

427 West 12800 South Draper, UT 84020

Test Report Certification

FCC ID	SWX-U6EXT
ISED ID	6545A-U6EXT
Equipment Under Test	U6-Extender
Test Report Serial Number	TR4930_03
Date of Test(s)	25 June and 7, 8 July 2020
Report Issue Date	14 July 2020

Test Specification	Applicant
47 CFR FCC Part 15, Subpart E	Ubiquiti Inc.
	685 Third Avenue
	New York, NY 10019
	U.S.A.
	Re MRA

NVLAP LAB CODE 600241-0



Certification of Engineering Report

This report has been prepared by Unified Compliance Laboratory (UCL) to document compliance of the device described below with the requirement of Federal Communication Commissions (FCC) Part 15, Subpart E. This report may be reproduced in full. Partial reproduction of this report may only be made with the written consent of the laboratory. The results in this report apply only to the sample tested.

Applicant	Ubiquiti Inc.
Manufacturer	Ubiquiti Inc.
Brand Name	Unifi
Model Number	U6-Extender
FCC ID	SWX-U6EXT
ISED ID	6545A-U6EXT

On this14th day of July 2020, I individually and for Unified Compliance Laboratory certify that the statements made in this engineering report are true, complete and correct to the best of my knowledge and are made in good faith.

Although NVLAP has accredited the Unified Compliance Laboratory testing facilities, this report must not be used to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government.

Unified Compliance Laboratory

Written By: Joseph W. Jackson

Reviewed By: Alex Macon



427 West 12800 South, Draper, UT 84020

Revision History		
Revision Description Date		Date
01	Original Report Release	14 July 2020
02	Amended Section 2.2, Added Conducted Disturbance at Main Port Data and Radiated Plots	21 July 2020
03	Added KDB 662911 Reference in Table 3.3.1	27 July 2020



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1 Client Information

1.1 Applicant

Company	Ubiquiti Inc. 685 Third Avenue New York, NY 10017 U.S.A.
Contact Name	Mark Feil
Title	Compliance Manager

1.2 Manufacturer

Company	Ubiquiti Inc. 685 Third Avenue New York, NY 10017 U.S.A.
Contact Name	Mark Feil
Title	Compliance Manager



2 Equipment Under Test (EUT)

2.1 Identification of EUT

Brand Name	Unifi
Model Number	U6-Extender
Serial Number	7483C29FF507
Dimensions (cm)	16.97 x 11.22 x 3.22

2.2 Description of EUT

The U6-Extender is to extend WiFi 6 coverage and to increase throughput in a home or office. The U6-Extender has 4x4 MIMO for the WiFi 6 technology. The U6-Extender is designed to be installed into any environment and plugs directly in a standard US wall outlet. The U6-Extender operates in the 2.4 MHz band and the 5 GHz band. The U6-Extender is for indoor use and is powered from mains power at 120 - 240 Volts, 50/60 Hz. The current version of firmware used in the U6-Extender is 1.0.

Band	Modulation Bandwidth	Frequency (MHz)	
	20 MHz	5180, 5200, 5220, 5240	
UNII-1	40 MHz	5190, 5230	
	80 MHz	5210	
	20 MHz	5745, 5765, 5785, 5805, 5825	
UNII-3	40 MHz	5755, 5795,	
	80 MHz	5775	

This report covers the circuitry of the device subject to FCC Part 15, Subpart E. The circuitry of the device subject to FCC Part 15 Subpart B was found to be compliant and is covered under a separate Unified Compliance Laboratory report.



2.3 EUT and Support Equipment

The EUT and support equipment used during the test are listed below.

Brand Name Model Number Serial Number	Description	Name of Interface Ports / Interface Cables
BN: UniFi MN: U6-Extender (Note 1) SN: 7483C29FF507	WiFi Access Point	See Section 2.4
BN: Dell MN: XPS 13 SN: N/A	Laptop PC	Shielded or Un-Shielded Cat 5e cable (Note 2)

Notes: (1) EUT

(2) Interface port connected to EUT (See Section 2.4)

The support equipment listed above was not modified in order to achieve compliance with this standard.

2.4 Interface Ports on EUT

Name of Ports	No. of Ports Fitted to EUT	Cable Description/Length
AC Power	1	

2.5 **Operating Environment**

Power Supply	120/240 VAC
AC Mains Frequency	50/60 Hz
Temperature	23.7 °C
Humidity	27.3 %
Barometric Pressure	1007 mBar

2.6 Operating Modes

The U6-Extender was tested using test software in order to enable to constant transmission of over 98% All emission modes of 802.11 a/n/ac were investigated.

2.7 EUT Exercise Software

Ubiquiti test software and firmware were used to control the transceivers of the EUT. (ART)



2.8 Block Diagram of Test Configuration

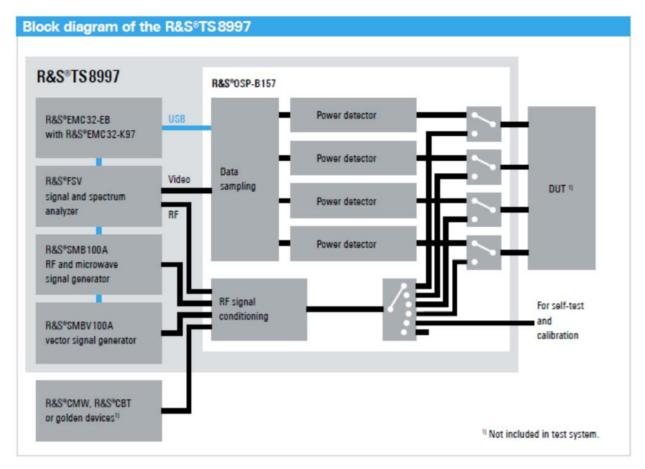


Diagram 1: Test Configuration Block Diagram

2.9 Modification Incorporated/Special Accessories on EUT

There were no modifications made to the EUT during testing to comply with the specification.

2.10 Deviation, Opinions Additional Information or Interpretations from Test Standard

There were no deviations, opinions, additional information or interpretations from the test specification.



3 Test Specification, Method and Procedures

3.1 Test Specification

Title	47 CFR FCC Part 15, Subpart E, Section 15.407 Limits and methods of measurement of radio interference characteristics of Unlicensed National Information Infrastructure Devices
Purpose of Test	The tests were performed to demonstrate initial compliance

3.2 Methods & Procedures

3.2.1 47 CFR FCC Part 15 Section 15.407

See test standard for details.

3.3 FCC Part 15, Subpart E

3.3.1 Summary of Tests

FCC Section	ISED Section	Environmental Phenomena	Frequency Range (MHZ)	Result
15.407(a)	N/A	Antenna requirements	Structural Requirement	Compliant
15.407(b)	RSS-Gen	Conducted Disturbance at Mains Port	0.15 to 30	Compliant
15.407(c)	RSS-247 §6.2.2, §6.2.3	Bandwidth Requirement	5725 to 5850	Compliant
15.407(e)	RSS-247 §6.2.2, §6.2.3	Peak Output Power	5725 to 5850	Compliant
15.407(f)	RSS-247 §6.2.2, §6.2.3	Antenna Conducted Spurious Emissions	0.009 to 40000	Compliant
15.407(g)	RSS-247 §6.2.2, §6.2.3	Radiated Spurious Emissions	0.009 to 40000	Compliant
15.407(h)	RSS-247 §6.2.2, §6.2.3	Peak Power Spectral Density	5725 to 5850	Compliant
The testing was	performed according to the	procedures in ANSI C63.10-20	013, KDB 78903	3 and 47

The testing was performed according to the procedures in ANSI C63.10-2013, KDB 789033 and 47 CFR Part 15.

The conducted power was summed per FCC KDB 662911 in sections 5.4 and 5.6.

3.4 Results

In the configuration tested, the EUT complied with the requirements of the specification.

3.5 Test Location

Testing was performed at the Unified Compliance Laboratory 10-Meter chamber located at 427 West 12800 South, Draper, UT 84020. Unified Compliance Laboratory is accredited by National Voluntary Laboratory Accreditation Program (NVLAP); NVLAP Code 600241-0 which is effective until 30 June 2021. ISED No. 25346, effective until July 31, 2020. Unified Compliance Laboratory has been assigned Conformity assessment Number US0223 by ISED.

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4 Test Equipment

4.1 Conducted Emissions at Main Ports

Type of Equipment	Manufacturer	Model Number	Asset Number	Date of Last Calibration	Due Date of Calibration
EMI Receiver	AFJ	FFT3010	UCL-2500	12/14/2018	8/17/2020
LISN	AFJ	LS16C/10	UCL-2512	5/26/2020	5/26/2021
Cat6 ISN	Teseq	ISN T8- Cat6	UCL-2971	5/18/2020	5/18/2021
ISN	Teseq	ISN T800	UCL-2974	6/1/2020	6/1/2021
LISN	Com-Power	LIN-120C	UCL-2612	5/19/2020	5/19/2021
AC Power Source	Laplace Instruments	AC1000A	UCL-2857	N/A	N/A
Monitoring Probe	Teseq	MD 4070A	UCL-2980	3/16/2019	7/21/2020
Test Software	UCL	Revision 1	UCL-3107	N/A	N/A

Table 1: List of equipment used for Direct Connect at the Antenna Port

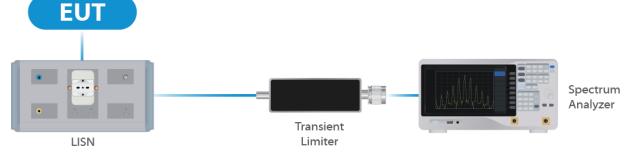


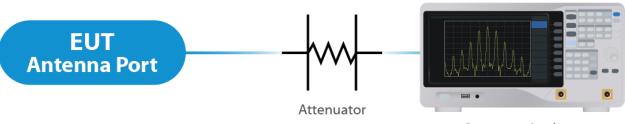
Figure 1: Conducted Emissions Test

4.2 Direct Connect at the Antenna Port Tests

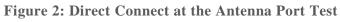
Type of Equipment	Manufacturer	Model Number	Asset Number	Date of Last Calibration	Due Date of Calibration
Spectrum Analyzer	R&S	FSV40	UCL-2861	06/12/2019	8/10/2020
Signal Generator	R&S	SMB100A	UCL-2864	N/A	N/A
Vector Signal Generator	R&S	SMBV100A	UCL-2873	N/A	N/A
Switch Extension	R&S	OSP- B157WX	UCL-2867	06/13/2019	06/13/2020
Switch Extension	R&S	OSP-150W	UCL-2870	06/14/2019	06/14/2020

Table 2:List of equipment used for Direct Connect at the Antenna Port





Spectrum Analyzer



4.3 Radiated Emissions

Type of Equipment	Manufacturer	Model Number	Asset Number	Date of Last Calibration	Due Date of Calibration
Spectrum Analyzer	R&S	FSV40	UCL-2861	06/12/2019	8/10/2020
Pre-Amplifier	Sonoma Instruments	310N	UCL-2889	9/13/2018	7/16/2020
Double Ridge Horn Antenna	Scwarzbeck	BBHA 9120D	UCL-3065	4/11/2019	8/3/2020
Log Periodic	Scwarzbeck	STLP 9129	UCL-3068	4/11/2019	8/3/2020
15 - 40 GHz Horn Antenna	Scwarzbeck	BBHA 9170	UCL-2487	2/15/2017	6/16/2020
18 – 40 GHz Amplifier	Scwarzbeck	BBV 9721	UCL-2490	4/1/2019	6/1/2020
0.5 – 18 GHz Amplifier	Scwarzbeck	BBV 9718C	UCL-2493	4/1/2019	6/1/2020
Loop Antenna	Com-Power	AL-130R	UCL-2596	10/26/2018	6/23/2020
Test Software	UCL	Revision 1	UCL-3108	N/A	N/A

Table 3:List of equipment used for Radiated Emissions

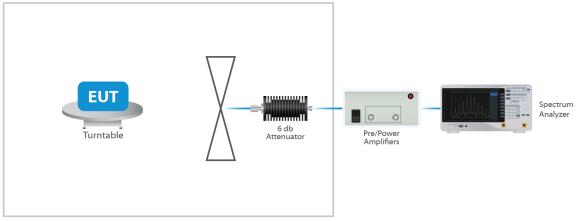


Figure 3: Radiated Emissions Test



4.4 Equipment Calibration

All applicable equipment is calibrated using either an independent calibration laboratory or Unified Compliance Laboratory personnel at intervals defined in ANSI C63.4:2014 following outlined calibration procedures. All measurement instrumentation is traceable to the National Institute of Standards and Technology (NIST). Supporting documentation relative to traceability is on file and is available for examination upon request.

4.5 Measurement Uncertainty

Test	Uncertainty (<u>+</u> dB)	Confidence (%)
Conducted Emissions	1.44	95
Radiated Emissions (9 kHz to 30 MHz)	2.50	95
Radiated Emissions (30 MHz to 1 GHz)	3.95	95
Radiated Emissions (1 GHz to 18 GHz)	5.56	95
Radiated Emissions (18 GHz to 40 GHz)	5.16	95
Direct Connect Tests	K Factor	Value
Emissions Bandwidth	2	2.0%
Output Power	2	1.0 dB
Peak Power Spectral Density	2	1.3 dB
Band Edge	2	0.8 dB
Transmitter Spurious Emissions	2	1.8 dB



5 Test Results

5.1 §15.203 Antenna Requirements

The EUT uses an integral antenna The Maximum gain of the antenna is 5.5 dBi. The antenna is not user replaceable.

Results

The EUT complied with the specification

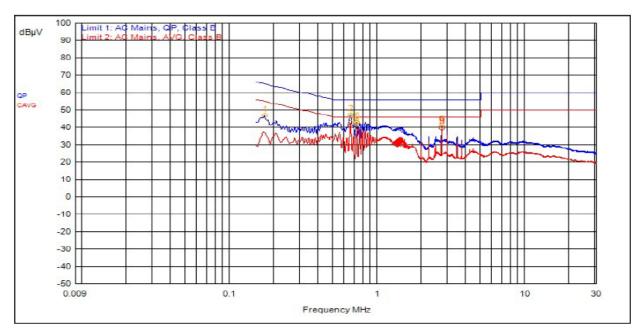
5.2 §15.407(b) Conducted Emissions at Mains Ports Data

5.2.1 Hot Lead

Frequency (MHZ)	Detector	Receiver Measured Level (dBµV)	Correction Factor (dB/m)	Corrected Receiver Level (dBµV)	Limit Class B Limit (dBµV)	Margin (dB)		
0.651	Average (Note 1)	30.3	12.3	42.60	46.0	- 3.40		
2.69	Average (Note 1)	27.3	12.3	39.60	46.0	- 6.40		
0.717	Average (Note 1)	27.2	12.3	39.50	46.0	- 6.50		
0.651	Quasi-Peak (Note 1)	34.7	12.3	47.00	56.0	- 9.00		
0.717	Quasi-Peak (Note 1)	30.8	12.3	43.10	56.0	- 12.90		
2.69	Quasi-Peak (Note 1)	28.6	12.3	40.90	56.0	- 15.10		
0.171	Quasi-Peak (Note 1)	34.2	12.3	46.50	64.9	- 18.40		
compared to	Note 1: The reference detector used for the measurements was quasi-peak and average and the data was compared to the respective limits. Note 2: The limits of CISPR 32/22 were applied							
Sample Fie	Sample Field Strength Calculation							
Correction Factor = LISN Insertion Loss + Cable Insertion Loss + Transient Limiter Insertion								
Loss								
C	Conducted Environment Annulity day Describer Describer Describer							

Conducted Emissions Amplitude = Receiver Reading + Correction Factor





5.2.2 Neutral Lead

Frequency (MHZ)	Detector	Receiver Measured Level (dBµV)	Correction Factor (dB/m)	Corrected Receiver Level (dBµV)	Limit Class B Limit (dBµV)	Margin (dB)
2.69	Average (Note 1)	29.5	12.3	41.80	46.0	- 4.20
0.681	Average (Note 1)	28.3	12.3	40.60	46.0	- 5.40
0.615	Average (Note 1)	27.4	12.3	39.70	46.0	- 6.30
0.618	Quasi-Peak (Note 1)	32.5	12.3	44.80	56.0	- 11.20
0.681	Quasi-Peak (Note 1)	32.1	12.3	44.40	56.0	- 11.60
2.69	Quasi-Peak (Note 1)	30.5	12.3	42.80	56.0	- 13.20
0.171	Quasi-Peak (Note 1)	29.6	12.2	41.80	64.9	- 23.10

Note 1: The reference detector used for the measurements was quasi-peak and average and the data was compared to the respective limits.

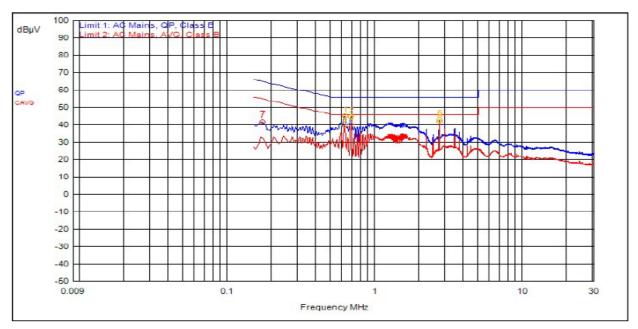
Note 2: The limits of CISPR 32/22 were applied

Sample Field Strength Calculation

Correction Factor = LISN Insertion Loss + Cable Insertion Loss + Transient Limiter Insertion Loss

Conducted Emissions Amplitude = Receiver Reading + Correction Factor





5.3 §15.403(i) Emissions Bandwidth

Nominal BW (MHz)	Frequency (MHz)	99% Bandwidth (MHz)	6 dB Bandwidth (MHz)	26 dB Bandwidth (MHz)
20	5745	27.6	15.5	41.0
20	5775	27.7	15.4	42.2
20	5825	25.7	15.2	42.4
40	5755	59.75	30.15	87.15
40	5775	63.50	32.6	92.25
40	5795	62.25	30.1	86.25
80	5775	94.00	75.1	208.5

Result

The 26 dB bandwidths are reported for information purposes. Please see Annex for all bandwidth measurements.



5.4 §15.403(a)(3) Maximum Average Output Power

The maximum average RF conducted output power measured for this device was 28.9 dBm or 776.25 mW. The limit is 30 dBm, or 1. The antenna has a gain of 5.5 dBi.

Modulation (BW)	Frequency (MHz)	Data Rate	TP Setting	Conducted Output Power	Measured EIRP	Measured PSD
OFDM 20	5745	Mcs0	21.5	28.5	34.0	12.0
OFDM 20	5775	Mcs0	21.5	28.3	33.8	11.7
OFDM 20	5825	Mcs0	19.5	26.1	31.6	9.2
HT 20	5745	Mcs0	21.5	28.5	34.0	11.8
HT 20	5775	Mcs0	21.5	28.5	34.0	11.9
HT 20	5825	Mcs0	20	27.3	32.8	10.5
HT 40	5755	Mcs0	21.5	25.8	31.3	8.0
HT 40	5775	Mcs0	21.5	28.7	34.2	11.0
HT 40	5795	Mcs0	21.5	28.8	34.3	11.2
VHT 20	5745	Mcs0	21.5	28.8	34.3	11.7
VHT 20	5775	Mcs0	21.5	28.2	33.7	11.7
VHT 20	5825	Mcs0	21	28.1	33.6	11.0
VHT 40	5755	Mcs0	21.5	28.8	34.3	11.7
VHT 40	5775	Mcs0	21.5	28.9	34.4	11.5
VHT 40	5795	Mcs0	21.5	28.5	34.0	11.4
VHT 80	5775	Mcs0	20	28.0	33.5	8.6
HE 20	5745	Mcs0	21.5	28.0	33.5	10.7
HE 20	5775	Mcs0	21.5	27.9	33.4	10.5
HE 20	5825	Mcs0	21	27.5	33.0	9.8
HE 40	5755	Mcs0	21.5	28.1	33.6	10.7
HE 40	5775	Mcs0	21.5	28.0	33.5	9.9
HE 40	5795	Mcs0	21.5	28.0	33.5	10.4
HE 80	5775	Mcs0	21	27.7	33.2	7.8

Result

In the configuration tested, the maximum average RF outpower was less than 1 watt; therefore, the EUT compiled with the requirements of the specification (see spectrum analyzer plots in attached Annex).

5.5 Radiated Spurious Emissions in the Restricted Bands of § 15.205

The EUT uses various power settings based on the channel in use. In order to reduce test time, the radiated spurious emissions at the lowest, middle, and highest channel were measured at the maximum power of TP 28.9, as this setting was found to be worst case for spurious emissions. Power was subsequently reduced during in-band and band edge testing. All emissions modes were tested and the worse-case measurements are shown below.

Result

Conducted spurious emissions were attenuated below the limit; therefore, the EUT complies with the specification.

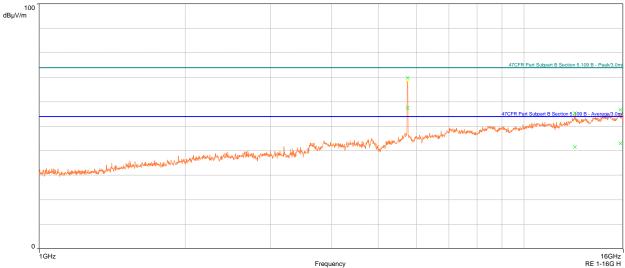
Frequency (MHZ)	Antenna Polarity	Detector	Correction Factor (dB)	Field Strength (dBµV/m)	Limit (dBµV/m)	Margin (dB)
31.76	Vertical	QuasiPeak	-11.21	20.98	30.00	-9.02
228.30	Vertical	QuasiPeak	-12.58	17.98	30.00	-12.02
31.86	Horizontal	QuasiPeak	-11.19	22.78	30.00	-7.22
219.72	Horizontal	QuasiPeak	-13.23	13.49	30.00	-16.51
226.83	Horizontal	QuasiPeak	-12.68	17.04	30.00	-12.96
229.26	Horizontal	QuasiPeak	-12.53	18.64	30.00	-11.36
778.70	Horizontal	QuasiPeak	-1.48	25.25	37.00	-11.75
11003	Vertical	Average	12.26	38.98	54.0	-15.02
12660	Vertical	Average	14.71	41.53	54.0	-12.47
15734	Vertical	Average	14.64	43.16	54.0	-10.84
12717	Horizontal	Average	14.94	41.57	54.0	-12.43
15791	Horizontal	Average	14.72	43.06	54.0	-10.94
11003	Vertical	Peak	12.26	52.43	74.0	-21.57
12660	Vertical	Peak	14.71	55.67	74.0	-18.33
15734	Vertical	Peak	14.64	56.27	74.0	-17.73
12717	Horizontal	Peak	14.94	55.33	74.0	-18.67
15791	Horizontal	Peak	14.72	56.79	74.0	-17.21
17221	Vertical	Average	-4.32	41.20	54.0	-12.80
17235	Vertical	Average	-4.29	41.69	54.0	-12.31
38168	Vertical	Average	2.81	38.97	54.0	-15.03
38955	Vertical	Average	4.44	40.40	54.0	-13.60
17241	Horizontal	Average	-4.32	40.33	54.0	-13.67
38970	Horizontal	Average	4.53	40.47	54.0	-13.53
39297	Horizontal	Average	4.54	40.05	54.0	-13.95
39341	Horizontal	Average	4.47	39.53	54.0	-14.47
39771	Horizontal	Average	4.95	40.29	54.0	-13.71
17221	Vertical	Peak	-4.32	56.58	74.0	-17.42

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17235	Vertical	Peak	-4.29	56.76	74.0	-17.24
38168	Vertical	Peak	2.81	52.35	74.0	-21.65
38955	Vertical	Peak	4.44	53.71	74.0	-20.29
17241	Horizontal	Peak	-4.32	57.21	74.0	-16.79
38970	Horizontal	Peak	4.53	53.74	74.0	-20.26
39297	Horizontal	Peak	4.54	53.17	74.0	-20.83
39341	Horizontal	Peak	4.47	53.40	74.0	-20.60
39771	Horizontal	Peak	4.95	53.29	74.0	-20.71

 Table 1: Transmitting on the Lowest Frequency 5745 MHz



Frequency (MHZ)	Antenna Polarity	Detector	Correction Factor (dB)	Field Strength (dBµV/m)	Limit (dBµV/m)	Margin (dB)
8486.8	Vertical	Average	10.74	37.84	54.0	-16.16
11552	Vertical	Average	12.21	44.36	54.0	-9.64
14486	Vertical	Average	15.52	42.46	54.0	-11.54
11550	Horizontal	Average	12.21	47.59	54.0	-6.41
15699	Horizontal	Average	14.57	42.84	54.0	-11.16
8486.8	Vertical	Peak	10.74	51.50	74.0	-22.50
11552	Vertical	Peak	12.21	58.41	74.0	-15.59
14486	Vertical	Peak	15.52	56.05	74.0	-17.95
11550	Horizontal	Peak	12.21	61.96	74.0	-12.04
15699	Horizontal	Peak	14.57	57.47	74.0	-16.53
17328	Vertical	Average	-4.69	39.60	54.0	-14.40
33528	Vertical	Average	2.80	37.75	54.0	-16.25
35196	Vertical	Average	2.11	37.19	54.0	-16.81
39275	Vertical	Average	4.51	40.14	54.0	-13.86
36931	Horizontal	Average	2.84	39.70	54.0	-14.30

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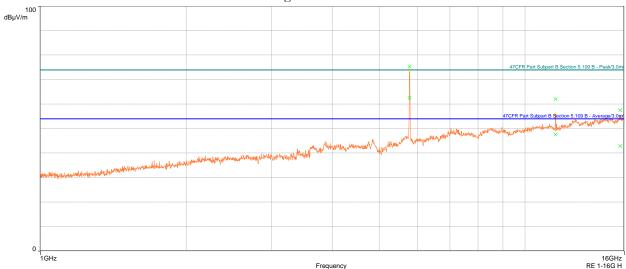
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38984	Horizontal	Average	4.55	40.49	54.0	-13.51
39088	Horizontal	Average	4.76	39.79	54.0	-14.21
39523	Horizontal	Average	4.72	40.37	54.0	-13.63
17328	Vertical	Peak	-4.69	53.69	74.0	-20.31
33528	Vertical	Peak	2.80	52.26	74.0	-21.74
35196	Vertical	Peak	2.11	50.17	74.0	-23.83
39275	Vertical	Peak	4.51	53.92	74.0	-20.08
36931	Horizontal	Peak	2.84	52.94	74.0	-21.06
38984	Horizontal	Peak	4.55	54.09	74.0	-19.91
39088	Horizontal	Peak	4.76	52.44	74.0	-21.56
39523	Horizontal	Peak	4.72	53.44	74.0	-20.56
Note 1: Change in Channel did not affect the measurements in the 30 – 1000 MHz range						

Table 2: Transmitting on the Middle Channel 5775



Frequency (MHZ)	Antenna Polarity	Detector	Correction Factor (dB)	Field Strength (dBµV/m)	Limit (dBµV/m)	Margin (dB)
7192.7	Vertical	Average	8.91	37.09	54.0	-16.91
8482.2	Vertical	Average	10.66	37.82	54.0	-16.18
15639	Vertical	Average	14.59	43.07	54.0	-10.93
8492.9	Horizontal	Average	10.79	37.84	54.0	-16.16
11649	Horizontal	Average	12.46	43.83	54.0	-10.17
15735	Horizontal	Average	14.64	43.21	54.0	-10.79
7192.7	Vertical	Peak	8.91	51.76	74.0	-22.24
8482.2	Vertical	Peak	10.66	51.77	74.0	-22.23
15639	Vertical	Peak	14.59	57.59	74.0	-16.41
8492.9	Horizontal	Peak	10.79	51.11	74.0	-22.89
11649	Horizontal	Peak	12.46	57.22	74.0	-16.78

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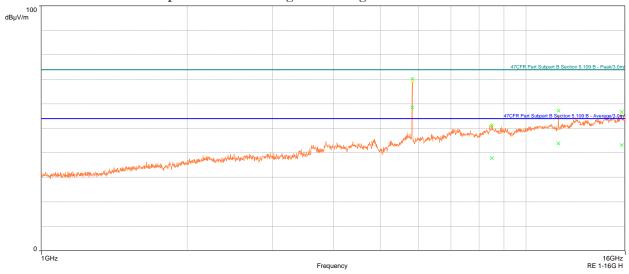
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15735	Horizontal	Peak	14.64	56.73	74.0	-17.27		
17469	Vertical	Average	-4.71	41.99	54.0	-12.01		
37984	Vertical	Average	2.72	38.71	54.0	-15.29		
38709	Vertical	Average	3.41	39.82	54.0	-14.18		
17477	Horizontal	Average	-4.71	44.74	54.0	-9.26		
38991	Horizontal	Average	4.54	40.54	54.0	-13.46		
39185	Horizontal	Average	4.58	39.74	54.0	-14.26		
39985	Horizontal	Average	5.14	40.53	54.0	-13.47		
17469	Vertical	Peak	-4.71	57.82	74.0	-16.18		
37984	Vertical	Peak	2.72	51.43	74.0	-22.57		
38709	Vertical	Peak	3.41	54.41	74.0	-19.59		
17477	Horizontal	Peak	-4.71	59.36	74.0	-14.64		
38991	Horizontal	Peak	4.54	52.94	74.0	-21.06		
39185	Horizontal	Peak	4.58	53.13	74.0	-20.87		
39985	Horizontal	Peak	5.14	54.54	74.0	-19.46		
Note 1: Change in Channel did not affect the measurements in the 30 – 1000 MHz range								

Graph 3: Transmitting on the Highest Channel 5825





5.6 §15.407(a) Maximum Power Spectral Density

The maximum average power spectral density conducted from the intentional radiator of the antenna shall not be greater than 30 dBm in any 500 kHz band during any time interval of continuous transmission. Results of this testing are summarized.

Modulation (BW)	Frequency (MHz)	Data Rate	TP Setting	Conducted Output Power	Measured EIRP	Measured PSD
OFDM 20	5745	Mcs0	21.5	28.5	34.0	12.0
OFDM 20	5775	Mcs0	21.5	28.3	33.8	11.7
OFDM 20	5825	Mcs0	19.5	26.1	31.6	9.2
HT 20	5745	Mcs0	21.5	28.5	34.0	11.8
HT 20	5775	Mcs0	21.5	28.5	34.0	11.9
HT 20	5825	Mcs0	20	27.3	32.8	10.5
HT 40	5755	Mcs0	21.5	25.8	31.3	8.0
HT 40	5775	Mcs0	21.5	28.7	34.2	11.0
HT 40	5795	Mcs0	21.5	28.8	34.3	11.2
VHT 20	5745	Mcs0	21.5	28.8	34.3	11.7
VHT 20	5775	Mcs0	21.5	28.2	33.7	11.7
VHT 20	5825	Mcs0	21	28.1	33.6	11.0
VHT 40	5755	Mcs0	21.5	28.8	34.3	11.7
VHT 40	5775	Mcs0	21.5	28.9	34.4	11.5
VHT 40	5795	Mcs0	21.5	28.5	34.0	11.4
VHT 80	5775	Mcs0	20	28.0	33.5	8.6
HE 20	5745	Mcs0	21.5	28.0	33.5	10.7
HE 20	5775	Mcs0	21.5	27.9	33.4	10.5
HE 20	5825	Mcs0	21	27.5	33.0	9.8
HE 40	5755	Mcs0	21.5	28.1	33.6	10.7
HE 40	5775	Mcs0	21.5	28.0	33.5	9.9
HE 40	5795	Mcs0	21.5	28.0	33.5	10.4
HE 80	5775	Mcs0	21	27.7	33.2	7.8

Result

The maximum average power spectral density was less than the limit of 30 dBm; therefore, the EUT complies with the specification.



-- End of Test Report --