RF TEST REPORT

Test item	:	Wi-Fi Transmitter
Model No.	:	WEG720B
Order No.	:	DEMC1311-03573
Date of receipt	:	2013-11-21
Test duration	:	2014-01-28 ~ 2014-02-17
Date of issue	:	2014-02-18
Use of report	:	FCC & IC Original Grant

Applicant : Samsung Electronics Co., Ltd.
19 Chapin Rd., Building D, Pine Brook, New Jersey, United States, 07058

Test laboratory : Digital EMC Co., Ltd.
42, Yurim-ro, 154beon-gil, Cheoin-gu, Yongin-si, Gyeonggi-do, Korea 449-935

Test specification	:	FCC Part 15 Subpart C 247 RSS-210 Issue 8: 2010
Test environment	:	See appended test report
Test result	:	☒ Pass ☐ Fail

The test results presented in this test report are limited only to the sample supplied by applicant and the use of this test report is inhibited other than its purpose. This test report shall not be reproduced except in full, without the written approval of DIGITAL EMC CO., LTD.

Tested by:

Engineer
HyunSu Son

Reviewed by:

Deputy General Manager
WonJung Lee

Test Report Version

Test Report No.	Date	Description
DRTFCC1402-0233	Feb. 18, 2014	Initial issue

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1. EUT DESCRIPTION

FCC Equipment Class	Digital Transmission System(DTS)
Product	Wi-Fi Transmitter
Model Name	WEG720B
Add Model Name	N/A
Power Supply	DC 5 V
Frequency Range	**2.4 GHz Band** ▪ 802.11b/g/n(HT20): 2412 MHz ~ 2462 MHz ▪ 802.11n(HT40): 2422 MHz ~ 2452 MHz **5.7 GHz Band** ▪ 802.11a/n(HT20)/ac(VHT20): 5745 MHz ~ 5825 MHz ▪ 802.11n(HT40)/ac(VHT40): 5755 MHz ~ 5795 MHz ▪ 802.11ac(VHT80): 5775 MHz
Modulation Type	CCK, DQPSK, DBPSK for DSSS 256QAM, 64QAM, 16QAM, QPSK BPSK for OFDM
Transmissions category	Completely uncorrelated signal
Antenna Specification	**Antenna type**: Internal Antenna **Antenna gain** ▪ 2.4 GHz Band: ANT 1 : 1.9 dBi & ANT 2 : 2.5 dBi ▪ 5.7 GHz Band: ANT 1 : 2.2 dBi & ANT 2 : 0.5 dBi **Antenna configuration** ▪ 802.11b/g/a: Single Transmitting (ANT 1 or ANT 2) ▪ 802.11n(MCS0 ~ 7) : Single Transmitting (ANT 1 or ANT 2) ▪ 802.11n(MCS8 ~ 15): Multiple Transmitting (ANT 1 and ANT 2) ▪ 802.11ac(NSS 1): Single Transmitting (ANT 1 or ANT 2) ▪ 802.11ac(NSS 2): Multiple Transmitting (ANT 1 and ANT 2)

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2. INFORMATION ABOUT TESTING

2.1 Test mode

Test mode	Worst case data rate	Tested Frequency(MHz)		
		Lowest	Middle	Highest
TM 1	802.11b 5.5 Mbps	2412	2442	2472
TM 2	802.11g 54 Mbps	2412	2442	2472
TM 3	802.11n(HT20) MCS 7	2412	2442	2472
TM 4	802.11n(HT40) MCS 7	2422	2437	2452
TM 5	802.11a 6 Mbps	5745	5785	5825
TM 6	802.11n(HT20) MCS 0	5745	5785	5825
TM 7	802.11n(HT40) MCS 0	5755	-	5795
N/A	802.11ac(VHT20) NSS 1 MCS 8	5745	5785	5825
N/A	802.11ac(VHT40) NSS 1 MCS 8	5755	-	5795
TM 10	802.11ac(VHT80) NSS 1 MCS 8	-	5775	-

The worst case data rate for each modulation is determined as above test mode. And all tests conducted in this report were made at the worst case data rate of each modulation.

2.3 Auxiliary equipment

Equipment	Model No.	Serial No.	Manufacturer	Note
Laptop	Satellite U50D-A	8D031763K	Toshiba	FCC DoC
-	-	-	-	-

2.4 Tested environment

Temperature	:	21 ~ 24°C
Relative humidity content	:	39 ~ 49 % R.H.
Details of power supply	:	DC 5 V

2.5 EMI suppression Device(s) / Modifications

EMI suppression device(s) added and/or modifications made during testing
→ None

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3. SUMMARY OF TESTS

FCC Part Section(s)	RSS Section(s)	Parameter	Limit	Test Condition	Status Note 1
I. Transmitter Mode (TX)					
15.247(a)	RSS-210 [A8.2]	6 dB Bandwidth	> 500 kHz	Conducted	C
15.247(b)	RSS-210 [A8.4]	Transmitter Output Power	< 1Watt		C
15.247(d)	RSS-210 [A8.5]	Out of Band Emissions / Band Edge	20dBc in any 100kHz BW		C
15.247(e)	RSS-210 [A8.2]	Transmitter Power Spectral Density	< 8dBm / 3kHz		C
-	RSS Gen [4.6.1]	Occupied Bandwidth (99%)	RSS-Gen(4.6.1)		C
15.205 15.209	RSS-210 [A8.5]	General Field Strength Limits (Restricted Bands and Radiated Emission Limits)	FCC 15.209 limits	Radiated	C Note2
15.207	RSS-Gen [7.2.4]	AC Conducted Emissions	FCC 15.207 limits	AC Line Conducted	C
15.203	-	Antenna Requirements	FCC 15.203 limits	-	C

Note 1: **C**=Comply **NC**=Not Comply **NT**=Not Tested **NA**=Not Applicable

Note 2: This test item was performed in each axis and the worst case data was reported.

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4. TEST METHODOLOGY

Generally the tests were performed according to the KDB558074 v03r1. And ANSI C63.10-2009 was used to reference appropriate EUT setup and maximizing procedures of radiated spurious emission and AC line conducted emission testing

4.1 EUT configuration

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner that intends to maximize its emission characteristics in a continuous normal application.

4.2 EUT exercise

The EUT was operated in the engineering mode to fix the Tx frequency that was for the purpose of the measurements. According to its specifications, the EUT must comply with the requirements of the Section 15.207, 15.209 and 15.247 under the FCC Rules Part 15 Subpart C.

4.3 General test procedures

Conducted Emissions

The power-line conducted emission test procedure is not described on the KDB 558074 v03r1. So this test was fulfilled with the requirements in Section 6.2 of ANSI C63.10.

The EUT is placed on the turntable, which is 0.8 m above ground plane and the conducted emissions from the EUT measured in the frequency range between 0.15MHz and 30MHz using CISPR Quasi-peak and Average detector.

Radiated Emissions

Basically the radiated tests were performed with KDB 558074 v03r1. But some requirements and procedures like test site requirements, EUT setup and maximizing procedure were fulfilled with the requirements in Section 5 and 6 of the ANSI C63.10 as stated on section 12.1 of the KDB 558074 v03r1.

The EUT is placed on a turn table, which is 0.8 m above ground plane. The turntable shall rotate360 degrees to determine the position of maximum emission level. EUT is set 3 m away from the receiving antenna, which varied from 1 m to 4 m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. In order to find out the highest emission, the relative positions of the EUT were rotated through three orthogonal axis.

4.4 Description of test modes

A test program is used to control the EUT for staying in continuous transmitting mode.

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5. INSTRUMENT CALIBRATION

The measuring equipment, which was utilized in performing the tests documented herein, has been calibrated in accordance with the manufacturer's recommendations for utilizing calibration equipments, which is traceable to recognized national standards.

6. FACILITIES AND ACCREDITATIONS

6.1 Facilities

The open area test site(OATS) or semi anechoic chamber and conducted measurement facility used to collect the radiated and conducted test data are located at the 38, Yurim-ro, 154beon-gil, Cheoin-gu, Yongin-si, Gyeonggi-do, Korea 449-935. The site is constructed in conformance with the requirements.

- Semi anechoic chamber registration Number : 678747

6.2 Equipment

Radiated emissions are measured with one or more of the following types of Linearly polarized antennas: tuned dipole, bi-conical, log periodic, bi-log, and/or ridged waveguide, horn. Spectrum analyzers with pre-selectors and peak, quasi-peak detectors are used to perform radiated measurements. Conducted emissions are measured with Line Impedance Stabilization Networks and EMI Test Receivers. Calibrated wideband preamplifiers, coaxial cables, and coaxial attenuators are also used for making measurements. All receiving equipment conforms to CISPR Publication 16-1, “Radio Interference Measuring Apparatus and Measurement Methods.”

7. ANTENNA REQUIREMENTS

7.1 According to FCC 47 CFR §15.203& RSS-Gen [7.1.2]:

An intentional radiator antenna shall be designed to ensure that no antenna other than that furnished by the responsible party can be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.

The antenna is installed permanently on this module.(Please refer to the internal photo.)

Therefore this module Complies with the requirement of §15.203

7.2 Directional antenna gain for MIMO :

Bands	ANT 1 [dBi]	ANT 2 [dBi]	Directional Gain for uncorrelated signals [dBi]
2.4 GHz	1.900	2.500	2.210
5.7 GHz	2.200	0.500	1.433

Directional gain = $10 \log[(10^{G1/10} + 10^{G2/10} + \ldots + 10^{GN/10}) / N_{ANT}]$ dBi for MIMO uncorrelated signal

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8. TEST RESULT

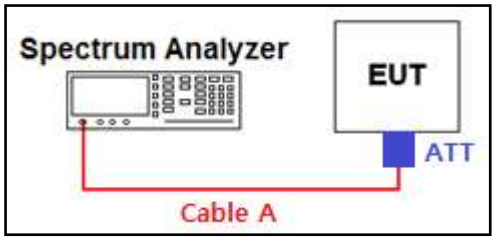
8.1 6dB bandwidth

Test Requirements and limit, §15.247(a) & RSS-210 [A8.2]

The bandwidth at 6dB down from the highest in-band spectral density is measured with a spectrum analyzer connected to the receive antenna while the EUT is operating in transmission mode at the appropriate frequencies.

The minimum permissible 6dB bandwidth is 500 kHz.

▣ TEST CONFIGURATION



▣ TEST PROCEDURE

The transmitter output is connected to the Spectrum Analyzer and used following test procedure of **KDB558074 v03r1**.

1. Set resolution bandwidth (RBW) = 100 KHz
2. Set the video bandwidth (VBW) ≥ 3 x RBW.
   (RBW:100KHz/VBW:300KHz)
3. Detector = **Peak**.
4. Trace mode = **max hold**.
5. Sweep = **auto couple**.
6. Allow the trace to stabilize.
7. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

▣ TEST RESULTS: Comply(Refer to next page.)

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- Measurement Data:

Test Mode	Frequency	Test Results[MHz]	
		ANT 1	ANT 2
TM 1	Lowest	10.650	10.470
	Middle	10.400	10.970
	Highest	10.650	10.780
TM 2	Lowest	16.460	16.430
	Middle	16.440	16.460
	Highest	16.430	16.450
TM 3	Lowest	17.680	17.670
	Middle	17.710	17.630
	Highest	17.650	17.740
TM 4	Lowest	36.380	36.340
	Middle	36.450	36.400
	Highest	36.490	36.410
TM 5	Lowest	16.410	16.430
	Middle	16.340	16.360
	Highest	16.420	16.400
TM 6	Lowest	17.580	17.620
	Middle	17.610	17.630
	Highest	17.630	17.650
TM 7	Lowest	36.370	36.410
	Highest	36.340	36.430
TM 10	Middle	75.900	76.200

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▣ RESULT PLOTS

6 dB Bandwidth

TM 1 & ANT 1 & Lowest

6 dB Bandwidth

TM 1 & ANT 1 & Middle

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6 dB Bandwidth

TM 1 & ANT 1 & Highest

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6 dB Bandwidth TM 1 & ANT 2 & Lowest

6 dB Bandwidth TM 1 & ANT 2 & Middle

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6 dB Bandwidth

TM 1 & ANT 2 & Highest

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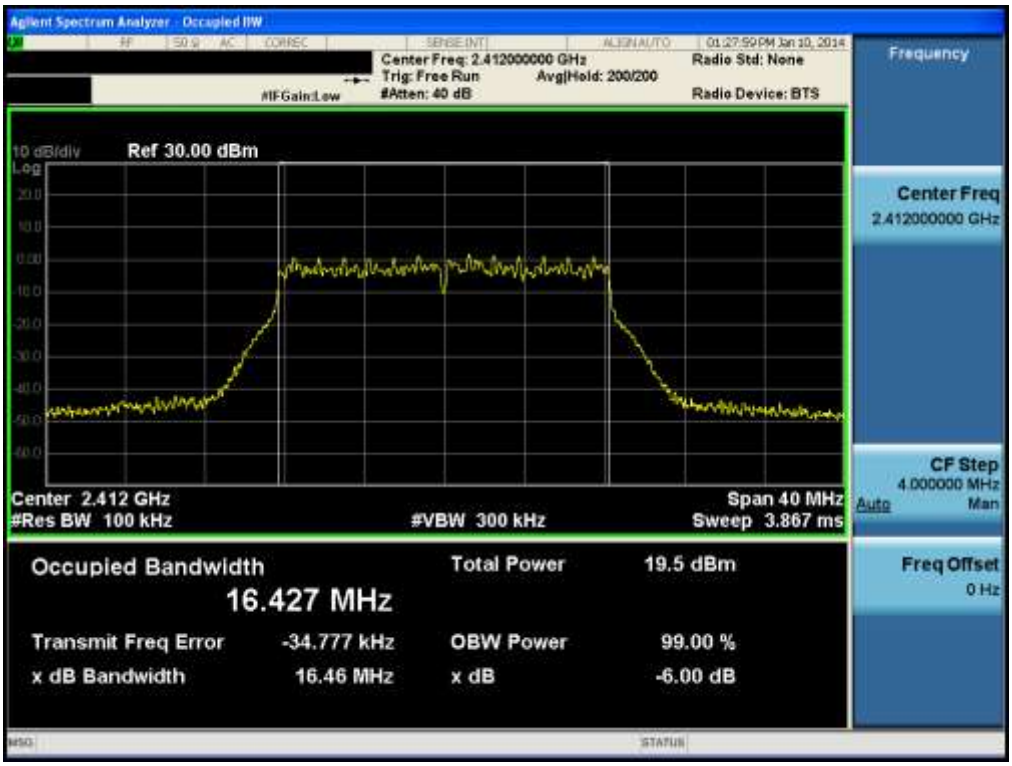
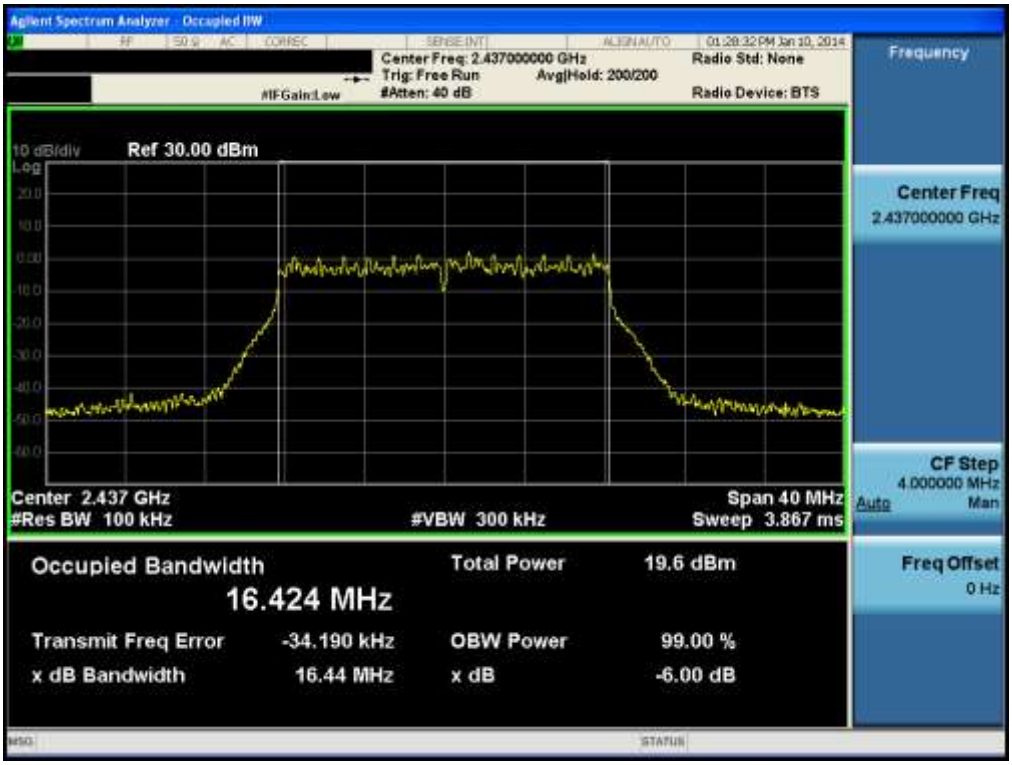
6 dB Bandwidth TM 2 & ANT 1 & Lowest



6 dB Bandwidth TM 2 & ANT 1 & Middle



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6 dB Bandwidth

TM 2 & ANT 1 & Highest

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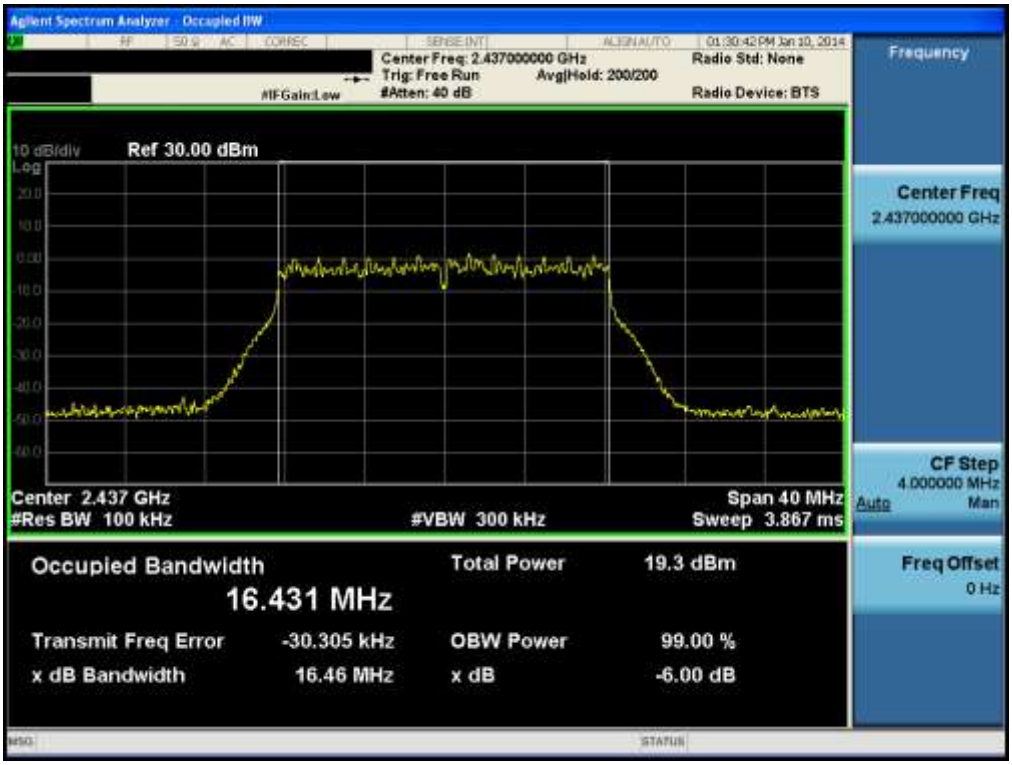
6 dB Bandwidth TM 2 & ANT 2 & Lowest

6 dB Bandwidth TM 2 & ANT 2 & Middle



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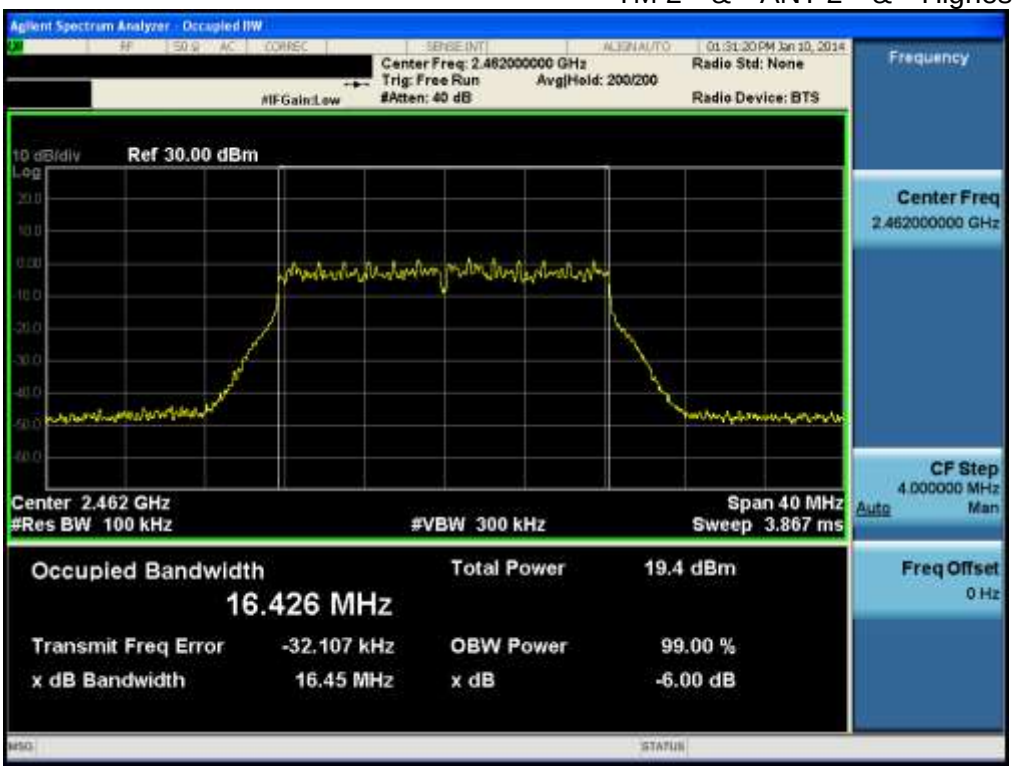
6 dB Bandwidth

TM 2 & ANT 2 & Highest



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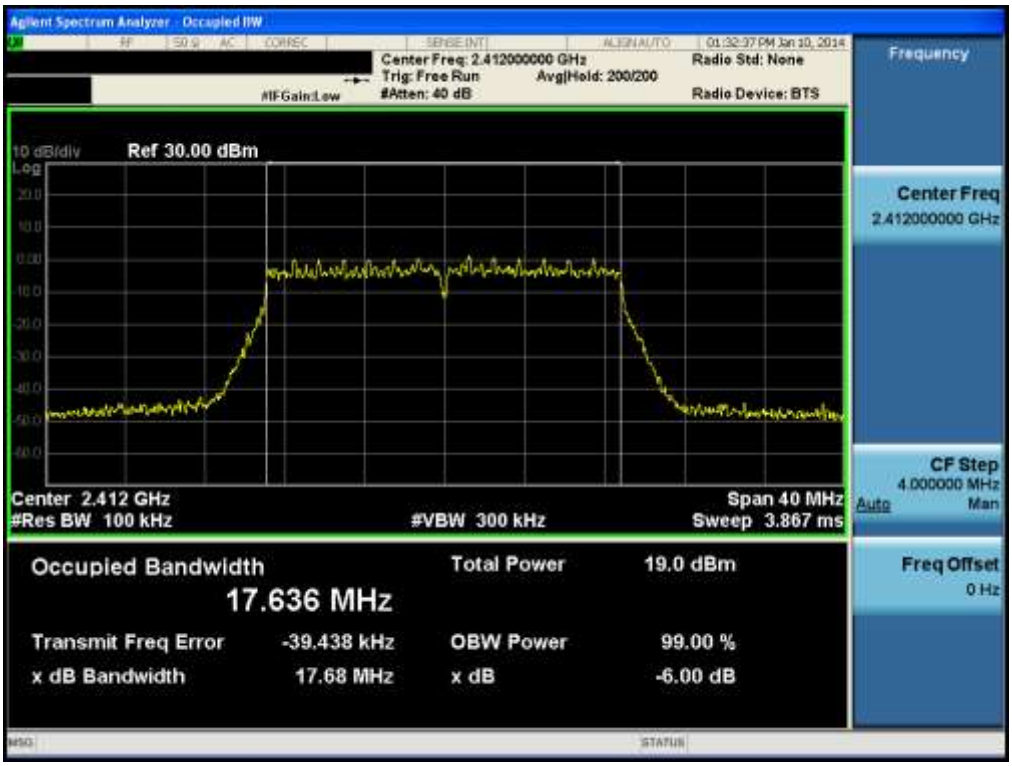
6 dB Bandwidth TM 3 & ANT 1 & Lowest



6 dB Bandwidth TM 3 & ANT 1 & Middle

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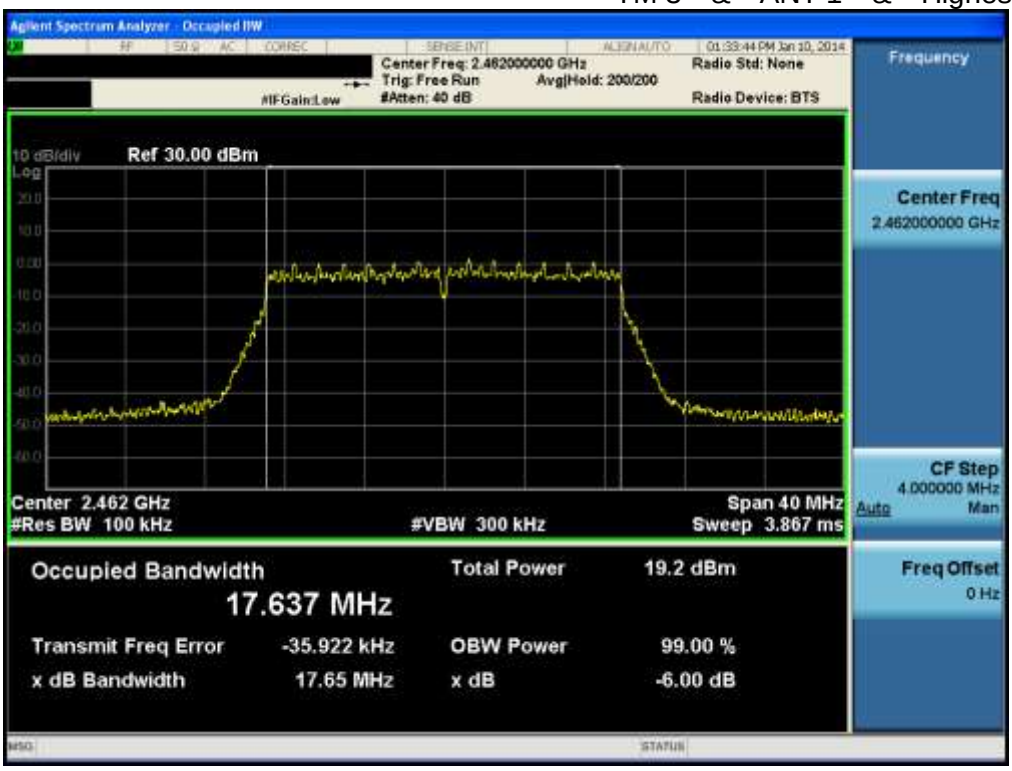
6 dB Bandwidth

TM 3 & ANT 1 & Highest



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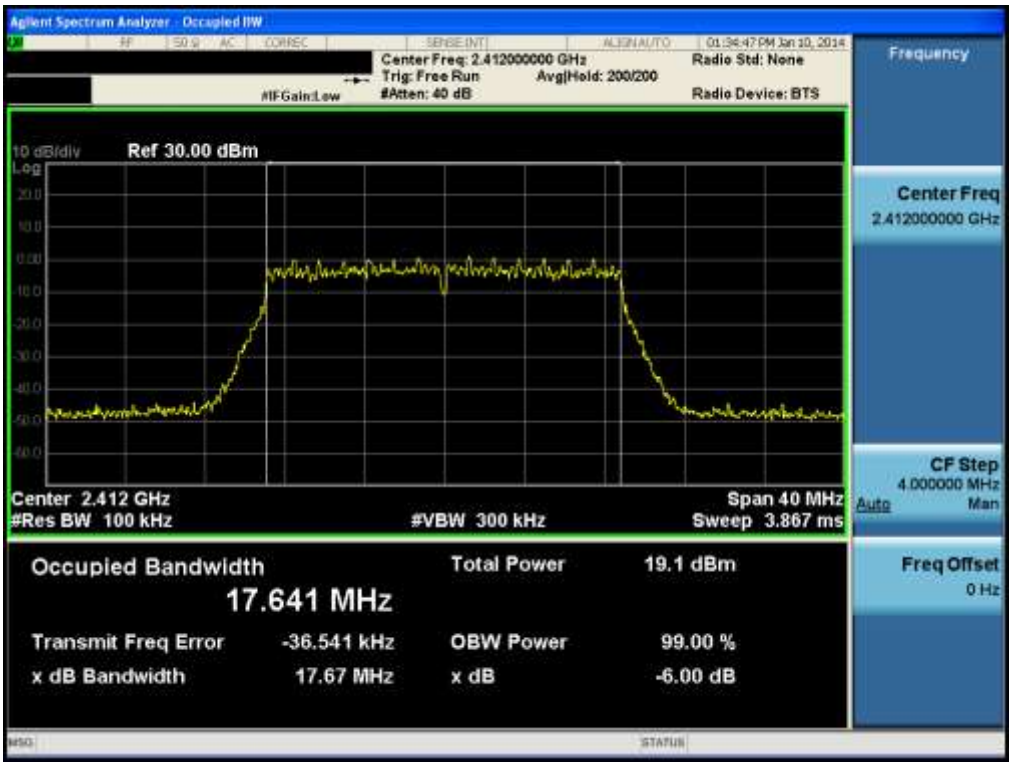
6 dB Bandwidth TM 3 & ANT 2 & Lowest



6 dB Bandwidth TM 3 & ANT 2 & Middle

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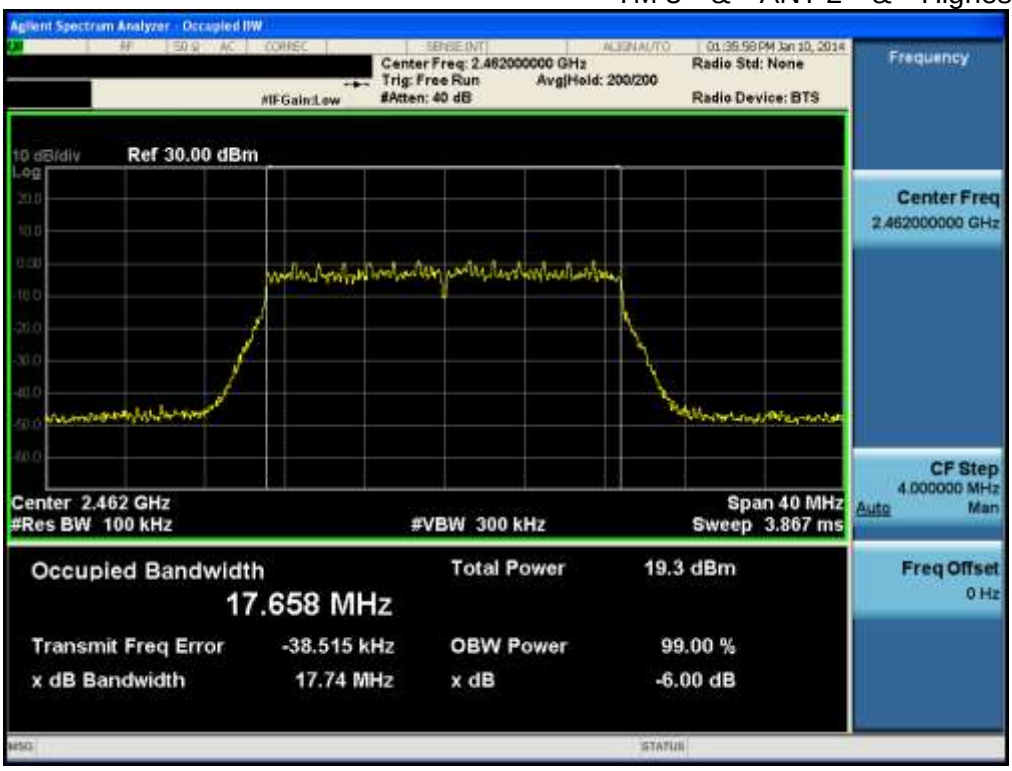
6 dB Bandwidth

TM 3 & ANT 2 & Highest



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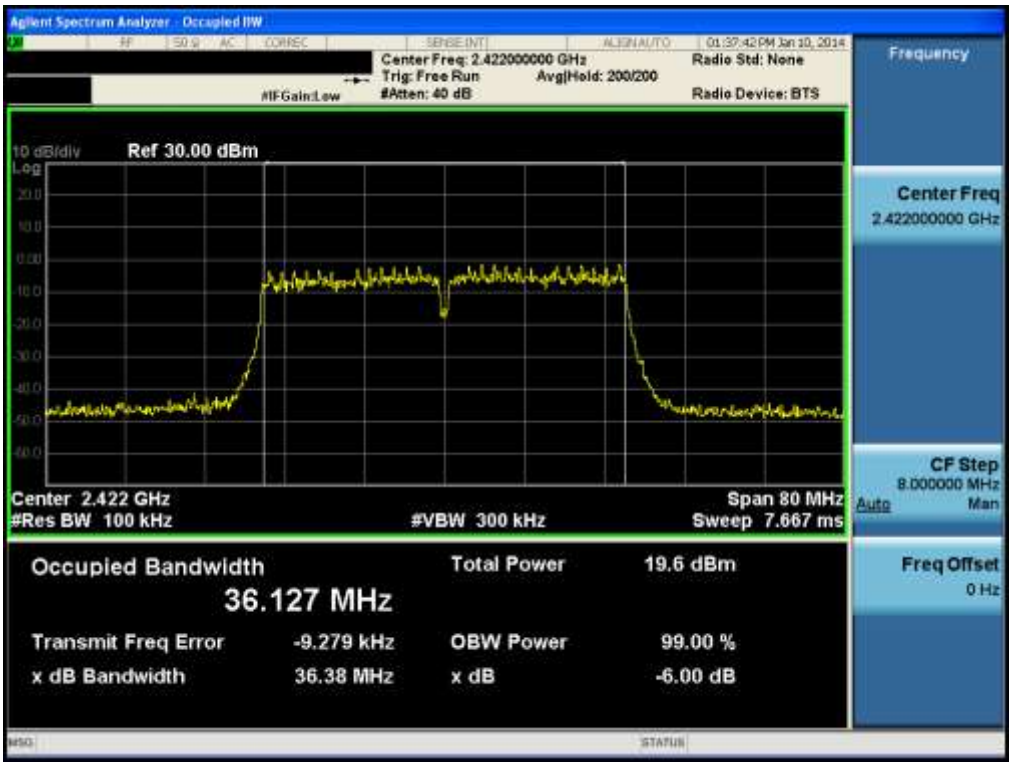
6 dB Bandwidth TM 4 & ANT 1 & Lowest



6 dB Bandwidth TM 4 & ANT 1 & Middle

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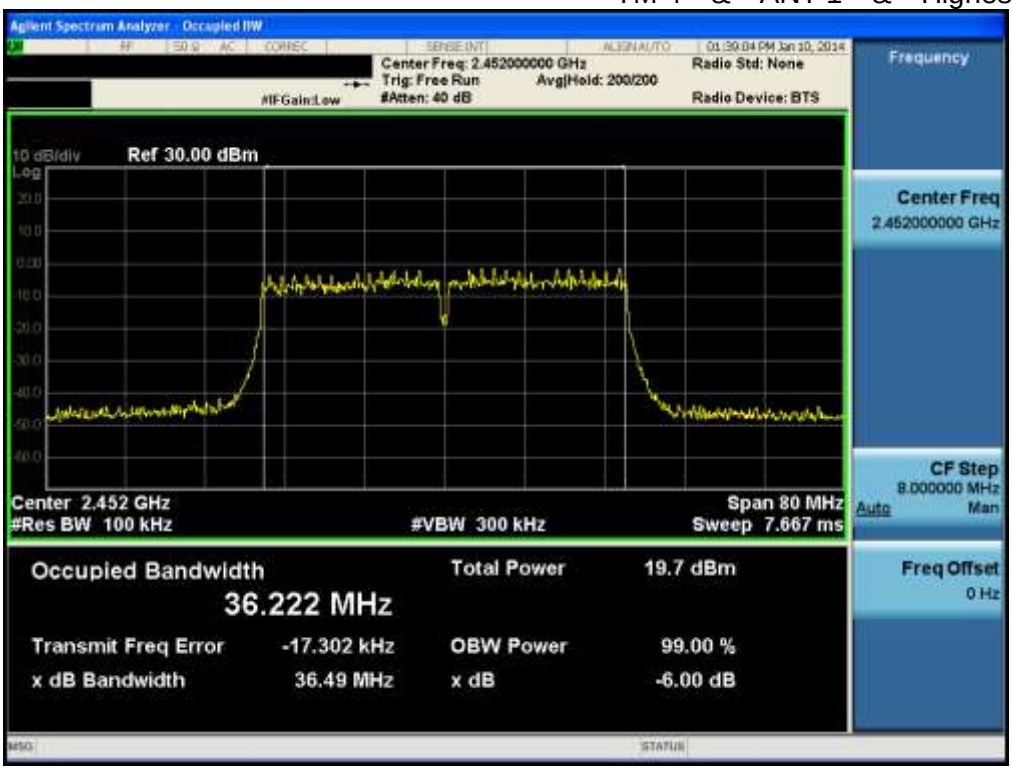
6 dB Bandwidth

TM 4 & ANT 1 & Highest



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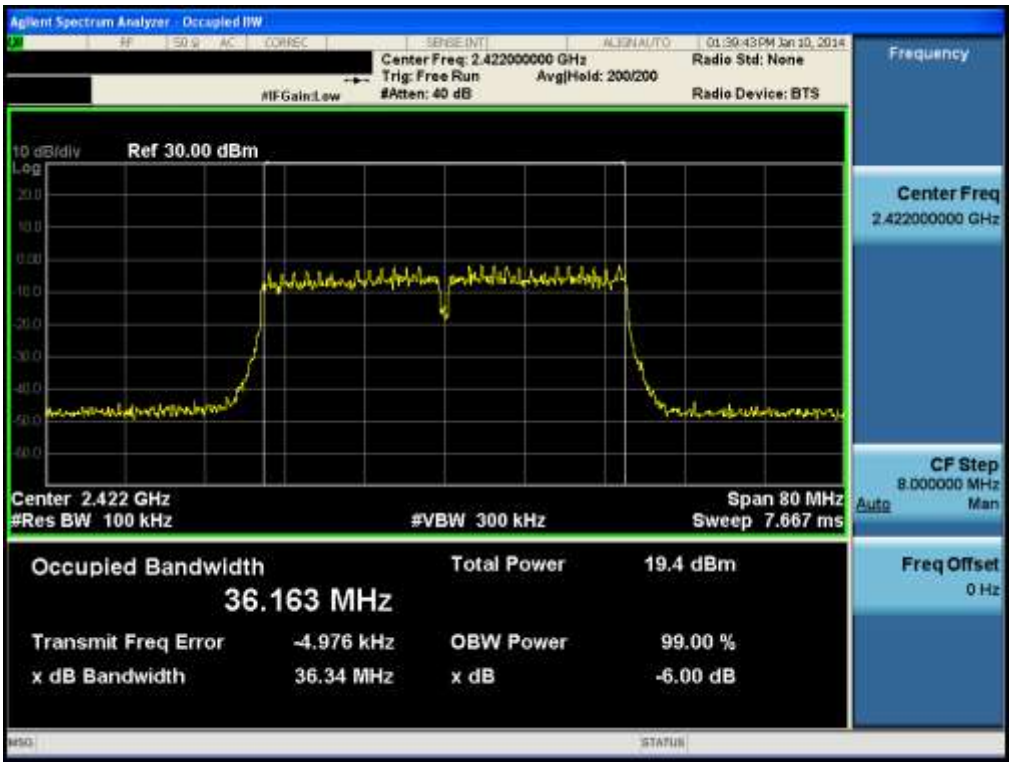
6 dB Bandwidth TM 4 & ANT 2 & Lowest



6 dB Bandwidth TM 4 & ANT 2 & Middle

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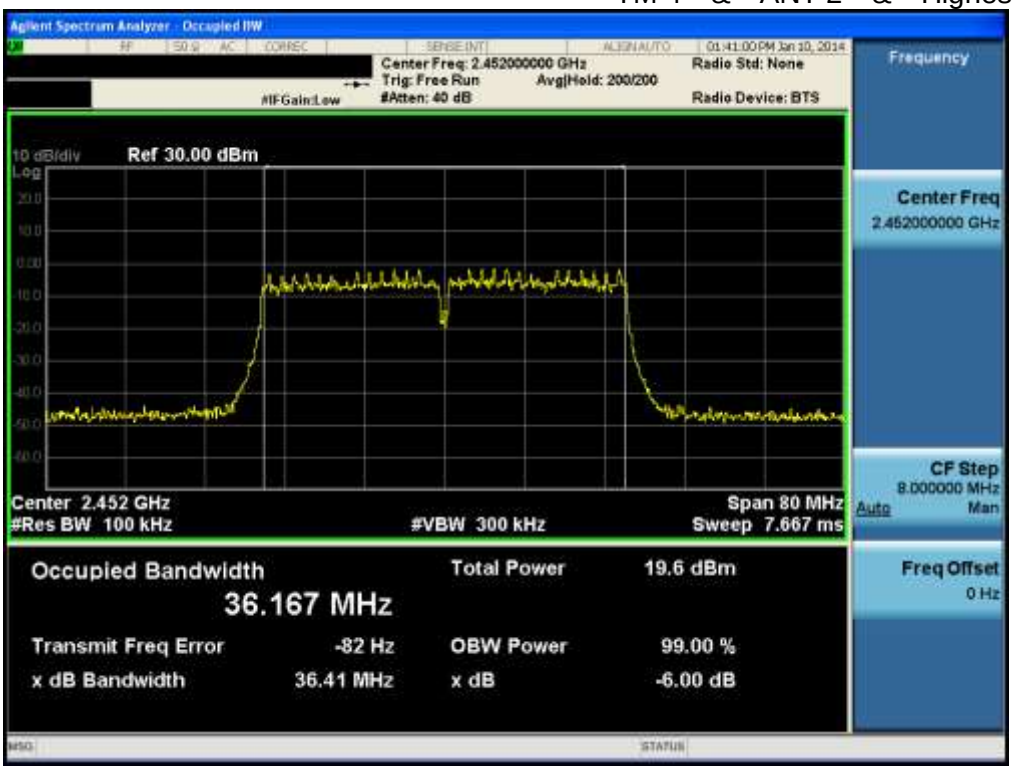
6 dB Bandwidth

TM 4 & ANT 2 & Highest



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6 dB Bandwidth TM 5 & ANT 1 & Lowest

6 dB Bandwidth TM 5 & ANT 1 & Middle

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6 dB Bandwidth

TM 5 & ANT 1 & Highest

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6 dB Bandwidth TM 5 & ANT 2 & Lowest

6 dB Bandwidth TM 5 & ANT 2 & Middle

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TM 5 & ANT 2 & Highest

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6 dB Bandwidth TM 6 & ANT 1 & Lowest

6 dB Bandwidth TM 6 & ANT 1 & Middle

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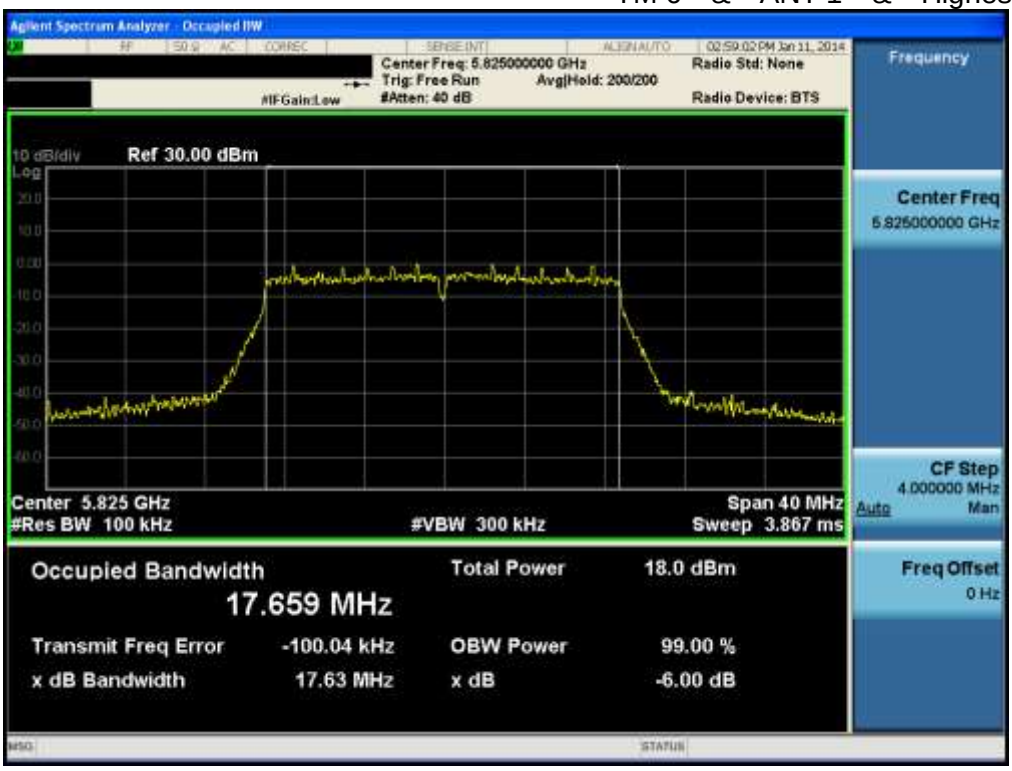
6 dB Bandwidth

TM 6 & ANT 1 & Highest



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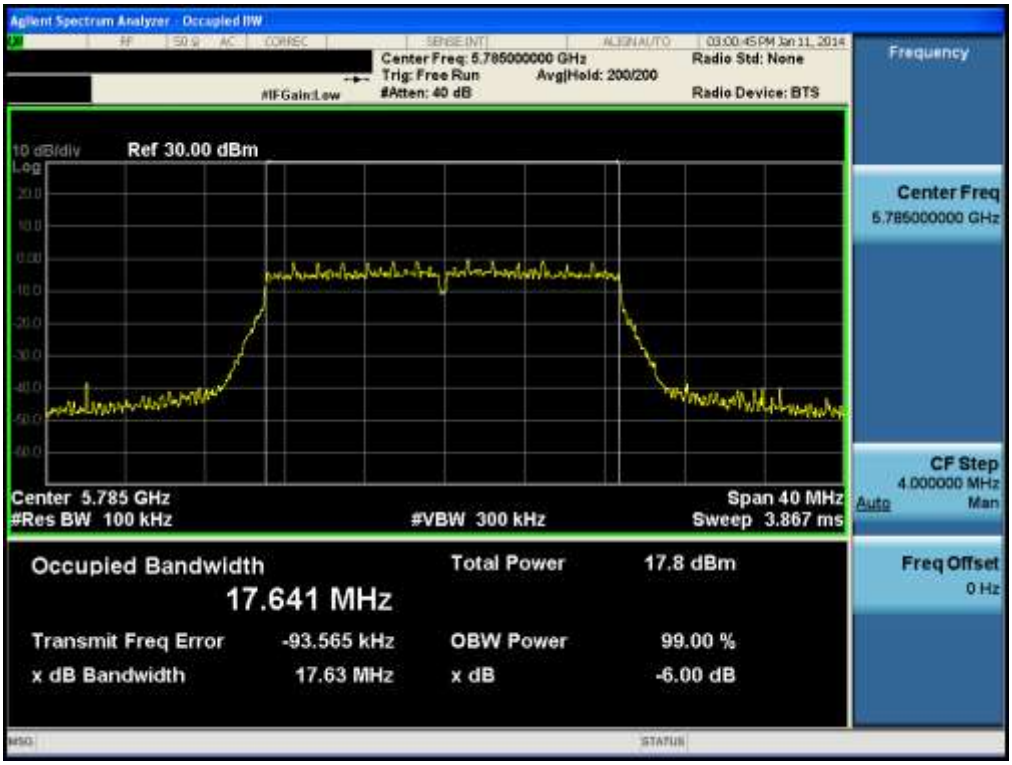
6 dB Bandwidth TM 6 & ANT 2 & Lowest

6 dB Bandwidth TM 6 & ANT 2 & Middle



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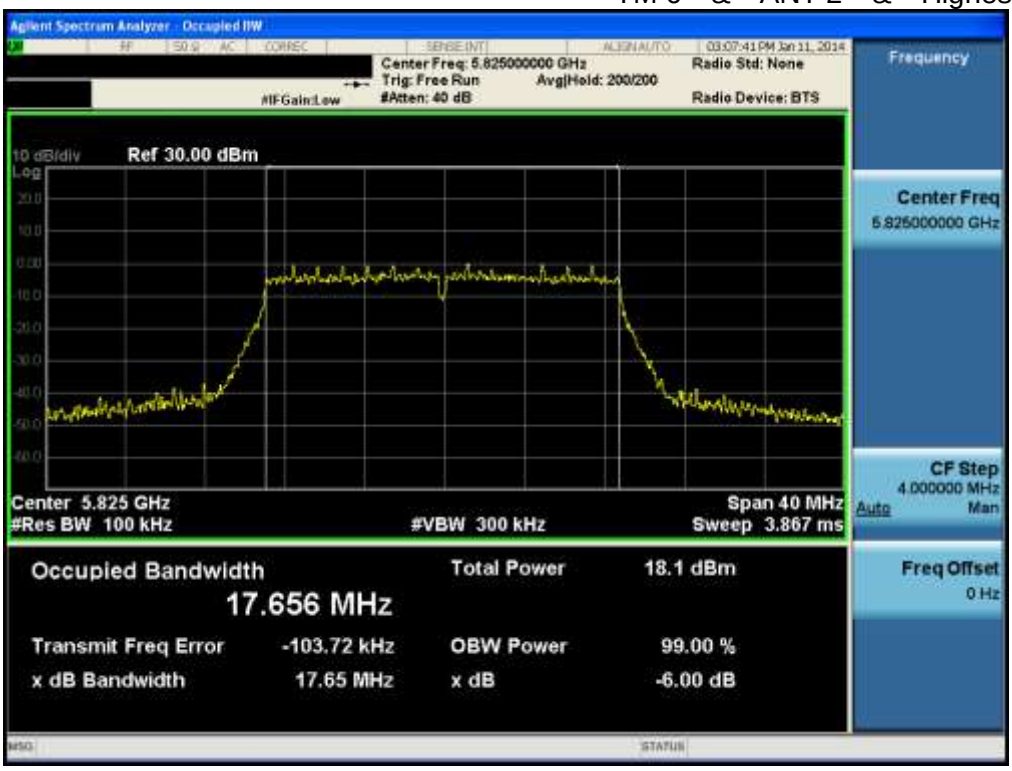
6 dB Bandwidth

TM 6 & ANT 2 & Highest



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6 dB Bandwidth TM 7 & ANT 1 & Lowest

6 dB Bandwidth TM 7 & ANT 1 & Highest

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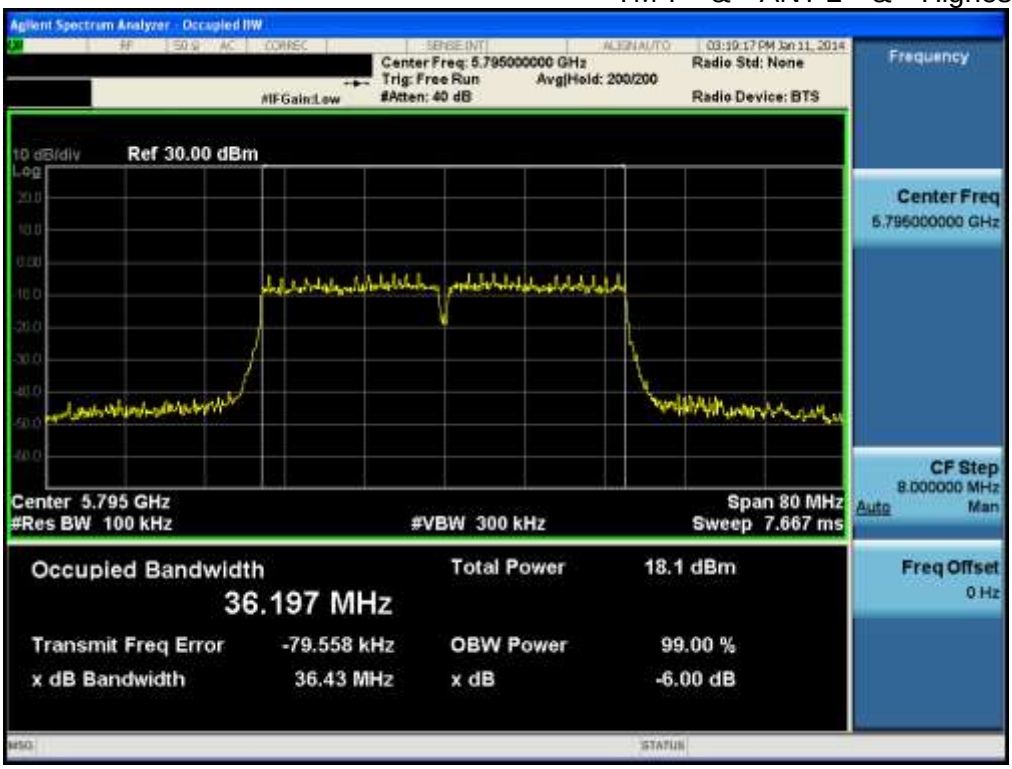
6 dB Bandwidth TM 7 & ANT 2 & Lowest

6 dB Bandwidth TM 7 & ANT 2 & Highest



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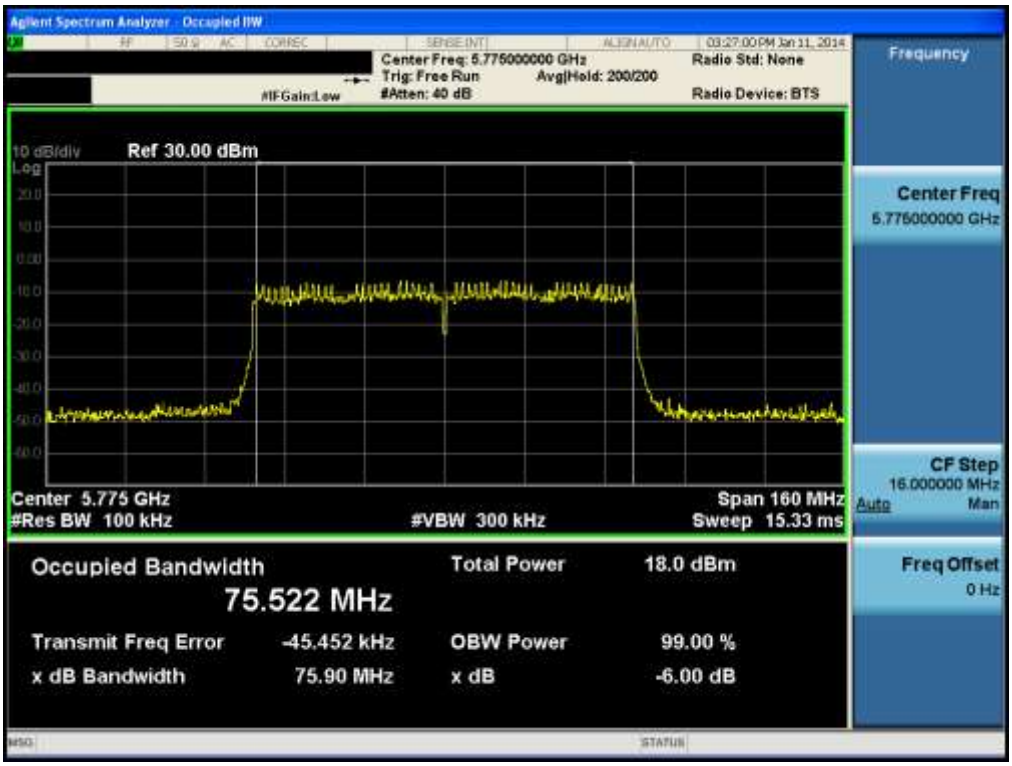
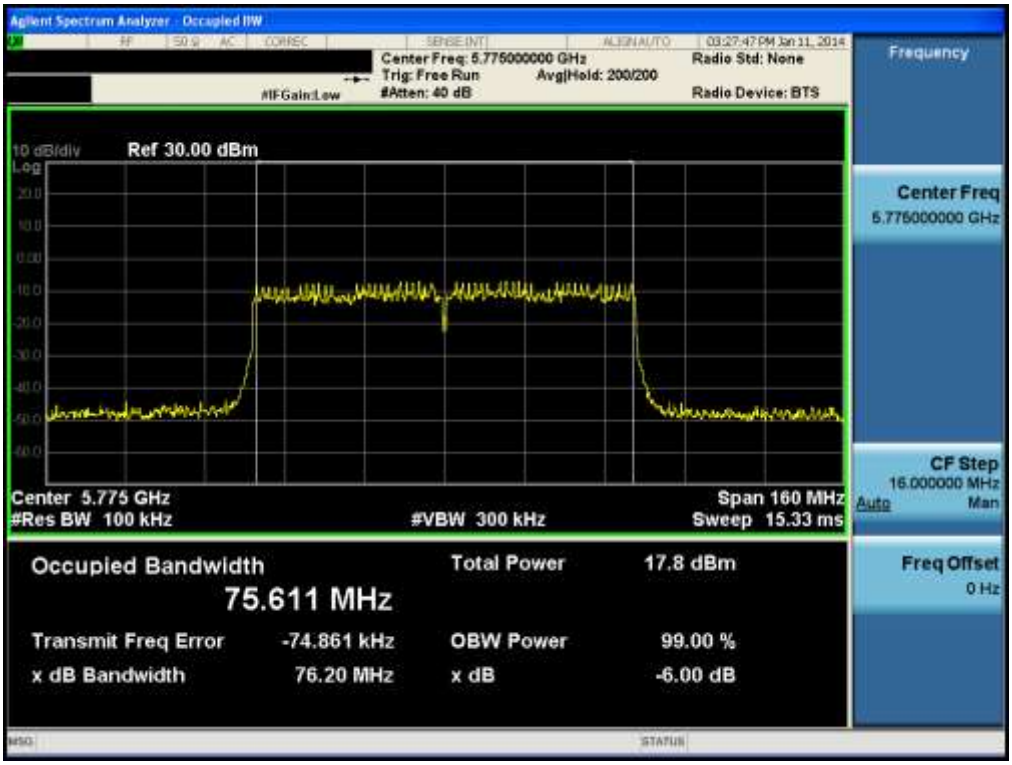
6 dB Bandwidth TM 10 & ANT 1 & Middle



6 dB Bandwidth TM 10 & ANT 2 & Middle



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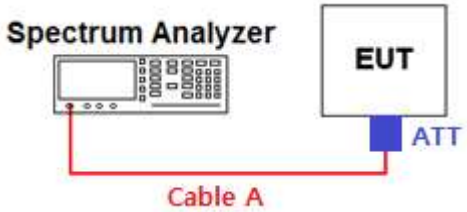
8.2 Maximum peak conducted output power

Test Requirements and limit, §15.247(b) & RSS-210 [A8.4]

The maximum permissible conducted output power is **1 Watt**.

▣ TEST CONFIGURATION

Test Configuration for **PKPM1** and **AVGPM-G**	Test Configuration for **Integrated band power method**
	

▣ TEST PROCEDURE:

1. **PKPM1 Peak power meter method of KDB558074 v03r1**

   The maximum conducted output powers were measured using a broadband peak RF power meter which has greater video bandwidth than DUT's DTS bandwidth and utilize a fast-responding diode detector.

2. **Integrated band power method of KDB558074 v03r1 for maximum peak conducted output power**

   The maximum conducted output powers were measured using a spectrum analyzer as below setting.

   - RBW = 1MHz & VBW ≥ 3 X RBW
   - Span ≥ 1.5 X DTS bandwidth
   - Detector = Peak & Sweep time = auto couple
   - Trace mode = max hold
   - Use the instrument's band/channel power measurement function with the band limits set equal to the DTS bandwidth edges.

3. **Method AVGPM-G (Measurement using a gated RF average power meter) of KDB558074 v03r1**

   The average conducted output powers were measured using a wideband gated RF power meter provided that the gate parameters are adjusted such that the power is measured only when the EUT is transmitting at its maximum power control level. Since this measurement is made only during the ON time of the transmitter, no duty cycle correction is required.

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▣ TEST RESULTS: Comply

- **Single transmitting**

ANT	Freq. (MHz)	Det.	Maximum Peak Conducted Output Power (dBm) for 802.11b			
			Data Rate [Mbps]			
			1	2	5.5	11
ANT 1	2412	PK	17.007	16.967	17.022	16.873
		AV	13.294	13.284	13.316	13.206
	2437	PK	17.021	17.001	17.034	16.830
		AV	13.370	13.367	13.402	13.326
	2462	PK	17.139	17.121	***17.162***	17.060
		AV	13.313	13.375	13.492	13.390
ANT 2	2412	PK	16.898	16.911	16.946	16.790
		AV	13.289	13.276	13.294	13.198
	2437	PK	16.877	16.840	16.894	16.772
		AV	13.303	13.284	13.309	13.292
	2462	PK	17.102	17.111	***17.132***	17.008
		AV	13.290	13.292	13.333	13.288

ANT	Freq. (MHz)	Det.	Maximum Peak Conducted Output Power (dBm) for 802.11g							
			Data Rate [Mbps]							
			6	9	12	18	24	36	48	54
ANT 1	2412	PK	20.584	20.521	20.481	20.433	20.466	20.578	20.514	20.592
		AV	10.874	10.950	10.937	10.996	11.040	11.063	11.125	11.156
	2437	PK	21.251	21.212	21.145	21.004	21.198	21.279	21.311	***21.354***
		AV	11.272	11.319	11.299	11.319	11.363	11.329	11.363	11.367
	2462	PK	21.120	21.137	21.156	21.191	21.187	21.155	21.146	21.198
		AV	11.167	11.177	11.172	11.179	11.196	11.188	11.208	11.251
ANT 2	2412	PK	20.414	20.333	20.385	20.295	20.357	20.395	20.458	20.512
		AV	10.647	10.675	10.654	10.677	10.685	10.684	10.682	10.689
	2437	PK	21.200	21.005	21.028	20.941	20.988	21.165	21.191	***21.211***
		AV	10.850	10.844	10.850	10.844	10.882	10.879	10.880	11.002
	2462	PK	20.991	20.999	21.042	21.146	21.095	21.141	21.138	21.158
		AV	11.060	11.053	11.044	11.043	11.068	11.069	11.057	11.078

ANT	Freq. (MHz)	Det.	Maximum Peak Conducted Output Power (dBm) for 802.11n(HT20)							
			Modulation and Coding Scheme [MCS]							
			0	1	2	3	4	5	6	7
ANT 1	2412	PK	19.900	19.915	19.886	19.905	19.853	19.915	19.878	20.139
		AV	10.324	10.382	10.364	10.352	10.438	10.390	10.382	10.440
	2437	PK	19.968	19.928	19.988	19.951	20.009	19.996	20.016	20.211
		AV	10.435	10.525	10.534	10.491	10.519	10.537	10.526	10.575
	2462	PK	20.082	20.096	20.087	20.145	20.099	20.164	20.201	***20.441***
		AV	10.715	10.754	10.786	10.766	10.813	10.840	10.815	10.872
ANT 2	2412	PK	19.874	19.835	19.870	19.847	19.892	19.933	19.886	20.103
		AV	10.259	10.214	10.174	10.198	10.187	10.237	10.193	10.352
	2437	PK	19.984	19.972	19.943	20.001	19.941	20.003	19.933	20.132
		AV	10.509	10.455	10.516	10.467	10.485	10.478	10.517	10.536
	2462	PK	19.948	19.955	19.994	20.001	20.031	19.991	20.054	***20.295***
		AV	10.487	10.499	10.518	10.585	10.665	10.727	10.697	10.649

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ANT	Freq. (MHz)	Det.	Maximum Peak Conducted Output Power (dBm) for 802.11n(HT40)							
			Modulation and Coding Scheme [MCS]							
			0	1	2	3	4	5	6	7
ANT 1	2422	PK	20.133	20.167	20.026	19.996	20.148	20.075	20.233	***20.478***
		AV	10.329	10.294	10.378	10.302	10.367	10.357	10.364	10.321
	2437	PK	20.121	19.989	20.143	20.037	20.142	20.040	20.122	20.338
		AV	10.462	10.435	10.399	10.486	10.406	10.448	10.412	10.487
	2452	PK	19.957	19.864	19.919	19.866	20.032	19.931	19.881	20.293
		AV	10.501	10.409	10.505	10.396	10.519	10.457	10.413	10.528
ANT 2	2422	PK	19.981	19.912	19.944	19.838	19.984	19.924	19.898	***20.712***
		AV	10.010	10.034	9.994	10.087	10.051	10.001	10.103	10.074
	2437	PK	19.826	19.841	19.882	19.889	19.953	19.934	19.895	20.214
		AV	10.161	10.151	10.165	10.122	10.119	10.181	10.142	10.200
	2452	PK	19.846	19.791	19.797	19.767	19.916	19.926	19.924	20.154
		AV	10.286	10.251	10.264	10.250	10.255	10.233	10.331	10.304

ANT	Freq. (MHz)	Det.	Maximum Peak Conducted Output Power (dBm) for 802.11a							
			Data Rate [Mbps]							
			6	9	12	18	24	36	48	54
ANT 1	5745	PK	20.207	18.627	19.888	20.061	20.051	19.917	19.320	18.842
		AV	10.226	10.139	9.845	10.037	9.711	10.072	10.093	9.941
	5785	PK	20.202	19.876	19.074	20.145	20.136	19.851	19.141	19.017
		AV	10.073	9.883	9.833	9.814	9.989	10.026	10.019	10.098
	5825	PK	***20.323***	18.639	19.638	19.247	19.572	19.364	20.072	18.929
		AV	10.206	10.088	9.895	9.920	9.897	10.006	10.177	10.101
ANT 2	5745	PK	20.133	20.027	19.888	19.760	19.202	19.128	18.605	18.803
		AV	10.161	9.763	9.921	9.902	10.014	10.082	9.825	10.030
	5785	PK	20.138	18.778	18.946	19.506	18.740	19.708	18.681	18.972
		AV	10.071	9.989	10.040	9.926	9.933	9.913	9.891	10.176
	5825	PK	***20.283***	19.178	19.018	19.996	18.653	20.010	19.169	18.913
		AV	10.192	9.960	10.112	10.155	10.176	9.931	10.064	10.180

ANT	Freq. (MHz)	Det.	Maximum Peak Conducted Output Power (dBm) for 802.11n(HT20)							
			Modulation and Coding Scheme [MCS]							
			0	1	2	3	4	5	6	7
ANT 1	5745	PK	19.615	19.086	19.359	19.304	18.705	19.254	19.112	18.994
		AV	10.156	9.728	9.764	9.926	9.921	10.037	9.732	9.946
	5785	PK	19.585	18.737	18.773	19.187	18.989	18.663	19.225	18.911
		AV	10.253	9.985	10.169	10.238	10.029	10.164	10.096	10.206
	5825	PK	***19.697***	19.651	18.955	19.606	19.237	19.429	19.118	19.204
		AV	10.332	10.037	10.082	9.994	10.191	10.260	10.041	10.292
ANT 2	5745	PK	19.498	18.911	19.214	19.067	19.161	19.011	19.365	18.812
		AV	10.118	9.955	10.110	10.032	10.026	9.739	9.934	9.924
	5785	PK	19.493	18.866	19.336	19.337	19.096	19.249	19.364	18.910
		AV	10.246	10.183	9.896	10.238	9.981	10.013	9.906	10.164
	5825	PK	***19.604***	19.376	18.960	18.969	19.174	19.075	19.319	19.192
		AV	10.315	9.830	10.246	10.029	9.933	9.903	9.924	10.124

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ANT	Freq. (MHz)	Det.	Maximum Peak Conducted Output Power (dBm) for 802.11n(HT40)							
			Modulation and Coding Scheme [MCS]							
			0	1	2	3	4	5	6	7
ANT 1	5755	PK	19.339	18.619	19.086	18.793	18.662	19.037	19.110	18.894
		AV	9.968	9.644	9.958	9.926	9.598	9.890	9.625	9.855
	5795	PK	***19.652***	19.187	19.221	19.381	19.079	19.267	19.278	19.251
		AV	9.959	9.594	9.881	9.677	9.894	9.767	9.626	9.876
ANT 2	5755	PK	19.278	18.719	18.724	18.671	18.692	18.526	18.667	18.806
		AV	9.959	9.594	9.881	9.677	9.894	9.767	9.626	9.876
	5795	PK	***19.552***	19.191	19.053	19.345	19.055	19.071	19.303	19.247
		AV	9.966	9.682	9.697	9.445	9.555	9.510	9.820	9.656

ANT	Freq. (MHz)	Det.	Maximum Peak Conducted Output Power (dBm) for 802.11ac(VHT20)								
			NSS 1 & Modulation and Coding Scheme [MCS]								
			0	1	2	3	4	5	6	7	8
ANT 1	5745	PK	19.295	19.214	19.240	19.135	19.097	19.264	19.101	19.105	19.517
		AV	10.017	9.953	10.134	10.030	10.065	9.835	10.172	9.843	10.203
	5785	PK	19.133	18.934	18.990	19.040	18.971	19.179	19.081	19.112	19.317
		AV	10.050	10.236	9.964	10.049	9.996	10.208	10.052	10.103	10.242
	5825	PK	19.407	19.347	19.334	19.384	19.220	19.309	19.212	19.323	***19.618***
		AV	10.265	10.178	10.264	10.084	10.145	10.171	10.162	10.356	10.363
ANT 2	5745	PK	19.238	19.302	19.295	19.204	19.046	19.066	19.284	19.252	19.408
		AV	10.029	9.933	9.886	10.116	9.945	9.839	9.836	9.863	10.131
	5785	PK	19.038	18.975	19.059	18.887	18.923	18.962	19.055	18.978	19.168
		AV	10.080	9.995	10.166	10.135	10.089	10.129	9.897	10.117	10.195
	5825	PK	19.401	19.300	19.448	19.310	19.291	19.319	19.249	19.451	***19.581***
		AV	10.045	9.913	10.285	9.984	10.253	10.026	9.908	10.030	10.426

ANT	Freq. (MHz)	Det.	Maximum Peak Conducted Output Power (dBm) for 802.11ac(VHT40)									
			NSS 1 & Modulation and Coding Scheme [MCS]									
			0	1	2	3	4	5	6	7	8	9
ANT 1	5755	PK	19.342	19.173	19.541	19.205	19.275	19.279	19.419	19.290	***19.619***	19.467
		AV	10.081	10.219	9.899	9.988	10.188	10.088	10.128	10.129	10.272	10.214
	5795	PK	19.402	19.311	19.204	19.331	19.360	19.393	19.528	19.215	19.582	19.437
		AV	10.120	10.281	10.302	10.199	10.207	9.974	10.261	9.918	10.294	10.170
ANT 2	5755	PK	19.306	19.126	19.510	19.178	19.233	19.249	19.380	19.252	***19.622***	19.420
		AV	9.891	10.172	10.180	9.973	10.085	10.007	9.744	10.016	10.184	10.083
	5795	PK	19.353	19.281	19.163	19.286	19.324	19.362	19.493	19.179	19.573	19.409
		AV	9.951	10.048	10.150	9.954	10.067	9.922	10.127	9.903	10.166	10.069

ANT	Freq. (MHz)	Det.	Maximum Peak Conducted Output Power (dBm) for 802.11ac(VHT80)									
			NSS 1 & Modulation and Coding Scheme [MCS]									
			0	1	2	3	4	5	6	7	8	9
ANT 1	5775	PK	17.800	17.670	17.630	17.760	17.650	17.560	17.620	17.410	***18.610***	17.470
		AV	8.142	8.214	8.344	8.415	8.397	8.442	8.438	8.502	8.515	8.436
ANT 2	5775	PK	17.770	17.530	17.440	17.640	17.480	17.410	17.340	17.220	***17.910***	17.200
		AV	8.204	8.214	8.310	8.281	8.313	8.348	8.276	8.357	8.397	8.392

Note: This result of PK was tested using the integrated band power method. Please refer to actual test plots.

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- **Multiple transmitting**

ANT	Freq. (MHz)	Det.	Maximum Peak Conducted Output Power (dBm) for 802.11n(HT20)							
			Modulation and Coding Scheme [MCS]							
			8	9	10	11	12	13	14	15
ANT 1	2412	PK	20.049	20.044	20.045	20.042	20.045	20.075	20.053	20.111
		AV	10.505	10.518	10.509	10.544	10.575	10.574	10.548	10.602
	2437	PK	20.152	20.081	20.112	20.054	20.116	20.131	20.127	20.178
		AV	10.633	10.670	10.635	10.691	10.715	10.697	10.703	10.739
	2462	PK	20.258	20.287	20.284	20.312	20.408	20.398	20.343	***20.421***
		AV	10.885	10.896	10.902	10.925	10.932	10.967	10.954	10.974
ANT 2	2412	PK	20.027	20.025	20.012	20.002	20.062	20.087	20.073	20.088
		AV	10.406	10.335	10.372	10.312	10.354	10.401	10.337	10.472
	2437	PK	20.095	20.111	20.097	20.114	20.126	20.122	20.120	20.131
		AV	10.612	10.622	10.622	10.623	10.654	10.643	10.635	10.656
	2462	PK	20.111	20.140	20.134	20.151	20.182	20.169	20.176	***20.240***
		AV	10.610	10.618	10.686	10.714	10.771	10.828	10.797	10.830
Sum (ANT 1+2)	2412	PK	23.049	23.045	23.039	23.033	23.064	23.092	23.074	23.110
	2437	PK	23.134	23.107	23.115	23.095	23.132	23.137	23.134	23.165
	2462	PK	23.196	23.225	23.220	23.243	23.307	23.296	23.271	***23.342***

ANT	Freq. (MHz)	Det.	Maximum Peak Conducted Output Power (dBm) for 802.11n(HT40)							
			Modulation and Coding Scheme [MCS]							
			8	9	10	11	12	13	14	15
ANT 1	2422	PK	20.312	20.275	20.224	20.111	20.289	20.197	20.429	***20.442***
		AV	10.454	10.474	10.479	10.479	10.498	10.510	10.494	10.511
	2437	PK	20.312	20.183	20.279	20.142	20.248	20.177	20.288	20.342
		AV	10.599	10.598	10.597	10.594	10.604	10.602	10.598	10.612
	2452	PK	20.098	20.012	20.076	20.008	20.139	20.111	20.054	20.276
		AV	10.612	10.607	10.607	10.593	10.627	10.622	10.608	10.632
ANT 2	2422	PK	20.104	20.048	20.051	20.001	20.104	20.044	20.031	***20.618***
		AV	10.183	10.187	10.186	10.190	10.194	10.190	10.206	10.224
	2437	PK	20.007	20.005	19.995	19.993	20.150	20.119	19.996	20.154
		AV	10.285	10.287	10.286	10.288	10.295	10.304	10.304	10.312
	2452	PK	20.001	19.939	19.980	19.899	20.085	20.100	20.040	20.147
		AV	10.422	10.410	10.419	10.408	10.422	10.413	10.435	10.441
Sum (ANT 1+2)	2422	PK	23.220	23.174	23.149	23.067	23.208	23.132	23.245	***23.542***
	2437	PK	23.173	23.106	23.150	23.079	23.210	23.159	23.155	23.260
	2452	PK	23.061	22.986	23.039	22.965	23.123	23.116	23.058	23.223

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ANT	Freq. (MHz)	Det.	Maximum Peak Conducted Output Power (dBm) for 802.11n(HT20)							
			Modulation and Coding Scheme [MCS]							
			8	9	10	11	12	13	14	15
ANT 1	5745	PK	19.505	19.428	19.474	18.960	19.487	19.109	18.993	19.012
		AV	10.223	9.903	9.834	10.208	10.019	10.096	10.191	10.080
	5785	PK	19.541	19.313	18.798	18.734	19.444	18.729	18.938	19.022
		AV	10.356	10.260	10.268	10.181	10.084	10.030	10.193	10.213
	5825	PK	***19.668***	19.468	19.607	19.561	19.293	19.330	19.275	19.428
		AV	10.405	10.237	10.270	10.024	10.029	10.352	10.339	10.297
ANT 2	5745	PK	19.463	18.941	19.120	18.810	19.417	19.146	18.662	18.893
		AV	10.125	9.836	9.993	10.124	9.892	9.797	9.920	10.014
	5785	PK	19.438	18.795	19.263	18.620	19.173	18.907	19.197	18.898
		AV	10.315	9.991	10.134	10.192	10.114	10.006	10.021	10.195
	5825	PK	***19.578***	18.935	19.252	19.436	19.468	19.264	19.125	19.204
		AV	10.364	10.249	9.938	10.047	10.264	9.988	10.159	10.156
Sum (ANT 1+2)	5745	PK	22.495	22.202	22.311	21.896	22.463	22.138	21.841	21.964
	5785	PK	22.501	22.073	22.048	21.688	22.321	21.830	22.080	21.971
	5825	PK	***22.634***	22.220	22.444	22.510	22.392	22.308	22.211	22.328

ANT	Freq. (MHz)	Det.	Maximum Peak Conducted Output Power (dBm) for 802.11n(HT40)							
			Modulation and Coding Scheme [MCS]							
			8	9	10	11	12	13	14	15
ANT 1	5755	PK	19.238	18.811	18.791	19.065	19.018	19.081	19.086	19.085
		AV	10.092	9.798	9.917	10.091	9.830	9.892	9.818	10.016
	5795	PK	***19.559***	19.205	19.305	19.548	19.528	19.380	19.247	19.412
		AV	10.142	10.049	9.620	9.637	9.675	9.769	9.856	9.854
ANT 2	5755	PK	19.212	19.203	18.824	19.208	18.975	19.006	18.843	18.979
		AV	10.071	9.800	9.962	9.847	9.892	9.941	9.928	10.000
	5795	PK	***19.513***	19.291	19.485	19.317	19.162	19.448	19.356	19.402
		AV	10.129	9.773	9.932	9.589	9.595	9.770	9.583	9.847
Sum (ANT 1+2)	5755	PK	22.236	22.022	21.818	22.148	22.007	22.054	21.977	22.043
	5795	PK	***22.547***	22.259	22.407	22.445	22.360	22.425	22.313	22.418

ANT	Freq. (MHz)	Det.	Maximum Peak Conducted Output Power (dBm) for 802.11ac(VHT20)								
			NSS 2 & Modulation and Coding Scheme [MCS]								
			0	1	2	3	4	5	6	7	8
ANT 1	5745	PK	19.451	19.409	19.411	19.313	19.504	19.342	19.488	19.275	19.512
		AV	10.203	10.189	10.153	10.154	10.081	10.123	10.032	10.116	10.226
	5785	PK	19.302	19.204	19.256	19.273	19.134	19.318	19.277	19.259	19.325
		AV	10.245	10.234	10.142	10.274	10.274	10.224	10.100	10.084	10.297
	5825	PK	19.519	19.453	19.392	19.399	19.545	19.374	19.355	19.564	***19.592***
		AV	10.434	10.298	10.361	10.292	10.384	10.245	10.302	10.258	10.456
ANT 2	5745	PK	19.367	19.394	19.205	19.255	19.314	19.359	19.381	19.324	19.417
		AV	10.206	10.168	10.154	10.066	10.152	10.063	10.013	10.199	10.214
	5785	PK	19.138	19.175	19.200	19.207	19.159	19.176	19.015	18.971	19.211
		AV	10.215	10.049	10.089	10.100	10.066	10.082	10.230	10.227	10.262
	5825	PK	19.514	19.370	19.314	19.513	19.451	19.475	19.413	19.363	***19.574***
		AV	10.200	10.053	10.038	10.038	10.176	10.132	10.194	10.023	10.232
Sum (ANT 1+2)	5745	PK	22.420	22.412	22.320	22.295	22.421	22.361	22.446	22.310	22.476
	5785	PK	22.232	22.200	22.239	22.251	22.157	22.258	22.159	22.128	22.279
	5825	PK	22.527	22.422	22.364	22.467	22.509	22.436	22.395	22.475	***22.594***

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ANT	Freq. (MHz)	Det.	Maximum Peak Conducted Output Power (dBm) for ***802.11ac(VHT40)***									
			NSS 2 & Modulation and Coding Scheme [MCS]									
			0	1	2	3	4	5	6	7	8	9
ANT 1	5755	PK	19.442	19.436	19.566	19.319	19.415	19.495	19.480	19.471	***19.590***	19.481
		AV	10.118	10.269	9.926	10.030	10.233	10.135	10.168	10.166	10.310	10.244
	5795	PK	19.472	19.434	19.485	19.431	19.479	19.466	19.352	19.454	19.554	19.490
		AV	10.151	10.325	10.332	10.237	10.238	10.001	10.292	9.954	10.332	10.209
ANT 2	5755	PK	19.342	19.173	19.541	19.205	19.275	19.279	19.419	19.290	***19.569***	19.467
		AV	9.918	10.214	10.225	10.008	10.114	10.039	9.787	10.056	10.229	10.115
	5795	PK	19.402	19.311	19.204	19.331	19.360	19.393	19.528	19.215	19.532	19.437
		AV	9.992	10.091	10.196	9.980	10.108	9.951	10.157	9.944	10.211	10.112
Sum (ANT 1+2)	5755	PK	22.403	22.317	22.564	22.273	22.356	22.399	22.460	22.392	***22.590***	22.485
	5795	PK	22.448	22.384	22.358	22.392	22.431	22.440	22.452	22.347	22.554	22.474

ANT	Freq. (MHz)	Det.	Maximum Peak Conducted Output Power (dBm) for ***802.11ac(VHT80)***									
			NSS 2 & Modulation and Coding Scheme [MCS]									
			0	1	2	3	4	5	6	7	8	9
ANT 1	5775	PK	17.850	17.690	17.600	17.810	17.610	17.510	17.550	17.290	***18.600***	17.650
		AV	8.464	8.522	8.517	8.540	8.592	8.577	8.524	8.587	8.626	8.555
ANT 2	5775	PK	17.710	17.510	17.590	17.470	17.300	17.220	17.330	17.200	***17.900***	17.230
		AV	8.247	8.224	8.219	8.239	8.301	8.345	8.348	8.380	8.399	8.377
Sum (ANT 1+2)	5775	PK	20.791	20.612	20.606	20.654	20.469	20.378	20.452	20.256	***21.275***	20.456

Note: This result of PK was tested using the integrated band power method. Please refer to actual test plots.

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Peak Conducted Output Power ANT 1 & 802.11ac & NSS 1 MCS 0 & 5775 MHz

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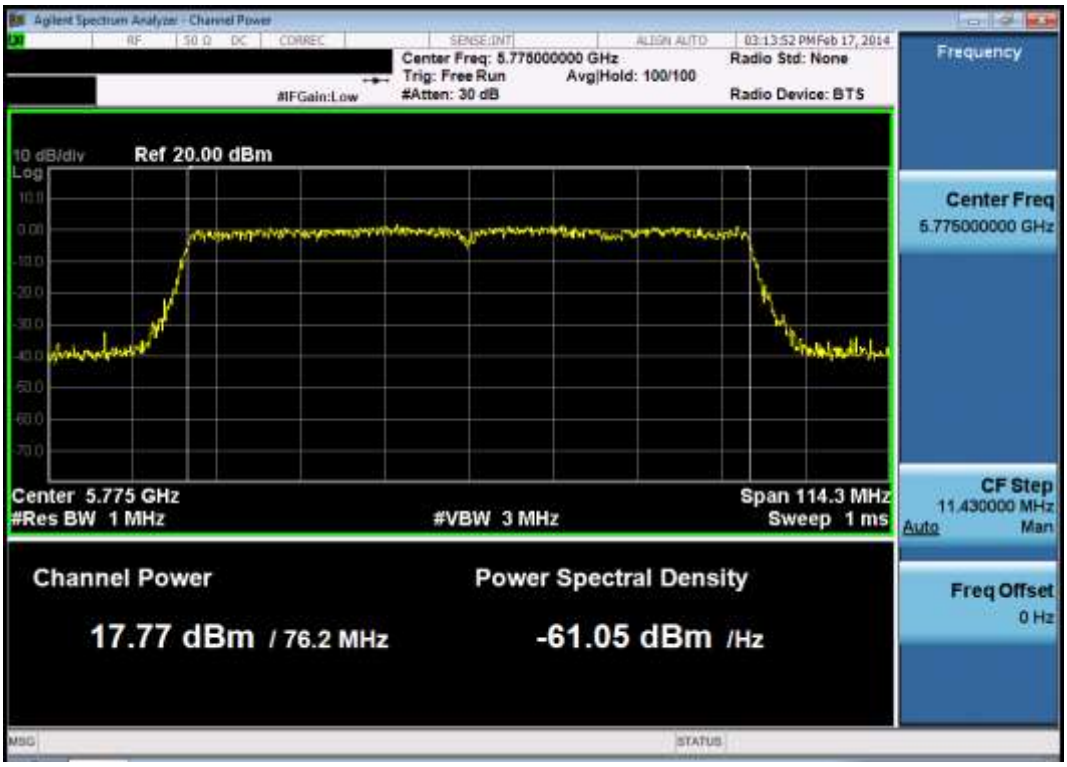
Peak Conducted Output Power ANT 2 & 802.11ac & NSS 1 MCS 0 & 5775 MHz



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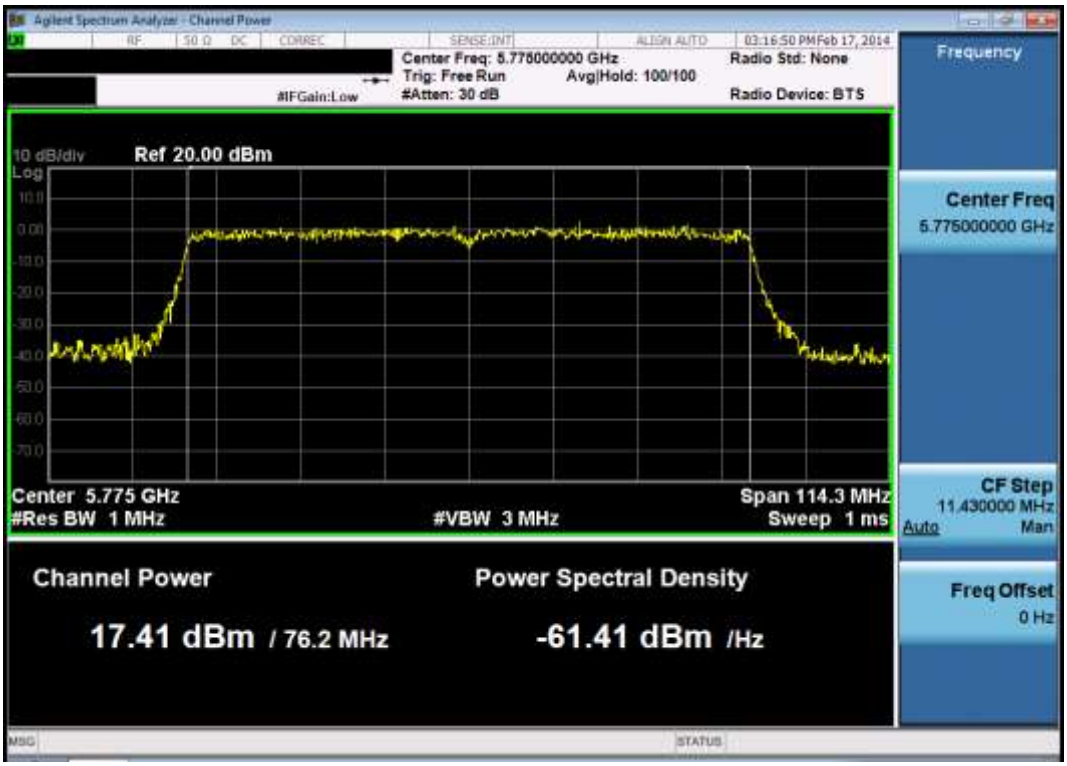
Peak Conducted Output Power ANT 2 & 802.11ac & NSS 1 MCS 4 & 5775 MHz

Peak Conducted Output Power ANT 2 & 802.11ac & NSS 1 MCS 5 & 5775 MHz



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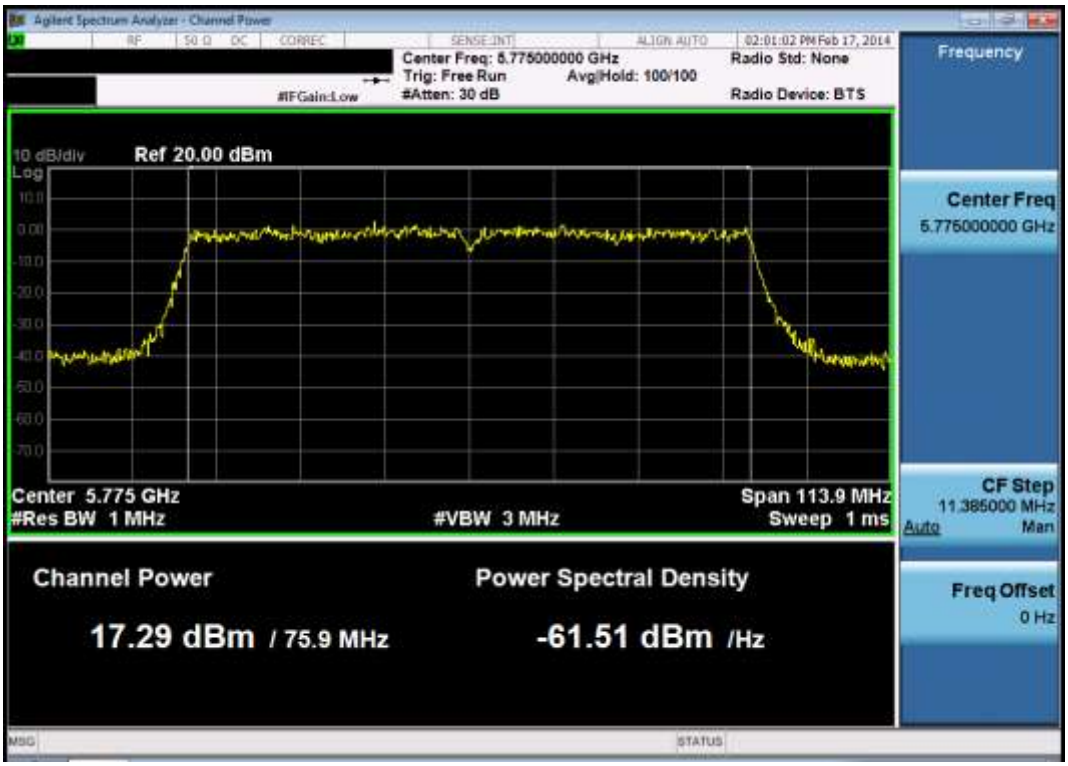
Peak Conducted Output Power ANT 1 & 802.11ac & NSS 2 MCS 6 & 5775 MHz

Peak Conducted Output Power ANT 1 & 802.11ac & NSS 2 MCS 7 & 5775 MHz



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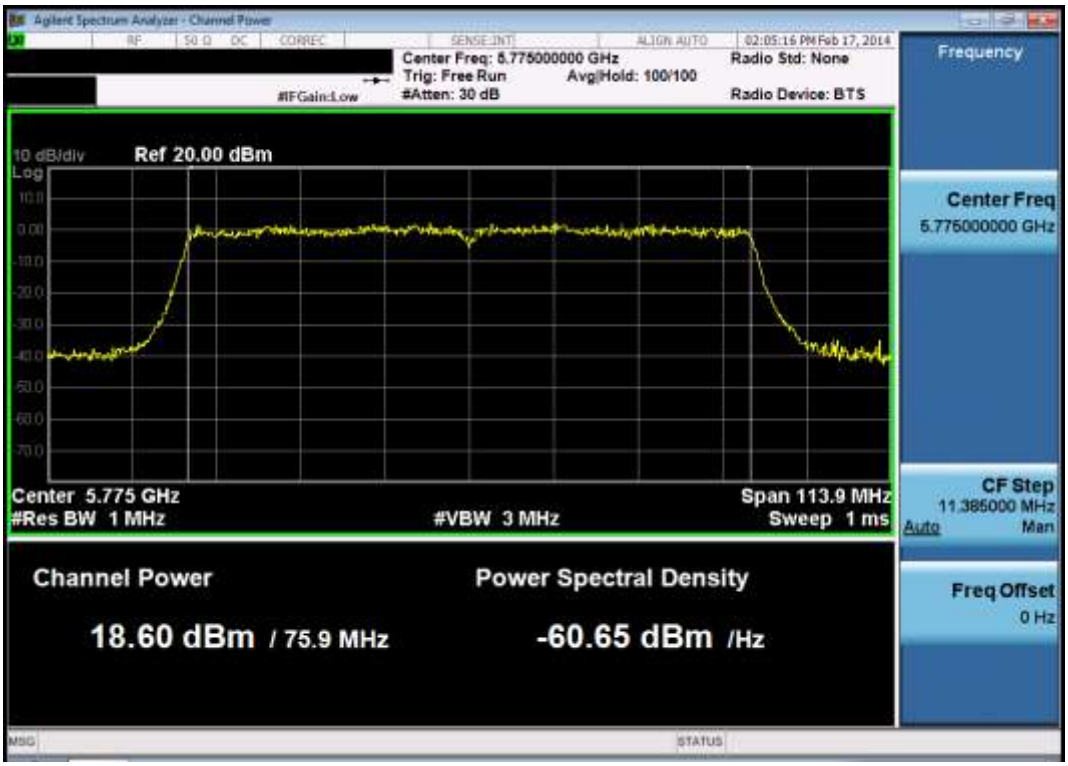
Peak Conducted Output Power ANT 1 & 802.11ac & NSS 2 MCS 8 & 5775 MHz



Peak Conducted Output Power ANT 1 & 802.11ac & NSS 2 MCS 9 & 5775 MHz

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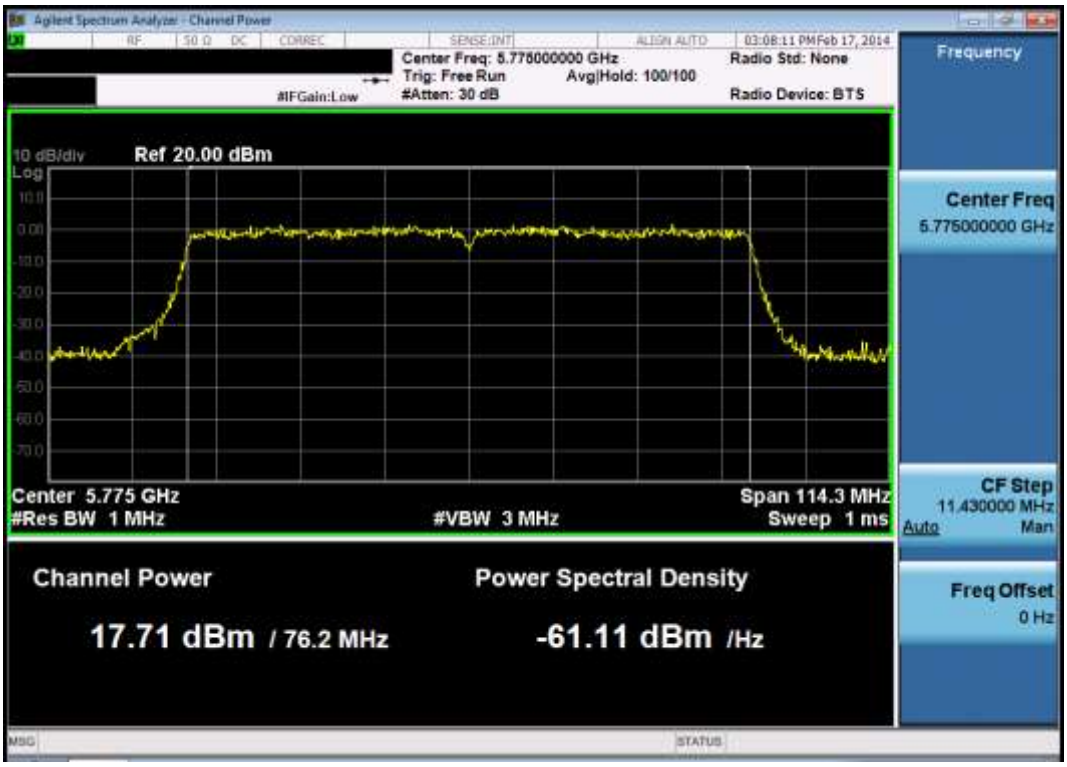
Peak Conducted Output Power ANT 2 & 802.11ac & NSS 2 MCS 0 & 5775 MHz



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