

# FCC Test Report

Product Name : Lyra mini  
Trade Name : ASUS  
Model No. : MAP-AC1300  
FCC ID. : MSQ-RTACBV00

Applicant : ASUSTeK COMPUTER INC.

Address : 4F, No. 150, Li-Te Rd., Peitou, Taipei, Taiwan

Date of Receipt : Nov. 17, 2016

Issued Date : Jan. 25, 2017

Report No. : 16B0409R-RFUSP05V00

Report Version : V1.0



The test results relate only to the samples tested.

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# Test Report Certification

Issued Date: Jan. 25, 2017

Report No. : 16B0409R-RFUSP05V00

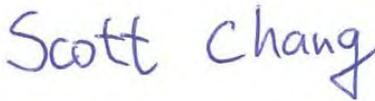


Product Name : Lyra mini  
Applicant : ASUSTeK COMPUTER INC.  
Address : 4F, No. 150, Li-Te Rd., Peitou, Taipei, Taiwan  
Manufacturer : ASUSTeK COMPUTER INC.  
Model No. : MAP-AC1300  
FCC ID. : MSQ-RTACBV00  
EUT Voltage : AC 100-240V, 50-60Hz  
Testing Voltage : AC 120V/ 60Hz  
Trade Name : ASUS  
Applicable Standard : FCC CFR Title 47 Part 15 Subpart E Section 15.407: 2015  
ANSI C63.10: 2013  
Test Lab : Hsin Chu Laboratory  
Test Result : Complied

The test results relate only to the samples tested.

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( Roy Wang / Director )

### Revision History

Report No.	Version	Description	Issued Date
16B0409R-RFUSP05V00	V1.0	Initial issue of report	Jan. 25, 2017

## Laboratory Information

We, **DEKRA Testing and Certification Co., Ltd.**, are an independent RF consultancy that was established the whole facility in our laboratories. The test facility has been accredited/accepted (audited or listed) by the following related bodies in compliance with ISO 17025 specified testing scopes:

<b>Taiwan R.O.C.</b>	<b>:</b>	<b>TAF, Accreditation Number: 3024</b>
<b>USA</b>	<b>:</b>	<b>FCC, Registration Number: 834100</b>
<b>Canada</b>	<b>:</b>	<b>IC, Submission No: 181665 / IC Registration Number: 22397-1 / 22397-2 / 22397-3</b>

The related certificate for our laboratories about the test site and management system can be downloaded from DEKRA Testing and Certification Co., Ltd. Web Site:

<http://www.dekra.com.tw/english/about/certificates.aspx?bval=5>

The address and introduction of DEKRA Testing and Certification Co., Ltd. laboratories can be founded in our Web site : [http://www.dekra.com.tw/index\\_en.aspx](http://www.dekra.com.tw/index_en.aspx)

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## 1. General Information

### 1.1. EUT Description

Product Name	Lyra mini	
Trade Name	ASUS	
Model No.	MAP-AC1300	
Frequency Range/ Channel Number	IEEE 802.11a/	5180~5240MHz / 4 Channels
	IEEE 802.11n (20MHz) /	5745~5825MHz / 5 Channels
	IEEE 802.11ac (20MHz)	
	IEEE 802.11n (40MHz) /	5190~5230MHz / 2 Channels
	IEEE 802.11ac (40MHz)	5755~5795MHz / 2 Channels
	IEEE 802.11ac (80MHz)	5210~5210MHz / 1 Channel
		5775~5775MHz / 1 Channel
Type of Modulation	IEEE 802.11a/n/ac	Orthogonal Frequency Division Multiplexing (OFDM)
Data Speed	IEEE 802.11a	6, 9,12,18, 24, 36, 48, 54Mbps
	IEEE 802.11n	Support a subset of the combination of GI, MCS 0~MCS 15 and bandwidth defined in 802.11n
	IEEE 802.11ac	Support a subset of the combination of GI, MCS 0~MCS 9 and bandwidth defined in 802.11ac

Antenna Information	
Antenna Type	PIFA
Antenna Gain	4.74 dBi
Beamforming Gain	1.77 dBi

Accessories Information	
USB Cable	Non-Shielded, 2m
LAN Cable	Non-Shielded, 2m
Power Adapter	ASUS, AD2037320910LF I/P: 100-240V~50/60Hz, 0.3A O/P: 5V $\overline{=}$ 2A Cable Out: Non-Shielded, 2m
Power Adapter	ASUS, W12-010N3A I/P: 100-240V~50/60Hz, 0.3A O/P: 5V $\overline{=}$ 2A Cable Out: Non-Shielded, 2m

**ANT-TX / RX & Bandwidth**

ANT-TX / RX	TX			RX		
	20MHz	40MHz	80MHz	20MHz	40MHz	80MHz
IEEE802.11a	✓			✓		
IEEE802.11n	✓	✓		✓	✓	
IEEE802.11ac	✓	✓	✓	✓	✓	✓

## IEEE 802.11n

MCS Index	Modulation	R	N <sub>BPSCS</sub>	N <sub>CBPS</sub>		N <sub>DBPS</sub>		Data Rate(Mb/s)			
				20MHz	40MHz	20MHz	40MHz	800ns GI		400ns GI	
								20MHz	40MHz	20MHz	40MHz
0	BPSK	1/2	1	52	108	26	54	6.5	13.5	7.2	15.0
1	QPSK	1/2	2	104	216	52	108	13.0	27.0	14.4	30.0
2	QPSK	3/4	2	104	216	78	162	19.5	40.5	21.7	45.0
3	16-QAM	1/2	4	208	432	104	216	26.0	54.0	28.9	60.0
4	16-QAM	3/4	4	208	432	156	324	39.0	81.0	43.3	90.0
5	64-QAM	2/3	6	312	648	208	432	52.0	108.0	57.8	120.0
6	64-QAM	3/4	6	312	648	234	486	58.5	121.5	65.0	135.0
7	64-QAM	5/6	6	312	648	260	540	65.0	135.0	72.2	150.0

Note 1: Support of 400ns GI is optional on transmit and receive.

Table 1 – MCS parameters for TX Antenna number = 1

MCS Index	Modulation	R	N <sub>BPSCS</sub>	N <sub>CBPS</sub>		N <sub>DBPS</sub>		Data Rate(Mb/s)			
				20MHz	40MHz	20MHz	40MHz	800ns GI		400ns GI	
								20MHz	40MHz	20MHz	40MHz
8	BPSK	1/2	1	104	216	52	108	13.0	27.0	14.4	30.0
9	QPSK	1/2	2	208	432	104	216	26.0	54.0	28.9	60.0
10	QPSK	3/4	2	208	432	156	324	39.0	81.0	43.3	90.0
11	16-QAM	1/2	4	416	864	208	432	52.0	108.0	57.8	120.0
12	16-QAM	3/4	4	416	864	312	648	78.0	162.0	86.7	180.0
13	64-QAM	2/3	6	624	1296	416	864	104.0	216.0	115.6	240.0
14	64-QAM	3/4	6	624	1296	468	972	117.0	243.0	130.0	270.0
15	64-QAM	5/6	6	624	1296	520	1080	130.0	270.0	144.4	300.0

Note 1: Support of 400ns GI is optional on transmit and receive.

Table 2 – MCS parameters for TX Antenna number = 2

Symbol	Explanation
R	Code rate
N <sub>BPSCS</sub>	Number of coded bits per single carrier
N <sub>CBPS</sub>	Number of coded bits per symbol
N <sub>DBPS</sub>	Number of data bits per symbol
GI	guard interval

**IEEE 802.11ac Data Rate**

Spatial Streams (Note1)	MCS Index	Modulation type	Coding rate	Data Rate(Mb/s)							
				20 MHz		40 MHz		80 MHz		160 MHz	
				Guard Interval		Guard Interval		Guard Interval		Guard Interval	
				800ns	400ns	800ns	400ns	800ns	400ns	800ns	400ns
1	0	BPSK	1/2	6.5	7.2	13.5	15	29.3	32.5	58.5	65
	1	QPSK	1/2	13	14.4	27	30	58.5	65	117	130
	2	QPSK	3/4	19.5	21.7	40.5	45	87.8	97.5	175.5	195
	3	16-QAM	1/2	26	28.9	54	60	117	130	234	260
	4	16-QAM	3/4	39	43.3	81	90	175.5	195	351	390
	5	64-QAM	2/3	52	57.8	108	120	234	260	468	520
	6	64-QAM	3/4	58.5	65	121.5	135	263.3	292.5	526.5	585
	7	64-QAM	5/6	65	72.2	135	150	292.5	325	585	650
	8	256-QAM	3/4	78	86.7	162	180	351	390	702	780
	9	256-QAM	5/6	N/A	N/A	180	200	390	433.3	780	866.7
2	0	BPSK	1/2	13	14.4	27	30	58.6	65	117	130
	1	QPSK	1/2	26	28.8	54	60	117	130	234	260
	2	QPSK	3/4	39	43.4	81	90	175.6	195	351	390
	3	16-QAM	1/2	52	57.8	108	120	234	260	468	520
	4	16-QAM	3/4	78	86.6	162	180	351	390	702	780
	5	64-QAM	2/3	104	115.6	216	240	468	520	936	1040
	6	64-QAM	3/4	117	130	243	270	526.6	585	1053	1170
	7	64-QAM	5/6	130	144.4	270	300	585	650	1170	1300
	8	256-QAM	3/4	156	173.4	324	360	702	780	1404	1560
	9	256-QAM	5/6	N/A	N/A	360	400	780	866.6	1560	1733.4

## IEEE 802.11a &amp; IEEE 802.11n (20MHz) &amp; IEEE 802.11ac (20MHz)

Working Frequency of Each Channel							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
36	5180 MHz	40	5200 MHz	44	5220 MHz	48	5240 MHz
149	5745 MHz	153	5765 MHz	157	5785 MHz	161	5805 MHz
165	5825 MHz						

## IEEE 802.11n (40MHz)&amp;IEEE 802.11ac (40MHz)

Working Frequency of Each Channel							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
38	5190 MHz	46	5230 MHz	151	5755 MHz	159	5795 MHz

## IEEE 802.11ac (80MHz)

Working Frequency of Each Channel	
Channel	Frequency
42	5210 MHz
155	5775 MHz

## Note:

1. This device is a Lyra mini including 2.4GHz b/g/n (2x2), BT2.0, BT4.0 and 5GHz a/n/ac (2x2) transmitting and receiving function.
2. Regards to the frequency band operation; the lowest , middle and highest frequency of channel were selected to perform the test, and then shown on this report.
3. The function of the 2.4GHz and BT transmitting is measured and makes a test report of the number: 16B0409R-RFUSP07V00, 16B0409R-RFUSP03V00 & 16B0409R-RFUSP03V00-A.
4. This device is a composite device in accordance with Part 15 regulations. The receiving function was tested and its number is 16B0409R-RFUSP12V00.

## 1.2. Test Mode

DEKRA has verified the construction and function in typical operation. The preliminary tests were performed in different data rate, and to find the worst condition, which was shown in this test report. The following table is the final test mode.

TX	Mode 1: Tx-AD2037320910LF-CDD Mode Mode 2: Tx-W12-010N3A-CDD Mode Mode 3: Tx-AD2037320910LF-BF Mode
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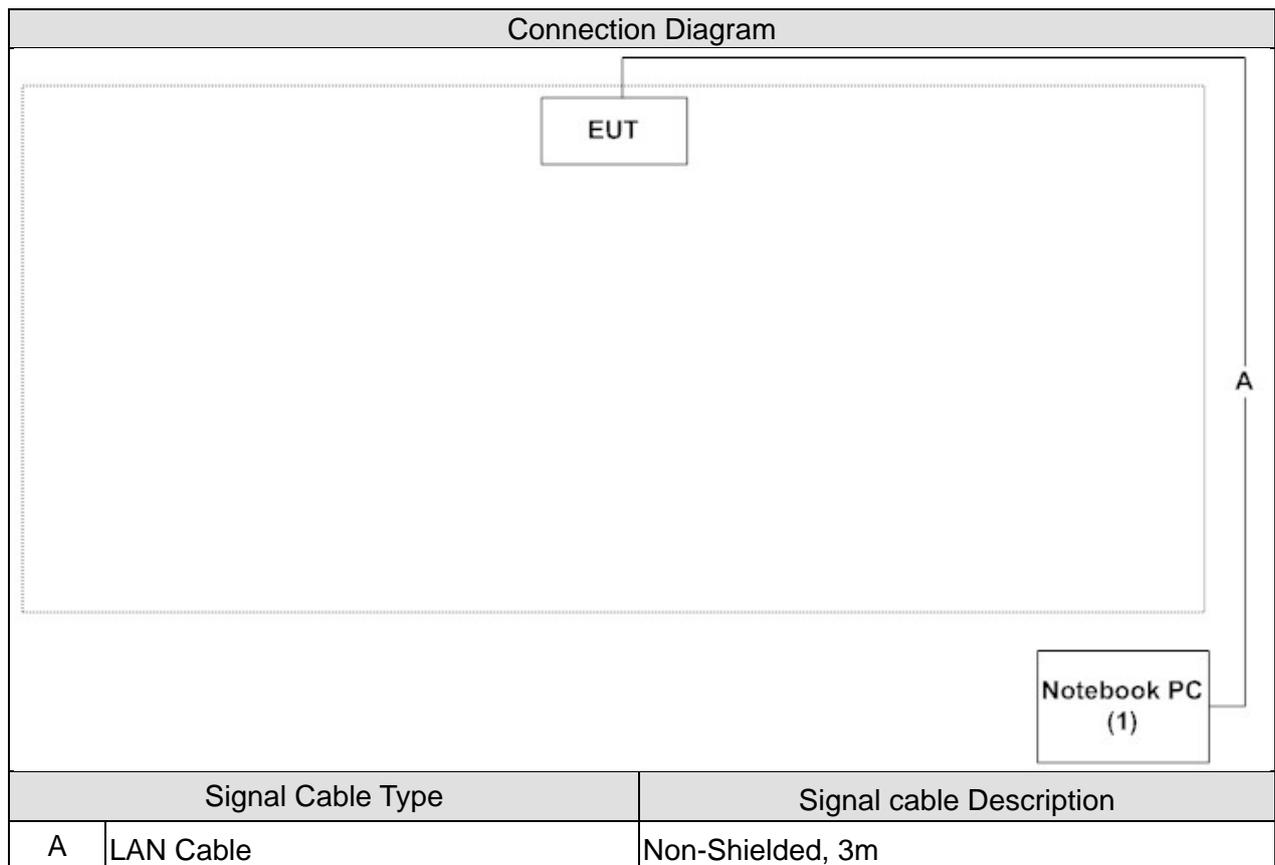
Test Items	Modulation	Channel	Antenna	Result
Conducted Emission	11ac (80MHz)	42/155	0+1	Complies
99% & 20dB & DTS Bandwidth	a	36/44/48/149/157/165	0/1	Complies
	11n/ac (20MHz)	36/44/48/149/157/165	0/1	Complies
	11n/ac (40MHz)	38/46/151/159	0/1	Complies
	11ac (80MHz)	42/155	0/1	Complies
Peak Transmit Output	a	36/44/48/149/157/165	0+1	Complies
	11n/ac (20MHz)	36/44/48/149/157/165	0+1	Complies
	11n/ac (40MHz)	38/46/151/159	0+1	Complies
	11ac (80MHz)	42/155	0+1	Complies
Peak Power Spectrum Density	a	36/44/48/149/157/165	0+1	Complies
	11n/ac (20MHz)	36/44/48/149/157/165	0+1	Complies
	11n/ac (40MHz)	38/46/151/159	0+1	Complies
	11ac (80MHz)	42/155	0+1	Complies
Radiated Emission	a	36/44/48/149/157/165	0+1	Complies
	11n/ac (20MHz)	36/44/48/149/157/165	0+1	Complies
	11n/ac (40MHz)	38/46/151/159	0+1	Complies
	11ac (80MHz)	42/155	0+1	Complies
Band Edge	a	36/44/48/149/157/165	0+1	Complies
	11n/ac (20MHz)	36/44/48/149/157/165	0+1	Complies
	11n/ac (40MHz)	38/46/151/159	0+1	Complies
	11ac (80MHz)	42/155	0+1	Complies
Frequency Stability	a	36/44/48/149/157/165	0/1	Complies
	11n/ac (20MHz)	36/44/48/149/157/165	0/1	Complies
	11n/ac (40MHz)	38/46/151/159	0/1	Complies
	11ac (80MHz)	42/155	0/1	Complies

### 1.3. System Details

The types for all equipments, plus descriptions of all cables used in the tested system (including inserted cards) are:

Product	Manufacturer	Model No.	Serial No.	FCC ID	Power Cord
1 Notebook PC	ASUS	X522EP	E5N0CV04 3264197	DoC	Non-Shielded, 1.8m, one ferrite core bonded

### 1.4. Configuration of tested System



### 1.5. EUT Exercise Software

1	Setup the EUT as shown in Section 1.4.
2	Execute the test program "QCA Radio Control Toolkit".
3	Configure the test mode, the test channel, and the data rate.
4	Press "Start TX" to start the continuous transmitting.
5	Verify that the EUT works properly.

**1.6. Test Facility**

Ambient conditions in the laboratory:

Items	Test Item	Required (IEC 68-1)	Actual
Temperature (°C)	FCC PART 15 E 15.407 Conducted Emission	15 - 35	20°C
Humidity (%RH)		25 - 75	50%RH
Barometric pressure (mbar)		860 - 1060	950-1000
Temperature (°C)	FCC PART 15 E 15.407 99% & DTS Bandwidth	15 - 35	25°C
Humidity (%RH)		25 - 75	45%RH
Barometric pressure (mbar)		860 - 1060	950-1000
Temperature (°C)	FCC PART 15 E 15.407 Peak Transmit Power	15 - 35	25°C
Humidity (%RH)		25 - 75	65%RH
Barometric pressure (mbar)		860 - 1060	950-1000
Temperature (°C)	FCC PART 15 E 15.407 Peak Power Spectrum	15 - 35	25°C
Humidity (%RH)		25 - 75	45%RH
Barometric pressure (mbar)		Density	860 - 1060
Temperature (°C)	FCC PART 15 E 15.407 Radiated Emission	15 - 35	25°C
Humidity (%RH)		25 - 75	45%RH
Barometric pressure (mbar)		860 - 1060	950-1000
Temperature (°C)	FCC PART 15 E 15.407 Band Edge	15 - 35	25°C
Humidity (%RH)		25 - 75	45%RH
Barometric pressure (mbar)		860 - 1060	950-1000
Temperature (°C)	FCC PART 15 E 15.407 Frequency Stability	15 - 35	25°C
Humidity (%RH)		25 - 75	45%RH
Barometric pressure (mbar)		860 - 1060	950-1000

## 2. Conducted Emission

### 2.1. Test Equipment

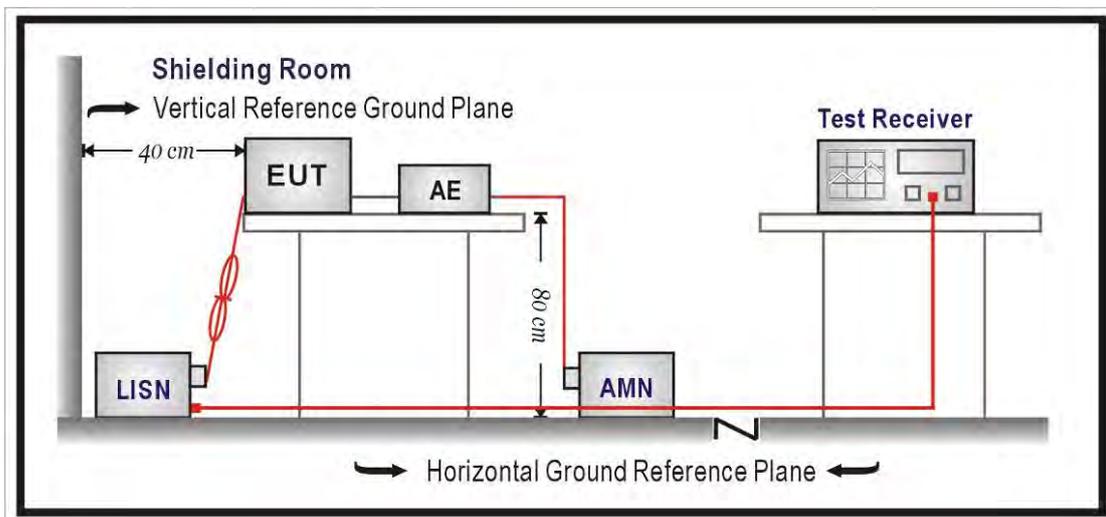
The following test equipments are used during the test:

#### Conducted Emission / SR2-H

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
Artificial Mains Network	R&S	ENV4200	848411/010	2017/01/20
LISN	R&S	ENV216	100092	2017/08/16
Test Receiver	R&S	ESCS 30	836858/022	2018/01/14

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

### 2.2. Test Setup



### 2.3. Limits

FCC Part 15 Subpart C Paragraph 15.207 Limits (dBuV)		
Frequency MHz	QP	AV
0.15 - 0.50	66-56	56-46
0.50 - 5.0	56	46
5.0 - 30	60	50

Remark: In the above table, the tighter limit applies at the band edges.

### 2.4. Test Procedure

The EUT was setup according to ANSI C63.10:2013. The EUT was placed on a platform of nominal size, 1 m by 1.5 m, raised 80 cm above the conducting ground plane. The vertical conducting plane was located 40 cm to the rear of the EUT. All other surfaces of EUT were at least 80 cm from any other grounded conducting surface. The EUT and simulators are connected to the main power through a line impedance stabilization network (LISN). The LISN provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN. (Please refer to the block diagram of the test setup and photographs.)

Each current-carrying conductor of the EUT power cord, except the ground (safety) conductor, was individually connected through a LISN to the input power source.

The excess length of the power cord between the EUT and the LISN receptacle were folded back and forth at the center of the lead to form a bundle not exceeding 40 cm in length.

Conducted emissions were investigated over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9 kHz.

### 2.5. Test Specification

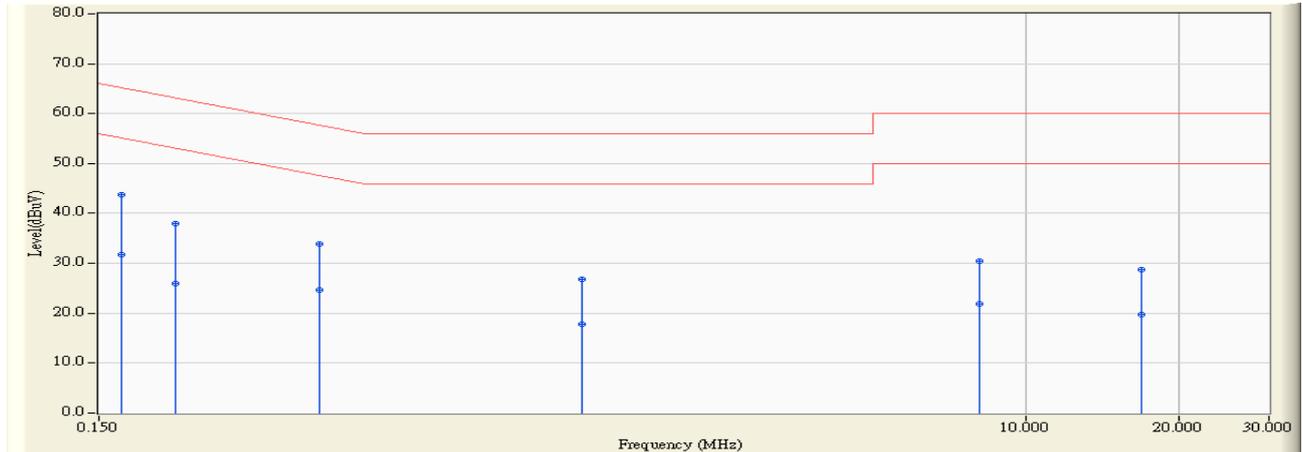
According to FCC Part 15 Subpart C Paragraph 15.207: 2015

### 2.6. Uncertainty

The measurement uncertainty is defined as  $\pm 2.26$  dB.

## 2.7. Test Result

Site : SR2-H	Time : 2017/01/18
Limit : CISPR_B_00M_QP	Margin : 10
Probe : SR2-H_LISN(16A)-6_0712 - Line1	Power : AC 120V / 60Hz
EUT : Lyra mini	Note : 802.11ac(80M)_5210MHz Mode 1: Tx-AD2037320910LF-CDD Mode

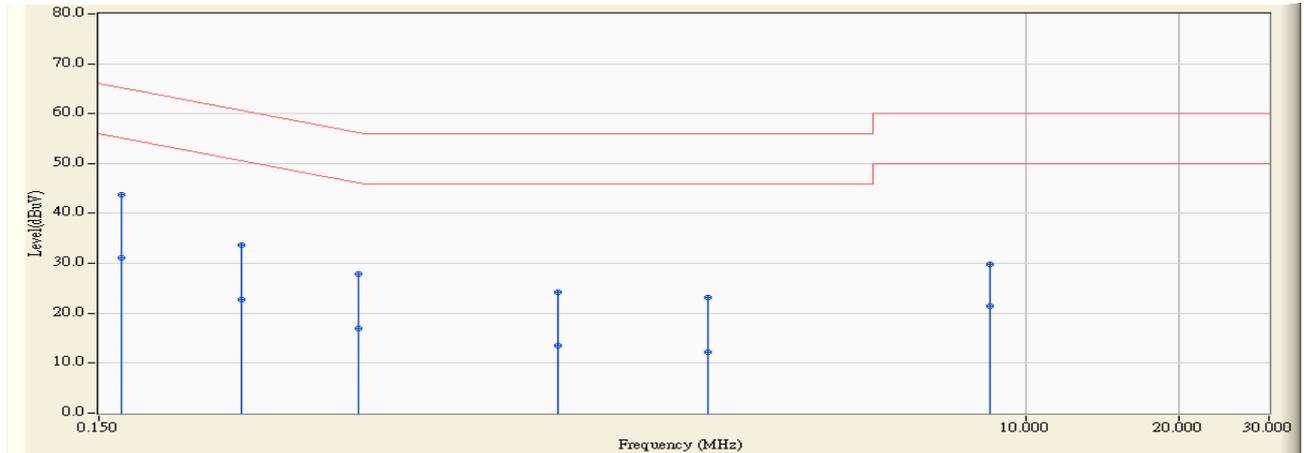


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1	*	0.166	9.753	34.040	43.793	-21.384	65.177	QUASPEAK
2		0.166	9.753	22.010	31.763	-23.414	55.177	AVERAGE
3		0.212	9.749	28.280	38.029	-25.078	63.107	QUASPEAK
4		0.212	9.749	16.100	25.849	-27.258	53.107	AVERAGE
5		0.408	9.730	24.260	33.990	-23.703	57.693	QUASPEAK
6		0.408	9.730	15.040	24.770	-22.923	47.693	AVERAGE
7		1.334	9.833	17.020	26.853	-29.147	56.000	QUASPEAK
8		1.334	9.833	7.880	17.713	-28.287	46.000	AVERAGE
9		8.084	10.050	20.460	30.510	-29.490	60.000	QUASPEAK
10		8.084	10.050	11.840	21.890	-28.110	50.000	AVERAGE
11		16.861	10.264	18.540	28.805	-31.195	60.000	QUASPEAK
12		16.861	10.264	9.390	19.655	-30.345	50.000	AVERAGE

**Note:**

1. All Reading Levels are Quasi-Peak and average value.
2. " \* ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : SR2-H	Time : 2017/01/18
Limit : CISPR_B_00M_QP	Margin : 10
Probe : SR2-H_LISN(16A)-6_0712 - Line2	Power : AC 120V / 60Hz
EUT : Lyra mini	Note : 802.11ac(80M)_5210MHz Mode 1: Tx-AD2037320910LF-CDD Mode

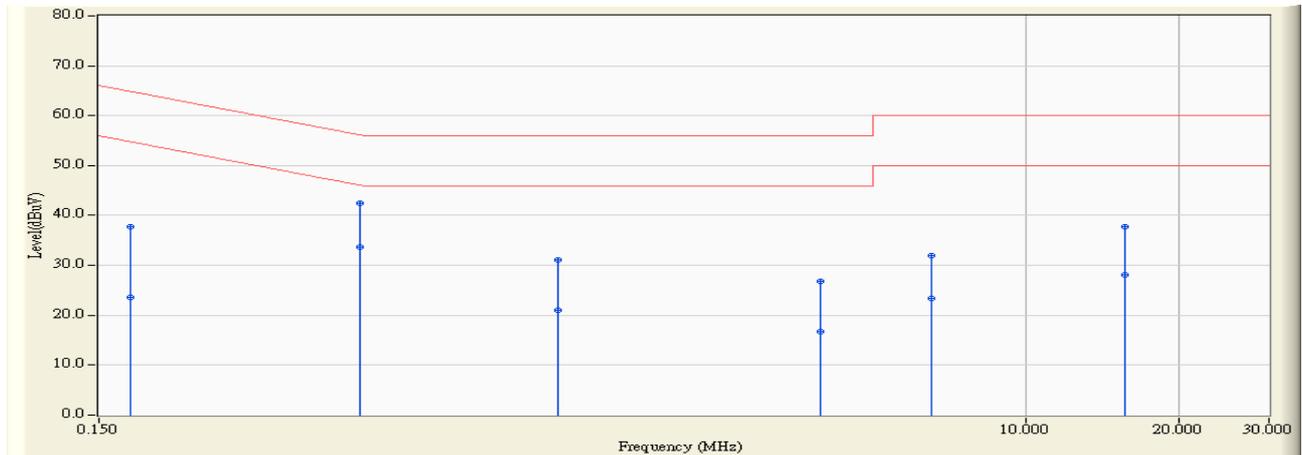


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1	*	0.166	9.753	34.100	43.853	-21.324	65.177	QUASPEAK
2		0.166	9.753	21.310	31.063	-24.114	55.177	AVERAGE
3		0.287	9.750	24.020	33.770	-26.849	60.619	QUASPEAK
4		0.287	9.750	12.990	22.740	-27.879	50.619	AVERAGE
5		0.486	9.746	18.200	27.946	-28.291	56.237	QUASPEAK
6		0.486	9.746	7.130	16.876	-29.361	46.237	AVERAGE
7		1.197	9.826	14.320	24.146	-31.854	56.000	QUASPEAK
8		1.197	9.826	3.610	13.436	-32.564	46.000	AVERAGE
9		2.365	9.848	13.360	23.208	-32.792	56.000	QUASPEAK
10		2.365	9.848	2.480	12.328	-33.672	46.000	AVERAGE
11		8.455	10.060	19.820	29.880	-30.120	60.000	QUASPEAK
12		8.455	10.060	11.370	21.430	-28.570	50.000	AVERAGE

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " \* ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : SR2-H	Time : 2017/01/18
Limit : CISPR_B_00M_QP	Margin : 10
Probe : SR2-H_LISN(16A)-6_0712 - Line1	Power : AC 120V / 60Hz
EUT : Lyra mini	Note : 802.11ac(80M)_5210MHz Mode 2: Tx-W12-010N3A-CDD Mode

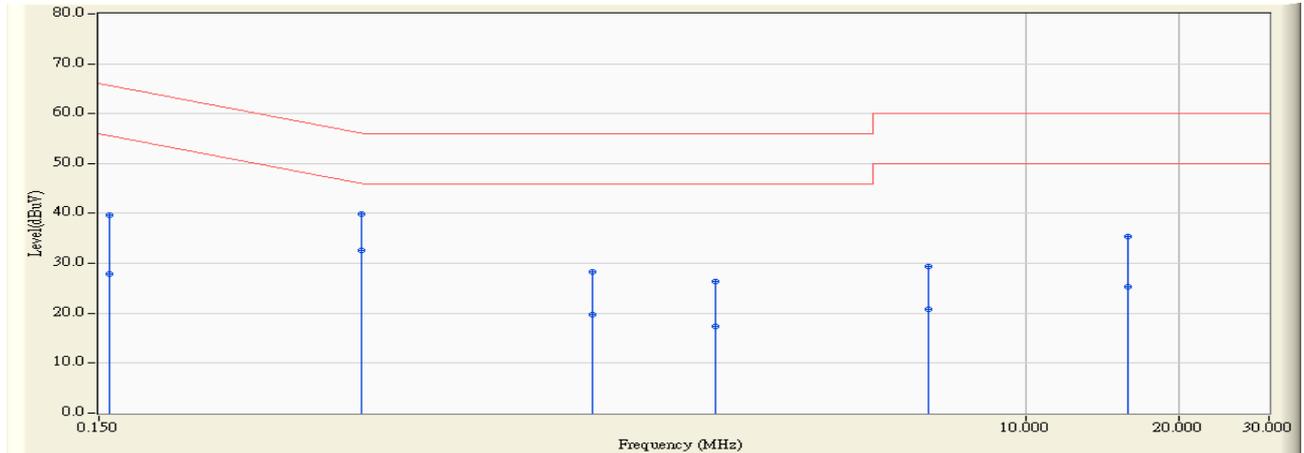


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1	0.173	9.753	28.020	37.773	-27.021	64.794	QUASPEAK
2	0.173	9.753	13.820	23.573	-31.221	54.794	AVERAGE
3	0.490	9.728	32.740	42.469	-13.702	56.170	QUASPEAK
4	*	9.728	23.930	33.659	-12.512	46.170	AVERAGE
5	1.197	9.828	21.360	31.188	-24.812	56.000	QUASPEAK
6	1.197	9.828	11.130	20.958	-25.042	46.000	AVERAGE
7	3.935	9.918	16.840	26.758	-29.242	56.000	QUASPEAK
8	3.935	9.918	6.810	16.728	-29.272	46.000	AVERAGE
9	6.502	9.984	22.020	32.004	-27.996	60.000	QUASPEAK
10	6.502	9.984	13.380	23.364	-26.636	50.000	AVERAGE
11	15.673	10.236	27.460	37.696	-22.304	60.000	QUASPEAK
12	15.673	10.236	17.820	28.056	-21.944	50.000	AVERAGE

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " \* ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : SR2-H	Time : 2017/01/18
Limit : CISPR_B_00M_QP	Margin : 10
Probe : SR2-H_LISN(16A)-6_0712 - Line2	Power : AC 120V / 60Hz
EUT : Lyra mini	Note : 802.11ac(80M)_5210MHz Mode 2: Tx-W12-010N3A-CDD Mode

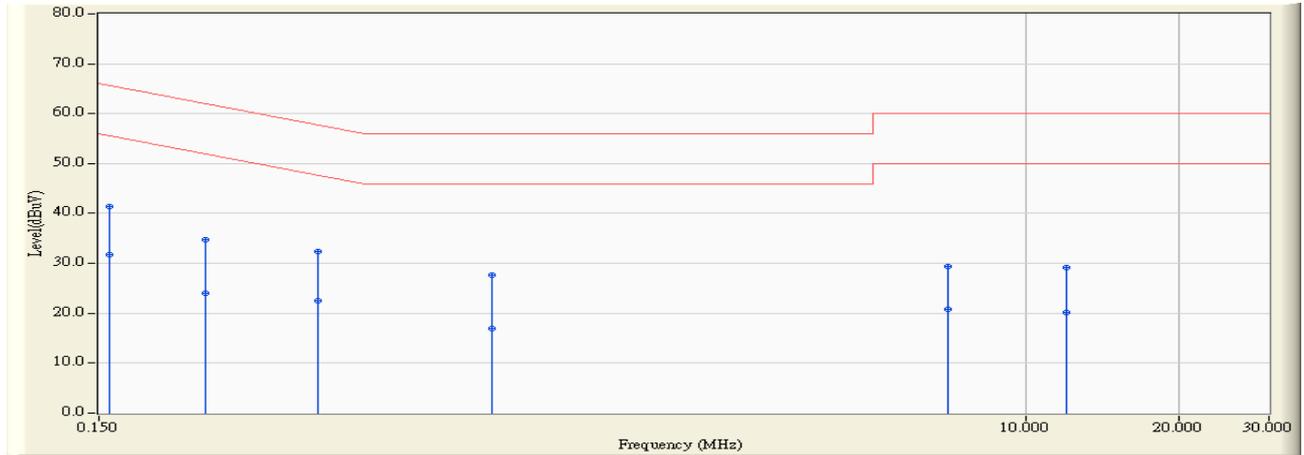


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1	0.158	9.751	29.860	39.611	-25.967	65.578	QUASIPeAK
2	0.158	9.751	18.090	27.841	-27.737	55.578	AVERAGE
3	0.494	9.745	30.060	39.806	-16.299	56.104	QUASIPeAK
4	* 0.494	9.745	22.770	32.516	-13.589	46.104	AVERAGE
5	1.400	9.832	18.480	28.312	-27.688	56.000	QUASIPeAK
6	1.400	9.832	9.860	19.692	-26.308	46.000	AVERAGE
7	2.439	9.848	16.500	26.348	-29.652	56.000	QUASIPeAK
8	2.439	9.848	7.510	17.358	-28.642	46.000	AVERAGE
9	6.408	9.940	19.520	29.460	-30.540	60.000	QUASIPeAK
10	6.408	9.940	10.930	20.870	-29.130	50.000	AVERAGE
11	15.877	10.344	24.980	35.323	-24.677	60.000	QUASIPeAK
12	15.877	10.344	14.970	25.313	-24.687	50.000	AVERAGE

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " \* ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : SR2-H	Time : 2017/01/18
Limit : CISPR_B_00M_QP	Margin : 10
Probe : SR2-H_LISN(16A)-6_0712 - Line1	Power : AC 120V / 60Hz
EUT : Lyra mini	Note : 802.11ac(80M)_5775MHz Mode 1: Tx-AD2037320910LF-CDD Mode

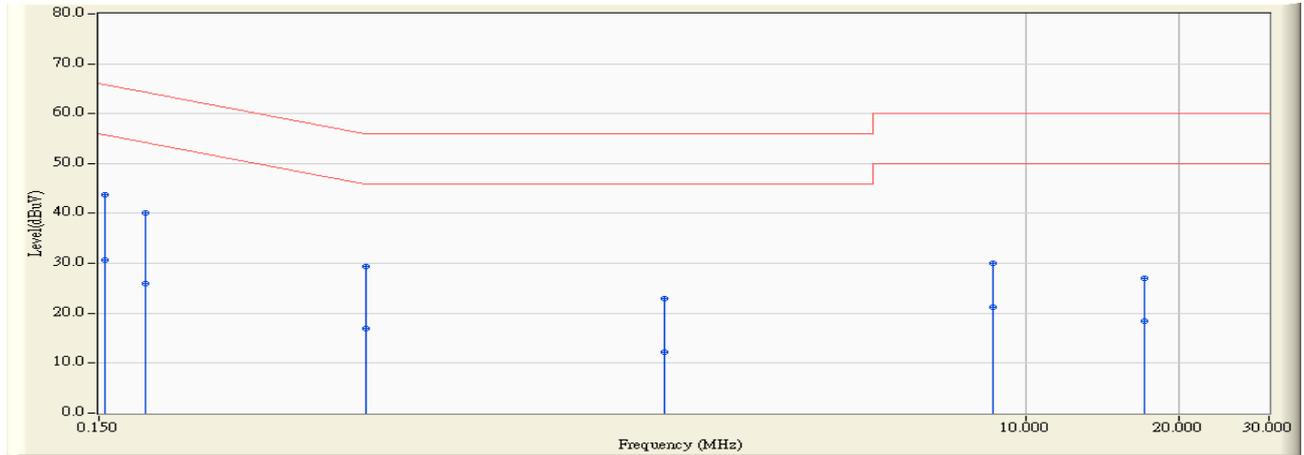


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1	0.158	9.751	31.620	41.371	-24.207	65.578	QUASPEAK
2	* 0.158	9.751	21.900	31.651	-23.927	55.578	AVERAGE
3	0.244	9.746	25.040	34.786	-27.182	61.967	QUASPEAK
4	0.244	9.746	14.180	23.926	-28.042	51.967	AVERAGE
5	0.404	9.730	22.740	32.470	-25.303	57.773	QUASPEAK
6	0.404	9.730	12.830	22.560	-25.213	47.773	AVERAGE
7	0.892	9.800	17.960	27.760	-28.240	56.000	QUASPEAK
8	0.892	9.800	7.050	16.850	-29.150	46.000	AVERAGE
9	7.029	10.006	19.440	29.446	-30.554	60.000	QUASPEAK
10	7.029	10.006	10.780	20.786	-29.214	50.000	AVERAGE
11	11.994	10.166	19.040	29.206	-30.794	60.000	QUASPEAK
12	11.994	10.166	10.080	20.246	-29.754	50.000	AVERAGE

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " \* ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : SR2-H	Time : 2017/01/18
Limit : CISPR_B_00M_QP	Margin : 10
Probe : SR2-H_LISN(16A)-6_0712 - Line2	Power : AC 120V / 60Hz
EUT : Lyra mini	Note : 802.11ac(80M)_5775MHz Mode 1: Tx-AD2037320910LF-CDD Mode

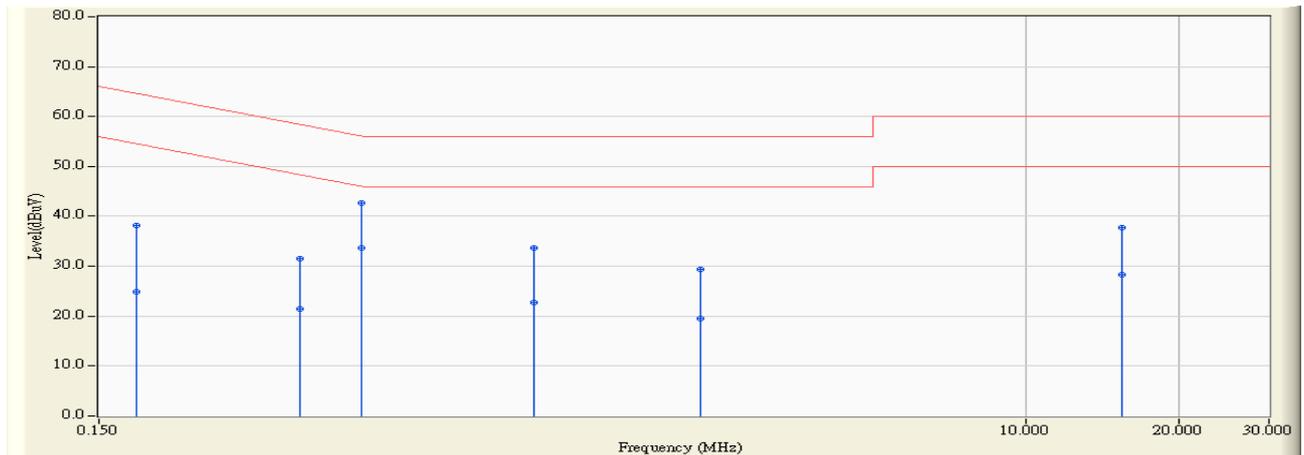


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1	*	0.154	9.747	33.920	43.666	-22.120	65.786	QUASPEAK
2		0.154	9.747	20.930	30.676	-25.110	55.786	AVERAGE
3		0.185	9.751	30.360	40.111	-24.140	64.251	QUASPEAK
4		0.185	9.751	16.270	26.021	-28.230	54.251	AVERAGE
5		0.502	9.746	19.620	29.366	-26.634	56.000	QUASPEAK
6		0.502	9.746	7.130	16.876	-29.124	46.000	AVERAGE
7		1.939	9.848	13.080	22.928	-33.072	56.000	QUASPEAK
8		1.939	9.848	2.410	12.258	-33.742	46.000	AVERAGE
9		8.591	10.068	20.020	30.088	-29.912	60.000	QUASPEAK
10		8.591	10.068	11.130	21.198	-28.802	50.000	AVERAGE
11		17.072	10.388	16.640	27.029	-32.971	60.000	QUASPEAK
12		17.072	10.388	8.090	18.479	-31.521	50.000	AVERAGE

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " \* ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : SR2-H	Time : 2017/01/18
Limit : CISPR_B_00M_QP	Margin : 10
Probe : SR2-H_LISN(16A)-6_0712 - Line1	Power : AC 120V / 60Hz
EUT : Lyra mini	Note : 802.11ac(80M)_5775MHz Mode 2: Tx-W12-010N3A-CDD Mode

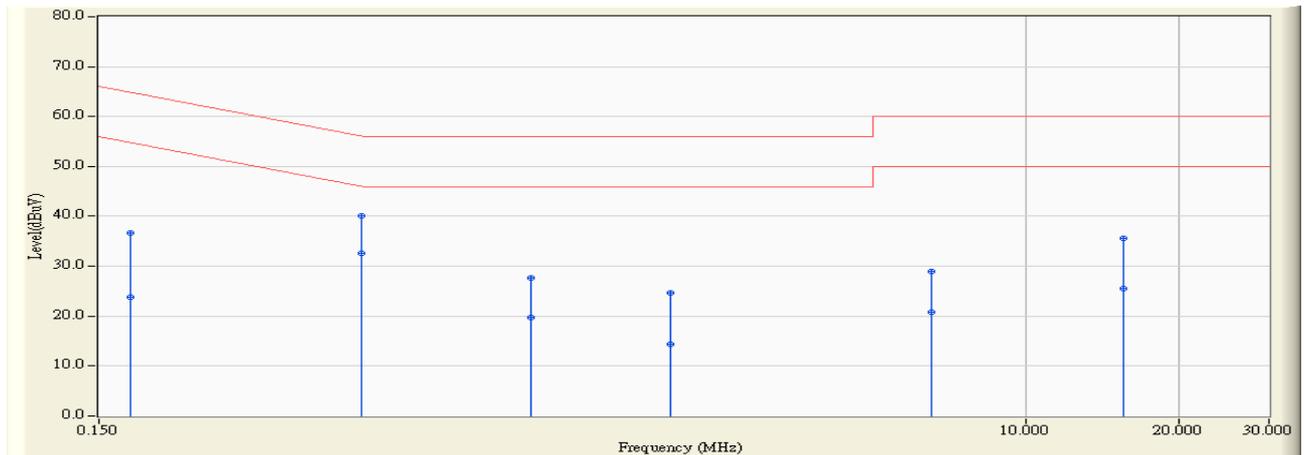


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1	0.177	9.752	28.380	38.132	-26.477	64.609	QUASPEAK
2	0.177	9.752	15.220	24.972	-29.637	54.609	AVERAGE
3	0.373	9.733	21.880	31.613	-26.829	58.442	QUASPEAK
4	0.373	9.733	11.800	21.533	-26.909	48.442	AVERAGE
5	0.494	9.728	33.000	42.729	-13.376	56.104	QUASPEAK
6	* 0.494	9.728	23.880	33.609	-12.496	46.104	AVERAGE
7	1.076	9.823	23.900	33.723	-22.277	56.000	QUASPEAK
8	1.076	9.823	12.830	22.653	-23.347	46.000	AVERAGE
9	2.291	9.869	19.460	29.329	-26.671	56.000	QUASPEAK
10	2.291	9.869	9.570	19.439	-26.561	46.000	AVERAGE
11	15.400	10.230	27.580	37.810	-22.190	60.000	QUASPEAK
12	15.400	10.230	18.130	28.360	-21.640	50.000	AVERAGE

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " \* ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : SR2-H	Time : 2017/01/18
Limit : CISPR_B_00M_QP	Margin : 10
Probe : SR2-H_LISN(16A)-6_0712 - Line2	Power : AC 120V / 60Hz
EUT : Lyra mini	Note : 802.11ac(80M)_5775MHz Mode 2: Tx-W12-010N3A-CDD Mode



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1	0.173	9.753	27.020	36.773	-28.021	64.794	QUASPEAK
2	0.173	9.753	14.040	23.793	-31.001	54.794	AVERAGE
3	0.494	9.745	30.380	40.126	-15.979	56.104	QUASPEAK
4	* 0.494	9.745	22.920	32.666	-13.439	46.104	AVERAGE
5	1.060	9.822	17.780	27.602	-28.398	56.000	QUASPEAK
6	1.060	9.822	9.860	19.682	-26.318	46.000	AVERAGE
7	1.994	9.850	14.880	24.730	-31.270	56.000	QUASPEAK
8	1.994	9.850	4.440	14.290	-31.710	46.000	AVERAGE
9	6.525	9.947	18.980	28.927	-31.073	60.000	QUASPEAK
10	6.525	9.947	10.780	20.727	-29.273	50.000	AVERAGE
11	15.505	10.329	25.300	35.629	-24.371	60.000	QUASPEAK
12	15.505	10.329	15.220	25.549	-24.451	50.000	AVERAGE

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " \* ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

### 3. 99% & DTS Bandwidth

#### 3.1. Test Equipment

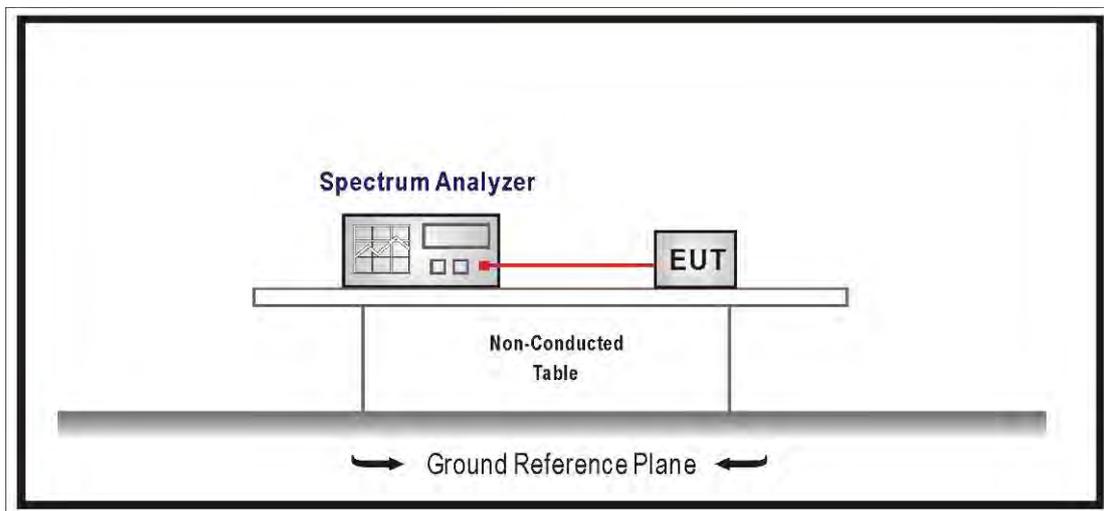
The following test equipments are used during the radiated emission tests:

99% & DTS Bandwidth / SR10-H

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
Signal & Spectrum Analyzer	R&S	FSV40	101049	2018/01/05

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

#### 3.2. Test Setup



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### **3.3. Limits**

99% Bandwidth : No Required

6dB Bandwidth  $\geq$  500KHz

### **3.4. Test Procedure**

99% Bandwidth :

The EUT was tested according to U-NII test procedure of KDB 789033 V01r03.

Set RBW 1% of the emission bandwidth, VBW equal to 3 times the RBW.

DTS Bandwidth :

Set RBW = 100KHz, VBW  $\geq$  3xRBW, Sweep time=Auto, Set Peak detector.

### **3.5. Uncertainty**

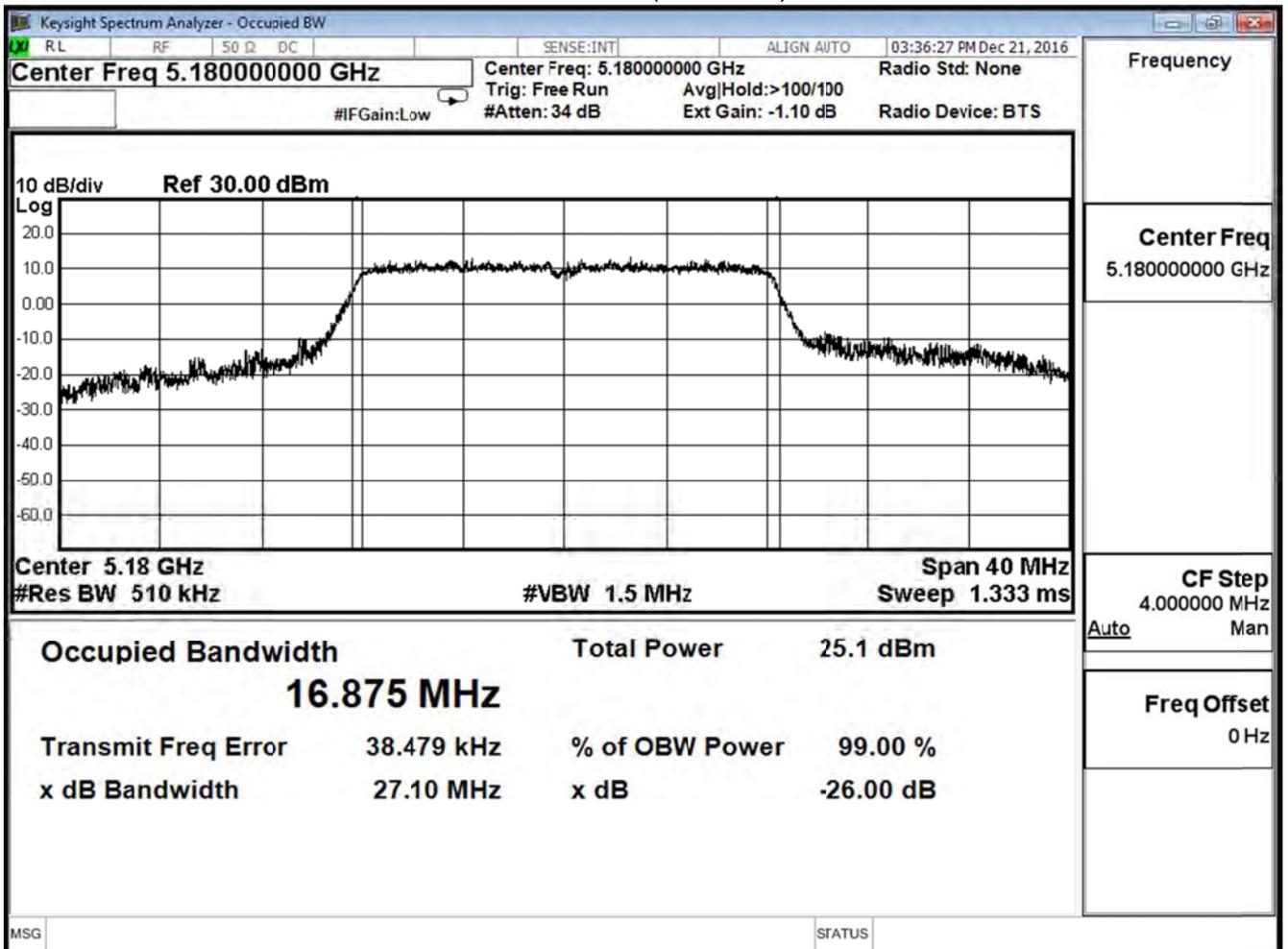
The measurement uncertainty is defined as  $\pm 150\text{Hz}$

### 3.6. Test Result

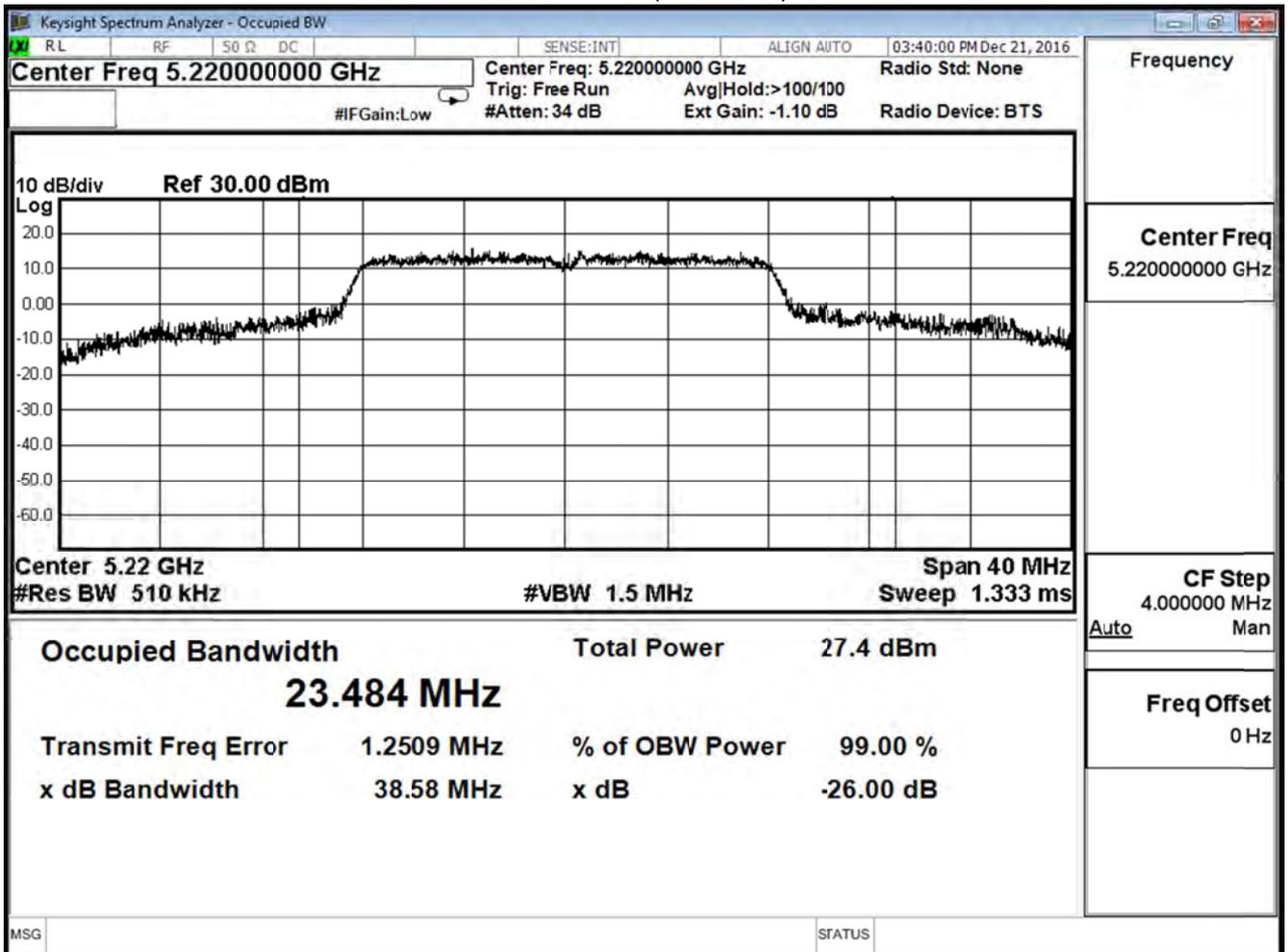
Product	Lyra mini		
Test Item	99% Bandwidth		
Test Mode	Mode 1: Tx-AD2037320910LF-CDD Mode		
Date of Test	2016/12/21	Test Site	SR10-H

IEEE 802.11a (ANT 0)			
Channel No.	Frequency (MHz)	Measure Value (MHz)	Limit (MHz)
36	5180	16.88	--
44	5220	23.48	--
48	5240	17.95	--

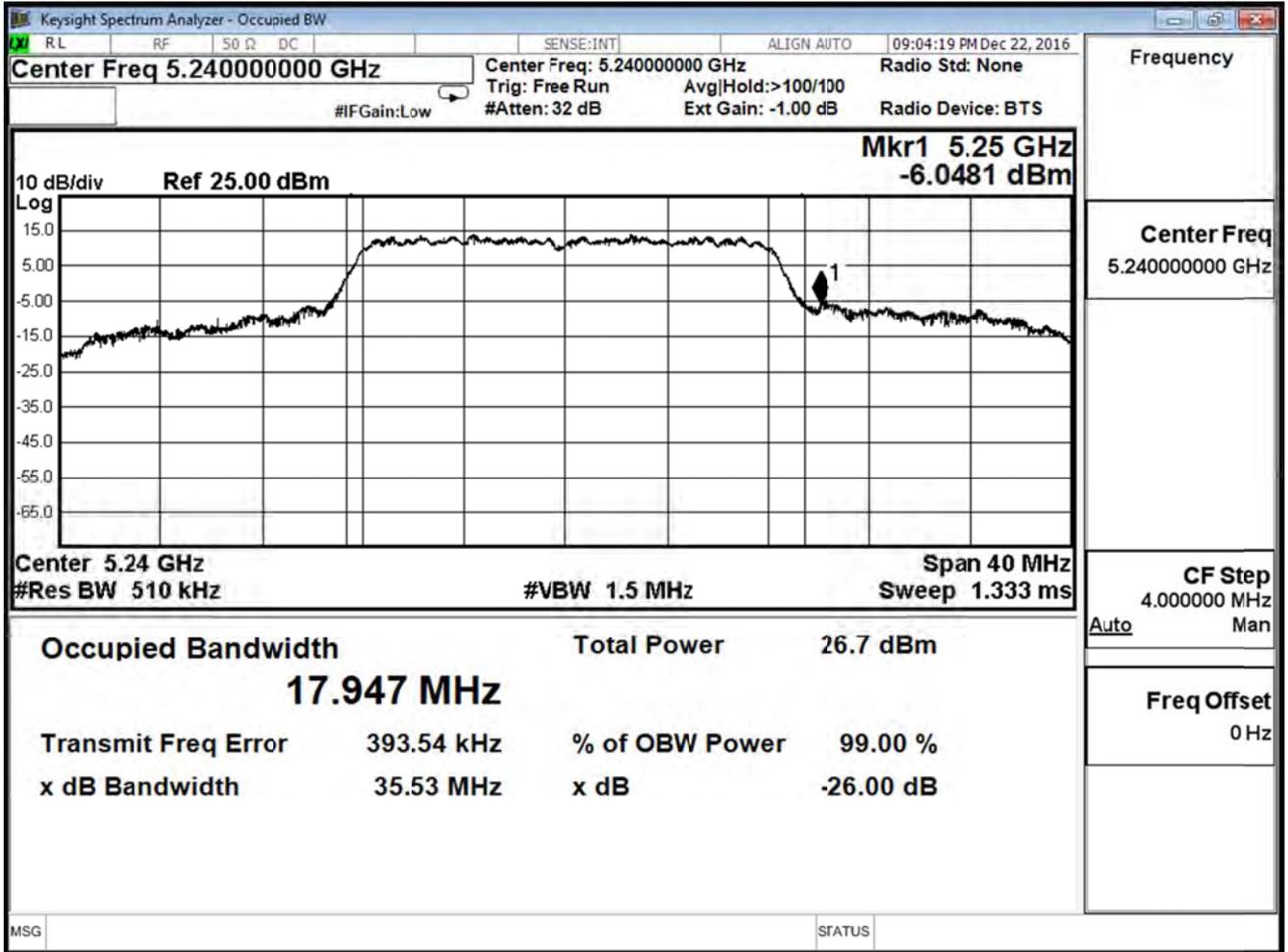
Channel 36 (5180MHz)



Channel 44 (5220MHz)



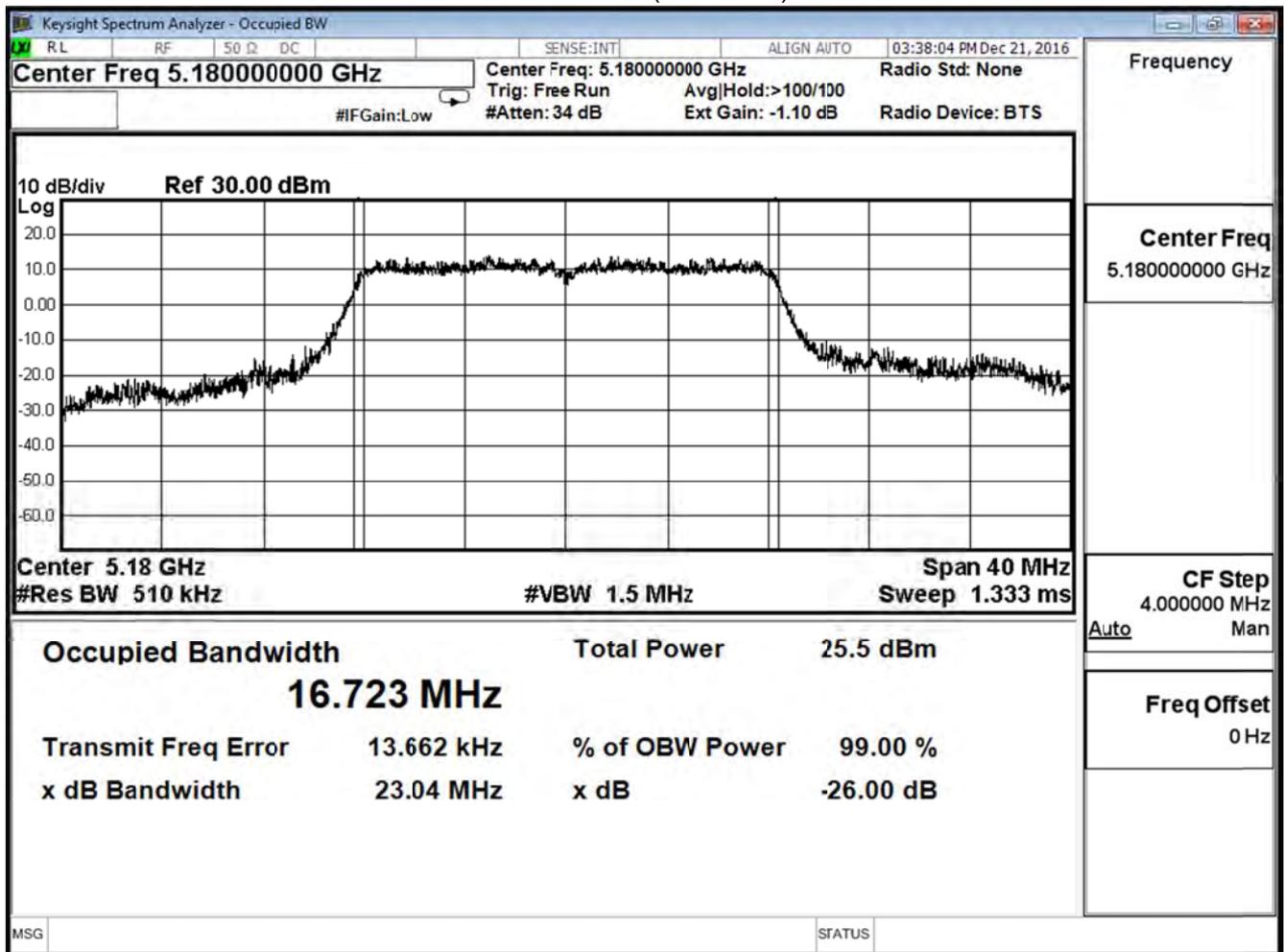
Channel 48 (5240MHz)



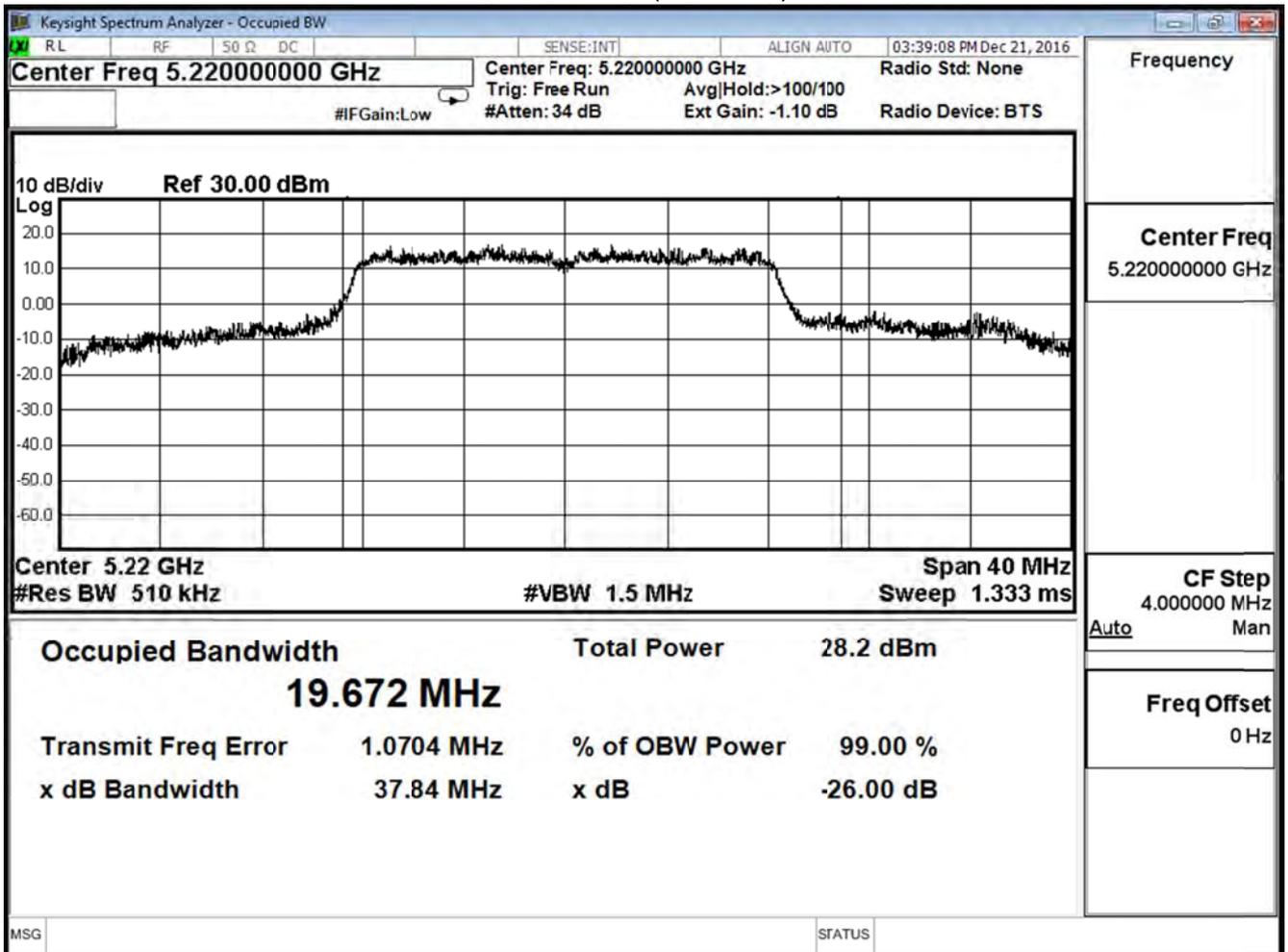
Product	Lyra mini		
Test Item	99% Bandwidth		
Test Mode	Mode 1: Tx-AD2037320910LF-CDD Mode		
Date of Test	2016/12/21	Test Site	SR10-H

IEEE 802.11a (ANT 1)			
Channel No.	Frequency (MHz)	Measure Value (MHz)	Limit (MHz)
36	5180	16.72	--
44	5220	19.67	--
48	5240	18.30	--

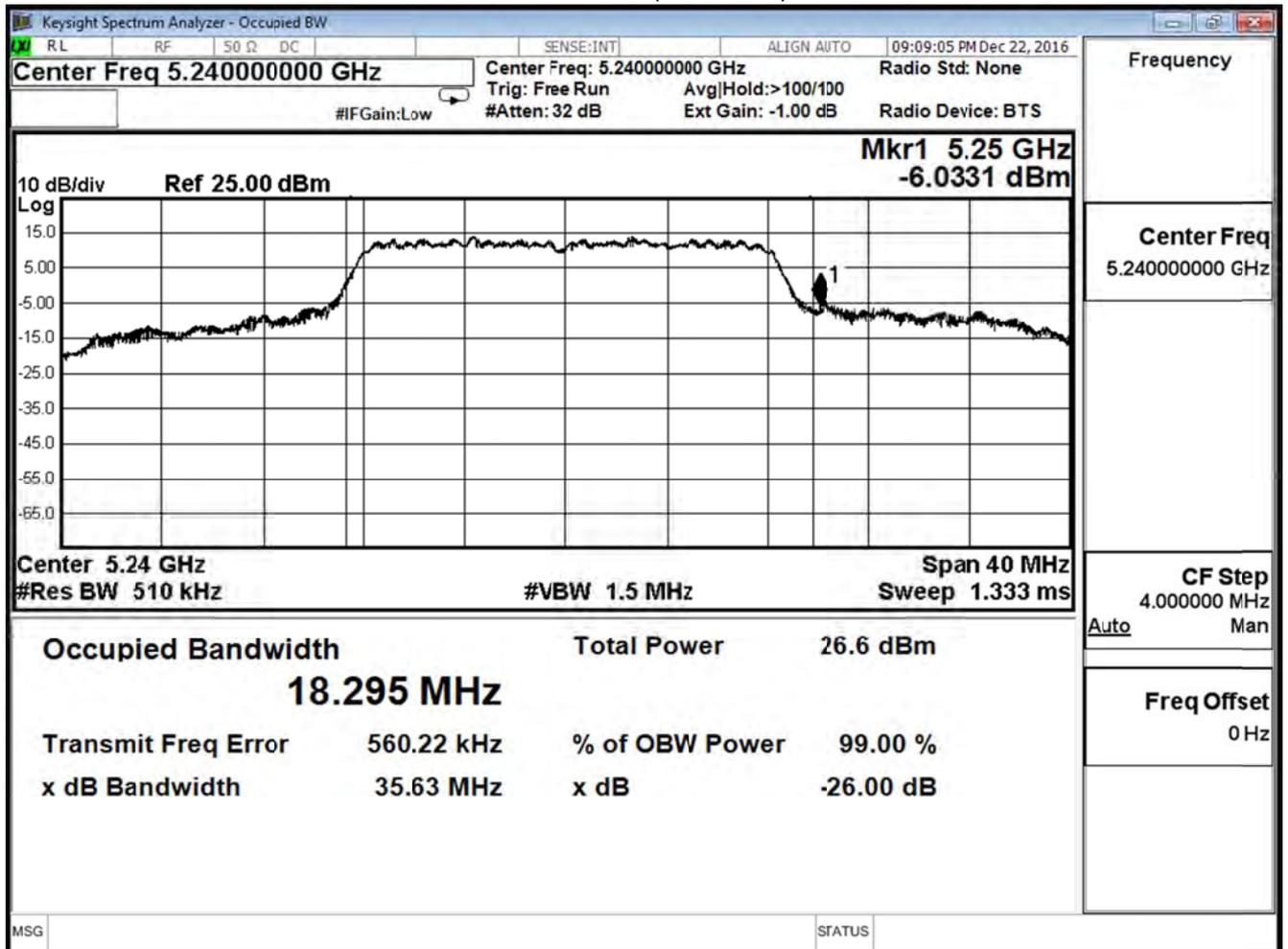
Channel 36 (5180MHz)



Channel 44 (5220MHz)



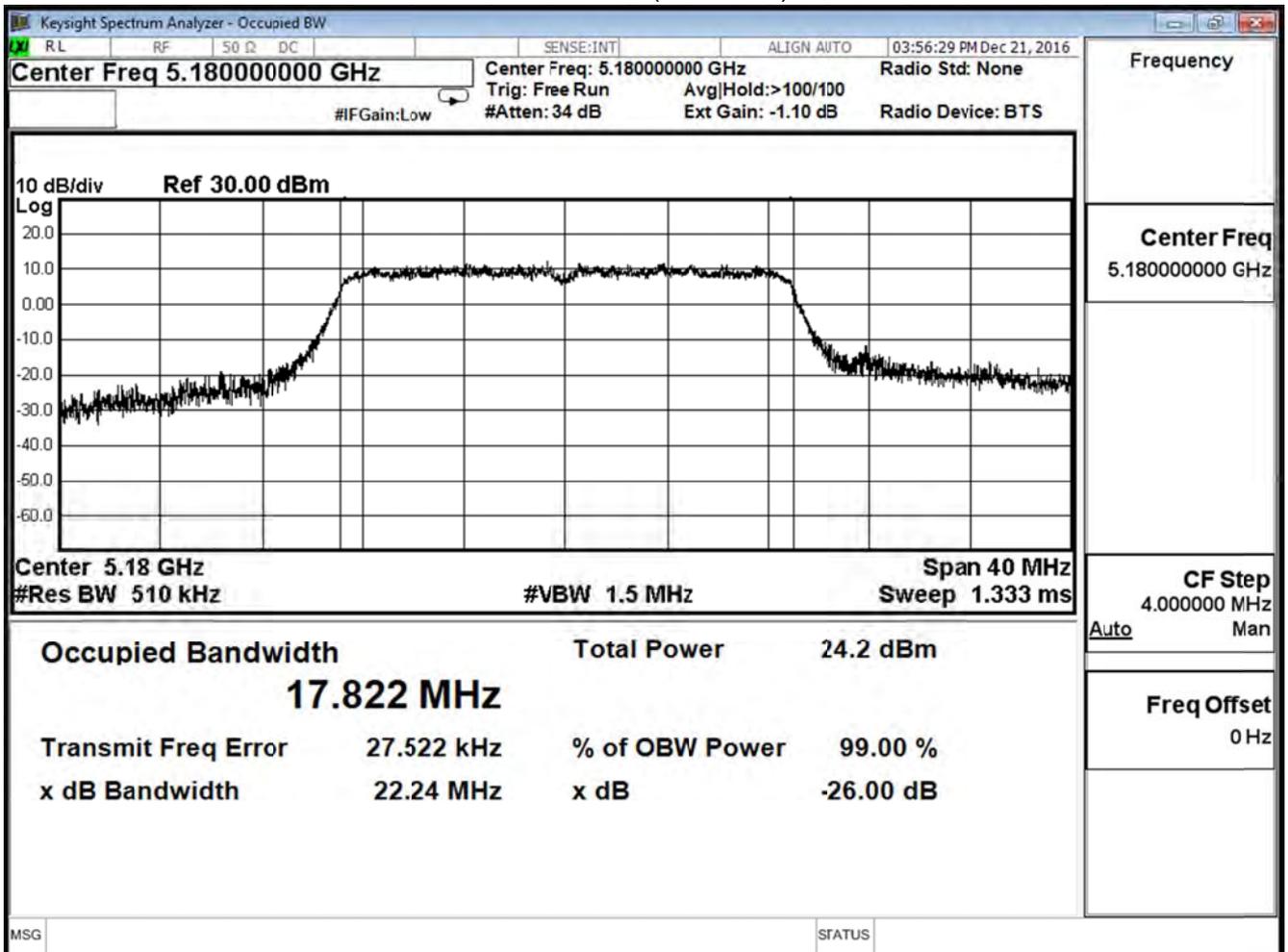
Channel 48 (5240MHz)



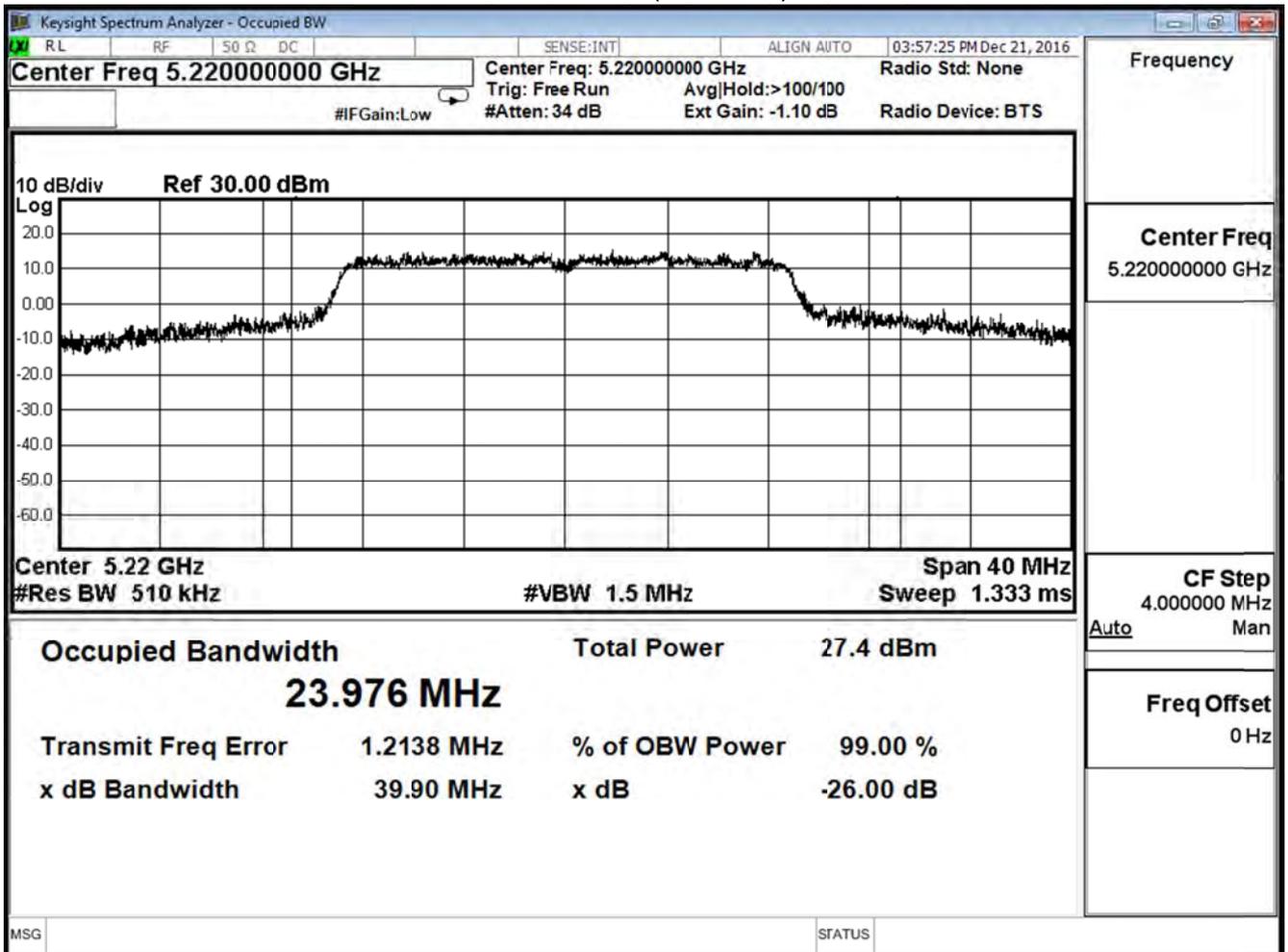
Product	Lyra mini		
Test Item	99% Bandwidth		
Test Mode	Mode 1: Tx-AD2037320910LF-CDD Mode		
Date of Test	2016/12/22	Test Site	SR10-H

IEEE 802.11n20 (ANT 0)			
Channel No.	Frequency (MHz)	Measure Value (MHz)	Limit (MHz)
36	5180	17.82	--
44	5220	23.98	--
48	5240	18.91	--

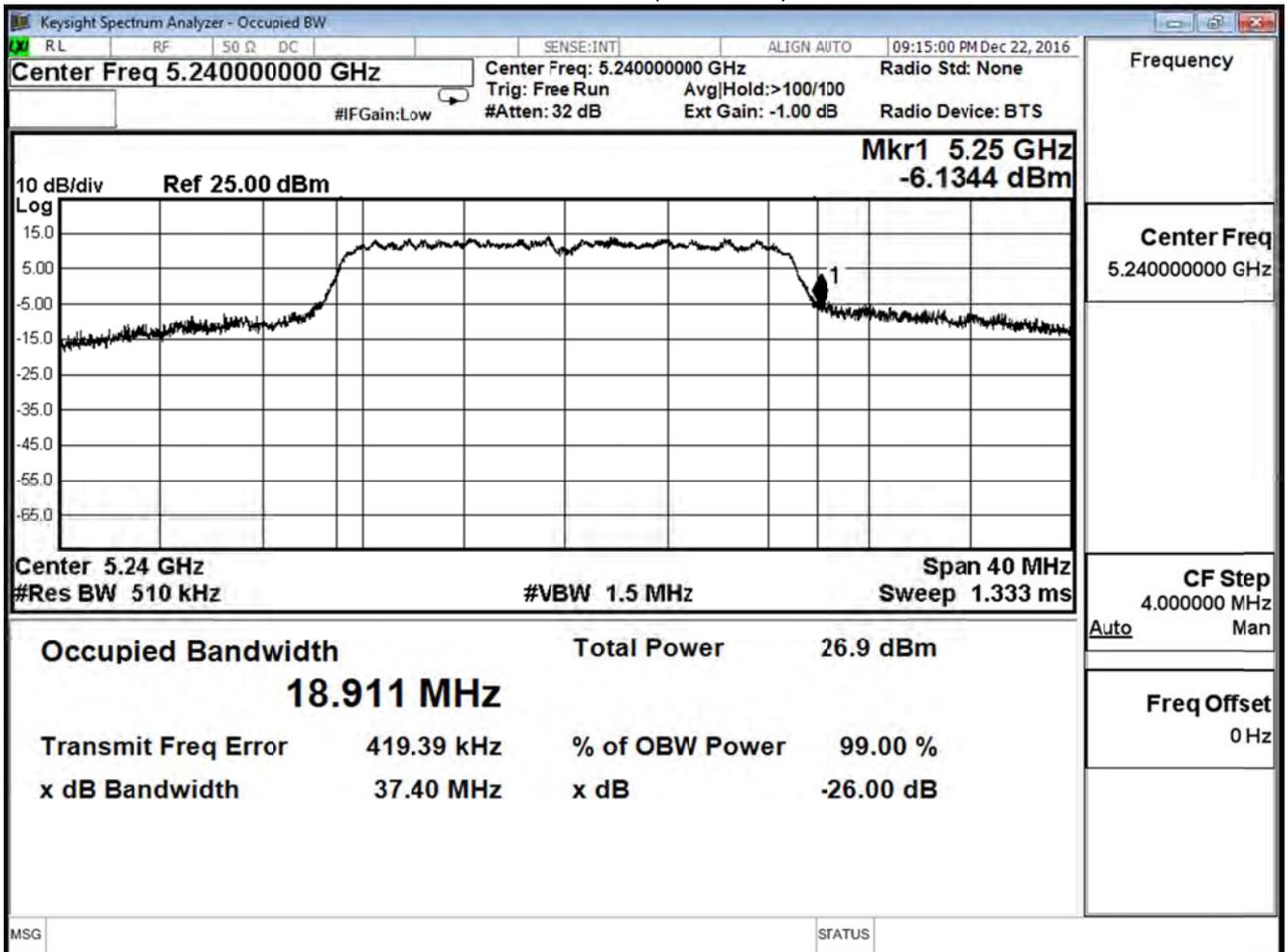
Channel 36 (5180MHz)



Channel 44 (5220MHz)



Channel 48 (5240MHz)

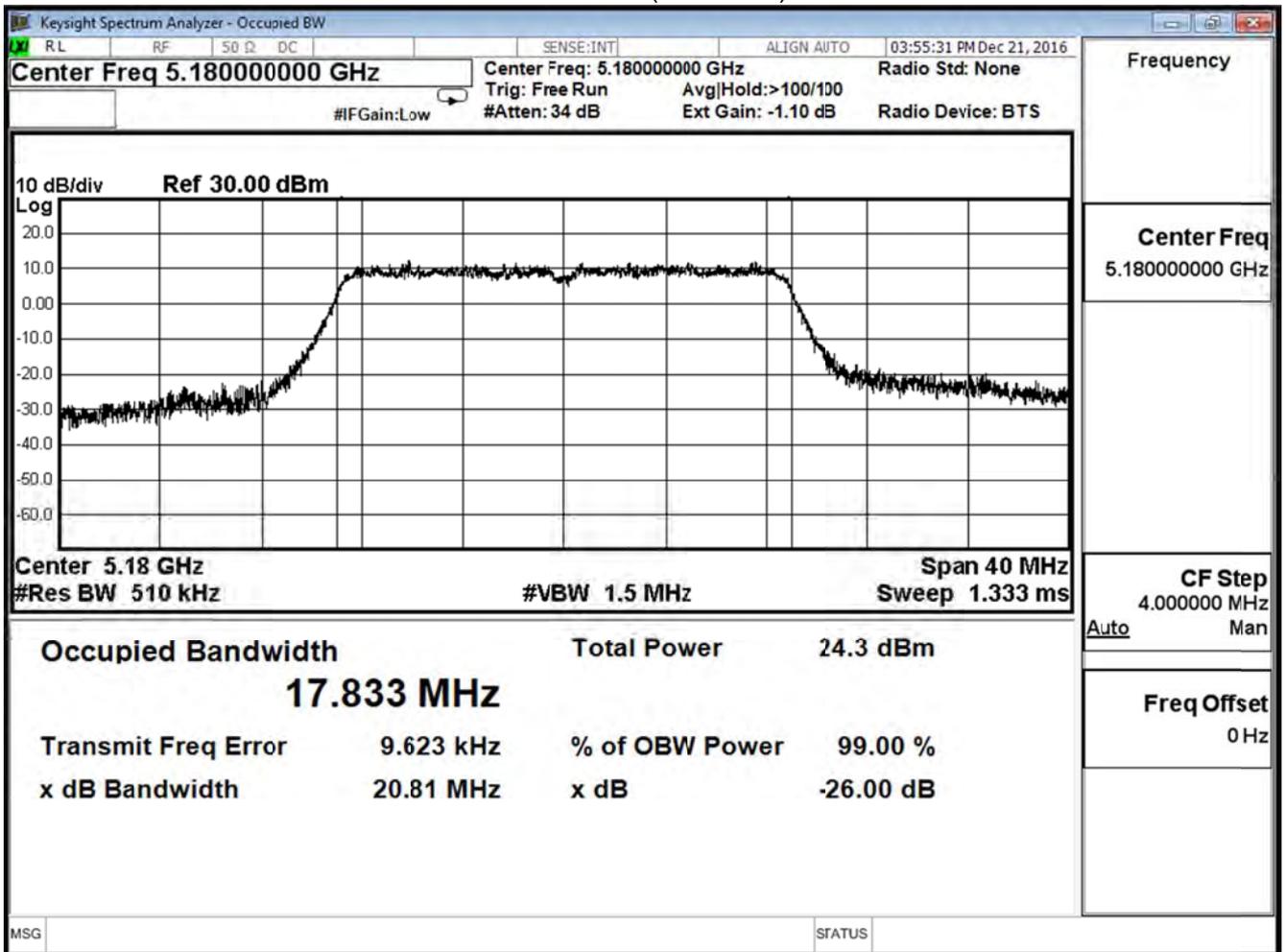


Product	Lyra mini		
Test Item	99% Bandwidth		
Test Mode	Mode 1: Tx-AD2037320910LF-CDD Mode		
Date of Test	2016/12/22	Test Site	SR10-H

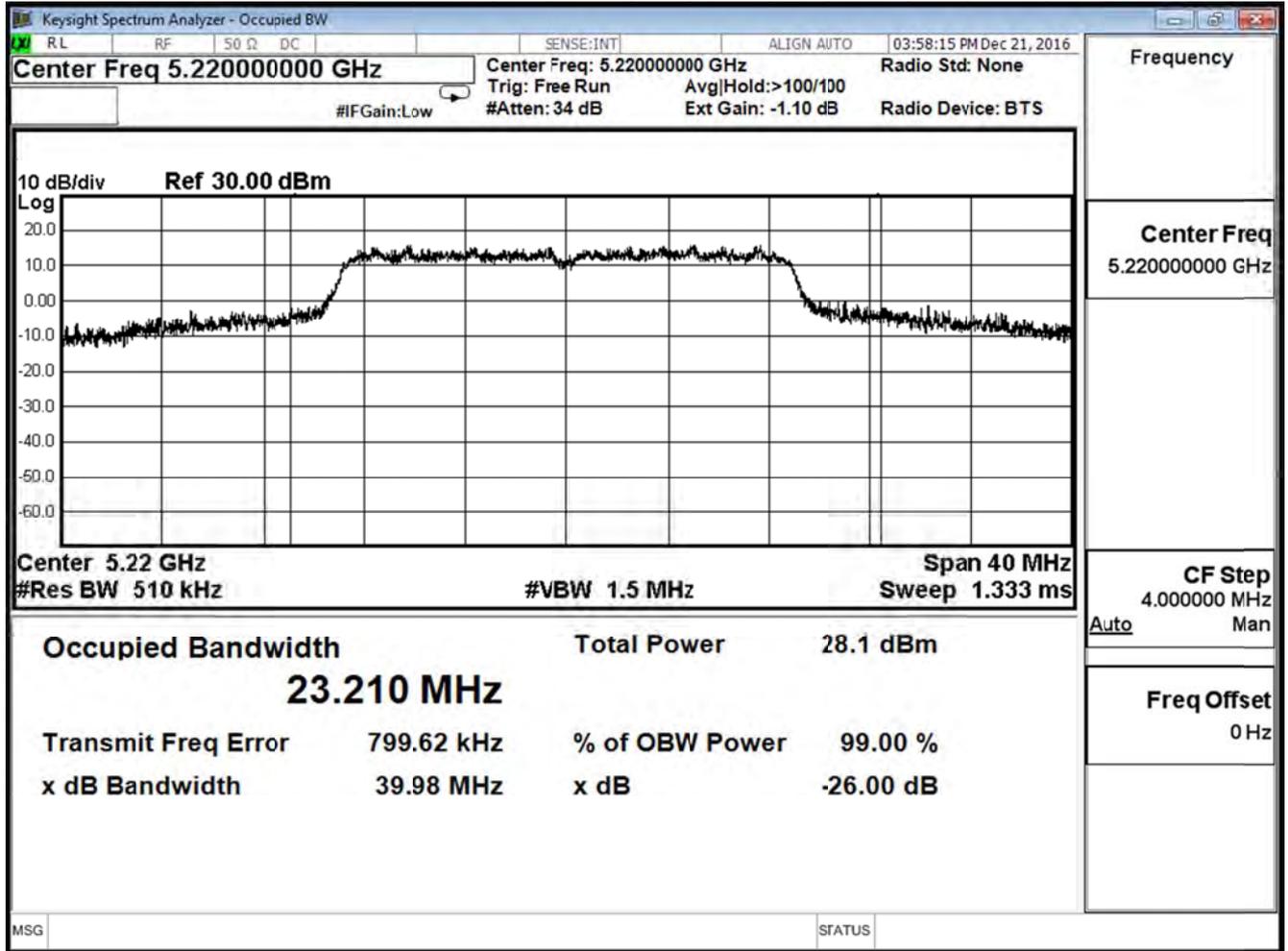
IEEE 802.11n20 (ANT 1)

Channel No.	Frequency (MHz)	Measure Value (MHz)	Limit (MHz)
36	5180	17.83	--
44	5220	23.21	--
48	5240	18.85	--

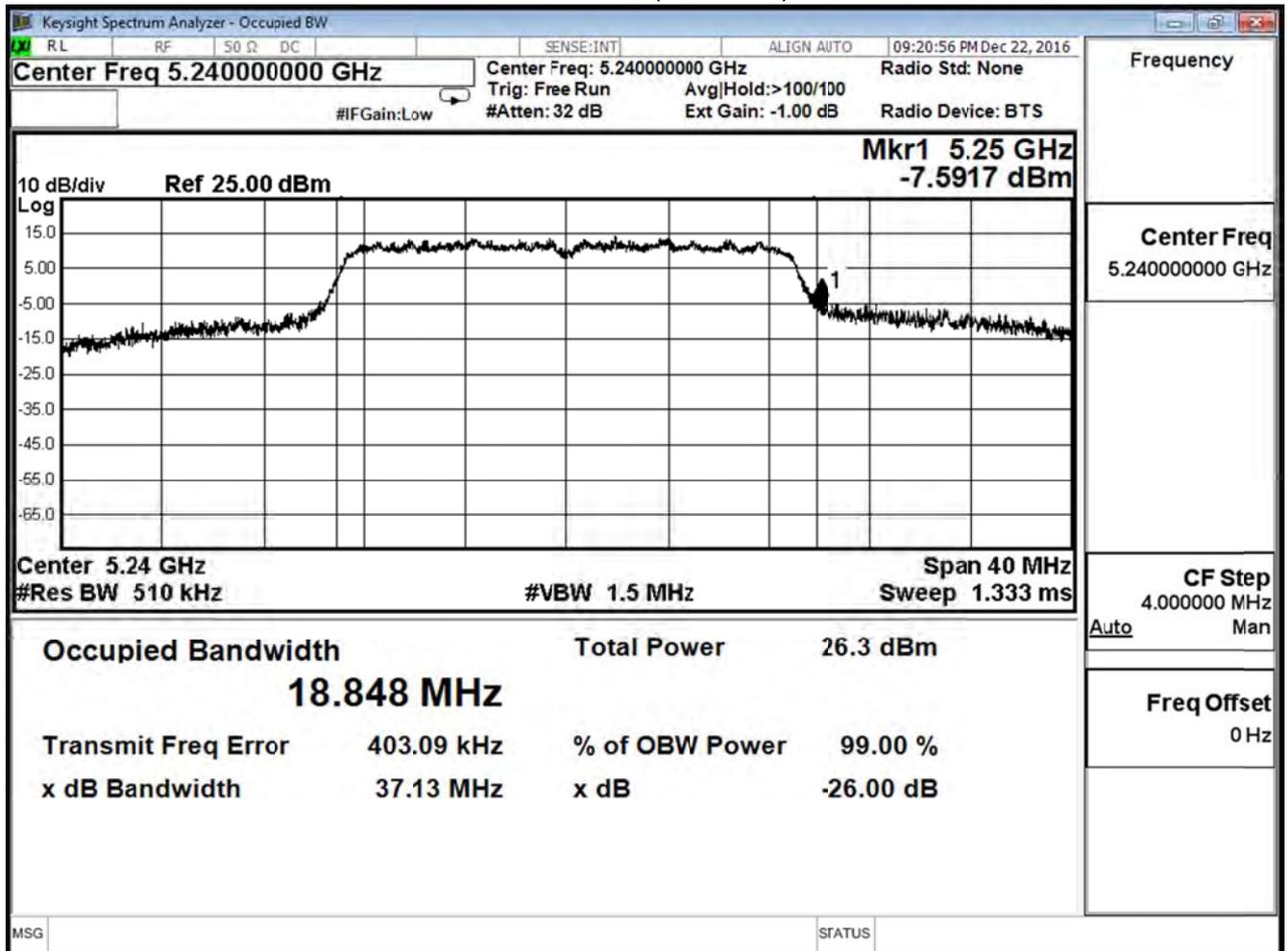
Channel 36 (5180MHz)



Channel 44 (5220MHz)



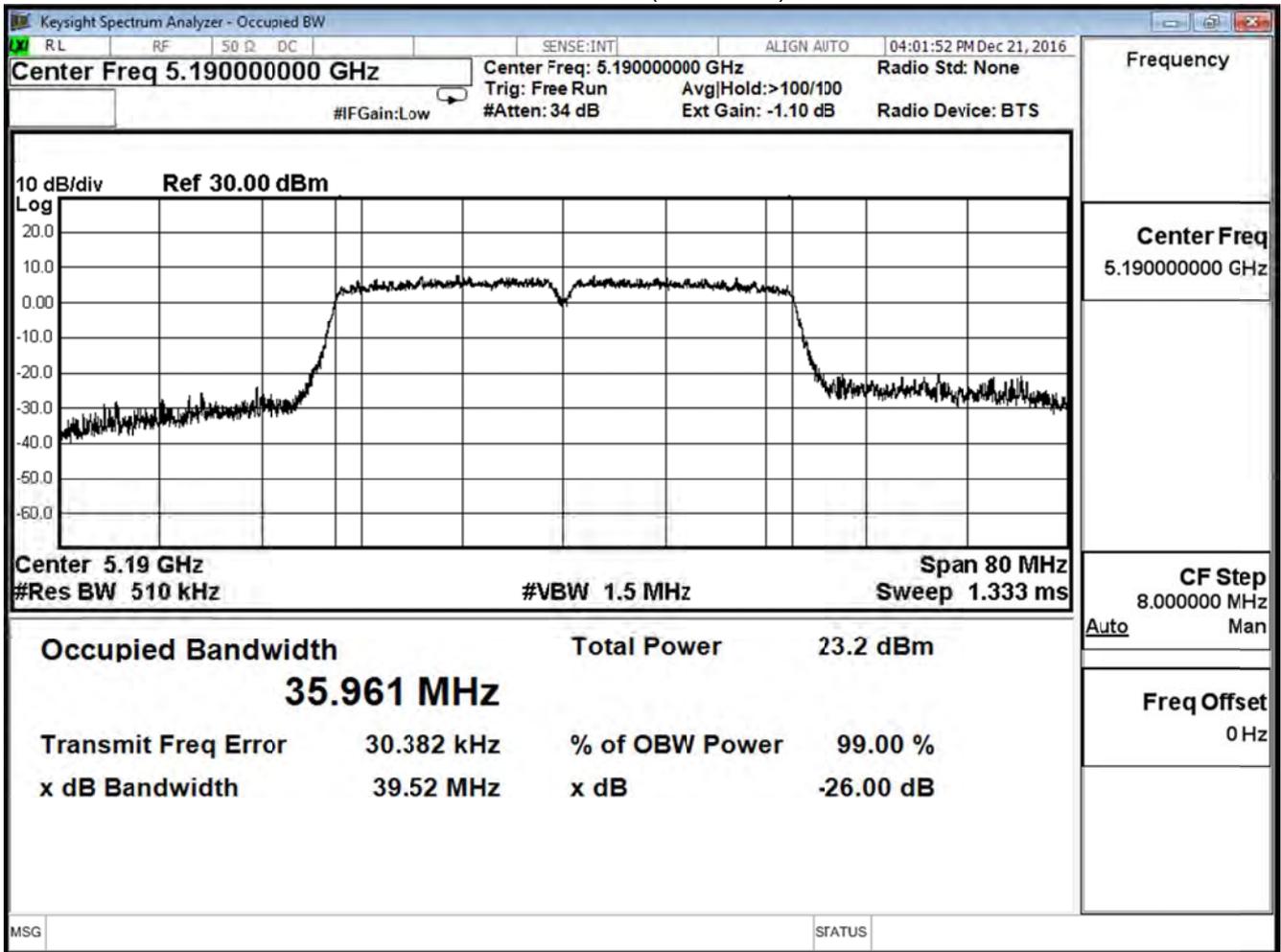
Channel 48 (5240MHz)



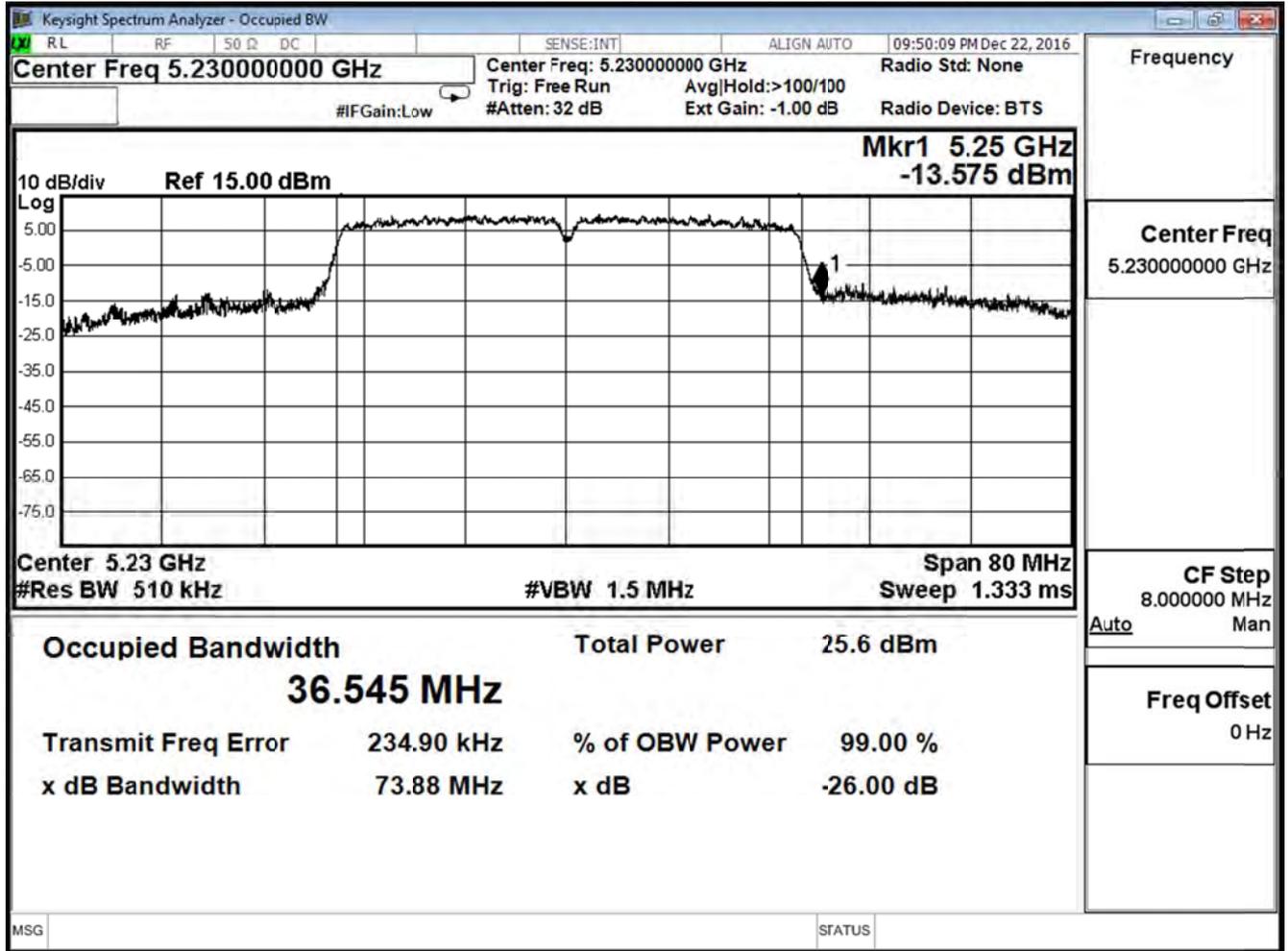
Product	Lyra mini		
Test Item	99% Bandwidth		
Test Mode	Mode 1: Tx-AD2037320910LF-CDD Mode		
Date of Test	2016/12/22	Test Site	SR10-H

IEEE 802.11n40 (ANT 0)			
Channel No.	Frequency (MHz)	Measure Value (MHz)	Limit (MHz)
38	5190	35.96	--
46	5230	36.55	--

Channel 38 (5190MHz)



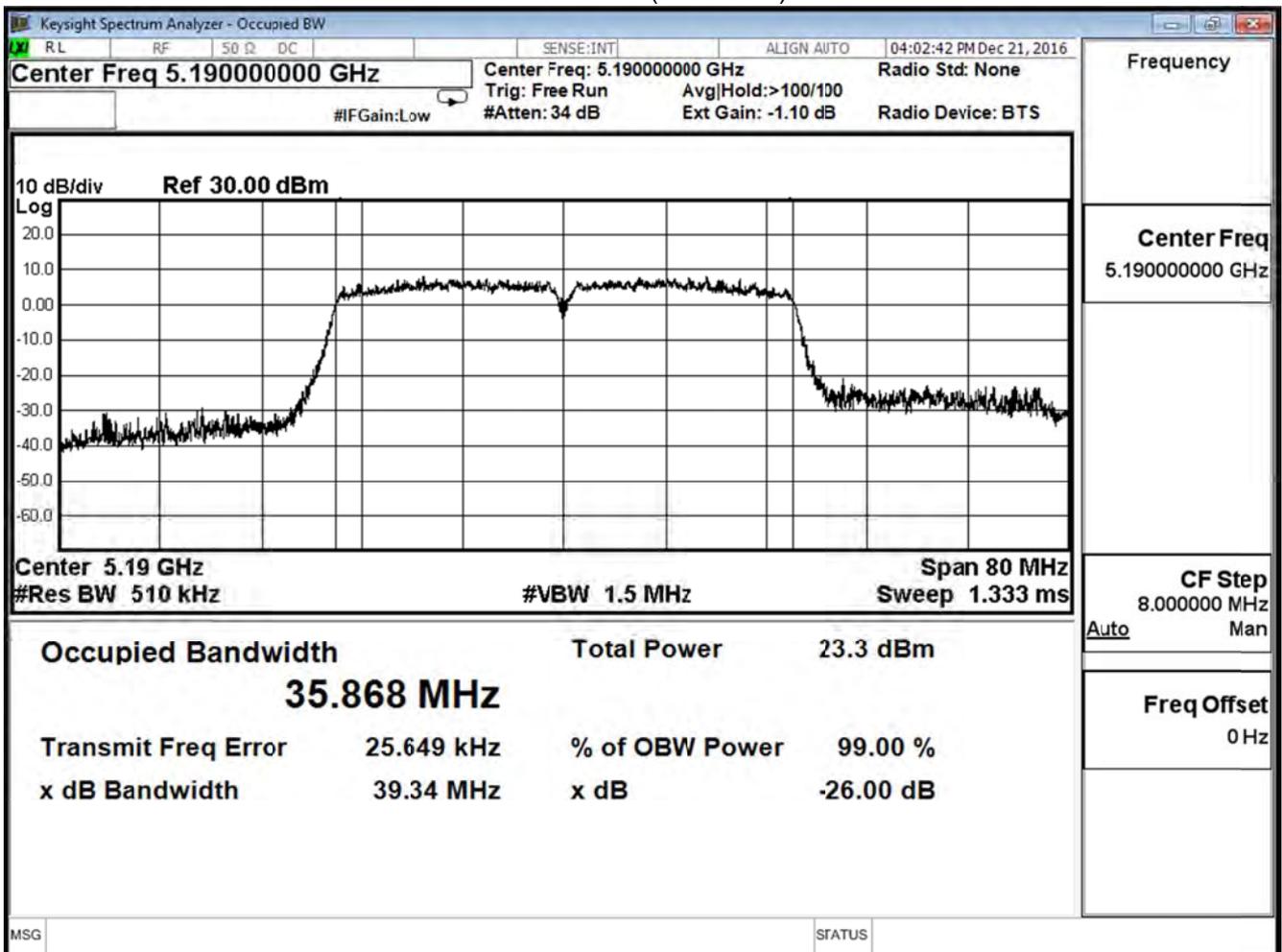
Channel 46 (5230MHz)



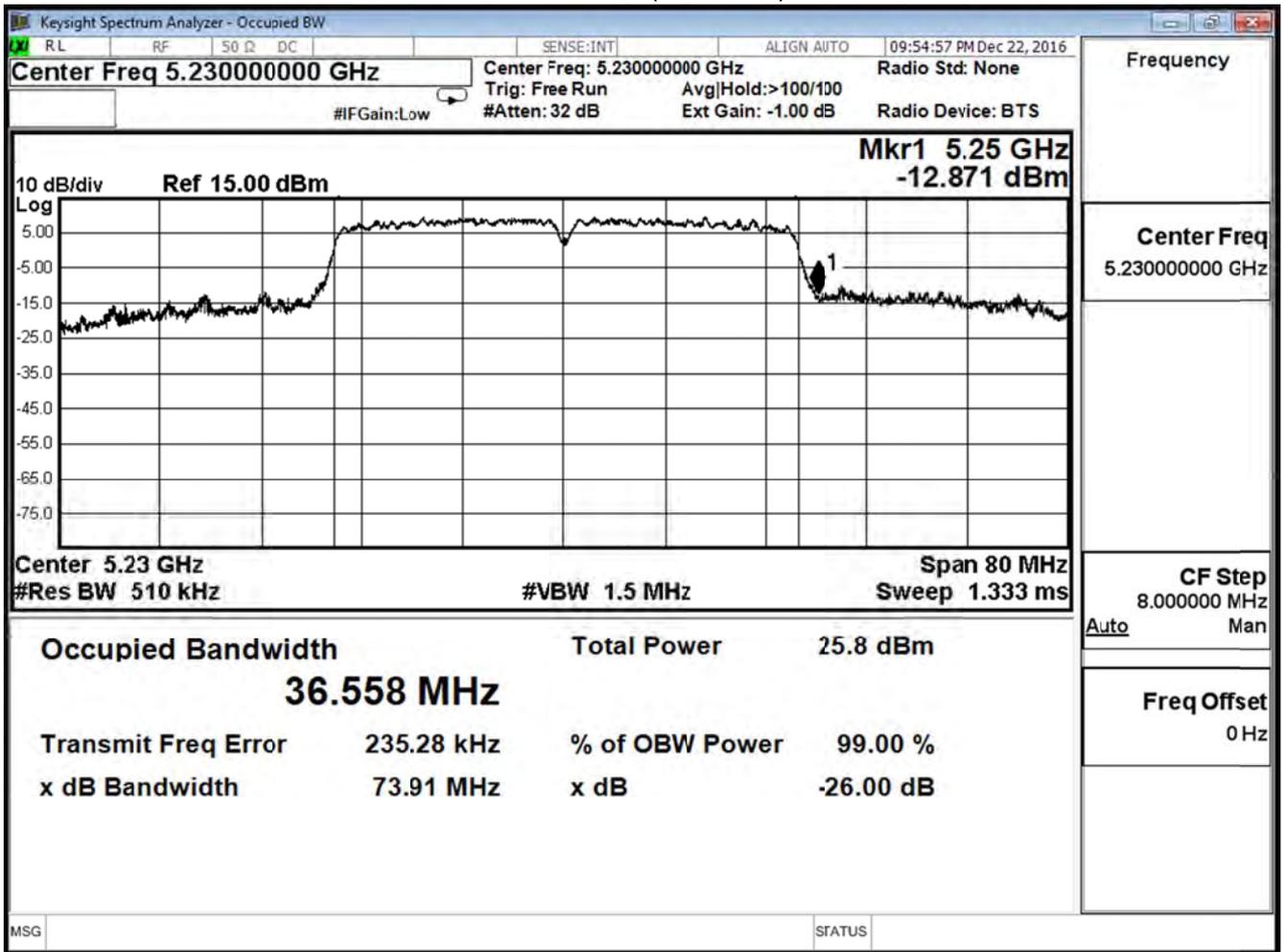
Product	Lyra mini		
Test Item	99% Bandwidth		
Test Mode	Mode 1: Tx-AD2037320910LF-CDD Mode		
Date of Test	2016/12/22	Test Site	SR10-H

IEEE 802.11n40 (ANT 1)			
Channel No.	Frequency (MHz)	Measure Value (MHz)	Limit (MHz)
38	5190	35.87	--
46	5230	36.56	--

Channel 38 (5190MHz)



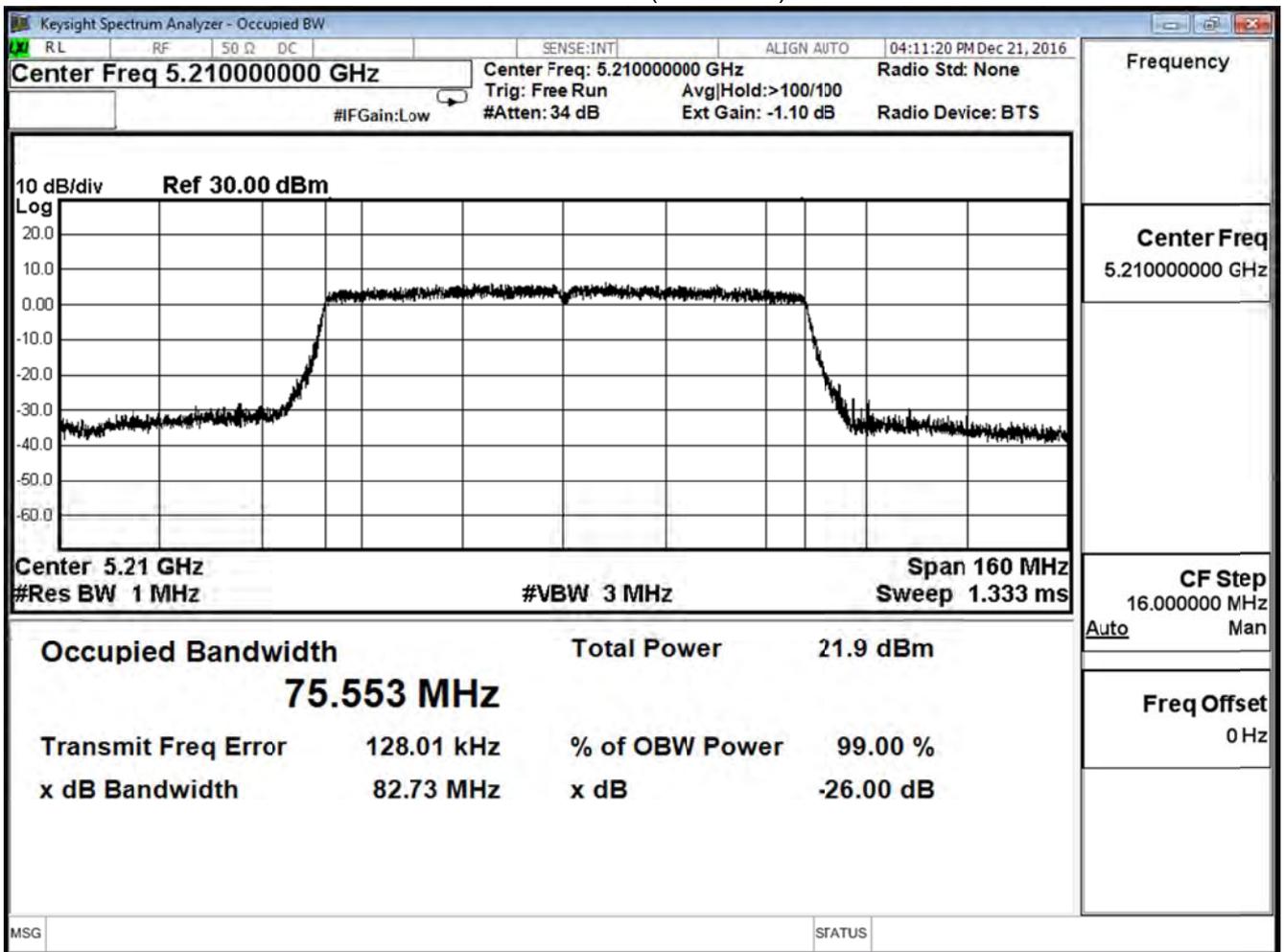
Channel 46 (5230MHz)



Product	Lyra mini		
Test Item	99% Bandwidth		
Test Mode	Mode 1: Tx-AD2037320910LF-CDD Mode		
Date of Test	2016/12/21	Test Site	SR10-H

IEEE 802.11ac80 (ANT 0)			
Channel No.	Frequency (MHz)	Measure Value (MHz)	Limit (MHz)
42	5210	75.55	--

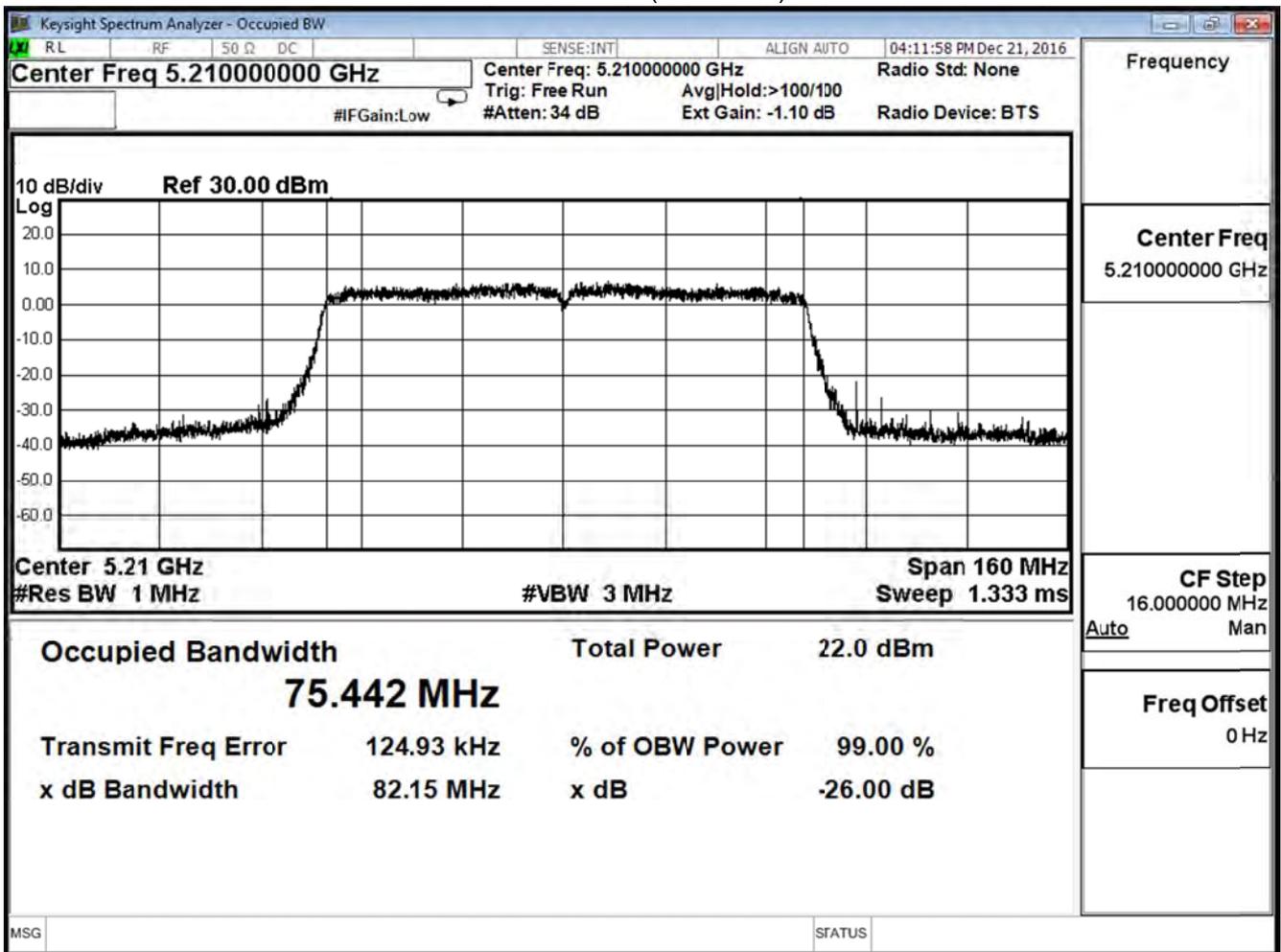
Channel 42 (5210MHz)



Product	Lyra mini		
Test Item	99% Bandwidth		
Test Mode	Mode 1: Tx-AD2037320910LF-CDD Mode		
Date of Test	2016/12/21	Test Site	SR10-H

IEEE 802.11ac80 (ANT 1)			
Channel No.	Frequency (MHz)	Measure Value (MHz)	Limit (MHz)
42	5210	75.44	--

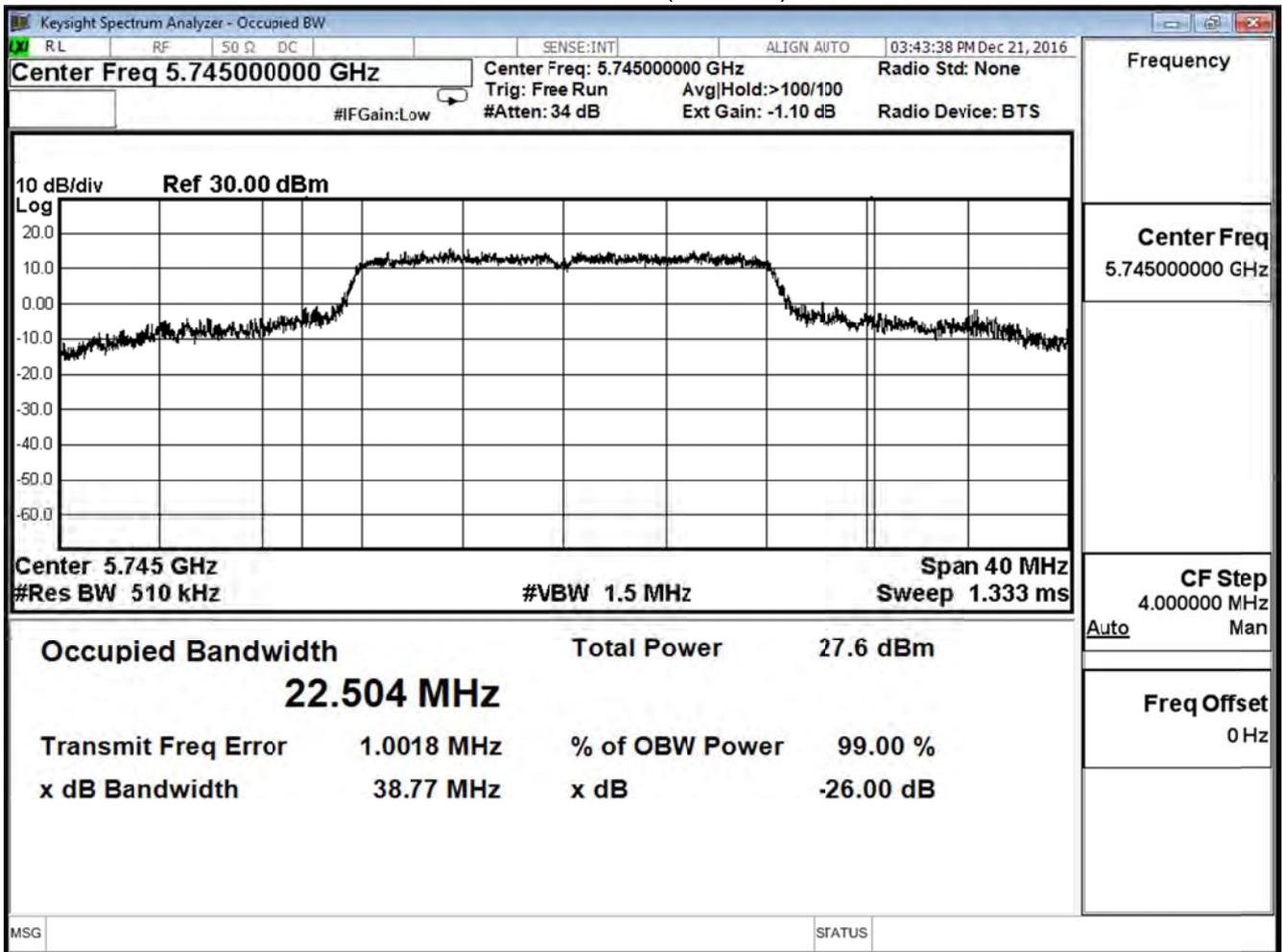
Channel 42 (5210MHz)



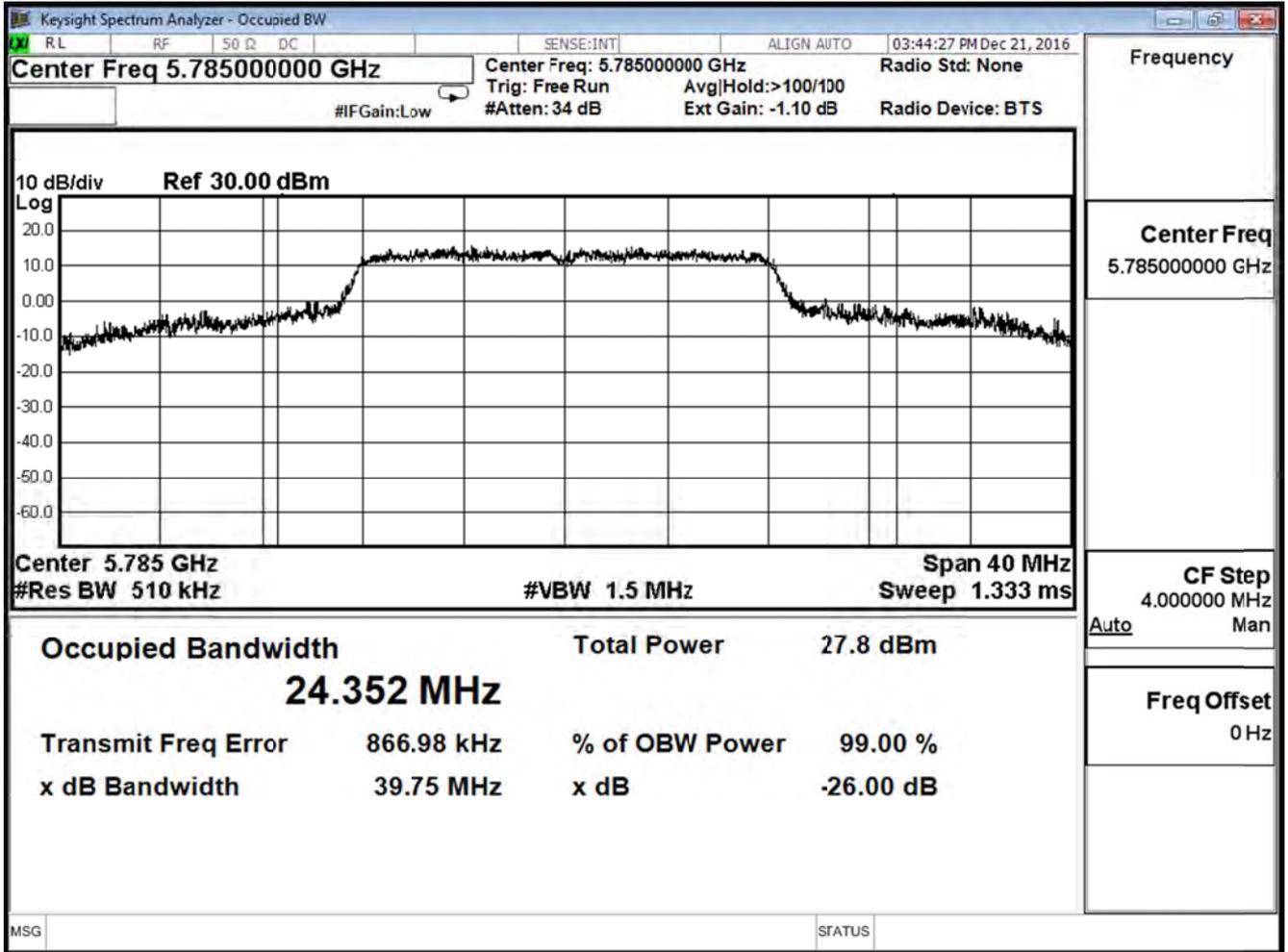
Product	Lyra mini		
Test Item	99% Bandwidth		
Test Mode	Mode 1: Tx-AD2037320910LF-CDD Mode		
Date of Test	2016/12/21	Test Site	SR10-H

IEEE 802.11a (ANT 0)			
Channel No.	Frequency (MHz)	Measure Value (MHz)	Limit (MHz)
149	5745	22.50	--
157	5785	24.35	--
165	5825	24.05	--

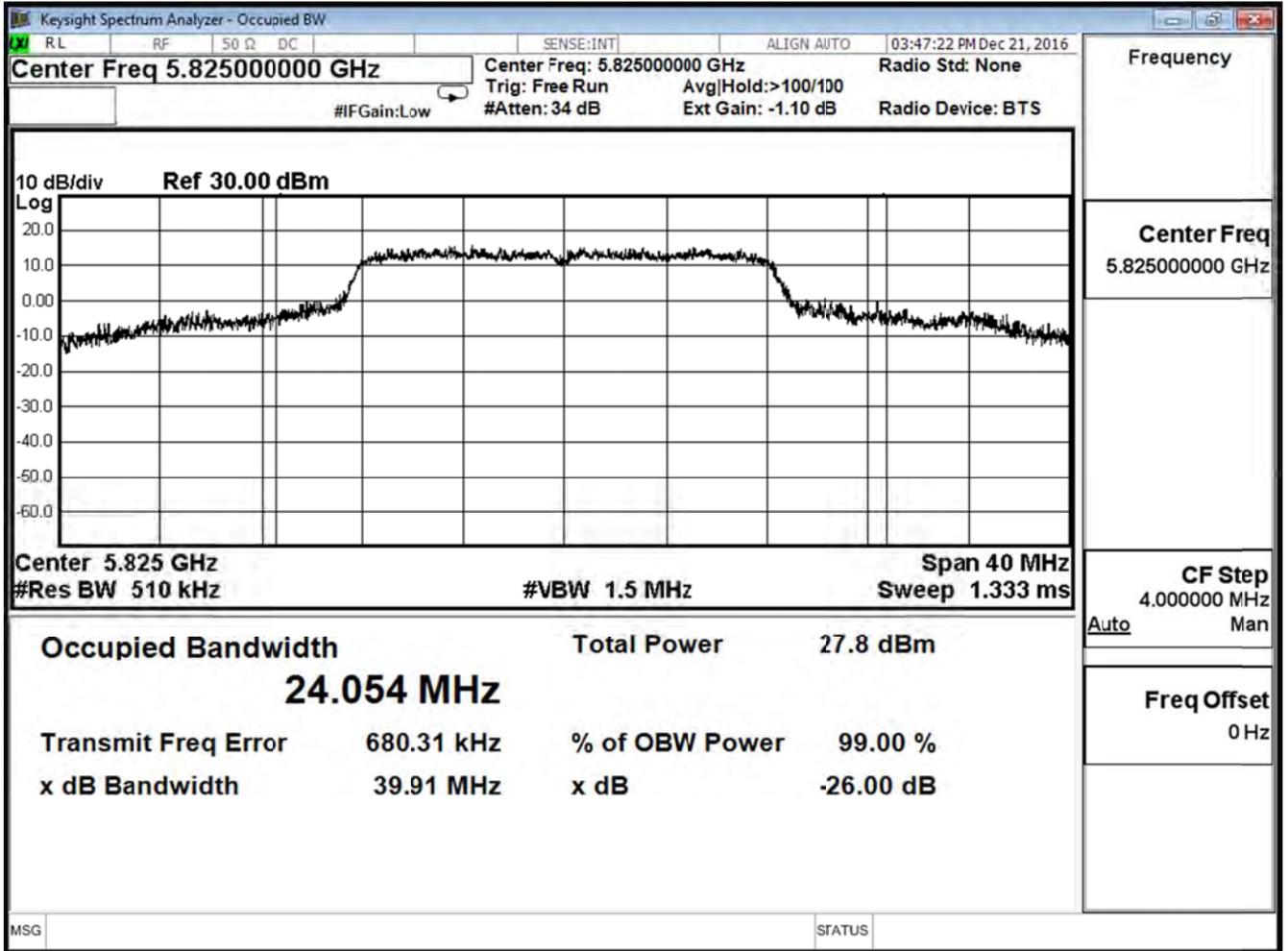
Channel 149 (5745MH)



Channel 157 (5785MHz)



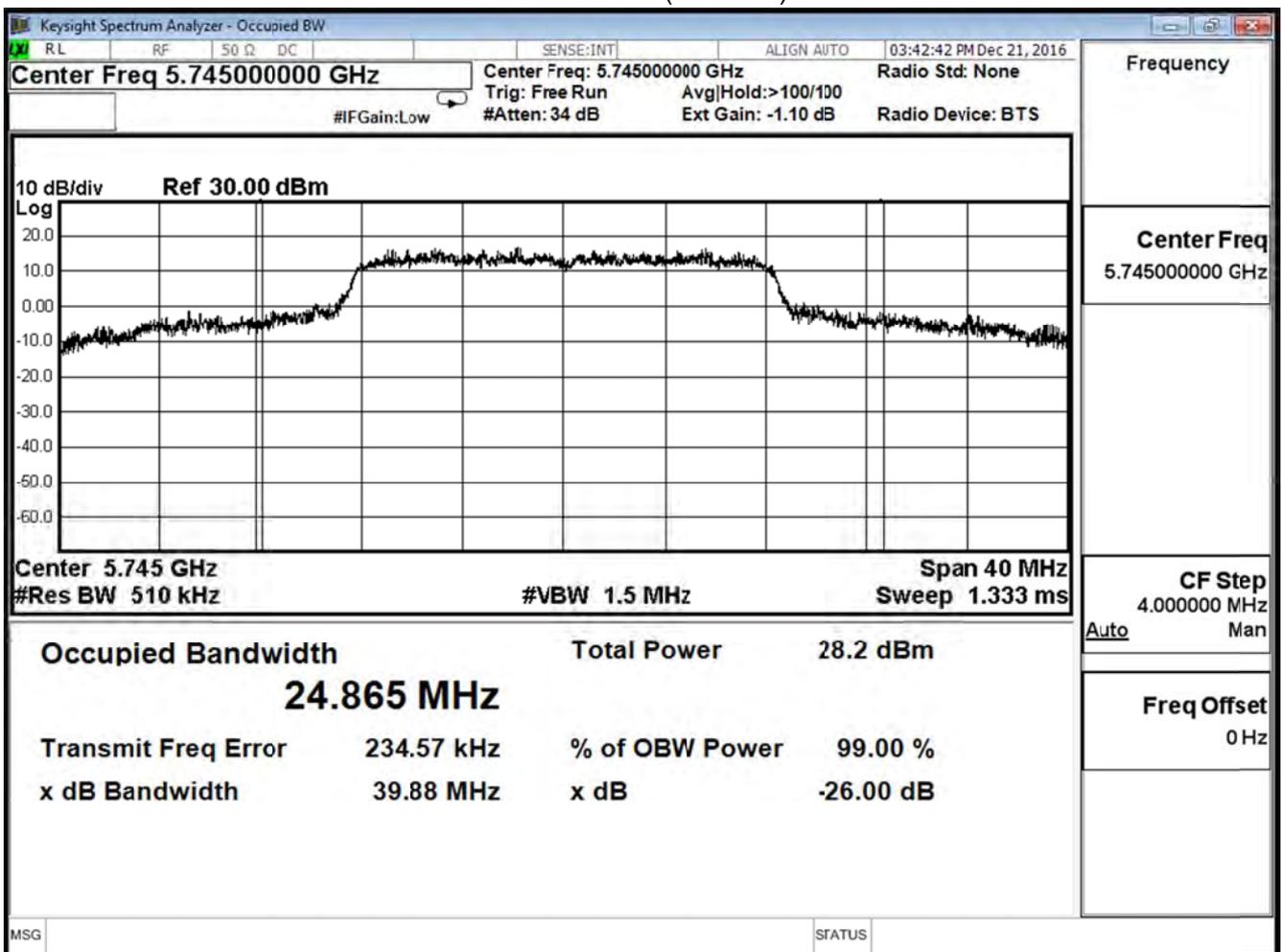
Channel 165 (5825MHz)



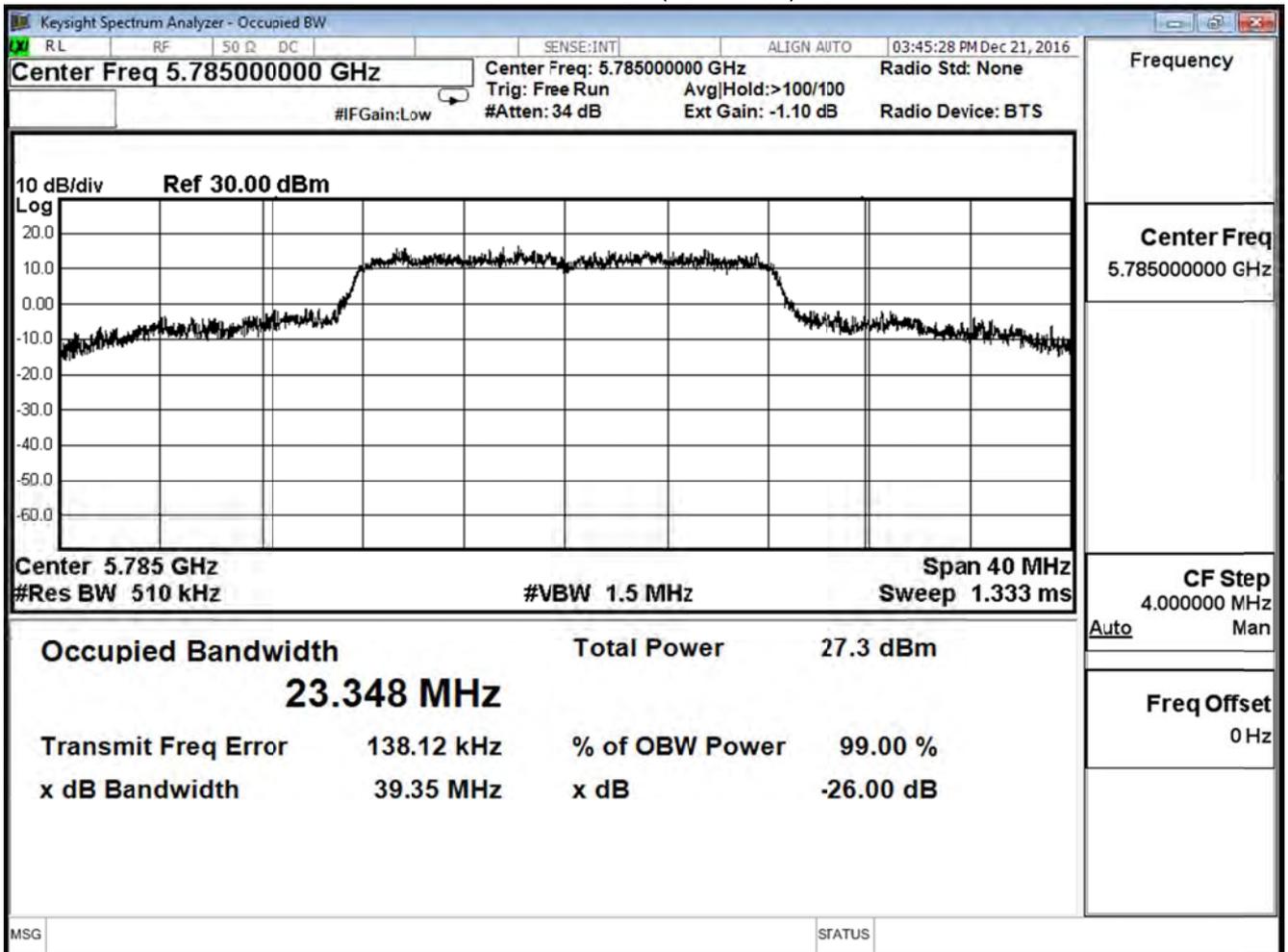
Product	Lyra mini		
Test Item	99% Bandwidth		
Test Mode	Mode 1: Tx-AD2037320910LF-CDD Mode		
Date of Test	2016/12/21	Test Site	SR10-H

IEEE 802.11a (ANT 1)			
Channel No.	Frequency (MHz)	Measure Value (MHz)	Limit (MHz)
149	5745	24.87	--
157	5785	23.35	--
165	5825	28.42	--

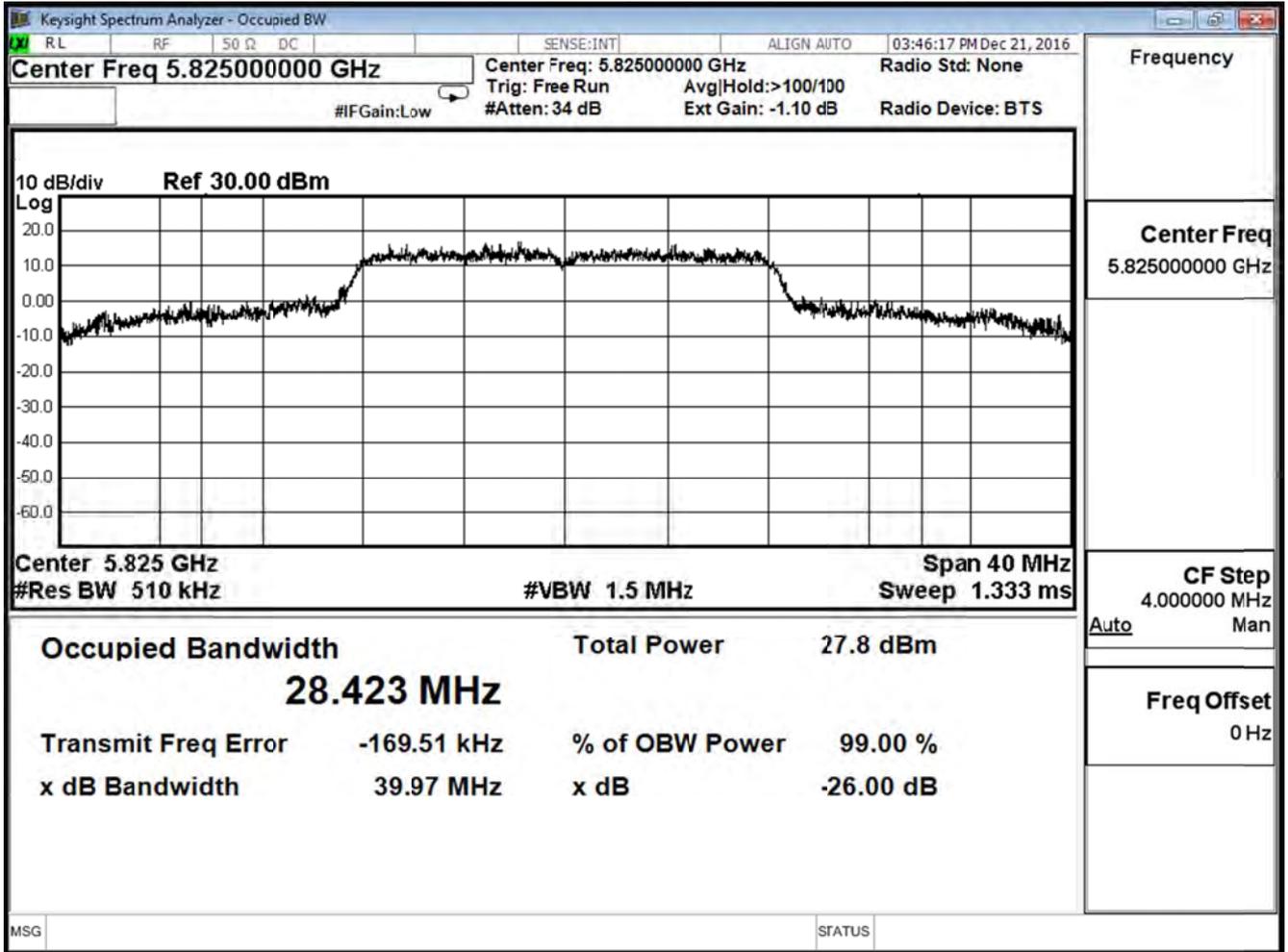
Channel 149 (5745MH)



Channel 157 (5785MHz)



Channel 165 (5825MHz)

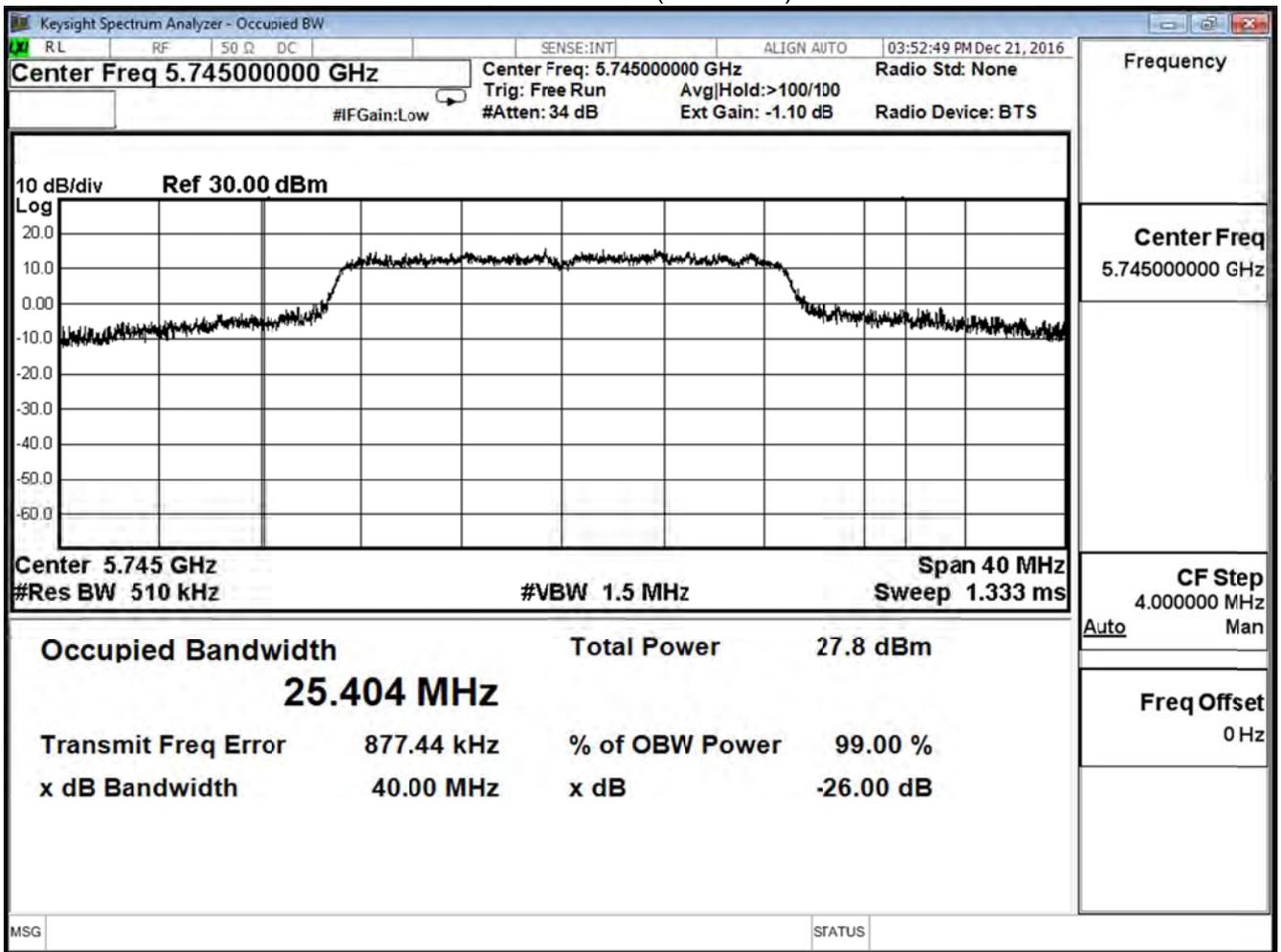


Product	Lyra mini		
Test Item	99% Bandwidth		
Test Mode	Mode 1: Tx-AD2037320910LF-CDD Mode		
Date of Test	2016/12/21	Test Site	SR10-H

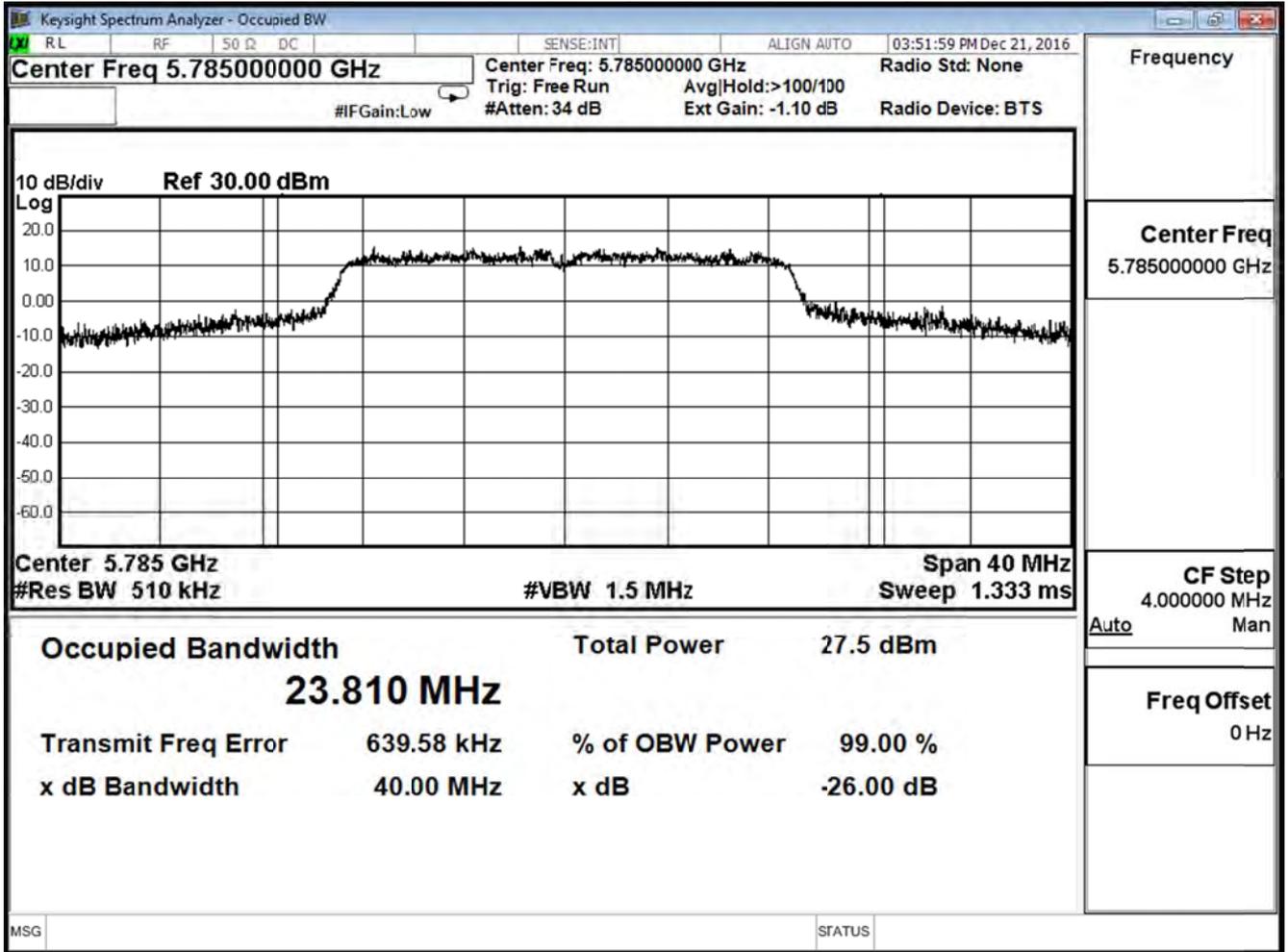
IEEE 802.11n20 (ANT 0)

Channel No.	Frequency (MHz)	Measure Value (MHz)	Limit (MHz)
149	5745	25.40	--
157	5785	23.81	--
165	5825	24.10	--

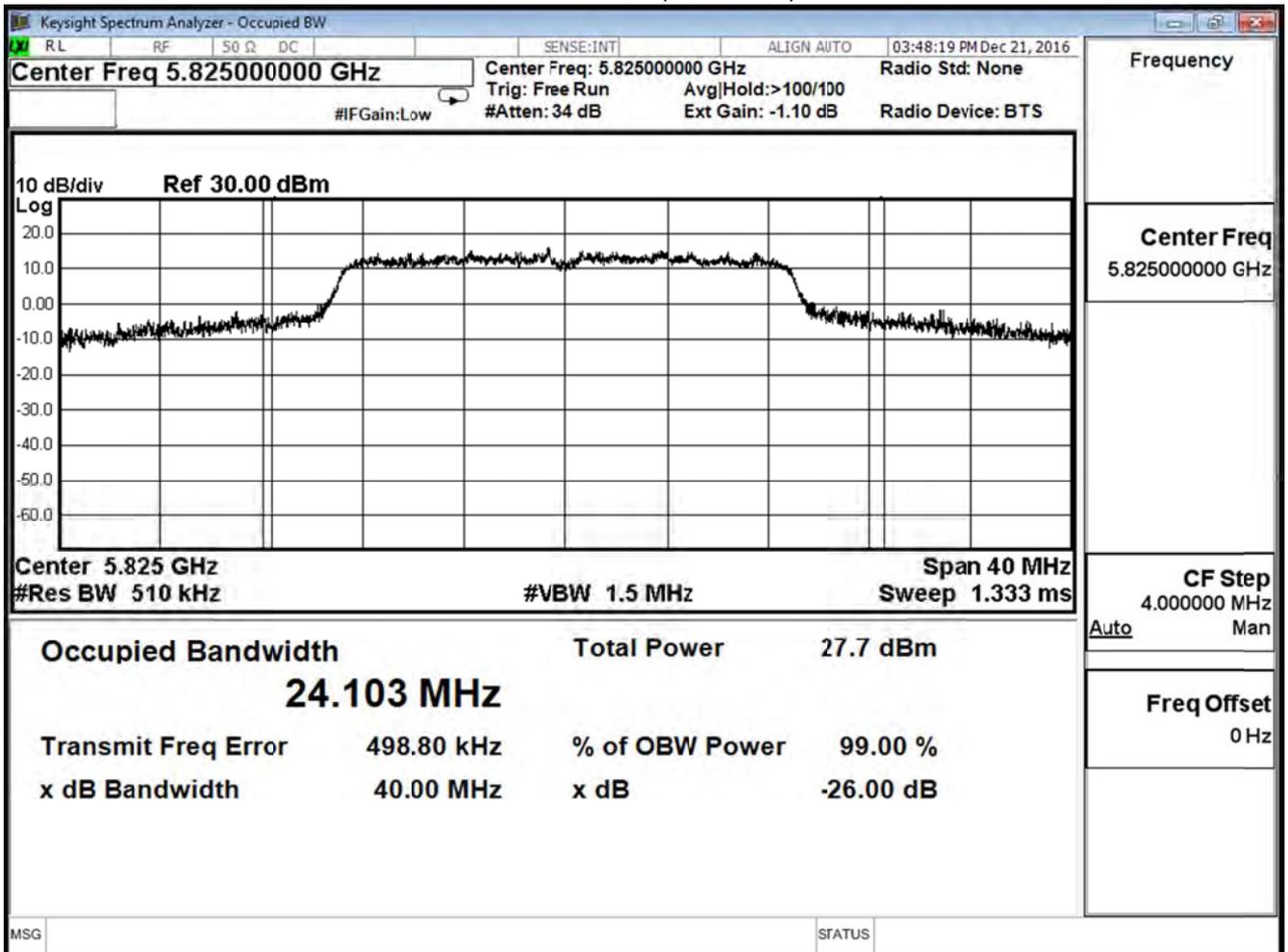
Channel 149 (5745MHz)



Channel 157 (5785MHz)



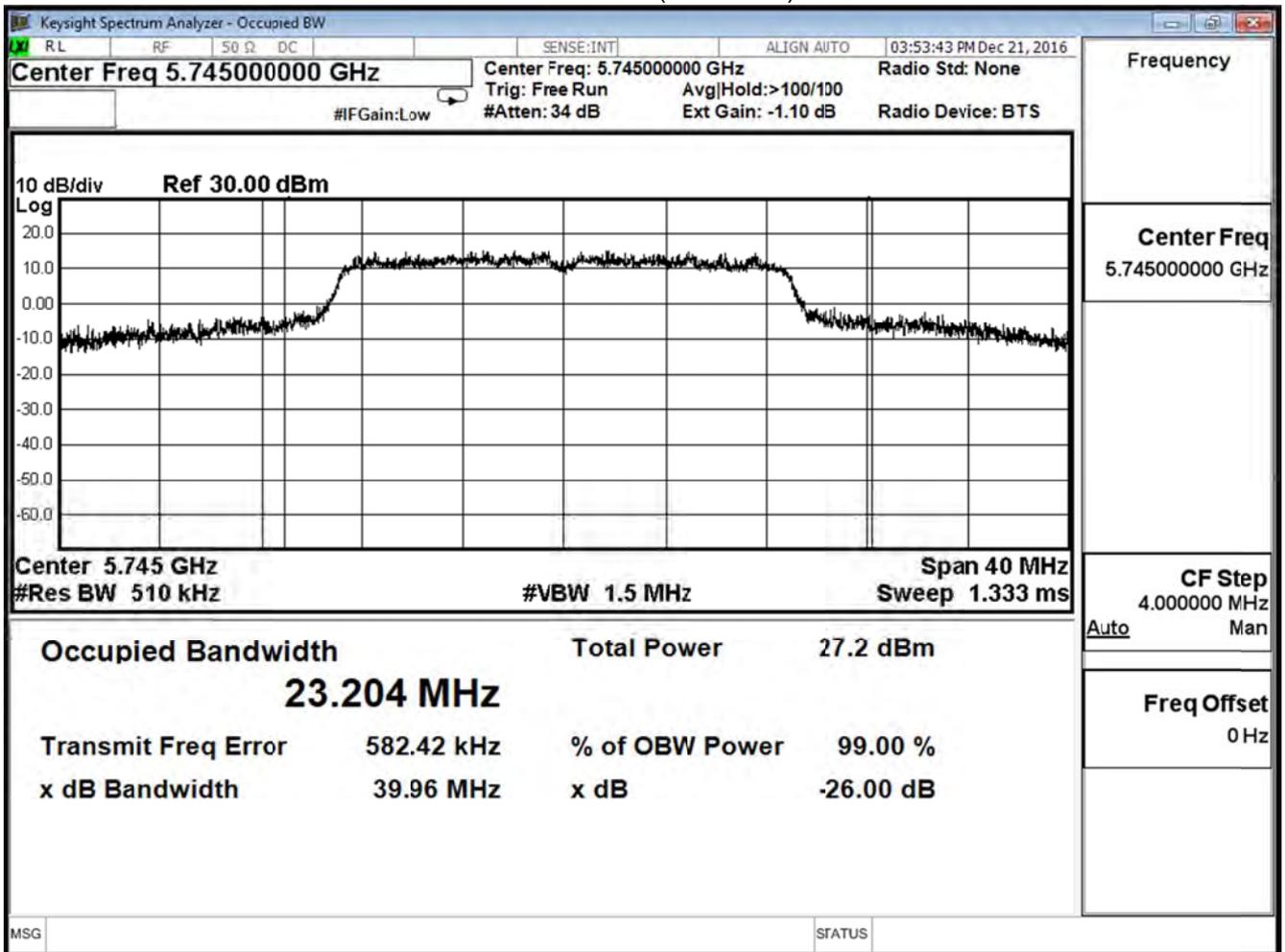
Channel 165 (5825MHz)



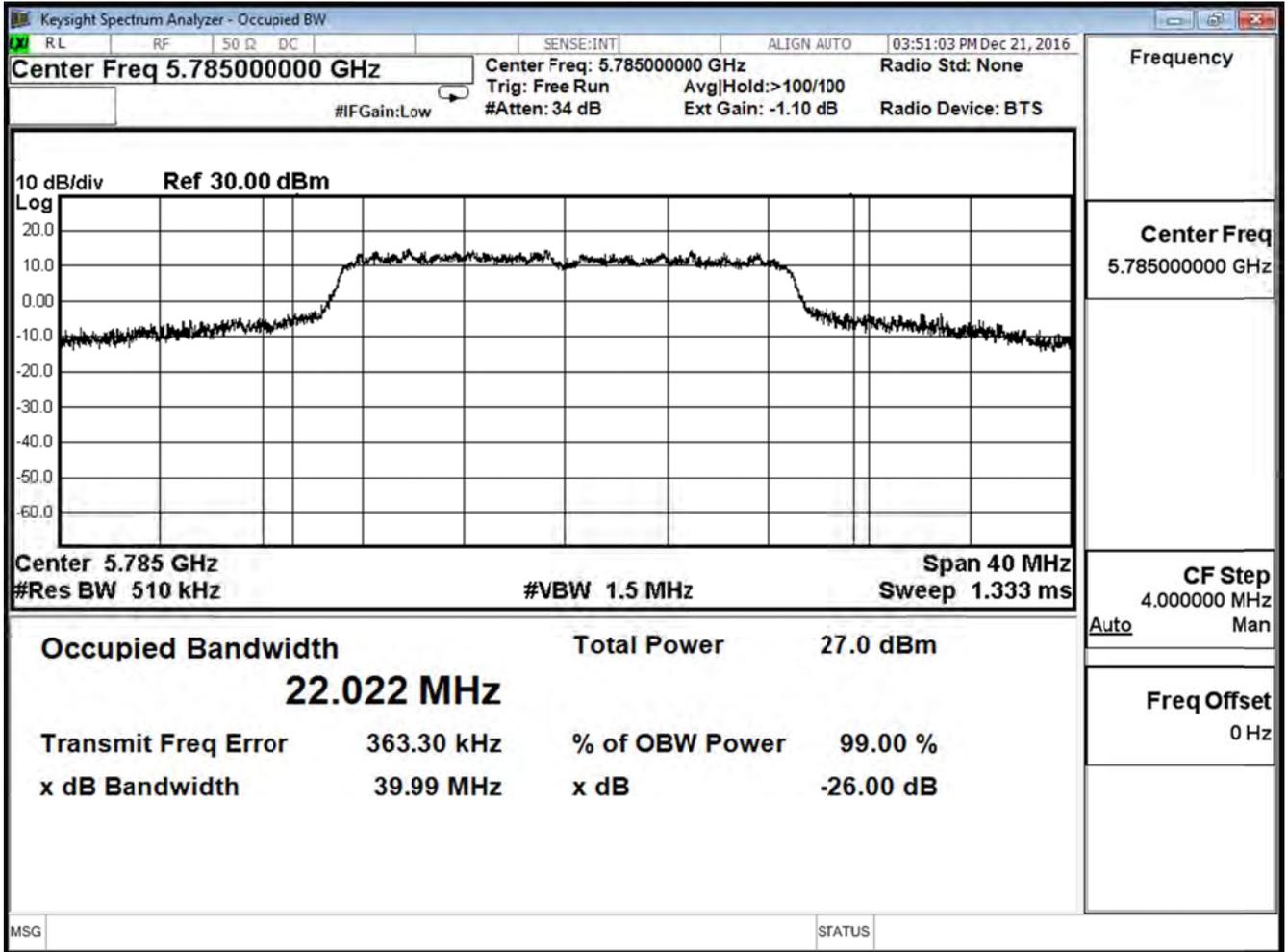
Product	Lyra mini		
Test Item	99% Bandwidth		
Test Mode	Mode 1: Tx-AD2037320910LF-CDD Mode		
Date of Test	2016/12/21	Test Site	SR10-H

IEEE 802.11n20 (ANT 1)			
Channel No.	Frequency (MHz)	Measure Value (MHz)	Limit (MHz)
149	5745	23.20	--
157	5785	22.02	--
165	5825	28.67	--

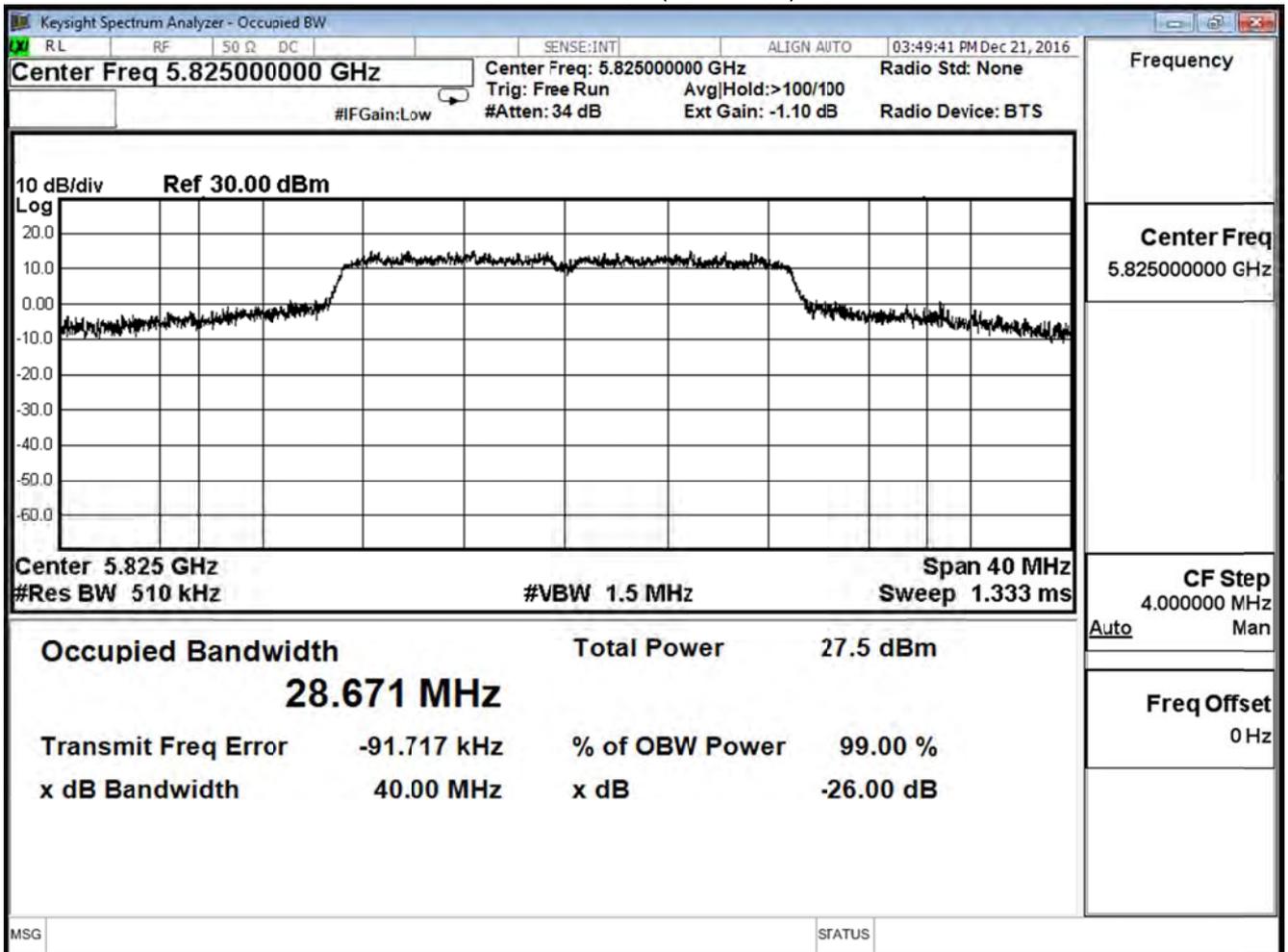
Channel 149 (5745MHz)



Channel 157 (5785MHz)



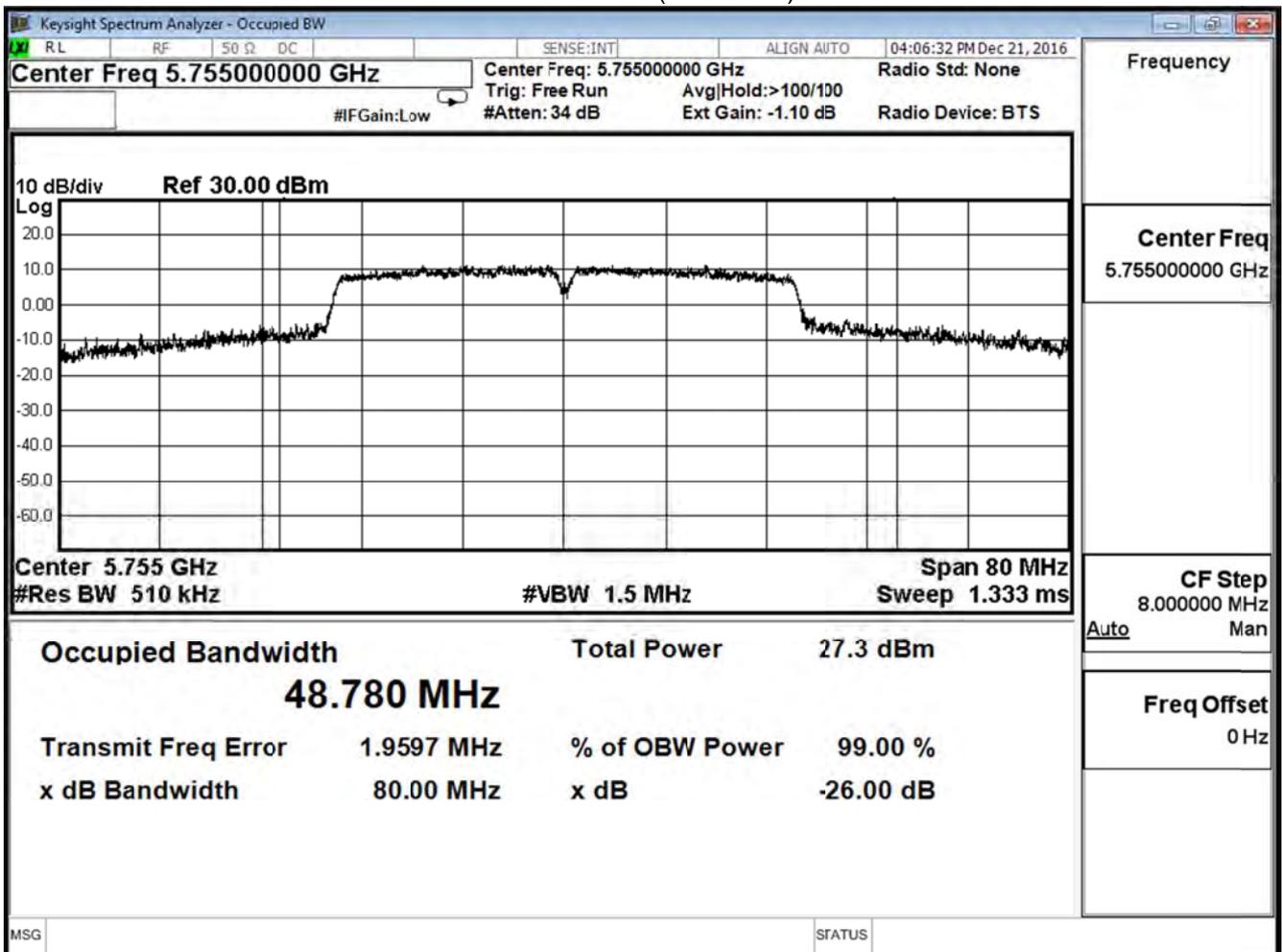
Channel 165 (5825MHz)



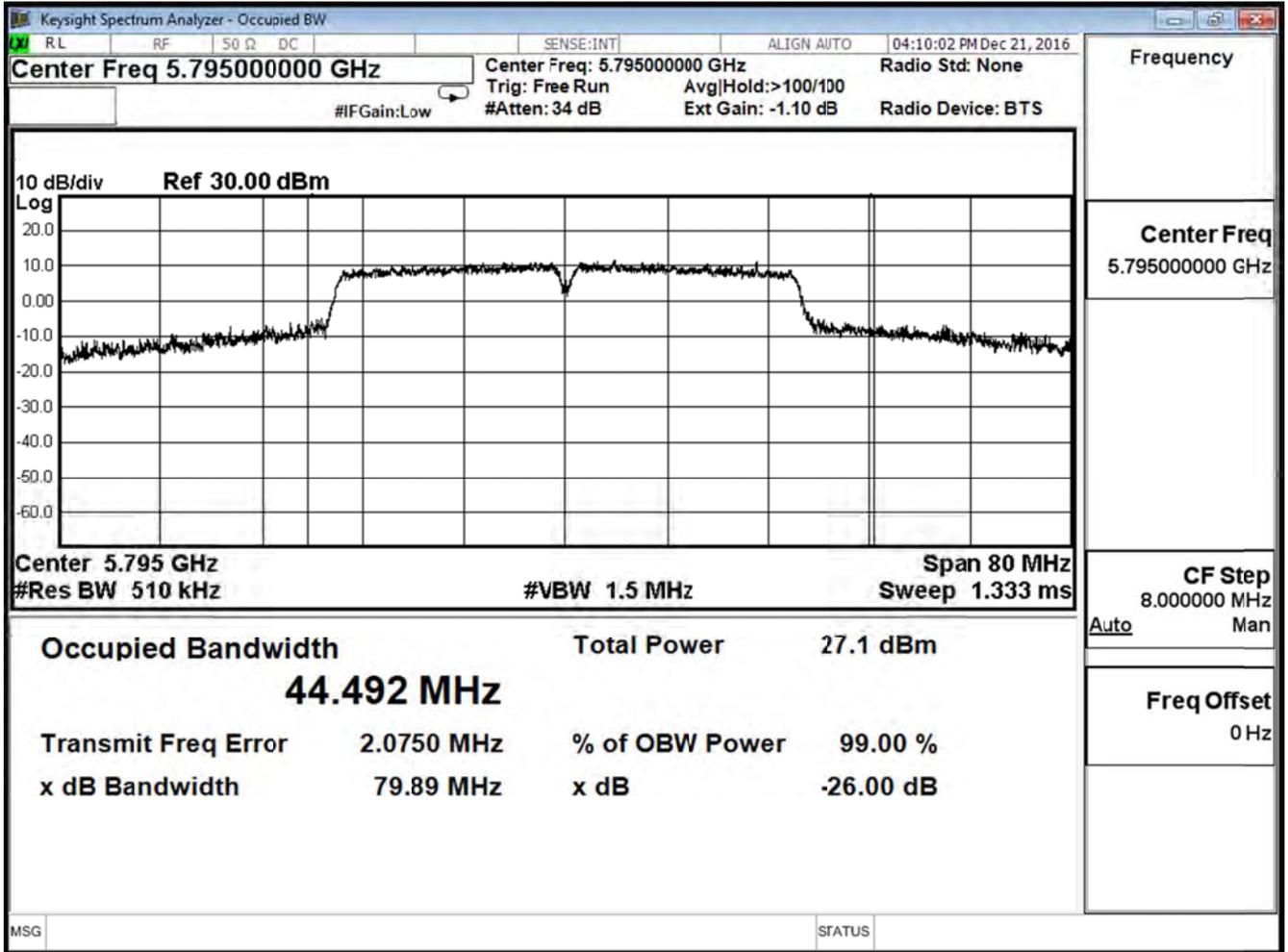
Product	Lyra mini		
Test Item	99% Bandwidth		
Test Mode	Mode 1: Tx-AD2037320910LF-CDD Mode		
Date of Test	2016/12/21	Test Site	SR10-H

IEEE 802.11n40 (ANT 0)			
Channel No.	Frequency (MHz)	Measure Value (MHz)	Limit (MHz)
151	5755	48.78	--
159	5795	44.49	--

Channel 151 (5755MHz)



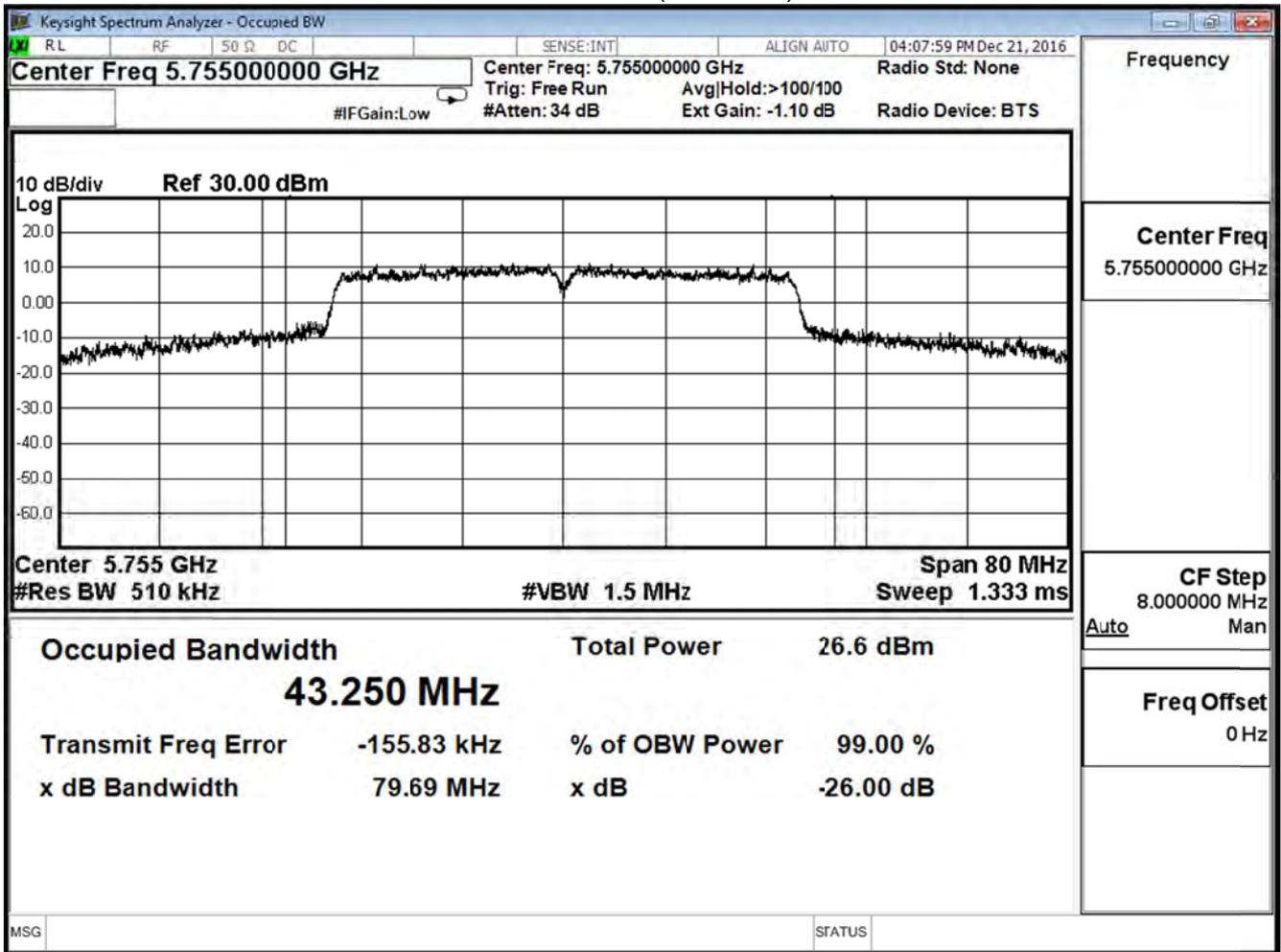
Channel 159 (5795MHz)



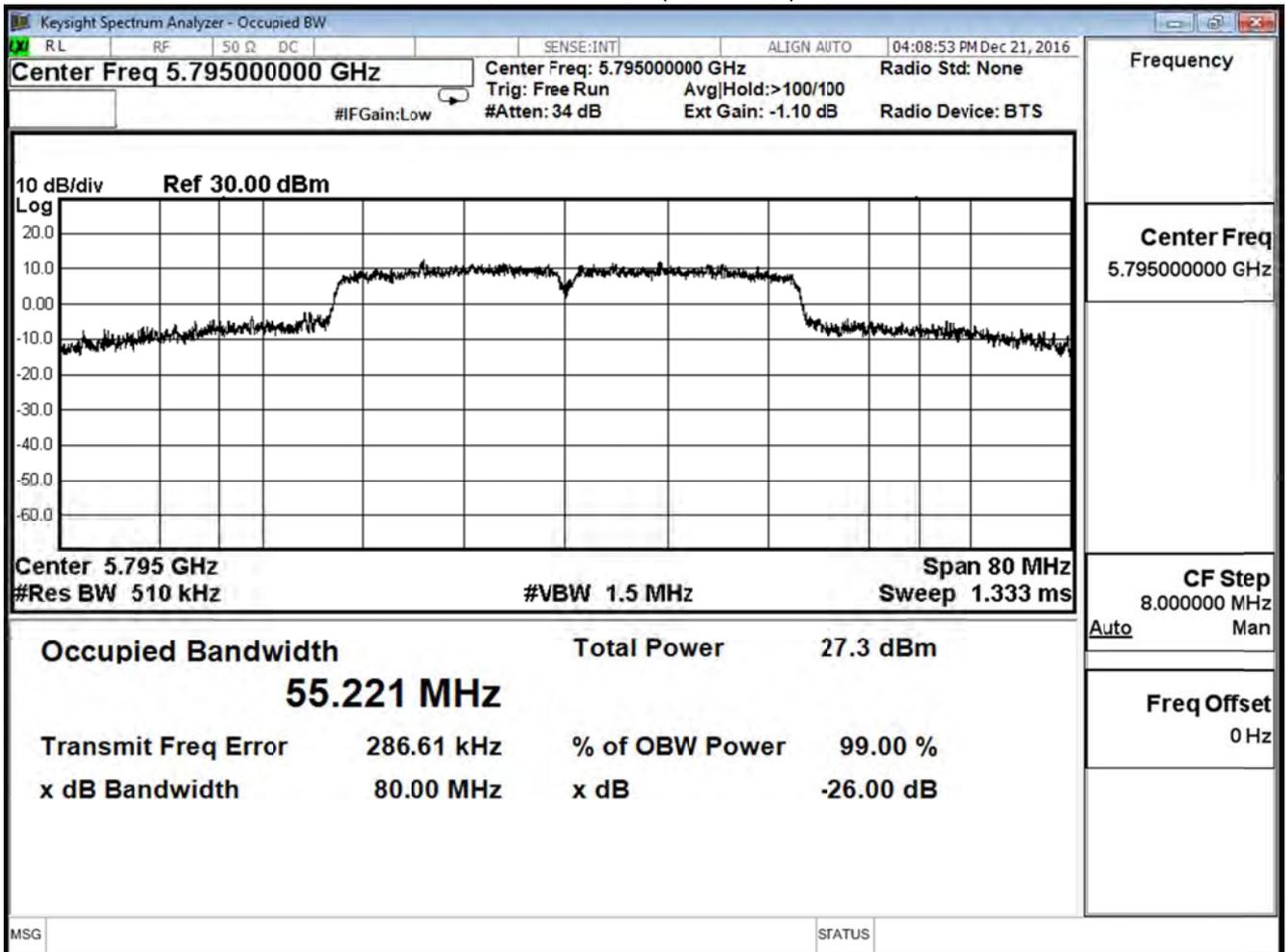
Product	Lyra mini		
Test Item	99% Bandwidth		
Test Mode	Mode 1: Tx-AD2037320910LF-CDD Mode		
Date of Test	2016/12/21	Test Site	SR10-H

IEEE 802.11n40 (ANT 1)			
Channel No.	Frequency (MHz)	Measure Value (MHz)	Limit (MHz)
151	5755	43.25	--
159	5795	55.22	--

Channel 151 (5755MHz)



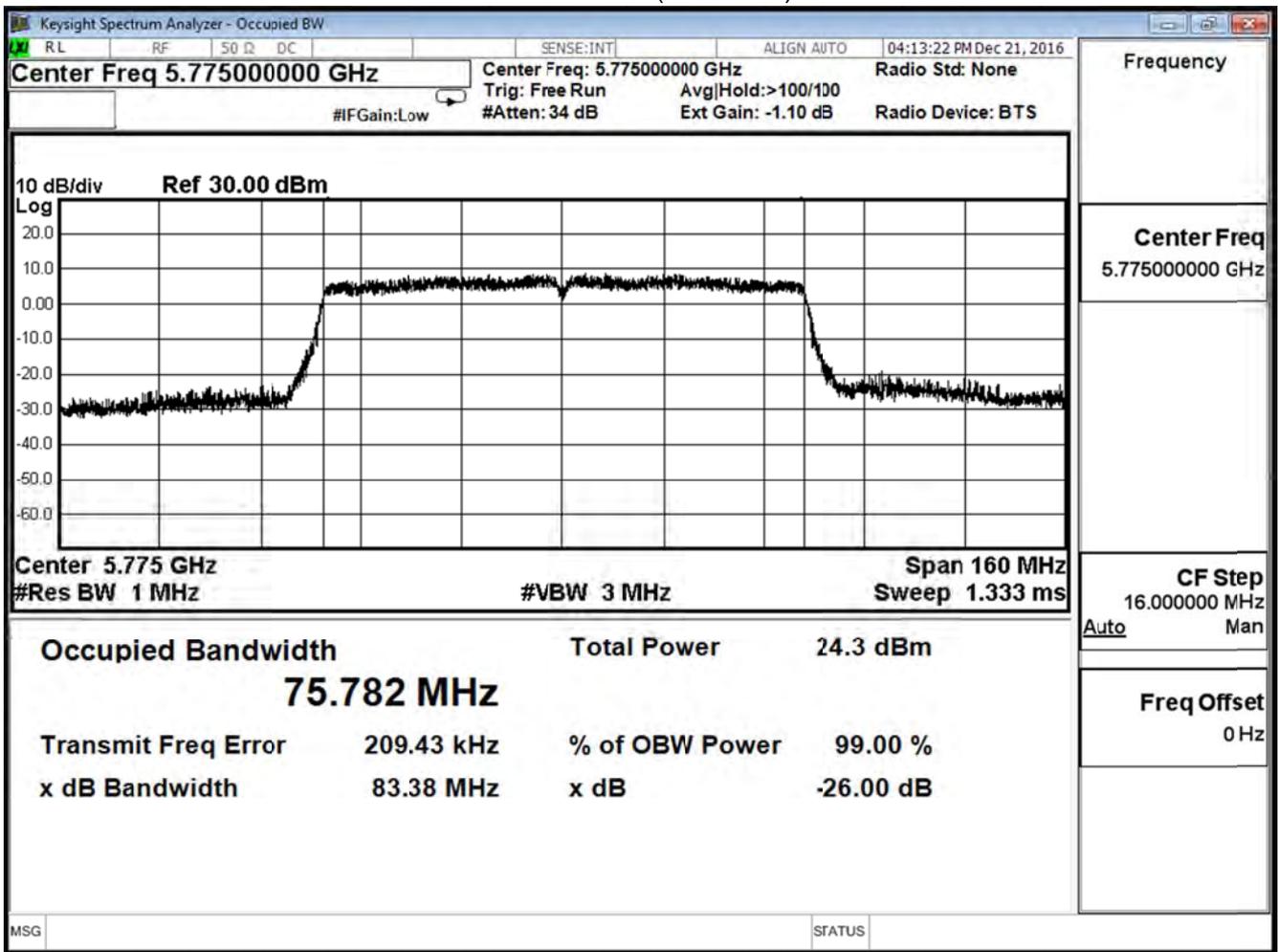
Channel 159 (5795MHz)



Product	Lyra mini		
Test Item	99% Bandwidth		
Test Mode	Mode 1: Tx-AD2037320910LF-CDD Mode		
Date of Test	2016/12/21	Test Site	SR10-H

IEEE 802.11ac80 (ANT 0)			
Channel No.	Frequency (MHz)	Measure Value (MHz)	Limit (MHz)
155	5775	75.78	--

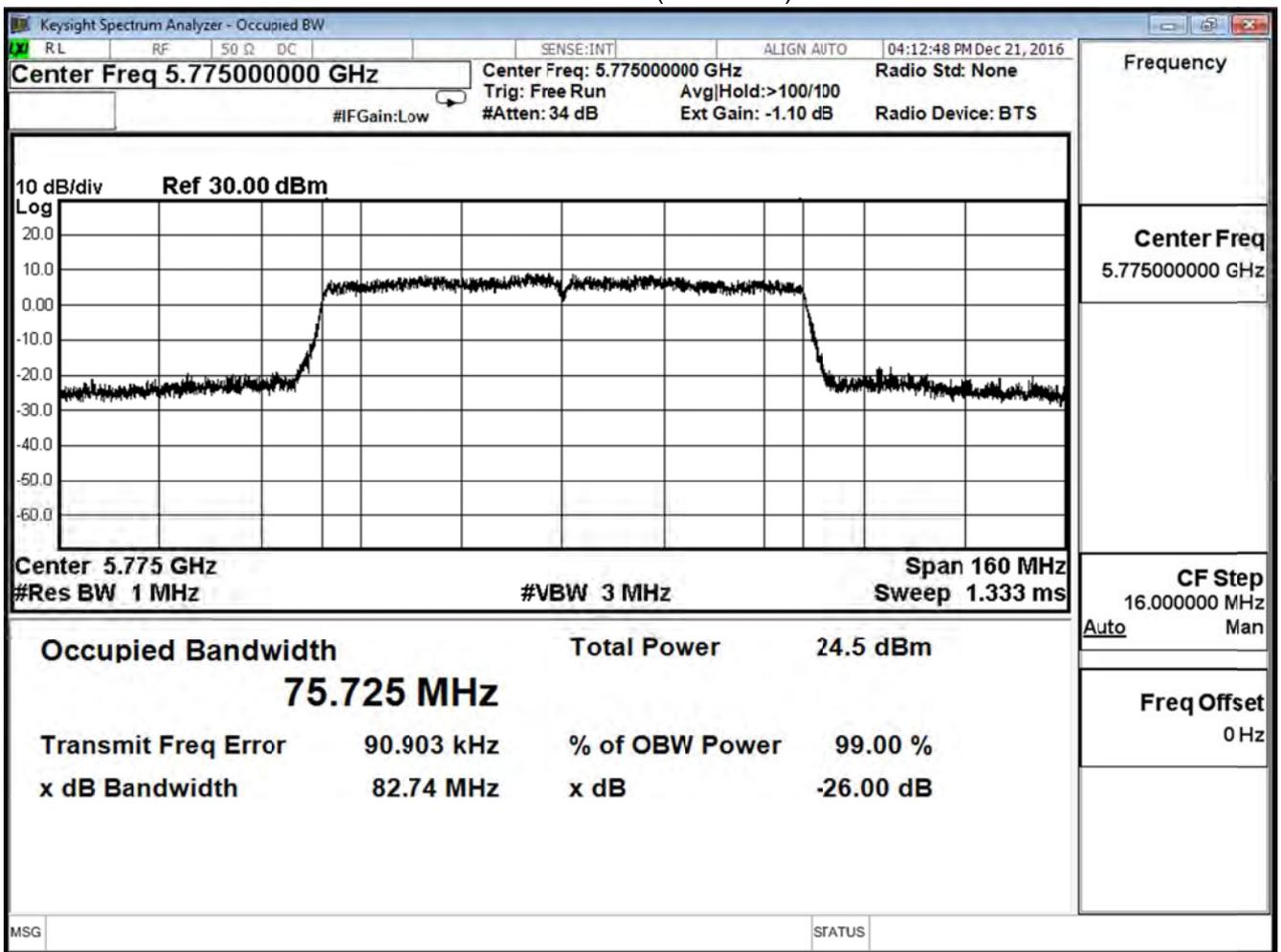
Channel 155 (5775MHz)



Product	Lyra mini		
Test Item	99% Bandwidth		
Test Mode	Mode 1: Tx-AD2037320910LF-CDD Mode		
Date of Test	2016/12/21	Test Site	SR10-H

IEEE 802.11ac80 (ANT 1)			
Channel No.	Frequency (MHz)	Measure Value (MHz)	Limit (MHz)
155	5775	75.73	--

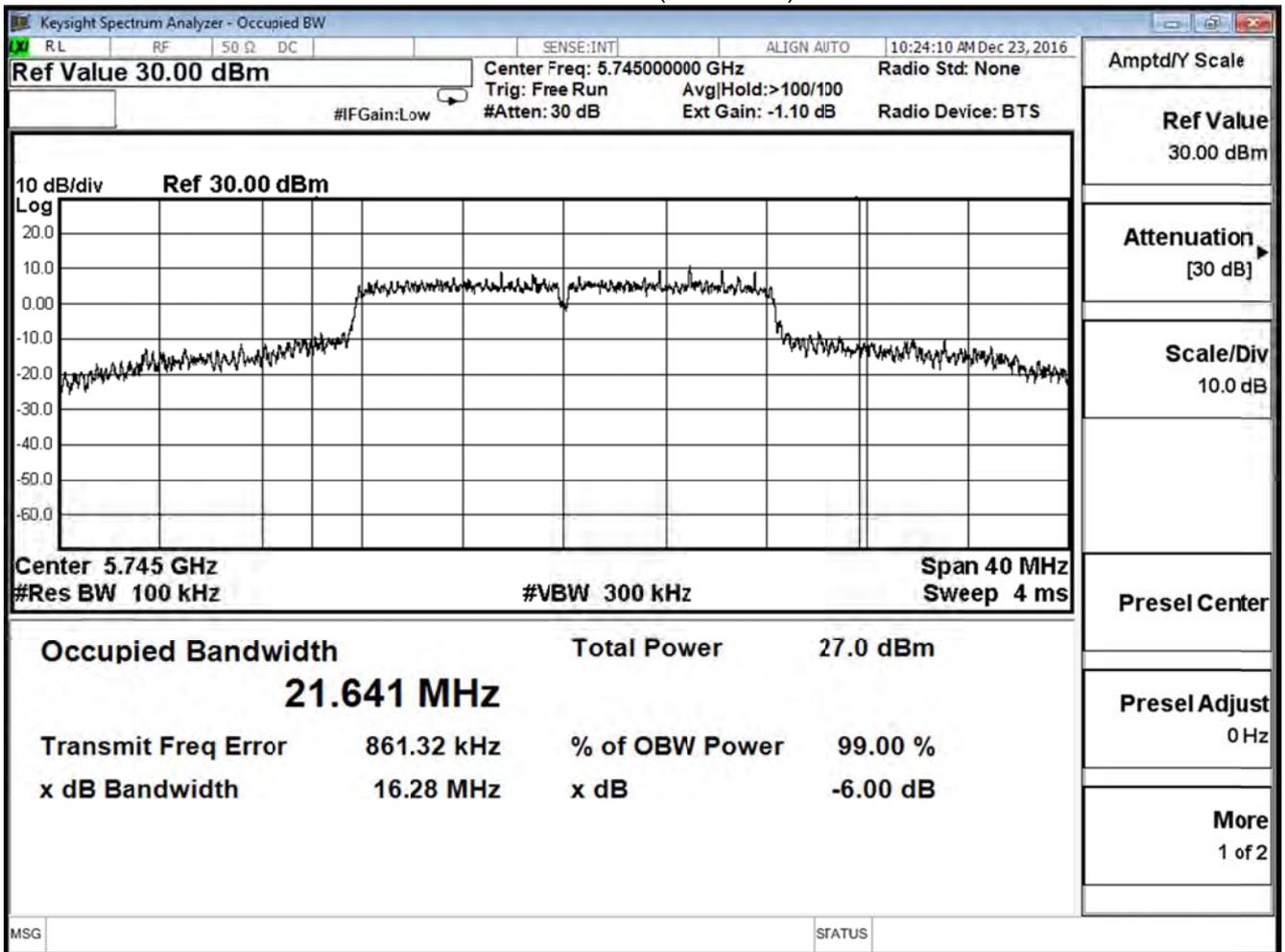
Channel 155 (5775MHz)



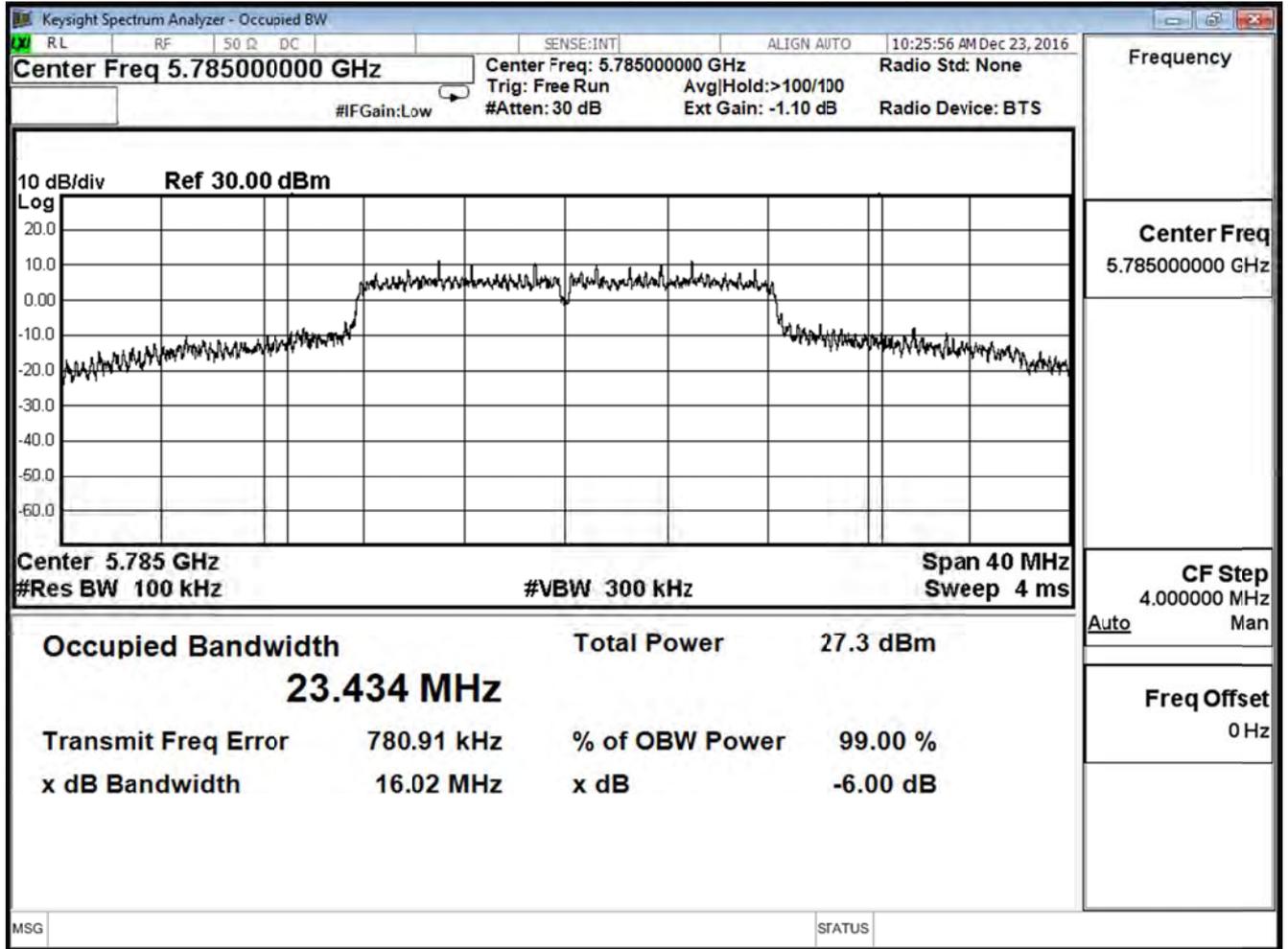
Product	Lyra mini		
Test Item	DTS Bandwidth		
Test Mode	Mode 1: Tx-AD2037320910LF-CDD Mode		
Date of Test	2016/12/23	Test Site	SR10-H

IEEE 802.11a (ANT 0)				
Channel No.	Frequency (MHz)	Measure Level (MHz)	Limit (MHz)	Result
149	5745	16.28	$\geq 0.5$	Pass
157	5785	16.02	$\geq 0.5$	Pass
165	5825	16.32	$\geq 0.5$	Pass

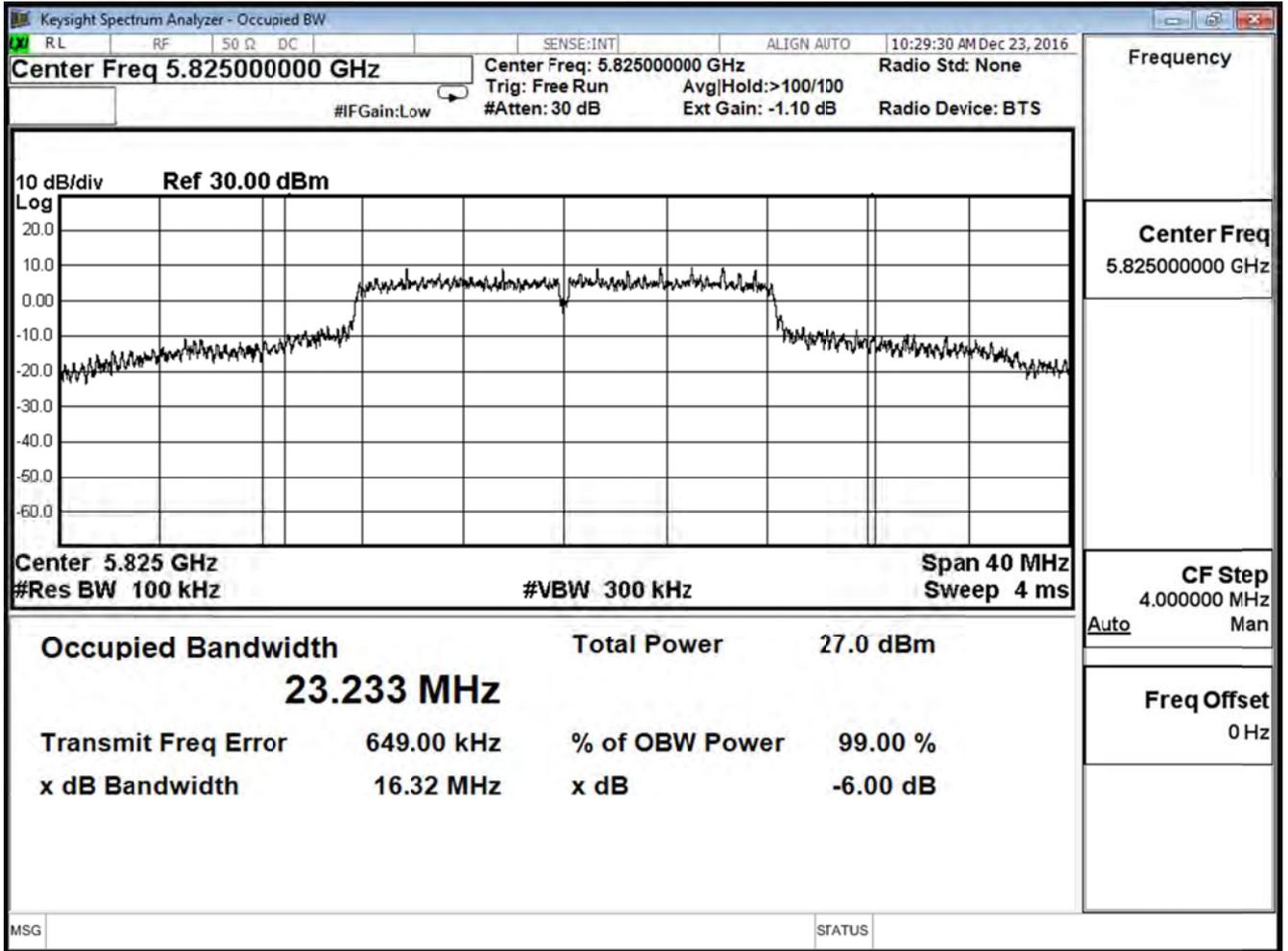
Channel 149 (5745MHz)



Channel 157 (5785MHz)



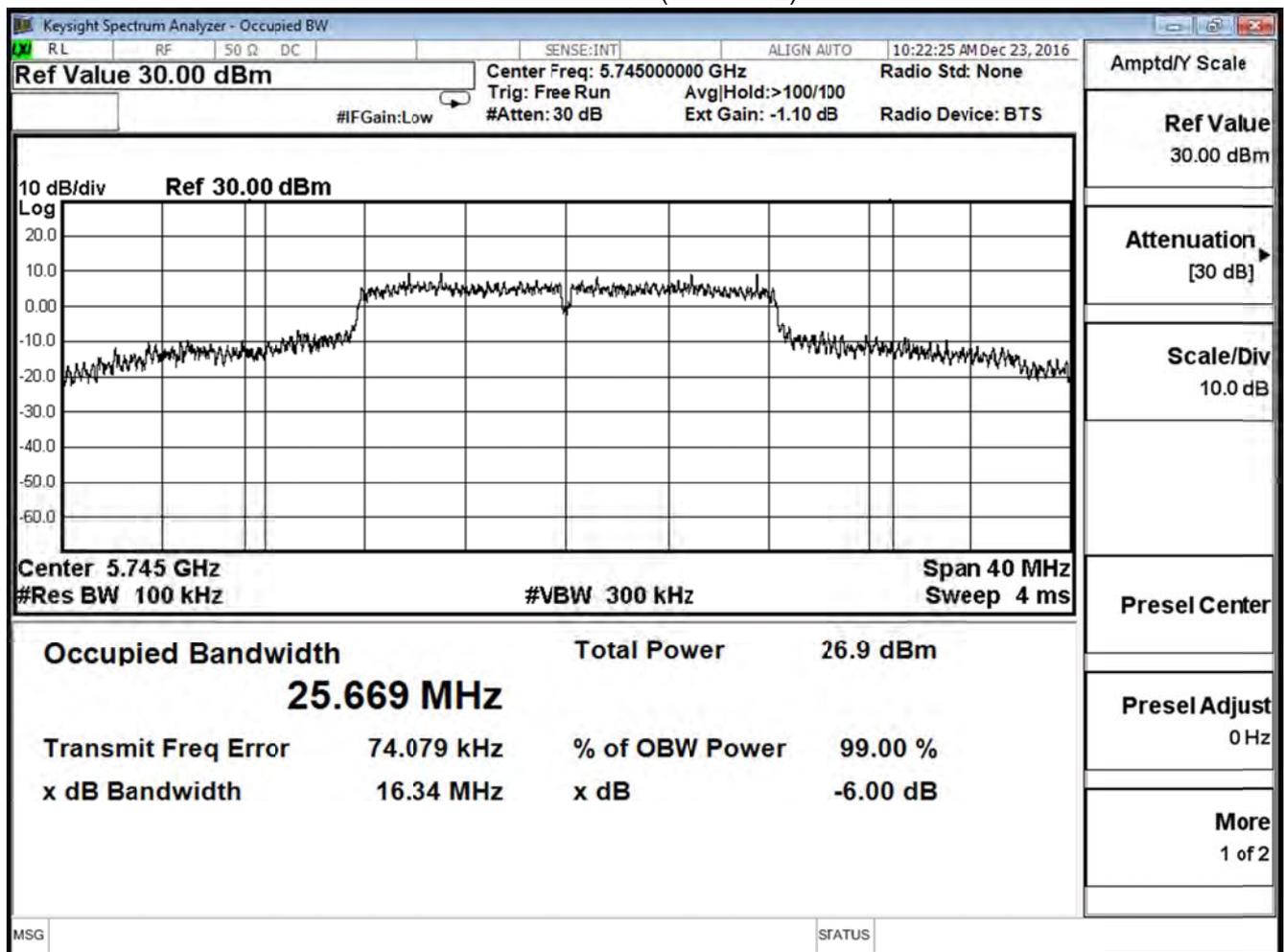
Channel 165 (5825MHz)



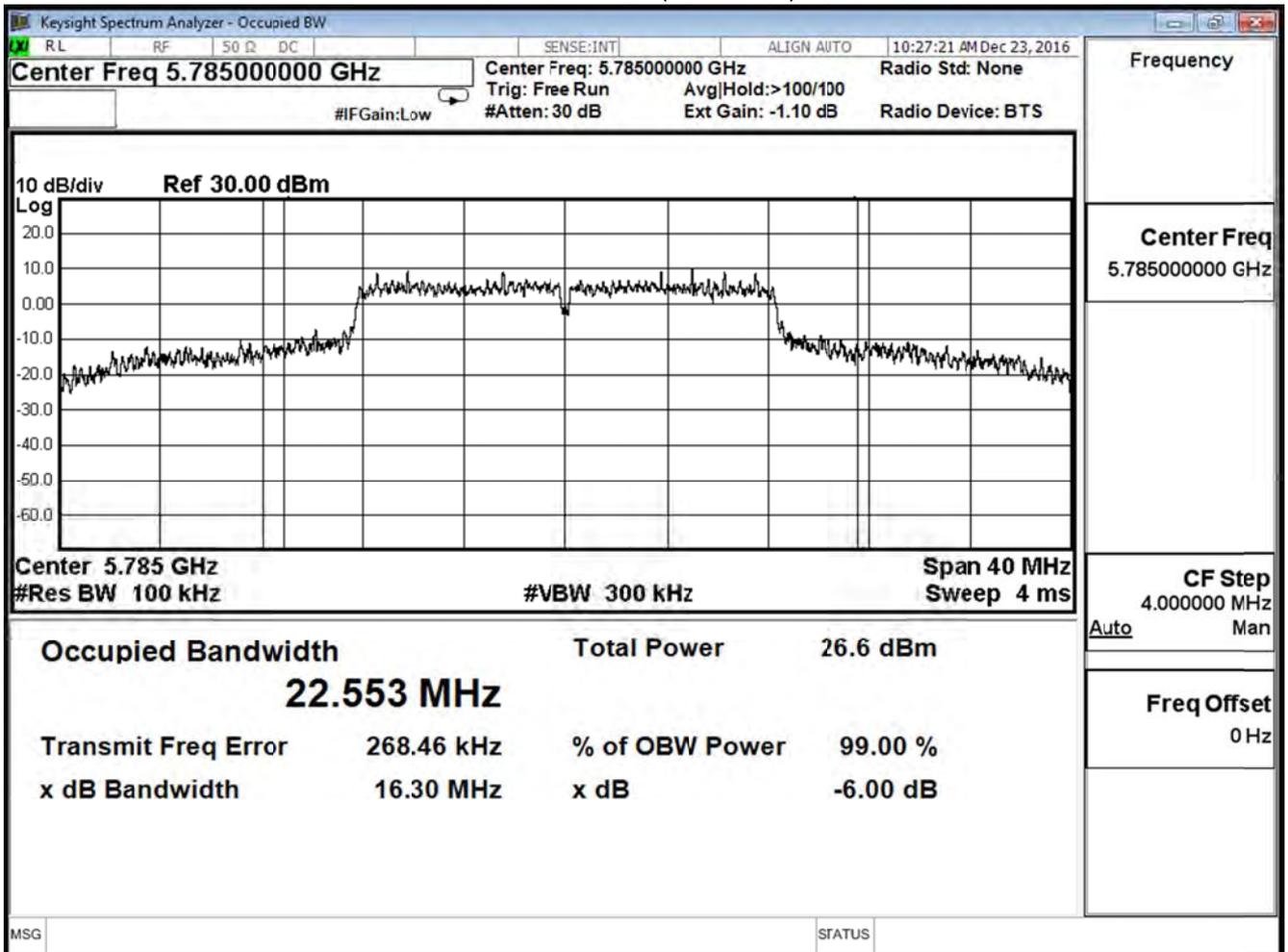
Product	Lyra mini		
Test Item	DTS Bandwidth		
Test Mode	Mode 1: Tx-AD2037320910LF-CDD Mode		
Date of Test	2016/12/23	Test Site	SR10-H

IEEE 802.11a (ANT 1)				
Channel No.	Frequency (MHz)	Measure Level (MHz)	Limit (MHz)	Result
149	5745	16.34	$\geq 0.5$	Pass
157	5785	16.30	$\geq 0.5$	Pass
165	5825	16.32	$\geq 0.5$	Pass

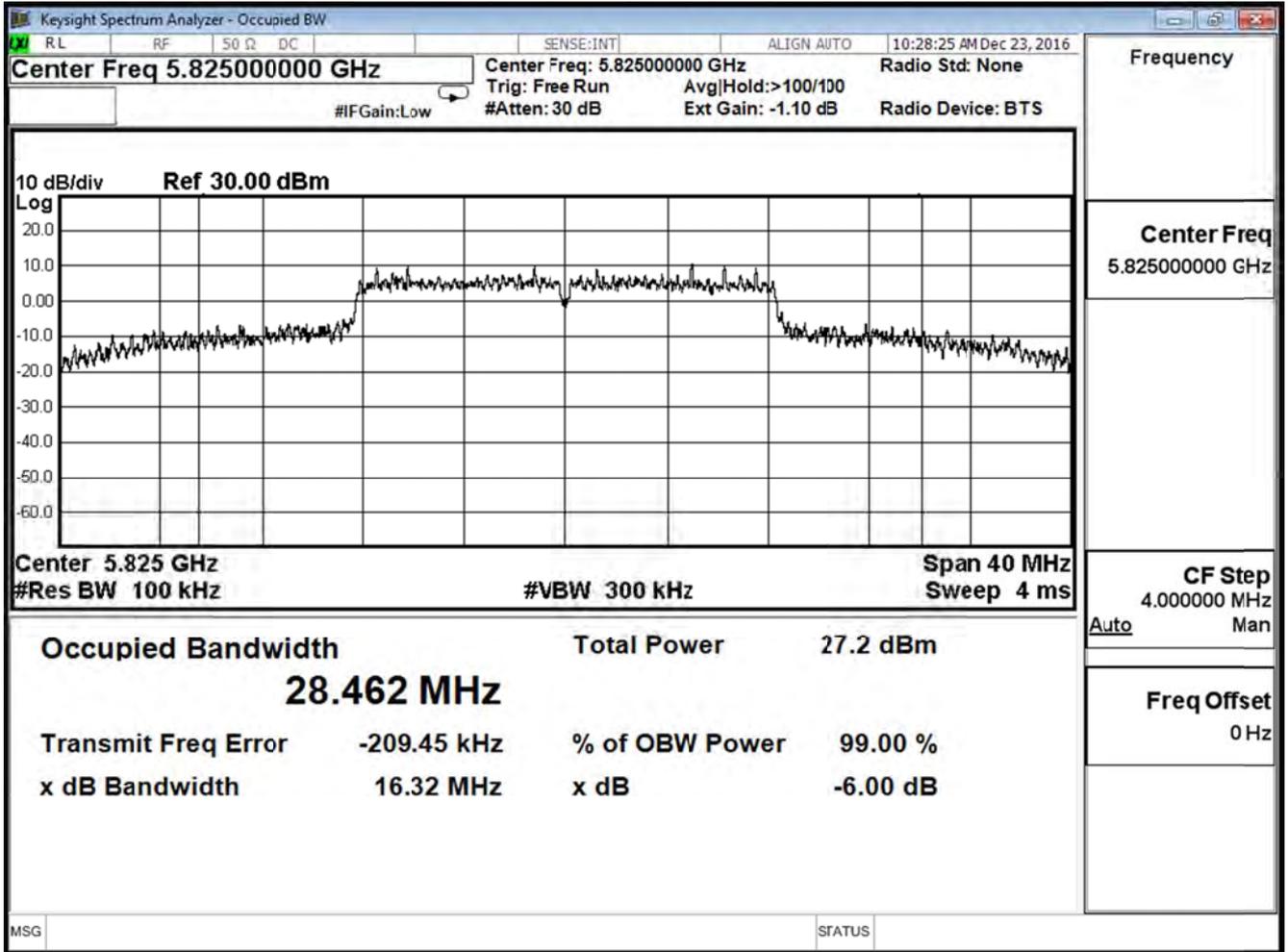
Channel 149 (5745MHz)



Channel 157 (5785MHz)



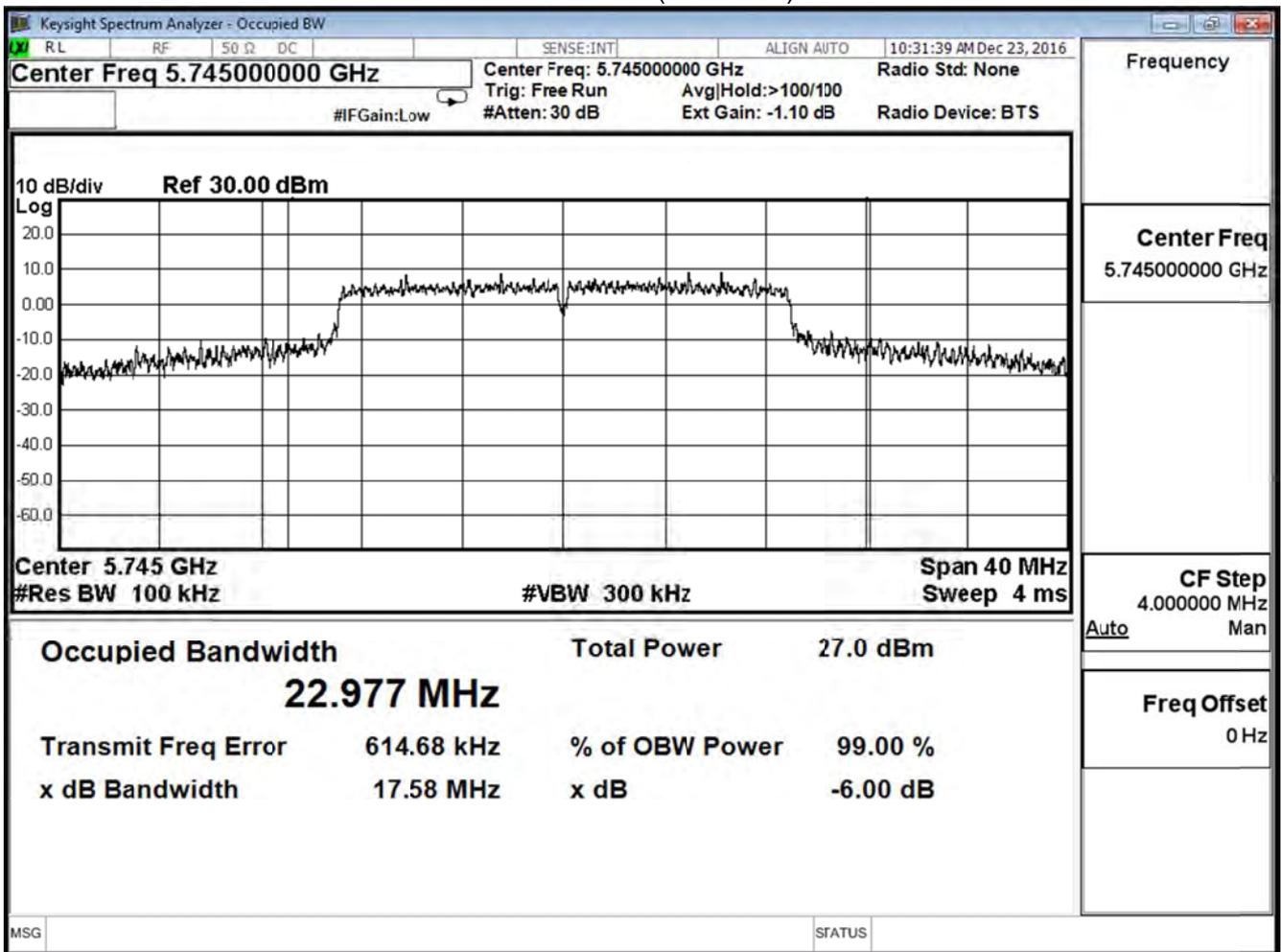
Channel 165 (5825MHz)



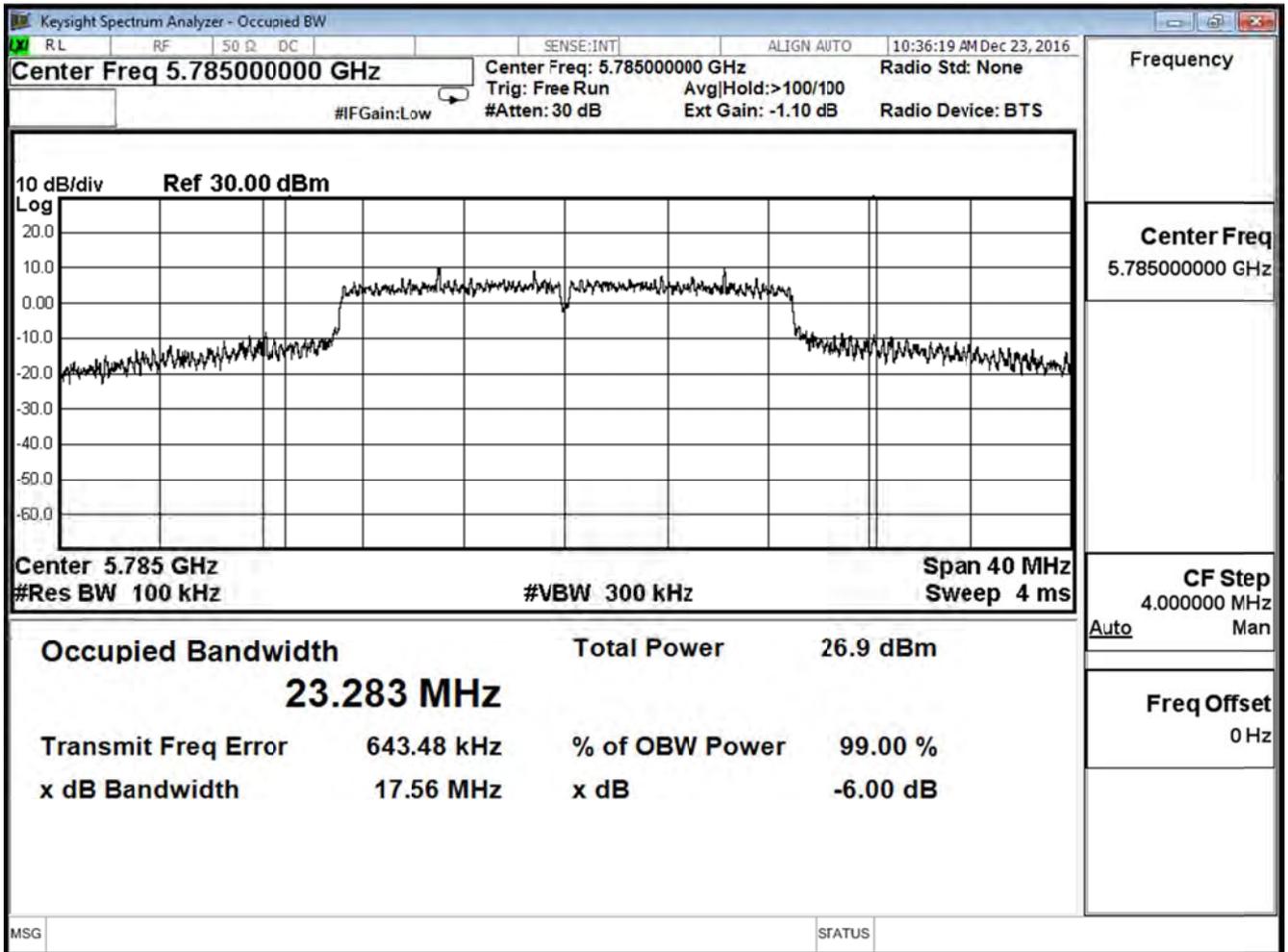
Product	Lyra mini		
Test Item	DTS Bandwidth		
Test Mode	Mode 1: Tx-AD2037320910LF-CDD Mode		
Date of Test	2016/12/23	Test Site	SR10-H

IEEE 802.11n20 (ANT 0)				
Channel No.	Frequency (MHz)	Measure Level (MHz)	Limit (MHz)	Result
149	5745	17.58	$\geq 0.5$	Pass
157	5785	17.56	$\geq 0.5$	Pass
165	5825	17.58	$\geq 0.5$	Pass

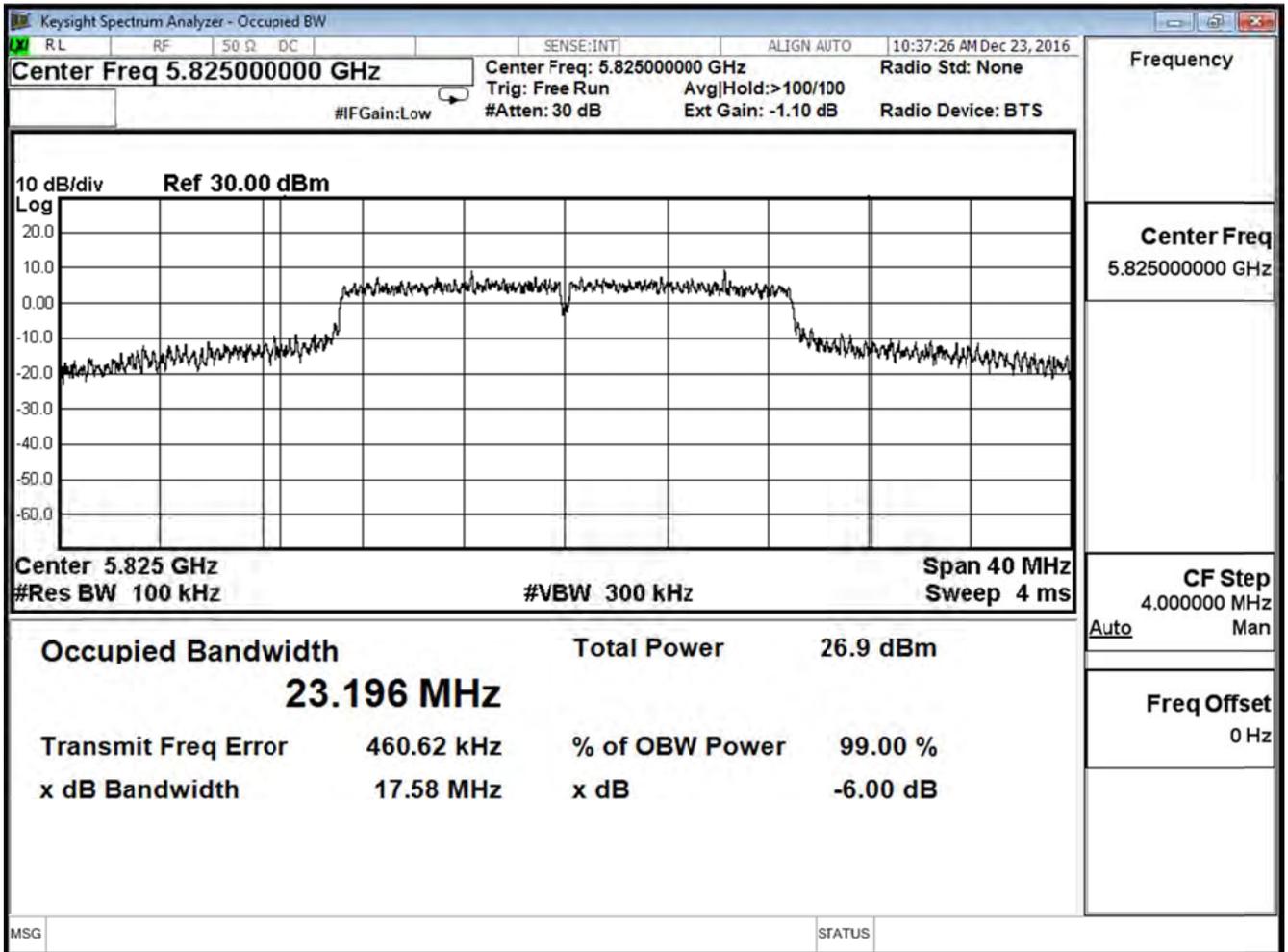
Channel 149 (5745MHz)



Channel 157 (5785MHz)



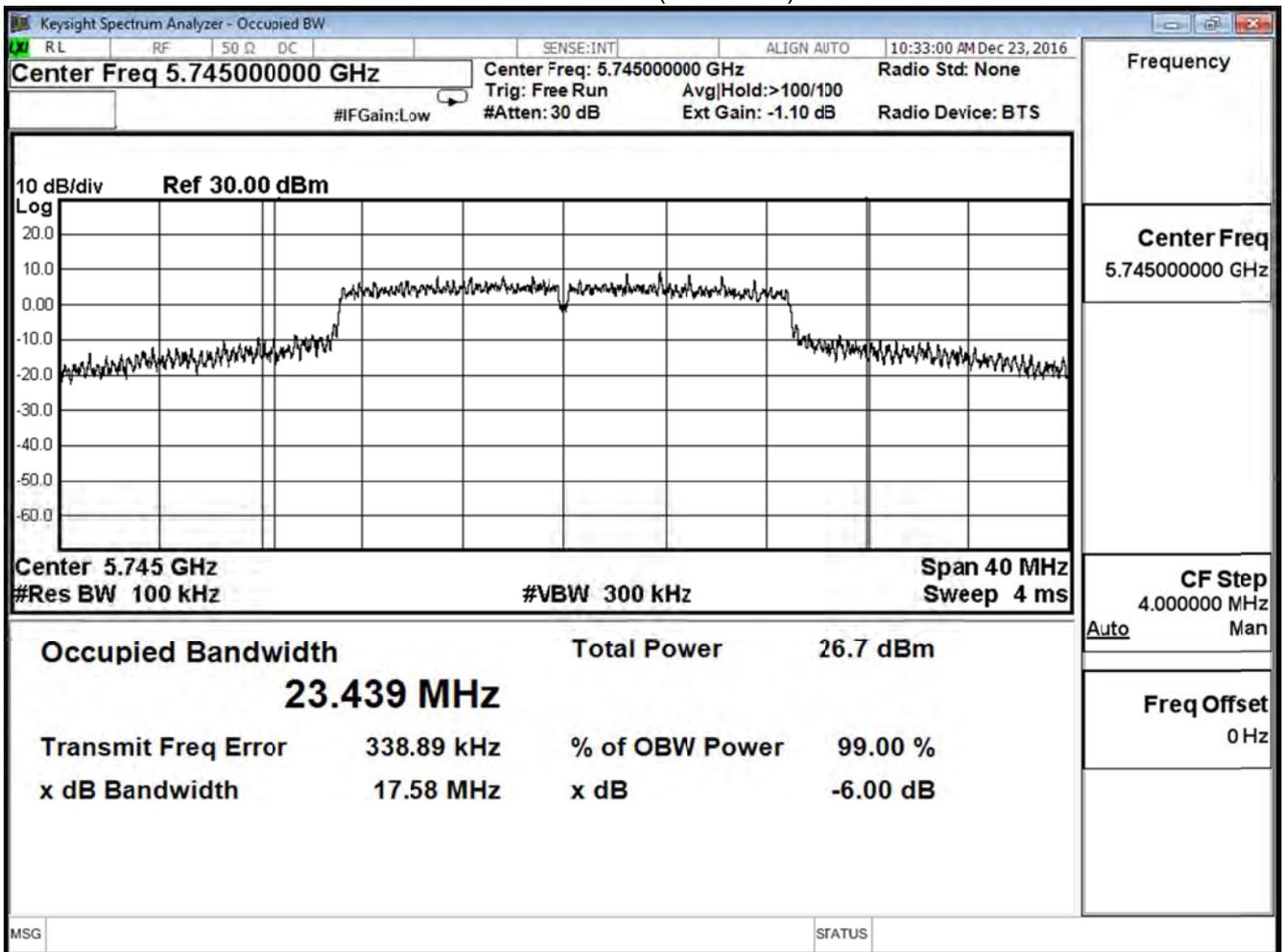
Channel 165 (5825MHz)



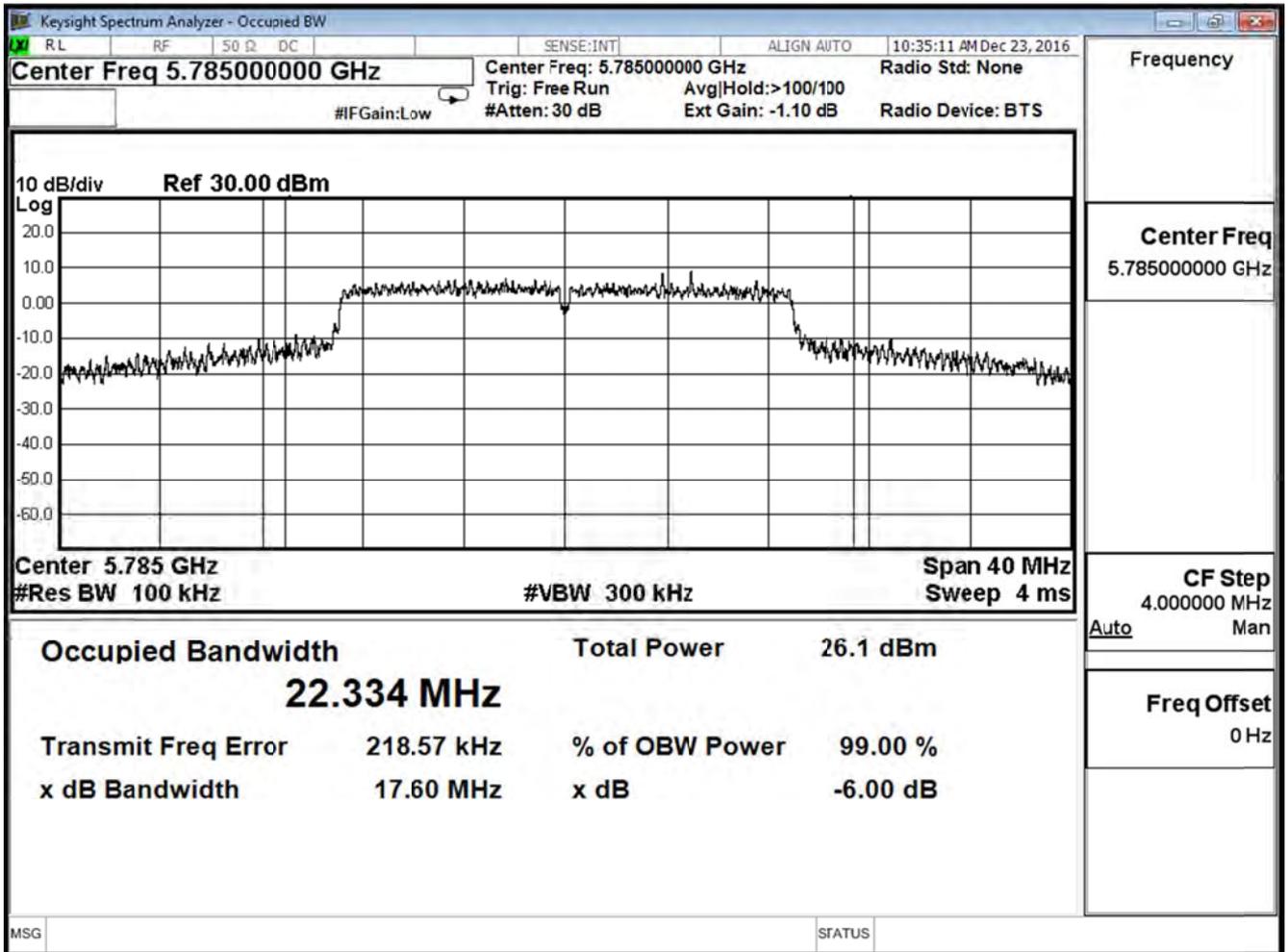
Product	Lyra mini		
Test Item	DTS Bandwidth		
Test Mode	Mode 1: Tx-AD2037320910LF-CDD Mode		
Date of Test	2016/12/23	Test Site	SR10-H

IEEE 802.11n20 (ANT 1)				
Channel No.	Frequency (MHz)	Measure Level (MHz)	Limit (MHz)	Result
149	5745	17.58	$\geq 0.5$	Pass
157	5785	17.60	$\geq 0.5$	Pass
165	5825	17.59	$\geq 0.5$	Pass

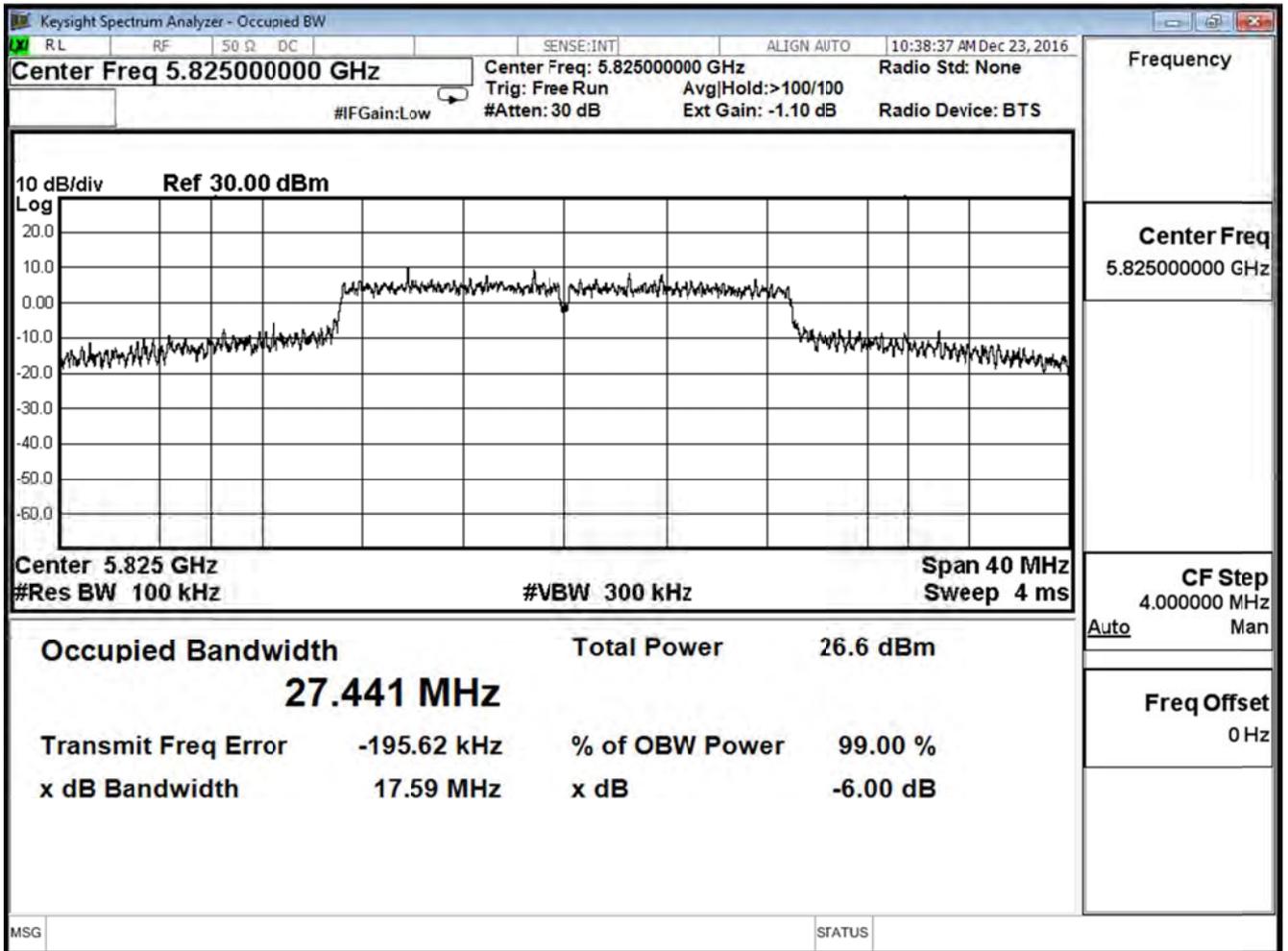
Channel 149 (5745MHz)



Channel 157 (5785MHz)



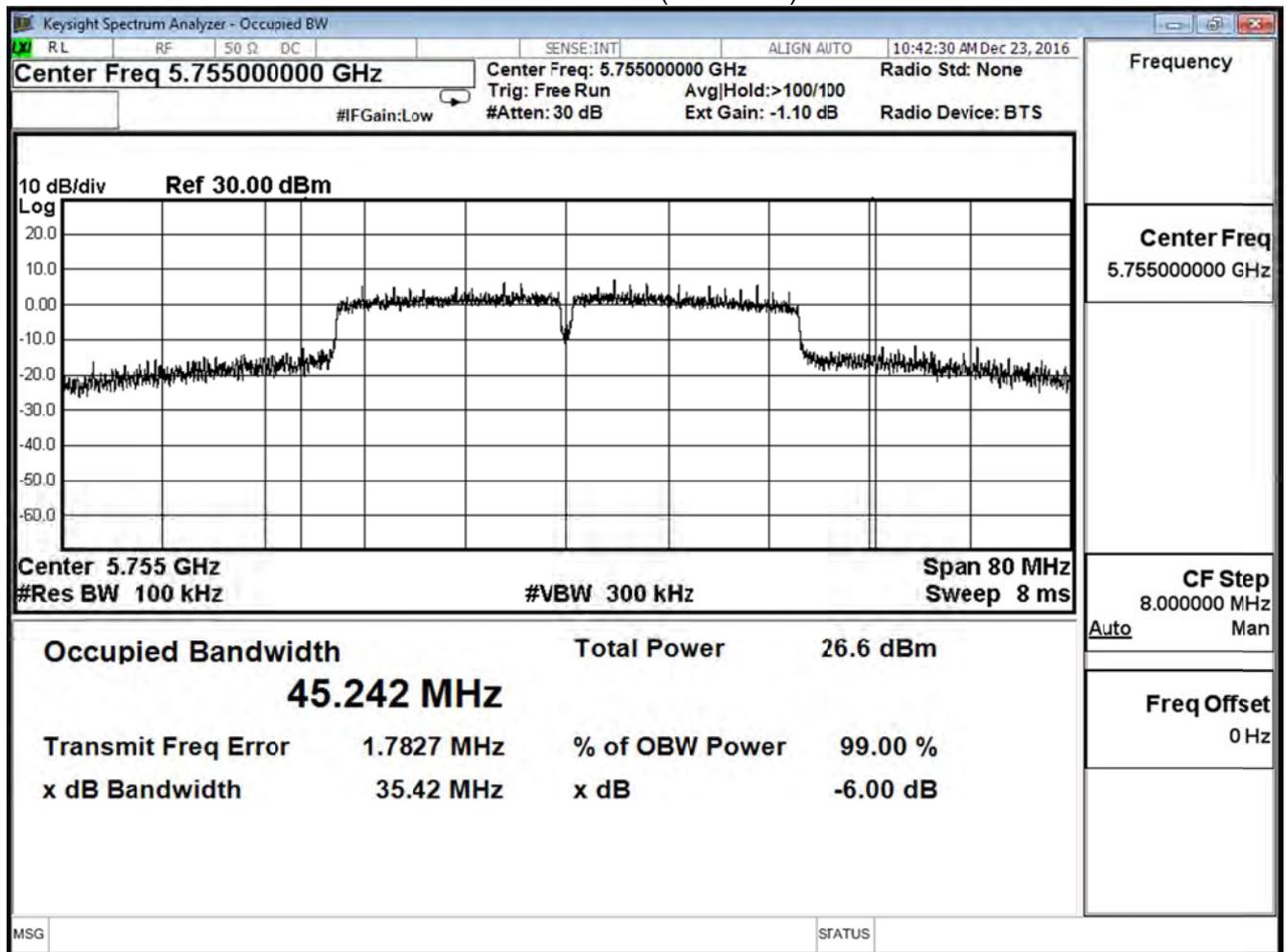
Channel 165 (5825MHz)



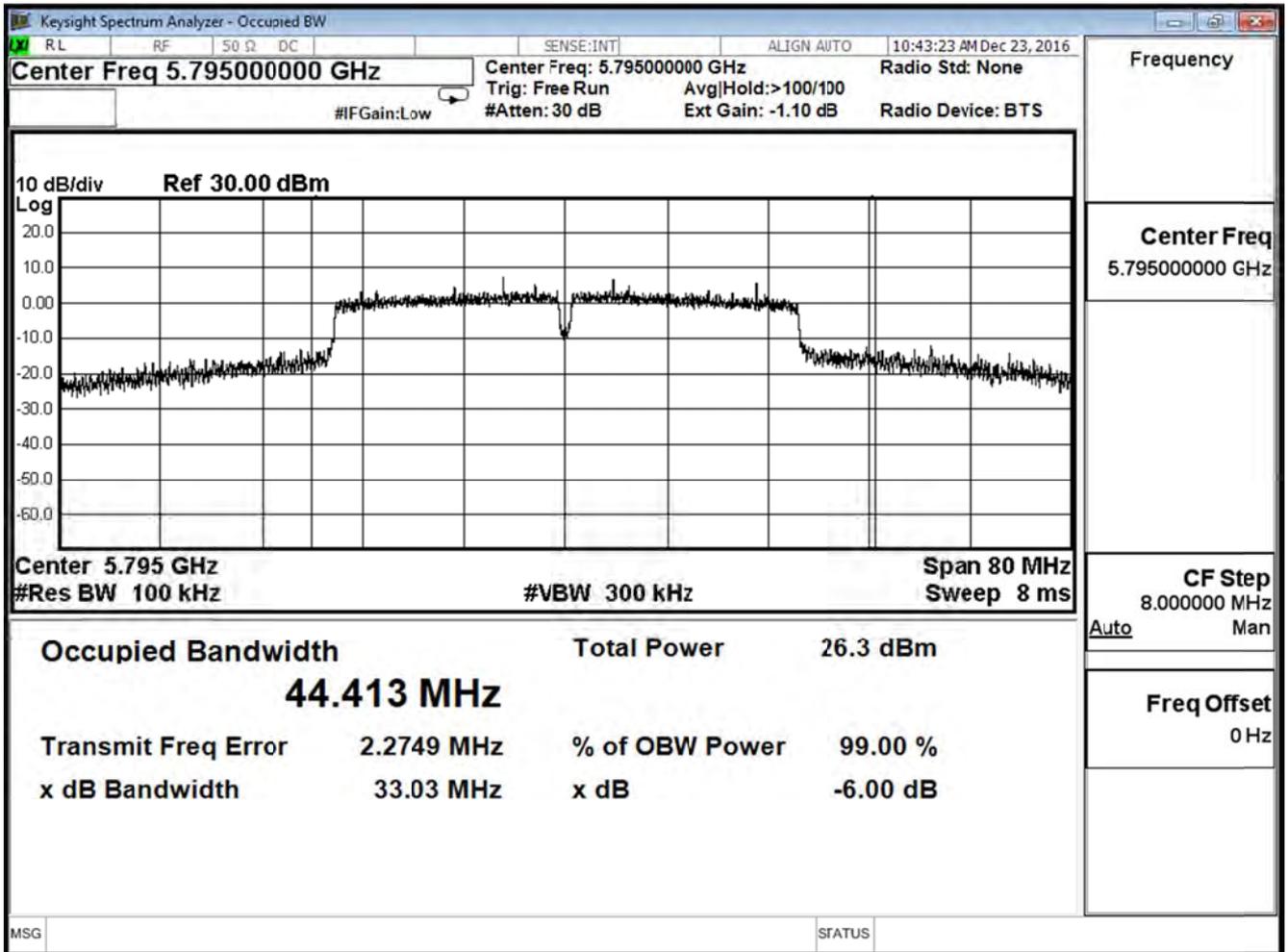
Product	Lyra mini		
Test Item	DTS Bandwidth		
Test Mode	Mode 1: Tx-AD2037320910LF-CDD Mode		
Date of Test	2016/12/23	Test Site	SR10-H

IEEE 802.11n40 (ANT 0)				
Channel No.	Frequency (MHz)	Measure Level (MHz)	Limit (MHz)	Result
151	5755	35.42	$\geq 0.5$	Pass
159	5795	33.03	$\geq 0.5$	Pass

Channel 151 (5755MHz)



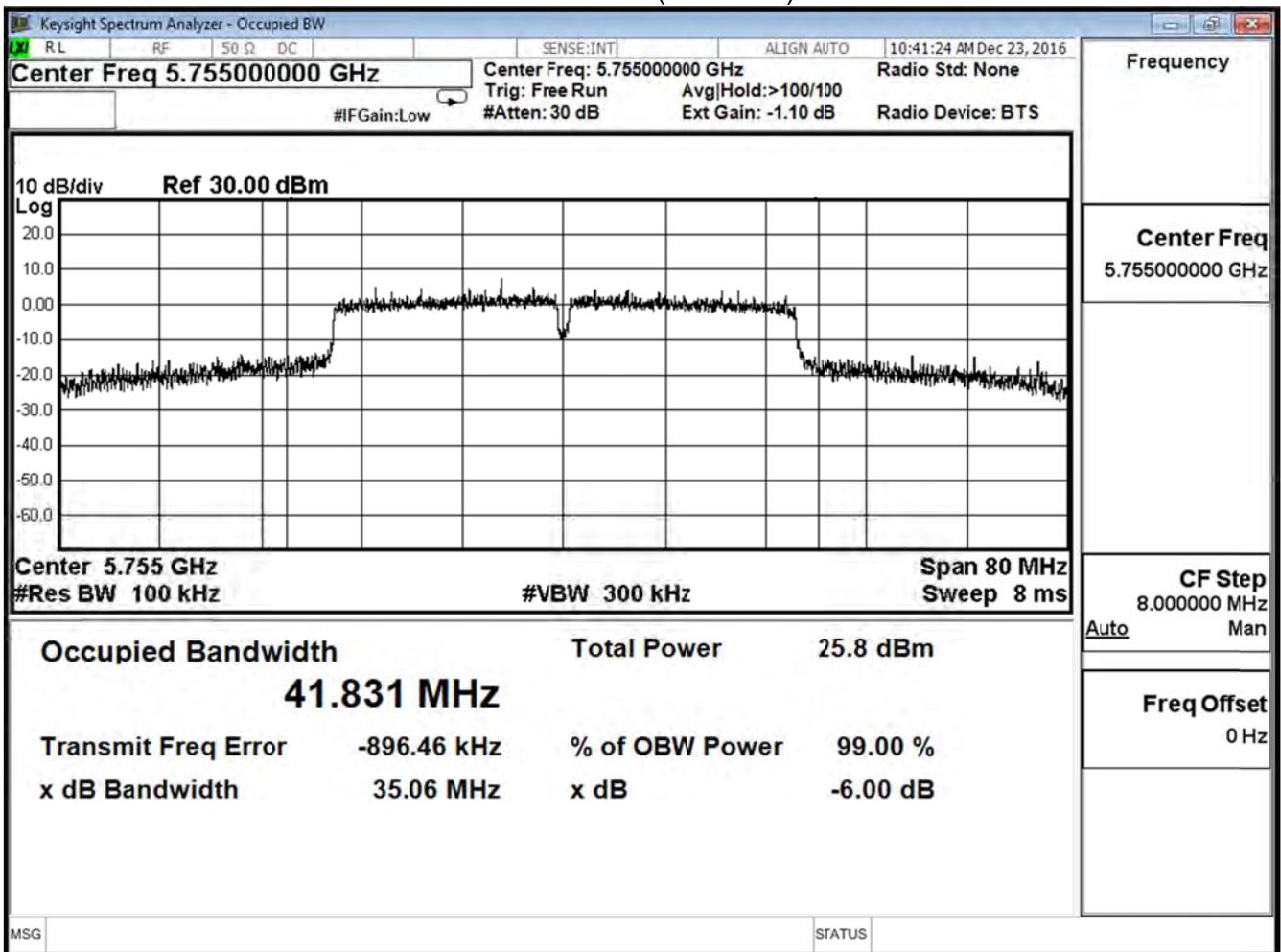
Channel 159 (5795MHz)



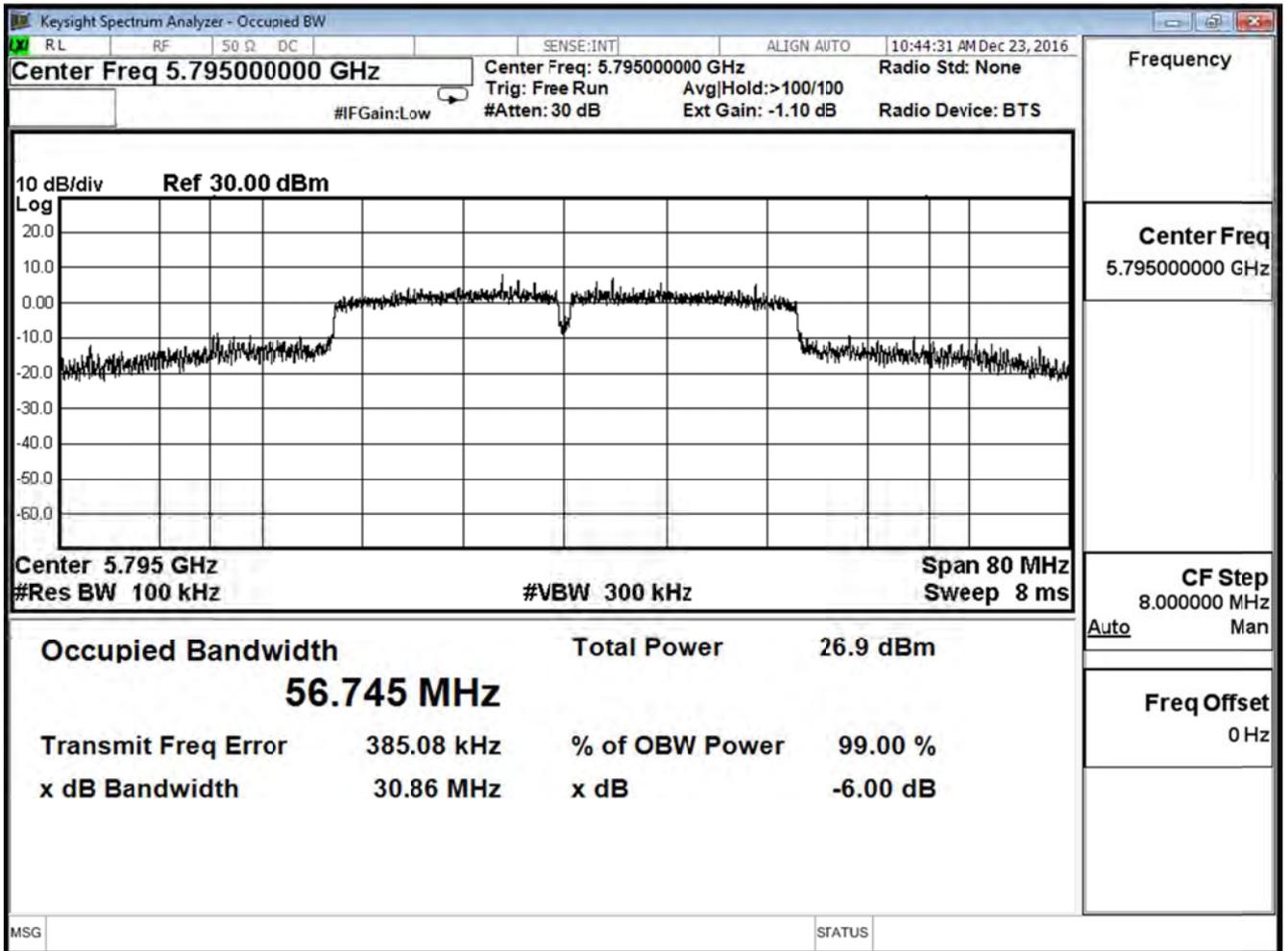
Product	Lyra mini		
Test Item	DTS Bandwidth		
Test Mode	Mode 1: Tx-AD2037320910LF-CDD Mode		
Date of Test	2016/12/23	Test Site	SR10-H

IEEE 802.11n40 (ANT 1)				
Channel No.	Frequency (MHz)	Measure Level (MHz)	Limit (MHz)	Result
151	5755	35.06	$\geq 0.5$	Pass
159	5795	30.86	$\geq 0.5$	Pass

Channel 151 (5755MHz)



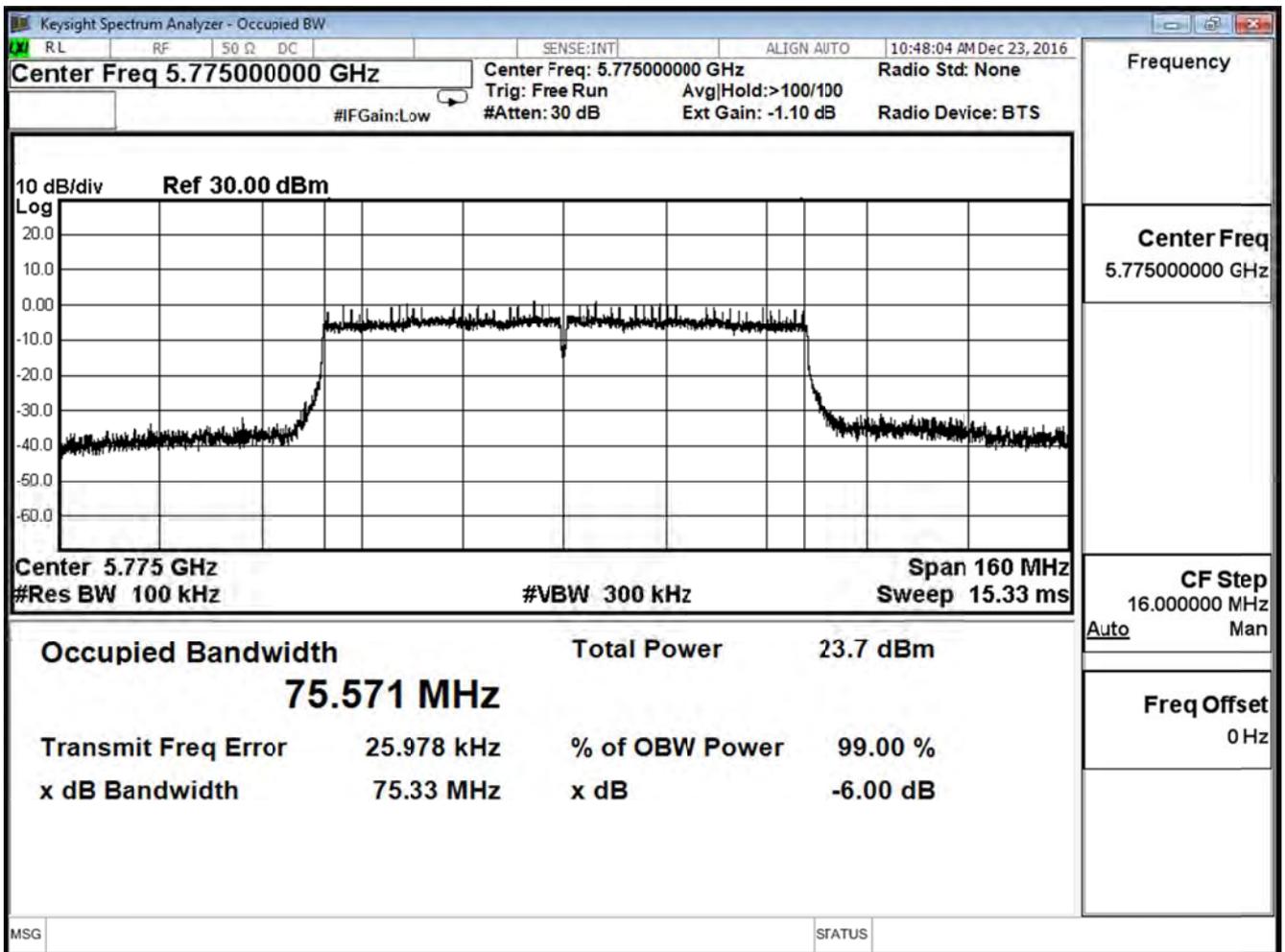
Channel 159 (5795MHz)



Product	Lyra mini		
Test Item	DTS Bandwidth		
Test Mode	Mode 1: Tx-AD2037320910LF-CDD Mode		
Date of Test	2016/12/23	Test Site	SR10-H

IEEE 802.11ac80 (ANT 0)				
Channel No.	Frequency (MHz)	Measure Level (MHz)	Limit (MHz)	Result
155	5775	75.33	≥ 0.5	Pass

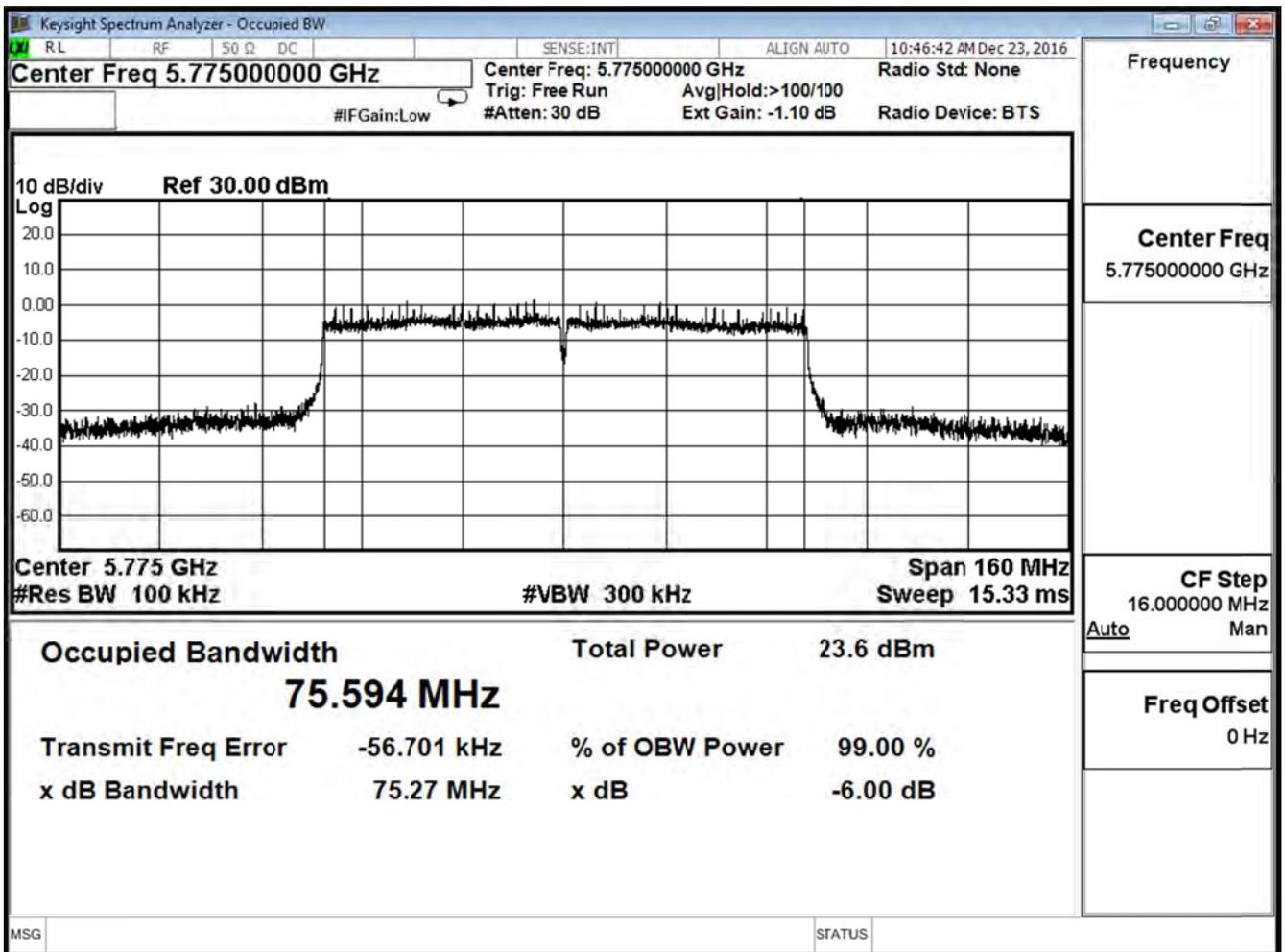
Channel 155 (5775MHz)



Product	Lyra mini		
Test Item	DTS Bandwidth		
Test Mode	Mode 1: Tx-AD2037320910LF-CDD Mode		
Date of Test	2016/12/23	Test Site	SR10-H

IEEE 802.11ac80 (ANT 1)				
Channel No.	Frequency (MHz)	Measure Level (MHz)	Limit (MHz)	Result
155	5775	75.27	≥ 0.5	Pass

Channel 155 (5775MHz)



#### 4. Peak Transmit power

##### 4.1. Test Equipment

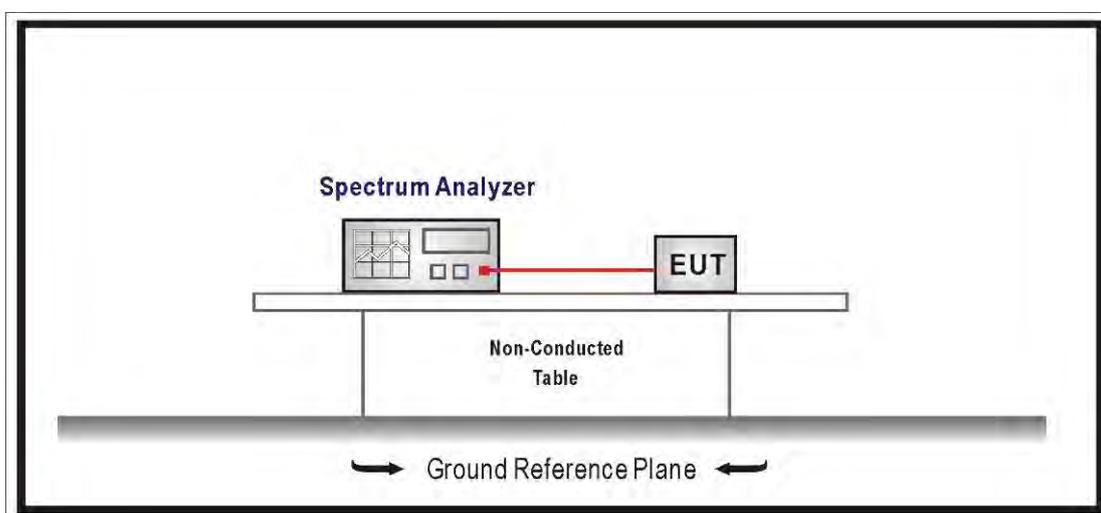
The following test equipments are used during the radiated emission tests:

Peak Transmit Output / SR10-H

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
Signal & Spectrum Analyzer	R&S	FSV40	101049	2018/01/05

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

##### 4.2. Test Setup



### 4.3. Limits

1. For the band 5.15-5.25 GHz, the peak transmit power over the frequency band of operation shall not exceed the lesser of 1W. If transmitting antenna of directional gain greater than 6 dBi are used, the peak transmit power shall be reduced by the amount in dB that directional gain of the antenna exceeds 6 dBi.
2. For client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. The maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.
3. For the band 5.25-5.35 GHz, the peak transmit power over the frequency band of operation shall not exceed the lesser of 250 mW. If transmitting antenna of directional gain greater than 6 dBi are used, the peak transmit power shall be reduced by the amount in dB that directional gain of the antenna exceeds 6 dBi.
4. For the band 5.725-5.850 GHz, the peak transmit power over the frequency band of operation shall not exceed the lesser of 1W. If transmitting antenna of directional gain greater than 6 dBi are used, the peak transmit power shall be reduced by the amount in dB that directional gain of the antenna exceeds 6 dBi.

### 4.4. Test Procedure

The EUT was setup to ANSI C63.10: 2013; tested to U-NII test procedure of 789033 D02 V01r03 and 662911 D01 v02r01 for compliance to FCC 47CFR Subpart E requirements.

The Method SA-1 of the Maximum conducted output power was used.

Set RBW=1MHz, VBW=3MHz with RMS detector and trace average 100 traces in power averaging mode. Set span to encompass the entire emission bandwidth (EBW) of the signal.

### 4.5. Uncertainty

The measurement uncertainty is defined as  $\pm 1.27$  dB

#### 4.6. Test Result

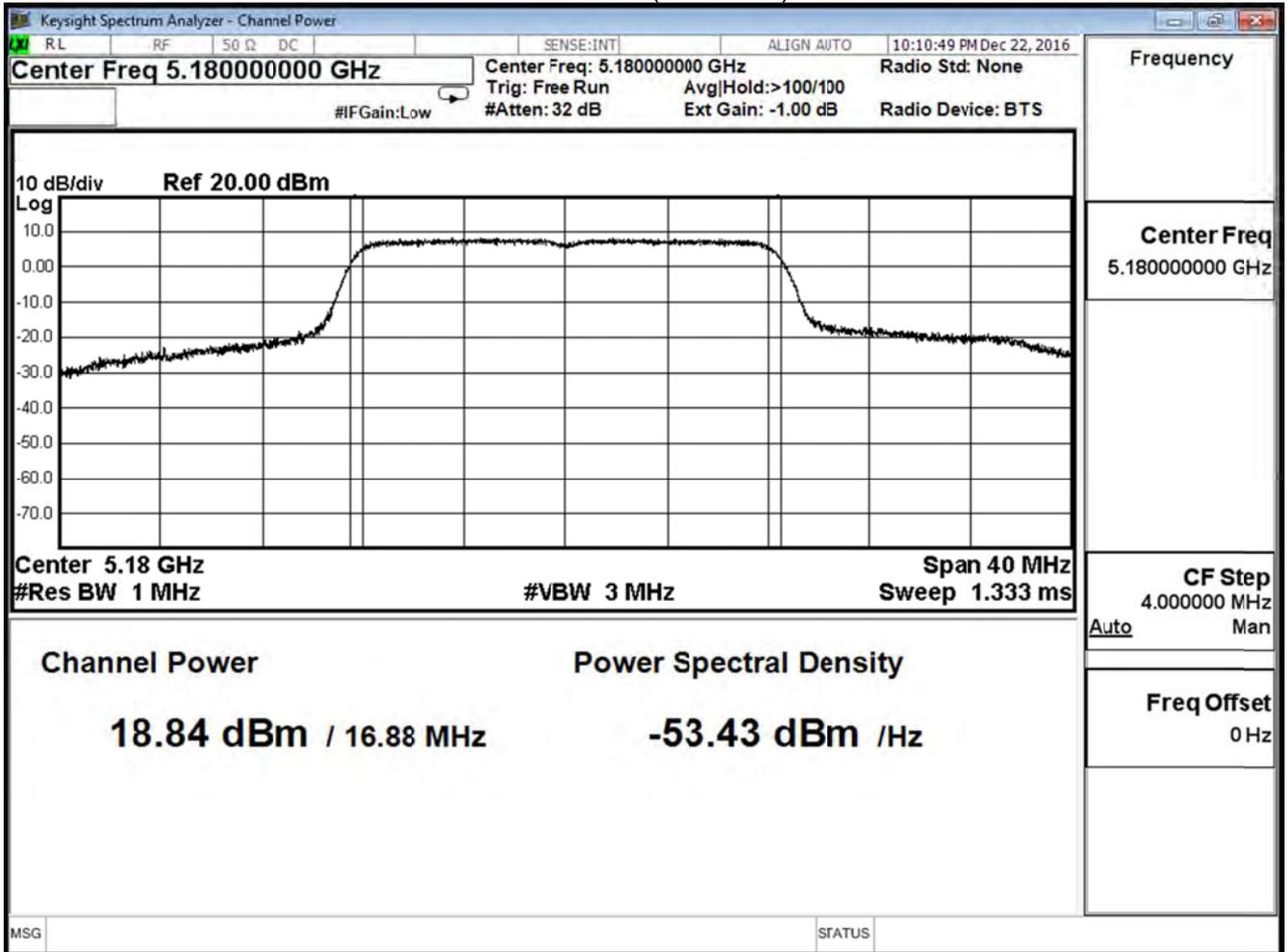
Product	Lyra mini		
Test Item	Peak Transmit Output		
Test Mode	Mode 1: Tx-AD2037320910LF-CDD Mode		
Date of Test	2016/12/22	Test Site	SR10-H

IEEE 802.11a (ANT 0)			
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)
36	5180	18.84	$\leq 30$
44	5220	21.32	$\leq 30$
48	5240	19.60	$\leq 30$

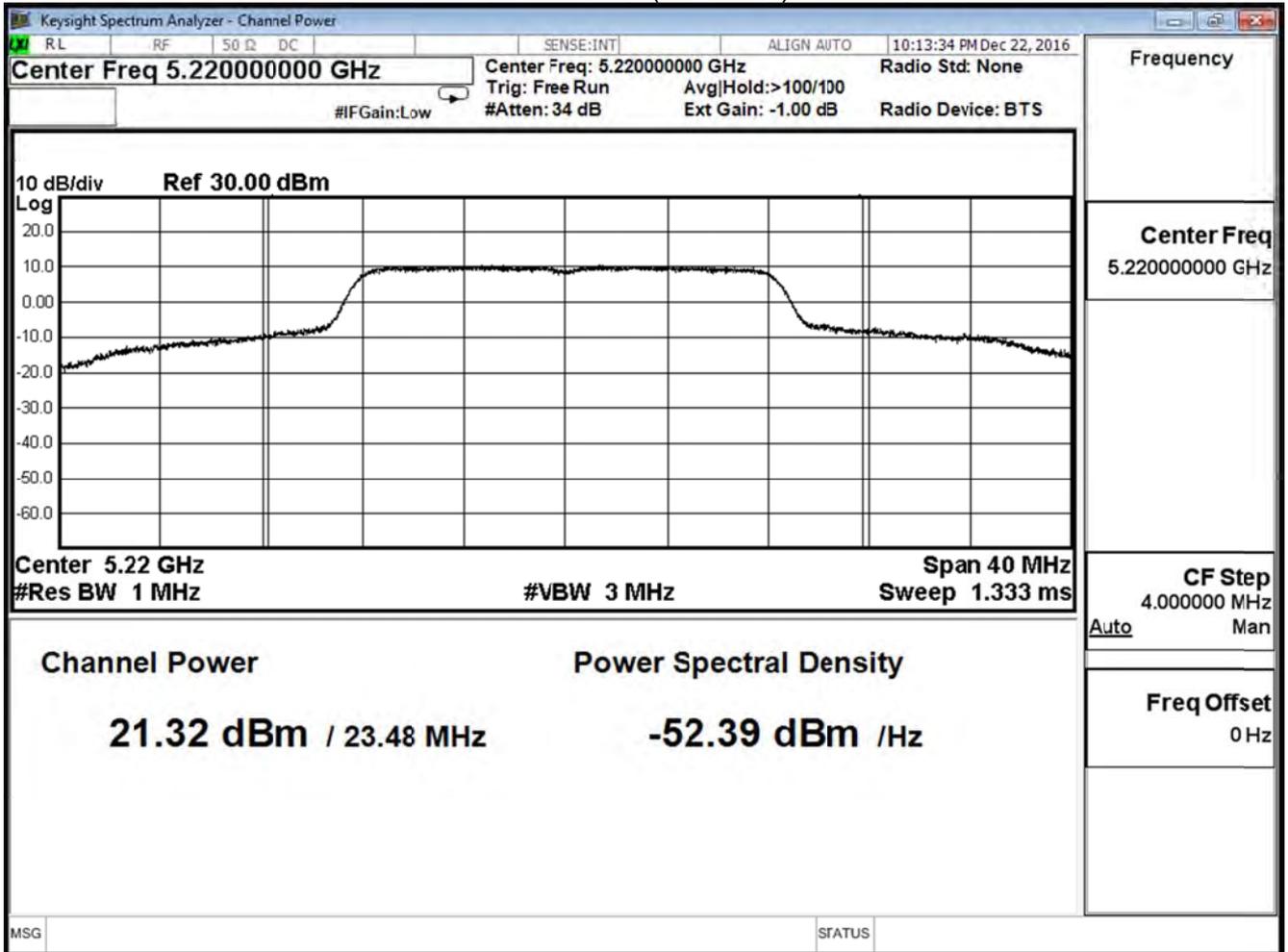
The worst emission of data rate is 6 Mbps.

Peak Power Output (dBm)										
Channel No	Frequency (MHz)	Data Rate								Required Limit
		6	9	12	18	24	36	48	54	
36	5180	18.84	--	--	--	--	--	--	--	$\leq 30$
44	5220	21.32	21.27	21.22	21.12	20.92	20.68	20.56	20.44	$\leq 30$
48	5240	19.60	--	--	--	--	--	--	--	$\leq 30$

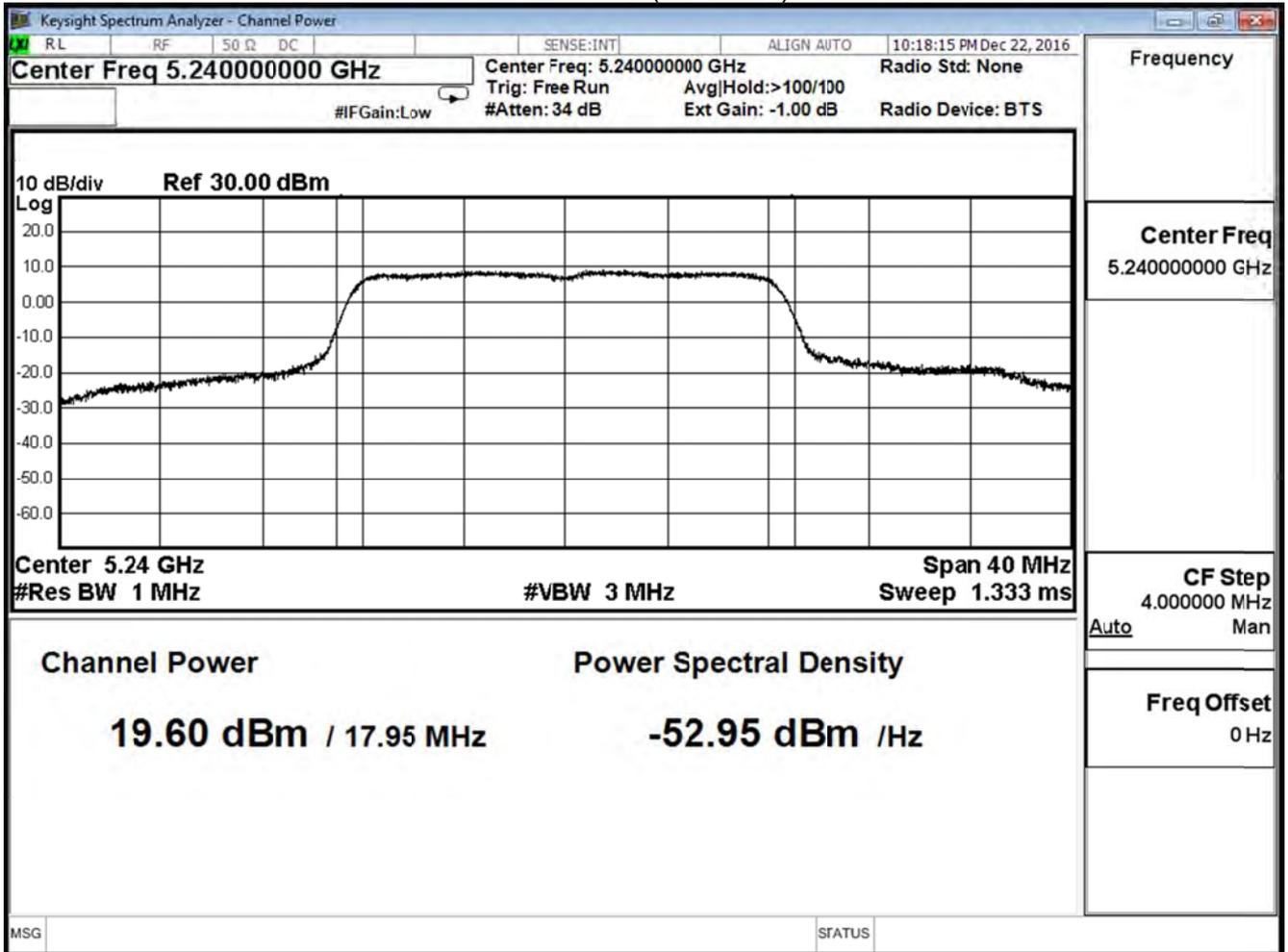
Channel 36 (5180MHz)



Channel 44 (5220MHz)



Channel 48 (5240MHz)



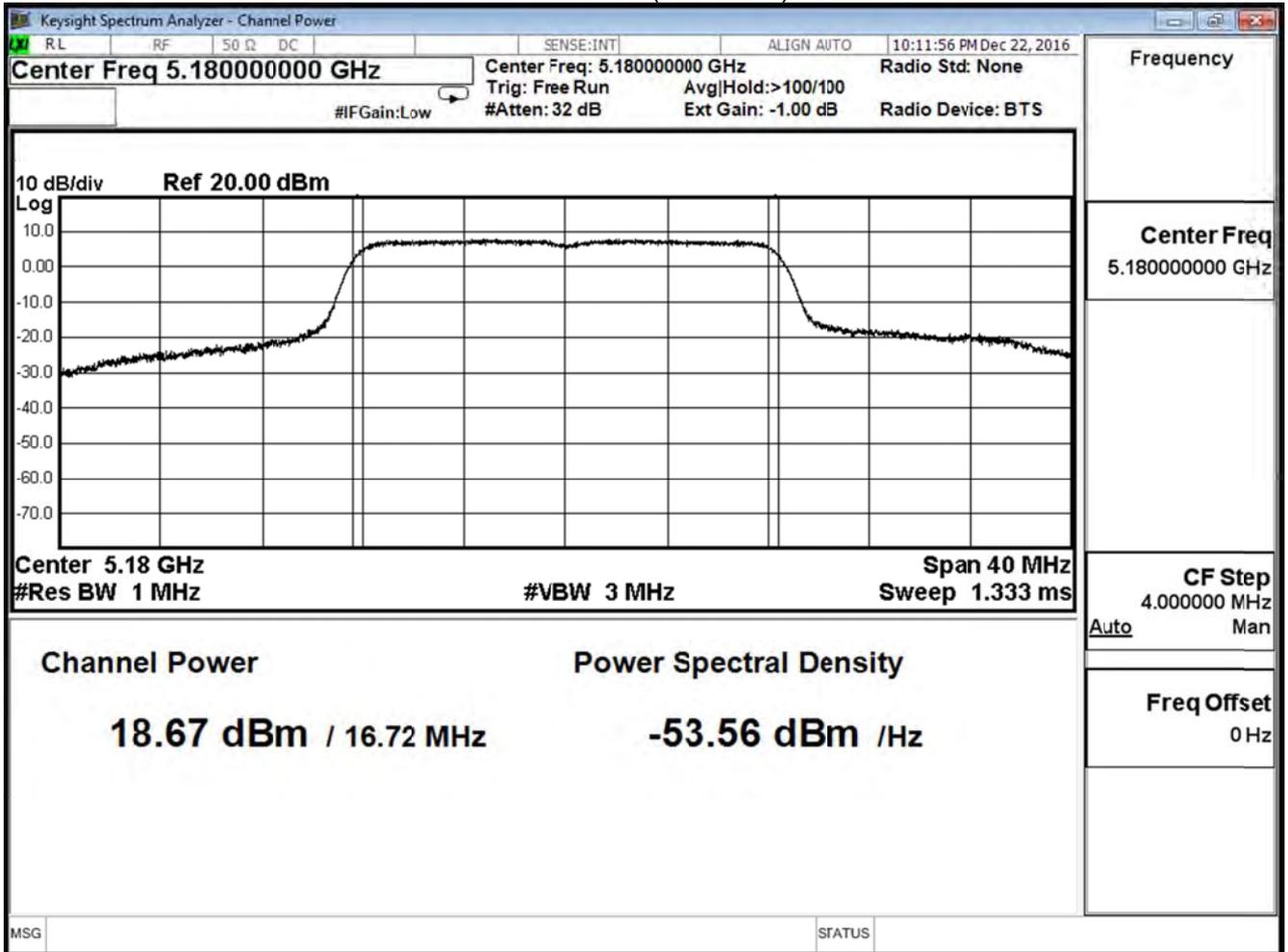
Product	Lyra mini		
Test Item	Peak Transmit Output		
Test Mode	Mode 1: Tx-AD2037320910LF-CDD Mode		
Date of Test	2016/12/22	Test Site	SR10-H

IEEE 802.11a (ANT 1)			
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)
36	5180	18.67	$\leq 30$
44	5220	21.37	$\leq 30$
48	5240	19.37	$\leq 30$

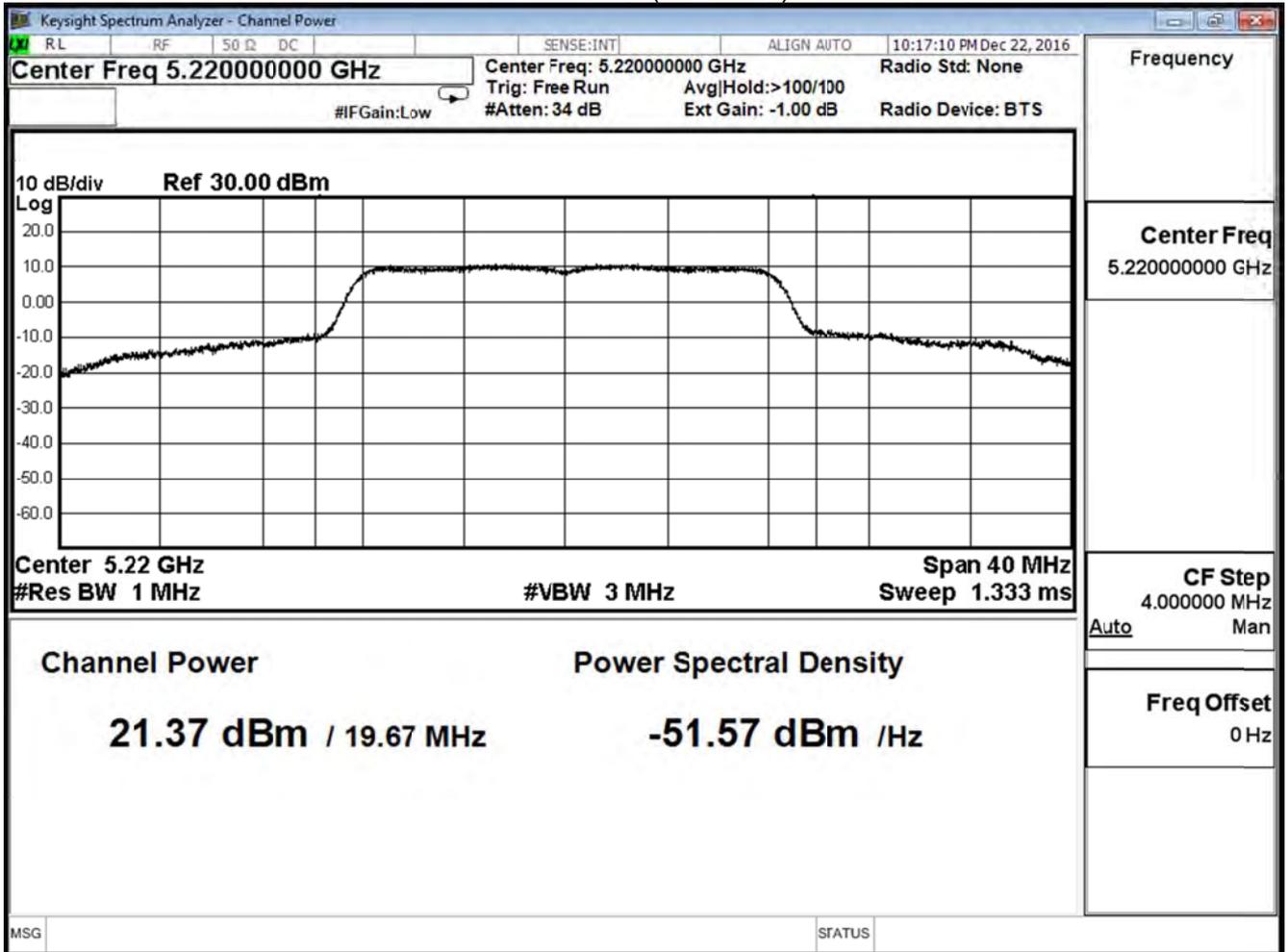
The worst emission of data rate is 6 Mbps.

Peak Power Output (dBm)										
Channel No	Frequency (MHz)	Data Rate								Required Limit
		6	9	12	18	24	36	48	54	
36	5180	18.67	--	--	--	--	--	--	--	$\leq 30$
44	5220	21.37	21.31	21.27	21.17	20.97	20.73	20.49	20.25	$\leq 30$
48	5240	19.37	--	--	--	--	--	--	--	$\leq 30$

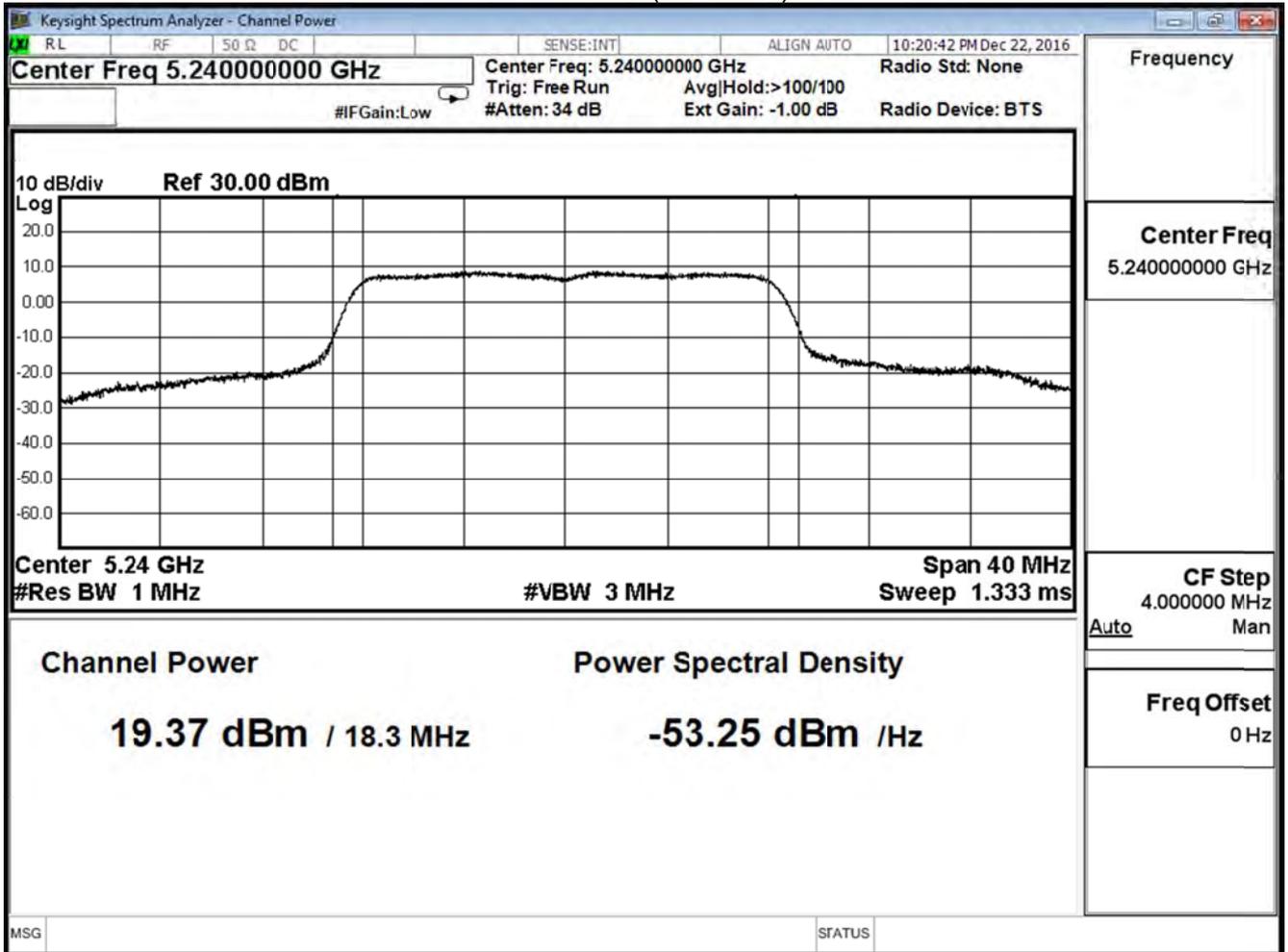
Channel 36 (5180MHz)



Channel 44 (5220MHz)



Channel 48 (5240MHz)



Product	Lyra mini		
Test Item	Peak Transmit Output		
Test Mode	Mode 1: Tx-AD2037320910LF-CDD Mode		
Date of Test	2016/12/22	Test Site	SR10-H

IEEE 802.11a (ANT 0+1)			
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)
36	5180	21.77	$\leq 30$
44	5220	24.36	$\leq 30$
48	5240	22.50	$\leq 30$

The worst emission of data rate is 6 Mbps.

Peak Power Output (dBm)										
Channel No	Frequency (MHz)	Data Rate								Required Limit
		6	9	12	18	24	36	48	54	
36	5180	21.77	--	--	--	--	--	--	--	$\leq 30$
44	5220	24.36	24.30	24.26	24.16	23.96	23.72	23.48	23.36	$\leq 30$
48	5240	22.50	--	--	--	--	--	--	--	$\leq 30$

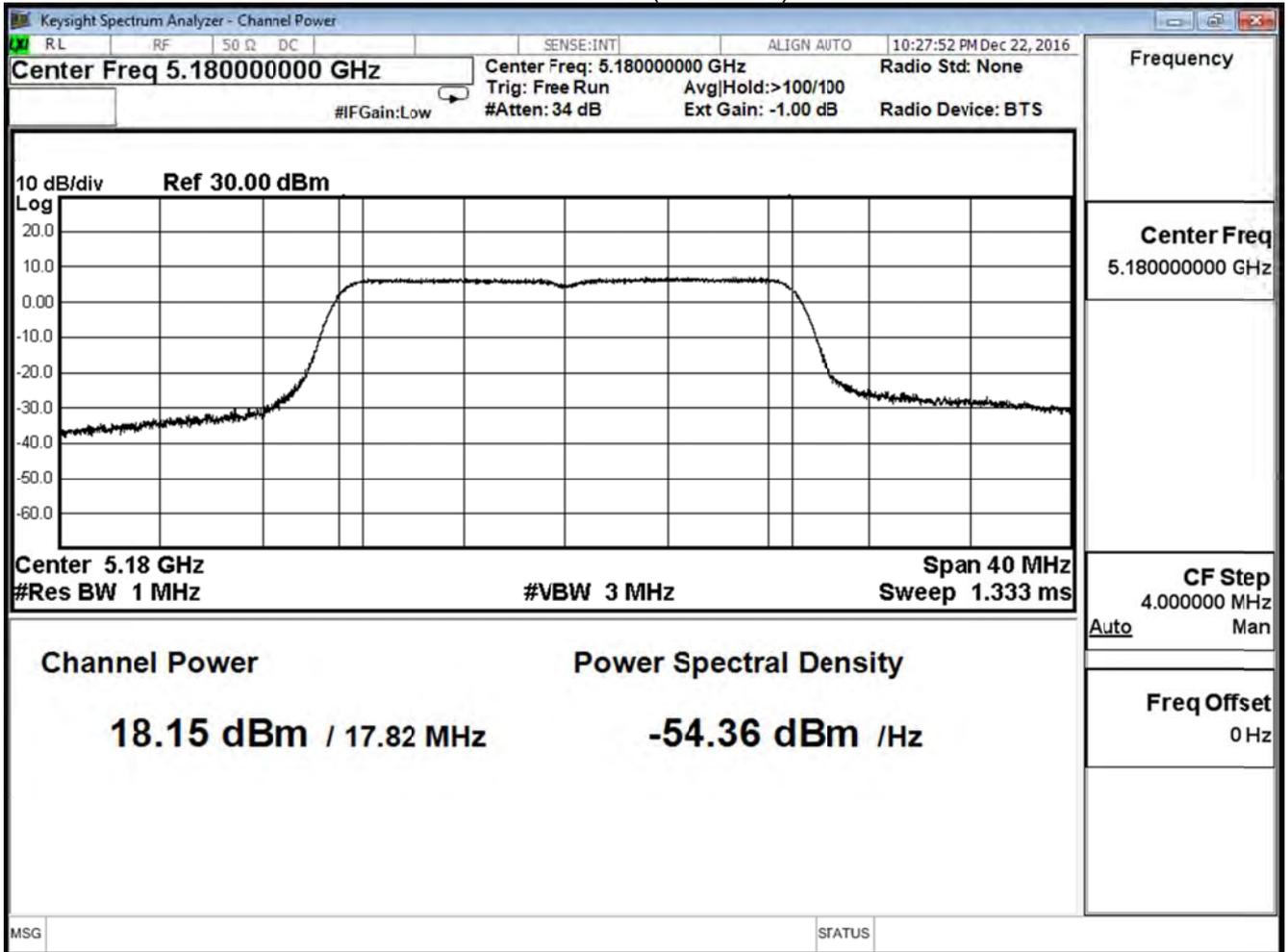
Product	Lyra mini		
Test Item	Peak Transmit power		
Test Mode	Mode 1: Tx-AD2037320910LF-CDD Mode		
Date of Test	2016/12/22	Test Site	SR10-H

IEEE 802.11n20 (ANT 0)			
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)
36	5180	18.15	$\leq 30$
44	5220	21.34	$\leq 30$
48	5240	19.77	$\leq 30$

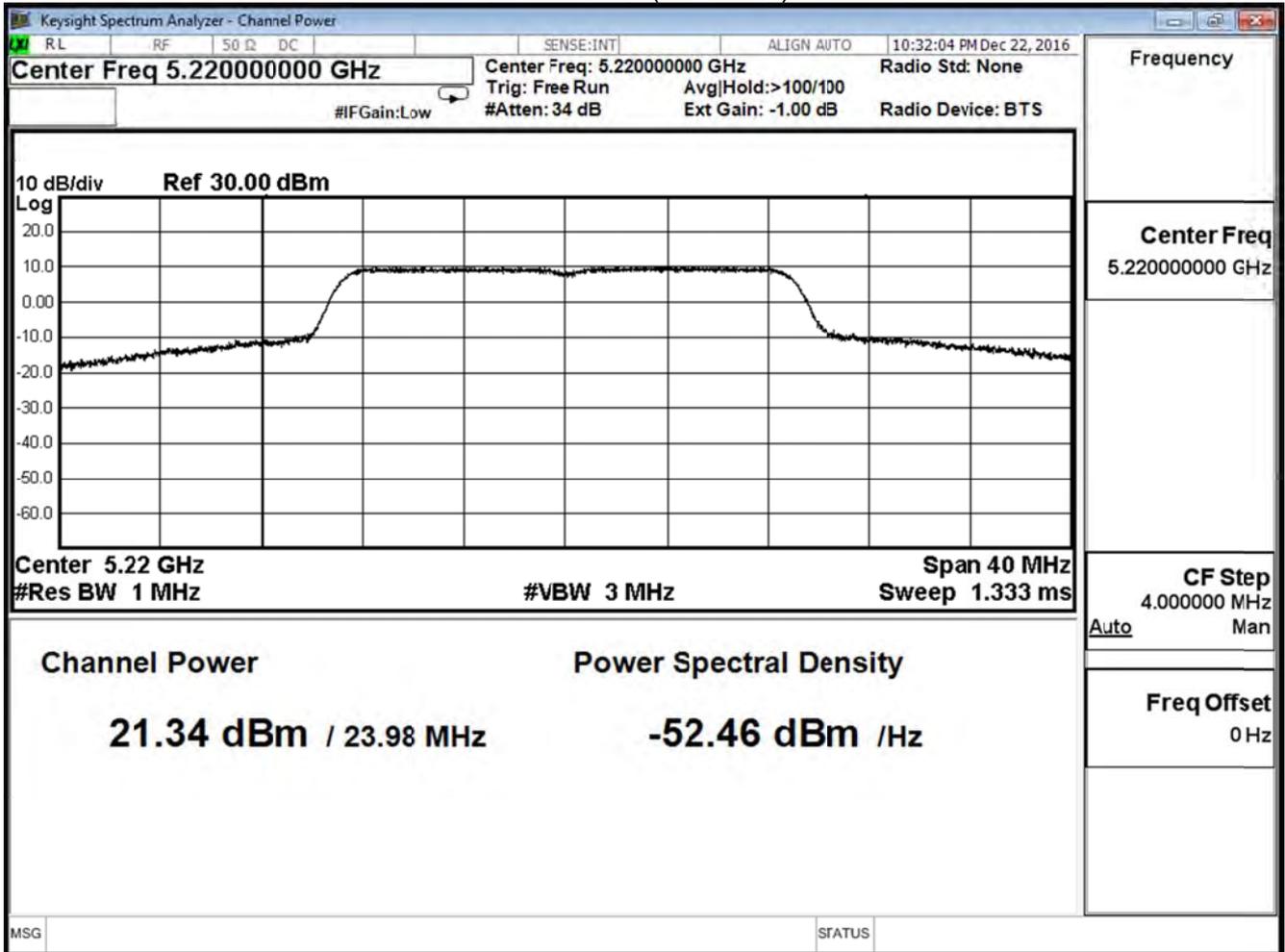
The worst emission of data rate is 6.5 Mbps

Peak Power Output (dBm)										
MCS Index		0	1	2	3	4	5	6	7	Required Limit
Channel No	Frequency (MHz)	Data Rate								
		6.5	13	19.5	26	39	52	58.5	65	
36	5180	18.15	--	--	--	--	--	--	--	$\leq 30$
44	5220	21.34	21.25	21.14	21.04	20.94	20.74	20.50	20.38	$\leq 30$
48	5240	19.77	--	--	--	--	--	--	--	$\leq 30$

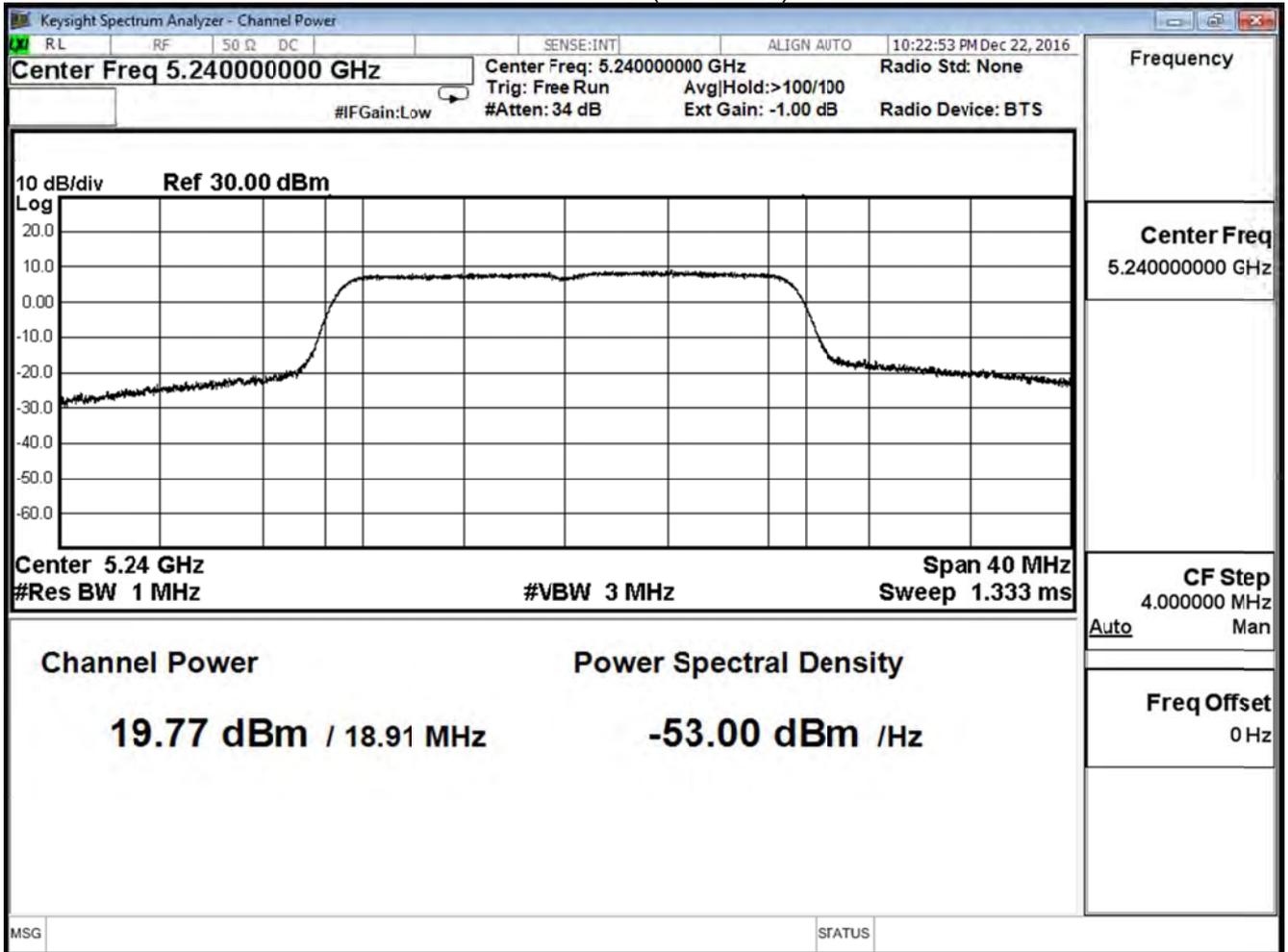
Channel 36 (5180MHz)



Channel 44 (5220MHz)



Channel 48 (5240MHz)



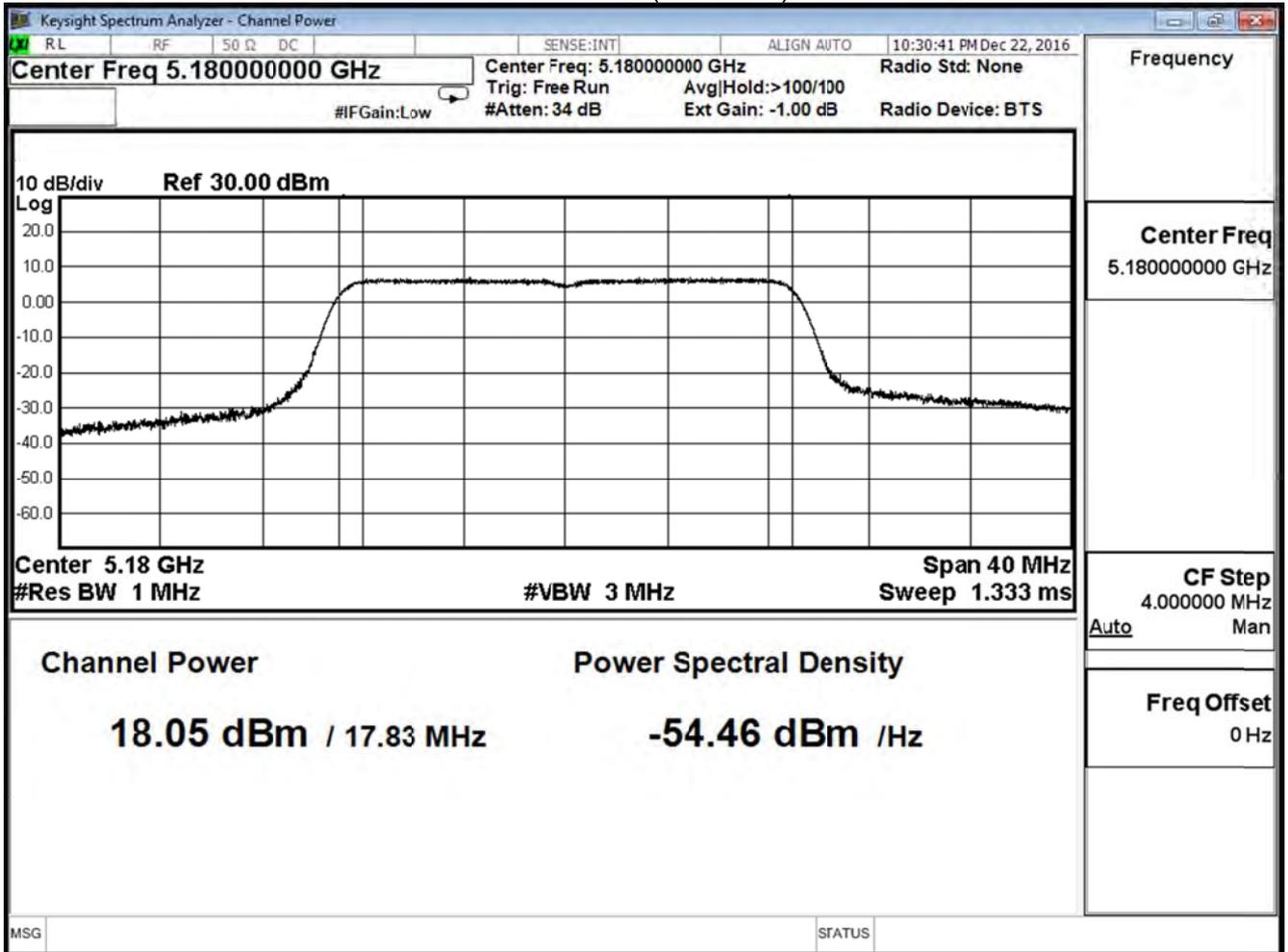
Product	Lyra mini		
Test Item	Peak Transmit power		
Test Mode	Mode 1: Tx-AD2037320910LF-CDD Mode		
Date of Test	2016/12/22	Test Site	SR10-H

IEEE 802.11n20 (ANT 1)			
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)
36	5180	18.05	$\leq 30$
44	5220	21.42	$\leq 30$
48	5240	19.75	$\leq 30$

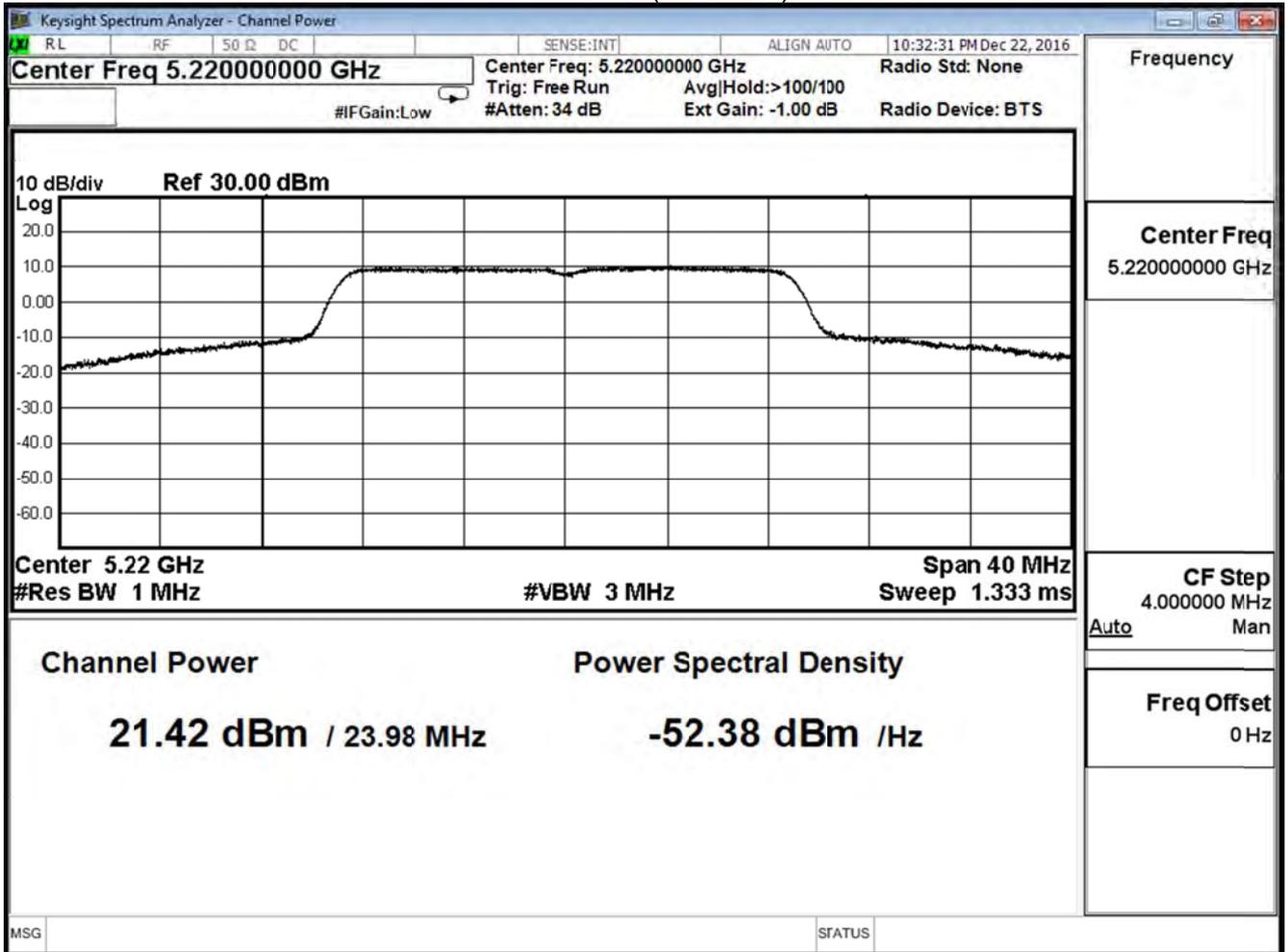
The worst emission of data rate is 6.5 Mbps

Peak Power Output (dBm)										
MCS Index		0	1	2	3	4	5	6	7	Required Limit
Channel No	Frequency (MHz)	Data Rate								
		6.5	13	19.5	26	39	52	58.5	65	
36	5180	18.05	--	--	--	--	--	--	--	$\leq 30$
44	5220	21.42	21.30	21.22	21.12	20.92	20.72	20.60	20.48	$\leq 30$
48	5240	19.75	--	--	--	--	--	--	--	$\leq 30$

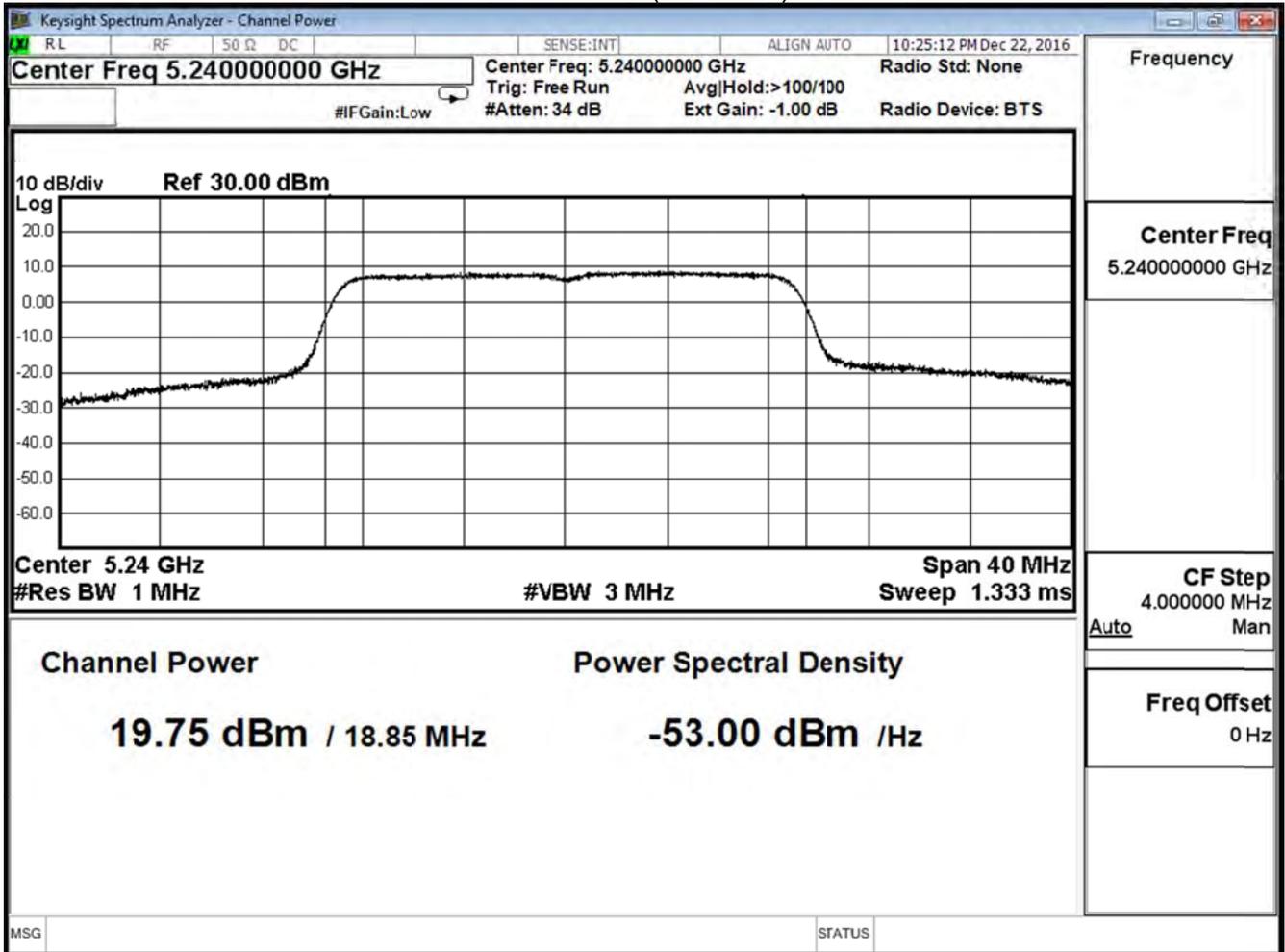
Channel 36 (5180MHz)



Channel 44 (5220MHz)



Channel 48 (5240MHz)



Product	Lyra mini		
Test Item	Peak Transmit power		
Test Mode	Mode 1: Tx-AD2037320910LF-CDD Mode		
Date of Test	2016/12/22	Test Site	SR10-H

IEEE 802.11n20 (ANT 0+1)			
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)
36	5180	21.11	$\leq 30$
44	5220	24.39	$\leq 30$
48	5240	22.77	$\leq 30$

The worst emission of data rate is 6.5 Mbps

Peak Power Output (dBm)										
MCS Index		0	1	2	3	4	5	6	7	Required Limit
Channel No	Frequency (MHz)	Data Rate								
		6.5	13	19.5	26	39	52	58.5	65	
36	5180	21.11	--	--	--	--	--	--	--	$\leq 30$
44	5220	24.39	24.34	24.29	24.19	24.09	23.89	23.77	23.65	$\leq 30$
48	5240	22.77	--	--	--	--	--	--	--	$\leq 30$

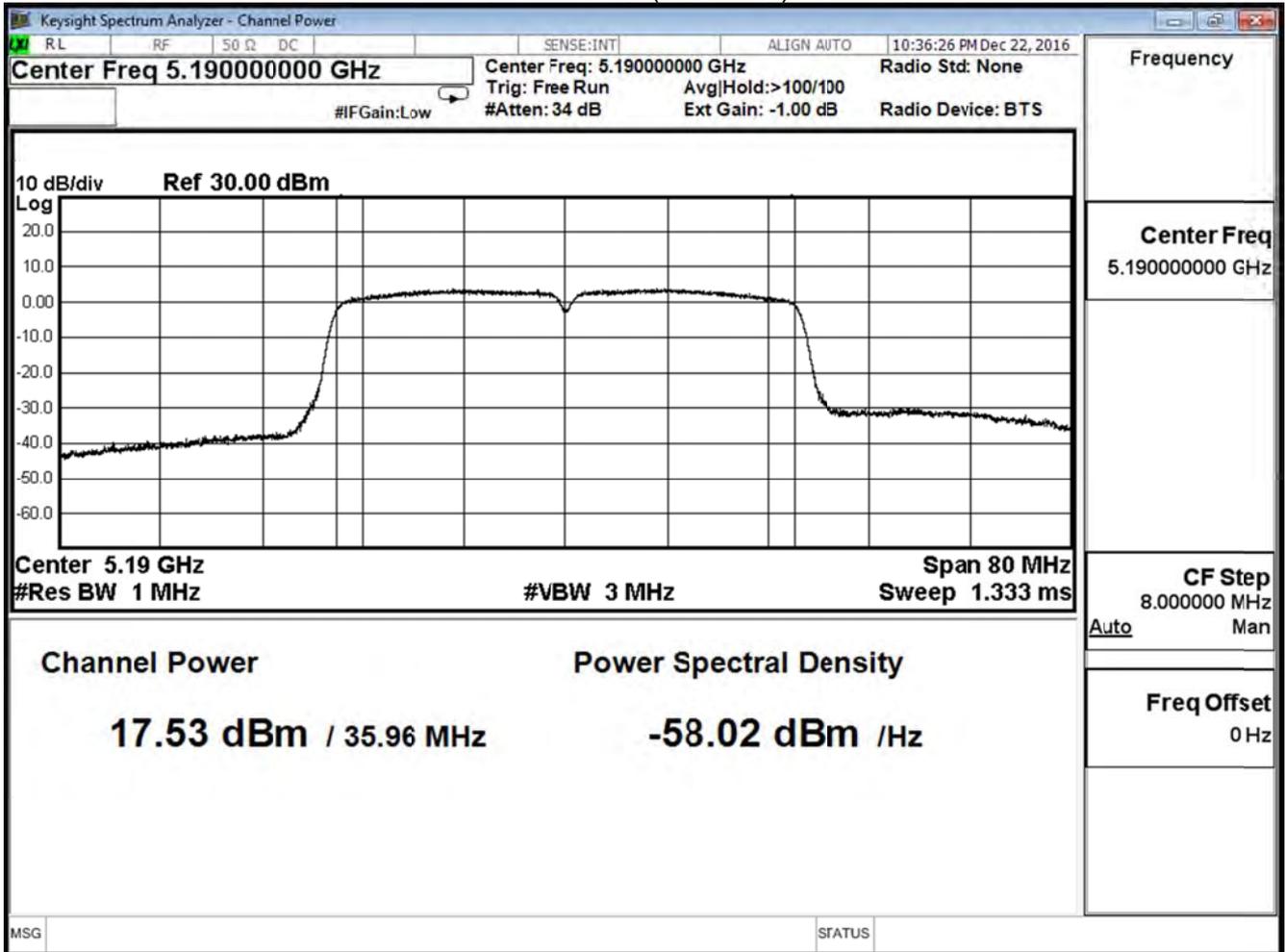
Product	Lyra mini		
Test Item	Peak Transmit power		
Test Mode	Mode 1: Tx-AD2037320910LF-CDD Mode		
Date of Test	2016/12/22	Test Site	SR10-H

IEEE 802.11n40 (ANT 0)			
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)
38	5190	17.53	$\leq 30$
46	5230	19.52	$\leq 30$

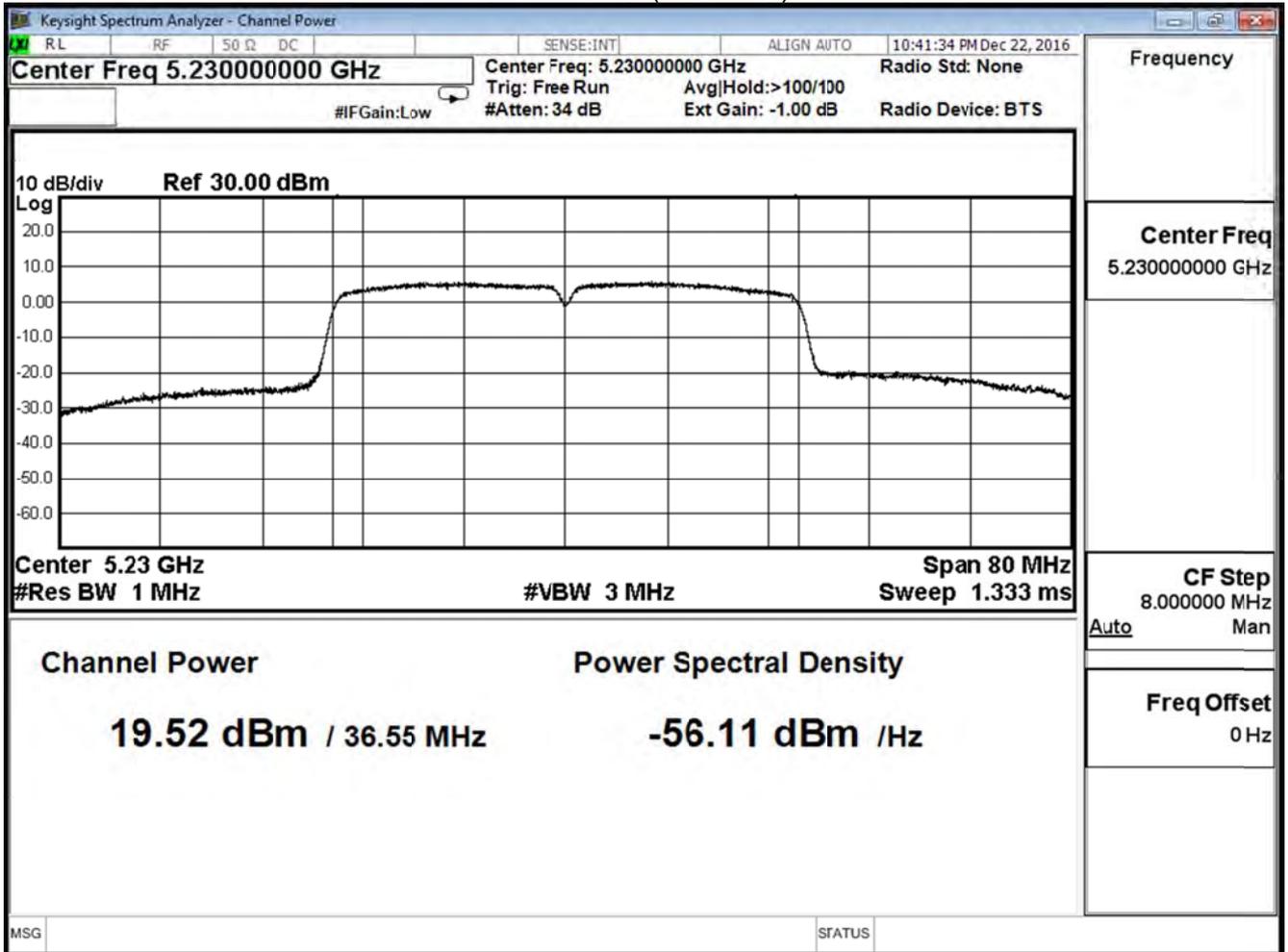
The worst emission of data rate is 13.5 Mbps.

Peak Power Output (dBm)										
MCS Index		0	1	2	3	4	5	6	7	Required Limit
Channel No	Frequency (MHz)	Data Rate								
		13.5	27	40.5	54	81	108	121.5	135	
38	5190	17.53	--	--	--	--	--	--	--	$\leq 30$
46	5230	19.52	19.46	19.42	19.32	19.12	19.02	18.78	18.66	$\leq 30$

Channel 38 (5190MHz)



Channel 46 (5230MHz)



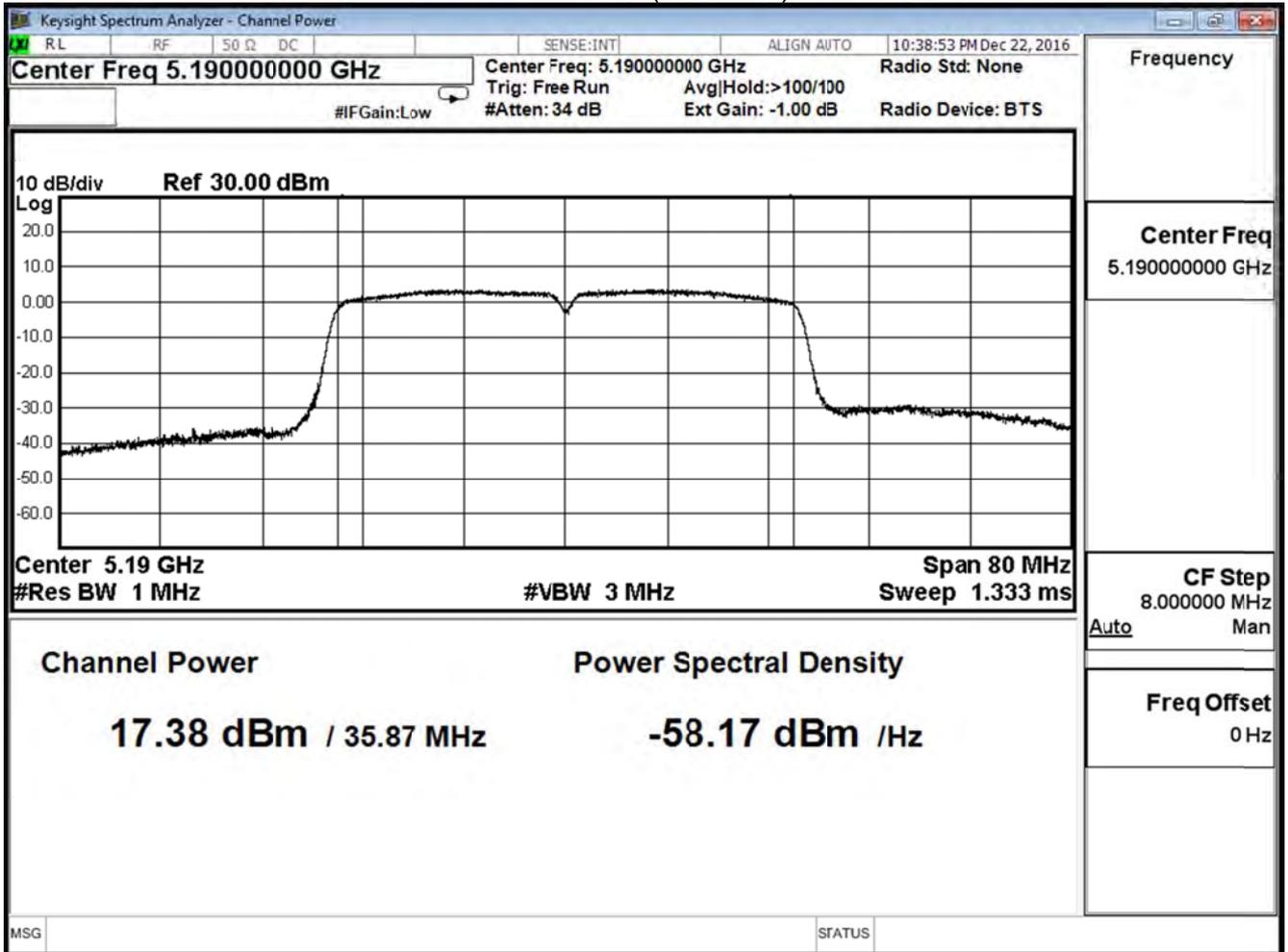
Product	Lyra mini		
Test Item	Peak Transmit power		
Test Mode	Mode 1: Tx-AD2037320910LF-CDD Mode		
Date of Test	2016/12/22	Test Site	SR10-H

IEEE 802.11n40 (ANT 1)			
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)
38	5190	17.38	≤ 30
46	5230	19.56	≤ 30

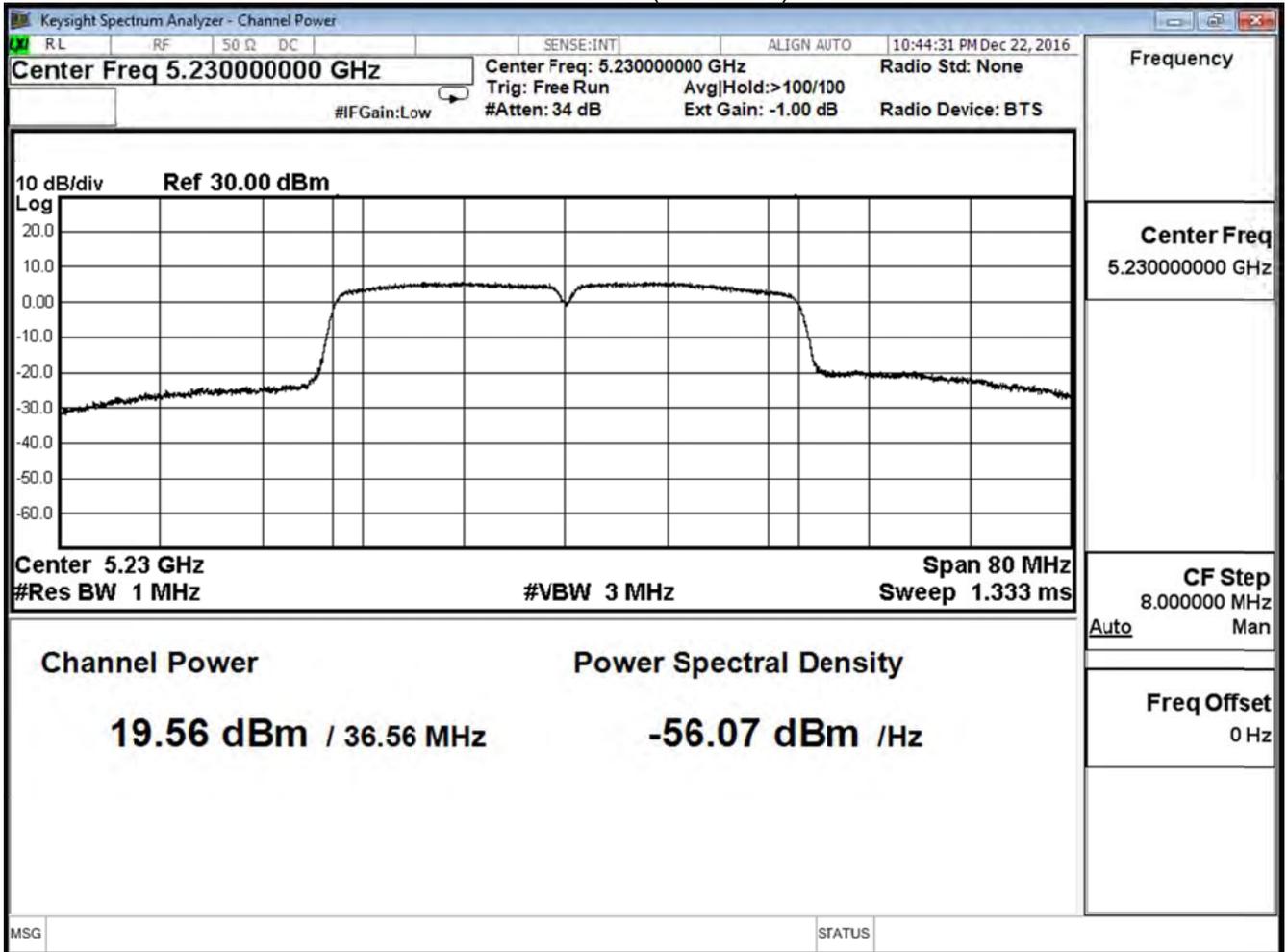
The worst emission of data rate is 13.5Mbps.

Peak Power Output (dBm)										
MCS Index		0	1	2	3	4	5	6	7	Required Limit
Channel No	Frequency (MHz)	Data Rate								
		13.5	27	40.5	54	81	108	121.5	135	
38	5190	17.38	--	--	--	--	--	--	--	≤ 30
46	5230	19.56	19.44	19.36	19.26	19.16	18.96	18.84	18.60	≤ 30

Channel 38 (5190MHz)



Channel 46 (5230MHz)



Product	Lyra mini		
Test Item	Peak Transmit power		
Test Mode	Mode 1: Tx-AD2037320910LF-CDD Mode		
Date of Test	2016/12/22	Test Site	SR10-H

IEEE 802.11n40 (ANT 0+1)			
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)
38	5190	20.47	≤ 30
46	5230	22.55	≤ 30

The worst emission of data rate is 13.5 Mbps.

Peak Power Output (dBm)										
MCS Index		0	1	2	3	4	5	6	7	Required Limit
Channel No	Frequency (MHz)	Data Rate								
		13.5	27	40.5	54	81	108	121.5	135	
38	5190	20.47	--	--	--	--	--	--	--	≤ 30
46	5230	22.55	22.48	22.45	22.35	22.25	22.05	21.81	21.69	≤ 30

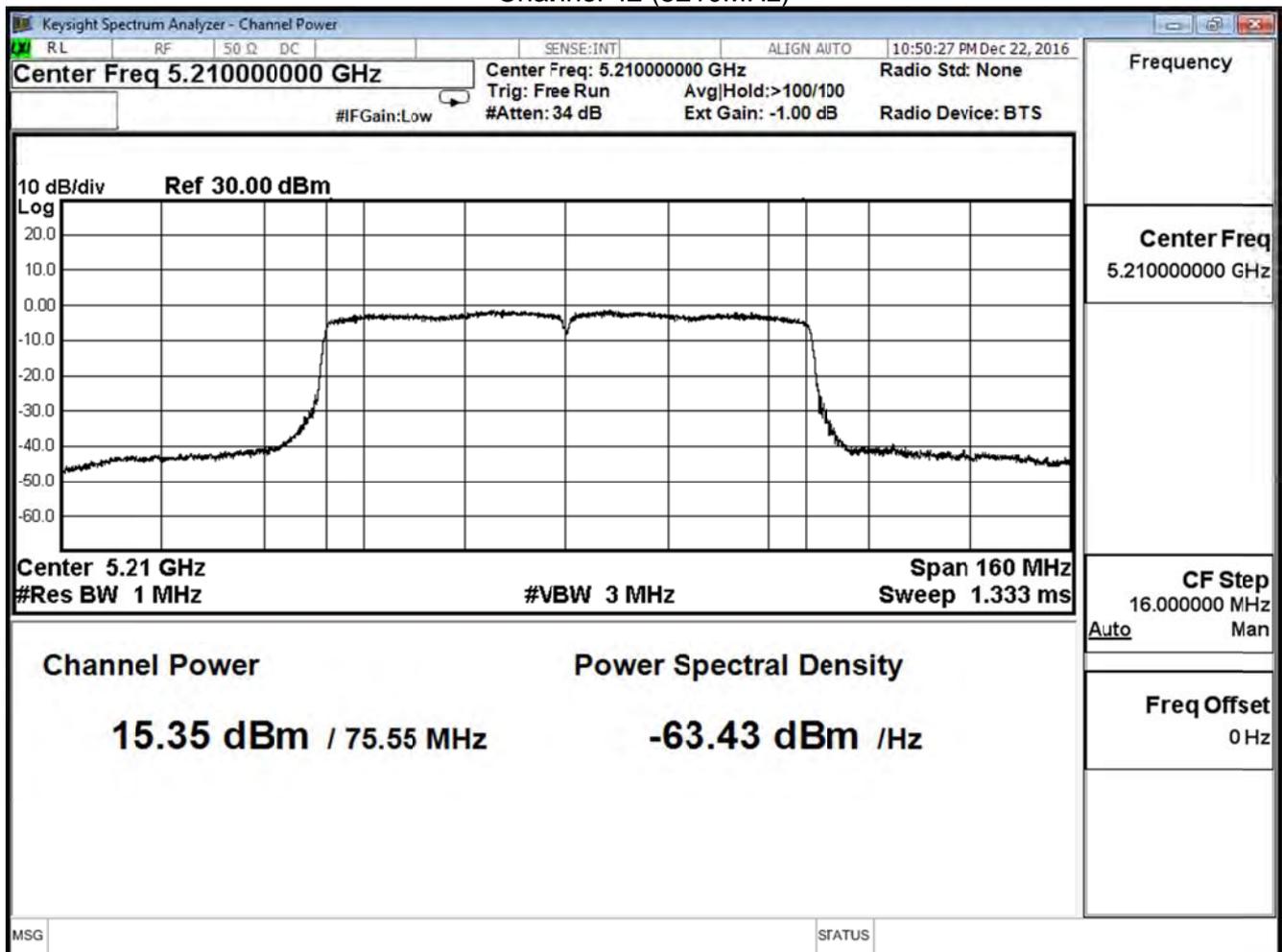
Product	Lyra mini		
Test Item	Peak Transmit power		
Test Mode	Mode 1: Tx-AD2037320910LF-CDD Mode		
Date of Test	2016/12/21	Test Site	SR7

IEEE 802.11ac80 (ANT 0)			
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)
42	5210	15.35	≤ 30

The worst emission of data rate is 29.3 Mbps.

Peak Power Output (dBm)											
MCS Index		0	1	2	3	4	5	6	7	8	Require Limit
Channel No	Frequency (MHz)	Data Rate									
		29.3	58.5	87.8	117	175.5	234	263.3	292.5	351	≤ 30
42	5210	15.35	15.25	15.05	14.85	14.65	14.45	14.33	14.09	13.85	

Channel 42 (5210MHz)



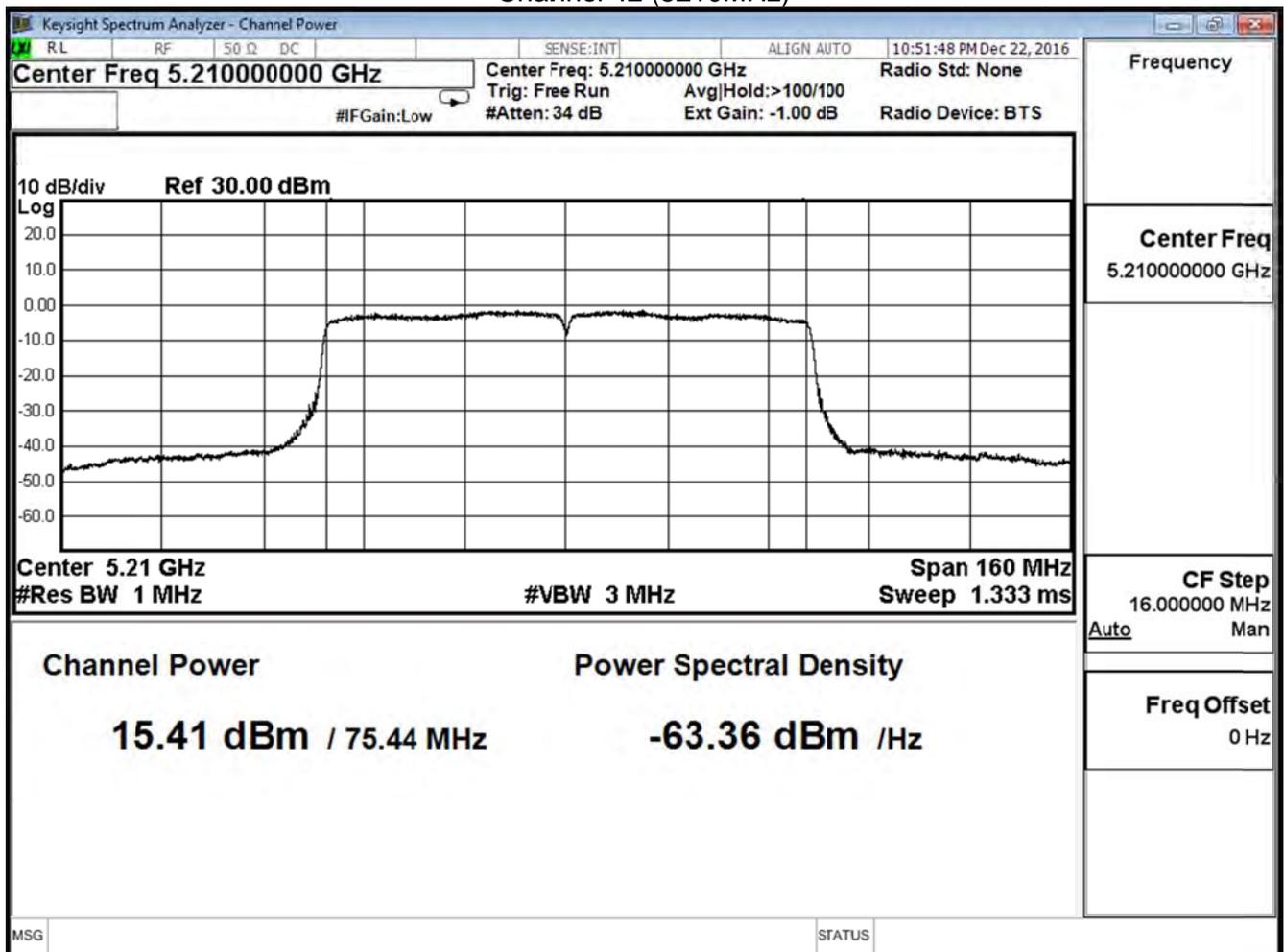
Product	Lyra mini		
Test Item	Peak Transmit power		
Test Mode	Mode 1: Tx-AD2037320910LF-CDD Mode		
Date of Test	2016/12/22	Test Site	SR10-H

IEEE 802.11ac80 (ANT 1)			
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)
42	5210	15.41	≤ 30

The worst emission of data rate is 29.3 Mbps.

Peak Power Output (dBm)											
MCS Index		0	1	2	3	4	5	6	7	8	Require Limit
Channel No	Frequency (MHz)	Data Rate									
		29.3	58.5	87.8	117	175.5	234	263.3	292.5	351	
42	5210	15.41	15.21	15.11	15.01	14.91	14.71	14.47	14.23	13.99	

Channel 42 (5210MHz)



Product	Lyra mini		
Test Item	Peak Transmit power		
Test Mode	Mode 1: Tx-AD2037320910LF-CDD Mode		
Date of Test	2016/12/22	Test Site	SR10-H

IEEE 802.11ac80 (ANT 0+1)			
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)
42	5210	18.39	≤ 30

The worst emission of data rate is 29.3 Mbps.

Peak Power Output (dBm)											
MCS Index		0	1	2	3	4	5	6	7	8	Require Limit
Channel No	Frequency (MHz)	Data Rate									
				29.3	58.5	87.8	117	175.5	234	263.3	292.5
42	5210	18.39	18.19	17.99	17.79	17.69	17.49	17.25	17.13	16.89	

Product	Lyra mini		
Test Item	Peak Transmit power		
Test Mode	Mode 3: Tx-AD2037320910LF-BF Mode		
Date of Test	2017/01/15	Test Site	SR10-H

IEEE 802.11n20 (ANT 0)			
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)
36	5180	16.28	≤ 26.49
44	5220	20.89	≤ 26.49
48	5240	19.37	≤ 26.49

The worst emission of data rate is 6.5 Mbps

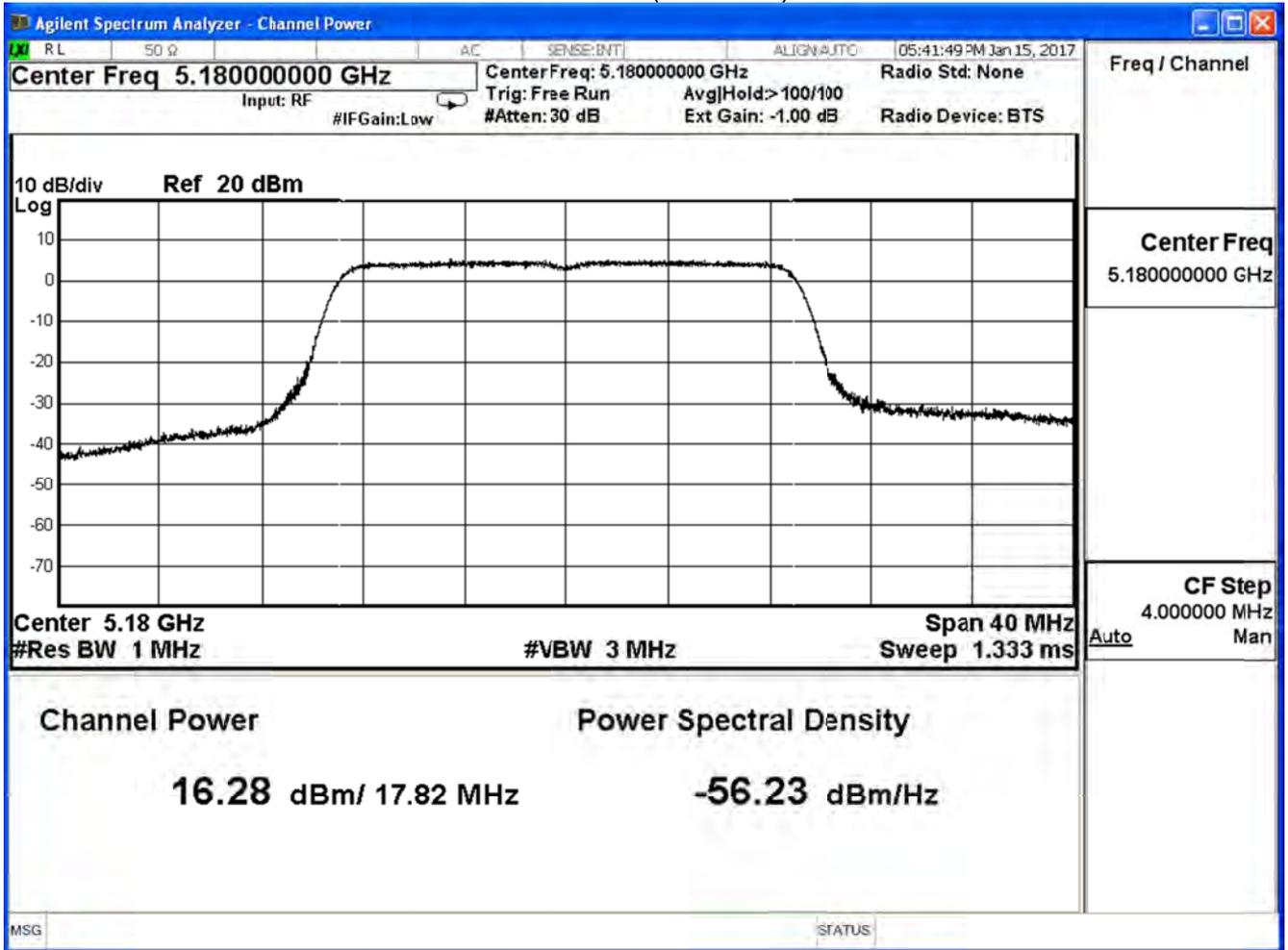
Peak Power Output (dBm)										
MCS Index		0	1	2	3	4	5	6	7	Required Limit
Channel No	Frequency (MHz)	Data Rate								
		6.5	13	19.5	26	39	52	58.5	65	
36	5180	16.28	--	--	--	--	--	--	--	≤ 26.49
44	5220	20.89	20.79	20.69	20.59	20.49	20.37	20.13	20.01	≤ 26.49
48	5240	19.37	--	--	--	--	--	--	--	≤ 26.49

Note:

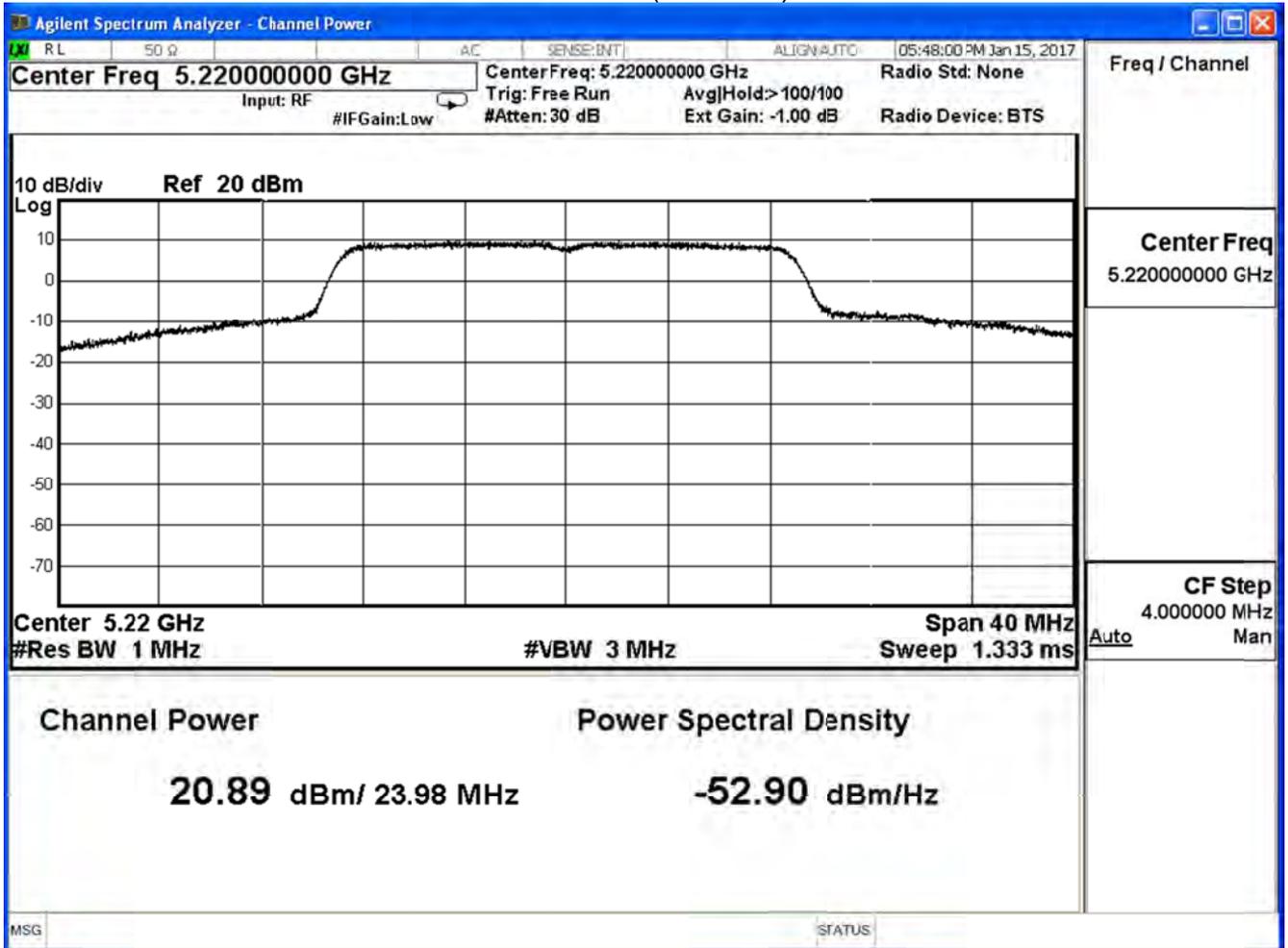
Directional Antenna=10log(N)+Max Gain+ Beamforming Gain=9.51dBi

Required Limit=30dBm-(9.51dBi-6dB)=26.49dBm

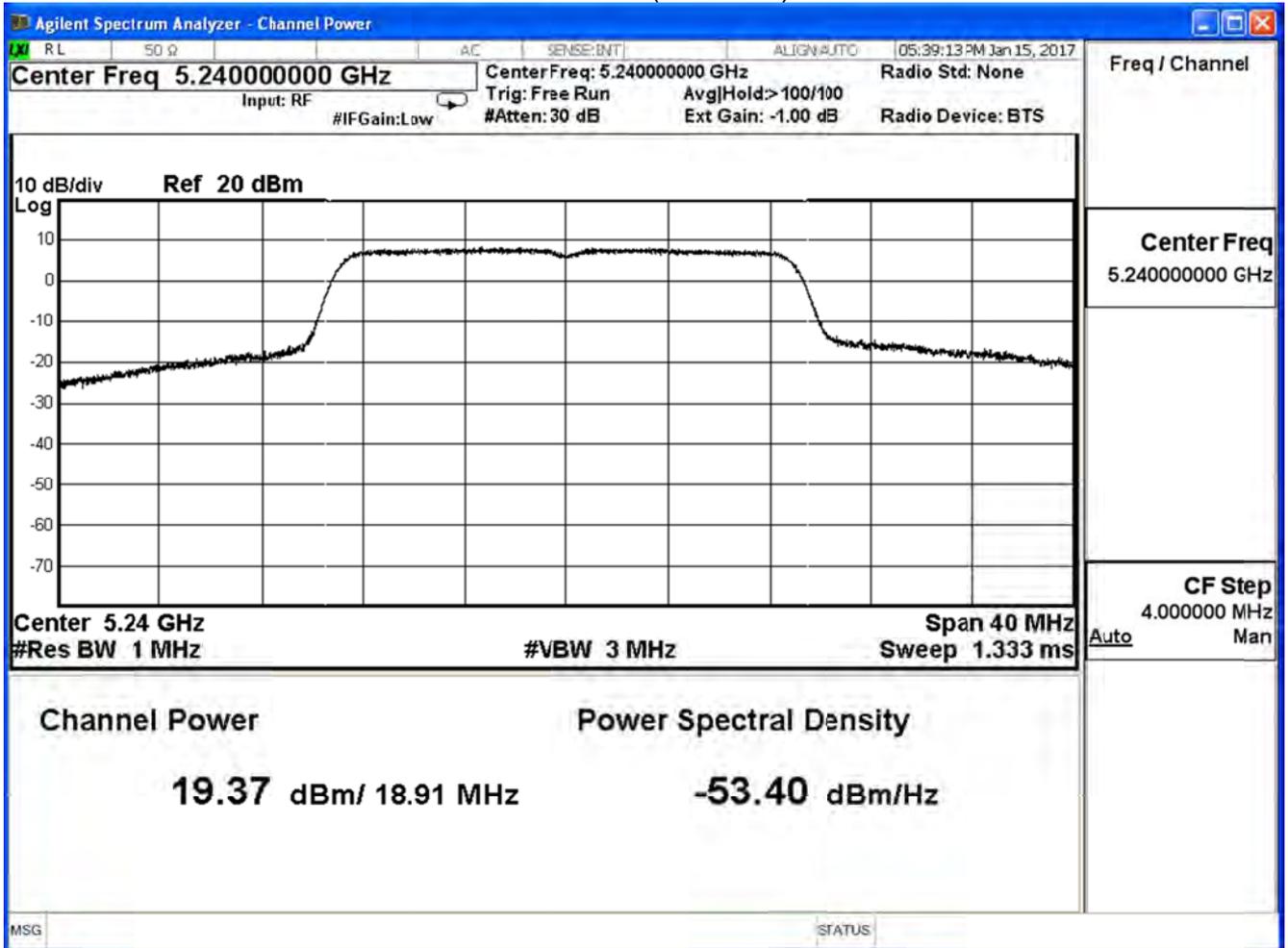
Channel 36 (5180MHz)



Channel 44 (5220MHz)



Channel 48 (5240MHz)



Product	Lyra mini		
Test Item	Peak Transmit power		
Test Mode	Mode 3: Tx-AD2037320910LF-BF Mode		
Date of Test	2017/01/15	Test Site	SR10-H

IEEE 802.11n20 (ANT 1)			
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)
36	5180	16.29	≤ 26.49
44	5220	20.81	≤ 26.49
48	5240	19.35	≤ 26.49

The worst emission of data rate is 6.5 Mbps

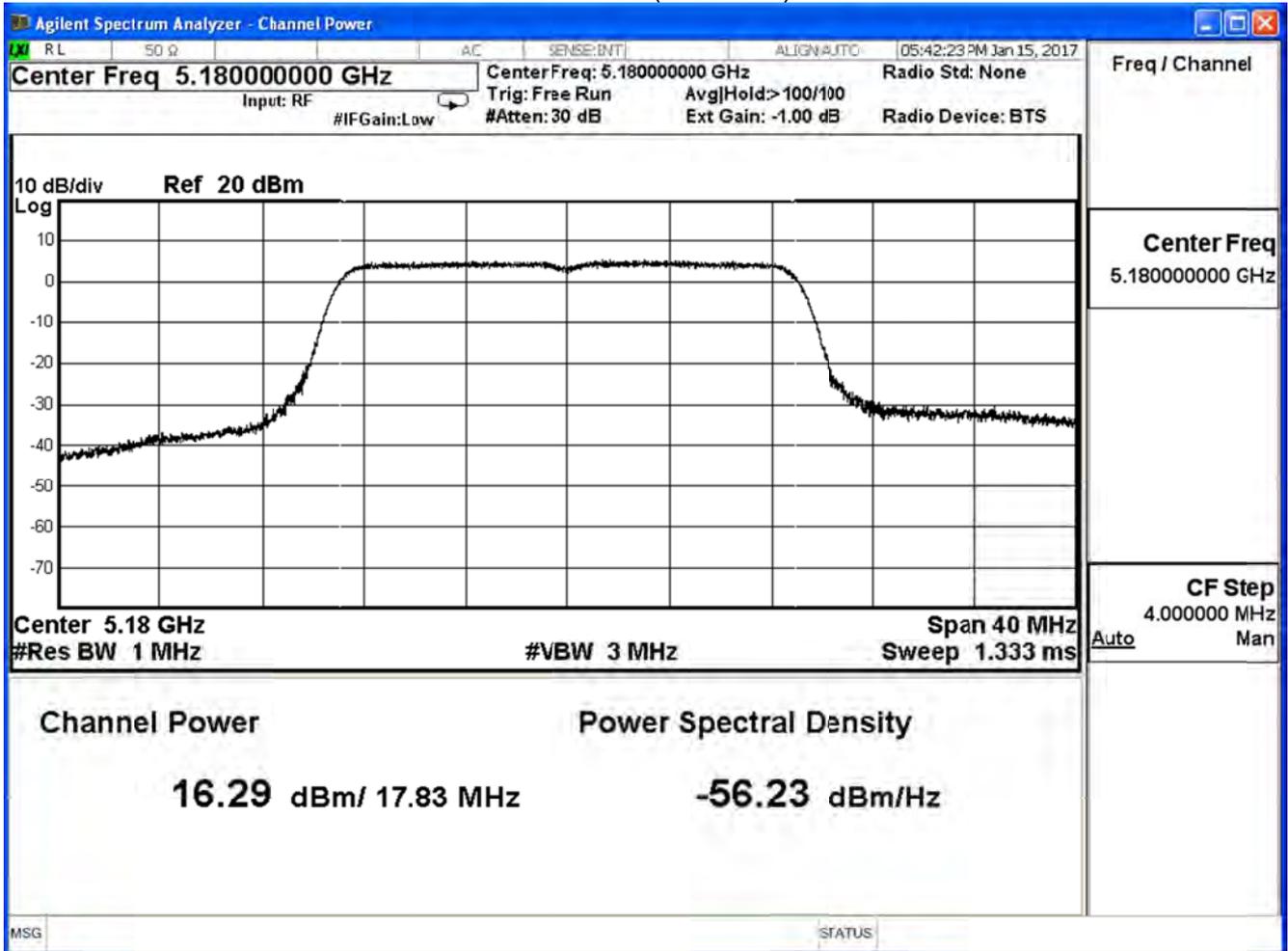
Peak Power Output (dBm)										
MCS Index		0	1	2	3	4	5	6	7	Required Limit
Channel No	Frequency (MHz)	Data Rate								
		6.5	13	19.5	26	39	52	58.5	65	
36	5180	16.29	--	--	--	--	--	--	--	≤ 26.49
44	5220	20.81	20.71	20.61	20.41	20.31	20.07	19.83	19.71	≤ 26.49
48	5240	19.35	--	--	--	--	--	--	--	≤ 26.49

Note:

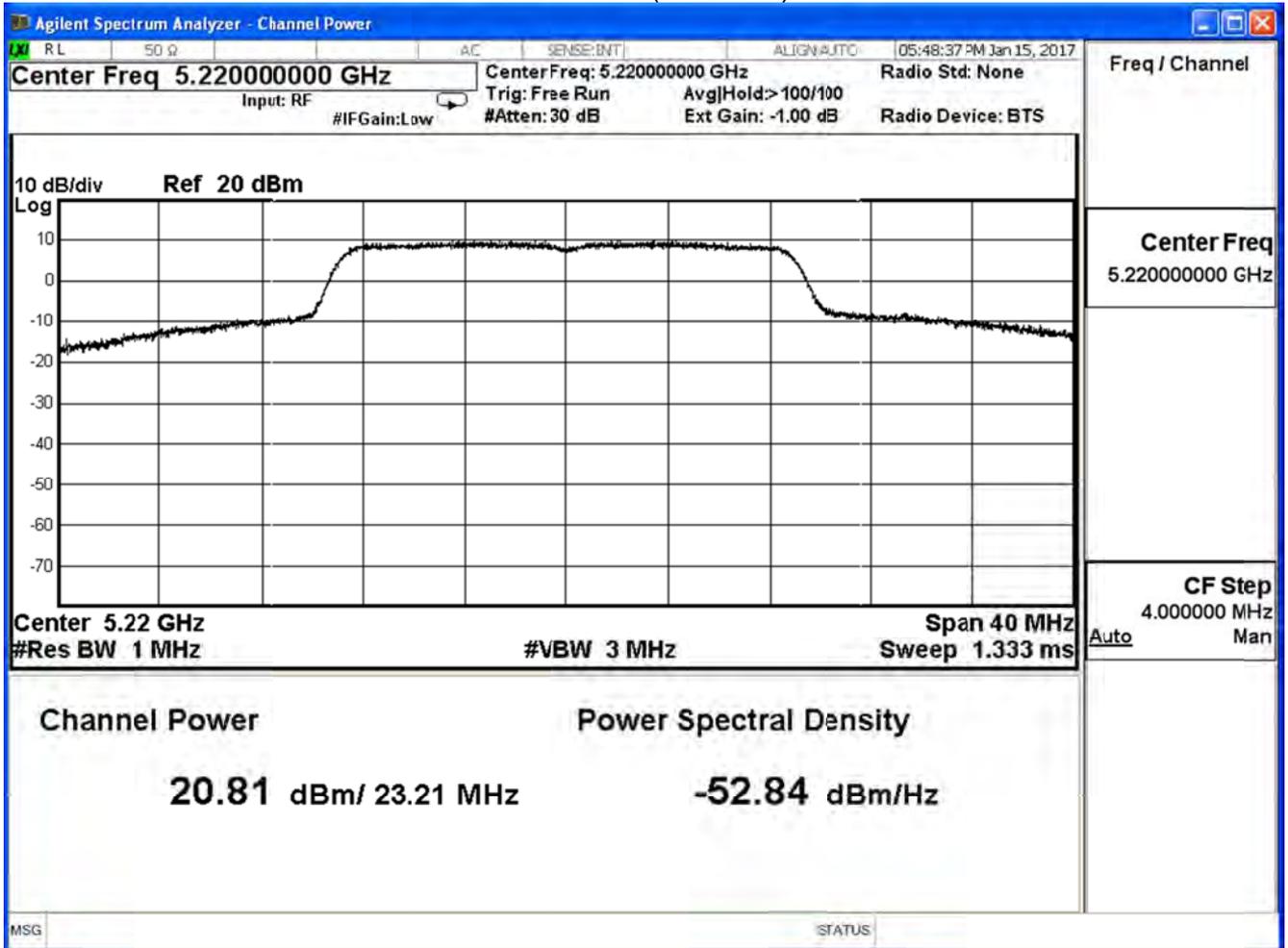
Directional Antenna=10log(N)+Max Gain+ Beamforming Gain=9.51dBi

Required Limit=30dBm-(9.51dBi-6dB)=26.49dBm

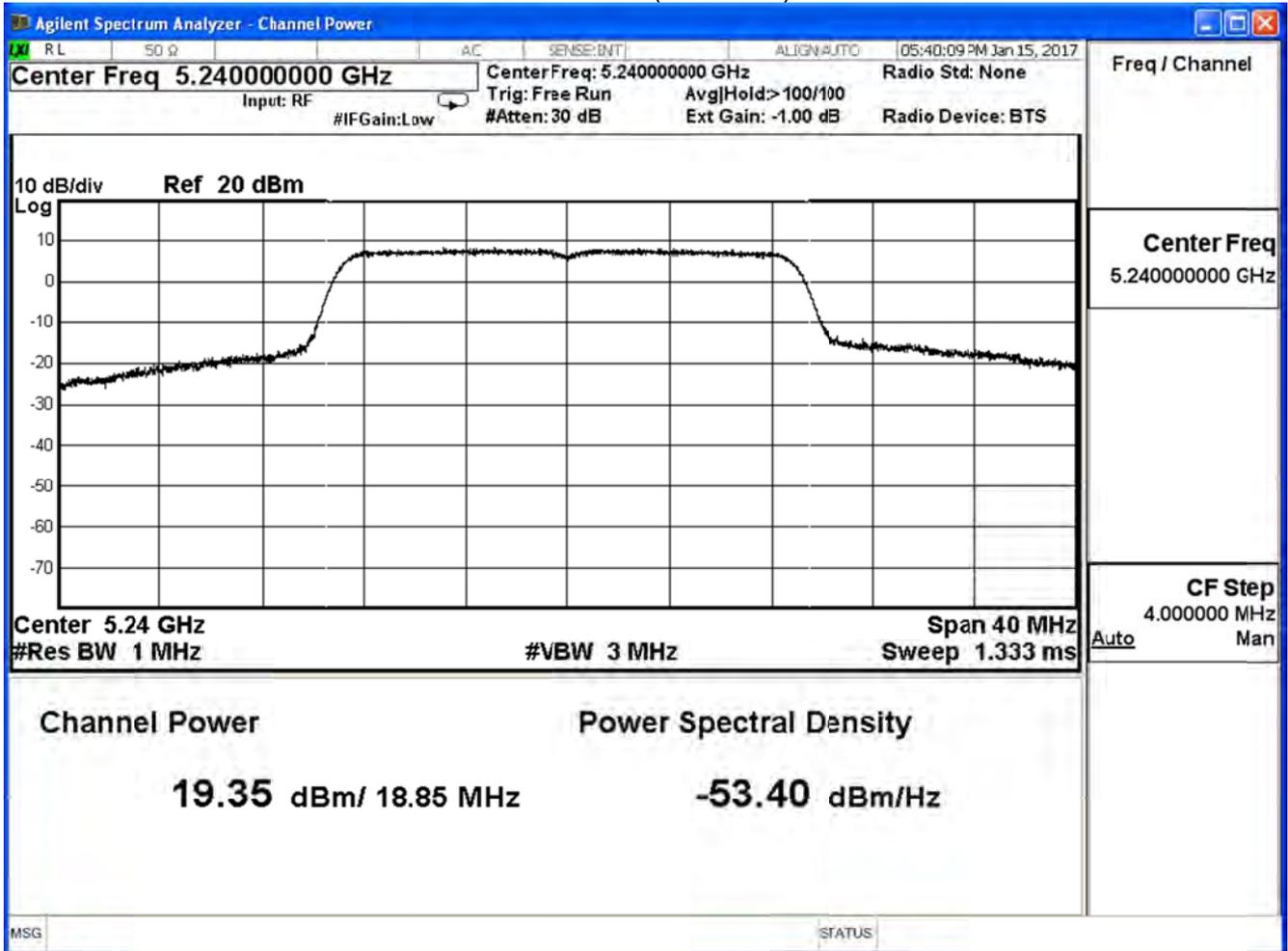
Channel 36 (5180MHz)



Channel 44 (5220MHz)



Channel 48 (5240MHz)



Product	Lyra mini		
Test Item	Peak Transmit power		
Test Mode	Mode 3: Tx-AD2037320910LF-BF Mode		
Date of Test	2017/01/15	Test Site	SR10-H

IEEE 802.11n20 (ANT 0+1)			
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)
36	5180	19.30	$\leq 26.49$
44	5220	23.86	$\leq 26.49$
48	5240	22.37	$\leq 26.49$

The worst emission of data rate is 6.5 Mbps

Peak Power Output (dBm)										
MCS Index		0	1	2	3	4	5	6	7	Required Limit
Channel No	Frequency (MHz)	Data Rate								
		6.5	13	19.5	26	39	52	58.5	65	
36	5180	19.30	--	--	--	--	--	--	--	$\leq 26.49$
44	5220	23.86	23.66	23.46	23.26	23.06	22.82	22.70	22.58	$\leq 26.49$
48	5240	22.37	--	--	--	--	--	--	--	$\leq 26.49$

Note:

Directional Antenna= $10\log(N)$ +Max Gain+ Beamforming Gain=9.51dBi

Required Limit= $30\text{dBm}-(9.51\text{dBi}-6\text{dB})=26.49\text{dBm}$

Product	Lyra mini		
Test Item	Peak Transmit power		
Test Mode	Mode 3: Tx-AD2037320910LF-BF Mode		
Date of Test	2017/01/15	Test Site	SR10-H

IEEE 802.11n40 (ANT 0)			
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)
38	5190	15.38	≤ 26.49
46	5230	19.31	≤ 26.49

The worst emission of data rate is 13.5 Mbps.

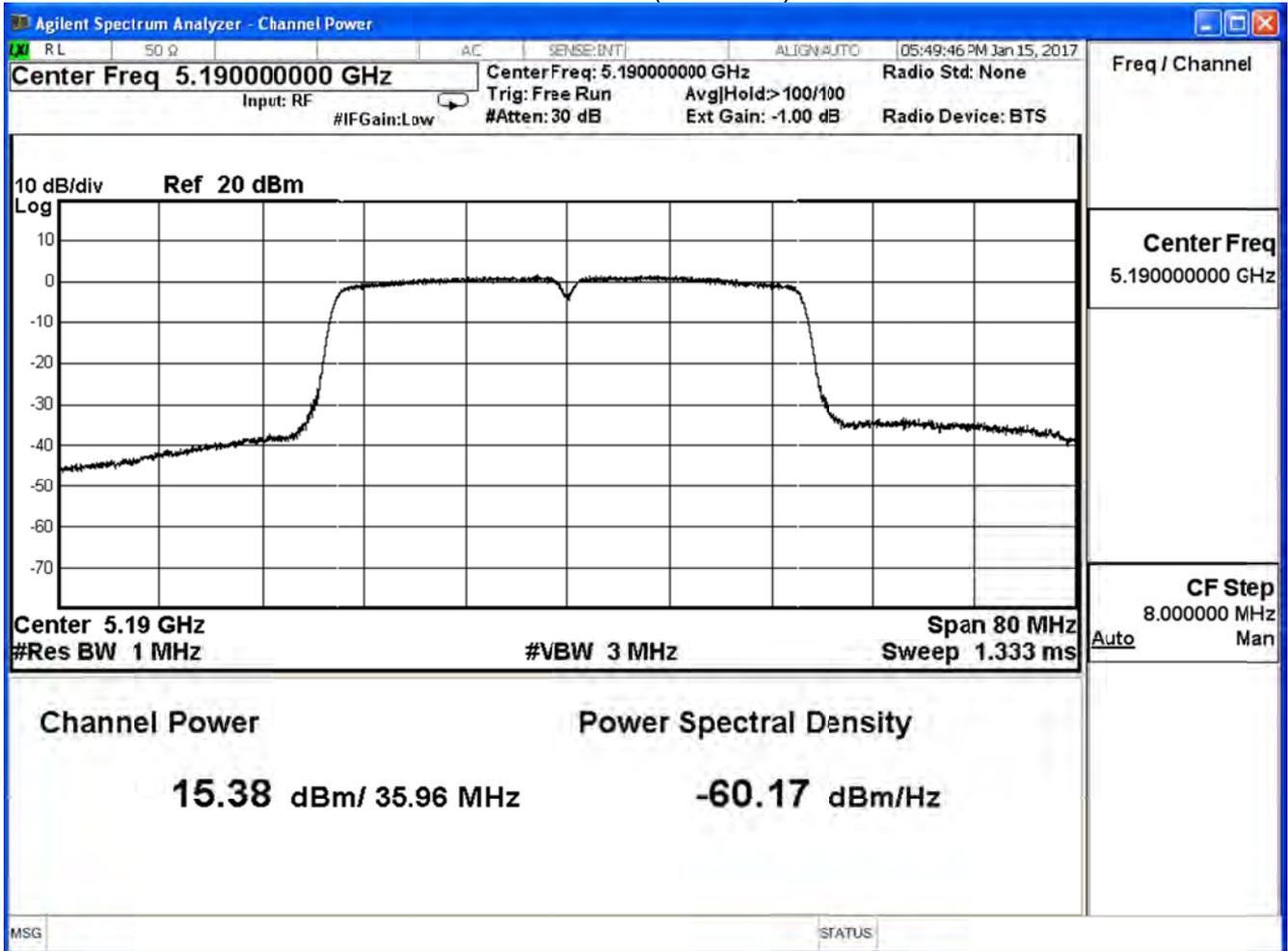
Peak Power Output (dBm)										
MCS Index		0	1	2	3	4	5	6	7	Required Limit
Channel No	Frequency (MHz)	Data Rate								
		13.5	27	40.5	54	81	108	121.5	135	
38	5190	15.38	--	--	--	--	--	--	--	≤ 26.49
46	5230	19.31	19.11	18.91	18.71	18.51	18.39	18.15	18.03	≤ 26.49

Note:

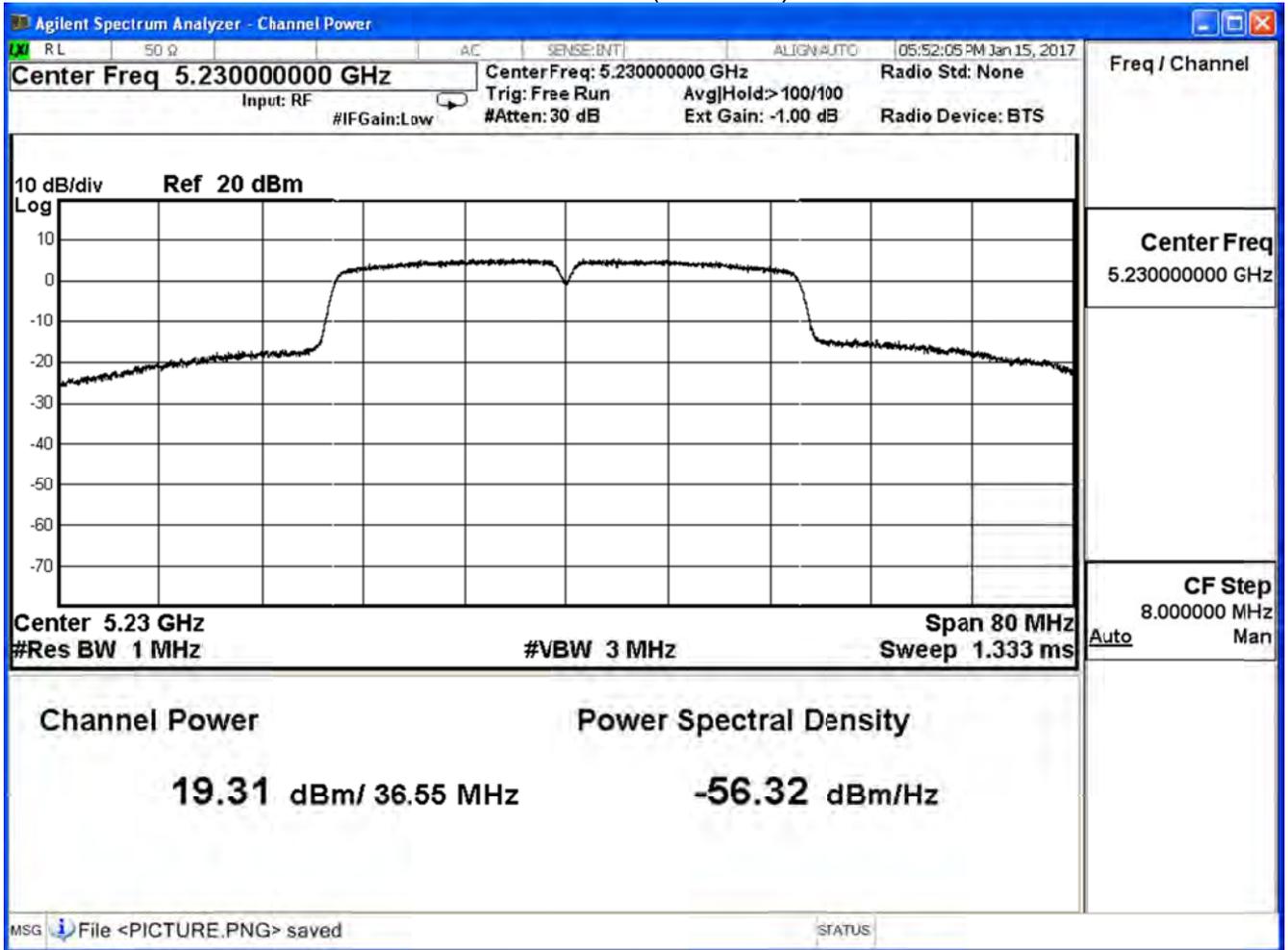
Directional Antenna=10log(N)+Max Gain+ Beamforming Gain=9.51dBi

Required Limit=30dBm-(9.51dBi-6dB)=26.49dBm

Channel 38 (5190MHz)



Channel 46 (5230MHz)



Product	Lyra mini		
Test Item	Peak Transmit power		
Test Mode	Mode 3: Tx-AD2037320910LF-BF Mode		
Date of Test	2017/01/15	Test Site	SR10-H

IEEE 802.11n40 (ANT 1)			
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)
38	5190	15.46	≤ 26.49
46	5230	19.40	≤ 26.49

The worst emission of data rate is 13.5Mbps.

Peak Power Output (dBm)										
MCS Index		0	1	2	3	4	5	6	7	Required Limit
Channel No	Frequency (MHz)	Data Rate								
		13.5	27	40.5	54	81	108	121.5	135	
38	5190	15.46	--	--	--	--	--	--	--	≤ 26.49
46	5230	19.40	19.30	19.20	19.00	18.80	18.56	18.32	18.08	≤ 26.49

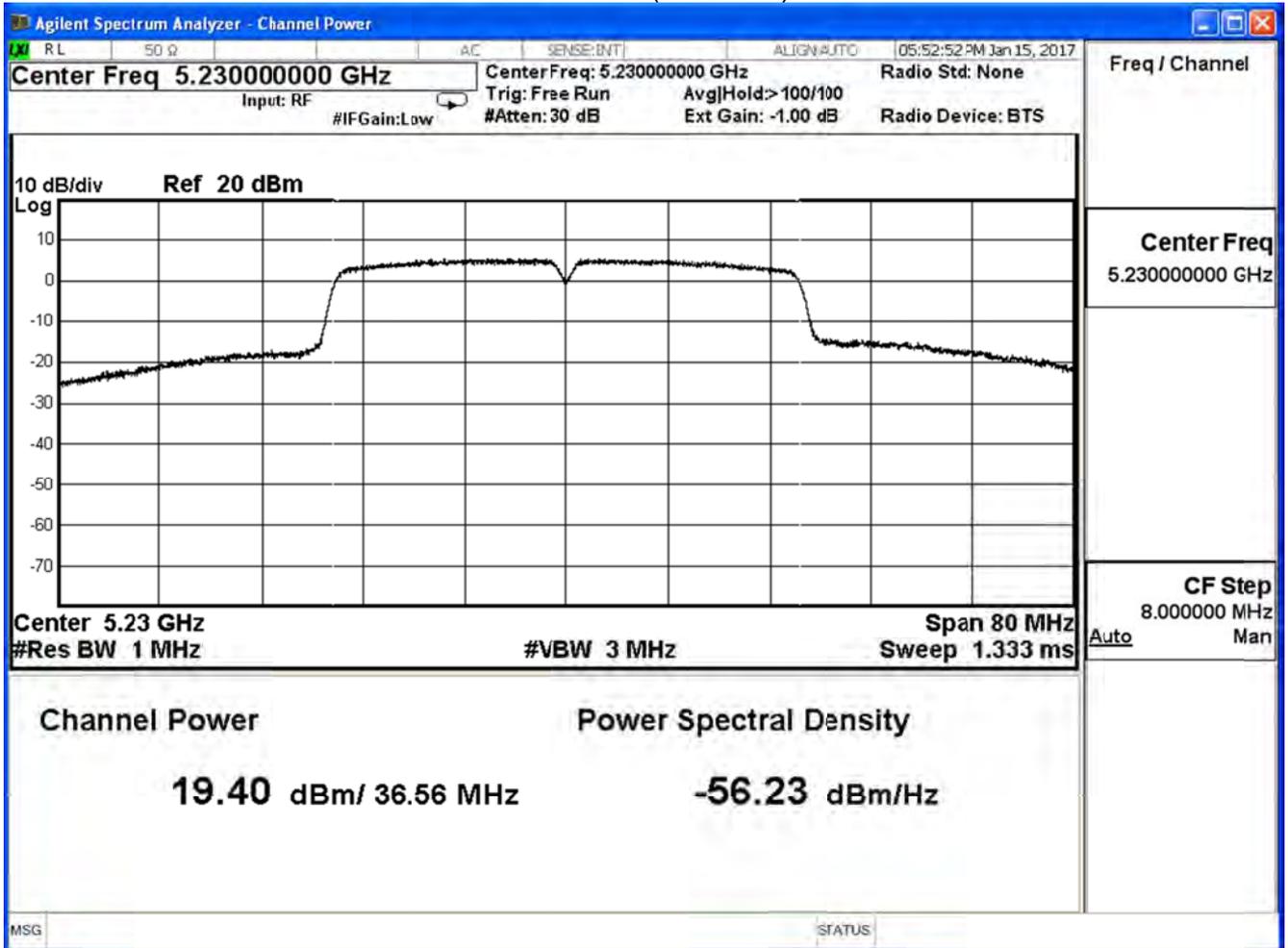
Note:

Directional Antenna=10log(N)+Max Gain+ Beamforming Gain=9.51dBi

Required Limit=30dBm-(9.51dBi-6dB)=26.49dBm



Channel 46 (5230MHz)



Product	Lyra mini		
Test Item	Peak Transmit power		
Test Mode	Mode 3: Tx-AD2037320910LF-BF Mode		
Date of Test	2017/01/15	Test Site	SR10-H

IEEE 802.11n40 (ANT 0+1)			
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)
38	5190	18.43	$\leq 26.49$
46	5230	22.37	$\leq 26.49$

The worst emission of data rate is 13.5 Mbps.

Peak Power Output (dBm)										
MCS Index		0	1	2	3	4	5	6	7	Required Limit
Channel No	Frequency (MHz)	Data Rate								
		13.5	27	40.5	54	81	108	121.5	135	
38	5190	18.43	--	--	--	--	--	--	--	$\leq 26.49$
46	5230	22.37	22.17	21.97	21.87	21.67	21.55	21.31	21.19	$\leq 26.49$

Note:

Directional Antenna= $10\log(N)+\text{Max Gain}+\text{Beamforming Gain}=9.51\text{dBi}$

Required Limit= $30\text{dBm}-(9.51\text{dBi}-6\text{dB})=26.49\text{dBm}$

Product	Lyra mini		
Test Item	Peak Transmit power		
Test Mode	Mode 3: Tx-AD2037320910LF-BF Mode		
Date of Test	2017/01/15	Test Site	SR10-H

IEEE 802.11ac80 (ANT 0)			
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)
42	5210	13.65	≤ 26.49

The worst emission of data rate is 29.3 Mbps.

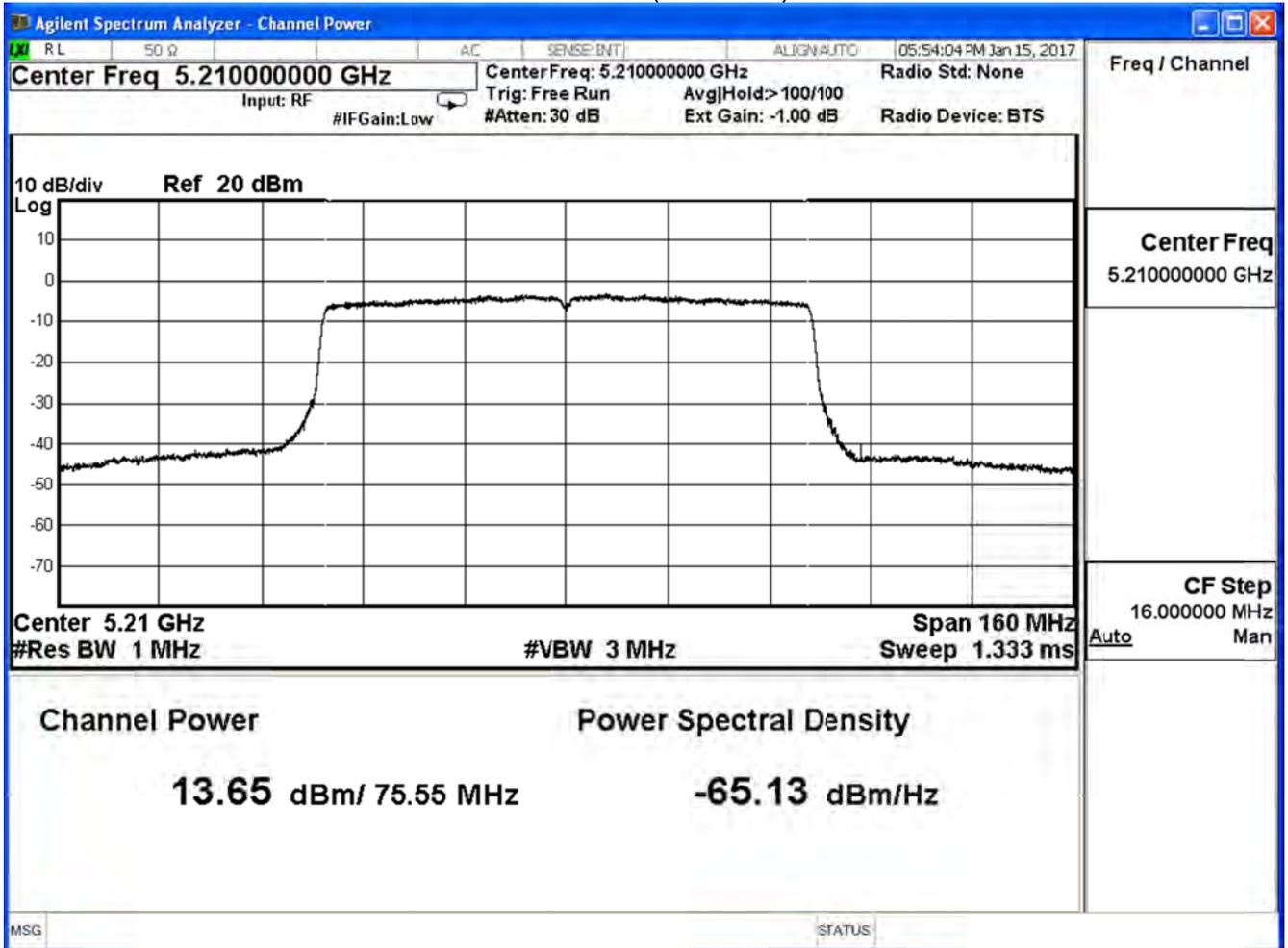
Peak Power Output (dBm)											
MCS Index		0	1	2	3	4	5	6	7	8	Require Limit
Channel No	Frequency (MHz)	Data Rate									
		29.3	58.5	87.8	117	175.5	234	263.3	292.5	351	≤ 26.49
42	5210	13.65	13.55	13.45	13.25	13.15	13.05	12.81	12.69	12.57	

Note:

Directional Antenna=10log(N)+Max Gain+ Beamforming Gain=9.51dBi

Required Limit=30dBm-(9.51dBi-6dB)=26.49dBm

Channel 42 (5210MHz)



Product	Lyra mini		
Test Item	Peak Transmit power		
Test Mode	Mode 3: Tx-AD2037320910LF-BF Mode		
Date of Test	2017/01/15	Test Site	SR10-H

IEEE 802.11ac80 (ANT 1)			
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)
42	5210	13.66	≤ 26.49

The worst emission of data rate is 29.3 Mbps.

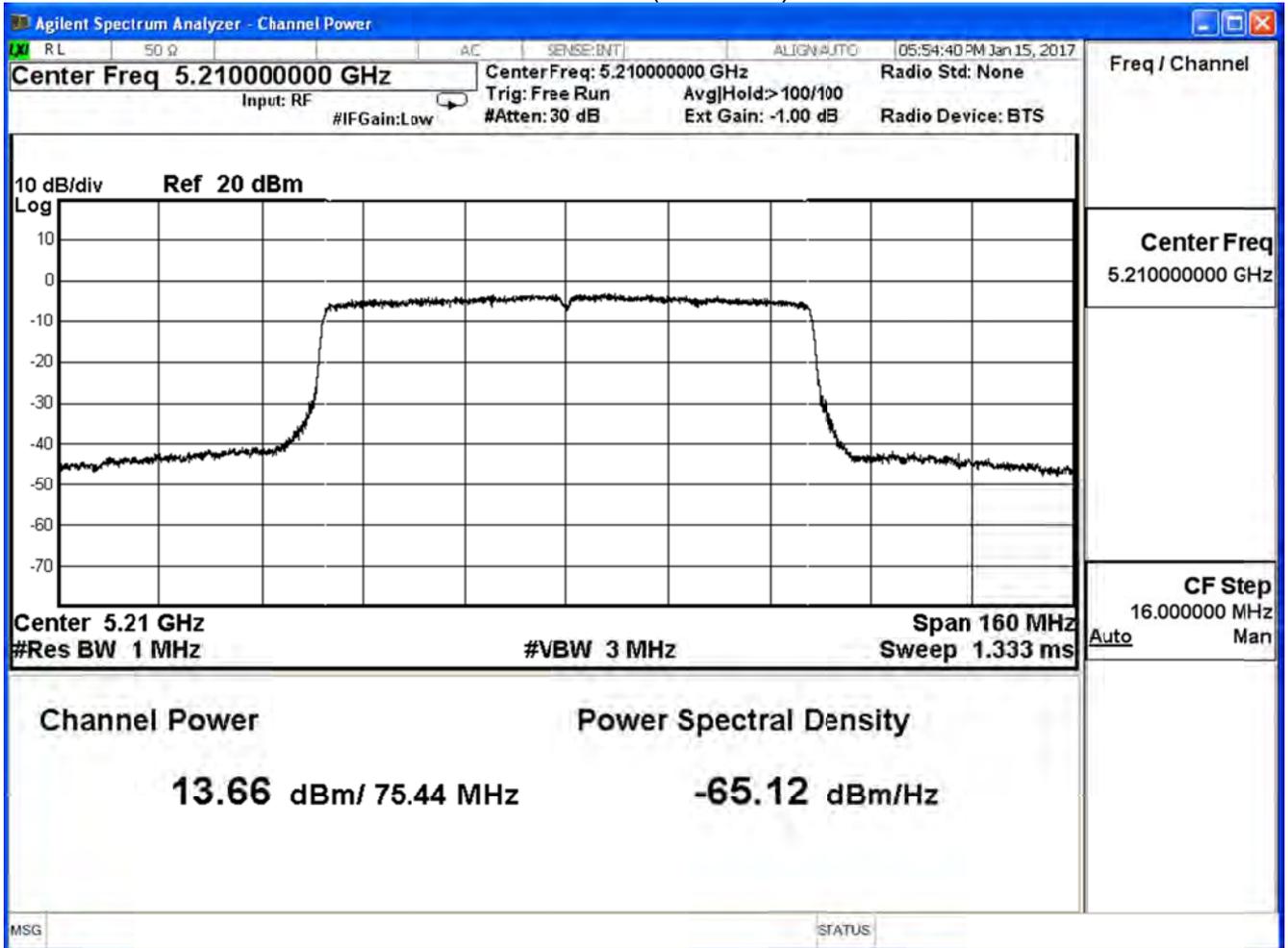
Peak Power Output (dBm)											
MCS Index		0	1	2	3	4	5	6	7	8	Require Limit
Channel No	Frequency (MHz)	Data Rate									
		29.3	58.5	87.8	117	175.5	234	263.3	292.5	351	≤ 26.49
42	5210	13.66	13.56	13.36	13.16	12.96	12.86	12.62	12.38	12.14	

Note:

Directional Antenna=10log(N)+Max Gain+ Beamforming Gain=9.51dBi

Required Limit=30dBm-(9.51dBi-6dB)=26.49dBm

Channel 42 (5210MHz)



Product	Lyra mini		
Test Item	Peak Transmit power		
Test Mode	Mode 3: Tx-AD2037320910LF-BF Mode		
Date of Test	2017/01/15	Test Site	SR10-H

IEEE 802.11ac80 (ANT 0+1)			
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)
42	5210	16.67	≤ 26.49

The worst emission of data rate is 29.3 Mbps.

Peak Power Output (dBm)											
MCS Index		0	1	2	3	4	5	6	7	8	Require Limit
Channel No	Frequency (MHz)	Data Rate									
		29.3	58.5	87.8	117	175.5	234	263.3	292.5	351	≤ 26.49
42	5210	16.67	16.46	16.36	16.16	15.96	15.76	15.52	15.28	15.04	

Note:

Directional Antenna=10log(N)+Max Gain+ Beamforming Gain=9.51dBi

Required Limit=30dBm-(9.51dBi-6dB)=26.49dBm

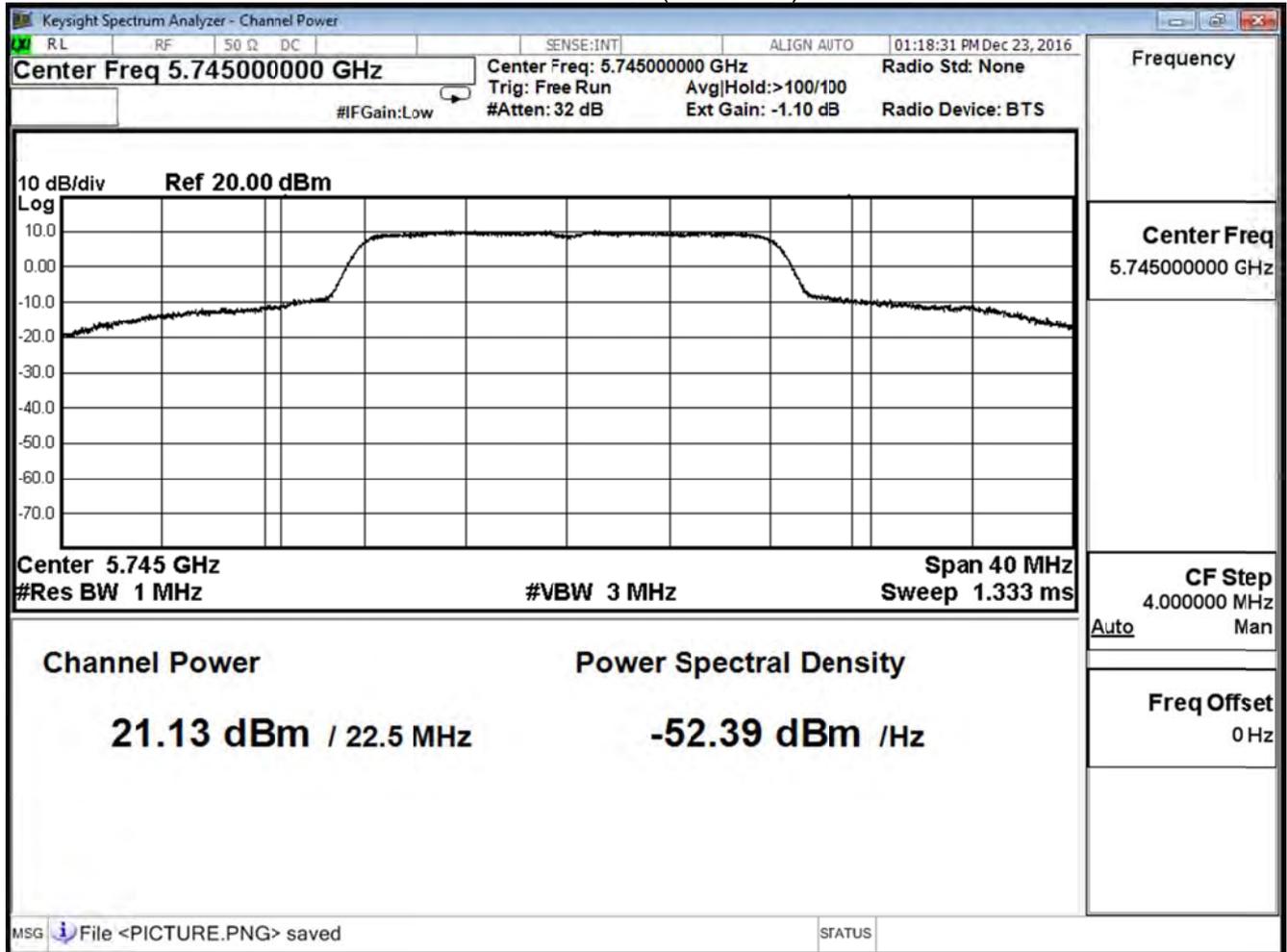
Product	Lyra mini		
Test Item	Peak Transmit power		
Test Mode	Mode 1: Tx-AD2037320910LF-CDD Mode		
Date of Test	2016/12/23	Test Site	SR10-H

IEEE 802.11a (ANT 0)			
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)
149	5745	21.13	$\leq 30$
157	5785	21.49	$\leq 30$
165	5825	21.59	$\leq 30$

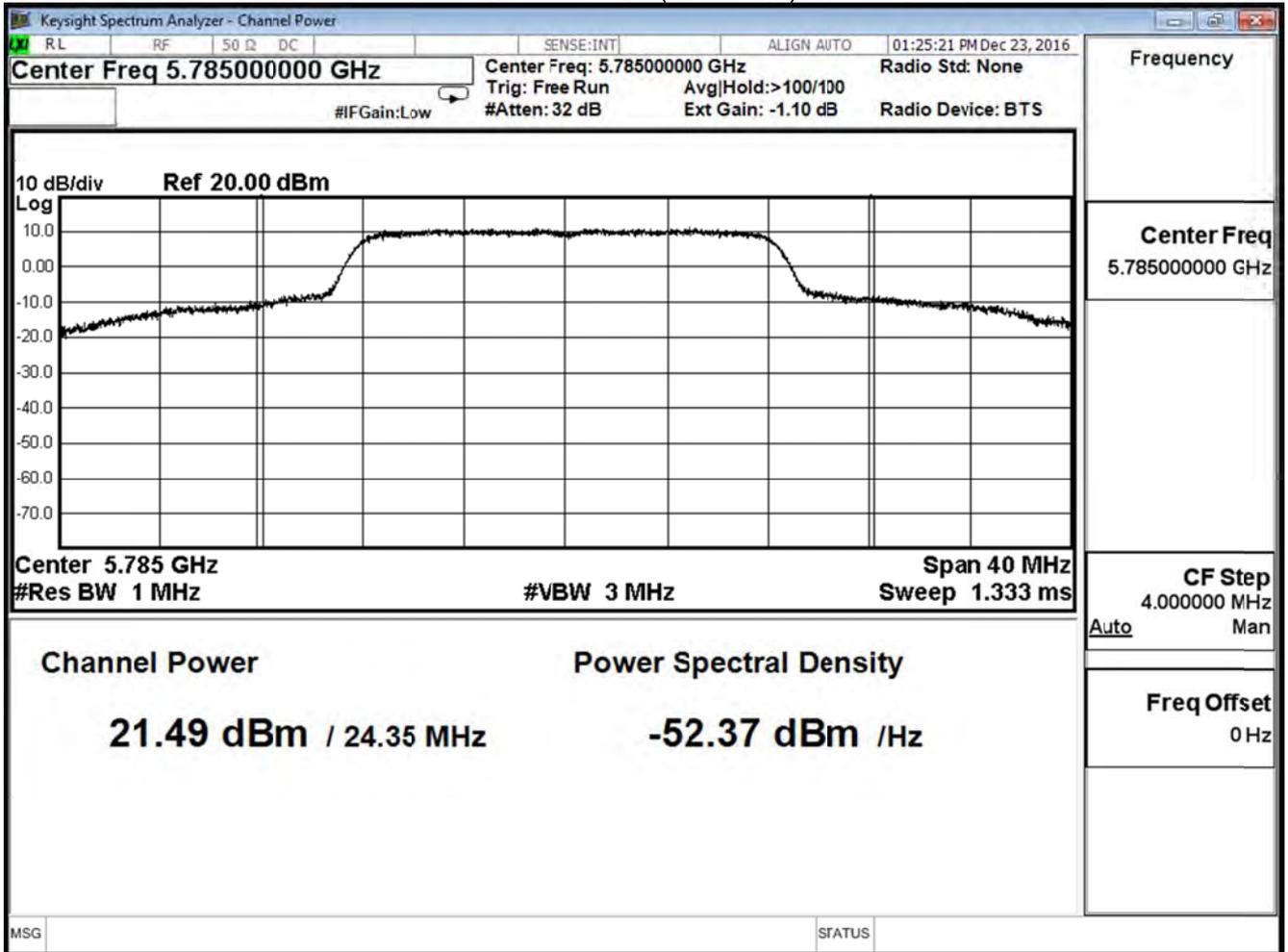
The worst emission of data rate is 6 Mbps.

Peak Power Output (dBm)										
Channel No	Frequency (MHz)	Data Rate								Required Limit
		6	9	12	18	24	36	48	54	
149	5745	21.13	--	--	--	--	--	--	--	$\leq 30$
157	5785	21.49	21.36	21.29	21.09	20.99	20.75	20.63	20.39	$\leq 30$
165	5825	21.59	--	--	--	--	--	--	--	$\leq 30$

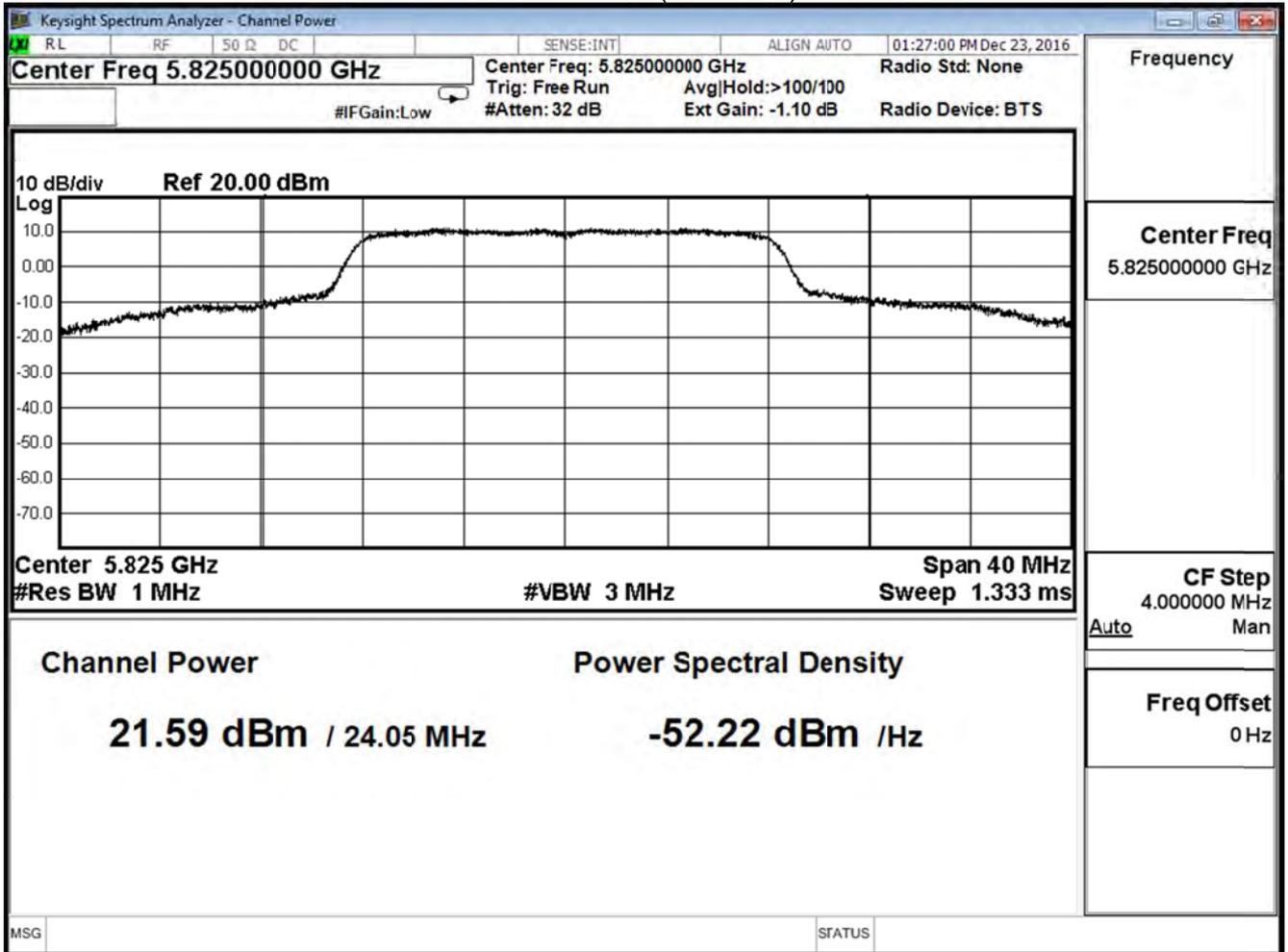
Channel 149 (5745MHz)



Channel 157 (5785MHz)



Channel 165 (5825MHz)



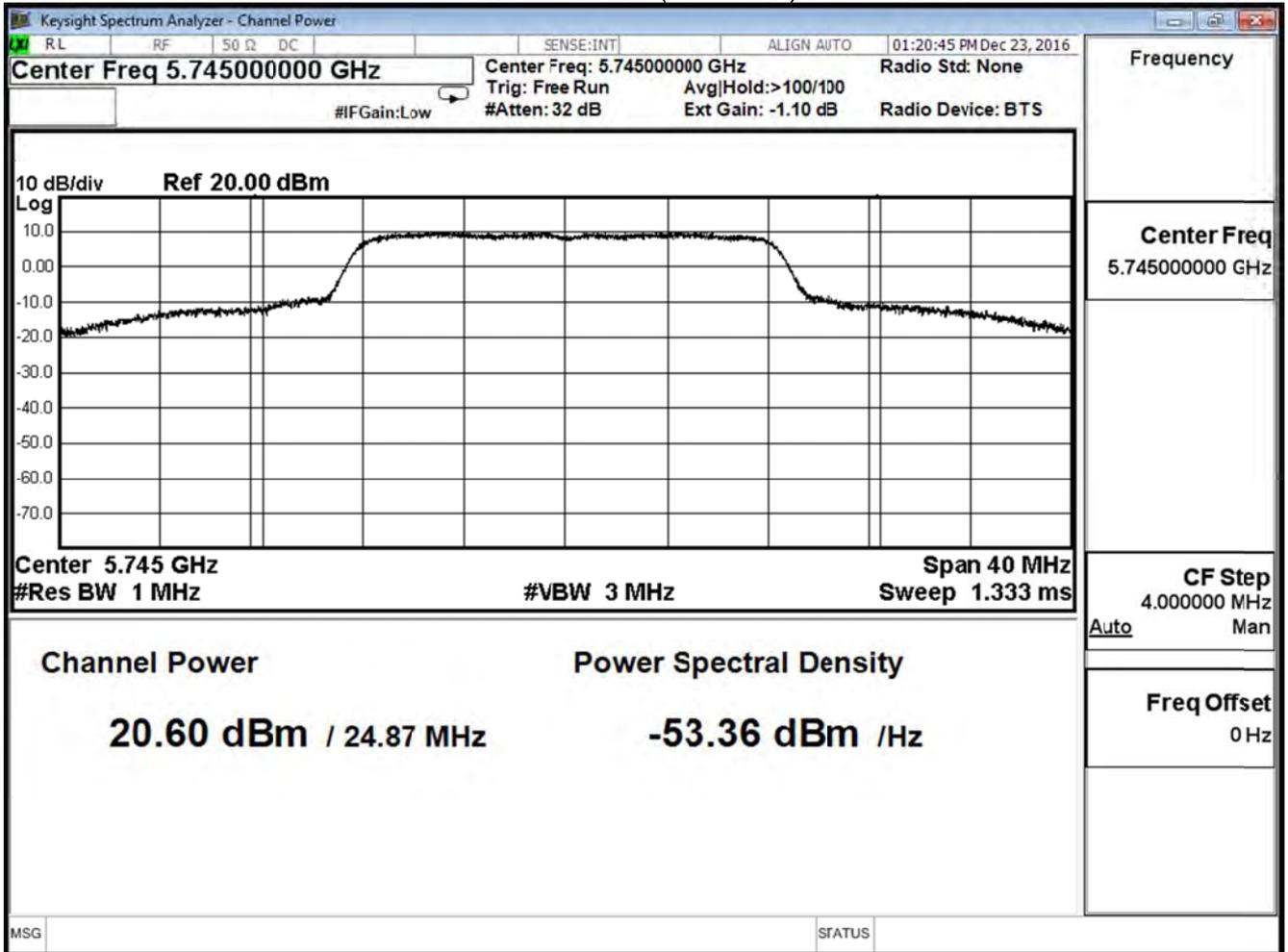
Product	Lyra mini		
Test Item	Peak Transmit power		
Test Mode	Mode 1: Tx-AD2037320910LF-CDD Mode		
Date of Test	2016/12/23	Test Site	SR10-H

IEEE 802.11a (ANT 1)			
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)
149	5745	20.60	$\leq 30$
157	5785	20.69	$\leq 30$
165	5825	21.45	$\leq 30$

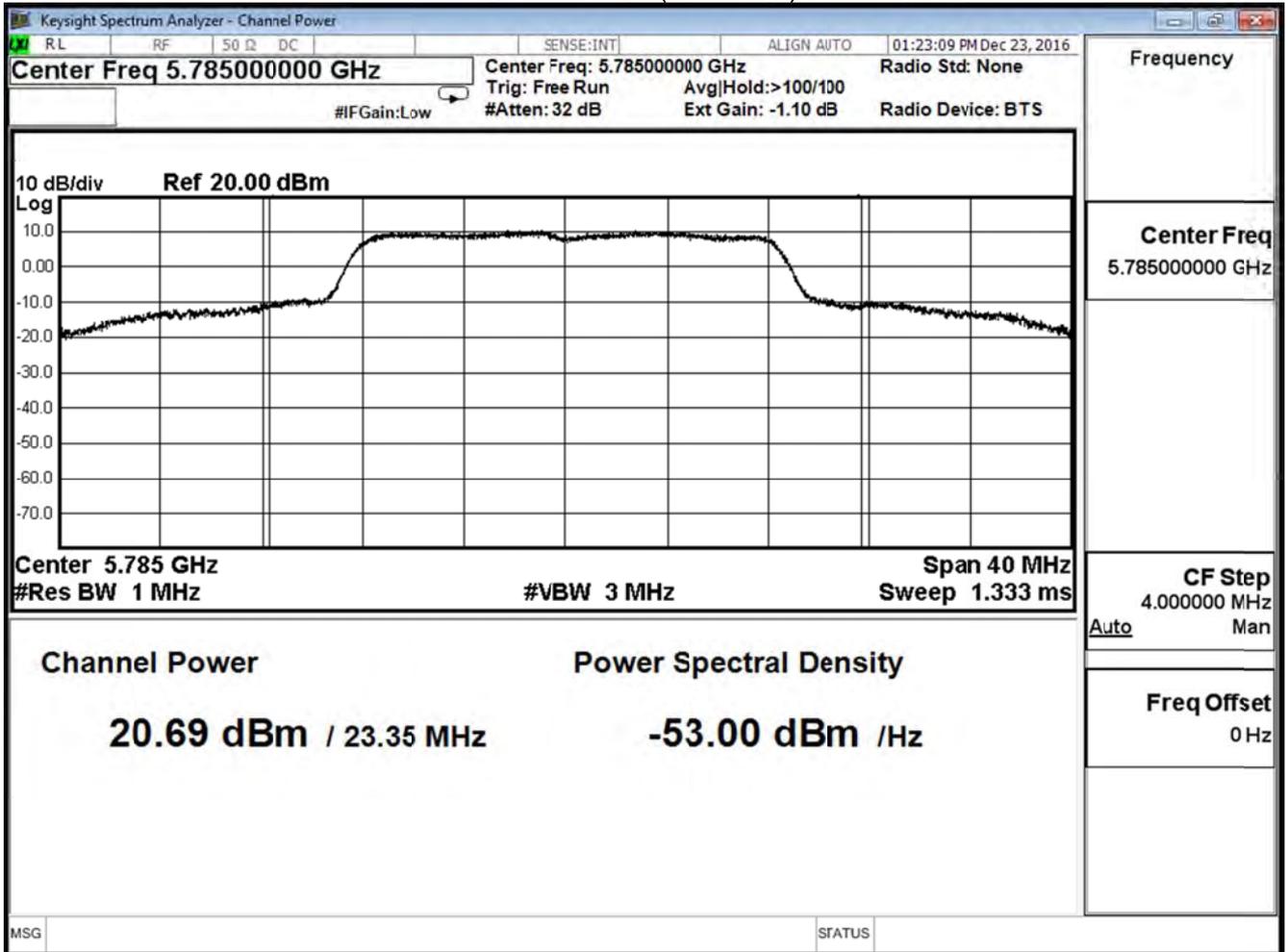
The worst emission of data rate is 6 Mbps.

Peak Power Output (dBm)										
Channel No	Frequency (MHz)	Data Rate								Required Limit
		6	9	12	18	24	36	48	54	
149	5745	20.60	--	--	--	--	--	--	--	$\leq 30$
157	5785	20.69	20.63	20.59	20.39	20.29	20.17	19.93	19.81	$\leq 30$
165	5825	21.45	--	--	--	--	--	--	--	$\leq 30$

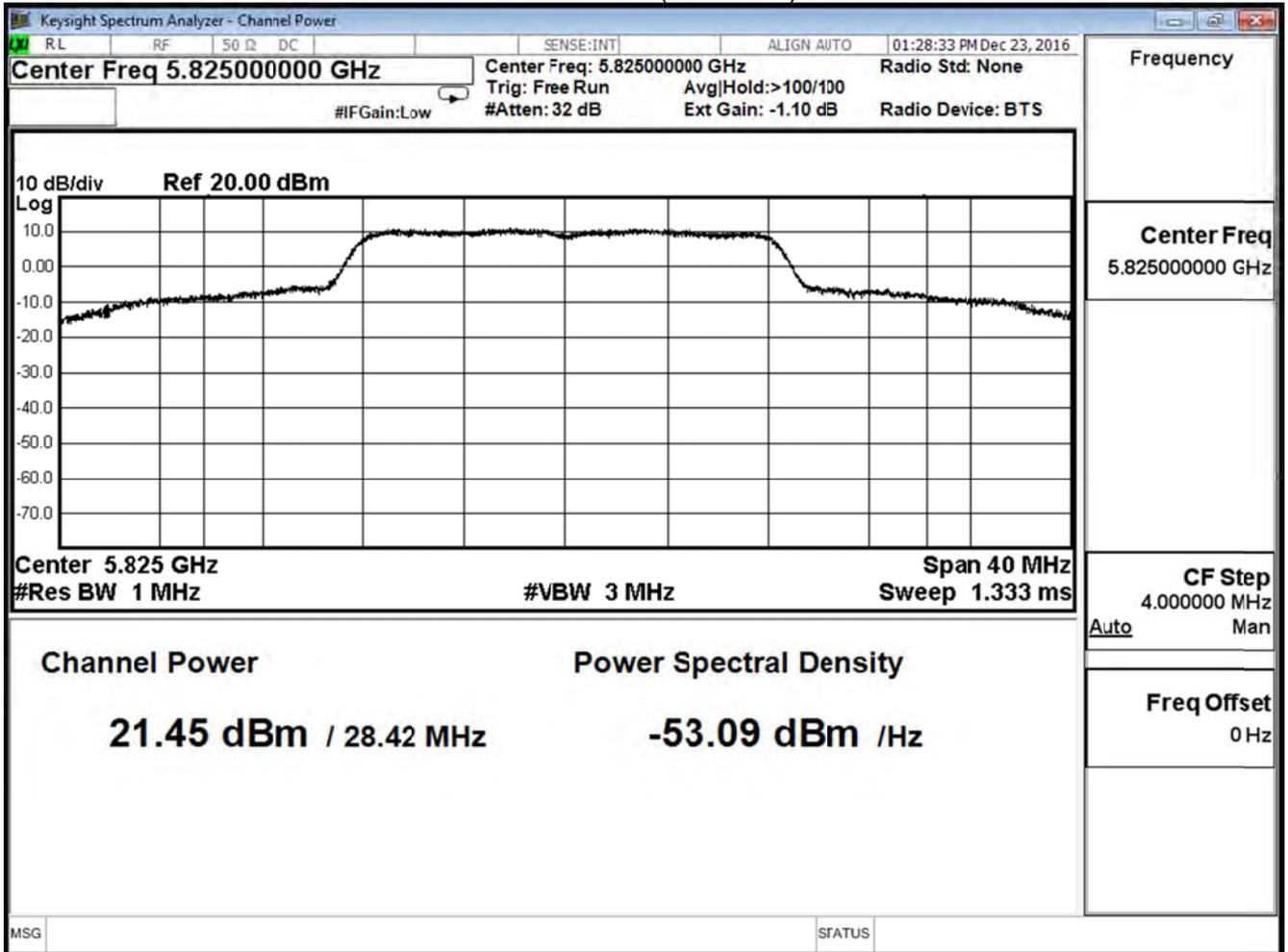
Channel 149 (5745MHz)



Channel 157 (5785MHz)



Channel 165 (5825MHz)



Product	Lyra mini		
Test Item	Peak Transmit power		
Test Mode	Mode 1: Tx-AD2037320910LF-CDD Mode		
Date of Test	2016/12/23	Test Site	SR10-H

IEEE 802.11a (ANT 0+1)			
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)
149	5745	23.88	≤ 30
157	5785	24.12	≤ 30
165	5825	24.53	≤ 30

The worst emission of data rate is 6 Mbps.

Peak Power Output (dBm)										
Channel No	Frequency (MHz)	Data Rate								Required Limit
		6	9	12	18	24	36	48	54	
149	5745	23.88	--	--	--	--	--	--	--	≤ 30
157	5785	24.12	24.06	24.02	23.82	23.62	23.38	23.14	23.02	≤ 30
165	5825	24.53	--	--	--	--	--	--	--	≤ 30

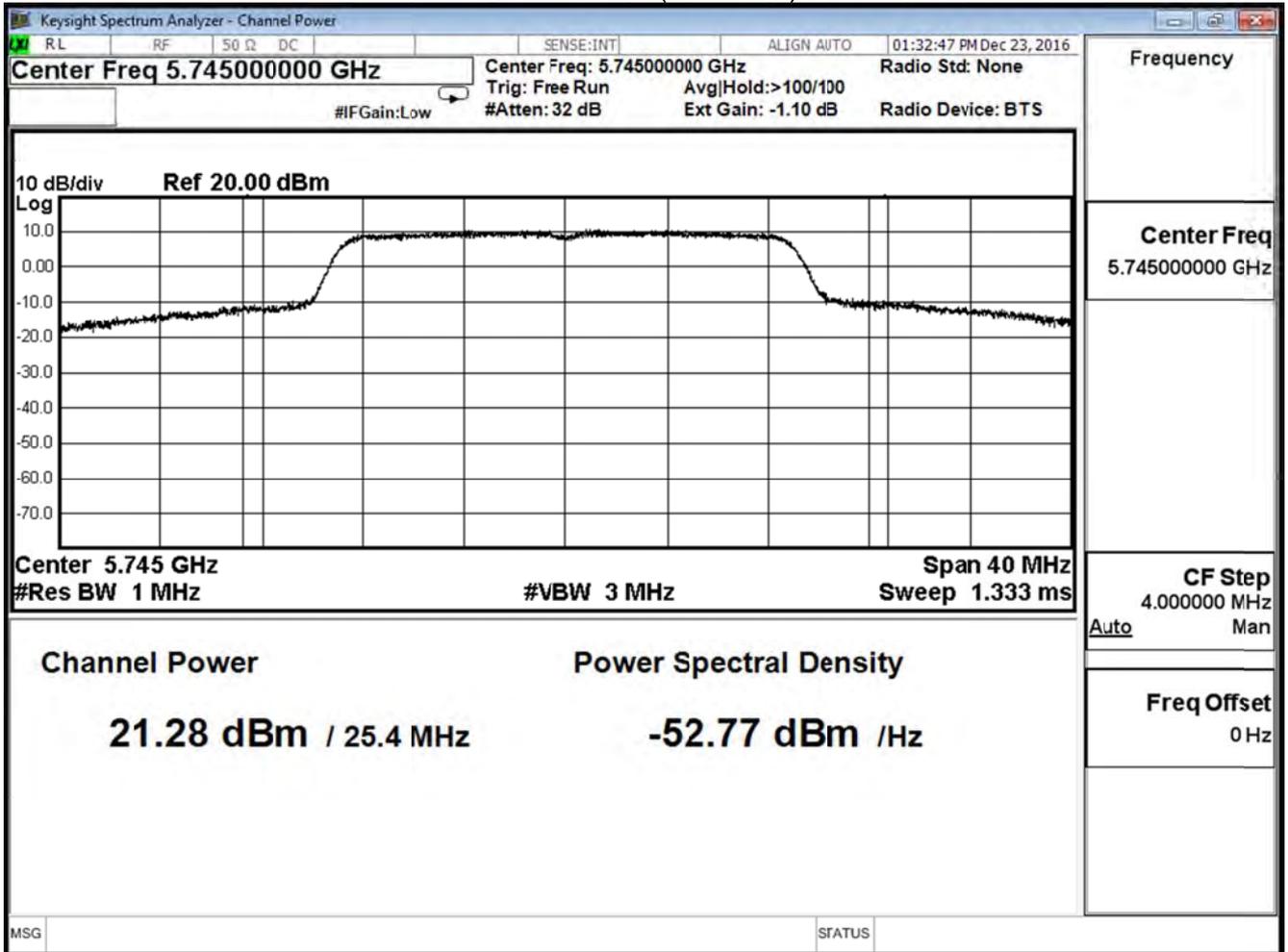
Product	Lyra mini		
Test Item	Peak Transmit power		
Test Mode	Mode 1: Tx-AD2037320910LF-CDD Mode		
Date of Test	2016/12/23	Test Site	SR10-H

IEEE 802.11n20 (ANT 0)			
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)
149	5745	21.28	$\leq 30$
157	5785	21.47	$\leq 30$
165	5825	21.34	$\leq 30$

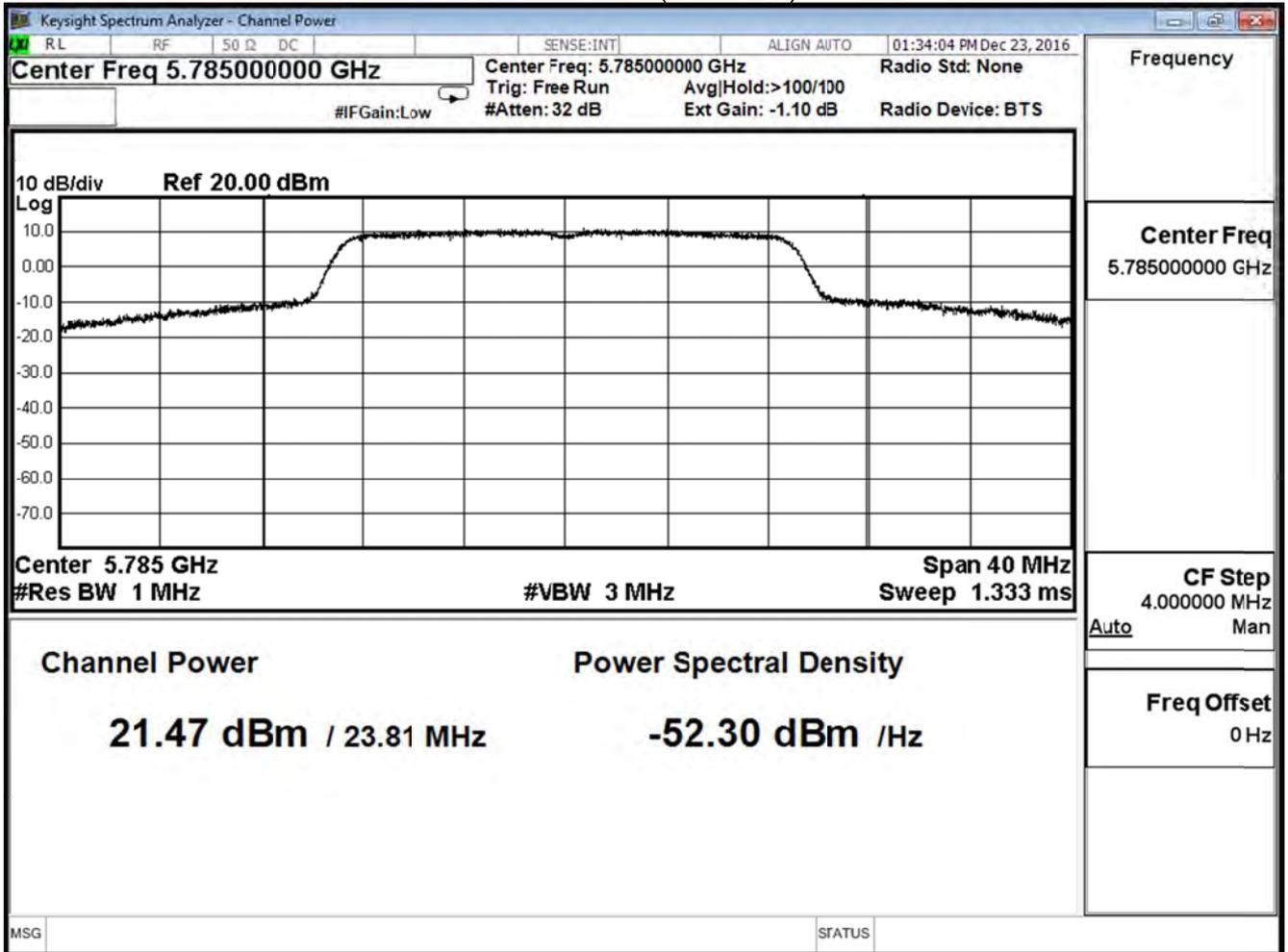
The worst emission of data rate is 6.5 Mbps

Peak Power Output (dBm)										
MCS Index		0	1	2	3	4	5	6	7	Required Limit
Channel No	Frequency (MHz)	Data Rate								
		6.5	13	19.5	26	39	52	58.5	65	
149	5745	21.28	--	--	--	--	--	--	--	$\leq 30$
157	5785	21.47	21.36	21.26	21.06	20.94	20.70	20.40	20.28	$\leq 30$
165	5825	21.34	--	--	--	--	--	--	--	$\leq 30$

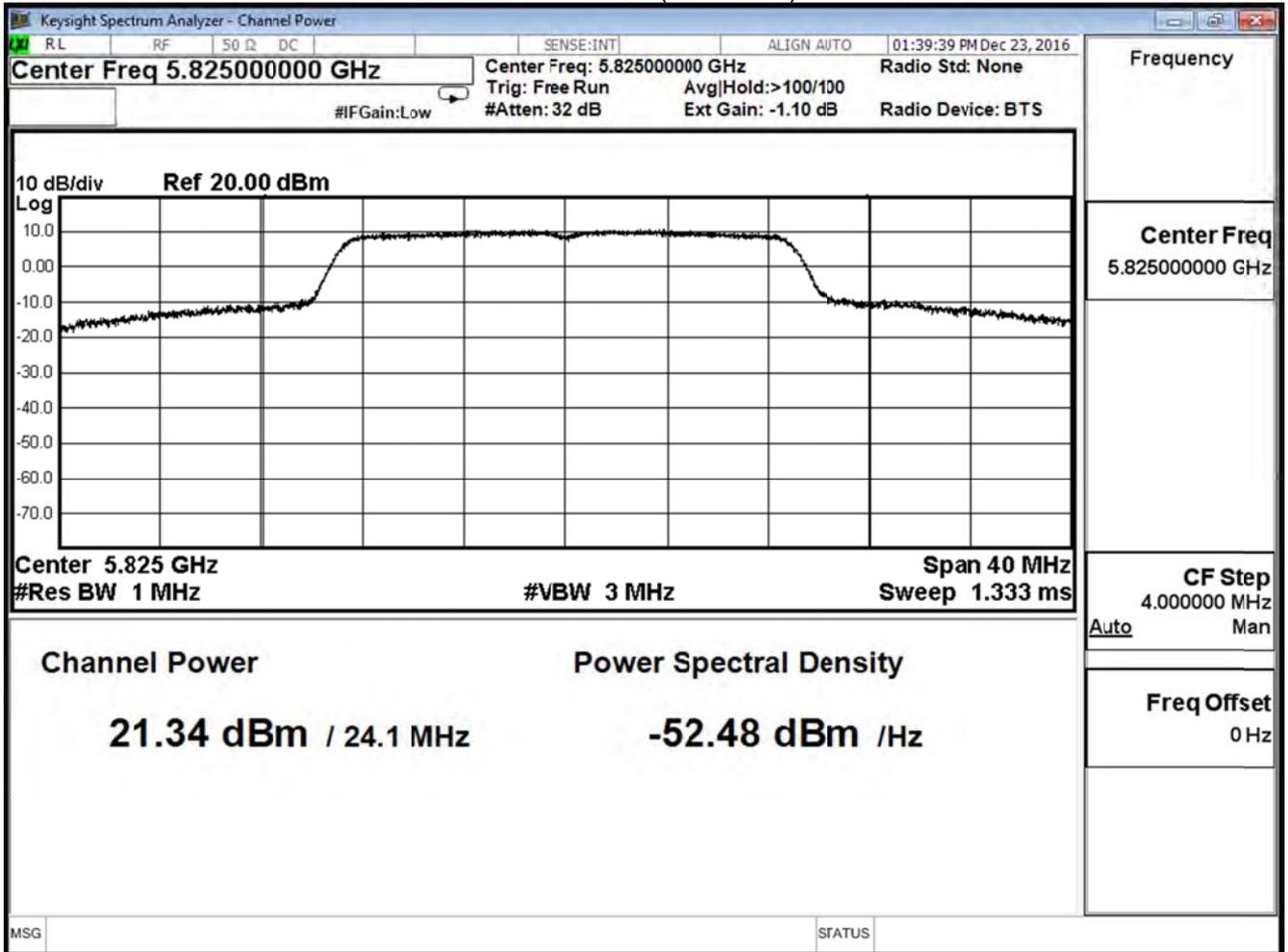
Channel 149 (5745MHz)



Channel 157 (5785MHz)



Channel 165 (5825MHz)



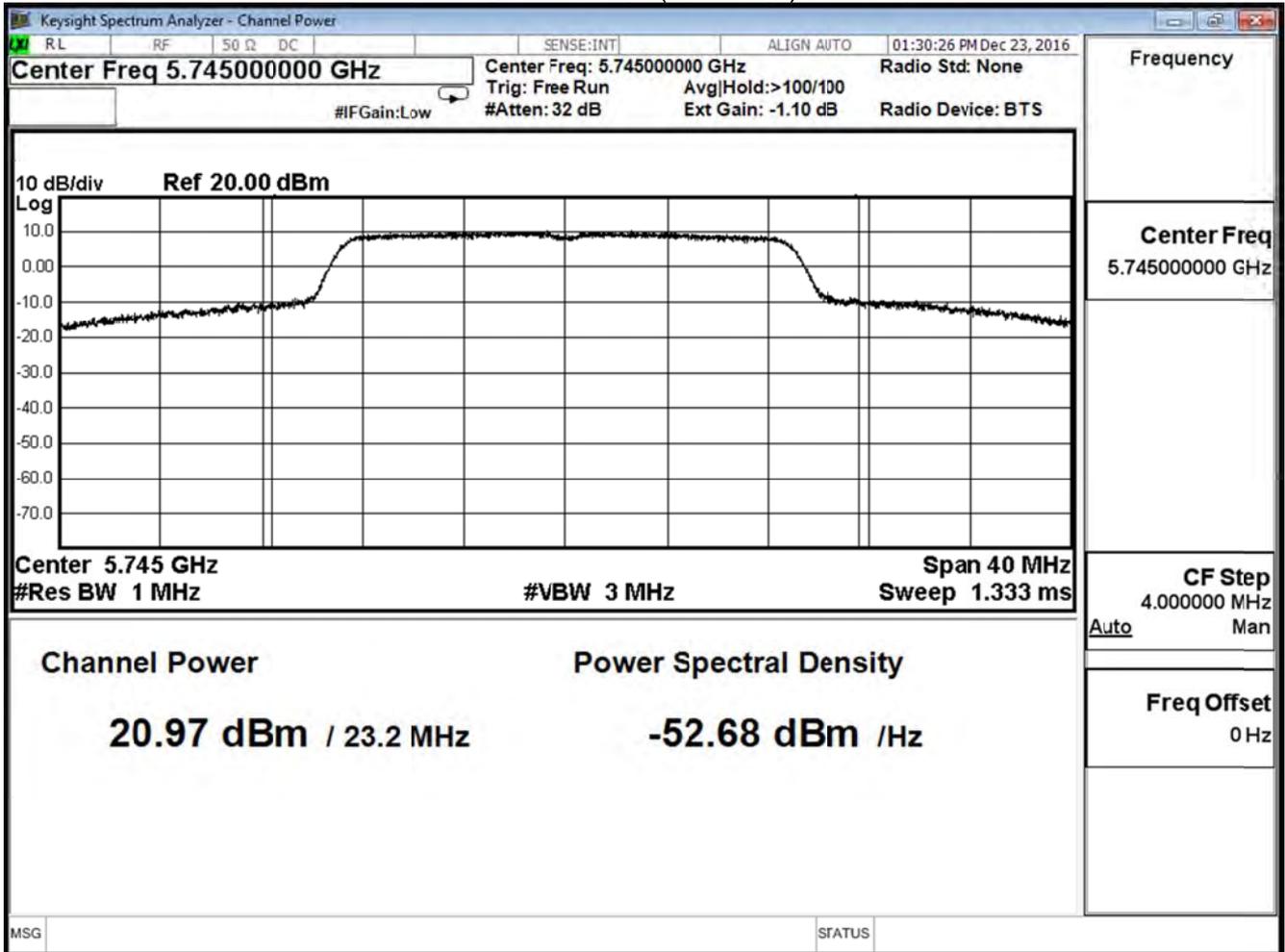
Product	Lyra mini		
Test Item	Peak Transmit power		
Test Mode	Mode 1: Tx-AD2037320910LF-CDD Mode		
Date of Test	2016/12/23	Test Site	SR10-H

IEEE 802.11n20 (ANT 1)			
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)
149	5745	20.97	≤ 30
157	5785	20.52	≤ 30
165	5825	21.33	≤ 30

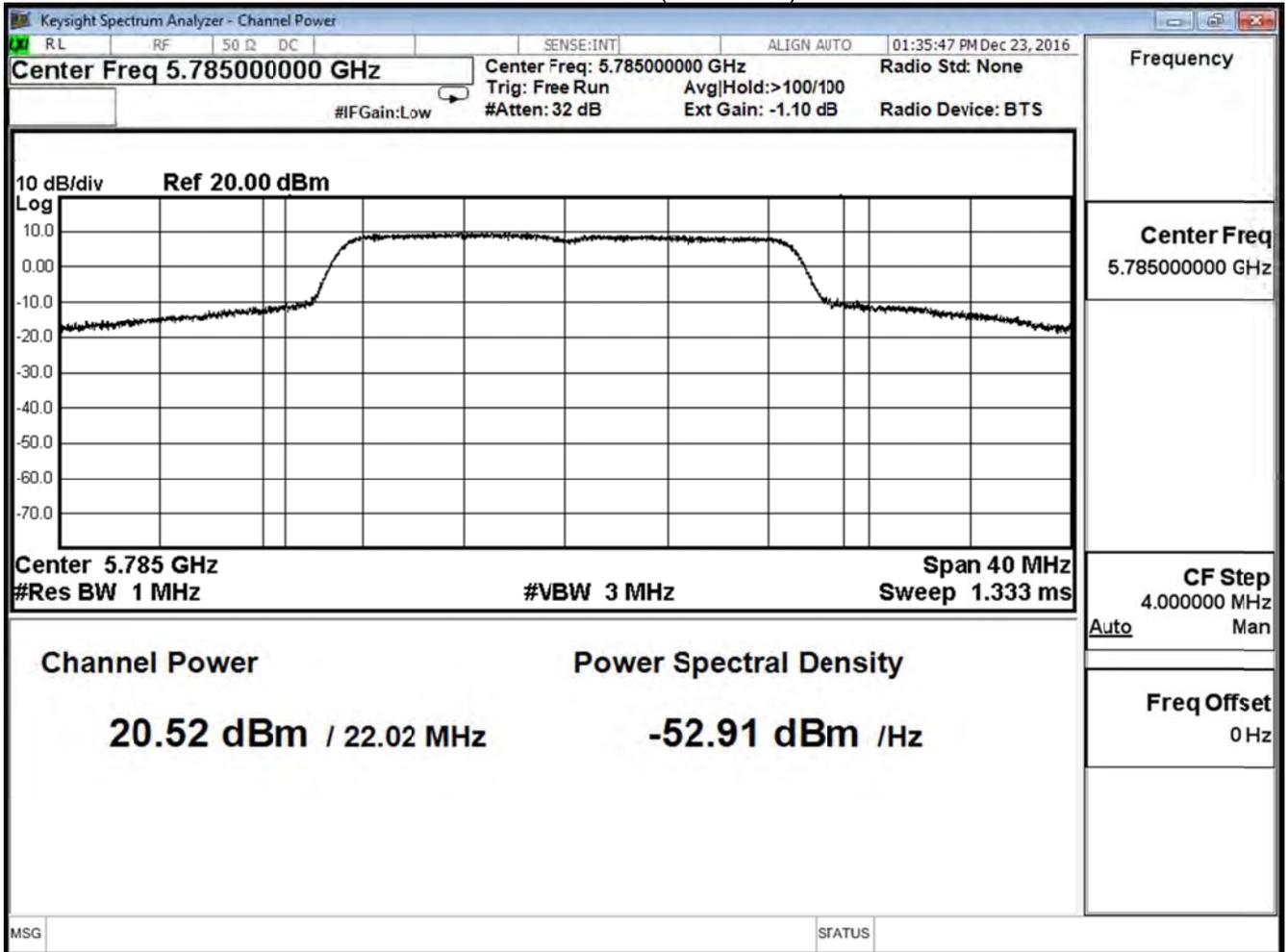
The worst emission of data rate is 6.5 Mbps

Peak Power Output (dBm)										
MCS Index		0	1	2	3	4	5	6	7	Required Limit
Channel No	Frequency (MHz)	Data Rate								
		6.5	13	19.5	26	39	52	58.5	65	
149	5745	20.97	--	--	--	--	--	--	--	≤ 30
157	5785	20.52	20.32	20.08	19.88	19.78	19.65	19.41	19.17	≤ 30
165	5825	21.33	--	--	--	--	--	--	--	≤ 30

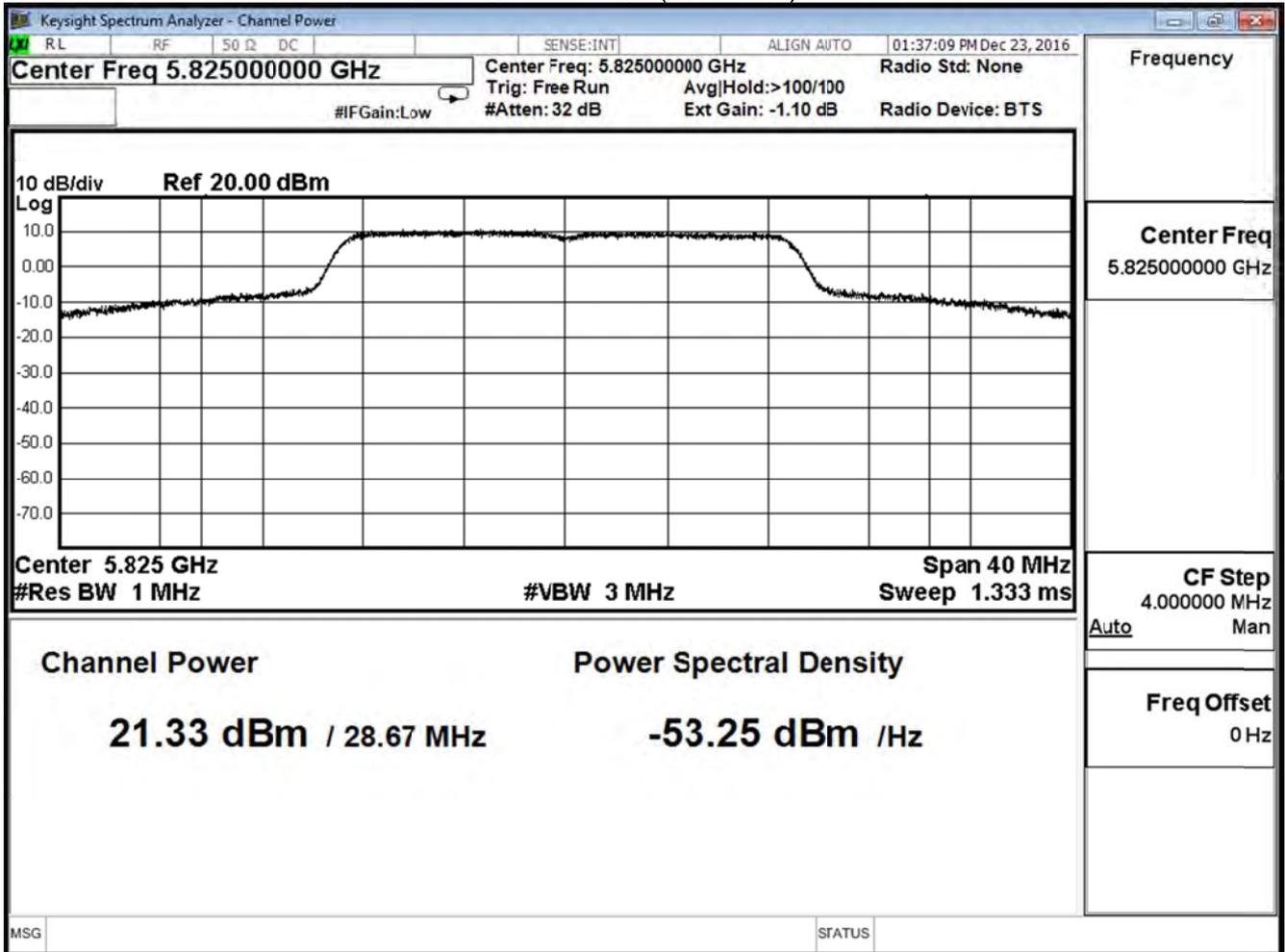
Channel 149 (5745MHz)



Channel 157 (5785MHz)



Channel 165 (5825MHz)



Product	Lyra mini		
Test Item	Peak Transmit power		
Test Mode	Mode 1: Tx-AD2037320910LF-CDD Mode		
Date of Test	2016/12/23	Test Site	SR10-H

IEEE 802.11n20 (ANT 0+1)			
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)
149	5745	24.14	$\leq 30$
157	5785	24.03	$\leq 30$
165	5825	24.35	$\leq 30$

The worst emission of data rate is 6.5 Mbps

Peak Power Output (dBm)										
MCS Index		0	1	2	3	4	5	6	7	Required Limit
Channel No	Frequency (MHz)	Data Rate								
		6.5	13	19.5	26	39	52	58.5	65	
149	5745	24.14	--	--	--	--	--	--	--	$\leq 30$
157	5785	24.03	23.93	23.71	23.51	23.33	23.14	23.00	22.88	$\leq 30$
165	5825	24.35	--	--	--	--	--	--	--	$\leq 30$

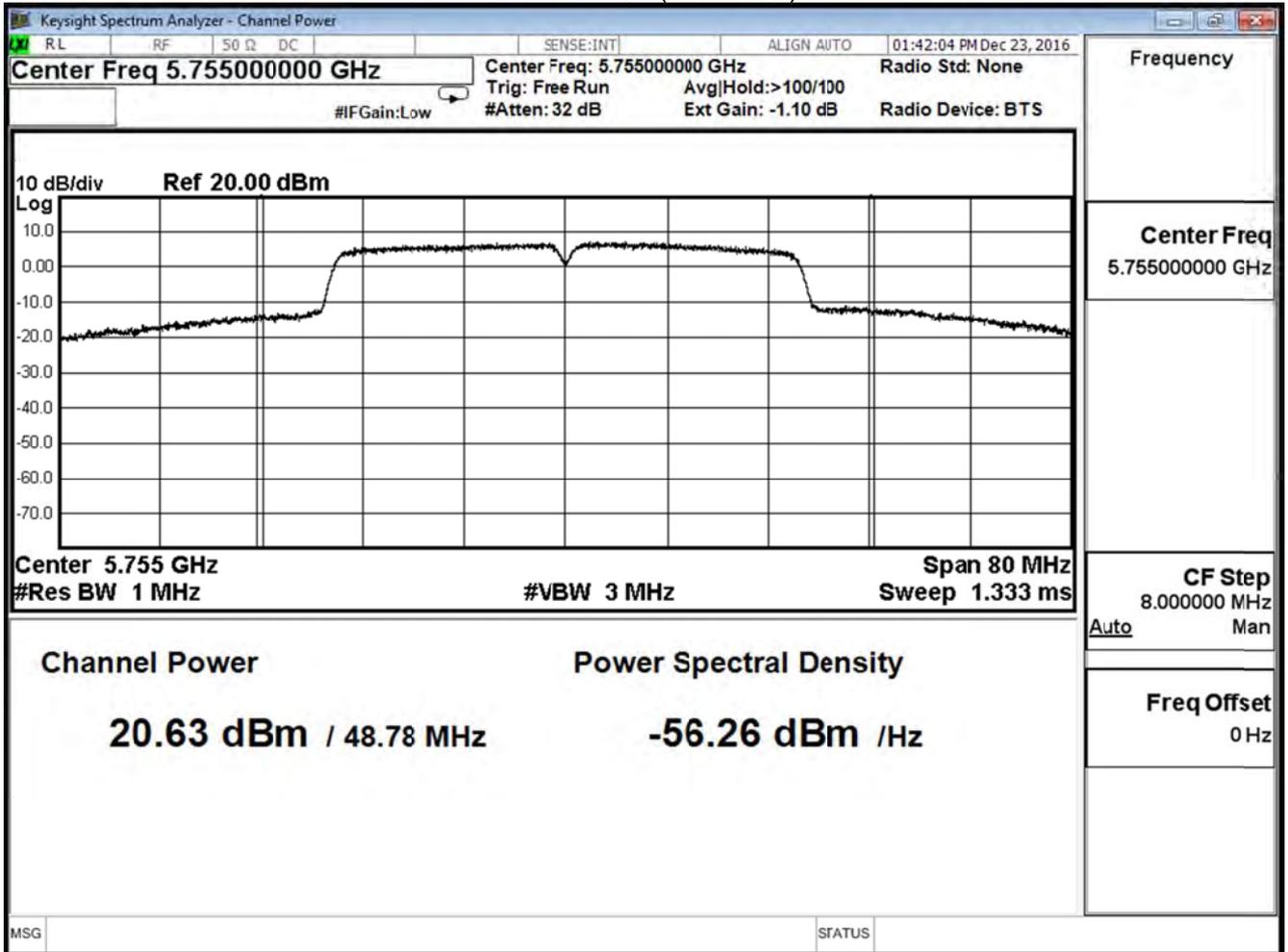
Product	Lyra mini		
Test Item	Peak Transmit power		
Test Mode	Mode 1: Tx-AD2037320910LF-CDD Mode		
Date of Test	2016/12/23	Test Site	SR10-H

IEEE 802.11n40 (ANT 0)			
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)
151	5755	20.63	$\leq 30$
159	5795	20.61	$\leq 30$

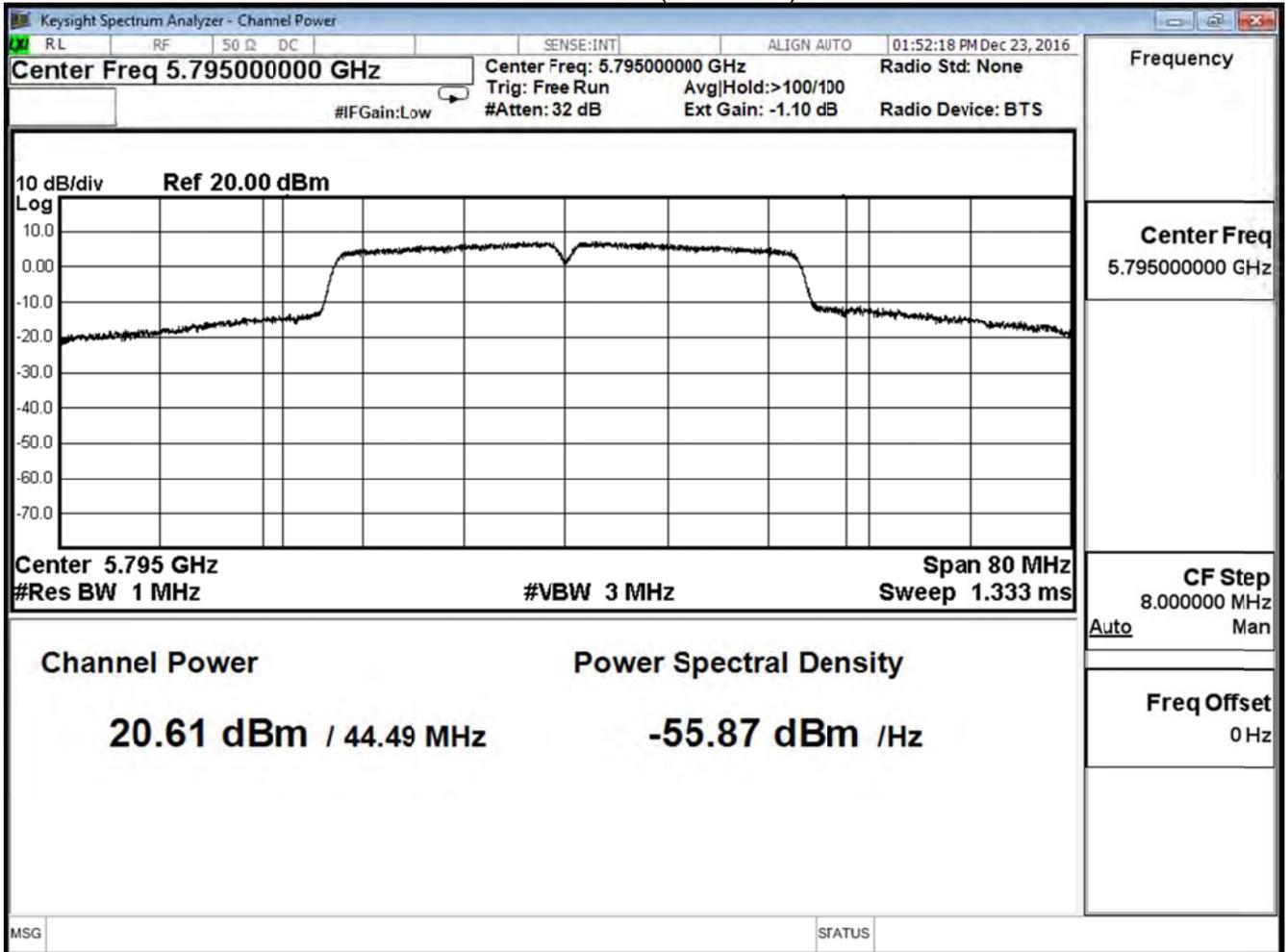
The worst emission of data rate is 13.5 Mbps.

Peak Power Output (dBm)										
MCS Index		0	1	2	3	4	5	6	7	Required Limit
Channel No	Frequency (MHz)	Data Rate								
		13.5	27	40.5	54	81	108	121.5	135	
151	5755	20.63	--	--	--	--	--	--	--	$\leq 30$
159	5795	20.61	20.51	20.31	20.21	20.01	19.77	19.65	19.41	$\leq 30$

Channel 151 (5755MHz)



Channel 159 (5795MHz)



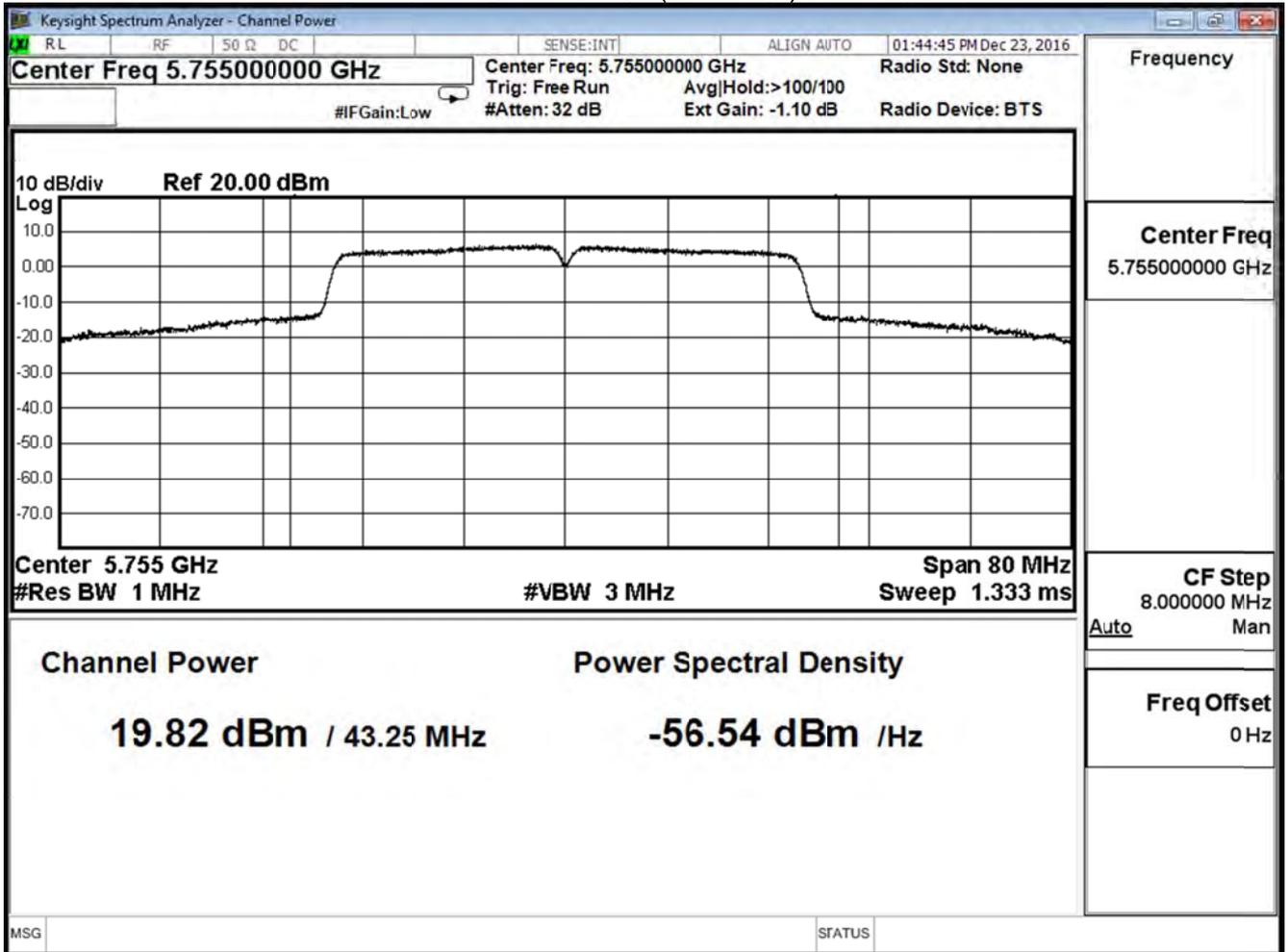
Product	Lyra mini		
Test Item	Peak Transmit power		
Test Mode	Mode 1: Tx-AD2037320910LF-CDD Mode		
Date of Test	2016/12/23	Test Site	SR10-H

IEEE 802.11n40 (ANT 1)			
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)
151	5755	19.82	≤ 30
159	5795	20.99	≤ 30

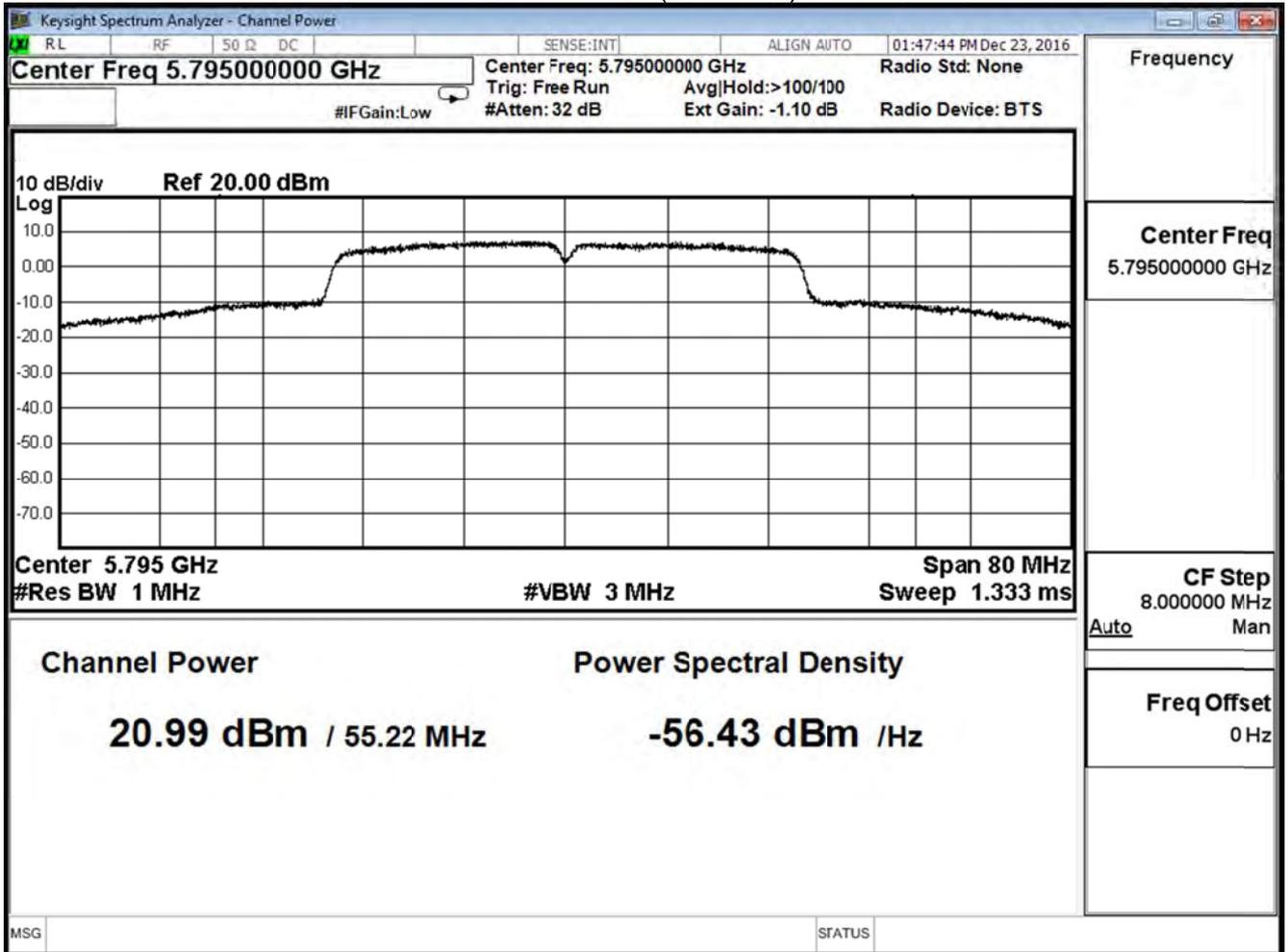
The worst emission of data rate is 13.5Mbps.

Peak Power Output (dBm)										
MCS Index		0	1	2	3	4	5	6	7	Required Limit
Channel No	Frequency (MHz)	Data Rate								
		13.5	27	40.5	54	81	108	121.5	135	
151	5755	19.82	--	--	--	--	--	--	--	≤ 30
159	5795	20.99	20.79	20.59	20.49	20.29	20.17	19.93	19.69	≤ 30

Channel 151 (5755MHz)



Channel 159 (5795MHz)



Product	Lyra mini		
Test Item	Peak Transmit power		
Test Mode	Mode 1: Tx-AD2037320910LF-CDD Mode		
Date of Test	2016/12/23	Test Site	SR10-H

IEEE 802.11n40 (ANT 0+1)			
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)
151	5755	23.25	≤ 30
159	5795	23.81	≤ 30

The worst emission of data rate is 13.5 Mbps.

Peak Power Output (dBm)										
MCS Index		0	1	2	3	4	5	6	7	Required Limit
Channel No	Frequency (MHz)	Data Rate								
		13.5	27	40.5	54	81	108	121.5	135	
151	5755	23.25	--	--	--	--	--	--	--	≤ 30
159	5795	23.81	23.61	23.46	23.36	23.21	23.09	22.91	22.73	≤ 30

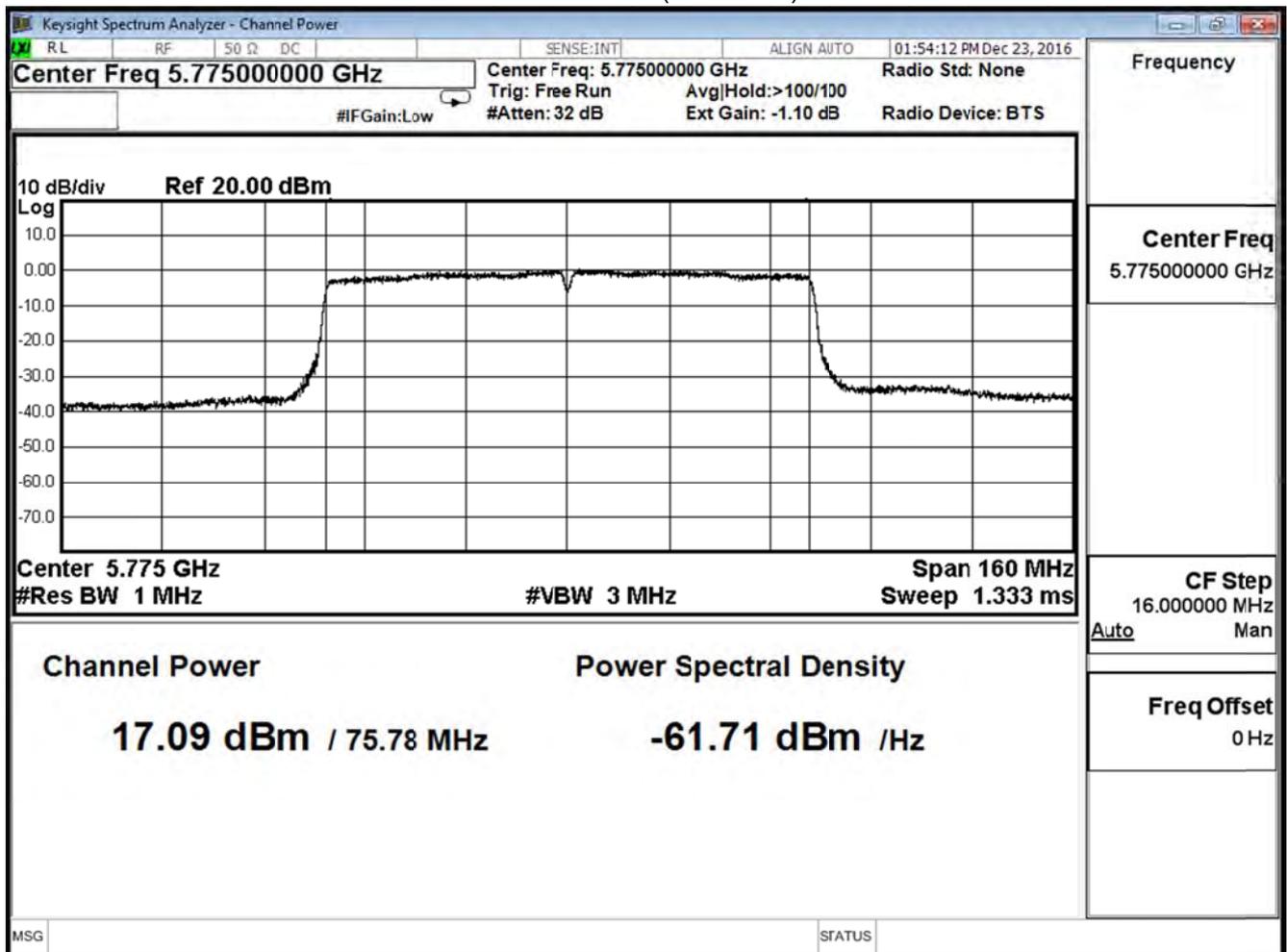
Product	Lyra mini		
Test Item	Peak Transmit power		
Test Mode	Mode 1: Tx-AD2037320910LF-CDD Mode		
Date of Test	2016/12/23	Test Site	SR10-H

IEEE 802.11ac80 (ANT 0)			
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)
155	5775	17.09	≤ 30

The worst emission of data rate is 29.3 Mbps.

Peak Power Output (dBm)											
MCS Index		0	1	2	3	4	5	6	7	8	Require Limit
Channel No	Frequency (MHz)	Data Rate									
		29.3	58.5	87.8	117	175.5	234	263.3	292.5	351	≤ 30
155	5775	17.09	16.89	16.69	16.59	16.39	16.19	15.95	15.83	15.59	

Channel 155 (5775MHz)



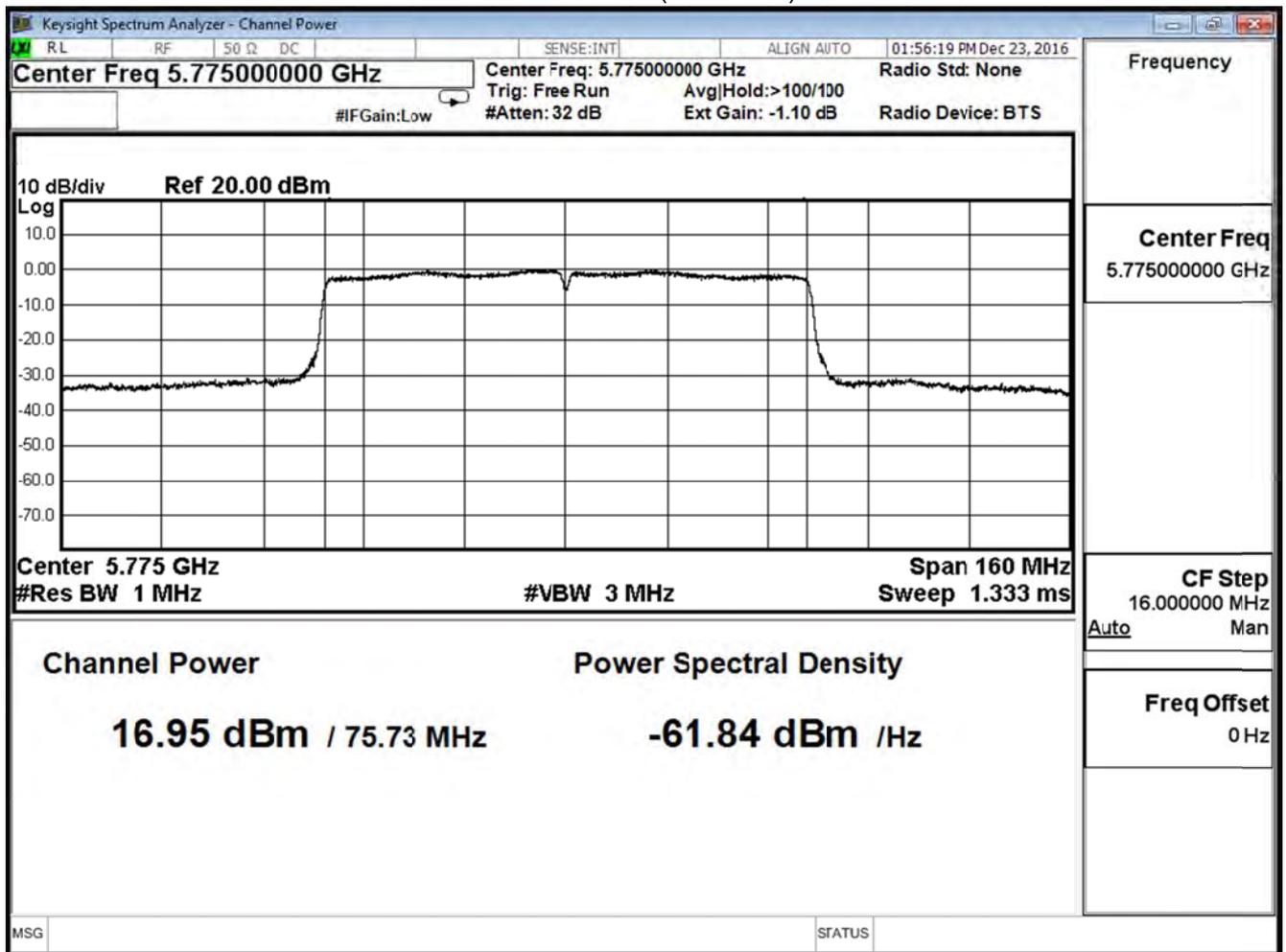
Product	Lyra mini		
Test Item	Peak Transmit power		
Test Mode	Mode 1: Tx-AD2037320910LF-CDD Mode		
Date of Test	2016/12/23	Test Site	SR10-H

IEEE 802.11ac80 (ANT 1)			
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)
155	5775	16.95	≤ 30

The worst emission of data rate is 29.3 Mbps.

Peak Power Output (dBm)											
MCS Index		0	1	2	3	4	5	6	7	8	Require Limit
Channel No	Frequency (MHz)	Data Rate									
				29.3	58.5	87.8	117	175.5	234	263.3	292.5
155	5775	16.95	16.85	16.75	16.55	16.45	16.25	16.13	15.89	15.77	

Channel 155 (5775MHz)



Product	Lyra mini		
Test Item	Peak Transmit power		
Test Mode	Mode 1: Tx-AD2037320910LF-CDD Mode		
Date of Test	2016/12/23	Test Site	SR10-H

IEEE 802.11ac80 (ANT 0+1)			
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)
155	5775	20.03	≤ 30

The worst emission of data rate is 29.3 Mbps.

Peak Power Output (dBm)											
MCS Index		0	1	2	3	4	5	6	7	8	Require Limit
Channel No	Frequency (MHz)	Data Rate									
		29.3	58.5	87.8	117	175.5	234	263.3	292.5	351	≤ 30
155	5775	20.03	19.88	19.73	19.58	19.43	19.23	19.05	18.87	18.69	

Product	Lyra mini		
Test Item	Peak Transmit power		
Test Mode	Mode 3: Tx-AD2037320910LF-BF Mode		
Date of Test	2016/12/23	Test Site	SR10-H

IEEE 802.11n20 (ANT 0)			
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)
149	5745	21.28	≤ 26.49
157	5785	21.47	≤ 26.49
165	5825	21.34	≤ 26.49

The worst emission of data rate is 6.5 Mbps

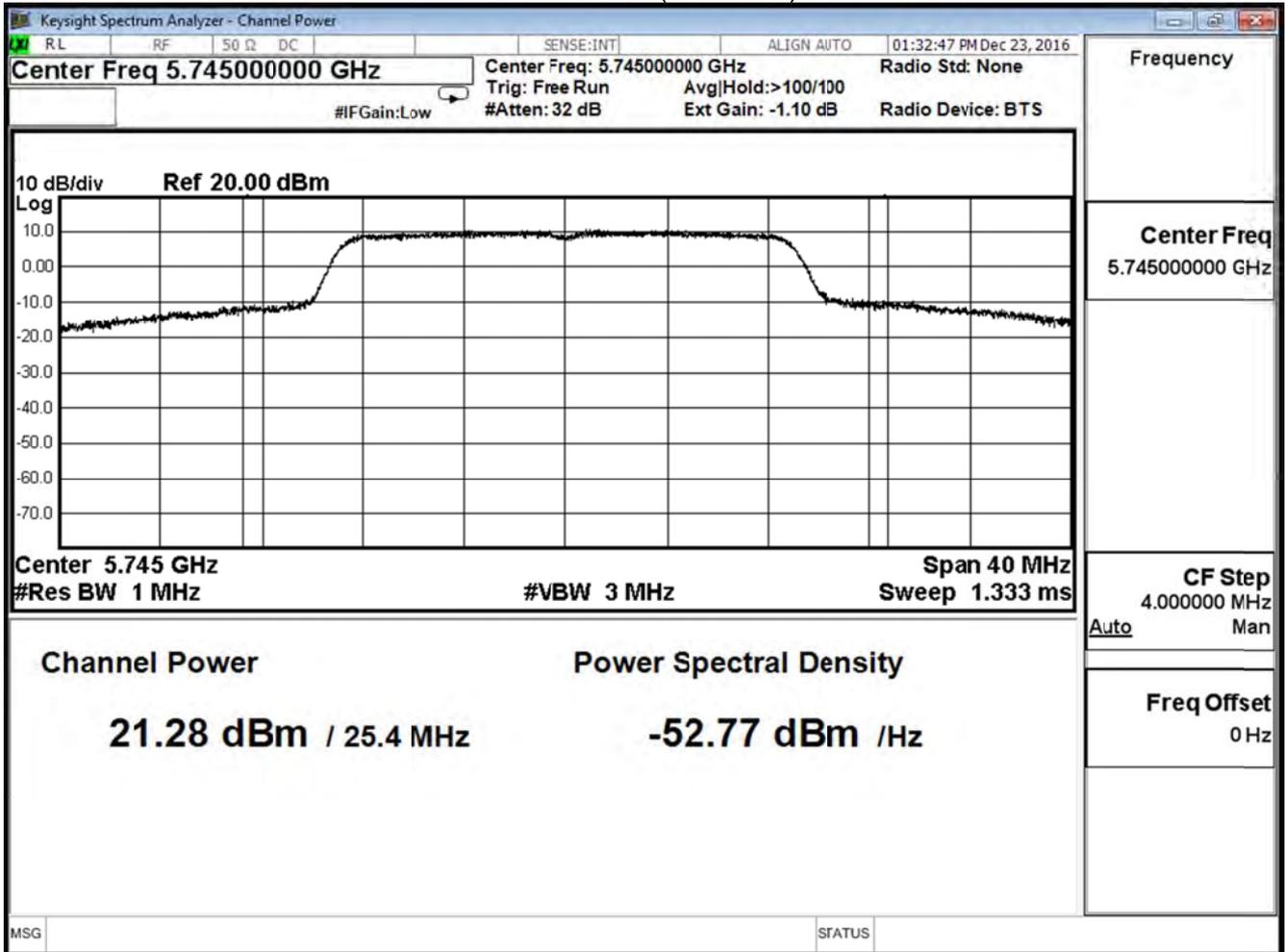
Peak Power Output (dBm)										
MCS Index		0	1	2	3	4	5	6	7	Required Limit
Channel No	Frequency (MHz)	Data Rate								
		6.5	13	19.5	26	39	52	58.5	65	
149	5745	21.28	--	--	--	--	--	--	--	≤ 26.49
157	5785	21.47	21.36	21.26	21.06	20.94	20.70	20.40	20.28	≤ 26.49
165	5825	21.34	--	--	--	--	--	--	--	≤ 26.49

Note:

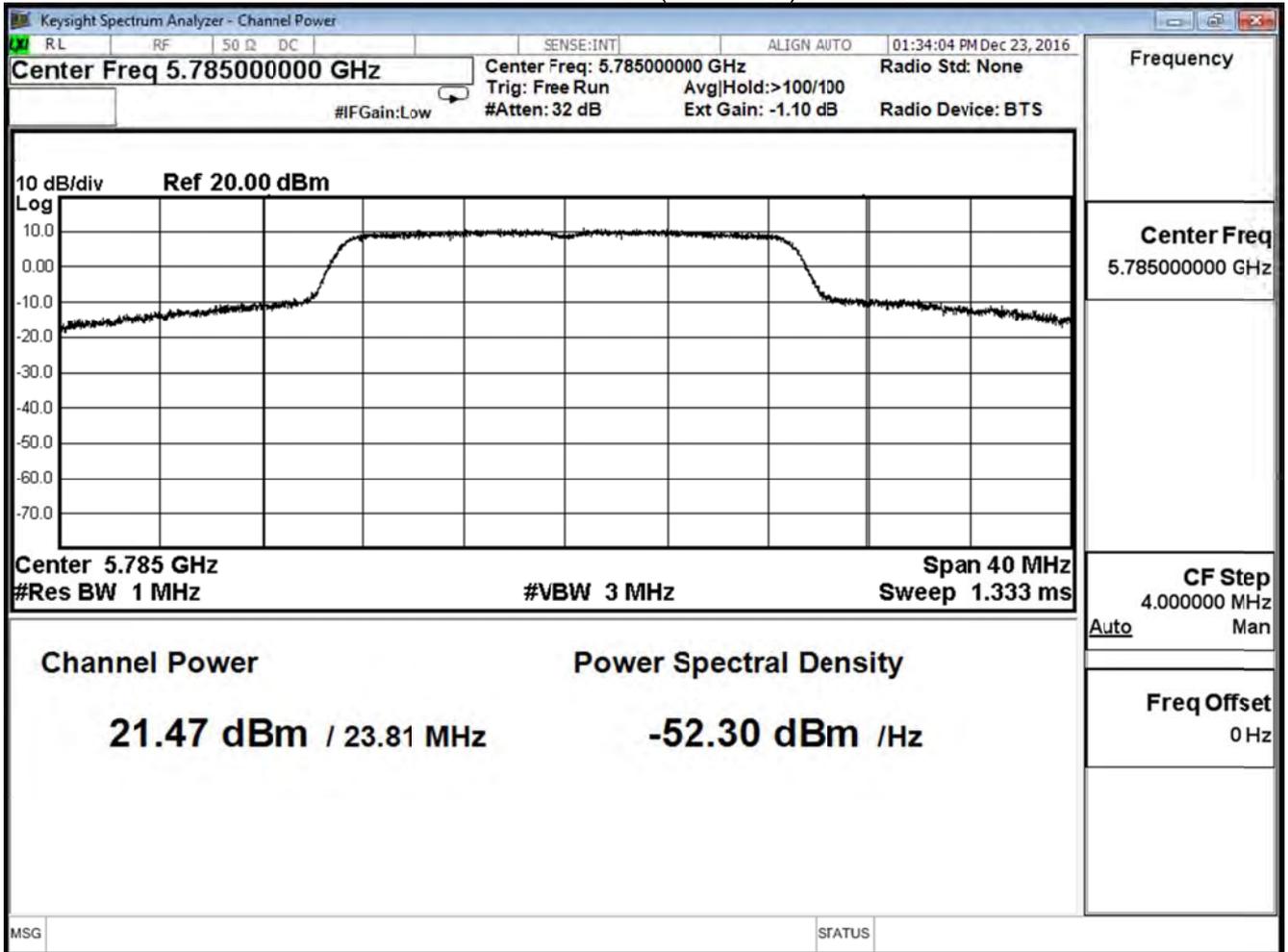
Directional Antenna=10log(N)+Max Gain+ Beamforming Gain=9.51dBi

Required Limit=30dBm-(9.51dBi-6dB)=26.49dBm

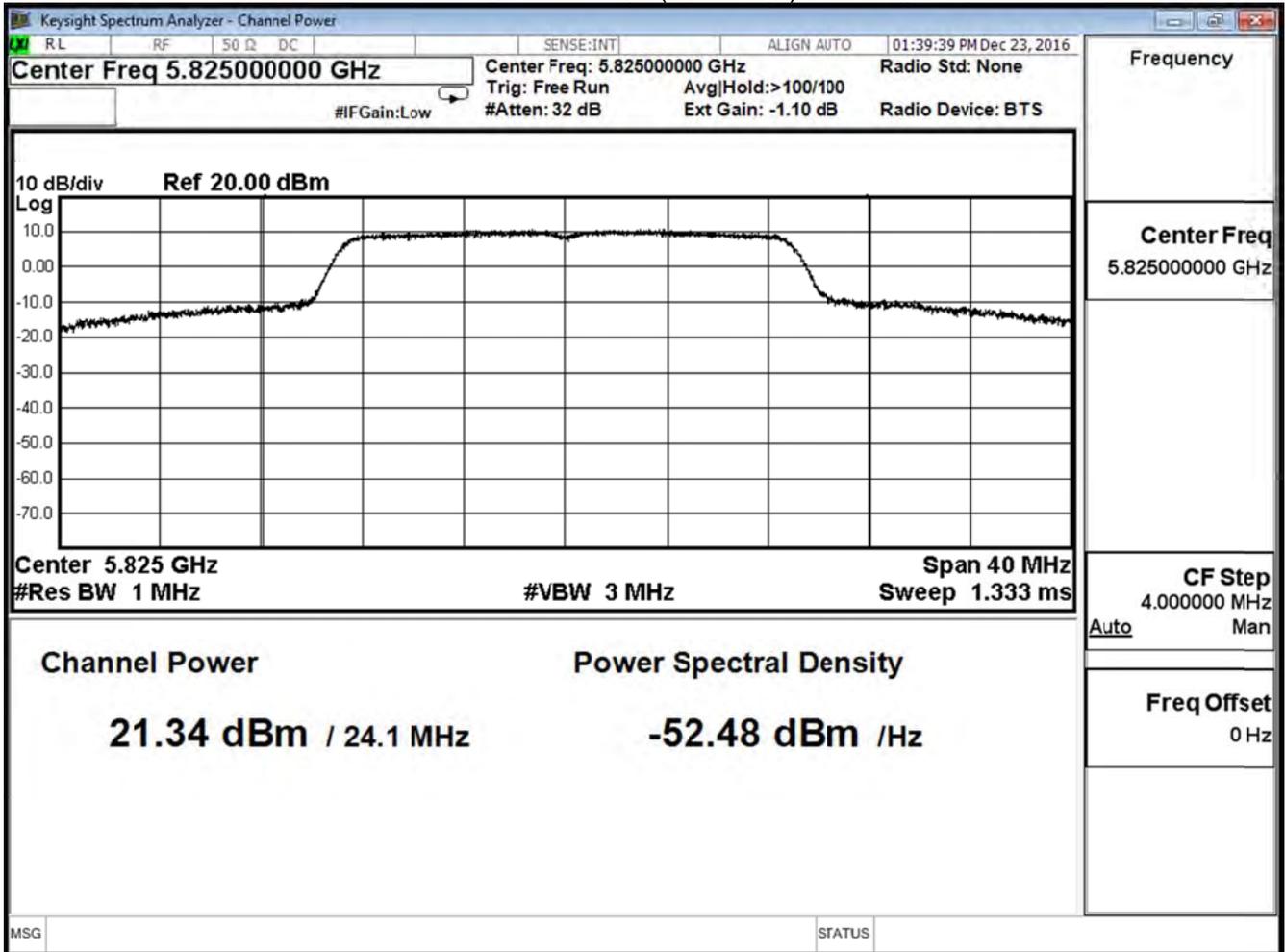
Channel 149 (5745MHz)



Channel 157 (5785MHz)



Channel 165 (5825MHz)



Product	Lyra mini		
Test Item	Peak Transmit power		
Test Mode	Mode 3: Tx-AD2037320910LF-BF Mode		
Date of Test	2016/12/23	Test Site	SR10-H

IEEE 802.11n20 (ANT 1)			
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)
149	5745	20.97	≤ 26.49
157	5785	20.52	≤ 26.49
165	5825	21.33	≤ 26.49

The worst emission of data rate is 6.5 Mbps

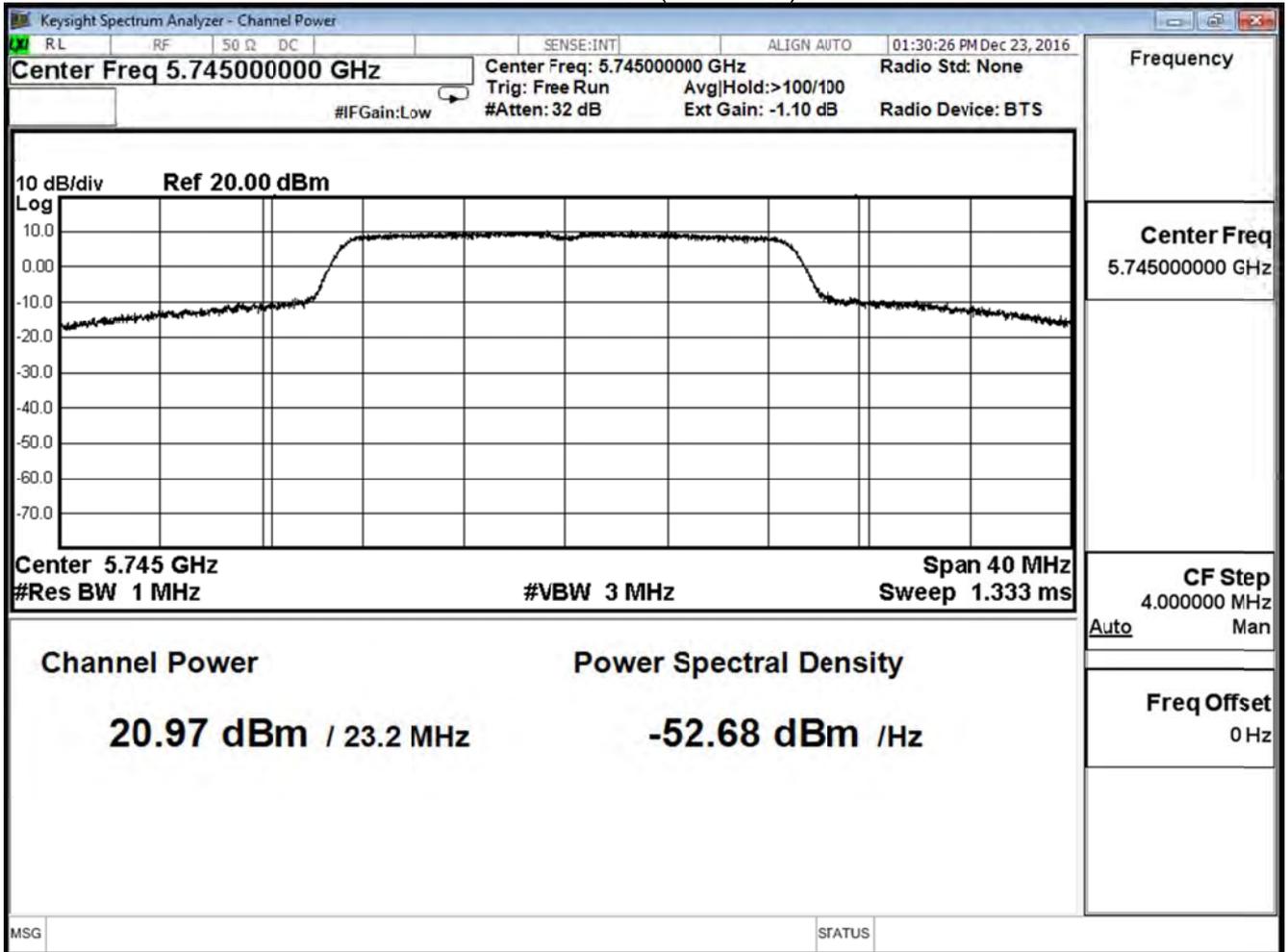
Peak Power Output (dBm)										
MCS Index		0	1	2	3	4	5	6	7	Required Limit
Channel No	Frequency (MHz)	Data Rate								
		6.5	13	19.5	26	39	52	58.5	65	
149	5745	20.97	--	--	--	--	--	--	--	≤ 26.49
157	5785	20.52	20.32	20.08	19.88	19.78	19.65	19.41	19.17	≤ 26.49
165	5825	21.33	--	--	--	--	--	--	--	≤ 26.49

Note:

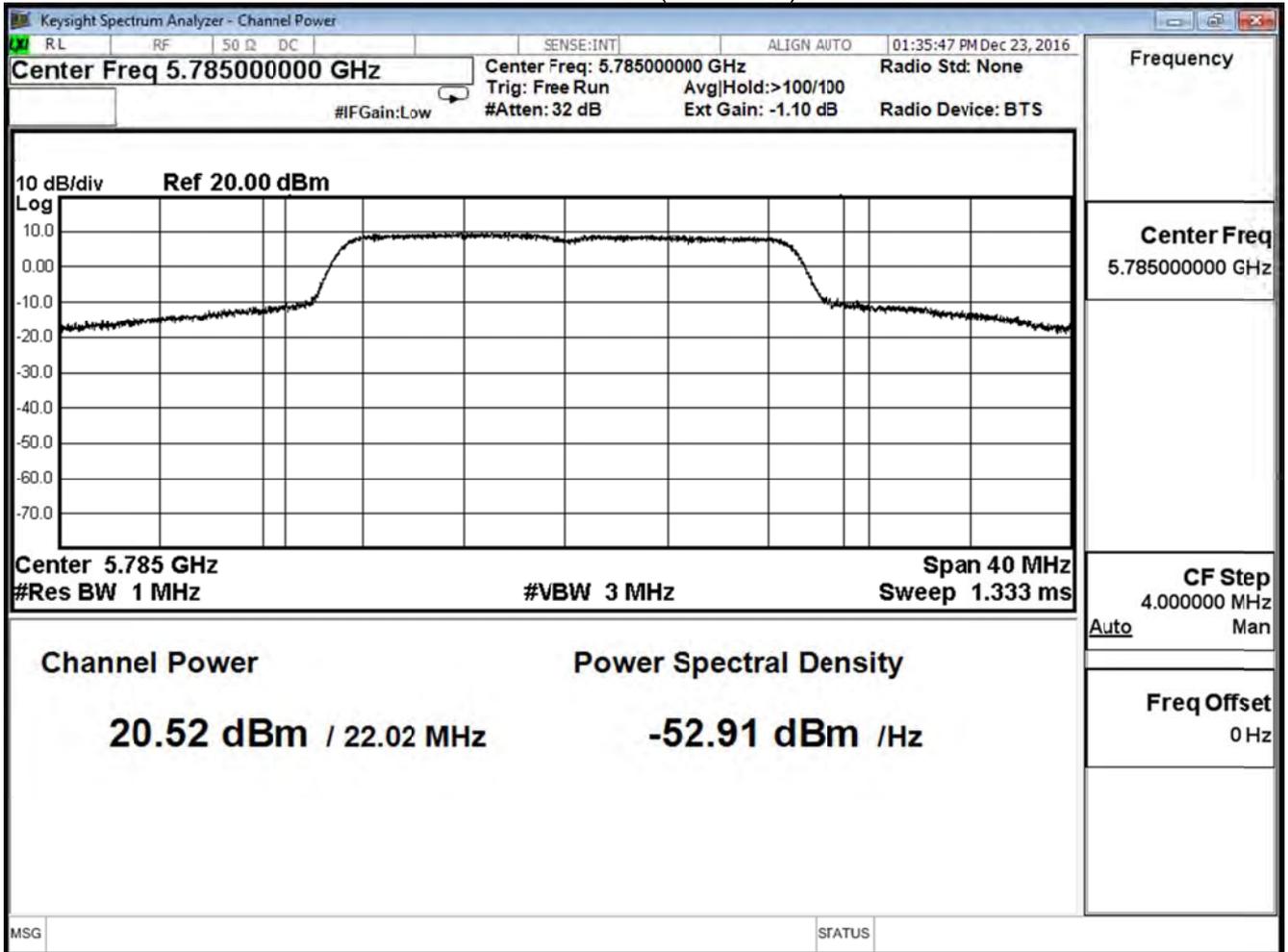
Directional Antenna=10log(N)+Max Gain+ Beamforming Gain=9.51dBi

Required Limit=30dBm-(9.51dBi-6dB)=26.49dBm

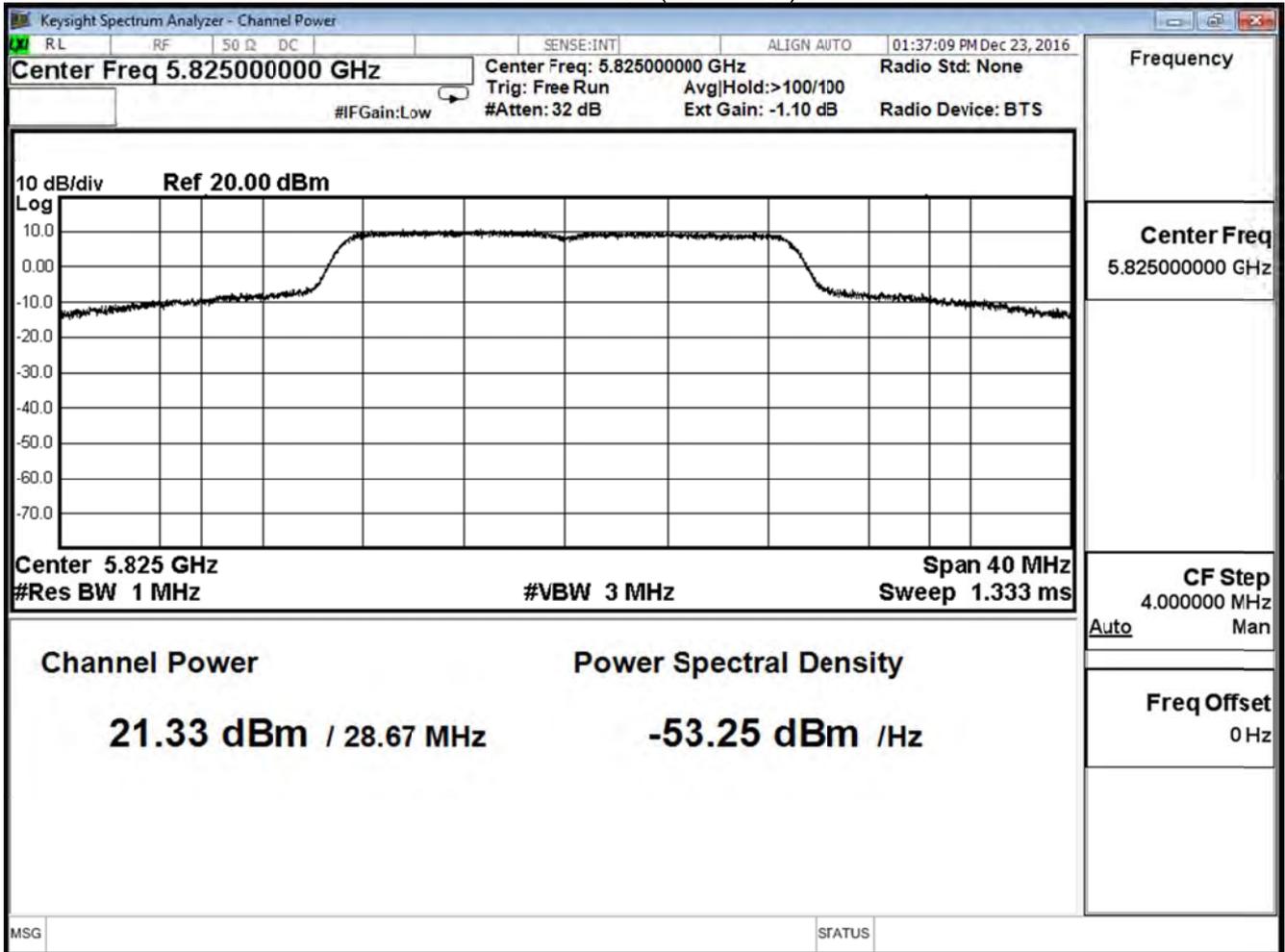
Channel 149 (5745MHz)



Channel 157 (5785MHz)



Channel 165 (5825MHz)



Product	Lyra mini		
Test Item	Peak Transmit power		
Test Mode	Mode 3: Tx-AD2037320910LF-BF Mode		
Date of Test	2016/12/23	Test Site	SR10-H

IEEE 802.11n20 (ANT 0+1)			
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)
149	5745	24.14	≤ 26.49
157	5785	24.03	≤ 26.49
165	5825	24.35	≤ 26.49

The worst emission of data rate is 6.5 Mbps

Peak Power Output (dBm)										
MCS Index		0	1	2	3	4	5	6	7	Required Limit
Channel No	Frequency (MHz)	Data Rate								
		6.5	13	19.5	26	39	52	58.5	65	
149	5745	24.14	--	--	--	--	--	--	--	≤ 26.49
157	5785	24.03	23.93	23.71	23.51	23.33	23.14	23.00	22.88	≤ 26.49
165	5825	24.35	--	--	--	--	--	--	--	≤ 26.49

Note:

Directional Antenna=10log(N)+Max Gain+ Beamforming Gain=9.51dBi

Required Limit=30dBm-(9.51dBi-6dB)=26.49dBm

Product	Lyra mini		
Test Item	Peak Transmit power		
Test Mode	Mode 3: Tx-AD2037320910LF-BF Mode		
Date of Test	2016/12/23	Test Site	SR10-H

IEEE 802.11n40 (ANT 0)			
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)
151	5755	20.63	≤ 26.49
159	5795	20.61	≤ 26.49

The worst emission of data rate is 13.5 Mbps.

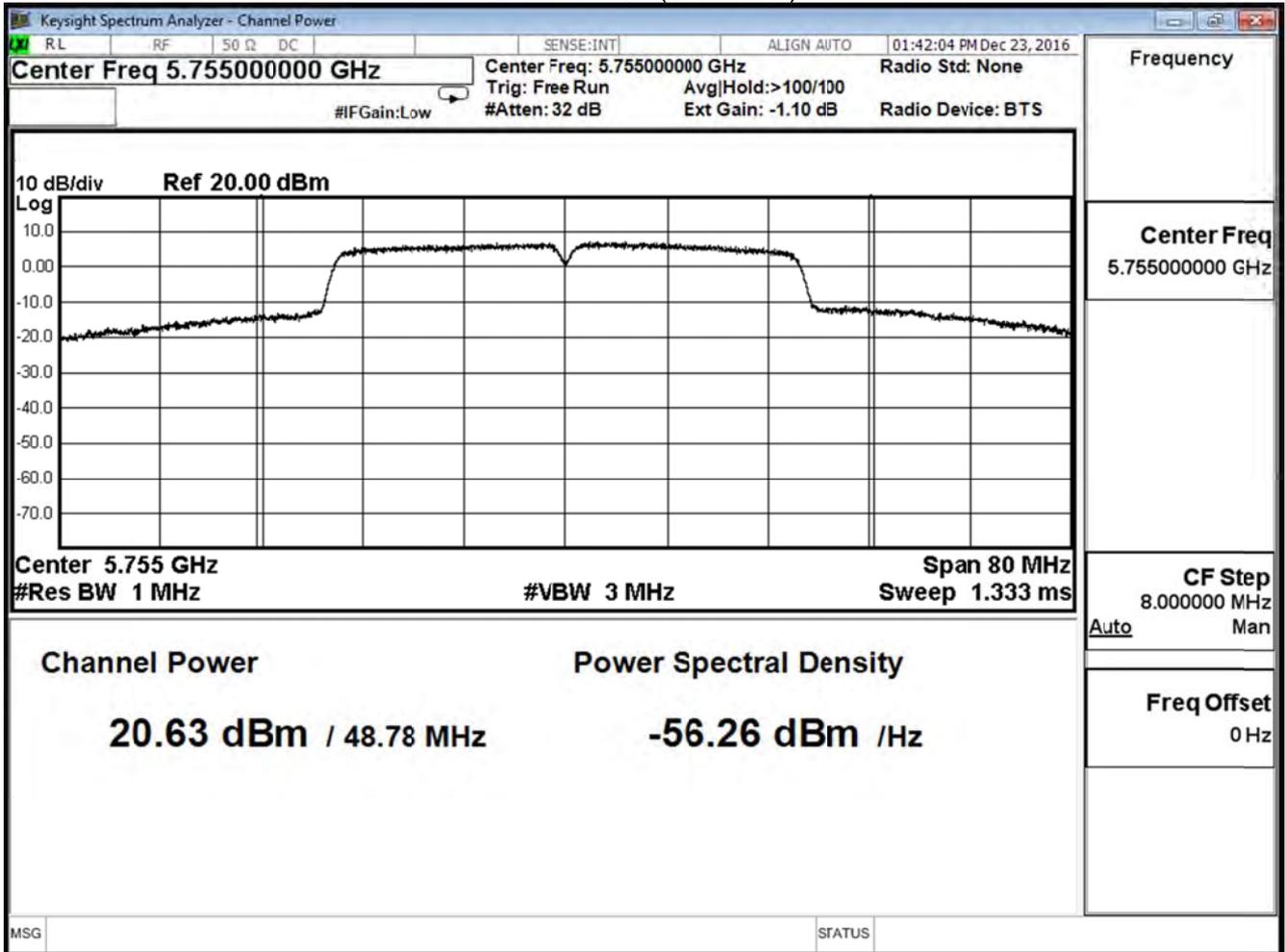
Peak Power Output (dBm)										
MCS Index		0	1	2	3	4	5	6	7	Required Limit
Channel No	Frequency (MHz)	Data Rate								
		13.5	27	40.5	54	81	108	121.5	135	
151	5755	20.63	--	--	--	--	--	--	--	≤ 26.49
159	5795	20.61	20.51	20.31	20.21	20.01	19.77	19.65	19.41	≤ 26.49

Note:

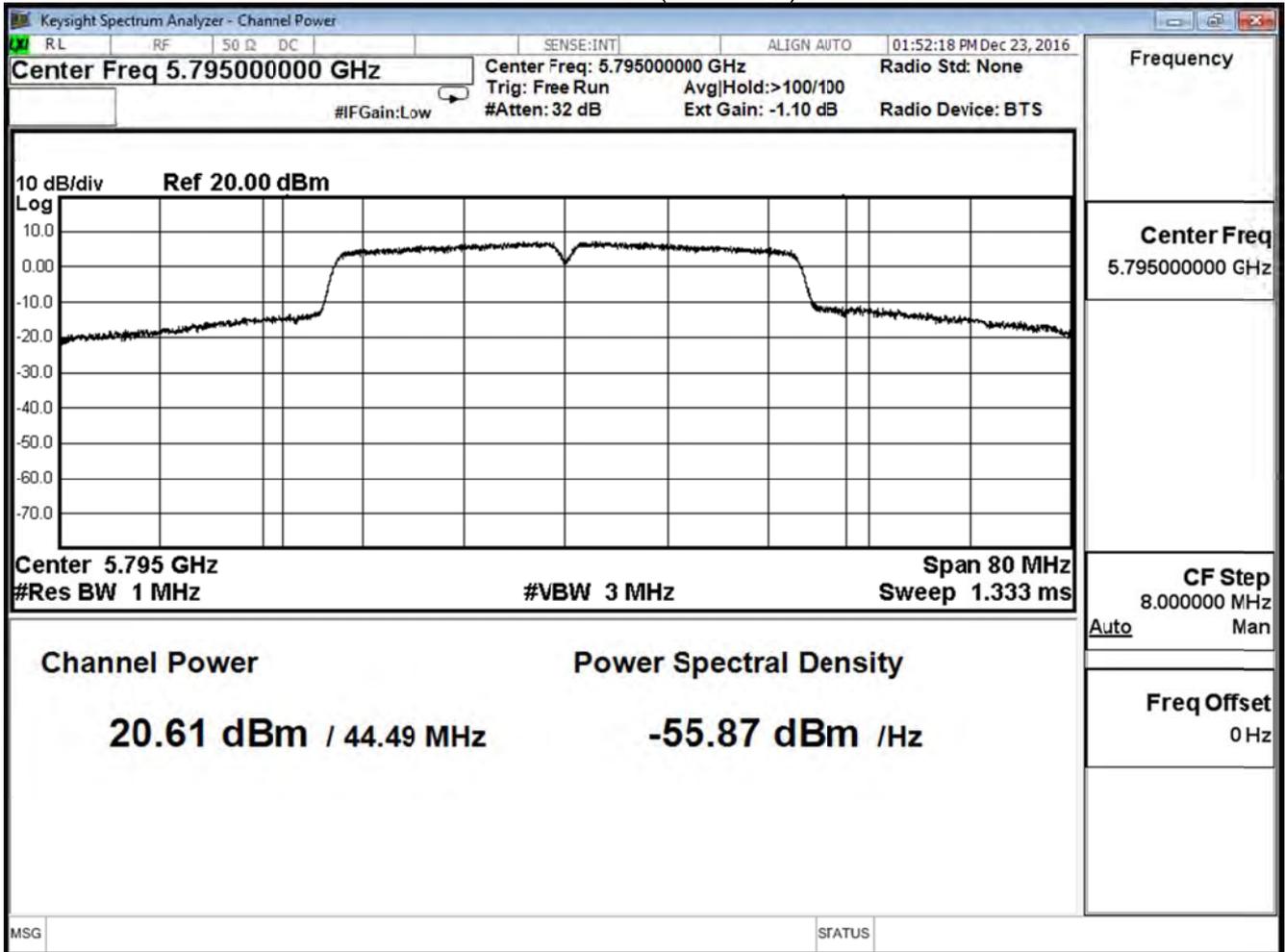
Directional Antenna=10log(N)+Max Gain+ Beamforming Gain=9.51dBi

Required Limit=30dBm-(9.51dBi-6dB)=26.49dBm

Channel 151 (5755MHz)



Channel 159 (5795MHz)



Product	Lyra mini		
Test Item	Peak Transmit power		
Test Mode	Mode 3: Tx-AD2037320910LF-BF Mode		
Date of Test	2016/12/23	Test Site	SR10-H

IEEE 802.11n40 (ANT 1)			
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)
151	5755	19.82	≤ 26.49
159	5795	20.99	≤ 26.49

The worst emission of data rate is 13.5Mbps.

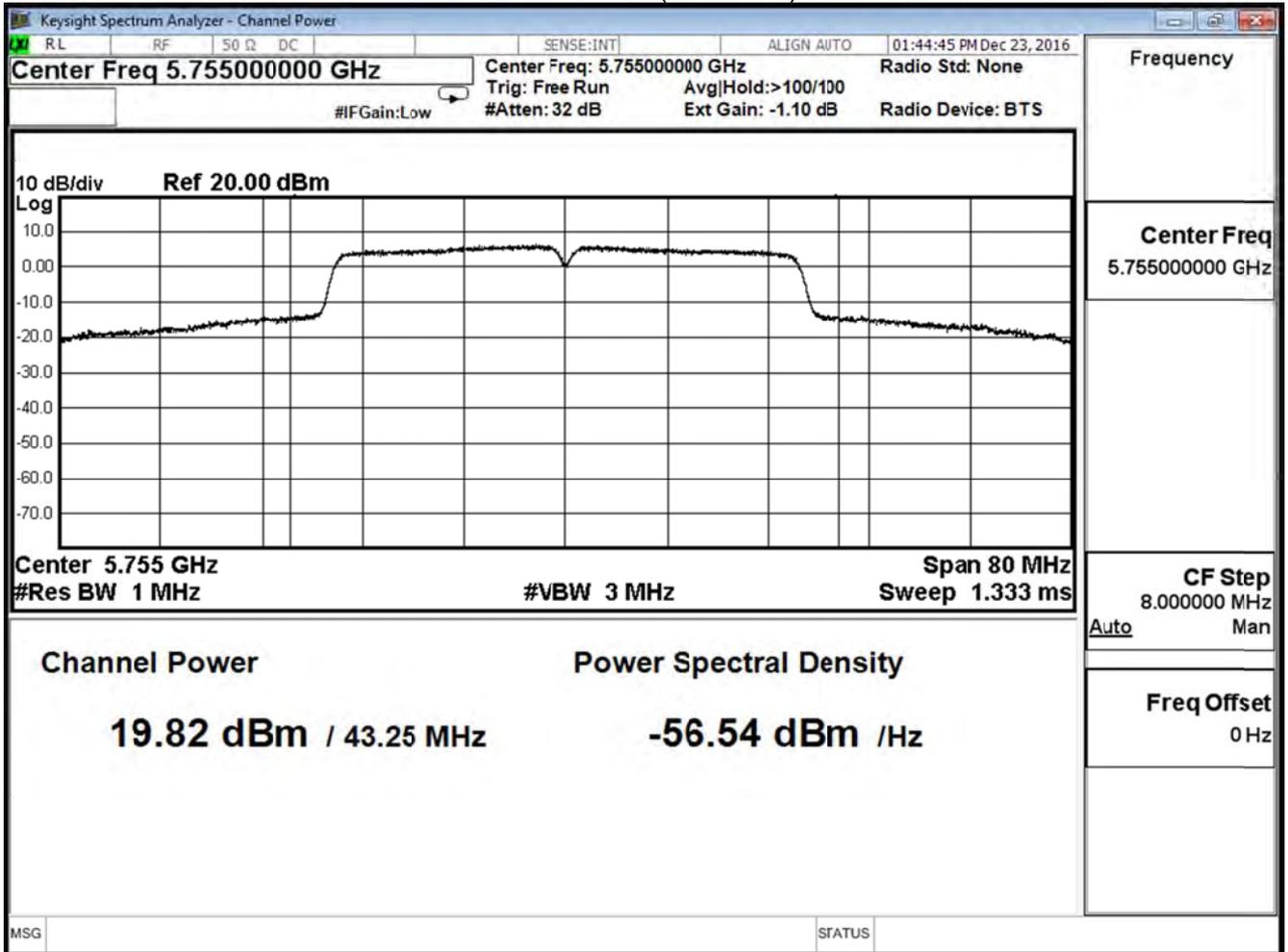
Peak Power Output (dBm)										
MCS Index		0	1	2	3	4	5	6	7	Required Limit
Channel No	Frequency (MHz)	Data Rate								
		13.5	27	40.5	54	81	108	121.5	135	
151	5755	19.82	--	--	--	--	--	--	--	≤ 26.49
159	5795	20.99	20.79	20.59	20.49	20.29	20.17	19.93	19.69	≤ 26.49

Note:

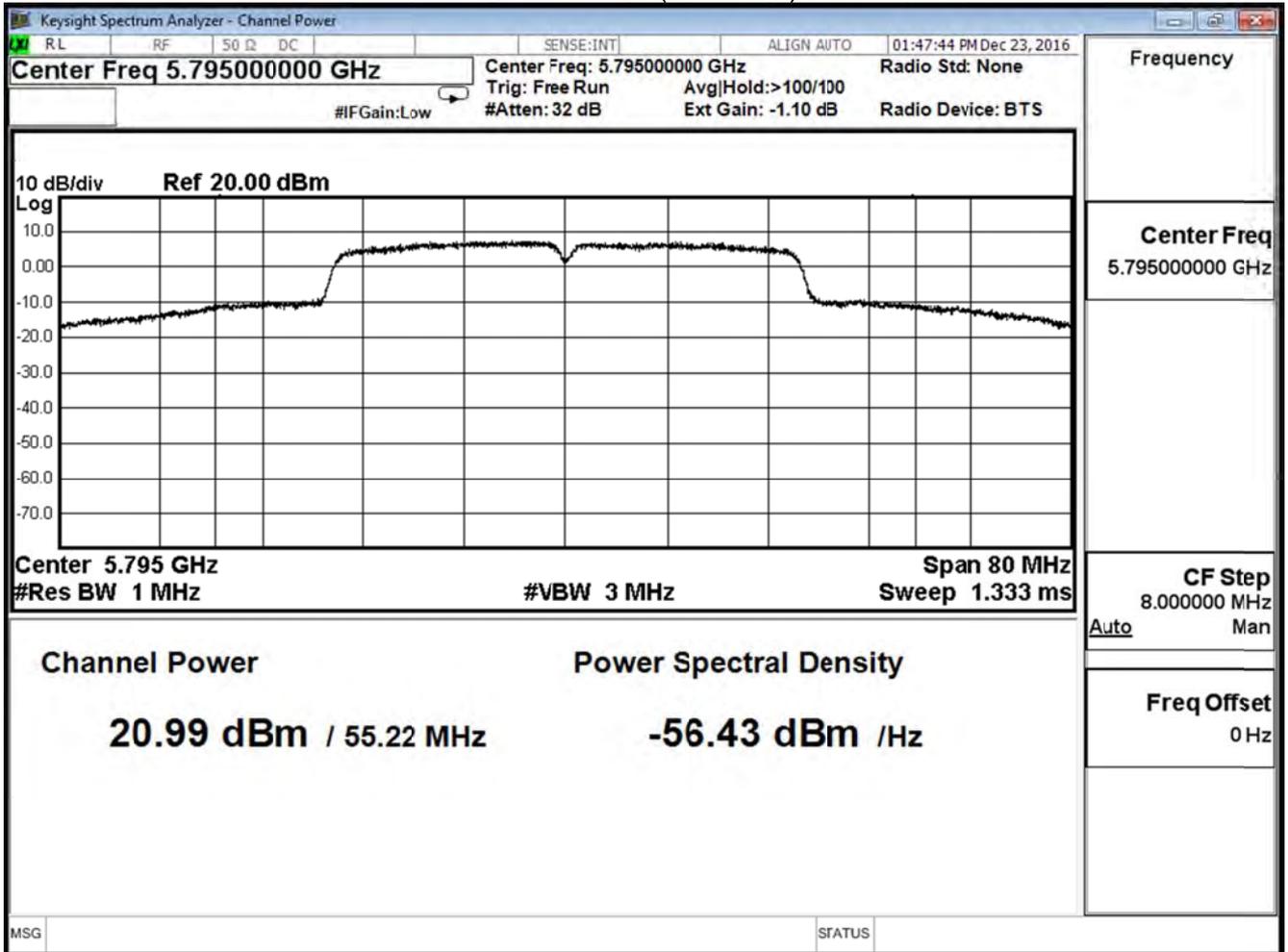
Directional Antenna=10log(N)+Max Gain+ Beamforming Gain=9.51dBi

Required Limit=30dBm-(9.51dBi-6dB)=26.49dBm

Channel 151 (5755MHz)



Channel 159 (5795MHz)



Product	Lyra mini		
Test Item	Peak Transmit power		
Test Mode	Mode 3: Tx-AD2037320910LF-BF Mode		
Date of Test	2016/12/23	Test Site	SR10-H

IEEE 802.11n40 (ANT 0+1)			
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)
151	5755	23.25	≤ 26.49
159	5795	23.81	≤ 26.49

The worst emission of data rate is 13.5 Mbps.

Peak Power Output (dBm)										
MCS Index		0	1	2	3	4	5	6	7	Required Limit
Channel No	Frequency (MHz)	Data Rate								
		13.5	27	40.5	54	81	108	121.5	135	
151	5755	23.25	--	--	--	--	--	--	--	≤ 26.49
159	5795	23.81	23.61	23.46	23.36	23.21	23.09	22.91	22.73	≤ 26.49

Note:

Directional Antenna=10log(N)+Max Gain+ Beamforming Gain=9.51dBi

Required Limit=30dBm-(9.51dBi-6dB)=26.49dBm

Product	Lyra mini		
Test Item	Peak Transmit power		
Test Mode	Mode 3: Tx-AD2037320910LF-BF Mode		
Date of Test	2017/01/15	Test Site	SR10-H

IEEE 802.11ac80 (ANT 0)			
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)
155	5775	16.19	≤ 26.49

The worst emission of data rate is 29.3 Mbps.

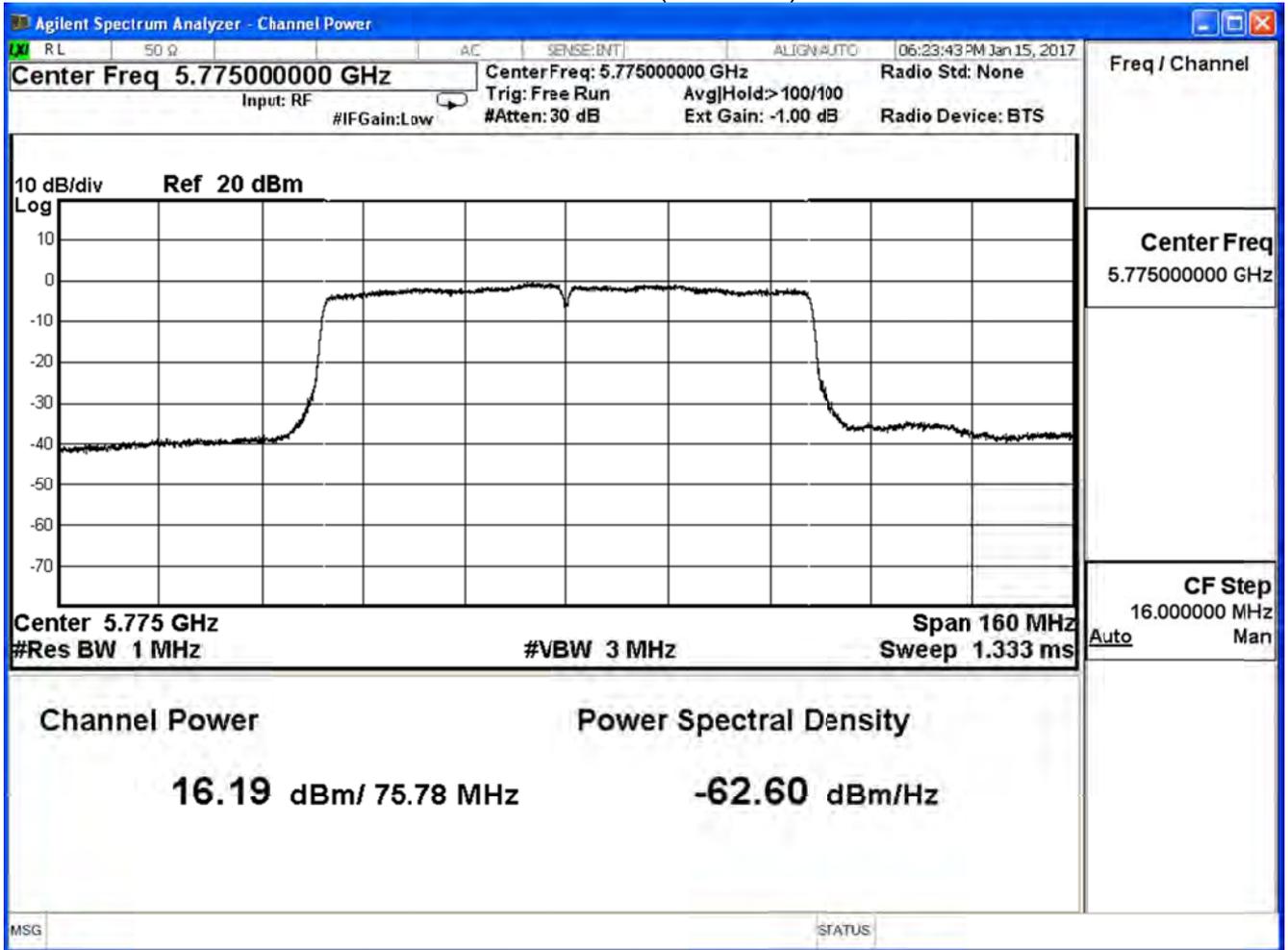
Peak Power Output (dBm)											
MCS Index		0	1	2	3	4	5	6	7	8	Require Limit
Channel No	Frequency (MHz)	Data Rate									
				29.3	58.5	87.8	117	175.5	234	263.3	292.5
155	5775	16.19	16.09	15.89	15.69	15.59	15.49	15.25	15.13	14.89	

Note:

Directional Antenna=10log(N)+Max Gain+ Beamforming Gain=9.51dBi

Required Limit=30dBm-(9.51dBi-6dB)=26.49dBm

Channel 155 (5775MHz)



Product	Lyra mini		
Test Item	Peak Transmit power		
Test Mode	Mode 3: Tx-AD2037320910LF-BF Mode		
Date of Test	2017/01/15	Test Site	SR10-H

IEEE 802.11ac80 (ANT 1)			
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)
155	5775	16.16	≤ 26.49

The worst emission of data rate is 29.3 Mbps.

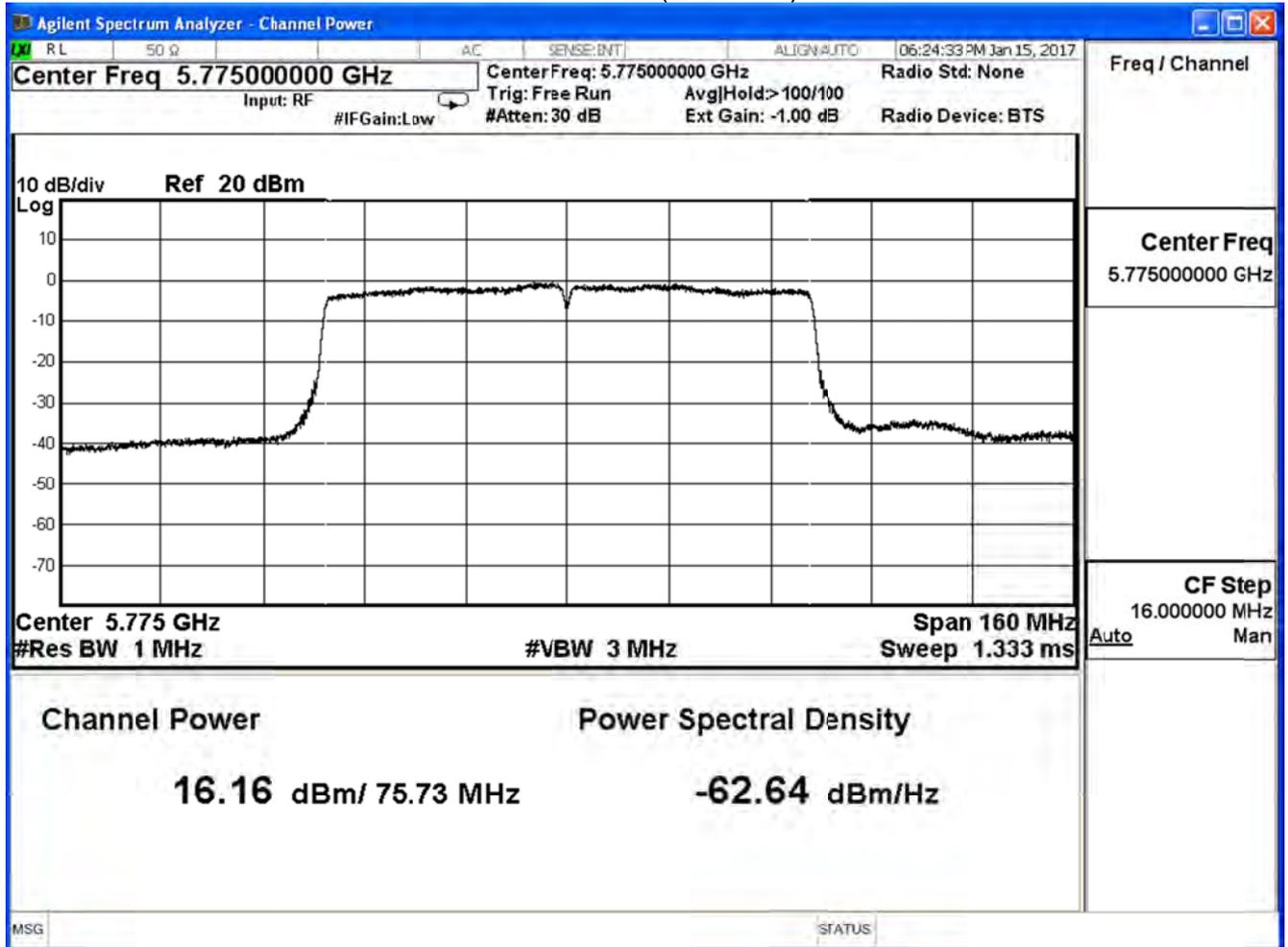
Peak Power Output (dBm)											
MCS Index		0	1	2	3	4	5	6	7	8	Require Limit
Channel No	Frequency (MHz)	Data Rate									
				29.3	58.5	87.8	117	175.5	234	263.3	292.5
155	5775	16.16	16.06	15.96	15.86	15.76	15.56	15.32	15.08	14.96	

Note:

Directional Antenna=10log(N)+Max Gain+ Beamforming Gain=9.51dBi

Required Limit=30dBm-(9.51dBi-6dB)=26.49dBm

Channel 155 (5775MHz)



Product	Lyra mini		
Test Item	Peak Transmit power		
Test Mode	Mode 3: Tx-AD2037320910LF-BF Mode		
Date of Test	2017/01/15	Test Site	SR10-H

IEEE 802.11ac80 (ANT 0+1)			
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)
155	5775	19.19	≤ 26.49

The worst emission of data rate is 29.3 Mbps.

Peak Power Output (dBm)											
MCS Index		0	1	2	3	4	5	6	7	8	Require Limit
Channel No	Frequency (MHz)	Data Rate									
				29.3	58.5	87.8	117	175.5	234	263.3	292.5
155	5775	19.19	19.09	18.94	18.79	18.69	18.54	18.30	18.12	17.94	

Note:

Directional Antenna=10log(N)+Max Gain+ Beamforming Gain=9.51dBi  
 Required Limit=30dBm-(9.51dBi-6dB)=26.49dBm