

Site no. : 3# Chamber Data no. : 176
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : 24*C/56% Engineer : Leo-Li

EUT : A8-Ein Super WiFi Base Station

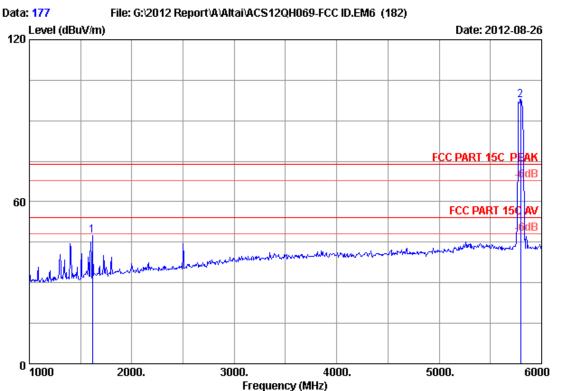
Power Rating : DC 56V From Adapter Input AC 120V/60Hz Test Mode : IEEE802.11nHT40 CH159 5795MHz Tx

M/N : WA8011N

		Ant.	Cable	AMP		Emission			
No.	Freq. (MHz)	Factor (dB/m)	Loss (dB)	factor (dBuV)	Reading (dBuV/m)	Level (dBuV/m)	Limits (dB)	Margin (dB)	Remark
_	11590.000 11590.000	39.17 39.17	12.20 12.20	34.82 34.82	44.68 31.56	61.23 48.11	74.00 54.00	12.77 5.89	Peak Average

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading





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Power Rating : DC 56V From Adapter Input AC 120V/60Hz Test Mode : IEEE802.11nHT40 CH159 5795MHz Tx

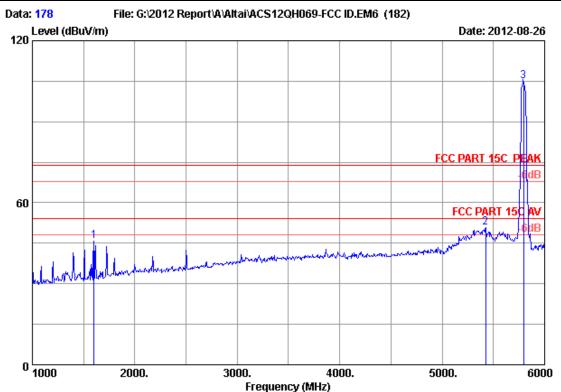
M/N : WA8011N

		Ant.	Cable	AMP		Emission			
No.	Freq. (MHz)	Factor (dB/m)	Loss (dB)	factor (dBuV)	_	Level (dBuV/m)		Margin (dB)	Remark
_	1615.000 5795.000	25.79 34.08		34.59 34.60	51.50 88.79	47.48 97.63	74.00 74.00	26.52 -23.63	

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading

The emission levels that are 20dB below the official limit are not reported.





Site no. : 3# Chamber Data no. : 178

Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : 24*C/56% Engineer : Leo-Li

EUT : A8-Ein Super WiFi Base Station

Power Rating : DC 56V From Adapter Input AC 120V/60Hz Test Mode : IEEE802.11nHT40 CH159 5795MHz Tx

M/N : WA8011N

		Ant.	Cable	AMP		Emission			
No.	Freq. (MHz)	Factor (dB/m)	Loss (dB)	factor (dBuV)	Reading (dBuV/m)	Level (dBuV/m)	Limits (dB)	Margin (dB)	Remark
1	1600.000	25.72	4.76	34.60	49.86	45.74	74.00	28.26	Peak
2	5425.000	33.78	9.06	34.60	42.66	50.90	74.00	23.10	Peak
3	5795.000	34.08	9.36	34.60	96.08	104.92	74.00	-30.92	Peak

._____

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp Factor



5. CONDUCTED SPURIOUS EMISSIONS

5.1.Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	PXA Signal Analyzer	Agilent	N9030A	MY51380221	Dct.31.12	1 Year
2.	Attenuator	Agilent	8491B	MY39262165	May.08,12	1 Year
3.	RF Cable	Hubersuhner	SUCOFLEX102	28618/2	May.08,12	1Year

5.2.Limit

In any 100kHz bandwidth outside the frequency bands in which the spread spectrum intentional radiator in operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power.

5.3.Test Procedure

The transmitter output was connected to a spectrum analyzer, The resolution bandwidth is set to 100 kHz, The video bandwidth is set to 300 kHz and measure all the emissions detected.

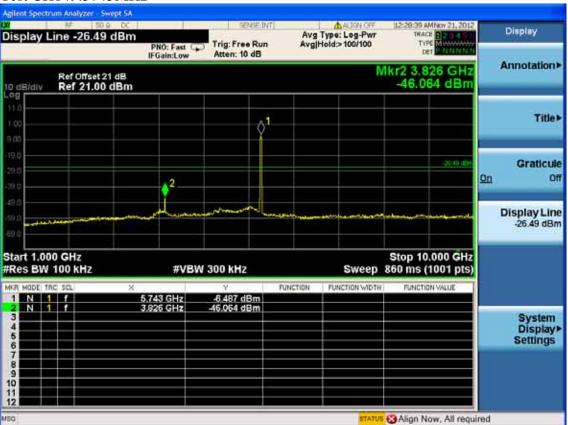
5.4. Test result

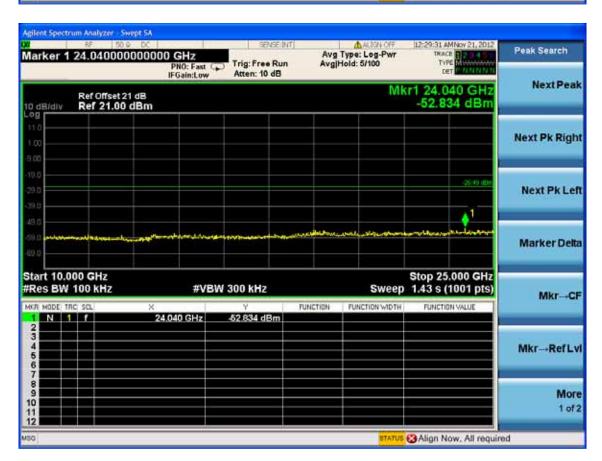
PASS (The testing data was attached in the next pages.)



ANT 0

Test Mode: IEEE 802.11a Test CH149:5745MHz

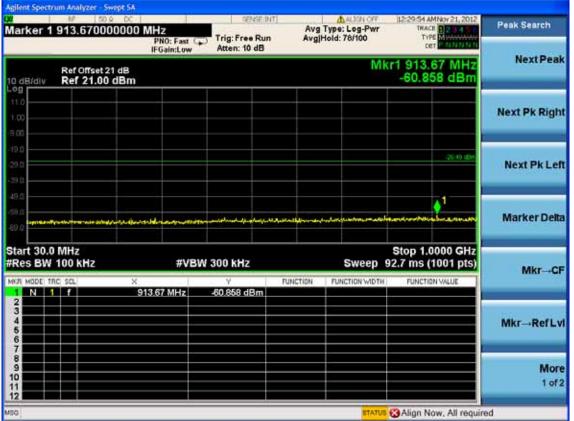






Agilent Spectrum Analyzer Swept SA

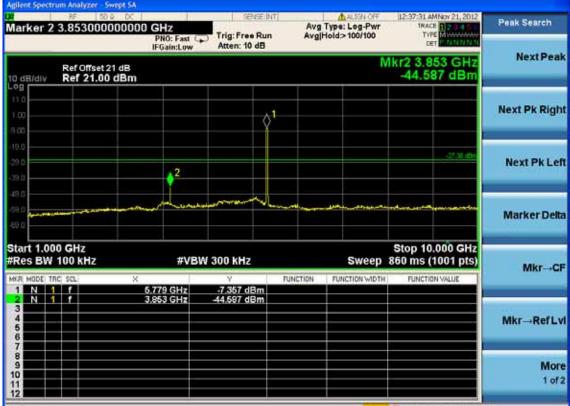
Agilent Spectrum Analyzer Swep

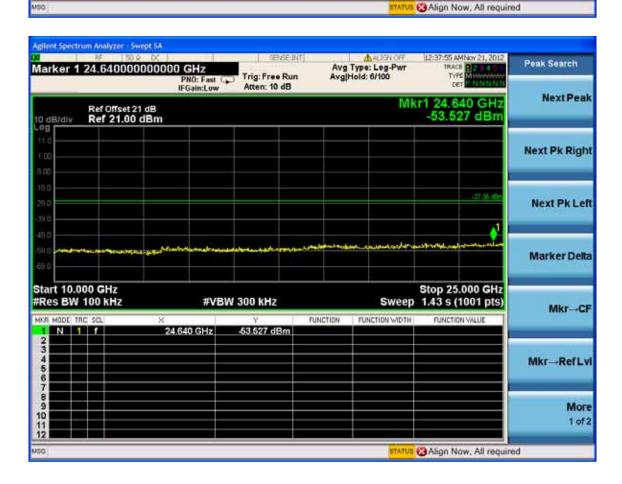




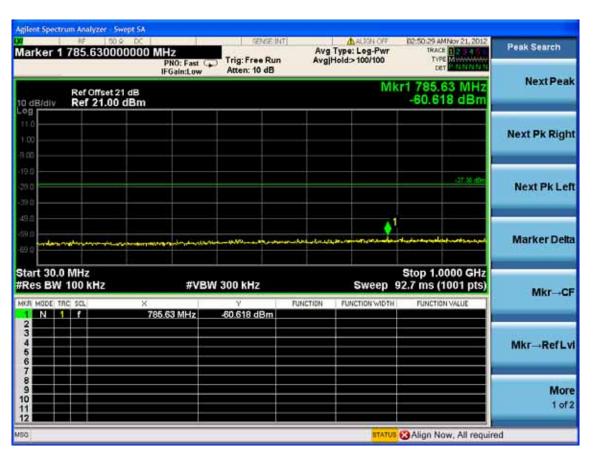


Test CH157: 5785MHz

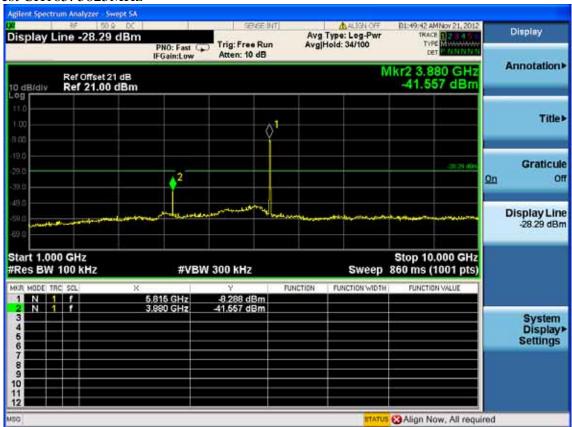








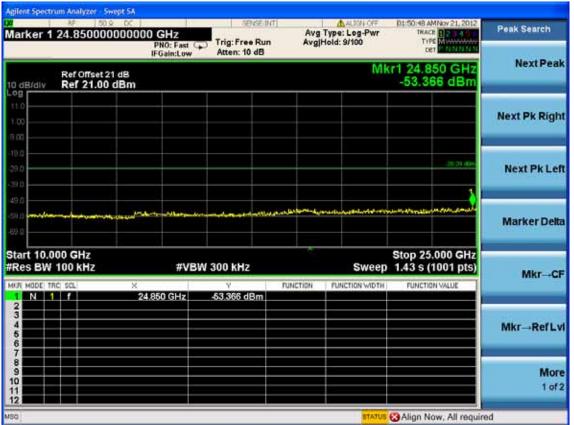
Test CH165: 5825MHz

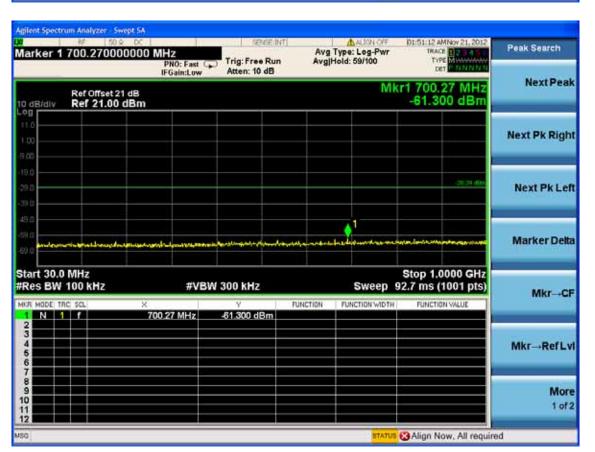




FCC ID: UCC-WA8011N

Agilent Spectrum Analyzer - Swept SA



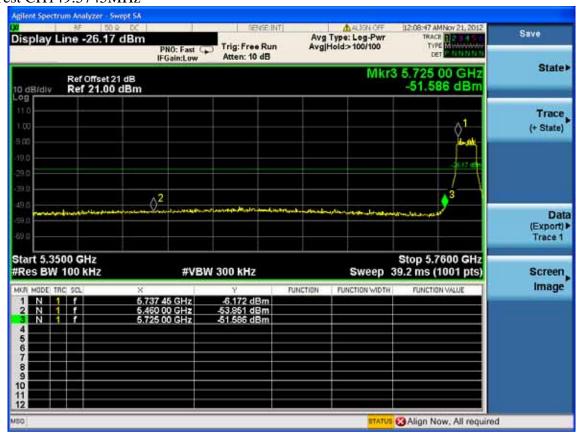






Test Mode: IEEE 802.11n HT20

Test CH149:5745MHz

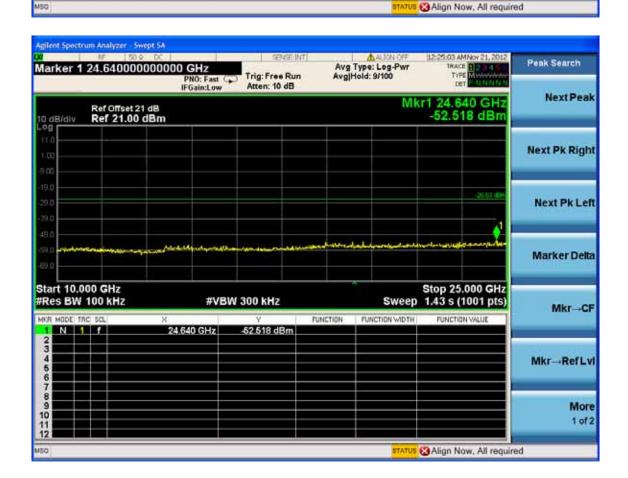


<u>page 5</u>-8

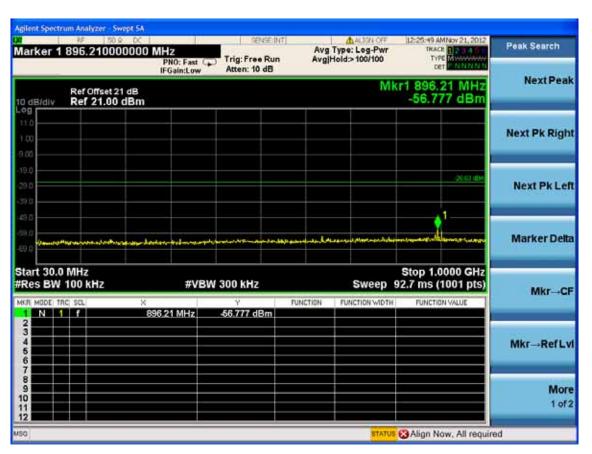


FCC ID:UCC-WA8011N

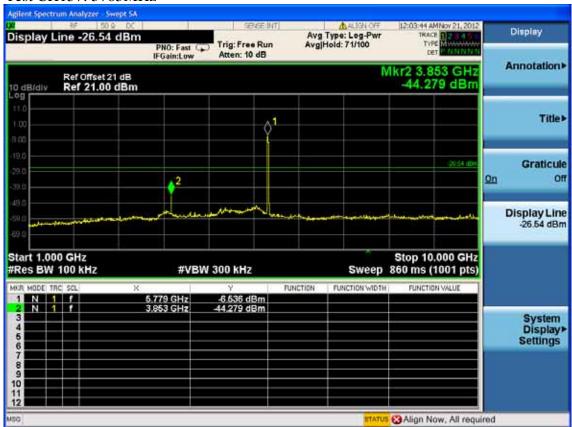
Agilent Spectrum Analyzer - Swept SA 12:24:29 AMNov 21, 2012 TRACE 17:04 4 500 TYPE 0ET 18:00 10: Avg Type: Log-Pwr Avg|Hold>100/100 Display Display Line -26.63 dBm Trig: Free Run Atten: 10 dB Annotation> Mkr2 3.826 GHz -46.425 dBm Ref Offset 21 dB Ref 21.00 dBm 10 dB/div Title> Graticule On 2 Display Line -26.63 dBm Start 1.000 GHz #Res BW 100 kHz Stop 10,000 GHz Sweep 860 ms (1001 pts) **#VBW 300 kHz** FUNCTION FUNCTION WIDTH 5.752 GHz 3.826 GHz -6.625 dBm -46.425 dBm System Display> Settings 10





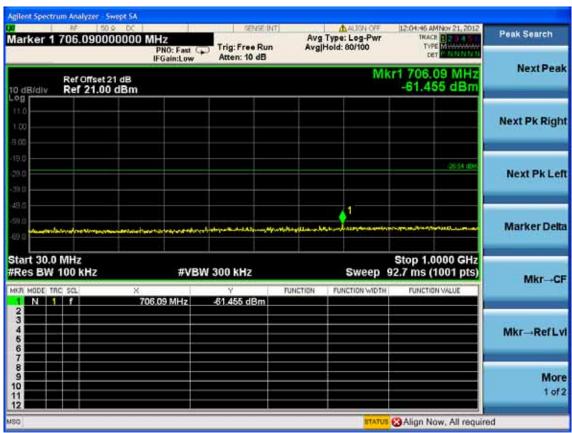


Test CH157: 5785MHz

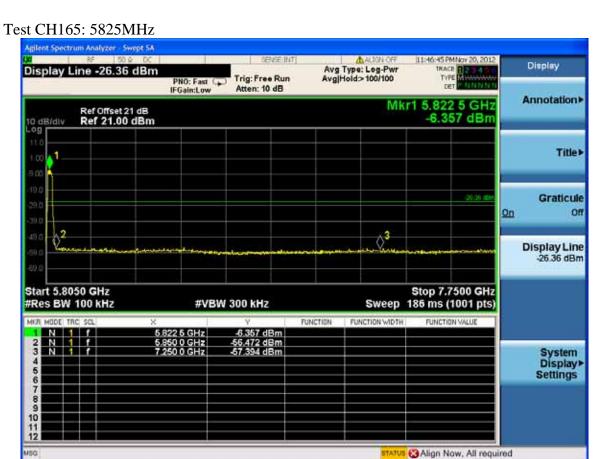


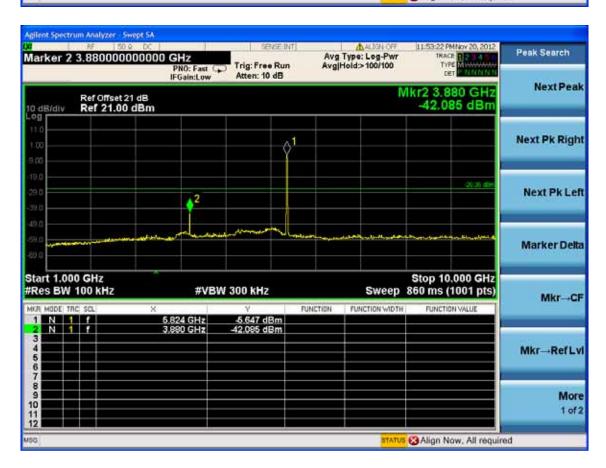






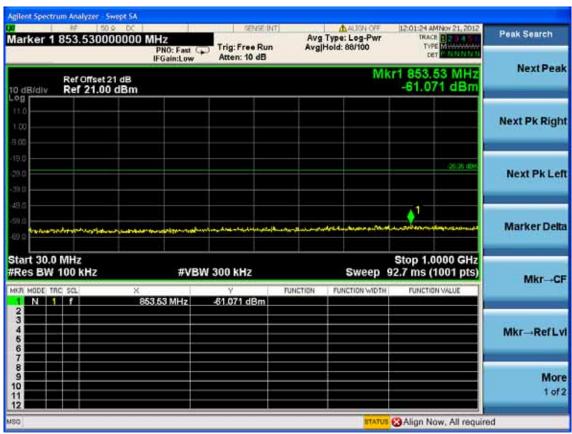




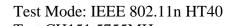


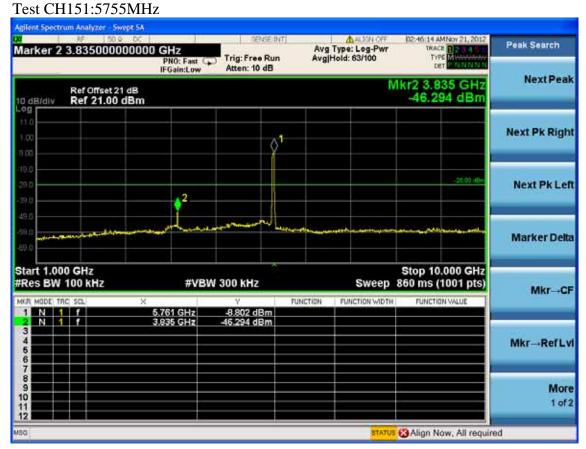


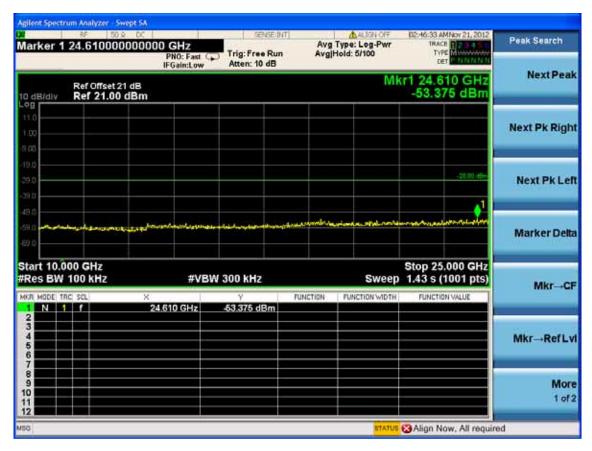




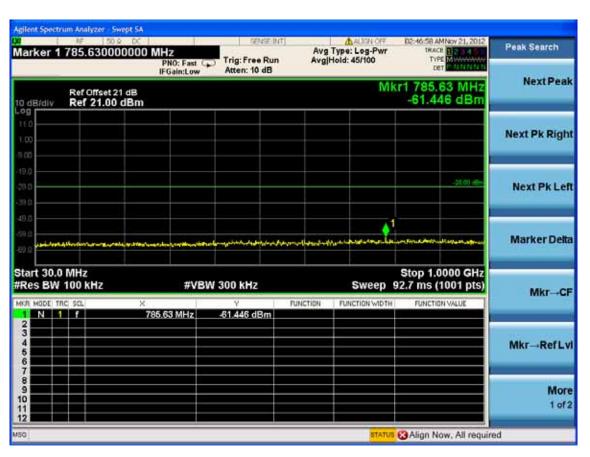






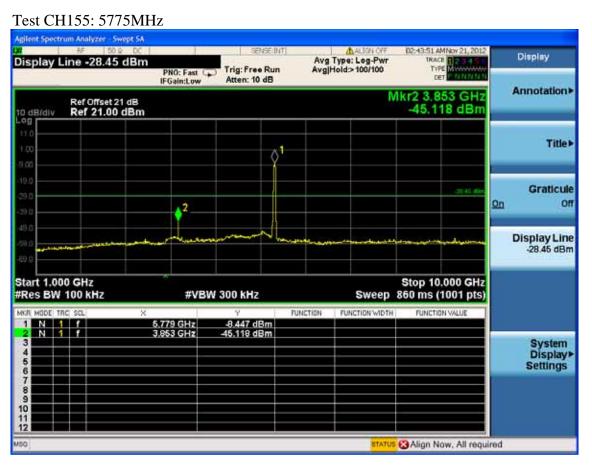


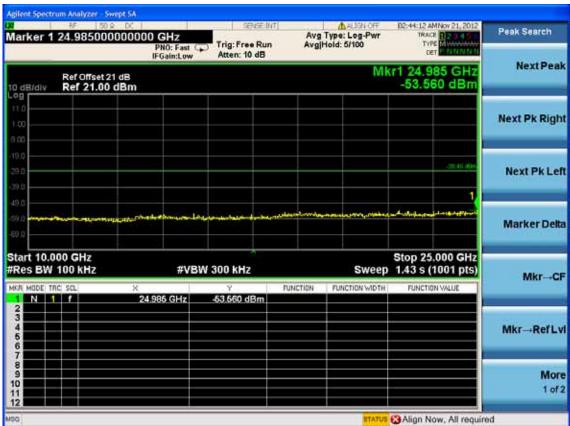




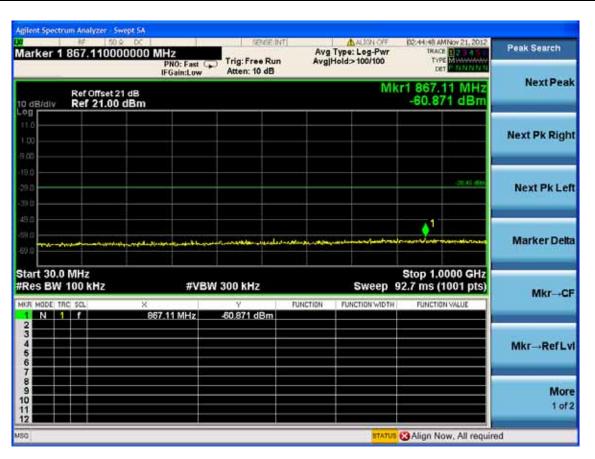




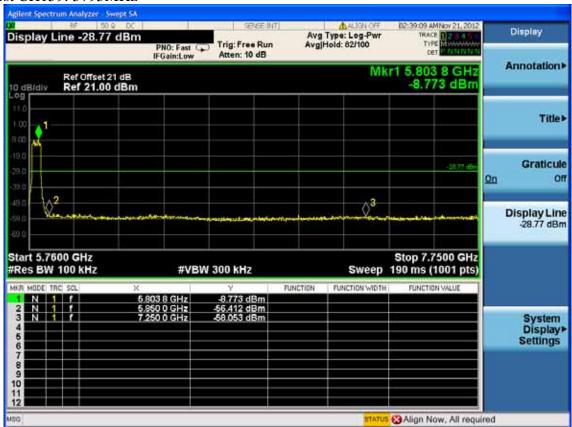




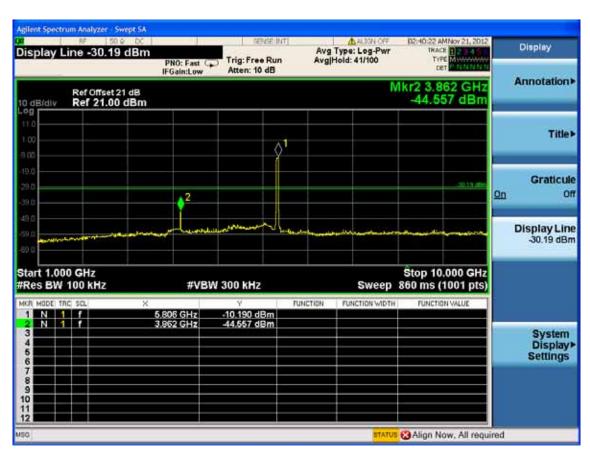


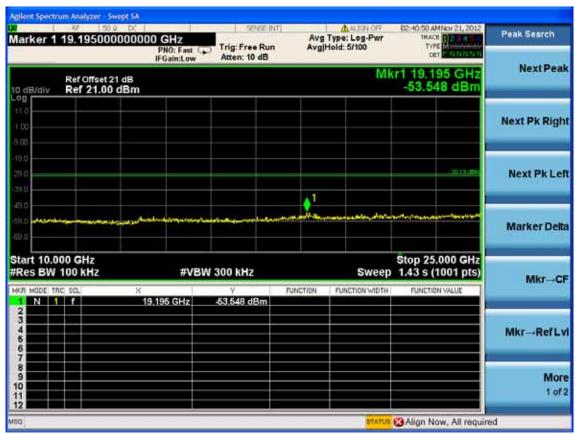


Test CH159: 5795MHz

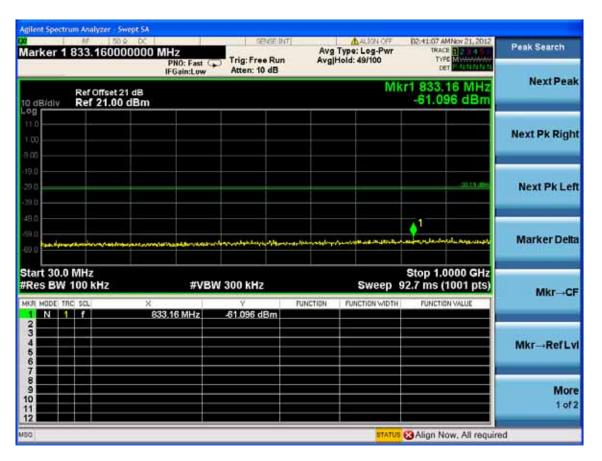






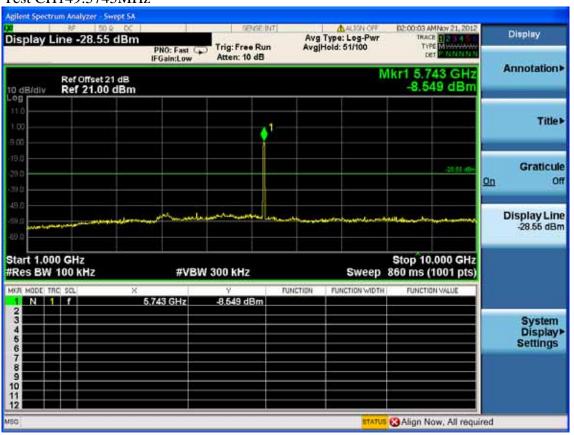






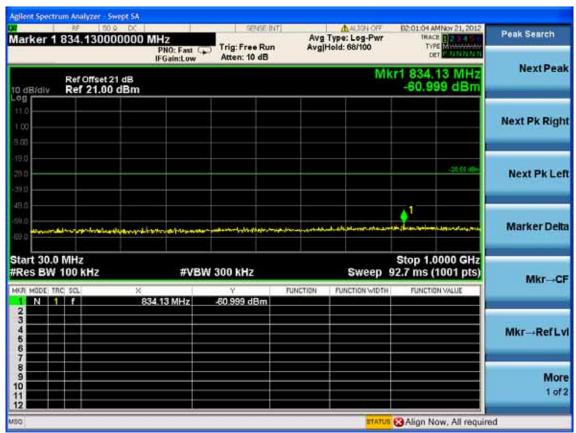
ANT 1

Test Mode: IEEE 802.11a Test CH149:5745MHz

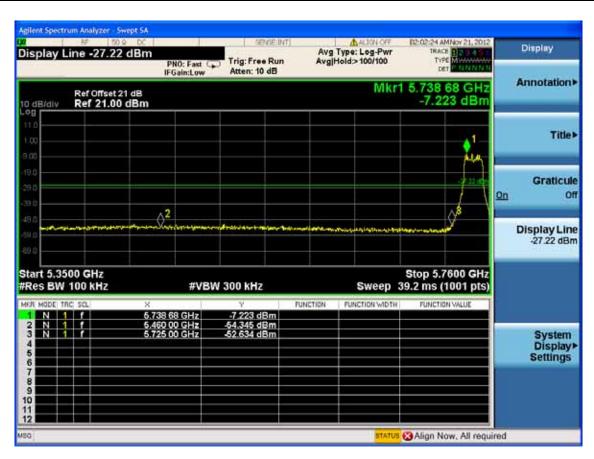




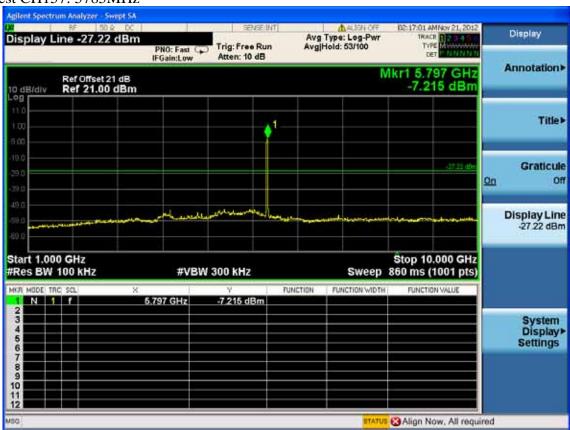






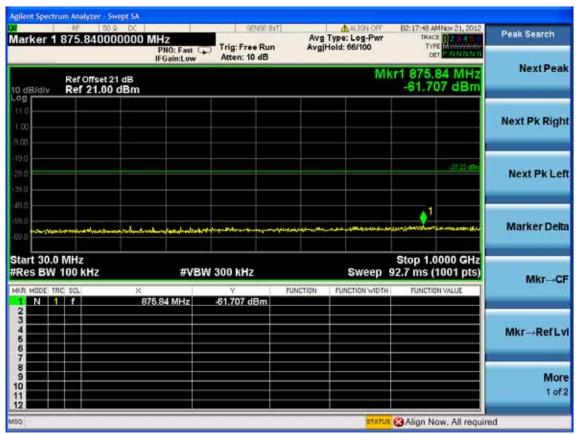


Test CH157: 5785MHz



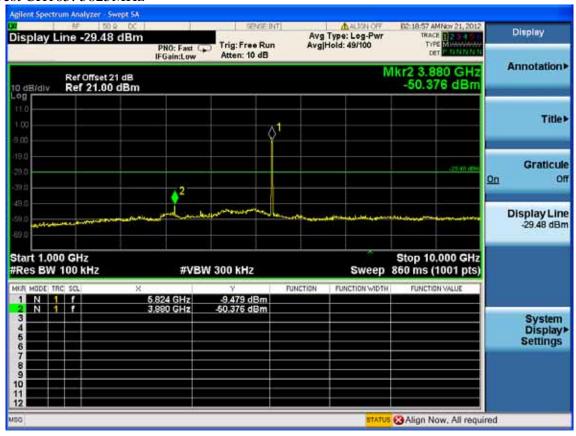


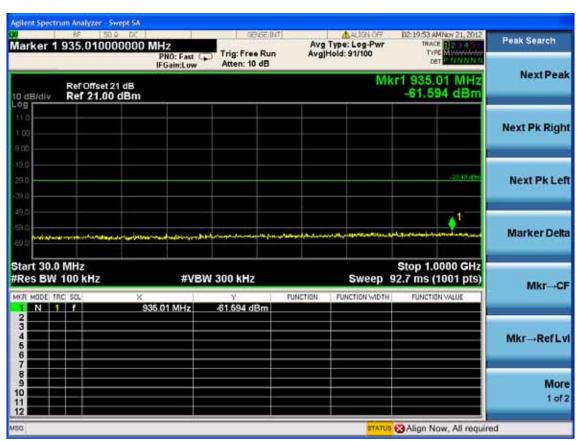




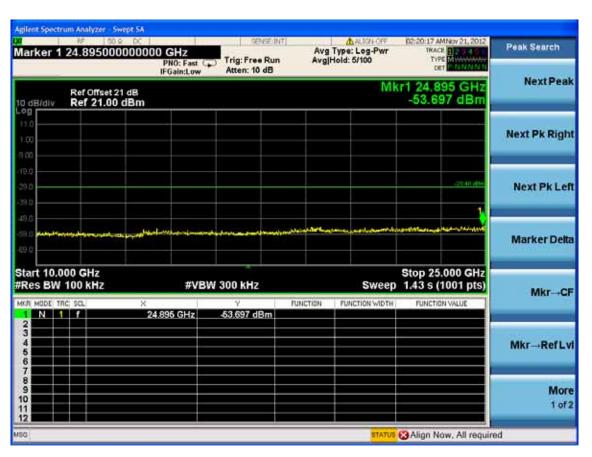


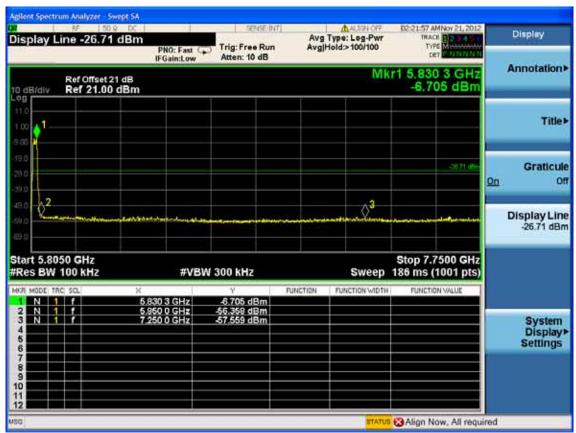
Test CH165: 5825MHz





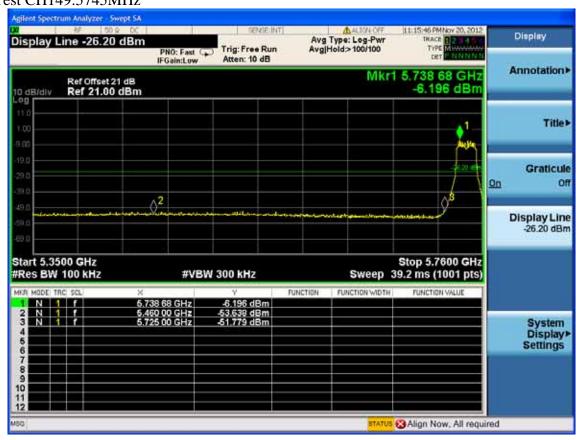






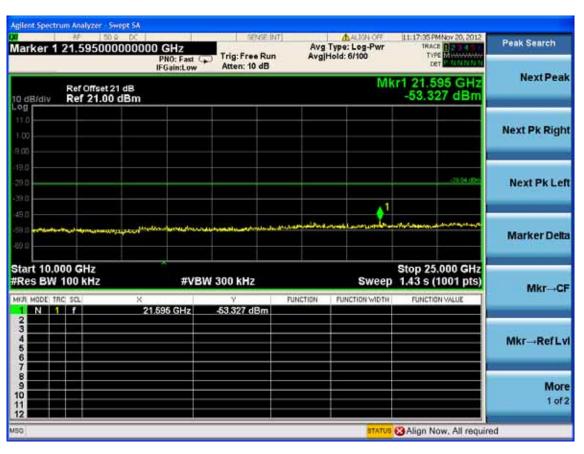


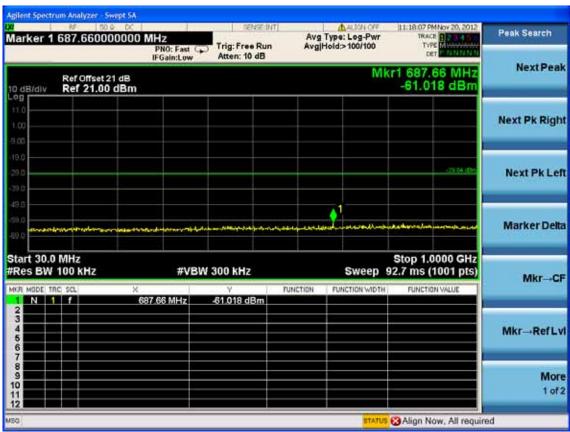
Test Mode: IEEE 802.11n HT20 Test CH149:5745MHz



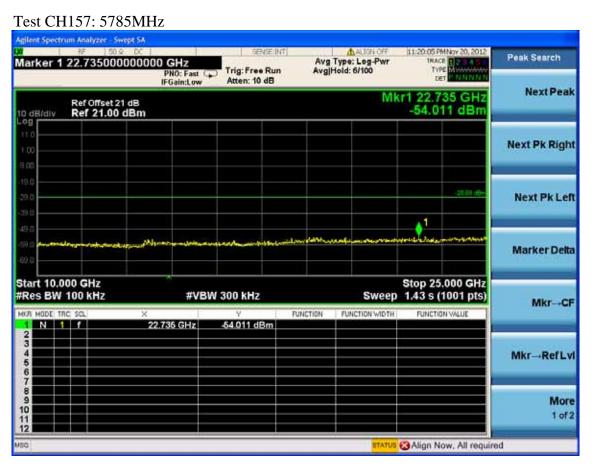


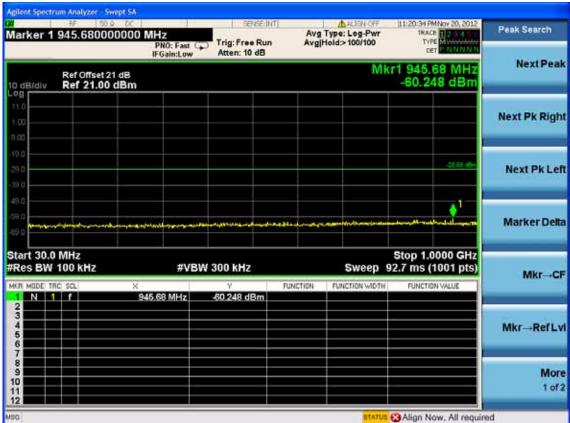




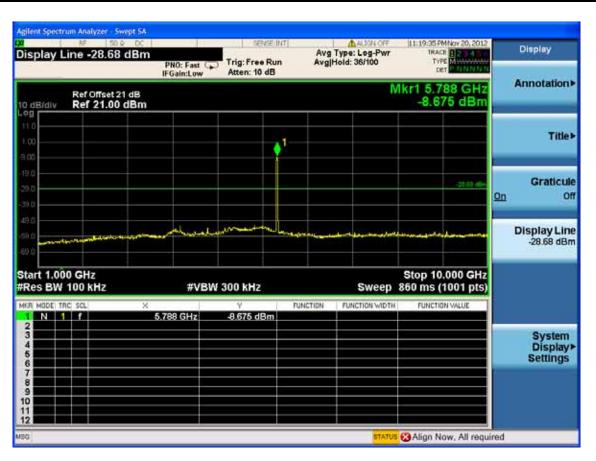




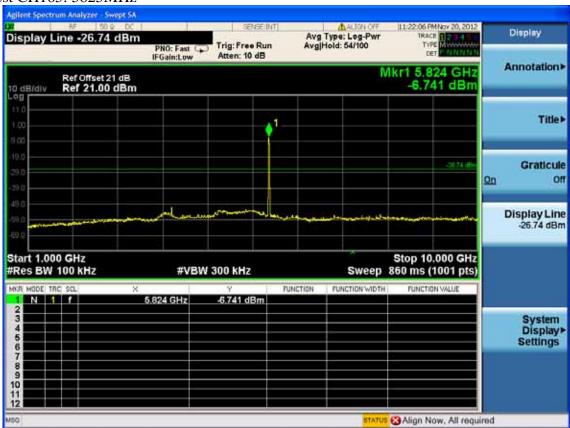






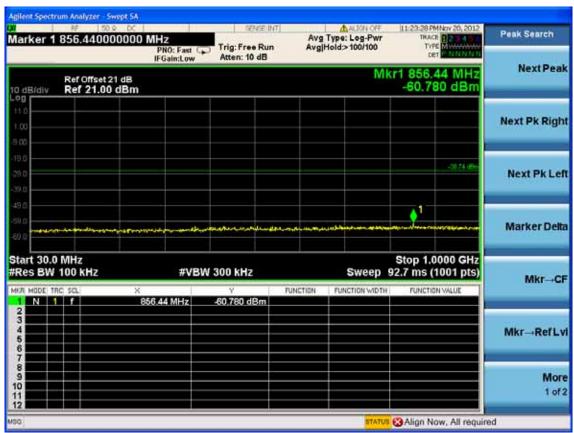


Test CH165: 5825MHz





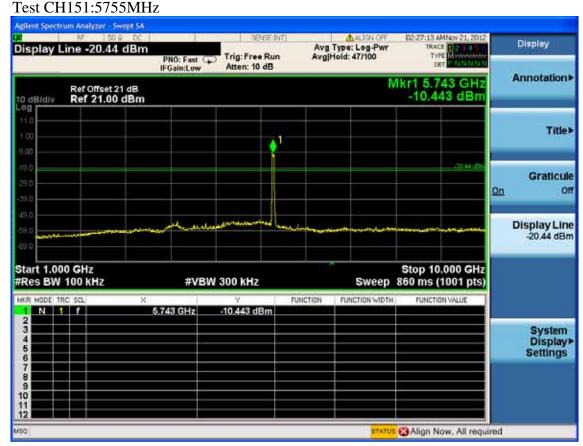






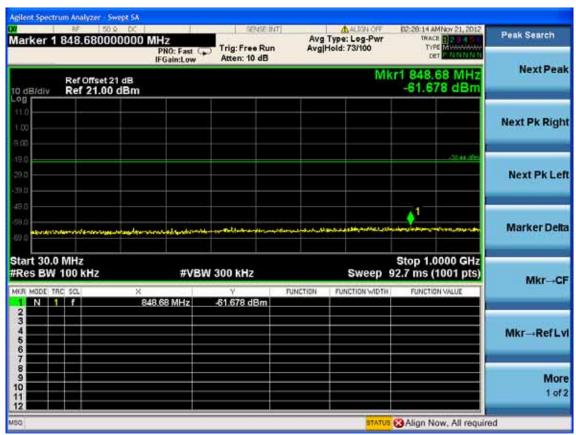


Test Mode: IEEE 802.11n HT40





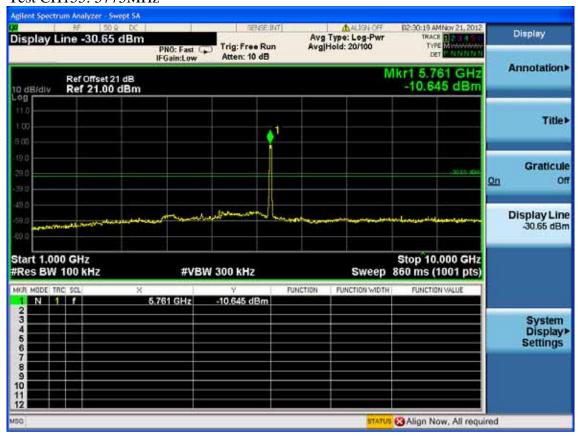




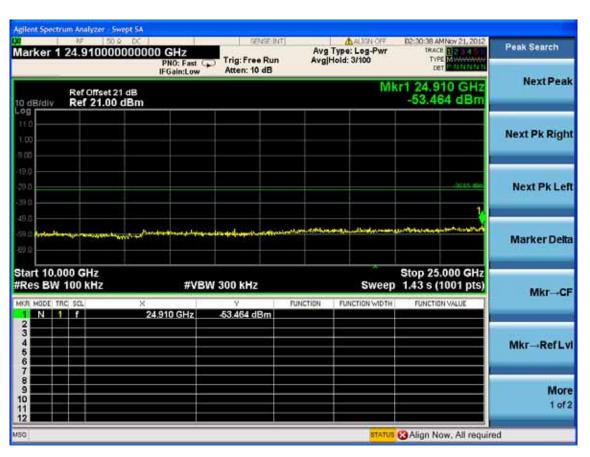


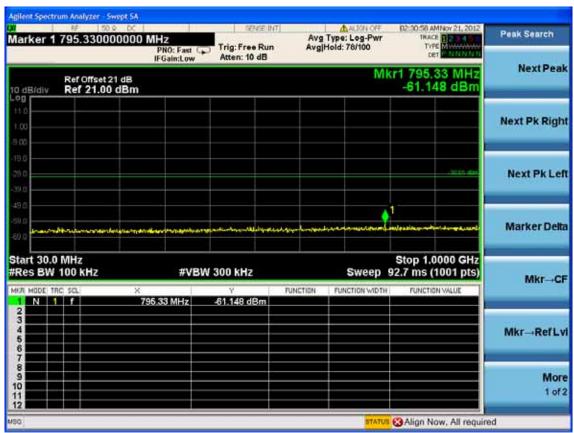


Test CH155: 5775MHz

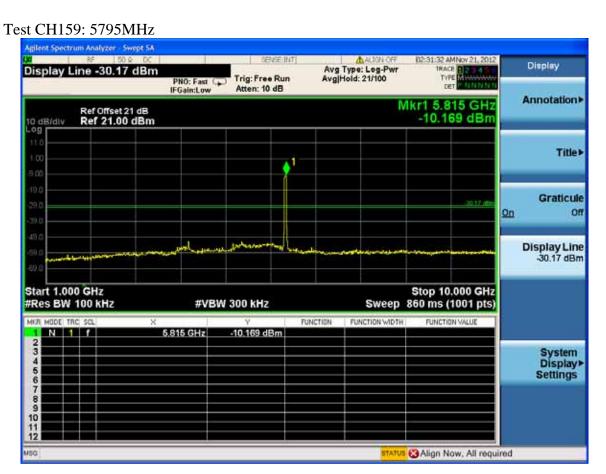


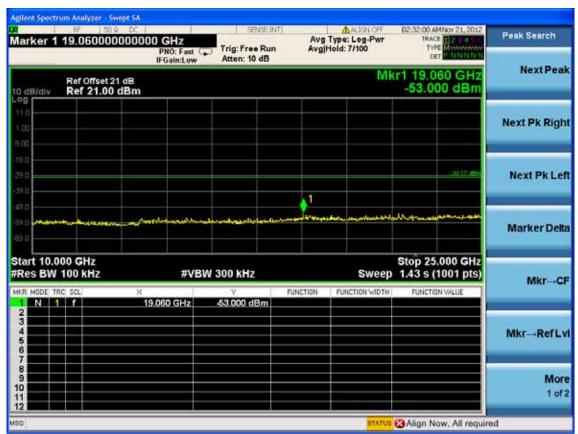




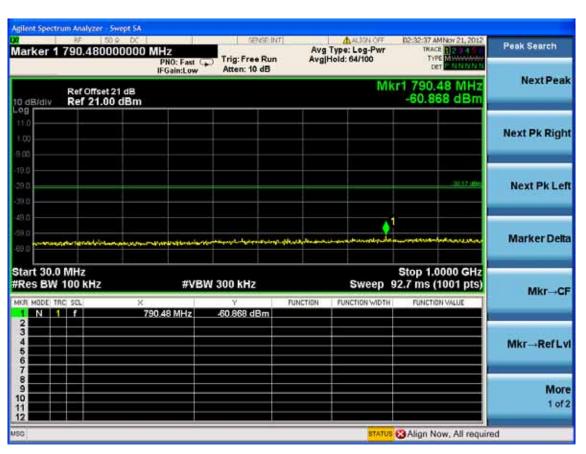


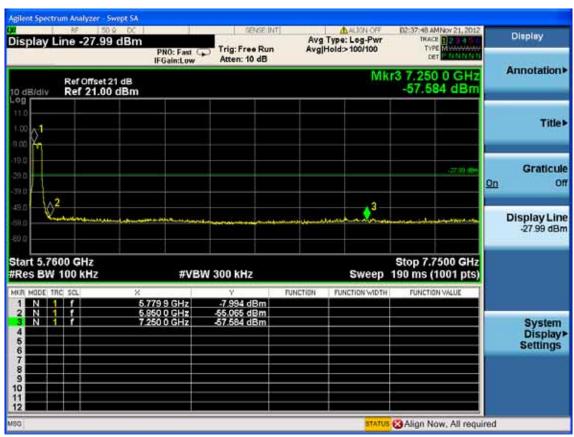












6. BAND EDGE COMPLIANCE TEST

6.1.Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum Analyzer	Agilent	E4407B	MY41440292	Dct.31.12	1 Year
2.	Amp	HP	8449B	3008A08495	May.08, 12	1 Year
3.	Antenna	EMCO	3115	9510-4580	May.08, 12	1Year
4.	HF Cable	Hubersuhne	Sucoflex104	-	May.08, 12	1 Year

6.2.Limit

All the lower and upper band-edges emissions appearing within 2310MHz to 2390MHz and 2483.5MHz to 2500MHz restricted frequency bands shall not exceed the limits shown in 15.209 all the other emissions outside operation frequency band 2400MHz to 2483.5MHz shall be at least 20dB below the fundamental emissions, or comply with 15.209 limits.

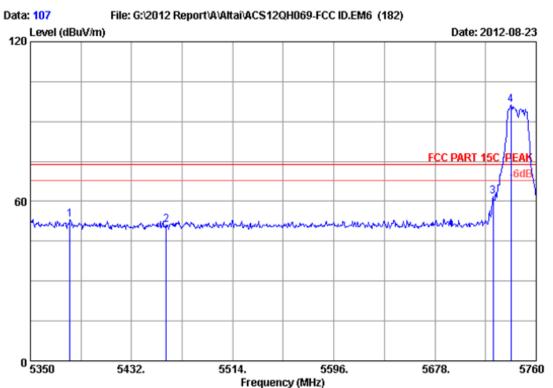
6.3. Test Produce

- 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.)





Site no. : 3# Chamber Data no. : 107
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : 24*C/56% Engineer : Leo-Li

EUT : A8-Ein Super WiFi Base Station

Power Rating : DC 56V From Adapter Input AC 120V/60Hz

Test Mode : IEEE802.11a CH149 5745MHz Tx

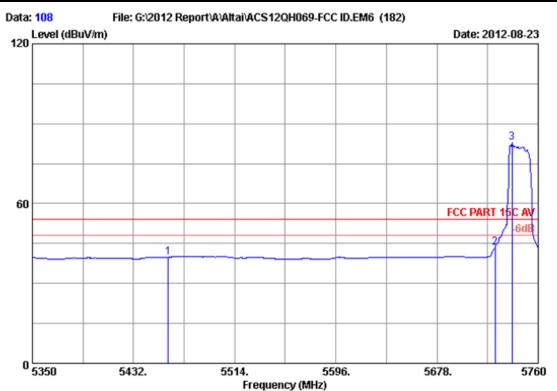
M/N : WA8011N

No.	Freq.	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dBuV)	Reading (dBuV/m)	Emission Level (dBuV/m)	Limits (dB)	Margin (dB)	Remark
3	5381.980	33.74	9.01	34.60	45.04	53.19	74.00	20.81	Peak
	5460.000	33.83	9.09	34.60	42.92	51.24	74.00	22.76	Peak
	5725.000	34.03	9.30	34.60	53.22	61.95	74.00	12.05	Peak
	5739.500	34.04	9.32	34.60	87.35	96.11	74.00	-22.11	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp Factor

The emission levels that are 20dB below the official limit are not reported.





Site no. : 3# Chamber Data no. : 108
Dis. / Ant. : 3m 2011 3115 4580 Ant. pol. : VERTICAL

Limit : FCC PART 15C AV

Env. / Ins. : 24*C/56% Engineer : Leo-Li

EUT : A8-Ein Super WiFi Base Station

Power Rating : DC 56V From Adapter Input AC 120V/60Hz

Test Mode : IEEE802.11a CH149 5745MHz Tx

M/N : WA8011N

No.	Freq. (MHz)	Factor (dB/m)	Loss (dB)	factor (dBuV)	Reading (dBuV/m)	Level (dBuV/m)	Limits (dB)	Margin (dB)	Remark
2	5460.000 5725.000 5738.680	33.83 34.03 34.04	9.09 9.30 9.32	34.60 34.60 34.60	31.61 34.60 74.28	39.93 43.33 83.04	54.00 54.00 54.00	10.67	Average Average Average

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading

The emission levels that are 20dB below the official limit are not reported.