



# RF TEST REPORT

Product Name: Cargo Volume Measurement Camera

Model Name: Z5

FCC ID: 2AM6L-Z5

Issued For : Streamax Technology Co., Ltd.  
21-23/F, Building B1, Zhiyuan, No.1001 Xueyuan Avenue,  
Nanshan District, Shenzhen, Guangdong, China

Issued By : Shenzhen LGT Test Service Co., Ltd.  
Room 205, Building 13, Zone B, Zhenxiong Industrial Park,  
No.177, Renmin West Road, Jinsha, Kengzi Street,  
Pingshan District, Shenzhen, Guangdong, China

Report Number: LGT25C118RF03

Sample Received Date: Mar. 20, 2025

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Shenzhen, Guangdong, China



## TEST REPORT CERTIFICATION

**Applicant:** Streamax Technology Co., Ltd.  
**Address:** 21-23/F, Building B1, Zhiyuan, No.1001 Xueyuan Avenue, Nanshan District, Shenzhen, Guangdong, China

**Manufacturer:** Streamax Technology Co., Ltd.  
**Address:** 21-23/F, Building B1, Zhiyuan, No.1001 Xueyuan Avenue, Nanshan District, Shenzhen, Guangdong, China

**Product Name:** Cargo Volume Measurement Camera

**Trademark:** N/A

**Model Name:** Z5

**Sample Status:** Normal

| APPLICABLE STANDARDS                           |              |
|------------------------------------------------|--------------|
| STANDARD                                       | TEST RESULTS |
| FCC Part 15.407, Subpart E<br>ANSI C63.10-2013 | PASS         |

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### **Revision History**

| Rev. | Issue Date    | Contents      |
|------|---------------|---------------|
| 00   | Apr. 24, 2025 | Initial Issue |
|      |               |               |



## 1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

Part 15.407, KDB 789033 D02 General U-NII Test Procedures New Rules v02r01

| FCC Part 15.407         |                                                        |         |
|-------------------------|--------------------------------------------------------|---------|
| FCC standard            | Test Item                                              | Results |
| 15.207                  | AC Conducted Emission                                  | N/A     |
| 15.407 (a) /15.407 (e)  | 26dB/6dB &99% Bandwidth                                | PASS    |
| 15.407(a)               | Maximum Conducted Output Power                         | PASS    |
| 15.407(b)/15.205/15.209 | Radiated Emission And (bandedge Emissions) Measurement | PASS    |
| 15.407(a)               | Power Spectral Density                                 | PASS    |
| 15.407(c)               | Automatically Discontinue Transmission                 | PASS    |
| 15.203/15.204           | Antenna Requirement                                    | PASS    |

### NOTE:

- (1) 'N/A' denotes test is not applicable in this Test Report.
- (2) All tests are according to ANSI C63.10-2013.



## 1.1 TEST FACTORY

|                            |                                                                                                                                                          |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Company Name:              | Shenzhen LGT Test Service Co., Ltd.                                                                                                                      |
| Address:                   | Room 205, Building 13, Zone B, Zhenxiong Industrial Park, No.177, Renmin West Road, Jinsha, Kengzi Street, Pingshan District, Shenzhen, Guangdong, China |
| Accreditation Certificate: | A2LA Certificate No.: 6727.01                                                                                                                            |
|                            | FCC Registration No.: 746540                                                                                                                             |
|                            | CAB ID: CN0136                                                                                                                                           |

## 1.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement  $y \pm U$ , where expanded uncertainty  $U$  is based on a standard uncertainty multiplied by a coverage factor of  $k=2$ , providing a level of confidence of approximately **95 %**.

| No. | Item                                  | Uncertainty               |
|-----|---------------------------------------|---------------------------|
| 1   | Occupied Channel Bandwidth            | $\pm 3.2 \%$              |
| 2   | RF Output Power, Conducted            | $\pm 0.71\text{dB}$       |
| 3   | Power Spectral Density, Conducted     | $\pm 1.57 \text{ dB}$     |
| 4   | Unwanted Emission, Conducted          | $\pm 0.63\text{dB}$       |
| 5   | Conducted emission                    | $\pm 2.80\text{dB}$       |
| 6   | All Emissions, Radiated (0.009-30MHz) | $\pm 2.16\text{dB}$       |
| 7   | All Emissions, Radiated (30MHz-1GHz)  | $\pm 4.40\text{dB}$       |
| 8   | All Emissions, Radiated (1GHz-18GHz)  | $\pm 5.49\text{dB}$       |
| 9   | Temperature                           | $\pm 0.5^{\circ}\text{C}$ |
| 10  | Humidity                              | $\pm 2\%$                 |
| 11  | Duty Cycle                            | $\pm 2.3\%$               |

Note: The measurement uncertainty is not included in the test result.



## 2. GENERAL INFORMATION

### 2.1 GENERAL DESCRIPTION OF THE EUT

|                         |                                                                               |                                                                                                                                                                                                                       |  |
|-------------------------|-------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| Product Name:           | Cargo Volume Measurement Camera                                               |                                                                                                                                                                                                                       |  |
| Trademark:              | N/A                                                                           |                                                                                                                                                                                                                       |  |
| Model Name:             | Z5                                                                            |                                                                                                                                                                                                                       |  |
| Series Model:           | N/A                                                                           |                                                                                                                                                                                                                       |  |
| Model Difference:       | N/A                                                                           |                                                                                                                                                                                                                       |  |
| Product Description:    | Operation Frequency:                                                          | IEEE 802.11a/n(HT20)/ac(VHT20)/ax(HE20):<br>5.180GHz-5.240GHz<br>IEEE 802.11n(HT40)/ac(VHT40)/ax(HE40):<br>5.190GHz-5.230GHz                                                                                          |  |
|                         |                                                                               | I IEEE 802.11a/n(HT20)/ac(VHT20)/ax(HE20):<br>5.745GHz-5.825GHz<br>IEEE 802.11a/n(HT40)/ac(VHT40)/ax(HE40):<br>5.755GHz-5.795GHz                                                                                      |  |
|                         | Modulation Type:                                                              | 802.11a(OFDM): BPSK, QPSK, 16-QAM, 64-QAM<br>802.11n(OFDM): BPSK, QPSK, 16-QAM, 64-QAM<br>802.11ac (OFDM): BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM<br>802.11ax(OFDM, OFDMA): BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM, 1024QAM |  |
|                         | Antenna Designation:                                                          | FPC                                                                                                                                                                                                                   |  |
|                         | Antenna Gain(dBi)                                                             | 6.2                                                                                                                                                                                                                   |  |
|                         | More details of EUT technical specification, please refer to the User Manual. |                                                                                                                                                                                                                       |  |
|                         | Test Channel:                                                                 | Please refer to the Note 3.                                                                                                                                                                                           |  |
| Rating:                 | Input: DC 10-36V                                                              |                                                                                                                                                                                                                       |  |
| Hardware Version:       | N/A                                                                           |                                                                                                                                                                                                                       |  |
| Software Version:       | N/A                                                                           |                                                                                                                                                                                                                       |  |
| Connecting I/O Port(s): | Please refer to the Note 1.                                                   |                                                                                                                                                                                                                       |  |



Note

1. For a more detailed features description, please refer to the manufacturer's specifications or the User Manual.
2. The antenna information refers to the manufacturer provide report, applicable only to the tested sample identified in the report. Due to the incorrect antenna information, a series of problems such as the accuracy of the test results will be borne by the customer.

3.

| Operation Frequency of channel |           |                   |           |
|--------------------------------|-----------|-------------------|-----------|
| 5.180GHz-5.240GHz              |           | 5.745GHz-5.825GHz |           |
| Channel                        | Frequency | Channel           | Frequency |
| 36                             | 5180      | 149               | 5745      |
| 38                             | 5190      | 151               | 5755      |
| 40                             | 5200      | 153               | 5765      |
| 42                             | 5210      | 157               | 5785      |
| 44                             | 5220      | 159               | 5795      |
| 46                             | 5230      | 161               | 5805      |
| 48                             | 5240      | 165               | 5825      |
|                                |           |                   |           |

Note:

In section 15.31(m), regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:

Carrier Frequency Channel

| Channel List for 802.11a/n/ac/ax(20MHz) |                 |         |                 |
|-----------------------------------------|-----------------|---------|-----------------|
| Channel                                 | Frequency (MHz) | Channel | Frequency (MHz) |
| 36                                      | 5180            | 149     | 5745            |
| 40                                      | 5200            | 157     | 5785            |
| 48                                      | 5240            | 165     | 5825            |

| Channel List for 802.11n/ac/ax(40MHz) |                 |         |                 |
|---------------------------------------|-----------------|---------|-----------------|
| Channel                               | Frequency (MHz) | Channel | Frequency (MHz) |
| 38                                    | 5190            | 151     | 5755            |
| 46                                    | 5230            | 159     | 5795            |
|                                       |                 |         |                 |



## 2.2 DESCRIPTION OF TEST MODES

To investigate the maximum EMI emission characteristics generated from EUT, the test system was pre-scanning tested based on the consideration of following EUT operation mode or test configuration mode which possibly have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

| Worst Mode | Description                                 | Data Rate |
|------------|---------------------------------------------|-----------|
| Mode 1     | TX IEEE 802.11a HT20 CH36&CH40&CH48         | 6 Mbps    |
| Mode 2     | TX IEEE 802.11a HT20 CH149&CH157&CH165      | 6 Mbps    |
| Mode 3     | TX IEEE 802.11n HT20 CH36&CH40&CH48         | MCS 0     |
| Mode 4     | TX IEEE 802.11ac/ax VHT20 CH36&CH40&CH48    | NSS1 MCS0 |
| Mode 5     | TX IEEE 802.11n HT20 CH149&CH157&CH165      | MCS 0     |
| Mode 6     | TX IEEE 802.11ac/ax VHT20 CH149&CH157&CH165 | NSS1 MCS0 |
| Mode 7     | TX IEEE 802.11n HT40 CH38&CH46              | MCS 0     |
| Mode 8     | TX IEEE 802.11ac/ax VHT40 CH38&CH46         | NSS1 MCS0 |
| Mode 9     | TX IEEE 802.11n HT40 CH151&CH159            | MCS 0     |
| Mode 10    | TX IEEE 802.11ac/ax VHT40 CH151&CH159       | NSS1 MCS0 |

Note: (1) The measurements are performed at the highest, middle, lowest available channels.  
(2) The measurements are performed at all Bit Rate of Transmitter, the worst data was reported.  
(3) We have been tested for all available U.S. voltage and frequencies (For 120V, 50/60Hz and 240V, 50/60Hz) for which the device is capable of operation.  
(4) The battery is fully-charged during the radiated and RF conducted test.  
(5) All 20M, 40M bandwidth modes have been tested, and the report only shows the worst mode data



### 2.3 TEST SOFTWARE AND POWER LEVEL

During testing channel & power controlling software provided by the customer was used to control the operating channel as well as the output power level.

| Test software Version | Test program: 5G WIFI B1 |               |
|-----------------------|--------------------------|---------------|
| SecureCRT_6.5.0.380   | Mode Or Modulation type  | Power setting |
|                       | a                        | Default       |
|                       | n20                      | Default       |
|                       | n40                      | Default       |
|                       | ac20                     | Default       |
|                       | ac40                     | Default       |
|                       | ax20                     | Default       |
|                       | ax40                     | Default       |
| Test software Version | Test program: 5G WIFI B4 |               |
| SecureCRT_6.5.0.380   | Mode Or Modulation type  | Power setting |
|                       | a                        | Default       |
|                       | n20                      | Default       |
|                       | n40                      | Default       |
|                       | ac20                     | Default       |
|                       | ac40                     | Default       |
|                       | ax20                     | Default       |
|                       | ax40                     | Default       |

### 2.4 DESCRIPTION OF NECESSARY ACCESSORIES AND SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

#### Accessories Equipment

| Description | Manufacturer | Model | S/N | Rating |
|-------------|--------------|-------|-----|--------|
| DC cable    | N/A          | N/A   | N/A | N/A    |
|             |              |       |     |        |
|             |              |       |     |        |

#### Auxiliary Equipment

| Description | Manufacturer | Model   | S/N | Rating |
|-------------|--------------|---------|-----|--------|
| DC source   | Jiuyuan      | QJ6010E | N/A | N/A    |
|             |              |         |     |        |
|             |              |         |     |        |

Note:

- (1) For detachable type I/O cable should be specified the length in cm in 『Length』 column.
- (2) “YES” is means “with core”; “NO” is means “without core”.



## 2.5 EQUIPMENTS LIST FOR ALL TEST ITEMS

| Radiated Test equipment            |                     |                     |              |            |            |
|------------------------------------|---------------------|---------------------|--------------|------------|------------|
| Equipment                          | Manufacturer        | Model No.           | Serial No.   | Cal. Date  | Cal. Until |
| EMI Test Receiver                  | R&S                 | ESU8                | 100372       | 2025.03.06 | 2026.03.05 |
| Active loop Antenna                | ETS                 | 6502                | 00049544     | 2025.03.11 | 2028.03.10 |
| Spectrum Analyzer                  | Keysight            | N9010B              | MY60242508   | 2025.03.05 | 2026.03.04 |
| Trilog Broadband Antenna (30M-1G)  | SCHWARZBECK         | VULB 9168           | 2705         | 2024.05.17 | 2027.05.16 |
| Horn Antenna(1-18G)                | SCHWARZBECK         | 3115                | 10SL0060     | 2025.03.10 | 2028.03.09 |
| Horn Antenna(18-40G)               | SCHWARZBECK         | BBHA 9170           | 685          | 2023.10.23 | 2026.10.22 |
| Pre-amplifier(30M-1G)              | EMtrace             | RP01A               | 02019        | 2025.03.06 | 2026.03.05 |
| Pre-amplifier(1-26.5G)             | Agilent             | 8449B               | 3008A4722    | 2025.03.06 | 2026.03.05 |
| Pre-amplifier(18-40G)              | SCHWARZBECK         | BBV 9721            | 9721-019     | 2024.10.21 | 2025.10.20 |
| Coaxial cables (9kHz-1GHz)         | Juncoax             | JMR600-NMMN-8M      | N.A          | 2025.03.06 | 2026.03.05 |
| Coaxial cables (1GHz-18GHz)        | TaiHe               | UCD460B-NMSM-1M9    | N.A          | 2025.03.06 | 2026.03.05 |
| Coaxial cables (18GHz-40GHz)       | Junkosha Inc.       | MWX241-05000KMS KMS | N.A          | 2025.03.08 | 2026.03.07 |
| Temperature& Humidity test chamber | AISRY               | LX-1000L            | 171200018    | 2024.08.05 | 2025.08.04 |
| Antenna Tower                      | SAEMC               | BK-4AT-BS-D         | SK2021093008 | N.A        | N.A        |
| DC source                          | Jiuyuan             | QJ6010E             | N.A          | 2025.03.09 | 2026.03.08 |
| Temperature & Humidity             | JINGCHUANG          | BT-3                | N.A          | 2025.03.10 | 2026.03.09 |
| Testing Software                   | EMC-I_V1.4.0.3_SKET |                     |              |            |            |

| RF Conducted Test equipment        |                     |            |                       |            |            |
|------------------------------------|---------------------|------------|-----------------------|------------|------------|
| Equipment                          | Manufacturer        | Model No.  | Serial No.            | Cal. Date  | Cal. Until |
| Signal Analyzer                    | Keysight            | N9010B     | MY60242508            | 2025.03.05 | 2026.03.04 |
| Signal Analyzer                    | Keysight            | N9020A     | MY50530994            | 2025.03.05 | 2026.03.04 |
| Power Sensor                       | R&S                 | NRP8S      | 149.0006K02-104963-Ae | 2025.03.06 | 2026.03.05 |
| RF Automatic Test system           | MW                  | MW100-RFCB | MW220324LG-33         | 2025.03.06 | 2026.03.05 |
| MXG Vector Signal Generator        | Keysight            | N5182B     | MY59100717            | 2025.03.05 | 2026.03.04 |
| Temperature& Humidity test chamber | AISRY               | LX-1000L   | 171200018             | 2024.08.05 | 2025.08.04 |
| Attenuator                         | eastsheep           | 90db       | N.A                   | 2025.03.06 | 2026.03.05 |
| Temperature & Humidity             | JINGCHUANG          | BT-3       | N.A                   | 2025.03.10 | 2026.03.09 |
| Digital multimeter                 | MASTECH             | MS8261     | MBGBC83053            | 2025.03.05 | 2026.03.04 |
| DC source                          | Jiuyuan             | QJ6010E    | N.A                   | 2025.03.09 | 2026.03.08 |
| Testing Software                   | MTS8310_V2.0.0.0_MW |            |                       |            |            |



### 3. EMC EMISSION TEST

#### 3.1 CONDUCTED EMISSION MEASUREMENT

##### 3.1.1 POWER LINE CONDUCTED EMISSION Limits (Frequency Range 150KHz-30MHz)

| FREQUENCY (MHz) | Class B (dBuV) |           | Standard |
|-----------------|----------------|-----------|----------|
|                 | Quasi-peak     | Average   |          |
| 0.15 -0.5       | 66 - 56 *      | 56 - 46 * | CISPR    |
| 0.50 -5.0       | 56.00          | 46.00     | CISPR    |
| 5.0 -30.0       | 60.00          | 50.00     | CISPR    |

|           |           |           |     |
|-----------|-----------|-----------|-----|
| 0.15 -0.5 | 66 - 56 * | 56 - 46 * | FCC |
| 0.50 -5.0 | 56.00     | 46.00     | FCC |
| 5.0 -30.0 | 60.00     | 50.00     | FCC |

Note:

- (1) The tighter limit applies at the band edges.
- (2) The limit of “ \* ” marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

The following table is the setting of the receiver

| Receiver Parameters | Setting  |
|---------------------|----------|
| Attenuation         | 10 dB    |
| Start Frequency     | 0.15 MHz |
| Stop Frequency      | 30 MHz   |
| IF Bandwidth        | 9 kHz    |



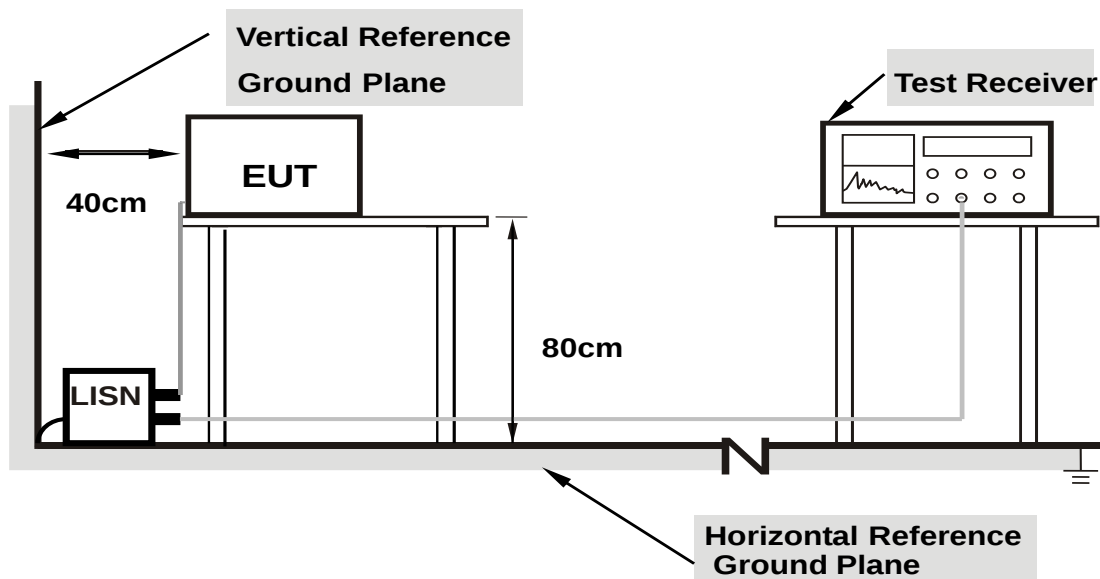
### 3.1.2 TEST PROCEDURE

- The EUT is 0.8 m from the horizontal ground plane and 0.4 m from the vertical ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments are powered from additional LISN(s). The LISN provides 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
- I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- LISN is at least 80 cm from the nearest part of EUT chassis.
- For the actual test configuration, please refer to the related Item –EUT Test Photos.

### 3.1.3 DEVIATION FROM TEST STANDARD

No deviation

### 3.1.4 TEST SETUP



**Note: 1. Support units were connected to second LISN.**

**2. Both of LISNs (AMN) are 80 cm from EUT and at least 80 cm from other units and other metal planes support units.**

### 3.1.5 EUT OPERATING CONDITIONS

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

### 3.1.6 TEST RESULTS

N/A. EUT product DC power supply.



### 3.2 RADIATED EMISSION AND ( BANDEGE) MEASUREMENT

#### 3.2.1 RADIATED EMISSION LIMITS (Frequency Range 9kHz-1000MHz)

In case the emission fall within the restricted band specified on 15.407(b)7&15.205/209(a), then the limit in the table below has to be followed.

| Frequencies (MHz) | Field Strength (micorvolts/meter) | Measurement Distance (meters) |
|-------------------|-----------------------------------|-------------------------------|
| 0.009~0.490       | 2400/F(KHz)                       | 300                           |
| 0.490~1.705       | 24000/F(KHz)                      | 30                            |
| 1.705~30.0        | 30                                | 30                            |
| 30~88             | 100                               | 3                             |
| 88~216            | 150                               | 3                             |
| 216~960           | 200                               | 3                             |
| Above 960         | 500                               | 3                             |

#### LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

| FREQUENCY (MHz) | Class B (dBuV/m) (at 3M) |         |
|-----------------|--------------------------|---------|
|                 | PEAK                     | AVERAGE |
| Above 1000      | 68.2                     | 54      |

Notes:

- (1) The limit for radiated test was performed according to FCC PART 15E.
- (2) The tighter limit applies at the band edges.
- (3) Emission level (dBuV/m)=20log Emission level (uV/m).

#### LIMITS OF RESTRICTED FREQUENCY BANDS

| FREQUENCY (MHz)   | FREQUENCY (MHz)     | FREQUENCY (MHz) | FREQUENCY (GHz) |
|-------------------|---------------------|-----------------|-----------------|
| 0.090-0.110       | 16.42-16.423        | 399.9-410       | 4.5-5.15        |
| 0.495-0.505       | 16.69475-16.69525   | 608-614         | 5.35-5.46       |
| 2.1735-2.1905     | 16.80425-16.80475   | 960-1240        | 7.25-7.75       |
| 4.125-4.128       | 25.5-25.67          | 1300-1427       | 8.025-8.5       |
| 4.17725-4.17775   | 37.5-38.25          | 1435-1626.5     | 9.0-9.2         |
| 4.20725-4.20775   | 73-74.6             | 1645.5-1646.5   | 9.3-9.5         |
| 6.215-6.218       | 74.8-75.2           | 1660-1710       | 10.6-12.7       |
| 6.26775-6.26825   | 108-121.94          | 1718.8-1722.2   | 13.25-13.4      |
| 6.31175-6.31225   | 123-138             | 2200-2300       | 14.47-14.5      |
| 8.291-8.294       | 149.9-150.05        | 2310-2390       | 15.35-16.2      |
| 8.362-8.366       | 156.52475-156.52525 | 2483.5-2500     | 17.7-21.4       |
| 8.37625-8.38675   | 156.7-156.9         | 2690-2900       | 22.01-23.12     |
| 8.41425-8.41475   | 162.0125-167.17     | 3260-3267       | 23.6-24.0       |
| 12.29-12.293      | 167.72-173.2        | 3332-3339       | 31.2-31.8       |
| 12.51975-12.52025 | 240-285             | 3345.8-3358     | 36.43-36.5      |
| 12.57675-12.57725 | 322-335.4           | 3600-4400       | Above 38.6      |
| 13.36-13.41       |                     |                 |                 |

Note: In case the emission radiated emission above 1000MHz fall within the restricted band the restricted frequency bands, the peak limit is 74 dBuV/m.



## LIMITS OF EMISSIONS OUTSIDE OF THE FREQUENCY BANDS

Undesirable emission limits. Except as shown in paragraph (b)(7) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:

- (1) For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.
- (2) For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.
- (3) For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.
- (4) For transmitters operating in the 5.725-5.85 GHz band:
  - (i) 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.

Note:  $\text{dBuV/m(at 3M)} = \text{EIRP(dBm)} + 95.2$ .

Peak Limit =  $-27\text{dBm/MHz} + 95.2 = 68.2 \text{ dBuV/m}$ .

| Spectrum Parameter                    | Setting                         |
|---------------------------------------|---------------------------------|
| Attenuation                           | Auto                            |
| Detector                              | Peak                            |
| Start Frequency                       | 1000 MHz(Peak/AV)               |
| Stop Frequency                        | 10th carrier harmonic (Peak/AV) |
| RB / VB (emission in restricted band) | 1 MHz / 1 MHz, AV=1 MHz /3 MHz  |

For Band edge

| Spectrum Parameter                    | Setting                        |
|---------------------------------------|--------------------------------|
| Detector                              | Peak                           |
| RB / VB (emission in restricted band) | 1 MHz / 1 MHz, AV=1 MHz /3 MHz |

| Receiver Parameter     | Setting                              |
|------------------------|--------------------------------------|
| Attenuation            | Auto                                 |
| Start ~ Stop Frequency | 9kHz~90kHz / RB 200Hz for PK & AV    |
| Start ~ Stop Frequency | 90kHz~110kHz / RB 200Hz for QP       |
| Start ~ Stop Frequency | 110kHz~490kHz / RB 200Hz for PK & AV |
| Start ~ Stop Frequency | 490kHz~30MHz / RB 9kHz for QP        |
| Start ~ Stop Frequency | 30MHz~1000MHz / RB 120kHz for QP     |

### 3.2.2 TEST PROCEDURE

- The measuring distance at 3 m shall be used for measurements at frequency 0.009MHz up to 1GHz, and above 1GHz.
- The EUT was placed on the top of a rotating table 0.8 m (above 1GHz is 1.5 m) above the ground at a 3 m anechoic chamber test site. The table was rotated 360 degree to determine the position of the highest radiation.
- The height of the equipment shall be 0.8 m (above 1GHz is 1.5 m); the height of the test antenna shall vary between 1 m to 4 m. Horizontal and vertical polarization of the antenna are set to make the measurement.
- The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and QuasiPeak detector mode will be re-measured.
- If the Peak Mode measured value is compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and no additional QP Mode measurement was performed.
- For the actual test configuration, please refer to the related Item –EUT Test Photos.

Note:

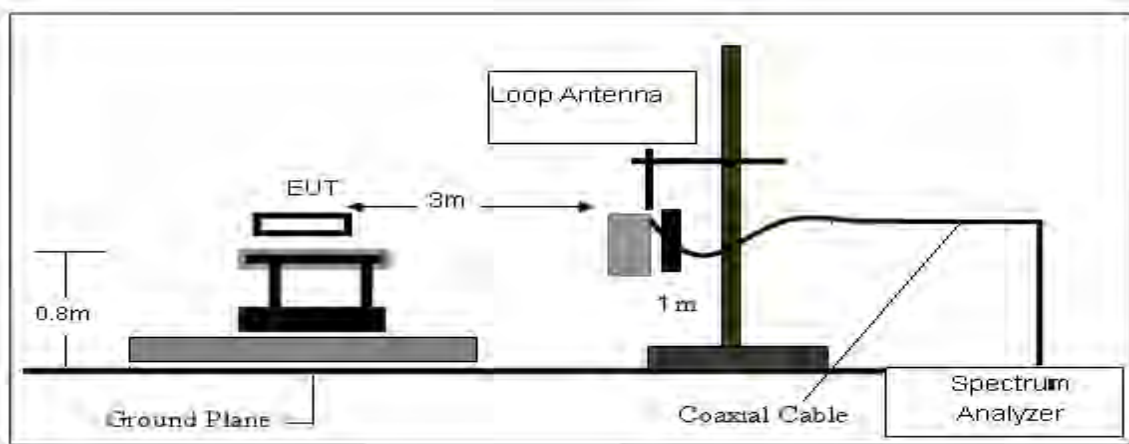
Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported.

### 3.2.2 DEVIATION FROM TEST STANDARD

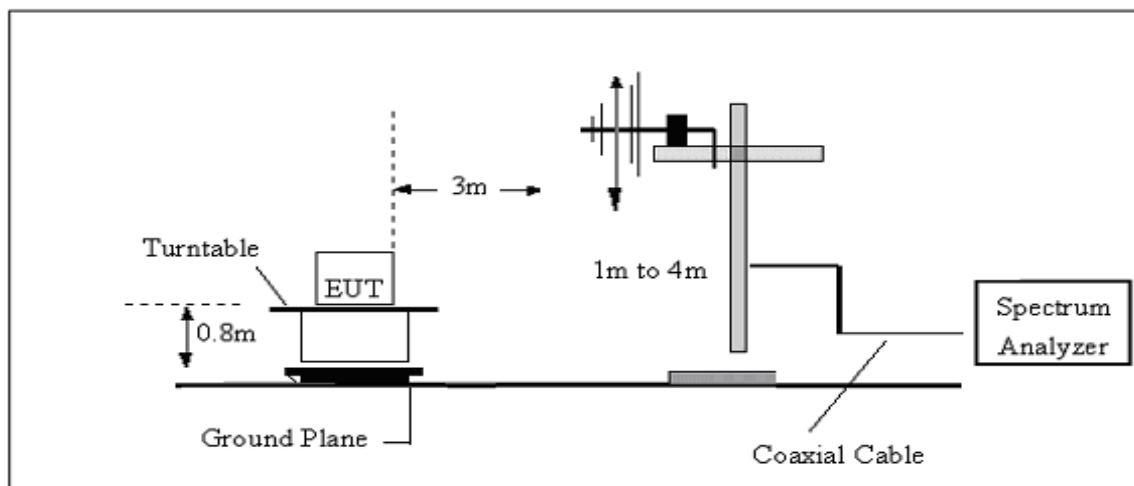
No deviation

### 3.2.3 TEST SETUP

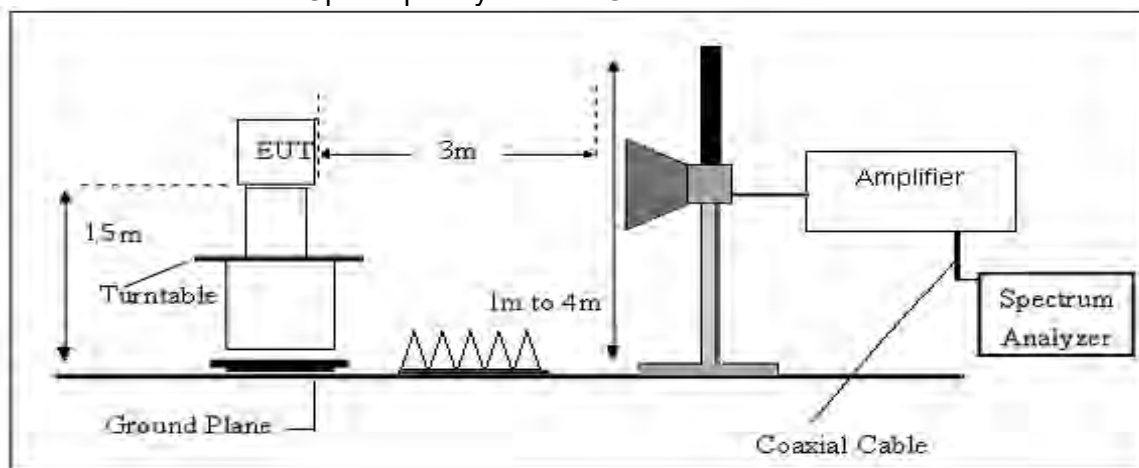
(A) Radiated Emission Test-Up Frequency Below 30MHz



(B) Radiated Emission Test-Up Frequency 30MHz~1GHz



(C) Radiated Emission Test-Up Frequency Above 1GHz





### 3.2.4 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

### 3.2.5 FIELD STRENGTH CALCULATION

The field strength is calculated by adding the Antenna Factor and Cable Factor and subtracting the Amplifier Gain and Duty Cycle Correction Factor (if any) from the measured reading. The basic equation with a sample calculation is as follows:

$$FS = RA + AF + CL - AG$$

Where

FS = Field Strength

CL = Cable Attenuation Factor (Cable Loss)

RA = Reading Amplitude

AG = Amplifier Gain

AF = Antenna Factor

For example

| Frequency | FS       | RA       | AF   | CL   | AG   | Factor |
|-----------|----------|----------|------|------|------|--------|
| (MHz)     | (dBμV/m) | (dBμV/m) | (dB) | (dB) | (dB) | (dB)   |
| 300       | 40       | 58.1     | 12.2 | 1.6  | 31.9 | -18.1  |

$$\text{Factor} = \text{AF} + \text{CL} - \text{AG}$$



### 3.2.6 TEST RESULTS

Results of Radiated Emissions (9 KHz~30MHz)

| No. | Frequency | Reading<br>dBuV | Factor<br>dB/m | Level<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Remark   |
|-----|-----------|-----------------|----------------|-----------------|-----------------|--------------|----------|----------|
| 1*  | -         | -               | -              | -               | -               | -            | -        | See Note |

Note:

The emission from 9 kHz to 30MHz was pre-tested and found the result was 20dB lower than the limit, and the permissible value has no need to be reported.

Distance extrapolation factor =  $40 \log (\text{specific distance} / \text{test distance})$  (dB);

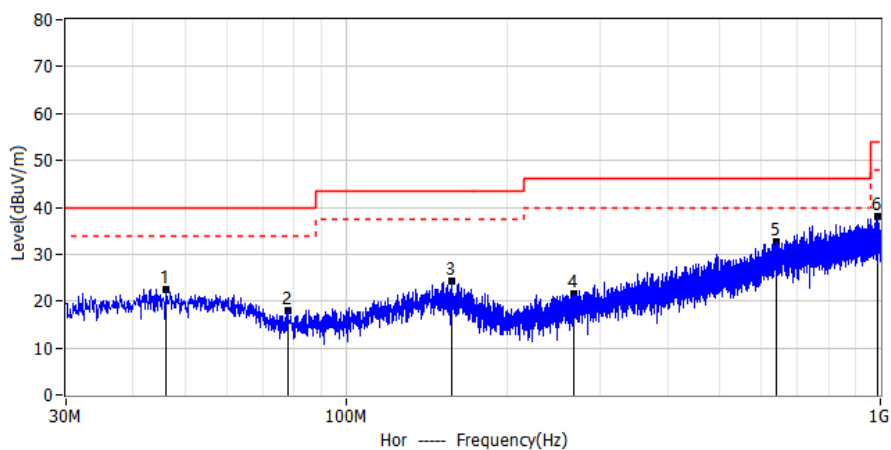
Limit line = specific limits (dBuV) + distance extrapolation factor.



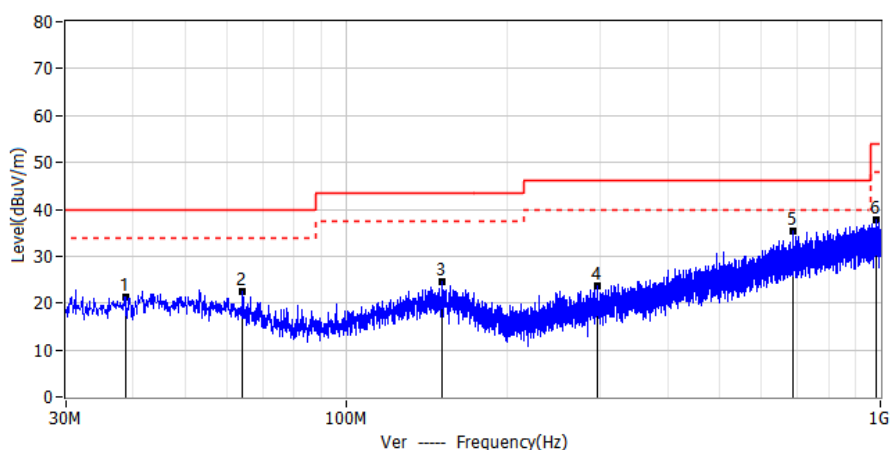
## Results of Radiated Emissions (30MHz~1000MHz)

Note:1. All mode has been tested, only shown the worst case data.

|                                      |                       |
|--------------------------------------|-----------------------|
| Project: LGT25C118                   | Test Engineer: LiuH   |
| EUT: Cargo Volume Measurement Camera | Temperature: 23°C     |
| M/N: Z5                              | Humidity: 52%RH       |
| Test Voltage: DC 12V                 | Test Data: 2025-03-28 |
| Test Mode: TX 802.11a 5180           |                       |
| Note:                                |                       |



| No. | Frequency MHz | Reading dBuV | Factor dB/m | Level dBuV/m | Limit dBuV/m | Margin dB | Height m | Degrees ° | Detector | Polar |
|-----|---------------|--------------|-------------|--------------|--------------|-----------|----------|-----------|----------|-------|
| 1*  | 46.126        | 1.90         | 20.43       | 22.33        | 40.00        | -17.67    | 1        | 116.2     | QP       | Hor   |
| 2*  | 78.015        | 1.34         | 16.58       | 17.92        | 40.00        | -22.08    | 1        | 76.4      | QP       | Hor   |
| 3*  | 157.434       | 2.59         | 21.80       | 24.39        | 43.50        | -19.11    | 1        | 40.7      | QP       | Hor   |
| 4*  | 267.771       | 1.49         | 19.95       | 21.44        | 46.00        | -24.56    | 1        | 47.5      | QP       | Hor   |
| 5*  | 639.281       | 2.98         | 29.58       | 32.56        | 46.00        | -13.44    | 1        | 35.6      | QP       | Hor   |
| 6*  | 985.935       | 3.89         | 34.17       | 38.06        | 54.00        | -15.94    | 1        | 30.2      | QP       | Hor   |



| No. | Frequency MHz | Reading dBuV | Factor dB/m | Level dBuV/m | Limit dBuV/m | Margin dB | Height m | Degrees ° | Detector | Polar |
|-----|---------------|--------------|-------------|--------------|--------------|-----------|----------|-----------|----------|-------|
| 1*  | 38.730        | 1.42         | 19.84       | 21.26        | 40.00        | -18.74    | 1        | 84.2      | QP       | Ver   |
| 2*  | 64.193        | 3.56         | 18.94       | 22.50        | 40.00        | -17.50    | 1        | 97.9      | QP       | Ver   |
| 3*  | 151.614       | 3.22         | 21.32       | 24.54        | 43.50        | -18.96    | 1        | 29.2      | QP       | Ver   |
| 4*  | 295.174       | 2.46         | 21.20       | 23.66        | 46.00        | -22.34    | 1        | 78.5      | QP       | Ver   |
| 5*  | 687.539       | 5.24         | 30.09       | 35.33        | 46.00        | -10.67    | 1        | 141.9     | QP       | Ver   |
| 6*  | 983.025       | 3.51         | 34.10       | 37.61        | 54.00        | -16.39    | 1        | 59.9      | QP       | Ver   |



## Results of Radiated Emissions (Above 1000MHz)

Note:1. All mode has been tested, only shown the worst case data.

| Band I(5.15-5.25) GHz           |                |                        |                 |                 |             |          |            |
|---------------------------------|----------------|------------------------|-----------------|-----------------|-------------|----------|------------|
| Frequency (MHz)                 | Reading (dBμV) | Corrected Factor (dB ) | Result (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Detector | Polarity   |
| Low Channel (802.11/ 5180 MHz)  |                |                        |                 |                 |             |          |            |
| 3985.64                         | 53.42          | -6.89                  | 46.53           | 74.00           | -27.47      | PK       | Vertical   |
| 3985.64                         | 42.62          | -6.89                  | 35.73           | 54.00           | -18.27      | AV       | Vertical   |
| 3986.05                         | 53.39          | -6.89                  | 46.50           | 74.00           | -27.50      | PK       | Horizontal |
| 3986.05                         | 42.46          | -6.89                  | 35.57           | 54.00           | -18.43      | AV       | Horizontal |
| 8909.82                         | 53.97          | -3.80                  | 50.17           | 68.20           | -18.03      | PK       | Vertical   |
| 8909.82                         | 43.82          | -3.80                  | 40.02           | 54.00           | -13.98      | AV       | Vertical   |
| 8921.91                         | 53.05          | -3.80                  | 49.25           | 68.20           | -18.95      | PK       | Horizontal |
| 8921.91                         | 43.41          | -3.80                  | 39.61           | 54.00           | -14.39      | AV       | Horizontal |
| 10360.38                        | 55.16          | -2.92                  | 52.24           | 68.20           | -15.96      | PK       | Vertical   |
| 10360.38                        | 44.45          | -2.92                  | 41.53           | 54.00           | -12.47      | AV       | Vertical   |
| 10360.04                        | 55.97          | -2.92                  | 53.05           | 68.20           | -15.15      | PK       | Horizontal |
| 10360.04                        | 44.10          | -2.92                  | 41.18           | 54.00           | -12.82      | AV       | Horizontal |
| 13286.15                        | 53.67          | -0.67                  | 53.00           | 74.00           | -21.00      | PK       | Vertical   |
| 13286.15                        | 43.94          | -0.67                  | 43.27           | 54.00           | -10.73      | AV       | Vertical   |
| 13284.33                        | 54.95          | -0.67                  | 54.28           | 74.00           | -19.72      | PK       | Horizontal |
| 13284.33                        | 44.14          | -0.67                  | 43.47           | 54.00           | -10.53      | AV       | Horizontal |
| Mid Channel (802.11/ 5200 MHz)  |                |                        |                 |                 |             |          |            |
| 3980.95                         | 52.53          | -6.89                  | 45.64           | 74.00           | -28.36      | PK       | Vertical   |
| 3980.95                         | 42.90          | -6.89                  | 36.01           | 54.00           | -17.99      | AV       | Vertical   |
| 3994.05                         | 52.16          | -6.89                  | 45.27           | 74.00           | -28.73      | PK       | Horizontal |
| 3994.05                         | 43.45          | -6.89                  | 36.56           | 54.00           | -17.44      | AV       | Horizontal |
| 7232.07                         | 53.79          | -3.80                  | 49.99           | 68.20           | -18.21      | PK       | Vertical   |
| 7232.07                         | 43.23          | -3.80                  | 39.43           | 54.00           | -14.57      | AV       | Vertical   |
| 7220.51                         | 53.23          | -3.80                  | 49.43           | 68.20           | -18.77      | PK       | Horizontal |
| 7220.51                         | 43.19          | -3.80                  | 39.39           | 54.00           | -14.61      | AV       | Horizontal |
| 10400.20                        | 56.50          | -2.92                  | 53.58           | 68.20           | -14.62      | PK       | Vertical   |
| 10400.20                        | 45.42          | -2.92                  | 42.50           | 54.00           | -11.50      | AV       | Vertical   |
| 10400.08                        | 55.27          | -2.92                  | 52.35           | 68.20           | -15.85      | PK       | Horizontal |
| 10400.08                        | 44.26          | -2.92                  | 41.34           | 54.00           | -12.66      | AV       | Horizontal |
| 13283.60                        | 54.05          | -0.67                  | 53.38           | 74.00           | -20.62      | PK       | Vertical   |
| 13283.60                        | 43.75          | -0.67                  | 43.08           | 54.00           | -10.92      | AV       | Vertical   |
| 13297.20                        | 54.22          | -0.67                  | 53.55           | 74.00           | -20.45      | PK       | Horizontal |
| 13297.20                        | 44.15          | -0.67                  | 43.48           | 54.00           | -10.52      | AV       | Horizontal |
| High Channel (802.11/ 5240 MHz) |                |                        |                 |                 |             |          |            |
| 3988.71                         | 53.08          | -6.89                  | 46.19           | 74.00           | -27.81      | PK       | Vertical   |
| 3988.71                         | 43.01          | -6.89                  | 36.12           | 54.00           | -17.88      | AV       | Vertical   |
| 3992.87                         | 53.13          | -6.89                  | 46.24           | 74.00           | -27.76      | PK       | Horizontal |
| 3992.87                         | 42.96          | -6.89                  | 36.07           | 54.00           | -17.93      | AV       | Horizontal |
| 7228.44                         | 54.37          | -3.80                  | 50.57           | 68.20           | -17.63      | PK       | Vertical   |
| 7228.44                         | 43.23          | -3.80                  | 39.43           | 54.00           | -14.57      | AV       | Vertical   |
| 7234.58                         | 53.10          | -3.80                  | 49.30           | 68.20           | -18.90      | PK       | Horizontal |
| 7234.58                         | 43.40          | -3.80                  | 39.60           | 54.00           | -14.40      | AV       | Horizontal |
| 10480.21                        | 56.19          | -2.92                  | 53.27           | 68.20           | -14.93      | PK       | Vertical   |
| 10480.21                        | 44.74          | -2.92                  | 41.82           | 54.00           | -12.18      | AV       | Vertical   |
| 10479.96                        | 56.28          | -2.92                  | 53.36           | 68.20           | -14.84      | PK       | Horizontal |
| 10479.96                        | 44.55          | -2.92                  | 41.63           | 54.00           | -12.37      | AV       | Horizontal |
| 13283.05                        | 54.05          | -0.67                  | 53.38           | 74.00           | -20.62      | PK       | Vertical   |
| 13283.05                        | 44.02          | -0.67                  | 43.35           | 54.00           | -10.65      | AV       | Vertical   |
| 13298.19                        | 54.96          | -0.67                  | 54.29           | 74.00           | -19.71      | PK       | Horizontal |
| 13298.19                        | 44.68          | -0.67                  | 44.01           | 54.00           | -9.99       | AV       | Horizontal |



| Band IV(5.725-5.85) GHz         |                |                        |                 |                 |             |          |            |
|---------------------------------|----------------|------------------------|-----------------|-----------------|-------------|----------|------------|
| Frequency (MHz)                 | Reading (dBμV) | Corrected Factor (dB ) | Result (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Detector | Polarity   |
| Low Channel (802.11/ 5745 MHz)  |                |                        |                 |                 |             |          |            |
| 3995.79                         | 53.07          | -6.89                  | 46.18           | 74.00           | -27.82      | PK       | Vertical   |
| 3995.79                         | 43.09          | -6.89                  | 36.20           | 54.00           | -17.80      | AV       | Vertical   |
| 3999.98                         | 53.19          | -6.89                  | 46.30           | 74.00           | -27.70      | PK       | Horizontal |
| 3999.98                         | 43.39          | -6.89                  | 36.50           | 54.00           | -17.50      | AV       | Horizontal |
| 8924.03                         | 53.87          | -3.80                  | 50.07           | 68.20           | -18.13      | PK       | Vertical   |
| 8924.03                         | 43.44          | -3.80                  | 39.64           | 54.00           | -14.36      | AV       | Vertical   |
| 8916.16                         | 53.85          | -3.80                  | 50.05           | 68.20           | -18.15      | PK       | Horizontal |
| 8916.16                         | 43.45          | -3.80                  | 39.65           | 54.00           | -14.35      | AV       | Horizontal |
| 11481.33                        | 55.34          | -2.92                  | 52.42           | 74.00           | -21.58      | PK       | Vertical   |
| 11481.33                        | 44.06          | -2.92                  | 41.14           | 54.00           | -12.86      | AV       | Vertical   |
| 11473.06                        | 56.18          | -2.92                  | 53.26           | 74.00           | -20.74      | PK       | Horizontal |
| 11473.06                        | 44.50          | -2.92                  | 41.58           | 54.00           | -12.42      | AV       | Horizontal |
| 13295.40                        | 53.53          | -0.35                  | 53.18           | 74.00           | -20.82      | PK       | Vertical   |
| 13295.40                        | 43.74          | -0.35                  | 43.39           | 54.00           | -10.61      | AV       | Vertical   |
| 13288.77                        | 53.52          | -0.35                  | 53.17           | 74.00           | -20.83      | PK       | Horizontal |
| 13288.77                        | 44.77          | -0.35                  | 44.42           | 54.00           | -9.58       | AV       | Horizontal |
| Mid Channel (802.11/ 5785 MHz)  |                |                        |                 |                 |             |          |            |
| 3997.16                         | 52.87          | -6.89                  | 45.98           | 74.00           | -28.02      | PK       | Vertical   |
| 3997.16                         | 43.29          | -6.89                  | 36.40           | 54.00           | -17.60      | AV       | Vertical   |
| 3986.93                         | 52.90          | -6.89                  | 46.01           | 74.00           | -27.99      | PK       | Horizontal |
| 3986.93                         | 42.22          | -6.89                  | 35.33           | 54.00           | -18.67      | AV       | Horizontal |
| 8914.52                         | 53.27          | -3.80                  | 49.47           | 68.20           | -18.73      | PK       | Vertical   |
| 8914.52                         | 43.96          | -3.80                  | 40.16           | 54.00           | -13.84      | AV       | Vertical   |
| 8918.96                         | 53.25          | -3.80                  | 49.45           | 68.20           | -18.75      | PK       | Horizontal |
| 8918.96                         | 43.25          | -3.80                  | 39.45           | 54.00           | -14.55      | AV       | Horizontal |
| 11568.83                        | 56.08          | -2.92                  | 53.16           | 74.00           | -20.84      | PK       | Vertical   |
| 11568.83                        | 44.33          | -2.92                  | 41.41           | 54.00           | -12.59      | AV       | Vertical   |
| 11558.96                        | 55.96          | -2.92                  | 53.04           | 74.00           | -20.96      | PK       | Horizontal |
| 11558.96                        | 44.50          | -2.92                  | 41.58           | 54.00           | -12.42      | AV       | Horizontal |
| 13286.15                        | 53.54          | -0.35                  | 53.19           | 74.00           | -20.81      | PK       | Vertical   |
| 13286.15                        | 44.02          | -0.35                  | 43.67           | 54.00           | -10.33      | AV       | Vertical   |
| 13293.41                        | 54.64          | -0.35                  | 54.29           | 74.00           | -19.71      | PK       | Horizontal |
| 13293.41                        | 43.81          | -0.35                  | 43.46           | 54.00           | -10.54      | AV       | Horizontal |
| High Channel (802.11/ 5825 MHz) |                |                        |                 |                 |             |          |            |
| 3994.25                         | 52.01          | -6.89                  | 45.12           | 74.00           | -28.88      | PK       | Vertical   |
| 3994.25                         | 43.37          | -6.89                  | 36.48           | 54.00           | -17.52      | AV       | Vertical   |
| 3999.05                         | 53.07          | -6.89                  | 46.18           | 74.00           | -27.82      | PK       | Horizontal |
| 3999.05                         | 42.59          | -6.89                  | 35.70           | 54.00           | -18.30      | AV       | Horizontal |
| 8918.50                         | 53.24          | -3.80                  | 49.44           | 68.20           | -18.76      | PK       | Vertical   |
| 8918.50                         | 43.91          | -3.80                  | 40.11           | 54.00           | -13.89      | AV       | Vertical   |
| 8910.37                         | 53.69          | -3.80                  | 49.89           | 68.20           | -18.31      | PK       | Horizontal |
| 8910.37                         | 44.43          | -3.80                  | 40.63           | 54.00           | -13.37      | AV       | Horizontal |
| 11630.79                        | 56.08          | -2.92                  | 53.16           | 74.00           | -20.84      | PK       | Vertical   |
| 11630.79                        | 45.37          | -2.92                  | 42.45           | 54.00           | -11.55      | AV       | Vertical   |
| 11650.16                        | 55.80          | -2.92                  | 52.88           | 74.00           | -21.12      | PK       | Horizontal |
| 11650.16                        | 45.49          | -2.92                  | 42.57           | 54.00           | -11.43      | AV       | Horizontal |
| 13284.92                        | 53.59          | -0.35                  | 53.24           | 74.00           | -20.76      | PK       | Vertical   |
| 13284.92                        | 44.83          | -0.35                  | 44.48           | 54.00           | -9.52       | AV       | Vertical   |
| 13284.74                        | 54.37          | -0.35                  | 54.02           | 74.00           | -19.98      | PK       | Horizontal |
| 13284.74                        | 44.62          | -0.35                  | 44.27           | 54.00           | -9.73       | AV       | Horizontal |

Remark: In frequency ranges 18~25GHz no any other harmonic emissions detected which are tested to compliance with the limit. No recording in the test report. No any other emissions level which are attenuated less than 20dB below the limit. No recording in the test report.



### 3.2.7 TEST RESULTS(Band edge Requirements)

Note:1. All mode has been tested, only shown the worst case data.

| Band I(5.15-5.35) GHz |                |                        |                 |                 |             |          |            |
|-----------------------|----------------|------------------------|-----------------|-----------------|-------------|----------|------------|
| Frequency (MHz)       | Reading (dBμV) | Corrected Factor (dB ) | Result (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Detector | Polarity   |
| 802.11n BW20MHz       |                |                        |                 |                 |             |          |            |
| 5150                  | 55.59          | -7.51                  | 48.08           | 74              | -25.92      | PK       | Vertical   |
| 5150                  | 45.33          | -7.51                  | 37.82           | 54              | -16.18      | AV       | Vertical   |
| 5150                  | 56.33          | -7.51                  | 48.82           | 74              | -25.18      | PK       | Horizontal |
| 5150                  | 45.07          | -7.51                  | 37.56           | 54              | -16.44      | AV       | Horizontal |
| 5350                  | 54.52          | -8.19                  | 46.33           | 74              | -27.67      | PK       | Vertical   |
| 5350                  | 44.94          | -8.19                  | 36.75           | 54              | -17.25      | AV       | Vertical   |
| 5350                  | 54.67          | -8.19                  | 46.48           | 74              | -27.52      | PK       | Horizontal |
| 5350                  | 44.68          | -8.19                  | 36.49           | 54              | -17.51      | AV       | Horizontal |
| 802.11n BW40MHz       |                |                        |                 |                 |             |          |            |
| 5150                  | 55.91          | -7.51                  | 48.40           | 74              | -25.60      | Peak     | Vertical   |
| 5150                  | 44.46          | -7.51                  | 36.95           | 54              | -17.05      | AVG      | Vertical   |
| 5150                  | 55.22          | -7.51                  | 47.71           | 74              | -26.29      | Peak     | Horizontal |
| 5150                  | 45.23          | -7.51                  | 37.72           | 54              | -16.28      | AVG      | Horizontal |
| 5350                  | 54.91          | -8.19                  | 46.72           | 74              | -27.28      | Peak     | Vertical   |
| 5350                  | 44.22          | -8.19                  | 36.03           | 54              | -17.97      | AVG      | Vertical   |
| 5350                  | 54.25          | -8.19                  | 46.06           | 74              | -27.94      | Peak     | Horizontal |
| 5350                  | 44.60          | -8.19                  | 36.41           | 54              | -17.59      | AVG      | Horizontal |
| 802.11ac BW80MHz      |                |                        |                 |                 |             |          |            |
| 5150                  | 55.54          | -7.51                  | 48.03           | 74              | -25.97      | Peak     | Vertical   |
| 5150                  | 45.22          | -7.51                  | 37.71           | 54              | -16.29      | AVG      | Vertical   |
| 5150                  | 55.06          | -7.51                  | 47.55           | 74              | -26.45      | Peak     | Horizontal |
| 5150                  | 44.25          | -7.51                  | 36.74           | 54              | -17.26      | AVG      | Horizontal |
| 5350                  | 55.03          | -8.19                  | 46.84           | 74              | -27.16      | Peak     | Vertical   |
| 5350                  | 44.96          | -8.19                  | 36.77           | 54              | -17.23      | AVG      | Vertical   |
| 5350                  | 54.54          | -8.19                  | 46.35           | 74              | -27.65      | Peak     | Horizontal |
| 5350                  | 43.58          | -8.19                  | 35.39           | 54              | -18.61      | AVG      | Horizontal |



| Band IV(5.725-5.85 GHz) |                |                        |                 |                 |             |          |            |
|-------------------------|----------------|------------------------|-----------------|-----------------|-------------|----------|------------|
| Frequency (MHz)         | Reading (dBμV) | Corrected Factor (dB ) | Result (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Detector | Polarity   |
| 802.11n BW20MHz         |                |                        |                 |                 |             |          |            |
| 5460                    | 54.01          | -8.27                  | 45.74           | 74              | -28.26      | PK       | Vertical   |
| 5460                    | 43.42          | -8.27                  | 35.15           | 54              | -18.85      | AV       | Vertical   |
| 5460                    | 54.02          | -8.27                  | 45.75           | 74              | -28.25      | PK       | Horizontal |
| 5460                    | 42.84          | -8.27                  | 34.57           | 54              | -19.43      | AV       | Horizontal |
| 7250                    | 55.19          | -6.33                  | 48.86           | 74              | -25.14      | PK       | Vertical   |
| 7250                    | 44.95          | -6.33                  | 38.62           | 54              | -15.38      | AV       | Vertical   |
| 7250                    | 55.38          | -6.33                  | 49.05           | 74              | -24.95      | PK       | Horizontal |
| 7250                    | 43.86          | -6.33                  | 37.53           | 54              | -16.47      | AV       | Horizontal |
| 802.11n BW40MHz         |                |                        |                 |                 |             |          |            |
| 5460                    | 53.11          | -8.27                  | 44.84           | 74              | -29.16      | PK       | Vertical   |
| 5460                    | 43.75          | -8.27                  | 35.48           | 54              | -18.52      | AV       | Vertical   |
| 5460                    | 54.09          | -8.27                  | 45.82           | 74              | -28.18      | PK       | Horizontal |
| 5460                    | 43.72          | -8.27                  | 35.45           | 54              | -18.55      | AV       | Horizontal |
| 7250                    | 55.10          | -6.33                  | 48.77           | 74              | -25.23      | PK       | Vertical   |
| 7250                    | 43.96          | -6.33                  | 37.63           | 54              | -16.37      | AV       | Vertical   |
| 7250                    | 54.10          | -6.33                  | 47.77           | 74              | -26.23      | PK       | Horizontal |
| 7250                    | 43.75          | -6.33                  | 37.42           | 54              | -16.58      | AV       | Horizontal |
| 802.11ac BW80MHz        |                |                        |                 |                 |             |          |            |
| 5460                    | 53.40          | -8.27                  | 45.13           | 74              | -28.87      | PK       | Vertical   |
| 5460                    | 43.88          | -8.27                  | 35.61           | 54              | -18.39      | AV       | Vertical   |
| 5460                    | 54.29          | -8.27                  | 46.02           | 74              | -27.98      | PK       | Horizontal |
| 5460                    | 43.74          | -8.27                  | 35.47           | 54              | -18.53      | AV       | Horizontal |
| 7250                    | 54.07          | -6.33                  | 47.74           | 74              | -26.26      | PK       | Vertical   |
| 7250                    | 44.41          | -6.33                  | 38.08           | 54              | -15.92      | AV       | Vertical   |
| 7250                    | 55.40          | -6.33                  | 49.07           | 74              | -24.93      | PK       | Horizontal |
| 7250                    | 43.87          | -6.33                  | 37.54           | 54              | -16.46      | AV       | Horizontal |



## 4. POWER SPECTRAL DENSITY TEST

### 4.1 LIMIT

1. For mobile and portable client devices in the 5.15-5.25 GHz band, , the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.
2. For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.
3. For the band 5.725-5.850 GHz, the peak power spectral density shall not exceed 30 dBm in any 500KHz band. If transmitting antenna directional gain is greater than 6 dBi, both the maximum conducted output power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

### 4.2 TEST PROCEDURE

1. The setting follows Method SA-1 of FCC KDB 789033 D02 General U-NII Test Procedures New Rules v02r01.

For devices operating in the band, the rules specify a measurement bandwidth of 500 kHz. Many spectrum analyzers do not have 500 kHz RBW, thus 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.I.a).
- b) Set  $VBW \geq 3 RBW$ .
- c) If measurement bandwidth of Maximum PSD is specified in 500 kHz, add  $10 \log (500\text{kHz}/RBW)$  to the measured result, whereas  $RBW (< 500 \text{ kHz})$  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  $10 \log (1\text{MHz}/RBW)$  to the measured result, whereas  $RBW (< 1 \text{ MHz})$  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  $RBW=100 \text{ KHz}$  is available on nearly all spectrum analyzers.

### 4.3 DEVIATION FROM STANDARD

No deviation.



#### 4.4 TEST SETUP



#### 4.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.1 Unless otherwise a special operating condition is specified in the follows during the testing.

#### 4.6 TEST RESULTS

For the measurement records, refer to the appendix I.



## 5. BANDWIDTH MEASUREMENT

### 5.1 EMISSION BANDWIDTH (EBW) 26 BANDWID PROCEDURES / LIMIT

The following procedure shall be used for measuring 26 bandwidth.

#### 5.1.1 TEST PROCEDURE

1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.
2. Set RBW = approximately 1% of the emission bandwidth.
3. Set the VBW  $\geq$  RBW.
4. Detector = Peak.
5. Trace mode = max hold.
6. Measure the maximum width of the emission that is 26 dB down from the peak of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

#### 5.1.2 DEVIATION FROM STANDARD

No deviation.

#### 5.1.3 TEST SETUP



#### 5.1.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

#### 5.1.5 TEST RESULTS

For the measurement records, refer to the appendix I.



## 5.2 OCCUPIED BANDWIDTH ( 99%) TEST APPLIED PROCEDURES / LIMIT

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

### 5.2.1 TEST PROCEDURE

1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures v02r01.

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.

### 5.2.2 DEVIATION FROM STANDARD

No deviation.

### 5.2.3 TEST SETUP



### 5.2.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

### 5.2.5 TEST RESULTS

For the measurement records, refer to the appendix I.



### 5.3 MINIMUM EMISSION BANDWIDTH(6 DB) PROCEDURES / LIMIT

Section 15.407(e) specifies the minimum 6 dB emission bandwidth of at least 500 KHz for the band 5.725-5.85 GHz. The following procedure shall be used for measuring this bandwidth.

#### 5.3.1 TEST PROCEDURE

1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures v02r01.
  - 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.

#### 5.3.2 DEVIATION FROM STANDARD

No deviation.

#### 5.3.3 TEST SETUP



#### 5.3.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

#### 5.3.5 TEST RESULTS

For the measurement records, refer to the appendix I.



## 6. MAXIMUM CONDUCTED OUTPUT POWER

### 6.1 LIMIT

For mobile and portable client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or  $11 \text{ dBm} + 10 \log B$ , where B is the 26 dB emission bandwidth in megahertz, If transmitting antennas of directional gain greater than 6 dBi are used.

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. If transmitting antennas of directional gain greater than 6 dBi are used.

| FCC Part15 (15.407) , Subpart E |              |                                                                                       |                        |        |
|---------------------------------|--------------|---------------------------------------------------------------------------------------|------------------------|--------|
| Section                         | Test Item    | Limit                                                                                 | Frequency Range (MHz)  | Result |
| 15.407(a) (1) (iv)              | Output Power | 0.25 watt                                                                             | 5150-5250              | PASS   |
|                                 |              | The lesser of 250 mW or $11 \text{ dBm} + 10 \log (26 \text{ dB emission bandwidth})$ | 5250-5350<br>5470-5725 |        |
| 15.407(a) (3)                   |              | 1 watt                                                                                | 5725-5825              |        |

### 6.2 TEST PROCEDURE

The EUT was directly connected to the Power Sensor&PC

### 6.3 DEVIATION FROM STANDARD

No deviation.

### 6.4 TEST SETUP



### 6.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 5 Unless otherwise a special operating condition is specified in the follows during the testing.

### 6.6 TEST RESULTS

For the measurement records, refer to the appendix I.



## **7. AUTOMATICALLY DISCONTINUE TRANSMISSION**

### **7.1 LIMIT OF AUTOMATICALLY DISCONTINUE TRANSMISSION**

The device shall automatically discontinue transmission in case of either absence of information to transmit or operational failure. These provisions are not intended to preclude the transmission of control or signaling information or the use of repetitive codes used by certain digital technologies to complete frame or burst intervals. Applicants shall include in their application for equipment authorization to describe how this requirement is met.

### **7.2 TEST RESULT OF AUTOMATICALLY DISCONTINUE TRANSMISSION**

During no any information transmission, the EUT can automatically discontinue transmission and become standby mode for power saving. The EUT can detect the controlling signal of ACK message transmitting from remote device and verify whether it shall resend or discontinue transmission



## **8. ANTENNA REQUIREMENT**

### **8.1 STANDARD REQUIREMENT**

Part 15.203 requirement: For intentional device, according to 15.203: an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

### **8.2 EUT ANTENNA**

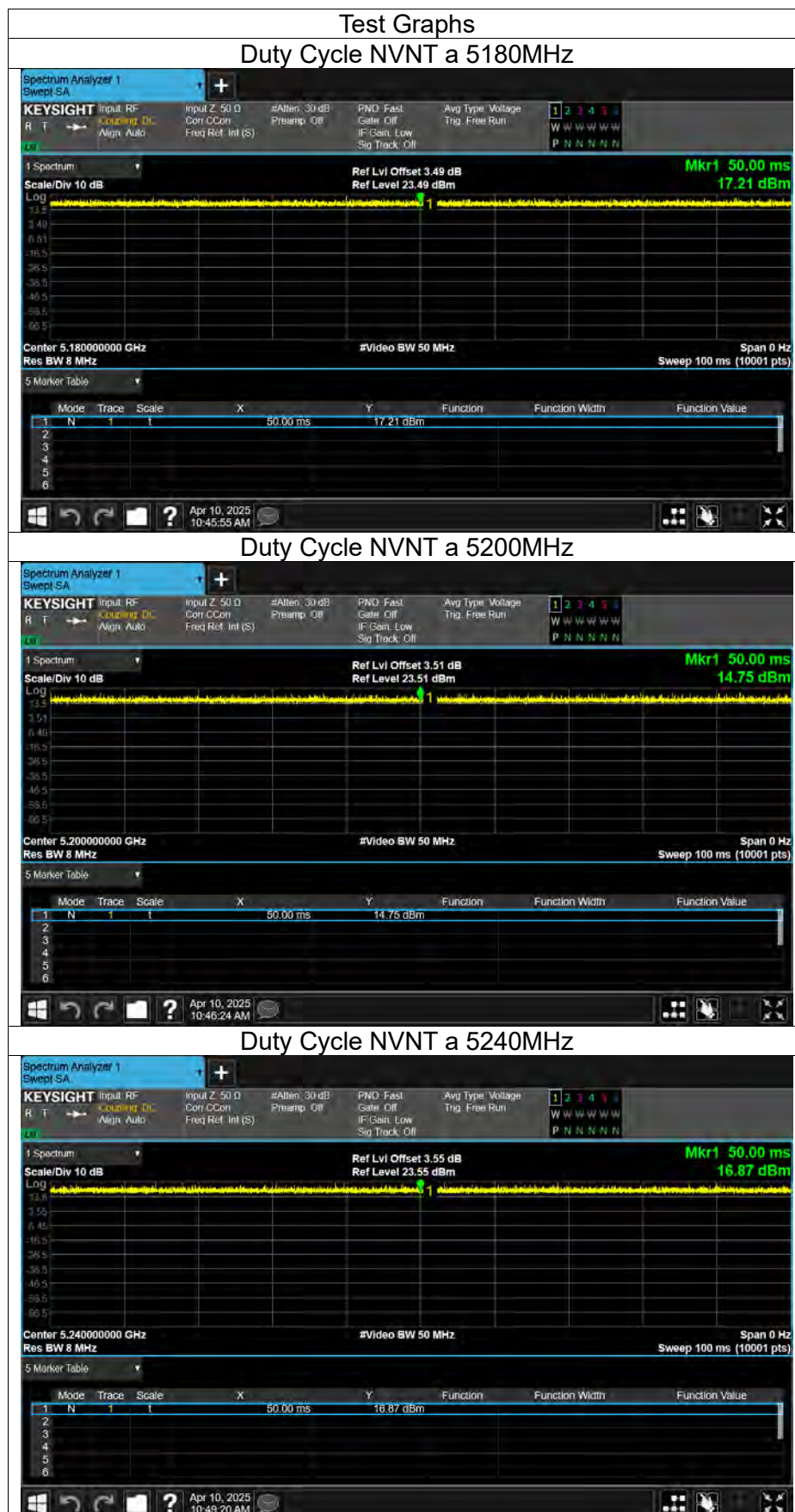
The EUT antenna is FPC Antenna. It comply with the standard requirement.

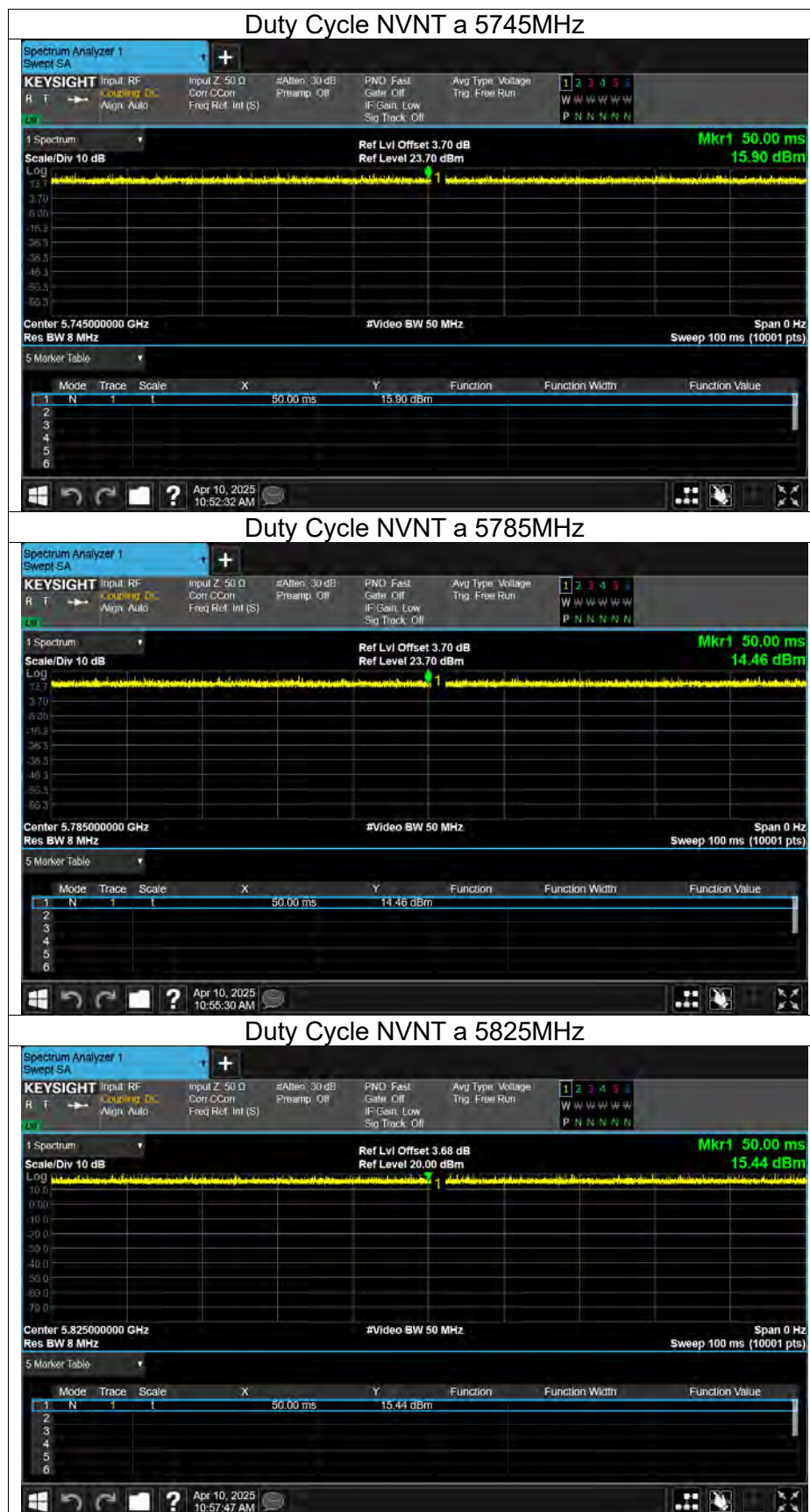


## APPENDIX I - TEST RESULTS

### Duty Cycle

| Condition | Mode | Frequency (MHz) | Tx On (ms) | Period (ms) | Duty Cycle (%) | Correction Factor (dB) | 1/T (kHz) |
|-----------|------|-----------------|------------|-------------|----------------|------------------------|-----------|
| NVNT      | a    | 5180            | 0          | 0           | 100            | 0                      | 0.01      |
| NVNT      | a    | 5200            | 0          | 0           | 100            | 0                      | 0.01      |
| NVNT      | a    | 5240            | 0          | 0           | 100            | 0                      | 0.01      |
| NVNT      | a    | 5745            | 0          | 0           | 100            | 0                      | 0.01      |
| NVNT      | a    | 5785            | 0          | 0           | 100            | 0                      | 0.01      |
| NVNT      | a    | 5825            | 0          | 0           | 100            | 0                      | 0.01      |
| NVNT      | n20  | 5180            | 0          | 0           | 100            | 0                      | 0.01      |
| NVNT      | n20  | 5200            | 0          | 0           | 100            | 0                      | 0.01      |
| NVNT      | n20  | 5240            | 0          | 0           | 100            | 0                      | 0.01      |
| NVNT      | n20  | 5745            | 0          | 0           | 100            | 0                      | 0.01      |
| NVNT      | n20  | 5785            | 0          | 0           | 100            | 0                      | 0.01      |
| NVNT      | n20  | 5825            | 0          | 0           | 100            | 0                      | 0.01      |
| NVNT      | n40  | 5190            | 0          | 0           | 100            | 0                      | 0.01      |
| NVNT      | n40  | 5230            | 0          | 0           | 100            | 0                      | 0.01      |
| NVNT      | n40  | 5755            | 0          | 0           | 100            | 0                      | 0.01      |
| NVNT      | n40  | 5795            | 0          | 0           | 100            | 0                      | 0.01      |
| NVNT      | ac20 | 5180            | 0          | 0           | 100            | 0                      | 0.01      |
| NVNT      | ac20 | 5200            | 0          | 0           | 100            | 0                      | 0.01      |
| NVNT      | ac20 | 5240            | 0          | 0           | 100            | 0                      | 0.01      |
| NVNT      | ac20 | 5745            | 0          | 0           | 100            | 0                      | 0.01      |
| NVNT      | ac20 | 5785            | 0          | 0           | 100            | 0                      | 0.01      |
| NVNT      | ac20 | 5825            | 0          | 0           | 100            | 0                      | 0.01      |
| NVNT      | ac40 | 5190            | 0          | 0           | 100            | 0                      | 0.01      |
| NVNT      | ac40 | 5230            | 0          | 0           | 100            | 0                      | 0.01      |
| NVNT      | ac40 | 5755            | 0          | 0           | 100            | 0                      | 0.01      |
| NVNT      | ac40 | 5795            | 0          | 0           | 100            | 0                      | 0.01      |
| NVNT      | ax20 | 5180            | 0          | 0           | 100            | 0                      | 0.01      |
| NVNT      | ax20 | 5200            | 0          | 0           | 100            | 0                      | 0.01      |
| NVNT      | ax20 | 5240            | 0          | 0           | 100            | 0                      | 0.01      |
| NVNT      | ax20 | 5745            | 0          | 0           | 100            | 0                      | 0.01      |
| NVNT      | ax20 | 5785            | 0          | 0           | 100            | 0                      | 0.01      |
| NVNT      | ax20 | 5825            | 0          | 0           | 100            | 0                      | 0.01      |
| NVNT      | ax40 | 5190            | 0          | 0           | 100            | 0                      | 0.01      |
| NVNT      | ax40 | 5230            | 0          | 0           | 100            | 0                      | 0.01      |
| NVNT      | ax40 | 5755            | 0          | 0           | 100            | 0                      | 0.01      |
| NVNT      | ax40 | 5795            | 0          | 0           | 100            | 0                      | 0.01      |







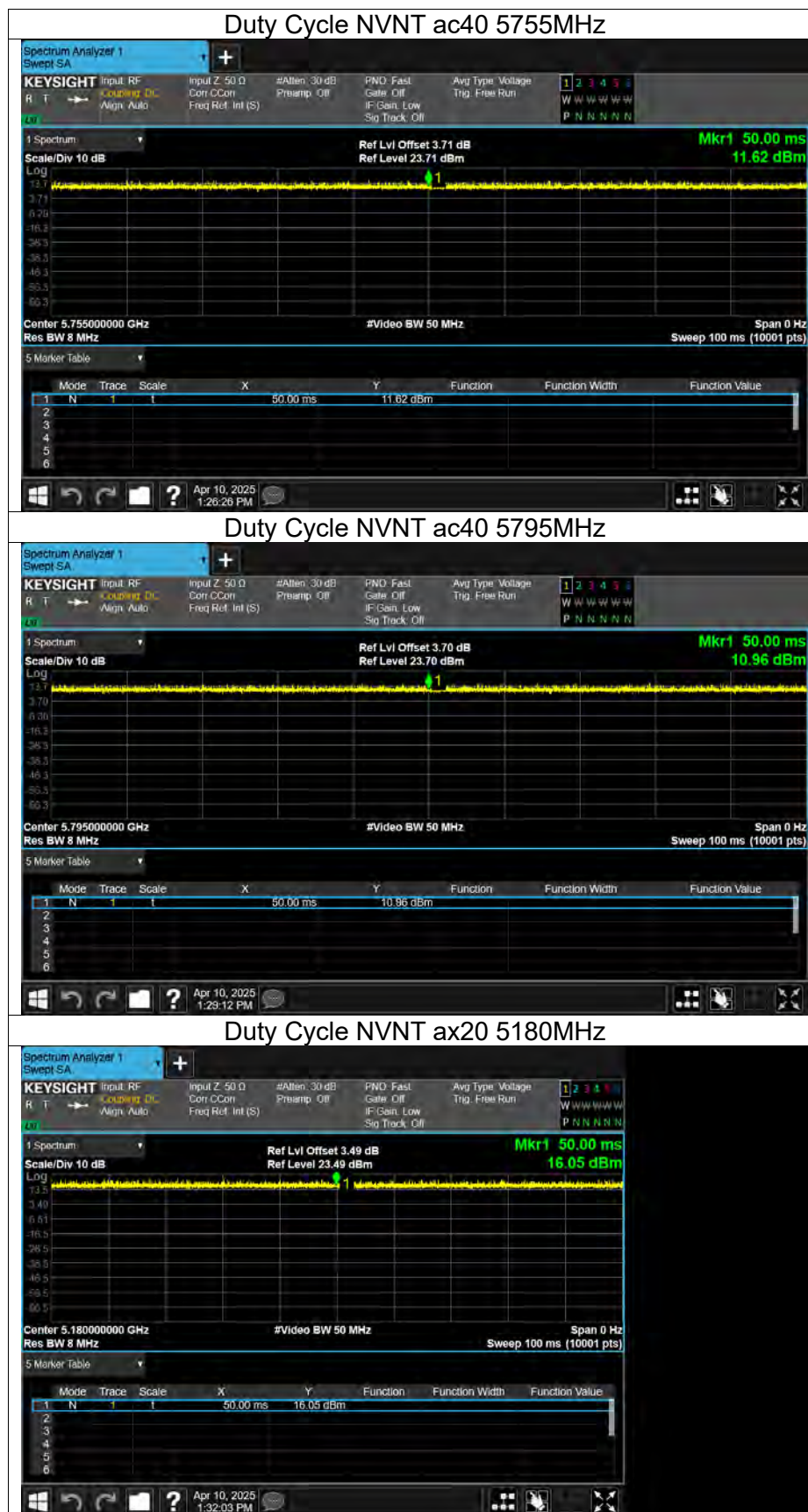




















## Maximum Conducted Output Power

| Condition | Mode | Frequency (MHz) | Conducted Power (dBm) | Duty Factor (dB) | Total Power (dBm) | Limit (dBm) | Verdict |
|-----------|------|-----------------|-----------------------|------------------|-------------------|-------------|---------|
| NVNT      | a    | 5180            | 13.18                 | 0                | 13.18             | 23.8        | Pass    |
| NVNT      | a    | 5200            | 12.83                 | 0                | 12.83             | 23.8        | Pass    |
| NVNT      | a    | 5240            | 13.06                 | 0                | 13.06             | 23.8        | Pass    |
| NVNT      | a    | 5745            | 11.21                 | 0                | 11.21             | 29.8        | Pass    |
| NVNT      | a    | 5785            | 11.13                 | 0                | 11.13             | 29.8        | Pass    |
| NVNT      | a    | 5825            | 11.21                 | 0                | 11.21             | 29.8        | Pass    |
| NVNT      | n20  | 5180            | 11.76                 | 0                | 11.76             | 23.8        | Pass    |
| NVNT      | n20  | 5200            | 11.72                 | 0                | 11.72             | 23.8        | Pass    |
| NVNT      | n20  | 5240            | 11.48                 | 0                | 11.48             | 23.8        | Pass    |
| NVNT      | n20  | 5745            | 9.91                  | 0                | 9.91              | 29.8        | Pass    |
| NVNT      | n20  | 5785            | 9.64                  | 0                | 9.64              | 29.8        | Pass    |
| NVNT      | n20  | 5825            | 9.6                   | 0                | 9.6               | 29.8        | Pass    |
| NVNT      | n40  | 5190            | 11.58                 | 0                | 11.58             | 23.8        | Pass    |
| NVNT      | n40  | 5230            | 11.87                 | 0                | 11.87             | 23.8        | Pass    |
| NVNT      | n40  | 5755            | 10.02                 | 0                | 10.02             | 29.8        | Pass    |
| NVNT      | n40  | 5795            | 9.85                  | 0                | 9.85              | 29.8        | Pass    |
| NVNT      | ac20 | 5180            | 11.33                 | 0                | 11.33             | 23.8        | Pass    |
| NVNT      | ac20 | 5200            | 11.65                 | 0                | 11.65             | 23.8        | Pass    |
| NVNT      | ac20 | 5240            | 11.91                 | 0                | 11.91             | 23.8        | Pass    |
| NVNT      | ac20 | 5745            | 10.02                 | 0                | 10.02             | 29.8        | Pass    |
| NVNT      | ac20 | 5785            | 9.84                  | 0                | 9.84              | 29.8        | Pass    |
| NVNT      | ac20 | 5825            | 10.05                 | 0                | 10.05             | 29.8        | Pass    |
| NVNT      | ac40 | 5190            | 11.63                 | 0                | 11.63             | 23.8        | Pass    |
| NVNT      | ac40 | 5230            | 11.8                  | 0                | 11.8              | 23.8        | Pass    |
| NVNT      | ac40 | 5755            | 9.86                  | 0                | 9.86              | 29.8        | Pass    |
| NVNT      | ac40 | 5795            | 9.91                  | 0                | 9.91              | 29.8        | Pass    |
| NVNT      | ax20 | 5180            | 11.72                 | 0                | 11.72             | 23.8        | Pass    |
| NVNT      | ax20 | 5200            | 12.04                 | 0                | 12.04             | 23.8        | Pass    |
| NVNT      | ax20 | 5240            | 12.19                 | 0                | 12.19             | 23.8        | Pass    |
| NVNT      | ax20 | 5745            | 10.22                 | 0                | 10.22             | 29.8        | Pass    |
| NVNT      | ax20 | 5785            | 10.27                 | 0                | 10.27             | 29.8        | Pass    |
| NVNT      | ax20 | 5825            | 10.32                 | 0                | 10.32             | 29.8        | Pass    |
| NVNT      | ax40 | 5190            | 11.8                  | 0                | 11.8              | 23.8        | Pass    |
| NVNT      | ax40 | 5230            | 12.15                 | 0                | 12.15             | 23.8        | Pass    |
| NVNT      | ax40 | 5755            | 10.17                 | 0                | 10.17             | 29.8        | Pass    |
| NVNT      | ax40 | 5795            | 10.13                 | 0                | 10.13             | 29.8        | Pass    |



-26dB Bandwidth

| Condition | Mode | Frequency (MHz) | -26 dB Bandwidth (MHz) | Verdict |
|-----------|------|-----------------|------------------------|---------|
| NVNT      | a    | 5180            | 19.781                 | Pass    |
| NVNT      | a    | 5200            | 19.958                 | Pass    |
| NVNT      | a    | 5240            | 19.614                 | Pass    |
| NVNT      | n20  | 5180            | 20.261                 | Pass    |
| NVNT      | n20  | 5200            | 20.011                 | Pass    |
| NVNT      | n20  | 5240            | 20.226                 | Pass    |
| NVNT      | n40  | 5190            | 39.717                 | Pass    |
| NVNT      | n40  | 5230            | 39.303                 | Pass    |
| NVNT      | ac20 | 5180            | 20.232                 | Pass    |
| NVNT      | ac20 | 5200            | 20.12                  | Pass    |
| NVNT      | ac20 | 5240            | 20.057                 | Pass    |
| NVNT      | ac40 | 5190            | 39.523                 | Pass    |
| NVNT      | ac40 | 5230            | 39.837                 | Pass    |
| NVNT      | ax20 | 5180            | 19.872                 | Pass    |
| NVNT      | ax20 | 5200            | 19.823                 | Pass    |
| NVNT      | ax20 | 5240            | 19.87                  | Pass    |
| NVNT      | ax40 | 5190            | 39.228                 | Pass    |
| NVNT      | ax40 | 5230            | 39.192                 | Pass    |



## Test Graphs

### -26dB Bandwidth NVNT a 5180MHz



### -26dB Bandwidth NVNT a 5200MHz



### -26dB Bandwidth NVNT a 5240MHz

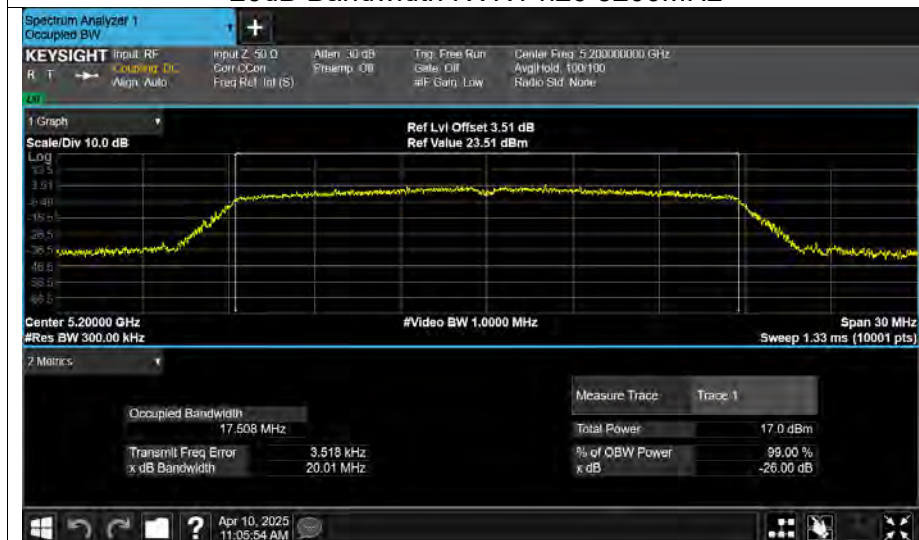




### -26dB Bandwidth NVNT n20 5180MHz



### -26dB Bandwidth NVNT n20 5200MHz



### -26dB Bandwidth NVNT n20 5240MHz





### -26dB Bandwidth NVNT n40 5190MHz



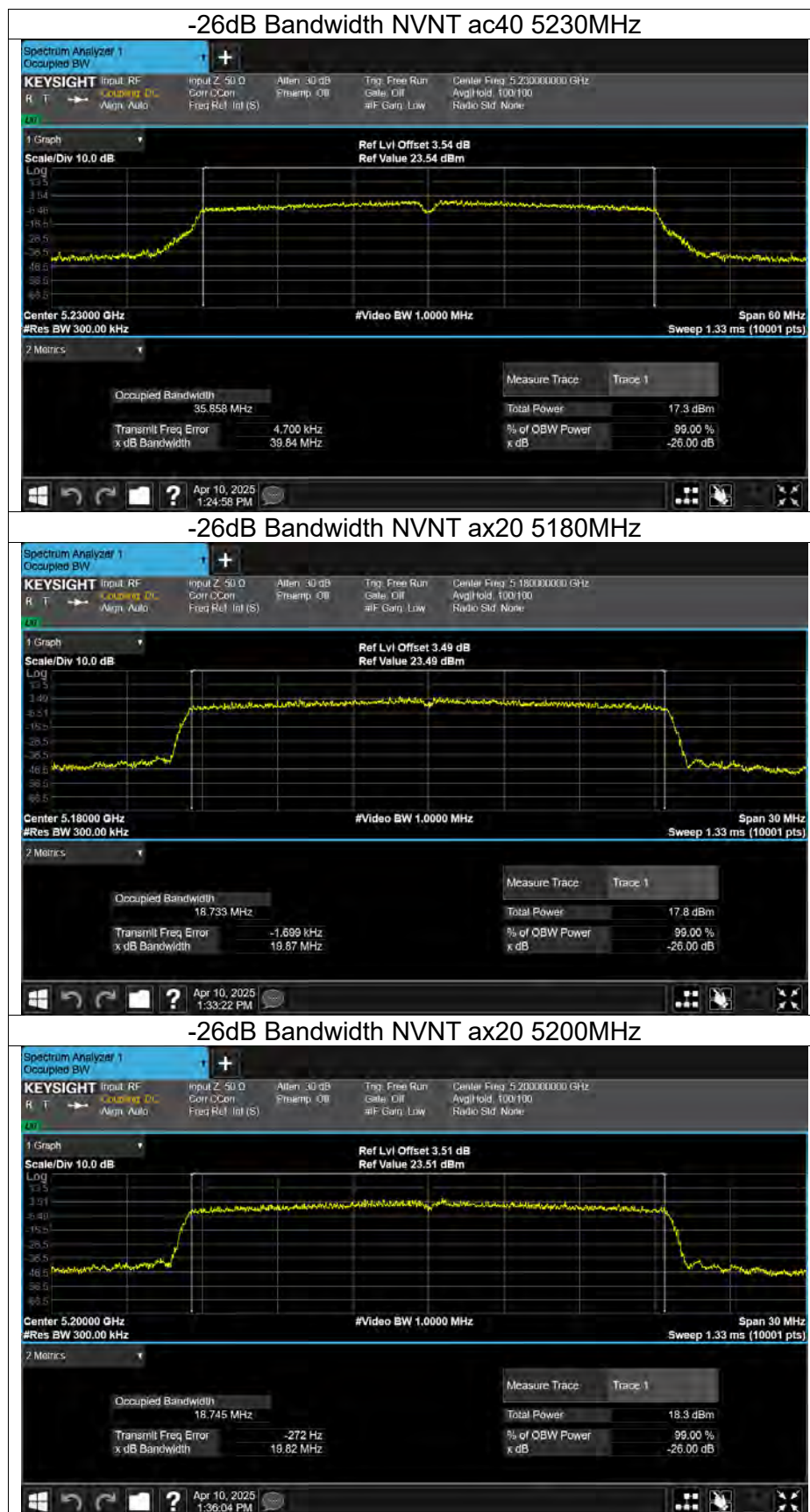
### -26dB Bandwidth NVNT n40 5230MHz

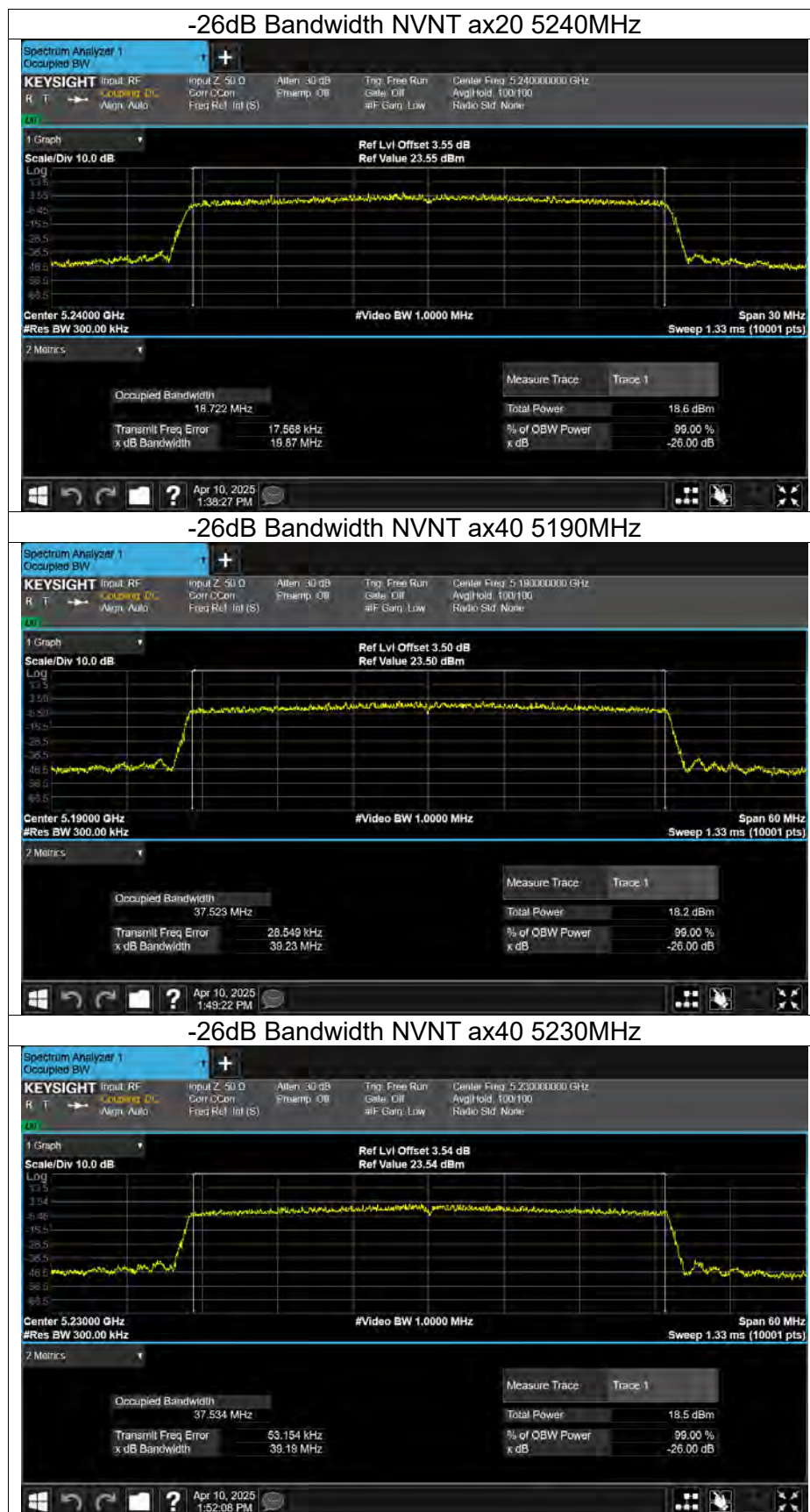


### -26dB Bandwidth NVNT ac20 5180MHz











## Occupied Channel Bandwidth

| Condition | Mode | Frequency (MHz) | 99% OBW (MHz) |
|-----------|------|-----------------|---------------|
| NVNT      | a    | 5180            | 16.272        |
| NVNT      | a    | 5200            | 16.327        |
| NVNT      | a    | 5240            | 16.349        |
| NVNT      | a    | 5745            | 16.319        |
| NVNT      | a    | 5785            | 16.293        |
| NVNT      | a    | 5825            | 16.284        |
| NVNT      | n20  | 5180            | 17.47         |
| NVNT      | n20  | 5200            | 17.447        |
| NVNT      | n20  | 5240            | 17.444        |
| NVNT      | n20  | 5745            | 17.471        |
| NVNT      | n20  | 5785            | 17.465        |
| NVNT      | n20  | 5825            | 17.448        |
| NVNT      | n40  | 5190            | 35.881        |
| NVNT      | n40  | 5230            | 35.866        |
| NVNT      | n40  | 5755            | 35.949        |
| NVNT      | n40  | 5795            | 35.903        |
| NVNT      | ac20 | 5180            | 17.446        |
| NVNT      | ac20 | 5200            | 17.469        |
| NVNT      | ac20 | 5240            | 17.453        |
| NVNT      | ac20 | 5745            | 17.461        |
| NVNT      | ac20 | 5785            | 17.468        |
| NVNT      | ac20 | 5825            | 17.454        |
| NVNT      | ac40 | 5190            | 35.832        |
| NVNT      | ac40 | 5230            | 35.898        |
| NVNT      | ac40 | 5755            | 35.909        |
| NVNT      | ac40 | 5795            | 35.877        |
| NVNT      | ax20 | 5180            | 18.741        |
| NVNT      | ax20 | 5200            | 18.759        |
| NVNT      | ax20 | 5240            | 18.743        |
| NVNT      | ax20 | 5745            | 18.713        |
| NVNT      | ax20 | 5785            | 18.692        |
| NVNT      | ax20 | 5825            | 18.712        |
| NVNT      | ax40 | 5190            | 37.57         |
| NVNT      | ax40 | 5230            | 37.57         |
| NVNT      | ax40 | 5755            | 37.653        |
| NVNT      | ax40 | 5795            | 37.541        |



## Test Graphs

### OBW NVNT a 5180MHz



### OBW NVNT a 5200MHz



### OBW NVNT a 5240MHz





### OBW NVNT a 5745MHz



### OBW NVNT a 5785MHz



### OBW NVNT a 5825MHz





### OBW NVNT n20 5180MHz



### OBW NVNT n20 5200MHz



### OBW NVNT n20 5240MHz





### OBW NVNT n20 5745MHz

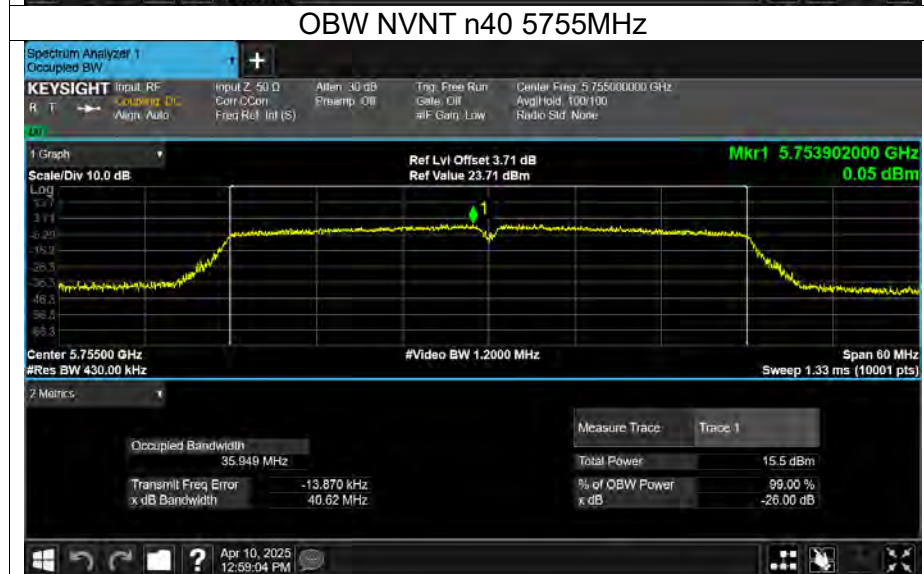
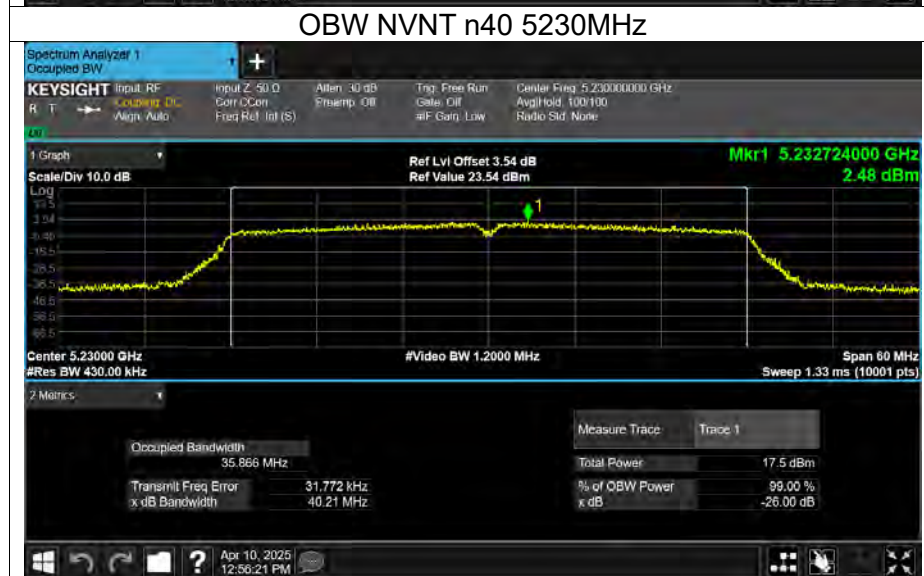
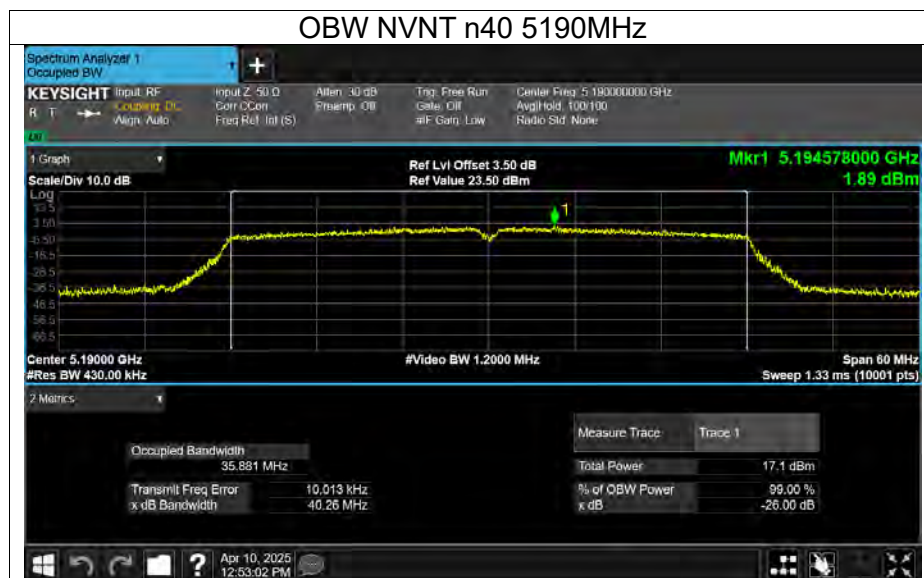


### OBW NVNT n20 5785MHz



### OBW NVNT n20 5825MHz







### OBW NVNT n40 5795MHz

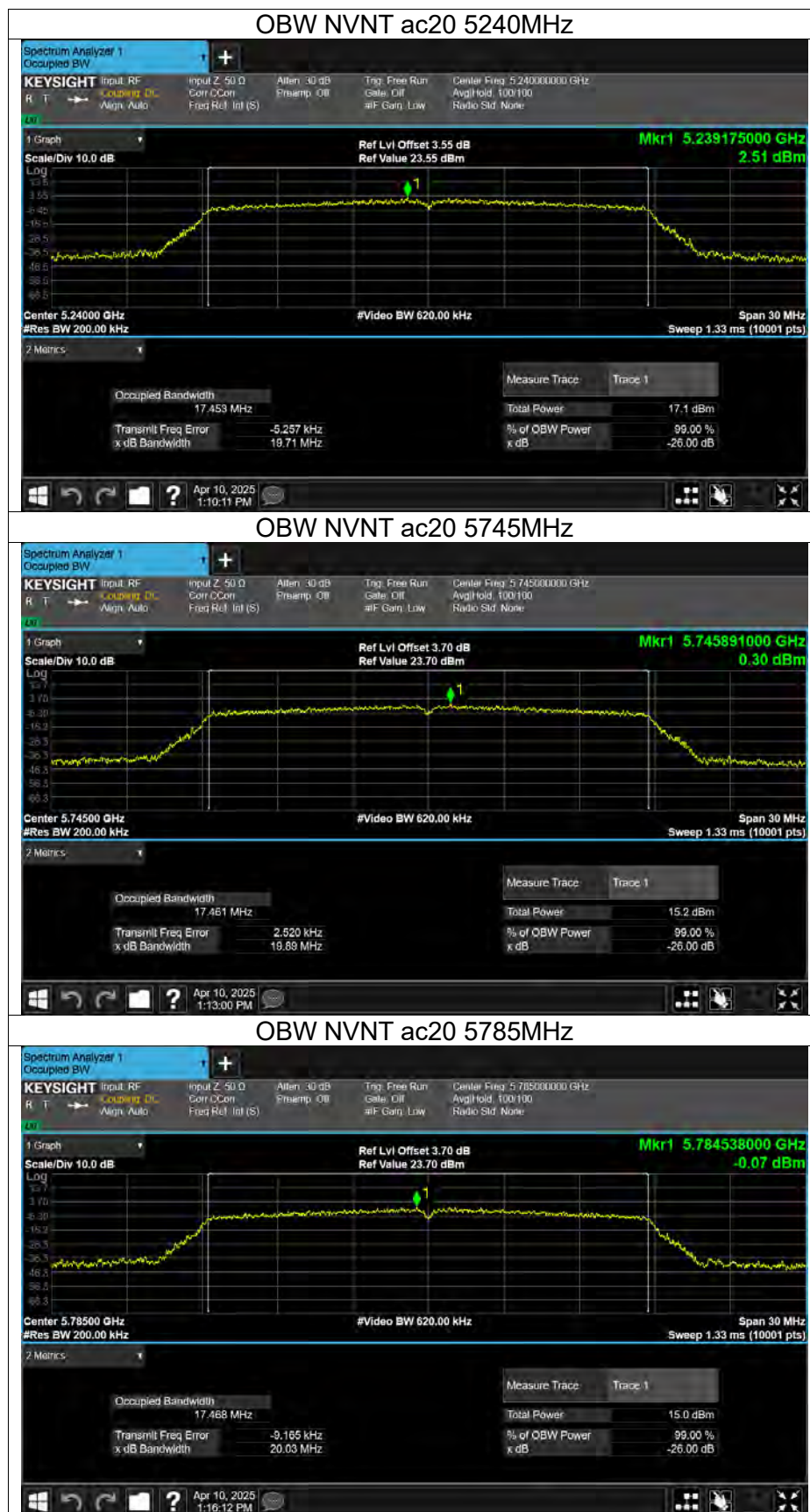


### OBW NVNT ac20 5180MHz



### OBW NVNT ac20 5200MHz







### OBW NVNT ac20 5825MHz

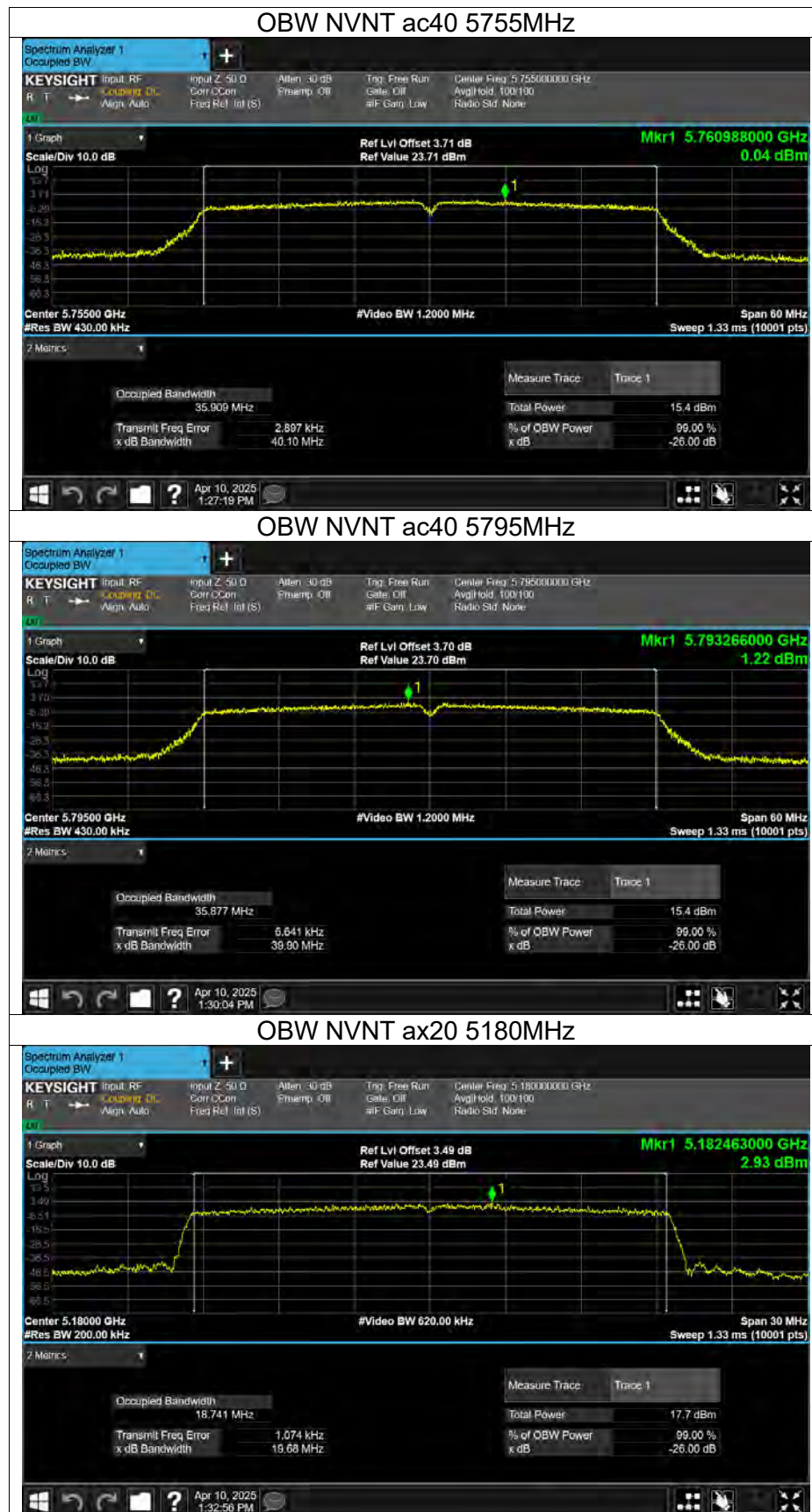


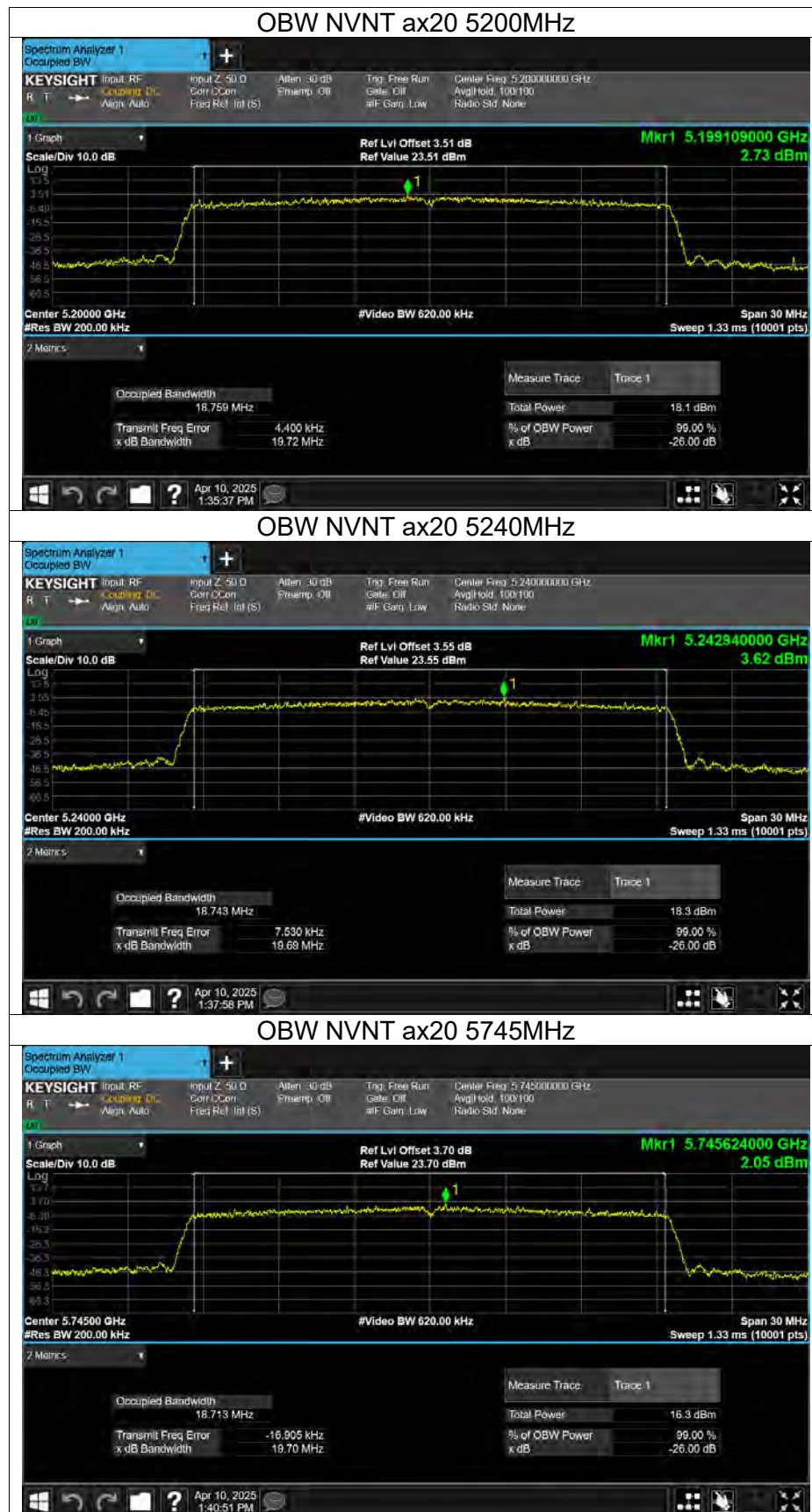
### OBW NVNT ac40 5190MHz

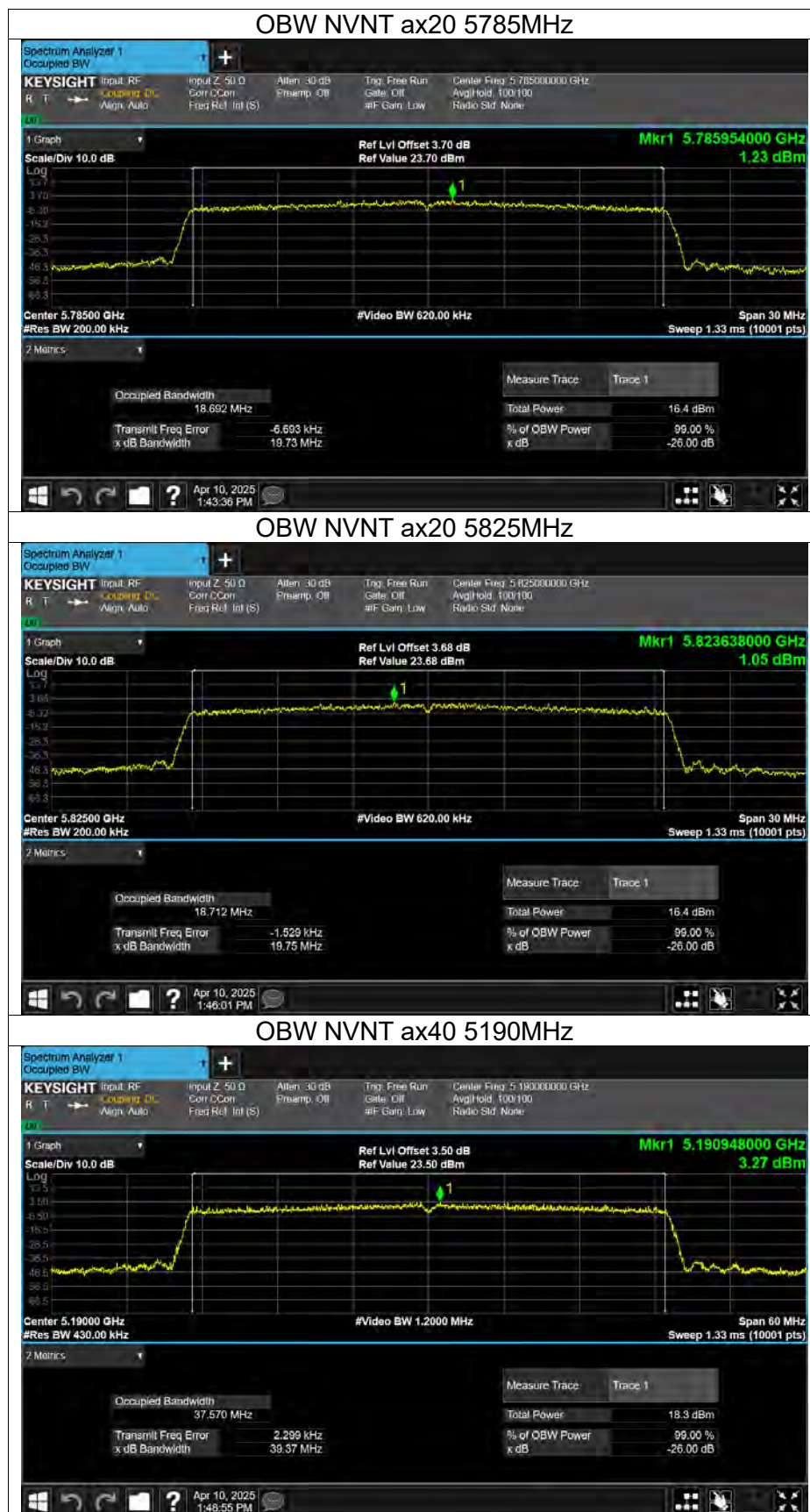


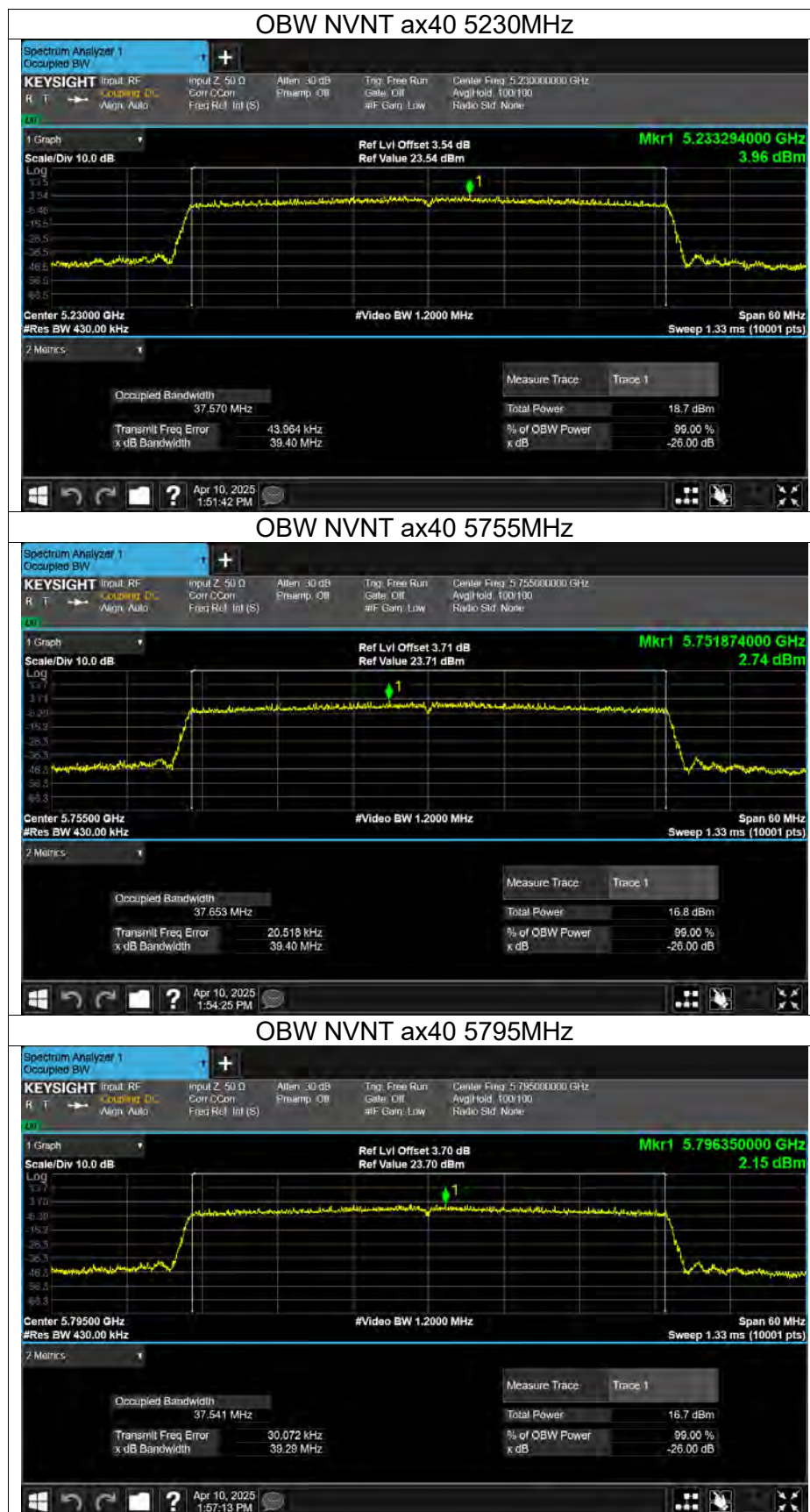
### OBW NVNT ac40 5230MHz













## Maximum Power Spectral Density Level

| Condition | Mode | Frequency (MHz) | Conducted PSD (dBm/MHz) | Duty Factor (dB) | Total PSD (dBm/MHz) | Limit (dBm/MHz) | Verdict |
|-----------|------|-----------------|-------------------------|------------------|---------------------|-----------------|---------|
| NVNT      | a    | 5180            | 2.23                    | 0                | 2.23                | 10.8            | Pass    |
| NVNT      | a    | 5200            | 0.04                    | 0                | 0.04                | 10.8            | Pass    |
| NVNT      | a    | 5240            | 2.35                    | 0                | 2.35                | 10.8            | Pass    |
| NVNT      | n20  | 5180            | 0.54                    | 0                | 0.54                | 10.8            | Pass    |
| NVNT      | n20  | 5200            | 0.93                    | 0                | 0.93                | 10.8            | Pass    |
| NVNT      | n20  | 5240            | 1.19                    | 0                | 1.19                | 10.8            | Pass    |
| NVNT      | n40  | 5190            | -2.44                   | 0                | -2.44               | 10.8            | Pass    |
| NVNT      | n40  | 5230            | -2.16                   | 0                | -2.16               | 10.8            | Pass    |
| NVNT      | ac20 | 5180            | 0.3                     | 0                | 0.3                 | 10.8            | Pass    |
| NVNT      | ac20 | 5200            | 0.91                    | 0                | 0.91                | 10.8            | Pass    |
| NVNT      | ac20 | 5240            | 1.19                    | 0                | 1.19                | 10.8            | Pass    |
| NVNT      | ac40 | 5190            | -2.33                   | 0                | -2.33               | 10.8            | Pass    |
| NVNT      | ac40 | 5230            | -2.26                   | 0                | -2.26               | 10.8            | Pass    |
| NVNT      | ax20 | 5180            | 0.05                    | 0                | 0.05                | 10.8            | Pass    |
| NVNT      | ax20 | 5200            | 0.75                    | 0                | 0.75                | 10.8            | Pass    |
| NVNT      | ax20 | 5240            | 1.23                    | 0                | 1.23                | 10.8            | Pass    |
| NVNT      | ax40 | 5190            | -2.68                   | 0                | -2.68               | 10.8            | Pass    |
| NVNT      | ax40 | 5230            | -1.5                    | 0                | -1.5                | 10.8            | Pass    |





PSD NVNT n20 5200MHz



PSD NVNT n20 5240MHz



PSD NVNT n40 5190MHz



PSD NVNT n40 5230MHz



PSD NVNT ac20 5180MHz



PSD NVNT ac20 5200MHz



PSD NVNT ac20 5240MHz



PSD NVNT ac40 5190MHz



PSD NVNT ac40 5230MHz



PSD NVNT ax20 5180MHz



PSD NVNT ax20 5200MHz



PSD NVNT ax20 5240MHz



PSD NVNT ax40 5190MHz



PSD NVNT ax40 5230MHz





| Condition | Mode | Frequency (MHz) | Conducted PSD (dBm /500kHz) | Duty Factor (dB) | Total PSD (dBm/ 500kHz) | Limit (dBm/500kHz) | Verdict |
|-----------|------|-----------------|-----------------------------|------------------|-------------------------|--------------------|---------|
| NVNT      | a    | 5745            | -2.83                       | 0                | -2.83                   | 29.8               | Pass    |
| NVNT      | a    | 5785            | -2.85                       | 0                | -2.85                   | 29.8               | Pass    |
| NVNT      | a    | 5825            | -2.39                       | 0                | -2.39                   | 29.8               | Pass    |
| NVNT      | n20  | 5745            | -3.97                       | 0                | -3.97                   | 29.8               | Pass    |
| NVNT      | n20  | 5785            | -4.19                       | 0                | -4.19                   | 29.8               | Pass    |
| NVNT      | n20  | 5825            | -4.65                       | 0                | -4.65                   | 29.8               | Pass    |
| NVNT      | n40  | 5755            | -6.86                       | 0                | -6.86                   | 29.8               | Pass    |
| NVNT      | n40  | 5795            | -7.2                        | 0                | -7.2                    | 29.8               | Pass    |
| NVNT      | ac20 | 5745            | -3.92                       | 0                | -3.92                   | 29.8               | Pass    |
| NVNT      | ac20 | 5785            | -4.19                       | 0                | -4.19                   | 29.8               | Pass    |
| NVNT      | ac20 | 5825            | -4.06                       | 0                | -4.06                   | 29.8               | Pass    |
| NVNT      | ac40 | 5755            | -7.52                       | 0                | -7.52                   | 29.8               | Pass    |
| NVNT      | ac40 | 5795            | -6.88                       | 0                | -6.88                   | 29.8               | Pass    |
| NVNT      | ax20 | 5745            | -4.51                       | 0                | -4.51                   | 29.8               | Pass    |
| NVNT      | ax20 | 5785            | -4.5                        | 0                | -4.5                    | 29.8               | Pass    |
| NVNT      | ax20 | 5825            | -4.54                       | 0                | -4.54                   | 29.8               | Pass    |
| NVNT      | ax40 | 5755            | -7.24                       | 0                | -7.24                   | 29.8               | Pass    |
| NVNT      | ax40 | 5795            | -7.62                       | 0                | -7.62                   | 29.8               | Pass    |



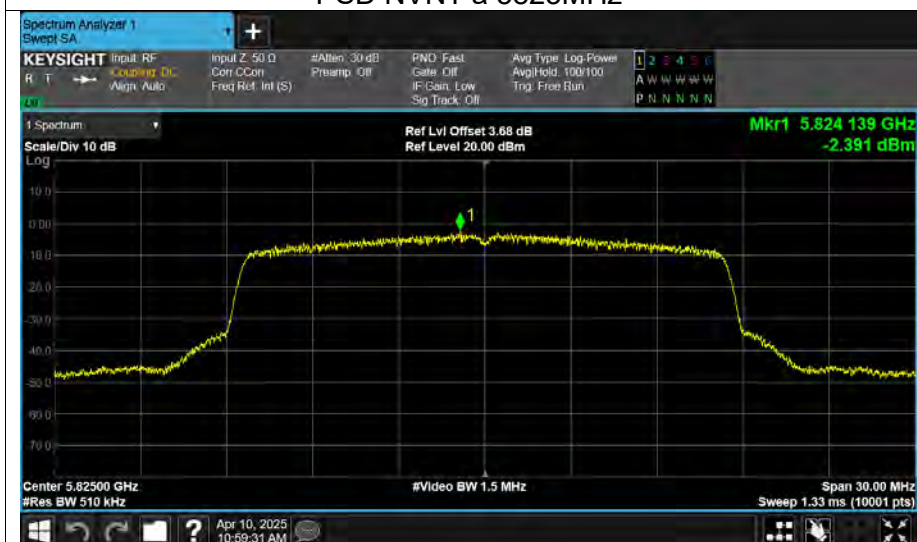
### PSD NVNT a 5745MHz



### PSD NVNT a 5785MHz



### PSD NVNT a 5825MHz





### PSD NVNT n20 5745MHz

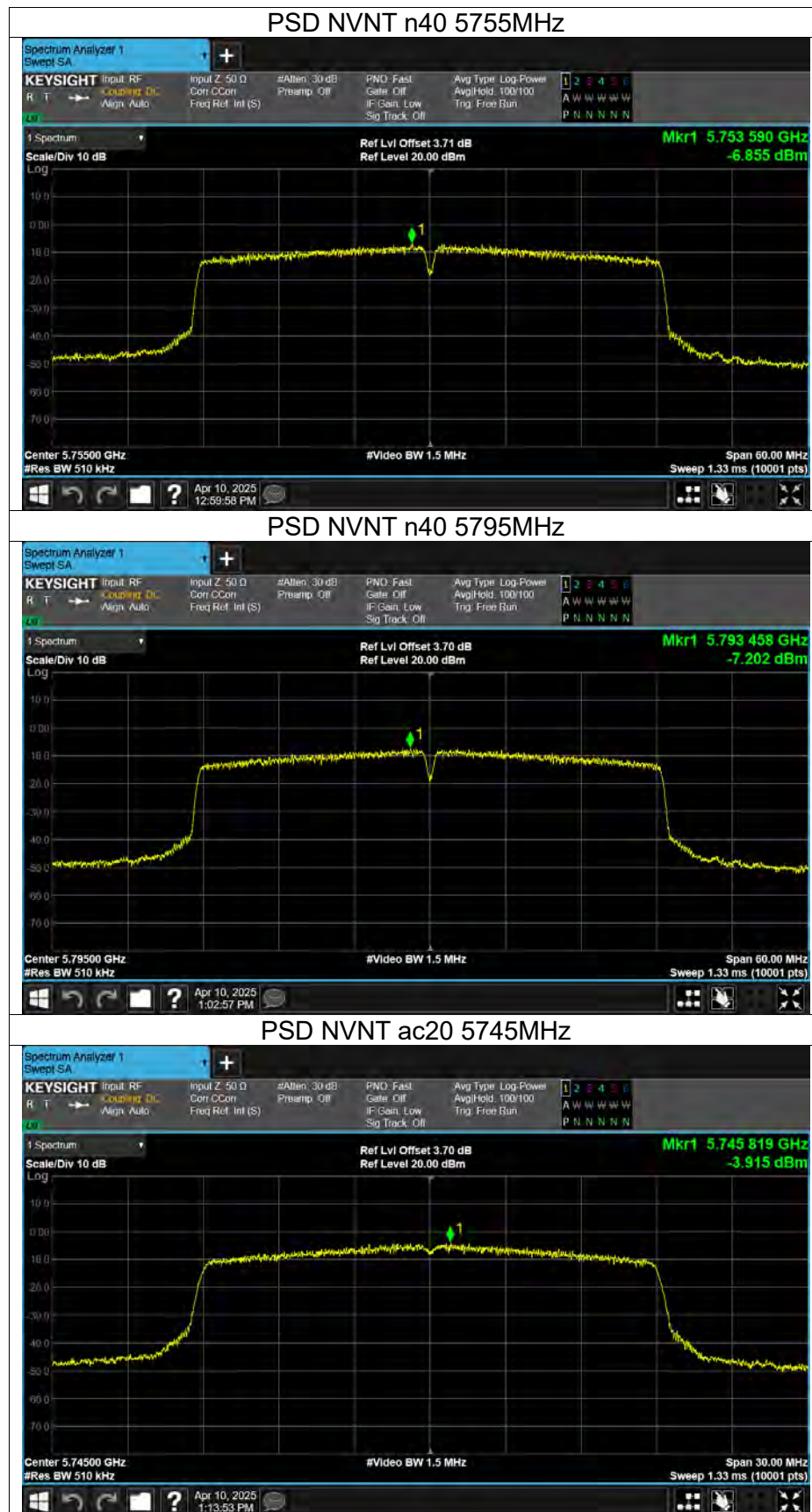


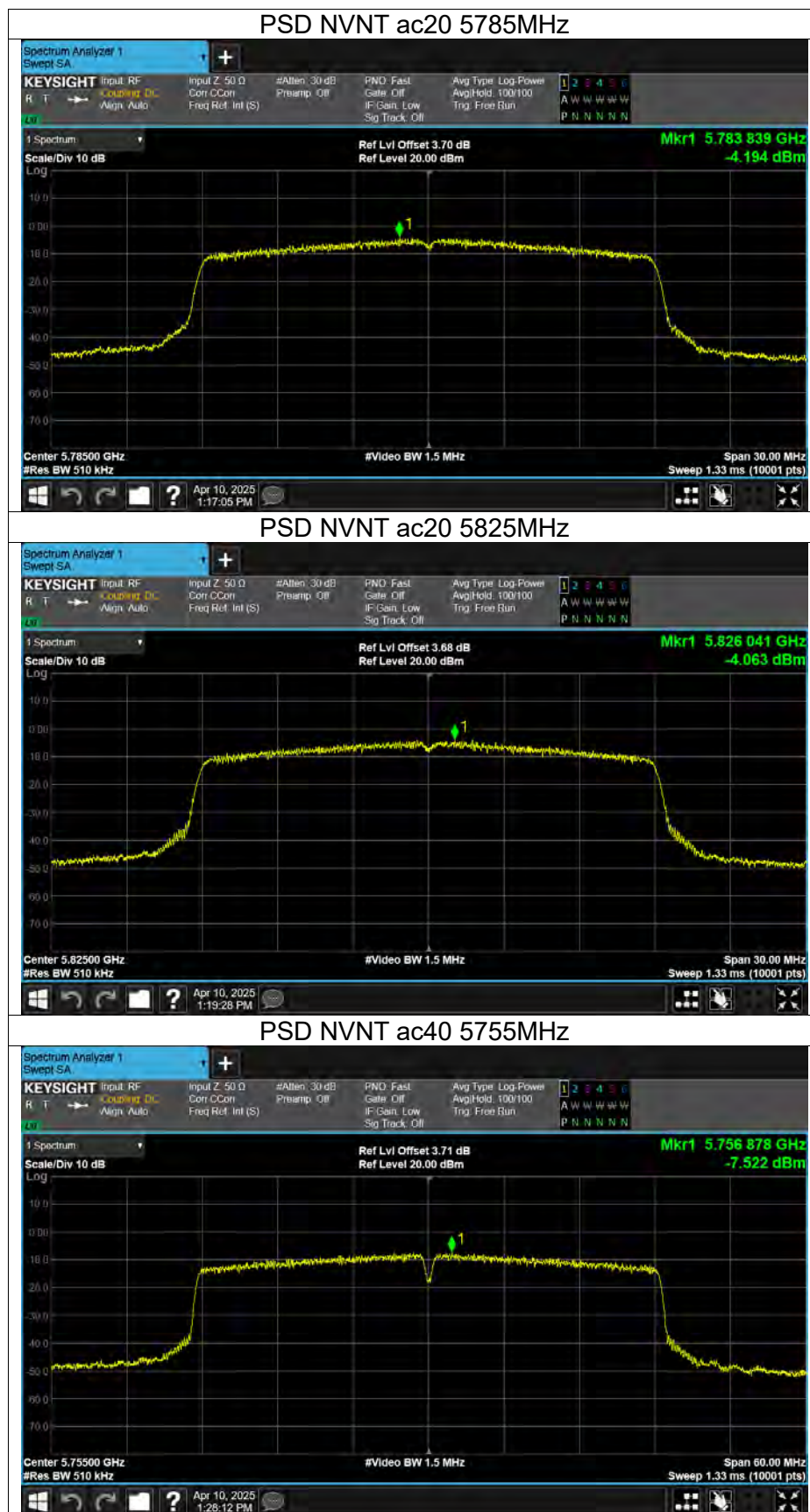
### PSD NVNT n20 5785MHz

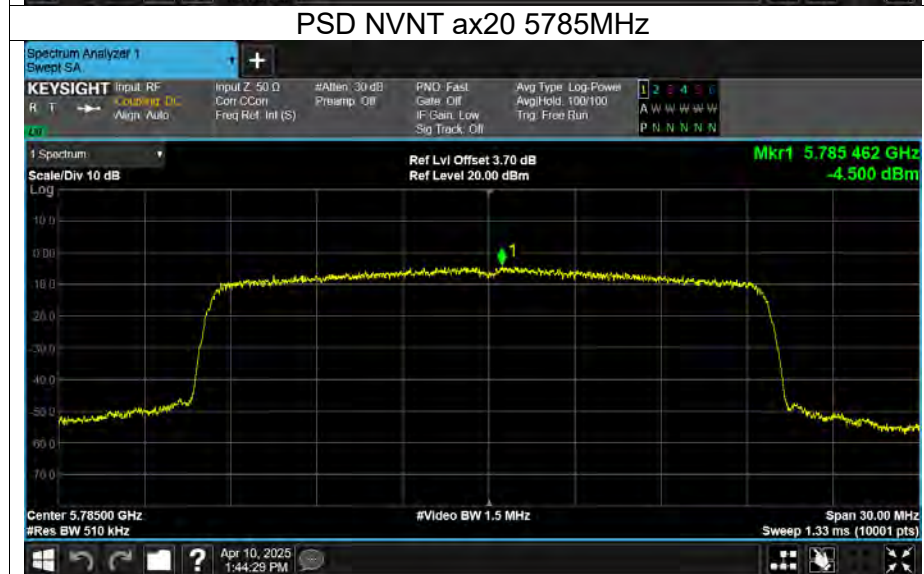
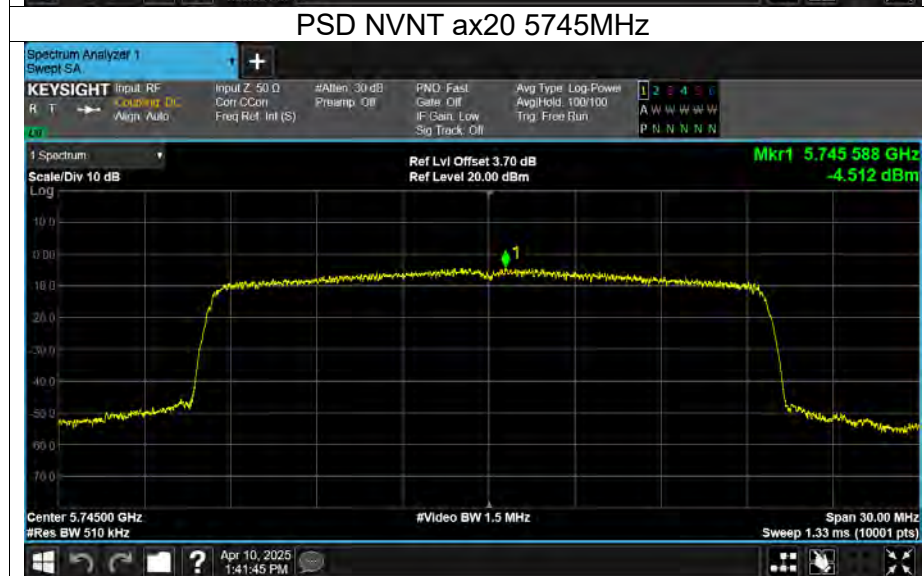
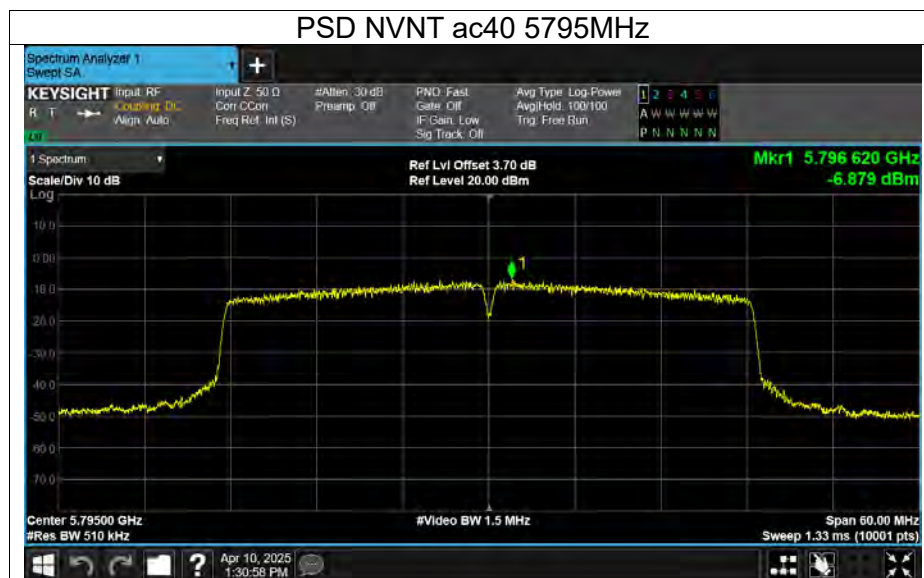


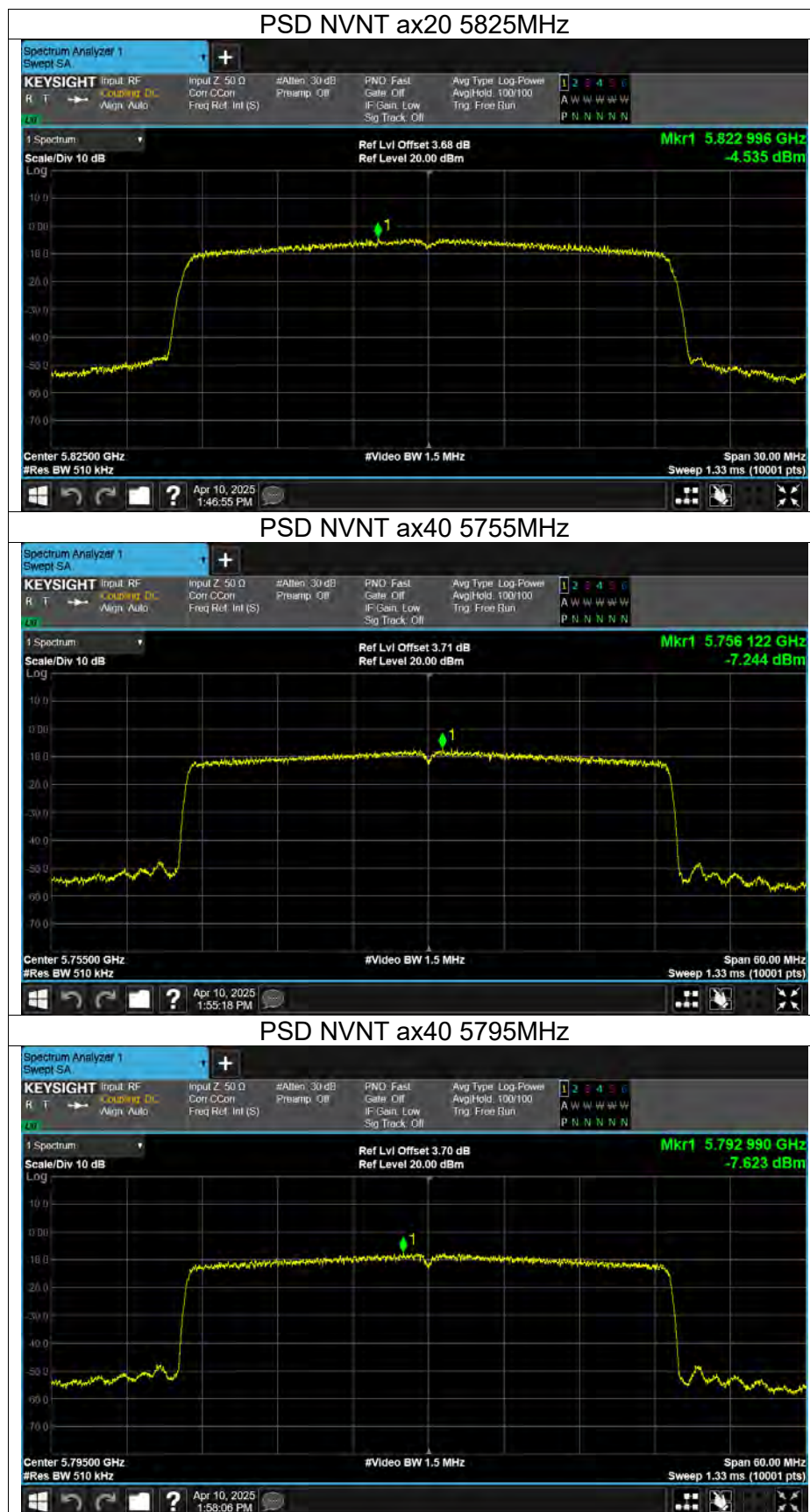
### PSD NVNT n20 5825MHz













## Band Edge

| Condition | Mode | Frequency (MHz) | Max Value (dBc) | Limit (dBc) | Verdict |
|-----------|------|-----------------|-----------------|-------------|---------|
| NVNT      | a    | 5180            | -34.48          | -27         | Pass    |
| NVNT      | a    | 5240            | -38.08          | -27         | Pass    |
| Condition | Mode | Frequency (MHz) | Max Value (dBm) | Limit (dBm) | Verdict |
| NVNT      | a    | 5745            | -27.68          |             | Pass    |
| NVNT      | a    | 5825            | -31.01          |             | Pass    |
| NVNT      | n20  | 5180            | -34.75          | -27         | Pass    |
| NVNT      | n20  | 5240            | -39.1           | -27         | Pass    |
| NVNT      | n20  | 5745            | -26.55          |             | Pass    |
| NVNT      | n20  | 5825            | -33.49          |             | Pass    |
| NVNT      | n40  | 5190            | -30.21          | -27         | Pass    |
| NVNT      | n40  | 5230            | -39.03          | -27         | Pass    |
| NVNT      | n40  | 5755            | -27.31          |             | Pass    |
| NVNT      | n40  | 5795            | -35.99          |             | Pass    |
| NVNT      | ac20 | 5180            | -34.77          | -27         | Pass    |
| NVNT      | ac20 | 5240            | -38.8           | -27         | Pass    |
| NVNT      | ac20 | 5745            | -29.18          |             | Pass    |
| NVNT      | ac20 | 5825            | -33.1           |             | Pass    |
| NVNT      | ac40 | 5190            | -29.42          | -27         | Pass    |
| NVNT      | ac40 | 5230            | -38.59          | -27         | Pass    |
| NVNT      | ac40 | 5755            | -28.45          |             | Pass    |
| NVNT      | ac40 | 5795            | -34.18          |             | Pass    |
| NVNT      | ax20 | 5180            | -35.62          | -27         | Pass    |
| NVNT      | ax20 | 5240            | -38.51          | -27         | Pass    |
| NVNT      | ax20 | 5745            | -36.55          |             | Pass    |
| NVNT      | ax20 | 5825            | -37.55          |             | Pass    |
| NVNT      | ax40 | 5190            | -35.65          | -27         | Pass    |
| NVNT      | ax40 | 5230            | -39.04          | -27         | Pass    |
| NVNT      | ax40 | 5755            | -32.3           |             | Pass    |
| NVNT      | ax40 | 5795            | -37.68          |             | Pass    |





### Band Edge NVNT a 5825MHz High

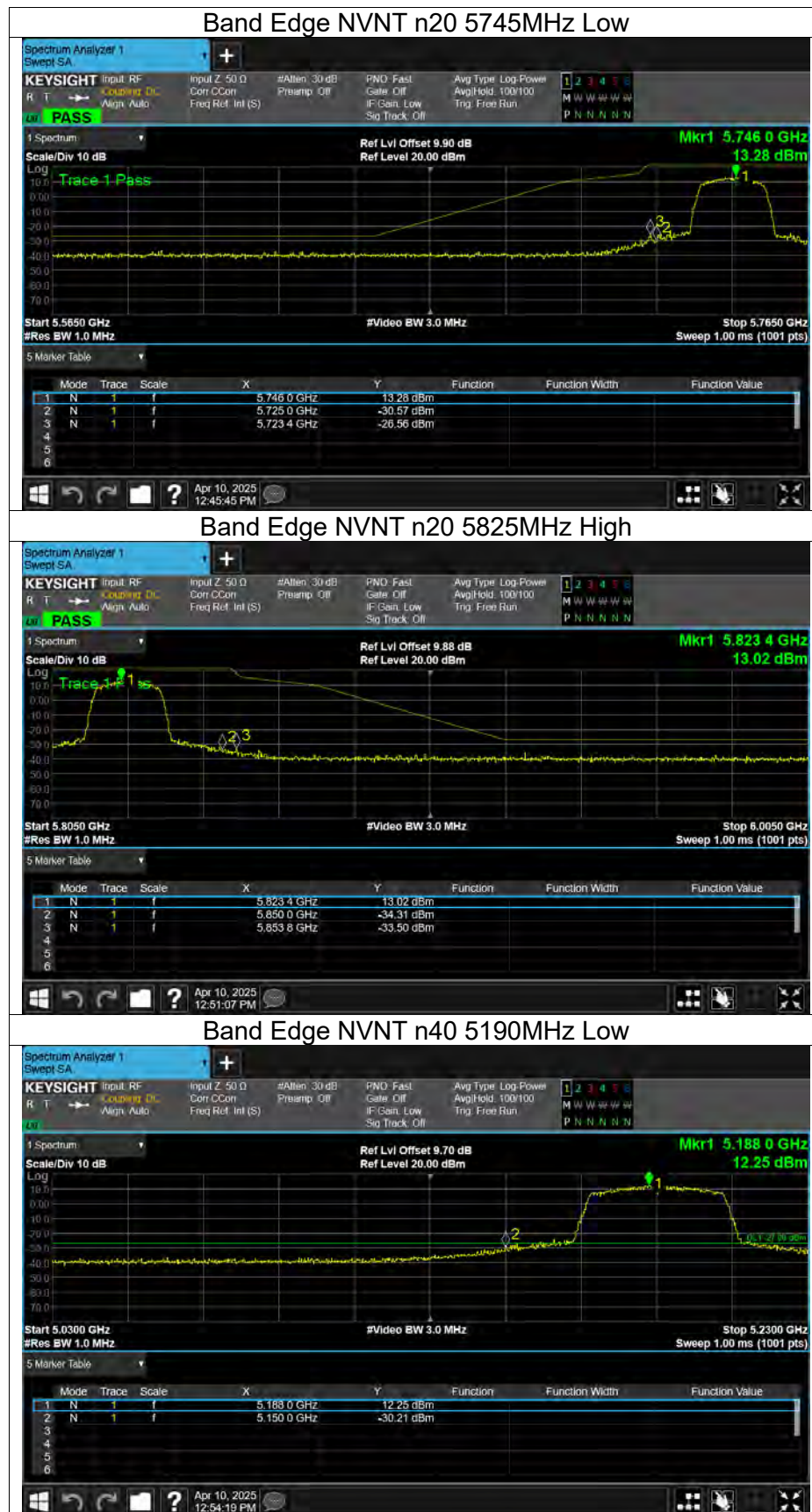


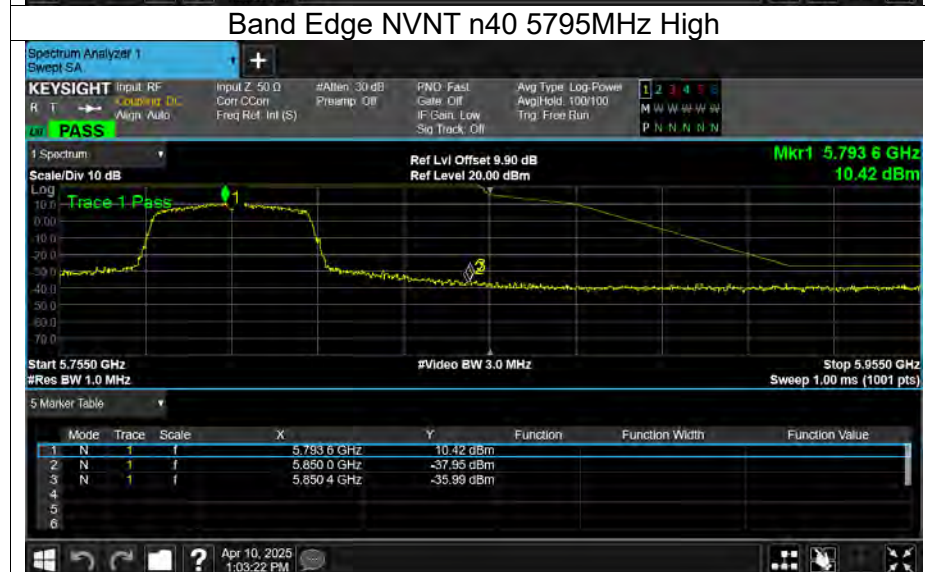
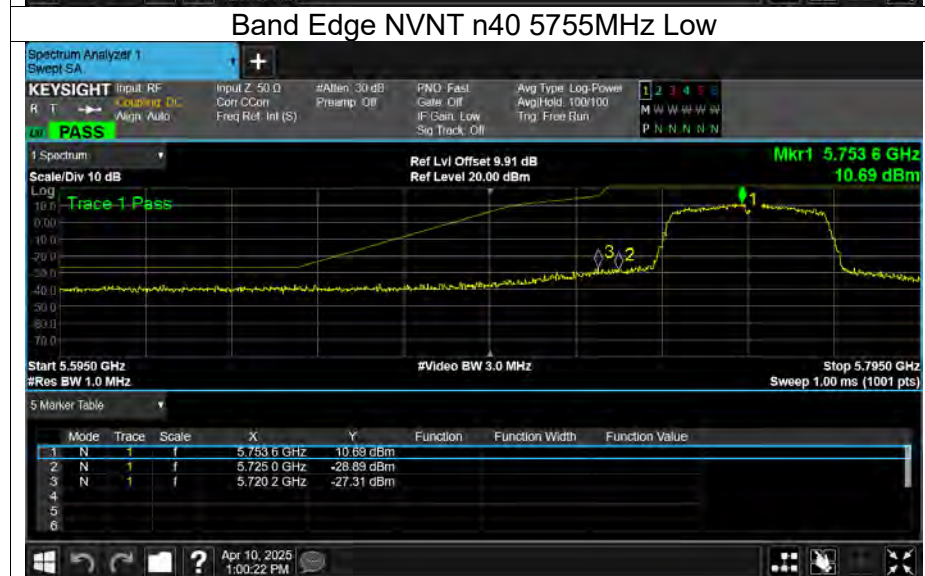
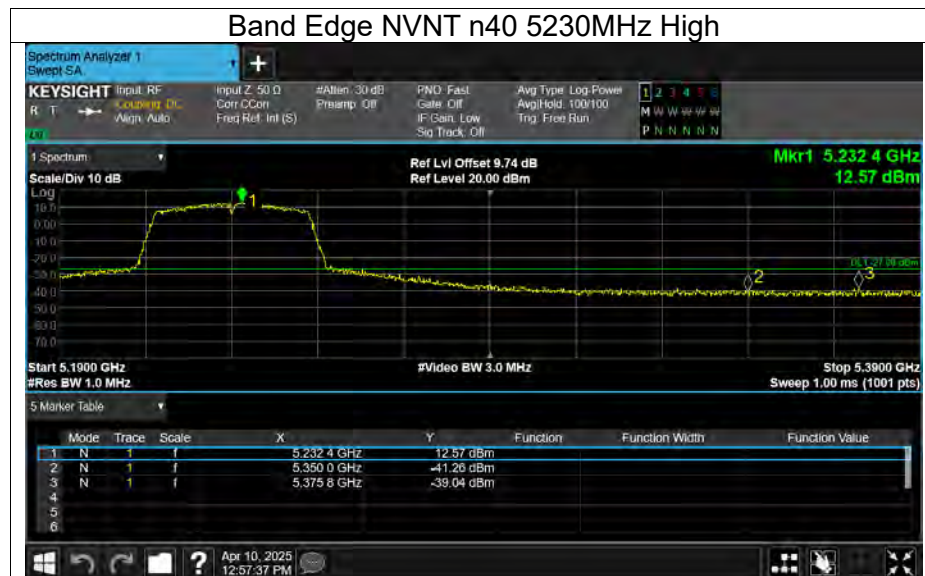
### Band Edge NVNT n20 5180MHz Low



### Band Edge NVNT n20 5240MHz High











### Band Edge NVNT ac20 5825MHz High



### Band Edge NVNT ac40 5190MHz Low



### Band Edge NVNT ac40 5230MHz High





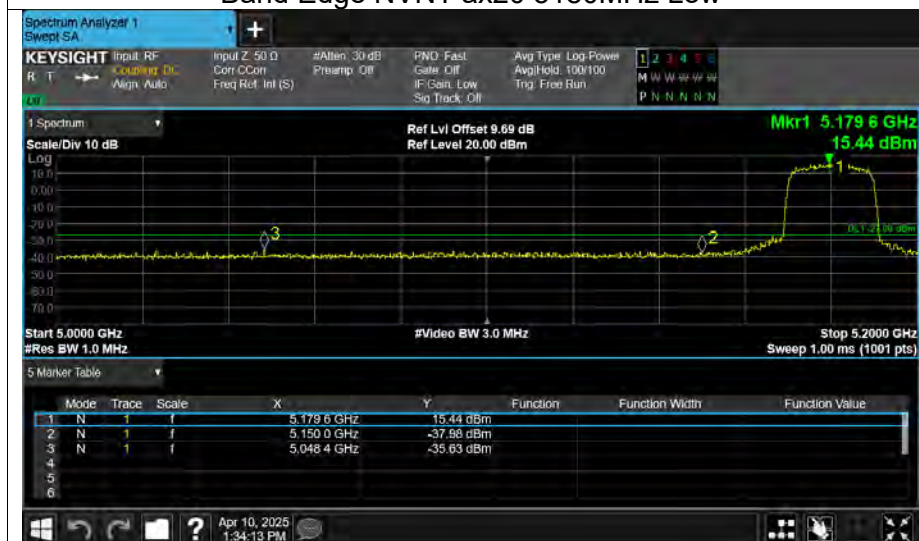
### Band Edge NVNT ac40 5755MHz Low



### Band Edge NVNT ac40 5795MHz High



### Band Edge NVNT ax20 5180MHz Low





### Band Edge NVNT ax20 5240MHz High

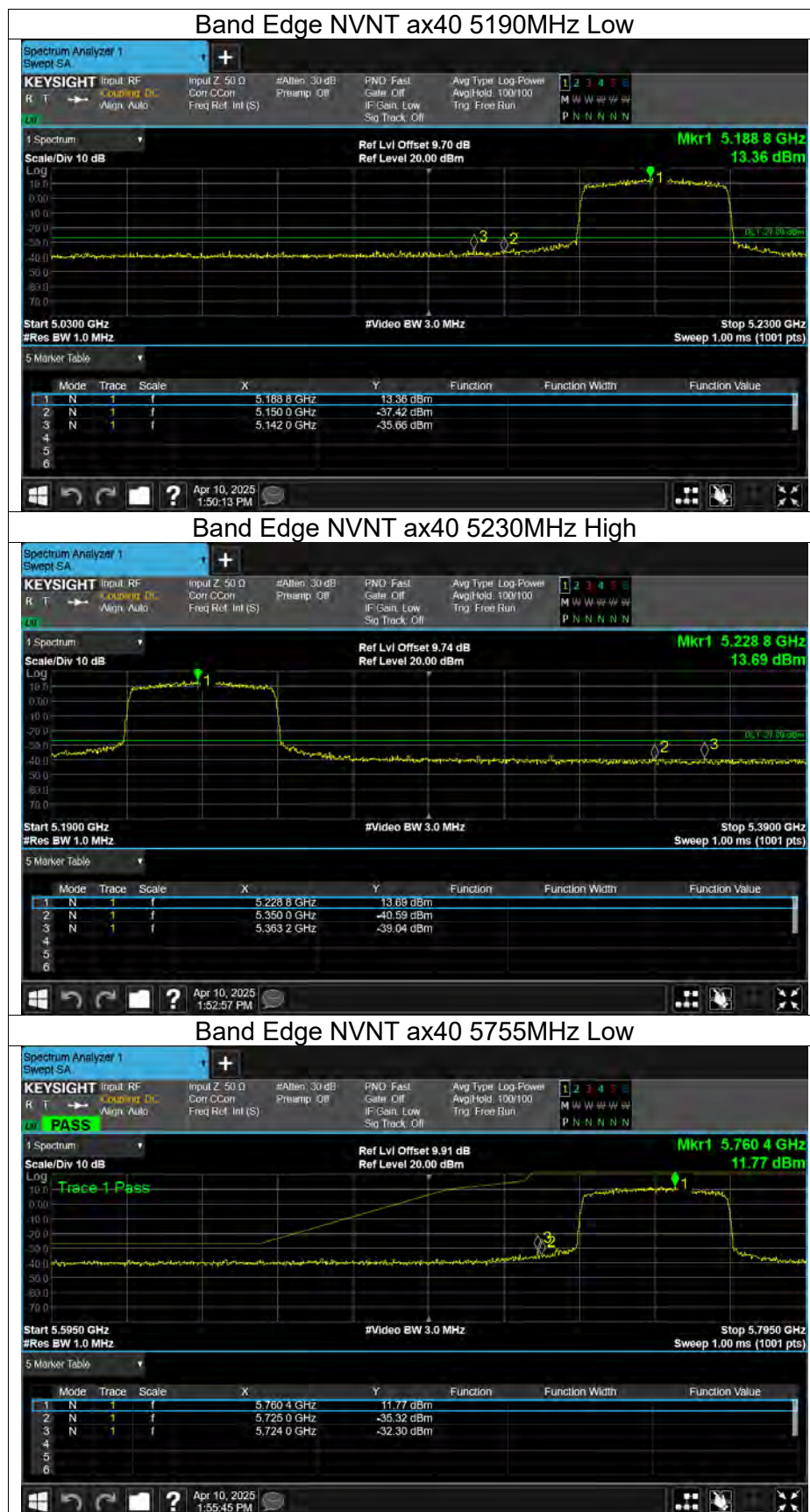


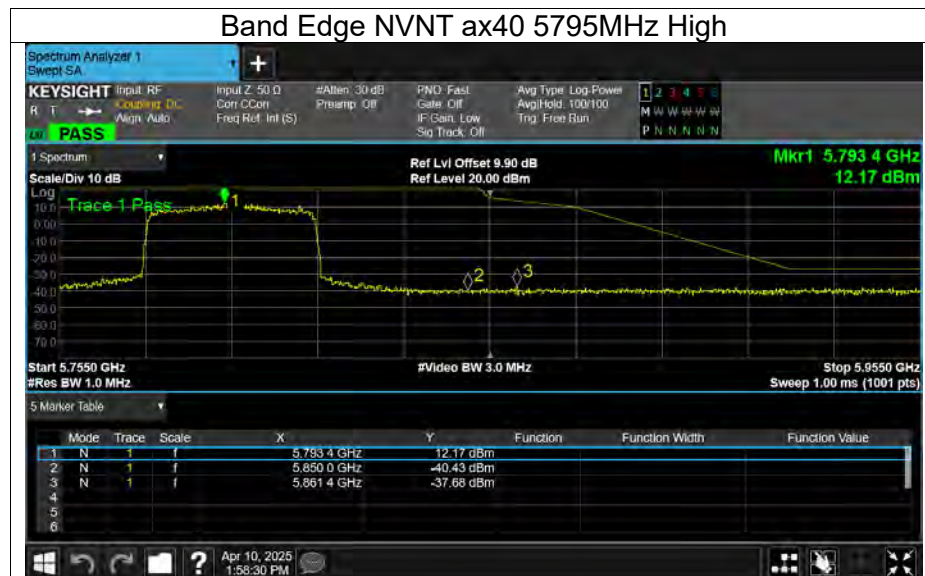
### Band Edge NVNT ax20 5745MHz Low



### Band Edge NVNT ax20 5825MHz High









-6dB Bandwidth

| Condition | Mode | Frequency (MHz) | -6 dB Bandwidth (MHz) | Limit -6 dB Bandwidth (MHz) | Verdict |
|-----------|------|-----------------|-----------------------|-----------------------------|---------|
| NVNT      | a    | 5745            | 15.801                | 0.5                         | Pass    |
| NVNT      | a    | 5785            | 15.715                | 0.5                         | Pass    |
| NVNT      | a    | 5825            | 16.064                | 0.5                         | Pass    |
| NVNT      | n20  | 5745            | 16.996                | 0.5                         | Pass    |
| NVNT      | n20  | 5785            | 17.059                | 0.5                         | Pass    |
| NVNT      | n20  | 5825            | 17.088                | 0.5                         | Pass    |
| NVNT      | n40  | 5755            | 36.054                | 0.5                         | Pass    |
| NVNT      | n40  | 5795            | 36.049                | 0.5                         | Pass    |
| NVNT      | ac20 | 5745            | 15.621                | 0.5                         | Pass    |
| NVNT      | ac20 | 5785            | 16.663                | 0.5                         | Pass    |
| NVNT      | ac20 | 5825            | 15.655                | 0.5                         | Pass    |
| NVNT      | ac40 | 5755            | 35.934                | 0.5                         | Pass    |
| NVNT      | ac40 | 5795            | 35.318                | 0.5                         | Pass    |
| NVNT      | ax20 | 5745            | 18.576                | 0.5                         | Pass    |
| NVNT      | ax20 | 5785            | 18.412                | 0.5                         | Pass    |
| NVNT      | ax20 | 5825            | 18.301                | 0.5                         | Pass    |
| NVNT      | ax40 | 5755            | 37.577                | 0.5                         | Pass    |
| NVNT      | ax40 | 5795            | 37.439                | 0.5                         | Pass    |



## Test Graphs

### -6dB Bandwidth NVNT a 5745MHz

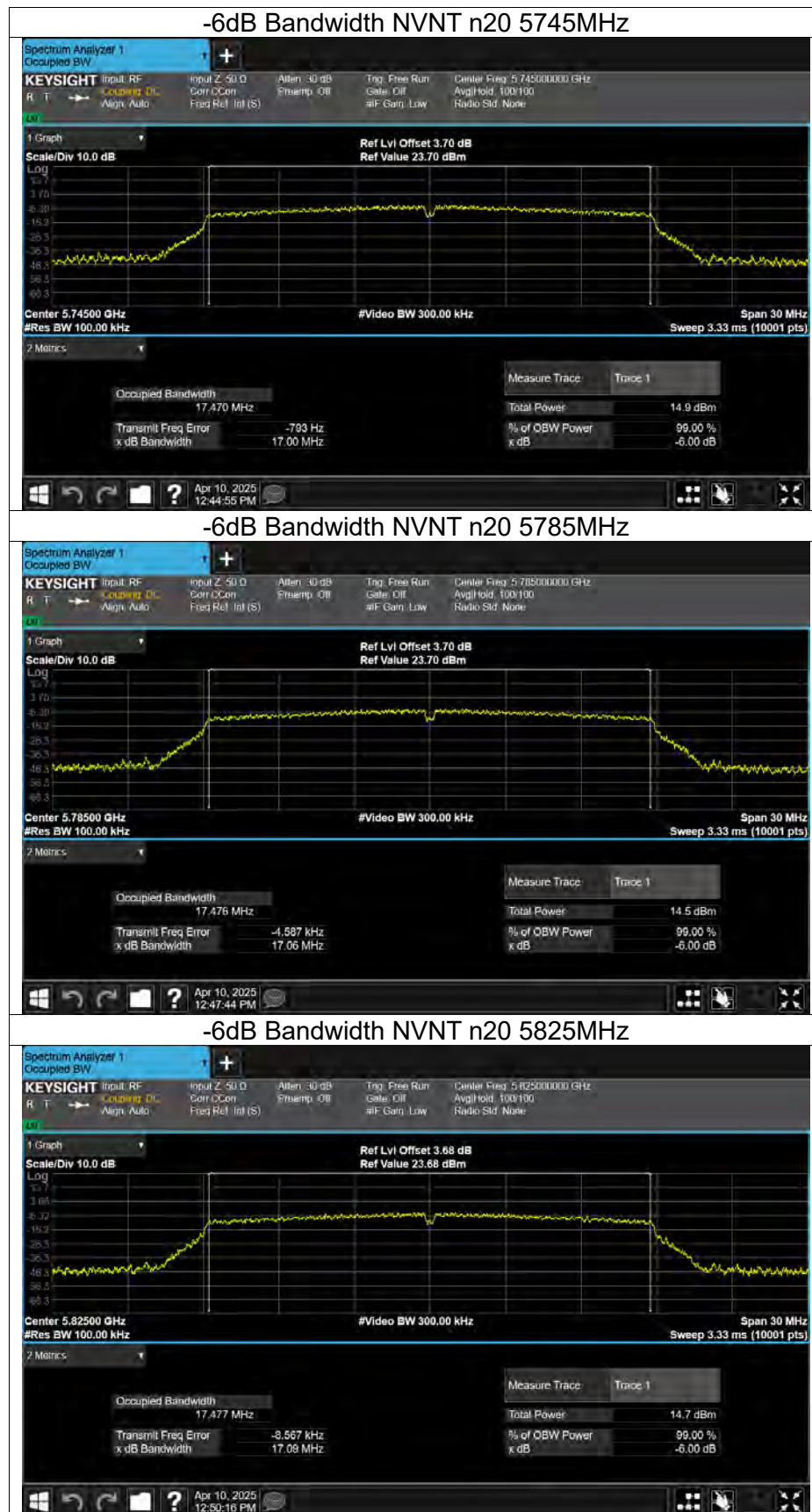


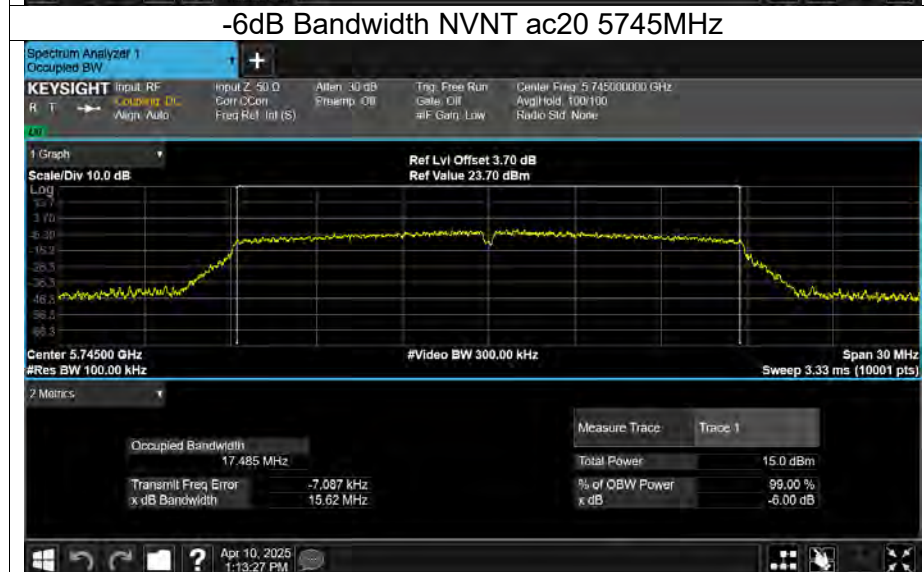
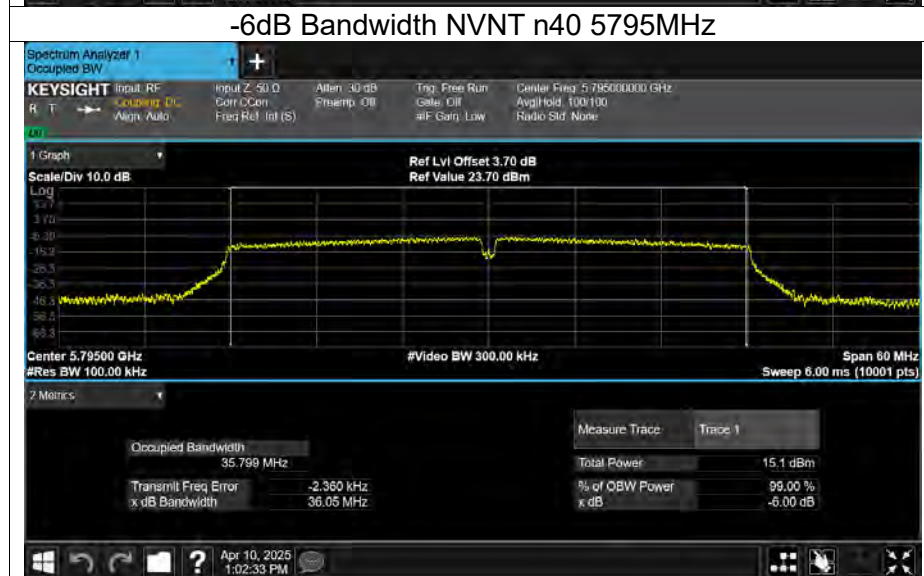
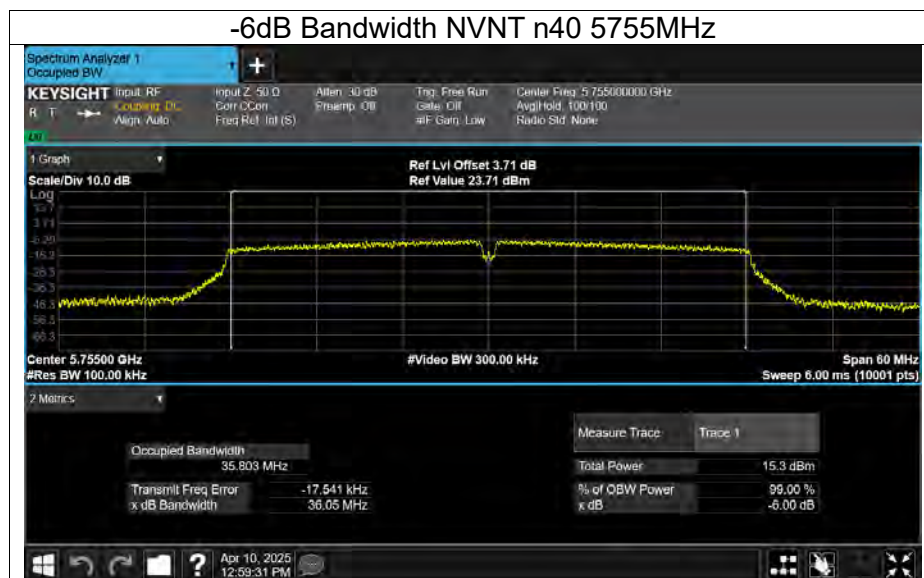
### -6dB Bandwidth NVNT a 5785MHz

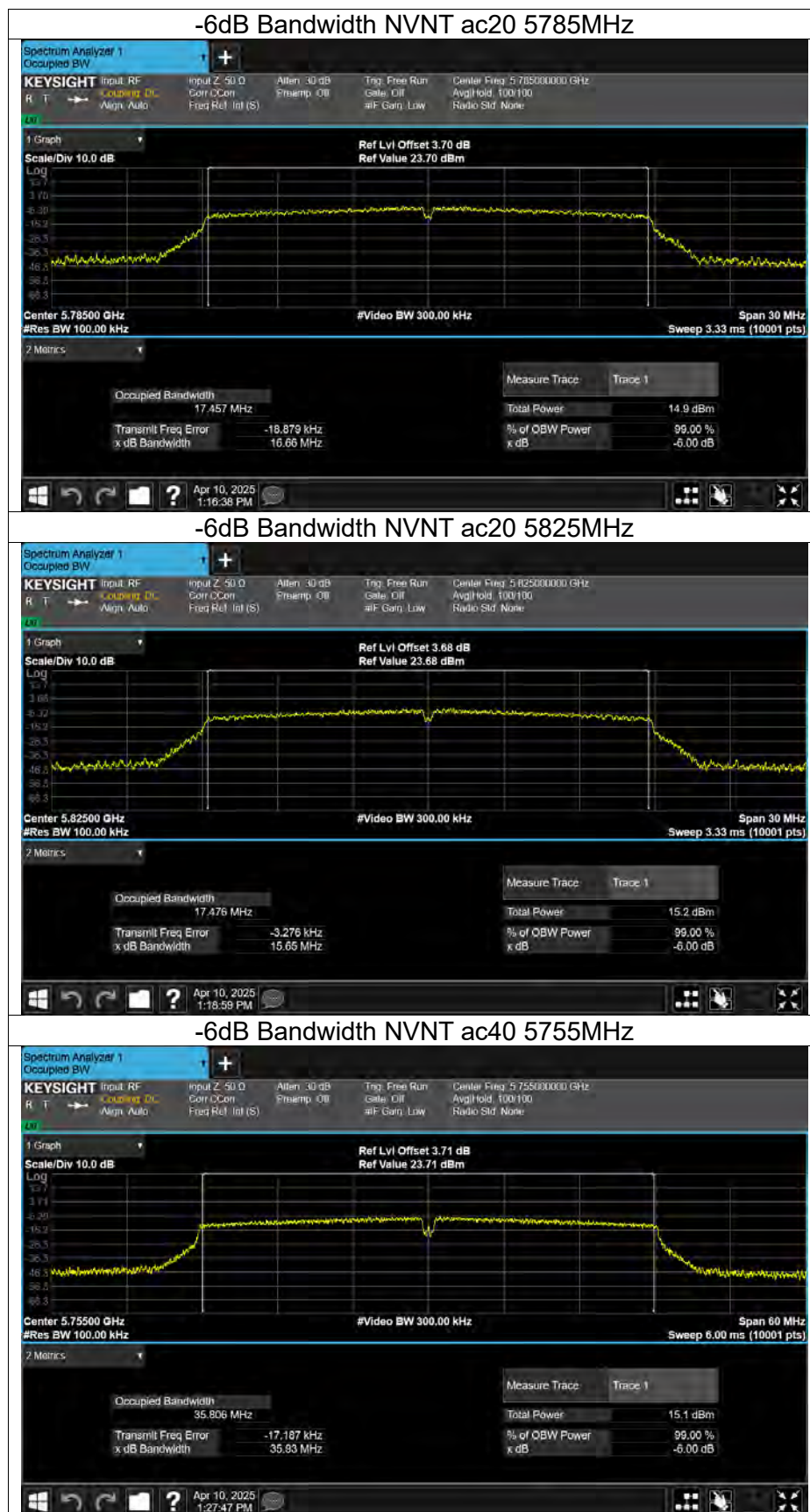


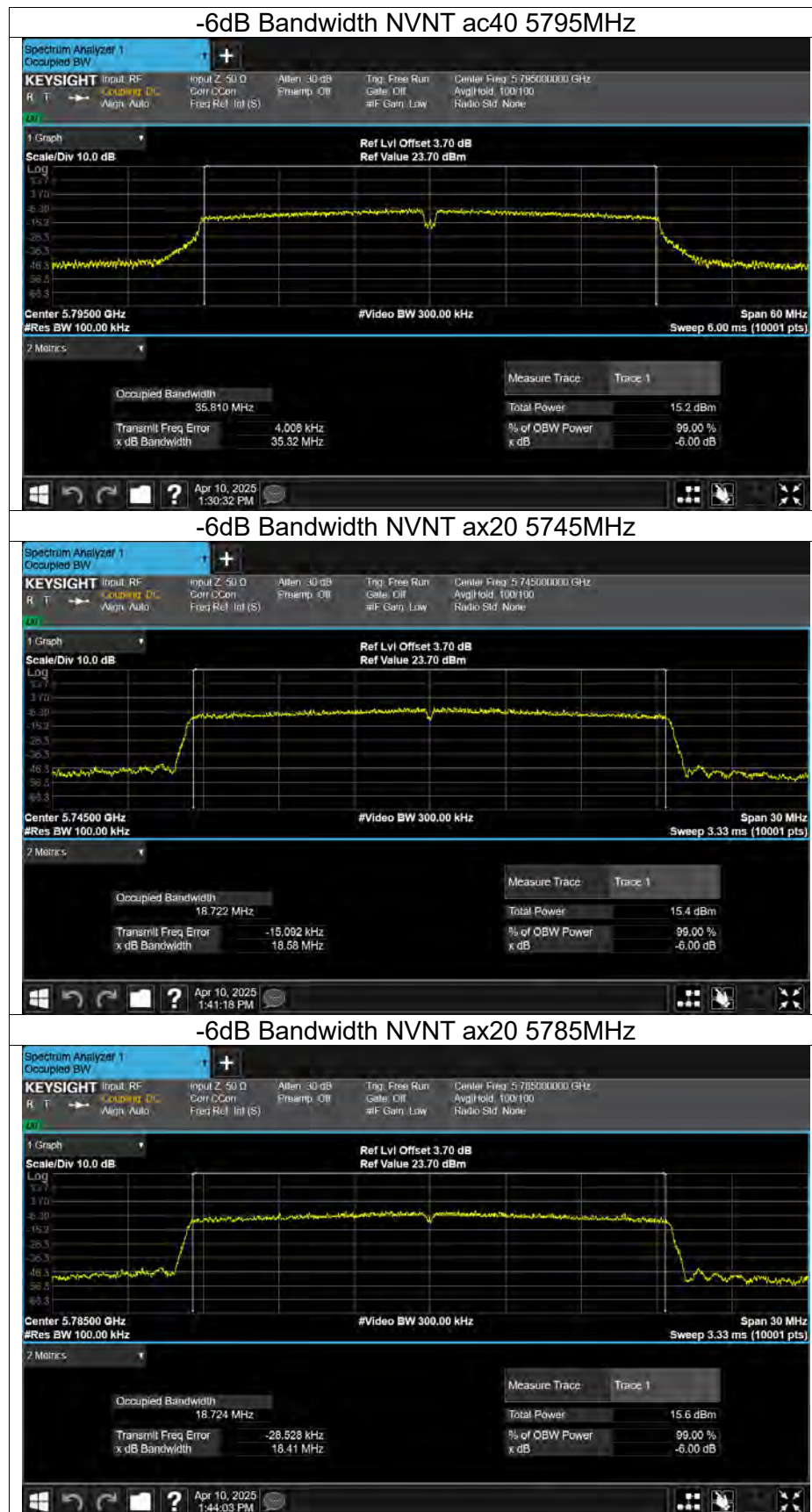
### -6dB Bandwidth NVNT a 5825MHz

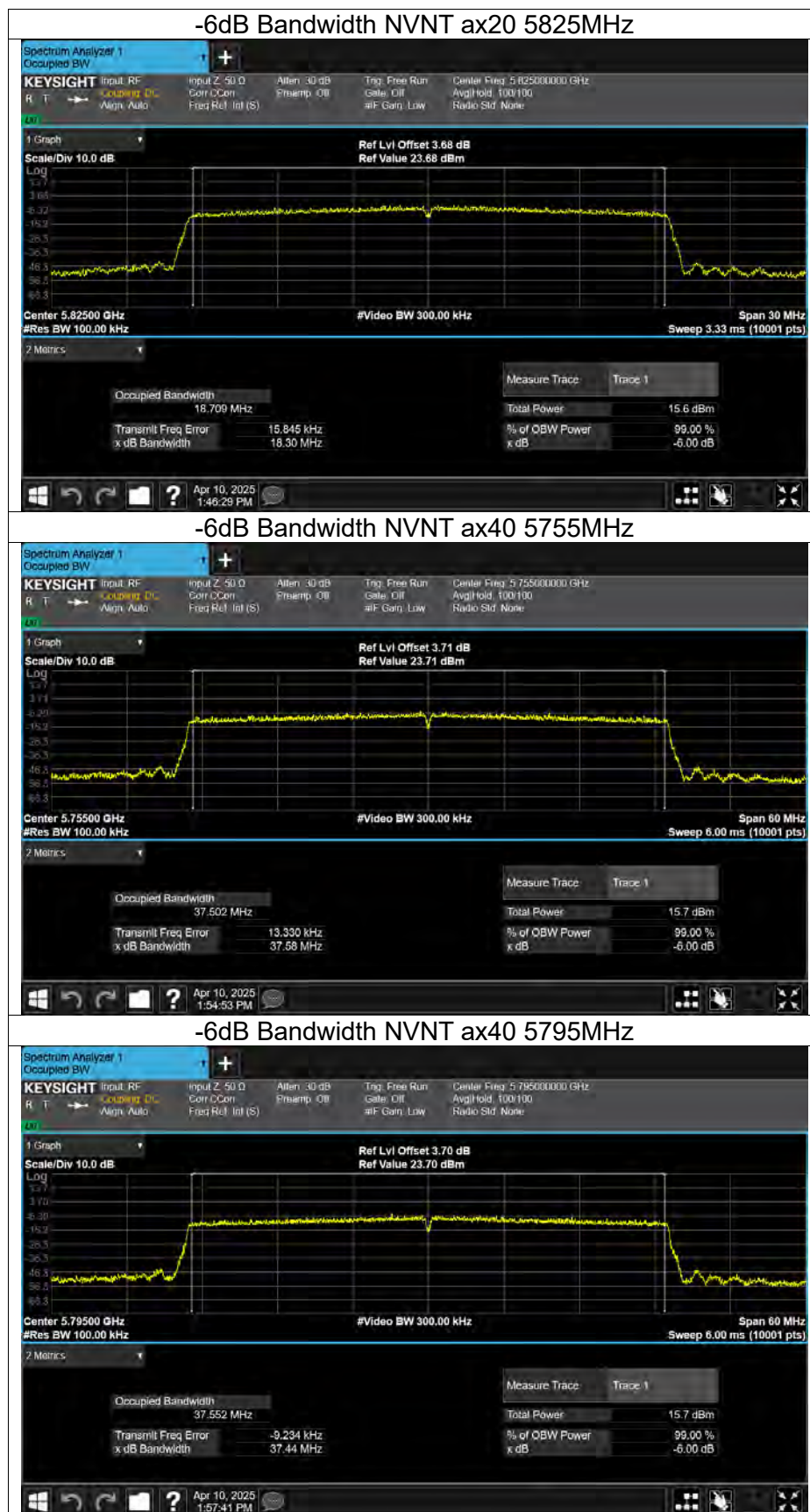














## **APPENDIX II - MEASUREMENT PHOTOS**

Note: Please see the attached RF\_Test Setup photos for FCC ID & IC.

※※※※※END OF THE REPORT※※※※※