

8. SPECTRAL DENSITY TEST

8.1. Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum	Agilent	N9030A	MY51380221	Oct.29, 14	1 Year
2.	Attenuator (20dB)	Agilent	8491B	MY39262165	Apr.28, 15	1 Year
3	RF Cable	Hubersuhner	SUCOFLEX102	28610/2	Apr.28, 15	1 Year

8.2. Limit

Band 5150-5250 MHz:

The e.i.r.p spectral density shall not exceed 11 dBm in any 1.0 MHz band.

Band 5250-5350 MHz:

The power spectral density shall not exceed 11 dBm in any 1.0 MHz band.

Band 5470-5725 MHz:

The power spectral density shall not exceed 11 dBm in any 1.0 MHz band.

Band 5725-5850 MHz:

The power spectral density shall not exceed 30 dBm in any 500 KHz band.

8.3. Test Procedure

For the Band 5.15-5.25GHz:

The transmitter output was connected to a spectrum analyzer. Power density was measured by spectrum analyzer with 1MHz RBW and 3MHz VBW; Detector: RMS mode.

For the band 5.725-5.85 GHz:

The transmitter output was connected to a spectrum analyzer. Power density was measured by spectrum analyzer with 1MHz RBW and 3MHz VBW, RMS Detector.

So use the test method described in KDB789033 clause E

- 1) Set the RBW=100kHz and VBW =3MHz
- 2) Number of points in sweep ≥ 2 Span / RBW.(This ensures that bin-to-bin spacing is \leq RBW/2, so that narrowband signals are not lost between frequency bins.)
- 3) Sweep time = auto
- 4) Detector = RMS (i.e., power averaging), if available. Otherwise, use sample detector mode.
- 5) Use the "peak search" function of spectrum analyzer find the max value, then add $10\log(500\text{kHz}/\text{RBW})$ to the measured result.

Note: The cable loss and attenuator loss were offset into measure device as an amplitude offset.

8.4. Test Results

5180-5240MHz Band:

EUT: Notebook		
M/N: RZ09-0168		
Test date: 2015-08-21	Pressure: 101.6±1.0 kpa	Humidity: 53.0±3.0%
Tested by: Alice_Yang	Test site: RF site	Temperature: 22.1±0.6

Test Mode	Frequency (MHz)	Power density (dBm/MHz)			Limit (dBm/MHz)
		ANT0	ANT1	Total	
11a	5180	4.069	4.952	N/A	11
	5200	4.253	4.638	N/A	11
	5240	3.059	3.374	N/A	11
11n HT20	5180	3.977	4.907	7.48	11
	5200	3.946	4.591	7.29	11
	5240	2.595	3.405	6.03	11
11n HT40	5190	0.157	1.213	3.73	11
	5230	-0.877	0.068	2.63	11
11ac VHT20	5180	4.225	4.602	7.43	11
	5200	3.815	4.168	7.01	11
	5240	2.711	3.199	5.97	11
11ac VHT40	5190	0.465	1.425	3.98	11
	5230	-1.107	0.072	2.53	11
11ac VHT80	5210	-4.150	-3.877	-1.00	11

Conclusion: PASS

5260-5320MHz Band:

EUT: Notebook		
M/N: RZ09-0168		
Test date: 2015-08-21	Pressure: 101.6±1.0 kpa	Humidity:53.0±3.0%
Tested by: Alice_Yang	Test site: RF site	Temperature:22.1±0.6

Test Mode	Frequency (MHz)	Power density (dBm/MHz)			Limit (dBm/MHz)
		ANT0	ANT1	Total	
11a	5260	3.269	3.779	N/A	11
	5300	3.959	3.910	N/A	11
	5320	3.044	2.550	N/A	11
11n HT20	5260	2.815	3.933	6.42	11
	5300	3.949	3.830	6.90	11
	5320	2.808	2.447	5.64	11
11n HT40	5270	-0.870	0.717	3.01	11
	5310	-0.680	0.127	2.75	11
11ac VHT20	5260	3.062	3.540	6.32	11
	5300	3.866	3.567	6.73	11
	5320	2.692	2.173	5.45	11
11ac VHT40	5270	-0.981	0.560	2.87	11
	5310	-0.675	0.010	2.69	11
11ac VHT80	5290	-4.761	-4.523	-1.63	11

Conclusion: PASS

5500-5700MHz Band:

EUT: Notebook		
M/N: RZ09-0168		
Test date: 2015-08-21	Pressure: 101.6±1.0 kpa	Humidity:53.0±3.0%
Tested by: Alice_Yang	Test site: RF site	Temperature:22.1±0.6

Test Mode	Frequency (MHz)	Power density (dBm/MHz)			Limit (dBm/MHz)
		ANT0	ANT1	Total	
11a	5500	4.260	3.079	N/A	10.7
	5600	4.474	3.698	N/A	10.7
	5700	4.924	4.517	N/A	10.7
11n HT20	5500	4.024	3.106	6.60	10.7
	5600	4.182	3.709	6.96	10.7
	5700	4.620	4.380	7.51	10.7
11n HT40	5510	0.047	-0.692	2.70	10.7
	5590	0.578	0.507	3.55	10.7
	5670	0.173	0.893	3.56	10.7
11ac VHT20	5500	3.971	2.843	6.45	10.7
	5600	4.172	3.409	6.82	10.7
	5700	4.738	4.084	7.43	10.7
11ac VHT40	5510	0.220	-0.743	2.78	10.7
	5590	0.484	0.394	3.45	10.7
	5670	0.790	0.896	3.85	10.7
11ac VHT80	5530	-4.265	-5.459	-1.81	10.7

Conclusion: PASS

Note: 11ac/n Mode

$$\text{Directional Gain} = 10 \log[(10^{3.52/20} + 10^{3.07/20})^2 / 2] \text{dBi}$$

$$= 6.3 \text{dBi} > 6 \text{dBi}$$

5745-5825MHz Band:

EUT: Notebook		
M/N: RZ09-0168		
Test date: 2015-08-21	Pressure: 101.6±1.0 kpa	Humidity:53.0±3.0%
Tested by: Alice_Yang	Test site: RF site	Temperature:22.1±0.6

Test Mode	Frequency (MHz)	Power density (dBm/500KHz)			Limit (dBm/500KHz)
		ANT0	ANT1	Total	
11a	5745	2.042	1.177	N/A	29.7
	5785	2.732	2.190	N/A	29.7
	5825	2.467	1.540	N/A	29.7
11n HT20	5745	1.946	1.023	4.52	29.7
	5785	2.035	1.548	4.81	29.7
	5825	1.648	1.329	4.50	29.7
11n HT40	5755	-1.730	-2.591	0.87	29.7
	5790	-1.107	-1.562	1.68	29.7
11ac VHT20	5745	2.004	0.678	4.40	29.7
	5785	2.257	1.403	4.86	29.7
	5825	1.857	1.104	4.51	29.7
11ac VHT40	5755	-1.671	-2.245	1.06	29.7
	5790	-0.768	-1.349	1.96	29.7
11ac VHT80	5775	-6.060	-6.071	-3.06	29.7
Conclusion: PASS					

Note 1: 11ac/n Mode

$$\text{Directional Gain} = 10 \log[(10^{3.48/20} + 10^{3.18/20})^2 / 2] \text{dBi}$$

$$= 6.3 \text{dBi} > 6 \text{dBi}$$

Note 2:

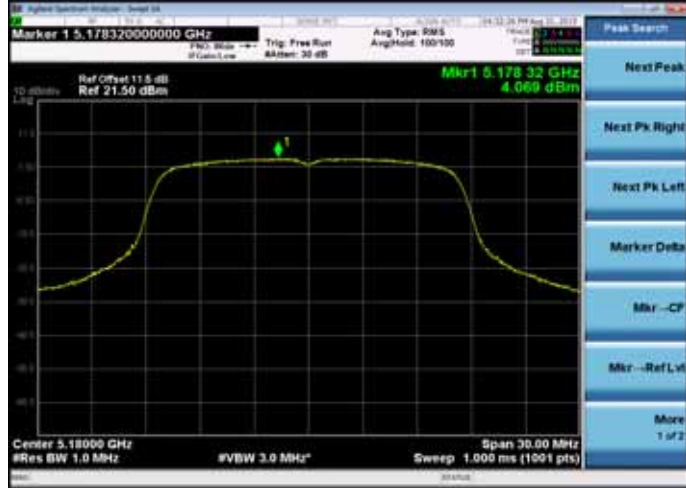
1. Correction factor = $10 \log(500 \text{kHz} / 100 \text{kHz}) = 6.9897$
2. Result = Reading value + Correction factor

5180-5240MHz Band:

ANT 0

11a

5180MHz

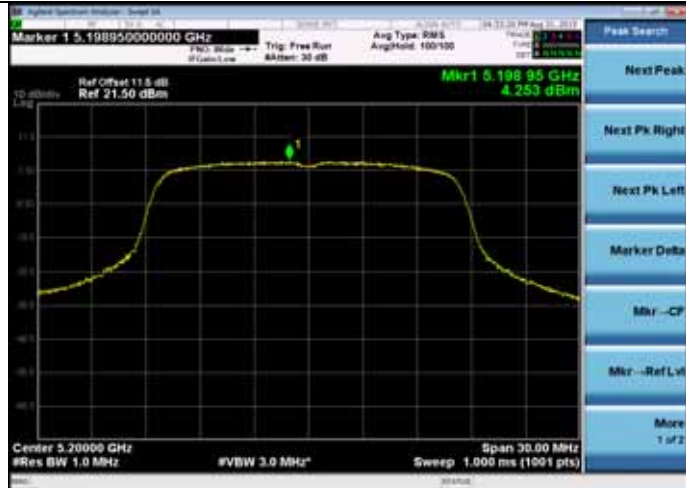


11n HT20

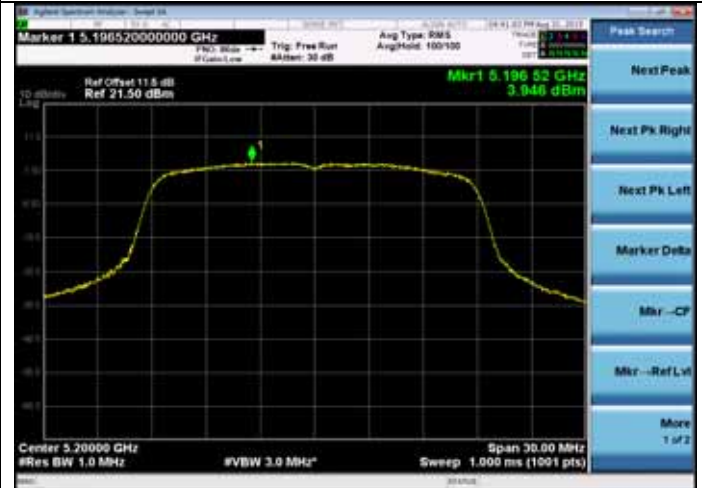
5180MHz



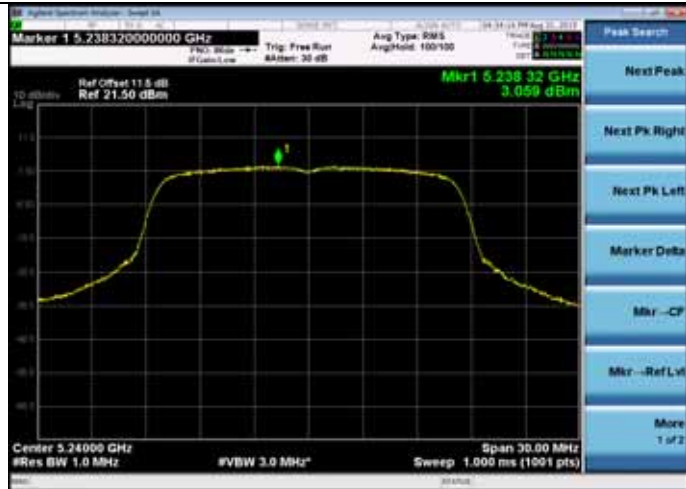
5200MHz



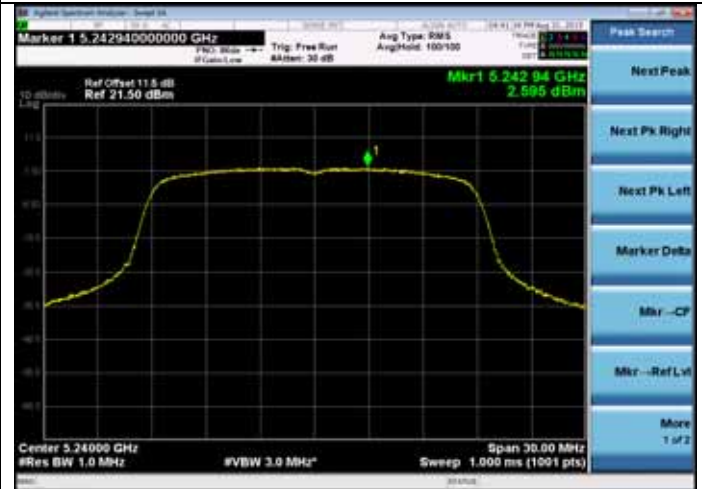
5200MHz

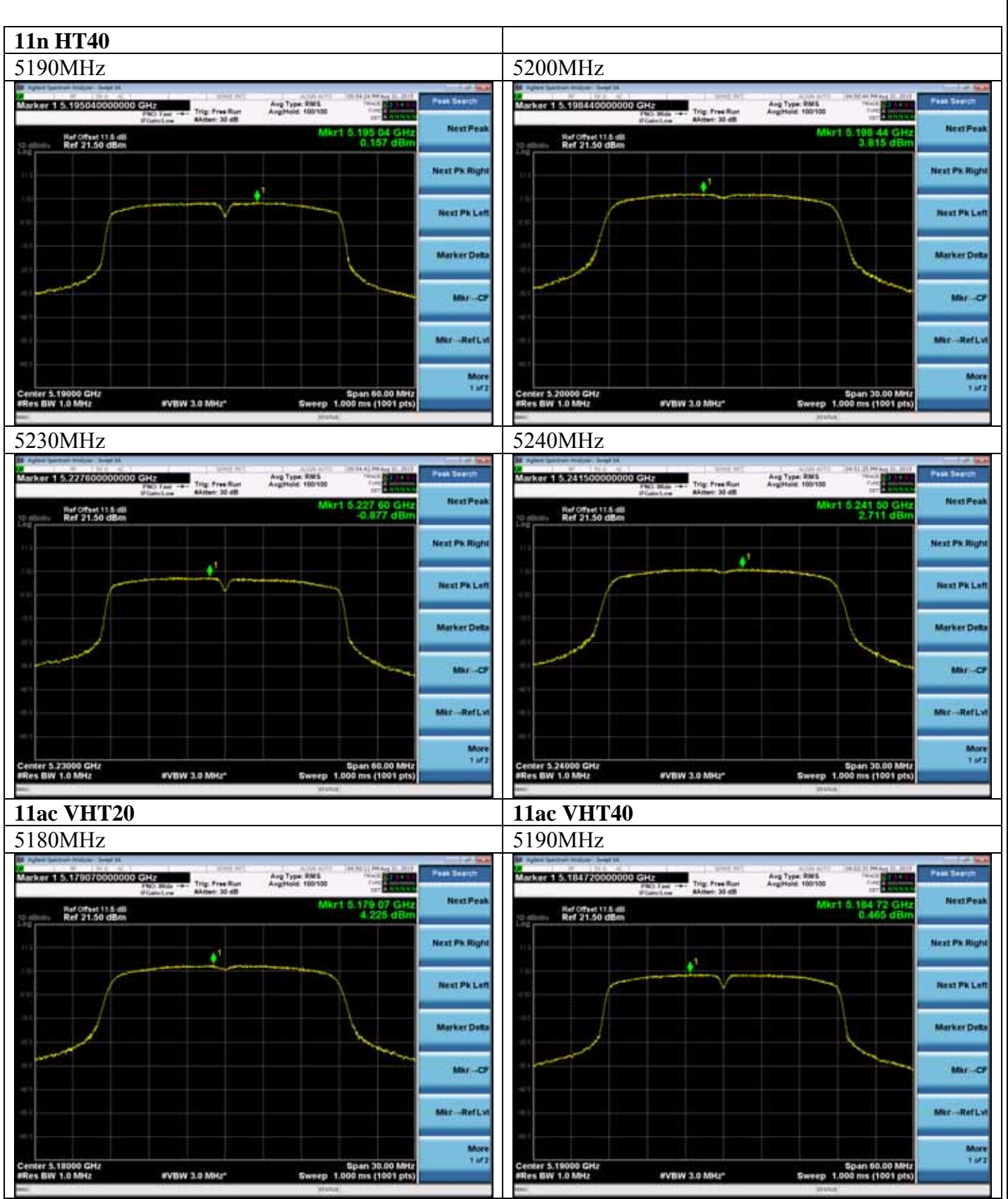


5240MHz



5240MHz





5230MHz



11ac VHT80
5210MHz



5180-5240MHz Band:

ANT 1

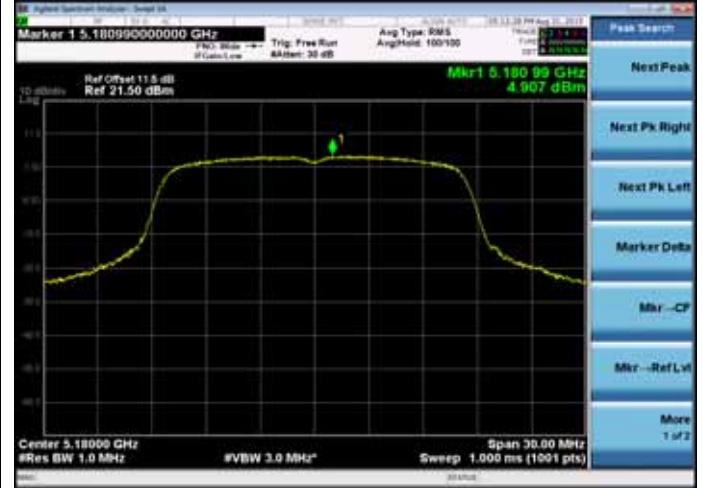
11a

5180MHz

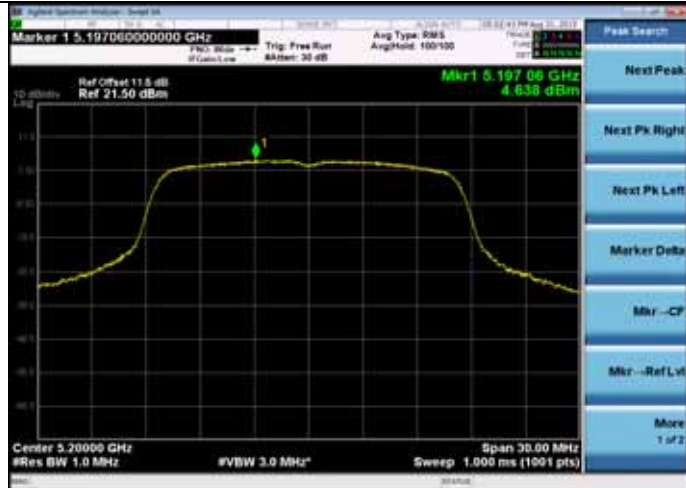


11n HT20

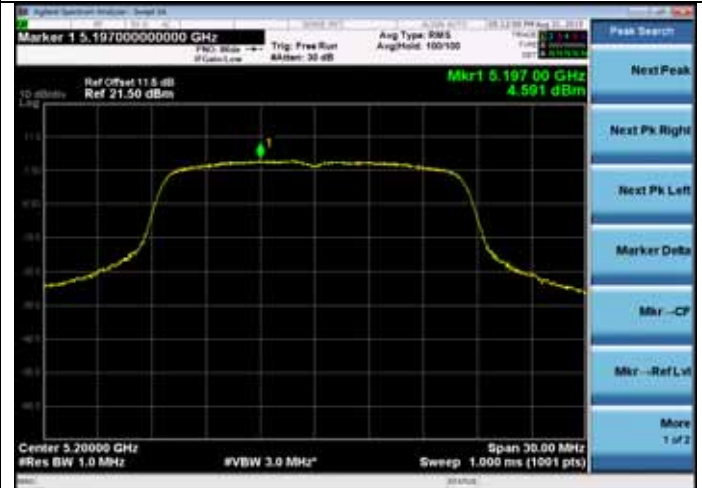
5180MHz



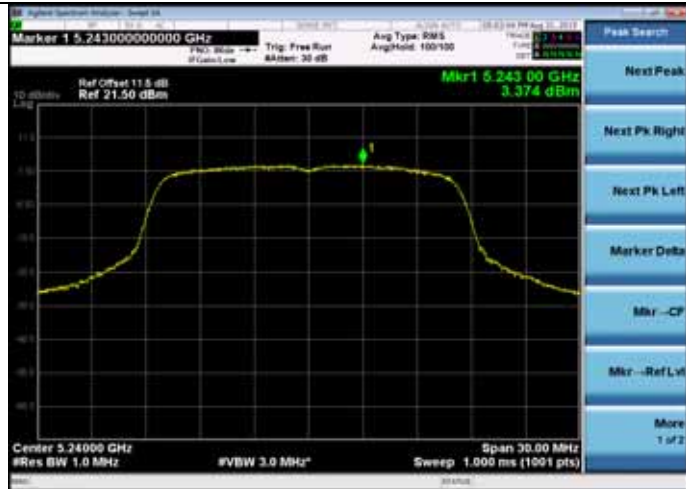
5200MHz



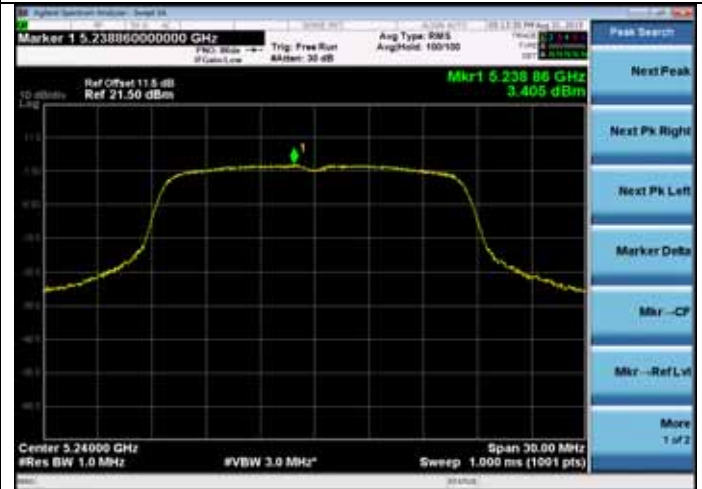
5200MHz



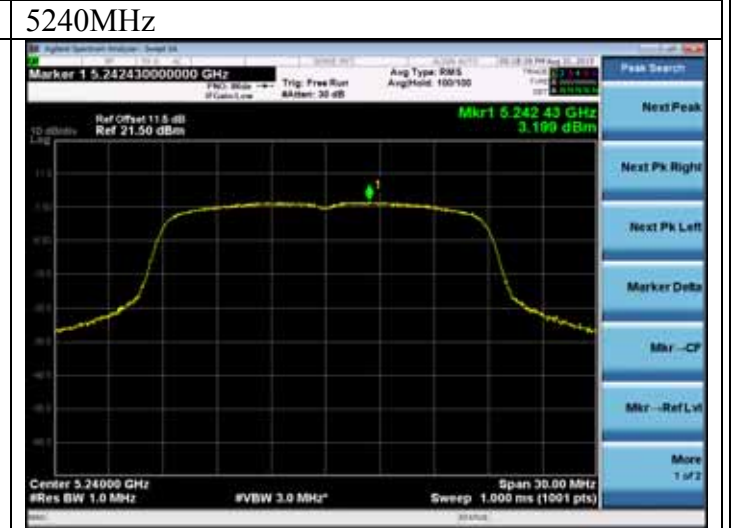
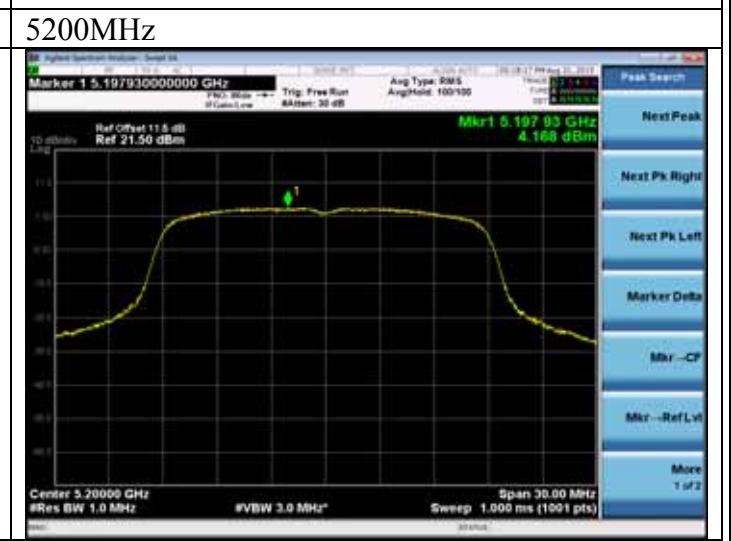
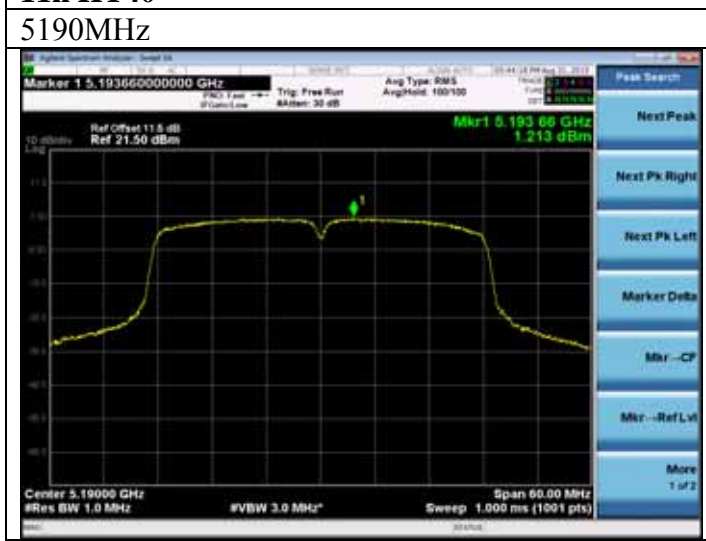
5240MHz



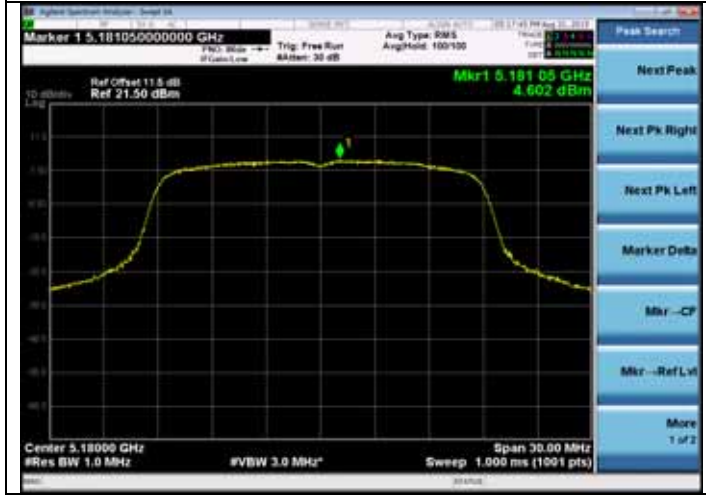
5240MHz



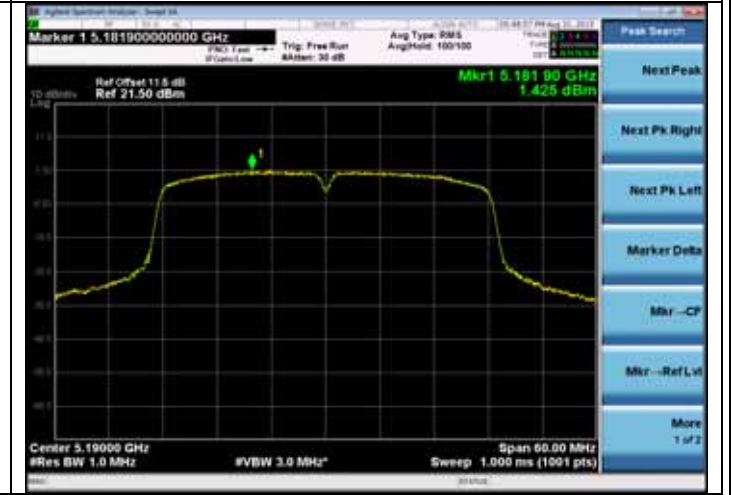
11n HT40

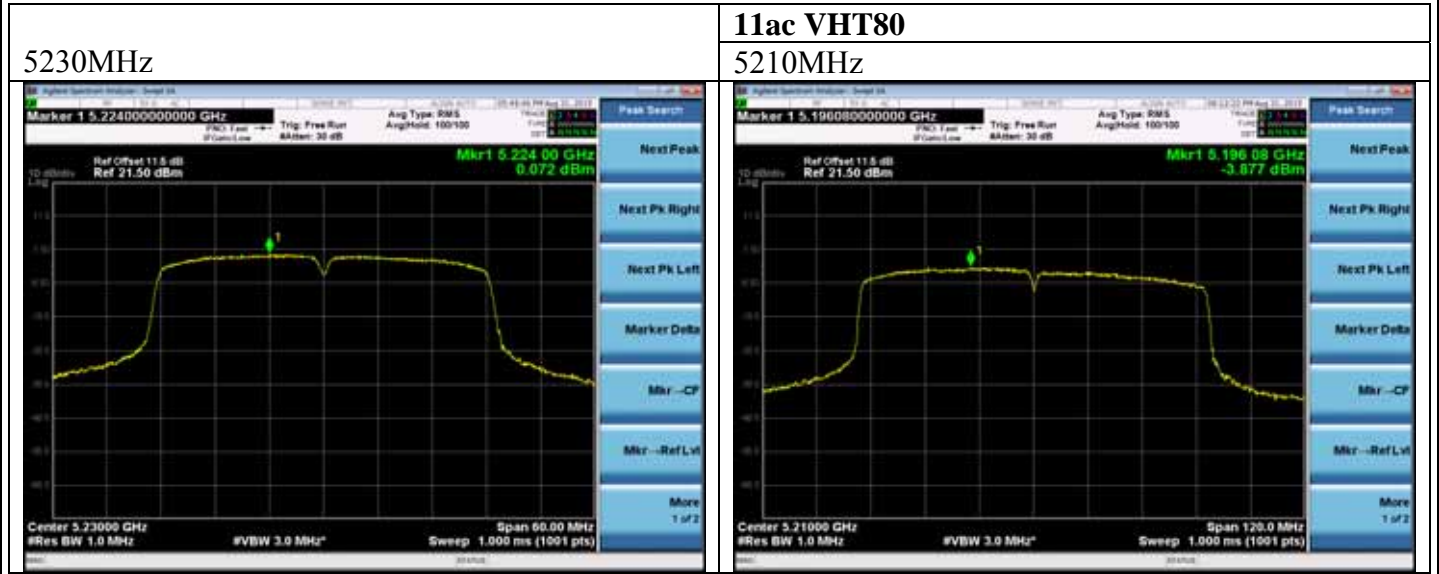


11ac VHT20



11ac VHT40





5260-5320MHz Band:

ANT 0

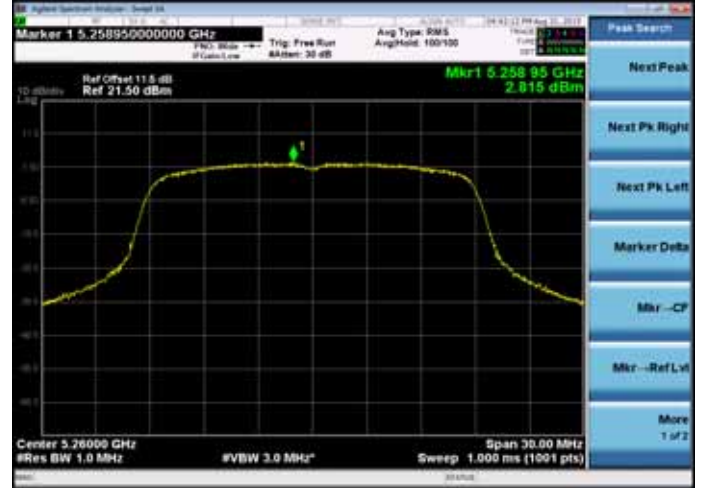
11a

5260MHz



11n HT20

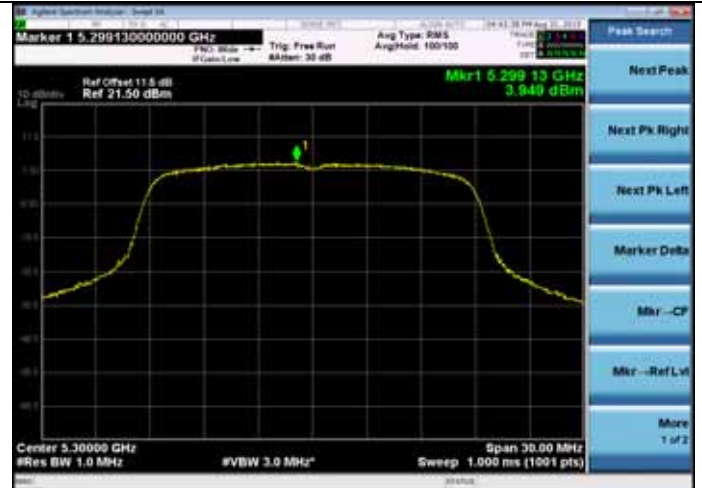
5260MHz



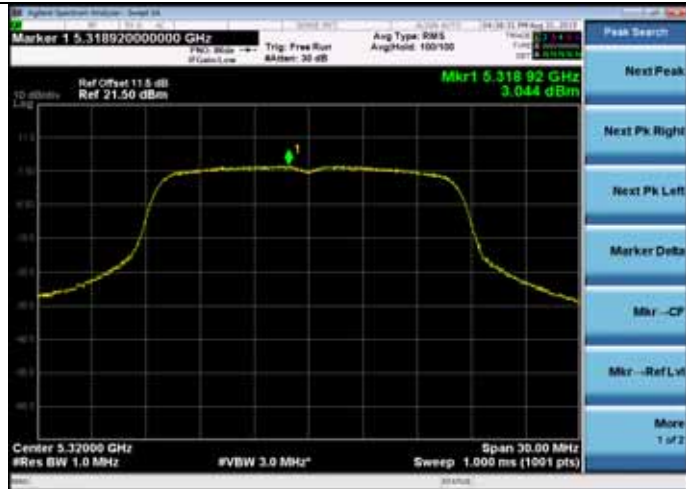
5300MHz



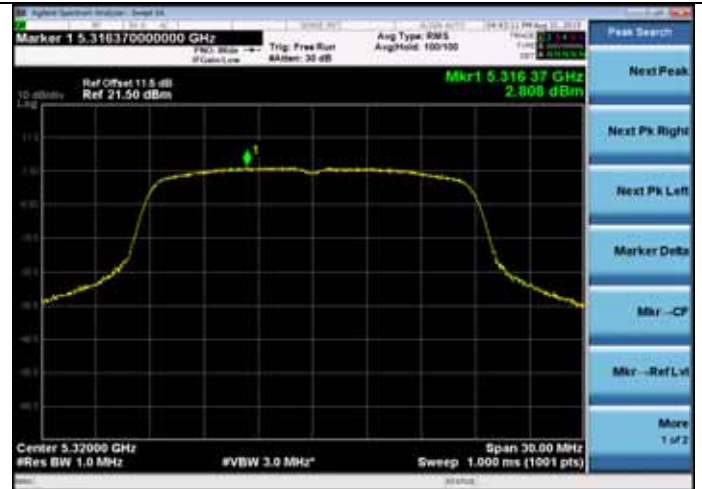
5300MHz

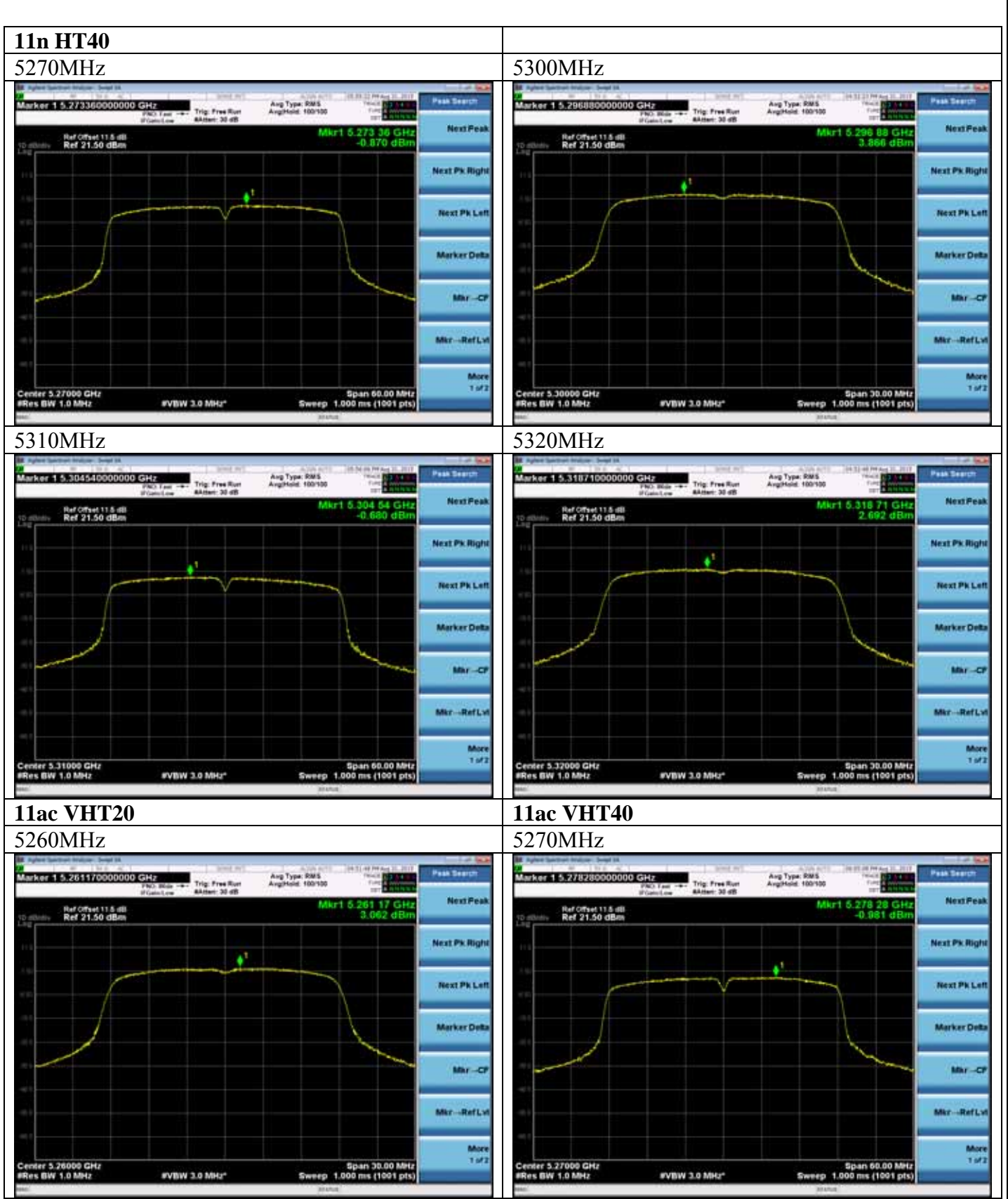


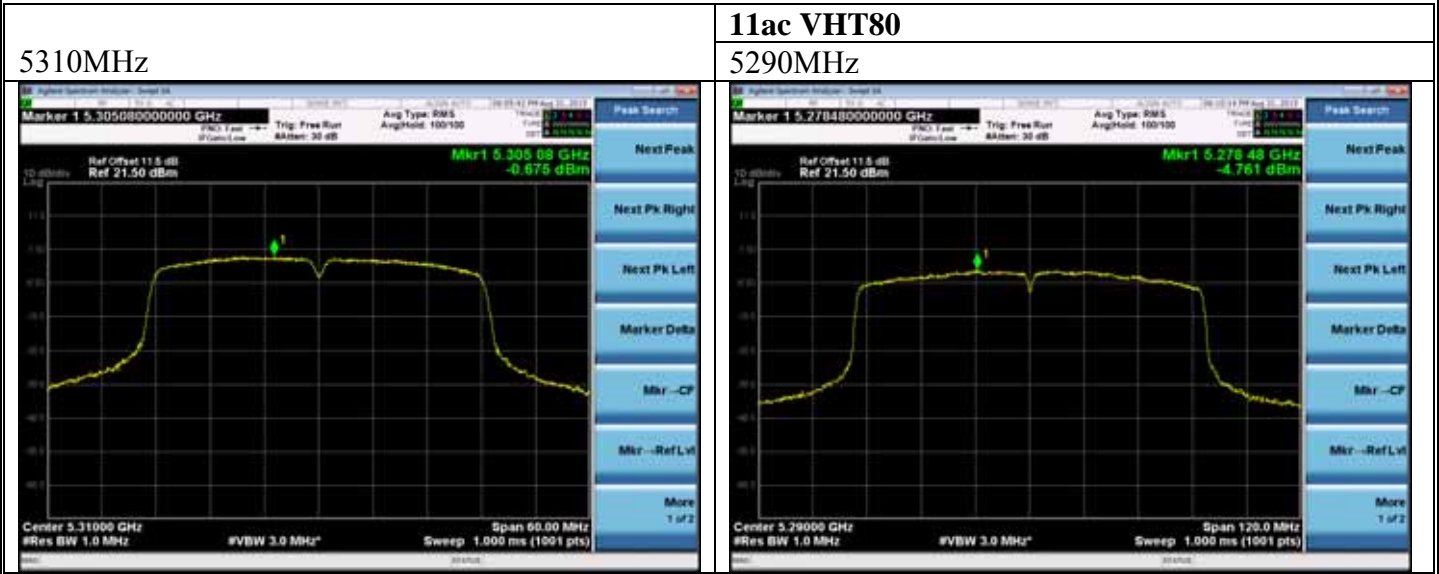
5320MHz



5320MHz





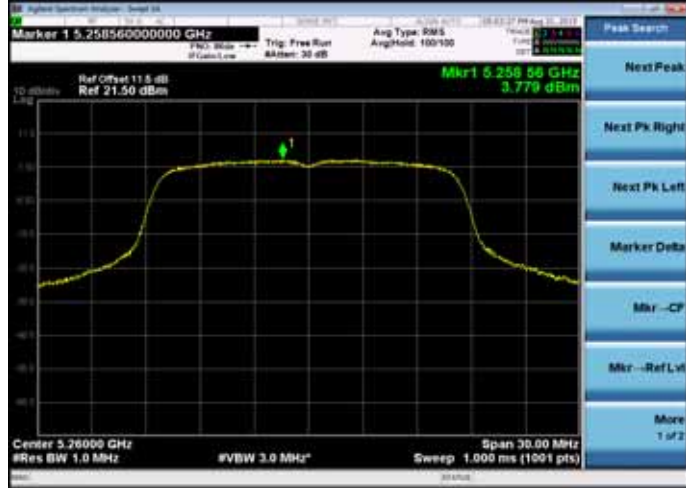


5260-5320MHz Band:

ANT 1

11a

5260MHz

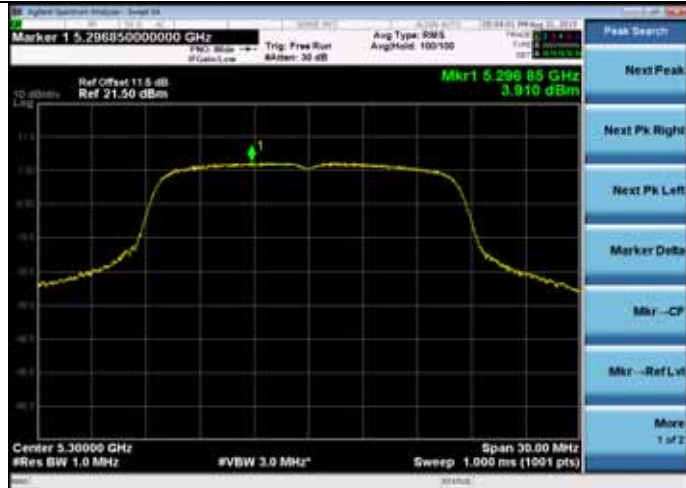


11n HT20

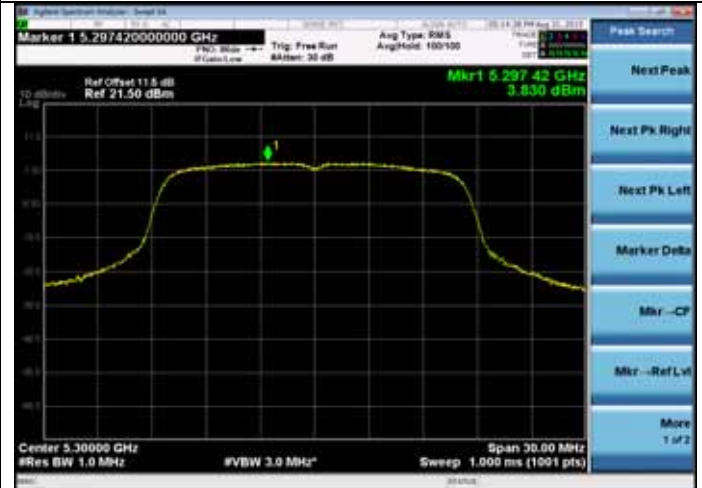
5260MHz



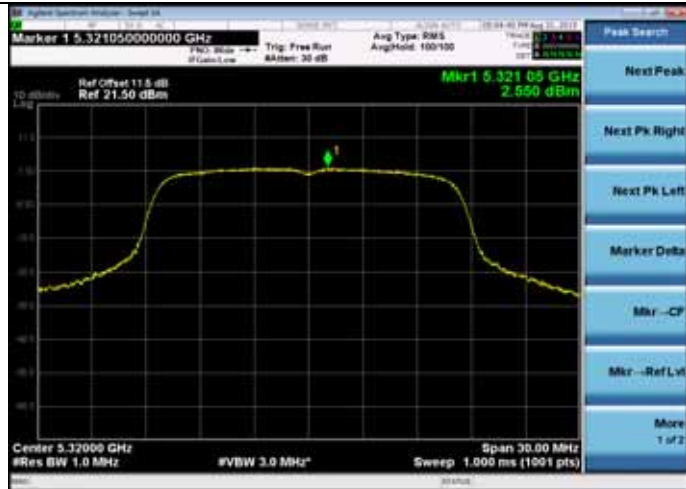
5300MHz



5300MHz

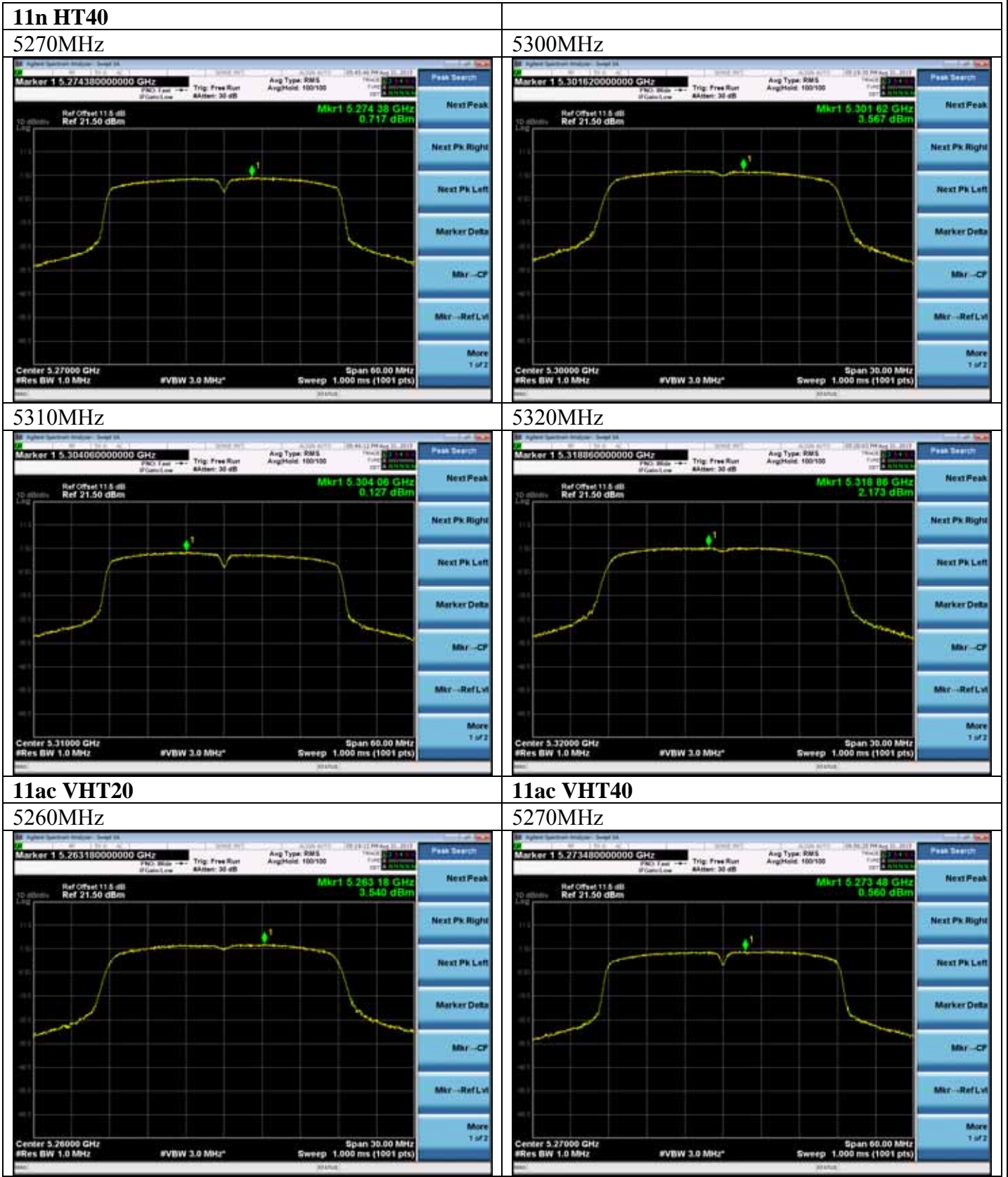


5320MHz

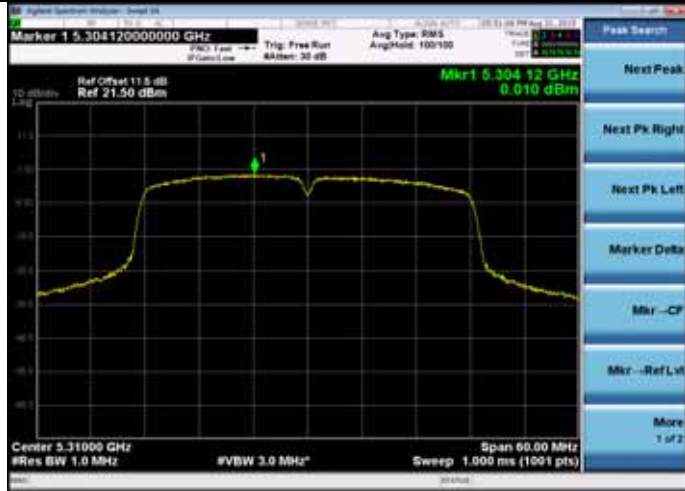


5320MHz

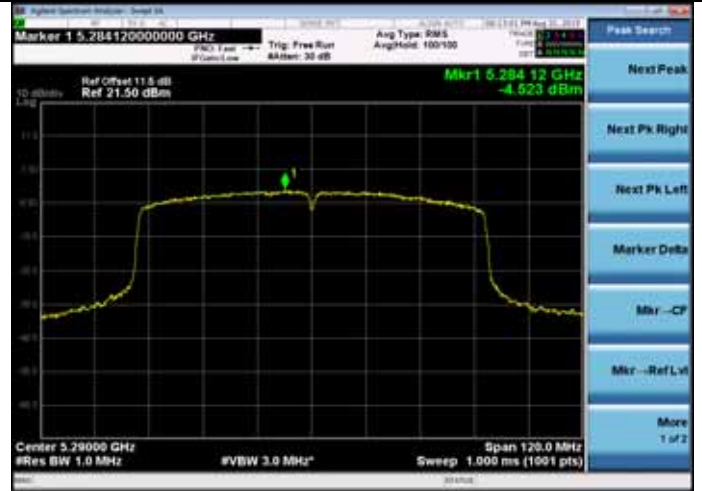




5310MHz



11ac VHT80
5290MHz

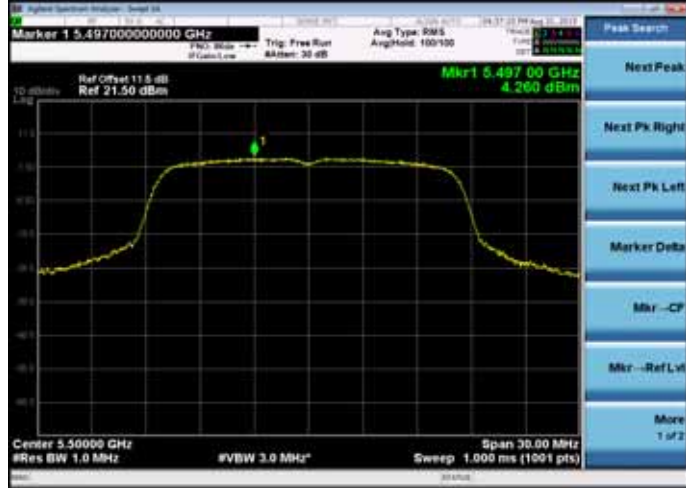


5500-5700MHz Band:

ANT 0

11a

5500MHz

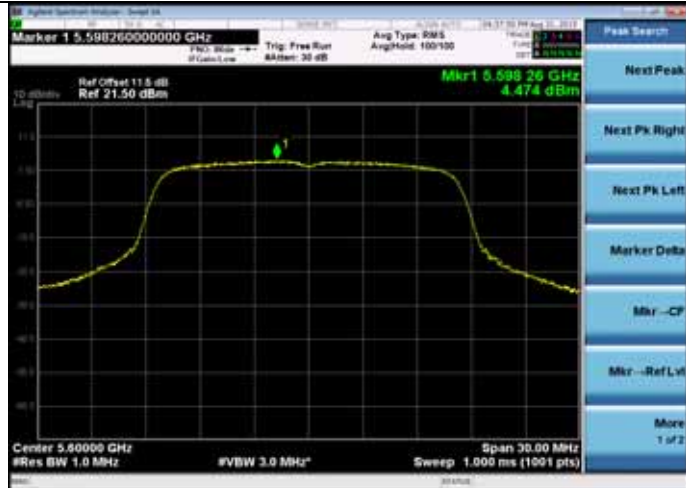


11n HT20

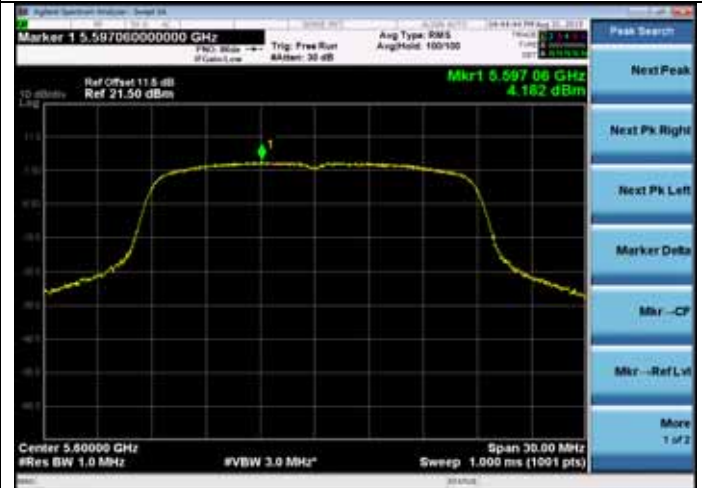
5500MHz



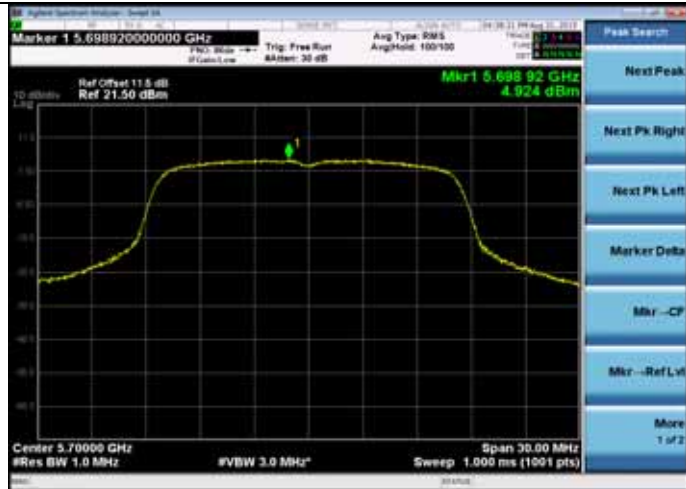
5600MHz



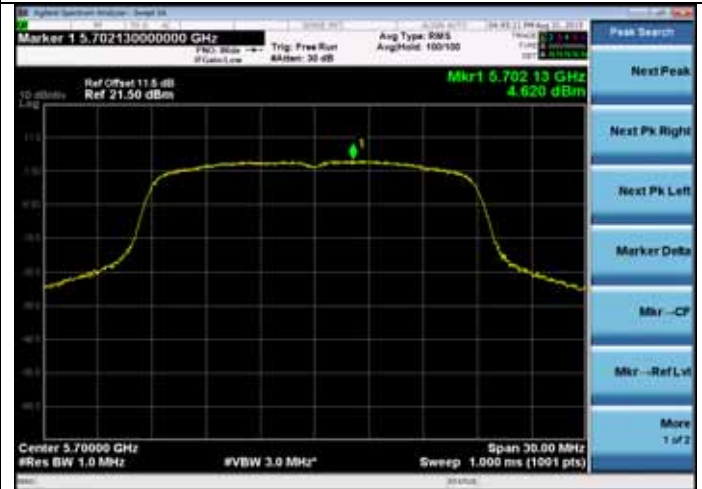
5600MHz

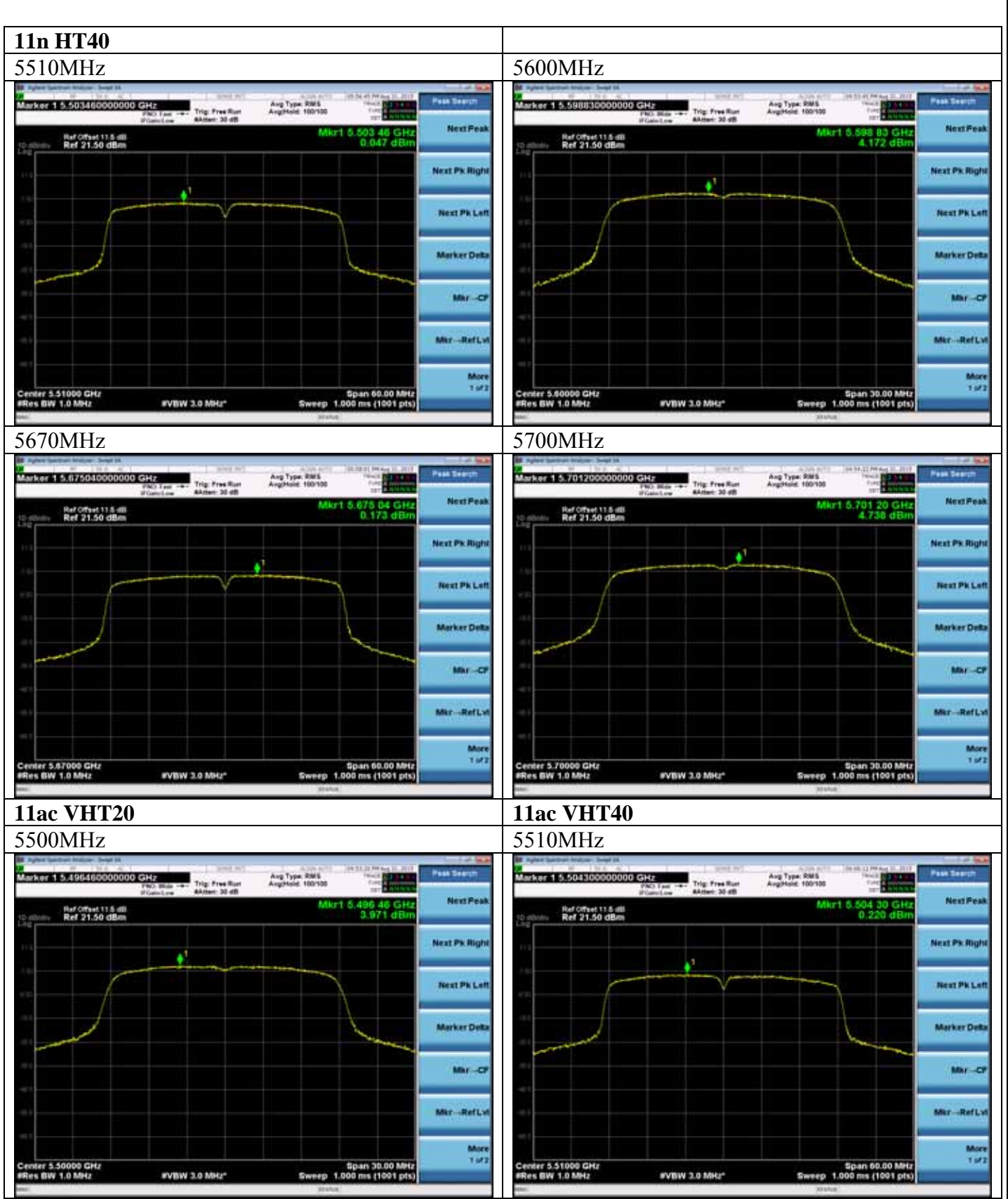


5700MHz

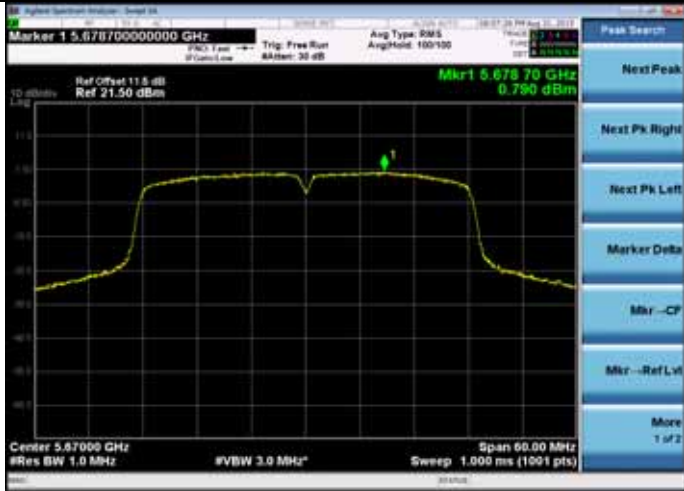


5700MHz





5670MHz

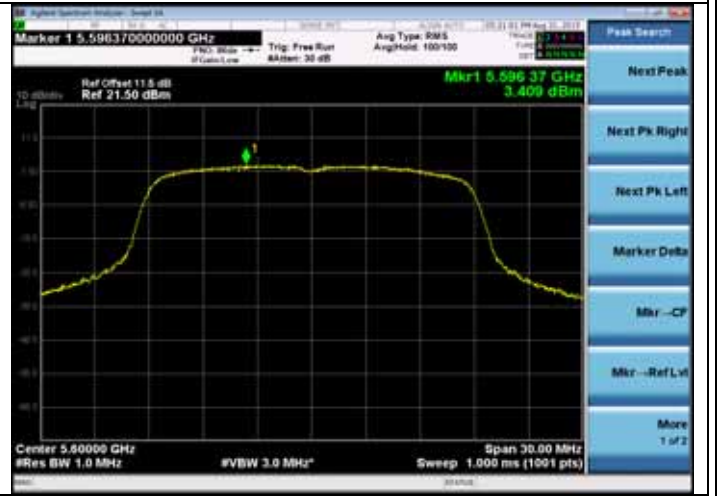


11ac VHT80
5530MHz

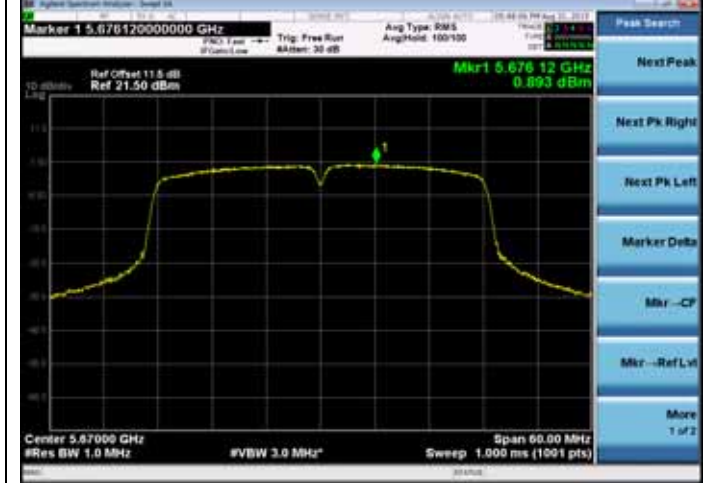


11n HT40	
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5510MHz	5600MHz
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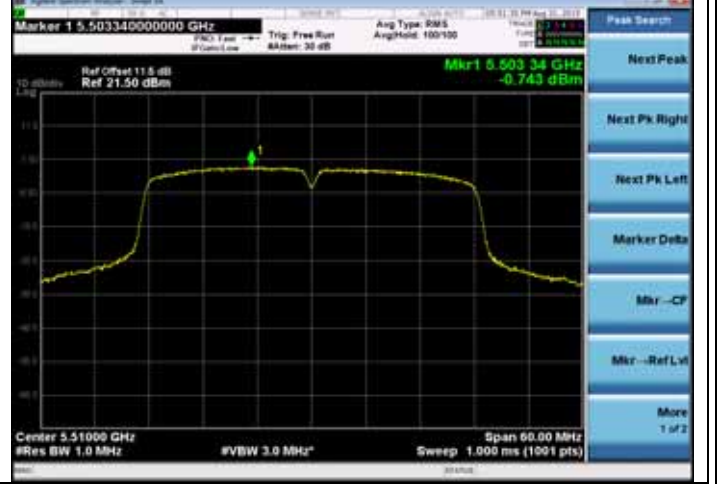


5670MHz	5700MHz
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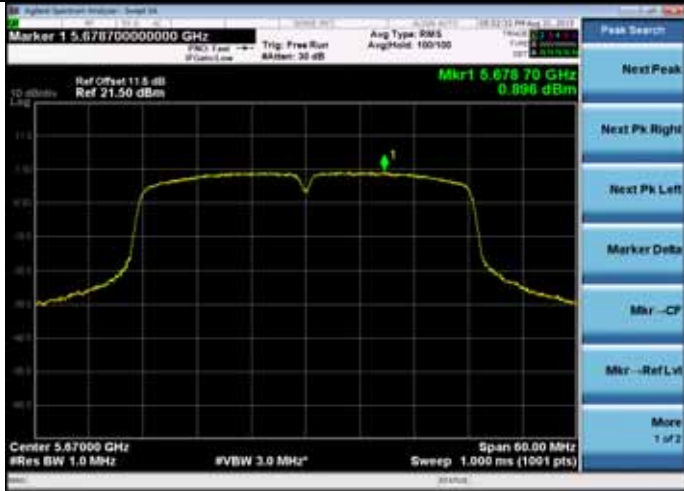


11ac VHT20	11ac VHT40
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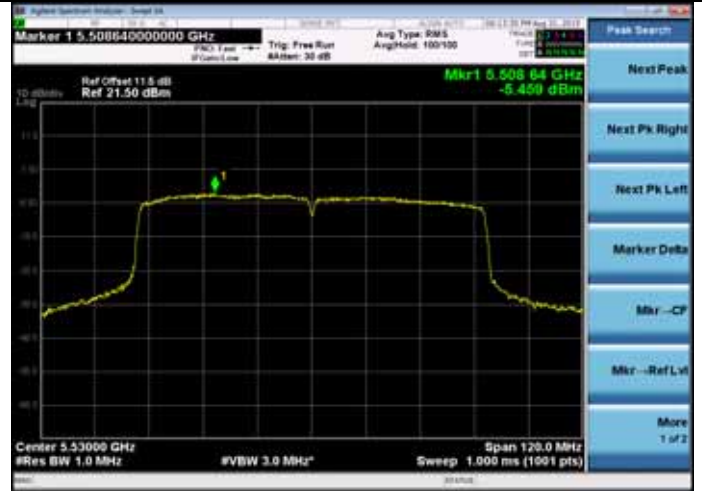
5500MHz	5510MHz
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5670MHz



11ac VHT80
5530MHz

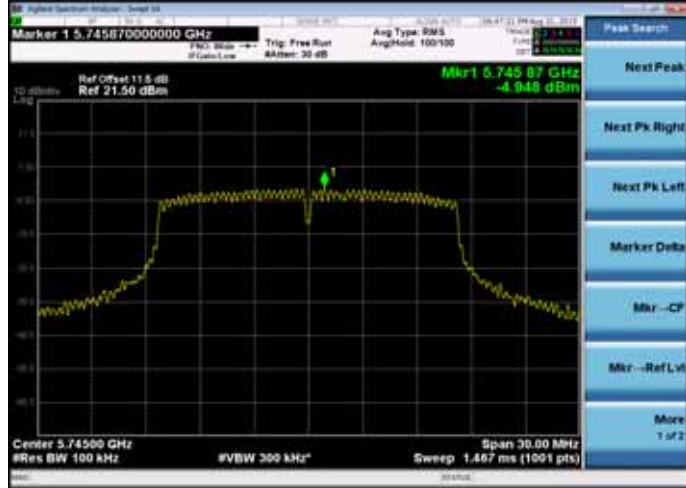


5745-5825MHz Band:

ANT 0

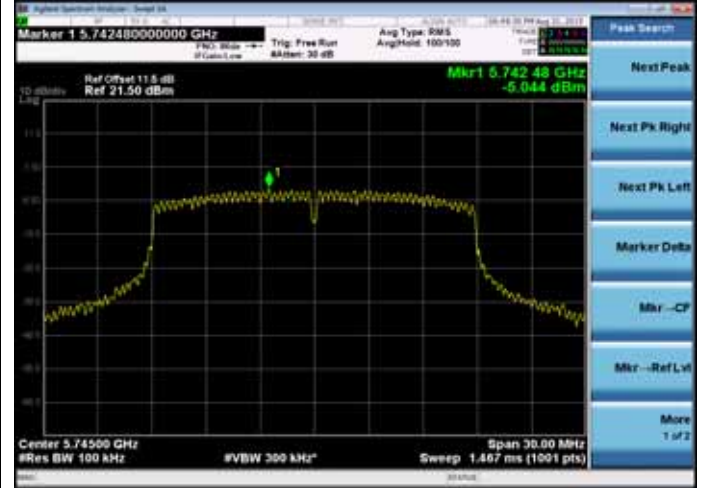
11a

5745MHz

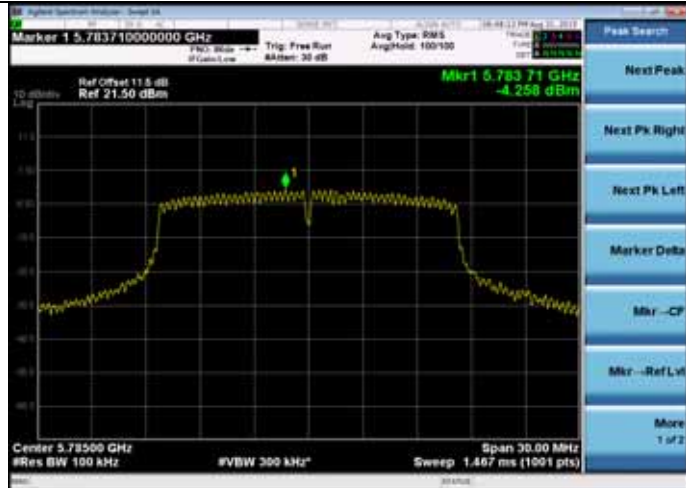


11n HT20

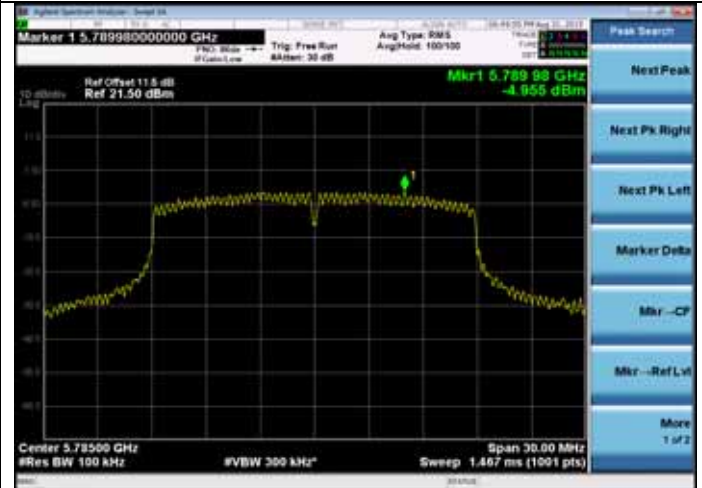
5745MHz



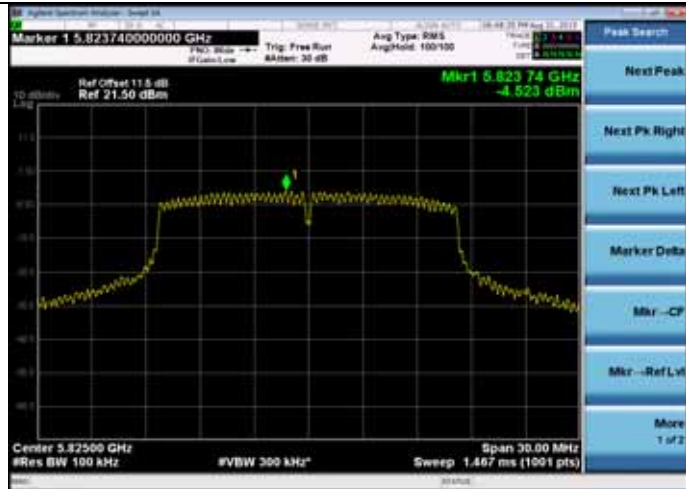
5785MHz



5785MHz



5825MHz

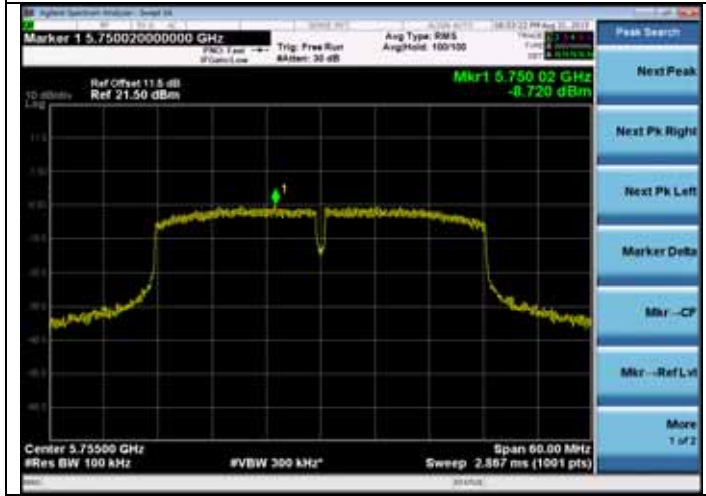


5825MHz



11n HT40

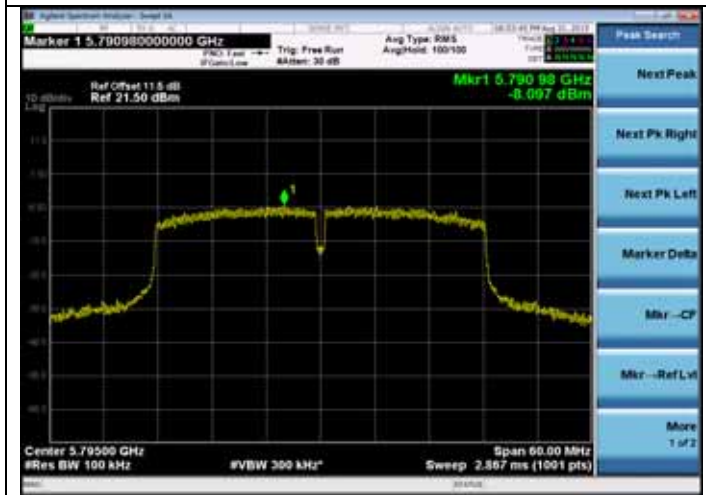
5755MHz



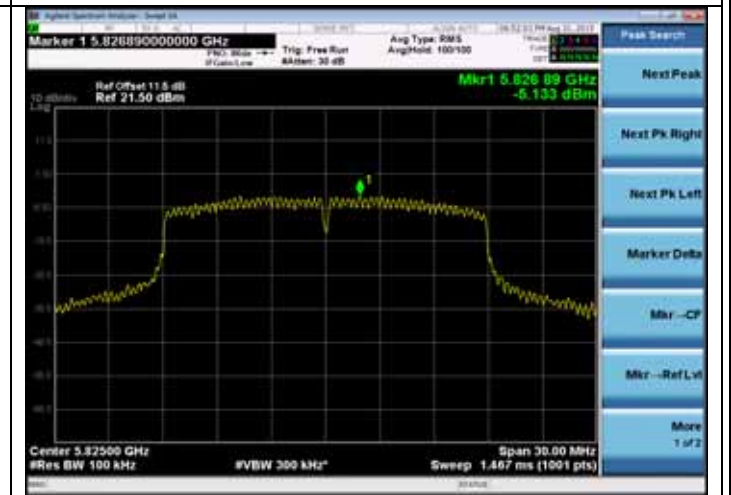
5785MHz



5795MHz

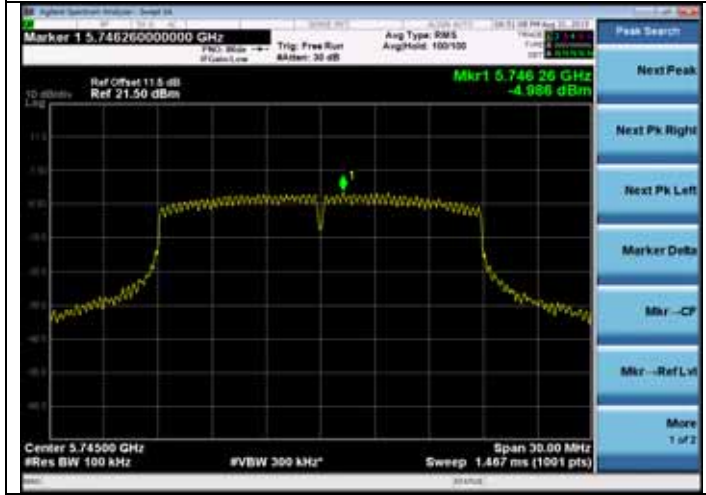


5825MHz



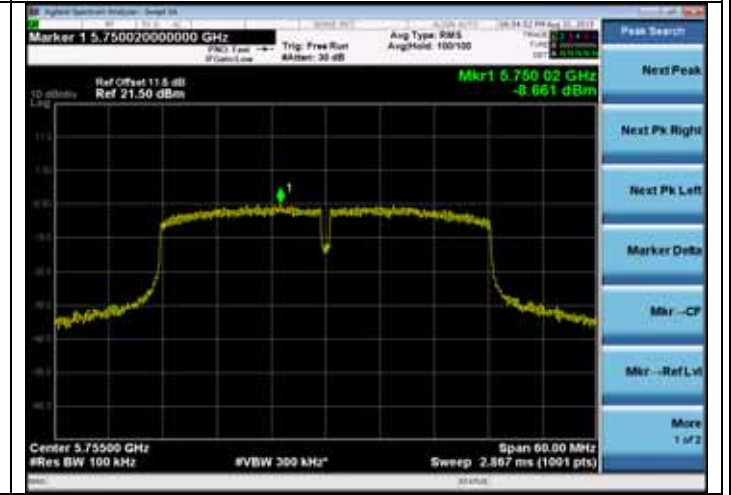
11ac VHT20

5745MHz

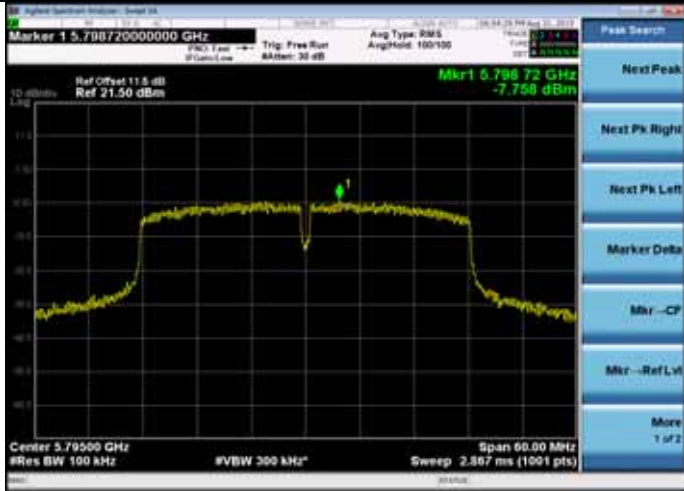


11ac VHT40

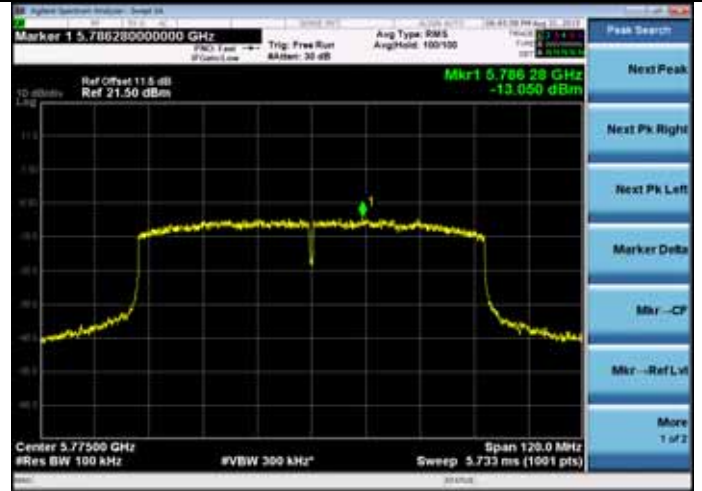
5755MHz



5795MHz



11ac VHT80
5775MHz

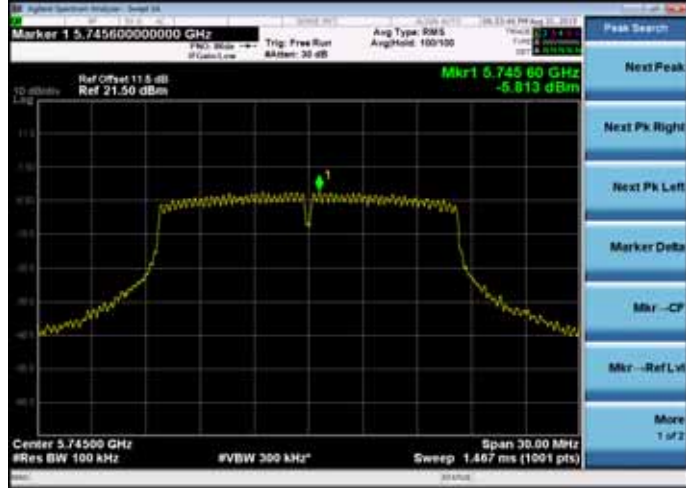


5745-5825MHz Band:

ANT 1

11a

5745MHz

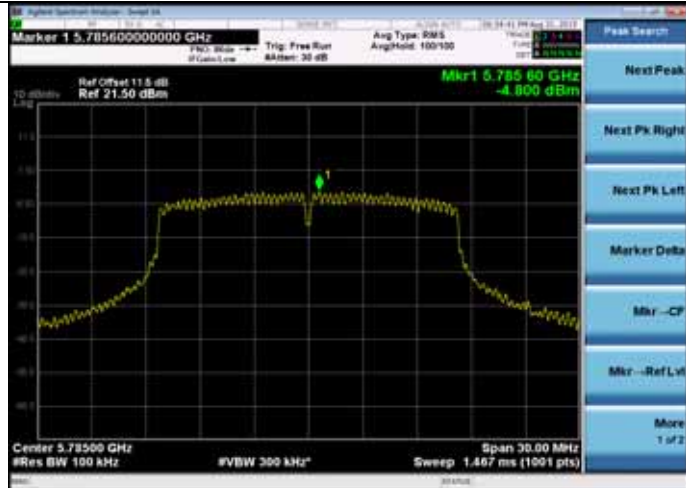


11n HT20

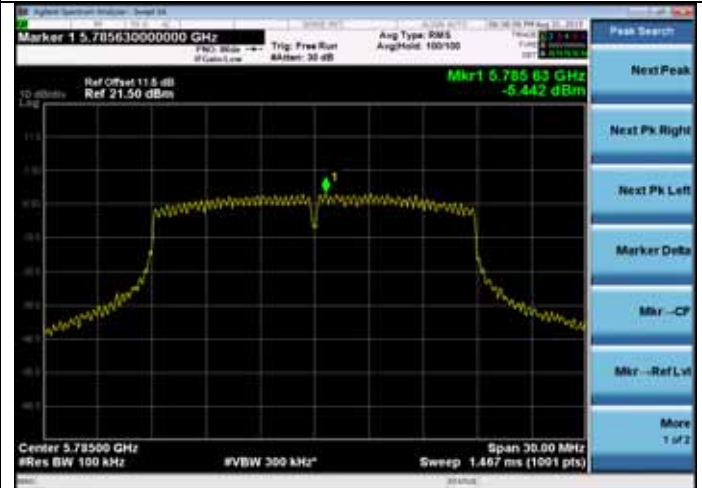
5745MHz



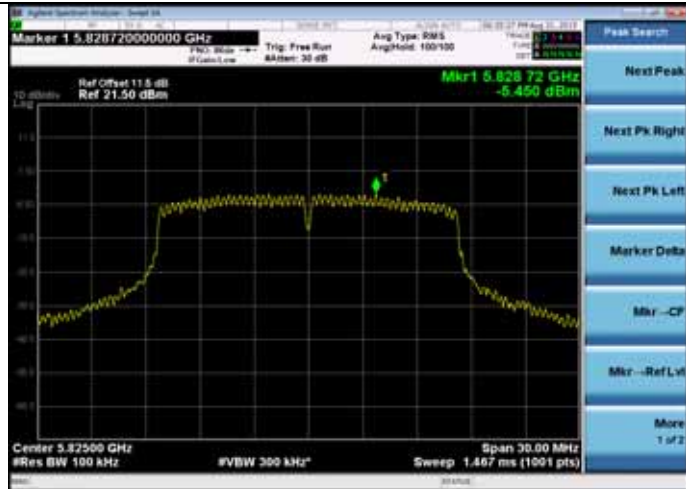
5785MHz



5785MHz



5825MHz

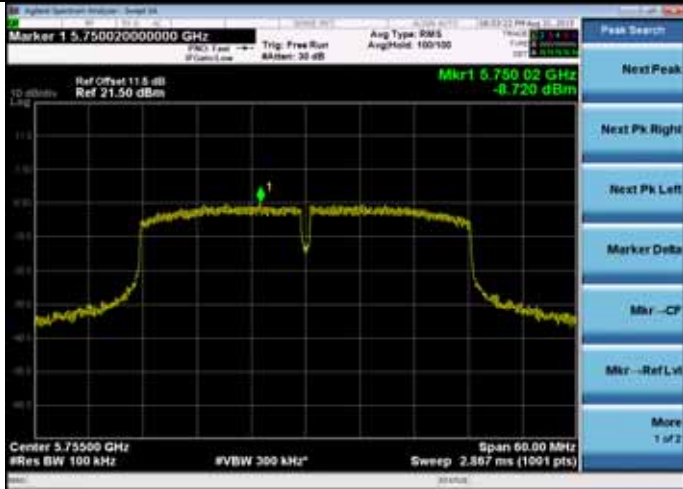


5825MHz

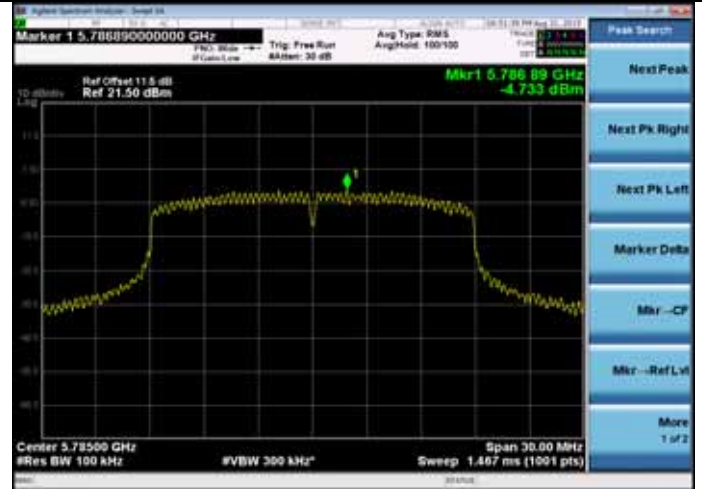


11n HT40

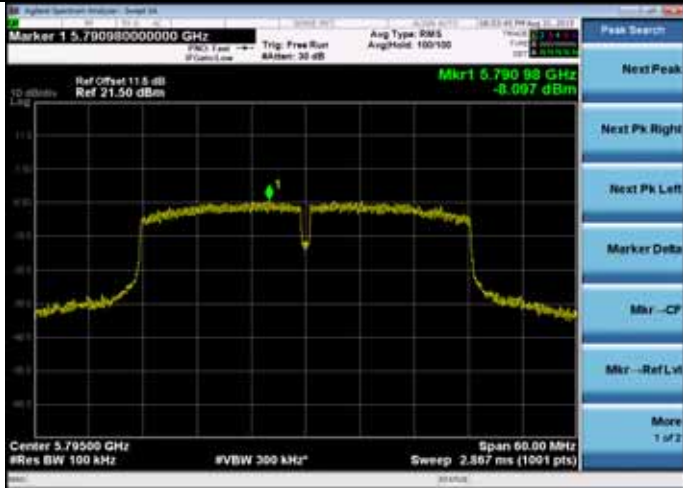
5755MHz



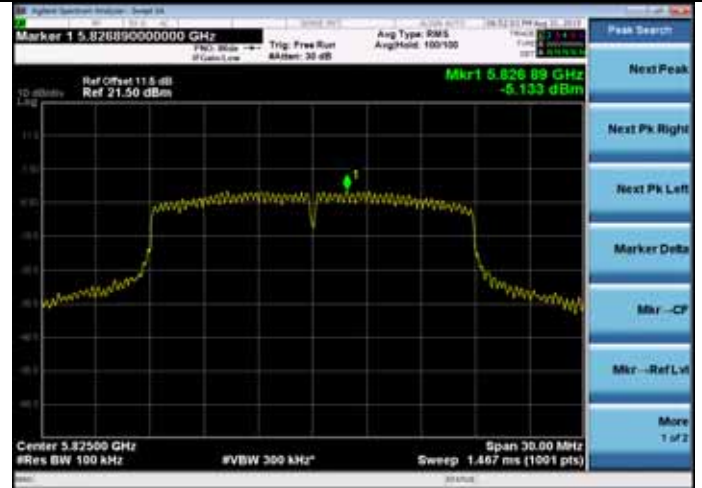
5785MHz



5795MHz

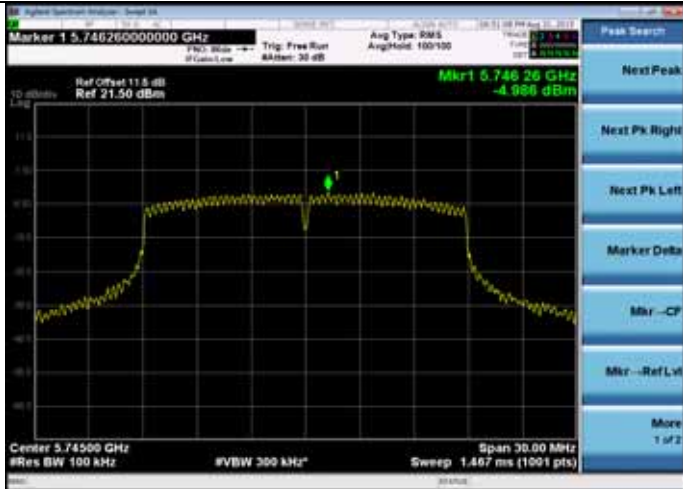


5825MHz



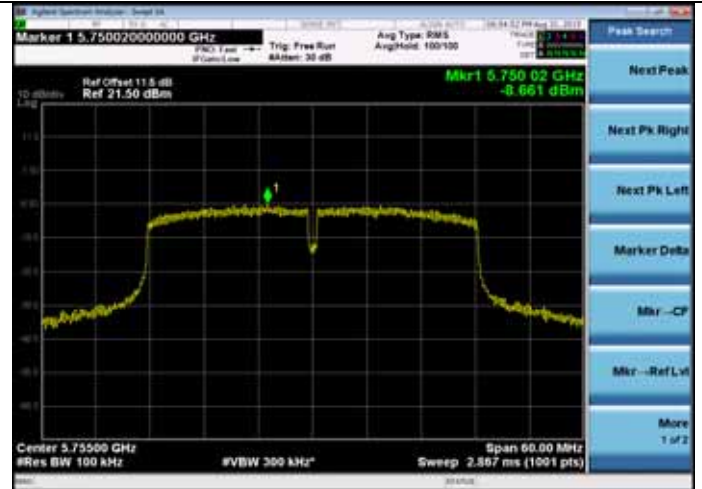
11ac VHT20

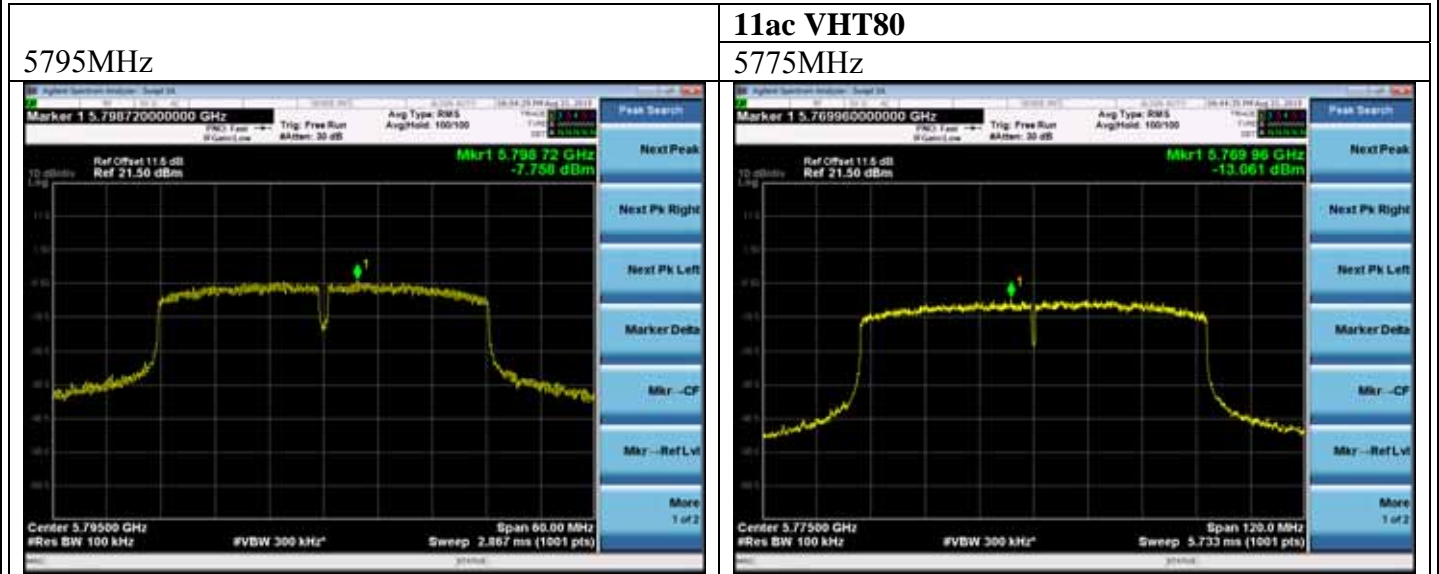
5745MHz



11ac VHT40

5755MHz





9. FREQUENCY STABILITY MEASUREMENT

9.1. Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	PXA Signal Analyzer	Agilent	N9030A	MY51380221	Oct.18,15	1 Year
2.	Amplifier	Agilent	8449B	3008A02495	Apr.28,15	1 Year
3.	Horn Antenna	ETS	3115	9510-4877	Oct.15,15	1 Year
4.	HF Cable	Hubersuhner	Sucoflex104	274094/4	Apr.28,15	1 Year

9.2. Limit

Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emissions is maintained within the band of operation under all conditions of normal operation as specified in the user's manual or ± 20 ppm

9.3. Test Procedure

1. The transmitter output (antenna port) was connected to the spectrum analyzer. EUT have transmitted absence of modulation signal and fixed channelise. Set the spectrum analyzer span to view the entire absence of modulation emissions bandwidth. Set RBW = 10 kHz, VBW = 10 kHz with peak detector and maxhold settings. f_c is declaring of channel frequency. Then the frequency error formula is $(f_c - f) / f_c \times 10^6$ ppm and the limit is less than ± 20 ppm The test extreme voltage is to change the primary supply voltage from 85 to 115 percent of the nominal value
2. Extreme temperature rule is $-30^{\circ}\text{C} \sim 50^{\circ}\text{C}$.

9.4. Test Result

EUT: Notebook		
M/N: RZ09-0168		
Test Site: RF Site	Date: 2015-8-21	Test Engineer: Alice yang
Temperature: 25 ± 0.6	Humidity: 53.7 ± 3.0 %	Pressure: 101.1 ± 1.0 kpa

Frequency Stability vs.Voltage:

Test Voltage (V)	Temp ()	CH	Max. Reading (MHz)	Target Frequency (MHz)	Result (ppm)	Limit (ppm)
AC108V	25	CH36	5180.025	5180	4.82	±20
		CH38	5190.048	5190	9.25	±20
		CH40	5200.025	5200	4.81	±20
		CH42	5210.00	5210	0	±20
		CH46	5230.020	5230	3.82	±20
		CH48	5240.025	5240	4.77	±20
		CH52	5260.025	5260	4.75	±20
		CH54	5270.00	5270	0	±20
		CH58	5290.025	5290	4.73	±20
		CH60	5300.042	5300	7.92	±20
		CH62	5310.025	5310	4.71	±20
		CH64	5320.00	5320	0	±20
		CH100	5500.025	5500	4.55	±20
		CH102	5510.030	5510	5.44	±20
		CH106	5530.025	5530	4.52	±20
		CH120	5600.00	5600	0	±20
		CH134	5670.025	5670	4.41	±20
		CH140	5700.045	5700	7.89	±20
		CH149	5745.00	5745	0	±20
		CH151	5755.025	5755	4.34	±20
CH155	5775.00	5775	0	±20		
CH157	5785.030	5785	5.19	±20		
CH159	5795.030	5795	5.18	±20		
CH165	5825.025	5825	4.29	±20		

Conclusion: PASS

Test Voltage (V)	Temp ()	CH	Max. Reading (MHz)	Target Frequency (MHz)	Result (ppm)	Limit (ppm)
AC120V	25	CH36	5180.035	5180	6.76	±20
		CH38	5190.052	5190	10.02	±20
		CH40	5200.048	5200	9.23	±20
		CH42	5210.050	5210	9.60	±20
		CH46	5230.025	5230	4.78	±20
		CH48	5240.030	5240	5.73	±20
		CH52	5260.045	5260	8.56	±20
		CH54	5270.045	5270	8.54	±20
		CH58	5290.030	5290	5.67	±20
		CH60	5300.045	5300	8.49	±20
		CH62	5310.030	5310	5.65	±20
		CH64	5320.025	5320	4.70	±20
		CH100	5500.030	5500	5.45	±20
		CH102	5510.045	5510	8.17	±20
		CH106	5530.030	5530	5.42	±20
		CH120	5600.025	5600	4.46	±20
		CH134	5670.045	5670	7.94	±20
		CH140	5700.050	5700	8.77	±20
		CH149	5745.040	5745	6.96	±20
		CH151	5755.035	5755	6.08	±20
CH155	5775.035	5775	6.06	±20		
CH157	5785.045	5785	7.78	±20		
CH159	5795.035	5795	6.04	±20		
CH165	5825.040	5825	6.87	±20		

Conclusion: PASS

Test Voltage (V)	Temp (°C)	CH	Max. Reading (MHz)	Target Frequency (MHz)	Result (ppm)	Limit (ppm)
AC132V	25	CH36	5180.040	5180	7.72	±20
		CH38	5190.045	5190	8.67	±20
		CH40	5200.050	5200	9.62	±20
		CH42	5210.065	5210	12.48	±20
		CH46	5230.075	5230	14.34	±20
		CH48	5240.030	5240	5.73	±20
		CH52	5260.045	5260	8.56	±20
		CH54	5270.080	5270	15.18	±20
		CH58	5290.075	5290	14.17	±20
		CH60	5300.060	5300	11.32	±20
		CH62	5310.040	5310	7.53	±20
		CH64	5320.048	5320	9.02	±20
		CH100	5500.045	5500	8.18	±20
		CH102	5510.050	5510	9.07	±20
		CH106	5530.060	5530	10.85	±20
		CH120	5600.030	5600	5.35	±20
		CH134	5670.050	5670	8.82	±20
		CH140	5700.060	5700	10.53	±20
		CH149	5745.050	5745	8.70	±20
		CH151	5755.050	5755	8.69	±20
CH155	5775.065	5775	11.25	±20		
CH157	5785.050	5785	8.64	±20		
		CH159	5795.040	5795	6.90	±20
		CH165	5825.050	5825	8.58	±20

Conclusion: PASS

Frequency Stability vs.Temperature:

Test Voltage (V)	Temp ()	CH	Max. Reading (MHz)	Target Frequency (MHz)	Result (ppm)	Limit (ppm)
AC120V	-10	CH36	5180.050	5180	9.65	±20
		CH38	5190.075	5190	14.45	±20
		CH40	5200.030	5200	5.77	±20
		CH42	5210.012	5210	2.30	±20
		CH46	5230.030	5230	5.74	±20
		CH48	5240.030	5240	5.73	±20
		CH52	5260.025	5260	4.75	±20
		CH54	5270.020	5270	3.80	±20
		CH58	5290.025	5290	4.73	±20
		CH60	5300.042	5300	7.92	±20
		CH62	5310.025	5310	4.71	±20
		CH64	5320.050	5320	9.40	±20
		CH100	5500.015	5500	2.73	±20
		CH102	5510.030	5510	5.44	±20
		CH106	5530.025	5530	4.52	±20
		CH120	5600.012	5600	2.14	±20
		CH134	5670.025	5670	4.41	±20
		CH140	5700.030	5700	5.26	±20
		CH149	5745.00	5745	0	±20
		CH151	5755.025	5755	4.34	±20
CH155	5775.025	5775	4.33	±20		
CH157	5785.025	5785	4.32	±20		
CH159	5795.048	5795	8.28	±20		
CH165	5825.030	5825	5.15	±20		

Conclusion: PASS

Test Voltage (V)	Temp ()	CH	Max. Reading (MHz)	Target Frequency (MHz)	Result (ppm)	Limit (ppm)
AC120V	0	CH36	5180.040	5180	7.72	±20
		CH38	5190.035	5190	6.74	±20
		CH40	5200.025	5200	4.81	±20
		CH42	5210.045	5210	8.64	±20
		CH46	5230.025	5230	4.78	±20
		CH48	5240.030	5240	5.73	±20
		CH52	5260.045	5260	8.56	±20
		CH54	5270.030	5270	5.69	±20
		CH58	5290.030	5290	5.67	±20
		CH60	5300.015	5300	2.83	±20
		CH62	5310.025	5310	4.71	±20
		CH64	5320.025	5320	4.70	±20
		CH100	5500.030	5500	5.45	±20
		CH102	5510.028	5510	5.08	±20
		CH106	5530.030	5530	5.42	±20
		CH120	5600.025	5600	4.46	±20
		CH134	5670.045	5670	7.94	±20
		CH140	5700.050	5700	8.77	±20
		CH149	5745.040	5745	6.96	±20
		CH151	5755.025	5755	4.34	±20
CH155	5775.035	5775	6.06	±20		
CH157	5785.025	5785	4.32	±20		
CH159	5795.035	5795	6.04	±20		
CH165	5825.030	5825	5.15	±20		

Conclusion: PASS

Test Voltage (V)	Temp ()	CH	Max. Reading (MHz)	Target Frequency (MHz)	Result (ppm)	Limit (ppm)
AC120V	10	CH36	5180.025	5180	4.83	±20
		CH38	5190.032	5190	6.17	±20
		CH40	5200.042	5200	8.08	±20
		CH42	5210.042	5210	8.06	±20
		CH46	5230.050	5230	9.56	±20
		CH48	5240.030	5240	5.73	±20
		CH52	5260.045	5260	8.56	±20
		CH54	5270.059	5270	11.19	±20
		CH58	5290.049	5290	9.26	±20
		CH60	5300.050	5300	9.43	±20
		CH62	5310.040	5310	7.53	±20
		CH64	5320.048	5320	9.02	±20
		CH100	5500.045	5500	8.18	±20
		CH102	5510.050	5510	9.07	±20
		CH106	5530.060	5530	10.85	±20
		CH120	5600.030	5600	5.36	±20
		CH134	5670.055	5670	9.70	±20
		CH140	5700.060	5700	10.53	±20
		CH149	5745.047	5745	8.18	±20
		CH151	5755.046	5755	7.99	±20
CH155	5775.058	5775	10.04	±20		
CH157	5785.052	5785	8.99	±20		
CH159	5795.046	5795	7.94	±20		
CH165	5825.055	5825	9.44	±20		

Conclusion: PASS

Test Voltage (V)	Temp ()	CH	Max. Reading (MHz)	Target Frequency (MHz)	Result (ppm)	Limit (ppm)
AC120V	20	CH36	5180.045	5180	8.69	±20
		CH38	5190.042	5190	8.09	±20
		CH40	5200.025	5200	4.81	±20
		CH42	5210.040	5210	7.68	±20
		CH46	5230.054	5230	10.33	±20
		CH48	5240.038	5240	7.25	±20
		CH52	5260.045	5260	8.56	±20
		CH54	5270.030	5270	5.69	±20
		CH58	5290.030	5290	5.67	±20
		CH60	5300.015	5300	2.83	±20
		CH62	5310.025	5310	4.71	±20
		CH64	5320.029	5320	5.45	±20
		CH100	5500.030	5500	5.45	±20
		CH102	5510.023	5510	4.17	±20
		CH106	5530.038	5530	6.87	±20
		CH120	5600.026	5600	4.64	±20
		CH134	5670.048	5670	8.47	±20
		CH140	5700.045	5700	7.89	±20
		CH149	5745.048	5745	8.36	±20
		CH151	5755.026	5755	4.52	±20
CH155	5775.052	5775	9.00	±20		
CH157	5785.035	5785	6.05	±20		
CH159	5795.039	5795	6.73	±20		
CH165	5825.036	5825	6.18	±20		

Conclusion: PASS

Test Voltage (V)	Temp ()	CH	Max. Reading (MHz)	Target Frequency (MHz)	Result (ppm)	Limit (ppm)
AC120V	30	CH36	5180.048	5180	9.27	±20
		CH38	5190.040	5190	7.71	±20
		CH40	5200.026	5200	5.00	±20
		CH42	5210.035	5210	6.72	±20
		CH46	5230.055	5230	10.52	±20
		CH48	5240.030	5240	5.73	±20
		CH52	5260.045	5260	8.56	±20
		CH54	5270.030	5270	5.69	±20
		CH58	5290.032	5290	6.05	±20
		CH60	5300.018	5300	3.40	±20
		CH62	5310.025	5310	4.71	±20
		CH64	5320.030	5320	5.64	±20
		CH100	5500.035	5500	6.36	±20
		CH102	5510.023	5510	4.17	±20
		CH106	5530.035	5530	6.33	±20
		CH120	5600.028	5600	5.00	±20
		CH134	5670.048	5670	8.47	±20
		CH140	5700.042	5700	7.37	±20
		CH149	5745.050	5745	8.70	±20
		CH151	5755.026	5755	4.52	±20
CH155	5775.045	5775	7.79	±20		
CH157	5785.035	5785	6.05	±20		
CH159	5795.045	5795	7.77	±20		
CH165	5825.030	5825	5.15	±20		

Conclusion: PASS

Test Voltage (V)	Temp ()	CH	Max. Reading (MHz)	Target Frequency (MHz)	Result (ppm)	Limit (ppm)
AC120V	40	CH36	5180.052	5180	9.27	±20
		CH38	5190.040	5190	7.71	±20
		CH40	5200.035	5200	5.00	±20
		CH42	5210.040	5210	6.72	±20
		CH46	5230.056	5230	10.52	±20
		CH48	5240.030	5240	5.73	±20
		CH52	5260.045	5260	8.56	±20
		CH54	5270.036	5270	5.69	±20
		CH58	5290.032	5290	6.05	±20
		CH60	5300.020	5300	3.40	±20
		CH62	5310.025	5310	4.71	±20
		CH64	5320.030	5320	5.64	±20
		CH100	5500.036	5500	6.36	±20
		CH102	5510.023	5510	4.17	±20
		CH106	5530.038	5530	6.33	±20
		CH120	5600.028	5600	5.00	±20
		CH134	5670.042	5670	8.47	±20
		CH140	5700.042	5700	7.37	±20
		CH149	5745.056	5745	8.70	±20
		CH151	5755.028	5755	4.52	±20
CH155	5775.047	5775	7.79	±20		
CH157	5785.036	5785	6.05	±20		
CH159	5795.050	5795	7.77	±20		
CH165	5825.035	5825	5.15	±20		

Conclusion: PASS

Test Voltage (V)	Temp ()	CH	Max. Reading (MHz)	Target Frequency (MHz)	Result (ppm)	Limit (ppm)
AC120V	50	CH36	5180.056	5180	10.81	±20
		CH38	5190.045	5190	8.67	±20
		CH40	5200.036	5200	6.92	±20
		CH42	5210.042	5210	8.06	±20
		CH46	5230.050	5230	9.56	±20
		CH48	5240.035	5240	6.68	±20
		CH52	5260.045	5260	8.56	±20
		CH54	5270.036	5270	6.83	±20
		CH58	5290.035	5290	6.62	±20
		CH60	5300.020	5300	3.77	±20
		CH62	5310.028	5310	5.27	±20
		CH64	5320.030	5320	5.64	±20
		CH100	5500.035	5500	6.36	±20
		CH102	5510.023	5510	4.17	±20
		CH106	5530.040	5530	7.23	±20
		CH120	5600.022	5600	3.93	±20
		CH134	5670.040	5670	7.05	±20
		CH140	5700.042	5700	7.37	±20
		CH149	5745.060	5745	10.44	±20
		CH151	5755.036	5755	6.26	±20
CH155	5775.045	5775	7.79	±20		
CH157	5785.042	5785	7.26	±20		
CH159	5795.030	5795	5.18	±20		
CH165	5825.030	5825	5.15	±20		

Conclusion: PASS

10. ANTENNA REQUIREMENT

10.1. Standard Applicable

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. And according to FCC 47 CFR Section 15.407 (a), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

10.2. Antenna Connected Construction

The antennas used for this product are PIFA antenna that no antenna other than that furnished by the responsible party shall be used with the device, the maximum peak gain of the transmit antenna is 3.52 dBi.

11. DEVIATION TO TEST SPECIFICATIONS

[NONE]