HERMON LABORATORIES

ELECTRICAL TESTING
0839.01

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TEST REPORT

ACCORDING TO: FCC 47CFR part 96

FOR:

Airspan Networks Inc.
LTE Base Station Radio
Model: AirSpeed 1000A, 3.550-3.700 GHz (B48)
FCC ID: PIDAS1000A

Table of contents

1 Applicant information

Client name:	Airspan Networks Inc.
Address:	777 Yamato, Road Suite 310 Boca Raton, FL 33431, USA
Telephone:	+1 561 893 8670
Fax:	+1 561 893 8671
E-mail:	zlevi@airspan.com
Contact name:	Mr. Zion Levi

2 Equipment under test attributes

Product name:	LTE Base Station Radio
Product type:	Transceiver
Model(s):	AirSpeed 1000A 3.550-3.700 GHz (B48)
Serial number:	DA5847016A72
Hardware version:	D4
Software release:	SR18.0
Receipt date	01-Oct-18

3 Manufacturer information

Manufacturer name:	Airspan Networks Inc.
Address:	777 Yamato, Road Suite 310 Boca Raton, FL 33431, USA
Telephone:	+1 561 893 8670
Fax:	+1 561 893 8671
E-Mail:	zlevi@airspan.com
Contact name:	Mr. Zion Levi

4 Test details

Project ID:	49874
Location:	Hermon Laboratories Ltd. P.O. Box 23, Binyamina 3055001, Israel
Test started:	26-Sep-18
Test completed:	20-Apr-23
Test specification(s):	FCC 47CFR part 96

5 Tests summary

Test	Status
Transmitter characteristics	
Section 96.41(b), Maximum EIRP and maximum power spectral density	Pass[Note1, Note2]
Section 96.41(g), Peak-to- average power ratio	Pass [Note2]
Section 2.1049, Occupied bandwidth	Pass [Note2]
Section 96.41(e), Emission mask	Pass[Note1, Note2]
Section 96.41(e)(2), Radiated spurious emissions	Pass[Note1, Note2]
Section 96.41(e)(3), Conducted spurious emissions	Pass[Note1, Note2]
Section 2.1055, Frequency stability	Pass [Note2]

This test report is based on the test report AIRRAD_FCC.31512_rev8 issued by Hermon Laboratories assuming that the original EUT configuration approved under FCC ID: PIDAST1200 was not changed except for antenna gain changed from 20.5dBi to 9dBi as well as enabling of LTE B48 256QAM modulation operation via embedded software as stated in manufacturer's declaration (refer to Appendix G of the test report).
Note1: These tests were performed again as a spot check of retesting at worst case settings as appears in the original test report.
Note2: All tests were performed for 256QAM modulation.

This test report supersedes the previously issued test report identified by Doc ID: AIRRAD_FCC.49874_31512_Rev1

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:	Mrs. M. Evsuk, test engineer, EMC & Radio	26-Sep-18 – 20-Apr-23	
Reviewed by:	Mrs. S. Peysahov Sheynin, test engineer, EMC & Radio	03-May-23	
Approved by:	Mr. M. Nikishin, group leader, EMC & Radio	16-May-23	

6 EUT description

6.1 General information

The EUT, Mobile Digital station, AirSpeed 1000A 3.55-3.7 GHz, (B48), Band 48, is part of a LTE 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's transceiver/receiver (up to 256 QAM modulation, data rate up to 95 Mbps) equipped with a 9 dBi external antenna. The Advanced Antenna Techniques 2x2 MIMO are supported. The maximum RF output power (not including antenna gain) is 23.08 dBm for 9 dBi antenna gain and it can be reduced by software. The transmitter output signals are completely uncorrelated, antennas 1/2 is one sector and antennas 3/4 is another sector.
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 LTE UE from relocating to another subscriber premises without authorization.

Note: The AirSpeed 1000A equipment defined as Category A CBSD (Citizens Broadband Radio Service Device)
Antennas 1/2 arrange one sector while antenna 1 is cross polarized to antenna 2 and antennas 3/4 arrange another sector while antenna 3 is cross polarized to antenna 4.
The transmitter output signals are completely uncorrelated, antennas 1/2 is one sector and antennas 3/4 is another sector! The sectors are either non overlapping by operation on different frequency channels or by different sectors coverage without overlapping of antenna beams.

6.2 Ports and lines

Port type	Port description	Connected from	Connected to	Qty.	Cable type	Cable length, m
Power	DC power	EUT	AC/DC adapter	1	Unshielded	20
Signal	Ethernet	EUT	Laptop	1	Shielded	20
Signal*	Serial*	Not connected	Not connected	1	NA	NA

*for maintenance only

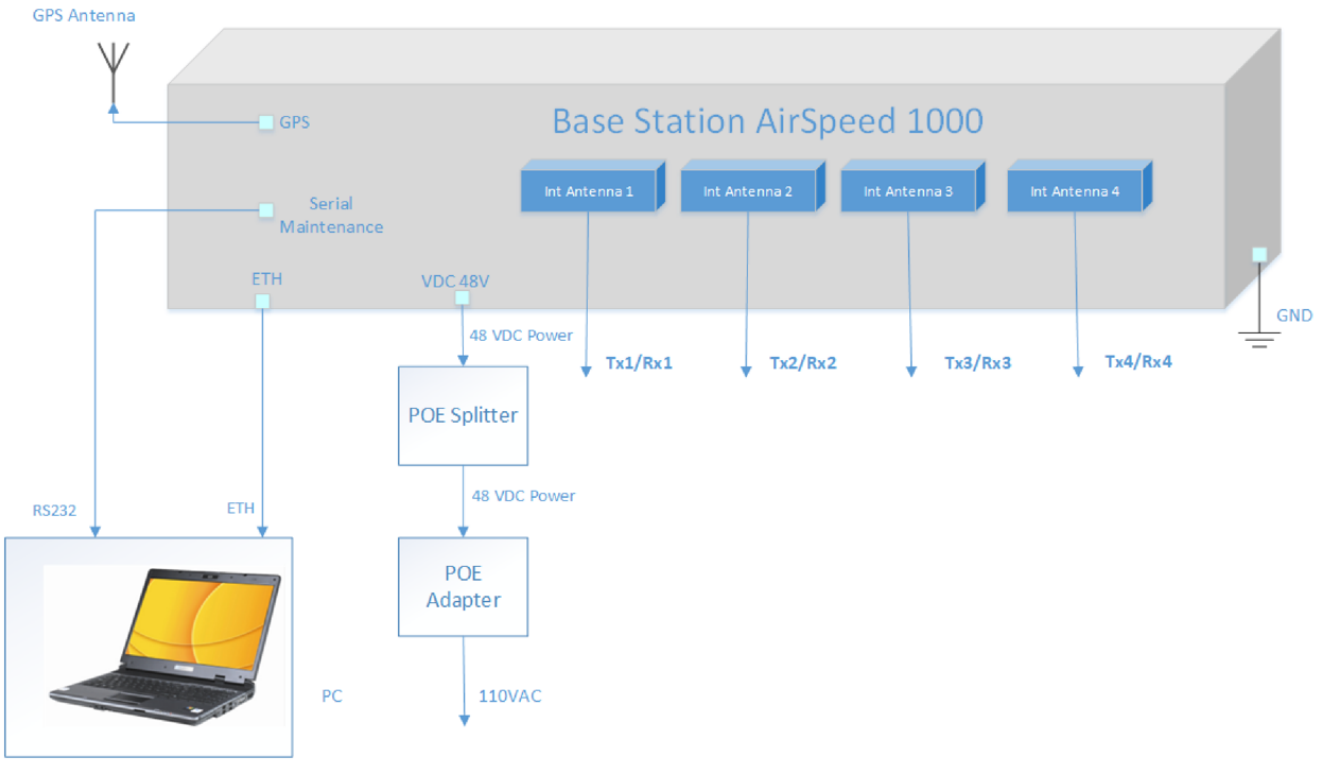
6.3 Support and test equipment

Description	Manufacturer	Model number	Serial number
Laptop	Dell	E7450	8TYRP32
USB to RS-232 convertor	ATEN	UC2324	NA
AC/DC adapter	MW	PSP-600-48	RB51931398

6.4 Changes made in the EUT

No changes were implemented in the EUT during testing.

6.5 Test configuration



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	3550.0 – 3700.0 MHz
Operating frequency (full bands)	3555.0 – 3695.0 MHz
RF channel spacing	10 MHz, 20 MHz
Maximum rated output power	At transmitter 50 Ω RF output connector (per port) 23.08 dBm

Is transmitter output power variable?		No		
	V	Yes		continuous variable
			V	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	**V** with temporary RF connector
				without temporary RF connector

Antenna/s technical characteristics

Type	Manufacturer	Model number	Gain
External	WIRELESS EDGE LTD.	MT035S09DDS	9 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	143

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**	yes	no

6.7 Table of calculations for the MAX EIRP at frequency range 3550 – 3700 MHz

Antenna configuration	Antenna Vendor	Antenna Model Number	Antenna Peak Gain (dBi)	Signal Bandwidth (MHz)	Maximum Conducted Power (dBm)	EIRP (dBm/10MHz)	EIRP per Bandwidth (dBm)	Operational Category
1	WIRELESS EDGE LTD.	MT035S09DDS	9 dBi	10.0	20.64	29.64	29.64	A
				20.0	23.08	32.08	29.57	

Test specification:	Section 96.41(b), Maximum EIRP and maximum power spectral density		
Test procedure:	Ansi 63.26 section 5.2.3.1		
Test mode:	Compliance	Verdict:	PASS
Date(s):	02-Apr-23 - 04-Apr-23		
Temperature: 24.3. ºC	Relative Humidity: 48 %	Air Pressure: 1010 hPa	Power: 48 VDC
Remarks:			

7 Transmitter tests according to 47CFR part 96

7.1 Maximum EIRP and maximum power spectral density

7.1.1 General

This test was performed to measure the maximum EIRP and maximum spectral power density at the transmitter RF antenna connector. Specification test limits are given in Table 7.1.1, Table 7.1.2.

Table 7.1.1 Maximum EIRP limits

Assigned frequency range, MHz	EIRP
	dBm/10 MHz
3550 - 3700	30.0

Table 7.1.2 Peak spectral power density limits

Assigned frequency range, MHz	Measurement bandwidth, MHz	Peak spectral power density, dBm
3550 - 3700	1.0	20.0

7.1.2 Test procedure

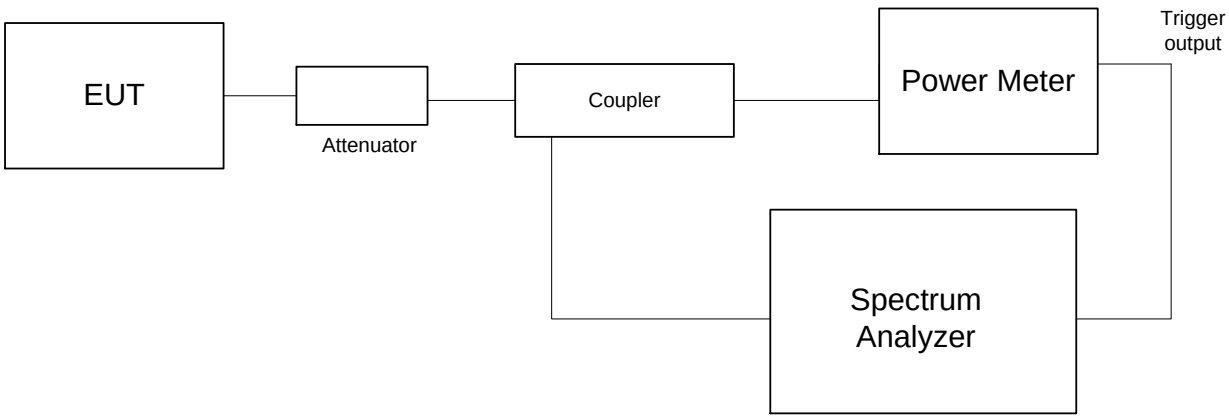
7.1.2.1 The EUT was set up as shown in Figure 7.1.1, energized and its proper operation was checked.

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

7.1.2.3 The frequency span of spectrum analyzer was set to capture the entire 6 dB band of the transmitter, in average mode with resolution bandwidth set to 1.0 MHz, video bandwidth wider than resolution bandwidth, sweep time and sufficient number of sweeps was allowed for trace stabilization.

7.1.2.4 Spectrum analyzer was set in average mode, sufficient number of sweeps was allowed for trace stabilization and peak spectral power density was measured as provided in Table 7.1.3, Table 7.1.4 and the associated plots.

Figure 7.1.1 Maximum EIRP and power spectral density test setup



Test specification:	**Section 96.41(b), Maximum EIRP and maximum power spectral density**		
Test procedure:	Ansi 63.26 section 5.2.3.1		
Test mode:	Compliance	**Verdict:**	PASS
Date(s):	02-Apr-23 - 04-Apr-23		
Temperature: 24.3. ºC	**Relative Humidity:** 48 %	**Air Pressure:** 1010 hPa	**Power:** 48 VDC
Remarks:			

Table 7.1.3 Maximum EIRP test results

ASSIGNED FREQUENCY RANGE: 3550.0 – 3700.0 MHz
DETECTOR USED: Average (gated)
VIDEO BANDWIDTH: ≥ Resolution bandwidth
CHANNEL SPACING: 10 MHz

Frequency, MHz	RF Output power				Antenna gain, dBi	EIRP*, dBm/10 MHz	Limit, dBm/10 MHz	Margin, dB**	Verdict
	Chain RF#1, dBm	Chain RF#2, dBm	Chain RF#3, dBm	Chain RF#4, dBm					
Modulation QPSK									
3555	19.74	19.73	19.66	19.54	9	28.74	30	-1.26	Pass
3625	20.53	20.43	20.64	20.52	9	29.64	30	-0.36	Pass
3695	20.24	20.40	20.31	20.61	9	29.61	30	-0.39	Pass
Modulation 16QAM									
3555	19.61	19.61	19.54	19.54	9	28.61	30	-1.39	Pass
3625	20.41	20.48	20.42	20.52	9	29.52	30	-0.48	Pass
3695	20.01	20.30	20.29	20.51	9	29.51	30	-0.49	Pass
Modulation 64QAM									
3555	19.62	19.61	19.56	19.60	9	28.62	30	-1.38	Pass
3625	20.33	20.47	20.41	20.46	9	29.47	30	-0.53	Pass
3695	20.03	20.30	20.30	20.40	9	29.40	30	-0.60	Pass
Modulation 256QAM									
3555	19.68	19.69	19.54	19.51	9	28.69	30	-1.31	Pass
3625	20.50	20.55	20.52	20.49	9	29.55	30	-0.45	Pass
3695	20.14	20.17	20.42	20.39	9	29.42	30	-0.58	Pass

* - EIRP = Max SA reading (Chains #1&2 and #3&4) + Antenna gain: The transmitter output signal are completely uncorrelated, antennas 1/2 is one sector and antennas 3/4 is another sector.
** - Margin = EIRP, dBm – specification limit.

Test specification:	Section 96.41(b), Maximum EIRP and maximum power spectral density		
Test procedure:	Ansi 63.26 section 5.2.3.1		
Test mode:	Compliance	Verdict:	PASS
Date(s):	02-Apr-23 - 04-Apr-23		
Temperature: 24.3. ºC	Relative Humidity: 48 %	Air Pressure: 1010 hPa	Power: 48 VDC
Remarks:			

Table 7.1.4 Maximum EIRP test results

ASSIGNED FREQUENCY RANGE: 3550.0 – 3700.0 MHz
DETECTOR USED: Average (gated)
VIDEO BANDWIDTH: ≥ Resolution bandwidth
CHANNEL SPACING: 20 MHz

Frequency, MHz	RF Output power				Antenna gain, dBi	EIRP*, dBm/20 MHz	EIRP*, dBm/10 MHz	Limit, dBm/10 MHz	Margin, dB**	Verdict
	Chain RF#1, dBm	Chain RF#2, dBm	Chain RF#3, dBm	Chain RF#4, dBm						
Modulation QPSK										
3560	21.81	21.96	22.04	22.12	9	31.12	28.61	30	-1.39	Pass
3625	22.91	22.73	23.08	22.95	9	32.08	29.57	30	-0.43	Pass
3690	22.65	22.75	22.82	22.87	9	31.87	29.36	30	-0.64	Pass
Modulation 16QAM										
3560	21.99	21.85	21.94	21.99	9	30.99	28.48	30	-1.52	Pass
3625	22.80	22.72	22.92	22.90	9	31.92	29.41	30	-0.59	Pass
3690	22.66	22.64	22.67	22.98	9	31.98	29.47	30	-0.53	Pass
Modulation 64QAM										
3560	21.91	21.85	21.93	22.07	9	31.07	28.56	30	-1.44	Pass
3625	22.90	22.62	22.81	22.92	9	31.92	29.41	30	-0.59	Pass
3690	22.52	22.73	22.59	22.88	9	31.88	29.37	30	-0.63	Pass
Modulation 256QAM										
3560	21.82	21.79	22.12	21.83	9	31.12	28.61	30	-1.39	Pass
3625	22.73	22.83	22.91	22.82	9	31.91	29.40	30	-0.60	Pass
3690	22.43	22.96	22.56	22.79	9	31.96	29.45	30	-0.55	Pass

* - EIRP = Max SA reading (Chains #1&2 and #3&4) - 10*log[OBW(MHz) / 10 MHz]] + Antenna gain = Max SA reading – 2.51 dB + Antenna gain: The transmitter output signal are completely uncorrelated, antennas 1/2 is one sector and antennas 3/4 is another sector.
** - Margin = EIRP, dBm – specification limit.

Test specification:	Section 96.41(b), Maximum EIRP and maximum power spectral density		
Test procedure:	Ansi 63.26 section 5.2.3.1		
Test mode:	Compliance	Verdict:	PASS
Date(s):	02-Apr-23 - 04-Apr-23		
Temperature: 24.3. ºC	Relative Humidity: 48 %	Air Pressure: 1010 hPa	Power: 48 VDC
Remarks:			

Table 7.1.5 Peak EIRP spectral power density test results

ASSIGNED FREQUENCY RANGE: 3550.0 – 3700.0 MHz
DETECTOR USED: Average (gated)
VIDEO BANDWIDTH: ≥ Resolution bandwidth
CHANNEL SPACING: 10 MHz

Frequency, MHz	SA Reading, dBm/MHz				Antenna gain, dBi	Total EIRP PSD*, dBm/ MHz	Limit, dBm/MHz	Margin, dB	Verdict
	Chain RF#1,	Chain RF#2,	Chain RF#3,	Chain RF#4,					
Channel spacing 10 MHz									
Modulation QPSK									
3555.0	10.98	10.96	10.92	10.92	9	19.98	20	-0.02	Pass
3625.0	10.95	10.90	10.99	10.95	9	19.99	20	-0.01	Pass
3695.0	10.95	10.92	10.95	10.94	9	19.95	20	-0.05	Pass
Modulation 16QAM									
3555.0	10.99	10.91	10.96	10.99	9	19.99	20	-0.01	Pass
3625.0	10.98	10.98	10.92	10.92	9	19.98	20	-0.02	Pass
3695.0	10.98	10.95	10.97	10.95	9	19.98	20	-0.02	Pass
Modulation 64QAM									
3555.0	10.98	10.91	10.95	10.94	9	19.98	20	-0.02	Pass
3625.0	10.83	10.98	10.95	10.96	9	19.98	20	-0.02	Pass
3695.0	10.94	10.95	10.95	10.87	9	19.95	20	-0.05	Pass
Modulation 256QAM									
3555	10.99	10.95	10.91	10.91	9	19.99	20	-0.01	Pass
3625	10.97	10.99	10.98	10.92	9	19.99	20	-0.01	Pass
3695	10.95	10.94	10.95	10.89	9	19.95	20	-0.05	Pass

* - EIRP = Max SA reading (Chains #1&2 and #3&4) + Antenna gain: The transmitter output signal are completely uncorrelated, antennas 1/2 is one sector and antennas 3/4 is another sector.
** - Margin = EIRP, dBm – specification limit.

Test specification:	**Section 96.41(b), Maximum EIRP and maximum power spectral density**		
Test procedure:	Ansi 63.26 section 5.2.3.1		
Test mode:	Compliance	**Verdict:**	PASS
Date(s):	02-Apr-23 - 04-Apr-23		
Temperature: 24.3. ºC	**Relative Humidity:** 48 %	**Air Pressure:** 1010 hPa	**Power:** 48 VDC
Remarks:			

Table 7.1.6 Peak EIRP spectral power density test results

ASSIGNED FREQUENCY RANGE: 3550.0 – 3700.0 MHz
DETECTOR USED: Average (gated)
VIDEO BANDWIDTH: ≥ Resolution bandwidth
CHANNEL SPACING: 20 MHz

Frequency, MHz	SA Reading, dBm/MHz				Antenna gain, dBi	Total EIRP PSD*, dBm/ MHz	Limit, dBm/MHz	Margin, dB	Verdict
	Chain RF#1,	Chain RF#2,	Chain RF#3,	Chain RF#4,					
Modulation QPSK									
3560	10.94	10.98	10.92	10.94	9	19.98	20	-0.02	Pass
3625	10.91	10.94	10.98	10.95	9	19.98	20	-0.02	Pass
3690	10.97	10.96	11.00	10.90	9	20.0	20	0.0	Pass
Modulation 16QAM									
3560	10.93	10.96	10.97	10.95	9	19.97	20	-0.03	Pass
3625	10.92	10.98	11.00	10.92	9	20.0	20	0.0	Pass
3690	10.97	10.99	10.95	11.00	9	20.0	20	0.0	Pass
Modulation 64QAM									
3560	10.92	10.88	10.99	10.99	9	19.99	20	-0.01	Pass
3625	10.93	10.97	10.95	10.98	9	19.98	20	-0.02	Pass
3690	10.98	10.95	10.92	10.92	9	19.98	20	-0.02	Pass
Modulation 256QAM									
3560	10.89	10.91	11.00	10.98	9	20.0	20	0.0	Pass
3625	10.94	10.95	10.97	10.95	9	19.97	20	-0.03	Pass
3690	10.92	10.98	10.93	10.92	9	19.98	20	-0.02	Pass

* - Total PSD = Max SA reading (Chains #1&2 or chains #3&4) + Antenna Gain: The transmitter output signal are completely uncorrelated, antennas 1/2 is one sector and antennas 3/4 is another sector.
** - Margin = Total PSD, dBm – specification limit.

Reference numbers of test equipment used

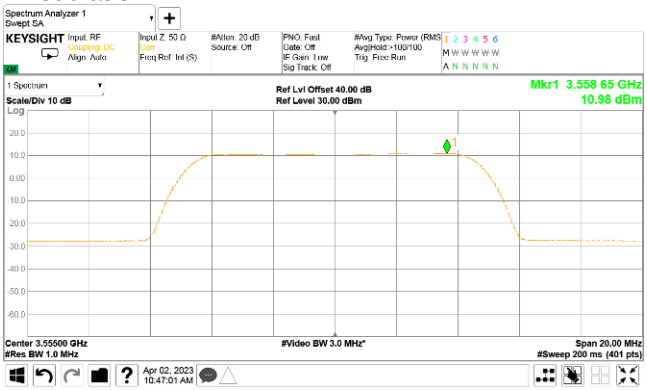
HL 3301	HL 3302	HL 4366	HL 5376	HL 5642			

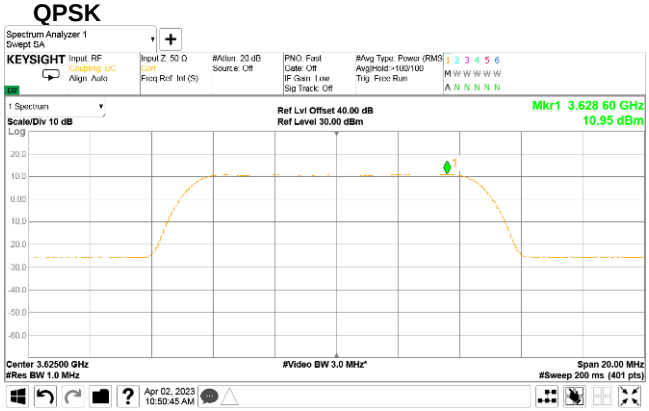
Full description is given in Appendix A.

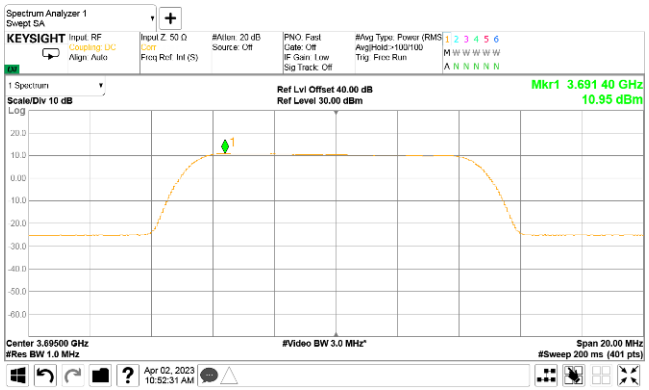
Test specification:	Section 96.41(b), Maximum EIRP and maximum power spectral density		
Test procedure:	Ansi 63.26 section 5.2.3.1		
Test mode:	Compliance	Verdict:	PASS
Date(s):	02-Apr-23 - 04-Apr-23		
Temperature: 24.3. ºC	Relative Humidity: 48 %	Air Pressure: 1010 hPa	Power: 48 VDC
Remarks:			

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

CHANNEL SPACING: 10 MHz
ANTENNA CHAIN: 1
Modulation: QPSK



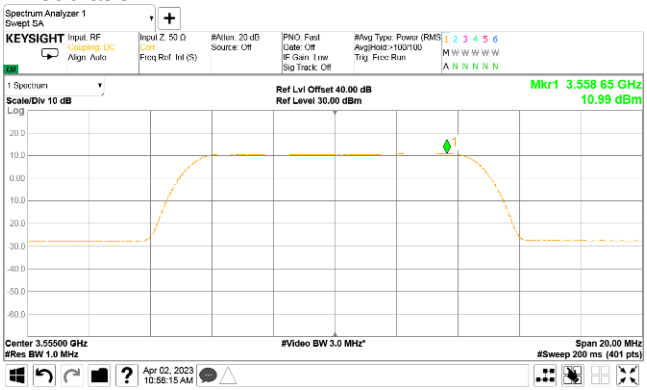


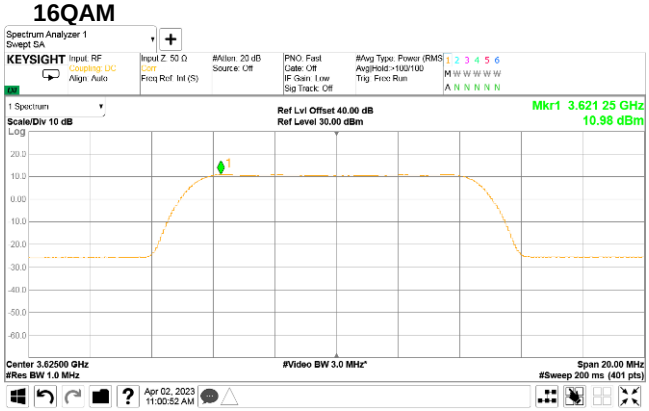


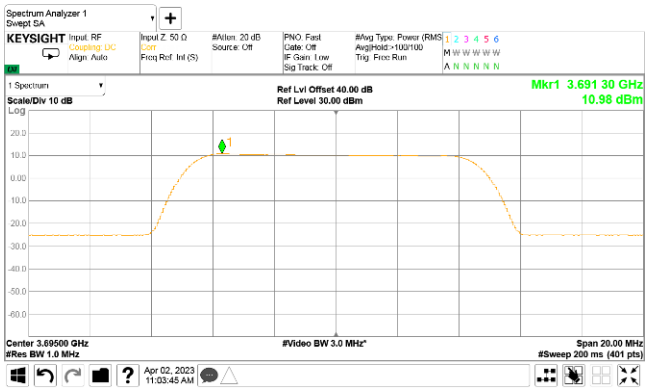
Test specification:	Section 96.41(b), Maximum EIRP and maximum power spectral density		
Test procedure:	Ansi 63.26 section 5.2.3.1		
Test mode:	Compliance	Verdict:	PASS
Date(s):	02-Apr-23 - 04-Apr-23		
Temperature: 24.3. ºC	Relative Humidity: 48 %	Air Pressure: 1010 hPa	Power: 48 VDC
Remarks:			

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

CHANNEL SPACING: 10 MHz
ANTENNA CHAIN: 1
Modulation: 16QAM



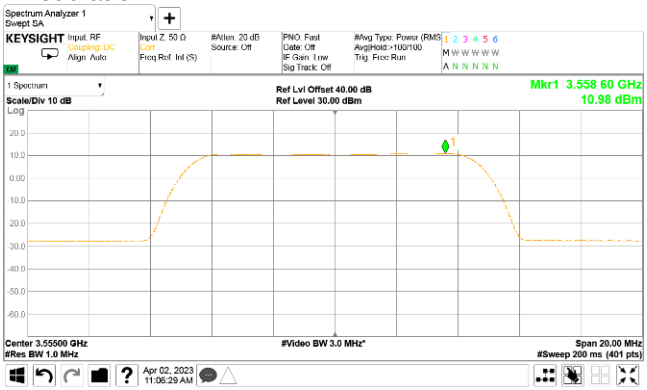


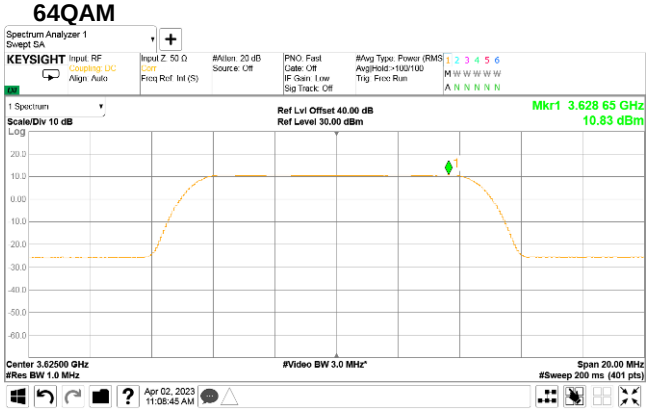


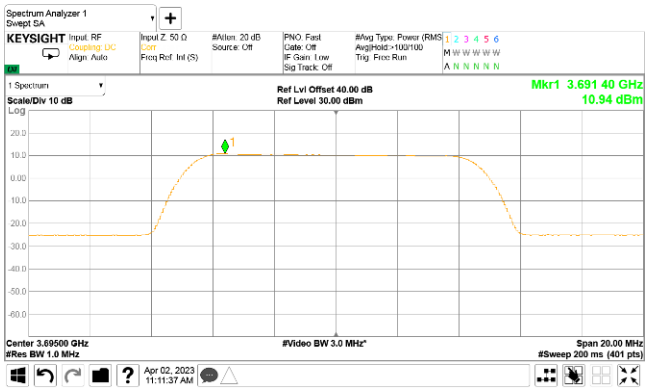
Test specification:	Section 96.41(b), Maximum EIRP and maximum power spectral density		
Test procedure:	Ansi 63.26 section 5.2.3.1		
Test mode:	Compliance	Verdict:	PASS
Date(s):	02-Apr-23 - 04-Apr-23		
Temperature: 24.3. ºC	Relative Humidity: 48 %	Air Pressure: 1010 hPa	Power: 48 VDC
Remarks:			

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

CHANNEL SPACING: 10 MHz
ANTENNA CHAIN: 1
Modulation: 64QAM



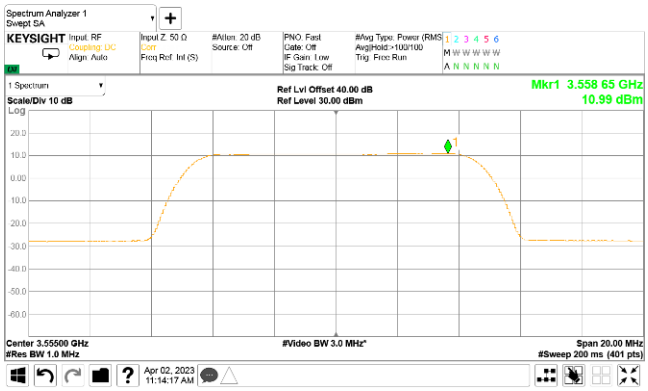


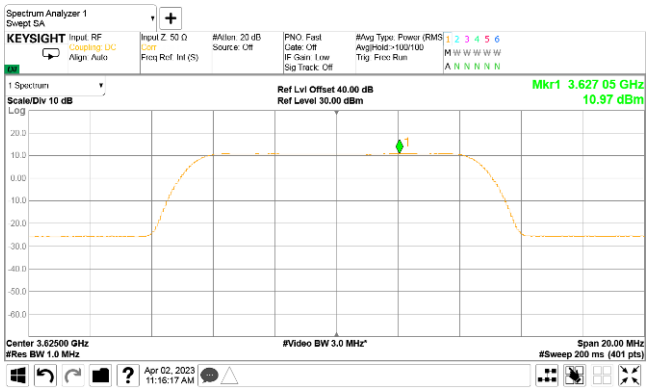


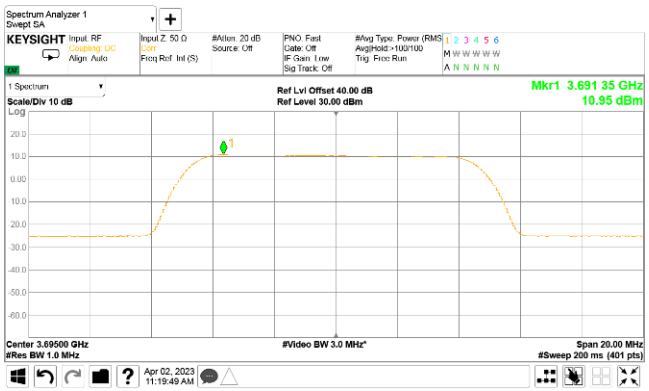
Test specification:	Section 96.41(b), Maximum EIRP and maximum power spectral density		
Test procedure:	Ansi 63.26 section 5.2.3.1		
Test mode:	Compliance	Verdict:	PASS
Date(s):	02-Apr-23 - 04-Apr-23		
Temperature: 24.3. ºC	Relative Humidity: 48 %	Air Pressure: 1010 hPa	Power: 48 VDC
Remarks:			

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

CHANNEL SPACING: 10 MHz
ANTENNA CHAIN: 1
Modulation: **256QAM**



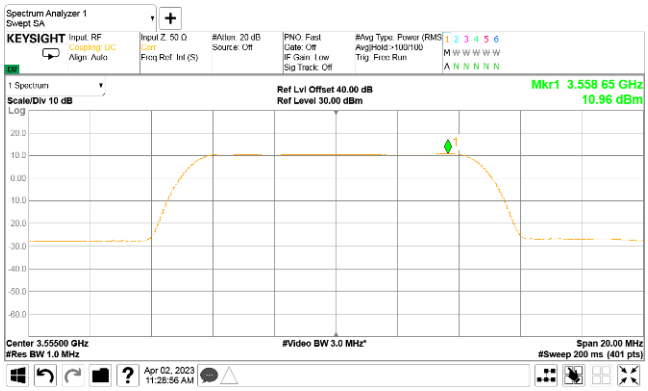


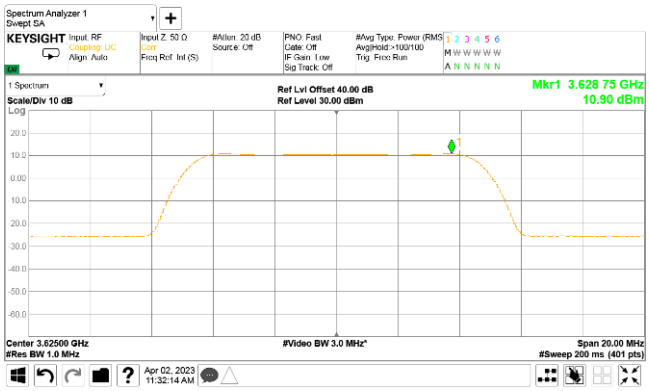


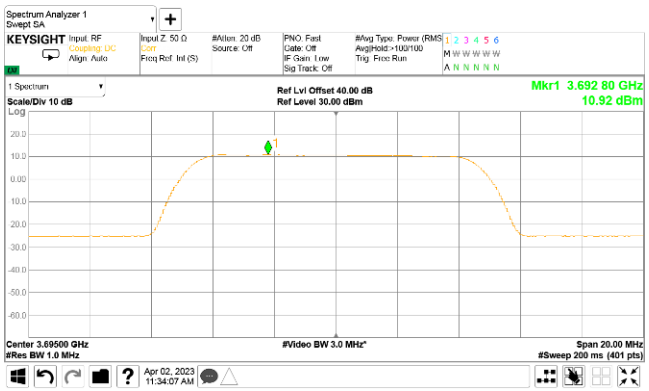
Test specification:	Section 96.41(b), Maximum EIRP and maximum power spectral density		
Test procedure:	Ansi 63.26 section 5.2.3.1		
Test mode:	Compliance	Verdict:	PASS
Date(s):	02-Apr-23 - 04-Apr-23		
Temperature: 24.3. ºC	Relative Humidity: 48 %	Air Pressure: 1010 hPa	Power: 48 VDC
Remarks:			

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

CHANNEL SPACING: 10 MHz
ANTENNA CHAIN: 2
Modulation: **QPSK**



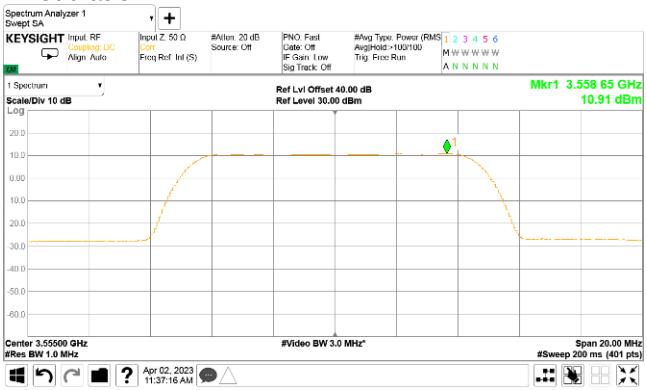


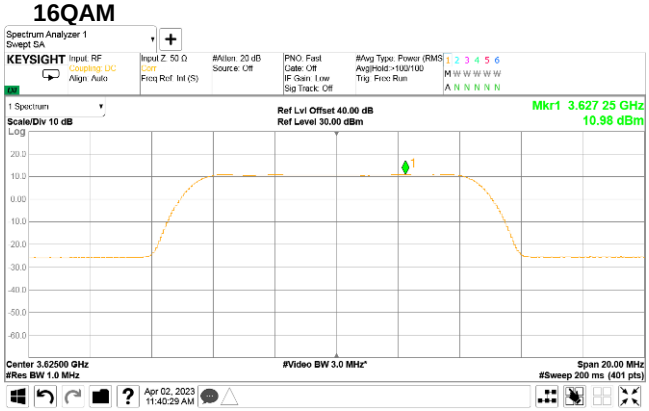


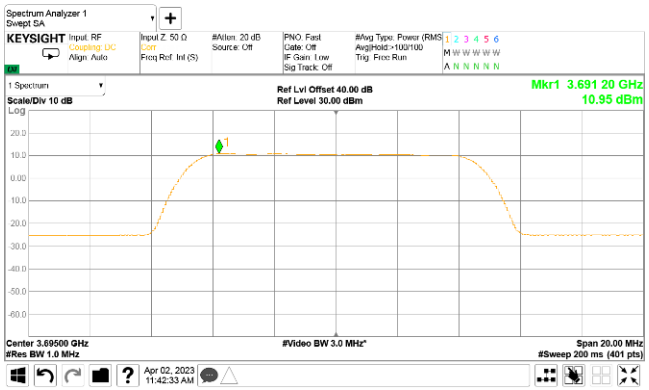
Test specification:	Section 96.41(b), Maximum EIRP and maximum power spectral density		
Test procedure:	Ansi 63.26 section 5.2.3.1		
Test mode:	Compliance	Verdict:	PASS
Date(s):	02-Apr-23 - 04-Apr-23		
Temperature: 24.3. ºC	Relative Humidity: 48 %	Air Pressure: 1010 hPa	Power: 48 VDC
Remarks:			

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

CHANNEL SPACING: 10 MHz
ANTENNA CHAIN: 2
Modulation: 16QAM



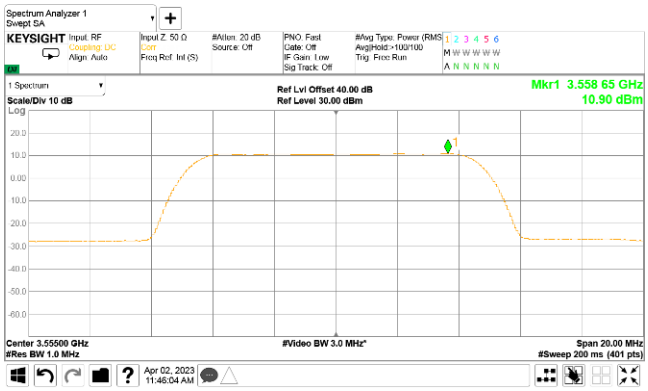


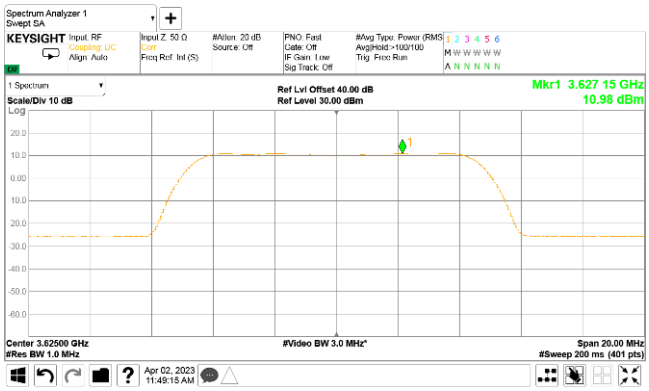


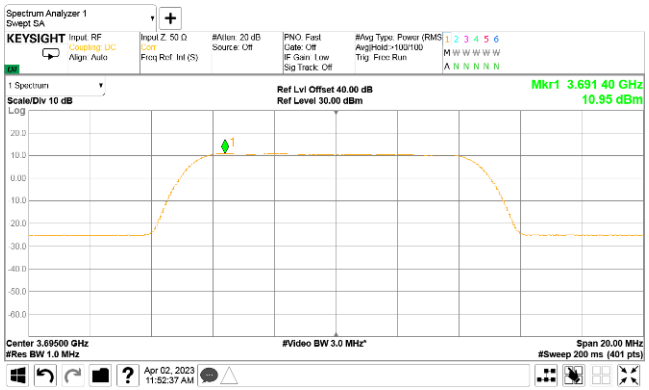
Test specification:	Section 96.41(b), Maximum EIRP and maximum power spectral density		
Test procedure:	Ansi 63.26 section 5.2.3.1		
Test mode:	Compliance	Verdict:	PASS
Date(s):	02-Apr-23 - 04-Apr-23		
Temperature: 24.3. ºC	Relative Humidity: 48 %	Air Pressure: 1010 hPa	Power: 48 VDC
Remarks:			

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

CHANNEL SPACING: 10 MHz
ANTENNA CHAIN: 2
Modulation: **64QAM**



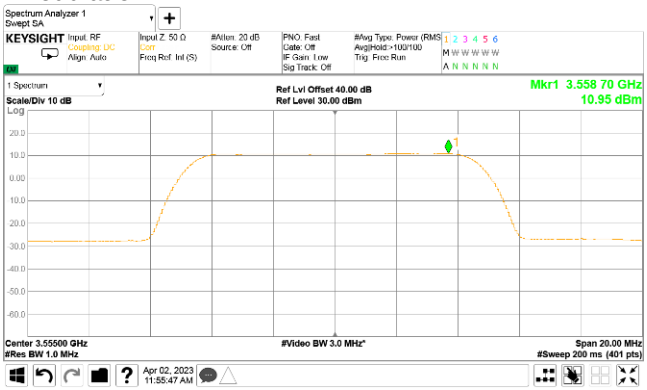


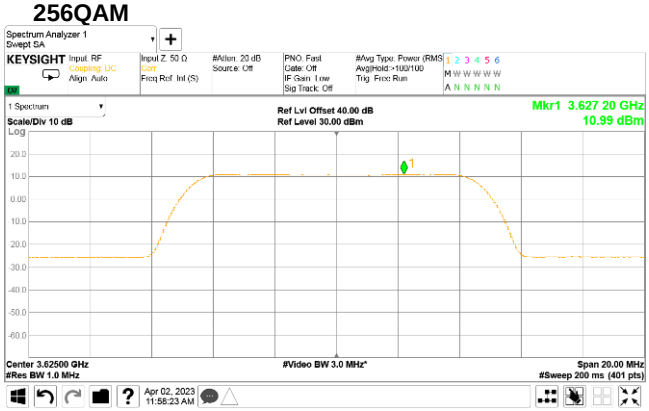


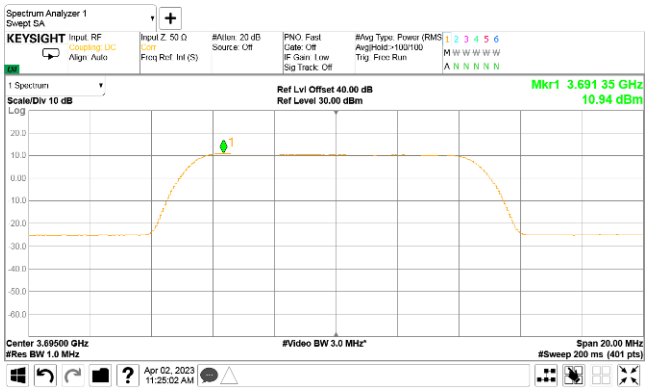
Test specification:	Section 96.41(b), Maximum EIRP and maximum power spectral density		
Test procedure:	Ansi 63.26 section 5.2.3.1		
Test mode:	Compliance	Verdict:	PASS
Date(s):	02-Apr-23 - 04-Apr-23		
Temperature: 24.3. ºC	Relative Humidity: 48 %	Air Pressure: 1010 hPa	Power: 48 VDC
Remarks:			

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

CHANNEL SPACING: 10 MHz
ANTENNA CHAIN: 2
Modulation: 256QAM



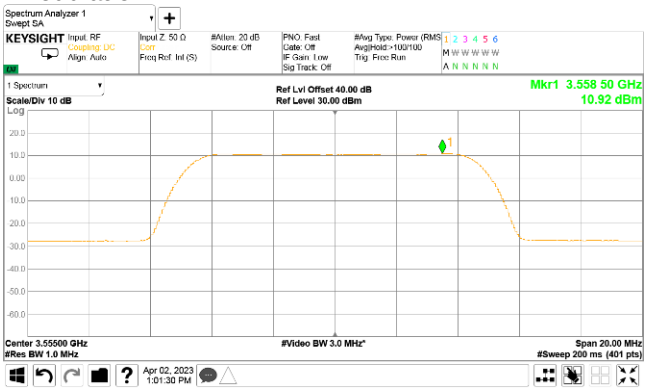


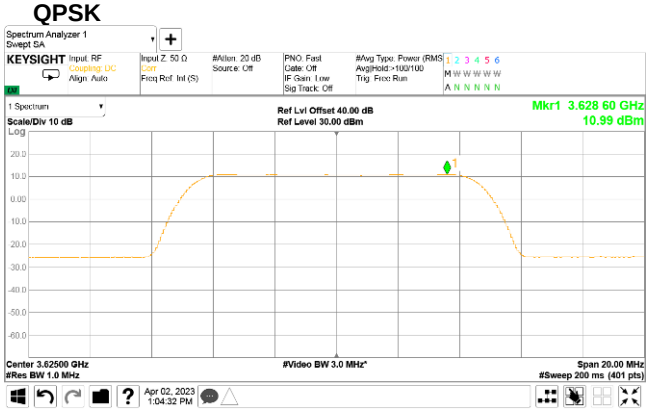


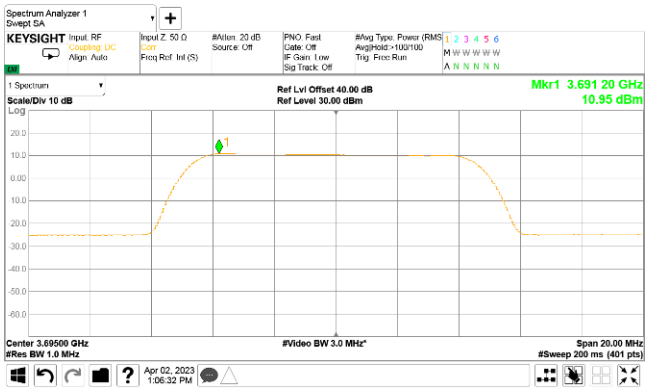
Test specification:	Section 96.41(b), Maximum EIRP and maximum power spectral density		
Test procedure:	Ansi 63.26 section 5.2.3.1		
Test mode:	Compliance	Verdict:	PASS
Date(s):	02-Apr-23 - 04-Apr-23		
Temperature: 24.3. ºC	Relative Humidity: 48 %	Air Pressure: 1010 hPa	Power: 48 VDC
Remarks:			

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

CHANNEL SPACING: 10 MHz
ANTENNA CHAIN: 3
Modulation: **QPSK**



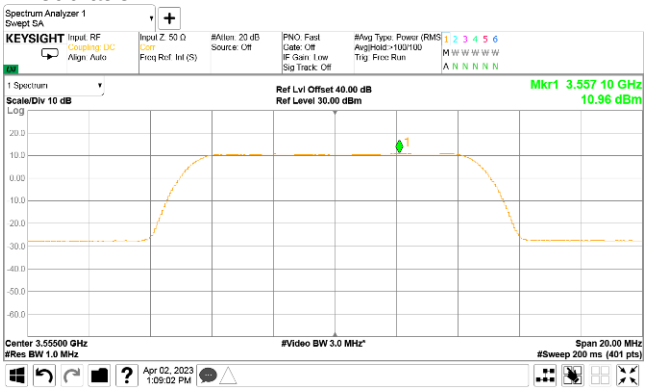


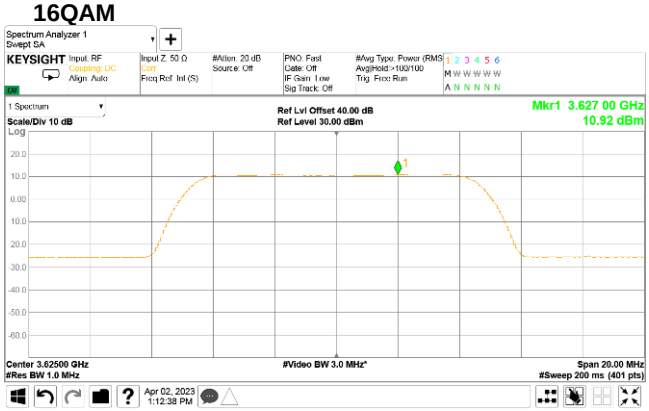


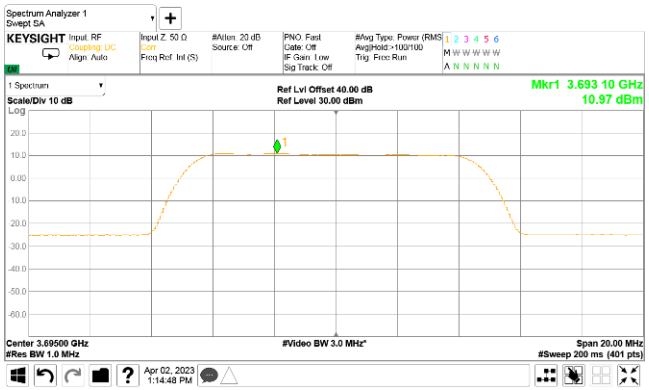
Test specification:	Section 96.41(b), Maximum EIRP and maximum power spectral density		
Test procedure:	Ansi 63.26 section 5.2.3.1		
Test mode:	Compliance	Verdict:	PASS
Date(s):	02-Apr-23 - 04-Apr-23		
Temperature: 24.3. ºC	Relative Humidity: 48 %	Air Pressure: 1010 hPa	Power: 48 VDC
Remarks:			

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

CHANNEL SPACING: 10 MHz
ANTENNA CHAIN: 3
Modulation: 16QAM



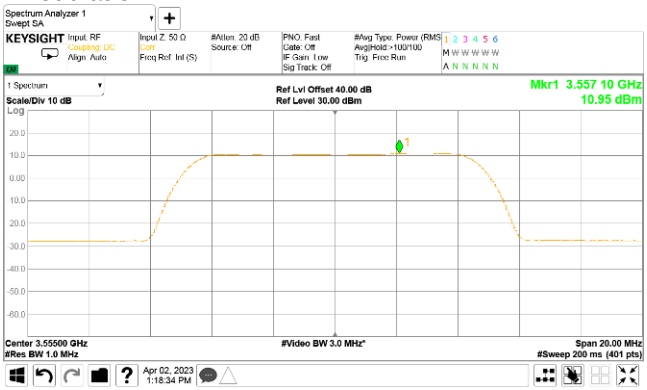


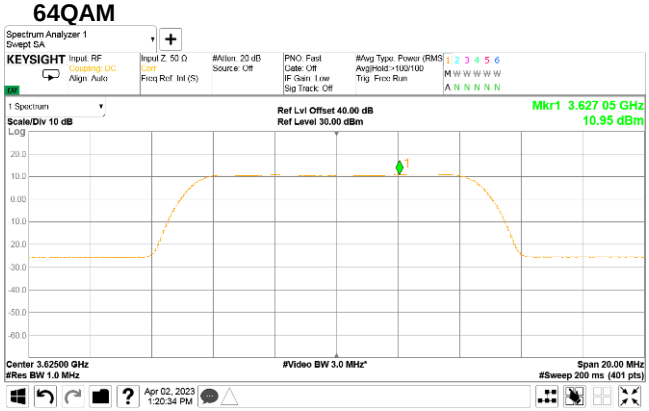


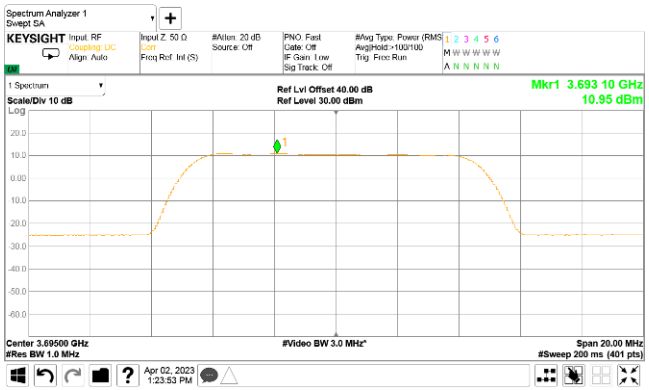
Test specification:	Section 96.41(b), Maximum EIRP and maximum power spectral density		
Test procedure:	Ansi 63.26 section 5.2.3.1		
Test mode:	Compliance	Verdict:	PASS
Date(s):	02-Apr-23 - 04-Apr-23		
Temperature: 24.3. ºC	Relative Humidity: 48 %	Air Pressure: 1010 hPa	Power: 48 VDC
Remarks:			

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

CHANNEL SPACING: 10 MHz
ANTENNA CHAIN: 3
Modulation: 64QAM



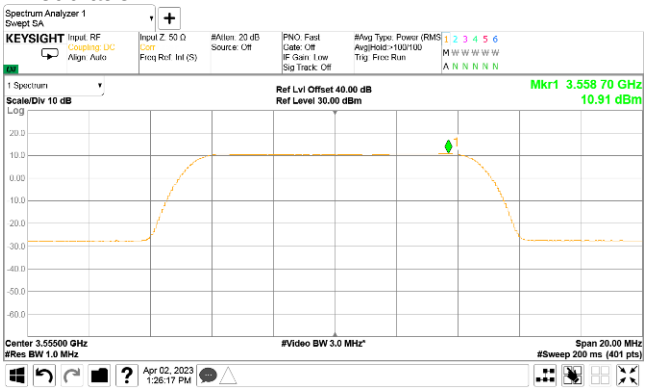


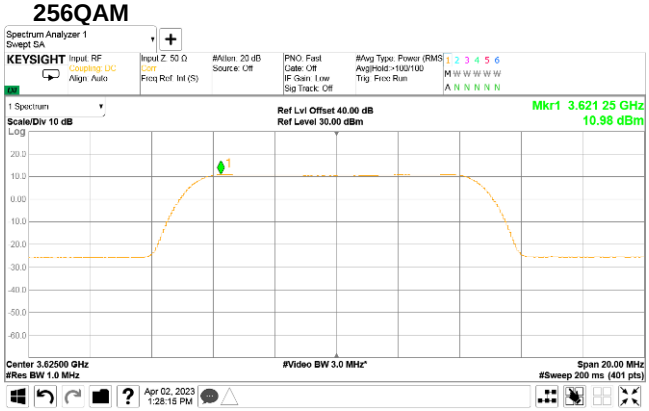


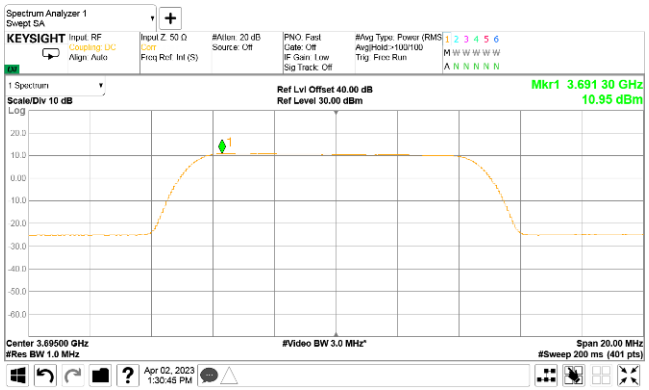
Test specification:	Section 96.41(b), Maximum EIRP and maximum power spectral density		
Test procedure:	Ansi 63.26 section 5.2.3.1		
Test mode:	Compliance	Verdict:	PASS
Date(s):	02-Apr-23 - 04-Apr-23		
Temperature: 24.3. ºC	Relative Humidity: 48 %	Air Pressure: 1010 hPa	Power: 48 VDC
Remarks:			

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

CHANNEL SPACING: 10 MHz
ANTENNA CHAIN: 3
Modulation: 256QAM



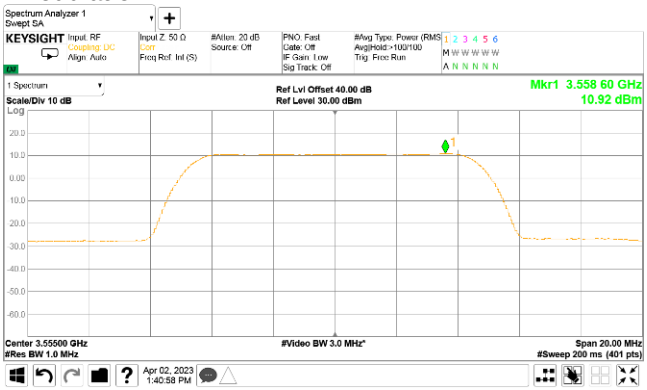


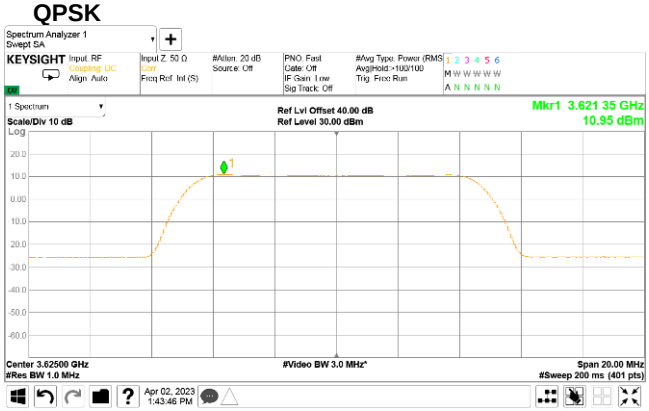


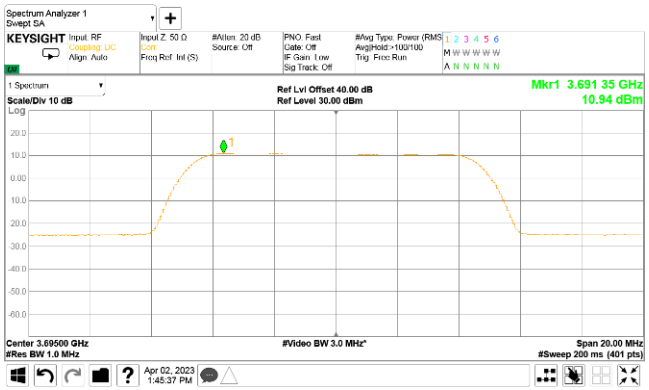
Test specification:	Section 96.41(b), Maximum EIRP and maximum power spectral density		
Test procedure:	Ansi 63.26 section 5.2.3.1		
Test mode:	Compliance	Verdict:	PASS
Date(s):	02-Apr-23 - 04-Apr-23		
Temperature: 24.3. ºC	Relative Humidity: 48 %	Air Pressure: 1010 hPa	Power: 48 VDC
Remarks:			

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

CHANNEL SPACING: 10 MHz
ANTENNA CHAIN: 4
Modulation: QPSK



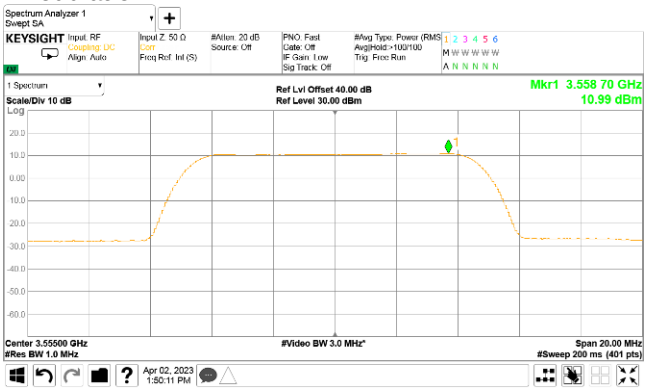


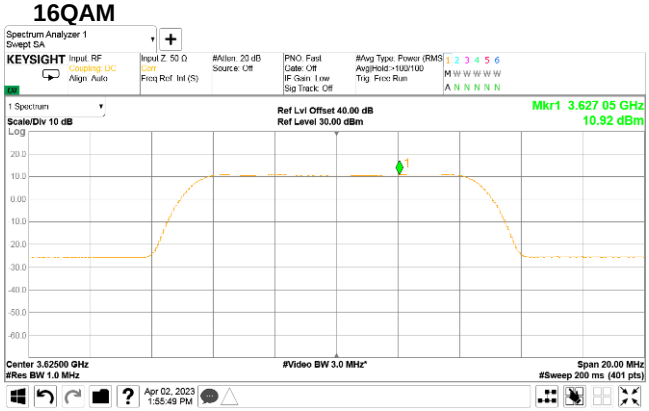


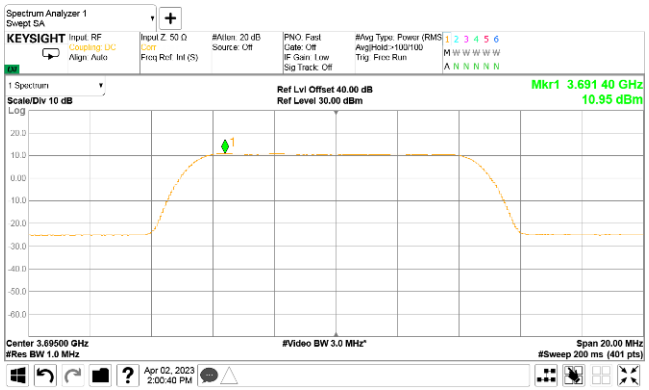
Test specification:	Section 96.41(b), Maximum EIRP and maximum power spectral density		
Test procedure:	Ansi 63.26 section 5.2.3.1		
Test mode:	Compliance	Verdict:	PASS
Date(s):	02-Apr-23 - 04-Apr-23		
Temperature: 24.3. ºC	Relative Humidity: 48 %	Air Pressure: 1010 hPa	Power: 48 VDC
Remarks:			

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

CHANNEL SPACING: 10 MHz
ANTENNA CHAIN: 4
Modulation: 16QAM



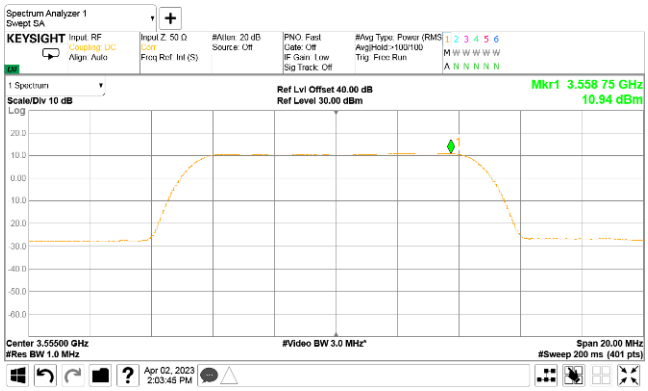


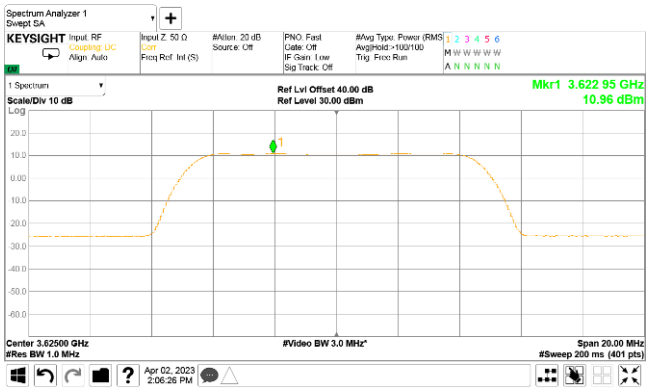


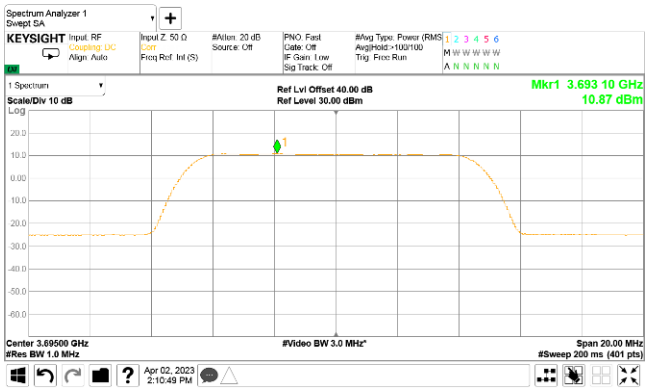
Test specification:	Section 96.41(b), Maximum EIRP and maximum power spectral density		
Test procedure:	Ansi 63.26 section 5.2.3.1		
Test mode:	Compliance	Verdict:	PASS
Date(s):	02-Apr-23 - 04-Apr-23		
Temperature: 24.3. ºC	Relative Humidity: 48 %	Air Pressure: 1010 hPa	Power: 48 VDC
Remarks:			

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

CHANNEL SPACING: 10 MHz
ANTENNA CHAIN: 4
Modulation: **64QAM**



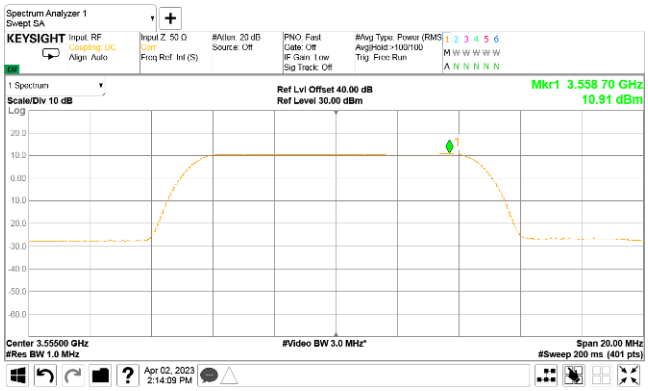


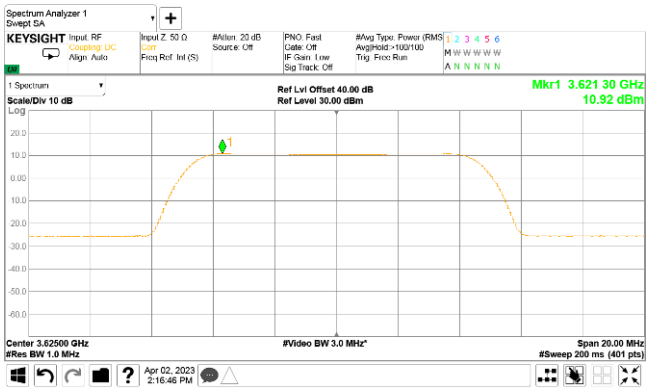


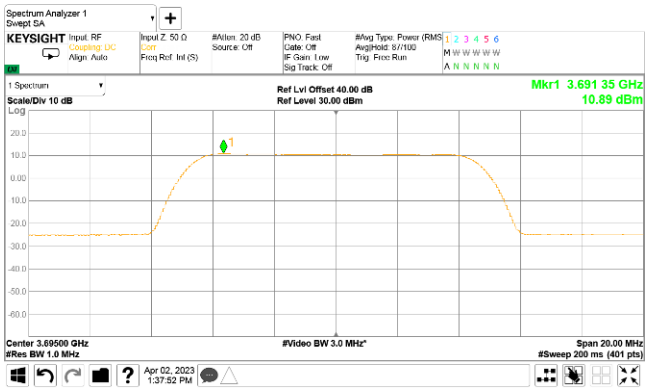
Test specification:	Section 96.41(b), Maximum EIRP and maximum power spectral density		
Test procedure:	Ansi 63.26 section 5.2.3.1		
Test mode:	Compliance	Verdict:	PASS
Date(s):	02-Apr-23 - 04-Apr-23		
Temperature: 24.3. ºC	Relative Humidity: 48 %	Air Pressure: 1010 hPa	Power: 48 VDC
Remarks:			

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

CHANNEL SPACING: 10 MHz
ANTENNA CHAIN: 4
Modulation: **256QAM**



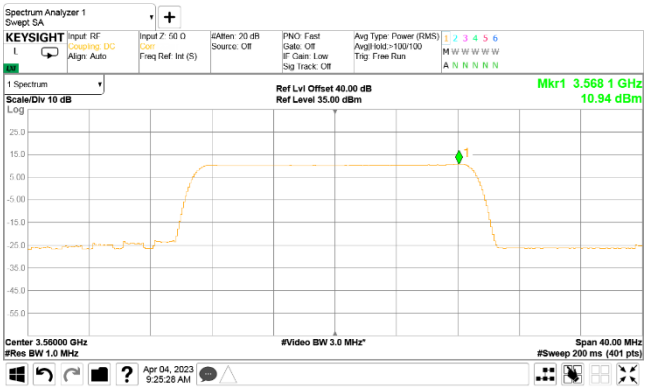


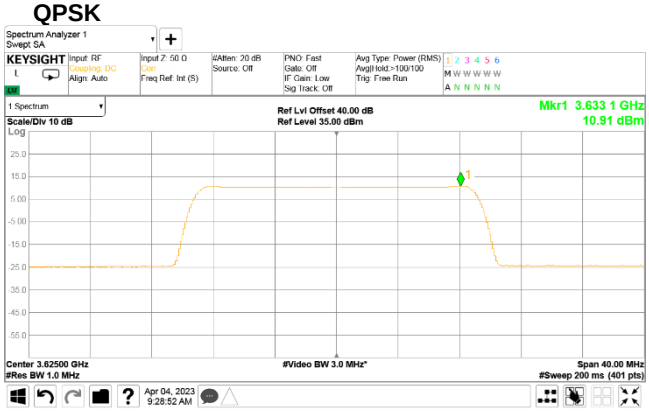


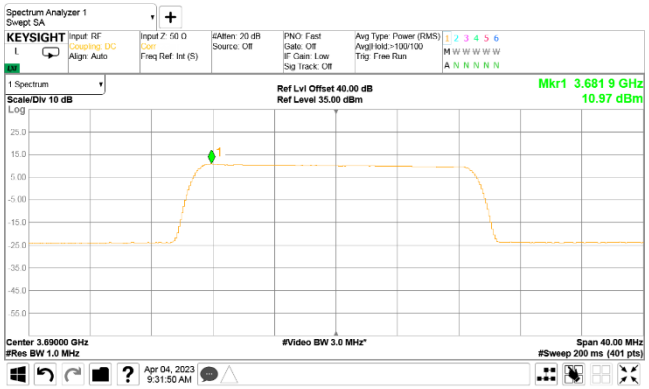
Test specification:	Section 96.41(b), Maximum EIRP and maximum power spectral density		
Test procedure:	Ansi 63.26 section 5.2.3.1		
Test mode:	Compliance	Verdict:	PASS
Date(s):	02-Apr-23 - 04-Apr-23		
Temperature: 24.3. ºC	Relative Humidity: 48 %	Air Pressure: 1010 hPa	Power: 48 VDC
Remarks:			

Plot 7.1.17 Peak spectral power density at low, mid, high frequency

CHANNEL SPACING: 20 MHz
ANTENNA CHAIN: 1
Modulation: **QPSK**







Test specification:	Section 96.41(b), Maximum EIRP and maximum power spectral density		
Test procedure:	Ansi 63.26 section 5.2.3.1		
Test mode:	Compliance	Verdict:	PASS
Date(s):	02-Apr-23 - 04-Apr-23		
Temperature: 24.3. ºC	Relative Humidity: 48 %	Air Pressure: 1010 hPa	Power: 48 VDC
Remarks:			

Plot 7.1.18 Peak spectral power density at low, mid, high frequency

CHANNEL SPACING: 20 MHz
ANTENNA CHAIN: 1
Modulation: 16QAM