

TEST REPORT

ACCORDING TO: FCC CFR 47 Part 90 subpart Y, Part 15 subpart B

FOR:

Airspan Networks Inc.

5G NR Base station

Model: AirSpeed 1900, 4.94 – 4.99GHz (n79)

FCC ID: PIDAS1900

This report is in conformity with ISO/ IEC 17025. The "A2LA Accredited" symbol endorsement applies only to the tests and calibrations that are listed in the scope of Hermon Laboratories accreditation. The test results relate only to the items tested.
This test report shall not be reproduced in any form except in full with the written approval of Hermon Laboratories Ltd.

Table of contents

1	Applicant information.....	3
2	Equipment under test attributes	3
3	Manufacturer information	3
4	Test details.....	3
5	Tests summary.....	4
6	EUT description.....	5
6.1	General information.....	5
6.2	Test configuration.....	5
6.3	Ports and lines	6
6.4	Support and test equipment	6
6.5	Changes made in the EUT	6
6.6	Transmitter characteristics	7
7	Transmitter tests according to FCC 47CFR part 90 requirements	8
7.1	Maximum output power.....	8
7.2	Occupied bandwidth test.....	39
7.3	Emission mask test	49
7.4	Radiated spurious emission measurements.....	76
7.5	Spurious emissions at RF antenna connector test	88
7.6	Frequency stability test.....	125
8	Emissions tests according to 47CFR part 15 subpart B requirements	127
8.1	Conducted emissions	127
8.2	Radiated emission measurements	131
9	APPENDIX A Test equipment and ancillaries used for tests.....	136
10	APPENDIX B Test equipment correction factors.....	138
11	APPENDIX C Measurement uncertainties	141
12	APPENDIX D Test facility description	142
13	APPENDIX E Specification references.....	143
14	APPENDIX F Abbreviations and acronyms.....	144

1 Applicant information

Client name: Airspan Networks Inc.
Address: 777 Yamato, Road Suite 310 Boca Raton, FL 33431, USA
Telephone: +972 (3) 3030020
Fax: +972 (3) 9777400
E-mail: oeinem@airspan.com
Contact name: Mr. Oleg Einem

2 Equipment under test attributes

Product name: 5G NR Base station
Product type: Transceiver
Model(s): AirSpeed 1900, 4.94 – 4.99GHz (n79)
Product Code: AS19-F495-DSC1
Serial number: F6787101336C
Hardware version: A0
Software release: SR19.00
Receipt date 25-Oct-23

3 Manufacturer information

Manufacturer name: Airspan Networks Inc.
Address: 777 Yamato, Road Suite 310 Boca Raton, FL 33431, USA
Telephone: +972 (3) 3030020
Fax: +972 (3) 9777400
E-Mail: oeinem@airspan.com
Contact name: Mr. Oleg Einem

4 Test details

Project ID: 52632
Location: Hermon Laboratories Ltd. 66 HaTachana str., P.O. Box 23, Binyamina 3055001, Israel
Test started: 26-Dec-23
Test completed: 07-Jan-24
Test specification(s): FCC 47CFR Part 90 subpart Y, Part 15 subpart B class B

5 Tests summary

Test	Status
Transmitter characteristics	
Section 90.205, 90.1215, Maximum output power and peak power spectral density	
Section 90.209, Occupied bandwidth	Pass
Section 90.210(l), Emission mask	Pass
Section 90.210, Radiated spurious emissions	Pass
Section 90.210, Conducted spurious emissions	Pass
Section 90.213, Frequency stability	Tested without limit
Section 90.214, Transient frequency behaviour	Not required
Section 2.1091, RF radiation exposure evaluation	Pass
Unintentional emissions	
Section 15.107, Class B, Conducted emission at AC power port	Pass
Section 15.109, Class B, Radiated emission	Pass
Section 15.111, Conducted emission at receiver antenna port	Not required

Revision history:

Date	File No.	Change Description
21-Feb-24	AIRRAD_FCC.52632_Rev1	1. Title page, The model name was modified from AirSpeed 1900, 5G, 4.94-4.99GHz (n79), FM, DC to AirSpeed 1900, 4940-4990MHz (n79)
19-Feb-24	AIRRAD_FCC.52632	Original report

This test report supersedes the previously issued test report identified by Doc ID: AIRRAD_FCC.52632

Testing was completed against all relevant requirements of the test standard. The results obtained indicate that the product under test complies in full with the requirements tested.
The test results relate only to the items tested. Pass/ fail decision was based on nominal values.

	Name and Title	Date	Signature
Tested by:	Mr. S. Sugatov, test engineer, EMC & Radio	26-Dec-23 – 07-Jan-24	
Reviewed by:	Mrs. S. Peysahov Sheynin, certification specialist, EMC & Radio	20-Jan-24	
Approved by:	Mr. M. Nikishin, group leader, EMC & Radio	21-Feb-24	

6 EUT description

Note: The following data in this clause is provided by the customer and represents his sole responsibility

6.1 General information

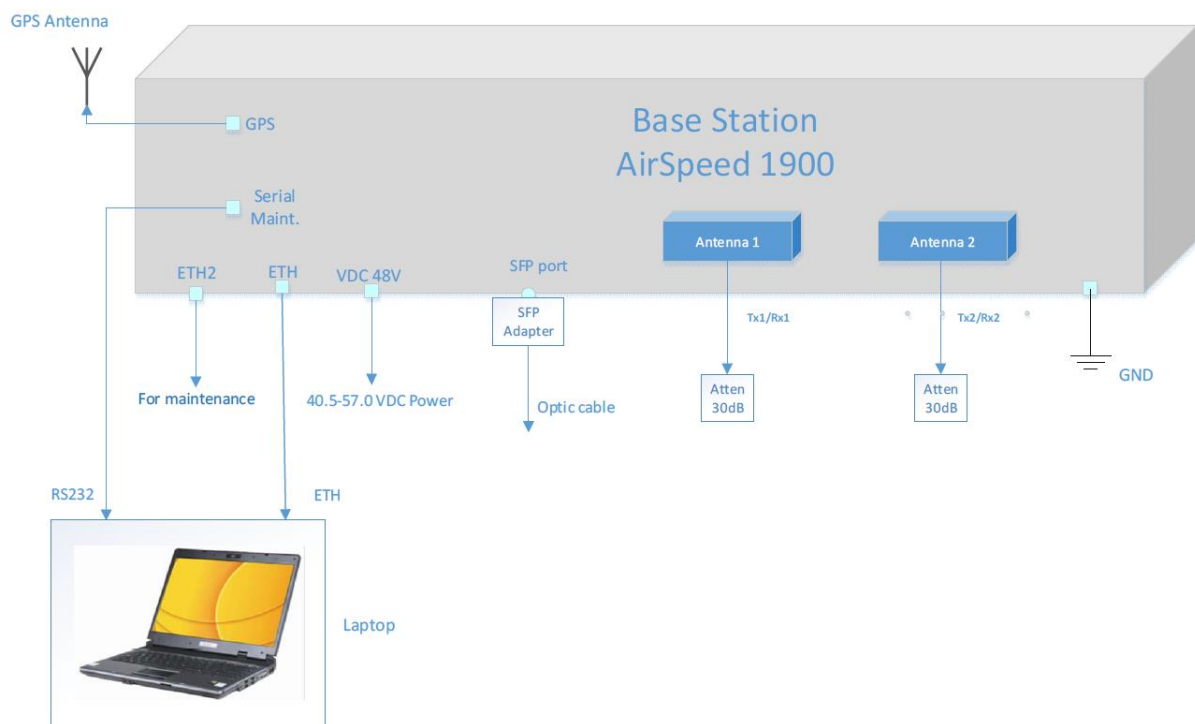
Mobile Digital station, AirSpeed 1900 4.94 – 4.99 GHz (n79), is part of a 5G broadband fixed cellular wireless access system. The system provides a radio link between an end-user (a subscriber) and a network to give high-speed data access. The AirSpeed 1900's transceiver/receiver (Up to 256 QAM modulation, data rate up to 285 Mbps) equipped with External antennas – maximum 19dBi antenna gain.

Advanced Antenna Techniques 2x2 MIMO are supported. The maximum RF output power (not including antenna gain) is 32.24 dBm for 19 dBi and it can be reduced by software.

The AirSpeed is installed outdoors. The Subscriber transmits and receives traffic to and from the base station respectively. The transceiver provides subscribers with "always-on" Internet, high speed data only, or data and voice (VoIP) services and is configured with a unique base station reference number, preventing the 5G UE from relocating to another subscriber premises without authorization.

This device supports 5G-NR TDD n79 band.

6.2 Test configuration



6.3 Ports and lines

Port No.	Name	Type	Cable Max. >3m	Cable Shielded	Qty.	Comments
1	ETH	RG45	>3m	v	1	NA
2	ETH2	RG45	>3m	v	1	For maintenance
3	RS232	RG45	>3m	v	1	For maintenance
4	SFP port	Optic cable	>3m	-	1	NA
5	GPS	GPS antenna	NA	NA	1	NA
6	RF	RF antenna	NA	NA	2	NA
7	DC power 48VDC	Power	>3m	NA	1	Range 40.5 – 57 VDC

6.4 Support and test equipment

Use	Product Type	Manufacturer	Model	Qty.	Serial number
AE	Laptop	DELL	Latitude E7440	1	3234219878
AE	GPS Antenna	Tallysman	32-3372-00-01	1	20150313
AE	SFP adapter	Hisense	LTE3409-BC+	1	Q65A4000001
AE	DC power supply	TDK-Lambda	GENH80-9.5	1	NA
AE	RF attenuator 30db	INMET	6N20W-30dB	2	NA

6.5 Changes made in the EUT

No changes were implemented in the EUT during testing.

6.6 Transmitter characteristics

Type of equipment					
V	Stand-alone (Equipment with or without its own control provisions)				
	Combined equipment (Equipment where the radio part is fully integrated within another type of equipment)				
	Plug-in card (Equipment intended for a variety of host systems)				
Intended use		Condition of use			
V	fixed	Always at a distance more than 2 m from all people			
	mobile	Always at a distance more than 20 cm from all people			
	portable	May operate at a distance closer than 20 cm to human body			
Assigned frequency range		4940 – 4990 MHz			
Operating frequency (full bands)		4945 – 4985 MHz (for 10 MHz channel spacing) 4952.5 – 4977.5 MHz (for 25 MHz channel spacing) 4965 MHz (for 50 MHz channel spacing)			
RF channel spacing		10 MHz, 25 MHz, 50 MHz			
Maximum rated output power		At transmitter 50 Ω RF output connector (per port) 29.98 dBm for 8.645 MHz Occupied bandwidth 32.20 dBm for 18.439 MHz Occupied bandwidth 32.24 dBm for 38.331 MHz Occupied bandwidth			
Is transmitter output power variable?		No			
		V	Yes	continuous variable	
				stepped variable with step size	0.25 dB
				minimum RF power	-30 dBm
		maximum RF power at antenna connector			dBm
Antenna connection					
unique coupling	V	standard connector	Integral	with temporary RF connector without temporary RF connector	
Antenna/s technical characteristics					
Type	Manufacturer	Model number / Part Number		Gain	
External	MP Antenna LTD.	08-ANT-1041		10 dBi	
External	Infinite Electronics, Inc.	KP-5HA-60 / KP-5HA-45 / KP-5HA-30		13.8 dBi / 16 dBi / 19 dBi	
External	PCTEL, Inc.	DAA4959-14DP		14.6 dBi	
Transmitter aggregate data rate/s, Mbps					
Transmitter 26dBc power bandwidth		Type of modulation			
		QPSK	16QAM	64QAM	256 QAM
10 MHz		10.7	22.7	47.3	71.5
20 MHz		23.4	45.4	95.0	143.0
40 MHz		46.8	90.8	190.0	285.0
Type of multiplexing		TDD			
Modulating test signal (baseband)		PRBS			
Maximum transmitter duty cycle in normal use		0.74			
Transmitter power source					
		Nominal rated voltage		Battery type	
V	DC	Nominal rated voltage	48 VDC		
	AC mains	Nominal rated voltage		Frequency	
Common power source for transmitter and receiver		V	y e s	no	



Test specification:		Section 90.1215, Maximum output power	
Test procedure:		47 CFR, Section 2.1046; TIA/EIA-603-A, Section 2.2.1	
Test mode:		Verdict: PASS	
Date(s):			
26-Dec-23			
Temperature: 24 °C	Relative Humidity: 39 %	Air Pressure: 1018 hPa	Power: 48 VDC
Remarks:			

7 Transmitter tests according to FCC 47CFR part 90 requirements

7.1 Maximum output power

7.1.1 General

This test was performed to measure the peak output power at RF antenna connector. Specification test limits are given in Table 7.1.1.

Table 7.1.1 Peak output power limits

Assigned frequency range, MHz	Occupied Bandwidth, MHz	Maximum peak output power*
		dBm
4940.0 – 4990.0	10	30.0
	20	33.0
	40	36.0
Assigned frequency range, MHz	Occupied Bandwidth, MHz	Maximum peak power spectral density
		dBm/MHz
4940.0 – 4990.0	10	21
	20	
	40	

*For high power transmitters point-to-point or point-to-multipoint operation (both fixed and temporary-fixed rapid deployment) may employ transmitting antennas with total directional antenna gain up to 26 dBi without any corresponding reduction in the transmitter power or spectral density. Corresponding reduction in the peak transmit power and peak power spectral density should be the amount in decibels that the total directional gain of the antennas exceeds 26 dBi

NOTE: Maximum declared Individual antenna gain is 19 dBi. Total Directional Antenna Gain should not exceed 26 dBi.

Total Directional Antenna Gain = Individual antenna gain + 10 log (number of co-polarized antennas)

7.1.2 Test procedure

7.1.2.1 The EUT was set up as shown in Figure 7.1.1, energized and its proper operation was checked.

7.1.2.2 The EUT was adjusted to produce maximum available to the end user RF output power.

7.1.2.3 The peak output power was measured with spectrum analyzer as provided in Table 7.1.2 and associated plots.



Test specification:		Section 90.1215, Maximum output power	
Test procedure:		47 CFR, Section 2.1046; TIA/EIA-603-A, Section 2.2.1	
Test mode:		Verdict: PASS	
Date(s):			
26-Dec-23			
Temperature: 24 °C	Relative Humidity: 39 %	Air Pressure: 1018 hPa	Power: 48 VDC
Remarks:			

Figure 7.1.1 Peak output power test setup

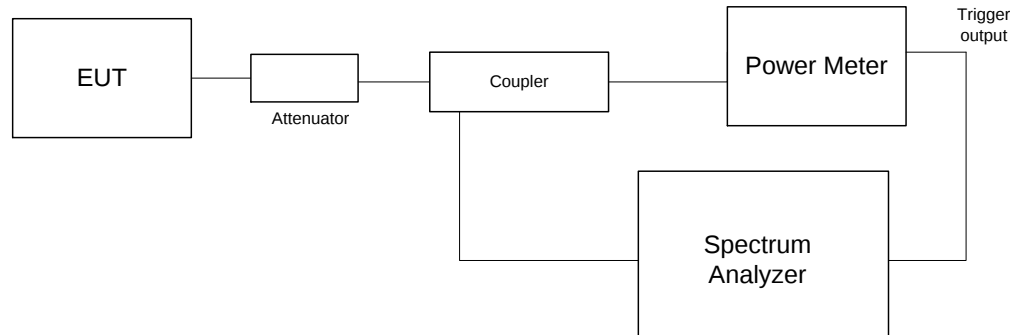


Table 7.1.2 Maximum conducted output power

ASSIGNED FREQUENCY RANGE:

4940.0 – 4990.0 MHz

DETECTOR USED:

Average (gated)

VIDEO BANDWIDTH:

≥ Resolution bandwidth

CHANNEL SPACING:

10 MHz

Channel, MHz	Pmeas (RF#1), dBm	Pmeas (RF#2), dBm	Sum RF output power dBm*	Limit, dBm	Margin, dB**	Verdict
Modulation QPSK						
4945.0	26.97	26.65	29.98	30.0	-0.02	Pass
4965.0	26.75	26.25	29.76	30.0	-0.24	Pass
4985.0	26.42	26.77	29.78	30.0	-0.22	Pass
Modulation 16 QAM						
4945.0	26.89	26.73	29.90	30.0	-0.10	Pass
4965.0	26.92	26.43	29.93	30.0	-0.07	Pass
4985.0	26.46	26.16	29.47	30.0	-0.53	Pass
Modulation 64QAM						
4945.0	26.77	26.75	29.78	30.0	-0.22	Pass
4965.0	26.78	26.71	29.79	30.0	-0.21	Pass
4985.0	26.55	26.37	29.56	30.0	-0.44	Pass
Modulation 256QAM						
4945.0	26.90	26.23	29.91	30.0	-0.09	Pass
4965.0	26.70	26.79	29.80	30.0	-0.20	Pass
4985.0	26.63	26.30	29.64	30.0	-0.36	Pass

* Sum RF output Power = $P_{ind} + 10\log(N)$, where N = 1, 2, ..., 8 number of chain

** Margin = Sum RF output Power – specification limit.



HERMON LABORATORIES

Test specification:		Section 90.1215, Maximum output power	
Test procedure:		47 CFR, Section 2.1046; TIA/EIA-603-A, Section 2.2.1	
Test mode:		Verdict: PASS	
Date(s):			
26-Dec-23			
Temperature: 24 °C	Relative Humidity: 39 %	Air Pressure: 1018 hPa	Power: 48 VDC
Remarks:			

Table 7.1.3 Maximum conducted output power

ASSIGNED FREQUENCY RANGE:

4942.5 – 4987.5 MHz

DETECTOR USED:

Average (gated)

VIDEO BANDWIDTH:

≥ Resolution bandwidth

CHANNEL SPACING:

25 MHz

Channel, MHz	Pmeas (RF#1), dBm	Pmeas (RF#2), dBm	Sum RF output power dBm*	Limit, dBm	Margin, dB**	Verdict
Modulation QPSK						
4952.5	28.65	28.93	31.94	33.0	-1.06	Pass
4967.5	28.89	28.65	31.90	33.0	-1.10	Pass
4977.5	29.05	28.97	32.06	33.0	-0.94	Pass
Modulation 16 QAM						
4952.5	28.59	28.89	31.90	33.0	-1.10	Pass
4967.5	28.95	28.55	31.96	33.0	-1.04	Pass
4977.5	29.04	28.87	32.05	33.0	-0.95	Pass
Modulation 64QAM						
4952.5	28.61	28.95	31.96	33.0	-1.04	Pass
4967.5	28.92	28.50	31.93	33.0	-1.07	Pass
4977.5	29.19	28.84	32.20	33.0	-0.80	Pass
Modulation 256QAM						
4952.5	28.63	28.78	31.79	33.0	-1.21	Pass
4967.5	28.90	28.46	31.91	33.0	-1.09	Pass
4977.5	29.03	28.81	32.04	33.0	-0.96	Pass

* Sum RF output Power = $P_{ind} + 10\log(N)$, where $N = 1, 2, \dots, 8$ number of chain

** Margin = Sum RF output Power – specification limit.



Test specification: Section 90.1215, Maximum output power			
Test procedure: 47 CFR, Section 2.1046; TIA/EIA-603-A, Section 2.2.1			
Test mode: Compliance		Verdict: PASS	
Date(s): 26-Dec-23			
Temperature: 24 °C	Relative Humidity: 39 %	Air Pressure: 1018 hPa	Power: 48 VDC
Remarks:			

Table 7.1.4 Maximum conducted output power

ASSIGNED FREQUENCY RANGE:

4942.5 – 4987.5 MHz

DETECTOR USED:

Average (gated)

VIDEO BANDWIDTH:

≥ Resolution bandwidth

CHANNEL SPACING:

50 MHz

Channel, MHz	Pmeas (RF#1), dBm	Pmeas (RF#2), dBm	Sum RF output power dBm*	Limit, dBm	Margin, dB**	Verdict
Modulation QPSK						
4965.0	29.02	29.00	32.03	36.0	-3.97	Pass
Modulation 16 QAM						
4965.0	29.23	28.73	32.24	36.0	-3.76	Pass
Modulation 64QAM						
4965.0	29.09	28.65	32.10	36.0	-3.90	Pass
Modulation 256QAM						
4965.0	29.07	28.78	32.08	36.0	-3.92	Pass

* Sum RF output Power = $P_{ind} + 10\log(N)$, where N = 1, 2, ..., 8 number of chain

** Margin = Sum RF output Power – specification limit.



Test specification:		Section 90.1215, Maximum output power	
Test procedure:		47 CFR, Section 2.1046; TIA/EIA-603-A, Section 2.2.1	
Test mode:		Verdict: PASS	
Date(s):			
26-Dec-23			
Temperature: 24 °C	Relative Humidity: 39 %	Air Pressure: 1018 hPa	Power: 48 VDC
Remarks:			

Table 7.1.5 Peak spectral power density test results

ASSIGNED FREQUENCY RANGE:

4940.0 – 4990.0 MHz

DETECTOR USED:

Average (gated)

VIDEO BANDWIDTH:

≥ Resolution bandwidth

CHANNEL SPACING:

10 MHz

Channel, MHz	Modulation	meas (RF#1), dBm/MHz	meas (RF#2), dBm/MHz	Total PSD dBm/MHz*	Limit, dBm/MHz	Margin, dB**	Verdict
Modulation QPSK							
4945.0	QPSK	16.76	16.85	19.86	21.0	-1.14	Pass
4965.0	QPSK	16.99	16.69	20.00	21.0	-1.00	Pass
4985.0	QPSK	17.35	16.96	20.36	21.0	-0.64	Pass
Modulation 16 QAM							
4945.0	16QAM	16.82	16.87	19.88	21.0	-1.12	Pass
4965.0	16QAM	16.63	17.01	20.02	21.0	-0.98	Pass
4985.0	16QAM	17.37	17.53	20.54	21.0	-0.46	Pass
Modulation 64QAM							
4945.0	64QAM	16.70	17.12	20.13	21.0	-0.87	Pass
4965.0	64QAM	16.61	17.42	20.43	21.0	-0.57	Pass
4985.0	64QAM	17.35	17.53	20.54	21.0	-0.46	Pass
Modulation 256QAM							
4945.0	256QAM	16.53	16.80	19.81	21.0	-1.19	Pass
4965.0	256QAM	17.12	17.42	20.43	21.0	-0.57	Pass
4985.0	256QAM	17.25	17.49	20.50	21.0	-0.50	Pass

* Total PSD = PSD_{ind} + 10log(N), where N = 1,2,...,8 number of chain

** Margin = Total PSD – specification limit.



HERMON LABORATORIES

Test specification:		Section 90.1215, Maximum output power	
Test procedure:		47 CFR, Section 2.1046; TIA/EIA-603-A, Section 2.2.1	
Test mode:		Verdict: PASS	
Date(s):			
26-Dec-23			
Temperature: 24 °C	Relative Humidity: 39 %	Air Pressure: 1018 hPa	Power: 48 VDC
Remarks:			

Table 7.1.6 Peak spectral power density test results (continue)

ASSIGNED FREQUENCY RANGE:

4942.5 – 4987.5 MHz

DETECTOR USED:

Average (gated)

VIDEO BANDWIDTH:

≥ Resolution bandwidth

CHANNEL SPACING:

25 MHz

Channel, MHz	Modulation	meas (RF#1), dBm/MHz	meas (RF#2), dBm/MHz	Total PSD dBm/MHz*	Limit, dBm/MHz	Margin, dB**	Verdict
Modulation QPSK							
4952.5	QPSK	16.76	16.70	19.77	21.0	-1.23	Pass
4967.5	QPSK	17.01	16.76	20.02	21.0	-0.98	Pass
4977.5	QPSK	16.96	16.95	19.97	21.0	-1.03	Pass
Modulation 16 QAM							
4952.5	16QAM	16.78	16.81	19.82	21.0	-1.18	Pass
4967.5	16QAM	17.05	16.91	20.06	21.0	-0.94	Pass
4977.5	16QAM	17.00	17.08	20.09	21.0	-0.91	Pass
Modulation 64QAM							
4952.5	64QAM	16.76	16.84	19.85	21.0	-1.15	Pass
4967.5	64QAM	17.04	16.88	20.05	21.0	-0.95	Pass
4977.5	64QAM	16.88	17.10	20.11	21.0	-0.89	Pass
Modulation 256QAM							
4952.5	256QAM	16.72	16.68	19.73	21.0	-1.27	Pass
4967.5	256QAM	16.90	16.71	19.91	21.0	-1.09	Pass
4977.5	256QAM	16.80	16.89	19.90	21.0	-1.10	Pass

* Total PSD = PSD_{ind} + 10log(N), where N = 1,2,...,8 number of chain

** Margin = Total PSD – specification limit.



Test specification:		Section 90.1215, Maximum output power	
Test procedure:		47 CFR, Section 2.1046; TIA/EIA-603-A, Section 2.2.1	
Test mode:		Verdict: PASS	
Date(s):			
26-Dec-23			
Temperature: 24 °C	Relative Humidity: 39 %	Air Pressure: 1018 hPa	Power: 48 VDC
Remarks:			

Table 7.1.7 Peak spectral power density test results (continue)

ASSIGNED FREQUENCY RANGE:

4942.5 – 4987.5 MHz

DETECTOR USED:

Average (gated)

VIDEO BANDWIDTH:

≥ Resolution bandwidth

CHANNEL SPACING:

50 MHz

Channel, MHz	Modulation	meas (RF#1), dBm/MHz	meas (RF#2), dBm/MHz	Total PSD dBm/MHz*	Limit, dBm/MHz	Margin, dB**	Verdict
Modulation QPSK							
4965.0	QPSK	13.70	13.96	16.97	21.0	-4.03	Pass
Modulation 16 QAM							
4965.0	16QAM	14.04	14.08	17.09	21.0	-3.91	Pass
Modulation 64QAM							
4965.0	64QAM	13.88	14.20	17.21	21.0	-3.79	Pass
Modulation 256QAM							
4965.0	256QAM	13.86	14.06	17.07	21.0	-3.93	Pass

* Total PSD = PSD_{ind} + 10log(N), where N = 1,2,...,8 number of chain

** Margin = Total PSD – specification limit.

Reference numbers of test equipment used

HL 3301	HL 4366	HL 5376	HL 5636	HL 5933			
---------	---------	---------	---------	---------	--	--	--

Full description is given in Appendix A.



HERMON LABORATORIES

Report ID: AIRRAD_FCC.52632_Rev1.docx

Date of Issue: 21-Feb-24

Test specification: Section 90.1215, Maximum output power			
Test procedure: 47 CFR, Section 2.1046; TIA/EIA-603-A, Section 2.2.1			
Test mode: Compliance		Verdict: PASS	
Date(s): 26-Dec-23			
Temperature: 24 °C	Relative Humidity: 39 %	Air Pressure: 1018 hPa	Power: 48 VDC
Remarks:			

Plot 7.1.1 Peak spectral power density at low, mid, high frequency

CHANNEL SPACING:

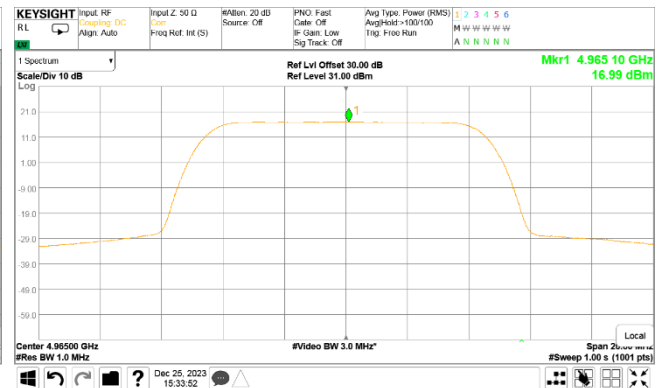
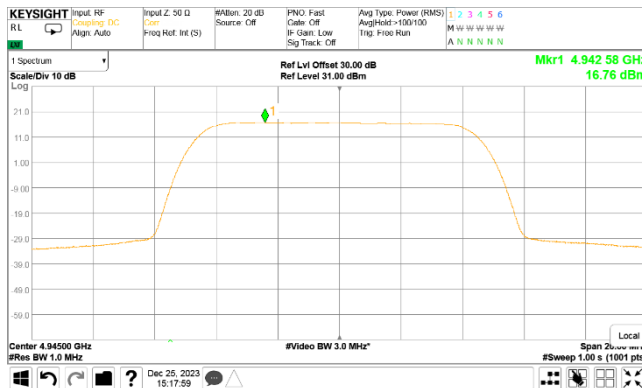
10 MHz

ANTENNA CHAIN:

1

Modulation:

QPSK





HERMON LABORATORIES

Test specification:		Section 90.1215, Maximum output power	
Test procedure:		47 CFR, Section 2.1046; TIA/EIA-603-A, Section 2.2.1	
Test mode:		Compliance	Verdict: PASS
Date(s):		26-Dec-23	
Temperature: 24 °C	Relative Humidity: 39 %	Air Pressure: 1018 hPa	Power: 48 VDC
Remarks:			

Plot 7.1.2 Peak spectral power density at low, mid, high frequency

CHANNEL SPACING:

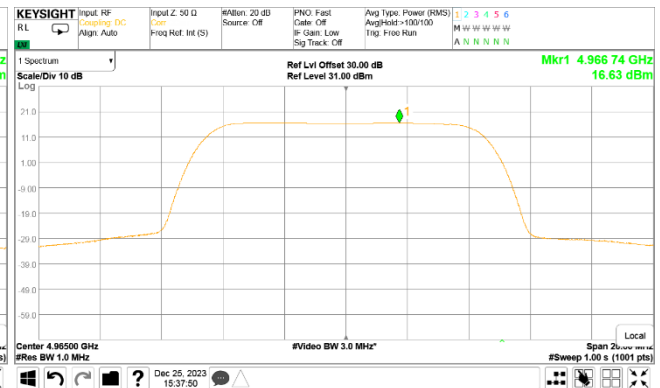
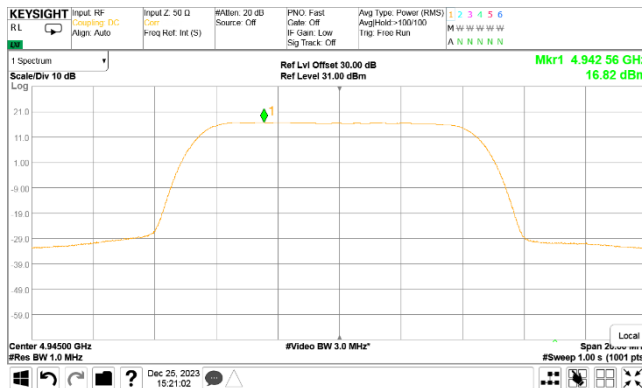
10 MHz

ANTENNA CHAIN:

1

Modulation:

16QAM





HERMON LABORATORIES

Test specification: Section 90.1215, Maximum output power			
Test procedure: 47 CFR, Section 2.1046; TIA/EIA-603-A, Section 2.2.1			
Test mode: Compliance		Verdict: PASS	
Date(s): 26-Dec-23			
Temperature: 24 °C	Relative Humidity: 39 %	Air Pressure: 1018 hPa	Power: 48 VDC
Remarks:			

Plot 7.1.3 Peak spectral power density at low, mid, high frequency

CHANNEL SPACING:

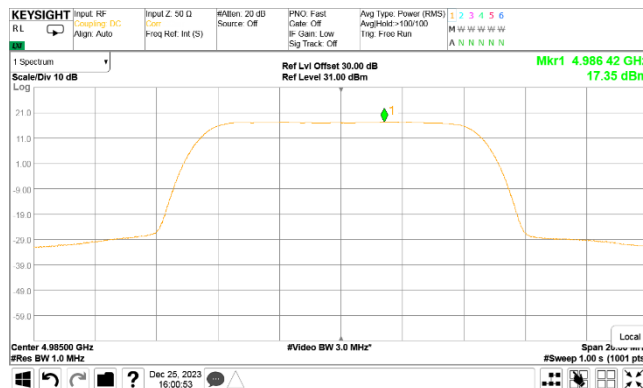
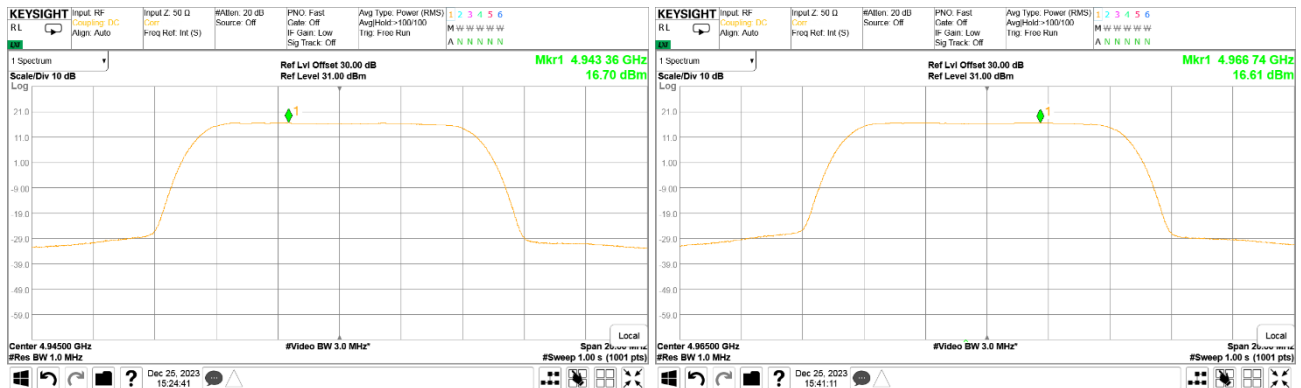
10 MHz

ANTENNA CHAIN:

1

Modulation:

64QAM





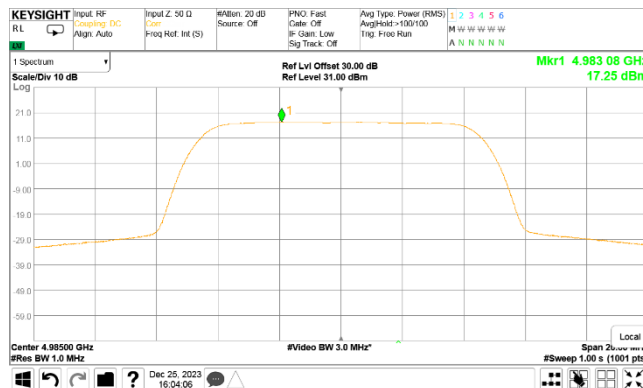
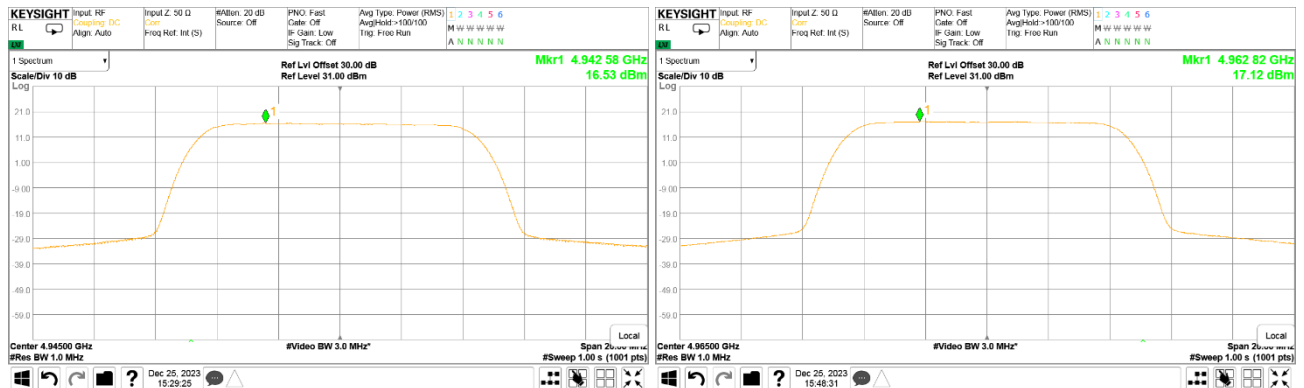
HERMON LABORATORIES

Test specification: Section 90.1215, Maximum output power	
Test procedure: 47 CFR, Section 2.1046; TIA/EIA-603-A, Section 2.2.1	
Test mode: Compliance	Verdict: PASS
Date(s): 26-Dec-23	
Temperature: 24 °C	Relative Humidity: 39 %
Air Pressure: 1018 hPa	Power: 48 VDC
Remarks:	

Plot 7.1.4 Peak spectral power density at low, mid, high frequency

CHANNEL SPACING:
ANTENNA CHAIN:
Modulation:

10 MHz
1
256QAM





HERMON LABORATORIES

Test specification:		Section 90.1215, Maximum output power	
Test procedure:		47 CFR, Section 2.1046; TIA/EIA-603-A, Section 2.2.1	
Test mode:		Verdict: PASS	
Date(s):			
26-Dec-23			
Temperature: 24 °C	Relative Humidity: 39 %	Air Pressure: 1018 hPa	Power: 48 VDC
Remarks:			

Plot 7.1.5 Peak spectral power density at low, mid, high frequency

CHANNEL SPACING:

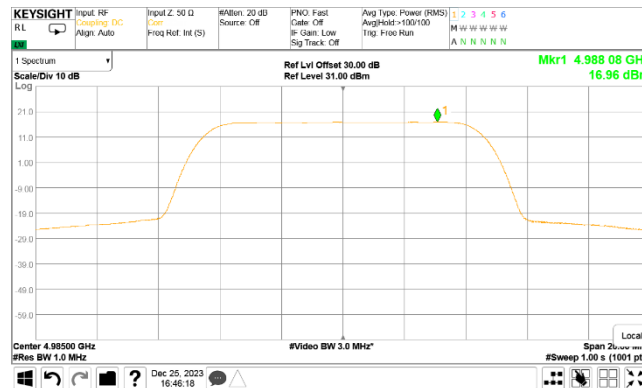
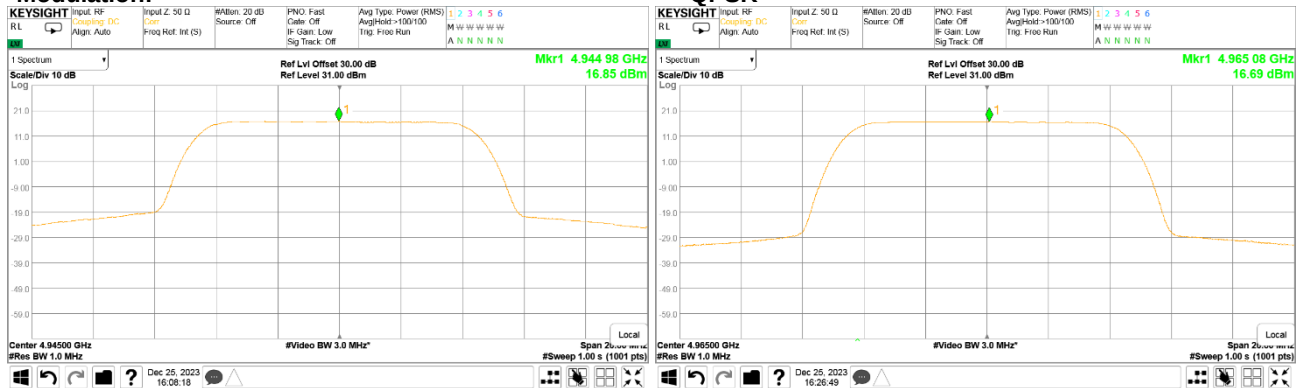
10 MHz

ANTENNA CHAIN:

2

Modulation:

QPSK





HERMON LABORATORIES

Test specification: Section 90.1215, Maximum output power	
Test procedure: 47 CFR, Section 2.1046; TIA/EIA-603-A, Section 2.2.1	
Test mode: Compliance	Verdict: PASS
Date(s): 26-Dec-23	
Temperature: 24 °C	Relative Humidity: 39 %
Air Pressure: 1018 hPa	
Power: 48 VDC	
Remarks:	

Plot 7.1.6 Peak spectral power density at low, mid, high frequency

CHANNEL SPACING:

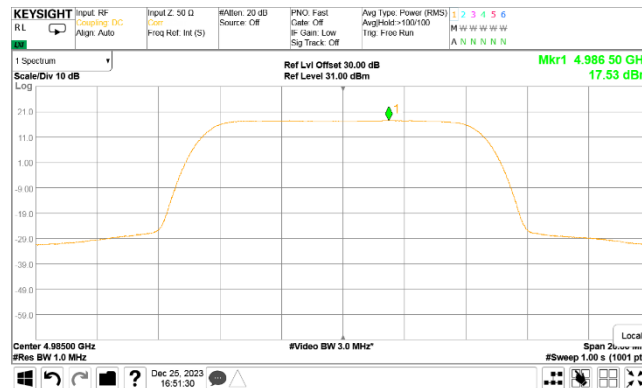
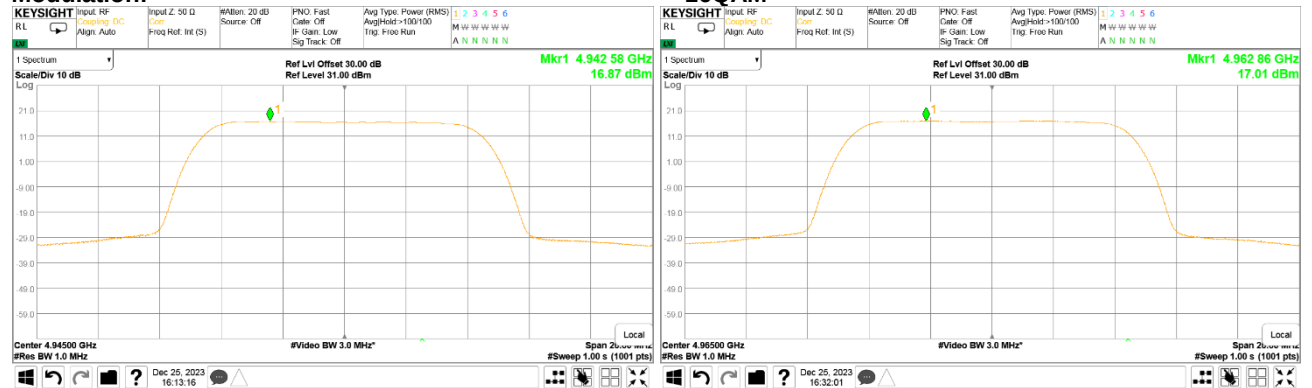
10 MHz

ANTENNA CHAIN:

2

Modulation:

16QAM





HERMON LABORATORIES

Test specification:		Section 90.1215, Maximum output power	
Test procedure:		47 CFR, Section 2.1046; TIA/EIA-603-A, Section 2.2.1	
Test mode:		Verdict: PASS	
Date(s):			
26-Dec-23			
Temperature: 24 °C	Relative Humidity: 39 %	Air Pressure: 1018 hPa	Power: 48 VDC
Remarks:			

Plot 7.1.7 Peak spectral power density at low, mid, high frequency

CHANNEL SPACING:

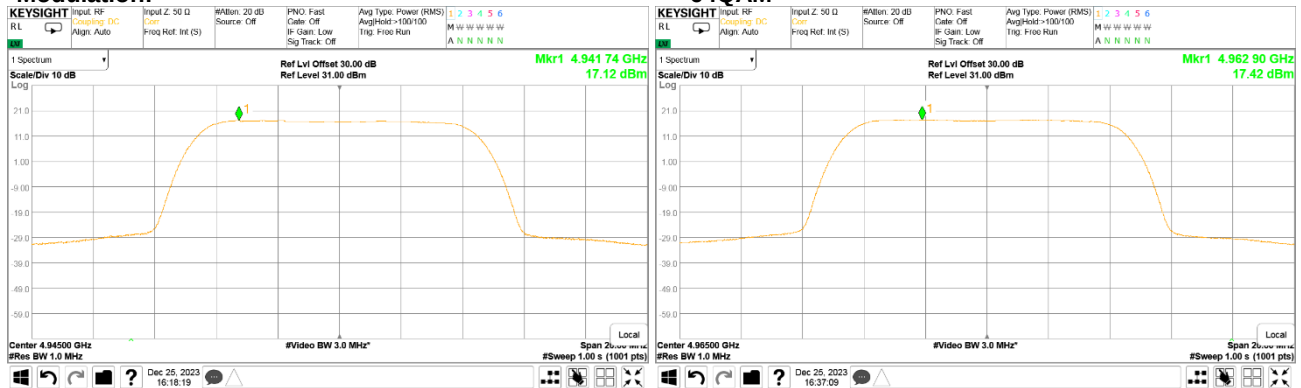
10 MHz

ANTENNA CHAIN:

2

Modulation:

64QAM





HERMON LABORATORIES

Test specification: Section 90.1215, Maximum output power			
Test procedure: 47 CFR, Section 2.1046; TIA/EIA-603-A, Section 2.2.1			
Test mode: Compliance		Verdict: PASS	
Date(s): 26-Dec-23			
Temperature: 24 °C	Relative Humidity: 39 %	Air Pressure: 1018 hPa	Power: 48 VDC
Remarks:			

Plot 7.1.8 Peak spectral power density at low, mid, high frequency

CHANNEL SPACING:

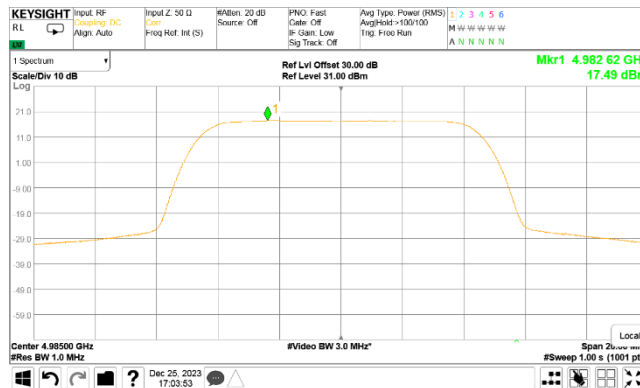
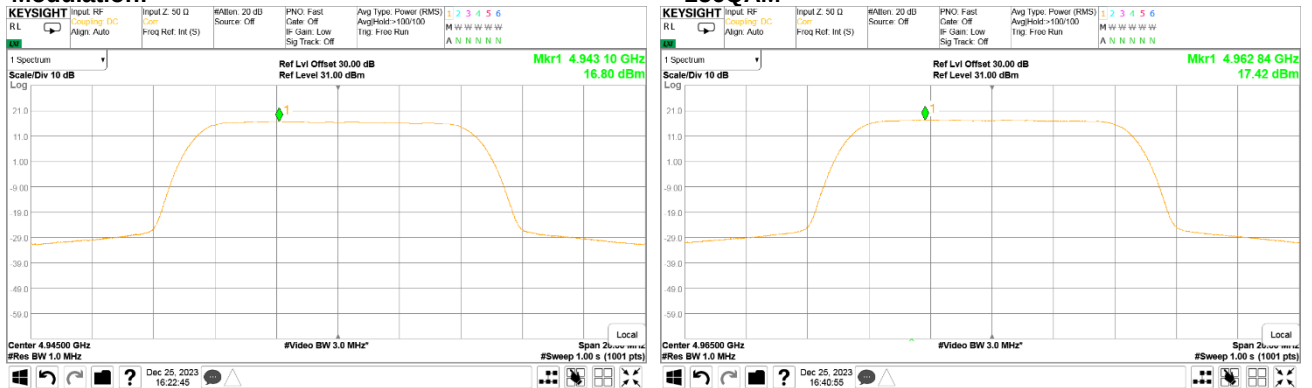
10 MHz

ANTENNA CHAIN:

2

Modulation:

256QAM





HERMON LABORATORIES

Test specification:		Section 90.1215, Maximum output power	
Test procedure:		47 CFR, Section 2.1046; TIA/EIA-603-A, Section 2.2.1	
Test mode:		Verdict: PASS	
Date(s):			
26-Dec-23			
Temperature: 24 °C	Relative Humidity: 39 %	Air Pressure: 1018 hPa	Power: 48 VDC
Remarks:			

Plot 7.1.9 Peak spectral power density at low, mid, high frequency

CHANNEL SPACING:

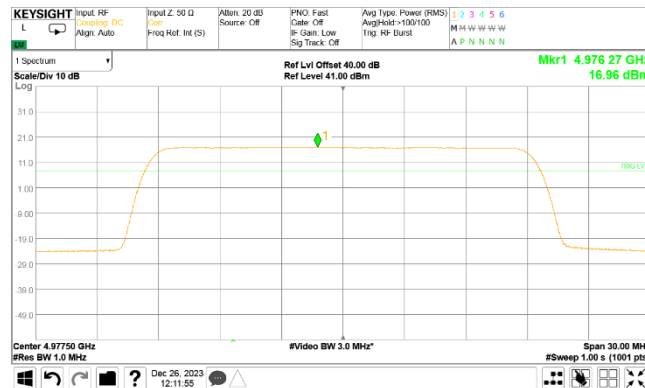
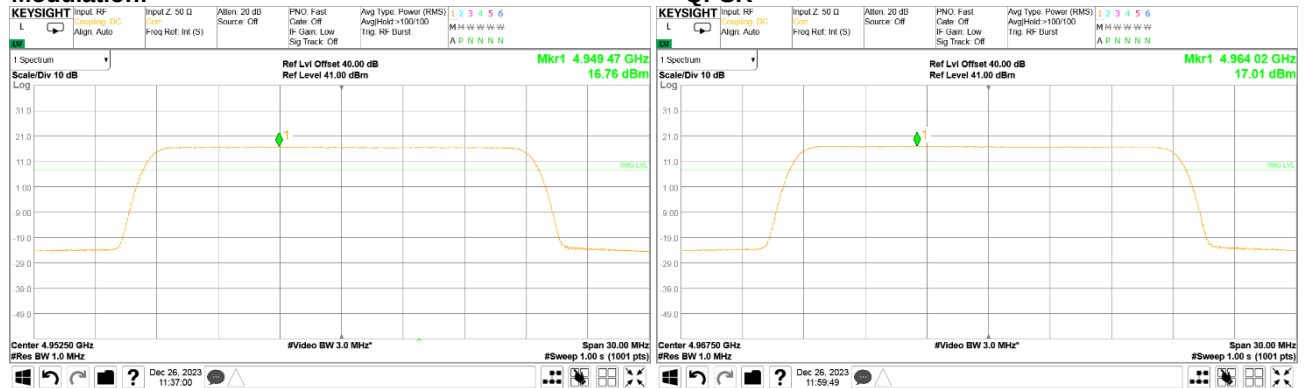
25 MHz

ANTENNA CHAIN:

1

Modulation:

QPSK





HERMON LABORATORIES

Report ID: AIRRAD_FCC.52632_Rev1.docx

Date of Issue: 21-Feb-24

Test specification:		Section 90.1215, Maximum output power	
Test procedure:		47 CFR, Section 2.1046; TIA/EIA-603-A, Section 2.2.1	
Test mode:		Verdict: PASS	
Date(s):			
26-Dec-23			
Temperature: 24 °C	Relative Humidity: 39 %	Air Pressure: 1018 hPa	Power: 48 VDC
Remarks:			

Plot 7.1.10 Peak spectral power density at low, mid, high frequency

CHANNEL SPACING:

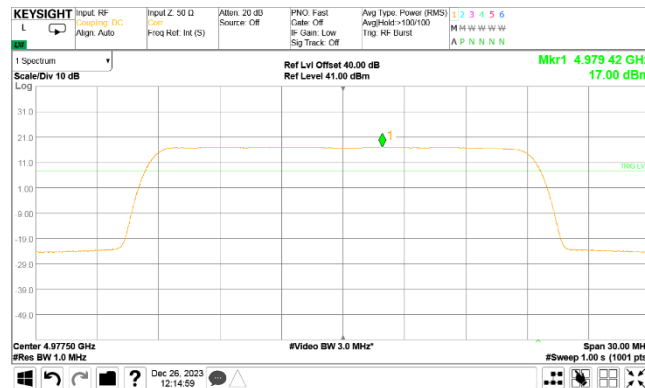
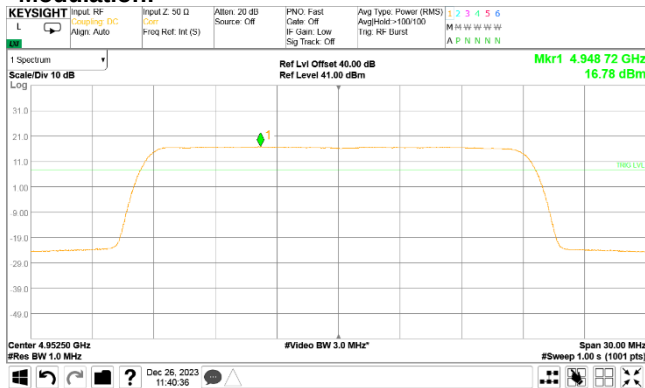
ANTENNA CHAIN:

Modulation:

25 MHz

1

16QAM





HERMON LABORATORIES

Test specification:		Section 90.1215, Maximum output power	
Test procedure:		47 CFR, Section 2.1046; TIA/EIA-603-A, Section 2.2.1	
Test mode:		Compliance	Verdict: PASS
Date(s):		26-Dec-23	
Temperature: 24 °C	Relative Humidity: 39 %	Air Pressure: 1018 hPa	Power: 48 VDC
Remarks:			

Plot 7.1.11 Peak spectral power density at low, mid, high frequency

CHANNEL SPACING:

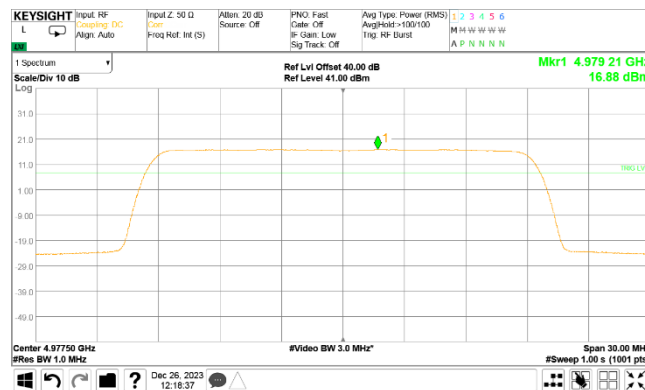
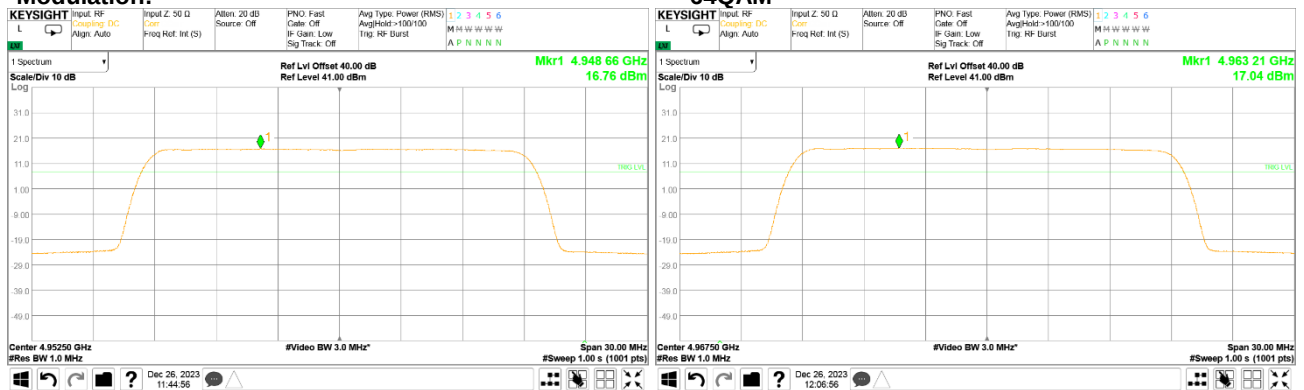
25 MHz

ANTENNA CHAIN:

1

Modulation:

64QAM





HERMON LABORATORIES

Test specification: Section 90.1215, Maximum output power	
Test procedure: 47 CFR, Section 2.1046; TIA/EIA-603-A, Section 2.2.1	
Test mode: Compliance	Verdict: PASS
Date(s): 26-Dec-23	
Temperature: 24 °C	Relative Humidity: 39 %
Air Pressure: 1018 hPa	
Power: 48 VDC	
Remarks:	

Plot 7.1.12 Peak spectral power density at low, mid, high frequency

CHANNEL SPACING:

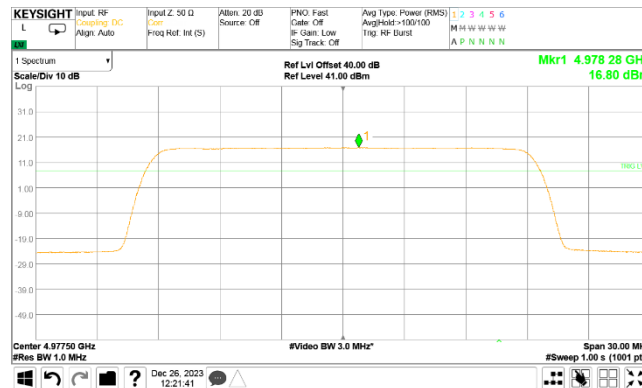
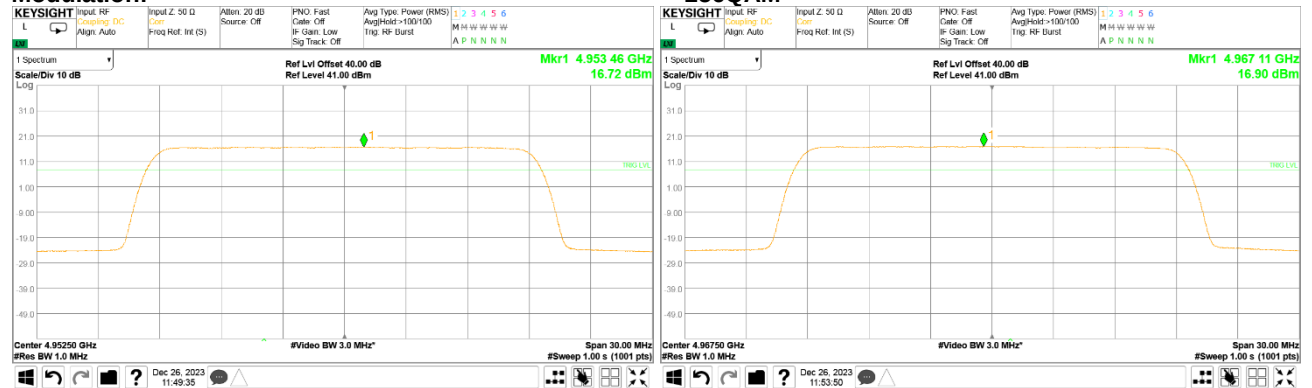
25 MHz

ANTENNA CHAIN:

1

Modulation:

256QAM





HERMON LABORATORIES

Test specification:		Section 90.1215, Maximum output power	
Test procedure:		47 CFR, Section 2.1046; TIA/EIA-603-A, Section 2.2.1	
Test mode:		Verdict: PASS	
Date(s):			
26-Dec-23			
Temperature: 24 °C	Relative Humidity: 39 %	Air Pressure: 1018 hPa	Power: 48 VDC
Remarks:			

Plot 7.1.13 Peak spectral power density at low, mid, high frequency

CHANNEL SPACING:

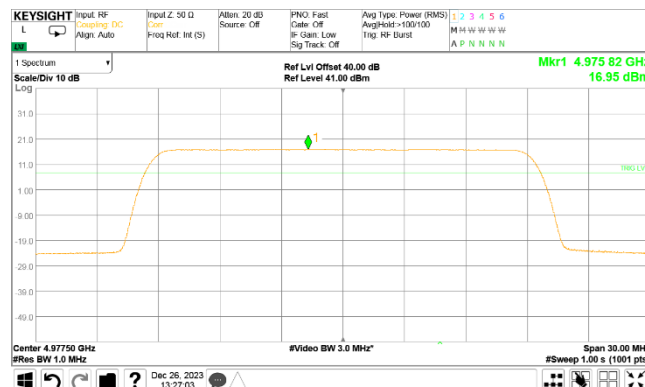
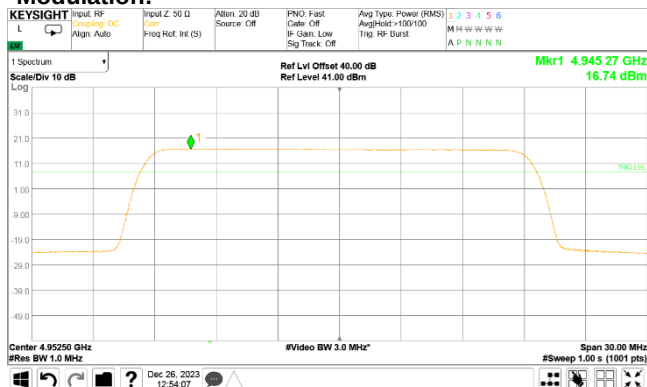
ANTENNA CHAIN:

Modulation:

25 MHz

2

QPSK





HERMON LABORATORIES

Test specification:		Section 90.1215, Maximum output power	
Test procedure:		47 CFR, Section 2.1046; TIA/EIA-603-A, Section 2.2.1	
Test mode:		Compliance	Verdict: PASS
Date(s):		26-Dec-23	
Temperature: 24 °C	Relative Humidity: 39 %	Air Pressure: 1018 hPa	Power: 48 VDC
Remarks:			

Plot 7.1.14 Peak spectral power density at low, mid, high frequency

CHANNEL SPACING:

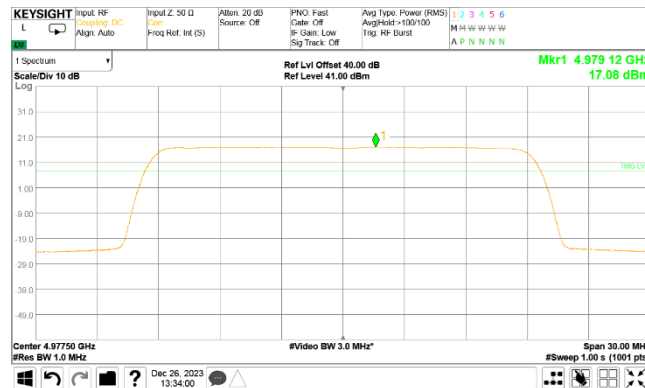
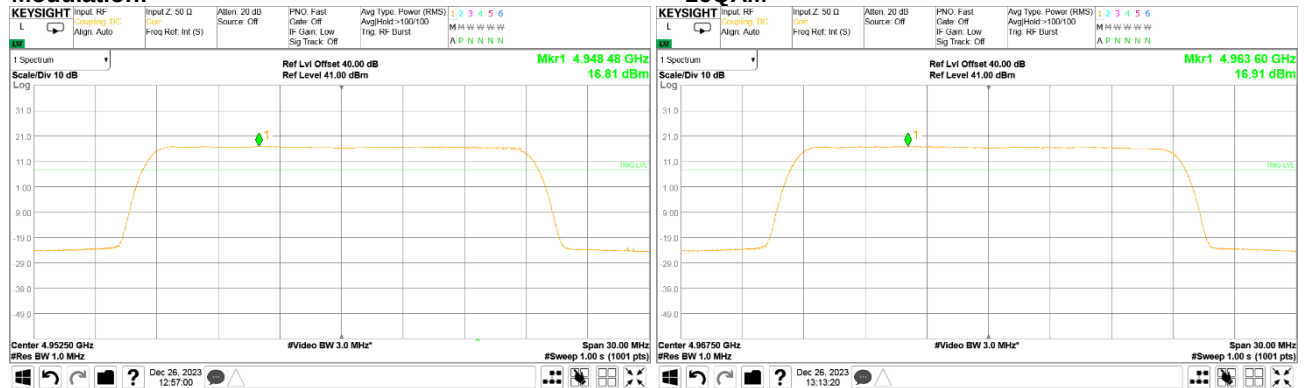
25 MHz

ANTENNA CHAIN:

2

Modulation:

16QAM





HERMON LABORATORIES

Report ID: AIRRAD_FCC.52632_Rev1.docx

Date of Issue: 21-Feb-24

Test specification: Section 90.1215, Maximum output power			
Test procedure: 47 CFR, Section 2.1046; TIA/EIA-603-A, Section 2.2.1			
Test mode: Compliance		Verdict: PASS	
Date(s): 26-Dec-23			
Temperature: 24 °C	Relative Humidity: 39 %	Air Pressure: 1018 hPa	Power: 48 VDC
Remarks:			

Plot 7.1.15 Peak spectral power density at low, mid, high frequency

CHANNEL SPACING:

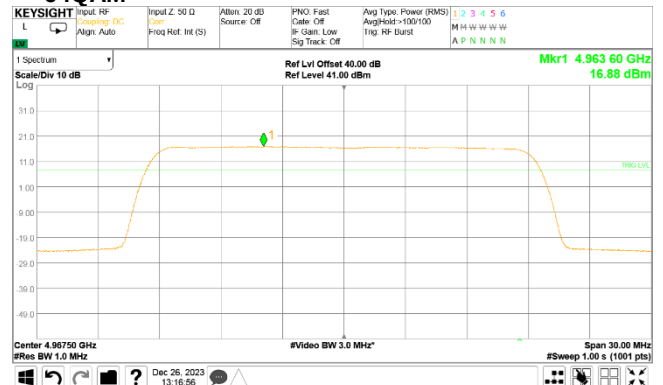
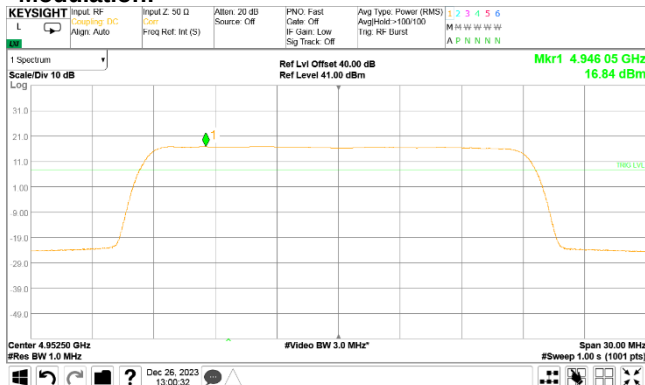
25 MHz

ANTENNA CHAIN:

2

Modulation:

64QAM





HERMON LABORATORIES

Report ID: AIRRAD_FCC.52632_Rev1.docx

Date of Issue: 21-Feb-24

Test specification:		Section 90.1215, Maximum output power	
Test procedure:		47 CFR, Section 2.1046; TIA/EIA-603-A, Section 2.2.1	
Test mode:		Verdict: PASS	
Date(s):			
26-Dec-23			
Temperature: 24 °C	Relative Humidity: 39 %	Air Pressure: 1018 hPa	Power: 48 VDC
Remarks:			

Plot 7.1.16 Peak spectral power density at low, mid, high frequency

CHANNEL SPACING:

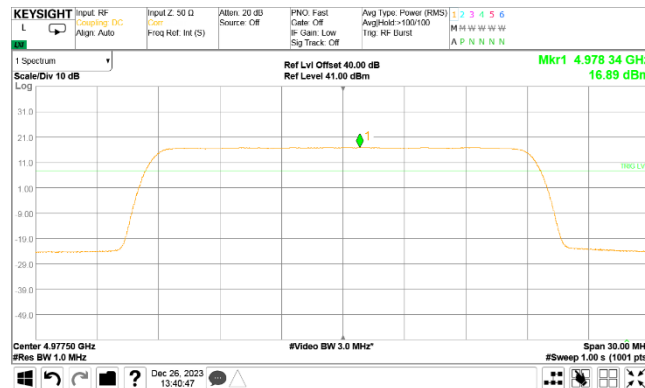
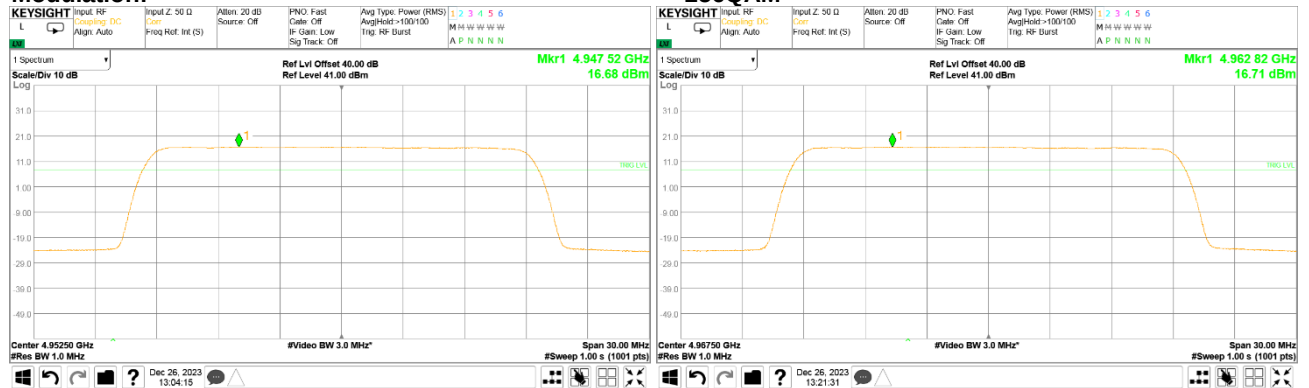
25 MHz

ANTENNA CHAIN:

2

Modulation:

256QAM





HERMON LABORATORIES

Test specification:		Section 90.1215, Maximum output power	
Test procedure:		47 CFR, Section 2.1046; TIA/EIA-603-A, Section 2.2.1	
Test mode:		Verdict: PASS	
Date(s):			
26-Dec-23			
Temperature: 24 °C	Relative Humidity: 39 %	Air Pressure: 1018 hPa	Power: 48 VDC
Remarks:			

Plot 7.1.17 Peak spectral power density at mid frequency

CHANNEL SPACING:

50 MHz

ANTENNA CHAIN:

1

Modulation:

QPSK

