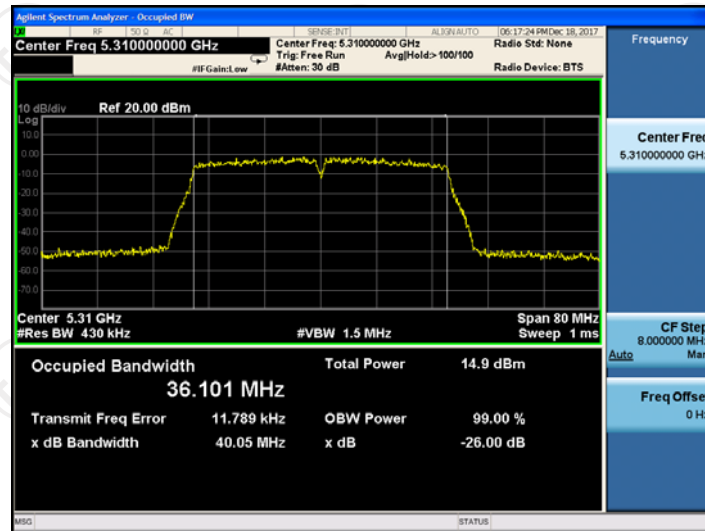
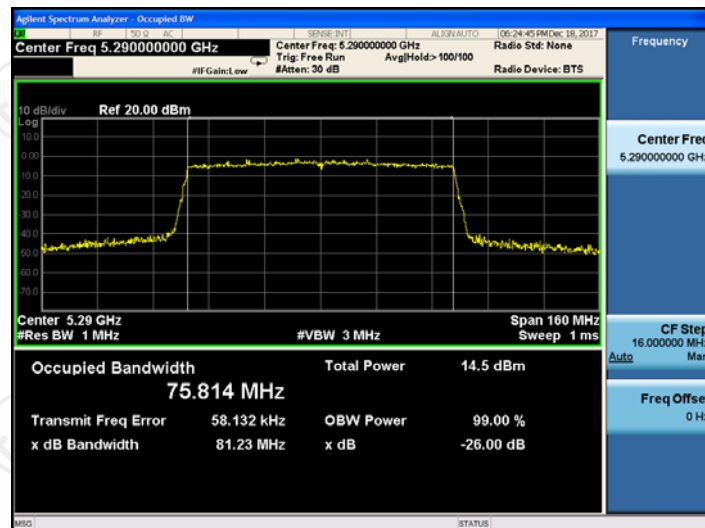


CH62



11ac(HT80)

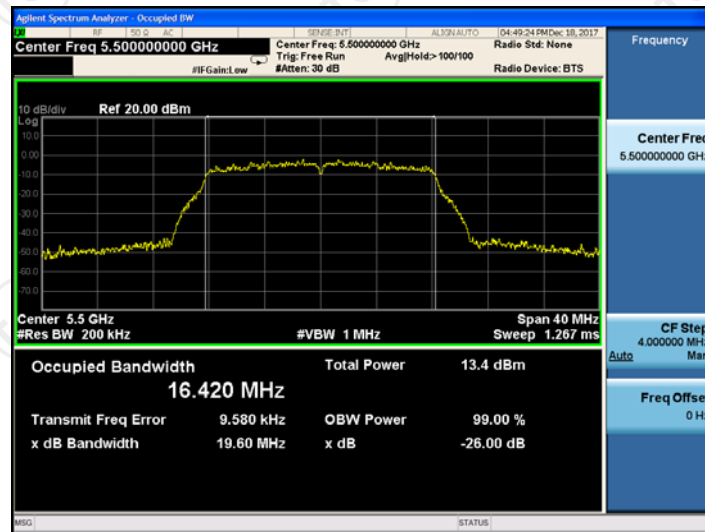
CH58



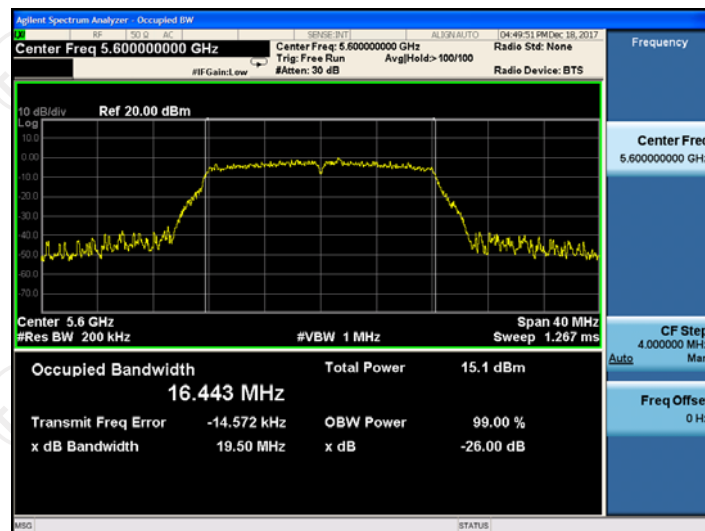
Band 2C(5500-5720MHz)

11a

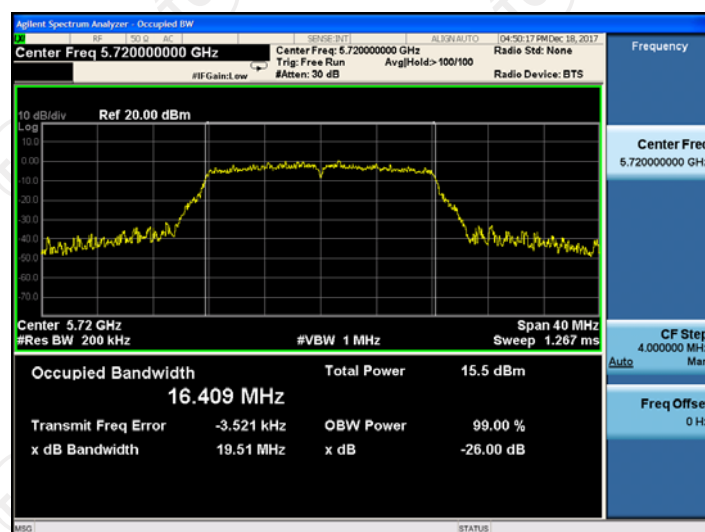
CH100



CH120

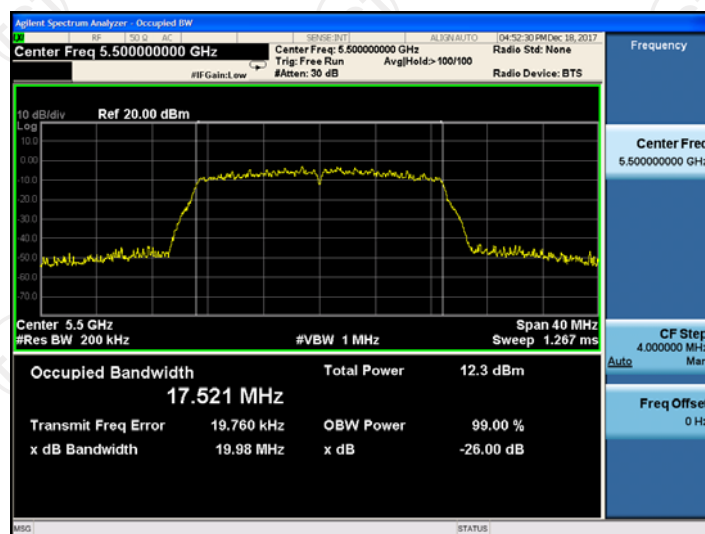


CH144

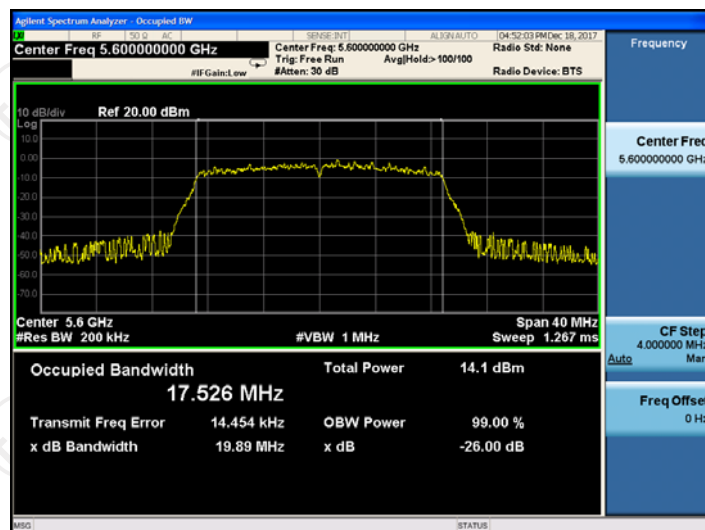


11n(HT20)

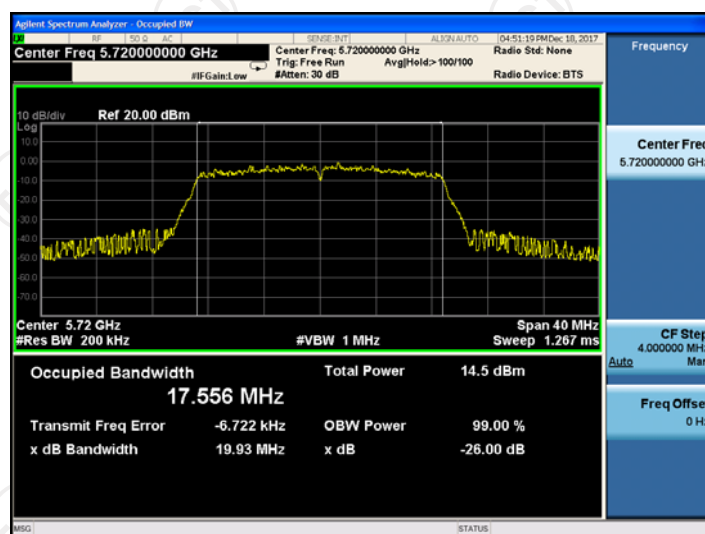
CH100



CH120

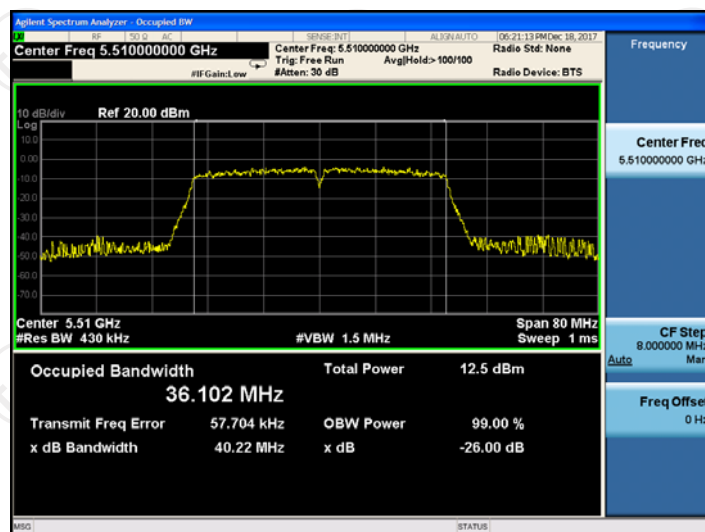


CH144

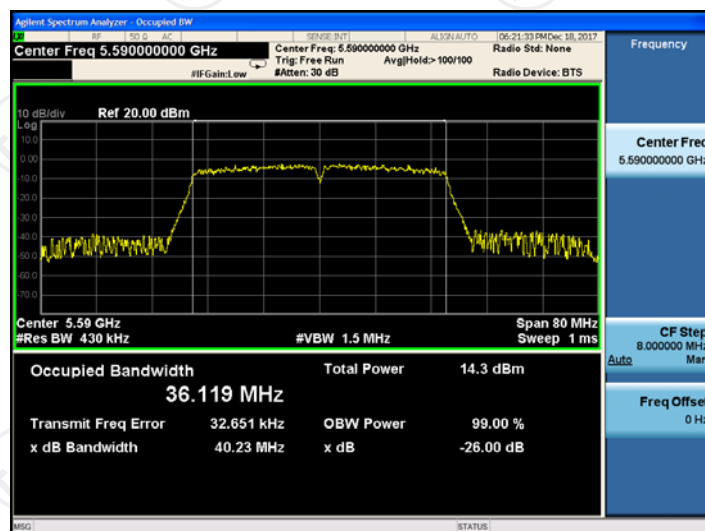


11n(HT40)

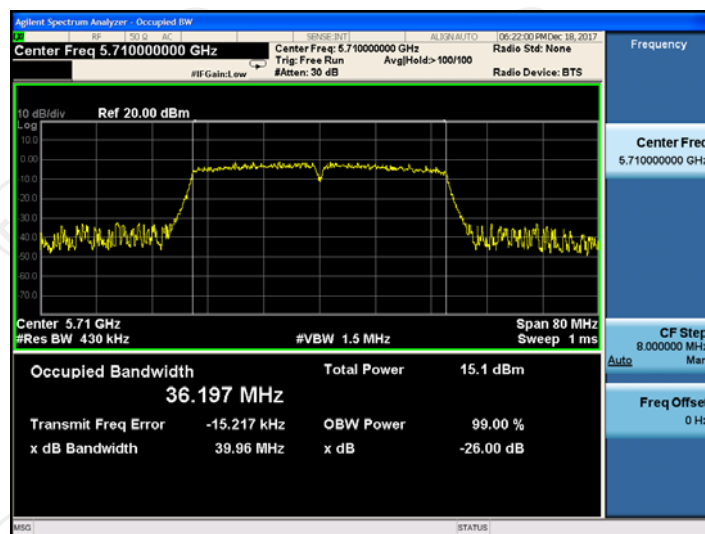
CH102



CH118

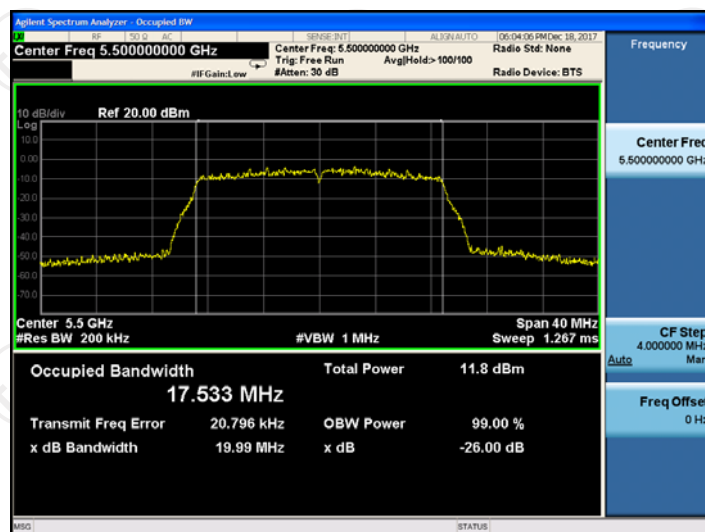


CH142

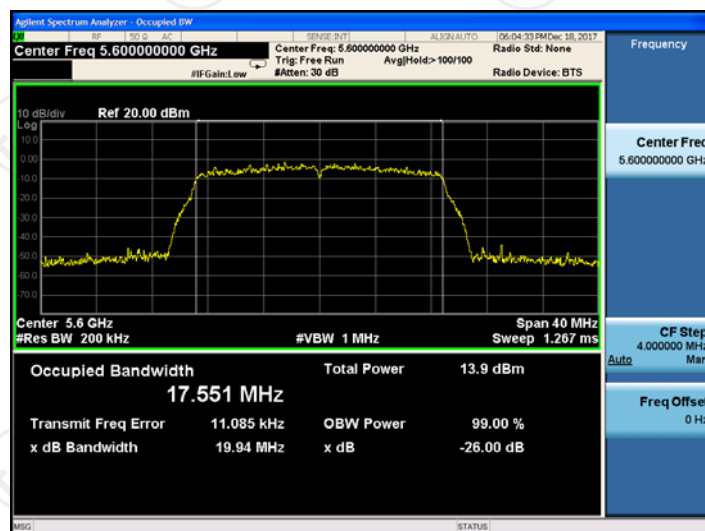


11ac(HT20)

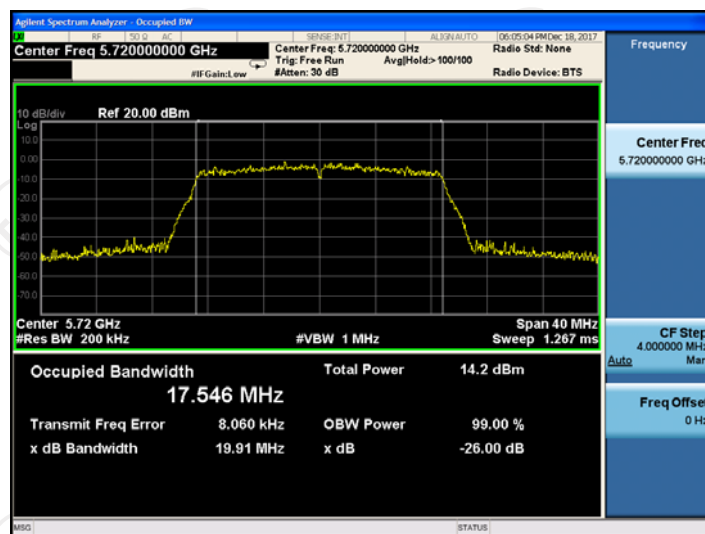
CH100



CH120

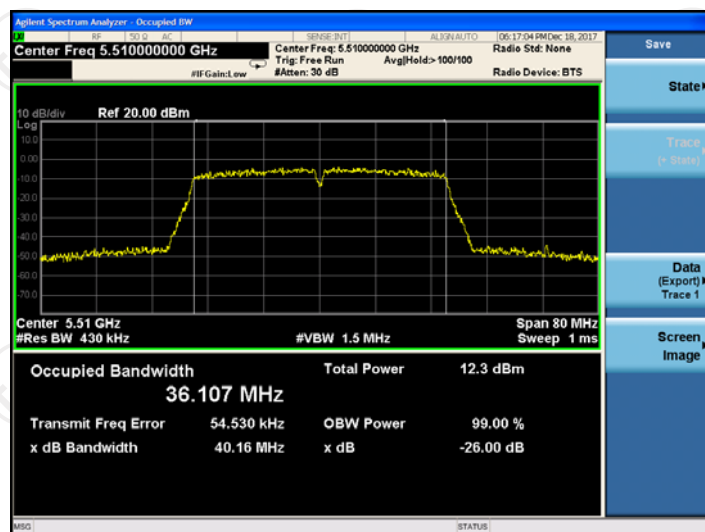


CH144

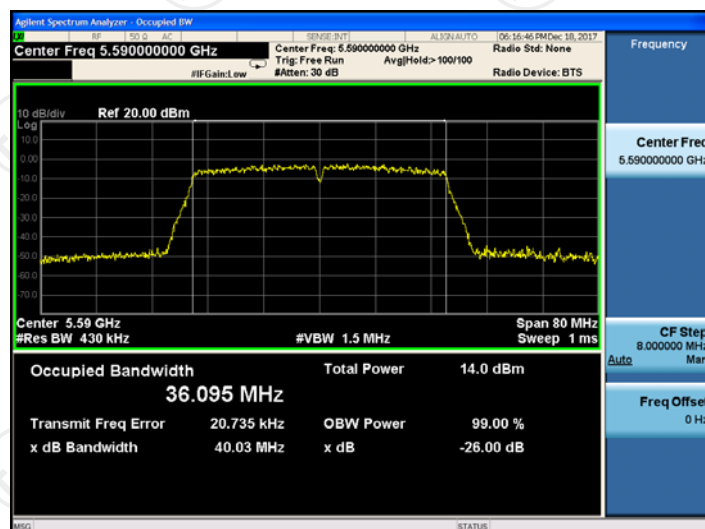


11ac(HT40)

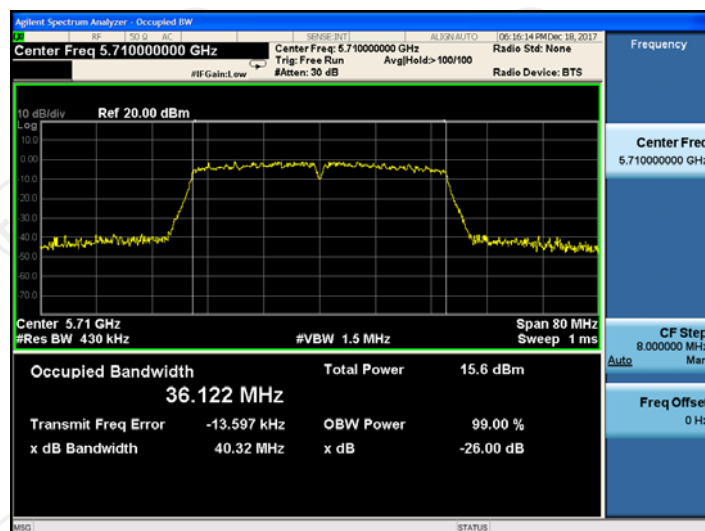
CH102



CH118

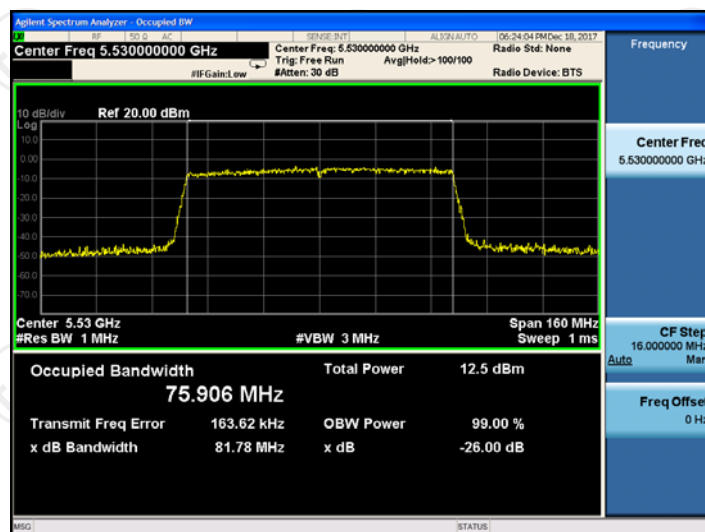


CH142

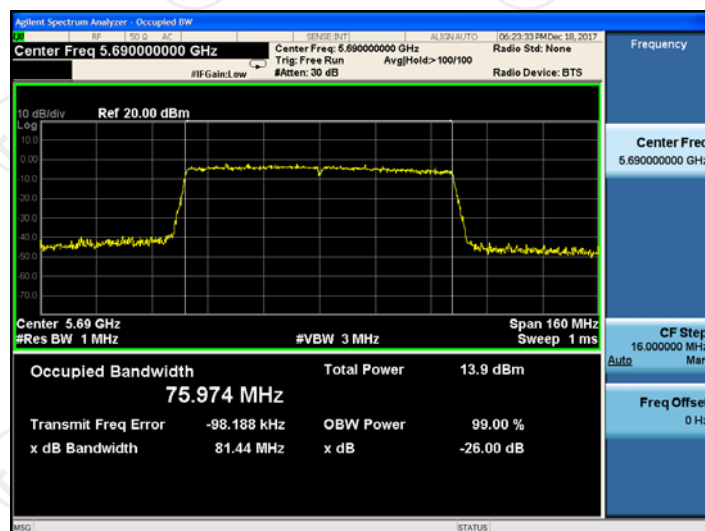


11ac(HT80)

CH106



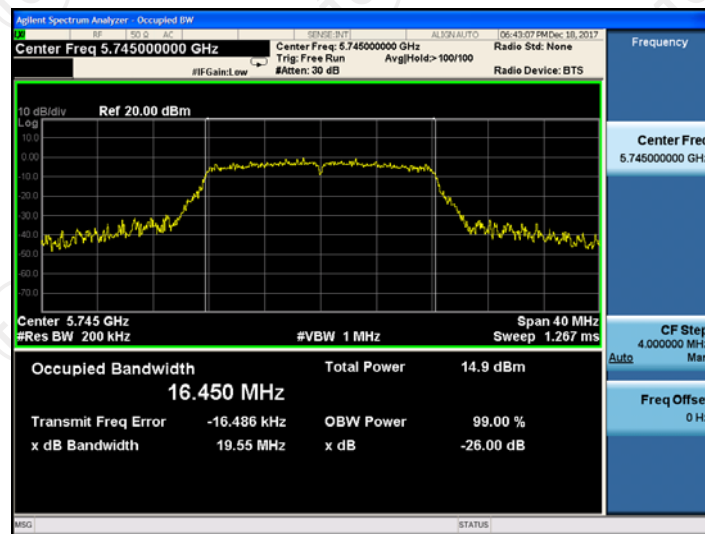
CH138



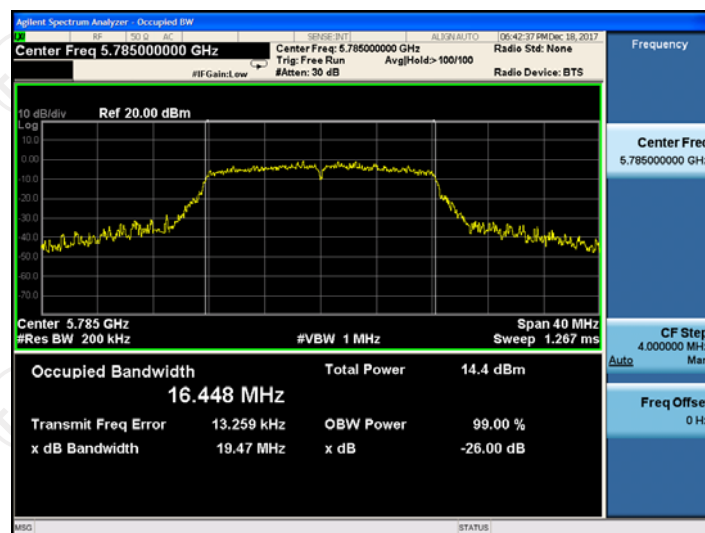
Band 3 (5745-5825MHz)

11a

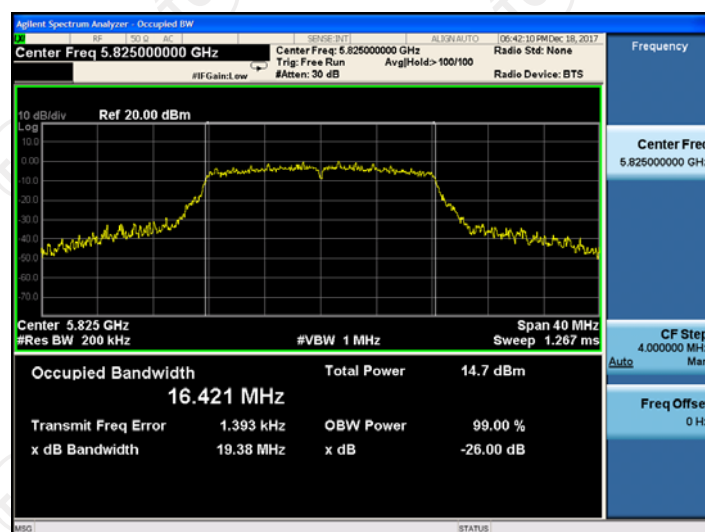
CH149



CH157

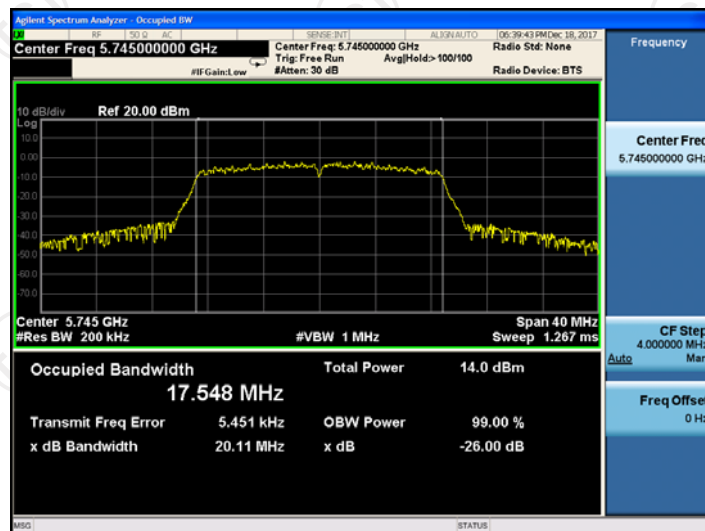


CH165

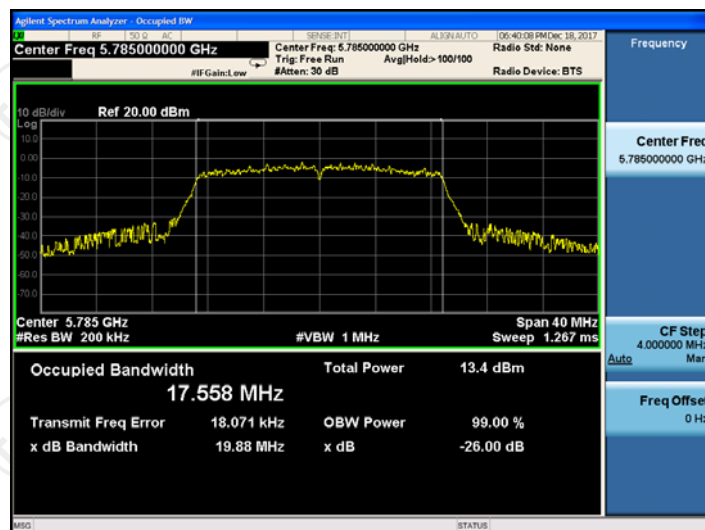


11n(HT20)

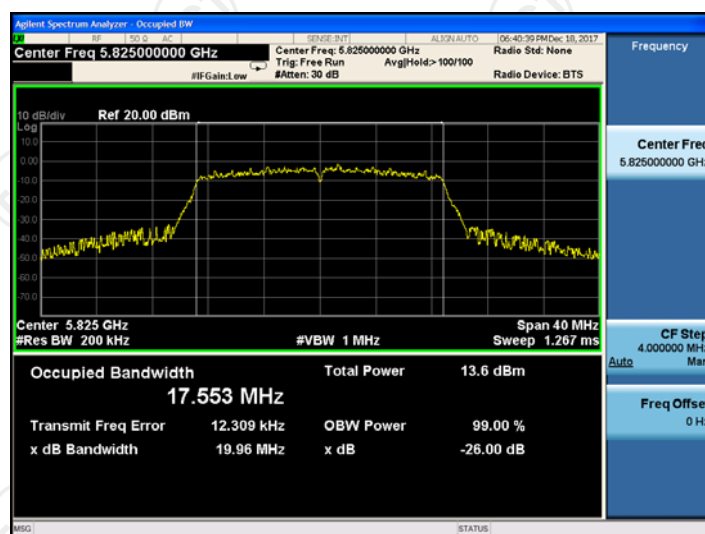
CH149



CH157

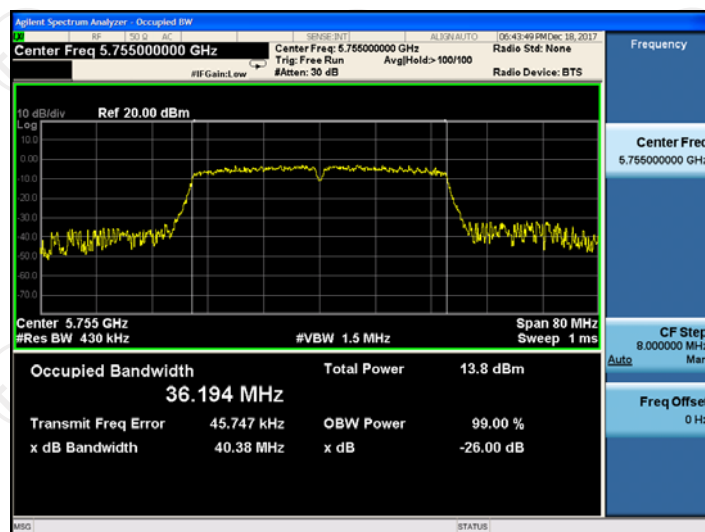


CH165

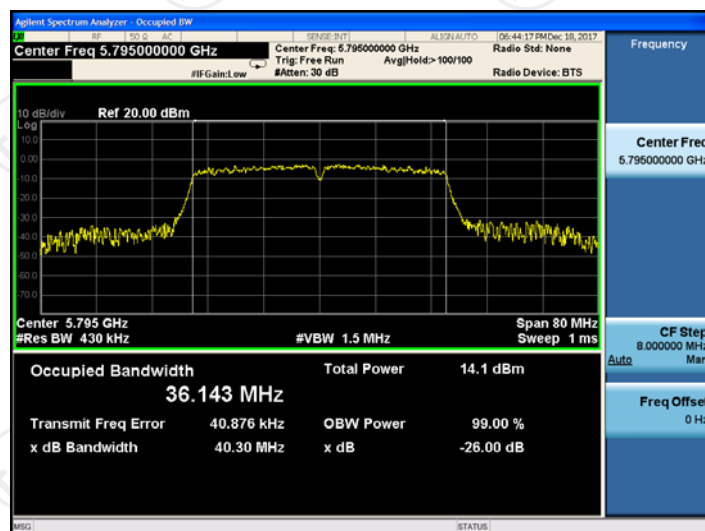


11n(HT40)

CH151

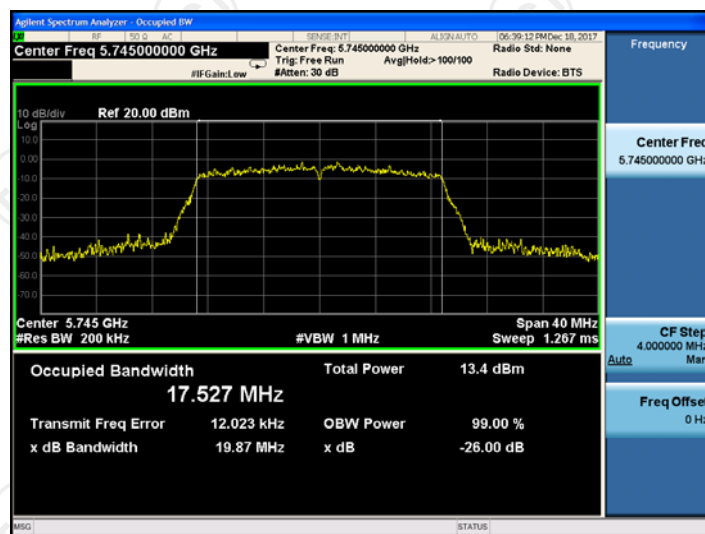


CH159

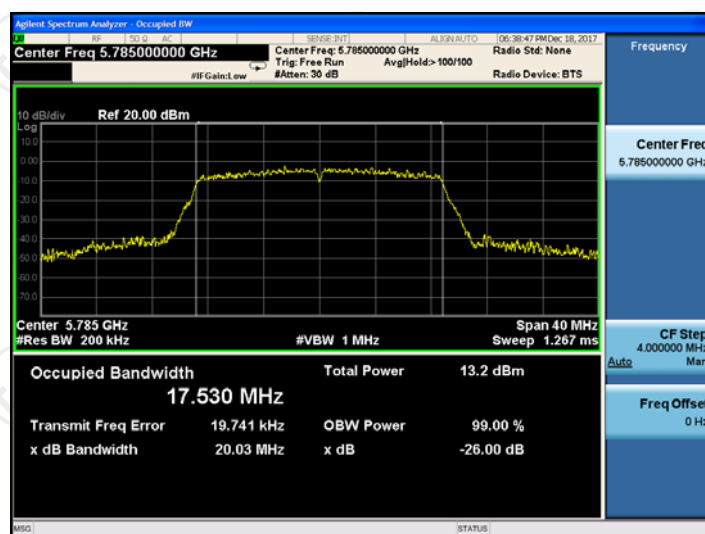


11ac(HT20)

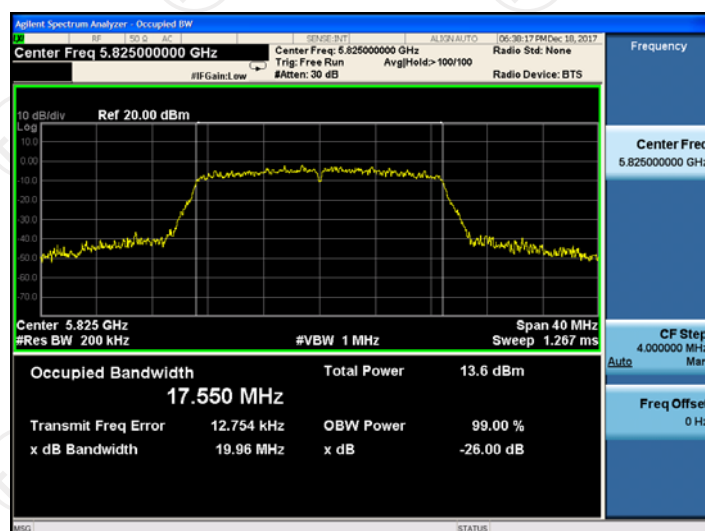
CH149



CH157

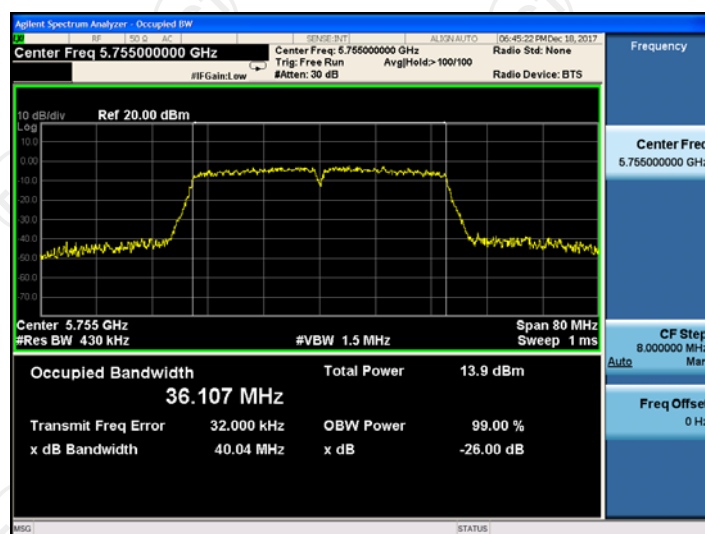


CH165

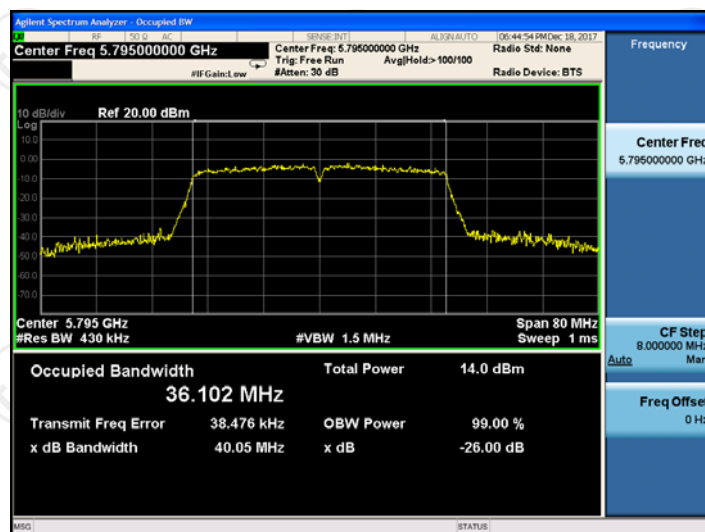


11ac(HT40)

CH151

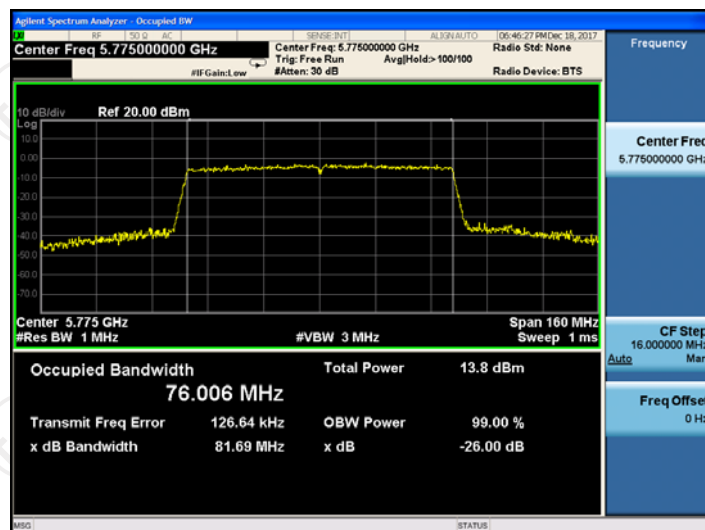


CH159



11ac(HT80)

CH155



6.6. Power Spectral Density

6.6.1. Test Specification

Test Requirement:	FCC Part15 E Section 15.407 (a)
Test Method:	KDB662911 D01 Multiple Transmitter Output v02r01 KDB789033 D02 General UNII Test Procedures New Rules v02 Section F
Limit:	$\leq 11.00\text{dBm/MHz}$ for Band 1 5150MHz-5250MHz(client device) $\leq 11.00\text{dBm/MHz}$ for Band 2A&2C 5250-5350&5470-5725 $\leq 30.00\text{dBm/500KHz}$ for Band 3 5725MHz-5850MHz The e.i.r.p spectral density for Band 1 5150MHz – 5250 MHz should not exceed 10dBm/MHz
Test Setup:	 Spectrum Analyzer EUT
Test Mode:	Transmitting mode with modulation
Test Procedure:	1. Set the spectrum analyzer or EMI receiver span to view the entire emission bandwidth. 1. Set RBW = 510 kHz/1 MHz, VBW $\geq 3 \times$ RBW, Sweep time = Auto, Detector = RMS. 2. Allow the sweeps to continue until the trace stabilizes. 3. Use the peak marker function to determine the maximum amplitude level. 4. The E.I.R.P spectral density used radiated test method. At a test site that has been validated using the procedures of ANSI C63.4 or the latest CISPR 16-1-4 for measurements above 1 GHz, so as to simulate a near free-space environment.
Test Result:	PASS

6.6.2. Test Instruments

RF Test Room				
Equipment	Manufacturer	Model	Serial Number	Calibration Due
Spectrum Analyzer	Agilent	N9020A	MY49100060	Sep. 27, 2018
RF Cable (9KHz-40GHz)	TCT	RE-03	N/A	Sep. 27, 2018
Antenna Connector	TCT	RFC-03	N/A	Sep. 27, 2018

Note: The calibration interval of the above test instruments is 12 months and the calibrations are traceable to international system unit (SI).

6.6.3. Test data

Configuration Band 1 (5180-5240 MHz) / Antenna 0+Antenna 1						
Mode	Test channel	Power Spectral Density			Limit (dBm/MHz)	Result
		Ant0	Ant1	Total		
11a	CH36	4.52	4.70	7.62	11	PASS
11a	CH40	4.90	4.70	7.81	11	PASS
11a	CH48	4.82	4.50	7.67	11	PASS
11n(HT20)	CH36	2.63	2.80	5.73	11	PASS
11n(HT20)	CH40	2.94	2.31	5.65	11	PASS
11n(HT20)	CH48	2.93	2.53	5.74	11	PASS
11n(HT40)	CH38	-0.95	-0.87	2.10	11	PASS
11n(HT40)	CH46	-0.66	-0.34	2.51	11	PASS
11ac(HT20)	CH36	2.62	2.32	5.48	11	PASS
11ac(HT20)	CH40	1.41	2.37	4.93	11	PASS
11ac(HT20)	CH48	2.17	2.45	5.32	11	PASS
11ac(HT40)	CH38	-0.34	-0.22	2.73	11	PASS
11ac(HT40)	CH46	-0.72	-0.20	2.56	11	PASS
11ac(HT80)	CH42	-3.39	-3.12	-0.24	11	PASS

Note: 1. All antennas have the same gain. $G_{ANT}=2\text{dBi}$, Array Gain= $10\log(N_{ANT}/N_{SS})=3.01\text{dBi}$

Directional Gain= $G_{ANT} + \text{Array Gain}=5.01\text{dBi}$, $5.01\text{dBi} < 6\text{dBi}$ so limit= 11dBm/MHz

2. The total PSD method used the sum spectra maxima across the outputs.

Configuration Band 2A (5260-5320MHz) / Antenna 0+Antenna 1

Mode	Test channel	Power Spectral Density			Limit (dBm/MHz)	Result
		Ant0	Ant1	Total		
11a	CH52	4.98	4.54	7.78	11	PASS
11a	CH60	4.82	5.19	8.02	11	PASS
11a	CH64	4.78	4.83	7.82	11	PASS
11n(HT20)	CH52	3.05	2.93	6.00	11	PASS
11n(HT20)	CH60	3.08	2.62	5.87	11	PASS
11n(HT20)	CH64	3.08	2.73	5.92	11	PASS
11n(HT40)	CH54	-0.61	-0.26	2.58	11	PASS
11n(HT40)	CH62	-0.54	0.064	2.78	11	PASS
11ac(HT20)	CH52	2.26	2.68	5.49	11	PASS
11ac(HT20)	CH60	2.76	3.32	6.06	11	PASS
11ac(HT20)	CH64	2.42	2.98	5.72	11	PASS
11ac(HT40)	CH54	-0.64	-0.42	2.48	11	PASS
11ac(HT40)	CH62	-0.57	0.15	2.82	11	PASS
11ac(HT80)	CH58	-3.64	-2.31	0.09	11	PASS

Note: 1. All antennas have the same gain. $G_{ANT}=2\text{dBi}$, Array Gain= $10\log(N_{ANT}/N_{SS})=3.01\text{dBi}$

Directional Gain= $G_{ANT} + \text{Array Gain}=5.01\text{dBi}$, $5.01\text{dBi} < 6\text{dBi}$ so limit=11dBm/MHz

2. The total PSD method used the sum spectra maxima across the outputs.

Configuration Band 2C (5500-5720 MHz) / Antenna 0+Antenna 1

Mode	Test channel	Power Spectral Density			Limit (dBm/MHz)	Result
		Ant0	Ant1	Total		
11a	CH100	4.10	4.48	7.30	11	PASS
11a	CH120	4.66	4.91	7.80	11	PASS
11a	CH144	3.78	4.94	7.41	11	PASS
11n(HT20)	CH100	2.23	2.67	5.47	11	PASS
11n(HT20)	CH120	2.79	3.22	6.02	11	PASS
11n(HT20)	CH144	1.78	2.42	5.12	11	PASS
11n(HT40)	CH102	-1.36	-0.61	2.04	11	PASS
11n(HT40)	CH118	-1.00	0.39	2.76	11	PASS
11n(HT40)	CH142	-1.39	0.10	2.43	11	PASS
11ac(HT20)	CH100	1.89	2.72	5.34	11	PASS
11ac(HT20)	CH120	2.41	3.58	6.04	11	PASS
11ac(HT20)	CH144	1.46	3.85	5.83	11	PASS
11ac(HT40)	CH102	-1.42	0.15	2.45	11	PASS
11ac(HT40)	CH118	-1.18	0.57	2.79	11	PASS
11ac(HT40)	CH142	-1.57	1.90	3.51	11	PASS
11ac(HT80)	CH106	-3.72	-2.83	-0.24	11	PASS
11ac(HT80)	CH138	-2.30	-1.71	1.02	11	PASS

Note: 1. All antennas have the same gain. $G_{ANT}=2\text{dBi}$, Array Gain= $10\log(N_{ANT}/N_{SS})=3.01\text{dBi}$

Directional Gain= $G_{ANT} + \text{Array Gain}=5.01\text{dBi}$, $5.01\text{dBi} < 6\text{dBi}$ so limit= 11dBm/MHz

2. The total PSD method used the sum spectra maxima across the outputs.

Configuration Band 3(5745-5825MHz) / Antenna 0+Antenna 1

Mode	Test channel	Power Spectral Density			Limit (dBm/MHz)	Result
		Ant0	Ant1	Total		
11a	CH52	0.88	0.85	3.88	30	PASS
11a	CH60	0.84	0.89	3.88	30	PASS
11a	CH64	1.66	1.07	4.39	30	PASS
11n(HT20)	CH52	-0.64	-0.71	2.34	30	PASS
11n(HT20)	CH60	-0.53	-0.97	2.27	30	PASS
11n(HT20)	CH64	0.49	-0.56	3.01	30	PASS
11n(HT40)	CH54	-4.57	-4.66	-1.60	30	PASS
11n(HT40)	CH62	-4.08	-4.49	-1.27	30	PASS
11ac(HT20)	CH52	-0.59	-0.33	2.55	30	PASS
11ac(HT20)	CH60	-0.54	-0.59	2.45	30	PASS
11ac(HT20)	CH64	0.091	-0.41	2.86	30	PASS
11ac(HT40)	CH54	-3.72	-4.51	-1.09	30	PASS
11ac(HT40)	CH62	-3.77	-3.77	-0.76	30	PASS
11ac(HT80)	CH58	-7.10	-7.38	-4.23	30	PASS

Note: 1. All antennas have the same gain. $G_{ANT}=2\text{dBi}$, Array Gain= $10\log(N_{ANT}/N_{SS})=3.01\text{dBi}$

Directional Gain= $G_{ANT} + \text{Array Gain}=5.01\text{dBi}$, $5.01\text{dBi} < 6\text{dBi}$ so limit=30dBm/MHz

2. The total PSD method used the sum spectra maxima across the outputs.

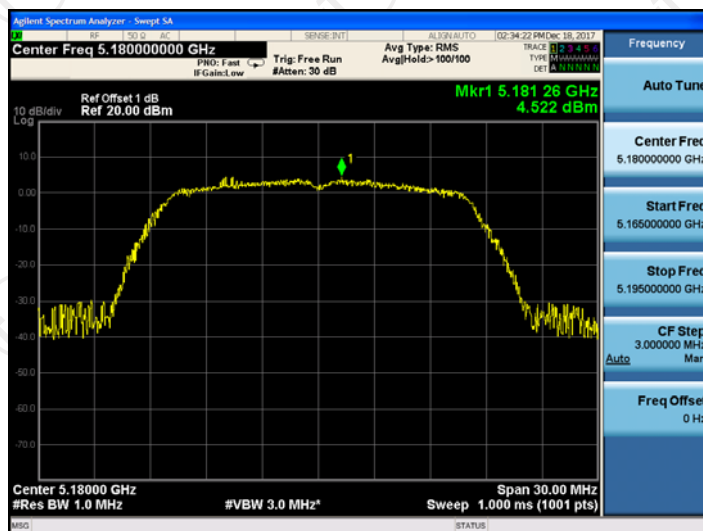
Test plots as follows:

ANT 0

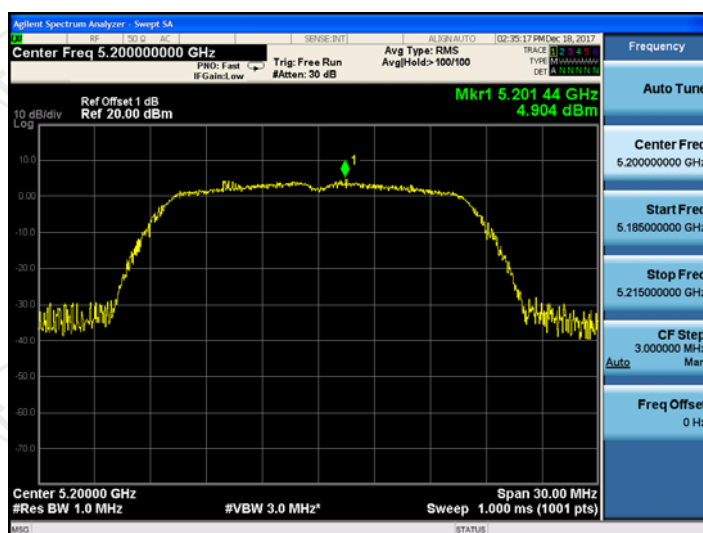
Band1 (5180-5240 MHz)

11a

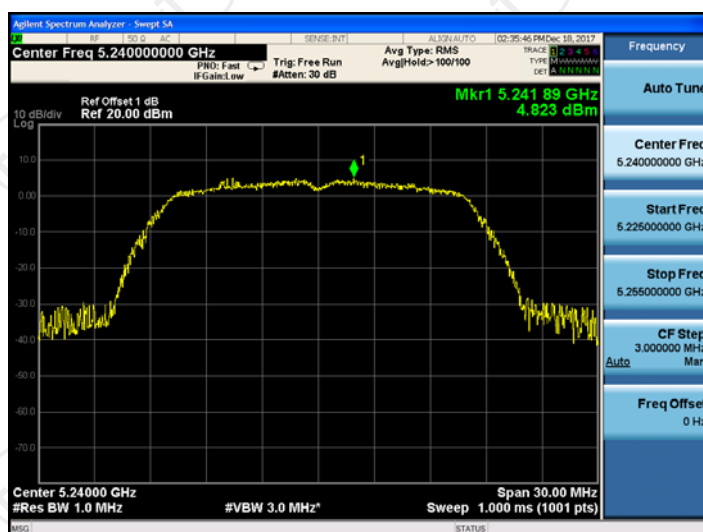
CH36



CH40

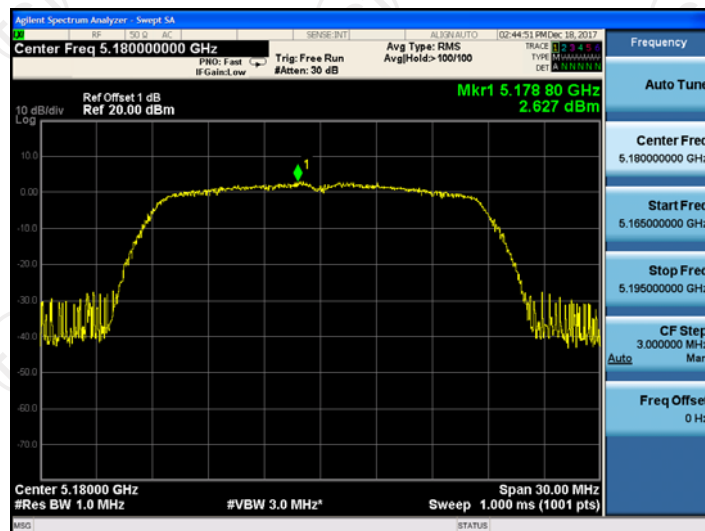


CH48

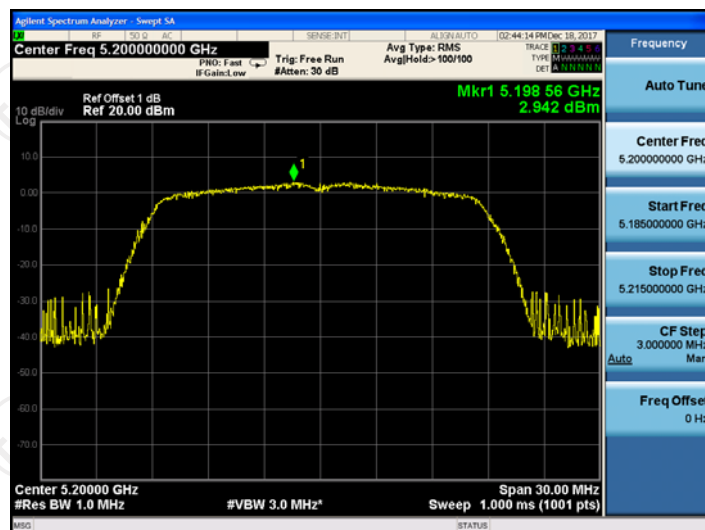


11n(HT20)

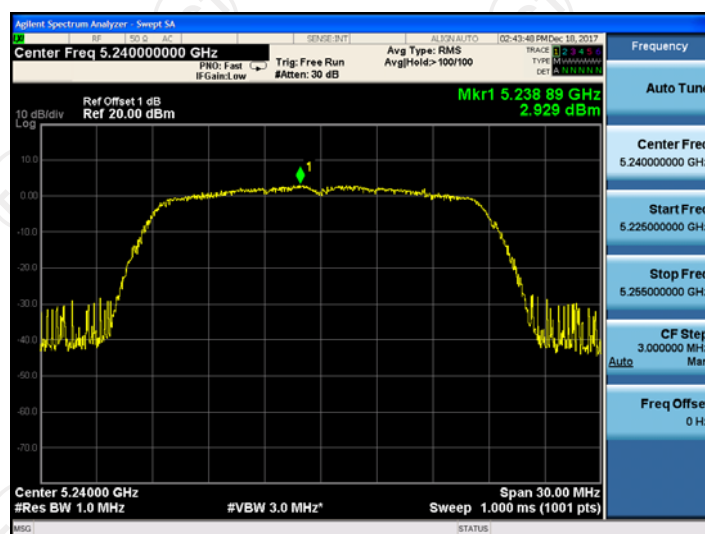
CH36



CH40

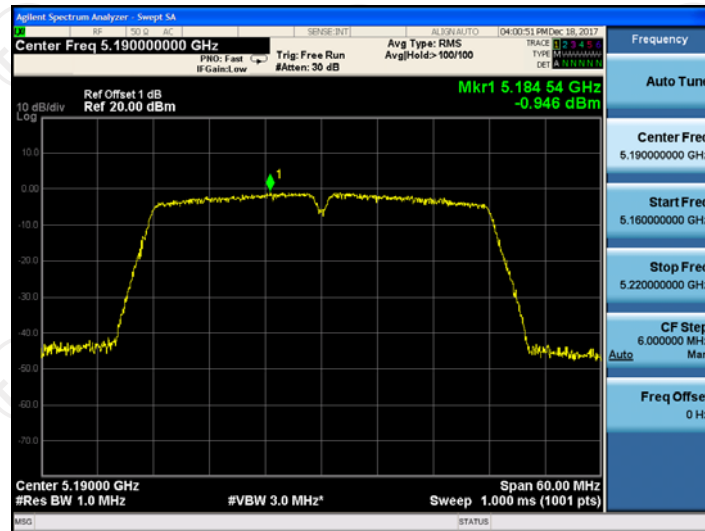


CH48

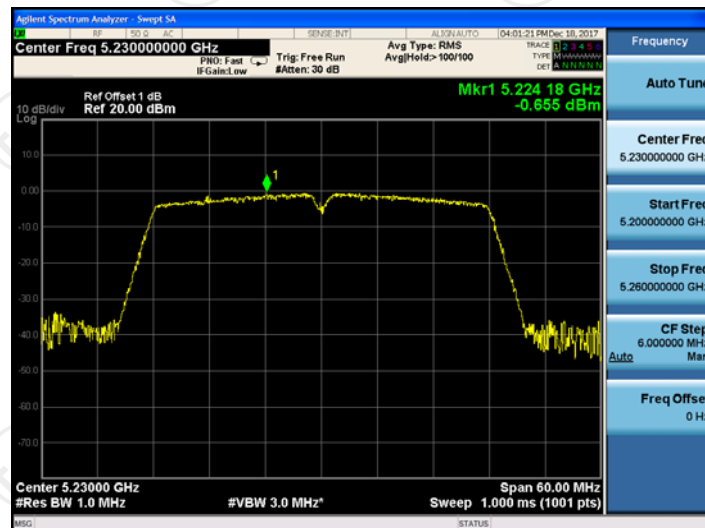


11n(HT40)

CH38

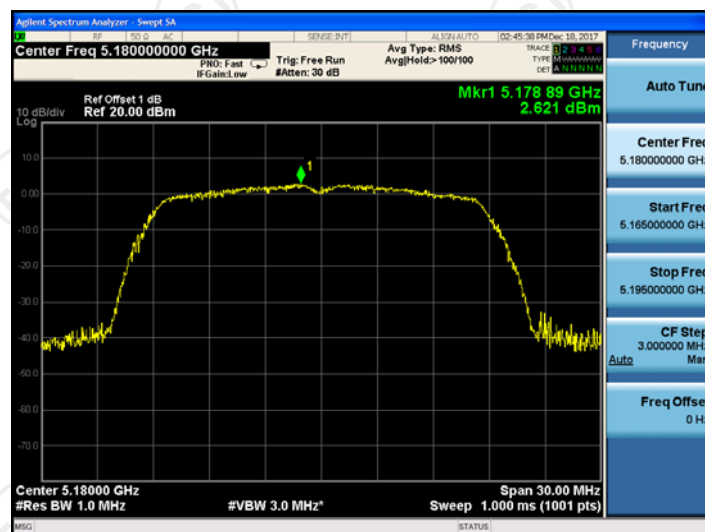


CH46

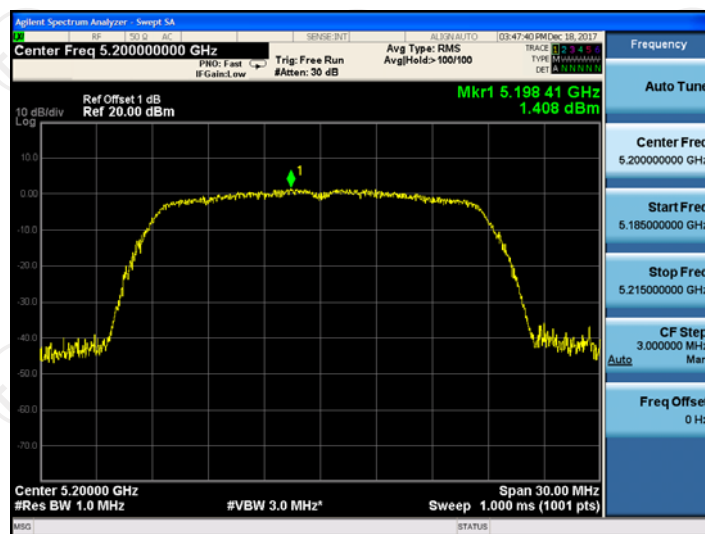


11ac(HT20)

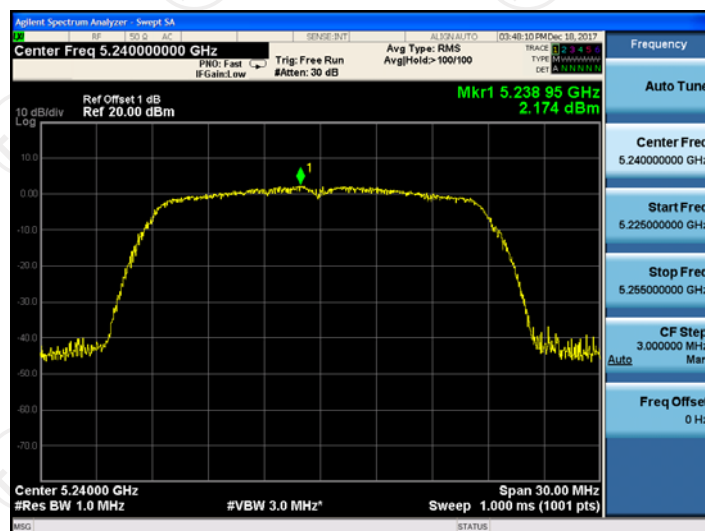
CH36



CH40

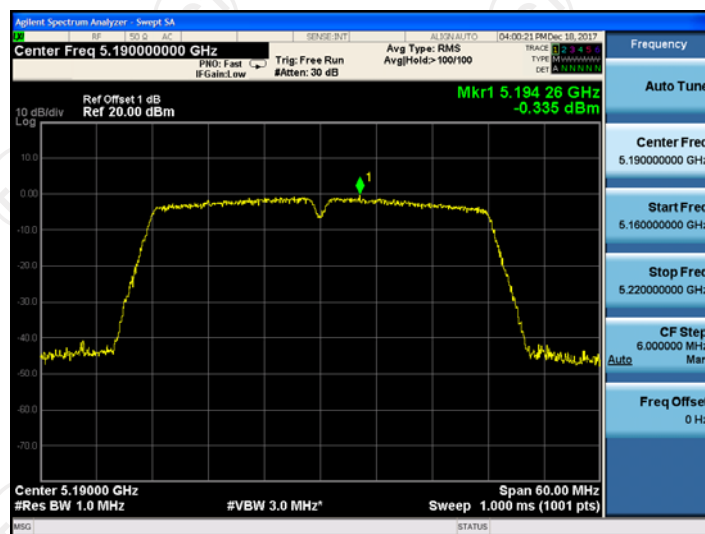


CH48

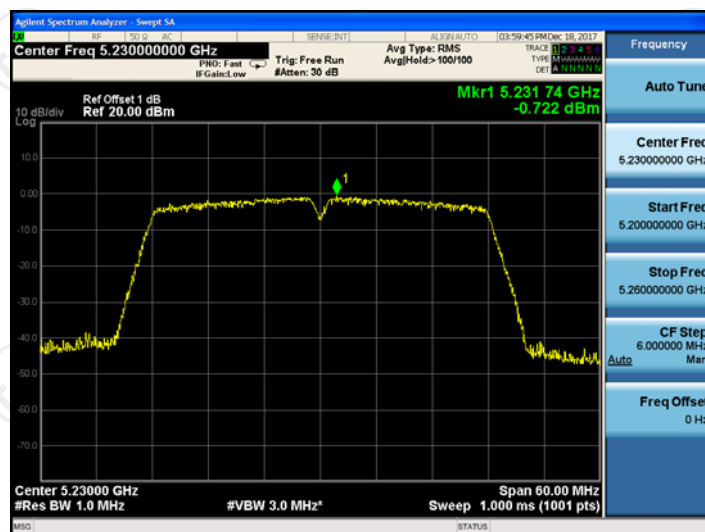


11ac(HT40)

CH38

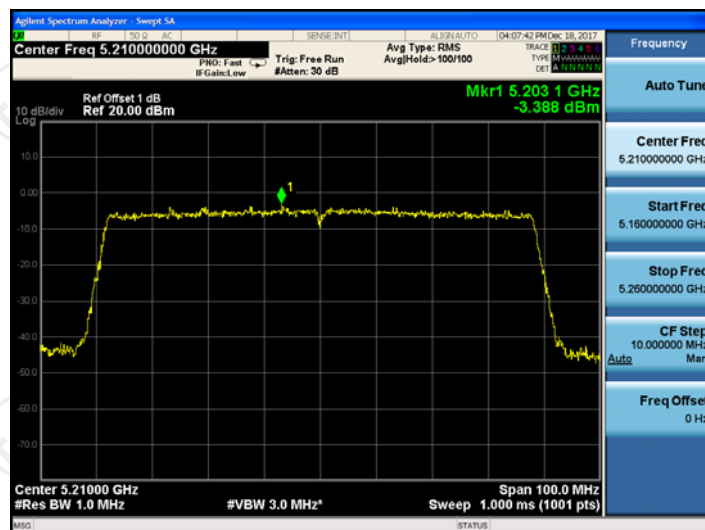


CH46



11ac(HT80)

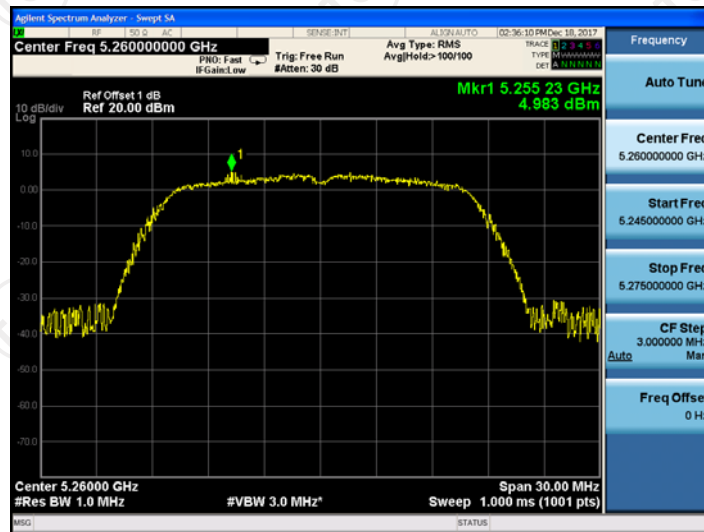
CH42



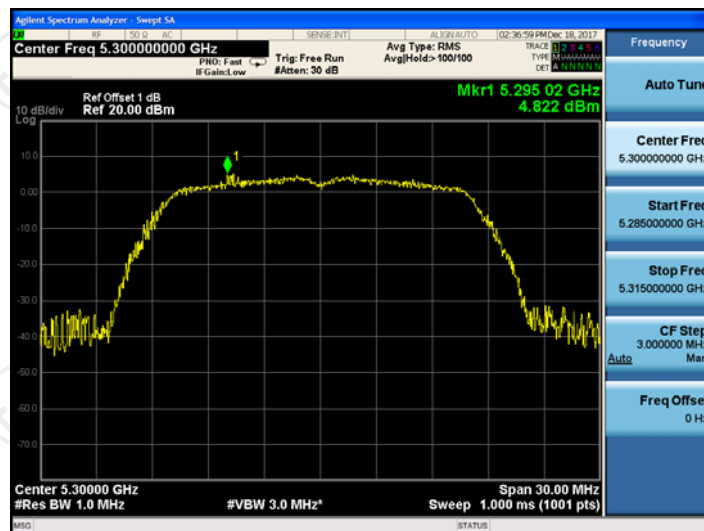
Band 2A (5260-5320MHz)

11a

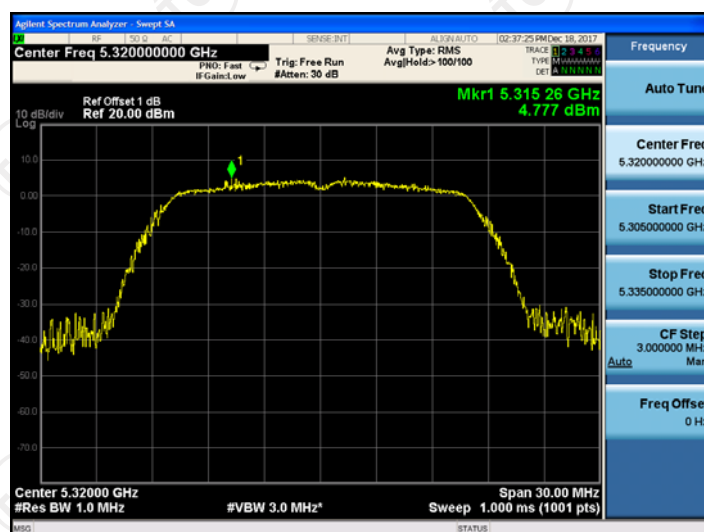
CH52



CH60

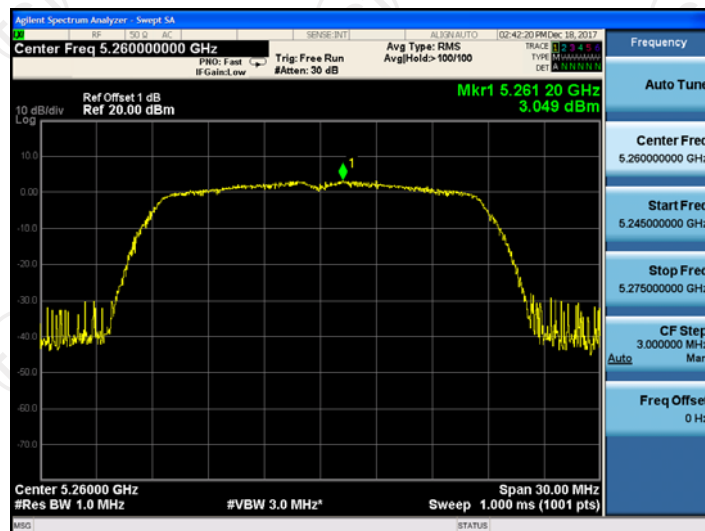


CH64

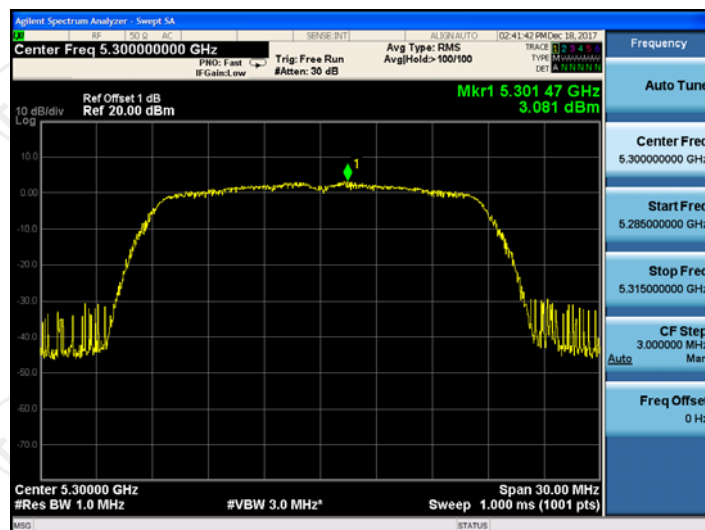


11n(HT20)

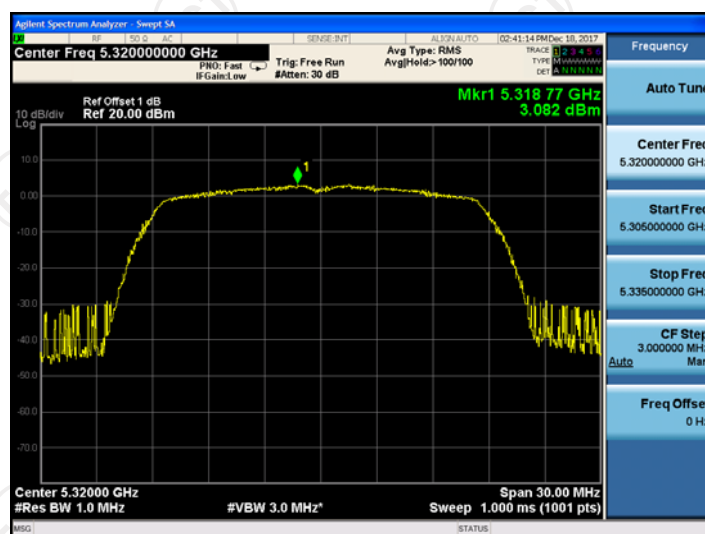
CH52



CH60

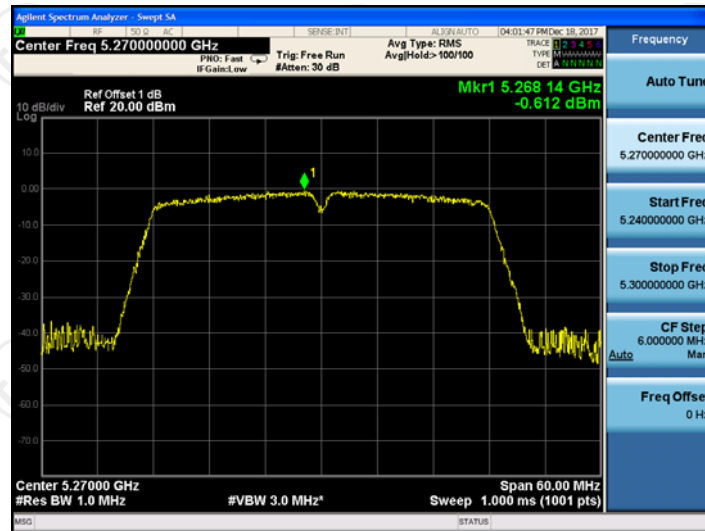


CH64

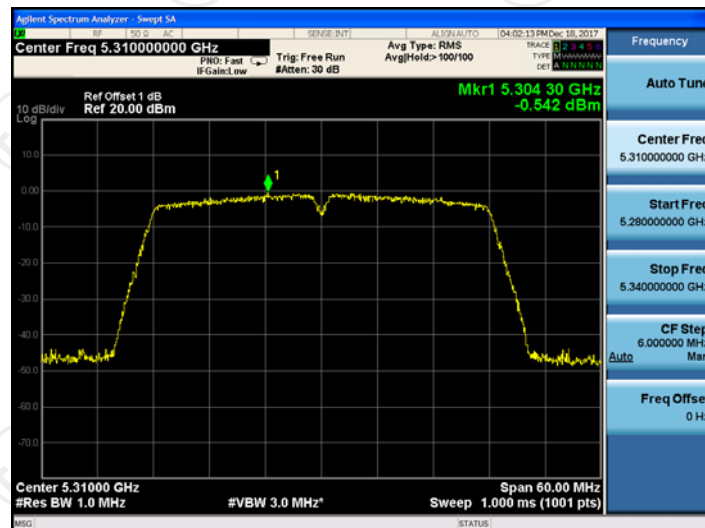


11n(HT40)

CH54

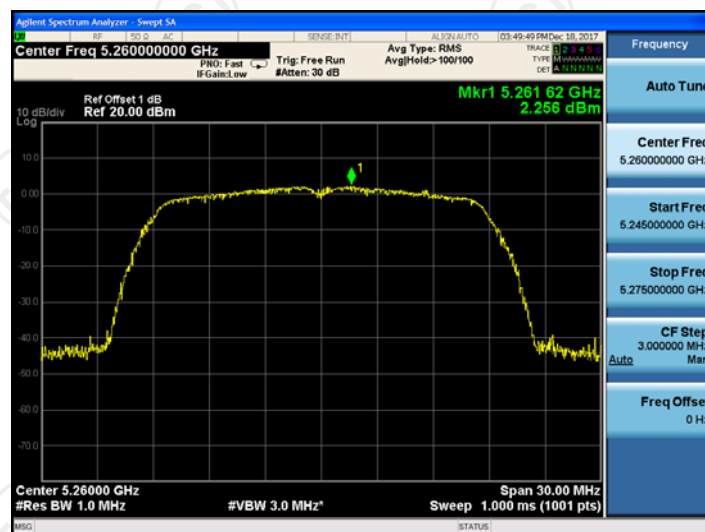


CH62

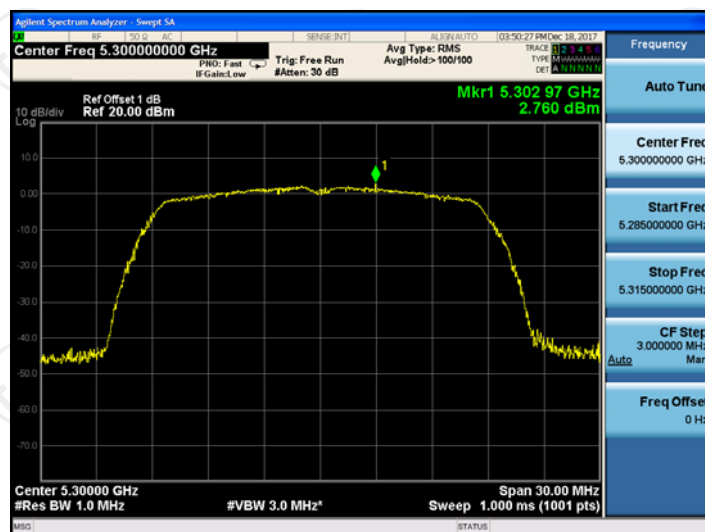


11ac(HT20)

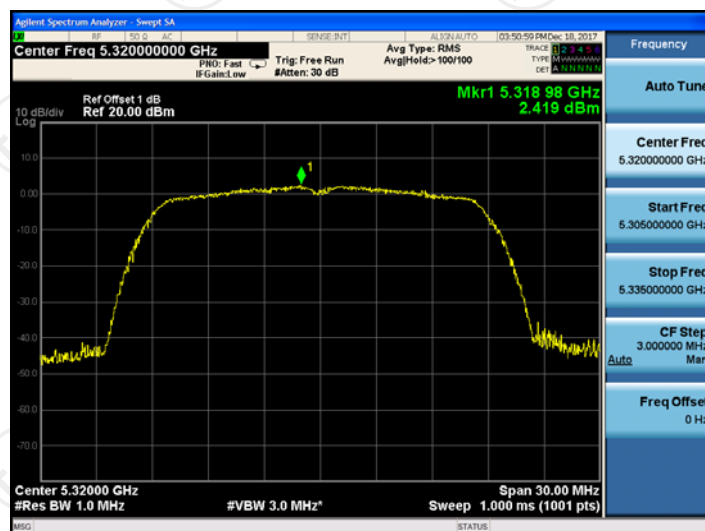
CH52



CH60

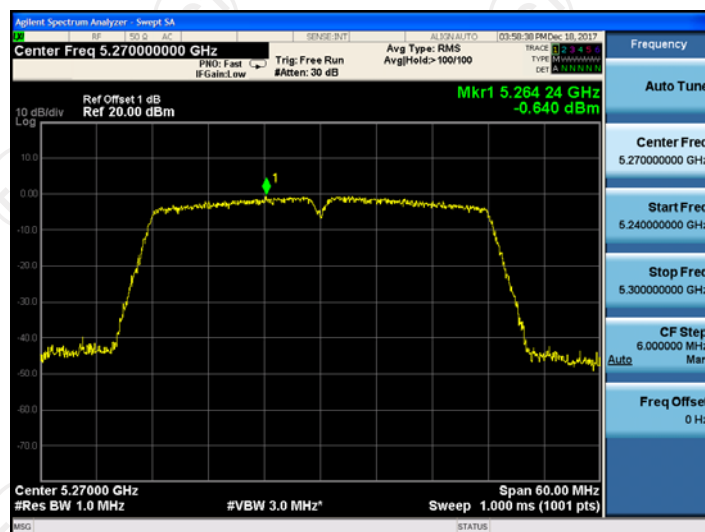


CH64

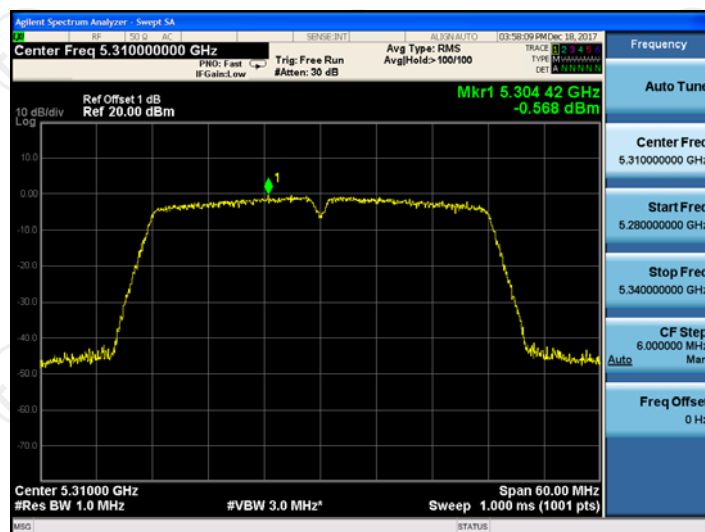


11ac(HT40)

CH54



CH62



11ac(HT80)

CH58

