

**FCC - TEST REPORT**Report Number : **709502502170-00D** Date of Issue: May 30, 2025Model : M800, M800-2Product Type : DASH CAMApplicant : 70mai Co., Ltd.Address : Room 2220, building 2, No. 588, Zixing road, MinHang District,
Shanghai, CHINA.Manufacturer : 70mai Co., Ltd.Address : Room 2220, building 2, No. 588, Zixing road, MinHang District,
Shanghai, CHINA.Test Result : **n Positive**  **Positive**Total pages including Appendices : 93

TÜV SÜD Certification and Testing (China) Co., Ltd. Shanghai Branch is a subcontractor to TÜV SÜD Product Service GmbH according to the principles outlined in ISO 17025.

TÜV SÜD Certification and Testing (China) Co., Ltd. Shanghai Branch reports apply only to the specific samples tested under stated test conditions. Construction of the actual test samples has been documented. It is the manufacturer's responsibility to assure that additional production units of this model are manufactured with identical electrical and mechanical components. The manufacturer/importer is responsible to the Competent Authorities in Europe for any modifications made to the production units which result in non-compliance to the relevant regulations. TÜV SÜD Certification and Testing (China) Co., Ltd. Shanghai Branch shall have no liability for any deductions, inferences or generalizations drawn by the client or others from TÜV SÜD Certification and Testing (China) Co., Ltd. Shanghai Branch issued reports.

This report is the confidential property of the client. As a mutual protection to our clients, the public and ourselves, extracts from the test report shall not be reproduced except in full without our written approval.



1 Table of Contents

1	Table of Contents	2
2	Report Modification Record	3
3	Details about the Test Laboratory	3
4	Description of the Equipment under Test	4
5	Summary of Test Standards	6
6	Summary of Test Results.....	7
7	General Remarks.....	8
8	Test Setups	9
9	Systems test configuration.....	11
10	Technical Requirement.....	12
10.1	Emission bandwidth	12
10.2	Maximum conducted output power.....	28
10.3	Maximum power spectral density	41
10.4	Frequencies Stability	49
10.5	Unwanted emissions.....	53
11	Test Equipment List	90
12	System Measurement Uncertainty.....	91
13	Photographs of Test Set-ups.....	92
14	Photographs of EUT	93



2 Report Modification Record

Alterations and additions to this report will be issued to the holders of each copy in the form of a complete document.

Issue	Description of Change	Date of Issue
709502502170-00D	First Issue	05/30/2025

3 Details about the Test Laboratory

Details about the Test Laboratory

Test Site 1 TÜV SÜD Certification and Testing (China) Co., Ltd. Shanghai Branch
No.16 Lane, 1951 Du Hui Road,
Shanghai 201108,
P.R. China

Telephone: +86 21 6141 0123

Fax: +86 21 6140 8600

FCC Registration 820234
No.:

FCC Designation CN1183
Number:

ISED CAB identifier CN0101

IC Registration 31668
No.:

4 Description of the Equipment under Test

Product: DASH CAM

Model no.: M800, M800-2

FCC ID: 2AOK9-M800

Rating: For Car charger
Rated Input Voltage: 12-24V DC
For Dash Cam
Rated Input Voltage: 5V DC; Rated Current: 2A

RF Transmission Frequency: For 2.4GHz Wi-Fi:802.11b/g/n-HT20: Wi-Fi:2412-2462MHz
For 802.11n(HT40: 2422~2452 MHz
For Bluetooth LE:2402~2480MHz
For 5GHz Wi-Fi:5180~5240 MHz (U-NII-1)
5745~5825 MHz (U-NII-3)

Modulation: Direct Sequence Spread Spectrum (DSSS) for 802.11b
Orthogonal Frequency Division Multiplexing (OFDM) for
802.11a/g/n; 2.4GHz BLE: GFSK

Channel list:

Bluetooth Low Energy							
Ch	Fre(MHz)	Ch	Fre(MHz)	Ch	Fre(MHz)	Ch	Fre(MHz)
0	2402	10	2422	20	2442	30	2462
1	2404	11	2424	21	2444	31	2464
2	2406	12	2426	22	2446	32	2466
3	2408	13	2428	23	2448	33	2468
4	2410	14	2430	24	2450	34	2470
5	2412	15	2432	25	2452	35	2472
6	2414	16	2434	26	2454	36	2474
7	2416	17	2436	27	2456	37	2476
8	2418	18	2438	28	2458	38	2478
9	2420	19	2440	29	2460	39	2480

5180~5240 MHz (U-NII-1):

4 channels for 802.11a, 802.11n (HT20):

Channel	Frequency (MHz)	Channel	Frequency (MHz)
36	5180	44	5220
40	5200	48	5240

2 channels are for 802.11n (HT40):

Channel	Frequency (MHz)	Channel	Frequency (MHz)
38	5190	46	5230

5745~5825 MHz (U-NII-3): Channel 149 – 165

5 channels for 802.11a, 802.11n (HT20):

Channel	Frequency (MHz)	Channel	Frequency (MHz)
149	5745	161	5805
153	5765	165	5825
157	5785		

2 channels for 802.11n (HT40):

Channel	Frequency (MHz)	Channel	Frequency (MHz)
151	5755	159	5795

802.11b/g/n(HT20)				802.11n(HT40)			
Ch	Fre(MHz)	Ch	Fre(MHz)	Ch	Fre(MHz)	Ch	Fre(MHz)
1	2412	7	2442	3	2422	8	2447MHz
2	2417	8	2447	4	2427	9	2452MHz
3	2422	9	2452	5	2432		
4	2427	10	2457	6	2437		
5	2432	11	2462	7	2442		
6	2437						

Modulation: Direct Sequence Spread Spectrum (DSSS) for 802.11b
Orthogonal Frequency Division Multiplexing (OFDM) for
802.11a/g/n; 2.4GHz BLE: GFSK

Hardware Version: LGDM003C1

Software Version: 0.014WW

Data speed: 2.4G Wi-Fi
SISO:11b 1-11Mbps, 11g 6-54Mbps
11n HT20 6.5 ~ 72.2Mbps, 11n HT40 13.5 ~ 150Mbps
2.4G BLE: 1/2 Mbps

5G Wi-Fi
SISO: 11a 6 ~ 54Mbps,
11n HT20 6.5 ~ 72.2Mbps, 11n HT40 13.5 ~ 150Mbps

Antenna Type: FPC Antenna

Antenna Gain: 1.66dBi for 2.4GHz; 0.78dBi for 5GHz

Description of the EUT: The Equipment Under Test (EUT) is DASH CAM which support 2.4/5GHz Wi-Fi, BLE 5.2 and GNSS function. According to clients' declaration, model M800 only has front camera, M800-2 has both front and rear cameras, So, we chose M800-2 to conduct all tests. The corresponding data is representative for the other model as well. This report is only 5.0GHz Wi-Fi included.

Test sample no.: SHA-899681-2 (RF radiated); SHA-899681-3 (RF conducted)

The sample's mentioned in this report is/are submitted/ supplied/ manufactured by client. The laboratory therefore assumes no responsibility for accuracy of information on the brand name, model number, origin of manufacture, consignment or any information supplied.



5 Summary of Test Standards

Test Standards	
FCC Part 15 Subpart E, 2023 Edition	PART 15 - RADIO FREQUENCY DEVICES Subpart E - Unlicensed National Information Infrastructure Devices

Test Method:

KDB 789033 D02 General UNII Test Procedures New Rules v02r01

KDB 662911 D01 Multiple Transmitter Output v02r01

ANSI C63.10-2020, American National Standard for Testing Unlicensed Wireless Devices



6 Summary of Test Results

Technical Requirements						
FCC Part 15 Subpart E						
Test Condition		Pages	Test Site	Test Result		
				Pass	Fail	N/A
§15.207	Conducted emission AC power port	--	--	☐	☐	☒
§15.407(a), (e)	Emission bandwidth	12-20	Site 1	☒	☐	☐
15.407(a)(1)(3)	Maximum Conducted Output Power	21-40	Site 1	☒	☐	☐
15.407(a)(1)(3)	Maximum Power Spectral Density	41-47	Site 1	☒	☐	☐
§15.407(g)	Frequencies Stability	48-50	Site 1	☒	☐	☐
§15.407(b)(1), 15.407(b)(4), 15.407(b)(8), 15.407(b)(9),15.209	Unwanted Emissions	51-87	Site 1	☒	☐	☐
§15.203	Antenna requirement	See note 1		☒	☐	☐

Remark:

1. N/A – Not Applicable. This equipment that is not designed to be connected to the public utility (AC) power line and conducted emission AC power port not required.
2. The EUT only operation at 5G Wi-Fi U-NII-1 and U-NII-3 Band (5180MHz-5240MHz, 5745MHz-5825MHz).

Note 1: The EUT uses FPC antenna, which gain is 1.66dBi for 2.4GHz and 0.78dBi for 5GHz. In accordance to §15.203, it is considered sufficiently to comply with the provisions of this section.

15.203 requirement: 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. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. 15.247(c) (1)(i) requirement: (i) Systems operating in the 2400-2483.5 MHz band that is used exclusively for fixed. Point-to-point operations may employ transmitting antennas with directional gain greater than 6dBi provided the maximum conducted output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6dBi.

7 General Remarks

Remarks

This submittal(s) (test report) is intended for FCC ID: 2AOK9-M800, complies with Section 15.209,15.205,15.247 of the FCC Part 15, Subpart C Rules.

SUMMARY:

All tests according to the regulations cited on page 8 were

n - Performed

o - **Not** Performed

The Equipment under Test

n - **Fulfills** the general approval requirements.

o - **Does not** fulfill the general approval requirements.

Sample Received Date: March 19, 2025

Testing Start Date: March 24, 2025

Testing End Date: May 30, 2025

- TÜV SÜD Certification and Testing (China) Co., Ltd. Shanghai Branch

Reviewed by:

Prepared by:

Tested by:

Jiayi Xu



Hui Tong

Chengjie Guo

Jiayi XU
Review Engineer

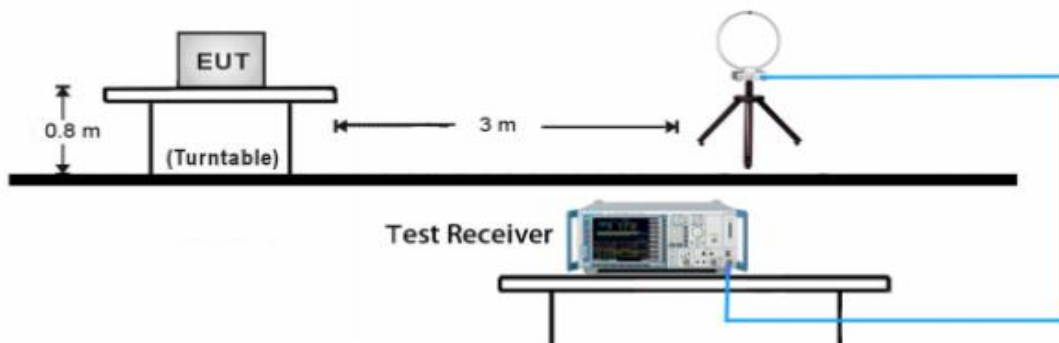
Hui TONG
Project Engineer

Chengjie GUO
Test Engineer

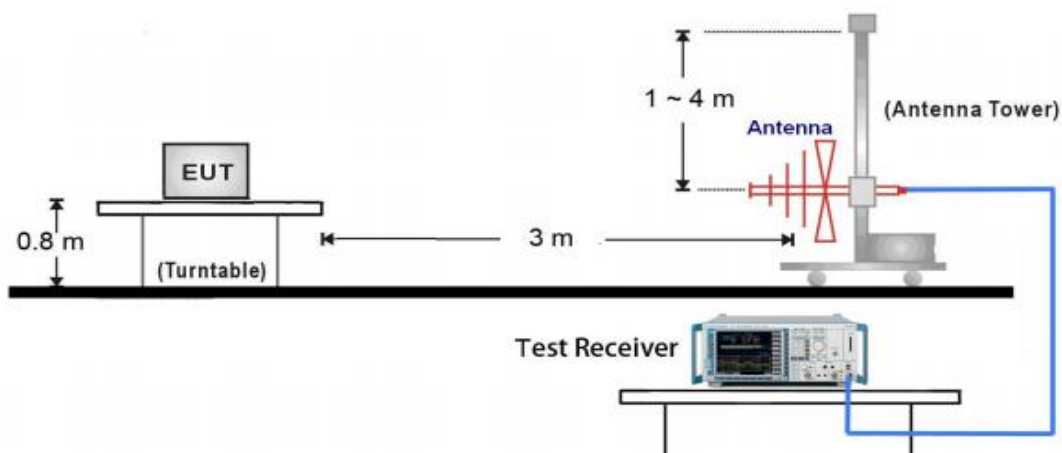
8 Test Setups

8.1 Radiated test setups

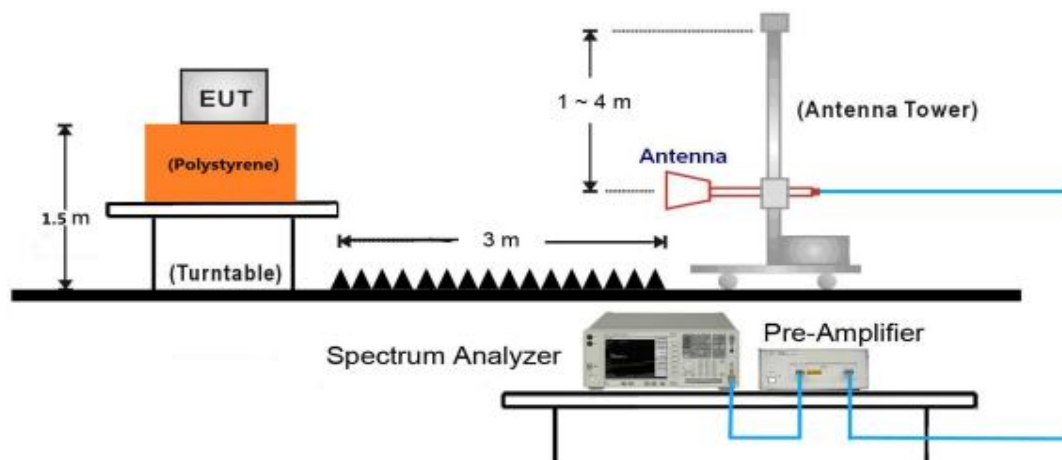
9kHz ~ 30MHz Test Setup:



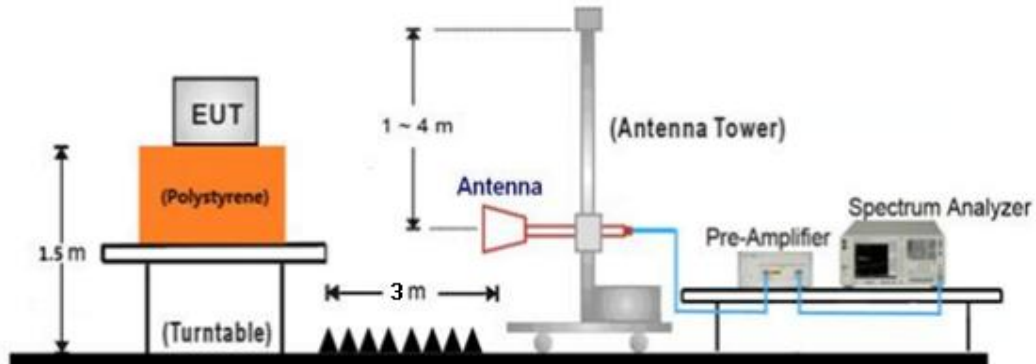
30MHz ~ 1GHz Test Setup:



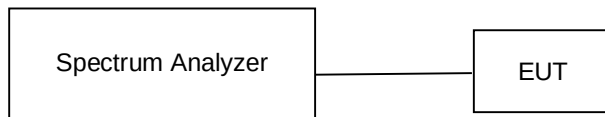
1GHz ~ 18GHz Test Setup:



18GHz ~ 40GHz Test Setup:



8.2 Conducted RF test setups



9 Systems test configuration

Auxiliary Equipment Used during Test:

DESCRIPTION	MANUFACTURER	MODEL NO.(SHIELD)	S/N(LENGTH)
Notebook	Lenovo	E470	PF-OU5TS7 17/09

Test software: SSCOM V5.13.1, which used to control the EUT in continues transmitting mode.
The system was configured to channel:

Test Mode	Channel	Index Value (Power level setting)	Frequency (MHz)
802.11a	36	15	5180
	40	15	5200
	48	15	5240
	149	15	5745
	157	15	5785
802.11n HT20	36	14	5180
	40	14	5200
	48	14	5240
	149	14	5745
	157	14	5785
	165	14	5825
802.11n HT40	38	14	5190
	46	14	5230
	151	14	5755
	159	14	5795

The pre-test has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates.

10 Technical Requirement

10.1 Emission bandwidth

1、Test Method of 26dB Bandwidth

According to KDB789033 D02

- a) Set RBW = approximately 1% of the emission bandwidth.
- b) Set the VBW > RBW.
- c) Detector = Peak.
- d) Trace mode = max hold.
- e) Measure the maximum width of the emission that is 26 dB down from the maximum 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%.

Limit: No limit

2、Test Method of 6dB Bandwidth

According to KDB789033 D02

- a) Set RBW = 100KHz
- b) Set the video bandwidth (VBW) $\geq 3 \times \text{RBW}$
- 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.

Limit: $\geq 500\text{KHz}$

3、Test Method of 99% Bandwidth

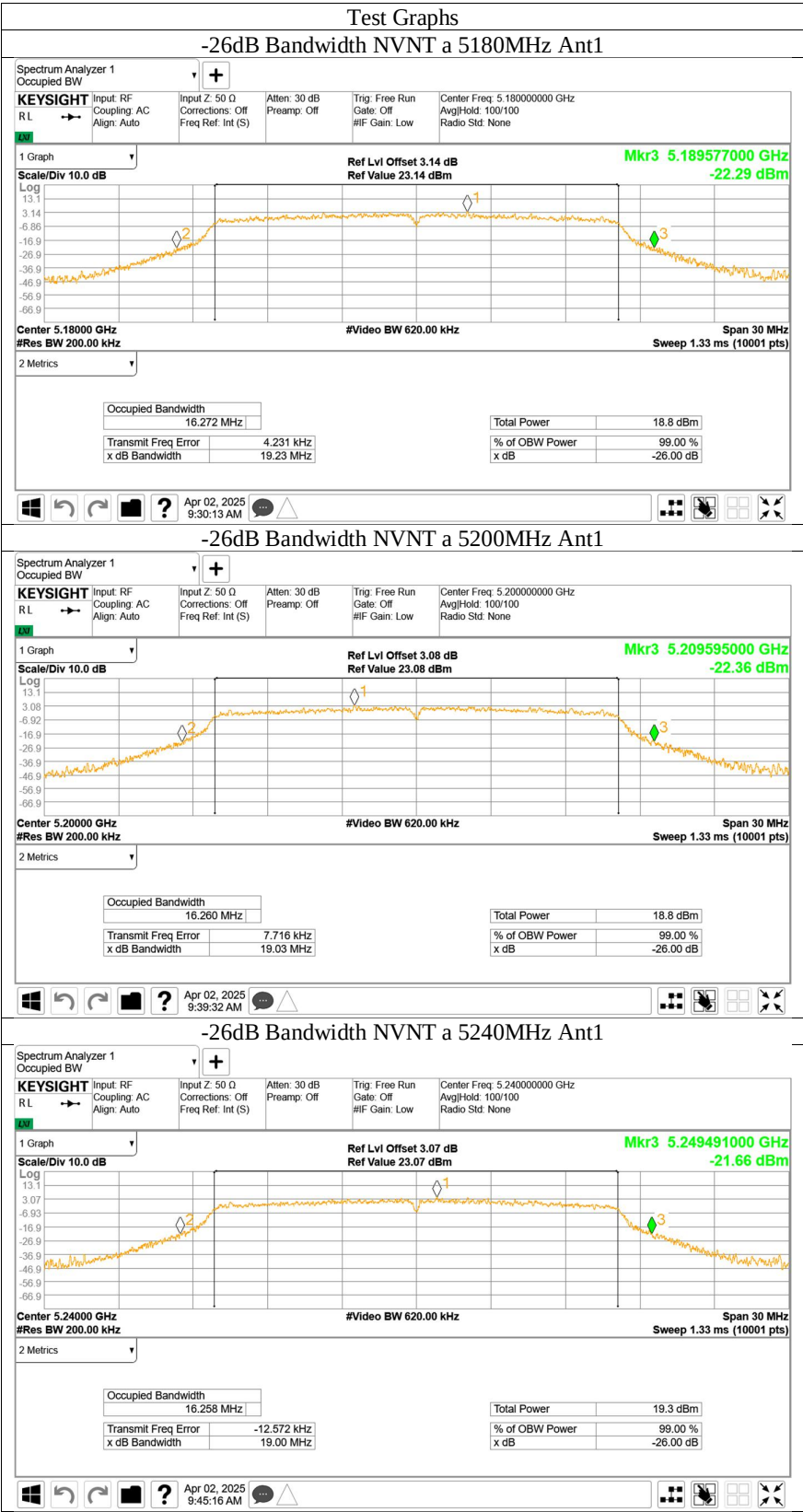
According to KDB789033 D02

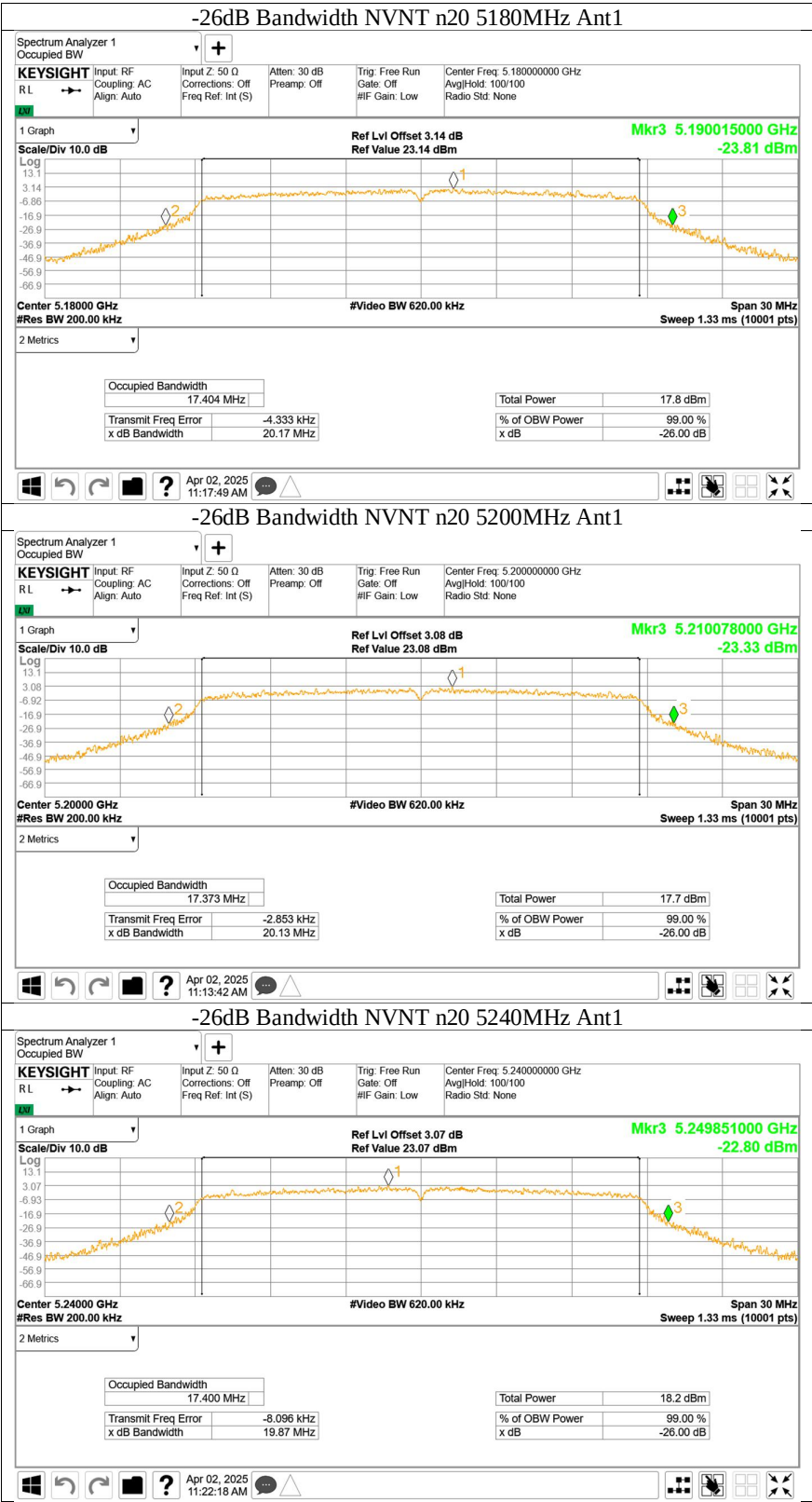
- a) Set center frequency to the nominal EUT channel center frequency
- b) Set span = 1.5 times to 5.0 times the OBW.
- c) Set RBW = 1 % to 5 % of the OBW
- d) Set VBW $\geq 3 \cdot \text{RBW}$
- e) Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max hold mode (until the trace stabilizes) shall be used.
- f) Use the 99 % power bandwidth function of the instrument (if available).
- g) 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.

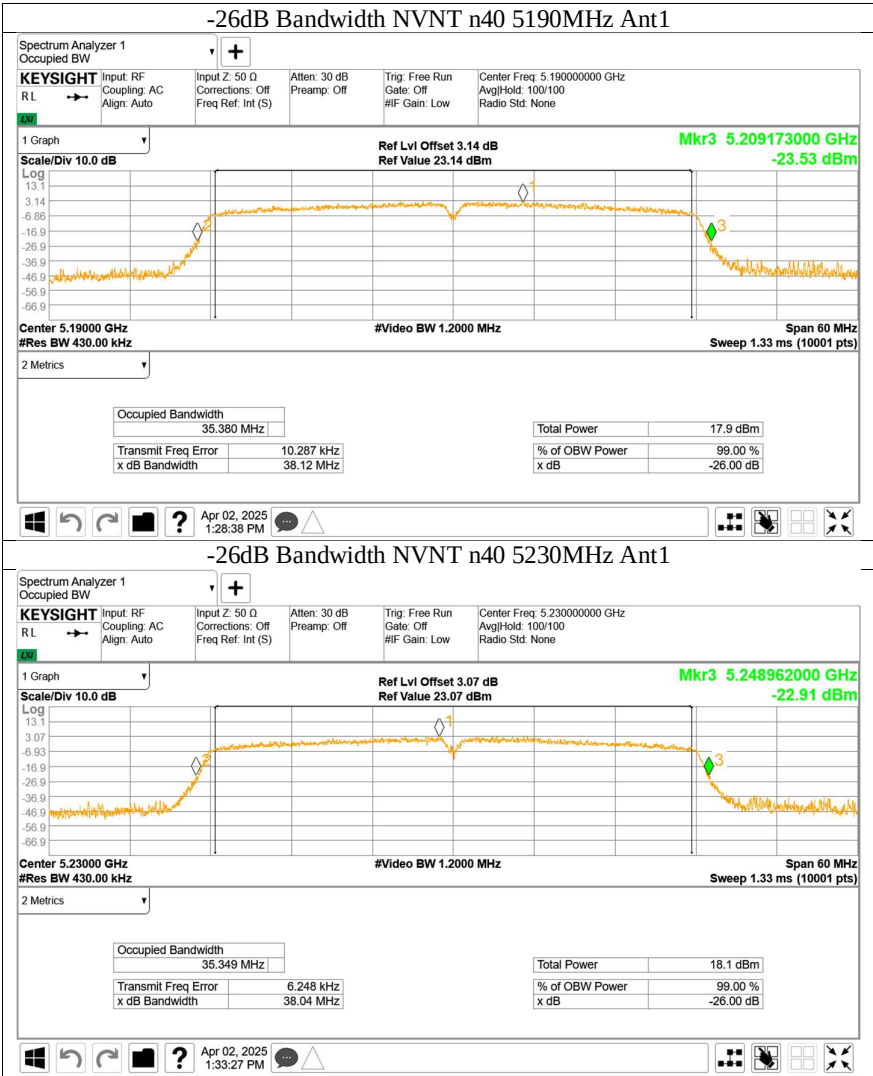
Limit: No limit

**26dB Bandwidth Test Result:**

Condition	Mode	Frequency (MHz)	Antenna	-26 dB Bandwidth (MHz)	Limit -26 dB Bandwidth (MHz)	Verdict
NVNT	a	5180	Ant1	19.23	--	Pass
NVNT	a	5200	Ant1	19.029	--	Pass
NVNT	a	5240	Ant1	19	--	Pass
NVNT	n20	5180	Ant1	20.174	--	Pass
NVNT	n20	5200	Ant1	20.126	--	Pass
NVNT	n20	5240	Ant1	19.868	--	Pass
NVNT	n40	5190	Ant1	38.125	--	Pass
NVNT	n40	5230	Ant1	38.037	--	Pass

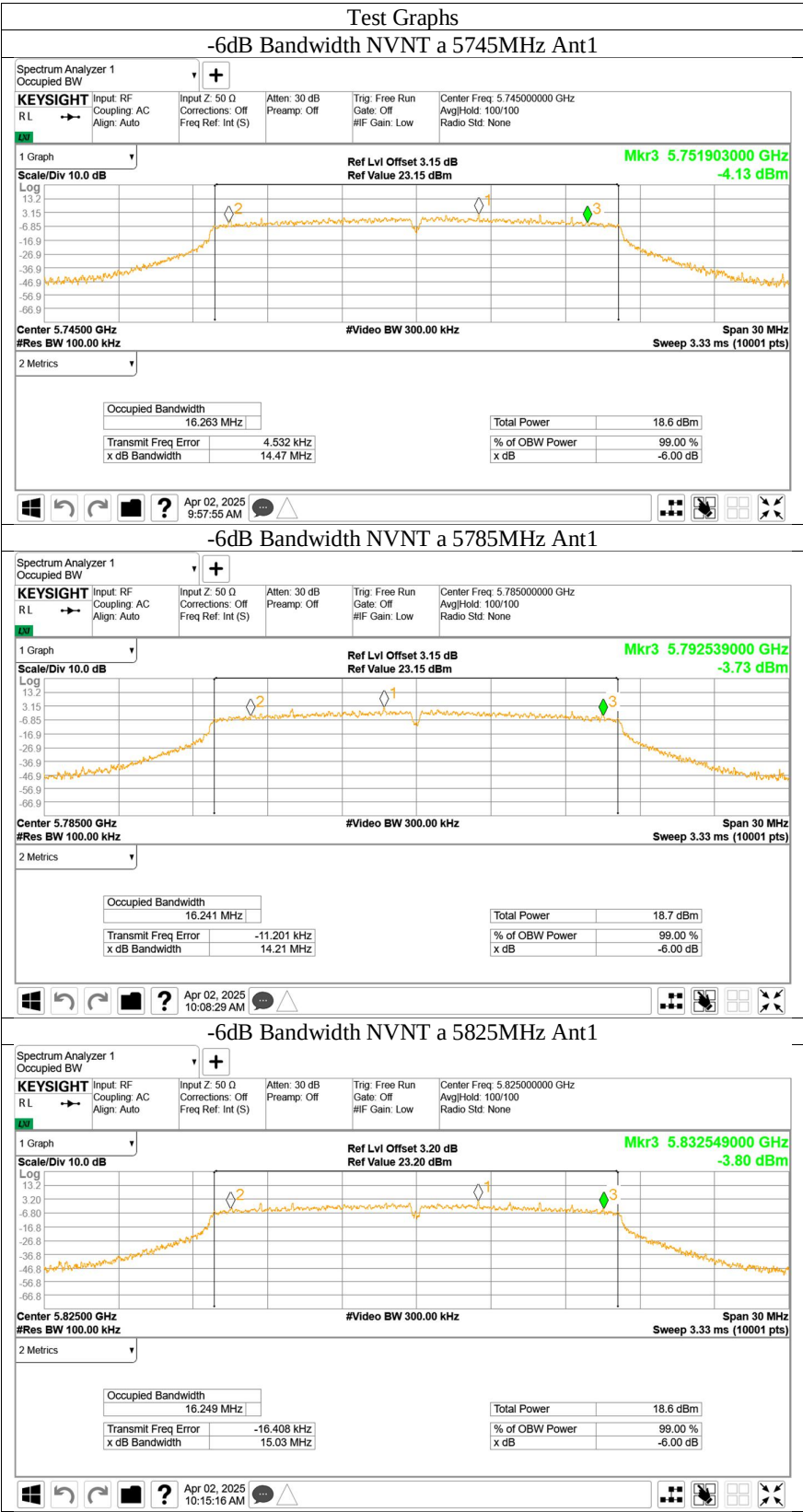


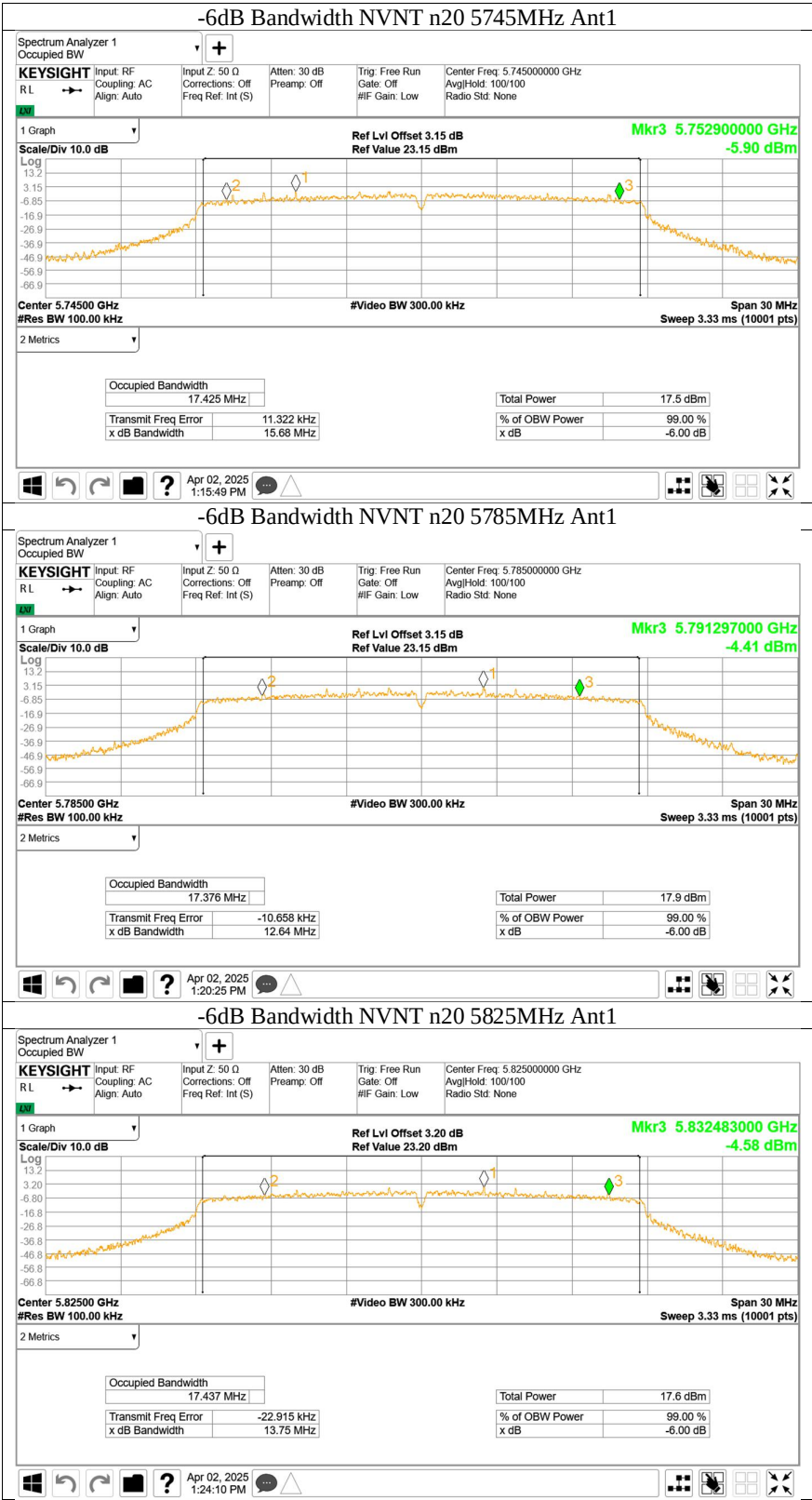


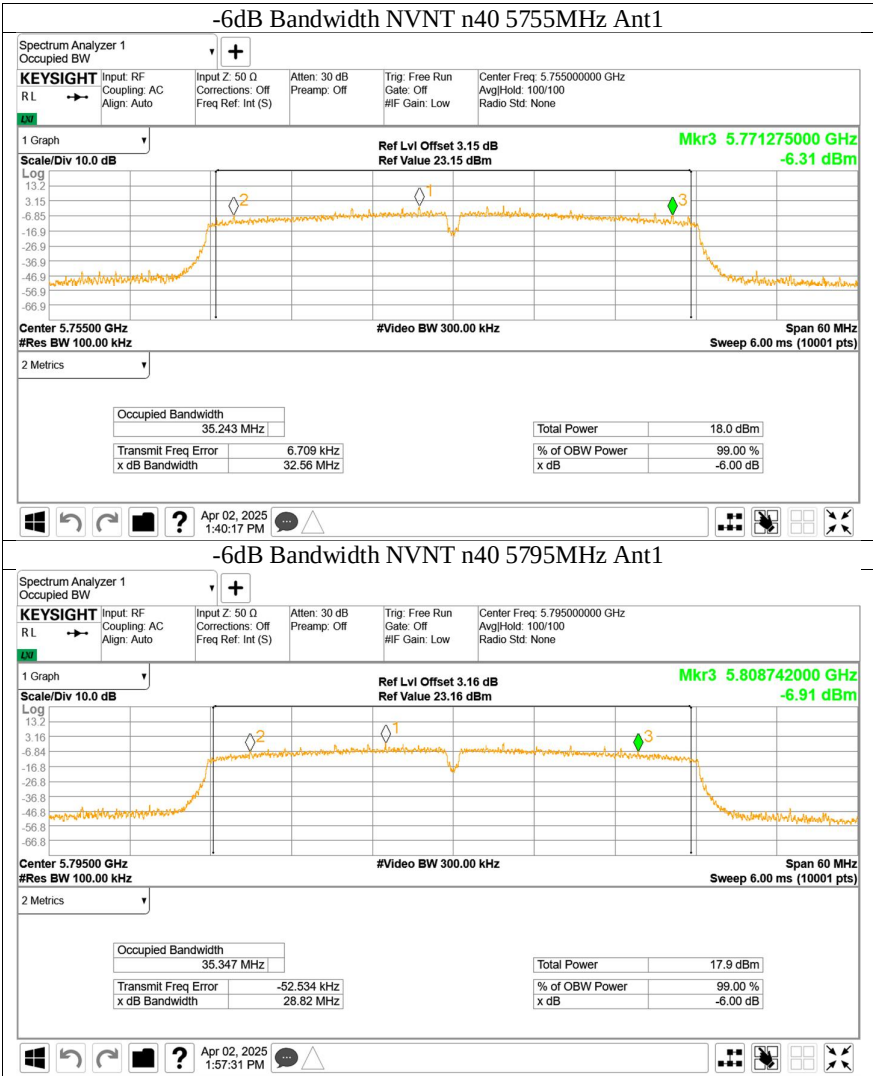


**6dB Bandwidth Test Result:**

Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	a	5745	Ant1	14.47	0.5	Pass
NVNT	a	5785	Ant1	14.206	0.5	Pass
NVNT	a	5825	Ant1	15.025	0.5	Pass
NVNT	n20	5745	Ant1	15.677	0.5	Pass
NVNT	n20	5785	Ant1	12.643	0.5	Pass
NVNT	n20	5825	Ant1	13.748	0.5	Pass
NVNT	n40	5755	Ant1	32.559	0.5	Pass
NVNT	n40	5795	Ant1	28.822	0.5	Pass

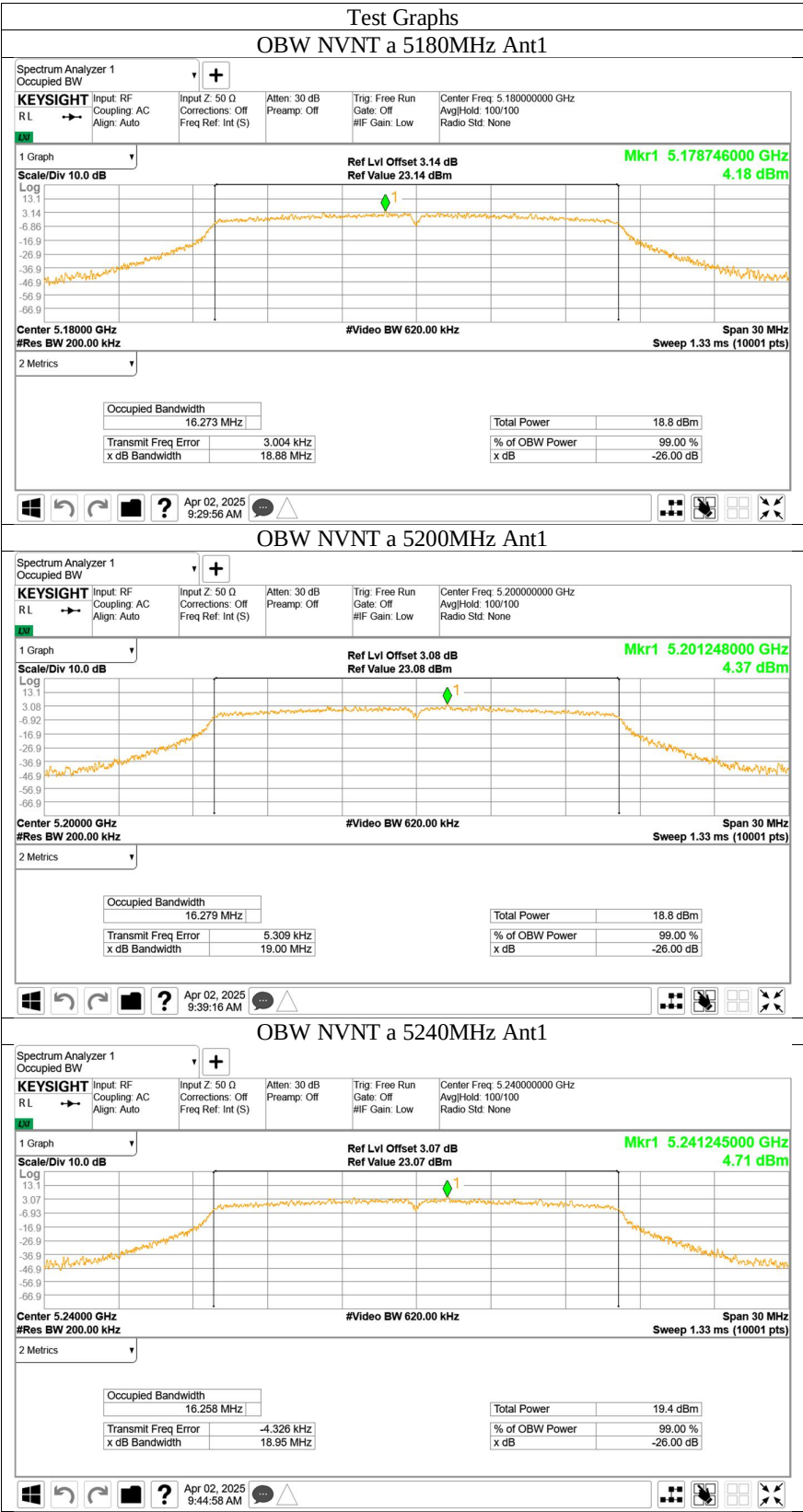


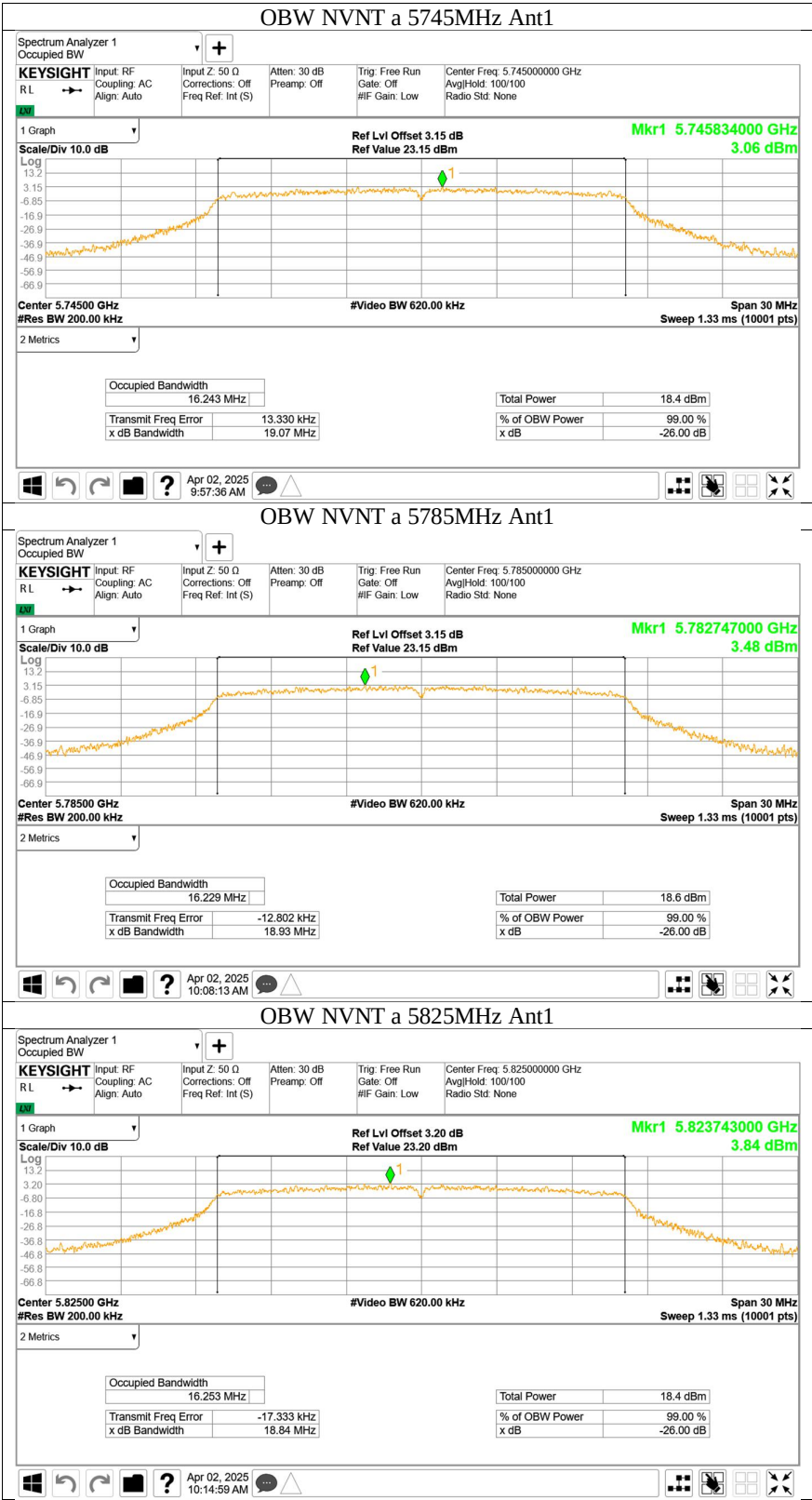


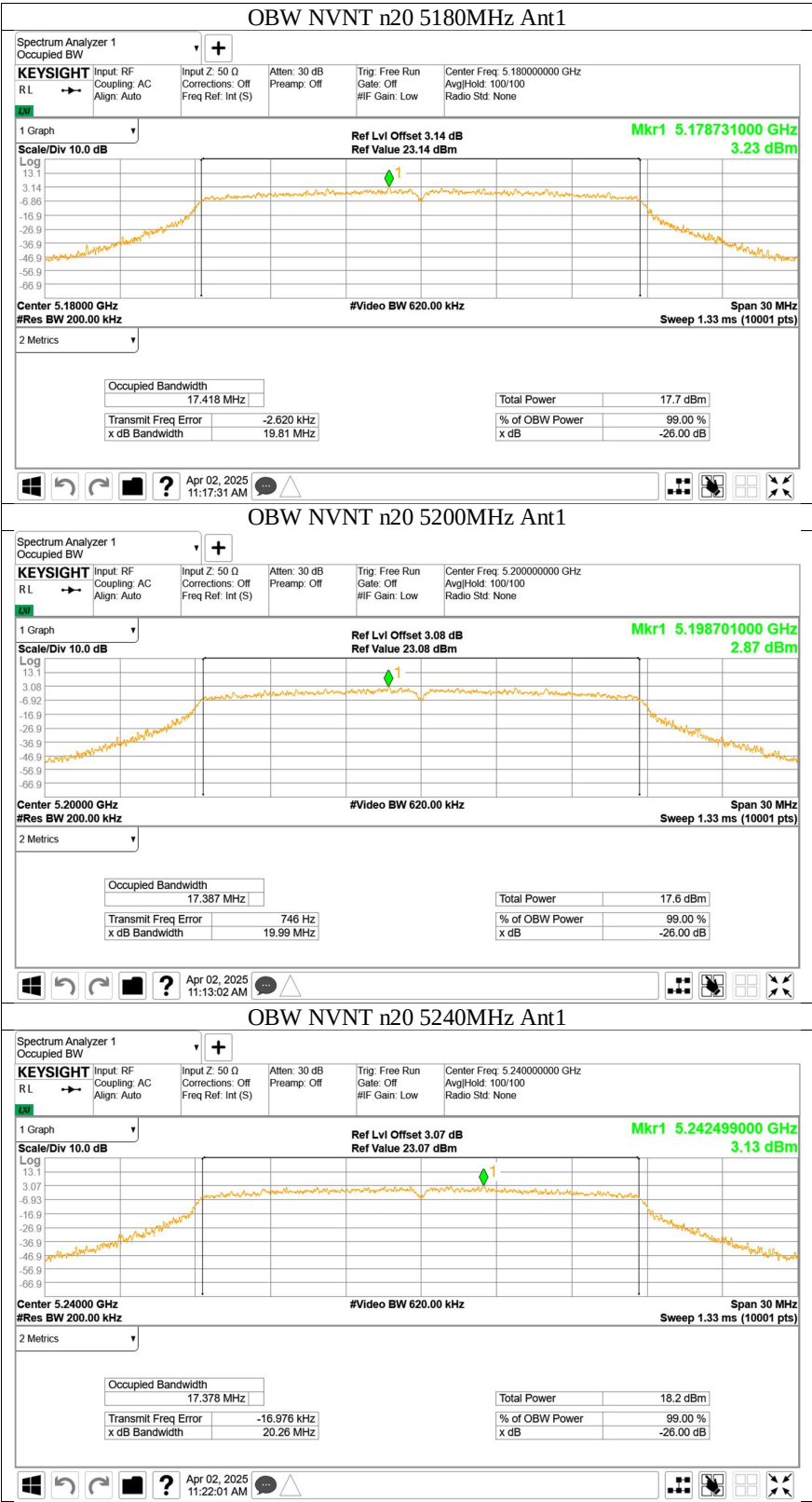


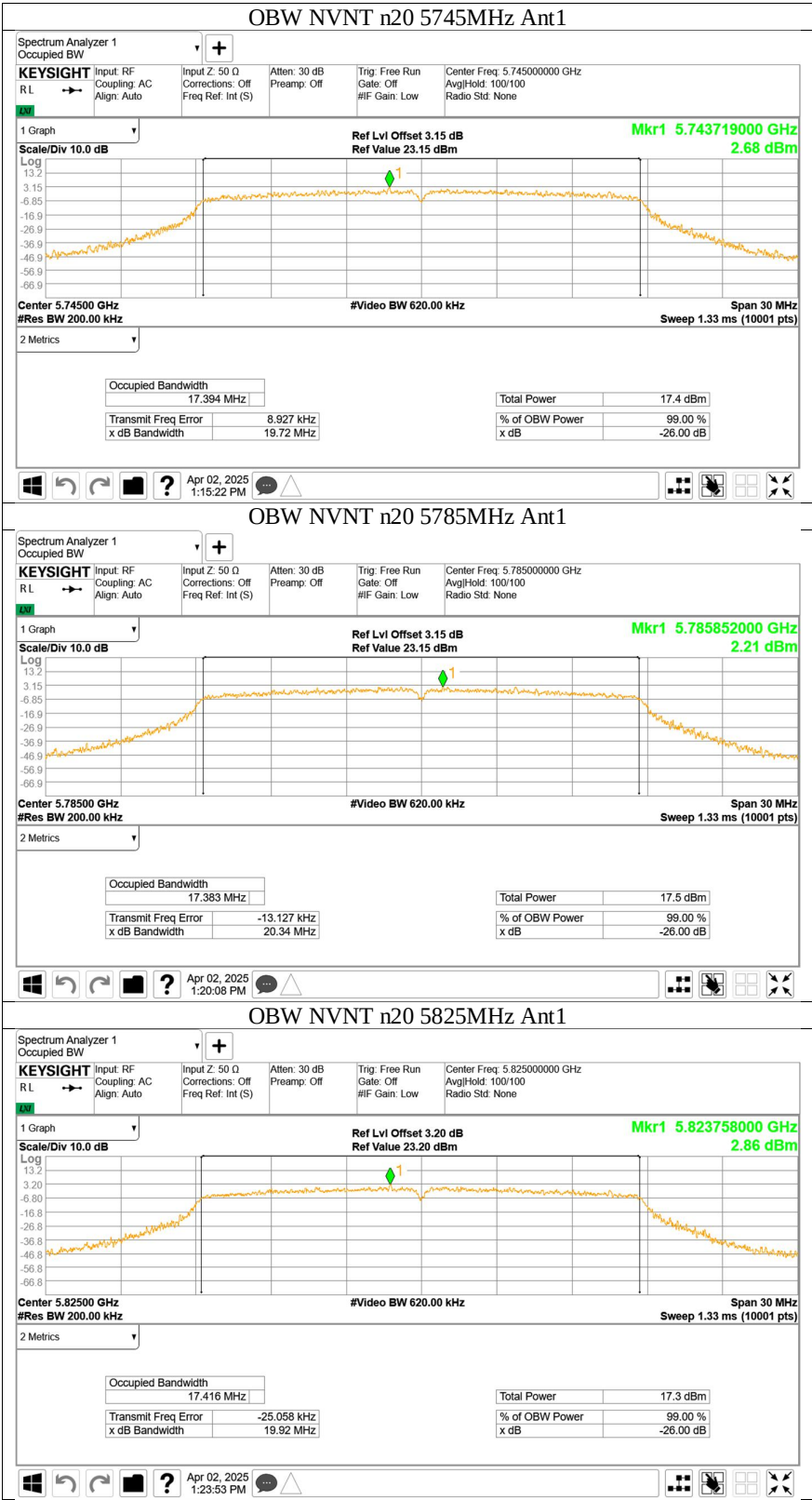
**99% Bandwidth Test Result**

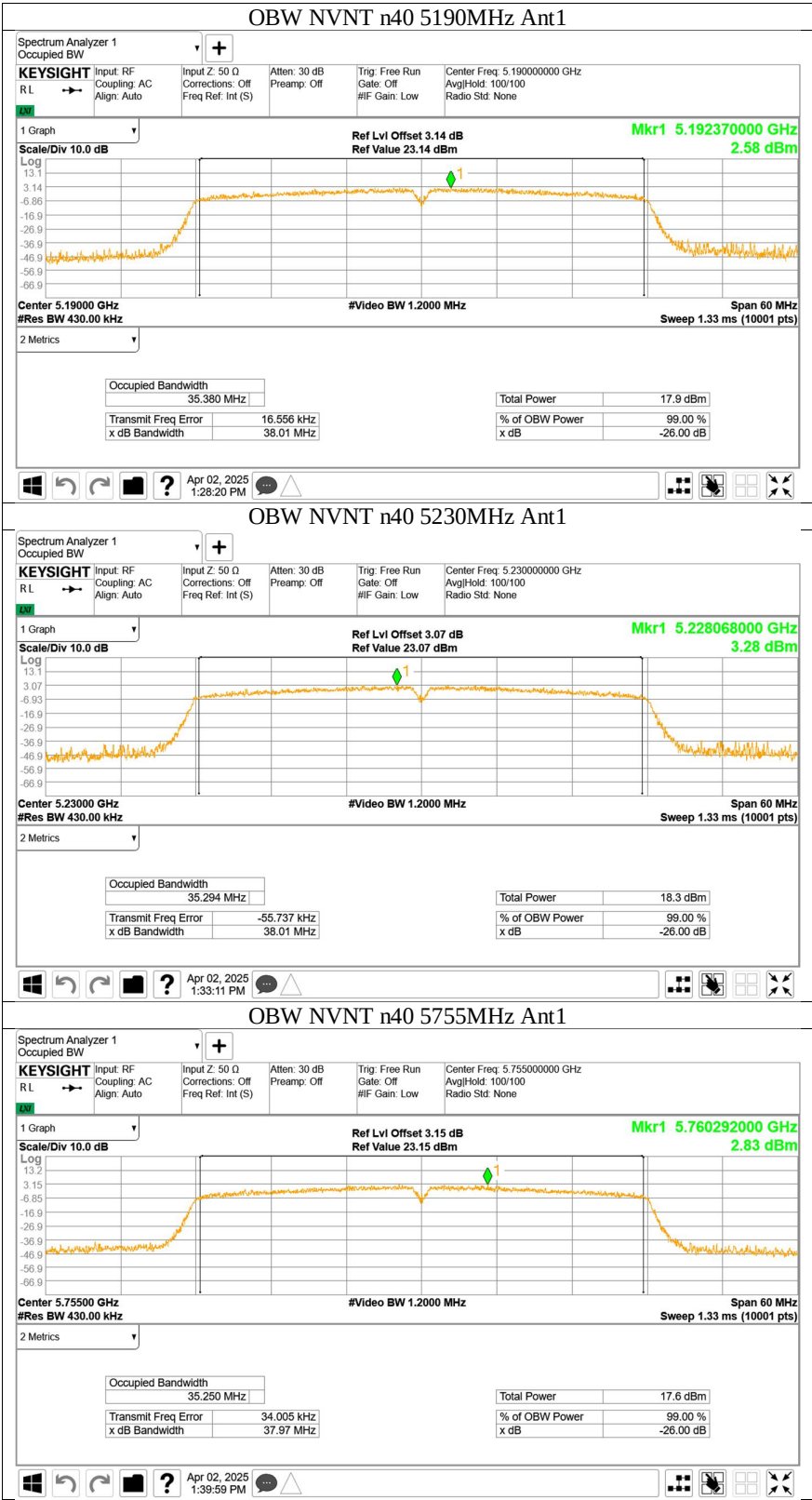
Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	a	5180	Ant1	16.273
NVNT	a	5200	Ant1	16.279
NVNT	a	5240	Ant1	16.258
NVNT	a	5745	Ant1	16.243
NVNT	a	5785	Ant1	16.229
NVNT	a	5825	Ant1	16.253
NVNT	n20	5180	Ant1	17.418
NVNT	n20	5200	Ant1	17.387
NVNT	n20	5240	Ant1	17.378
NVNT	n20	5745	Ant1	17.394
NVNT	n20	5785	Ant1	17.383
NVNT	n20	5825	Ant1	17.416
NVNT	n40	5190	Ant1	35.38
NVNT	n40	5230	Ant1	35.294
NVNT	n40	5755	Ant1	35.25
NVNT	n40	5795	Ant1	35.383

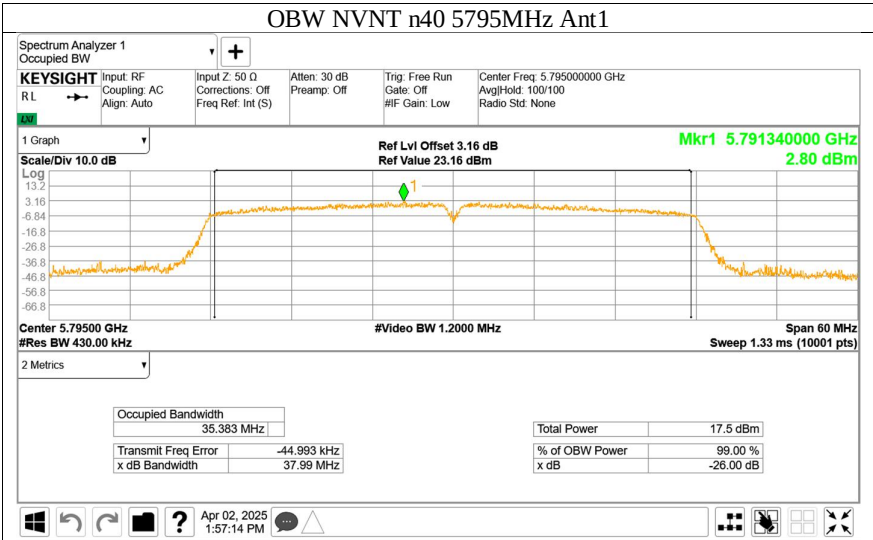












10.2 Maximum conducted output power

Test Method

According to C63.10, the EUT was placed on 0.8m height table, the RF output of EUT was connected to the Spectrum Analyzer by RF cable. The path loss was compensated to the results for each measurement.

1. Measure the duty cycle
2. Use the following spectrum analyzer settings:
RBW=1MHz, VBW≥3MHz, Span≥ the 99% Bandwidth of the emission being measured
Sweep = auto, Detector function = power averaging.
3. Trace average at least 100 traces in power averaging (rms) mode
4. Add $10 \log (1/x)$, where x is the duty cycle, to the measured power in order to compute the average power during the actual transmission times

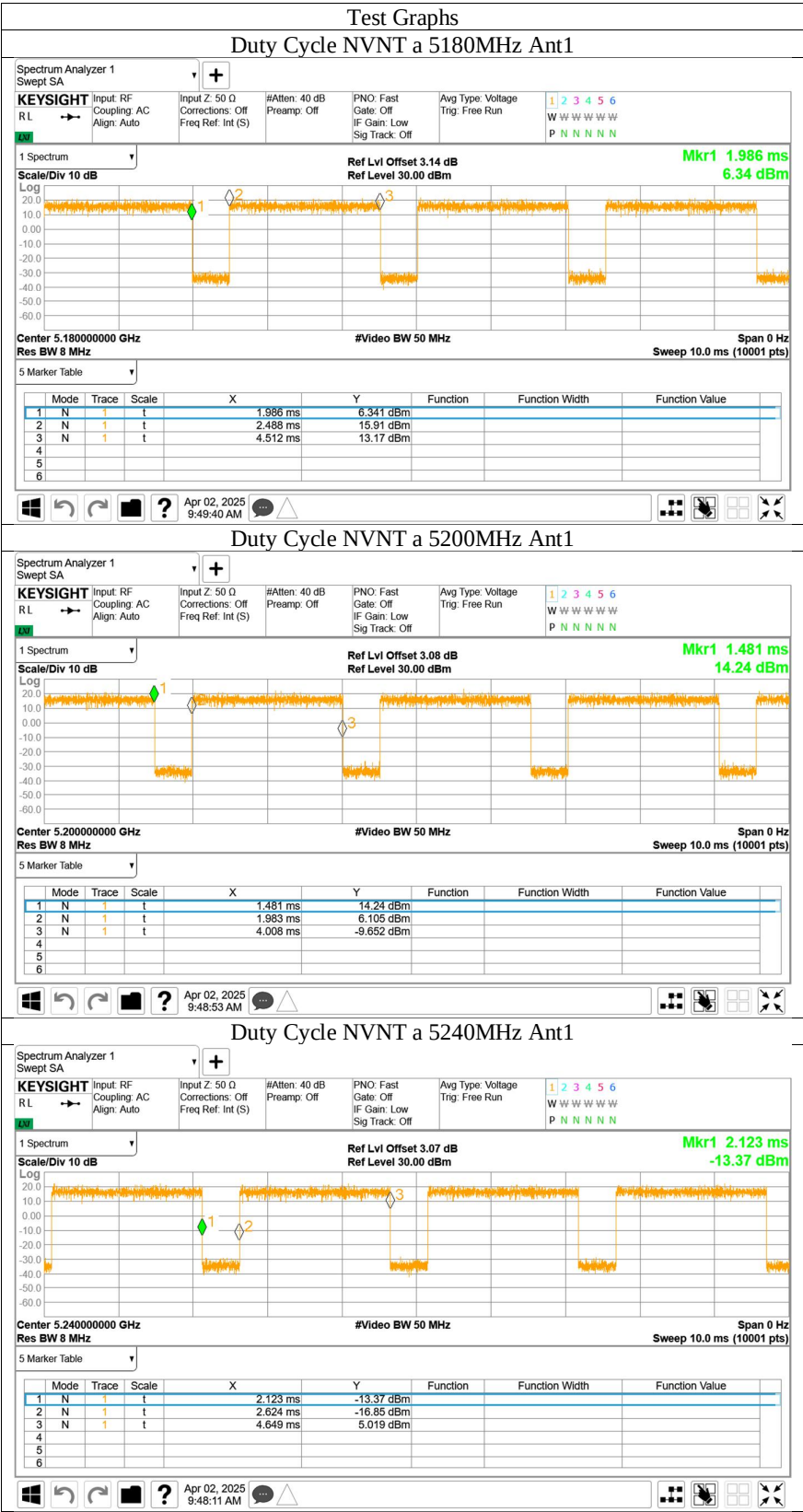
15.407 Limits:

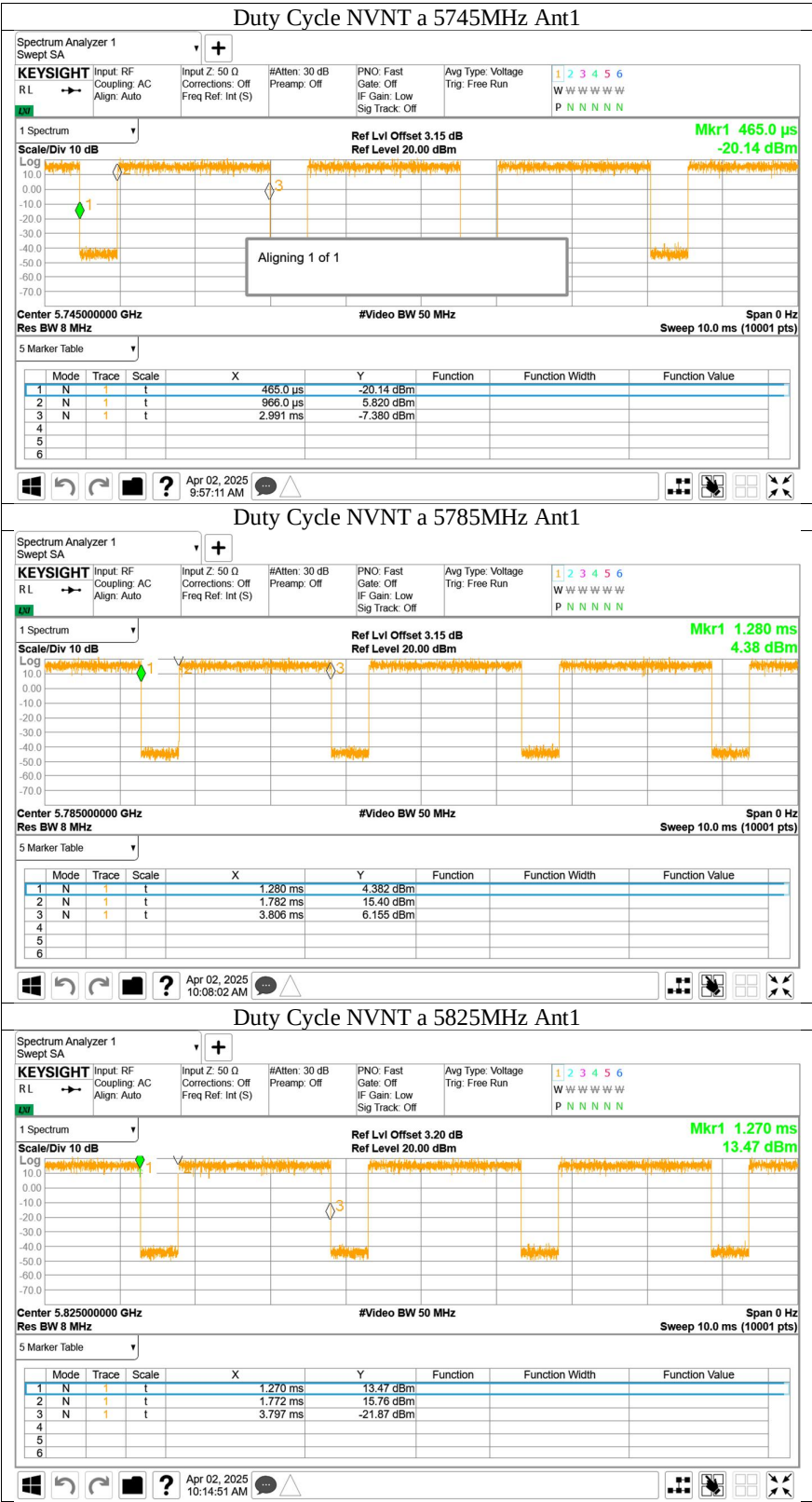
For client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. For the band 5.725-5.850 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W.

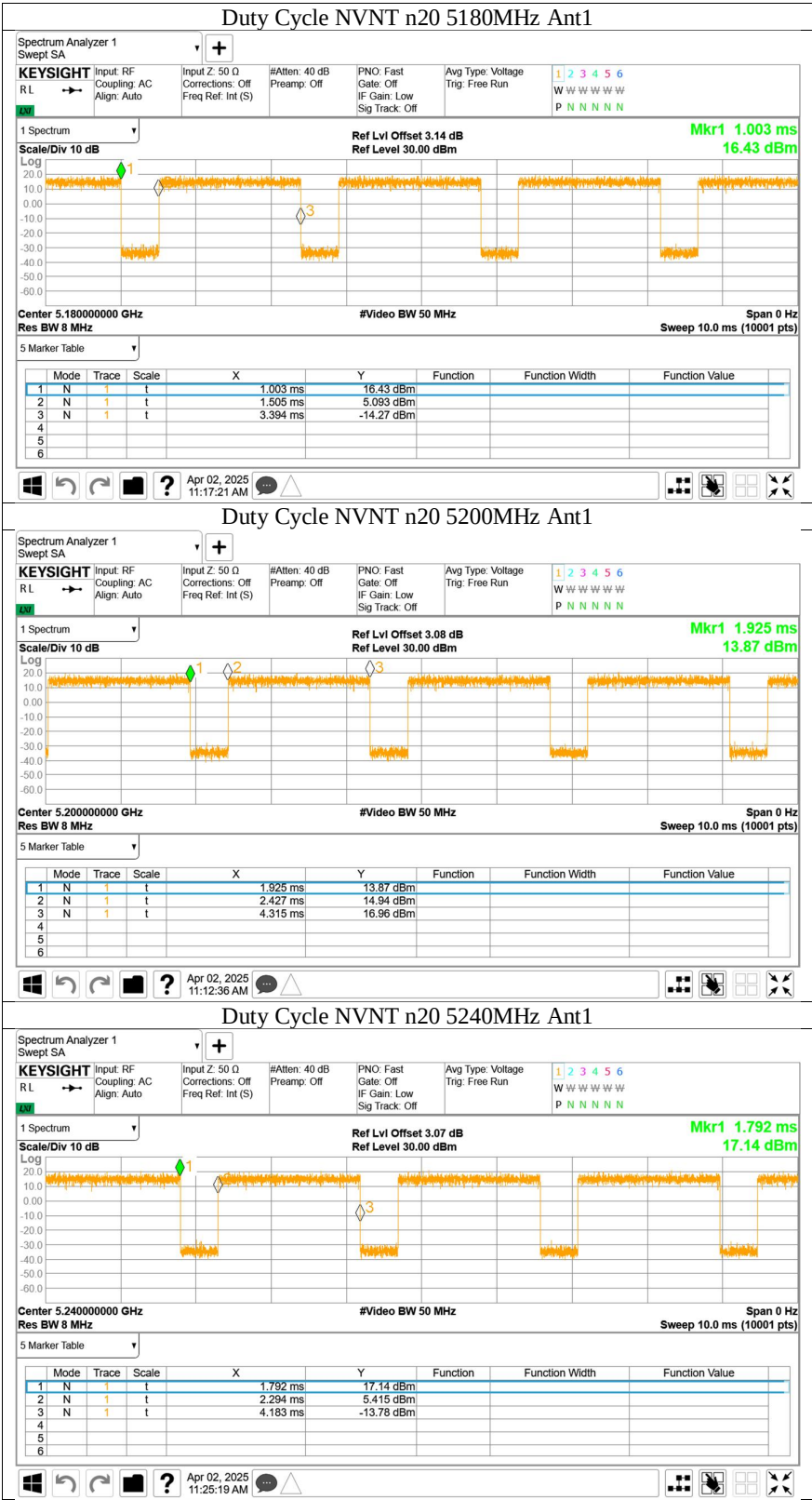
Maximum conducted output power Test Result:

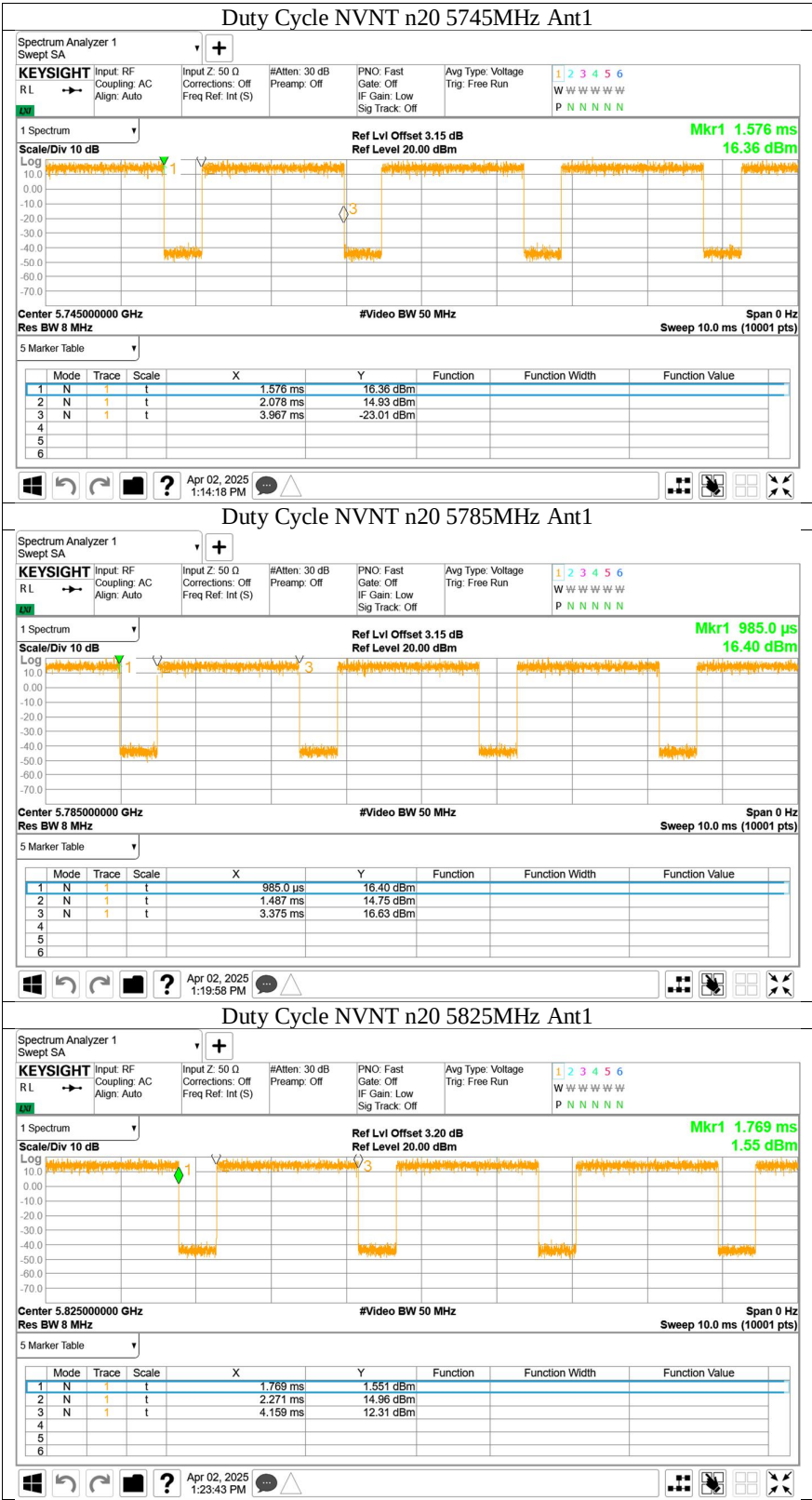
Duty Cycle

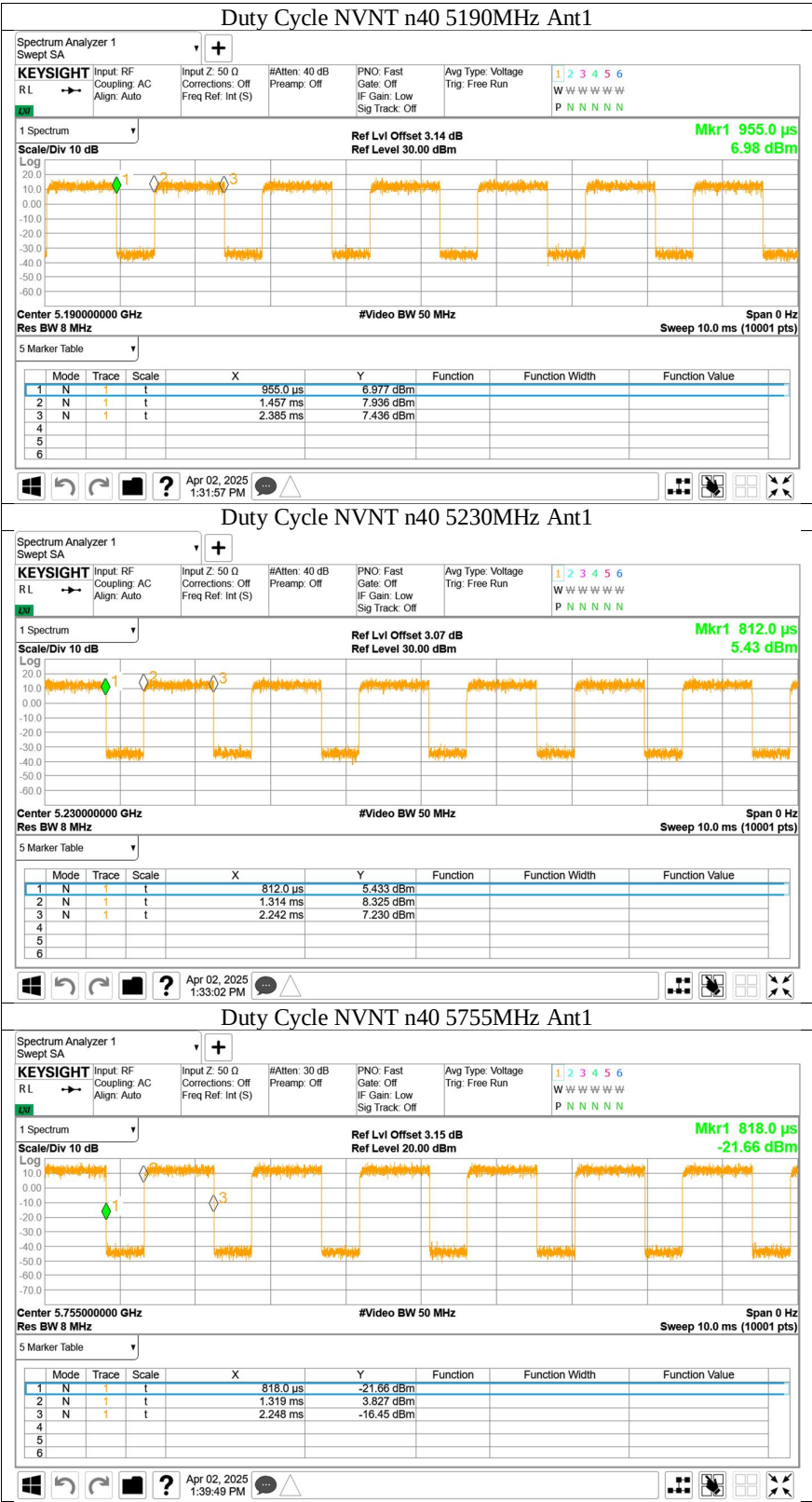
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	a	5180	Ant1	80.13	0.96	0.49
NVNT	a	5200	Ant1	80.13	0.96	0.49
NVNT	a	5240	Ant1	80.17	0.96	0.49
NVNT	a	5745	Ant1	80.17	0.96	0.49
NVNT	a	5785	Ant1	80.13	0.96	0.49
NVNT	a	5825	Ant1	80.13	0.96	0.49
NVNT	n20	5180	Ant1	79	1.02	0.53
NVNT	n20	5200	Ant1	79	1.02	0.53
NVNT	n20	5240	Ant1	79	1.02	0.53
NVNT	n20	5745	Ant1	79	1.02	0.53
NVNT	n20	5785	Ant1	79	1.02	0.53
NVNT	n20	5825	Ant1	79	1.02	0.53
NVNT	n40	5190	Ant1	64.9	1.88	1.08
NVNT	n40	5230	Ant1	64.9	1.88	1.08
NVNT	n40	5755	Ant1	64.97	1.87	1.08
NVNT	n40	5795	Ant1	64.9	1.88	1.08

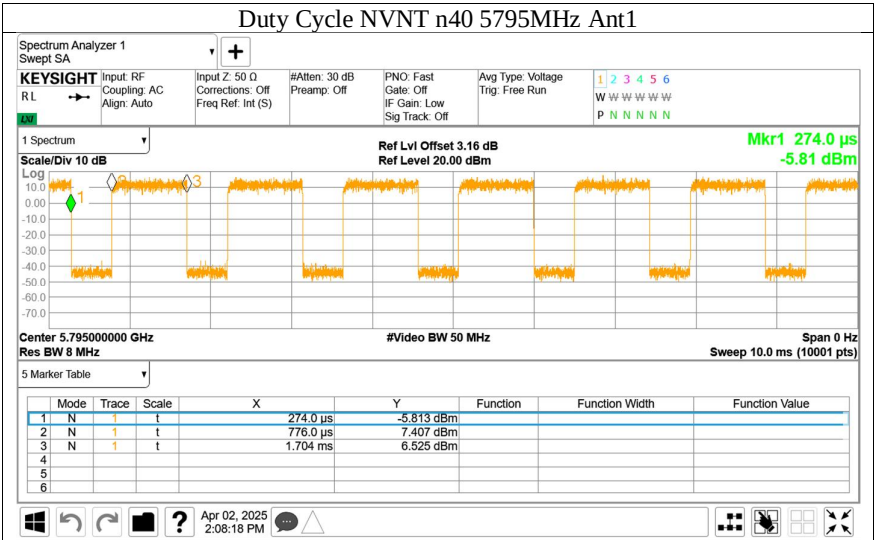












Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Duty Factor (dB)	Total Power (dBm)	FCC Limit (dBm)	Verdict
NVNT	a	5180	Ant1	12.53	0.96	13.49	24	Pass
NVNT	a	5200	Ant1	12.34	0.96	13.3	24	Pass
NVNT	a	5240	Ant1	12.59	0.96	13.55	24	Pass
NVNT	a	5745	Ant1	12.13	0.96	13.09	30	Pass
NVNT	a	5785	Ant1	12.28	0.96	13.24	30	Pass
NVNT	a	5825	Ant1	12.19	0.96	13.15	30	Pass
NVNT	n20	5180	Ant1	11.11	1.02	12.13	24	Pass
NVNT	n20	5200	Ant1	11.3	1.02	12.32	24	Pass
NVNT	n20	5240	Ant1	11.94	1.02	12.96	24	Pass
NVNT	n20	5745	Ant1	11.21	1.02	12.23	30	Pass
NVNT	n20	5785	Ant1	11.05	1.02	12.07	30	Pass
NVNT	n20	5825	Ant1	11.03	1.02	12.05	30	Pass
NVNT	n40	5190	Ant1	10.47	1.88	12.35	24	Pass
NVNT	n40	5230	Ant1	11.09	1.88	12.97	24	Pass
NVNT	n40	5755	Ant1	10.32	1.87	12.19	30	Pass
NVNT	n40	5795	Ant1	10.12	1.88	12	30	Pass

