



Test Report No.: EW0071-3



## TEST REPORT

Applicant	Bevi
Address	529 Main St. Suite 304 Charleston MA, 02129

Manufacturer or Supplier	Bevi
Address	529 Main St. Suite 304 Charleston MA, 02129
Product Name	Bevi Countertop 1.0
Brand Name	Bevi
Model	700-0008
Additional Model & Model Difference	N/A
Date of tests	April 6, 2022 to May 31, 2022

The tests have been carried out according to the requirements of the following standard:

**FCC Part 15, Subpart E, Section 15.407  
ISED Canada RSS-247 Issue 2**

**CONCLUSION: The submitted sample was found to COMPLY with the test requirement**

Tested by Ryan M. Brown Sr. EMC Wireless Engineer	Approved by Yunus Faziloglu Wireless Manager
	 Date: 08/9/2022

This report is governed by, and incorporates by reference, CPS Conditions of Service as posted at the date of issuance of this report at <http://www.bureauveritas.com/home/about-us/our-business/cps/about-us/terms-conditions> and is intended for your exclusive use. Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our prior written permission. This report sets forth our findings solely with respect to the test samples identified herein. The results set forth in this report are not indicative or representative of the quality or characteristics of the lot from which a test sample was taken or any similar or identical product unless specifically and expressly noted. Our report includes all of the tests requested by you and the results thereof based upon the information that you provided to us. Measurement uncertainty is only provided upon request for accredited tests. You have 60 days from date of issuance of this report to notify us of any material error or omission caused by our negligence or if you require measurement uncertainty; provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute you unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents.



## TABLE OF CONTENTS

<b>RELEASE CONTROL RECORD .....</b>	<b>4</b>
<b>1. STATEMENT OF CONFORMITY .....</b>	<b>5</b>
<b>2. SUMMARY OF TEST RESULTS.....</b>	<b>6</b>
1.1    MEASUREMENT UNCERTAINTY .....	6
<b>3. GENERAL INFORMATION.....</b>	<b>7</b>
2.1 GENERAL DESCRIPTION OF EUT.....	7
2.2 DESCRIPTION OF TEST MODES .....	8
2.4 DESCRIPTION OF SUPPORT UNITS.....	11
2.5 GENERAL DESCRIPTION OF APPLIED STANDARDS.....	11
<b>3. TEST TYPES AND RESULTS .....</b>	<b>12</b>
3.1 RADIATED EMISSION AND BANDEdge MEASUREMENT .....	12
3.1.1 <i>LIMITS OF RADIATED EMISSION AND BANDEdge MEASUREMENT .....</i>	12
3.1.2 <i>LIMITS OF UNWANTED EMISSION OUT OF THE RESTRICTED BANDS.....</i>	13
3.1.3 <i>TEST INSTRUMENTS.....</i>	14
3.1.4 <i>TEST PROCEDURES .....</i>	15
3.1.5 <i>DEVIATION FROM TEST STANDARD .....</i>	16
3.1.6 <i>TEST SETUP .....</i>	17
3.1.7 <i>TEST RESULTS.....</i>	19
3.2 CONDUCTED EMISSION MEASUREMENT .....	47
3.2.1 <i>LIMITS OF CONDUCTED EMISSION MEASUREMENT.....</i>	47
3.2.2 <i>TEST INSTRUMENTS.....</i>	47
3.2.3 <i>TEST PROCEDURES .....</i>	48
3.2.4 <i>DEVIATION FROM TEST STANDARD .....</i>	48
3.2.5 <i>TEST SETUP .....</i>	48
3.2.6 <i>TEST RESULTS.....</i>	49
3.3 TRANSMIT POWER MEASUREMENT .....	51
3.3.1 <i>LIMITS OF TRANSMIT POWER MEASUREMENT.....</i>	51
3.3.2 <i>TEST SETUP .....</i>	51
3.3.3 <i>TEST INSTRUMENTS.....</i>	52
3.3.4 <i>TEST PROCEDURE .....</i>	52



## Test Report No.: EW0071-3

3.3.5	DEVIATION FROM TEST STANDARD .....	53
3.3.6	TEST RESULTS .....	54
3.4	PEAK POWER SPECTRAL DENSITY MEASUREMENT .....	57
3.4.1	LIMITS OF PEAK POWER SPECTRAL DENSITY MEASUREMENT .....	57
3.4.2	TEST SETUP .....	57
3.4.3	TEST INSTRUMENTS .....	58
3.4.4	TEST PROCEDURES .....	58
3.4.5	DEVIATION FROM TEST STANDARD .....	59
3.4.6	TEST RESULTS .....	60
3.5	FREQUENCY STABILITY .....	63
3.5.1	LIMITS OF FREQUENCY STABILITY MEASUREMENT .....	63
3.5.2	TEST SETUP .....	63
3.5.3	TEST INSTRUMENTS .....	63
3.5.4	TEST PROCEDURE .....	64
3.5.5	DEVIATION FROM TEST STANDARD .....	64
3.5.6	TEST RESULTS .....	65
3.6	99% OCCUPIED BANDWIDTH .....	66
3.6.1	TEST Method .....	66
3.6.2	TEST SETUP .....	66
3.6.3	TEST INSTRUMENTS .....	66
3.6.4	TEST RESULTS .....	67
3.7	CONDUCTED SPURIOUS EMISSIONS .....	70
3.7.1	TEST Method .....	70
3.7.2	TEST SETUP .....	70
3.7.3	TEST INSTRUMENTS .....	70
3.7.4	TEST RESULTS .....	71
3.8	CONDUCTED BAND EDGE .....	73
3.8.1	TEST Method .....	73
3.8.2	TEST SETUP .....	73
3.8.3	TEST INSTRUMENTS .....	74
3.8.4	TEST RESULTS .....	75
4.	PHOTOGRAPHS OF THE TEST CONFIGURATION .....	77
5.	APPENDIX A – MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB .....	78



Test Report No.: EW0071-3

## RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
EW0071-3	Original release.	7/25/22
EW0071-3 Issue 2	Added Issue NO. and date of Original Release	8/9/2022



## 1. STATEMENT OF CONFORMITY

RSS-GEN	RSP-100	RSS 247	Part 15	Comments
6.4			15.15(b)	There are no controls accessible to the user that varies the output power to operate in violation of the regulatory requirements.
	3.1		15.19	The label is shown in the label exhibit.
	3.2		15.21	Information to the user is shown in the instruction manual exhibit.
			15.27	No special accessories are required for compliance.
3.2			15.31	The EUT was tested in accordance with the measurement standards in this section.
6.13.2			15.33	Frequency range was investigated according to this section, unless noted in specific rule section under which the equipment operates.
6.13.1			15.35	The EUT emissions were measured using the measurement detector and bandwidth specified in this section, unless noted in specific rule section under which the equipment operates.
6.8			15.203	The antenna for this device is (Flexible PCB Antenna with 3M Adhesive, Magnetic Field antenna, 4.5dBi gain)
8.10			15.205 15.209	The fundamental is not in a Restricted band and the spurious and harmonic emissions in the Restricted bands comply with the general emission limits of 15.209 or RSS-Gen as applicable
8.8			15.207	EUT meets the AC Line conducted emissions requirements of this section.
			15.247	The unit complies with the requirements of 15.247
		RSS 247		The unit complies with the requirements of RSS-247
6.7				99% occupied bandwidth measurements were performed.



## 2. SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC PART 15, SUBPART E (SECTION 15.407 UNDER NEW RULE)			
STANDARD SECTION	TEST TYPE	RESULT	REMARK
15.407(b)(6) RSS-247 Issue 2	AC Power Conducted Emissions	PASS	Meet the requirement of limit.
15.407(b) (1/2/3/4/6) RSS-247 Issue 2	Radiated Emissions & Band Edge Measurement	PASS	Meet the requirement of limit.
15.407(a)(1/2/3) RSS-247 Issue 2	Max Average Transmit Power	PASS	Meet the requirement of limit.
15.407(a)(1/2/3) RSS-247 Issue 2	Peak Power Spectral Density	PASS	Meet the requirement of limit.
15.407(g) RSS-247 Issue 2	Frequency Stability	PASS	Meet the requirement of limit.
15.203 RSS-247 Issue 2	Antenna Requirement	PASS	Antenna connector is UFL not a standard connector.

### 1.1 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

Measurement	Expanded Uncertainty k=2	Maximum allowable uncertainty
Radio frequency (@ 2.4GHz)	$3.23 \times 10^{-8}$	$1 \times 10^{-7}$
RF power, conducted	0.40dB	0.75dB
Maximum frequency deviation:		
Within 300Hz and 6kHz of audio frequency / Within 6kHz and 25kHz of audio frequency	3.4% 0.3dB	5% 3dB
Adjacent channel power	1.9dB	3dB
Conducted spurious emission of transmitter, valid up to 12.75GHz	2.39dB	3dB
Conducted emission of receivers	1.3dB	3dB
Radiated emission of transmitter, valid up to 26.5GHz	3.9dB	6dB
Radiated emission of transmitter, valid up to 80GHz	3.3dB	6dB
Radiated emission of receiver, valid up to 26.5GHz	3.9dB	6dB
Radiated emission of receiver, valid up to 80GHz	3.3dB	6dB
Humidity	2.37%	5%
Temperature	0.7°C	1.0°C
Time	4.1%	10%
RF Power Density, Conducted	0.4dB	3dB
DC and low frequency voltages	1.3%	3%
Voltage (AC, <10kHz)	1.3%	2%
Voltage (DC)	0.62%	1%
The above reflects a 95% confidence level		

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k = 2.



### 3. GENERAL INFORMATION

#### 2.1 GENERAL DESCRIPTION OF EUT

<b>PRODUCT</b>	Bevi Countertop 1.0
<b>BRAND</b>	Bevi
<b>MODEL NO.</b>	700-0008
<b>EUT Description</b>	The Bevi Countertop 1.0 is a countertop water dispenser and is intended for indoor use.
<b>FCC ID</b>	2AMTV-700008
<b>IC ID</b>	22810-700008
<b>HVIN</b>	700-0008
<b>POWER SUPPLY</b>	120VAC 60Hz
<b>MODULATION TYPE</b>	BPSK for OFDM
<b>MODULATION TECHNOLOGY</b>	OFDM
<b>TRANSFER RATE</b>	802.11a: 54.0/ 48.0/ 36.0/ 24.0/ 18.0/ 12.0/ 9.0/ 6.0Mbps
<b>OPERATING FREQUENCY</b>	5180 ~ 5240MHz,
<b>NUMBER OF CHANNEL</b>	5180 ~ 5240MHz: 4 channels for 802.11a(20MHz)
<b>CONDUCTED OUTPUT POWER</b>	20.41 mW for 5180 ~ 5240MHz (Maximum AVG Power)
<b>ANTENNA TYPE</b>	2.4/5GHzDuel band dipole antenna
<b>ANTENNA Gain</b>	4.5dBi
<b>I/O PORTS</b>	Refer to user's manual
<b>CABLE SUPPLIED</b>	Network Line: shielded, Not Detachable,

#### NOTES:

1. The above EUT information is declared by manufacturer and for more detailed features description, please refers to the manufacturer's specifications or user's manual.
2. Please refer to the EUT photo document (Reference No.: EW0071-4, -5, -6) for detailed product photo.
3. The EUT incorporates a SISO function. Physically, the EUT provides 1 completed transmitter and 1 receiver.

MODULATION MODE	FUNCTION
802.11a	1TX/1RX



Test Report No.: EW0071-3

## 2.2 DESCRIPTION OF TEST MODES

### FOR 5150 ~ 5250MHz

4 channels are provided for 802.11a

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
36	5180 MHz	40	5200 MHz
44	5220 MHz	48	5240 MHz

**2.2.1 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL**

EUT CONFIGURE MODE	APPLICABLE TO				DESCRIPTION
	RE≥1G	RE<1G	PLC	APCM	
A	√	√	√	√	

Where      **RE≥1G:** Radiated Emission above 1GHz      **RE<1G:** Radiated Emission below 1GHz  
**PLC:** Power Line Conducted Emission      **APCM:** Antenna Port Conducted Measurement

**NOTE:**

1. The EUT had been pre-tested on the positioned of each 3 axis. The worst case was found when positioned on **X-plane**.

**NOTE:** “-”means no effect.

**RADIATED EMISSION TEST (ABOVE 1GHz):**

- Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- Following channel(s) was (were) selected for the final test as listed below.

EUT CONFIGURE MODE	MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A	802.11a	5150-5250	36 to 48	36, 40, 48	OFDM	BPSK	24

**RADIATED EMISSION TEST (BELOW 1GHz):**

- Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- Following channel(s) was (were) selected for the final test as listed below.

EUT CONFIGURE MODE	MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A	802.11a	5150-5250	36 to 48	40	OFDM	BPSK	24

**POWER LINE CONDUCTED EMISSION TEST:**

- Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- Following channel(s) was (were) selected for the final test as listed below.

EUT CONFIGURE MODE	MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A	802.11a	5150-5250	36 to 48	40	OFDM	BPSK	24



## Test Report No.: EW0071-3

### ANTENNA PORT CONDUCTED MEASUREMENT:

- This item includes all test value of each mode, but only includes spectrum plot of worst value of each mode.
- Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- Following channel(s) was (were) selected for the final test as listed below.

EUT CONFIGURE MODE	MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A	802.11a	5150-5250	36 to 48	36, 40, 48	OFDM	BPSK	6.0-54

### TEST CONDITION:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER(ADAPTER)	DATE OF TEST	TESTED BY
RE<1G	See Note	120VAC/60Hz	4/13/22-5/19/22	RMB
RE≥1G	See Note	120VAC/60Hz	5/19/22-7/20/22	RMB
PLC	See Note	120VAC/60Hz	5/21/22	RMB
APCM	21.5deg. C, 52.9%RH	120VAC/60Hz	4/6/22-4/12/22	RMB

#### Note:

1. **Environmental Conditions are recorded in Data Tables/Graphs**



Test Report No.: EW0071-3

## 2.4 DESCRIPTION OF SUPPORT UNITS

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

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
	N/A	N/A	N/A	N/A	N/A

NO.	DESCRIPTION OF THE ABOVE SUPPORT UNITS
	N/A

## 2.5 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is a RF Product. According to the specification of the EUT declared by the manufacturer, it must comply with the requirements of the following standards:

**FCC Part 15, Subpart E (15.407)**

**789033 D02 General UNII Test Procedures New Rules v02r01**

**ANSI C63.10-2013**

**ISED Canada RSS-247 Issue 2**

**ISED Canada RSS-Gen Issue 5**

All test items have been performed and recorded as per the above standards.



### 3. TEST TYPES AND RESULTS

#### 3.1 RADIATED EMISSION AND BANDEDGE MEASUREMENT

##### 3.1.1 LIMITS OF RADIATED EMISSION AND BANDEDGE MEASUREMENT

Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table:

FREQUENCIES (MHz)	FIELD STRENGTH (microvolts/meter)	MEASUREMENT DISTANCE (meters)
0.009 ~ 0.490	2400/F(kHz)	300
0.490 ~ 1.705	24000/F(kHz)	30
1.705 ~ 30.0	30	30
30 ~ 88	100	3
88 ~ 216	150	3
216 ~ 960	200	3
Above 960	500	3

**NOTES:**

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dB<sub>u</sub>V/m) = 20 log Emission level (uV/m).
3. For frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 30dB under any condition of modulation.

**3.1.2 LIMITS OF UNWANTED EMISSION OUT OF THE RESTRICTED BANDS**

APPLICABLE TO	LIMIT	
789033 D02 General UNII Test Procedures New Rules v02r01	FIELD STRENGTH AT 3m	
	PK: 74 (dB $\mu$ V/m)	AV: 54 (dB $\mu$ V/m)
APPLICABLE TO	EIRP LIMIT	EQUIVALENT FIELD STRENGTH AT 3m
15.407(b)(1)		
15.407(b)(2)	PK: -27 (dBm/MHz)	PK: 68.2 (dB $\mu$ V/m)
15.407(b)(3)		
15.407(b)(4)	Note	Note

**NOTE:** For transmitters operating in the 5.725-5.85 GHz band:

Section 15.407(b)(4) specifies the unwanted emissions limit for the U-NII-3 band. A band emissions mask is specified in Section 15.407(b)(4)(i). An alternative to the band emissions mask is specified in Section 15.407(b)(4)(ii). The alternative limits are based on the highest antenna gain specified in the filing. There are also marketing and importation restrictions for the alternative limit.

15.407(b)(4)(i) All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength:

$$E = \frac{1000000\sqrt{30P}}{3} \mu\text{V/m, where } P \text{ is the eirp (Watts).}$$



## Test Report No.: EW0071-3

### 3.1.3 TEST INSTRUMENTS

Rev. 7/5/2022

	Range	MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on
<b>Spectrum Analyzers / Receivers /Preselectors</b> 2093 MXE EMI Receiver	20Hz-26.5GHz	N9038A	Agilent	MY51210181	2093	I	3/7/2023	3/7/2022
<b>Radiated Emissions Sites</b> EMI Chamber 2	FCC Code	IC Code	VCCI Code	Range	Asset	Cat	Calibration Due	Calibrated on
EMI Chamber 2	719150	2762A-7	A-0015	30-1000MHz	1686	I	12/5/2022	12/5/2020
	719150	2762A-7	A-0015	1-18GHz	1686	I	12/8/2022	12/8/2020
<b>Preamps /Couplers Attenuators / Filters</b>	Range	MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on
2111 HF Preamp	0.5-18GHz	PAM-118A	COM-POWER	551063	2111	II	10/26/2022	10/26/2021
8449B HF Preamp	1-18GHz	8449B	Agilent	1149055		II	11/10/2022	11/10/2021
8447F Rental PA	9KHz-1.3GHz	84477F	HP	3113A05395		II	10/18/2022	10/18/2021
HF (Yellow)	18-26.5GHz	AFS4-18002650-60-8P-4	CS	467559	1266	II	10/26/2022	10/26/2021
2116 BRF	0.009-18000MHz	BRM50702	Micro-Tronics	G226	2116	II	11/10/2022	11/10/2021
<b>Antennas</b>	Range	MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on
Red-Brown BiLog	30-2000MHz	JB1	Sunol	A0032406	1218	I	4/28/2023	4/28/2021
Yellow Horn	1-18GHz	3115	EMCO	9608-4898	37	I	10/20/2022	10/20/2020
HF (White) Horn	18-26.5GHz	801-WLM	Waveline	758	758	III	Verify before Use	date of test
Blue Horn	1-18Ghz	3117	ETS	157647	1861	I	4/26/2023	4/26/2021
Small Loop	10kHz-30MHz	PLA-130/A	ARA	1024	755	I	8/25/2022	8/25/2020
Large Loop	20Hz-5MHz	6511	EMCO	9704-1154	67	I	8/21/2022	8/21/2020
<b>Meteorological Meters/Chambers</b>	MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on	
Weather Clock (Pressure Only)	BA928	Oregon Scientific	C3166-1	831	I	11/23/2022	11/23/2020	
Asset #2657	1235C97	Control Company	200435369	2657	I	7/23/2022	7/23/2020	
<b>Cables</b>	Range	Mfr			Cat	Calibration Due	Calibrated on	
Asset #2474	9KHz-18GHz	MegaPhase			II	11/9/2022	11/9/2021	
Asset #2610	9KHz-18GHz	Pasternack			II	3/16/2023	3/16/2022	
Asset #2583	9KHz-18GHz	Pasternack			II	2/17/2023	2/17/2022	
Asset #2323	1-26.5GHz	MEGAPHASE	17139101 002		II	9/10/2022	9/10/2021	
Asset #2682	9KHz-18GHz	Pasternack			II	6/17/2023	6/17/2022	

All equipment is calibrated using standards traceable to NIST or other nationally recognized calibration standard.

#### NOTES:

1. The ISED CAB ID. is US0106
3. The FCC Site Registration No. is US1026.



### 3.1.4 TEST PROCEDURES

- a. The EUT was placed on the top of a rotating table 1.5 meters(above 1GHz) and 0.8 meters(below 1GHz) above the ground at a 3 meters semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The antenna is a broadband antenna, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

#### NOTES:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is  $\geq 1/T$  (Duty cycle < 98%) or 10Hz(Duty cycle > 98%) for Average detection (AV) at frequency above 1GHz.
4. All modes of operation were investigated and the worst-case emissions are reported.
5. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 200Hz for 9KHz-150KHz and 9KHz for 0.15-30Mhz using a Peak detector.
6. 9KHz – 30MHz measurements were taken with the measurement antenna Parallel and Perpendicular to the EUT at distance of 3m from the EUT
7. *The limits in CFR 47, Part 15, Subpart C, paragraph 15.209 (a), are identical to those in RSS-GEN Section 8.9, Table 6, since the measurements are performed in terms of magnetic field strength and converted to electric field strength levels (as reported in the table) using the free space impedance of  $377\Omega$ . For example, the measurement frequency 669 KHz resulted in a level of 39.2 dB<sub>UV</sub>/m, which is equivalent to  $39.2 - 51.5 = -12.3$  dB<sub>UA</sub>/m, which has the same margin, -31.9 dB, to the corresponding RSS-GEN Table 6 limit as it has to the 15.209(a) limit.*



**Test Report No.: EW0071-3**

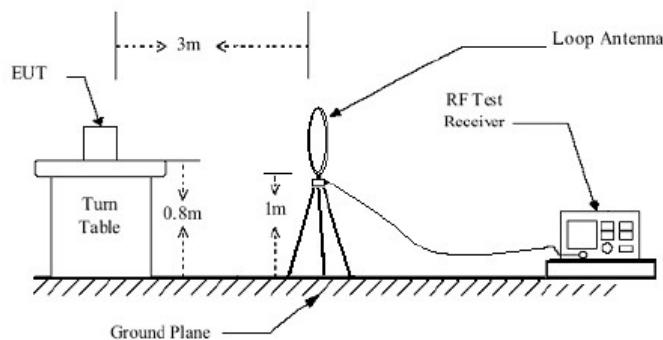
### 3.1.5 DEVIATION FROM TEST STANDARD

No deviation.

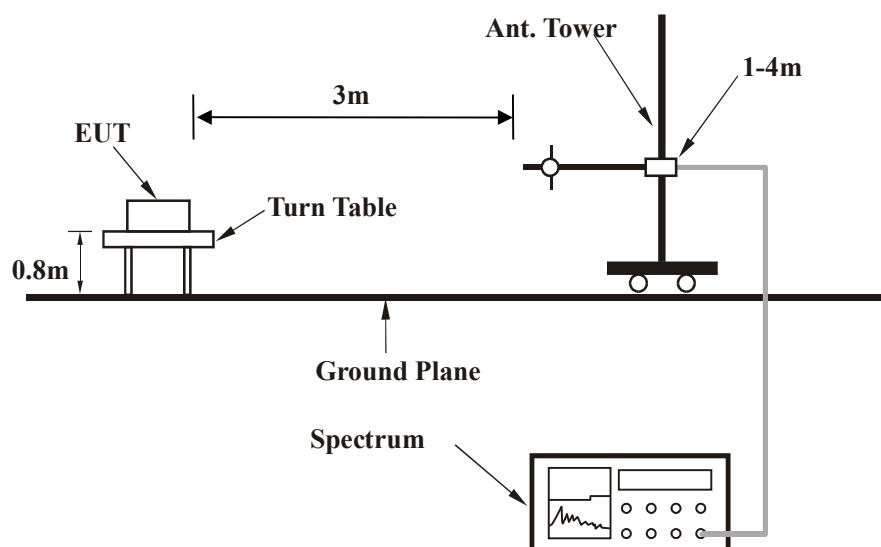


### 3.1.6 TEST SETUP

#### Below 30MHz



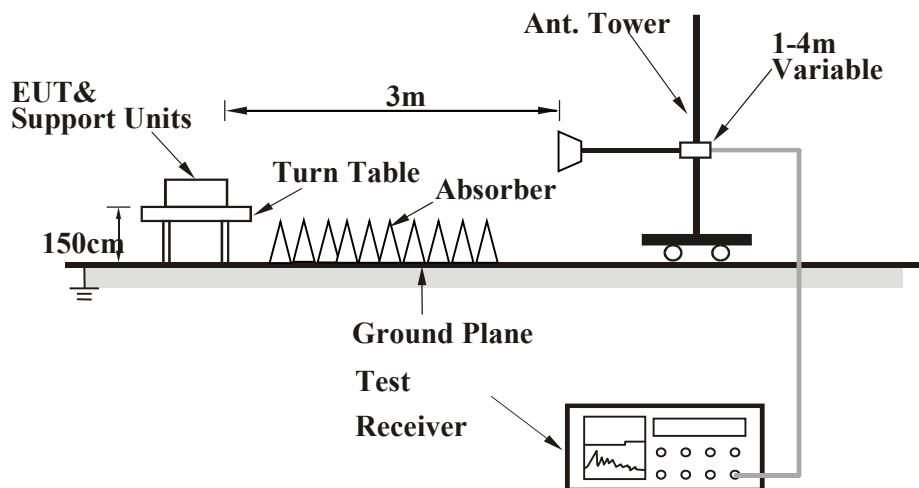
#### Below 1GHz test setup



**Note:** For the actual test configuration, please refer to the attached file (Test Setup Photo).



### Above 1GHz test setup



**Note:** For the actual test configuration, please refer to the attached file (Test Setup Photo).



## Test Report No.: EW0071-3

### 3.1.7 TEST RESULTS

#### BELOW 1GHz WORST-CASE DATA

##### 802.11a Data Rate 24 Mid Channel

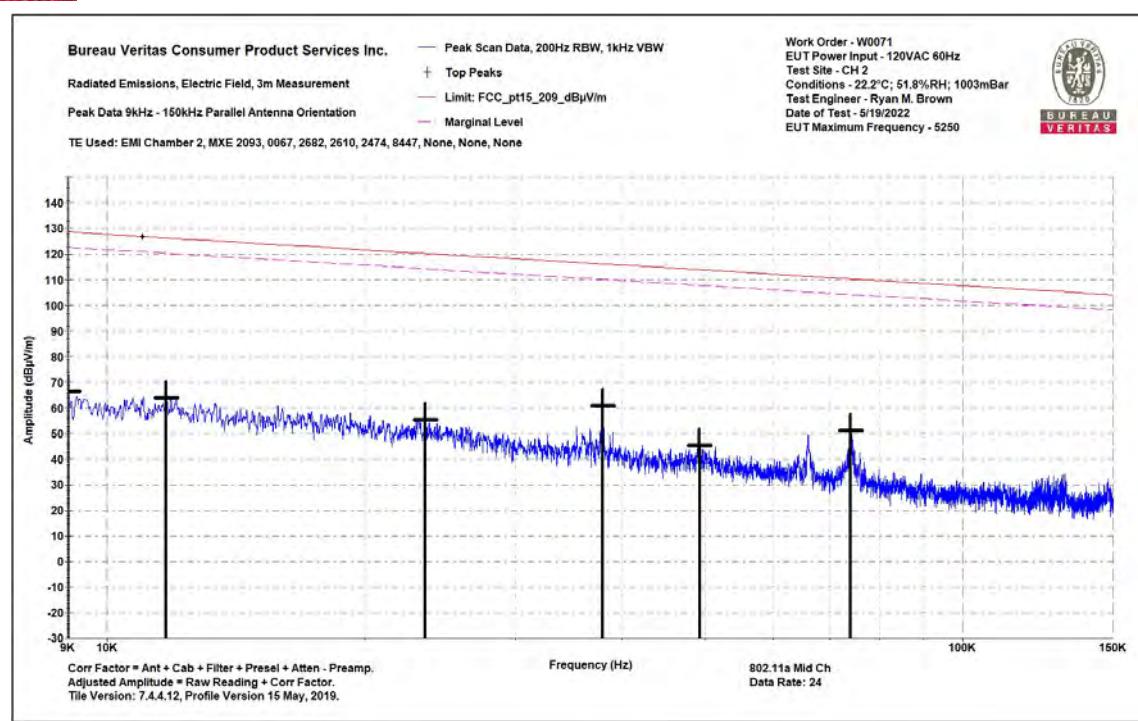
Bureau Veritas Consumer Product Services Inc.	Work Order - W0071
Radiated Emissions, Electric Field, 3m Measurement	EUT Power Input - 120VAC 60Hz
Top Peaks Parallel 9-150kHz	Test Site - CH 2
Notes:	Conditions - 22.2°C; 51.8%RH; 1003mBar
802.11a Mid Ch	Test Engineer - Ryan M. Brown
Data Rate: 24	Date of Test - 5/19/2022

Frequency (MHz)	Raw Peak Reading (dB $\mu$ V)	Correction Factor (dB/m)	Adjusted Peak Amplitude (dB $\mu$ V/m)	Lim: FCC_pt15_20 9_dB $\mu$ V/m (dB $\mu$ V/m)	Peak Margin (dB)	Peak Test Results (Pass/Fail)	Worst Margin (dB)	EUT Azimuth (degrees)
0.009	26.6	39.7	66.3	128.5	-62.3	PASS		90
0.011728	26.9	37.1	63.9	126.2	-62.3	PASS		45
0.023537	23.3	32.1	55.3	120.2	-64.8	PASS		180
0.037965	33	28	60.9	116	-55.1	PASS	-55.1	225
0.049273	19.2	26	45.2	113.8	-68.5	PASS		315
0.073955	28.5	22.7	51.2	110.2	-59.1	PASS		90

#### 9-150 KHz Parallel



## Test Report No.: EW0071-3



### 9-150 KHz Parallel

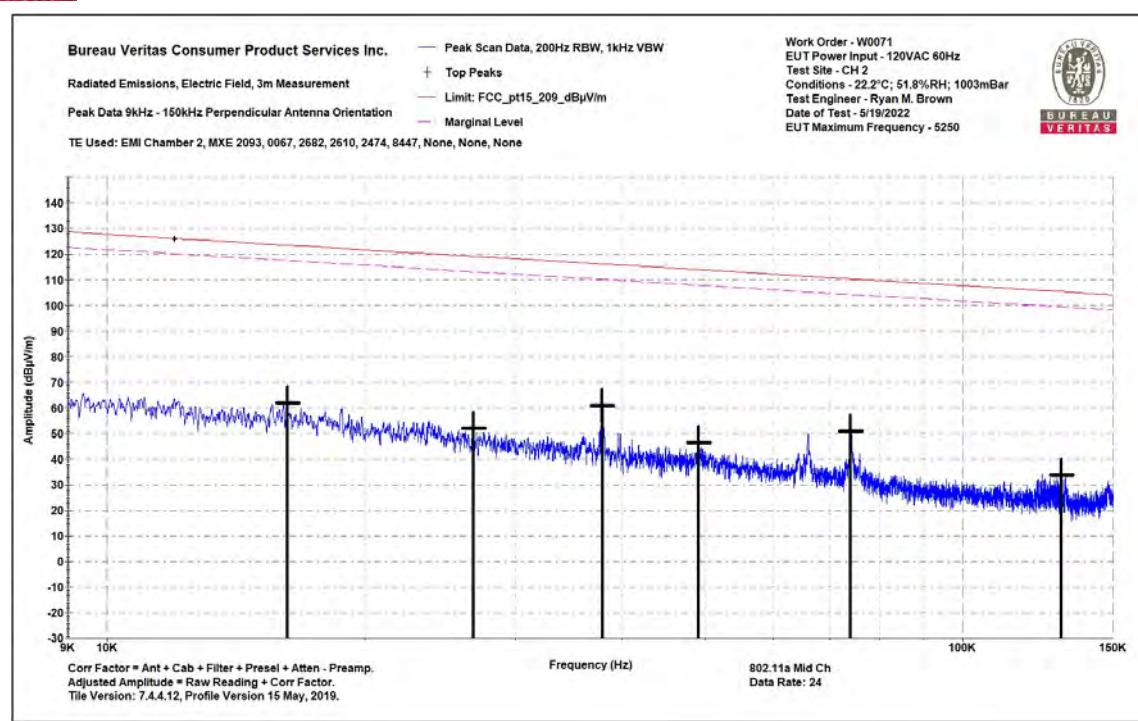
Bureau Veritas Consumer Product Services Inc.	Work Order - W0071
Radiated Emissions, Electric Field, 3m Measurement	EUT Power Input - 120VAC 60Hz
Top Peaks Perpendicular 9-150kHz	Test Site - CH 2
Notes:	Conditions - 22.2°C; 51.8%RH; 1003mBar
802.11a Mid Ch	Test Engineer - Ryan M. Brown
Data Rate: 24	Date of Test - 5/19/2022

Frequency (MHz)	Raw Peak Reading (dBµV)	Correction Factor (dB/m)	Adjusted Peak Amplitude (dBµV/m)	Lim: FCC_pt15_200_dBµV/m (dBµV/m)	Peak Margin (dB)	Peak Test Results (Pass/Fail)	Worst Margin (dB)	EUT Azimuth (degrees)
0.016233	27	34.9	61.9	123.4	-61.5	PASS		270
0.026822	20.9	31	51.9	119	-67.1	PASS		225
0.037919	32.9	28	60.9	116	-55.1	PASS	-55.1	180
0.049115	20.3	26.1	46.4	113.8	-67.4	PASS		315
0.073994	28.1	22.7	50.8	110.2	-59.4	PASS		0
0.130542	12.9	20.9	33.8	105.3	-71.5	PASS		180

### 9-150 KHz Perpendicular



## Test Report No.: EW0071-3



### 9-150 KHz Perpendicular

Bureau Veritas Consumer Product Services Inc.  
Radiated Emissions Magnetic Field 3m Distance  
Top Peaks Parallel 150-1000kHz  
Notes:  
802.11a Mid Ch  
Data Rate: 24

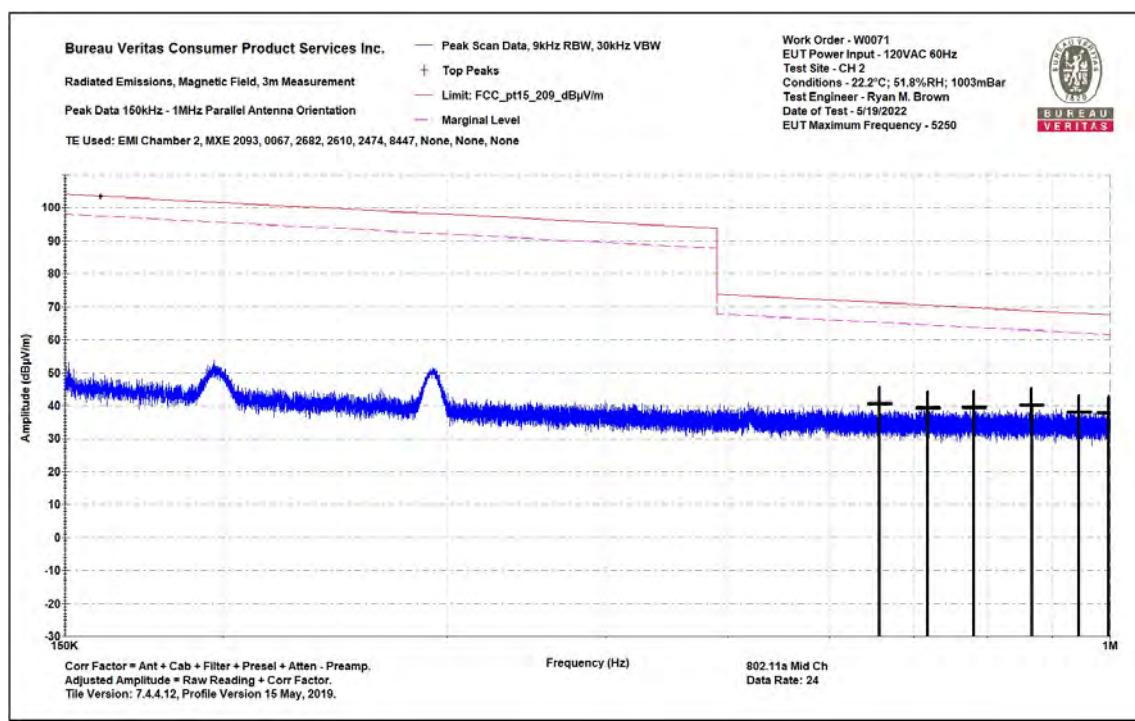
Work Order - W0071  
EUT Power Input - 120VAC 60Hz  
Test Site - CH 2  
Conditions - 22.2°C; 51.8%RH; 1003mBar  
Test Engineer - Ryan M. Brown  
Date of Test - 5/19/2022

Frequency (MHz)	Raw Peak Reading (dBµV)	Correction Factor (dB/m)	Adjusted Peak Amplitude (dBµV/m)	Lim: FCC_pt15_200_dBµV/m (dBµV/m)	Peak Margin (dB)	Peak Test Results (Pass/Fail)	Worst Margin (dB)	EUT Azimuth (degrees)
0.658	21.5	19.2	40.7	71.3	-30.5	PASS		180
0.718	20.1	19.2	39.3	70.5	-31.2	PASS		270
0.781	20.4	19.2	39.6	69.8	-30.2	PASS		0
0.867	20.9	19.2	40.1	68.9	-28.7	PASS	-28.7	0
0.945	18.9	19.2	38.1	68.1	-30	PASS		180
0.998	18.7	19.2	37.9	67.6	-29.7	PASS		225

### 0.150-1 MHz Parallel



## Test Report No.: EW0071-3



### 0.150-1 MHz Parallel

Bureau Veritas Consumer Product Services Inc.  
Radiated Emissions Magnetic Field 3m Distance  
Top Peaks Perpendicular 150-1000kHz  
Notes:  
802.11a Mid Ch  
Data Rate: 24

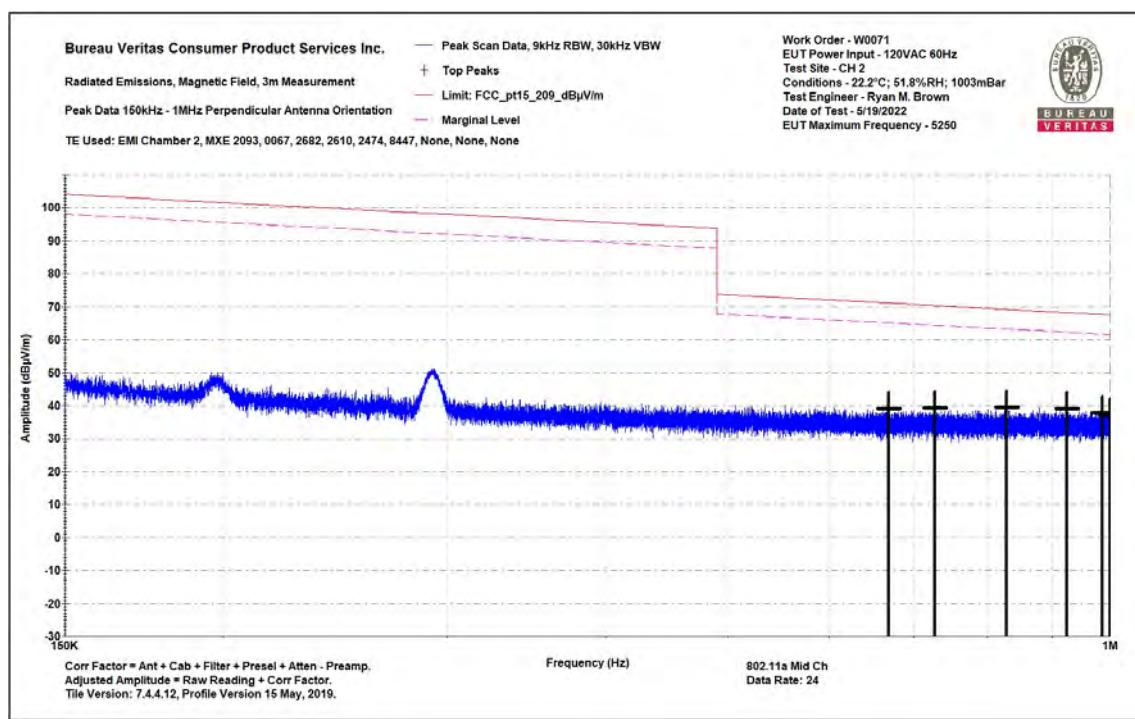
Work Order - W0071  
EUT Power Input - 120VAC 60Hz  
Test Site - CH 2  
Conditions - 22.2°C; 51.8%RH; 1003mBar  
Test Engineer - Ryan M. Brown  
Date of Test - 5/19/2022

Frequency (MHz)	Raw Peak Reading (dBµV)	Correction Factor (dB/m)	Adjusted Peak Amplitude (dBµV/m)	Lim: FCC_pt15_200_dBµV/m (dBµV/m)	Peak Margin (dB)	Peak Test Results (Pass/Fail)	Worst Margin (dB)	EUT Azimuth (degrees)
0.669	20	19.2	39.2	71.1	-31.9	PASS		225
0.727	20.1	19.2	39.3	70.4	-31.1	PASS		270
0.828	20.4	19.2	39.6	69.3	-29.7	PASS		270
0.925	20	19.2	39.2	68.3	-29.1	PASS	-29.1	135
0.986	18.7	19.2	37.9	67.7	-29.8	PASS		315
1	17.9	19.2	37.1	67.6	-30.5	PASS		180

### 0.150-1 MHz Perpendicular



## Test Report No.: EW0071-3



### 0.150-1 MHz Perpendicular

Bureau Veritas Consumer Product Services Inc.  
Radiated Emissions Magnetic Field 3m Distance  
Top Peaks Parallel 1-30MHz  
Notes:  
802.11a Mid Ch  
Data Rate: 24

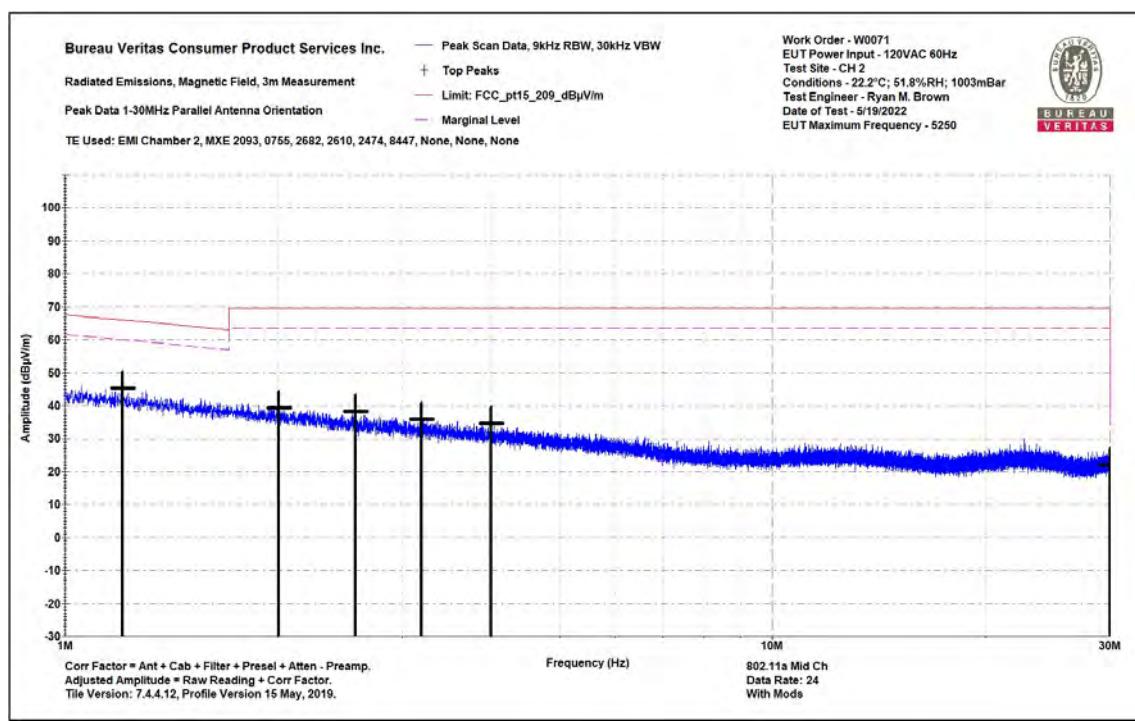
Work Order - W0071  
EUT Power Input - 120VAC 60Hz  
Test Site - CH 2  
Conditions - 22.2°C; 51.8%RH; 1003mBar  
Test Engineer - Ryan M. Brown  
Date of Test - 5/19/2022

Frequency (MHz)	Raw Peak Reading (dBµV)	Correction Factor (dB/m)	Adjusted Peak Amplitude (dBµV/m)	Lim: FCC_pt15_209_dBµV/m (dBµV/m)	Peak Margin (dB)	Peak Test Results (Pass/Fail)	Worst Margin (dB)	EUT Azimuth (degrees)
1.205	18.5	26.8	45.3	66	-20.6	PASS		60
2.003	17.3	22	39.4	69.5	-30.2	PASS		240
2.575	18.3	20.1	38.3	69.5	-31.2	PASS		210
3.189	17.8	18.2	36	69.5	-33.6	PASS		30
4.002	18.1	16.4	34.5	69.5	-35	PASS		330
30	14.1	8.1	22.2	40	-17.8	PASS	-17.8	300

### 1-30 MHz Parallel



## Test Report No.: EW0071-3



### 1-30 MHz Parallel

Bureau Veritas Consumer Product Services Inc.  
Radiated Emissions Magnetic Field 3m Distance  
Top Peaks Perpendicular 1-30MHz  
Notes:  
802.11a Mid Ch  
Data Rate: 24

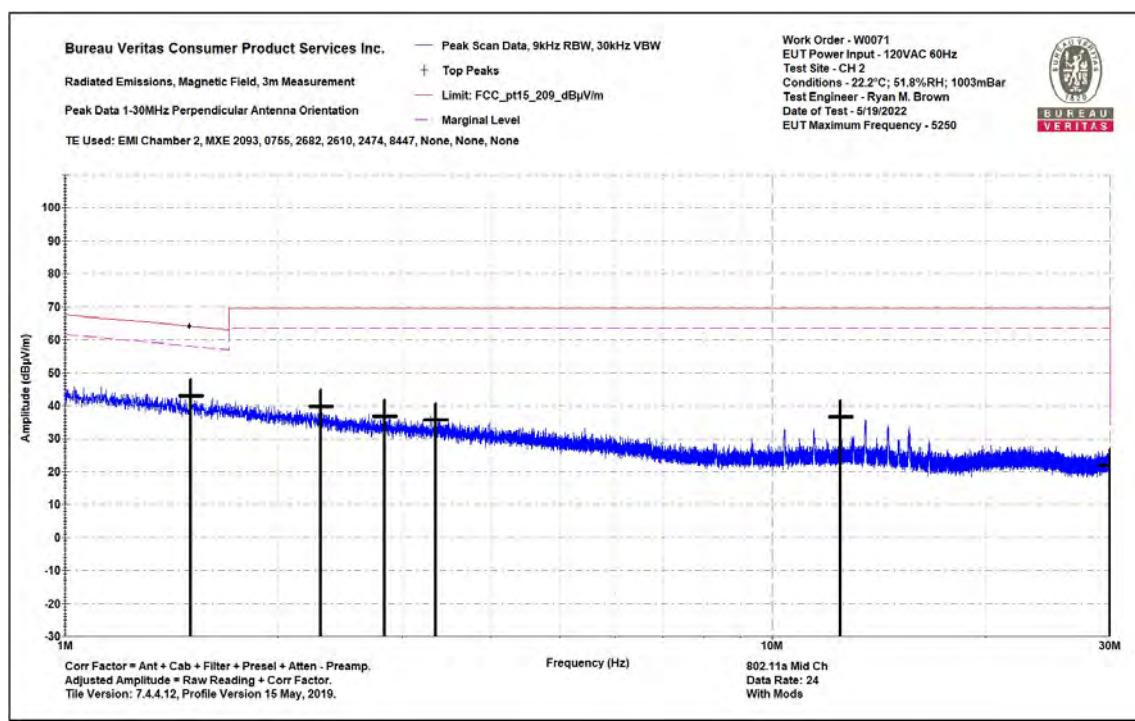
Work Order - W0071  
EUT Power Input - 120VAC 60Hz  
Test Site - CH 2  
Conditions - 22.2°C; 51.8%RH; 1003mBar  
Test Engineer - Ryan M. Brown  
Date of Test - 5/19/2022

Frequency (MHz)	Raw Peak Reading (dBµV)	Correction Factor (dB/m)	Adjusted Peak Amplitude (dBµV/m)	Lim: FCC_pt15_200_dBµV/m (dBµV/m)	Peak Margin (dB)	Peak Test Results (Pass/Fail)	Worst Margin (dB)	EUT Azimuth (degrees)
1.505	18.1	25	43	64.1	-21	PASS		195
2.3	18.7	21	39.7	69.5	-29.9	PASS		75
2.832	17.6	19.2	36.8	69.5	-32.8	PASS		255
3.342	17.9	17.9	35.8	69.5	-33.8	PASS		45
12.479	26.4	10.1	36.5	69.5	-33	PASS		30
30	13.8	8.1	21.8	40	-18.2	PASS	-18.2	270

### 1-30 MHz Perpendicular



## Test Report No.: EW0071-3



### 1-30 MHz Perpendicular

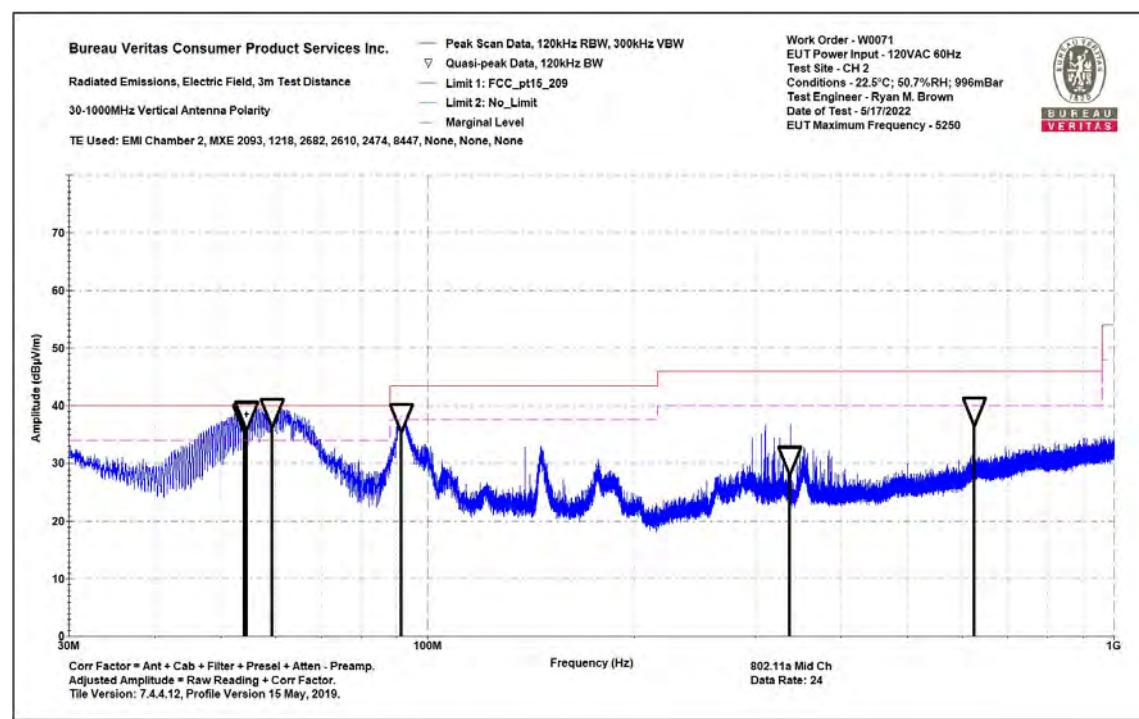
Bureau Veritas Consumer Product Services Inc.	Work Order - W0071
Radiated Emissions Electric Field 3m Distance	EUT Power Input - 120VAC 60Hz
30-1000MHz Vertical Data	Test Site - CH 2
Notes:	Conditions - 22.5°C; 50.7%RH; 996mBar
802.11a Mid Ch	Test Engineer - Ryan M. Brown
Data Rate: 24	Date of Test - 5/17/2022

Frequency (MHz)	Raw QP Reading (dBµV)	Correction Factor (dB/m)	Adjusted QP Amplitude (dBµV/m)	Lim1: FCC_pt15_209 (dBµV/m)	Margin to Lim1 (dB)	Test Results Lim1 (Pass/Fail)	Worst Margin Lim1 (dB)	Antenna Height (cm)	EUT Azimuth (degrees)
54.022	50.2	-12.1	38.1	40	-1.9	PASS		125	171
54.445	50.7	-12.2	38.5	40	-1.5	PASS		102	165
59.233	51.3	-12.2	39	40	-1	PASS	-1	103	200
91.594	49.6	-11.5	38.1	43.5	-5.4	PASS		125	0
336.797	34.4	-3.7	30.8	46	-15.2	PASS		125	160
625.009	38.4	0.9	39.2	46	-6.8	PASS		136	190

### 30-1000MHz Vertical



## Test Report No.: EW0071-3



### 30-1000MHz Vertical

Bureau Veritas Consumer Product Services Inc.	Work Order - W0071								
Radiated Emissions Electric Field 3m Distance	EUT Power Input - 120VAC 60Hz								
30-1000MHz Horizontal Data	Test Site - CH 2								
Notes:	Conditions - 22.5°C; 50.7%RH; 996mBar								
802.11a Mid Ch	Test Engineer - Ryan M. Brown								
Data Rate: 24	Date of Test - 5/17/2022								
Frequency (MHz)	Raw QP Reading (dB $\mu$ V)	Correction Factor (dB/m)	Adjusted QP Amplitude (dB $\mu$ V/m)	Lim1: FCC_pt15_209 (dB $\mu$ V/m)	Margin to Lim1 (dB)	Test Results Lim1 (Pass/Fail)	Worst Margin Lim1 (dB)	Antenna Height (cm)	EUT Azimuth (degrees)
297.025	42.4	-4.5	37.9	46	-8.1	PASS		100	109
311.154	28.7	-4.1	24.6	46	-21.4	PASS		209	290
320.857	30.4	-3.9	26.5	46	-19.5	PASS		100	261
323.082	33.6	-3.8	29.9	46	-16.1	PASS		118	106
625.014	39.8	0.9	40.7	46	-5.3	PASS	-5.3	125	75
947.893	23.1	5.8	28.9	46	-17.1	PASS		250	182

### 30-1000MHz Horizontal



## Test Report No.: EW0071-3

Bureau Veritas Consumer Product Services Inc.

Radiated Emissions, Electric Field, 3m Test Distance

30-1000MHz Horizontal Antenna Polarity

TE Used: EMI Chamber 2, MXE 2093, 1218, 2682, 2610, 2474, 8447, None, None, None

Peak Scan Data, 120kHz RBW, 300kHz VBW

Quasi-peak Data, 120 kHz BW

Limit 1: FCC\_pt15\_209

Limit 2: No\_Limit

Marginal Level

Work Order - W0071

EUT Power Input - 120VAC 60Hz

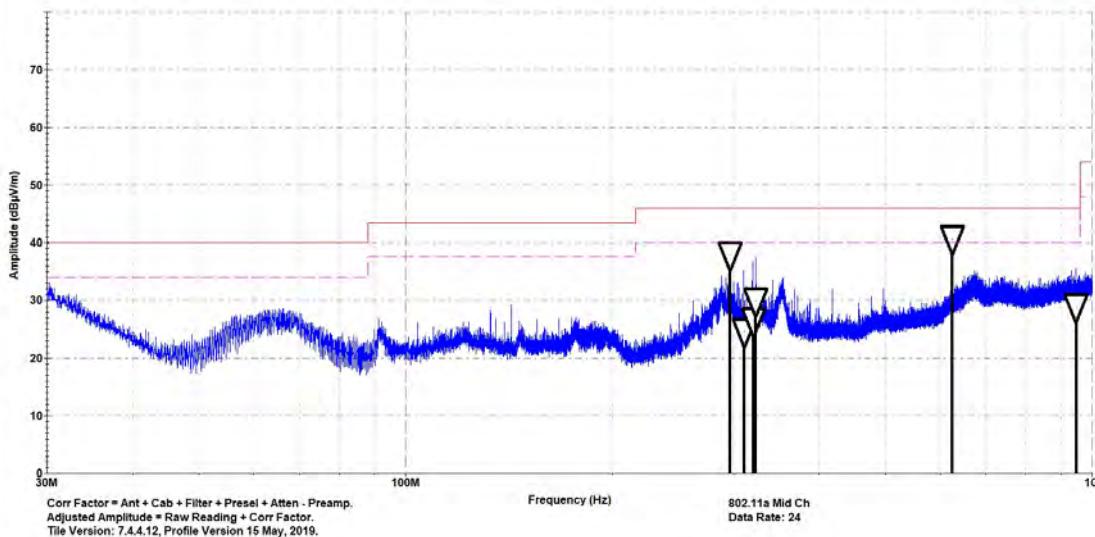
Test Site - CH 2

Conditions - 22.5°C; 50.7%RH; 996mBar

Test Engineer - Ryan M. Brown

Date of Test - 5/17/2022

EUT Maximum Frequency - 5250



30-1000MHz Horizontal

Bureau Veritas Consumer Products  
Services Inc.

One Distribution Center Circle, #1 • Littleton,  
MA.

Tel: (978) 486-8880  
Fax: (978) 486-8828



## Test Report No.: EW0071-3

Band 1 (5150-5250MHz): ABOVE 1GHz DATA 802.11a Data Rate 24

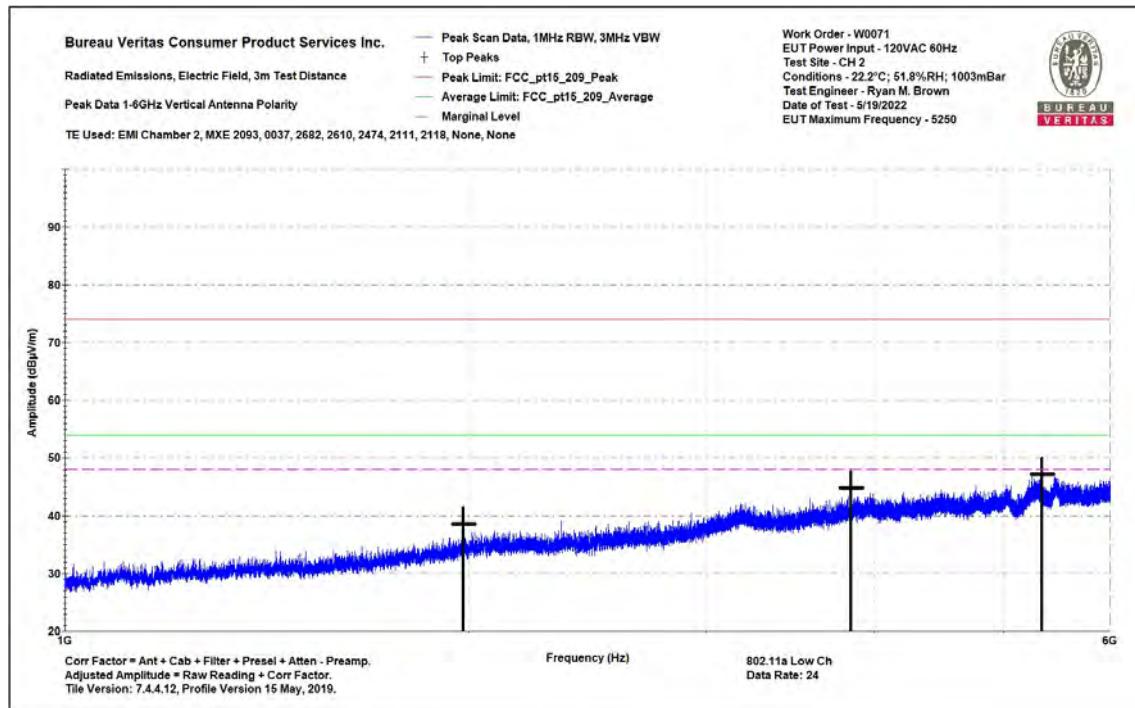
### Low Ch

### Field Strength to Radiated Power Conversion for measurements not in the restricted band

$$\text{EIRP[dBm]} = \text{E[dB}\mu\text{V/m]} - 95.2$$

Bureau Veritas Consumer Product Services Inc.		Work Order - W0071											
Radiated Emissions Electric Field 3m Distance		EUT Power Input - 120VAC 60Hz											
Top Peaks Vertical 1-6GHz		Test Site - CH 2											
Notes:		Conditions - 22.2°C; 51.8%RH; 1003mBar											
802.11a Low Ch		Test Engineer - Ryan M. Brown											
Data Rate: 24		Date of Test - 5/19/2022											
Frequency (MHz)	Raw Peak Reading (dB $\mu$ V)	Correction Factor (dB/m)	Adjusted Peak Amplitude (dB $\mu$ V/m)	Pk Lim: FCC_pt15_20_9_Peak (dB $\mu$ V/m)	Margin to Peak Limit (dB)	Peak Limit Test Results (Pass/Fail)	Peak Limit Worst Margin (dB)	Av Lim: FCC_pt15_20_9_Average (dB $\mu$ V/m)	Margin to Average Limit (dB)	Average Limit Test Result (Pass/Fail)	Average Limit Worst Margin (dB)	Antenna Height (cm)	EUT Azimuth (degrees)
1980	49.8	-106.4	-56.6dBm	-27dBm	-29.6	PASS		N/A	N/A	N/A		300	286
3850.25	50.8	-6	44.8	74	-29.2	PASS		54	-9.2	PASS		300	124
5335.63	48.7	-1.5	47.2	74	-26.8	PASS	-26.8	54	-6.8	PASS	-6.8	100	92

### 1-6 GHz Vertical



### 1-6GHz Vertical

Bureau Veritas Consumer Products Services Inc.

One Distribution Center Circle, #1 • Littleton, MA.

Tel: (978) 486-8880  
Fax: (978) 486-8828

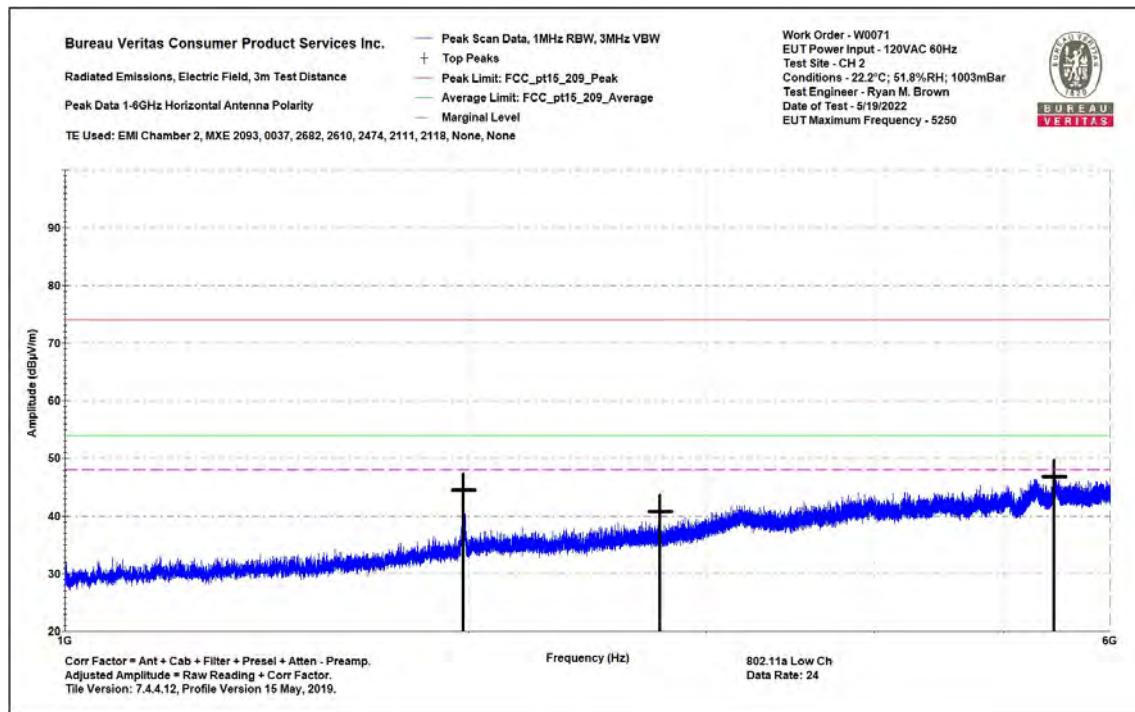


## Test Report No.: EW0071-3

Bureau Veritas Consumer Product Services Inc.	Work Order - W0071
Radiated Emissions Electric Field 3m Distance	EUT Power Input - 120VAC 60Hz
Top Peaks Horizontal 1-6GHz	Test Site - CH 2
Notes:	Conditions - 22.2°C; 51.8%RH; 1003mBar
802.11a Low Ch	Test Engineer - Ryan M. Brown
Data Rate: 24	Date of Test - 5/19/2022

Frequency (MHz)	Raw Peak Reading (dB $\mu$ V)	Correction Factor (dB/m)	Adjusted Peak Amplitude (dB $\mu$ V/m)	Pk Lim: FCC_pt15_20_9_Peak (dB $\mu$ V/m)	Margin to Peak Limit (dB)	Peak Limit Results (Pass/Fail)	Peak Limit Worst Margin (dB)	Av Lim: FCC_pt15_20_9_Average (dB $\mu$ V/m)	Margin to Avg Limit (dB)	Avg Limit Results (Pass/Fail)	Avg Limit Worst Margin (dB)	Antenna Height (cm)	EUT Azimuth (degrees)
1980	55.6	-106.4	-50.8dBm	-27dBm	-32	PASS		N/A	N/A	N/A		200	60
2773.13	51	-10.2	40.8	74	-33.2	PASS		54	-13.2	PASS		100	288
5451.25	48.1	-1.3	46.8	74	-27.2	PASS	-27.2	54	-7.2	PASS	-7.2	300	289

### 1-6GHz Horizontal



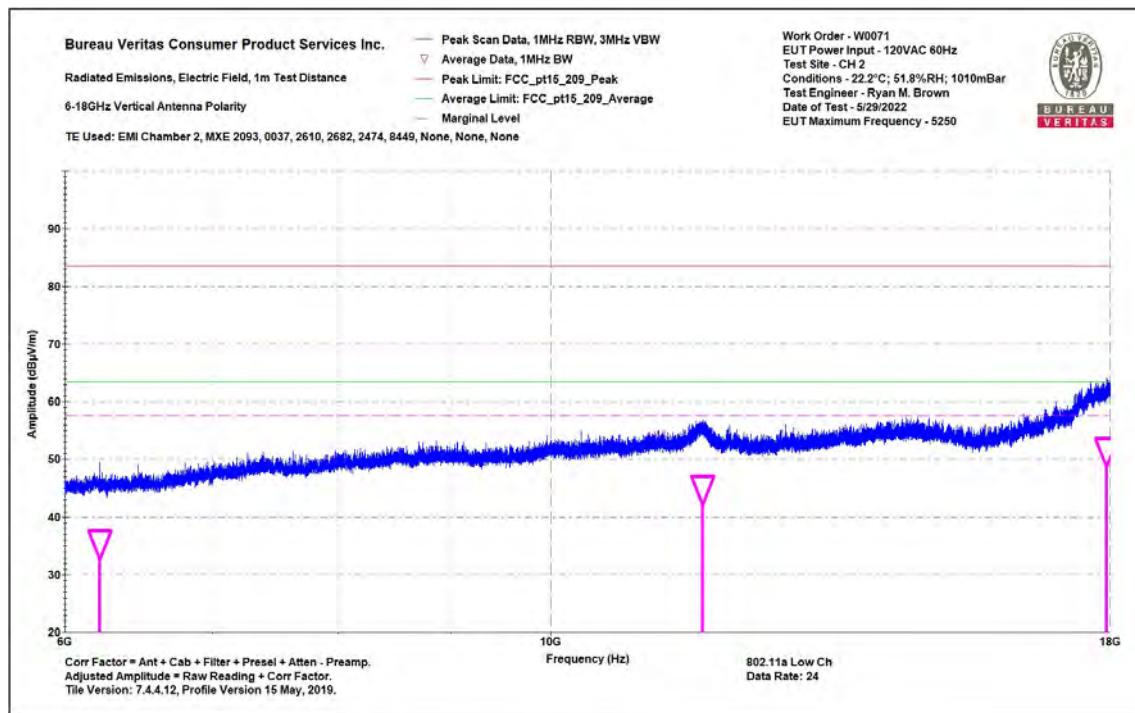
### 1-6GHz Horizontal



## Test Report No.: EW0071-3

Bureau Veritas Consumer Product Services Inc. Radiated Emissions Electric Field 1m Distance 6-18GHz Vertical Data Notes: 802.11a Low Ch Data Rate: 24							Work Order - W0071 EUT Power Input - 120VAC 60Hz Test Site - CH 2 Conditions - 22.2°C; 51.8%RH; 1010mBar Test Engineer - Ryan M. Brown Date of Test - 5/29/2022								
Frequency (MHz)	Raw Peak Reading (dB $\mu$ V)	Raw Avg Reading (dB $\mu$ V)	Correction Factor (dB/m)	Adjusted Peak Amplitude (dB $\mu$ V/m)	Pk Lim: FCC_pt15_209_Peak (dB $\mu$ V/m)	Peak Margin (dB)	Peak Results (Pass/Fail)	Worst Peak Margin (dB)	Adjusted Avg Amplitude (dB $\mu$ V/m)	Av Lim: FCC_pt15_209_Average (dB $\mu$ V/m)	Avg Margin (dB)	Avg Results (Pass/Fail)	Worst Avg Margin (dB)	Antenna Height (cm)	EUT Azimuth (degrees)
6222.3	42.9	N/A	-92.4	-45.5dBm	-27 dBm	-22.5	PASS	N/A	N/A	N/A	N/A	PASS	200	280	
11732.6	44.2	36.1	8.9	53.1	83.5	-30.4	PASS	45	63.5	-18.5	PASS	200	95		
17935.4	43.7	34.3	17.2	60.9	83.5	-22.6	PASS	51.5	63.5	-12	PASS	-12	98	89	

### 6-18GHz Vertical



### 6-18GHz Vertical



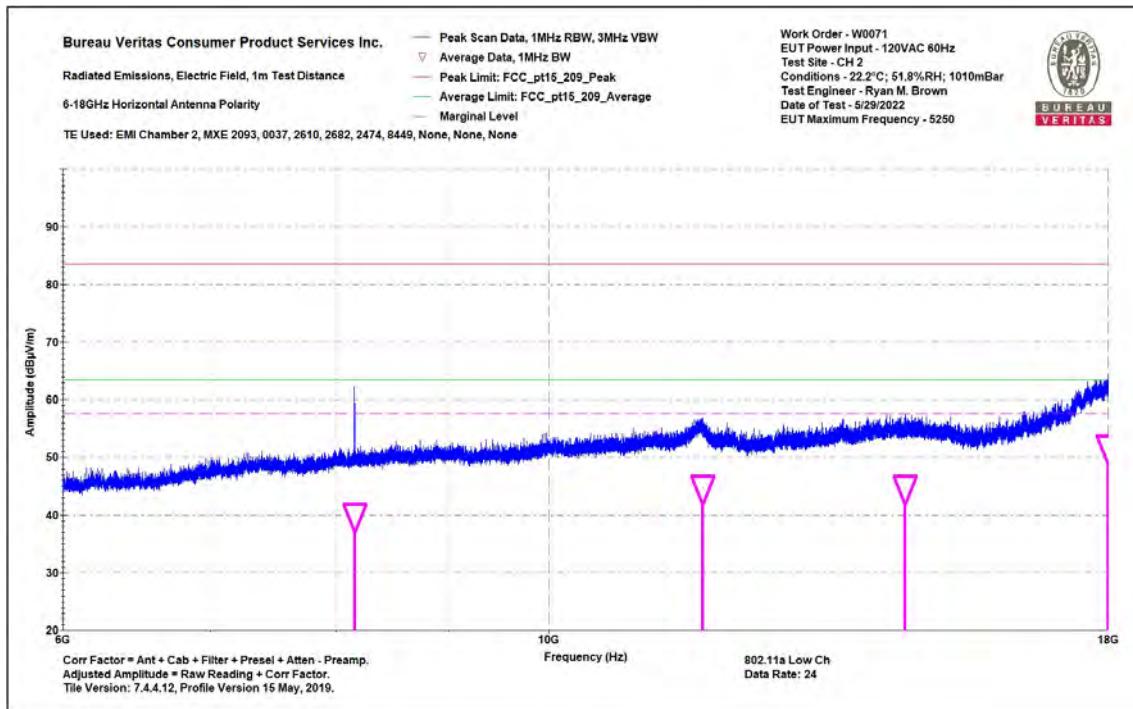
## Test Report No.: EW0071-3

Bureau Veritas Consumer Product Services Inc.  
Radiated Emissions Electric Field 1m Distance  
6-18GHz Horizontal Data  
Notes:  
802.11a Low Ch  
Data Rate: 24

Work Order - W0071  
EUT Power Input - 120VAC 60Hz  
Test Site - CH 2  
Conditions - 22.2°C; 51.8%RH; 1010mBar  
Test Engineer - Ryan M. Brown  
Date of Test - 5/29/2022

Frequency (MHz)	Raw Peak Reading (dB $\mu$ V)	Raw Avg Reading (dB $\mu$ V)	Correction Factor (dB/m)	Adjusted Peak Amplitude (dB $\mu$ V/m)	Pk Lim: FCC_pt15_209_Peak (dB $\mu$ V/m)	Peak Margin (dB)	Peak Test Results (Pass/Fail)	Worst Peak Margin (dB)	Adjusted Avg Amplitude (dB $\mu$ V/m)	Av Lim: FCC_pt15_209_Average (dB $\mu$ V/m)	Avg Margin (dB)	Avg Test Results (Pass/Fail)	Worst Avg Margin (dB)	Antenna Height (cm)	EUT Azimuth (degrees)
8152.8	43.2	33.9	5.8	49	83.5	-34.5	PASS		39.8	63.5	-23.7	PASS		100	179
11756.8	44.7	35.9	8.7	53.5	83.5	-30	PASS		44.7	63.5	-18.8	PASS		109	248
14543.9	43.8	N/A	-83.8	-40dBm	-27dBm	-13	PASS		N/A	N/A	N/A	N/A		150	25
17996.8	43.6	34.3	17.4	61	83.5	-22.5	PASS	-22.5	51.7	63.5	-11.8	PASS	-11.8	118	174

### 6-18GHz Horizontal



### 6-18GHz Horizontal



## Test Report No.: EW0071-3

### Radiated Emissions Table

Date: 16-May-22	Company: Bevi	Work Order: W0071												
Engineer: Ryan M. Brown	EUT Desc: Bevi Countertop 1.0	EUT Operating Voltage/Frequency: 120VAC 60Hz												
Temp: 22.9	Humidity: 58%	Pressure: 998												
Frequency Range: 18-26.5GHz		Measurement Distance: 1 m												
Notes: 802.11a Data Rate 24		EUT Max Freq: 5250MHz												
Antenna Polarization (H / V)	Frequency (MHz)	Peak Reading (dB $\mu$ V)	Average Reading (dB $\mu$ V)	Preamp Factor (dB)	Antenna Factor (dB/m)	Cable Factor (dB)	Adjusted Peak Reading (dB $\mu$ V/m)	Adjusted Avg Reading (dB $\mu$ V/m)	FCC Class B High Frequency - Peak	FCC Class B High Frequency - Average				
									Limit (dB $\mu$ V/m)	Margin (dB)	Result (Pass/Fail)	Limit (dB $\mu$ V/m)	Margin (dB)	Result (Pass/Fail)

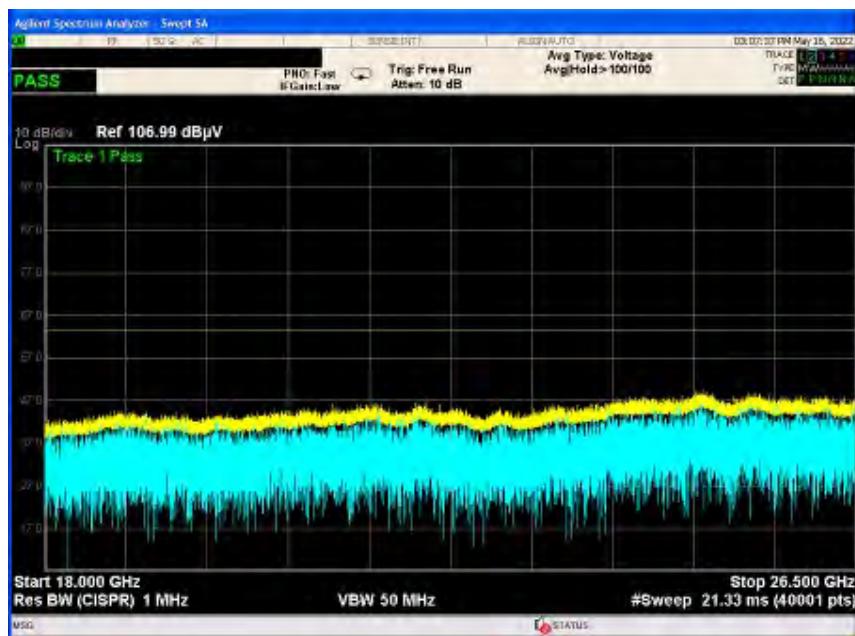
No Emissions found in this range

**Table Result:** --- by --- dB **Worst Freq:** --- MHz

Test Site: EMI Chamber 2  
Analyzer: 2093  
CSsoft Radiated Emissions Calculator v 1.017.222  
Adjusted Reading = Reading - Preamp Factor + Antenna Factor + Cable Factor

Cable 1: Asset #2323  
Preamp: 18-26.5GHz  
Cable 2: ---  
Antenna: 18-26.5GHz Horn  
Cable 3: ---  
Preselector: ---  
Copyright Curtis-Straus LLC 2000

### 18-26.5GHz



### 18-26.5GHz

### Radiated Emissions Table

Date: 31-May-22	Company: Bevi	Work Order: W0071												
Engineer: Ryan M. Brown	EUT Desc: Bevi Countertop 1.0	EUT Operating Voltage/Frequency: 120VAC 50Hz												
Temp: 23.5	Humidity: 50%	Pressure: 1007												
Frequency Range: 26.5-40GHz		Measurement Distance: 0.1 m												
Notes: 802.11a Data Rate: 24 Low Ch		EUT Max Freq: 5240												
Antenna Polarization (H / V)	Frequency (MHz)	Peak Reading (dB $\mu$ V)	Average Reading (dB $\mu$ V)	Preamp Factor (dB)	Antenna Factor (dB/m)	Cable Factor (dB)	Adjusted Peak Reading (dB $\mu$ V/m)	Adjusted Avg Reading (dB $\mu$ V/m)	FCC Class B High Frequency - Peak	FCC Class B High Frequency - Average				
									Limit (dB $\mu$ V/m)	Margin (dB)	Result (Pass/Fail)	Limit (dB $\mu$ V/m)	Margin (dB)	Result (Pass/Fail)

No Emissions Found in this Range

**Table Result:** --- by --- dB **Worst Freq:** --- MHz

Test Site: Chamber 2  
Analyzer: 1284  
CSsoft Radiated Emissions Calculator v 1.017.221  
Adjusted Reading = Reading - Preamp Factor + Antenna Factor + Cable Factor

Cable 1: 40GHz Mixer/18-26.5GHz no cable  
Preamp: None  
Cable 2: ---  
Antenna: 40GHz Mixer  
Cable 3: ---  
Preselector: ---  
Copyright Curtis-Straus LLC 2000

### 26.5-40GHz

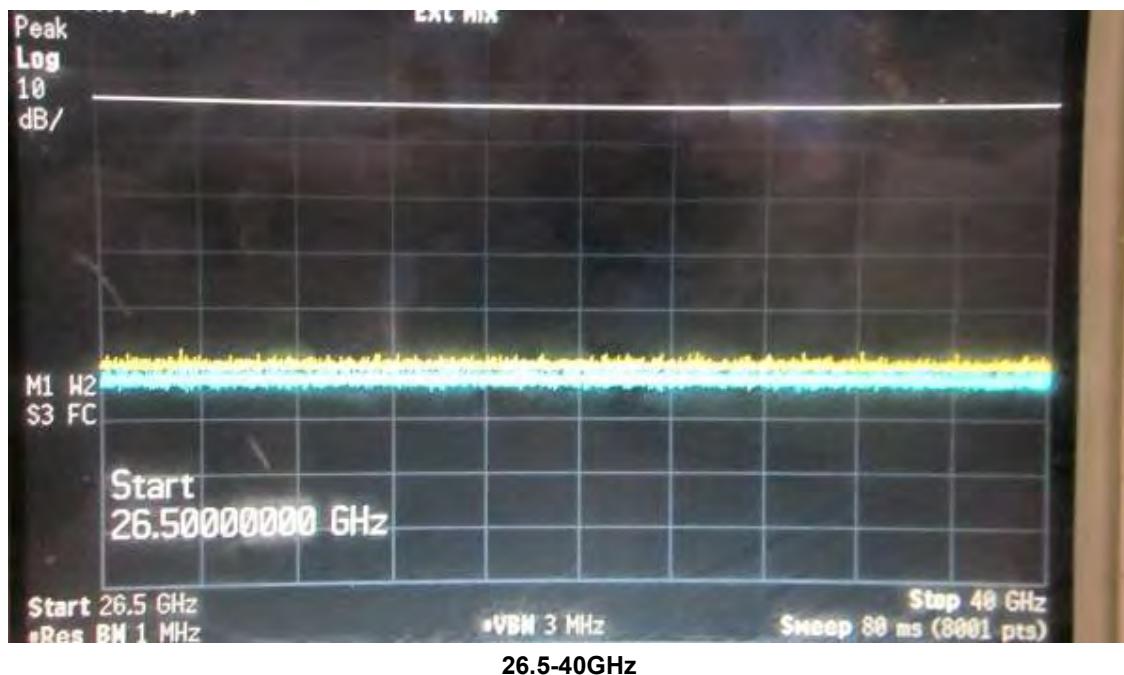
Bureau Veritas Consumer Products  
Services Inc.

One Distribution Center Circle, #1 • Littleton,  
MA.

Tel: (978) 486-8880  
Fax: (978) 486-8828



Test Report No.: EW0071-3





## Test Report No.: EW0071-3

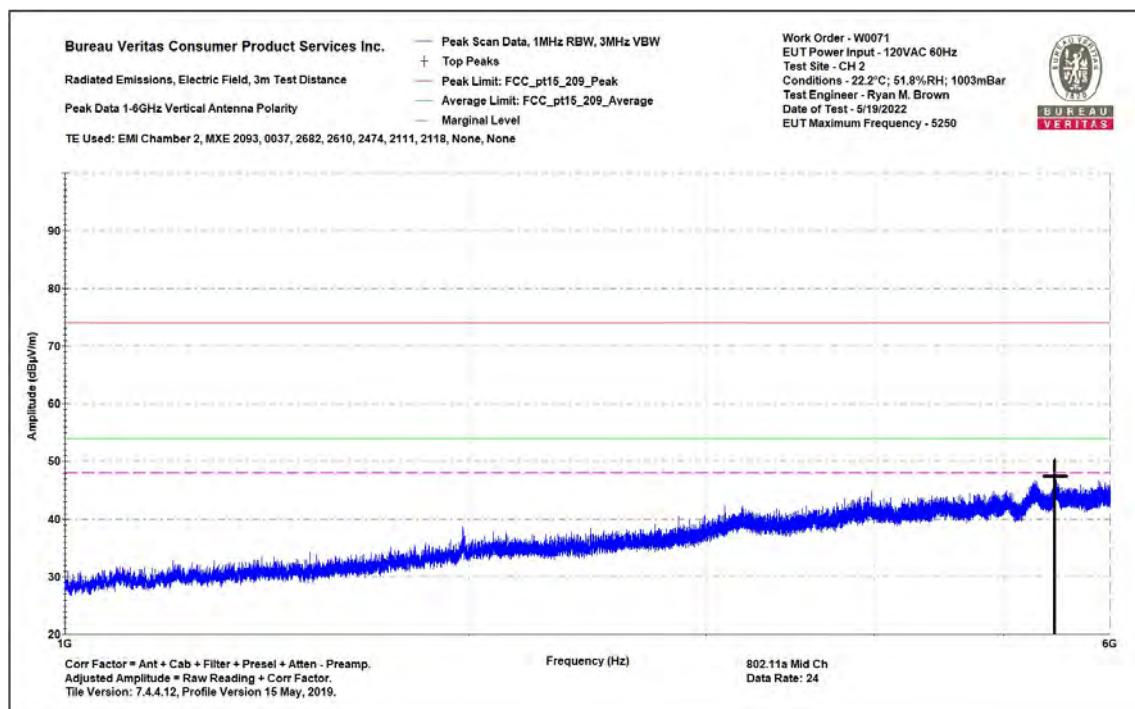
### Mid Ch

Bureau Veritas Consumer Product Services Inc.	Work Order - W0071
Radiated Emissions Electric Field 3m Distance	EUT Power Input - 120VAC 60Hz
Top Peaks Vertical 1-6GHz	Test Site - CH 2
Notes:	Conditions - 22.2°C; 51.8%RH; 1003mBar
802.11a Mid Ch	Test Engineer - Ryan M. Brown
Data Rate: 24	Date of Test - 5/19/2022

Frequency (MHz)	Raw Peak Reading (dB $\mu$ V)	Correction Factor (dB/m)	Adjusted Peak Amplitude (dBm)	Pk Lim: FCC_pt15_209_Peak (dBm)	Margin to Peak Limit (dB)	Peak Limit Test Results (Pass/Fail)	Peak Limit Worst Margin (dB)	Antenna Height (cm)	EUT Azimuth (degrees)
5458.5	48.7	-96.4	-47.7	-27	-20.7	PASS	-26.5	100	157

### 1-6 GHz Vertical



### 1-6GHz Vertical



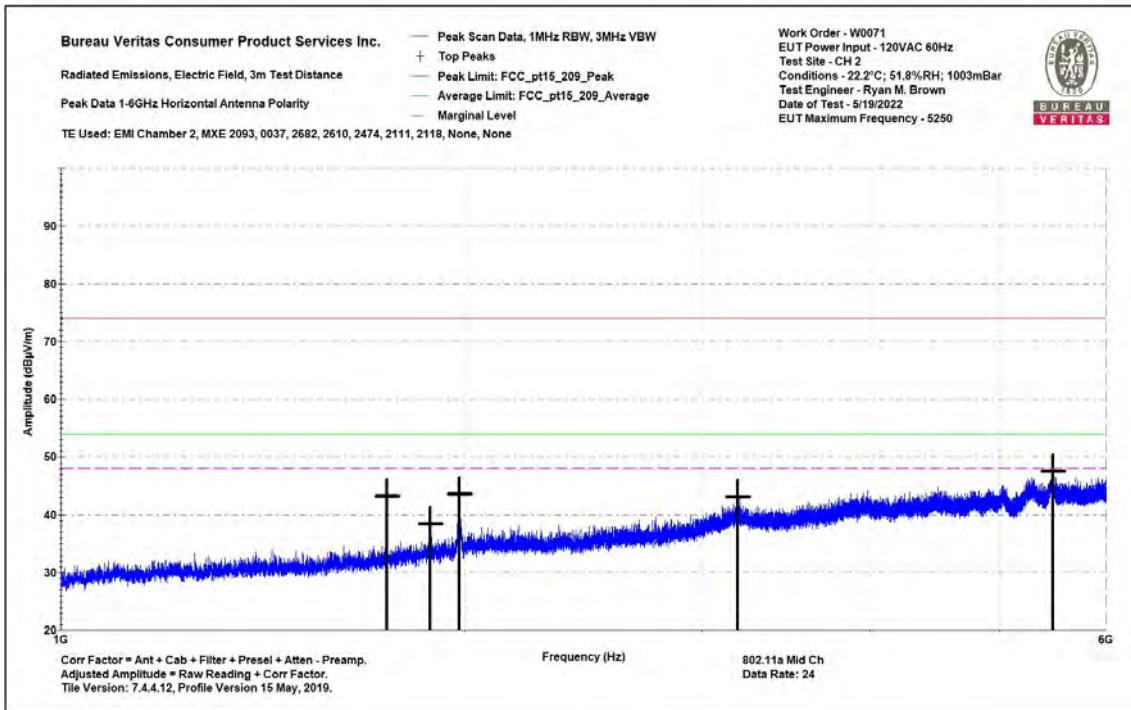
## Test Report No.: EW0071-3

Bureau Veritas Consumer Product Services Inc.	Work Order - W0071
Radiated Emissions Electric Field 3m Distance	EUT Power Input - 120VAC 60Hz
Top Peaks Horizontal 1-6GHz	Test Site - CH 2
Notes:	Conditions - 22.2°C; 51.8%RH; 1003mBar
802.11a Mid Ch	Test Engineer - Ryan M. Brown
Data Rate: 24	Date of Test - 5/19/2022

Frequency (MHz)	Raw Peak Reading (dB $\mu$ V)	Correction Factor (dB/m)	Adjusted Peak Amplitude (dBm)	Pk Lim: FCC_pt15_209_Peak (dBm)	Margin to Peak Limit (dB)	Peak Limit Results (Pass/Fail)	Peak Limit Worst Margin (dB)	Antenna Height (cm)	EUT Azimuth (degrees)
1748.25	56	-108	-52	-27	-25	PASS		200	49
1882.88	50.4	-107.1	-56.7	-27	-29.7	PASS		200	82
1980	54.8	-106.4	-51.6	-27	-24.6	PASS		200	82
3189	50.4	-102.5	-52.1	-27	-25.1	PASS		300	315
5475.13	49.2	-96.8	-47.6	-27	-20.6	PASS	-20.6	300	27

### 1-6GHz Horizontal



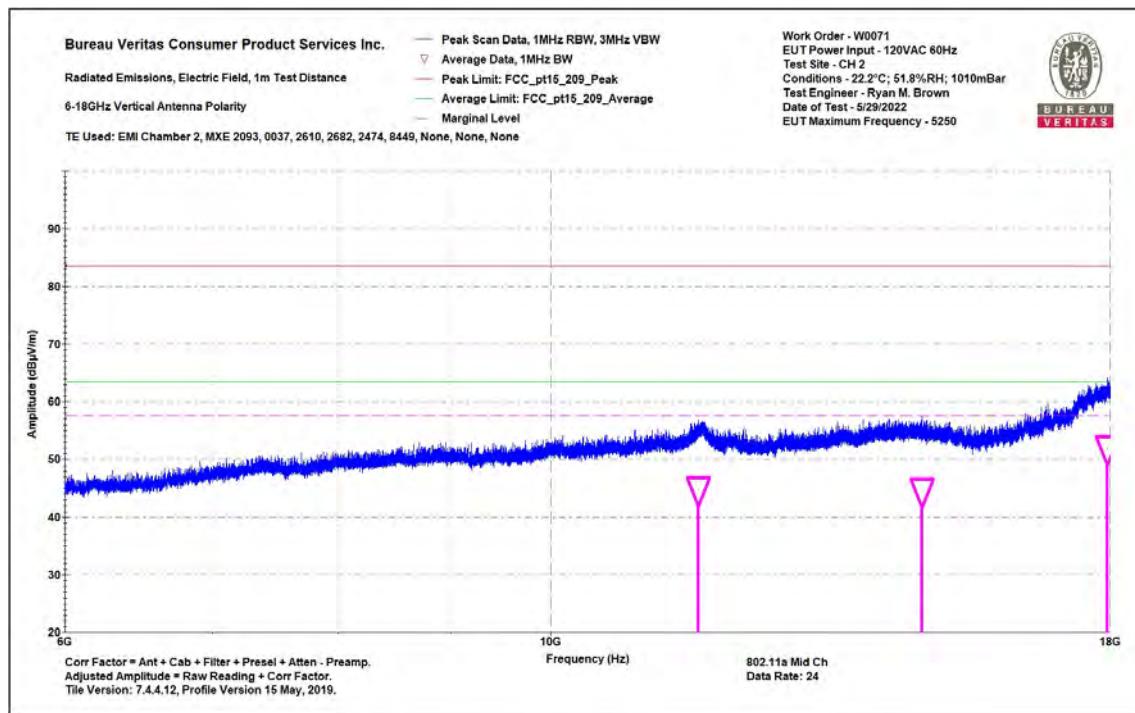
### 1-6GHz Horizontal



## Test Report No.: EW0071-3

Bureau Veritas Consumer Product Services Inc. Radiated Emissions Electric Field 1m Distance 6-18GHz Vertical Data Notes: 802.11a Mid Ch Data Rate: 24							Work Order - W0071 EUT Power Input - 120VAC 60Hz Test Site - CH 2 Conditions - 22.2°C; 51.8%RH; 1010mBar Test Engineer - Ryan M. Brown Date of Test - 5/29/2022								
Frequency (MHz)	Raw Peak Reading (dB $\mu$ V)	Raw Avg Reading (dB $\mu$ V)	Correction Factor (dB/m)	Adjusted Peak Amplitude (dB $\mu$ V/m)	Pk Lim: FCC_pt15_209_Peak (dB $\mu$ V/m)	Peak Margin (dB)	Peak Results (Pass/Fail)	Worst Peak Margin (dB)	Adjusted Avg Amplitude (dB $\mu$ V/m)	Av Lim: FCC_pt15_209_Average (dB $\mu$ V/m)	Avg Margin (dB)	Avg Results (Pass/Fail)	Worst Avg Margin (dB)	Antenna Height (cm)	EUT Azimuth (degrees)
11674.1	46.1	35.7	9.1	55.2	83.5	-28.3	PASS		44.8	63.5	-18.7	PASS		182	232
14765.1	43.2	N/A	-84.1	-40.9dBm	-27dBm	-13.9	PASS		N/A	N/A	N/A	N/A		200	238
17948.1	44	34.4	17.4	61.5	83.5	-22	PASS	-22	51.9	63.5	-11.6	PASS	-11.6	166	166

### 6-18GHz Vertical



### 6-18GHz Vertical

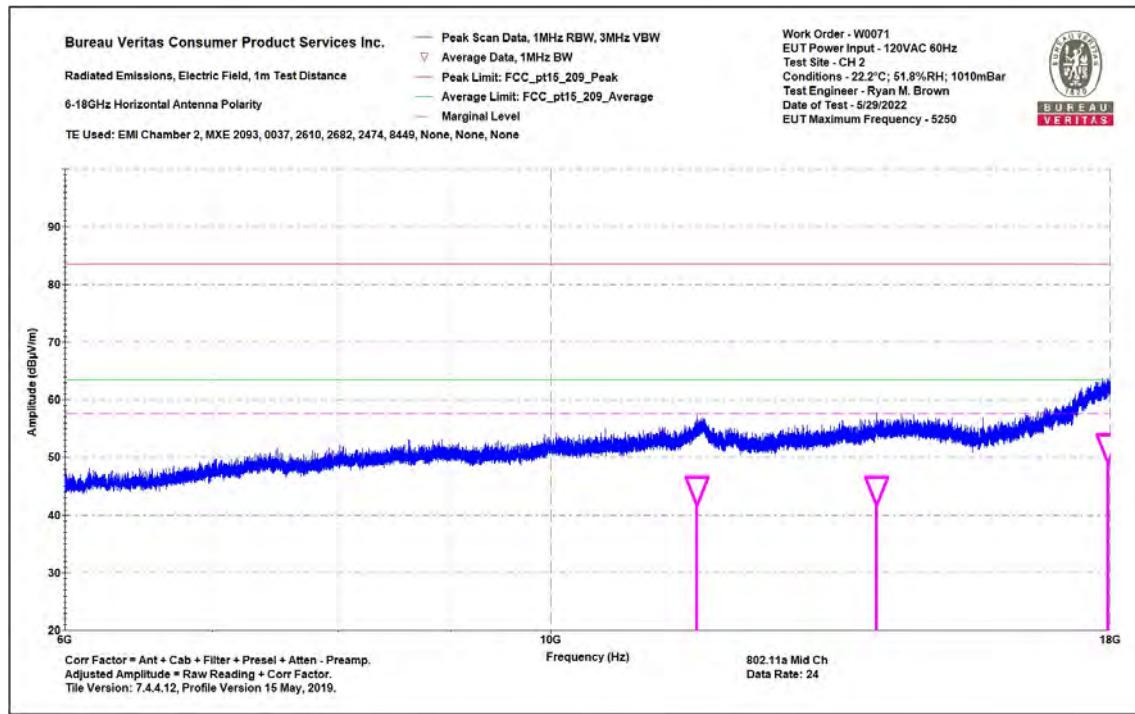


## Test Report No.: EW0071-3

Bureau Veritas Consumer Product Services Inc.							Work Order - W0071						
Radiated Emissions Electric Field 1m Distance							EUT Power Input - 120VAC 60Hz						
6-18GHz Horizontal Data							Test Site - CH 2						
Notes:							Conditions - 22.2°C; 51.8%RH; 1010mBar						
802.11a Mid Ch							Test Engineer - Ryan M. Brown						
Data Rate: 24							Date of Test - 5/29/2022						

Frequency (MHz)	Raw Peak Reading (dB $\mu$ V)	Raw Avg Reading (dB $\mu$ V)	Correction Factor (dB/m)	Adjusted Peak Amplitude (dB $\mu$ V/m)	Pk Lim: FCC_pt15_209_Peak (dB $\mu$ V/m)	Peak Margin (dB)	Peak Test Results (Pass/Fail)	Worst Peak Margin (dB)	Adjusted Avg Amplitude (dB $\mu$ V/m)	Av Lim: FCC_pt15_209_Average (dB $\mu$ V/m)	Avg Margin (dB)	Avg Test Results (Pass/Fail)	Worst Avg Margin (dB)	Antenna Height (cm)	EUT Azimuth (degrees)
11655.7	44.4	35.5	9.1	53.4	83.5	-30.1	PASS		44.5	63.5	-19	PASS		172	176
14079.7	43.6	N/A	-83.7	-40.1dBm	-27dBm	-13.1	PASS		N/A	N/A	N/A	N/A		170	273
17958.5	42.6	34.5	17.5	60	83.5	-23.5	PASS	-23.5	51.9	63.5	-11.6	PASS	-11.6	16	89

### 6-18GHz Horizontal



### 6-18GHz Horizontal



## Test Report No.: EW0071-3

### Radiated Emissions Table

Date: 16-May-22	Company: Bevi	Work Order: W0071												
Engineer: Ryan M. Brown	EUT Desc: Bevi Countertop 1.0	EUT Operating Voltage/Frequency: 120VAC 60Hz												
Temp: 22.9	Humidity: 58%	Pressure: 998												
Frequency Range: 18-26.5GHz		Measurement Distance: 1 m												
Notes: 802.11a Data Rate 24		EUT Max Freq: 5250MHz												
Antenna Polarization (H / V)	Frequency (MHz)	Peak Reading (dB $\mu$ V)	Average Reading (dB $\mu$ V)	Preamp Factor (dB)	Antenna Factor (dB/m)	Cable Factor (dB)	Adjusted Peak Reading (dB $\mu$ V/m)	Adjusted Avg Reading (dB $\mu$ V/m)	FCC Class B High Frequency - Peak	FCC Class B High Frequency - Average				
									Limit (dB $\mu$ V/m)	Margin (dB)	Result (Pass/Fail)	Limit (dB $\mu$ V/m)	Margin (dB)	Result (Pass/Fail)

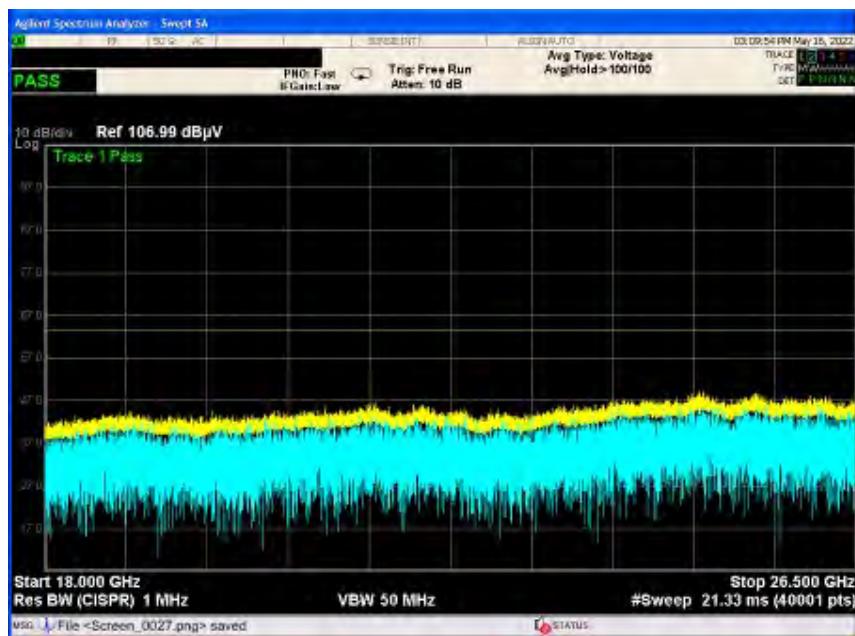
No Emissions found in this range

**Table Result:** --- by --- dB **Worst Freq:** --- MHz

Test Site: EMI Chamber 2  
Analyzer: 2093  
CSsoft Radiated Emissions Calculator v 1.017.222  
Adjusted Reading = Reading - Preamp Factor + Antenna Factor + Cable Factor

Cable 1: Asset #2323  
Preamp: 18-26.5GHz  
Antenna: 18-26.5GHz Horn  
Preslector: ---  
Copyright Curtis-Straus LLC 2000

### 18-26.5GHz



### 18-26.5GHz

### Radiated Emissions Table

Date: 31-May-22	Company: Bevi	Work Order: W0071												
Engineer: Ryan M. Brown	EUT Desc: Bevi Countertop 1.0	EUT Operating Voltage/Frequency: 120VAC 50Hz												
Temp: 23.5	Humidity: 50%	Pressure: 1007												
Frequency Range: 26.5-40GHz		Measurement Distance: 0.1 m												
Notes: 802.11a Data Rate: 24 Mid Ch		EUT Max Freq: 5240												
Antenna Polarization (H / V)	Frequency (MHz)	Peak Reading (dB $\mu$ V)	Average Reading (dB $\mu$ V)	Preamp Factor (dB)	Antenna Factor (dB/m)	Cable Factor (dB)	Adjusted Peak Reading (dB $\mu$ V/m)	Adjusted Avg Reading (dB $\mu$ V/m)	FCC Class B High Frequency - Peak	FCC Class B High Frequency - Average				
									Limit (dB $\mu$ V/m)	Margin (dB)	Result (Pass/Fail)	Limit (dB $\mu$ V/m)	Margin (dB)	Result (Pass/Fail)

No Emissions Found in this Range

**Table Result:** --- by --- dB **Worst Freq:** --- MHz

Test Site: Chamber 2  
Analyzer: 1284  
CSsoft Radiated Emissions Calculator v 1.017.221  
Adjusted Reading = Reading - Preamp Factor + Antenna Factor + Cable Factor

Cable 1: 40GHz Mixer/18-26.5GHz no cable  
Preamp: None  
Antenna: 40GHz Mixer  
Preslector: ---  
Copyright Curtis-Straus LLC 2000

### 26.5-40GHz

Bureau Veritas Consumer Products  
Services Inc.

One Distribution Center Circle, #1 • Littleton,  
MA.

Tel: (978) 486-8880  
Fax: (978) 486-8828



BUREAU  
VERITAS

Test Report No.: EW0071-3





## Test Report No.: EW0071-3

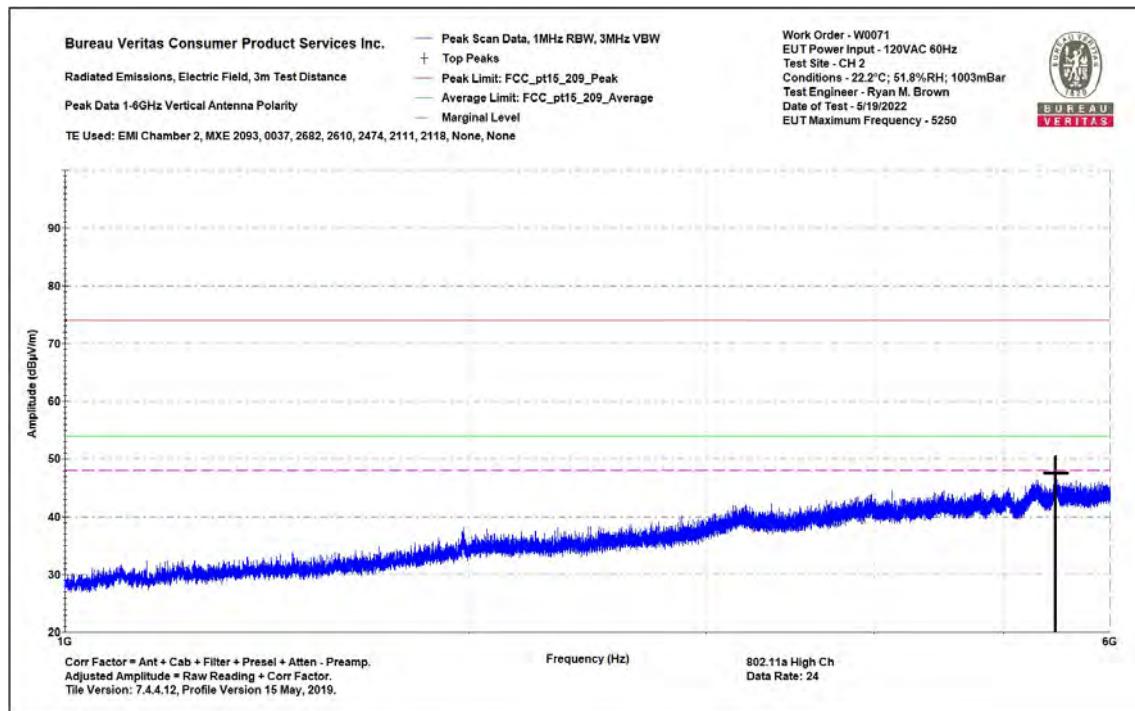
### High Ch

Bureau Veritas Consumer Product Services Inc.	Work Order - W0071
Radiated Emissions Electric Field 3m Distance	EUT Power Input - 120VAC 60Hz
Top Peaks Vertical 1-6GHz	Test Site - CH 2
Notes:	Conditions - 22.2°C; 51.8%RH; 1003mBar
802.11a High Ch	Test Engineer - Ryan M. Brown
Data Rate: 24	Date of Test - 5/19/2022
0	

Frequency (MHz)	Raw Peak Reading (dB $\mu$ V)	Correction Factor (dB/m)	Adjusted Peak Amplitude (dBm)	Pk Lim: FCC_pt15_209_Peak (dBm)	Margin to Peak Limit (dB)	Peak Limit Test Results (Pass/Fail)	Peak Limit Worst Margin (dB)	Antenna Height (cm)	EUT Azimuth (degrees)
5464.38	48.8	-96.5	-47.7	-27	-20.7	PASS	-20.7	200	59

### 1-6 GHz Vertical



### 1-6 GHz Vertical

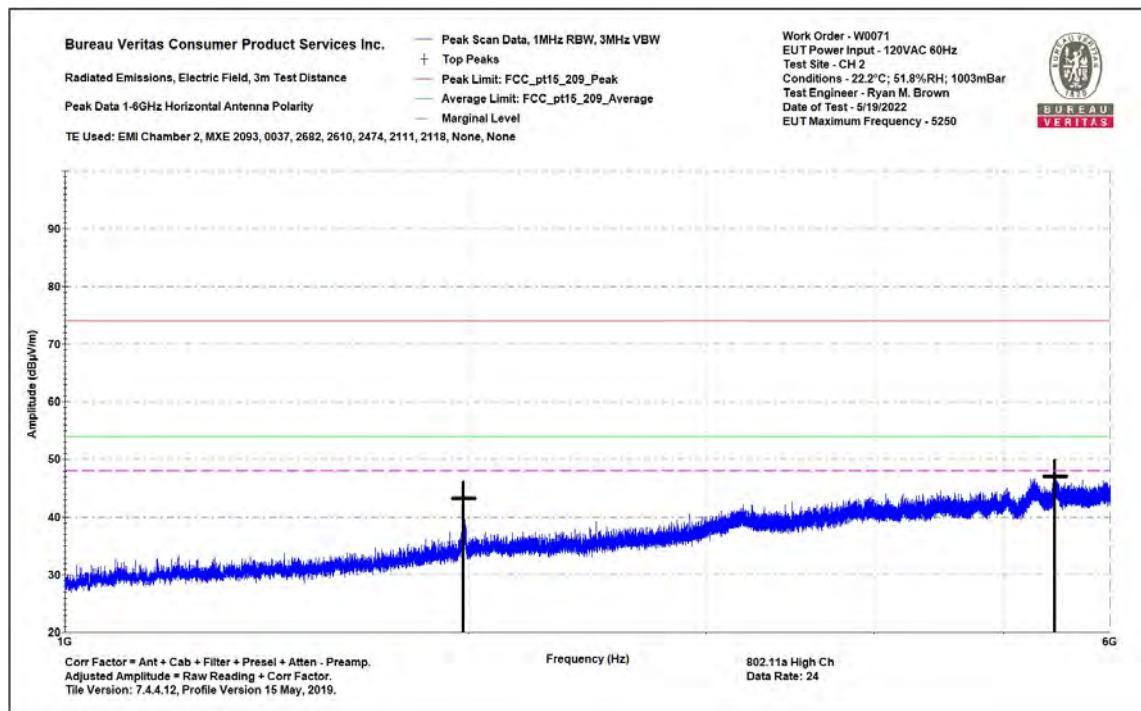


## Test Report No.: EW0071-3

Bureau Veritas Consumer Product Services Inc.	Work Order - W0071
Radiated Emissions Electric Field 3m Distance	EUT Power Input - 120VAC 60Hz
Top Peaks Horizontal 1-6GHz	Test Site - CH 2
Notes:	Conditions - 22.2°C; 51.8%RH; 1003mBar
802.11a High Ch	Test Engineer - Ryan M. Brown
Data Rate: 24	Date of Test - 5/19/2022

Frequency (MHz)	Raw Peak Reading (dB $\mu$ V)	Correction Factor (dB/m)	Adjusted Peak Amplitude (dB $\mu$ V/m)	Pk Lim: FCC_pt15_20_9_Peak (dB $\mu$ V/m)	Margin to Peak Limit (dB)	Peak Limit Results (Pass/Fail)	Peak Limit Worst Margin (dB)	Av Lim: FCC_pt15_20_9_Average (dB $\mu$ V/m)	Margin to Avg Limit (dB)	Avg Limit Results (Pass/Fail)	Avg Limit Worst Margin (dB)	Antenna Height (cm)	EUT Azimuth (degrees)
1980.38	54.4	-106.4	-52dBm	-27dBm	-25	PASS		N/A	N/A	N/A		200	287
5456.62	48.3	-1.2	47.1	74	-26.9	PASS	-26.9	54	-6.9	PASS	-6.9	300	0

### 1-6 GHz Horizontal



### 1-6 GHz Horizontal

Bureau Veritas Consumer Product Services Inc.	Work Order - W0071
Radiated Emissions Electric Field 1m Distance	EUT Power Input - 120VAC 60Hz
6-18GHz Vertical Data	Test Site - CH 2
Notes:	Conditions - 22.2°C; 51.8%RH; 1010mBar
802.11a High Ch	Test Engineer - Ryan M. Brown
Data Rate: 24	Date of Test - 5/29/2022

Frequency (MHz)	Raw Peak Reading (dB $\mu$ V)	Raw Avg Reading (dB $\mu$ V)	Correction Factor (dB/m)	Adjusted Peak Amplitude (dB $\mu$ V/m)	Pk Lim: FCC_pt15_20_9_Peak (dB $\mu$ V/m)	Peak Margin (dB)	Peak Results (Pass/Fail)	Worst Peak Margin (dB)	Adjusted Avg Amplitude (dB $\mu$ V/m)	Av Lim: FCC_pt15_20_9_Average (dB $\mu$ V/m)	Avg Margin (dB)	Avg Results (Pass/Fail)	Worst Avg Margin (dB)	Antenna Height (cm)	EUT Azimuth (degrees)
11774.2	43.5	35.7	8.7	52.2	83.5	-31.3	PASS		44.4	63.5	-19.1	PASS		154	64
14702.3	42.4	33.6	-84.2	-41.8dBm	-27dBm	-14.8	PASS		N/A	N/A	N/A	N/A		174	188
17978.8	43	34.5	17.4	60.5	83.5	-23	PASS	-23	51.9	63.5	-11.6	PASS	-11.6	200	281

### 6-18 GHz Vertical

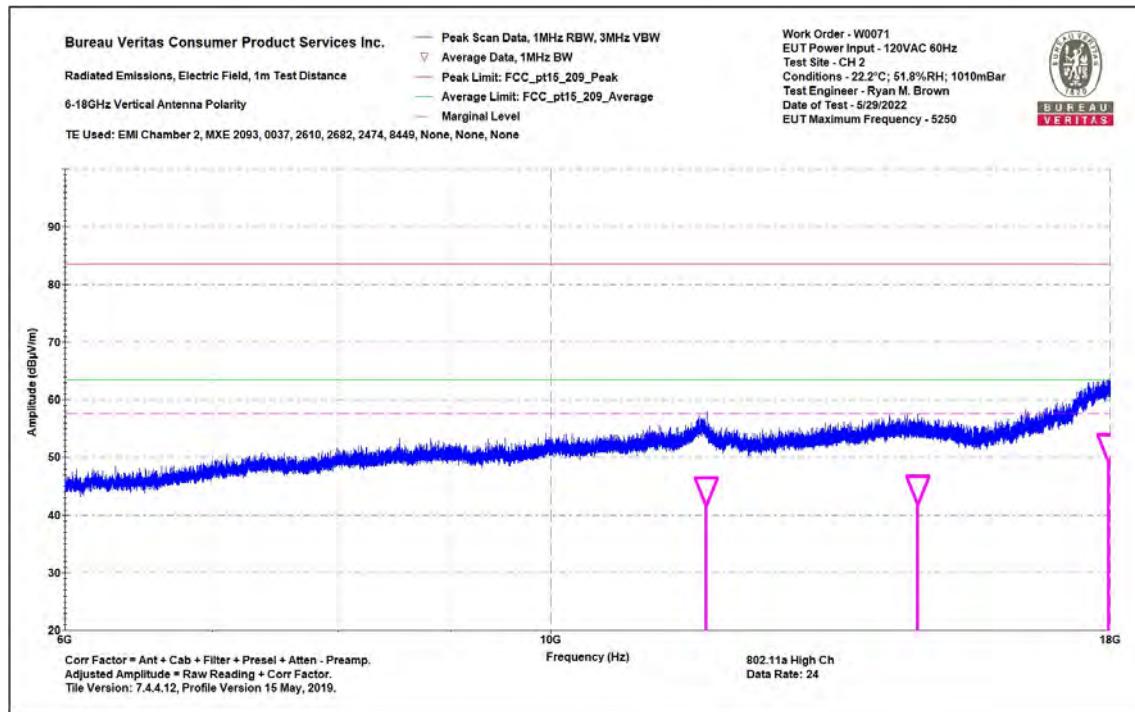
Bureau Veritas Consumer Products Services Inc.

One Distribution Center Circle, #1 • Littleton, MA.

Tel: (978) 486-8880  
Fax: (978) 486-8828



## Test Report No.: EW0071-3



### 6-18 GHz Vertical

Bureau Veritas Consumer Product Services Inc.	Work Order - W0071
Radiated Emissions Electric Field 1m Distance	EUT Power Input - 120VAC 60Hz
6-18GHz Horizontal Data	Test Site - CH 2
Notes:	Conditions - 22.2°C; 51.8%RH; 1010mBar
802.11a High Ch	Test Engineer - Ryan M. Brown
Data Rate: 24	Date of Test - 5/29/2022

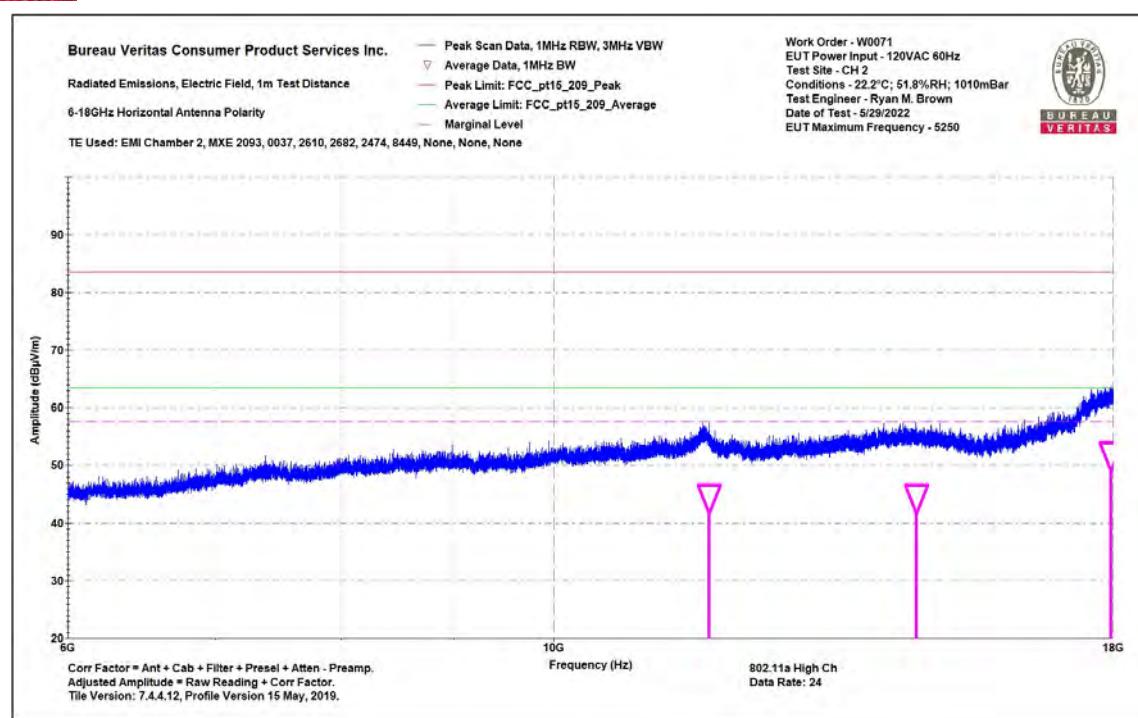
  

Frequency (MHz)	Raw Peak Reading (dB $\mu$ V)	Raw Avg Reading (dB $\mu$ V)	Correction Factor (dB/m)	Adjusted Peak Amplitude (dB $\mu$ V/m)	Pk Lim: FCC_pt15_20_9_Peak (dB $\mu$ V/m)	Peak Margin (dB)	Peak Test Results (Pass/Fail)	Worst Peak Margin (dB)	Adjusted Avg Amplitude (dB $\mu$ V/m)	Av Lim: FCC_pt15_20_9_Average (dB $\mu$ V/m)	Avg Margin (dB)	Avg Test Results (Pass/Fail)	Worst Avg Margin (dB)	Antenna Height (cm)	EUT Azimuth (degrees)
11769.4	47	35.7	8.7	55.7	83.5	-27.8	PASS		44.4	63.5	-19.1	PASS		10	55
14634.1	43.3	33.2	-83.9	-40.6dBm	-27dBm	-13.6	PASS		N/A	N/A	N/A	N/A		91	200
17956.5	43.7	34.4	17.5	61.2	83.5	-22.3	PASS	-22.3	51.9	63.5	-11.6	PASS	-11.6	182	57

### 6-18 GHz Horizontal



## Test Report No.: EW0071-3



### 6-18 GHz Horizontal

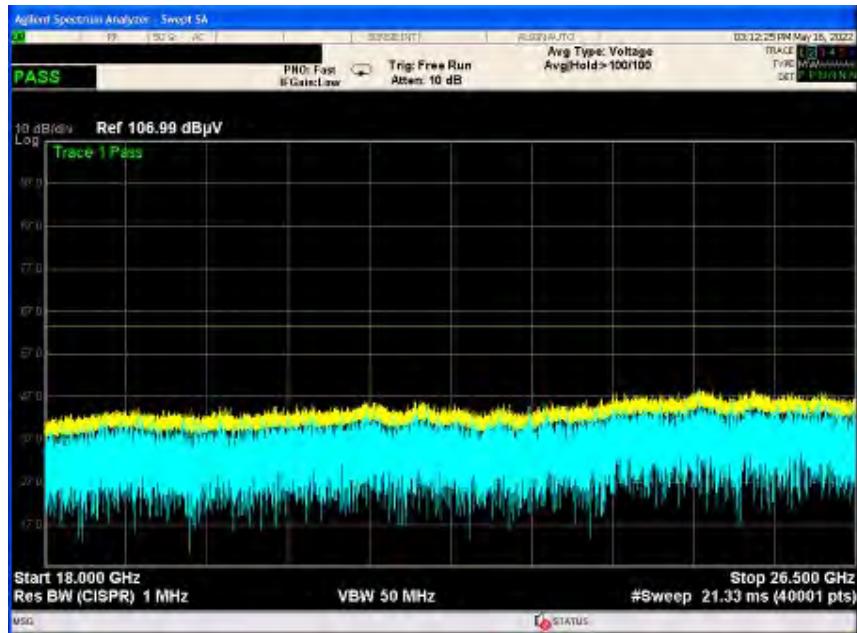
#### Radiated Emissions Table

Date: 16-May-22	Company: Bevi	Work Order: W0071																							
Engineer: Ryan M. Brown	EUT Desc: Bevi Countertop 1.0	EUT Operating Voltage/Frequency: 120VAC 60Hz																							
Temp: 22.9	Humidity: 58%	Pressure: 998																							
Frequency Range: 18-26.5GHz		Measurement Distance: 1 m																							
Notes: 802.11a Data Rate 24		EUT Max Freq: 5250MHz																							
Antenna Polarization (H/V)	Frequency (MHz)	Peak Reading (dB $\mu$ V)	Average Reading (dB $\mu$ V)	Preamp Factor (dB)	Antenna Factor (dB/m)	Cable Factor (dB)	Adjusted Peak Reading (dB $\mu$ V/m)	Adjusted Avg Reading (dB $\mu$ V/m)	FCC Class B High Frequency - Peak			FCC Class B High Frequency - Average													
									Limit (dB $\mu$ V/m)	Margin (dB)	Result (Pass/Fail)	Limit (dB $\mu$ V/m)	Margin (dB)	Result (Pass/Fail)											
No Emissions found in this range																									
<b>Table Result:</b> --- by --- dB			<b>Worst Freq:</b> --- MHz																						
Test Site: EMI Chamber 2	Cable 1: Asset #2323			Cable 2: ---			Cable 3: ---			Antenna: 18-26.5GHz Horn			Preselector: ---												
Analyzer: 2093	Preamp: 18-26.5GHz												Copyright Curtis-Straus LLC 2000												
CSsoft Radiated Emissions Calculator v 1.017.222																									
Adjusted Reading = Reading - Preamp Factor + Antenna Factor + Cable Factor																									

### 18-26.5 GHz



## Test Report No.: EW0071-3



### 18-26.5 GHz

#### Radiated Emissions Table

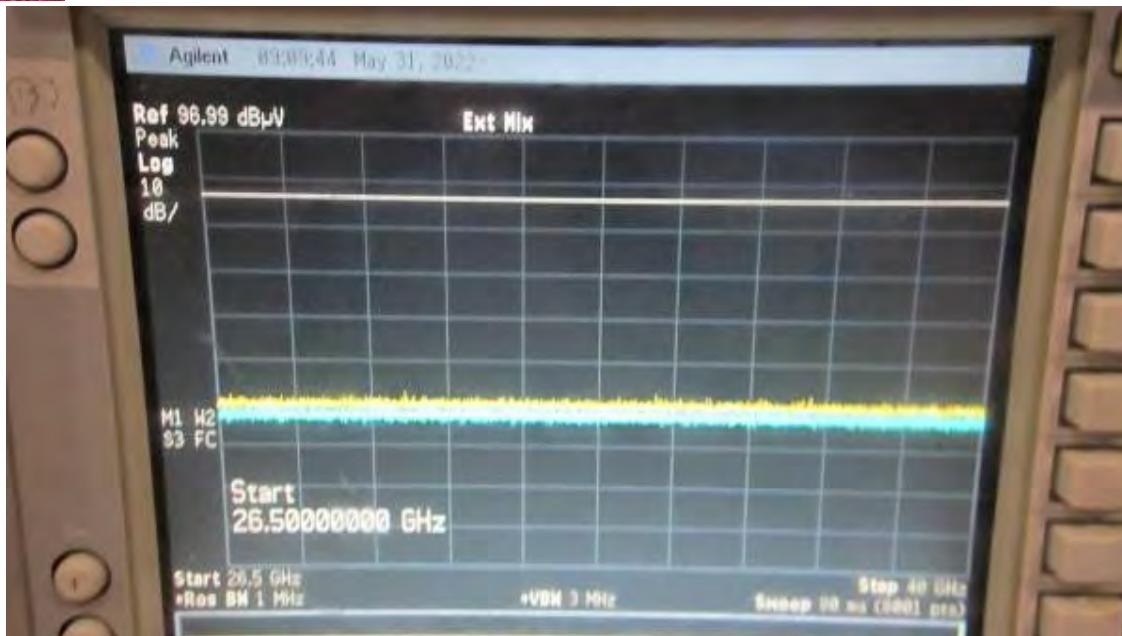
Date: 31-May-22	Company: Bevi	Work Order: W0071												
Engineer: Ryan M. Brown	EUT Desc: Bevi Countertop 1.0	EUT Operating Voltage/Frequency: 120VAC 50Hz												
Temp: 23.5	Humidity: 50%	Pressure: 1007												
Frequency Range: 26.5-40GHz		Measurement Distance: 0.1 m												
Notes: 802.11a Data Rate: 24 High Ch		EUT Max Freq: 5240												
Antenna Polarization (H / V)	Frequency (MHz)	Peak Reading (dBµV)	Average Reading (dBµV)	Preamp Factor (dB)	Antenna Factor (dB/m)	Cable Factor (dB)	Adjusted Peak Reading (dBµV/m)	Adjusted Avg Reading (dBµV/m)	FCC Class B High Frequency - Peak			FCC Class B High Frequency - Average		
No Emissions Found in this Range									Limit (dBµV/m)	Margin (dB)	Result (Pass/Fail)	Limit (dBµV/m)	Margin (dB)	Result (Pass/Fail)
<b>Table Result:</b> --- by --- dB									<b>Worst Freq:</b> --- MHz					
Test Site: Chamber 2 Analyzer: 1284 CSsoft Radiated Emissions Calculator Adjusted Reading = Reading - Preamp Factor + Antenna Factor + Cable Factor	Cable 1: 40GHz Mixer/18-26.5GHz no cable Preamp: None				Cable 2: --- Antenna: 40GHz Mixer			Cable 3: --- Preselector: ---		Copyright Curtis-Straus LLC 2000				

### 26.5-40 GHz



BUREAU  
VERITAS

Test Report No.: EW0071-3



26.5-40 GHz



## Test Report No.: EW0071-3

### Radiated Band Edge

#### Radiated Emissions Table

Date: 19-May-22		Company: Bevi		Work Order: W0071										
Engineer: Ryan M. Brown		EUT Desc: Bevi Countertop 1.0		EUT Operating Voltage/Frequency: 120VAC/60Hz										
Temp: 21.7		Humidity: 54%		Pressure: 1002										
Frequency Range: Bandedge					Measurement Distance: 3 m									
Notes:					EUT Max Freq: 5280									
Antenna Polarization (H / V)	Frequency (MHz)	Peak Reading (dB $\mu$ V)	Average Reading (dB $\mu$ V)	Preamp Factor (dB)	Antenna Factor (dB/m)	Cable Factor (dB)	Adjusted Peak Reading (dB $\mu$ V/m)	Adjusted Avg Reading (dB $\mu$ V/m)	FCC Class B High Frequency - Peak		FCC Class B High Frequency - Average			
802.11a Data Rate 24 Low Ch	V	5128.002	46.284	46.3	42.5	33.6	15.8	53.2	74.0	-20.8	Pass	54.0	-0.8	Pass
		5128.002	45.693	45.7	42.5	33.6	15.8	52.6	74.0	-21.4	Pass	54.0	-1.4	Pass
802.11a Data Rate 24 High Ch	V	5324.54	51.9	36.8	42.2	33.9	15.8	-35.8dBm	-50.9dBm	-27dBm	Pass	-27dBm	-23.9	Pass
		5327.791	51.124	36.4	42.2	33.9	15.8	-36.6dBm	-51.3dBm	-27dBm	Pass	-27dBm	-24.3	Pass
<b>Table Result:</b>		Pass	by	-0.8 dB						<b>Worst Freq:</b> 5128.002 MHz				
Test Site: EMI Chamber 2		Cable 1: Asset #2682		Cable 2: Asset #2610		Cable 3: Asset #2474		Antenna: Yellow Horn		Preselector: ---				
Analyzer: Asset #2093		Preamp: Asset #2111		Antenna: Yellow Horn		Preselector: ---		Copyright Curtis-Straus LLC 2000						
CSsoft Radiated Emissions Calculator v 1.017.222														
Adjusted Reading = Reading - Preamp Factor + Antenna Factor + Cable Factor														
dBm=adjusted Reading in (dbuv/m)-95.2														

#### Radiated Emissions Table

Date: 20-Jul-22		Company: Bevi		Work Order: W0071											
Engineer: Ryan M. Brown		EUT Desc: Bevi Countertop 1.0		EUT Operating Voltage/Frequency: 120VAC/60Hz											
Temp: 21.7		Humidity: 54%		Pressure: 1002											
Frequency Range: Bandedge					Measurement Distance: 3 m										
Notes:					EUT Max Freq: 5280										
Antenna Polarization (H / V)	Frequency (MHz)	Peak Reading (dB $\mu$ V)	Average Reading (dB $\mu$ V)	Preamp Factor (dB)	Antenna Factor (dB/m)	Cable Factor (dB)	Adjusted Peak Reading (dB $\mu$ V/m)	Adjusted Avg Reading (dB $\mu$ V/m)	FCC Class B High Frequency - Peak		FCC Class B High Frequency - Average				
802.11a Data Rate 24 Low Ch	V	5150.0	44.158	34.9	---	---	---	---	---	---	---	---	---		
		5150.0	46.603	38.4	38.2	34.2	15.7	55.9	46.6	74.0	-18.1	Pass	54.0	-7.4	Pass
802.11a Data Rate 24 High Ch	V	5350.0	44.015	33.7	38.2	34.3	17.2	57.3	47.0	74.0	-16.7	Pass	54.0	-7.0	Pass
		5350.0	42.442	33.8	38.2	34.3	17.2	55.7	47.1	74.0	-18.3	Pass	54.0	-6.9	Pass
<b>Table Result:</b>		Pass	by	-3.9 dB						<b>Worst Freq:</b> 5150.0 MHz					
Test Site: EMI Chamber 2		Cable 1: Asset #2583		Cable 2: Asset #2610		Cable 3: Asset #2474		Antenna: Blue Horn		Preselector: ---					
Analyzer: 2093		Preamp: 8449B		Antenna: Blue Horn		Preselector: ---		Copyright Curtis-Straus LLC 2000							
CSsoft Radiated Emissions Calculator v 1.017.222															
Adjusted Reading = Reading - Preamp Factor + Antenna Factor + Cable Factor															
dBm=adjusted Reading in (dbuv/m)-95.2															



### 3.2 CONDUCTED EMISSION MEASUREMENT

#### 3.2.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

FREQUENCY OF EMISSION (MHz)		CONDUCTED LIMIT (dB $\mu$ V)					
		Quasi-peak			Average		
0.15 ~ 0.5		66 to 56			56 to 46		
0.5 ~ 5		56			46		
5 ~ 30		60			50		

**NOTES:** 1. The lower limit shall apply at the transition frequencies.

2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.
3. All emanations from a class A/B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

#### 3.2.2 TEST INSTRUMENTS

Rev. 6/13/2022									
<b>Spectrum Analyzers / Receivers /Preselectors</b> Rental EXA Signal Analyzer(1118473)	<b>Range</b> 9KHz-26.5GHz	<b>MN</b> N9010A-526;N	<b>Mfr</b> AT	<b>SN</b> MY51170076	<b>Asset</b> 1118473	<b>Cat</b> I	<b>Calibration Due</b> 8/5/2022	<b>Calibrated on</b> 8/5/2021	
<b>LISNs/Measurement Probes</b> LISN Asset 1728 LISN Asset 1729	<b>Range</b> 150kHz-30MHz 150kHz-30MHz	<b>MN</b> LI-150A LI-150A	<b>Mfr</b> Com-Power Com-Power	<b>SN</b> 201084 201085	<b>Asset</b> 1728 1729	<b>Cat</b> I I	<b>Calibration Due</b> 1/5/2023 1/5/2023	<b>Calibrated on</b> 1/5/2022 1/5/2022	
<b>Conducted Test Sites (Mains / Telco)</b> CEMI 3	<b>FCC Code</b> 719150		<b>VCCI Code</b> A-0015			<b>Cat</b> III	<b>Calibration Due</b> NA	<b>Calibrated on</b> N/A	
<b>Meteorological Meters/Chambers</b> Weather Clock (Pressure Only) Asset #2657		<b>MN</b> BA928 1235C97	<b>Mfr</b> Oregon Scientific Control Company	<b>SN</b> C3166-1 200435369	<b>Asset</b> 831 2657	<b>Cat</b> I I	<b>Calibration Due</b> 11/23/2022 7/23/2022	<b>Calibrated on</b> 11/23/2020 7/23/2020	
<b>Cables</b> CEMI-02	<b>Range</b> 9kHz - 2GHz		<b>Mfr</b> C-S			<b>Cat</b> II	<b>Calibration Due</b> 2/17/2023	<b>Calibrated on</b> 2/17/2022	
<b>Attenuators</b> 20dB ATT(A#2507)	<b>Range</b> 9kHz-2GHz	<b>MN</b> PE7014-20	<b>Mfr</b> Paternack	<b>SN</b> 2030	<b>Asset</b> 2507	<b>Cat</b> II	<b>Calibration Due</b> 8/4/2022	<b>Calibrated on</b> 8/4/2021	

All equipment is calibrated using standards traceable to NIST or other nationally recognized calibration standard.

### 3.2.3 TEST PROCEDURES

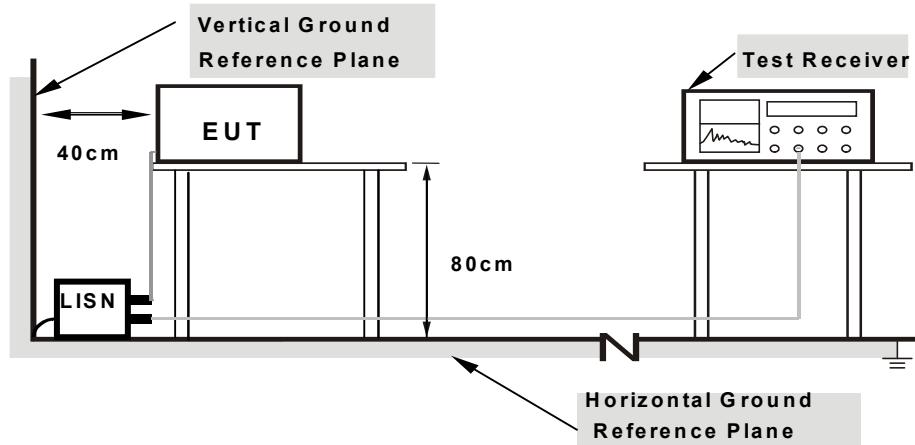
- a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) were not recorded.

**NOTE:** All modes of operation were investigated and the worst-case emissions are reported.

### 3.2.4 DEVIATION FROM TEST STANDARD

No deviation.

### 3.2.5 TEST SETUP



**Note:**

1. Support units were connected to second LISN.
2. Both of LISNs (AMN) are 80 cm from EUT and at least 80 cm from other units and other metal planes

For the actual test configuration, please refer to the attached file (Test Setup Photo).



## Test Report No.: EW0071-3

### 3.2.6 TEST RESULTS

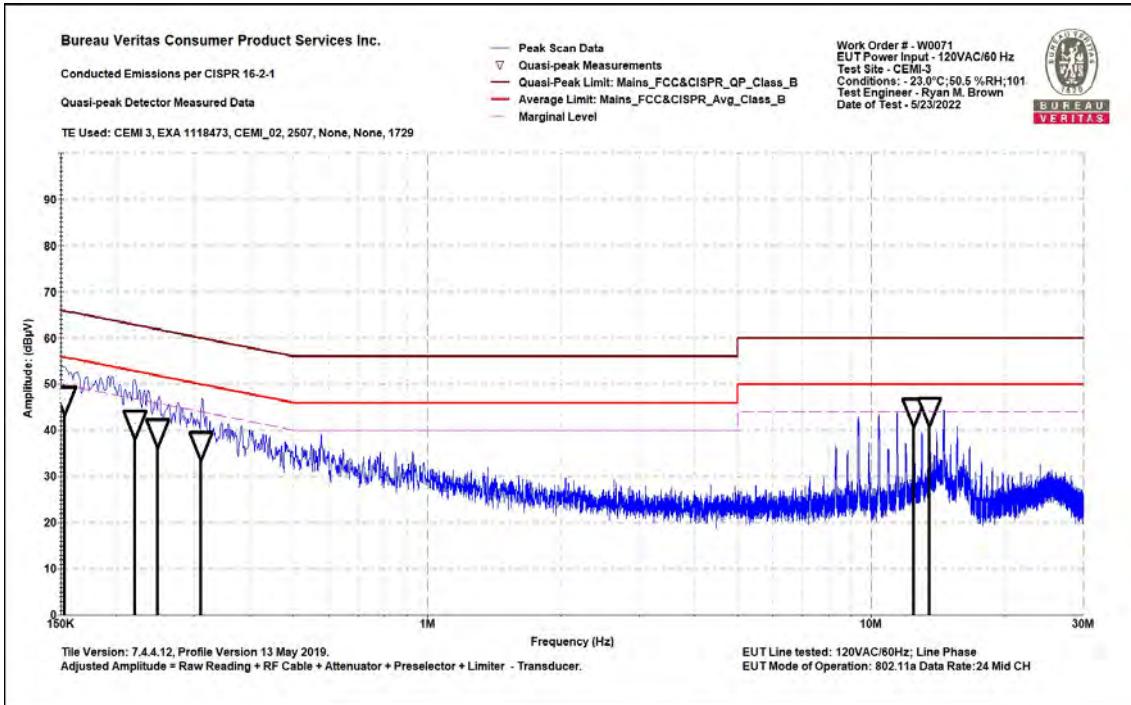
#### CONDUCTED WORST-CASE DATA: 802.11a CH40

Bureau Veritas Consumer Product Services Inc.  
Conducted Emissions per CISPR 16-2-1  
Quasi-peak Detector Data  
Notes:  
EUT Line tested: 120VAC/60Hz; Line Phase  
EUT Mode of Operation: 802.11a Data Rate:24 Mid CH

Work Order # - W0071  
EUT Power Input - 120VAC/60 Hz  
Test Site - CEMI-3  
Conditions: - 23.0°C;50.5 %RH;1014mBar  
Test Engineer - Ryan M. Brown  
Date of Test - 5/23/2022

Frequency (MHz)	Raw QP Reading (dB $\mu$ V)	Correction Factor (dB)	Adjusted QP Amplitude (dB $\mu$ V)	QP Lim: Mains_FCC&CISP_R_QP_Class_B (dB $\mu$ V)	Margin to QP Limit (dB)	QP Limit Results (Pass/Fail)	Worst Margin (QP Limit) (dB)	Av Lim: Mains_FCC&CISP_R_Avg_Class_B (dB $\mu$ V)	Margin to Avg Limit (dB)	Avg Limit Results (Pass/Fail)	Worst Margin (Avg Limit) (dB)
0.153	26.529	20.3	46.8	65.8	-19	PASS	55.8	-9	PASS		
0.22	21.211	20.2	41.5	62.8	-21.4	PASS	52.8	-11.4	PASS		
0.247	19.436	20.3	39.7	61.8	-22.2	PASS	51.8	-12.2	PASS		
0.31	16.623	20.2	36.9	60	-23.1	PASS	50	-13.1	PASS		
12.454	23.78	20.4	44.2	60	-15.8	PASS	50	-5.8	PASS		
13.497	23.894	20.4	44.3	60	-15.7	PASS	-15.7	50	-5.7	PASS	-5.7

#### 0.15-30MHz Line



#### 0.15-30MHz Line



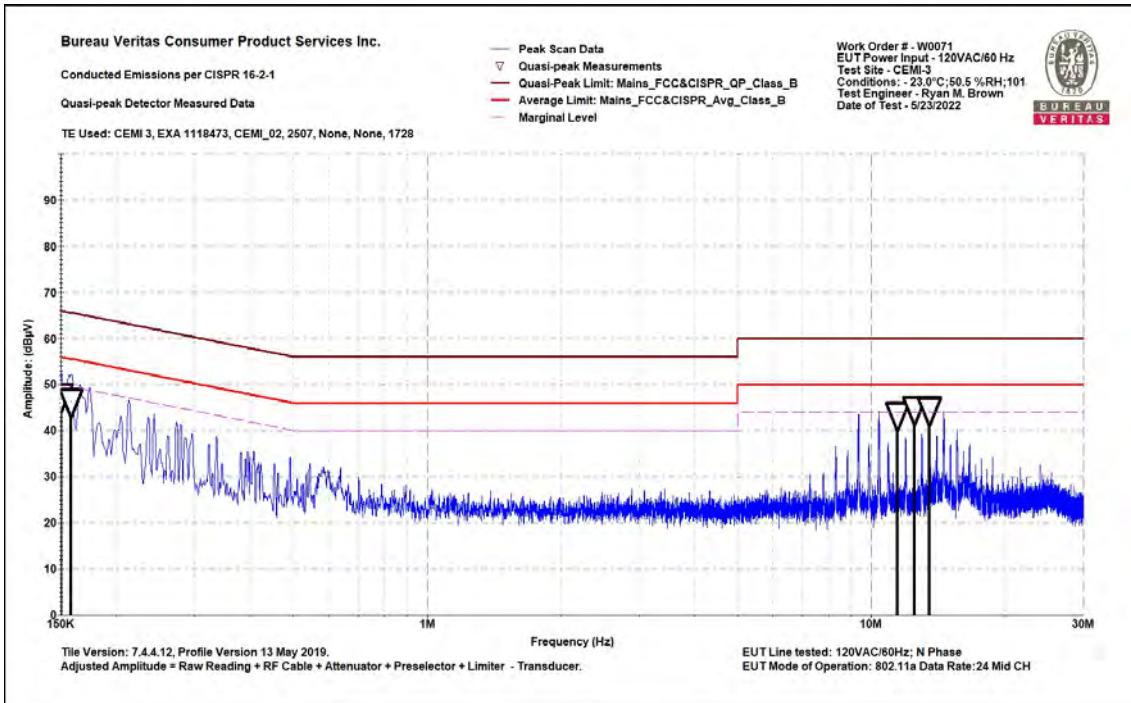
**Test Report No.: EW0071-3**

Bureau Veritas Consumer Product Services Inc.  
Conducted Emissions per CISPR 16-2-1  
Quasi-peak Detector Data  
Notes:  
EUT Line tested: 120VAC/60Hz; N Phase  
EUT Mode of Operation: 802.11a Data Rate:24

Work Order # - W0071  
EUT Power Input - 120VAC/60 Hz  
Test Site - CEMI-3  
Conditions: -23.0°C;50.5%RH;1014mBar  
Test Engineer - Ryan M. Brown  
Date of Test - 5/23/2022

Frequency (MHz)	Raw QP Reading (dB $\mu$ V)	Correction Factor (dB)	Adjusted QP Amplitude (dB $\mu$ V)	QP Lim: Mains_FCC&CISP R_QP_Class_B (dB $\mu$ V)	Margin to QP Limit (dB)	QP Limit Results (Pass/Fail)	Worst Margin (QP Limit) (dB)	Av Lim: Mains_FCC&CISP R_Avg_Class_B (dB $\mu$ V)	Margin to Avg Limit (dB)	Avg Limit Results (Pass/Fail)	Worst Margin (Avg Limit) (dB)
0.15	1.994										
0.15	27.037	20.4	47.4	66	-18.6	PASS		56	-8.6	PASS	
0.158	25.901	20.3	46.2	65.6	-19.3	PASS		55.6	-9.3	PASS	
11.425	23.016	20.4	43.4	60	-16.6	PASS		50	-6.6	PASS	
12.48	24.234	20.4	44.6	60	-15.4	PASS	-15.4	50	-5.4	PASS	-5.4
13.507	24.185	20.4	44.6	60	-15.4	PASS		50	-5.4	PASS	
13.516	24.114	20.4	44.5	60	-15.5	PASS		50	-5.5	PASS	

## 0.15-30MHz Neutral



0.15-30MHz Neutral



### 3.3 TRANSMIT POWER MEASUREMENT

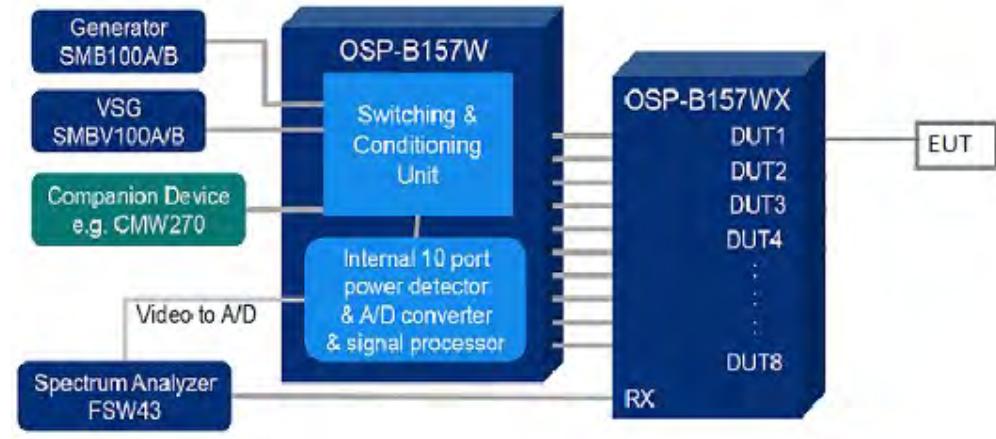
#### 3.3.1 LIMITS OF TRANSMIT POWER MEASUREMENT

Operation Band	EUT Category		LIMIT
U-NII-1	Outdoor Access Point	Outdoor Access Point	1 Watt (30 dBm) (Max. e.i.r.p $\leq$ 125mW(21 dBm) at any elevation angle above 30 degrees as measured from the horizon)
		Fixed point-to-point Access Point	1 Watt (30 dBm)
		Indoor Access Point	1 Watt (30 dBm)
	✓	Mobile and Portable client device	250mW (24 dBm) FCC 200mw (23 dBm) ISED 10+10Log(B) (22dBm) ISED

NOTE: 1. Where B is the 99% OBW in MHz.

#### 3.3.2 TEST SETUP

### SCHEMATIC RF-CABLING





## Test Report No.: EW0071-3

### 3.3.3 TEST INSTRUMENTS

Rev. 6/13/2022

	Range	MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on
<b>Spectrum Analyzers / Receivers /Preselectors</b> FSV40 Spectrum Analyzer	10Hz-40GHz	FSV40	ROHDE & SCHWARZ	101551	2200	I	10/26/2022	10/26/2021
<b>Signal Generators/Comparison Noise Emitter</b> SMBV100A Vector Signal Generator SMB100A Signal Generator OSP-B157W8 CMW270 Wireless Connectivity Tester	9KHz-6GHz 100KHz-40GHz	SMBV100A SMB100A OSP-B157W8 CMW270	ROHDE & SCHWARZ ROHDE & SCHWARZ ROHDE & SCHWARZ ROHDE & SCHWARZ	261919 179884 100955 101066	2201 2557 2558 2559	I I I I	10/26/2022 10/26/2022 8/26/2022 4/14/2024	10/26/2021 10/26/2021 8/26/2021 4/14/2022
<b>Meteorological Meters/Chambers</b> Weather Clock (Pressure Only) Asset #2657		MN BA928 1235C97	Mfr Oregon Scientific Control Company	SN C3166-1 200435369	Asset 831 2657	Cat I I	Calibration Due 11/23/2022 7/23/2022	Calibrated on 11/23/2020 7/23/2020
<b>Cables</b> Asset #2595	Range 9KHz-40GHz		Mfr Carlisle			Cat II	Calibration Due 1/21/2023	Calibrated on 1/21/2022

All equipment is calibrated using standards traceable to NIST or other nationally recognized calibration standard.

### 3.3.4 TEST PROCEDURE

#### FOR AVERAGE POWER MEASUREMENT

Method PM-G is used to perform output power measurement, trigger and gating function of wide band power meter is enabled to measure max output power of TX on burst. Duty factor is not added to measured value.

#### FOR 26dB BANDWIDTH

- 1) Set RBW = approximately 1% of the emission bandwidth.
- 2) Set the VBW > RBW.
- 3) Detector = Peak.
- 4) Trace mode = max hold.
- 5) Measure the maximum width of the emission that is 26 dB down from the peak of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.



**Test Report No.: EW0071-3**

### 3.3.5 DEVIATION FROM TEST STANDARD

No deviation.



## 3.3.6 TEST RESULTS

## OUTPUT POWER:

## 802.11a

CHANNEL NUMBER	FREQ. (MHz)	CONDUCTED POWER (dBm)	CONDUCTED POWER (mW)	Duty Cycle (%)	LIMIT (dBm)	PASS /FAIL
<b>Data Rate 6</b>						
36	5180	11.5	14.12	97.244	22.00	PASS
40	5200	12.2	16.59	97.241	22.00	PASS
48	5240	11.7	14.79	97.241	22.00	PASS
<b>Data Rate 9</b>						
36	5180	11.3	13.48	95.954	22.00	PASS
40	5200	12.4	17.37	95.950	22.00	PASS
48	5240	11.7	14.79	95.950	22.00	PASS
<b>Data Rate 12</b>						
36	5180	11.6	14.45	94.680	22.00	PASS
40	5200	12.5	17.78	94.677	22.00	PASS
48	5240	11.9	15.48	94.679	22.00	PASS
<b>Data Rate 18</b>						
36	5180	12.0	15.84	92.404	22.00	PASS
40	5200	13.0	19.95	92.394	22.00	PASS
48	5240	12.3	16.98	92.394	22.00	PASS
<b>Data Rate 24</b>						
36	5180	12.0	15.84	90.160	22.00	PASS
40	5200	13.1	20.41	90.206	22.00	PASS
48	5240	12.4	17.37	90.153	22.00	PASS
<b>Data Rate 36</b>						
36	5180	12.1	16.21	86.464	22.00	PASS
40	5200	12.9	19.49	86.479	22.00	PASS
48	5240	12.1	16.21	86.491	22.00	PASS
<b>Data Rate 48</b>						
36	5180	10.5	11.22	82.997	22.00	PASS
40	5200	11.5	14.12	82.977	22.00	PASS
48	5240	11.0	12.58	83.019	22.00	PASS
<b>Data Rate 54</b>						
36	5180	10.6	11.48	81.816	22.00	PASS
40	5200	11.7	14.79	81.791	22.00	PASS
48	5240	11.2	13.18	81.810	22.00	PASS



Test Report No.: EW0071-3

## 26dB BANDWIDTH:

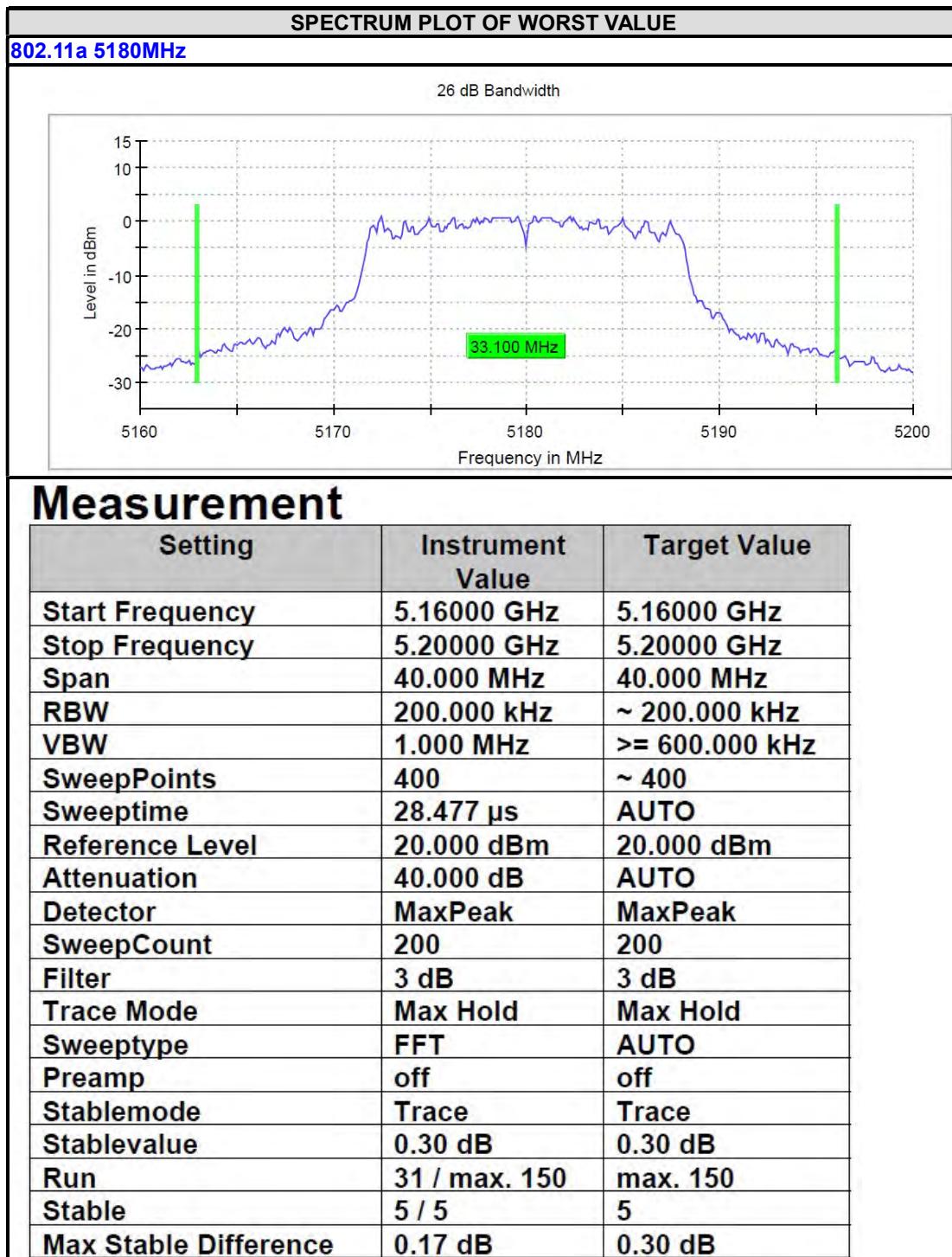
802.11a

Channel Number	Freq. (MHz)	26dB DOWN BANDWIDTH (MHz)	PASS /FAIL
<b>Data Rate 6</b>			
36	5180	33.1	PASS
40	5200	28	PASS
48	5240	29.8	PASS
<b>Data Rate 9</b>			
36	5180	31.9	PASS
40	5200	29.8	PASS
48	5240	29.8	PASS
<b>Data Rate 12</b>			
36	5180	30.6	PASS
40	5200	25.9	PASS
48	5240	27.8	PASS
<b>Data Rate 18</b>			
36	5180	31.7	PASS
40	5200	24.6	PASS
48	5240	25.0	PASS
<b>Data Rate 24</b>			
36	5180	30.9	PASS
40	5200	24.7	PASS
48	5240	24.0	PASS
<b>Data Rate 36</b>			
36	5180	29.1	PASS
40	5200	23.0	PASS
48	5240	23.4	PASS
<b>Data Rate 48</b>			
36	5180	25.2	PASS
40	5200	21.4	PASS
48	5240	21.8	PASS
<b>Data Rate 54</b>			
36	5180	22.8	PASS
40	5200	20.9	PASS
48	5240	21.0	PASS



Test Report No.: EW0071-3

26dB bandwidth Test Plot  
For 5150-5250MHz



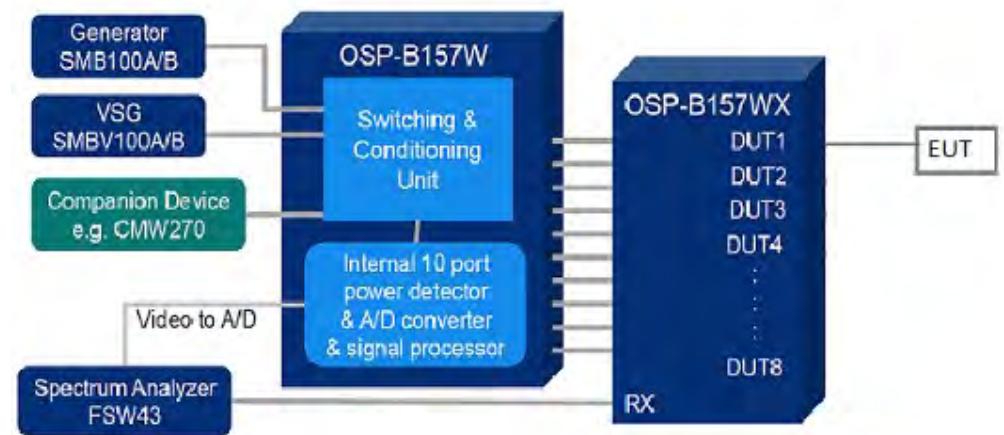
### 3.4 PEAK POWER SPECTRAL DENSITY MEASUREMENT

#### 3.4.1 LIMITS OF PEAK POWER SPECTRAL DENSITY MEASUREMENT

Operation Band	EUT Category		LIMIT	
U-NII-1	Outdoor Access Point		17dBm/ MHz	
	Fixed point-to-point Access Point			
	Indoor Access Point			
✓	Mobile and Portable client device		11dBm/ MHz FCC 10dBm/ MHz ISED	

#### 3.4.2 TEST SETUP

### SCHEMATIC RF-CABLING





## Test Report No.: EW0071-3

### 3.4.3 TEST INSTRUMENTS

Rev. 6/13/2022

Spectrum Analyzers / Receivers /Preselectors	Range	MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on
FSV40 Spectrum Analyzer	10Hz-40GHz	FSV40	ROHDE & SCHWARZ	101551	2200	I	10/26/2022	10/26/2021
Signal Generators/Comparaison Noise Emitter	Range	MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on
SMBV100A Vector Signal Generator	9KHz-6GHz	SMBV100A	ROHDE & SCHWARZ	261919	2201	I	10/26/2022	10/26/2021
SMB100A Signal Generator	100kHz-40GHz	SMB100A	ROHDE & SCHWARZ	179884	2557	I	10/26/2022	10/26/2021
OSP-B157W8	OSP-B157W8	ROHDE & SCHWARZ	100955	2558	I	8/26/2022	8/26/2021	
CMW270 Wireless Connectivity Tester	CMW270	ROHDE & SCHWARZ	101066	2559	I	4/14/2024	4/14/2022	
Meteorological Meters/Chambers	Range	MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on
Weather Clock (Pressure Only)	9KHz-6GHz	BA928	Oregon Scientific	C3166-1	831	I	11/23/2022	11/23/2020
Asset #2657	1235C97	Control Company	200435369	2657	I	7/23/2022	7/23/2020	
Cables	Range		Mfr			Cat	Calibration Due	Calibrated on
Asset #2595	9KHz-40GHz		Carlisle			II	1/21/2023	1/21/2022

All equipment is calibrated using standards traceable to NIST or other nationally recognized calibration standard.

### 3.4.4 TEST PROCEDURES

#### For U-NII-1 band:

Using method SA-2

- 1) Set span to encompass the entire emission bandwidth (EBW) of the signal.
- 2) Set RBW = 1MHz, Set VBW =3 MHz, Detector = RMS
- 3) Set Channel power measure = 1MHz
- 4) Sweep time = auto, trigger set to “free run”.
- 5) Trace average at least 100 traces in power averaging mode.
- 6) Record the max value and add 10 log (1/duty cycle)

Note: 1) Duty Cycle was recorded in the Output power Section.



**Test Report No.: EW0071-3**

### 3.4.5 DEVIATION FROM TEST STANDARD

No deviation.



## 3.4.6 TEST RESULTS

For U-NII-1:

## 802.11a

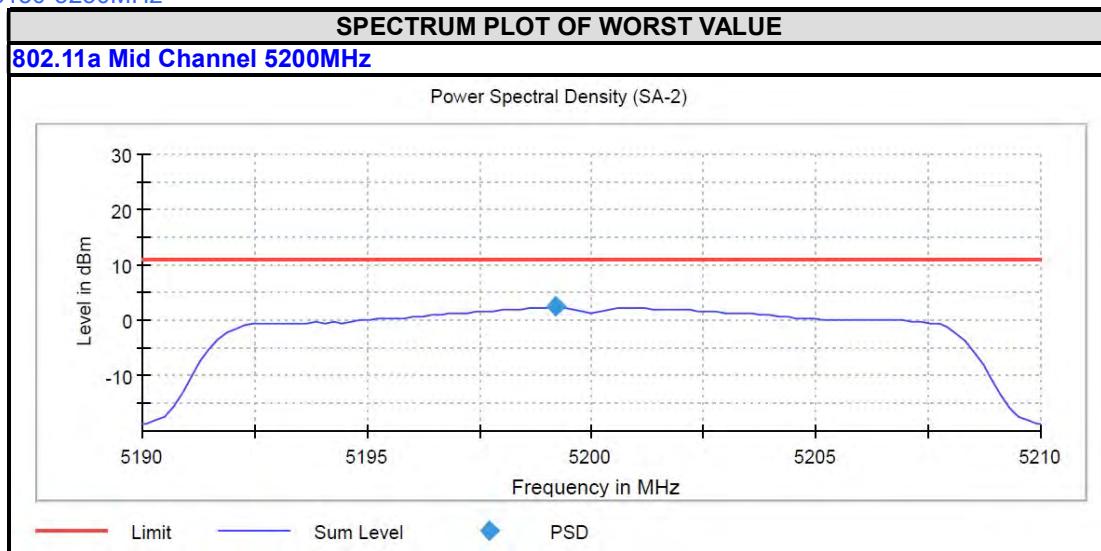
Channel	Frequency (MHz)	PSD (dBm/MHz)	Duty Cycle Correction Factor	Corrected PSD (dBm/Mhz)	MAX. Limit (dBm)	PASS / FAIL
<b>Data Rate 6</b>						
36	5180	1.484	0.121	1.605	10.00	PASS
40	5200	2.365	0.121	2.486	10.00	PASS
48	5240	1.605	0.121	1.726	10.00	PASS
<b>Data Rate 9</b>						
36	5180	0.923	0.179	1.102	10.00	PASS
40	5200	1.808	0.179	1.987	10.00	PASS
48	5240	1.170	0.179	1.349	10.00	PASS
<b>Data Rate 12</b>						
36	5180	0.796	0.237	1.033	10.00	PASS
40	5200	1.470	0.237	1.707	10.00	PASS
48	5240	0.927	0.237	1.164	10.00	PASS
<b>Data Rate 18</b>						
36	5180	1.368	0.343	1.711	10.00	PASS
40	5200	2.148	0.343	2.491	10.00	PASS
48	5240	1.148	0.343	1.491	10.00	PASS
<b>Data Rate 24</b>						
36	5180	1.206	0.449	1.655	10.00	PASS
40	5200	2.301	0.447	2.748	10.00	PASS
48	5240	1.199	0.450	1.649	10.00	PASS
<b>Data Rate 36</b>						
36	5180	1.008	0.631	1.639	10.00	PASS
40	5200	1.861	0.630	2.491	10.00	PASS
48	5240	0.943	0.630	1.573	10.00	PASS
<b>Data Rate 48</b>						
36	5180	-1.040	0.809	-0.231	10.00	PASS
40	5200	-0.213	0.810	0.597	10.00	PASS
48	5240	-0.681	0.808	0.127	10.00	PASS
<b>Data Rate 54</b>						
36	5180	-1.106	0.906	-0.200	10.00	PASS
40	5200	-0.170	0.872	0.702	10.00	PASS
48	5240	-0.876	0.871	-0.005	10.00	PASS



Test Report No.: EW0071-3

PSD Test Plot

BAND 1  
5150-5250MHz





## Measurement

Setting	Instrument Value	Target Value
Start Frequency	5.19000 GHz	5.19000 GHz
Stop Frequency	5.21000 GHz	5.21000 GHz
Span	20.000 MHz	20.000 MHz
RBW	1.000 MHz	<= 1.000 MHz
VBW	3.000 MHz	>= 3.000 MHz
SweepPoints	101	~ 40
Sweeptime	1.000 ms	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	RMS	RMS
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Average Power	Average Power
Sweeptype	Sweep	Sweep
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	2 / max. 15	max. 15
Stable	1 / 1	1
Max Stable Difference	0.12 dB	0.50 dB

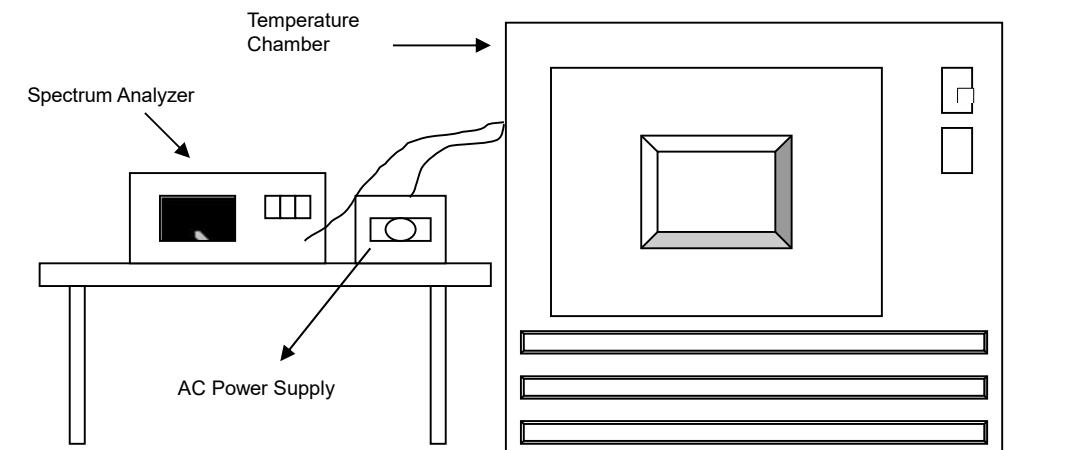


### 3.5 FREQUENCY STABILITY

#### 3.5.1 LIMITS OF FREQUENCY STABILITY MEASUREMENT

The frequency of the carrier signal shall be maintained within band of operation.

#### 3.5.2 TEST SETUP



#### 3.5.3 TEST INSTRUMENTS

Rev. 6/13/2022

	Range	MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on
<b>Spectrum Analyzers / Receivers /Preselectors</b> FSV40 Spectrum Analyzer	10Hz-40GHz	FSV40	ROHDE & SCHWARZ	101551	2200	I	10/26/2022	10/26/2021
<b>Signal Generators/Comparaison Noise Emitter</b> SMBV100A Vector Signal Generator SMB100A Signal Generator OSP-B157W8 CMW270 Wireless Connectivity Tester	9KHz-6GHz 100kHz-40GHz	SMBV100A SMB100A OSP-B157W8 CMW270	ROHDE & SCHWARZ ROHDE & SCHWARZ ROHDE & SCHWARZ ROHDE & SCHWARZ	261919 179884 100955 101066	2201 2557 2558 2559	I I I I	10/26/2022 10/26/2022 8/26/2022 4/14/2024	10/26/2021 10/26/2021 8/26/2021 4/14/2022
<b>Meteorological Meters/Chambers</b> Weather Clock (Pressure Only) Asset #2657		MN BA928 1235C97	Mfr Oregon Scientific Control Company	SN C3166-1 200435369	Asset 831 2657	Cat I I	Calibration Due 11/23/2022 7/23/2022	Calibrated on 11/23/2020 7/23/2020
<b>Cables</b> Asset #2595	9KHz-40GHz		Mfr Carlisle		Cat II	Calibration Due 1/21/2023	Calibrated on 1/21/2022	

All equipment is calibrated using standards traceable to NIST or other nationally recognized calibration standard.



### 3.5.4 TEST PROCEDURE

- a. The EUT was placed inside the environmental test chamber and powered by nominal AC voltage.
- b. Turn the EUT on and couple its output to a spectrum analyzer.
- c. Turn the EUT off and set the chamber to the highest temperature specified.
- d. Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize, turn the EUT on and measure the operating frequency after 2, 5, and 10 minutes.
- e. Repeat step 2 and 3 with the temperature chamber set to the lowest temperature.
- f. The test chamber was allowed to stabilize at +20 degree C for a minimum of 30 minutes. The supply voltage was then adjusted on the EUT from 85% to 115% and the frequency record.

### 3.5.5 DEVIATION FROM TEST STANDARD

No deviation.



### 3.5.6 TEST RESULTS

FREQUENCY STABILITY VERSUS TEMP.										
OPERATING FREQUENCY: 5200MHz										
TEMP. (°C)	POWER SUPPLY (Vac)	0 MINUTE		2 MINUTE		5 MINUTE		10 MINUTE		
		Measured Frequency (MHz)	Frequency Drift (KHz)	Measured Frequency (MHz)	Frequency Drift (KHz)	Measured Frequency (MHz)	Frequency Drift (KHz)	Measured Frequency (MHz)	Frequency Drift	
50	120	5199.932007	-67.9930	5199.941006	-58.9940	5199.942006	-57.9940	5199.941006	-58.9940	
40	120	5199.927008	-72.9925	5199.927008	-72.9925	5199.928007	-71.9920	5199.927008	-72.9925	
30	120	5199.932007	-67.9935	5199.928008	-71.9925	5199.929007	-70.9930	5199.929007	-70.9930	
20	120	5199.943006	-56.9945	5199.939006	-60.9940	5199.938007	-61.9935	5199.938007	-61.9935	
10	120	5199.956005	-43.9955	5199.951005	-48.9950	5199.951005	-48.9955	5199.952005	-47.9955	
0	120	5199.970003	-29.9970	5199.967004	-32.9965	5199.967004	-32.9965	5199.966004	-33.9965	
-10	120	5199.978003	-21.9975	5199.977003	-22.9975	5199.977003	-22.9975	5199.977003	-22.9975	
-20	120	5199.983002	-16.9985	5199.983002	-16.9985	5199.983002	-16.9985	5199.983002	-16.9985	

FREQUENCY STABILITY VERSUS VOLTAGE										
OPERATING FREQUENCY: 5200MHz										
TEMP. (°C)	POWER SUPPLY (Vac)	0 MINUTE		2 MINUTE		5 MINUTE		10 MINUTE		
		Measured Frequency (MHz)	Frequency Drift (KHz)	Measured Frequency (MHz)	Frequency Drift (KHz)	Measured Frequency (MHz)	Frequency Drift (KHz)	Measured Frequency (MHz)	Frequency Drift	
20	138	5199.943006	-56.9945	5199.939007	-60.9935	5199.939007	-60.9935	5199.938007	-61.9935	
	120	5199.943006	-56.9945	5199.939006	-60.9940	5199.938007	-61.9935	5199.938007	-61.9935	
	102	5199.948005	-51.9950	5199.942006	-57.9940	5199.940006	-59.9940	5199.939006	-60.9940	



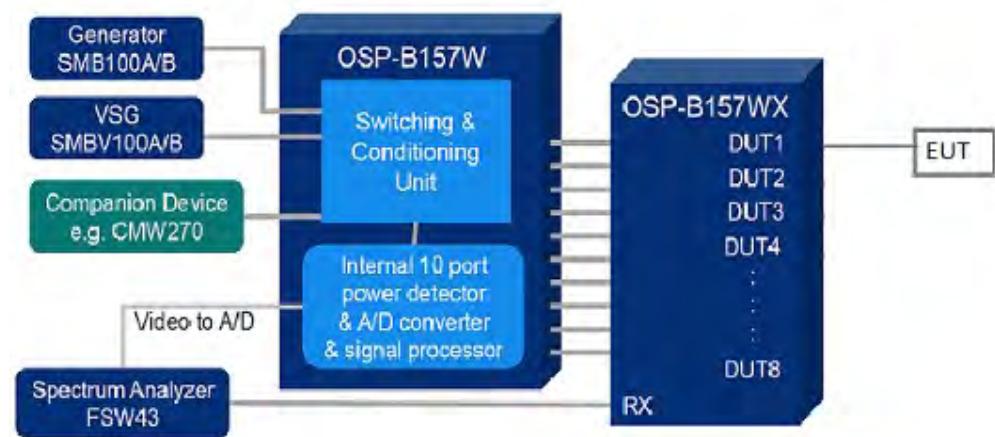
### 3.6 99% OCCUPIED BANDWIDTH

#### 3.6.1 TEST Method

Test according to FCC title 47 part 15 §15.407(a),(e), KDB 789033 D02 General U-NII Test Procedures  
New Rules v02r01 D and ANSI C63.10-2013

#### 3.6.2 TEST SETUP

#### SCHEMATIC RF-CABLING



#### 3.6.3 TEST INSTRUMENTS

Rev. 6/13/2022

Spectrum Analyzers / Receivers /Preselectors	Range	MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on
FSV40 Spectrum Analyzer	10Hz-40GHz	FSV40	ROHDE & SCHWARZ	101551	2200	I	10/26/2022	10/26/2021
Signal Generators/Comparaison Noise Emitter	Range	MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on
SMBV100A Vector Signal Generator	9KHz-6GHz	SMBV100A	ROHDE & SCHWARZ	261919	2201	I	10/26/2022	10/26/2021
SMB100A Signal Generator	100kHz-40GHz	SMB100A	ROHDE & SCHWARZ	179884	2557	I	10/26/2022	10/26/2021
OSP-B157W8		OSP-B157W8	ROHDE & SCHWARZ	100955	2558	I	8/26/2022	8/26/2021
CMW270 Wireless Connectivity Tester		CMW270	ROHDE & SCHWARZ	101066	2559	I	4/14/2024	4/14/2022
Meteorological Meters/Chambers		MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on
Weather Clock (Pressure Only)		BA928	Oregon Scientific	C3166-1	831	I	11/23/2022	11/23/2020
Asset #2657		1235C97	Control Company	200435369	2657	I	7/23/2022	7/23/2020
Cables	Range		Mfr		Cat	Calibration Due	Calibrated on	
Asset #2595	9KHz-40GHz		Carlisle		II	1/21/2023	1/21/2022	

All equipment is calibrated using standards traceable to NIST or other nationally recognized calibration standard.



### 3.6.4 TEST RESULTS

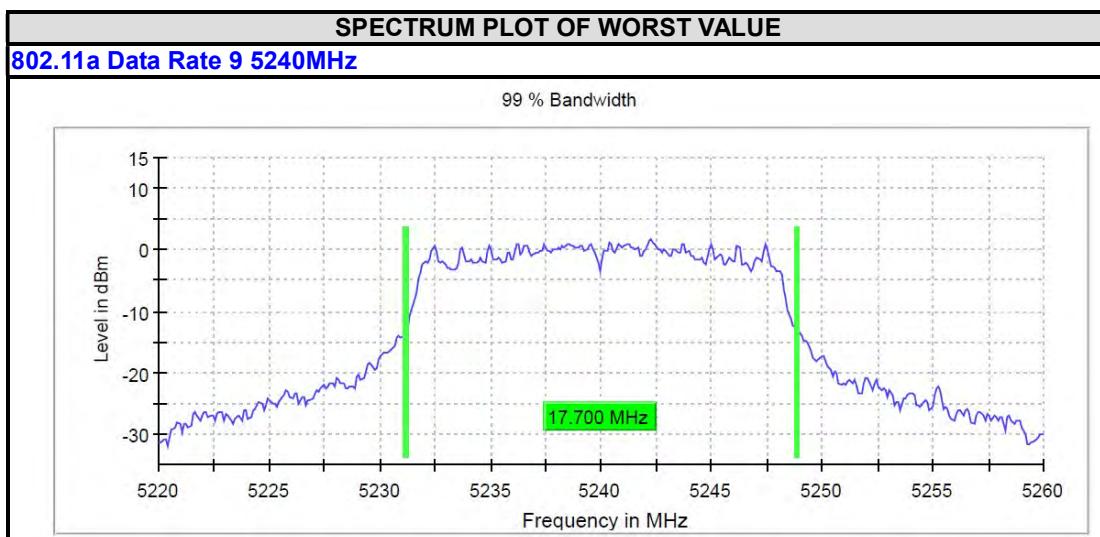
Band 1  
5150-5250MHz

Channel Number	Freq. (MHz)	99% Occupied BANDWIDTH (MHz)	PASS /FAIL
<b>Data Rate 6</b>			
36	5180	17.500	PASS
40	5200	17.100	PASS
48	5240	17.500	PASS
<b>Data Rate 9</b>			
36	5180	17.500	PASS
40	5200	17.400	PASS
48	5240	17.700	PASS
<b>Data Rate 12</b>			
36	5180	17.100	PASS
40	5200	16.900	PASS
48	5240	17.000	PASS
<b>Data Rate 18</b>			
36	5180	17.000	PASS
40	5200	16.800	PASS
48	5240	17.000	PASS
<b>Data Rate 24</b>			
36	5180	16.800	PASS
40	5200	16.700	PASS
48	5240	16.800	PASS
<b>Data Rate 36</b>			
36	5180	16.800	PASS
40	5200	16.700	PASS
48	5240	16.800	PASS



## Test Report No.: EW0071-3

Data Rate 48			
<b>36</b>	5180	16.700	PASS
<b>40</b>	5200	16.600	PASS
<b>48</b>	5240	16.600	PASS
Data Rate 54			
<b>36</b>	5180	16.600	PASS
<b>40</b>	5200	16.500	PASS
<b>48</b>	5240	16.600	PASS





## Measurement

Setting	Instrument Value	Target Value
Start Frequency	5.22000 GHz	5.22000 GHz
Stop Frequency	5.26000 GHz	5.26000 GHz
Span	40.000 MHz	40.000 MHz
RBW	200.000 kHz	>= 200.000 kHz
VBW	1.000 MHz	>= 600.000 kHz
SweepPoints	400	~ 400
Sweeptime	28.477 µs	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	200	200
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30 dB	0.30 dB
Run	19 / max. 150	max. 150
Stable	5 / 5	5
Max Stable Difference	0.01 dB	0.30 dB



Test Report No.: EW0071-3

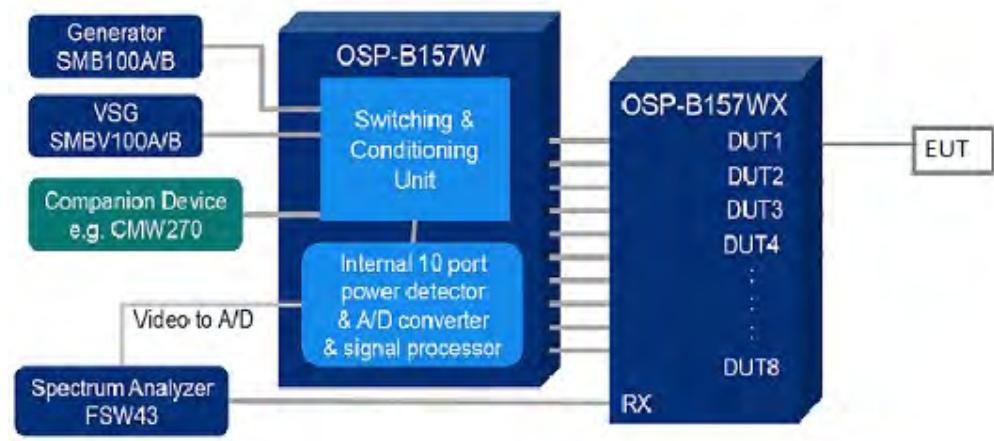
### 3.7 CONDUCTED SPURIOUS EMISSIONS

#### 3.7.1 TEST Method

Test according to FCC title 47 part 15 §15.407(b), KDB 789033 D02 General U-NII Test Procedures New Rules v02r01 II.G.4&5 and ANSI C63.10-2013

#### 3.7.2 TEST SETUP

#### SCHEMATIC RF-CABLING



#### 3.7.3 TEST INSTRUMENTS

Rev. 6/13/2022

Spectrum Analyzers / Receivers /Preselectors	Range	MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on
FSV40 Spectrum Analyzer	10Hz-40GHz	FSV40	ROHDE & SCHWARZ	101551	2200	I	10/26/2022	10/26/2021
Signal Generators/Comparison Noise Emitter	Range	MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on
SMBV100A Vector Signal Generator	9KHz-6GHz	SMBV100A	ROHDE & SCHWARZ	261919	2201	I	10/26/2022	10/26/2021
SMB100A Signal Generator	100KHz-40GHz	SMB100A	ROHDE & SCHWARZ	179884	2557	I	10/26/2022	10/26/2021
OSP-B157W8		OSP-B157W8	ROHDE & SCHWARZ	100955	2558	I	8/26/2022	8/26/2021
CMW270 Wireless Connectivity Tester		CMW270	ROHDE & SCHWARZ	101066	2559	I	4/14/2024	4/14/2022
Meteorological Meters/Chambers	MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on	
Weather Clock (Pressure Only)	BA928	Oregon Scientific	C3166-1	831	I	11/23/2022	11/23/2020	
Asset #2657	1235C97	Control Company	200435369	2657	I	7/23/2022	7/23/2020	
Cables	Range	Mfr	Cat	Calibration Due	Calibrated on			
Asset #2595	9KHz-40GHz	Carlisle	II	1/21/2023	1/21/2022			

All equipment is calibrated using standards traceable to NIST or other nationally recognized calibration standard.

Bureau Veritas Consumer Products  
Services Inc.

One Distribution Center Circle, #1 • Littleton,  
MA.

Tel: (978) 486-8880  
Fax: (978) 486-8828



### 3.7.4 TEST RESULTS

Data Rate 6

Test Channel	CH36 (5180MHz)																																																																					
Frequency Range	Pre Measurements																																																																					
30.0MHz to 40000.0MHz		<table border="1"><thead><tr><th>Frequency (MHz)</th><th>Level (dBm)</th><th>Margin (dB)</th><th>Limit (dBm)</th></tr></thead><tbody><tr><td>5149.250000</td><td>-27.4</td><td>0.4</td><td>-27.0</td></tr><tr><td>5148.750000</td><td>-28.4</td><td>1.4</td><td>-27.0</td></tr><tr><td>5149.750000</td><td>-30.0</td><td>3.0</td><td>-27.0</td></tr><tr><td>5148.250000</td><td>-30.5</td><td>3.5</td><td>-27.0</td></tr><tr><td>5147.750000</td><td>-30.5</td><td>3.5</td><td>-27.0</td></tr><tr><td>5147.250000</td><td>-30.7</td><td>3.7</td><td>-27.0</td></tr><tr><td>5146.250000</td><td>-31.0</td><td>4.0</td><td>-27.0</td></tr><tr><td>5146.750000</td><td>-31.0</td><td>4.0</td><td>-27.0</td></tr><tr><td>39994.750000</td><td>-31.1</td><td>4.1</td><td>-27.0</td></tr><tr><td>5144.250000</td><td>-31.4</td><td>4.4</td><td>-27.0</td></tr><tr><td>5144.750000</td><td>-31.5</td><td>4.5</td><td>-27.0</td></tr><tr><td>39964.750000</td><td>-31.5</td><td>4.5</td><td>-27.0</td></tr><tr><td>5142.250000</td><td>-31.5</td><td>4.5</td><td>-27.0</td></tr><tr><td>39038.750000</td><td>-31.6</td><td>4.6</td><td>-27.0</td></tr><tr><td>38669.250000</td><td>-31.6</td><td>4.6</td><td>-27.0</td></tr></tbody></table>					Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	5149.250000	-27.4	0.4	-27.0	5148.750000	-28.4	1.4	-27.0	5149.750000	-30.0	3.0	-27.0	5148.250000	-30.5	3.5	-27.0	5147.750000	-30.5	3.5	-27.0	5147.250000	-30.7	3.7	-27.0	5146.250000	-31.0	4.0	-27.0	5146.750000	-31.0	4.0	-27.0	39994.750000	-31.1	4.1	-27.0	5144.250000	-31.4	4.4	-27.0	5144.750000	-31.5	4.5	-27.0	39964.750000	-31.5	4.5	-27.0	5142.250000	-31.5	4.5	-27.0	39038.750000	-31.6	4.6	-27.0	38669.250000	-31.6	4.6	-27.0
Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)																																																																			
5149.250000	-27.4	0.4	-27.0																																																																			
5148.750000	-28.4	1.4	-27.0																																																																			
5149.750000	-30.0	3.0	-27.0																																																																			
5148.250000	-30.5	3.5	-27.0																																																																			
5147.750000	-30.5	3.5	-27.0																																																																			
5147.250000	-30.7	3.7	-27.0																																																																			
5146.250000	-31.0	4.0	-27.0																																																																			
5146.750000	-31.0	4.0	-27.0																																																																			
39994.750000	-31.1	4.1	-27.0																																																																			
5144.250000	-31.4	4.4	-27.0																																																																			
5144.750000	-31.5	4.5	-27.0																																																																			
39964.750000	-31.5	4.5	-27.0																																																																			
5142.250000	-31.5	4.5	-27.0																																																																			
39038.750000	-31.6	4.6	-27.0																																																																			
38669.250000	-31.6	4.6	-27.0																																																																			
30.0MHz to 40000.0MHz																																																																						
Test Channel	CH40 (5200MHz)																																																																					
Frequency Range	Pre Measurements																																																																					
30.0MHz to 40000.0MHz		<table border="1"><thead><tr><th>Frequency (MHz)</th><th>Level (dBm)</th><th>Margin (dB)</th><th>Limit (dBm)</th></tr></thead><tbody><tr><td>39814.250000</td><td>-31.4</td><td>4.4</td><td>-27.0</td></tr><tr><td>39729.250000</td><td>-31.5</td><td>4.5</td><td>-27.0</td></tr><tr><td>39996.750000</td><td>-31.6</td><td>4.6</td><td>-27.0</td></tr><tr><td>39759.750000</td><td>-31.6</td><td>4.6</td><td>-27.0</td></tr><tr><td>39045.250000</td><td>-31.7</td><td>4.7</td><td>-27.0</td></tr><tr><td>39993.250000</td><td>-31.9</td><td>4.9</td><td>-27.0</td></tr><tr><td>39895.250000</td><td>-31.9</td><td>4.9</td><td>-27.0</td></tr><tr><td>39963.750000</td><td>-31.9</td><td>4.9</td><td>-27.0</td></tr><tr><td>39809.250000</td><td>-31.9</td><td>4.9</td><td>-27.0</td></tr><tr><td>39733.250000</td><td>-32.0</td><td>5.0</td><td>-27.0</td></tr><tr><td>39894.750000</td><td>-32.0</td><td>5.0</td><td>-27.0</td></tr><tr><td>39023.250000</td><td>-32.0</td><td>5.0</td><td>-27.0</td></tr><tr><td>39341.750000</td><td>-32.0</td><td>5.0</td><td>-27.0</td></tr><tr><td>39760.250000</td><td>-32.1</td><td>5.1</td><td>-27.0</td></tr><tr><td>39341.250000</td><td>-32.1</td><td>5.1</td><td>-27.0</td></tr></tbody></table>					Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	39814.250000	-31.4	4.4	-27.0	39729.250000	-31.5	4.5	-27.0	39996.750000	-31.6	4.6	-27.0	39759.750000	-31.6	4.6	-27.0	39045.250000	-31.7	4.7	-27.0	39993.250000	-31.9	4.9	-27.0	39895.250000	-31.9	4.9	-27.0	39963.750000	-31.9	4.9	-27.0	39809.250000	-31.9	4.9	-27.0	39733.250000	-32.0	5.0	-27.0	39894.750000	-32.0	5.0	-27.0	39023.250000	-32.0	5.0	-27.0	39341.750000	-32.0	5.0	-27.0	39760.250000	-32.1	5.1	-27.0	39341.250000	-32.1	5.1	-27.0
Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)																																																																			
39814.250000	-31.4	4.4	-27.0																																																																			
39729.250000	-31.5	4.5	-27.0																																																																			
39996.750000	-31.6	4.6	-27.0																																																																			
39759.750000	-31.6	4.6	-27.0																																																																			
39045.250000	-31.7	4.7	-27.0																																																																			
39993.250000	-31.9	4.9	-27.0																																																																			
39895.250000	-31.9	4.9	-27.0																																																																			
39963.750000	-31.9	4.9	-27.0																																																																			
39809.250000	-31.9	4.9	-27.0																																																																			
39733.250000	-32.0	5.0	-27.0																																																																			
39894.750000	-32.0	5.0	-27.0																																																																			
39023.250000	-32.0	5.0	-27.0																																																																			
39341.750000	-32.0	5.0	-27.0																																																																			
39760.250000	-32.1	5.1	-27.0																																																																			
39341.250000	-32.1	5.1	-27.0																																																																			
30.0MHz to 40000.0MHz																																																																						
Test Channel	CH48 (5240MHz)																																																																					
Frequency Range	Pre Measurements																																																																					
30.0MHz to 40000.0MHz		<table border="1"><thead><tr><th>Frequency (MHz)</th><th>Level (dBm)</th><th>Margin (dB)</th><th>Limit (dBm)</th></tr></thead><tbody><tr><td>39714.750000</td><td>-31.4</td><td>4.4</td><td>-27.0</td></tr><tr><td>39752.250000</td><td>-31.5</td><td>4.5</td><td>-27.0</td></tr><tr><td>39935.750000</td><td>-31.6</td><td>4.6</td><td>-27.0</td></tr><tr><td>39984.250000</td><td>-31.6</td><td>4.6</td><td>-27.0</td></tr><tr><td>39825.250000</td><td>-31.8</td><td>4.8</td><td>-27.0</td></tr><tr><td>39871.250000</td><td>-31.8</td><td>4.8</td><td>-27.0</td></tr><tr><td>39694.250000</td><td>-31.9</td><td>4.9</td><td>-27.0</td></tr><tr><td>38945.250000</td><td>-31.9</td><td>4.9</td><td>-27.0</td></tr><tr><td>39811.250000</td><td>-31.9</td><td>4.9</td><td>-27.0</td></tr><tr><td>39644.750000</td><td>-31.9</td><td>4.9</td><td>-27.0</td></tr><tr><td>38662.250000</td><td>-31.9</td><td>4.9</td><td>-27.0</td></tr><tr><td>39871.500000</td><td>-31.9</td><td>4.9</td><td>-27.0</td></tr><tr><td>39138.250000</td><td>-32.0</td><td>5.0</td><td>-27.0</td></tr><tr><td>38993.750000</td><td>-32.0</td><td>5.0</td><td>-27.0</td></tr><tr><td>38662.750000</td><td>-32.0</td><td>5.0</td><td>-27.0</td></tr></tbody></table>					Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	39714.750000	-31.4	4.4	-27.0	39752.250000	-31.5	4.5	-27.0	39935.750000	-31.6	4.6	-27.0	39984.250000	-31.6	4.6	-27.0	39825.250000	-31.8	4.8	-27.0	39871.250000	-31.8	4.8	-27.0	39694.250000	-31.9	4.9	-27.0	38945.250000	-31.9	4.9	-27.0	39811.250000	-31.9	4.9	-27.0	39644.750000	-31.9	4.9	-27.0	38662.250000	-31.9	4.9	-27.0	39871.500000	-31.9	4.9	-27.0	39138.250000	-32.0	5.0	-27.0	38993.750000	-32.0	5.0	-27.0	38662.750000	-32.0	5.0	-27.0
Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)																																																																			
39714.750000	-31.4	4.4	-27.0																																																																			
39752.250000	-31.5	4.5	-27.0																																																																			
39935.750000	-31.6	4.6	-27.0																																																																			
39984.250000	-31.6	4.6	-27.0																																																																			
39825.250000	-31.8	4.8	-27.0																																																																			
39871.250000	-31.8	4.8	-27.0																																																																			
39694.250000	-31.9	4.9	-27.0																																																																			
38945.250000	-31.9	4.9	-27.0																																																																			
39811.250000	-31.9	4.9	-27.0																																																																			
39644.750000	-31.9	4.9	-27.0																																																																			
38662.250000	-31.9	4.9	-27.0																																																																			
39871.500000	-31.9	4.9	-27.0																																																																			
39138.250000	-32.0	5.0	-27.0																																																																			
38993.750000	-32.0	5.0	-27.0																																																																			
38662.750000	-32.0	5.0	-27.0																																																																			
30.0MHz to 40000.0MHz																																																																						



## Test Report No.: EW0071-3

Data Rate 24

Test Channel		CH36 (5180MHz)																																																																			
Frequency Range		Pre Measurements																																																																			
<b>30.0MHz to 40000.0MHz</b>		<table border="1"><thead><tr><th>Frequency (MHz)</th><th>Level (dBm)</th><th>Margin (dB)</th><th>Limit (dBm)</th></tr></thead><tbody><tr><td>5148.250000</td><td>-28.0</td><td>1.0</td><td>-27.0</td></tr><tr><td>5147.750000</td><td>-28.7</td><td>1.7</td><td>-27.0</td></tr><tr><td>5148.750000</td><td>-29.7</td><td>2.7</td><td>-27.0</td></tr><tr><td>5149.750000</td><td>-30.2</td><td>3.2</td><td>-27.0</td></tr><tr><td>5147.250000</td><td>-30.5</td><td>3.5</td><td>-27.0</td></tr><tr><td>5149.250000</td><td>-31.5</td><td>4.5</td><td>-27.0</td></tr><tr><td>39987.250000</td><td>-31.8</td><td>4.8</td><td>-27.0</td></tr><tr><td>39735.750000</td><td>-31.9</td><td>4.9</td><td>-27.0</td></tr><tr><td>5146.750000</td><td>-32.1</td><td>5.1</td><td>-27.0</td></tr><tr><td>39789.250000</td><td>-32.1</td><td>5.1</td><td>-27.0</td></tr><tr><td>39985.250000</td><td>-32.1</td><td>5.1</td><td>-27.0</td></tr><tr><td>39812.250000</td><td>-32.2</td><td>5.2</td><td>-27.0</td></tr><tr><td>39745.250000</td><td>-32.2</td><td>5.2</td><td>-27.0</td></tr><tr><td>39070.250000</td><td>-32.2</td><td>5.2</td><td>-27.0</td></tr><tr><td>38722.750000</td><td>-32.2</td><td>5.2</td><td>-27.0</td></tr></tbody></table>				Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	5148.250000	-28.0	1.0	-27.0	5147.750000	-28.7	1.7	-27.0	5148.750000	-29.7	2.7	-27.0	5149.750000	-30.2	3.2	-27.0	5147.250000	-30.5	3.5	-27.0	5149.250000	-31.5	4.5	-27.0	39987.250000	-31.8	4.8	-27.0	39735.750000	-31.9	4.9	-27.0	5146.750000	-32.1	5.1	-27.0	39789.250000	-32.1	5.1	-27.0	39985.250000	-32.1	5.1	-27.0	39812.250000	-32.2	5.2	-27.0	39745.250000	-32.2	5.2	-27.0	39070.250000	-32.2	5.2	-27.0	38722.750000	-32.2	5.2	-27.0
Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)																																																																		
5148.250000	-28.0	1.0	-27.0																																																																		
5147.750000	-28.7	1.7	-27.0																																																																		
5148.750000	-29.7	2.7	-27.0																																																																		
5149.750000	-30.2	3.2	-27.0																																																																		
5147.250000	-30.5	3.5	-27.0																																																																		
5149.250000	-31.5	4.5	-27.0																																																																		
39987.250000	-31.8	4.8	-27.0																																																																		
39735.750000	-31.9	4.9	-27.0																																																																		
5146.750000	-32.1	5.1	-27.0																																																																		
39789.250000	-32.1	5.1	-27.0																																																																		
39985.250000	-32.1	5.1	-27.0																																																																		
39812.250000	-32.2	5.2	-27.0																																																																		
39745.250000	-32.2	5.2	-27.0																																																																		
39070.250000	-32.2	5.2	-27.0																																																																		
38722.750000	-32.2	5.2	-27.0																																																																		
<b>30.0MHz to 40000.0MHz</b>																																																																					
Test Channel		CH40 (5200MHz)																																																																			
Frequency Range		Pre Measurements																																																																			
<b>30.0MHz to 40000.0MHz</b>		<table border="1"><thead><tr><th>Frequency (MHz)</th><th>Level (dBm)</th><th>Margin (dB)</th><th>Limit (dBm)</th></tr></thead><tbody><tr><td>39979.750000</td><td>-30.0</td><td>3.0</td><td>-27.0</td></tr><tr><td>39756.750000</td><td>-31.3</td><td>4.3</td><td>-27.0</td></tr><tr><td>39838.750000</td><td>-31.3</td><td>4.3</td><td>-27.0</td></tr><tr><td>39722.250000</td><td>-31.3</td><td>4.3</td><td>-27.0</td></tr><tr><td>38997.250000</td><td>-31.3</td><td>4.3</td><td>-27.0</td></tr><tr><td>38706.750000</td><td>-31.4</td><td>4.4</td><td>-27.0</td></tr><tr><td>38997.750000</td><td>-31.5</td><td>4.5</td><td>-27.0</td></tr><tr><td>39772.750000</td><td>-31.5</td><td>4.5</td><td>-27.0</td></tr><tr><td>39924.250000</td><td>-31.6</td><td>4.6</td><td>-27.0</td></tr><tr><td>39720.750000</td><td>-31.7</td><td>4.7</td><td>-27.0</td></tr><tr><td>39271.750000</td><td>-31.7</td><td>4.7</td><td>-27.0</td></tr><tr><td>39838.250000</td><td>-31.7</td><td>4.7</td><td>-27.0</td></tr><tr><td>39982.750000</td><td>-31.7</td><td>4.7</td><td>-27.0</td></tr><tr><td>39717.750000</td><td>-31.7</td><td>4.7</td><td>-27.0</td></tr><tr><td>38732.250000</td><td>-31.8</td><td>4.8</td><td>-27.0</td></tr></tbody></table>				Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	39979.750000	-30.0	3.0	-27.0	39756.750000	-31.3	4.3	-27.0	39838.750000	-31.3	4.3	-27.0	39722.250000	-31.3	4.3	-27.0	38997.250000	-31.3	4.3	-27.0	38706.750000	-31.4	4.4	-27.0	38997.750000	-31.5	4.5	-27.0	39772.750000	-31.5	4.5	-27.0	39924.250000	-31.6	4.6	-27.0	39720.750000	-31.7	4.7	-27.0	39271.750000	-31.7	4.7	-27.0	39838.250000	-31.7	4.7	-27.0	39982.750000	-31.7	4.7	-27.0	39717.750000	-31.7	4.7	-27.0	38732.250000	-31.8	4.8	-27.0
Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)																																																																		
39979.750000	-30.0	3.0	-27.0																																																																		
39756.750000	-31.3	4.3	-27.0																																																																		
39838.750000	-31.3	4.3	-27.0																																																																		
39722.250000	-31.3	4.3	-27.0																																																																		
38997.250000	-31.3	4.3	-27.0																																																																		
38706.750000	-31.4	4.4	-27.0																																																																		
38997.750000	-31.5	4.5	-27.0																																																																		
39772.750000	-31.5	4.5	-27.0																																																																		
39924.250000	-31.6	4.6	-27.0																																																																		
39720.750000	-31.7	4.7	-27.0																																																																		
39271.750000	-31.7	4.7	-27.0																																																																		
39838.250000	-31.7	4.7	-27.0																																																																		
39982.750000	-31.7	4.7	-27.0																																																																		
39717.750000	-31.7	4.7	-27.0																																																																		
38732.250000	-31.8	4.8	-27.0																																																																		
<b>30.0MHz to 40000.0MHz</b>																																																																					
Test Channel		CH48 (5240MHz)																																																																			
Frequency Range		Pre Measurements																																																																			
<b>30.0MHz to 40000.0MHz</b>		<table border="1"><thead><tr><th>Frequency (MHz)</th><th>Level (dBm)</th><th>Margin (dB)</th><th>Limit (dBm)</th></tr></thead><tbody><tr><td>39741.750000</td><td>-31.4</td><td>4.4</td><td>-27.0</td></tr><tr><td>39897.750000</td><td>-31.7</td><td>4.7</td><td>-27.0</td></tr><tr><td>39900.750000</td><td>-31.8</td><td>4.8</td><td>-27.0</td></tr><tr><td>39716.750000</td><td>-32.0</td><td>5.0</td><td>-27.0</td></tr><tr><td>39172.250000</td><td>-32.0</td><td>5.0</td><td>-27.0</td></tr><tr><td>39901.250000</td><td>-32.1</td><td>5.1</td><td>-27.0</td></tr><tr><td>39991.250000</td><td>-32.2</td><td>5.2</td><td>-27.0</td></tr><tr><td>39988.750000</td><td>-32.2</td><td>5.2</td><td>-27.0</td></tr><tr><td>39042.250000</td><td>-32.2</td><td>5.2</td><td>-27.0</td></tr><tr><td>39874.250000</td><td>-32.2</td><td>5.2</td><td>-27.0</td></tr><tr><td>38988.250000</td><td>-32.2</td><td>5.2</td><td>-27.0</td></tr><tr><td>39808.250000</td><td>-32.3</td><td>5.3</td><td>-27.0</td></tr><tr><td>39807.750000</td><td>-32.3</td><td>5.3</td><td>-27.0</td></tr><tr><td>39646.250000</td><td>-32.3</td><td>5.3</td><td>-27.0</td></tr><tr><td>38356.250000</td><td>-32.3</td><td>5.3</td><td>-27.0</td></tr></tbody></table>				Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	39741.750000	-31.4	4.4	-27.0	39897.750000	-31.7	4.7	-27.0	39900.750000	-31.8	4.8	-27.0	39716.750000	-32.0	5.0	-27.0	39172.250000	-32.0	5.0	-27.0	39901.250000	-32.1	5.1	-27.0	39991.250000	-32.2	5.2	-27.0	39988.750000	-32.2	5.2	-27.0	39042.250000	-32.2	5.2	-27.0	39874.250000	-32.2	5.2	-27.0	38988.250000	-32.2	5.2	-27.0	39808.250000	-32.3	5.3	-27.0	39807.750000	-32.3	5.3	-27.0	39646.250000	-32.3	5.3	-27.0	38356.250000	-32.3	5.3	-27.0
Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)																																																																		
39741.750000	-31.4	4.4	-27.0																																																																		
39897.750000	-31.7	4.7	-27.0																																																																		
39900.750000	-31.8	4.8	-27.0																																																																		
39716.750000	-32.0	5.0	-27.0																																																																		
39172.250000	-32.0	5.0	-27.0																																																																		
39901.250000	-32.1	5.1	-27.0																																																																		
39991.250000	-32.2	5.2	-27.0																																																																		
39988.750000	-32.2	5.2	-27.0																																																																		
39042.250000	-32.2	5.2	-27.0																																																																		
39874.250000	-32.2	5.2	-27.0																																																																		
38988.250000	-32.2	5.2	-27.0																																																																		
39808.250000	-32.3	5.3	-27.0																																																																		
39807.750000	-32.3	5.3	-27.0																																																																		
39646.250000	-32.3	5.3	-27.0																																																																		
38356.250000	-32.3	5.3	-27.0																																																																		
<b>30.0MHz to 40000.0MHz</b>																																																																					



### 3.8 CONDUCTED BAND EDGE

#### 3.8.1 TEST Method

Test according to FCC title 47 part 15 §15.407(b), KDB 789033 D02 General U-NII Test Procedures New Rules v02r01 II.G.3.d ii and ANSI C63.10-2013

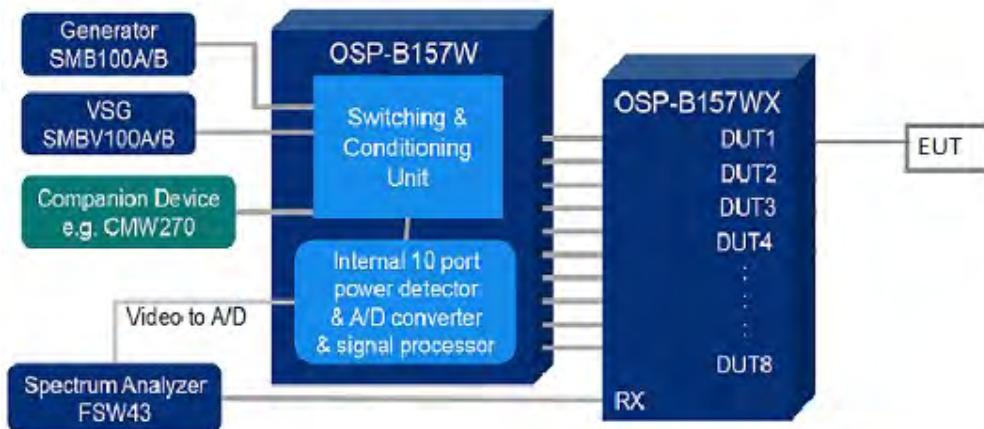
Channel filter is used for doing integration in the measurement device

Measurement uncertainty calculated in accordance with ETSITR 100 028-1.

Expanded Uncertainty (K=2) < 0.8 dB

#### 3.8.2 TEST SETUP

### SCHEMATIC RF-CABLING





### 3.8.3 TEST INSTRUMENTS

Rev. 6/13/2022

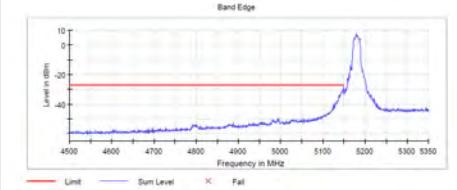
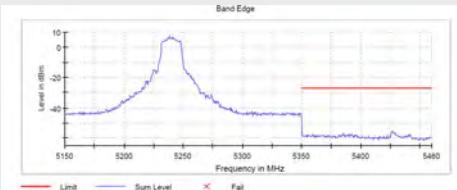
Spectrum Analyzers / Receivers /Preselectors	Range	MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on
FSV40 Spectrum Analyzer	10Hz-40GHz	FSV40	ROHDE & SCHWARZ	101551	2200	I	10/26/2022	10/26/2021
Signal Generators/Comparaison Noise Emitter	Range	MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on
SMBV100A Vector Signal Generator	9KHz-6GHz	SMBV100A	ROHDE & SCHWARZ	261919	2201	I	10/26/2022	10/26/2021
SMB100A Signal Generator	100KHz-40GHz	SMB100A	ROHDE & SCHWARZ	179884	2557	I	10/26/2022	10/26/2021
OSP-B157W8		OSP-B157W8	ROHDE & SCHWARZ	100955	2558	I	8/26/2022	8/26/2021
CMW270 Wireless Connectivity Tester		CMW270	ROHDE & SCHWARZ	101066	2559	I	4/14/2024	4/14/2022
Meteorological Meters/Chambers	Range	MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on
Weather Clock (Pressure Only)		BA928	Oregon Scientific	C3166-1	831	I	11/23/2022	11/23/2020
Asset #2657		1235C97	Control Company	200435369	2657	I	7/23/2022	7/23/2020
Cables	Range		Mfr			Cat	Calibration Due	Calibrated on
Asset #2595	9KHz-40GHz		Carlisle			II	1/21/2023	1/21/2022

All equipment is calibrated using standards traceable to NIST or other nationally recognized calibration standard.



### 3.8.4 TEST RESULTS

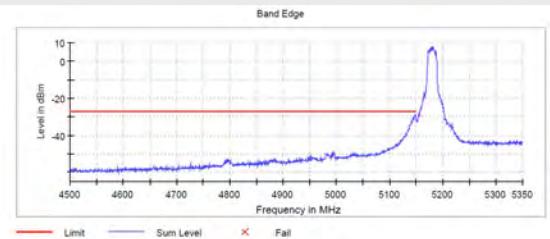
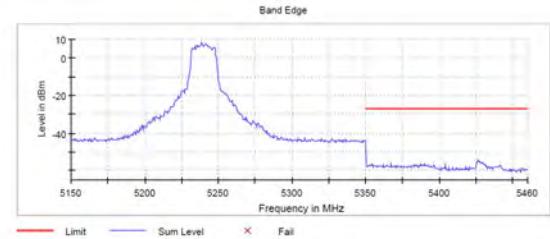
Data Rate 6

Test Channel	CH36 (5180MHz)				
Frequency Range	Measurements				
4500MHz to 5350MHz					
Test Channel	CH48 (5240MHz)				
Frequency Range	Measurements				
5150MHz to 5460MHz					



## Test Report No.: EW0071-3

Data Rate 24

Test Channel		CH36 (5180MHz)																																																																																				
Frequency Range		Measurements																																																																																				
<b>4500MHz to 5350MHz</b>		<table border="1"><thead><tr><th>Frequency (MHz)</th><th>Level (dBm)</th><th>Margin (dB)</th><th>Limit (dBm)</th><th>Result</th></tr></thead><tbody><tr><td>5146.250000</td><td>-28.8</td><td>1.3</td><td>-27.0</td><td>PASS</td></tr><tr><td>5147.750000</td><td>-28.8</td><td>1.8</td><td>-27.0</td><td>PASS</td></tr><tr><td>5147.250000</td><td>-28.8</td><td>1.8</td><td>-27.0</td><td>PASS</td></tr><tr><td>5149.750000</td><td>-29.0</td><td>2.0</td><td>-27.0</td><td>PASS</td></tr><tr><td>5149.250000</td><td>-29.5</td><td>2.5</td><td>-27.0</td><td>PASS</td></tr><tr><td>5148.750000</td><td>-29.9</td><td>2.9</td><td>-27.0</td><td>PASS</td></tr><tr><td>5146.250000</td><td>-30.0</td><td>3.0</td><td>-27.0</td><td>PASS</td></tr><tr><td>5145.750000</td><td>-30.6</td><td>3.0</td><td>-27.0</td><td>PASS</td></tr><tr><td>5145.250000</td><td>-30.6</td><td>3.6</td><td>-27.0</td><td>PASS</td></tr><tr><td>5144.750000</td><td>-30.7</td><td>3.7</td><td>-27.0</td><td>PASS</td></tr><tr><td>5144.250000</td><td>-30.8</td><td>3.8</td><td>-27.0</td><td>PASS</td></tr><tr><td>5143.250000</td><td>-31.3</td><td>4.3</td><td>-27.0</td><td>PASS</td></tr><tr><td>5143.750000</td><td>-31.4</td><td>4.4</td><td>-27.0</td><td>PASS</td></tr><tr><td>5142.750000</td><td>-31.6</td><td>4.6</td><td>-27.0</td><td>PASS</td></tr><tr><td>5145.250000</td><td>-31.7</td><td>4.7</td><td>-27.0</td><td>PASS</td></tr></tbody></table>					Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result	5146.250000	-28.8	1.3	-27.0	PASS	5147.750000	-28.8	1.8	-27.0	PASS	5147.250000	-28.8	1.8	-27.0	PASS	5149.750000	-29.0	2.0	-27.0	PASS	5149.250000	-29.5	2.5	-27.0	PASS	5148.750000	-29.9	2.9	-27.0	PASS	5146.250000	-30.0	3.0	-27.0	PASS	5145.750000	-30.6	3.0	-27.0	PASS	5145.250000	-30.6	3.6	-27.0	PASS	5144.750000	-30.7	3.7	-27.0	PASS	5144.250000	-30.8	3.8	-27.0	PASS	5143.250000	-31.3	4.3	-27.0	PASS	5143.750000	-31.4	4.4	-27.0	PASS	5142.750000	-31.6	4.6	-27.0	PASS	5145.250000	-31.7	4.7	-27.0	PASS
Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result																																																																																		
5146.250000	-28.8	1.3	-27.0	PASS																																																																																		
5147.750000	-28.8	1.8	-27.0	PASS																																																																																		
5147.250000	-28.8	1.8	-27.0	PASS																																																																																		
5149.750000	-29.0	2.0	-27.0	PASS																																																																																		
5149.250000	-29.5	2.5	-27.0	PASS																																																																																		
5148.750000	-29.9	2.9	-27.0	PASS																																																																																		
5146.250000	-30.0	3.0	-27.0	PASS																																																																																		
5145.750000	-30.6	3.0	-27.0	PASS																																																																																		
5145.250000	-30.6	3.6	-27.0	PASS																																																																																		
5144.750000	-30.7	3.7	-27.0	PASS																																																																																		
5144.250000	-30.8	3.8	-27.0	PASS																																																																																		
5143.250000	-31.3	4.3	-27.0	PASS																																																																																		
5143.750000	-31.4	4.4	-27.0	PASS																																																																																		
5142.750000	-31.6	4.6	-27.0	PASS																																																																																		
5145.250000	-31.7	4.7	-27.0	PASS																																																																																		
																																																																																						
Test Channel		CH48 (5240MHz)																																																																																				
Frequency Range		<table border="1"><thead><tr><th>Frequency (MHz)</th><th>Level (dBm)</th><th>Margin (dB)</th><th>Limit (dBm)</th><th>Result</th></tr></thead><tbody><tr><td>5426.250000</td><td>-54.5</td><td>27.5</td><td>-27.0</td><td>PASS</td></tr><tr><td>5426.750000</td><td>-55.1</td><td>28.1</td><td>-27.0</td><td>PASS</td></tr><tr><td>5427.250000</td><td>-55.3</td><td>28.3</td><td>-27.0</td><td>PASS</td></tr><tr><td>5425.750000</td><td>-55.6</td><td>28.6</td><td>-27.0</td><td>PASS</td></tr><tr><td>5427.250000</td><td>-55.6</td><td>28.6</td><td>-27.0</td><td>PASS</td></tr><tr><td>5429.250000</td><td>-55.7</td><td>28.7</td><td>-27.0</td><td>PASS</td></tr><tr><td>5429.750000</td><td>-55.7</td><td>28.7</td><td>-27.0</td><td>PASS</td></tr><tr><td>5429.250000</td><td>-56.1</td><td>29.1</td><td>-27.0</td><td>PASS</td></tr><tr><td>5428.750000</td><td>-56.1</td><td>29.1</td><td>-27.0</td><td>PASS</td></tr><tr><td>5367.250000</td><td>-56.3</td><td>29.3</td><td>-27.0</td><td>PASS</td></tr><tr><td>5354.250000</td><td>-56.3</td><td>29.3</td><td>-27.0</td><td>PASS</td></tr><tr><td>5389.750000</td><td>-56.6</td><td>29.6</td><td>-27.0</td><td>PASS</td></tr><tr><td>5387.250000</td><td>-56.6</td><td>29.6</td><td>-27.0</td><td>PASS</td></tr><tr><td>5430.750000</td><td>-56.7</td><td>29.7</td><td>-27.0</td><td>PASS</td></tr><tr><td>5430.250000</td><td>-56.8</td><td>29.8</td><td>-27.0</td><td>PASS</td></tr></tbody></table> <td data-kind="ghost"></td> <td data-kind="ghost"></td> <td data-kind="ghost"></td> <td data-kind="ghost"></td>	Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result	5426.250000	-54.5	27.5	-27.0	PASS	5426.750000	-55.1	28.1	-27.0	PASS	5427.250000	-55.3	28.3	-27.0	PASS	5425.750000	-55.6	28.6	-27.0	PASS	5427.250000	-55.6	28.6	-27.0	PASS	5429.250000	-55.7	28.7	-27.0	PASS	5429.750000	-55.7	28.7	-27.0	PASS	5429.250000	-56.1	29.1	-27.0	PASS	5428.750000	-56.1	29.1	-27.0	PASS	5367.250000	-56.3	29.3	-27.0	PASS	5354.250000	-56.3	29.3	-27.0	PASS	5389.750000	-56.6	29.6	-27.0	PASS	5387.250000	-56.6	29.6	-27.0	PASS	5430.750000	-56.7	29.7	-27.0	PASS	5430.250000	-56.8	29.8	-27.0	PASS				
Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result																																																																																		
5426.250000	-54.5	27.5	-27.0	PASS																																																																																		
5426.750000	-55.1	28.1	-27.0	PASS																																																																																		
5427.250000	-55.3	28.3	-27.0	PASS																																																																																		
5425.750000	-55.6	28.6	-27.0	PASS																																																																																		
5427.250000	-55.6	28.6	-27.0	PASS																																																																																		
5429.250000	-55.7	28.7	-27.0	PASS																																																																																		
5429.750000	-55.7	28.7	-27.0	PASS																																																																																		
5429.250000	-56.1	29.1	-27.0	PASS																																																																																		
5428.750000	-56.1	29.1	-27.0	PASS																																																																																		
5367.250000	-56.3	29.3	-27.0	PASS																																																																																		
5354.250000	-56.3	29.3	-27.0	PASS																																																																																		
5389.750000	-56.6	29.6	-27.0	PASS																																																																																		
5387.250000	-56.6	29.6	-27.0	PASS																																																																																		
5430.750000	-56.7	29.7	-27.0	PASS																																																																																		
5430.250000	-56.8	29.8	-27.0	PASS																																																																																		
<b>5150MHz to 5460MHz</b>																																																																																						



Test Report No.: EW0071-3

#### 4. PHOTOGRAPHS OF THE TEST CONFIGURATION

Please refer to the attached file (Test Setup Photo).



**Test Report No.: EW0071-3**

**---END---**