FCC Test Report

Product Name ： Dual-band Wireless-AC1200 Gigabit Router

Trade Name ： ASUS

Model No. ： RT-AC56U, RT-AC56R

FCC ID. ： MSQ-RTAC56UA

Applicant ： ASUSTeK COMPUTER INC.

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

Date of Receipt ： May 09, 2016

Issued Date ： May 13, 2016

Report No. ： 1650232R-RFUSP42V00-A

Report Version ： V1.0

Testing Laboratory
3024

The test results relate only to the samples tested.
The test report shall not be reproduced except in full without the written approval of QuieTek Corporation.

Test Report Certification

Issued Date: May 13, 2016
Report No. : 1650232R-RFUSP42V00-A

Product Name	：	Dual-band Wireless-AC1200 Gigabit Router
Applicant	：	ASUSTeK COMPUTER INC.
Address	：	4F, No. 150, Li-Te Rd., Peitou, Taipei, Taiwan
Manufacturer	：	Compal Networking（KunShan）Co.,Ltd
Model No.	：	RT-AC56U, RT-AC56R
FCC ID.	：	MSQ-RTAC56UA
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: 20109
Test Lab	：	QuieTek Hsin Chu Laboratory
Test Result	：	Complied

The test results relate only to the samples tested.
The test report shall not be reproduced except in full without the written approval of QuieTek Corporation.

Documented By ：

(Carol Tsai / Senior Engineering Adm. Specialist)

Tested By ：

(JuBo Shen / Senior Engineer)

Approved By ：

(Roy Wang / Director)

Revision History

Report No.	Version	Description	Issued Date
139121R-RFUSP42V01	V1.0	Initial issue of report	Sep. 03, 2013
13B0052R-RFUSP70V00	V1.0	Change EUT hardware version to 2.2 & 2.3 Verify radiation emission (under 1GHz). Update internal photo.	Nov. 26, 2013
1650232R-RFUSP42V00-A	V1.0	Update WLAN 5G band 4 standard to FCC 15.407. The 2.4G test data, please refer to the 13B0052R-RFUSP70V00.	May 13, 2016

Laboratory Information

We, **QuieTek Corporation**, 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:

Taiwan R.O.C.	**:**	**TAF, Accreditation Number: 3024**
USA	**:**	**FCC, Registration Number: 365520**
Canada	**:**	**IC, Submission No: 181665 / IC Registration Number: 4075C-4**

The related certificate for our laboratories about the test site and management system can be downloaded from QuieTek Corporation's Web Site:http://www.quietek.com/english/about/certificates.aspx?bval=5
The address and introduction of QuieTek Corporation's laboratories can be founded in our Web site : http://www.quietek.com/index_en.aspx
If you have any comments, Please don't hesitate to contact us. Our contact information is as below:

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1. General Information

1.1. EUT Description

Product Name	Dual-band Wireless-AC1200 Gigabit Router	
Trade Name	ASUS	
Model No.	RT-AC56U, RT-AC56R	
Product Type	WLAN (4TX, 4RX)	
Frequency Range/ Channel Number	IEEE 802.11a/ IEEE 802.11n (20MHz)_5.8GHz / IEEE 802.11ac (20MHz)	5745~5825MHz / 5 Channels
	IEEE 802.11n (40MHz)_5.8GHz / IEEE 802.11ac (40MHz)	5755~5795MHz / 2 Channels
	IEEE 802.11ac (80MHz)	5775~5775MHz / 1 Channel
Type of Modulation	IEEE 802.11a/n/ac	Orthogonal Frequency Division Multiplexing
Data Speed	IEEE 802.11a	6, 9, 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

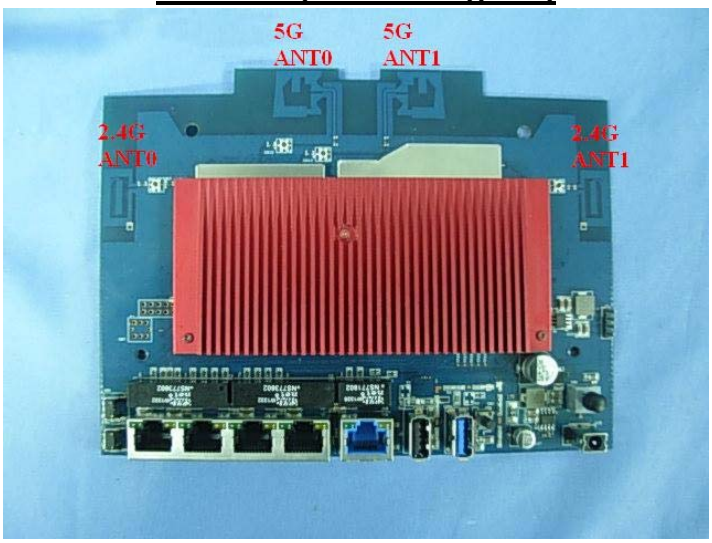
Antenna Information	
Antenna Gain	Ant0:3.79dBi, Ant1:3.79dBi,
Beamforming Gain	3dB
Antenna Type	PCB on Antenna

Accessories Information	
LAN Cable	YFC-BONEAGLE , Non-Shielded, 1.5m
LAN Cable	Cablex Electronics , Non-Shielded, 1.5m
LAN Cable	SHENZHEN , Non-Shielded, 1.5m
Power Adatper	PIE, AD890326 I/P : 100-240V~50/60Hz 0.8A O/P : 19V ⎓ 1.75A Cable Out: Non-Shielded, 2.3m
Power Adapter	Enertronix, EXA1206UH I/P : AC 100-240V~50-60Hz, 1.0A O/P : 19Vdc ⎓ 1.75A Cable Out: Non-Shielded, 2.3m

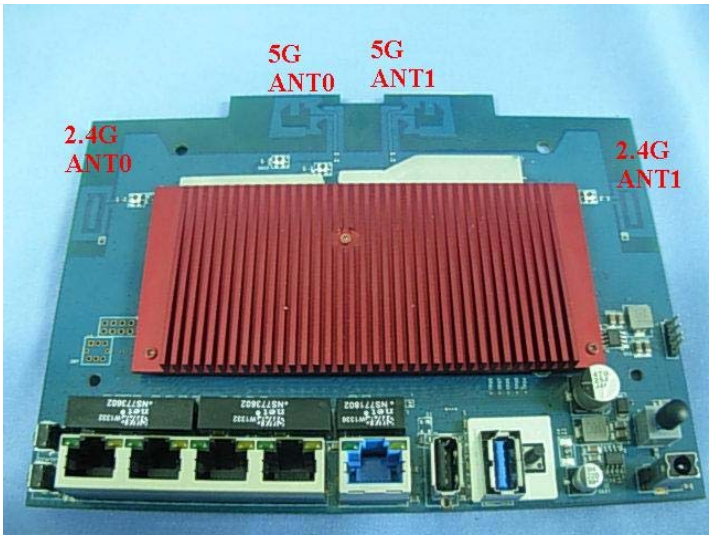
ANT-TX / RX & Bandwidth

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

2TX / 2RX (Blue Board)(V2.2)



2TX / 2RX (Blue Board)(V2.3)



IEEE 802.11n

MCS Index	Modulation	R	N_{BPSCS}	N_{CBPS}		N_{DBPS}		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_{BPSCS}	N_{CBPS}		N_{DBPS}		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_{BPSC}	Number of coded bits per single carrier
N_{CBPS}	Number of coded bits per symbol
N_{DBPS}	Number of data bits per symbol
GI	guard interval

Draft 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 & IEEE 802.11n (20MHz) & IEEE 802.11ac (20MHz)

Working Frequency of Each Channel							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
149	5745 MHz	153	5765 MHz	157	5785 MHz	161	5805 MHz
165	5825 MHz						

IEEE 802.11n (40MHz) & IEEE 802.11ac (40MHz)

Working Frequency of Each Channel			
Channel	Frequency	Channel	Frequency
151	5755 MHz	159	5795 MHz

IEEE 802.11ac (80MHz)

Working Frequency of Each Channel	
Channel	Frequency
155	5775 MHz

Note:

1. This device is a Dual-band Wireless-AC1200 Gigabit Router including 2.4GHz b/g/n and 5GHz a/n (2x2) transmitting and receiving function.
2. The variation of model number is for different strategy of marketing.
3. 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.
4. The function of the 2.4G & 5.2GHz transmitting is measured and makes a test report of the report number: 13B0052R-RFUSP70V00 & 1650232R-RFUSP42V000.
5. This device is a composite device in accordance with Part 15 regulations. The receiving function receiving was tested and its test report number is 13B0052R-RFUSP15V00 under Declaration of Conformity.
6. The difference between ver.2.2 and Ver.2.3 of the “Blue Board”:

Location of component	Modify	Note
R113, R114, R7, R10, R12,R57	Remove R113, R114 (5.1Kohm) , R7,R10 (10Kohm) and Add R12,R57 (10Kohm).	Improve USB device compatibility issue

1.2. Test Mode

QuieTek 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:Transmit (CDD mode)_Adapter: EXA1206UH_LAN1 Mode 2:Transmit (CDD mode)_Adapter:EXA1206UH_LAN2 Mode 3:Transmit (CDD mode)_Adapter:EXA1206UH_LAN3 Mode 4:Transmit (CDD mode)_Adapter: AD890326_LAN1 Mode 5:Transmit (CDD mode)_Adapter: AD890326_LAN2 Mode 6: Transmit (CDD mode)_Adapter: AD890326_LAN3 Mode 7: Transmit (Beamforming mode)_Adapter:EXA1206UH_LAN1

Test Items	Modulation	Channel	Antenna	Result
Conducted Emission	11ac(80MHz)	155	0+1	N/A
99 % & 26dB Bandwidth	11a	149/ 157/ 165	0/1	N/A
	11n(20MHz)	149/ 157/ 165	0/1	N/A
	11n(40MHz)	151/ 159	0/1	N/A
	11ac(80MHz)	155	0/1	N/A
Peak Transmit Output	11a	149/157/165	0+1	N/A
	11n(20MHz)	149/157/165	0+1	N/A
	11n(40MHz)	151/159	0+1	N/A
	11ac(80MHz)	155	0+1	N/A
Peak Power Spectrum Density	11a	149/ 157/ 165	0+1	Complies
	11n(20MHz)	149/ 157/ 165	0+1	Complies
	11n(40MHz)	151/ 159	0+1	Complies
	11ac(80MHz)	155	0+1	Complies
Radiated Emission	11a	149/ 157/ 165	0+1	N/A
	11n(20MHz)	149/ 157/ 165	0+1	N/A
	11n(40MHz)	151/ 159	0+1	N/A
	11ac(80MHz)	155	0+1	N/A
Band Edge	11a	149/157/165	0+1	N/A
	11n(20MHz)	149/157/165	0+1	N/A
	11n(40MHz)	151/159	0+1	N/A
	11ac(80MHz)	155	0+1	N/A
Frequency Stability	11a	149/ 157/ 165	0/1	Complies
	11n(20MHz)	149/ 157/ 165	0/1	Complies
	11n(40MHz)	151/ 159	0/1	Complies
	11ac(80MHz)	155	0/1/2/3	Complies

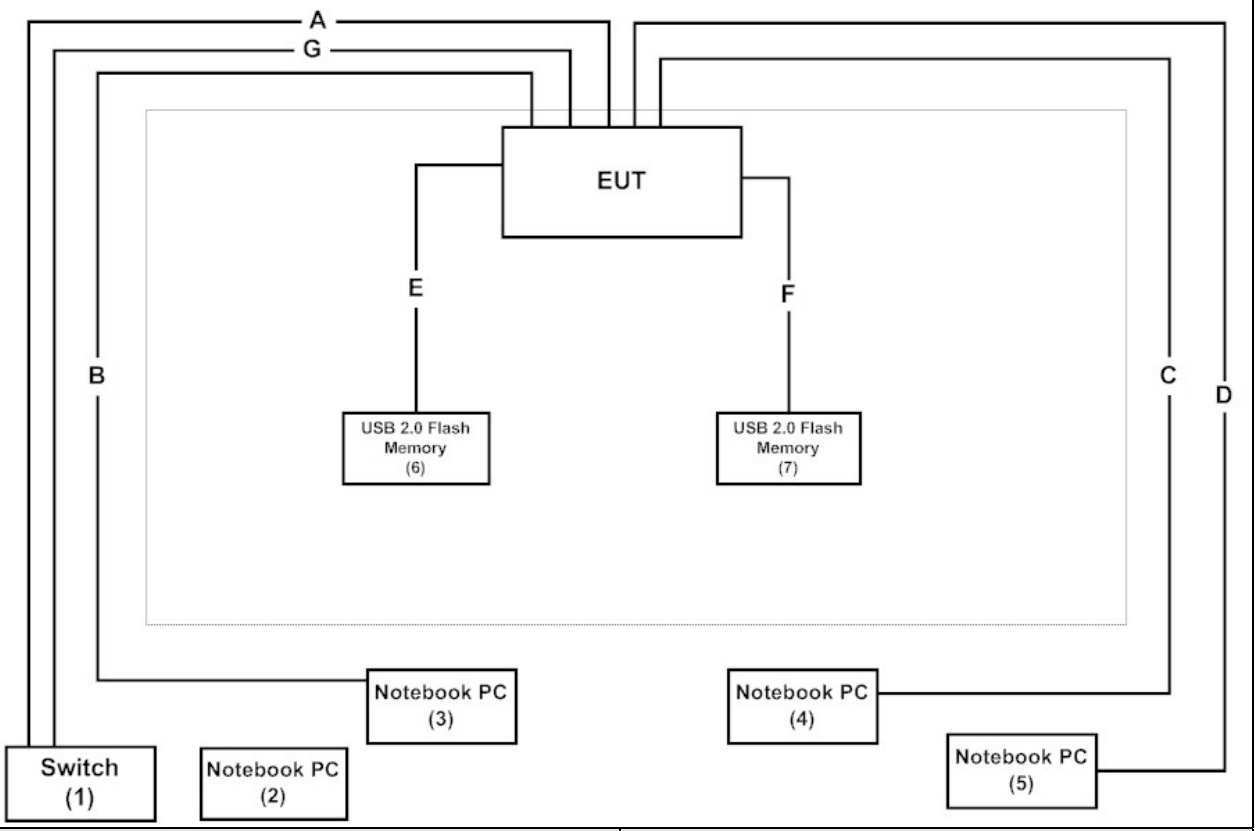
1.3. Tested System Details

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	Switch	D-Link	DGS1216T	F360298000042	DoC	Non-Shielded, 1.8m
2	Notebook PC	HP	HSTNN-146C	CNU8253S1X	DoC	Non-Shielded, 1.8m
3	Notebook PC	DELL	Vostro3400	7F808N1	DoC	Non-Shielded, 1.8m
4	Notebook PC	ACER	MS2296	LUSCV021391150332C2000	DoC	Non-Shielded, 2.5m one ferrite core bonded
5	Notebook PC	ACER	PAV70	LUSEW0D0371105FE221601	DoC	Non-Shielded, 2.5m one ferrite core bonded
6	USB 2.0 Flash Memory	Apacer	AH223	N/A	DoC	--
7	USB 2.0 Flash Memory	Apacer	AH223	N/A	DoC	--

1.4. Configuration of tested System

Connection Diagram



Signal Cable Type		Signal cable Description
A	LAN Cable	Non-Shielded, 1.5m
B	LAN Cable	Non-Shielded, 1.5m
C	LAN Cable	Non-Shielded, 1.5m
D	LAN Cable	Non-Shielded, 1.5m
E	USB 2.0 Flash Memory Cable	Shielded, 1m
F	USB 2.0 Flash Memory Cable	Shielded, 1m
G	LAN Cable	Non-Shielded, 1.5m

1.5. EUT Exercise Software

1	Setup the EUT as shown in Section 1.5.
2	Execute the“MFG_UI_AC56” on the EUT.
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 Peak Power Spectrum Density	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. Peak Power Spectrum Density

2.1. Test Equipment

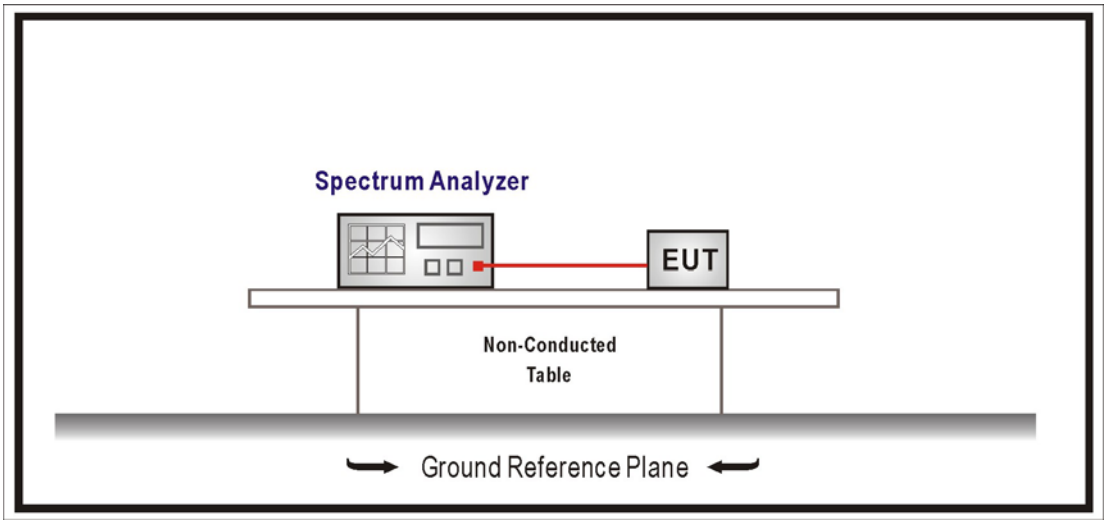
The following test equipments are used during the radiated emission tests:

Peak Power Spectrum Density / SR7

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

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

2.2. Test Setup



2.3. Limits

1. For the band 5.15-5.25 GHz, the peak power spectral density shall not exceed 17 dBm in any 1MHz band. If transmitting antenna of directional gain greater than 6 dBi are used, the peak power spectral density shall be reduced by the amount in dB that directional gain of the antenna exceeds 6 dBi.
2. For the band 5.25-5.35 GHz, the peak power spectral density shall not exceed 11 dBm in any 1-MHz band. If transmitting antenna of directional gain greater than 6 dBi are used, the peak power spectral density shall be reduced by the amount in dB that directional gain of the antenna exceeds 6 dBi.
3. For the band 5.725-5.850 GHz, the peak power spectral density shall not exceed 30 dBm in any 500KHz band. If transmitting antenna of directional gain greater than 6 dBi are used, the peak power spectral density shall be reduced by the amount in dB that directional gain of the antenna exceeds 6 dBi.

2.4. Test Procedure

The EUT was setup to ANSI C63.10: 2009 tested to U-NII test procedure of 789033 D02 V01R02 for compliance to FCC 47CFR Subpart E requirements.

For Band1 : Set RBW=1MHz, VBW=3MHz with RMS detector. The PPSD is the highest level found across the emission in any 1-MHz band after 100 sweeps of averaging.

For Band4 : Set RBW=500KHz, VBW=1.5MHz with RMS detector. The PPSD is the highest level found across the emission in any 500KHz band after 100 sweeps of averaging.

2.5. Uncertainty

The measurement uncertainty is defined as ± 1.27 dB

2.6. Test Result

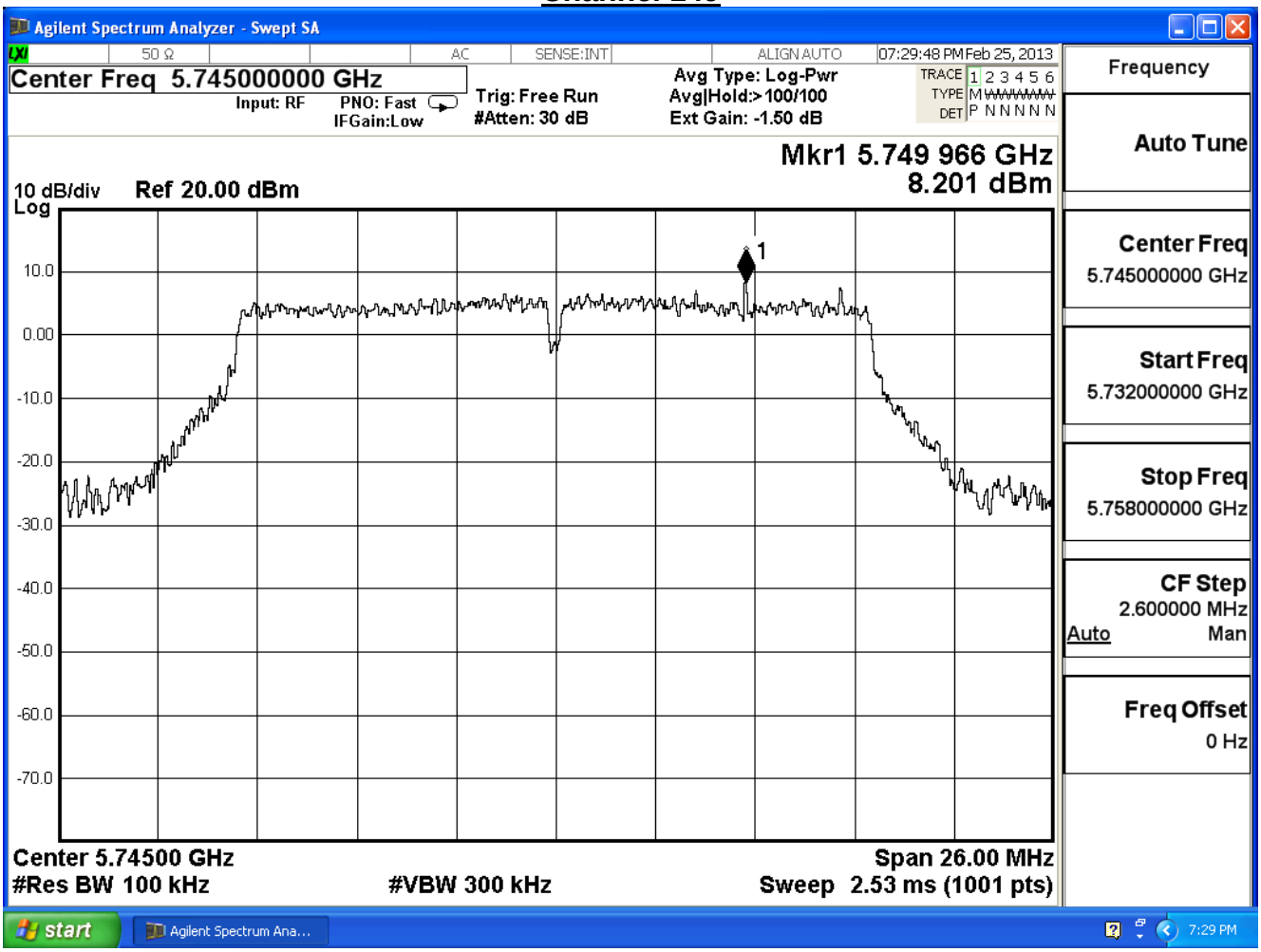
Product	Dual-band Wireless-AC1200 Gigabit Router		
Test Item	Peak Power Spectrum Density		
Test Mode	Mode 1:Transmit (CDD mode)_Adapter: EXA1206UH_LAN1		
Date of Test	2013/02/25	Test Site	SR7

IEEE 802.11a (ANT 0)				
Channel No.	Frequency (MHz)	Reading Level (dBm)	Measure Level (dBm)	Limit (dBm)
149	5745	8.201	15.191	≦30
157	5785	9.144	16.134	≦30
165	5825	8.711	15.701	≦30

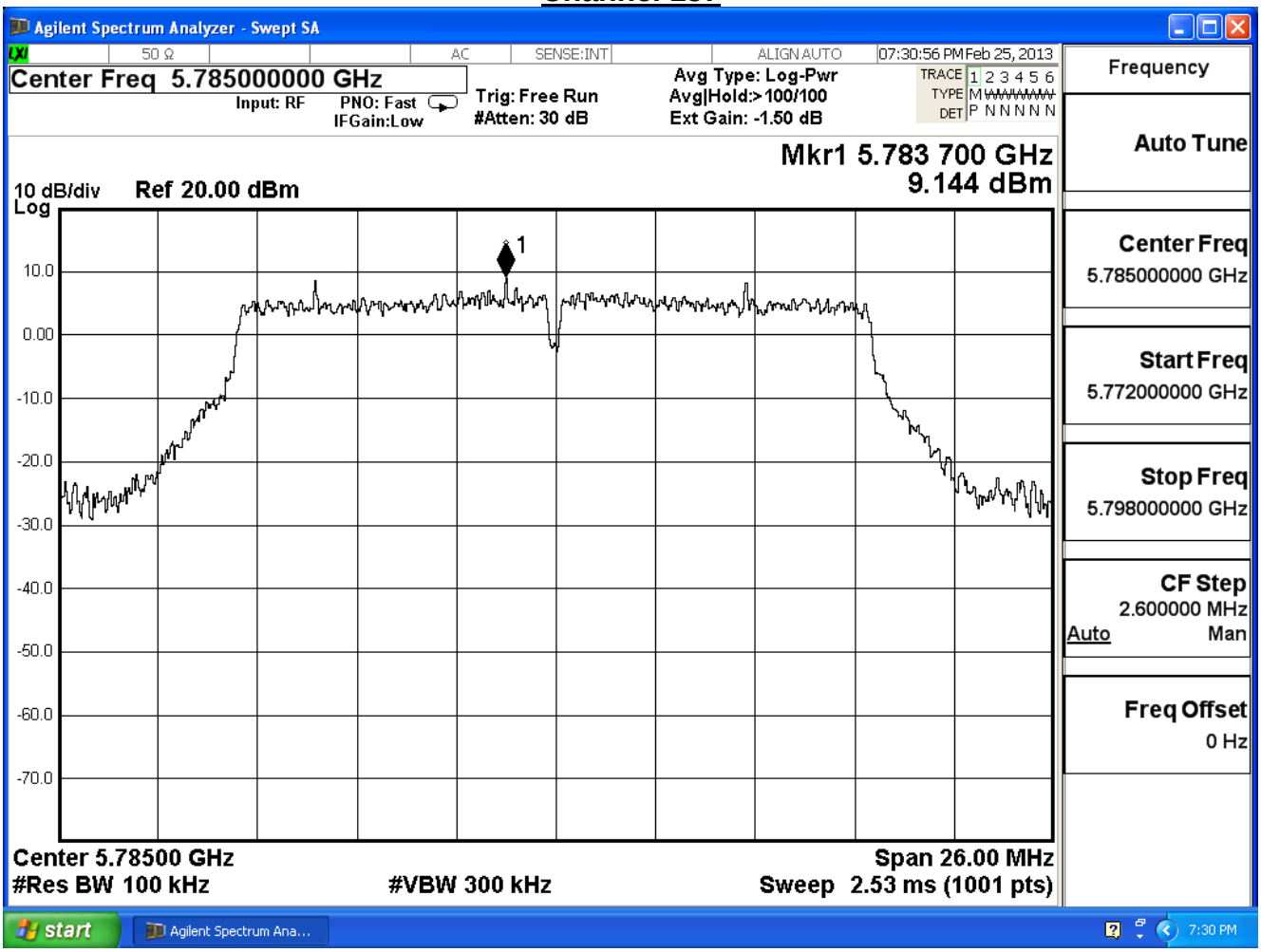
Correct factor=10log(500kHz/100KHz)=6.99dB

Measure = Reading + correct factor

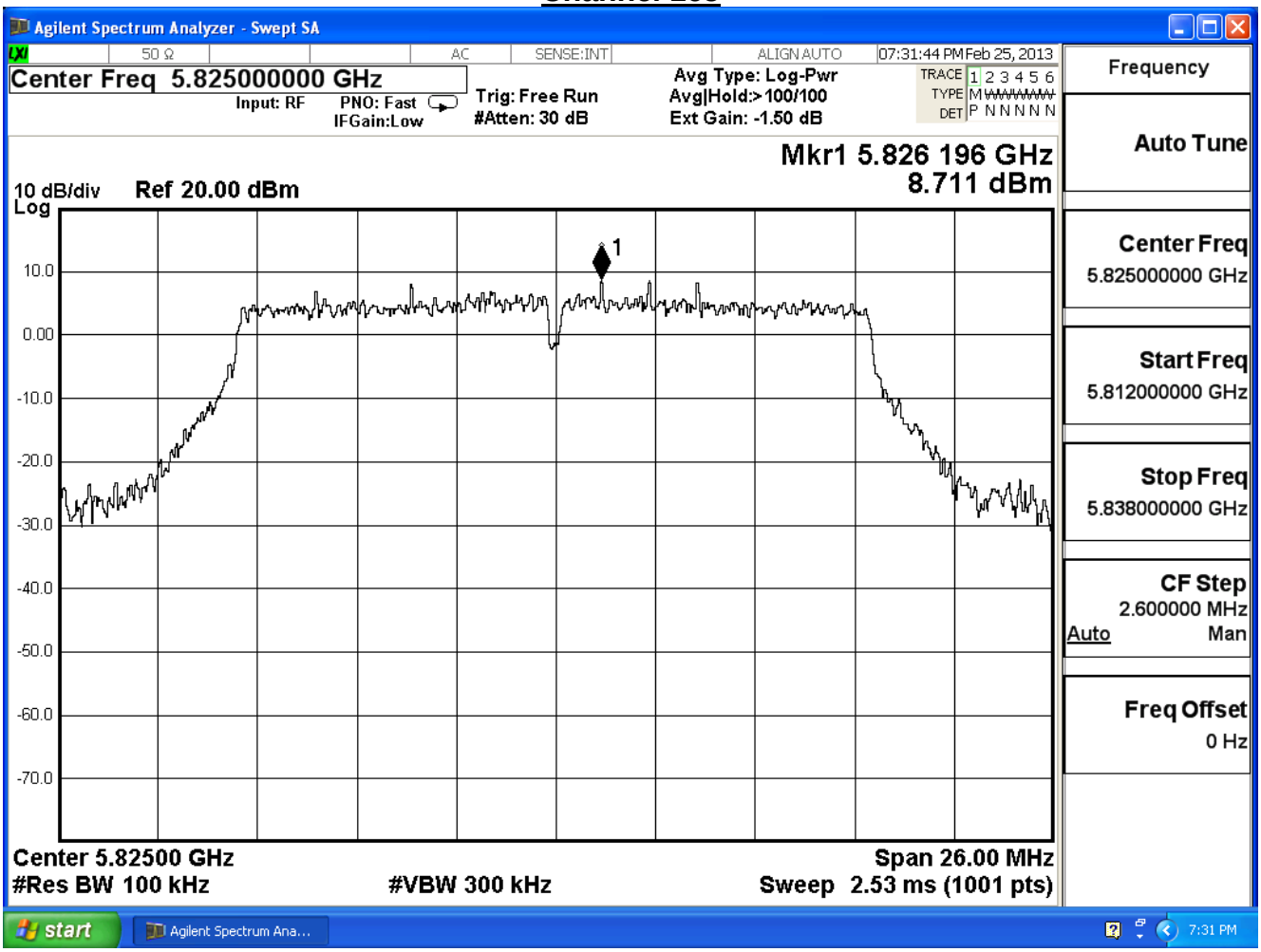
Channel 149


Agilent Spectrum Analyzer - Swept SA
50 Ω
AC
SENSE:INT
ALIGN AUTO
07:29:48 PM Feb 25, 2013
Center Freq 5.745000000 GHz
Input: RF
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
Ext Gain: -1.50 dB
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
Mkr1 5.749 966 GHz
8.201 dBm
10 dB/div
Log
Ref 20.00 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
Center 5.74500 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 26.00 MHz
Sweep 2.53 ms (1001 pts)
Frequency
Auto Tune
Center Freq
5.745000000 GHz
Start Freq
5.732000000 GHz
Stop Freq
5.758000000 GHz
CF Step
2.600000 MHz
Auto
Man
Freq Offset
0 Hz
start
Agilent Spectrum Ana...
7:29 PM

Channel 157


Agilent Spectrum Analyzer - Swept SA
50 Ω
AC
SENSE:INT
ALIGN AUTO
07:30:56 PM Feb 25, 2013
Center Freq 5.785000000 GHz
Input: RF
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
Ext Gain: -1.50 dB
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
Mkr1 5.783 700 GHz
9.144 dBm
10 dB/div
Log
Ref 20.00 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
Center 5.78500 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 26.00 MHz
Sweep 2.53 ms (1001 pts)
Frequency
Auto Tune
Center Freq
5.785000000 GHz
Start Freq
5.772000000 GHz
Stop Freq
5.798000000 GHz
CF Step
2.600000 MHz
Auto
Man
Freq Offset
0 Hz
start
Agilent Spectrum Ana...
7:30 PM

Channel 165


Agilent Spectrum Analyzer - Swept SA
50 Ω
AC
SENSE:INT
ALIGN AUTO
07:31:44 PM Feb 25, 2013
Center Freq 5.825000000 GHz
Input: RF
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
Ext Gain: -1.50 dB
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
Mkr1 5.826 196 GHz
8.711 dBm
10 dB/div
Log
Ref 20.00 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
Center 5.82500 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 26.00 MHz
Sweep 2.53 ms (1001 pts)
Frequency
Auto Tune
Center Freq
5.825000000 GHz
Start Freq
5.812000000 GHz
Stop Freq
5.838000000 GHz
CF Step
2.600000 MHz
Auto
Man
Freq Offset
0 Hz
start
Agilent Spectrum Ana...
7:31 PM

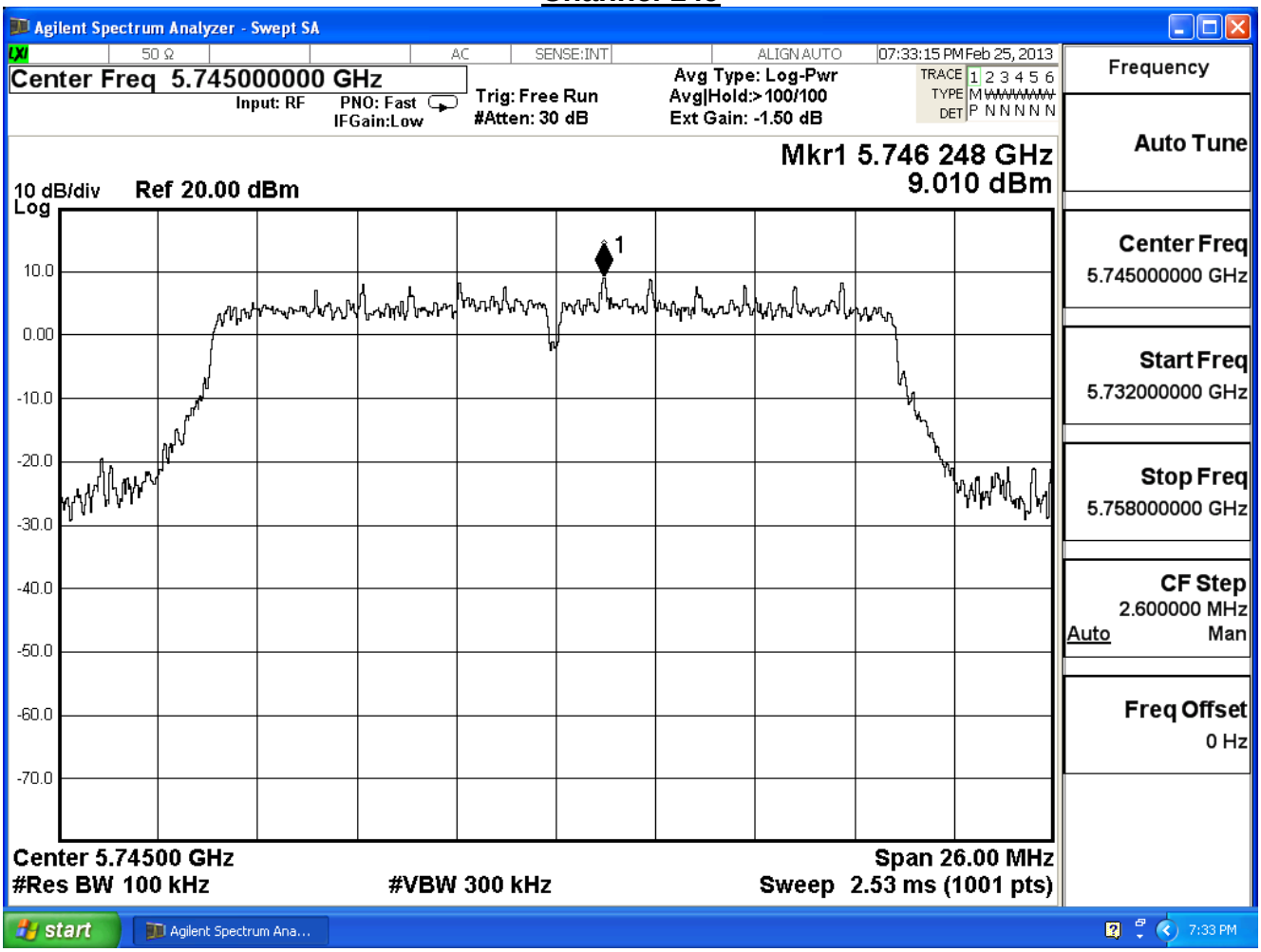
Product	Dual-band Wireless-AC1200 Gigabit Router		
Test Item	Peak Power Spectrum Density		
Test Mode	Mode 1:Transmit (CDD mode)_Adapter: EXA1206UH_LAN1		
Date of Test	2013/02/25	Test Site	SR7

IEEE802.11n_20MHz_(ANT 0)				
Channel No.	Frequency (MHz)	Reading Level (dBm)	Measure Level (dBm)	Limit (dBm)
149	5745	9.010	16.000	≦30
157	5785	9.631	16.621	≦30
165	5825	9.529	16.519	≦30

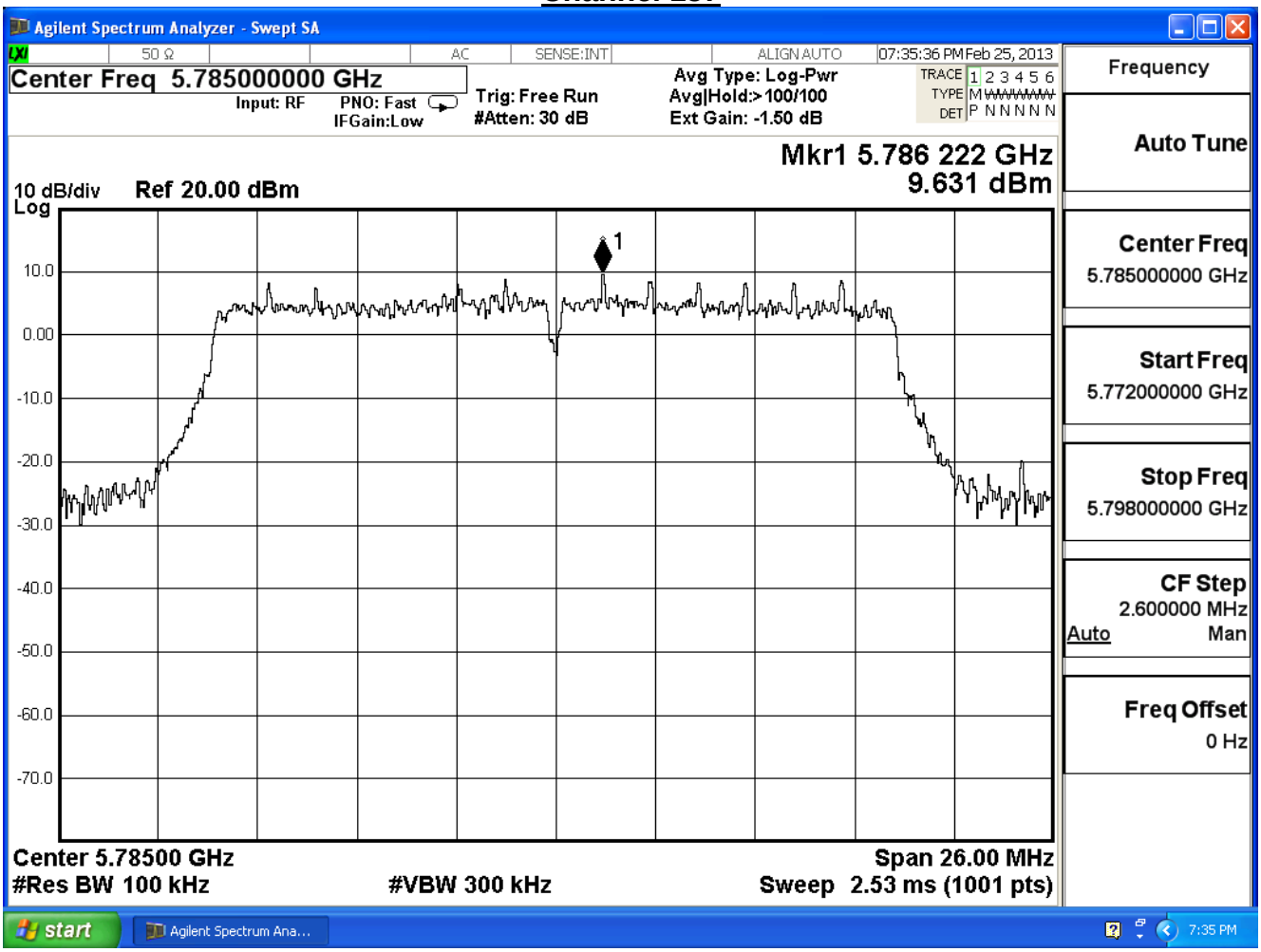
Correct factor=10log(500kHz/100KHz)=6.99dB

Measure = Reading + correct factor

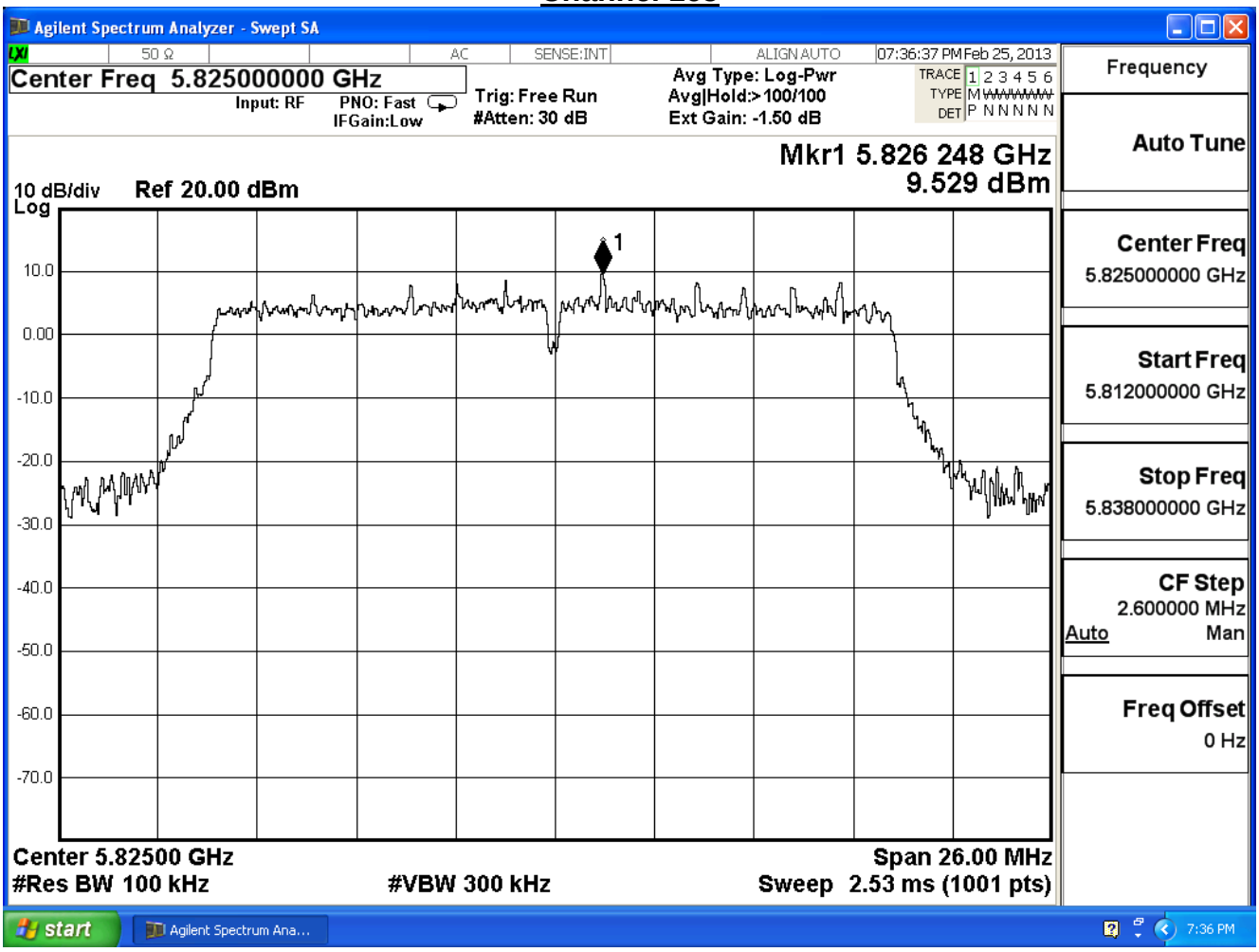
Channel 149


Agilent Spectrum Analyzer - Swept SA
50 Ω
AC
SENSE:INT
ALIGN AUTO
07:33:15 PM Feb 25, 2013
Center Freq 5.745000000 GHz
Input: RF
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
Ext Gain: -1.50 dB
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
Mkr1 5.746 248 GHz
9.010 dBm
10 dB/div
Log
Ref 20.00 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
Center 5.74500 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 26.00 MHz
Sweep 2.53 ms (1001 pts)
Frequency
Auto Tune
Center Freq
5.745000000 GHz
Start Freq
5.732000000 GHz
Stop Freq
5.758000000 GHz
CF Step
2.600000 MHz
Auto
Man
Freq Offset
0 Hz
start
Agilent Spectrum Ana...
7:33 PM

Channel 157


Agilent Spectrum Analyzer - Swept SA
50 Ω
AC
SENSE:INT
ALIGN AUTO
07:35:36 PM Feb 25, 2013
Center Freq 5.785000000 GHz
Input: RF
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
Ext Gain: -1.50 dB
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
Mkr1 5.786 222 GHz
9.631 dBm
10 dB/div
Log
Ref 20.00 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
Center 5.78500 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 26.00 MHz
Sweep 2.53 ms (1001 pts)
Frequency
Auto Tune
Center Freq
5.785000000 GHz
Start Freq
5.772000000 GHz
Stop Freq
5.798000000 GHz
CF Step
2.600000 MHz
Auto
Man
Freq Offset
0 Hz
start
Agilent Spectrum Ana...
7:35 PM

Channel 165


Agilent Spectrum Analyzer - Swept SA
50 Ω
AC
SENSE:INT
ALIGN AUTO
07:36:37 PM Feb 25, 2013
Center Freq 5.825000000 GHz
Input: RF
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
Ext Gain: -1.50 dB
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
Mkr1 5.826 248 GHz
9.529 dBm
10 dB/div
Log
Ref 20.00 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
Center 5.82500 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 26.00 MHz
Sweep 2.53 ms (1001 pts)
Frequency
Auto Tune
Center Freq
5.825000000 GHz
Start Freq
5.812000000 GHz
Stop Freq
5.838000000 GHz
CF Step
2.600000 MHz
Auto
Man
Freq Offset
0 Hz
start
Agilent Spectrum Ana...
7:36 PM

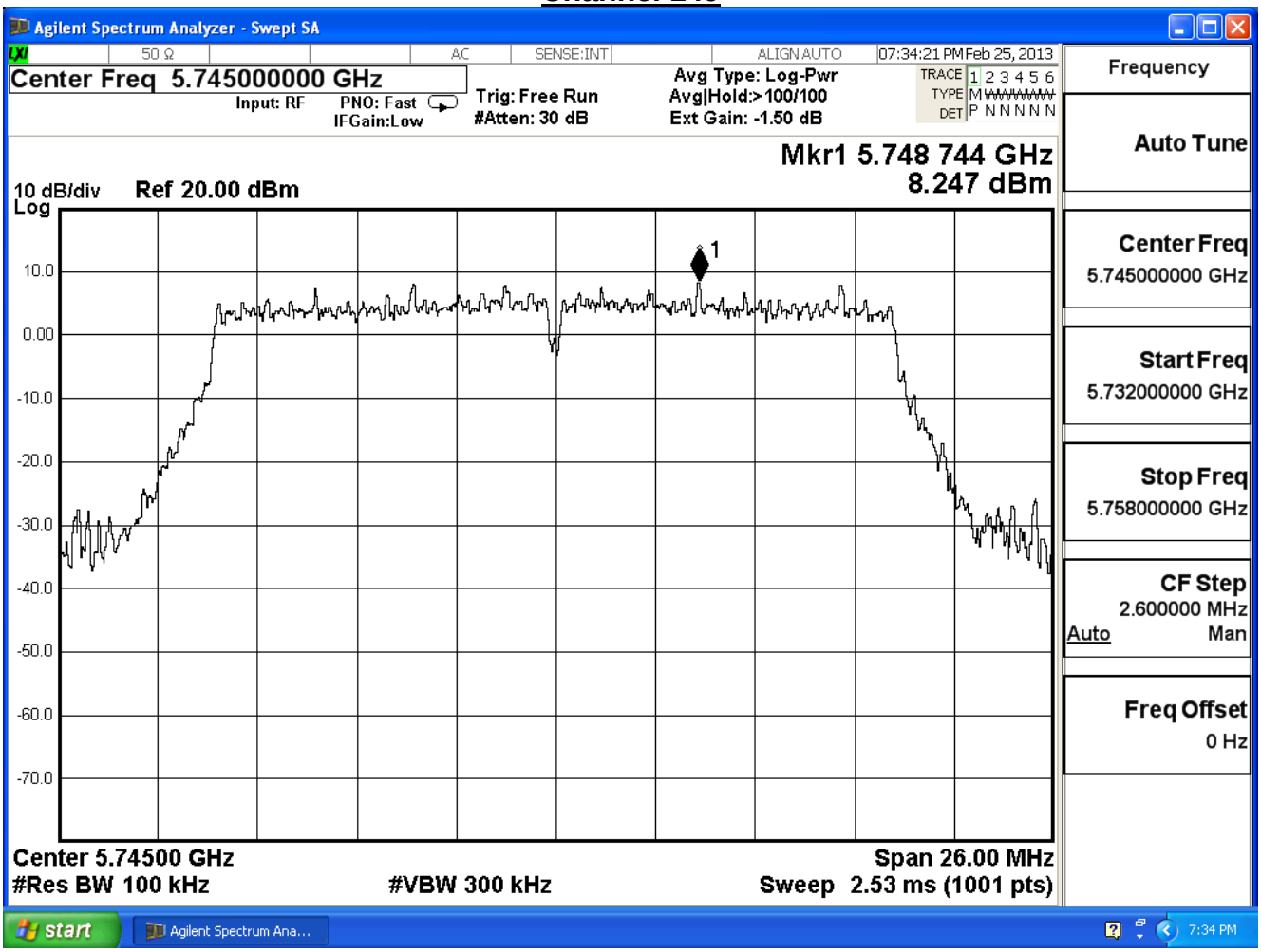
Product	Dual-band Wireless-AC1200 Gigabit Router		
Test Item	Peak Power Spectrum Density		
Test Mode	Mode 1:Transmit (CDD mode)_Adapter: EXA1206UH_LAN1		
Date of Test	2013/02/25	Test Site	SR7

IEEE802.11n_20MHz_(ANT 1)				
Channel No.	Frequency (MHz)	Reading Level (dBm)	Measure Level (dBm)	Limit (dBm)
149	5745	8.247	15.237	≦30
157	5785	8.927	15.917	≦30
165	5825	8.388	15.378	≦30

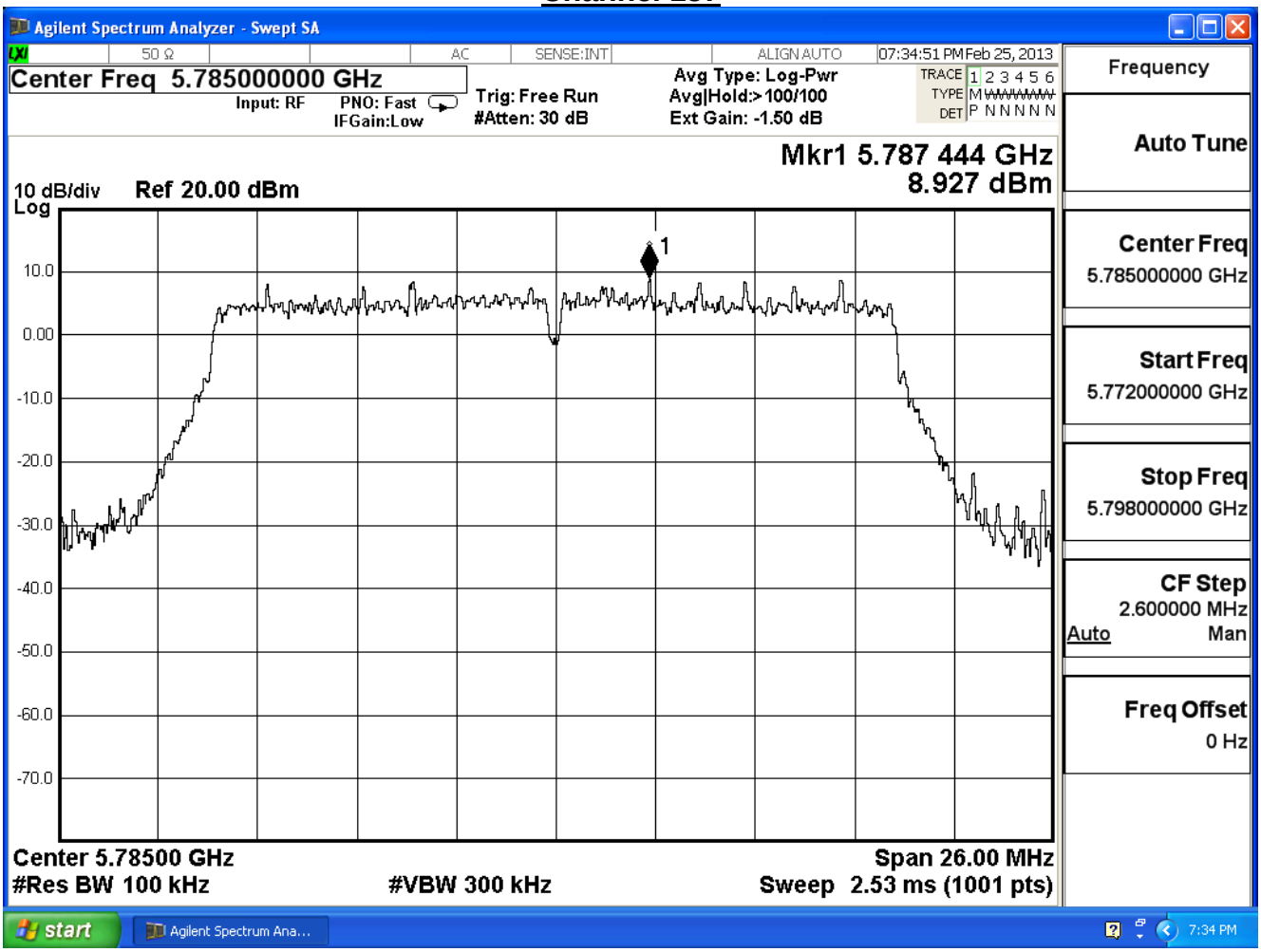
Correct factor=10log(500kHz/100KHz)=6.99dB

Measure = Reading + correct factor

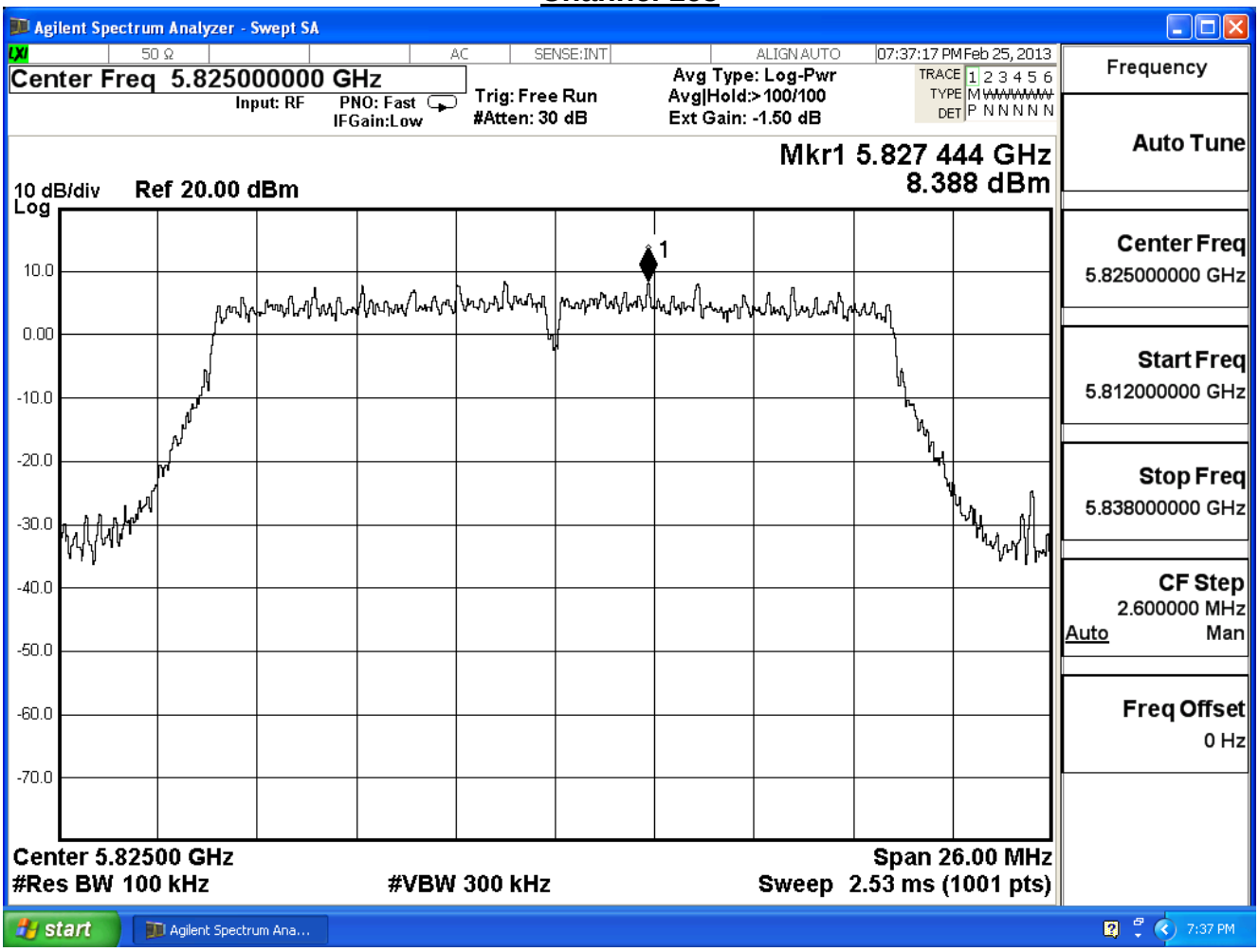
Channel 149


Agilent Spectrum Analyzer - Swept SA
50 Ω
AC
SENSE:INT
ALIGN AUTO
07:34:21 PM Feb 25, 2013
Center Freq 5.745000000 GHz
Input: RF
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
Ext Gain: -1.50 dB
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
Mkr1 5.748 744 GHz
8.247 dBm
10 dB/div
Log
Ref 20.00 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
Center 5.74500 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 26.00 MHz
Sweep 2.53 ms (1001 pts)
Frequency
Auto Tune
Center Freq
5.745000000 GHz
Start Freq
5.732000000 GHz
Stop Freq
5.758000000 GHz
CF Step
2.600000 MHz
Auto
Man
Freq Offset
0 Hz
start
Agilent Spectrum Ana...
7:34 PM

Channel 157


Agilent Spectrum Analyzer - Swept SA
50 Ω
AC
SENSE:INT
ALIGN AUTO
07:34:51 PM Feb 25, 2013
Center Freq 5.785000000 GHz
Input: RF
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
Ext Gain: -1.50 dB
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
Mkr1 5.787 444 GHz
8.927 dBm
10 dB/div
Log
Ref 20.00 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
Center 5.78500 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 26.00 MHz
Sweep 2.53 ms (1001 pts)
Frequency
Auto Tune
Center Freq
5.785000000 GHz
Start Freq
5.772000000 GHz
Stop Freq
5.798000000 GHz
CF Step
2.600000 MHz
Auto
Man
Freq Offset
0 Hz
start
Agilent Spectrum Ana...
7:34 PM

Channel 165


Agilent Spectrum Analyzer - Swept SA
Center Freq 5.825000000 GHz
Input: RF
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
Ext Gain: -1.50 dB
07:37:17 PM Feb 25, 2013
Mkr1 5.827 444 GHz
8.388 dBm
10 dB/div
Log
Ref 20.00 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
Center 5.82500 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 26.00 MHz
Sweep 2.53 ms (1001 pts)
Frequency
Auto Tune
Center Freq
5.825000000 GHz
Start Freq
5.812000000 GHz
Stop Freq
5.838000000 GHz
CF Step
2.600000 MHz
Auto
Man
Freq Offset
0 Hz
start
Agilent Spectrum Ana...
7:37 PM

Product	Dual-band Wireless-AC1200 Gigabit Router		
Test Item	Peak Power Spectrum Density		
Test Mode	Mode 1:Transmit (CDD mode)_Adapter: EXA1206UH_LAN1		
Date of Test	2013/02/25	Test Site	SR7

IEEE802.11n_20MHz_(ANT 0+1)			
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)
149	5745	18.646	≦30
157	5785	19.294	≦30
165	5825	18.996	≦30

Correct factor=10log(500kHz/100KHz)=6.99dB

Measure = Reading + correct factor

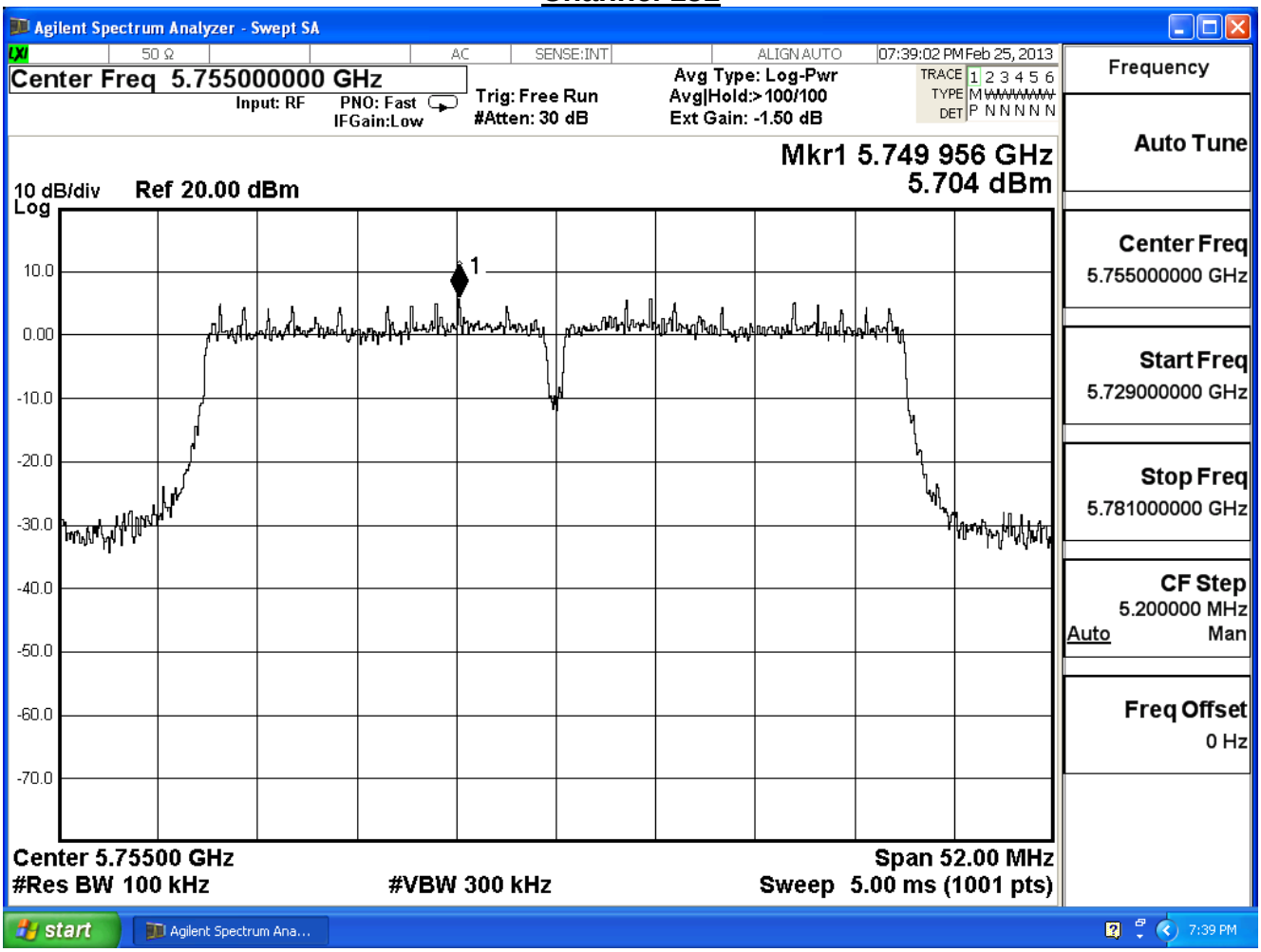
Product	Dual-band Wireless-AC1200 Gigabit Router		
Test Item	Peak Power Spectrum Density		
Test Mode	Mode 1:Transmit (CDD mode)_Adapter: EXA1206UH_LAN1		
Date of Test	2013/02/25	Test Site	SR7

IEEE 802.11n_40MHz (ANT 0)				
Channel No.	Frequency (MHz)	Reading Level (dBm)	Measure Level (dBm)	Limit (dBm)
151	5755	5.704	12.694	≦30
159	5795	6.009	12.999	≦30

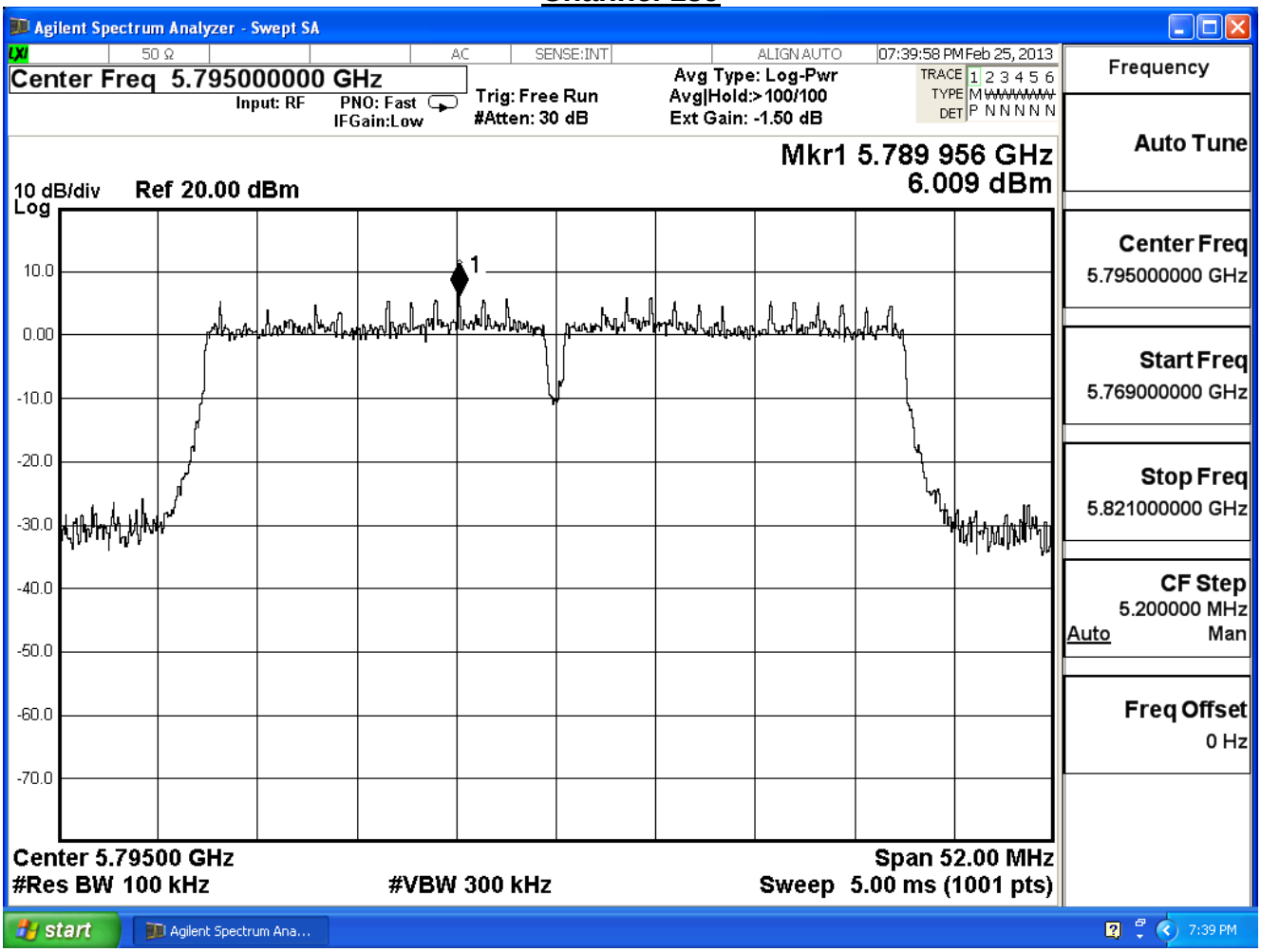
Correct factor=10log(500kHz/100KHz)=6.99dB

Measure = Reading + correct factor

Channel 151


Agilent Spectrum Analyzer - Swept SA
50 Ω
AC
SENSE:INT
ALIGN AUTO
07:39:02 PM Feb 25, 2013
Center Freq 5.755000000 GHz
Input: RF
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
Ext Gain: -1.50 dB
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
Mkr1 5.749 956 GHz
5.704 dBm
10 dB/div
Log
Ref 20.00 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
Center 5.75500 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 52.00 MHz
Sweep 5.00 ms (1001 pts)
Frequency
Auto Tune
Center Freq
5.755000000 GHz
Start Freq
5.729000000 GHz
Stop Freq
5.781000000 GHz
CF Step
5.200000 MHz
Auto
Man
Freq Offset
0 Hz
start
Agilent Spectrum Ana...
7:39 PM

Channel 159


Agilent Spectrum Analyzer - Swept SA
50 Ω
AC
SENSE:INT
ALIGN AUTO
07:39:58 PM Feb 25, 2013
Center Freq 5.795000000 GHz
Input: RF
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
Ext Gain: -1.50 dB
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
Mkr1 5.789 956 GHz
6.009 dBm
10 dB/div
Log
Ref 20.00 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
Center 5.79500 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 52.00 MHz
Sweep 5.00 ms (1001 pts)
Frequency
Auto Tune
Center Freq
5.795000000 GHz
Start Freq
5.769000000 GHz
Stop Freq
5.821000000 GHz
CF Step
5.200000 MHz
Auto
Man
Freq Offset
0 Hz
start
Agilent Spectrum Ana...
7:39 PM

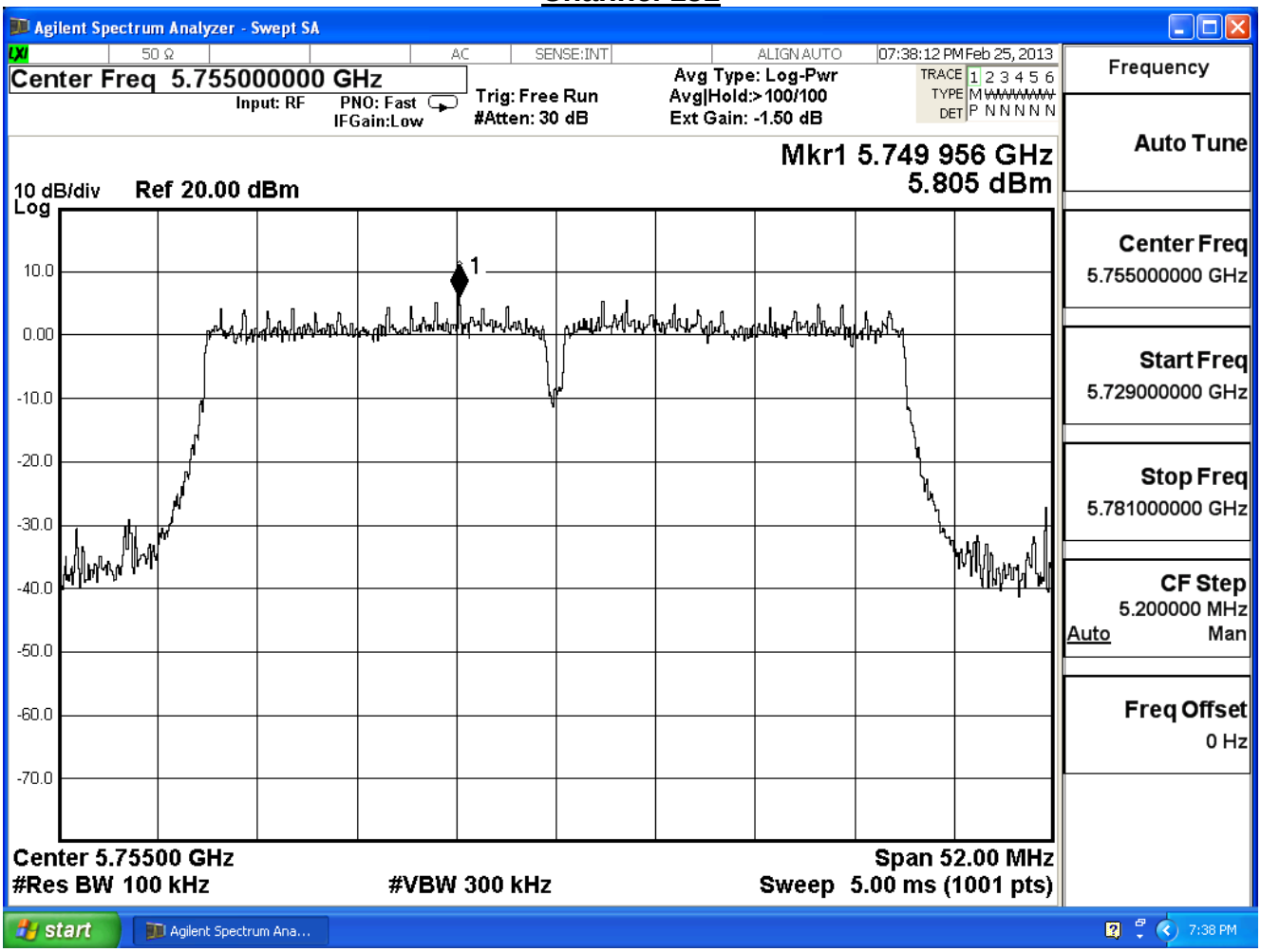
Product	Dual-band Wireless-AC1200 Gigabit Router		
Test Item	Peak Power Spectrum Density		
Test Mode	Mode 1:Transmit (CDD mode)_Adapter: EXA1206UH_LAN1		
Date of Test	2013/02/25	Test Site	SR7

IEEE 802.11n_40MHz (ANT 1)				
Channel No.	Frequency (MHz)	Reading Level (dBm)	Measure Level (dBm)	Limit (dBm)
151	5755	5.805	12.795	≦30
159	5795	5.702	12.692	≦30

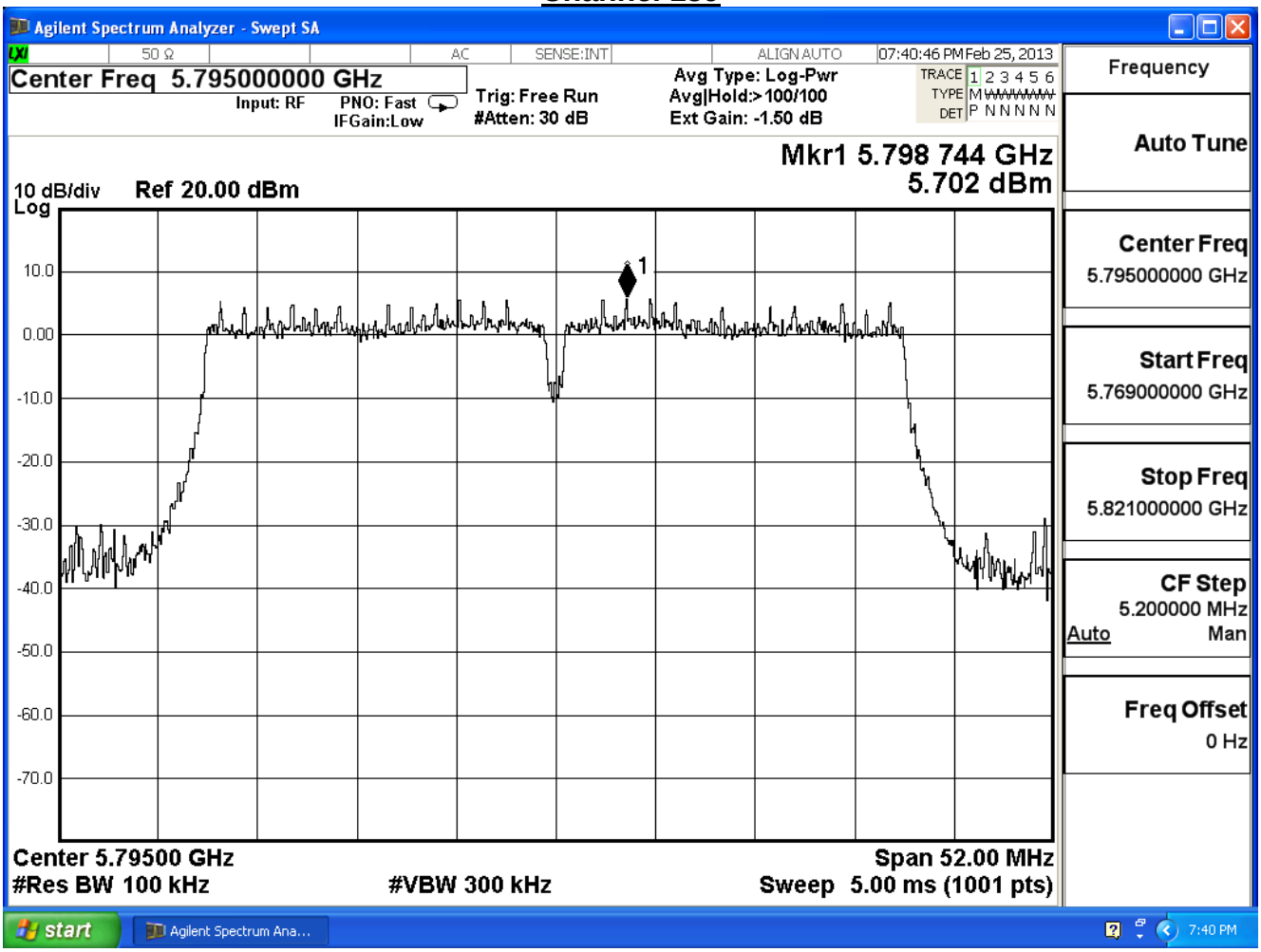
Correct factor=10log(500kHz/100KHz)=6.99dB

Measure = Reading + correct factor

Channel 151


Agilent Spectrum Analyzer - Swept SA
50 Ω
AC
SENSE:INT
ALIGN AUTO
07:38:12 PM Feb 25, 2013
Center Freq 5.755000000 GHz
Input: RF
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
Ext Gain: -1.50 dB
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
Mkr1 5.749 956 GHz
5.805 dBm
10 dB/div
Log
Ref 20.00 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
Center 5.75500 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 52.00 MHz
Sweep 5.00 ms (1001 pts)
Frequency
Auto Tune
Center Freq
5.755000000 GHz
Start Freq
5.729000000 GHz
Stop Freq
5.781000000 GHz
CF Step
5.200000 MHz
Auto
Man
Freq Offset
0 Hz
start
Agilent Spectrum Ana...
7:38 PM

Channel 159


Agilent Spectrum Analyzer - Swept SA
50 Ω
AC
SENSE:INT
ALIGN AUTO
07:40:46 PM Feb 25, 2013
Center Freq 5.795000000 GHz
Input: RF
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
Ext Gain: -1.50 dB
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
Mkr1 5.798 744 GHz
5.702 dBm
10 dB/div
Log
Ref 20.00 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
Center 5.79500 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 52.00 MHz
Sweep 5.00 ms (1001 pts)
Frequency
Auto Tune
Center Freq
5.795000000 GHz
Start Freq
5.769000000 GHz
Stop Freq
5.821000000 GHz
CF Step
5.200000 MHz
Auto
Man
Freq Offset
0 Hz
start
Agilent Spectrum Ana...
7:40 PM

Product	Dual-band Wireless-AC1200 Gigabit Router		
Test Item	Peak Power Spectrum Density		
Test Mode	Mode 1:Transmit (CDD mode)_Adapter: EXA1206UH_LAN1		
Date of Test	2013/02/25	Test Site	SR7

IEEE802.11n 40MHz(ANT 0+1)

Channel No.	Frequency (MHz)	Measurement (dBm)	Limit (dBm)
151	5755	15.755	≦30
159	5795	15.859	≦30

Correct factor=10log(500kHz/100KHz)=6.99dB

Measure = Reading + correct factor

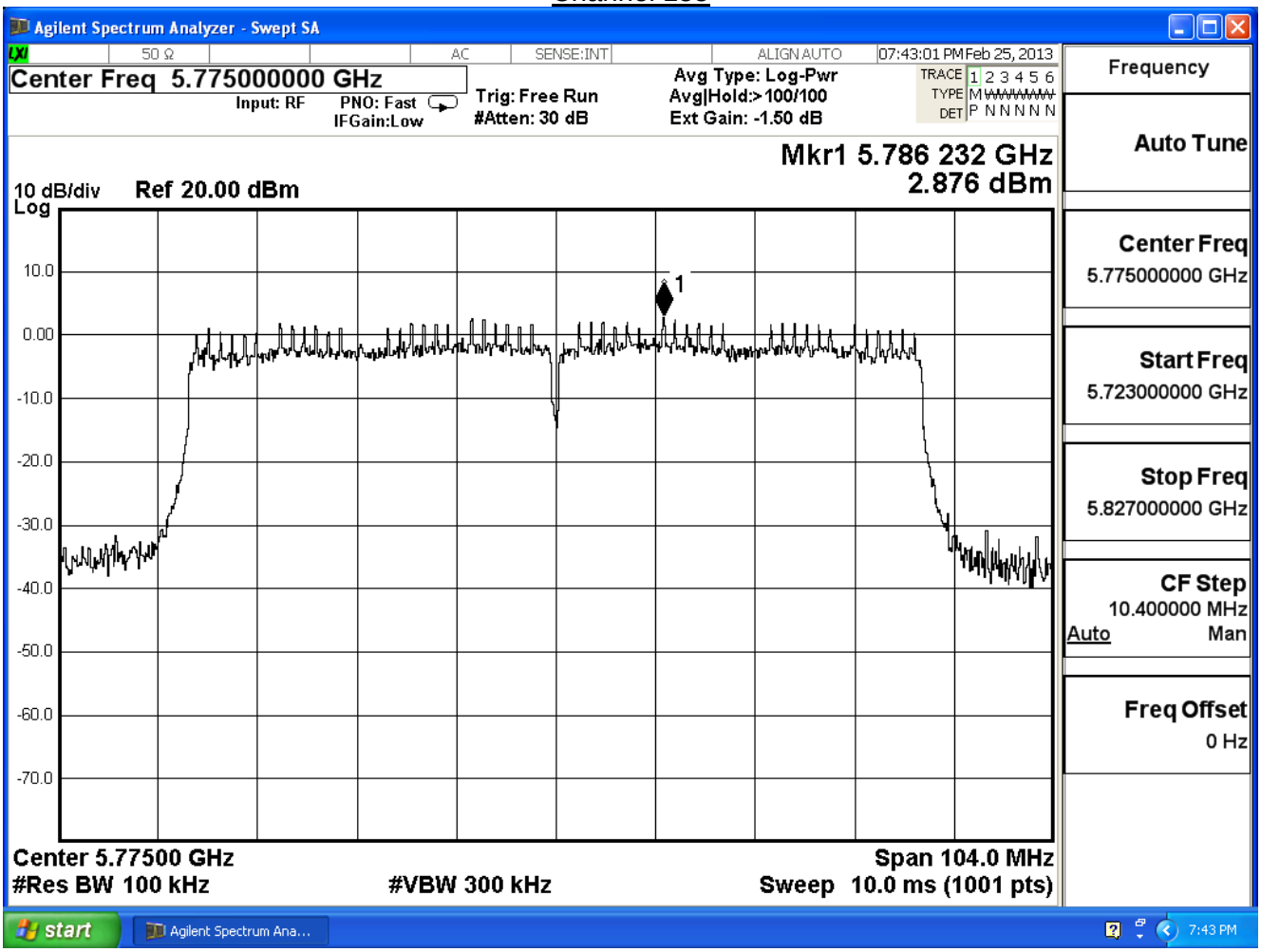
Product	Dual-band Wireless-AC1200 Gigabit Router		
Test Item	Peak Power Spectrum Density		
Test Mode	Mode 1:Transmit (CDD mode)_Adapter: EXA1206UH_LAN1		
Date of Test	2013/02/25	Test Site	SR7

IEEE 802.11ac_80MHz (ANT 0)				
Channel No.	Frequency (MHz)	Reading Level (dBm)	Measure Level (dBm)	Limit (dBm)
155	5775	2.876	9.866	≦30

Correct factor=10log(500kHz/100KHz)=6.99dB

Measure = Reading + correct factor

Channel 155


Agilent Spectrum Analyzer - Swept SA
50 Ω
AC
SENSE:INT
ALIGN AUTO
07:43:01 PM Feb 25, 2013
Center Freq 5.775000000 GHz
Input: RF
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
Ext Gain: -1.50 dB
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
Mkr1 5.786 232 GHz
2.876 dBm
10 dB/div
Log
Ref 20.00 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
Center 5.77500 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 104.0 MHz
Sweep 10.0 ms (1001 pts)
Frequency
Auto Tune
Center Freq
5.775000000 GHz
Start Freq
5.723000000 GHz
Stop Freq
5.827000000 GHz
CF Step
10.400000 MHz
Auto
Man
Freq Offset
0 Hz
start
Agilent Spectrum Ana...
7:43 PM

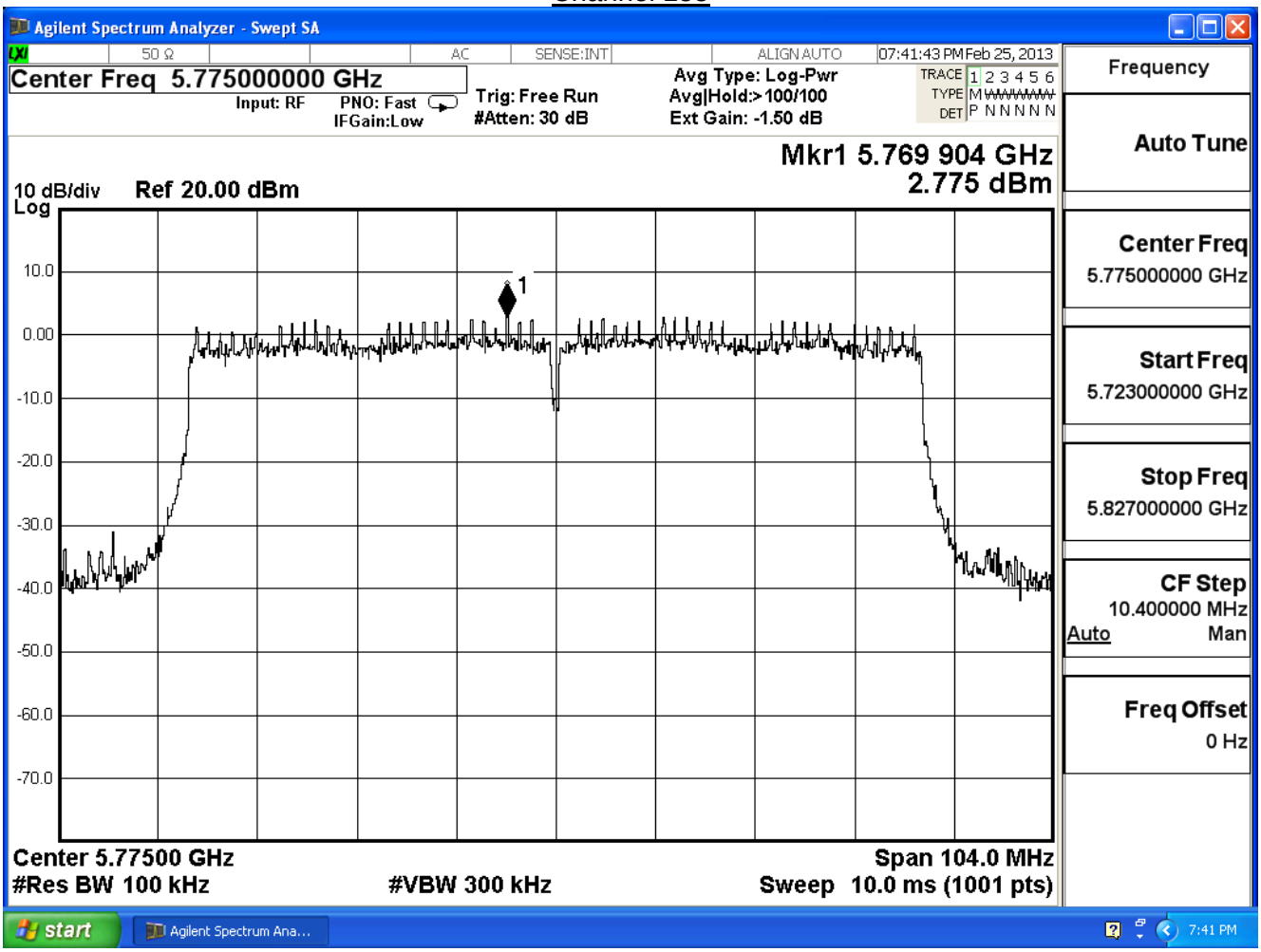
Product	Dual-band Wireless-AC1200 Gigabit Router		
Test Item	Peak Power Spectrum Density		
Test Mode	Mode 1:Transmit (CDD mode)_Adapter: EXA1206UH_LAN1		
Date of Test	2013/02/25	Test Site	SR7

IEEE 802.11ac_80MHz (ANT 1)				
Channel No.	Frequency (MHz)	Reading Level (dBm)	Measure Level (dBm)	Limit (dBm)
155	5775	2.775	9.765	≦30

Correct factor=10log(500kHz/100KHz)=6.99dB

Measure = Reading + correct factor

Channel 155


Agilent Spectrum Analyzer - Swept SA
50 Ω
AC
SENSE:INT
ALIGN AUTO
07:41:43 PM Feb 25, 2013
Center Freq 5.775000000 GHz
Input: RF
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
Ext Gain: -1.50 dB
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
Mkr1 5.769 904 GHz
2.775 dBm
10 dB/div
Log
Ref 20.00 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
Center 5.77500 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 104.0 MHz
Sweep 10.0 ms (1001 pts)
Frequency
Auto Tune
Center Freq
5.775000000 GHz
Start Freq
5.723000000 GHz
Stop Freq
5.827000000 GHz
CF Step
10.400000 MHz
Auto
Man
Freq Offset
0 Hz
start
Agilent Spectrum Ana...
7:41 PM

Product	Dual-band Wireless-AC1200 Gigabit Router		
Test Item	Peak Power Spectrum Density		
Test Mode	Mode 1:Transmit (CDD mode)_Adapter: EXA1206UH_LAN1		
Date of Test	2013/02/25	Test Site	SR7

IEEE802.11ac 80MHz(ANT 0+1)

Channel No.	Frequency (MHz)	Measurement (dBm)	Limit (dBm)
155	5775	12.826	≦30

Correct factor=10log(500kHz/100KHz)=6.99dB

Measure = Reading + correct factor

3. Frequency Stability

3.1. Test Equipment

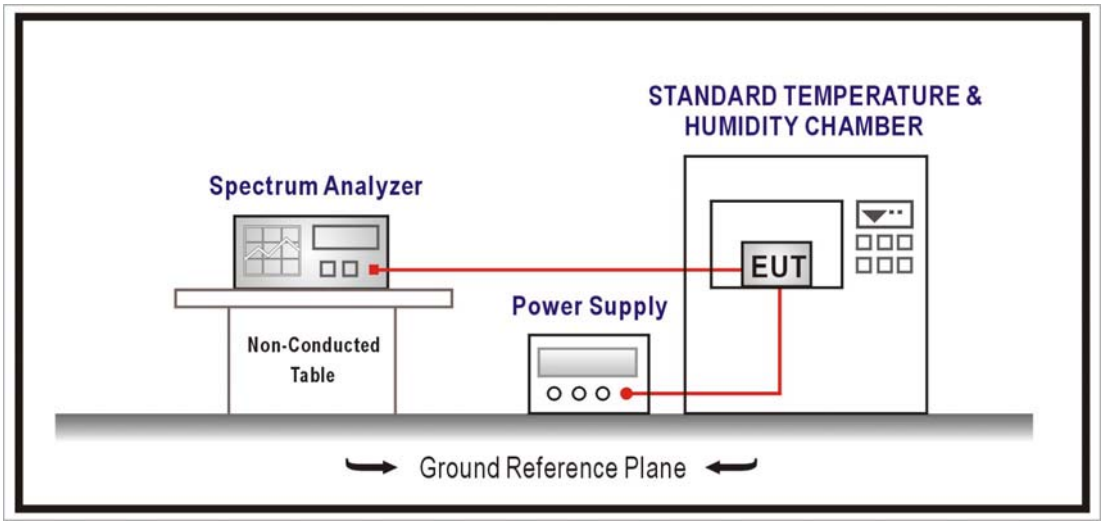
The following test equipments are used during the radiated emission tests:

Frequency Stability / SR7

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
Spectrum Analyzer	Agilent	N9010A-EXA	US47140172	2016/08/23
Temperature & Humidity Chamber	WIT	TH-1S-B	1082101	2017/01/18

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

3.2. Test Setup



3.3. Limits

Manufactures of all devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified

3.4. Test Procedure

The EUT was setup to ANSI C63.10:2013; tested to U-NII test procedure of 789033 D02 V01R02 for compliance to FCC 47CFR Subpart E requirements.

3.5. Uncertainty

The measurement uncertainty is defined as ± 150 Hz

3.6. Test Result

Product	Dual-band Wireless-AC1200 Gigabit Router		
Test Item	Frequency Stability		
Test Mode	Mode 1:Transmit (CDD mode)_Adapter: EXA1206UH_LAN1_802.11a - 5745MHz, ANT 0		
Date of Test	2016/03/29	Test Site	SR7

Temperature Interval (°C)	AC Voltage (V)	Frequency (MHz)	Deviation (ppm)	Result
-20	120	5745.00019	0.0389	Pass
-10		5745.00058	0.1016	Pass
0		5745.01310	2.2796	Pass
10		5745.00242	0.4215	Pass
20		5744.98673	-2.3097	Pass
30		5744.99890	-0.1921	Pass
40		5744.95122	-8.4912	Pass
50		5745.02604	4.5327	Pass

Temperature Interval (°C)	AC Voltage (V)	Frequency (MHz)	Deviation (ppm)	Result
25	102	5744.99847	-0.2661	Pass
	120	5744.99714	-0.4971	Pass
	138	5744.98992	-1.7541	Pass

Product	Dual-band Wireless-AC1200 Gigabit Router		
Test Item	Frequency Stability		
Test Mode	Mode 1:Transmit (CDD mode)_Adapter: EXA1206UH_LAN1_802.11a - 5825MHz, ANT 0		
Date of Test	2016/03/29	Test Site	SR7

Temperature Interval (oC)	AC Voltage (V)	Frequency (MHz)	Deviation (ppm)	Result
-20	120	5825.01369	2.3555	Pass
-10		5825.02915	5.0050	Pass
0		5825.01396	2.3963	Pass
10		5825.01095	1.8795	Pass
20		5824.99979	-0.0358	Pass
30		5824.98581	-2.4355	Pass
40		5824.98621	-2.3678	Pass
50		5825.01371	2.3530	Pass

Temperature Interval (^{o}C)	AC Voltage (V)	Frequency (MHz)	Deviation (ppm)	Result
25	102	5824.99915	-0.1463	Pass
	120	5824.96582	-5.8684	Pass
	138	5824.96523	-5.9688	Pass

Product	Dual-band Wireless-AC1200 Gigabit Router		
Test Item	Frequency Stability		
Test Mode	Mode 1:Transmit (CDD mode)_Adapter: EXA1206UH_LAN1_802.11n_20M - 5745MHz, ANT 0		
Date of Test	2016/03/29	Test Site	SR7

Temperature Interval (oC)	AC Voltage (V)	Frequency (MHz)	Deviation (ppm)	Result
-20	120	5745.03327	5.7971	Pass
-10		5745.00537	0.9348	Pass
0		5745.02728	4.7478	Pass
10		5745.00065	0.1128	Pass
20		5744.99323	-1.1776	Pass
30		5744.99584	-0.7244	Pass
40		5744.98517	-2.5808	Pass
50		5745.02271	3.9534	Pass

Temperature Interval (^{o}C)	AC Voltage (V)	Frequency (MHz)	Deviation (ppm)	Result
25	102	5744.99772	-0.3968	Pass
	120	5745.02914	5.0725	Pass
	138	5744.97794	-3.8405	Pass

Product	Dual-band Wireless-AC1200 Gigabit Router		
Test Item	Frequency Stability		
Test Mode	Mode 1:Transmit (CDD mode)_Adapter: EXA1206UH_LAN1_802.11n_20M - 5825MHz, ANT 0		
Date of Test	2016/03/29	Test Site	SR7

Temperature Interval (oC)	AC Voltage (V)	Frequency (MHz)	Deviation (ppm)	Result
-20	120	5745.01096	1.9133	Pass
-10		5745.03179	5.5342	Pass
0		5745.00625	1.0874	Pass
10		5745.01949	3.3927	Pass
20		5744.98206	-3.1230	Pass
30		5744.98054	-3.3865	Pass
40		5744.94522	-9.5356	Pass
50		5745.03053	5.3145	Pass

Temperature Interval (^{o}C)	AC Voltage (V)	Frequency (MHz)	Deviation (ppm)	Result
25	102	5744.99766	-0.4074	Pass
	120	5745.04209	7.3263	Pass
	138	5744.97944	-3.5786	Pass

Product	Dual-band Wireless-AC1200 Gigabit Router		
Test Item	Frequency Stability		
Test Mode	Mode 1:Transmit (CDD mode)_Adapter: EXA1206UH_LAN1_802.11n_20M - 5745MHz, ANT 1		
Date of Test	2016/03/29	Test Site	SR7

Temperature Interval (oC)	AC Voltage (V)	Frequency (MHz)	Deviation (ppm)	Result
-20	120	5825.01997	3.4342	Pass
-10		5825.03089	5.3028	Pass
0		5825.02937	5.0424	Pass
10		5825.01929	3.3116	Pass
20		5824.98147	-3.1816	Pass
30		5824.99244	-1.2976	Pass
40		5824.96706	-5.6544	Pass
50		5825.03265	5.6055	Pass

Temperature Interval (^{o}C)	AC Voltage (V)	Frequency (MHz)	Deviation (ppm)	Result
25	102	5824.99911	-0.1536	Pass
	120	5825.03590	6.1624	Pass
	138	5824.99357	-1.1042	Pass

Product	Dual-band Wireless-AC1200 Gigabit Router		
Test Item	Frequency Stability		
Test Mode	Mode 1:Transmit (CDD mode)_Adapter: EXA1206UH_LAN1_ 802.11n_20M - 5825MHz, ANT 1		
Date of Test	2016/03/29	Test Site	SR7

Temperature Interval (oC)	AC Voltage (V)	Frequency (MHz)	Deviation (ppm)	Result
-20	120	5825.01412	2.4303	Pass
-10		5825.02482	4.2607	Pass
0		5825.01957	3.3594	Pass
10		5825.00074	0.1271	Pass
20		5824.99721	-0.4795	Pass
30		5824.97753	-3.8579	Pass
40		5824.98635	-2.3438	Pass
50		5825.03573	6.1334	Pass

Temperature Interval (^{o}C)	AC Voltage (V)	Frequency (MHz)	Deviation (ppm)	Result
25	102	5824.99975	-0.0429	Pass
	120	5825.02857	4.9051	Pass
	138	5824.98890	-1.9064	Pass

Product	Dual-band Wireless-AC1200 Gigabit Router		
Test Item	Frequency Stability		
Test Mode	Mode 1:Transmit (CDD mode)_Adapter: EXA1206UH_LAN1_802.11n_40M - 5755MHz, ANT 0		
Date of Test	2016/03/29	Test Site	SR7

Temperature Interval (oC)	AC Voltage (V)	Frequency (MHz)	Deviation (ppm)	Result
-20	120	5755.01307	2.2772	Pass
-10		5755.02806	4.8751	Pass
0		5755.00046	0.0794	Pass
10		5755.01189	2.0664	Pass
20		5754.98309	-2.9375	Pass
30		5754.97932	-3.5930	Pass
40		5754.95580	-7.6810	Pass
50		5755.03775	6.5602	Pass

Temperature Interval (^{o}C)	AC Voltage (V)	Frequency (MHz)	Deviation (ppm)	Result
25	102	5754.99754	-0.4276	Pass
	120	5755.02058	3.5760	Pass
	138	5754.98993	-1.7501	Pass

Product	Dual-band Wireless-AC1200 Gigabit Router		
Test Item	Frequency Stability		
Test Mode	Mode 1:Transmit (CDD mode)_Adapter: EXA1206UH_LAN1_802.11n_40M - 5795MHz, ANT 0		
Date of Test	2016/03/29	Test Site	SR7

Temperature Interval (oC)	AC Voltage (V)	Frequency (MHz)	Deviation (ppm)	Result
-20	120	5755.04832	8.4018	Pass
-10		5755.03136	5.4494	Pass
0		5755.00919	1.5974	Pass
10		5755.01855	3.2238	Pass
20		5754.98994	-1.7486	Pass
30		5754.97078	-5.0767	Pass
40		5754.99885	-0.2004	Pass
50		5755.02811	4.8837	Pass

Temperature Interval (^{o}C)	AC Voltage (V)	Frequency (MHz)	Deviation (ppm)	Result
25	102	5754.99865	-0.2349	Pass
	120	5755.01825	3.1716	Pass
	138	5754.97348	-4.6075	Pass

Product	Dual-band Wireless-AC1200 Gigabit Router		
Test Item	Frequency Stability		
Test Mode	Mode 1:Transmit (CDD mode)_Adapter: EXA1206UH_LAN1_802.11n_40M - 5755MHz, ANT 1		
Date of Test	2016/03/29	Test Site	SR7

Temperature Interval (oC)	AC Voltage (V)	Frequency (MHz)	Deviation (ppm)	Result
-20	120	5795.03014	5.2068	Pass
-10		5795.03842	6.6297	Pass
0		5795.01567	2.7044	Pass
10		5795.01361	2.3478	Pass
20		5794.99178	-1.4185	Pass
30		5794.97459	-4.3845	Pass
40		5794.97758	-3.8690	Pass
50		5795.00879	1.5161	Pass

Temperature Interval (^{o}C)	AC Voltage (V)	Frequency (MHz)	Deviation (ppm)	Result
25	102	5794.99758	-0.4181	Pass
	120	5795.03019	5.2092	Pass
	138	5794.99861	-0.2403	Pass

Product	Dual-band Wireless-AC1200 Gigabit Router		
Test Item	Frequency Stability		
Test Mode	Mode 1:Transmit (CDD mode)_Adapter: EXA1206UH_LAN1_802.11n_40M - 5795MHz, ANT 1		
Date of Test	2016/03/29	Test Site	SR7

Temperature Interval (oC)	AC Voltage (V)	Frequency (MHz)	Deviation (ppm)	Result
-20	120	5795.00204	0.3576	Pass
-10		5795.03142	5.4211	Pass
0		5795.00011	0.0195	Pass
10		5795.01781	3.0725	Pass
20		5794.99161	-1.4482	Pass
30		5794.98776	-2.1114	Pass
40		5794.96365	-6.2725	Pass
50		5795.00031	0.0527	Pass

Temperature Interval (^{o}C)	AC Voltage (V)	Frequency (MHz)	Deviation (ppm)	Result
25	102	5794.99924	-0.1304	Pass
	120	5795.03370	5.8155	Pass
	138	5794.99129	-1.5030	Pass

Product	Dual-band Wireless-AC1200 Gigabit Router		
Test Item	Frequency Stability		
Test Mode	Mode 1:Transmit (CDD mode)_Adapter: EXA1206UH_LAN1_802.11ac_80M - 5775MHz, ANT 0		
Date of Test	2016/03/29	Test Site	SR7

Temperature Interval (oC)	AC Voltage (V)	Frequency (MHz)	Deviation (ppm)	Result
-20	120	5775.02703	4.6858	Pass
-10		5775.02401	4.1580	Pass
0		5775.00305	0.5275	Pass
10		5775.00929	1.6094	Pass
20		5774.98715	-2.2254	Pass
30		5774.99705	-0.5100	Pass
40		5774.95735	-7.3850	Pass
50		5775.03264	5.6525	Pass

Temperature Interval (^{o}C)	AC Voltage (V)	Frequency (MHz)	Deviation (ppm)	Result
25	102	5774.99865	-0.2331	Pass
	120	5775.03899	6.7515	Pass
	138	5775.03904	6.7600	Pass

Product	Dual-band Wireless-AC1200 Gigabit Router		
Test Item	Frequency Stability		
Test Mode	Mode 1:Transmit (CDD mode)_Adapter: EXA1206UH_LAN1_802.11ac_80M - 5775MHz, ANT 1		
Date of Test	2016/03/29	Test Site	SR7

Temperature Interval (oC)	AC Voltage (V)	Frequency (MHz)	Deviation (ppm)	Result
-20	120	5775.01637	2.8408	Pass
-10		5775.03025	5.2386	Pass
0		5775.02518	4.3605	Pass
10		5775.00579	1.0027	Pass
20		5774.99507	-0.8534	Pass
30		5774.99956	-0.0765	Pass
40		5774.98302	-2.9411	Pass
50		5775.04303	7.4505	Pass

Temperature Interval (^{o}C)	AC Voltage (V)	Frequency (MHz)	Deviation (ppm)	Result
25	102	5774.99974	-0.0444	Pass
	120	5775.01558	2.6983	Pass
	138	5775.00888	1.5385	Pass

Attachment 1

- **Original Report**