasi-Peak
- Frequency range: 0.009 – 30 MHz
- Frequency steps: measurement at frequencies detected in step 1
- IF-Bandwidth: 0.2 - 10 kHz
- Measuring time / Frequency step: 1 s

**2. Measurement above 30 MHz and up to 1 GHz**



Test Setup; Spurious Emission Radiated (SAC), 30 MHz- 1GHz

**Step 1:** Preliminary scan

This is a preliminary test to identify the highest amplitudes relative to the limit.

Settings for step 1:

- Antenna distance: 3 m
- Detector: Peak-Maxhold / Quasipeak (FFT-based)
- Frequency range: 30 – 1000 MHz
- Frequency steps: 30 kHz
- IF-Bandwidth: 120 kHz
- Measuring time / Frequency step: 100 ms
- Turntable angle range: -180° to 90°

- Turntable step size: 90°
- Height variation range: 1 – 4 m
- Height variation step size: 1.5 m
- Polarisation: Horizontal + Vertical

Intention of this step is, to determine the radiated EMI-profile of the EUT. Afterwards the relevant emissions for the final measurement are identified.

### **Step 2:** Adjustment measurement

In this step the accuracy of the turntable azimuth and antenna height will be improved. This is necessary to find out the maximum value of every frequency.

For each frequency, which was determined the turntable azimuth and antenna height will be adjusted. The turntable azimuth will slowly vary by 360°. During this action, the value of emission is continuously measured. The turntable azimuth at the highest emission will be recorded and adjusted. In this position, the antenna height will also slowly vary by 1 – 4 meter. During this action, the value of emission is also continuously measured. The antenna height of the highest emission will also be recorded and adjusted.

- Detector: Peak – Maxhold
- Measured frequencies: in step 1 determined frequencies
- IF – Bandwidth: 120 kHz
- Measuring time: 100 ms
- Turntable angle range: 360 °
- Height variation range: 1 – 4 m
- Antenna Polarisation: max. value determined in step 1

### **Step 3:** Final measurement with QP detector

With the settings determined in step 2, the final measurement will be performed:

EMI receiver settings for step 3:

- Detector: Quasi-Peak (< 1 GHz)
- Measured frequencies: in step 1 determined frequencies
- IF – Bandwidth: 120 kHz
- Measuring time: 1 s

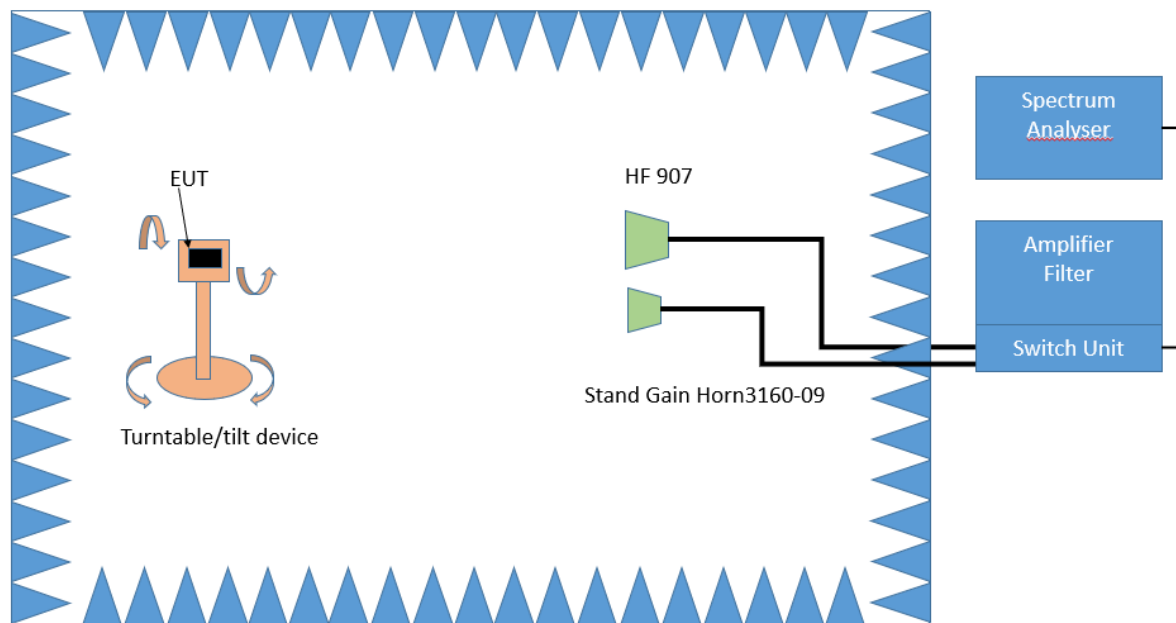
After the measurement a plot will be generated which contains a diagram with the results of the preliminary scan and a chart with the frequencies and values of the results of the final measurement.

### Above 1 GHz:

The Equipment Under Test (EUT) was set up on a non-conductive support (tilt device) at 1.5 m height in the fully-anechoic chamber.

All steps were performed with one height (1.5 m) of the receiving antenna only.

### 3. Measurement 1 GHz up to 26.5 GHz



Test Setup; Spurious Emission Radiated (FAC), 1 GHz-26.5 GHz

#### Step 1:

The Equipment Under Test (EUT) was set up on a non-conductive support (tilt device) at 1.5 m height in the fully-anechoic chamber.

All steps were performed with one height (1.5 m) of the receiving antenna only.

The EUT is turned during the preliminary measurement across the elevation axis, with a step size of 90 °.

The turn table step size (azimuth angle) for the preliminary measurement is 45 °.

#### Step 2:

Due to the fact, that in this frequency range the test is performed in a fully anechoic room, the height scan of the receiving antenna instep 2 is omitted. Instead of this, a maximum search with a step size  $\pm 45^\circ$  for the elevation axis is performed.

The turn table azimuth will slowly vary by  $\pm 22.5^\circ$ .

The elevation angle will slowly vary by  $\pm 45^\circ$

EMI receiver settings (for all steps):

- Detector: Peak, Average
- IF Bandwidth = 1 MHz

#### Step 3:

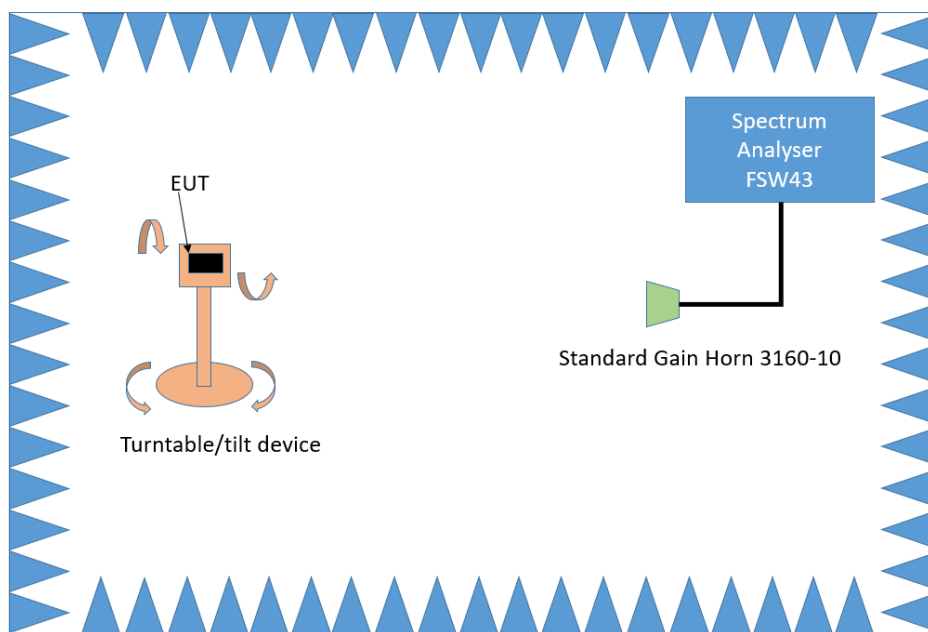
Spectrum analyser settings for step 3:

- Detector: Peak / Average
- Measured frequencies: in step 1 determined frequencies
- IF – Bandwidth: 1 MHz
- Measuring time: 1 s

#### 4. Measurement above 26.5 GHz up to 40 GHz

The following modifications, compared to the frequency range 1 GHz – 26.5 GHz, apply to the measurement procedure for the frequency range above 26.5 GHz:

- Measurement distance: 1m



Test Setup; Spurious Emission Radiated (FAC), 26.5 – 40 GHz

#### 5.7.2 TEST REQUIREMENTS / LIMITS

##### A) FCC

FCC Part 15 Subpart E, §15.407 (b)(1)

For transmitters operating in the 5150–5250 MHz band:

Limit: –27 dBm/MHz EIRP outside of the band 5150–5350 MHz.

FCC Part 15 Subpart E, §15.407 (b)(2)

For transmitters operating in the 5250–5350 MHz band:

Limit: –27 dBm/MHz EIRP outside of the band 5150–5350 MHz.

FCC Part 15 Subpart E, §15.407 (b)(3)

For transmitters operating in the 5470–5725 MHz band:

Limit: –27 dBm/MHz EIRP outside of the band 5470–5725 MHz.

FCC Part 15 Subpart E, §15.407 (b)(4)

For transmitters operating in the 5725–5850 MHz band:

Limit: –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  
 increasing linearly to 15.6 dBm/MHz at 5 MHz above or below the band edge  
 increasing linearly to 27 dBm/MHz at the band edge.

FCC Part 15 Subpart E, §15.407 (b) (5)



For transmitters operating within the 5.925-7.125 GHz band:  
Limit: -27 dBm/MHz EIRP outside of the band 5.925-7.125 GHz.

FCC Part 15 Subpart E, §15.407 (b) (6)

For transmitters operating within the 5.925-7.125 GHz bands:

Power spectral density must be suppressed by 20 dB at 1 MHz outside of channel edge, by 28 dB at one channel bandwidth from the channel center, and by 40 dB at one- and one-half times the channel bandwidth away from channel center. At frequencies between one megahertz outside an unlicensed device's channel edge and one channel bandwidth from the center of the channel, the limits must be linearly interpolated between 20 dB and 28 dB suppression, and at frequencies between one and one- and one-half times an unlicensed device's channel bandwidth, the limits must be linearly interpolated between 28 dB and 40 dB suppression. Emissions removed from the channel center by more than one- and one-half times the channel bandwidth must be suppressed by at least 40 dB.

## **B) IC**

Different frequency bands and limits apply, as compared to the FCC requirements.

RSS-247, 6.2.1.2, Emissions outside the band 5150-5250 MHz, indoor operation only:  
Limit: -27 dBm/MHz EIRP outside of the band 5150-5250 MHz.

RSS-247, 6.2.2.2, Emissions outside the band 5250-5350 MHz:  
Limit: -27 dBm/MHz EIRP outside of the band 5250-5350 MHz.

RSS-247, 6.2.3.2, Emissions outside the bands 5470-5600 MHz and 5650-5725 MHz:  
Limit: -27 dBm/MHz EIRP outside of the band 5470-5725 MHz.  
However, devices with bandwidth overlapping the band edge of 5725 MHz can meet the emission limit of -27 dBm/MHz e.i.r.p. at 5850 MHz instead of 5725 MHz.  
Note: No operation is permitted for the frequency range 5600-5650 MHz.

RSS-247, 6.2.4.2, Emissions outside the band 5725-5850 MHz:

- a. 27 dBm/MHz at frequencies from the band edges decreasing linearly to 15.6 Bm/MHz at 5 MHz above or below the band edges;
- b. 15.6 dBm/MHz at 5 MHz above or below the band edges decreasing linearly to 10 dBm/MHz at 25 MHz above or below the band edges;
- c. 10 dBm/MHz at 25 MHz above or below the band edges decreasing linearly to -27 dBm/MHz at 75 MHz above or below the band edges; and
- d. -27 dBm/MHz at frequencies more than 75 MHz above or below the band edges.

## **C) FCC & IC**

FCC Part 15 Subpart E, §15.405  
The provisions of §§ 15.203 and 15.205 are included.

§15.407 (b)(6)

Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in § 15.209.

§15.407 (b)(7)

The provisions of §15.205 apply to intentional radiators operating under this section

FCC Part 15, Subpart C, §15.209, Radiated Emission Limits

Frequency in MHz	Limit (µV/m)	Measurement distance (m)	Limits (dBµV/m)
0.009 – 0.49	2400/F(kHz)@300m	3	(48.5 – 13.8)@300m
0.49 – 1.705	24000/F(kHz)@30m	3	(33.8 – 23.0)@30m
1.705 – 30	30@30m	3	29.5@30m

The measured values are corrected with an inverse linear distance extrapolation factor (40 dB/decade) according FCC 15.31 (2).

Frequency in MHz	Limit (µV/m)	Measurement distance (m)	Limits (dBµV/m)
30 – 88	100@3m	3	40.0@3m
88 – 216	150@3m	3	43.5@3m
216 – 960	200@3m	3	46.0@3m
960 - 26000	500@3m	3	54.0@3m
26000 - 40000	500@3m	1	54.0@3m

The measured values above 26 GHz are corrected with an inverse linear distance extrapolation factor (20 dB/decade).

§15.35(b) ..., there is also a limit on the radio frequency emissions, as measured using instrumentation with a peak detector function, corresponding to 20 dB above the maximum permitted average limit....

Used conversion factor:

- Limit (dBµV/m) = 20 log (Limit (µV/m)/1µV/m)
- Limit (dBµV/m) = EIRP [dBm] – 20 log (d [m]) + 104.8

Limit types (in result tables):

RB – Emissions falls into a "Restricted Band" according FCC §§15.205 and 15.209 \*)

UE – "Undesirable Emission Limit" according FCC §15.407

BE-RB – Band Edge Limit basing on "Restricted Band Limits"

BE-UE – Band Edge Limit basing on "Undesirable Emission Limit"

\*) Below 1 GHz the limits of §15.209 are applied for all frequencies.

### 5.7.3 TEST PROTOCOL

Ambient temperature: 22–26 °C  
 Air Pressure: 991–1023 hPa  
 Humidity: 37–57 %

#### With <8 dBi antenna FCC power setting (worst case):

WLAN a-Mode; 20 MHz; 6 Mbit/s; Diversity  
 Applied duty cycle correction (AV): 0.5 dB

Ch. No.	Ch. Center Freq. [MHz]	Spurious Freq. [MHz]	Spurious Level [dBµV/m]	Detector	RBW [kHz]	Limit [dBµV/m]	Margin [dB]	Limit Type
36	5180	1071.3	65.3	PEAK	1000	74.0	8.7	RB
36	5180	1071.3	38.0	AV	1000	54.0	16.0	RB
36	5180	1150.8	54.6	PEAK	1000	74.0	19.4	RB
36	5180	1150.8	29.9	AV	1000	54.0	24.1	RB
44	5220	433.9	21.0	QP	120	46.0	25.0	RB
44	5220	535.5	23.4	QP	120	46.0	22.6	RB
44	5220	600.1	17.9	QP	120	46.0	28.1	RB
44	5220	831.3	30.4	QP	120	46.0	15.6	RB
44	5220	935.5	30.5	QP	120	46.0	15.5	RB
44	5220	990.8	35.2	QP	120	54.0	18.8	RB
44	5220	1071.2	61.2	PEAK	1000	74.0	12.8	RB
44	5220	1071.2	35.4	AV	1000	54.0	18.6	RB
44	5220	1151.4	55.2	PEAK	1000	74.0	18.8	RB
44	5220	1151.4	30.3	AV	1000	54.0	23.7	RB
48	5240	1071.2	62.7	PEAK	1000	74.0	11.3	RB
48	5240	1071.2	36.8	AV	1000	54.0	17.2	RB
149	5745	1071.4	61.4	PEAK	1000	74.0	12.6	RB
149	5745	1071.4	41.1	AV	1000	54.0	12.9	RB
157	5785	314.6	16.7	QP	120	46.0	29.3	RB
157	5785	535.5	24.1	QP	120	46.0	21.9	RB
157	5785	600.0	18.1	QP	120	46.0	27.9	RB
157	5785	831.3	28.2	QP	120	46.0	17.8	RB
157	5785	967.0	33.2	QP	120	54.0	20.8	RB
157	5785	991.1	36.2	QP	120	54.0	17.8	RB
157	5785	1071.0	52.2	PEAK	1000	74.0	21.8	RB
157	5785	1071.0	36.5	AV	1000	54.0	17.5	RB
157	5785	1150.5	57.3	PEAK	1000	74.0	16.7	RB
157	5785	1150.5	30.7	AV	1000	54.0	23.3	RB
165	5825	1070.9	67.6	PEAK	1000	74.0	6.4	RB
165	5825	1070.9	40.9	AV	1000	54.0	13.1	RB
165	5825	1151.0	55.5	PEAK	1000	74.0	18.5	RB
165	5825	1151.0	30.2	AV	1000	54.0	23.8	RB

WLAN n-Mode; 20 MHz; MCS 8; MIMO  
 Applied duty cycle correction (AV): 0.5 dB

Ch. No.	Ch. Center Freq. [MHz]	Spurious Freq. [MHz]	Spurious Level [dBµV/m]	Detector	RBW [kHz]	Limit [dBµV/m]	Margin [dB]	Limit Type
36	5180	1071.2	60.6	PEAK	1000	74.0	13.4	RB
36	5180	1071.2	35.9	AV	1000	54.0	18.1	RB
36	5180	1091.9	56.1	PEAK	1000	74.0	17.9	RB
36	5180	1091.9	31.0	AV	1000	54.0	23.0	RB
36	5180	1250.7	48.9	PEAK	1000	68.2	19.3	UE
36	5180	1962.5	53.5	PEAK	1000	68.2	14.7	UE
44	5220	1071.8	57.8	PEAK	1000	74.0	16.2	RB
44	5220	1071.8	33.1	AV	1000	54.0	20.9	RB
48	5240	1071.8	60.1	PEAK	1000	74.0	13.9	RB
48	5240	1071.8	33.7	AV	1000	54.0	20.3	RB
149	5745	1071.0	60.2	PEAK	1000	74.0	13.8	RB
149	5745	1071.0	36.3	AV	1000	54.0	17.7	RB

149	5745	1071.4	63.2	PEAK	1000	74.0	10.8	RB
149	5745	1071.4	37.0	AV	1000	54.0	17.0	RB
157	5785	1050.3	56.3	PEAK	1000	74.0	17.7	RB
157	5785	1050.3	31.0	AV	1000	54.0	23.0	RB
157	5785	1071.0	61.2	PEAK	1000	74.0	12.8	RB
157	5785	1071.0	37.0	AV	1000	54.0	17.0	RB
157	5785	1747.3	44.5	PEAK	1000	68.2	23.7	UE

WLAN n-Mode; 40 MHz; MCS 8; MIMO  
Applied duty cycle correction (AV): 0.5 dB

Ch. No.	Ch. Center Freq. [MHz]	Spurious Freq. [MHz]	Spurious Level [dBµV/m]	Detector	RBW [kHz]	Limit [dBµV/m]	Margin [dB]	Limit Type
38	5190	535.5	30.1	QP	120	46.0	15.9	RB
38	5190	713.7	29.7	QP	120	46.0	16.3	RB
38	5190	840.1	27.3	QP	120	46.0	18.7	RB
38	5190	893.8	32.2	QP	120	46.0	13.8	RB
38	5190	967.1	28.9	QP	120	54.0	25.1	RB
38	5190	987.8	35.5	QP	120	54.0	18.5	RB
38	5190	1070.9	52.8	PEAK	1000	74.0	21.2	RB
38	5190	1070.9	32.2	AV	1000	54.0	21.8	RB
46	5230	1070.3	62.4	PEAK	1000	74.0	11.6	RB
46	5230	1070.3	35.5	AV	1000	54.0	18.5	RB
151	5755	1049.5	49.5	PEAK	1000	74.0	24.5	RB
151	5755	1049.5	29.7	AV	1000	54.0	24.3	RB
151	5755	1071.0	62.5	PEAK	1000	74.0	11.5	RB
151	5755	1071.0	38.4	AV	1000	54.0	15.6	RB
159	5795	535.5	30.2	QP	120	46.0	15.8	RB
159	5795	713.8	27.5	QP	120	46.0	18.5	RB
159	5795	834.6	29.0	QP	120	46.0	17.0	RB
159	5795	892.0	31.9	QP	120	46.0	14.2	RB
159	5795	967.0	33.3	QP	120	54.0	20.7	RB
159	5795	987.7	35.5	QP	120	54.0	18.5	RB
159	5795	1071.0	58.2	PEAK	1000	74.0	15.8	RB
159	5795	1071.0	35.0	AV	1000	54.0	19.0	RB
159	5795	1071.4	60.2	PEAK	1000	74.0	13.8	RB
159	5795	1071.4	35.4	AV	1000	54.0	18.6	RB

WLAN ac-Mode; 40 MHz; MCS 0; SISO  
Applied duty cycle correction (AV): 0.8 dB

Ch. No.	Ch. Center Freq. [MHz]	Spurious Freq. [MHz]	Spurious Level [dBµV/m]	Detector	RBW [kHz]	Limit [dBµV/m]	Margin [dB]	Limit Type
38	5190	-	-	-	-	-	-	-
46	5230	-	-	-	-	-	-	-
151	5755	-	-	-	-	-	-	-
159	5795	1071.4	55.0	PEAK	1000	74.0	19.0	RB
159	5795	1071.4	32.9	AV	1000	54.0	21.1	RB
159	5795	1071.6	56.1	PEAK	1000	74.0	17.9	RB
159	5795	1071.6	32.8	AV	1000	54.0	21.2	RB

WLAN ax-Mode; 40 MHz; MCS 0; SISO  
Applied duty cycle correction (AV): 1.2 dB

Ch. No.	Ch. Center Freq. [MHz]	Spurious Freq. [MHz]	Spurious Level [dBµV/m]	Detector	RBW [kHz]	Limit [dBµV/m]	Margin [dB]	Limit Type
38	5190	1070.1	56.5	PEAK	1000	74.0	17.5	RB
38	5190	1070.1	32.9	AV	1000	54.0	21.1	RB
38	5190	1071.5	53.5	PEAK	1000	74.0	20.5	RB
38	5190	1071.5	31.8	AV	1000	54.0	22.2	RB
38	5190	1743.8	47.4	PEAK	1000	68.2	20.8	UE

**With <9 dBi antenna FCC power setting (worst case):**

WLAN a-Mode; 20 MHz; 6 Mbit/s

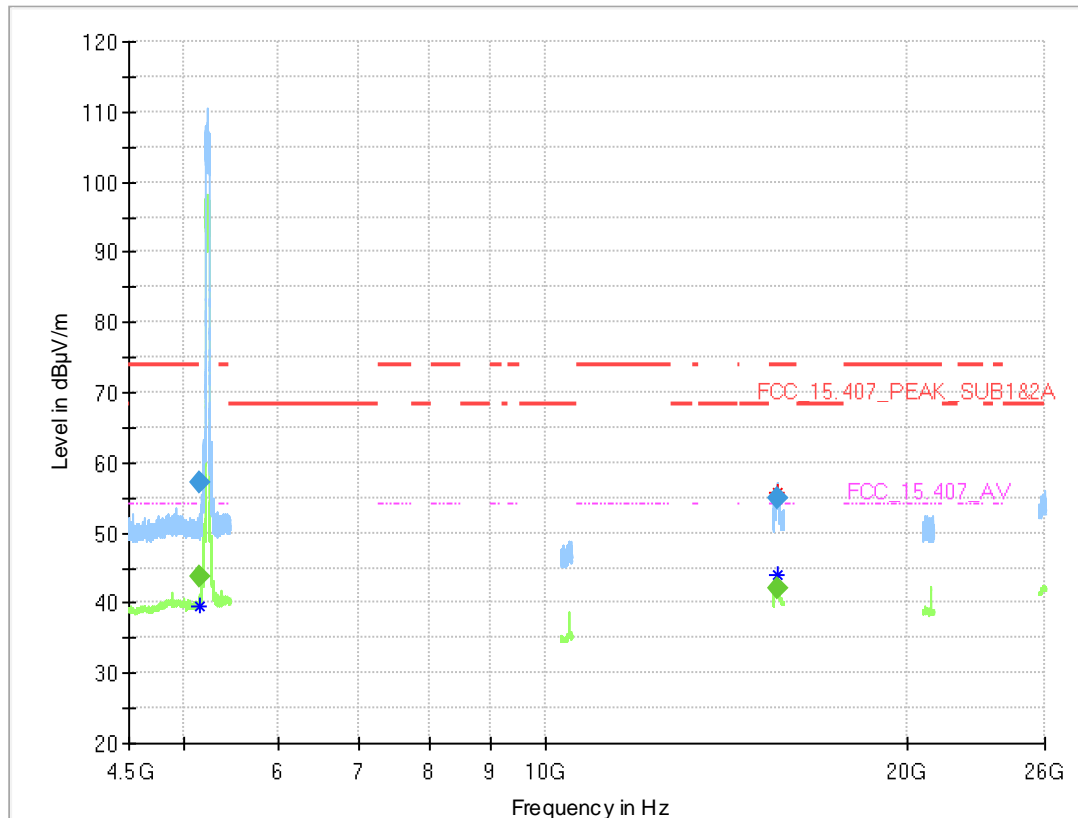
Applied duty cycle correction (AV): 0.7 dB

Ch. No.	Ch. Center Freq. [MHz]	Spurious Freq. [MHz]	Spurious Level [dB $\mu$ V/m]	Detector	RBW [kHz]	Limit [dB $\mu$ V/m]	Margin [dB]	Limit Type
36	5180	5376.1	56.8	PEAK	1000	74.0	17.2	RB
36	5180	5376.1	43.5	AV	1000	54.0	10.5	RB
44	5220	-	-	-	-	-	-	-
48	5240	-	-	-	-	-	-	-
149	5745	-	-	-	-	-	-	-
157	5785	-	-	-	-	-	-	-
165	5825	-	-	-	-	-	-	-

Remark: Please see next sub-clause for the measurement plot.

### 5.7.4 MEASUREMENT PLOT (EXAMPLE PLOT, SHOWING WORST CASE, IF APPLICABLE)

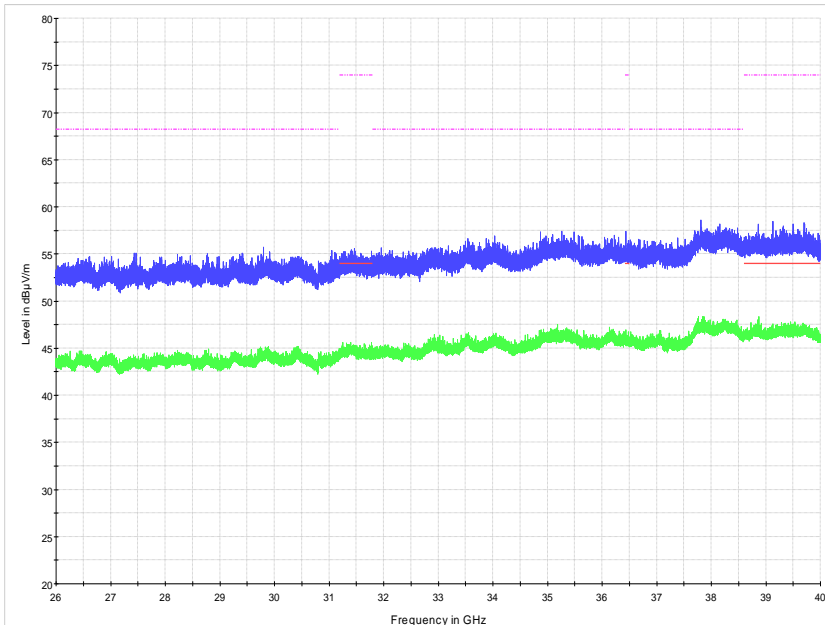
Radio Technology = WLAN ax 40 MHz, Operating Frequency = high, Measurement range = 1GHz - 26GHz, Subband = U-NII-1 (S02\_AC02)



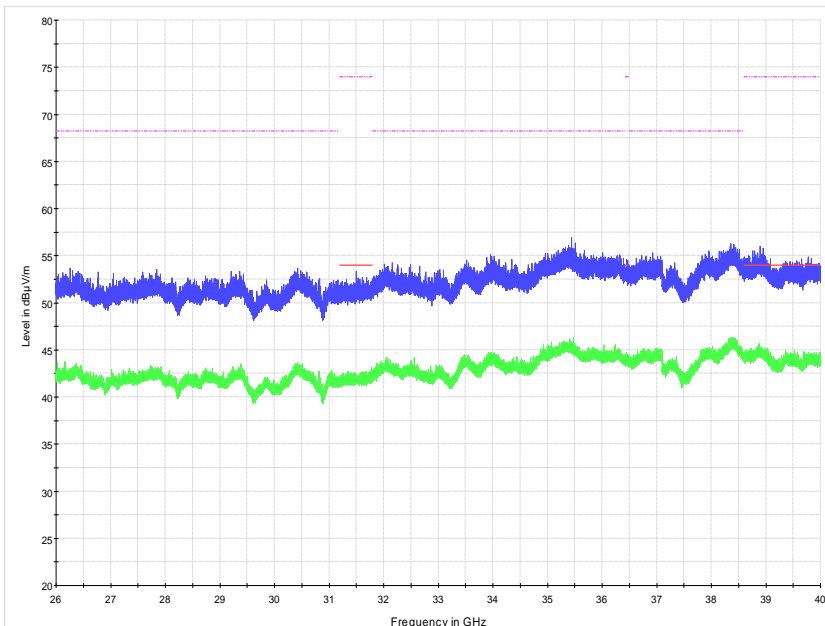
### Final Result

Frequency (MHz)	MaxPeak (dBµV/m)	CAverage (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB/m)
5149.513	---	43.7	54.00	10.34	1000.0	1000.000	150.0	H	-10.0	82.0	13.5
5149.513	57.1	---	74.00	16.89	1000.0	1000.000	150.0	H	-10.0	82.0	13.5
15596.538	---	42.1	54.00	11.88	1000.0	1000.000	150.0	V	-124.0	105.0	-1.0
15596.538	54.8	---	74.00	19.16	1000.0	1000.000	150.0	V	-124.0	105.0	-1.0

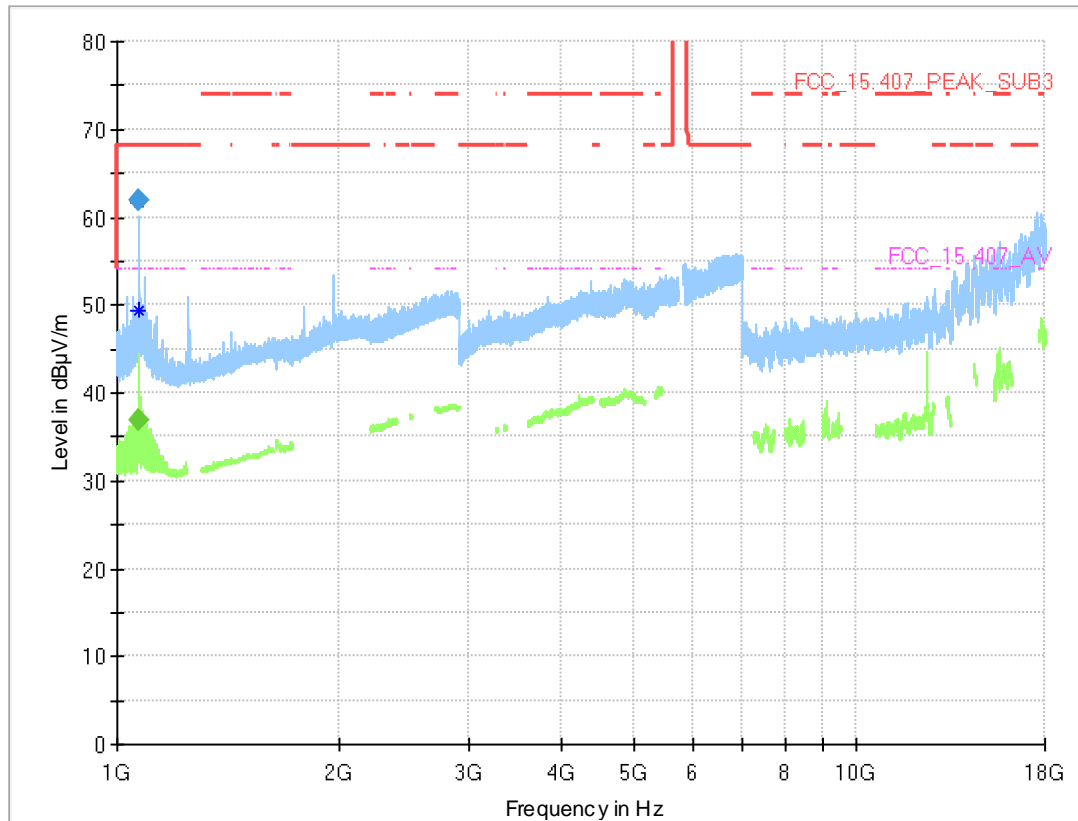
Radio Technology = WLAN a MIMO, Operating Frequency = mid, Measurement range = 26GHz - 40GHz, Subband = U-NII-1 (S02\_AC02)



Radio Technology = WLAN n 20 MHz MIMO, Operating Frequency = mid, Measurement range = 26GHz - 40GHz, Subband = U-NII-1 (S02\_AC02)



Radio Technology = WLAN n 20 MHz MIMO, Operating Frequency = high, Measurement range = 1GHz - 26GHz, Subband = U-NII-3 (S02\_AC02)

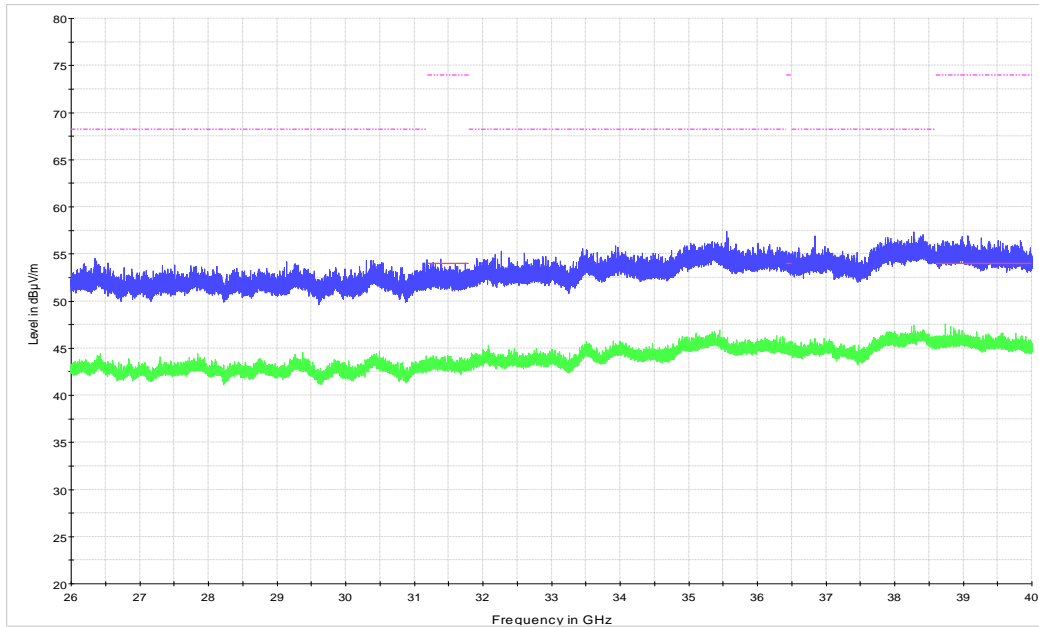


### Final Result

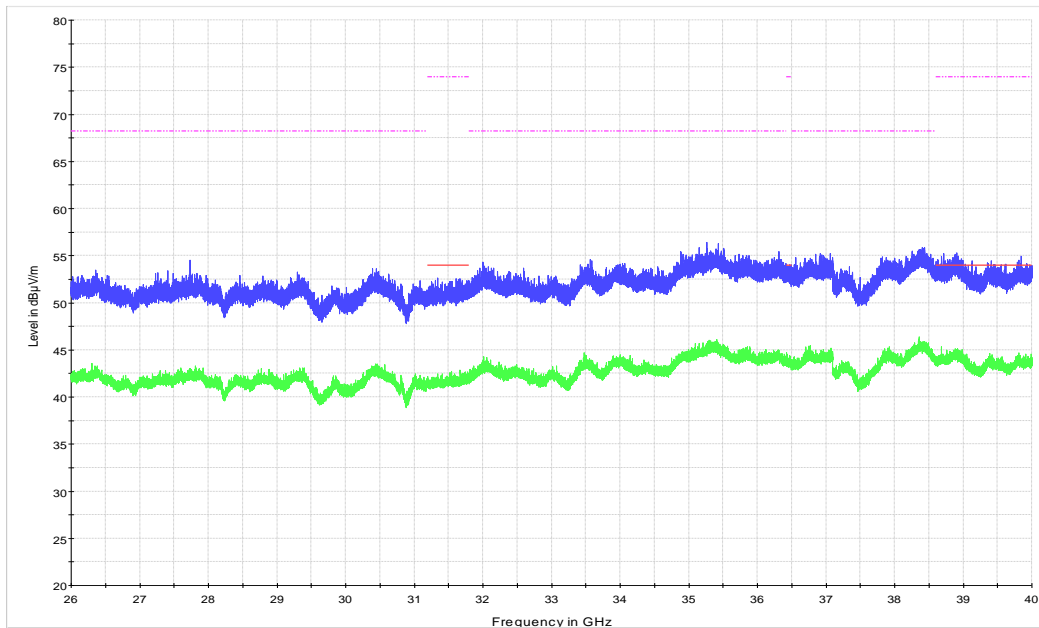
Frequency (MHz)	MaxPeak (dBµV/m)	CAverage (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB/m)
1070.800	---	36.8	54.00	17.19	1000.0	1000.000	150.0	V	-188.0	-11.0	-1.4
1070.800	61.9	---	68.20	6.27	1000.0	1000.000	150.0	V	-188.0	-11.0	-1.4



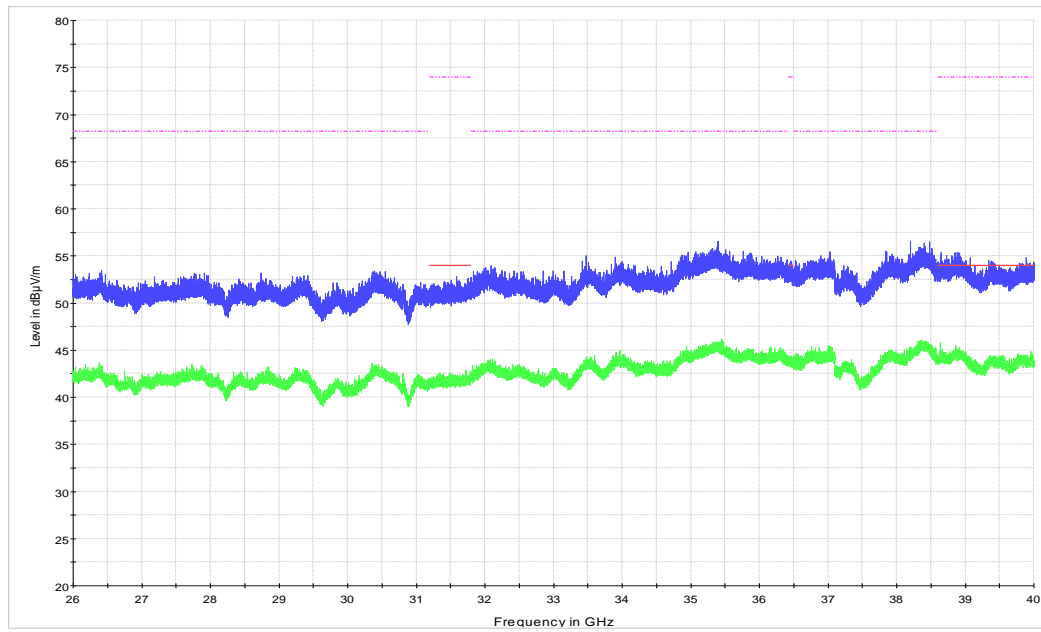
Radio Technology = WLAN a MIMO, Operating Frequency = mid, Measurement range = 26GHz - 40GHz, Subband = U-NII-3 (S02\_AC02)



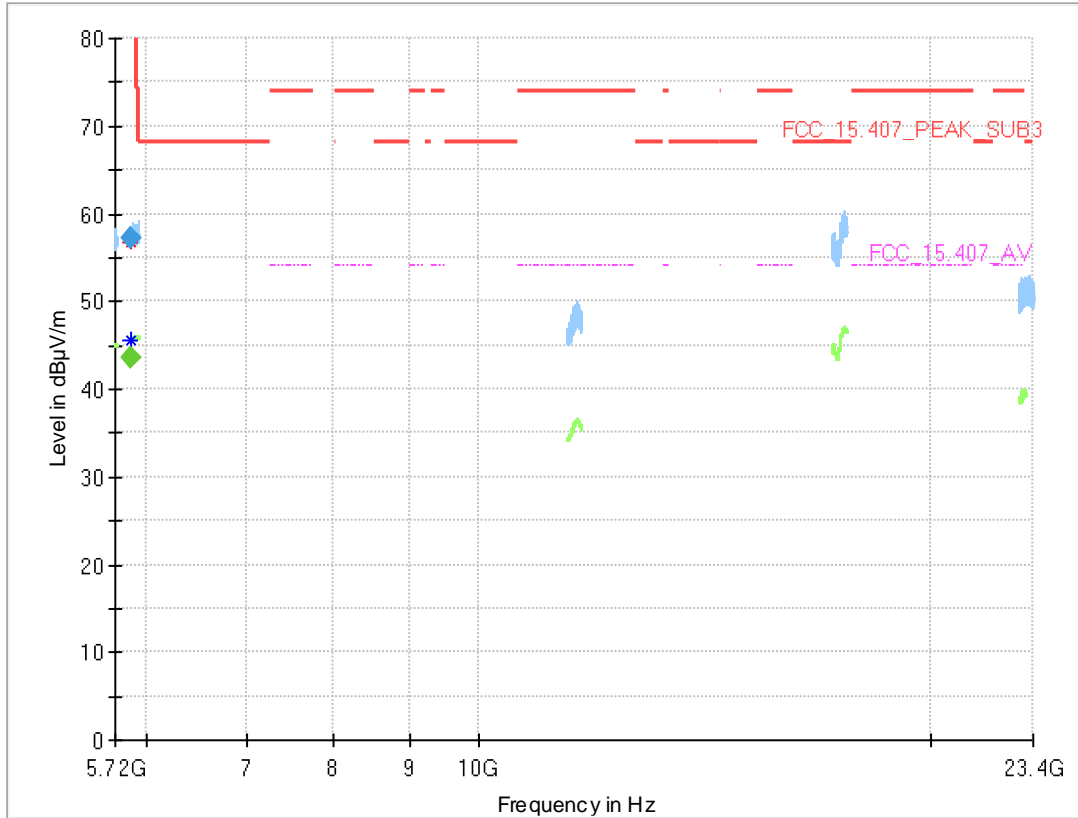
Radio Technology = WLAN n 40 MHz MIMO, Operating Frequency = high, Measurement range = 26GHz - 40GHz, Subband = U-NII-3 (S02\_AC02)



Radio Technology = WLAN n 40 MHz MIMO, Operating Frequency = low, Measurement range =  
26GHz - 40GHz, Subband = U-NII-1  
(S02\_AC02)



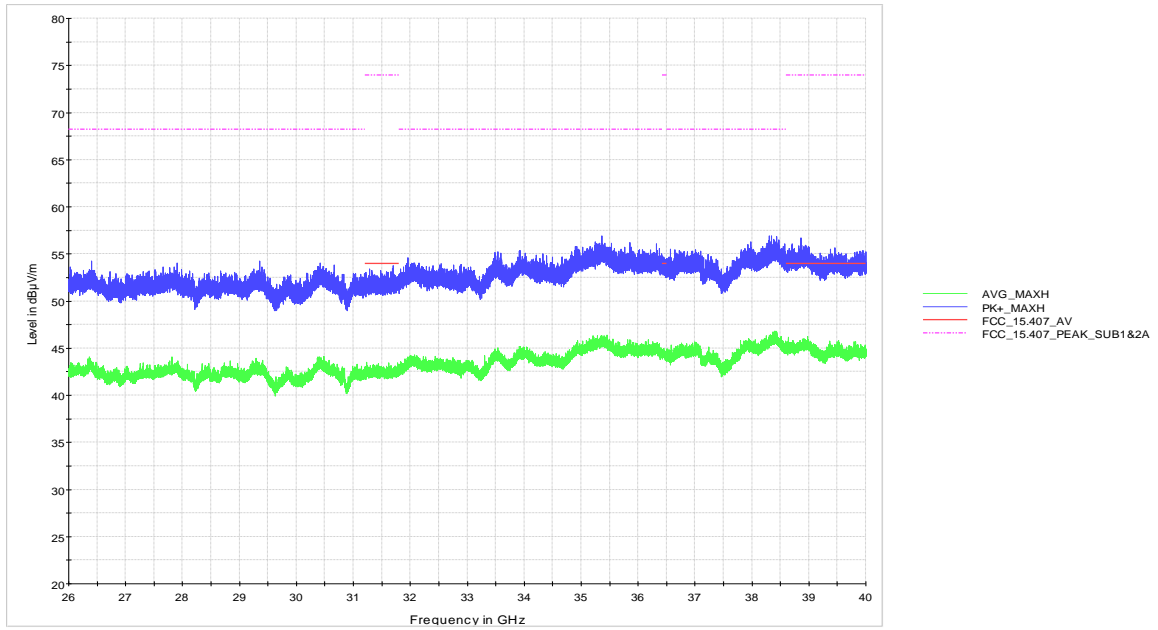
Radio Technology = WLAN ax 40 MHz, Operating Frequency = high, Measurement range = 1GHz - 26GHz, Subband = U-NII-3 (S02\_AC02)



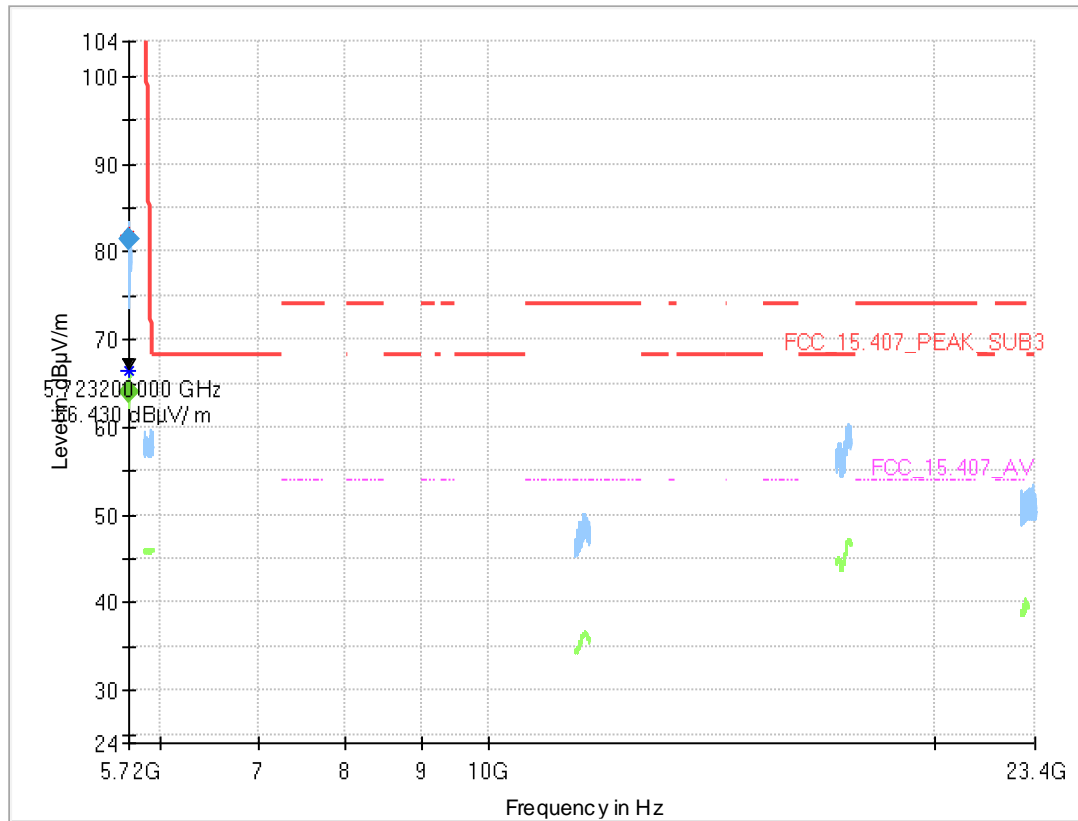
### Final Result

Frequency (MHz)	MaxPeak (dBµV/m)	CAverage (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB/m)
5853.280	---	43.6	---	---	1000.0	1000.000	150.0	H	-124.0	78.0	14.9
5853.280	57.2	---	114.7	57.53	1000.0	1000.000	150.0	H	-124.0	78.0	14.9

Radio Technology = WLAN n 20 MHz MIMO, Operating Frequency = mid, Measurement range = 26GHz - 40GHz, Subband = U-NII-3 (S02\_AC02)



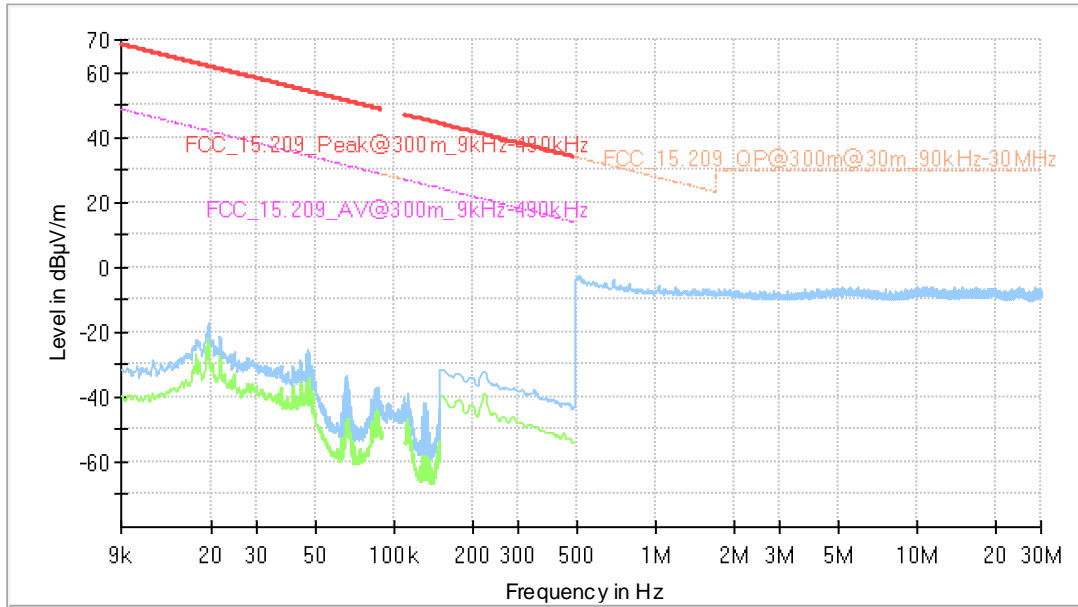
Radio Technology = WLAN ax 40 MHz, Operating Frequency = low, Measurement range = 1GHz - 26GHz, Subband = U-NII-3 (S02\_AC02)



### Final Result

Frequency (MHz)	MaxPeak (dBµV/m)	CAverage (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB/m)
5723.200	---	64.1	---	---	1000.0	1000.000	150.0	H	56.0	100.0	14.2
5723.200	81.4	---	118.1	36.67	1000.0	1000.000	150.0	H	56.0	100.0	14.2

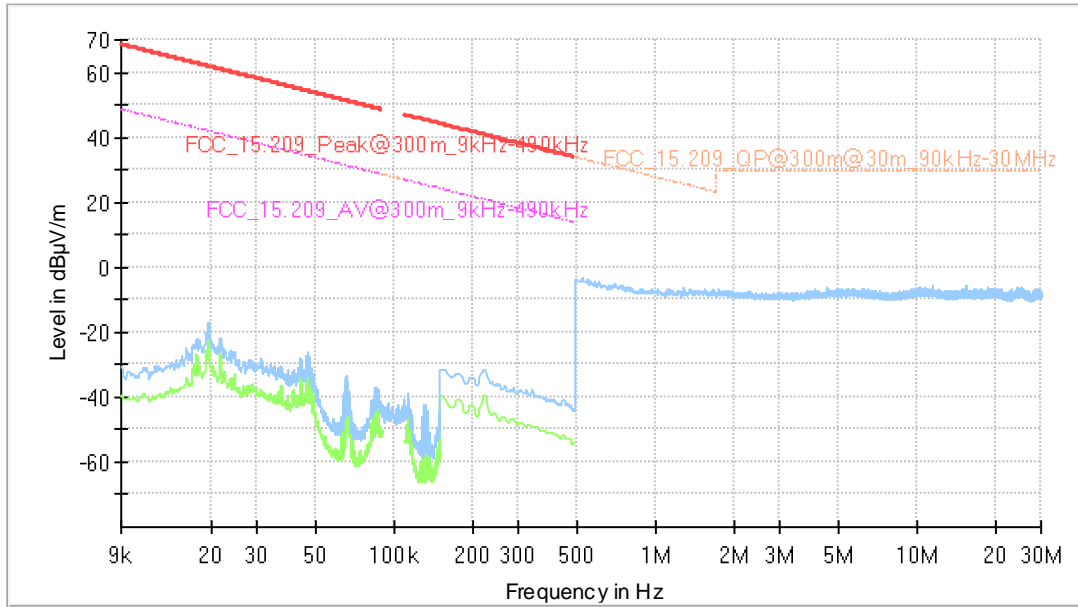
Radio Technology = WLAN a MIMO, Operating Frequency = low, Measurement range = 9kHz - 30MHz, Subband = U-NII-1 (S02\_AC02)



**Final Result**

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---	---	---	---	---	---

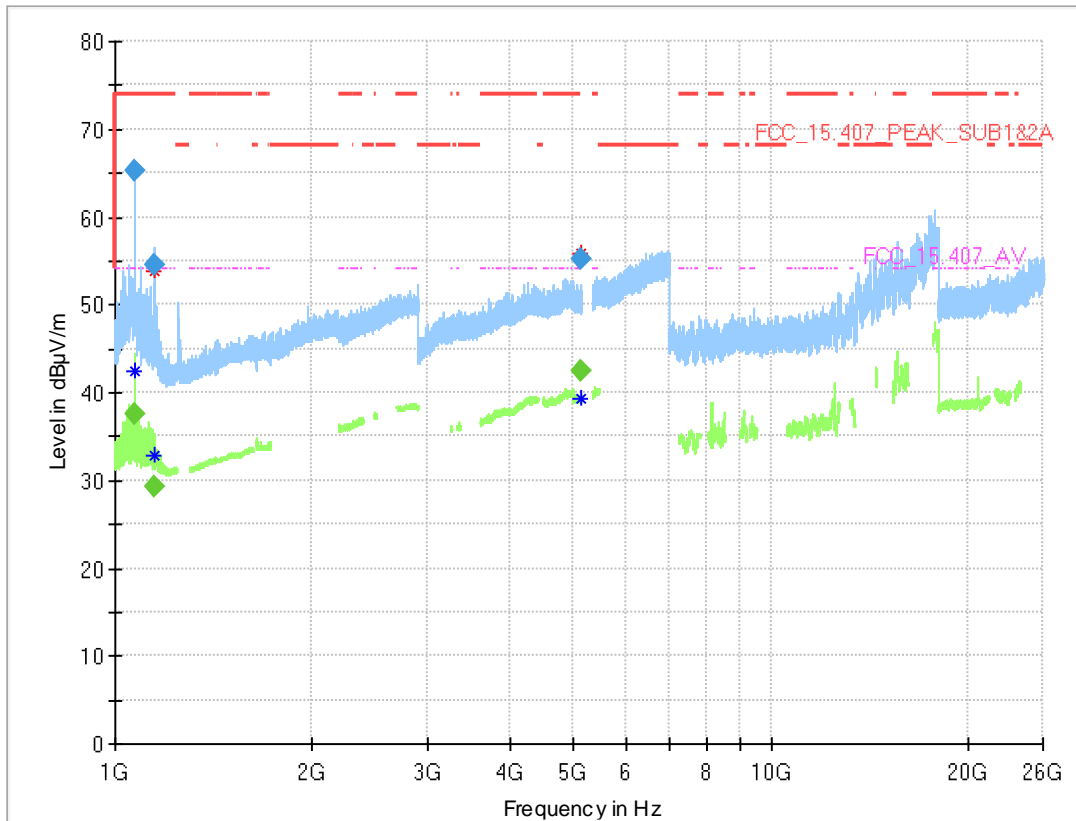
Radio Technology = WLAN n 40 MHz MIMO, Operating Frequency = low, Measurement range = 9kHz - 30MHz, Subband = U-NII-1 (S02\_AC02)



### Final Result

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---	---	---	---	---	---

Radio Technology = WLAN a MIMO, Operating Frequency = low, Measurement range = 1GHz - 26GHz, Subband = U-NII-1 (S02\_AC01)

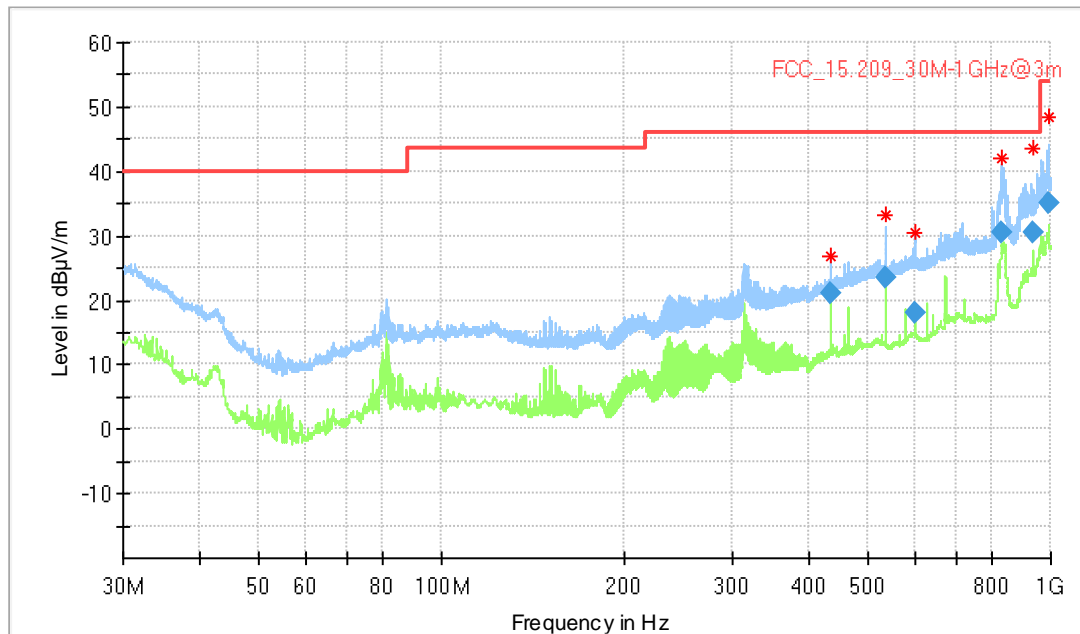


### Final Result

Frequency (MHz)	MaxPeak (dBµV/m)	CAverage (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB/m)
1071.280	65.3	---	74.00	8.72	1000.0	1000.000	150.0	V	93.0	-11.0	-1.4
1071.280	---	37.5	54.00	16.46	1000.0	1000.000	150.0	V	93.0	-11.0	-1.4
1150.840	54.6	---	74.00	19.40	1000.0	1000.000	150.0	H	82.0	105.0	-1.0
1150.840	---	29.4	54.00	24.63	1000.0	1000.000	150.0	H	82.0	105.0	-1.0
5149.188	---	42.5	54.00	11.48	1000.0	1000.000	150.0	V	146.0	-10.0	13.5
5149.188	55.2	---	74.00	18.80	1000.0	1000.000	150.0	V	146.0	-10.0	13.5



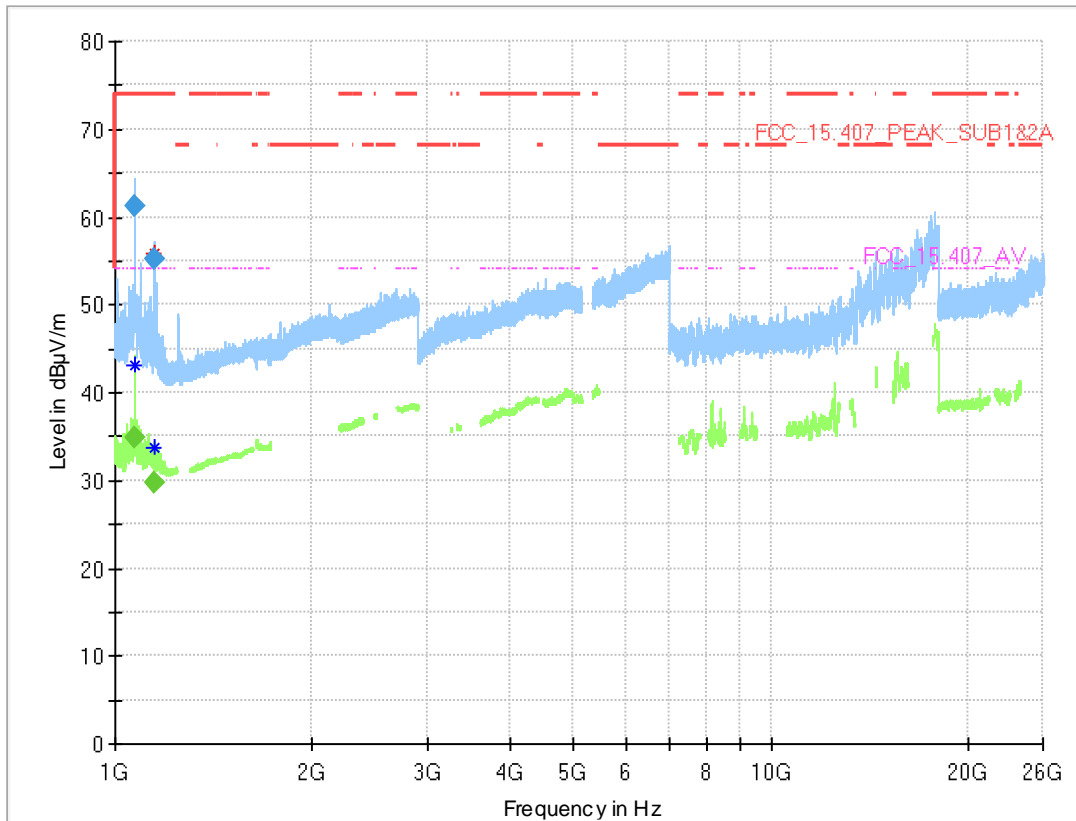
Radio Technology = WLAN a MIMO, Operating Frequency = mid, Measurement range = 30MHz  
 - 1GHz, Subband = U-NII-1  
 (S02\_AC02)



### Final\_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
433.860000	21.01	46.00	24.99	1000.0	120.000	136.0	H	-34.0	18.0
535.500000	23.36	46.00	22.64	1000.0	120.000	108.0	V	78.0	20.1
600.090000	17.90	46.00	28.10	1000.0	120.000	109.0	V	102.0	21.3
831.270000	30.44	46.00	15.56	1000.0	120.000	142.0	H	-97.0	25.1
935.490000	30.51	46.00	15.49	1000.0	120.000	144.0	H	-27.0	26.0
990.750000	35.18	54.00	18.82	1000.0	120.000	128.0	V	-134.0	26.7

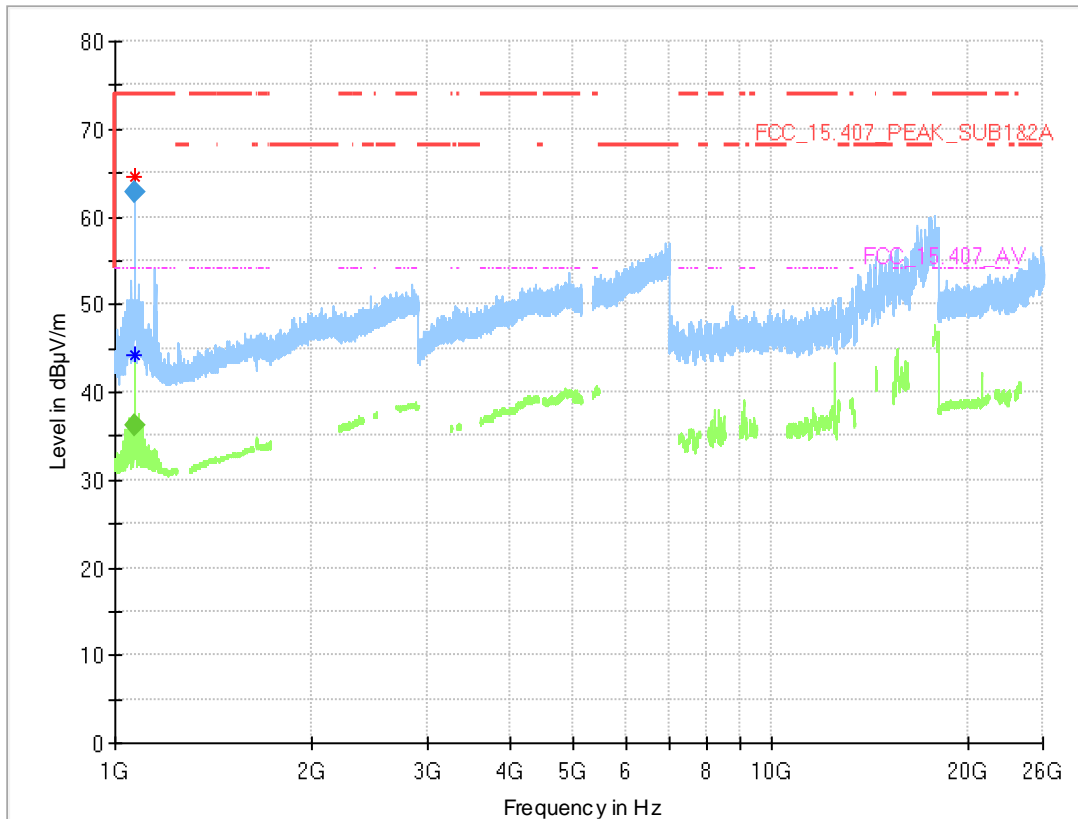
Radio Technology = WLAN a MIMO, Operating Frequency = mid, Measurement range = 1GHz - 26GHz, Subband = U-NII-1 (S02\_AC01)



### Final\_Result

Frequency (MHz)	MaxPeak (dBµV/m)	CAverage (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB/m)
1071.160	---	34.9	54.00	19.12	1000.0	1000.000	150.0	H	139.0	-4.0	-1.4
1071.160	61.2	---	74.00	12.84	1000.0	1000.000	150.0	H	139.0	-4.0	-1.4
1151.440	---	29.8	54.00	24.22	1000.0	1000.000	150.0	H	84.0	98.0	-1.0
1151.440	55.2	---	74.00	18.77	1000.0	1000.000	150.0	H	84.0	98.0	-1.0

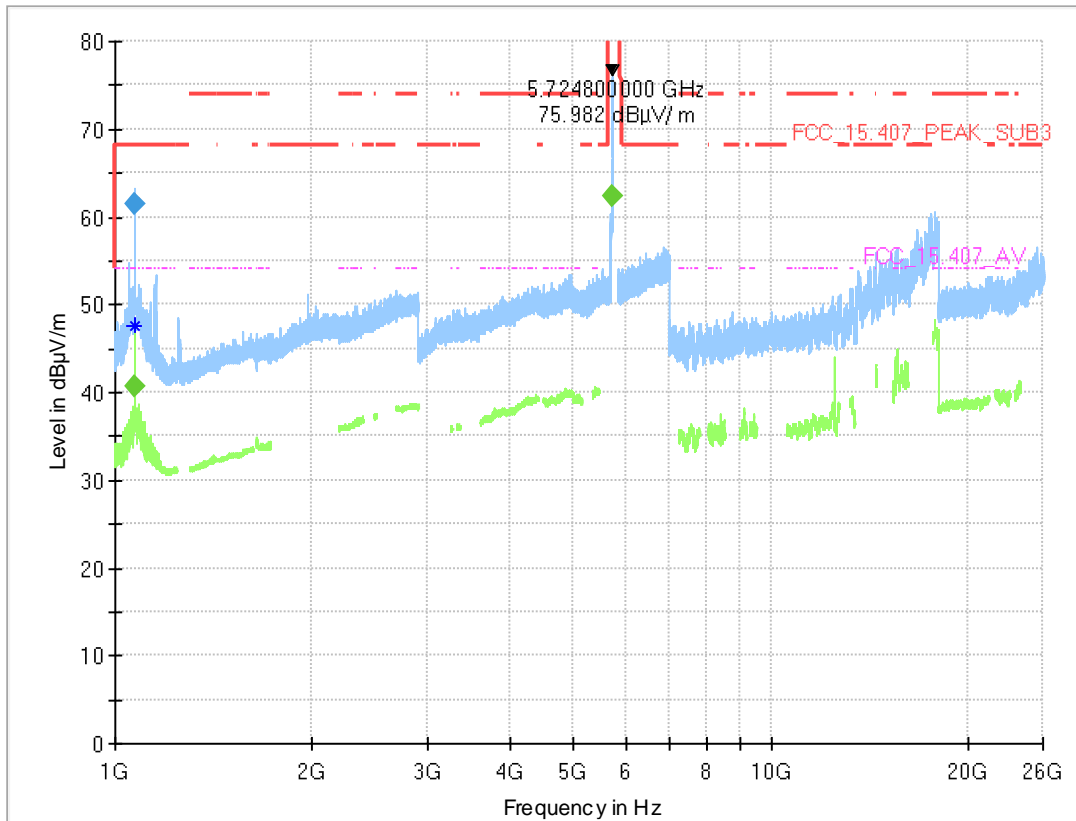
Radio Technology = WLAN a MIMO, Operating Frequency = high, Measurement range = 1GHz - 26GHz, Subband = U-NII-1 (S02\_AC02)



### Final Result

Frequency (MHz)	MaxPeak (dBµV/m)	CAverage (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB/m)
1071.160	---	36.3	54.00	17.71	1000.0	1000.000	150.0	V	-45.0	-5.0	-1.4
1071.160	62.7	---	74.00	11.30	1000.0	1000.000	150.0	V	-45.0	-5.0	-1.4

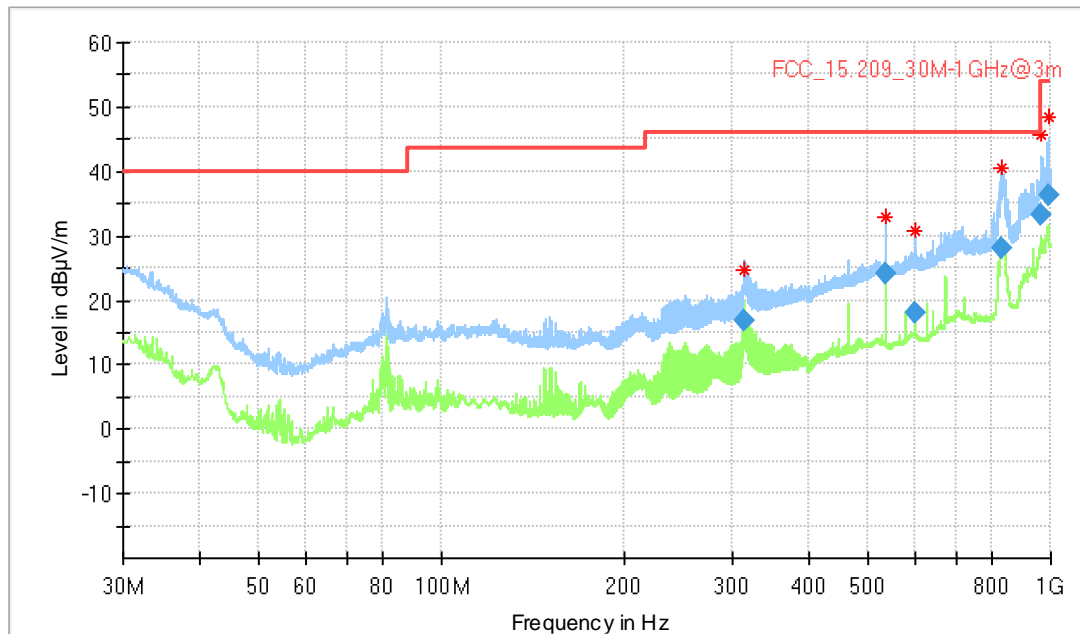
Radio Technology = WLAN a MIMO, Operating Frequency = low, Measurement range = 1GHz - 26GHz, Subband = U-NII-3 (S02\_AC02)



### Final Result

Frequency (MHz)	MaxPeak (dBµV/m)	CAverage (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB/m)
1071.040	---	40.6	54.00	13.38	1000.0	1000.000	150.0	V	-45.0	2.0	-1.4
1071.040	61.4	---	68.20	6.79	1000.0	1000.000	150.0	V	-45.0	2.0	-1.4
5724.800	---	62.5	---	---	1000.0	1000.000	150.0	V	125.0	-12.0	14.2
5724.800	87.0	---	121.7	34.78	1000.0	1000.000	150.0	V	125.0	-12.0	14.2

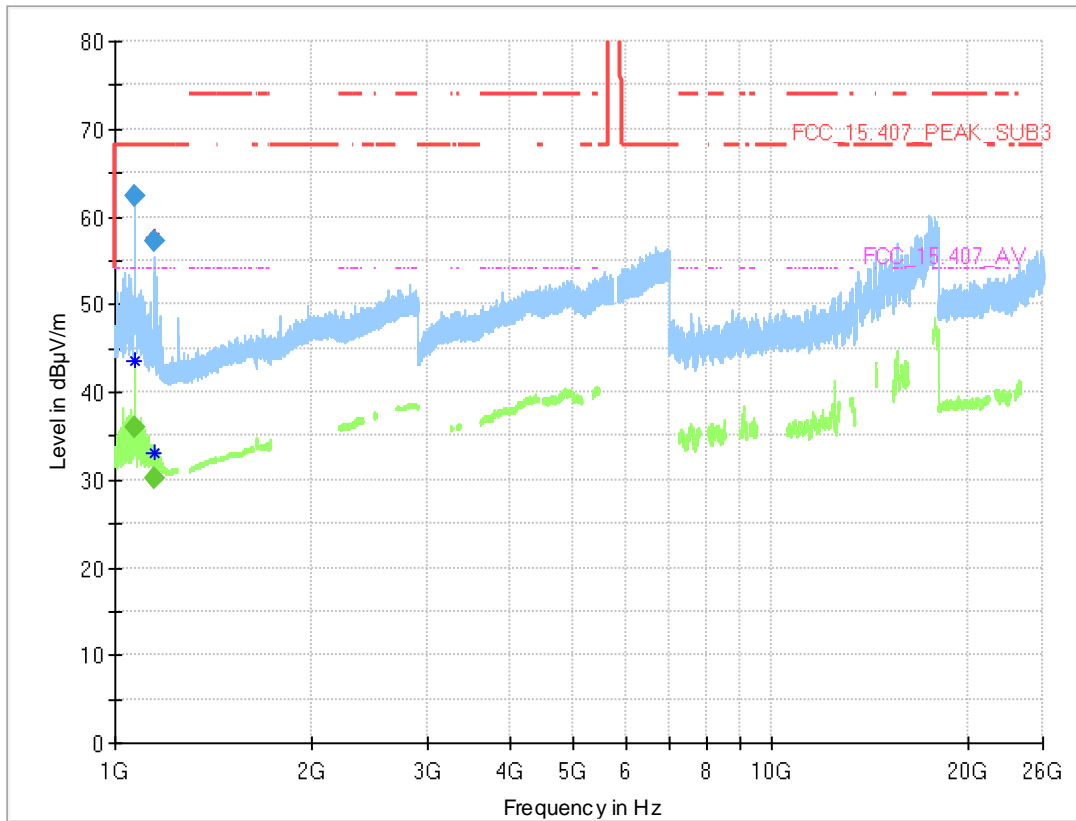
Radio Technology = WLAN a MIMO, Operating Frequency = mid, Measurement range = 30MHz  
 - 1GHz, Subband = U-NII-3  
 (S02\_AC02)



### Final\_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
314.550000	16.72	46.00	29.28	1000.0	120.000	109.0	H	-77.0	14.3
535.500000	24.06	46.00	21.94	1000.0	120.000	103.0	V	92.0	20.1
599.970000	18.14	46.00	27.86	1000.0	120.000	108.0	V	92.0	21.3
831.300000	28.16	46.00	17.84	1000.0	120.000	102.0	H	-164.0	25.1
966.990000	33.19	54.00	20.81	1000.0	120.000	182.0	H	-22.0	26.1
991.080000	36.17	54.00	17.83	1000.0	120.000	117.0	V	-76.0	26.7

Radio Technology = WLAN a MIMO, Operating Frequency = mid, Measurement range = 1GHz - 26GHz, Subband = U-NII-3 (S02\_AC02)



### Final Result

Frequency (MHz)	MaxPeak (dBµV/m)	CAverage (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB/m)
1071.040	---	36.0	54.00	17.97	1000.0	1000.000	150.0	H	144.0	94.0	-1.4
1071.040	62.2	---	68.20	5.96	1000.0	1000.000	150.0	H	144.0	94.0	-1.4
1150.480	---	30.2	54.00	23.77	1000.0	1000.000	150.0	H	-188.0	105.0	-1.0
1150.480	57.3	---	68.20	10.88	1000.0	1000.000	150.0	H	-188.0	105.0	-1.0