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TEST REPORT

ACCORDING TO: FCC 47CFR part 27

FOR:

Airspan Networks Inc.

LTE Base Station

Model: AirSpeed 1050, 2.6GHz (B41)

FCC ID:PIDAS1050

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.

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1 Applicant information

Client name: Airspan Networks Inc.
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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
Product type: Transceiver
Model(s): AirSpeed 1050, 2.6 GHz (B41)
Serial number: E44F33CDD944
Hardware version: A0
Software release: SR-16.50
Receipt date: 19-May-19

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



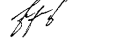
4 Test details

Project ID: 33270
Location: Hermon Laboratories Ltd. P.O. Box 23, Binyamina 3055001, Israel
Test started: 19-May-19
Test completed: 02-Jun-19
Test specification(s): FCC 47CFR part 27

5 Tests summary

Test	Status
Transmitter characteristics	
Section 2.1049, Occupied bandwidth	Pass
Section 27.50(h), Peak output power at RF antenna connector	Pass
Section 27.50(h)(4), Spectral power density	Pass
Section 2.1091, 27.52, RF safety	Pass, exhibit provided in Application for certification
Section 27.53(m)(2), Spurious emissions at RF antenna connector	Pass
Section 27.53(m)(2), Band edge emissions at RF antenna connector	Pass
Section 27.53(m)(2), Radiated spurious emissions	Pass
Section 27.54, Frequency stability	Pass

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. Samokha, test engineer	June 2, 2019	
Reviewed by:	Mrs. M. Cherniavsky, certification engineer	June 12, 2019	
Approved by:	Mr. M. Nikishin, EMC and Radio group manager	June 17, 2019	

6 EUT description

6.1 General information

The EUT, LTE Base station, AirSpeed 1050 2.6GHz (B41), 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 64 QAM modulation, data rate up to 95 MHz) equipped with a 12 dBi internal antenna. The Advanced Antenna Techniques 2x2 MIMO are supported. The maximum total RF output power (not including antenna gain) is 35 dBm for 12 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 LTE UE from relocating to another subscriber premises without authorization.

6.2 Ports and lines

Port Type	Port description	Connected from	Connected to	Qty.	Cable type	Cable length, m
Power	AC power	EUT	AC mains	1	Unshielded	1.5
Signal	GPS	EUT	GPS external antenna	1	Coax	0.2
Signal	Antenna	EUT	Termination 50 Ohm	8	Coax	0.5
Signal	Serial*	Not connected	Not connected	1	NA	NA

*for maintenance only

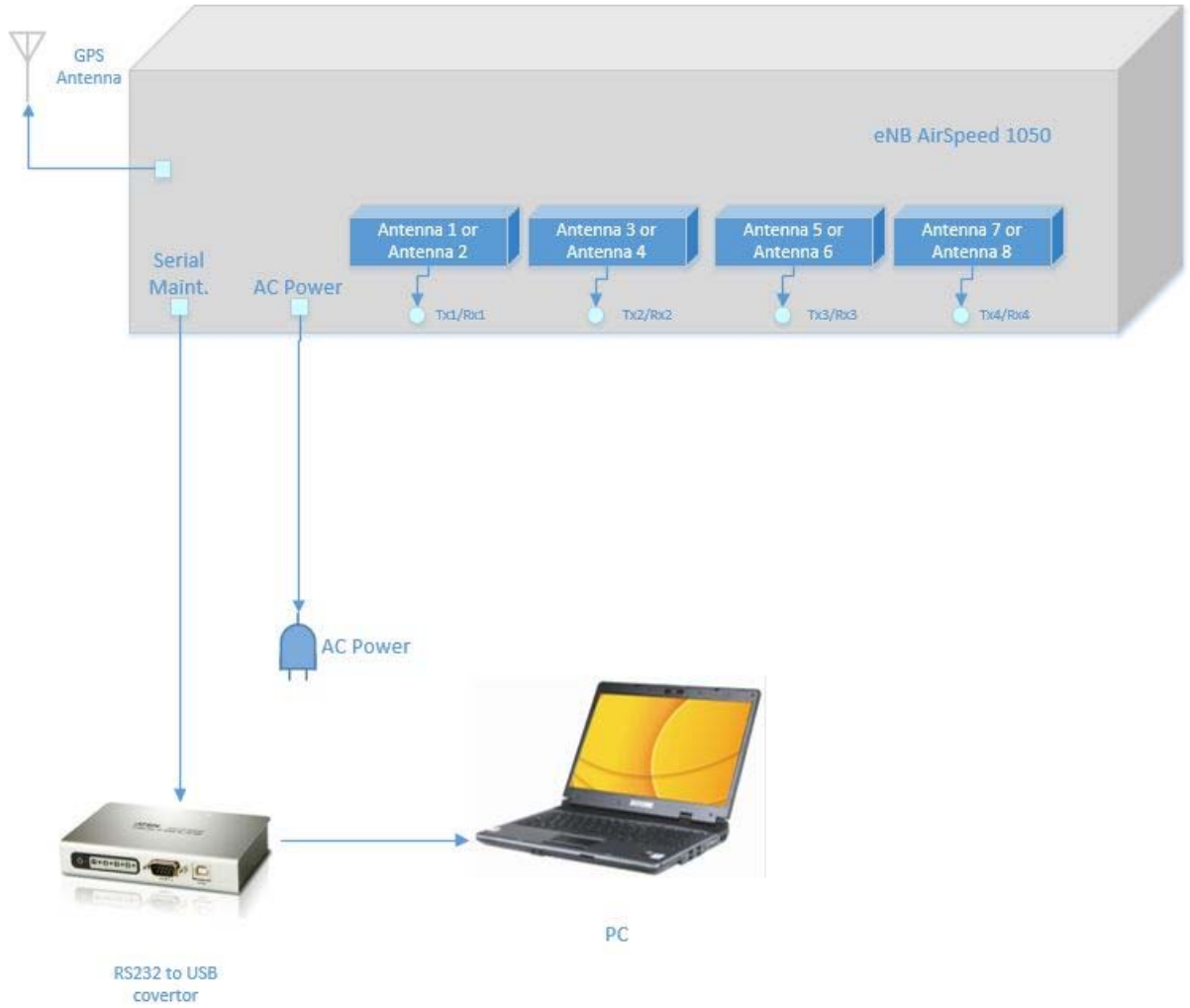
6.3 Support and test equipment

Description	Manufacturer	Model number	Serial number
Laptop	Dell	E7450	8TYRP32
Switch	HPE	HPE 1420	CN64HDD2S4

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					
<input checked="" type="checkbox"/>	Stand-alone (Equipment with or without its own control provisions)				
<input type="checkbox"/>	Combined equipment (Equipment where the radio part is fully integrated within another type of equipment)				
<input type="checkbox"/>	Plug-in card (Equipment intended for a variety of host systems)				
Intended use		Condition of use			
<input checked="" type="checkbox"/>	fixed	Always at a distance more than 2 m from all people			
<input type="checkbox"/>	mobile	Always at a distance more than 20 cm from all people			
<input type="checkbox"/>	portable	May operate at a distance closer than 20 cm to human body			
Assigned frequency range		2496.0 – 2690.0 MHz			
Operating frequency (full bands)		2501.0 – 2685.0 MHz 2506.0 – 2680.0 MHz			
RF channel spacing		10 MHz, 20 MHz			
Maximum rated output power		At transmitter 50 Ω RF output connector (aggregate power of both RF chains) 35 dBm			
Is transmitter output power variable?		<input type="checkbox"/> No			
		<input type="checkbox"/> continuous variable			
		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> Yes	<input checked="" type="checkbox"/> stepped variable with step size 0.25 dB	
				<input type="checkbox"/> minimum RF power -30 dBm	
		<input type="checkbox"/> maximum RF power at antenna connector 35 dBm			
Antenna connection					
<input type="checkbox"/> unique coupling	<input checked="" type="checkbox"/>	standard connector	<input type="checkbox"/> Integral		
		<input checked="" type="checkbox"/> with temporary RF connector			
		<input type="checkbox"/> without temporary RF connector			
Antenna/s technical characteristics					
Type	Manufacturer	Model number	Gain		
Internal, sector antenna	ALPHA Wireless Ltd	AW3702-1	12 dBi		
Internal, sector antenna	ALPHA Wireless Ltd	AW3702-2	12 dBi		
Internal, sector antenna	ALPHA Wireless Ltd	AW3702-3	12 dBi		
Internal, sector antenna	ALPHA Wireless Ltd	AW3702-4	12 dBi		
Transmitter aggregate data rate/s, MBps					
Transmitter 26dBc power bandwidth		Type of modulation			
		QPSK	16QAM	64QAM	
10 MHz		10.7	22.7	47.3	
20 MHz		23.4	45.4	95.0	
Type of multiplexing		TDD			
Modulating test signal (baseband)		PRBS			
Maximum transmitter duty cycle in normal use		70%			
Transmitter power source					
		Nominal rated voltage	Battery type		
<input type="checkbox"/>	DC	Nominal rated voltage			
<input checked="" type="checkbox"/>	AC mains	Nominal rated voltage 120 VAC	Frequency 60 Hz		
Common power source for transmitter and receiver		<input checked="" type="checkbox"/>	yes	<input type="checkbox"/>	no



Test specification: Section 2.1049, Occupied bandwidth			
Test procedure: 47 CFR, Section 2.1049			
Test mode: Compliance		Verdict: PASS	
Date(s): 19-May-19			
Temperature: 24 °C	Relative Humidity: 54 %	Air Pressure: 1012 hPa	Power: 120 VAC
Remarks:			

7 Transmitter tests according to 47CFR part 27

7.1 Occupied bandwidth test

7.1.1 General

This test was performed to measure transmitter occupied bandwidth. Specification test limits are given in Table 7.1.1.

Table 7.1.1 Occupied bandwidth limits

Assigned frequency, MHz	Modulation envelope reference points*, %	Maximum allowed bandwidth, kHz
2496.0 – 2690.0 MHz	99%	NA

* - Modulation envelope reference points are provided in terms of attenuation below the unmodulated carrier.

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.

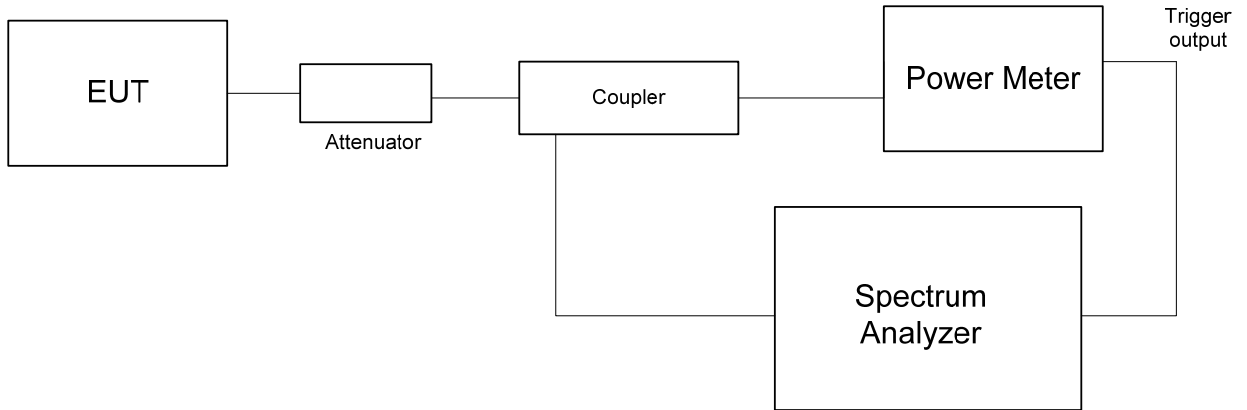
7.1.2.2 The EUT was set to transmit the normal modulated signal and actual channel width was measured at the 26 dBc modulation envelope reference points.

7.1.2.3 The transmitter occupied bandwidth was measured with spectrum analyzer as a frequency delta between the reference points on modulation envelope and provided in Table 7.1.2 and the associated plots.



Test specification: Section 2.1049, Occupied bandwidth			
Test procedure: 47 CFR, Section 2.1049			
Test mode: Compliance		Verdict: PASS	
Date(s): 19-May-19			
Temperature: 24 °C	Relative Humidity: 54 %	Air Pressure: 1012 hPa	Power: 120 VAC
Remarks:			

Figure 7.1.1 Occupied bandwidth test setup





Test specification: Section 2.1049, Occupied bandwidth			
Test procedure: 47 CFR, Section 2.1049			
Test mode: Compliance		Verdict: PASS	
Date(s): 19-May-19			
Temperature: 24 °C	Relative Humidity: 54 %	Air Pressure: 1012 hPa	Power: 120 VAC
Remarks:			

Table 7.1.2 Occupied bandwidth test results

DETECTOR USED: Peak
MODULATION ENVELOPE REFERENCE POINTS: 26 dBc; 99%

RESOLUTION BANDWIDTH: 200 kHz
EBW: 10 MHz

Carrier frequency, MHz	OBW 26 dBc, MHz	OBW 99%, MHz	Limit, kHz	Verdict
QPSK				
2501.0	9.701	8.9789	NA	Pass
2624.0	9.718	8.9717	NA	Pass
2685.0	9.719	8.9758	NA	Pass
64QAM				
2501.0	9.738	8.9687	NA	Pass
2624.0	9.714	8.9667	NA	Pass
2685.0	9.746	8.9712	NA	Pass

RESOLUTION BANDWIDTH: 390 kHz
EBW: 20 MHz

Carrier frequency, MHz	OBW 26 dBc, MHz	OBW 99%, MHz	Limit, kHz	Verdict
QPSK				
2506.0	19.37	17.939	NA	Pass
2624.0	19.25	17.929	NA	Pass
2680.0	19.18	17.929	NA	Pass
64QAM				
2506.0	19.34	17.911	NA	Pass
2624.0	19.36	17.924	NA	Pass
2680.0	19.33	17.923	NA	Pass

Reference numbers of test equipment used

HL 3301	HL 3302	HL3901	HL 4366	HL 5409			
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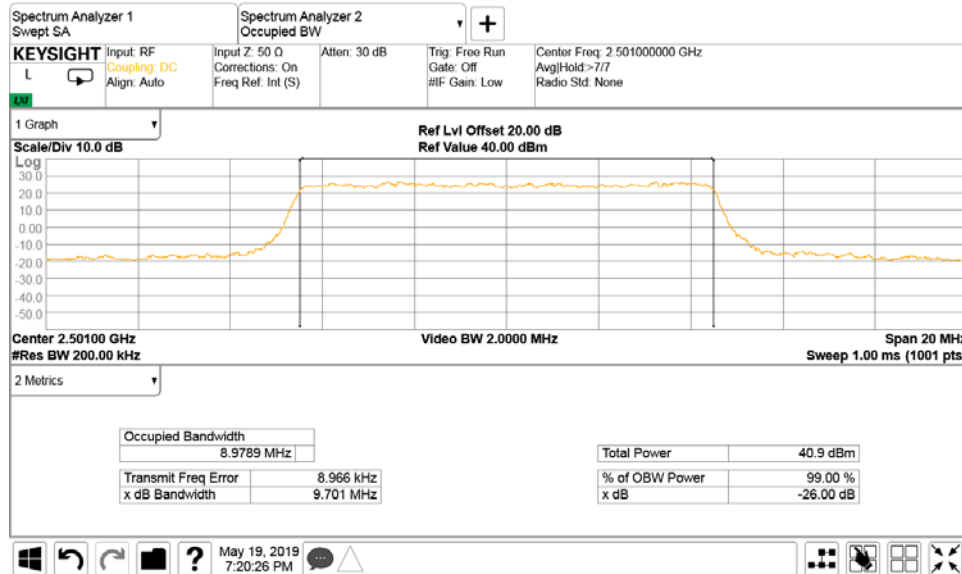
Full description is given in Appendix A.



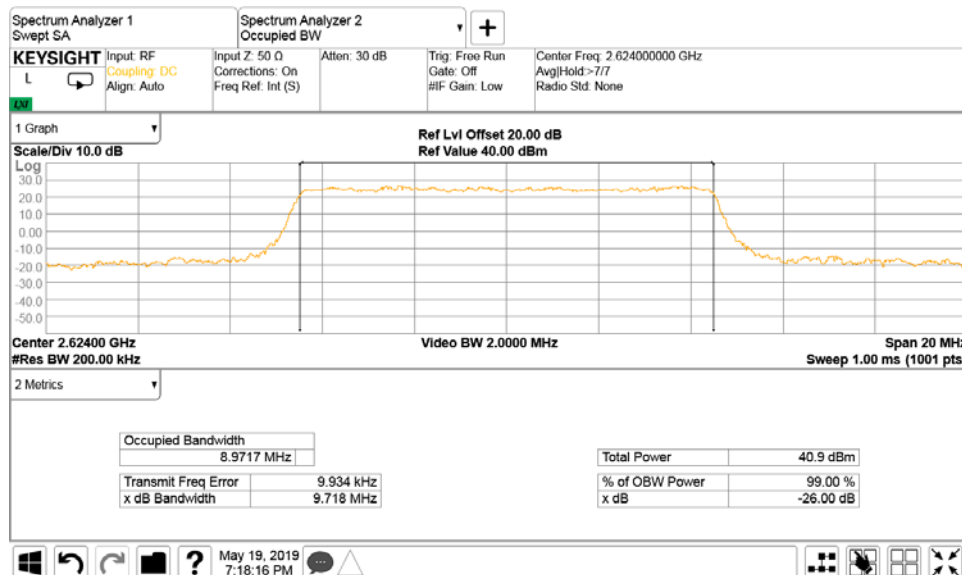
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Test specification: Section 2.1049, Occupied bandwidth			
Test procedure: 47 CFR, Section 2.1049			
Test mode: Compliance		Verdict: PASS	
Date(s): 19-May-19			
Temperature: 24 °C	Relative Humidity: 54 %	Air Pressure: 1012 hPa	Power: 120 VAC
Remarks:			

Plot 7.1.1 Occupied bandwidth test results at low frequency, 10 MHz EBW, QPSK



Plot 7.1.2 Occupied bandwidth test results at mid frequency, 10 MHz EBW, QPSK

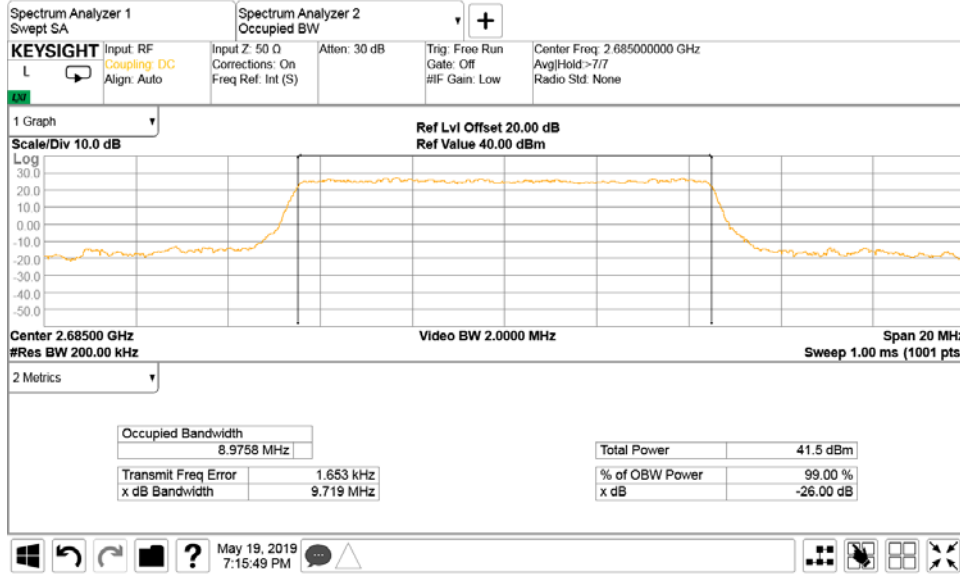




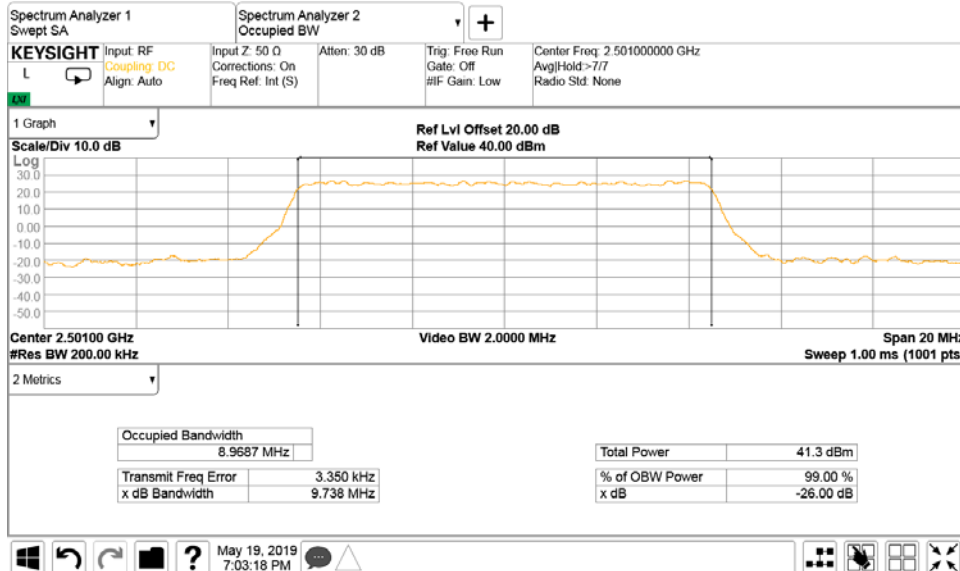
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Test specification: Section 2.1049, Occupied bandwidth			
Test procedure: 47 CFR, Section 2.1049			
Test mode: Compliance		Verdict:	PASS
Date(s): 19-May-19			
Temperature: 24 °C	Relative Humidity: 54 %	Air Pressure: 1012 hPa	Power: 120 VAC
Remarks:			

Plot 7.1.3 Occupied bandwidth test results at high frequency, 10 MHz EBW, QPSK



Plot 7.1.4 Occupied bandwidth test results at low frequency, 10 MHz EBW, 64QAM

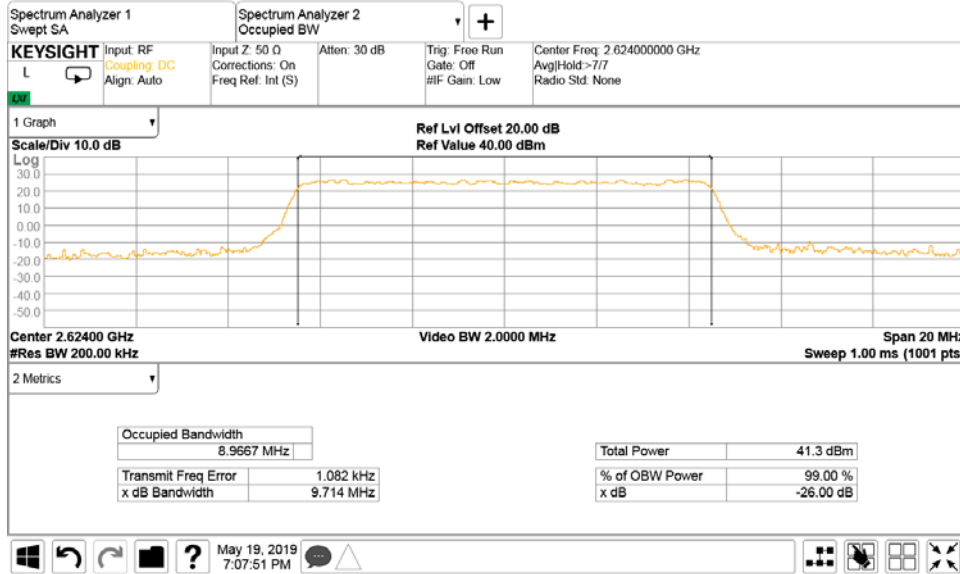




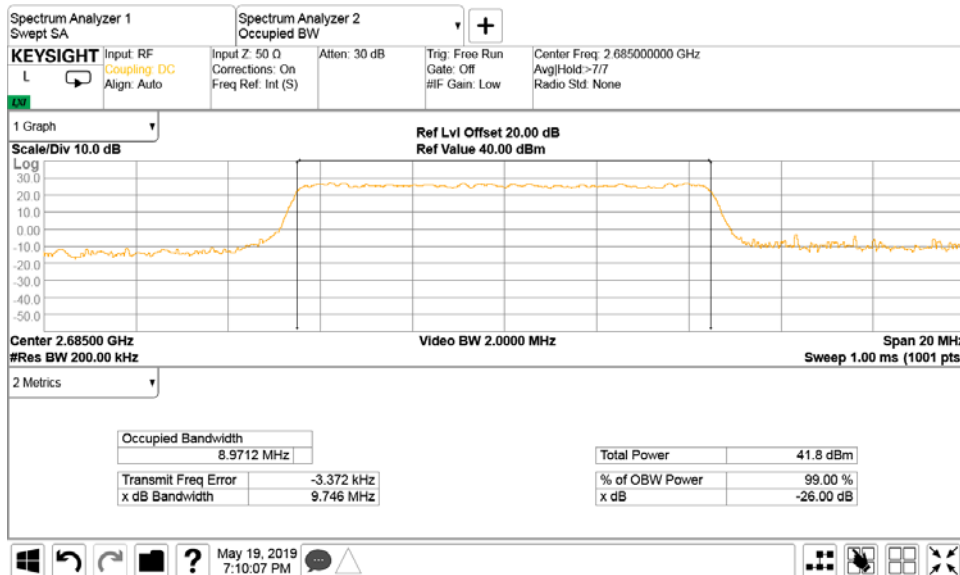
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Test specification: Section 2.1049, Occupied bandwidth			
Test procedure: 47 CFR, Section 2.1049			
Test mode: Compliance		Verdict: PASS	
Date(s): 19-May-19			
Temperature: 24 °C	Relative Humidity: 54 %	Air Pressure: 1012 hPa	Power: 120 VAC
Remarks:			

Plot 7.1.5 Occupied bandwidth test results at mid frequency, 10 MHz EBW, 64QAM



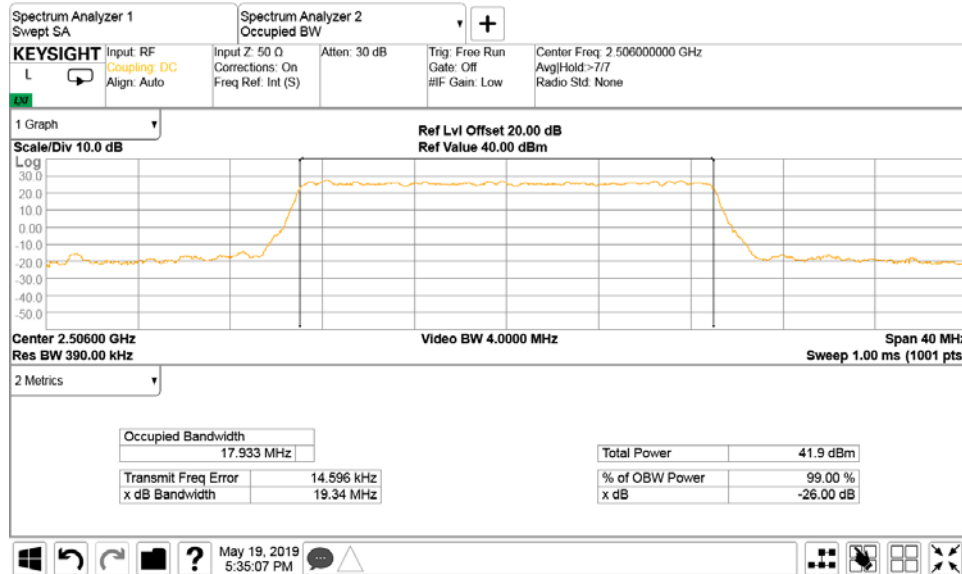
Plot 7.1.6 Occupied bandwidth test results at high frequency, 10 MHz EBW, 64QAM



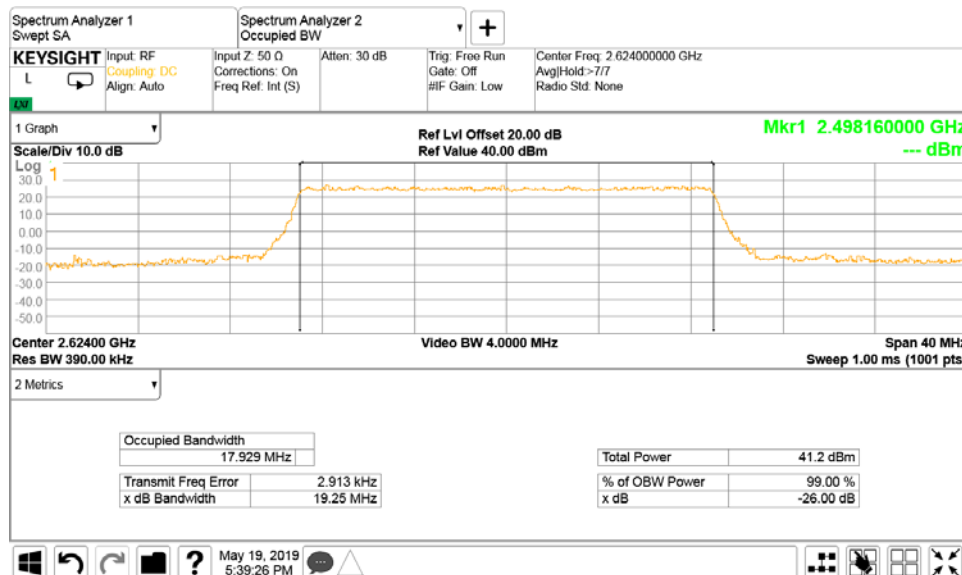


Test specification: Section 2.1049, Occupied bandwidth			
Test procedure: 47 CFR, Section 2.1049			
Test mode: Compliance		Verdict: PASS	
Date(s): 19-May-19			
Temperature: 24 °C	Relative Humidity: 54 %	Air Pressure: 1012 hPa	Power: 120 VAC
Remarks:			

Plot 7.1.7 Occupied bandwidth test results at low frequency, 20 MHz EBW, QPSK



Plot 7.1.8 Occupied bandwidth test results at mid frequency, 20 MHz EBW, QPSK

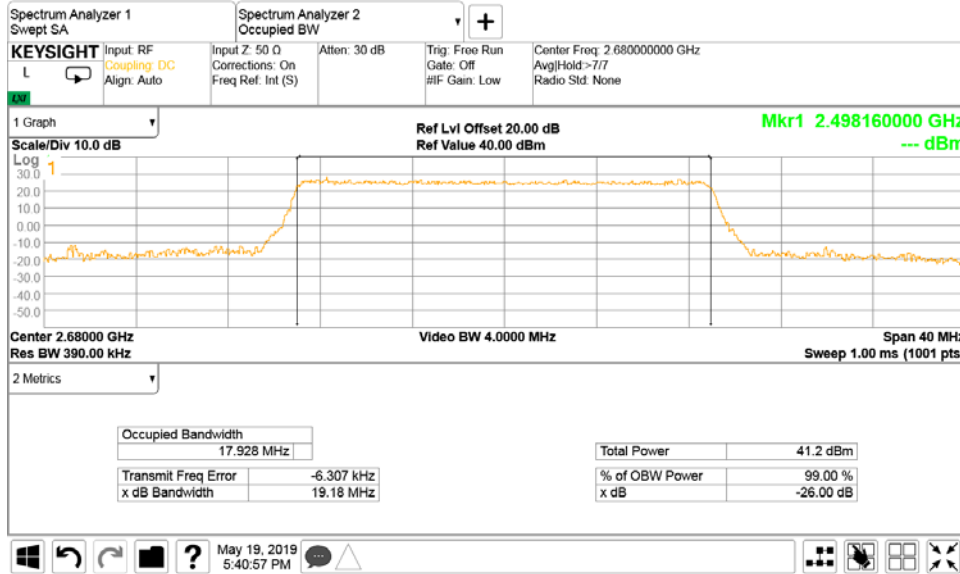




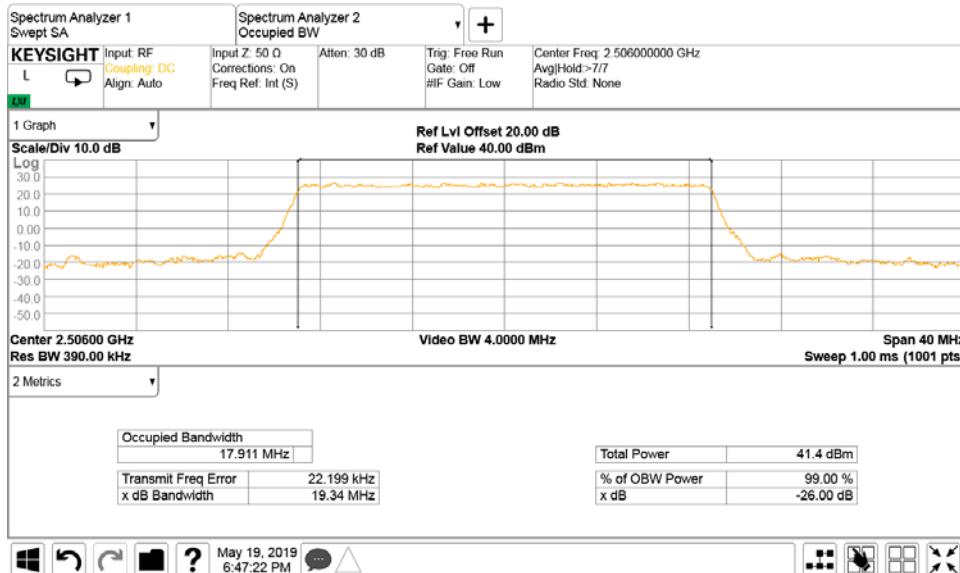
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Test specification: Section 2.1049, Occupied bandwidth			
Test procedure: 47 CFR, Section 2.1049			
Test mode: Compliance		Verdict: PASS	
Date(s): 19-May-19			
Temperature: 24 °C	Relative Humidity: 54 %	Air Pressure: 1012 hPa	Power: 120 VAC
Remarks:			

Plot 7.1.9 Occupied bandwidth test results at high frequency, 20 MHz EBW, QPSK



Plot 7.1.10 Occupied bandwidth test results at low frequency, 20 MHz EBW, 64QAM

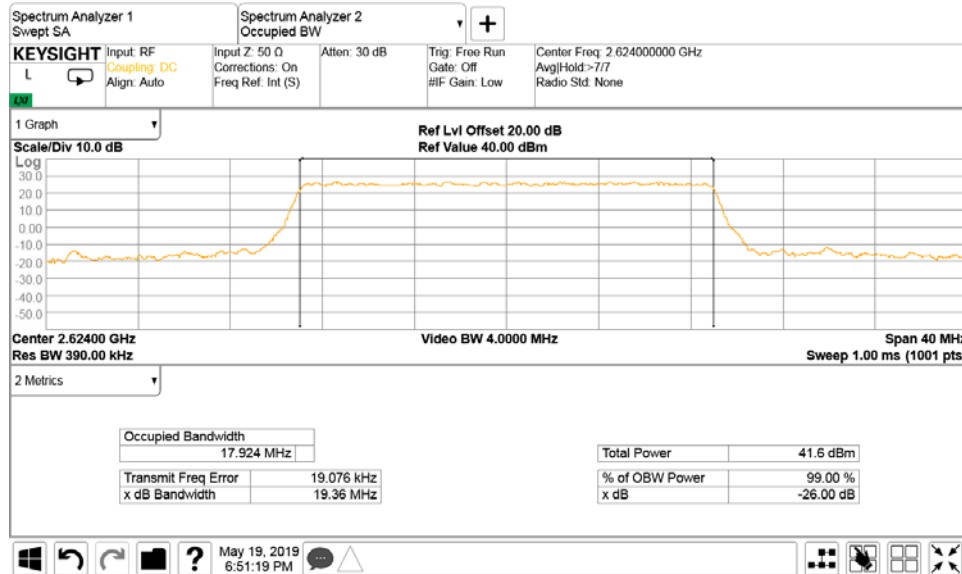




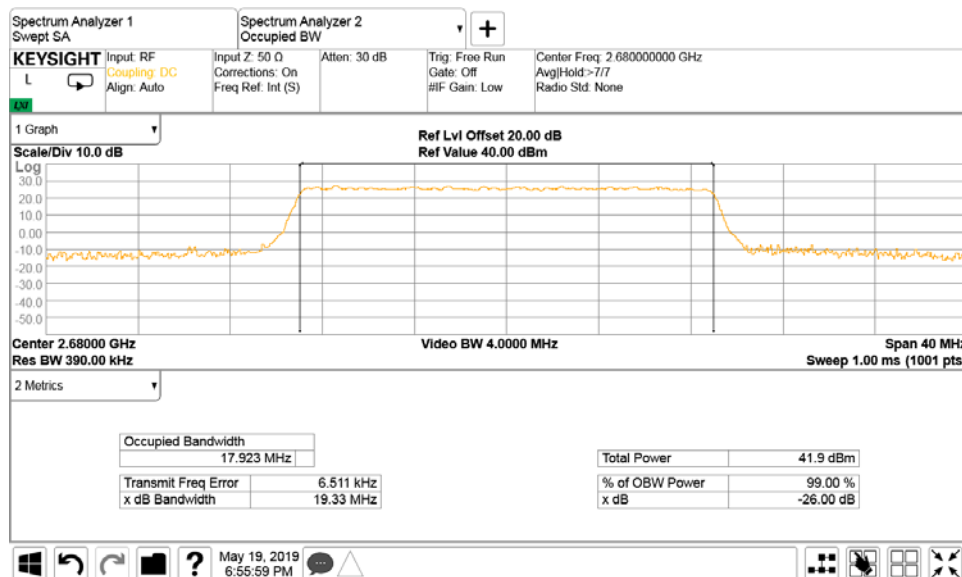
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Test specification: Section 2.1049, Occupied bandwidth			
Test procedure: 47 CFR, Section 2.1049			
Test mode: Compliance		Verdict: PASS	
Date(s): 19-May-19			
Temperature: 24 °C	Relative Humidity: 54 %	Air Pressure: 1012 hPa	Power: 120 VAC
Remarks:			

Plot 7.1.11 Occupied bandwidth test results at mid frequency, 20 MHz EBW, 64QAM



Plot 7.1.12 Occupied bandwidth test results at high frequency, 20 MHz EBW, 64QAM





Test specification: Section 27.50, Peak output power			
Test procedure: 47 CFR, Section 2.1046; TIA/EIA-603-E, Section 2.2.1			
Test mode: Compliance		Verdict: PASS	
Date(s): 19-May-19			
Temperature: 24 °C	Relative Humidity: 54 %	Air Pressure: 1003 hPa	Power: 120 VAC
Remarks:			

7.2 Peak output power test

7.2.1 General

This test was performed to measure the peak output power at RF antenna connector. Specification test limits are given in Table 7.2.1.

Table 7.2.1 Peak output power limits

Transmitter type	Assigned frequency range, MHz	Maximum peak output power, dBm
Main, booster and base stations	2496.0 – 2690.0	$63+10\log(X/Y)+10\log(360/\text{beamwidth})$
		Maximum peak power density, dBm/100 kHz
		$\text{EIRP}+10\log(0.1/Y)$

*- X is the actual channel width in MHz (occupied bandwidth), Y is either

- 1) 6 MHz if prior to transition or the station is in the MBS following transition or
- 2) 5.5 MHz if the station is in the LBS and UBS following transition, and
- 3) beamwidth is the total horizontal plane beam width of the individual transmitting antenna for the station or any sector measured at the half-power points.

7.2.2 Test procedure

7.2.2.1 The EUT was set up as shown in Figure 7.2.1, energized and its proper operation was checked.

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

7.2.2.3 The average output power was measured with power meter as provided in Table 7.2.2.

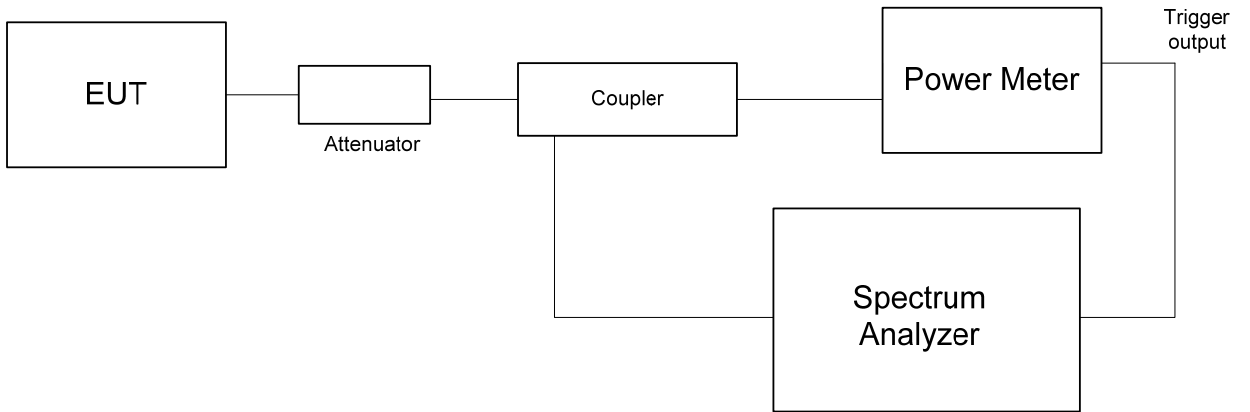
7.2.2.4 The power spectral density was measured with spectrum analyzer as provided in Table 7.2.3 and the associated plots.

7.2.2.5 The test results are provided in the tables below and associated plots.



Test specification: Section 27.50, Peak output power			
Test procedure: 47 CFR, Section 2.1046; TIA/EIA-603-E, Section 2.2.1			
Test mode: Compliance		Verdict: PASS	
Date(s): 19-May-19			
Temperature: 24 °C	Relative Humidity: 54 %	Air Pressure: 1003 hPa	Power: 120 VAC
Remarks:			

Figure 7.2.1 Peak output power test setup





Test specification: Section 27.50, Peak output power			
Test procedure: 47 CFR, Section 2.1046; TIA/EIA-603-E, Section 2.2.1			
Test mode: Compliance		Verdict: PASS	
Date(s): 19-May-19			
Temperature: 24 °C	Relative Humidity: 54 %	Air Pressure: 1003 hPa	Power: 120 VAC
Remarks:			

Table 7.2.2 Peak output power test results

DETECTOR USED: Average
DUTY CYCLE: 70%
EBW: 10 MHz

Carrier frequency, MHz	Power Meter reading RF#1, dBm	Power Meter reading RF#2, dBm	Total RF power**, dBm	Antenna gain, dBi	Total EIRP*, dBm	Limit***, dBm	Margin, dB	Verdict
Antenna Chain RF #11 / #12								
QPSK								
2501.0	31.8	31.4	34.60	12	46.60	69.36	-22.75	Pass
2624.0	31.9	32.0	34.95	12	46.97	69.36	-22.39	Pass
2685.0	31.7	32.0	34.85	12	46.85	69.55	-22.70	Pass
64QAM								
2501.0	31.9	31.5	34.75	12	46.77	69.35	-22.59	Pass
2624.0	32.0	31.9	34.95	12	46.95	69.35	-22.40	Pass
2685.0	32.0	32.0	35.00	12	47.02	69.55	-22.53	Pass
Antenna Chain RF #11S / #12S								
QPSK								
2501.0	31.2	31.4	34.20	12	46.20	69.36	-23.16	Pass
2624.0	31.5	31.7	34.50	12	46.52	69.36	-22.84	Pass
2685.0	31.8	31.5	34.80	12	46.80	69.55	-22.75	Pass
64QAM								
2501.0	31.2	31.4	34.20	12	46.22	69.35	-23.14	Pass
2624.0	31.5	31.5	34.50	12	46.50	69.35	-22.85	Pass
2685.0	31.9	31.3	34.90	12	46.92	69.55	-22.63	Pass
Antenna Chain RF #21 / #22								
QPSK								
2501.0	31.5	31.1	34.30	12	46.30	68.89	-22.58	Pass
2624.0	31.6	31.4	34.50	12	46.52	68.87	-22.35	Pass
2685.0	31.4	31.2	34.30	12	46.30	69.07	-22.77	Pass
64QAM								
2501.0	31.2	31.0	34.10	12	46.12	68.90	-22.78	Pass
2624.0	31.5	31.2	34.35	12	46.35	68.87	-22.52	Pass
2685.0	31.3	31.3	34.30	12	46.32	69.07	-22.76	Pass
Antenna Chain RF #21S / #22S								
QPSK								
2501.0	31.1	31.5	34.10	12	46.10	68.89	-22.79	Pass
2624.0	31.2	31.6	34.20	12	46.22	68.87	-22.66	Pass
2685.0	31.2	31.2	34.20	12	46.20	69.07	-22.87	Pass
64QAM								
2501.0	31.1	31.3	34.10	12	46.12	68.90	-22.78	Pass
2624.0	31.3	31.5	34.30	12	46.30	68.87	-22.57	Pass
2685.0	31.2	31.4	34.20	12	46.22	69.07	-22.86	Pass

* - EIRP total, dBm = Total RF power**, dBm + Antenna Gain, dBi

** - Total RF power , dBm = 10*log[10^(Power RF#1 / 10) + 10^(Power RF#2 / 10)]

*** - See Table 7.2.4



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Test specification: Section 27.50, Peak output power			
Test procedure: 47 CFR, Section 2.1046; TIA/EIA-603-E, Section 2.2.1			
Test mode: Compliance		Verdict: PASS	
Date(s): 19-May-19			
Temperature: 24 °C	Relative Humidity: 54 %	Air Pressure: 1003 hPa	Power: 120 VAC
Remarks:			

Table 7.2.2 Peak output power test results (continued)

DETECTOR USED: Average
CHANNEL BANDWIDTH: 20 MHz
DUTY CYCLE: 70%

Carrier frequency, MHz	Power Meter reading RF#1, dBm	Power Meter reading RF#2, dBm	Total RF power**, dBm	Antenna gain, dBi	Total EIRP*, dBm	Limit***, dBm	Margin, dB	Verdict
Antenna Chain RF #11 / #12								
QPSK								
2506.0	31.5	31.4	34.45	12	46.45	69.45	-23.00	Pass
2624.0	31.7	31.3	34.50	12	46.52	69.75	-23.23	Pass
2680.0	31.7	31.8	34.75	12	46.75	69.55	-22.79	Pass
64QAM								
2506.0	31.6	31.1	34.36	12	46.37	69.44	-23.07	Pass
2624.0	31.7	31.6	34.65	12	46.65	69.75	-23.10	Pass
2680.0	32.0	31.4	34.71	12	46.73	69.54	-22.82	Pass
Antenna Chain RF #11S / #12S								
QPSK								
2506.0	31.1	31.0	34.10	12	46.10	69.45	-23.35	Pass
2624.0	31.3	31.2	34.30	12	46.32	69.75	-23.43	Pass
2680.0	31.0	31.3	34.00	12	46.00	69.55	-23.54	Pass
64QAM								
2506.0	31.6	31.1	34.60	12	46.62	69.44	-22.83	Pass
2624.0	31.7	31.3	34.70	12	46.70	69.75	-23.05	Pass
2680.0	31.6	31.2	34.60	12	46.62	69.54	-22.93	Pass
Antenna Chain RF #21 / #22								
QPSK								
2506.0	31.2	30.9	34.05	12	46.05	69.45	-23.40	Pass
2624.0	31.3	31.0	34.15	12	46.17	69.75	-23.58	Pass
2680.0	31.4	30.8	34.11	12	46.11	69.55	-23.43	Pass
64QAM								
2506.0	31.3	30.8	34.07	12	46.07	69.44	-23.37	Pass
2624.0	31.4	31.1	34.25	12	46.25	69.75	-23.49	Pass
2680.0	31.5	31.0	34.27	12	46.27	69.54	-23.27	Pass
Antenna Chain RF #21S / #22S								
QPSK								
2506.0	31.0	31.0	34.00	12	46.00	69.45	-23.45	Pass
2624.0	31.2	31.1	34.15	12	46.17	69.75	-23.58	Pass
2680.0	31.1	31.0	34.05	12	46.05	69.55	-23.49	Pass
64QAM								
2506.0	30.9	31.0	33.95	12	45.97	69.44	-23.48	Pass
2624.0	31.0	31.3	34.15	12	46.15	69.75	-23.59	Pass
2680.0	30.8	31.2	34.00	12	46.02	69.54	-23.52	Pass

* - EIRP total, dBm = Total RF power**, dBm + Antenna Gain, dBi
 ** - Total RF power , dBm = 10*log[10^(Power RF#1 / 10) + 10^(Power RF#2 / 10)]
 *** - See Table 7.2.5

Reference numbers of test equipment used

HL 3301	HL 3302	HL 4366					
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Full description is given in Appendix A.



Test specification: Section 27.50, Peak output power			
Test procedure: 47 CFR, Section 2.1046; TIA/EIA-603-E, Section 2.2.1			
Test mode: Compliance		Verdict: PASS	
Date(s): 19-May-19			
Temperature: 24 °C	Relative Humidity: 54 %	Air Pressure: 1003 hPa	Power: 120 VAC
Remarks:			

Table 7.2.3 Power spectral density test results

DETECTOR USED: Average
RESOLUTION BANDWIDTH: 100 kHz
VIDEO BANDWIDTH: 300 kHz
CHANNEL BANDWIDTH: 10 MHz
DUTY CYCLE: 70%

Carrier frequency, MHz	SA reading*, RF #1 dBm/100kHz	SA reading*, RF #2 dBm/100kHz	Total PSD dBm/100kHz	Antenna gain, dBi	Total EIRP*, dBm	Limit***, dBm	Margin, dB	Verdict
Antenna Chain RF #11 / #12								
QPSK								
2501.0	12.55	12.56	15.56	12	29.10	48.75	-19.65	Pass
2624.0	12.95	12.58	15.77	12	29.32	48.75	-19.43	Pass
2685.0	13.25	12.4	15.85	12	29.40	49.14	-19.74	Pass
64QAM								
2501.0	12.80	12.41	15.61	12	29.16	48.75	-19.59	Pass
2624.0	13.22	12.58	15.91	12	29.46	48.75	-19.29	Pass
2685.0	13.50	12.04	15.83	12	29.38	49.13	-19.75	Pass
Antenna Chain RF #11S / #12S								
QPSK								
2501.0	12.27	12.5	15.39	12	28.94	48.75	-19.82	Pass
2624.0	12.34	11.42	14.90	12	28.45	48.75	-20.30	Pass
2685.0	12.57	11.36	15.01	12	28.56	49.14	-20.58	Pass
64QAM								
2501.0	12.08	11.51	14.80	12	28.35	48.75	-20.39	Pass
2624.0	13.39	13.07	16.23	12	29.78	48.75	-18.96	Pass
2685.0	13.78	11.92	15.95	12	29.50	49.13	-19.64	Pass
Antenna Chain RF #21 / #22								
QPSK								
2501.0	12.38	12.96	15.68	12	29.23	48.75	-19.52	Pass
2624.0	12.09	12.37	15.23	12	28.78	48.75	-19.97	Pass
2685.0	12.0	12.65	15.34	12	28.89	49.14	-20.25	Pass
64QAM								
2501.0	12.13	12.5	15.32	12	28.87	48.75	-19.88	Pass
2624.0	12.6	12.12	15.37	12	28.92	48.75	-19.83	Pass
2685.0	12.24	12.79	15.52	12	29.07	49.13	-20.06	Pass
Antenna Chain RF #21S / #22S								
QPSK								
2501.0	11.99	11.82	14.91	12	28.46	48.75	-20.30	Pass
2624.0	12.13	11.48	14.82	12	28.37	48.75	-20.38	Pass
2685.0	12.12	11.96	15.04	12	28.59	49.14	-20.55	Pass
64QAM								
2501.0	12.06	11.82	14.94	12	28.49	48.75	-20.26	Pass
2624.0	12.01	12.21	15.11	12	28.66	48.75	-20.09	Pass
2685.0	12.1	11.45	14.79	12	28.34	49.13	-20.80	Pass

* SA reading including attenuation, cable loss and DC correction factor

** - Total EIRP PSD, dBm = $10 \log_{10}(\text{SA reading Max (dBm/100kHz, RF\#1/10)} + 10^{\text{Antenna Gain, dBi}} (\text{SA reading Max (dBm/100kHz, RF\#2/10)})$ +

*** See Table 7.2.6



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Test specification: Section 27.50, Peak output power			
Test procedure: 47 CFR, Section 2.1046; TIA/EIA-603-E, Section 2.2.1			
Test mode: Compliance		Verdict: PASS	
Date(s): 19-May-19			
Temperature: 24 °C	Relative Humidity: 54 %	Air Pressure: 1003 hPa	Power: 120 VAC
Remarks:			

Table 7.2.3 Power spectral density test results (continued)

DETECTOR USED: Average
RESOLUTION BANDWIDTH: 100 kHz
VIDEO BANDWIDTH: 300 kHz
CHANNEL BANDWIDTH: 20 MHz
DUTY CYCLE: 70%

Carrier frequency, MHz	SA reading*, RF #1 dBm/100kHz	SA reading*, RF #2 dBm/100kHz	Total PSD dBm/100kHz	Antenna gain, dBi	Total EIRP*, dBm	Limit***, dBm	Margin, dB	Verdict
Antenna Chain RF #11 / #12								
QPSK								
2506.0	9.03	8.69	11.86	12	25.41	45.93	-20.52	Pass
2624.0	8.65	9.06	11.86	12	25.41	46.53	-21.12	Pass
2680.0	9.66	8.14	11.97	12	25.52	46.12	-20.61	Pass
64QAM								
2506.0	9.2	8.21	11.73	12	25.28	45.92	-20.64	Pass
2624.0	9.56	9.33	12.45	12	26.00	46.52	-20.53	Pass
2680.0	9.83	9.18	12.52	12	26.07	46.12	-20.05	Pass
Antenna Chain RF #11S / #12S								
QPSK								
2506.0	9.03	8.41	11.73	12	25.28	45.93	-20.65	Pass
2624.0	9.7	9.0	12.36	12	24.38	46.53	-22.15	Pass
2680.0	9.05	8.66	11.86	12	23.86	46.12	-22.26	Pass
64QAM								
2506.0	9.2	8.64	11.93	12	23.94	45.92	-21.98	Pass
2624.0	8.85	9.17	12.01	12	24.01	46.52	-22.51	Pass
2680.0	9.76	8.59	12.21	12	24.23	46.12	-21.89	Pass
Antenna Chain RF #21 / #22								
QPSK								
2506.0	8.25	8.43	11.34	12	24.89	45.46	-20.57	Pass
2624.0	8.14	8.55	11.35	12	24.90	46.06	-21.16	Pass
2680.0	8.49	8.71	11.60	12	25.15	45.66	-20.51	Pass
64QAM								
2506.0	8.35	8.65	11.50	12	25.05	45.47	-20.42	Pass
2624.0	8.43	8.58	11.51	12	25.05	46.06	-21.00	Pass
2680.0	8.26	8.62	11.44	12	24.99	45.66	-20.67	Pass
Antenna Chain RF #21S / #22S								
QPSK								
2506.0	8.22	8.38	11.30	12	24.85	45.46	-20.61	Pass
2624.0	8.34	8.2	11.27	12	23.29	46.06	-22.78	Pass
2680.0	8.34	8.33	11.34	12	23.34	45.66	-22.33	Pass
64QAM								
2506.0	8.15	8.46	11.31	12	23.32	45.47	-22.15	Pass
2624.0	8.28	8.05	11.17	12	23.17	46.06	-22.89	Pass
2680.0	8.36	8.36	11.36	12	23.38	45.66	-22.29	Pass

* SA reading including attenuation, cable loss and DC correction factor

** - Total EIRP PSD, dBm = $10 \log[10^{SA \text{ reading Max (dBm/100kHz, RF\#1/10)}} + 10^{SA \text{ reading Max (dBm/100kHz, RF\#2/10)}}] + \text{Antenna Gain, dBi}$

*** See Table 7.2.7

Reference numbers of test equipment used

HL 3301	HL 3302	HL 4366	HL 5376	HL 5409			
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Full description is given in Appendix A.



Test specification: Section 27.50, Peak output power			
Test procedure: 47 CFR, Section 2.1046; TIA/EIA-603-E, Section 2.2.1			
Test mode: Compliance		Verdict: PASS	
Date(s): 19-May-19			
Temperature: 24 °C	Relative Humidity: 54 %	Air Pressure: 1003 hPa	Power: 120 VAC
Remarks:			

Table 7.2.4 Post - transition frequency channels assignment

Channel	OBW, MHz	Peak power limit with antenna 12.0 dBi, 65° beamwidth, dBm	Power limit, dBm
10 MHz QPSK			
2501.0 MHz BRS1+EBS A1	8.9789	$63+10\log(\text{OBW}/11.5)+10\log(360/\text{beamwidth})$	69.36
2624.0 MHz BRS 2A+ BRS/EBS E1	8.9717	$63+10\log(\text{OBW}/11.5)+10\log(360/\text{beamwidth})$	69.36
2685.0 MHz EBS G2+G3	8.9758	$63+10\log(\text{OBW}/11.0)+10\log(360/\text{beamwidth})$	69.55
10 MHz 64QAM			
2501.0 MHz BRS1+EBS A1	8.9687	$63+10\log(\text{OBW}/11.5)+10\log(360/\text{beamwidth})$	69.35
2624.0 MHz BRS 2A+ BRS/EBS E1	8.9667	$63+10\log(\text{OBW}/11.5)+10\log(360/\text{beamwidth})$	69.35
2685.0 MHz EBS G2+G3	8.9712	$63+10\log(\text{OBW}/11.0)+10\log(360/\text{beamwidth})$	69.55

Table 7.2.5 Post - transition frequency channels assignment

Channel	OBW, MHz	Peak power limit with antenna 12.0 dBi, 65° beamwidth, dBm	Power limit, dBm
20 MHz QPSK			
2506.0 MHz BRS1+EBS A1+A2+A3	17.939	$63+10\log(\text{OBW}/22.5)+10\log(360/\text{beamwidth})$	69.45
2624.0 MHz BRS KH1+KH2+KH3+KG1KG2+KG3+ KF1+KF2+KF3+KE1+KE2+KE3 + BRS 2A+ BRS/EBS E1+E2	17.929	$63+10\log(\text{OBW}/21.0)+10\log(360/\text{beamwidth})$	69.75
2680.0 MHz EBS H3+G1+G2+G3	17.929	$63+10\log(\text{OBW}/22.0)+10\log(360/\text{beamwidth})$	69.55
20 MHz 64QAM			
2506.0 MHz BRS1+EBS A1+A2+A3	17.911	$63+10\log(\text{OBW}/22.5)+10\log(360/\text{beamwidth})$	69.44
2624.0 MHz BRS KH1+KH2+KH3+KG1KG2+KG3+ KF1+KF2+KF3+KE1+KE2+KE3 + BRS 2A+ BRS/EBS E1+E2	17.924	$63+10\log(\text{OBW}/24.0)+10\log(360/\text{beamwidth})$	69.75
2680.0 MHz EBS H3+G1+G2+G3	17.923	$63+10\log(\text{OBW}/22.0)+10\log(360/\text{beamwidth})$	69.54



Test specification: Section 27.50, Peak output power			
Test procedure: 47 CFR, Section 2.1046; TIA/EIA-603-E, Section 2.2.1			
Test mode: Compliance		Verdict: PASS	
Date(s): 19-May-19			
Temperature: 24 °C	Relative Humidity: 54 %	Air Pressure: 1003 hPa	Power: 120 VAC
Remarks:			

Table 7.2.6 Peak power density limits

Channel	Channel BW, MHz	Peak power density, dBm/100kHz	
10 MHz QPSK			
2501.0 MHz BRS1+EBS A1	11.5	EIRP+10log(0.1/11.5)	48.75
2624.0 MHz BRS 2A+ BRS/EBS E1	11.5	EIRP+10log(0.1/11.5)	48.75
2685.0 MHz EBS G2+G3	11.0	EIRP+10log(0.1/11.0)	48.14
10 MHz 64 QAM			
2501.0 MHz BRS1+EBS A1	11.5	EIRP+10log(0.1/11.5)	48.75
2624.0 MHz BRS 2A+ BRS/EBS E1	11.5	EIRP+10log(0.1/11.5)	48.75
2685.0 MHz EBS G2+G3	11.0	EIRP+10log(0.1/11.0)	49.13

Table 7.2.7 Peak power density limits

Channel	Channel BW, MHz	Peak power density, dBm/100kHz	
20 MHz QPSK			
2506.0 MHz BRS1+EBS A1+A2+A3	22.5	EIRP+10log(0.1/22.5)	45.93
2624.0 MHz BRS KH1+KH2+KH3+KG1KG2+KG3+ KF1+KF2+KF3+KE1+KE2+KE3 + BRS 2A+ BRS/EBS E1+E2	21.0	EIRP+10log(0.1/21.0)	46.53
2680.0 MHz EBS H3+G1+G2+G3	22.0	EIRP+10log(0.1/22.0)	46.12
20 MHz 64 QAM			
2506.0 MHz BRS1+EBS A1+A2+A3	22.5	EIRP+10log(0.1/22.5)	45.92
2624.0 MHz BRS KH1+KH2+KH3+KG1KG2+KG3+ KF1+KF2+KF3+KE1+KE2+KE3 + BRS 2A+ BRS/EBS E1+E2	21.0	EIRP+10log(0.1/21.0)	46.52
2680.0 MHz EBS H3+G1+G2+G3	22.0	EIRP+10log(0.1/22.0)	46.12



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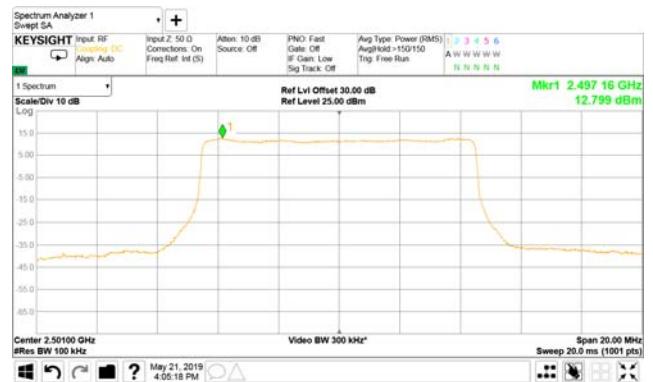
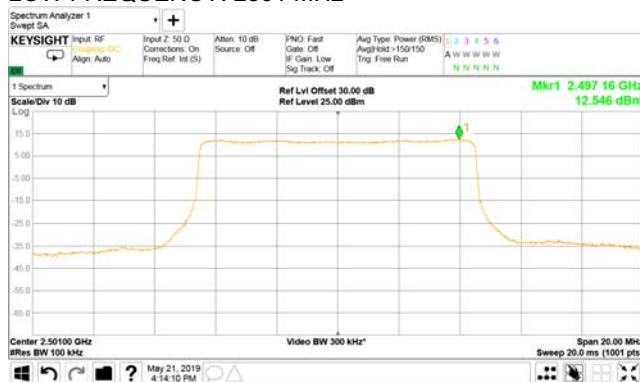
Test specification: Section 27.50, Peak output power			
Test procedure: 47 CFR, Section 2.1046; TIA/EIA-603-E, Section 2.2.1			
Test mode: Compliance		Verdict: PASS	
Date(s): 19-May-19			
Temperature: 24 °C	Relative Humidity: 54 %	Air Pressure: 1003 hPa	Power: 120 VAC
Remarks:			

Plot 7.2.1 Peak output power test results at antenna chain RF # 11

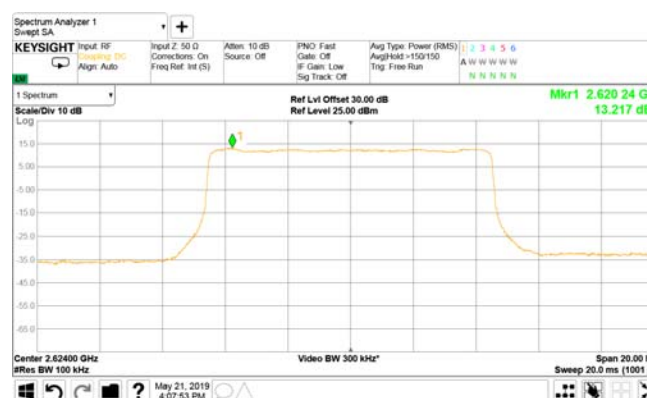
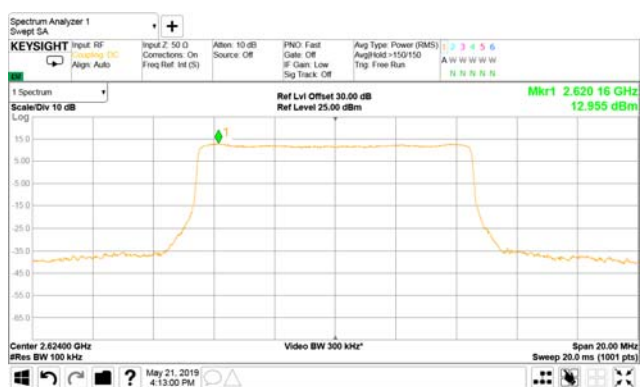
CHANNEL BANDWIDTH:
NUMBER OF ANTENNA:
MODULATION: QPSK

10 MHz
1
MODULATION: 64 QAM

LOW FREQUENCY: 2501 MHz



MID FREQUENCY: 2624 MHz





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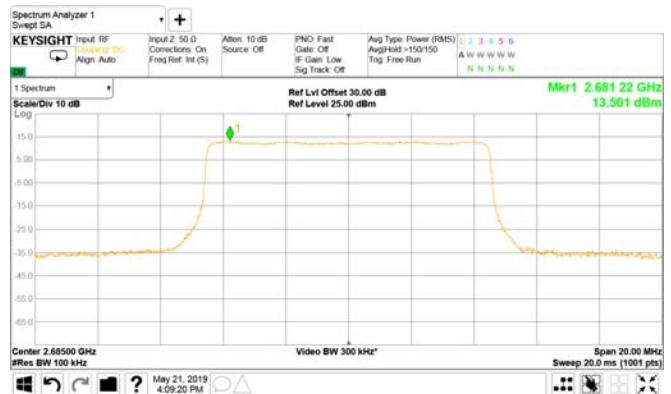
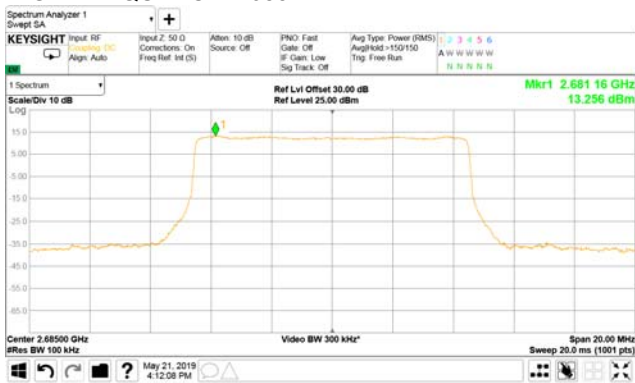
Test specification: Section 27.50, Peak output power			
Test procedure: 47 CFR, Section 2.1046; TIA/EIA-603-E, Section 2.2.1			
Test mode: Compliance		Verdict: PASS	
Date(s): 19-May-19			
Temperature: 24 °C	Relative Humidity: 54 %	Air Pressure: 1003 hPa	Power: 120 VAC
Remarks:			

Plot 7.2.2 Peak output power test results at antenna chain RF # 11

CHANNEL BANDWIDTH:
NUMBER OF ANTENNA:
MODULATION: QPSK

10 MHz
1
MODULATION: 64 QAM

HIGH FREQUENCY: 2685 MHz





HERMON LABORATORIES

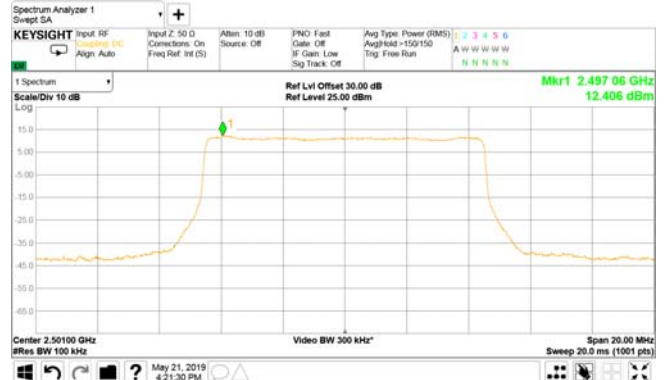
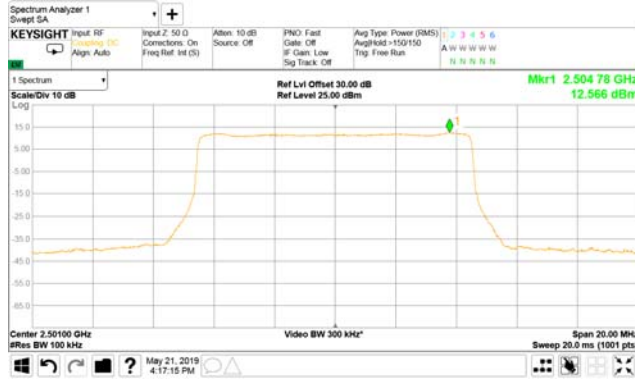
Test specification: Section 27.50, Peak output power			
Test procedure: 47 CFR, Section 2.1046; TIA/EIA-603-E, Section 2.2.1			
Test mode: Compliance		Verdict:	PASS
Date(s): 19-May-19			
Temperature: 24 °C	Relative Humidity: 54 %	Air Pressure: 1003 hPa	Power: 120 VAC
Remarks:			

Plot 7.2.3 Peak output power test results at antenna chain RF # 12

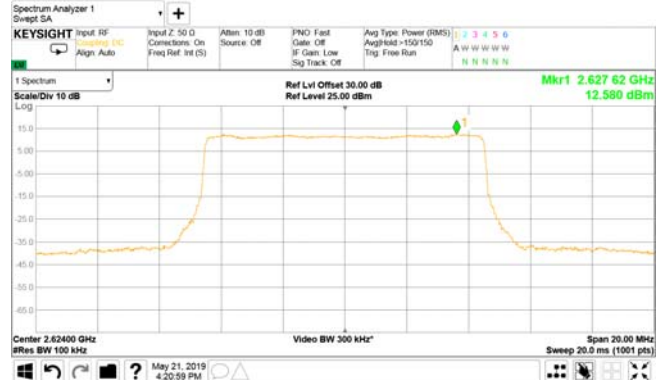
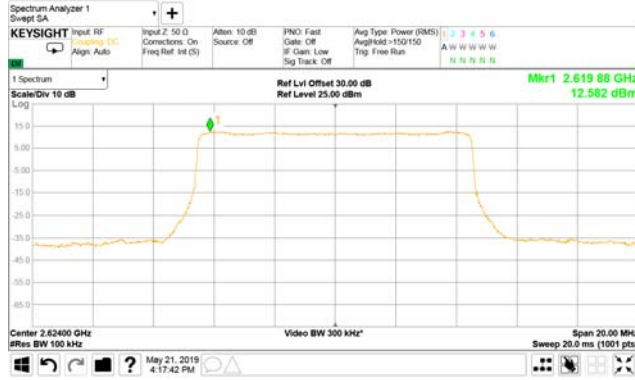
CHANNEL BANDWIDTH:
NUMBER OF ANTENNA:
MODULATION: QPSK

10 MHz
3
MODULATION: 64 QAM

LOW FREQUENCY: 2501 MHz



MID FREQUENCY: 2624 MHz





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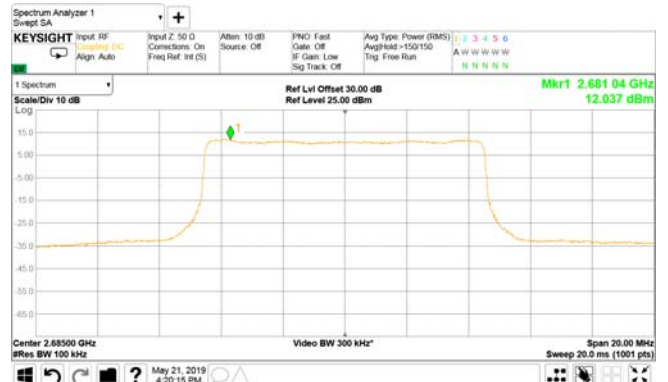
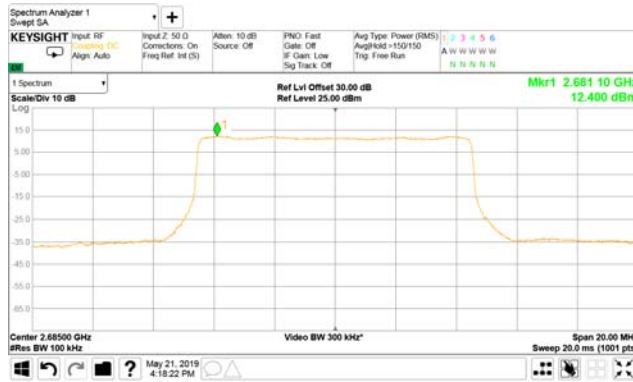
Test specification: Section 27.50, Peak output power			
Test procedure: 47 CFR, Section 2.1046; TIA/EIA-603-E, Section 2.2.1			
Test mode: Compliance		Verdict: PASS	
Date(s): 19-May-19			
Temperature: 24 °C	Relative Humidity: 54 %	Air Pressure: 1003 hPa	Power: 120 VAC
Remarks:			

Plot 7.2.4 Peak output power test results at antenna chain RF # 12

CHANNEL BANDWIDTH:
NUMBER OF ANTENNA:
MODULATION: QPSK

10 MHz
3
MODULATION: 64 QAM

HIGH FREQUENCY: 2685 MHz





HERMON LABORATORIES

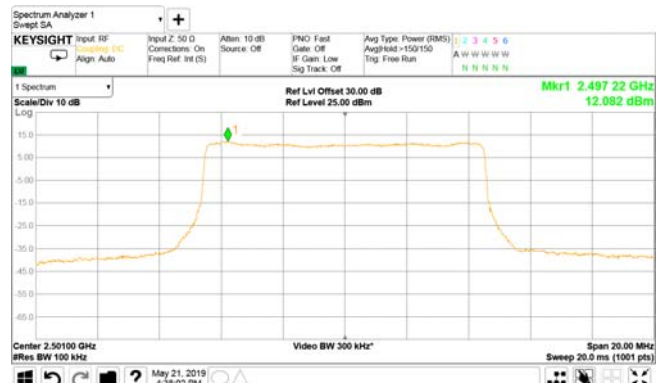
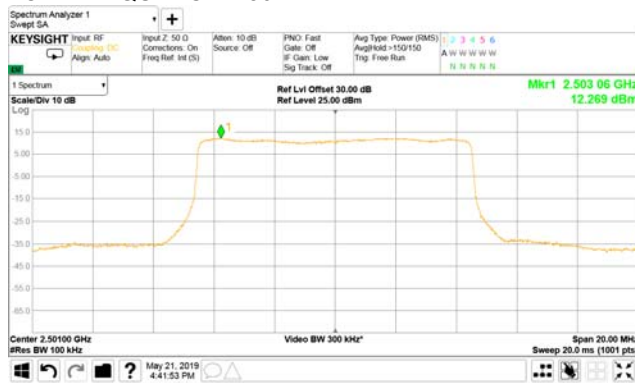
Test specification: Section 27.50, Peak output power			
Test procedure: 47 CFR, Section 2.1046; TIA/EIA-603-E, Section 2.2.1			
Test mode: Compliance		Verdict:	PASS
Date(s): 19-May-19			
Temperature: 24 °C	Relative Humidity: 54 %	Air Pressure: 1003 hPa	Power: 120 VAC
Remarks:			

Plot 7.2.5 Peak output power test results at antenna chain RF # 11S

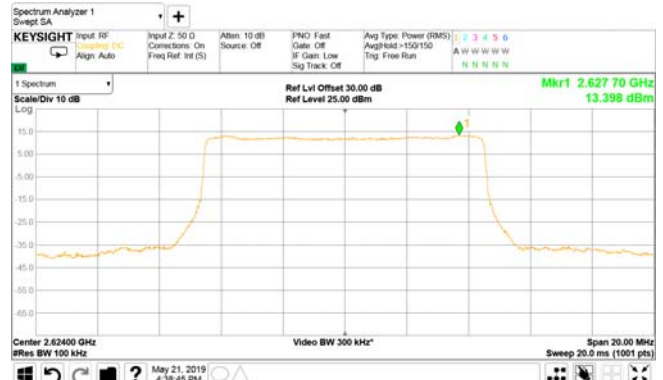
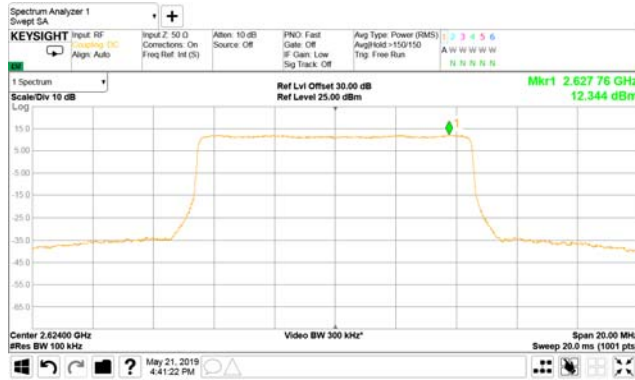
CHANNEL BANDWIDTH:
NUMBER OF ANTENNA:
Modulation: QPSK

10 MHz
2
Modulation: 64 QAM

LOW FREQUENCY: 2501 MHz



MID FREQUENCY: 2624 MHz





HERMON LABORATORIES

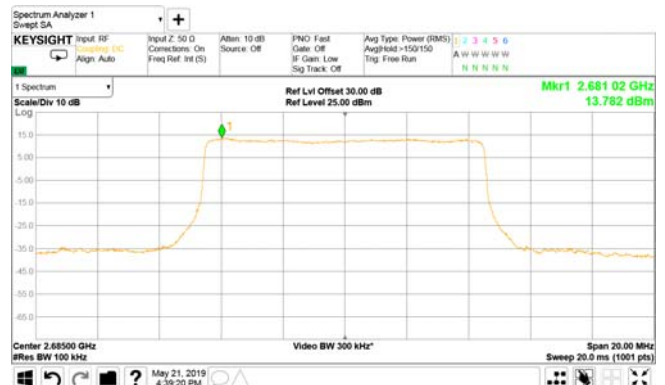
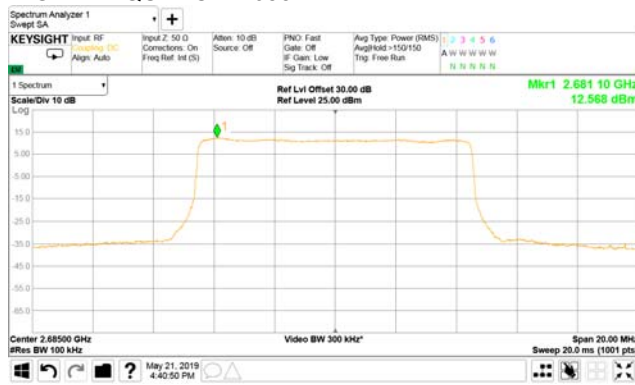
Test specification: Section 27.50, Peak output power			
Test procedure: 47 CFR, Section 2.1046; TIA/EIA-603-E, Section 2.2.1			
Test mode: Compliance		Verdict: PASS	
Date(s): 19-May-19			
Temperature: 24 °C	Relative Humidity: 54 %	Air Pressure: 1003 hPa	Power: 120 VAC
Remarks:			

Plot 7.2.6 Peak output power test results at antenna chain RF # 11S

CHANNEL BANDWIDTH:
NUMBER OF ANTENNA:
Modulation: QPSK

10 MHz
2
Modulation: 64 QAM

HIGH FREQUENCY: 2685 MHz





HERMON LABORATORIES

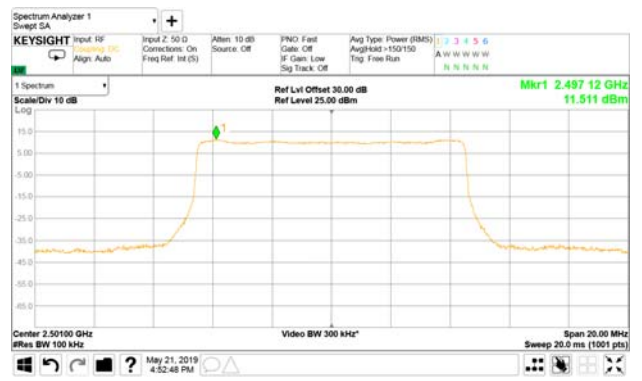
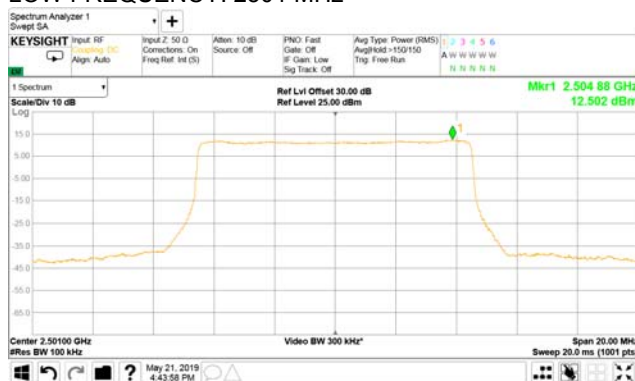
Test specification: Section 27.50, Peak output power			
Test procedure: 47 CFR, Section 2.1046; TIA/EIA-603-E, Section 2.2.1			
Test mode: Compliance		Verdict:	PASS
Date(s): 19-May-19			
Temperature: 24 °C	Relative Humidity: 54 %	Air Pressure: 1003 hPa	Power: 120 VAC
Remarks:			

Plot 7.2.7 Peak output power test results at antenna chain, RF # 12S

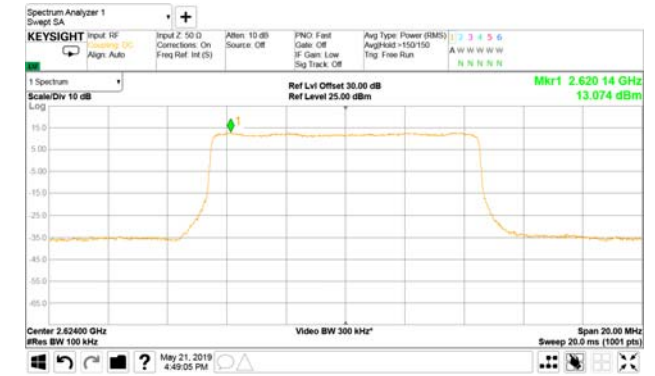
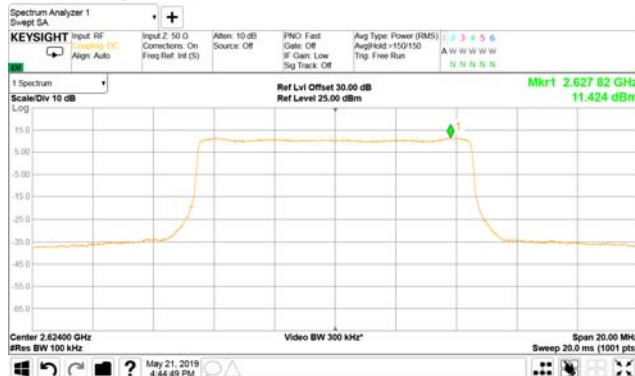
CHANNEL BANDWIDTH:
NUMBER OF ANTENNA:
Modulation: QPSK

10 MHz
4
Modulation: 64 QAM

LOW FREQUENCY: 2501 MHz



MID FREQUENCY: 2624 MHz





HERMON LABORATORIES

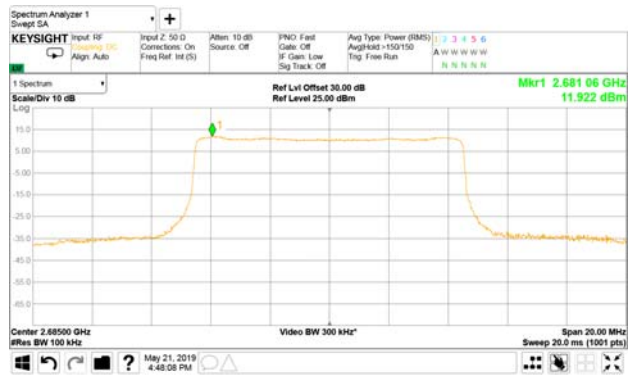
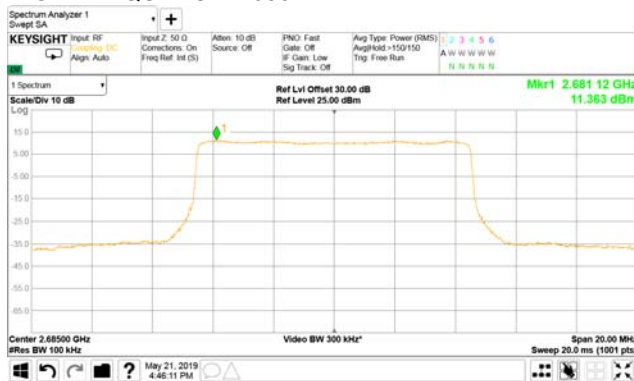
Test specification: Section 27.50, Peak output power			
Test procedure: 47 CFR, Section 2.1046; TIA/EIA-603-E, Section 2.2.1			
Test mode: Compliance		Verdict: PASS	
Date(s): 19-May-19			
Temperature: 24 °C	Relative Humidity: 54 %	Air Pressure: 1003 hPa	Power: 120 VAC
Remarks:			

Plot 7.2.8 Peak output power test results at antenna chain, RF # 12S

CHANNEL BANDWIDTH:
NUMBER OF ANTENNA:
Modulation: QPSK

10 MHz
4
Modulation: 64 QAM

HIGH FREQUENCY: 2685 MHz





HERMON LABORATORIES

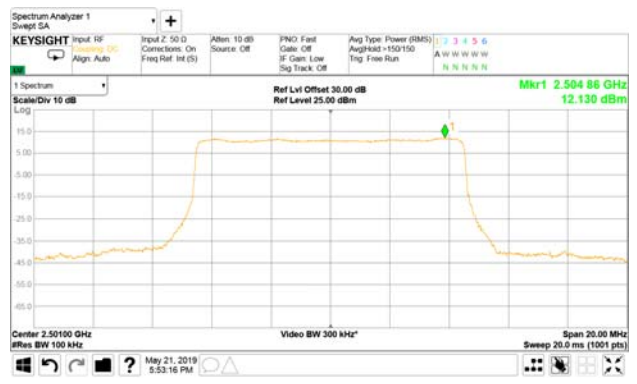
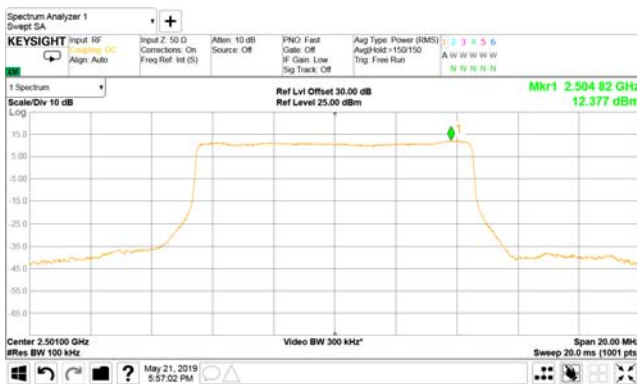
Test specification: Section 27.50, Peak output power			
Test procedure: 47 CFR, Section 2.1046; TIA/EIA-603-E, Section 2.2.1			
Test mode: Compliance		Verdict:	PASS
Date(s): 19-May-19			
Temperature: 24 °C	Relative Humidity: 54 %	Air Pressure: 1003 hPa	Power: 120 VAC
Remarks:			

Plot 7.2.9 Peak output power test results at antenna chain RF # 21

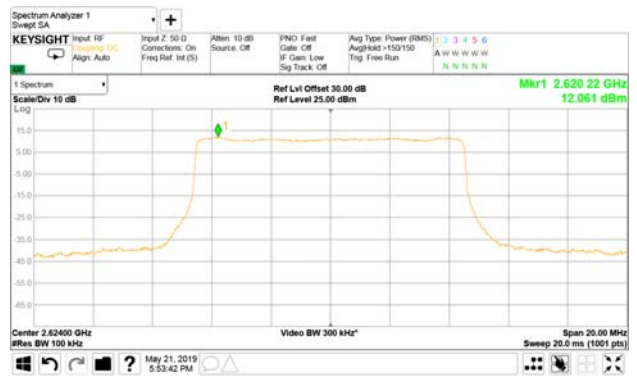
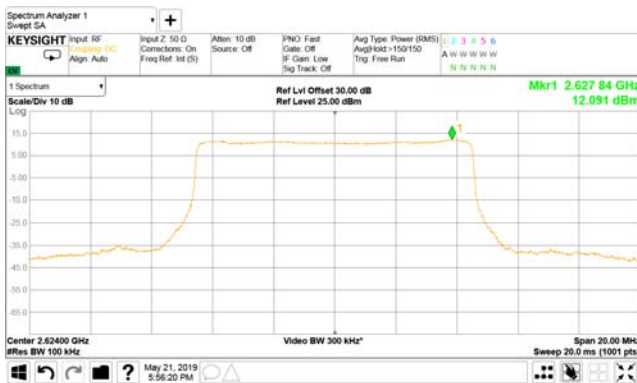
CHANNEL BANDWIDTH:
NUMBER OF ANTENNA:
MODULATION: QPSK

10 MHz
5
MODULATION: 64 QAM

LOW FREQUENCY: 2501 MHz



MID FREQUENCY: 2624 MHz





HERMON LABORATORIES

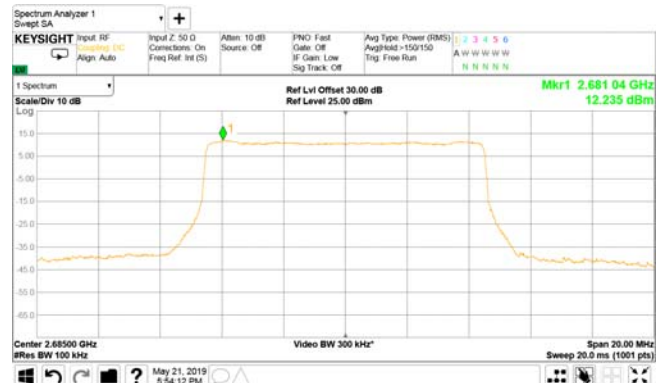
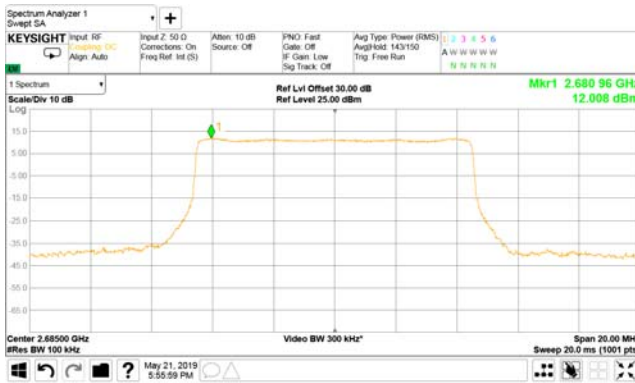
Test specification: Section 27.50, Peak output power			
Test procedure: 47 CFR, Section 2.1046; TIA/EIA-603-E, Section 2.2.1			
Test mode: Compliance		Verdict: PASS	
Date(s): 19-May-19			
Temperature: 24 °C	Relative Humidity: 54 %	Air Pressure: 1003 hPa	Power: 120 VAC
Remarks:			

Plot 7.2.10 Peak output power test results at antenna chain RF # 21

CHANNEL BANDWIDTH:
NUMBER OF ANTENNA:
MODULATION: QPSK

10 MHz
5
MODULATION: 64 QAM

HIGH FREQUENCY: 2685 MHz





HERMON LABORATORIES

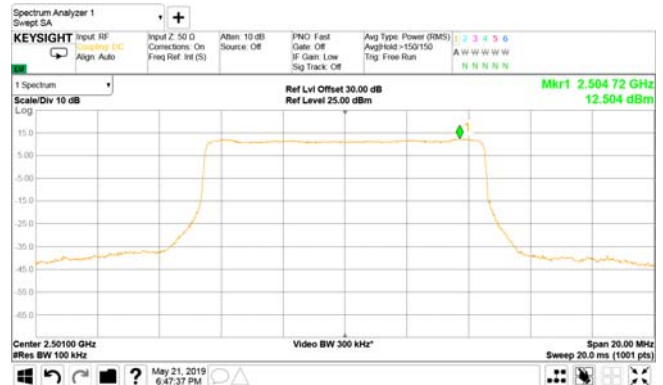
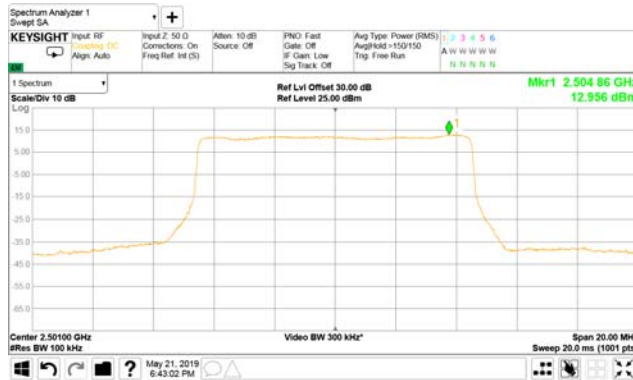
Test specification: Section 27.50, Peak output power			
Test procedure: 47 CFR, Section 2.1046; TIA/EIA-603-E, Section 2.2.1			
Test mode: Compliance		Verdict: PASS	
Date(s): 19-May-19			
Temperature: 24 °C	Relative Humidity: 54 %	Air Pressure: 1003 hPa	Power: 120 VAC
Remarks:			

Plot 7.2.11 Peak output power test results at antenna chain RF # 22

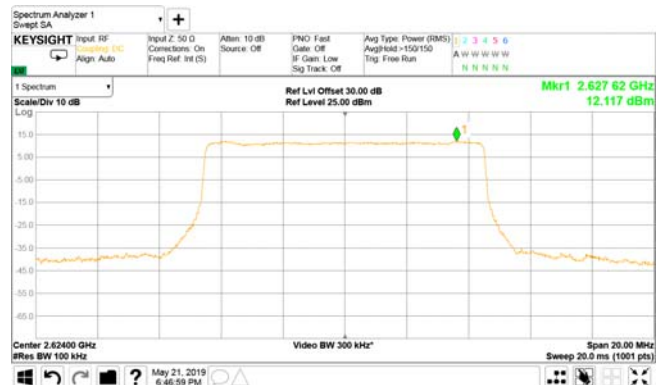
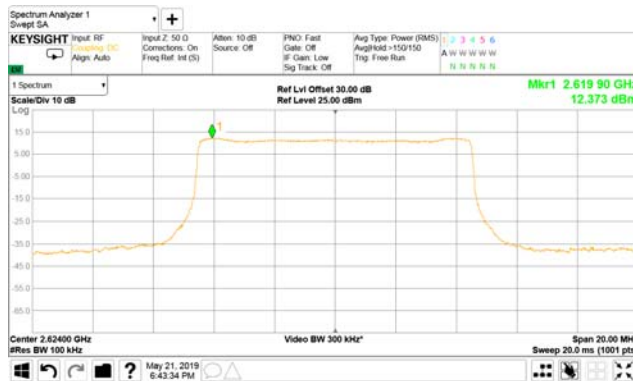
CHANNEL BANDWIDTH:
NUMBER OF ANTENNA:
MODULATION: QPSK

10 MHz
7
MODULATION: 64 QAM

LOW FREQUENCY: 2501 MHz



MID FREQUENCY: 2624 MHz





HERMON LABORATORIES

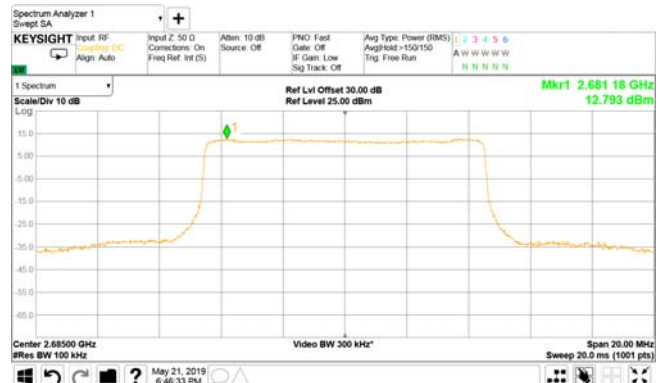
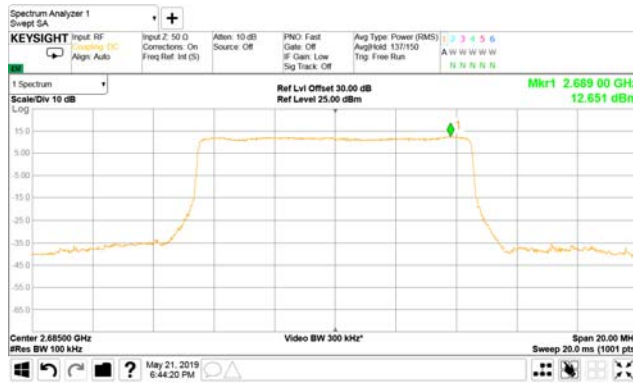
Test specification: Section 27.50, Peak output power			
Test procedure: 47 CFR, Section 2.1046; TIA/EIA-603-E, Section 2.2.1			
Test mode: Compliance		Verdict: PASS	
Date(s): 19-May-19			
Temperature: 24 °C	Relative Humidity: 54 %	Air Pressure: 1003 hPa	Power: 120 VAC
Remarks:			

Plot 7.2.12 Peak output power test results at antenna chain RF # 22

CHANNEL BANDWIDTH:
NUMBER OF ANTENNA:
MODULATION: QPSK

10 MHz
7
MODULATION: 64 QAM

HIGH FREQUENCY: 2685 MHz





HERMON LABORATORIES

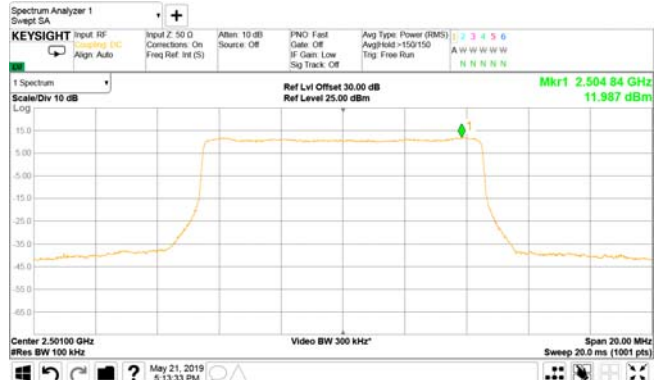
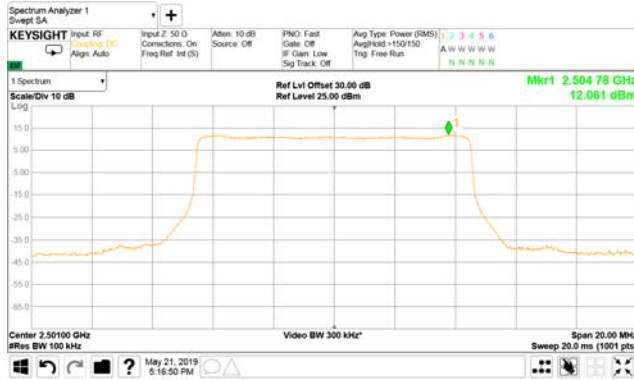
Test specification: Section 27.50, Peak output power			
Test procedure: 47 CFR, Section 2.1046; TIA/EIA-603-E, Section 2.2.1			
Test mode: Compliance		Verdict:	PASS
Date(s): 19-May-19			
Temperature: 24 °C	Relative Humidity: 54 %	Air Pressure: 1003 hPa	Power: 120 VAC
Remarks:			

Plot 7.2.13 Peak output power test results at antenna chain RF # 21S

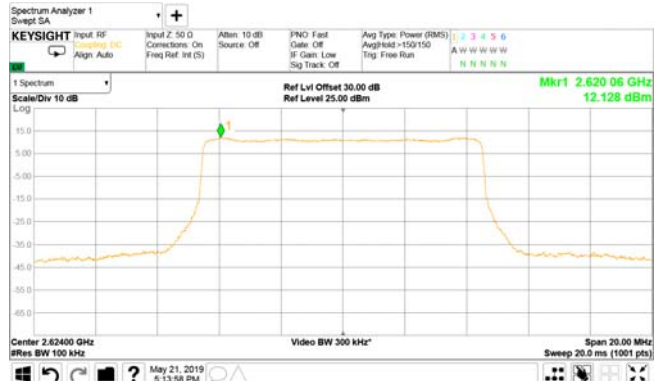
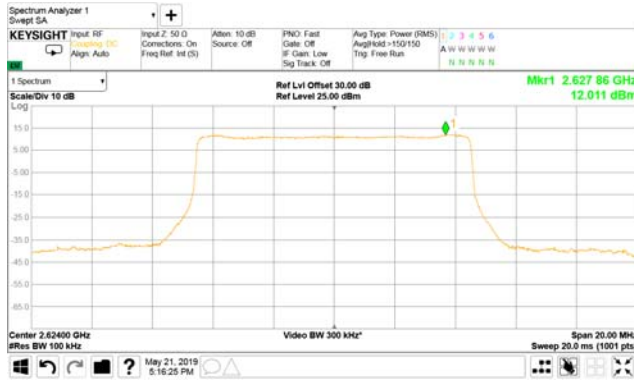
CHANNEL BANDWIDTH:
NUMBER OF ANTENNA:
Modulation: QPSK

10 MHz
6
Modulation: 64 QAM

LOW FREQUENCY: 2501 MHz



MID FREQUENCY: 2624 MHz





HERMON LABORATORIES

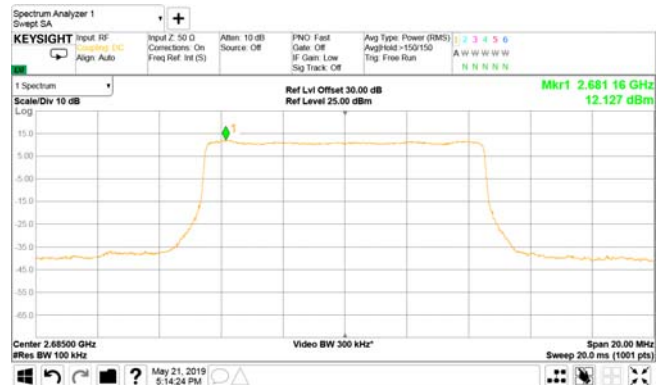
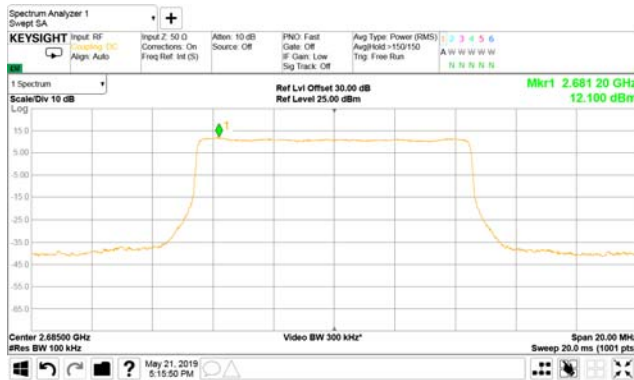
Test specification: Section 27.50, Peak output power			
Test procedure: 47 CFR, Section 2.1046; TIA/EIA-603-E, Section 2.2.1			
Test mode: Compliance		Verdict: PASS	
Date(s): 19-May-19			
Temperature: 24 °C	Relative Humidity: 54 %	Air Pressure: 1003 hPa	Power: 120 VAC
Remarks:			

Plot 7.2.14 Peak output power test results at antenna chain RF # 21S

CHANNEL BANDWIDTH:
NUMBER OF ANTENNA:
Modulation: QPSK

10 MHz
6
Modulation: 64 QAM

HIGH FREQUENCY: 2685 MHz





HERMON LABORATORIES

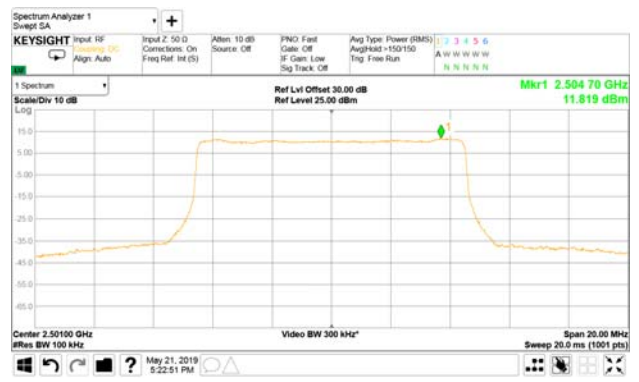
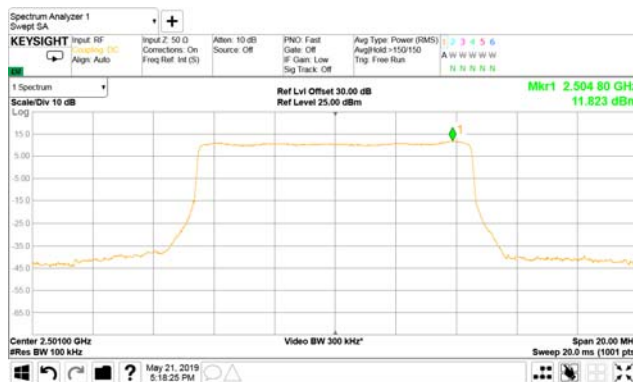
Test specification: Section 27.50, Peak output power			
Test procedure: 47 CFR, Section 2.1046; TIA/EIA-603-E, Section 2.2.1			
Test mode: Compliance		Verdict: PASS	
Date(s): 19-May-19			
Temperature: 24 °C	Relative Humidity: 54 %	Air Pressure: 1003 hPa	Power: 120 VAC
Remarks:			

Plot 7.2.15 Peak output power test results at antenna chain, RF # 22S

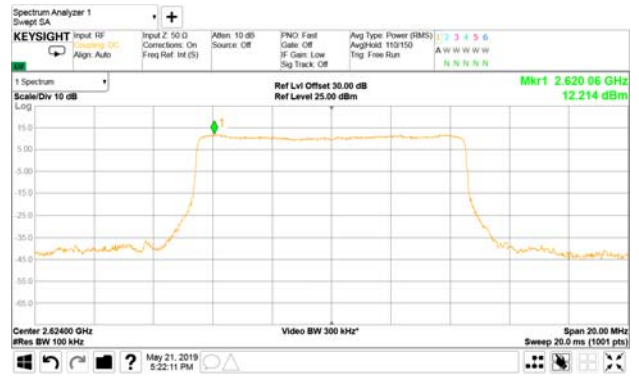
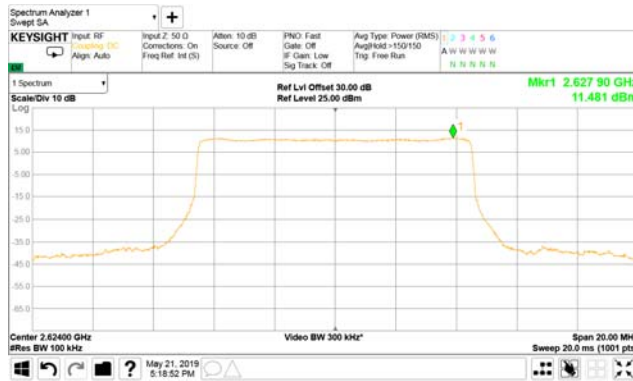
CHANNEL BANDWIDTH:
NUMBER OF ANTENNA:
Modulation: QPSK

10 MHz
8
Modulation: 64 QAM

LOW FREQUENCY: 2501 MHz



MID FREQUENCY: 2624 MHz





HERMON LABORATORIES

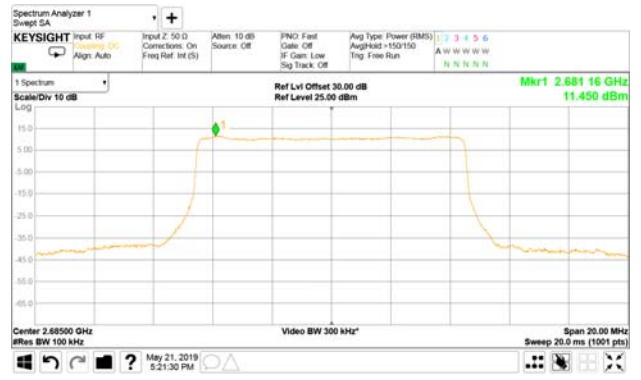
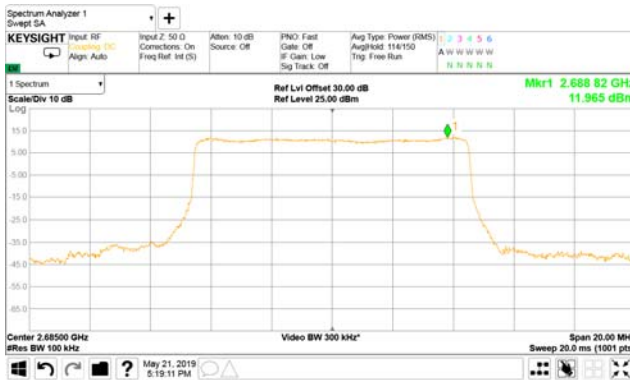
Test specification: Section 27.50, Peak output power			
Test procedure: 47 CFR, Section 2.1046; TIA/EIA-603-E, Section 2.2.1			
Test mode: Compliance		Verdict: PASS	
Date(s): 19-May-19			
Temperature: 24 °C	Relative Humidity: 54 %	Air Pressure: 1003 hPa	Power: 120 VAC
Remarks:			

Plot 7.2.16 Peak output power test results at antenna chain, RF # 22S

CHANNEL BANDWIDTH:
NUMBER OF ANTENNA:
Modulation: QPSK

10 MHz
8
Modulation: 64 QAM

HIGH FREQUENCY: 2685 MHz





HERMON LABORATORIES

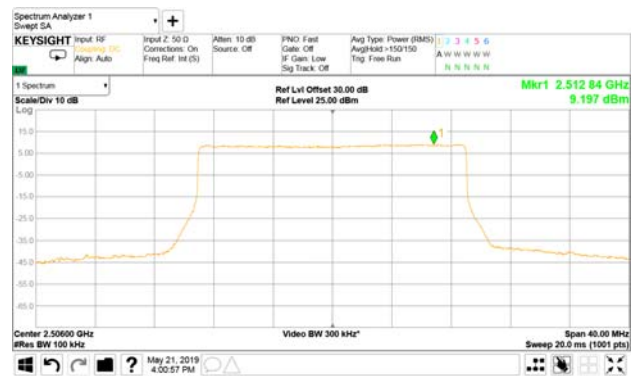
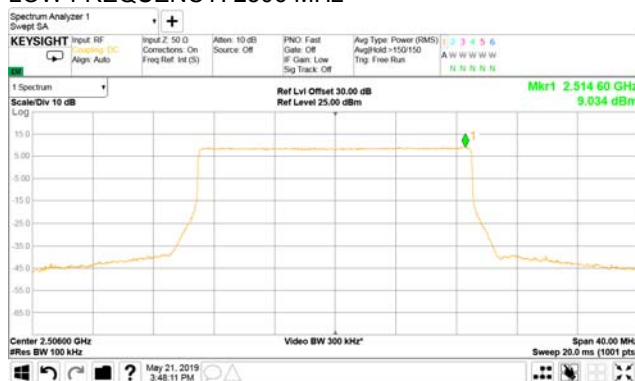
Test specification: Section 27.50, Peak output power			
Test procedure: 47 CFR, Section 2.1046; TIA/EIA-603-E, Section 2.2.1			
Test mode: Compliance		Verdict:	PASS
Date(s): 19-May-19			
Temperature: 24 °C	Relative Humidity: 54 %	Air Pressure: 1003 hPa	Power: 120 VAC
Remarks:			

Plot 7.2.17 Peak output power test results at antenna chain RF # 11

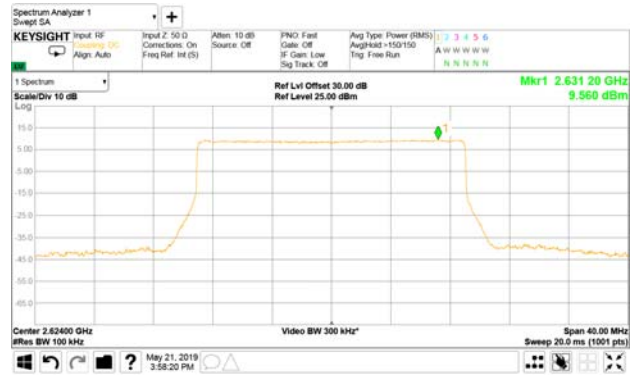
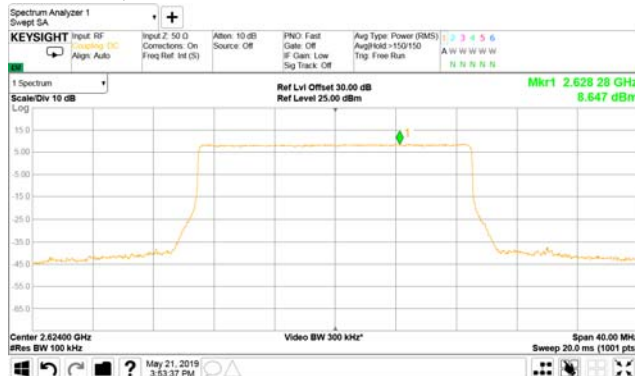
CHANNEL BANDWIDTH:
NUMBER OF ANTENNA:
Modulation: QPSK

20 MHz
1
Modulation: 64 QAM

LOW FREQUENCY: 2506 MHz



MID FREQUENCY: 2624 MHz





HERMON LABORATORIES

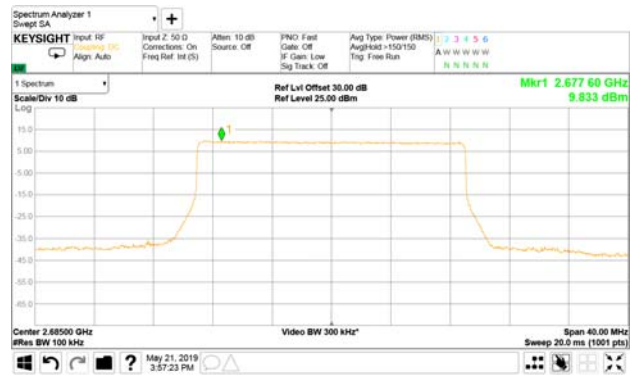
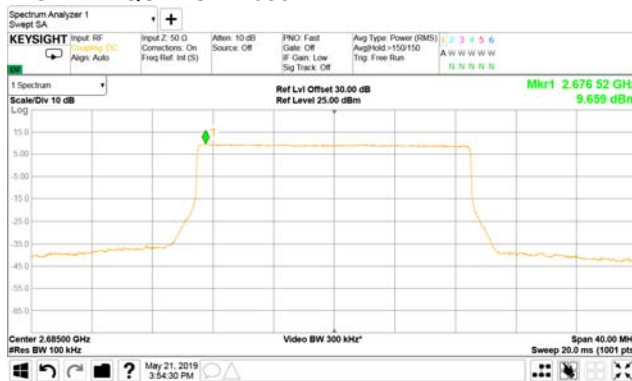
Test specification: Section 27.50, Peak output power			
Test procedure: 47 CFR, Section 2.1046; TIA/EIA-603-E, Section 2.2.1			
Test mode: Compliance		Verdict: PASS	
Date(s): 19-May-19			
Temperature: 24 °C	Relative Humidity: 54 %	Air Pressure: 1003 hPa	Power: 120 VAC
Remarks:			

Plot 7.2.18 Peak output power test results at antenna chain, RF # 11

CHANNEL BANDWIDTH:
NUMBER OF ANTENNA:
Modulation: QPSK

20 MHz
1
Modulation: 64 QAM

HIGH FREQUENCY: 2685 MHz





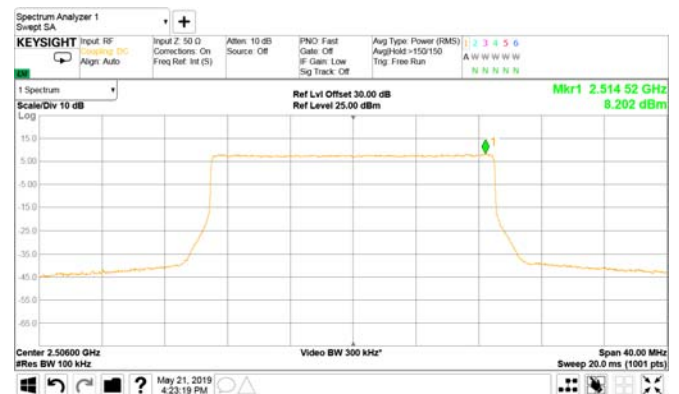
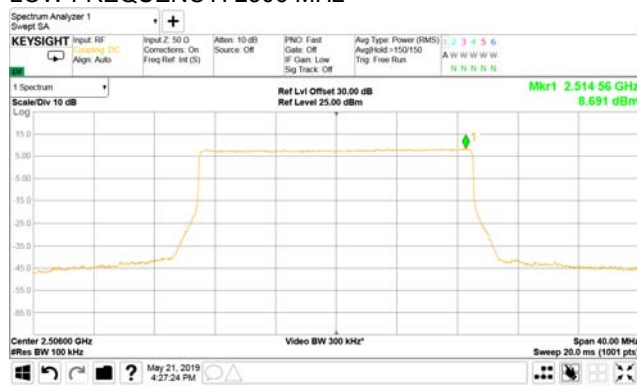
HERMON LABORATORIES

Test specification: Section 27.50, Peak output power			
Test procedure: 47 CFR, Section 2.1046; TIA/EIA-603-E, Section 2.2.1			
Test mode: Compliance		Verdict: PASS	
Date(s): 19-May-19			
Temperature: 24 °C	Relative Humidity: 54 %	Air Pressure: 1003 hPa	Power: 120 VAC
Remarks:			

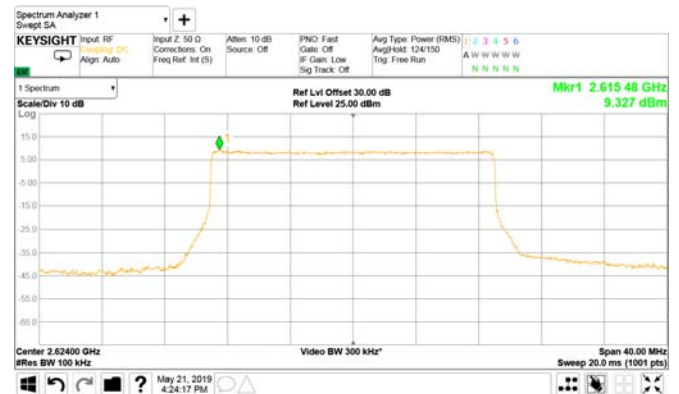
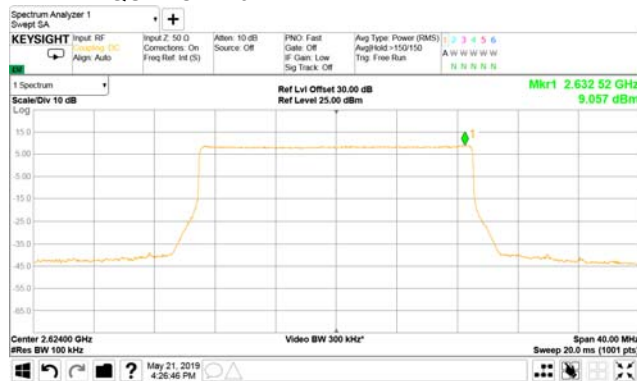
Plot 7.2.19 Peak output power test results at antenna chain RF # 12

CHANNEL BANDWIDTH:
NUMBER OF ANTENNA:
Modulation: QPSK
LOW FREQUENCY: 2506 MHz

20 MHz
3
Modulation: 64 QAM



MID FREQUENCY: 2624 MHz





HERMON LABORATORIES

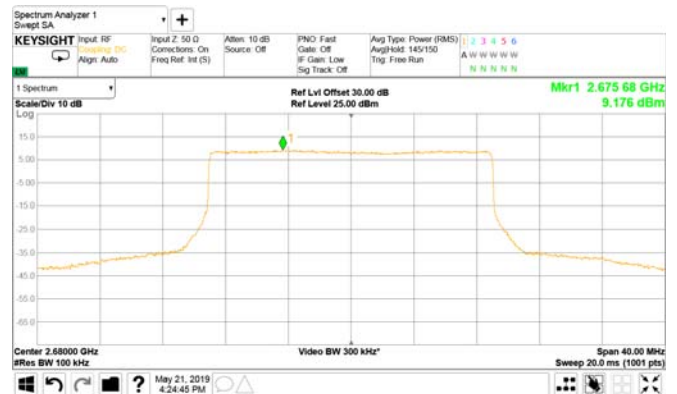
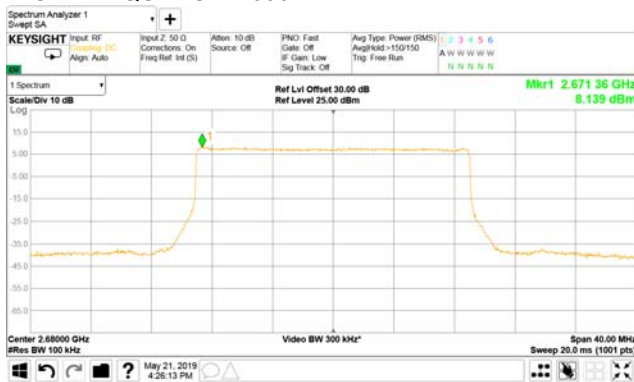
Test specification: Section 27.50, Peak output power			
Test procedure: 47 CFR, Section 2.1046; TIA/EIA-603-E, Section 2.2.1			
Test mode: Compliance		Verdict: PASS	
Date(s): 19-May-19			
Temperature: 24 °C	Relative Humidity: 54 %	Air Pressure: 1003 hPa	Power: 120 VAC
Remarks:			

Plot 7.2.20 Peak output power test results at antenna chain RF # 12

CHANNEL BANDWIDTH:
NUMBER OF ANTENNA:
Modulation: QPSK

20 MHz
3
Modulation: 64 QAM

HIGH FREQUENCY: 2680 MHz





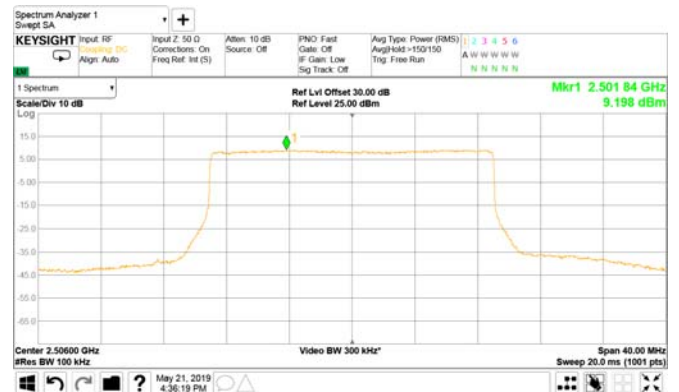
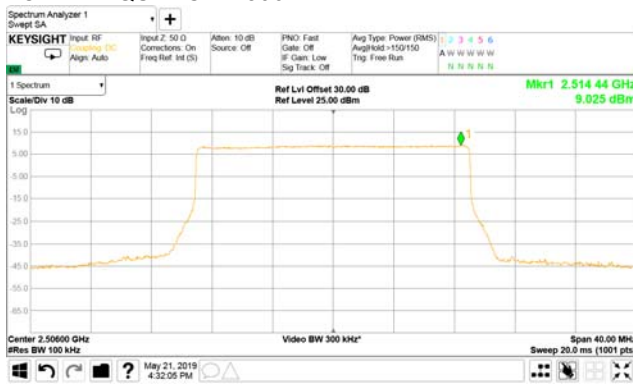
HERMON LABORATORIES

Test specification: Section 27.50, Peak output power			
Test procedure: 47 CFR, Section 2.1046; TIA/EIA-603-E, Section 2.2.1			
Test mode: Compliance		Verdict: PASS	
Date(s): 19-May-19			
Temperature: 24 °C	Relative Humidity: 54 %	Air Pressure: 1003 hPa	Power: 120 VAC
Remarks:			

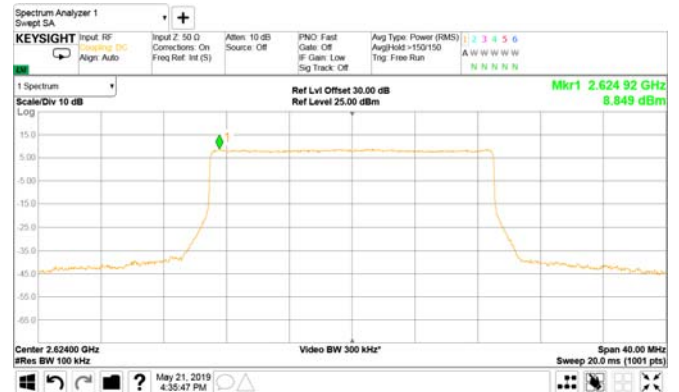
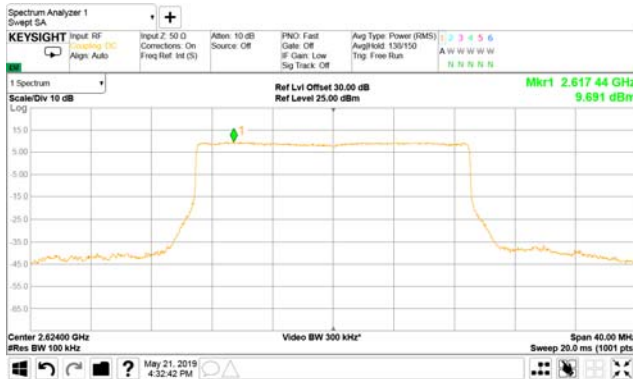
Plot 7.2.21 Peak output power test results at antenna chain RF # 11S

CHANNEL BANDWIDTH:
NUMBER OF ANTENNA:
Modulation: QPSK
LOW FREQUENCY: 2506 MHz

20 MHz
2
Modulation: 64 QAM



MID FREQUENCY: 2624 MHz





HERMON LABORATORIES

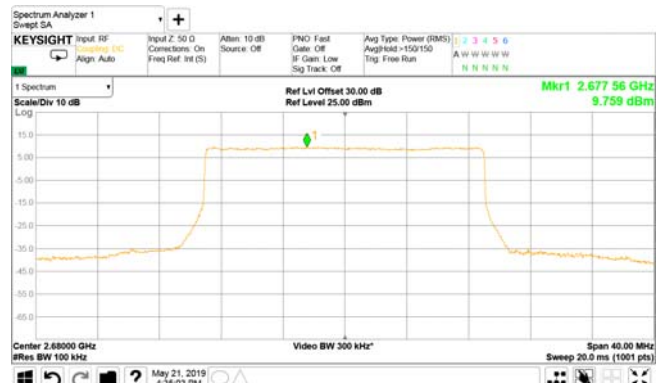
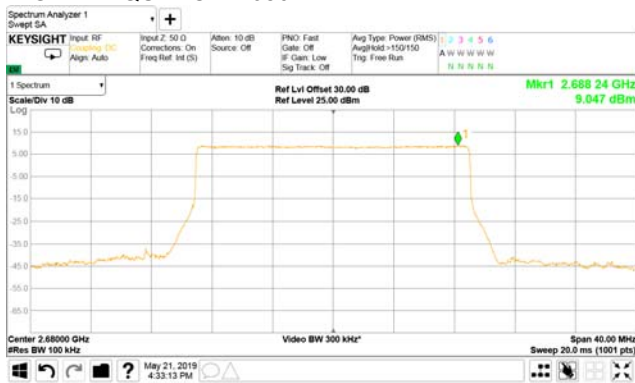
Test specification: Section 27.50, Peak output power			
Test procedure: 47 CFR, Section 2.1046; TIA/EIA-603-E, Section 2.2.1			
Test mode: Compliance		Verdict: PASS	
Date(s): 19-May-19			
Temperature: 24 °C	Relative Humidity: 54 %	Air Pressure: 1003 hPa	Power: 120 VAC
Remarks:			

Plot 7.2.22 Peak output power test results at antenna chain RF # 11S

CHANNEL BANDWIDTH:
NUMBER OF ANTENNA:
Modulation: QPSK

20 MHz
2
Modulation: 64 QAM

HIGH FREQUENCY: 2680 MHz





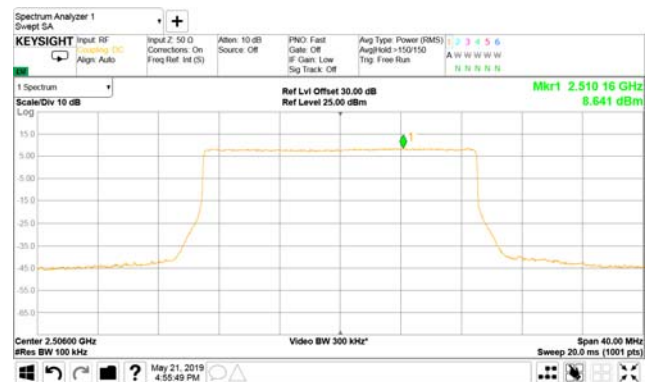
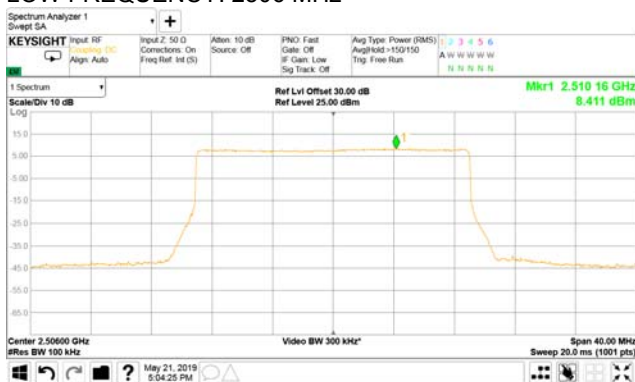
HERMON LABORATORIES

Test specification: Section 27.50, Peak output power			
Test procedure: 47 CFR, Section 2.1046; TIA/EIA-603-E, Section 2.2.1			
Test mode: Compliance		Verdict: PASS	
Date(s): 19-May-19			
Temperature: 24 °C	Relative Humidity: 54 %	Air Pressure: 1003 hPa	Power: 120 VAC
Remarks:			

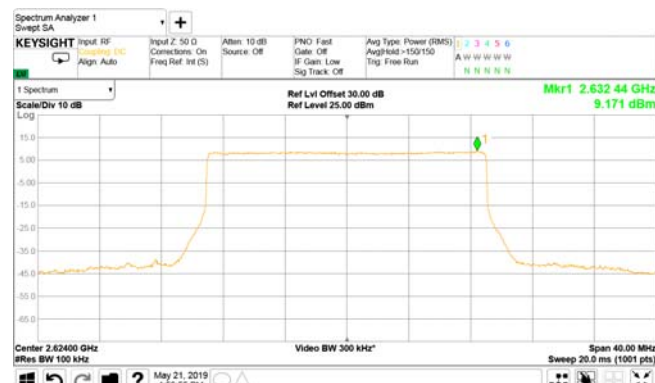
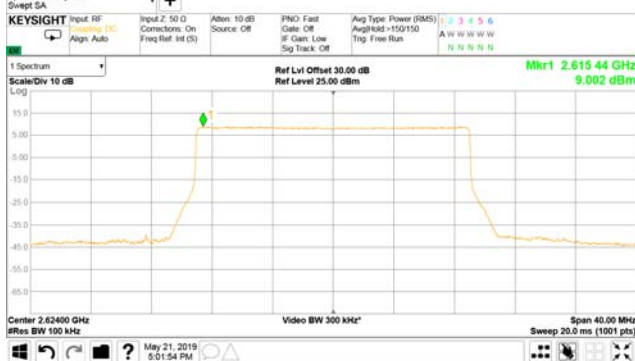
Plot 7.2.23 Peak output power test results at antenna chain, RF # 12S

CHANNEL BANDWIDTH:
NUMBER OF ANTENNA:
Modulation: QPSK
LOW FREQUENCY: 2506 MHz

20 MHz
4
Modulation: 64 QAM



MID FREQUENCY: 2624 MHz





HERMON LABORATORIES

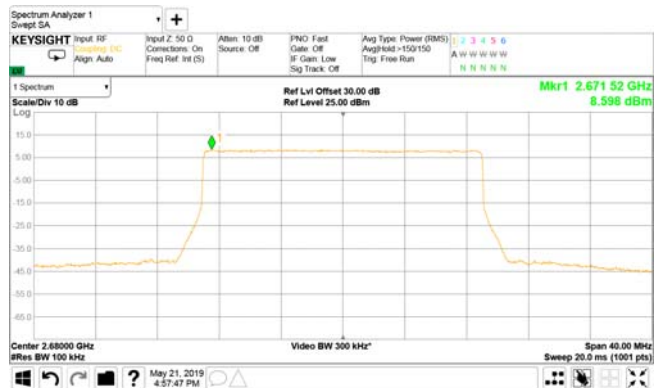
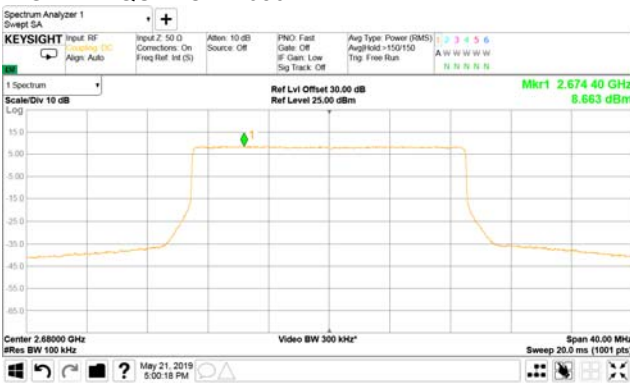
Test specification: Section 27.50, Peak output power			
Test procedure: 47 CFR, Section 2.1046; TIA/EIA-603-E, Section 2.2.1			
Test mode: Compliance		Verdict: PASS	
Date(s): 19-May-19			
Temperature: 24 °C	Relative Humidity: 54 %	Air Pressure: 1003 hPa	Power: 120 VAC
Remarks:			

Plot 7.2.24 Peak output power test results at antenna chain, RF # 12S

CHANNEL BANDWIDTH:
NUMBER OF ANTENNA:
Modulation: QPSK

20 MHz
4
Modulation: 64 QAM

HIGH FREQUENCY: 2680 MHz





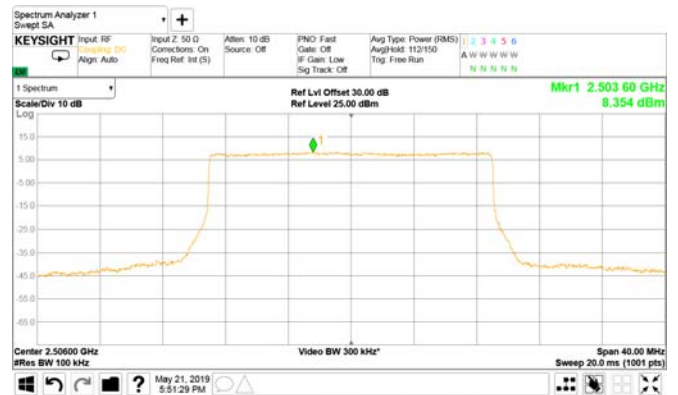
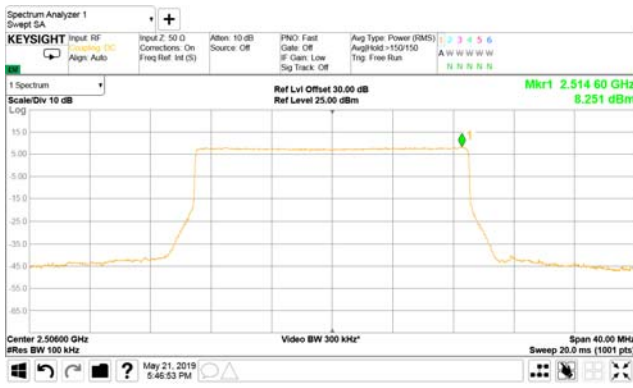
HERMON LABORATORIES

Test specification: Section 27.50, Peak output power			
Test procedure: 47 CFR, Section 2.1046; TIA/EIA-603-E, Section 2.2.1			
Test mode: Compliance		Verdict: PASS	
Date(s): 19-May-19			
Temperature: 24 °C	Relative Humidity: 54 %	Air Pressure: 1003 hPa	Power: 120 VAC
Remarks:			

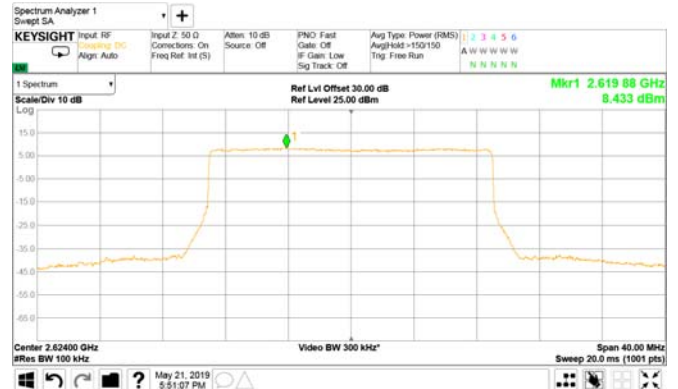
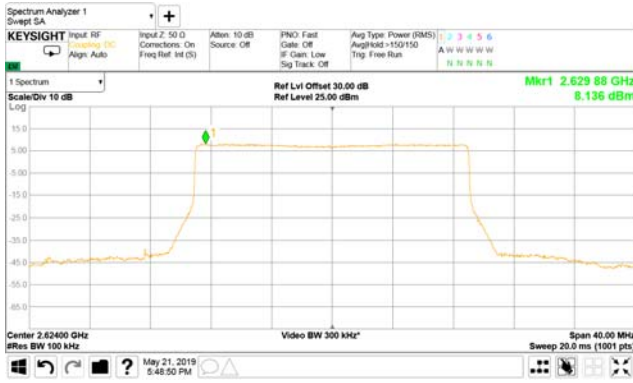
Plot 7.2.25 Peak output power test results at antenna chain RF # 21

CHANNEL BANDWIDTH:
NUMBER OF ANTENNA:
Modulation: QPSK
LOW FREQUENCY: 2506 MHz

20 MHz
5
Modulation: 64 QAM



MID FREQUENCY: 2624 MHz





HERMON LABORATORIES

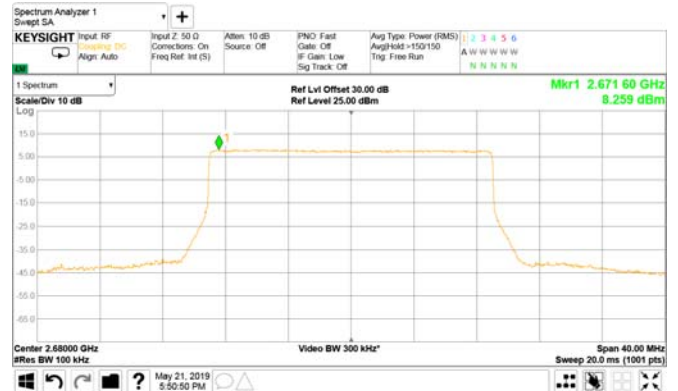
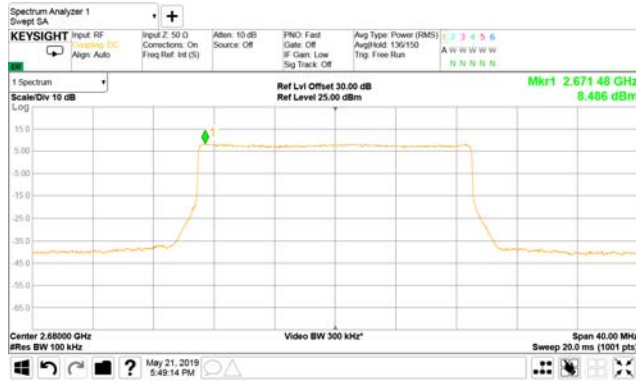
Test specification: Section 27.50, Peak output power			
Test procedure: 47 CFR, Section 2.1046; TIA/EIA-603-E, Section 2.2.1			
Test mode: Compliance		Verdict: PASS	
Date(s): 19-May-19			
Temperature: 24 °C	Relative Humidity: 54 %	Air Pressure: 1003 hPa	Power: 120 VAC
Remarks:			

Plot 7.2.26 Peak output power test results at antenna chain RF # 21

CHANNEL BANDWIDTH:
NUMBER OF ANTENNA:
Modulation: QPSK

20 MHz
5
Modulation: 64 QAM

HIGH FREQUENCY: 2680 MHz





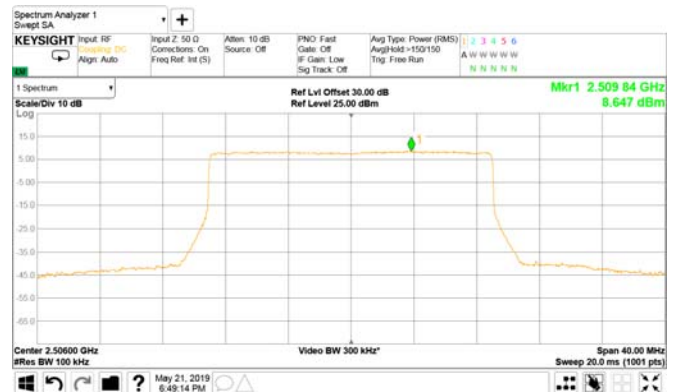
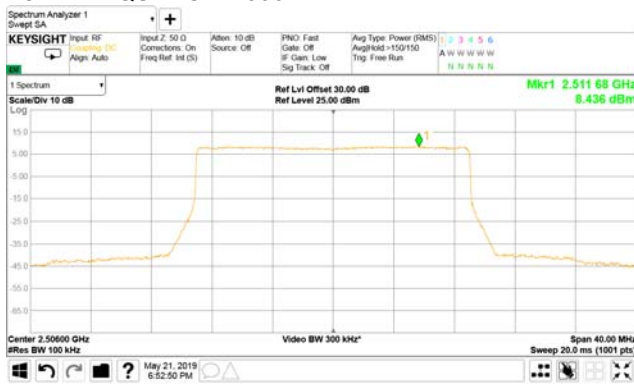
HERMON LABORATORIES

Test specification: Section 27.50, Peak output power			
Test procedure: 47 CFR, Section 2.1046; TIA/EIA-603-E, Section 2.2.1			
Test mode: Compliance		Verdict: PASS	
Date(s): 19-May-19			
Temperature: 24 °C	Relative Humidity: 54 %	Air Pressure: 1003 hPa	Power: 120 VAC
Remarks:			

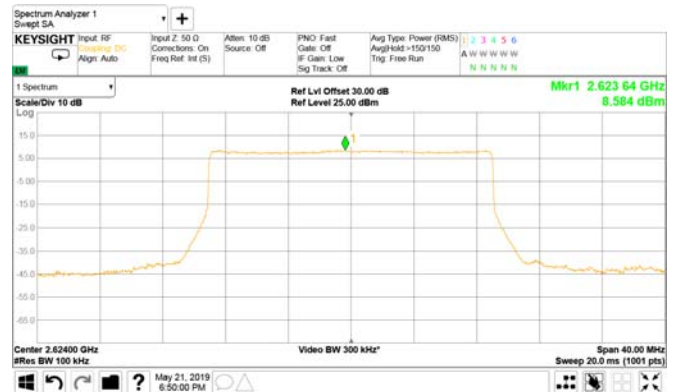
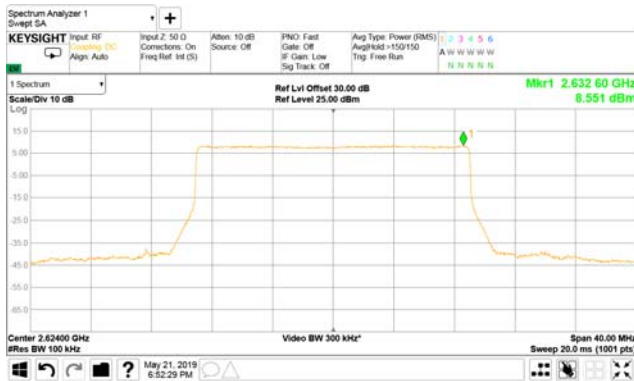
Plot 7.2.27 Peak output power test results at antenna chain RF # 22

CHANNEL BANDWIDTH:
NUMBER OF ANTENNA:
Modulation:
LOW FREQUENCY: 2506 MHz

20 MHz
7
Modulation: 64 QAM



MID FREQUENCY: 2624 MHz





HERMON LABORATORIES

Test specification: Section 27.50, Peak output power			
Test procedure: 47 CFR, Section 2.1046; TIA/EIA-603-E, Section 2.2.1			
Test mode: Compliance		Verdict: PASS	
Date(s): 19-May-19			
Temperature: 24 °C	Relative Humidity: 54 %	Air Pressure: 1003 hPa	Power: 120 VAC
Remarks:			

Plot 7.2.28 Peak output power test results at antenna chain RF # 22

CHANNEL BANDWIDTH:

20 MHz

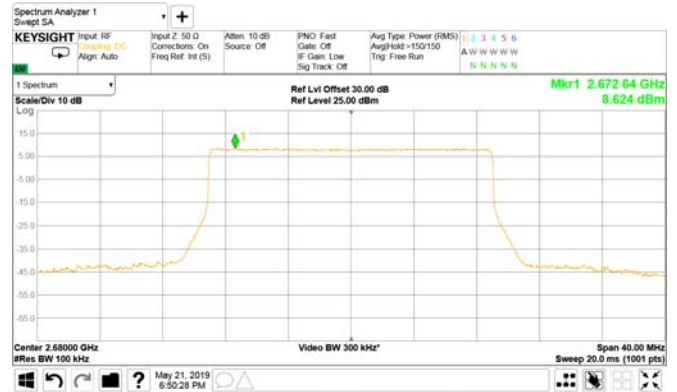
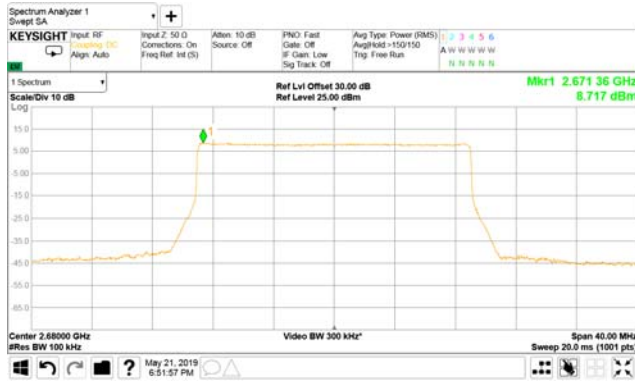
NUMBER OF ANTENNA:

7

Modulation: QPSK

Modulation: 64 QAM

HIGH FREQUENCY: 2680 MHz





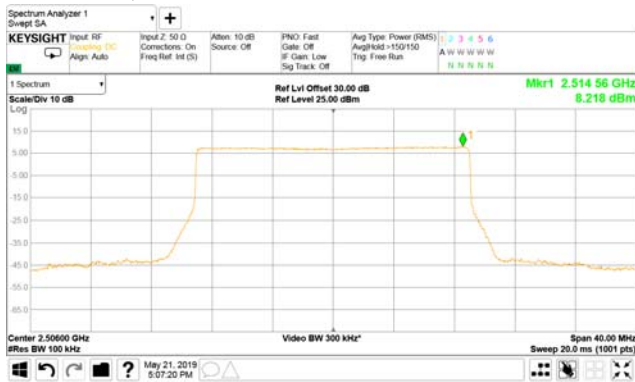
HERMON LABORATORIES

Test specification: Section 27.50, Peak output power			
Test procedure: 47 CFR, Section 2.1046; TIA/EIA-603-E, Section 2.2.1			
Test mode: Compliance		Verdict: PASS	
Date(s): 19-May-19			
Temperature: 24 °C	Relative Humidity: 54 %	Air Pressure: 1003 hPa	Power: 120 VAC
Remarks:			

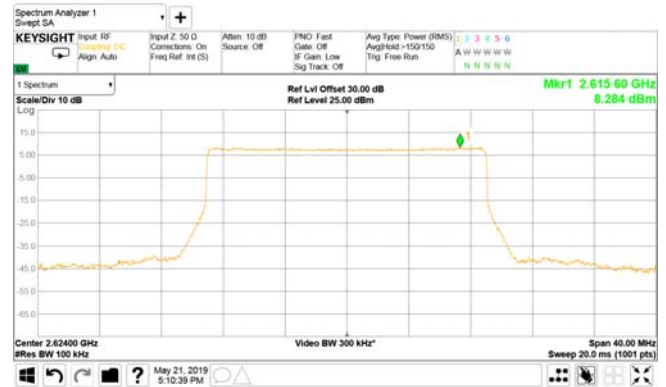
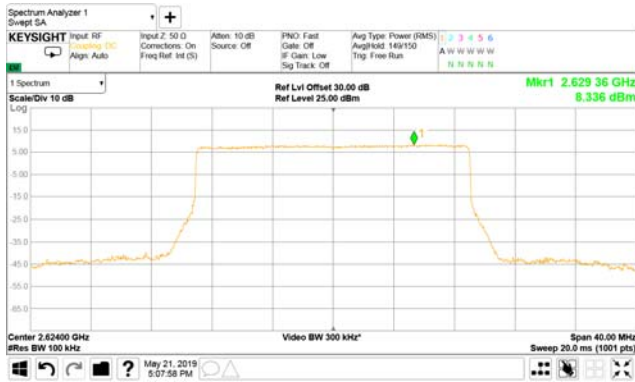
Plot 7.2.29 Peak output power test results at antenna chain RF #21S

CHANNEL BANDWIDTH:
NUMBER OF ANTENNA:
Modulation: QPSK
LOW FREQUENCY: 2506 MHz

20 MHz
6
Modulation: 64 QAM



MID FREQUENCY: 2624 MHz





HERMON LABORATORIES

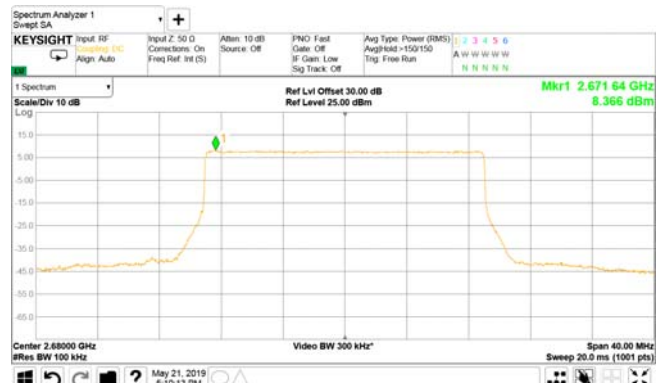
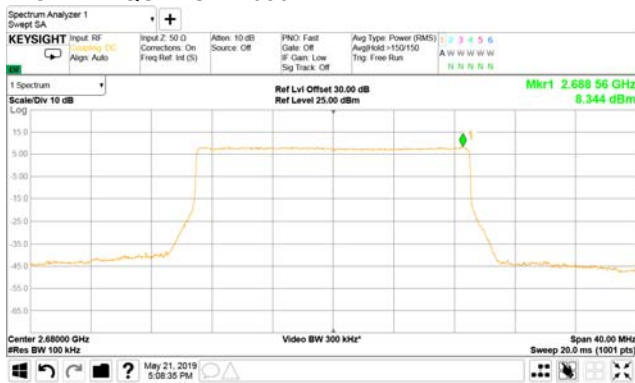
Test specification: Section 27.50, Peak output power			
Test procedure: 47 CFR, Section 2.1046; TIA/EIA-603-E, Section 2.2.1			
Test mode: Compliance		Verdict: PASS	
Date(s): 19-May-19			
Temperature: 24 °C	Relative Humidity: 54 %	Air Pressure: 1003 hPa	Power: 120 VAC
Remarks:			

Plot 7.2.30 Peak output power test results at antenna chain RF # 21S

CHANNEL BANDWIDTH:
NUMBER OF ANTENNA:
Modulation: QPSK

20 MHz
6
Modulation: 64 QAM

HIGH FREQUENCY: 2680 MHz





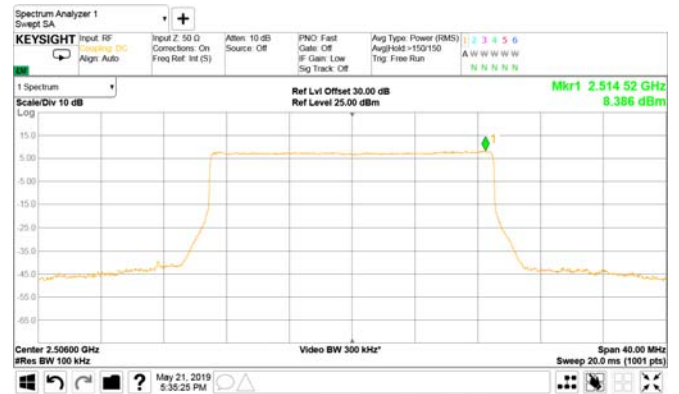
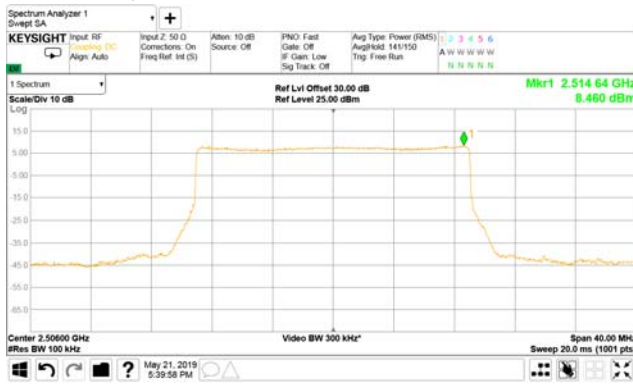
HERMON LABORATORIES

Test specification: Section 27.50, Peak output power			
Test procedure: 47 CFR, Section 2.1046; TIA/EIA-603-E, Section 2.2.1			
Test mode: Compliance		Verdict: PASS	
Date(s): 19-May-19			
Temperature: 24 °C	Relative Humidity: 54 %	Air Pressure: 1003 hPa	Power: 120 VAC
Remarks:			

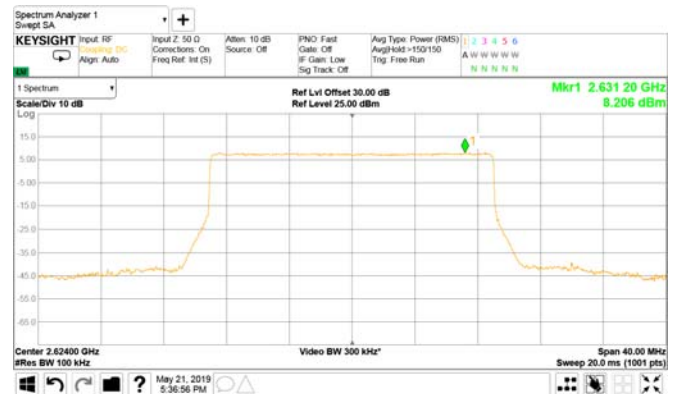
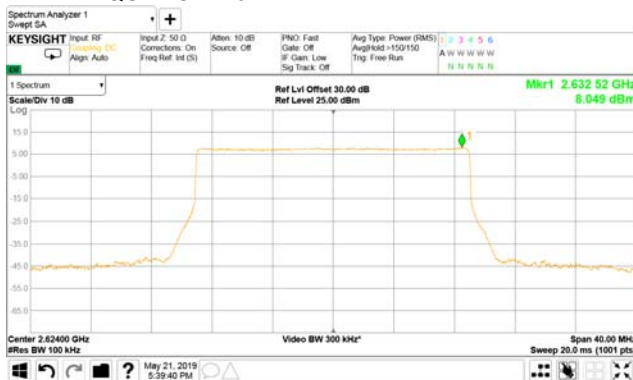
Plot 7.2.31 Peak output power test results at antenna chain RF # 22S

CHANNEL BANDWIDTH:
NUMBER OF ANTENNA:
Modulation: QPSK
LOW FREQUENCY: 2506 MHz

20 MHz
8
Modulation: 64 QAM



MID FREQUENCY: 2624 MHz





HERMON LABORATORIES

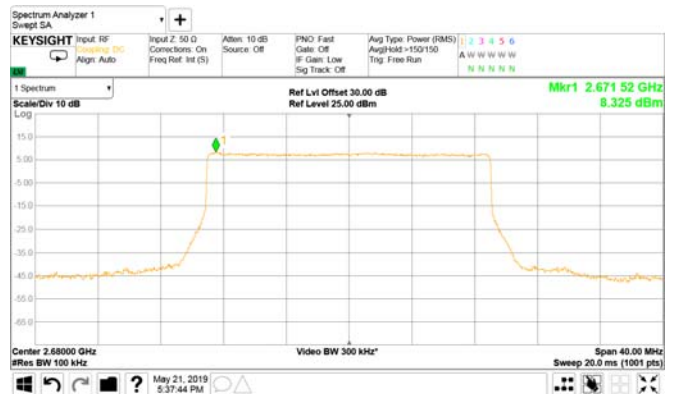
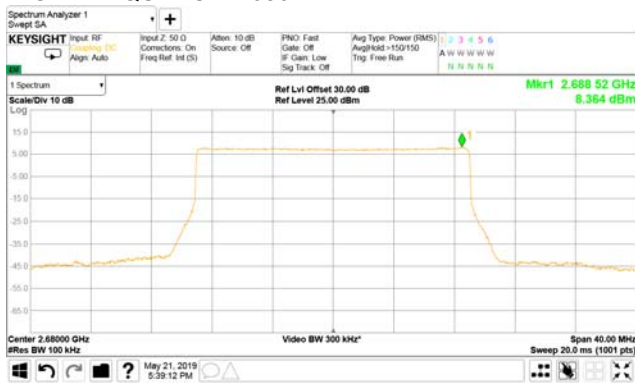
Test specification: Section 27.50, Peak output power			
Test procedure: 47 CFR, Section 2.1046; TIA/EIA-603-E, Section 2.2.1			
Test mode: Compliance		Verdict: PASS	
Date(s): 19-May-19			
Temperature: 24 °C	Relative Humidity: 54 %	Air Pressure: 1003 hPa	Power: 120 VAC
Remarks:			

Plot 7.2.32 Peak output power test results at antenna chain RF # 22S

CHANNEL BANDWIDTH:
NUMBER OF ANTENNA:
Modulation: QPSK

20 MHz
8
Modulation: 64 QAM

HIGH FREQUENCY: 2680 MHz





Test specification: Section 27.53, Band edge emissions			
Test procedure: 447 CFR, Sections 2.1051, 27.53; TIA/EIA-603-E, Section 2.2.13			
Test mode: Compliance		Verdict: PASS	
Date(s): 22-May-19			
Temperature: 24 °C	Relative Humidity: 55 %	Air Pressure: 1009 hPa	Power: 120 VAC
Remarks:			

7.3 Band edge emissions at RF connector test

7.3.1 General

This test was performed to measure spurious emissions at the channel edge at the RF antenna connector. Specification test limits are given in Table 7.3.1.

Table 7.3.1 Spurious emission limits at band edges

Channel, 10 MHz	Frequency range	RBW, kHz	Attenuation below carrier, dBc	Limit, dBm
2496.0 – 2507.5	Below 2495 MHz	1000	43+ 10*Log (P*)	-13.0
	2495.0 – 2496.0	100/300	43+ 10*Log (P*)	-13.0
	2507.5 – 2508.5	100/300	43+ 10*Log (P*)	-13.0
	Above 2508.5 MHz	1000	43+ 10*Log (P*)	-13.0
2618.0 – 2629.5	Below 2617.0 MHz	1000	43+ 10*Log (P*)	-13.0
	2617.0 – 2618.0	100/300	43+ 10*Log (P*)	-13.0
	2629.5 – 2630.5	100/300	43+ 10*Log (P*)	-13.0
	Above 2630.5 MHz	1000	43+ 10*Log (P*)	-13.0
2679.0 – 2690.0	Below 2679.0 MHz	1000	43+ 10*Log (P*)	-13.0
	2679.0 – 2680.0	100/300	43+ 10*Log (P*)	-13.0
	2690.0 – 2691.0	100/300	43+ 10*Log (P*)	-13.0
	Above 2691.0	1000	43+ 10*Log (P*)	-13.0
Channel, 20 MHz	Frequency range	RBW, kHz	Attenuation below carrier, dBc	Limit, dBm
2496.0 – 2518.5	Below 2495.0 MHz	1000	43+ 10*Log (P*)	-13.0
	2495.0-2496.0	100/300	43+ 10*Log (P*)	-13.0
	2518.5-2519.5	100/300	43+ 10*Log (P*)	-13.0
	Above 2519.5 MHz	1000	43+ 10*Log (P*)	-13.0
2614.0 – 2635.0	Below 2613.0 MHz	1000	43+ 10*Log (P*)	-13.0
	2613.0 – 2614.0	100/300	43+ 10*Log (P*)	-13.0
	2635.0 – 2636.0	100/300	43+ 10*Log (P*)	-13.0
	Above 2636.0 MHz	1000	43+ 10*Log (P*)	-13.0
2668.0 – 2690.0	Below 2667.0 MHz	1000	43+ 10*Log (P*)	-13.0
	2667.0 – 2668.0	100/300	43+ 10*Log (P*)	-13.0
	2690.0 – 2691.0	100/300	43+ 10*Log (P*)	-13.0
	Above 2691.0	1000	43+ 10*Log (P*)	-13.0

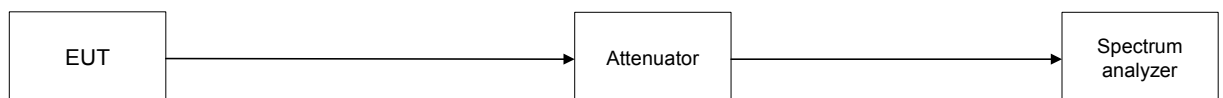
* - P is transmitter output power in Watts

7.3.2 Test procedure

7.3.2.1 The EUT was set up as shown in Figure 7.3.1, energized and its proper operation was checked.

7.3.2.2 The spurious emission was measured with spectrum analyzer as provided in Table 7.3.2 and the associated plots.

Figure 7.3.1 Spurious emission test setup for single output





Test specification: Section 27.53, Band edge emissions			
Test procedure: 447 CFR, Sections 2.1051, 27.53; TIA/EIA-603-E, Section 2.2.13			
Test mode: Compliance		Verdict: PASS	
Date(s): 22-May-19			
Temperature: 24 °C	Relative Humidity: 55 %	Air Pressure: 1009 hPa	Power: 120 VAC
Remarks:			

Table 7.3.2 Spurious emission at the low band edge test results

ASSIGNED FREQUENCY RANGE: 2496.0 – 2690.0 MHz
 DETECTOR USED: Average (gated)
 RESOLUTION BANDWIDTH: 100 KHz
 VIDEO BANDWIDTH: ≥ Resolution bandwidth
 EBW: 10 MHz
 NUMBER OF CHAINS: 2
 ANTENNA CHAIN: #12
 ANTENNA PORT: 3

Frequency MHz	Band edge	SA reading over 1 chain, dBm	Total band edge*, dBm	RBW, kHz	Integration BW, kHz	Limit, dBm	Verdict
QPSK							
Low frequency 2501.0 MHz							
2496.00	Low	-25.83	-22.83	100	NA	-13.0	Pass
2495.00	Low	-18.40	-15.4	1000	NA	-13.0	
2507.50	High	-37.24	-34.24	100	NA	-13.0	
2508.50	High	-27.73	-24.73	1000	NA	-13.0	
Mid frequency 2624.0 MHz							
2618.00	Low	-35.38	-32.38	100	NA	-13.0	Pass
2617.00	Low	-27.03	-24.03	1000	NA	-13.0	
2629.50	High	-34.74	-31.74	100	NA	-13.0	
2630.50	High	-26.18	-23.18	1000	NA	-13.0	
High frequency 2685.0 MHz							
2679.00	Low	-35.11	-32.11	100	NA	-13.0	Pass
2678.00	Low	-26.36	-23.36	1000	NA	-13.0	
2690.00	High	-25.58	-22.58	100	NA	-13.0	
2691.00	High	-17.50	-14.5	1000	NA	-13.0	
64QAM							
Low frequency 2501.0 MHz							
2496.00	Low	-24.81	-21.81	100	NA	-13.0	Pass
2495.00	Low	-18.58	-15.58	1000	NA	-13.0	
2507.50	High	-37.10	-34.1	100	NA	-13.0	
2508.50	High	-28.16	-25.16	1000	NA	-13.0	
Mid frequency 2624.0 MHz							
2618.00	Low	-35.47	-32.47	100	NA	-13.0	Pass
2617.00	Low	-26.75	-23.75	1000	NA	-13.0	
2629.50	High	-33.74	-30.74	100	NA	-13.0	
2630.50	High	-26.28	-23.28	1000	NA	-13.0	
High frequency 2685.0 MHz							
2679.00	Low	-35.74	-32.74	100	NA	-13.0	Pass
2678.00	Low	-26.83	-23.83	1000	NA	-13.0	
2690.00	High	-26.67	-23.67	100	NA	-13.0	
2691.00	High	-17.42	-14.42	1000	NA	-13.0	

*- Total band edge, dBm = SA Reading band edge, dBm + 10*log(N) = SA Reading band edge, dBm + 3 dB

Reference numbers of test equipment used

HL 3301	HL 3302	HL 4071	HL 4366	HL 5376	HL 5409	
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Full description is given in Appendix A.



HERMON LABORATORIES

Test specification: Section 27.53, Band edge emissions			
Test procedure: 447 CFR, Sections 2.1051, 27.53; TIA/EIA-603-E, Section 2.2.13			
Test mode: Compliance		Verdict: PASS	
Date(s): 22-May-19			
Temperature: 24 °C	Relative Humidity: 55 %	Air Pressure: 1009 hPa	Power: 120 VAC
Remarks:			

Table 7.3.3 Spurious emission at the low band edge test results

ASSIGNED FREQUENCY RANGE: 2496.0 – 2690.0 MHz
 DETECTOR USED: Average (gated)
 RESOLUTION BANDWIDTH: 100 KHz
 VIDEO BANDWIDTH: ≥ Resolution bandwidth
 EBW: 20 MHz
 NUMBER OF CHAINS: 2
 ANTENNA CHAIN: #12
 ANTENNA PORT: 3

Frequency MHz	Band edge	SA reading over 1chain, dBm	Total band edge*, dBm	RBW, kHz	Integration BW, kHz	Limit, dBm	Verdict
QPSK							
Low frequency 2506.0 MHz							
2496.00	Low	-28.06	-25.06	300	NA	-13.0	Pass
2495.00	Low	-25.49	-22.49	1000	NA	-13.0	
2518.50	High	-37.55	-34.55	300	NA	-13.0	
2519.50	High	-28.05	-25.05	1000	NA	-13.0	
Mid frequency 2624.0 MHz							
2614.00	Low	-27.30	-24.3	300	NA	-13.0	Pass
2613.00	Low	-26.65	-23.65	1000	NA	-13.0	
2635.00	High	-36.32	-33.32	300	NA	-13.0	
2636.00	High	-23.98	-20.98	1000	NA	-13.0	
High frequency 2680.0 MHz							
2668.00	Low	-36.25	-33.25	300	NA	-13.0	Pass
2667.00	Low	-24.98	-21.98	1000	NA	-13.0	
2690.00	High	-27.61	-24.61	300	NA	-13.0	
2691.00	High	-25.23	-22.23	1000	NA	-13.0	
64QAM							
Low frequency 2506.0 MHz							
2496.00	Low	-28.83	-25.83	300	NA	-13.0	Pass
2495.00	Low	-25.58	-22.58	1000	NA	-13.0	
2518.50	High	-37.05	-34.05	300	NA	-13.0	
2519.50	High	-27.70	-24.7	1000	NA	-13.0	
Mid frequency 2624.0 MHz							
2614.00	Low	-28.09	-25.09	300	NA	-13.0	Pass
2613.00	Low	-25.96	-22.96	1000	NA	-13.0	
2635.00	High	-37.09	-34.09	300	NA	-13.0	
2636.00	High	-23.33	-20.33	1000	NA	-13.0	
High frequency 2680.0 MHz							
2668.00	Low	-36.49	-33.49	300	NA	-13.0	Pass
2667.00	Low	-24.97	-21.97	1000	NA	-13.0	
2690.00	High	-28.07	-25.07	300	NA	-13.0	
2691.00	High	-25.71	-22.71	1000	NA	-13.0	

*- Total band edge, dBm = SA Reading band edge, dBm + 10*log(N) = SA Reading band edge, dBm + 3 dB

Reference numbers of test equipment used

HL 3301	HL 3302	HL 4071	HL 4366	HL 5376	HL 5409	
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Full description is given in Appendix A.



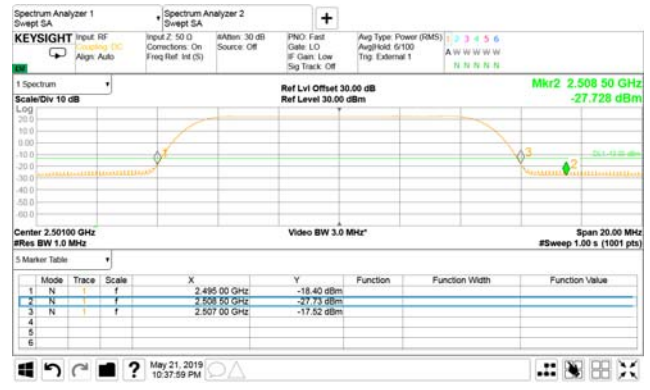
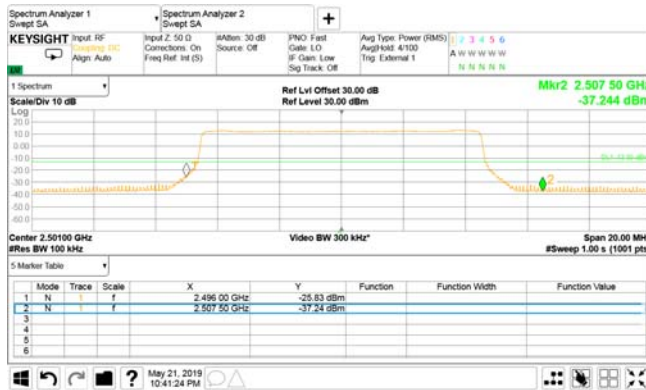
HERMON LABORATORIES

Test specification: Section 27.53, Band edge emissions			
Test procedure: 447 CFR, Sections 2.1051, 27.53; TIA/EIA-603-E, Section 2.2.13			
Test mode: Compliance		Verdict:	PASS
Date(s): 22-May-19			
Temperature: 24 °C	Relative Humidity: 55 %	Air Pressure: 1009 hPa	Power: 120 VAC
Remarks:			

Plot 7.3.1 Spurious emission at band edges test results at low carrier frequency

ASSIGNED FREQUENCY RANGE:
DETECTOR USED:
MODULATION:
EBW:
TRANSMITTER OUTPUT POWER SETTINGS:
ANTENNA PORT:

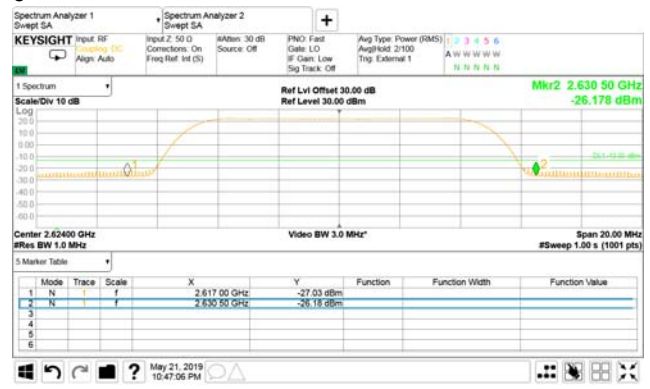
2496 – 2690 MHz
Average
QPSK
10 MHz
Maximum
3



Plot 7.3.2 Spurious emission at band edges test results at mid carrier frequency

ASSIGNED FREQUENCY RANGE:
DETECTOR USED:
MODULATION:
EBW:
TRANSMITTER OUTPUT POWER SETTINGS:
ANTENNA PORT:

2496 – 2690 MHz
Average
QPSK
10 MHz
Maximum
3





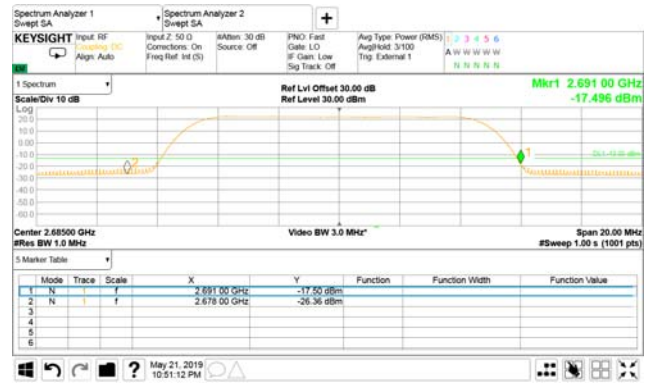
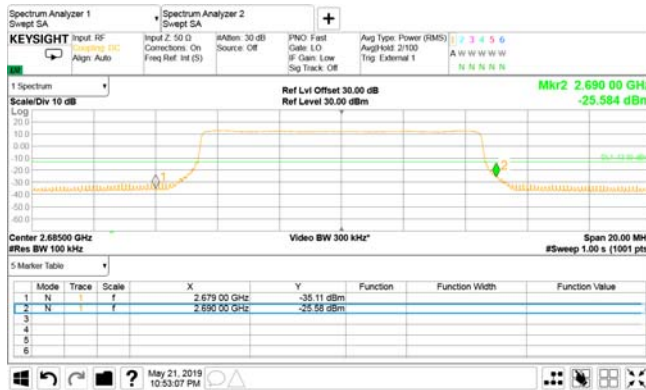
HERMON LABORATORIES

Test specification: Section 27.53, Band edge emissions			
Test procedure: 447 CFR, Sections 2.1051, 27.53; TIA/EIA-603-E, Section 2.2.13			
Test mode: Compliance		Verdict:	PASS
Date(s): 22-May-19			
Temperature: 24 °C	Relative Humidity: 55 %	Air Pressure: 1009 hPa	Power: 120 VAC
Remarks:			

Plot 7.3.3 Spurious emission at band edges test results at high carrier frequency

ASSIGNED FREQUENCY RANGE:
DETECTOR USED:
MODULATION:
EBW:
TRANSMITTER OUTPUT POWER SETTINGS:
ANTENNA PORT:

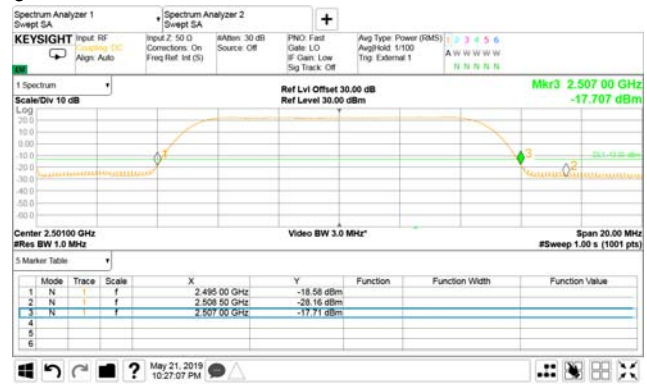
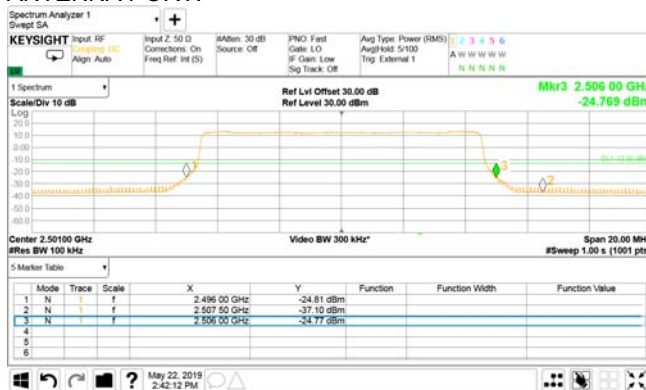
2496 – 2690 MHz
Average
QPSK
10 MHz
Maximum
3



Plot 7.3.4 Spurious emission at band edges test results at low carrier frequency

ASSIGNED FREQUENCY RANGE:
DETECTOR USED:
MODULATION:
EBW:
TRANSMITTER OUTPUT POWER SETTINGS:
ANTENNA PORT:

2496 – 2690 MHz
Average
64QAM
10 MHz
Maximum
3

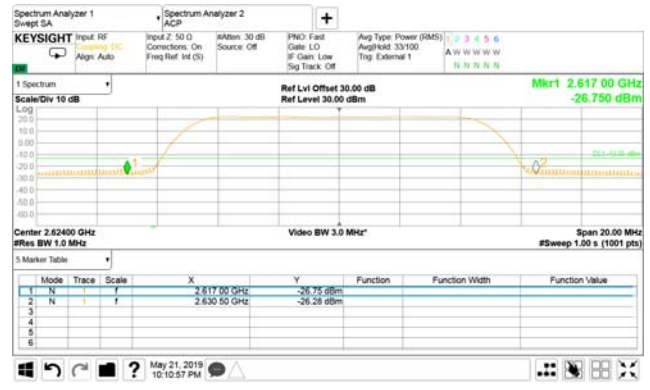
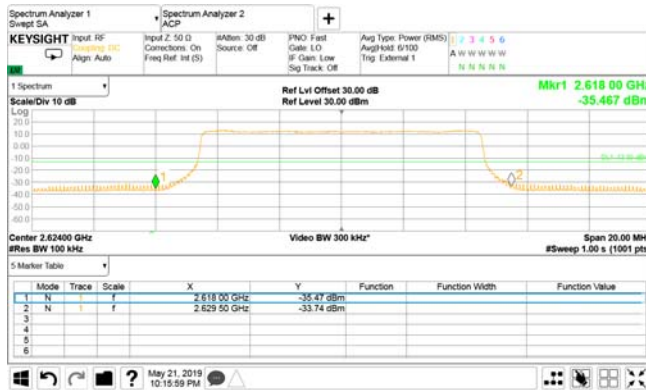


Test specification: Section 27.53, Band edge emissions			
Test procedure: 447 CFR, Sections 2.1051, 27.53; TIA/EIA-603-E, Section 2.2.13			
Test mode: Compliance		Verdict:	PASS
Date(s): 22-May-19			
Temperature: 24 °C	Relative Humidity: 55 %	Air Pressure: 1009 hPa	Power: 120 VAC
Remarks:			

Plot 7.3.5 Spurious emission at band edges test results at mid carrier frequency

ASSIGNED FREQUENCY RANGE:
DETECTOR USED:
MODULATION:
EBW:
TRANSMITTER OUTPUT POWER SETTINGS:
ANTENNA PORT:

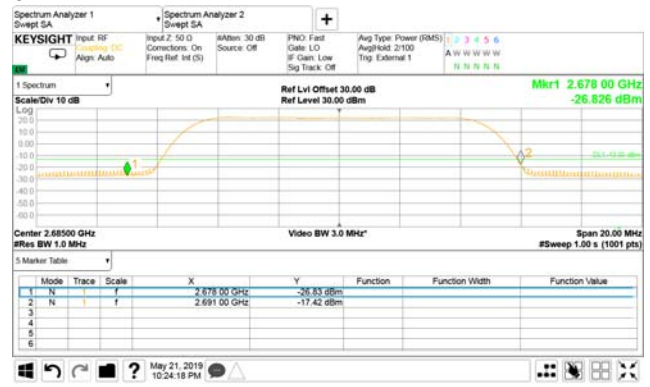
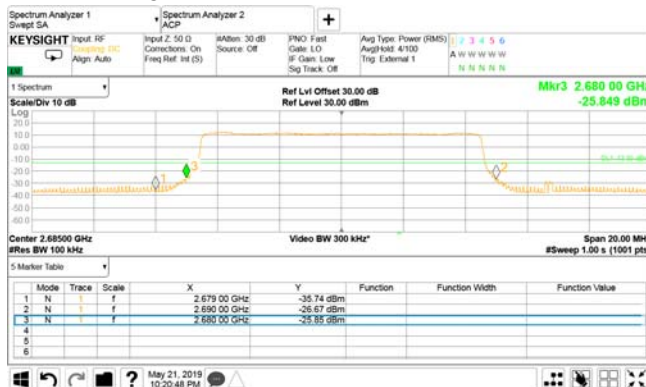
2496 – 2690 MHz
Average
64QAM
10 MHz
Maximum
3



Plot 7.3.6 Spurious emission at band edges test results at high carrier frequency

ASSIGNED FREQUENCY RANGE:
DETECTOR USED:
MODULATION:
EBW:
TRANSMITTER OUTPUT POWER SETTINGS:
ANTENNA PORT:

2496 – 2690 MHz
Average
64QAM
10 MHz
Maximum
3





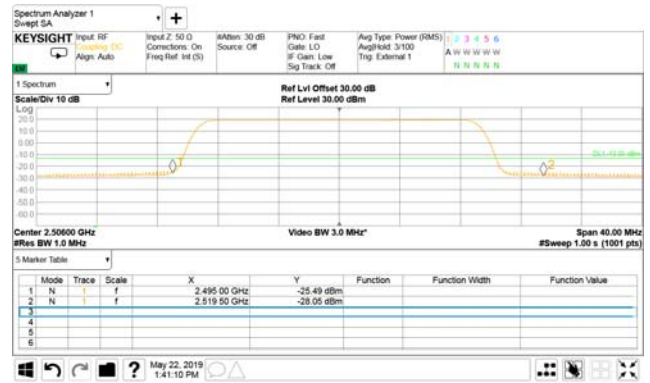
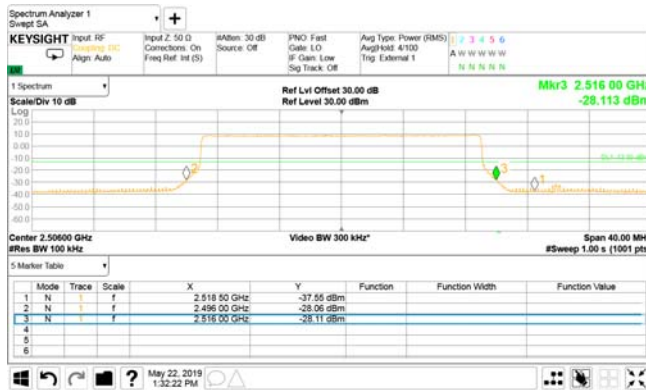
HERMON LABORATORIES

Test specification: Section 27.53, Band edge emissions			
Test procedure: 447 CFR, Sections 2.1051, 27.53; TIA/EIA-603-E, Section 2.2.13			
Test mode: Compliance	Verdict: PASS		
Date(s): 22-May-19			
Temperature: 24 °C	Relative Humidity: 55 %	Air Pressure: 1009 hPa	Power: 120 VAC
Remarks:			

Plot 7.3.7 Spurious emission at band edges test results at low carrier frequency

ASSIGNED FREQUENCY RANGE:
DETECTOR USED:
MODULATION:
EBW:
TRANSMITTER OUTPUT POWER SETTINGS:
ANTENNA PORT:

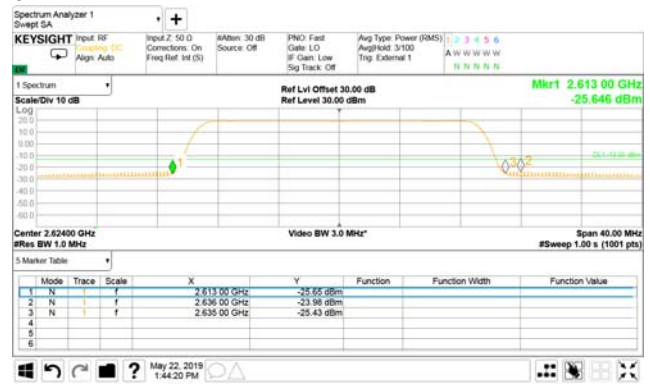
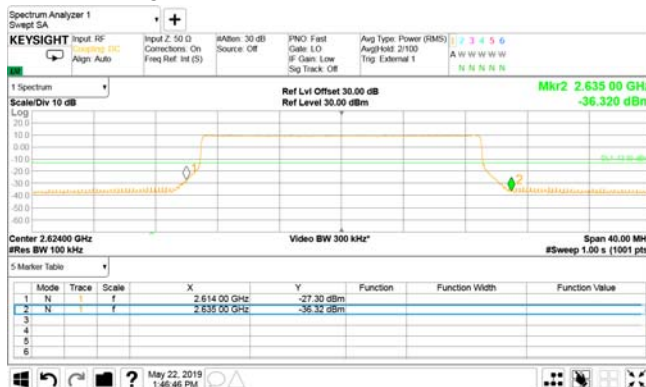
2496 – 2690 MHz
Average
QPSK
20 MHz
Maximum
3



Plot 7.3.8 Spurious emission at band edges test results at mid carrier frequency

ASSIGNED FREQUENCY RANGE:
DETECTOR USED:
MODULATION:
EBW:
TRANSMITTER OUTPUT POWER SETTINGS:
ANTENNA PORT:

2496 – 2690 MHz
Average
QPSK
20 MHz
Maximum
3

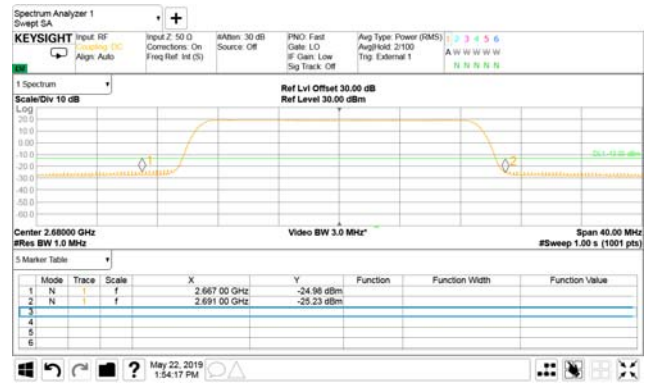
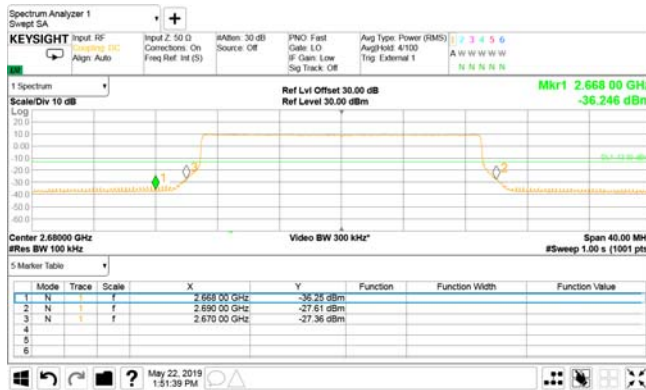


Test specification: Section 27.53, Band edge emissions			
Test procedure: 447 CFR, Sections 2.1051, 27.53; TIA/EIA-603-E, Section 2.2.13			
Test mode: Compliance	Verdict: PASS		
Date(s): 22-May-19			
Temperature: 24 °C	Relative Humidity: 55 %	Air Pressure: 1009 hPa	Power: 120 VAC
Remarks:			

Plot 7.3.9 Spurious emission at band edges test results at high carrier frequency

ASSIGNED FREQUENCY RANGE:
DETECTOR USED:
MODULATION:
EBW:
TRANSMITTER OUTPUT POWER SETTINGS:
ANTENNA PORT:

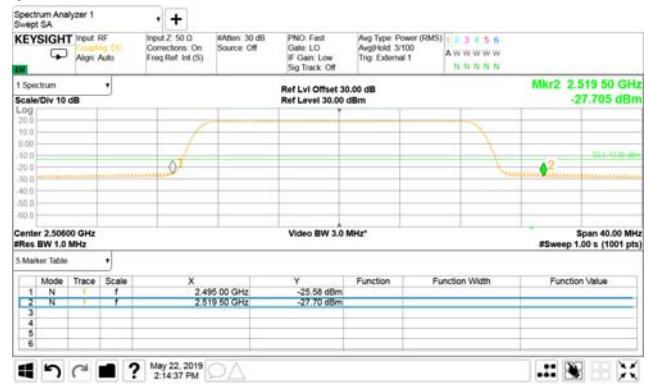
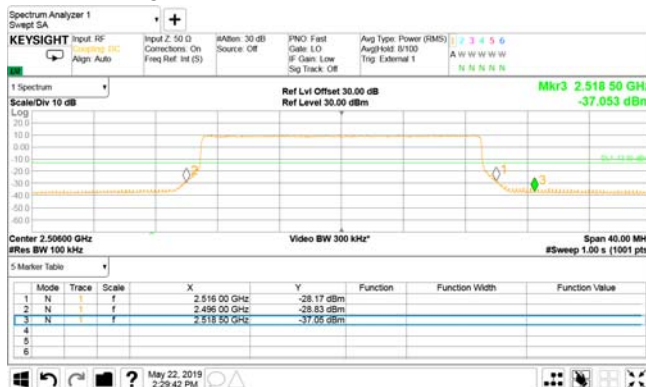
2496 – 2690 MHz
Average
QPSK
20 MHz
Maximum
3



Plot 7.3.10 Spurious emission at band edges test results at low carrier frequency

ASSIGNED FREQUENCY RANGE:
DETECTOR USED:
MODULATION:
EBW:
TRANSMITTER OUTPUT POWER SETTINGS:
ANTENNA PORT:

2496 – 2690 MHz
Average
64QAM
20 MHz
Maximum
3





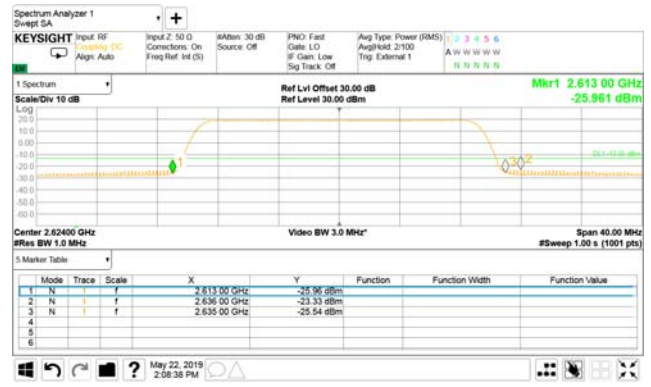
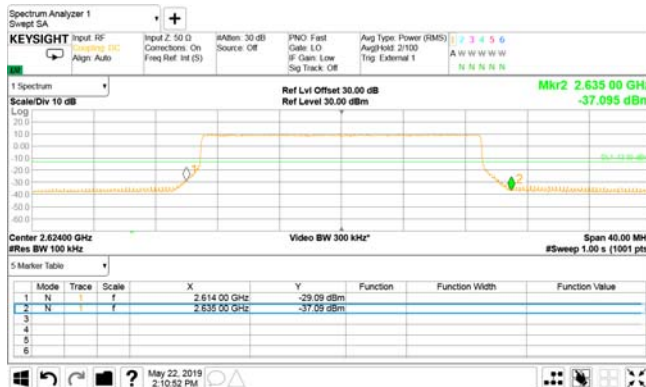
HERMON LABORATORIES

Test specification: Section 27.53, Band edge emissions			
Test procedure: 447 CFR, Sections 2.1051, 27.53; TIA/EIA-603-E, Section 2.2.13			
Test mode: Compliance		Verdict: PASS	
Date(s): 22-May-19			
Temperature: 24 °C	Relative Humidity: 55 %	Air Pressure: 1009 hPa	Power: 120 VAC
Remarks:			

Plot 7.3.11 Spurious emission at band edges test results at mid carrier frequency

ASSIGNED FREQUENCY RANGE:
DETECTOR USED:
MODULATION:
EBW:
TRANSMITTER OUTPUT POWER SETTINGS:
ANTENNA PORT:

2496 – 2690 MHz
Average
64QAM
20 MHz
Maximum
3



Plot 7.3.12 Spurious emission at band edges test results at high carrier frequency

ASSIGNED FREQUENCY RANGE:
DETECTOR USED:
MODULATION:
EBW:
TRANSMITTER OUTPUT POWER SETTINGS:
ANTENNA PORT:

2496 – 2690 MHz
Average
64QAM
20 MHz
Maximum
3

