



Test Report No.: EW0071-3



TEST REPORT

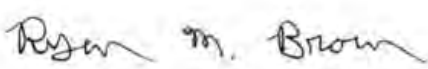
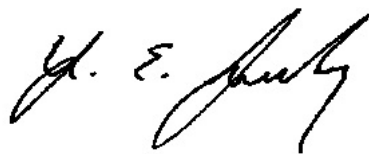
Applicant	Bevi
Address	529 Main St. Suite 304 Charleston MA, 02129

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 your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents.

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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)	3.23×10^{-3}	1×10^{-2}
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%	5%
Adjacent channel power	0.3dB	3dB
Conducted spurious emission of transmitter, valid up to 12.75GHz	1.9dB	3dB
Conducted emission of receivers	2.39dB	3dB
Radiated emission of transmitter, valid up to 26.5GHz	1.3dB	3dB
Radiated emission of transmitter, valid up to 80GHz	3.9dB	6dB
Radiated emission of receiver, valid up to 26.5GHz	3.3dB	6dB
Radiated emission of receiver, valid up to 80GHz	3.9dB	6dB
Humidity	3.3dB	6dB
Temperature	2.37%	5%
Time	0.7°C	1.0°C
RF Power Density, Conducted	4.1%	10%
DC and low frequency voltages	0.4dB	3dB
Voltage (AC, <10kHz)	1.3%	3%
Voltage (DC)	1.3%	2%
	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

PRODUCT	Bevi Countertop 1.0
BRAND	Bevi
MODEL NO.	700-0008
EUT Description	The Bevi Countertop 1.0 is a countertop water dispenser and is intended for indoor use.
FCC ID	2AMTV-700008
IC ID	22810-700008
HVIN	700-0008
POWER SUPPLY	120VAC 60Hz
MODULATION TYPE	BPSK for OFDM
MODULATION TECHNOLOGY	OFDM
TRANSFER RATE	802.11a: 54.0/ 48.0/ 36.0/ 24.0/ 18.0/ 12.0/ 9.0/ 6.0Mbps
OPERATING FREQUENCY	5180 ~ 5240MHz,
NUMBER OF CHANNEL	5180 ~ 5240MHz: 4 channels for 802.11a(20MHz)
CONDUCTED OUTPUT POWER	20.41 mW for 5180 ~ 5240MHz (Maximum AVG Power)
ANTENNA TYPE	2.4/5GHzDuel band dipole antenna
ANTENNA Gain	4.5dBi
I/O PORTS	Refer to user's manual
CABLE SUPPLIED	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



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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 $\geq$ 1G	RE<1G	PLC	APCM	
A	√	√	√	√	

Where **RE $\geq$ 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



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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:

- Environmental Conditions are recorded in Data Tables/Graphs**



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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 (dBuV/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 (dBμV/m)	AV: 54 (dBμV/m)
APPLICABLE TO	EIRP LIMIT	EQUIVALENT FIELD STRENGTH AT 3m
15.407(b)(1)	PK: -27 (dBm/MHz)	PK: 68.2 (dBμV/m)
15.407(b)(2)		
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:

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



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3.1.3 TEST INSTRUMENTS

Rev. 7/5/2022

Spectrum Analyzers / Receivers / Preselectors		Range	MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on
2093 MXE EMI Receiver		20Hz-26.5GHz	N9038A	Agilent	MY51210181	2093	I	3/7/2023	3/7/2022
Radiated Emissions Sites		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
EMI Chamber 2		719150	2762A-7	A-0015	1-18GHz	1686	I	12/8/2022	12/8/2020
Preamps / Couplers Attenuators / Filters		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
Antennas		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
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 #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	TM26-S1S1-120	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 Ω . For example, the measurement frequency 669 KHz resulted in a level of 39.2 dBuV/m, which is equivalent to $39.2 - 51.5 = -12.3$ dBuA/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.*



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3.1.5 DEVIATION FROM TEST STANDARD

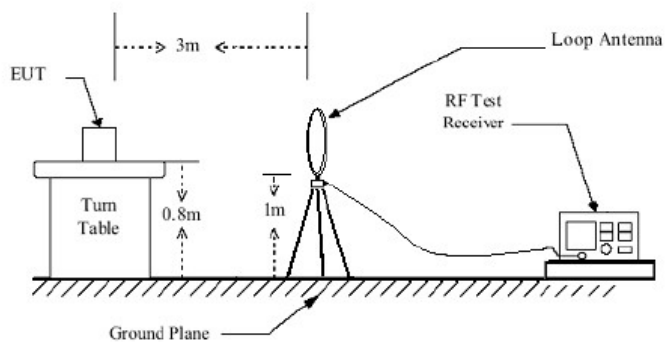
No deviation.



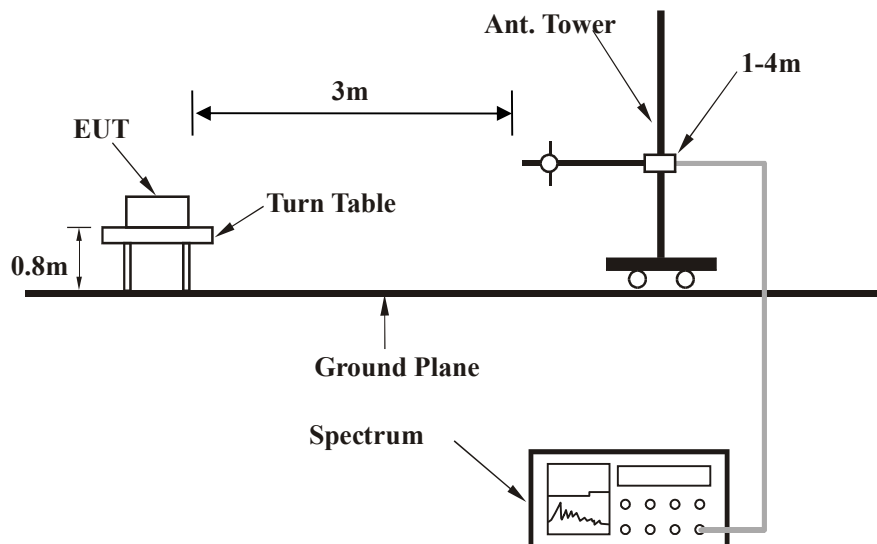
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3.1.6 TEST SETUP

Below 30MHz

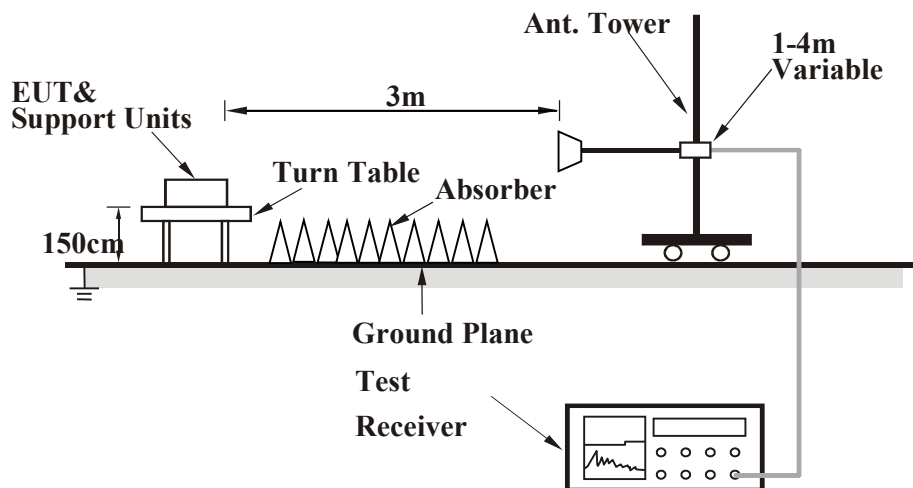


Below 1GHz test setup



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).



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3.1.7 TEST RESULTS

BELOW 1GHz WORST-CASE DATA

802.11a Data Rate 24 Mid Channel

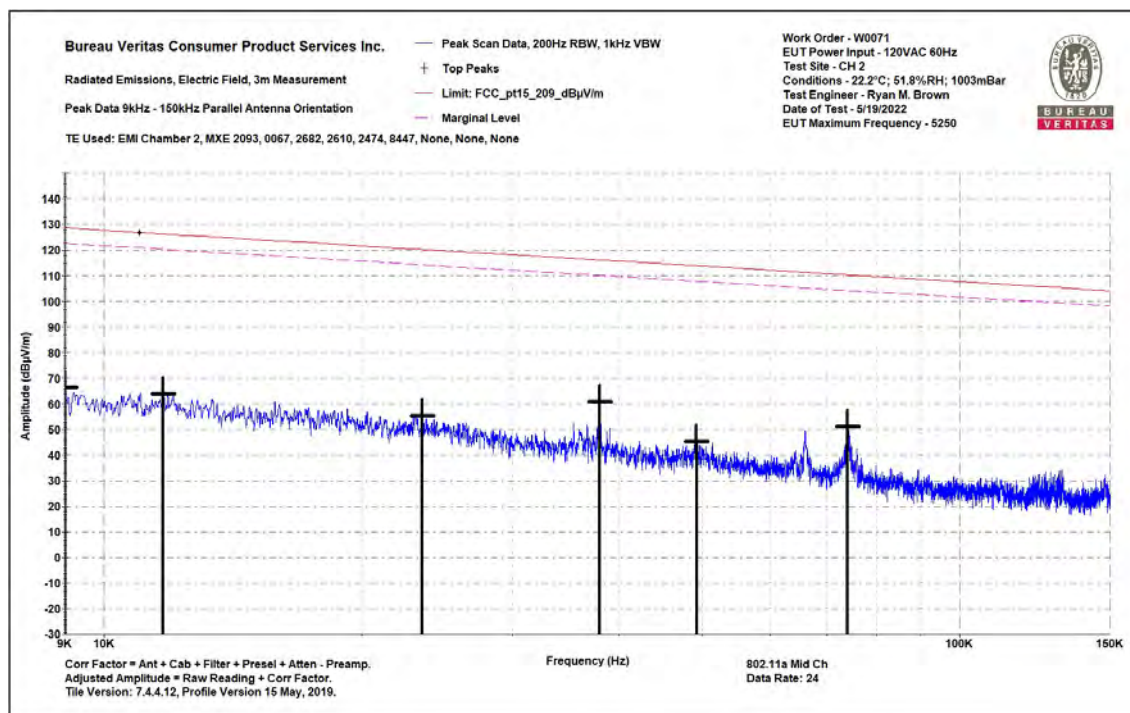
Bureau Veritas Consumer Product Services Inc.	Work Order - W0071
Radiated Emissions, Electric Field, 3m Measurement	EUT Power Input - 120VAC 60Hz
Top Peaks Parallel 9-150kHz	Test Site - CH 2
Notes:	Conditions - 22.2°C; 51.8%RH; 1003mBar
802.11a Mid Ch	Test Engineer - Ryan M. Brown
Data Rate: 24	Date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

Frequency (MHz)	Raw Peak Reading (dBμV)	Correction Factor (dB/m)	Adjusted Peak Amplitude (dBμV/m)	Lim: FCC_pt15_20 9_dBμV/m (dBμV/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.
 Radiated Emissions, Electric Field, 3m Measurement
 Top Peaks Perpendicular 9-150kHz
 Notes:
 802.11a Mid Ch
 Data Rate: 24

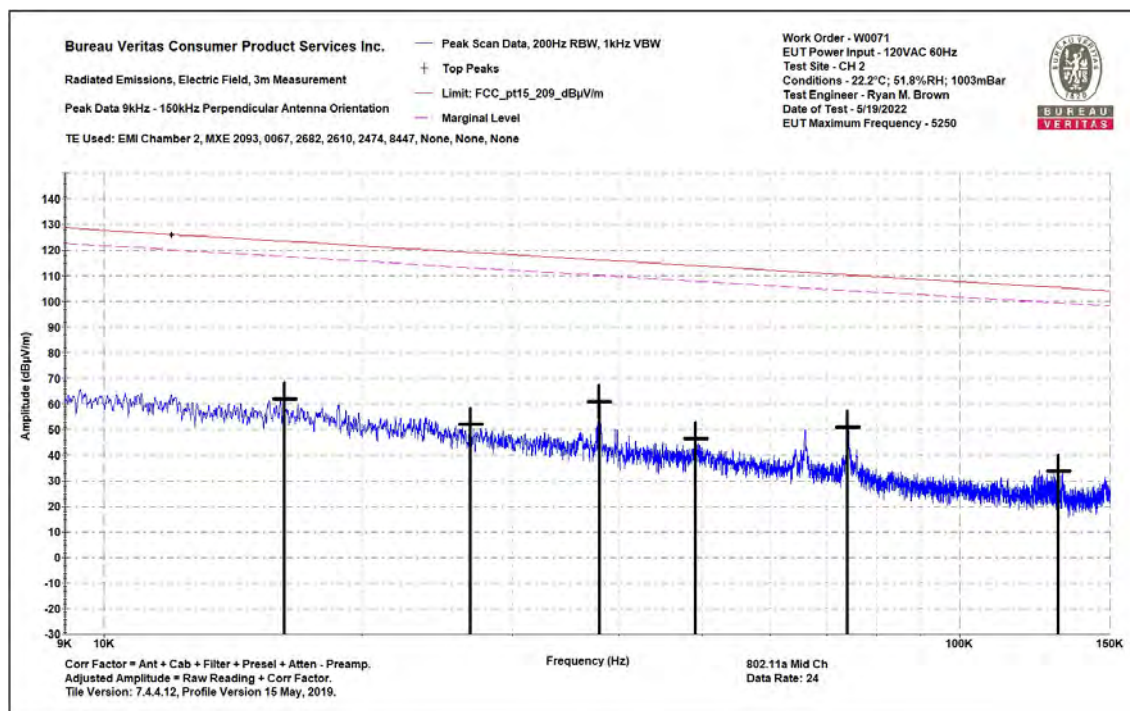
Work Order - W0071
 EUT Power Input - 120VAC 60Hz
 Test Site - CH 2
 Conditions - 22.2°C; 51.8%RH; 1003mBar
 Test Engineer - Ryan M. Brown
 Date of Test - 5/19/2022

Frequency (MHz)	Raw Peak Reading (dBµV)	Correction Factor (dB/m)	Adjusted Peak Amplitude (dBµV/m)	Lim: FCC_pt15_20 9_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

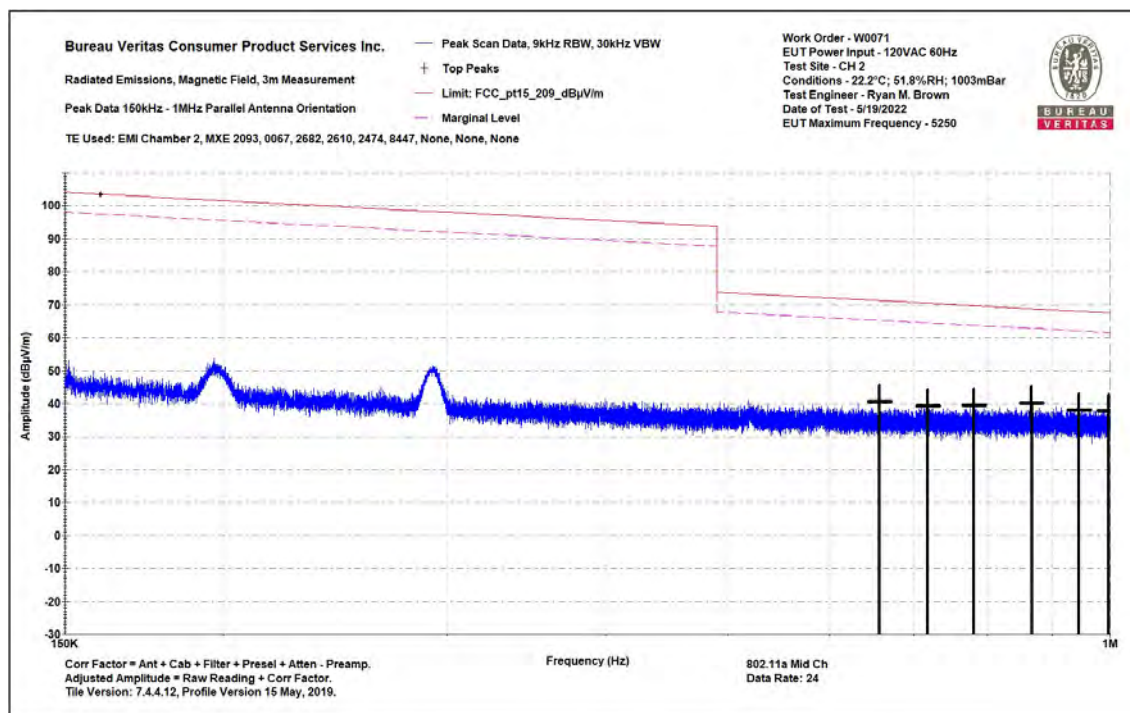
Work Order - W0071
EUT Power Input - 120VAC 60Hz
Test Site - CH 2
Conditions - 22.2°C; 51.8%RH; 1003mBar
Test Engineer - Ryan M. Brown
Date of Test - 5/19/2022

Frequency (MHz)	Raw Peak Reading (dBμV)	Correction Factor (dB/m)	Adjusted Peak Amplitude (dBμV/m)	Lim: FCC_pt15_20 9_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

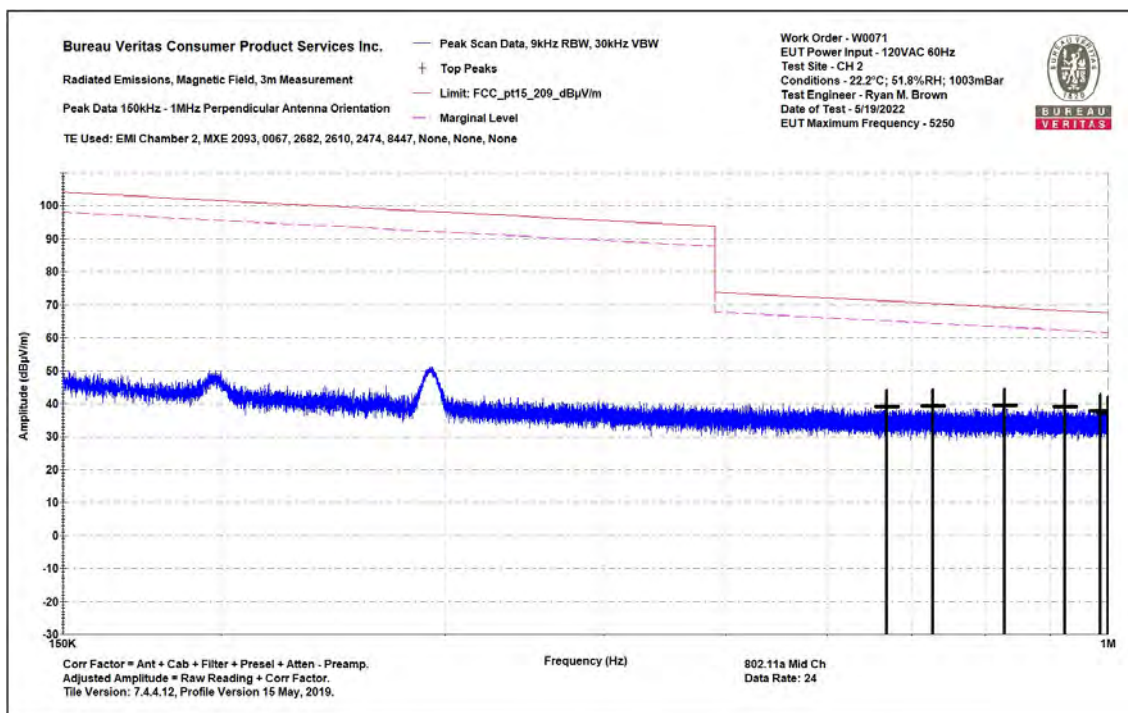
Work Order - W0071
EUT Power Input - 120VAC 60Hz
Test Site - CH 2
Conditions - 22.2°C; 51.8%RH; 1003mBar
Test Engineer - Ryan M. Brown
Date of Test - 5/19/2022

Frequency (MHz)	Raw Peak Reading (dBµV)	Correction Factor (dB/m)	Adjusted Peak Amplitude (dBµV/m)	Lim: FCC_pt15_20 9_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

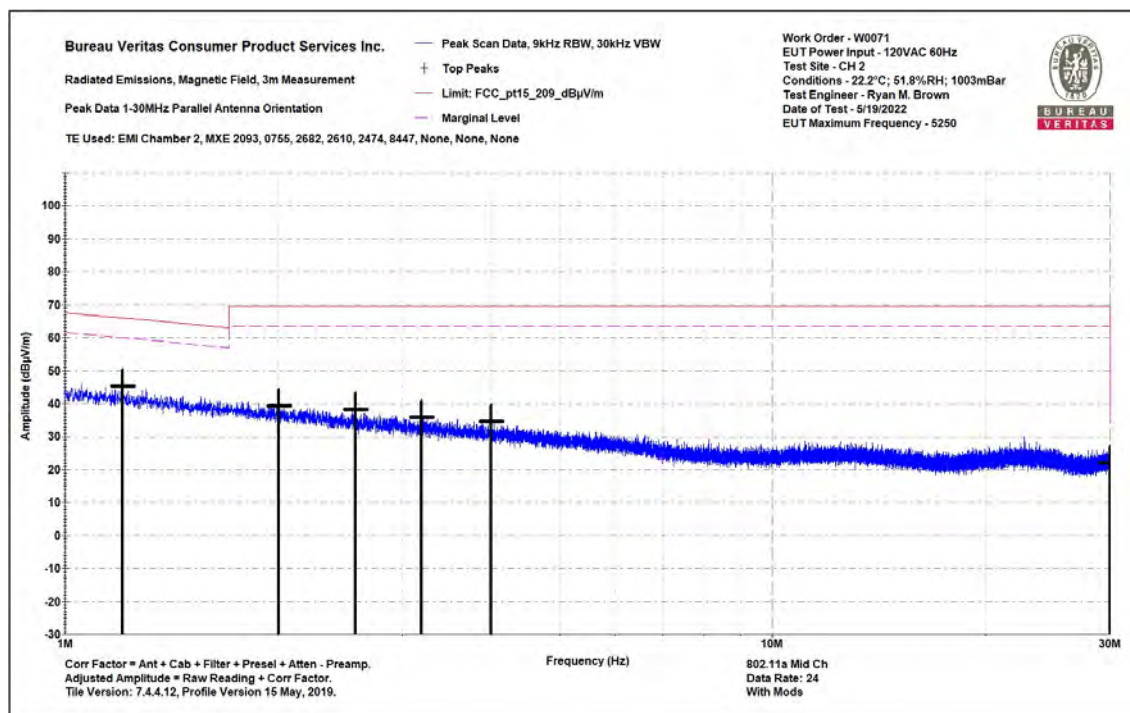
Work Order - W0071
EUT Power Input - 120VAC 60Hz
Test Site - CH 2
Conditions - 22.2°C; 51.8%RH; 1003mBar
Test Engineer - Ryan M. Brown
Date of Test - 5/19/2022

Frequency (MHz)	Raw Peak Reading (dBµV)	Correction Factor (dB/m)	Adjusted Peak Amplitude (dBµV/m)	Lim: FCC_pt15_20 9_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

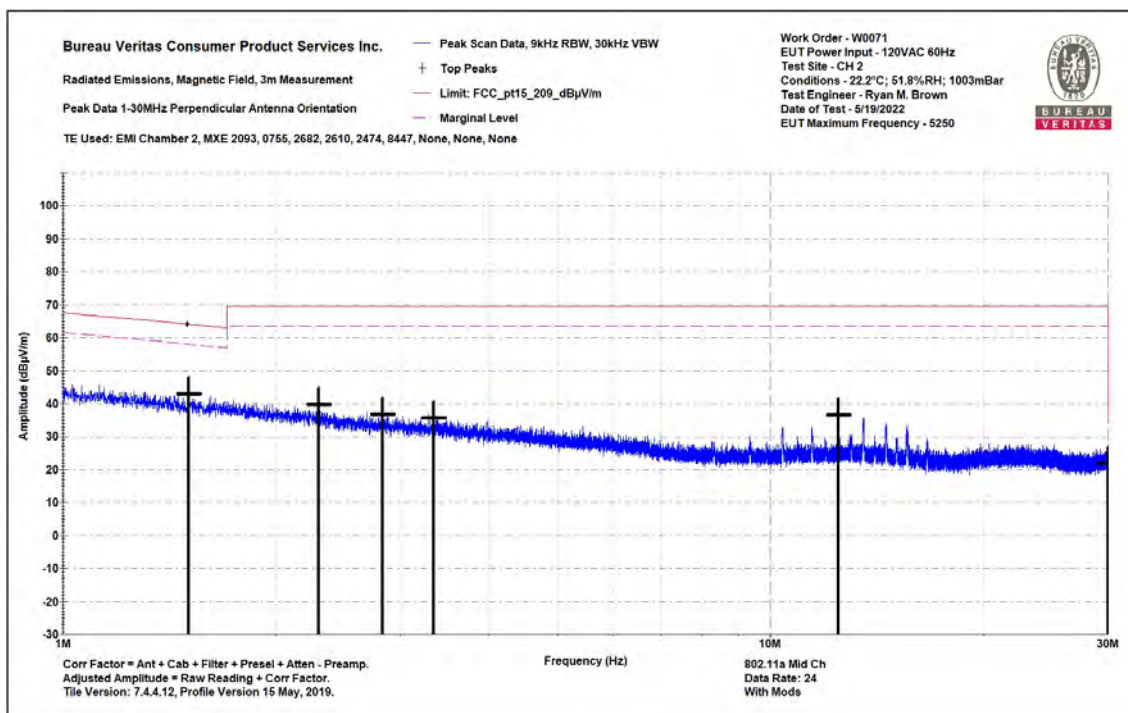
Work Order - W0071
 EUT Power Input - 120VAC 60Hz
 Test Site - CH 2
 Conditions - 22.2°C; 51.8%RH; 1003mBar
 Test Engineer - Ryan M. Brown
 Date of Test - 5/19/2022

Frequency (MHz)	Raw Peak Reading (dBµV)	Correction Factor (dB/m)	Adjusted Peak Amplitude (dBµV/m)	Lim: FCC_pt15_20 9_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



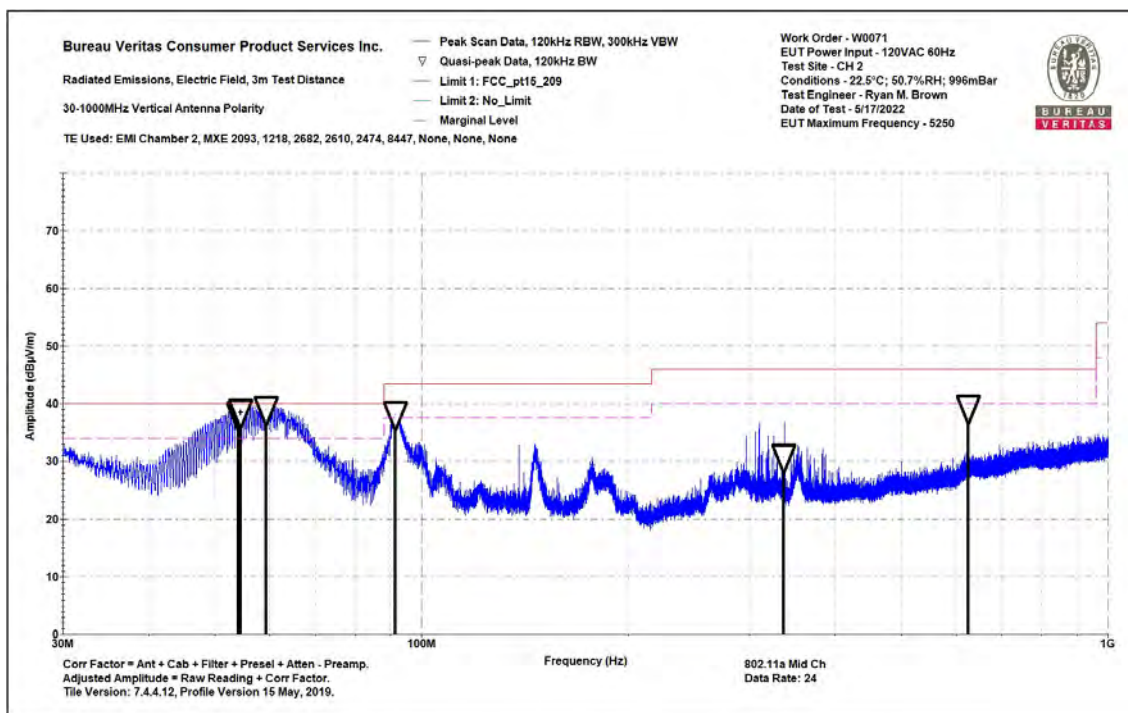
1-30 MHz Perpendicular

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



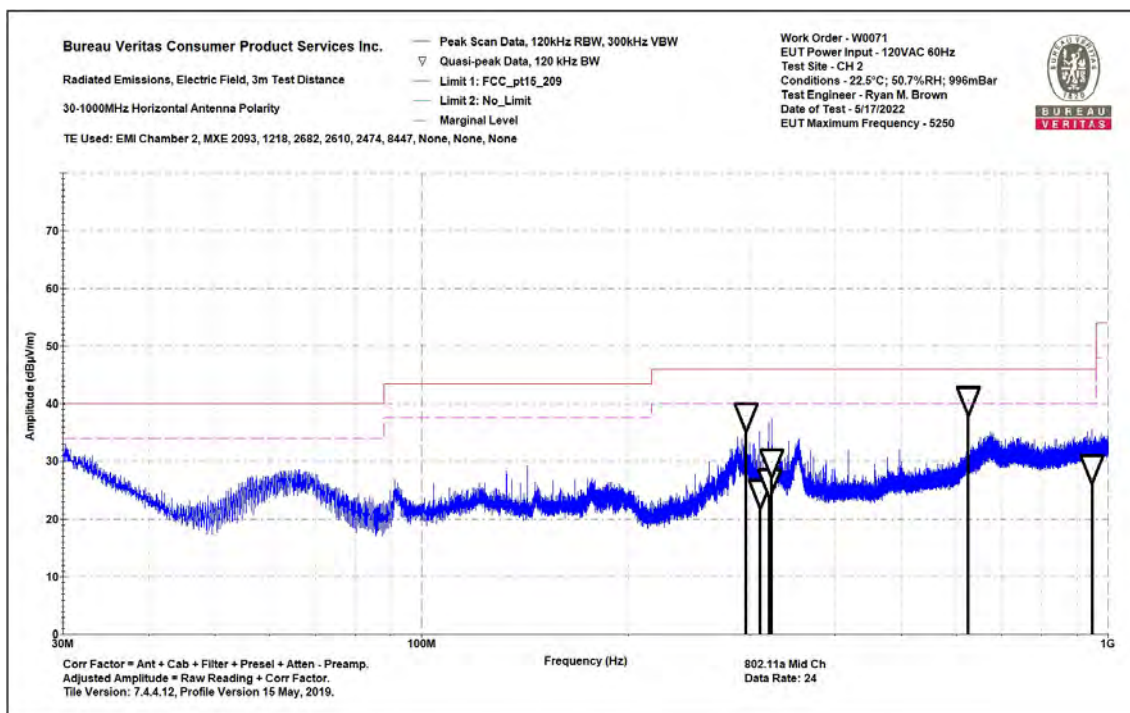
30-1000MHz Vertical

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 (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)
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



30-1000MHz Horizontal



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

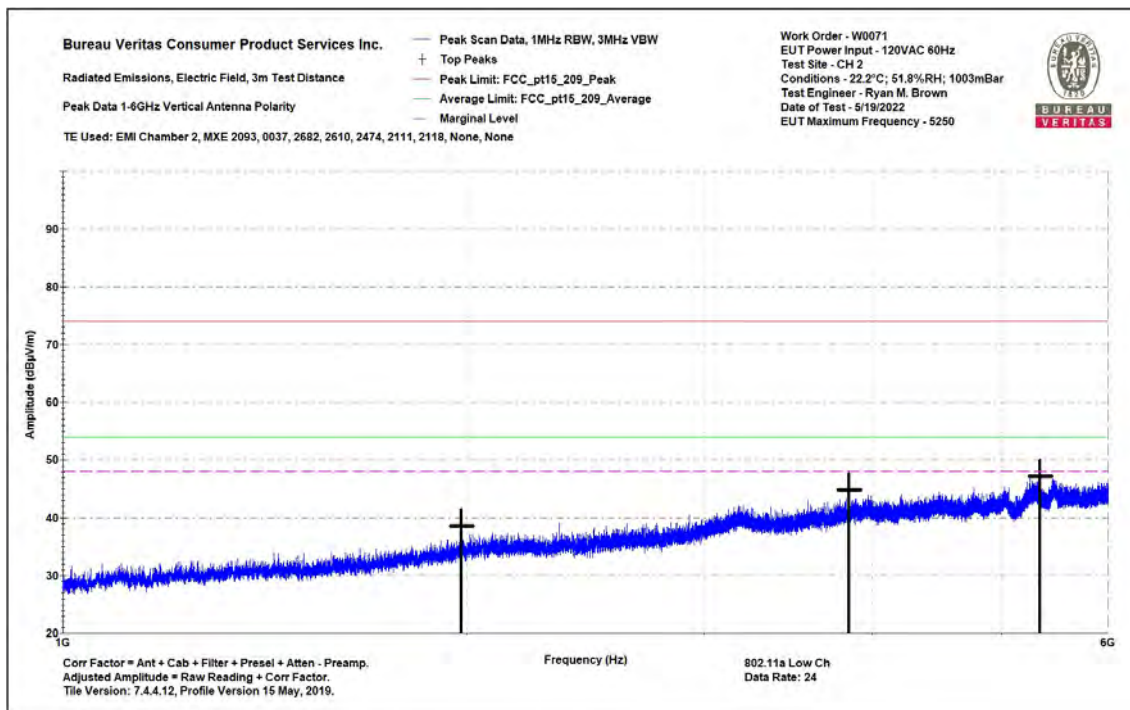
$$\text{EIRP[dBm]} = E[\text{dB}\mu\text{V/m}] - 95.2$$

Bureau Veritas Consumer Product Services Inc.
Radiated Emissions Electric Field 3m Distance
Top Peaks Vertical 1-6GHz
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; 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)	Pk Lim: FCC_pt15_20 9_Peak (dBμV/m)	Margin to Peak Limit (dB)	Peak Limit Test Results (Pass/Fail)	Peak Limit Worst Margin (dB)	Av Lim: FCC_pt15_20 9_Average (dBμV/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



Test Report No.: EW0071-3

Bureau Veritas Consumer Product Services Inc.
Radiated Emissions Electric Field 3m Distance

Top Peaks Horizontal 1-6GHz

Notes:

802.11a Low Ch

Data Rate: 24

Work Order - W0071

EUT Power Input - 120VAC 60Hz

Test Site - CH 2

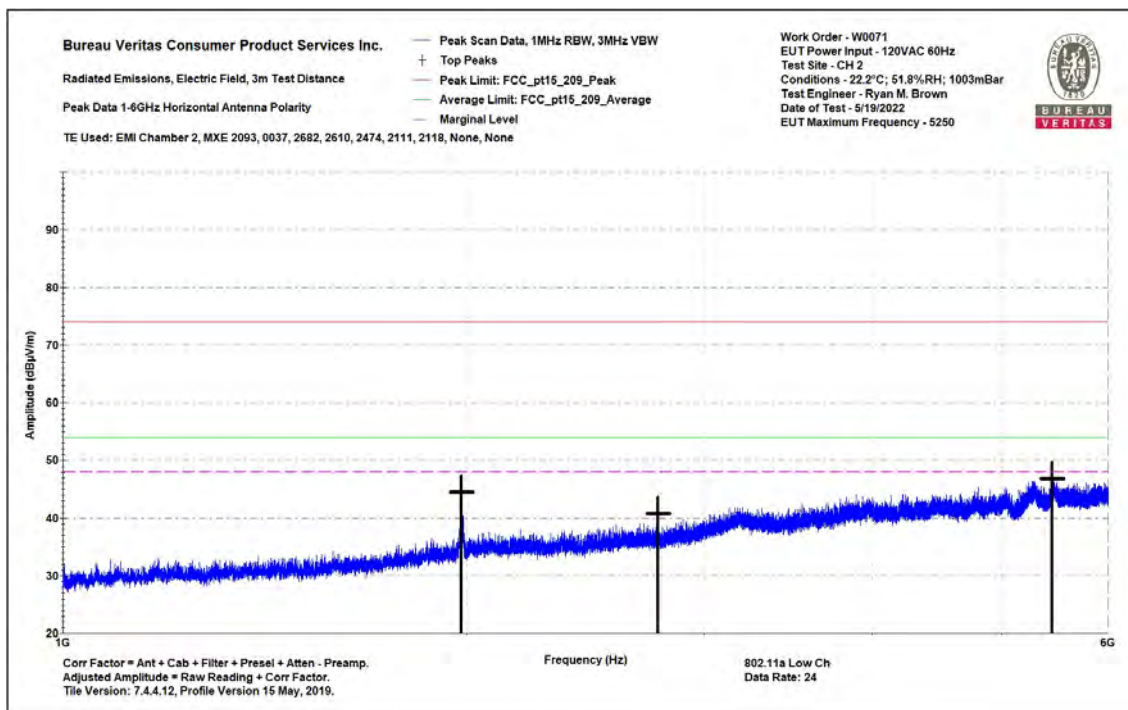
Conditions - 22.2°C; 51.8%RH; 1003mBar

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)	Pk Lim: FCC_pt15_20 9_Peak (dBμV/m)	Margin to Peak Limit (dB)	Peak Limit Results (Pass/Fail)	Peak Limit Worst Margin (dB)	Av Lim: FCC_pt15_20 9_Average (dBμV/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



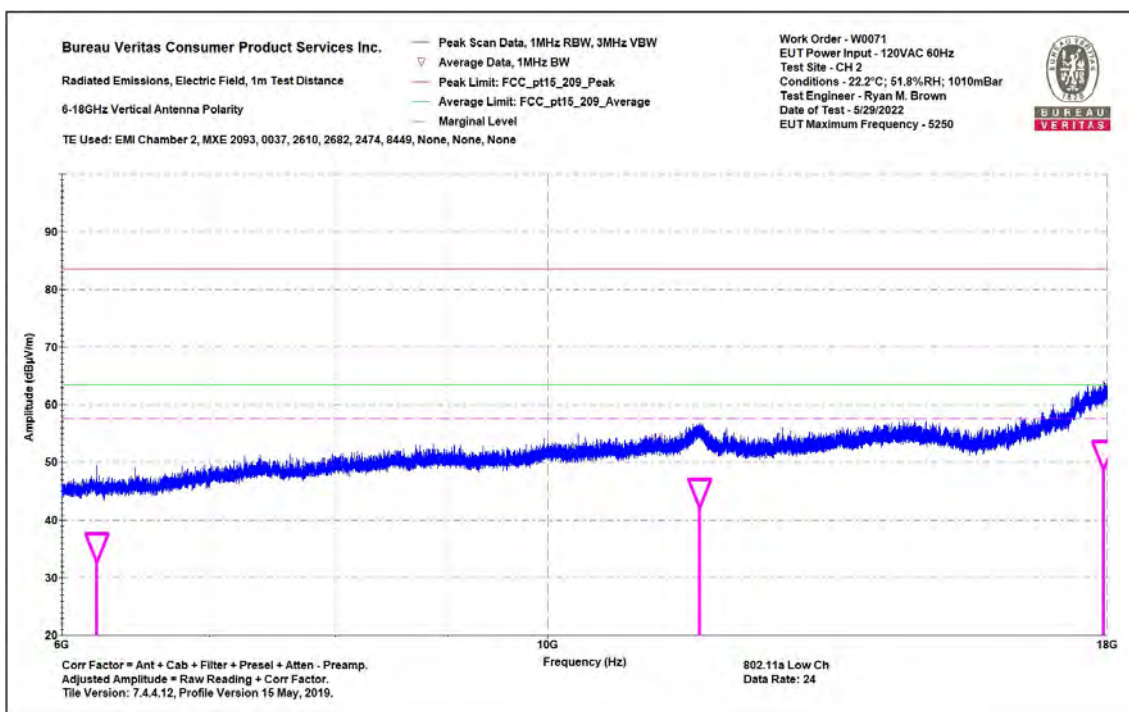
Test Report No.: EW0071-3

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 (dBμV)	Raw Avg Reading (dBμV)	Correction Factor (dB/m)	Adjusted Peak Amplitude (dBμV/m)	Pk Lim: FCC_pt15_20_9_Peak (dBμV/m)	Peak Margin (dB)	Peak Results (Pass/Fail)	Worst Peak Margin (dB)	Adjusted Avg Amplitude (dBμV/m)	Av Lim: FCC_pt15_20_9_Average (dBμV/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	-27dBm	-22.5	PASS		N/A	N/A	N/A	N/A		200	280
11732.6	44.2	36.1	8.9	53.1	83.5	-30.4	PASS		45	63.5	-18.5	PASS		200	185
17935.4	43.7	34.3	17.2	60.9	83.5	-22.6	PASS	-22.6	51.5	63.5	-12	PASS	-12	190	180

6-18GHz Vertical



6-18GHz Vertical



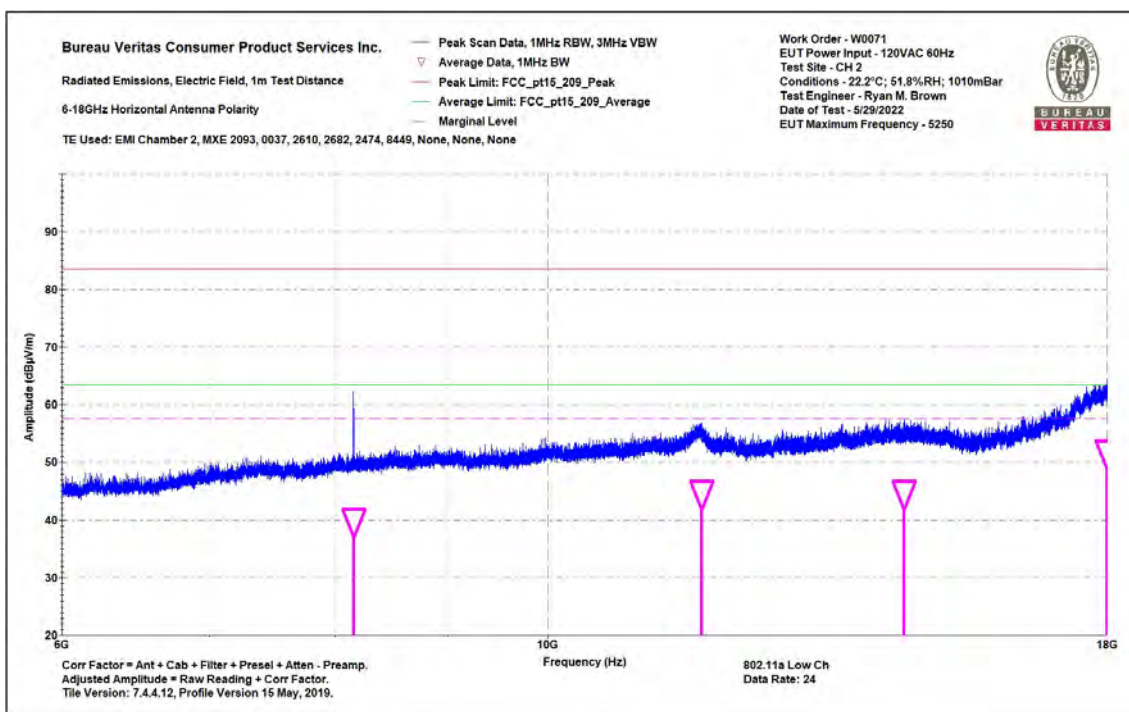
Test Report No.: EW0071-3

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 (dBμV)	Raw Avg Reading (dBμV)	Correction Factor (dB/m)	Adjusted Peak Amplitude (dBμV/m)	Pk Lim: FCC_pt15_20 9_Peak (dBμV/m)	Peak Margin (dB)	Peak Test Results (Pass/Fail)	Worst Peak Margin (dB)	Adjusted Avg Amplitude (dBμV/m)	Av Lim: FCC_pt15_20 9_Average (dBμV/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		90	170
11756.8	44.7	35.9	8.7	53.5	83.5	-30	PASS		44.7	63.5	-18.8	PASS		90	248
14543.9	43.8	N/A	-83.8	-40dBm	-27dBm	-13	PASS		N/A	N/A	N/A	N/A		90	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	18	104

6-18GHz Horizontal



6-18GHz Horizontal

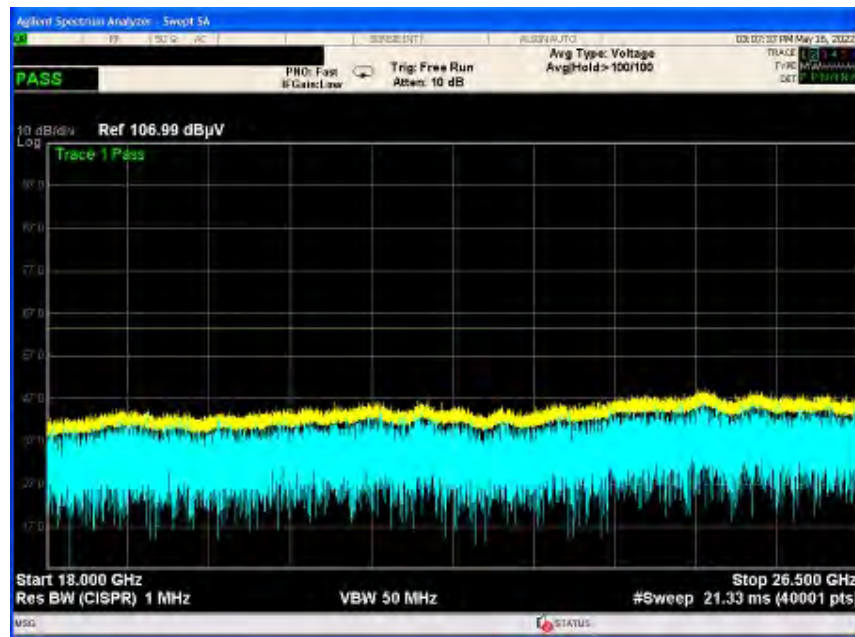


Test Report No.: EW0071-3

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 (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			
									Limit (dBμV/m)	Margin (dB)	Result (Pass/Fail)	Limit (dBμV/m)	Margin (dB)	Result (Pass/Fail)	
No Emissions found in this range															
Table Result:		---		by		---		dB		Worst Freq:				--- MHz	
Test Site: EMI Chamber 2		Cable 1: Asset #2323		Cable 2: ---		Cable 3: ---									
Analyzer: 2093		Preamp: 18-26.5GHz		Antenna: 18-26.5GHz Horn		Preselector: ---									
CSsoft Radiated Emissions Calculator v 1.017.222															
Adjusted Reading = Reading - Preamp Factor + Antenna Factor + Cable Factor															
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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 (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		
									Limit (dBμV/m)	Margin (dB)	Result (Pass/Fail)	Limit (dBμV/m)	Margin (dB)	Result (Pass/Fail)
No Emissions Found in this Range														
Table Result:		---		by		---		dB		Worst Freq: --- MHz				
Test Site: Chamber 2				Cable 1: 40GHz Mixer/18-26.5GHz no cable					Cable 2: ---			Cable 3: ---		
Analyzer: 1284				Preamp: None					Antenna: 40GHz Mixer			Preselector: ---		
CSsoft Radiated Emissions Calculator v 1.017.221														
Adjusted Reading = Reading - Preamp Factor + Antenna Factor + Cable Factor														
Copyright Curtis-Strauss LLC 2000														

26.5-40GHz

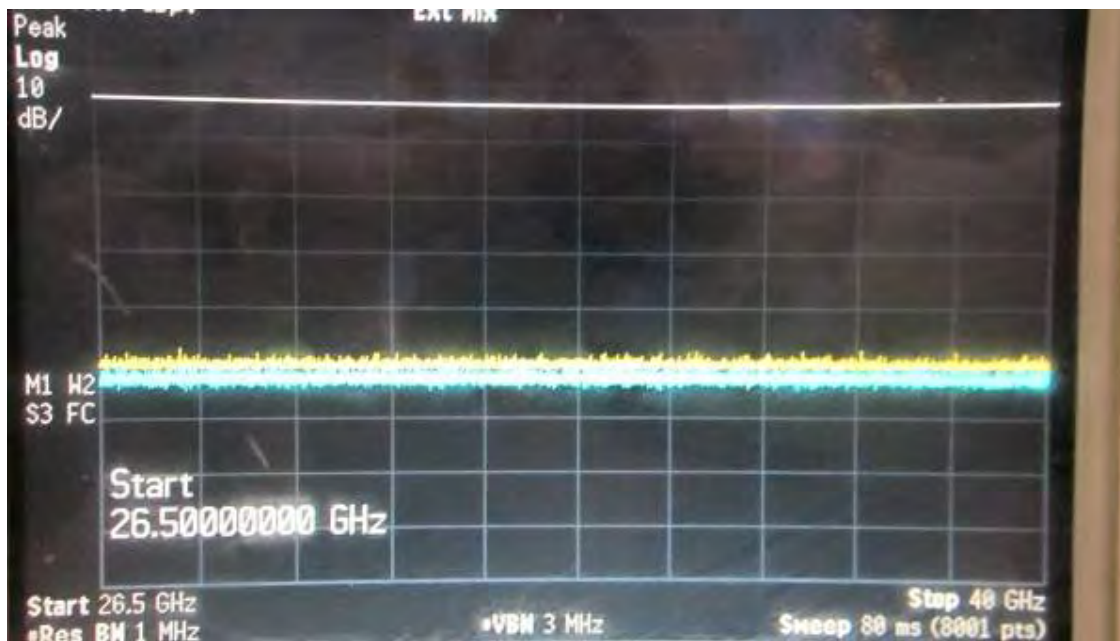
Bureau Veritas Consumer Products Services Inc.

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Fax: (978) 486-8828



Test Report No.: EW0071-3



26.5-40GHz

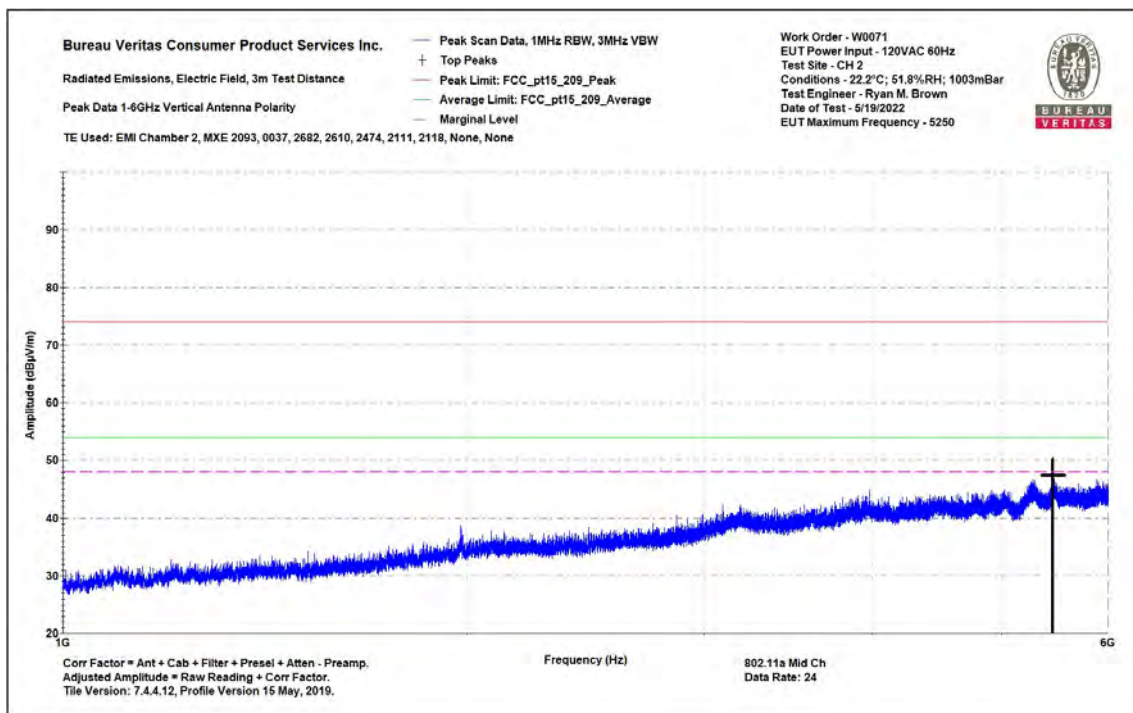


Test Report No.: EW0071-3

Mid Ch

Bureau Veritas Consumer Product Services Inc. Radiated Emissions Electric Field 3m Distance Top Peaks Vertical 1-6GHz 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 (dBm)	Pk Lim: FCC_pt15_20 9_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.
Radiated Emissions Electric Field 3m Distance
Top Peaks Horizontal 1-6GHz

Notes:

802.11a Mid Ch

Data Rate: 24

Work Order - W0071

EUT Power Input - 120VAC 60Hz

Test Site - CH 2

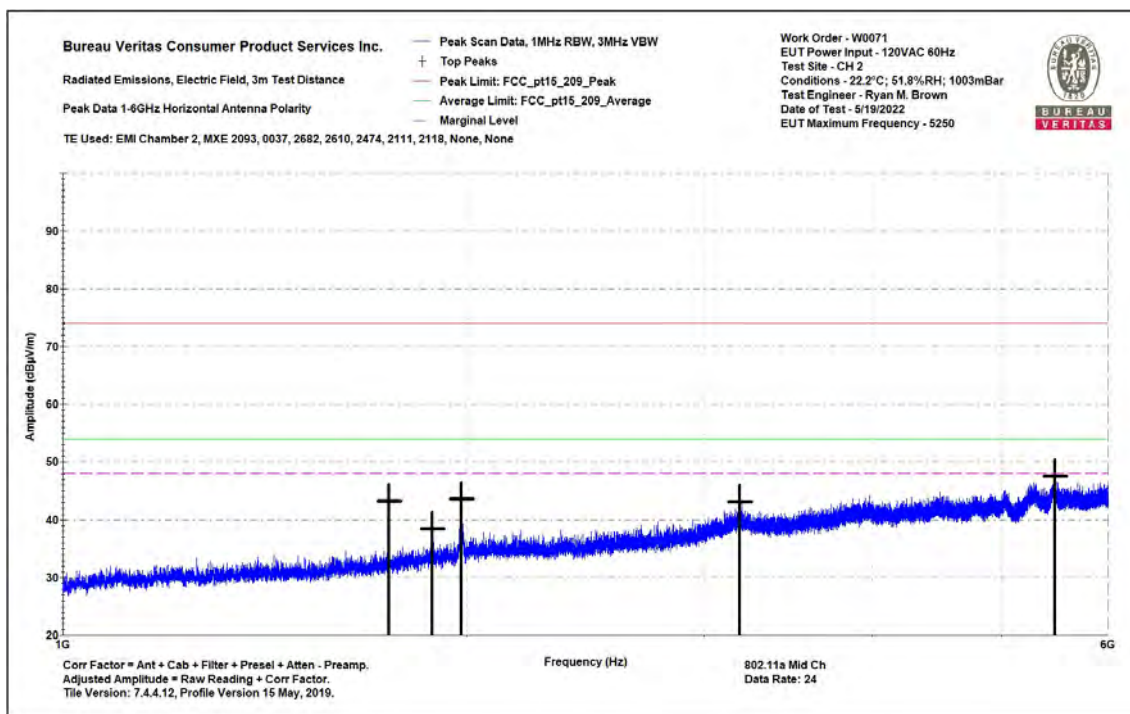
Conditions - 22.2°C; 51.8%RH; 1003mBar

Test Engineer - Ryan M. Brown

Date of Test - 5/19/2022

Frequency (MHz)	Raw Peak Reading (dBμV)	Correction Factor (dB/m)	Adjusted Peak Amplitude (dBm)	Pk Lim: FCC_pt15_20 9_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



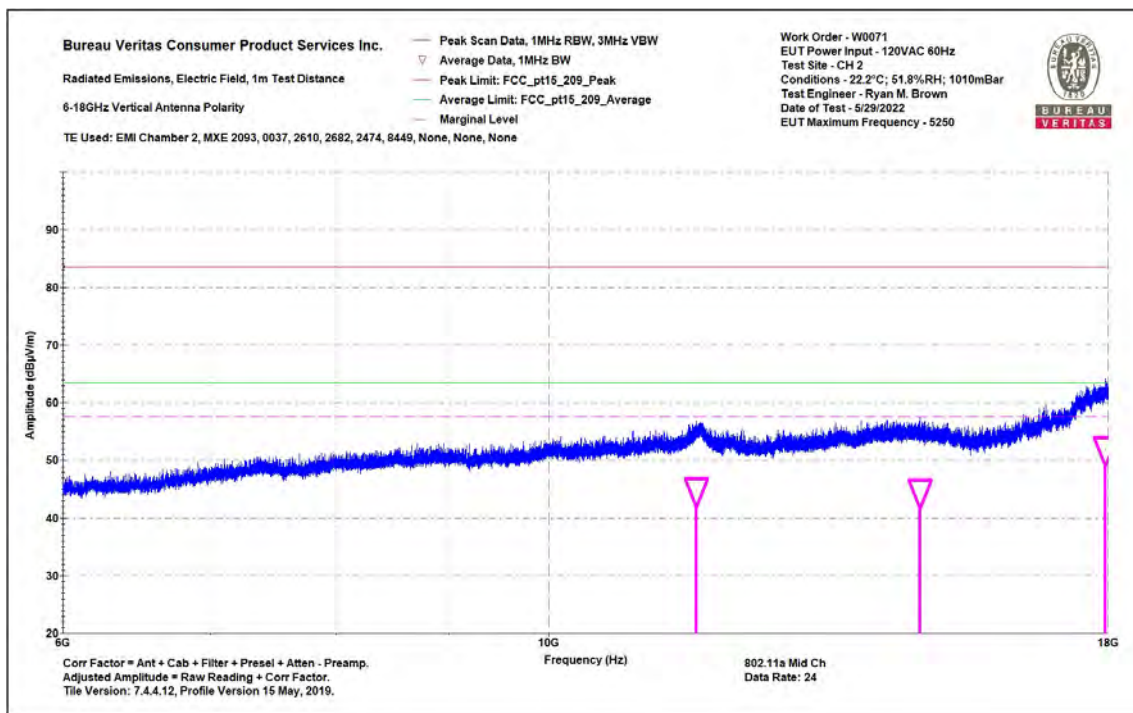
Test Report No.: EW0071-3

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 (dBμV)	Raw Avg Reading (dBμV)	Correction Factor (dB/m)	Adjusted Peak Amplitude (dBμV/m)	Pk Lim: FCC_pt15_20_9_Peak (dBμV/m)	Peak Margin (dB)	Peak Results (Pass/Fail)	Worst Peak Margin (dB)	Adjusted Avg Amplitude (dBμV/m)	Av Lim: FCC_pt15_20_9_Average (dBμV/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		92	232
14765.1	43.2	N/A	-84.1	-40.9dBm	-27dBm	-13.9	PASS		N/A	N/A	N/A	N/A		200	230
17948.1	44	34.4	17.4	61.5	83.5	-22	PASS	-22	51.9	63.5	-11.6	PASS	-11.6	96	96

6-18GHz Vertical



6-18GHz Vertical



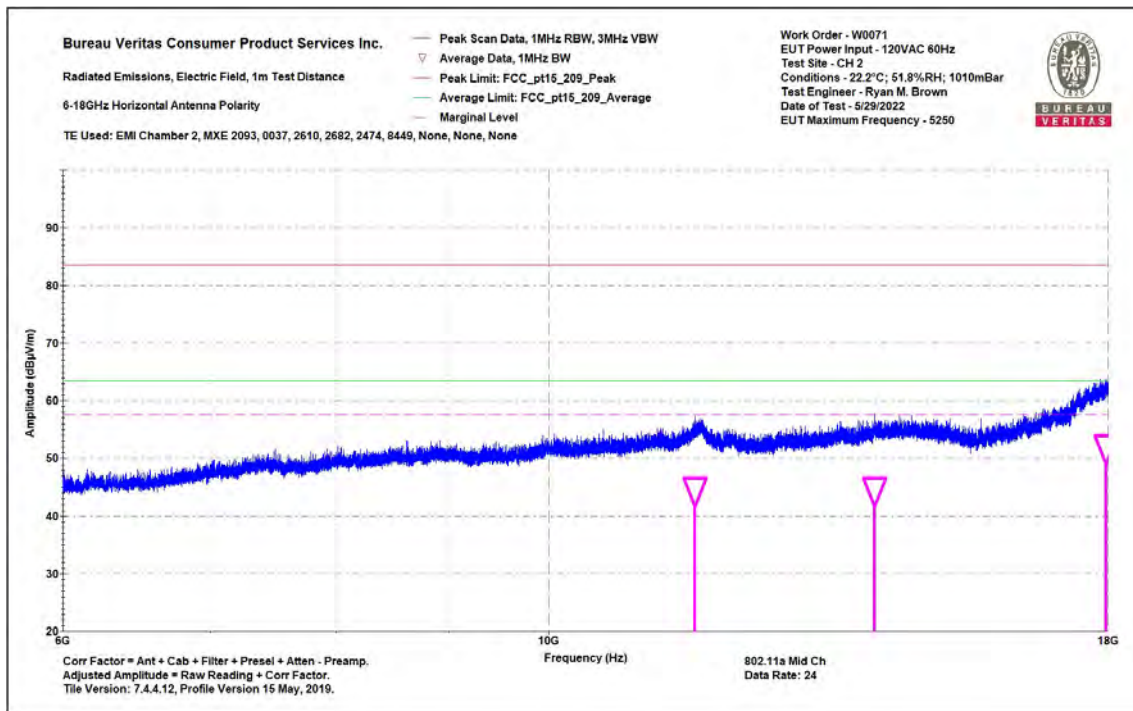
Test Report No.: EW0071-3

Bureau Veritas Consumer Product Services Inc.
Radiated Emissions Electric Field 1m Distance
6-18GHz Horizontal Data
Notes:
802.11a 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 (dBμV)	Raw Avg Reading (dBμV)	Correction Factor (dB/m)	Adjusted Peak Amplitude (dBμV/m)	Pk Lim: FCC_pt15_20 9_Peak (dBμV/m)	Peak Margin (dB)	Peak Test Results (Pass/Fail)	Worst Peak Margin (dB)	Adjusted Avg Amplitude (dBμV/m)	Av Lim: FCC_pt15_20 9_Average (dBμV/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	126
14079.7	43.6	N/A	-83.7	-40.1dBm	-27dBm	-13.1	PASS		N/A	N/A	N/A	N/A		150	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	116	180

6-18GHz Horizontal



6-18GHz Horizontal

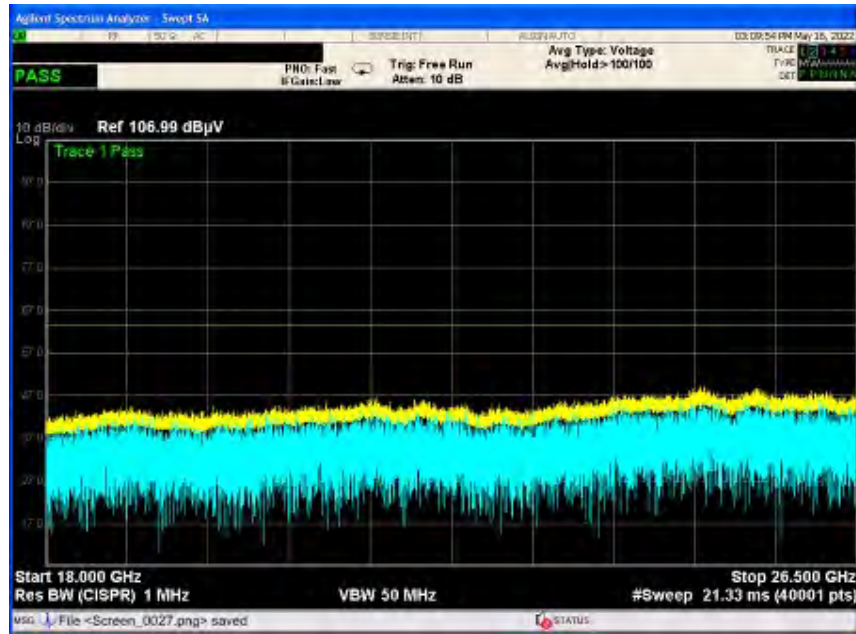


Test Report No.: EW0071-3

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 (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			
									Limit (dBμV/m)	Margin (dB)	Result (Pass/Fail)	Limit (dBμV/m)	Margin (dB)	Result (Pass/Fail)	
No Emissions found in this range															
Table Result:		---		by		---		dB		Worst Freq:				--- MHz	
Test Site: EMI Chamber 2		Cable 1: Asset #2323		Cable 2: ---		Cable 3: ---									
Analyzer: 2093		Preamp: 18-26.5GHz		Antenna: 18-26.5GHz Horn		Preselector: ---									
CSsoft Radiated Emissions Calculator v 1.017.222															
Adjusted Reading = Reading - Preamp Factor + Antenna Factor + Cable Factor															
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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								EUT Max Freq: 5240														
Mid Ch																						
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										
									Limit (dBμV/m)	Margin (dB)	Result (Pass/Fail)	Limit (dBμV/m)	Margin (dB)	Result (Pass/Fail)								
No Emissions Found in this Range																						
Table Result: --- by --- dB										Worst Freq: --- MHz												
Test Site: Chamber 2		Cable 1: 40GHz Mixer/18-26.5GHz no cable						Cable 2: ---		Cable 3: ---												
Analyzer: 1284		Preamp: None						Antenna: 40GHz Mixer		Preselector: ---												
CSsoft Radiated Emissions Calculator v 1.017.221																						
Adjusted Reading = Reading - Preamp Factor + Antenna Factor + Cable Factor																						
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26.5-40GHz

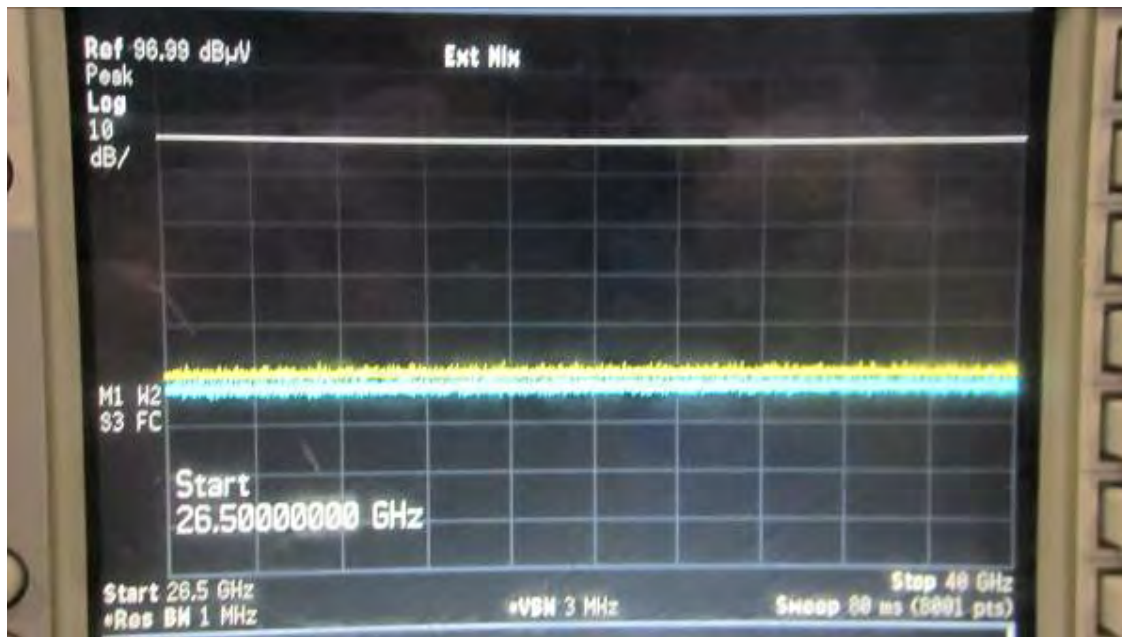
Bureau Veritas Consumer Products
Services Inc.

One Distribution Center Circle, #1 • Littleton,
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Tel: (978) 486-8880
Fax: (978) 486-8828



Test Report No.: EW0071-3



26.5-40GHz

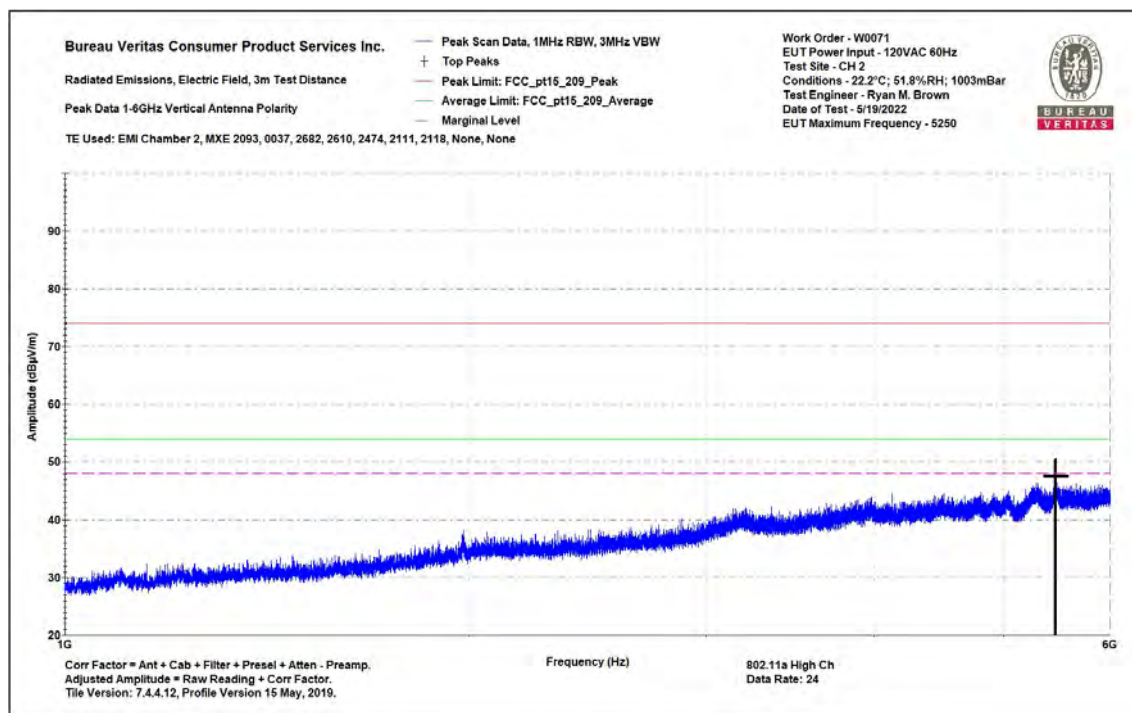


Test Report No.: EW0071-3

High Ch

Bureau Veritas Consumer Product Services Inc. Radiated Emissions Electric Field 3m Distance Top Peaks Vertical 1-6GHz Notes: 802.11a High Ch Data Rate: 24 0					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 (dBm)	Pk Lim: FCC_pt15_20 9_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



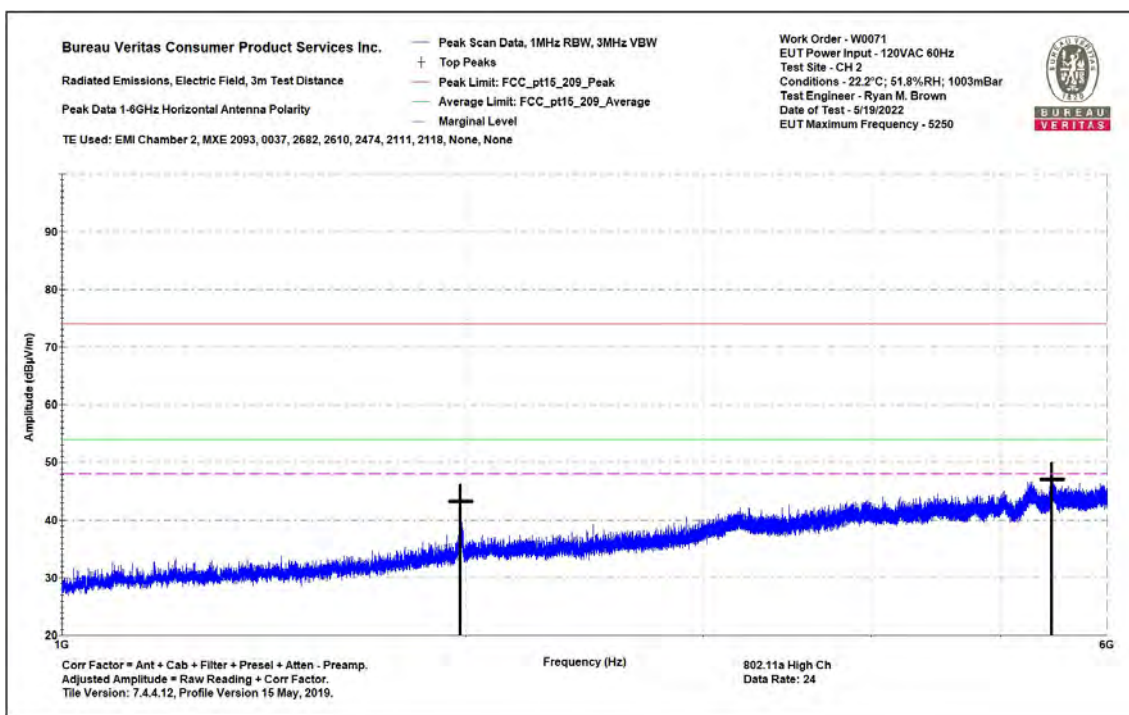
Test Report No.: EW0071-3

Bureau Veritas Consumer Product Services Inc.
Radiated Emissions Electric Field 3m Distance
Top Peaks Horizontal 1-6GHz
Notes:
802.11a High 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)	Pk Lim: FCC_pt15_20 9_Peak (dBμV/m)	Margin to Peak Limit (dB)	Peak Limit Results (Pass/Fail)	Peak Limit Worst Margin (dB)	Av Lim: FCC_pt15_20 9_Average (dBμV/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	-6.9	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.
Radiated Emissions Electric Field 1m Distance
6-18GHz Vertical Data
Notes:
802.11a High 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 (dBμV)	Raw Avg Reading (dBμV)	Correction Factor (dB/m)	Adjusted Peak Amplitude (dBμV/m)	Pk Lim: FCC_pt15_20 9_Peak (dBμV/m)	Peak Margin (dB)	Peak Results (Pass/Fail)	Worst Peak Margin (dB)	Adjusted Avg Amplitude (dBμV/m)	Av Lim: FCC_pt15_20 9_Average (dBμV/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	84
14702.3	42.4	33.6	-84.2	-41.8dBm	-27dBm	-14.8	PASS		N/A	N/A	N/A	N/A		174	186
17978.8	43	34.5	17.4	60.5	83.5	-23	PASS	-23	51.9	63.5	-11.6	PASS	-11.6	200	218

6-18 GHz Vertical

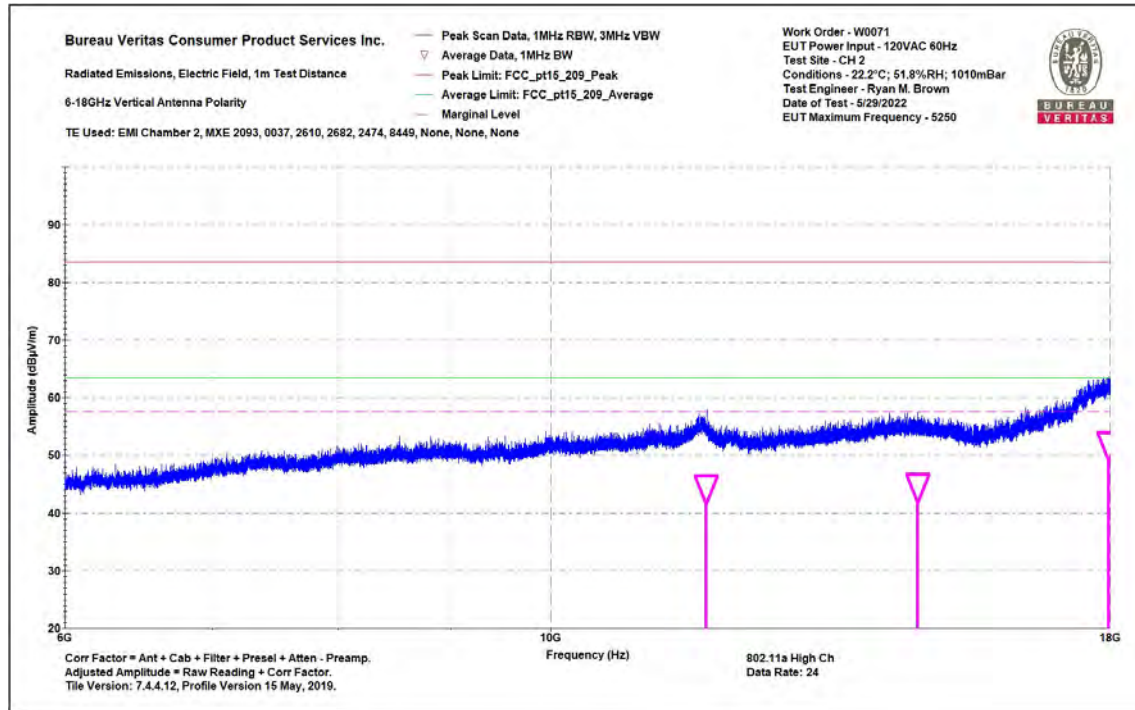
Bureau Veritas Consumer Products
Services Inc.

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Tel: (978) 486-8880
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Test Report No.: EW0071-3



6-18 GHz Vertical

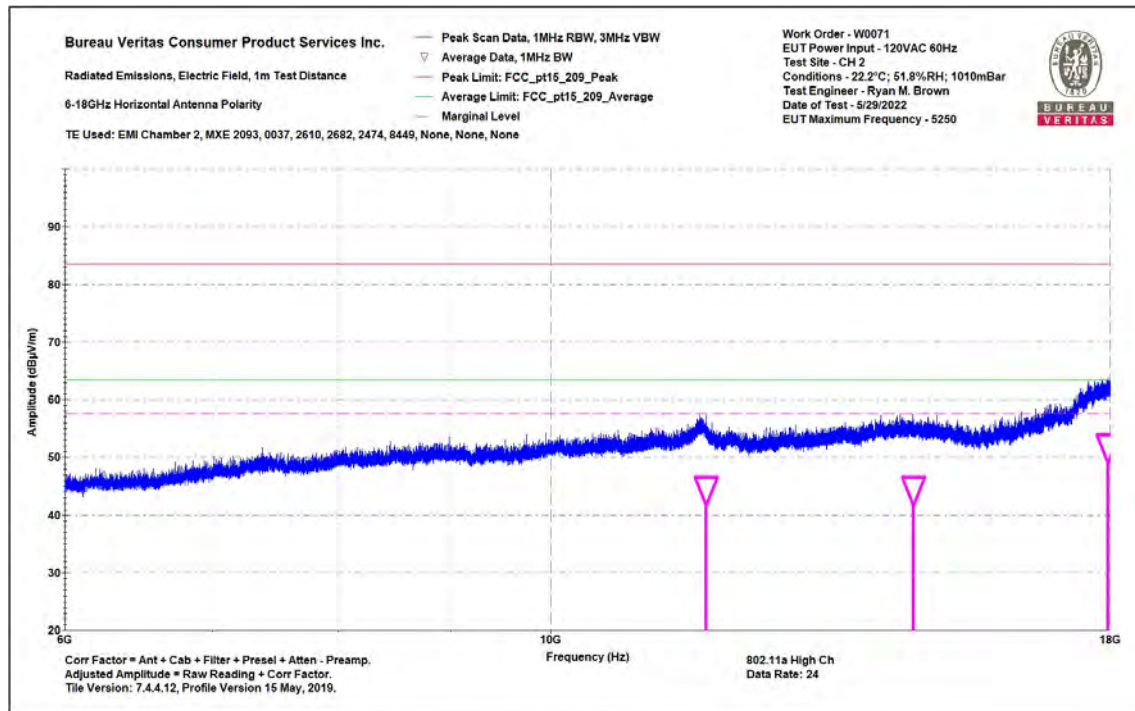
Bureau Veritas Consumer Product Services Inc.				Work Order - W0071			
Radiated Emissions Electric Field 1m Distance				EUT Power Input - 120VAC 60Hz			
6-18GHz Horizontal Data				Test Site - CH 2			
Notes:				Conditions - 22.2°C; 51.8%RH; 1010mBar			
802.11a High Ch				Test Engineer - Ryan M. Brown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

Frequency (MHz)	Raw Peak Reading (dBµV)	Raw Avg Reading (dBµV)	Correction Factor (dB/m)	Adjusted Peak Amplitude (dBµV/m)	Pk Lim: FCC_pt15_209_Peak (dBµV/m)	Peak Margin (dB)	Peak Test Results (Pass/Fail)	Worst Peak Margin (dB)	Adjusted Avg Amplitude (dBµV/m)	Av Lim: FCC_pt15_209_Average (dBµV/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	205
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	92	57

6-18 GHz Horizontal



Test Report No.: EW0071-3



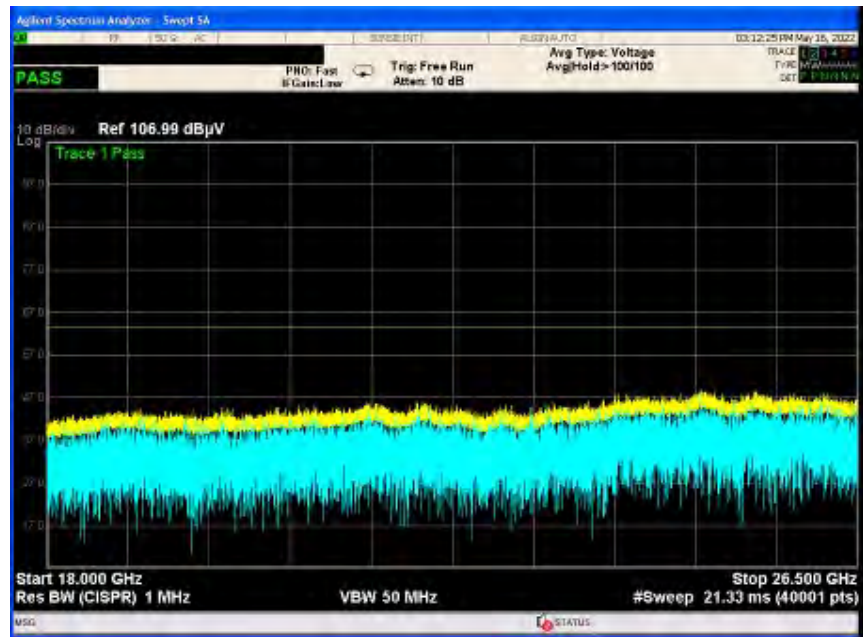
6-18 GHz Horizontal

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 (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												
									Limit (dBμV/m)	Margin (dB)	Result (Pass/Fail)	Limit (dBμV/m)	Margin (dB)	Result (Pass/Fail)										
No Emissions found in this range																								
Table Result:				---				by				---				Worst Freq:			---			MHz		
Test Site: EMI Chamber 2				Cable 1: Asset #2323				Cable 2: ---				Cable 3: ---												
Analyzer: 2093				Preamp: 18-26.5GHz				Antenna: 18-26.5GHz Horn				Preselector: ---												
CSsoft Radiated Emissions Calculator v 1.017.222															Copyright Curtis-Straus LLC 200									
Adjusted Reading = Reading - Preamp Factor + Antenna Factor + Cable Factor																								

18-26.5 GHz



Test Report No.: EW0071-3



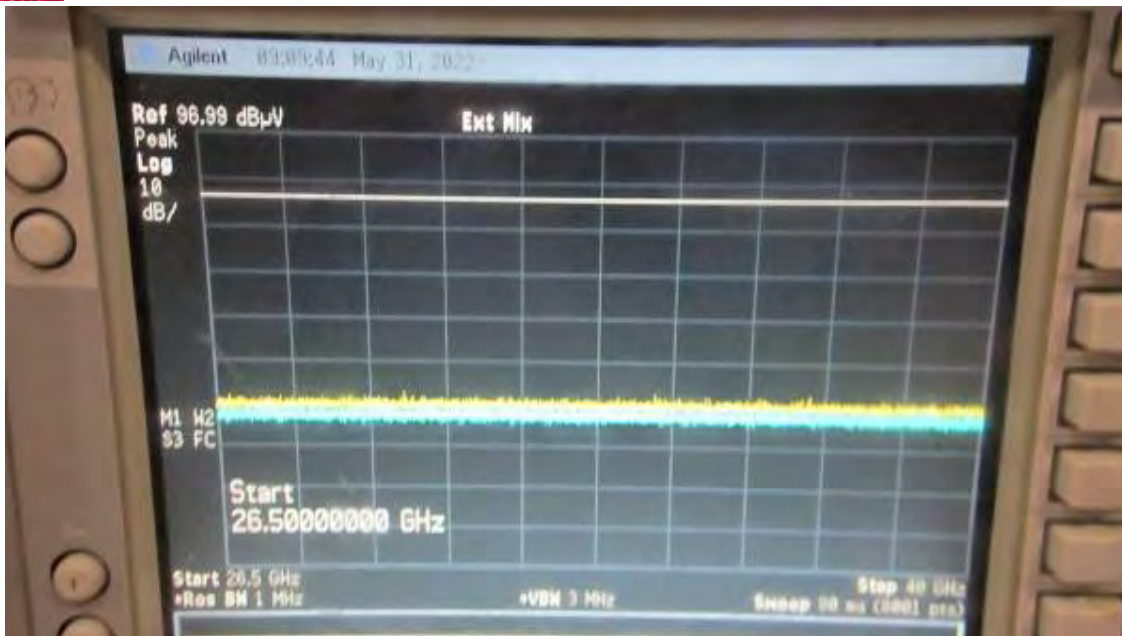
18-26.5 GHz

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		
									Limit (dBμV/m)	Margin (dB)	Result (Pass/Fail)	Limit (dBμV/m)	Margin (dB)	Result (Pass/Fail)
No Emissions Found in this Range														
Table Result: --- by --- dB Worst Freq: --- MHz														
Test Site: Chamber 2				Cable 1: 40GHz Mixer/18-26.5GHz no cable				Cable 2: ---				Cable 3: ---		
Analyzer: 1284				Preamp: None				Antenna: 40GHz Mixer				Preselector: ---		
CSsoft Radiated Emissions Calculator v 1.017.221														
Adjusted Reading = Reading - Preamp Factor + Antenna Factor + Cable Factor														
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26.5-40 GHz



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 (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		
									Limit (dBμV/m)	Margin (dB)	Result (Pass/Fail)	Limit (dBμV/m)	Margin (dB)	Result (Pass/Fail)
802.11a Data Rate 24 Low Ch V	5128.002	46.284	46.3	42.5	33.6	15.8	53.2	53.2	74.0	-20.8	Pass	54.0	-0.8	Pass
	H	5128.002	45.693	45.7	42.5	33.6	15.8	52.6	52.6	-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	-8.8	Pass	-27dBm	-23.9	Pass
	H	5327.791	51.124	36.4	42.2	33.9	15.8	-36.6dBm	-51.3dBm	-27dBm	-9.4	Pass	-27dBm	-24.3
Table Result: Pass by -0.8 dB										Worst Freq: 5128.002 MHz				
Test Site: EMI Chamber 2					Cable 1: Asset #2682					Cable 2: Asset #2610				
Analyzer: Asset #2093					Preamp: Asset #2111					Antenna: Yellow Horn				
CSsoft Radiated Emissions Calculator v 1.017.222														
Adjusted Reading = Reading - Preamp Factor + Antenna Factor + Cable Factor														
dBm=adjusted Reading in (dbu/m)-95.2														
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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 (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		
									Limit (dBμV/m)	Margin (dB)	Result (Pass/Fail)	Limit (dBμV/m)	Margin (dB)	Result (Pass/Fail)
802.11a Data Rate 24 Low Ch														
V	5150.0			---	---	---	---	---	---	---	---	---	---	---
H	5150.0	44.158	34.9	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	46.603	38.4	38.2	34.2	15.7	58.3	50.1	74.0	-15.7	Pass	54.0	-3.9	Pass
H	5350.0			---	---	---	---	---	---	---	---	---	---	---
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
H	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
Table Result:			Pass by -3.9 dB						Worst Freq:			5150.0 MHz		
Test Site: EMI Chamber 2			Cable 1: Asset #2583						Cable 2: Asset #2610			Cable 3: Asset #2474		
Analyzer: 2093			Preamp: 8449B						Antenna: Blue Horn			Preselector: ---		
CSsoft Radiated Emissions Calculator v 1.017.222														
Adjusted Reading = Reading - Preamp Factor + Antenna Factor + Cable Factor														
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Test Report No.: EW0071-3

3.2 CONDUCTED EMISSION MEASUREMENT

3.2.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

FREQUENCY OF EMISSION (MHz)	CONDUCTED LIMIT (dBµV)	
	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

Spectrum Analyzers / Receivers /Preselectors Rental EXA Signal Analyzer(1118473)	Range 9KHz-26.5GHz	MN N9010A-526;N	Mfr AT	SN MY51170076	Asset 1118473	Cat I	Calibration Due 8/5/2022	Calibrated on 8/5/2021
LISNs/Measurement Probes LISN Asset 1728 LISN Asset 1729	Range 150kHz-30MHz 150kHz-30MHz	MN LI-150A LI-150A	Mfr Com-Power Com-Power	SN 201084 201085	Asset 1728 1729	Cat I I	Calibration Due 1/5/2023 1/5/2023	Calibrated on 1/5/2022 1/5/2022
Conducted Test Sites (Mains / Telco) CEMI 3	FCC Code 719150		VCCI Code A-0015			Cat III	Calibration Due NA	Calibrated on N/A
Meteorological Meters/Chambers 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
Cables CEMI-02	Range 9kHz - 2GHz		Mfr C-S			Cat II	Calibration Due 2/17/2023	Calibrated on 2/17/2022
Attenuators 20dB ATT(A#2507)	Range 9kHz-2GHz	MN PE7014-20	Mfr Pasternack	SN 2030	Asset 2507	Cat II	Calibration Due 8/4/2022	Calibrated on 8/4/2021

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



3.2.3 TEST PROCEDURES

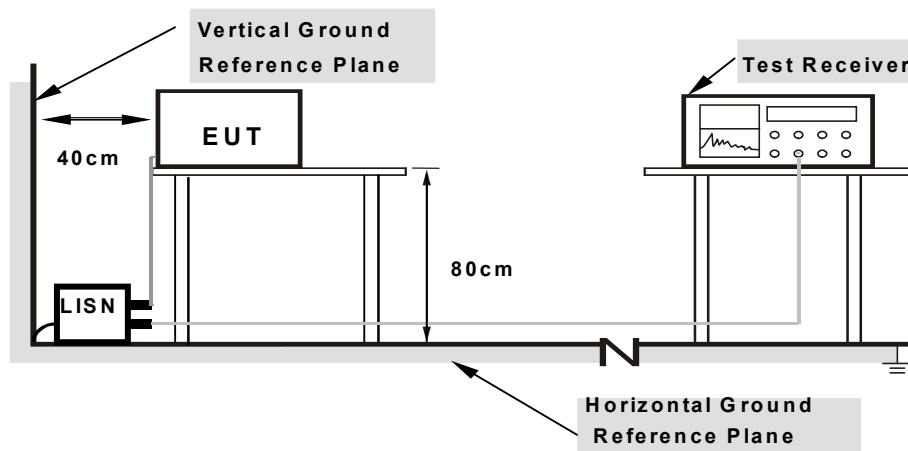
- The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.
- Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- 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:**
- Support units were connected to second LISN.
 - 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

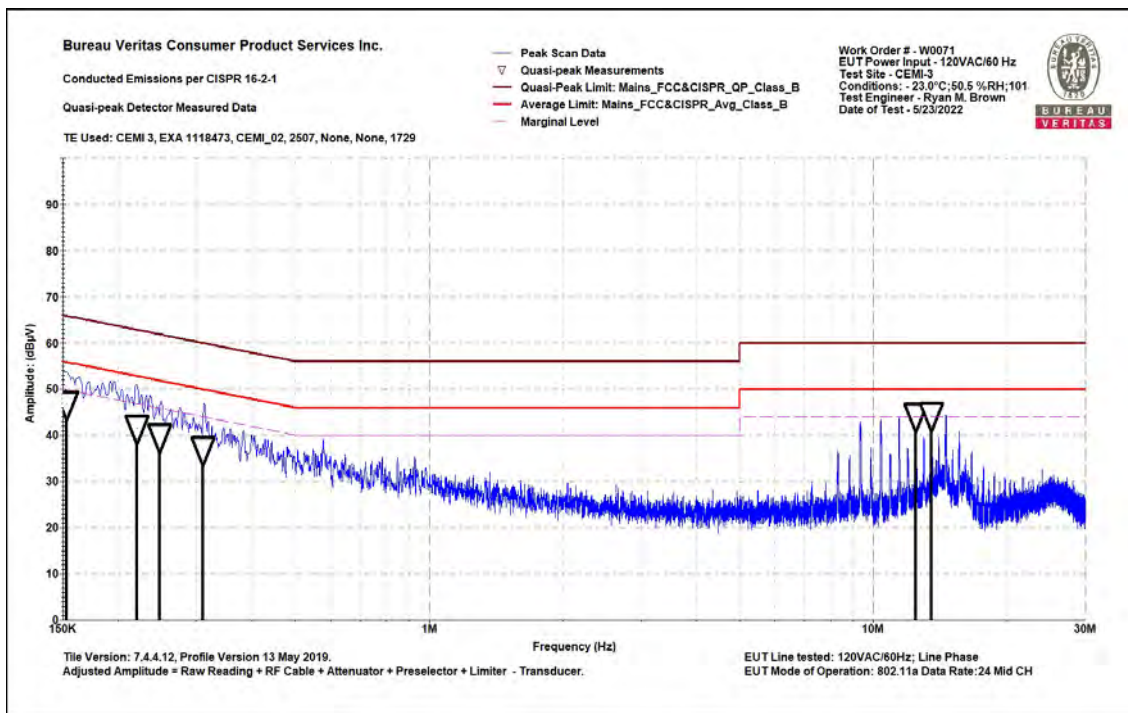
CONDUCTED WORST-CASE DATA: 802.11a CH40

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 (dBμV)	Correction Factor (dB)	Adjusted QP Amplitude (dBμV)	QP Lim: Mains_FCC&CISPR_QP_Class_B (dBμV)	Margin to QP Limit (dB)	QP Limit Results (Pass/Fail)	Worst Margin (QP Limit) (dB)	Av Lim: Mains_FCC&CISPR_Avg_Class_B (dBμV)	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 Mid CH

Work Order # - W0071

EUT Power Input - 120VAC/60 Hz

Test Site - CEMI-3

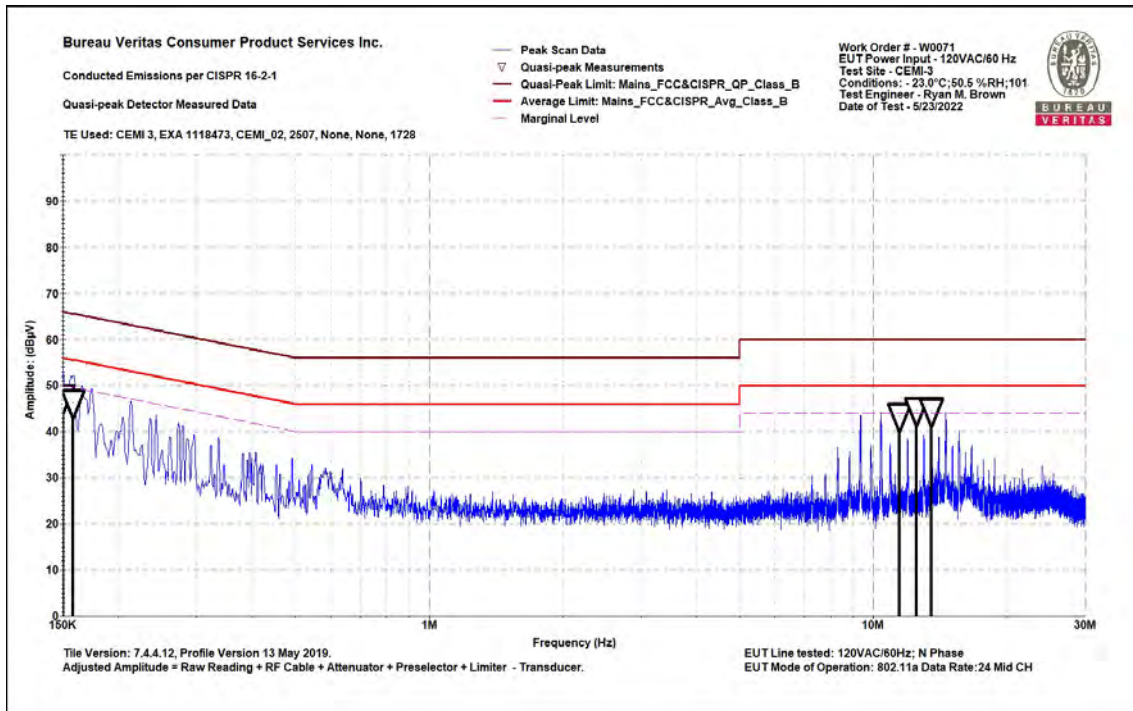
Conditions: - 23.0°C;50.5 %RH;1014mBar

Test Engineer - Ryan M. Brown

Date of Test - 5/23/2022

Frequency (MHz)	Raw QP Reading (dBμV)	Correction Factor (dB)	Adjusted QP Amplitude (dBμV)	QP Lim: Mains_FCC&CISPR_R_QP_Class_B (dBμV)	Margin to QP Limit (dB)	QP Limit Results (Pass/Fail)	Worst Margin (QP Limit) (dB)	Av Lim: Mains_FCC&CISPR_R_Avg_Class_B (dBμV)	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

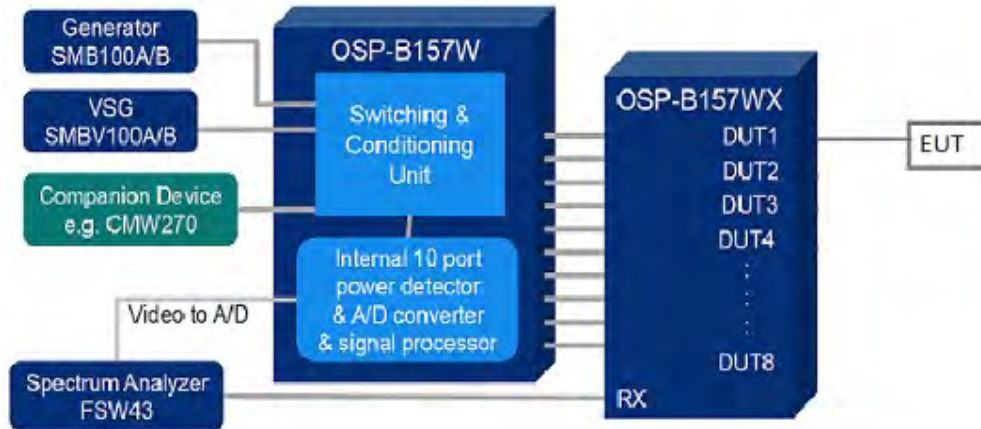
3.3.1 LIMITS OF TRANSMIT POWER MEASUREMENT

Operation Band	EUT Category		LIMIT
U-NII-1		Outdoor Access Point	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

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.

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.



Test Report No.: EW0071-3

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
Data Rate 6						
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
Data Rate 9						
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
Data Rate 12						
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
Data Rate 18						
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
Data Rate 24						
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
Data Rate 36						
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
Data Rate 48						
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
Data Rate 54						
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:

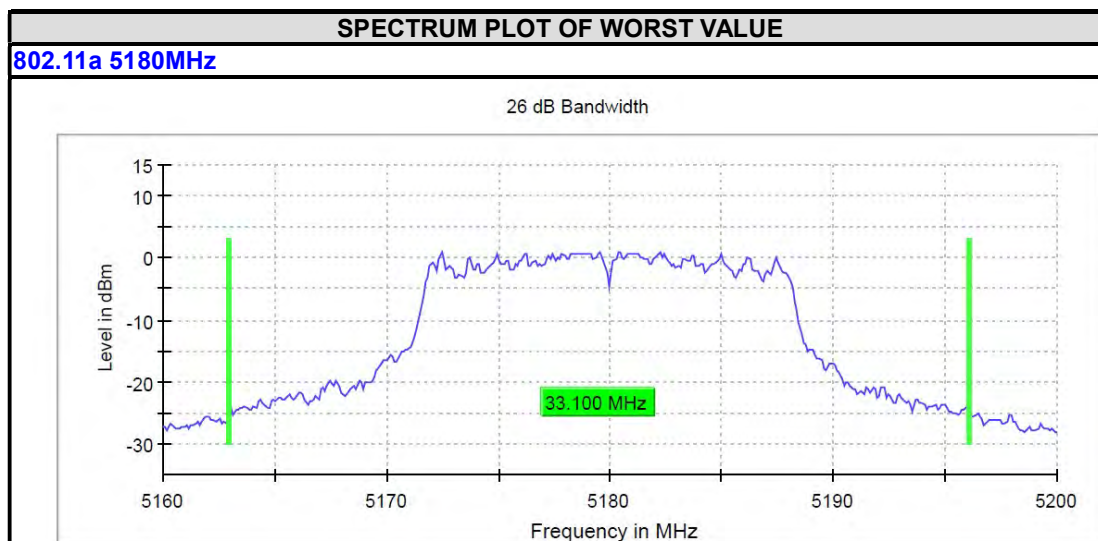
802.11a

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



Measurement

Setting	Instrument Value	Target Value
Start Frequency	5.16000 GHz	5.16000 GHz
Stop Frequency	5.20000 GHz	5.20000 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 μ s	AUTO
Reference Level	20.000 dBm	20.000 dBm
Attenuation	40.000 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	31 / max. 150	max. 150
Stable	5 / 5	5
Max Stable Difference	0.17 dB	0.30 dB

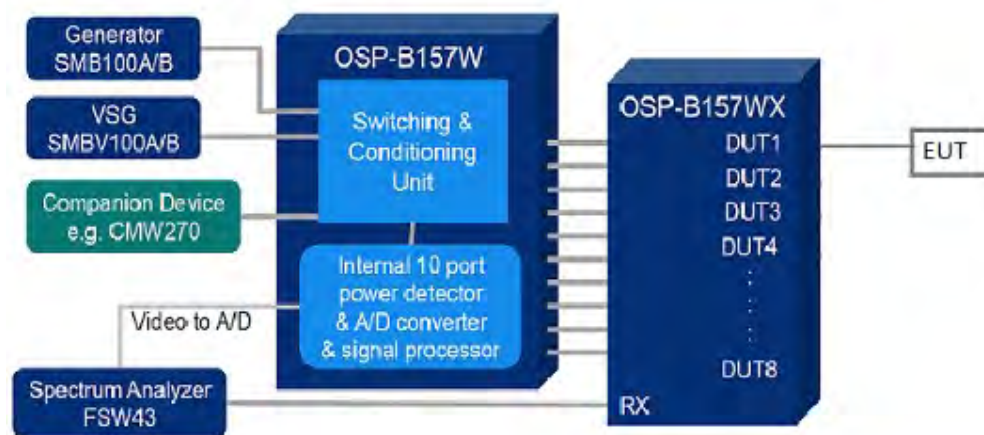
3.4 PEAK POWER SPECTRAL DENSITY MEASUREMENT

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 ISSED

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/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.

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.



Test Report No.: EW0071-3

3.4.6 TEST RESULTS

For U-NII-1:

802.11a

Chan nel	Frequenc y (MHz)	PSD (dBm/MHz)	Duty Cycle Correction Factor	Corrected PSD (dBm/MHz)	MAX. Limit (dBm)	PASS / FAIL
Data Rate 6						
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
Data Rate 9						
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
Data Rate 12						
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
Data Rate 18						
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
Data Rate 24						
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
Data Rate 36						
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
Data Rate 48						
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
Data Rate 54						
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

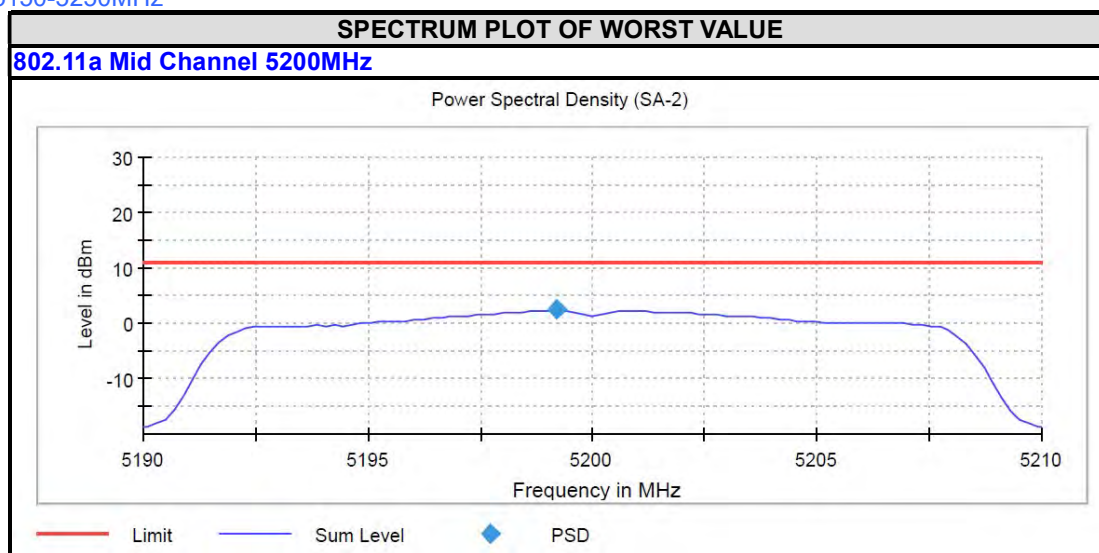


Test Report No.: EW0071-3

PSD Test Plot

BAND 1

5150-5250MHz





Test Report No.: EW0071-3

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



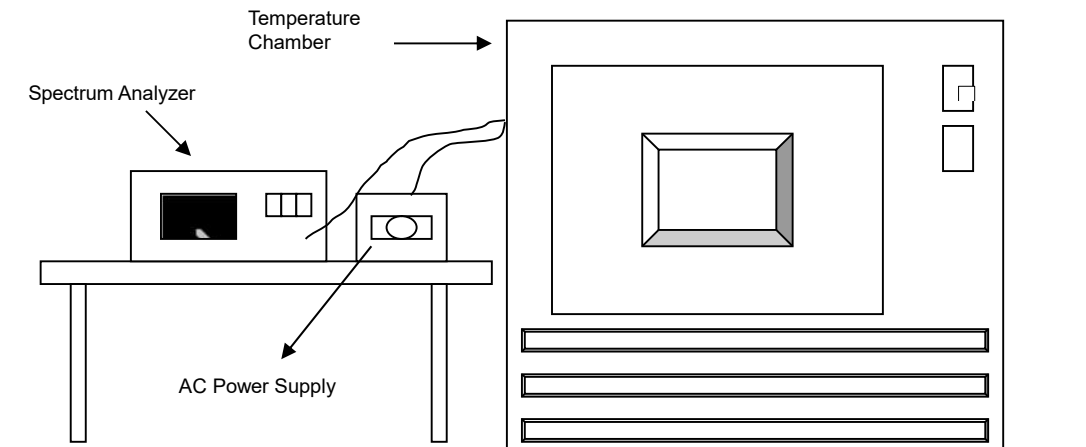
Test Report No.: EW0071-3

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

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.



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.



Test Report No.: EW0071-3

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



Test Report No.: EW0071-3

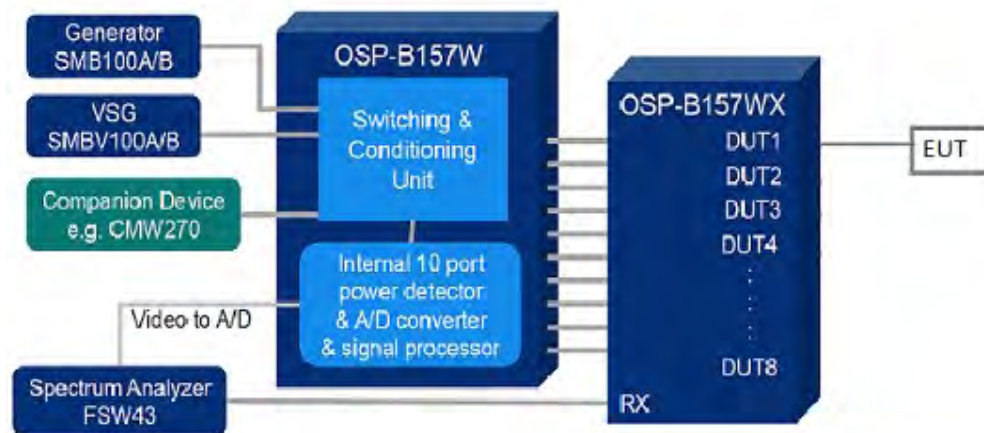
3.6 99% OCCUPIED BANDWIDTH

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/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.



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3.6.4 TEST RESULTS

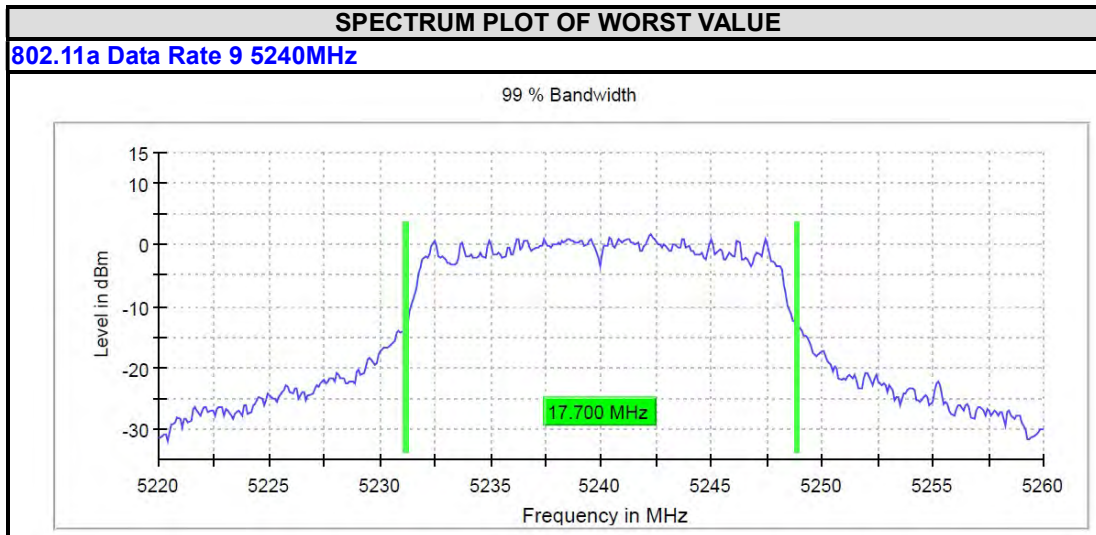
Band 1
5150-5250MHz

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



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Data Rate 48			
36	5180	16.700	PASS
40	5200	16.600	PASS
48	5240	16.600	PASS
Data Rate 54			
36	5180	16.600	PASS
40	5200	16.500	PASS
48	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 μ s	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



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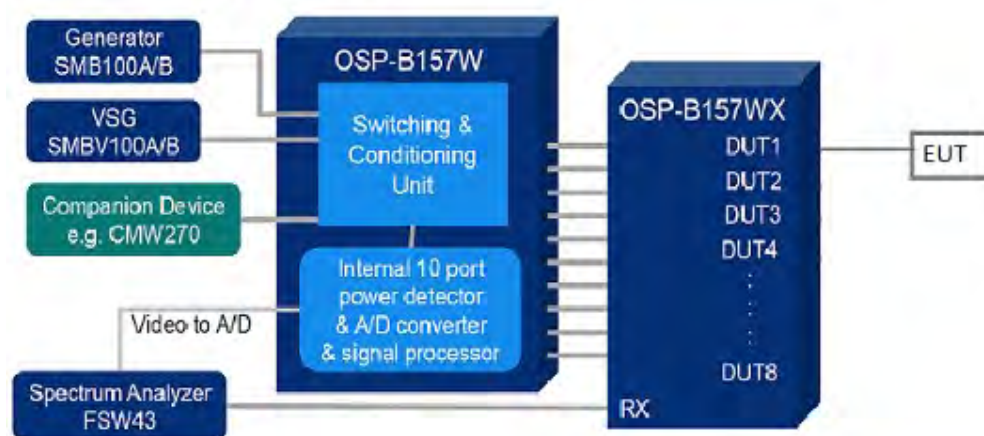
3.7 CONDUCTED SPURIOUS EMISSIONS

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

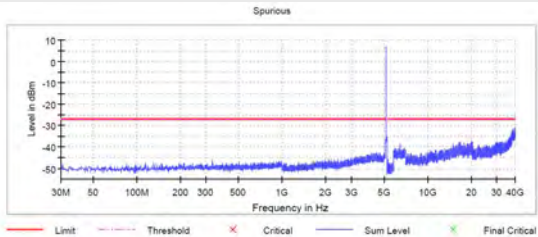
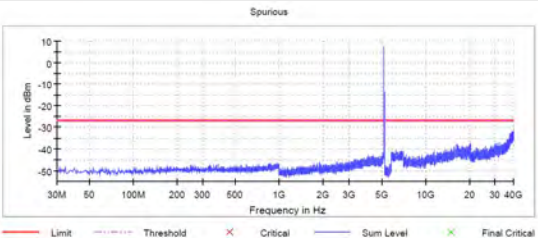
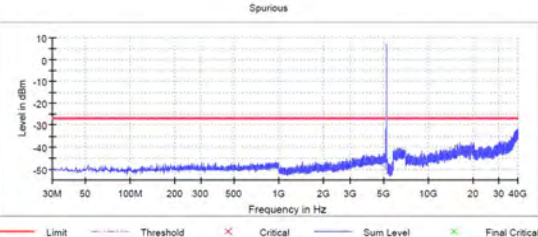
All equipment is calibrated using standards traceable to NIST or other nationally recognized calibration standard.



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3.7.4 TEST RESULTS

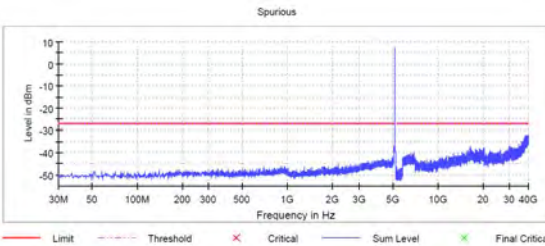
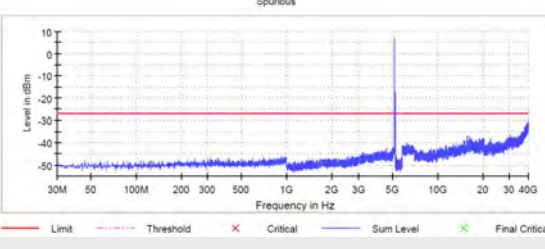
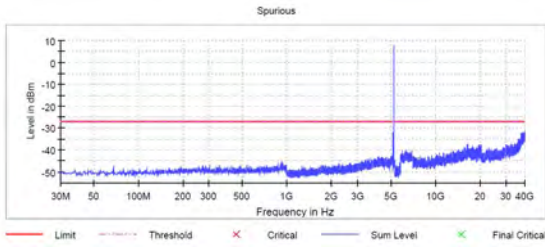
Data Rate 6

Test Channel	CH36 (5180MHz)			
Frequency Range				
30.0MHz to 40000.0MHz	Pre Measurements			
	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	
				
Test Channel	CH40 (5200MHz)			
Frequency Range				
30.0MHz to 40000.0MHz	Pre Measurements			
	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	
				
Test Channel	CH48 (5240MHz)			
Frequency Range				
30.0MHz to 40000.0MHz	Pre Measurements			
	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
	39845.250000	-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
	39871.750000	-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	
				



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Data Rate 24

Test Channel	CH36 (5180MHz)			
Frequency Range				
30.0MHz to 40000.0MHz	Pre Measurements			
	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
				
Test Channel	CH40 (5200MHz)			
Frequency Range				
30.0MHz to 40000.0MHz	Pre Measurements			
	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
				
Test Channel	CH48 (5240MHz)			
Frequency Range				
30.0MHz to 40000.0MHz	Pre Measurements			
	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
	39988.250000	-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
				



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

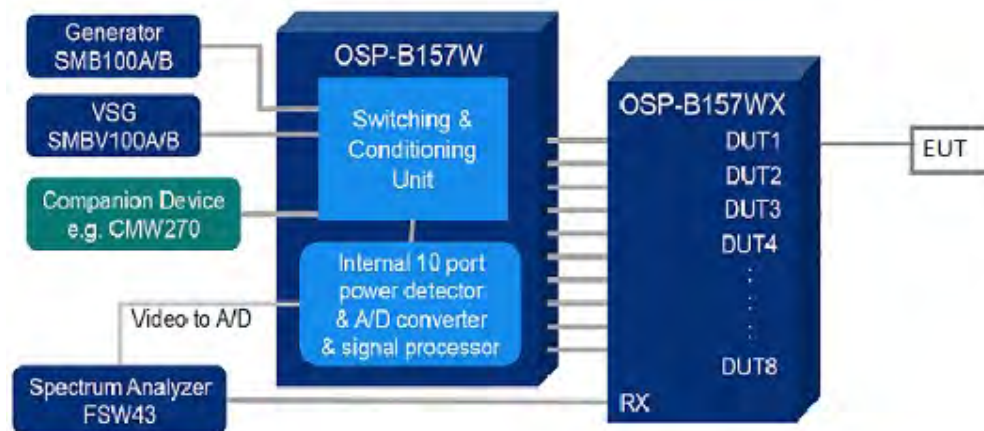
Channel filter is used for doing integration in the measurement device

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





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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/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.



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3.8.4 TEST RESULTS

Data Rate 6

Test Channel	CH36 (5180MHz)				
Frequency Range					
4500MHz to 5350MHz	Measurements				
	Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
	5148.750000	-28.4	1.4	-27.0	PASS
	5149.250000	-28.9	1.9	-27.0	PASS
	5149.750000	-29.2	2.2	-27.0	PASS
	5147.250000	-29.3	2.3	-27.0	PASS
	5147.750000	-30.2	3.2	-27.0	PASS
	5146.750000	-30.3	3.3	-27.0	PASS
	5148.250000	-30.6	3.6	-27.0	PASS
	5145.750000	-31.1	4.1	-27.0	PASS
	5146.250000	-31.4	4.4	-27.0	PASS
	5145.250000	-31.5	4.5	-27.0	PASS
	5143.750000	-31.6	4.6	-27.0	PASS
	5144.750000	-31.8	4.8	-27.0	PASS
	5143.250000	-32.1	5.1	-27.0	PASS
	5144.250000	-32.1	5.1	-27.0	PASS
	5142.250000	-32.6	5.6	-27.0	PASS
Test Channel	CH48 (5240MHz)				
Frequency Range					
5150MHz to 5460MHz	Measurements				
	Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
	5426.750000	-55.5	28.5	-27.0	PASS
	5426.250000	-55.7	28.7	-27.0	PASS
	5428.750000	-56.5	29.5	-27.0	PASS
	5427.750000	-56.5	29.5	-27.0	PASS
	5427.250000	-56.8	29.8	-27.0	PASS
	5425.750000	-56.8	29.8	-27.0	PASS
	5428.250000	-57.1	30.1	-27.0	PASS
	5385.250000	-57.2	30.2	-27.0	PASS
	5429.250000	-57.3	30.3	-27.0	PASS
	5389.750000	-57.3	30.3	-27.0	PASS
	5391.750000	-57.3	30.3	-27.0	PASS
	5441.750000	-57.4	30.4	-27.0	PASS
	5392.250000	-57.5	30.5	-27.0	PASS
	5441.250000	-57.6	30.6	-27.0	PASS
	5359.250000	-57.6	30.6	-27.0	PASS



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Data Rate 24

Test Channel	CH36 (5180MHz)	
Frequency Range		
4500MHz to 5350MHz	Measurements	
	Frequency (MHz)	Level (dBm) Margin (dB) Limit (dBm) Result
	5148.250000	-28.8 1.8 -27.0 PASS
	5147.750000	-28.8 1.8 -27.0 PASS
	5147.250000	-28.8 1.8 -27.0 PASS
	5146.750000	-29.0 2.0 -27.0 PASS
	5146.250000	-29.5 2.5 -27.0 PASS
	5145.750000	-29.9 2.9 -27.0 PASS
	5145.250000	-30.0 3.0 -27.0 PASS
	5144.750000	-30.0 3.0 -27.0 PASS
	5144.250000	-30.6 3.6 -27.0 PASS
	5143.750000	-30.7 3.7 -27.0 PASS
	5143.250000	-30.8 3.8 -27.0 PASS
	5142.750000	-31.3 4.3 -27.0 PASS
	5142.250000	-31.4 4.4 -27.0 PASS
5141.750000	-31.6 4.6 -27.0 PASS	
5141.250000	-31.7 4.7 -27.0 PASS	
Test Channel	CH48 (5240MHz)	
Frequency Range		
5150MHz to 5460MHz	Measurements	
	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
	5427.750000	-55.6 28.6 -27.0 PASS
	5428.250000	-55.6 28.6 -27.0 PASS
	5428.750000	-55.7 28.7 -27.0 PASS
	5429.250000	-55.7 28.7 -27.0 PASS
	5429.750000	-56.1 29.1 -27.0 PASS
	5430.250000	-56.1 29.1 -27.0 PASS
	5430.750000	-56.3 29.3 -27.0 PASS
	5431.250000	-56.3 29.3 -27.0 PASS
	5431.750000	-56.6 29.6 -27.0 PASS
	5432.250000	-56.6 29.6 -27.0 PASS
5432.750000	-56.7 29.7 -27.0 PASS	
5433.250000	-56.8 29.8 -27.0 PASS	



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4. PHOTOGRAPHS OF THE TEST CONFIGURATION

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



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---END---