

6. Radiated Emission Band Edge

6.1. Test Equipment

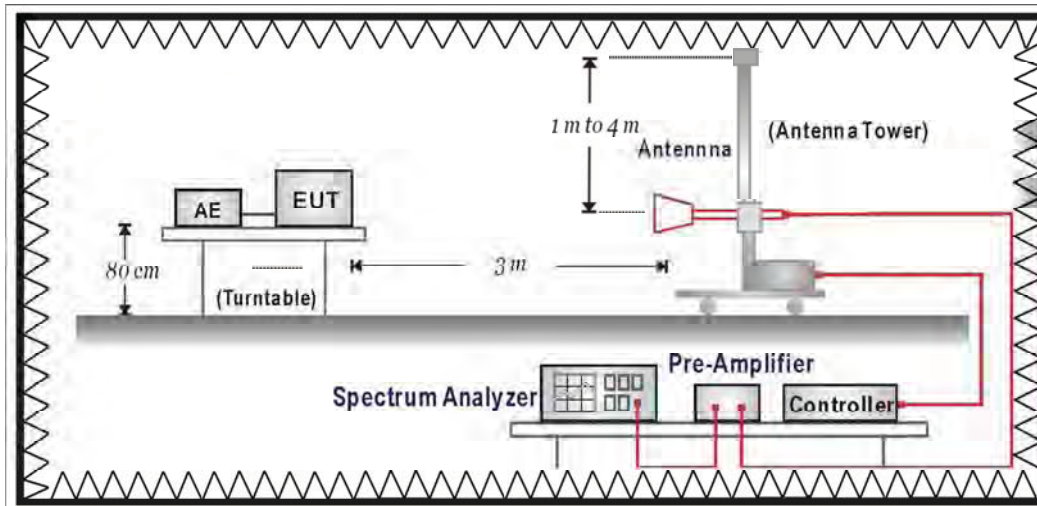
The following test equipments are used during the test:

Radiated Emission Band Edge / CB1

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
Double Ridged Guide Horn Antenna	Schwarzback	BBHA 9120	D743	2014/02/17
Spectrum Analyzer	Agilent	E4440A	MY46187335	2014/01/27
k Type Cable	Huber Suhner	Sucoflex 102	25623/2	2014/02/21

Note: 1. All equipments that need to calibrate are with calibration period of 1 year.

6.2. Test Setup



6.3. Limits

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 20dB below the level of the fundamental or to the general radiated emission limits in paragraph 15.209, whichever is the lesser attenuation.

6.4. Test Procedure

The EUT was setup according to ANSI C63.4: 2009 and tested according to DTS test procedure of Oct. 2012 KDB5580744 for compliance to FCC 47CFR 15.247 requirements. The EUT and its simulators are placed on a turn table which is 0.8 meter above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.

The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level.

Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated according to ANSI C63.4: 2009 on radiated measurement.

6.5. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247: 2012

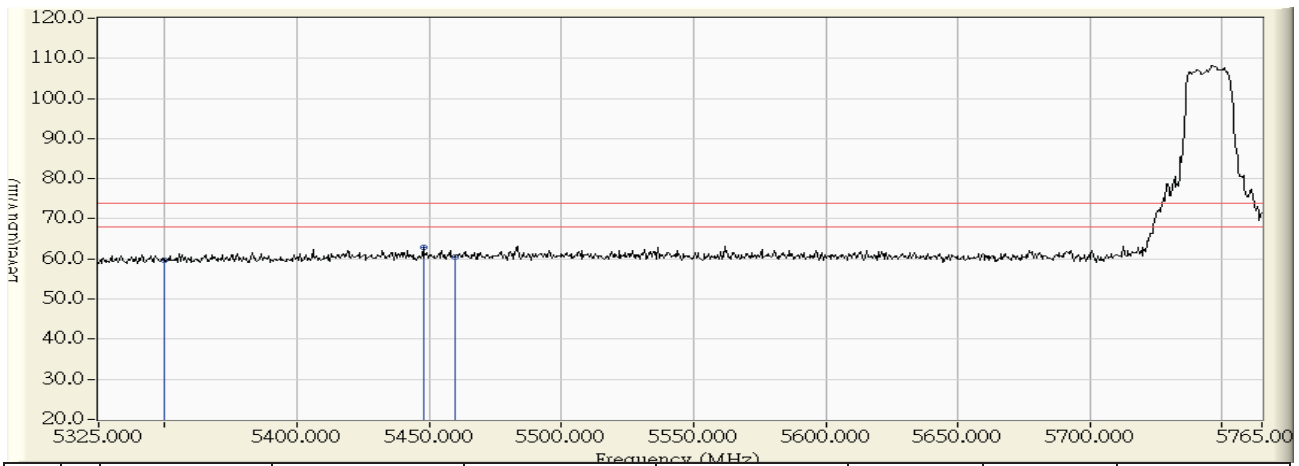
6.6. Uncertainty

The measurement uncertainty
 ± 3.9 dB above 1GHz

6.7. Test Result

Radiated is defined as

Site : CB1	Time : 2013/11/28 - 10:56
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : AC 120V/60Hz
EUT : Wireless Extender	Note : 80211a_CH149

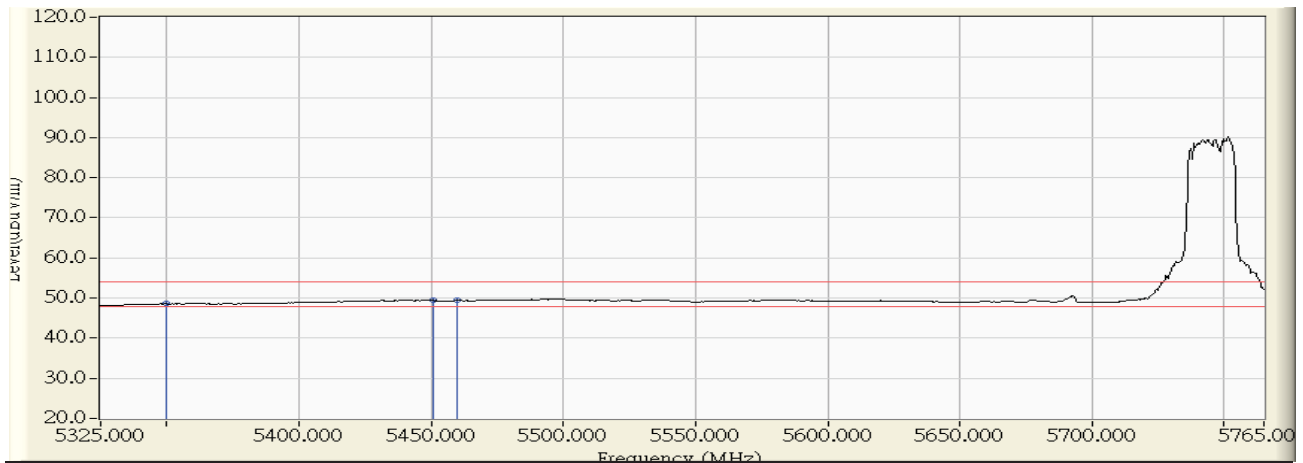


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	5350.000	2.526	57.276	59.802	-14.198	74.000	PEAK
2	* 5447.760	3.284	59.491	62.775	-11.225	74.000	PEAK
3	5460.000	3.379	57.094	60.473	-13.527	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	Time : 2013/11/28 - 10:58
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : AC 120V/60Hz
EUT : Wireless Extender	Note : 80211a_CH149

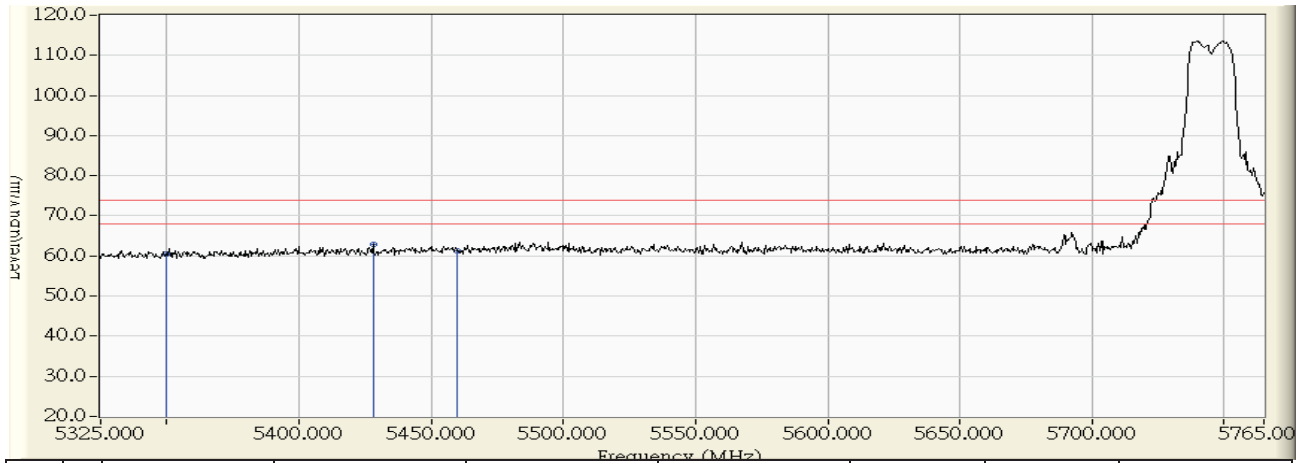


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	5350.000	2.526	46.054	48.580	-5.420	54.000	AVERAGE
2	5450.840	3.308	46.068	49.376	-4.624	54.000	AVERAGE
3	* 5460.000	3.379	46.004	49.383	-4.617	54.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	Time : 2013/11/28 - 11:02
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : AC 120V/60Hz
EUT : Wireless Extender	Note : 80211a_CH149

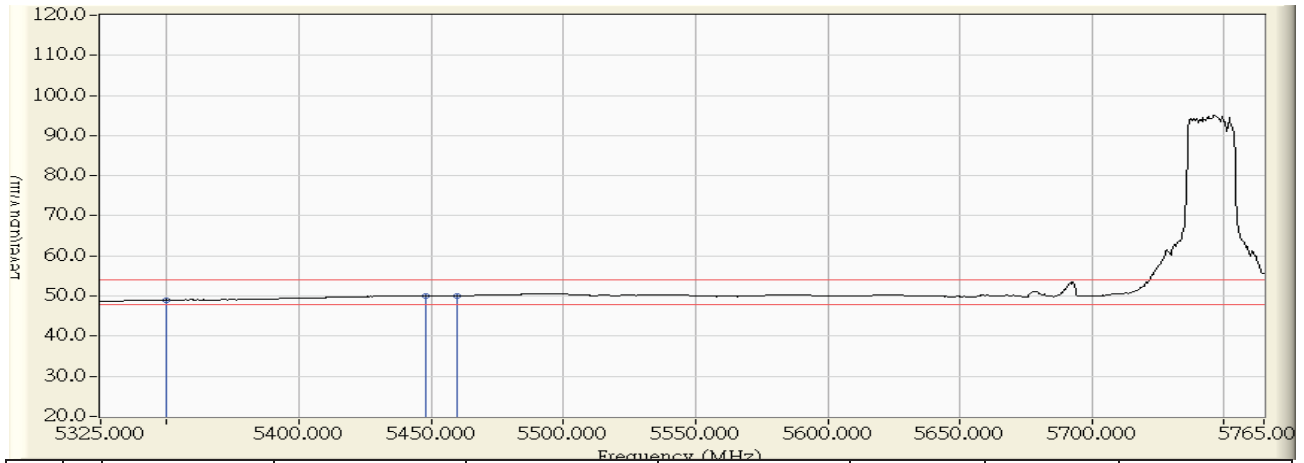


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	5350.000	2.526	57.826	60.352	-13.648	74.000	PEAK
2	* 5427.960	3.131	59.645	62.776	-11.224	74.000	PEAK
3	5460.000	3.379	57.883	61.262	-12.738	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	Time : 2013/11/28 - 11:05
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : AC 120V/60Hz
EUT : Wireless Extender	Note : 80211a_CH149

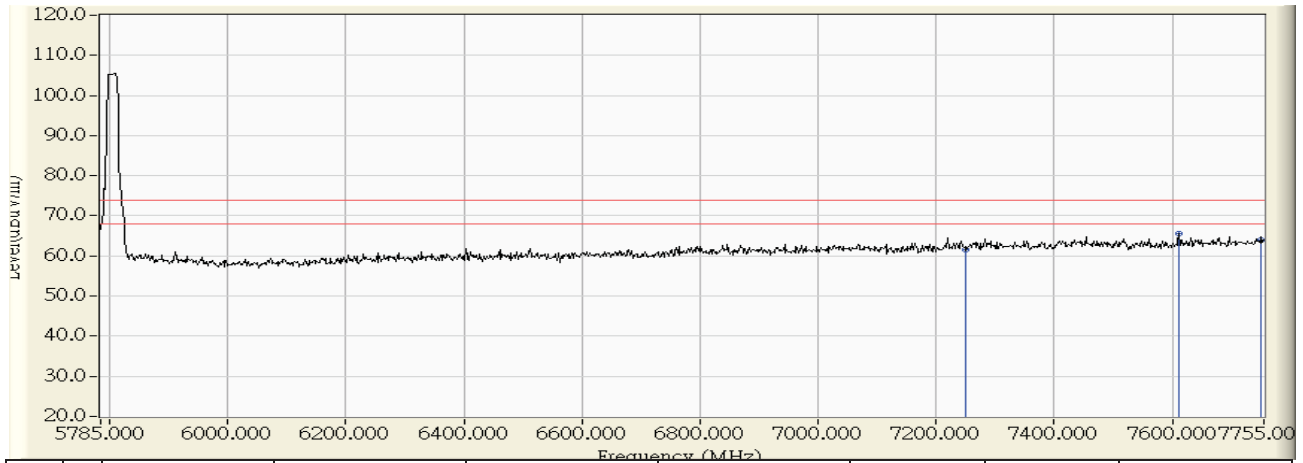


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	5350.000	2.526	46.562	49.088	-4.912	54.000	AVERAGE
2	5447.760	3.284	46.761	50.045	-3.955	54.000	AVERAGE
3	* 5460.000	3.379	46.737	50.116	-3.884	54.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	Time : 2013/11/28 - 11:13
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : AC 120V/60Hz
EUT : Wireless Extender	Note : 80211a_CH161

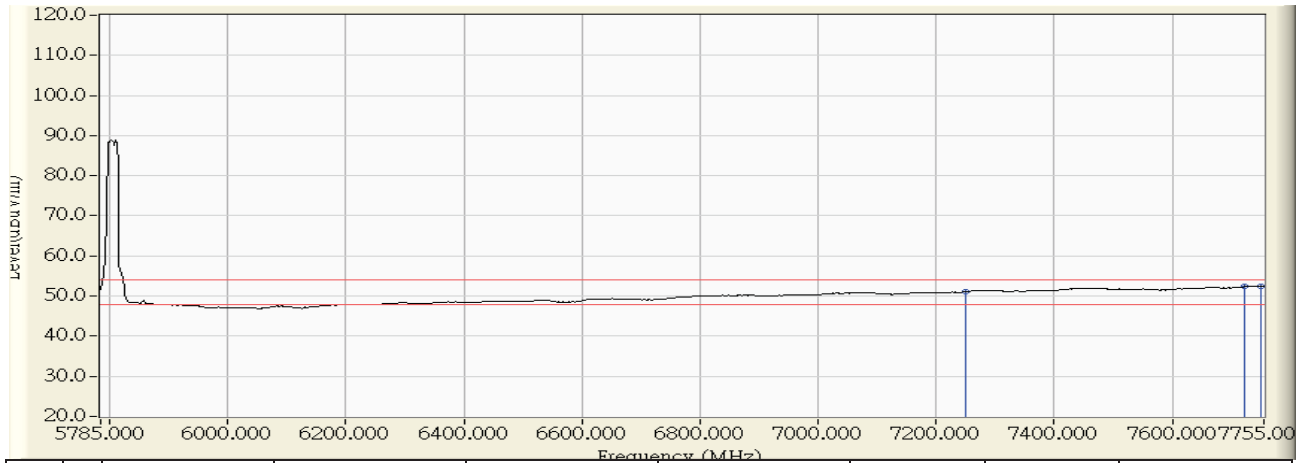


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	7250.000	5.476	56.158	61.634	-12.366	74.000	PEAK
2	* 7611.190	6.207	59.458	65.665	-8.335	74.000	PEAK
3	7750.000	6.446	57.437	63.883	-10.117	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	Time : 2013/11/28 - 11:16
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : AC 120V/60Hz
EUT : Wireless Extender	Note : 80211a_CH161

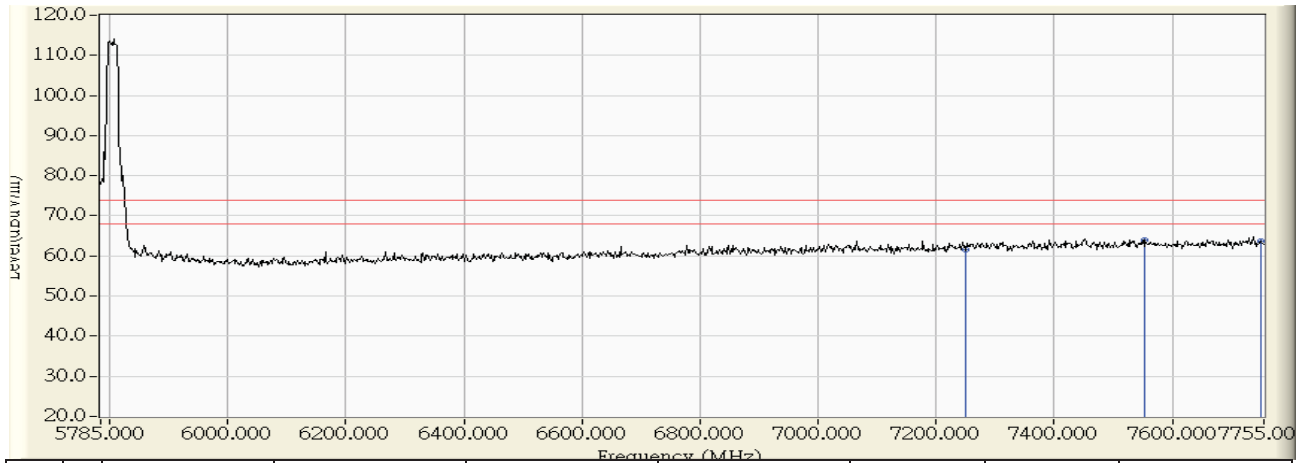


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	7250.000	5.476	45.596	51.072	-2.928	54.000	AVERAGE
2	7721.510	6.398	45.911	52.308	-1.692	54.000	AVERAGE
3	* 7750.000	6.446	45.986	52.432	-1.568	54.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	Time : 2013/11/28 - 11:20
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : AC 120V/60Hz
EUT : Wireless Extender	Note : 80211a_CH161

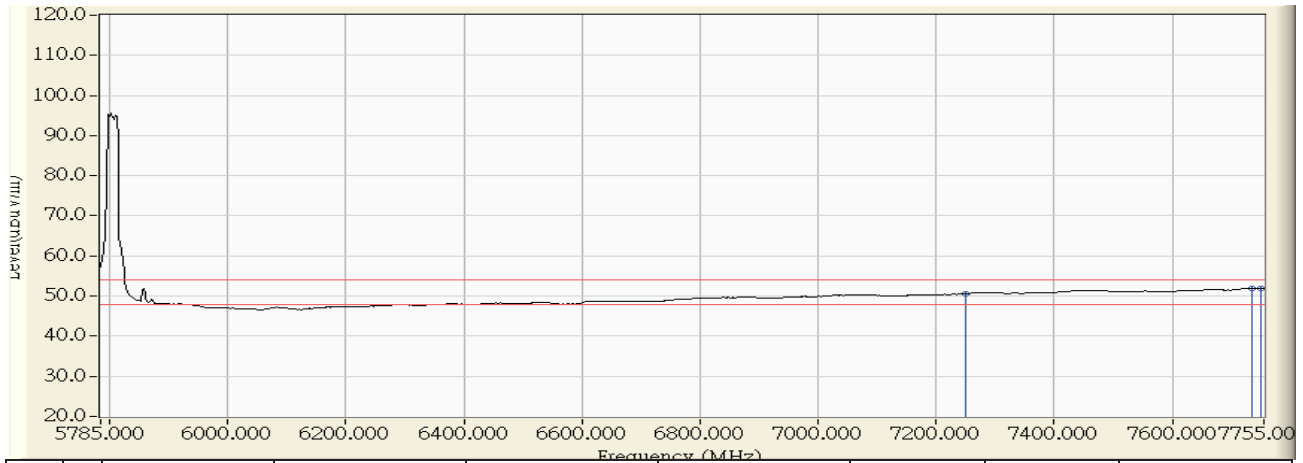


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	7250.000	5.476	56.213	61.689	-12.311	74.000	PEAK
2	* 7554.060	6.109	57.876	63.985	-10.015	74.000	PEAK
3	7750.000	6.446	57.320	63.766	-10.234	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	Time : 2013/11/28 - 11:30
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : AC 120V/60Hz
EUT : Wireless Extender	Note : 80211a_CH161

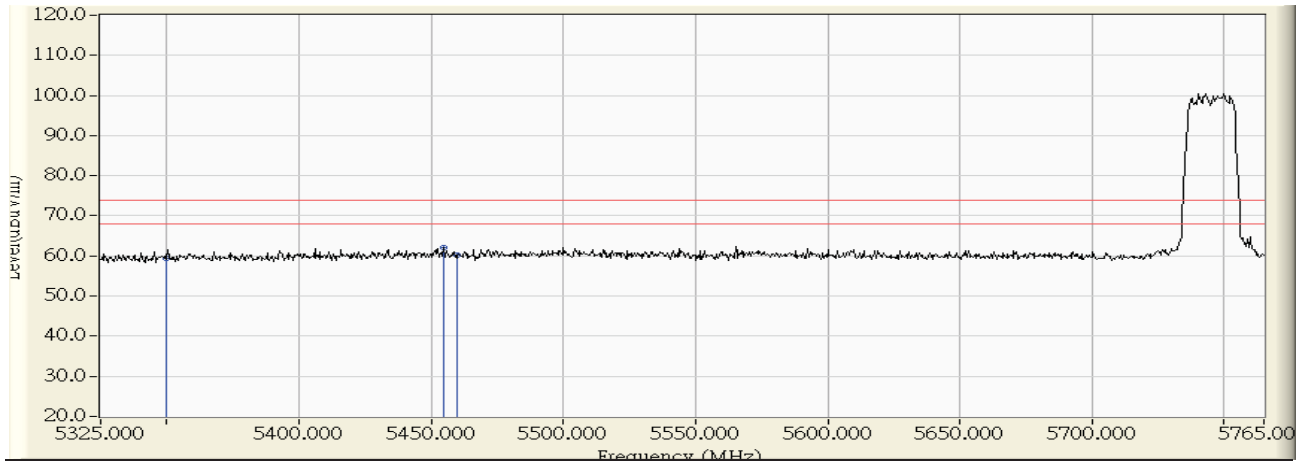


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	7250.000	5.476	45.059	50.535	-3.465	54.000	AVERAGE
2	7735.300	6.421	45.460	51.881	-2.119	54.000	AVERAGE
3	* 7750.000	6.446	45.452	51.898	-2.102	54.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	Time : 2013/11/28 - 11:35
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : AC 120V/60Hz
EUT : Wireless Extender	Note : 80211n 20MHz_CH149

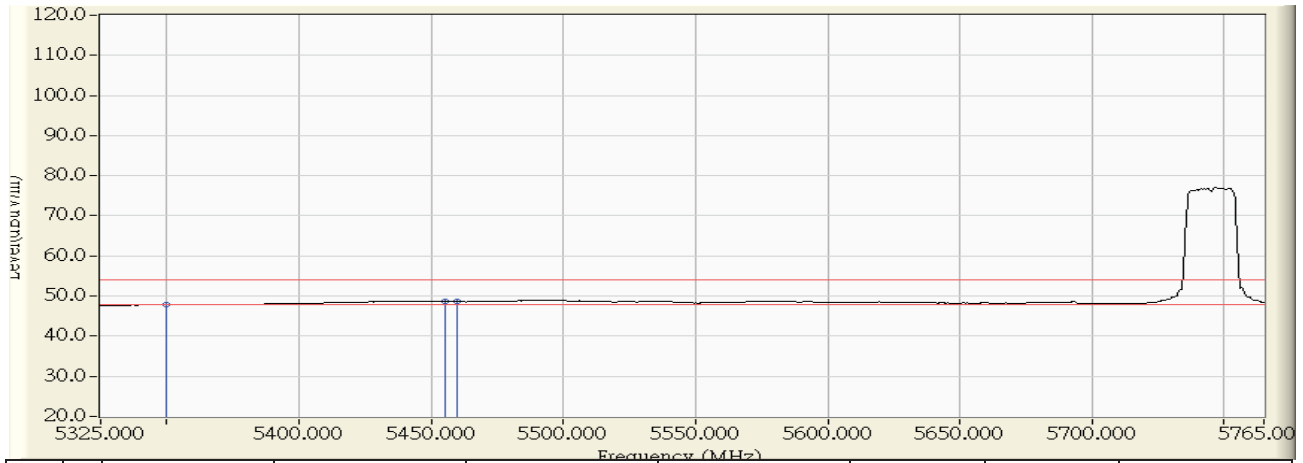


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	5350.000	2.526	56.774	59.300	-14.700	74.000	PEAK
2	* 5454.800	3.339	58.701	62.040	-11.960	74.000	PEAK
3	5460.000	3.379	56.735	60.114	-13.886	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	Time : 2013/11/28 - 11:38
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : AC 120V/60Hz
EUT : Wireless Extender	Note : 80211n 20MHz_CH149

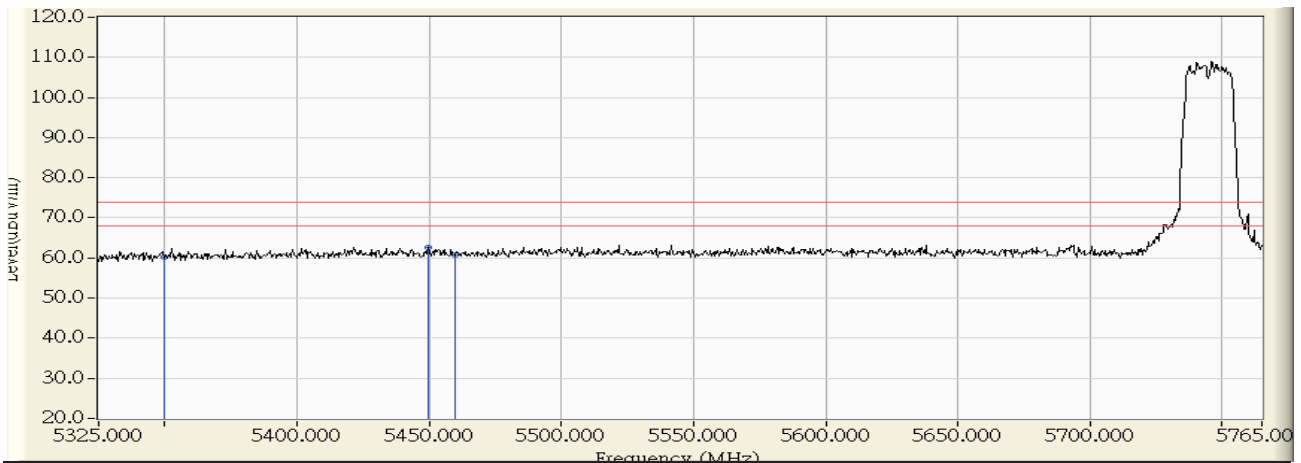


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	5350.000	2.526	45.368	47.894	-6.106	54.000	AVERAGE
2	5455.240	3.343	45.268	48.610	-5.390	54.000	AVERAGE
3	* 5460.000	3.379	45.232	48.611	-5.389	54.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	Time : 2013/11/28 - 11:43
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : AC 120V/60Hz
EUT : Wireless Extender	Note : 80211n 20MHz_CH149

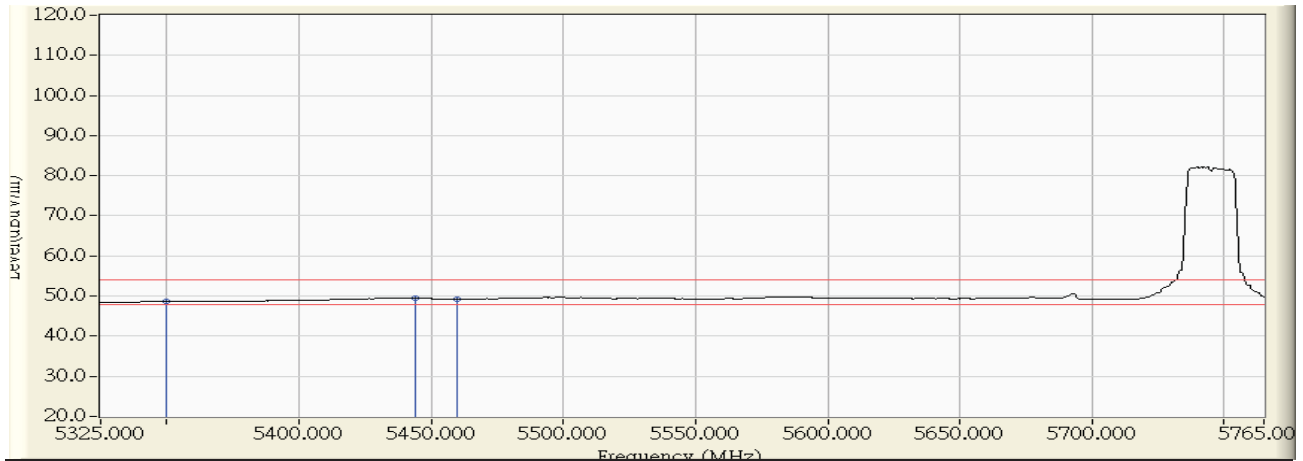


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	5350.000	2.526	57.724	60.250	-13.750	74.000	PEAK
2	* 5449.520	3.297	59.455	62.753	-11.247	74.000	PEAK
3	5460.000	3.379	57.268	60.647	-13.353	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	Time : 2013/11/28 - 11:45
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : AC 120V/60Hz
EUT : Wireless Extender	Note : 80211n 20MHz_CH149

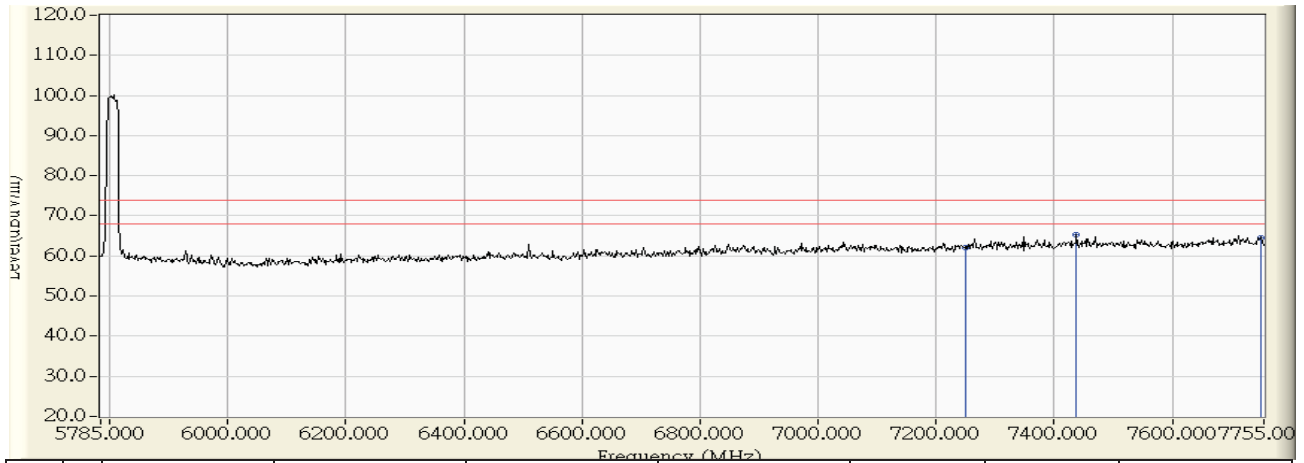


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	5350.000	2.526	46.202	48.728	-5.272	54.000	AVERAGE
2	* 5443.800	3.253	46.108	49.362	-4.638	54.000	AVERAGE
3	5460.000	3.379	45.902	49.281	-4.719	54.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	Time : 2013/11/28 - 11:50
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : AC 120V/60Hz
EUT : Wireless Extender	Note : 80211n 20MHz_CH161

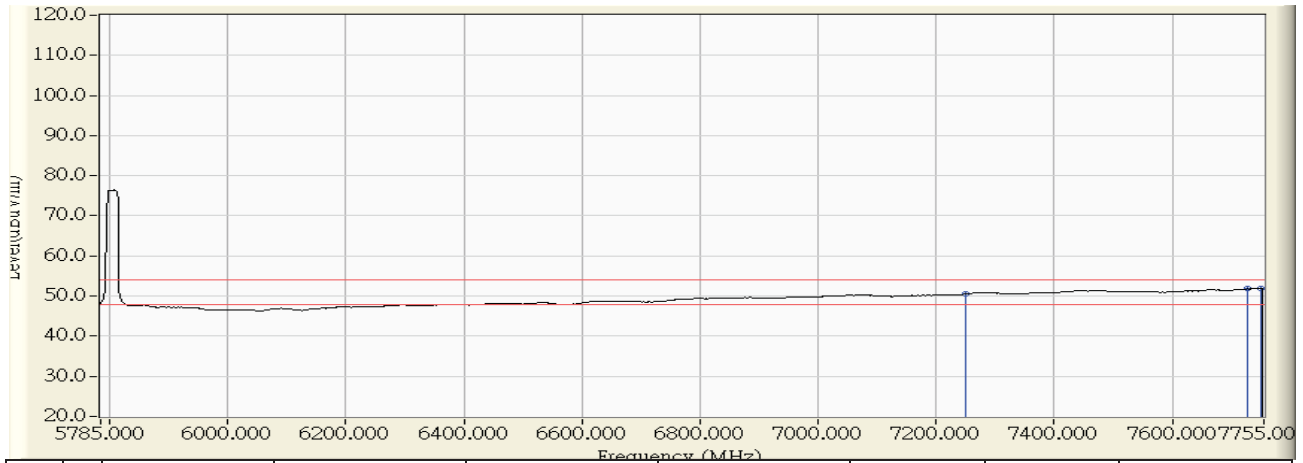


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	7250.000	5.476	56.565	62.041	-11.959	74.000	PEAK
2	* 7437.830	5.882	59.295	65.177	-8.823	74.000	PEAK
3	7750.000	6.446	58.001	64.447	-9.553	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	Time : 2013/11/28 - 11:59
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : AC 120V/60Hz
EUT : Wireless Extender	Note : 80211n 20MHz_CH161

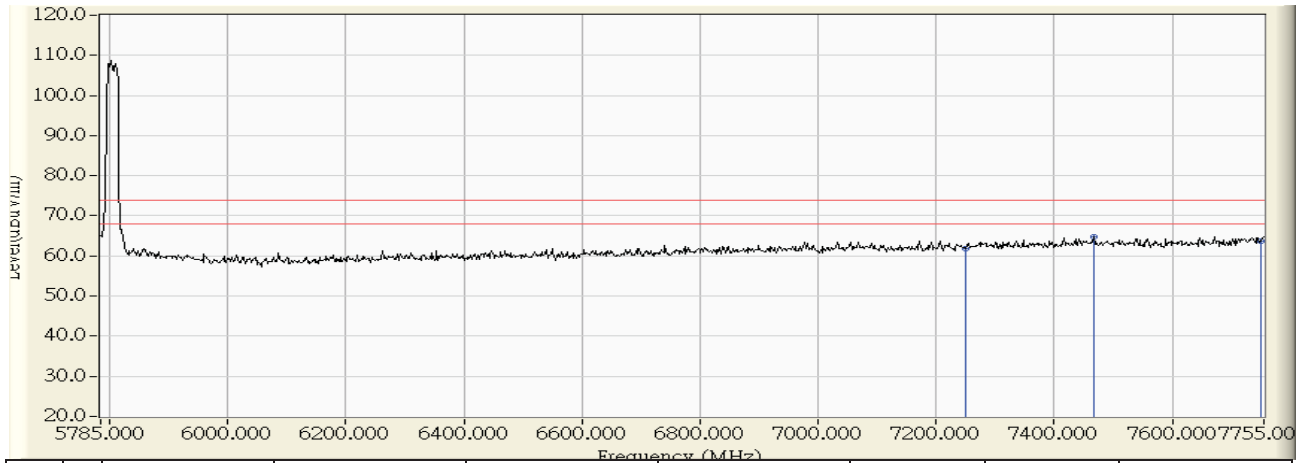


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	7250.000	5.476	45.001	50.477	-3.523	54.000	AVERAGE
2	7727.420	6.408	45.365	51.773	-2.227	54.000	AVERAGE
3	* 7750.000	6.446	45.387	51.833	-2.167	54.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	Time : 2013/11/28 - 13:07
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : AC 120V/60Hz
EUT : Wireless Extender	Note : 80211n 20MHz_CH161

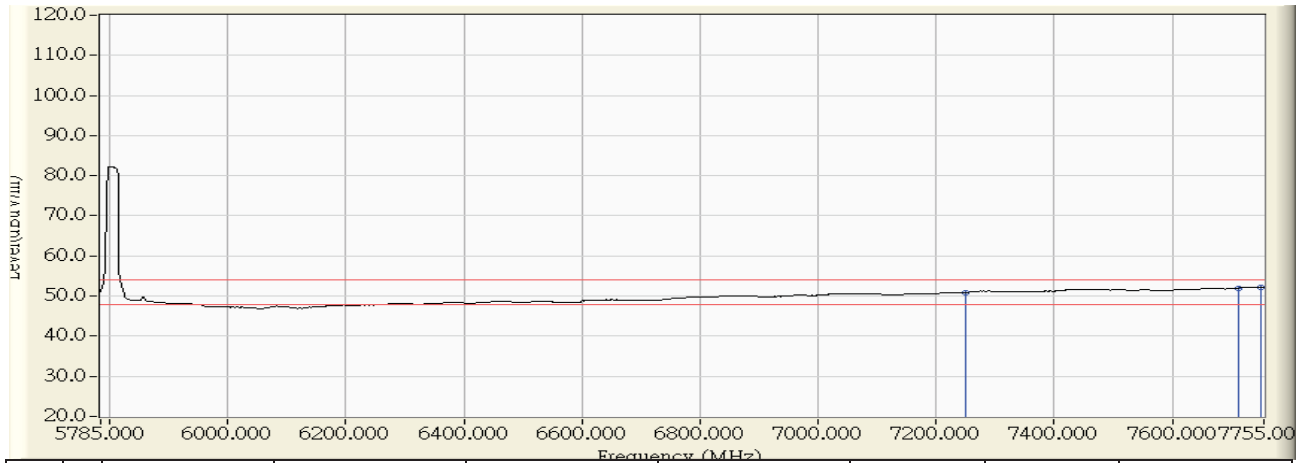


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	7250.000	5.476	56.419	61.895	-12.105	74.000	PEAK
2	* 7467.380	5.946	58.878	64.824	-9.176	74.000	PEAK
3	7750.000	6.446	57.273	63.719	-10.281	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	Time : 2013/11/28 - 13:16
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : AC 120V/60Hz
EUT : Wireless Extender	Note : 80211n 20MHz_CH161

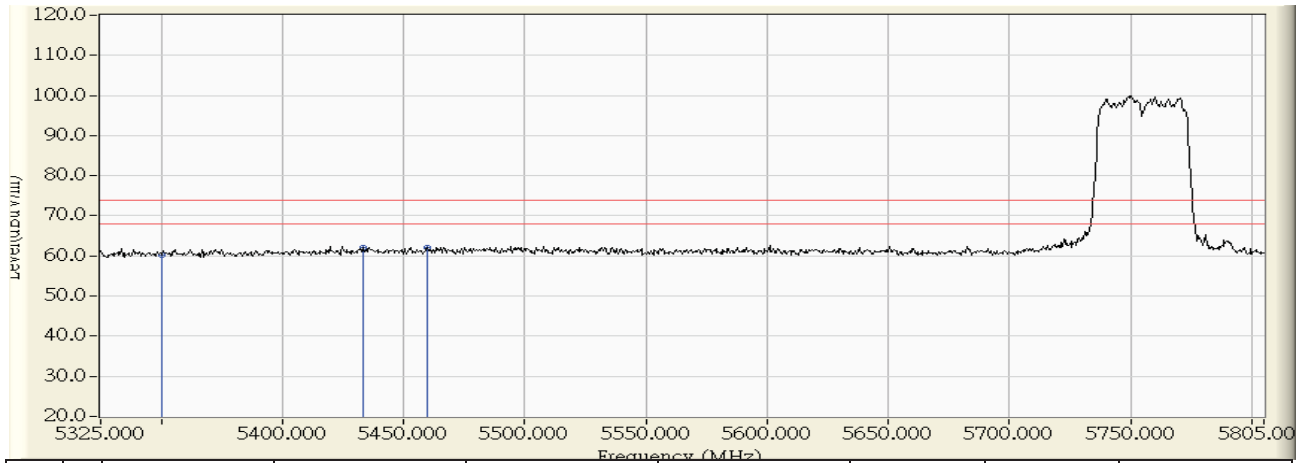


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	7250.000	5.476	45.401	50.877	-3.123	54.000	AVERAGE
2	7711.660	6.380	45.653	52.033	-1.967	54.000	AVERAGE
3	* 7750.000	6.446	45.795	52.241	-1.759	54.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	Time : 2013/11/28 - 13:23
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : AC 120V/60Hz
EUT : Wireless Extender	Note : 80211n 40MHz_CH151

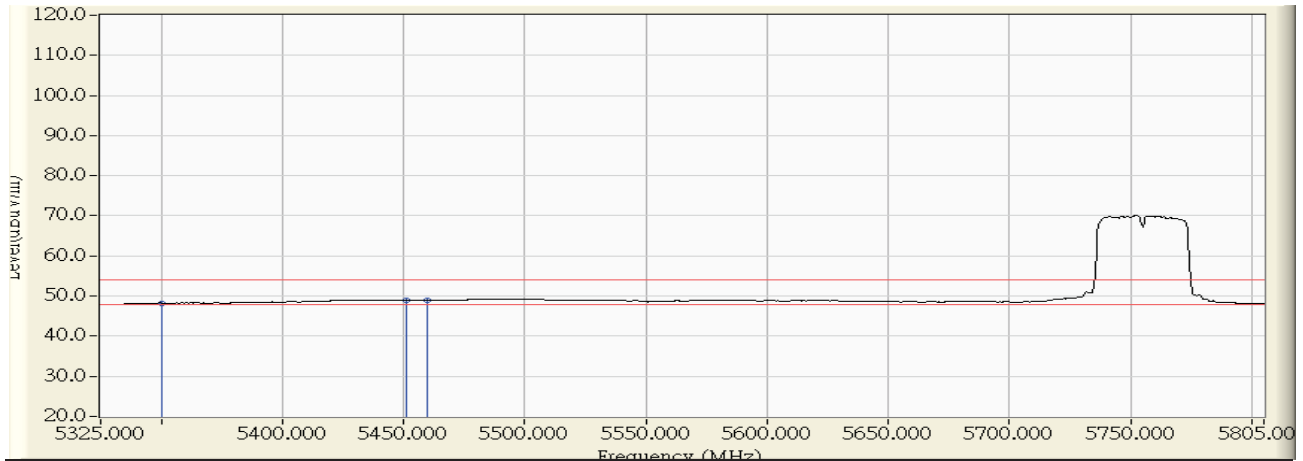


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	5350.000	2.526	57.815	60.341	-13.659	74.000	PEAK
2	5433.000	3.169	58.806	61.976	-12.024	74.000	PEAK
3	* 5460.000	3.379	58.634	62.013	-11.987	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	Time : 2013/11/28 - 13:24
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : AC 120V/60Hz
EUT : Wireless Extender	Note : 80211n 40MHz_CH151

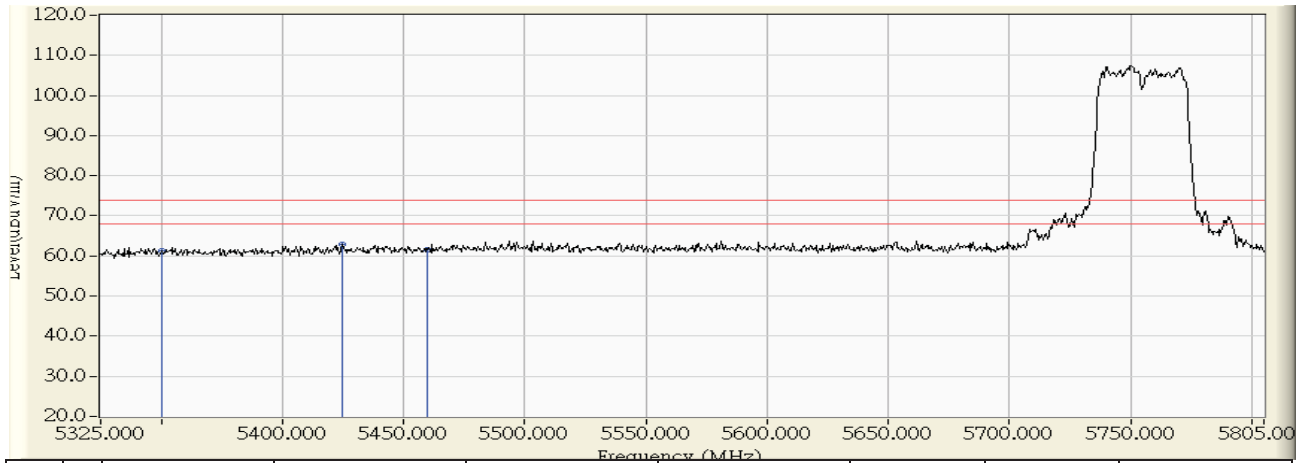


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	5350.000	2.526	45.733	48.259	-5.741	54.000	AVERAGE
2	5451.240	3.311	45.667	48.978	-5.022	54.000	AVERAGE
3	* 5460.000	3.379	45.613	48.992	-5.008	54.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	Time : 2013/11/28 - 13:28
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : AC 120V/60Hz
EUT : Wireless Extender	Note : 80211n 40MHz_CH151

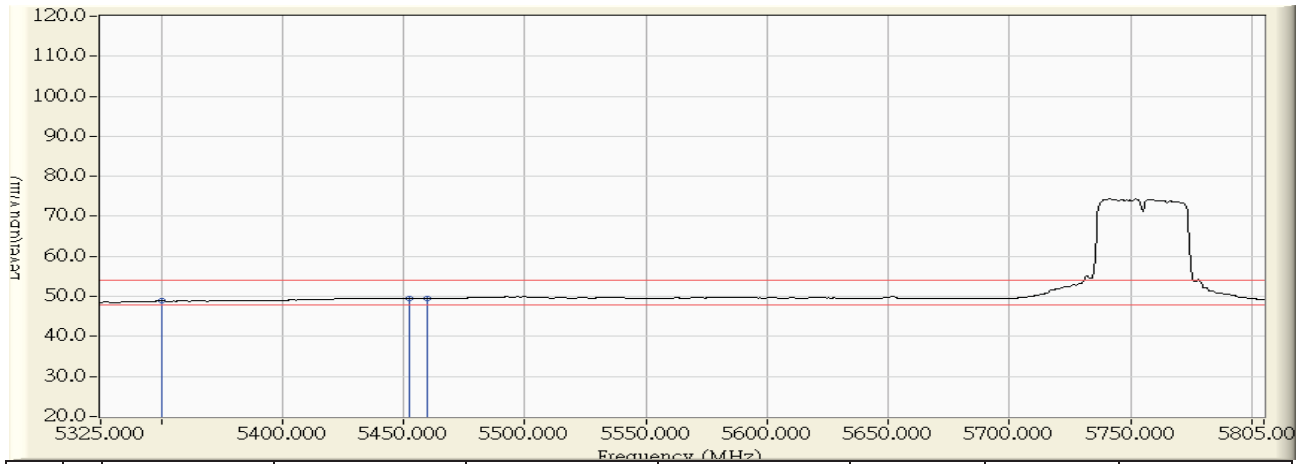


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	5350.000	2.526	58.646	61.172	-12.828	74.000	PEAK
2	* 5424.840	3.107	59.810	62.917	-11.083	74.000	PEAK
3	5460.000	3.379	58.292	61.671	-12.329	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	Time : 2013/11/28 - 13:30
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : AC 120V/60Hz
EUT : Wireless Extender	Note : _80211n 40MHz_CH151

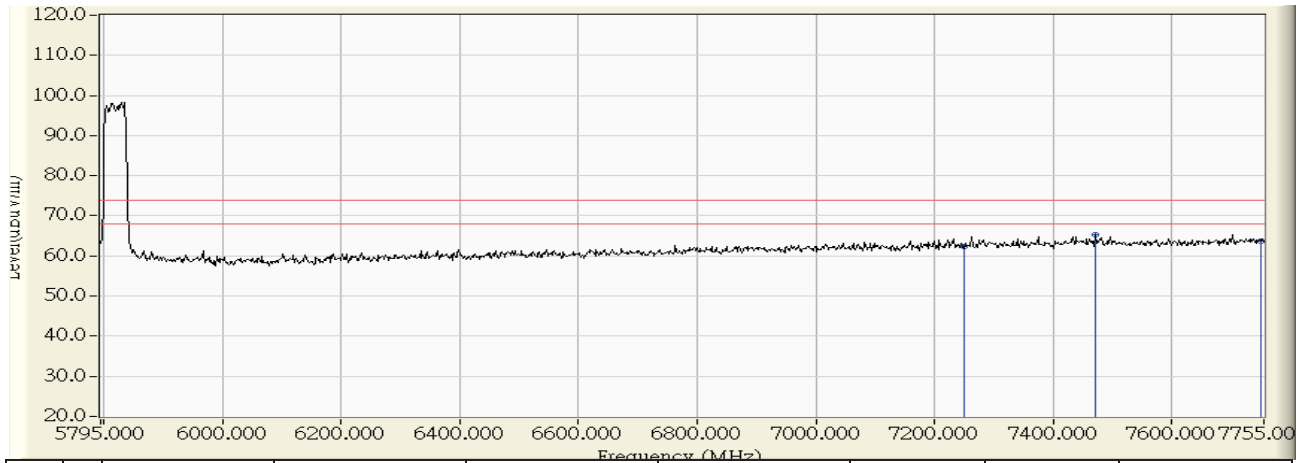


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	5350.000	2.526	46.303	48.829	-5.171	54.000	AVERAGE
2	* 5452.200	3.319	46.145	49.464	-4.536	54.000	AVERAGE
3	5460.000	3.379	46.072	49.451	-4.549	54.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	Time : 2013/11/28 - 13:36
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : AC 120V/60Hz
EUT : Wireless Extender	Note : 80211n 40MHz_CH159

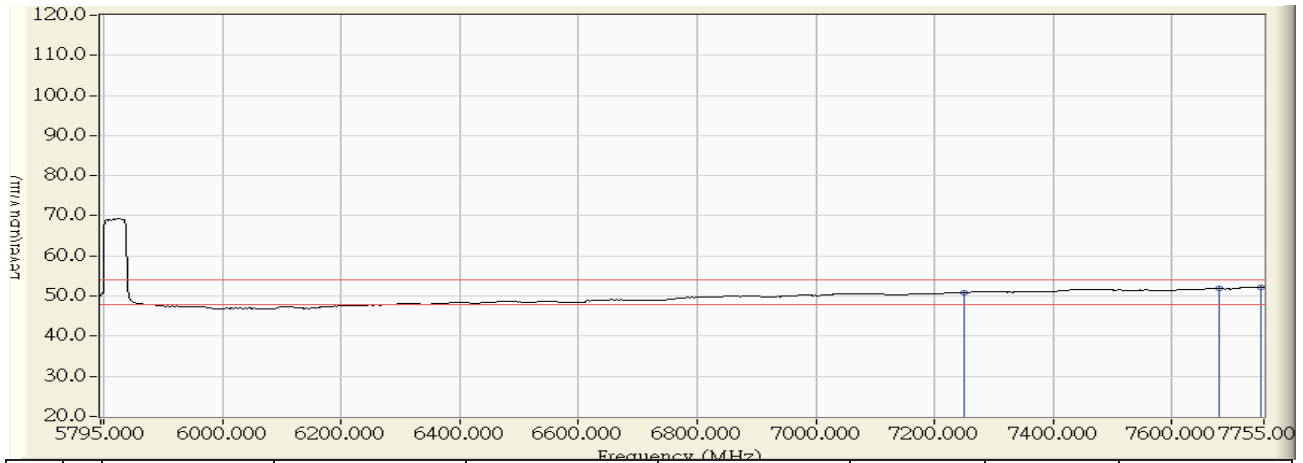


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	7250.000	5.476	56.851	62.327	-11.673	74.000	PEAK
2	* 7470.800	5.954	59.280	65.233	-8.767	74.000	PEAK
3	7750.000	6.446	57.296	63.742	-10.258	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	Time : 2013/11/28 - 13:39
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : AC 120V/60Hz
EUT : Wireless Extender	Note : 80211n 40MHz_CH159

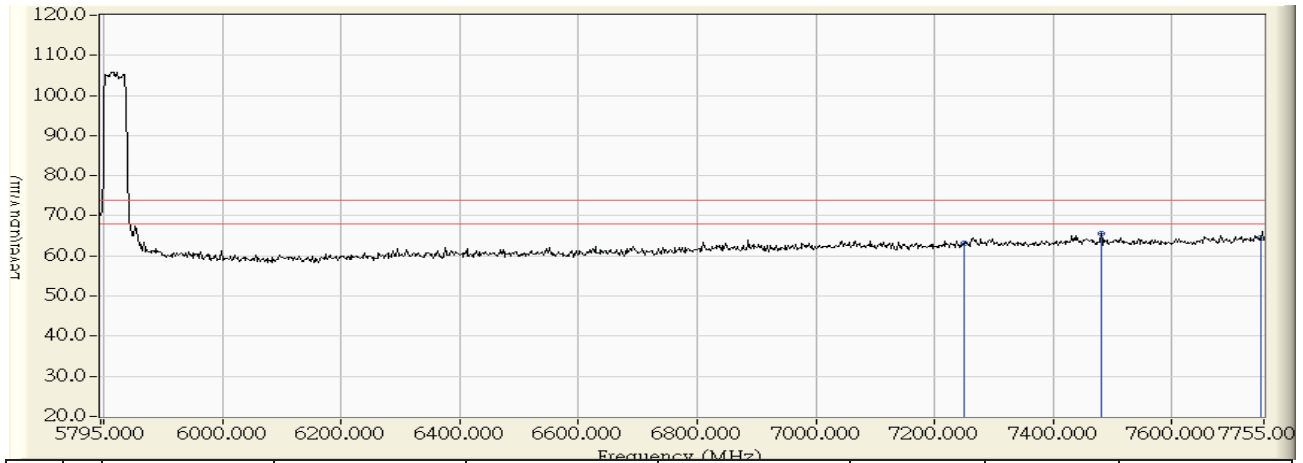


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	7250.000	5.476	45.308	50.784	-3.216	54.000	AVERAGE
2	7678.560	6.323	45.555	51.878	-2.122	54.000	AVERAGE
3	* 7750.000	6.446	45.751	52.197	-1.803	54.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	Time : 2013/11/28 - 13:43
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : AC 120V/60Hz
EUT : Wireless Extender	Note : 80211n 40MHz_CH159

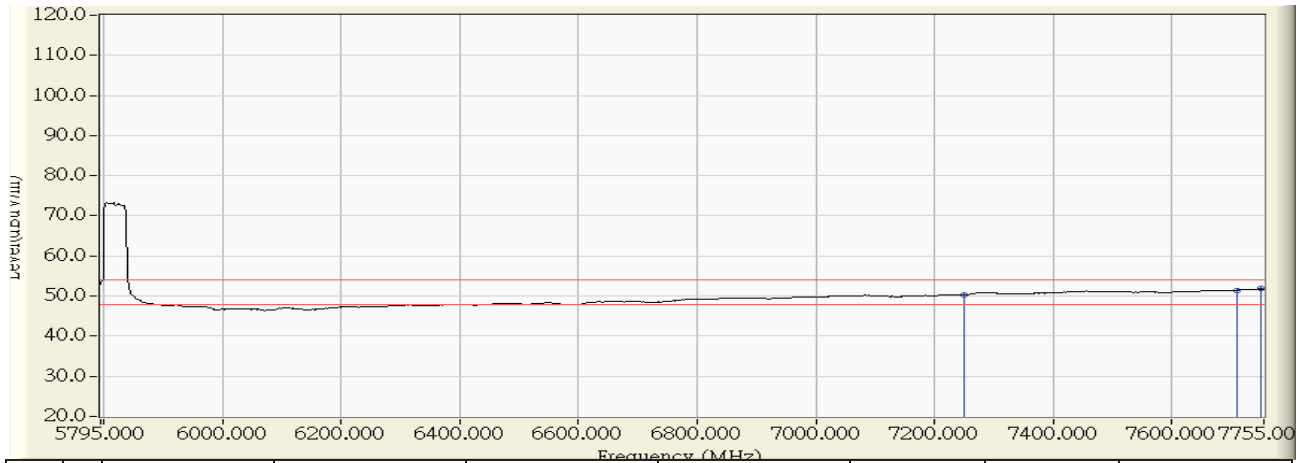


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	7250.000	5.476	57.669	63.145	-10.855	74.000	PEAK
2	* 7480.600	5.974	59.608	65.582	-8.418	74.000	PEAK
3	7750.000	6.446	57.992	64.438	-9.562	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	Time : 2013/11/28 - 13:53
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : AC 120V/60Hz
EUT : Wireless Extender	Note : 80211n 40MHz_CH159



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	7250.000	5.476	44.839	50.315	-3.685	54.000	AVERAGE
2	7709.920	6.378	45.120	51.497	-2.503	54.000	AVERAGE
3	* 7750.000	6.446	45.328	51.774	-2.226	54.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

7. Occupied Bandwidth

7.1. Test Equipment

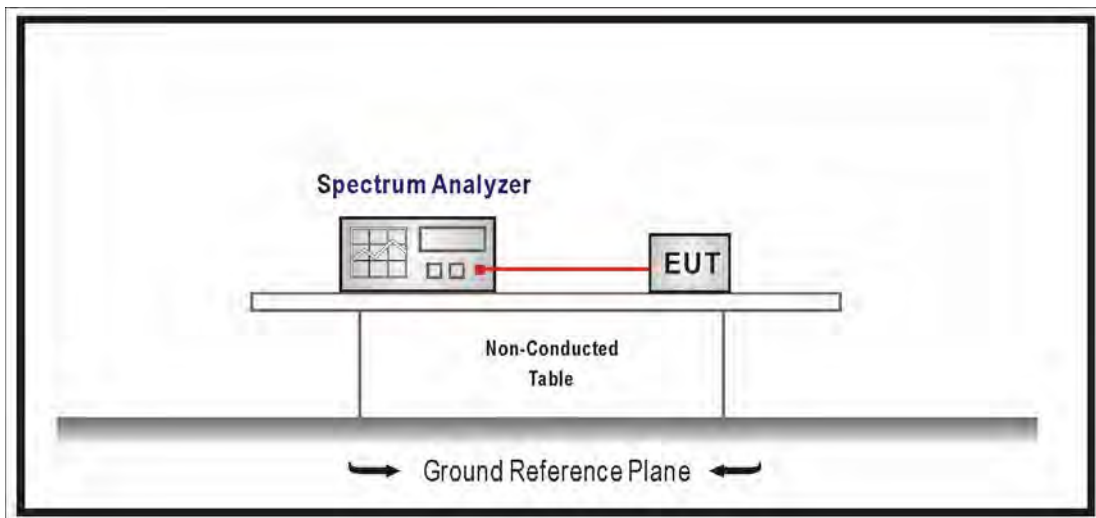
The following test equipments are used during the test:

Occupied Bandwidth / SR7

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
Spectrum Analyzer	Agilent	N9010A-EXA	US47140172	2014/08/05

Note: 1. All equipments that need to calibrate are with calibration period of 1 year.

7.2. Test Setup



7.3. Test Procedures

The EUT was setup according to ANSI C63.4: 2009; tested according to DTS test procedure of Oct. 2012 KDB5580744 for compliance to FCC 47CFR 15.247 requirements.

Set RBW = 1% of EBW, Span greater than RBW.

7.4. Limits

The 6 dB bandwidth must be greater than 500 kHz.

7.5. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247: 2012

7.6. Uncertainty

The measurement uncertainty is defined as $\pm 150\text{Hz}$

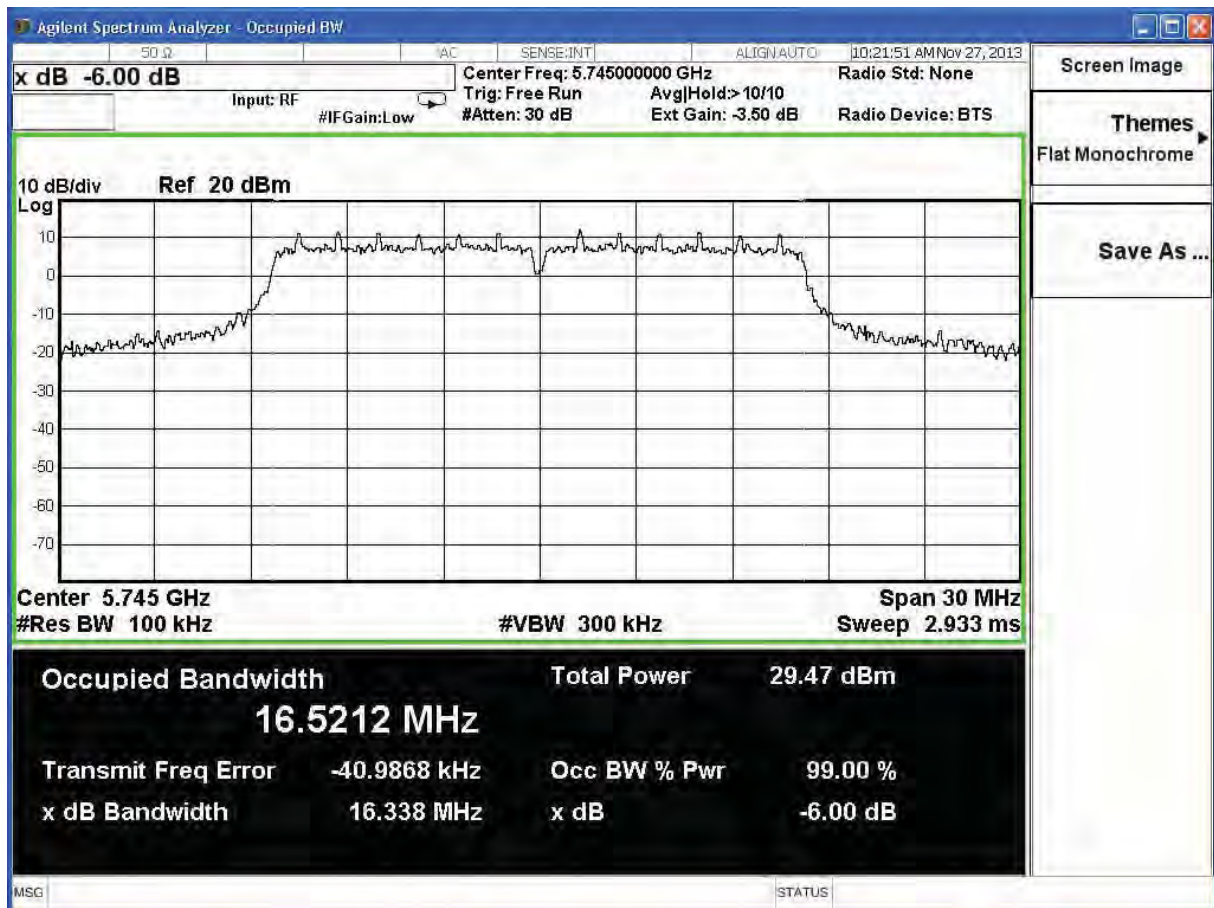
7.7. Test Result

Product	Wireless Extender		
Test Item	Occupied Bandwidth		
Test Mode	Mode 1: Transmit		
Date of Test	2013/11/27	Test Site	SR7

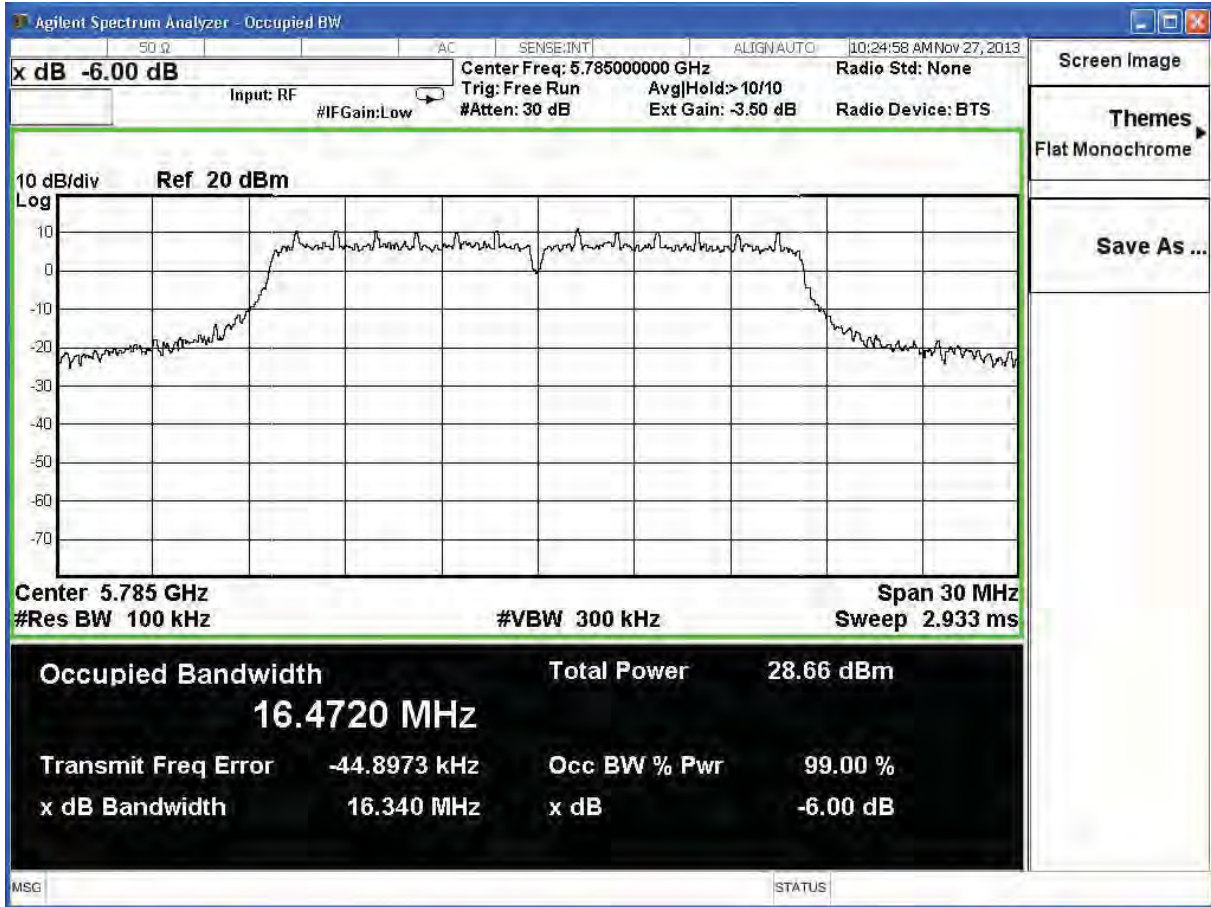
802.11 a (ANT0)

Channel No.	Frequency (MHz)	Measurement Level (MHz)	Required Limit (MHz)	Result
149	5745	16.34	≥ 0.5	Pass
157	5785	16.34	≥ 0.5	Pass
161	5805	16.33	≥ 0.5	Pass

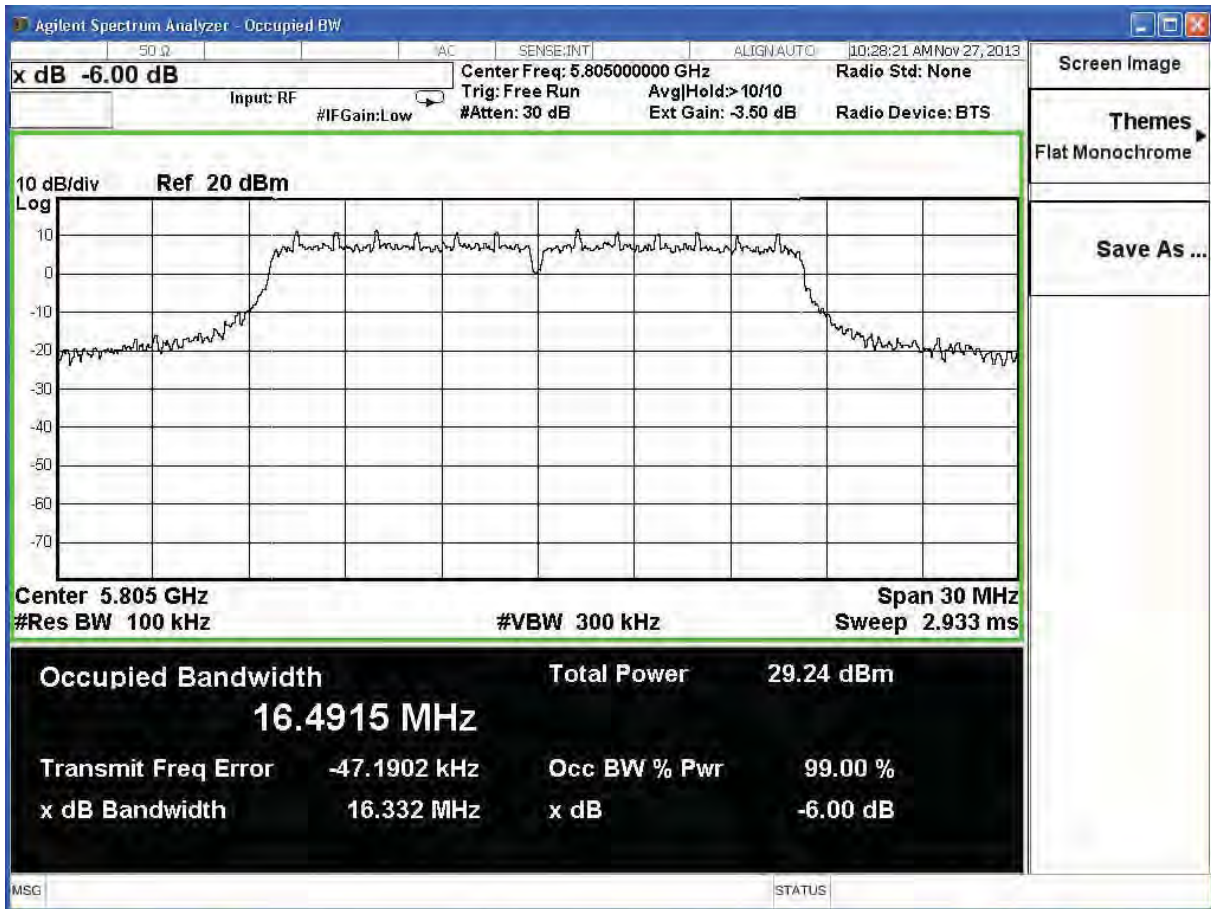
Channel 149



Channel 157



Channel 161

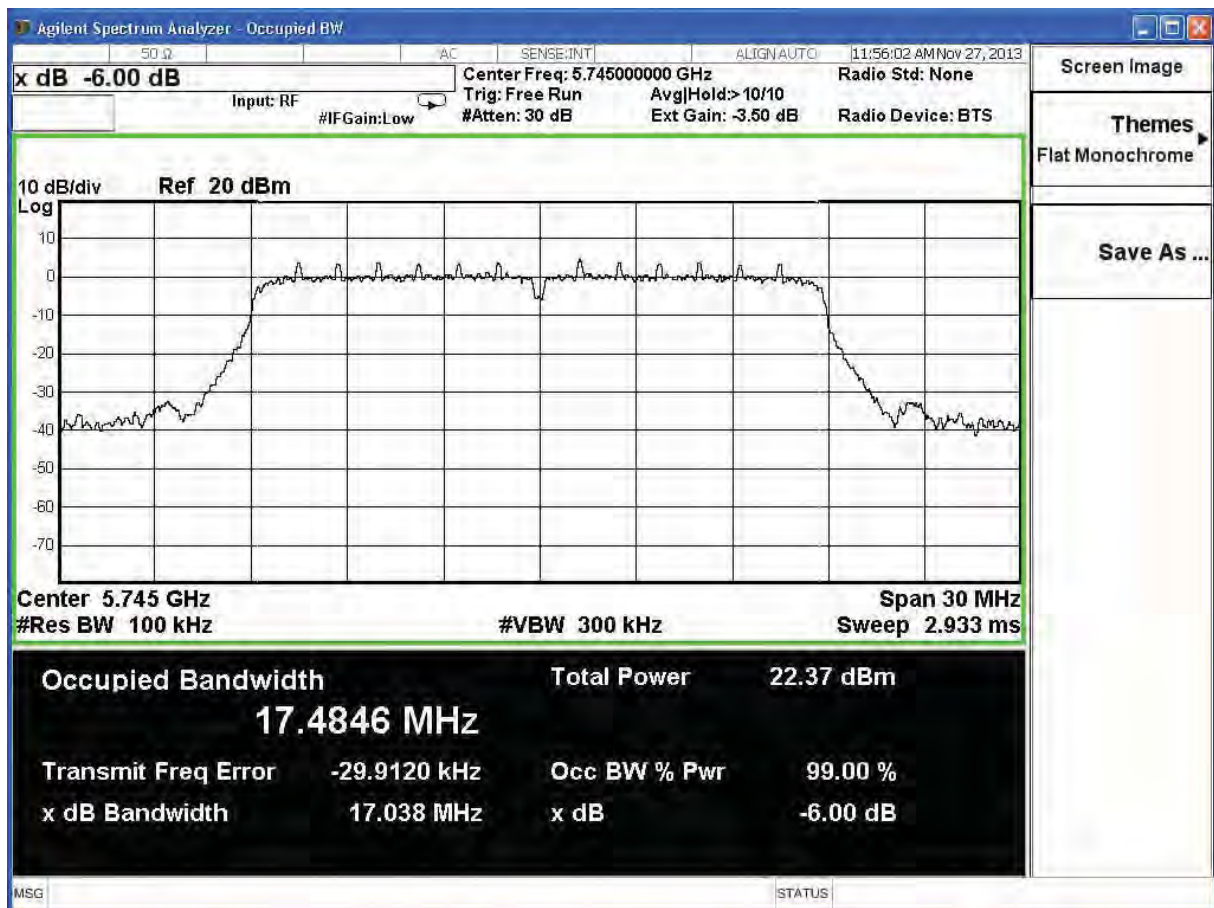


Product	Wireless Extender		
Test Item	Occupied Bandwidth		
Test Mode	Mode 1: Transmit		
Date of Test	2013/11/27	Test Site	SR7

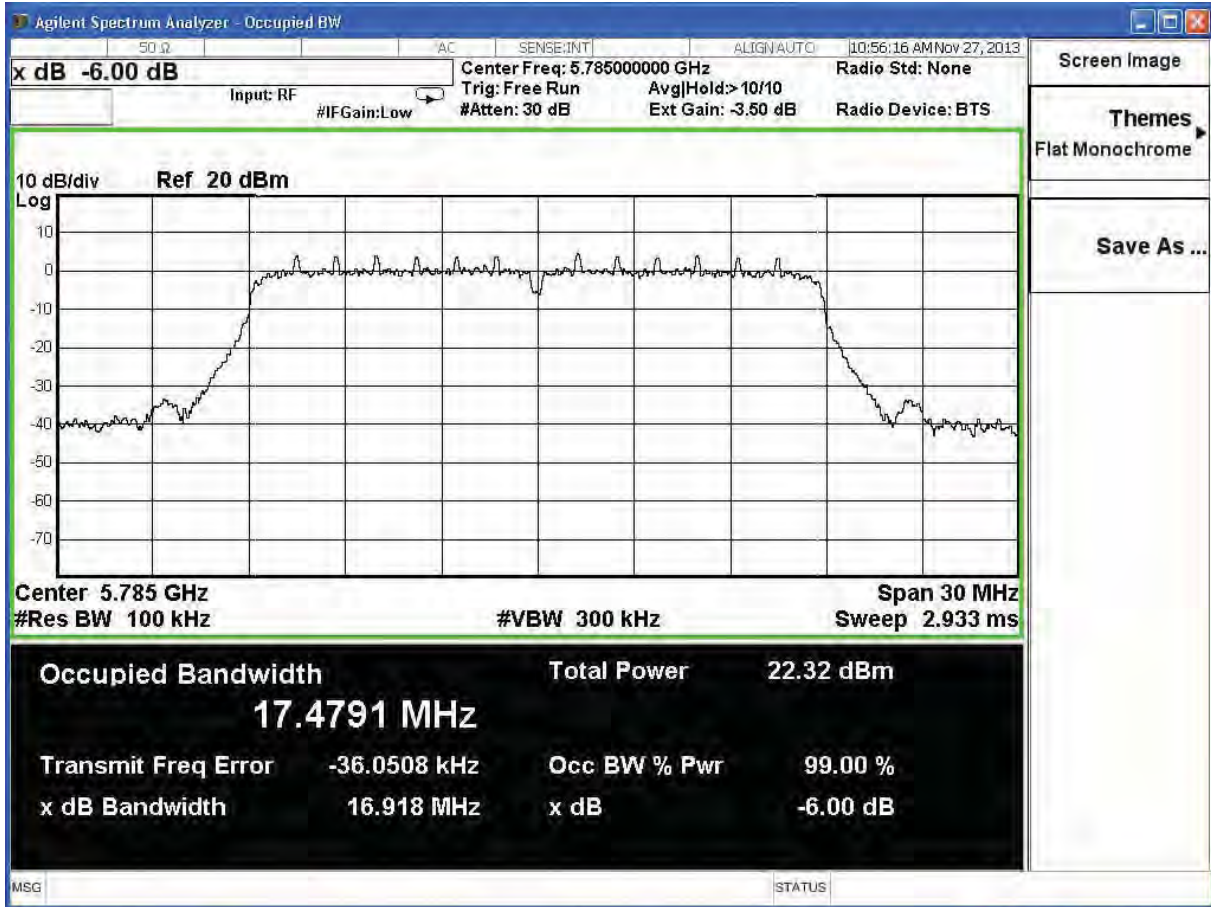
IEEE 802.11n 20MHz (ANT0)

Channel No.	Frequency (MHz)	Measurement Level (MHz)	Required Limit (MHz)	Result
149	5745	17.04	≥ 0.5	Pass
157	5785	16.92	≥ 0.5	Pass
161	5805	16.80	≥ 0.5	Pass

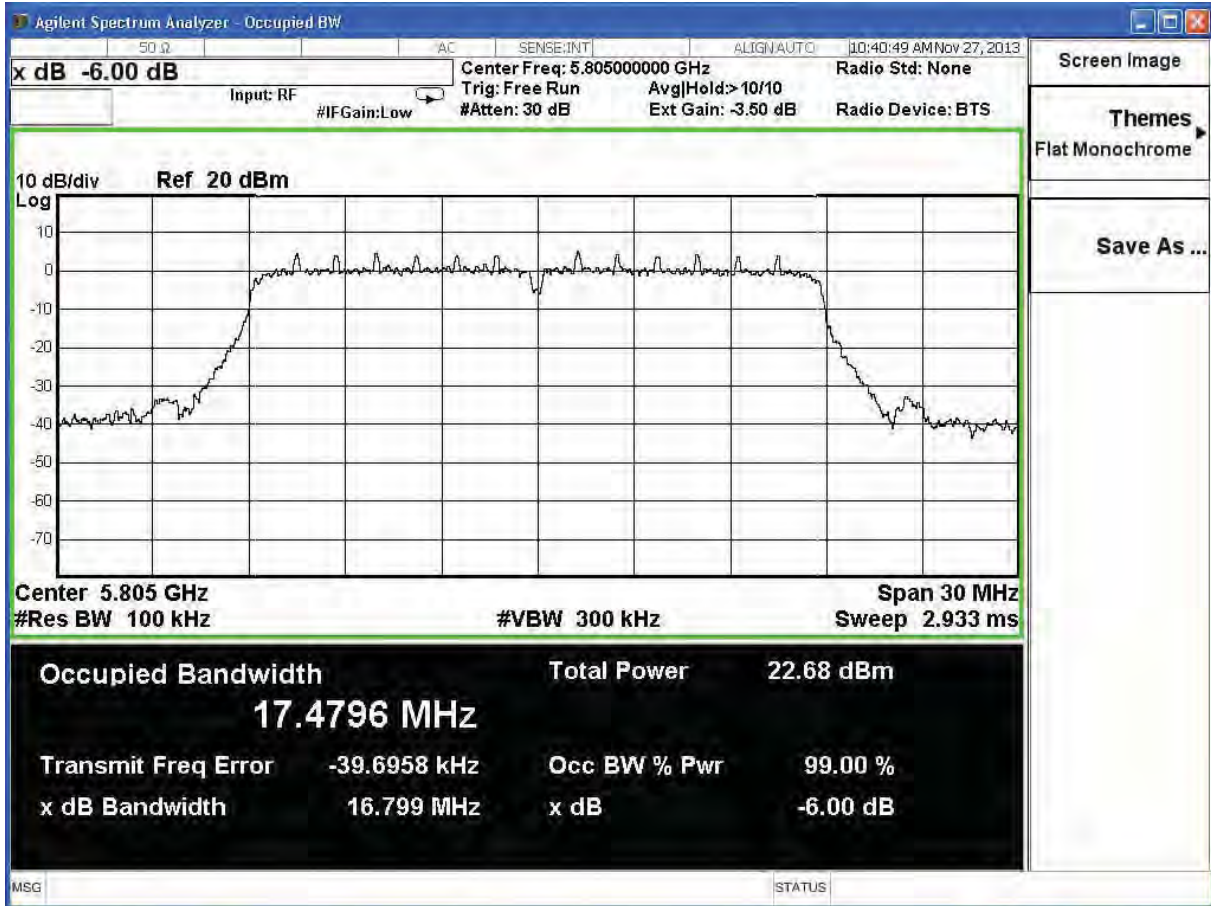
Channel 149



Channel 157



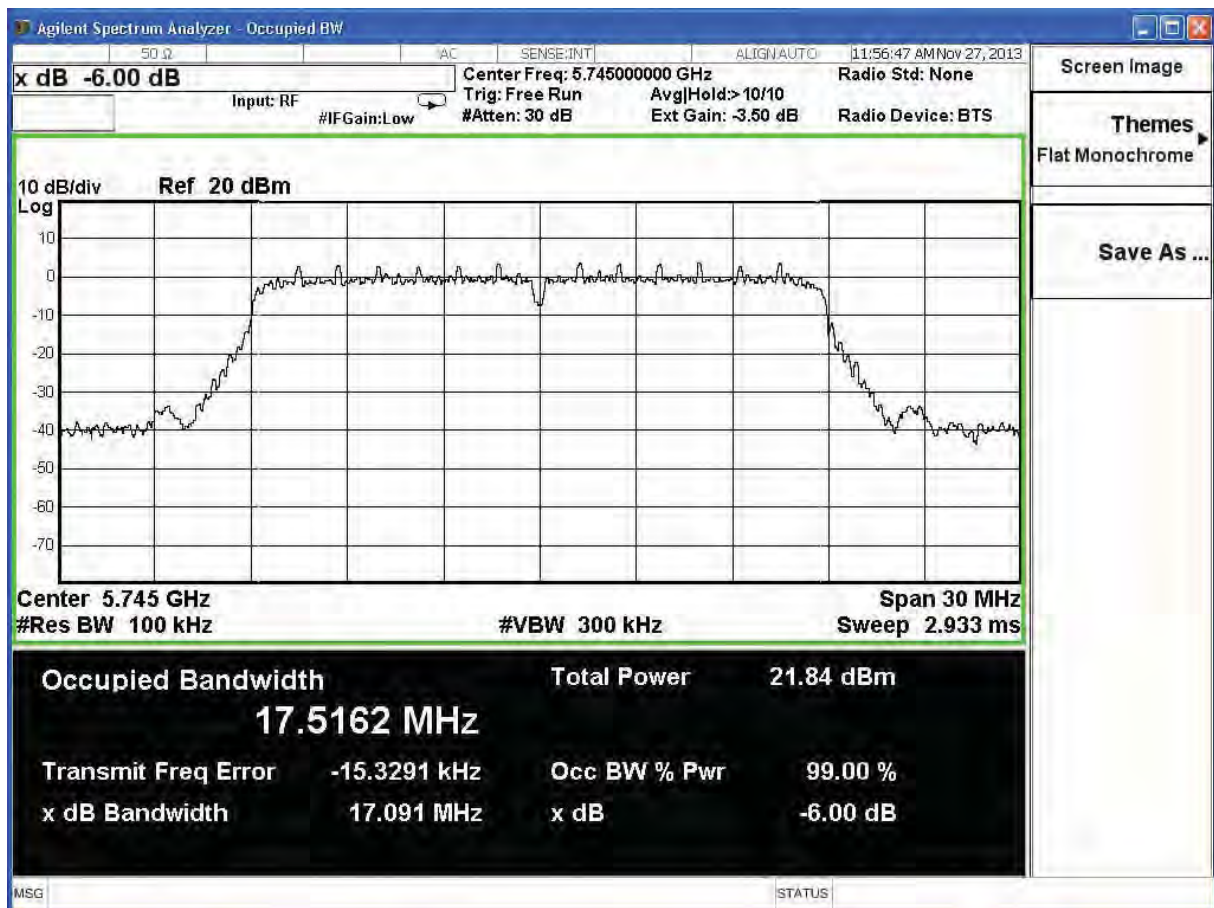
Channel 161



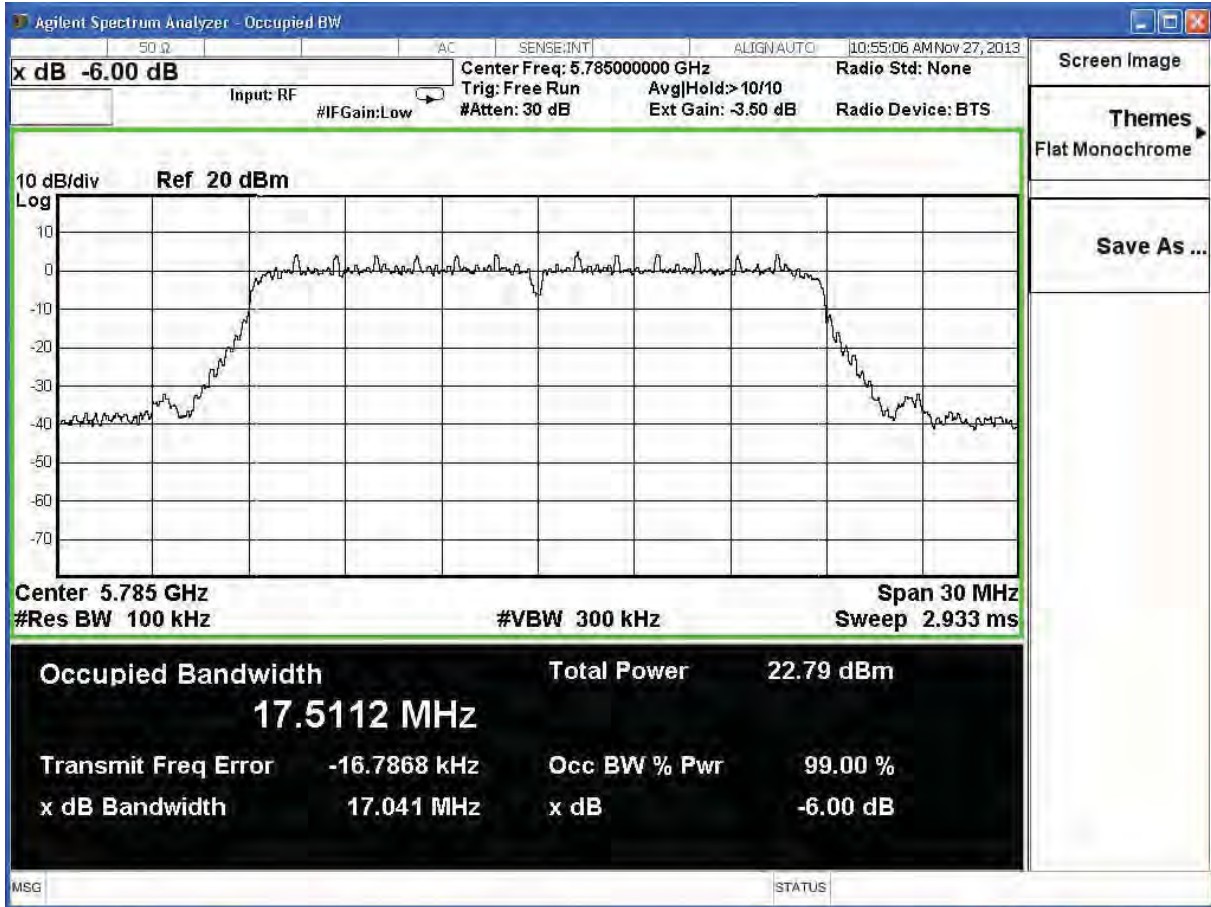
Product	Wireless Extender		
Test Item	Occupied Bandwidth		
Test Mode	Mode 1: Transmit		
Date of Test	2013/11/27	Test Site	SR7

IEEE 802.11n 20MHz (ANT1)				
Channel No.	Frequency (MHz)	Measurement Level (MHz)	Required Limit (MHz)	Result
149	5745	17.09	≥ 0.5	Pass
157	5785	17.04	≥ 0.5	Pass
161	5805	17.10	≥ 0.5	Pass

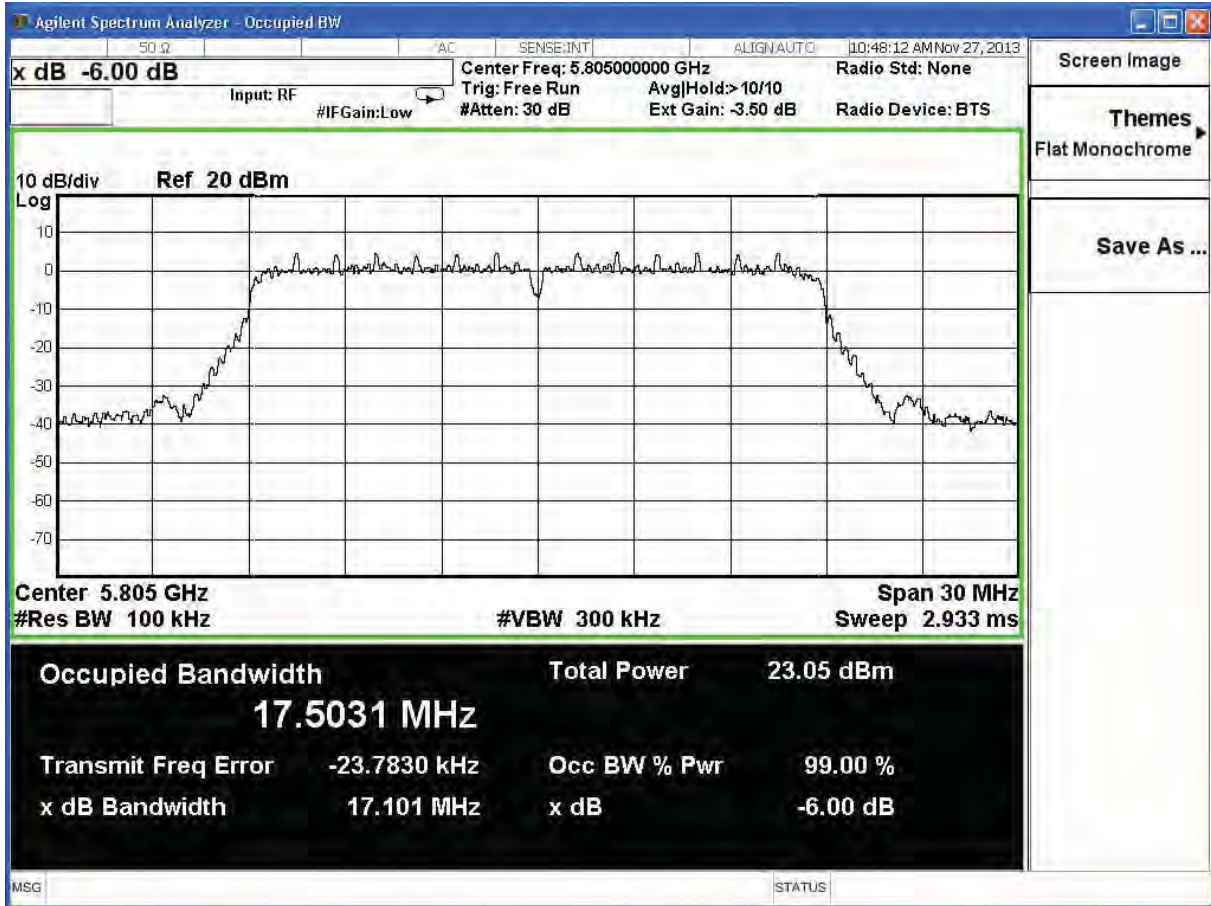
Channel 149



Channel 157



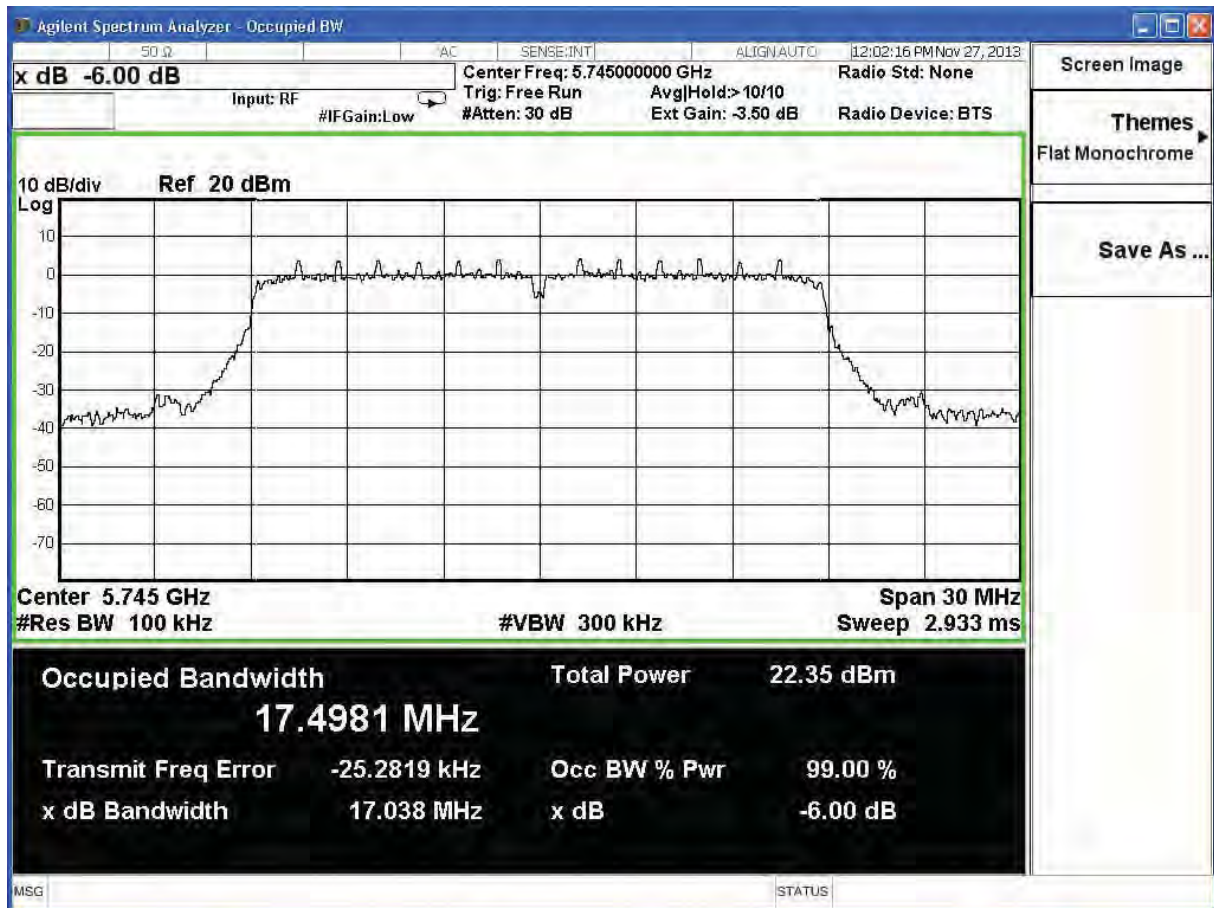
Channel 161



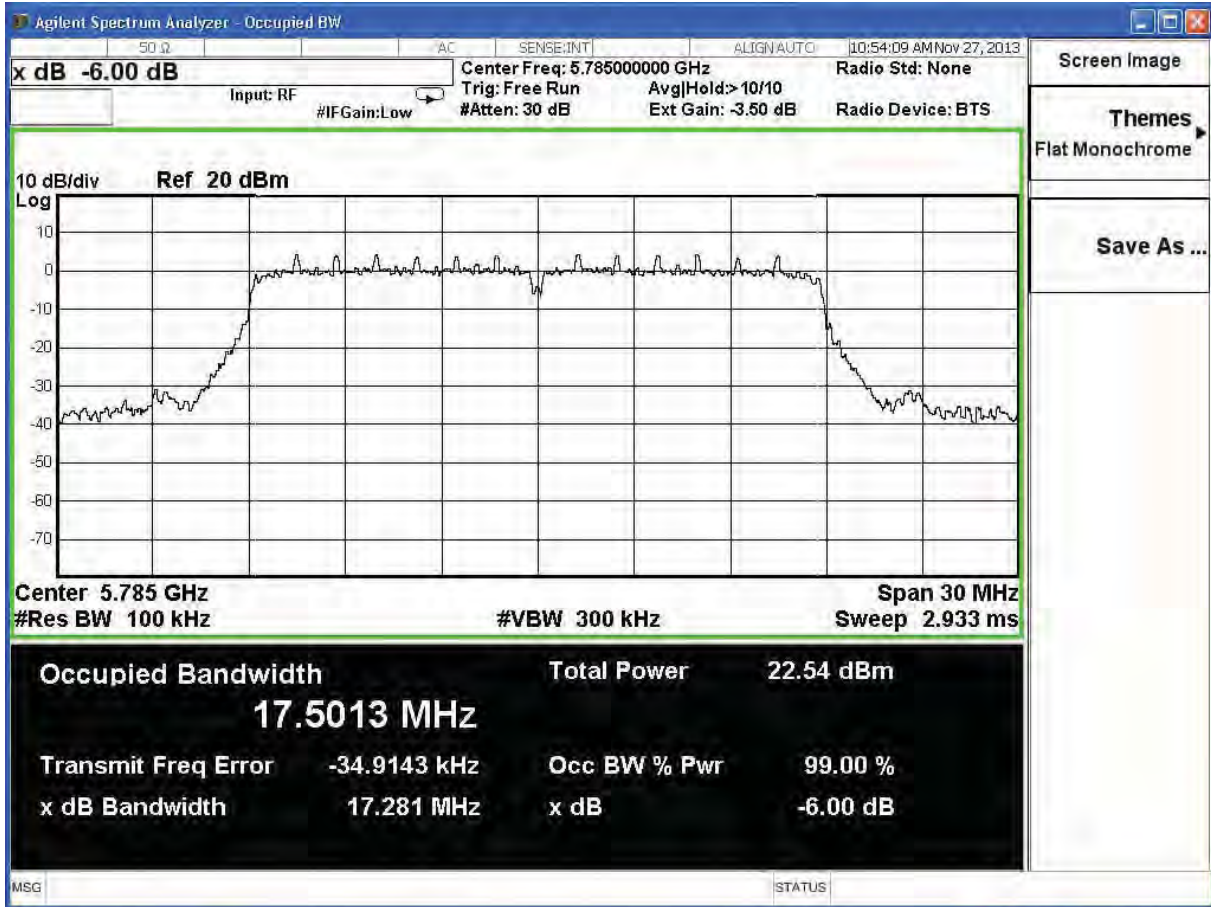
Product	Wireless Extender		
Test Item	Occupied Bandwidth		
Test Mode	Mode 1: Transmit		
Date of Test	2013/11/27	Test Site	SR7

IEEE 802.11n 20MHz (ANT2)				
Channel No.	Frequency (MHz)	Measurement Level (MHz)	Required Limit (MHz)	Result
149	5745	17.04	≥ 0.5	Pass
157	5785	17.28	≥ 0.5	Pass
161	5805	17.28	≥ 0.5	Pass

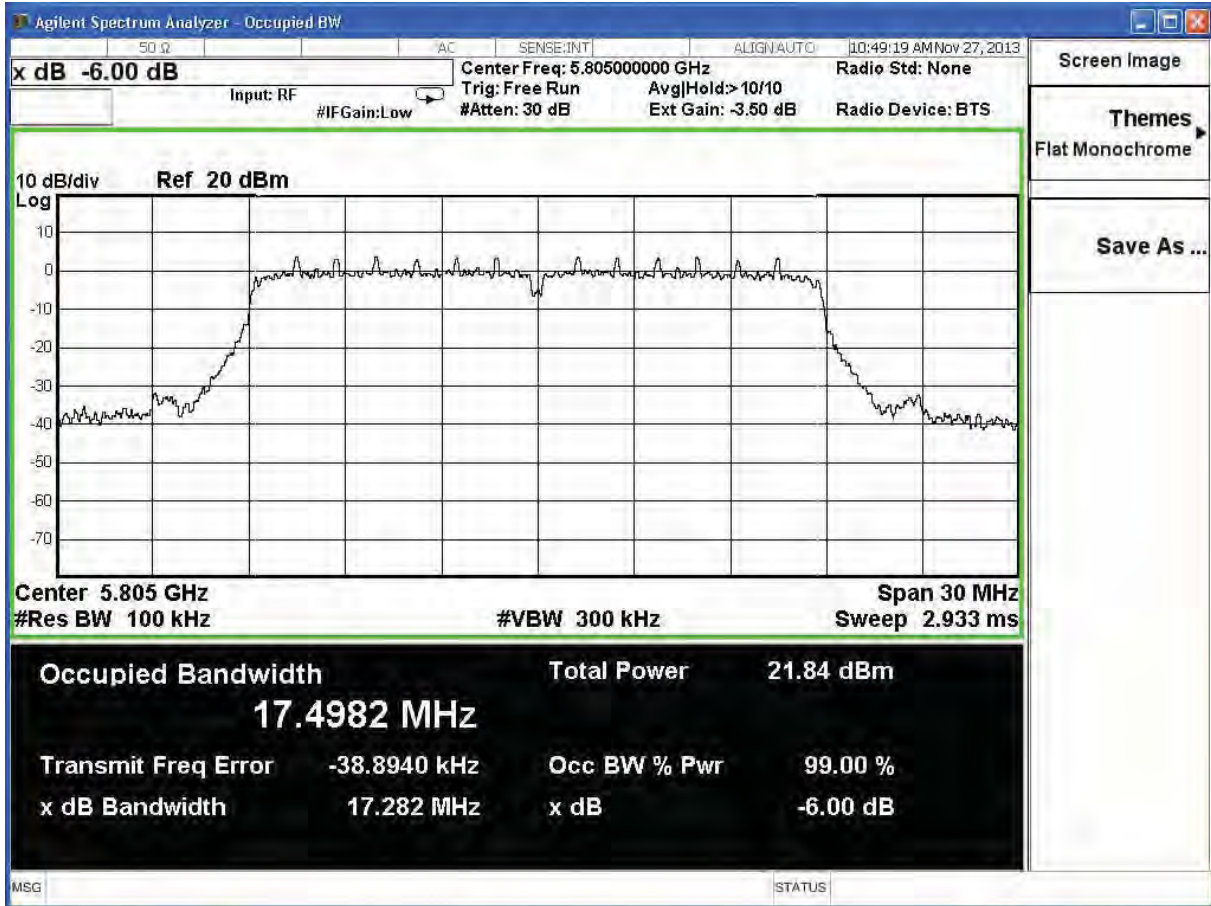
Channel 149



Channel 157



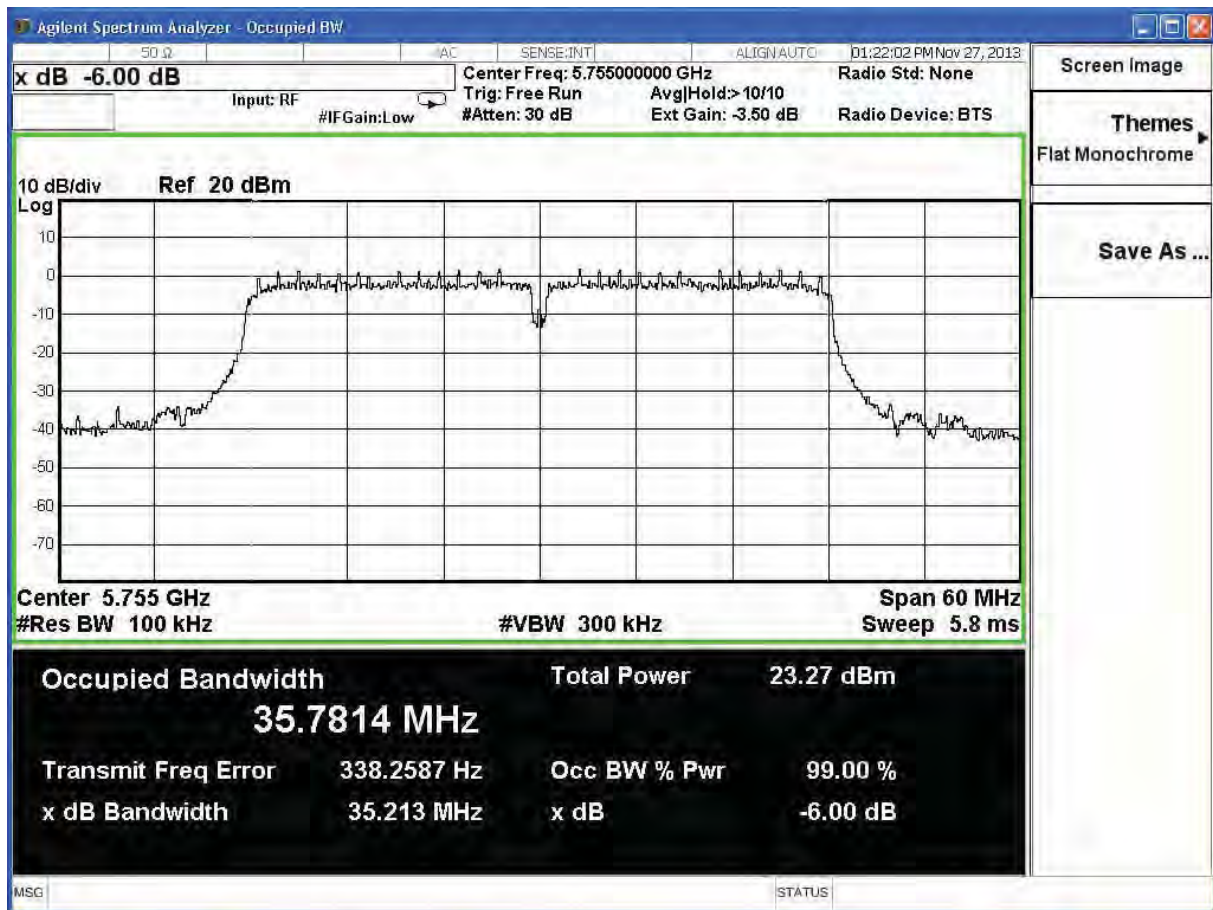
Channel 161



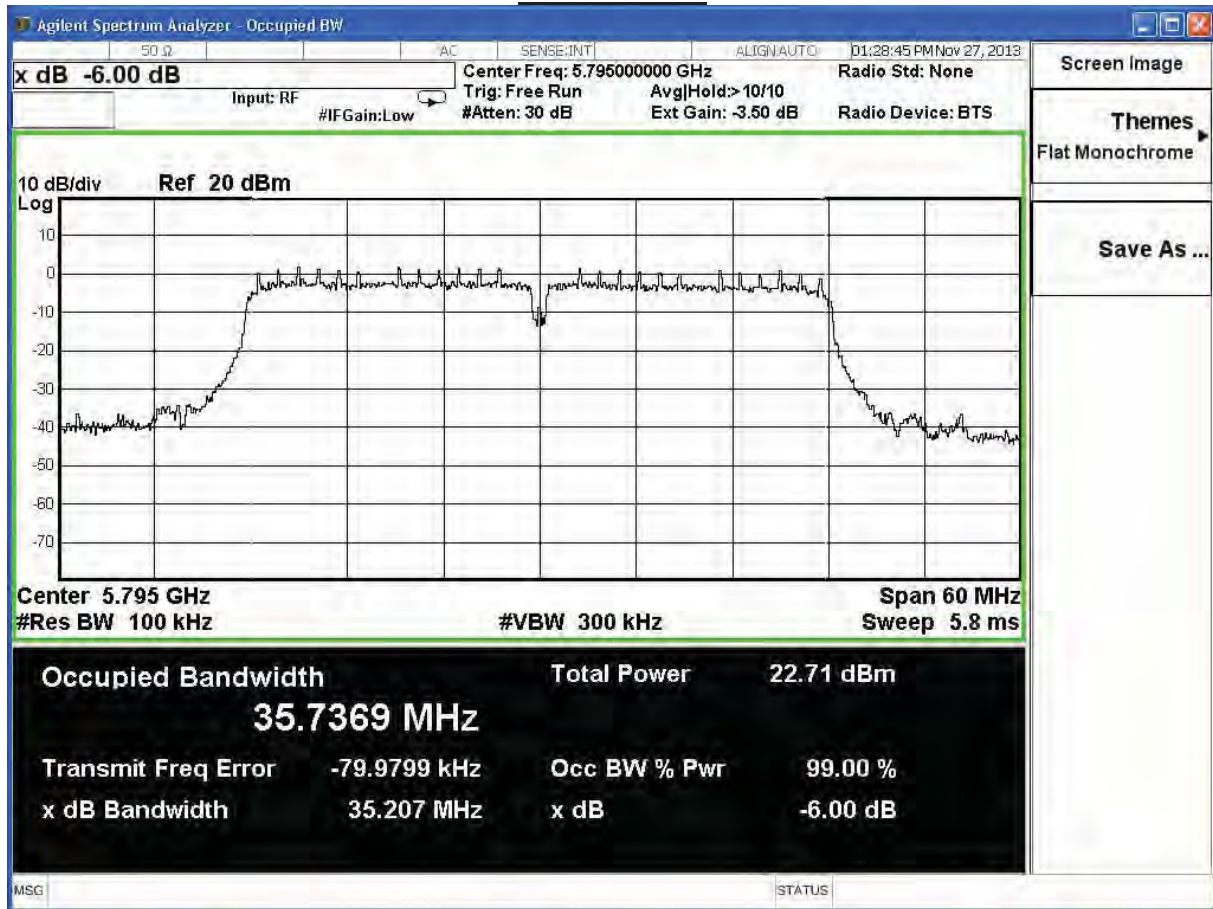
Product	Wireless Extender		
Test Item	Occupied Bandwidth		
Test Mode	Mode 1: Transmit		
Date of Test	2013/11/27	Test Site	SR7

IEEE 802.11n 40MHz (ANT0)				
Channel No.	Frequency (MHz)	Measurement Level (MHz)	Required Limit (MHz)	Result
151	5755	35.21	≥ 0.5	Pass
159	5795	35.21	≥ 0.5	Pass

Channel 151



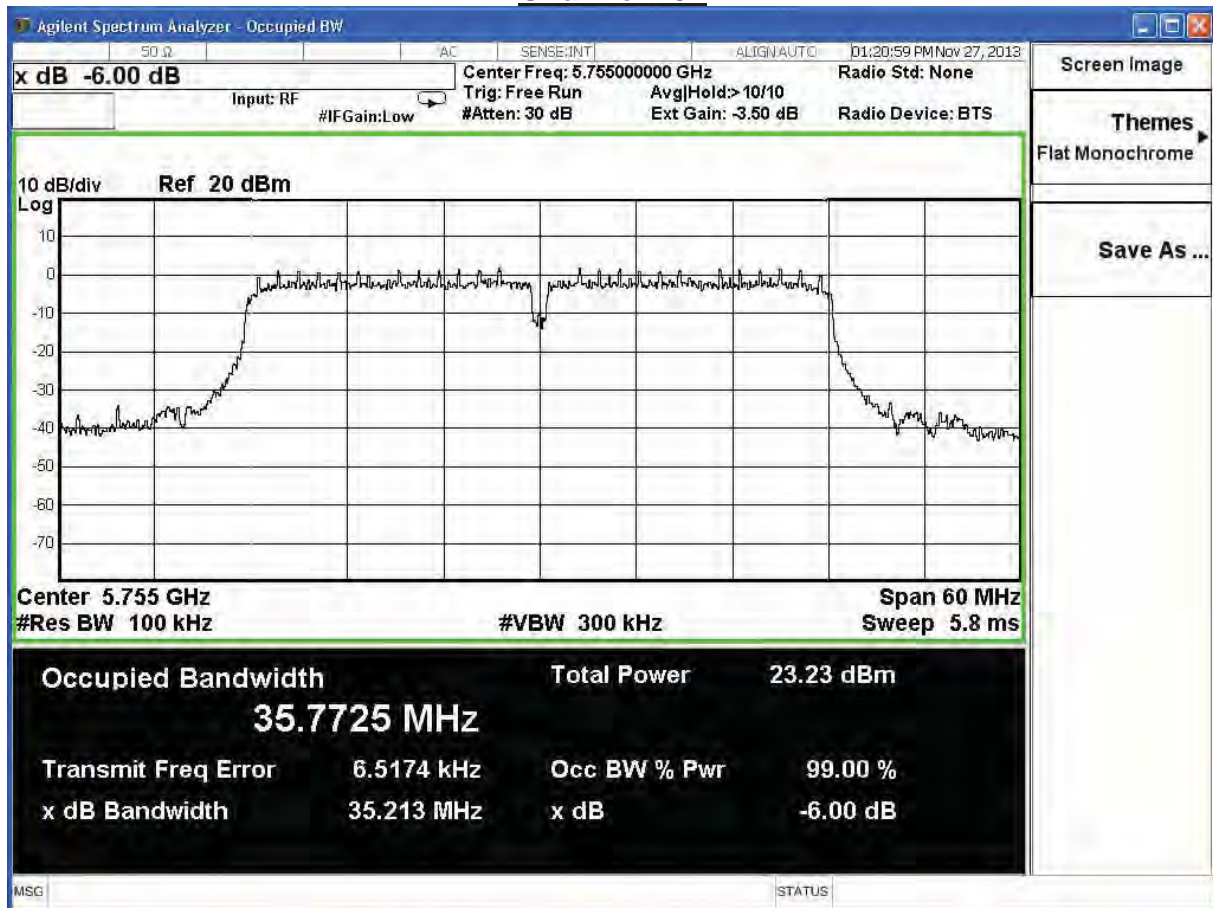
Channel 159



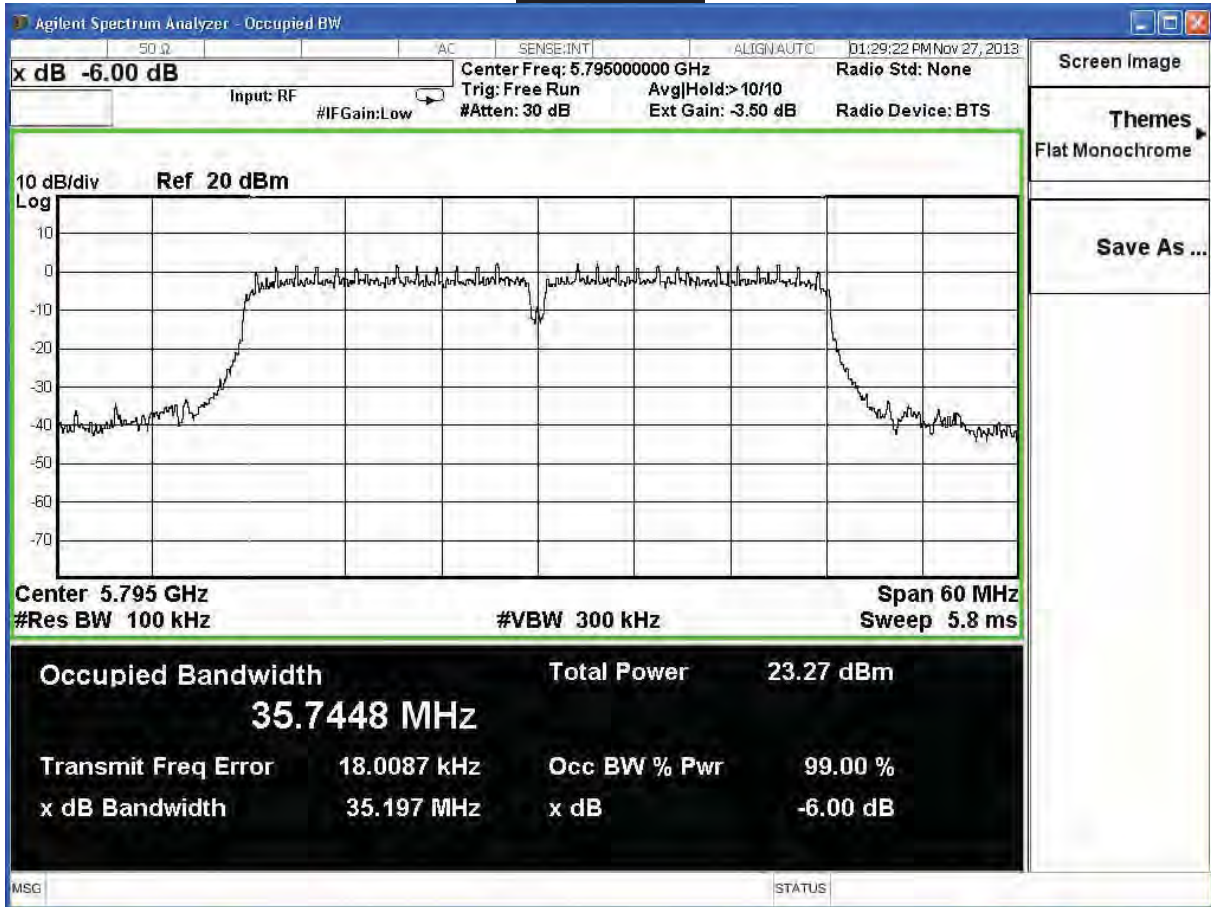
Product	Wireless Extender		
Test Item	Occupied Bandwidth		
Test Mode	Mode 1: Transmit		
Date of Test	2013/11/27	Test Site	SR7

IEEE 802.11n 40MHz (ANT0)				
Channel No.	Frequency (MHz)	Measurement Level (MHz)	Required Limit (MHz)	Result
151	5755	35.21	≥ 0.5	Pass
159	5795	35.20	≥ 0.5	Pass

Channel 151



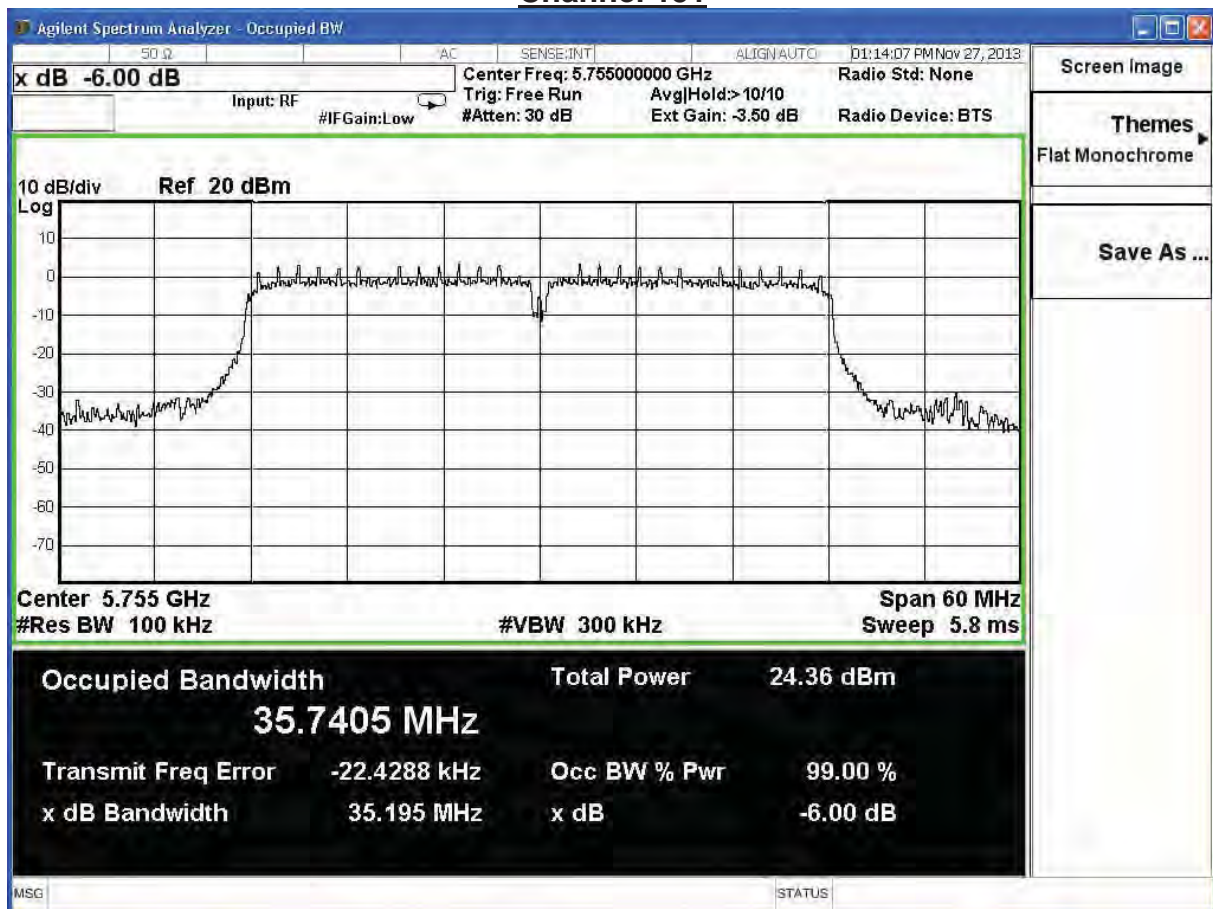
Channel 159



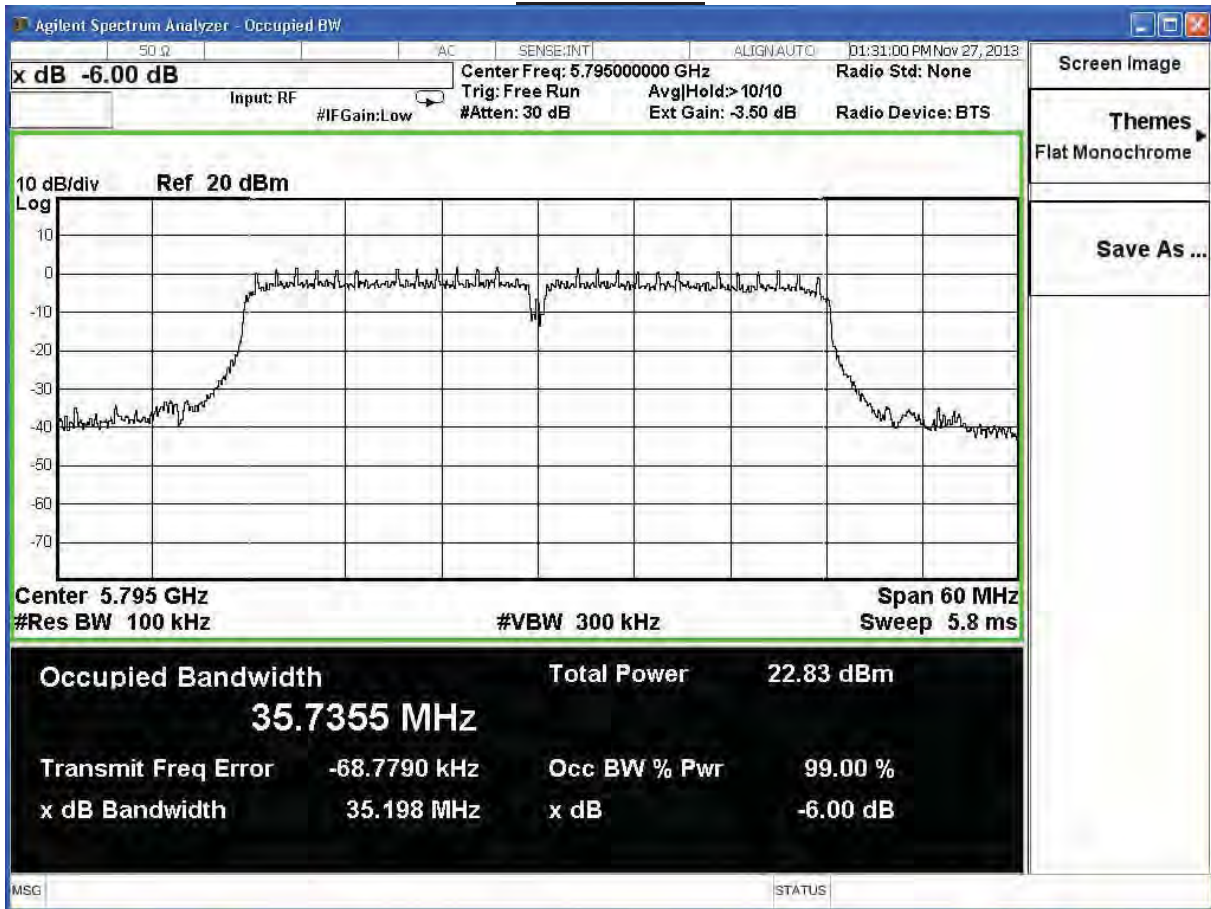
Product	Wireless Extender		
Test Item	Occupied Bandwidth		
Test Mode	Mode 1: Transmit		
Date of Test	2013/11/27	Test Site	SR7

IEEE 802.11n 40MHz (ANT 2)				
Channel No.	Frequency (MHz)	Measurement Level (MHz)	Required Limit (MHz)	Result
151	5755	35.20	≥ 0.5	Pass
159	5795	35.20	≥ 0.5	Pass

Channel 151



Channel 159



8. Power Density

8.1. Test Equipment

The following test equipment is used during the test:

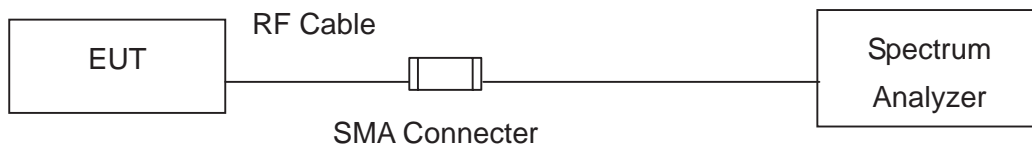
Power Density / SR7

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
Spectrum Analyzer	Agilent	N9010A-EXA	US47140172	2014/08/05

Note: 1. All equipments that need to calibrate are with calibration period of 1 year.

8.2. Test Setup

IEEE 802.11 b / g / a / n (20M / 40M) MODE



8.3. Limits

The peak power spectral density conducted from the intentional radiated to the antenna shall not be greater than +8dBm in any 3kHz band during any time interval of continuous transmission.

8.4. Test Procedures

The EUT was setup according to ANSI C63.4: 2009; tested according to DTS test procedure of Oct. 2012 KDB558074, Section 9.2 Measurement Procedure option2 for compliance to FCC 47CFR 15.247 requirements.

Set RBW= 100 kHz, Set VBW= 300 kHz, Sweep time=Auto, Set detector=Peak detector.

Scale the observed power level to an equivalent value in 3 kHz by adjusting (reducing) the measured power by a bandwidth correction factor (BWCF) where $BWCF = 10\log (3 \text{ kHz}/100 \text{ kHz} = -15.2 \text{ dB})$.

8.5. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247: 2012

8.6. Uncertainty

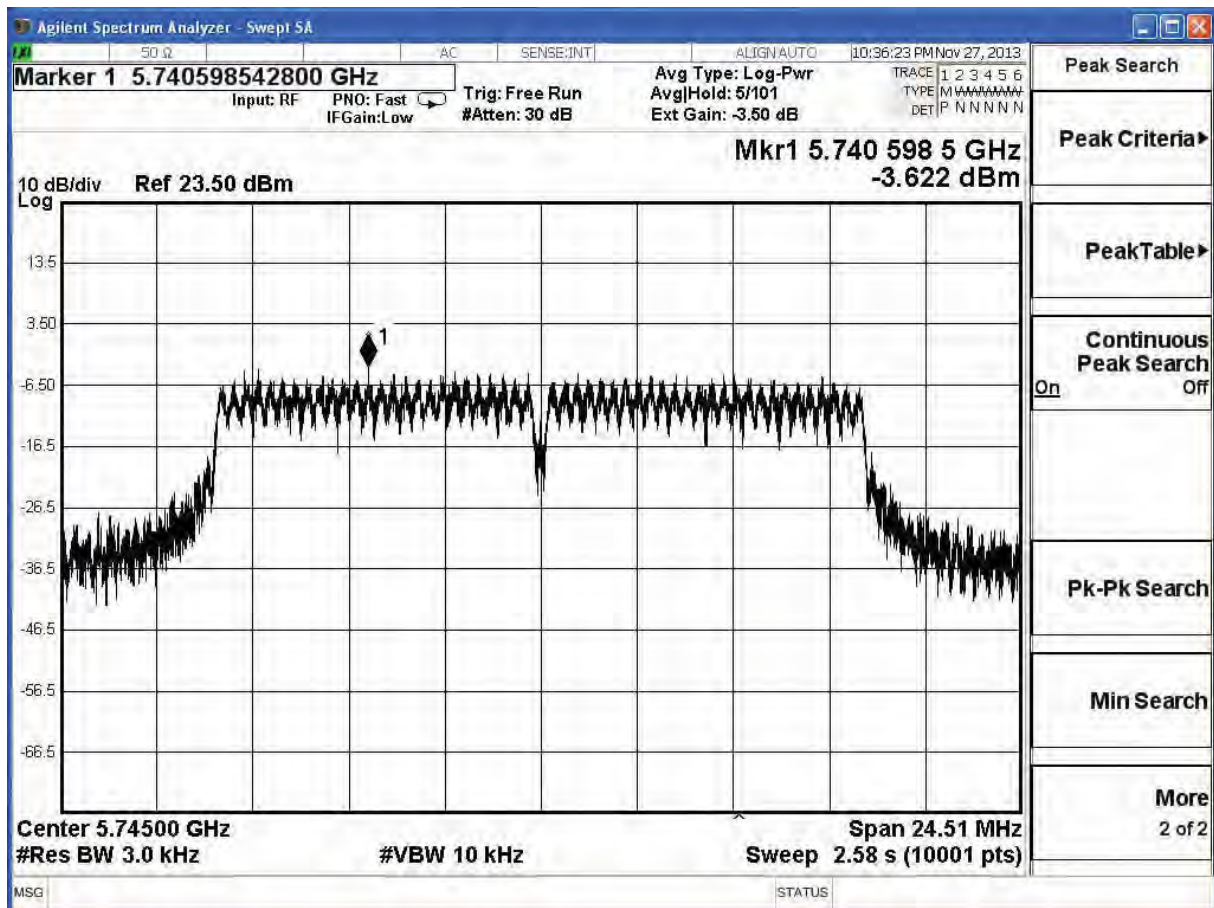
The measurement uncertainty is defined as $\pm 1.27\text{dB}$.

8.7. Test Result

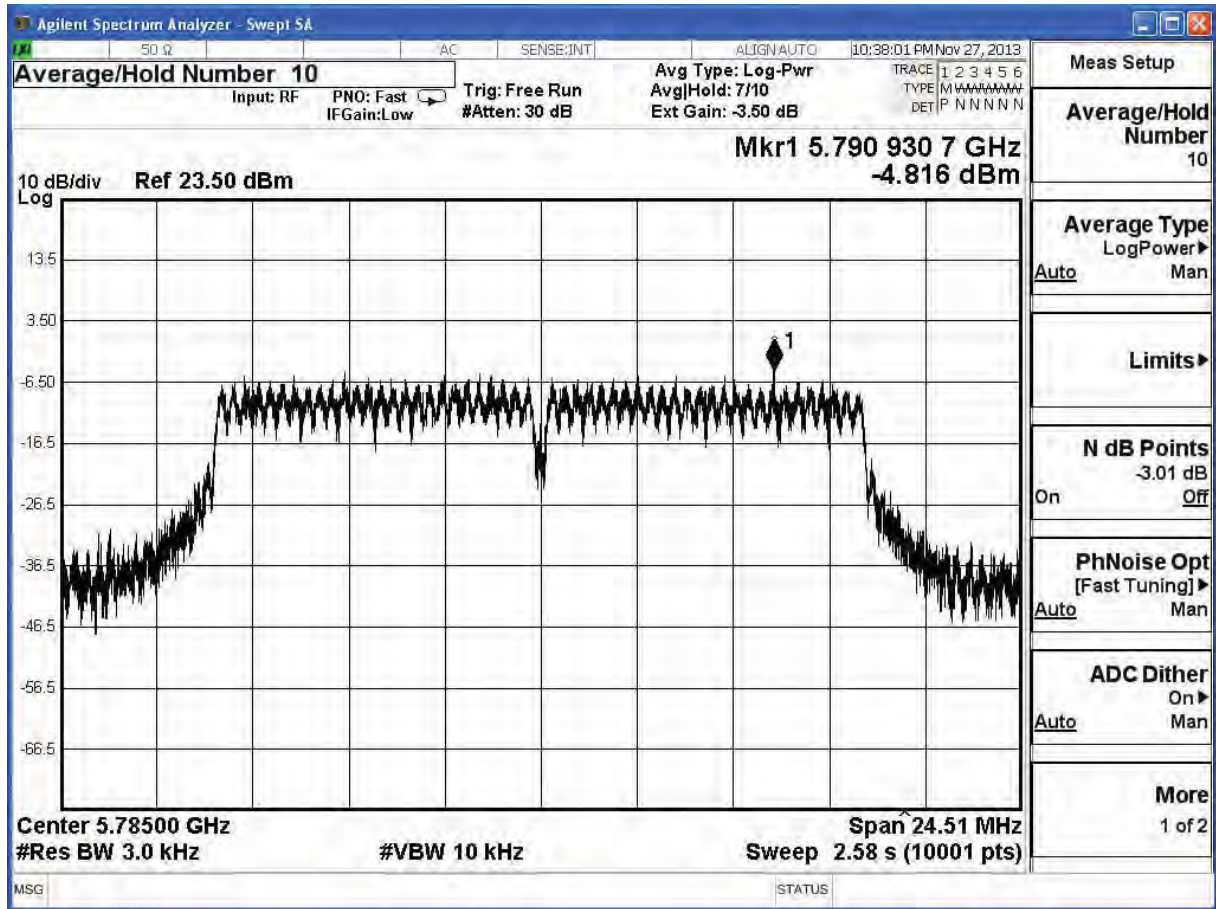
Product	Wireless Extender		
Test Item	Power Density		
Test Mode	Mode 1: Transmit		
Date of Test	2013/11/27	Test Site	SR7

IEEE 802.11a (ANT0)				
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
149	5745	-3.62	≤ 8	Pass
157	5785	-4.80	≤ 8	Pass
161	5805	-5.51	≤ 8	Pass

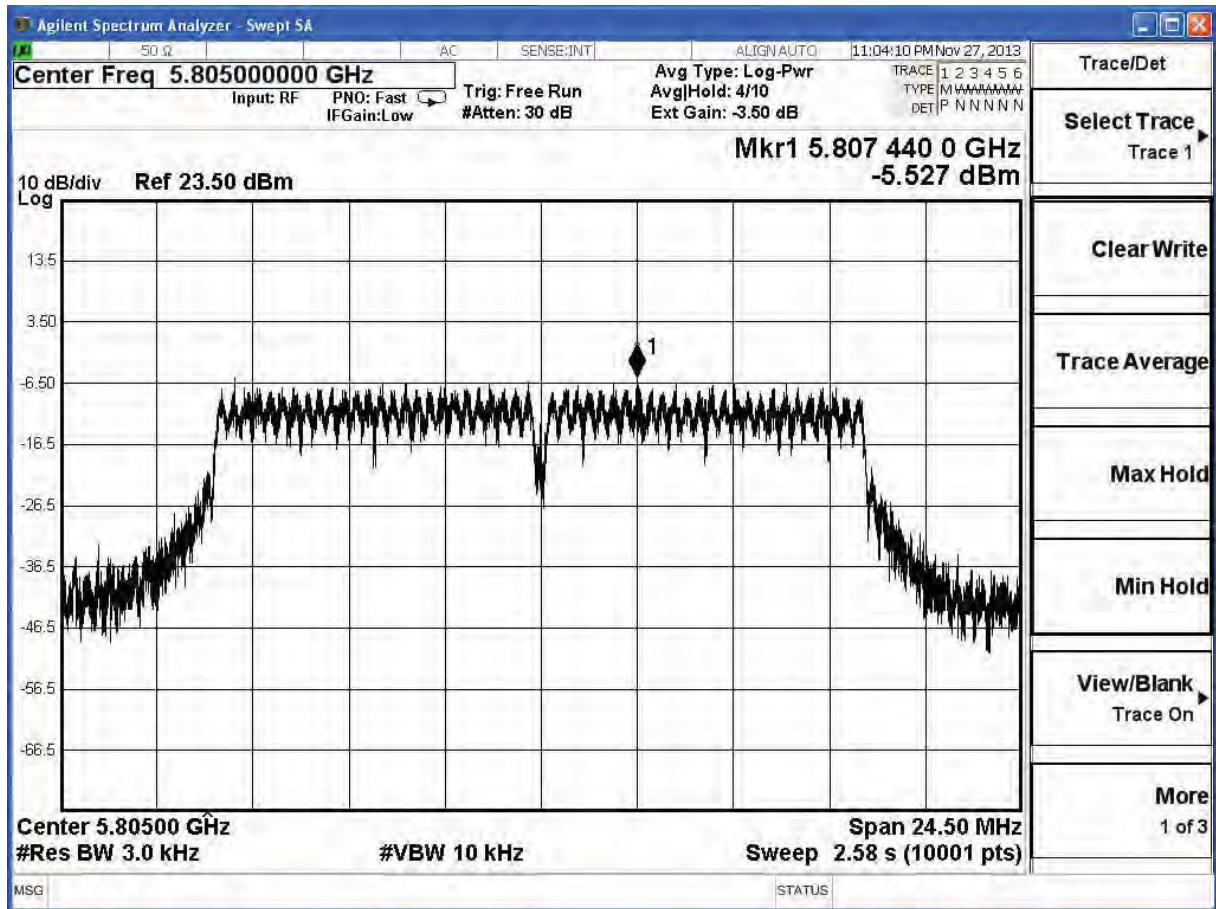
Channel 149



Channel 157



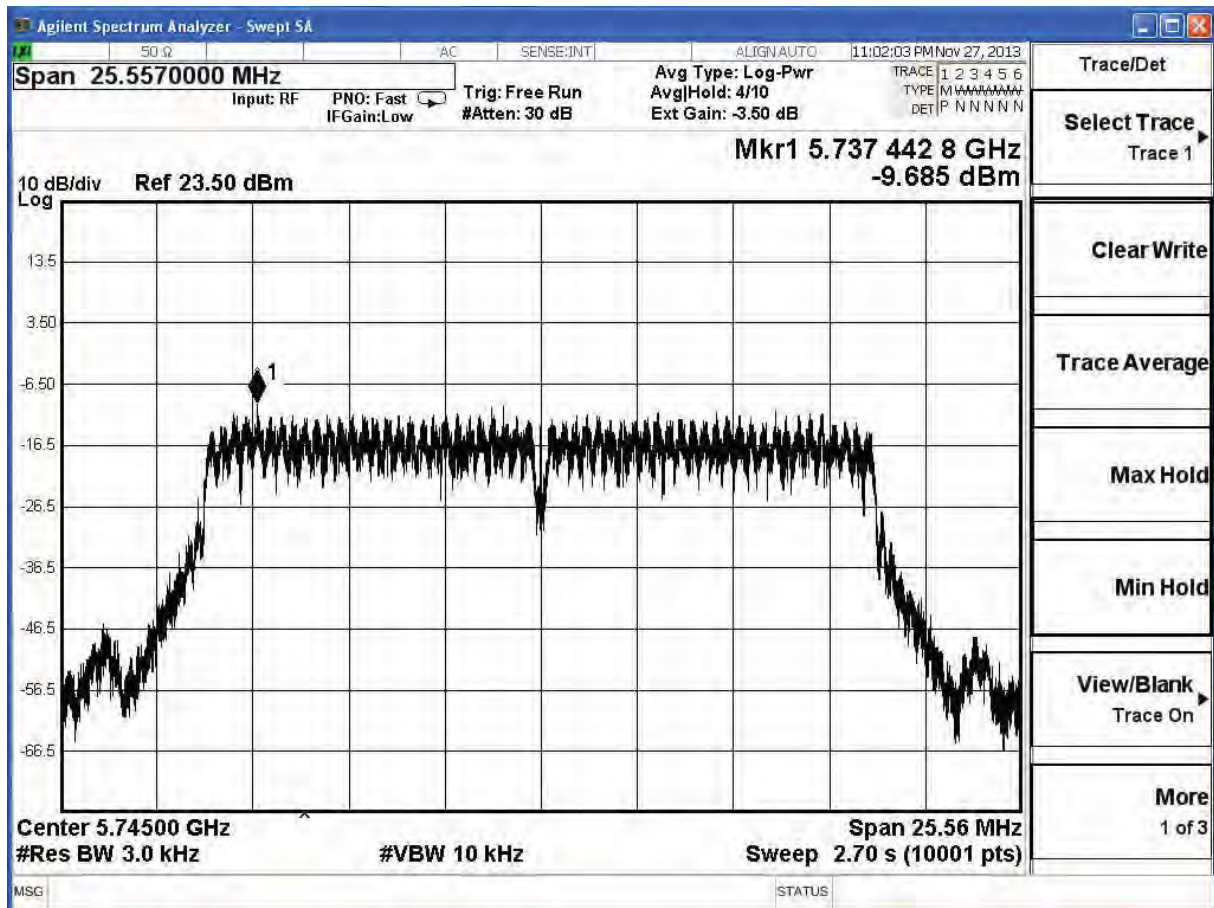
Channel 161



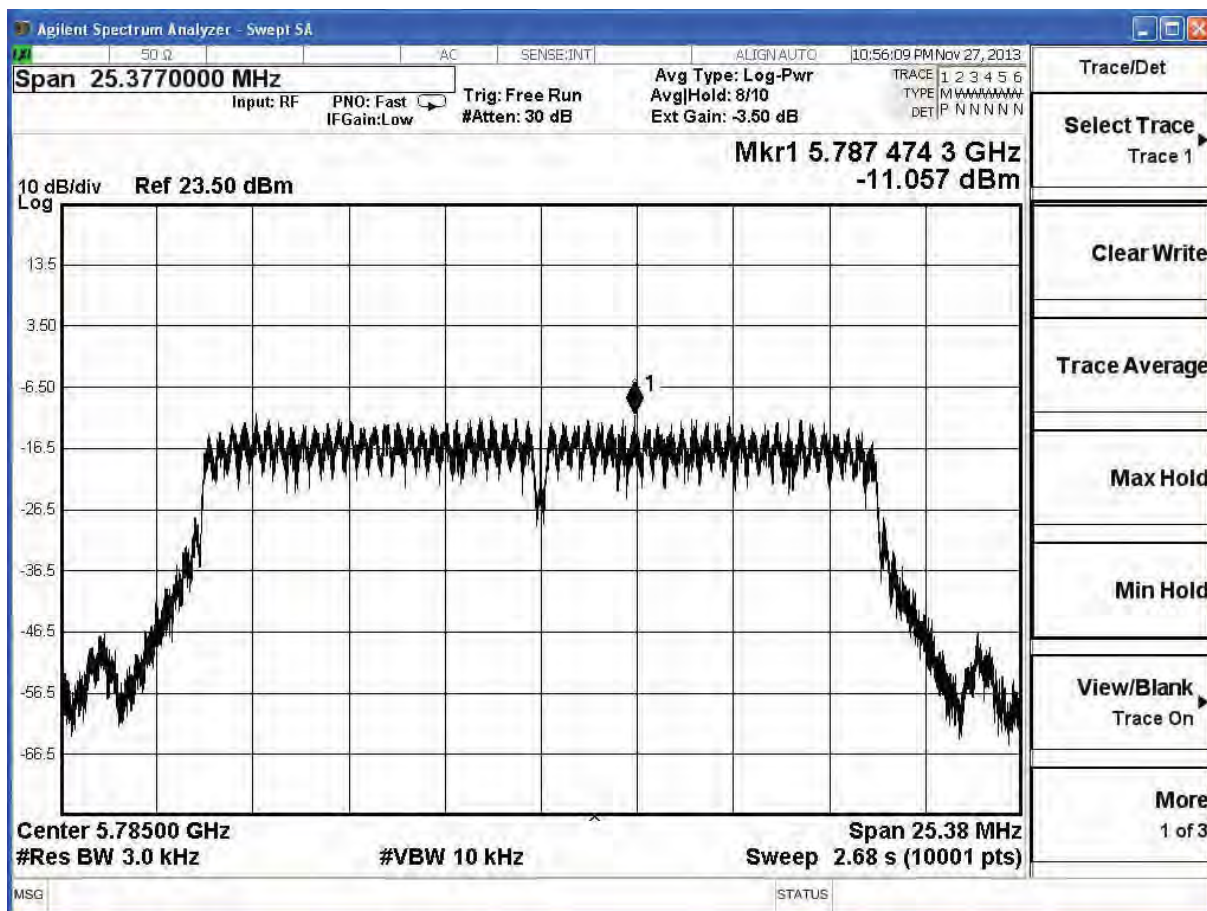
Product	Wireless Extender		
Test Item	Power Density		
Test Mode	Mode 1: Transmit		
Date of Test	2013/11/27	Test Site	SR7

IEEE 802.11n 20MHz (ANT0)				
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
149	5745	-9.67	≤ 8	Pass
157	5785	-11.04	≤ 8	Pass
161	5805	-10.85	≤ 8	Pass

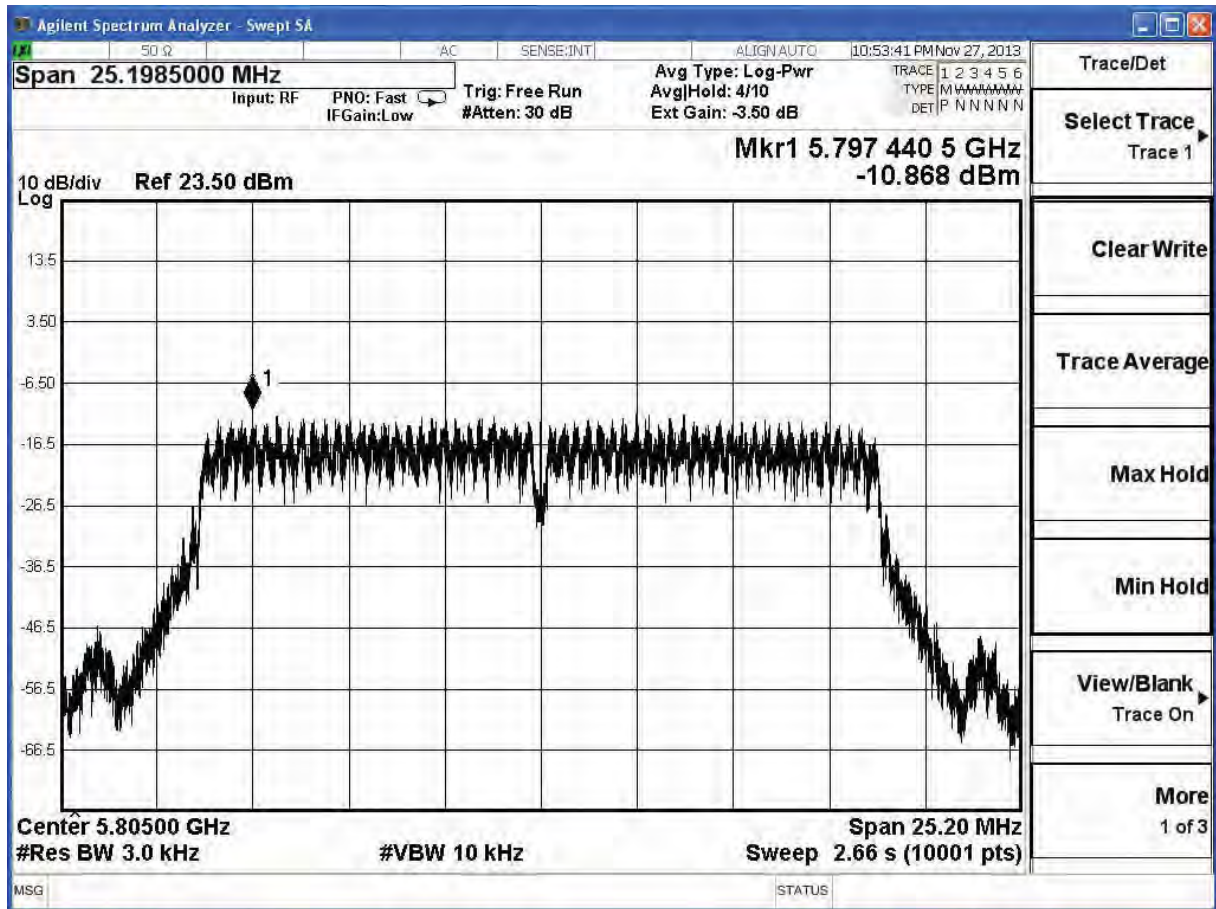
Channel 149



Channel 157



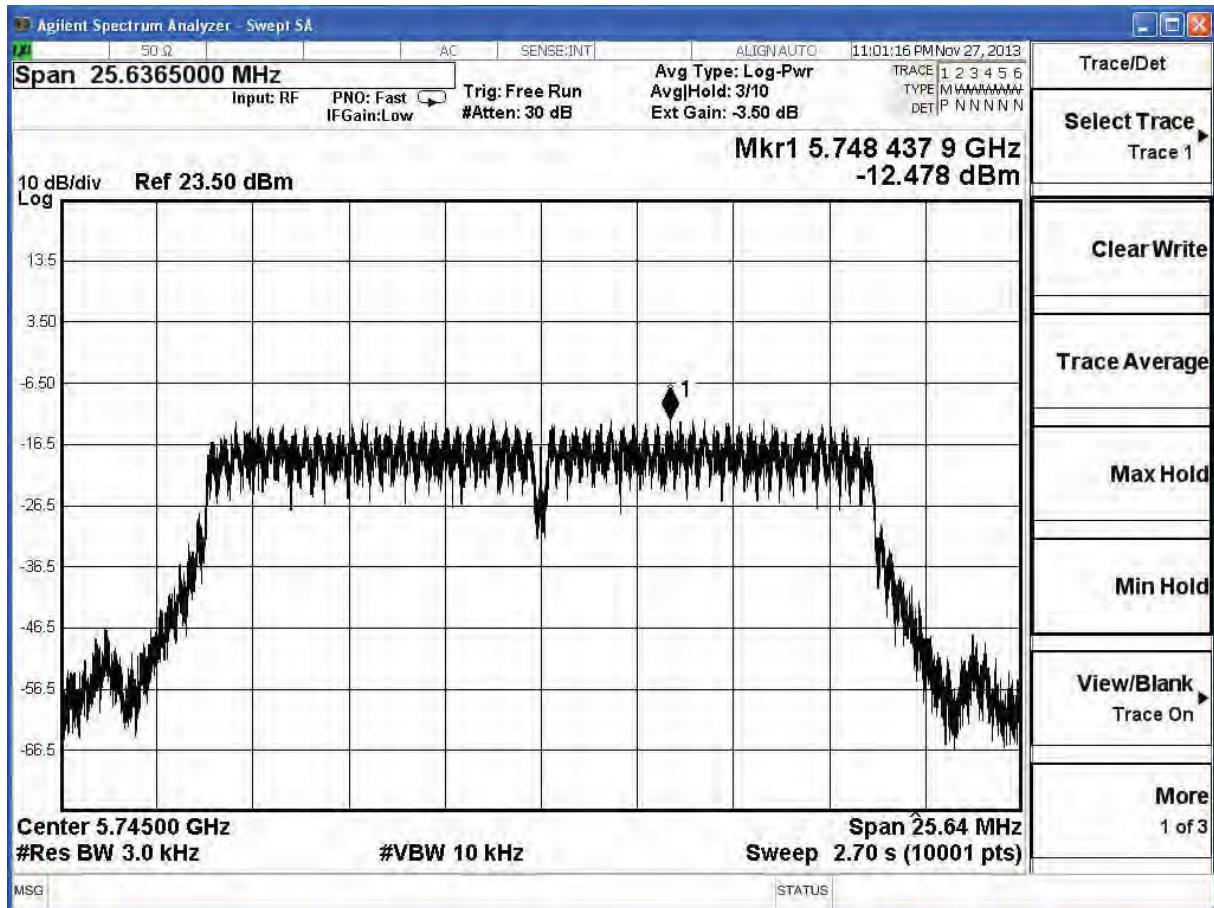
Channel 161



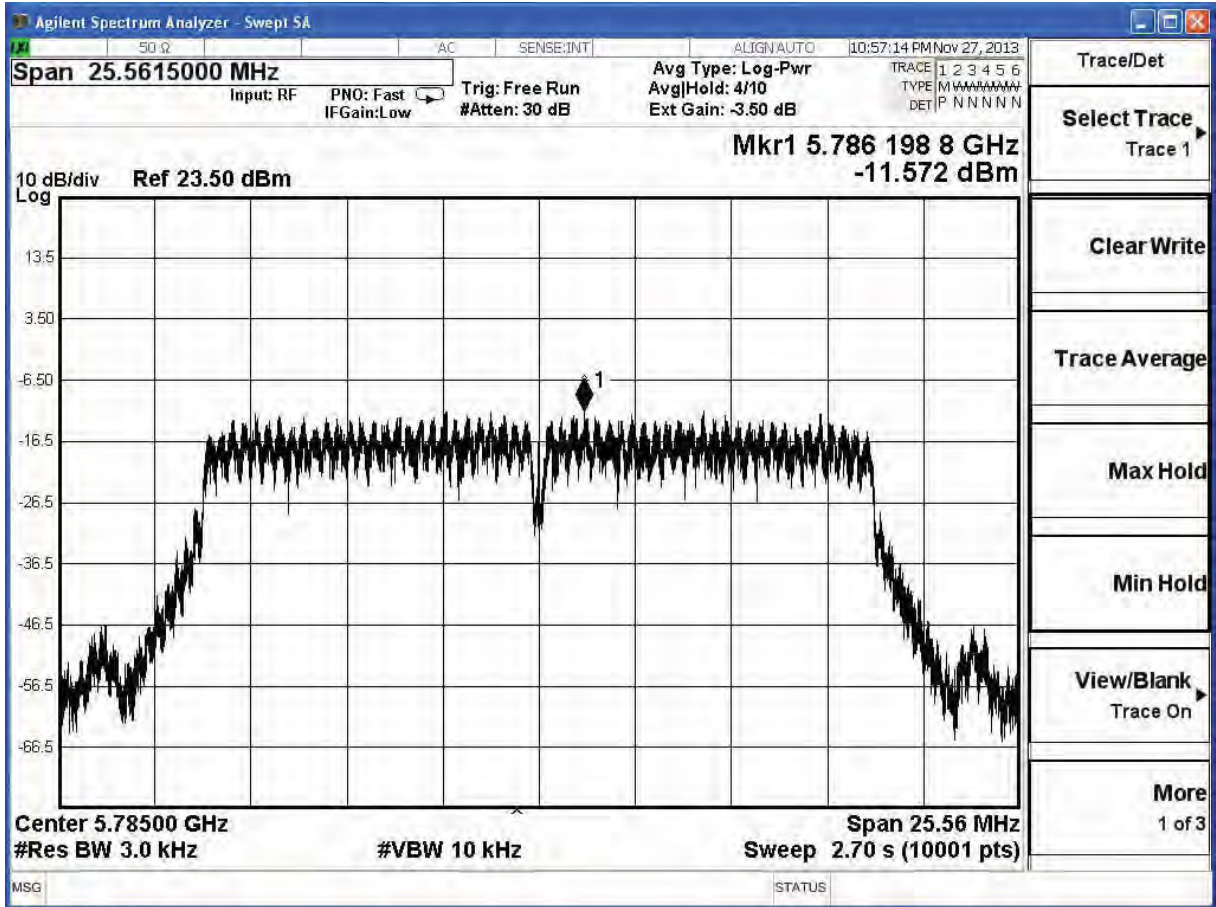
Product	Wireless Extender		
Test Item	Power Density		
Test Mode	Mode 1: Transmit		
Date of Test	2013/11/27	Test Site	SR7

IEEE 802.11n 20MHz (ANT1)				
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
149	5745	-12.46	≤ 8	Pass
157	5785	-11.57	≤ 8	Pass
161	5805	-11.46	≤ 8	Pass

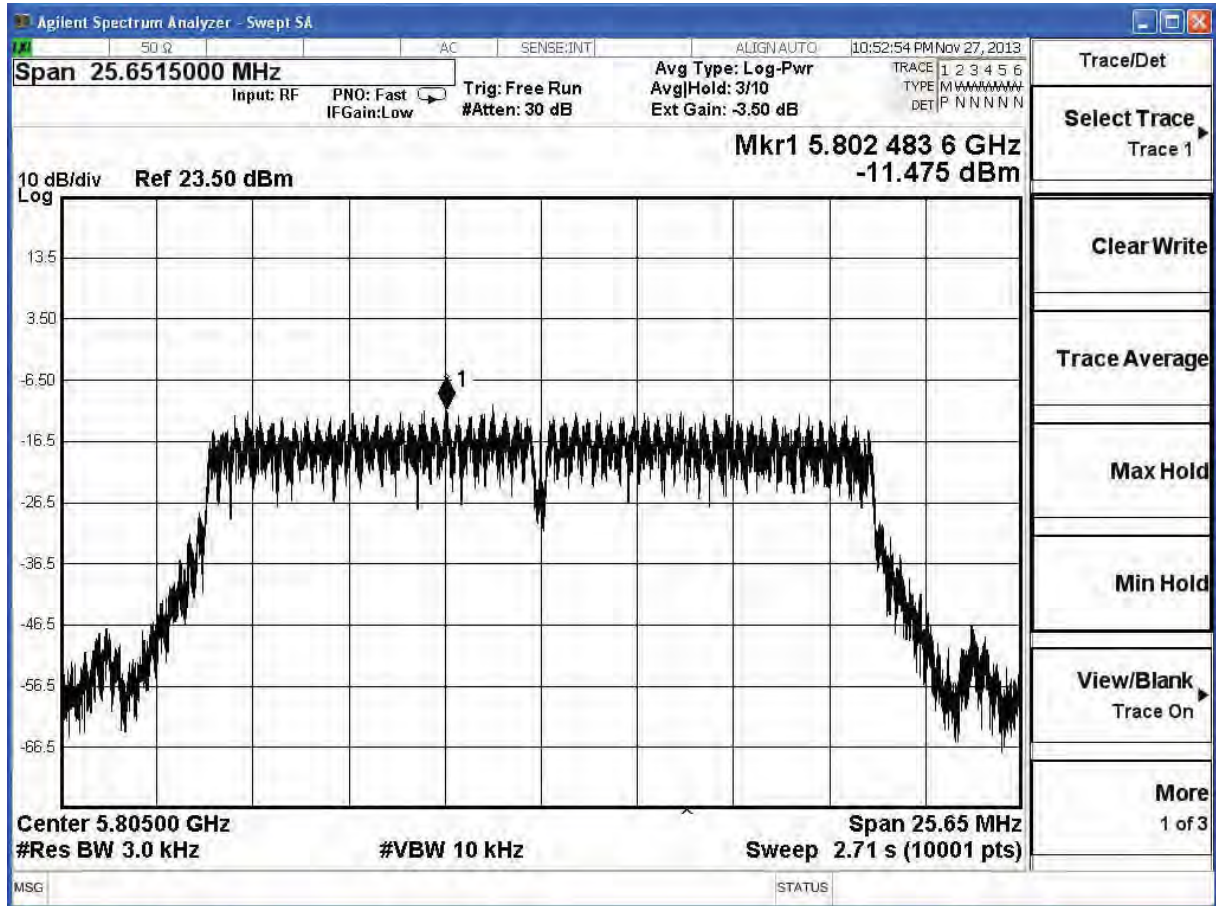
Channel 149



Channel 157



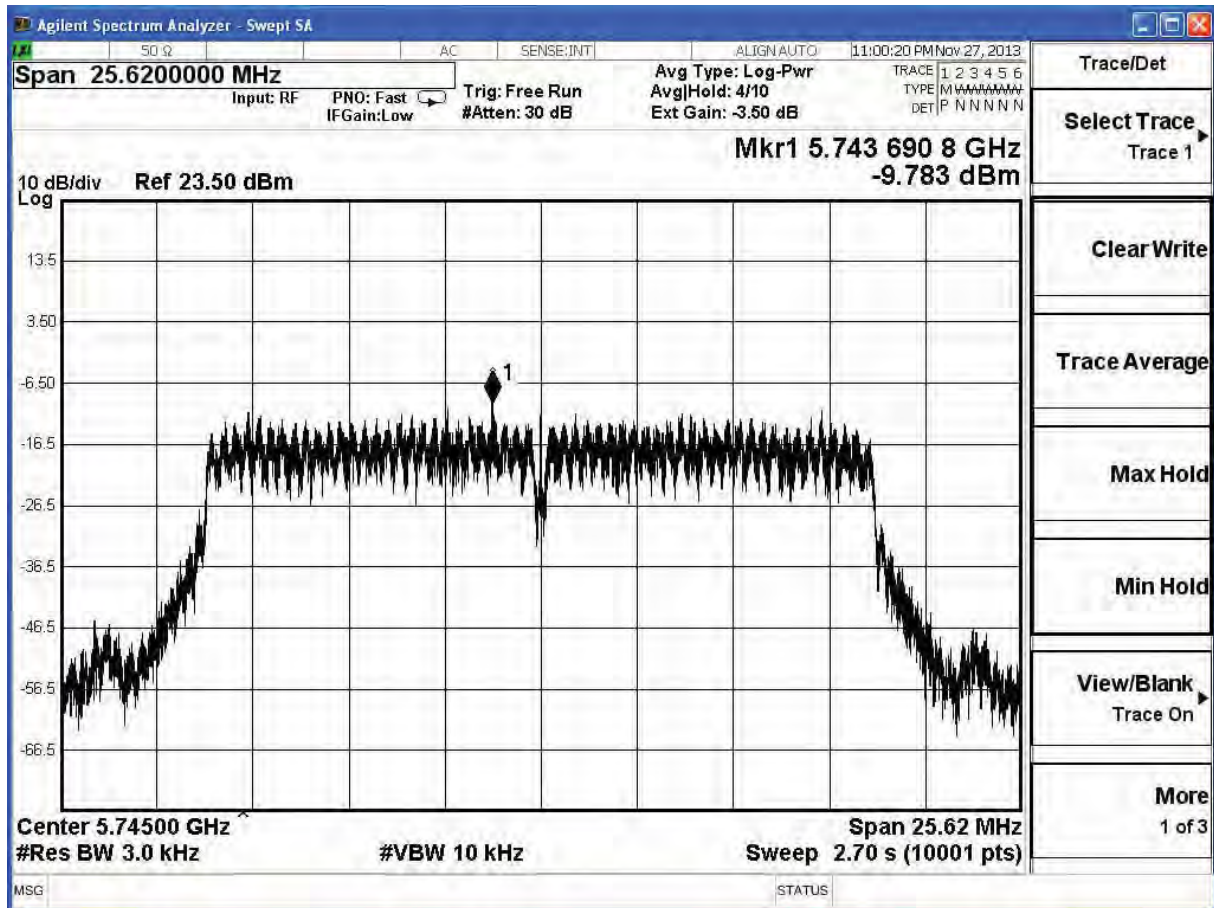
Channel 161



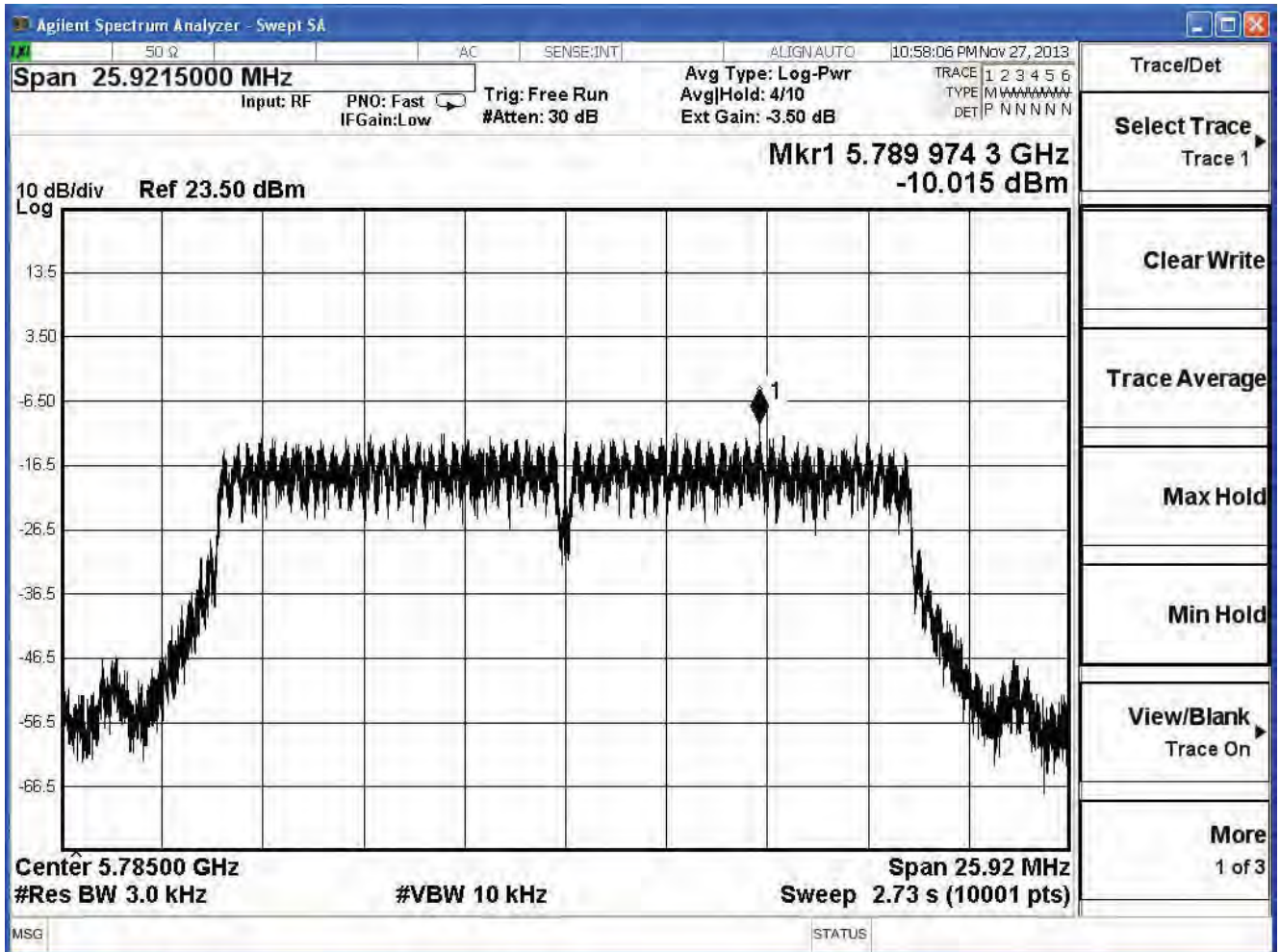
Product	Wireless Extender		
Test Item	Power Density		
Test Mode	Mode 1: Transmit		
Date of Test	2013/11/27	Test Site	SR7

IEEE 802.11n 20MHz (ANT2)				
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
149	5745	-9.78	≤ 8	Pass
157	5785	-10.00	≤ 8	Pass
161	5805	-11.13	≤ 8	Pass

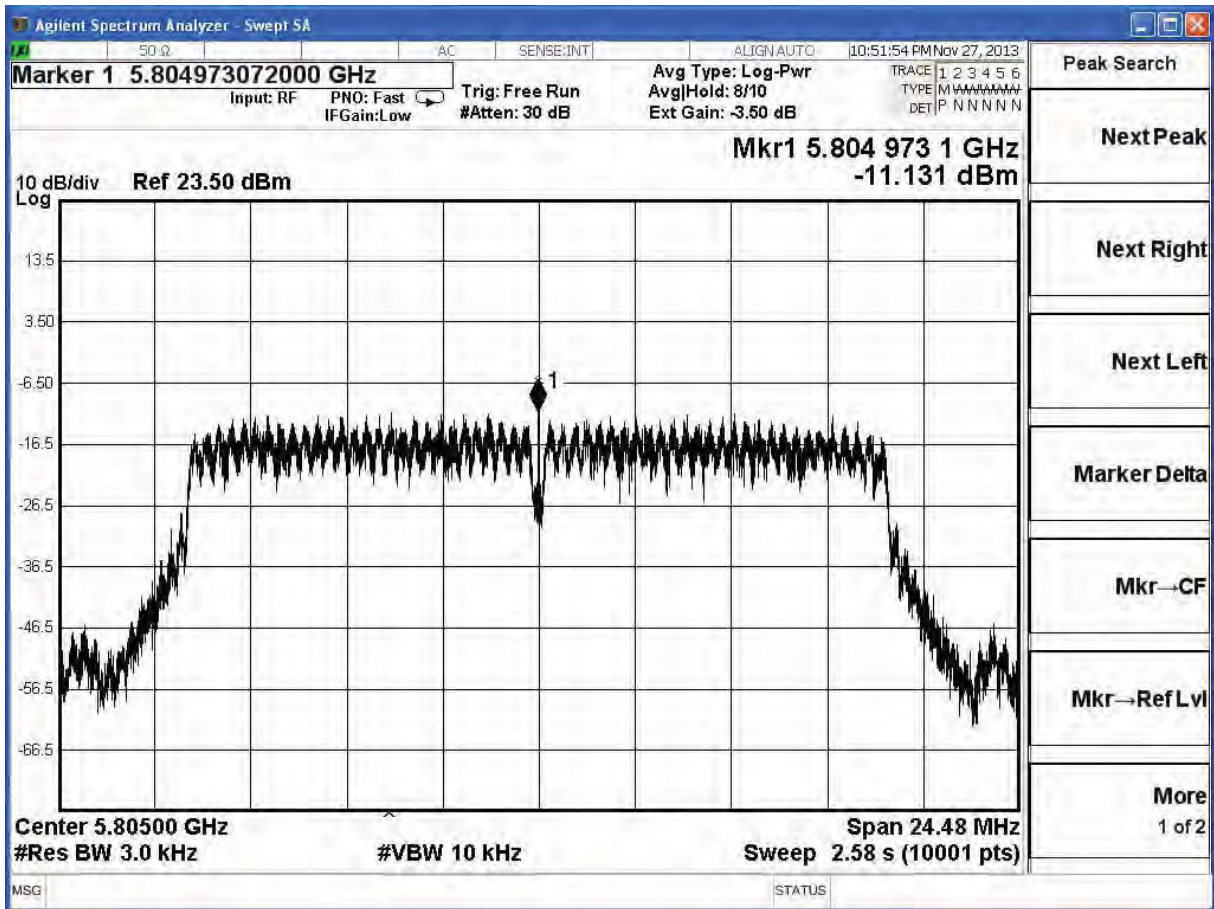
Channel 149



Channel 157



Channel 161



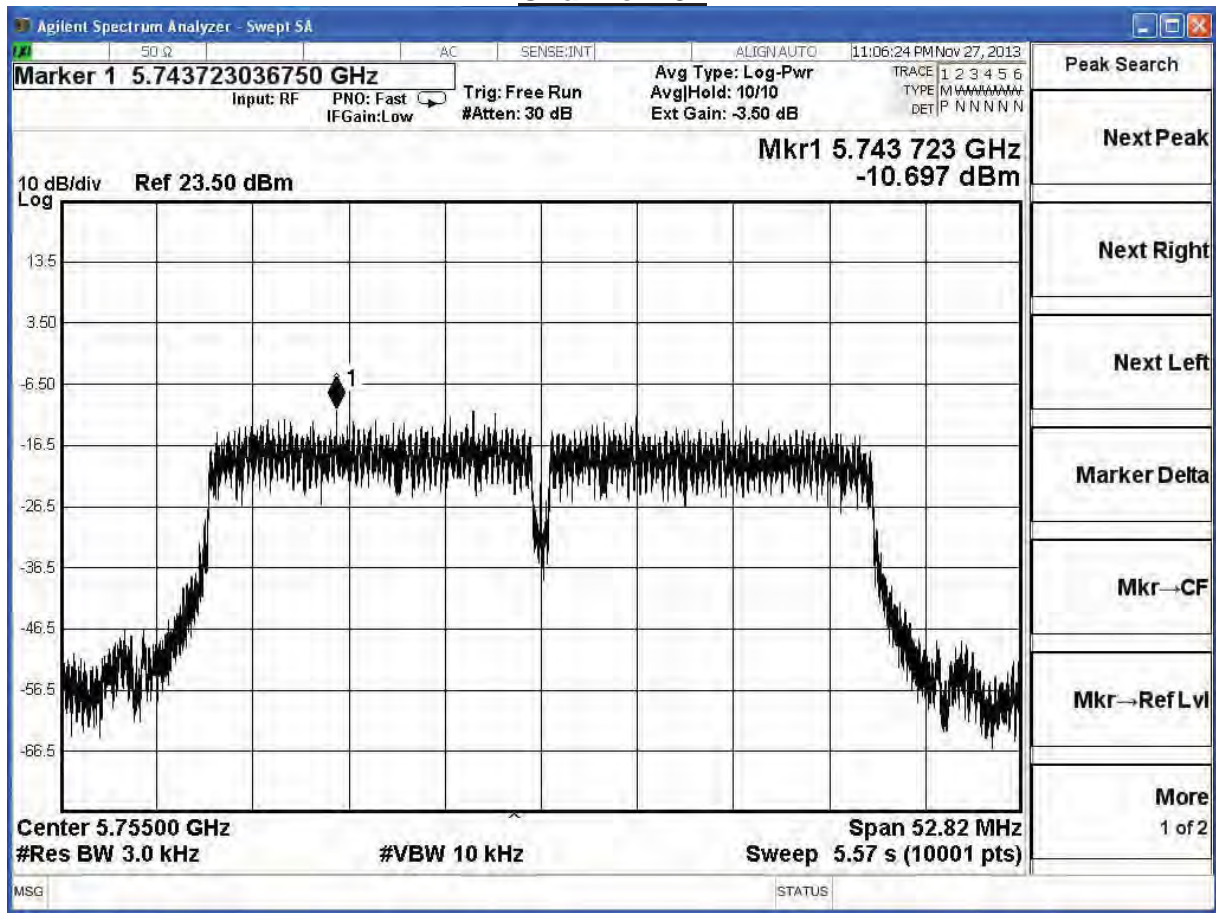
Product	Wireless Extender		
Test Item	Power Density		
Test Mode	Mode 1: Transmit		
Date of Test	2013/11/27	Test Site	SR7

IEEE 802.11n 20MHz (ANT0+1+2)				
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
149	5745	-5.69	≤ 8	Pass
157	5785	-6.06	≤ 8	Pass
161	5805	-6.37	≤ 8	Pass

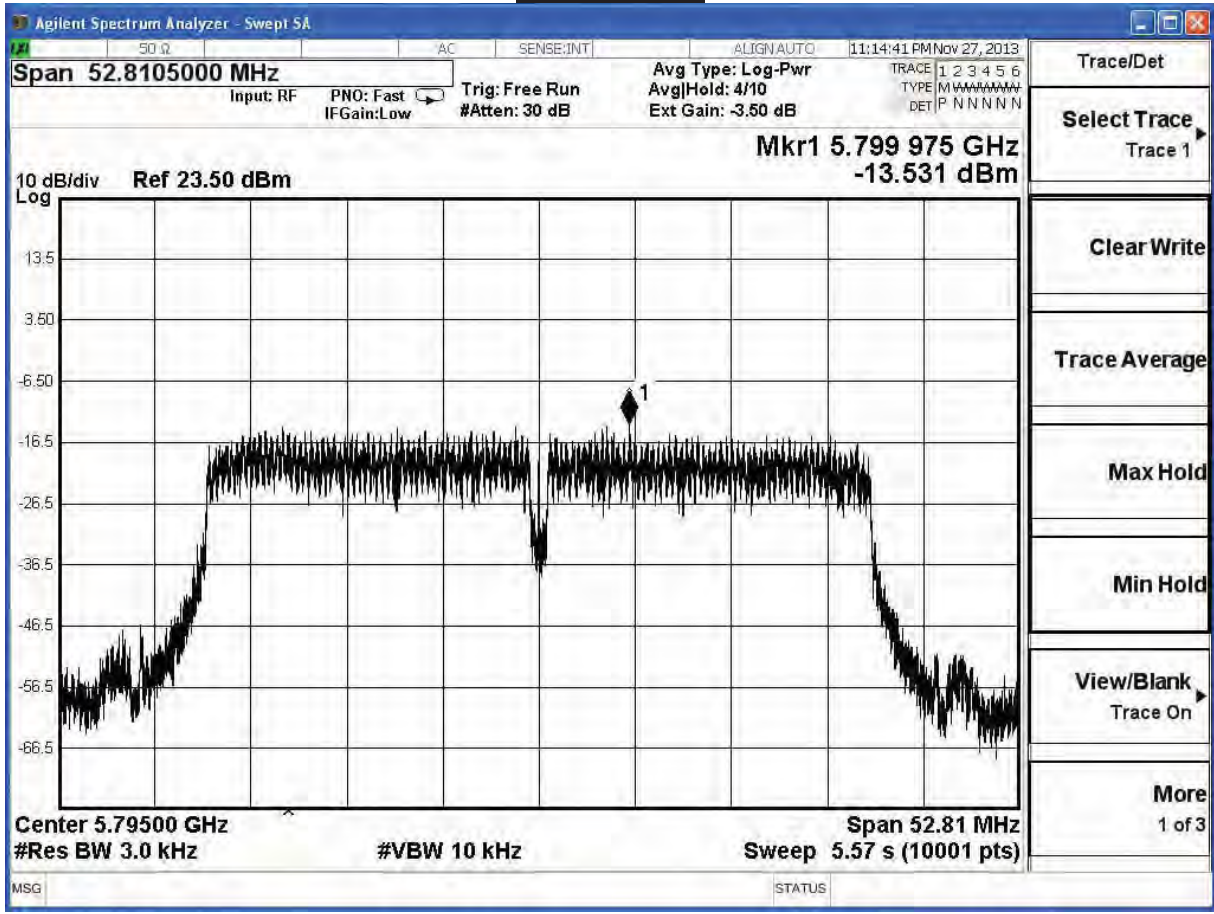
Product	Wireless Extender		
Test Item	Power Density		
Test Mode	Mode 1: Transmit		
Date of Test	2013/11/27	Test Site	SR7

IEEE 802.11n 40MHz (ANT0)				
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
151	5755	-10.68	≤ 8	Pass
159	5795	-13.53	≤ 8	Pass

Channel 151



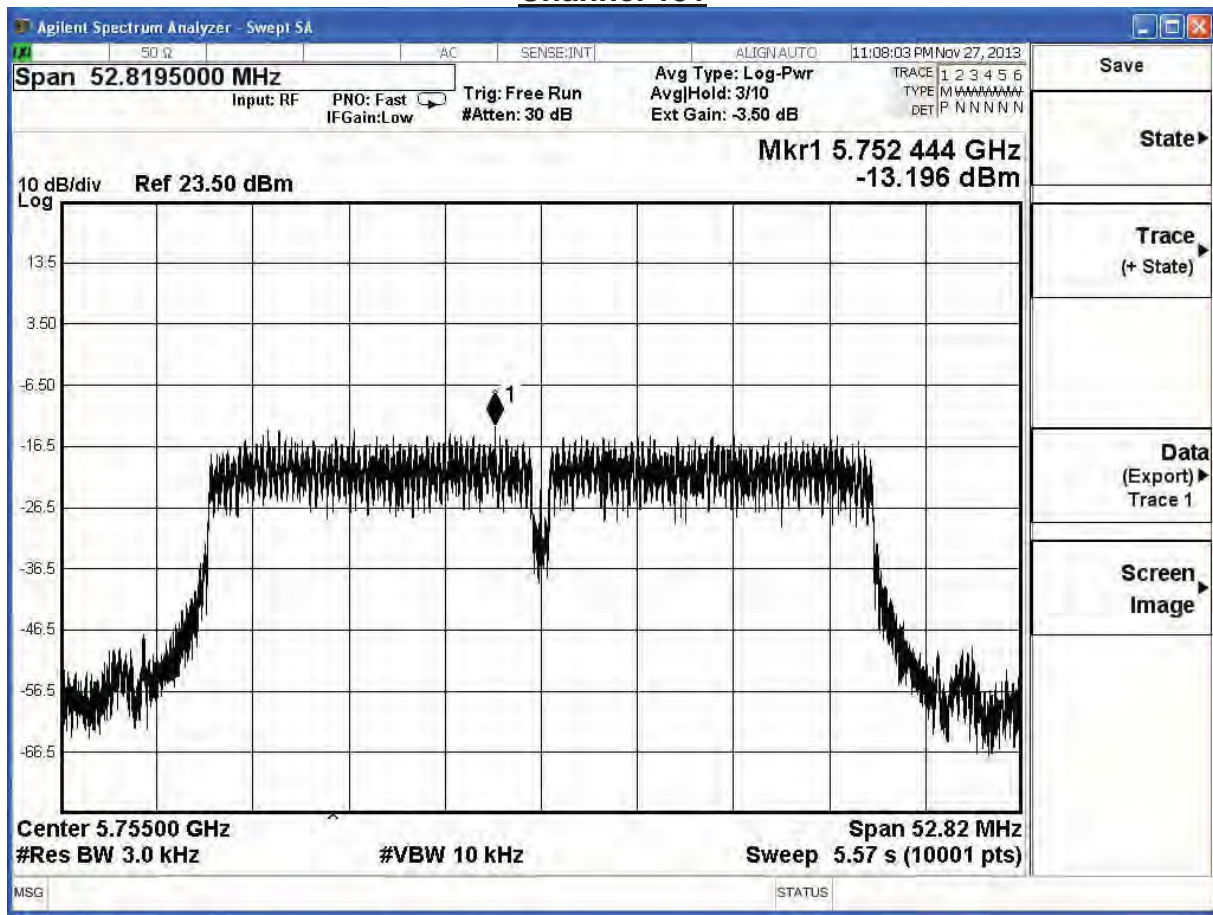
Channel 159



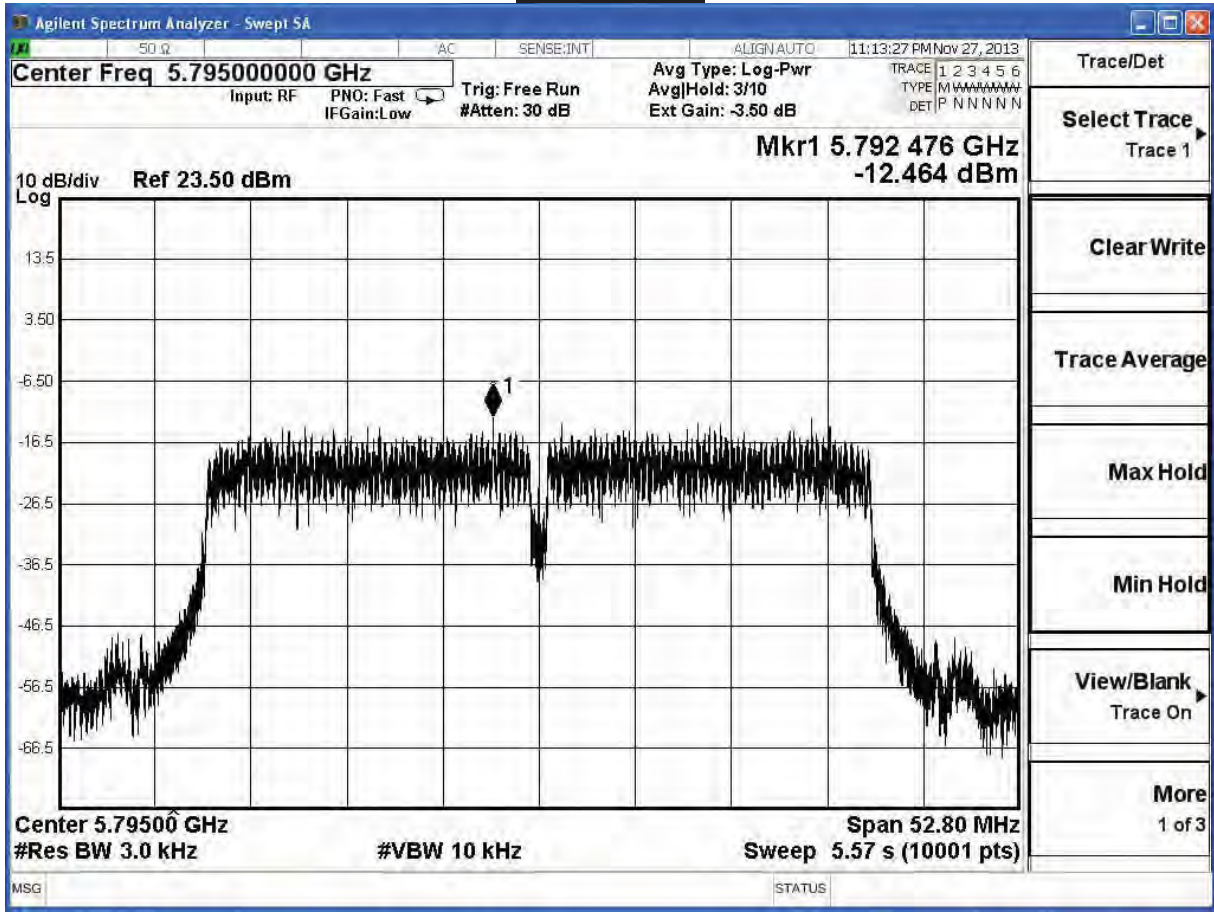
Product	Wireless Extender		
Test Item	Power Density		
Test Mode	Mode 1: Transmit		
Date of Test	2013/11/27	Test Site	SR7

IEEE 802.11n 40MHz (ANT1)				
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
151	5755	-13.18	≤ 8	Pass
159	5795	-12.46	≤ 8	Pass

Channel 151



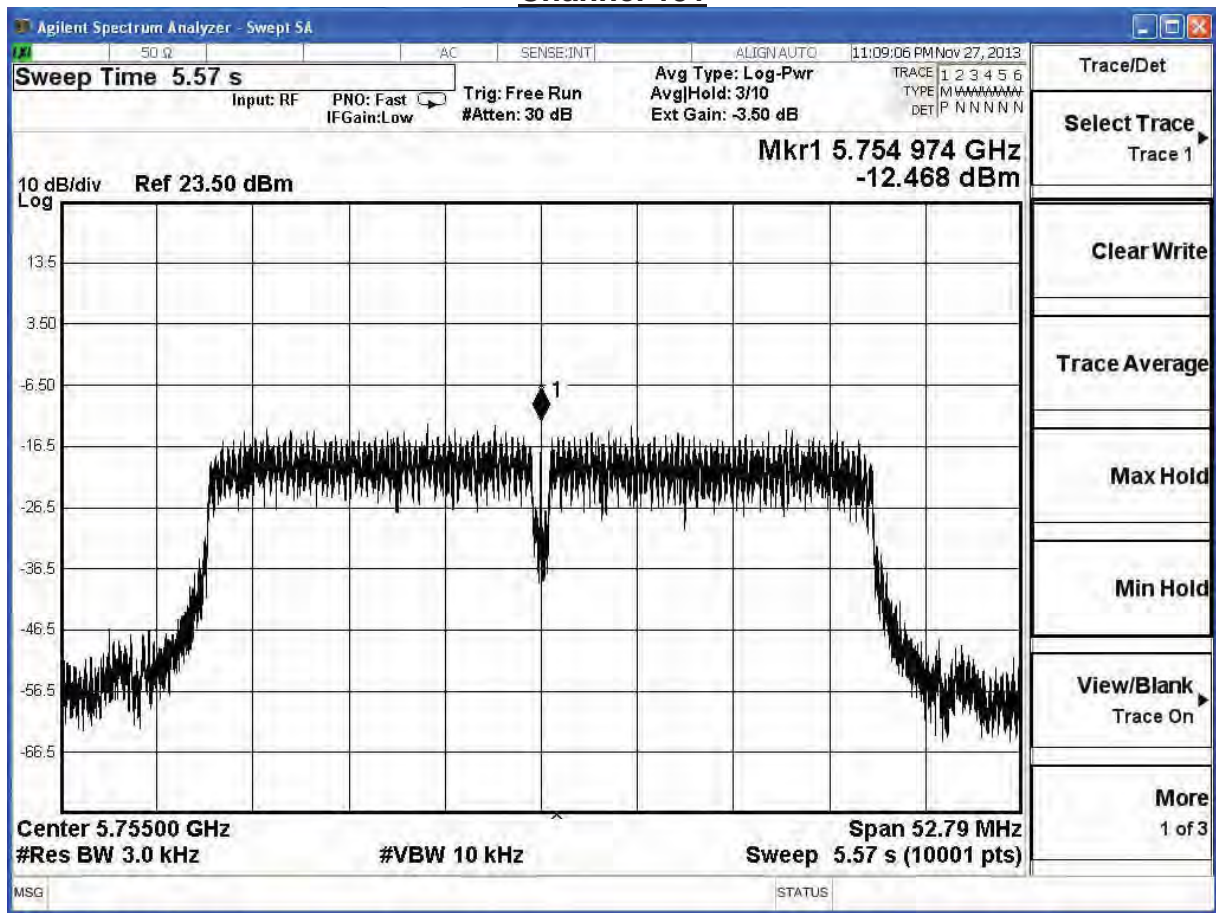
Channel 159



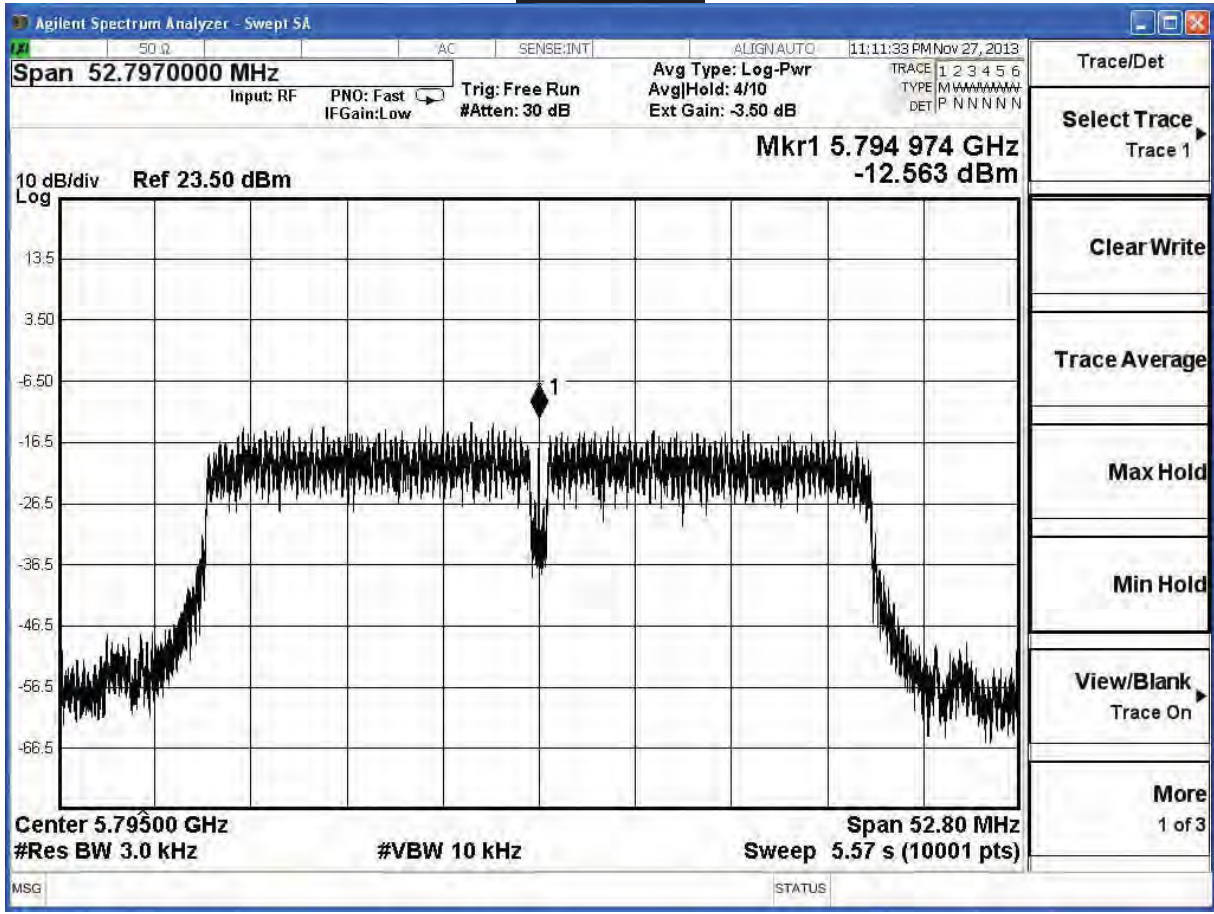
Product	Wireless Extender		
Test Item	Power Density		
Test Mode	Mode 1: Transmit		
Date of Test	2013/11/27	Test Site	SR7

IEEE 802.11n 40MHz (ANT2)				
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
151	5755	-12.45	≤ 8	Pass
159	5795	-12.56	≤ 8	Pass

Channel 151



Channel 159



Product	Wireless Extender		
Test Item	Power Density		
Test Mode	Mode 1: Transmit		
Date of Test	2013/11/27	Test Site	SR7

IEEE 802.11n 40MHz (ANT0+1+2)				
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
151	5755	-7.21	≤ 8	Pass
159	5795	-8.05	≤ 8	Pass