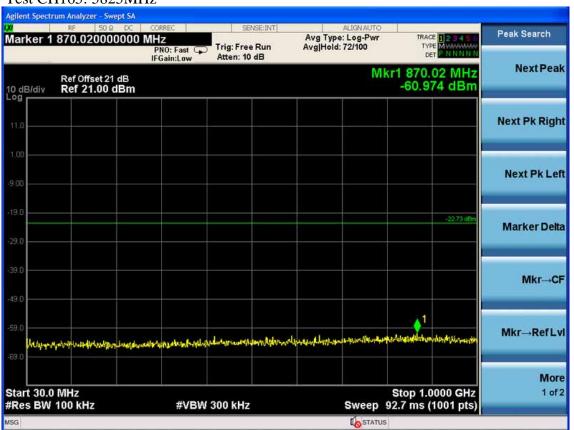
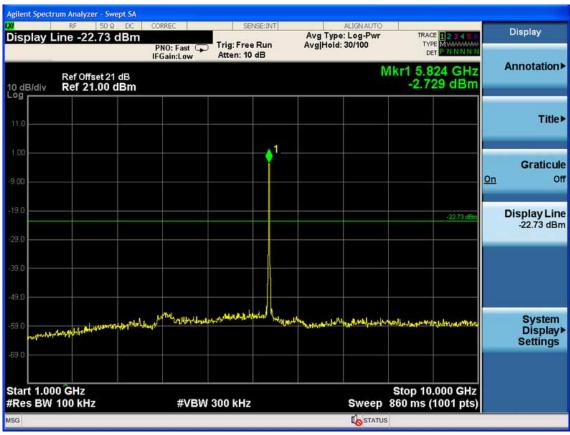


# Test CH165: 5825MHz

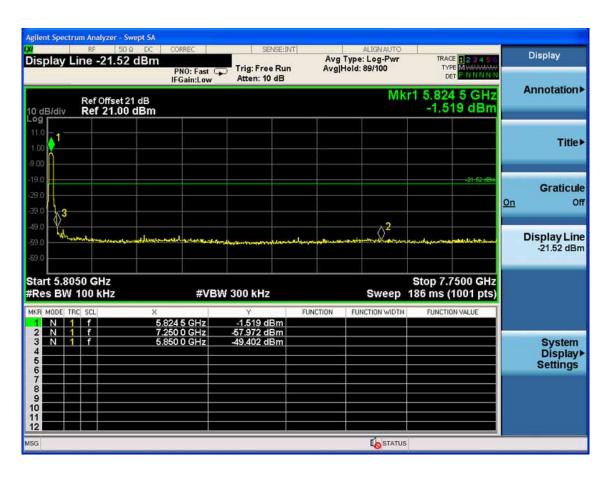






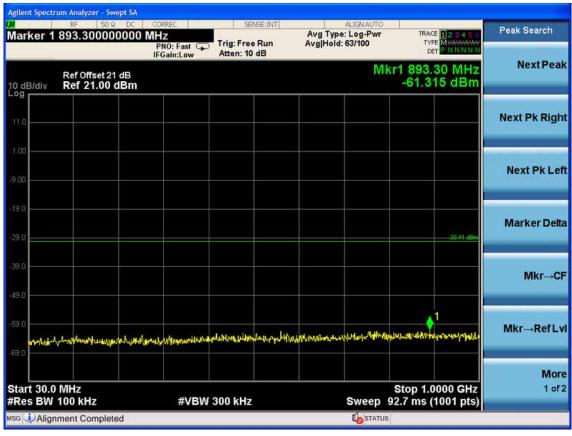






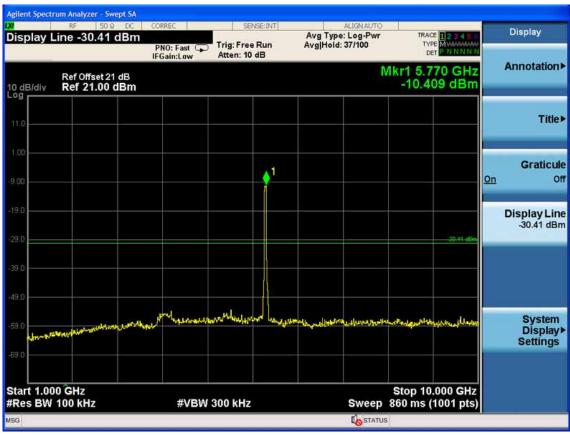
Test Mode: IEEE 802.11n HT40 TX

Test CH151: 5755MHz









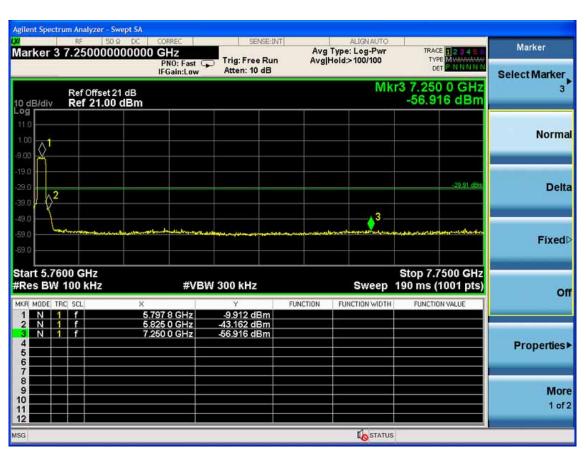


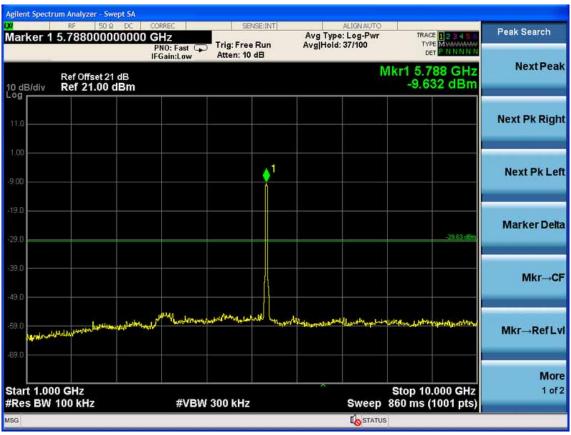


# Test CH159: 5795MHz











# 6. BAND EDGE COMPLIANCE TEST

# 6.1.Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum	Agilent	E4446A	US44300459	May.08, 13	1 Year
2.	Amp	HP	8449B	3008A08495	May.08, 13	1 Year
3.	Horn Antenna	EMCO	3115	9510-4580	May.28, 13	1 Year
4.	HF Cable	Hubersuhne	Sucoflex104	-	May.08, 13	1 Year

## 6.2.Limit

All the lower and upper band-edges emissions appearing within 5.35-5.46GHz and 7.25-7.75GHz restricted frequency bands shall not exceed the limits shown in 15.209, all the other emissions outside operation frequency band 5725MHz to 5850MHz shall be at least 20dB below the fundamental emissions, or comply with 15.209 limits.

## 6.3. Test Produce

- 1. The EUT is placed on a turntable, which is 0.8m above the ground plane and worked at highest radiated power.
- 2. The turntable was rotated for 360 degrees to determine the position of maximum emission level.
- 3. EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emission.
- 4. Set the spectrum analyzer in the following setting in order to capture the lower and upper band-edges of the emission:
- (a) PEAK: RBW=1MHz; VBW=3MHz; Sweep=AUTO
- (b) AVERAGE: RBW=1MHz; VBW=10Hz; Sweep=AUTO

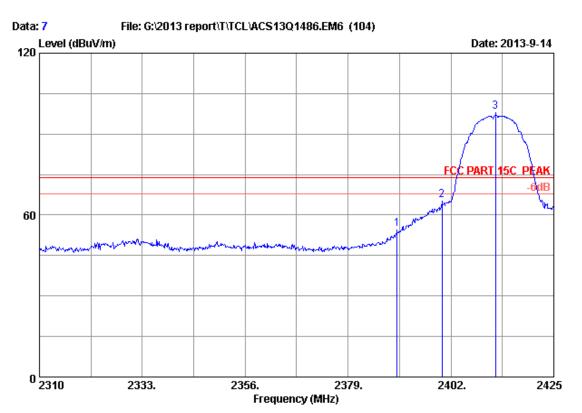
## 6.4. Test Results

Pass (The testing data was attached in the next pages.)



page FCC ID:W8UWAE22

## 2.4G:



Site no. : 3m Chamber

Data no. : 7 Ant. pol. : HORIZONTAL Dis. / Ant. : 3m 2013 3115 (4580)

: FCC PART 15C PEAK

Env. / Ins. : 23\*C/54% Engineer : Kevin\_Hu

EUT : WIFI Module

Power supply : DC 5V

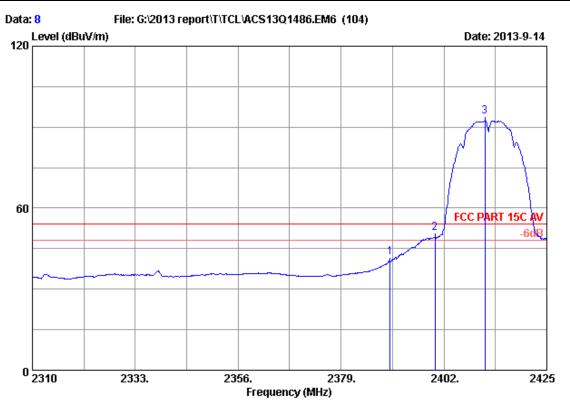
: IEEE802.11b 2412MHz Tx Mode Test mode

WAE22-DF01-AR

	Freq.	Ant. Factor (dB/m)	Cable loss (dB)	•	Reading (dBuV)	Emission Level (dBuV/m)			Remark	
2		28.16 28.18 28.21	5.80	35.70	56.64 67.15 100.09	54.88 65.43 98.41	74.00 74.00 74.00	19.12 8.57 -24.41	Peak Peak Peak	-

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.





Site no. : 3m Chamber Data no. : 8

Dis. / Ant. : 3m 2013 3115 (4580) Ant. pol. : HORIZONTAL

Limit : FCC PART 15C AV

Env. / Ins. : 23\*C/54% Engineer : Kevin\_Hu

EUT : WIFI Module

Power supply : DC 5V

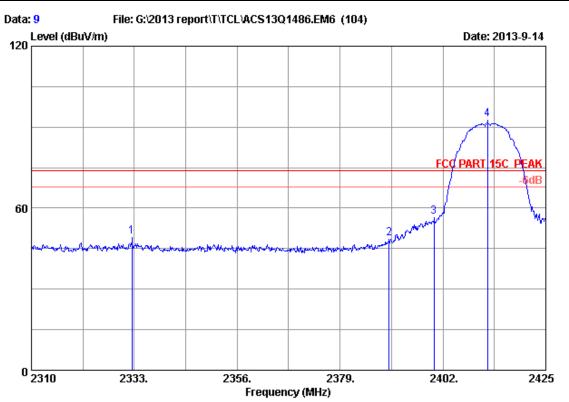
Test mode : IEEE802.11b 2412MHz Tx Mode

WAE22-DF01-AR

(MHz) (dB/r	n) (dB)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)	
1 2390.000 28.10	5.80	35.70	43.47	41.71	54.00	12.29	Average
2 2400.000 28.18		35.70	52.50	50.78	54.00	3.22	Average
3 2411.200 28.20		35.70	95.48	93.79	54.00	-39.79	Average

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.





Site no. : 3m Chamber Data no. : 9

Dis. / Ant. : 3m 2013 3115 (4580) Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : 23 \*C/54% Engineer : Kevin Hu

EUT : WIFI Module

Power supply : DC 5V

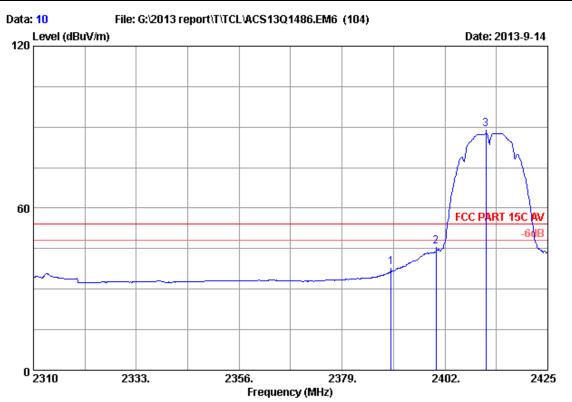
Test mode : IEEE802.11b 2412MHz Tx Mode

WAE22-DF01-AR

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
2	2332.425 2390.000 2400.000 2412.005	28.03 28.16 28.18 28.21		35.70 35.70 35.70 35.70	51.47 50.45 58.66 94.64	49.50 48.69 56.94 92.96	74.00 74.00 74.00 74.00	24.50 25.31 17.06 -18.96	Peak Peak Peak Peak

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.





Site no. : 3m Chamber Data no. : 10

Dis. / Ant. : 3m 2013 3115 (4580) Ant. pol. : VERTICAL

Limit : FCC PART 15C AV

Env. / Ins. : 23 \*C/54% Engineer : Kevin Hu

EUT : WIFI Module

Power supply : DC 5V

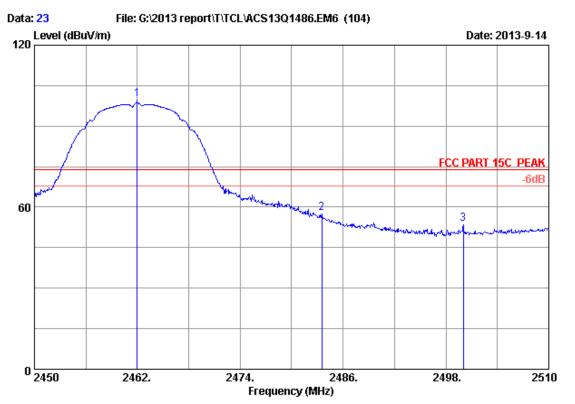
Test mode : IEEE802.11b 2412MHz Tx Mode

WAE22-DF01-AR

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1 2 3	2390.000 2400.000 2411.200	28.16 28.18 28.20	5.80	35.70 35.70 35.70	39.81 47.41 90.82	38.05 45.69 89.13	54.00 54.00 54.00	15.95 8.31 -35.13	Average Average Average
·									

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.





Site no. : 3m Chamber Data no. : 23

Dis. / Ant. : 3m 2013 3115 (4580) Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : 23 \*C/54% Engineer : Kevin Hu

EUT : WIFI Module

Power supply : DC 5V

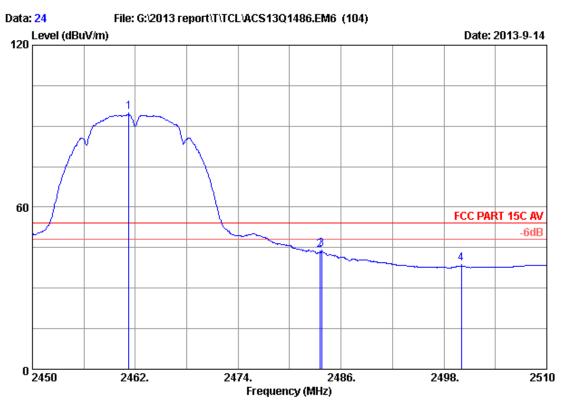
Test mode : IEEE802.11b 2462MHz Tx Mode

WAE22-DF01-AR

	Freq.		Cable loss (dB)	Factor	_	Emission Level (dBuV/m)	Limits	Margin (dB)	Remark
	2462.000 2483.500			35.70 35.70	101.28 59.35	99.79 57.93	74.00 74.00	-25.79 16.07	Peak Peak
3	2500.000	28.40	5.94	35.70	55.19	53.83	74.00	20.17	Peak

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.





Site no. : 3m Chamber Data no. : 24

Dis. / Ant. : 3m 2013 3115 (4580) Ant. pol. : HORIZONTAL

Limit : FCC PART 15C AV

Env. / Ins. : 23 \*C/54% Engineer : Kevin Hu

EUT : WIFI Module

Power supply : DC 5V

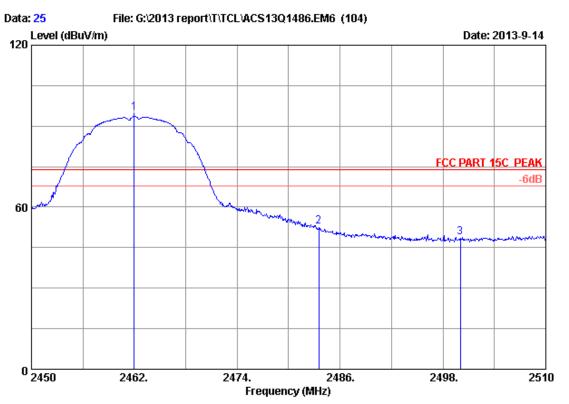
Test mode : IEEE802.11b 2462MHz Tx Mode

WAE22-DF01-AR

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2461.220	28.31	5.89	35.70	96.87	95.37	54.00	-41.37	Average
2	2483.500	28.36	5.92	35.70	45.53	44.11	54.00	9.89	Average
3	2483.720	28.36	5.92	35.70	45.87	44.45	54.00	9.55	Average
4	2500.000	28.40	5.94	35.70	40.58	39.22	54.00	14.78	Average

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.





Site no. : 3m Chamber Data no. : 25

Dis. / Ant. : 3m 2013 3115 (4580) Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : 23 \*C/54% Engineer : Kevin Hu

EUT : WIFI Module

Power supply : DC 5V

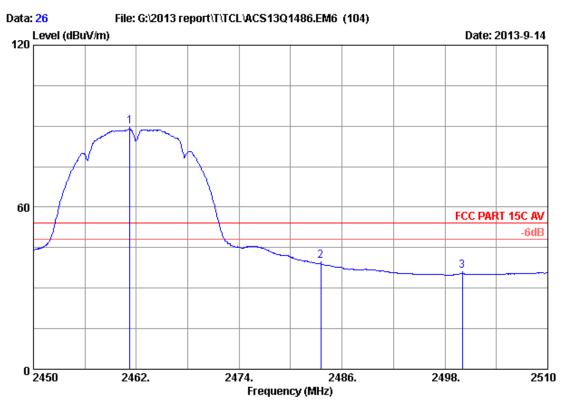
Test mode : IEEE802.11b 2462MHz Tx Mode

WAE22-DF01-AR

1 2462.000 28.32 5.89 35.70 96.39 2 2483.500 28.36 5.92 35.70 54.33		
3 2500.000 28.40 5.94 35.70 50.14	94.90 74.00 -20.90 Peak 52.91 74.00 21.09 Peak 48.78 74.00 25.22 Peak	

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.





Site no. : 3m Chamber Data no. : 26

Dis. / Ant. : 3m 2013 3115 (4580) Ant. pol. : VERTICAL

Limit : FCC PART 15C AV

Env. / Ins. : 23 \*C/54% Engineer : Kevin Hu

EUT : WIFI Module

Power supply : DC 5V

Test mode : IEEE802.11b 2462MHz Tx Mode

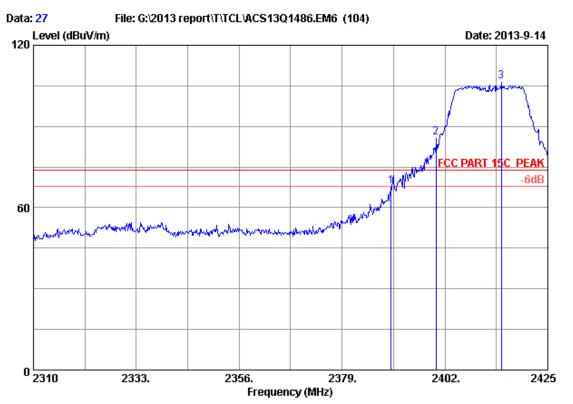
WAE22-DF01-AR

1 2461.220 28.31 5.89 35.70 91.44 89.94 54.00 -35.94		Freq.	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
2 2483.500 28.36 5.92 35.70 41.48 40.06 54.00 13.94 3 2500.000 28.40 5.94 35.70 37.65 36.29 54.00 17.71	2	2483.500	28.36	5.92	35.70	41.48	40.06	54.00	13.94	Average Average Average

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- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.





Site no. : 3m Chamber Data no. : 27

Dis. / Ant. : 3m 2013 3115 (4580) Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : 23 \*C/54% Engineer : Kevin Hu

EUT : WIFI Module

Power supply : DC 5V

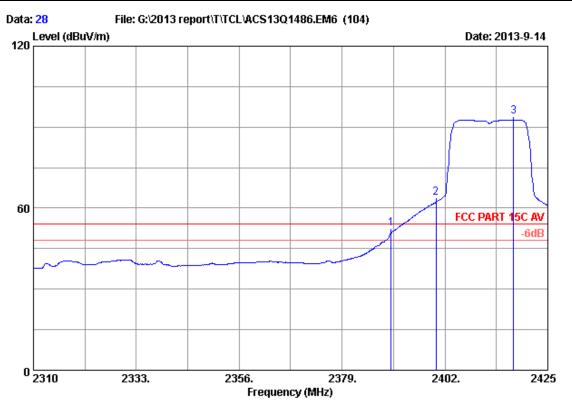
Test mode : IEEE802.11g 2412MHz Tx Mode

WAE22-DF01-AR

	Freq. (MHz)	Ant. Factor (dB/m)	loss	Factor	Reading	Emission Level (dBuV/m)	Limits	Margin (dB)	Remark	
2	2390.000 2400.000 2414.650	28.18	5.80		69.61 87.54 108.18	85.82		6.15 -11.82 -32.51	Peak Peak Peak Peak	

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.





Site no. : 3m Chamber Data no. : 28

Dis. / Ant. : 3m 2013 3115 (4580) Ant. pol. : HORIZONTAL

Limit : FCC PART 15C AV

Env. / Ins. : 23 \*C/54% Engineer : Kevin Hu

EUT : WIFI Module

Power supply : DC 5V

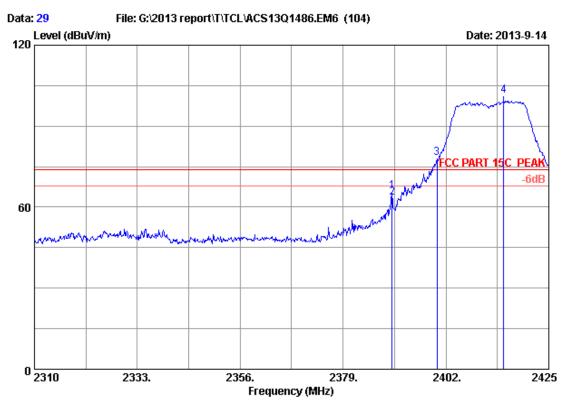
Test mode : IEEE802.11g 2412MHz Tx Mode

WAE22-DF01-AR

Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1 2390.000	28.16	5.80	35.70	54.32	52.56	54.00	1.44	Average
2 2400.000	28.18		35.70	65.49	63.77	54.00	-9.77	Average
3 2417.295	28.22		35.70	95.74	94.08	54.00	-40.08	Average

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.





Site no. : 3m Chamber Data no. : 29

Dis. / Ant. : 3m 2013 3115 (4580) Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : 23 \*C/54% Engineer : Kevin Hu

EUT : WIFI Module

Power supply : DC 5V

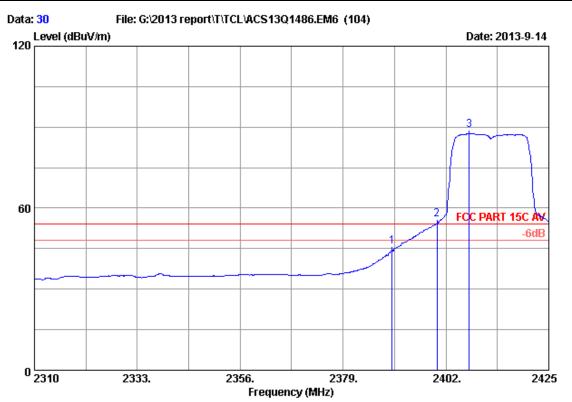
Test mode : IEEE802.11g 2412MHz Tx Mode

WAE22-DF01-AR

Freq (MHz)		Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)		Limits (dBuV/m)	Margin (dB)	Remark
1 2389.92 2 2390.00 3 2400.00 4 2414.88	0 28.16 0 28.18			67.66 65.36 80.01 102.94	65.90 63.60 78.29 101.27	74.00 74.00 74.00 74.00	8.10 10.40 -4.29 -27.27	Peak Peak Peak Peak

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.





Site no. : 3m Chamber Data no. : 30

Dis. / Ant. : 3m 2013 3115 (4580) Ant. pol. : VERTICAL

Limit : FCC PART 15C AV

Env. / Ins. : 23 \*C/54% Engineer : Kevin Hu

EUT : WIFI Module

Power supply : DC 5V

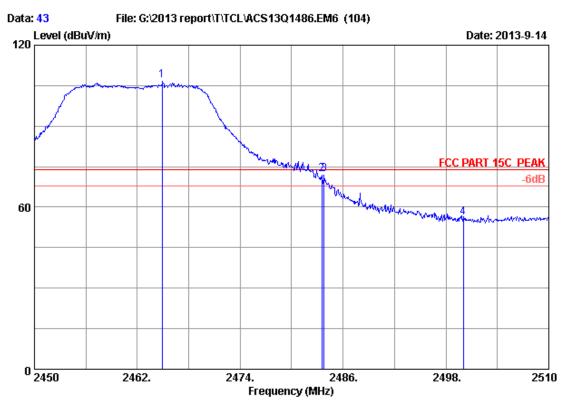
Test mode : IEEE802.11g 2412MHz Tx Mode

WAE22-DF01-AR

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1 2 3	2390.000 2400.000 2407.175	28.16 28.18 28.20	5.80	35.70 35.70 35.70	47.48 57.57 90.60	45.72 55.85 88.91	54.00 54.00 54.00	8.28 -1.85 -34.91	Average Average Average

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.





Site no. : 3m Chamber Data no. : 43

Dis. / Ant. : 3m 2013 3115 (4580) Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : 23 \*C/54% Engineer : Kevin Hu

EUT : WIFI Module

Power supply : DC 5V

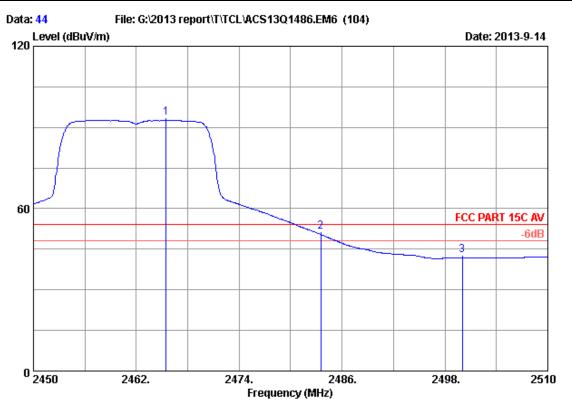
Test mode : IEEE802.11g 2462MHz Tx Mode

WAE22-DF01-AR

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)		Limits (dBuV/m)	Margin (dB)	Remark
1	2464.880	28.32	5.89	35.70	108.59	107.10	74.00	-33.10	Peak
2	2483.500	28.36	5.92	35.70	73.53	72.11	74.00	1.89	Peak
3	2483.780	28.36	5.92	35.70	73.73	72.31	74.00	1.69	Peak
4	2500.000	28.40	5.94	35.70	57.43	56.07	74.00	17.93	Peak

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.





Site no. : 3m Chamber Data no. : 44

Dis. / Ant. : 3m 2013 3115 (4580) Ant. pol. : HORIZONTAL

Limit : FCC PART 15C AV

Env. / Ins. : 23 \*C/54% Engineer : Kevin Hu

EUT : WIFI Module

Power supply : DC 5V

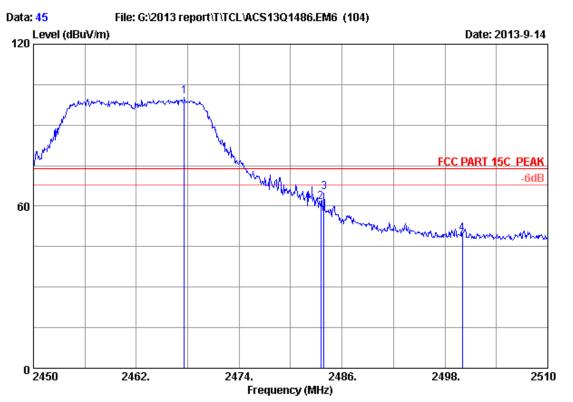
Test mode : IEEE802.11g 2462MHz Tx Mode

WAE22-DF01-AR

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)		Limits (dBuV/m)	Margin (dB)	Remark
1 2 3		28.32 28.36 28.40	5.92	35.70 35.70 35.70	95.21 53.01 44.11	93.72 51.59 42.75	54.00 54.00 54.00	-39.72 2.41 11.25	Average Average Average

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.





Site no. : 3m Chamber Data no. : 45

Dis. / Ant. : 3m 2013 3115 (4580) Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : 23 \*C/54% Engineer : Kevin Hu

EUT : WIFI Module

Power supply : DC 5V

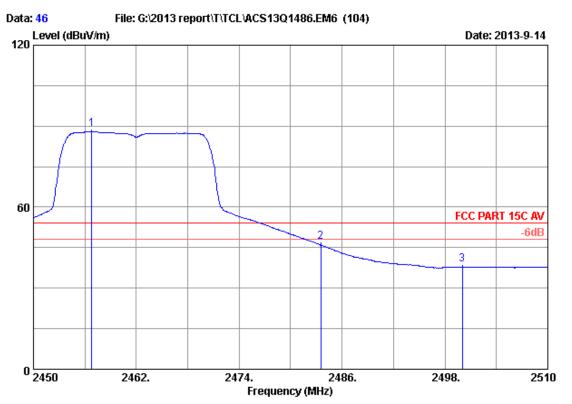
Test mode : IEEE802.11g 2462MHz Tx Mode

WAE22-DF01-AR

	Freq. (MHz)		Cable loss (dB)	Factor	_	Emission Level (dBuV/m)		Margin (dB)	Remark
1	2467.580	28.33	5.90	35.70	102.17	100.70	74.00	-26.70	Peak
2	2483.500	28.36	5.92	35.70	62.88	61.46	74.00	12.54	Peak
3	2483.900	28.36	5.92	35.70	66.49	65.07	74.00	8.93	Peak
4	2500.000	28.40	5.94	35.70	51.22	49.86	74.00	24.14	Peak

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.





Site no. : 3m Chamber Data no. : 46

Dis. / Ant. : 3m 2013 3115 (4580) Ant. pol. : VERTICAL

Limit : FCC PART 15C AV

Env. / Ins. : 23 \*C/54% Engineer : Kevin Hu

EUT : WIFI Module

Power supply : DC 5V

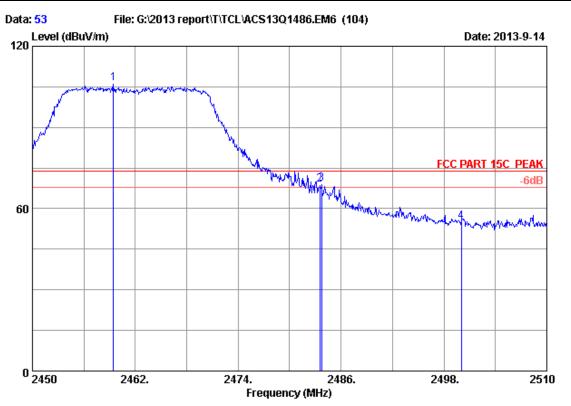
Test mode : IEEE802.11g 2462MHz Tx Mode

WAE22-DF01-AR

1 2456.780 28.30 5.88 35.70 90.55 89.03 54.00 -35.03 Average 2 2483.500 28.36 5.92 35.70 48.41 46.99 54.00 7.01 Average 3 2500.000 28.40 5.94 35.70 40.03 38.67 54.00 15.33 Average		Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
	2	2483.500	28.36	5.92	35.70	48.41	46.99	54.00	7.01	Average

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.





Site no. : 3m Chamber Data no. : 53

Dis. / Ant. : 3m 2013 3115 (4580) Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : 23 \*C/54% Engineer : Kevin\_Hu

EUT : WIFI Module

Power supply : DC 5V

Test mode : IEEE802.11nHT20 2462MHz Tx Mode

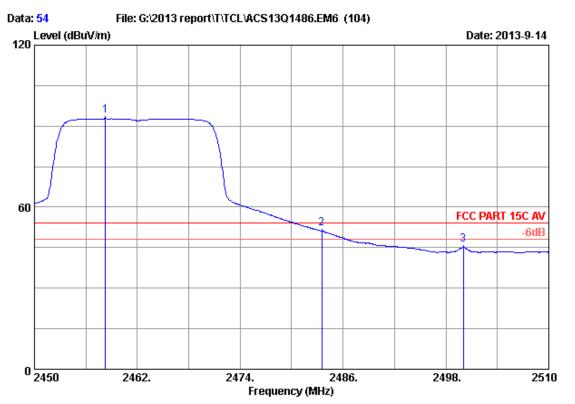
WAE22-DF01-AR

	Freq.	Ant. Factor (dB/m)	Cable loss (dB)	Factor	Reading (dBuV)		Limits (dBuV/m)	Margin (dB)	Remark
1	2459.420	28.31	5.88	35.70	107.89	106.38	74.00	-32.38	Peak
2	2483.500	28.36	5.92	35.70	70.19	68.77	74.00	5.23	Peak
3	2483.720	28.36	5.92	35.70	70.56	69.14	74.00	4.86	Peak
4	2500.000	28.40	5.94	35.70	56.61	55.25	74.00	18.75	Peak

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- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.





Site no. : 3m Chamber Data no. : 54

Dis. / Ant. : 3m 2013 3115 (4580) Ant. pol. : HORIZONTAL

Limit : FCC PART 15C AV

Env. / Ins. : 23 \*C/54% Engineer : Kevin Hu

EUT : WIFI Module

Power supply : DC 5V

Test mode : IEEE802.11nHT20 2462MHz Tx Mode

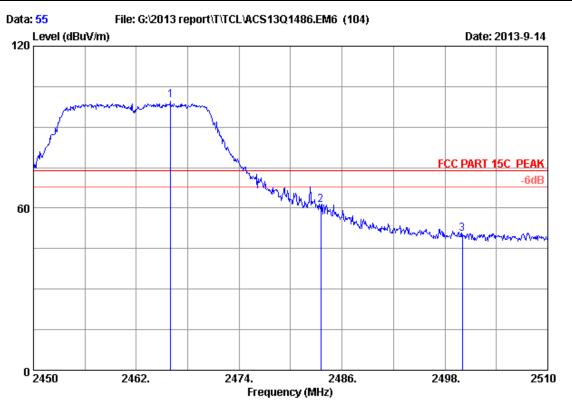
WAE22-DF01-AR

		Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits	Margin (dB)	Remark
3 2500.000 28.40 5.94 35.70 47.38 46.02 54.00 7.98 Averag	2	2483.500	28.36	5.92	35.70	53.61	52.19	54.00	1.81	Average Average Average

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- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.





Site no. : 3m Chamber Data no. : 55

Dis. / Ant. : 3m 2013 3115 (4580) Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : 23 \*C/54% Engineer : Kevin Hu

EUT : WIFI Module

Power supply : DC 5V

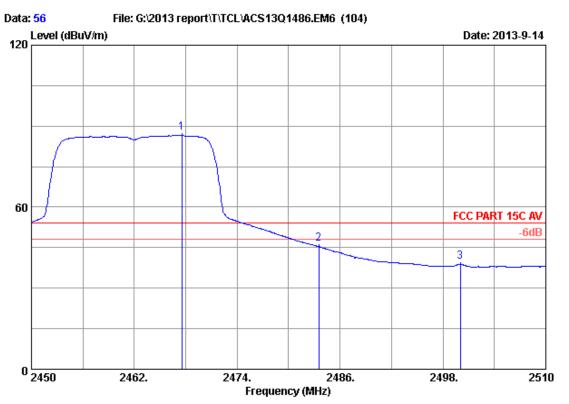
Test mode : IEEE802.11nHT20 2462MHz Tx Mode

WAE22-DF01-AR

	Freq.	Ant. Factor (dB/m)	Cable loss (dB)	Factor	_	Emission Level (dBuV/m)	Limits	Margin (dB)	Remark
2	2466.020 2483.500 2500.000	28.33 28.36 28.40	5.92	35.70 35.70 35.70	101.43 62.55 51.67	99.95 61.13 50.31	74.00 74.00 74.00	-25.95 12.87 23.69	Peak Peak Peak

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.





Site no. : 3m Chamber Data no. : 56

Dis. / Ant. : 3m 2013 3115 (4580) Ant. pol. : VERTICAL

Limit : FCC PART 15C AV

Env. / Ins. : 23 \*C/54% Engineer : Kevin Hu

EUT : WIFI Module

Power supply : DC 5V

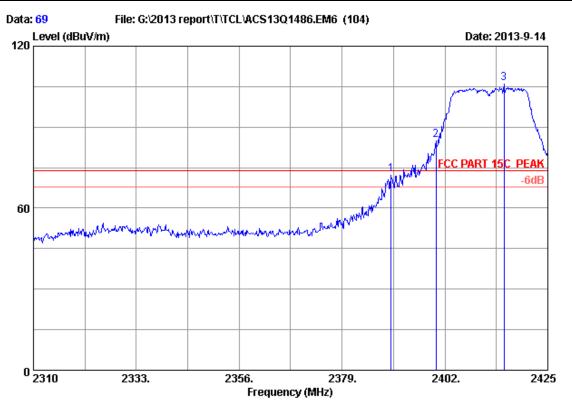
Test mode : IEEE802.11nHT20 2462MHz Tx Mode

WAE22-DF01-AR

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1 2 3	2467.520 2483.500 2500.000	28.33 28.36 28.40	5.90 5.92 5.94	35.70 35.70 35.70	89.10 47.92 41.13	87.63 46.50 39.77	54.00 54.00 54.00	-33.63 7.50 14.23	Average Average Average

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.





Site no. : 3m Chamber Data no. : 69

Dis. / Ant. : 3m 2013 3115 (4580) Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : 23 \*C/54% Engineer : Kevin Hu

EUT : WIFI Module

Power supply : DC 5V

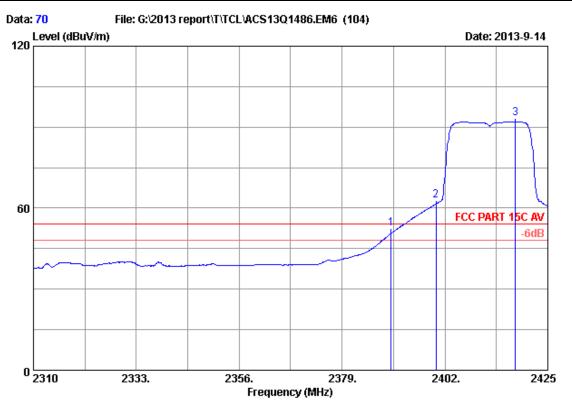
Test mode : IEEE802.11nHT20 2412MHz Tx Mode

WAE22-DF01-AR

	Freq.		Cable loss (dB)		_	Emission Level (dBuV/m)	Limits		Remark
2		28.16 28.18 28.21	5.80	35.70 35.70 35.70	74.15 86.97 107.99	72.39 85.25 106.32		1.61 -11.25 -32.32	Peak Peak Peak

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.





Site no. : 3m Chamber Data no. : 70

Dis. / Ant. : 3m 2013 3115 (4580) Ant. pol. : HORIZONTAL

Limit : FCC PART 15C AV

Env. / Ins. : 23 \*C/54% Engineer : Kevin Hu

EUT : WIFI Module

Power supply : DC 5V

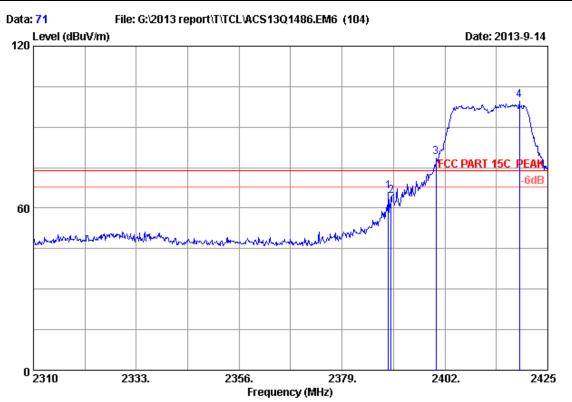
Test mode : IEEE802.11nHT20 2412MHz Tx Mode

WAE22-DF01-AR

Freq.	Factor	loss	Factor	Reading	Level	Limits	Margin	Remark
(MHz)	(dB/m)	(dB)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)	
1 2390.000	28.16	5.80	35.70	54.21	52.45	54.00	1.55	Average
2 2400.000	28.18		35.70	64.72	63.00	54.00	-9.00	Average
3 2417.755	28.22		35.70	94.97	93.31	54.00	-39.31	Average

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.





Site no. : 3m Chamber Data no. : 71

Dis. / Ant. : 3m 2013 3115 (4580) Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : 23 \*C/54% Engineer : Kevin Hu

EUT : WIFI Module

Power supply : DC 5V

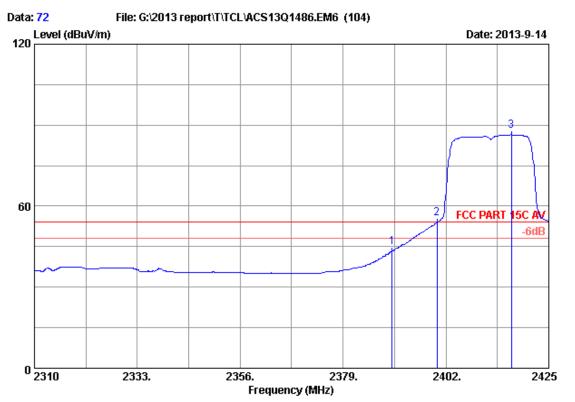
Test mode : IEEE802.11nHT20 2412MHz Tx Mode

WAE22-DF01-AR

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2389.350	28.16	5.78	35.70	68.08	66.32	74.00	7.68	Peak
2	2390.000	28.16	5.78	35.70	66.14	64.38	74.00	9.62	Peak
3	2400.000	28.18	5.80	35.70	80.46	78.74	74.00	-4.74	Peak
4	2418.675	28.22	5.82	35.70	101.65	99.99	74.00	-25.99	Peak

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.





Site no. : 3m Chamber Data no. : 72

Dis. / Ant. : 3m 2013 3115 (4580) Ant. pol. : VERTICAL

Limit : FCC PART 15C AV

Env. / Ins. : 23 \*C/54% Engineer : Kevin Hu

EUT : WIFI Module

Power supply : DC 5V

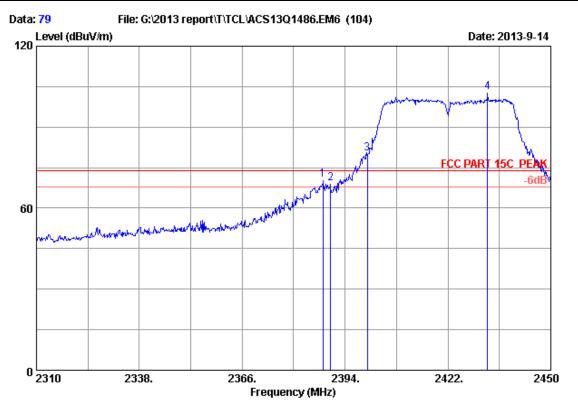
Test mode : IEEE802.11nHT20 2412MHz Tx Mode

WAE22-DF01-AR

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	 Reading (dBuV)		Limits (dBuV/m)	Margin (dB)	Remark
1 2 3	2390.000 2400.000 2416.605	28.16 28.18 28.22	5.80	 46.53 57.20 89.43	44.77 55.48 87.77	54.00 54.00 54.00	9.23 -1.48 -33.77	Average Average Average

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.





Site no. : 3m Chamber Data no. : 79

Dis. / Ant. : 3m 2013 3115 (4580) Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : 23 \*C/54% Engineer : Kevin Hu

EUT : WIFI Module

Power supply : DC 5V

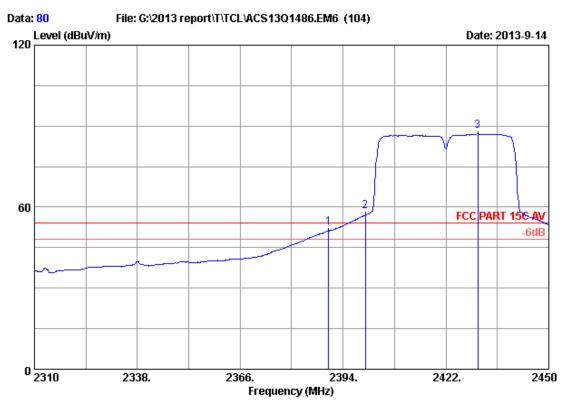
Test mode : IEEE802.11nHT40 2422MHz Tx Mode

WAE22-DF01-AR

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)		Limits (dBuV/m)	Margin (dB)	Remark
2	2387.980 2390.000 2400.000 2432.780	28.15 28.16 28.18 28.25	5.78	35.70 35.70 35.70 35.70	72.21 71.02 81.82 104.57	70.44 69.26 80.10 102.96	74.00 74.00 74.00 74.00	3.56 4.74 -6.10 -28.96	Peak Peak Peak Peak

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.





Site no. : 3m Chamber Data no. : 80

Dis. / Ant. : 3m 2013 3115 (4580) Ant. pol. : HORIZONTAL

Limit : FCC PART 15C AV

Env. / Ins. : 23 \*C/54% Engineer : Kevin Hu

EUT : WIFI Module

Power supply : DC 5V

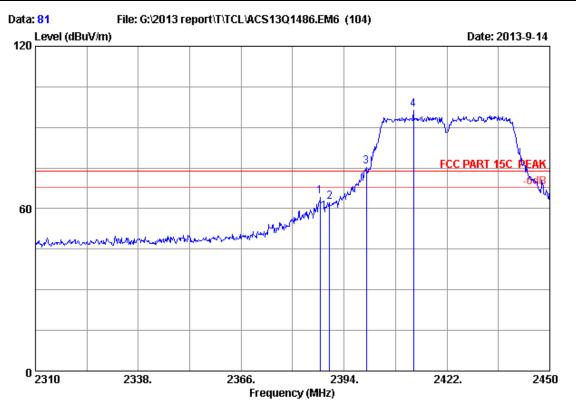
Test mode : IEEE802.11nHT40 2422MHz Tx Mode

WAE22-DF01-AR

2 2400.000 28.18 5.80 35.70 60.24 58.52 54.00 -4.52 Average		Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
	_	2400.000	28.18	5.80	35.70	60.24	58.52	54.00	-4.52	Average Average Average

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.





Site no. : 3m Chamber Data no. : 81

Dis. / Ant. : 3m 2013 3115 (4580) Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : 23 \*C/54% Engineer : Kevin\_Hu

EUT : WIFI Module

Power supply : DC 5V

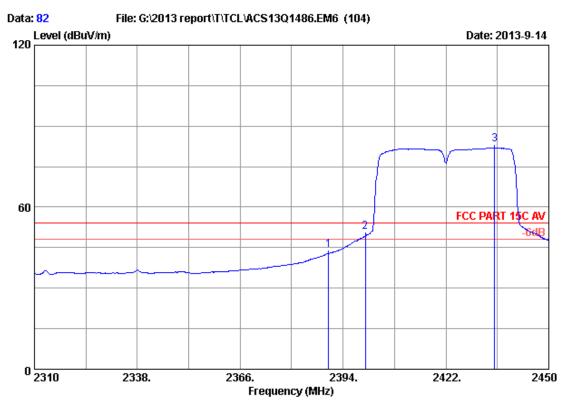
Test mode : IEEE802.11nHT40 2422MHz Tx Mode

WAE22-DF01-AR

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)		Limits (dBuV/m)	Margin (dB)	Remark
1	2387.420	28.15	5.78	35.70	66.15	64.38	74.00	9.62	Peak
2	2390.000	28.16	5.78	35.70	64.34	62.58	74.00	11.42	Peak
3	2400.000	28.18	5.80	35.70	77.17	75.45	74.00	-1.45	Peak
4	2412.900	28.21	5.82	35.70	98.31	96.64	74.00	-22.64	Peak

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.





Site no. : 3m Chamber Data no. : 82

Dis. / Ant. : 3m 2013 3115 (4580) Ant. pol. : VERTICAL

Limit : FCC PART 15C AV

Env. / Ins. : 23 \*C/54% Engineer : Kevin Hu

EUT : WIFI Module

Power supply : DC 5V

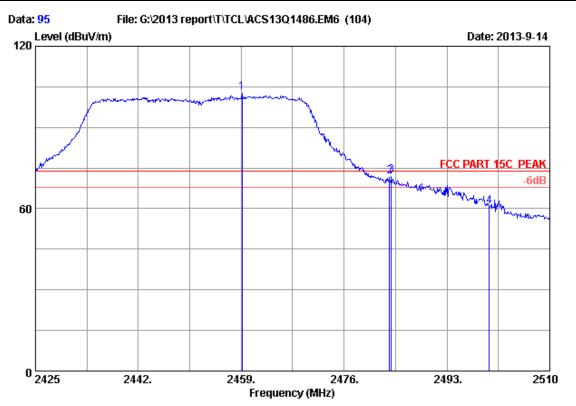
Test mode : IEEE802.11nHT40 2422MHz Tx Mode

WAE22-DF01-AR

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1 2 3	2390.000 2400.000 2435.300	28.16 28.18 28.26	5.78 5.80 5.85	35.70 35.70 35.70	45.98 52.64 84.78	44.22 50.92 83.19	54.00 54.00 54.00	9.78 3.08 -29.19	Average Average Average

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.





Site no. : 3m Chamber Data no. : 95

Dis. / Ant. : 3m 2013 3115 (4580) Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : 23 \*C/54% Engineer : Kevin\_Hu

EUT : WIFI Module

Power supply : DC 5V

Test mode : IEEE802.11nHT40 2452MHz Tx Mode

WAE22-DF01-AR

	Freq. (MHz)	Ant. Factor (dB/m)		Amp. Factor (dB)	Reading (dBuV)		Limits (dBuV/m)	Margin (dB)	Remark
1	2459.170	28.31	5.88	35.70	104.46	102.95	74.00	-28.95	Peak
2	2483.500	28.36	5.92	35.70	73.17	71.75	74.00	2.25	Peak
3	2483.820	28.36	5.92	35.70	73.46	72.04	74.00	1.96	Peak
4	2500.000	28.40	5.94	35.70	62.36	61.00	74.00	13.00	Peak

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.





Site no. : 3m Chamber Data no. : 96

Dis. / Ant. : 3m 2013 3115 (4580) Ant. pol. : HORIZONTAL

Limit : FCC PART 15C AV

Env. / Ins. : 23\*C/54% Engineer : Kevin\_Hu

EUT : WIFI Module

Power supply : DC 5V

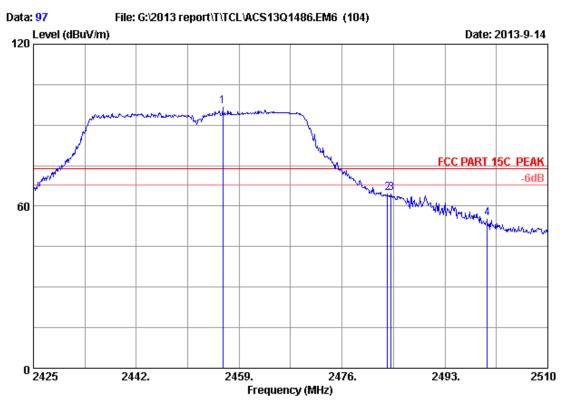
Test mode : IEEE802.11nHT40 2452MHz Tx Mode

WAE22-DF01-AR

1 2463.675 28.32 5.89 35.70 89.57 88.08 54.00 -34.08 Average 2 2483.500 28.36 5.92 35.70 53.41 51.99 54.00 2.01 Average 3 2500.000 28.40 5.94 35.70 45.76 44.40 54.00 9.60 Average		Freq.	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
	2	2483.500	28.36	5.92	35.70	53.41	51.99	54.00	2.01	Average

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.





Site no. : 3m Chamber Data no. : 97

Dis. / Ant. : 3m 2013 3115 (4580) Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : 23 \*C/54% Engineer : Kevin Hu

EUT : WIFI Module

Power supply : DC 5V

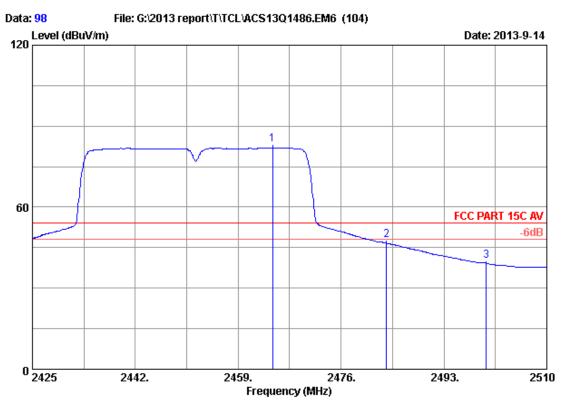
Test mode : IEEE802.11nHT40 2452MHz Tx Mode

WAE22-DF01-AR

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2456.280	28.30	5.88	35.70	98.36	96.84	74.00	-22.84	Peak
2	2483.500	28.36	5.92	35.70	66.13	64.71	74.00	9.29	Peak
3	2484.075	28.36	5.92	35.70	66.41	64.99	74.00	9.01	Peak
4	2500.000	28.40	5.94	35.70	56.72	55.36	74.00	18.64	Peak

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.





Site no. : 3m Chamber Data no. : 98

Dis. / Ant. : 3m 2013 3115 (4580) Ant. pol. : VERTICAL

Limit : FCC PART 15C AV

Env. / Ins. : 23 \*C/54% Engineer : Kevin Hu

EUT : WIFI Module

Power supply : DC 5V

Test mode : IEEE802.11nHT40 2452MHz Tx Mode

WAE22-DF01-AR

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits	Margin (dB)	Remark
1	2464.695	28.32	5.92	35.70	84.66	83.17	54.00	-29.17	Average
2	2483.500	28.36		35.70	49.06	47.64	54.00	6.36	Average
3	2500.000	28.40		35.70	41.58	40.22	54.00	13.78	Average

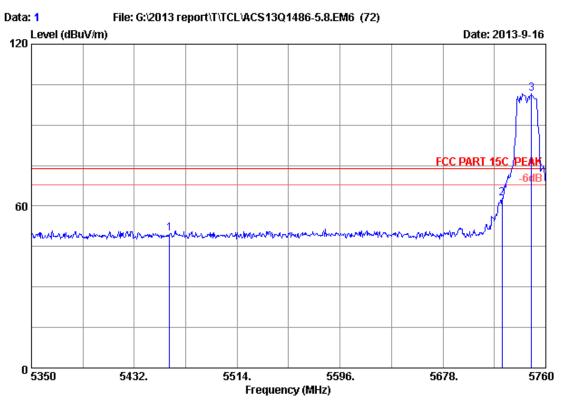
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- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.



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## 5.8G:



Site no. : 3m Chamber

Data no. : 1 Ant. pol. : HORIZONTAL Dis. / Ant. : 3m 2013 3115 (4580)

: FCC PART 15C PEAK

Env. / Ins. : 23\*C/54% Engineer : leo-Li

EUT : WIFI Module

Power supply : DC 5V

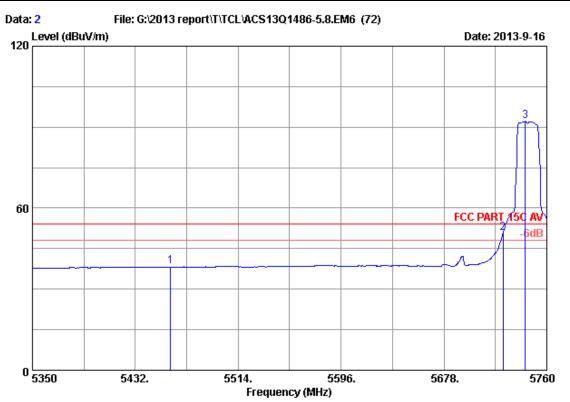
: IEEE802.11a CH149 5745MHz Tx Test mode

WAE22-DF01-AR

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	•	Reading (dBuV)	Emission Level (dBuV/m)			Remark	
2	5460.000 5725.000 5748.520	34.09	9.52	35.70 35.70 35.70	42.22 54.94 93.72	49.71 62.85 101.67	74.00 74.00 74.00	24.29 11.15 -27.67	Peak Peak Peak	-

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.





Site no. : 3m Chamber Data no. : 2

Dis. / Ant. : 3m 2013 3115 (4580) Ant. pol. : HORIZONTAL

Limit : FCC PART 15C AV

Env. / Ins. : 23\*C/54% Engineer : leo-Li

EUT : WIFI Module

Power supply : DC 5V

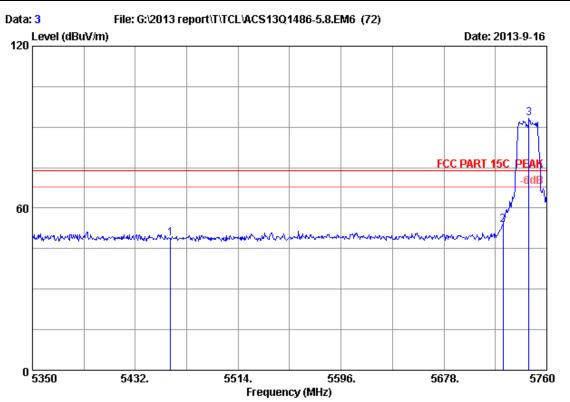
Test mode : IEEE802.11a CH149 5745MHz Tx

WAE22-DF01-AR

2 5725.000 34.09 9.52 35.70 42.84 50.75 54.00 3.25 Avers		Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
3 5/42./80 34.10 9.54 35./0 84.19 92.13 54.00 -38.13 Avers	1 2 3							54.00		Average Average Average

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.





Site no. : 3m Chamber Data no. : 3

Dis. / Ant. : 3m 2013 3115 (4580) Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : 23\*C/54% Engineer : leo-Li

EUT : WIFI Module

Power supply : DC 5V

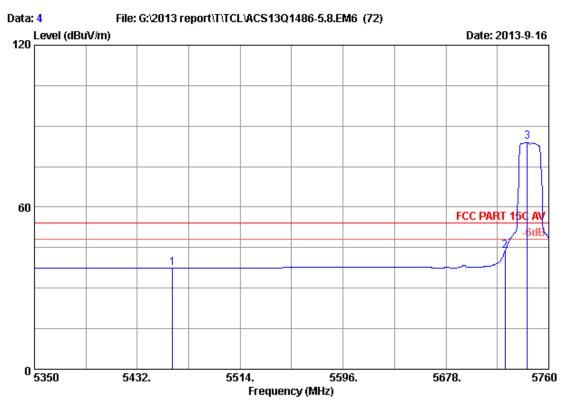
Test mode : IEEE802.11a CH149 5745MHz Tx

WAE22-DF01-AR

	Freq. (MHz)			Factor	_	Emission Level (dBuV/m)	Limits	Margin (dB)	Remark	
2	5460.000 5725.000 5745.650	34.09	9.52	35.70 35.70 35.70	41.47 45.85 85.19	48.96 53.76 93.14	74.00 74.00 74.00	25.04 20.24 -19.14	Peak Peak Peak	

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.





Site no. : 3m Chamber Data no. : 4

Dis. / Ant. : 3m 2013 3115 (4580) Ant. pol. : VERTICAL

Limit : FCC PART 15C AV

Env. / Ins. : 23 \*C/54% Engineer : leo-Li

EUT : WIFI Module

Power supply : DC 5V

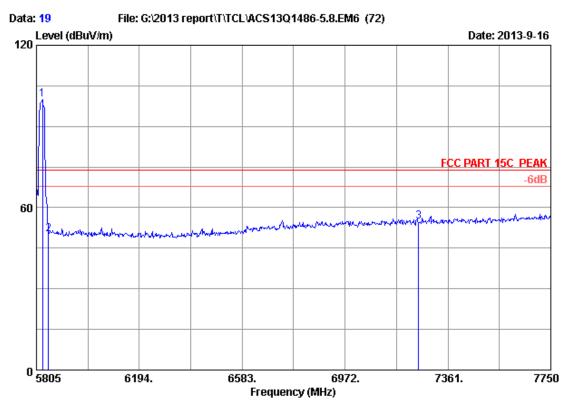
Test mode : IEEE802.11a CH149 5745MHz Tx

WAE22-DF01-AR

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
2	5725.000	33.94 34.09 34.10	9.52	35.70 35.70 35.70	30.01 35.92 76.13	37.50 43.83 84.07	54.00 54.00 54.00	16.50 10.17 -30.07	Average Average Average

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.





Site no. : 3m Chamber Data no. : 19

Dis. / Ant. : 3m 2013 3115 (4580) Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : 23\*C/54% Engineer : leo-Li

EUT : WIFI Module

Power supply : DC 5V

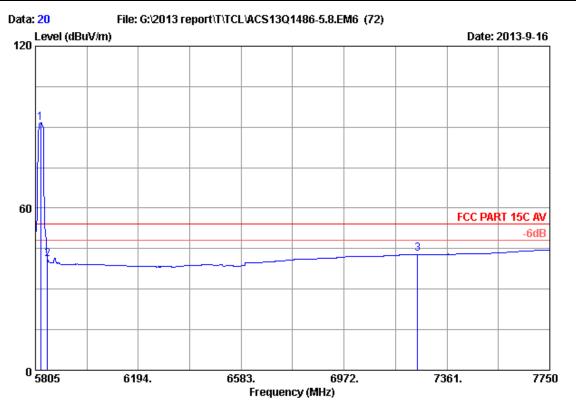
Test mode : IEEE802.11a CH165 5825MHz Tx

WAE22-DF01-AR

	Freq. (MHz)	Ant. Factor (dB/m)	Factor	_	Emission Level (dBuV/m)	Limits	_	Remark
2	5828.340 5850.000 7250.000	34.14	 35.70	91.76 41.98 43.18	99.82 50.08 54.77	74.00 74.00 74.00	-25.82 23.92 19.23	Peak Peak Peak Peak

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.





Site no. : 3m Chamber Data no. : 20

Dis. / Ant. : 3m 2013 3115 (4580) Ant. pol. : HORIZONTAL

Limit : FCC PART 15C AV

Env. / Ins. : 23 \*C/54% Engineer : leo-Li

EUT : WIFI Module

Power supply : DC 5V

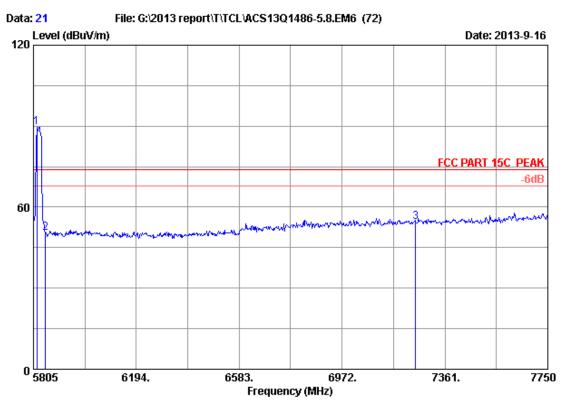
Test mode : IEEE802.11a CH165 5825MHz Tx

WAE22-DF01-AR

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1 2 3	5824.450 5850.000 7250.000	34.13 34.14 36.05		35.70 35.70 35.45	83.44 33.05 31.48	91.50 41.15 43.07	54.00 54.00 54.00	-37.50 12.85 10.93	Average Average Average
-									

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.





Site no. : 3m Chamber Data no. : 21

Dis. / Ant. : 3m 2013 3115 (4580) Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : 23 \*C/54% Engineer : leo-Li

EUT : WIFI Module

Power supply : DC 5V

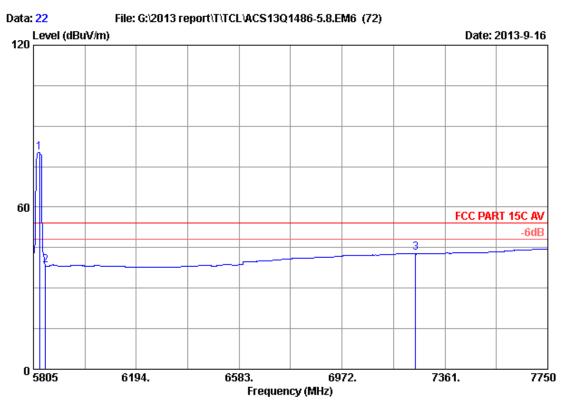
Test mode : IEEE802.11a CH165 5825MHz Tx

WAE22-DF01-AR

	Freq. (MHz)		Factor	_	Emission Level (dBuV/m)	Limits	Margin (dB)	Remark	
2	5818.615 5850.000 7250.000	34.14	 35.70 35.70 35.45	42.23	89.53 50.33 54.44	74.00 74.00 74.00	-15.53 23.67 19.56	Peak Peak Peak	

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.





Site no. : 3m Chamber Data no. : 22

Dis. / Ant. : 3m 2013 3115 (4580) Ant. pol. : VERTICAL

Limit : FCC PART 15C AV

Env. / Ins. : 23\*C/54% Engineer : leo-Li

EUT : WIFI Module

Power supply : DC 5V

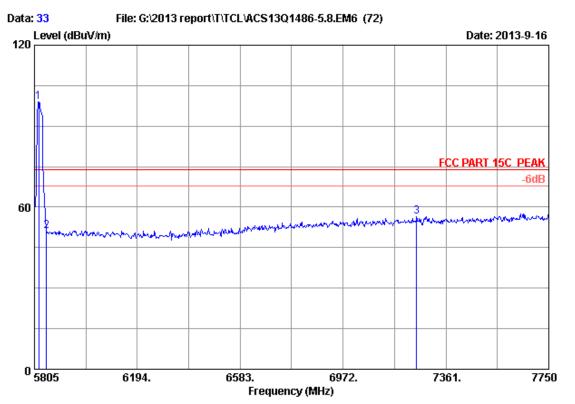
Test mode : IEEE802.11a CH165 5825MHz Tx

WAE22-DF01-AR

	Freq.	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
2	5850.000	34.13 34.14 36.05	9.66	35.70 35.70 35.45	72.30 30.18 31.50	80.36 38.28 43.09	54.00 54.00 54.00	-26.36 15.72 10.91	Average Average Average

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.





Site no. : 3m Chamber Data no. : 33

Dis. / Ant. : 3m 2013 3115 (4580) Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : 23\*C/54% Engineer : leo-Li

EUT : WIFI Module

Power supply : DC 5V

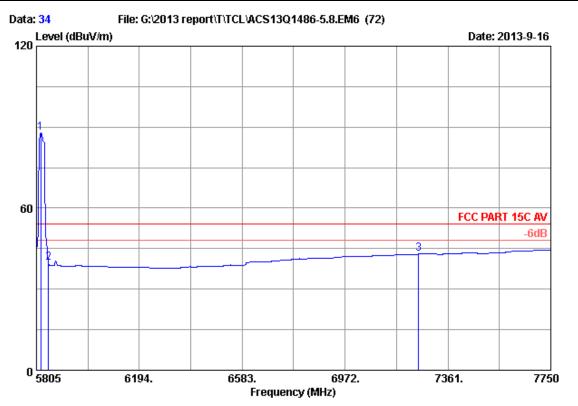
Test mode : IEEE802.11nHT20 CH165 5825MHz Tx

WAE22-DF01-AR

	Freq. (MHz)		Cable loss (dB)	Factor	_	Emission Level (dBuV/m)	Limits	Margin (dB)	Remark	
2	5820.560 5850.000 7250.000	34.14		35.70 35.70 35.45	91.00 43.12 45.02	99.05 51.22 56.61	74.00 74.00 74.00	-25.05 22.78 17.39	Peak Peak Peak	

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.





Site no. : 3m Chamber Data no. : 34

Dis. / Ant. : 3m 2013 3115 (4580) Ant. pol. : HORIZONTAL

Limit : FCC PART 15C AV

Env. / Ins. : 23\*C/54% Engineer : leo-Li

EUT : WIFI Module

Power supply : DC 5V

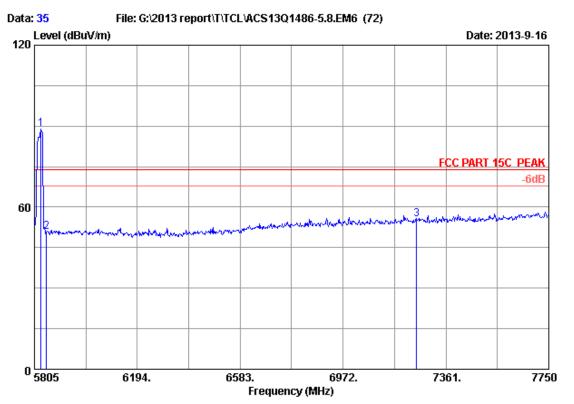
Test mode : IEEE802.11nHT20 CH165 5825MHz Tx

WAE22-DF01-AR

1 5820.560 34.13 9.62 35.70 79.80 87.85 54.00 -33.85 Average 2 5850.000 34.14 9.66 35.70 31.70 39.80 54.00 14.20 Average 3 7250.000 36.05 10.99 35.45 31.64 43.23 54.00 10.77 Average		Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
	2	5850.000	34.14	9.66	35.70	31.70	39.80	54.00	14.20	Average

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.





Site no. : 3m Chamber Data no. : 35

Dis. / Ant. : 3m 2013 3115 (4580) Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : 23 \*C/54% Engineer : leo-Li

EUT : WIFI Module

Power supply : DC 5V

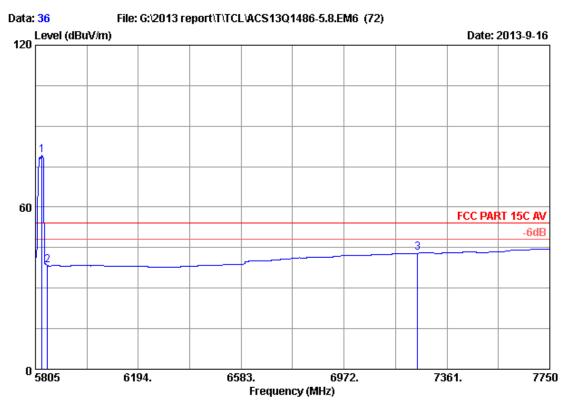
Test mode : IEEE802.11nHT20 CH165 5825MHz Tx

WAE22-DF01-AR

	Freq. (MHz)		Cable loss (dB)	Factor	_	Emission Level (dBuV/m)	Limits	Margin (dB)	Remark	_
2	5830.285 5850.000 7250.000	34.14		35.70 35.70 35.45	80.97 42.82 43.86	89.03 50.92 55.45	74.00 74.00 74.00	-15.03 23.08 18.55	Peak Peak Peak	

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.





Site no. : 3m Chamber Data no. : 36

Dis. / Ant. : 3m 2013 3115 (4580) Ant. pol. : VERTICAL

Limit : FCC PART 15C AV

Env. / Ins. : 23\*C/54% Engineer : leo-Li

EUT : WIFI Module

Power supply : DC 5V

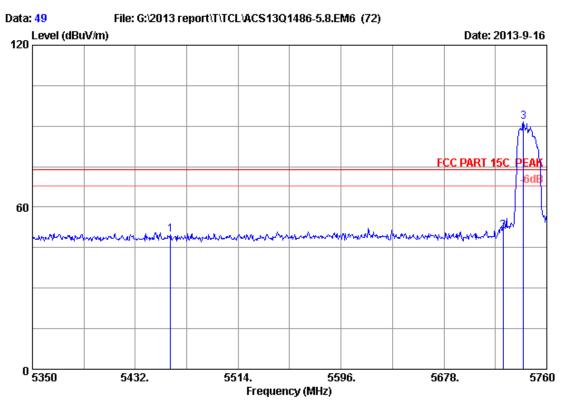
Test mode : IEEE802.11nHT20 CH165 5825MHz Tx

WAE22-DF01-AR

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)		Reading (dBuV)		Limits (dBuV/m)	Margin (dB)	Remark
1	5830.285	34.13		35.70	71.26	79.32	54.00	-25.32	Average
2	5850.000	34.14		35.70	30.37	38.47	54.00	15.53	Average
3	7250.000	36.05		35.45	31.61	43.20	54.00	10.80	Average

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.





Site no. : 3m Chamber Data no. : 49

Dis. / Ant. : 3m 2013 3115 (4580) Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : 23\*C/54% Engineer : leo-Li

EUT : WIFI Module

Power supply : DC 5V

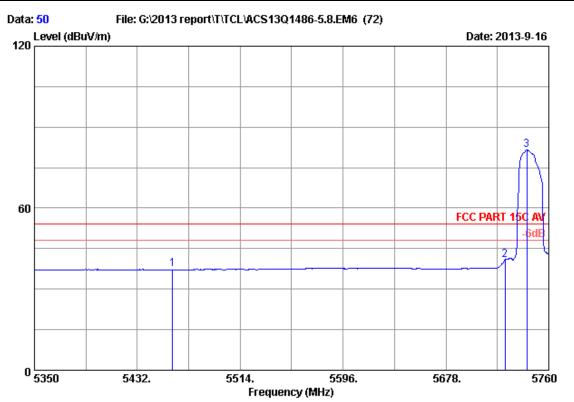
Test mode : IEEE802.11nHT20 CH149 5745MHz Tx

WAE22-DF01-AR

	Freq. (MHz)	Ant. Factor (dB/m)	loss	Factor	_	Emission Level (dBuV/m)	Limits		Remark	_
2	5460.000 5725.000 5741.550	34.09	9.52	35.70 35.70 35.70	42.37 43.26 83.58	49.86 51.17 91.52	74.00 74.00 74.00	24.14 22.83 -17.52	Peak Peak Peak	

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.





Site no. : 3m Chamber Data no. : 50

Dis. / Ant. : 3m 2013 3115 (4580) Ant. pol. : VERTICAL

Limit : FCC PART 15C AV

Env. / Ins. : 23\*C/54% Engineer : leo-Li

EUT : WIFI Module

Power supply : DC 5V

Test mode : IEEE802.11nHT20 CH149 5745MHz Tx

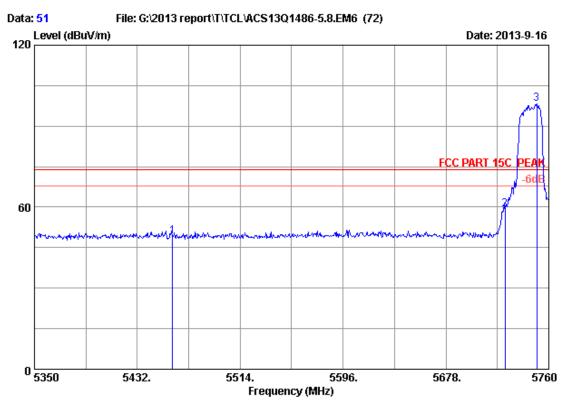
WAE22-DF01-AR

	F	Ant.			Dandina	Emission		Vanada	Dawasala
	Freq.	Factor (dB/m)	loss (dB)	(dB)	Reading (dBuV)	Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5460.000	33.94	9.25	35.70	29.89	37.38	54.00	16.62	Average
2	5725.000	34.09	9.52	35.70	32.98	40.89	54.00	13.11	Average
3	5742.370	34.10	9.54	35.70	73.63	81.57	54.00	-27.57	Average

\_\_\_\_\_\_

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.





Site no. : 3m Chamber Data no. : 51

Dis. / Ant. : 3m 2013 3115 (4580) Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : 23\*C/54% Engineer : leo-Li

EUT : WIFI Module

Power supply : DC 5V

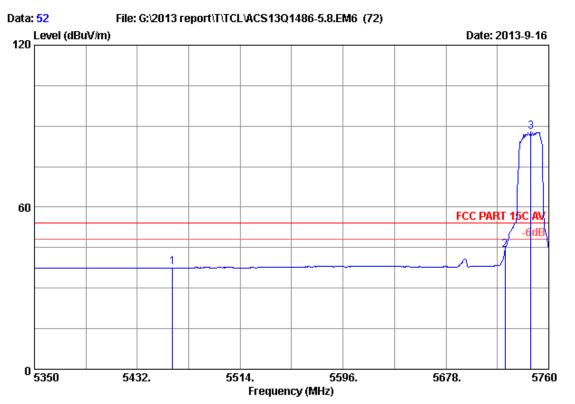
Test mode : IEEE802.11nHT20 CH149 5745MHz Tx

WAE22-DF01-AR

	Freq. (MHz)			Factor	_	Emission Level (dBuV/m)	Limits	Margin (dB)	Remark	
2	5460.000 5725.000 5750.570	34.09	9.52	35.70 35.70 35.70	41.69 51.10 90.34	49.18 59.01 98.29	74.00 74.00 74.00	24.82 14.99 -24.29	Peak Peak Peak	

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.





Site no. : 3m Chamber Data no. : 52

Dis. / Ant. : 3m 2013 3115 (4580) Ant. pol. : HORIZONTAL

Limit : FCC PART 15C AV

Env. / Ins. : 23\*C/54% Engineer : leo-Li

EUT : WIFI Module

Power supply : DC 5V

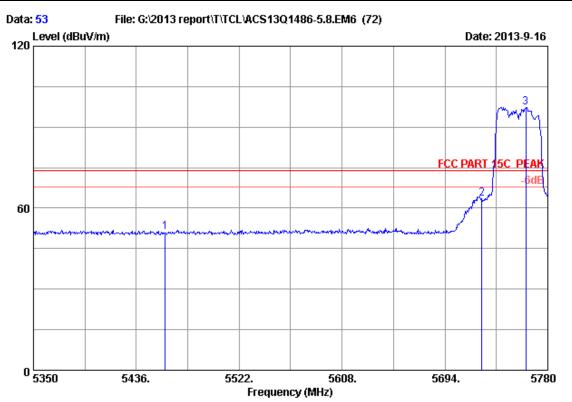
Test mode : IEEE802.11nHT20 CH149 5745MHz Tx

WAE22-DF01-AR

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
2	5725.000	33.94 34.09 34.10	9.52	35.70 35.70 35.70	30.20 36.11 80.06	37.69 44.02 88.01	54.00 54.00 54.00	16.31 9.98 -34.01	Average Average Average

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.





Site no. : 3m Chamber Data no. : 53

Dis. / Ant. : 3m 2013 3115 (4580) Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : 23\*C/54% Engineer : leo-Li

EUT : WIFI Module

Power supply : DC 5V

Test mode : IEEE802.11nHT40 CH151 5755MHz Tx

WAE22-DF01-AR

	Freq. (MHz)	Cable loss (dB)	Factor	_	Emission Level (dBuV/m)	Limits	Margin (dB)	Remark
	5460.000	 	35.70	43.54	51.03	74.00	22.97	Peak
_	5725.000 5761.510	 	35.70 35.70	55.58 89.45	63.49 97.41	74.00 74.00	10.51 -23.41	Peak Peak

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.





Site no. : 3m Chamber Data no. : 54

Dis. / Ant. : 3m 2013 3115 (4580) Ant. pol. : HORIZONTAL

Limit : FCC PART 15C AV

Env. / Ins. : 23\*C/54% Engineer : leo-Li

EUT : WIFI Module

Power supply : DC 5V

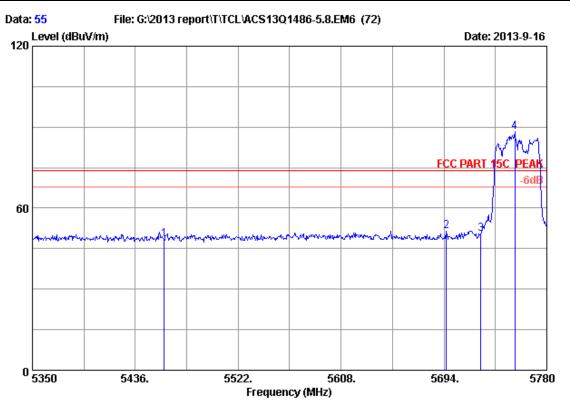
Test mode : IEEE802.11nHT40 CH151 5755MHz Tx

WAE22-DF01-AR

	Freq. (MHz)	Ant. Factor (dB/m)		Amp. Factor (dB)	Reading (dBuV)		Limits (dBuV/m)	Margin (dB)	Remark
2		33.94 34.09 34.10	9.52	35.70 35.70 35.70	30.26 42.14 78.74	37.75 50.05 86.68	54.00 54.00 54.00	16.25 3.95 -32.68	Average Average Average

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.





Site no. : 3m Chamber Data no. : 55

Dis. / Ant. : 3m 2013 3115 (4580) Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : 23\*C/54% Engineer : leo-Li

EUT : WIFI Module

Power supply : DC 5V

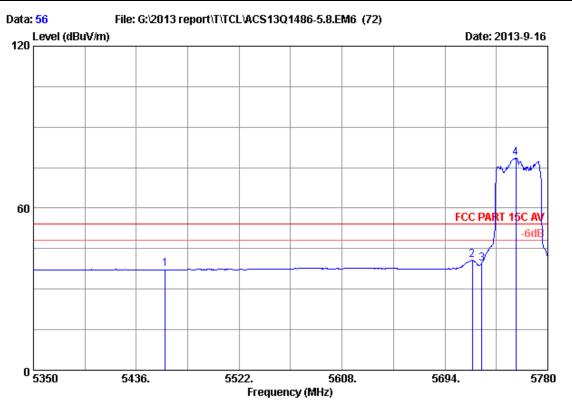
Test mode : IEEE802.11nHT40 CH151 5755MHz Tx

WAE22-DF01-AR

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5460.000	33.94	9.25	35.70	40.97	48.46	74.00	25.54	Peak
2	5696.150	34.08	9.49	35.70	43.69	51.56	74.00	22.44	Peak
3	5725.000	34.09	9.52	35.70	42.43	50.34	74.00	23.66	Peak
4	5753.340	34.10	9.55	35.70	80.33	88.28	74.00	-14.28	Peak

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.





Site no. : 3m Chamber Data no. : 56

Dis. / Ant. : 3m 2013 3115 (4580) Ant. pol. : VERTICAL

Limit : FCC PART 15C AV

Env. / Ins. : 23\*C/54% Engineer : leo-Li

EUT : WIFI Module

Power supply : DC 5V

Test mode : IEEE802.11nHT40 CH151 5755MHz Tx

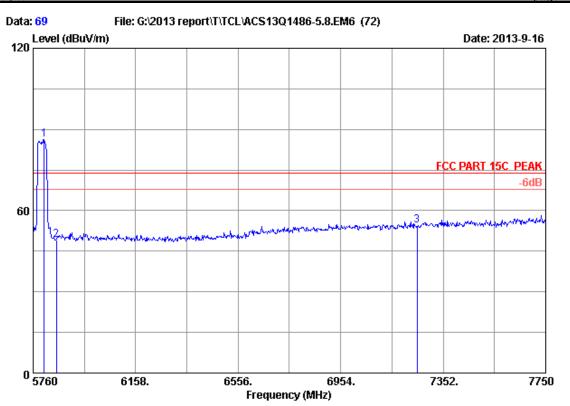
WAE22-DF01-AR

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5460.000	33.94	9.25	35.70	29.86	37.35	54.00	16.65	Average
2	5716.790	34.09	9.52	35.70	32.81	40.72	54.00	13.28	Average
3	5725.000	34.09	9.52	35.70	31.70	39.61	54.00	14.39	Average
4	5753.340	34.10	9.55	35.70	70.56	78.51	54.00	-24.51	Average

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- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.





Site no. : 3m Chamber Data no. : 69

Dis. / Ant. : 3m 2013 3115 (4580) Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : 23\*C/54% Engineer : leo-Li

EUT : WIFI Module

Power supply : DC 5V

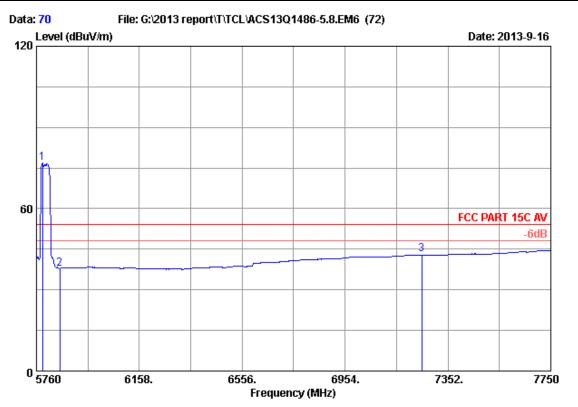
Test mode : IEEE802.11nHT40 CH159 5795MHz Tx

WAE22-DF01-AR

	Freq.	Ant. Factor (dB/m)	Factor	_	Emission Level (dBuV/m)	Limits	Margin (dB)	Remark	
2	5803.780 5850.000 7250.000	34.14	 35.70 35.70 35.45	41.18	86.38 49.28 54.33	74.00 74.00 74.00	-12.38 24.72 19.67	Peak Peak Peak	

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.





Site no. : 3m Chamber Data no. : 70

Dis. / Ant. : 3m 2013 3115 (4580) Ant. pol. : VERTICAL

Limit : FCC PART 15C AV

Env. / Ins. : 23\*C/54% Engineer : leo-Li

EUT : WIFI Module

Power supply : DC 5V

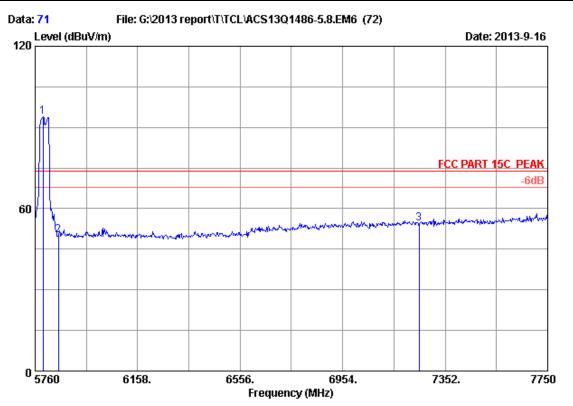
Test mode : IEEE802.11nHT40 CH159 5795MHz Tx

WAE22-DF01-AR

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)		Limits (dBuV/m)	Margin (dB)	Remark
1 2 3	5783.880 5850.000 7250.000		9.66	35.70 35.70 35.45	68.92 29.76 31.50	76.92 37.86 43.09	54.00 54.00 54.00	-22.92 16.14 10.91	Average Average Average

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.





Site no. : 3m Chamber Data no. : 71

Dis. / Ant. : 3m 2013 3115 (4580) Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : 23\*C/54% Engineer : leo-Li

EUT : WIFI Module

Power supply : DC 5V

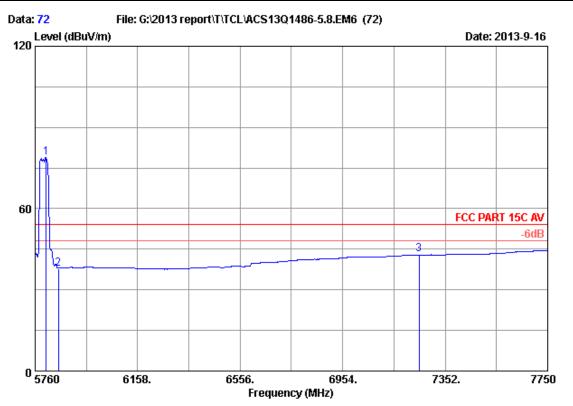
Test mode : IEEE802.11nHT40 CH159 5795MHz Tx

WAE22-DF01-AR

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	•	_	Emission Level (dBuV/m)	Limits	5	Remark	
2	5789.850 5850.000 7250.000	34.14		35.70 35.70 35.45	85.93 41.89 42.76	93.94 49.99 54.35	74.00 74.00 74.00	-19.94 24.01 19.65	Peak Peak Peak	

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.





Site no. : 3m Chamber Data no. : 72

Dis. / Ant. : 3m 2013 3115 (4580) Ant. pol. : HORIZONTAL

Limit : FCC PART 15C AV

Env. / Ins. : 23\*C/54% Engineer : leo-Li

EUT : WIFI Module

Power supply : DC 5V

Test mode : IEEE802.11nHT40 CH159 5795MHz Tx

WAE22-DF01-AR

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5803.780			35.70	70.90	78.93		-24.93	Average
2	5850.000	34.14		35.70	29.83	37.93	54.00	16.07	Average
3	7250.000	36.05	10.99	35.45	31.51	43.10	54.00	10.90	Average

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.



# 7. 6dB Bandwidth Test

# 7.1.Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	PXA Signal Analyzer	Agilent	N9030A	MY51380221	Oct.31, 12	1 Year
2	Horn Antenna	EMCO	3115	9510-4580	May.28, 13	1 Year
3	HF Cable	Hubersuhner	Sucoflex104	-	May.08, 13	1 Year

## 7.2.Limit

For direct sequence systems, the minimum 6dB bandwidth shall be at least 500kHz

## 7.3.Test Procedure

The transmitter output was connected to a spectrum analyzer, The bandwidth of the fundamental frequency was measured by spectrum analyzer with 300kHz RBW and 1MHz VBW. The 6dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 6dB.

# 7.4. Test Results

## 2.4G:

EUT:WIFI Module		
M/N: WAE22-DF01-AR		
Test date: 2013-09-13	Pressure: 101.2±1.0 kpa	Humidity: 48.4±3.0%
Tested by: Leo-Li	Test site: RF site	Temperature:20.7±0.6 °C

Cable loss: 1 dB		Attenuator loss: 20 dB					
Test Mode	СН	6dB ba ( M	Limit (KHz)				
		ANT0	ANT1	(1112)			
	CH1	10.37	10.25	>500			
11b	CH6	10.37	10.25	>500			
	CH11	10.37	10.25	>500			
	CH1	16.63	16.47	>500			
11g	CH6	16.57	16.45	>500			
	CH11	16.63	16.44	>500			
11	CH1	17.76	17.63	>500			
11n HT20	CH6	17.76	17.66	>500			
11120	CH11	17.82	17.62	>500			
11	CH1	36.53	36.45	>500			
11n HT40	CH4	36.47	36.51	>500			
	CH7	36.47	36.49	>500			
Conclusion: P.	ASS						



# 5.8G:

EUT:WIFI Module		
M/N:WAE22-DF01-AR		
Test date: 2013-09-15	Pressure: 101.1±1.0 kpa	Humidity: 49.9±3.0%
Tested by: Kevin_Hu	Test site: RF site	Temperature:22.1±0.6 ℃

Cable loss: 1 dB			Attenuator loss: 20 dB				
Test Mode	СН		ndwidth Hz)	Limit (KHz)			
		Chain 0	Chain 1				
	CH149	16.43	16.56	>500			
11a	CH157	16.55	16.56	>500			
	CH165	16.49	16.54	>500			
11	CH149	17.55	17.62	>500			
11n HT20	CH157	17.64	17.65	>500			
11120	CH165	17.7	17.66	>500			
11n	CH151	35.78	35.93	>500			
HT40	CH159	35.91	35.38	>500			
Conclusion: P.	ASS	_					



# 2.4G: Chain 0:

Test Mode: IEEE 802.11b TX

Test CH1: 2412MHz



## Test CH6: 2437MHz





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Test CH11: 2462MHz

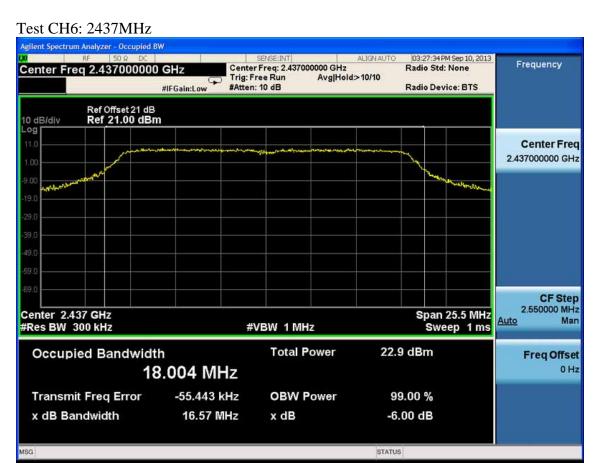


Test Mode: IEEE 802.11g TX

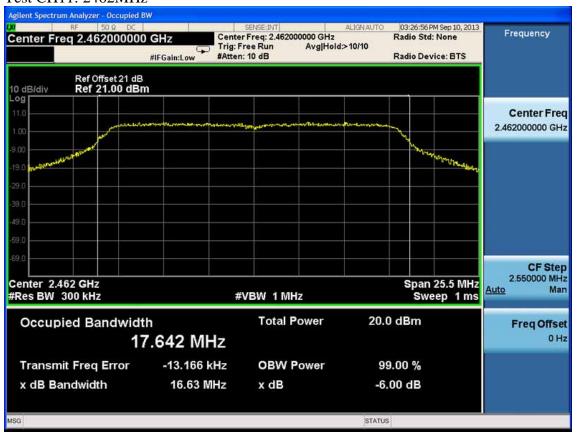
Test CH1: 2412MHz







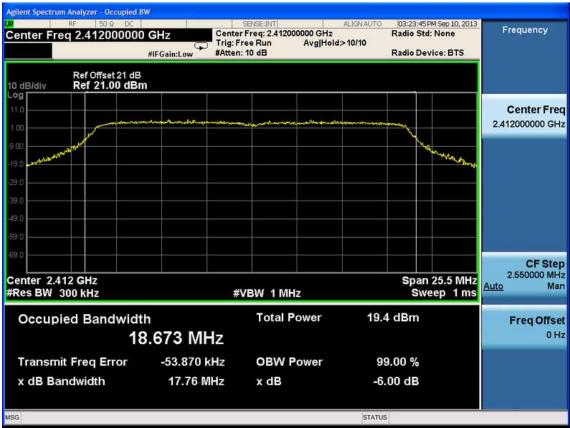
## Test CH11: 2462MHz

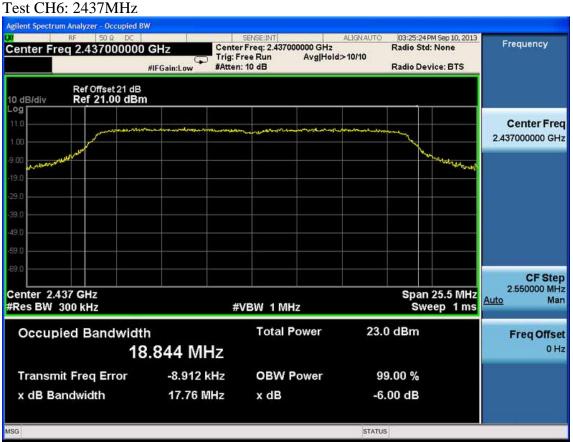




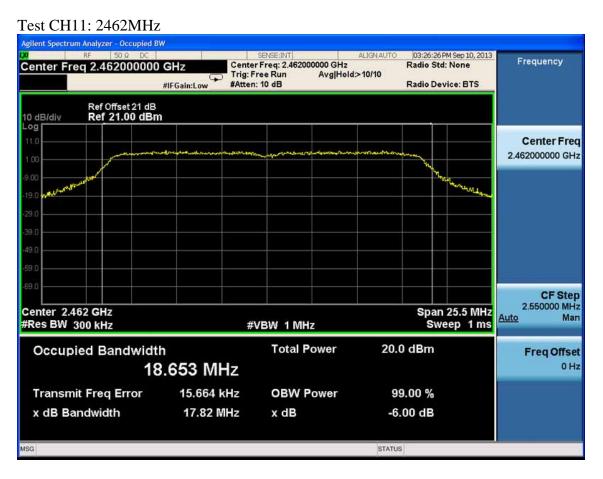
## Test Mode: IEEE 802.11n HT20 TX

Test CH1: 2412MHz



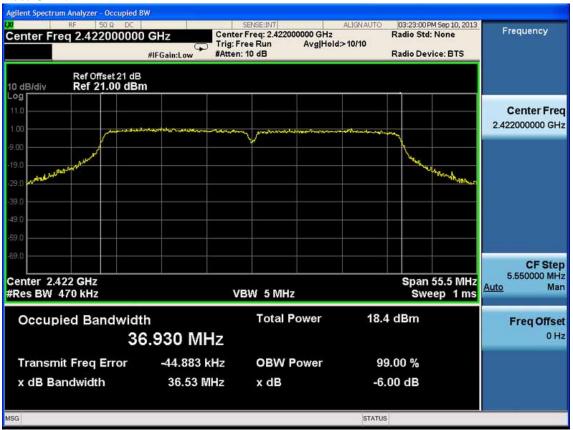




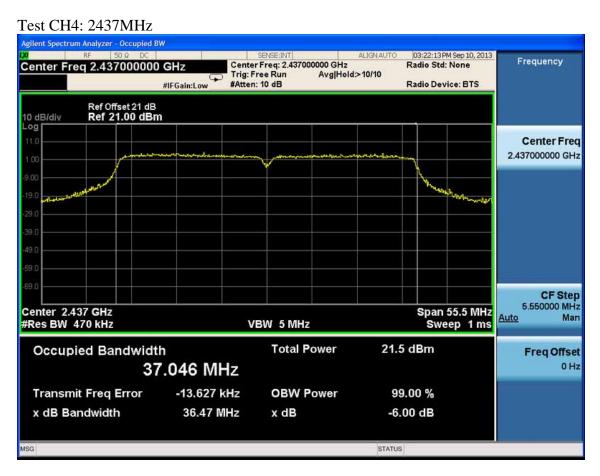


Test Mode: IEEE 802.11n HT40 TX

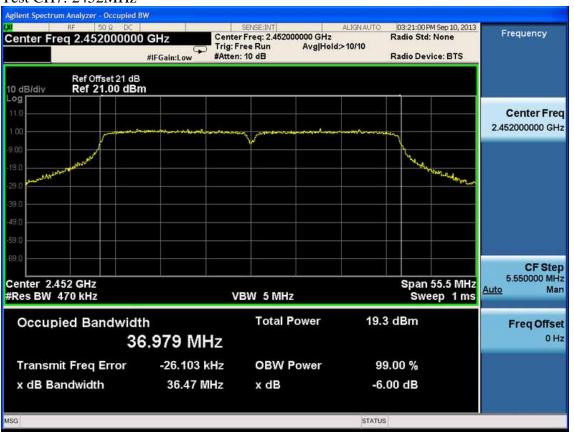
Test CH1: 2422MHz







## Test CH7: 2452MHz





## Chain 1:

Test Mode: IEEE 802.11b TX

Test CH1: 2412MHz



# Test CH6: 2437MHz





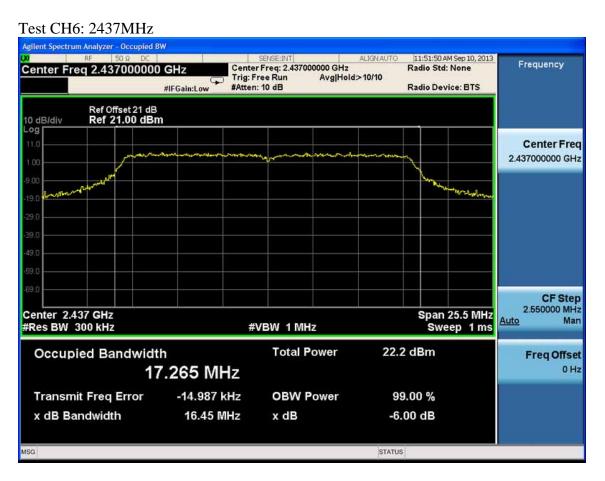


Test Mode: IEEE 802.11g TX

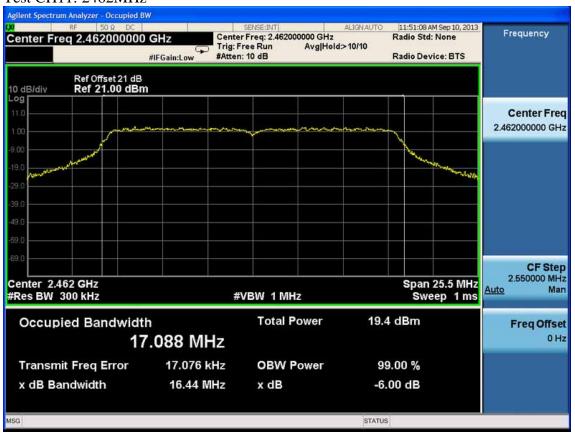
Test CH1: 2412MHz







## Test CH11: 2462MHz



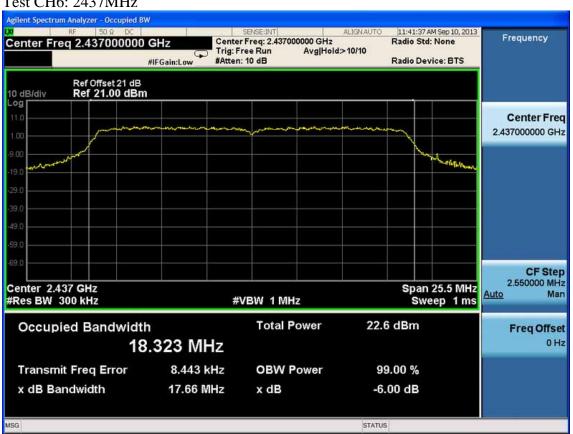


## Test Mode: IEEE 802.11n HT20 TX

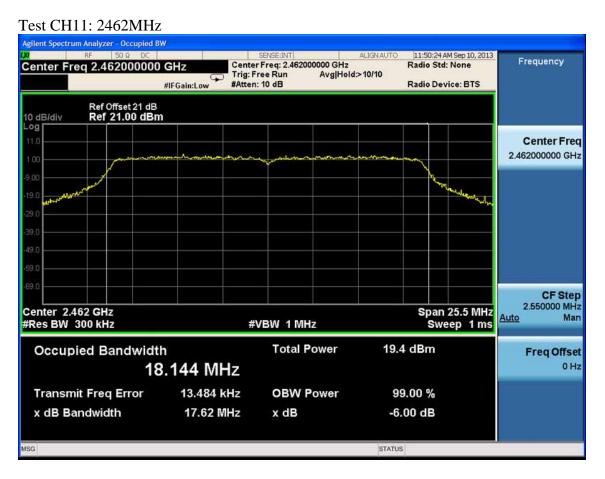
Test CH1: 2412MHz



# Test CH6: 2437MHz

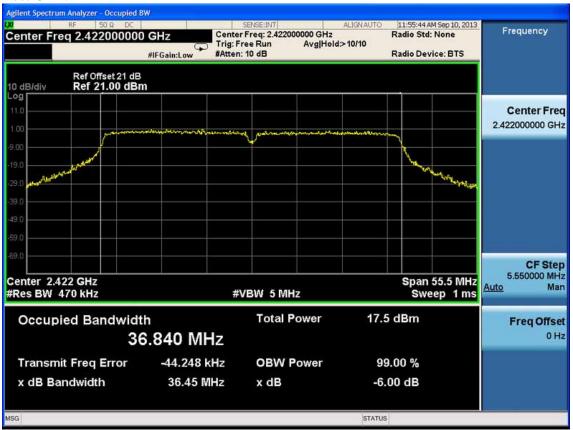




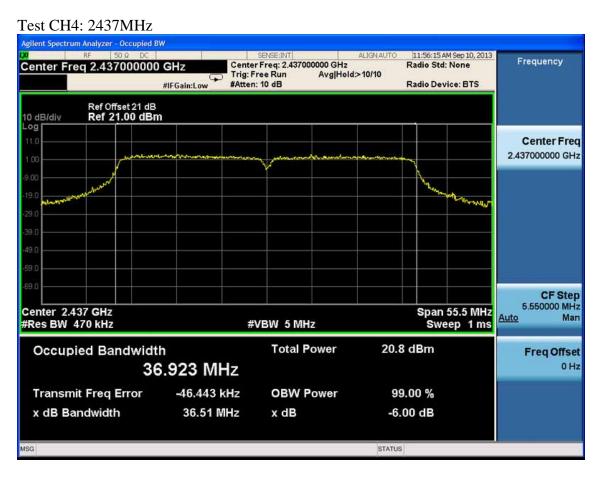


Test Mode: IEEE 802.11n HT40 TX

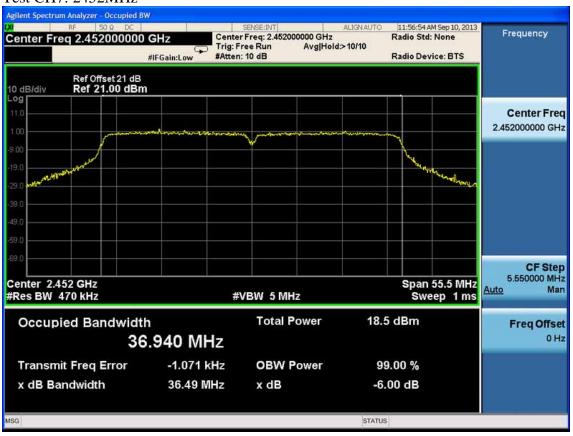
Test CH1: 2422MHz







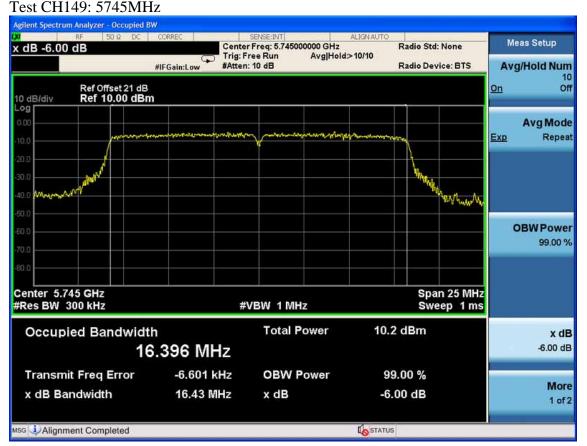
## Test CH7: 2452MHz





## 5.8G: Chain 0:

Test Mode: IEEE 802.11a TX



## Test CH157: 5785MHz

