

47 CFR PART 15 SUBPART E TEST REPORT

for

TPMS TOOL

Model No.: XXX66XXX, XXX67XXX

(X=A-Z, 0-9 or blank)

FCC ID: 2ANR7-VT67RFID

of

Applicant: ATEQ INSTRUMENTS (ASIA)PTE LTD.

TAIWAN BRANCH (SINGAPORE)

Address: NO.3, LANE 223, SAN JIA DONG STREET, 40642,
TAICHUNG, TAIWAN

Tested and Prepared

by

Worldwide Testing Services (Taiwan) Co., Ltd.

FCC Registration No.: TW1477, TW1072

Industry Canada filed test laboratory Reg. No.: 20037, 5107A



Report No.: W6M22311-23090-C-3



Registration number: W6M22311-23090-C-3
FCC ID: 2ANR7-VT67RFID

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1 General Information

1.1 Notes

The purpose of conformity testing is to increase the probability of adherence to the essential requirements or conformity specifications, as appropriate.

The complexity of the technical specifications, however, means that full and thorough testing is impractical for both technical and economic reasons.

Furthermore, there is no guarantee that a test sample which has passed all the relevant tests conforms to a specification.

Neither is there any guarantee that such a test sample will interwork with other genuinely open systems. The existence of the tests nevertheless provides the confidence that the test sample possesses the qualities as maintained and that its performance generally conforms to representative cases of communications equipment.

Laboratory disclaimer-

1. The test results of this test report relate exclusively to the item tested as specified in 1.5.
2. The test report may only be reproduced or published in full.
3. Reproduction or publication of extracts from the report requires the prior written approval of the Worldwide Testing Services(Taiwan) Co., Ltd.
4. Antenna gain is provided by applicant and laboratory issue relevant data and results.

Specific Conditions:

Usage of the hereunder tested device in combination with other integrated or external antennas requires at least additional output power measurements, spurious emission measurements, conducted emission measurements (AC supply lines) and radio frequency exposure evaluations for each individual configuration performed, for certification by FCC.

Tester:

December 21, 2023

Sora Kuo

Date

WTS-Lab.

Name

Signature

Technical responsibility for area of testing:

December 21, 2023

Kevin Wang

Date

WTS

Name

Signature



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1.2 Testing laboratory

1.2.1 Location

10m OATS
No.5-1, Lishui, Shuang Sing Village, Wanli Dist.,
New Taipei City 207, Taiwan (R.O.C.)

3 meter semi-anechoic chamber
No.35, Aly. 21, Ln. 228, Ankang Rd., Neihu Dist.,
Taipei City 114, Taiwan (R.O.C.)
Tel: 886-2-6613-0228

Worldwide Testing Services (Taiwan) Co., Ltd.
6F., No. 58, Ln. 188, Ruiguang Rd., Neihu Dist.,
Taipei City 114, Taiwan (R.O.C.)
Tel: 886-2-6606-8877

1.2.2 Details of accreditation status

Accredited testing laboratory
FCC filed test laboratory Reg. No.: TW1477, TW1072
Industry Canada filed test laboratory Reg. No.: 20037, 5107A

Test location, where different from Worldwide Testing Services (Taiwan) Co., Ltd.:

Name: ./.
Accredited number: ./.
Street: ./.
Town: ./.
Country: ./.

1.3 Details of approval holder

Name: ATEQ INSTRUMENTS (ASIA)PTE LTD.
TAIWAN BRANCH (SINGAPORE)
Street: NO.3, LANE 223, SAN JIA DONG STREET, 40642,
Town: TAICHUNG,
Country: TAIWAN

1.4 Application details

Date of receipt of test item: November 24, 2023
Date of test: from November 27, 2023 to December 19, 2023



Registration number: W6M22311-23090-C-3
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1.5 General information of Test item

Type of test item: TPMS TOOL
 Model number: XXX66XXX, XXX67XXX (X=A-Z, 0-9 or blank)
 Brand name: ATEQ
 Multi-listing model number: ./.
 Sample no.: #02

Technical data

Frequency band: Band 1: 5.150 GHz-5.250 GHz, Band 4: 5.725 GHz-5.850 GHz

| Band | Mode | Channel | Conducted Power (dBm) |
|-------|--------------|-------------------|-----------------------|
| NII-1 | 802.11a | Ch 36 : 5180 MHz | 10.81 |
| | | Ch 44 : 5220 MHz | 10.86 |
| | | Ch 48 : 5240 MHz | 10.65 |
| | 802.11n 20M | Ch 36 : 5180 MHz | 10.84 |
| | | Ch 44 : 5220 MHz | 10.92 |
| | | Ch 48 : 5240 MHz | 10.49 |
| | 802.11n 40M | Ch 38 : 5190 MHz | 10.95 |
| | | Ch 46 : 5230 MHz | 10.66 |
| | 802.11ac 80M | Ch 42 : 5210 MHz | 10.81 |
| NII-3 | 802.11a | Ch 149 : 5745 MHz | 10.88 |
| | | Ch 157 : 5785 MHz | 9.25 |
| | | Ch 165 : 5825 MHz | 9.68 |
| | 802.11n 20M | Ch 149 : 5745 MHz | 10.66 |
| | | Ch 157 : 5785 MHz | 10.31 |
| | | Ch 165 : 5825 MHz | 9.79 |
| | 802.11n 40M | Ch 151 : 5755 MHz | 10.64 |
| | | Ch 159 : 5795 MHz | 10.32 |
| | 802.11ac 80M | Ch 155 : 5775 MHz | 10.44 |

Operating modes: Duplex
 Type of modulation: OFDM/DSSS
 Fixed point to point operation: Yes / No
 Type of antenna: PCB antenna



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Antenna gain: Band 1: 0.31 dBi
Band 4: 1.07 dBi

Power supply: Adapter (I/P: 100-240V~50/60Hz 0.3A
O/P: +5.0V=2.0A, 10.0W)
Battery 3.8Vd.c. 6200mAh 23.56Wh

Note: Tests were performed under worst case mode 802.11a 6 Mbps, 802.11n 20MHz(MCS0), 802.11n 40MHz(MCS0) and 802.11ac 80MHz(MCS0).

Special statement:

1. This test report is valid in connection to the model has been tested, any modification to the product which is different from the test model will avoid the certification of the test report.
2. This test report shall always be duplicated in full pages unless the written approval of the testing laboratory is obtained.
3. The x in model number is representing different marketing purpose.

Manufacturer: (if applicable)

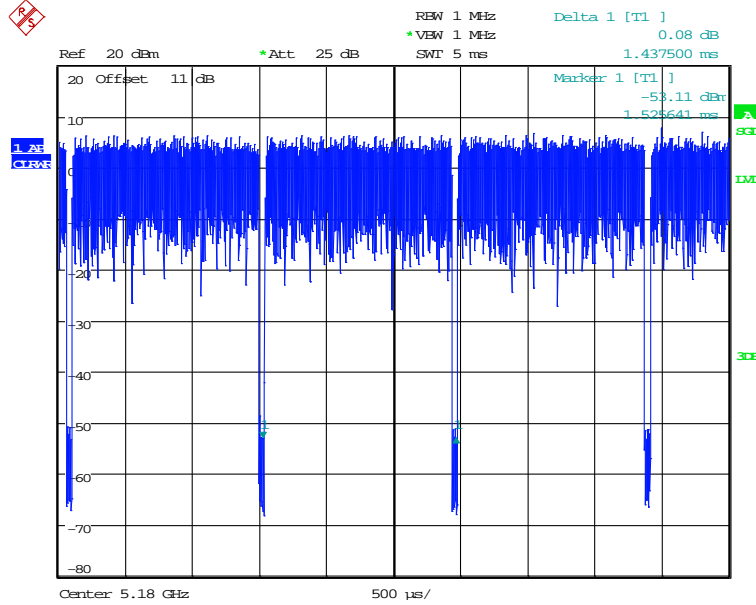
Name: ./.
Street: ./.
Town: ./.
Country: ./.

Duty cycle

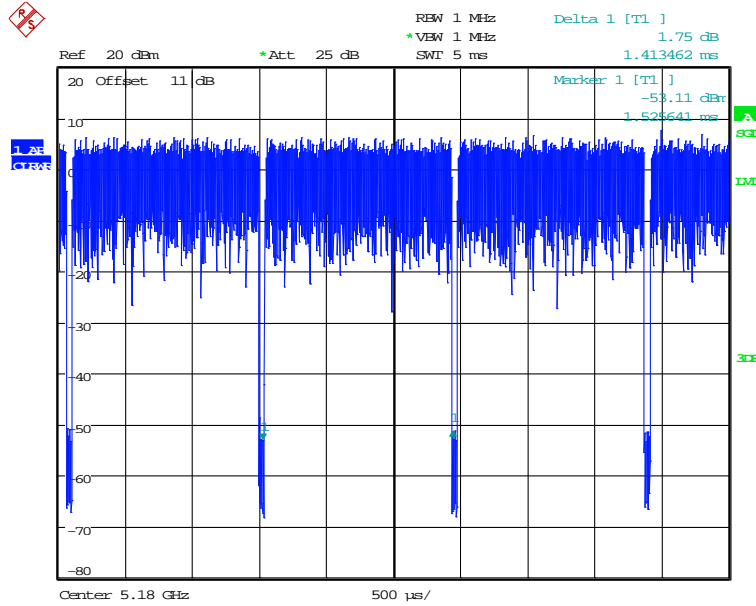
| Mode | T _{on} (ms) | T _{on} +T _{off} (ms) | Duty cycle (%) | Duty Factor (dB) | 1/T - VBW (kHz) |
|--------------|-------------------------|---|-------------------|---------------------|--------------------|
| 802.11a | 1.413 | 1.438 | 98.30% | 0.07 | 0.71 |
| 802.11n 20M | 1.317 | 1.341 | 98.21% | 0.08 | 0.76 |
| 802.11n 40M | 0.660 | 0.692 | 95.38% | 0.21 | 1.52 |
| 802.11ac 80M | 0.332 | 0.369 | 90.01% | 0.46 | 3.01 |



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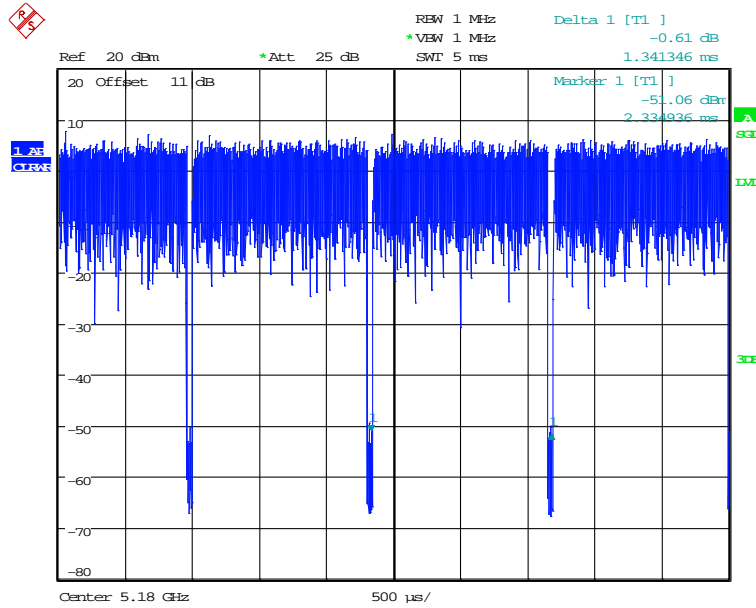
DUTY 802.11a
Date: 3.DEC.2023 09:46:05



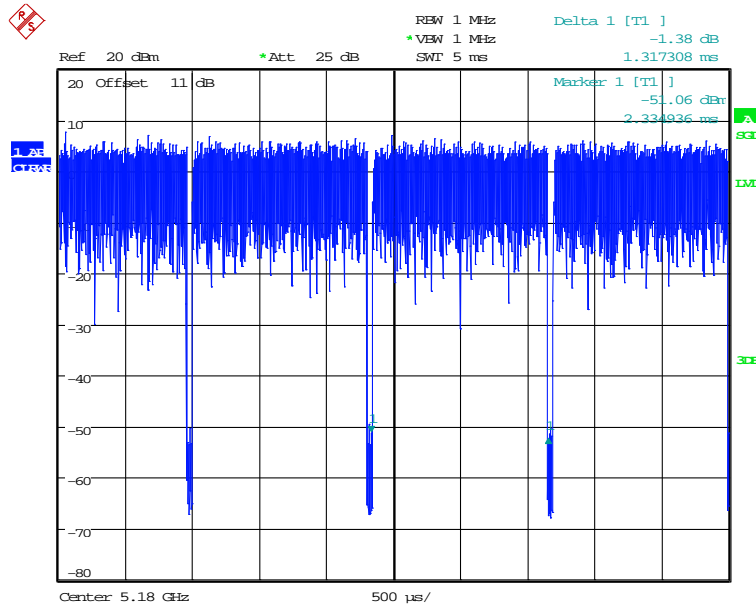
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Registration number: W6M22311-23090-C-3
FCC ID: 2ANR7-VT67RFID



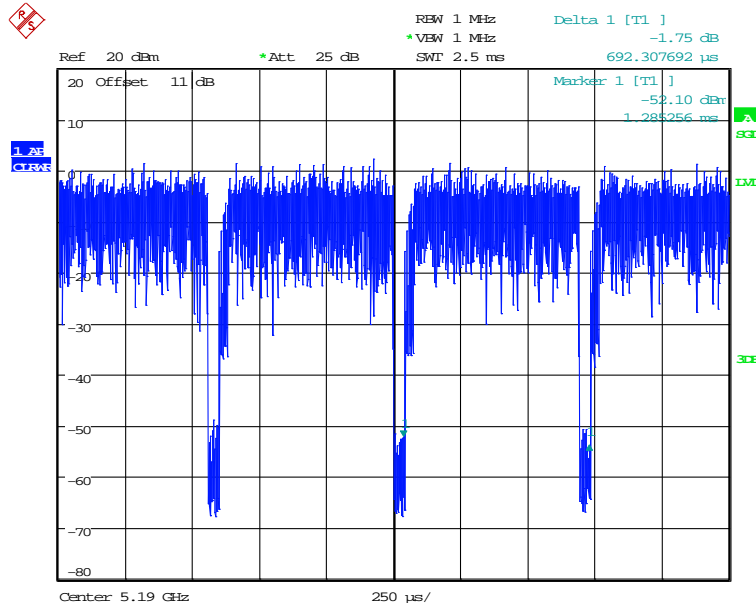
DUTY 802.11n20
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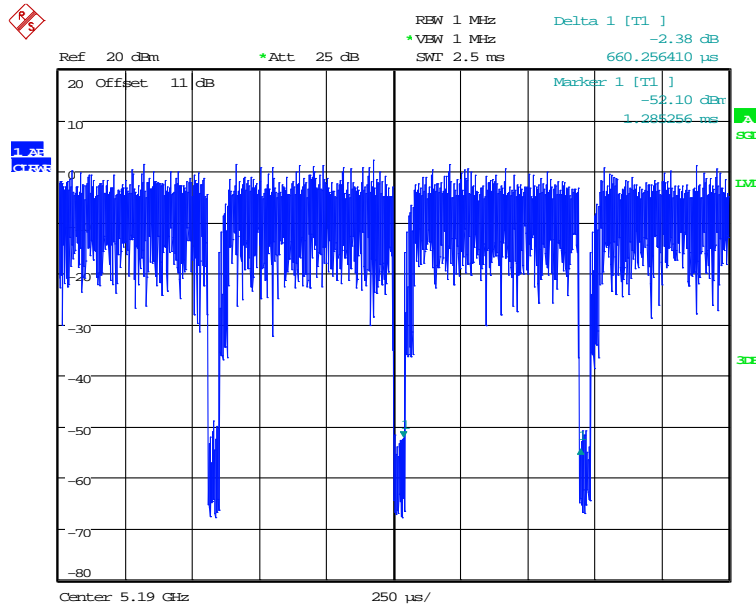
DUTY 802.11n20
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Registration number: W6M22311-23090-C-3
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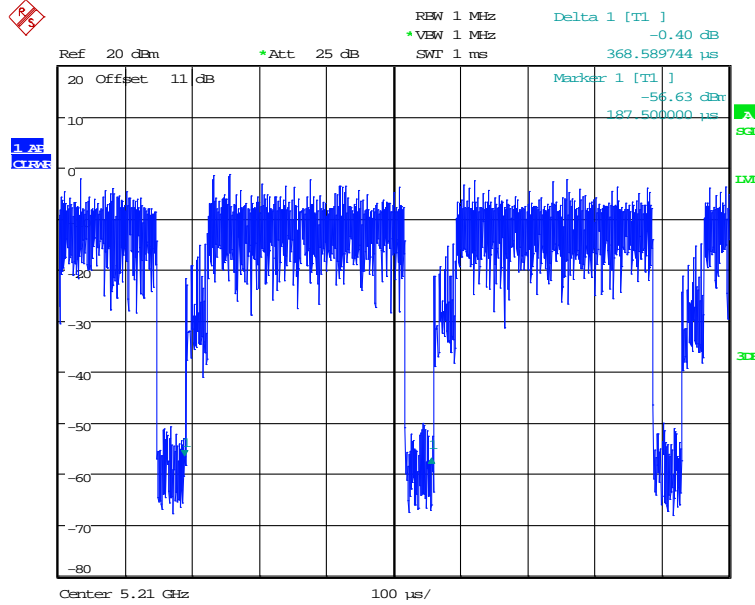
DUTY 802.11n40
Date: 3.DEC.2023 09:44:10



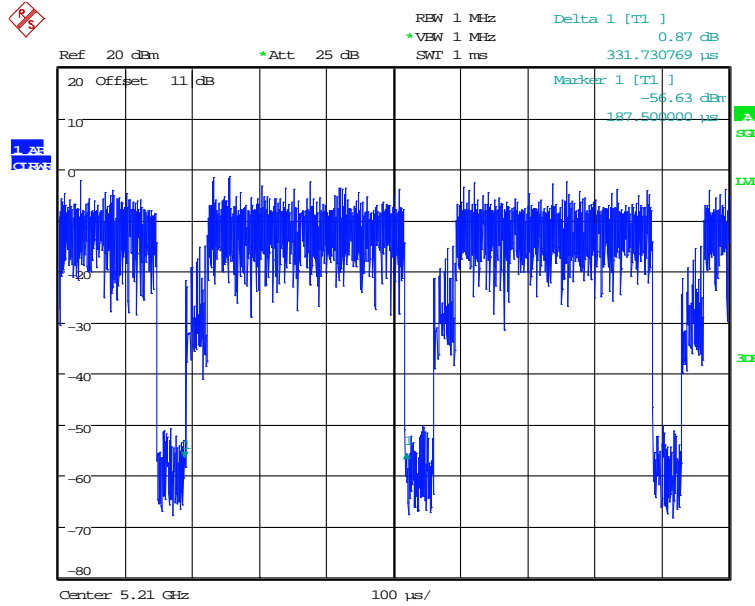
DUTY 802.11n40
Date: 3.DEC.2023 09:44:17



Registration number: W6M22311-23090-C-3
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DUTY 802.11ac80
Date: 3.DEC.2023 09:43:12



DUTY 802.11ac80
Date: 3.DEC.2023 09:43:17

1.6 Test standards

Technical standard : 47 CFR PART 15 SUBPART C § 15.407 (2021-10)



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2 Technical test

2.1 Summary of test results

No deviations from the technical specification(s) were ascertained in the course of the tests performed.

or

The deviations were ascertained in the course of the tests performed.

2.2 Test environment

Relative humidity content: 20 ... 75 %

Air pressure: 86 ... 103 kPa

Details of power supply: Adapter (I/P: 100-240V~50/60Hz 0.3A
 O/P: +5.0V=2.0A, 10.0W)
 Battery 3.8Vd.c. 6200mAh 23.56Wh

| Test item Name | Uncertainty |
|---|--|
| Estimation Result of Uncertainty of Conducted Emission (Power Line Conducted Emission) | Expanded Uncertainty : AMN : 0.94 dB Voltage probe : 0.96 dB Include Pulse Limiter : 1.52 dB |
| Estimation Result of Uncertainty of Radiated Emission(3M-966A) (Undesirable emission limits, Radiated Emissions from Receiver Part) | Expanded Uncertainty : 0.009-30 MHz : 1.88 dB 30-1000 MHz : 3.20 dB 1-18 GHz : 3.56 dB 18-40 GHz : 2.94 dB |
| Estimation Result of Uncertainty of Bandwidth Measurement (26dB emission bandwidth, 99% Occupied Bandwidth, 6dB emission bandwidth, 99% Occupied Bandwidth) | Expanded Uncertainty : 0.45 kHz |
| Estimation Result of Uncertainty of Conducted Output Power Measurement (Peak Transmit Power) | Expanded Uncertainty : 1.48 dB |
| Estimation Result of Uncertainty of Power Density Measurement (Peak Power Spectral Density) | Expanded Uncertainty : 1.48 dB |
| Estimation Result of Uncertainty of EIRP Measurement (Equivalent Isotropic Radiated Power (EIRP), Radiated Emissions from Receiver Part) | Expanded Uncertainty : 30-200MHz : 3.49 dB 200-1000MHz : 3.49 dB 1-18GHz : 4.81 dB 18-40GHz : 3.94 dB |
| Estimation Result of Uncertainty of DFS Timing (Dynamic Frequency Selection (DFS), Channel Move Time, Channel Closing Transmission Time) | Expanded Uncertainty : 587.89 us |
| Estimation Result of Uncertainty of DFS Threshold (Dynamic Frequency Selection (DFS), Channel Move Time, Channel Closing Transmission Time) | Expanded Uncertainty : 1.51 dB |

The decision rule is: Measurement uncertainty is not included in the calculation of test results.



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2.3 Test Equipment List

| No. | Test equipment | Type | Serial No. | Manufacturer | Cal. Date | Next Cal. Date |
|--------------|---|-----------------|-------------|--------------|---------------|----------------|
| ETSTW-CE 001 | EMI TEST RECEIVER | ESHS10 | 842121/013 | R&S | 2023/6/12 | 2024/6/11 |
| ETSTW-CE 003 | AC POWER SOURCE | APS-9102 | D161137 | GW | Function Test | |
| ETSTW-CE 004 | ZWEILEITER-V-NETZNACHBILDUNG TWO-LINE V-NETWORK | ESH3-Z5 | 840731/011 | R&S | 2023/9/19 | 2024/9/18 |
| ETSTW-CE 006 | IMPULSBEGRENZER PULSE LIMITER | ESH3-Z2 | 100226 | R&S | 2023/9/25 | 2024/9/24 |
| ETSTW-CE 008 | HF-EICHLITUNG RF STEP ATTENUATOR 139dB DPSP | 334.6010.02 | 844581/024 | R&S | Function Test | |
| ETSTW-CE 009 | TEMP.&HUMIDITY CHAMBER | GTH-225-40-1P-U | MAA0305-009 | GIANT FORCE | 2023/7/24 | 2024/7/23 |
| ETSTW-CE 016 | TWO-LINE V-NETWORK | ENV216 | 100050 | R&S | 2023/10/26 | 2024/10/25 |
| ETSTW-CE 028 | MXE EMI Receiver | N9038A | MY53220110 | Agilent | 2023/7/17 | 2024/7/16 |
| ETSTW-RE 003 | EMI TEST RECEIVER | ESI 26 | 831438/001 | R&S | 2023/6/12 | 2024/6/11 |
| ETSTW-RE 004 | EMI TEST RECEIVER | ESI 40 | 832427/004 | R&S | 2023/10/19 | 2024/10/18 |
| ETSTW-RE 012 | TUNABLE BANDREJECT FILTER | D.C 0309 | 146 | K&L | Function Test | |
| ETSTW-RE 013 | TUNABLE BANDREJECT FILTER | D.C 0336 | 397 | K&L | Function Test | |
| ETSTW-RE 018 | MICROWAVE HORN ANTENNA | AT4560 | 27212 | AR | 2023/7/21 | 2024/7/20 |
| ETSTW-RE 019 | MICROWAVE HORN ANTENNA | 22240-25 | 121074 | FM | 2023/6/9 | 2024/6/8 |
| ETSTW-RE 027 | Passive Loop Antenna | 6512 | 00034563 | ETS-Lindgren | 2023/6/28 | 2024/6/27 |
| ETSTW-RE 030 | Double-Ridged Guide Horn Antenna | 3117 | 00035224 | ETS-Lindgren | 2023/5/5 | 2024/5/4 |
| ETSTW-RE 042 | Biconical Antenna | HK116 | 100172 | R&S | 2023/3/2 | 2024/3/1 |
| ETSTW-RE 043 | Log-Periodic Dipole Antenna | HL223 | 100166 | R&S | 2023/7/28 | 2024/7/27 |
| ETSTW-RE 044 | Log-Periodic Antenna | HL050 | 100094 | R&S | 2023/7/31 | 2024/7/30 |
| ETSTW-RE 045 | ESA-E SERIES SPECTRUM ANALYZER | E4404B | MY45111242 | Agilent | Pre-test Use | |
| ETSTW-RE 050 | Attenuator 10dB | 50HF-010-1 | None | JFW | 2023/2/17 | 2024/2/16 |
| ETSTW-RE 051 | Attenuator 6dB | 50HF-006-1 | None | JFW | 2023/2/17 | 2024/2/16 |
| ETSTW-RE 053 | Attenuator 3dB | 50HF-003-1 | None | JFW | 2023/2/17 | 2024/2/16 |
| ETSTW-RE 055 | SPECTRUM ANALYZER | FSU 26 | 200074 | R&S | 2023/3/22 | 2024/3/21 |
| ETSTW-RE 060 | Attenuator 30dB | 5015-30 | F651012z-01 | ATM | 2023/2/17 | 2024/2/16 |
| ETSTW-RE 062 | Amplifier Module | CHC 2 | None | KMIC | 2023/2/20 | 2024/2/19 |
| ETSTW-RE 064 | Bluetooth Test Set | MT8852B-042 | 6K00005709 | Anritsu | Function Test | |
| ETSTW-RE 069 | Double-Ridged Guide Horn Antenna | 3117 | 00069377 | ETS-Lindgren | Function Test | |
| ETSTW-RE 072 | CELL SITE TEST SET | 8921A | 3339A00375 | HP | 2023/10/22 | 2024/10/21 |
| ETSTW-RE 088 | SOLID STATE AMPLIFIER | KMA180265A01 | 99057 | KMIC | 2023/9/15 | 2024/9/14 |
| ETSTW-RE 091 | Match Pad | MDCS1500 | None | WOKEN | 2023/5/25 | 2024/5/24 |
| ETSTW-RE 099 | DC Block | 50DB-007-1 | None | JFW | 2023/2/17 | 2024/2/16 |
| ETSTW-RE 112 | AC POWER SOURCE | TFC-1005 | T-0A023536 | T-Power | Function test | |



Worldwide Testing Services(Taiwan) Co., Ltd.

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| | | | | | | |
|-----------------|--------------------------------------|--|-----------------|--------------------|--------------|------------|
| ETSTW-RE 115 | 2.4GHz Notch Filter | N0124411 | 473874 | MICROWAVE CIRCUITS | 2023/12/21 | 2024/12/20 |
| ETSTW-RE 120 | RF Player | MP9200 | MP9210-111022 | ADIVIC | 2023/10/24 | 2024/10/23 |
| ETSTW-RE 122 | SIGNAL GENERATOR | SMF100A | 102149 | R&S | 2023/6/7 | 2024/6/6 |
| ETSTW-RE 125 | 5GHz Notch filter | 5NSL11-5200/E221.3-O/O | 1 | K&L Microwave | 2023/8/4 | 2024/8/3 |
| ETSTW-RE 126 | 5GHz Notch filter | 5NSL12-5800/E221.3-O/O | 1 | K&L Microwave | 2023/8/4 | 2024/8/3 |
| ETSTW-RE 127 | RF Switch Box | RFS-01 | None | WTS | 2023/2/17 | 2024/2/16 |
| ETSTW-RE 128 | 5.3GHz Notch filter | N0153001 | SN487233 | Microwave Circuits | 2023/8/4 | 2024/8/3 |
| ETSTW-RE 129 | 5.5GHz Notch filter | N0555984 | SN487234 | Microwave Circuits | 2023/8/4 | 2024/8/3 |
| ETSTW-RE 130 | Handheld RF Spectrum Analyzer | N9340A | CN0147000204 | Agilent | Pre-test Use | |
| ETSTW-RE 142 | Amplifier | 8447D | 2805A03378 | Agilent | 2023/2/20 | 2024/2/19 |
| ETSTW-RE 146 | Preamplifier | JPA-10M1G | 15090004 | JPT | 2023/5/26 | 2024/5/25 |
| ETSTW-RE 152 | Bi-log Hybrid Antenna | MCTD 2786B | BLB20J04029 | ETC | 2023/3/21 | 2024/3/20 |
| ETSTW-RE 153 | Signal Analyzer | FSV40 | 101929 | R&S | 2023/9/20 | 2024/9/19 |
| ETSTW-RE 154 | EMI Test Receiver | ESR3 | 102829 | R&S | 2023/4/13 | 2024/4/12 |
| ETSTW-RE 159 | Bi-log Hybrid Antenna (30M~1000 MHz) | MCTD 2786B | BLB21N04035 | ETC | 2023/12/21 | 2024/12/20 |
| ETSTW-RE 160 | Amplifier Module | CHC 3 | None | WTS | 2023/7/14 | 2024/7/13 |
| ETSTW-RE 176 | Loop Antenna | FMZB 1513-60 | 00039 | SCHWARZBECK | 2023/8/10 | 2024/8/9 |
| ETSTW-RE 177 | TRILOG Broadband Antenna | VULB 9168&EMCI-N-6-06 | 01380&AT-06007 | SCHWARZBECK&EMC | 2023/8/24 | 2024/8/23 |
| ETSTW-RE 178 | Double Ridged Guide Horn Antenna | DRH18-E | 210505A18ES | RFSPIN | 2023/8/17 | 2024/8/16 |
| ETSTW-RF 002 | Electromagnetic field probe | LF-30 | K-0007 | STT | 2023/6/13 | 2024/6/12 |
| ETSTW-EMI 011 | USB Compact Modulator | SFC-U | 101689 | R&S | 2023/5/28 | 2024/5/27 |
| ETSTW-GSM 002 | Universal Radio Communication Tester | CMU 200 | 109439 | R&S | 2023/3/22 | 2024/3/21 |
| ETSTW-GSM 003 | Radio Communication Analyzer | MT8820C | 6201342073 | Anritsu | 2023/5/10 | 2024/5/9 |
| ETSTW-GSM 004 | Wideband Radio Communication Tester | CMW500 | 128092 | R&S | 2023/10/18 | 2024/10/17 |
| ETSTW-GSM 019 | Band Reject Filter | WRCTF824/849-822/851-40 /12+9SS | 3 | WI | 2023/12/21 | 2024/12/20 |
| ETSTW-GSM 020 | Band Reject Filter | WRCD1747/1748-1743/1752-32/5SS | 1 | WI | 2023/12/21 | 2024/12/20 |
| ETSTW-GSM 021 | Band Reject Filter | WRCD1879.5/1880.5-1875.5/1884.5-32/5SS | 3 | WI | 2023/12/21 | 2024/12/20 |
| ETSTW-GSM 022 | Band Reject Filter | WRCT901.9/903.1-904.25-50/8SS | 1 | WI | 2023/12/21 | 2024/12/20 |
| ETSTW-GSM 023 | Power Divider | 4901.19.A | None | SUHNER | 2023/8/28 | 2024/8/27 |
| ETSTW-GSM 024 | Radio Communication Analyzer | MT8821C | None | Anritsu | 2023/4/24 | 2024/4/23 |
| ETSTW-GSM 025 | Band Reject Filter | BRM19835 | 001 | Micro-Tronics | 2023/8/4 | 2024/8/3 |
| ETSTW-Cable 016 | BNC Cable | Switch Box | B Cable 1 | Schwarz beck | 2023/2/4 | 2024/2/3 |
| ETSTW-Cable 017 | BNC Cable | X Cable | B Cable 2 | Schwarz beck | 2023/2/4 | 2024/2/3 |
| ETSTW-Cable 018 | BNC Cable | Y Cable | B Cable 3 | Schwarz beck | 2023/2/4 | 2024/2/3 |
| ETSTW-Cable 019 | BNC Cable | Z Cable | B Cable 4 | Schwarz beck | 2023/2/4 | 2024/2/3 |
| ETSTW-Cable 020 | N TYPE Cable | OATS Cable 1 | N30N30-L335-15M | JYE BAO CO.,LTD. | 2023/6/26 | 2024/6/25 |



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| | | | | | | |
|-----------------|--------------------------|-----------------------------|-------------|--------------|---------------------------------------|------------|
| ETSTW-Cable 027 | Microwave Cable | SUCOFLEX 104 | 279083 | HUBER+SUHNER | 2023/4/27 | 2024/4/26 |
| ETSTW-Cable 028 | Microwave Cable | FA147A0015M2020 | 30064-2 | UTIFLEX | 2023/9/15 | 2024/9/14 |
| ETSTW-Cable 029 | Microwave Cable | FA147A0015M2020 | 30064-3 | UTIFLEX | 2023/9/15 | 2024/9/14 |
| ETSTW-Cable 030 | Microwave Cable | SUCOFLEX 104 (S Cable 9) | 279067 | HUBER+SUHNER | 2023/02/17 | 2024/2/16 |
| ETSTW-Cable 045 | Microwave Cable | SUCOFLEX 104 | 325536 | HUBER+SUHNER | 2023/10/20 | 2024/10/19 |
| ETSTW-Cable 049 | Microwave Cable | FA147A0015M2020 | 30064-1 | UTIFLEX | 2023/8/16 | 2024/8/15 |
| ETSTW-Cable 058 | Microwave Cable | SUCOFLEX 104 | none | HUBER+SUHNER | 2023/5/26 | 2024/5/25 |
| ETSTW-Cable 064 | Microwave Cable | SUCOFLEX 104 | MY28891 | HUBER+SUHNER | 2023/2/20 | 2024/2/19 |
| ETSTW-Cable 071 | N TYPE CABLE | EMCCFD400-NM- NM-25000 | 170239 | EMCI | 2023/10/23 | 2024/10/22 |
| ETSTW-Cable 072 | SMA type cable (8m) | SUCOFLEX 104 | 805800/4 | HUBER+SUHNER | 2023/2/20 | 2024/2/19 |
| ETSTW-Cable 074 | SMA type cable (2m) | SUCOFLEX 104 | 802563/4 | HUBER+SUHNER | 2023/2/20 | 2024/2/19 |
| ETSTW-Cable 076 | SMA type cable (1m) | N/A | 812652/4 | HUBER+SUHNER | 2023/2/20 | 2024/2/19 |
| ETSTW-Cable 077 | SMA type cable (10m) | EMC104-SM- SM-10000 | 230511 | EMCI | 2023/7/14 | 2024/7/13 |
| ETSTW-Cable 084 | SMA type cable (1m) | SF104-11SMA-1000 | 816477/4 | HONOVA | 2023/7/14 | 2024/7/13 |
| ETSTW-Cable 089 | SMA type cable (2m) | SF104-11SMA-2000 | SN 811889/4 | HUBER+SUHNER | 2023/7/14 | 2024/7/13 |
| ETSTW-Cable 090 | N type Cable (15m) | EMCCFD400- NM-NM-15000 | 230732 | EMCI | 2023/8/4 | 2024/8/3 |
| ETSTW-Cable 091 | N type Cable (15m) | EMCCFD400- NM-NM-15000 | 230733 | EMCI | 2023/8/4 | 2024/8/3 |
| WTSTW-SW 002 | EMI TEST SOFTWARE | EZ EMC | None | Farad | Version ETS-03A1 Version EMEC-3A1+ | |
| WTSTW-SW 006 | EMI TEST SOFTWARE | e3 | None | AUDIX | Version 9.161014 | |
| WTSTW-SW 008 | Signal studio | Agilent | None | AUDIX | Version 2.0.0.1 | |
| ETSTW-TH 002 | Thermohygrometer | 608-H1 | 45204317 | Testo | 2023/7/21 | 2024/7/20 |
| ETSTW-TH 003 | Wireless weather station | GAIA | N/A | TFA | 2023/10/20 | 2024/10/19 |
| ETSTW-TH 004 | Thermohygrometer | 88163 | 2205131 | AZ | 2023/9/13 | 2024/9/12 |



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FCC ID: 2ANR7-VT67RFID

2.4 Test Procedure

The test procedures are performed following the test stands ANSI STANDARD C63.10 and FCC 789033 D02 General UNII Test Procedures New Rules v01r04.

■ Minimum Emission Bandwidth for the band 5.150-5.250 GHz, 5.725-5.850 GHz

Section 15.407(e) specifies the minimum 6 dB emission bandwidth of at least 500 KHz for the band 5.715-5.85 GHz. The following procedure shall be used for measuring this bandwidth:

- a) Set RBW = 100 kHz.
- b) Set the video bandwidth (VBW) $\geq 3 \times$ RBW.
- c) Detector = Peak.
- d) Trace mode = max hold.
- e) Sweep = auto couple.
- f) Allow the trace to stabilize.
- g) Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

Note: The automatic bandwidth measurement capability of a spectrum analyzer or EMI receiver may be employed if it implements the functionality described above.

■ 99 Percent Occupied Bandwidth

The 99-percent occupied bandwidth is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers are each equal to 0.5 % of the total mean power of the given emission. Measurement of the 99-percent occupied bandwidth is required only as a condition for using the optional band-edge measurement techniques described in section H)3)d). Measurements of 99-percent occupied bandwidth may also optionally be used in lieu of the 6-dB emission bandwidth to define the minimum frequency range over which the spectrum is integrated when measuring maximum conducted output power as described in section E). However, the 6-dB bandwidth must be measured to determine bandwidth dependent limits on maximum conducted output power in accordance with 15.407(a).

The following procedure shall be used for measuring (99 %) power bandwidth.

1. Set center frequency to the nominal EUT channel center frequency.
2. Set span = 1.5 times to 5.0 times the OBW.
3. Set RBW = 1 % to 5 % of the OBW
4. Set VBW $\geq 3 \cdot$ RBW
5. Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max hold mode (until the trace stabilizes) shall be used.
6. Use the 99 % power bandwidth function of the instrument (if available).
7. If the instrument does not have a 99 % power bandwidth function, the trace data points are recovered and directly summed in power units. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5 % of the total is reached; that frequency is recorded as the lower frequency. The process is repeated until 99.5 % of the total is reached; that frequency is recorded as the upper frequency. The 99% occupied bandwidth is the difference between these two frequencies.



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■ Maximum conducted output power

- (i) Set span to encompass the entire emission bandwidth (EBW) (or, alternatively, the entire 99% occupied bandwidth) of the signal.
- (ii) Set RBW = 1 MHz.
- (iii) Set VBW ≥ 3 MHz.
- (iv) Number of points in sweep \geq Span / RBW. (This ensures that bin-to-bin spacing is \leq RBW/2, so that narrowband signals are not lost between frequency bins.)
- (v) Sweep time = auto.
- (vi) Detector = RMS (i.e., power averaging), if available. Otherwise, use sample detector mode.
- (vii) If transmit duty cycle < 98 percent, use a video trigger with the trigger level set to enable triggering only on full power pulses. Transmitter must operate at maximum power control level for the entire duration of every sweep. If the EUT transmits continuously (i.e., with no off intervals) or at duty cycle ≥ 98 percent, and if each transmission is entirely at the maximum power control level, then the trigger shall be set to “free run”.
- (viii) Trace average at least 100 traces in power averaging (i.e., RMS) mode.
- (ix) Compute power by integrating the spectrum across the EBW (or, alternatively, the entire 99% occupied bandwidth) of the signal using the instrument’s band power measurement function with band limits set equal to the EBW (or occupied bandwidth) band edges. If the instrument does not have a band power function, sum the spectrum levels (in power units) at 1 MHz intervals extending across the EBW (or, alternatively, the entire 99% occupied bandwidth) of the spectrum.

■ Power Density

The rules requires “maximum power spectral density” measurements where the intent is to measure the maximum value of the time average of the power spectral density measured during a period of continuous transmission.

1. Create an average power spectrum for the EUT operating mode being tested by following the instructions in section II.E.2. for measuring maximum conducted output power using a spectrum analyzer or EMI receiver: select the appropriate test method (SA-1, SA-2, SA-3, or alternatives to each) and apply it up to, but not including, the step labeled, “Compute power...”. (This procedure is required even if the maximum conducted output power measurement was performed using a power meter, method PM.)
2. Use the peak search function on the instrument to find the peak of the spectrum and record its value.
3. Make the following adjustments to the peak value of the spectrum, if applicable:
 - a) If Method SA-2 or SA-2 Alternative was used, add $10 \log(1/x)$, where x is the duty cycle, to the peak of the spectrum.
 - b) If Method SA-3 Alternative was used and the linear mode was used in step II.E.2.g)(viii), add 1 dB to the final result to compensate for the difference between linear averaging and power averaging.
4. The result is the Maximum PSD over 1 MHz reference bandwidth.
5. For devices operating in the bands 5.15-5.25 GHz, 5.25-5.35 GHz, and 5.47-5.725 GHz, the above procedures make use of 1 MHz RBW to satisfy directly the 1 MHz reference bandwidth specified in § 15.407(a)(5). For devices operating in the band 5.725-5.85 GHz, the rules specify a measurement bandwidth of 500 kHz. Many spectrum analyzers do not have 500 kHz RBW, thus



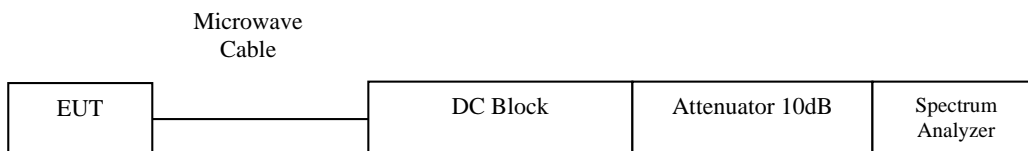
Registration number: W6M22311-23090-C-3
FCC ID: 2ANR7-VT67RFID

a narrower RBW may need to be used. The rules permit the use of a RBWs less than 1 MHz, or 500 kHz, “provided that the measured power is integrated over the full reference bandwidth” to show the total power over the specified measurement bandwidth (i.e., 1 MHz, or 500 kHz). If measurements are performed using a reduced resolution bandwidth (< 1 MHz, or < 500 kHz) and integrated over 1 MHz, or 500 KHz bandwidth, the following adjustments to the procedures apply:

- a) Set RBW $\geq 1/T$, where T is defined in section II.B.1.a).
- b) Set VBW ≥ 3 RBW.
- c) If measurement bandwidth of Maximum PSD is specified in 500 kHz, add $10\log(500\text{kHz}/\text{RBW})$ to the measured result, whereas RBW (< 500 kHz) is the reduced resolution bandwidth of the spectrum analyzer set during measurement.
- d) If measurement bandwidth of Maximum PSD is specified in 1 MHz, add $10\log(1\text{MHz}/\text{RBW})$ to the measured result, whereas RBW (< 1 MHz) is the reduced resolution bandwidth of spectrum analyzer set during measurement.
- e) Care must be taken to ensure that the measurements are performed during a period of continuous transmission or are corrected upward for duty cycle.

Note: As a practical matter, it is recommended to use reduced RBW of 100 kHz for the sections 5.c) and 5.d) above, since RBW=100 kHz is available on nearly all spectrum analyzers.

Conducted measurement test setup





Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M22311-23090-C-3
 FCC ID: 2ANR7-VT67RFID

3 Test results (enclosure)

| Test case | Para. Number | Required | Test passed | Test failed |
|---|---|-------------------------------------|-------------------------------------|--------------------------|
| Peak Transmit Power | 15.407(a) | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 6-dB emission bandwidth | 15.407(a) | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 26-dB emission bandwidth | 15.407(a) | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 99 % Occupied Bandwidth | 789033 D02 General U-NII Test Procedures New Rules v02r01 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Peak Power Spectral Density | 15.407(a) | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Undesirable emission limits | 15.407(b) | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Radio Frequency Exposure | 15.407(f) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Transmit Power Control | 15.407(h) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Dynamic Frequency Selection (DFS) | 15.407(h) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| UNII Detection Bandwidth | 905462 D02 UNII DFS Compliance Procedures New Rules v02 – 7.8.1 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Initial Channel Availability Check Time | 905462 D02 UNII DFS Compliance Procedures New Rules v02 – 7.8.2.1 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Radar Burst at the Beginning of the Channel Availability Check Time | 905462 D02 UNII DFS Compliance Procedures New Rules v02 – 7.8.2.2 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Radar Burst at the End of the Channel Availability Check Time | 905462 D02 UNII DFS Compliance Procedures New Rules v02 – 7.8.2.3 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| In-Service Monitoring for Channel Move Time, Channel Closing Transmission Time and Non-Occupancy Period | 905462 D02 UNII DFS Compliance Procedures New Rules v02 – 7.8.3 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Statistical Performance Check | 905462 D02 UNII DFS Compliance Procedures New Rules v02 – 7.8.4 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Radiated Emission from Receiver Part | 15.109 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| AC Conducted Emissions | 15.207 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

The following is intentionally left blank.



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 FCC ID: 2ANR7-VT67RFID

3.1 Peak Transmit Power, FCC 15.407 (a)

According to §15.407(a)

1. For the band 5.15-5.25 GHz, the maximum conducted power over the frequency of operation shall not exceed the lesser of 30 dBm (1 W) for master device and 24 dBm (250 mW) for mobile/portable client device.
2. For the band 5.25-5.35 GHz and 5.47-5.725 GHz, the maximum conducted power over the frequency of operation shall not exceed the lesser of 24 dBm (250 mW) or 11dBm + 10 log B, whichever is lower (B= 26-dB emission BW).
3. For the band 5.725-5.850 GHz, the maximum conducted power over the frequency of operation shall not exceed the lesser of 30 dBm (1 W).

Test date: December 03, 2023

Temperature: 22.7°C

Humidity: 58.1 %

Tester: Sora

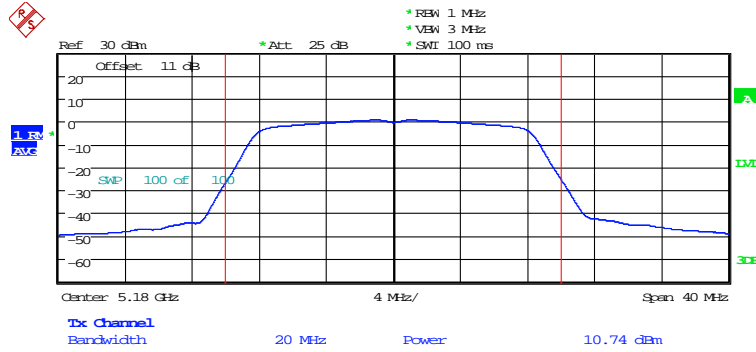
| Band | Mode | Channel | Conducted power with DF (dBm/MHz) | DF (dB) | Limit (dBm/MHz) |
|-------------------|-------------|-------------------|-----------------------------------|---------|-----------------|
| NII-1 | 802.11a | Ch 36 : 5180 MHz | 10.81 | 0.07 | 24 |
| | | Ch 44 : 5220 MHz | 10.86 | 0.07 | 24 |
| | | Ch 48 : 5240 MHz | 10.65 | 0.07 | 24 |
| | 802.11n 20 | Ch 36 : 5180 MHz | 10.84 | 0.08 | 24 |
| | | Ch 44 : 5220 MHz | 10.92 | 0.08 | 24 |
| | | Ch 48 : 5240 MHz | 10.49 | 0.08 | 24 |
| | 802.11n 40 | Ch 38 : 5190 MHz | 10.95 | 0.21 | 24 |
| | | Ch 46 : 5230 MHz | 10.66 | 0.21 | 24 |
| | 802.11ac 80 | Ch 42 : 5210 MHz | 10.81 | 0.46 | 24 |
| | NII-3 | 802.11a | Ch 149 : 5745 MHz | 10.88 | 0.07 |
| Ch 157 : 5785 MHz | | | 9.25 | 0.07 | 30 |
| Ch 165 : 5825 MHz | | | 9.68 | 0.07 | 30 |
| 802.11n 20 | | Ch 149 : 5745 MHz | 10.66 | 0.08 | 30 |
| | | Ch 157 : 5785 MHz | 10.31 | 0.08 | 30 |
| | | Ch 165 : 5825 MHz | 9.79 | 0.08 | 30 |
| 802.11n 40 | | Ch 151 : 5755 MHz | 10.64 | 0.21 | 30 |
| | | Ch 159 : 5795 MHz | 10.32 | 0.21 | 30 |
| 802.11ac 80 | | Ch 155: 5775 MHz | 10.44 | 0.46 | 30 |



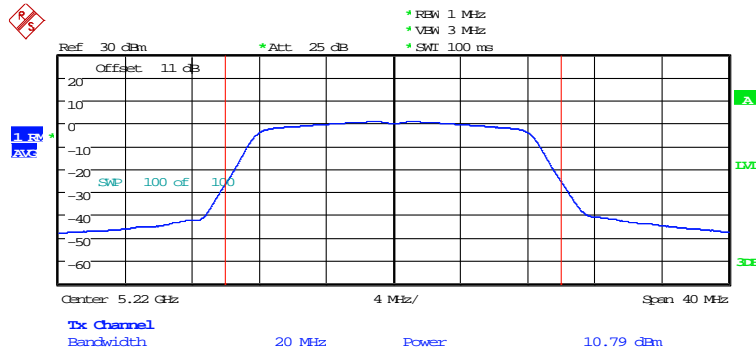
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FCC ID: 2ANR7-VT67RFID

5.15 GHz ~ 5.25 GHz



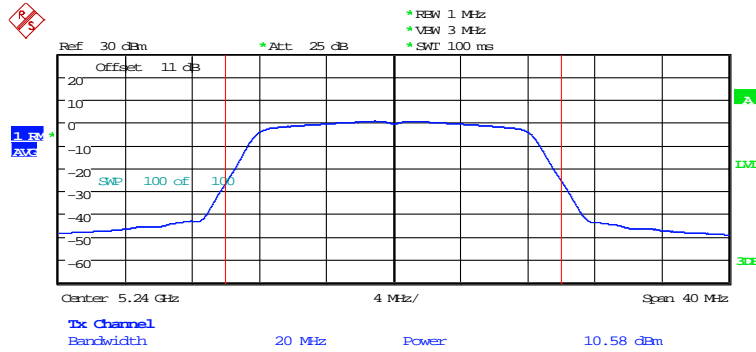
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Date: 3.DEC.2023 09:11:29



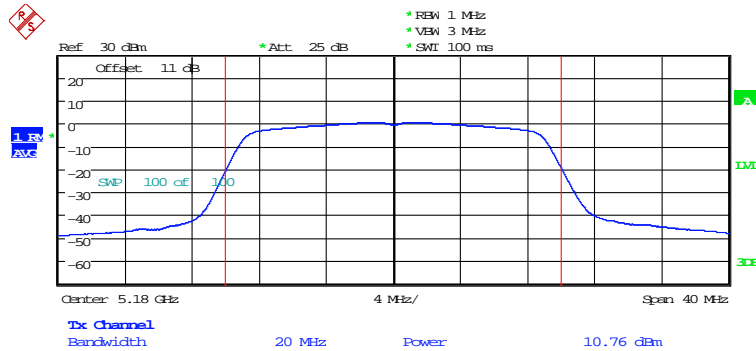
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Registration number: W6M22311-23090-C-3
 FCC ID: 2ANR7-VT67RFID



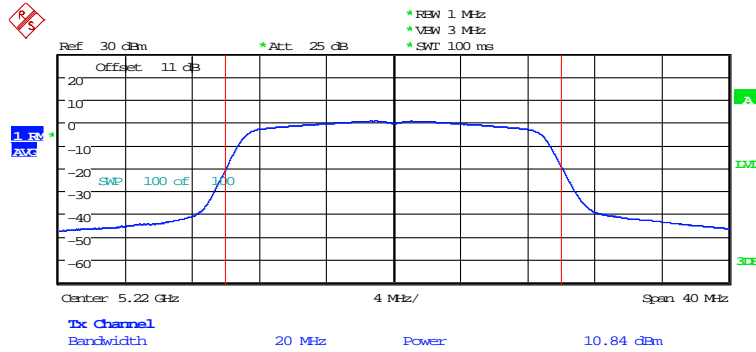
MAXIMUM CONDUCTED POWER ANT1_11aCH48
 Date: 3.DEC.2023 09:13:38



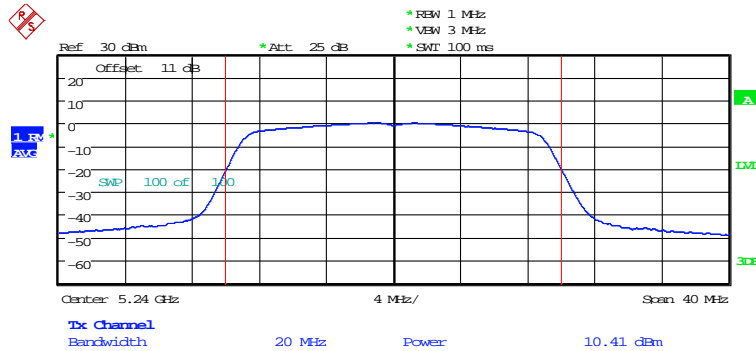
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Registration number: W6M22311-23090-C-3
FCC ID: 2ANR7-VT67RFID



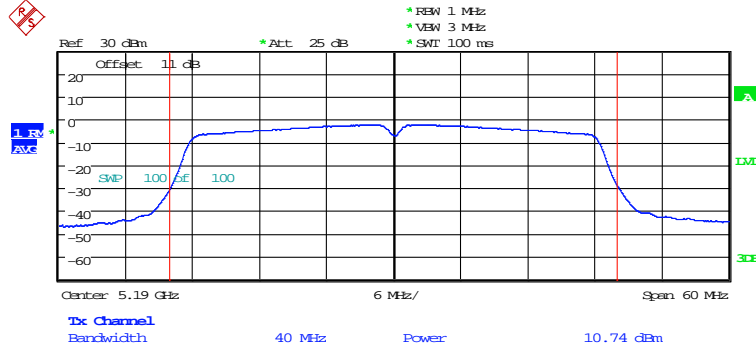
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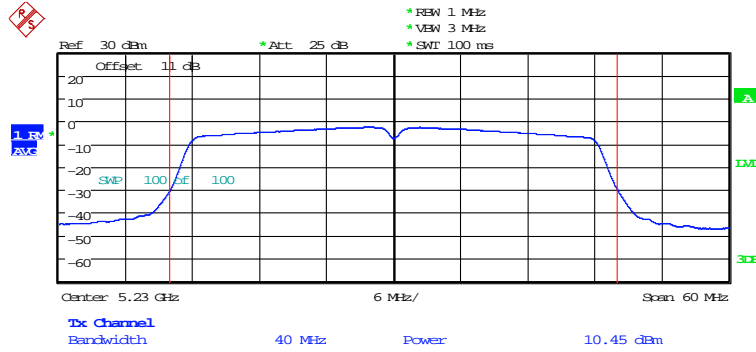
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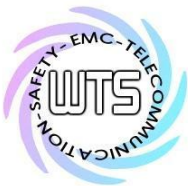
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FCC ID: 2ANR7-VT67RFID



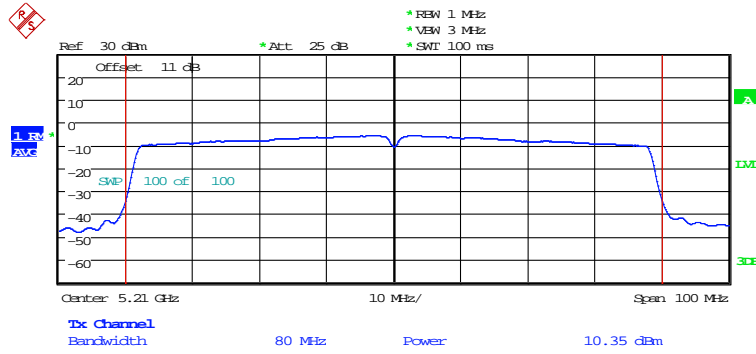
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Date: 3.DEC.2023 09:18:30



MAXIMUM CONDUCTED POWER ANT1_11n40CH46
Date: 3.DEC.2023 09:19:32



Registration number: W6M22311-23090-C-3
FCC ID: 2ANR7-VT67RFID



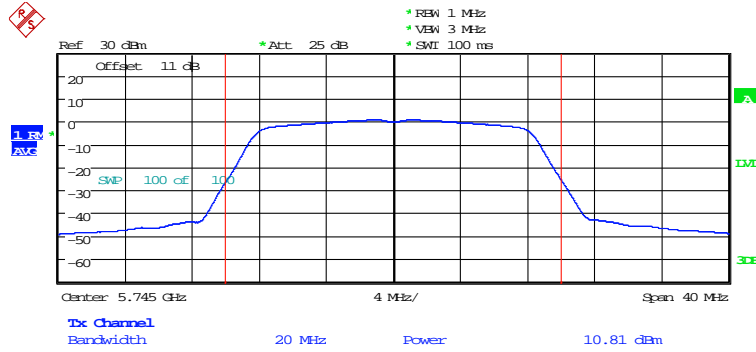
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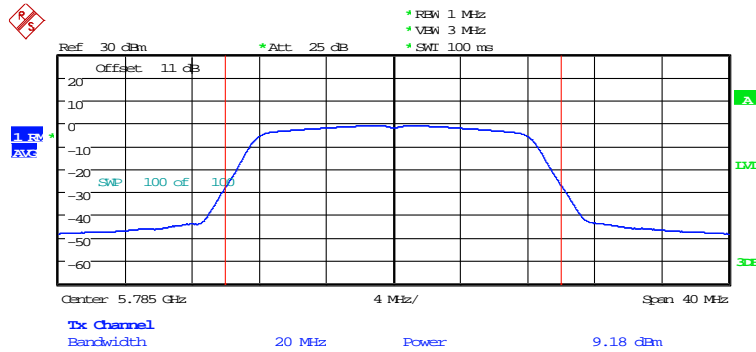
Registration number: W6M22311-23090-C-3

FCC ID: 2ANR7-VT67RFID

5.725 GHz ~ 5.85 GHz



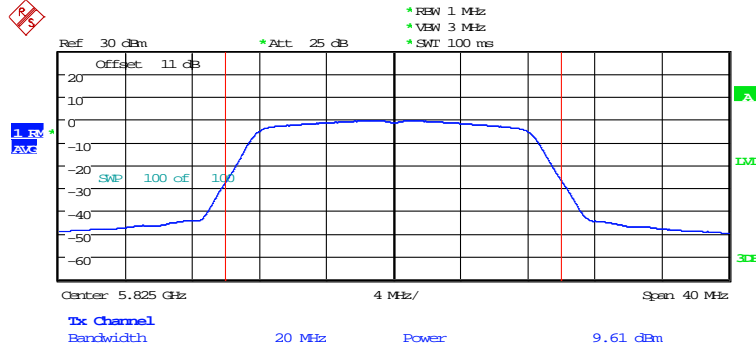
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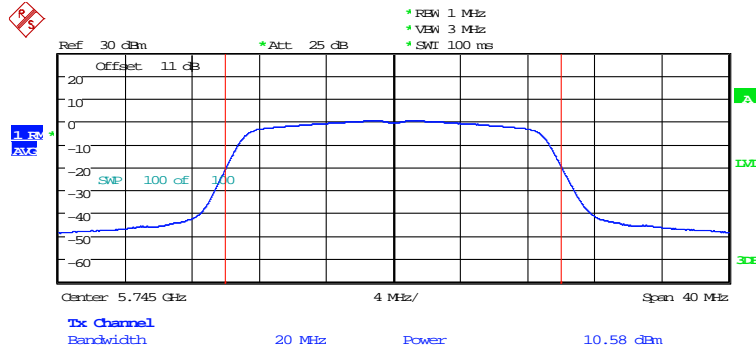
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Registration number: W6M22311-23090-C-3
 FCC ID: 2ANR7-VT67RFID



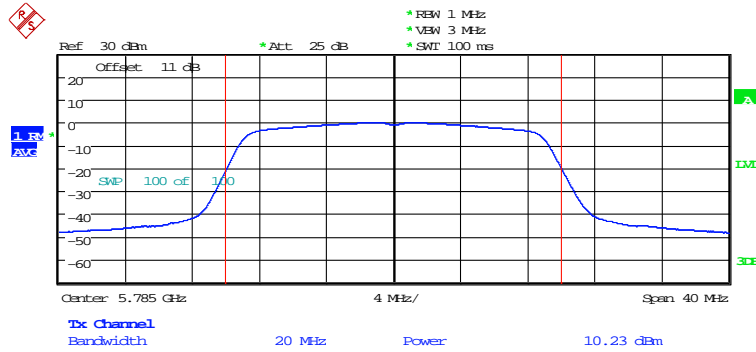
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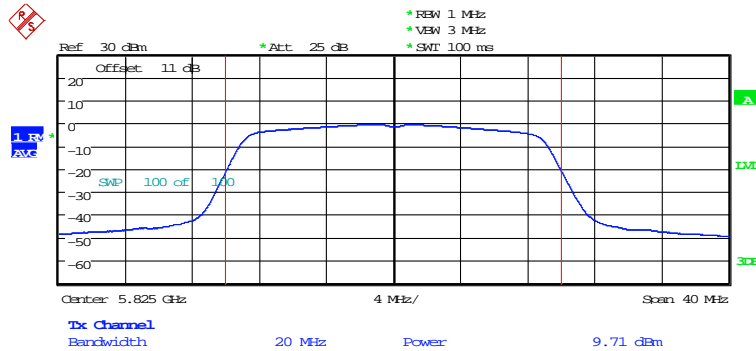
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Registration number: W6M22311-23090-C-3
 FCC ID: 2ANR7-VT67RFID



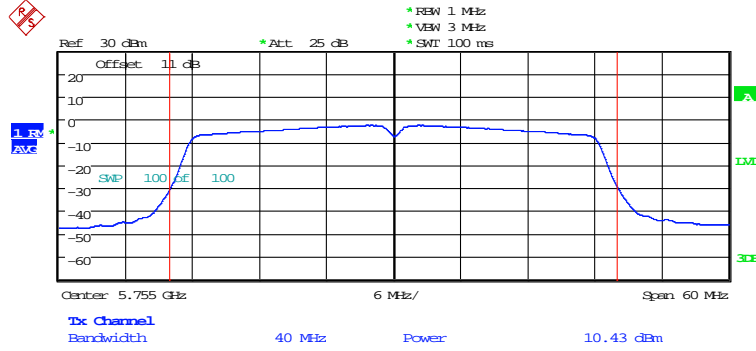
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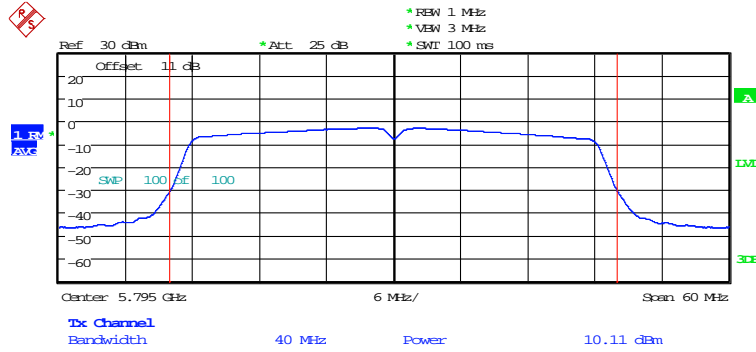
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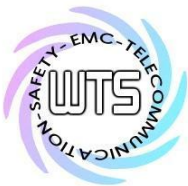
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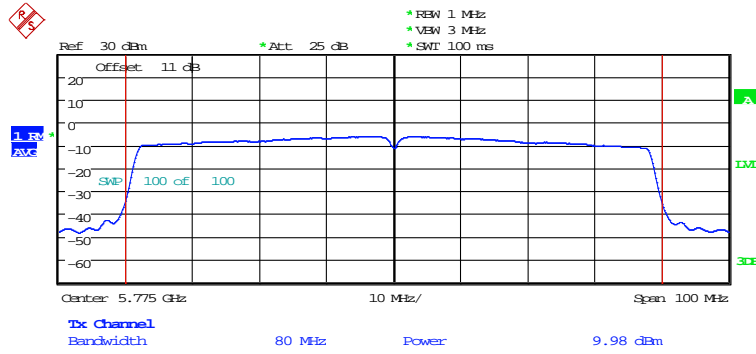
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MAXIMUM CONDUCTED POWER ANT1_11n40CH159
 Date: 3.DEC.2023 09:38:27



Registration number: W6M22311-23090-C-3
FCC ID: 2ANR7-VT67RFID



MAXIMUM CONDUCTED POWER ANT1_11ac80CH155
Date: 3.DEC.2023 09:24:38

Test equipment used: ETSTW-RE 055, ETSTW-RE 050



Registration number: W6M22311-23090-C-3
FCC ID: 2ANR7-VT67RFID

3.2 26dB emission bandwidth, 99% Occupied Bandwidth, FCC 15.407 (a)

According to §15.407(a). No Limit required.

Result:

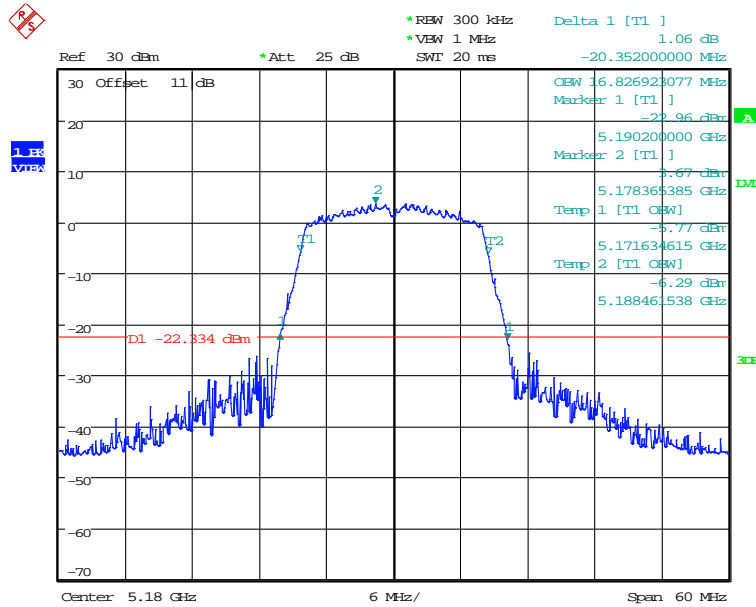
Test date: December 03, 2023

Temperature: 22.7°C

Humidity: 58.1 %

Tester: Sora

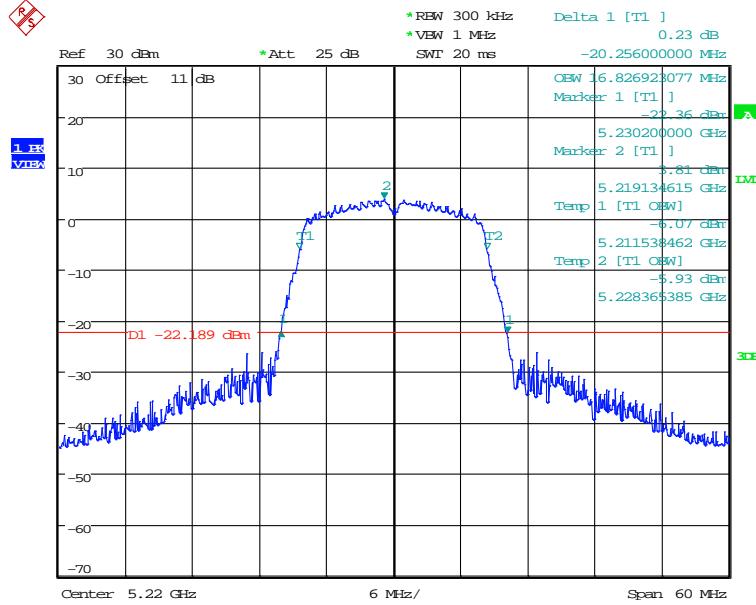
5.15 GHz ~ 5.25 GHz



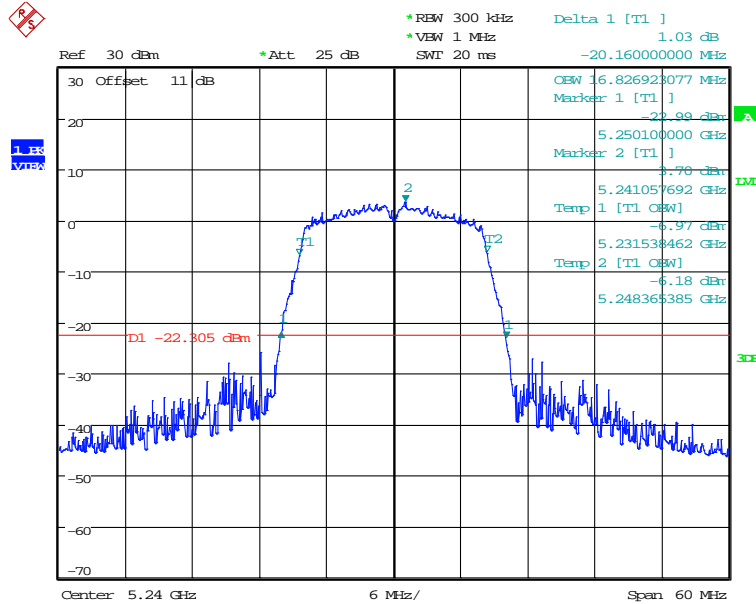
99% OBW & 26DB BANDWIDTH ANT1_11a_CH36
Date: 3.DEC.2023 09:12:07



Registration number: W6M22311-23090-C-3
 FCC ID: 2ANR7-VT67RFID



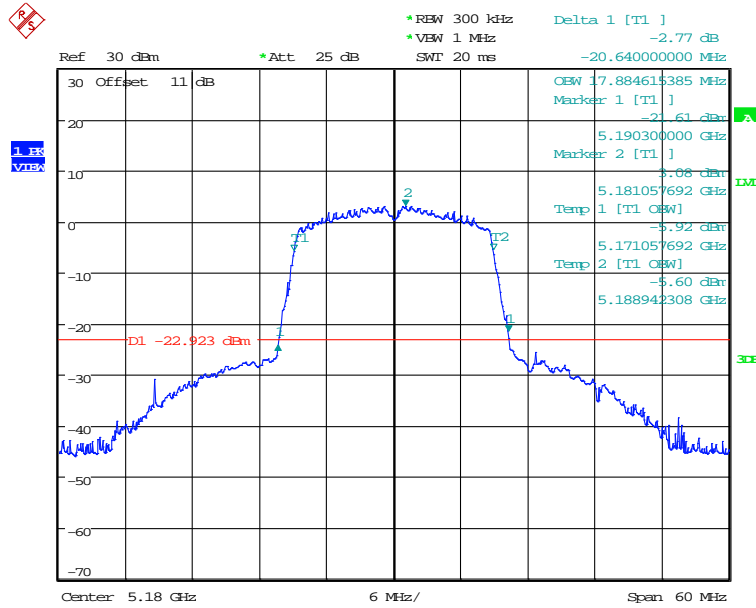
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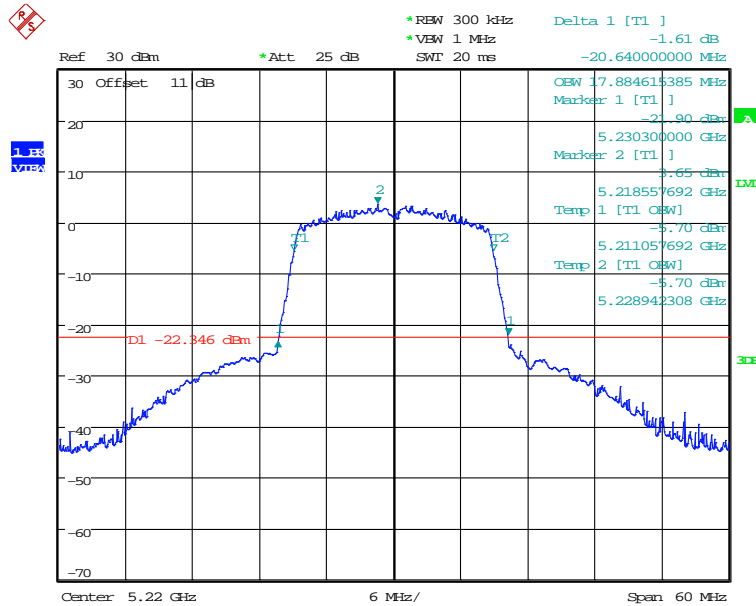
99% OBW & 26DB BANDWIDTH ANTI_11a_CH48
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Registration number: W6M22311-23090-C-3
 FCC ID: 2ANR7-VT67RFID



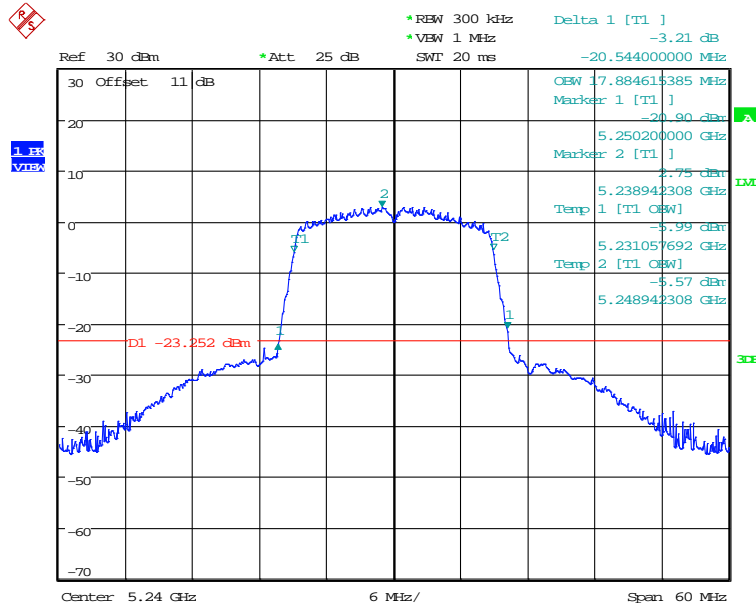
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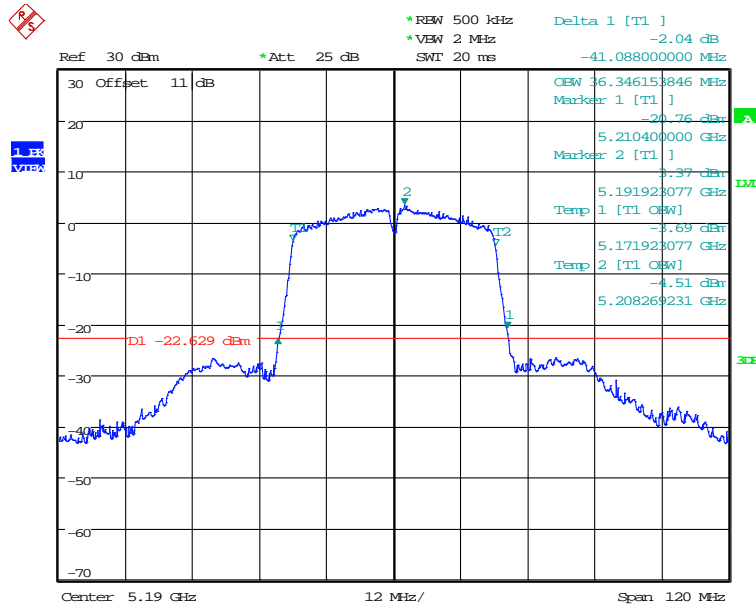
99% OBW & 26DB BANDWIDTH ANT1_11n20_CH44
 Date: 3.DEC.2023 09:16:26



Registration number: W6M22311-23090-C-3
 FCC ID: 2ANR7-VT67RFID



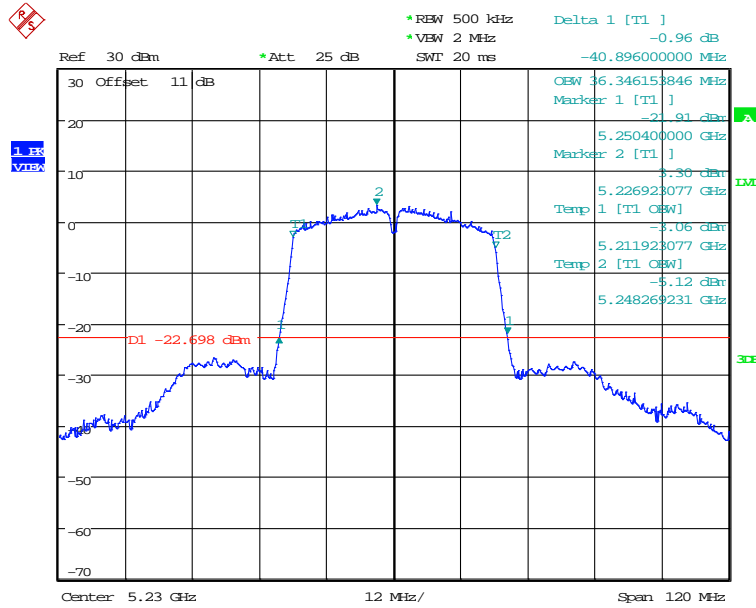
99% OBW & 26DB BANDWIDTH ANT1_11n20_CH48
 Date: 3.DEC.2023 09:17:32



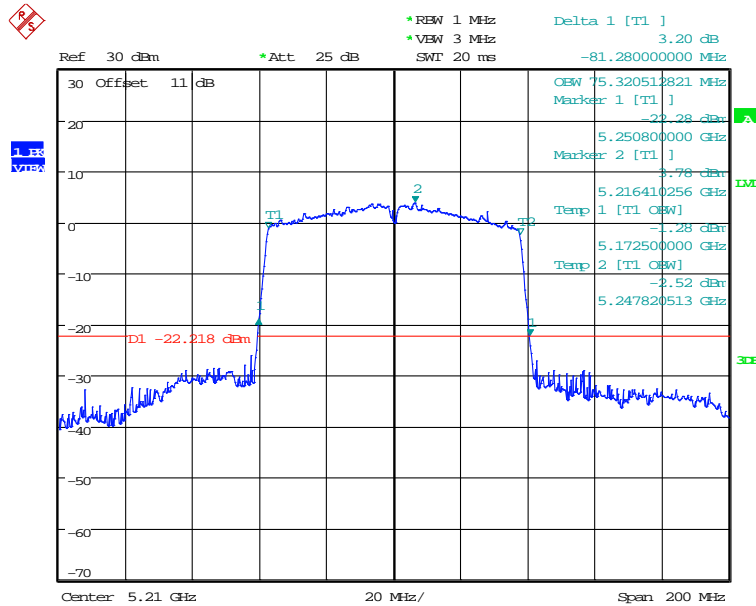
99% OBW & 26DB BANDWIDTH ANT1_11n40_CH38
 Date: 3.DEC.2023 09:19:05



Registration number: W6M22311-23090-C-3
 FCC ID: 2ANR7-VT67RFID



99% OBW & 26DB BANDWIDTH ANTI_11n40_CH46
 Date: 3.DEC.2023 09:20:11



99% OBW & 26DB BANDWIDTH ANTI_11ac80_CH42
 Date: 3.DEC.2023 09:21:50

Test equipment used: ETSTW-RE 055, ETSTW-RE 050



Registration number: W6M22311-23090-C-3
FCC ID: 2ANR7-VT67RFID

3.3 6dB emission bandwidth, 99% Occupied Bandwidth, FCC 15.407 (a)

According to §15.407(a). No Limit required.

Result:

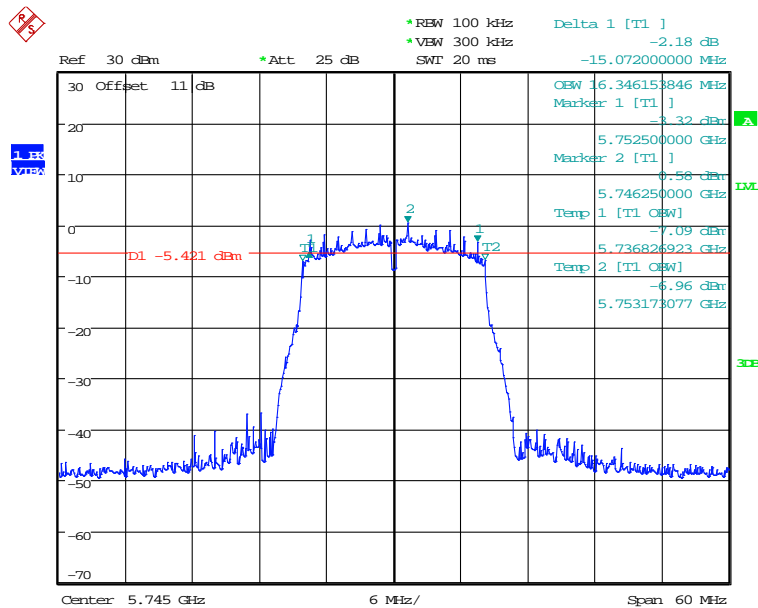
Test date: December 03, 2023

Temperature: 22.7°C

Humidity: 58.1 %

Tester: Sora

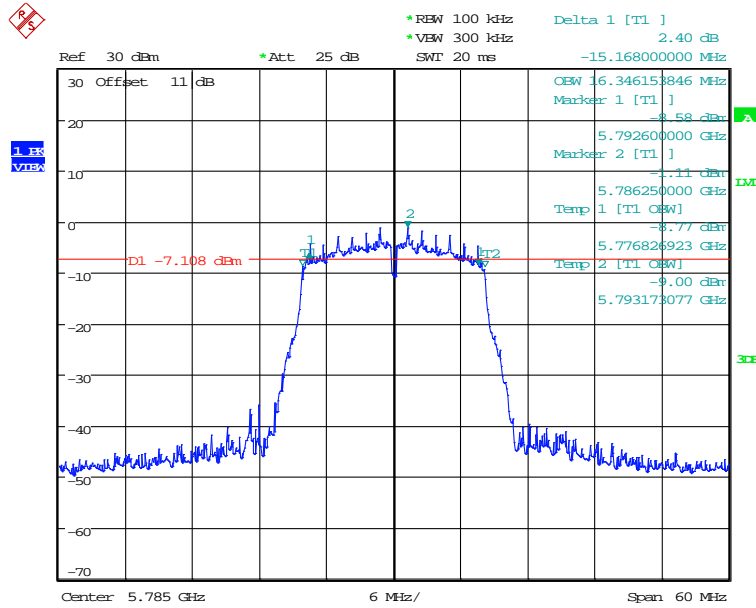
5.725 GHz ~ 5.85 GHz



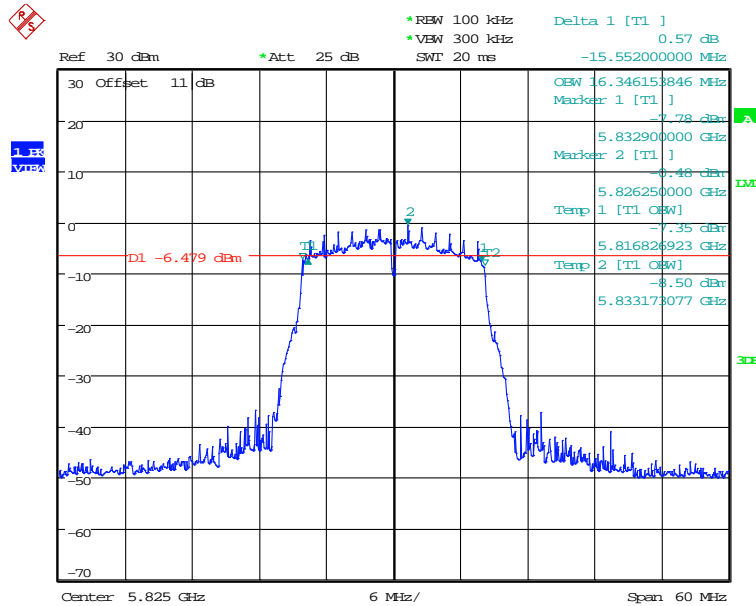
99% OBW & 6DB BANDWIDTH ANT1_11a_CH149
Date: 3.DEC.2023 09:27:04



Registration number: W6M22311-23090-C-3
 FCC ID: 2ANR7-VT67RFID



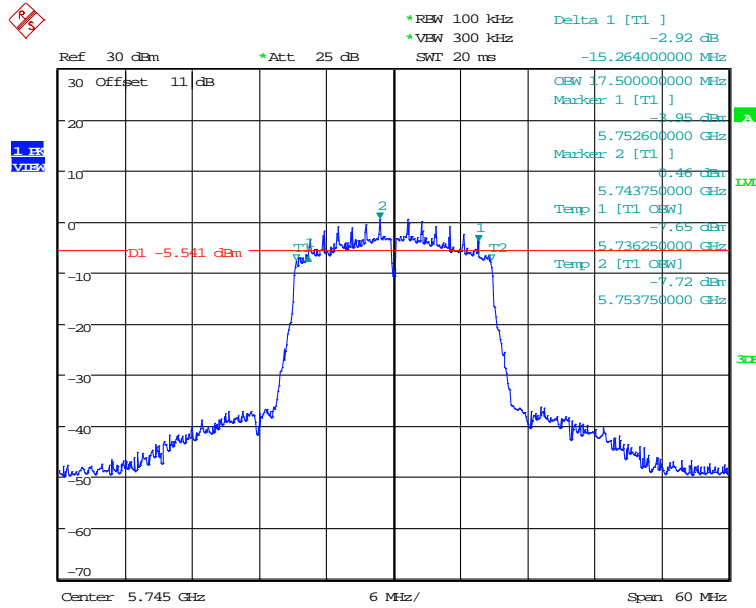
99% OBW & 6DB BANDWIDTH ANT1_11a_CH157
 Date: 3.DEC.2023 09:27:59



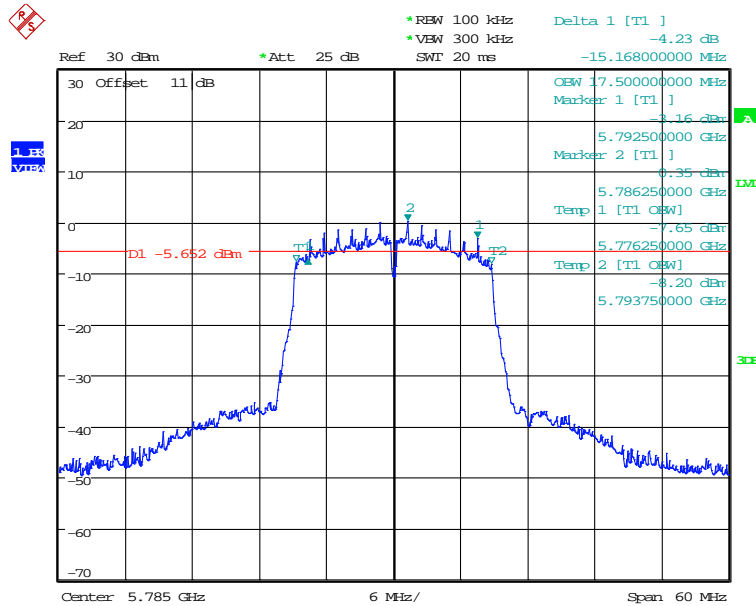
99% OBW & 6DB BANDWIDTH ANT1_11a_CH165
 Date: 3.DEC.2023 09:28:59



Registration number: W6M22311-23090-C-3
 FCC ID: 2ANR7-VT67RFID



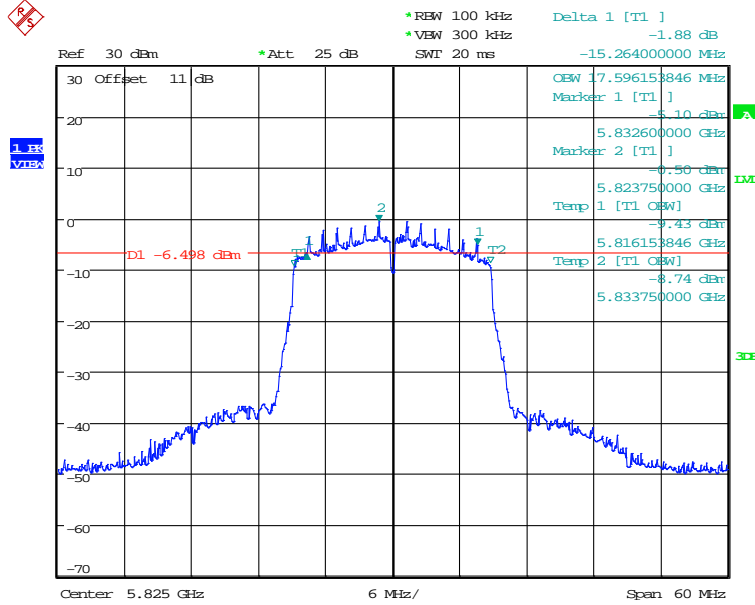
99% OBW & 6DB BANDWIDTH ANT1_11n20_CH149
 Date: 3.DEC.2023 09:30:16



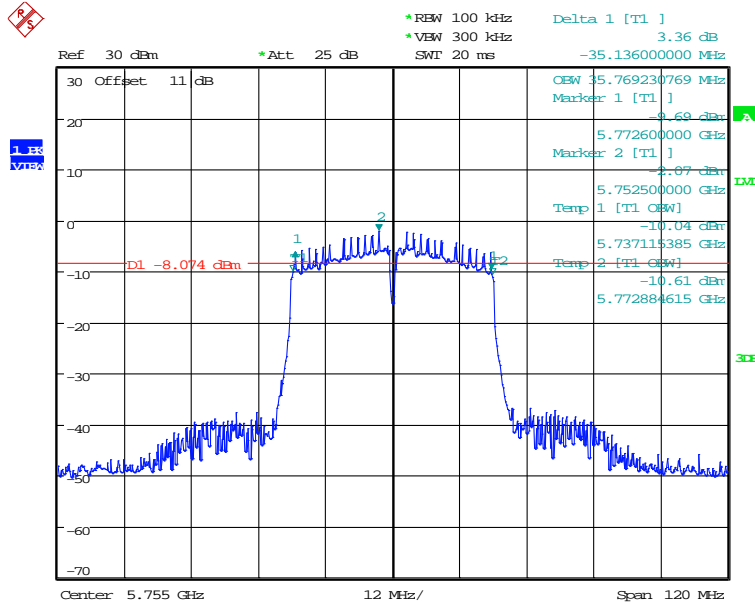
99% OBW & 6DB BANDWIDTH ANT1_11n20_CH157
 Date: 3.DEC.2023 09:31:22



Registration number: W6M22311-23090-C-3
 FCC ID: 2ANR7-VT67RFID



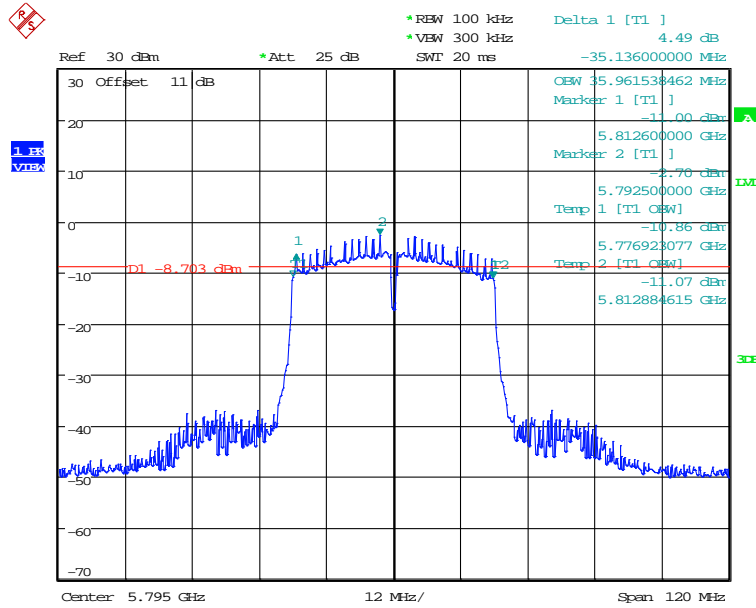
99% OBW & 6DB BANDWIDTH ANT1_11n20_CH165
 Date: 3.DEC.2023 09:32:28



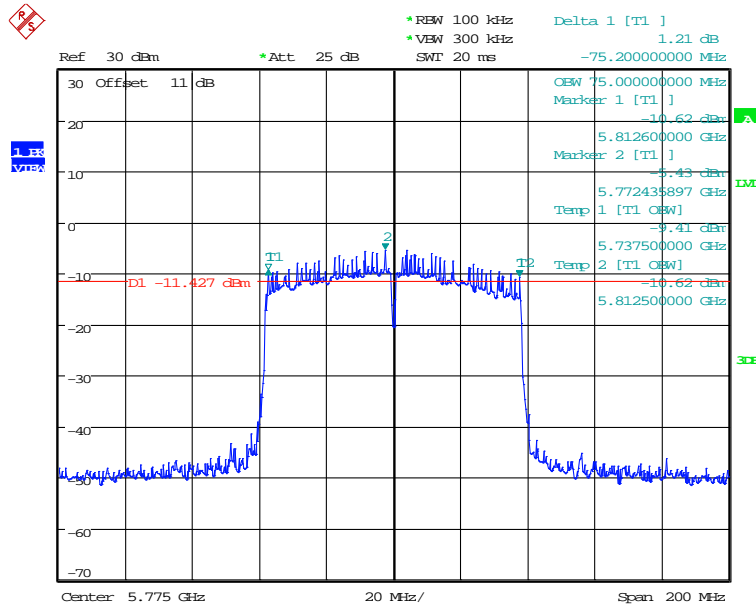
99% OBW & 6DB BANDWIDTH ANT1_11n40_CH151
 Date: 3.DEC.2023 09:33:56



Registration number: W6M22311-23090-C-3
 FCC ID: 2ANR7-VT67RFID



99% OBW & 6DB BANDWIDTH ANT1_11n40_CH159
 Date: 3.DEC.2023 09:35:02



99% OBW & 6DB BANDWIDTH ANT1_11ac80_CH155
 Date: 3.DEC.2023 09:25:14



Registration number: W6M22311-23090-C-3
FCC ID: 2ANR7-VT67RFID

3.4 Peak Power Spectral Density, FCC 15.407 (a)

According to §15.407(a)

For the band 5.15-5.25 GHz, the peak power spectral density shall not exceed 17 dBm/MHz for master device and 11 dBm/MHz for mobile/portable client device.

For the band 5.25-5.35 GHz and 5.47-5.725 GHz, the peak power spectral density shall not exceed 11 dBm/MHz.

For the band 5.725-5.850 GHz, the peak power spectral density shall not exceed 30 dBm/500kHz.

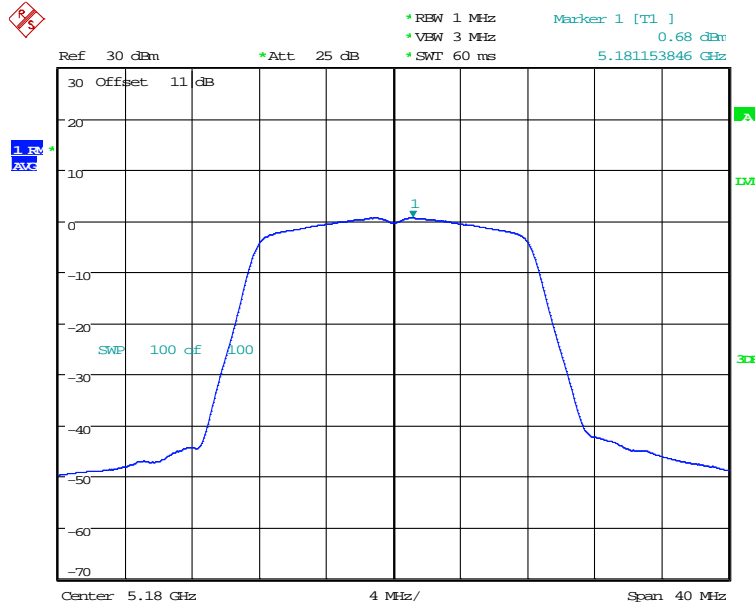
Test date: December 03, 2023

Temperature: 22.7°C

Humidity: 58.1 %

Tester: Sora

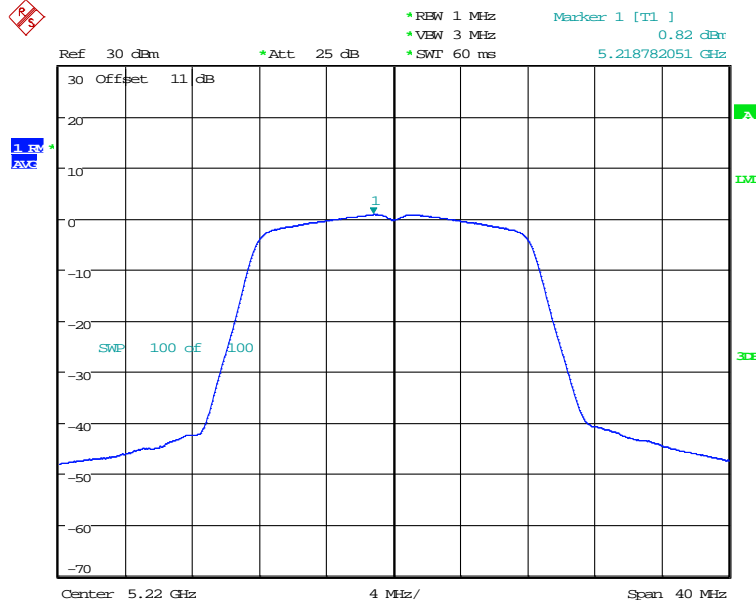
5.15 GHz ~ 5.25 GHz



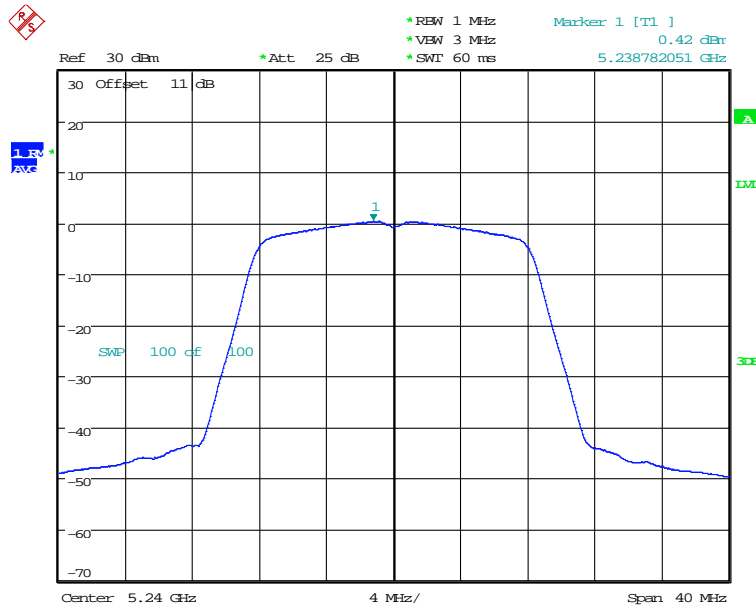
POWER DENSITY AV ANT111aCH36
Date: 3.DEC.2023 09:11:51



Registration number: W6M22311-23090-C-3
FCC ID: 2ANR7-VT67RFID



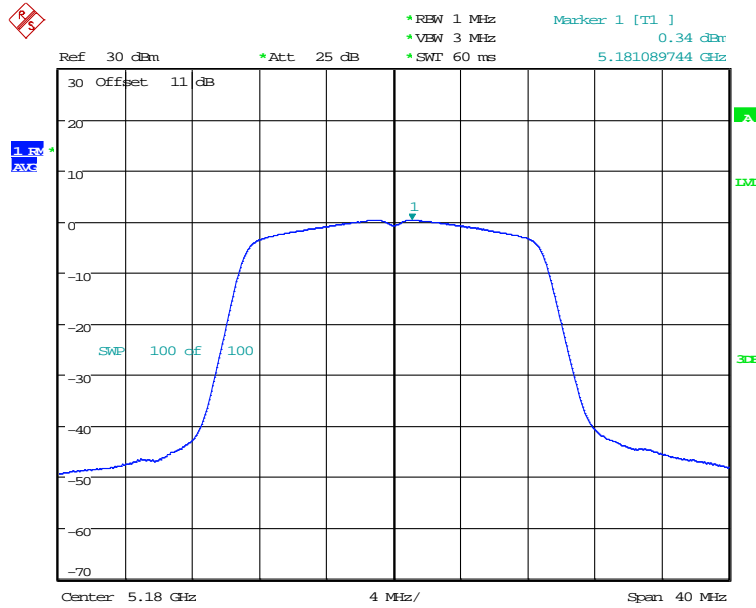
POWER DENSITY AV ANT111aCH44
Date: 3.DEC.2023 09:12:56



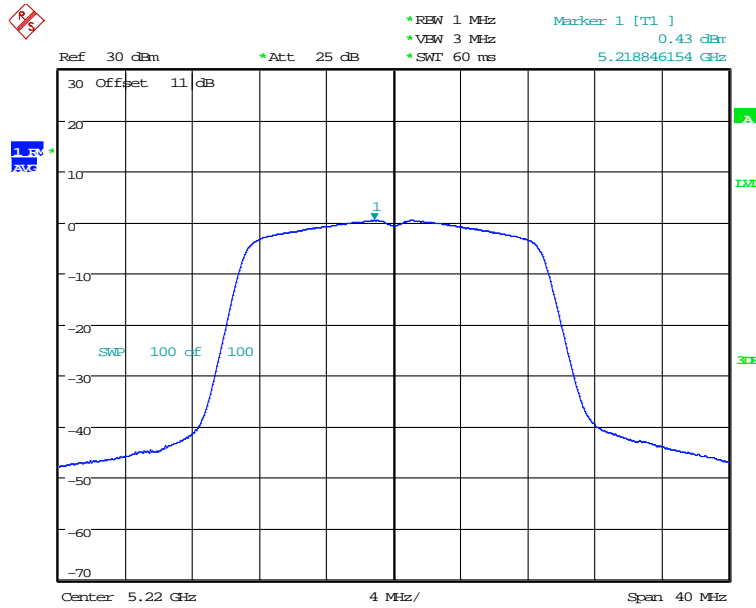
POWER DENSITY AV ANT111aCH48
Date: 3.DEC.2023 09:14:01



Registration number: W6M22311-23090-C-3
FCC ID: 2ANR7-VT67RFID



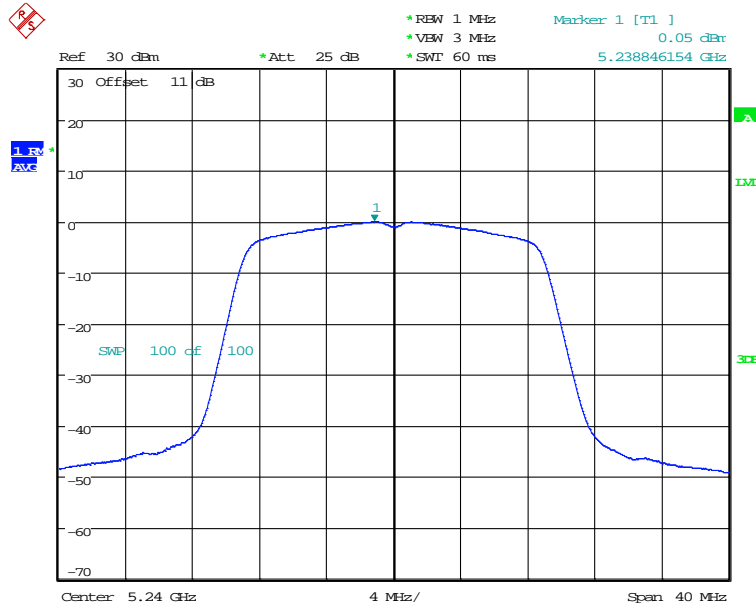
POWER DENSITY AV ANT111n20CH36
Date: 3.DEC.2023 09:15:12



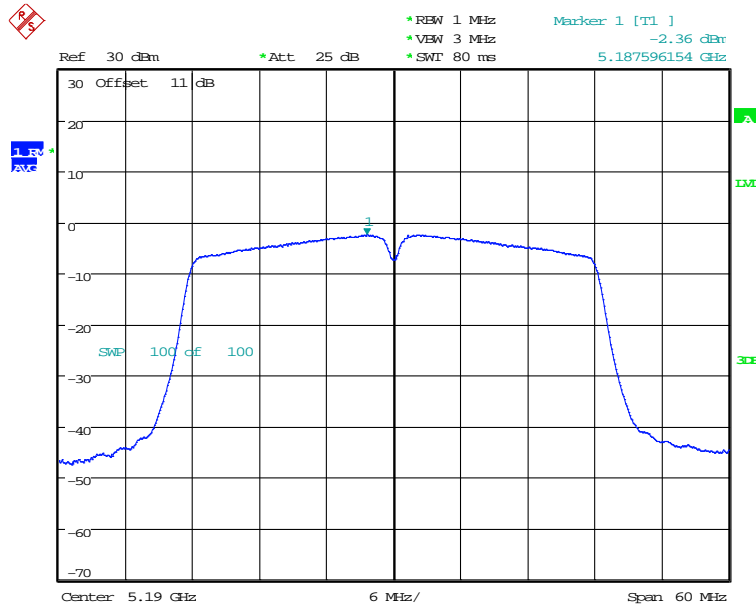
POWER DENSITY AV ANT111n20CH44
Date: 3.DEC.2023 09:16:11



Registration number: W6M22311-23090-C-3
FCC ID: 2ANR7-VT67RFID



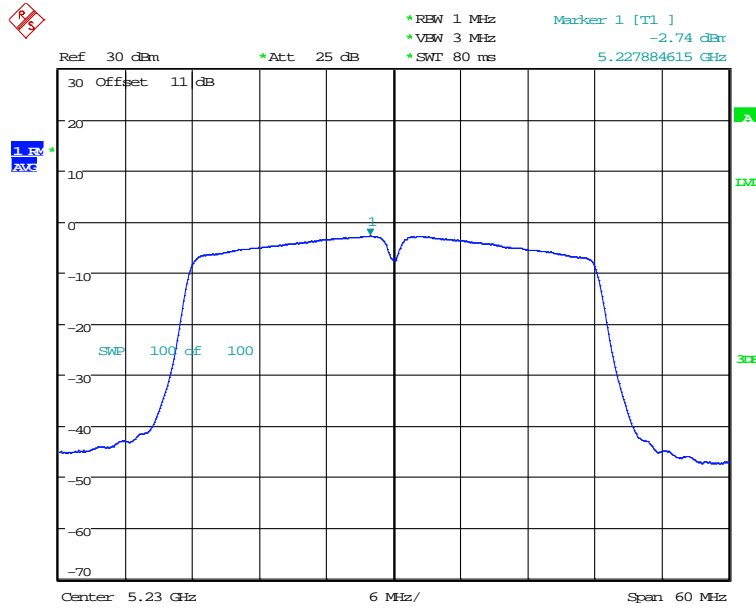
POWER DENSITY AV ANT111n20CH48
Date: 3.DEC.2023 09:17:16



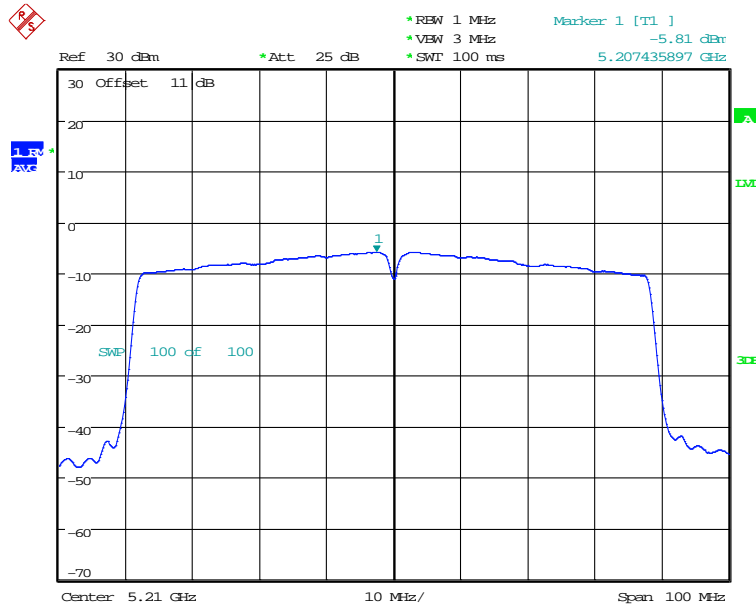
POWER DENSITY AV ANT111n40CH38
Date: 3.DEC.2023 09:18:48



Registration number: W6M22311-23090-C-3
FCC ID: 2ANR7-VT67RFID



POWER DENSITY AV ANT111n40CH46
Date: 3.DEC.2023 09:19:56



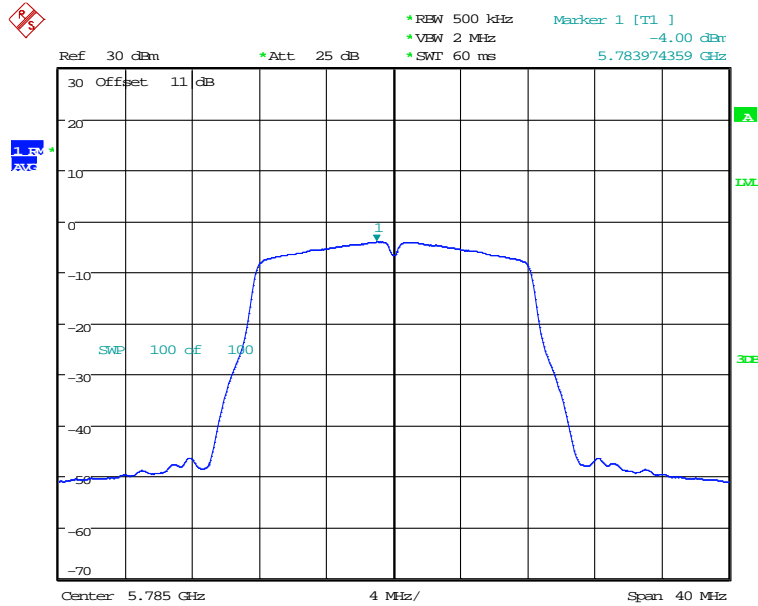
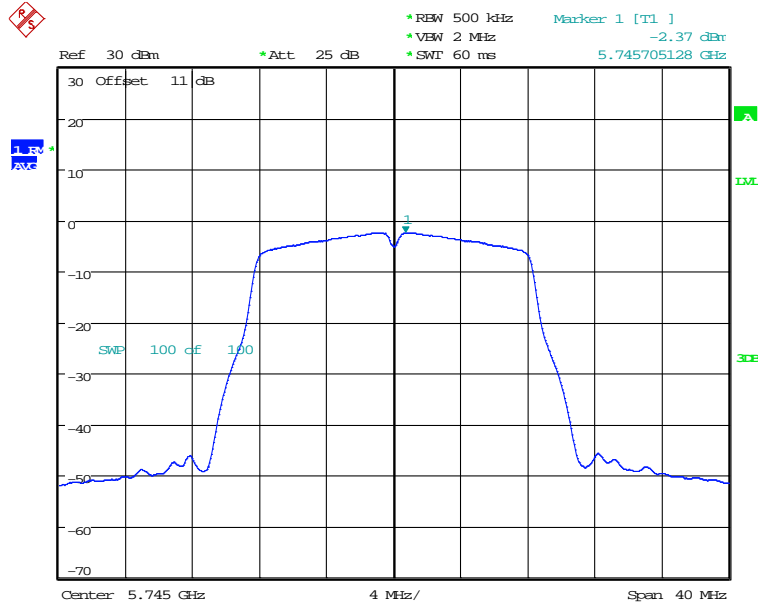
POWER DENSITY AV ANT111ac80CH42
Date: 3.DEC.2023 09:21:36



Registration number: W6M22311-23090-C-3

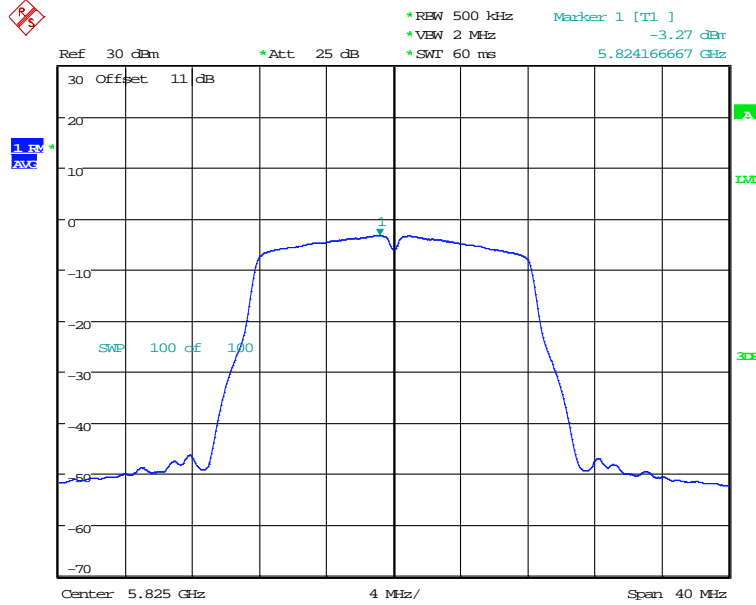
FCC ID: 2ANR7-VT67RFID

5.725 GHz ~ 5.85 GHz

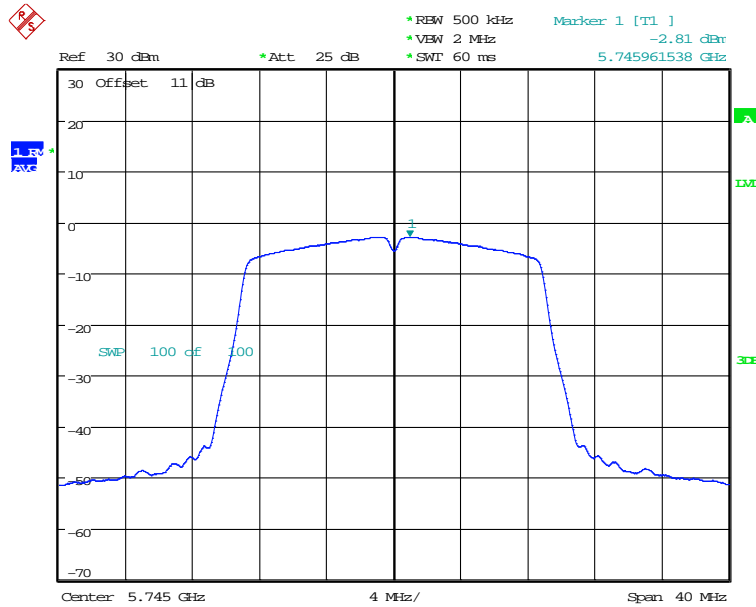




Registration number: W6M22311-23090-C-3
FCC ID: 2ANR7-VT67RFID



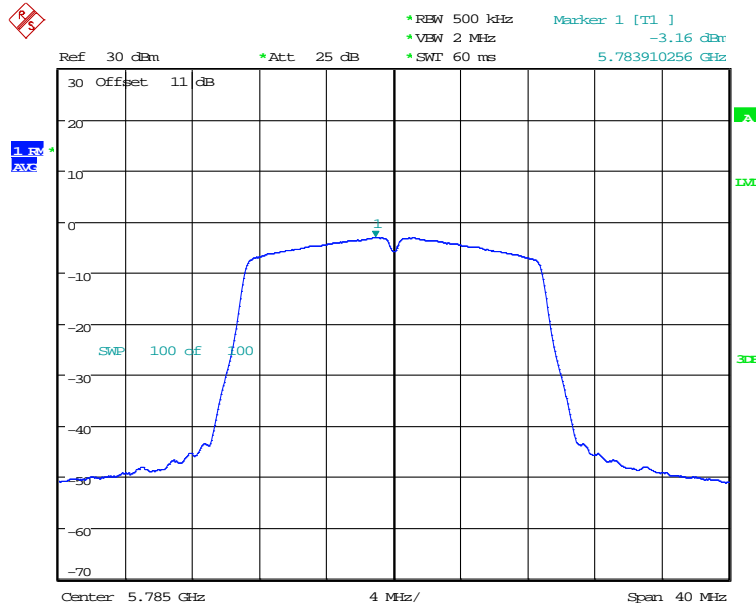
POWER DENSITY AV ANT111aCH165
Date: 3.DEC.2023 09:28:45



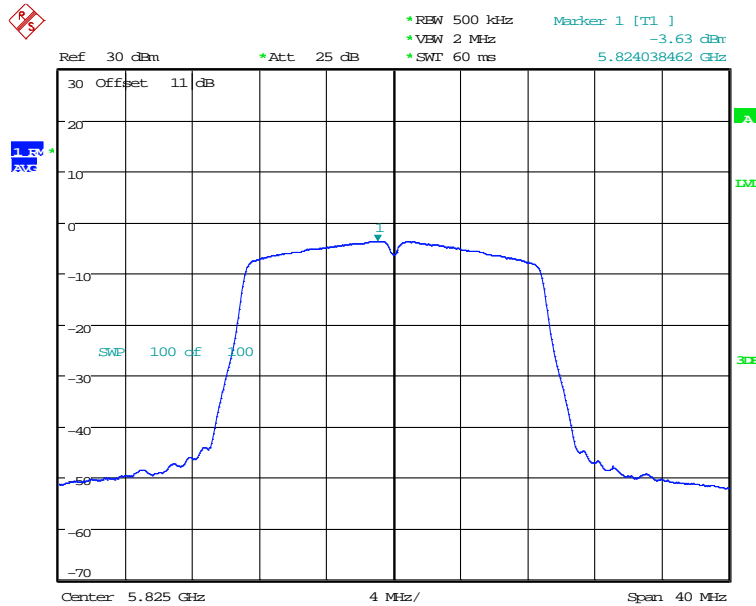
POWER DENSITY AV ANT111n20CH149
Date: 3.DEC.2023 09:30:03



Registration number: W6M22311-23090-C-3
FCC ID: 2ANR7-VT67RFID



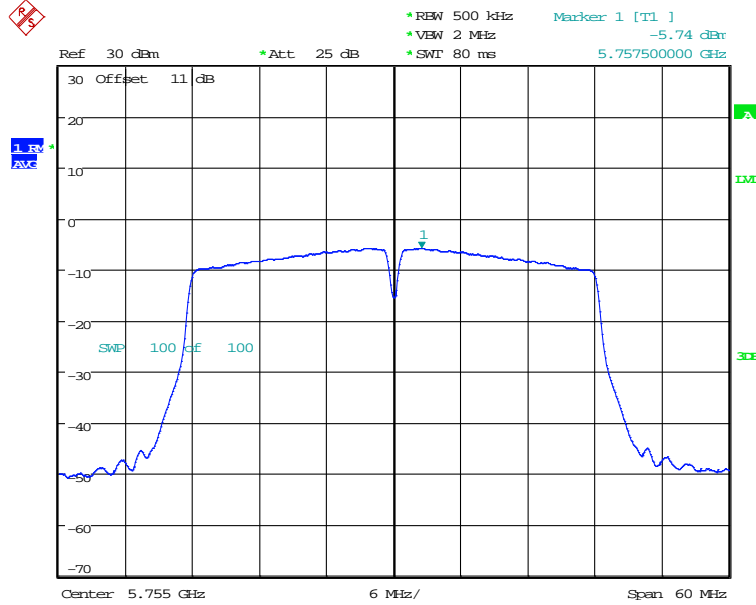
POWER DENSITY AV ANT111n20CH157
Date: 3.DEC.2023 09:31:08



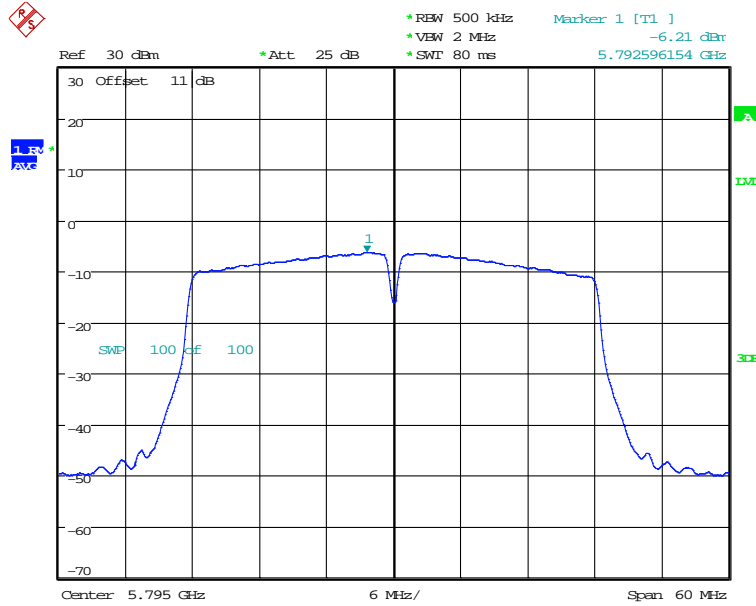
POWER DENSITY AV ANT111n20CH165
Date: 3.DEC.2023 09:32:13



Registration number: W6M22311-23090-C-3
FCC ID: 2ANR7-VT67RFID



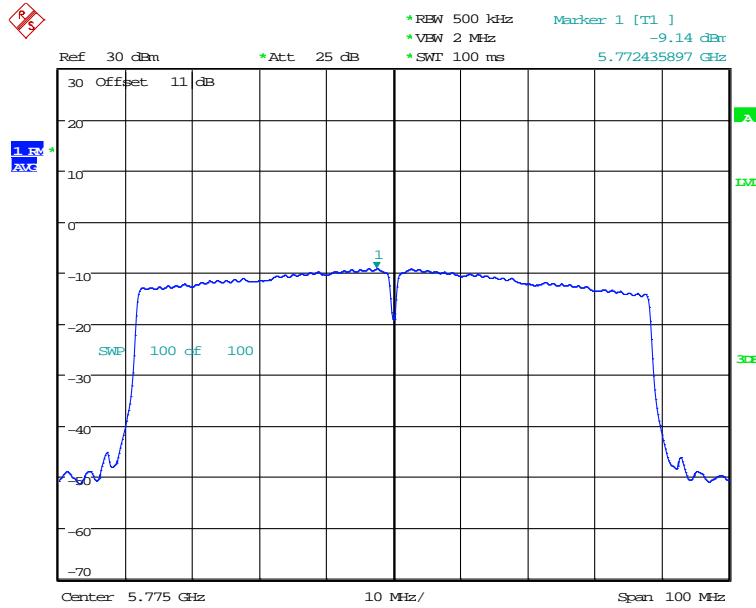
POWER DENSITY AV ANT111n40CH151
Date: 3.DEC.2023 09:33:41



POWER DENSITY AV ANT111n40CH159
Date: 3.DEC.2023 09:34:48



Registration number: W6M22311-23090-C-3
FCC ID: 2ANR7-VT67RFID



POWER DENSITY AV ANT111ac80CH155
Date: 3.DEC.2023 09:25:00

Test equipment used: ETSTW-RE 055, ETSTW-RE 050

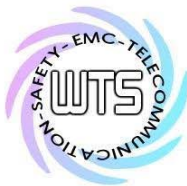


Registration number: W6M22311-23090-C-3
 FCC ID: 2ANR7-VT67RFID

3.5 Undesirable emission limits, FCC 15.407 (b)

1. For transmitters operating in the 5.15–5.25 GHz band: all emissions out-side of the 5.15–5.35 GHz band shall not exceed an EIRP of –27 dBm/MHz.
2. For transmitters operating in the 5.25–5.35 GHz band: all emissions out-side of the 5.15–5.35 GHz band shall not exceed an EIRP of –27 dBm/MHz. De-vices operating in the 5.25–5.35 GHz band that generate emissions in the 5.15–5.25 GHz band must meet all appli-cable technical requirements for operation in the 5.15–5.25 GHz band (including indoor use) or alternatively meet an out-of-band emission EIRP limit of -27 dBm/MHz in the 5.15–5.25 GHz band.
3. For transmitters operating in the 5.47–5.725 GHz band: all emissions out-side of the 5.47–5.725 GHz band shall not exceed an EIRP of -27 dBm/MHz.
4. For transmitters operating in the 5.725–5.850 GHz band: All emissions shall be limited to a level of –27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.
5. The emission measurements shall be performed using a minimum resolution bandwidth of 1 MHz. A lower resolution bandwidth may be employed near the band edge, when necessary, provided the measured energy is integrated to show the total power over 1 MHz.
6. Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in § 15.209.
7. According to According to KDB 789033 D02 General UNII Test Procedures v01, as specified in 15.407(b), emissions above 1000 MHz that are outside of the restricted bands are subject to a peak emission limit of -27 dBm/MHz (or -17 dBm/MHz as specified in 15.407(b)(4)). However, an out-of-band emission that complies with both the average and peak limits of 15.209 is not required to satisfy the -27 dBm/MHz or -17 dBm/MHz peak emission limit.
8. If radiated measurements are performed, field strength is then converted to EIRP as follows:
 - (i) $EIRP = ((E*d)^2) / 30$, where: E is the field strength in V/m; d is the measurement distance in meters. EIRP is the equivalent isotropically radiated power in watts.
 - (ii) Working in dB units, the above equation is equivalent to: $EIRP[dBm] = E[dB\mu V/m] + 20 \log(d[meters]) - 104.77$.
 - (iii) Or, if d is 3 meters: $EIRP[dBm] = E[dB\mu V/m] - 95.2$.

| Applicable to | Limit | |
|-------------------------------------|-------------------------------|--|
| <input checked="" type="checkbox"/> | FIELD STRENGTH at 3m (dBμV/m) | |
| | PK | AV |
| | 74 | 54 |
| <input type="checkbox"/> | EIRP LIMIT (dBm) | EQUIVALENT FIELD STRENGTH at 3m (dBμV/m) |
| | PK | PK |
| | -27 | 68.3 |



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M22311-23090-C-3
 FCC ID: 2ANR7-VT67RFID

XXX66XXX, XXX67XXX

Model: (X=A-Z, 0-9 or blank)

Date: --

Mode: --

Temperature: -- °C Engineer: --

Polarization: Horizontal

Humidity: -- %

| Frequency (MHz) | Reading (dBuV) | Detector | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|-----------------|----------------|----------|-------------|-----------------|----------------|-------------|---------------------|----------------|
| -- | -- | -- | -- | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | -- | -- | -- | -- | -- |

| Frequency (MHz) | Reading (dBuV) | | Factor (dB) Corr. | Result (dBuV/m) | | Limit (dBuV/m) | | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|-----------------|----------------|------|-------------------|-----------------|------|----------------|------|-------------|---------------------|----------------|
| | Peak | Ave. | | Peak | Ave. | Peak | Ave. | | | |
| -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

Polarization: Vertical

| Frequency (MHz) | Reading (dBuV) | Detector | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|-----------------|----------------|----------|-------------|-----------------|----------------|-------------|---------------------|----------------|
| -- | -- | -- | -- | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | -- | -- | -- | -- | -- |

| Frequency (MHz) | Reading (dBuV) | | Factor (dB) Corr. | Result (dBuV/m) | | Limit (dBuV/m) | | Margin (dB) | Table Degree (Deg.) | Ant. High (cm) |
|-----------------|----------------|------|-------------------|-----------------|------|----------------|------|-------------|---------------------|----------------|
| | Peak | Ave. | | Peak | Ave. | Peak | Ave. | | | |
| -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

Test equipment used: ETSTW-RE 153, ETSTW-RE 154, ETSTW-RE 160,
 ETSTW-RE 177, ETSTW-RE178, ETSTW-Cable 077, ETSTW-Cable 084,
 ETSTW-Cable 089

Explanation: After evaluated, the test result in this report adopt the worst case to measure,
 please see attached diagrams in appendix.



Registration number: W6M22311-23090-C-3
FCC ID: 2ANR7-VT67RFID

3.6 Automatic Discontinuation of transmission, FCC 15.407 (c)

The device shall automatically discontinue transmission in case of either absence of information to transmit or operational failure.

This function will be declared by manufacturer.

3.7 Reserved, FCC 15.407 (d)

3.8 Indoor Operation Restriction, FCC 15.407 (e)

Within the 5.15–5.25 GHz band, U- NII devices will be restricted to indoor operations to reduce any potential for harmful interference to co-channel MSS operations. This equipment has to be declared by manufacturer of the final product as content of the user manual.

Test equipment used: ETSTW-RE 055

3.9 Transmit Power Control (TPC)

Transmit power control (TPC). U-NII devices operating in the 5.25-5.35 GHz band and the 5.47-5.725 GHz band shall employ a TPC mechanism. The U-NII device is required to have the capability to operate at least 6 dB below the mean EIRP value of 30 dBm. A TPC mechanism is not required for systems with an e.i.r.p. of less than 500 mW.

Explanation: Max put power of the EUT is less than 500 mW (27dBm) so this test item is not required.

3.10 Dynamic Frequency Selection (DFS)

3.10.1 DFS Detection Threshold

3.10.2 UNII Detection Bandwidth

3.10.3 Initial Channel Availability Check Time-5500 MHz

3.10.4 Radar Burst at the Beginning of the Channel Availability Check Time-5500 MHz

3.10.5 Radar Burst at the End of the Channel Availability Check Time- 5500 MHz



Registration number: W6M22311-23090-C-3
FCC ID: 2ANR7-VT67RFID

3.10.6 In-Service Monitoring for Channel Move Time, Channel Closing Transmission Time and Non-Occupancy Period

Note: The Channel Close Transmission Time is compromised 200 milliseconds starting at the beginning of the Channel Move Time plus the additional intermittent control signal required to facilitate channel-move operation (an aggregate of 60milliseconds) during the remainder of the 10seconds period.

Test equipment used: ETSTW-RE 133, ETSTW-RE 134

Explanation: The test is not required.

3.10.7 Statistical Performance Check

Test equipment used: ETSTW-RE 133, ETSTW-RE 134

Explanation: The test is not required because the EUT only has Band 1 & Band 4.



Registration number: W6M22311-23090-C-3
FCC ID: 2ANR7-VT67RFID

3.11 Radiated Emissions from Receiver Part

FCC Rule: 15.109

Except for Class A digital devices, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values:

| Frequency of Emission (MHz) | Field Strength (microvolts/meter) | Field Strength (dBmicrovolts/meter) |
|-----------------------------|-----------------------------------|-------------------------------------|
| 30 – 88 | 100 | 40.0 |
| 88 – 216 | 150 | 43.5 |
| 216 – 960 | 200 | 46.0 |
| Above 960 | 500 | 54.0 |

Test equipment used: ETSTW-RE 153, ETSTW-RE 154, ETSTW-RE 160,
ETSTW-RE 177, ETSTW-RE178, ETSTW-Cable 077, ETSTW-Cable 084,
ETSTW-Cable 089

Explanation: The test results are listed in the separated test report no.: W6M22311-23090-P-15B.

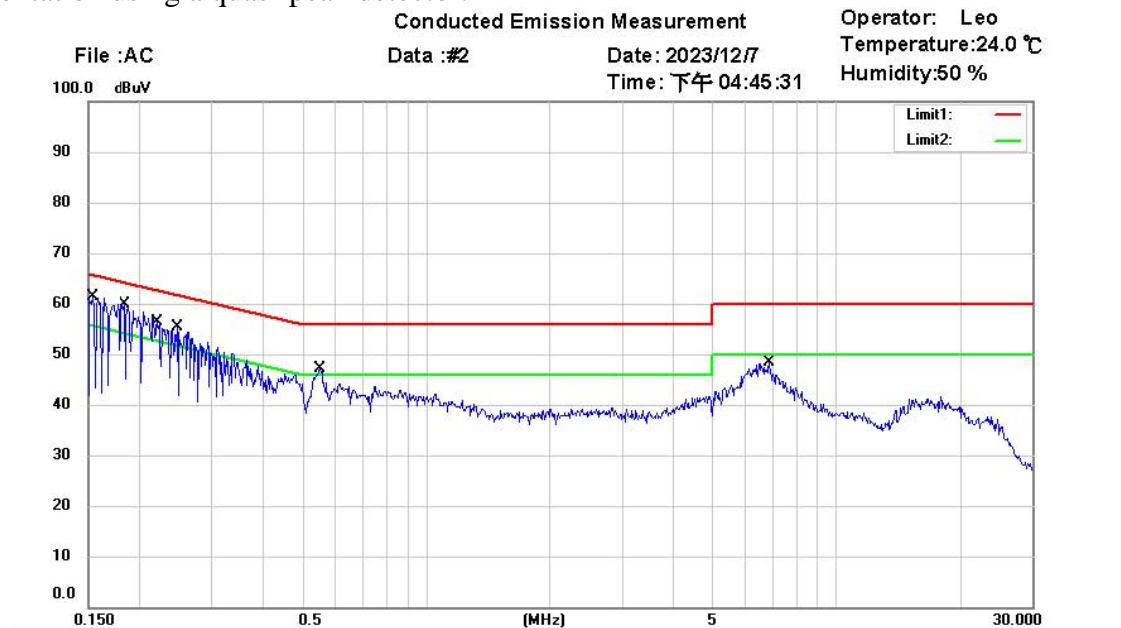


Registration number: W6M22311-23090-C-3
 FCC ID: 2ANR7-VT67RFID

3.12 Power Line Conducted Emission

For an intentional radiator which is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the table bellows with this provision shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminals.

This measurement was transact first with instrumentation using an average and peak detector and a 10 kHz bandwidth. If the peak detector achieves a calculated level, the measurement is repeated by an instrumentation using a quasi-peak detector.



Site : Chamber_03
 Condition : FCC Part 15 Class B Conduction (QP) Phase: N
 EUT : W6M22311-23090 Power : 120V.a.c.
 M/N:
 Test Mode :
 Note :

| Mk. | Frequency (MHz) | Reading (dBuV) | Detector | Corrected factor(dB) | Result (dBuV) | Limit (dBuV) | Margin (dB) | Comment |
|-----|-----------------|----------------|----------|----------------------|---------------|--------------|-------------|---------|
| | 0.1528 | 39.51 | QP | 9.72 | 49.23 | 65.85 | -16.62 | |
| | 0.1528 | 22.55 | AVG | 9.72 | 32.27 | 55.85 | -23.58 | |
| | 0.1838 | 36.68 | QP | 9.71 | 46.39 | 64.31 | -17.92 | |
| | 0.1838 | 22.88 | AVG | 9.71 | 32.59 | 54.31 | -21.72 | |
| | 0.2216 | 33.35 | QP | 9.71 | 43.06 | 62.76 | -19.70 | |
| | 0.2216 | 13.69 | AVG | 9.71 | 23.40 | 52.76 | -29.36 | |
| | 0.2477 | 32.43 | QP | 9.71 | 42.14 | 61.83 | -19.69 | |
| | 0.2477 | 17.27 | AVG | 9.71 | 26.98 | 51.83 | -24.85 | |
| | 0.5517 | 32.35 | QP | 9.70 | 42.05 | 56.00 | -13.95 | |
| * | 0.5517 | 25.39 | AVG | 9.70 | 35.09 | 46.00 | -10.91 | |
| | 6.8625 | 30.84 | QP | 9.80 | 40.64 | 60.00 | -19.36 | |
| | 6.8625 | 20.97 | AVG | 9.80 | 30.77 | 50.00 | -19.23 | |

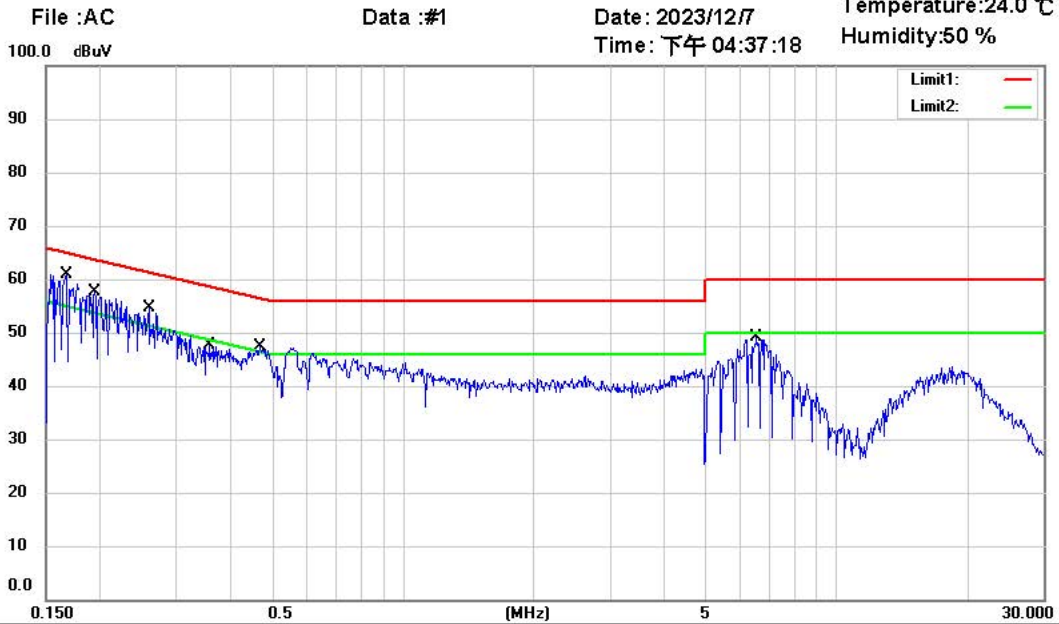


Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M22311-23090-C-3
 FCC ID: 2ANR7-VT67RFID

Conducted Emission Measurement

Operator: Leo
 Temperature: 24.0 °C
 Humidity: 50 %



Site : Chamber_03

Condition : FCC Part 15 Class B Conduction (QP)

Phase: L1

EUT : W6M22311-23090

Power : 120V.a.c.

M/N:

Test Mode :

Note :

| Mk. | Frequency (MHz) | Reading (dBuV) | Detector | Corrected factor(dB) | Result (dBuV) | Limit (dBuV) | Margin (dB) | Comment |
|-----|-----------------|----------------|----------|----------------------|---------------|--------------|-------------|---------|
| | 0.1661 | 37.69 | QP | 9.73 | 47.42 | 65.15 | -17.73 | |
| | 0.1661 | 15.47 | AVG | 9.73 | 25.20 | 55.15 | -29.95 | |
| | 0.1948 | 35.52 | QP | 9.72 | 45.24 | 63.83 | -18.59 | |
| | 0.1948 | 14.35 | AVG | 9.72 | 24.07 | 53.83 | -29.76 | |
| | 0.2596 | 32.49 | QP | 9.71 | 42.20 | 61.44 | -19.24 | |
| | 0.2596 | 13.99 | AVG | 9.71 | 23.70 | 51.44 | -27.74 | |
| | 0.3582 | 29.78 | QP | 9.70 | 39.48 | 58.77 | -19.29 | |
| | 0.3582 | 12.34 | AVG | 9.70 | 22.04 | 48.77 | -26.73 | |
| * | 0.4685 | 31.48 | QP | 9.69 | 41.17 | 56.54 | -15.37 | |
| | 0.4685 | 13.03 | AVG | 9.69 | 22.72 | 46.54 | -23.82 | |
| | 6.5500 | 31.37 | QP | 9.78 | 41.15 | 60.00 | -18.85 | |
| | 6.5500 | 16.31 | AVG | 9.78 | 26.09 | 50.00 | -23.91 | |

- Note:**
- The formula of measured value as: **Test Result = Reading + Correction Factor**
 - The Correction Factor = Cable Loss + LISN Insertion Loss + Pulse Limit Loss
 - Detector function in the form : PK = Peak, QP = Quasi Peak, AV = Average
 - All not in the table noted test results are more than 20 dB below the relevant limits.
 - Up Line: QP Limit Line, Down Line: Ave Limit Line.



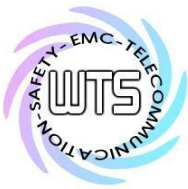
Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M22311-23090-C-3
FCC ID: 2ANR7-VT67RFID

Limits:

| Frequency of Emission (MHz) | Conducted Limit (dBuV) | |
|-----------------------------|------------------------|----------|
| | Quasi Peak | Average |
| 0.15-0.5 | 66 to 56 | 56 to 46 |
| 0.5-5 | 56 | 46 |
| 5-30 | 60 | 50 |

Test equipment used: ETSTW-CE 001, ETSTW-CE 016, ETSTW- RE 045, ETSTW- Cable 047.



Registration number: W6M22311-23090-C-3
FCC ID: 2ANR7-VT67RFID

Appendix

Measurement diagrams

Spurious Emissions radiated



Radiated Emission Measurement

Operator: Kai

File :1_WiFi 5G_ant1_TX 802 Data :#1

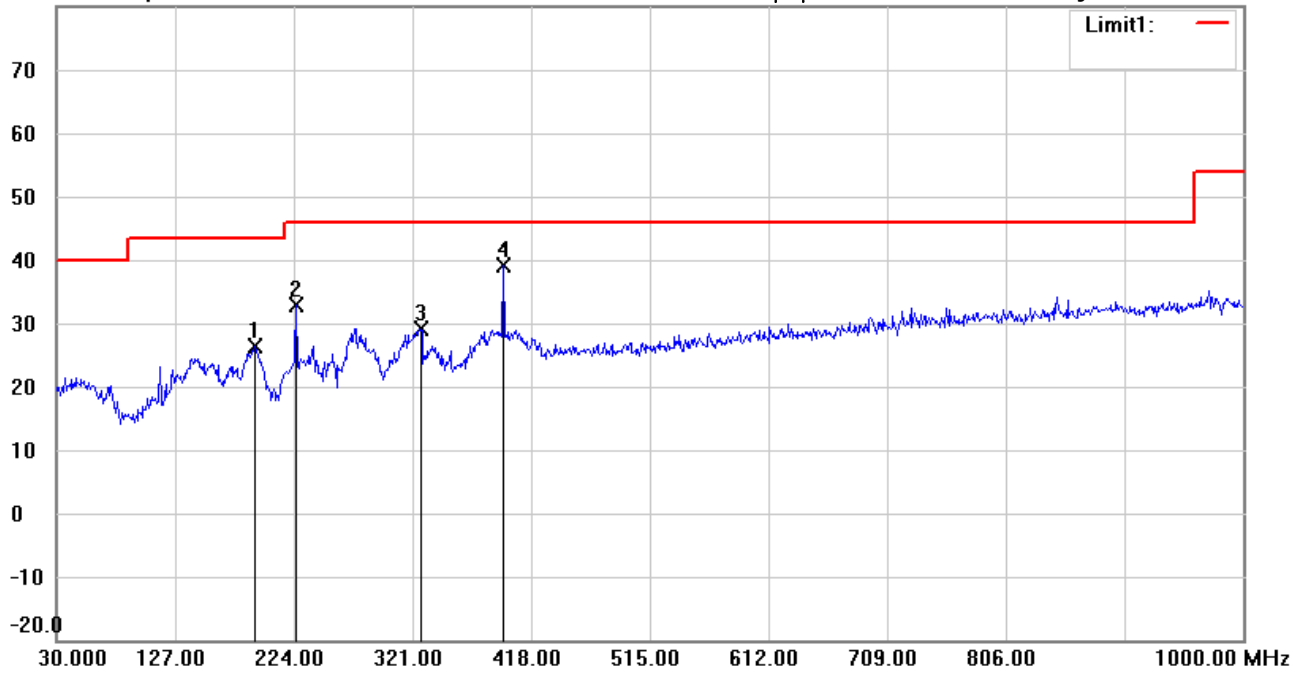
Date: 2023/11/29

Temperature:23.4 °C

80.0 dBuV/m

Time: 下午 05:32:30

Humidity:59.0 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_30-1000MHz

Polarization: *Horizontal*

EUT : W6M22311-23090

Power : 120 Va.c.

M/N:

Distance: 3m

Test Mode : TX 802.11a CH36

Note :

| Mk. | Frequency (MHz) | Reading (dBuV) | Detector | Corr. factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Ant.Pos (cm) | Tab.Pos (deg.) | Margin (dB) | Comment |
|-----|-----------------|----------------|----------|---------------------|-----------------|----------------|--------------|----------------|-------------|---------|
| | 191.9900 | 40.50 | peak | -14.12 | 26.38 | 43.50 | 100 | 120 | -17.12 | |
| | 225.9400 | 46.94 | peak | -14.13 | 32.81 | 46.00 | 100 | 296 | -13.19 | |
| | 327.3050 | 39.76 | peak | -10.70 | 29.06 | 46.00 | 100 | 50 | -16.94 | |
| * | 395.2050 | 48.01 | peak | -8.85 | 39.16 | 46.00 | 100 | 190 | -6.84 | |



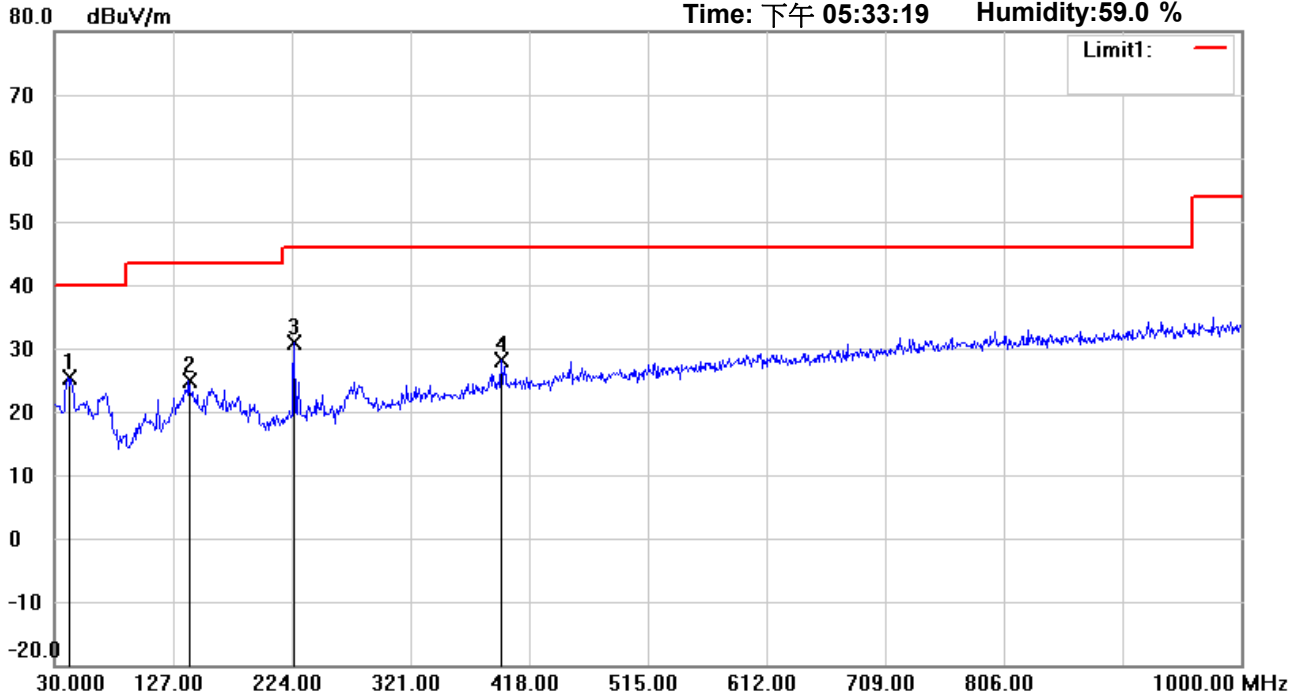
Radiated Emission Measurement

Operator: Kai

File :1_WiFi 5G_ant1_TX 802 Data :#2

Date: 2023/11/29
 Time: 下午 05:33:19

Temperature:23.4 °C
 Humidity:59.0 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_30-1000MHz

EUT : W6M22311-23090

M/N:

Test Mode : TX 802.11a CH36

Note :

Polarization: *Vertical*

Power : 120 Va.c.

Distance: 3m

| Mk. | Frequency (MHz) | Reading (dBuV) | Detector | Corr. factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Ant.Pos (cm) | Tab.Pos (deg.) | Margin (dB) | Comment |
|-----|-----------------|----------------|----------|---------------------|-----------------|----------------|--------------|----------------|-------------|---------|
| * | 41.1550 | 38.09 | peak | -12.64 | 25.45 | 40.00 | 100 | 359 | -14.55 | |
| | 140.0950 | 37.48 | peak | -12.50 | 24.98 | 43.50 | 100 | 355 | -18.52 | |
| | 225.9400 | 45.12 | peak | -14.13 | 30.99 | 46.00 | 100 | 100 | -15.01 | |
| | 395.6900 | 36.94 | peak | -8.84 | 28.10 | 46.00 | 100 | 218 | -17.90 | |



Address:6F.,No.58,Ln 188,Ruey Kuang Rd,Neihu,Taipei
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 Fax:+886-2-6606-8875

Radiated Emission Measurement

Operator: Kai

File :3

Data :#1

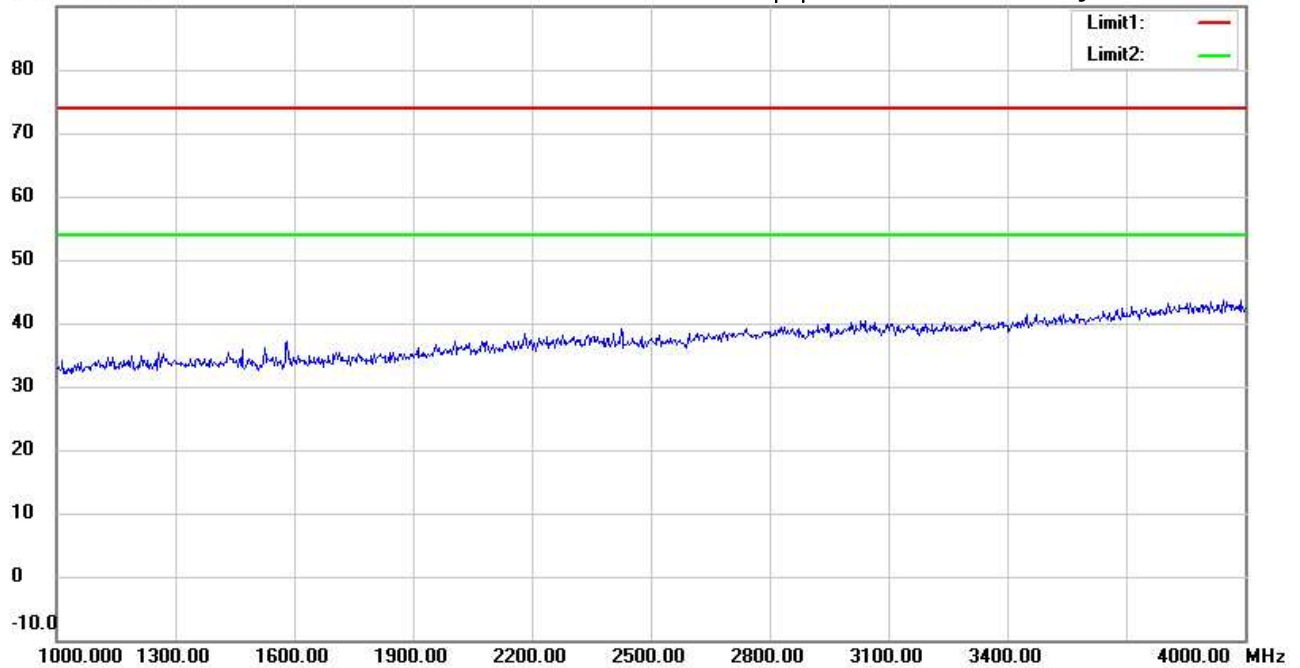
Date: 2023/11/28

Temperature:23.8 °C

90.0 dBuV/m

Time: 下午 02:17:25

Humidity:61.8 %



Site : Chamber

Condition : FCC_part 15E RE_Above 1GHz_PK

Polarization: *Horizontal*

EUT : W6M22311-23090

Power : 120 Va.c.

M/N:

Distance: 3m

Test Mode : TX 802.11a CH36

Note :

| Mk. | Frequency (MHz) | Reading (dBuV) | Detector | Corr. factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Ant.Pos (cm) | Tab.Pos (deg.) | Margin (dB) | Comment |
|-----|-----------------|----------------|----------|---------------------|-----------------|----------------|--------------|----------------|-------------|---------|
|-----|-----------------|----------------|----------|---------------------|-----------------|----------------|--------------|----------------|-------------|---------|

*:Maximum data x:Over limit !:over margin



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Radiated Emission Measurement

Operator: Kai

File :3

Data :#7

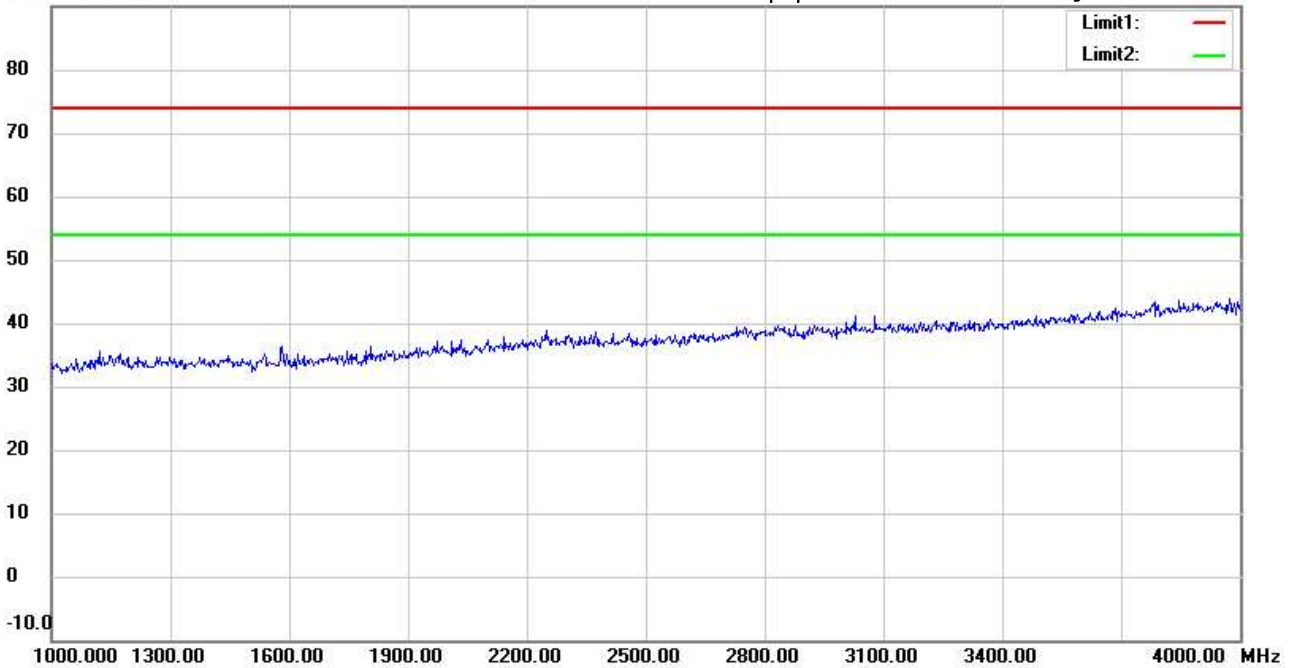
Date: 2023/11/28

Temperature:23.8 °C

90.0 dBuV/m

Time: 下午 02:21:49

Humidity:61.8 %



Site : Chamber

Condition : FCC_part 15E RE_Above 1GHz_PK

Polarization: *Vertical*

EUT : W6M22311-23090

Power : 120 Va.c.

M/N:

Distance: 3m

Test Mode : TX 802.11a CH36

Note :

| Mk. | Frequency (MHz) | Reading (dBuV) | Detector | Corr. factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Ant.Pos (cm) | Tab.Pos (deg.) | Margin (dB) | Comment |
|-----|-----------------|----------------|----------|---------------------|-----------------|----------------|--------------|----------------|-------------|---------|
|-----|-----------------|----------------|----------|---------------------|-----------------|----------------|--------------|----------------|-------------|---------|

*:Maximum data x:Over limit !:over margin



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 Fax:+886-2-6606-8875

Radiated Emission Measurement

Operator: Kai

File :3

Data :#2

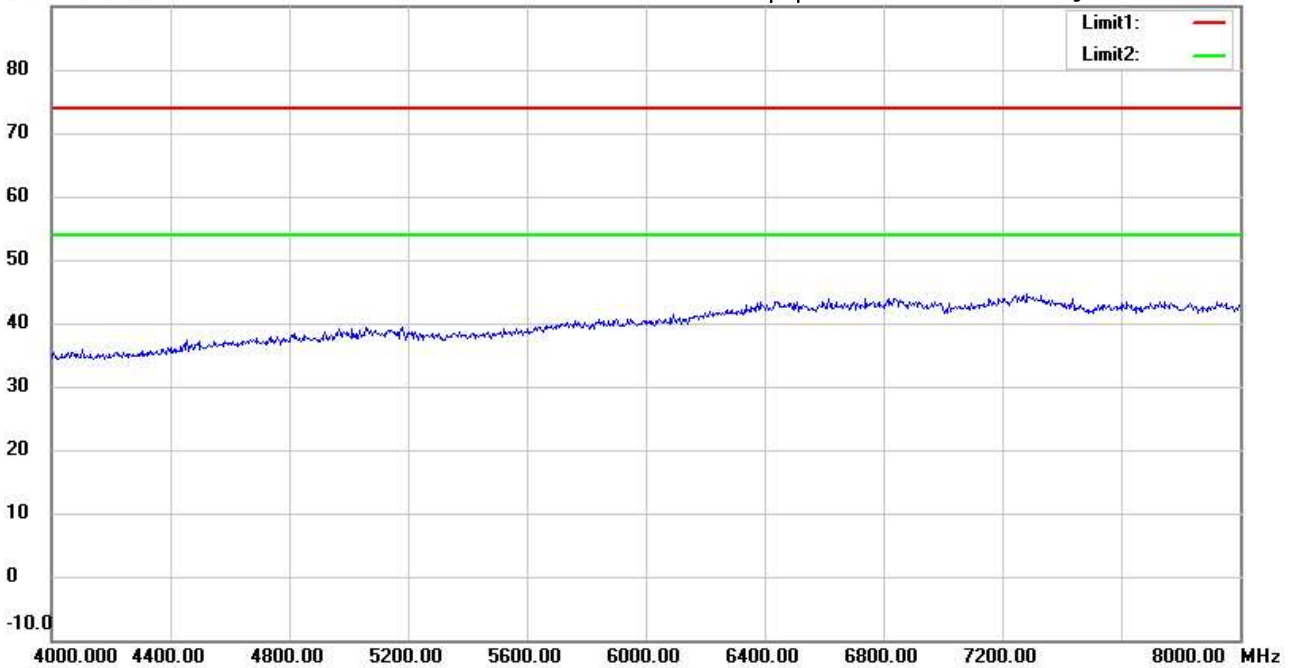
Date: 2023/11/28

Temperature:23.8 °C

90.0 dBuV/m

Time: 下午 02:18:22

Humidity:61.8 %



Site : Chamber

Condition : FCC_part 15E RE_Above 1GHz_PK

Polarization: *Horizontal*

EUT : W6M22311-23090

Power : 120 Va.c.

M/N:

Distance: 3m

Test Mode : TX 802.11a CH36

Note :

| Mk. | Frequency (MHz) | Reading (dBuV) | Detector | Corr. factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Ant.Pos (cm) | Tab.Pos (deg.) | Margin (dB) | Comment |
|-----|-----------------|----------------|----------|---------------------|-----------------|----------------|--------------|----------------|-------------|---------|
|-----|-----------------|----------------|----------|---------------------|-----------------|----------------|--------------|----------------|-------------|---------|

*:Maximum data x:Over limit !:over margin



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Radiated Emission Measurement

Operator: Kai

File :3

Data :#8

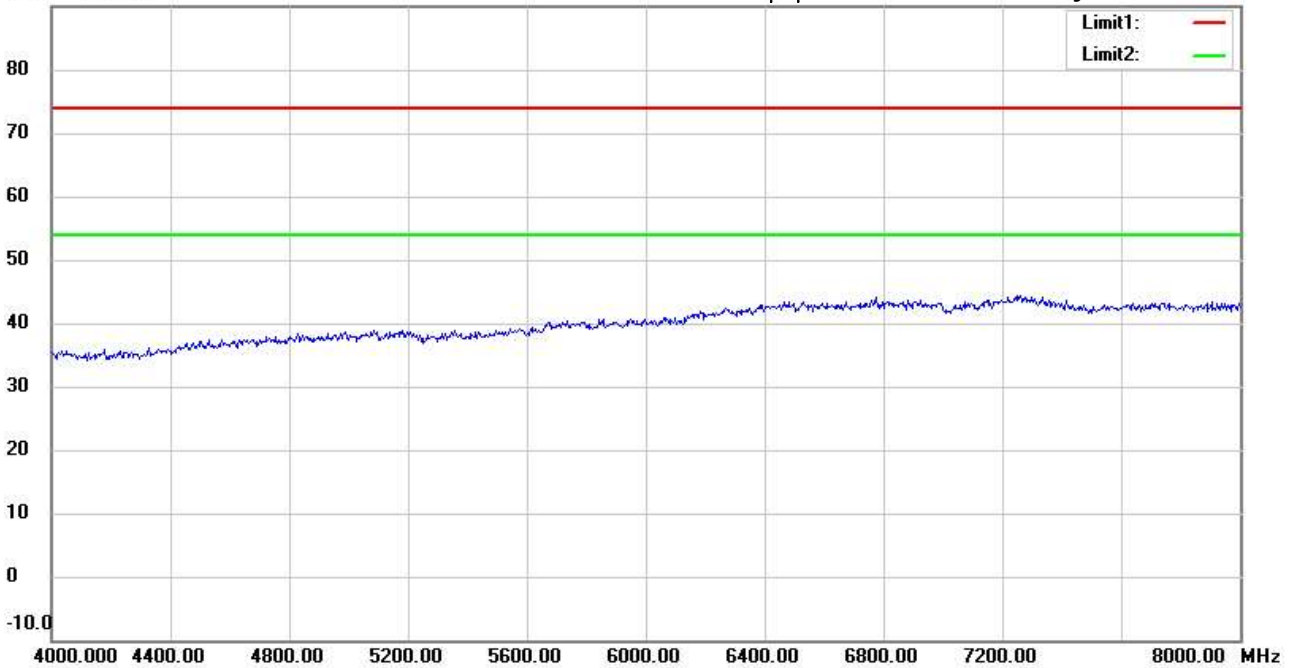
Date: 2023/11/28

Temperature:23.8 °C

90.0 dBuV/m

Time: 下午 02:22:45

Humidity:61.8 %



Site : Chamber

Condition : FCC_part 15E RE_Above 1GHz_PK

Polarization: *Vertical*

EUT : W6M22311-23090

Power : 120 Va.c.

M/N:

Distance: 3m

Test Mode : TX 802.11a CH36

Note :

| Mk. | Frequency (MHz) | Reading (dBuV) | Detector | Corr. factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Ant.Pos (cm) | Tab.Pos (deg.) | Margin (dB) | Comment |
|-----|-----------------|----------------|----------|---------------------|-----------------|----------------|--------------|----------------|-------------|---------|
|-----|-----------------|----------------|----------|---------------------|-----------------|----------------|--------------|----------------|-------------|---------|

*:Maximum data x:Over limit !:over margin



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Radiated Emission Measurement

Operator: Kai

File :3

Data :#3

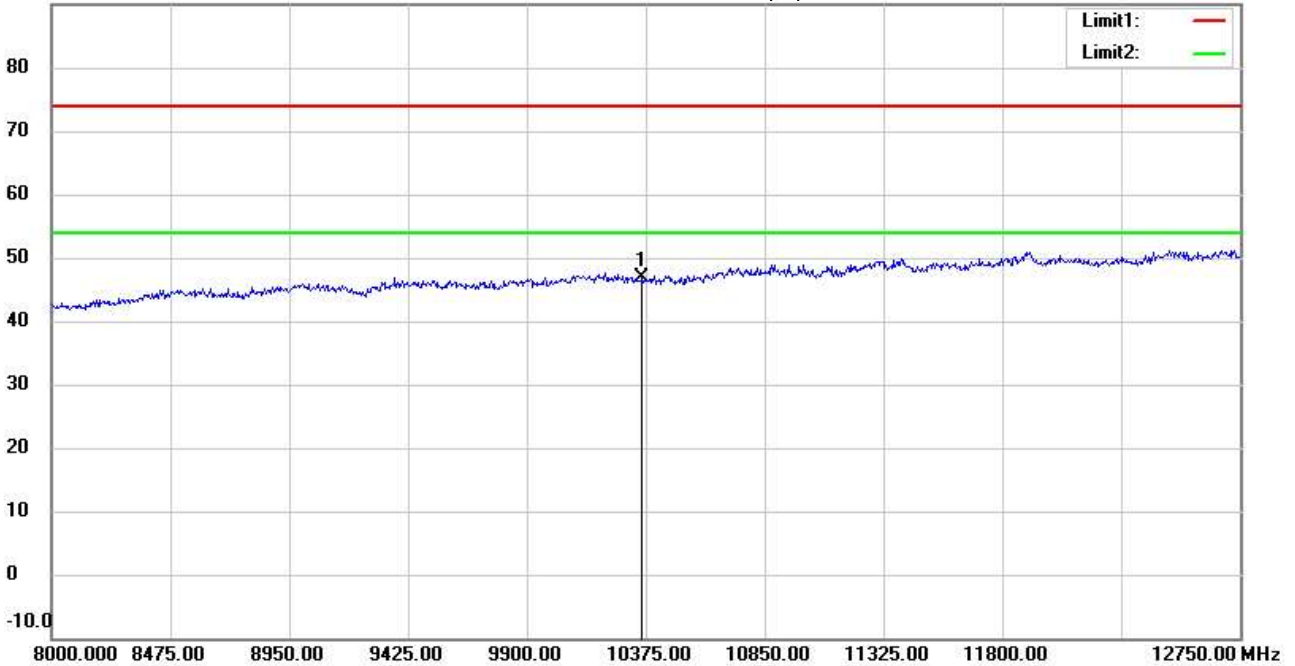
Date: 2023/11/28

Temperature:23.8 °C

90.0 dBuV/m

Time: 下午 02:19:19

Humidity:61.8 %



Site : Chamber

Condition : FCC_part 15E RE_Above 1GHz_PK

Polarization: *Horizontal*

EUT : W6M22311-23090

Power : 120 Va.c.

M/N:

Distance: 3m

Test Mode : TX 802.11a CH36

Note :

| Mk. | Frequency (MHz) | Reading (dBuV) | Detector | Corr. factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Ant.Pos (cm) | Tab.Pos (deg.) | Margin (dB) | Comment |
|-----|-----------------|----------------|----------|---------------------|-----------------|----------------|--------------|----------------|-------------|---------|
| * | 10360.000 | 32.66 | peak | 14.15 | 46.81 | 74.00 | 150 | 270 | -27.19 | |

*:Maximum data x:Over limit !:over margin



Address:6F.,No.58,Ln 188,Ruey Kuang Rd,Neihu,Taipei
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Radiated Emission Measurement

Operator: Kai

File :3

Data :#9

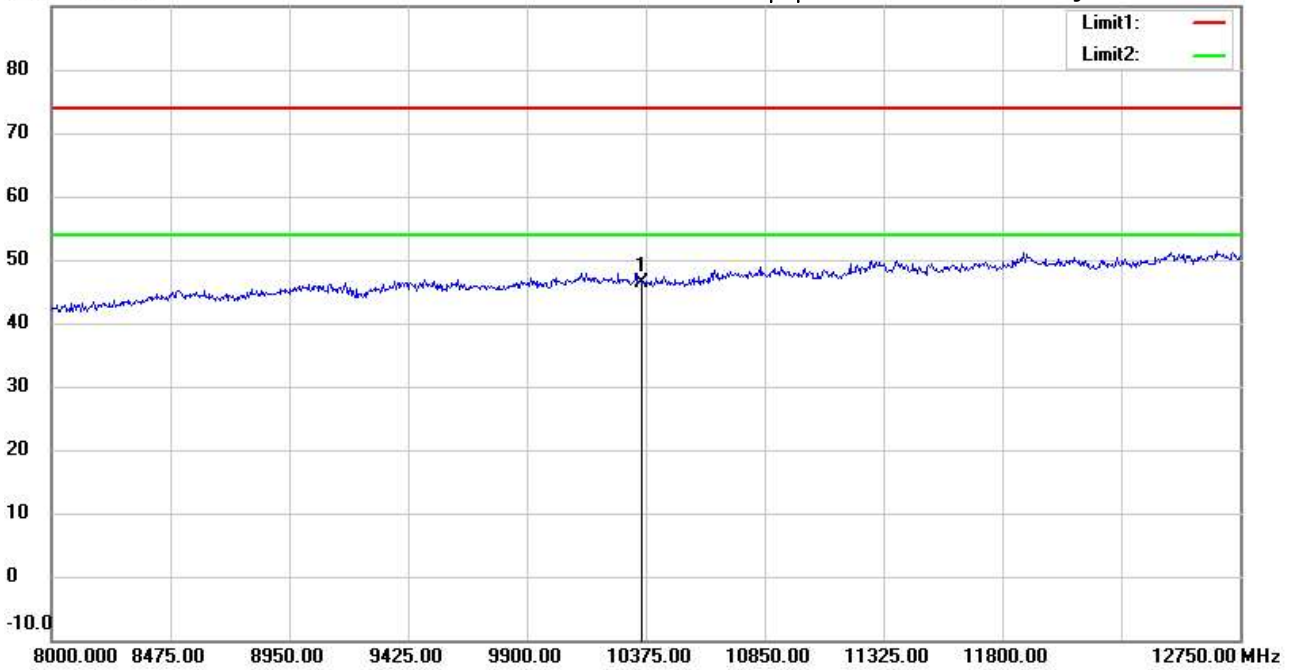
Date: 2023/11/28

Temperature:23.8 °C

90.0 dBuV/m

Time: 下午 02:23:43

Humidity:61.8 %



Site : Chamber

Condition : FCC_part 15E RE_Above 1GHz_PK

Polarization: *Vertical*

EUT : W6M22311-23090

Power : 120 Va.c.

M/N:

Distance: 3m

Test Mode : TX 802.11a CH36

Note :

| Mk. | Frequency (MHz) | Reading (dBuV) | Detector | Corr. factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Ant.Pos (cm) | Tab.Pos (deg.) | Margin (dB) | Comment |
|-----|-----------------|----------------|----------|---------------------|-----------------|----------------|--------------|----------------|-------------|---------|
| * | 10360.000 | 32.33 | peak | 14.15 | 46.48 | 74.00 | 150 | 12 | -27.52 | |

*:Maximum data x:Over limit !:over margin



Address:6F.,No.58,Ln 188,Ruey Kuang Rd,Neihu,Taipei
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Radiated Emission Measurement

Operator: Kai

File :3

Data :#4

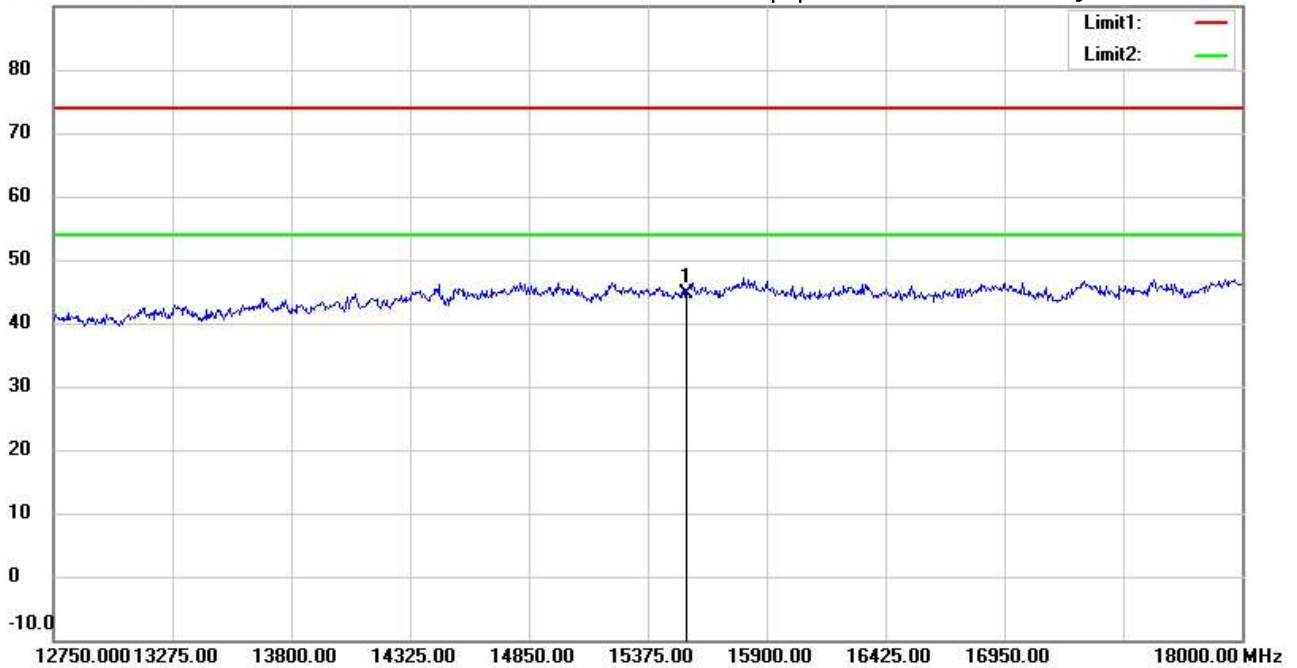
Date: 2023/11/28

Temperature:23.8 °C

90.0 dBuV/m

Time: 下午 02:20:20

Humidity:61.8 %



Site : Chamber

Condition : FCC_part 15E RE_Above 1GHz_PK

Polarization: *Horizontal*

EUT : W6M22311-23090

Power : 120 Va.c.

M/N:

Distance: 3m

Test Mode : TX 802.11a CH36

Note :

| Mk. | Frequency (MHz) | Reading (dBuV) | Detector | Corr. factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Ant.Pos (cm) | Tab.Pos (deg.) | Margin (dB) | Comment |
|-----|-----------------|----------------|----------|---------------------|-----------------|----------------|--------------|----------------|-------------|---------|
| * | 15540.000 | 21.31 | peak | 23.41 | 44.72 | 74.00 | 150 | 330 | -29.28 | |

*:Maximum data x:Over limit !:over margin



Address:6F.,No.58,Ln 188,Ruey Kuang Rd,Neihu,Taipei
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Radiated Emission Measurement

Operator: Kai

File :3

Data :#10

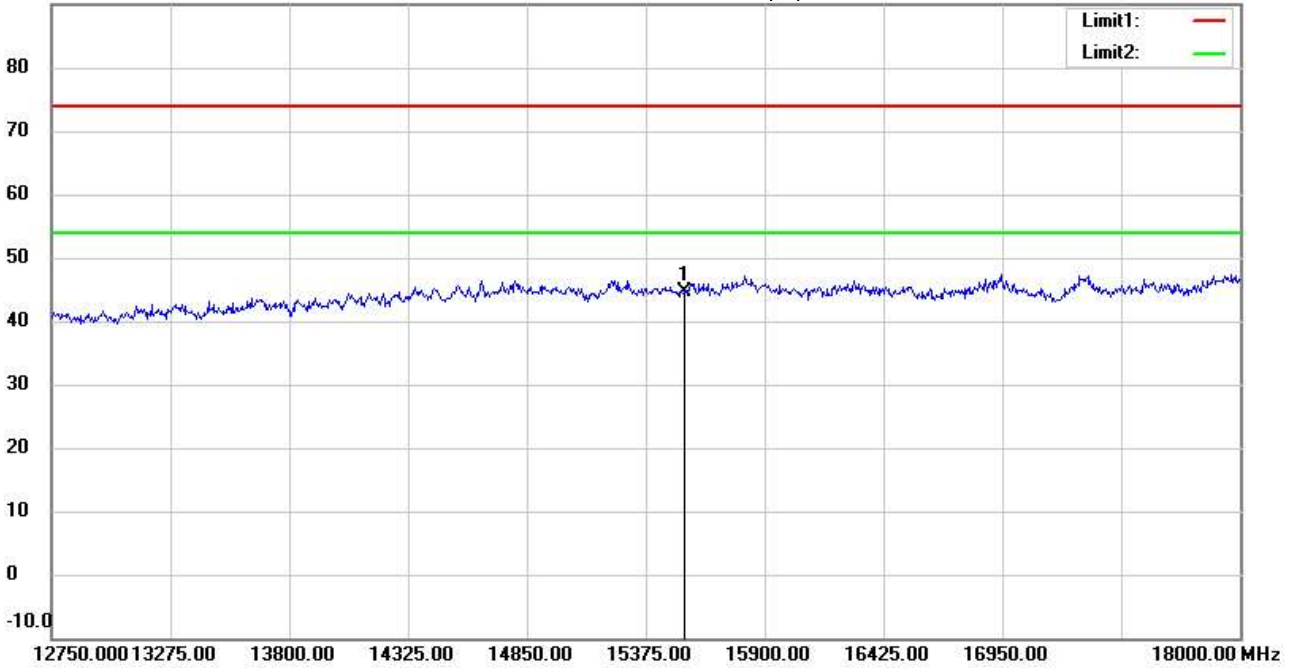
Date: 2023/11/28

Temperature:23.8 °C

90.0 dBuV/m

Time: 下午 02:24:44

Humidity:61.8 %



Site : Chamber

Condition : FCC_part 15E RE_Above 1GHz_PK

Polarization: **Vertical**

EUT : W6M22311-23090

Power : 120 Va.c.

M/N:

Distance: 3m

Test Mode : TX 802.11a CH36

Note :

| Mk. | Frequency (MHz) | Reading (dBuV) | Detector | Corr. factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Ant.Pos (cm) | Tab.Pos (deg.) | Margin (dB) | Comment |
|-----|-----------------|----------------|----------|---------------------|-----------------|----------------|--------------|----------------|-------------|---------|
| * | 15540.000 | 21.20 | peak | 23.41 | 44.61 | 74.00 | 150 | 174 | -29.39 | |

*:Maximum data x:Over limit !:over margin



Address:6F.,No.58,Ln 188,Ruey Kuang Rd,Neihu,Taipei
 Tel:+886-2-6606-8877
 Fax:+886-2-6606-8875

Radiated Emission Measurement

Operator: Kai

File :3

Data :#5

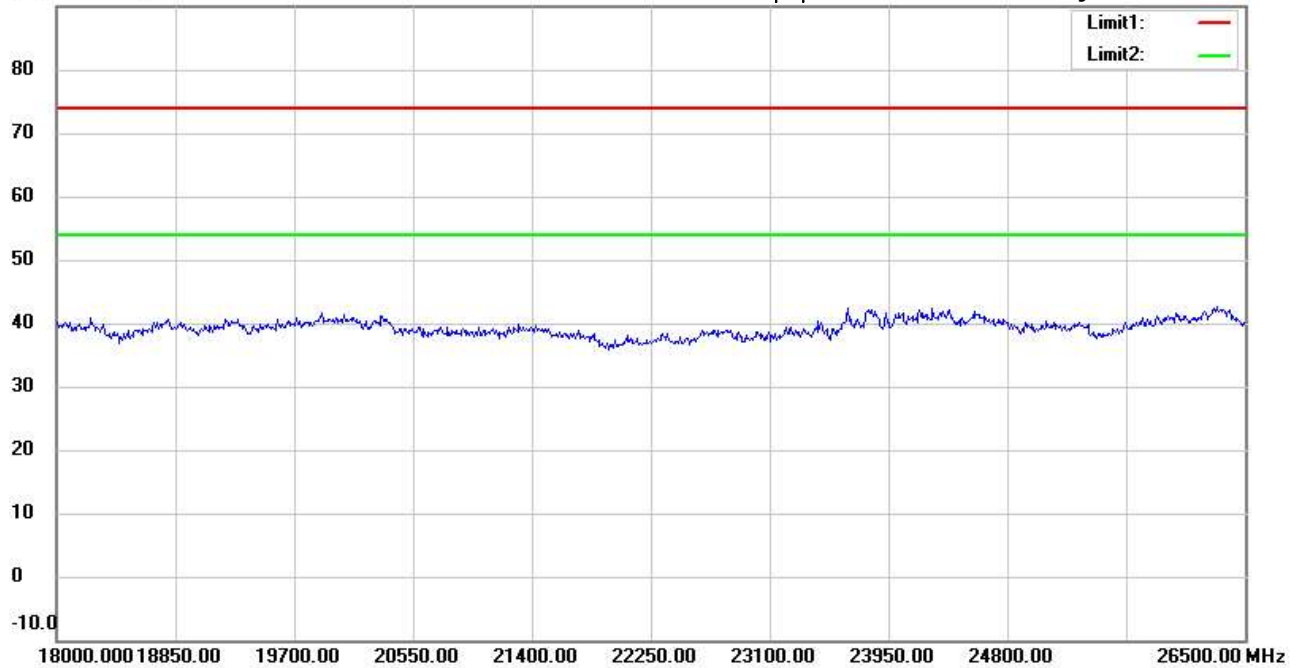
Date: 2023/11/28

Temperature:23.8 °C

90.0 dBuV/m

Time: 下午 02:20:31

Humidity:61.8 %



Site : Chamber

Condition : FCC_part 15E RE_Above 1GHz_PK

Polarization: *Horizontal*

EUT : W6M22311-23090

Power : 120 Va.c.

M/N:

Distance: 3m

Test Mode : TX 802.11a CH36

Note :

| Mk. | Frequency (MHz) | Reading (dBuV) | Detector | Corr. factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Ant.Pos (cm) | Tab.Pos (deg.) | Margin (dB) | Comment |
|-----|-----------------|----------------|----------|---------------------|-----------------|----------------|--------------|----------------|-------------|---------|
|-----|-----------------|----------------|----------|---------------------|-----------------|----------------|--------------|----------------|-------------|---------|

*:Maximum data x:Over limit !:over margin



Address:6F.,No.58,Ln 188,Ruey Kuang Rd,Neihu,Taipei
 Tel:+886-2-6606-8877
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Radiated Emission Measurement

Operator: Kai

File :3

Data :#11

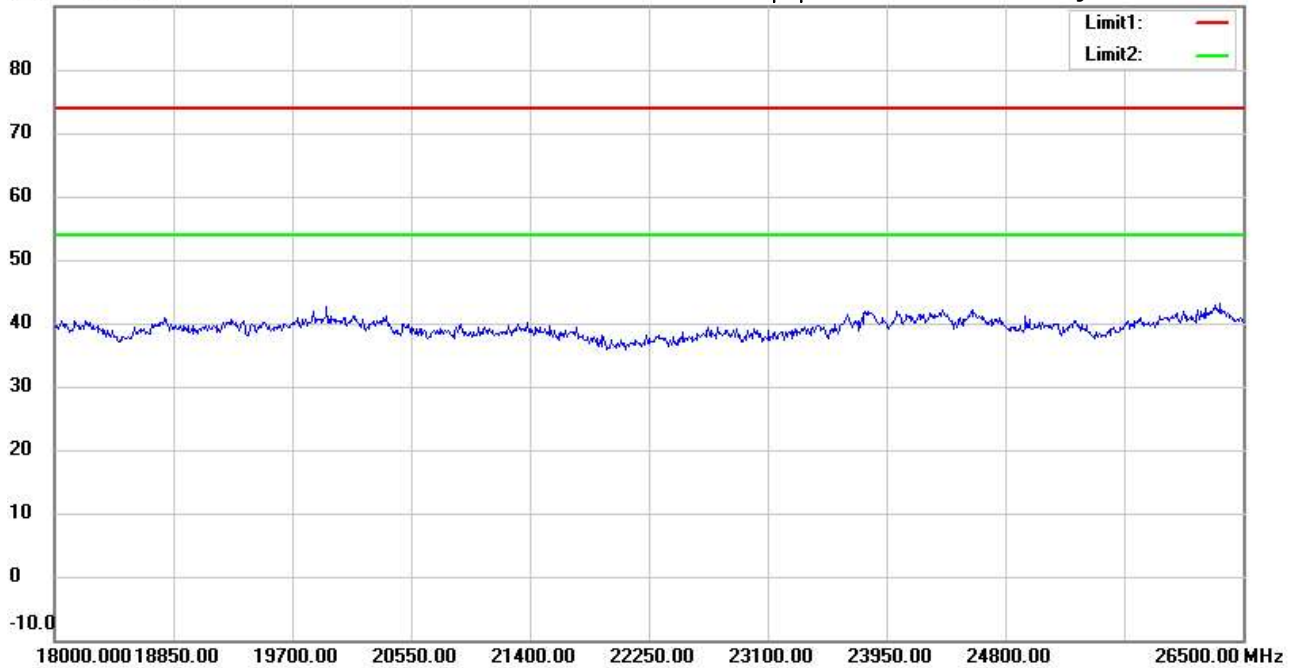
Date: 2023/11/28

Temperature:23.8 °C

90.0 dBuV/m

Time: 下午 02:24:54

Humidity:61.8 %



Site : Chamber

Condition : FCC_part 15E RE_Above 1GHz_PK

Polarization: *Vertical*

EUT : W6M22311-23090

Power : 120 Va.c.

M/N:

Distance: 3m

Test Mode : TX 802.11a CH36

Note :

| Mk. | Frequency (MHz) | Reading (dBuV) | Detector | Corr. factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Ant.Pos (cm) | Tab.Pos (deg.) | Margin (dB) | Comment |
|-----|-----------------|----------------|----------|---------------------|-----------------|----------------|--------------|----------------|-------------|---------|
|-----|-----------------|----------------|----------|---------------------|-----------------|----------------|--------------|----------------|-------------|---------|

*:Maximum data x:Over limit !:over margin



Address:6F.,No.58,Ln 188,Ruey Kuang Rd,Neihu,Taipei
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Radiated Emission Measurement

Operator: Kai

File :3

Data :#6

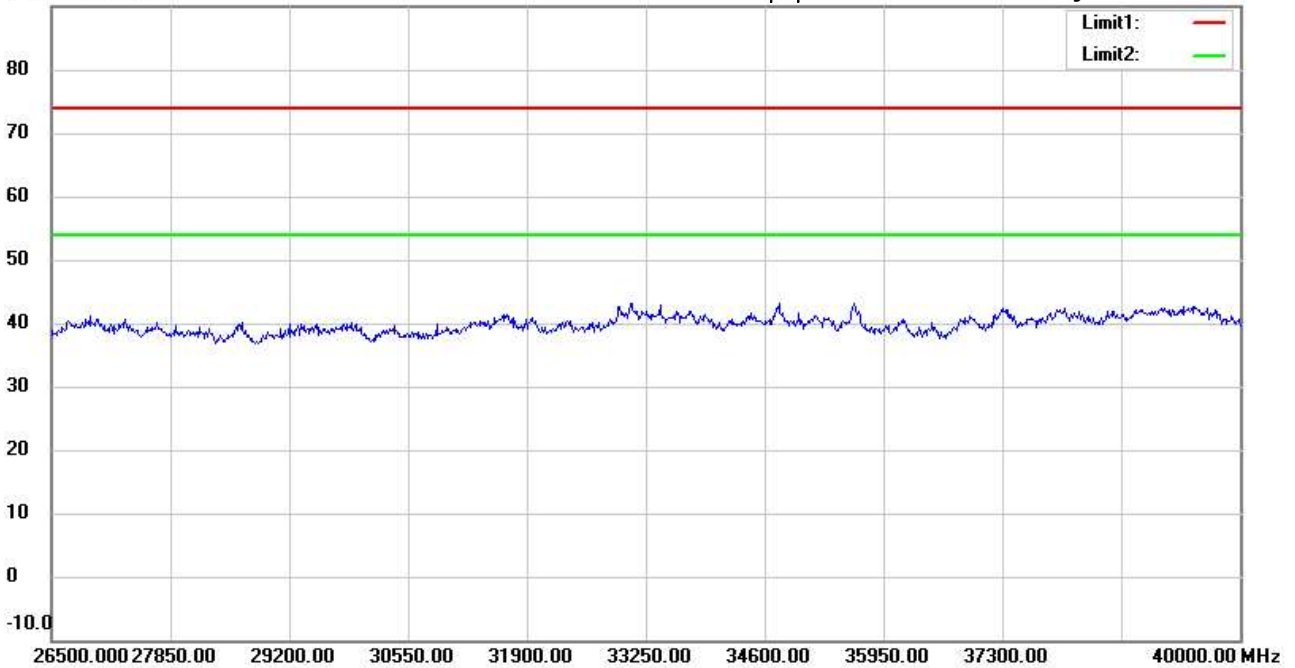
Date: 2023/11/28

Temperature:23.8 °C

90.0 dBuV/m

Time: 下午 02:20:41

Humidity:61.8 %



Site : Chamber

Condition : FCC_part 15E RE_Above 1GHz_PK

Polarization: *Horizontal*

EUT : W6M22311-23090

Power : 120 Va.c.

M/N:

Distance: 3m

Test Mode : TX 802.11a CH36

Note :

| Mk. | Frequency (MHz) | Reading (dBuV) | Detector | Corr. factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Ant.Pos (cm) | Tab.Pos (deg.) | Margin (dB) | Comment |
|-----|-----------------|----------------|----------|---------------------|-----------------|----------------|--------------|----------------|-------------|---------|
|-----|-----------------|----------------|----------|---------------------|-----------------|----------------|--------------|----------------|-------------|---------|

*:Maximum data x:Over limit !:over margin



Address:6F.,No.58,Ln 188,Ruey Kuang Rd,Neihu,Taipei
 Tel:+886-2-6606-8877
 Fax:+886-2-6606-8875

Radiated Emission Measurement

Operator: Kai

File :3

Data :#12

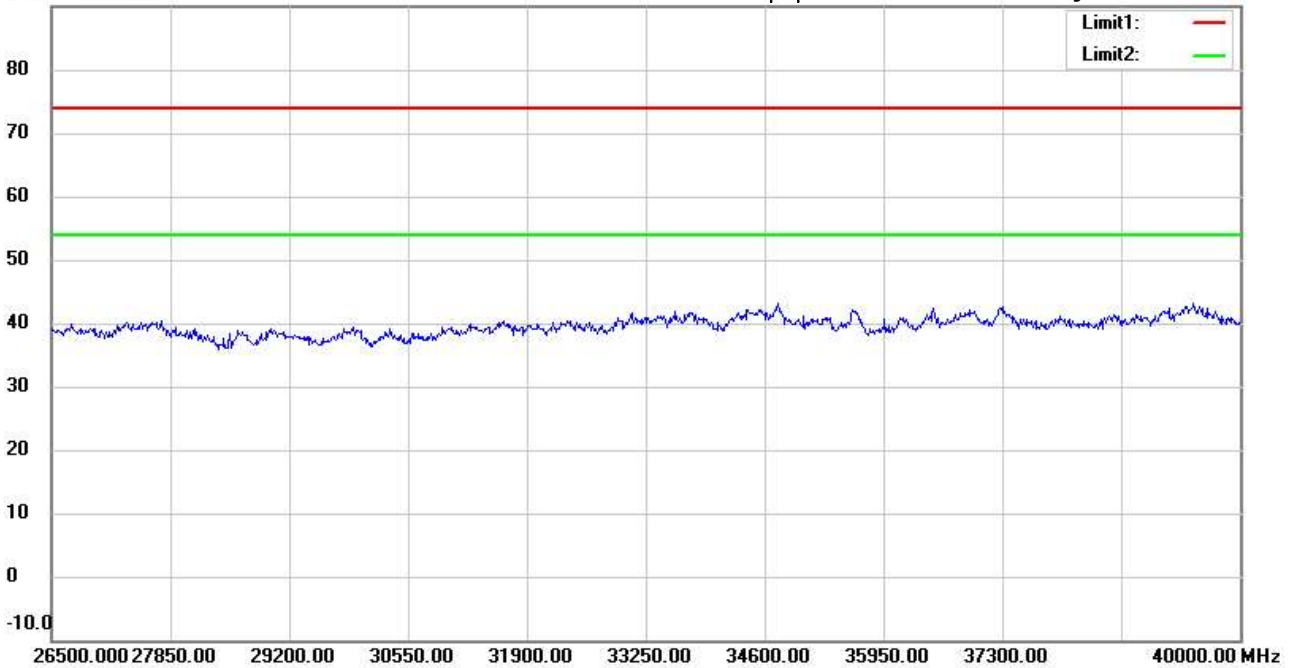
Date: 2023/11/28

Temperature:23.8 °C

90.0 dBuV/m

Time: 下午 02:25:05

Humidity:61.8 %



Site : Chamber

Condition : FCC_part 15E RE_Above 1GHz_PK

Polarization: **Vertical**

EUT : W6M22311-23090

Power : 120 Va.c.

M/N:

Distance: 3m

Test Mode : TX 802.11a CH36

Note :

| Mk. | Frequency (MHz) | Reading (dBuV) | Detector | Corr. factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Ant.Pos (cm) | Tab.Pos (deg.) | Margin (dB) | Comment |
|-----|-----------------|----------------|----------|---------------------|-----------------|----------------|--------------|----------------|-------------|---------|
|-----|-----------------|----------------|----------|---------------------|-----------------|----------------|--------------|----------------|-------------|---------|

*:Maximum data x:Over limit !:over margin



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 Tel:+886-2-6606-8877
 Fax:+886-2-6606-8875

Radiated Emission Measurement

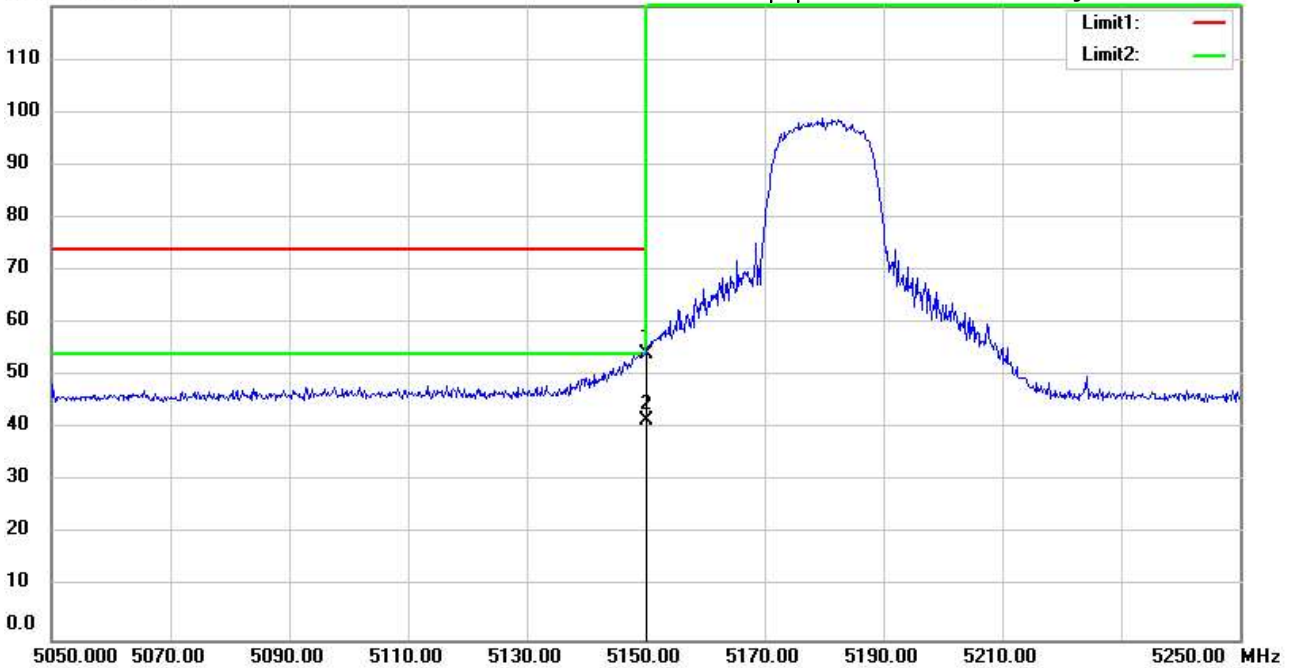
Operator: Kai

File :Bandedge
 120.0 dBuV/m

Data :#1

Date: 2023/11/28
 Time: 下午 02:31:12

Temperature:23.8 °C
 Humidity:61.8 %



Site : Chamber

Condition : FCC 15.407 PK (Bandedge)(B1_5150_5250)

Polarization: *Horizontal*

EUT : W6M22311-23090

Power : 120 Va.c.

M/N:

Distance: 3m

Test Mode : TX 802.11a CH36

Note :

| Mk. | Frequency (MHz) | Reading (dBuV) | Detector | Corr. factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Ant.Pos (cm) | Tab.Pos (deg.) | Margin (dB) | Comment |
|-----|-----------------|----------------|----------|---------------------|-----------------|----------------|--------------|----------------|-------------|---------|
| | 5150.000 | 48.71 | peak | 5.31 | 54.02 | 74.00 | 150 | 313 | -19.98 | |
| * | 5150.000 | 36.38 | AVG | 5.31 | 41.69 | 54.00 | 150 | 313 | -12.31 | |

*:Maximum data x:Over limit !:over margin



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 Tel:+886-2-6606-8877
 Fax:+886-2-6606-8875

Radiated Emission Measurement

Operator: Kai

File :Bandedge
 120.0 dBuV/m

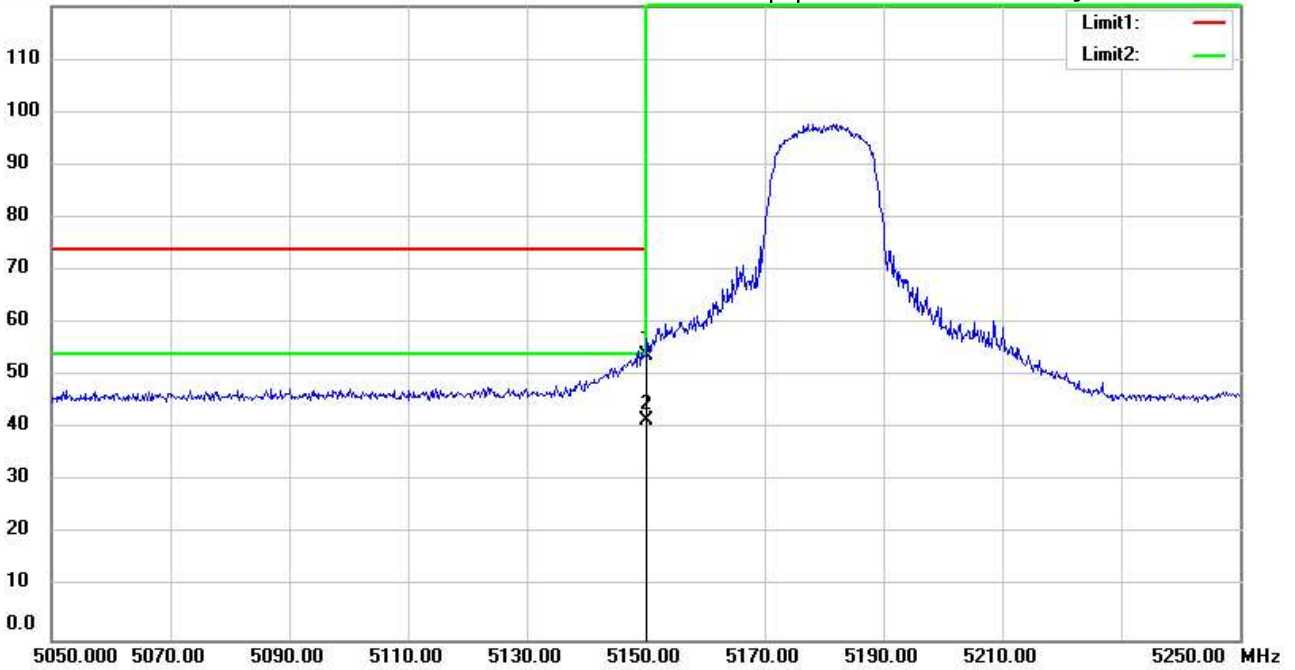
Data :#2

Date: 2023/11/28

Temperature:23.8 °C

Time: 下午 02:35:49

Humidity:61.8 %



Site : Chamber

Condition : FCC 15.407 PK (Bandedge)(B1_5150_5250)

Polarization: *Vertical*

EUT : W6M22311-23090

Power : 120 Va.c.

M/N:

Distance: 3m

Test Mode : TX 802.11a CH36

Note :

| Mk. | Frequency (MHz) | Reading (dBuV) | Detector | Corr. factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Ant.Pos (cm) | Tab.Pos (deg.) | Margin (dB) | Comment |
|-----|-----------------|----------------|----------|---------------------|-----------------|----------------|--------------|----------------|-------------|---------|
| | 5150.000 | 48.67 | peak | 5.31 | 53.98 | 74.00 | 150 | 89 | -20.02 | |
| * | 5150.000 | 36.14 | AVG | 5.31 | 41.45 | 54.00 | 150 | 89 | -12.55 | |

*:Maximum data x:Over limit !:over margin



Address:6F.,No.58,Ln 188,Ruey Kuang Rd,Neihu,Taipei
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Radiated Emission Measurement

Operator: Kai

File :3

Data :#1

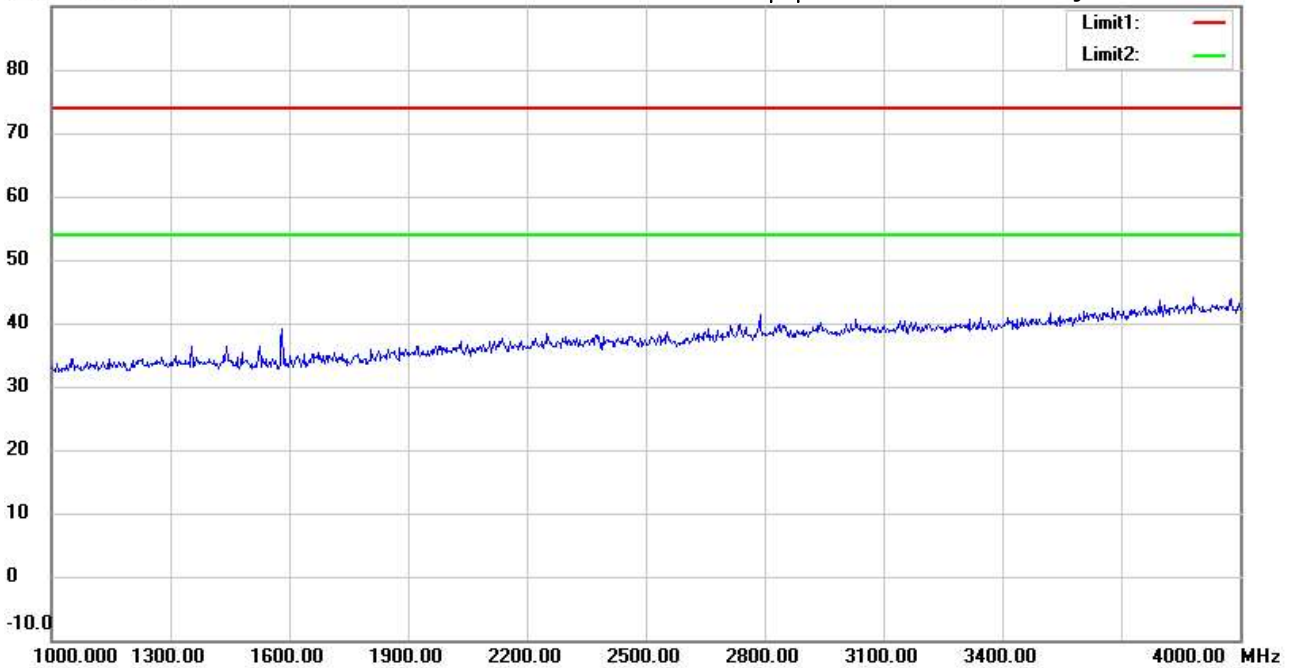
Date: 2023/11/28

Temperature:23.8 °C

90.0 dBuV/m

Time: 下午 02:44:36

Humidity:61.8 %



Site : Chamber

Condition : FCC_part 15E RE_Above 1GHz_PK

Polarization: *Horizontal*

EUT : W6M22311-23090

Power : 120 Va.c.

M/N:

Distance: 3m

Test Mode : TX 802.11a CH44

Note :

| Mk. | Frequency (MHz) | Reading (dBuV) | Detector | Corr. factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Ant.Pos (cm) | Tab.Pos (deg.) | Margin (dB) | Comment |
|-----|-----------------|----------------|----------|---------------------|-----------------|----------------|--------------|----------------|-------------|---------|
|-----|-----------------|----------------|----------|---------------------|-----------------|----------------|--------------|----------------|-------------|---------|

*:Maximum data x:Over limit !:over margin