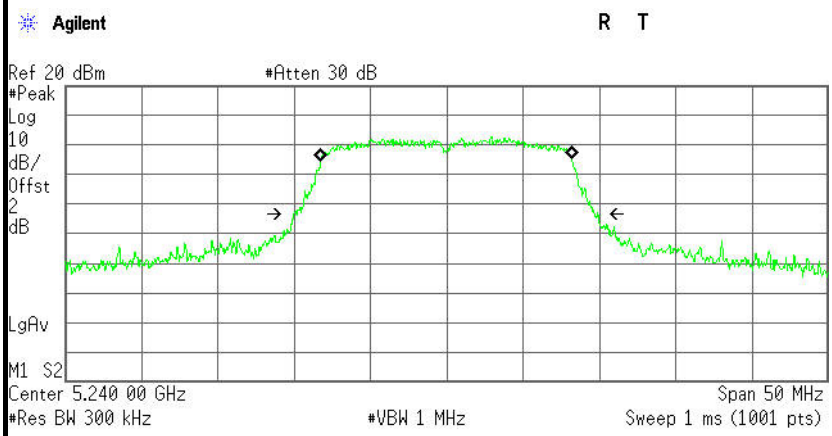
26dB Bandwidth (CH High)

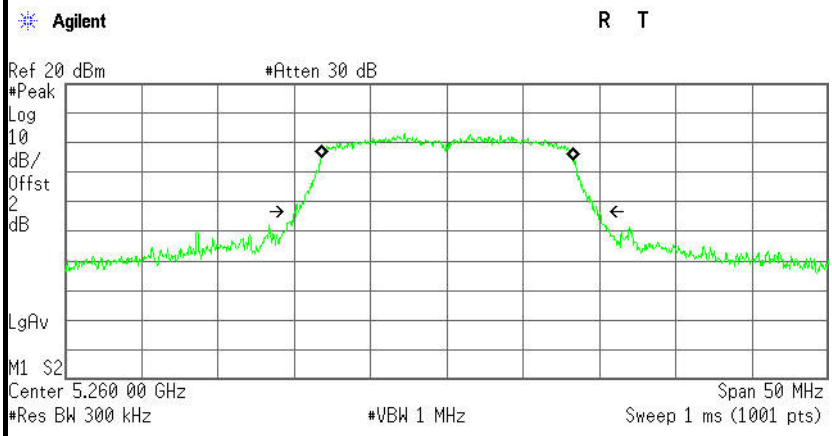
Antenna 0



IEEE 802.11a mode / 5260 ~ 5320MHz

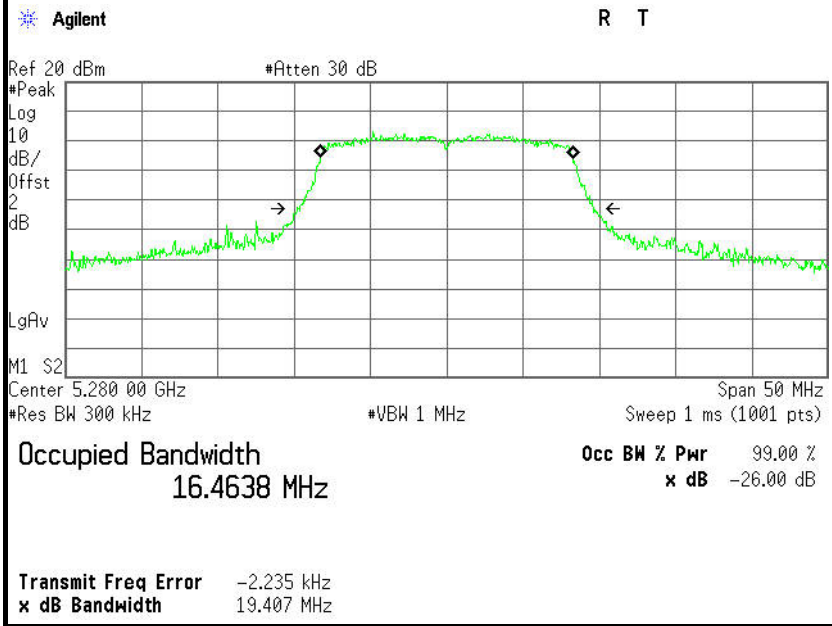
26dB Bandwidth (CH Low)

Antenna 0



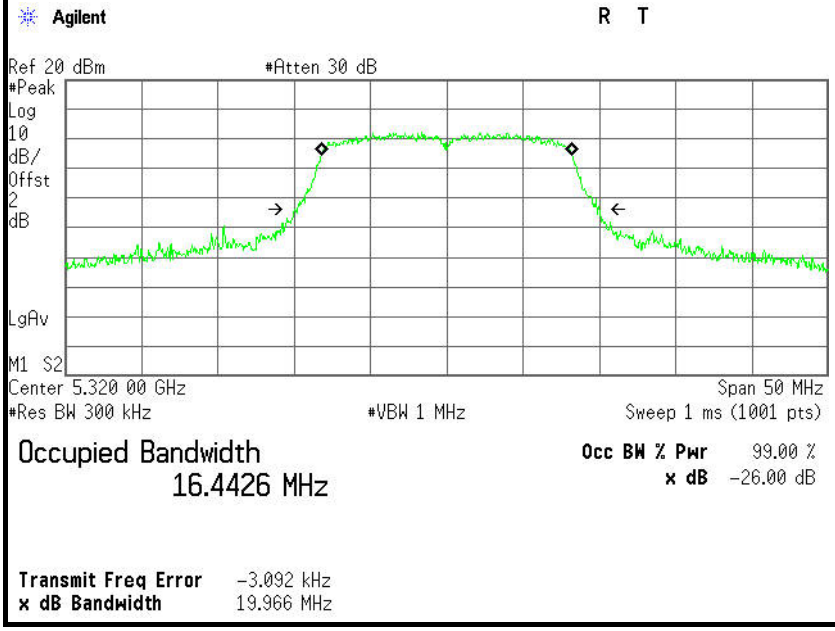
26dB Bandwidth (CH Mid)

Antenna 0



26dB Bandwidth (CH High)

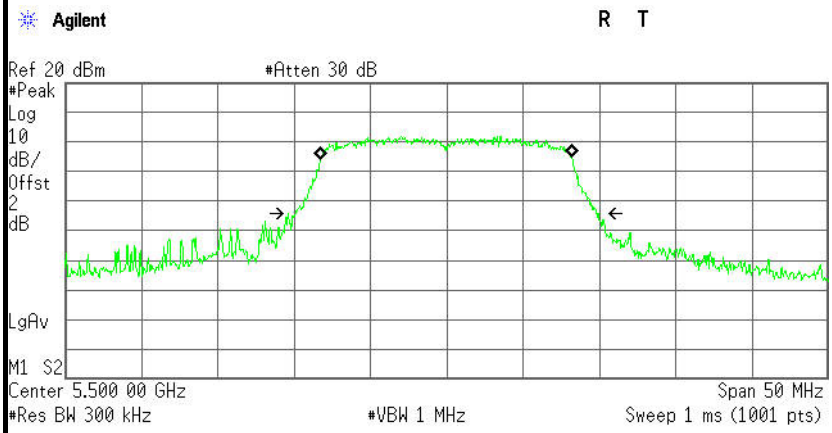
Antenna 0



IEEE 802.11a mode / 5500 ~ 5700MHz

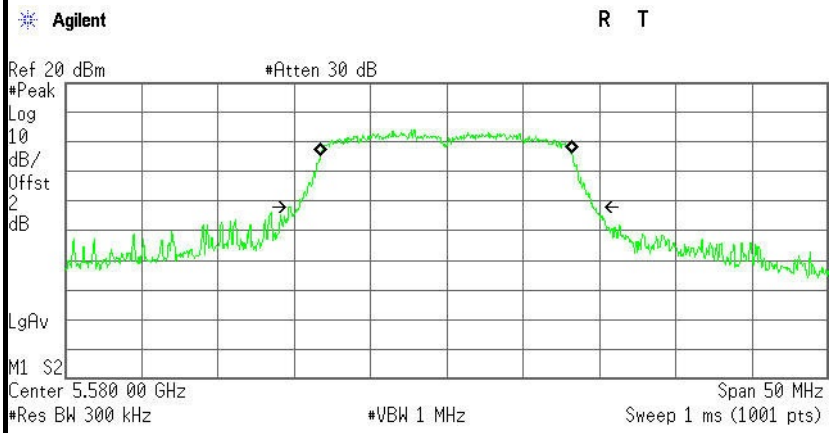
26dB Bandwidth (CH Low)

Antenna 0



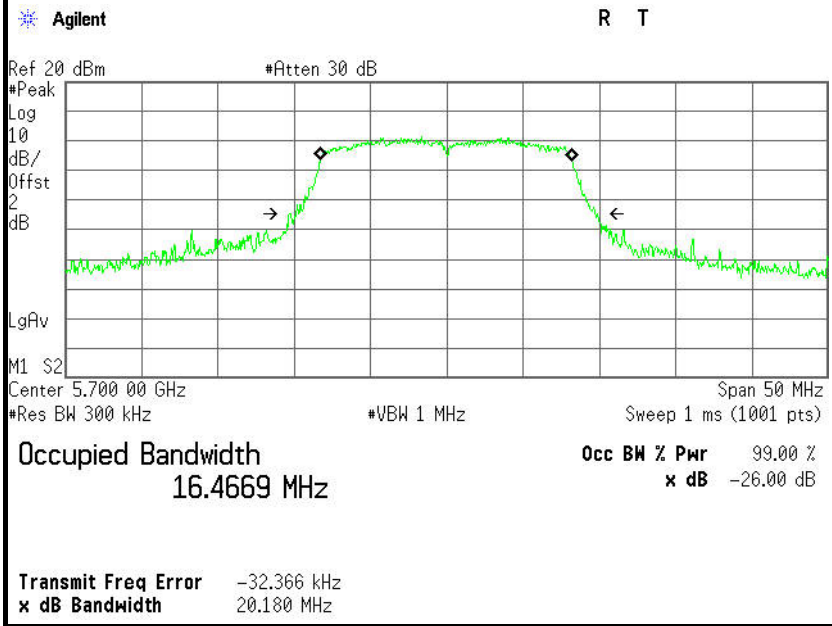
26dB Bandwidth (CH Mid)

Antenna 0



26dB Bandwidth (CH High)

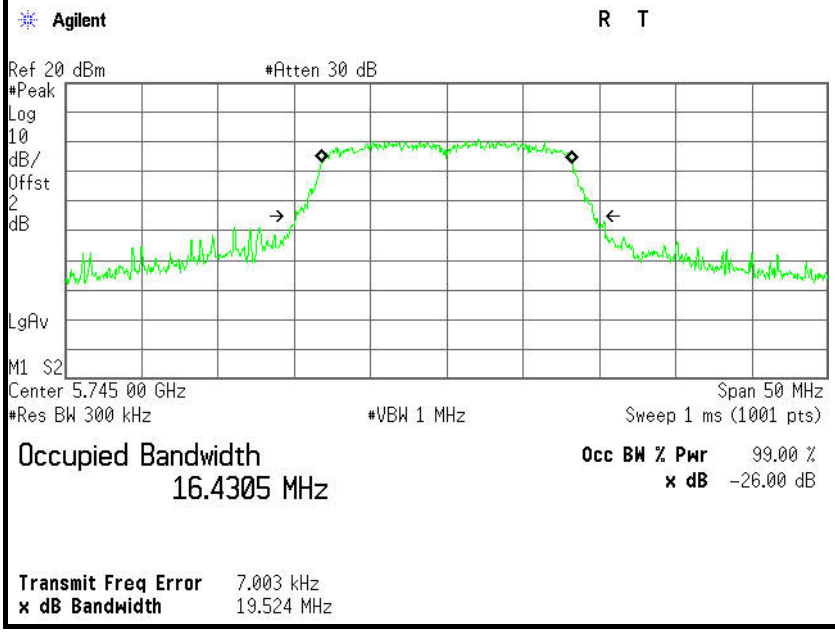
Antenna 0



IEEE 802.11a mode / 5745 ~ 5805MHz

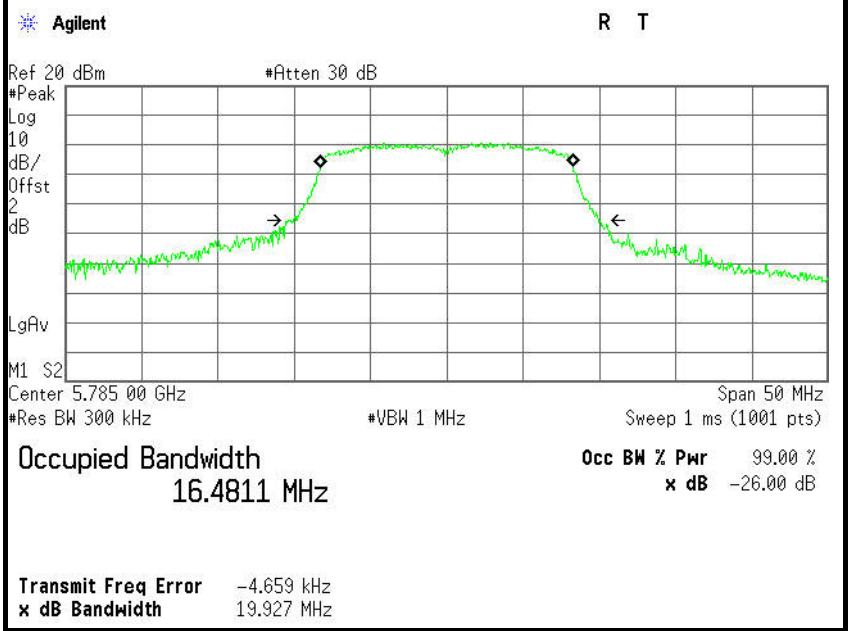
26dB Bandwidth (CH Low)

Antenna 0



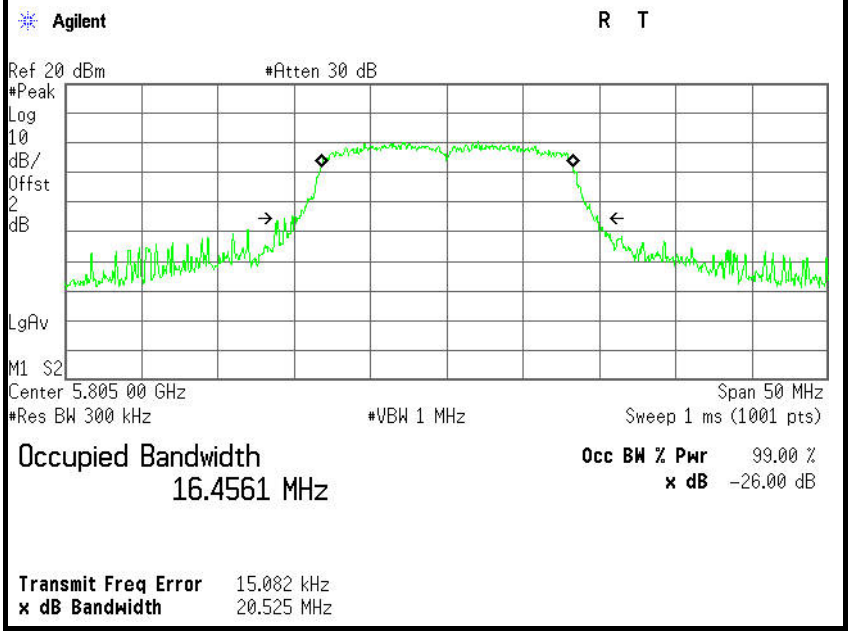
26dB Bandwidth (CH Mid)

Antenna 0



26dB Bandwidth (CH High)

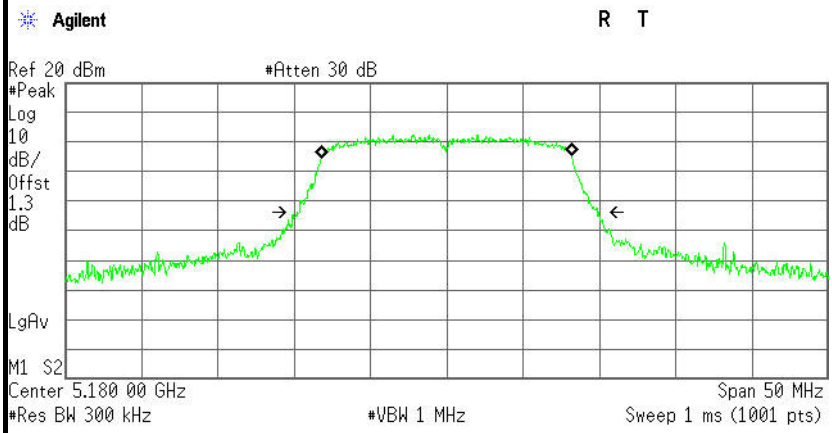
Antenna 0



IEEE 802.11a mode / 5180 ~ 5240MHz

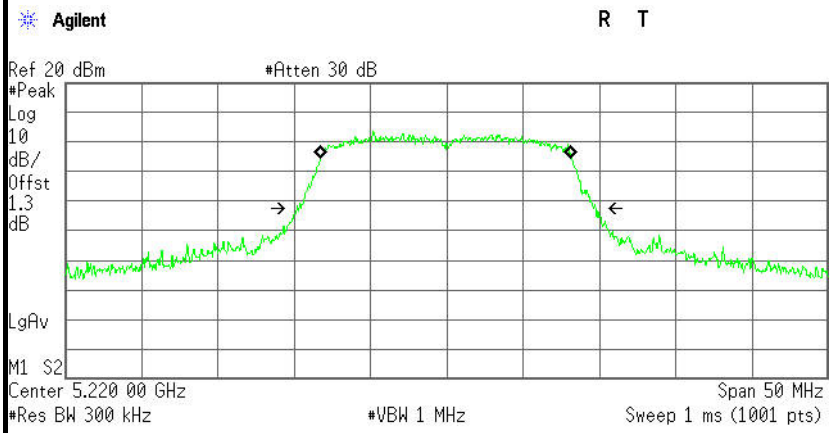
26dB Bandwidth (CH Low)

Antenna 1



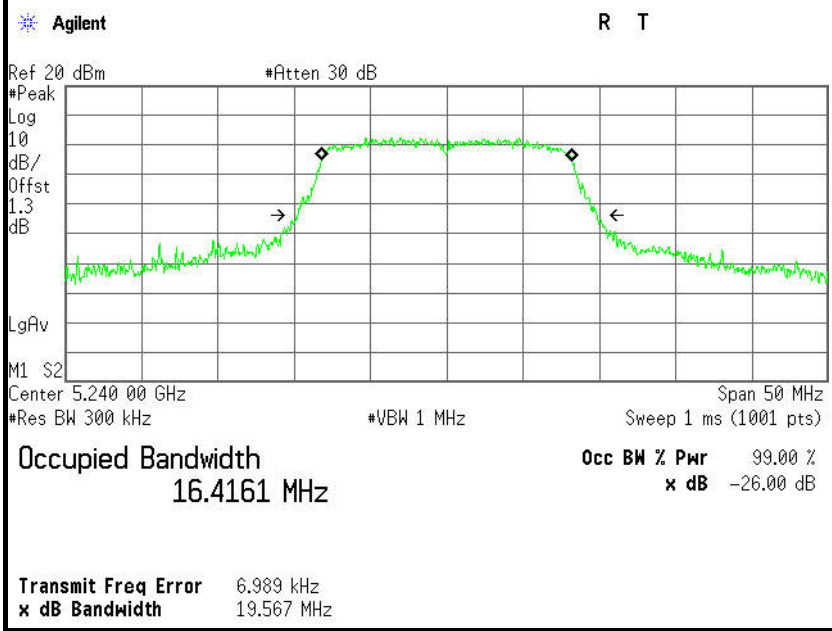
26dB Bandwidth (CH Mid)

Antenna 1



26dB Bandwidth (CH High)

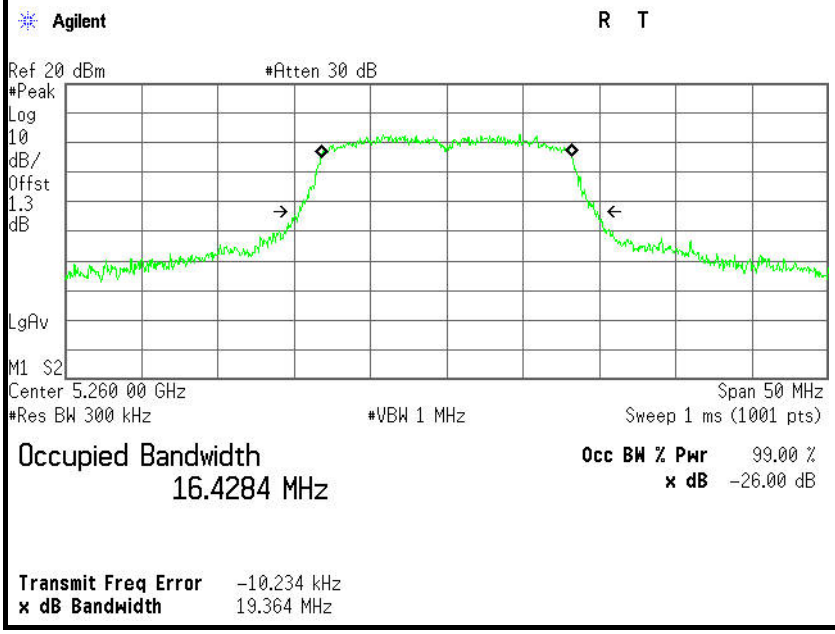
Antenna 1



IEEE 802.11a mode / 5260 ~ 5320MHz

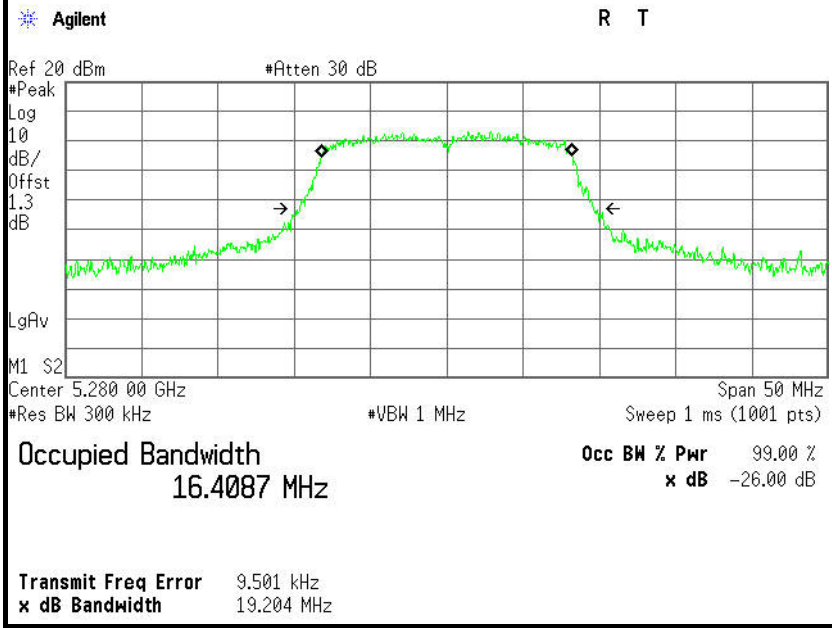
26dB Bandwidth (CH Low)

Antenna 1



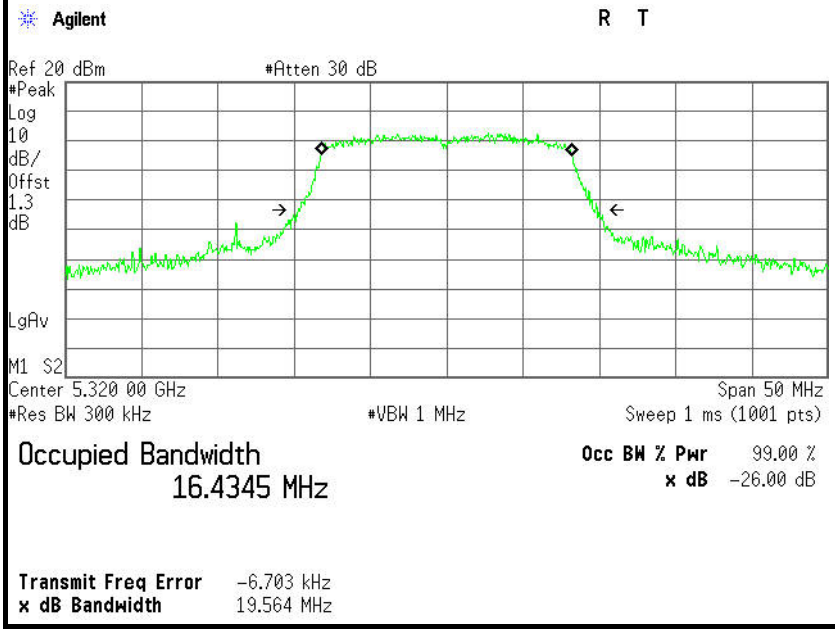
26dB Bandwidth (CH Mid)

Antenna 1



26dB Bandwidth (CH High)

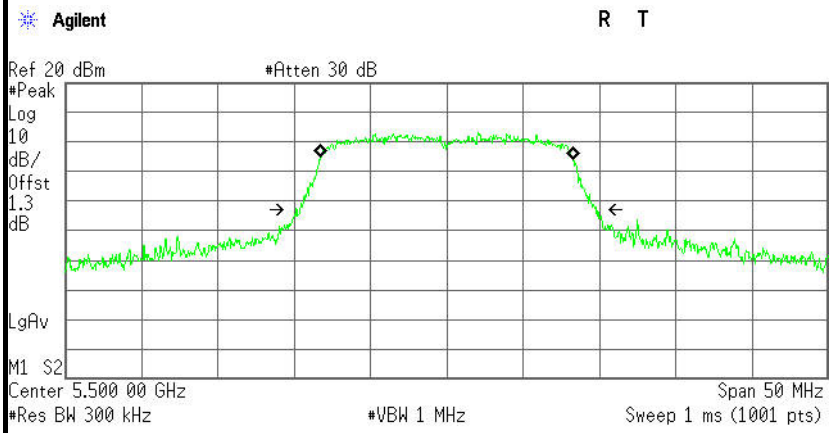
Antenna 1



IEEE 802.11a mode / 5500 ~ 5700MHz

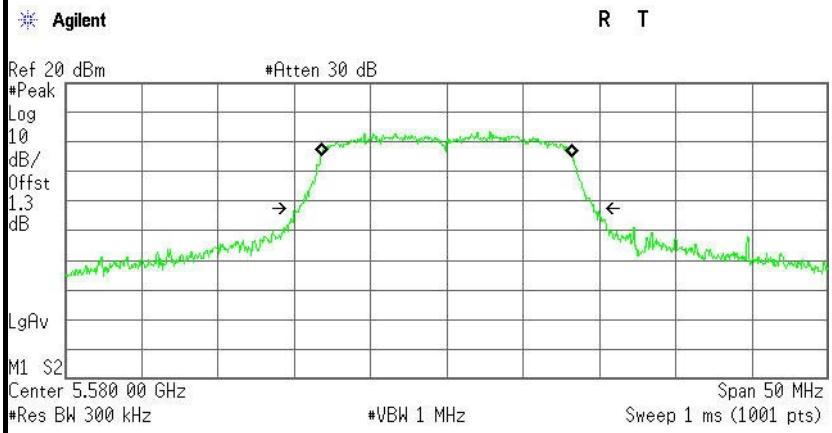
26dB Bandwidth (CH Low)

Antenna 1



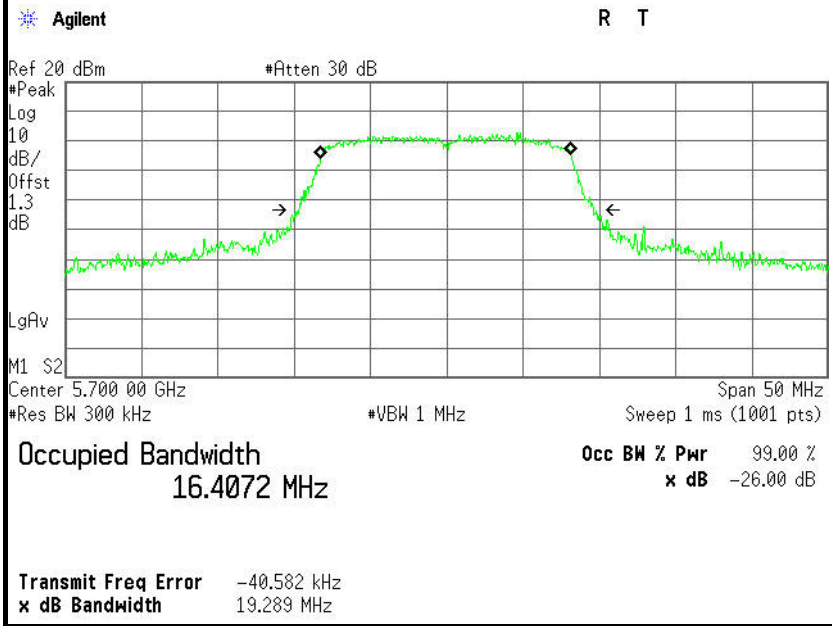
26dB Bandwidth (CH Mid)

Antenna 1



26dB Bandwidth (CH High)

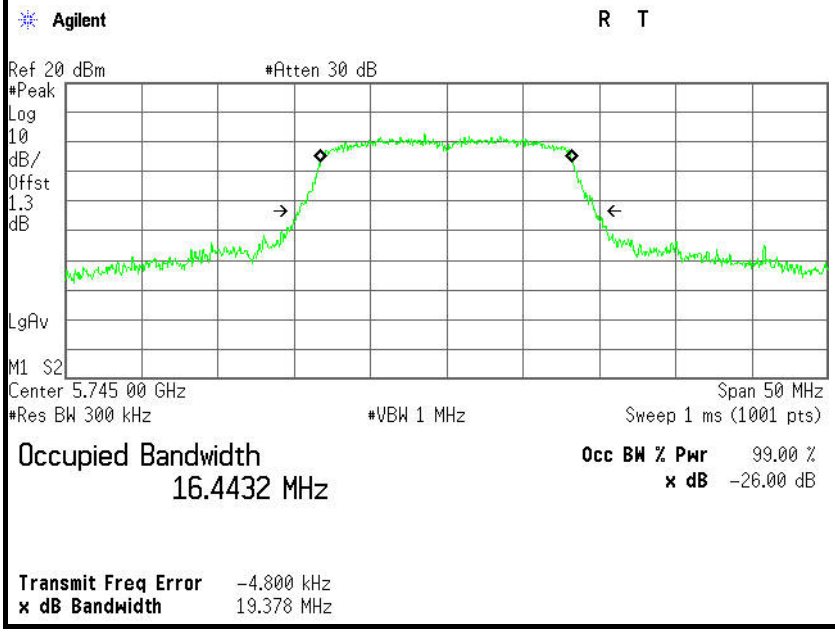
Antenna 1



IEEE 802.11a mode / 5745 ~ 5805MHz

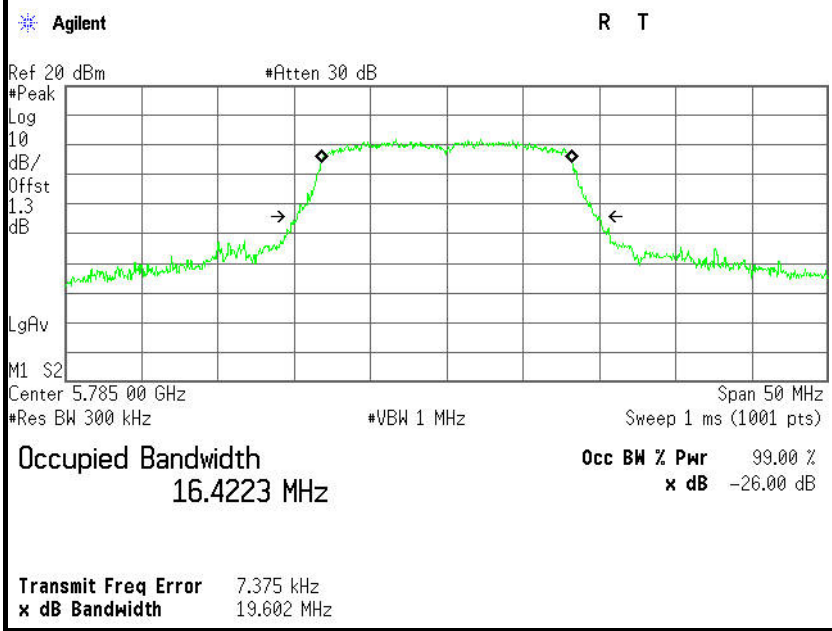
26dB Bandwidth (CH Low)

Antenna 1



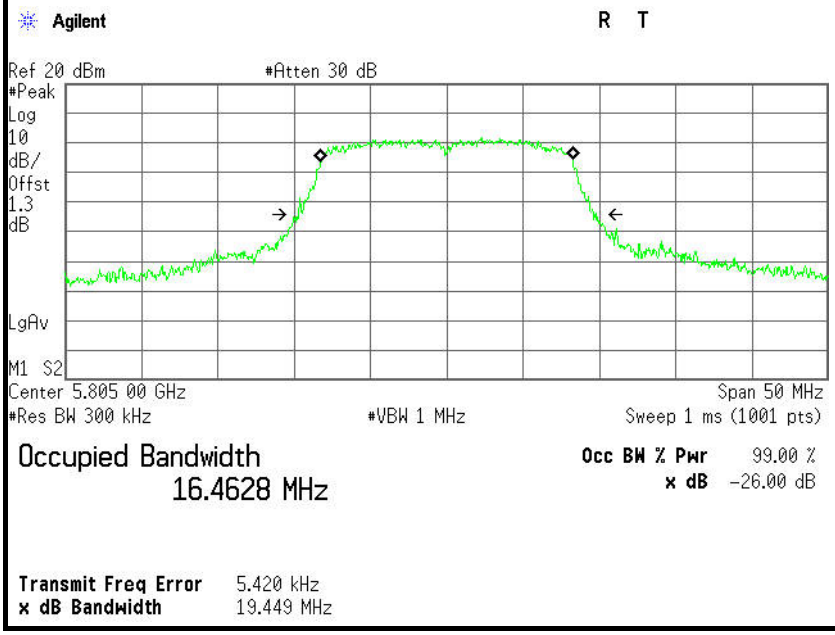
26dB Bandwidth (CH Mid)

Antenna 1



26dB Bandwidth (CH High)

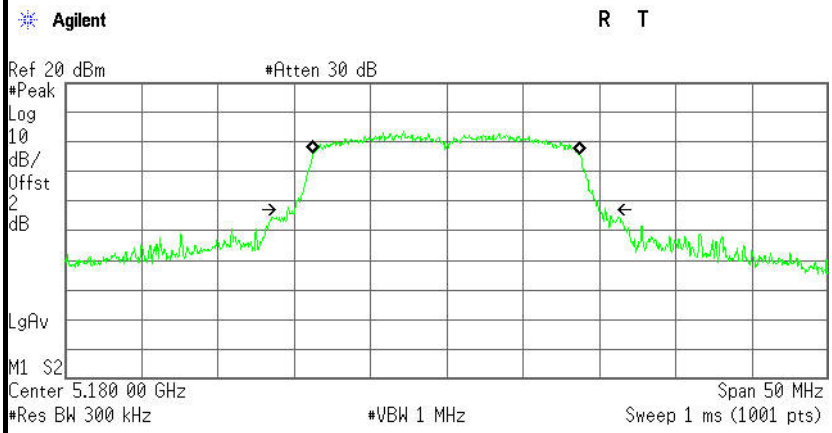
Antenna 1



IEEE 802.11n HT 20 MHz mode / 5180 ~ 5240MHz

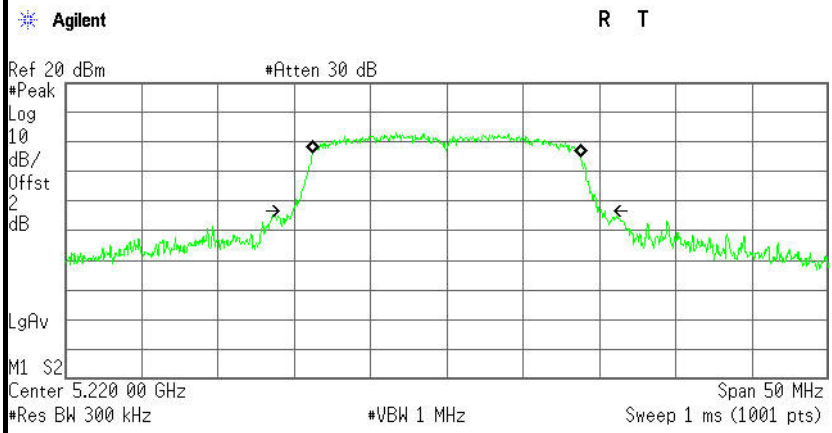
26dB Bandwidth (CH Low)

Antenna 0



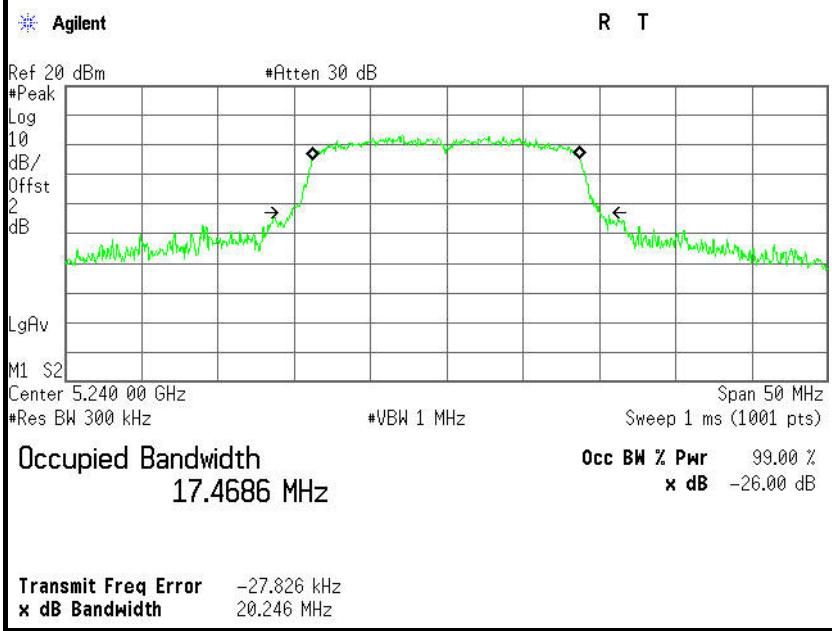
26dB Bandwidth (CH Mid)

Antenna 0



26dB Bandwidth (CH High)

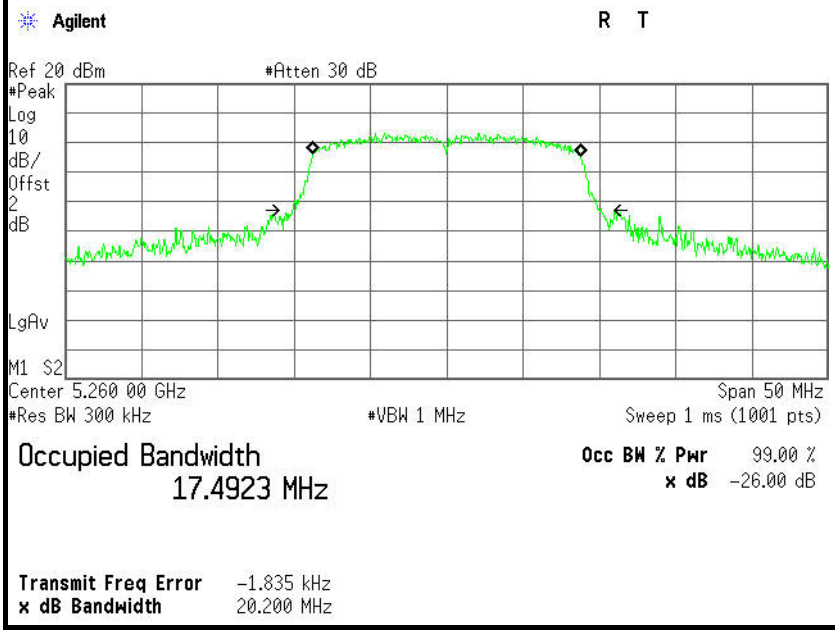
Antenna 0



IEEE 802.11n HT 20 MHz mode / 5260 ~ 5320MHz

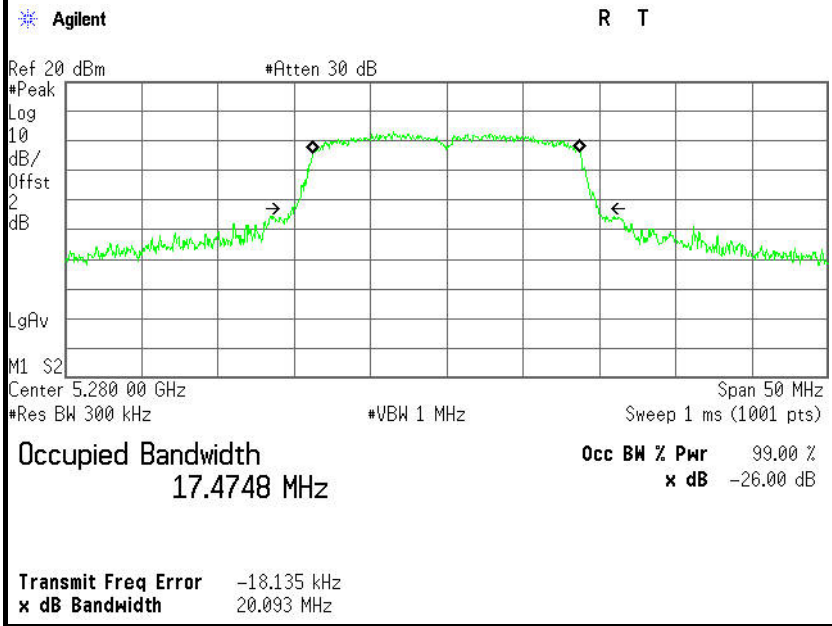
26dB Bandwidth (CH Low)

Antenna 0



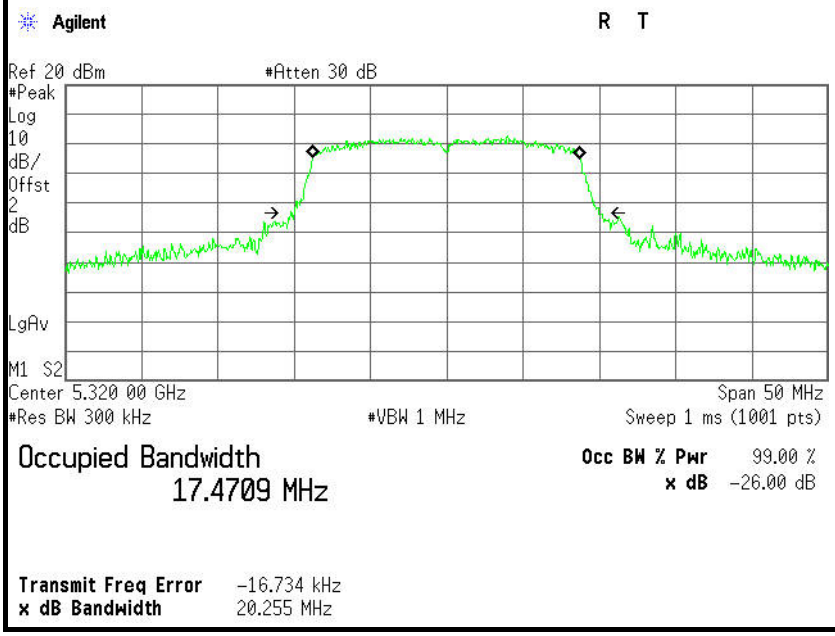
26dB Bandwidth (CH Mid)

Antenna 0



26dB Bandwidth (CH High)

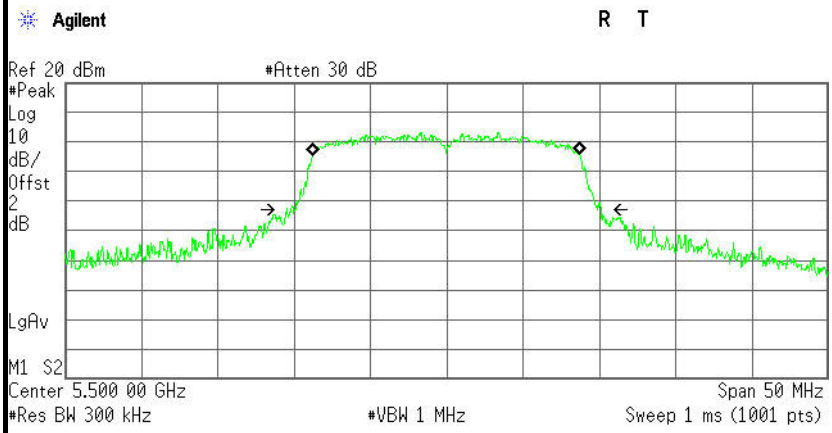
Antenna 0



IEEE 802.11n HT 20 MHz mode / 5500 ~ 5700MHz

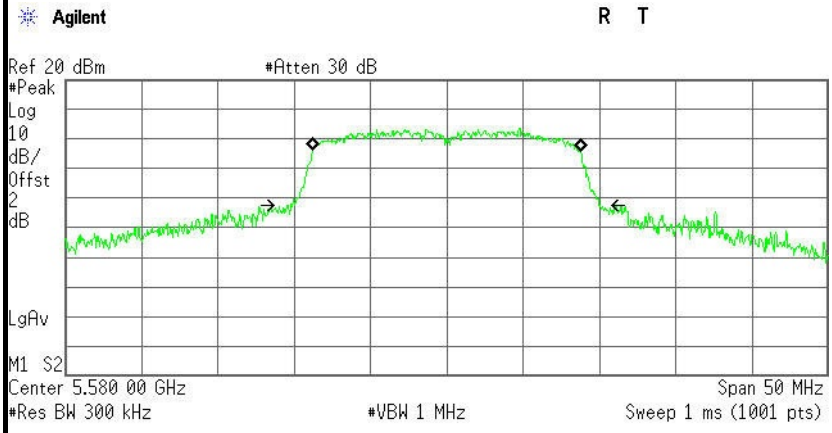
26dB Bandwidth (CH Low)

Antenna 0



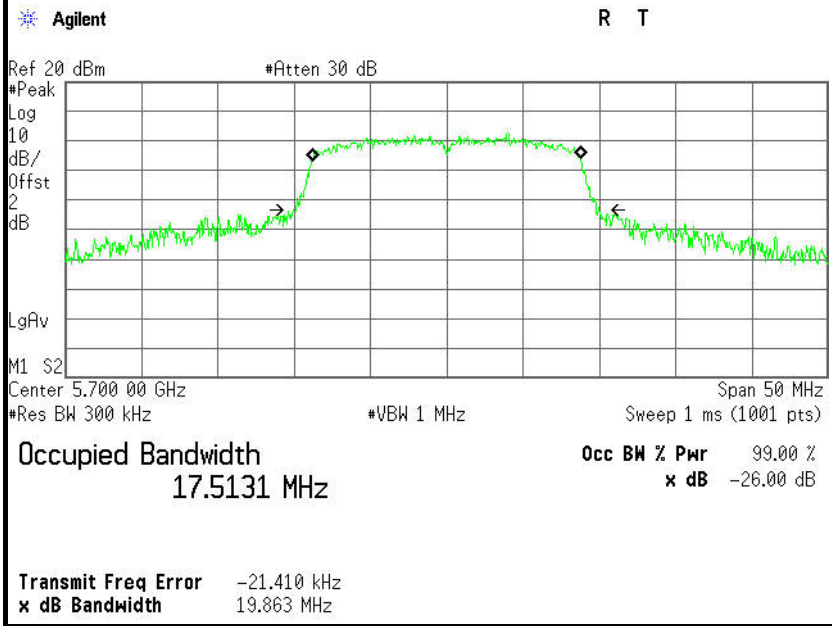
26dB Bandwidth (CH Mid)

Antenna 0



26dB Bandwidth (CH High)

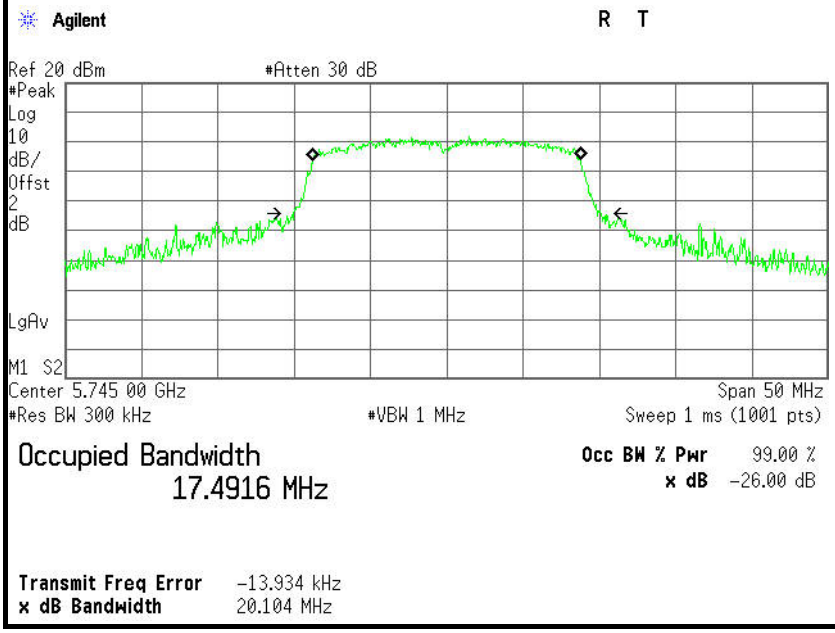
Antenna 0



IEEE 802.11n HT 20 MHz mode / 5745 ~ 5805MHz

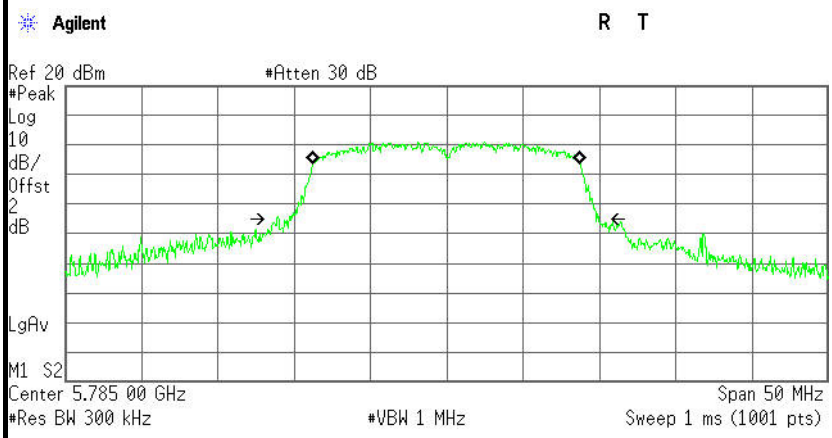
26dB Bandwidth (CH Low)

Antenna 0



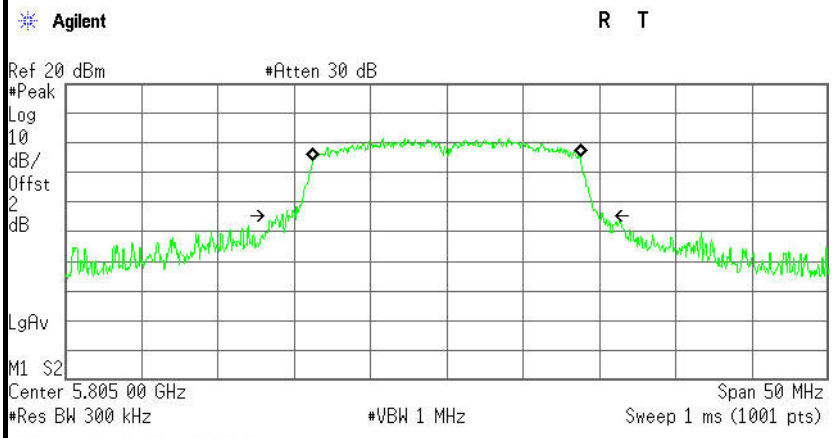
26dB Bandwidth (CH Mid)

Antenna 0



26dB Bandwidth (CH High)

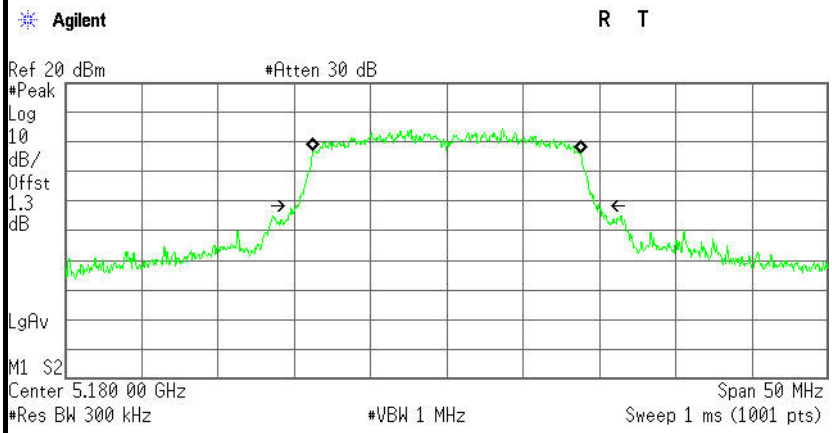
Antenna 0



IEEE 802.11n HT 20 MHz mode / 5180 ~ 5240MHz

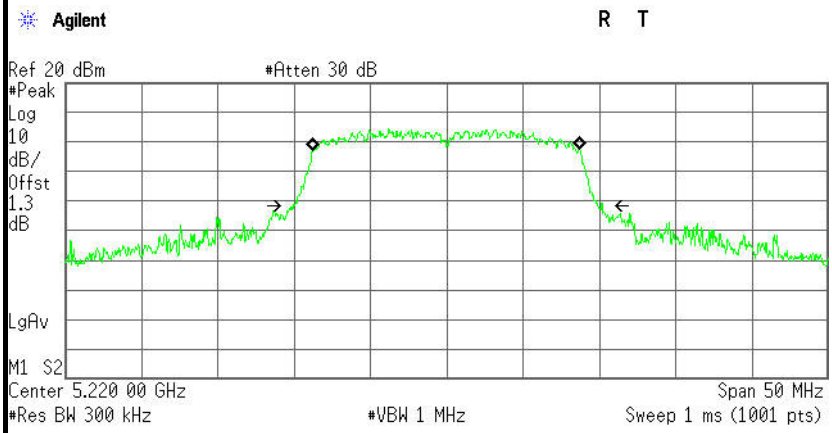
26dB Bandwidth (CH Low)

Antenna 1



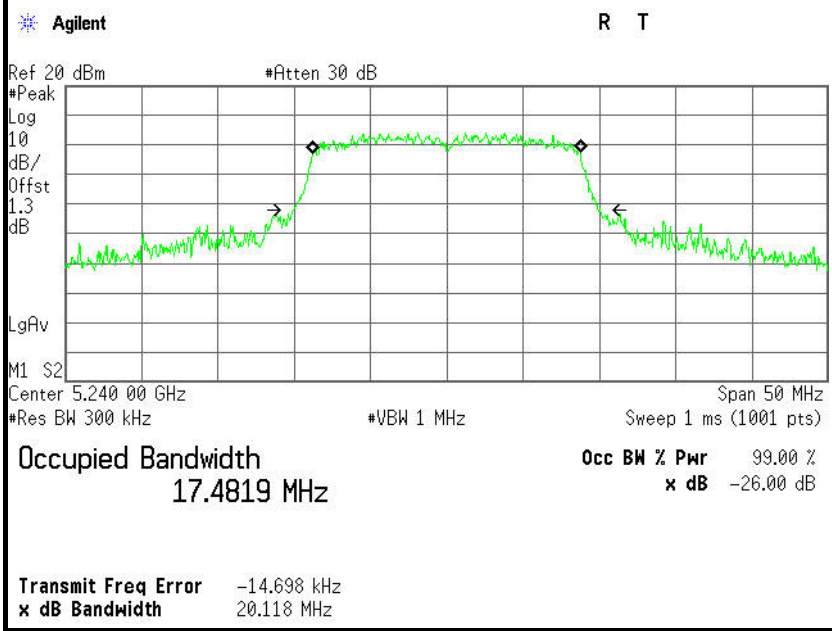
26dB Bandwidth (CH Mid)

Antenna 1



26dB Bandwidth (CH High)

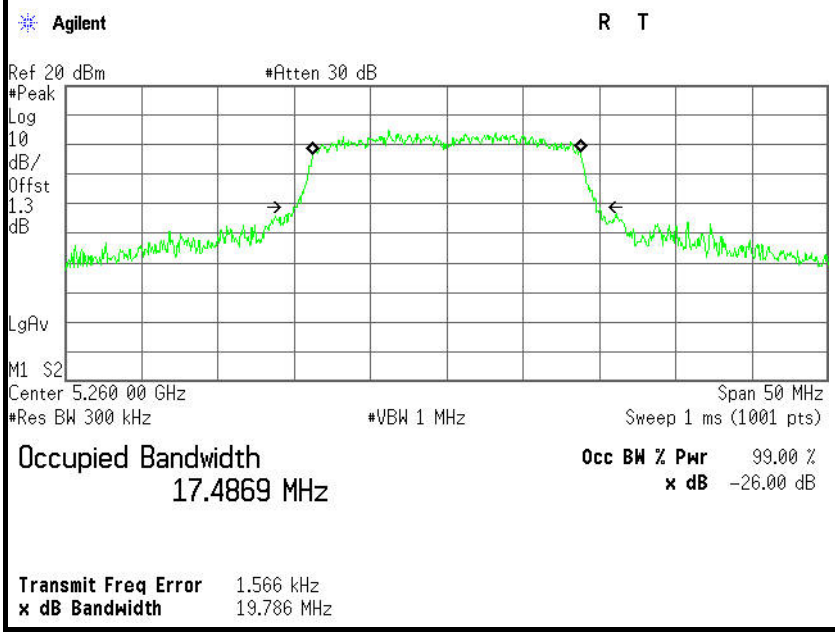
Antenna 1



IEEE 802.11n HT 20 MHz mode / 5260 ~ 5320MHz

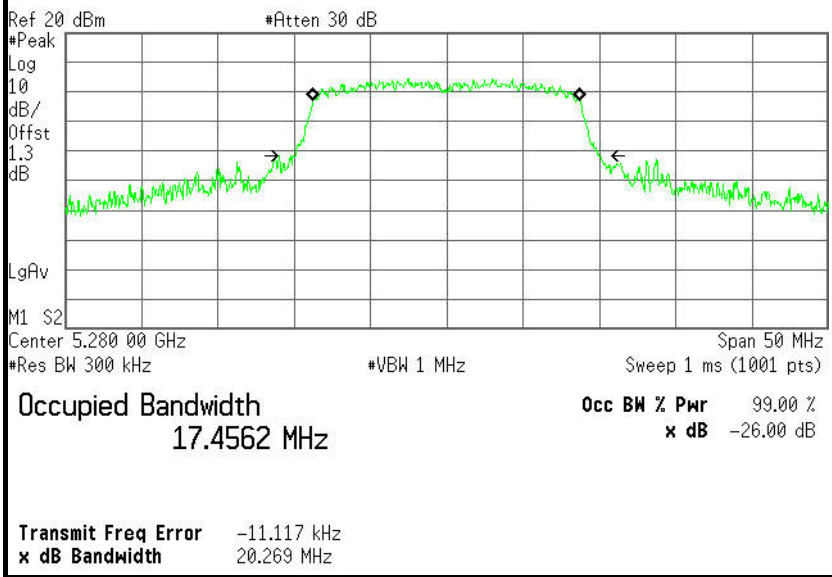
26dB Bandwidth (CH Low)

Antenna 1



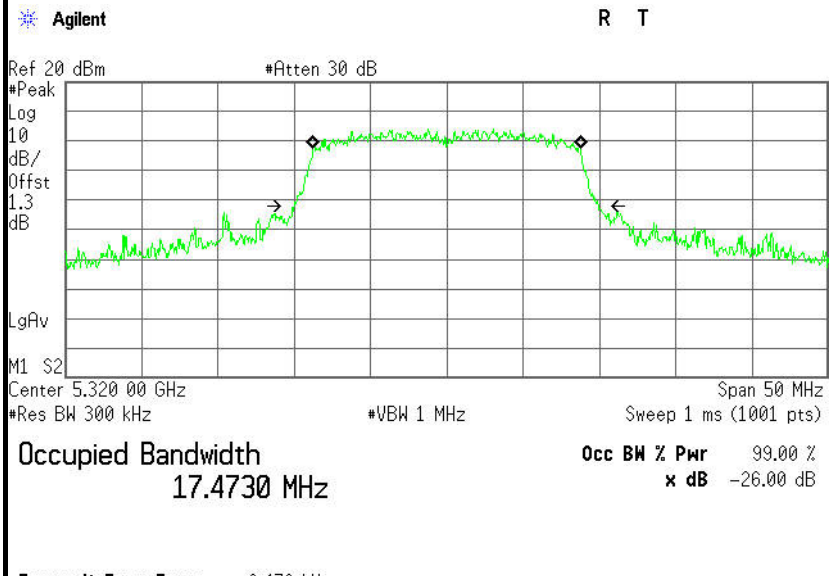
26dB Bandwidth (CH Mid)

Antenna 1



26dB Bandwidth (CH High)

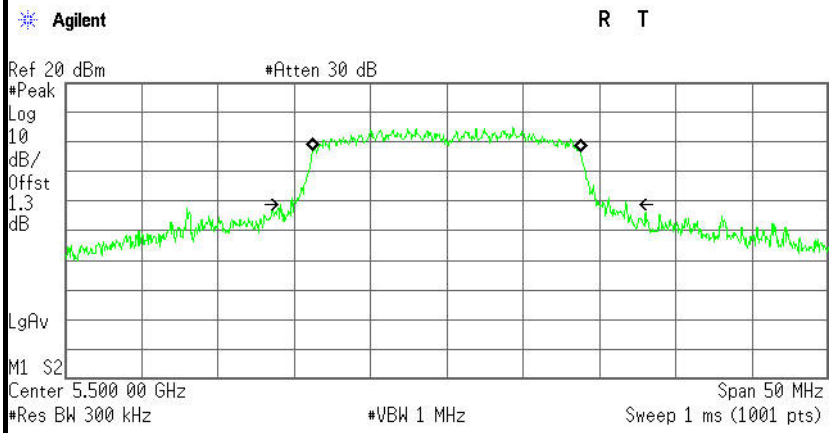
Antenna 1



IEEE 802.11n HT 20 MHz mode / 5500 ~ 5700MHz

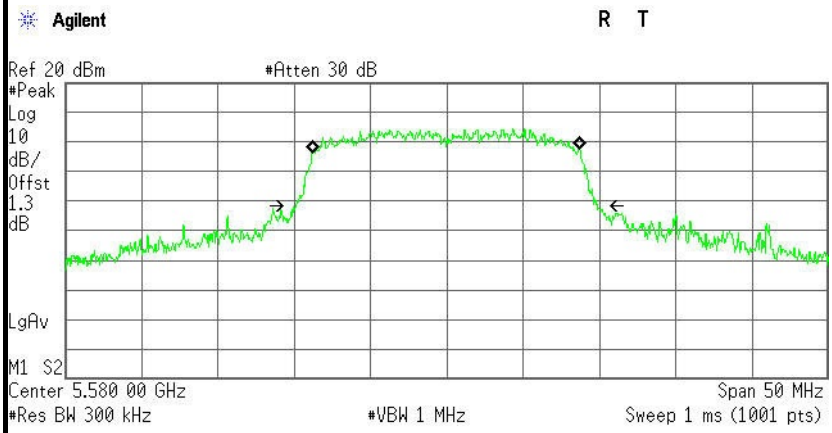
26dB Bandwidth (CH Low)

Antenna 1



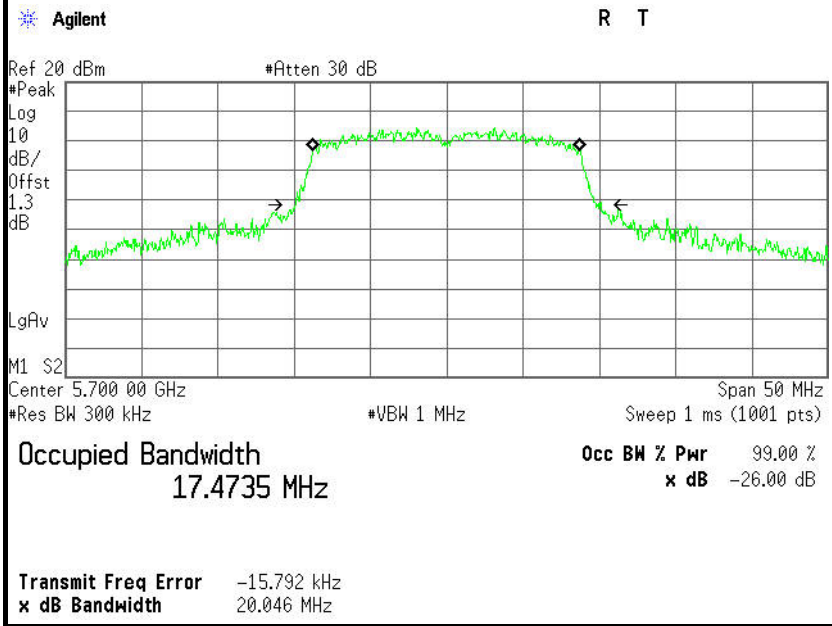
26dB Bandwidth (CH Mid)

Antenna 1



26dB Bandwidth (CH High)

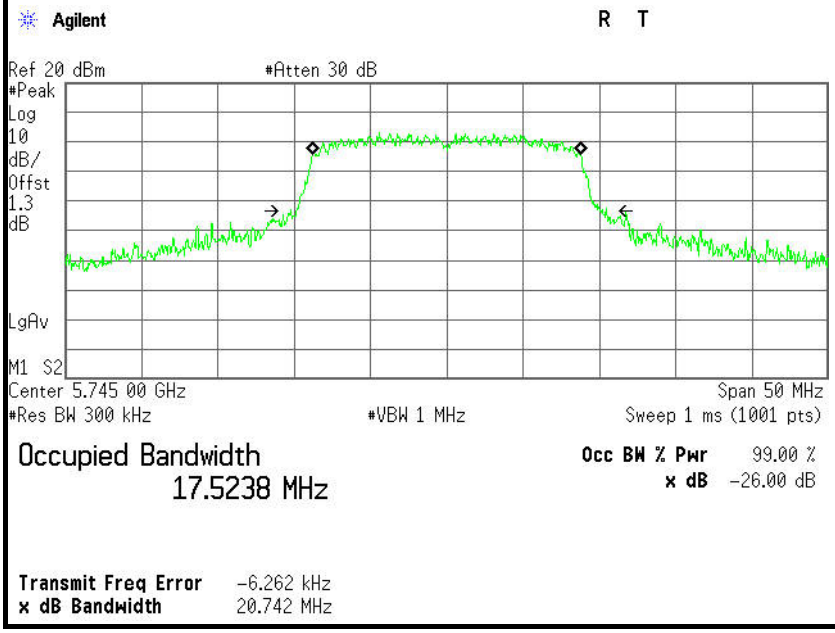
Antenna 1



IEEE 802.11n HT 20 MHz mode / 5745 ~ 5805MHz

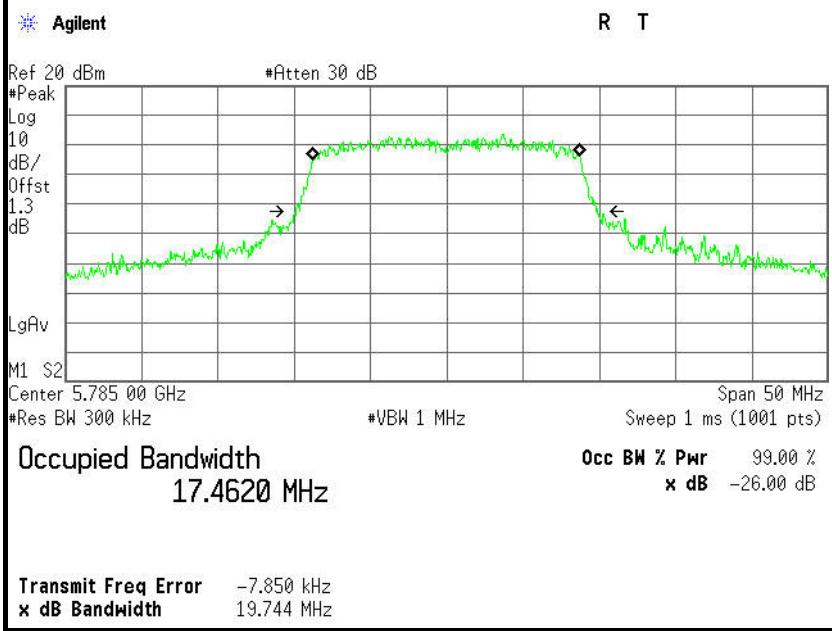
26dB Bandwidth (CH Low)

Antenna 1



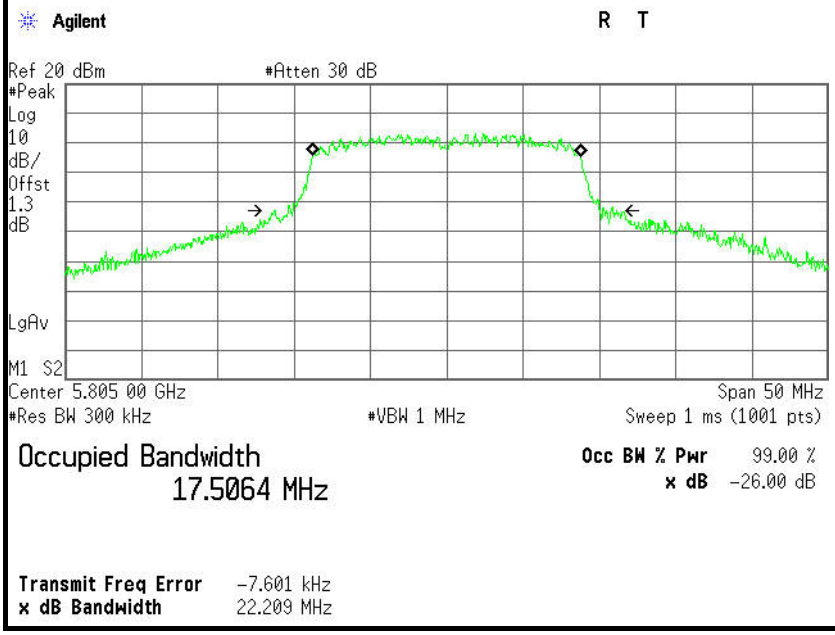
26dB Bandwidth (CH Mid)

Antenna 1



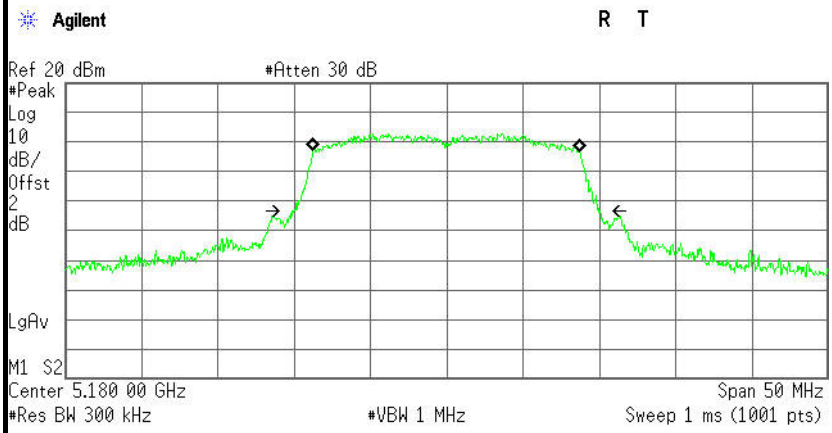
26dB Bandwidth (CH High)

Antenna 1



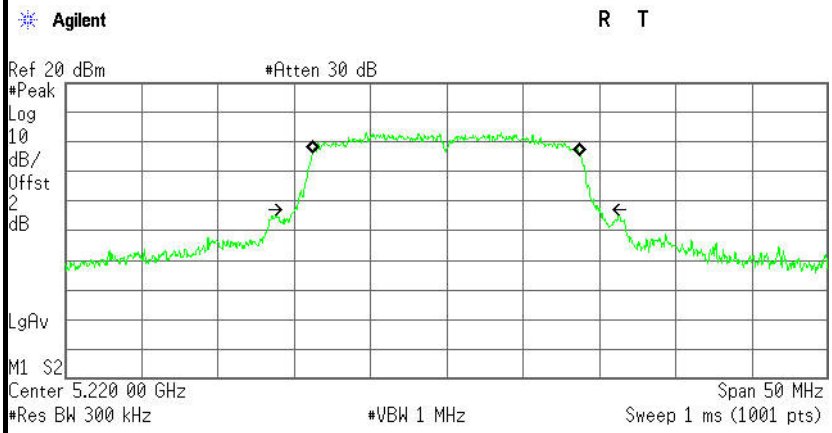
IEEE 802.11n HT 20 MHz SISO mode / 5180 ~ 5240MHz
26dB Bandwidth (CH Low)

Antenna 0



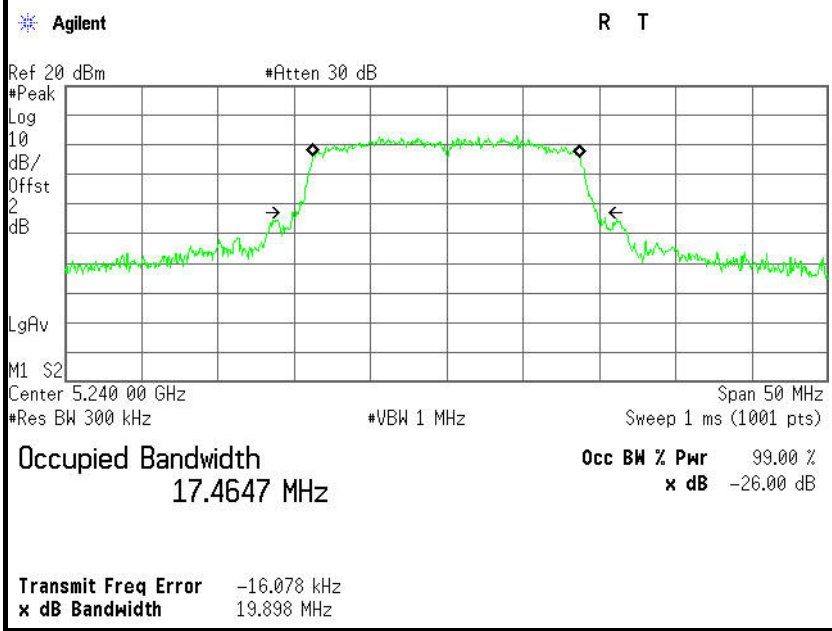
26dB Bandwidth (CH Mid)

Antenna 0



26dB Bandwidth (CH High)

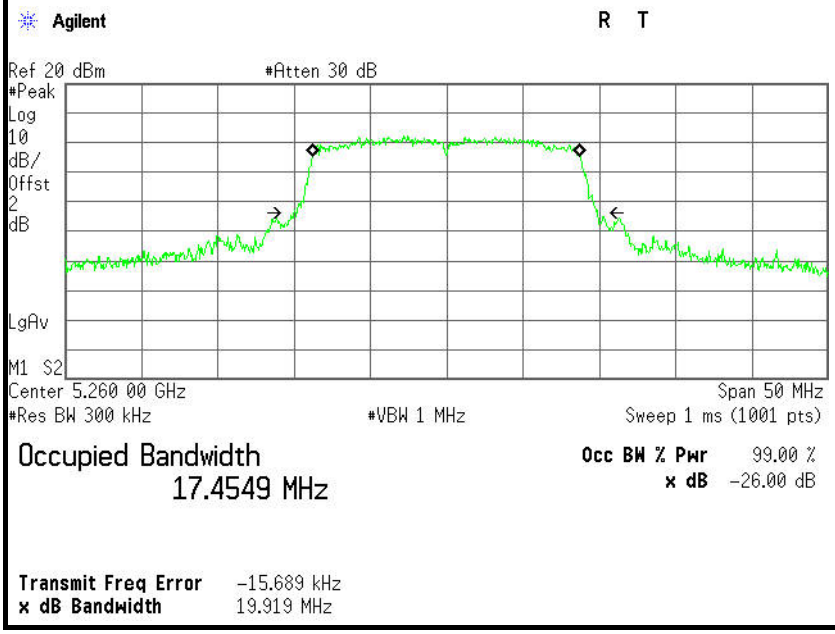
Antenna 0



IEEE 802.11n HT 20 MHz SISO mode / 5260 ~ 5320MHz

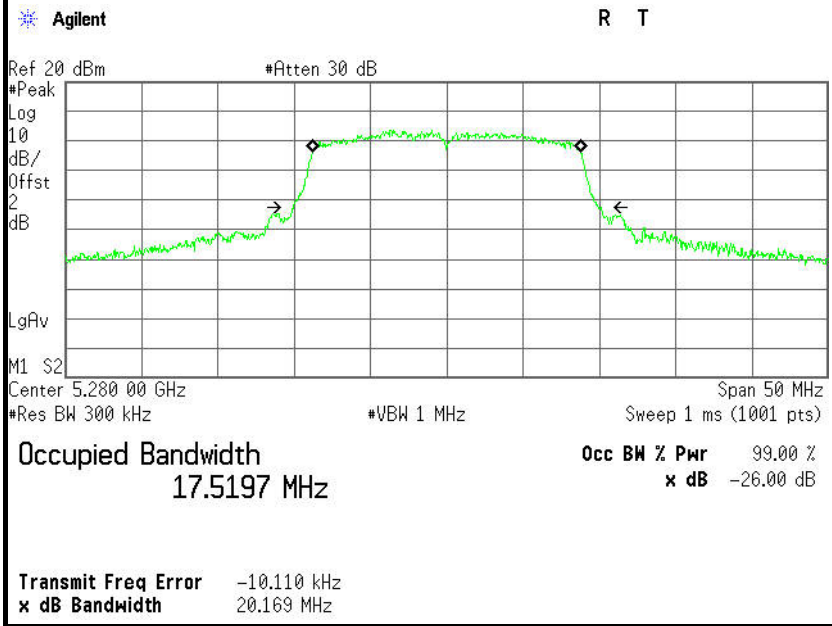
26dB Bandwidth (CH Low)

Antenna 0



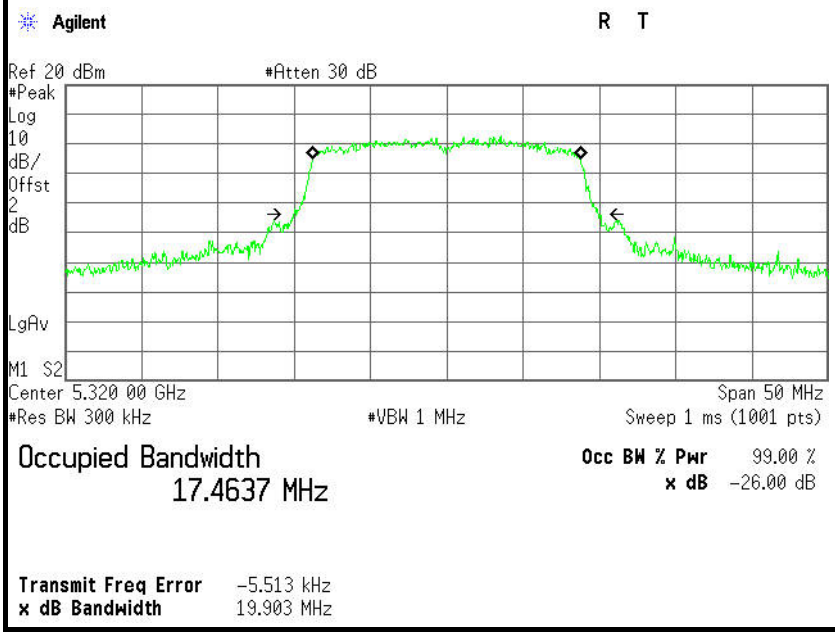
26dB Bandwidth (CH Mid)

Antenna 0



26dB Bandwidth (CH High)

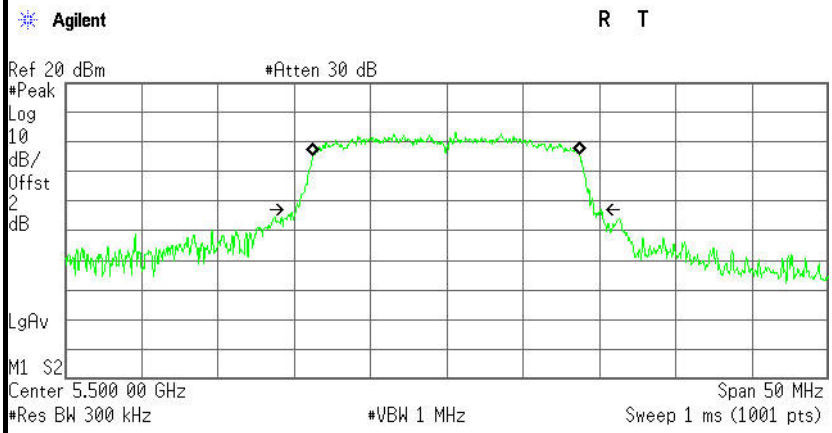
Antenna 0



IEEE 802.11n HT 20 MHz SISO mode / 5500 ~ 5700MHz

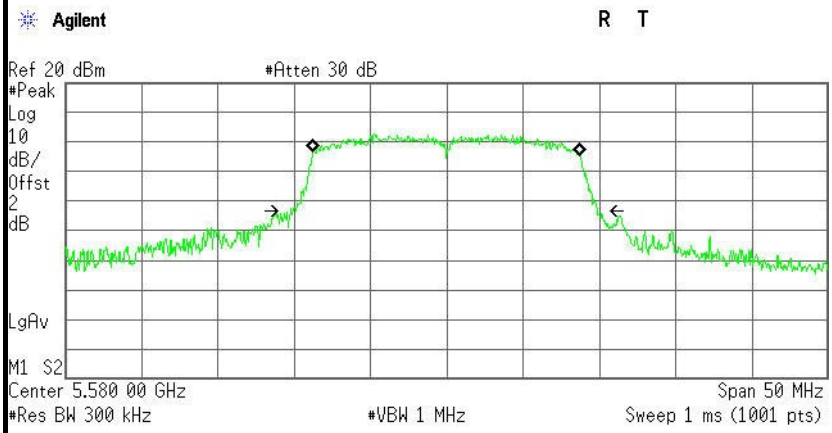
26dB Bandwidth (CH Low)

Antenna 0



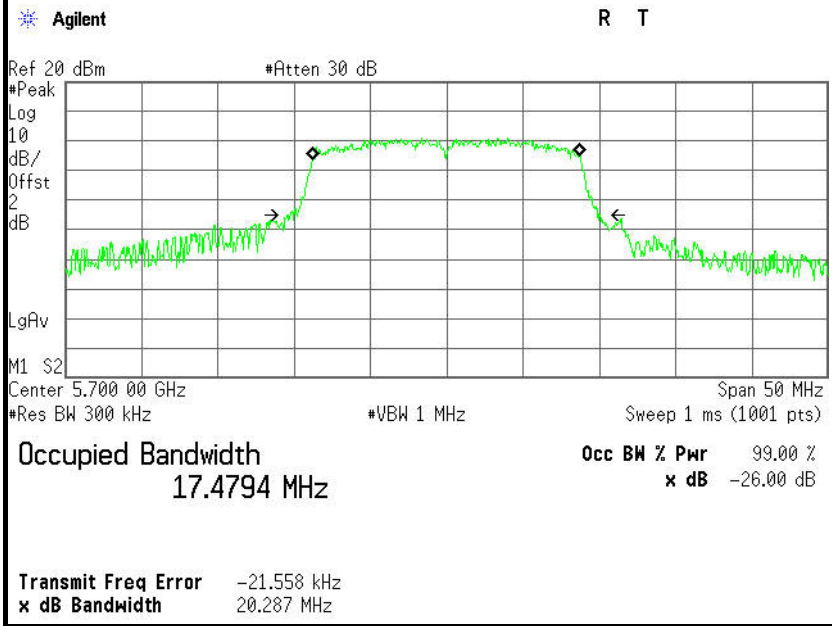
26dB Bandwidth (CH Mid)

Antenna 0



26dB Bandwidth (CH High)

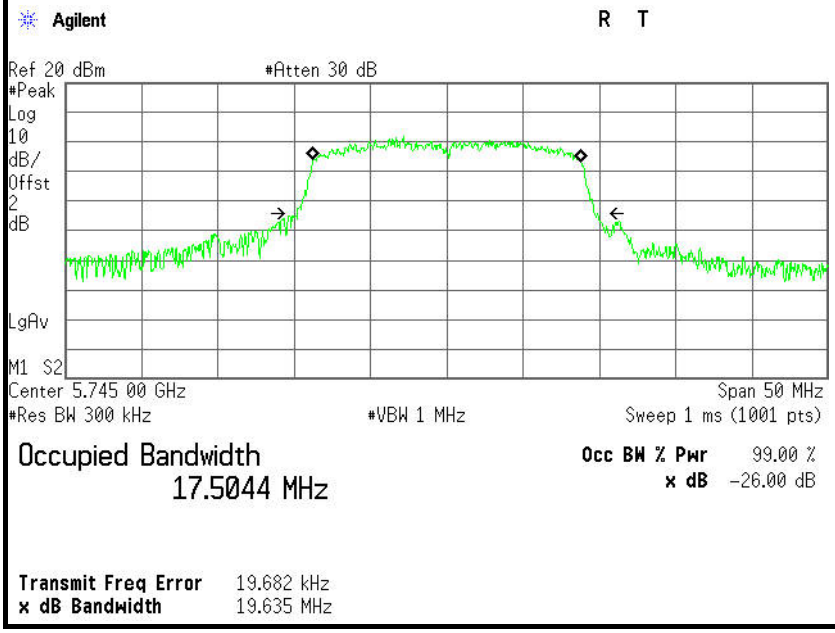
Antenna 0



IEEE 802.11n HT 20 MHz SISO mode / 5745 ~ 5805MHz

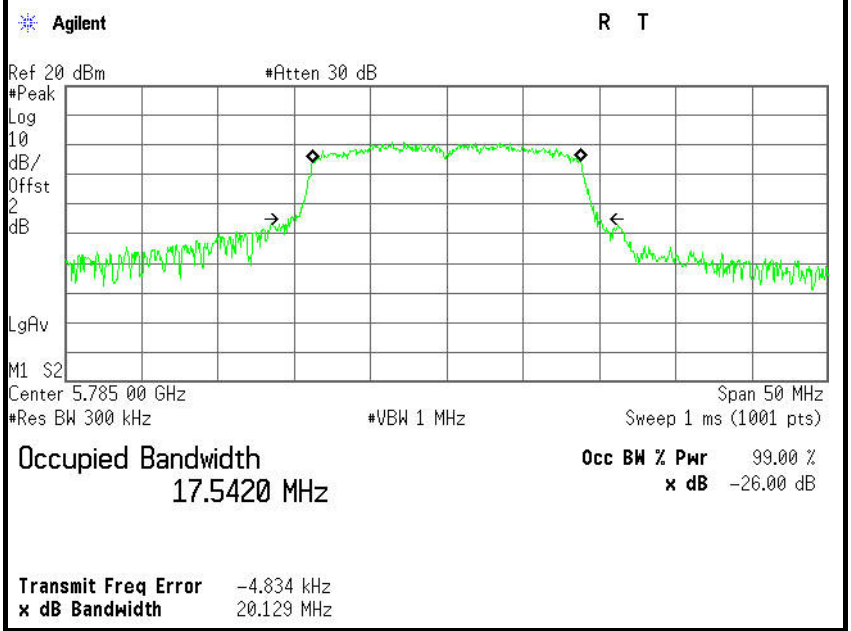
26dB Bandwidth (CH Low)

Antenna 0



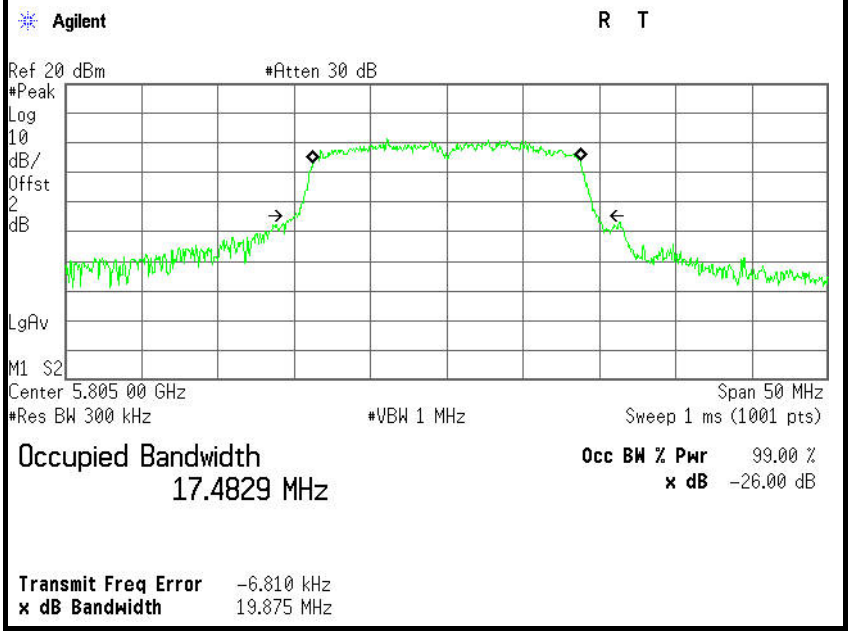
26dB Bandwidth (CH Mid)

Antenna 0



26dB Bandwidth (CH High)

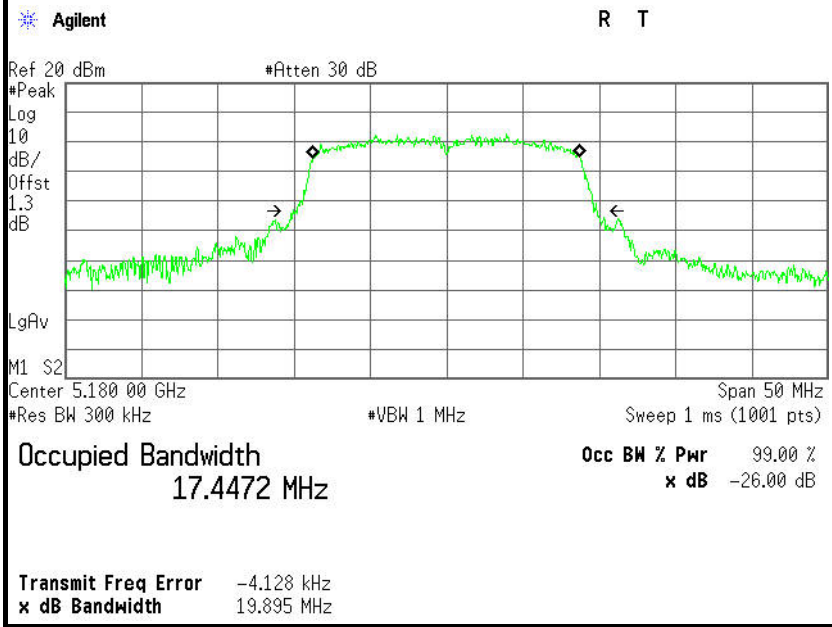
Antenna 0



IEEE 802.11n HT 20 MHz SISO mode / 5180 ~ 5240MHz

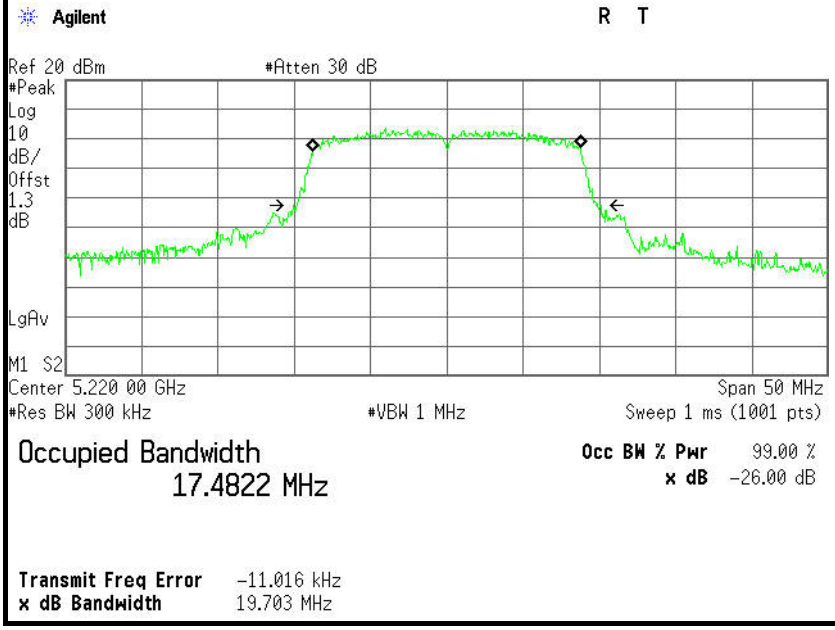
26dB Bandwidth (CH Low)

Antenna 1



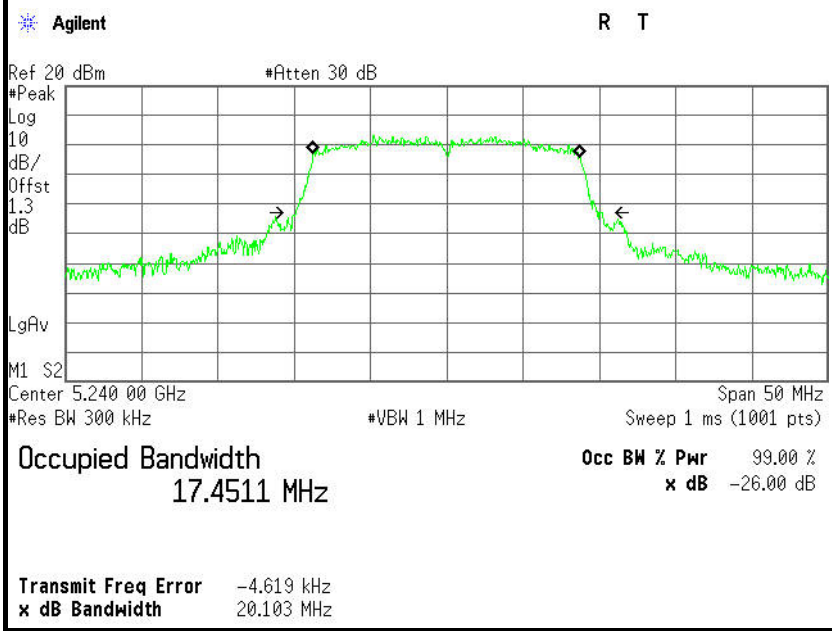
26dB Bandwidth (CH Mid)

Antenna 1



26dB Bandwidth (CH High)

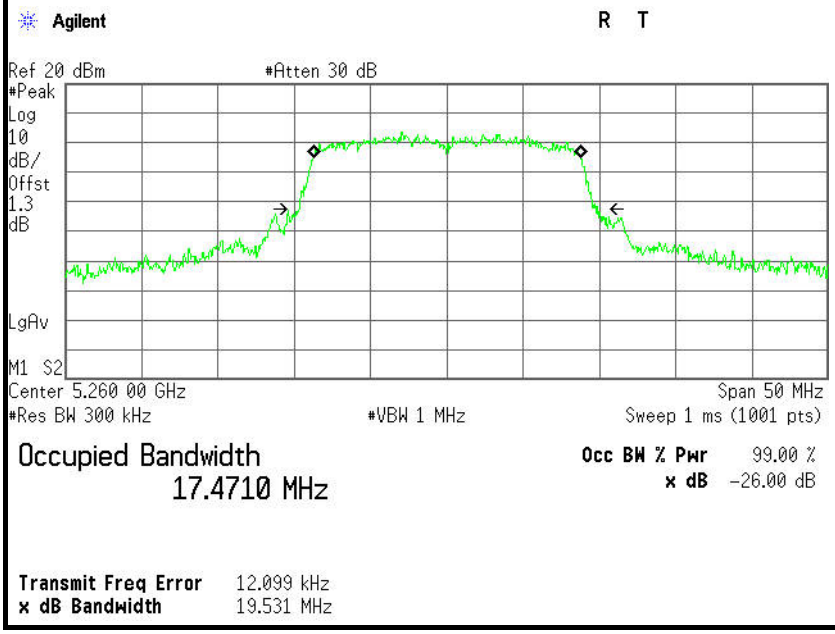
Antenna 1



IEEE 802.11n HT 20 MHz SISO mode / 5260 ~ 5320MHz

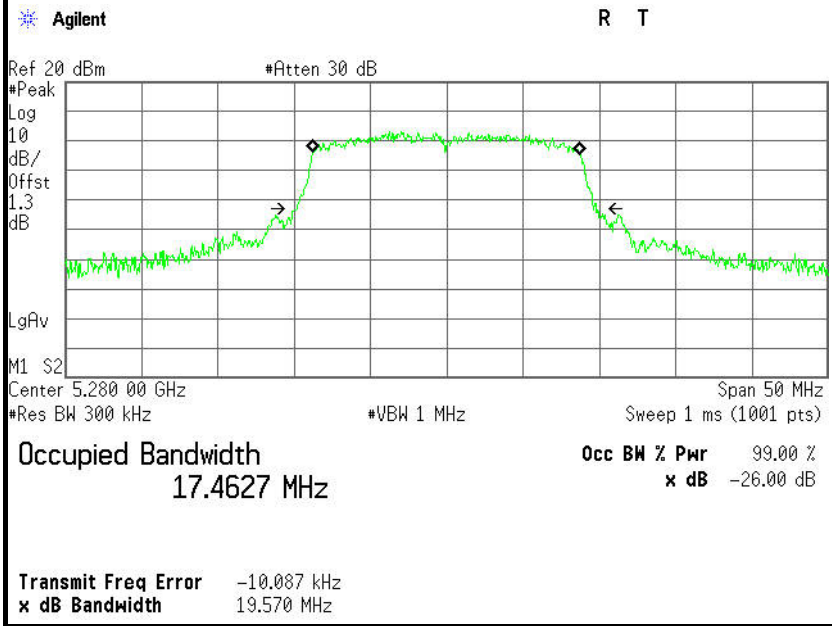
26dB Bandwidth (CH Low)

Antenna 1



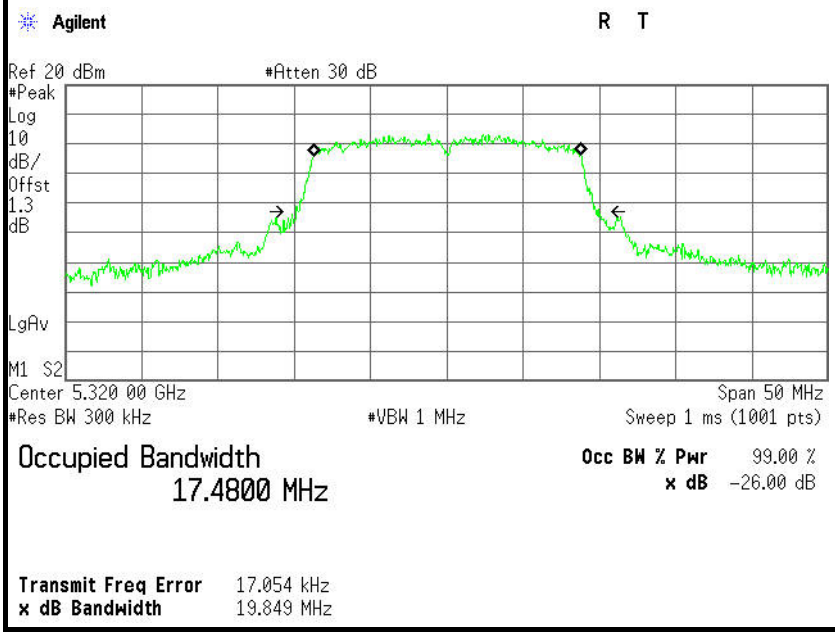
26dB Bandwidth (CH Mid)

Antenna 1



26dB Bandwidth (CH High)

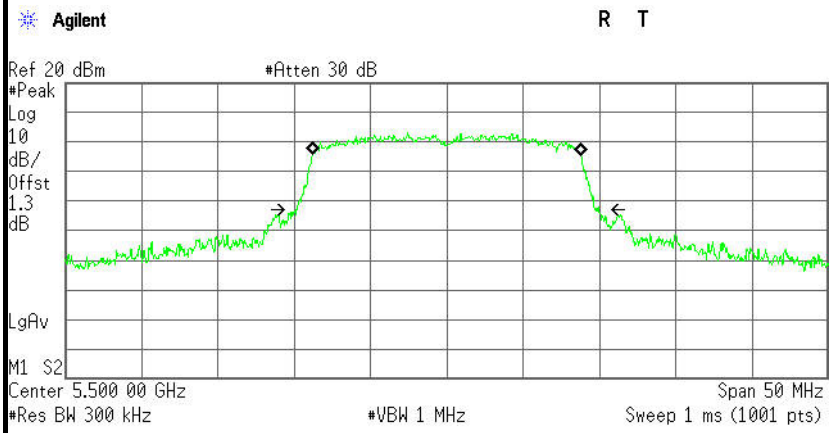
Antenna 1



IEEE 802.11n HT 20 MHz SISO mode / 5500 ~ 5700MHz

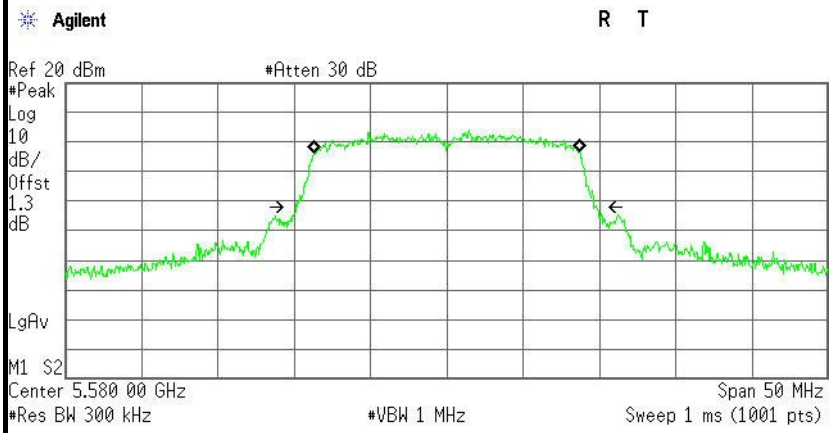
26dB Bandwidth (CH Low)

Antenna 1



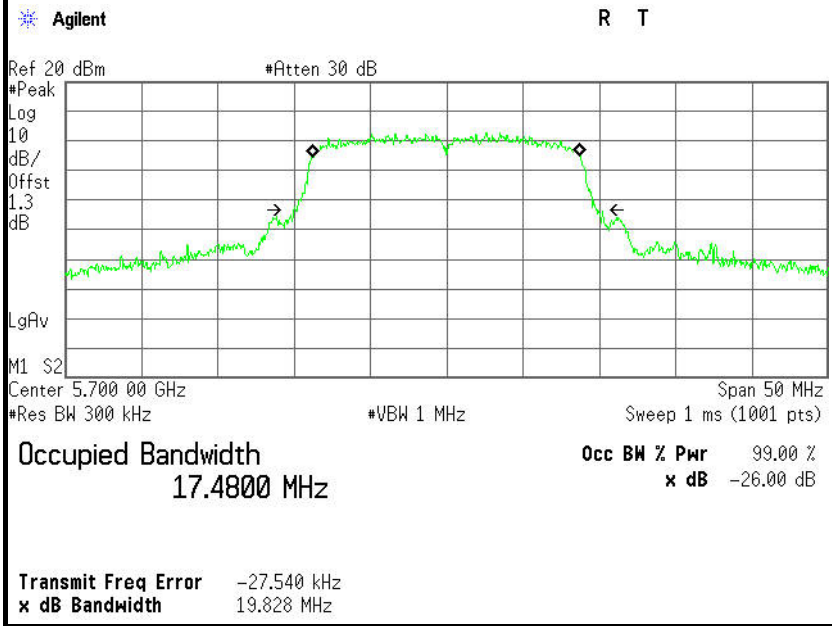
26dB Bandwidth (CH Mid)

Antenna 1



26dB Bandwidth (CH High)

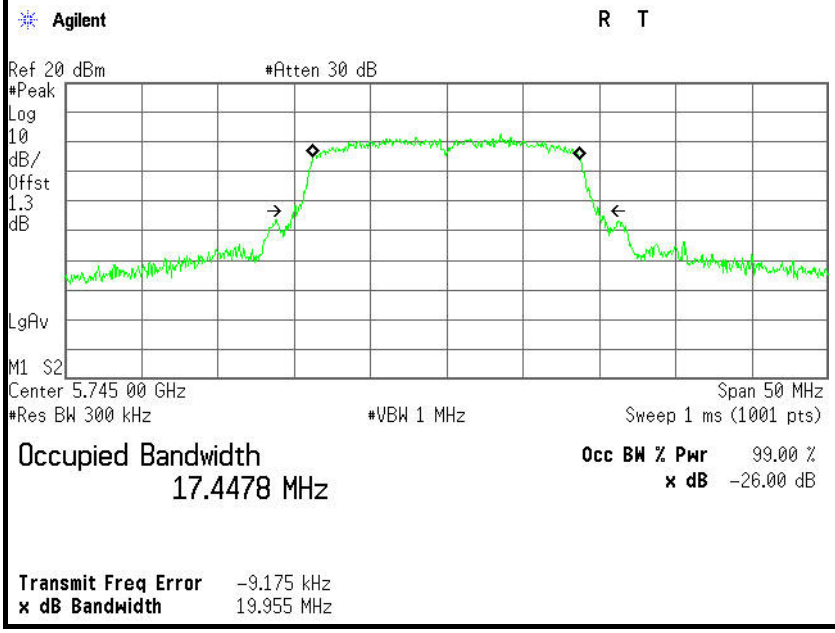
Antenna 1



IEEE 802.11n HT 20 MHz SISO mode / 5745 ~ 5805MHz

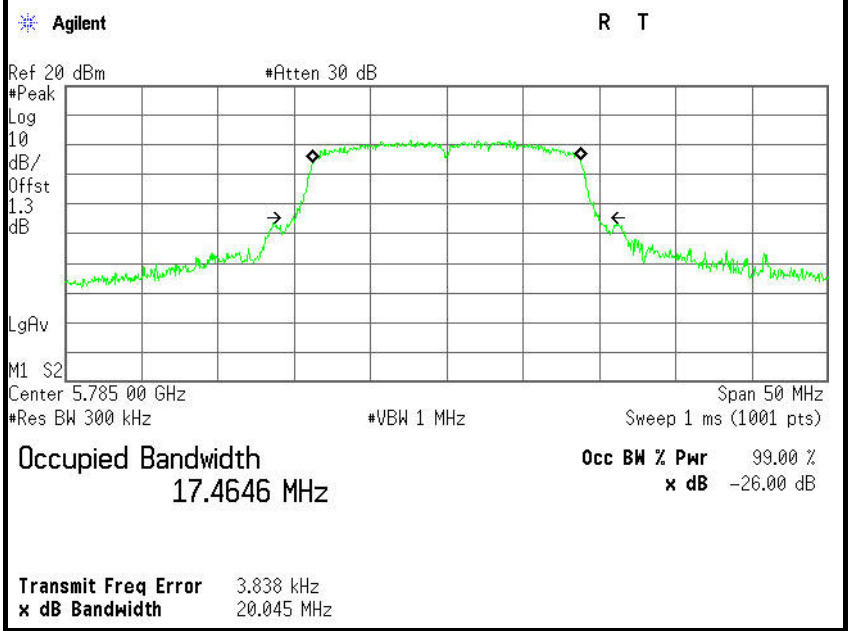
26dB Bandwidth (CH Low)

Antenna 1



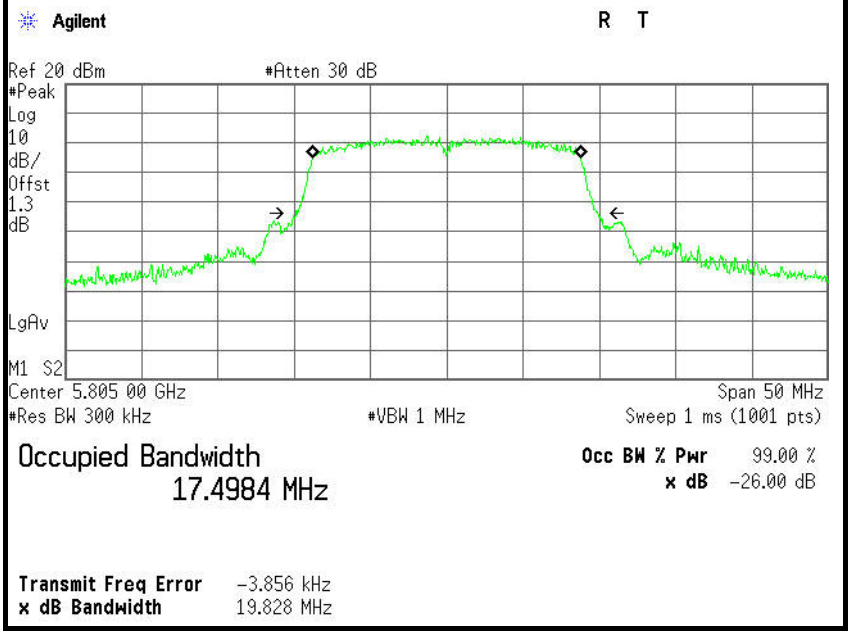
26dB Bandwidth (CH Mid)

Antenna 1



26dB Bandwidth (CH High)

Antenna 1



7.3 MAXIMUM CONDUCTED OUTPUT POWER

7.3.1 LIMIT

According to §15.407(a),

(1) For the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 50 mW or 4 dBm + 10log B, where B is the 26 dB emission bandwidth in MHz.

(2) For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10log B, where B is the 26 dB emission bandwidth in MHz.

(3) For the band 5.725–5.825 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 1 W or 17 dBm + 10 log B, where B is the 26-dB emission bandwidth in MHz.

If transmitting antennas of directional gain greater than 6dBi are used, both the peak transmit power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

According to RSS-210 §A9.2,

(1) For the band 5150-5250 MHz, the maximum equivalent isotropically radiated power (e.i.r.p.) shall not exceed 200 mW or 10 + 10 Log10 B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz. The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band.

(2) For the band 5250-5350 MHz and 5470-5725 MHz, the maximum conducted output power shall not exceed 250 mW or 11 + 10 Log10 B, dBm, whichever power is less. The power spectral density shall not exceed 11 dBm in any 1.0 MHz band. The maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 Log10 B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz.

(3) For the band 5725-5825 MHz, The maximum conducted output power shall not exceed 1.0 W or 17 + 10 log10 B, dBm, whichever power is less. The power spectral density shall not exceed 17 dBm in any 1.0 MHz band. The maximum e.i.r.p. shall not exceed 4.0 W or 23 + 10 log10 B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz.

In addition, devices with maximum e.i.r.p. greater than 500 mW shall implement TPC in order to have the capability to operate at least 6 dB below the maximum permitted e.i.r.p. of 1 W.
The peak power shall not exceed the limit as follow:

Specified Limit of the Peak Power

Test mode: IEEE 802.11a mode / 5180 ~ 5240MHz

Channel	Frequency (MHz)	26 dB Bandwidth (B) (MHz)		10*Log(B) (dB)		4 + 10*Log(B) (dBm)		Maximum Conducted Output Power Limit (dBm)	
		Antenna 0	Antenna 1	Antenna 0	Antenna 1	Antenna 0	Antenna 1	Antenna 0	Antenna 1
Low	5180	19.761	19.573	12.96	12.92	16.96	16.92	16.96	16.92
Mid	5220	19.709	19.555	12.95	12.91	16.95	16.91	16.95	16.91
High	5240	19.923	19.567	12.99	12.92	16.99	16.92	16.99	16.92

Test mode: IEEE 802.11a mode / 5260 ~ 5320MHz

Channel	Frequency (MHz)	26 dB Bandwidth (B) (MHz)		10*Log(B) (dB)		11 + 10*Log(B) (dBm)		Maximum Conducted Output Power Limit (dBm)	
		Antenna 0	Antenna 1	Antenna 0	Antenna 1	Antenna 0	Antenna 1	Antenna 0	Antenna 1
Low	5260	19.711	19.364	12.95	12.87	23.95	23.87	23.95	23.87
Mid	5280	19.407	19.204	12.88	12.83	23.88	23.83	23.88	23.83
High	5320	19.966	19.564	13.00	12.91	24.00	23.91	24.00	23.91

Test mode: IEEE 802.11a mode / 5500 ~ 5700MHz

Channel	Frequency (MHz)	26 dB Bandwidth (B) (MHz)		10*Log(B) (dB)		11 + 10*Log(B) (dBm)		Maximum Conducted Output Power Limit (dBm)	
		Antenna 0	Antenna 1	Antenna 0	Antenna 1	Antenna 0	Antenna 1	Antenna 0	Antenna 1
Low	5500	19.730	19.632	12.95	12.93	23.95	23.93	23.95	23.93
Mid	5580	19.217	19.308	12.84	12.86	23.84	23.86	23.84	23.86
High	5700	20.180	19.289	13.05	12.85	24.05	23.85	24.00	23.85

Test mode: IEEE 802.11a mode / 5745 ~ 5805MHz

Channel	Frequency (MHz)	26 dB Bandwidth (B) (MHz)		10*Log(B) (dB)		17 + 10*Log(B) (dBm)		Maximum Conducted Output Power Limit (dBm)	
		Antenna 0	Antenna 1	Antenna 0	Antenna 1	Antenna 0	Antenna 1	Antenna 0	Antenna 1
Low	5745	19.524	19.378	12.91	12.87	29.91	29.87	29.91	29.87
Mid	5785	19.927	19.602	12.99	12.92	29.99	29.92	29.99	29.92
High	5805	20.525	19.449	13.12	12.89	30.12	29.89	30.00	29.89

Test mode: IEEE 802.11n HT 20 MHz mode / 5180 ~ 5240MHz

Channel	Frequency (MHz)	26 dB Bandwidth (B) (MHz)		10*Log(B) (dB)		4 + 10*Log(B) (dBm)		Maximum Conducted Output Power Limit (dBm)	
		Antenna 0	Antenna 1	Antenna 0	Antenna 1	Antenna 0	Antenna 1	Antenna 0	Antenna 1
Low	5180	20.826	19.699	13.19	12.94	17.19	16.94	17.00	16.94
Mid	5220	20.205	20.277	13.05	13.07	17.05	17.07	17.00	17.00
High	5240	20.246	20.118	13.06	13.04	17.06	17.04	17.00	17.00

Test mode: IEEE 802.11n HT 20 MHz mode / 5260 ~ 5320MHz

Channel	Frequency (MHz)	26 dB Bandwidth (B) (MHz)		10*Log(B) (dB)		11 + 10*Log(B) (dBm)		Maximum Conducted Output Power Limit (dBm)	
		Antenna 0	Antenna 1	Antenna 0	Antenna 1	Antenna 0	Antenna 1	Antenna 0	Antenna 1
Low	5260	20.200	19.786	13.05	12.96	24.05	23.96	24.00	23.96
Mid	5280	20.093	20.269	13.03	13.07	24.03	24.07	24.00	24.00
High	5320	20.255	19.935	13.07	13.00	24.07	24.00	24.00	24.00

Test mode: IEEE 802.11n HT 20 MHz mode / 5500 ~ 5700MHz

Channel	Frequency (MHz)	26 dB Bandwidth (B) (MHz)		10*Log(B) (dB)		11 + 10*Log(B) (dBm)		Maximum Conducted Output Power Limit (dBm)	
		Antenna 0	Antenna 1	Antenna 0	Antenna 1	Antenna 0	Antenna 1	Antenna 0	Antenna 1
Low	5500	20.595	22.001	13.14	13.42	24.14	24.42	24.00	24.00
Mid	5580	20.503	19.766	13.12	12.96	24.12	23.96	24.00	23.96
High	5700	19.863	20.146	12.98	13.04	23.98	24.04	23.98	24.00

Test mode: IEEE 802.11n HT 20 MHz mode / 5745 ~ 5805MHz

Channel	Frequency (MHz)	26 dB Bandwidth (B) (MHz)		10*Log(B) (dB)		17 + 10*Log(B) (dBm)		Maximum Conducted Output Power Limit (dBm)	
		Antenna 0	Antenna 1	Antenna 0	Antenna 1	Antenna 0	Antenna 1	Antenna 0	Antenna 1
Low	5745	20.104	20.742	13.03	13.17	30.03	30.17	30.00	30.00
Mid	5785	21.098	19.744	13.24	12.95	30.24	29.95	30.00	29.95
High	5805	21.405	22.209	13.31	13.47	30.31	30.47	30.00	30.00

Test mode: IEEE 802.11n HT 20 MHz SISO mode / 5180 ~ 5240MHz

Channel	Frequency (MHz)	26 dB Bandwidth (B) (MHz)		10*Log(B) (dB)		4 + 10*Log(B) (dBm)		Maximum Conducted Output Power Limit (dBm)	
		Antenna 0	Antenna 1	Antenna 0	Antenna 1	Antenna 0	Antenna 1	Antenna 0	Antenna 1
Low	5180	20.156	19.895	13.04	12.99	17.04	16.99	17.00	16.99
Mid	5220	20.008	19.703	13.01	12.95	17.01	16.95	17.00	16.95
High	5240	19.898	20.103	12.99	13.03	16.99	17.03	16.99	17.00

Test mode: IEEE 802.11n HT 20 MHz SISO mode / 5260 ~ 5320MHz

Channel	Frequency (MHz)	26 dB Bandwidth (B) (MHz)		10*Log(B) (dB)		11 + 10*Log(B) (dBm)		Maximum Conducted Output Power Limit (dBm)	
		Antenna 0	Antenna 1	Antenna 0	Antenna 1	Antenna 0	Antenna 1	Antenna 0	Antenna 1
Low	5260	19.919	19.531	12.99	12.91	23.99	23.91	23.99	23.91
Mid	5280	20.169	19.570	13.05	12.92	24.05	23.92	24.00	23.92
High	5320	19.903	19.849	12.99	12.98	23.99	23.98	23.98	23.98

Test mode: IEEE 802.11n HT 20 MHz SISO mode / 5500 ~ 5700MHz

Channel	Frequency (MHz)	26 dB Bandwidth (B) (MHz)		10*Log(B) (dB)		11 + 10*Log(B) (dBm)		Maximum Conducted Output Power Limit (dBm)	
		Antenna 0	Antenna 1	Antenna 0	Antenna 1	Antenna 0	Antenna 1	Antenna 0	Antenna 1
Low	5500	19.511	19.799	12.90	12.97	23.90	23.97	23.90	23.97
Mid	5580	20.136	19.666	13.04	12.94	24.04	23.94	24.00	23.94
High	5700	20.287	19.828	13.07	12.97	24.07	23.97	24.00	23.97

Test mode: IEEE 802.11n HT 20 MHz SISO mode / 5745 ~ 5805MHz

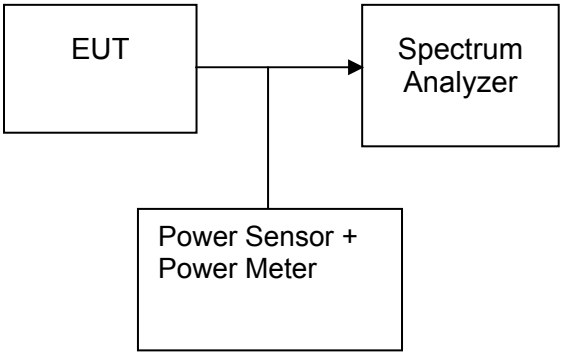
Channel	Frequency (MHz)	26 dB Bandwidth (B) (MHz)		10*Log(B) (dB)		17 + 10*Log(B) (dBm)		Maximum Conducted Output Power Limit (dBm)	
		Antenna 0	Antenna 1	Antenna 0	Antenna 1	Antenna 0	Antenna 1	Antenna 0	Antenna 1
Low	5745	19.635	19.955	12.93	13.00	29.93	30.00	29.93	30.00
Mid	5785	20.129	20.045	13.04	13.02	30.04	30.02	30.00	30.00
High	5805	19.875	19.828	12.98	12.97	29.98	29.97	29.98	29.97

7.3.2 MEASUREMENT EQUIPMENT USED

Name of Equipment	Manufacturer	Model	Serial Number	Last Calibration	Calibration Due
Spectrum Analyzer	Agilent	E4446A	US44300399	03/01/2014	03/01/2015
Power Meter	Anritsu	ML2495A	1204003	03/01/2014	03/01/2015
Power Sensor	Anritsu	MA2411B	1126150	03/01/2014	03/01/2015

Remark: *Each piece of equipment is scheduled for calibration once a year.*

7.3.3 TEST CONFIGURATIONS



7.3.4TEST PROCEDURE

Set span to encompass the entire emission bandwidth (EBW) of the signal.

Set RBW = 1 MHz / Set VBW = 3 MHz.

Use sample detector mode if bin width (i.e., span/number of points in spectrum display) < 0.5 RBW. Otherwise use peak detector mode. Use a video trigger with the trigger level set to enable triggering only on full power pulses. Transmitter must operate at full control power for entire sweep of every sweep. If the device transmits continuously, with no off intervals or reduced power intervals, the trigger may be set to “free run”.·Trace average 100 traces in power averaging mode. Compute power by integrating the spectrum across the 26 dB EBW of the signal. The integration can be performed using the spectrum analyzer’s band power measurement function with band limits set equal to the EBW band edges or by summing power levels in each 1 MHz band in linear power terms. The 1 MHz band power levels to be summed can be obtained by averaging, in linear power terms, power levels in each frequency bin across the 1 MHz.

7.3.5TEST RESULTS

No non-compliance noted

7.3.6TEST DATA

Test mode: IEEE 802.11a mode / 5180 ~ 5240MHz

Channel	Frequency (MHz)	Output Power (dBm)		Output Power (W)		Limit (dBm)	Result
		Antenna 0	Antenna 1	Antenna 0	Antenna 1		
Low	5180	12.65	11.81	0.01841	0.01517	16.91	PASS
Mid	5220	12.72	12.33	0.01871	0.01710		PASS
High	5240	12.74	12.36	0.01879	0.01722		PASS

Test mode: IEEE 802.11a mode / 5260 ~ 5320MHz

Channel	Frequency (MHz)	Output Power (dBm)		Output Power (W)		Limit (dBm)	Result
		Antenna 0	Antenna 1	Antenna 0	Antenna 1		
Low	5260	12.61	12.32	0.01824	0.01706	23.83	PASS
Mid	5280	12.13	12.23	0.01633	0.01671		PASS
High	5320	11.84	12.14	0.01528	0.01637		PASS

Test mode: IEEE 802.11a mode / 5500 ~ 5700MHz

Channel	Frequency (MHz)	Output Power (dBm)		Output Power (W)		Limit (dBm)	Result
		Antenna 0	Antenna 1	Antenna 0	Antenna 1		
Low	5500	12.69	11.80	0.01858	0.01514	23.84	PASS
Mid	5580	12.97	12.50	0.01982	0.01778		PASS
High	5700	11.27	12.95	0.01340	0.01972		PASS

Test mode: IEEE 802.11a mode / 5745 ~ 5805MHz

Channel	Frequency (MHz)	Output Power (dBm)		Output Power (W)		Limit (dBm)	Result
		Antenna 0	Antenna 1	Antenna 0	Antenna 1		
Low	5745	10.80	11.39	0.01202	0.01377	29.87	PASS
Mid	5785	10.65	10.04	0.01161	0.01009		PASS
High	5805	10.78	11.13	0.01197	0.01297		PASS

Test mode: IEEE 802.11n HT 20 MHz mode / 5180 ~ 5240MHz

Channel	Frequency (MHz)	Output Power (dBm)			Output Power (W)	Limit (dBm)	Result
		Antenna 0	Antenna 1	Total			
Low	5180	12.85	12.66	15.77	0.03773	16.94	PASS
Mid	5220	12.66	12.61	15.65	0.03669		PASS
High	5240	12.83	12.53	15.69	0.03709		PASS

Test mode: IEEE 802.11n HT 20 MHz mode / 5260 ~ 5320MHz

Channel	Frequency (MHz)	Output Power (dBm)			Output Power (W)	Limit (dBm)	Result
		Antenna 0	Antenna 1	Total			
Low	5260	12.62	12.16	15.41	0.03472	23.96	PASS
Mid	5280	12.47	12.11	15.30	0.03392		PASS
High	5320	12.63	12.58	15.62	0.03644		PASS

Test mode: IEEE 802.11n HT 20 MHz mode / 5500 ~ 5700MHz

Channel	Frequency (MHz)	Output Power (dBm)			Output Power (W)	Limit (dBm)	Result
		Antenna 0	Antenna 1	Total			
Low	5500	13.20	13.42	16.32	0.04287	23.96	PASS
Mid	5580	12.63	12.91	15.78	0.03787		PASS
High	5700	12.58	12.11	15.36	0.03437		PASS

Test mode: IEEE 802.11n HT 20 MHz mode / 5745 ~ 5805MHz

Channel	Frequency (MHz)	Output Power (dBm)			Output Power (W)	Limit (dBm)	Result
		Antenna 0	Antenna 1	Total			
Low	5745	11.95	11.58	14.78	0.03006	29.95	PASS
Mid	5785	11.83	11.54	14.70	0.02950		PASS
High	5805	12.22	11.87	15.06	0.03205		PASS

Test mode: IEEE 802.11n HT 20 MHz SISO mode / 5180 ~ 5240MHz

Channel	Frequency (MHz)	Output Power (dBm)		Output Power (W)		Limit (dBm)	Result
		Antenna 0	Antenna 1	Antenna 0	Antenna 1		
Low	5180	10.54	10.27	0.01132	0.01064	16.95	PASS
Mid	5220	10.74	10.53	0.01186	0.01130		PASS
High	5240	10.69	10.64	0.01172	0.01159		PASS

Test mode: IEEE 802.11n HT 20 MHz SISO mode / 5260 ~ 5320MHz

Channel	Frequency (MHz)	Output Power (dBm)		Output Power (W)		Limit (dBm)	Result
		Antenna 0	Antenna 1	Antenna 0	Antenna 1		
Low	5260	10.42	10.67	0.01102	0.01167	23.91	PASS
Mid	5280	9.99	10.58	0.00998	0.01143		PASS
High	5320	9.27	10.45	0.00845	0.01109		PASS

Test mode: IEEE 802.11n HT 20 MHz SISIO mode / 5500 ~ 5700MHz

Channel	Frequency (MHz)	Output Power (dBm)		Output Power (W)		Limit (dBm)	Result
		Antenna 0	Antenna 1	Antenna 0	Antenna 1		
Low	5500	10.68	11.02	0.01169	0.01265	23.90	PASS
Mid	5580	10.75	10.85	0.01189	0.01216		PASS
High	5700	9.24	10.51	0.00839	0.01125		PASS

Test mode: IEEE 802.11n HT 20 MHz SISO mode / 5745 ~ 5805MHz

Channel	Frequency (MHz)	Output Power (dBm)		Output Power (W)		Limit (dBm)	Result
		Antenna 0	Antenna 1	Antenna 0	Antenna 1		
Low	5745	9.16	10.44	0.00824	0.01107	29.93	PASS
Mid	5785	8.68	9.48	0.00738	0.00887		PASS
High	5805	8.51	9.28	0.00710	0.00847		PASS

7.4 BAND EDGES MEASUREMENT

7.4.1LIMIT

According to §15.407(b) & RSS-210 §A8.5,

(1) The provisions of Section 15.205 of this part apply to intentional radiators operating under this section.

(2) When measuring the emission limits, the nominal carrier frequency shall be adjusted as close to the upper and lower frequency block edges as the design of the equipment permits.

7.4.2MEASUREMENT EQUIPMENT USED

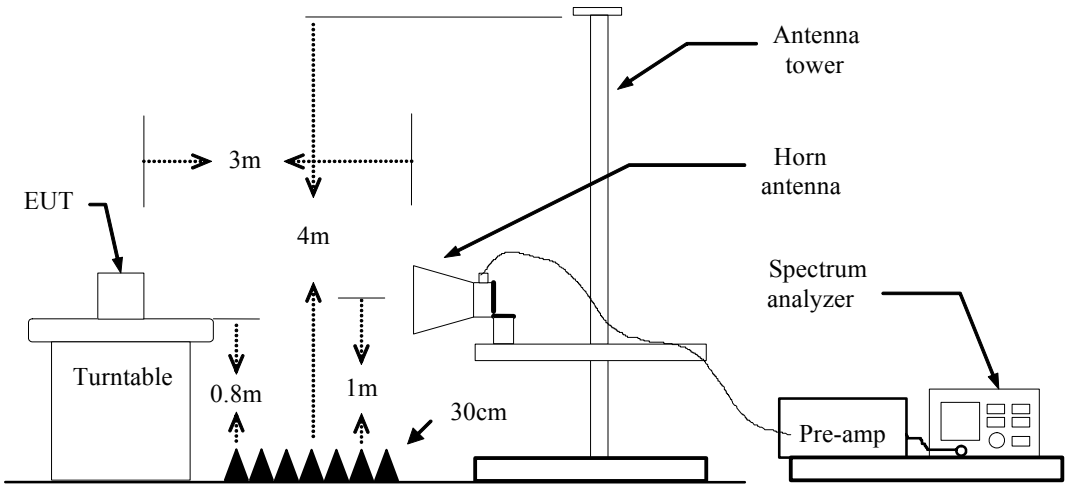
Radiated Emission Test Site 966（2）					
Name of Equipment	**Manufacturer**	**Model Number**	**Serial Number**	**Last Calibration**	**Due Calibration**
PSA Series Spectrum Analyzer	Agilent	E4446A	US44300399	03/01/2014	03/01/2015
EMI TEST RECEIVER	ROHDE&SCHWARZ	ESCI	100783	03/09/2014	03/08/2015
Amplifier	MITEQ	AM-1604-3000	1123808	03/18/2015	03/18/2015
High Noise Amplifier	Agilent	8449B	3008A01838	03/18/2015	03/18/2015
Board-Band Horn Antenna	Schwarzbeck	BBHA 9170	9170-497	07/10/2013	07/09/2014
Bilog Antenna	SCHAFFNER	CBL6143	5082	03/01/2014	03/01/2015
Horn Antenna	SCHWARZBECK	BBHA9120	D286	03/01/2014	03/01/2015
Loop Antenna	COM-POWER	AL-130	121044	09/27/2013	09/26/2014
Turn Table	N/A	N/A	N/A	N.C.R	N.C.R
Controller	Sunol Sciences	SC104V	022310-1	N.C.R	N.C.R
Controller	CT	N/A	N/A	N.C.R	N.C.R
Temp. / Humidity Meter	Anymetre	JR913	N/A	02/28/2014	02/28/2015
Antenna Tower	SUNOL	TLT2	N/A	N.C.R	N.C.R
Test S/W	FARAD	LZ-RF / CCS-SZ-3A2			

NOTE: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

2. The FCC Site Registration number is 101879.

3. N.C.R = No Calibration Required.

7.4.3TEST CONFIGURATION



7.4.4TEST PROCEDURE

1. The EUT is placed on a turntable, which is 0.8m above the ground plane.
2. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level.
3. EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emission.
4. Set the spectrum analyzer in the following setting in order to capture the lower and upper band-edges of the emission:
   (a) PEAK: RBW=1 / VBW=3MHz / Sweep=AUTO
   (b) AVERAGE: RBW=1MHz / VBW=11Hz / Sweep=AUTO
5. Repeat the procedures until all the PEAK and AVERAGE versus POLARIZATION are measured.

7.4.5TEST RESULT

Refer to attach spectrum analyzer data chart.

Test mode: IEEE 802.11a mode / 5500 ~ 5700MHz

Antenna 0:

1. Operating Frequency: 5500-5700MHz
2. CH Low: 5500MHz, CH High: 5700MHz
3. 26dB bandwidth: CH Low: 19.730MHz, CH High: 20.180MHz
4. Frequency Range: 5490.135MHz, 5710.090MHz

Antenna 1:

1. Operating Frequency: 5500-5700MHz
2. CH Low: 5500MHz, CH High: 5700MHz
3. 26dB bandwidth: CH Low: 19.632MHz, CH High: 19.289MHz
4. Frequency Range: 5490.184MHz, 5709.6445MHz

Test mode: IEEE 802.11a mode / 5745 ~ 5805MHz

Antenna 0:

1. Operating Frequency: 5745-5805MHz
2. CH Low: 5745MHz, CH High: 5805MHz
3. 26dB bandwidth: CH Low: 19.524MHz, CH High: 20.525MHz
4. Frequency Range: 5735.238MHz, 5815.2625MHz

Antenna 1:

1. Operating Frequency: 5745-5805MHz
2. CH Low: 5745MHz, CH High: 5805MHz
3. 26dB bandwidth: CH Low: 19.378MHz, CH High: 19.449MHz
4. Frequency Range: 5735.311MHz, 5814.7245MHz

Test mode: IEEE 802.11n HT 20 MHz mode / 5500 ~ 5700MHz

Antenna 0:

1. Operating Frequency: 5500-5700MHz
2. CH Low: 5500MHz, CH High: 5700MHz
3. 26dB bandwidth: CH Low: 20.595MHz, CH High: 19.863MHz
4. Frequency Range: 5489.7025MHz, 5709.9315MHz

Antenna 1:

1. Operating Frequency: 5500-5700MHz
2. CH Low: 5500MHz, CH High: 5700MHz
3. 26dB bandwidth: CH Low: 22.001MHz, CH High: 20.046MHz
4. Frequency Range: 5488.9995MHz, 5710.023MHz

Test mode: IEEE 802.11n HT 20 MHz mode / 5745 ~ 5805MHz

Antenna 0:

1. Operating Frequency: 5745-5805MHz
2. CH Low: 5745MHz, CH High: 5805MHz
3. 26dB bandwidth: CH Low: 20.104MHz, CH High: 21.405MHz
4. Frequency Range: 5734.948MHz, 5815.7025MHz

Antenna 1:

1. Operating Frequency: 5745-5805MHz
2. CH Low: 5745MHz, CH High: 5805MHz
3. 26dB bandwidth: CH Low: 20.742MHz, CH High: 22.209MHz
4. Frequency Range: 5734.629MHz, 5816.1045MHz

Test mode: IEEE 802.11n HT 20 MHz SISO mode / 5500 ~ 5700MHz

Antenna 0:

1. Operating Frequency: 5500-5700MHz
2. CH Low: 5500MHz, CH High: 5700MHz
3. 26dB bandwidth: CH Low: 19.511MHz, CH High: 20.287MHz
4. Frequency Range: 5490.2445MHz, 5710.1435MHz

Antenna 1:

1. Operating Frequency: 5500-5700MHz
2. CH Low: 5500MHz, CH High: 5700MHz
3. 26dB bandwidth: CH Low: 19.799MHz, CH High: 19.828MHz
4. Frequency Range: 5490.1005MHz, 5709.914MHz

Test mode: IEEE 802.11n HT 20 MHz SISO mode / 5745 ~ 5805MHz

Antenna 0:

1. Operating Frequency: 5745-5805MHz
2. CH Low: 5745MHz, CH High: 5805MHz
3. 26dB bandwidth: CH Low: 19.635MHz, CH High: 19.875MHz
4. Frequency Range: 5735.1825MHz, 5814.9375MHz

Antenna 1:

1. Operating Frequency: 5745-5805MHz
2. CH Low: 5745MHz, CH High: 5805MHz
3. 26dB bandwidth: CH Low: 19.955MHz, CH High: 19.828MHz
4. Frequency Range: 5735.0225MHz, 5814.914MHz

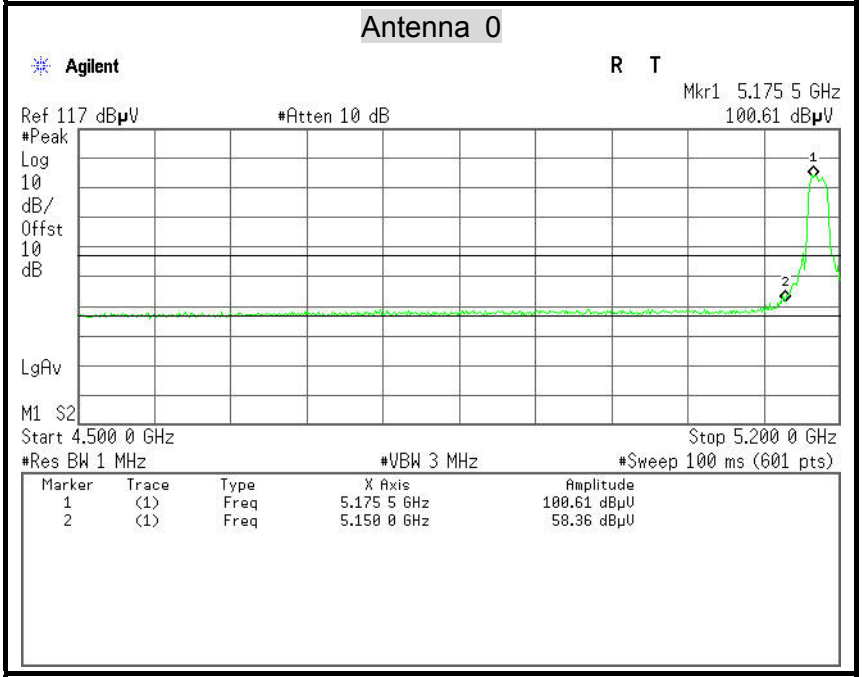
Because the mentioned conditions, the test is not applicable.

Test Plot

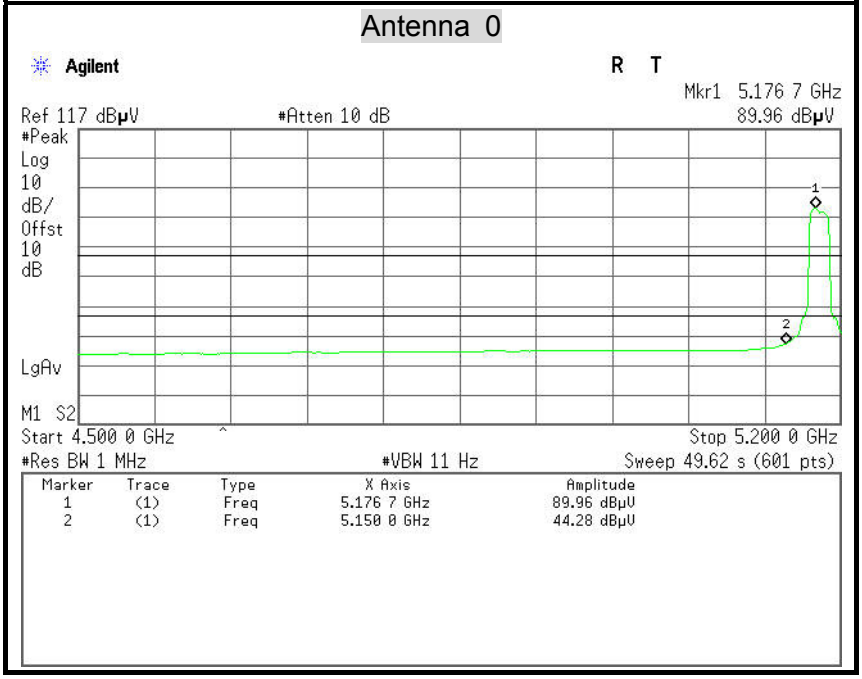
IEEE 802.11a mode / 5180 MHz mode

Band Edges (CH Low)

Detector mode: Peak **Polarity: Vertical**

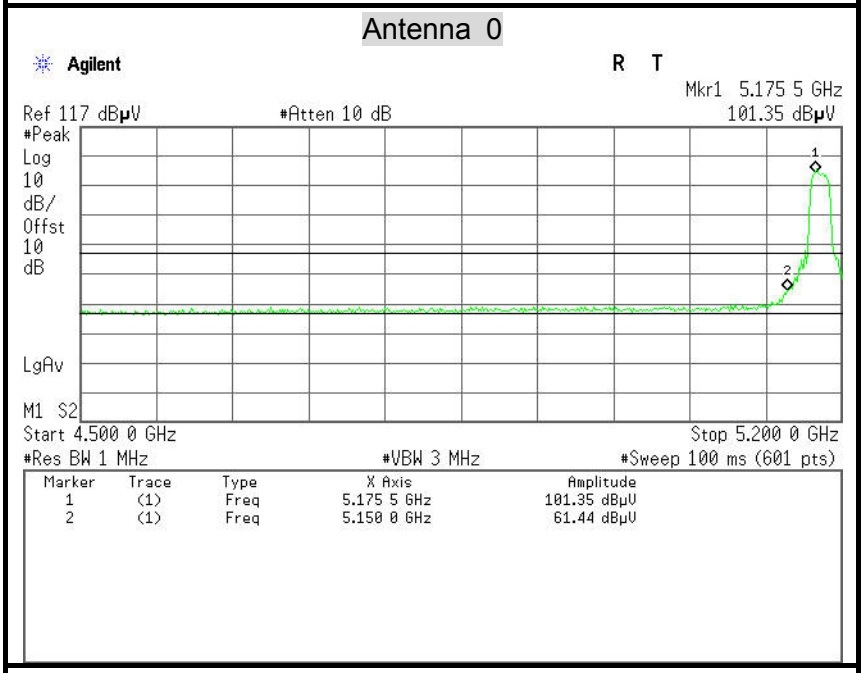


Detector mode: Average **Polarity: Vertical**

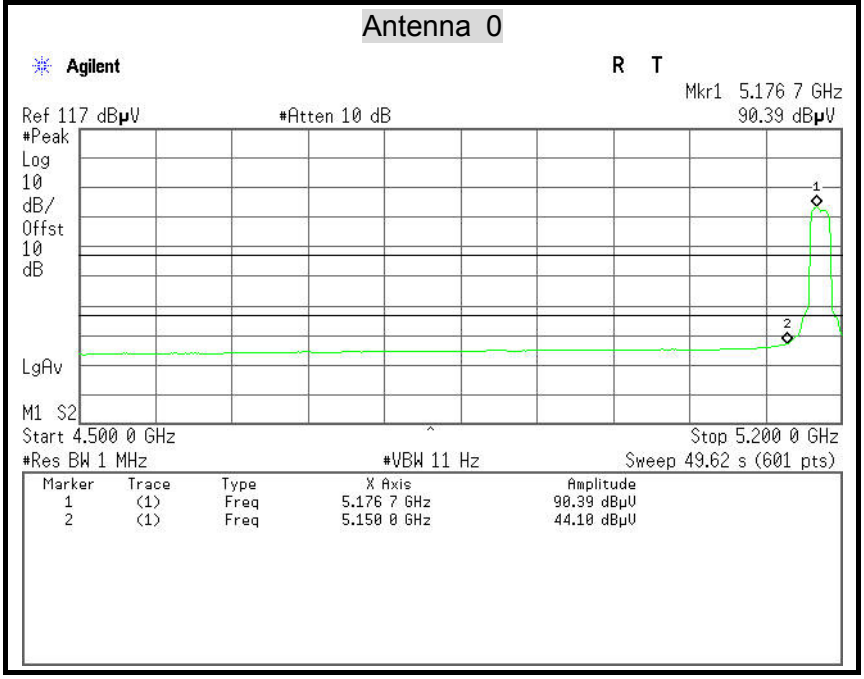


No.	Frequency (MHz)	Reading (dBuV)	Corrected (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Antenna Pole
1	5150.0000	51.76	-6.60	58.36	74.00	-15.64	Peak	Vertical
2	5150.0000	37.68	-6.60	44.28	54.00	-9.72	Average	Vertical

Detector mode: Peak **Polarity: Horizontal**



Detector mode: Average **Polarity: Horizontal**

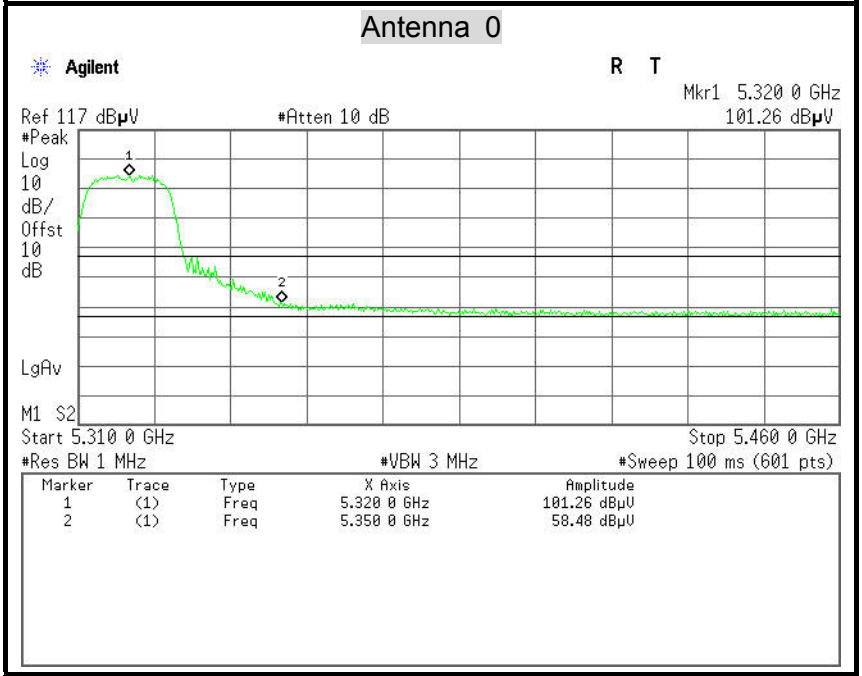


No.	Frequency (MHz)	Reading (dBuV)	Corrected (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Antenna Pole
1	5150.0000	54.84	-6.60	61.44	74.00	-12.56	Peak	Horizontal
2	5150.0000	37.50	-6.60	44.10	54.00	-9.90	Average	Horizontal

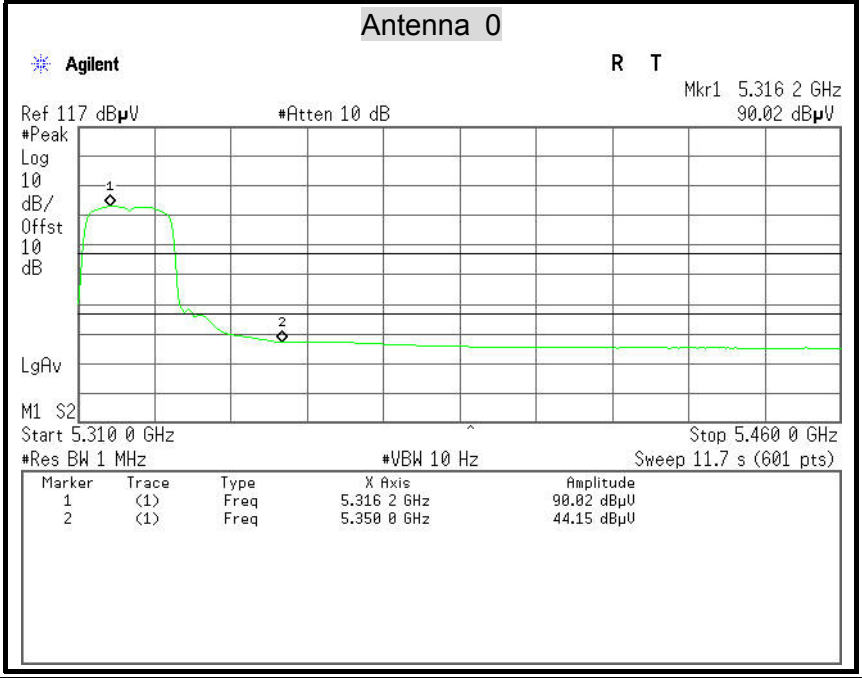
IEEE 802.11a mode / 5320 MHz mode

Band Edges (CH High)

Detector mode: Peak **Polarity: Vertical**



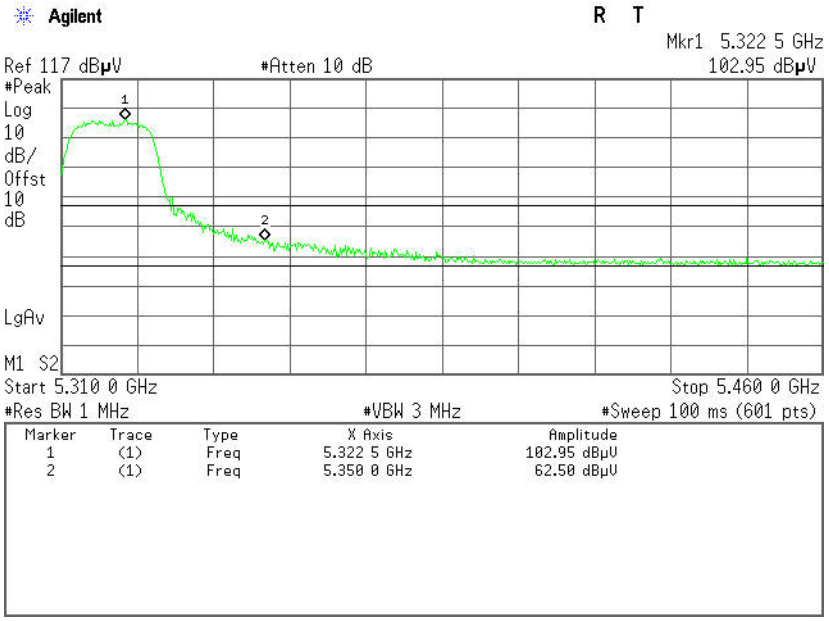
Detector mode: Average **Polarity: Vertical**



No.	Frequency (MHz)	Reading (dBuV)	Corrected (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Antenna Pole
1	5350.0000	52.24	-6.24	58.48	74.00	-15.52	Peak	Vertical
2	5350.0000	37.91	-6.24	44.15	54.00	-9.85	Average	Vertical

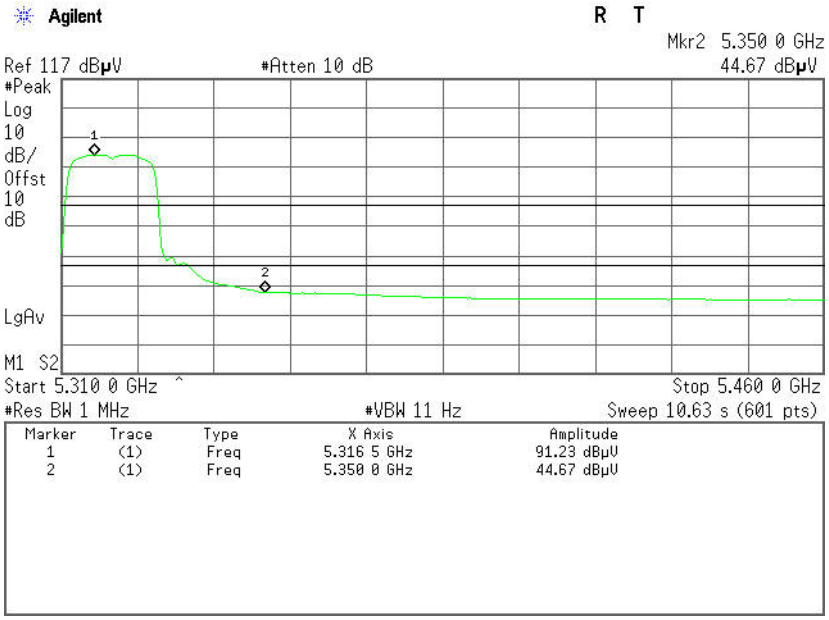
Detector mode: Peak **Polarity: Horizontal**

Antenna 0



Detector mode: Average **Polarity: Horizontal**

Antenna 0



No.	Frequency (MHz)	Reading (dBuV)	Corrected (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Antenna Pole
1	5350.0000	56.26	-6.24	62.50	74.00	-11.50	Peak	Horizontal
2	5350.0000	38.43	-6.24	44.67	54.00	-9.33	Average	Horizontal