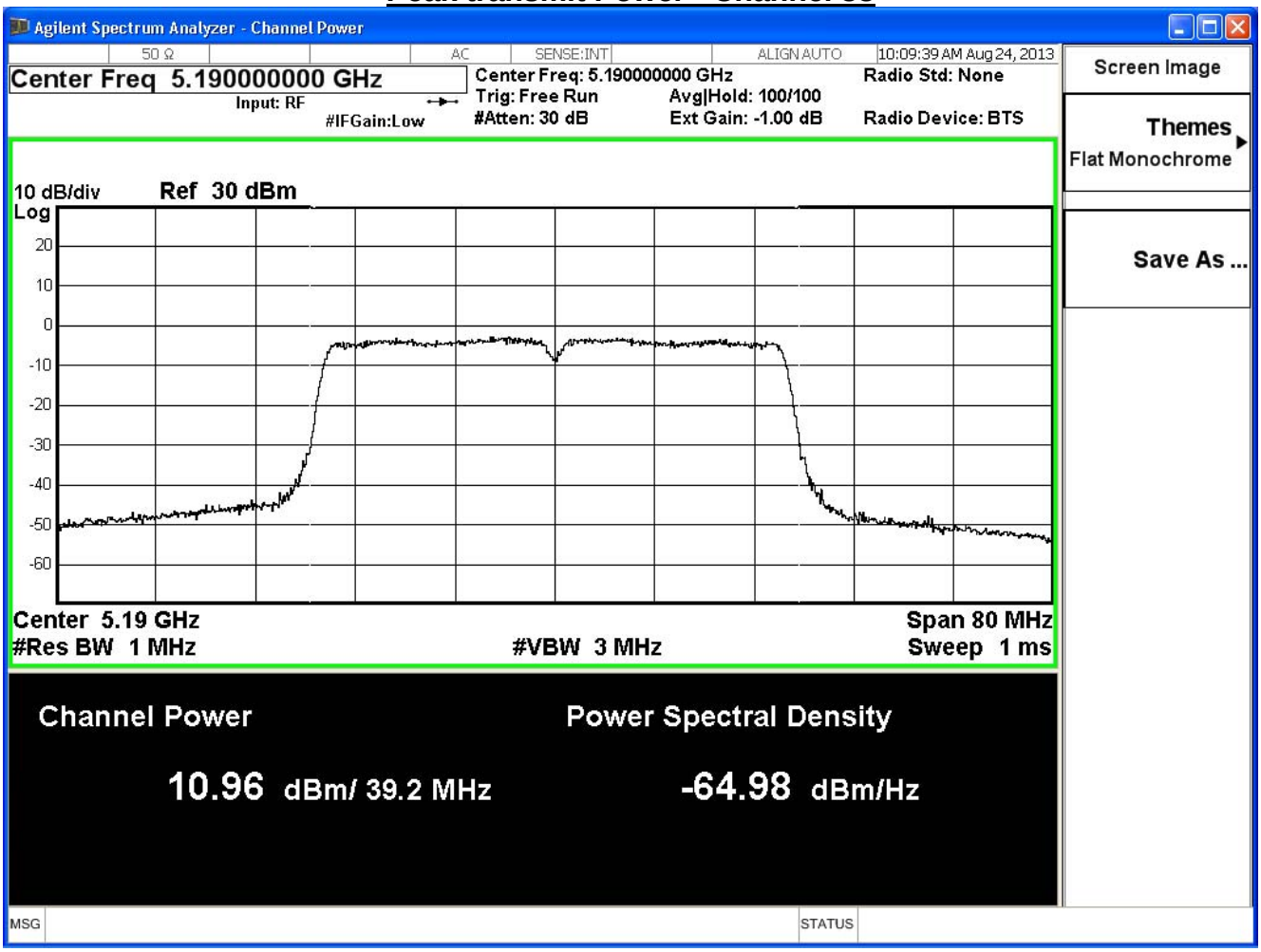
Product	Dual Band 3x3 802.11ac PCI-E Adapter		
Test Item	Peak Transmit Output		
Test Mode	Mode 1: Transmit (CDD mode)		
Date of Test	2013/08/24	Test Site	SR7

IEEE 802.11n(40MHz)_ANT 0						
Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Required Limit		Result
				Fixed Limit (dBm)	4+10logB Limit (dBm)	
38	5190	39.20	10.96	≤17	≤19.93	Pass
46	5230	39.22	11.26	≤ 17	≤19.93	Pass

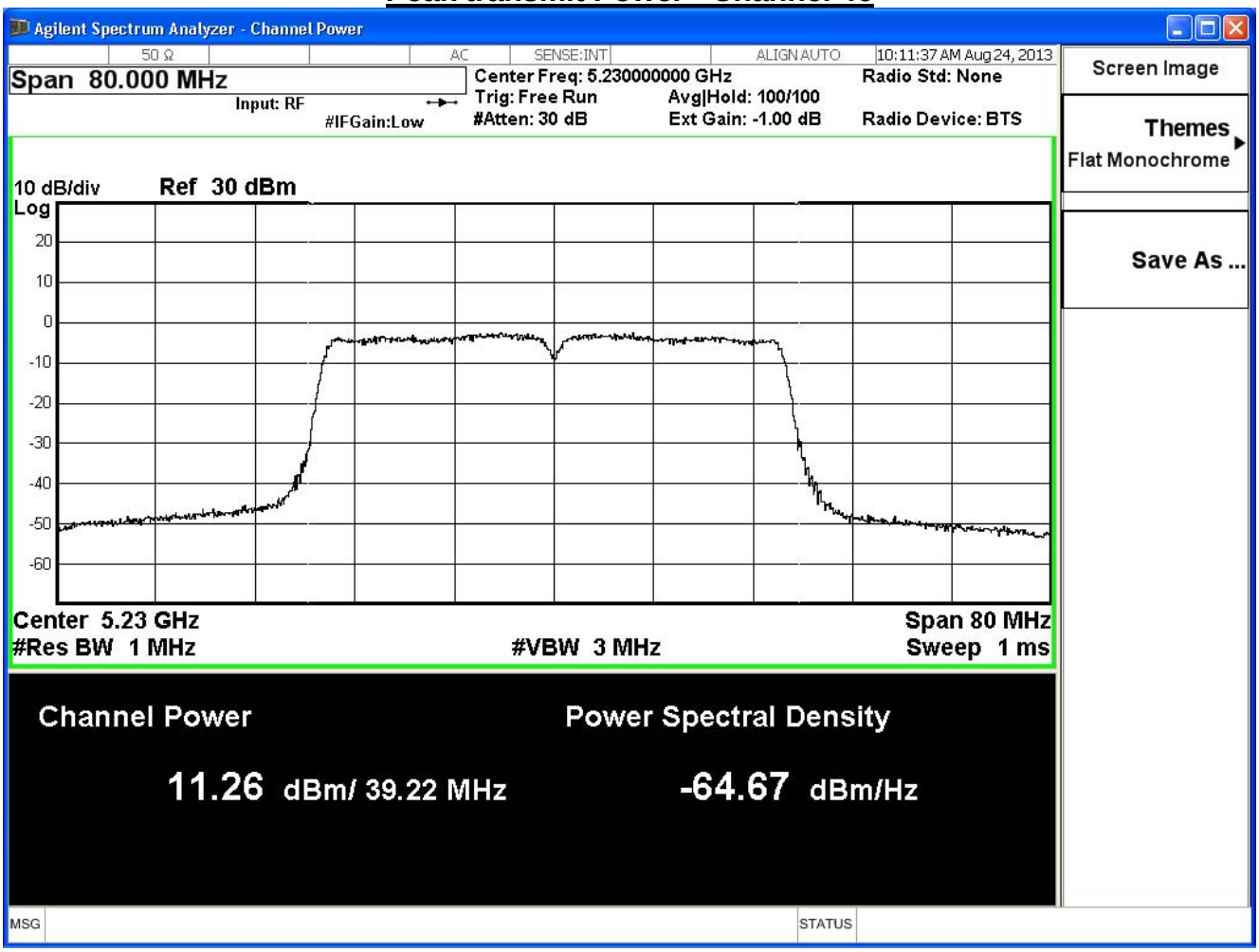
The worst emission of data rate is 40.5 Mbps

Peak Power Output (dBm)										
MCS Index		16	17	18	19	20	21	22	23	Required Limit
Channel No	Frequency (MHz)	Data Rate								
		40.5	81.0	121.5	162.0	243.0	324.0	364.5	405.0	
38	5190	10.96	10.95	10.94	10.93	10.92	10.91	10.90	10.89	17dBm or 4dBm+10logB
46	5230	11.26	--	--	--	--	--	--	--	

Peak transmit Power - Channel 38



Peak transmit Power - Channel 46



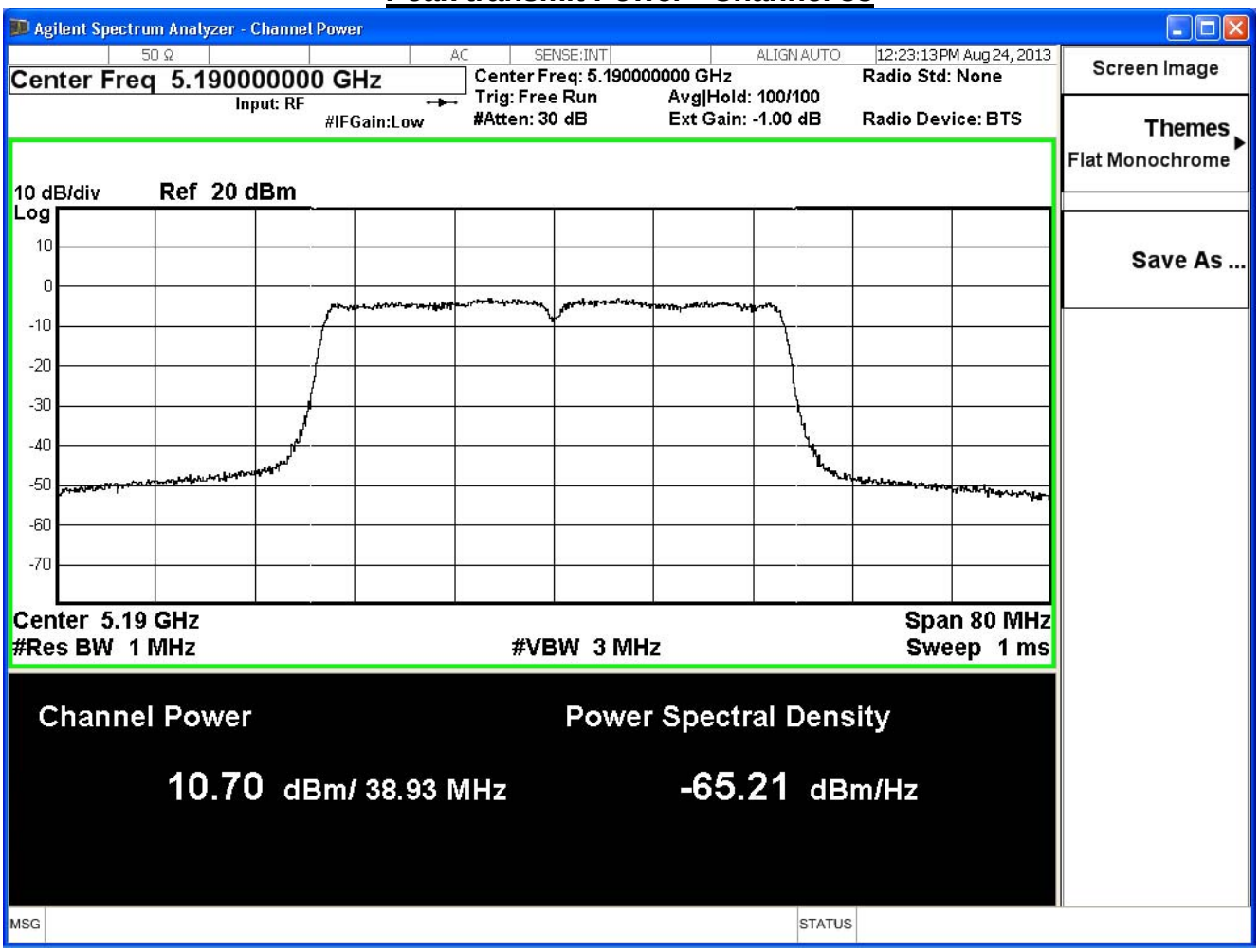
Product	Dual Band 3x3 802.11ac PCI-E Adapter		
Test Item	Peak Transmit Output		
Test Mode	Mode 1: Transmit (CDD mode)		
Date of Test	2013/08/24	Test Site	SR7

IEEE 802.11n(40MHz)_ANT 1						
Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Required Limit		Result
				Fixed Limit (dBm)	4+10logB Limit (dBm)	
38	5190	38.93	10.70	≤17	≤19.90	Pass
46	5230	39.09	11.26	≤ 17	≤19.92	Pass

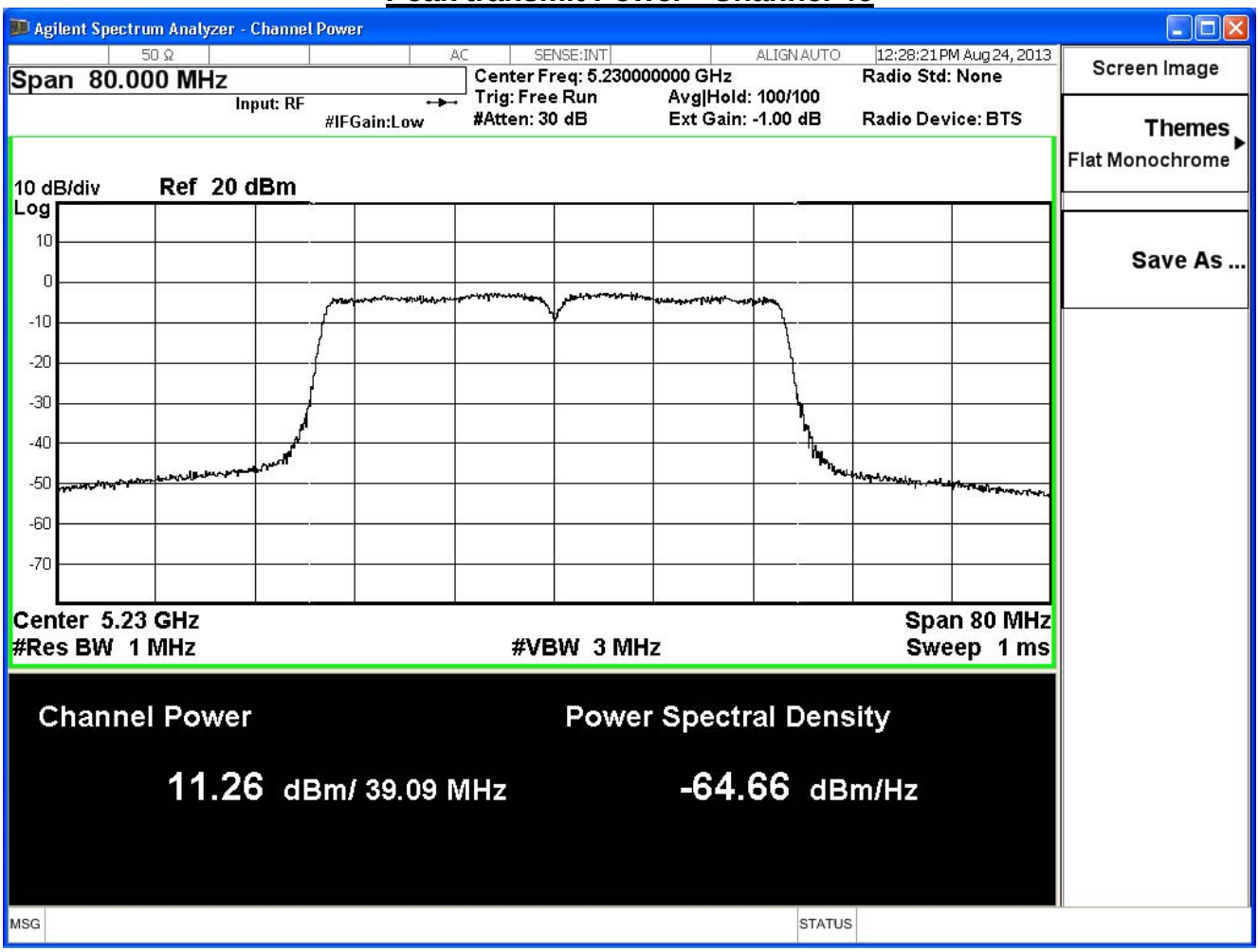
The worst emission of data rate is 40.5 Mbps

Peak Power Output (dBm)									
MCS Index		16	17	18	19	20	21	22	23	Required Limit
Channel No	Frequency (MHz)	Data Rate								
		40.5	81.0	121.5	162.0	243.0	324.0	364.5	405.0	
38	5190	10.70	10.69	10.68	10.65	10.64	10.63	10.61	10.60	17dBm or 4dBm+10logB
46	5230	11.26	--	--	--	--	--	--	--	

Peak transmit Power - Channel 38



Peak transmit Power - Channel 46



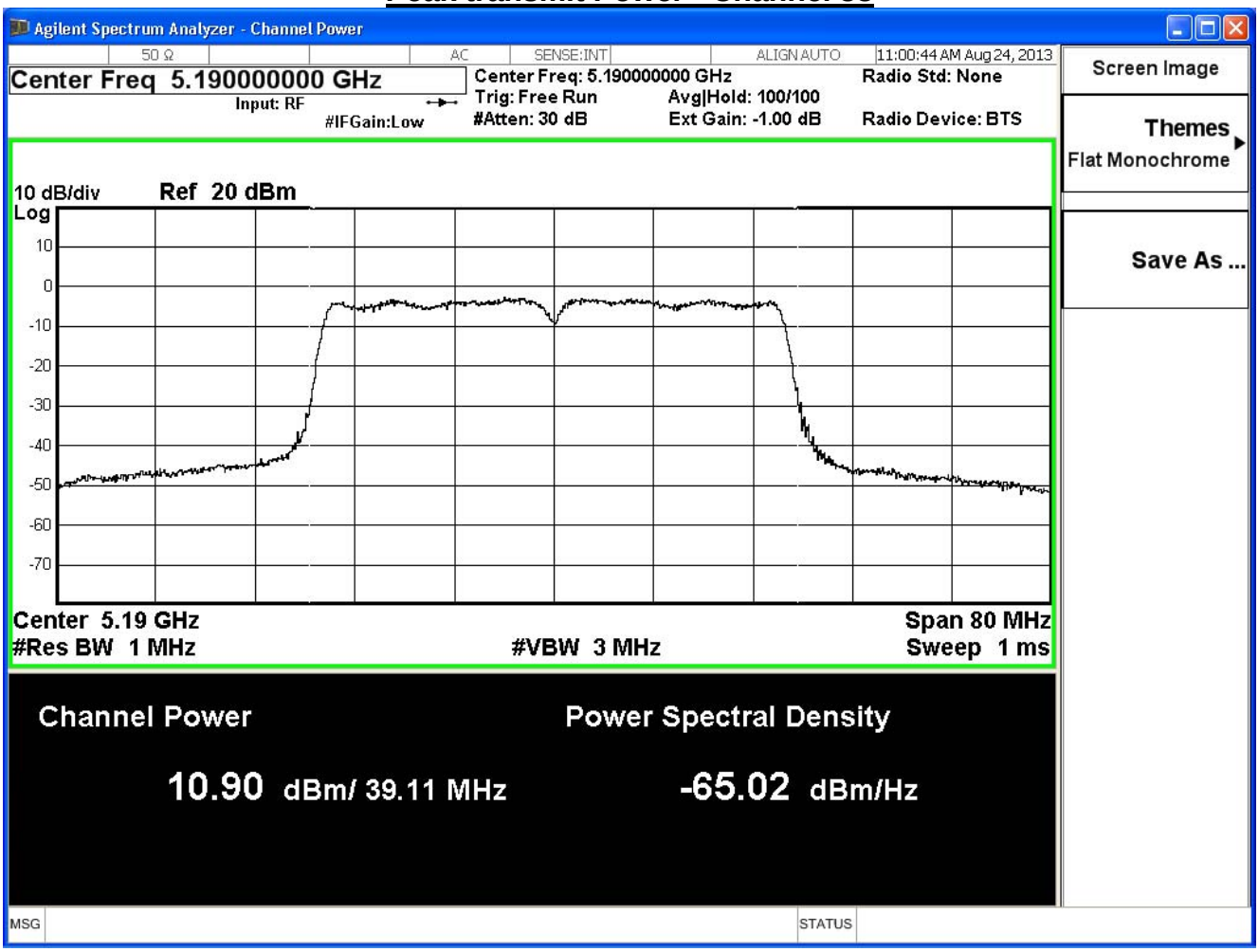
Product	Dual Band 3x3 802.11ac PCI-E Adapter		
Test Item	Peak Transmit Output		
Test Mode	Mode 1: Transmit (CDD mode)		
Date of Test	2013/08/24	Test Site	SR7

IEEE 802.11n(40MHz)_ANT 2						
Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Required Limit		Result
				Fixed Limit (dBm)	4+10logB Limit (dBm)	
38	5190	39.11	10.90	≤17	≤19.92	Pass
46	5230	38.97	11.16	≤ 17	≤19.90	Pass

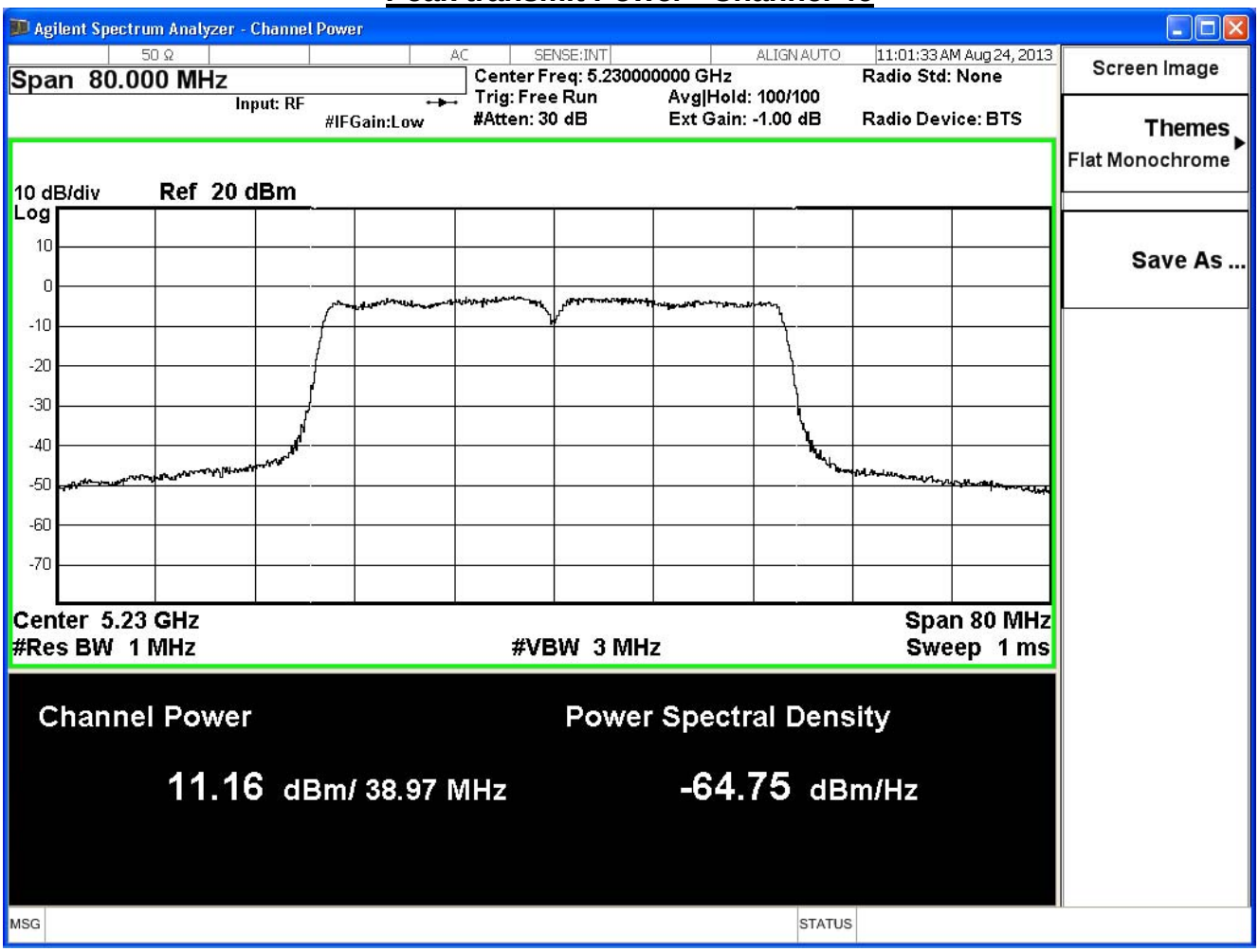
The worst emission of data rate is 40.5 Mbps

Peak Power Output (dBm)									
MCS Index		16	17	18	19	20	21	22	23	Required Limit
Channel No	Frequency (MHz)	Data Rate								
		40.5	81.0	121.5	162.0	243.0	324.0	364.5	405.0	
38	5190	10.90	10.89	10.88	10.87	10.86	10.85	10.84	10.82	17dBm or 4dBm+10logB
46	5230	11.16	--	--	--	--	--	--	--	

Peak transmit Power - Channel 38



Peak transmit Power - Channel 46



Product	Dual Band 3x3 802.11ac PCI-E Adapter		
Test Item	Peak Transmit Output		
Test Mode	Mode 1: Transmit (CDD mode)		
Date of Test	2013/08/24	Test Site	SR7

IEEE 802.11n(40MHz)_ANT 0+1+2					
Channel No.	Frequency (MHz)	Total Output Power		Required Limit (dBm)	Result
		(mW)	(dBm)		
38	5190	48.75	15.63	≤17	Pass
46	5230	48.08	16.00	≤ 17	Pass

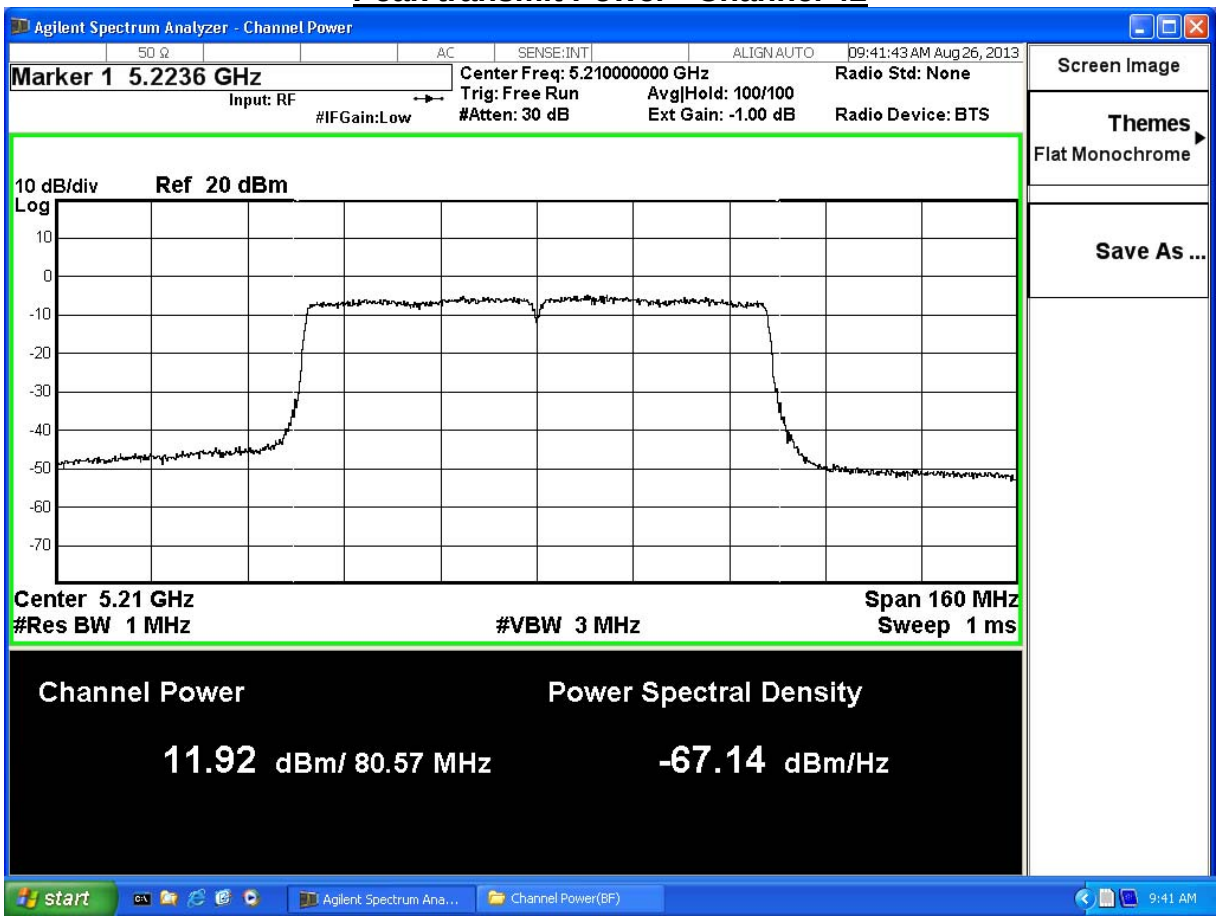
Product	Dual Band 3x3 802.11ac PCI-E Adapter		
Test Item	Peak Transmit Output		
Test Mode	Mode 1: Transmit (CDD mode)		
Date of Test	2013/08/24	Test Site	SR7

IEEE 802.11ac(80MHz)_ANT 0						
Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Required Limit		Result
				Fixed Limit (dBm)	4+10logB Limit (dBm)	
42	5210	80.57	11.92	≤17	≤ 23.06	Pass

The worst emission of data rate is 87.9 Mbps.

Peak Power Output (dBm)											
MCS Index		0	1	2	3	4	5	6	7	8	9	Required Limit
Channel No	Frequency (MHz)	Data Rate										
		87.9	175.5	263.4	351	526.5	702	789.9	877.5	1053	1170	
42	5210	11.92	11.91	11.90	11.89	11.88	11.87	11.86	11.85	11.84	118.3	17

Peak transmit Power - Channel 42



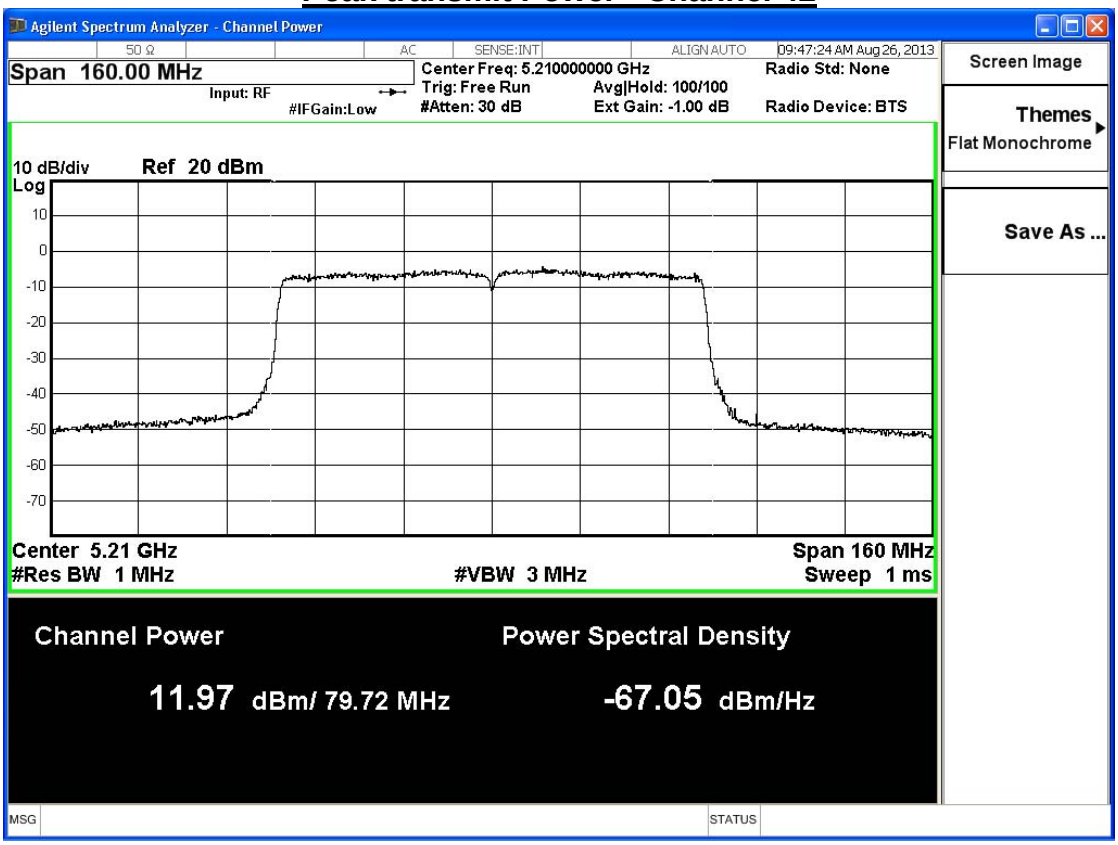
Product	Dual Band 3x3 802.11ac PCI-E Adapter		
Test Item	Peak Transmit Output		
Test Mode	Mode 1: Transmit (CDD mode)		
Date of Test	2013/08/24	Test Site	SR7

IEEE 802.11ac(80MHz)_ANT 1						
Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Required Limit		Result
				Fixed Limit (dBm)	4+10logB Limit (dBm)	
42	5210	79.72	11.97	≤17	≤ 23.01	Pass

The worst emission of data rate is 87.9 Mbps.

Peak Power Output (dBm)											
MCS Index		0	1	2	3	4	5	6	7	8	9	Required Limit
Channel No	Frequency (MHz)	Data Rate										
		87.9	175.5	263.4	351	526.5	702	789.9	877.5	1053	1170	
42	5210	11.97	11.96	11.95	11.94	11.93	11.92	11.91	11.90	11.89	11.88	17

Peak transmit Power - Channel 42



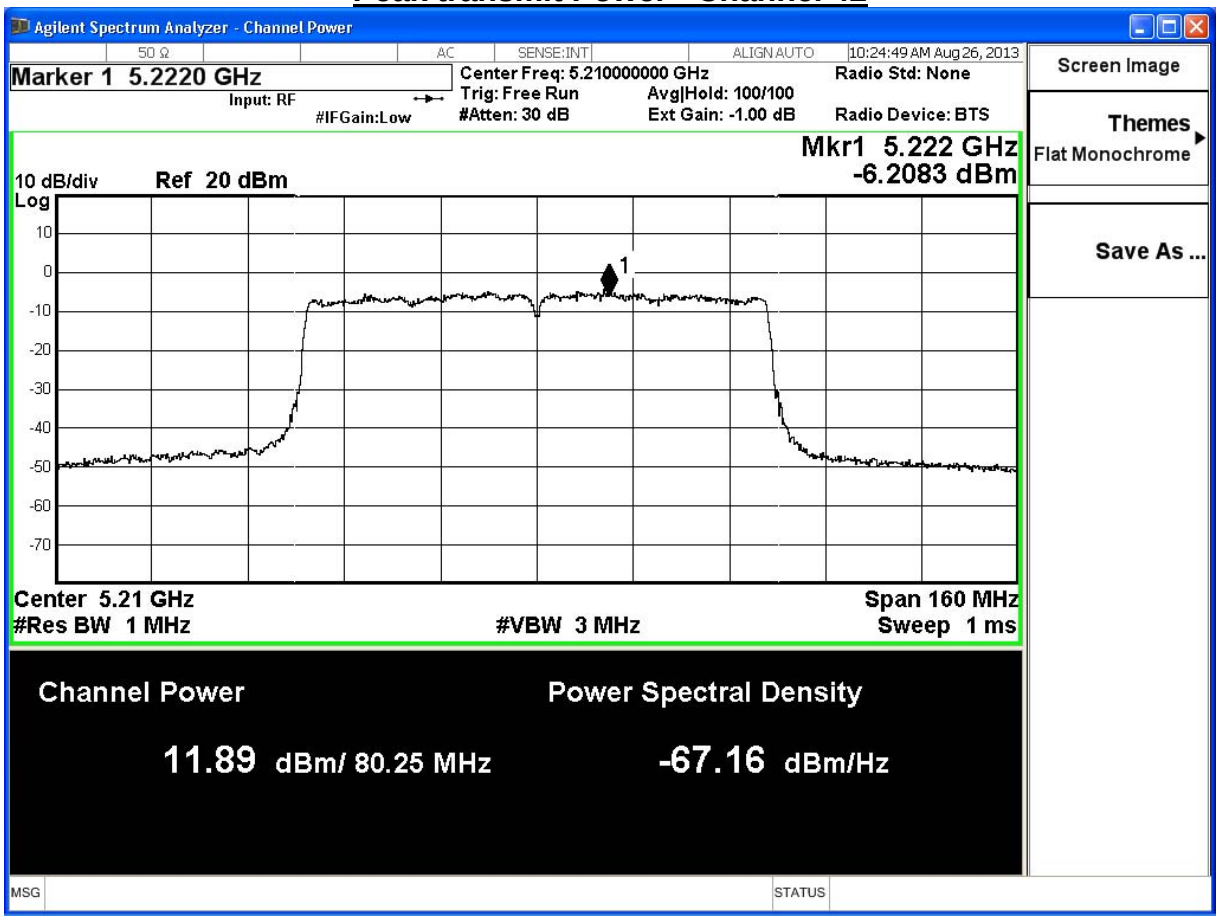
Product	Dual Band 3x3 802.11ac PCI-E Adapter		
Test Item	Peak Transmit Output		
Test Mode	Mode 1: Transmit (CDD mode)		
Date of Test	2013/08/24	Test Site	SR7

IEEE 802.11ac(80MHz)_ANT 2						
Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Required Limit		Result
				Fixed Limit (dBm)	4+10logB Limit (dBm)	
42	5210	80.25	11.89	≤17	≤ 23.04	Pass

The worst emission of data rate is 87.9 Mbps.

Peak Power Output (dBm)												
MCS Index		0	1	2	3	4	5	6	7	8	9	Required Limit
Channel No	Frequency (MHz)	Data Rate										
		87.9	175.5	263.4	351	526.5	702	789.9	877.5	1053	1170	
42	5210	11.89	11.88	11.87	11.86	11.85	11.84	11.83	11.82	11.81	11.80	17

Peak transmit Power - Channel 42



Product	Dual Band 3x3 802.11ac PCI-E Adapter		
Test Item	Peak Transmit Output		
Test Mode	Mode 1: Transmit (CDD mode)		
Date of Test	2013/08/24	Test Site	SR7

IEEE 802.11ac(80MHz)_ANT 0+1+2					
Channel No.	Frequency (MHz)	Total Output Power		Required Limit (dBm)	Result
		(mW)	(dBm)		
42	5210	47.20	16.70	≤17	Pass

Product	Dual Band 3x3 802.11ac PCI-E Adapter		
Test Item	Peak Transmit Output		
Test Mode	Mode 2: Transmit (Beamforming mode)		
Date of Test	2013/08/26	Test Site	SR7

802.11a

Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Required Limit		Result
				Fixed Limit (dBm)	4+10logB Limit (dBm)	
36	5180	20.42	12.57	≤15.23	≤17.10	Pass
44	5220	20.11	12.69	≤ 15.23	≤17.03	Pass
48	5240	20.19	12.74	≤15.23	≤17.05	Pass

The worst emission of data rate is 6 Mbps.

Peak Power Output (dBm)									
Channel No	Frequency (MHz)	Data Rate							Required Limit
		6	12	18	24	36	48	54	
36	5180	12.57	--	--	--	--	--	--	15.23dBm or 4dBm+10logB
44	5220	12.69	12.68	12.67	12.66	12.65	12.64	12.63	
48	5240	12.74	--	--	--	--	--	--	

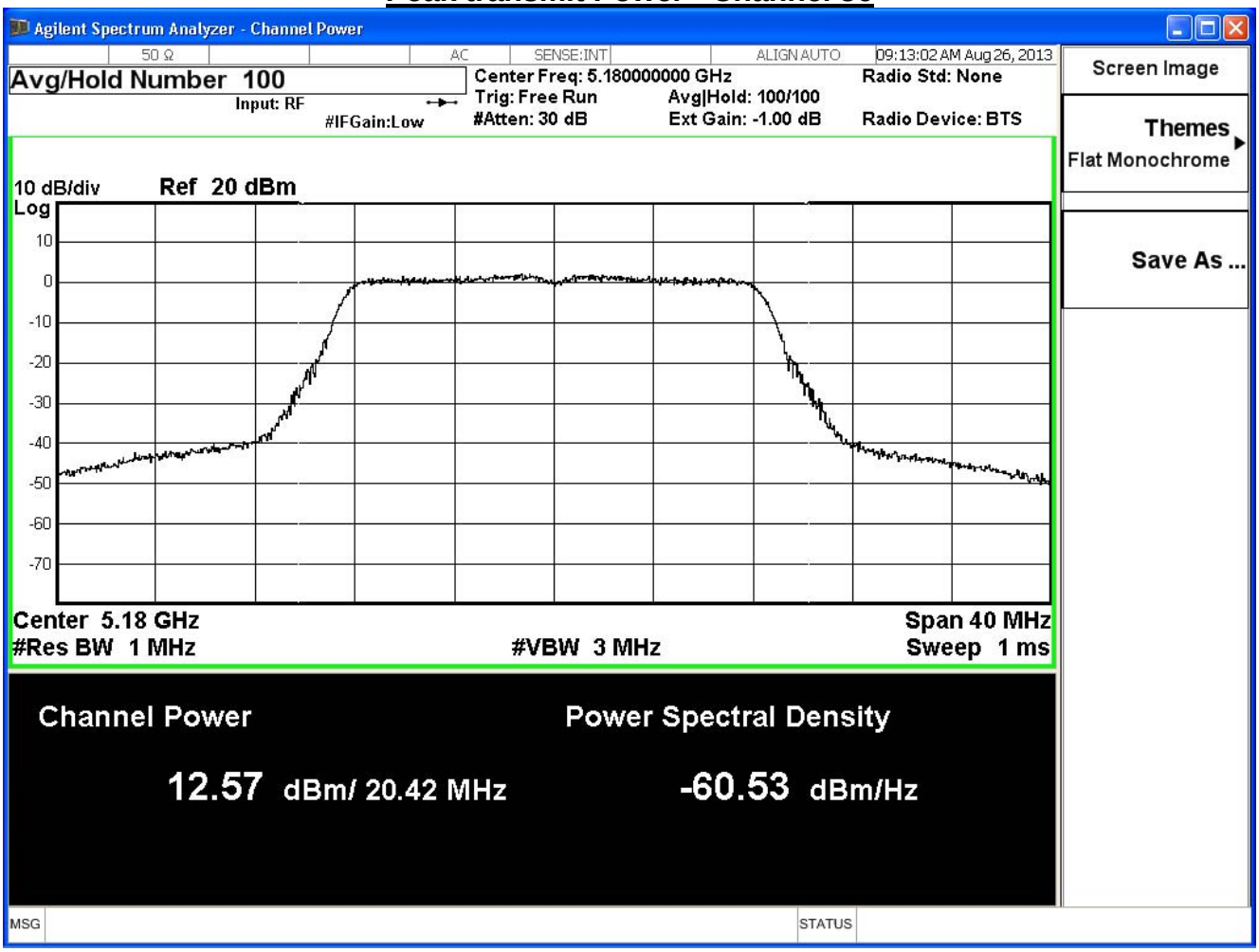
Note:

Measure Level =Reading value + cable loss

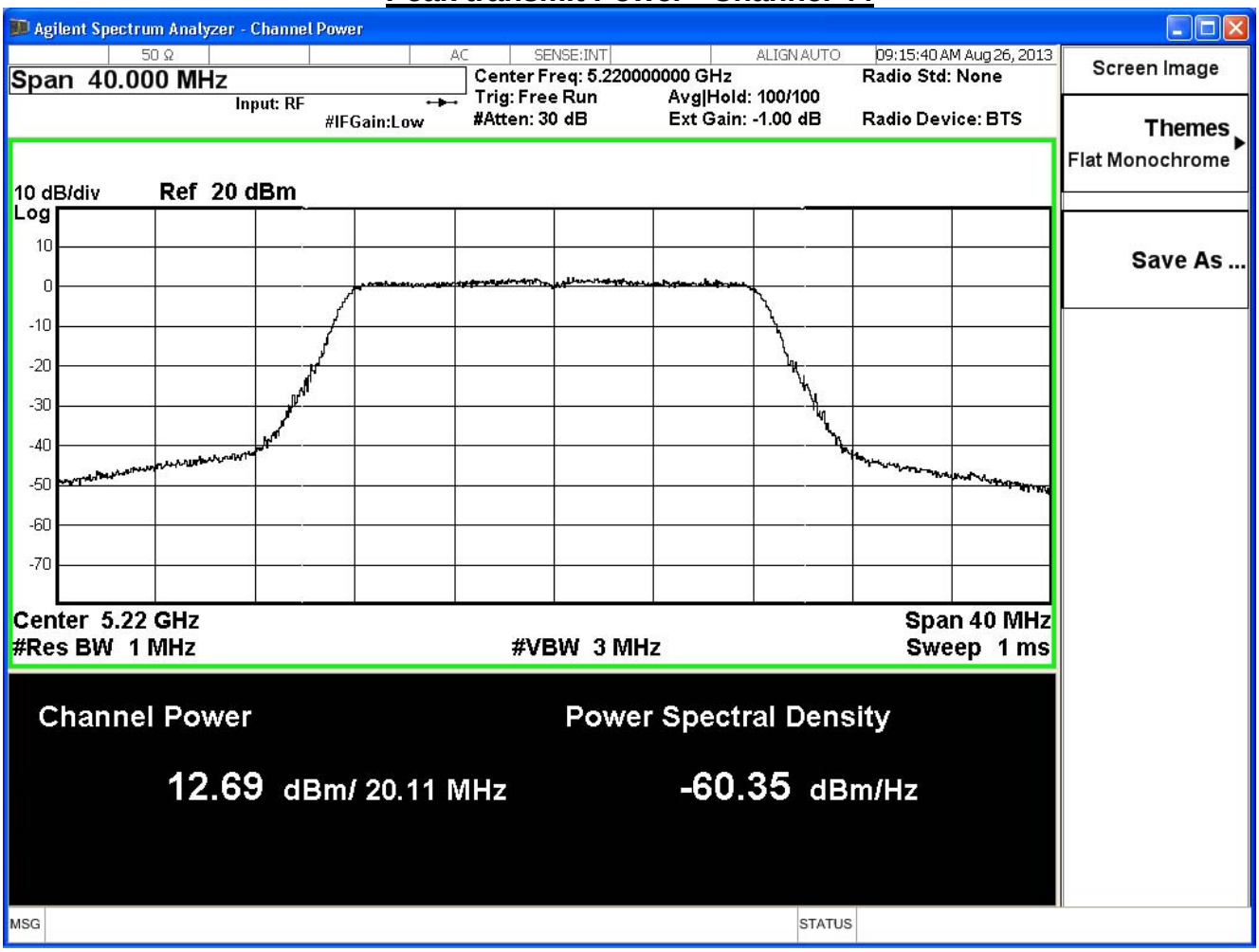
Total Gain: Beamforming Gain + max Gain = 4.77dB + 3dBi = 7.77dBi

Fixed Limit = 17dBm - (7.77dBi - 6dBi) = 17 – 1.77 = 15.23 dBm

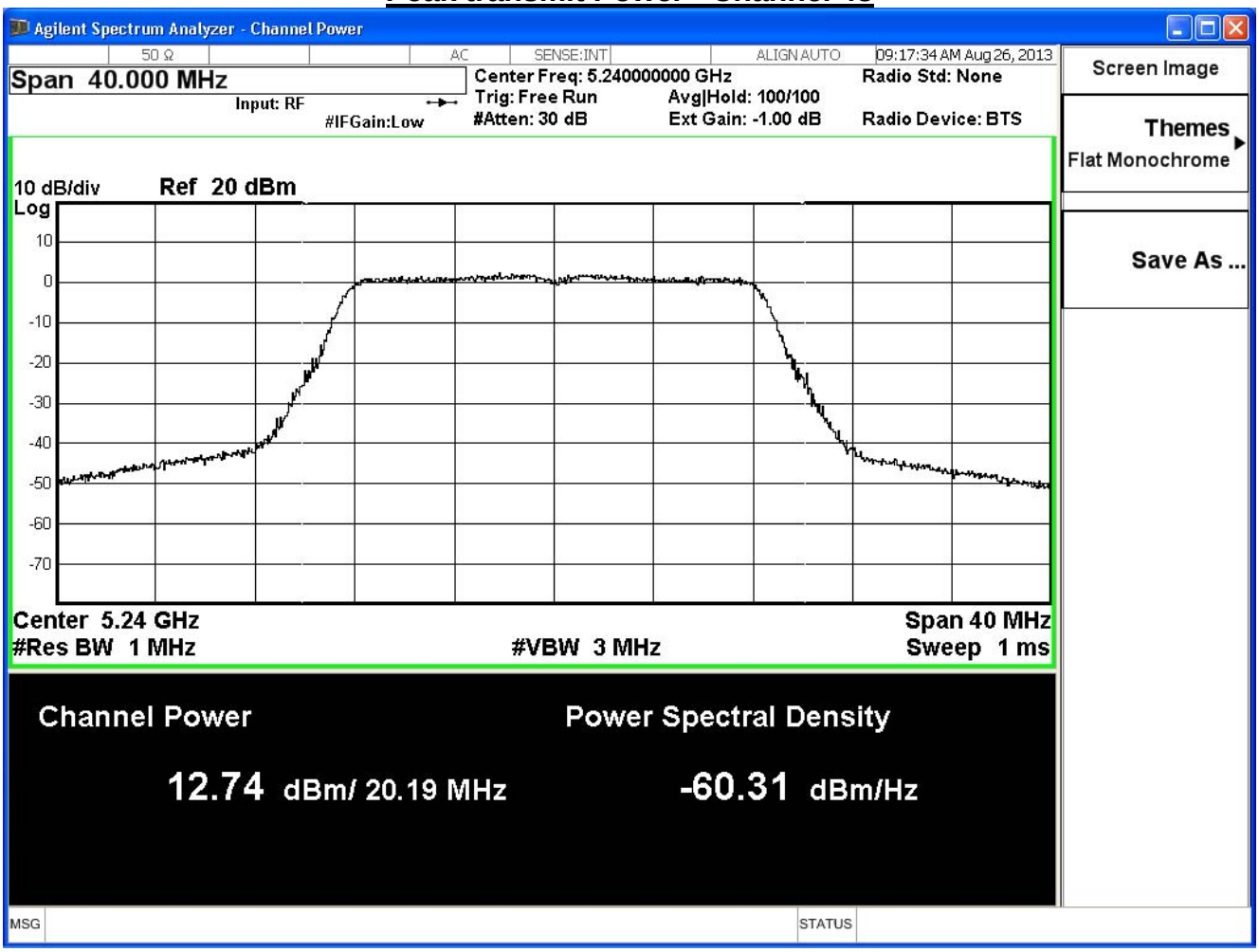
Peak transmit Power - Channel 36



Peak transmit Power - Channel 44



Peak transmit Power - Channel 48



Product	Dual Band 3x3 802.11ac PCI-E Adapter		
Test Item	Peak Transmit Output		
Test Mode	Mode 2: Transmit (Beamforming mode)		
Date of Test	2013/08/26	Test Site	SR7

IEEE 802.11n(20MHz)_ANT 0						
Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Required Limit		Result
				Fixed Limit (dBm)	4+10logB Limit (dBm)	
36	5180	20.49	8.02	≤15.23	≤17.10	Pass
44	5220	20.23	8.16	≤ 15.23	≤17.05	Pass
48	5240	20.51	8.09	≤15.23	≤17.11	Pass

The worst emission of data rate is 19.5Mbps.

Peak Power Output (dBm)									
MCS Index		16	17	18	19	20	21	22	23	Required Limit
Channel No	Frequency (MHz)	Data Rate								
		19.5	39	58.5	78	117	156	175.5	195	
36	5180	8.02	--	--	--	--	--	--	--	15.23dBm or 4dBm+10logB
44	5220	8.16	8.15	8.17	8.14	8.13	8.12	8.11	8.10	
48	5240	8.09	--	--	--	--	--	--	--	

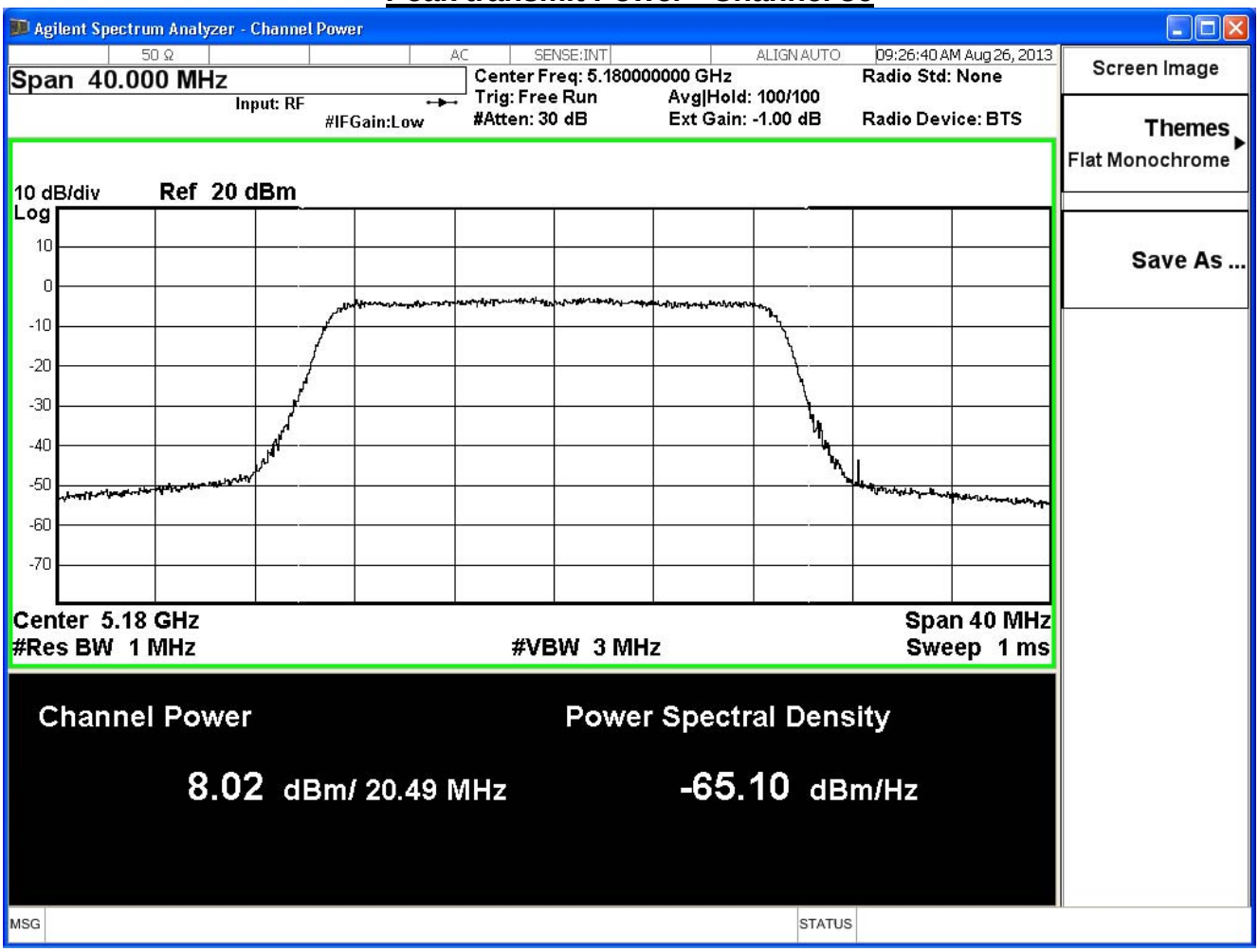
Note:

Measure Level =Reading value + cable loss

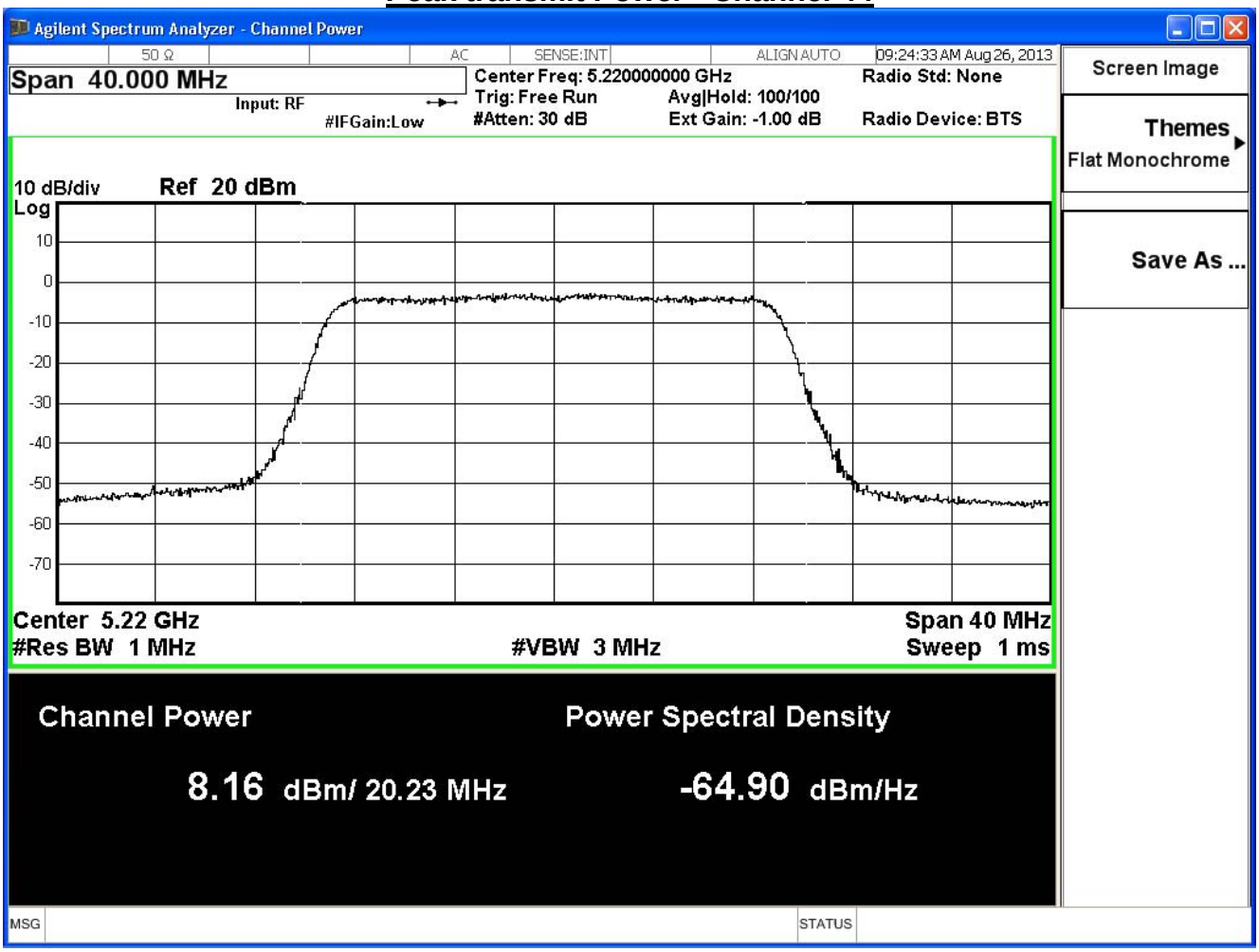
Total Gain: 10log(Ant N) + max Gain = 7.77dBi

Fixed Limit = 17dBm - (7.77dBi - 6dBi) = 17 – 1.77 = 15.23 dBm

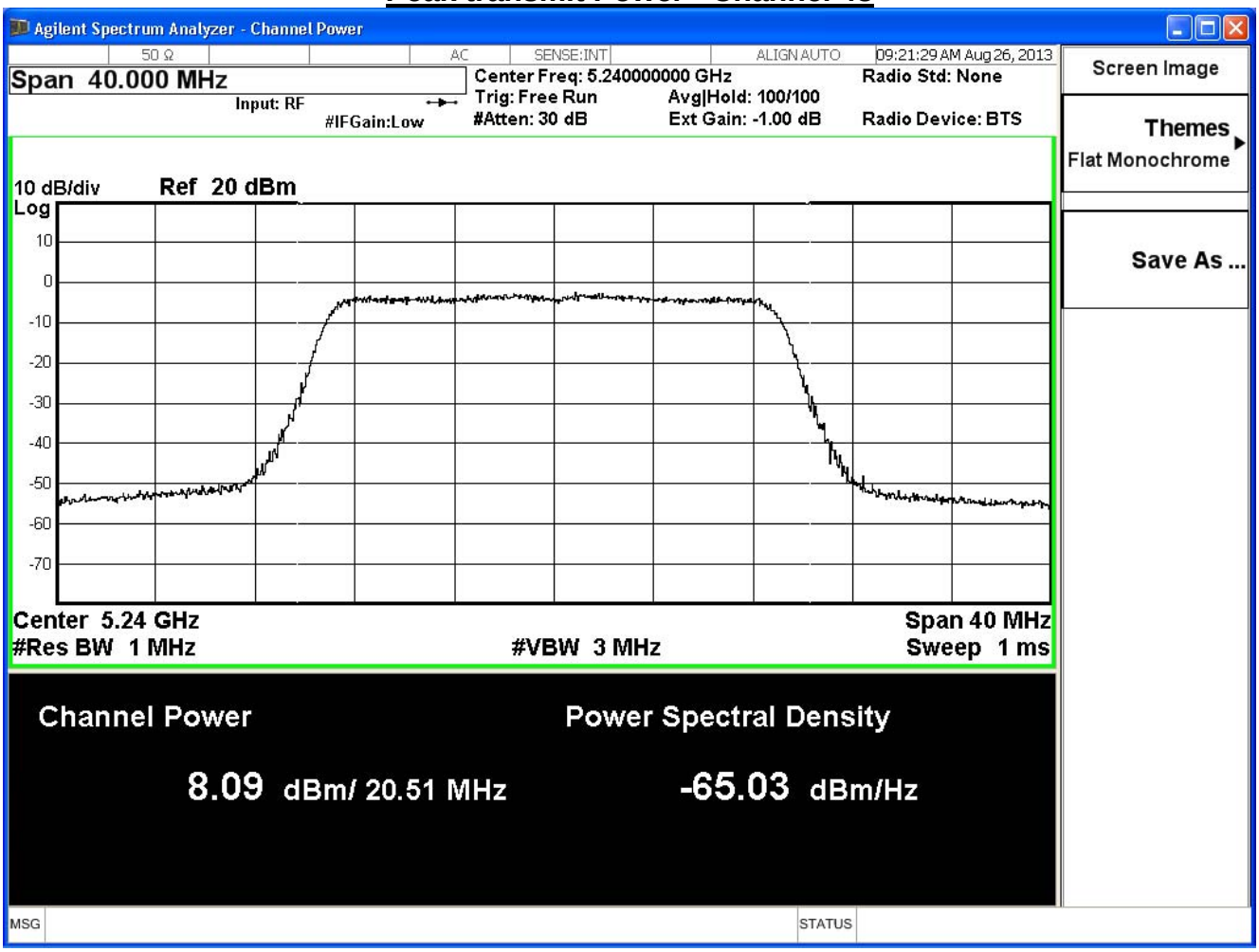
Peak transmit Power - Channel 36



Peak transmit Power - Channel 44



Peak transmit Power - Channel 48



Product	Dual Band 3x3 802.11ac PCI-E Adapter		
Test Item	Peak Transmit Output		
Test Mode	Mode 2: Transmit (Beamforming mode)		
Date of Test	2013/08/26	Test Site	SR7

IEEE 802.11n(20MHz)_ANT 1						
Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Required Limit		Result
				Fixed Limit (dBm)	4+10logB Limit (dBm)	
36	5180	20.28	7.81	≤15.23	≤17.05	Pass
44	5220	20.35	7.89	≤ 15.23	≤17.09	Pass
48	5240	20.12	8.02	≤15.23	≤17.03	Pass

The worst emission of data rate is 19.5Mbps.

Peak Power Output (dBm)										
MCS Index		16	17	18	19	20	21	22	23	Required Limit
Channel No	Frequency (MHz)	Data Rate								
		19.5	39	58.5	78	117	156	175.5	195	
36	5180	7.81	--	--	--	--	--	--	--	15.23dBm or 4dBm+10logB
44	5220	7.89	7.88	7.87	7.86	7.85	7.84	7.83	7.82	
48	5240	8.02	--	--	--	--	--	--	--	

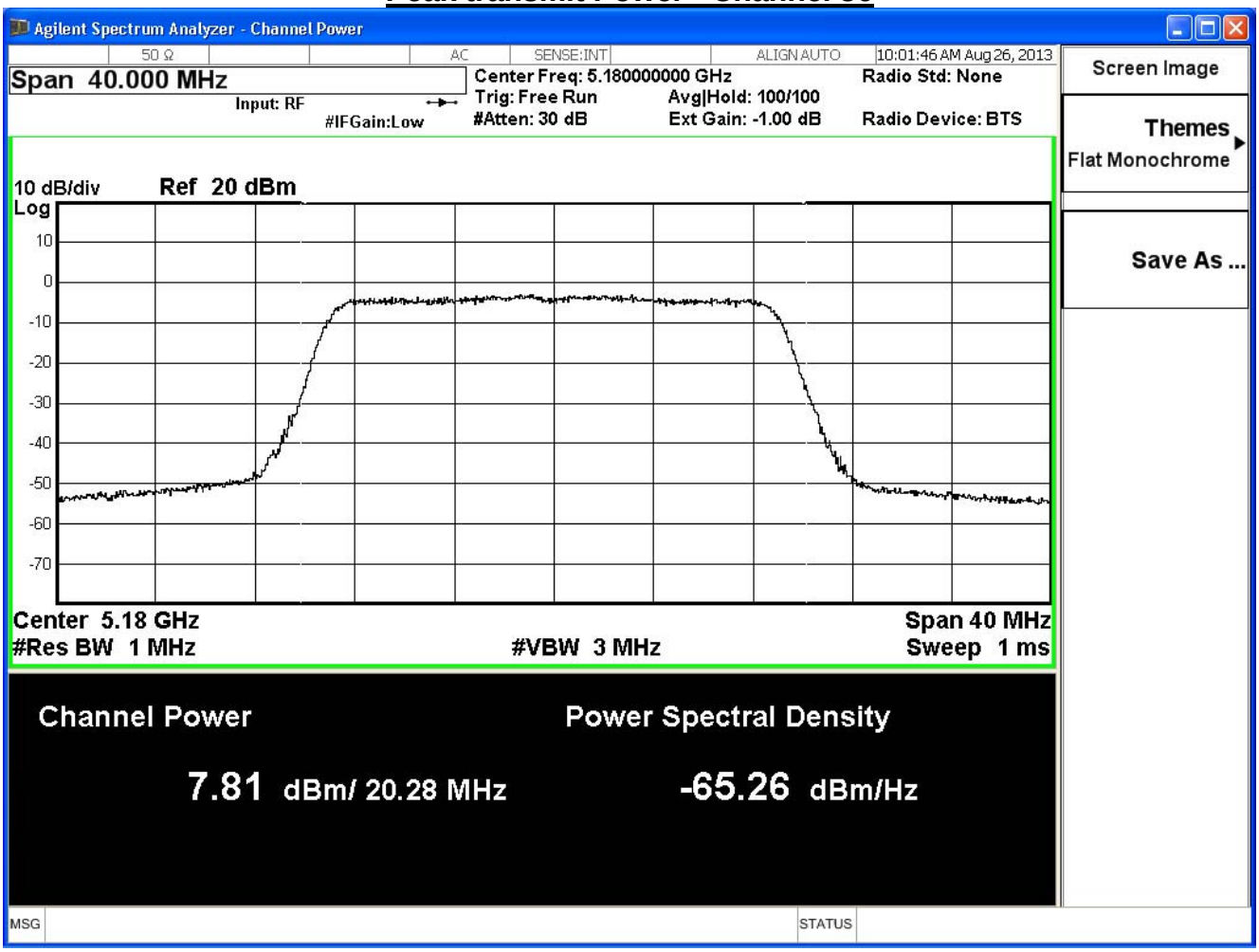
Note:

Measure Level =Reading value + cable loss

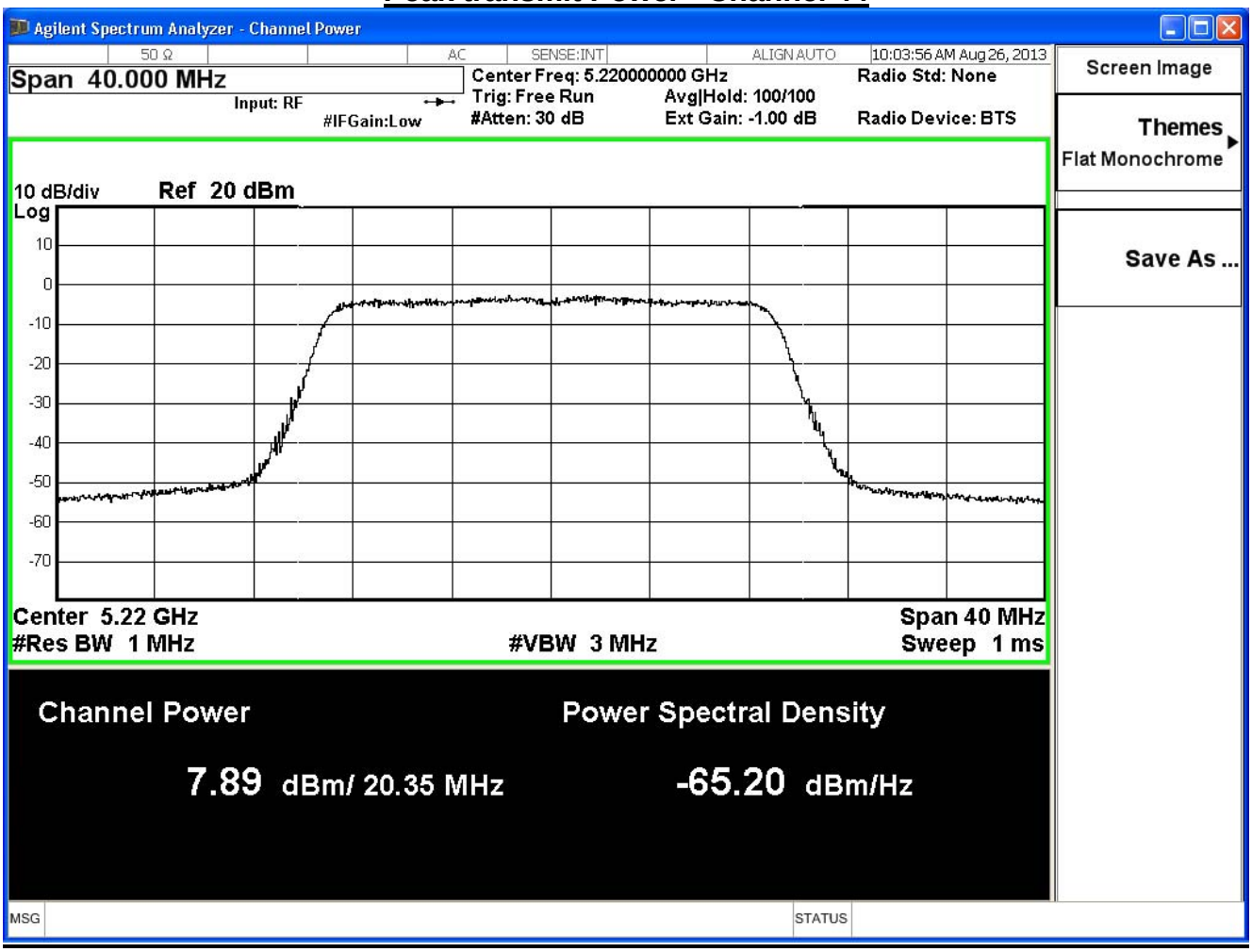
Total Gain: 10log(Ant N) + max Gain = 7.77dBi

Fixed Limit = 17dBm - (7.77dBi - 6dBi) = 17 – 1.77 = 15.23 dBm

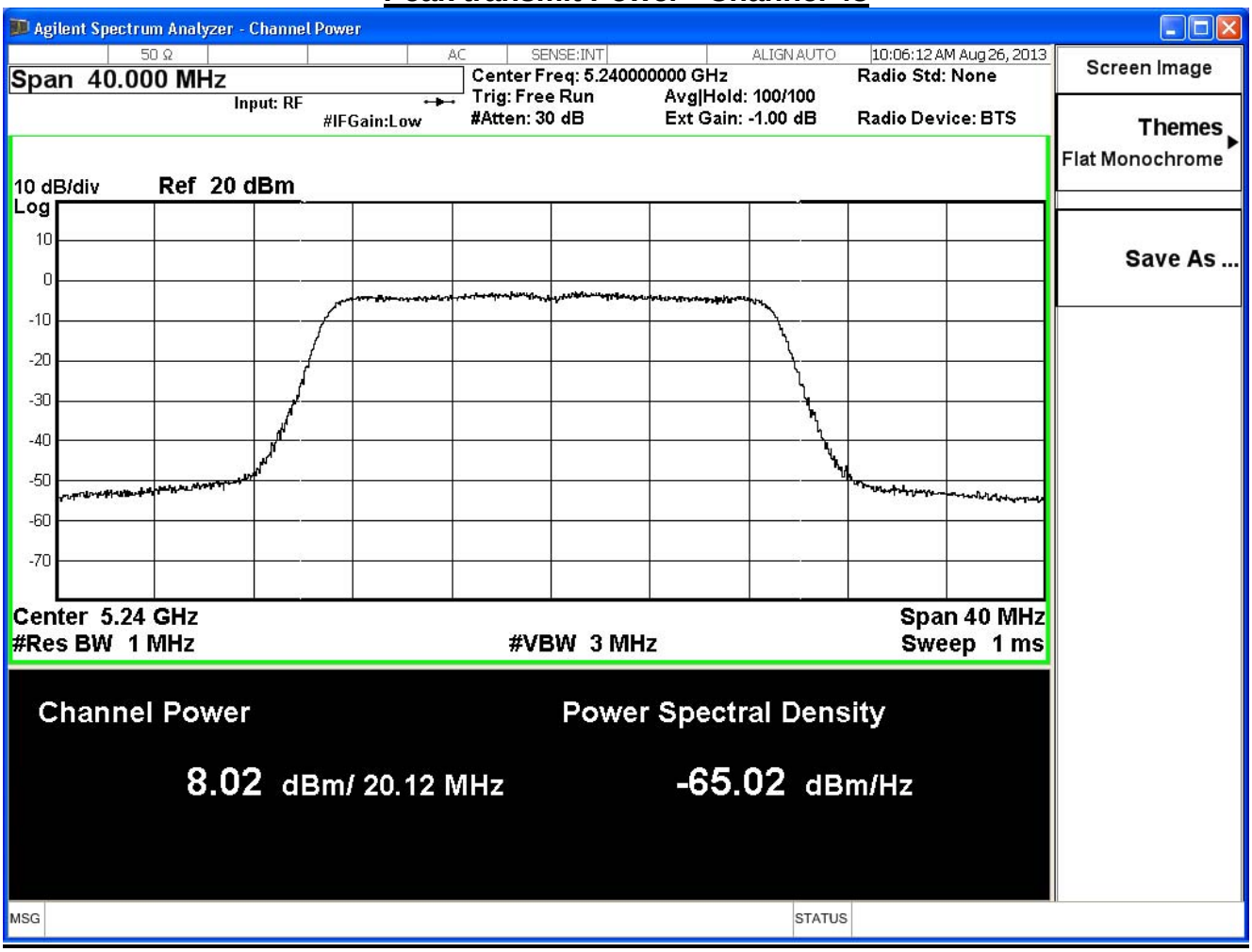
Peak transmit Power - Channel 36



Peak transmit Power - Channel 44



Peak transmit Power - Channel 48



Product	Dual Band 3x3 802.11ac PCI-E Adapter		
Test Item	Peak Transmit Output		
Test Mode	Mode 2: Transmit (Beamforming mode)		
Date of Test	2013/08/26	Test Site	SR7

IEEE 802.11n(20MHz)_ANT 2						
Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Required Limit		Result
				Fixed Limit (dBm)	4+10logB Limit (dBm)	
36	5180	20.36	8.25	≤15.23	≤17.09	Pass
44	5220	20.35	8.24	≤ 15.23	≤17.09	Pass
48	5240	20.38	8.16	≤15.23	≤17.09	Pass

The worst emission of data rate is 19.5Mbps.

Peak Power Output (dBm)									
MCS Index		16	17	18	19	20	21	22	23	Required Limit
Channel No	Frequency (MHz)	Data Rate								
		19.5	39	58.5	78	117	156	175.5	195	
36	5180	8.25	--	--	--	--	--	--	--	15.23dBm or 4dBm+10logB
44	5220	8.24	8.23	8.22	8.21	8.20	8.19	8.18	8.17	
48	5240	8.16	--	--	--	--	--	--	---	

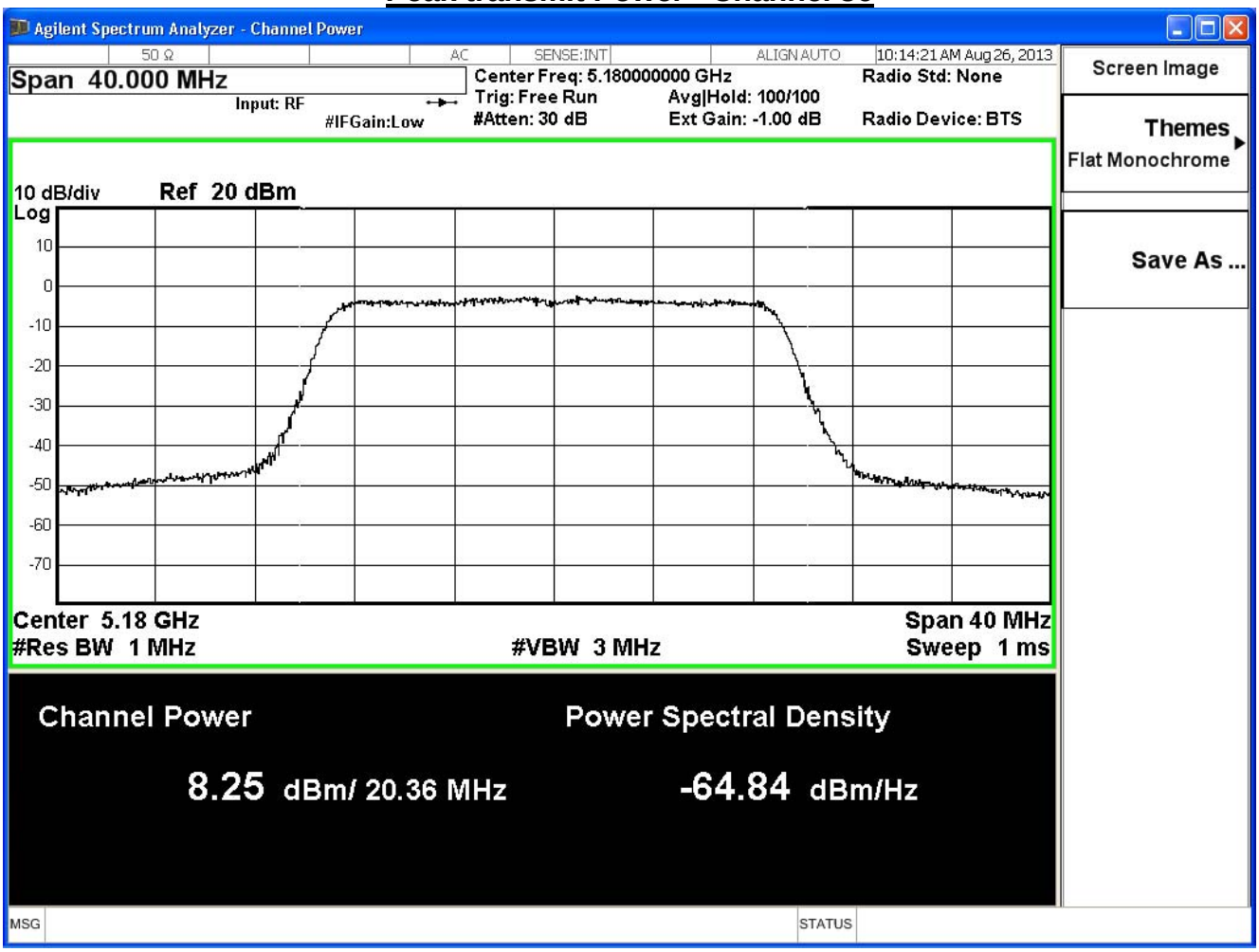
Note:

Measure Level =Reading value + cable loss

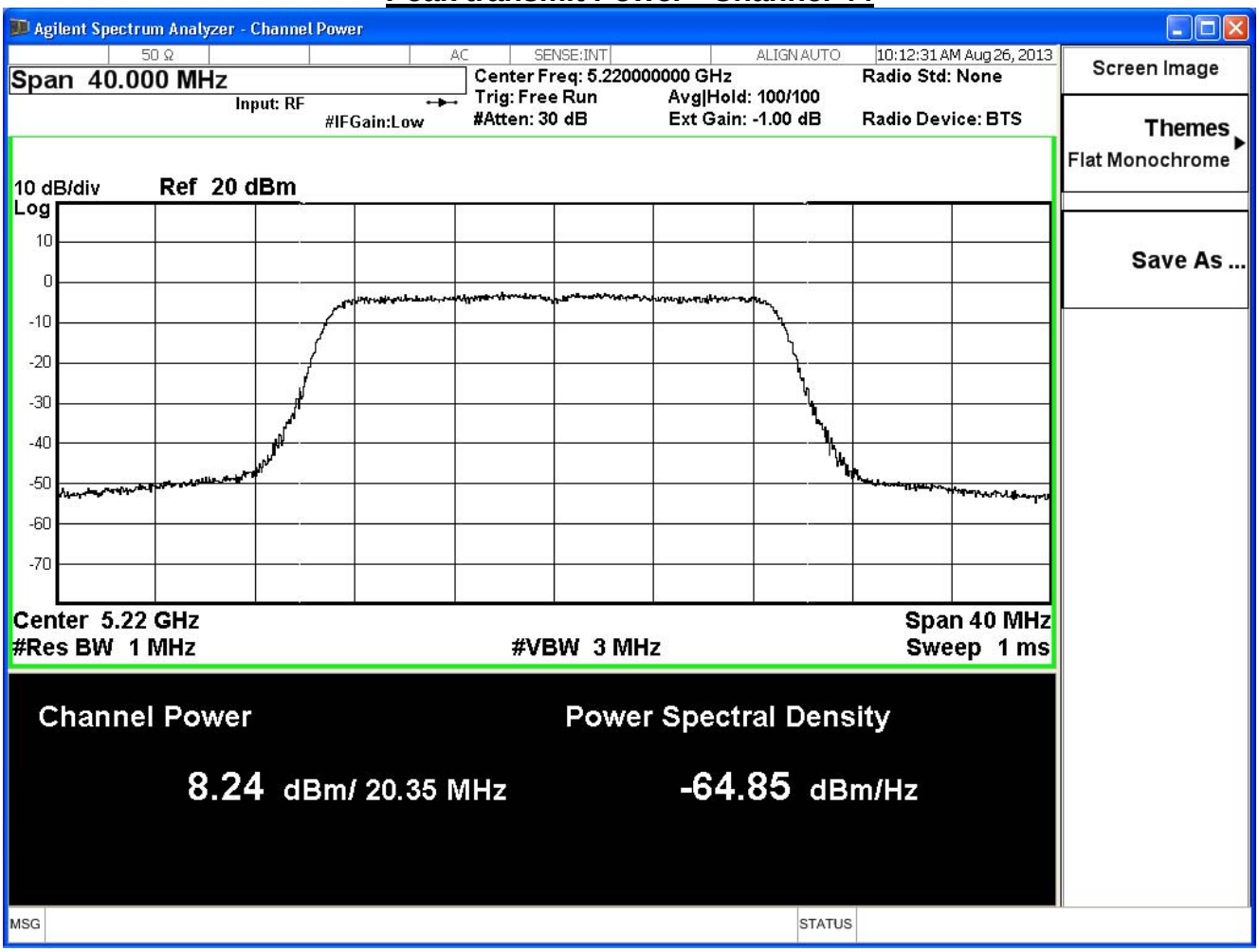
Total Gain: 10log(Ant N) + max Gain = 7.77dBi

Fixed Limit = 17dBm - (7.77dBi - 6dBi) = 17 – 1.77 = 15.23 dBm

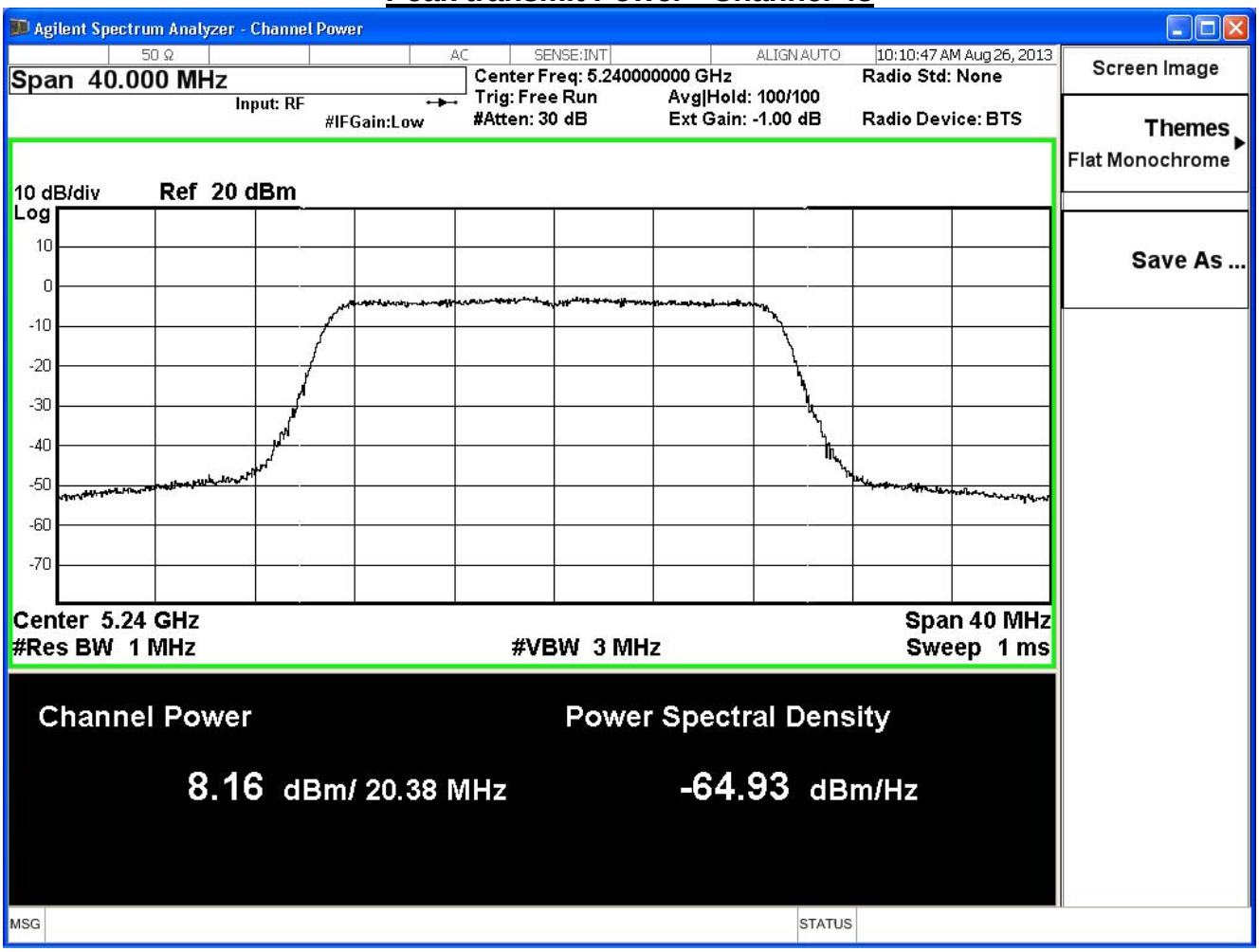
Peak transmit Power - Channel 36



Peak transmit Power - Channel 44



Peak transmit Power - Channel 48



Product	Dual Band 3x3 802.11ac PCI-E Adapter		
Test Item	Peak Transmit Output		
Test Mode	Mode 2: Transmit (Beamforming mode)		
Date of Test	2013/08/26	Test Site	SR7

IEEE 802.11n(20MHz)_ANT 0+1+2					
Channel No.	Frequency (MHz)	Total Output Power		Required Limit (dBm)	Result
		(mW)	(dBm)		
36	5180	28.18	12.802	≤15.23	Pass
44	5220	30.47	12.870	≤ 15.23	Pass
48	5240	27.98	12.862	≤15.23	Pass

Note:

Measure Level =Reading value + cable loss

Total Gain: 10log(Ant N) + max Gain = 7.77dBi

Fixed Limit = 17dBm - (7.77dBi - 6dBi) = 17 – 1.77 = 15.23 dBm

Product	Dual Band 3x3 802.11ac PCI-E Adapter		
Test Item	Peak Transmit Output		
Test Mode	Mode 2: Transmit (Beamforming mode)		
Date of Test	2013/08/26	Test Site	SR7

IEEE 802.11n(40MHz)_ANT 0						
Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Required Limit		Result
				Fixed Limit (dBm)	4+10logB Limit (dBm)	
38	5190	39.20	10.21	≤15.23	≤19.93	Pass
46	5230	39.22	10.34	≤ 15.23	≤19.93	Pass

The worst emission of data rate is 40.5 Mbps

Peak Power Output (dBm)										
MCS Index		16	17	18	19	20	21	22	23	Required Limit
Channel No	Frequency (MHz)	Data Rate								
		40.5	81.0	121.5	162.0	243.0	324.0	364.5	405.0	
38	5190	10.21	10.20	10.19	10.18	10.17	10.16	10.15	10.14	15.23dBm or 4dBm+10logB
46	5230	10.34	--	--	--	--	--	--	--	

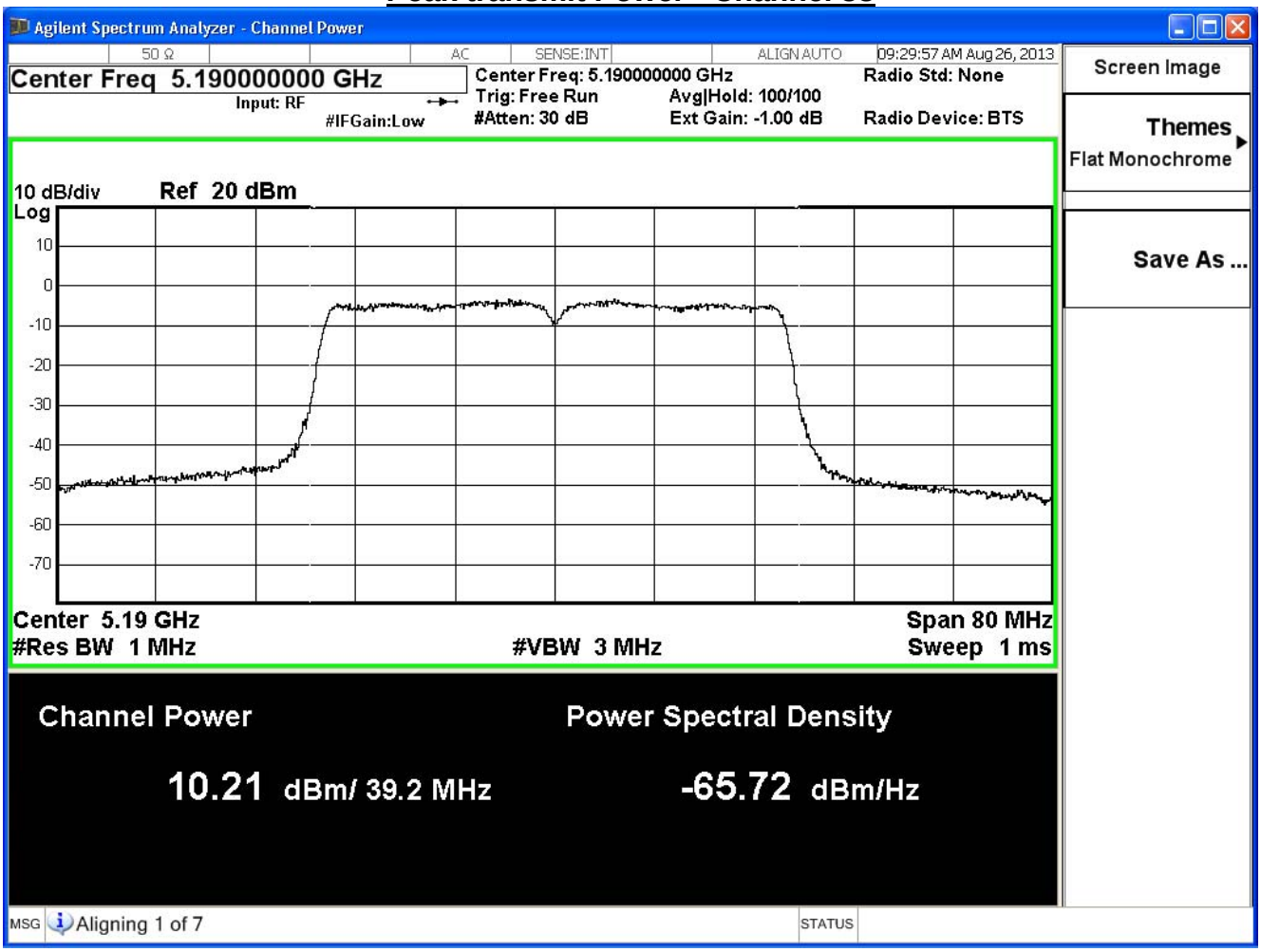
Note:

Measure Level =Reading value + cable loss

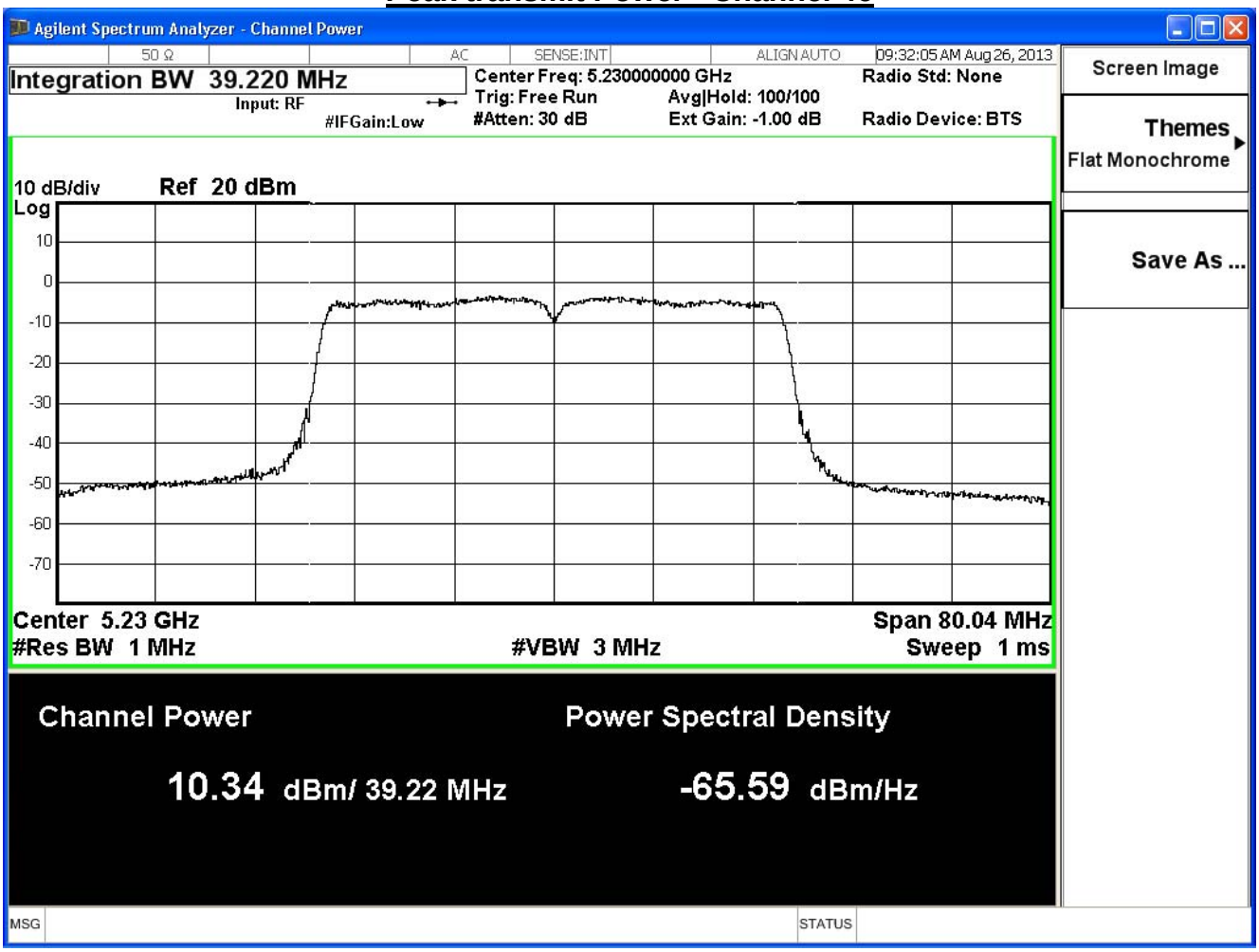
Total Gain: 10log(Ant N) + max Gain = 7.77dBi

Fixed Limit = 17dBm - (7.77dBi - 6dBi) = 17 – 1.77 = 15.23 dBm

Peak transmit Power - Channel 38



Peak transmit Power - Channel 46



Product	Dual Band 3x3 802.11ac PCI-E Adapter		
Test Item	Peak Transmit Output		
Test Mode	Mode 2: Transmit (Beamforming mode)		
Date of Test	2013/08/26	Test Site	SR7

IEEE 802.11n(40MHz)_ANT 1						
Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Required Limit		Result
				Fixed Limit (dBm)	4+10logB Limit (dBm)	
38	5190	38.93	10.30	≤15.23	≤19.90	Pass
46	5230	39.09	10.32	≤ 15.23	≤19.92	Pass

The worst emission of data rate is 40.5 Mbps

Peak Power Output (dBm)										
MCS Index		16	17	18	19	20	21	22	23	Required Limit
Channel No	Frequency (MHz)	Data Rate								
		40.5	81.0	121.5	162.0	243.0	324.0	364.5	405.0	
38	5190	10.30	10.28	10.27	10.26	10.25	10.24	10.23	10.22	15.23dBm or 4dBm+10logB
46	5230	10.32	--	--	--	--	--	--	--	

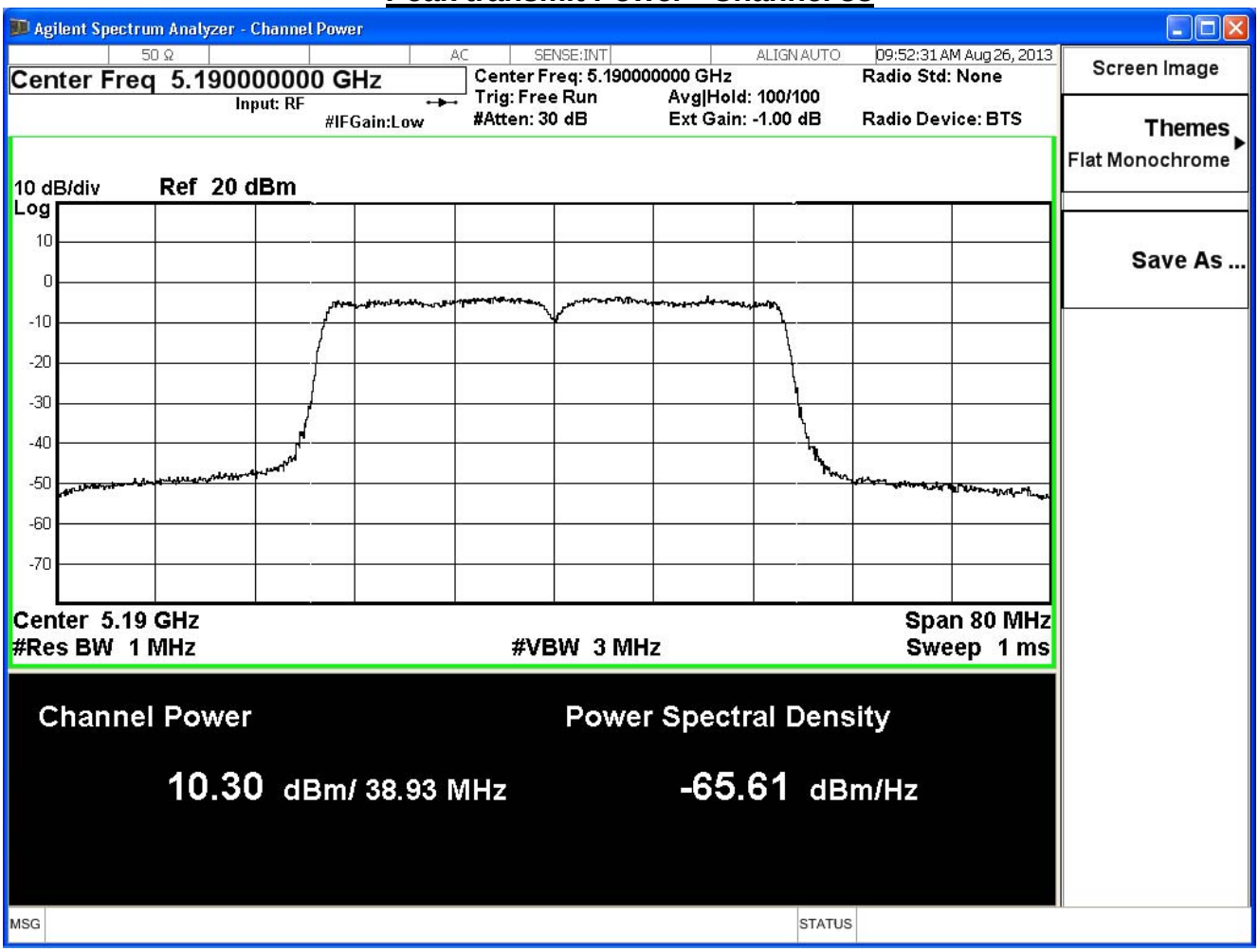
Note:

Measure Level =Reading value + cable loss

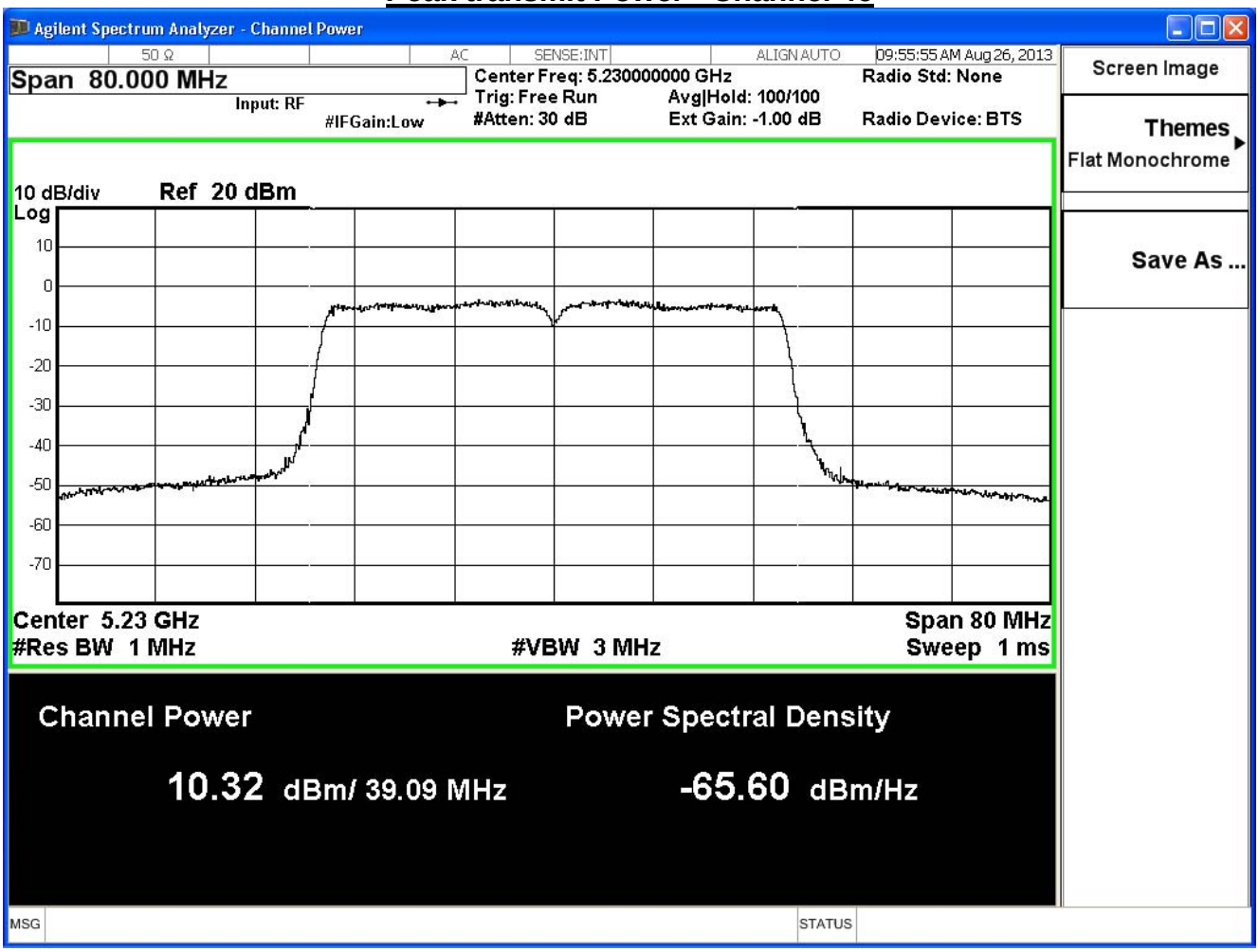
Total Gain: 10log(Ant N) + max Gain = 7.77dBi

Fixed Limit = 17dBm - (7.77dBi - 6dBi) = 17 – 1.77 = 15.23 dBm

Peak transmit Power - Channel 38



Peak transmit Power - Channel 46



Product	Dual Band 3x3 802.11ac PCI-E Adapter		
Test Item	Peak Transmit Output		
Test Mode	Mode 2: Transmit (Beamforming mode)		
Date of Test	2013/08/26	Test Site	SR7

IEEE 802.11n(40MHz)_ANT 2						
Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Required Limit		Result
				Fixed Limit (dBm)	4+10logB Limit (dBm)	
38	5190	39.11	10.14	≤15.23	≤19.92	Pass
46	5230	38.97	10.25	≤ 15.23	≤19.90	Pass

The worst emission of data rate is 40.5 Mbps

Peak Power Output (dBm)									
MCS Index		16	17	18	19	20	21	22	23	Required Limit
Channel No	Frequency (MHz)	Data Rate								
		40.5	81.0	121.5	162.0	243.0	324.0	364.5	405.0	
38	5190	10.14	10.13	10.12	10.11	10.10	10.09	10.08	10.07	15.23dBm or 4dBm+10logB
46	5230	10.25	--	--	--	--	--	--	--	

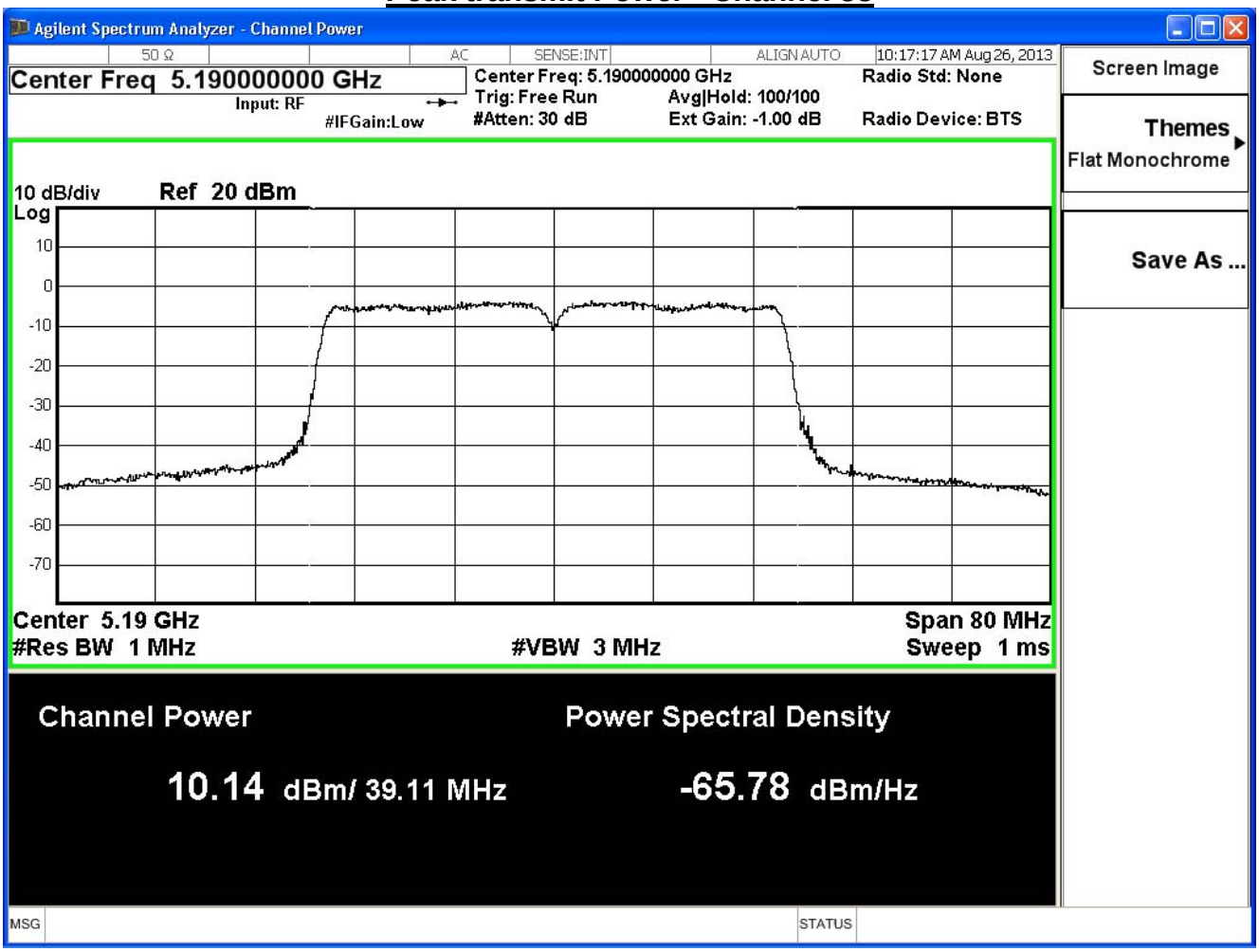
Note:

Measure Level =Reading value + cable loss

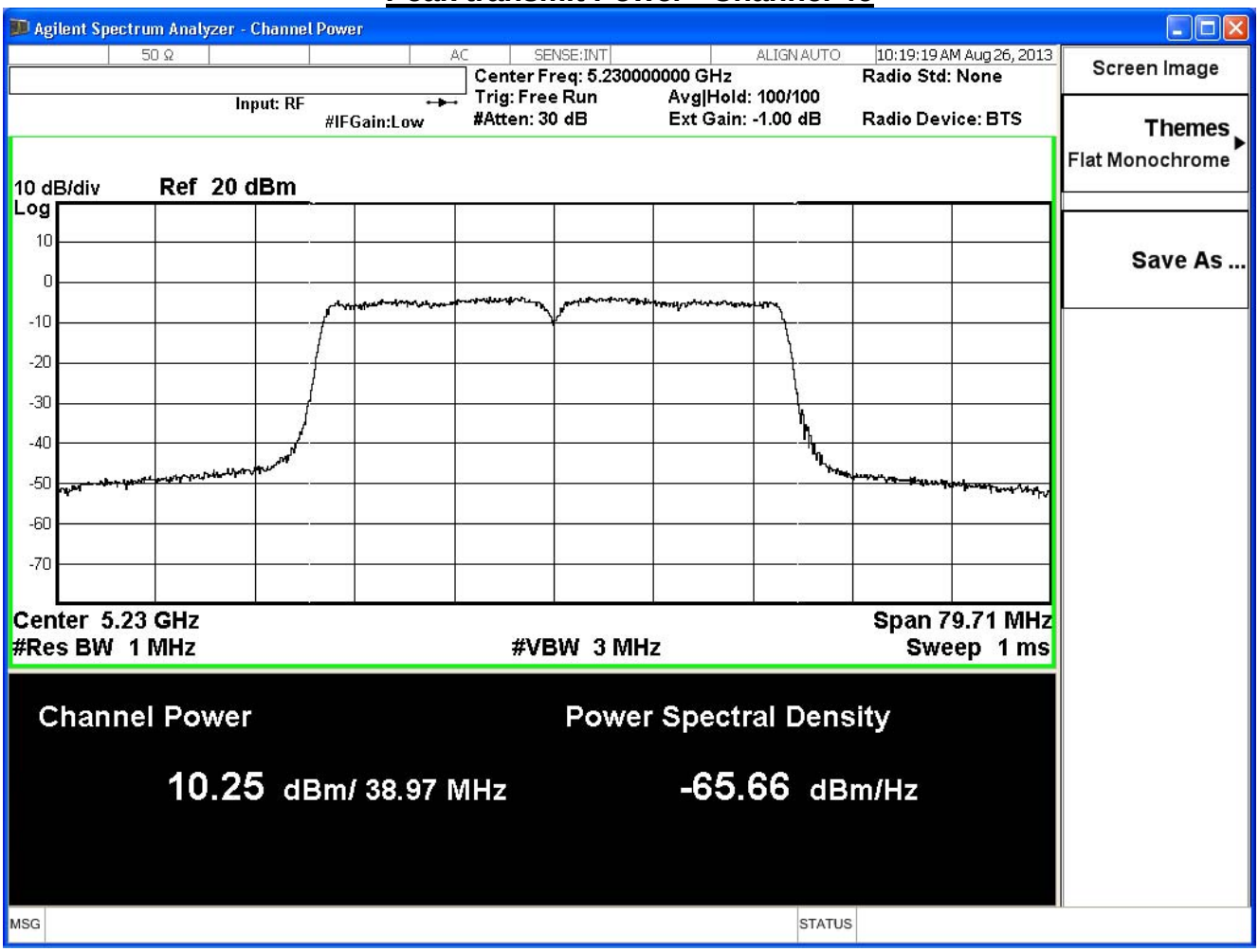
Total Gain: 10log(Ant N) + max Gain = 7.77dBi

Fixed Limit = 17dBm - (7.77dBi - 6dBi) = 17 – 1.77 = 15.23 dBm

Peak transmit Power - Channel 38



Peak transmit Power - Channel 46



Product	Dual Band 3x3 802.11ac PCI-E Adapter		
Test Item	Peak Transmit Output		
Test Mode	Mode 2: Transmit (Beamforming mode)		
Date of Test	2013/08/26	Test Site	SR7

IEEE 802.11n(40MHz)_ANT 0+1+2					
Channel No.	Frequency (MHz)	Total Output Power		Required Limit (dBm)	Result
		(mW)	(dBm)		
38	5190	31.55	14.99	≤15.23	Pass
46	5230	32.21	15.08	≤ 15.23	Pass

Note:

Measure Level =Reading value + cable loss

Total Gain: 10log(Ant N) + max Gain = 7.77dBi

Fixed Limit = 17dBm - (7.77dBi - 6dBi) = 17 – 1.77 = 15.23 dBm

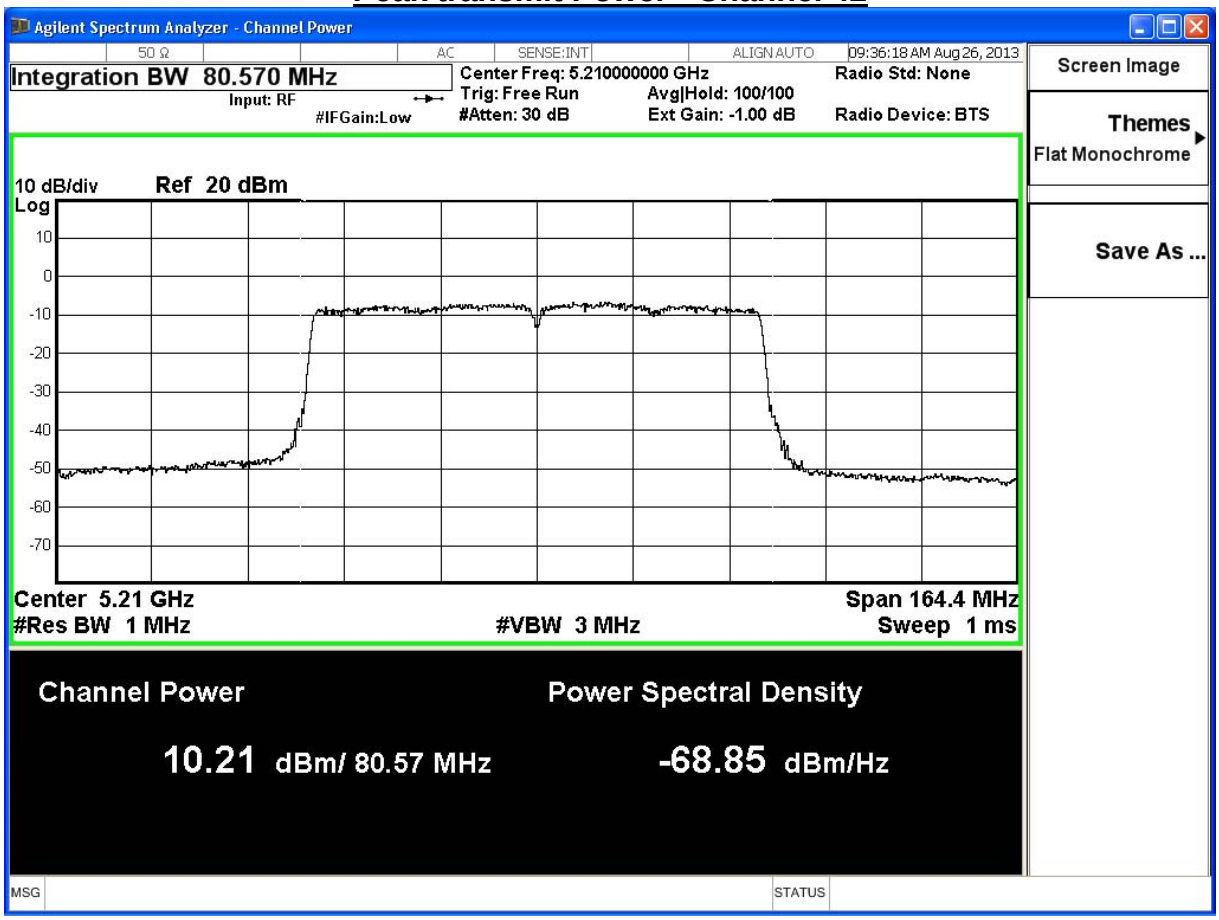
Product	Dual Band 3x3 802.11ac PCI-E Adapter		
Test Item	Peak Transmit Output		
Test Mode	Mode 2: Transmit (Beamforming mode)		
Date of Test	2013/08/26	Test Site	SR7

IEEE 802.11ac(80MHz)_ANT 0						
Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Required Limit		Result
				Fixed Limit (dBm)	4+10logB Limit (dBm)	
42	5210	80.57	10.21	≤15.23	≤ 23.06	Pass

The worst emission of data rate is 87.9 Mbps.

Peak Power Output (dBm)												
MCS Index		0	1	2	3	4	5	6	7	8	9	Required Limit
Channel No	Frequency (MHz)	Data Rate										
		87.9	175.5	263.4	351	526.5	702	789.9	877.5	1053	1170	
42	5210	10.21	10.20	10.19	10.18	10.17	10.16	10.15	10.14	10.13	10.12	17

Peak transmit Power - Channel 42



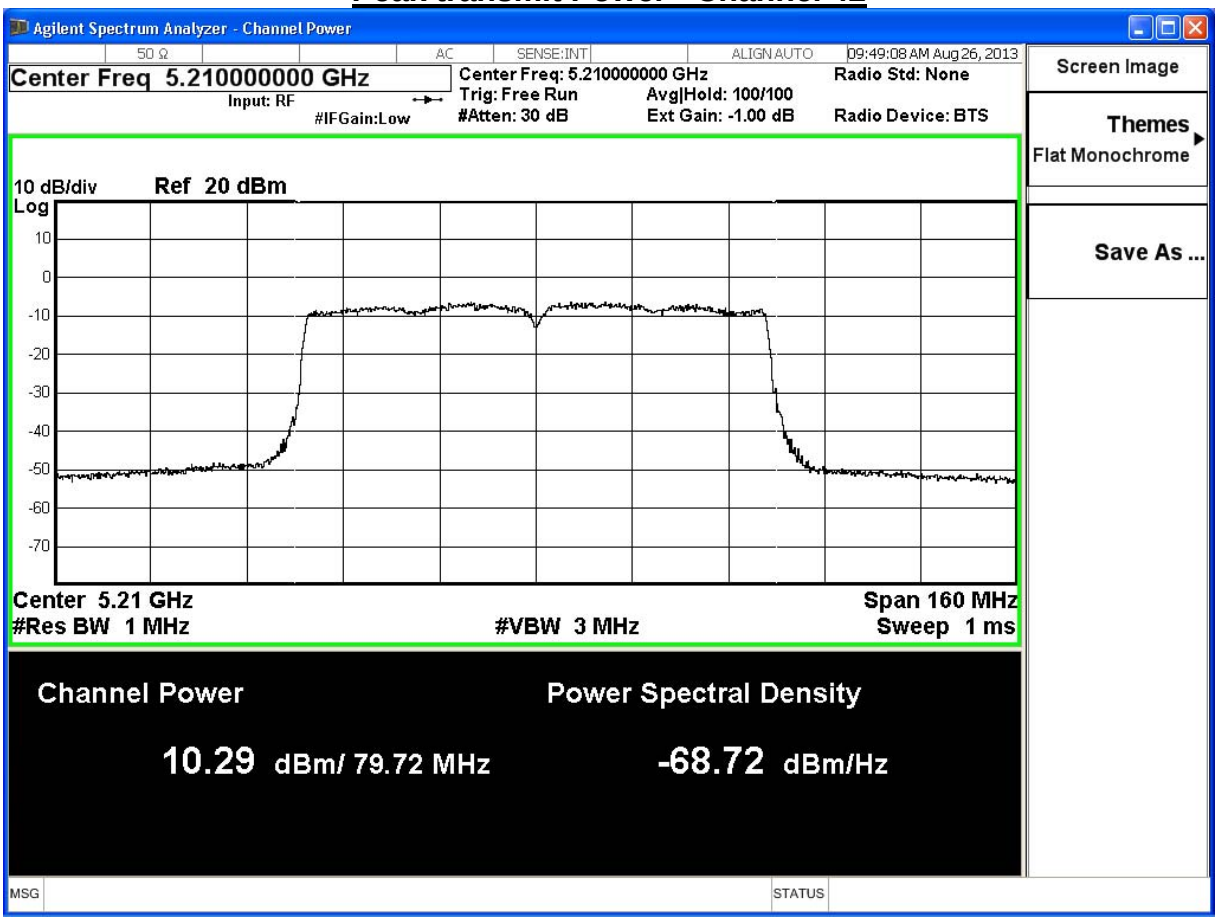
Product	Dual Band 3x3 802.11ac PCI-E Adapter		
Test Item	Peak Transmit Output		
Test Mode	Mode 2: Transmit (Beamforming mode)		
Date of Test	2013/08/26	Test Site	SR7

IEEE 802.11ac(80MHz)_ANT 1						
Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Required Limit		Result
				Fixed Limit (dBm)	4+10logB Limit (dBm)	
42	5210	79.72	10.29	≤15.23	≤ 23.01	Pass

The worst emission of data rate is 87.9 Mbps.

Peak Power Output (dBm)											
MCS Index		0	1	2	3	4	5	6	7	8	9	Required Limit
Channel No	Frequency (MHz)	Data Rate										
		87.9	175.5	263.4	351	526.5	702	789.9	877.5	1053	1170	
42	5210	10.29	10.28	10.27	10.26	10.24	10.23	10.22	10.21	10.20	10.19	15.23

Peak transmit Power - Channel 42



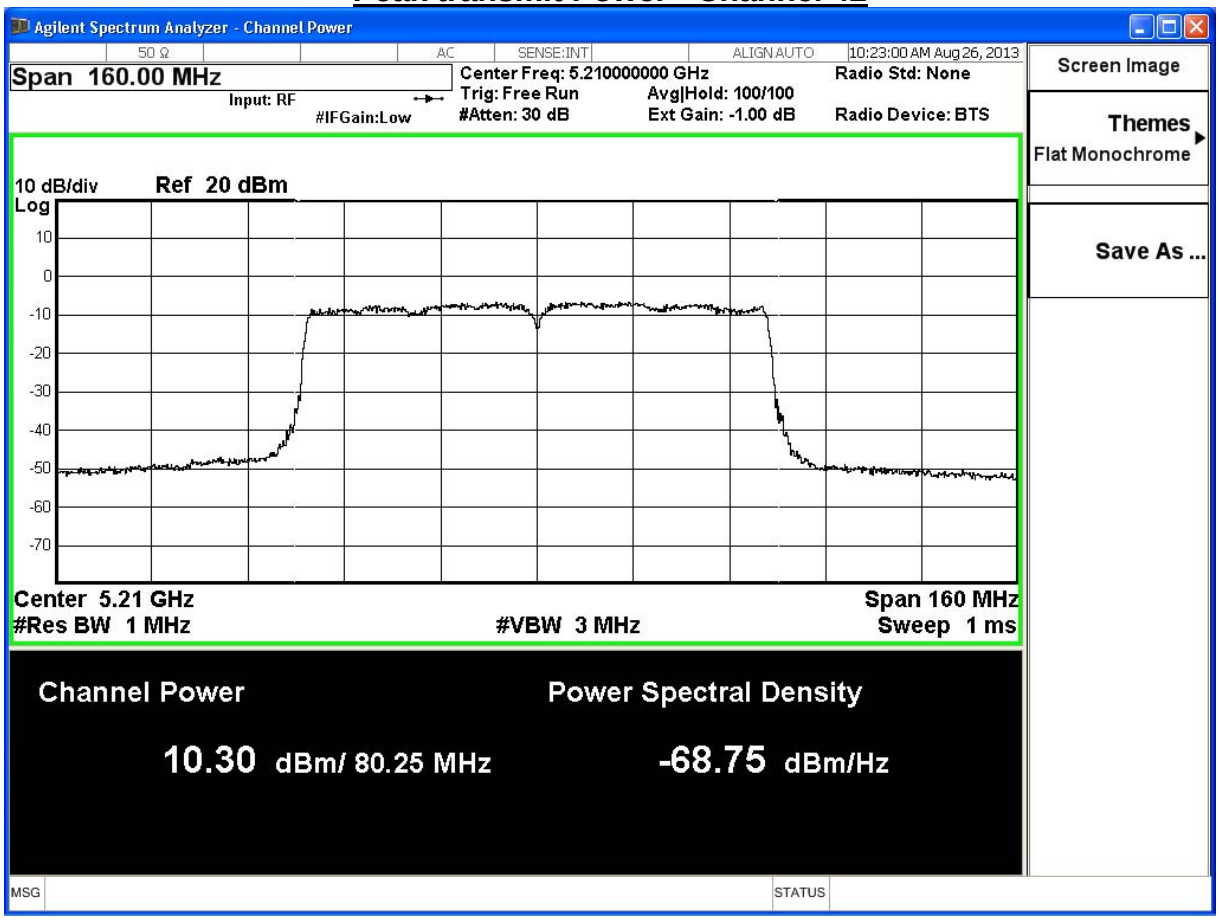
Product	Dual Band 3x3 802.11ac PCI-E Adapter		
Test Item	Peak Transmit Output		
Test Mode	Mode 2: Transmit (Beamforming mode)		
Date of Test	2013/08/26	Test Site	SR7

IEEE 802.11ac(80MHz)_ANT 2						
Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Required Limit		Result
				Fixed Limit (dBm)	4+10logB Limit (dBm)	
42	5210	80.25	10.30	≤15.23	≤ 23.04	Pass

The worst emission of data rate is 87.9 Mbps.

Peak Power Output (dBm)												
MCS Index		0	1	2	3	4	5	6	7	8	9	Required Limit
Channel No	Frequency (MHz)	Data Rate										
		87.9	175.5	263.4	351	526.5	702	789.9	877.5	1053	1170	
42	5210	10.30	10.29	10.28	10.27	10.25	10.24	10.23	10.22	10.21	10.20	15.23

Peak transmit Power - Channel 42



Product	Dual Band 3x3 802.11ac PCI-E Adapter		
Test Item	Peak Transmit Output		
Test Mode	Mode 2: Transmit (Beamforming mode)		
Date of Test	2013/08/26	Test Site	SR7

IEEE 802.11ac(80MHz)_ANT 0+1+2					
Channel No.	Frequency (MHz)	Total Output Power		Required Limit (dBm)	Result
		(mW)	(dBm)		
42	5210	31.92	15.04	≤15.23	Pass

Note:

Measure Level =Reading value + cable loss

Total Gain: 10log(Ant N) + max Gain = 7.77dBi

Fixed Limit = 17dBm - (7.77dBi - 6dBi) = 17 – 1.77 = 15.23 dBm

5. Peak Power Spectrum Density

5.1. Test Equipment

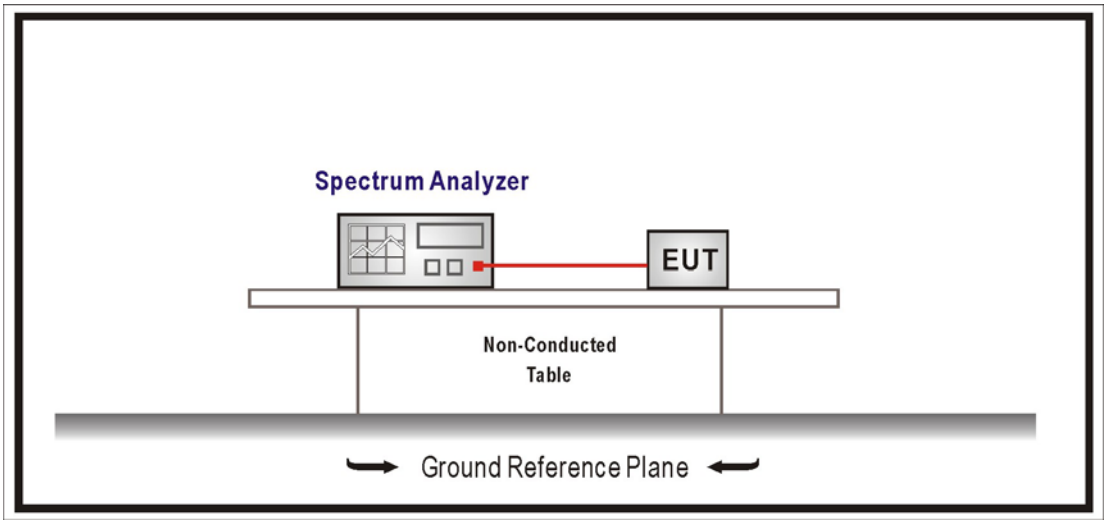
The following test equipments are used during the radiated emission tests:

Peak Power Spectrum Density / SR7

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

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

5.2. Test Setup



5.3. Limits

1. For the band 5.15-5.25 GHz, the peak power spectral density shall not exceed 4 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.
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 5.725-5.825 GHz, the peak power spectral density shall not exceed 17 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.

5.4. Test Procedure

The EUT was setup to ANSI C63.4, 2009; tested to U-NII test procedure of March 2012 KDB 789033 for compliance to FCC 47CFR Subpart E requirements.

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.

5.5. Uncertainty

The measurement uncertainty is defined as ± 1.27 dB

5.6. Test Result

Product	Dual Band 3x3 802.11ac PCI-E Adapter		
Test Item	Peak Power Spectral Density		
Test Mode	Mode 1: Transmit (CDD mode)		
Date of Test	2013/08/29	Test Site	SR7

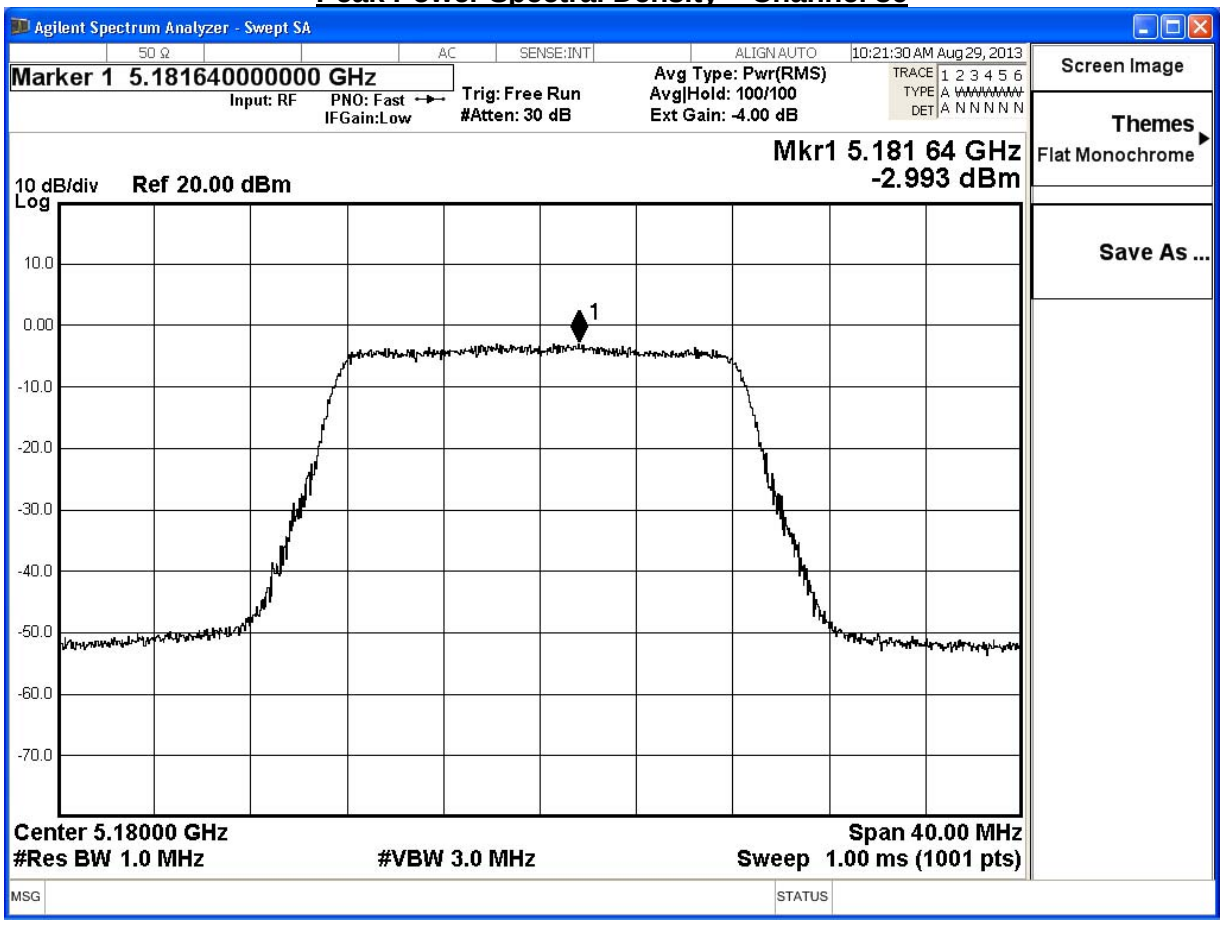
IEEE 802.11a (ANT 0)				
Channel No.	Frequency (MHz)	Measure Level (dBm)	Required Limit (dBm)	Result
36	5180	-2.99	≦2.23	Pass
44	5220	-2.59	≦2.23	Pass
48	5240	-2.62	≦2.23	Pass

Note:

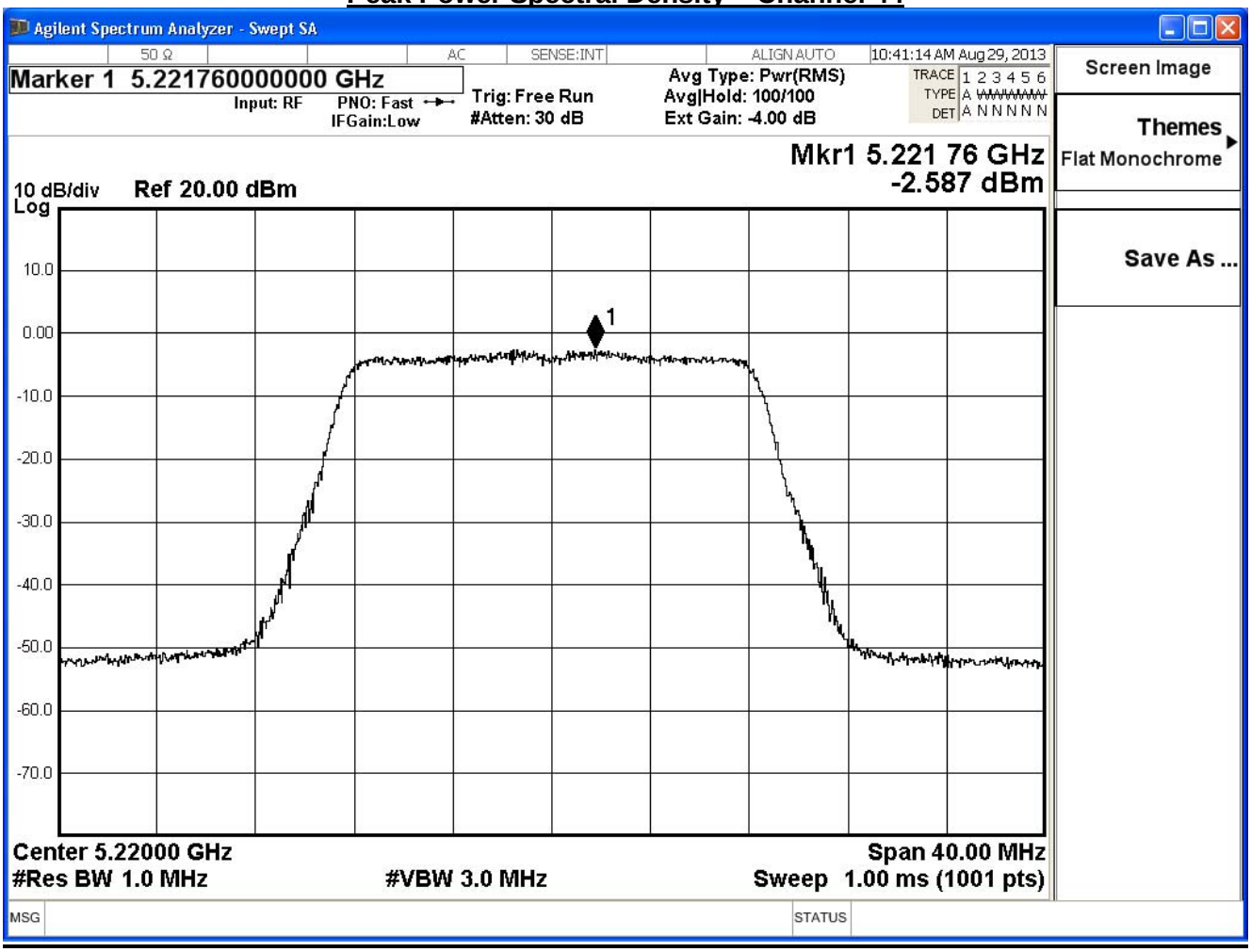
Measure Level =Reading value + cable loss

Total Gain: 10log(Ant N) + max Gain = 7.77dBi
Limit = 4dBm - (7.77dBi - 6dBi) = 4 – 1.77 = 2.23 dBm

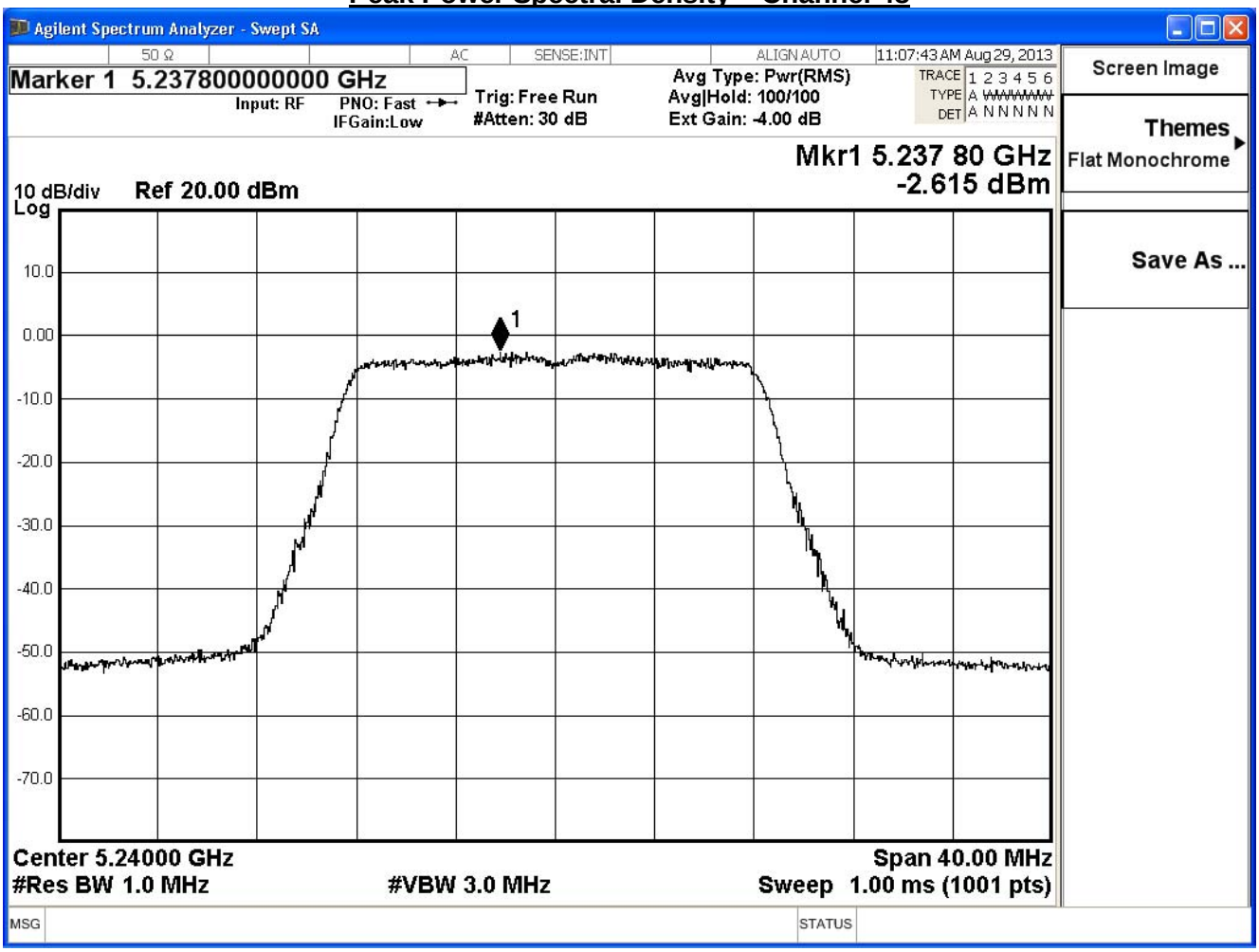
Peak Power Spectral Density – Channel 36



Peak Power Spectral Density – Channel 44



Peak Power Spectral Density – Channel 48



Product	Dual Band 3x3 802.11ac PCI-E Adapter		
Test Item	Peak Power Spectral Density		
Test Mode	Mode 1: Transmit (CDD mode)		
Date of Test	2013/08/29	Test Site	SR7

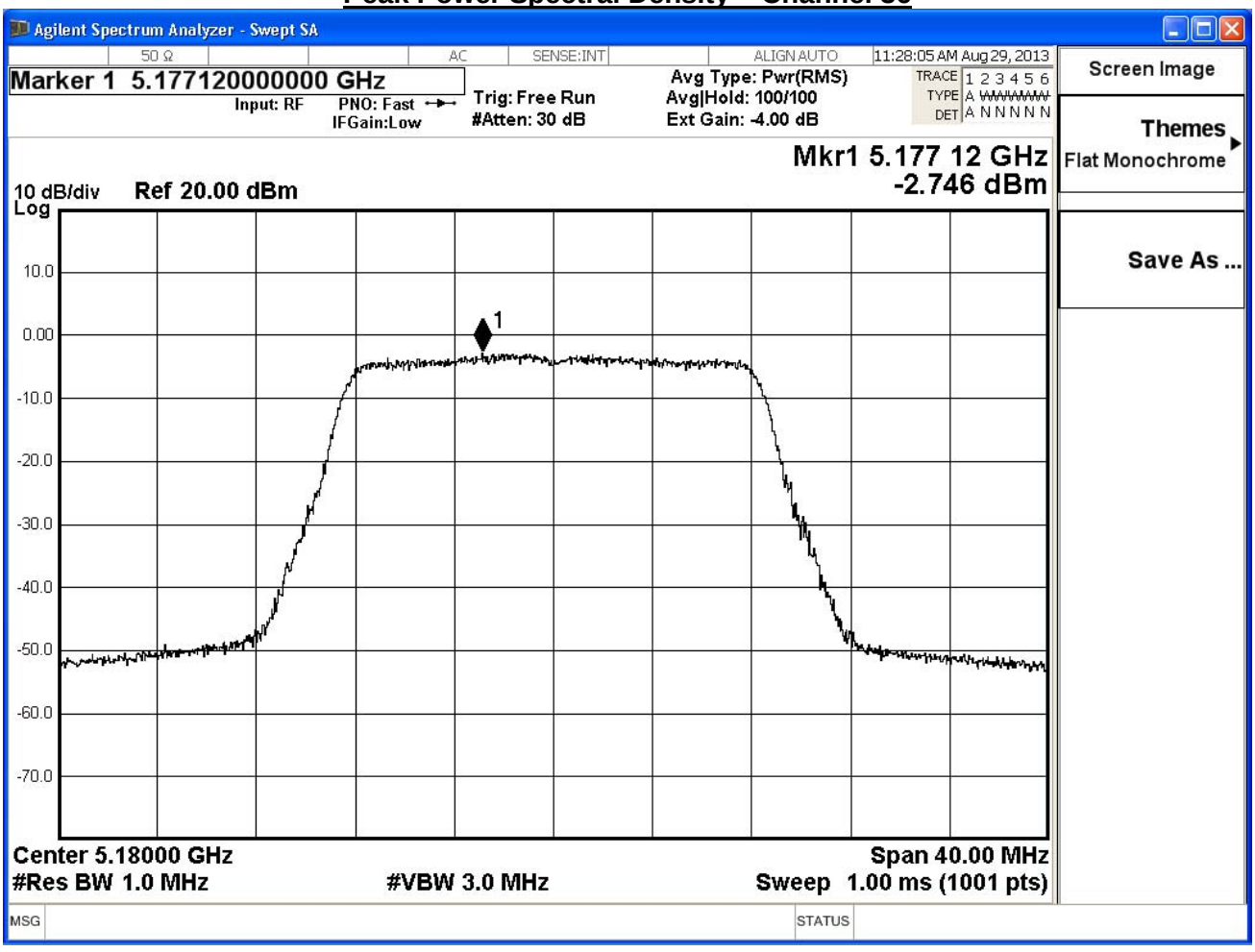
IEEE 802.11a (ANT 1)				
Channel No.	Frequency (MHz)	Measure Level (dBm)	Required Limit (dBm)	Result
36	5180	-2.75	≦2.23	Pass
44	5220	-2.72	≦2.23	Pass
48	5240	-2.67	≦2.23	Pass

Note:

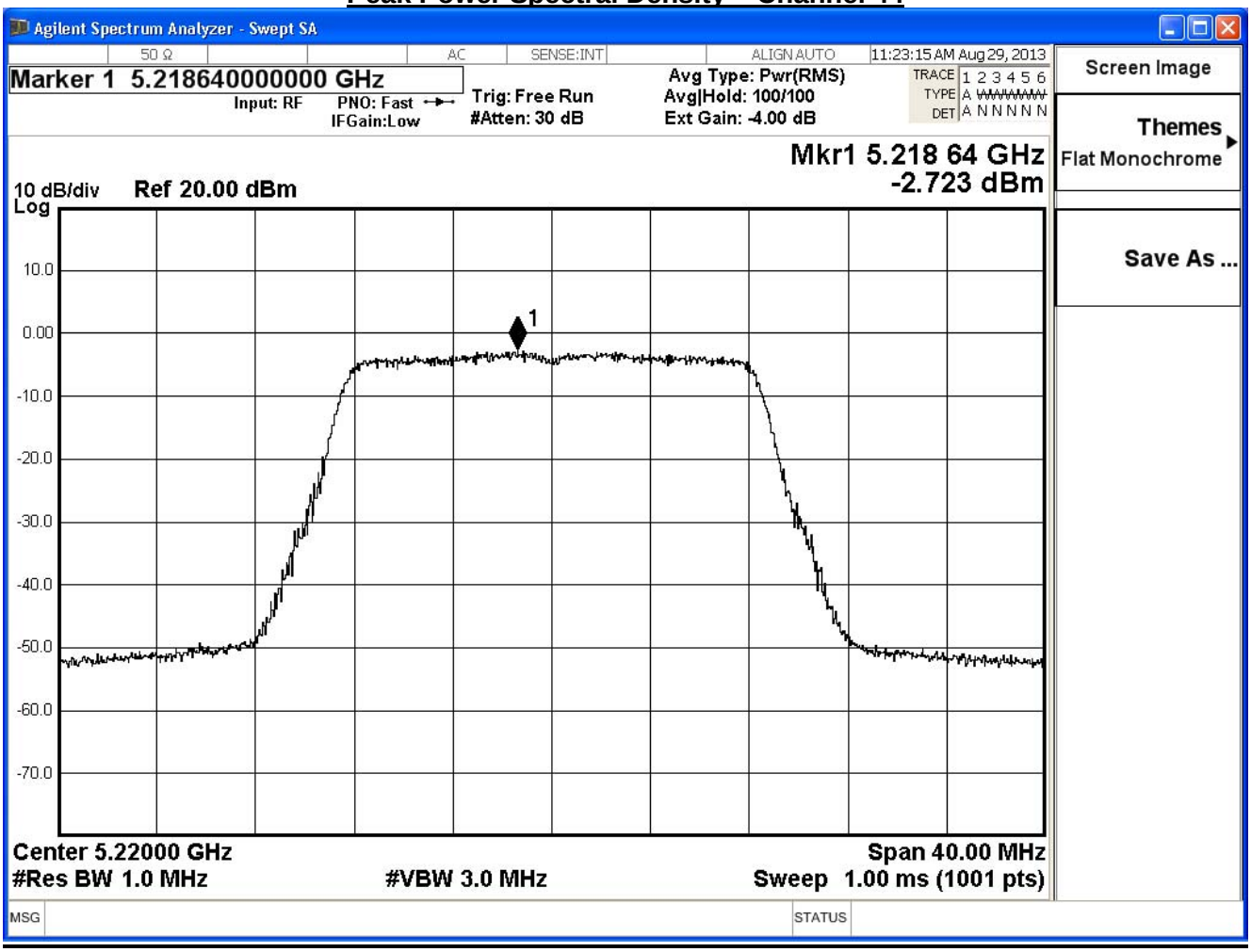
Measure Level =Reading value + cable loss

Total Gain: 10log(Ant N) + max Gain = 7.77dBi
Limit = 4dBm - (7.77dBi - 6dBi) = 4 – 1.77 = 2.23 dBm

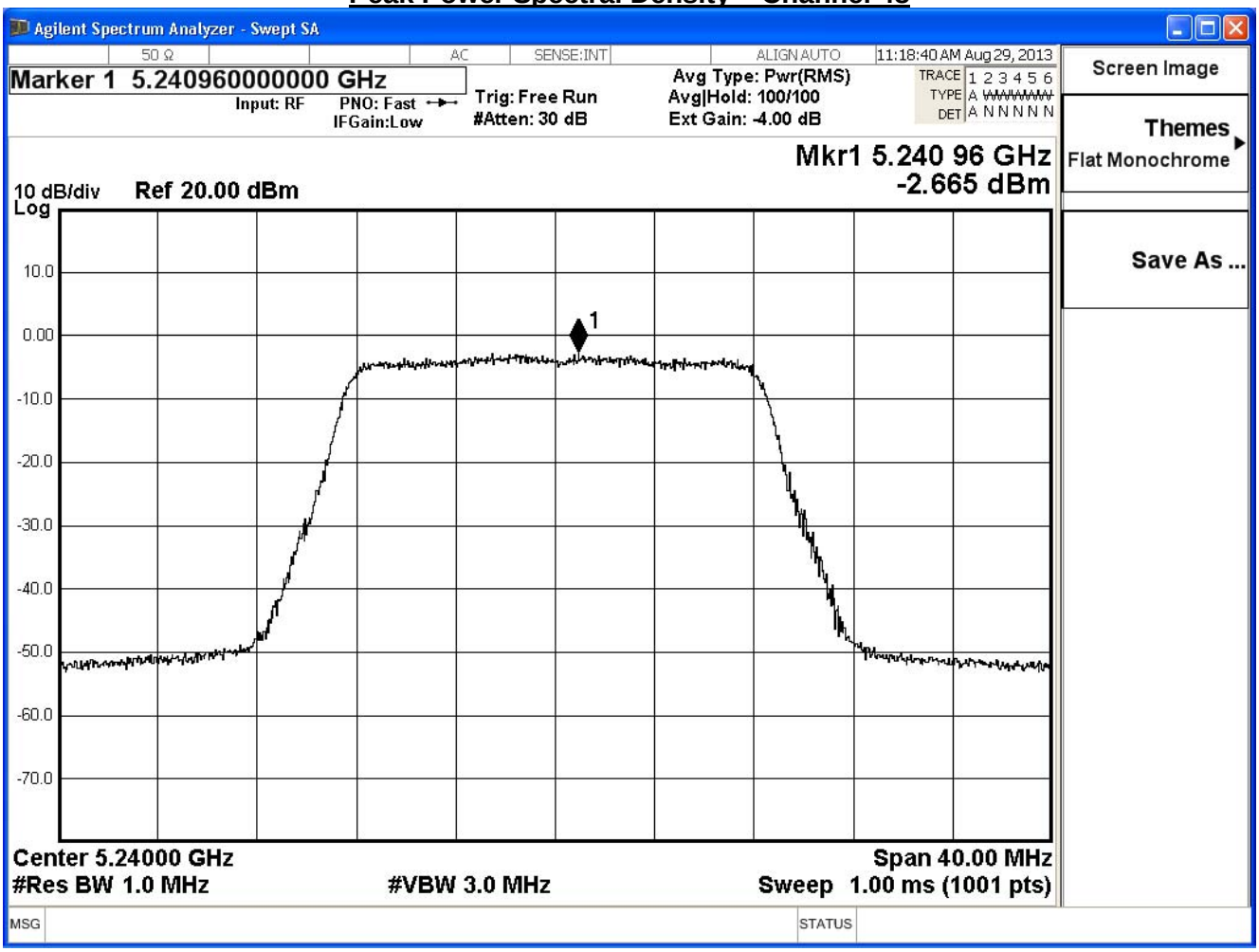
Peak Power Spectral Density – Channel 36



Peak Power Spectral Density – Channel 44



Peak Power Spectral Density – Channel 48



Product	Dual Band 3x3 802.11ac PCI-E Adapter		
Test Item	Peak Power Spectral Density		
Test Mode	Mode 1: Transmit (CDD mode)		
Date of Test	2013/08/29	Test Site	SR7

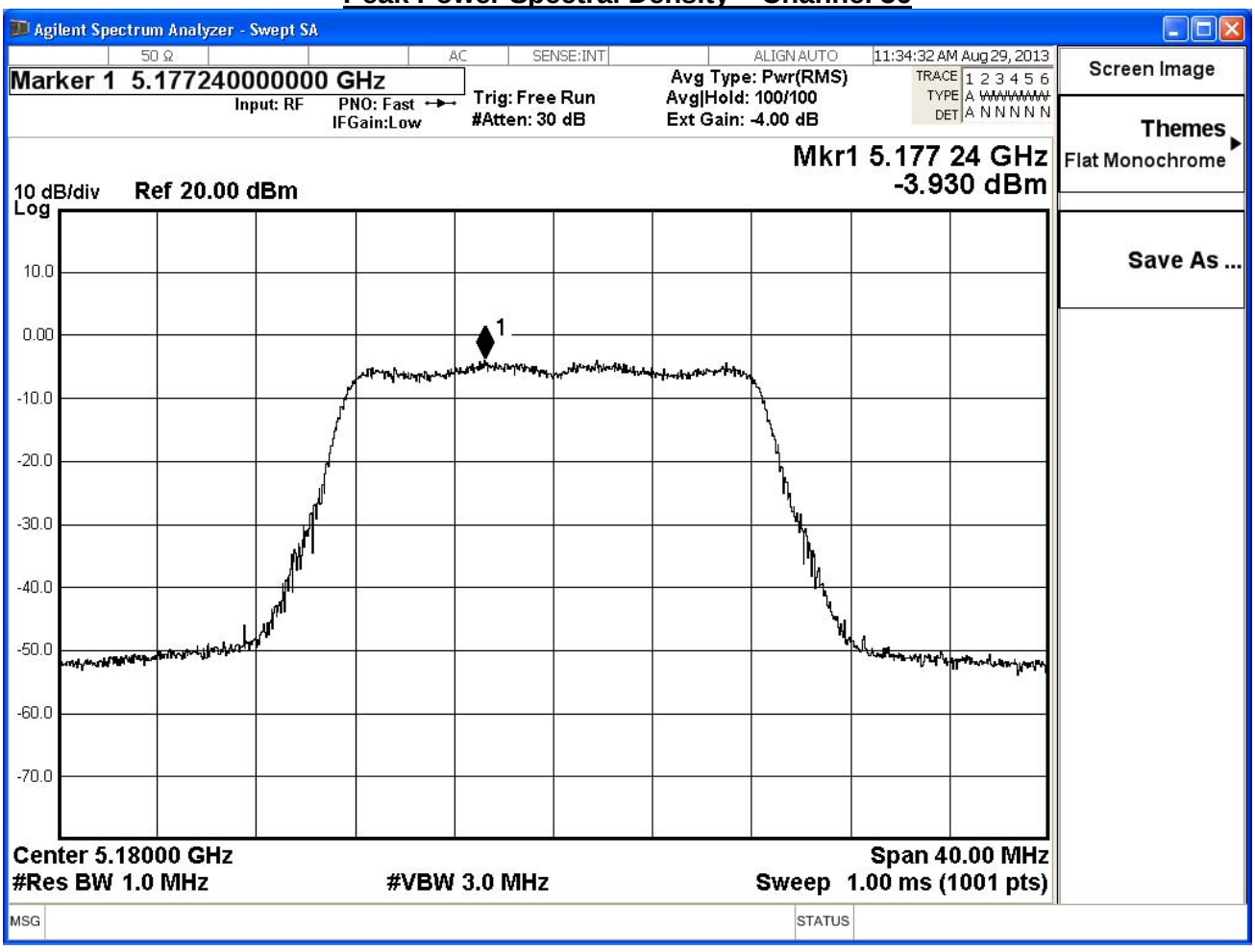
IEEE 802.11a (ANT 2)				
Channel No.	Frequency (MHz)	Measure Level (dBm)	Required Limit (dBm)	Result
36	5180	-3.93	≦2.23	Pass
44	5220	-3.63	≦2.23	Pass
48	5240	-3.42	≦2.23	Pass

Note:

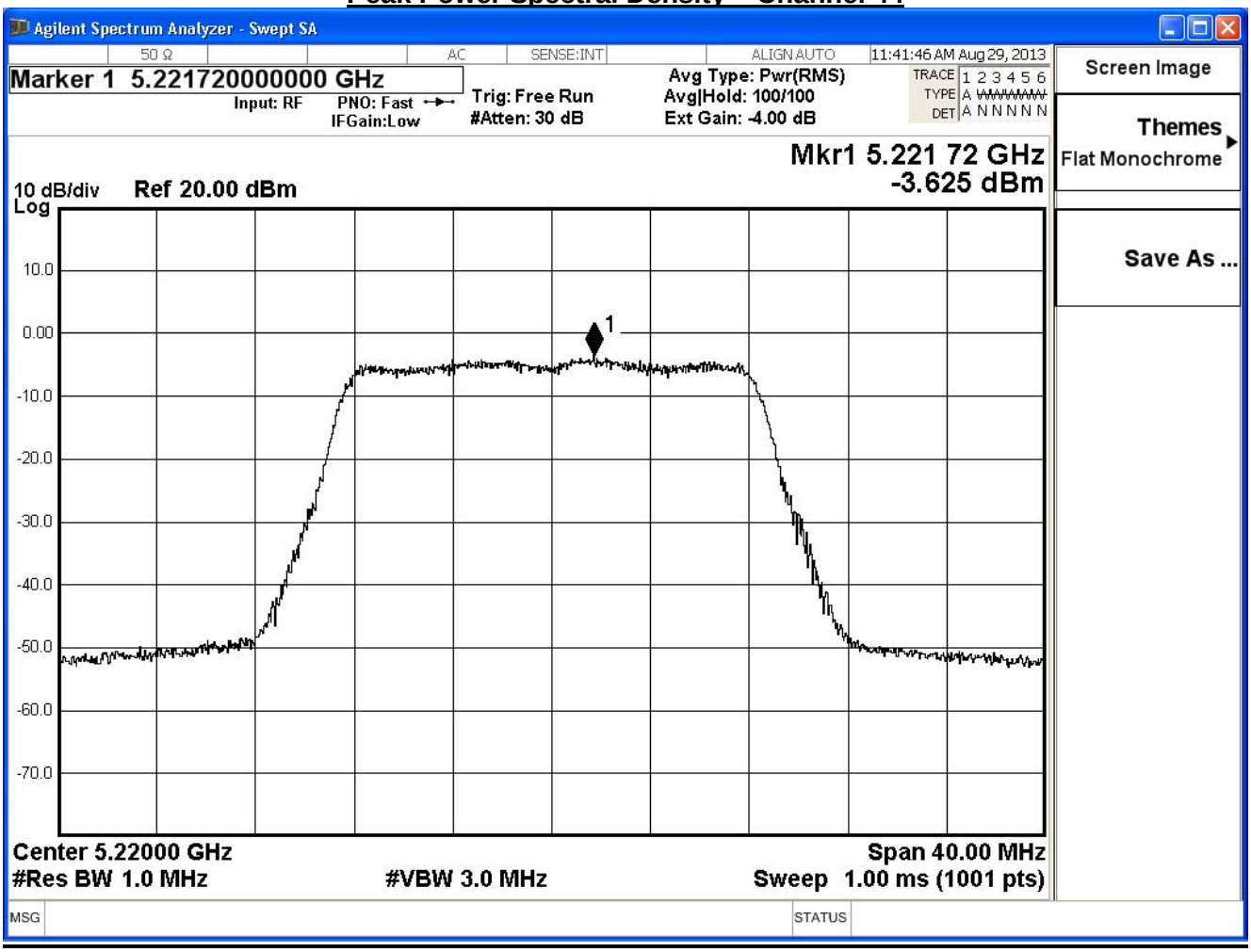
Measure Level =Reading value + cable loss

Total Gain: 10log(Ant N) + max Gain = 7.77dBi
Limit = 4dBm - (7.77dBi - 6dBi) = 4 – 1.77 = 2.23 dBm

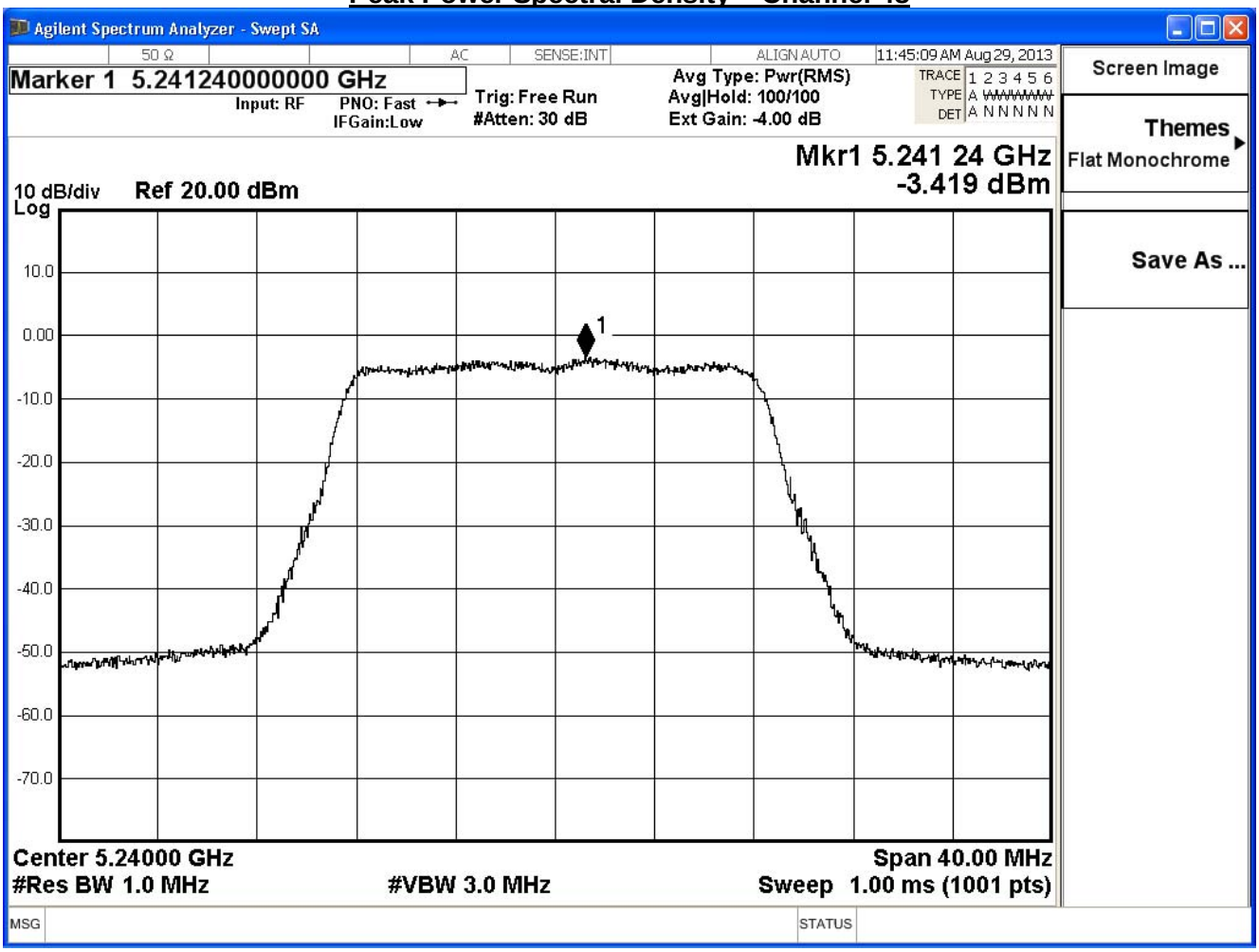
Peak Power Spectral Density – Channel 36



Peak Power Spectral Density – Channel 44



Peak Power Spectral Density – Channel 48



IEEE 802.11a (ANT 0+1+2)				
Channel No.	Frequency (MHz)	Measure Level (dBm)	Required Limit (dBm)	Result
36	5180	1.58	≦2.23	Pass
44	5220	1.82	≦2.23	Pass
48	5240	1.88	≦2.23	Pass

Note:

Measure Level =Reading value + cable loss

Total Gain: 10log(Ant N) + max Gain = 7.77dBi
Limit = 4dBm - (7.77dBi - 6dBi) = 4 – 1.77 = 2.23 dBm

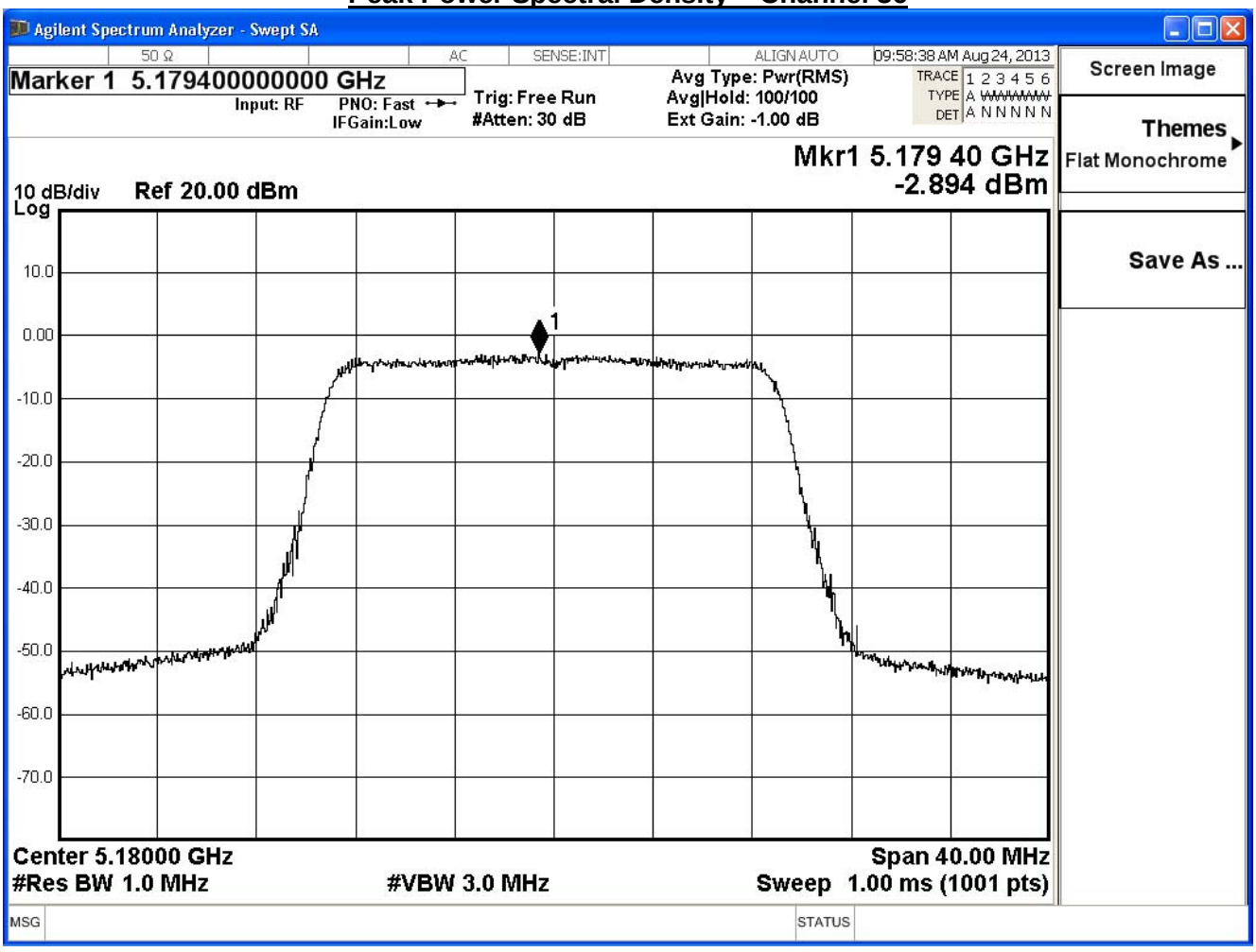
IEEE 802.11n_20M(ANT 0)				
Channel No.	Frequency (MHz)	Measure Level (dBm)	Required Limit (dBm)	Result
36	5180	-2.894	≦2.23	Pass
44	5220	-2.829	≦2.23	Pass
48	5240	-2.824	≦2.23	Pass

Note:

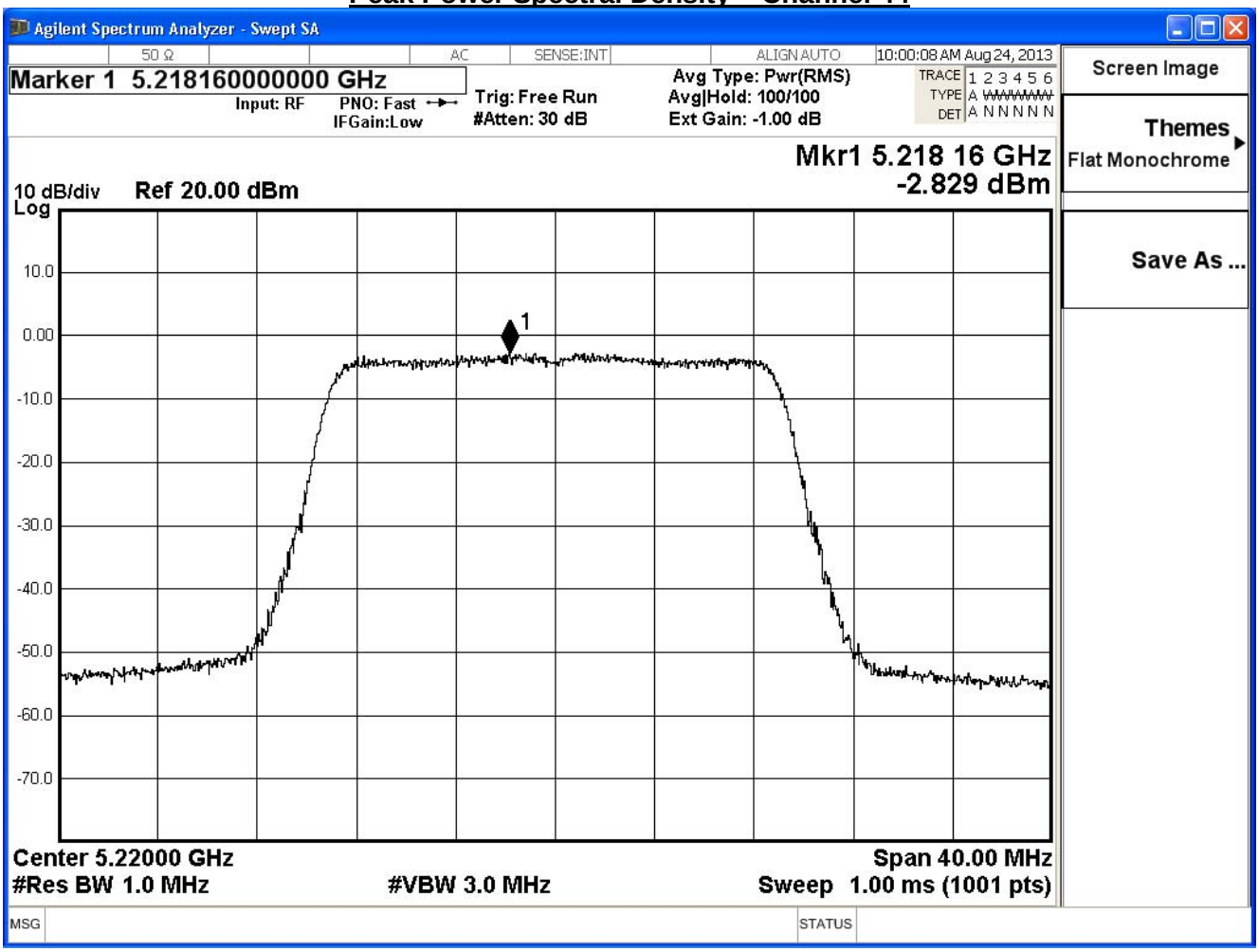
Measure Level =Reading value + cable loss

Total Gain: 10log(Ant N) + max Gain = 7.77dBi
Limit = 4dBm - (7.77dBi - 6dBi) = 4 – 1.77 = 2.23 dBm

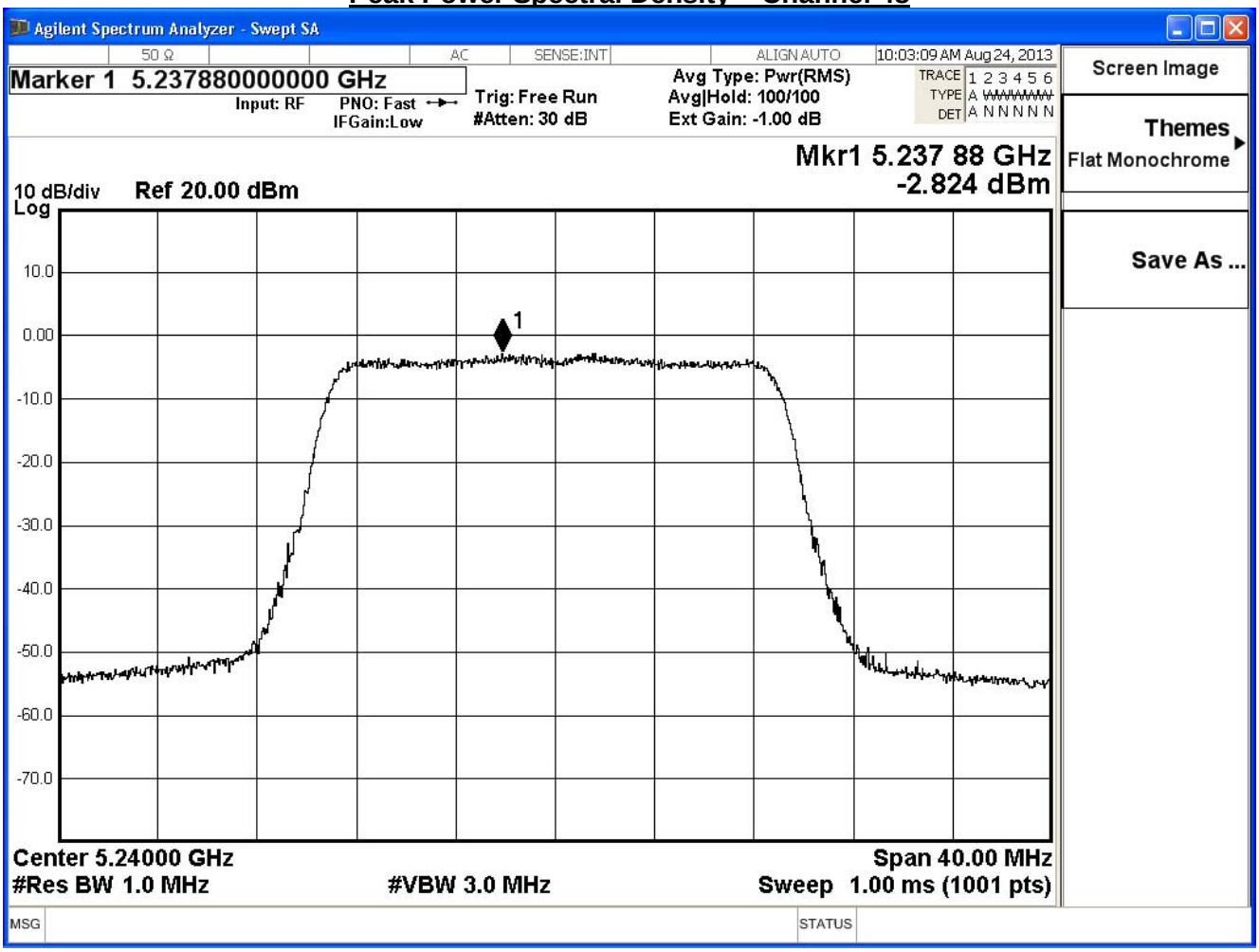
Peak Power Spectral Density – Channel 36



Peak Power Spectral Density – Channel 44



Peak Power Spectral Density – Channel 48



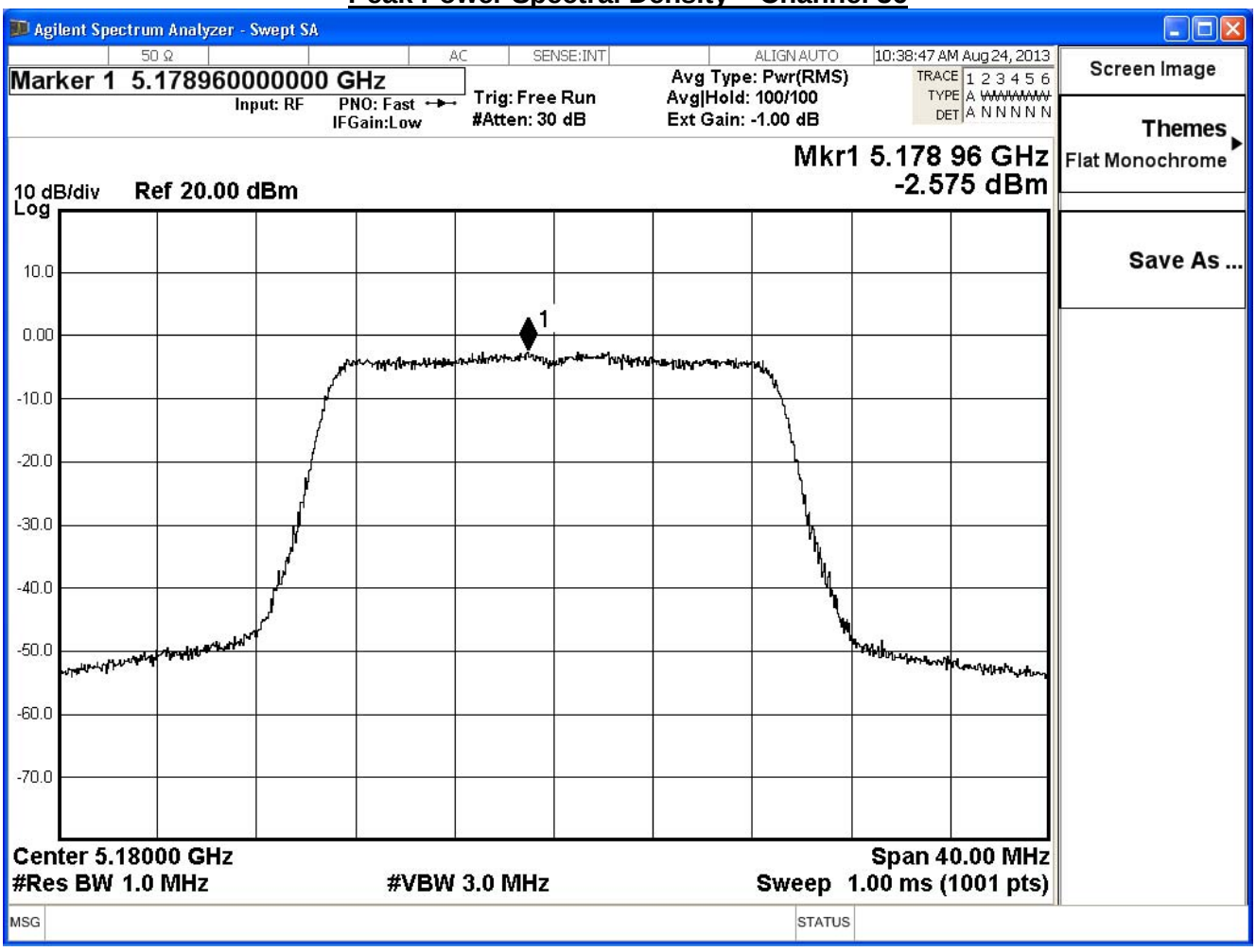
IEEE 802.11n_20M(ANT 1)				
Channel No.	Frequency (MHz)	Measure Level (dBm)	Required Limit (dBm)	Result
36	5180	-2.575	≦2.23	Pass
44	5220	-2.641	≦2.23	Pass
48	5240	-2.877	≦2.23	Pass

Note:

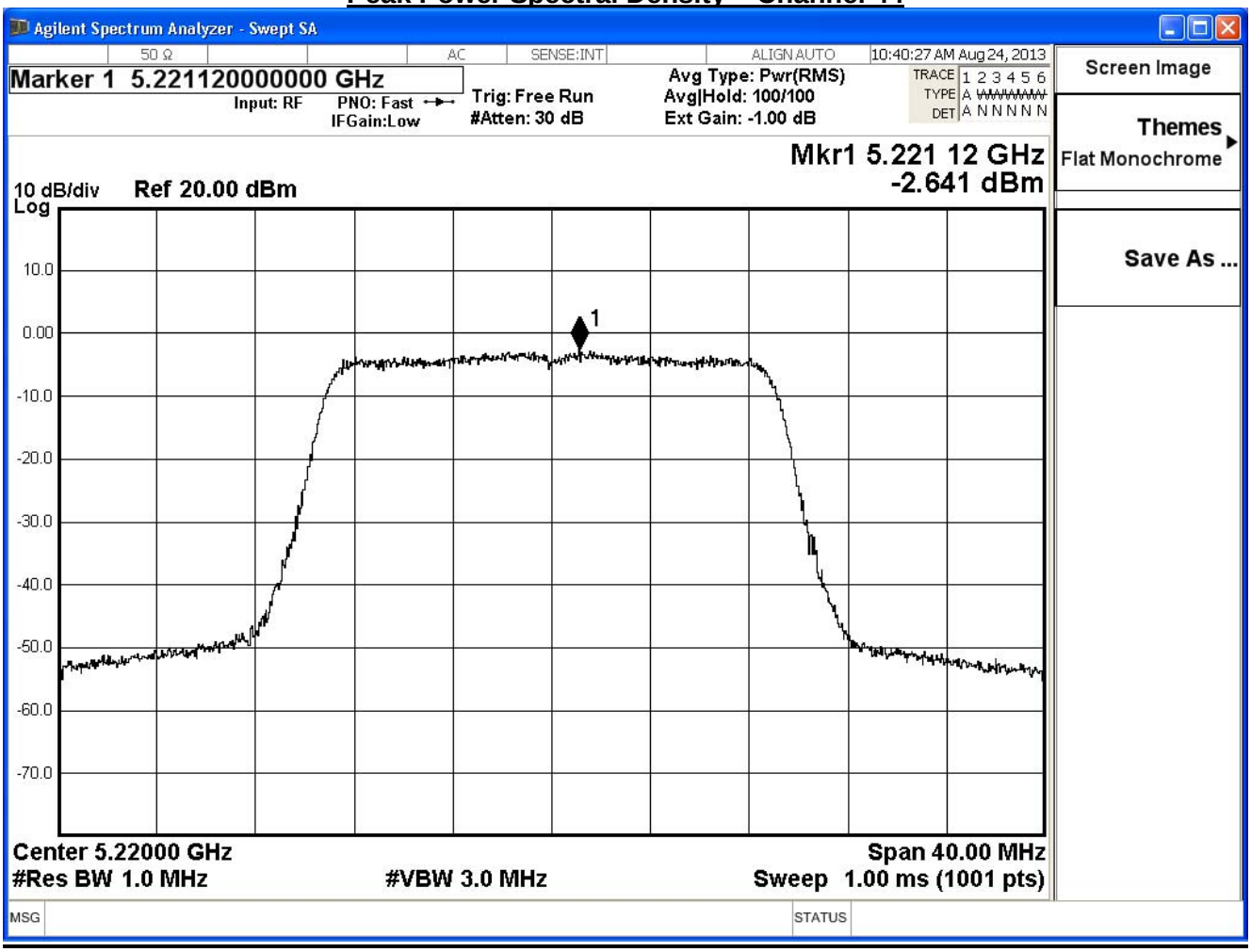
Measure Level =Reading value + cable loss

Total Gain: 10log(Ant N) + max Gain = 7.77dBi
Limit = 4dBm - (7.77dBi - 6dBi) = 4 – 1.77 = 2.23 dBm

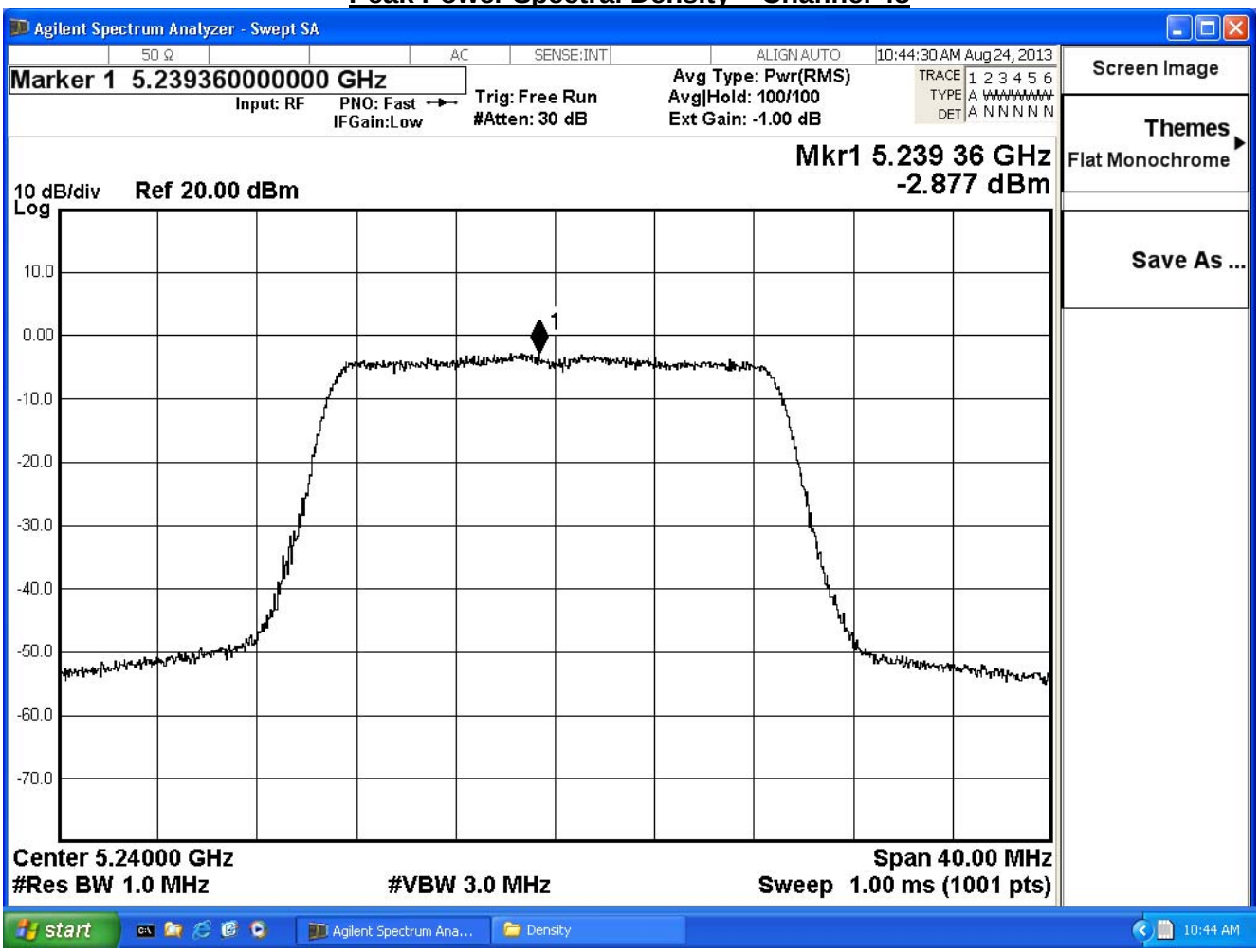
Peak Power Spectral Density – Channel 36



Peak Power Spectral Density – Channel 44



Peak Power Spectral Density – Channel 48



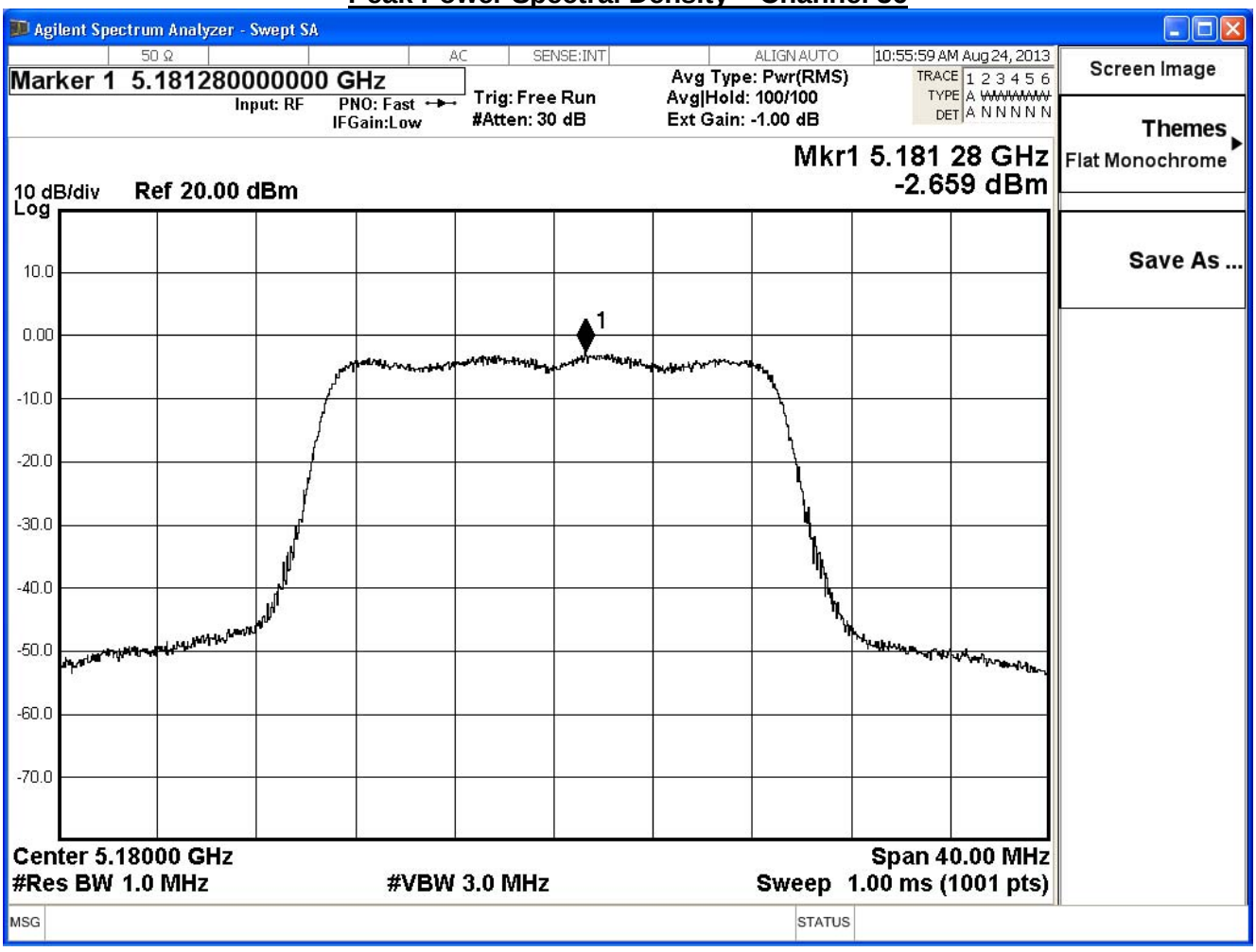
IEEE 802.11n_20M(ANT 2)				
Channel No.	Frequency (MHz)	Measure Level (dBm)	Required Limit (dBm)	Result
36	5180	-2.659	≦2.23	Pass
44	5220	-2.591	≦2.23	Pass
48	5240	-2.848	≦2.23	Pass

Note:

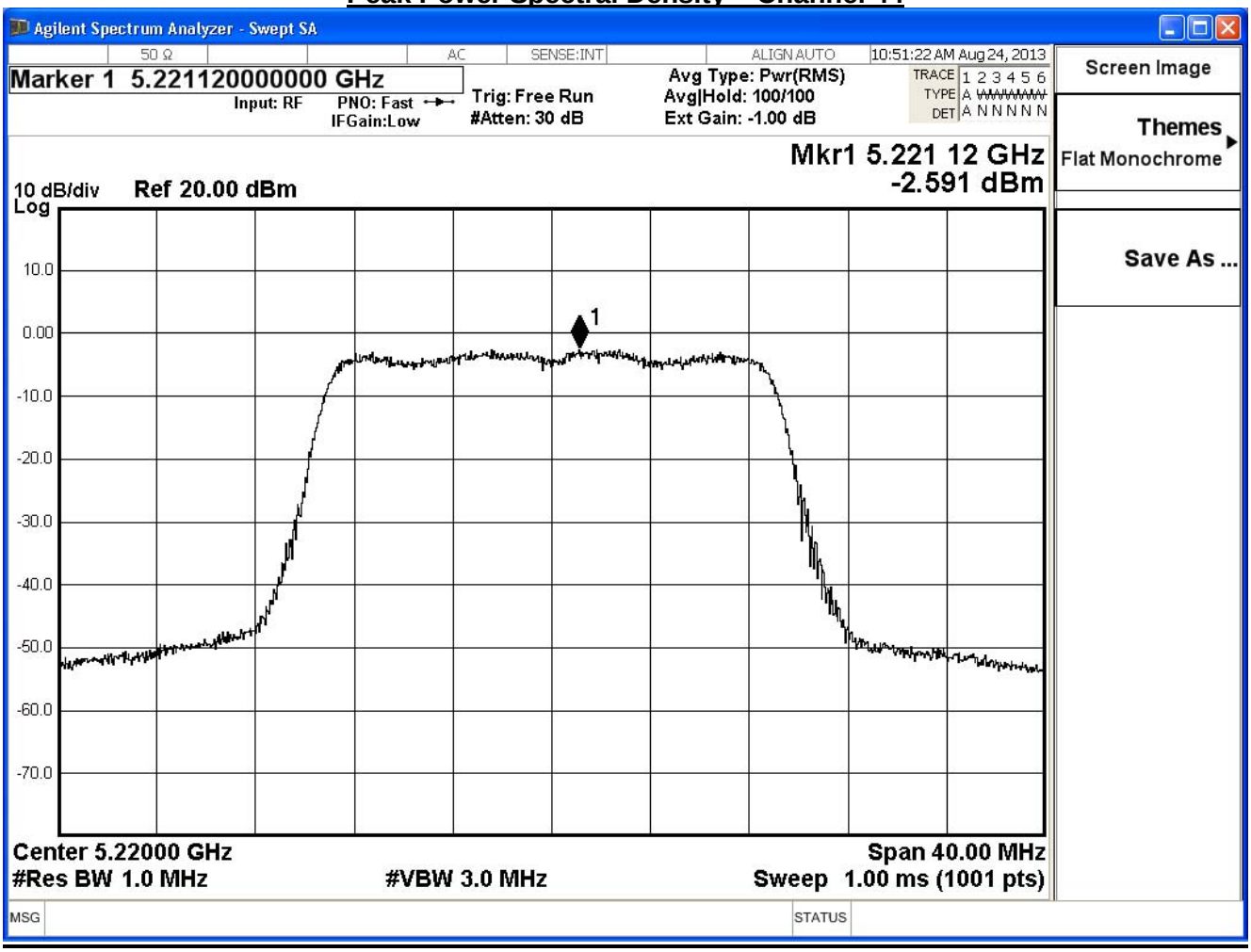
Measure Level =Reading value + cable loss

Total Gain: 10log(Ant N) + max Gain = 7.77dBi
Limit = 4dBm - (7.77dBi - 6dBi) = 4 – 1.77 = 2.23 dBm

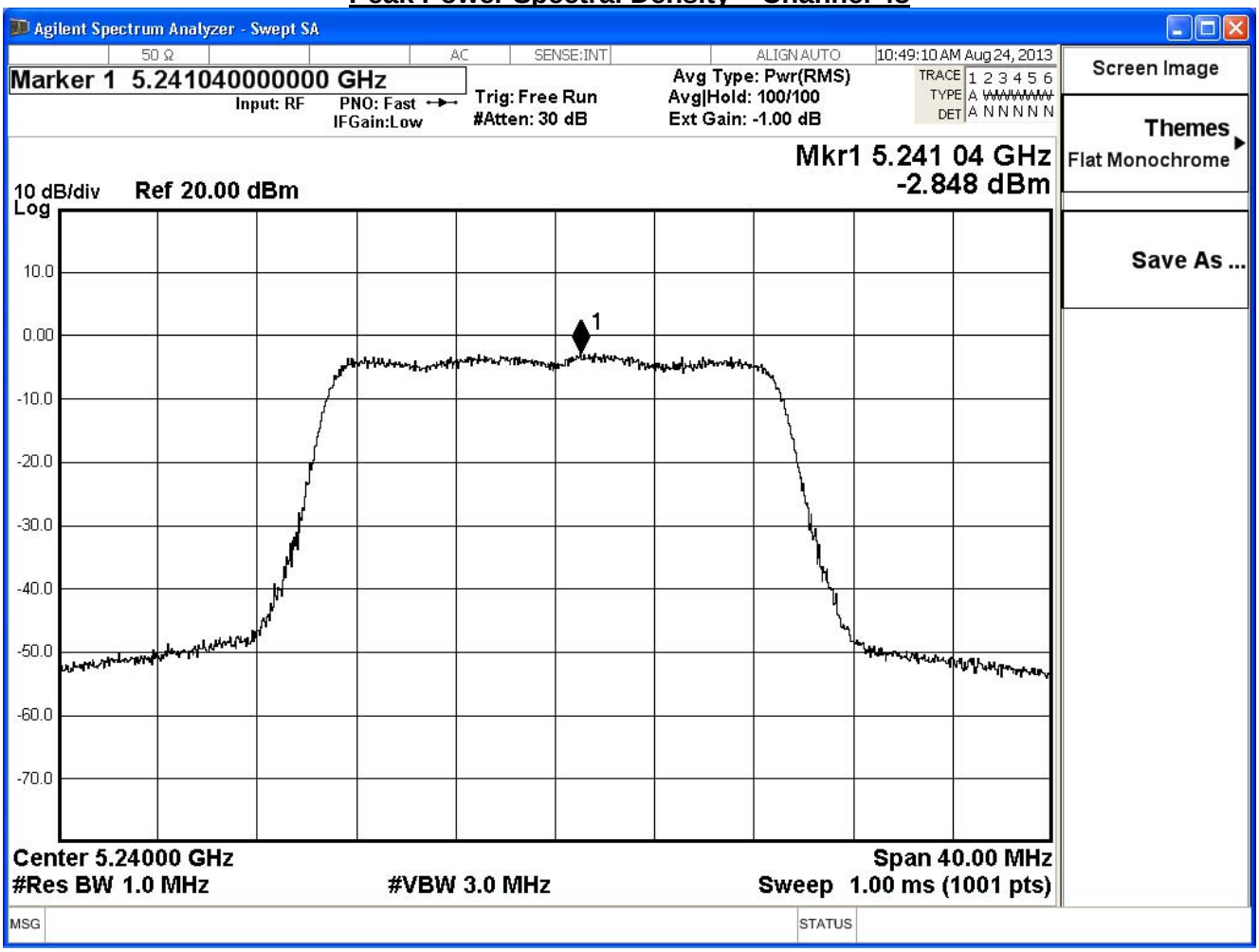
Peak Power Spectral Density – Channel 36



Peak Power Spectral Density – Channel 44



Peak Power Spectral Density – Channel 48



IEEE 802.11n_20M(ANT 0+1+2)				
Channel No.	Frequency (MHz)	Measure Level (dBm)	Required Limit (dBm)	Result
36	5180	2.060	≦2.23	Pass
44	5220	2.090	≦2.23	Pass
48	5240	1.920	≦2.23	Pass

Note:

Measure Level =Reading value + cable loss

Total Gain: 10log(Ant N) + max Gain = 7.77dBi
Limit = 4dBm - (7.77dBi - 6dBi) = 4 – 1.77 = 2.23 dBm