TESTING LABORATORY
CERTIFICATE #4820.01

FCC PART 15 B

TEST REPORT

For

Iconnect

No.9, Aly. 58, Ln. 112, Ruiguang Rd., Neihu Dist.,Taipei City,Taiwan

FCC ID: 2AB879531

Report Type: Original Report	**Product Type:** WiFi USB Extender Router
Report Number:	RDG180925011-00A
Report Date:	2018-11-14
Reviewed By:	Jerry Zhang EMC Manager
Test Laboratory:	Bay Area Compliance Laboratories Corp. (Dongguan) No.69 Pulongcun, Puxinhu Industry Area, Tangxia, Dongguan, Guangdong, China Tel: +86-769-86858888 Fax: +86-769-86858891 www.baclcorp.com.cn

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GENERAL INFORMATION

Product Description for Equipment Under Test (EUT)

EUT Name:		WiFi USB Extender Router
EUT Model:		R36A
Multiple Models:		HoneyBee, R36A-AC, SecuPlus, WiTele4G, WISP-Q2, N2Qplus,N2Q1,Unity4G,R36AH, WiFi CampPor 2 ,WiFi CampPro 2+,4G CampPor 2,4G CampPro 2+,WiTouch Pro,WiTou Pro,WiMo,WiMo plus,Surfi,WiMo Pro,MeshTouch-Q,MeshTouch-R,MeshTouch-M,CC Vector
FCC ID:		2AB879531
Highest Operation Frequency:		2462 MHz
Rated Input Voltage:		DC12V from AC/DC adapter or DC 12V from PoE Adapter
Nominal Adapter Information	**Model:**	MAUS-120100Y-D-15
	Input:	100-240VAC
	Output:	12VDC
External Dimension:		99mm(L)*73mm(W)*27mm(H)
Serial Number:		180925011
EUT Received Date:		2018.09.27

Note: The series product, HoneyBee, R36A-AC, SecuPlus, WiTele4G, WISP-Q2, N2Qplus,N2Q1,Unity4G,R36AH, WiFi CampPor 2 ,WiFi CampPro 2+,4G CampPor 2,4G CampPro 2+,WiTouch Pro,WiTou Pro,WiMo,WiMo plus,Surfi,WiMo Pro,MeshTouch-Q,MeshTouch-R,MeshTouch-M,CC Vector are electrically identical, The difference between them please refer to the declaration letter for details. For marketing purpose, we selected R36A for fully testing.

Objective

This test report is prepared on behalf of *Iconnect* In accordance with Part 2, Subpart J, and Part 15-Subparts A and B of the Federal Communications Commission's rules.

The objective of the manufacturer is to determine the compliance of EUT with FCC Part 15 B Class B.

Related Submittal(s)/Grant(s)

FCC Part 15C DTS submissions with FCC ID: 2AB879531.

Test Methodology

All measurements contained in this report were conducted with ANSI C63.4-2014, American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9 kHz to 40 GHz.

All radiated and conducted emissions measurement was performed at Bay Area Compliance Laboratories Corp. (Dongguan).

Measurement Uncertainty

Parameter	Measurement Uncertainty
Unwanted Emissions, radiated	30M~200MHz: 4.55 dB,200M~1GHz: 5.92 dB,1G~6GHz: 4.98 dB, 6G~18GHz: 5.89 dB,18G~26.5G:5.47 dB,26.5G~40G:5.63 dB
Temperature	±1℃
Humidity	±5%
AC Power Lines Conducted Emission	3.12 dB (150 kHz to 30 MHz)

Test Facility

The Test site used by Bay Area Compliance Laboratories Corp. (Dongguan) to collect test data is located on the No.69 Pulongcun, Puxinhu Industry Area, Tangxia, Dongguan, Guangdong, China.

The test site has been approved by the FCC under the KDB 974614 D01 and is listed in the FCC Public Access Link (PAL) database, FCC Registration No. : 897218, the FCC Designation No. : CN1220.

The test site has been registered with ISED Canada under ISED Canada Registration Number 3062D.

SYSTEM TEST CONFIGURATION

Description of Test Configuration

The system was configured for testing in normal use mode.

Equipment Modifications

No modification was made to the EUT.

EUT Exercise Software

TFGen.exe was used in test.

Support Equipment List and Details

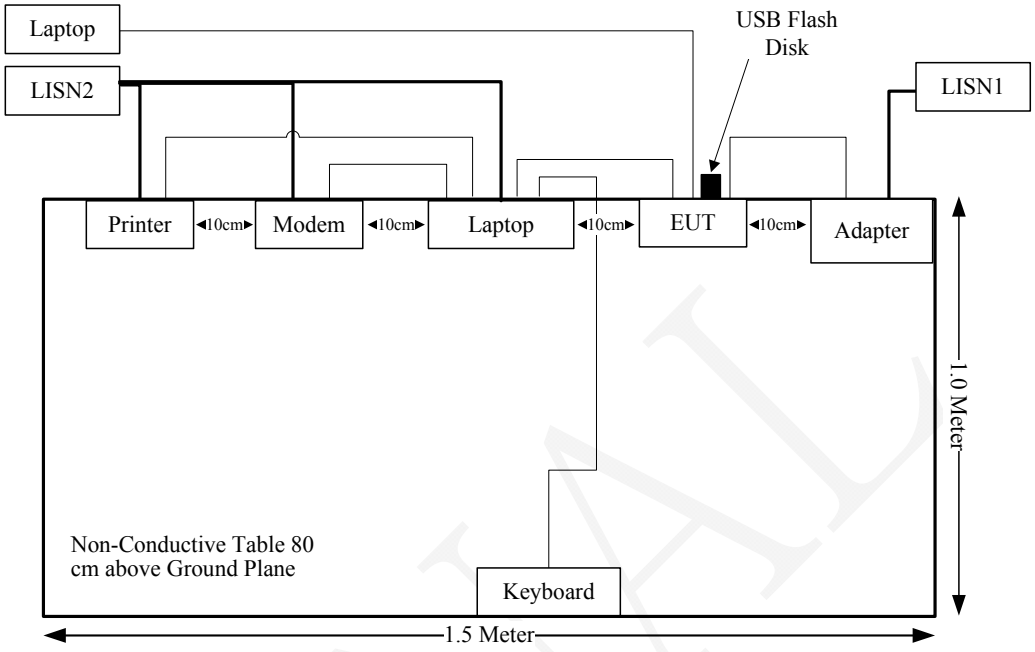
Manufacturer	Description	Model	Serial Number
DELL	Laptop	PP11L	QDS-BRCM1017
HP	Printer	C3941A	JPTVOB2337
DELL	Keyboard	L100	CNORH656658907BL05DC
SAST	Modem	AEM-2100	293
DELL	Laptop	PP11L	QDS-BRCM121
Kinston	USB Flash Disk	4G	0045
Sunydeal	PoE Adapter	BLL107-24W-12V	/

Support Cable List and Details

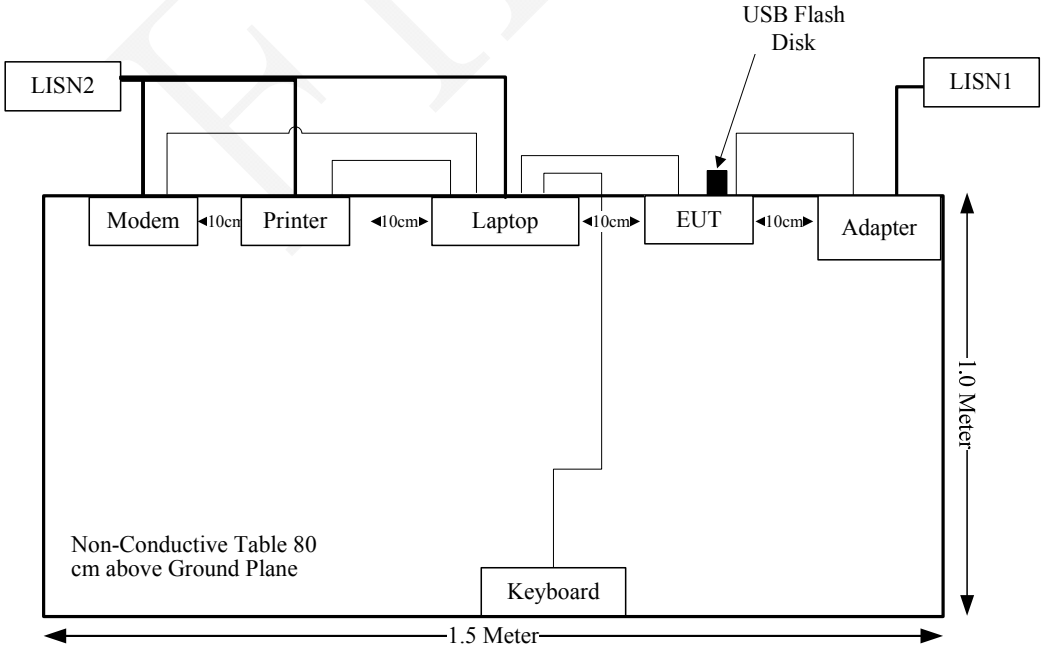
Cable Description	Shielding Cable	Ferrite Core	Length (m)	From Port	To
Parallel Cable	yes	No	1.2	Parallel Port of Laptop	Printer
Serial Cable	yes	No	1.2	Serial port of Laptop	Modem
Keyboard Cable	yes	No	1.8	USB port of Laptop	Keyboard
RJ45 Cable	yes	No	1.0	RJ45 port of Laptop	EUT
RJ45 Cable	yes	No	10	EUT	Laptop
DC Pwoer Cable	No	No	1.0	Adapter	EUT
RJ45 Cable	yes	No	1.0	PoE adapter	EUT

Configuration of Test Setup

AC/DC Adapter:



PoE Adapter:



Test Equipment List

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	EMI Test Receiver	ESCS 30	830245/006	2017-12-11	2018-12-11
Unknown	Coaxial Cable	C-NJNJ-50	C-0200-01	2018-09-05	2019-09-05
R&S	Test Software	EMC32	Version8.53.0	N/A	N/A
R&S	Two-line V-network	ENV 216	101614	2017-12-08	2018-12-08
R&S	EMI Test Receiver	ESCI	100224	2017-12-11	2018-12-11
Farad	Test Software	EZ-EMC	V1.1.4.2	N/A	N/A
Sunol Sciences	Antenna	JB3	A060611-1	2017-11-10	2020-11-10
Unknown	Coaxial Cable	C-NJNJ-50	C-0400-01	2018-09-05	2019-09-05
Unknown	Coaxial Cable	C-NJNJ-50	C-0075-01	2018-09-05	2019-09-05
Unknown	Coaxial Cable	C-NJNJ-50	C-1000-01	2018-09-05	2019-09-05
HP	Amplifier	8447D	2727A05902	2018-09-05	2019-09-05
Agilent	Spectrum Analyzer	E4440A	SG43360054	2018-01-04	2019-01-04
ETS-Lindgren	Horn Antenna	3115	000 527 35	2016-01-05	2019-01-04
Unknown	Coaxial Cable	C-SJSJ-50	C-0800-01	2018-09-05	2019-09-05
MITEQ	Amplifier	AFS42-00101800-25-S-42	2001271	2018-09-05	2019-09-05

* Statement of Traceability: Bay Area Compliance Laboratories Corp. (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

Environmental Conditions

Temperature:	24.6~26.4 °C
Relative Humidity:	34~52 %
ATM Pressure:	100.4~100.5 kPa
Tester:	Vern Shen, Tyler Pan, Lily Xie
Test Date:	2018.10.12-2018.10.16

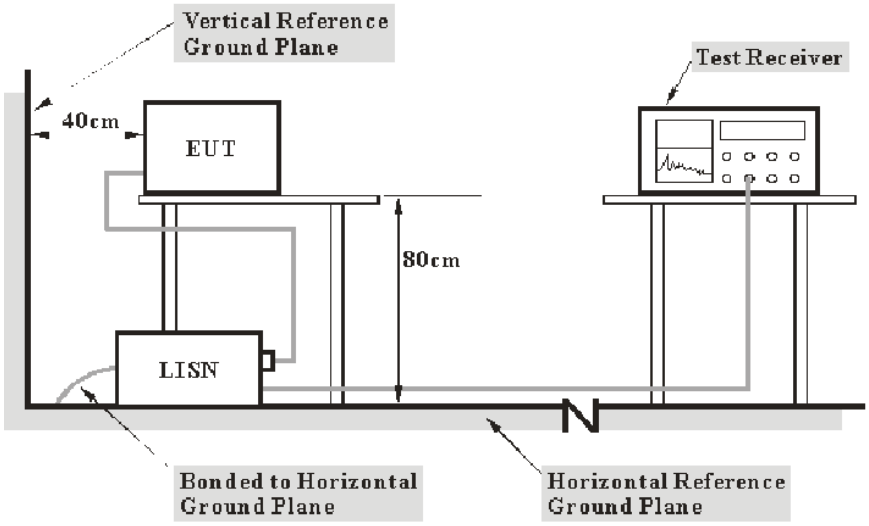
SUMARY OF TEST RESULTS

FCC Part 15B

Clause	Description of Test	Test Result
§15.107	Conducted emissions	Compliance
§15.109	Radiated emissions	Compliance

FCC Part 15B §15.107 – CONDUCTED EMISSIONS

EUT Setup



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

The setup of EUT is according with per ANSI C63.4-2014 measurement procedure. The specification used was with the FCC Part 15 B Class B limits.

The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle.

EMI Test Receiver Setup

The EMI test receiver was set to investigate the spectrum from 150 kHz to 30 MHz.

During the conducted emission test, the EMI test receiver was set with the following configurations:

Frequency Range	IF B/W
150 kHz – 30 MHz	9 kHz

Test Procedure

During the conducted emission test, the adapter was connected to the outlet of the first LISN and the other support equipments were connected to the outlet of the second LISN.

Maximizing procedure was performed on the six (6) highest emissions of the EUT.

All data was recorded in the Quasi-peak and average detection mode.

Corrected Amplitude & Margin Calculation

The basic equation is as follows:

Result (QuasiPeak or Average) = Meter Reading + Corr.

Note:
Corr. = Cable loss + Factor of coupling device

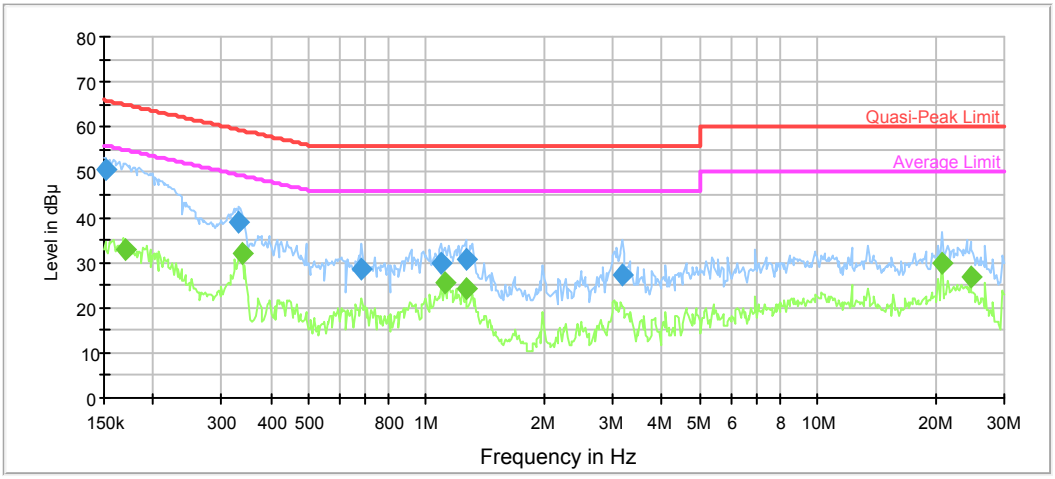
The "**Margin**" column of the following data tables indicates the degree of compliance within the applicable limit. For example, a margin of 7dB means the emission is 7dB below the limit. The equation for margin calculation is as follows:

Margin = Limit – Result

Test Data

Please refer to following table and plots:

Model Number:	R36A
Port:	L
Test Mode:	Operating(AC/DC Adapter)
Power Source:	AC 120V/60Hz



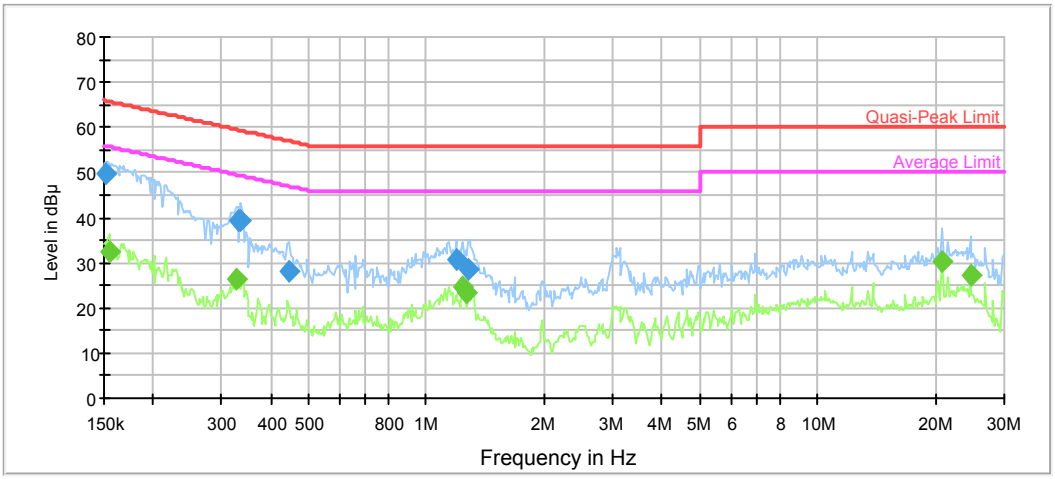
Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.151200	50.4	9.000	L1	11.2	15.5	65.9
0.332770	38.9	9.000	L1	10.1	20.5	59.4
0.681699	28.6	9.000	L1	9.8	27.4	56.0
1.090848	29.9	9.000	L1	9.8	26.1	56.0
1.259081	30.8	9.000	L1	9.8	25.2	56.0
3.173039	27.4	9.000	L1	9.8	28.6	56.0

Final Result 2

Frequency (MHz)	Average (dBµV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.170396	33.0	9.000	L1	10.9	21.9	54.9
0.338116	31.9	9.000	L1	10.1	17.3	49.2
1.117238	25.4	9.000	L1	9.8	20.6	46.0
1.259081	24.2	9.000	L1	9.8	21.8	46.0
20.804674	29.8	9.000	L1	10.1	20.2	50.0
24.594166	27.0	9.000	L1	10.1	23.0	50.0

Model Number: R36A
Port: N
Test Mode: Operating(AC/DC Adapter)
Power Source: AC 120V/60Hz



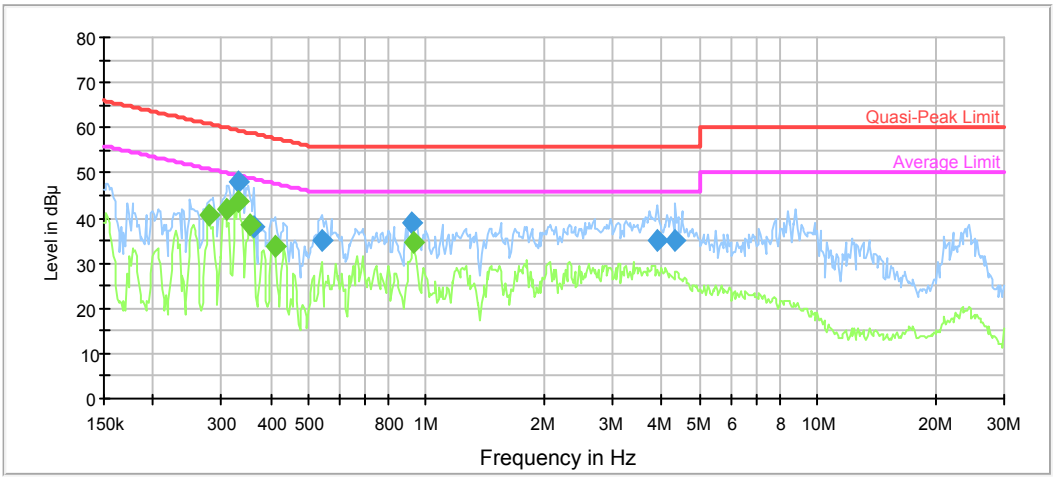
Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.152410	49.5	9.000	N	11.1	16.4	65.9
0.330129	39.4	9.000	N	10.1	20.0	59.4
0.335433	39.2	9.000	N	10.1	20.1	59.3
0.446873	28.3	9.000	N	9.9	28.6	56.9
1.190776	30.7	9.000	N	9.8	25.3	56.0
1.279307	28.3	9.000	N	9.8	27.7	56.0

Final Result 2

Frequency (MHz)	Average (dBµV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.154858	32.4	9.000	N	11.1	23.3	55.7
0.327509	26.2	9.000	N	10.1	23.3	49.5
1.239175	24.6	9.000	N	9.8	21.4	46.0
1.259081	23.1	9.000	N	9.8	22.9	46.0
20.804674	30.4	9.000	N	10.0	19.6	50.0
24.594166	27.3	9.000	N	10.1	22.7	50.0

Model Number: R36A
Port: L
Test Mode: Operating(PoE Adapter)
Power Source: AC 120V/60Hz



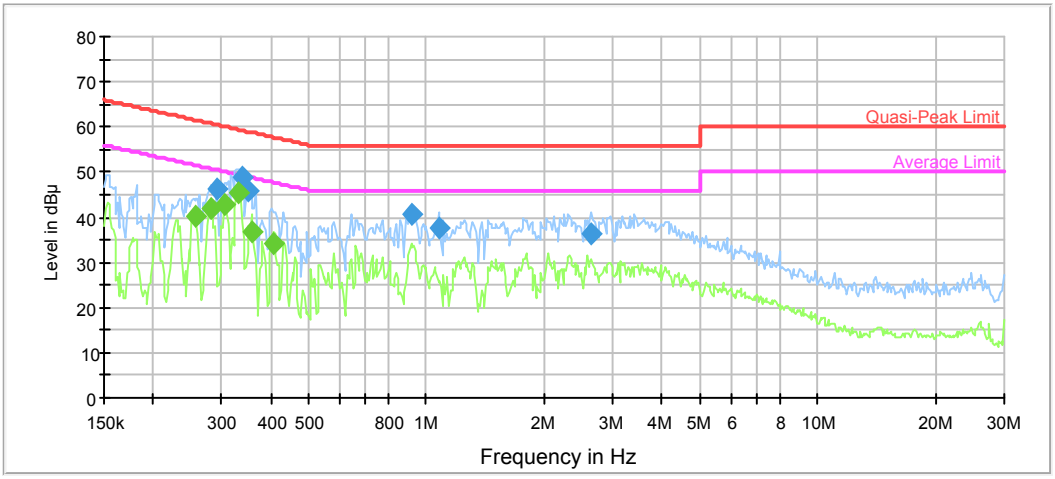
Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.332770	48.1	9.000	L1	10.1	11.3	59.4
0.363254	38.0	9.000	L1	10.0	20.7	58.7
0.541050	35.0	9.000	L1	9.9	21.0	56.0
0.915445	39.0	9.000	L1	9.8	17.0	56.0
3.903455	35.1	9.000	L1	9.8	20.9	56.0
4.329484	34.8	9.000	L1	9.8	21.2	56.0

Final Result 2

Frequency (MHz)	Average (dBµV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.279263	40.6	9.000	L1	10.2	10.3	50.8
0.307284	42.0	9.000	L1	10.1	8.0	50.0
0.330129	43.5	9.000	L1	10.1	6.0	49.4
0.354674	38.4	9.000	L1	10.0	10.5	48.9
0.409372	33.8	9.000	L1	10.0	13.9	47.7
0.930151	34.7	9.000	L1	9.8	11.3	46.0

Model Number: R36A
Port: N
Test Mode: Operating(PoE Adapter)
Power Source: AC 120V/60Hz



Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.292938	46.2	9.000	N	10.2	14.2	60.4
0.338116	48.7	9.000	N	10.1	10.6	59.2
0.349066	45.9	9.000	N	10.0	13.1	59.0
0.915445	40.7	9.000	N	9.8	15.3	56.0
1.073601	37.8	9.000	N	9.8	18.2	56.0
2.641698	36.2	9.000	N	9.8	19.8	56.0

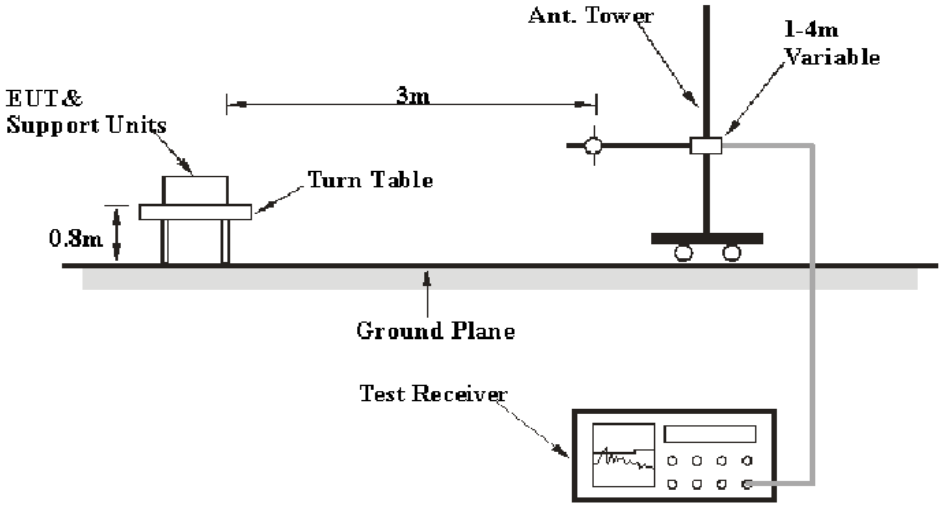
Final Result 2

Frequency (MHz)	Average (dBµV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.255827	40.2	9.000	N	10.3	11.4	51.6
0.281497	41.8	9.000	N	10.2	8.9	50.8
0.304845	43.0	9.000	N	10.1	7.1	50.1
0.330129	45.6	9.000	N	10.1	3.8	49.4
0.357511	36.9	9.000	N	10.0	11.9	48.8
0.406123	34.3	9.000	N	10.0	13.5	47.7

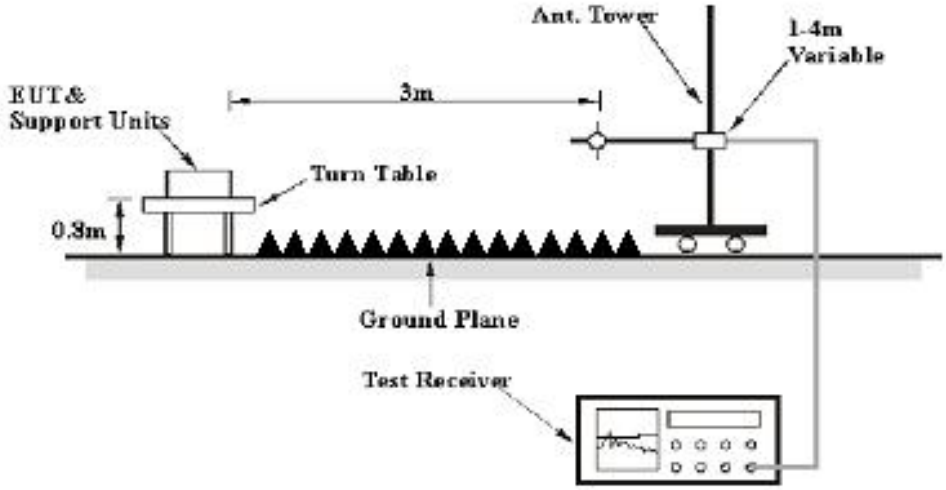
FCC §15.109 - RADIATED SPURIOUS EMISSIONS

EUT Setup

Below 1GHz:



Above 1GHz:



The radiated emission tests were performed at the 3 meters distance, using the setup accordance with the ANSI C63.4-2014. The specification used was the FCC Part 15.109 Class B limits.

EMI Test Receiver Setup

The system was investigated from 30 MHz to 13 GHz.

During the radiated emission test, the EMI test receiver was set with the following configurations:

Frequency Range	RBW	Video B/W	IF B/W	Measurement
30 MHz – 1000 MHz	120 kHz	300 kHz	120 kHz	QP
Above 1 GHz	1 MHz	3 MHz	/	Peak
	1 MHz	10Hz	/	AVG

Test Procedure

During the radiated emissions, the adapter was connected to the first AC floor outlet and the other support equipments were connected to the second AC floor outlet.

Maximizing procedure was performed on the highest emissions to ensure that the EUT complied with all installation combinations.

The data was recorded in the Quasi-peak detection mode for below 1 GHz, peak and average detection mode above 1 GHz.

All emissions under the average limit and under the noise floor have not recorded in the report.

Corrected Amplitude & Margin Calculation

The basic equation is as follows:

Result = Meter Reading+ Corrected

Note:
Corrected = Antenna Factor + Cable Loss - Amplifier Gain
or
Corrected = Antenna Factor + Cable Loss + Insertion loss of attenuator - Amplifier Gain

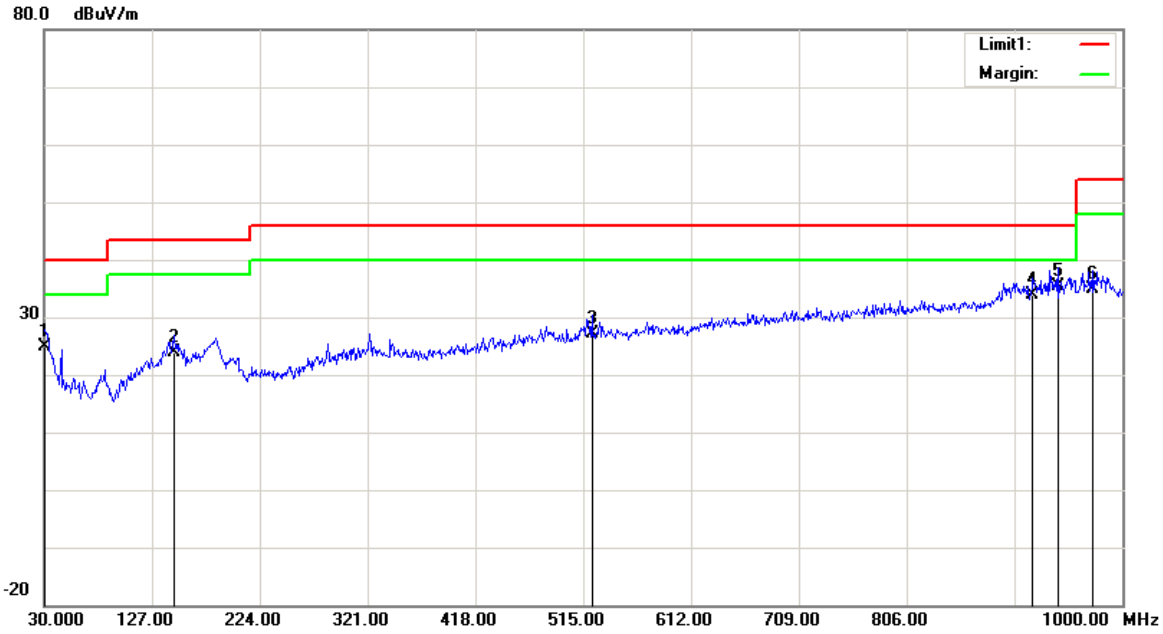
The "**Margin**" column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of 7 dB means the emission is 7 dB below the limit. The equation for margin calculation is as follows:

Margin = Limit – Result

Test Data

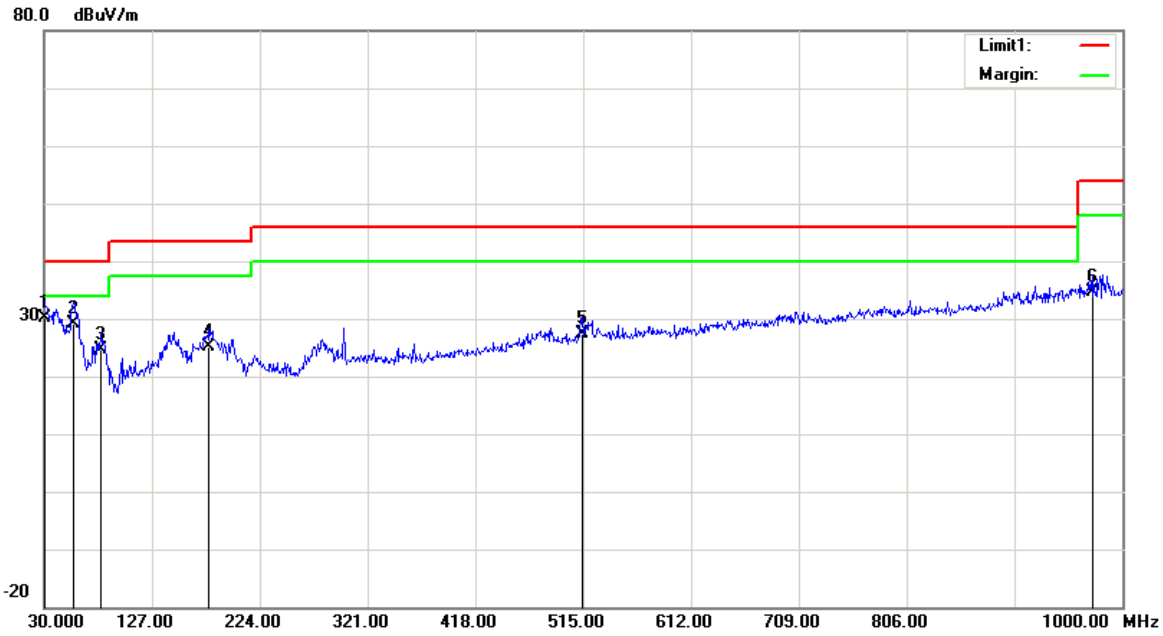
Please refer to following table and plots:

Condition:	**FCC Class B 3M Radiation**	**Polarization:**	**Horizontal**
EUT:	WiFi USB Extender Router	**Power:**	**AC 120V/60Hz**
Model:	**R36A**	**Distance:**	3m
Test Mode:	Operating(AC/DC adapter)		



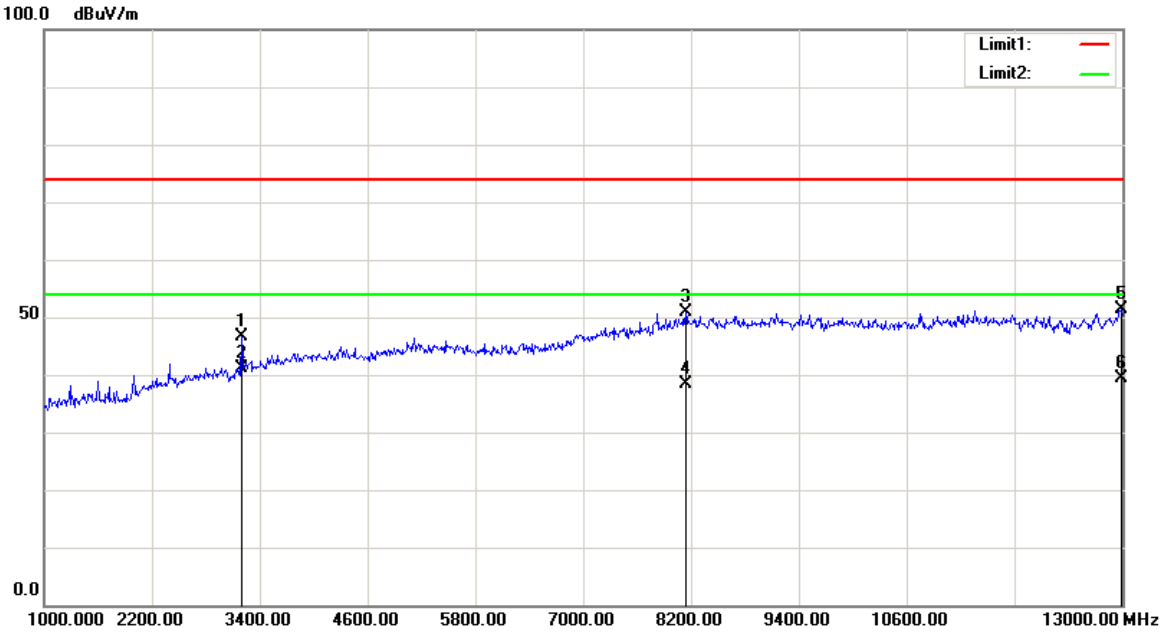
No.	Frequency (MHz)	Reading (dBµV)	Detector	Corrected dB/m	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)
1	30.0000	23.36	QP	1.54	24.90	40.00	15.10
2	146.4000	29.80	QP	-6.00	23.80	43.50	19.70
3	522.7600	26.79	QP	0.41	27.20	46.00	18.80
4	919.4900	37.51	QP	-3.71	33.80	46.00	12.20
5	941.8000	38.91	QP	-3.41	35.50	46.00	10.50
6	973.8100	12.00	QP	23.00	35.00	54.00	19.00

Condition:	**FCC Class B 3M Radiation**	**Polarization:**	**Vertical**
EUT:	WiFi USB Extender Router	**Power:**	**AC 120V/60Hz**
Model:	**R36A**	**Distance:**	3m
Test Mode:	Operating(AC/DC adapter)		



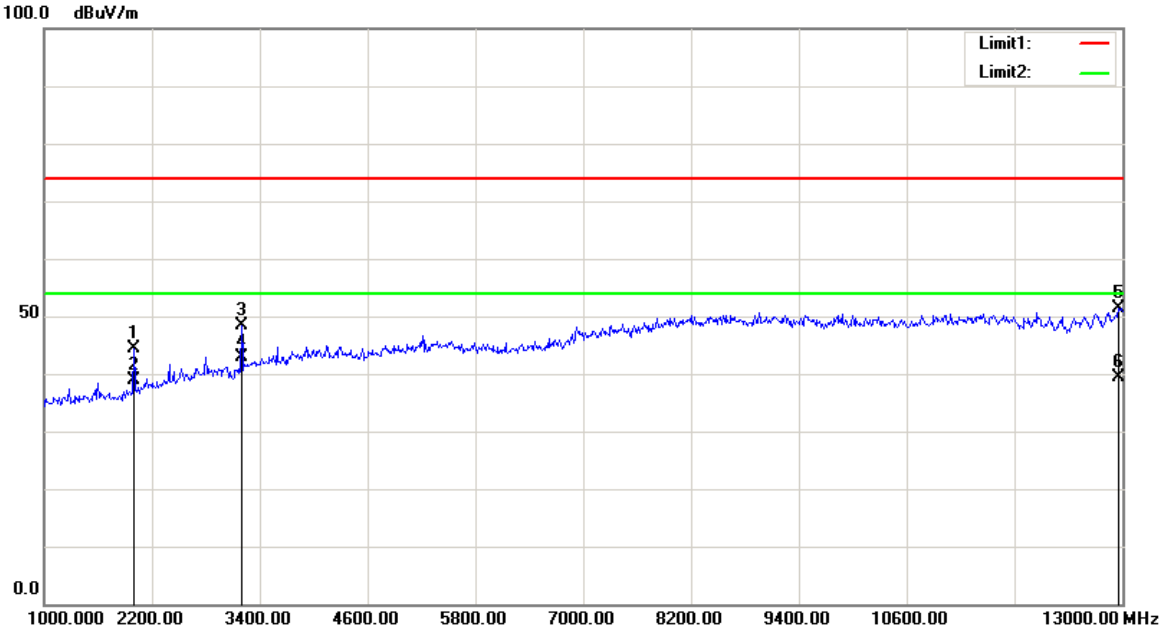
No.	Frequency (MHz)	Reading (dBµV)	Detector	Corrected dB/m	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)
1	30.0000	28.56	QP	1.54	30.10	40.00	9.90
2	56.1900	41.30	QP	-12.20	29.10	40.00	10.90
3	81.4100	36.01	QP	-11.31	24.70	40.00	15.30
4	178.4100	32.27	QP	-7.07	25.20	43.50	18.30
5	514.0300	27.30	QP	0.00	27.30	46.00	18.70
6	973.8100	11.70	QP	23.00	34.70	54.00	19.30

Condition:	**FCC Part 15 Class B**	**Polarization:**	**Horizontal**
EUT:	WiFi USB Extender Router	**Power:**	**AC 120V/60Hz**
Model:	**R36A**	**Distance:**	3m
Test Mode:	Operating(AC/DC adapter)		



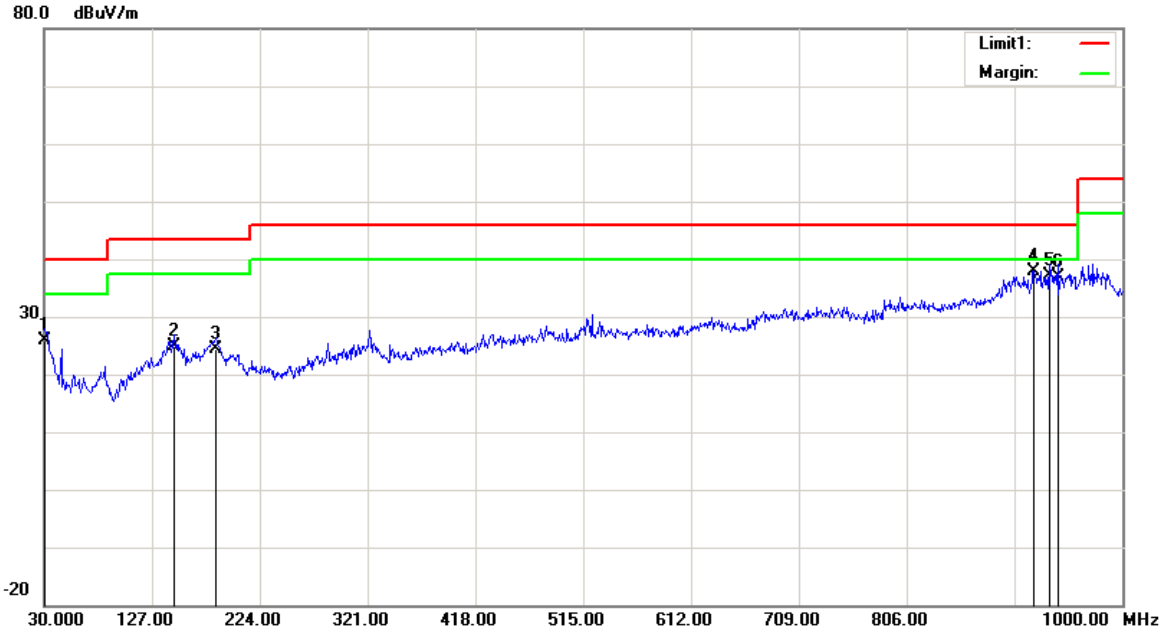
No.	Frequency (MHz)	Reading (dBµV)	Detector	Corrected (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)
1	3200.000	50.90	peak	-4.21	46.69	74.00	27.31
2	3200.000	45.36	AVG	-4.21	41.15	54.00	12.85
3	8146.000	45.84	peak	5.02	50.86	74.00	23.14
4	8146.000	33.45	AVG	5.02	38.47	54.00	15.53
5	12994.000	43.01	peak	8.36	51.37	74.00	22.63
6	12994.000	31.02	AVG	8.36	39.38	54.00	14.62

Condition:	**FCC Part 15 Class B**	**Polarization:**	**Vertical**
EUT:	WiFi USB Extender Router	**Power:**	**AC 120V/60Hz**
Model:	**R36A**	**Distance:**	3m
Test Mode:	Operating(AC/DC adapter)		



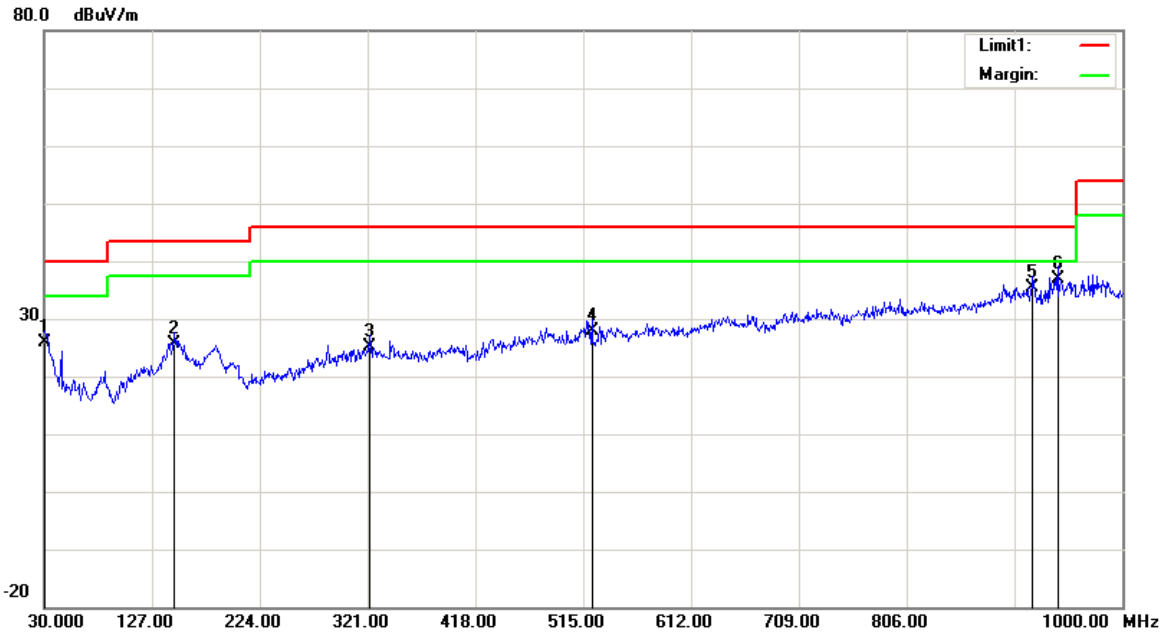
No.	Frequency (MHz)	Reading (dBµV)	Detector	Corrected (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)
1	2002.000	51.59	peak	-7.18	44.41	74.00	29.59
2	2002.000	46.11	AVG	-7.18	38.93	54.00	15.07
3	3202.000	52.65	peak	-4.21	48.44	74.00	25.56
4	3202.000	47.12	AVG	-4.21	42.91	54.00	11.09
5	12970.000	43.14	peak	8.31	51.45	74.00	22.55
6	12970.000	31.01	AVG	8.31	39.32	54.00	14.68

Condition:	**FCC Class B 3M Radiation**	**Polarization:**	**Horizontal**
EUT:	WiFi USB Extender Router	**Power:**	**AC 120V/60Hz**
Model:	**R36A**	**Distance:**	3m
Test Mode:	Operating(PoE adapter)		



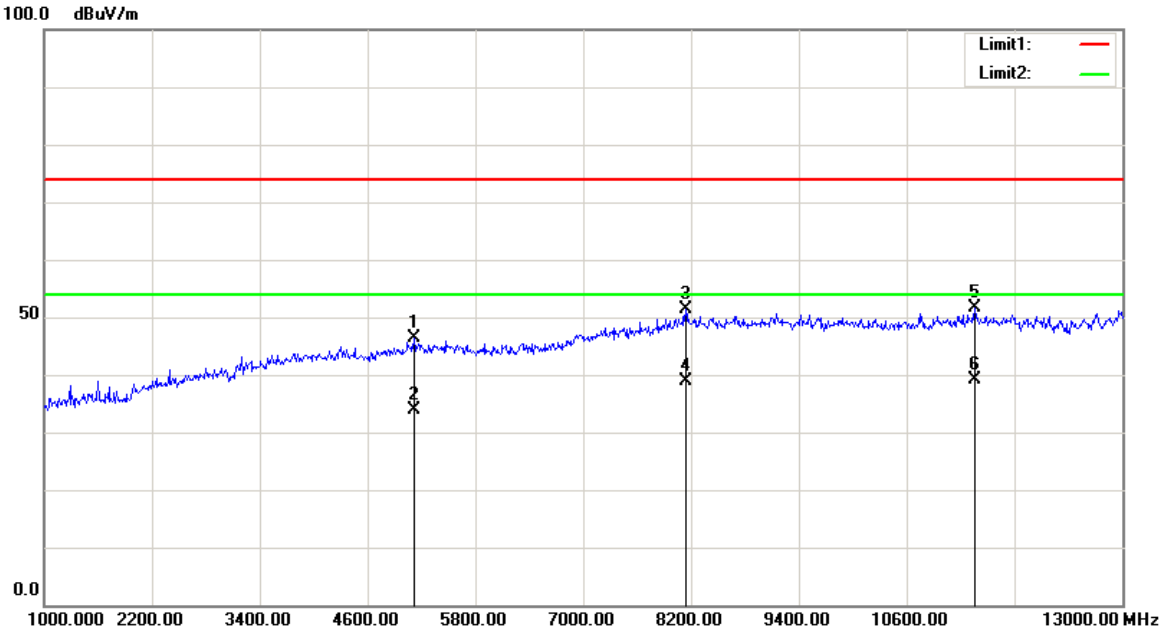
No.	Frequency (MHz)	Reading (dBµV)	Detector	Corrected dB/m	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)
1	30.0000	24.40	QP	1.54	25.94	40.00	14.06
2	146.4000	30.86	QP	-6.00	24.86	43.50	18.64
3	184.2300	31.63	QP	-7.31	24.32	43.50	19.18
4	920.4600	41.56	QP	-3.69	37.87	46.00	8.13
5	934.0400	40.54	QP	-3.43	37.11	46.00	8.89
6	941.8000	40.41	QP	-3.41	37.00	46.00	9.00

Condition:	**FCC Class B 3M Radiation**	**Polarization:**	**Vertical**
EUT:	WiFi USB Extender Router	**Power:**	**AC 120V/60Hz**
Model:	**R36A**	**Distance:**	3m
Test Mode:	Operating(PoE adapter)		



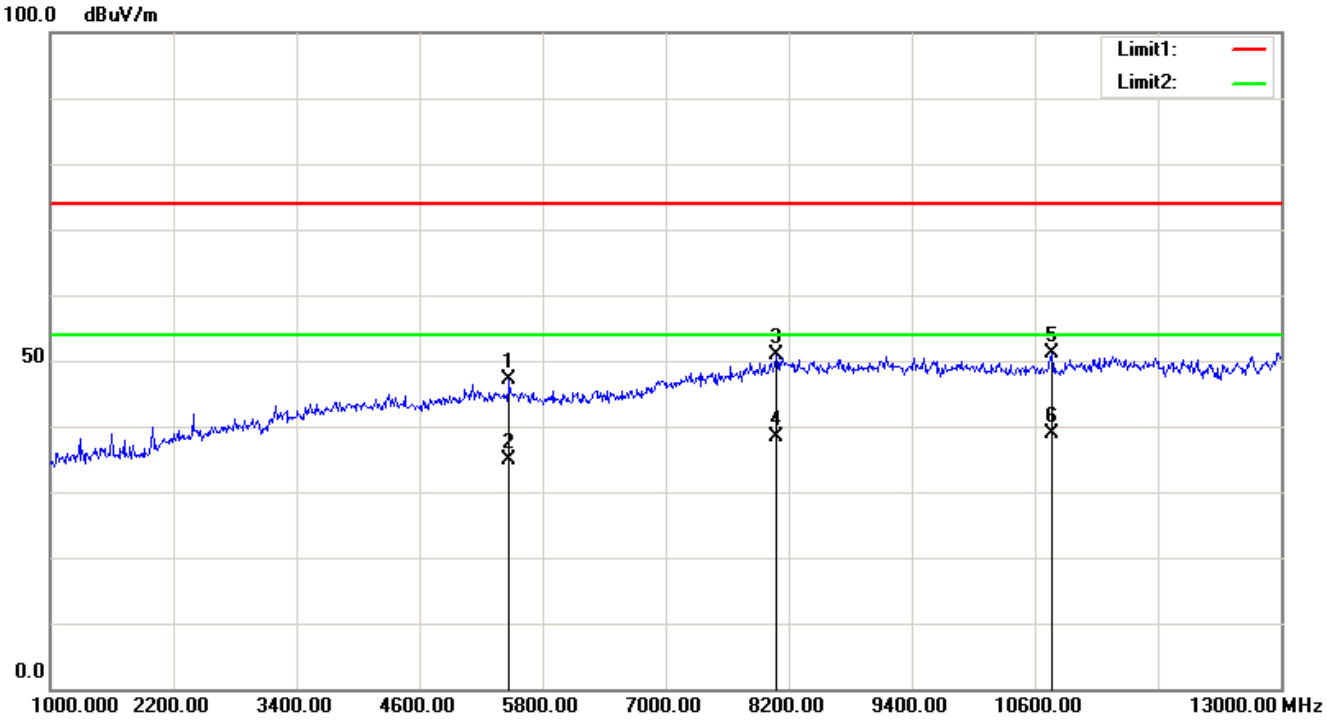
No.	Frequency (MHz)	Reading (dBµV)	Detector	Corrected dB/m	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)
1	30.0000	24.40	QP	1.54	25.94	40.00	14.06
2	147.3700	31.63	QP	-6.01	25.62	43.50	17.88
3	322.9400	28.39	QP	-3.32	25.07	46.00	20.93
4	522.7600	27.37	QP	0.41	27.78	46.00	18.22
5	919.4900	39.05	QP	-3.71	35.34	46.00	10.66
6	941.8000	40.41	QP	-3.41	37.00	46.00	9.00

Condition:	**FCC Class B 3M Radiation**	**Polarization:**	**Horizontal**
EUT:	WiFi USB Extender Router	**Power:**	**AC 120V/60Hz**
Model:	**R36A**	**Distance:**	3m
Test Mode:	Operating(PoE adapter)		



No.	Frequency (MHz)	Reading (dBµV)	Detector	Corrected dB/m	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)
1	5122.000	46.63	peak	-0.32	46.31	74.00	27.69
2	5122.000	34.15	AVG	-0.32	33.83	54.00	20.17
3	8146.000	46.34	peak	5.02	51.36	74.00	22.64
4	8146.000	33.76	AVG	5.02	38.78	54.00	15.22
5	11356.000	43.40	peak	8.17	51.57	74.00	22.43
6	11356.000	31.05	AVG	8.17	39.22	54.00	14.78

Condition:	**FCC Class B 3M Radiation**	**Polarization:**	**Vertical**
EUT:	WiFi USB Extender Router	**Power:**	**AC 120V/60Hz**
Model:	**R36A**	**Distance:**	3m
Test Mode:	Operating(PoE adapter)		



No.	Frequency (MHz)	Reading (dBµV)	Detector	Corrected dB/m	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)
1	5476.000	46.85	peak	0.28	47.13	74.00	26.87
2	5476.000	34.50	AVG	0.28	34.78	54.00	19.22
3	8086.000	45.88	peak	4.94	50.82	74.00	23.18
4	8086.000	33.43	AVG	4.94	38.37	54.00	15.63
5	10774.000	43.36	peak	7.86	51.22	74.00	22.78
6	10774.000	30.98	AVG	7.86	38.84	54.00	15.16

******END OF REPORT******