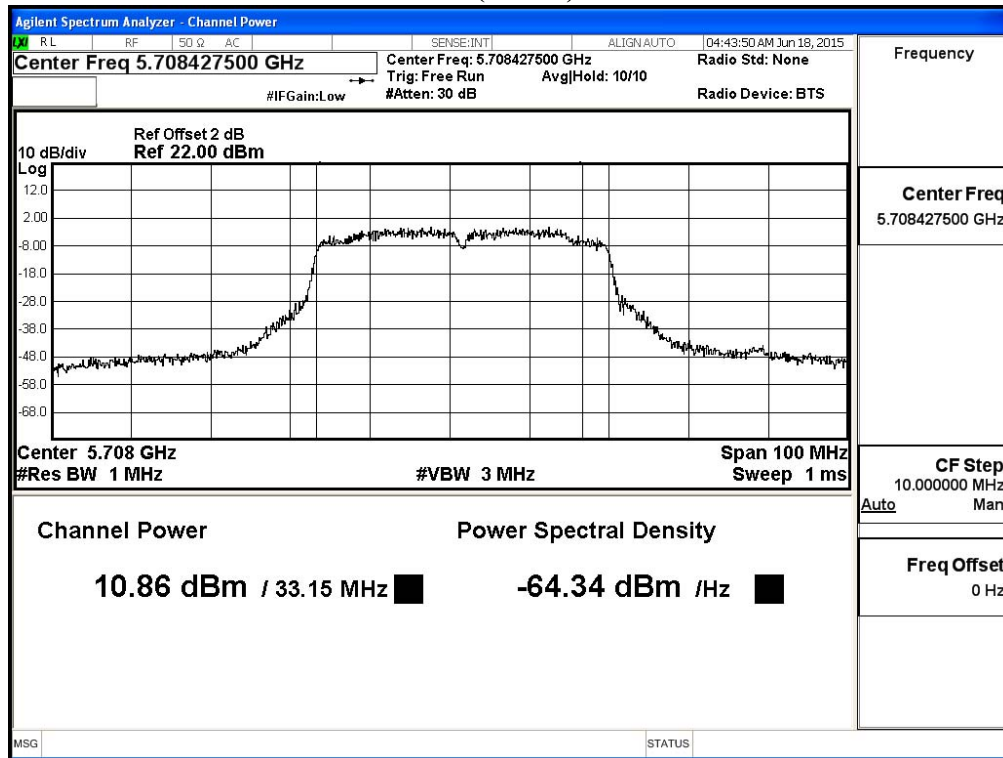
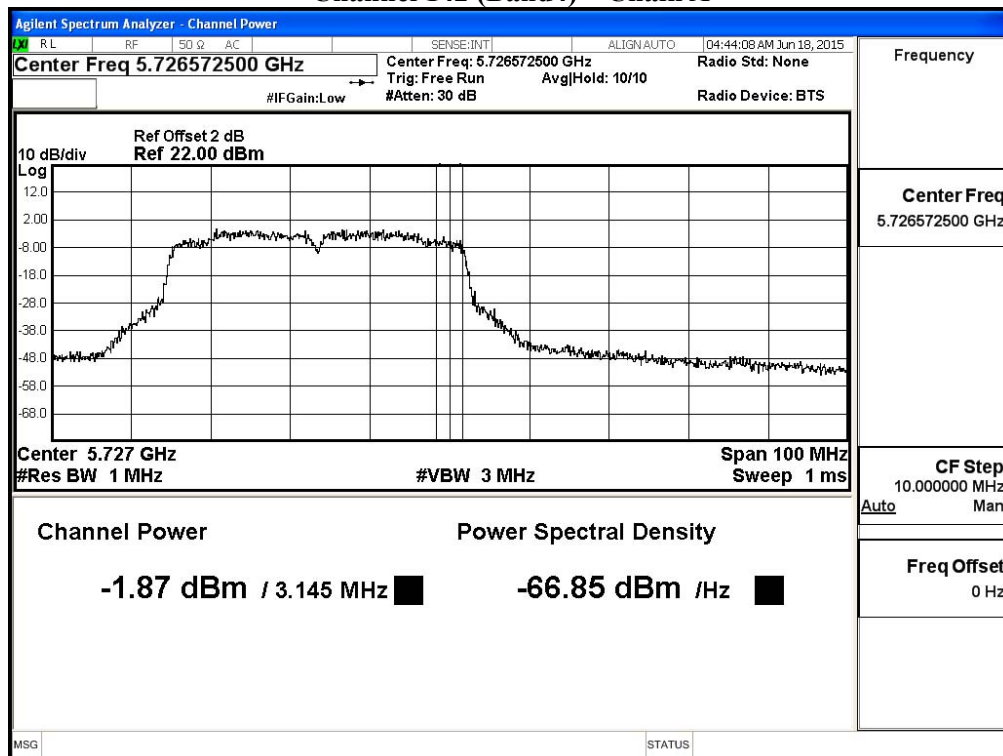


Maximum conducted output power:

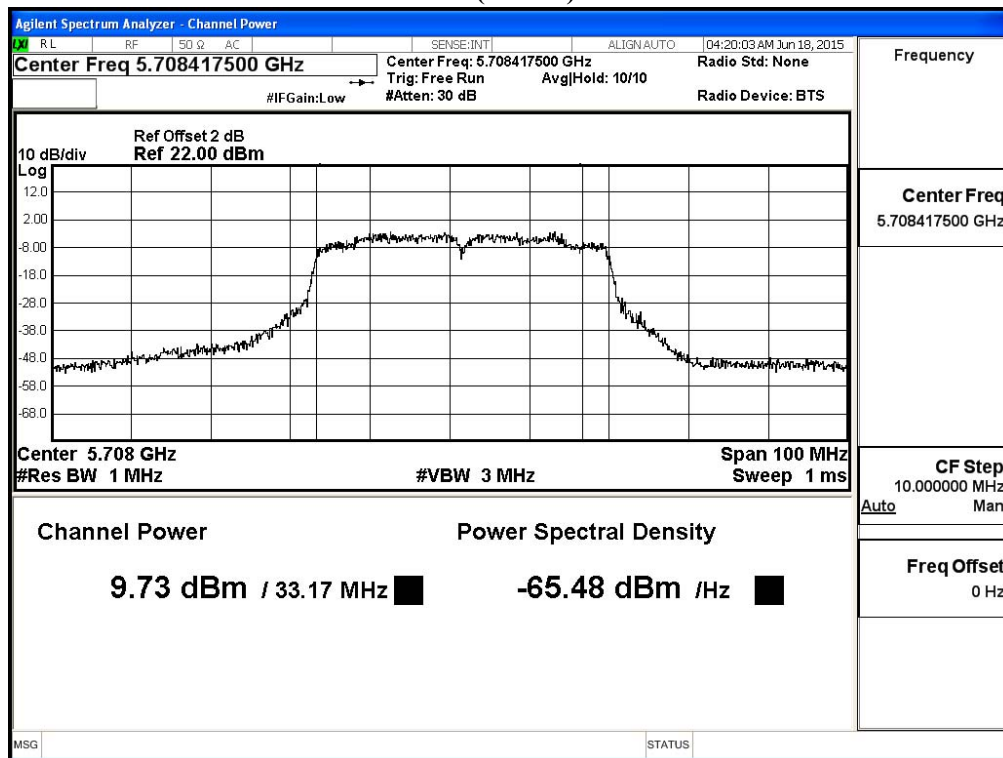
Channel 142 (Band3) – Chain A



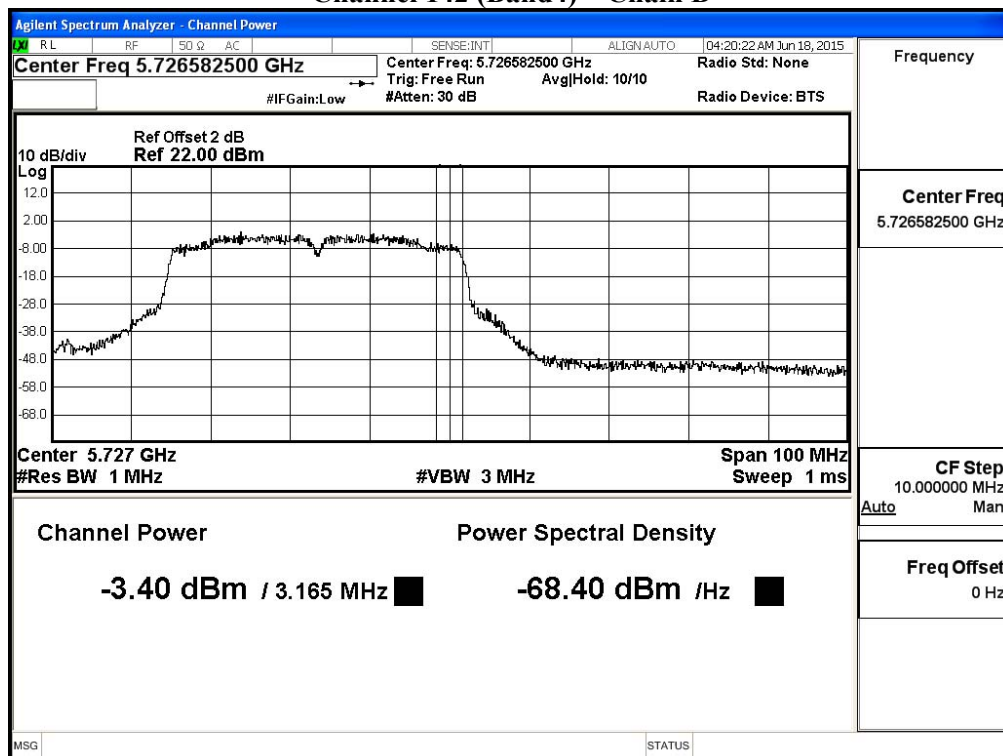
Channel 142 (Band4) – Chain A



**Maximum conducted output power:
Channel 142 (Band3) – Chain B**



Channel 142 (Band4) – Chain B



Product : RUGGED TABLET COMPUTER
Test Item : Maximum conducted output power
Test Site : No.3 OATS
Test Mode : Mode 6: Transmit (802.11ac-80BW-65Mbps)

Chain A

Cable loss=1dB		Maximum conducted output power										
Channel No	Frequency (MHz)	Data Rate (Mbps)										Required Limit
		VTH0	VTH1	VTH2	VTH3	VTH4	VTH5	VTH6	VTH7	VTH8	VTH9	
42	5210	7.21	7.15	7.06	6.98	6.91	6.83	6.75	6.69	6.62	6.55	<24dBm
58	5290	8.42	8.35	8.29	8.21	8.15	8.09	8.00	7.91	7.83	7.75	<24dBm
106	5530	7.34	7.26	7.19	7.11	7.03	6.95	6.89	6.83	6.75	6.68	<24dBm
122	5610	11.27	11.21	11.16	11.07	10.99	10.91	10.83	10.75	10.69	10.62	<24dBm
138(Band3)	5690	10.92	10.85	10.79	10.73	10.68	10.60	10.52	10.46	10.39	10.31	<24dBm
138(Band4)	5690	-4.87	-4.93	-5.07	-5.16	-5.22	-5.29	-5.37	-5.45	-5.51	-5.58	<30dBm
155	5775	10.73	10.67	10.59	10.51	10.43	10.38	10.31	10.24	10.16	10.09	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Chain B

Cable loss=1dB		Maximum conducted output power										
Channel No	Frequency (MHz)	Data Rate (Mbps)										Required Limit
		VTH0	VTH1	VTH2	VTH3	VTH4	VTH5	VTH6	VTH7	VTH8	VTH9	
42	5210	7.82	7.73	7.68	7.59	7.52	7.45	7.38	7.31	7.24	7.17	<24dBm
58	5290	9.34	9.29	9.21	9.13	9.05	8.97	8.91	8.83	8.75	7.69	<24dBm
106	5530	7.54	7.49	7.42	7.32	7.24	7.18	7.09	7.00	6.92	6.86	<24dBm
122	5610	11.50	11.42	11.35	11.28	11.21	11.13	11.06	10.98	10.93	10.87	<24dBm
138(Band3)	5690	10.58	10.5	10.42	10.34	10.28	10.21	10.13	10.05	9.97	9.89	<24dBm
138(Band4)	5690	-6.68	-6.74	-6.87	-6.93	-7.04	-7.11	-7.19	-7.26	-7.31	-7.38	<30dBm
155	5775	9.61	9.53	9.47	9.41	9.32	9.25	9.17	9.08	8.99	8.92	<30dBm

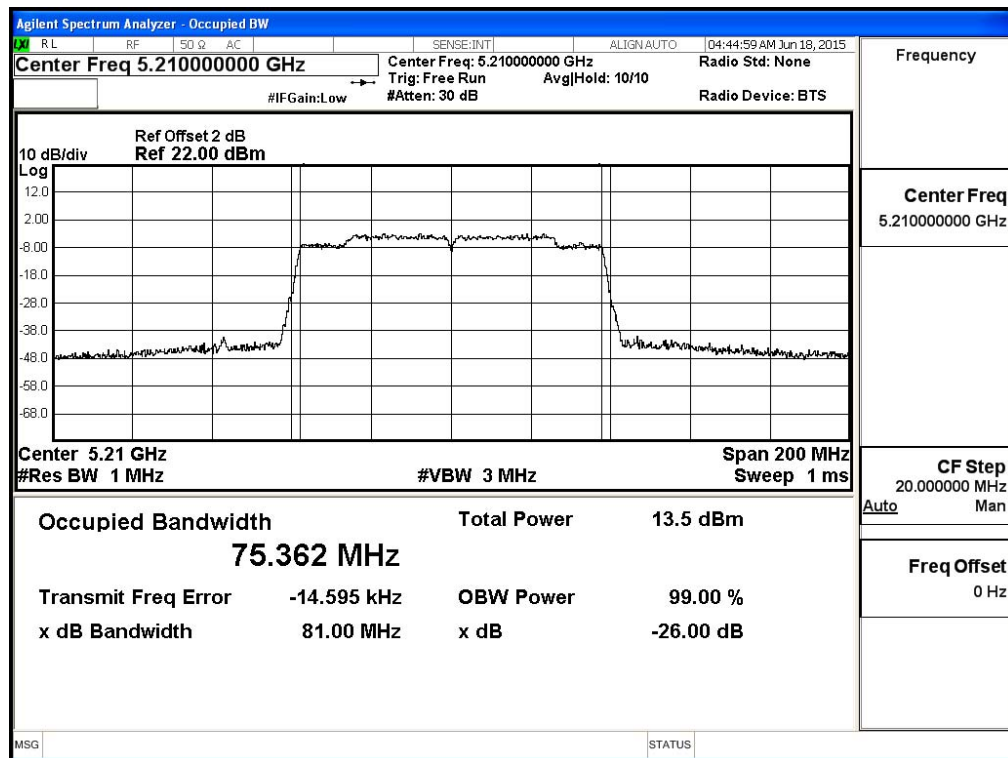
Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Maximum conducted output power Measurement

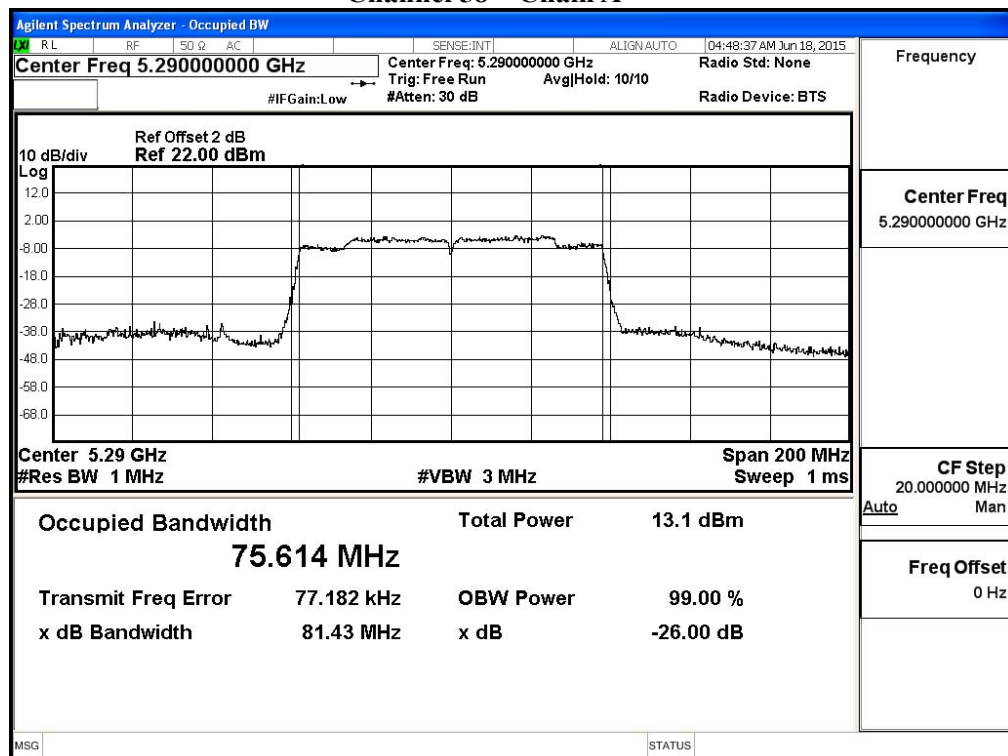
Channel No	Frequency Range (MHz)	99% Bandwidth (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Output Power (dBm)	Output Power Limit		Result
						(dBm)	dBm+10log(BW)	
42	5210	75.346	7.21	7.82	10.54	24	29.77	Pass
58	5290	75.540	8.42	9.34	11.91	24	29.78	Pass
106	5530	75.312	7.34	7.54	10.45	24	29.77	Pass
122	5610	75.402	11.27	11.50	14.40	24	29.77	Pass
138(Band3)	5690	72.688	10.92	10.58	13.76	24	29.61	Pass
138(Band4)	5690	2.688	-4.87	-6.68	-2.67	30	--	Pass
155	5775	75.252	10.73	9.61	13.22	30	--	Pass

Note: Power Output Value = Reading value on average power meter + cable loss

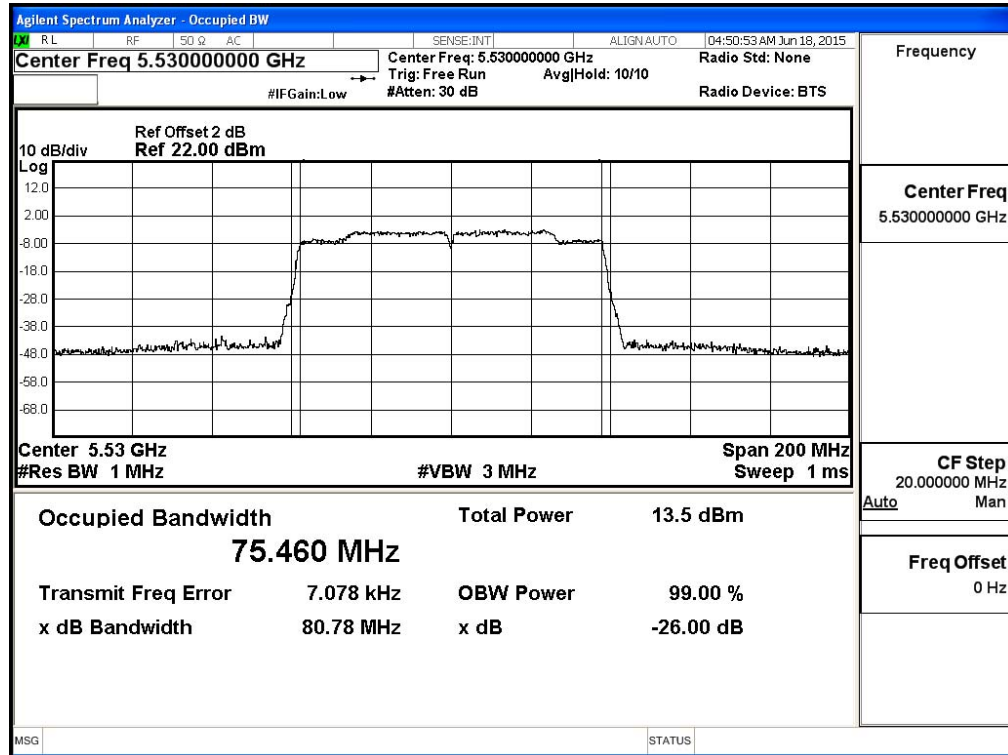
99% Occupied Bandwidth: Channel 42 – Chain A



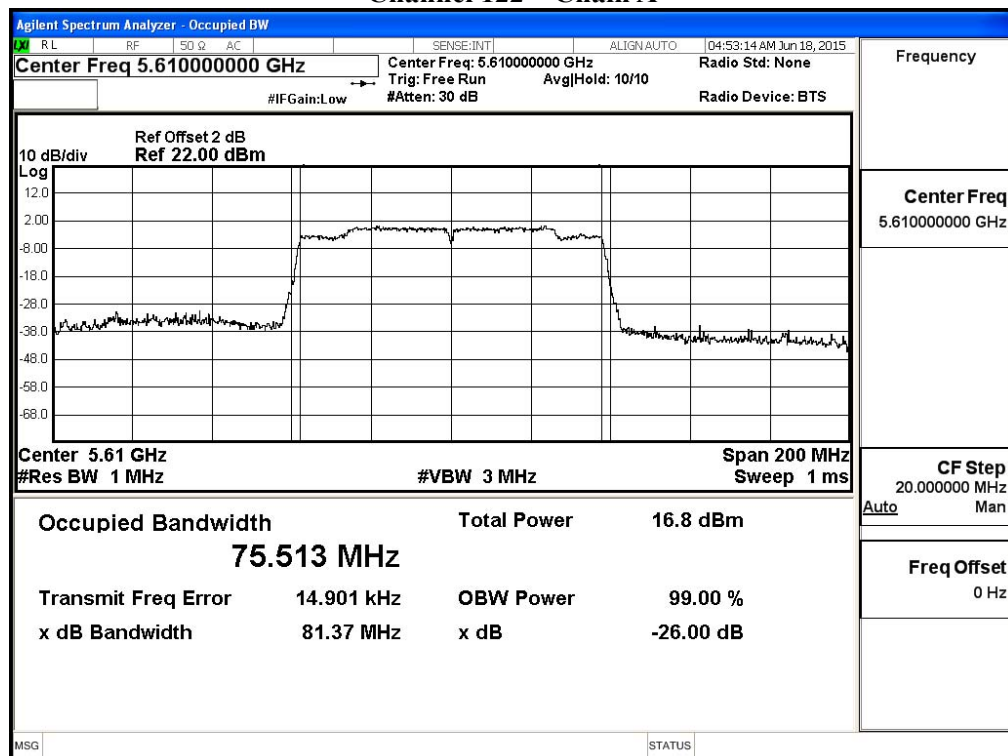
Channel 58 – Chain A



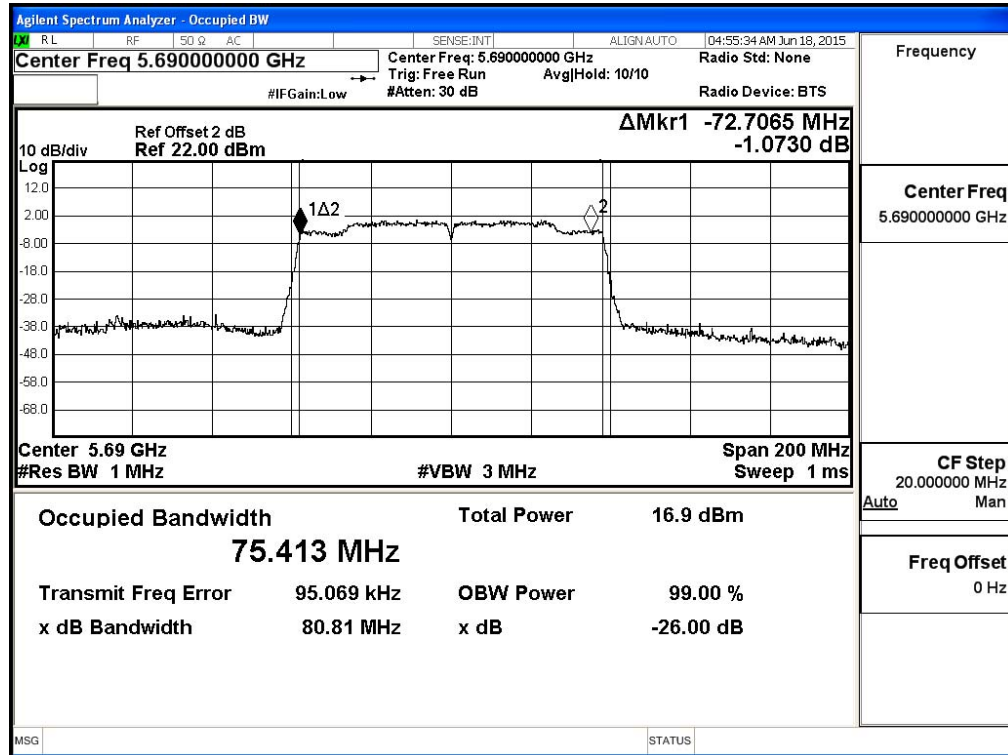
Channel 106 – Chain A



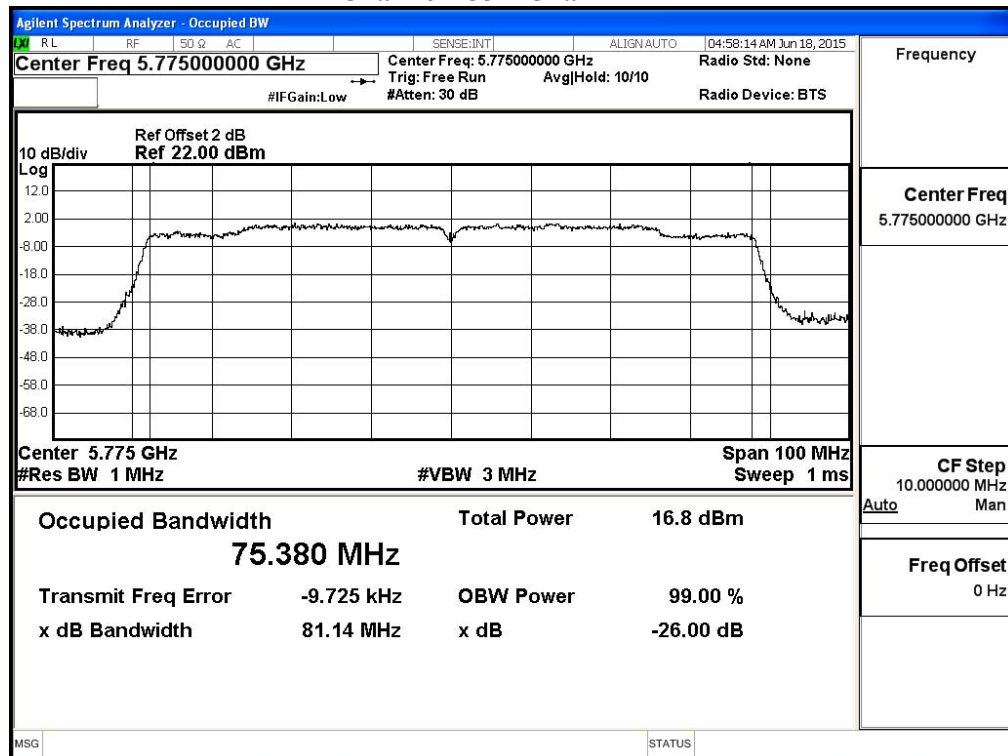
Channel 122 – Chain A



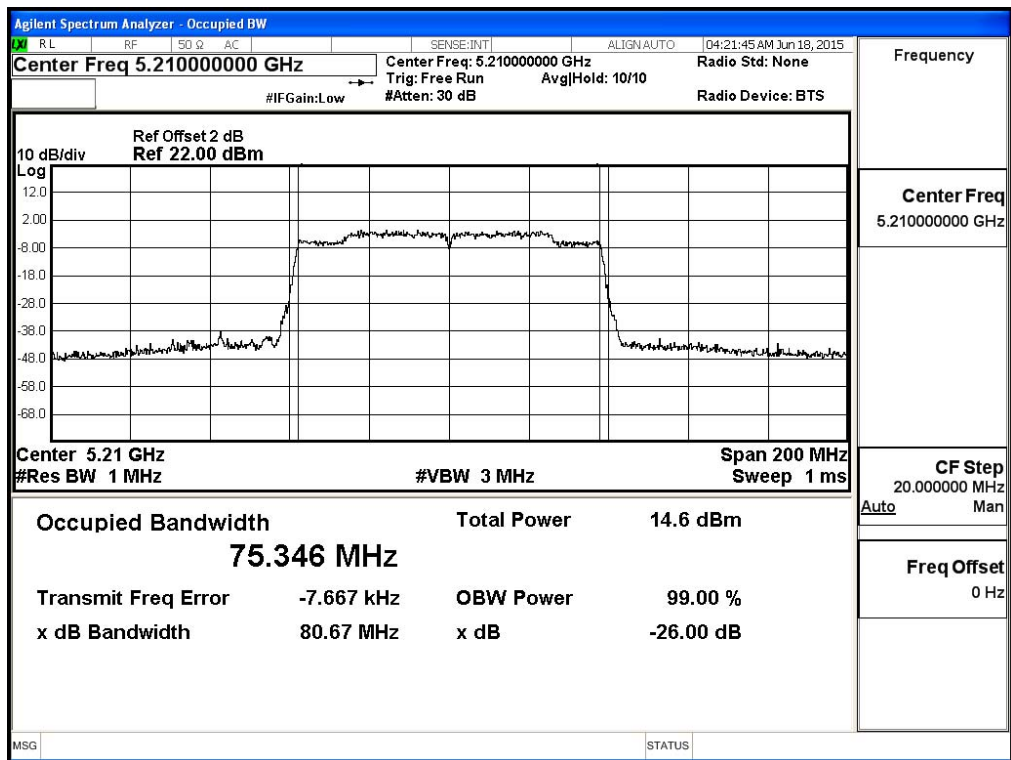
Channel 138 – Chain A



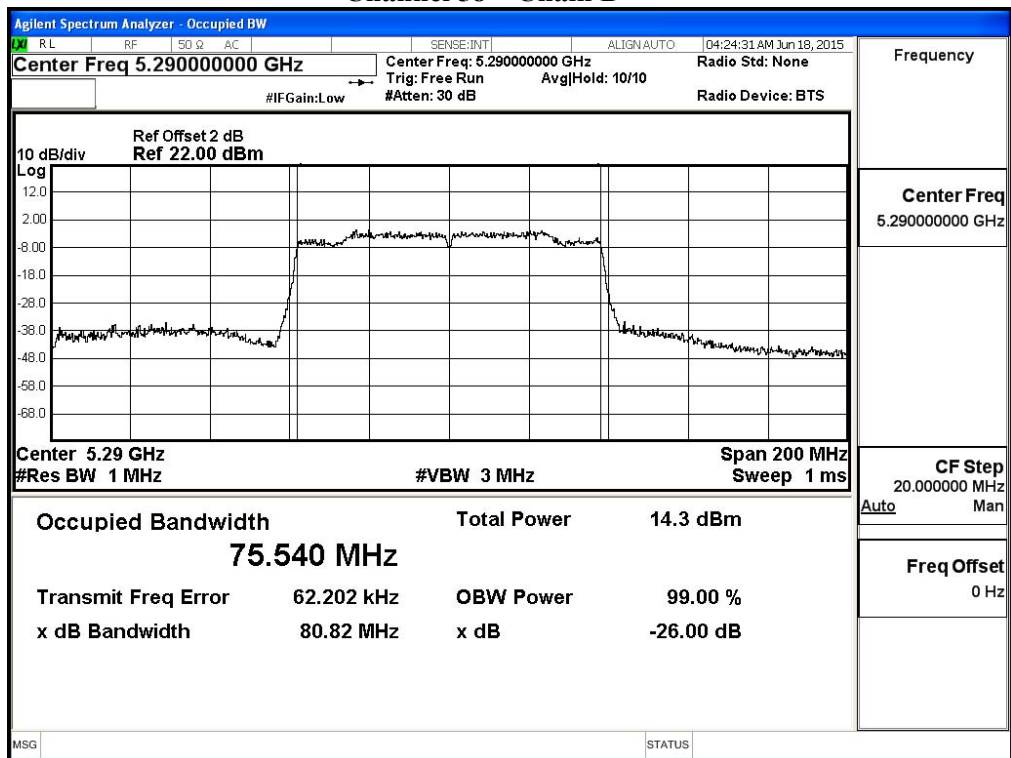
Channel 155 – Chain A



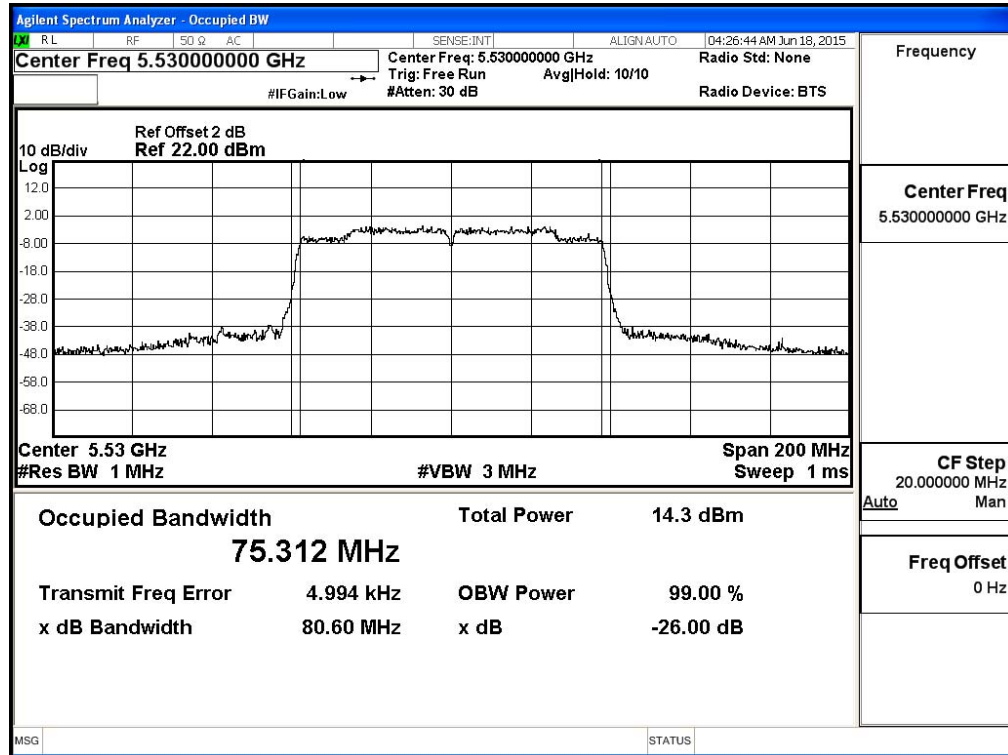
99% Occupied Bandwidth:
Channel 42 – Chain B



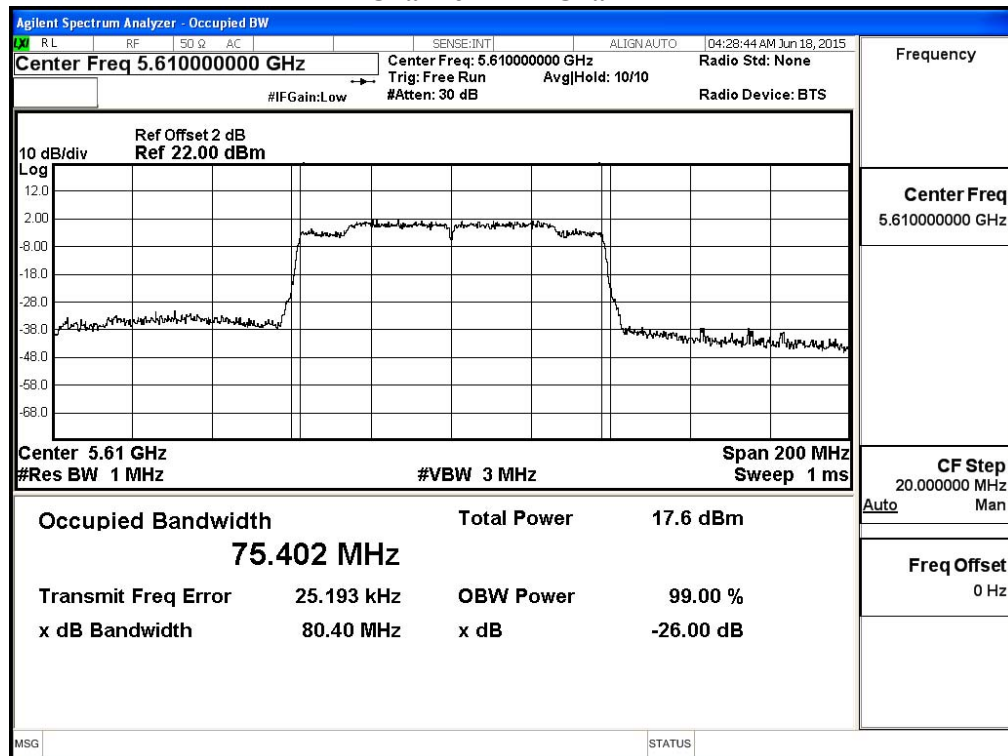
Channel 58 – Chain B



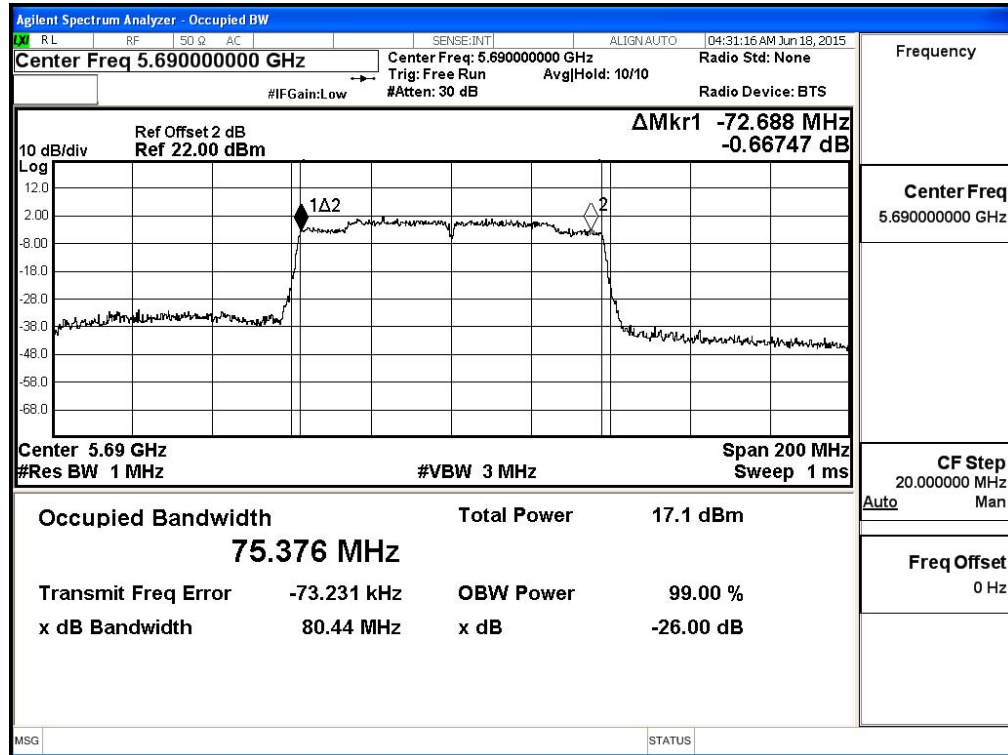
Channel 106 – Chain B



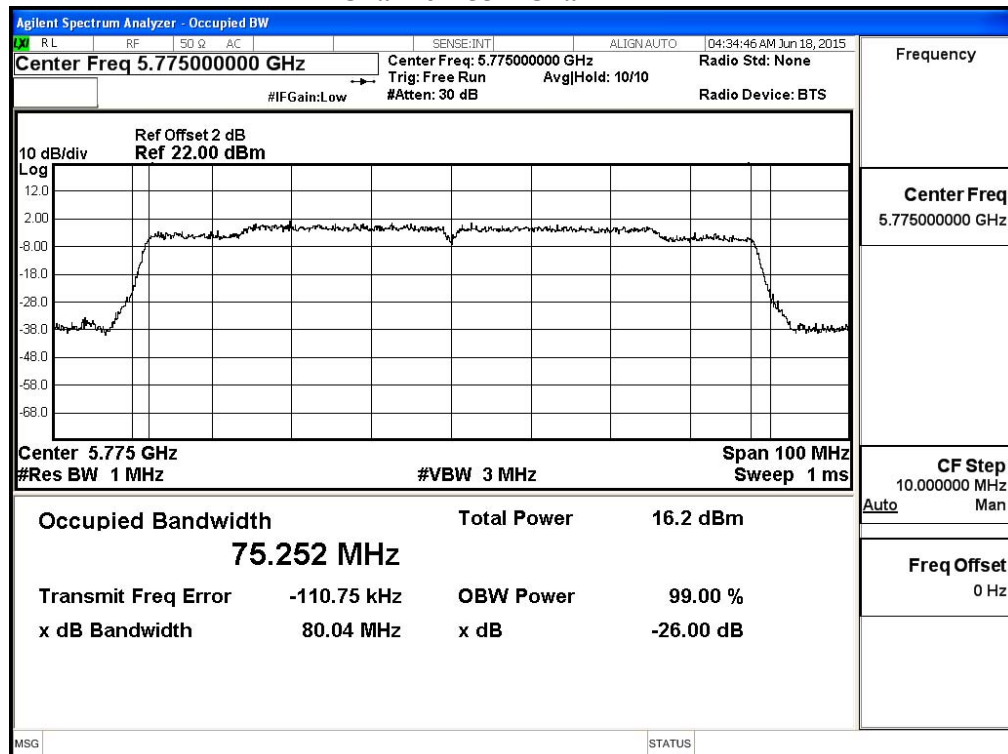
Channel 122 – Chain B



Channel 138 – Chain B

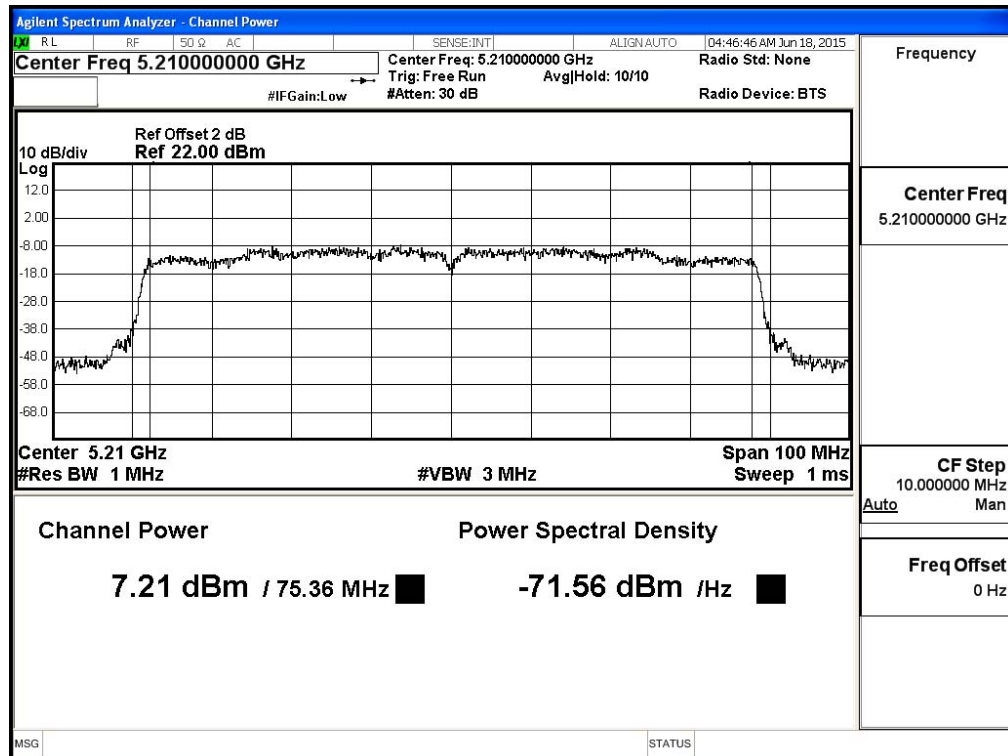


Channel 155 – Chain B



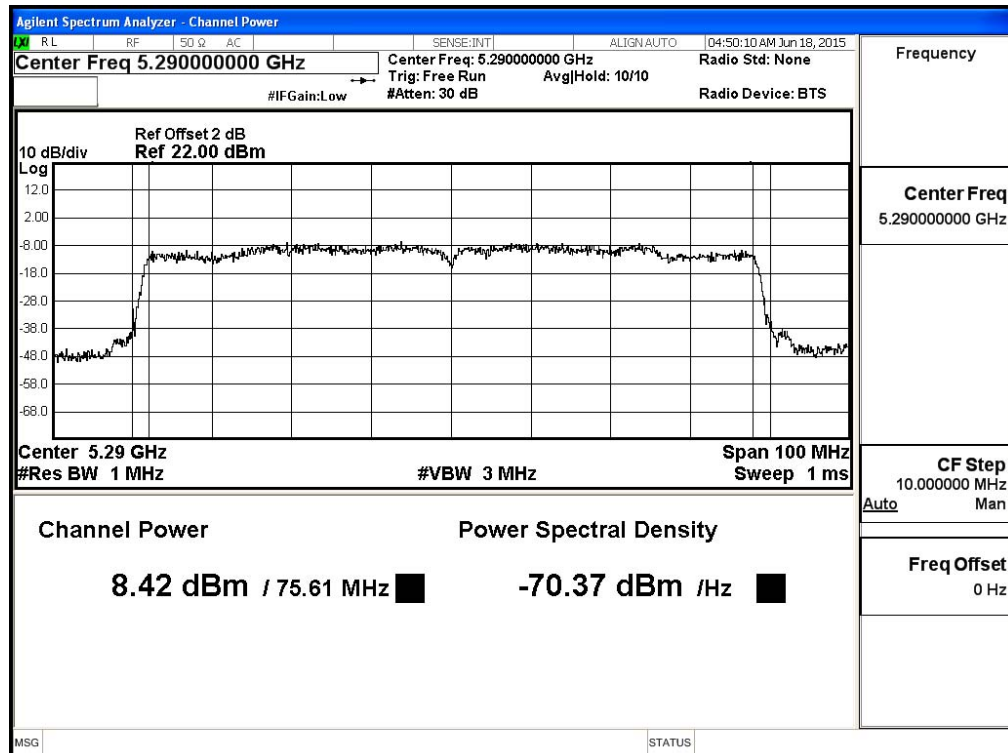
Maximum conducted output power:

Channel 42 – Chain A



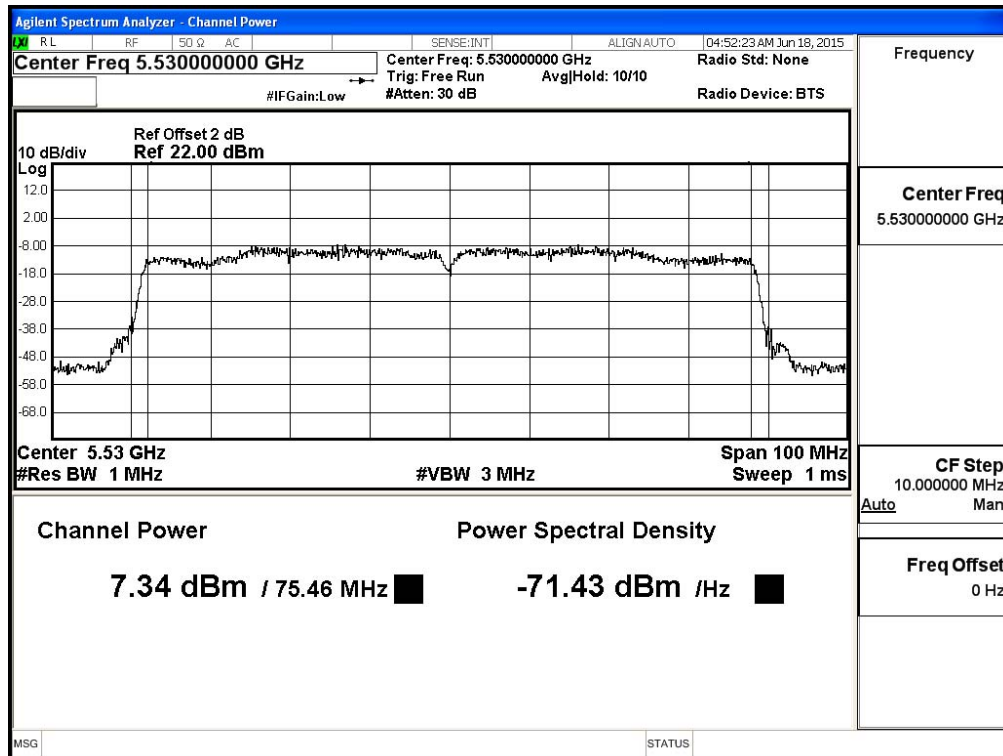
Maximum conducted output power:

Channel 58 – Chain A



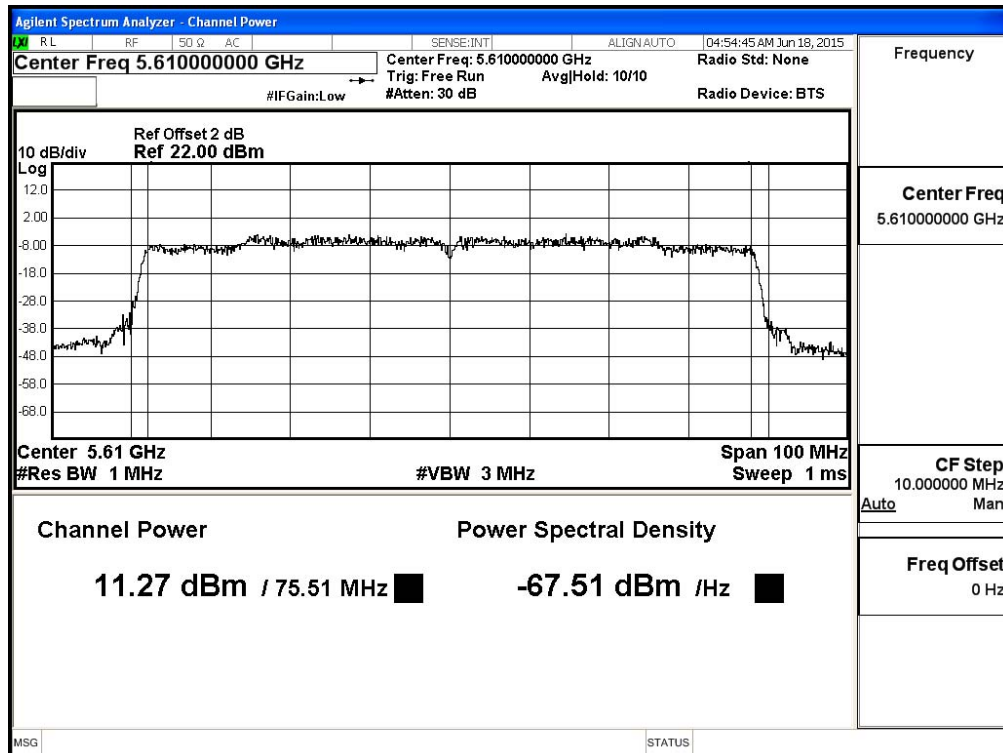
Maximum conducted output power:

Channel 106 – Chain A

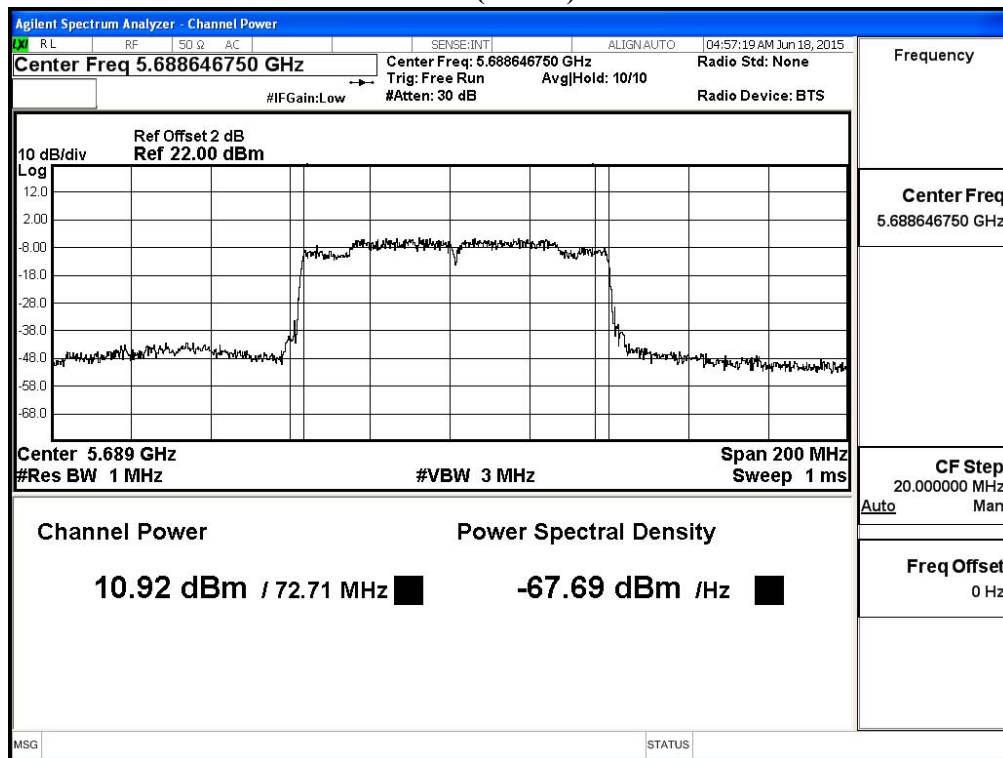


Maximum conducted output power:

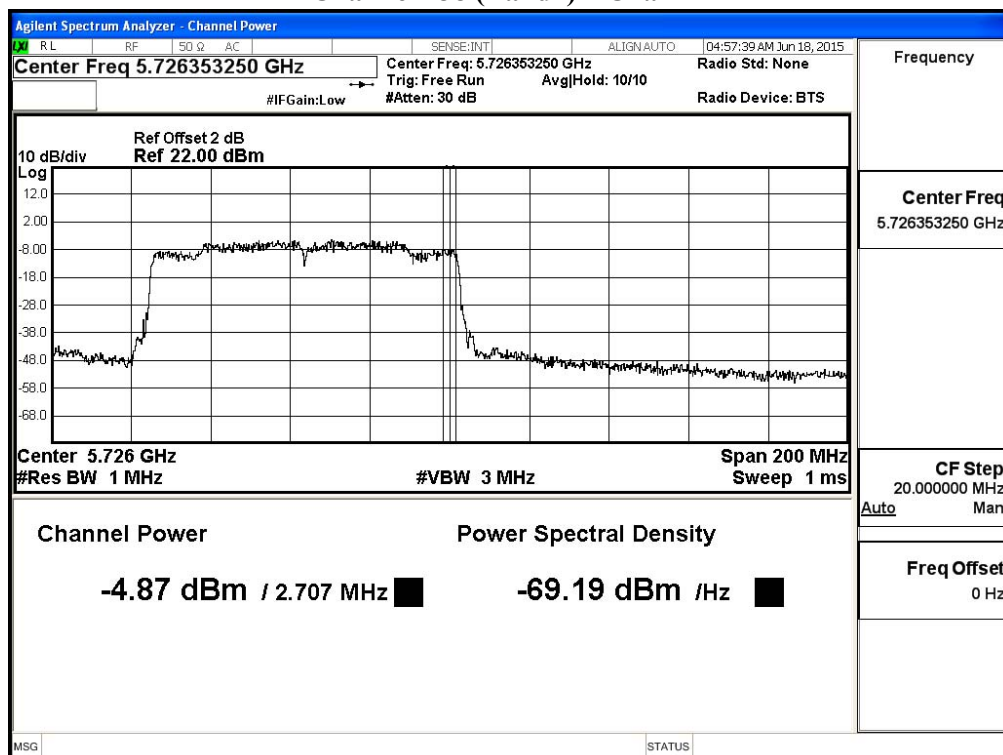
Channel 122 – Chain A



**Maximum conducted output power:
Channel 138 (Band3) – Chain A**

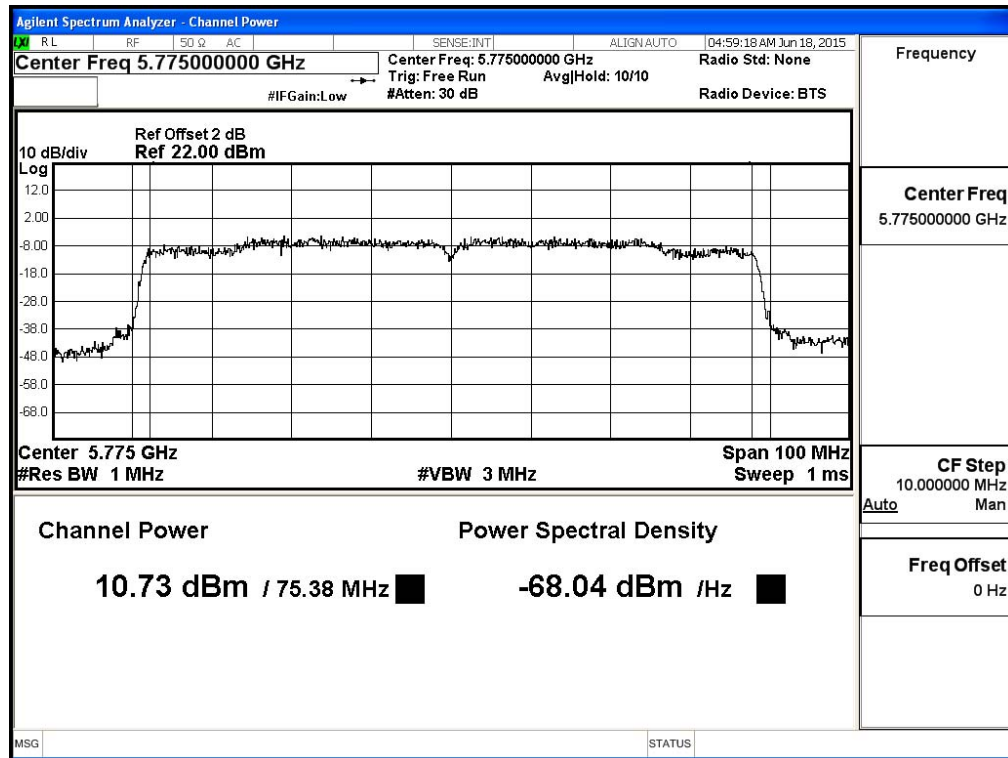


**Maximum conducted output power:
Channel 138 (Band4) – Chain A**



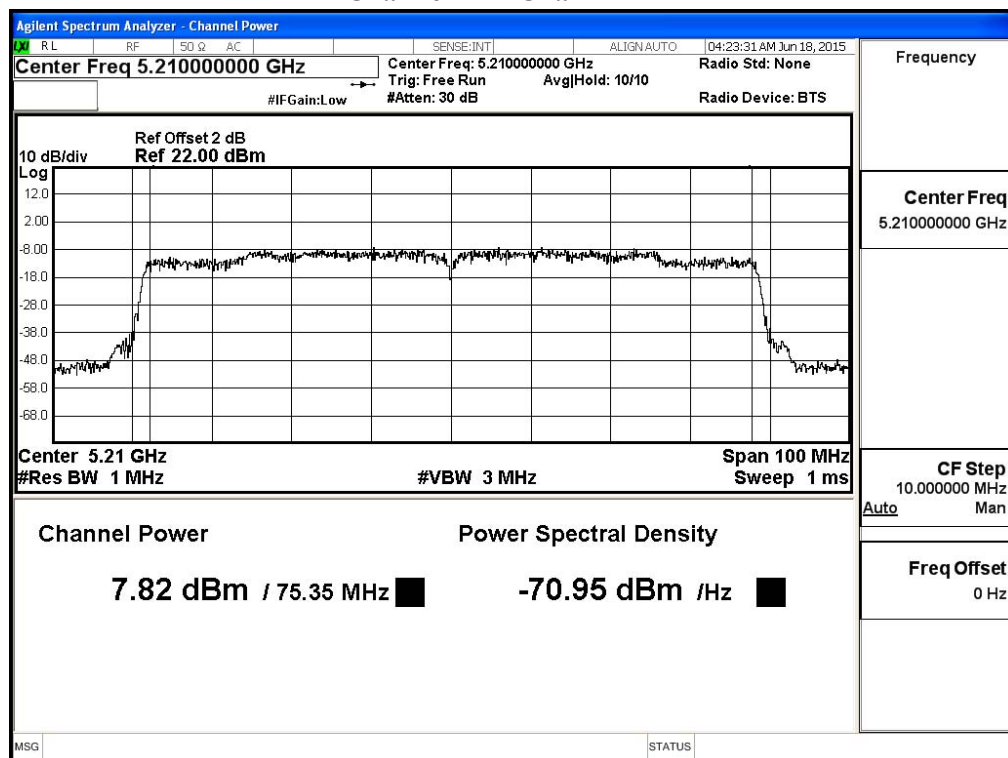
Maximum conducted output power:

Channel 155 – Chain A



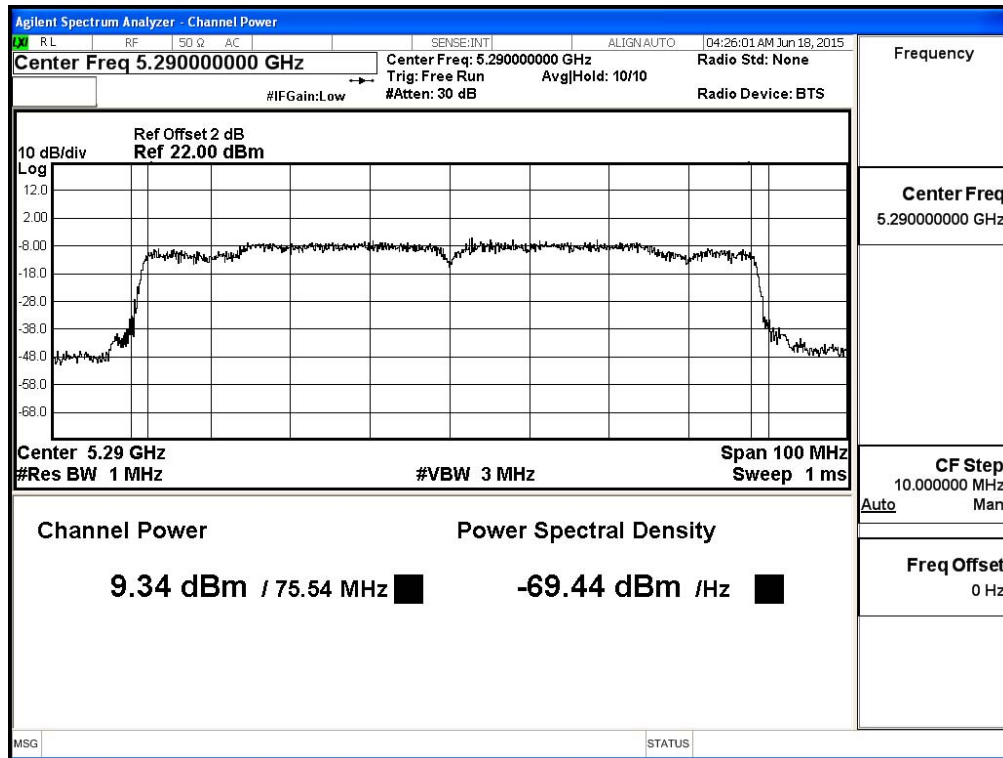
Maximum conducted output power:

Channel 42 – Chain B



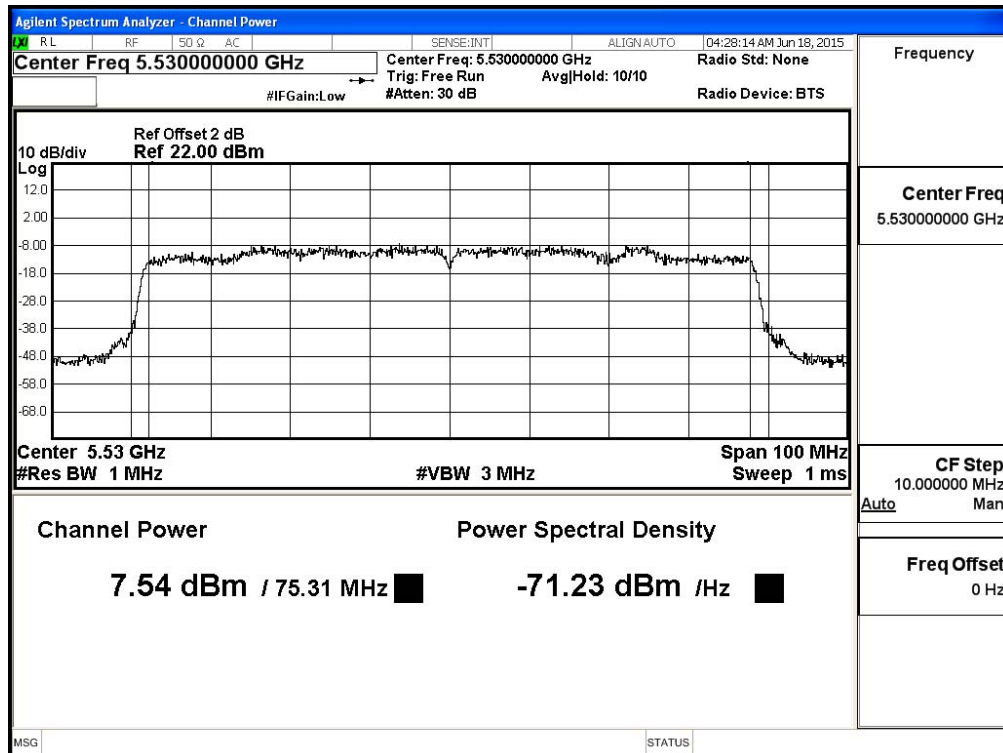
Maximum conducted output power:

Channel 58 – Chain B



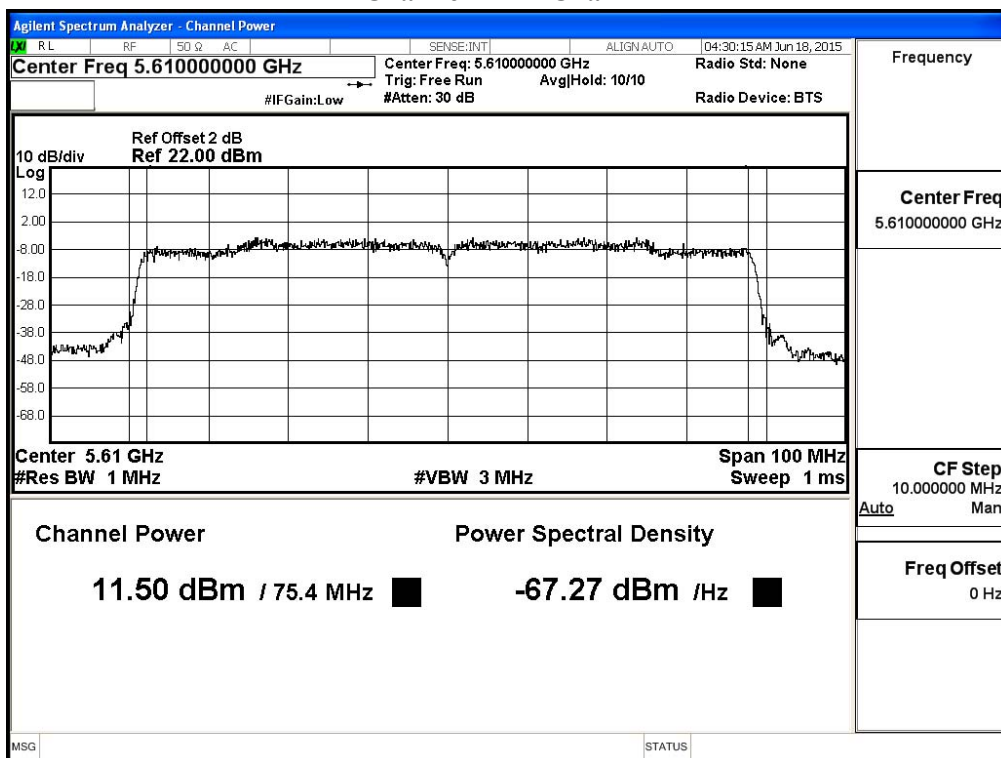
Maximum conducted output power:

Channel 106 – Chain B



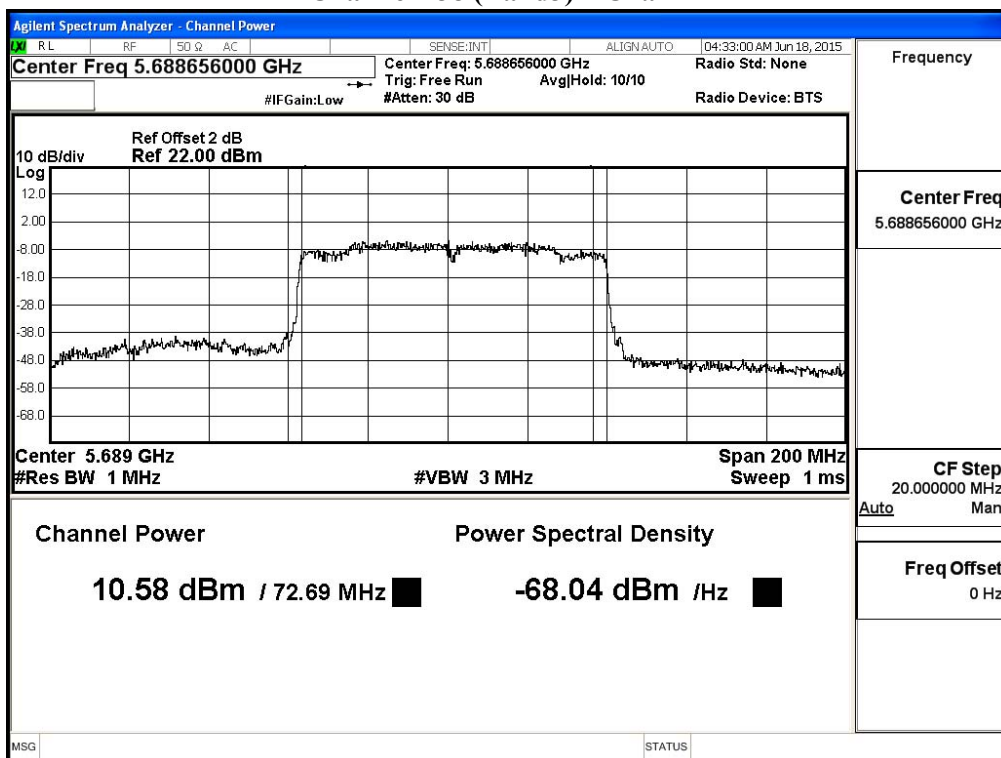
Maximum conducted output power:

Channel 122 – Chain B



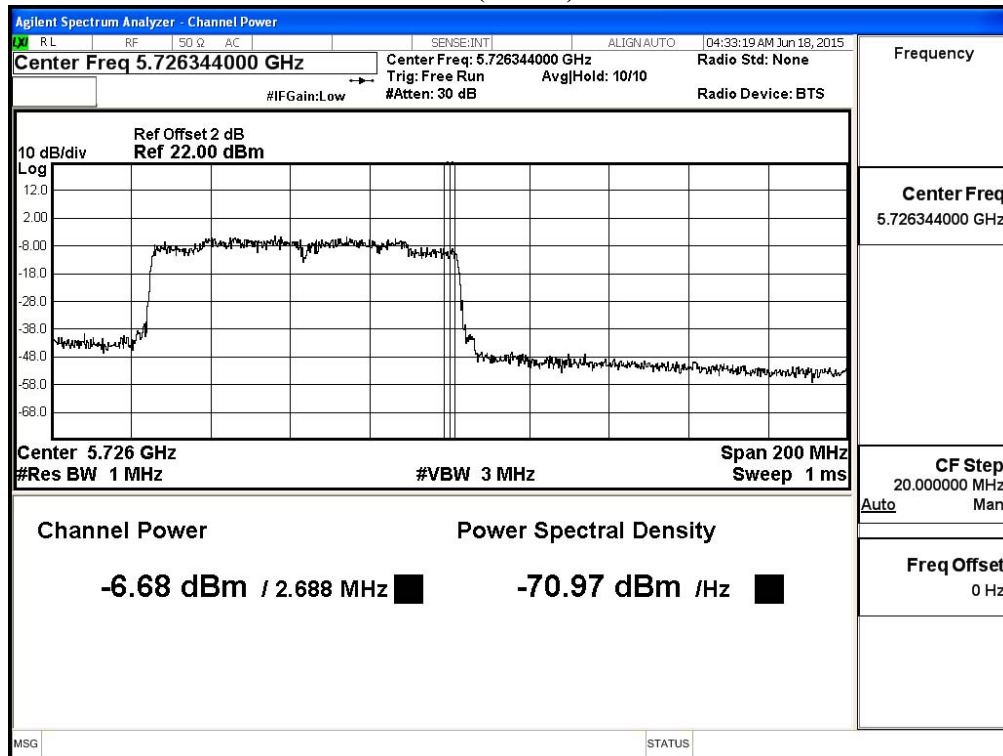
Maximum conducted output power:

Channel 138 (Band3) – Chain B



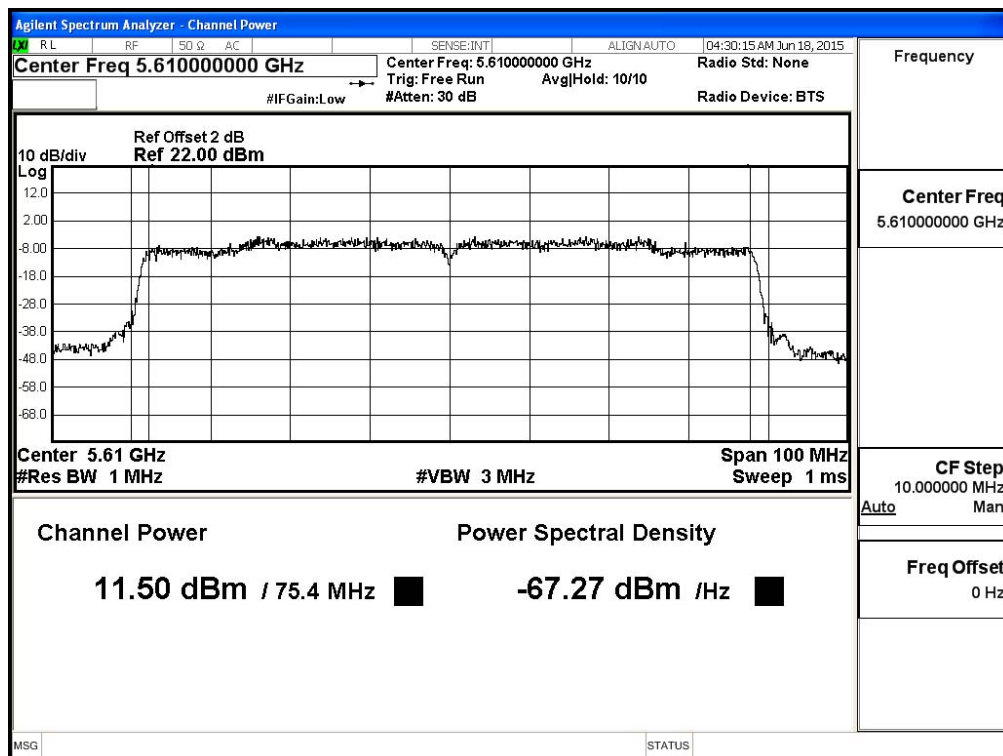
Maximum conducted output power:

Channel 138 (Band4) – Chain B



Maximum conducted output power:

Channel 155 – Chain B



4. Peak Power Spectral Density

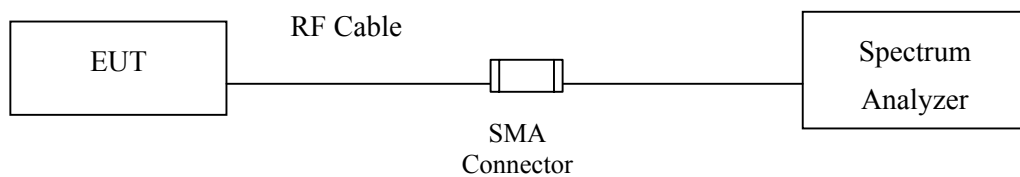
4.1. Test Equipment

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
	Spectrum Analyzer	R&S	FSP40 / 100170	Jun., 2015
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun., 2015
X	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr, 2015

Note:

1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.
2. The test instruments marked with “X” are used to measure the final test results.

4.2. Test Setup



4.3. Limits

- (1) For the band 5.15-5.25 GHz,
 - (i) For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.
 - (ii) For an indoor access point operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.
 - (iii) For fixed point-to-point access points operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power or maximum power spectral density. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum conducted output power and maximum power spectral density is required for each 1 dB of antenna gain in excess of 23 dBi. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the

equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations. (iv) For mobile and portable client devices in the 5.15-5.25 GHz band, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.+

- (2) For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.
- (3) For the band 5.725-5.85 GHz, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point UNII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

4.4. Test Procedure

The EUT was setup to ANSI C63.10, 2013; tested to UNII test procedure of FCC KDB-789033 for compliance to FCC 47CFR Subpart E requirements.

The Peak Power Spectral Density using KDB 789033 section F) procedure, Create an average power spectrum for the EUT operating mode being tested by following the instructions in section E)2) for measuring maximum conducted output power using a spectrum analyzer.

SA-1 method is selected to run the test.

For the band 5.725-5.85 GHz, Scale the observed power level to an equivalent value in 500 kHz by adjusting (increase) the measured power by a bandwidth correction factor (BWCF) where $BWCF = 10\log(500\text{ kHz}/100\text{ kHz}) = 6.98\text{ dB}$.

4.5. Uncertainty

$\pm 1.27\text{ dB}$

4.6. Test Result of Peak Power Spectral Density

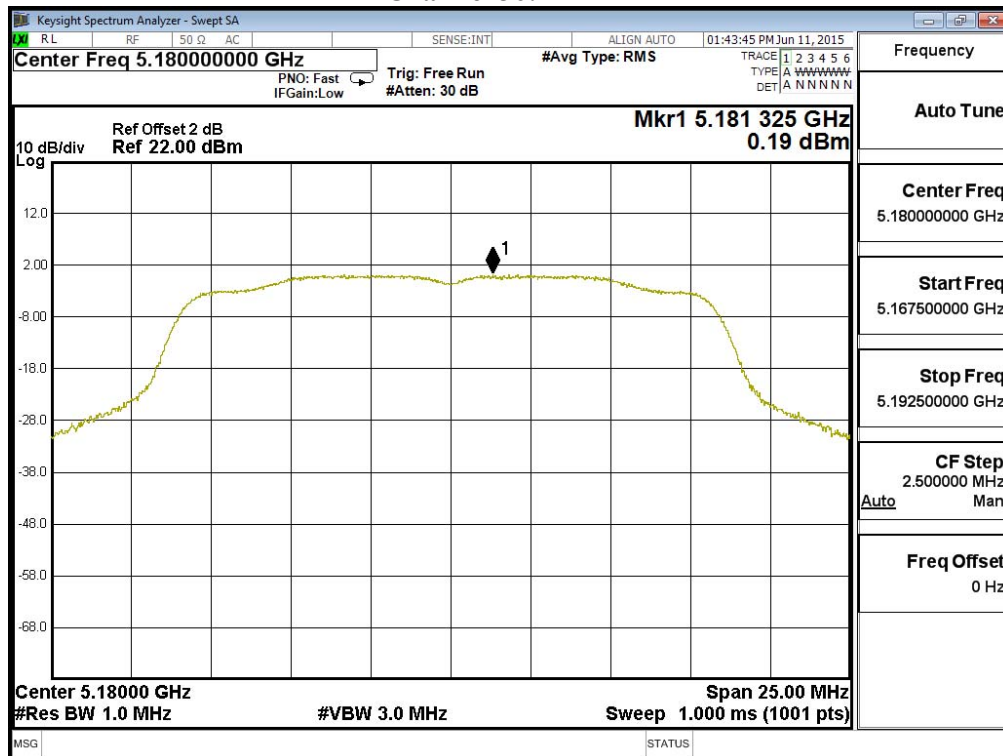
Product : RUGGED TABLET COMPUTER
 Test Item : Peak Power Spectral Density
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11a-6Mbps)

Channel Number	Frequency (MHz)	Data Rate (Mbps)	Measurement Level (dBm)	Required Limit (dBm)	Result
36	5180	6	0.190	<11	Pass
44	5220	6	1.760	<11	Pass
48	5240	6	2.130	<11	Pass
52	5260	6	2.800	<11	Pass
60	5300	6	2.780	<11	Pass
64	5320	6	-0.060	<11	Pass
100	5500	6	0.970	<11	Pass
116	5580	6	2.940	<11	Pass
140	5700	6	0.940	<11	Pass

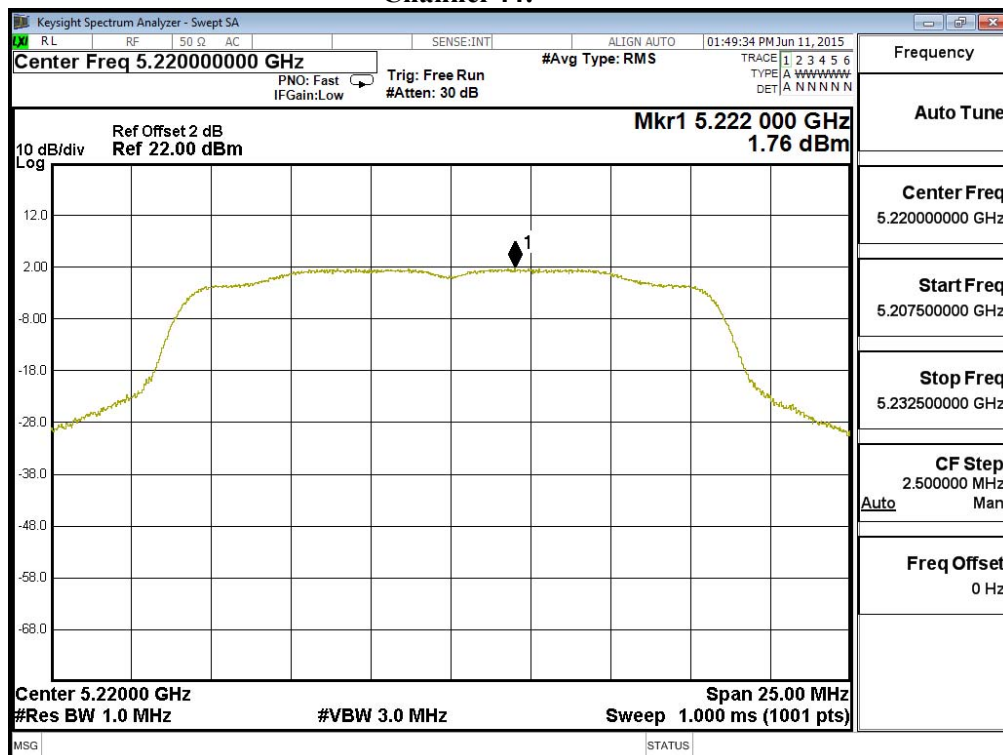
Channel Number	Frequency (MHz)	Data Rate (Mbps)	PPSD (dBm)	BWCF (dB)	Total PSD (dBm)	Required Limit (dBm)	Result
149	5745	6	1.530	6.98	8.510	<30	Pass
157	5785	6	1.670	6.98	8.650	<30	Pass
165	5825	6	1.220	6.98	8.200	<30	Pass

Note 1: The quantity $10 \cdot \log 2$ (two antennas) is added to the spectrum peak value according to document 662911 D01.

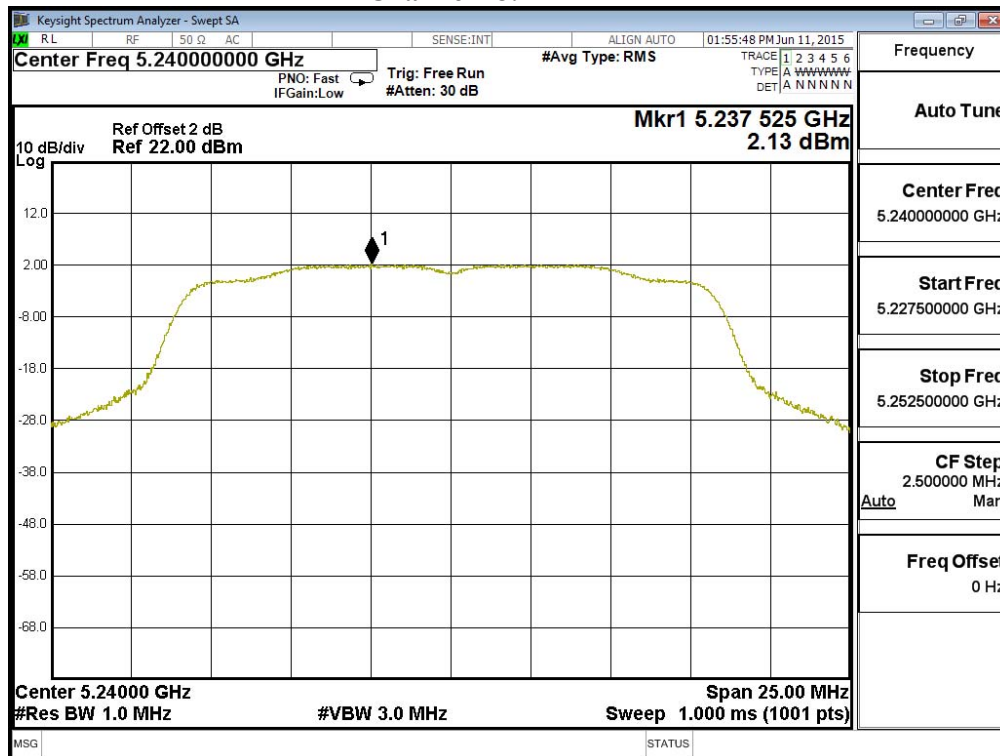
Channel 36:



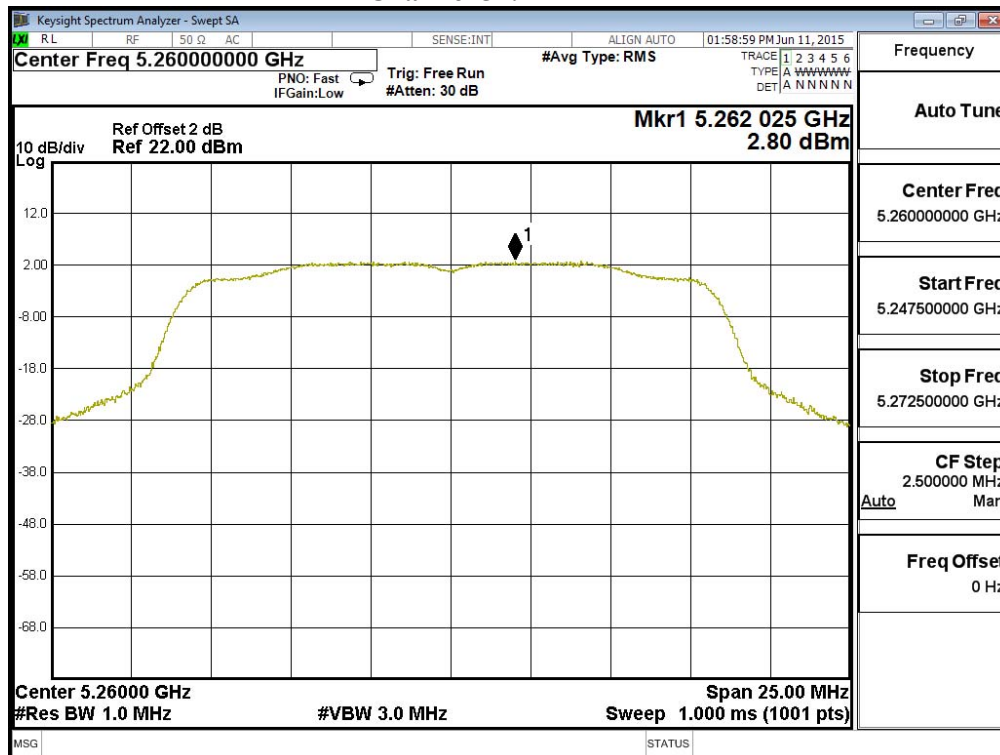
Channel 44:



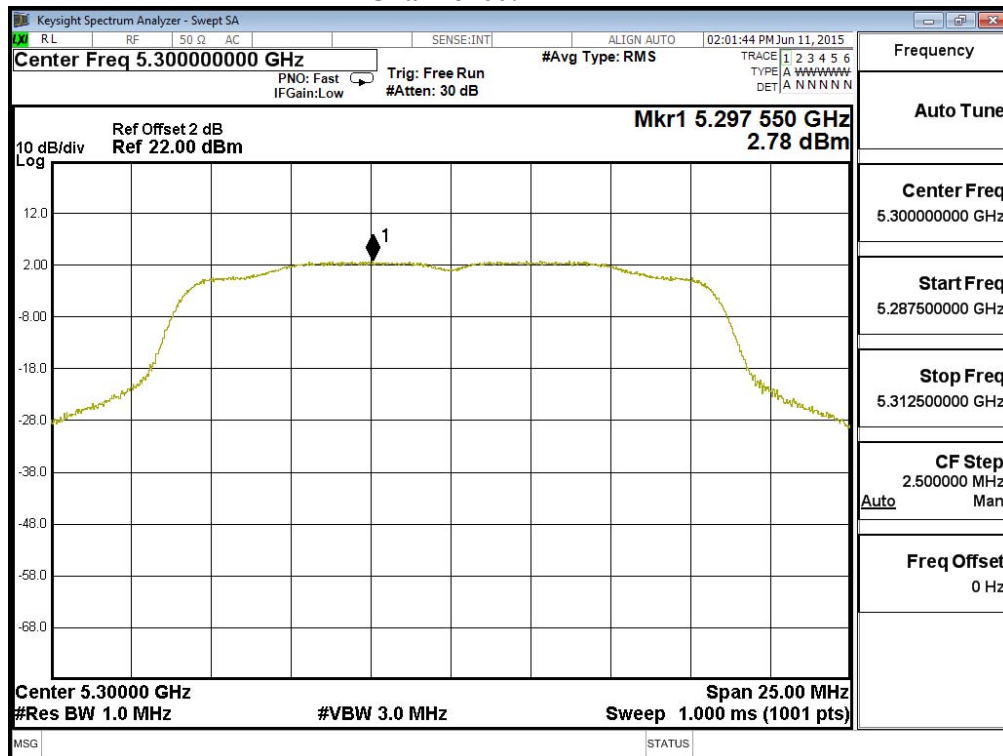
Channel 48:



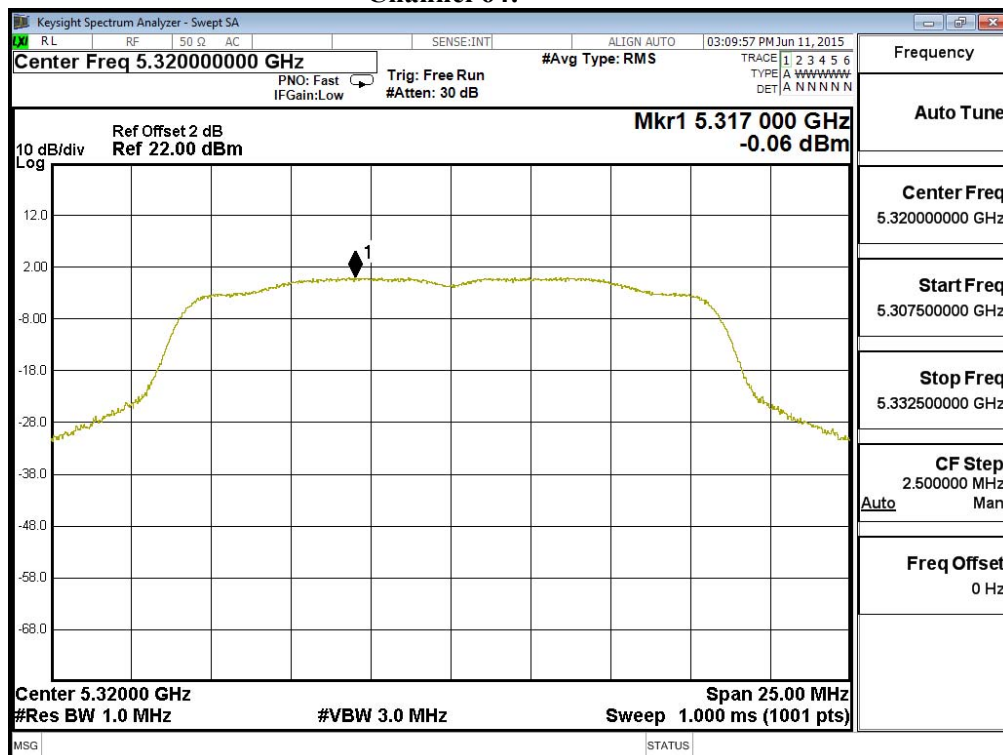
Channel 52:



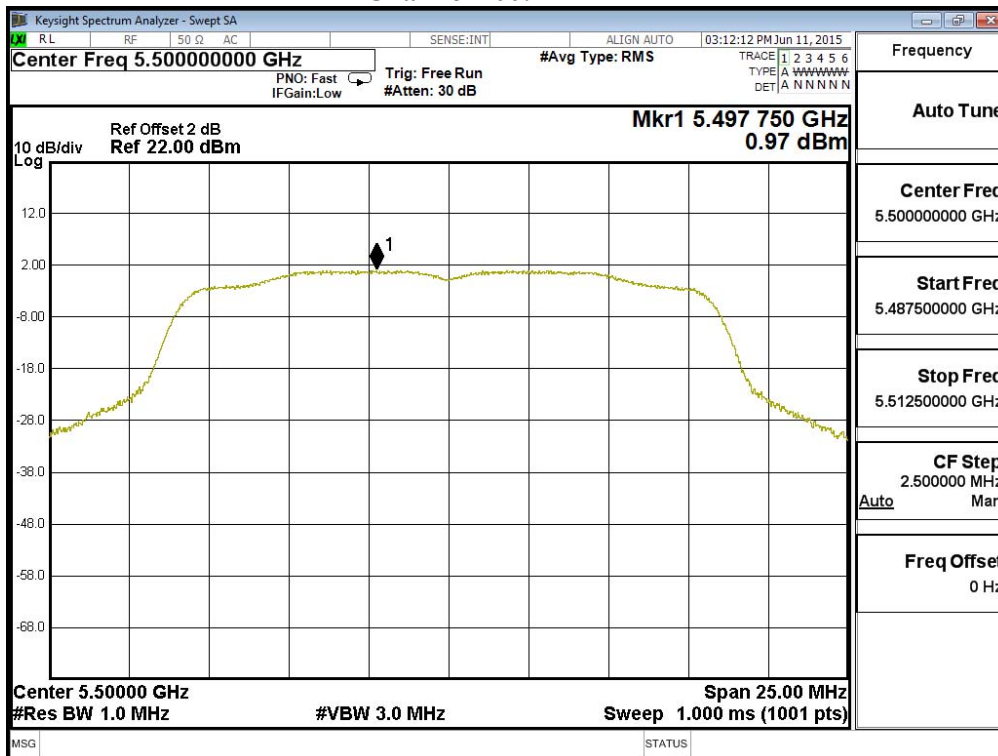
Channel 60:



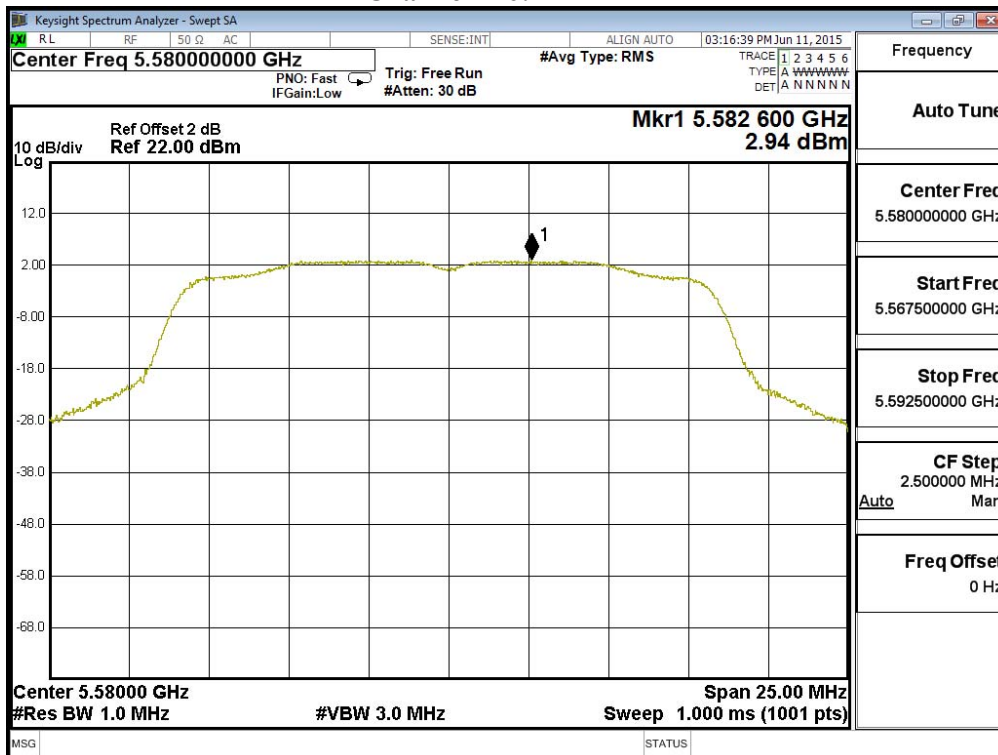
Channel 64:



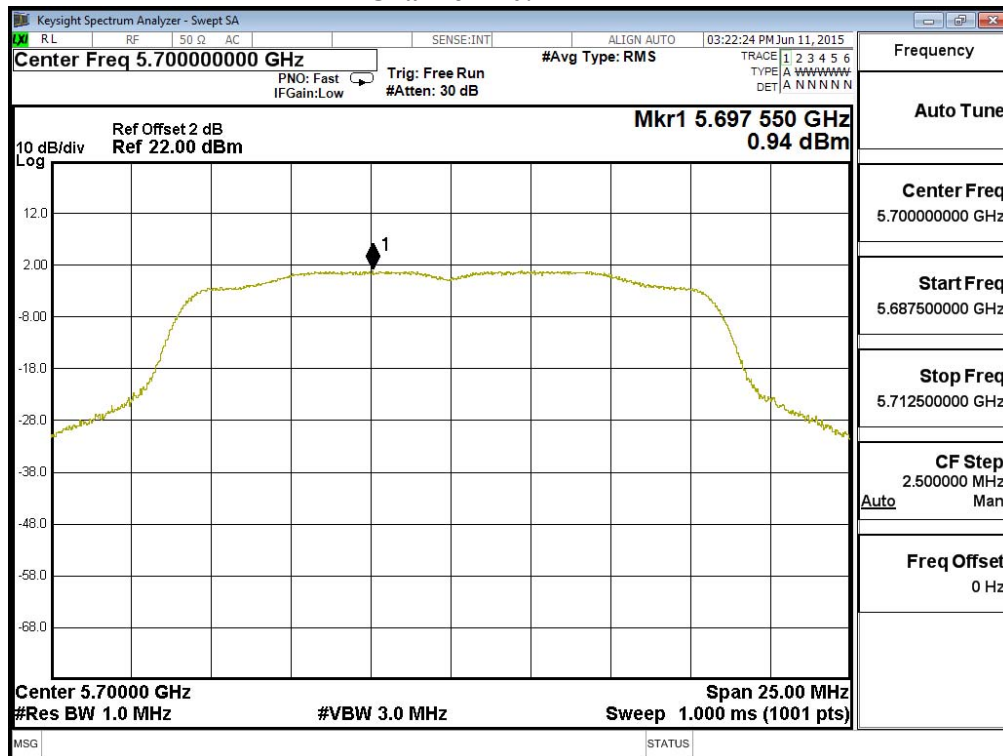
Channel 100:



Channel 116:



Channel 140:



Channel 149

