

6. Band Edge Emissions

6.1 Test Standard and Limit

6.1.1 Test Standard

FCC Part 15.407(b)

6.1.2 Test Limit

Limits of unwanted emission out of the restricted bands

Frequency (MHz)	EIRP Limits (dBm)	Equivalent Field Strength at 3m (dBuV/m)
5150~5250	-27	68.3
5250~5350	-27	68.3
5470~5725	-27	68.3
5725~5825	-27(Note 2)	68.3
	10(Note 2)	105.3
	15.6(Note 2)	110.9
	27(Note 2)	122.3

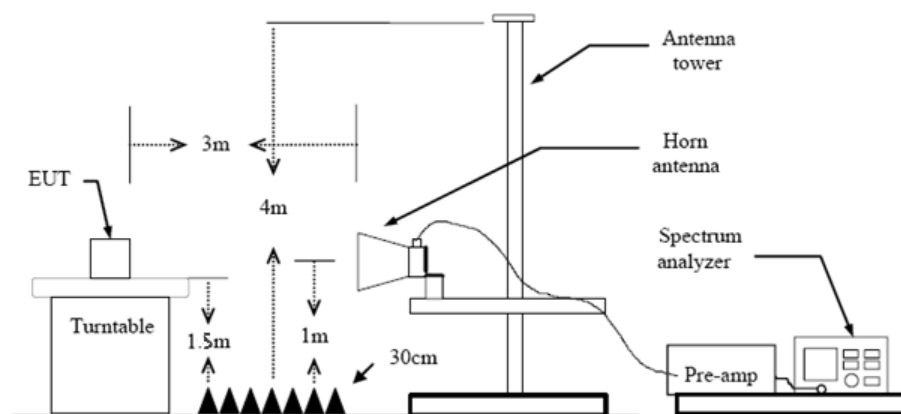
NOTE:

1, The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength:

$$E = \frac{1000000\sqrt{30P}}{3} \text{ uV/m, where P is the eirp (Watts)}$$

2, According to FCC 16-24, All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27dBm/MHz at the band edge.

6.2 Test Setup



6.3 Test Procedure

- (1) The measuring distance of 3m shall be used for measurements at frequency up to 1GHz. The EUT was placed on a rotating 0.8m high above the ground, the table was rotated 360 degrees to determine the position of the highest radiation.
- (2) Measurements at frequency above 1GHz. The EUT was placed on a rotating 1.5m high above the ground. RF absorbers covered the ground plane with a minimum area of 3.0m by 3.0m between the EUT and measurement receiver antenna. The RF absorber shall not exceed 30cm in high above the conducting floor. The table was rotated 360 degrees to determine the position of the highest radiation.
- (3) The Test antenna shall vary between 1m and 4m, Both Horizontal and Vertical antenna are set to make measurement.
- (4) The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
- (5) If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit Bellow 1 GHz, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed. But the Peak Value and average value both need to comply with applicable limit above 1 GHz.
- (6) Testing frequency range below 1GHz the measuring instrument use VBW=120 kHz with Quasi-peak detection.
- (7) Testing frequency range above 1GHz the measuring instrument use RBW=1 MHz and VBW=3 MHz with Peak Detector for Peak Values, and use RBW=1 MHz and VBW=10 Hz with Peak Detector for Average Values.
- (8) For the actual test configuration, please see the test setup photo.

6.4 EUT Operating Condition

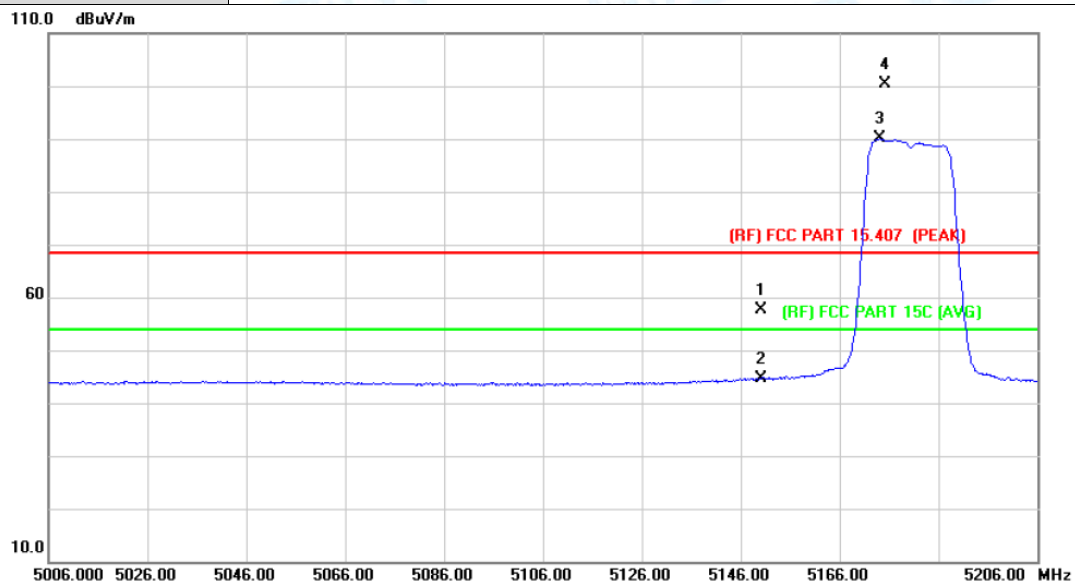
The Equipment Under Test was set to Continual Transmitting in maximum power.

6.5 Test Data

Please see the next page.

(1) Radiation Test
a/n(20)/ac(20)

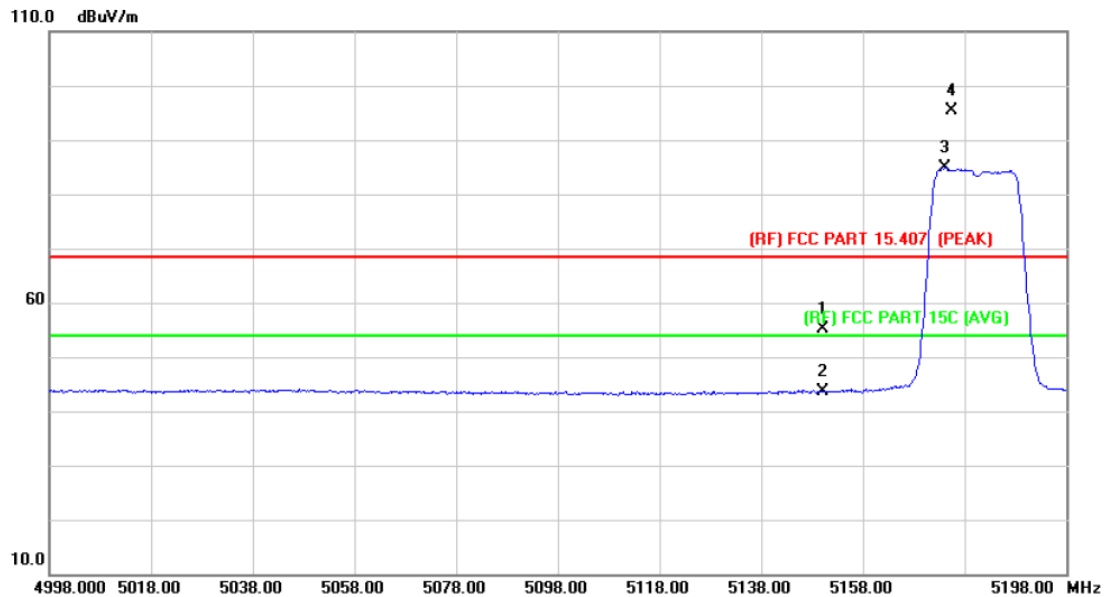
EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX 802.11a Mode 5180 MHz (U-NII-1)		
Remark:	TX 802.11a Mode 5180~5240 MHz (U-NII-1) Low		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		5150.000	48.86	8.78	57.64	68.30	-10.66	peak
2		5150.000	35.85	8.78	44.63	54.00	-9.37	AVG
3	*	5174.200	81.25	8.79	90.04	Fundamental Frequency		AVG
4	X	5175.200	91.71	8.79	100.50	Fundamental Frequency		peak

Emission Level= Read Level+ Correct Factor

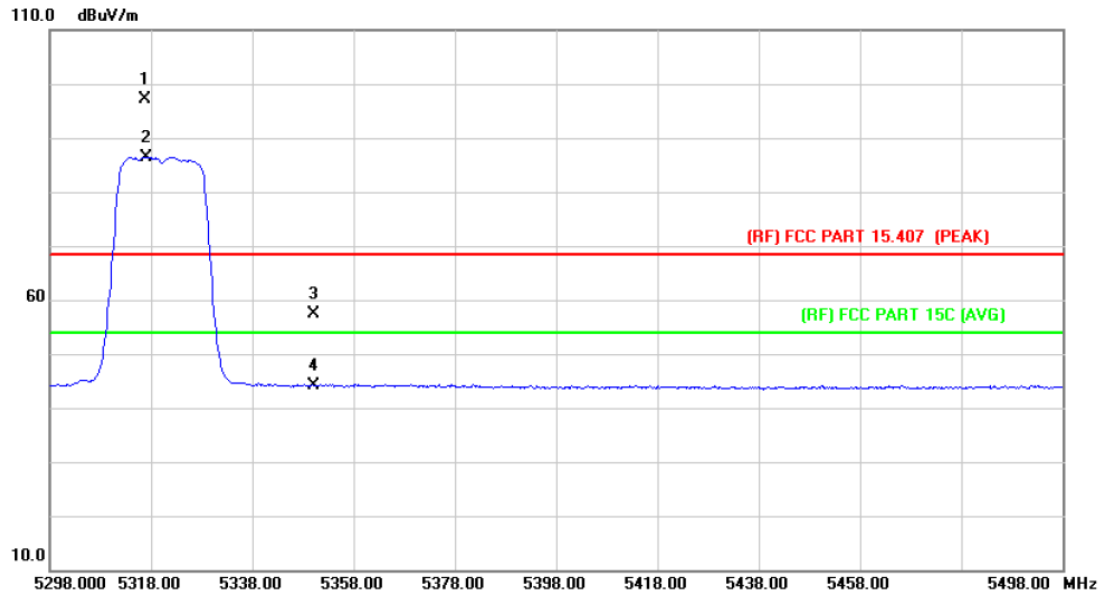
EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Vertical		
Test Mode:	TX 802.11a Mode 5180 MHz (U-NII-1)		
Remark:	TX 802.11a Mode 5180~5240 MHz (U-NII-1) CH Low		



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		5150.000	46.43	8.78	55.21	68.30	-13.09	peak
2		5150.000	34.79	8.78	43.57	54.00	-10.43	AVG
3	*	5174.200	76.05	8.79	84.84	Fundamental Frequency		AVG
4	X	5175.400	86.62	8.79	95.41	Fundamental Frequency		peak

Emission Level= Read Level+ Correct Factor

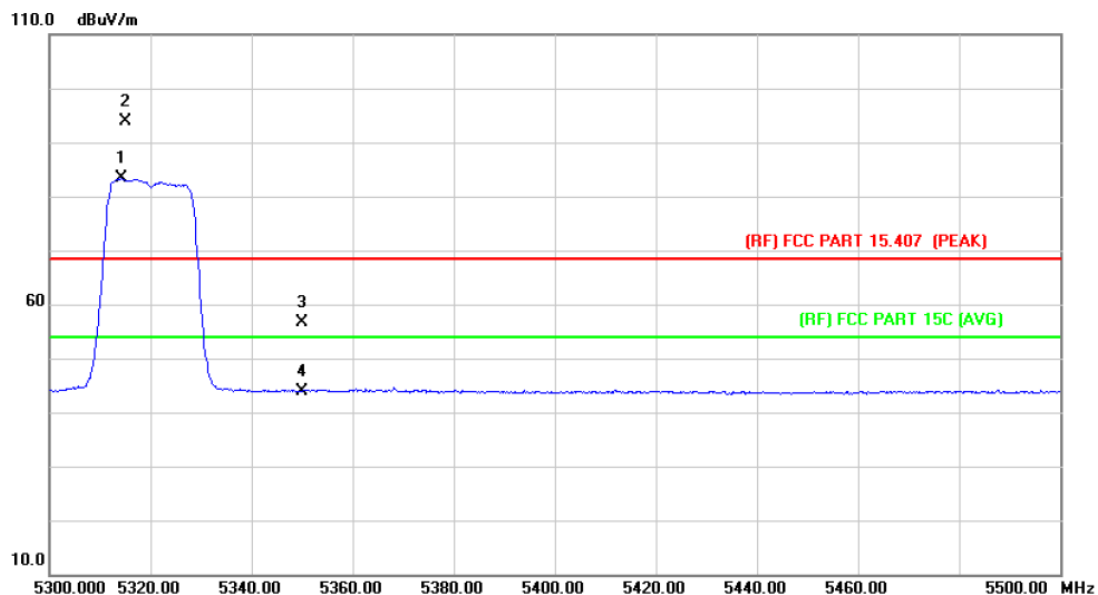
EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX 802.11a Mode 5320 MHz (U-NII-2A)		
Remark:	TX 802.11a Mode 5260~5320 MHz (U-NII-2A) CH High		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	X	5316.800	88.23	8.89	97.12	Fundamental Frequency		peak
2	*	5317.000	77.57	8.89	86.46	Fundamental Frequency		AVG
3		5350.000	48.38	8.91	57.29	68.30	-11.01	peak
4		5350.000	35.33	8.91	44.24	54.00	-9.76	AVG

Emission Level= Read Level+ Correct Factor

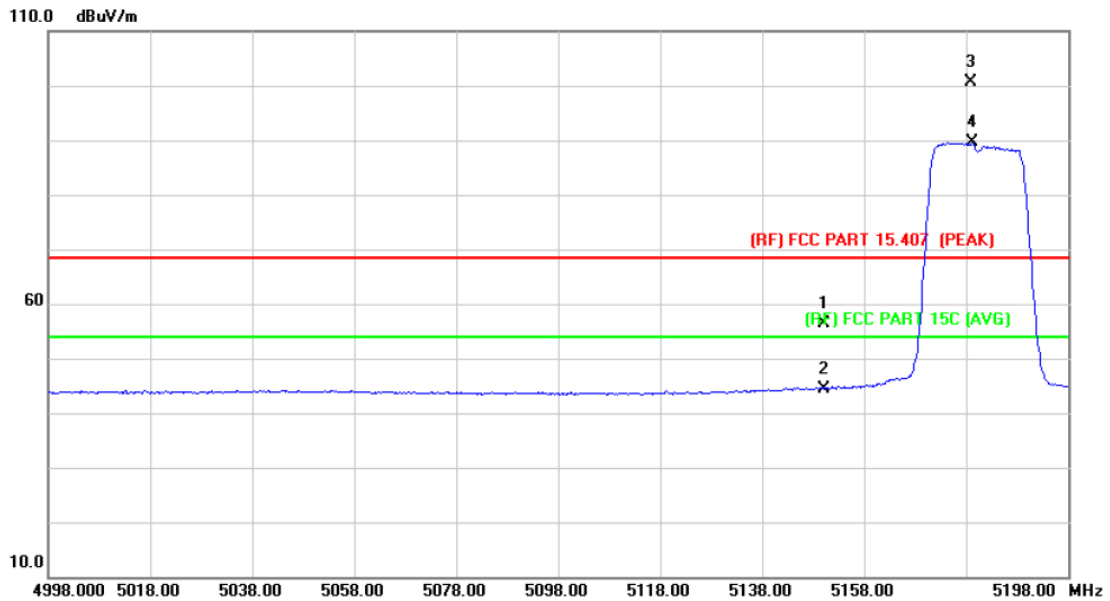
EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Vertical		
Test Mode:	TX 802.11a Mode 5320 MHz (U-NII-2A)		
Remark:	TX 802.11a Mode 5260~5320 MHz (U-NII-2A) CH High		



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1	*	5314.200	74.42	8.88	83.30	Fundamental Frequency		AVG
2	X	5315.200	84.97	8.88	93.85	Fundamental Frequency		peak
3		5350.000	47.66	8.91	56.57	68.30	-11.73	peak
4		5350.000	35.08	8.91	43.99	54.00	-10.01	AVG

Emission Level= Read Level+ Correct Factor

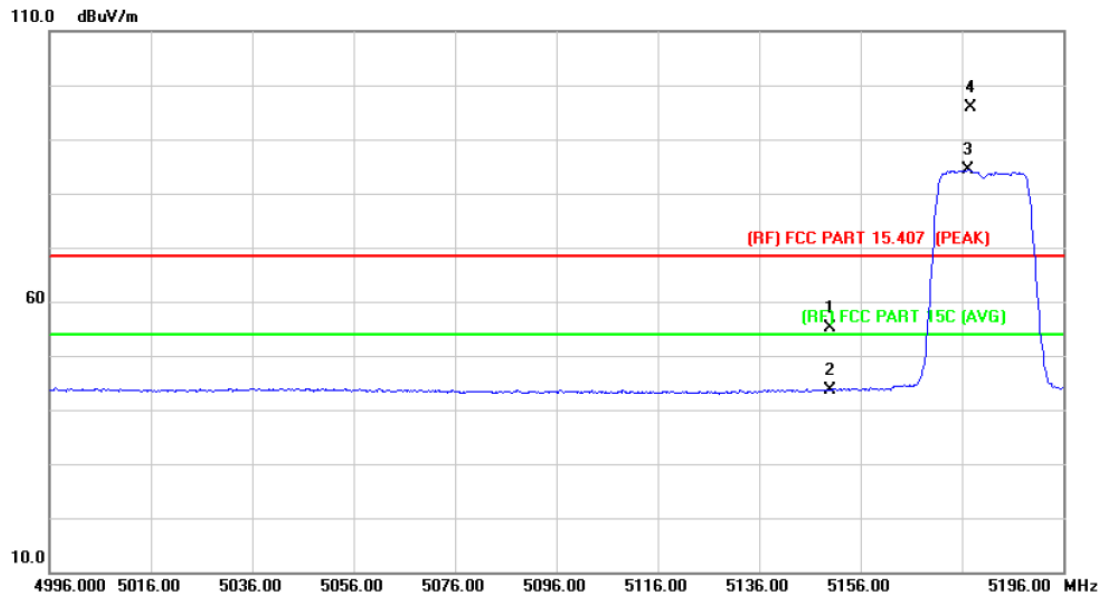
EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX 802.11n(20) Mode 5180 MHz (U-NII-1)		
Remark:	TX 802.11 n(20) Mode 5180~5240 MHz (U-NII-1) CH Low		



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		5150.000	47.63	8.78	56.41	68.30	-11.89	peak
2		5150.000	35.70	8.78	44.48	54.00	-9.52	AVG
3	X	5179.000	91.77	8.79	100.56	Fundamental Frequency		peak
4	*	5179.200	80.76	8.79	89.55	Fundamental Frequency		AVG

Emission Level= Read Level+ Correct Factor

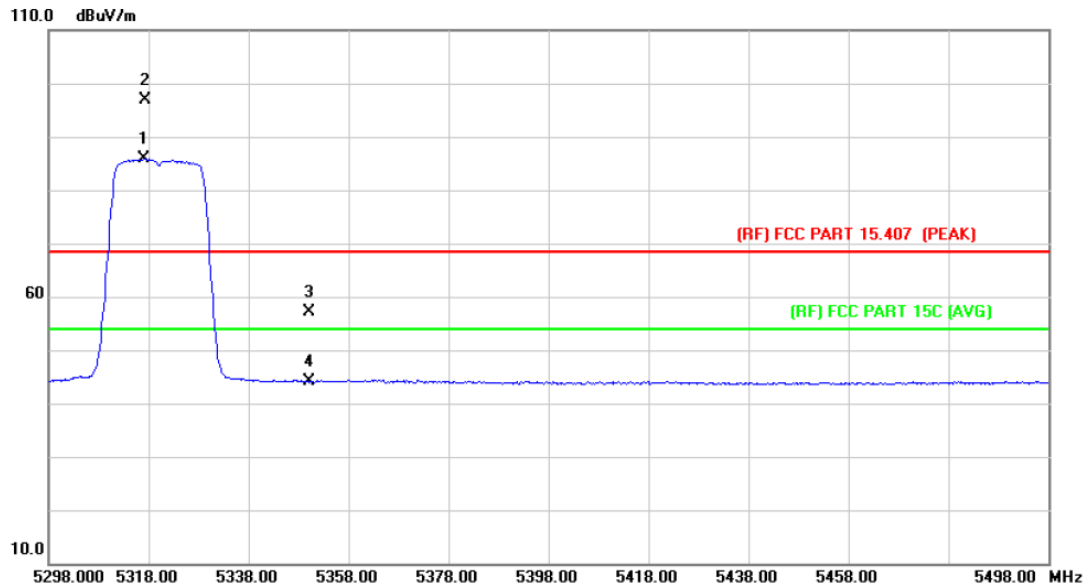
EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Vertical		
Test Mode:	TX 802.11n(20) Mode 5180 MHz (U-NII-1)		
Remark:	TX 802.11 n(20) Mode 5180~5240 MHz (U-NII-1) CH Low		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		5150.000	46.34	8.78	55.12	68.30	-13.18	peak
2		5150.000	34.76	8.78	43.54	54.00	-10.46	AVG
3	*	5177.200	75.49	8.79	84.28	Fundamental Frequency		AVG
4	X	5177.600	87.01	8.79	95.80	Fundamental Frequency		peak

Emission Level= Read Level+ Correct Factor

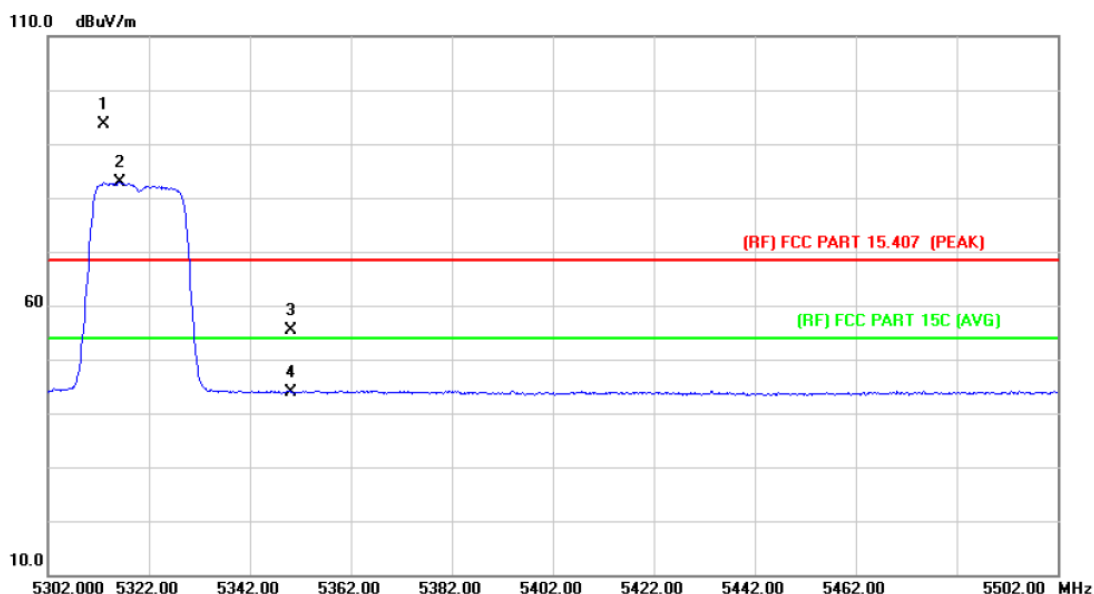
EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX 802.11n(20) Mode 5320 MHz (U-NII-2A)		
Remark:	TX 802.11 n(20) Mode 5260~5320 MHz (U-NII-2A) CH High		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	5317.000	76.97	8.89	85.86	Fundamental Frequency		AVG
2	X	5317.400	87.97	8.89	96.86	Fundamental Frequency		peak
3		5350.000	48.27	8.91	57.18	68.30	-11.12	peak
4		5350.000	35.18	8.91	44.09	54.00	-9.91	AVG

Emission Level= Read Level+ Correct Factor

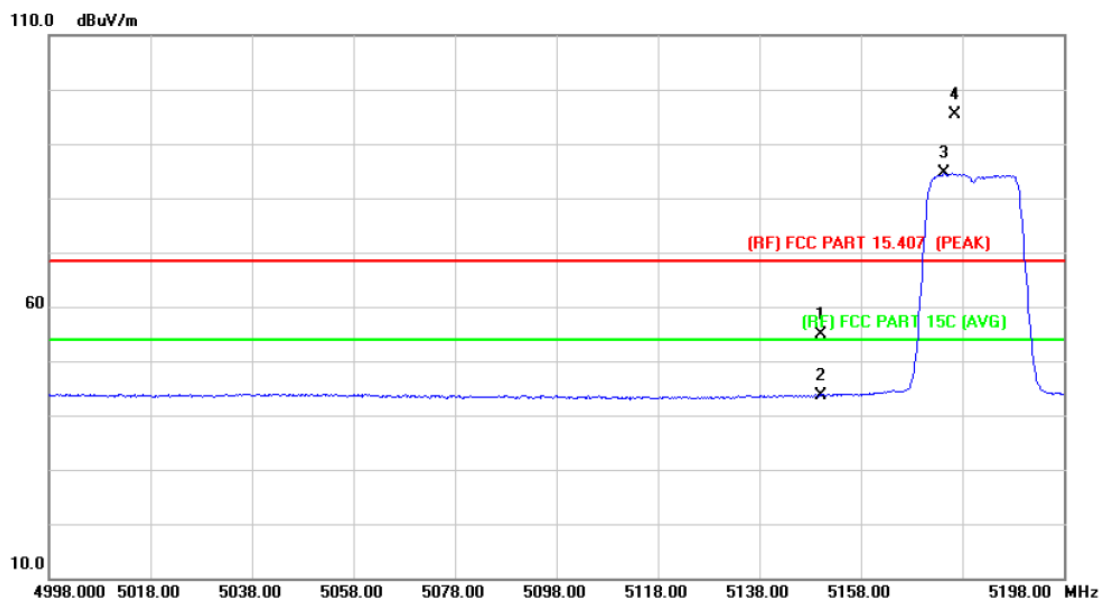
EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Vertical		
Test Mode:	TX 802.11n(20) Mode 5320 MHz (U-NII-2A)		
Remark:	TX 802.11 n(20) Mode 5260~5320 MHz (U-NII-2A) CH High		



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1	X	5313.200	84.78	8.88	93.66	Fundamental Frequency		peak
2	*	5316.200	73.93	8.88	82.81	Fundamental Frequency		AVG
3		5350.000	46.43	8.91	55.34	68.30	-12.96	peak
4		5350.000	35.08	8.91	43.99	54.00	-10.01	AVG

Emission Level= Read Level+ Correct Factor

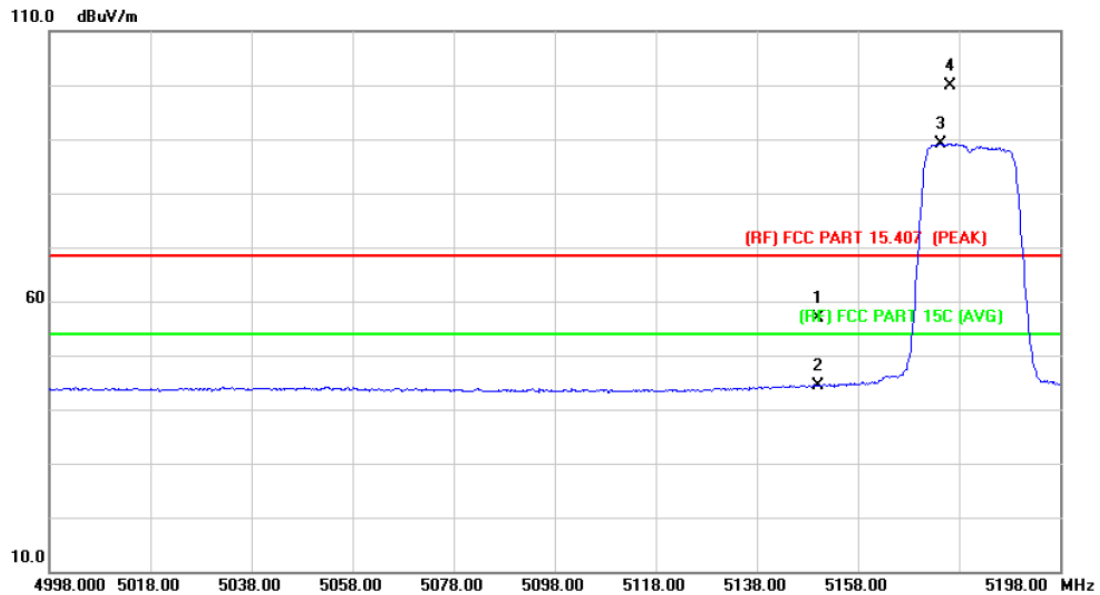
EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX 802.11ac(20) Mode 5180 MHz (U-NII-1)		
Remark:	TX 802.11 ac(20) Mode 5180~5240 MHz (U-NII-1) CH Low		



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		5150.000	46.03	8.78	54.81	Fundamental Frequency		peak
2		5150.000	34.92	8.78	43.70	Fundamental Frequency		AVG
3	*	5174.400	75.76	8.79	84.55	54.00	30.55	AVG
4	X	5176.600	86.48	8.79	95.27	68.30	26.97	peak

Emission Level= Read Level+ Correct Factor

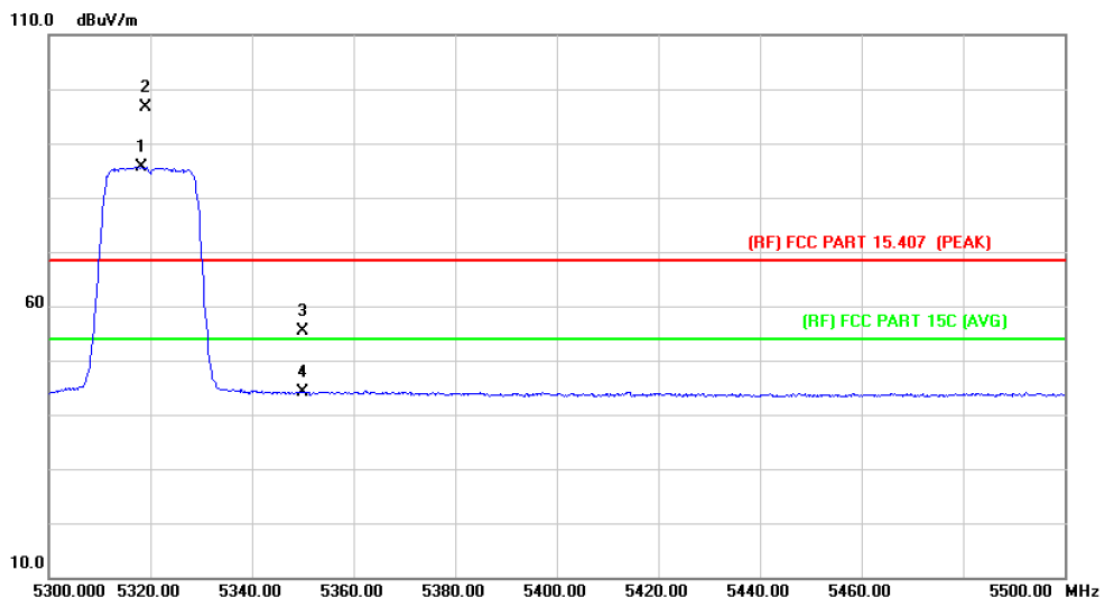
EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Vertical		
Test Mode:	TX 802.11ac(20) Mode 5180 MHz (U-NII-1)		
Remark:	TX 802.11 ac(20) Mode 5180~5240 MHz (U-NII-1) CH Low		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	
1		5150.000	48.20	8.78	56.98	Fundamental Frequency		peak
2		5150.000	35.56	8.78	44.34	Fundamental Frequency		AVG
3	*	5174.400	80.38	8.79	89.17	54.00	35.17	AVG
4	X	5176.400	91.21	8.79	100.00	68.30	31.70	peak

Emission Level= Read Level+ Correct Factor

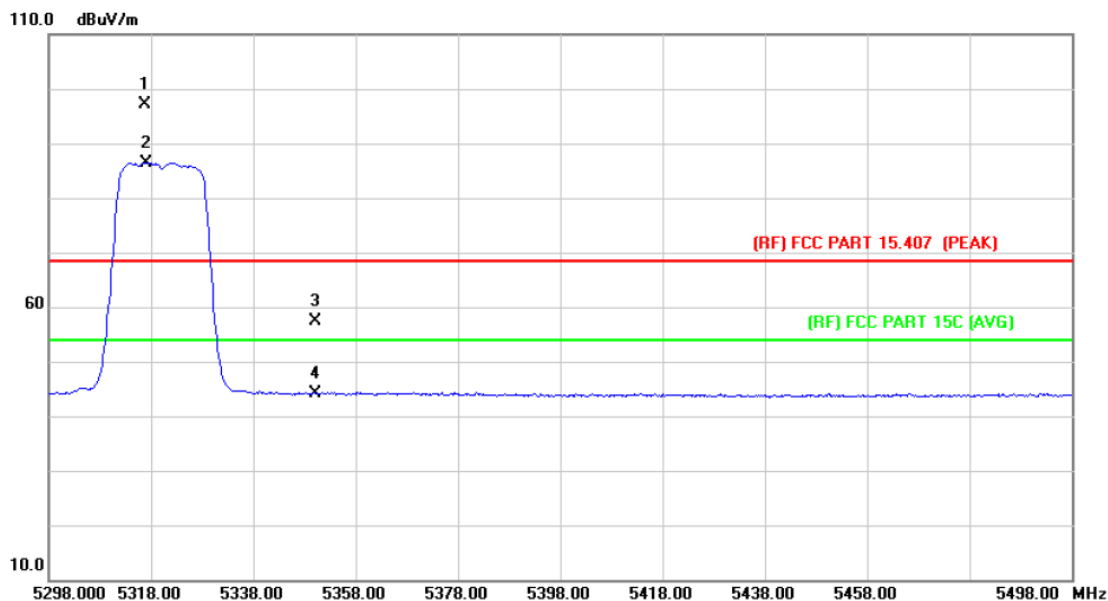
EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX 802.11ac(20) Mode 5320 MHz (U-NII-2A)		
Remark:	TX 802.11 ac(20) Mode 5260~5320 MHz (U-NII-2A) CH High		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	
1	*	5318.200	76.81	8.89	85.70	Fundamental Frequency		AVG
2	X	5319.000	87.68	8.89	96.57	Fundamental Frequency		peak
3		5350.000	46.44	8.91	55.35	68.30	-12.95	peak
4		5350.000	35.12	8.91	44.03	54.00	-9.97	AVG

Emission Level= Read Level+ Correct Factor

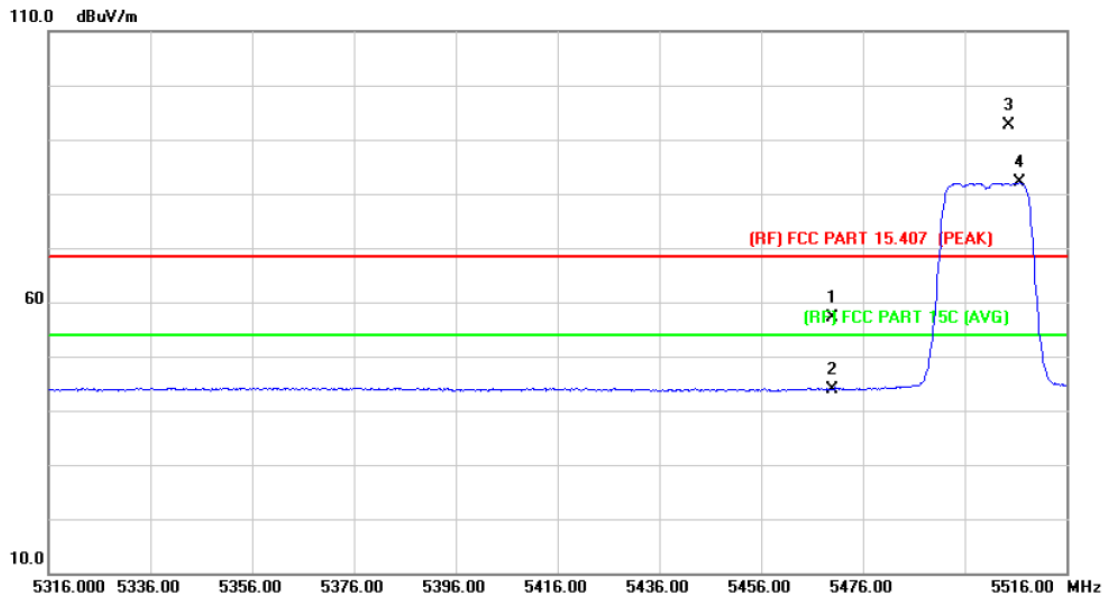
EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Vertical		
Test Mode:	TX 802.11ac(20) Mode 5320 MHz (U-NII-2A)		
Remark:	TX 802.11 ac(20) Mode 5260~5320 MHz (U-NII-2A) CH High		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	X	5316.800	88.23	8.89	97.12	Fundamental Frequency		peak
2	*	5317.000	77.57	8.89	86.46	Fundamental Frequency		AVG
3		5350.000	48.38	8.91	57.29	68.30	-11.01	peak
4		5350.000	35.33	8.91	44.24	54.00	-9.76	AVG

Emission Level= Read Level+ Correct Factor

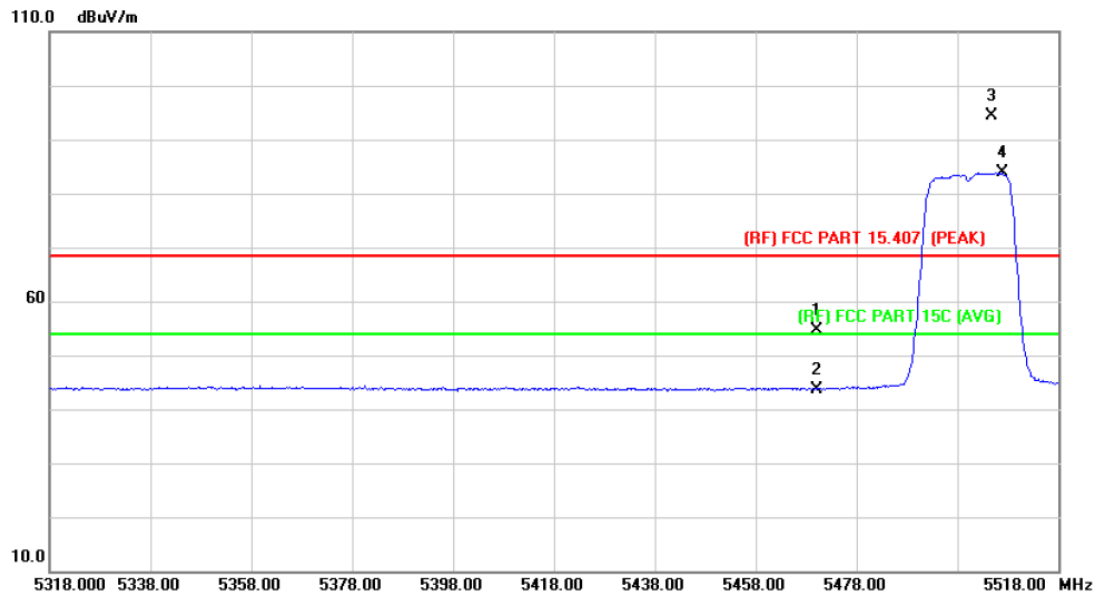
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Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX 802.11a Mode 5500 MHz (U-NII-2C)		
Remark:	N/A		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB Detector
1		5470.000	48.06	8.99	57.05	68.30	-11.25 peak
2		5470.000	34.87	8.99	43.86	54.00	-10.14 AVG
3	X	5504.600	83.58	9.01	92.59	Fundamental Frequency	peak
4	*	5506.800	72.99	9.02	82.01	Fundamental Frequency	AVG

Emission Level= Read Level+ Correct Factor

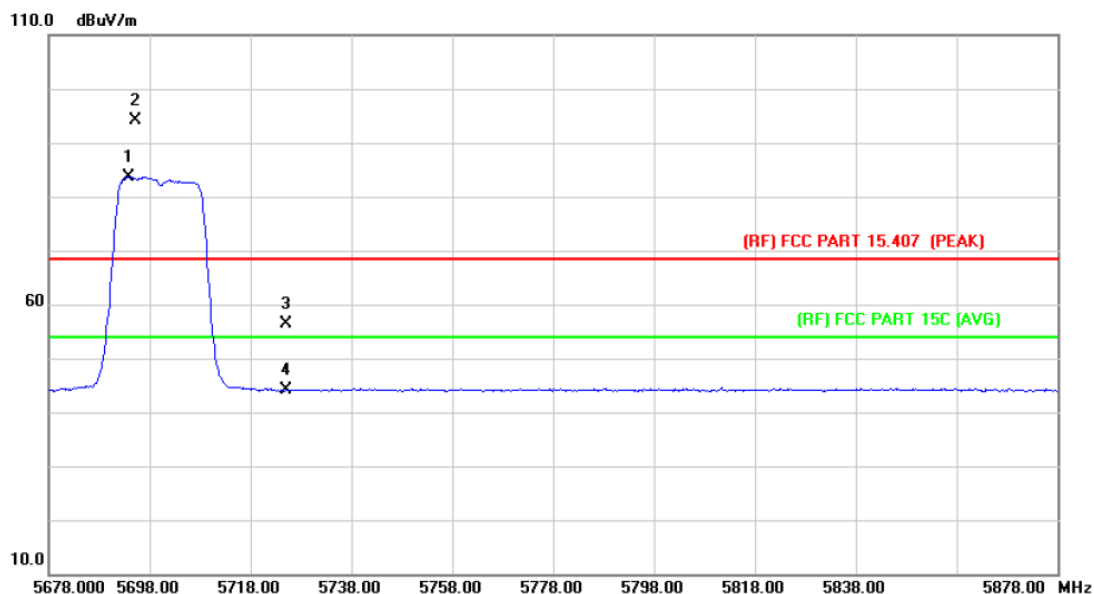
EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Vertical		
Test Mode:	TX 802.11a Mode 5500 MHz (U-NII-2C)		
Remark:	N/A		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		5470.000	45.70	8.99	54.69	68.30	-13.61	peak
2		5470.000	34.75	8.99	43.74	54.00	-10.26	AVG
3	X	5504.800	85.46	9.01	94.47	Fundamental Frequency		peak
4	*	5507.000	74.88	9.02	83.90	Fundamental Frequency		AVG

Emission Level= Read Level+ Correct Factor

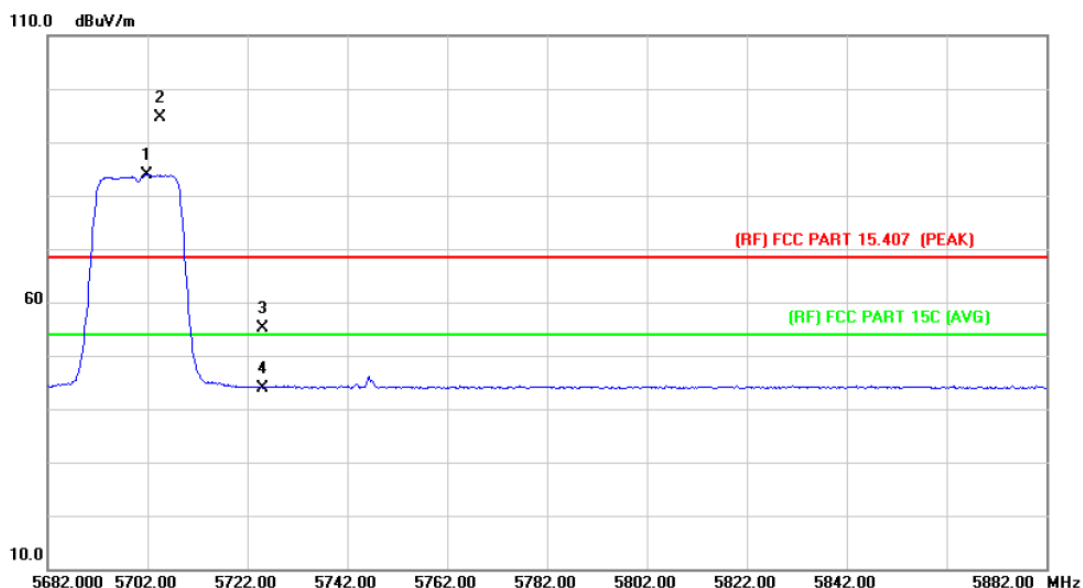
EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX 802.11a Mode 5700 MHz (U-NII-2C)		
Remark:	N/A		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	5693.800	74.54	9.13	83.67	Fundamental Frequency		AVG
2	X	5695.200	85.07	9.14	94.21	Fundamental Frequency		peak
3		5725.000	47.23	9.15	56.38	68.30	-11.92	peak
4		5725.000	34.95	9.15	44.10	54.00	-9.90	AVG

Emission Level= Read Level+ Correct Factor

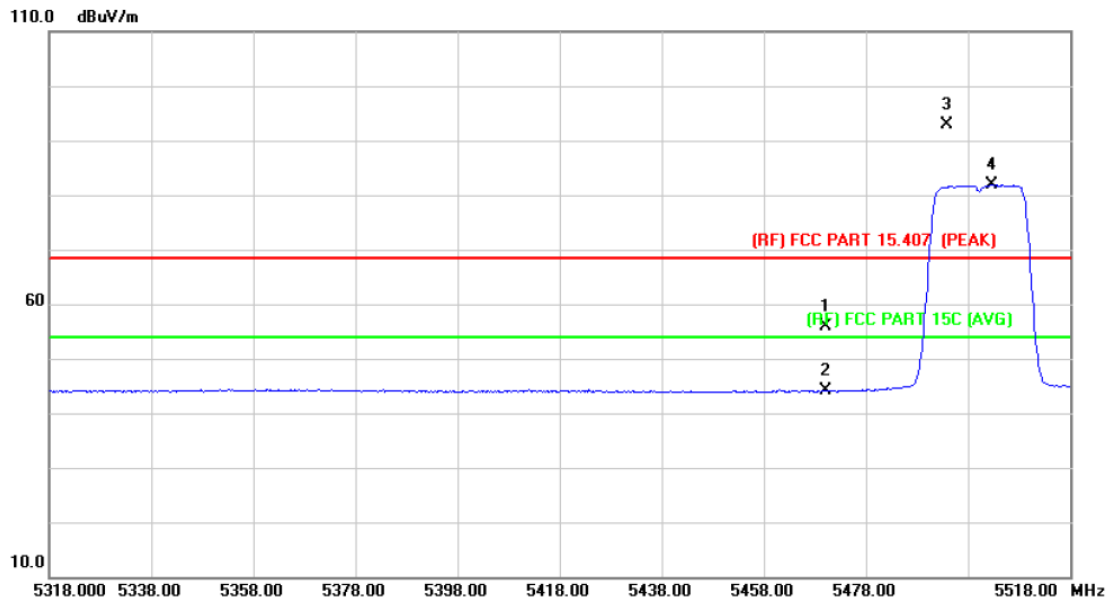
EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Vertical		
Test Mode:	TX 802.11a Mode 5700 MHz (U-NII-2C)		
Remark:	N/A		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	5701.800	74.79	9.14	83.93	Fundamental Frequency		AVG
2	X	5704.600	85.43	9.14	94.57	Fundamental Frequency		peak
3		5725.000	45.98	9.15	55.13	68.30	-13.17	peak
4		5725.000	34.82	9.15	43.97	54.00	-10.03	AVG

Emission Level= Read Level+ Correct Factor

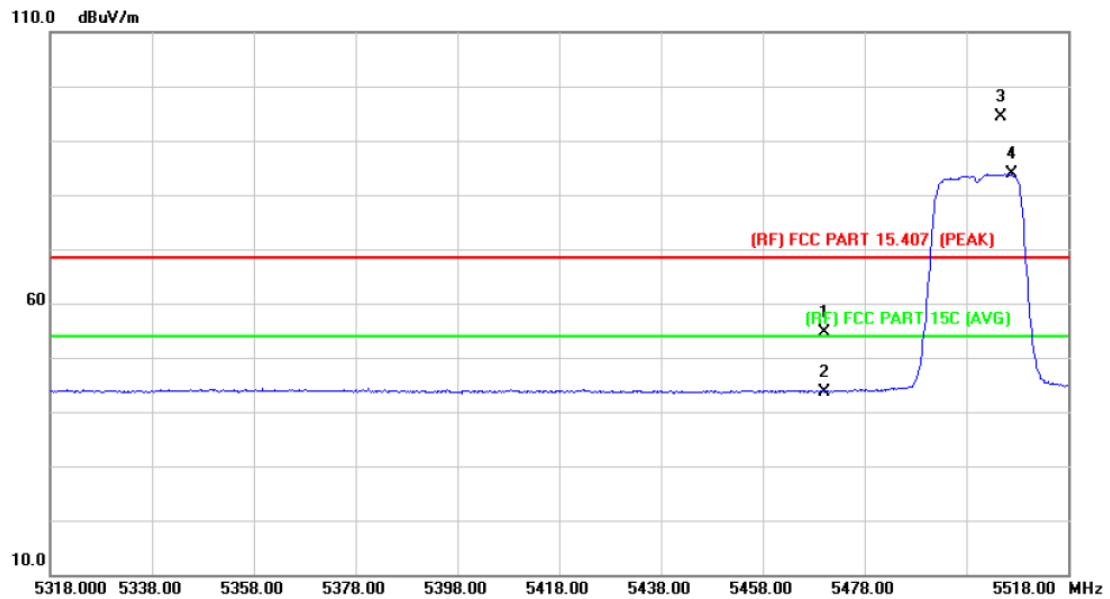
EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX 802.11 n(20) Mode 5500 MHz (U-NII-2C)		
Remark:	N/A		



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		5470.000	46.93	8.99	55.92	68.30	-12.38	peak
2		5470.000	35.11	8.99	44.10	54.00	-9.90	AVG
3	X	5493.800	83.77	9.00	92.77	Fundamental Frequency		peak
4	*	5502.600	72.87	9.01	81.88	Fundamental Frequency		AVG

Emission Level= Read Level+ Correct Factor

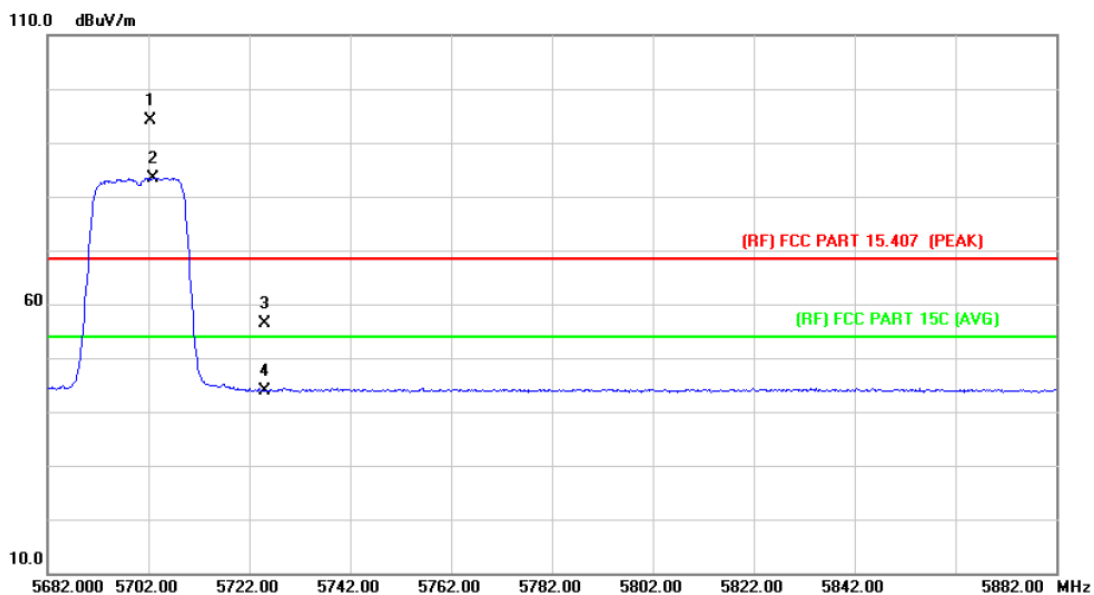
EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Vertical		
Test Mode:	TX 802.11 n(20) Mode 5500 MHz (U-NII-2C)		
Remark:	N/A		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		5470.000	45.70	8.99	54.69	68.30	-13.61	peak
2		5470.000	34.75	8.99	43.74	54.00	-10.26	AVG
3	X	5504.800	85.46	9.01	94.47	Fundamental Frequency		peak
4	*	5507.000	74.88	9.02	83.90	Fundamental Frequency		AVG

Emission Level= Read Level+ Correct Factor

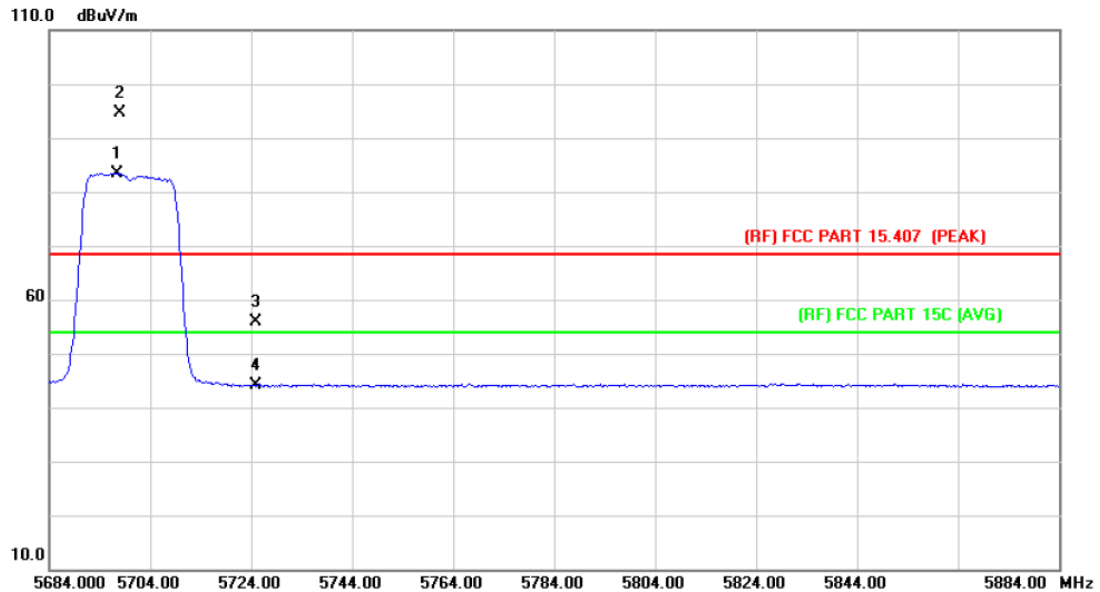
EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX 802.11 n(20) Mode 5700 MHz (U-NII-2C)		
Remark:	N/A		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	X	5702.400	85.06	9.14	94.20	Fundamental Frequency		peak
2	*	5703.000	74.36	9.14	83.50	Fundamental Frequency		AVG
3		5725.000	47.25	9.15	56.40	68.30	-11.90	peak
4		5725.000	34.80	9.15	43.95	54.00	-10.05	AVG

Emission Level= Read Level+ Correct Factor

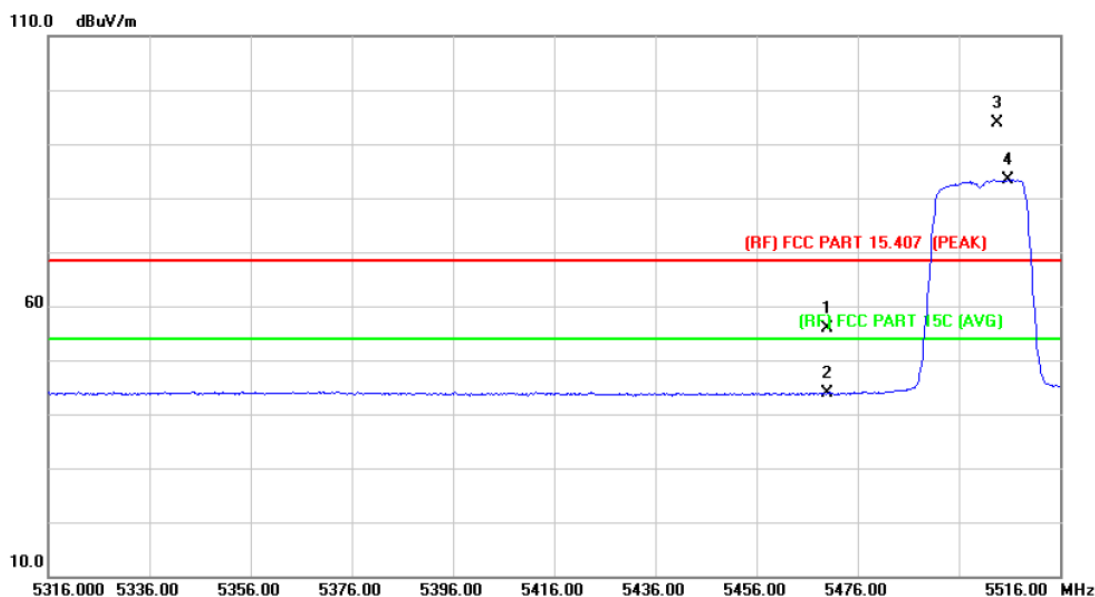
EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Vertical		
Test Mode:	TX 802.11 n(20) Mode 5700 MHz (U-NII-2C)		
Remark:	N/A		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	5697.400	74.31	9.14	83.45	Fundamental Frequency		AVG
2	X	5698.000	85.40	9.14	94.54	Fundamental Frequency		peak
3		5725.000	46.84	9.15	55.99	68.30	-12.31	peak
4		5725.000	34.92	9.15	44.07	54.00	-9.93	AVG

Emission Level= Read Level+ Correct Factor

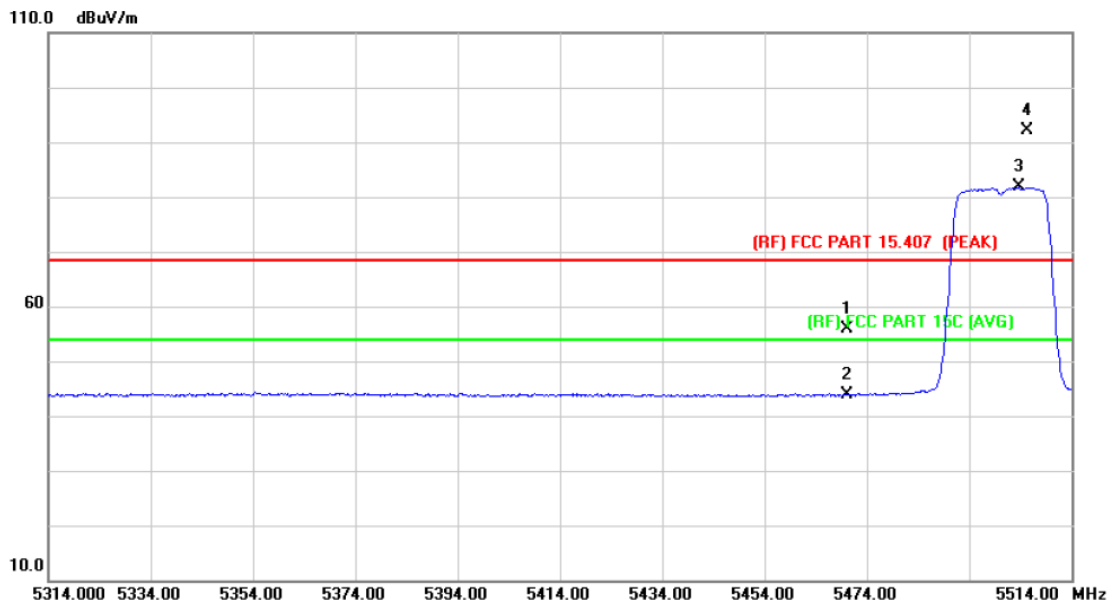
EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX 802.11 ac(20) Mode 5500 MHz (U-NII-2C)		
Remark:	N/A		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		5470.000	46.88	8.99	55.87	68.30	-12.43	peak
2		5470.000	34.93	8.99	43.92	54.00	-10.08	AVG
3	X	5503.600	84.89	9.01	93.90	Fundamental Frequency		peak
4	*	5505.800	74.34	9.02	83.36	Fundamental Frequency		AVG

Emission Level= Read Level+ Correct Factor

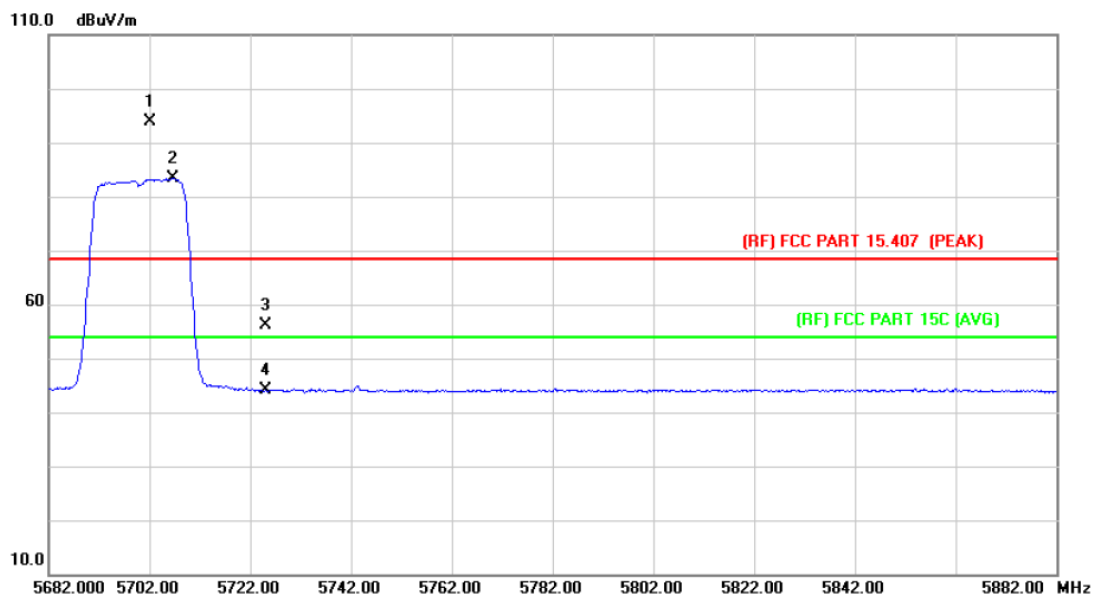
EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Vertical		
Test Mode:	TX 802.11 ac(20) Mode 5500 MHz (U-NII-2C)		
Remark:	N/A		



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		5470.000	46.89	8.99	55.88	68.30	-12.42	peak
2		5470.000	34.85	8.99	43.84	54.00	-10.16	AVG
3	*	5503.600	72.90	9.01	81.91	Fundamental Frequency		AVG
4	X	5505.400	83.22	9.01	92.23	Fundamental Frequency		peak

Emission Level= Read Level+ Correct Factor

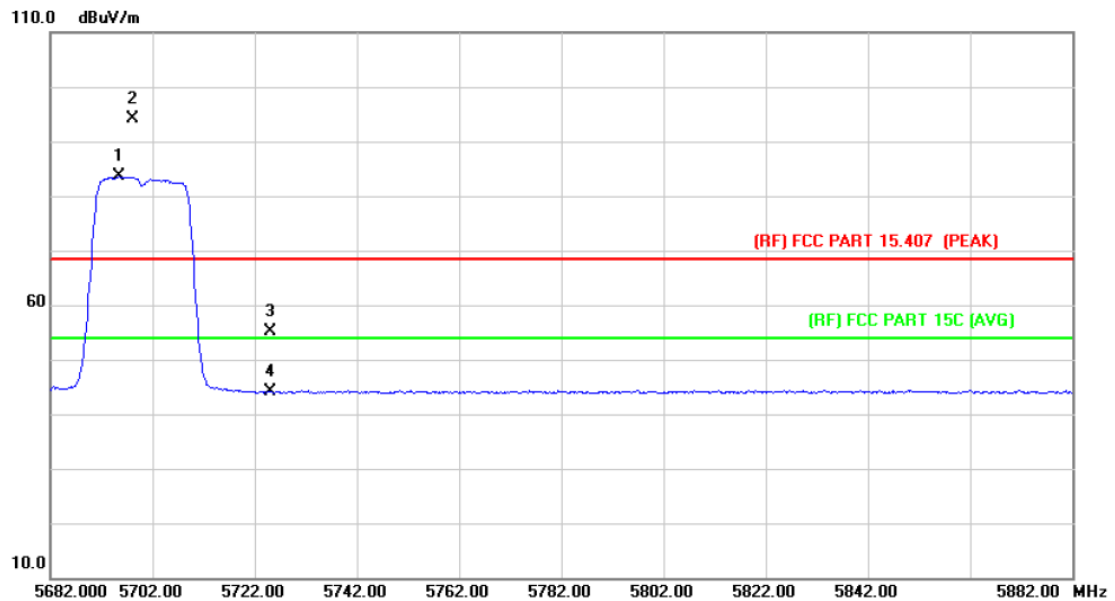
EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX 802.11 ac(20) Mode 5700 MHz (U-NII-2C)		
Remark:	N/A		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	X	5702.200	84.79	9.14	93.93	Fundamental Frequency		peak
2	*	5706.600	74.17	9.15	83.32	Fundamental Frequency		AVG
3		5725.000	46.99	9.15	56.14	68.30	-12.16	peak
4		5725.000	34.86	9.15	44.01	54.00	-9.99	AVG

Emission Level= Read Level+ Correct Factor

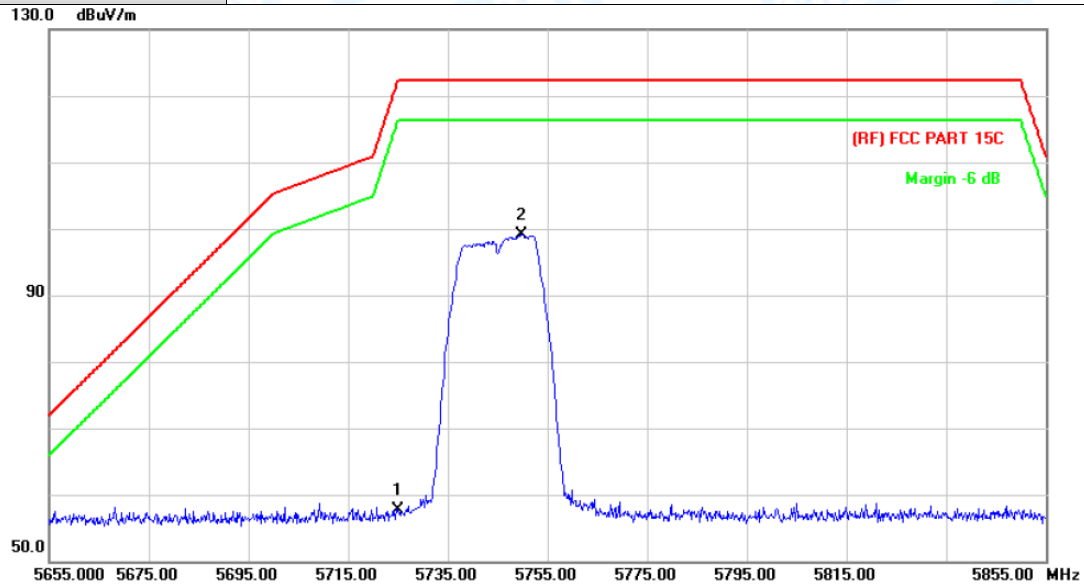
EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Vertical		
Test Mode:	TX 802.11 ac(20) Mode 5700 MHz (U-NII-2C)		
Remark:	N/A		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	5695.400	74.41	9.14	83.55	Fundamental Frequency		AVG
2	X	5698.000	85.09	9.14	94.23	Fundamental Frequency		peak
3		5725.000	46.05	9.15	55.20	68.30	-13.10	peak
4		5725.000	34.92	9.15	44.07	54.00	-9.93	AVG

Emission Level= Read Level+ Correct Factor

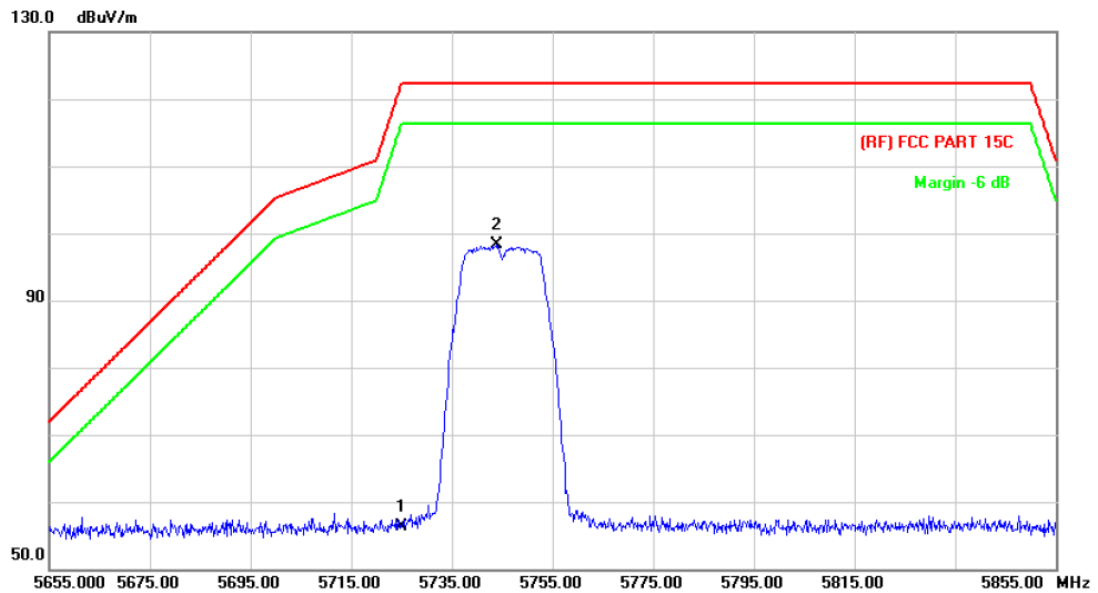
EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX 802.11a Mode 5745 MHz (U-NII-3)		
Remark:	N/A		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	
1		5725.000	47.89	9.78	57.67	122.30	-64.63	peak
2	*	5749.800	89.27	9.84	99.11	122.30	-23.19	peak

Emission Level= Read Level+ Correct Factor

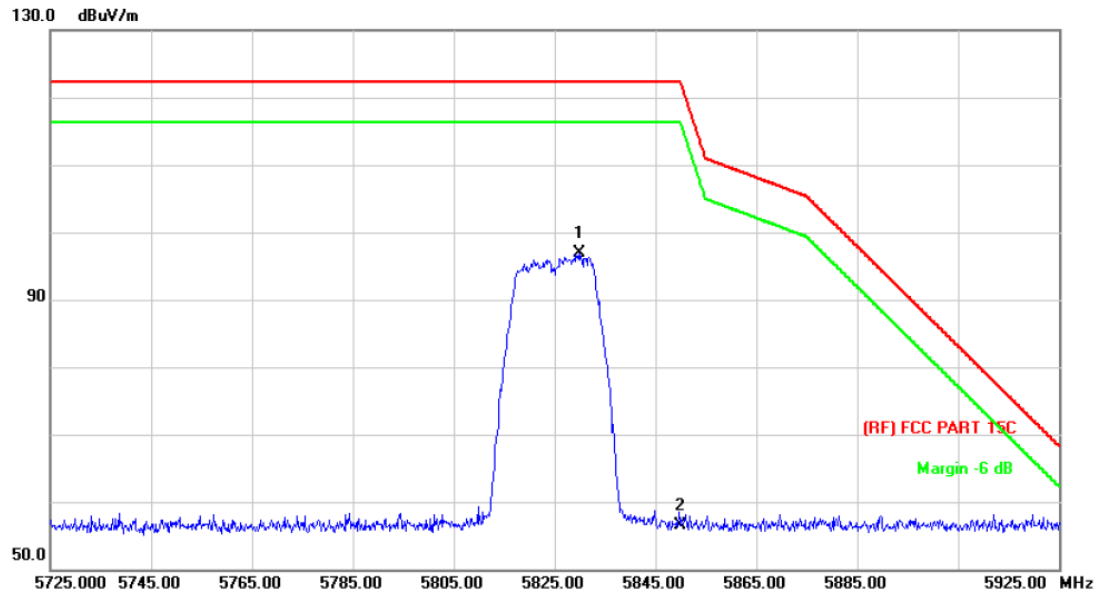
EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Vertical		
Test Mode:	TX 802.11a Mode 5745 MHz (U-NII-3)		
Remark:	N/A		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		5725.000	46.55	9.78	56.33	122.30	-65.97	peak
2	*	5744.000	88.45	9.83	98.28	122.30	-24.02	peak

Emission Level= Read Level+ Correct Factor

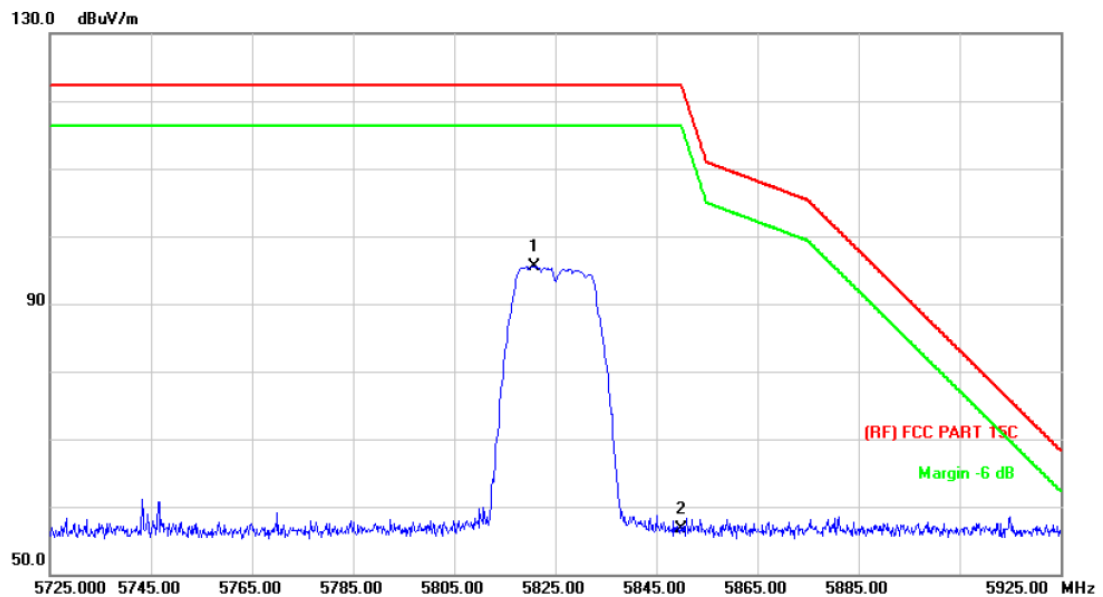
EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX 802.11a Mode 5825 MHz (U-NII-3)		
Remark:	N/A		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	5829.800	86.88	10.08	96.96	122.30	-25.34	peak
2		5850.000	46.31	10.13	56.44	122.30	-65.86	peak

Emission Level= Read Level+ Correct Factor

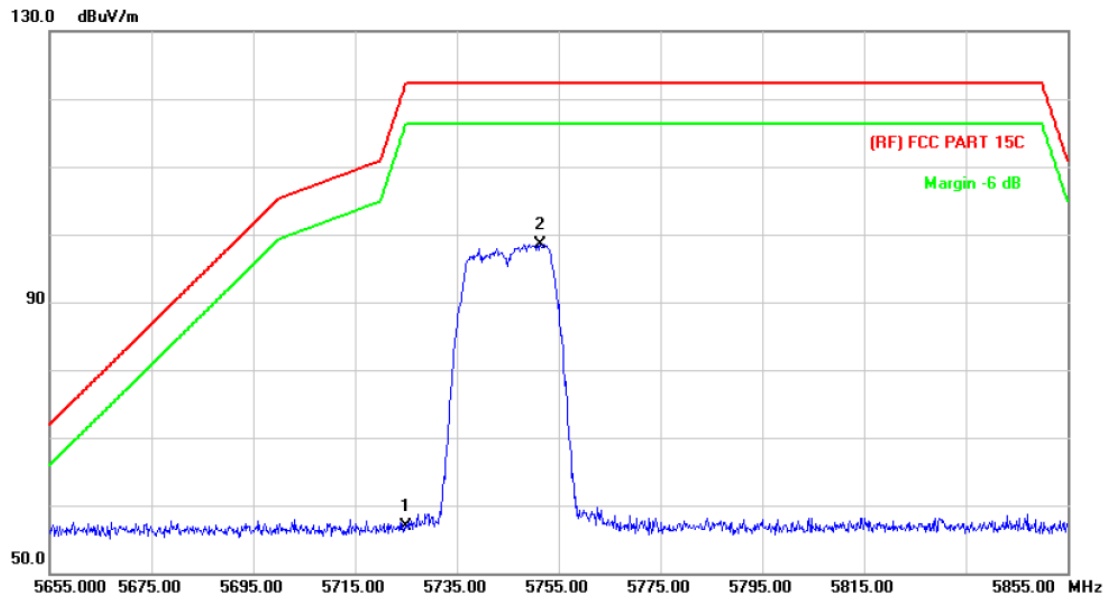
EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Vertical		
Test Mode:	TX 802.11a Mode 5825 MHz (U-NII-3)		
Remark:	N/A		



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1	*	5820.800	85.48	10.05	95.53	122.30	-26.77	peak
2		5850.000	46.58	10.13	56.71	122.30	-65.59	peak

Emission Level= Read Level+ Correct Factor

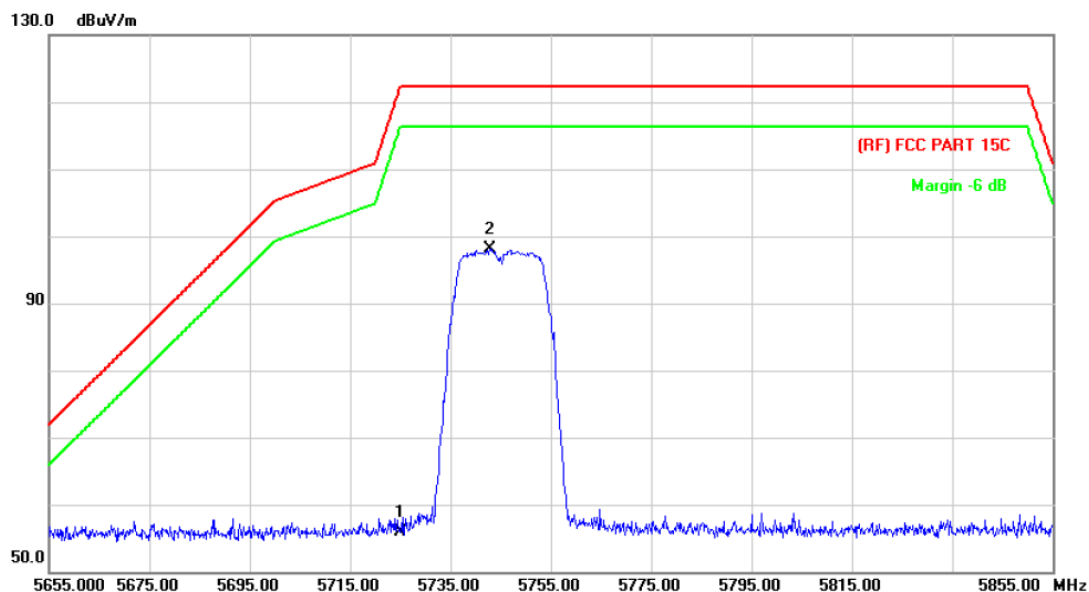
EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX 802.11n(20) Mode 5745 MHz (U-NII-3)		
Remark:	N/A		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		5725.000	47.18	9.78	56.96	122.30	-65.34	peak
2	*	5751.400	88.68	9.85	98.53	122.30	-23.77	peak

Emission Level= Read Level+ Correct Factor

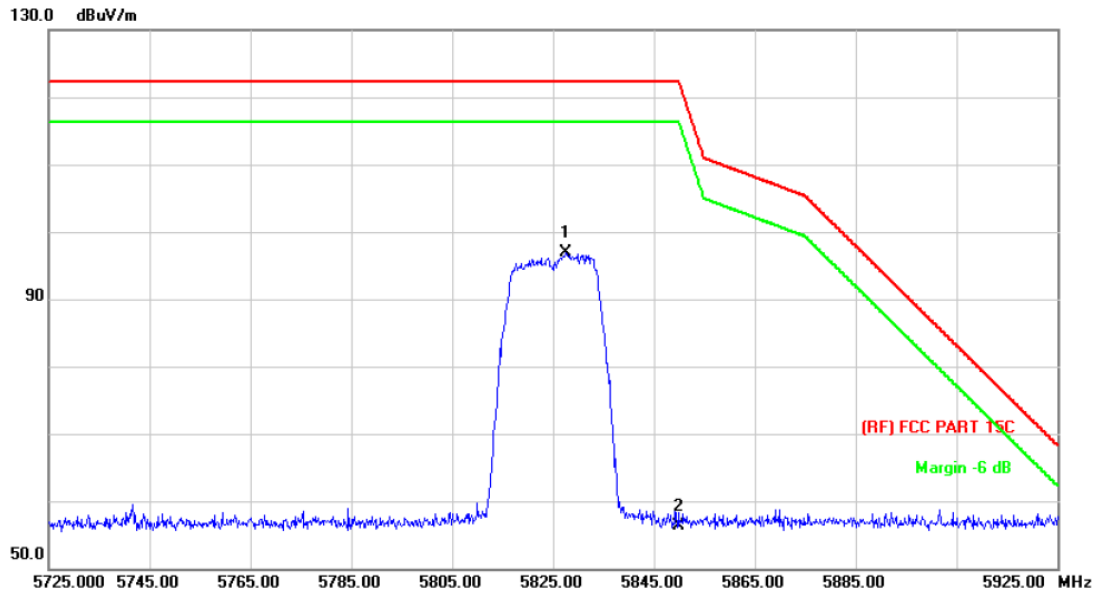
EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Vertical		
Test Mode:	TX 802.11n(20) Mode 5745 MHz (U-NII-3)		
Remark:	N/A		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB Detector
1		5725.000	46.15	9.78	55.93	122.30	-66.37 peak
2	*	5742.800	88.32	9.83	98.15	122.30	-24.15 peak

Emission Level= Read Level+ Correct Factor

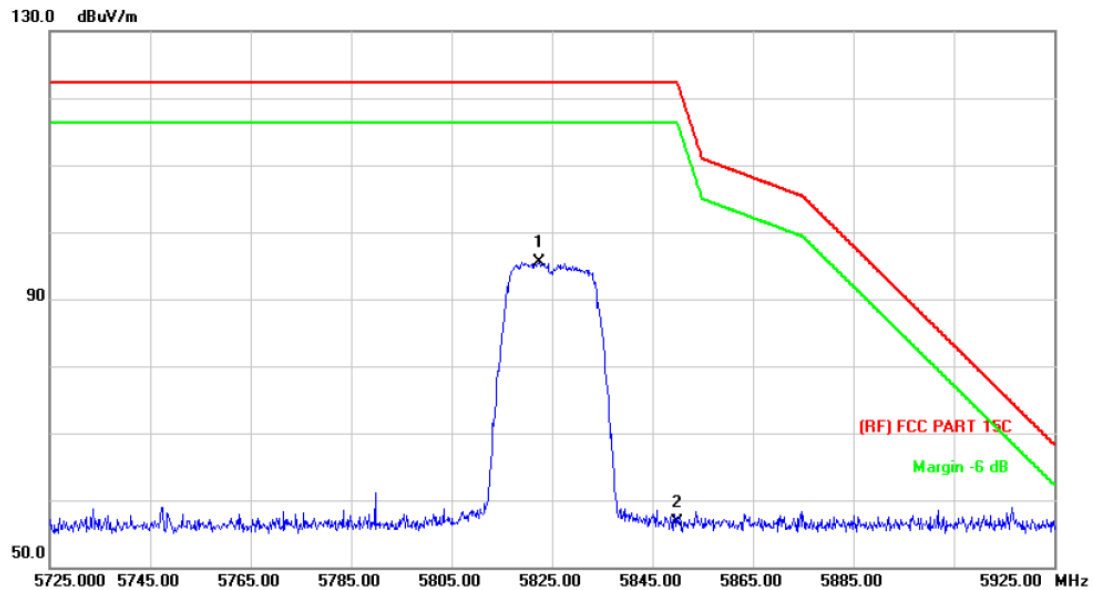
EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX 802.11n(20) Mode 5825 MHz (U-NII-3)		
Remark:	N/A		



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1	*	5827.600	86.83	10.06	96.89	122.30	-25.41	peak
2		5850.000	46.12	10.13	56.25	122.30	-66.05	peak

Emission Level= Read Level+ Correct Factor

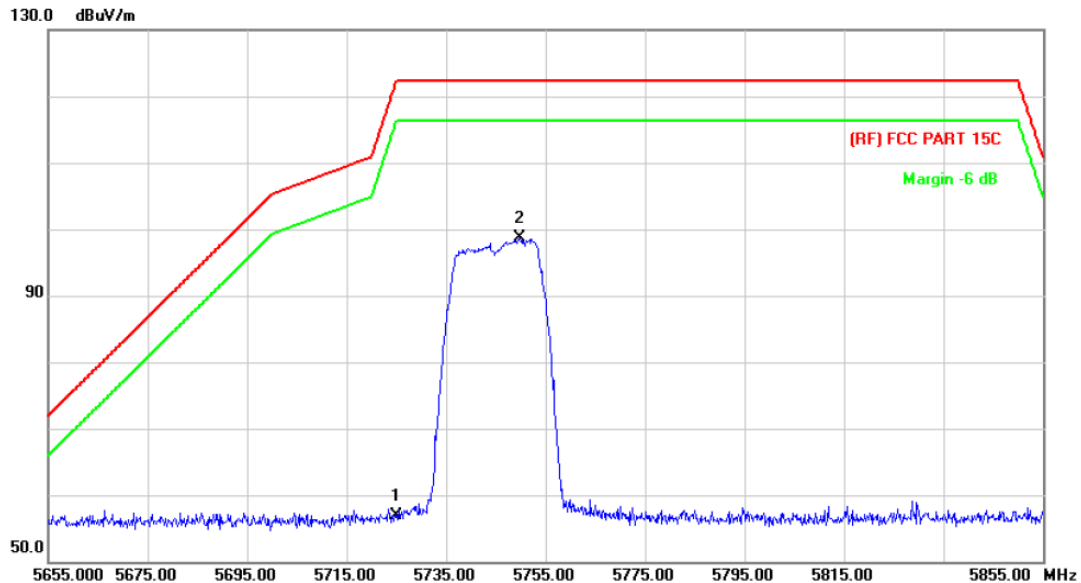
EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Vertical		
Test Mode:	TX 802.11n(20) Mode 5825 MHz (U-NII-3)		
Remark:	N/A		



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1	*	5822.400	85.54	10.05	95.59	122.30	-26.71	peak
2		5850.000	46.57	10.13	56.70	122.30	-65.60	peak

Emission Level= Read Level+ Correct Factor

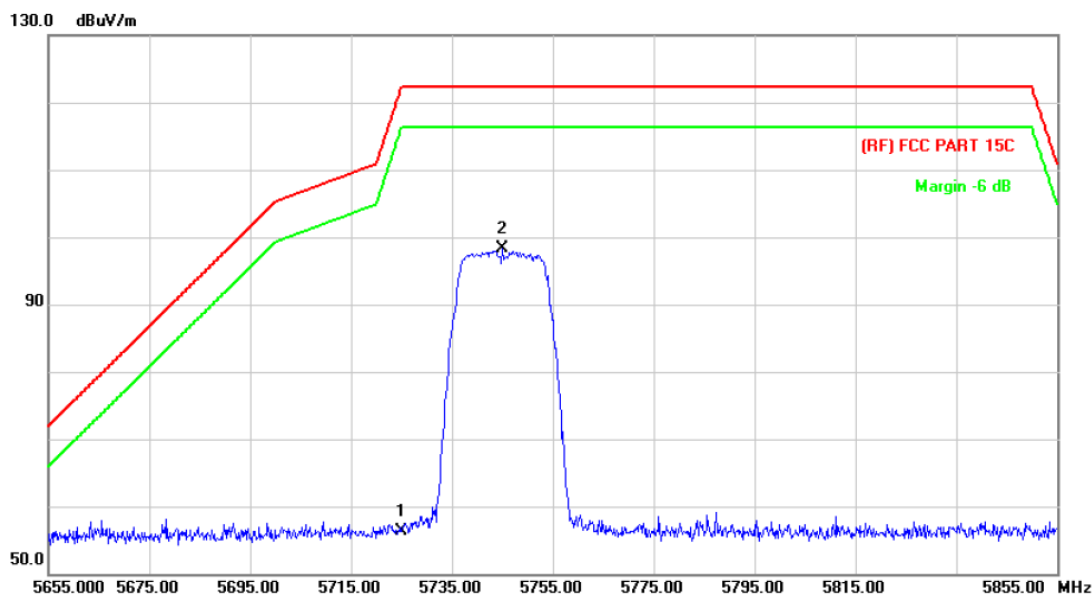
EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX 802.11ac(20) Mode 5745 MHz (U-NII-3)		
Remark:	N/A		



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		5725.000	47.21	9.78	56.99	122.30	-65.31	peak
2	*	5749.800	88.84	9.84	98.68	122.30	-23.62	peak

Emission Level= Read Level+ Correct Factor

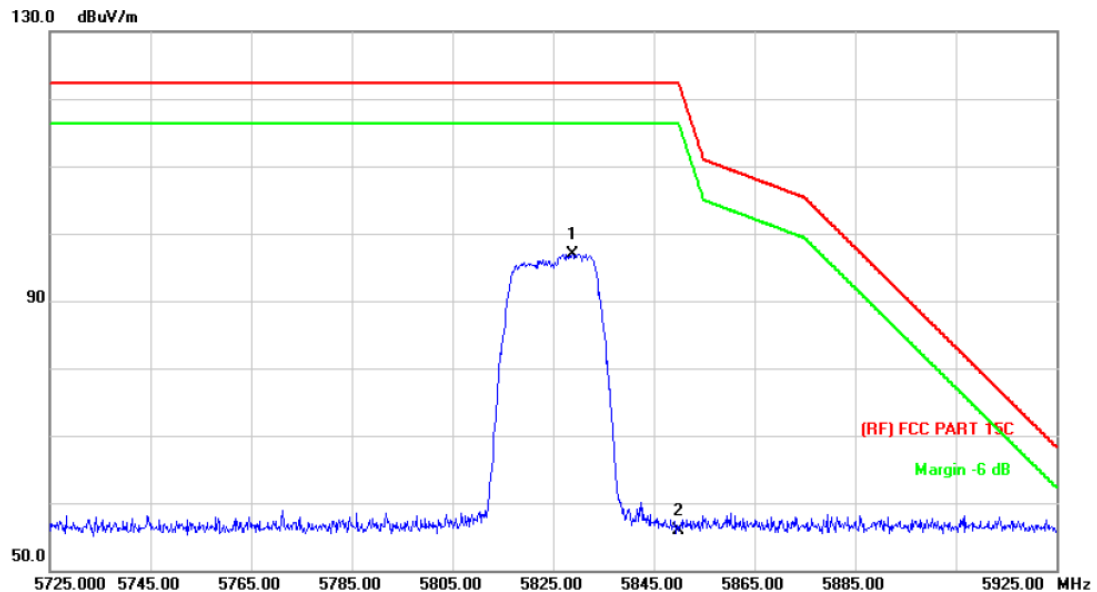
EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Vertical		
Test Mode:	TX 802.11ac(20) Mode 5745 MHz (U-NII-3)		
Remark:	N/A		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		5725.000	46.46	9.78	56.24	122.30	-66.06	peak
2	*	5745.000	88.45	9.83	98.28	122.30	-24.02	peak

Emission Level= Read Level+ Correct Factor

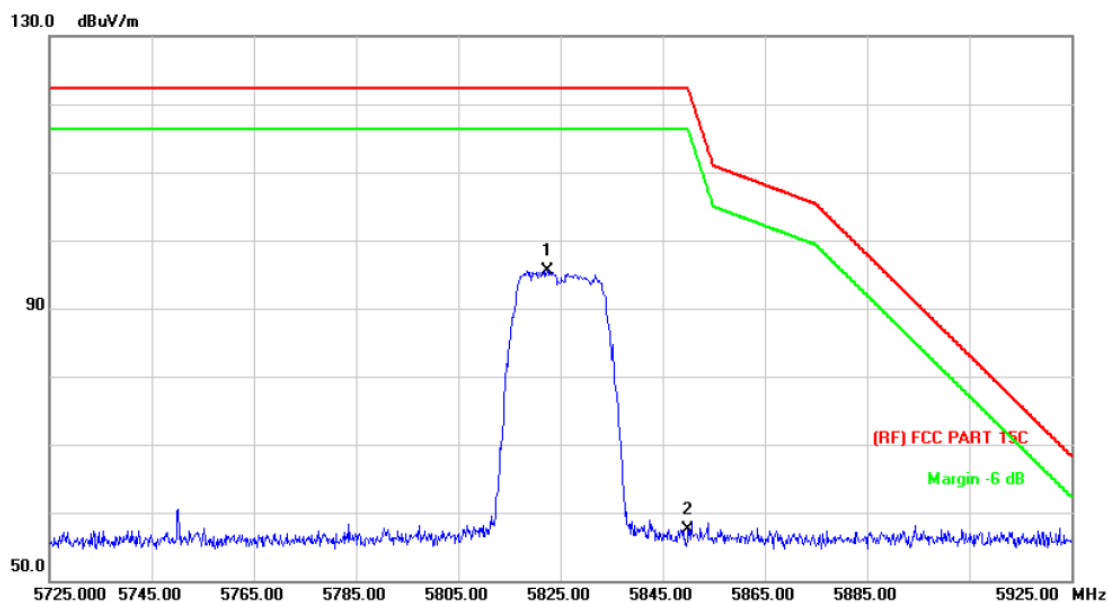
EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX 802.11ac(20) Mode 5825 MHz (U-NII-3)		
Remark:	N/A		



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1	*	5828.800	86.92	10.07	96.99	122.30	-25.31	peak
2		5850.000	45.68	10.13	55.81	122.30	-66.49	peak

Emission Level= Read Level+ Correct Factor

EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Vertical		
Test Mode:	TX 802.11ac(20) Mode 5825 MHz (U-NII-3)		
Remark:	N/A		

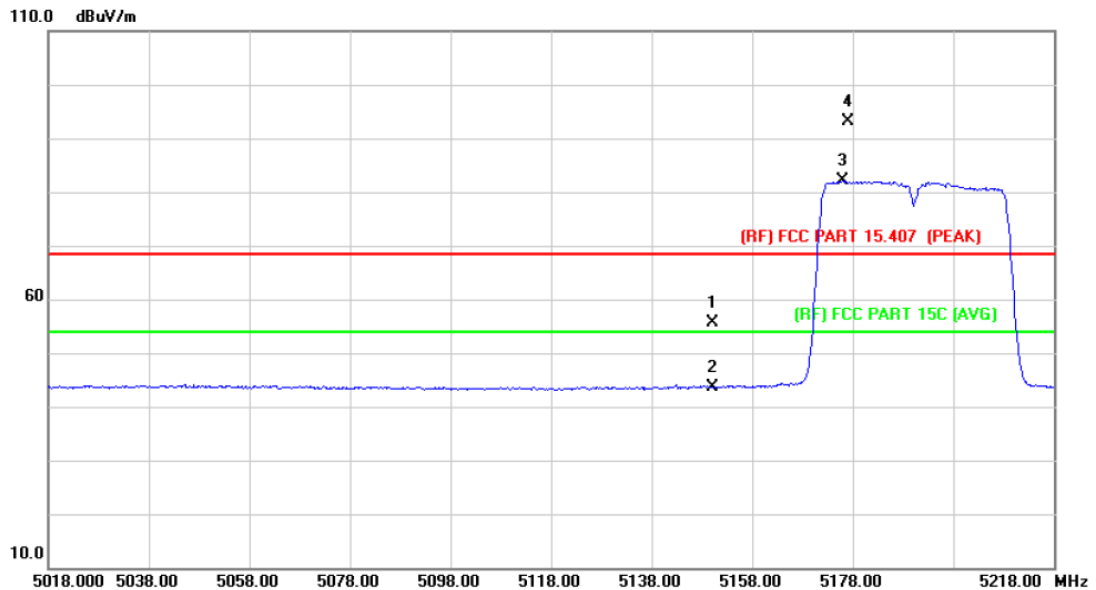


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1	*	5822.400	85.45	10.05	95.50	122.30	-26.80	peak
2		5850.000	47.43	10.13	57.56	122.30	-64.74	peak

Emission Level= Read Level+ Correct Factor

n(40)/ac(40)

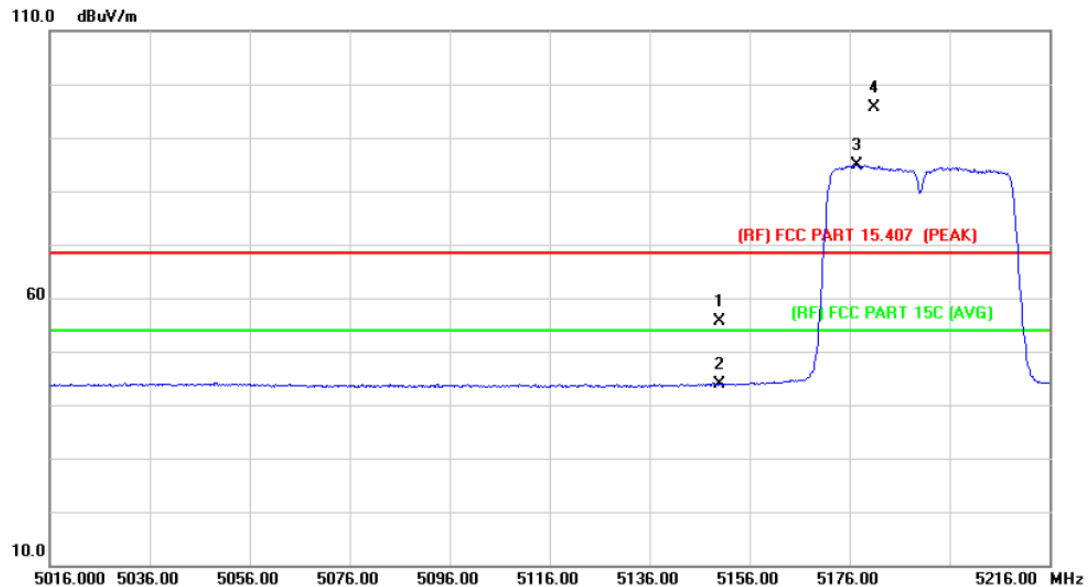
EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX 802.11n (40) Mode 5190 MHz (U-NII-1)		
Remark:	TX 802.11n (40) Mode 5190~5230 MHz (U-NII-1) CH Low		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	
1		5150.000	46.95	8.78	55.73	68.30	-12.57	peak
2		5150.000	34.89	8.78	43.67	54.00	-10.33	AVG
3	*	5176.000	73.25	8.79	82.04	Fundamental Frequency		AVG
4	X	5177.200	84.30	8.79	93.09	Fundamental Frequency		peak

Emission Level= Read Level+ Correct Factor

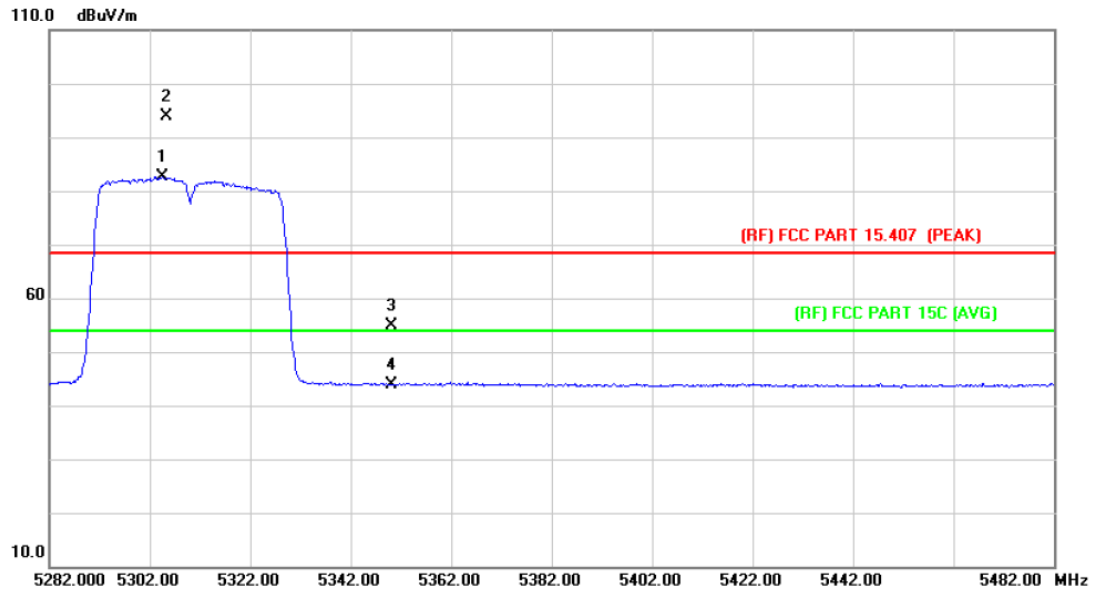
EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Vertical		
Test Mode:	TX 802.11n (40) Mode 5190 MHz (U-NII-1)		
Remark:	TX 802.11n (40) Mode 5190~5230 MHz (U-NII-1) CH Low		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB Detector
1		5150.000	46.84	8.78	55.62	68.30	-12.68 peak
2		5150.000	35.04	8.78	43.82	54.00	-10.18 AVG
3	*	5177.400	76.12	8.79	84.91	Fundamental Frequency	
4	X	5180.800	86.87	8.79	95.66	Fundamental Frequency	

Emission Level= Read Level+ Correct Factor

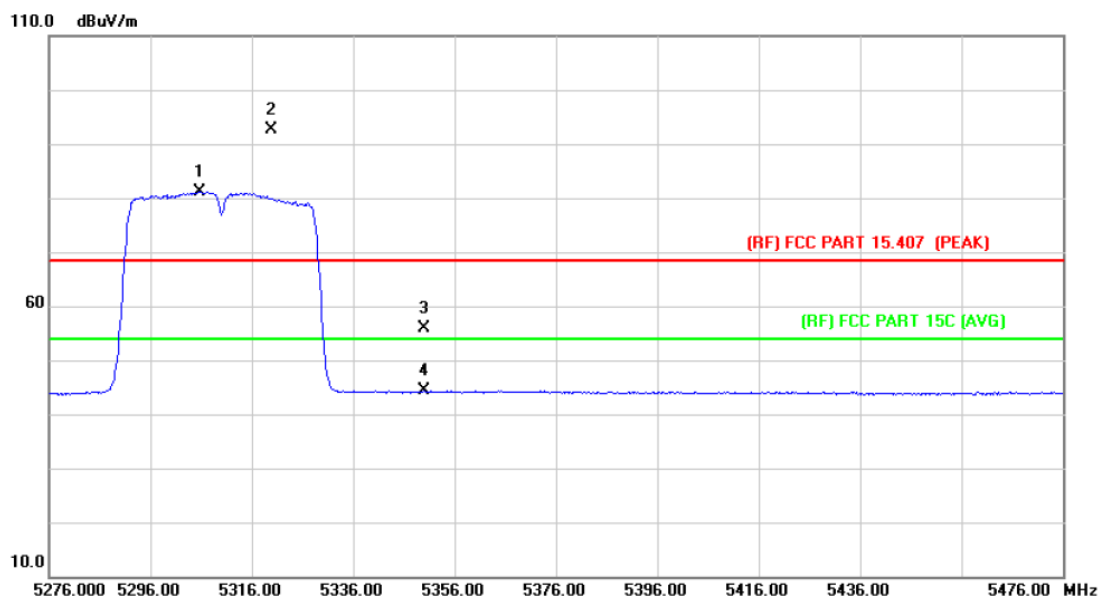
EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX 802.11n (40) Mode 5310 MHz (U-NII-2A)		
Remark:	TX 802.11n (40) Mode 5270~5310 MHz (U-NII-2A) CH High		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	5304.600	73.76	8.87	82.63	Fundamental Frequency		AVG
2	X	5305.400	84.93	8.87	93.80	Fundamental Frequency		peak
3		5350.000	45.85	8.91	54.76		-13.54	peak
4		5350.000	35.00	8.91	43.91		-10.09	AVG

Emission Level= Read Level+ Correct Factor

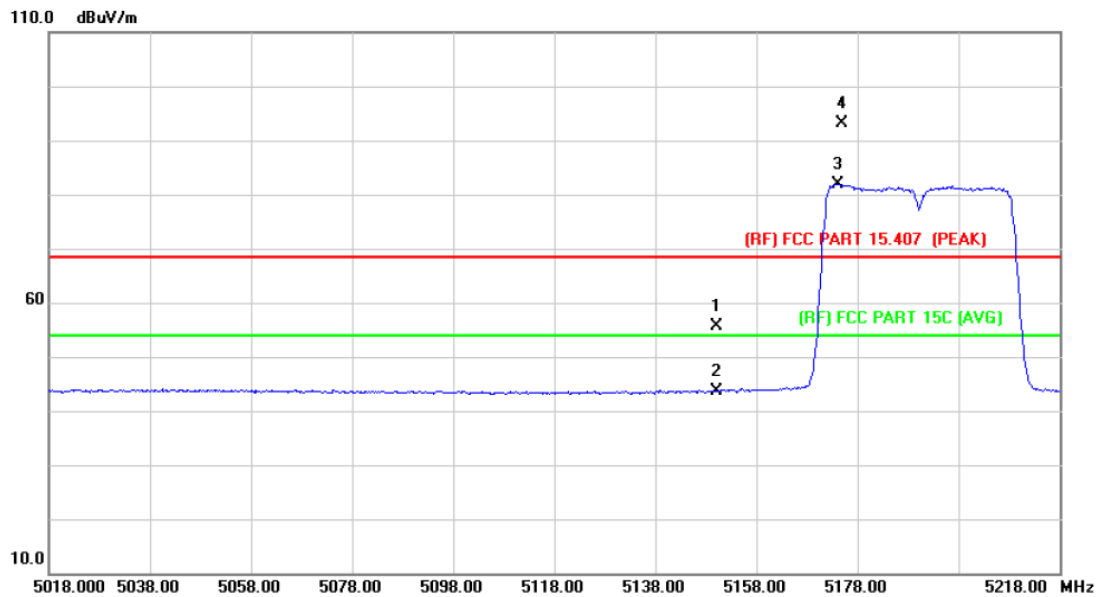
EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Vertical		
Test Mode:	TX 802.11n (40) Mode 5310 MHz (U-NII-2A)		
Remark:	TX 802.11n (40) Mode 5270~5310 MHz (U-NII-2A) CH High		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	5305.800	72.23	8.88	81.11	Fundamental Frequency		AVG
2	X	5319.800	83.81	8.89	92.70	Fundamental Frequency		peak
3		5350.000	46.95	8.91	55.86	68.30	-12.44	peak
4		5350.000	35.43	8.91	44.34	54.00	-9.66	AVG

Emission Level= Read Level+ Correct Factor

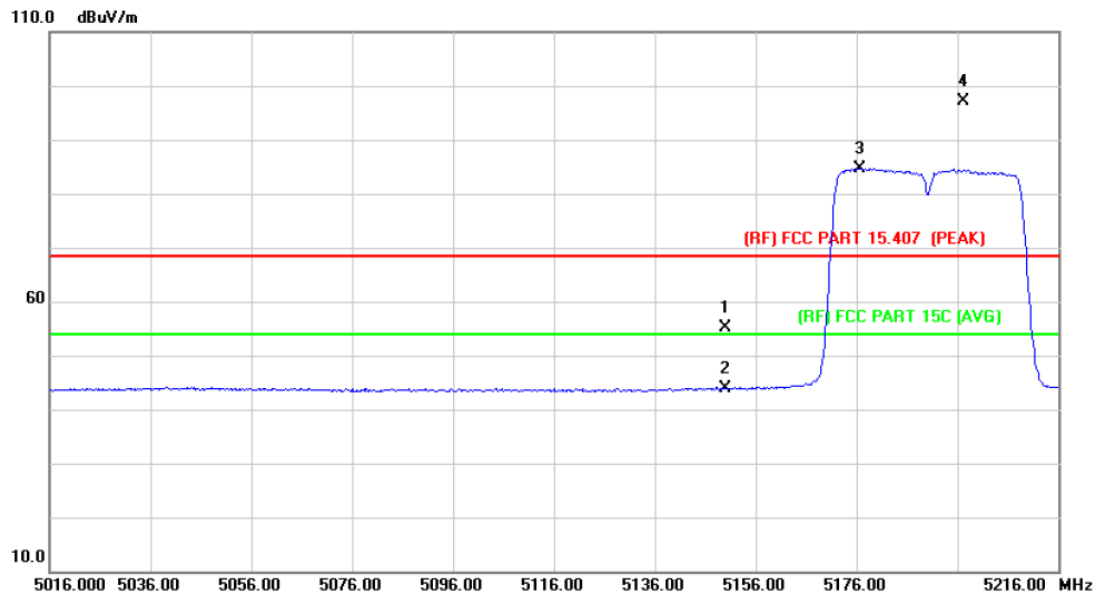
EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX 802.11ac (40) Mode 5190 MHz (U-NII-1)		
Remark:	TX 802.11ac (40) Mode 5190~5230 MHz (U-NII-1) CH Low		



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		5150.000	46.82	8.78	55.60	68.30	-12.70	peak
2		5150.000	34.89	8.78	43.67	54.00	-10.33	AVG
3	*	5174.000	73.06	8.79	81.85	Fundamental Frequency		AVG
4	X	5175.000	84.35	8.79	93.14	Fundamental Frequency		peak

Emission Level= Read Level+ Correct Factor

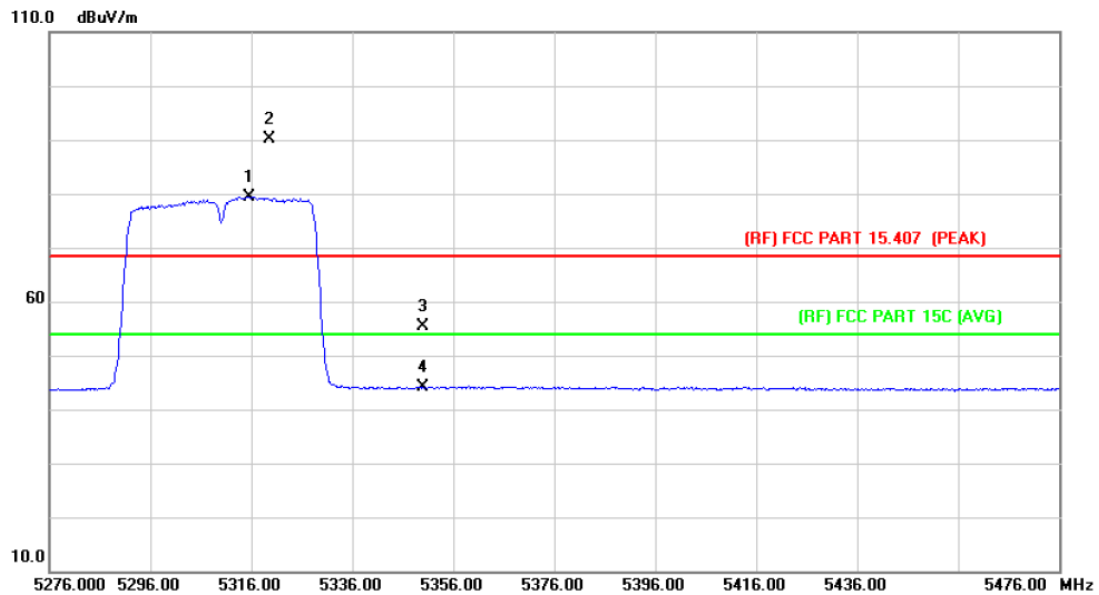
EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Vertical		
Test Mode:	TX 802.11ac (40) Mode 5190 MHz (U-NII-1)		
Remark:	TX 802.11ac (40) Mode 5190~5230 MHz (U-NII-1) CH Low		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		5150.000	46.27	8.78	55.05	68.30	-13.25	peak
2		5150.000	35.03	8.78	43.81	54.00	-10.19	AVG
3	*	5176.600	75.93	8.79	84.72	Fundamental Frequency		AVG
4	X	5197.200	88.26	8.81	97.07	Fundamental Frequency		peak

Emission Level= Read Level+ Correct Factor

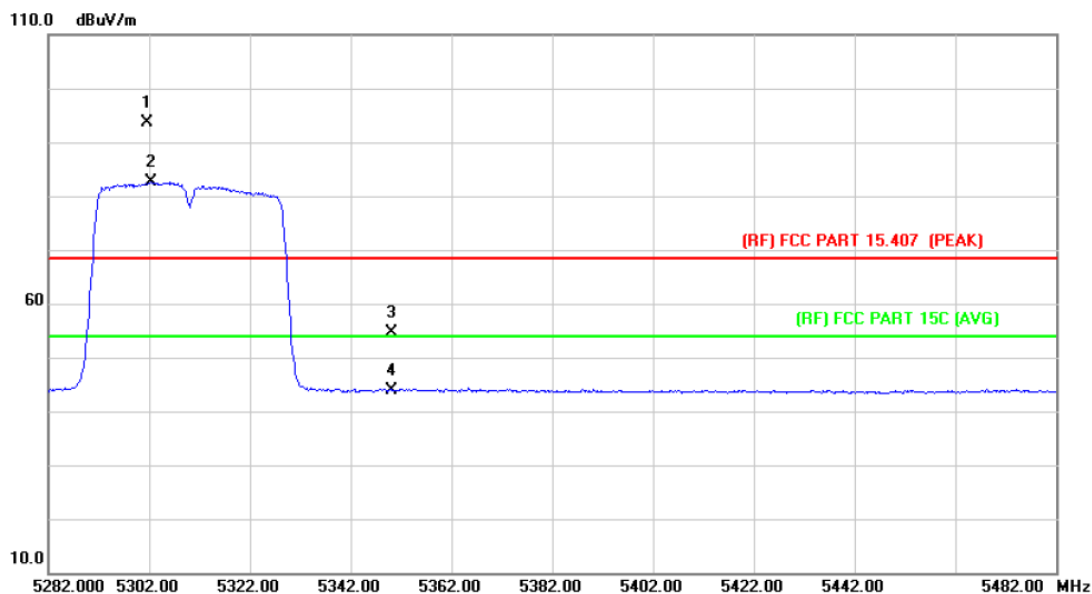
EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX 802.11ac (40) Mode 5310 MHz (U-NII-2A)		
Remark:	TX 802.11ac (40) Mode 5270~5310 MHz (U-NII-2A) CH High		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	5315.600	70.62	8.88	79.50	Fundamental Frequency		AVG
2	X	5319.600	81.14	8.89	90.03	Fundamental Frequency		peak
3		5350.000	46.51	8.91	55.42	68.30	-12.88	peak
4		5350.000	35.15	8.91	44.06	54.00	-9.94	AVG

Emission Level= Read Level+ Correct Factor

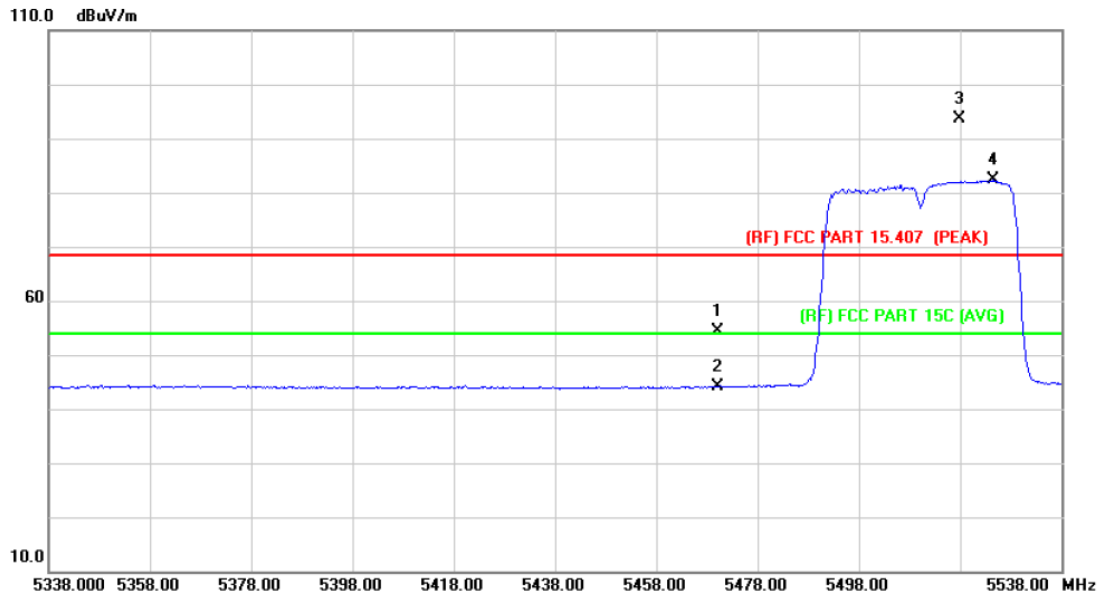
EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Vertical		
Test Mode:	TX 802.11ac (40) Mode 5310 MHz (U-NII-2A)		
Remark:	TX 802.11ac (40) Mode 5270~5310 MHz (U-NII-2A) CH High		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	X	5301.600	84.72	8.87	93.59	Fundamental Frequency		peak
2	*	5302.400	73.72	8.87	82.59	Fundamental Frequency		AVG
3		5350.000	45.76	8.91	54.67	68.30	-13.63	peak
4		5350.000	35.07	8.91	43.98	54.00	-10.02	AVG

Emission Level= Read Level+ Correct Factor

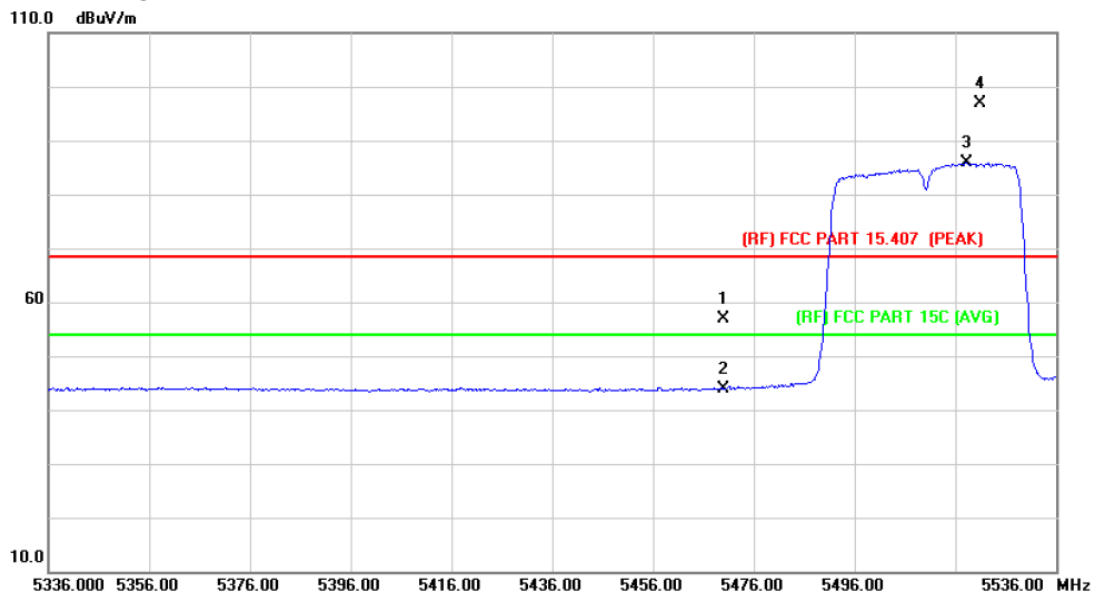
EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX 802.11n(40) Mode 5510 MHz (U-NII-2C)		
Remark:	N/A		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB Detector
1		5470.000	45.36	8.99	54.35	68.30	-13.95 peak
2		5470.000	35.12	8.99	44.11	54.00	-9.89 AVG
3	X	5517.800	84.54	9.03	93.57	Fundamental Frequency	peak
4	*	5524.600	73.24	9.02	82.26	Fundamental Frequency	AVG

Emission Level= Read Level+ Correct Factor

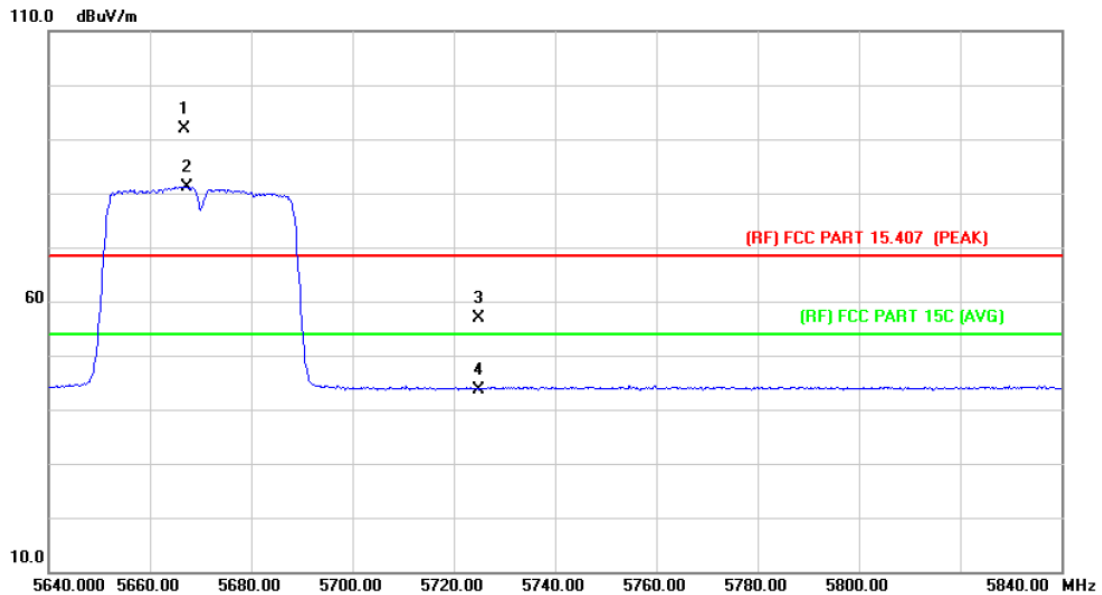
EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Vertical		
Test Mode:	TX 802.11n(40) Mode 5510 MHz (U-NII-2C)		
Remark:	N/A		



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		5470.000	47.91	8.99	56.90	68.30	-11.40	peak
2		5470.000	34.87	8.99	43.86	54.00	-10.14	AVG
3	*	5518.200	76.80	9.03	85.83	Fundamental Frequency		AVG
4	X	5520.800	87.78	9.02	96.80	Fundamental Frequency		peak

Emission Level= Read Level+ Correct Factor

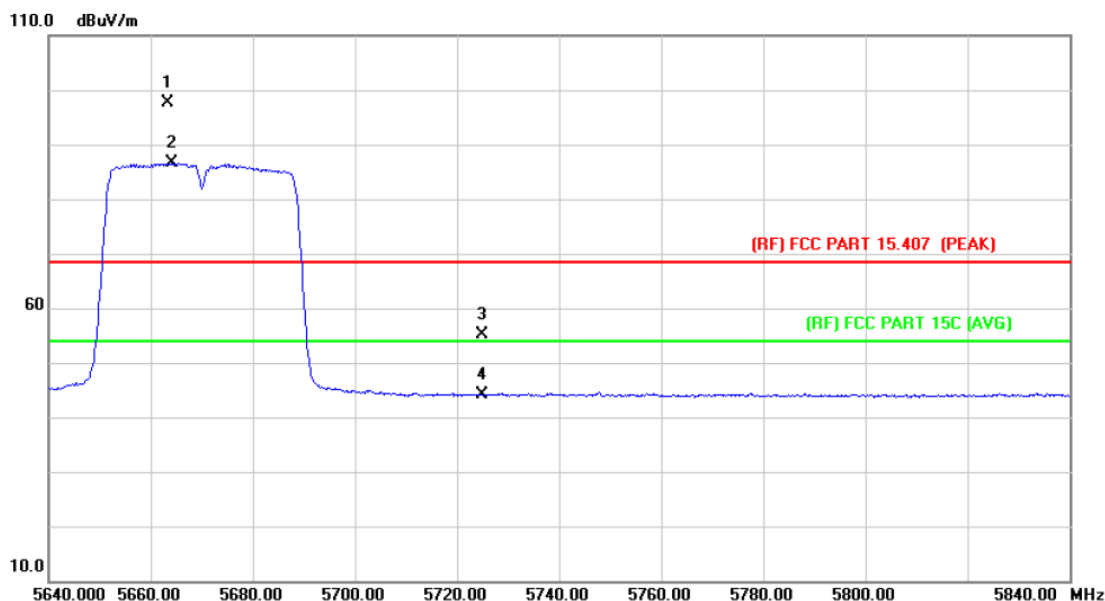
EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX 802.11n(40) Mode 5670 MHz (U-NII-2C)		
Remark:	N/A		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB Detector
1	X	5666.800	82.85	9.12	91.97	Fundamental Frequency	peak
2	*	5667.400	72.10	9.12	81.22	Fundamental Frequency	AVG
3		5725.000	47.76	9.15	56.91	68.30	-11.39 peak
4		5725.000	34.57	9.15	43.72	54.00	-10.28 AVG

Emission Level= Read Level+ Correct Factor

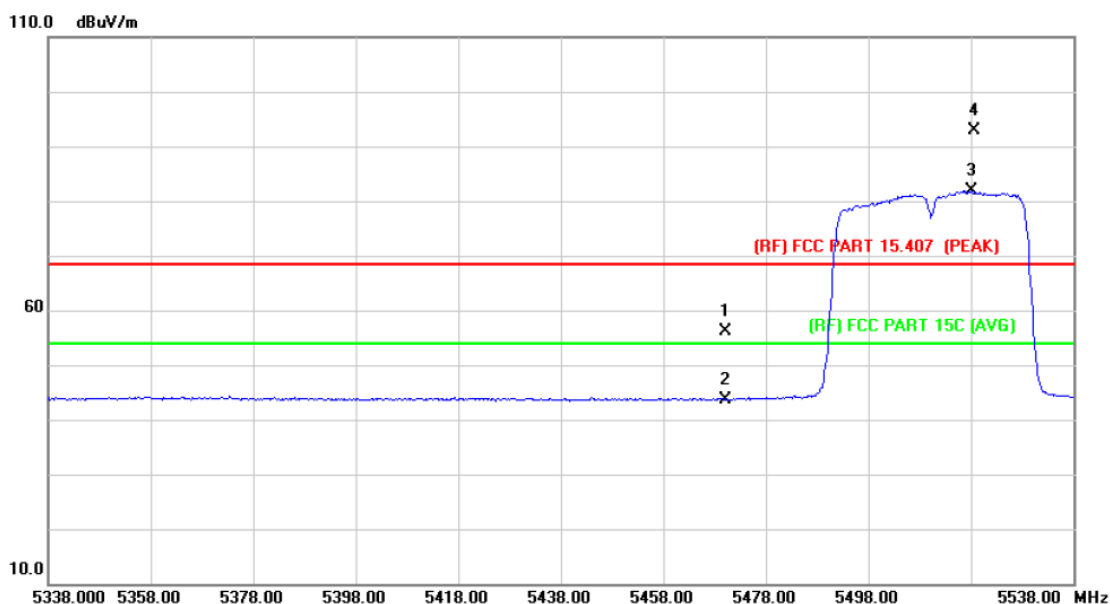
EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Vertical		
Test Mode:	TX 802.11n(40) Mode 5670 MHz (U-NII-2C)		
Remark:	N/A		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	X	5663.400	88.61	9.12	97.73	Fundamental Frequency		peak
2	*	5664.000	77.43	9.12	86.55	Fundamental Frequency		AVG
3		5725.000	45.93	9.15	55.08	68.30	-13.22	peak
4		5725.000	34.90	9.15	44.05	54.00	-9.95	AVG

Emission Level= Read Level+ Correct Factor

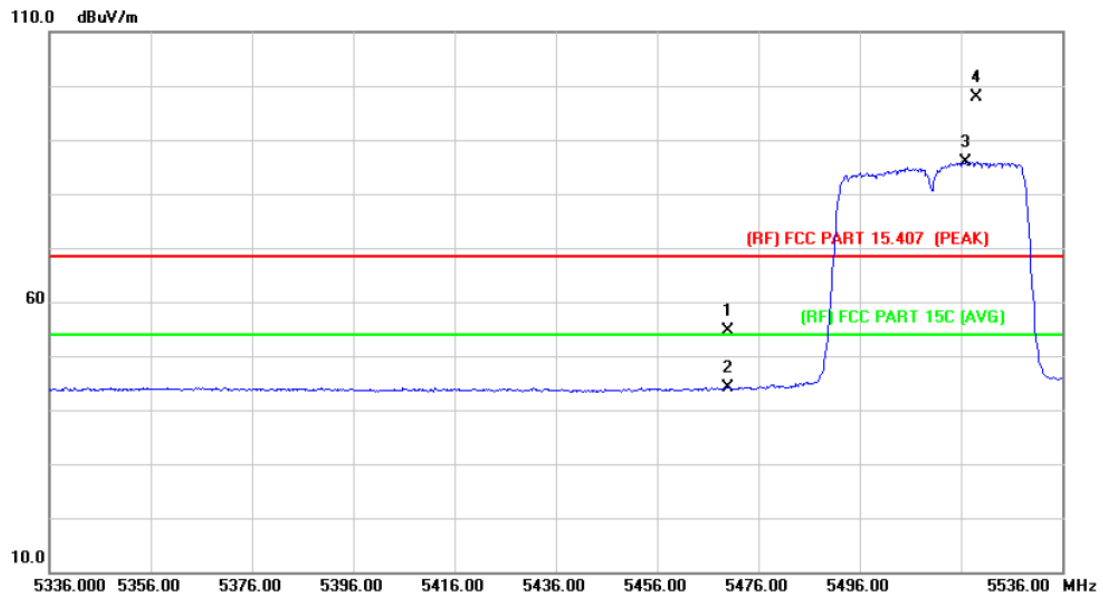
EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX 802.11ac(40) Mode 5510 MHz (U-NII-2C)		
Remark:	N/A		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		5470.000	47.17	8.99	56.16	68.30	-12.14	peak
2		5470.000	34.72	8.99	43.71	54.00	-10.29	AVG
3	*	5518.200	72.76	9.03	81.79	Fundamental Frequency		AVG
4	X	5518.600	83.95	9.03	92.98	Fundamental Frequency		peak

Emission Level= Read Level+ Correct Factor

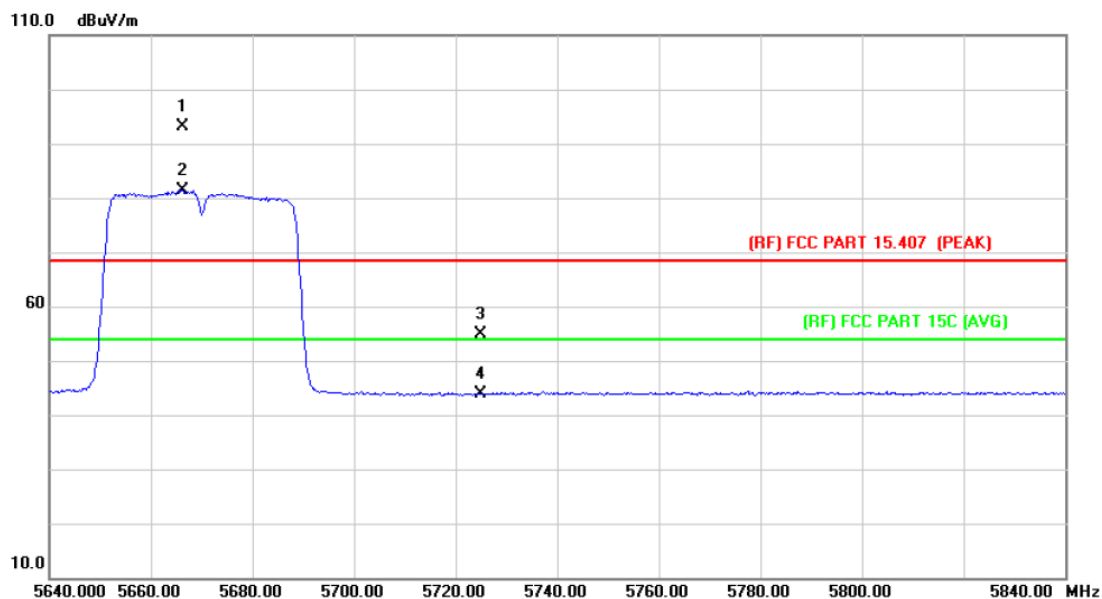
EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Vertical		
Test Mode:	TX 802.11ac(40) Mode 5510 MHz (U-NII-2C)		
Remark:	N/A		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB Detector
1		5470.000	45.69	8.99	54.68	68.30	-13.62 peak
2		5470.000	35.10	8.99	44.09	54.00	-9.91 AVG
3	*	5517.000	76.94	9.03	85.97	Fundamental Frequency AVG	
4	X	5519.000	88.74	9.03	97.77	Fundamental Frequency peak	

Emission Level= Read Level+ Correct Factor

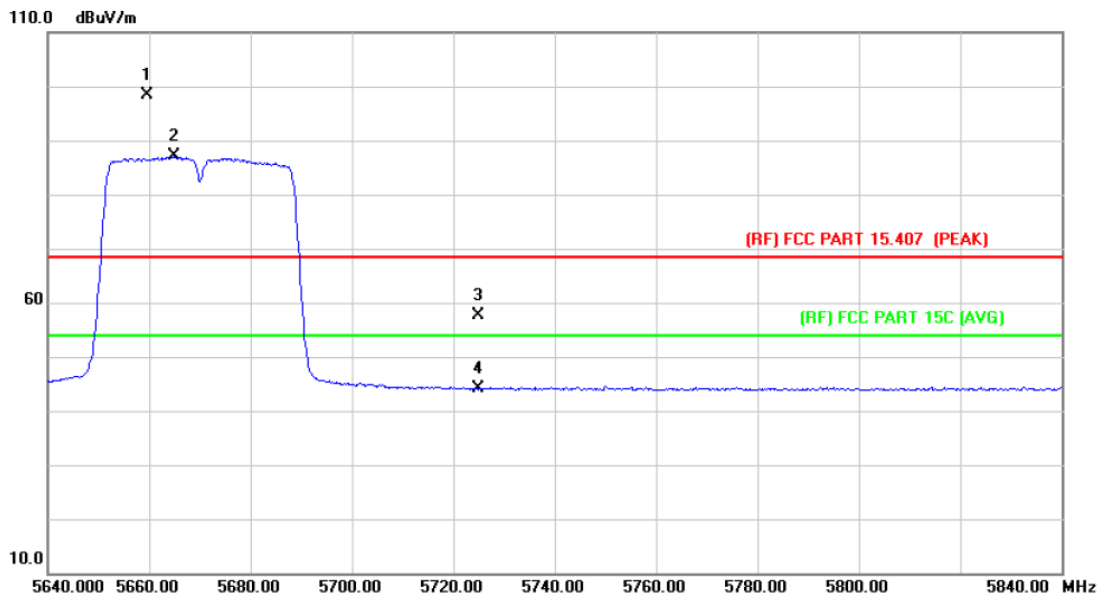
EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX 802.11ac(40) Mode 5670 MHz (U-NII-2C)		
Remark:	N/A		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	X	5666.200	84.13	9.12	93.25	Fundamental Frequency		peak
2	*	5666.200	72.23	9.12	81.35	Fundamental Frequency		AVG
3		5725.000	45.70	9.15	54.85		-13.45	peak
4		5725.000	34.79	9.15	43.94		-10.06	AVG

Emission Level= Read Level+ Correct Factor

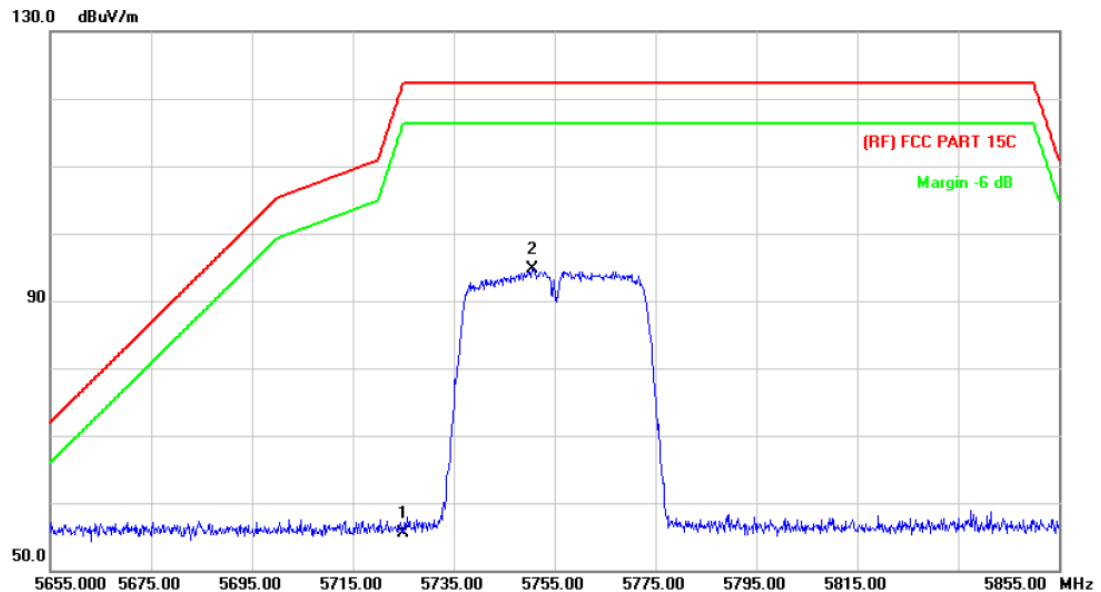
EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Vertical		
Test Mode:	TX 802.11ac(40) Mode 5670 MHz (U-NII-2C)		
Remark:	N/A		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	X	5659.600	89.15	9.11	98.26	Fundamental Frequency		peak
2	*	5665.000	77.96	9.12	87.08	Fundamental Frequency		AVG
3		5725.000	48.48	9.15	57.63	68.30	-10.67	peak
4		5725.000	34.98	9.15	44.13	54.00	-9.87	AVG

Emission Level= Read Level+ Correct Factor

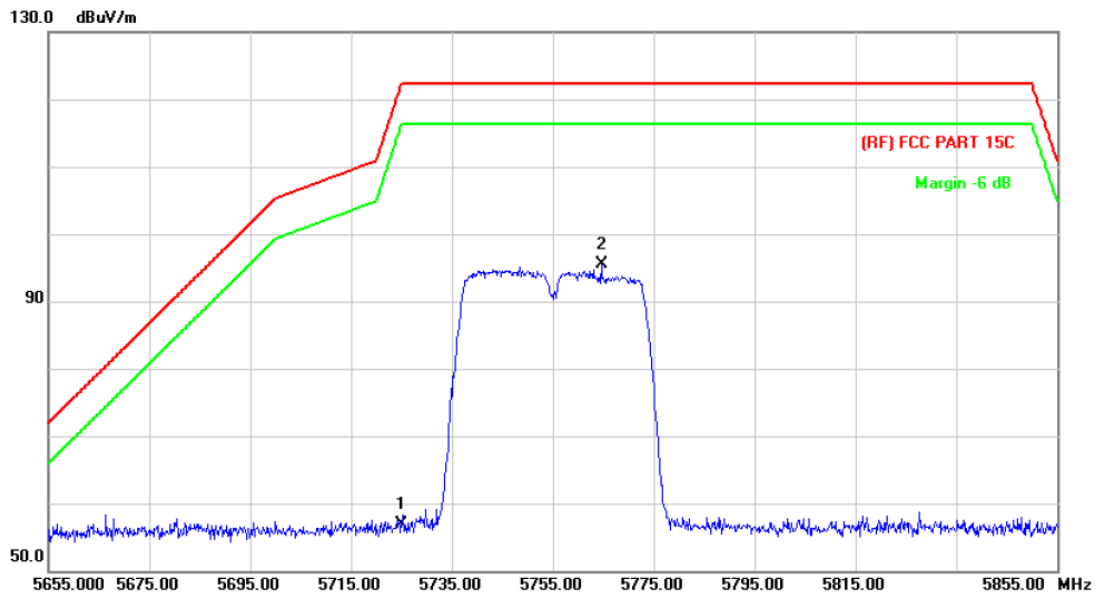
EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX 802.11n(40) Mode 5755MHz (U-NII-3)		
Remark:	N/A		



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		5725.000	45.68	9.78	55.46	122.30	-66.84	peak
2	*	5750.600	84.78	9.85	94.63	122.30	-27.67	peak

Emission Level= Read Level+ Correct Factor

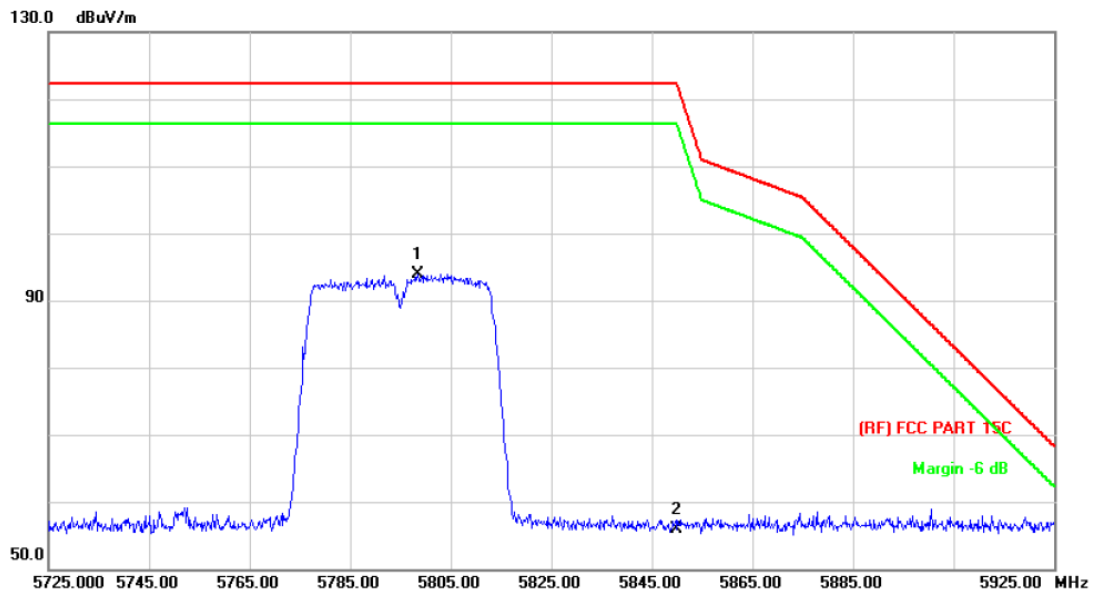
EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Vertical		
Test Mode:	TX 802.11n(40) Mode 5755MHz (U-NII-3)		
Remark:	N/A		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		5725.000	47.08	9.78	56.86	122.30	-65.44	peak
2	*	5764.600	85.54	9.89	95.43	122.30	-26.87	peak

Emission Level= Read Level+ Correct Factor

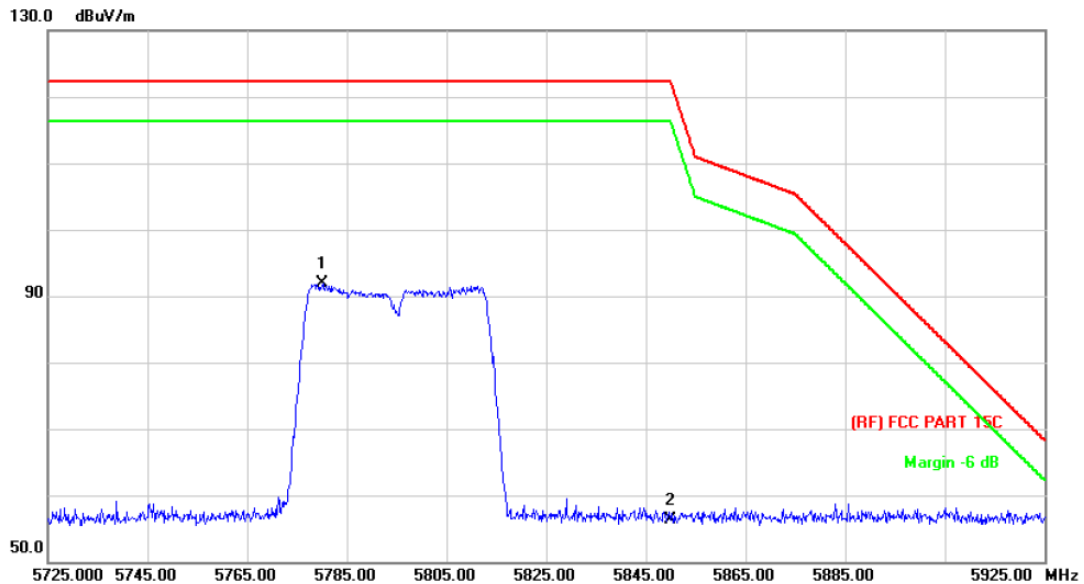
EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX 802.11n(40) Mode 5795 MHz (U-NII-3)		
Remark:	N/A		



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1	*	5798.400	83.95	9.98	93.93	122.30	-28.37	peak
2		5850.000	45.87	10.13	56.00	122.30	-66.30	peak

Emission Level= Read Level+ Correct Factor

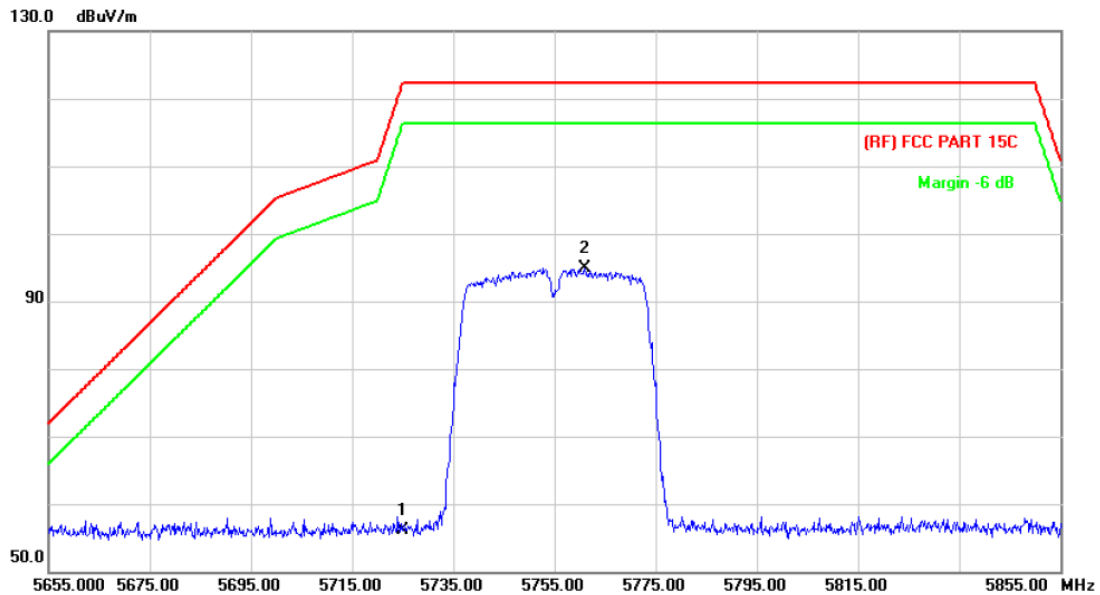
EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Vertical		
Test Mode:	TX 802.11n(40) Mode 5795 MHz (U-NII-3)		
Remark:	N/A		



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1	*	5780.200	81.89	9.93	91.82	122.30	-30.48	peak
2		5850.000	46.27	10.13	56.40	122.30	-65.90	peak

Emission Level= Read Level+ Correct Factor

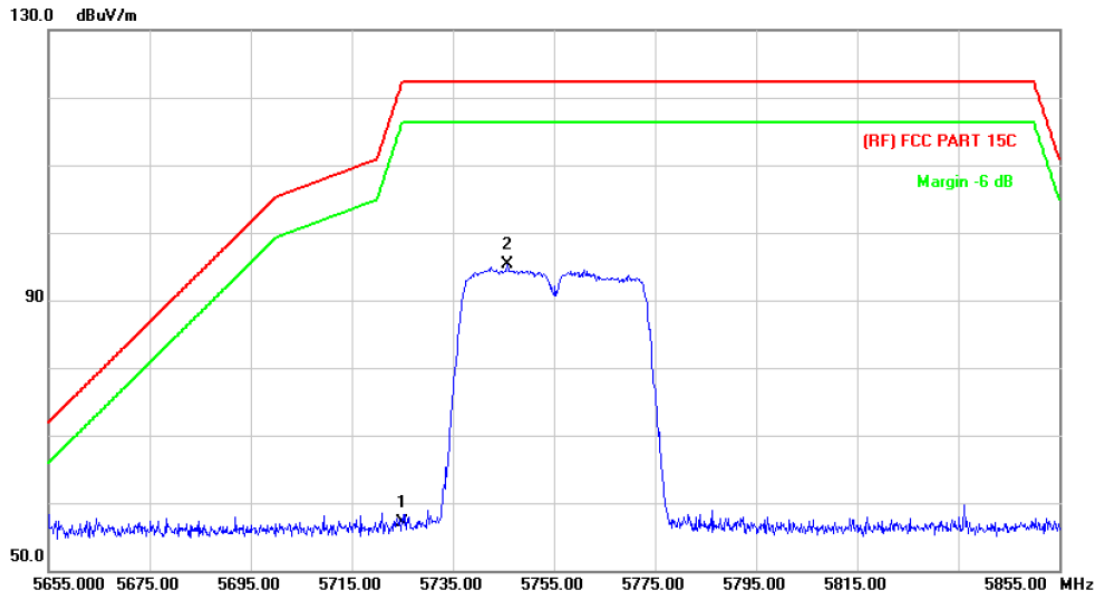
EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX 802.11ac(40) Mode 5755 MHz (U-NII-3)		
Remark:	N/A		



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		5725.000	46.28	9.78	56.06	122.30	-66.24	peak
2	*	5761.000	85.11	9.87	94.98	122.30	-27.32	peak

Emission Level= Read Level+ Correct Factor

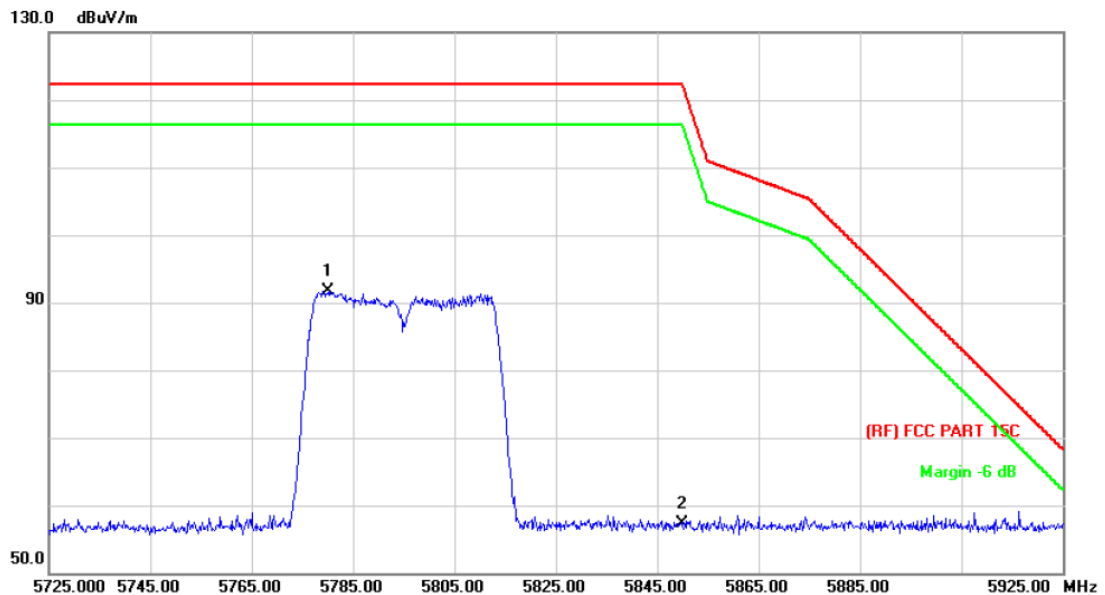
EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Vertical		
Test Mode:	TX 802.11ac(40) Mode 5755 MHz (U-NII-3)		
Remark:	N/A		



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		5725.000	47.23	9.78	57.01	122.30	-65.29	peak
2	*	5745.800	85.43	9.83	95.26	122.30	-27.04	peak

Emission Level= Read Level+ Correct Factor

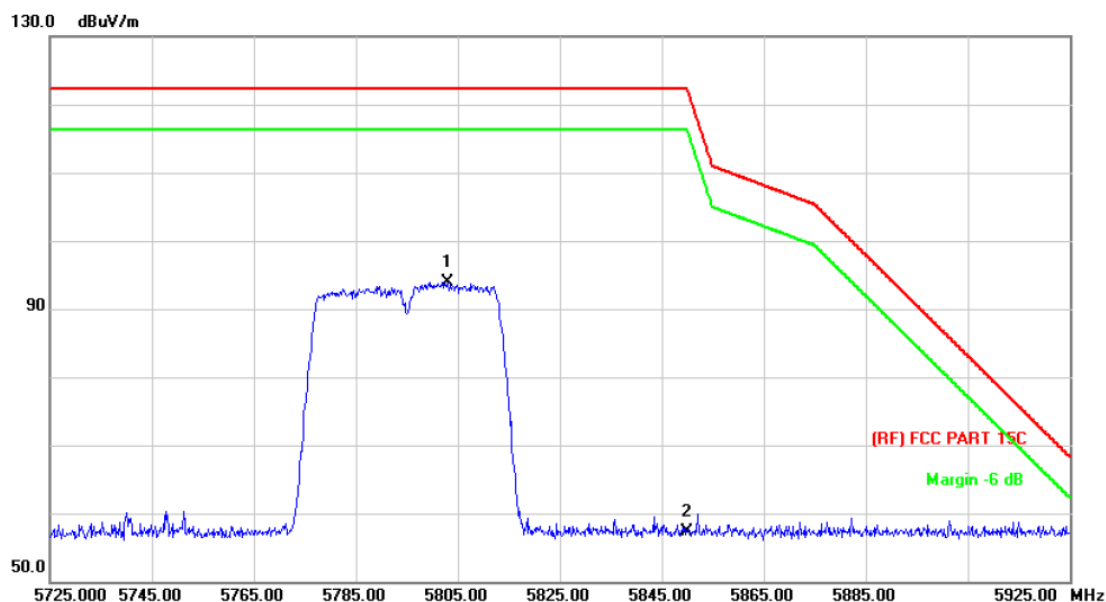
EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX 802.11ac(40) Mode 5795 MHz (U-NII-3)		
Remark:	N/A		



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1	*	5780.200	81.79	9.93	91.72	122.30	-30.58	peak
2		5850.000	47.20	10.13	57.33	122.30	-64.97	peak

Emission Level= Read Level+ Correct Factor

EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Vertical		
Test Mode:	TX 802.11ac(40) Mode 5795 MHz (U-NII-3)		
Remark:	N/A		

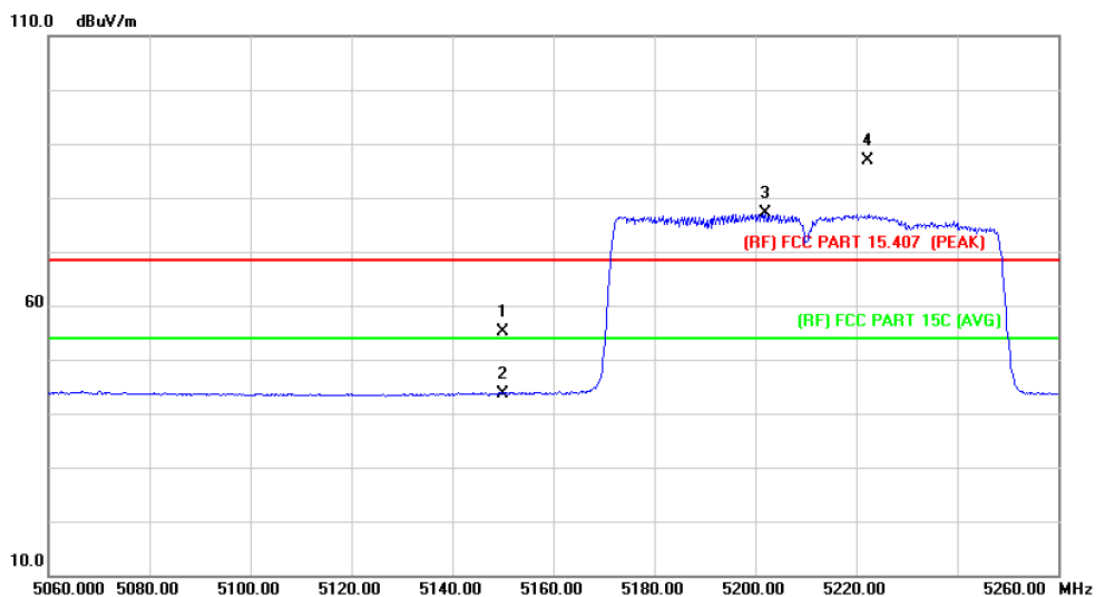


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	5803.000	83.85	10.00	93.85	122.30	-28.45	peak
2		5850.000	47.11	10.13	57.24	122.30	-65.06	peak

Emission Level= Read Level+ Correct Factor

ac(80)

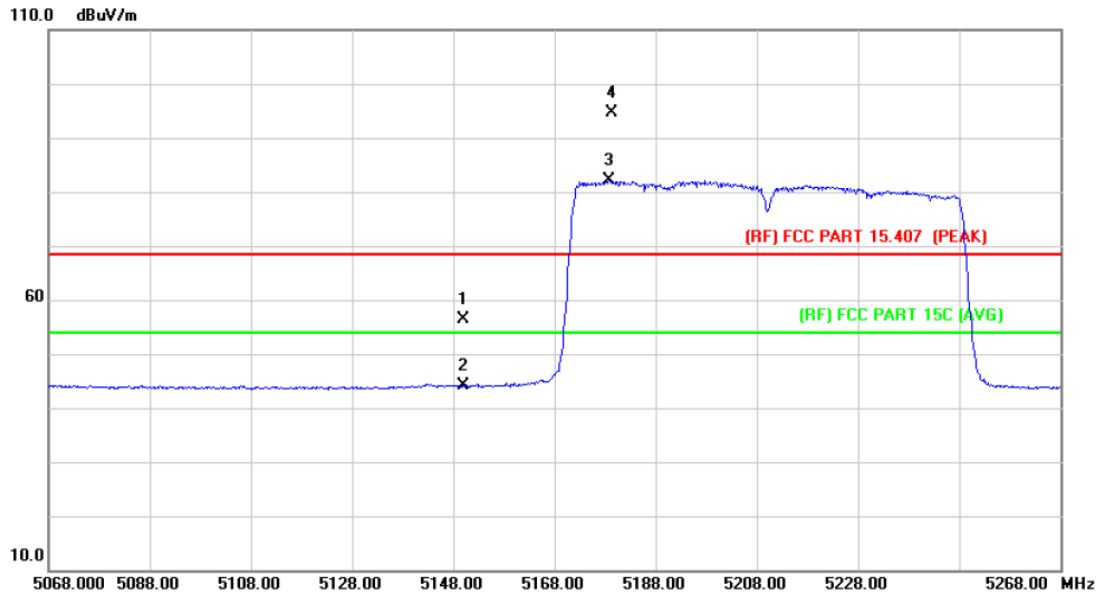
EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX 802.11 ac(80) Mode 5210MHz (U-NII-1)		
Remark:	N/A		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB Detector
1		5150.000	46.36	8.78	55.14	68.30	-13.16 peak
2		5150.000	34.94	8.78	43.72	54.00	-10.28 AVG
3	*	5202.000	68.31	8.81	77.12	Fundamental Frequency	AVG
4	X	5222.200	77.94	8.82	86.76	Fundamental Frequency	peak

Emission Level= Read Level+ Correct Factor

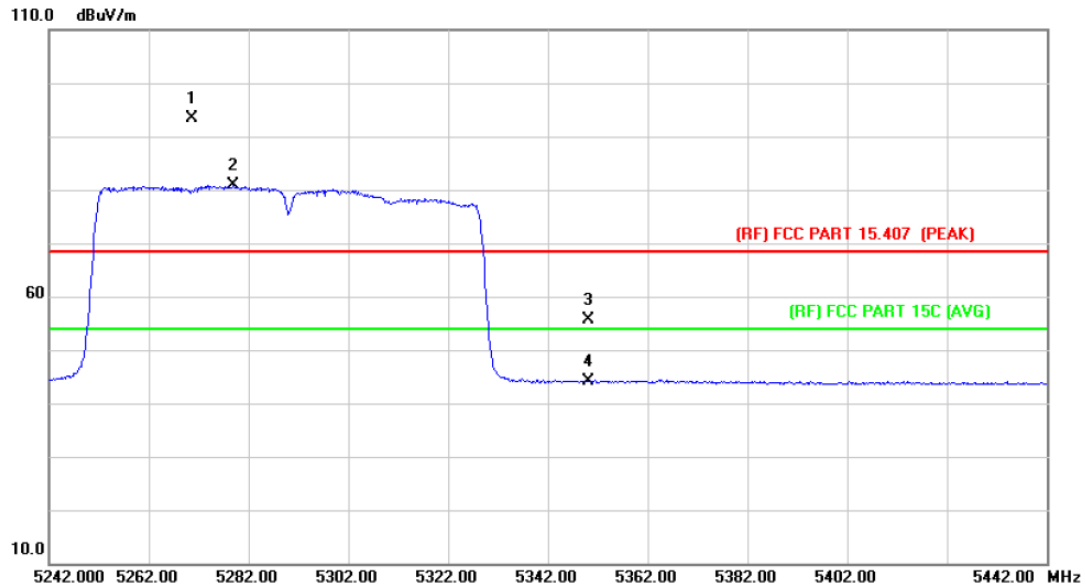
EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Vertical		
Test Mode:	TX 802.11 ac(80) Mode 5210MHz (U-NII-1)		
Remark:	N/A		



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		5150.000	47.66	8.78	56.44	68.30	-11.86	peak
2		5150.000	35.28	8.78	44.06	54.00	-9.94	AVG
3	*	5178.800	73.32	8.79	82.11	Fundamental Frequency		AVG
4	X	5179.400	85.81	8.79	94.60	Fundamental Frequency		peak

Emission Level= Read Level+ Correct Factor

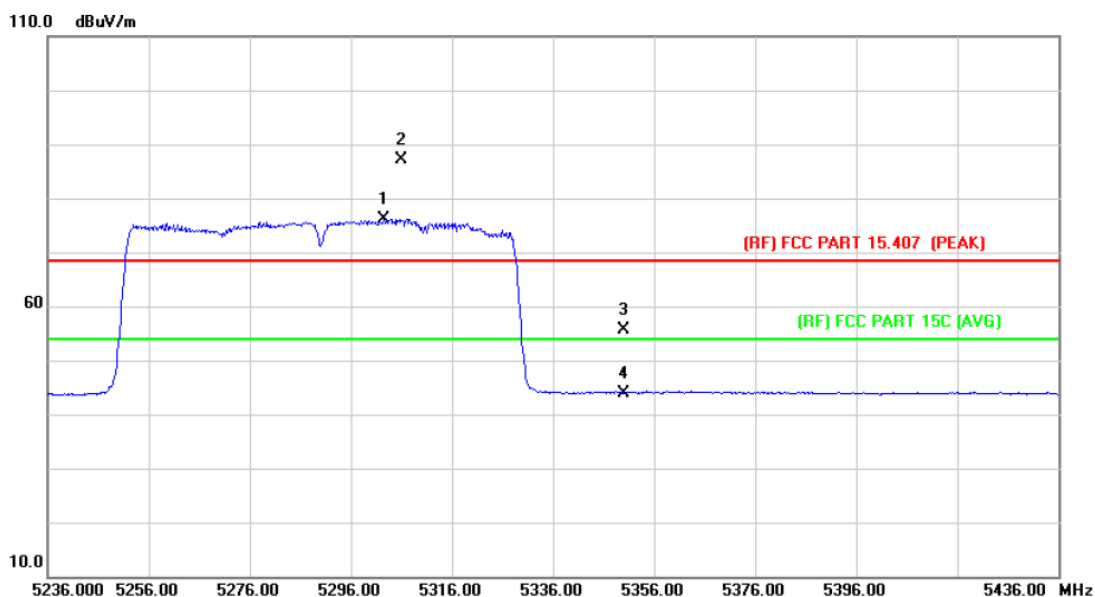
EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX 802.11 ac(80) Mode 5290MHz (U-NII-2A)		
Remark:	N/A		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	X	5270.600	84.60	8.85	93.45	Fundamental Frequency		peak
2	*	5279.000	71.96	8.86	80.82	Fundamental Frequency		AVG
3		5350.000	46.68	8.91	55.59	68.30	-12.71	peak
4		5350.000	35.11	8.91	44.02	54.00	-9.98	AVG

Emission Level= Read Level+ Correct Factor

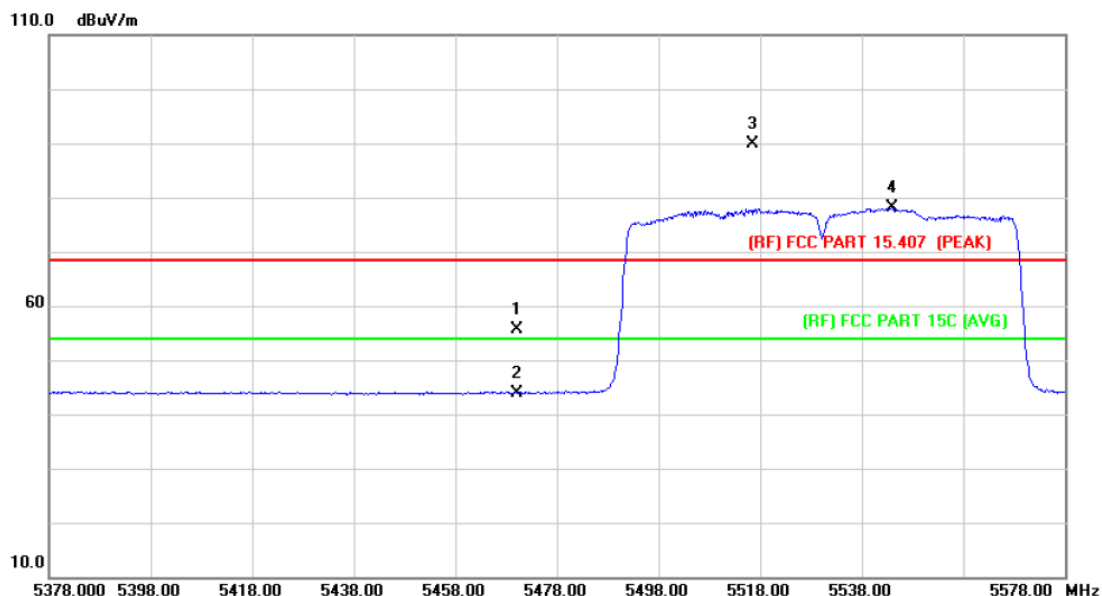
EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Vertical		
Test Mode:	TX 802.11 ac(80) Mode 5290MHz (U-NII-2A)		
Remark:	N/A		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	5302.600	67.35	8.87	76.22	Fundamental Frequency		AVG
2	X	5306.000	78.20	8.88	87.08	Fundamental Frequency		peak
3		5350.000	46.78	8.91	55.69	68.30	-12.61	peak
4		5350.000	35.08	8.91	43.99	54.00	-10.01	AVG

Emission Level= Read Level+ Correct Factor

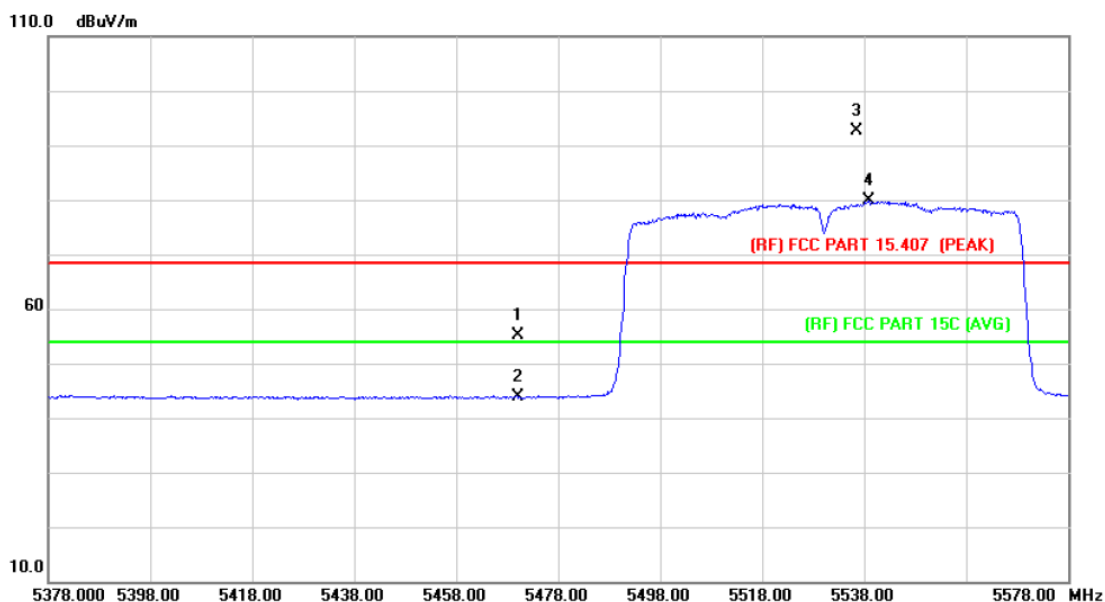
EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX 802.11 ac(80) Mode 5530MHz (U-NII-2C)		
Remark:	N/A		



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		5470.000	46.73	8.99	55.72	68.30	-12.58	peak
2		5470.000	35.00	8.99	43.99	54.00	-10.01	AVG
3	X	5516.600	80.81	9.02	89.83	Fundamental Frequency		peak
4	*	5544.000	69.01	9.04	78.05	Fundamental Frequency		AVG

Emission Level= Read Level+ Correct Factor

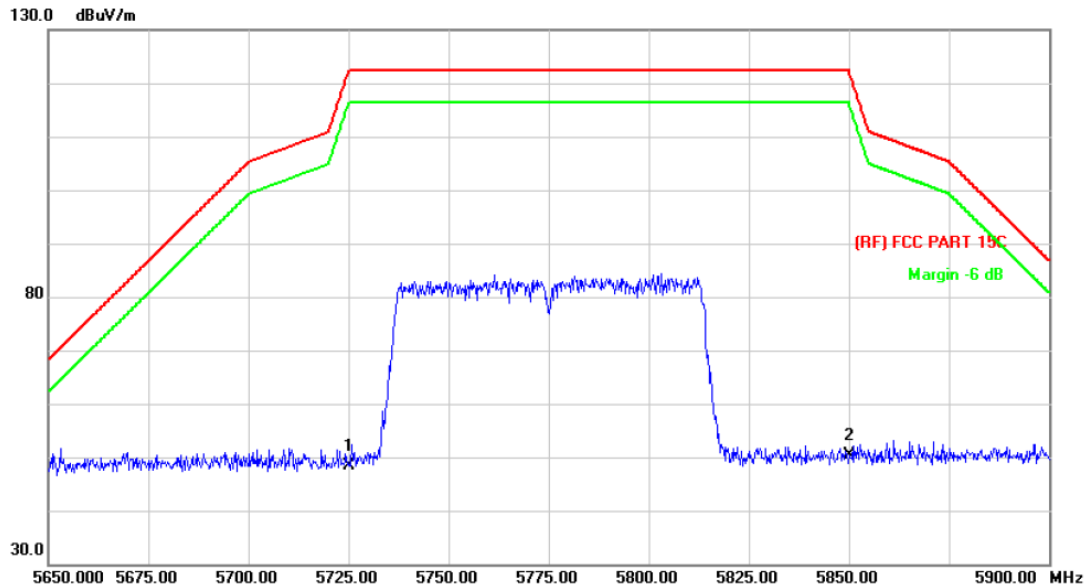
EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Vertical		
Test Mode:	TX 802.11 ac(80) Mode 5530MHz (U-NII-2C)		
Remark:	N/A		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		5470.000	46.03	8.99	55.02	68.30	-13.28	peak
2		5470.000	34.86	8.99	43.85	54.00	-10.15	AVG
3	X	5536.600	83.53	9.03	92.56	Fundamental Frequency		peak
4	*	5539.000	70.73	9.04	79.77	Fundamental Frequency		AVG

Emission Level= Read Level+ Correct Factor

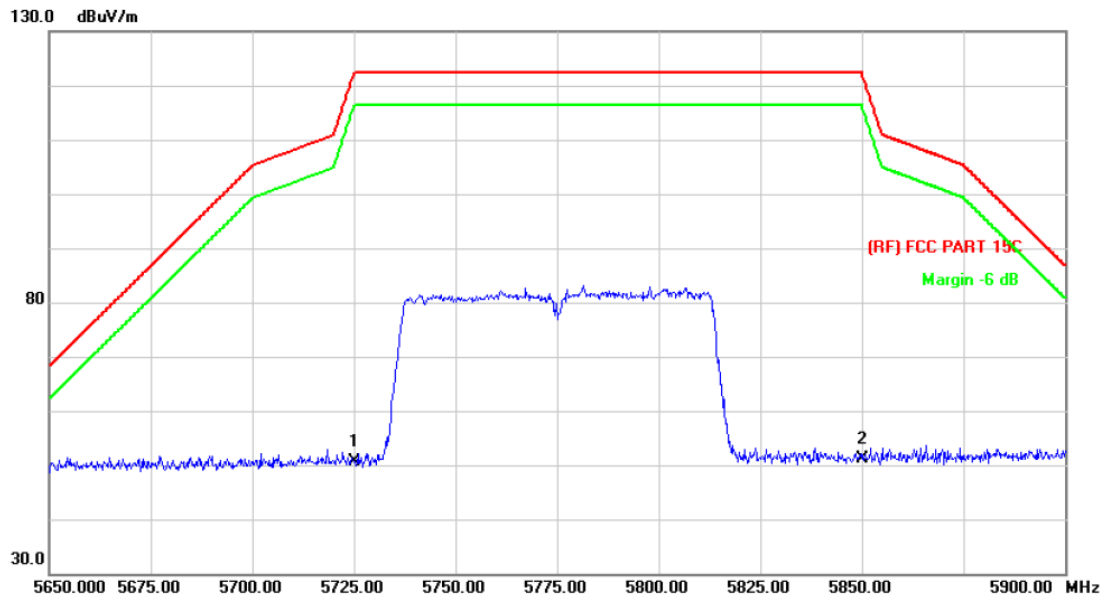
EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX 802.11 ac(80) Mode 5775MHz (U-NII-3)		
Remark:	N/A		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		5725.000	32.46	15.87	48.33	122.30	-73.97	peak
2	*	5850.000	33.66	16.83	50.49	122.30	-71.81	peak

Emission Level= Read Level+ Correct Factor

EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Vertical		
Test Mode:	TX 802.11 ac(80) Mode 5775MHz (U-NII-3)		
Remark:	N/A		

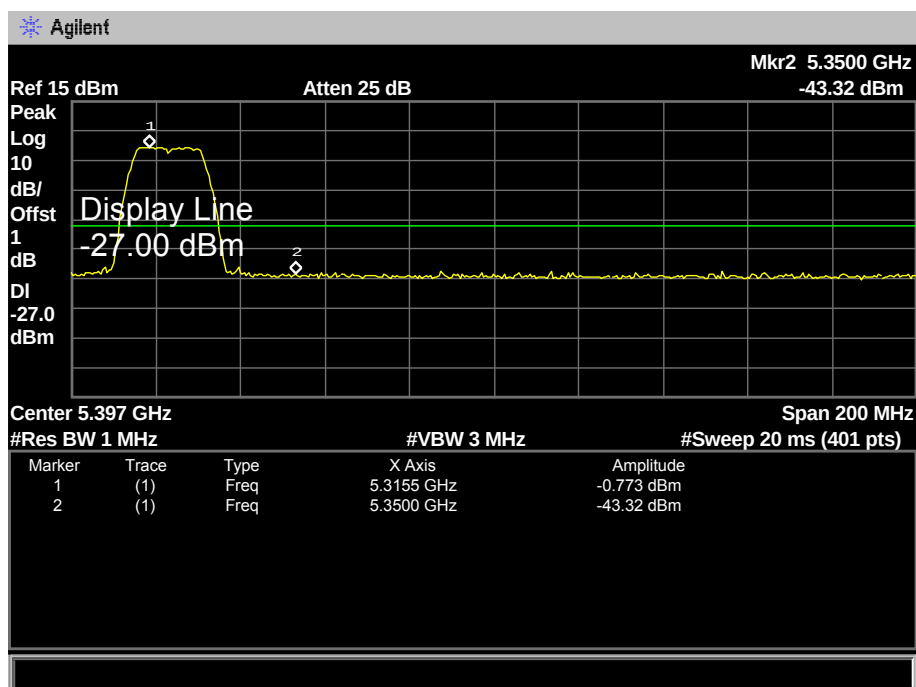
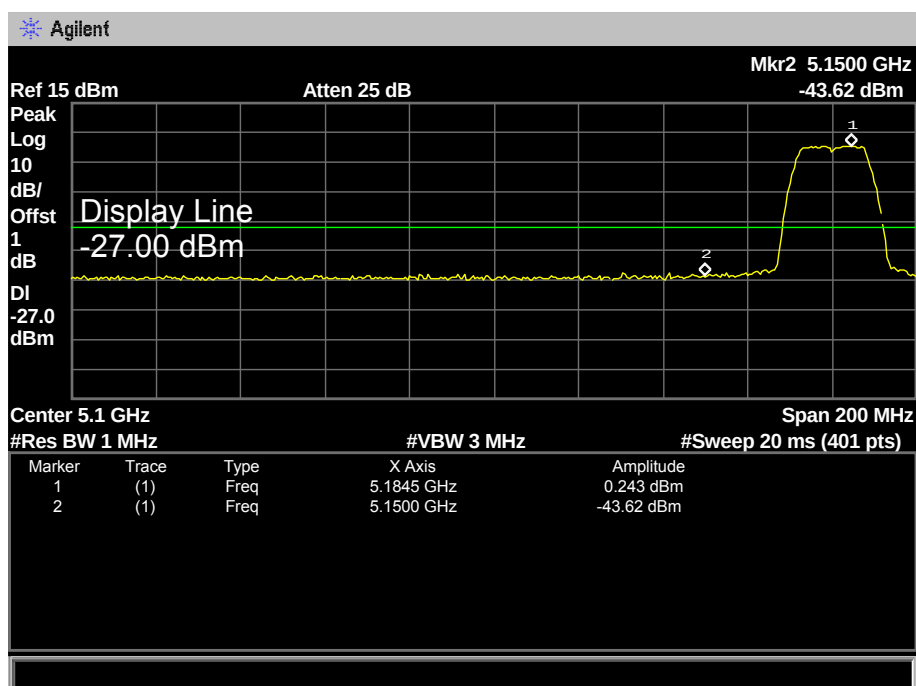


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		5725.000	34.74	15.87	50.61	122.30	-71.69	peak
2	*	5850.000	34.22	16.83	51.05	122.30	-71.25	peak

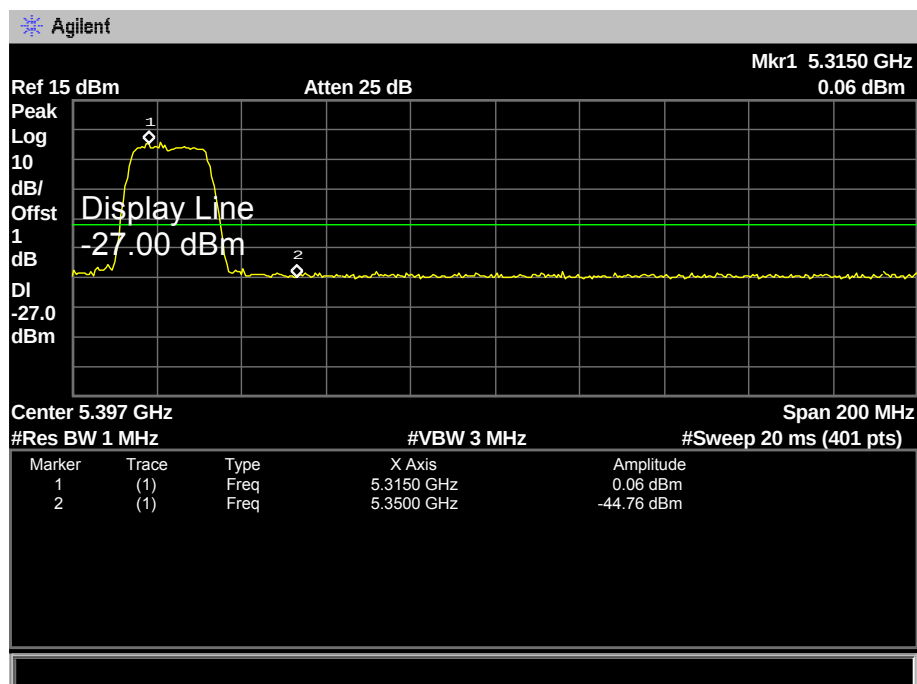
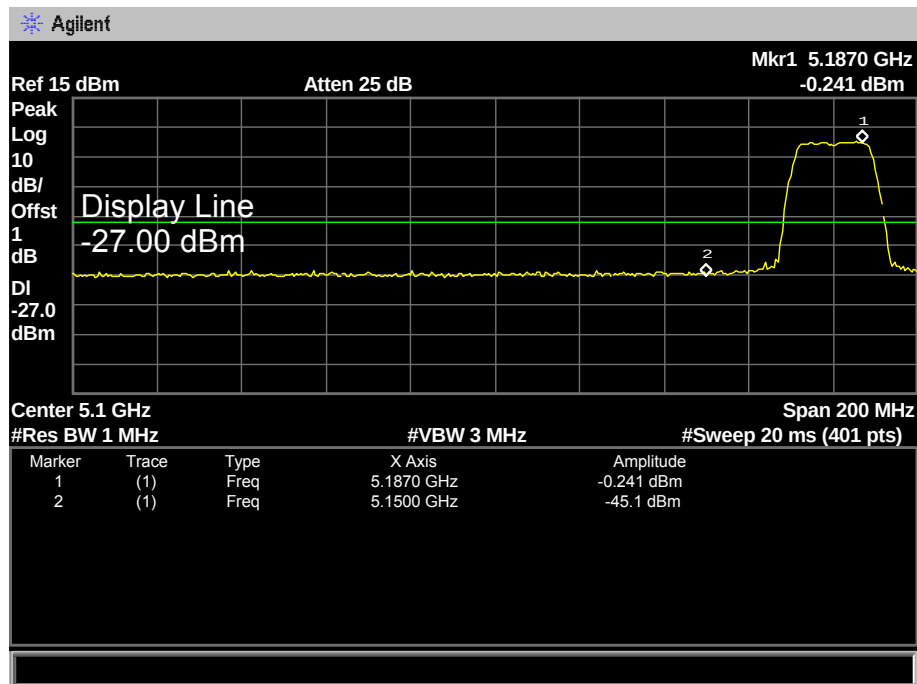
Emission Level= Read Level+ Correct Factor

(2) Conducted Test

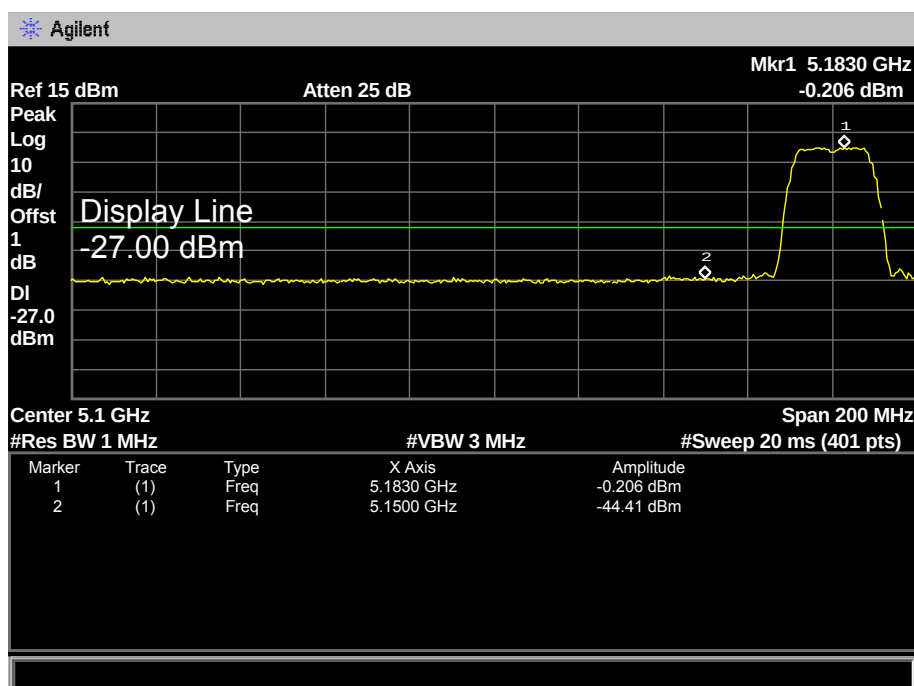
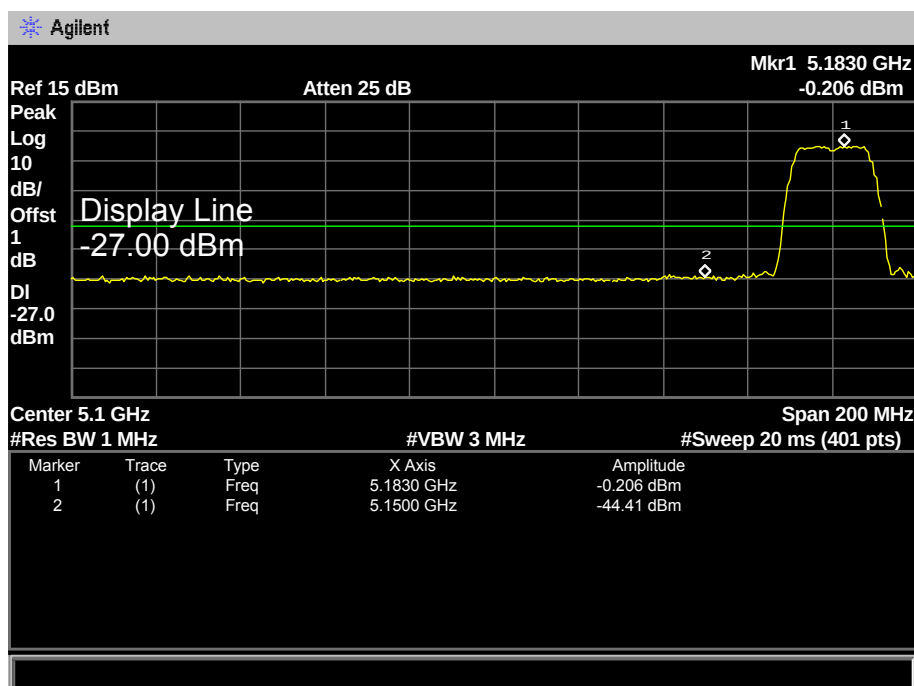
EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX 802.11a mode(U-NII-1) / 5180 ~ 5240MHz CH Low-5180MHz TX 802.11a mode(U-NII-2A) / 5260~ 5320MHz CH High-5320MHz		
Remark:	The EUT is programmed in continuously transmitting mode		



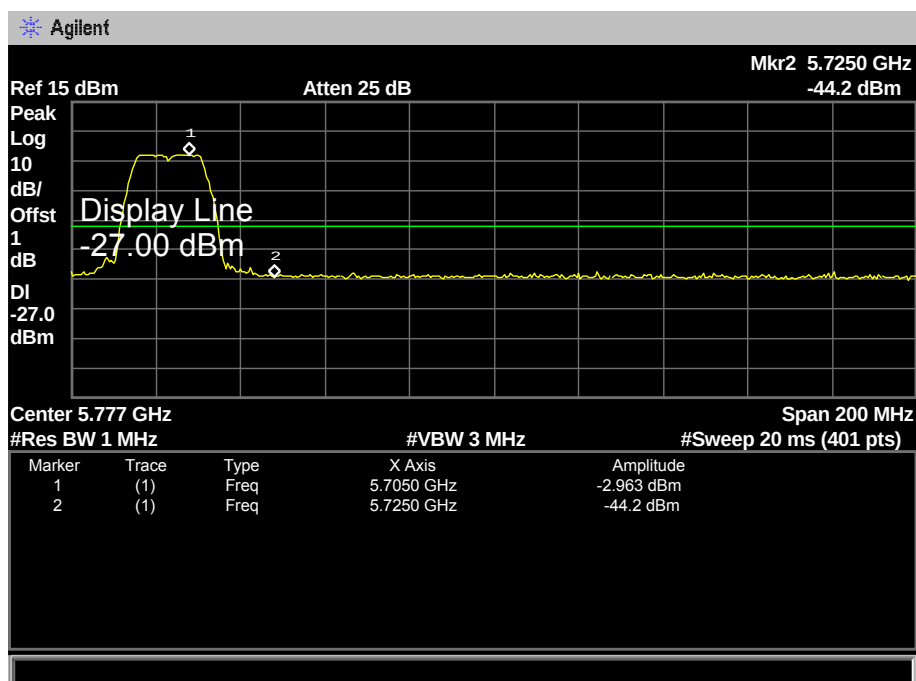
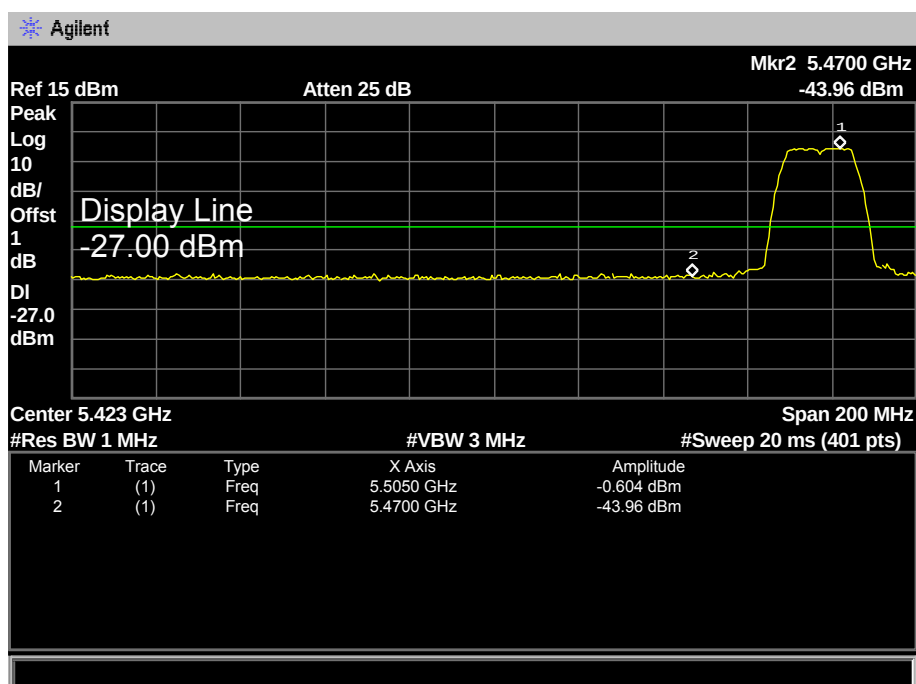
EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX 802.11n(20) mode(U-NII-1) / 5180 ~ 5240MHz CH Low-5180MHz TX 802.11 n(20) mode(U-NII-2A) / 5260~ 5320MHz CH High-5320MHz		
Remark:	The EUT is programed in continuously transmitting mode		



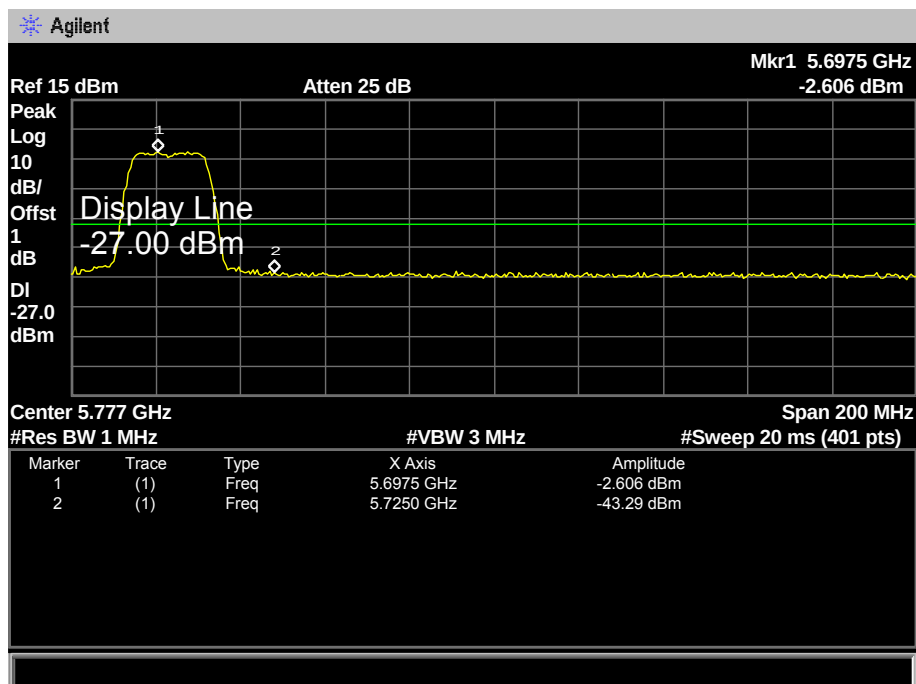
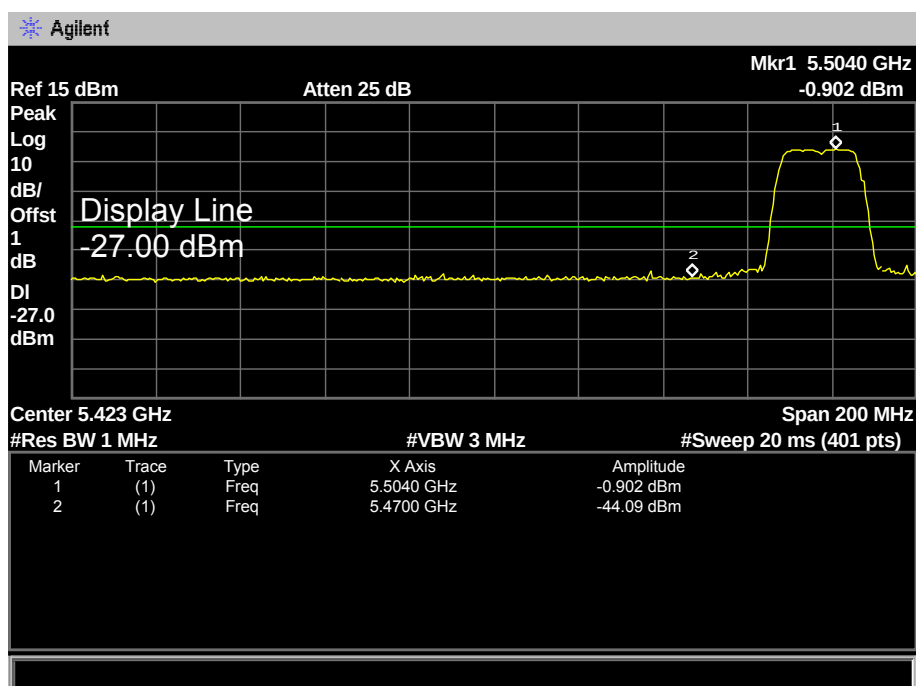
EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX 802.11ac(20) mode(U-NII-1) / 5180 ~ 5240MHz CH Low-5180MHz TX 802.11 ac(20) mode(U-NII-2A) / 5260~ 5320MHz CH High-5320MHz		
Remark:	The EUT is programed in continuously transmitting mode		



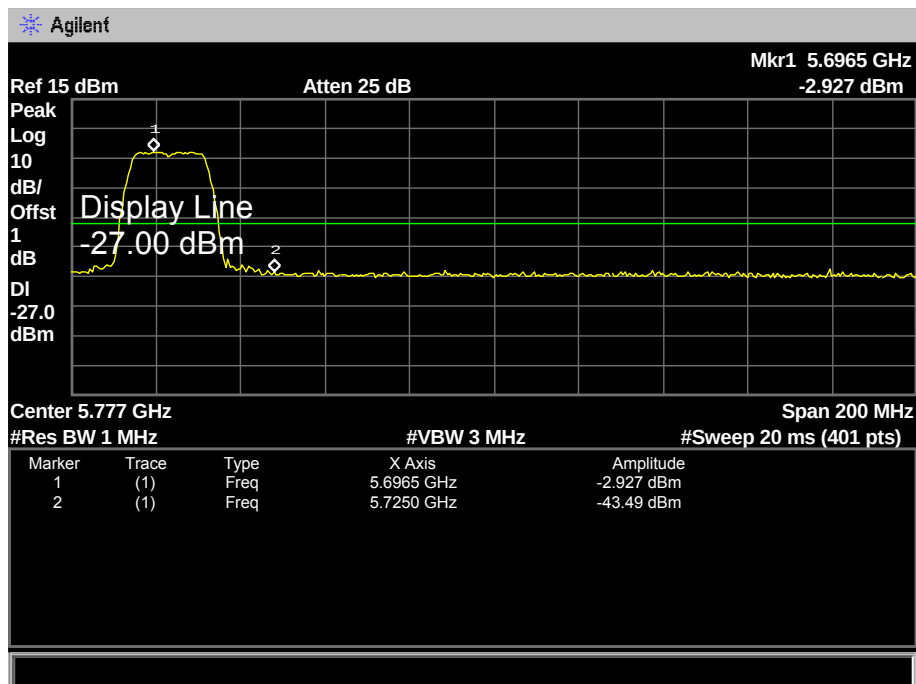
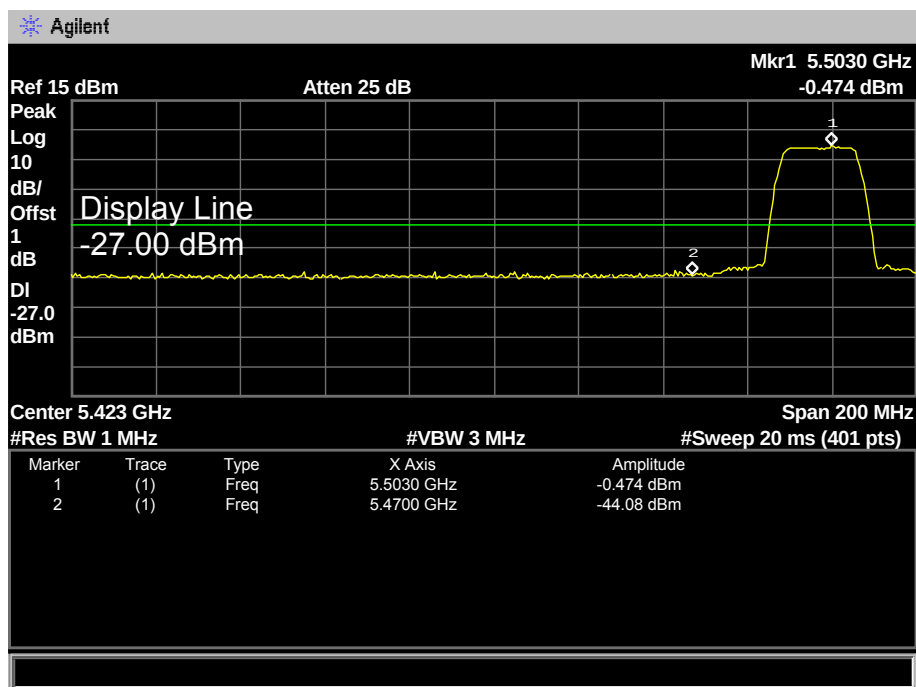
EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX 802.11a Mode 5500MHz /5700MHz (U-NII-2C)		
Remark:	The EUT is programed in continuously transmitting mode		



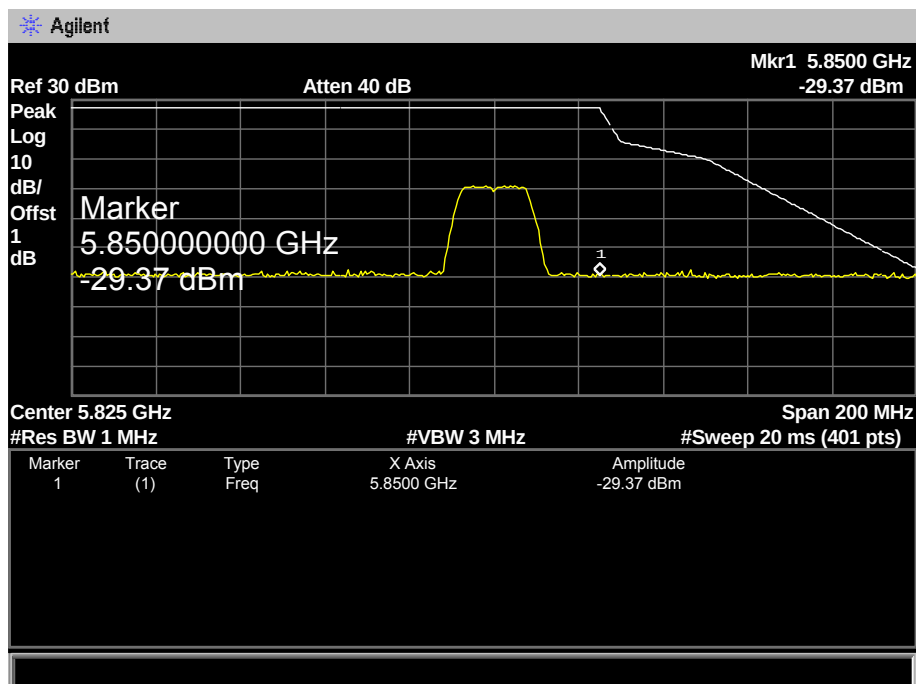
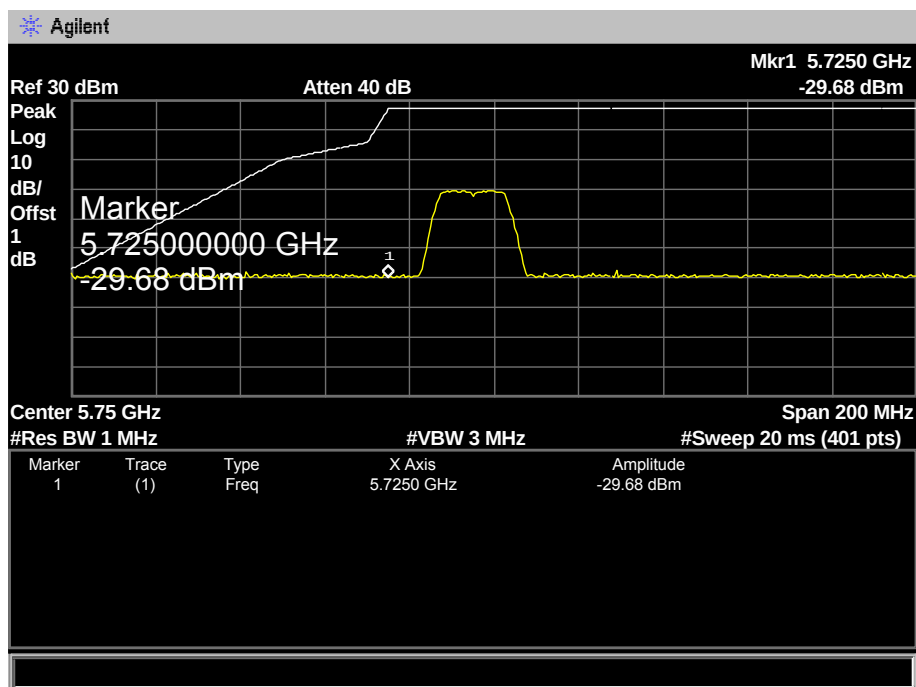
EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX 802.11n(20) Mode 5500MHz /5700MHz (U-NII-2C)		
Remark:	The EUT is programed in continuously transmitting mode		



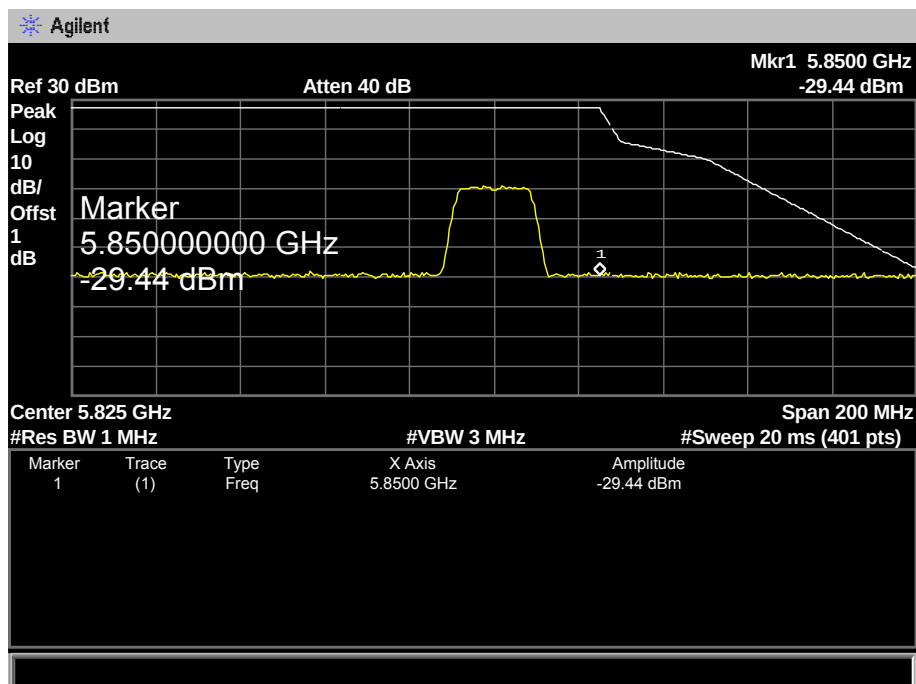
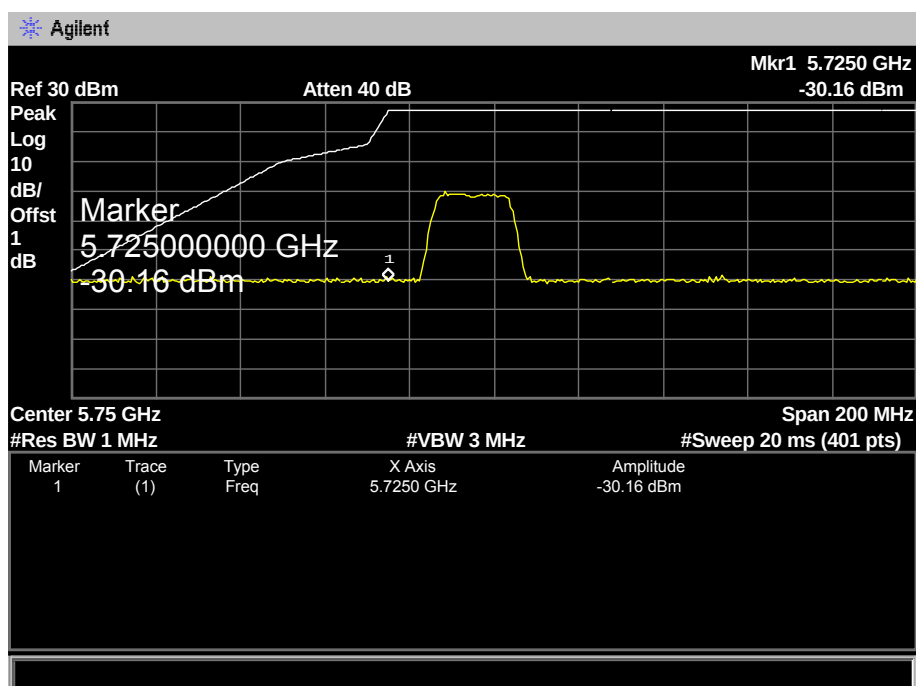
EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX 802.11ac(20) Mode 5500MHz /5700MHz (U-NII-2C)		
Remark:	The EUT is programed in continuously transmitting mode		



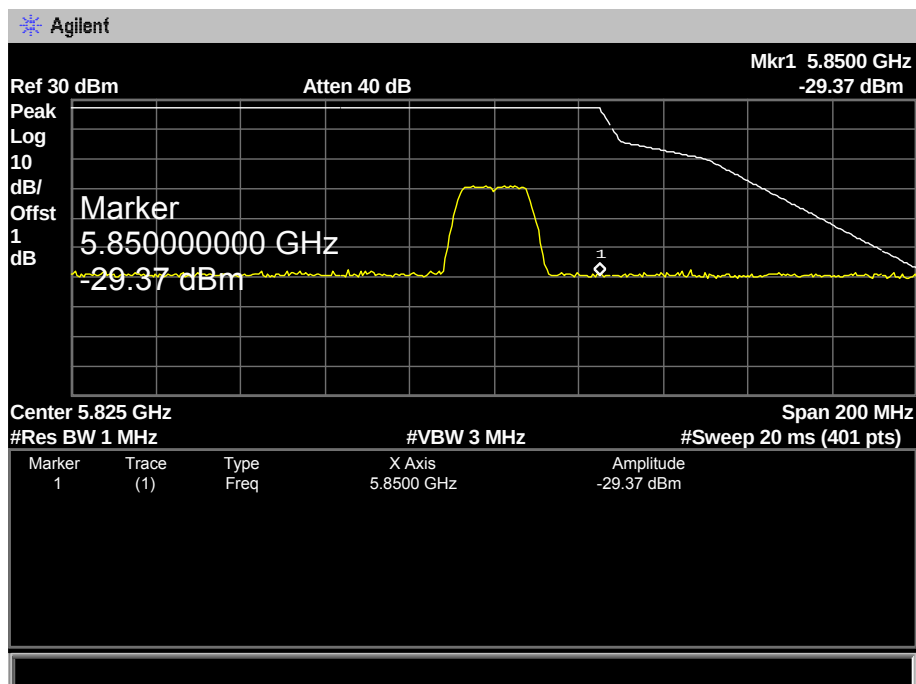
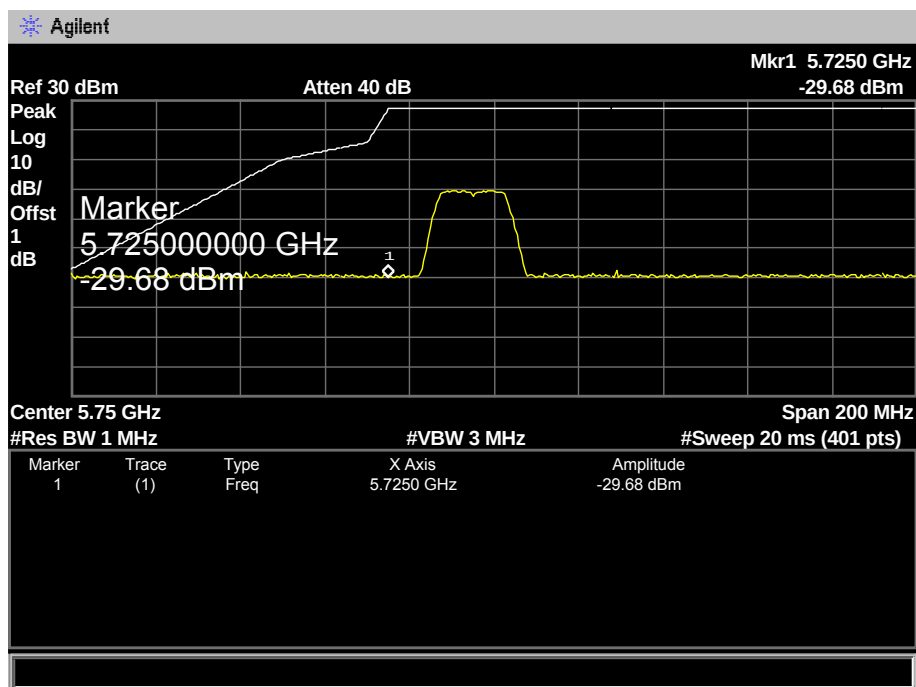
EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX 802.11a Mode 5745MHz /5825MHz (U-NII-3)		
Remark:	The EUT is programed in continuously transmitting mode		



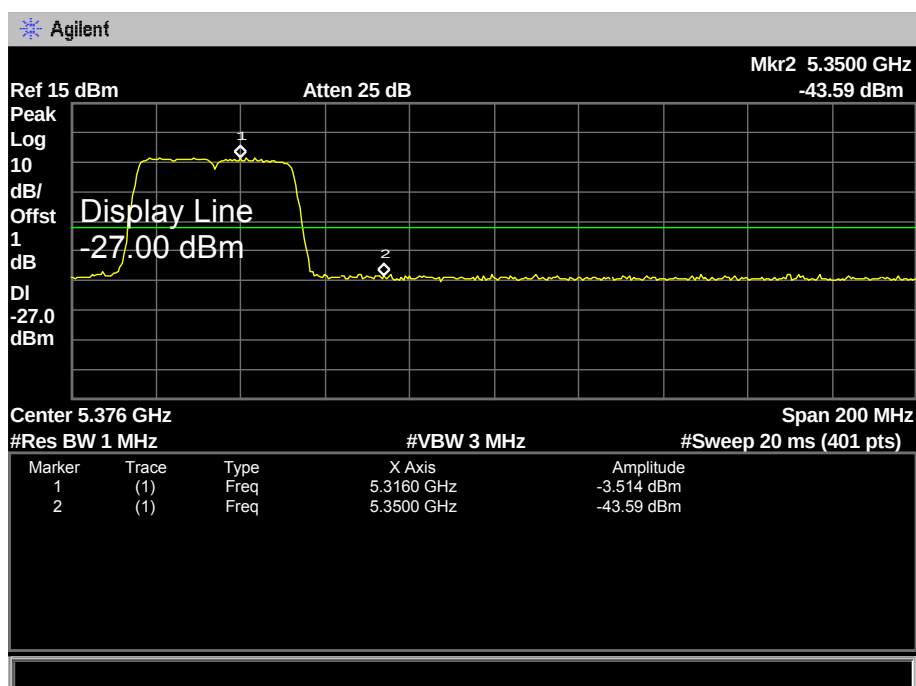
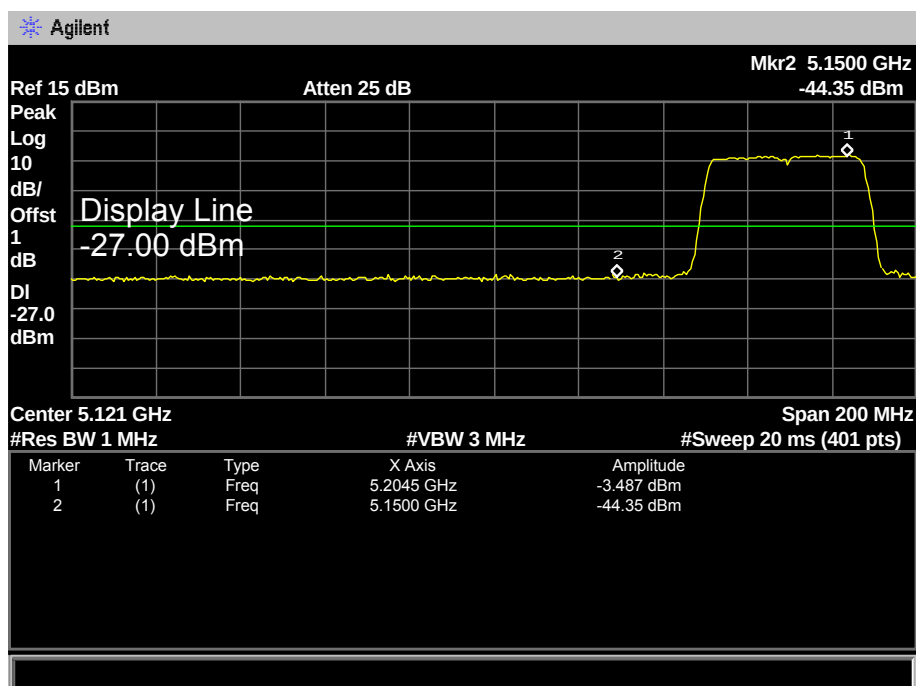
EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX 802.11n(20) Mode 5745MHz /5825MHz (U-NII-3)		
Remark:	The EUT is programed in continuously transmitting mode		



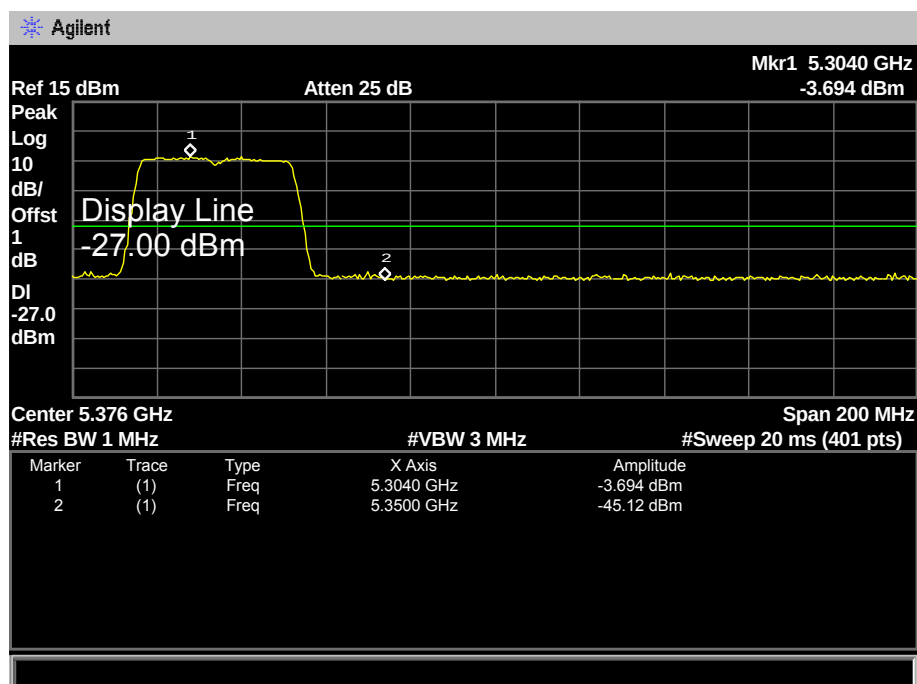
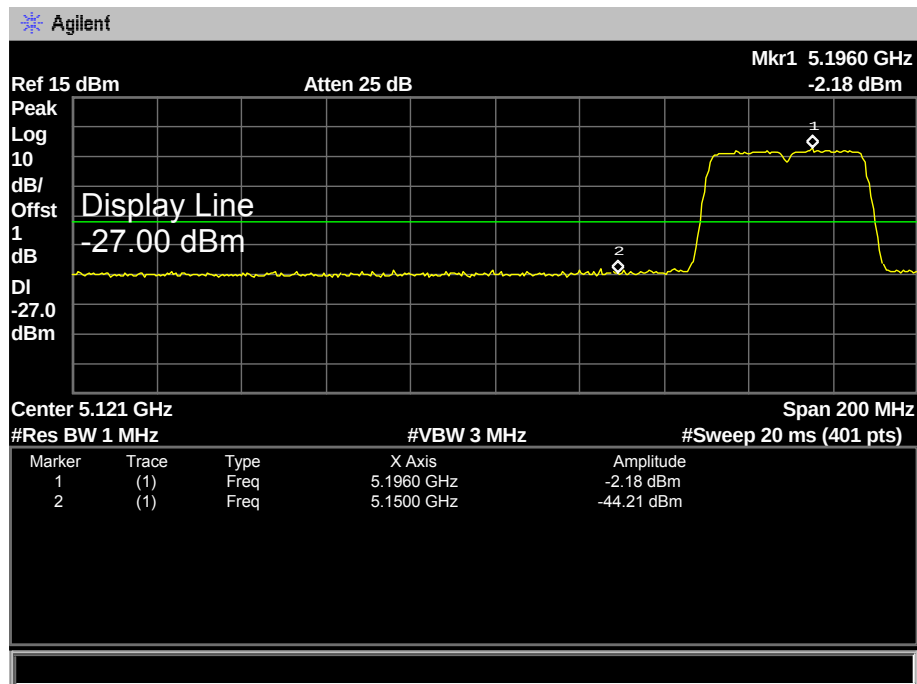
EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX 802.11ac(20) Mode 5745MHz /5825MHz (U-NII-3)		
Remark:	The EUT is programed in continuously transmitting mode		



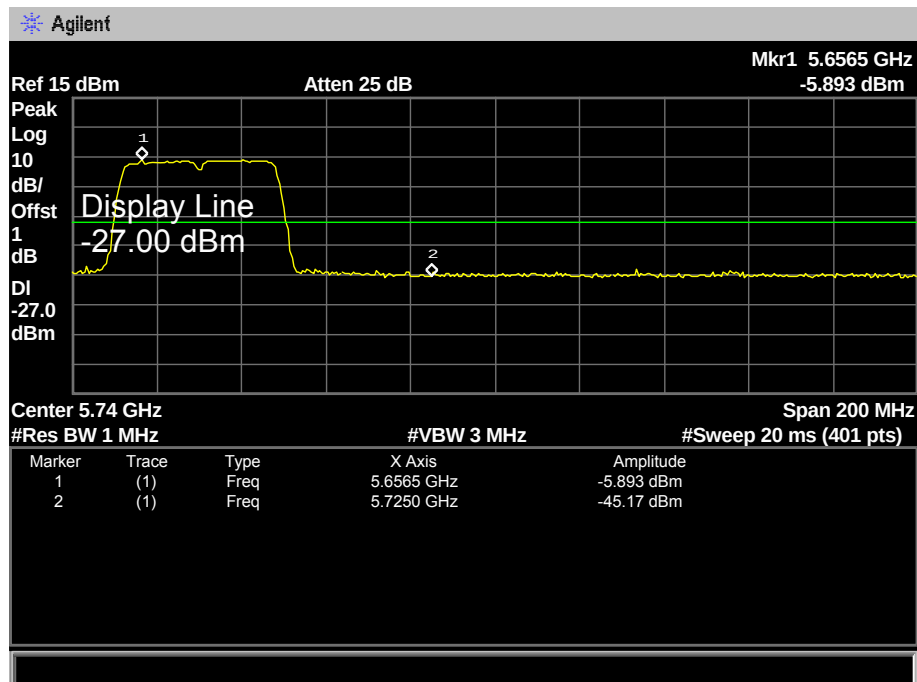
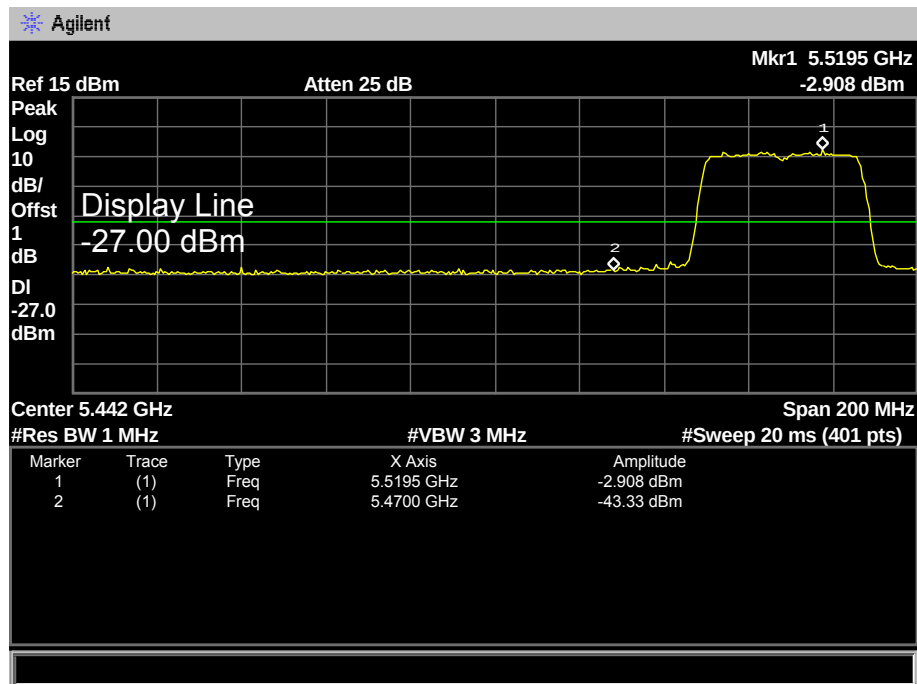
EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX 802.11n(40) mode(U-NII-1) / 5190 ~ 5230MHz CH Low-5180MHz TX 802.11 n(40) mode(U-NII-2A) / 5270~ 5310MHz CH High-5320MHz		
Remark:	The EUT is programed in continuously transmitting mode		



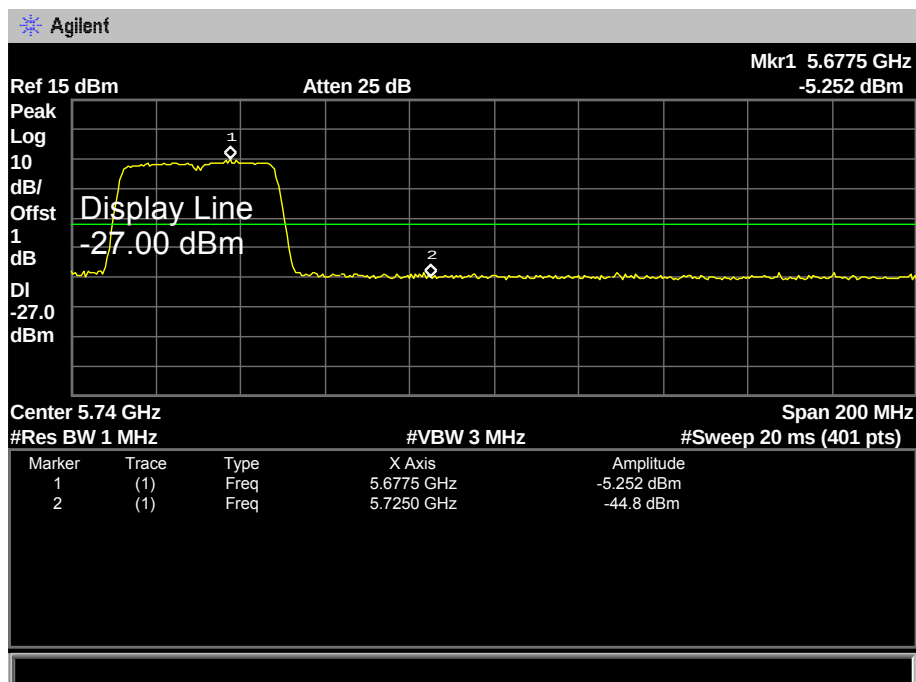
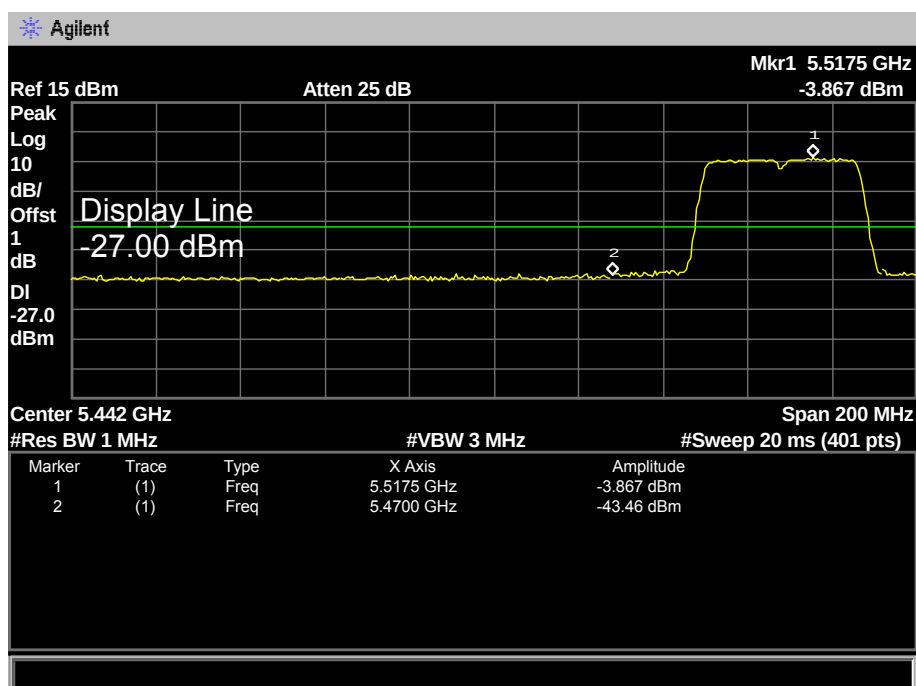
EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX 802.11ac(40) mode(U-NII-1) / 5190 ~ 5230MHz CH Low-5180MHz TX 802.11 ac(40) mode(U-NII-2A) / 5270~ 5310MHz CH High-5320MHz		
Remark:	The EUT is programed in continuously transmitting mode		



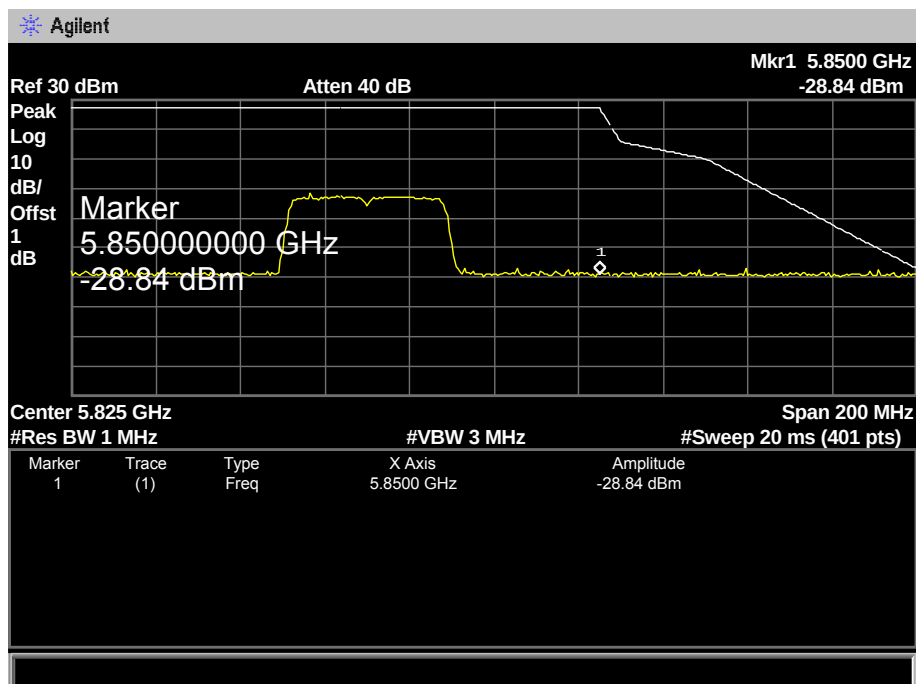
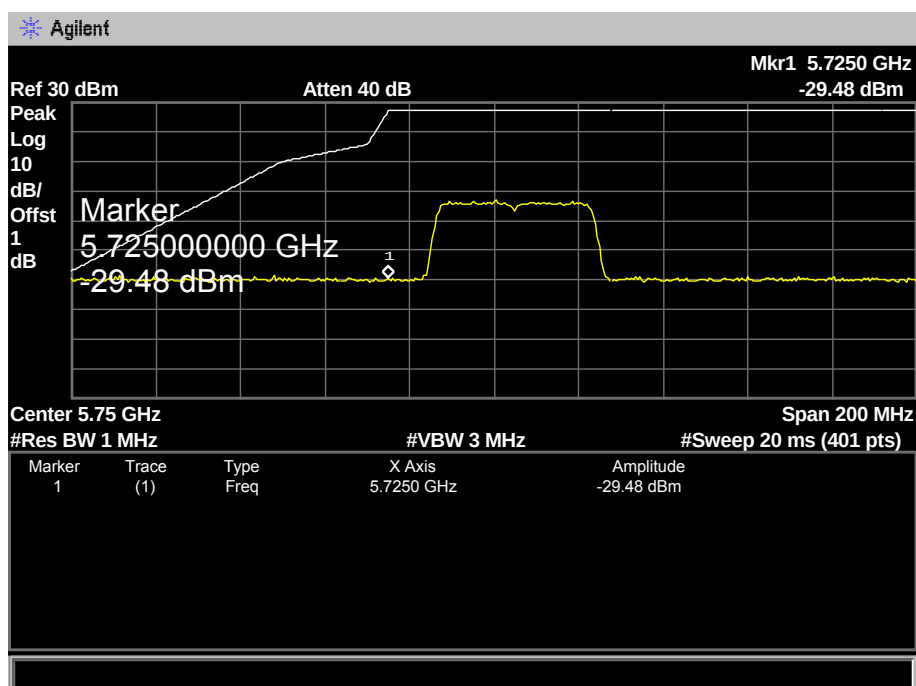
EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX 802.11n(40) Mode 5510MHz/5670 (U-NII-2C)		
Remark:	The EUT is programed in continuously transmitting mode		



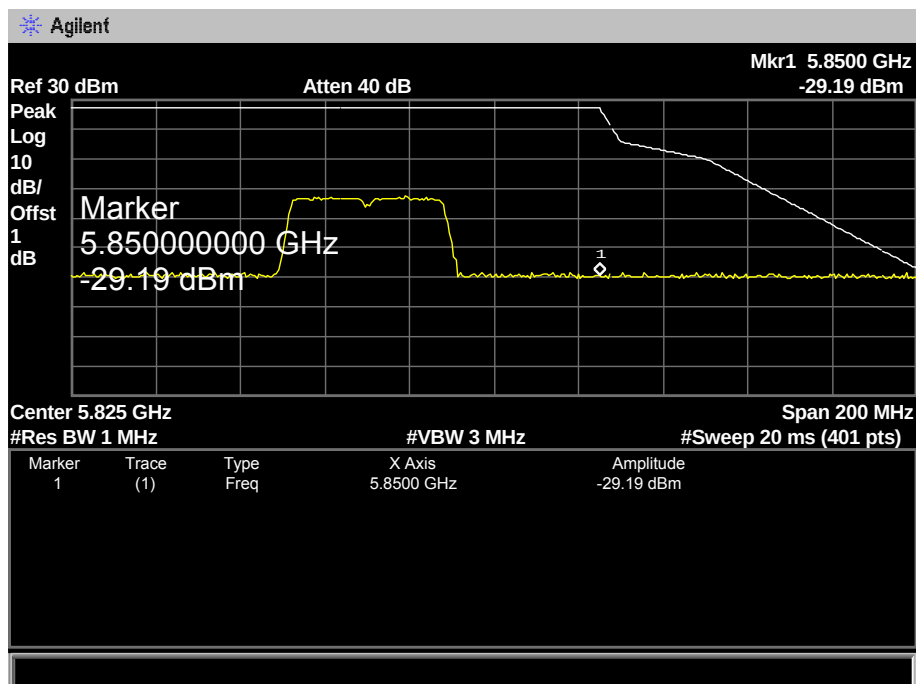
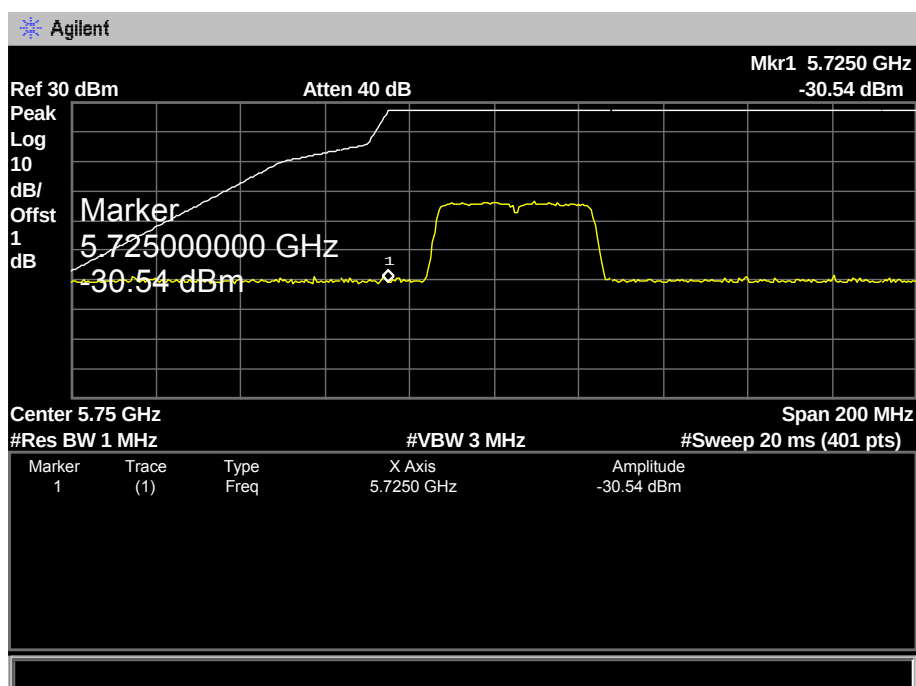
EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX 802.11 ac(40) Mode 5510MHz/5670 (U-NII-2C)		
Remark:	The EUT is programed in continuously transmitting mode		



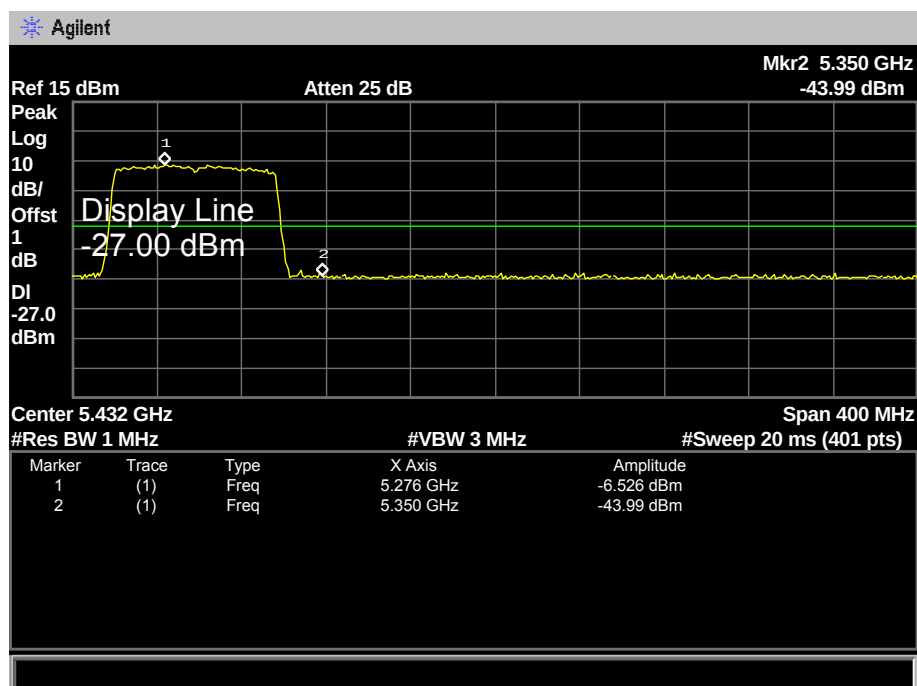
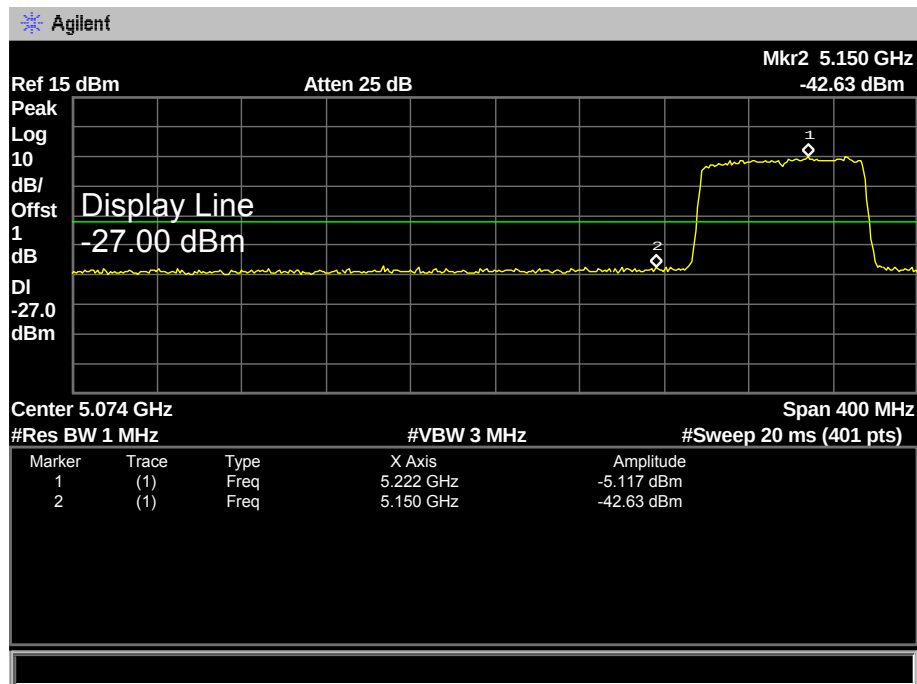
EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX 802.11 n(40) Mode 5755MHz/5795 (U-NII-3)		
Remark:	The EUT is programed in continuously transmitting mode		



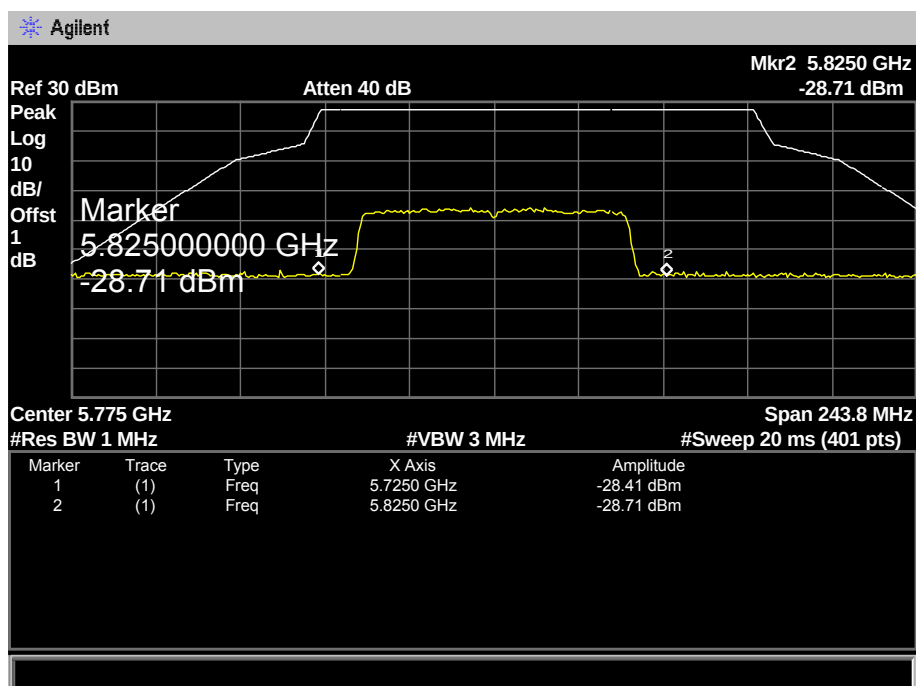
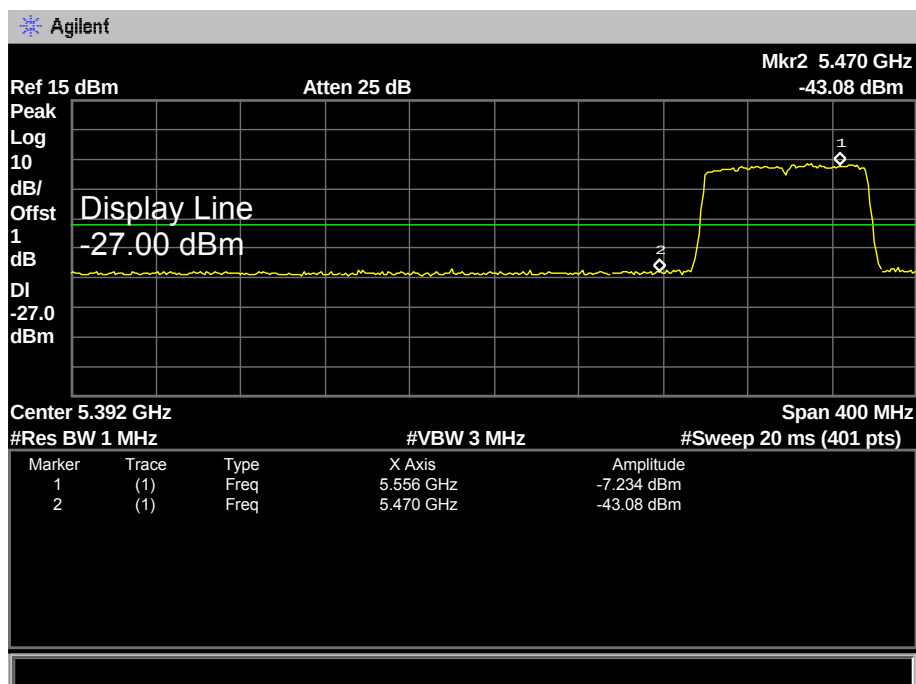
EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX 802.11 ac(40) Mode 5755MHz/5795 (U-NII-3)		
Remark:	The EUT is programed in continuously transmitting mode		



EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX 802.11 ac(80) Mode 5210MHz (U-NII-1) TX 802.11 ac(80) Mode 5290MHz (U-NII-2A)		
Remark:	The EUT is programed in continuously transmitting mode		



EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX 802.11 ac(80) Mode 5530MHz (U-NII-2C) TX 802.11 ac(80) Mode 5775MHz (U-NII-3)		
Remark:	The EUT is programed in continuously transmitting mode		



7. Bandwidth Test

7.1 Test Standard and Limit

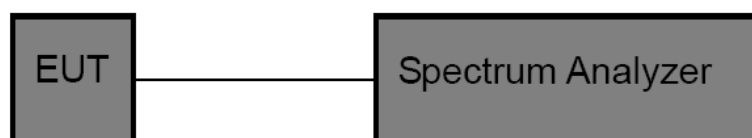
7.1.1 Test Standard

FCC Part 15.407

7.1.2 Test Limit

FCC Part 15 Subpart C(15.407)/RSS-210		
Test Item	Limit	Frequency Range (MHz)
26 Bandwidth	N/A	5150~5250
		5250~5350
		5500~5700
6 dB Bandwidth	>500kHz	5725~5850

7.2 Test Setup



7.3 Test Procedure

- (1) The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram above.
- (2) The setting of the spectrum analyser as below:

26dB Bandwidth Test	
Spectrum Parameters	Setting
Attenuation	Auto
Span	>26 dB Bandwidth
RBW	Approximately 1% of the emission bandwidth
VBW	VBW>RBW
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

6dB Bandwidth Test	
Spectrum Parameters	Setting
Attenuation	Auto
Span	>6 dB Bandwidth
RBW	100 kHz
VBW	VBW>=3*RBW
Detector	Peak
Trace	Max Hold
Sweep Time	Auto
99% Occupied Bandwidth Test	
Spectrum Parameters	Setting
Attenuation	Auto
RBW	1% to 5% of the OBW
VBW	≥ 3RBW
Detector	Peak
Trace	Max Hold

7.4 EUT Operating Condition

The EUT was set to continuously transmitting in each mode and low, Middle and high channel for the test.

7.5 Test Data

EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX 802.11a Mode (U-NII-1)		
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
36	5180	21.693	17.1770
40	5200	21.662	17.1405
48	5240	21.716	17.1187

802.11a Mode			
5180 MHz			

Agilent

Ref 15 dBm Atten 25 dB

#Peak Log 10 dB/Offst 1 dB

VBW 1.000000000 MHz

Center 5.18 GHz Span 30 MHz

#Res BW 300 kHz #VBW 1 MHz Sweep 4 ms (401 pts)

Occupied Bandwidth 17.1770 MHz

Occ BW % Pwr 99.00 %

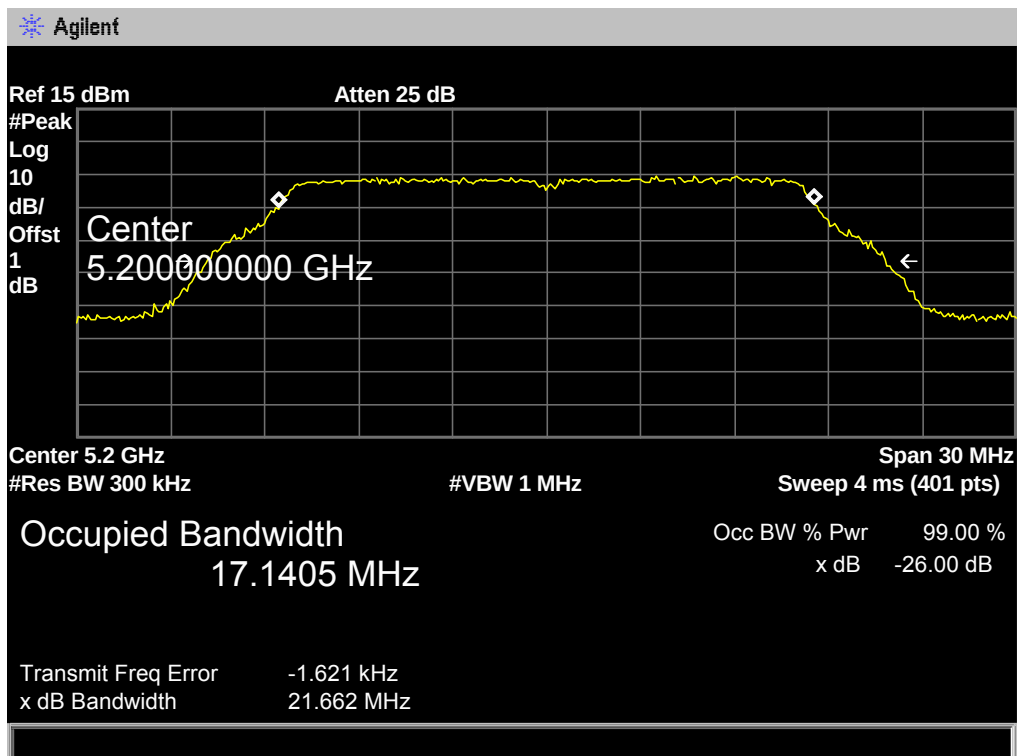
x dB -26.00 dB

Transmit Freq Error -9.088 kHz

x dB Bandwidth 21.693 MHz

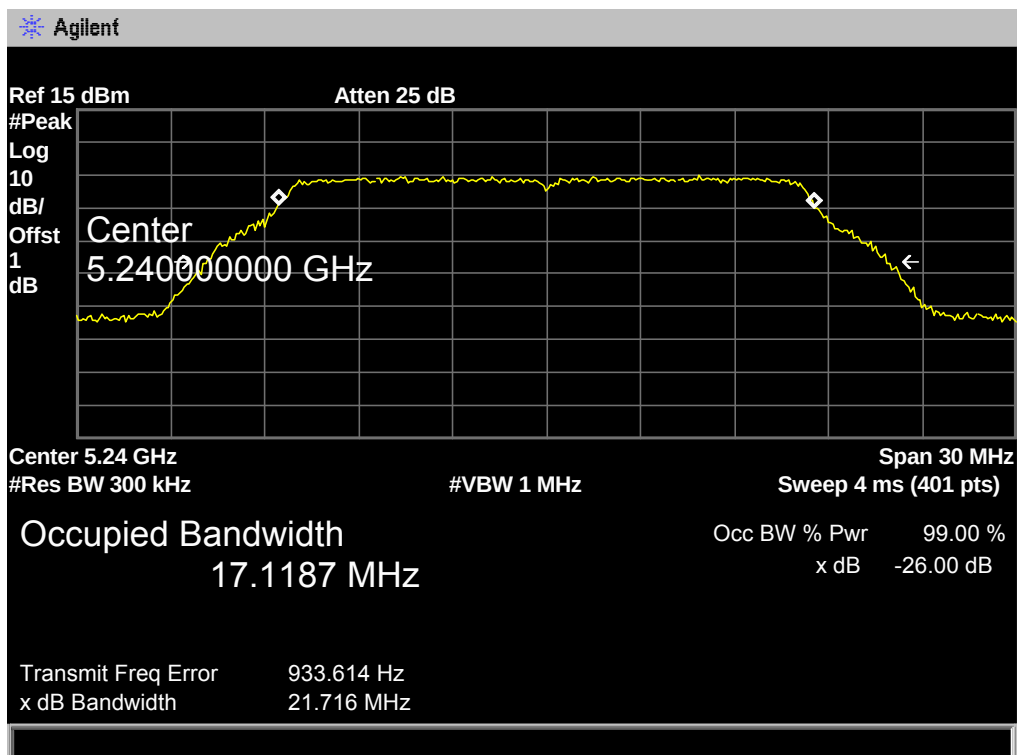
802.11a Mode

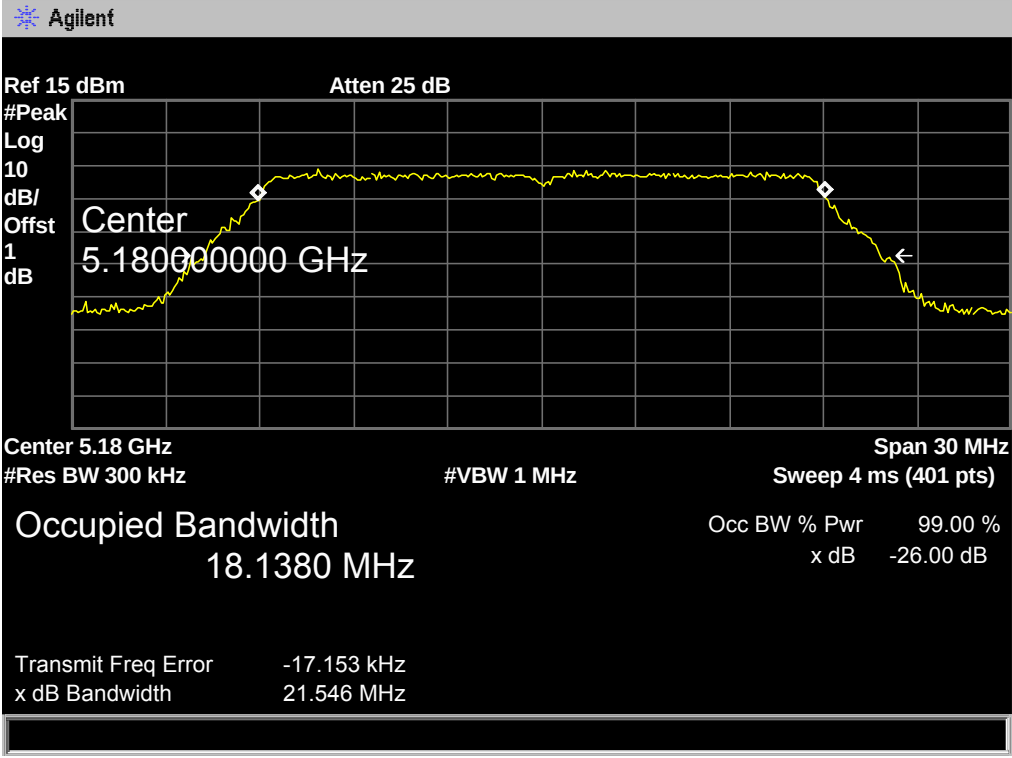
5200 MHz



802.11a Mode

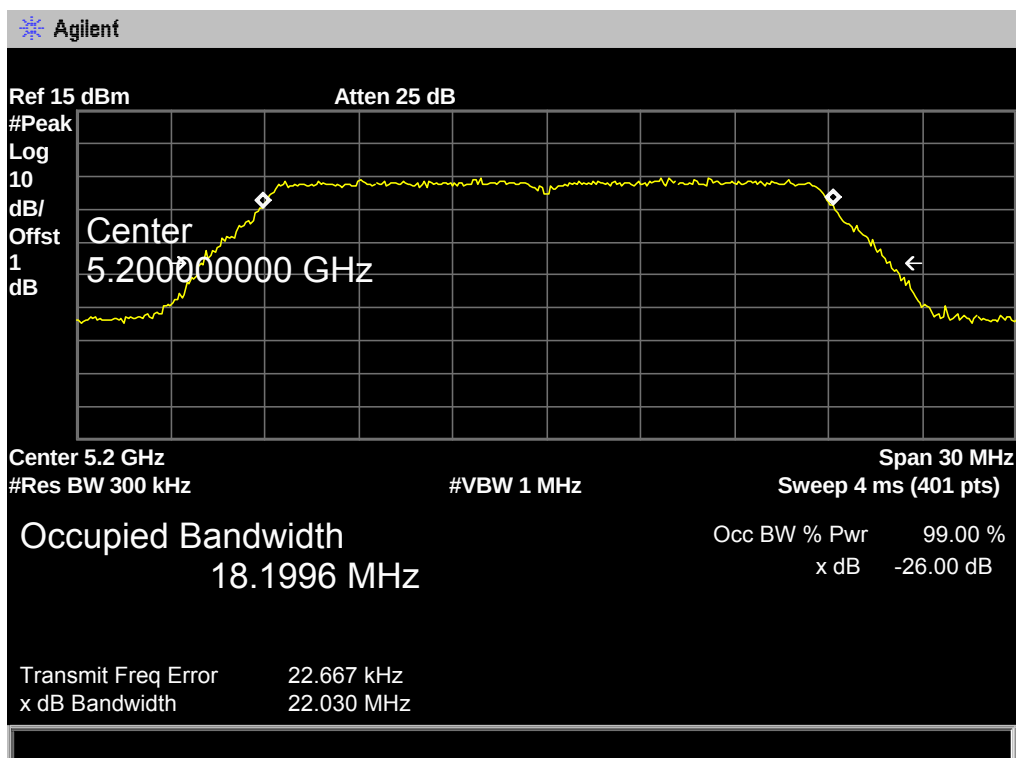
5240 MHz



EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX 802.11n(HT20) Mode (U-NII-1)		
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
36	5180	21.546	18.1380
40	5200	22.030	18.1996
48	5240	21.914	18.1678
802.11n(HT20) Mode			
5180 MHz			
 Agilent Ref 15 dBm Atten 25 dB #Peak Log 10 dB/ Offst 1 dB Center 5.180000000 GHz Center 5.18 GHz #Res BW 300 kHz #VBW 1 MHz Span 30 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 18.1380 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -17.153 kHz x dB Bandwidth 21.546 MHz			

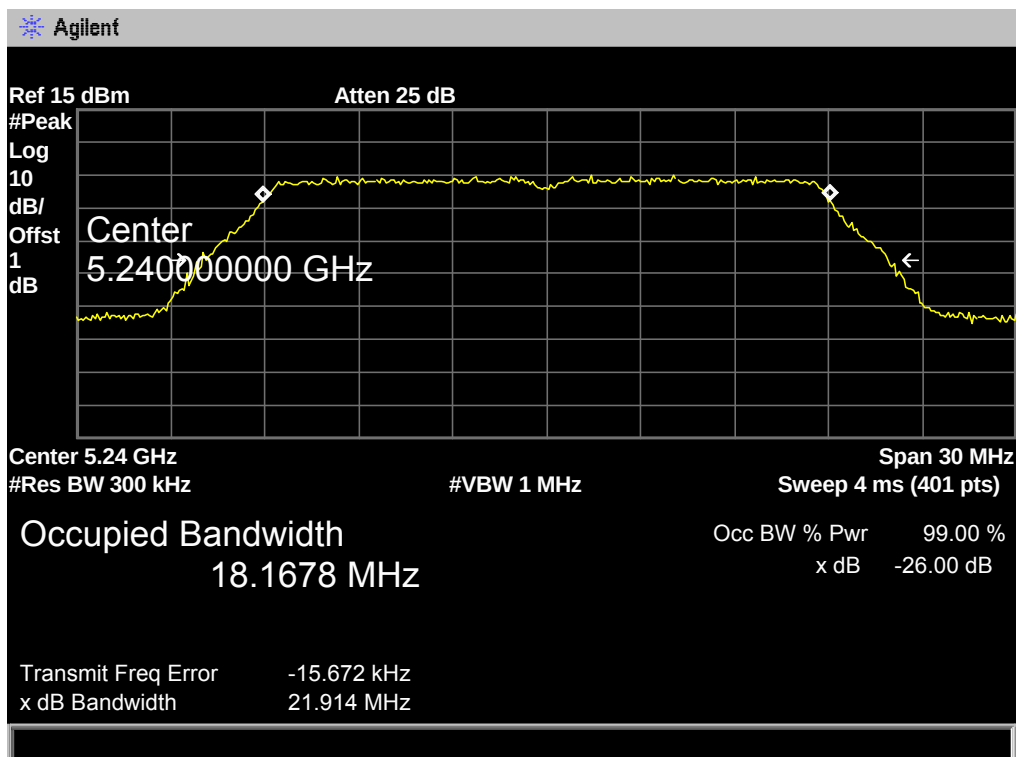
802.11n(HT20) Mode

5200 MHz



802.11n(HT20) Mode

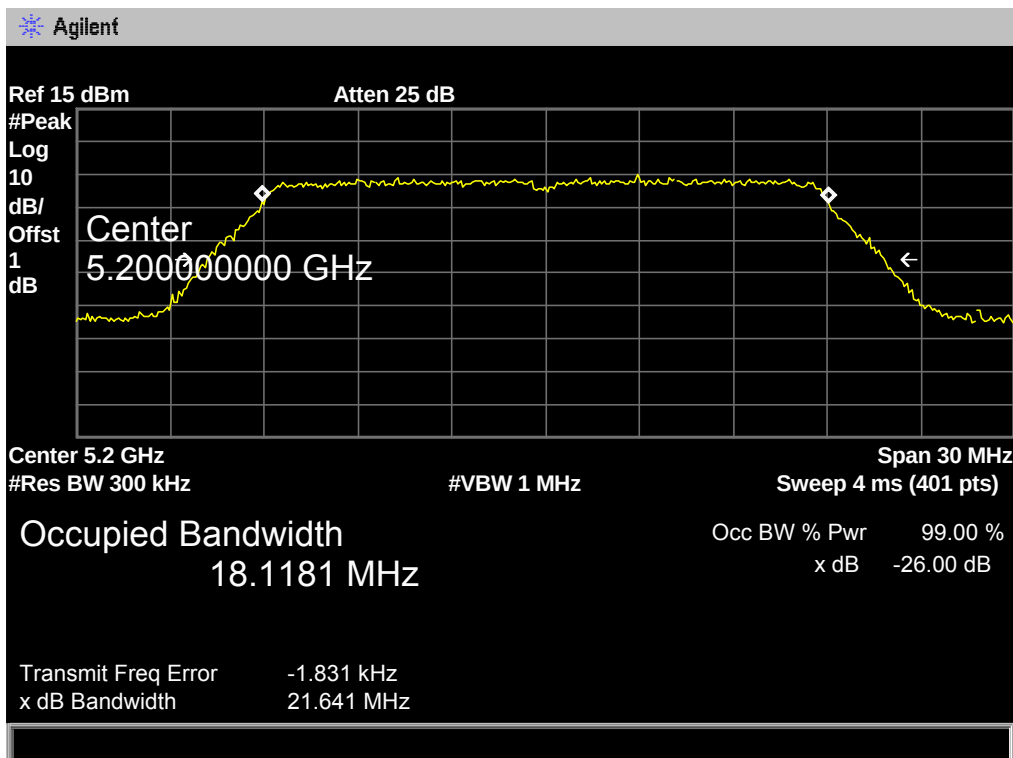
5240 MHz



EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX 802.11ac(20) Mode (U-NII-1)		
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
36	5180	21.544	17.6987
40	5200	22.479	17.7267
48	5240	22.479	17.7661
802.11ac(20) Mode			
5180 MHz			
Agilent Ref 15 dBm Atten 25 dB #Peak Log 10 dB/ Offst 1 dB Center 5.180000000 GHz Center 5.18 GHz #Res BW 300 kHz #VBW 1 MHz Span 30 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 18.1723 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -43.366 Hz x dB Bandwidth 21.651 MHz			

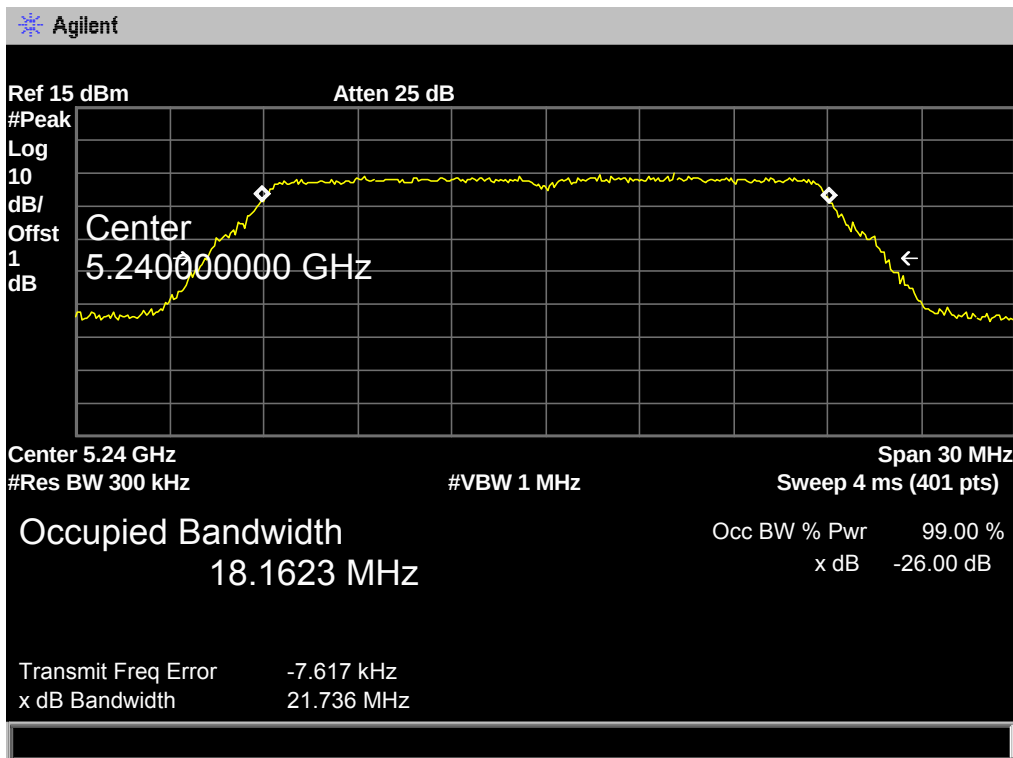
802.11ac(20) Mode

5200 MHz



802.11ac(20) Mode

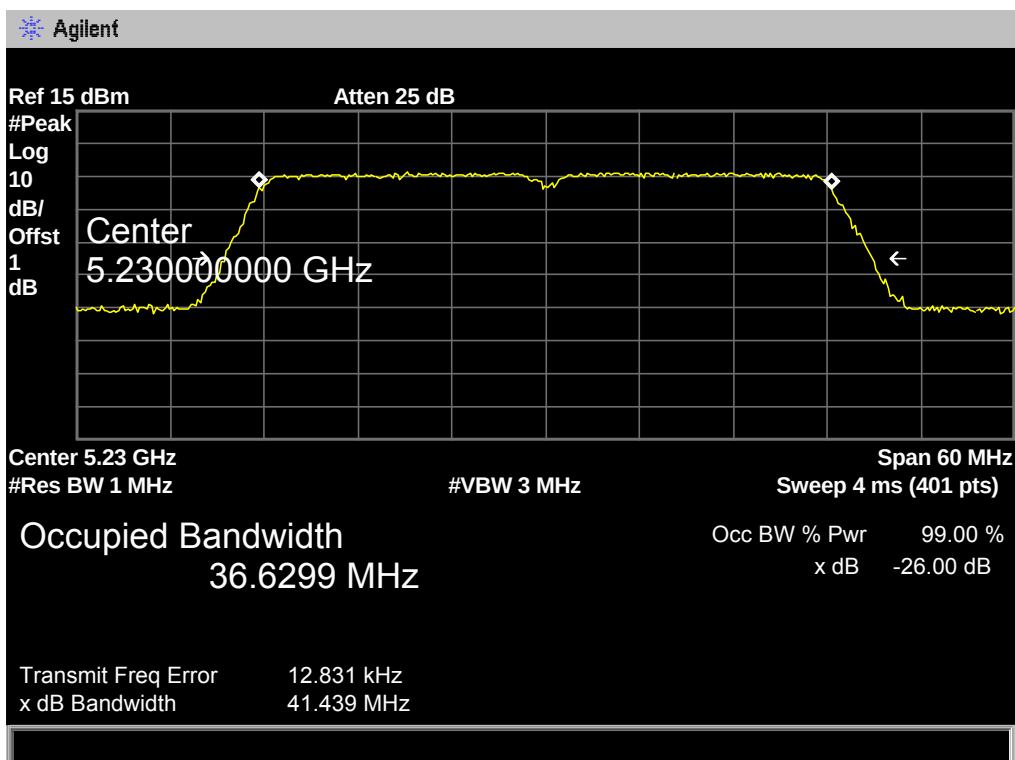
5240 MHz

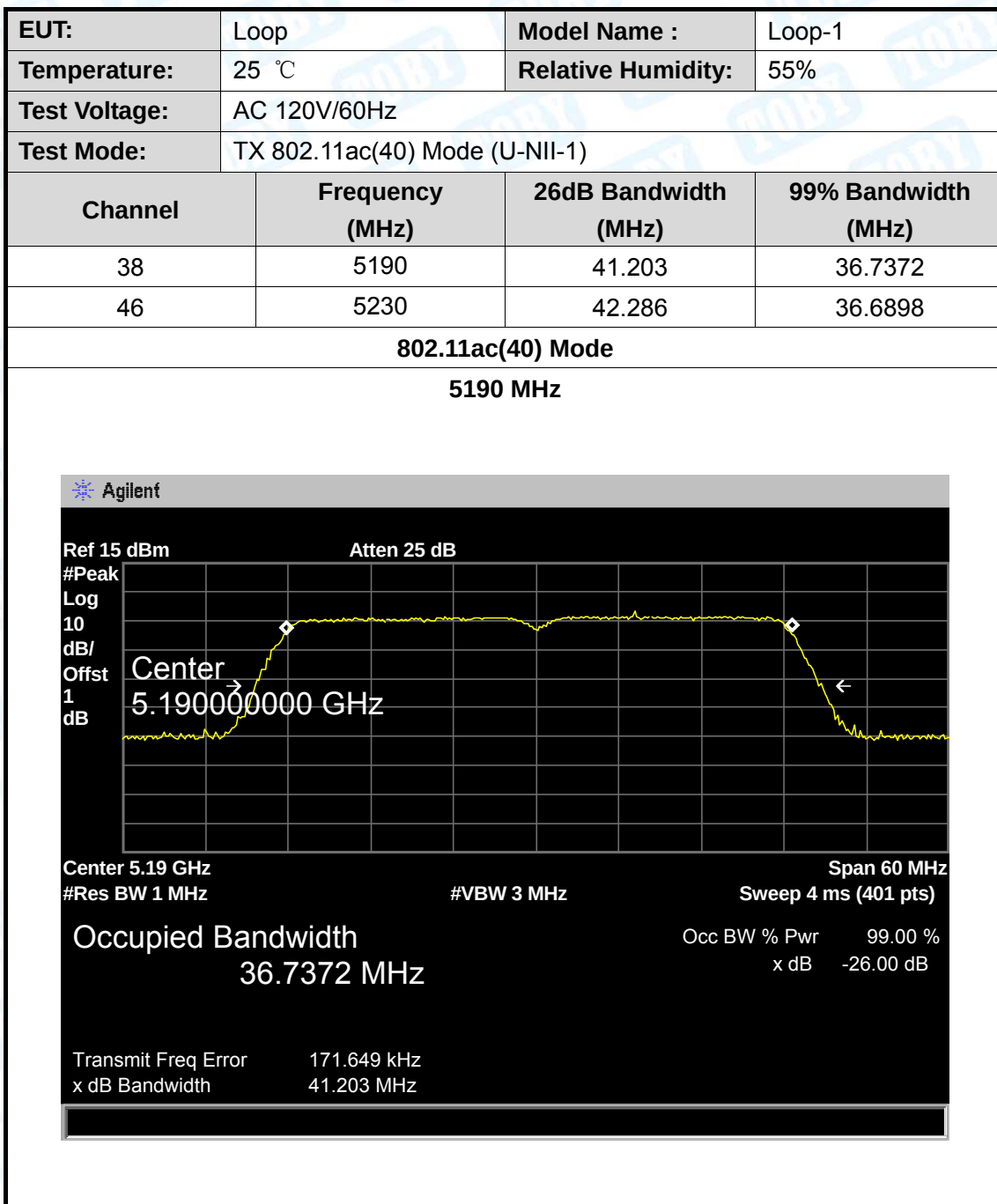


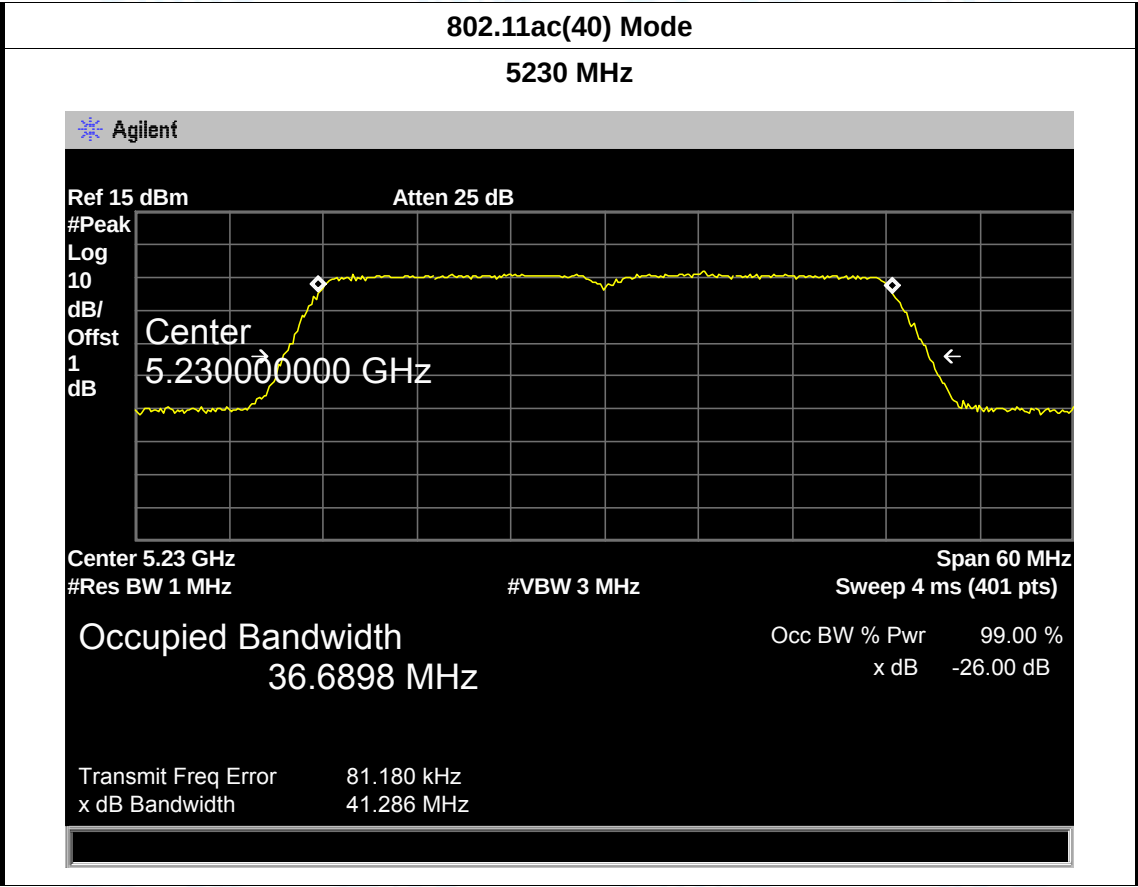
EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX 802.11N(HT40) Mode (U-NII-1)		
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
38	5190	41.305	36.7426
46	5230	41.439	36.6299
802.11N(HT40) Mode			
5190 MHz			
Agilent Ref 15 dBm Atten 25 dB #Peak Log 10 dB/ Offst 1 dB Center 5.190000000 GHz Center 5.19 GHz #Res BW 1 MHz #VBW 3 MHz Span 60 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 36.7426 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 122.511 kHz x dB Bandwidth 41.305 MHz			

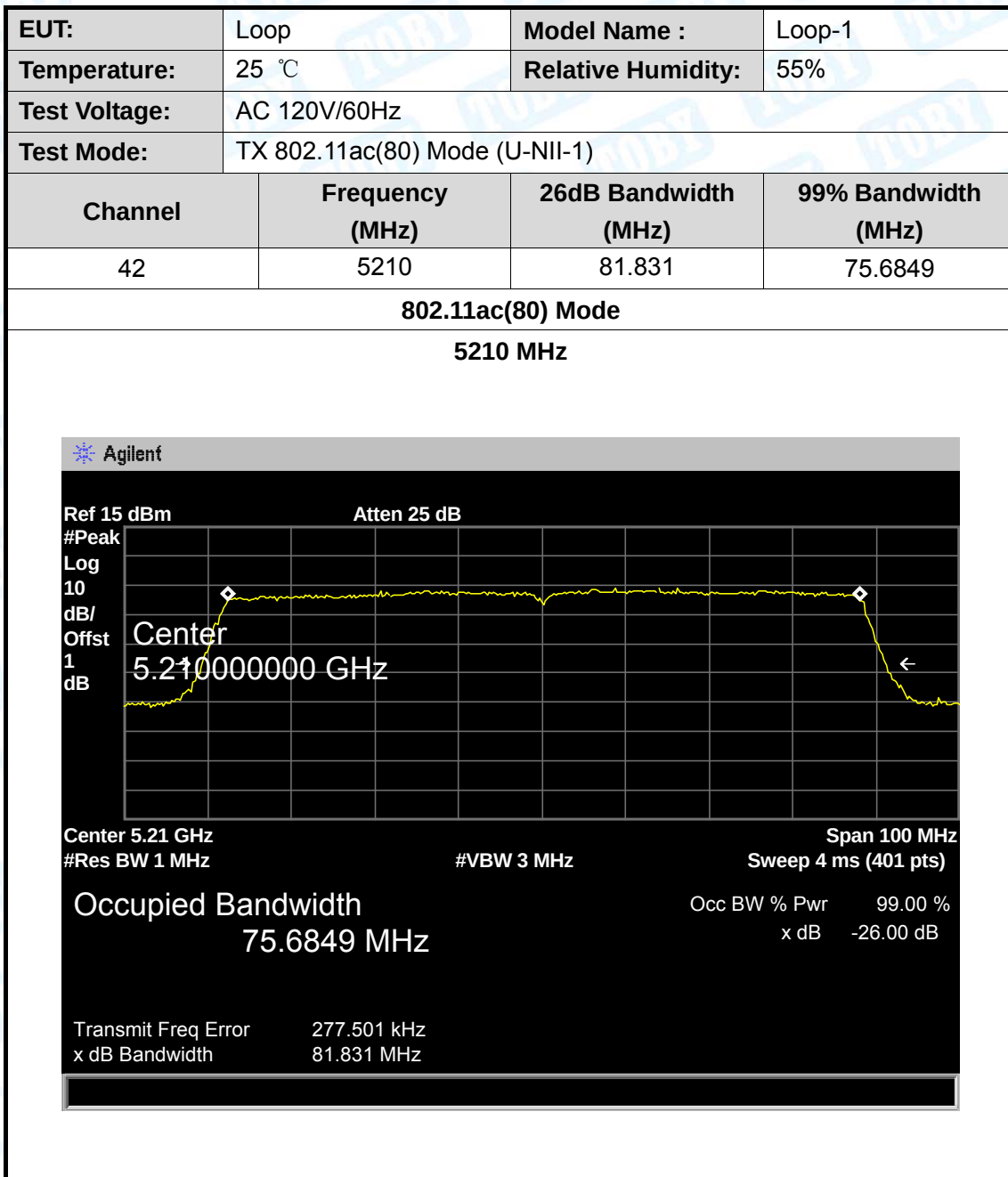
802.11N(HT40) Mode

5230 MHz





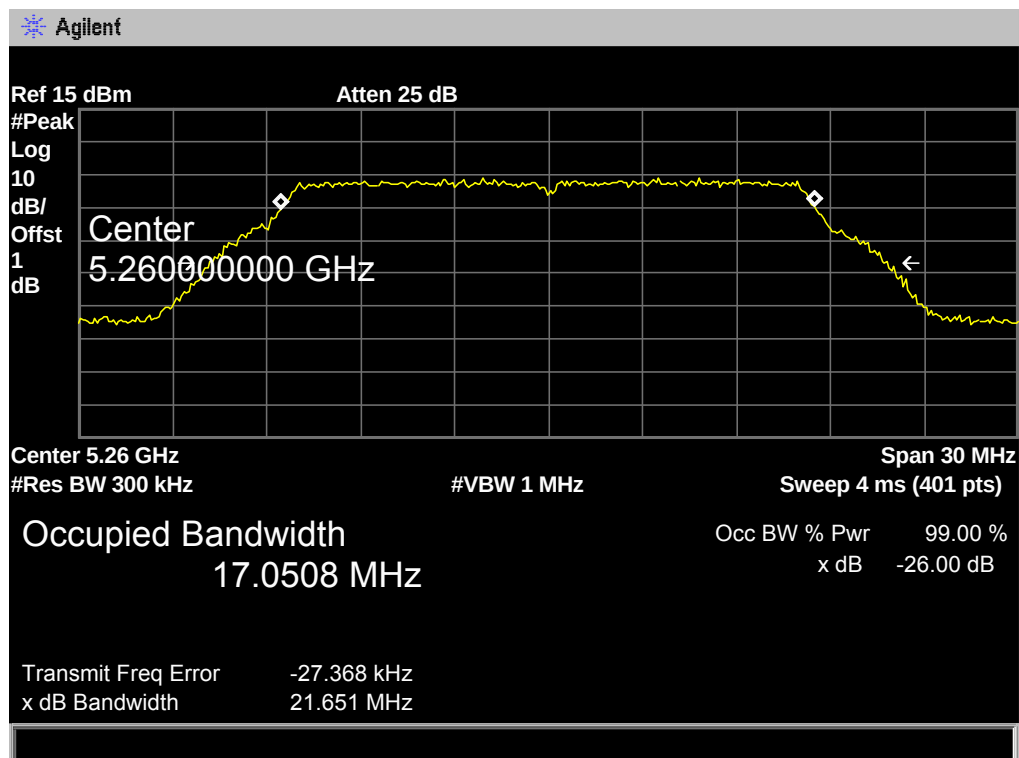




EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX 802.11a Mode (U-NII-2A)		
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
52	5260	21.651	17.0508
56	5280	21.657	17.0862
64	5320	21.636	17.1145

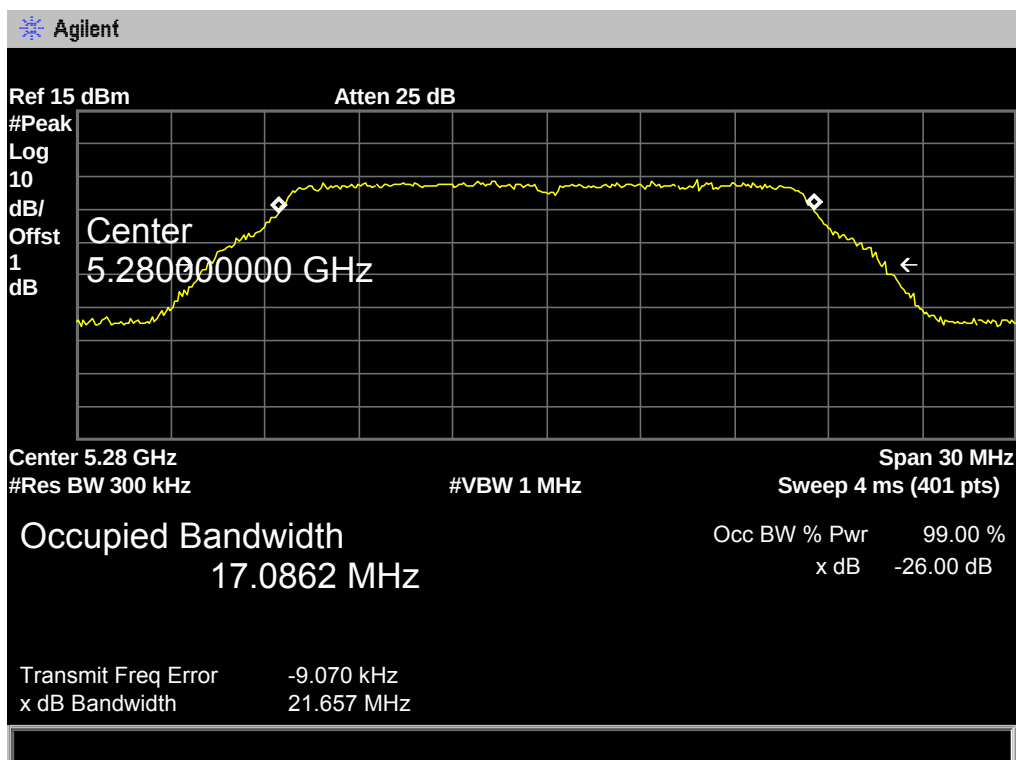
802.11a Mode

5260 MHz



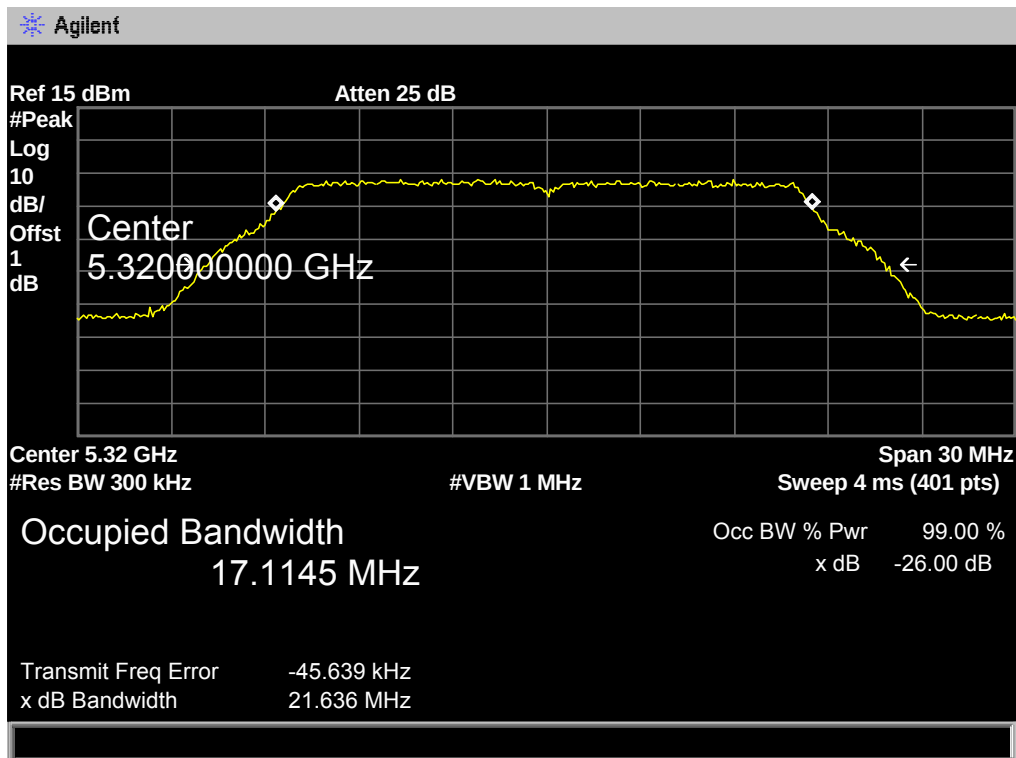
802.11a Mode

5280 MHz



802.11a Mode

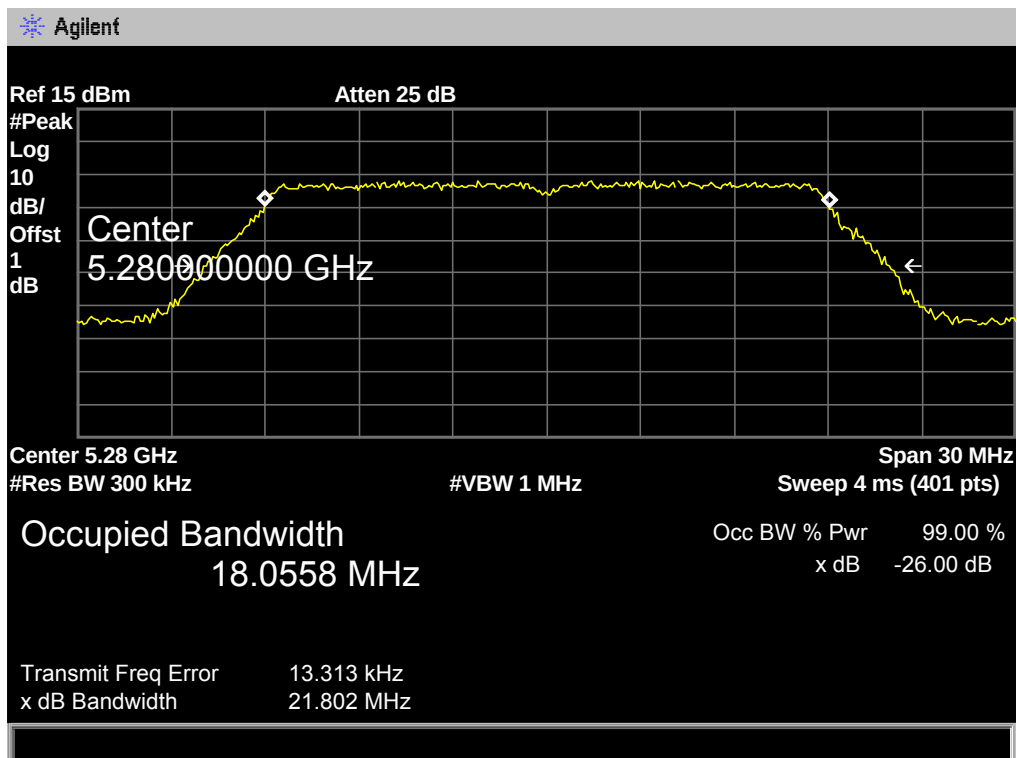
5320 MHz



EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX 802.11n(HT20) Mode (U-NII-2A)		
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
52	5260	22.080	18.1541
56	5280	21.802	18.0558
64	5320	21.965	18.1361
802.11n(HT20) Mode			
5260 MHz			
Agilent Ref 15 dBm Atten 25 dB #Peak Log 10 dB/ Offst 1 dB Center 5.260000000 GHz Center 5.26 GHz #Res BW 300 kHz #VBW 1 MHz Span 30 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 18.1541 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 7.942 kHz x dB Bandwidth 22.080 MHz			

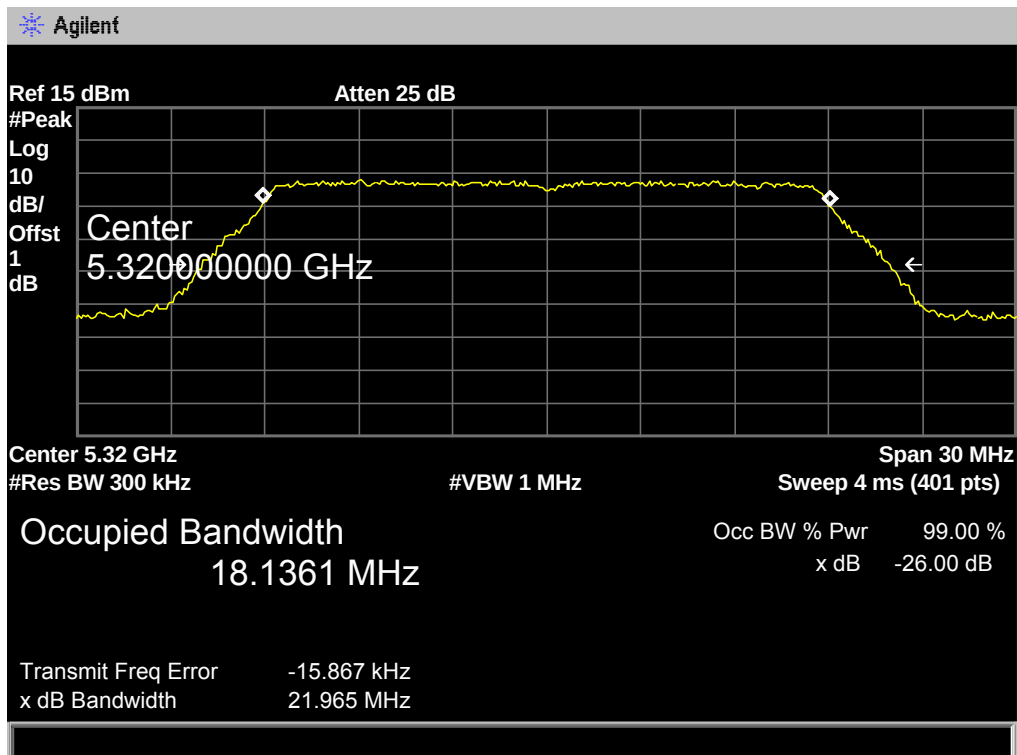
802.11n(HT20) Mode

5280 MHz



802.11n(HT20) Mode

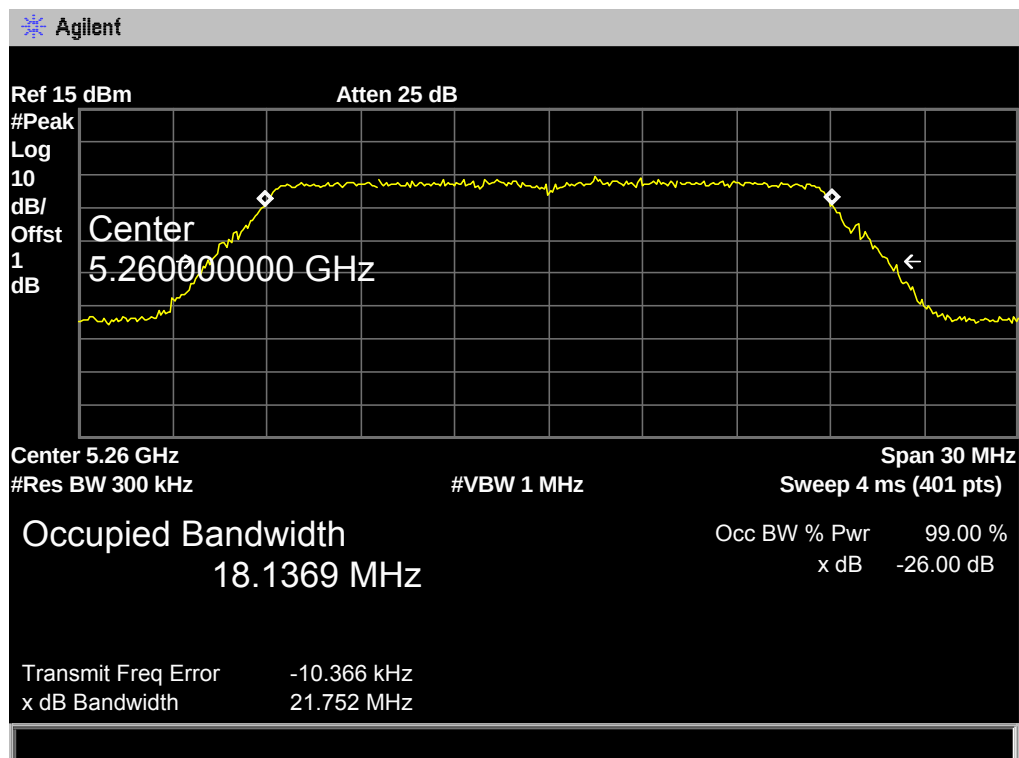
5320 MHz



EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX 802.11ac(20) Mode (U-NII-2A)		
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
52	5260	21.752	18.1369
56	5280	21.954	18.1914
64	5320	21.986	18.2449

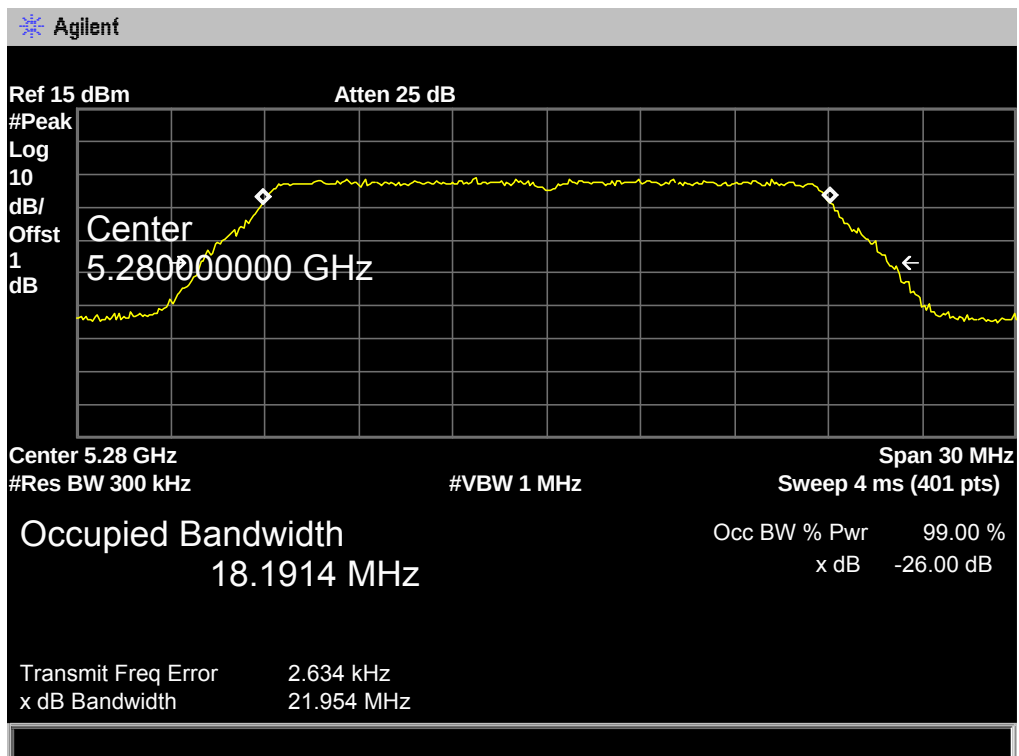
802.11ac(20) Mode

5260 MHz



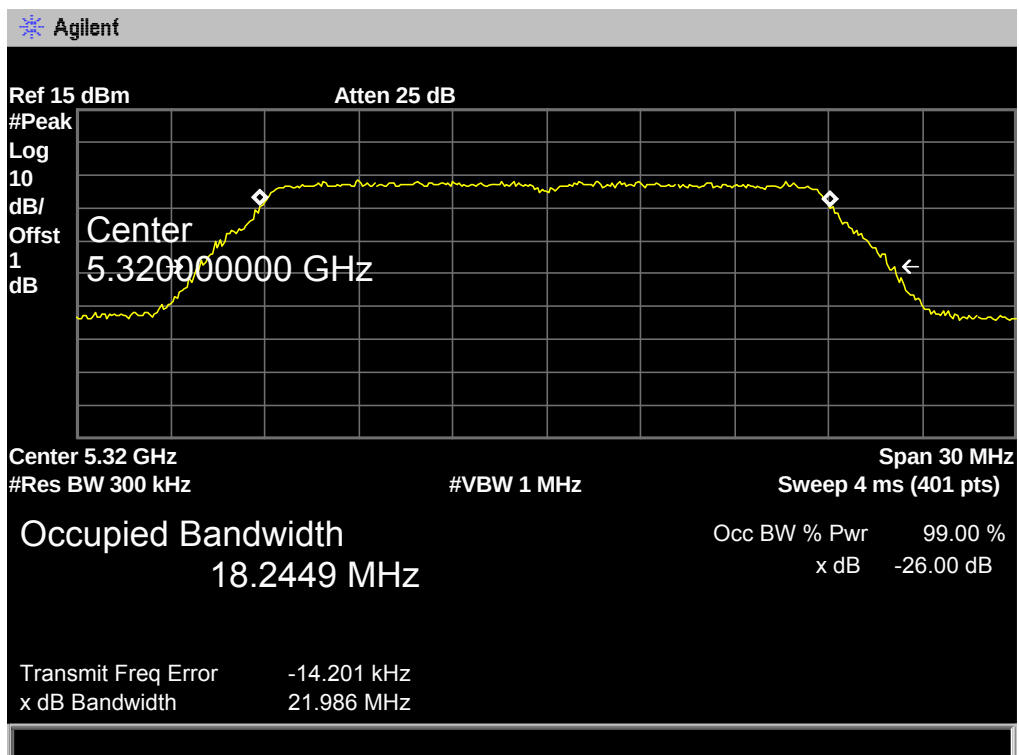
802.11ac(20) Mode

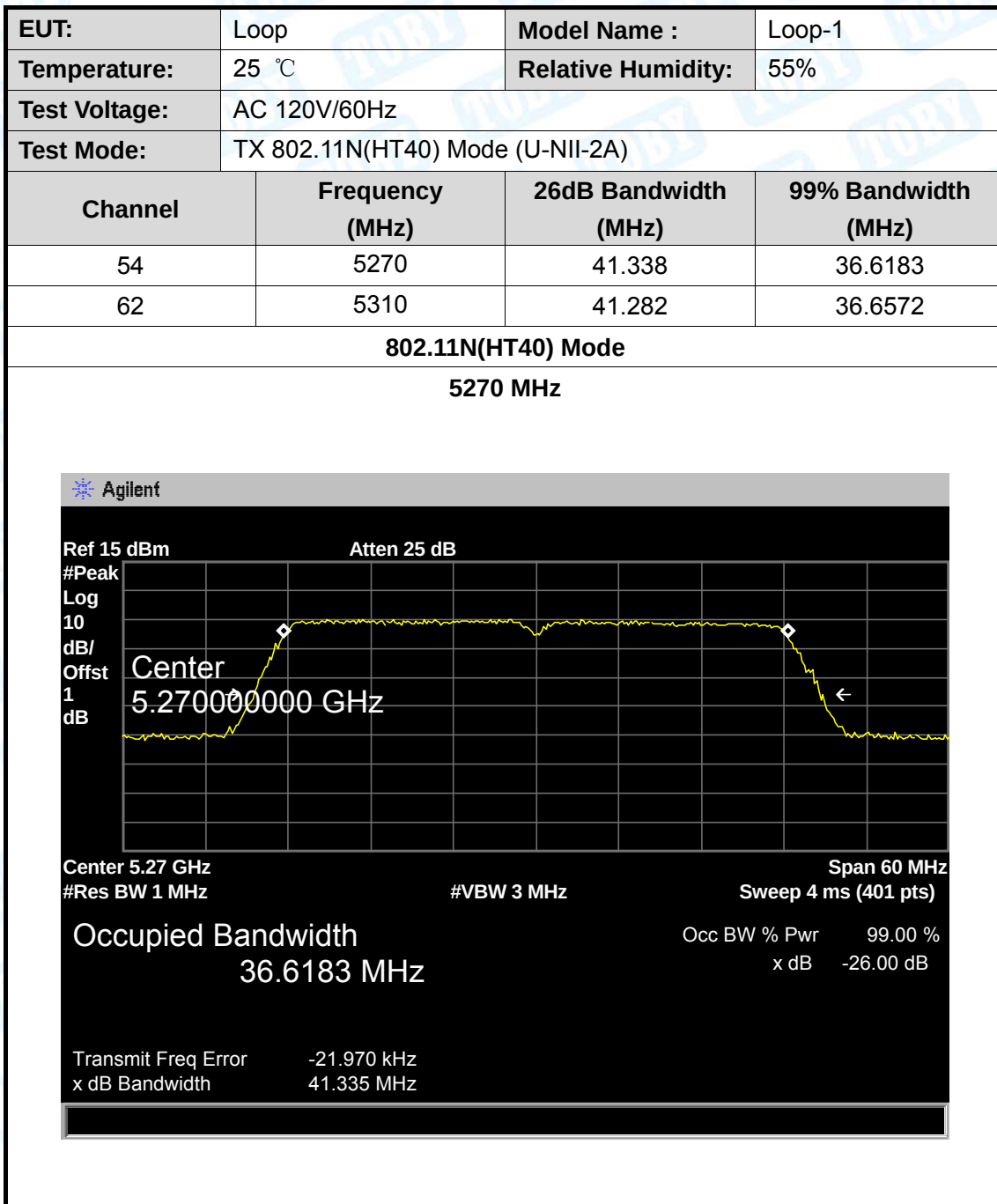
5280 MHz



802.11ac(20) Mode

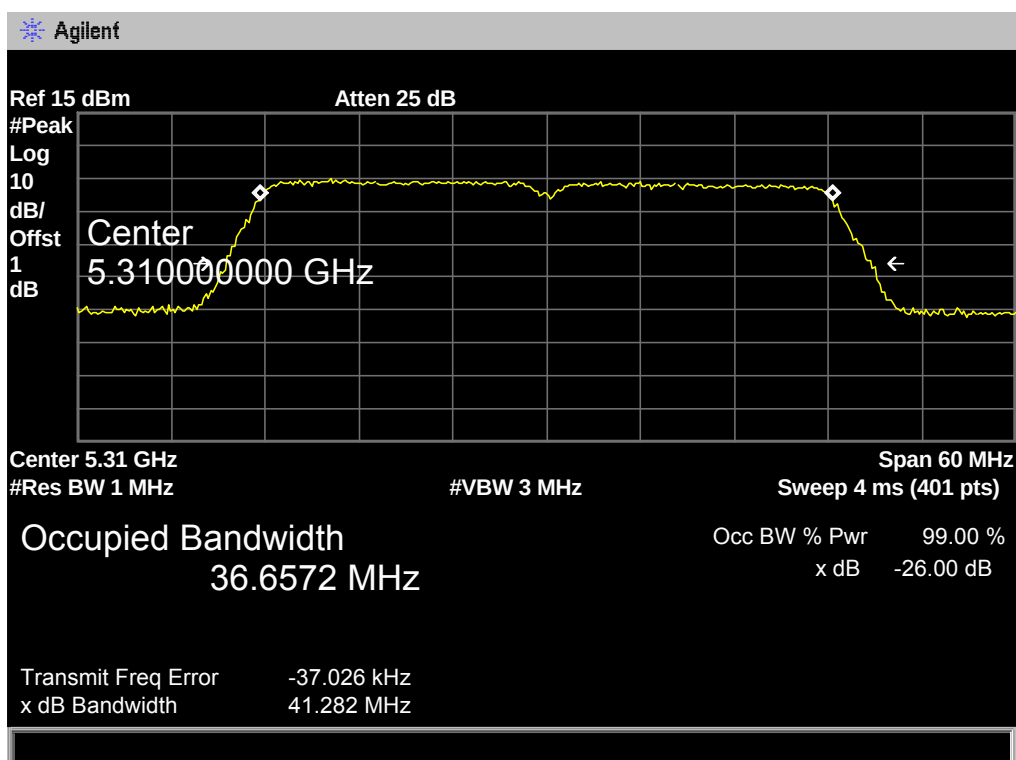
5320 MHz

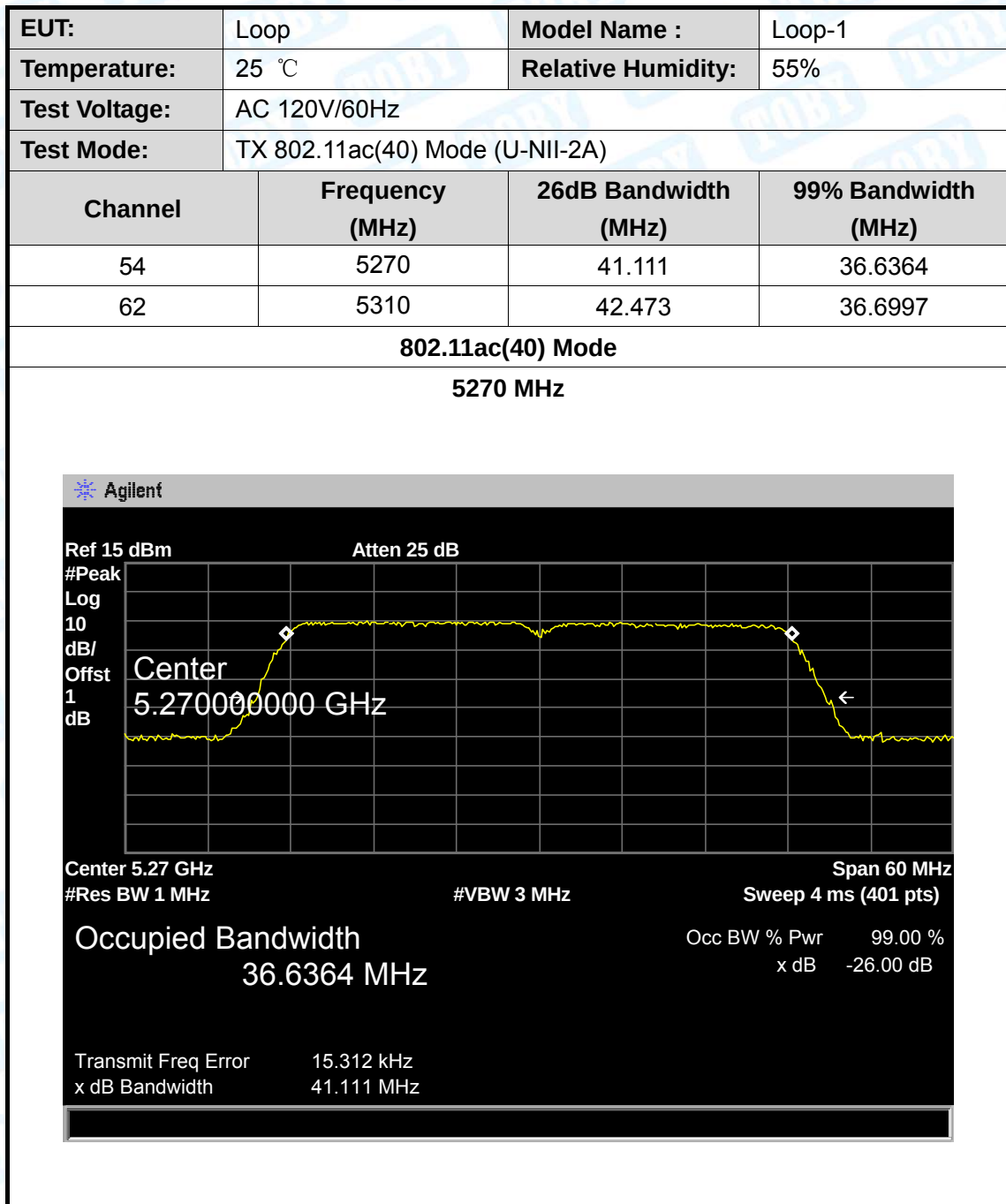




802.11N(HT40) Mode

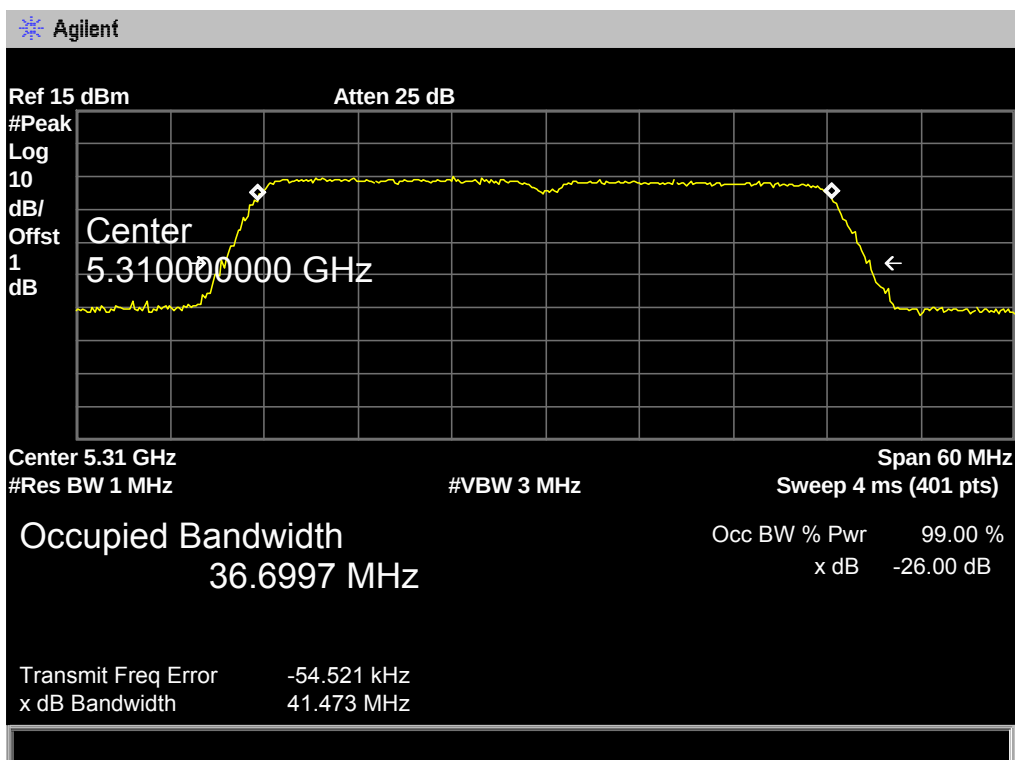
5310 MHz

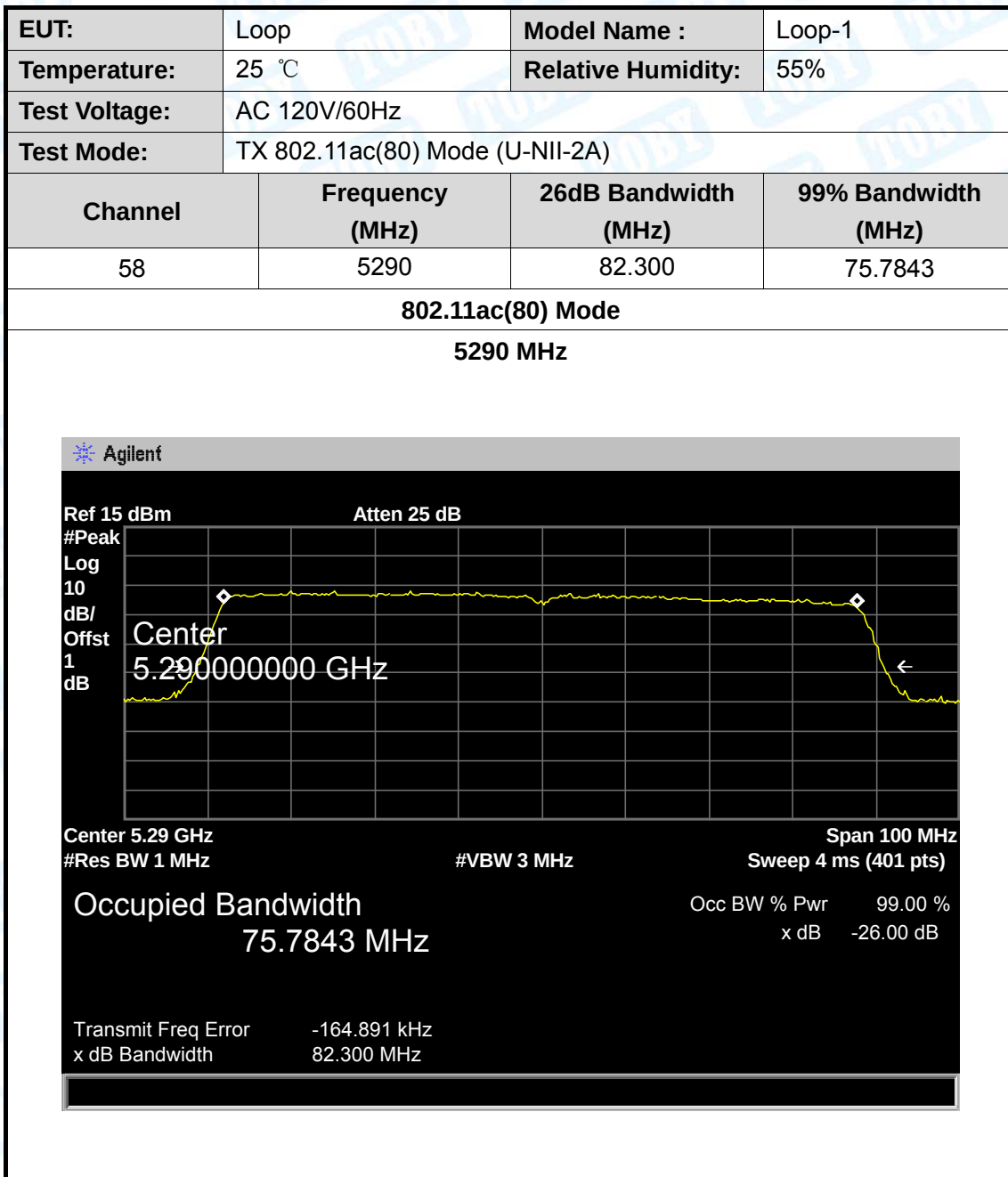


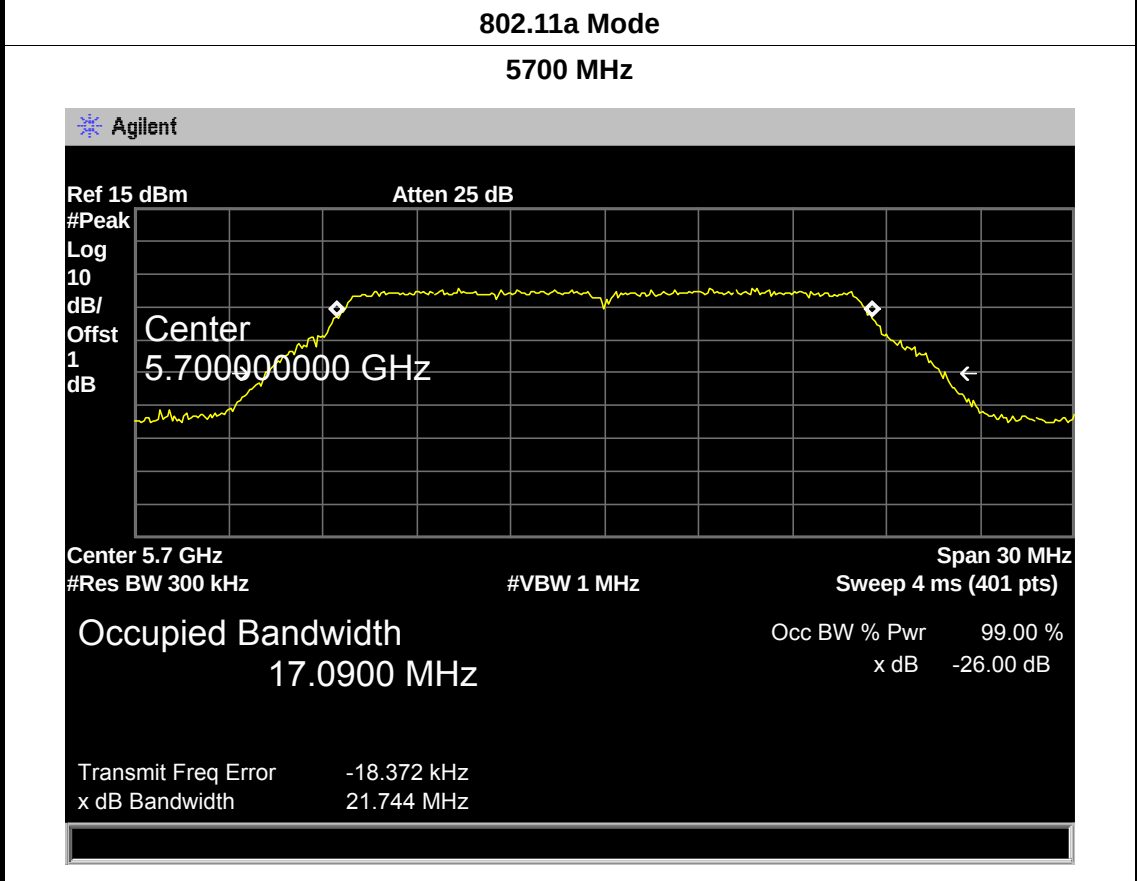
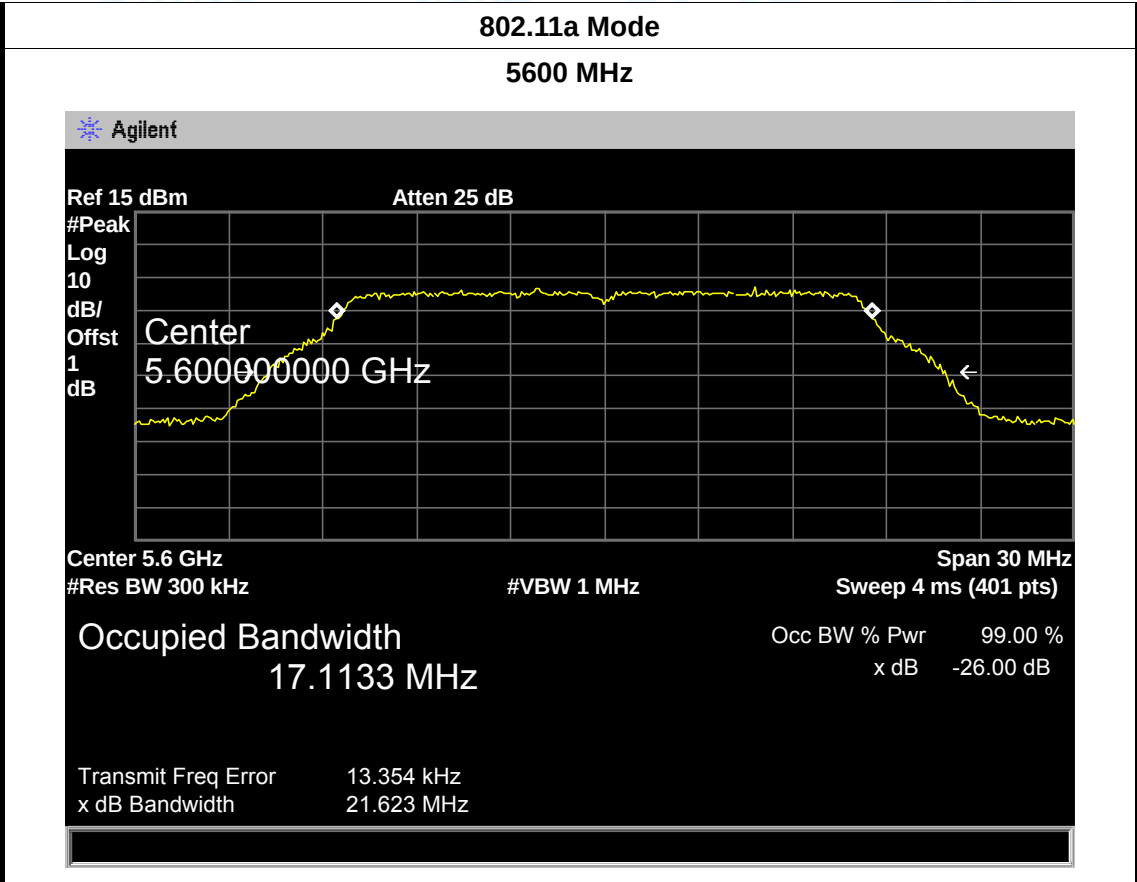


802.11ac(40) Mode

5310 MHz

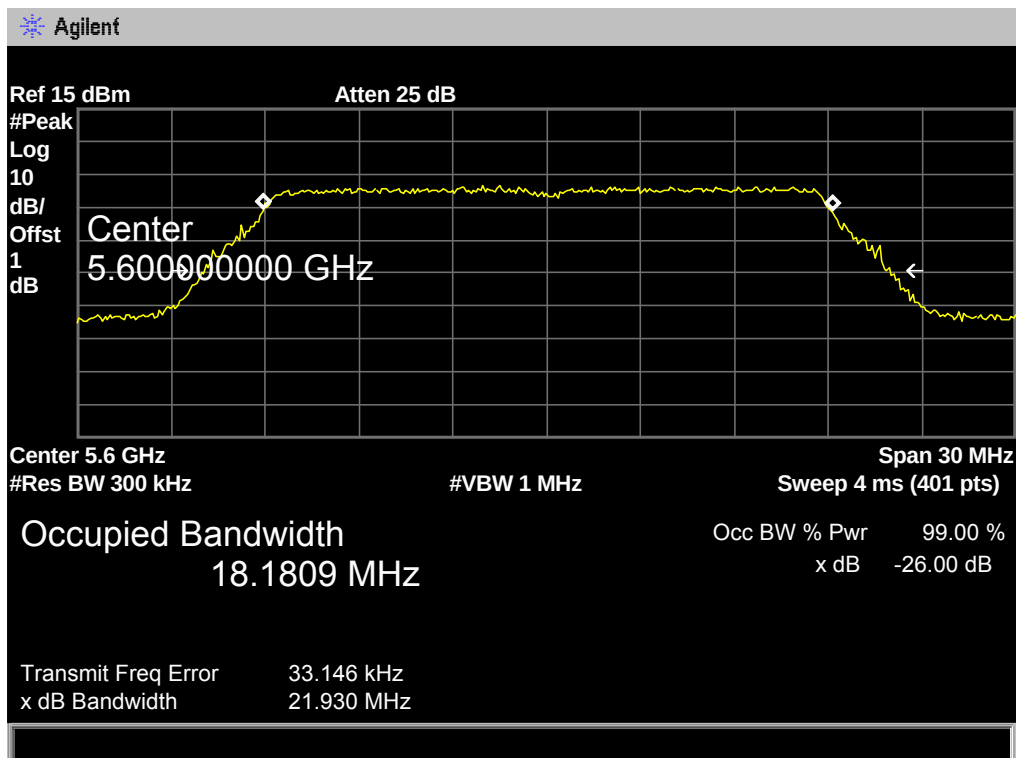






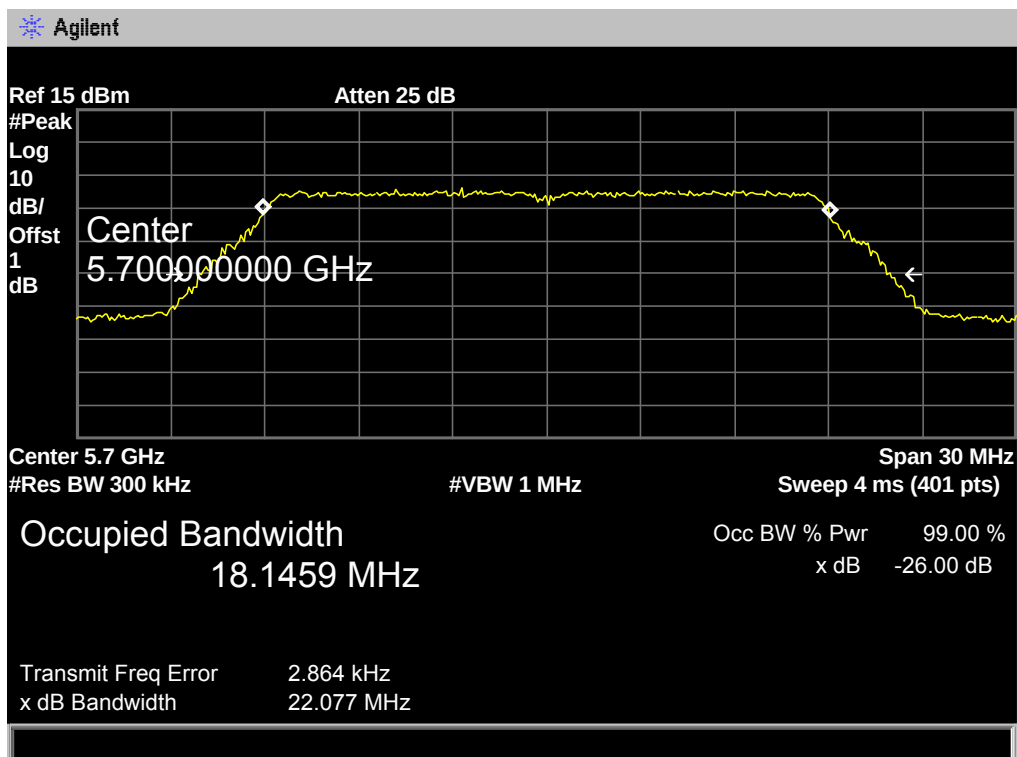
802.11n(HT20) Mode

5600 MHz



802.11n(HT20) Mode

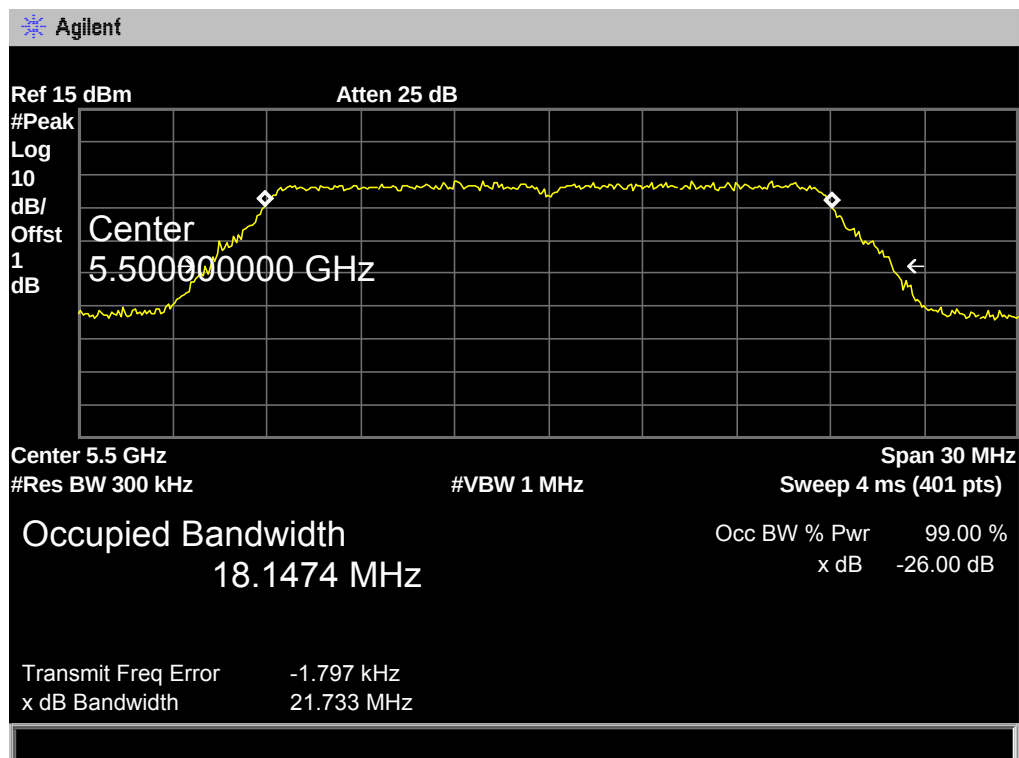
5700 MHz



EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX 802.11ac(20) Mode (U-NII-2C)		
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
100	5500	21.733	18.1474
116	5600	21.880	18.1598
144	5700	22.002	18.1472

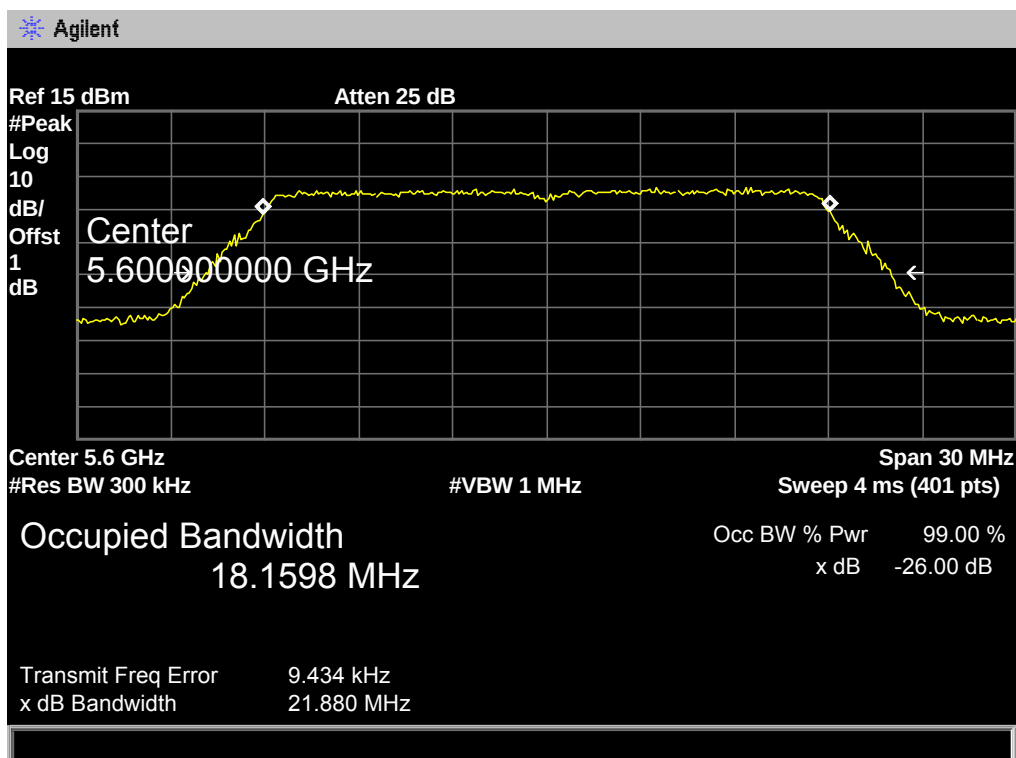
802.11ac(20) Mode

5500 MHz



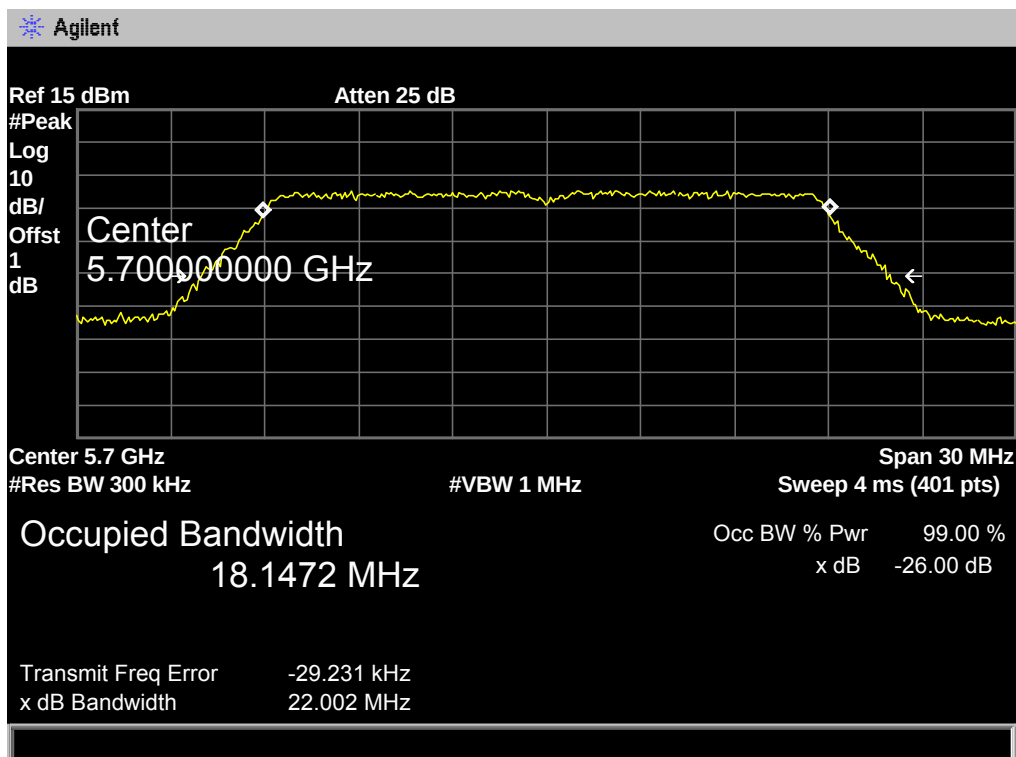
802.11ac(20) Mode

5600 MHz



802.11ac(20) Mode

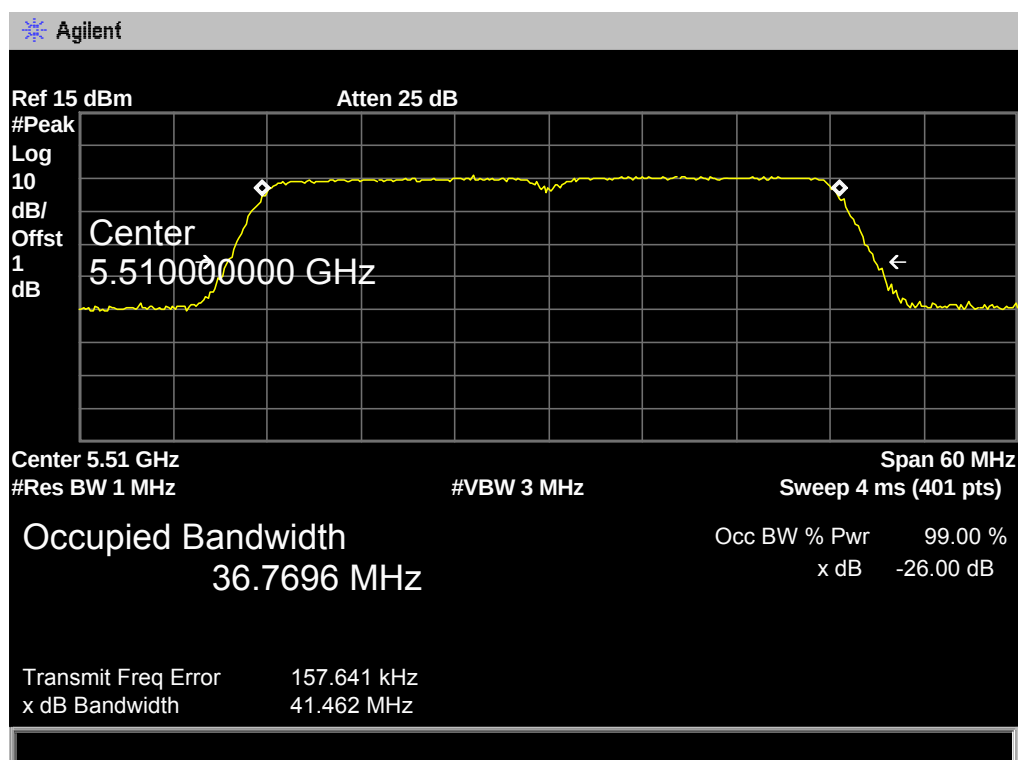
5700 MHz



EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX 802.11N(HT40) Mode (U-NII-2C)		
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
102	5510	41.462	36.7696
118	5590	41.124	36.7234
142	5710	41.614	36.7828

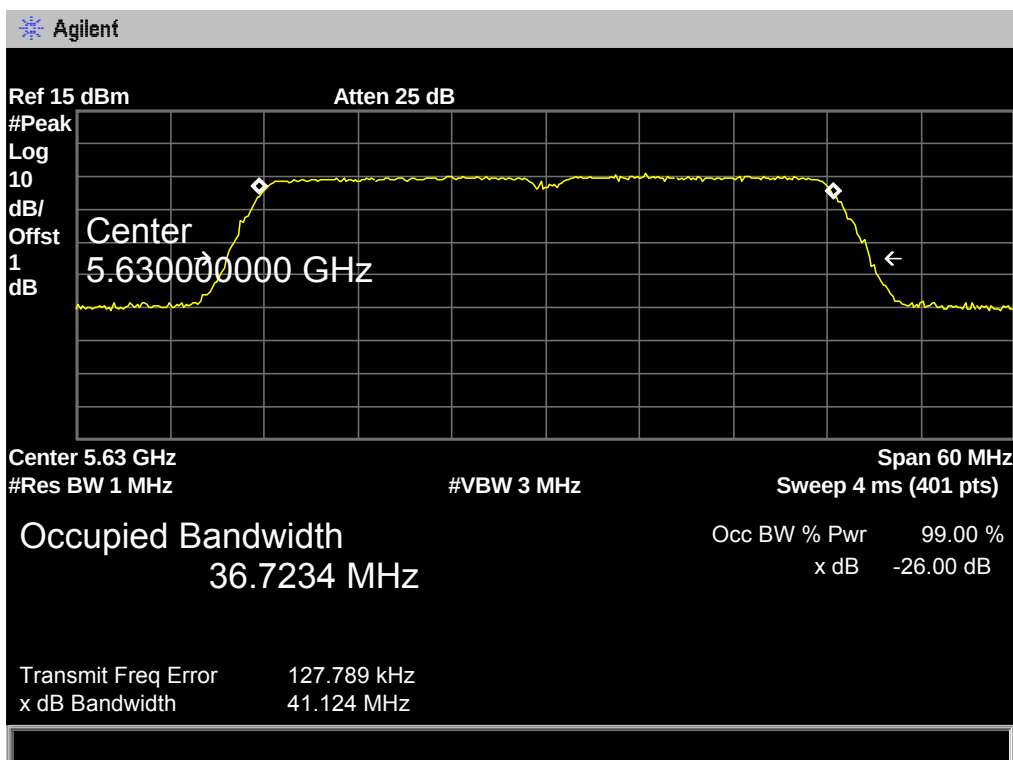
802.11N(HT40) Mode

5510 MHz



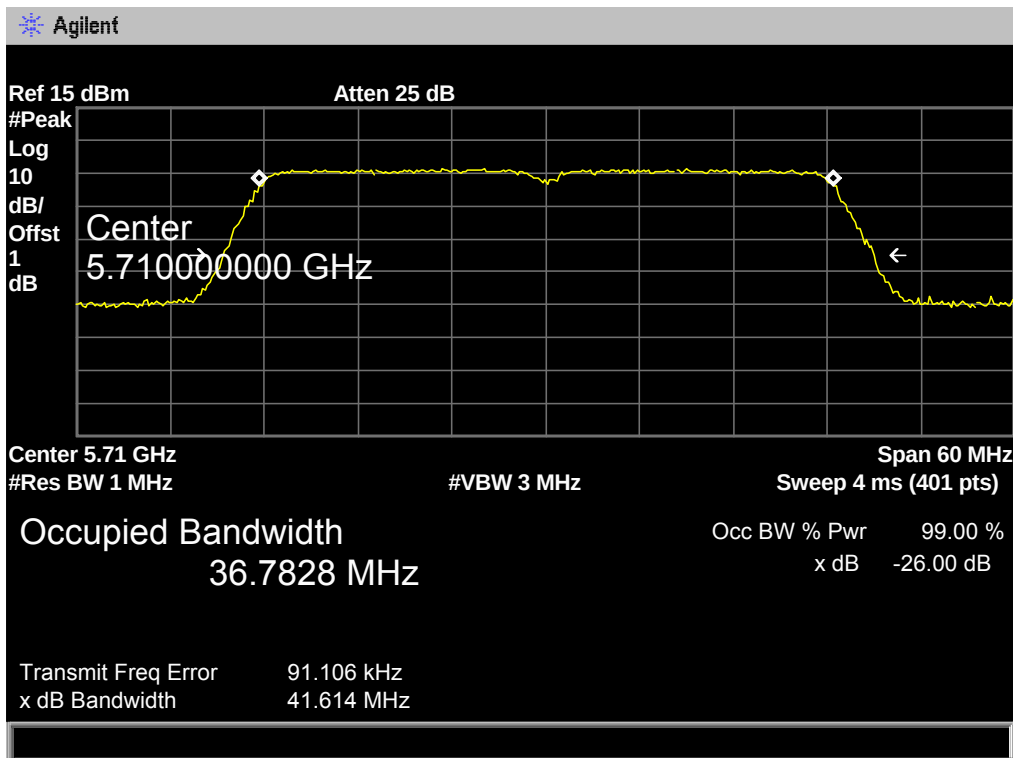
802.11N(HT40) Mode

5590 MHz



802.11N(HT40) Mode

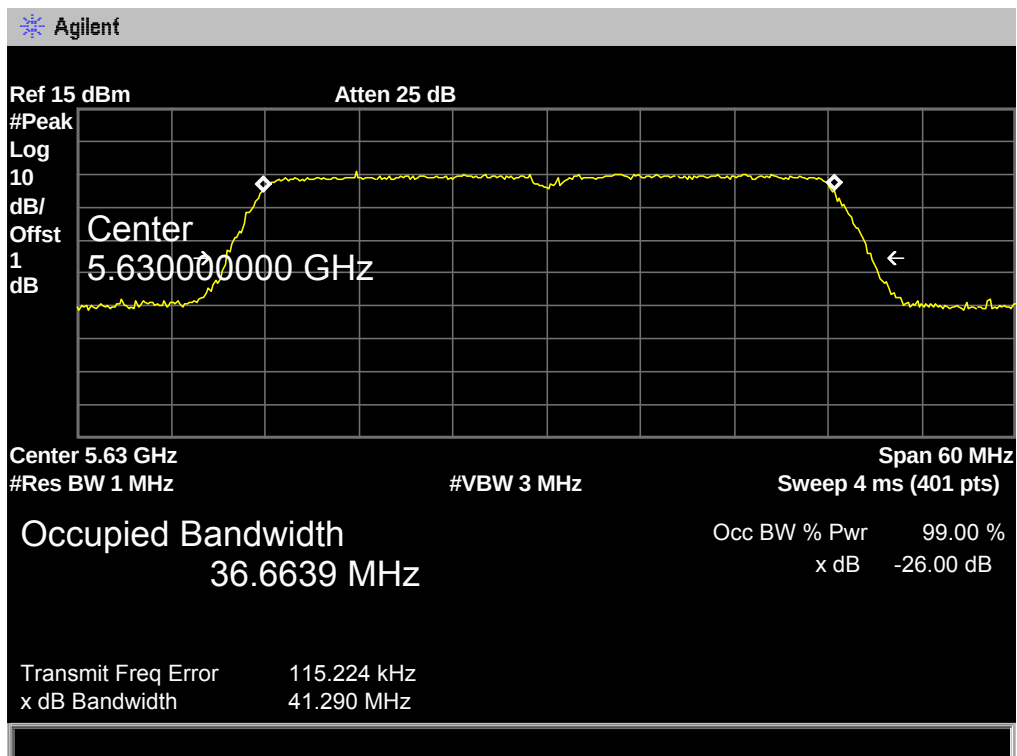
5710 MHz



EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX 802.11 ac(HT40) Mode (U-NII-2C)		
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
102	5510	41.255	36.7617
118	5590	41.290	36.6639
142	5710	41.455	36.7744
802.11ac(HT40) Mode			
5510 MHz			
Agilent Ref 15 dBm Atten 25 dB #Peak Log 10 dB/ Offst 1 dB Center 5.510000000 GHz Center 5.51 GHz #Res BW 1 MHz #VBW 3 MHz Span 60 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 36.7617 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 158.467 kHz x dB Bandwidth 41.255 MHz			

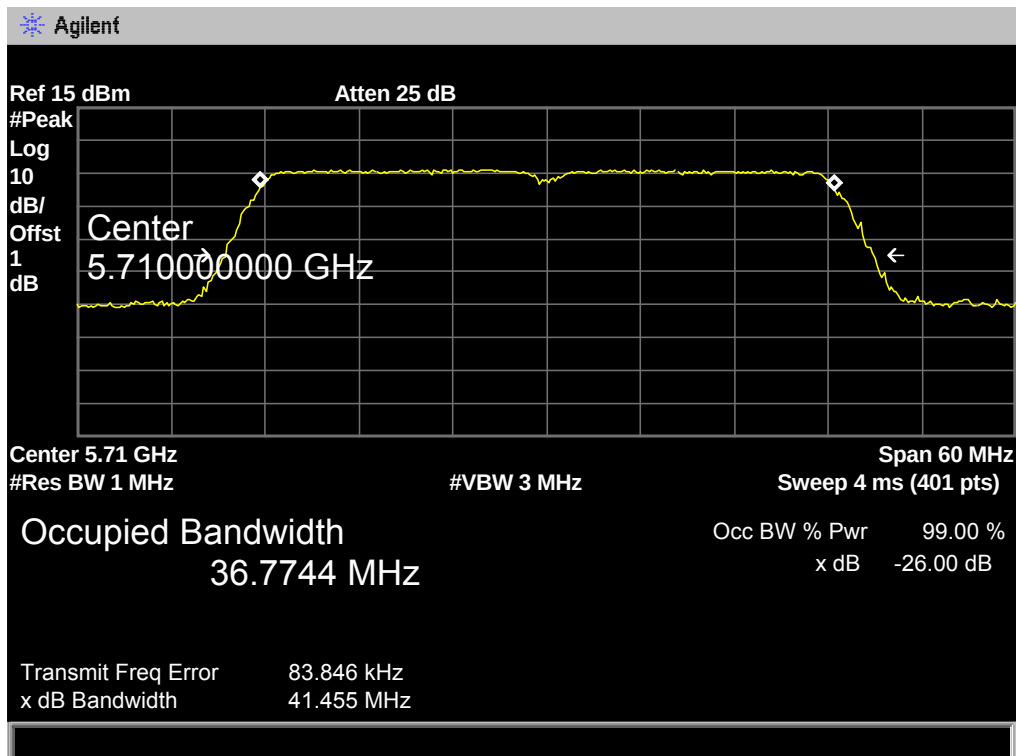
802.11ac(HT40) Mode

5590 MHz



802.11ac(HT40) Mode

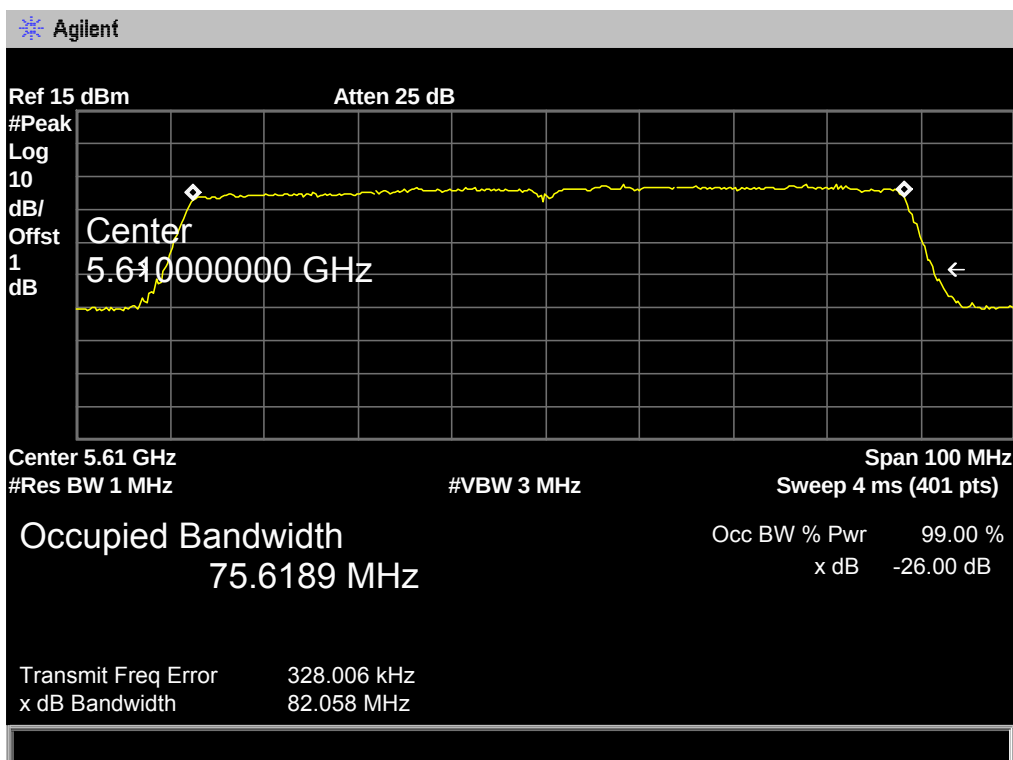
5710 MHz



EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX 802.11 ac(HT80) Mode (U-NII-2C)		
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
106	5530	82.209	75.6975
122	5610	82.058	75.6189
138	5690	82.062	75.7264
802.11ac(HT80) Mode			
5530 MHz			
Agilent Ref 15 dBm Atten 25 dB #Peak Log 10 dB/ Offst 1 dB Center 5.58000000 GHz Center 5.53 GHz #Res BW 1 MHz #VBW 3 MHz Span 100 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 75.6975 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 322.248 kHz x dB Bandwidth 82.209 MHz			

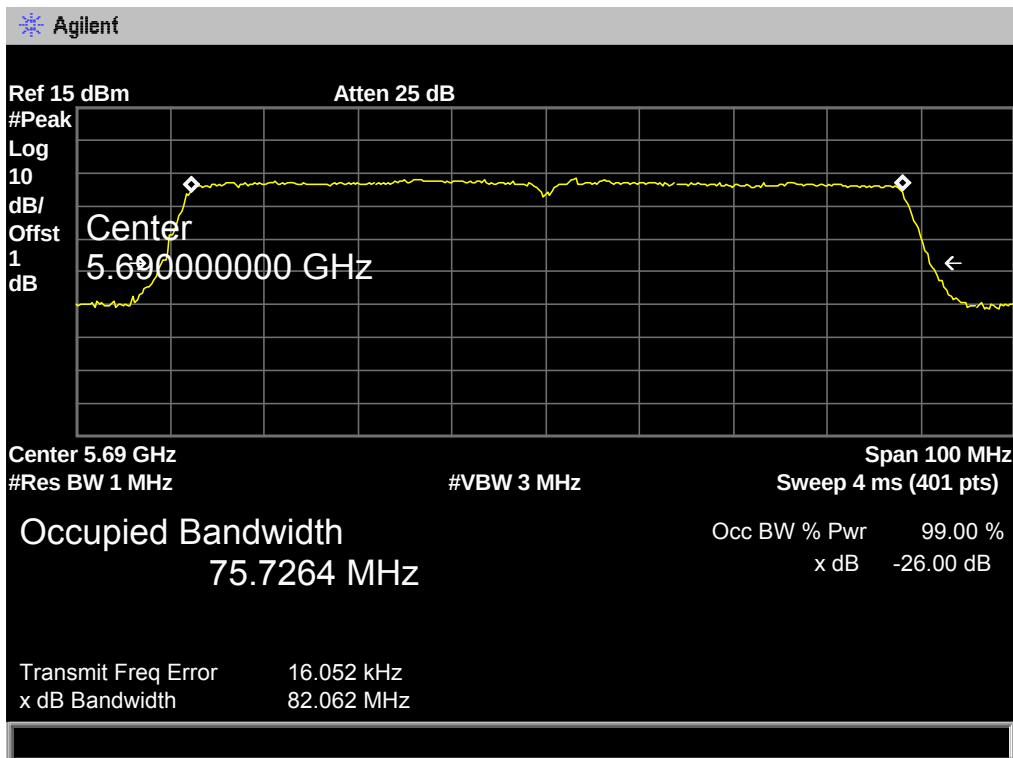
802.11ac(HT80) Mode

5610 MHz



802.11ac(HT80) Mode

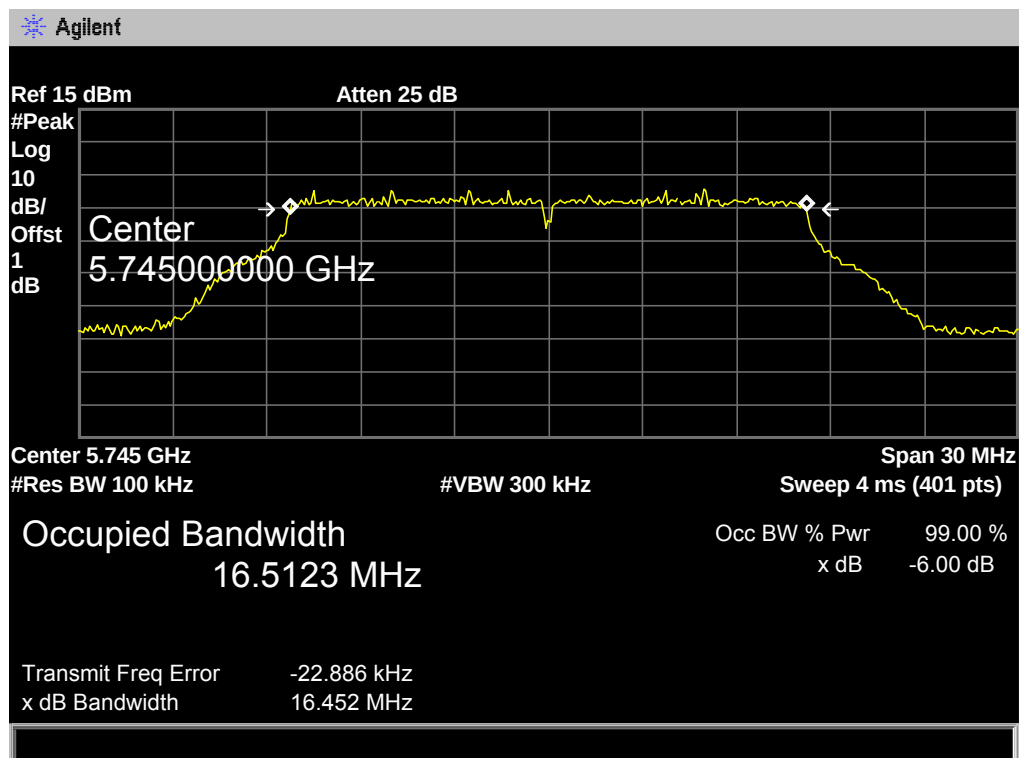
5690 MHz



EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX 802.11a Mode (U-NII-3)		
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	99% Bandwidth (MHz)
149	5745	16.452	16.5123
157	5785	16.427	16.5283
165	5825	16.451	16.5068

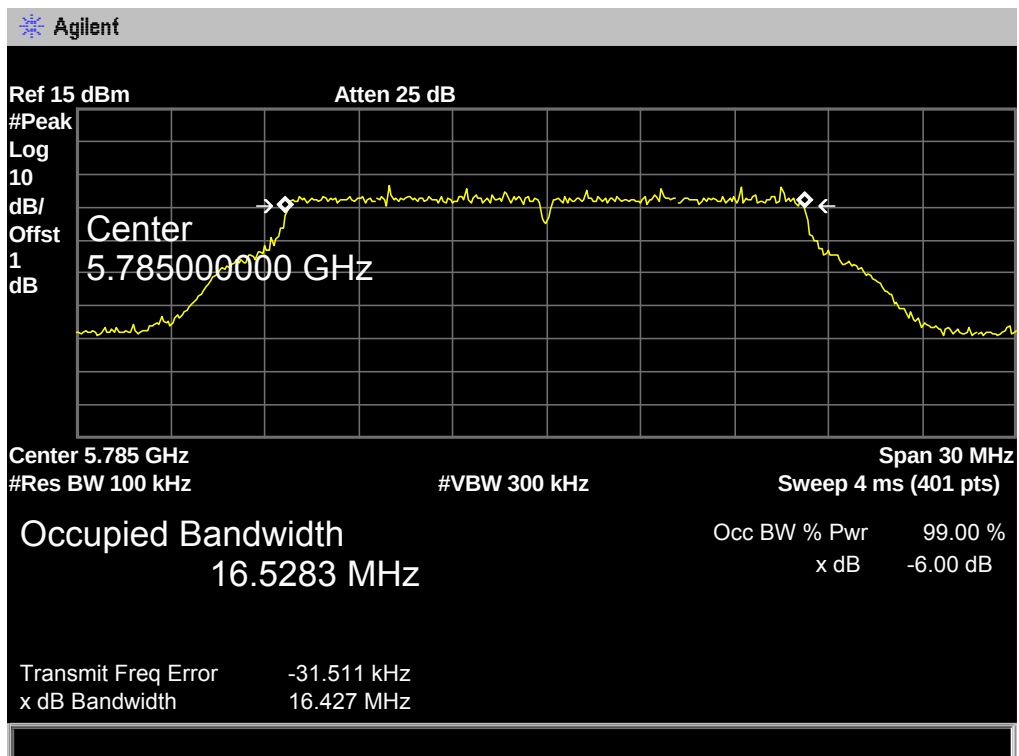
802.11a Mode

5745 MHz



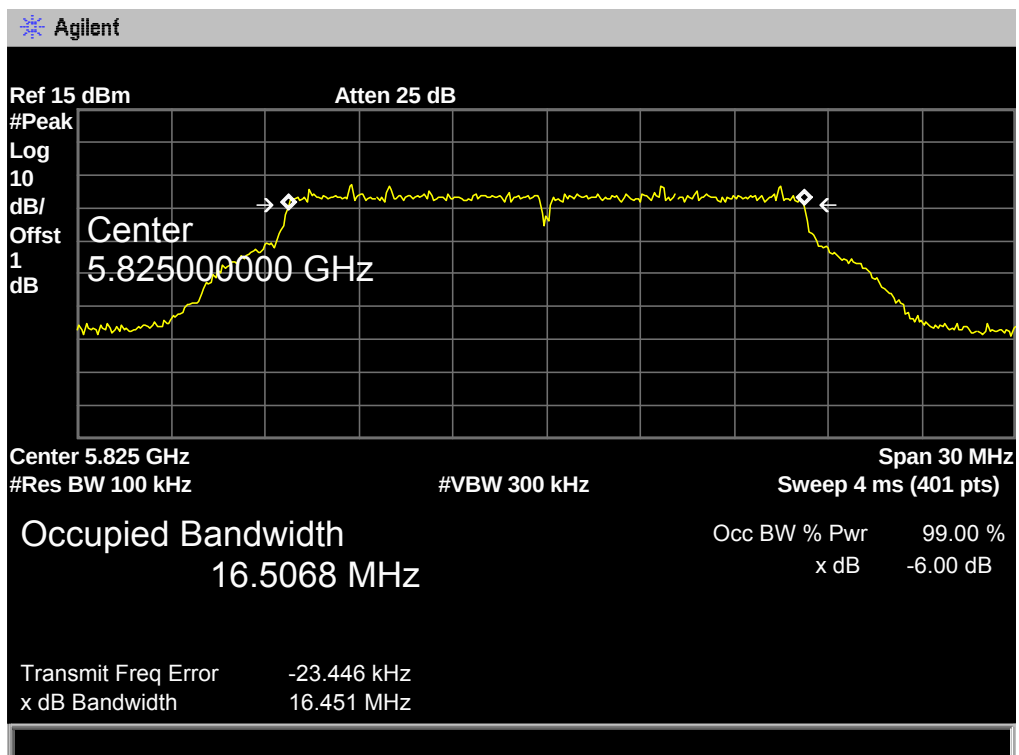
802.11a Mode

5785 MHz



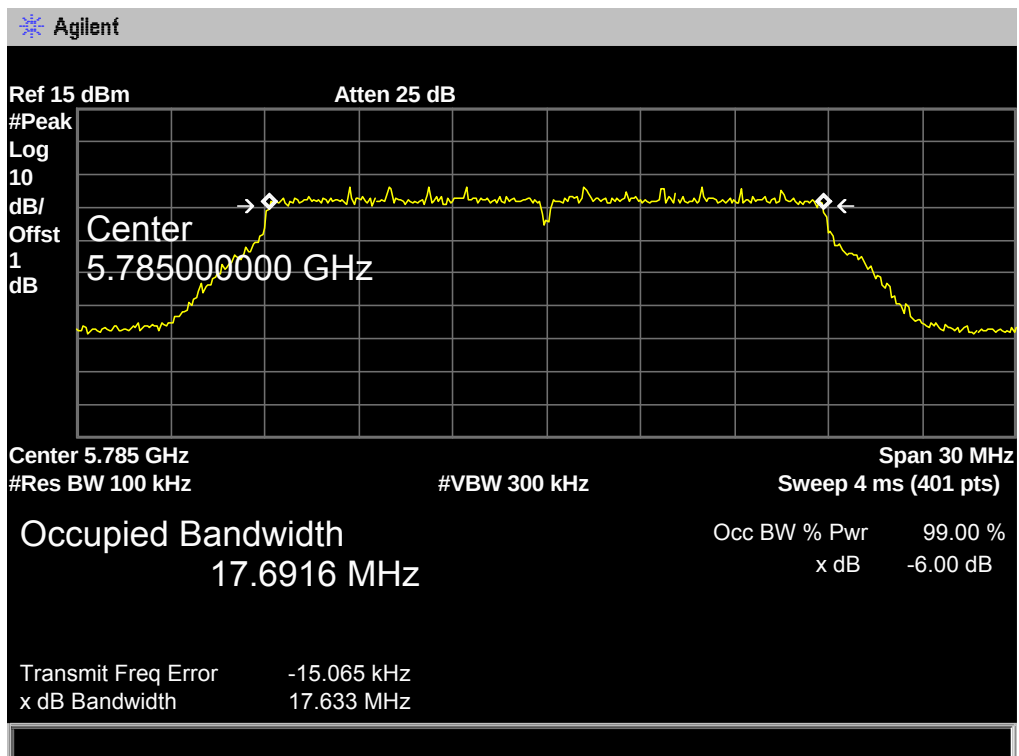
802.11a Mode

5825 MHz



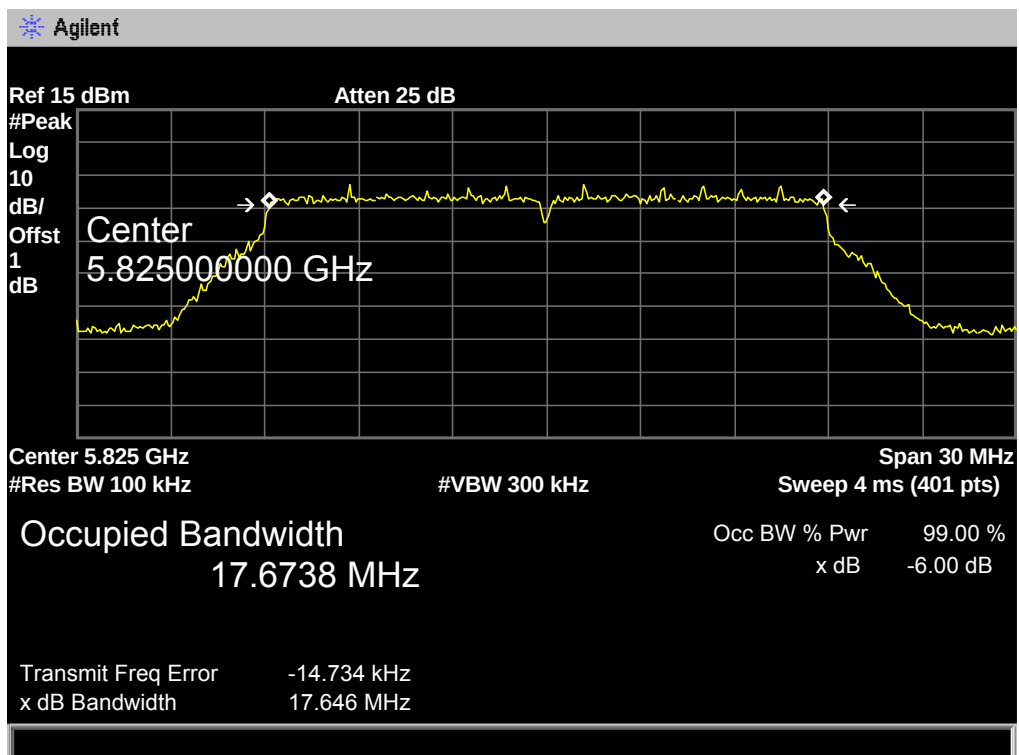
802.11n(HT20) Mode

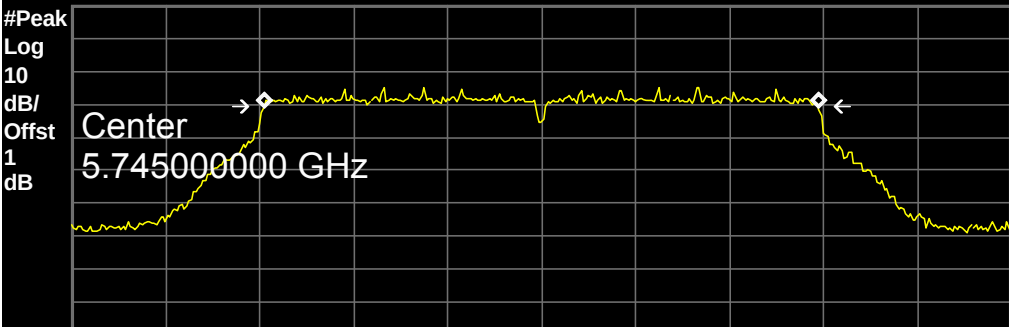
5785 MHz



802.11n(HT20) Mode

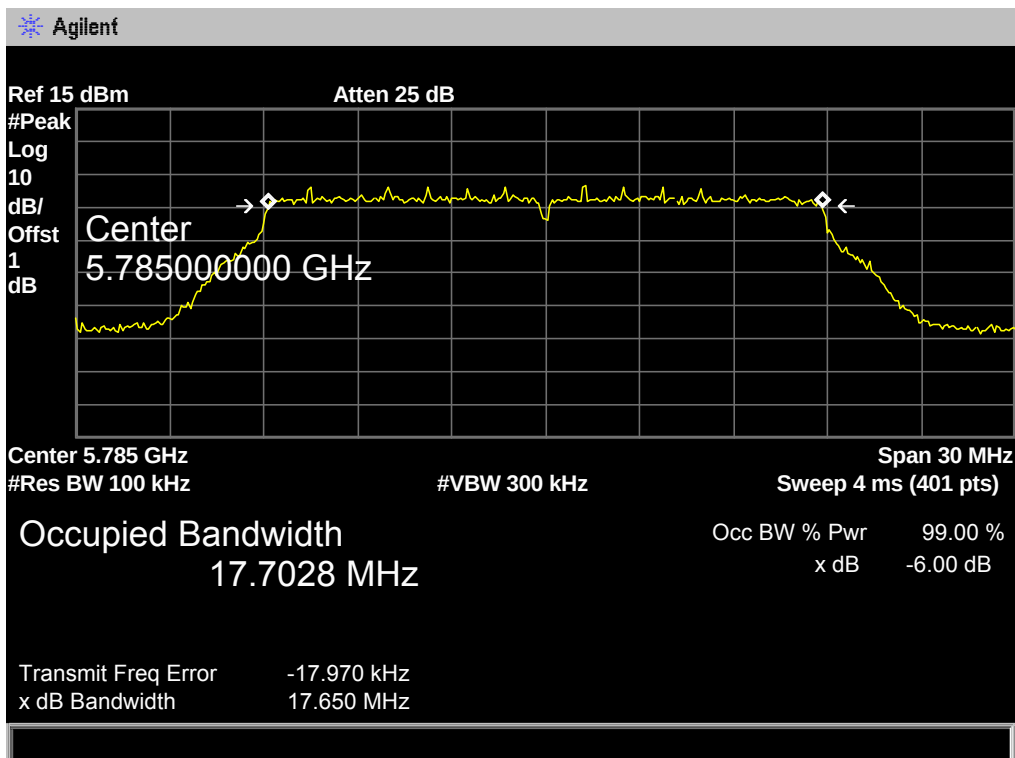
5825 MHz



EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX 802.11ac(20) Mode (U-NII-3)		
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	99% Bandwidth (MHz)
149	5745	17.669	17.7069
157	5785	17.650	17.7028
165	5825	17.650	17.7166
802.11ac(20) Mode			
5745 MHz			
Agilent Ref 15 dBm Atten 25 dB #Peak Log 10 dB/ Offst 1 dB Center 5.745000000 GHz  Center 5.745 GHz #Res BW 100 kHz #VBW 300 kHz Span 30 MHz Sweep 4 ms (401 pts) Occupied Bandwidth 17.7069 MHz Occ BW % Pwr 99.00 % x dB -6.00 dB Transmit Freq Error -23.180 kHz x dB Bandwidth 17.669 MHz			

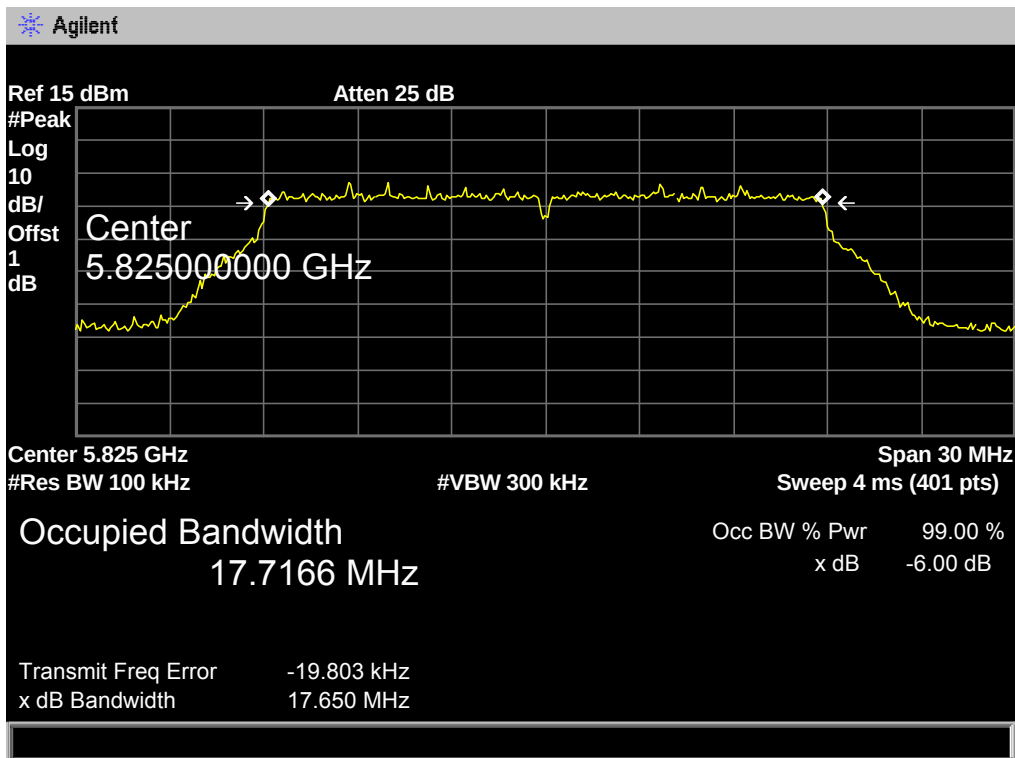
802.11ac(20) Mode

5785 MHz



802.11ac(20) Mode

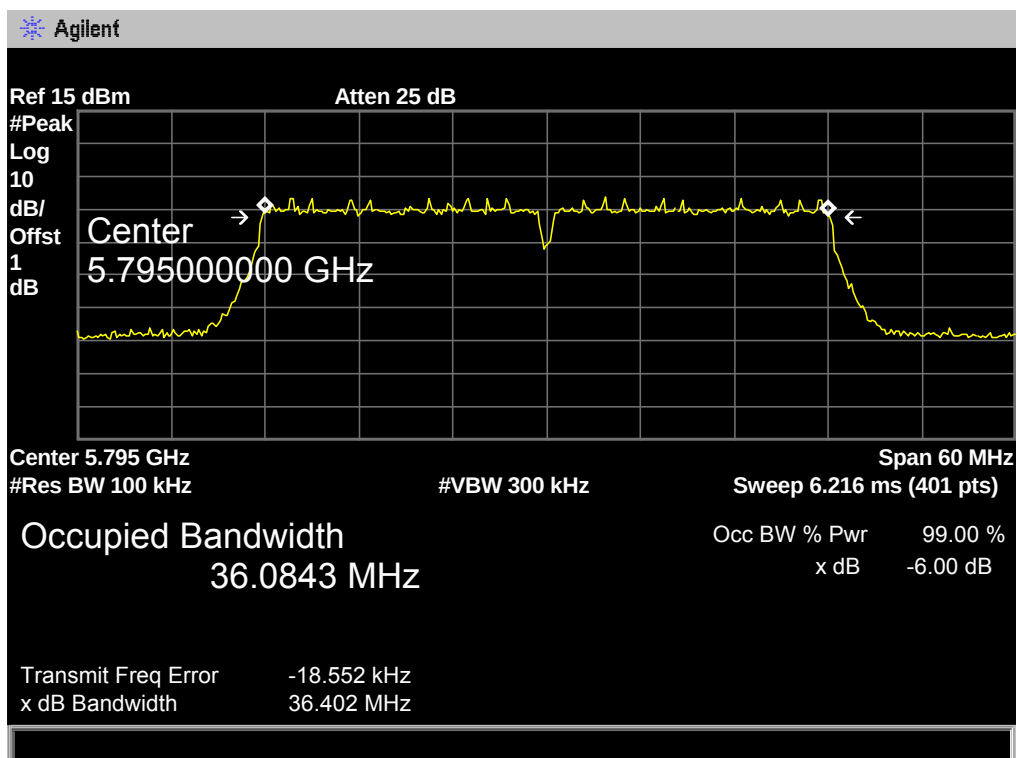
5825 MHz

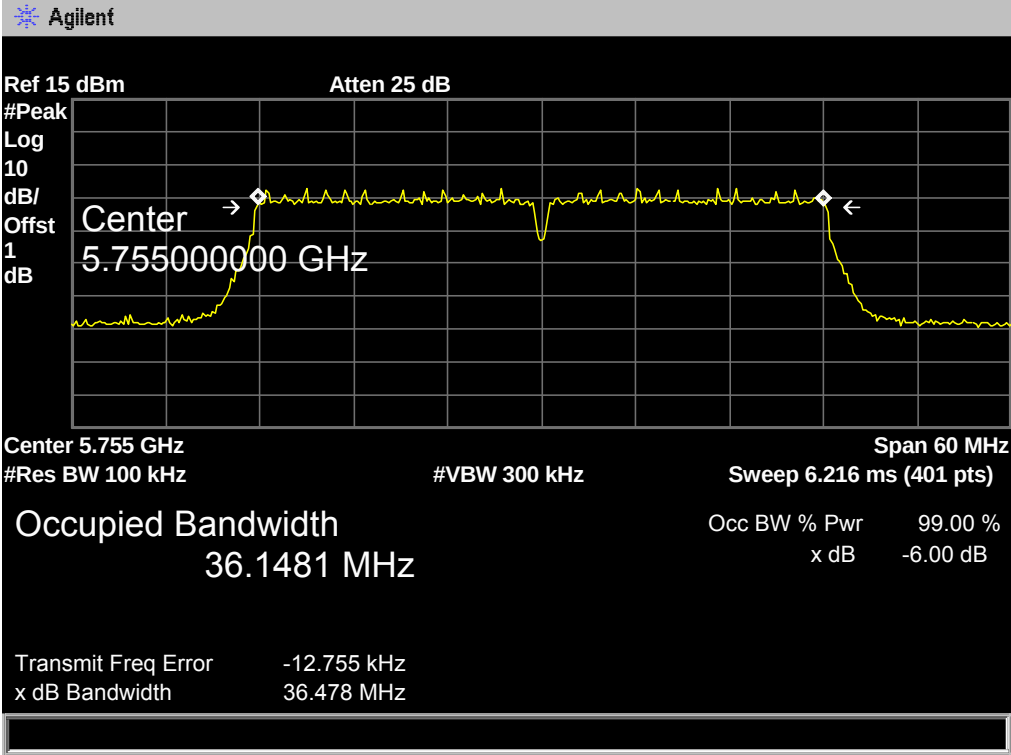


EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX 802.11n(40) Mode (U-NII-3)		
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	99% Bandwidth (MHz)
151	5755	36.462	36.1401
159	5795	36.402	36.0843
802.11n(HT40) Mode			
5755 MHz			
Agilent Ref 15 dBm Atten 25 dB #Peak Log 10 dB/ Offst 1 dB Center → 5.755000000 GHz ← Center 5.755 GHz #Res BW 100 kHz #VBW 300 kHz Span 60 MHz Sweep 6.216 ms (401 pts) Occupied Bandwidth 36.1401 MHz Occ BW % Pwr 99.00 % x dB -6.00 dB Transmit Freq Error -16.438 kHz x dB Bandwidth 36.462 MHz			

802.11n(HT40) Mode

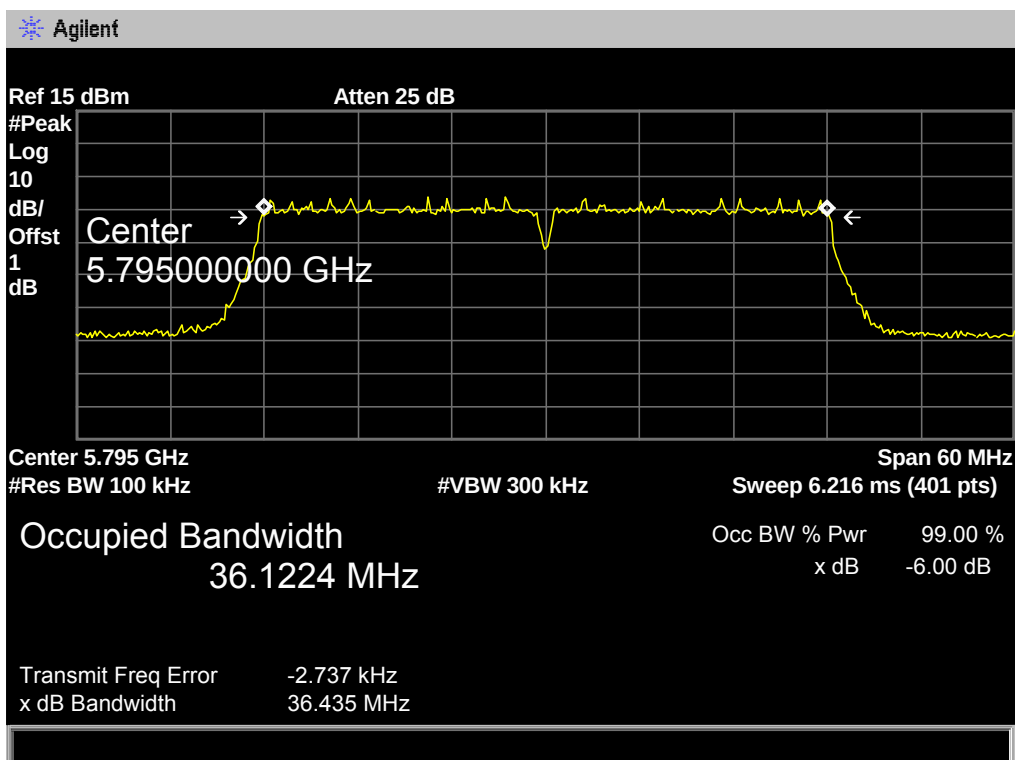
5795 MHz

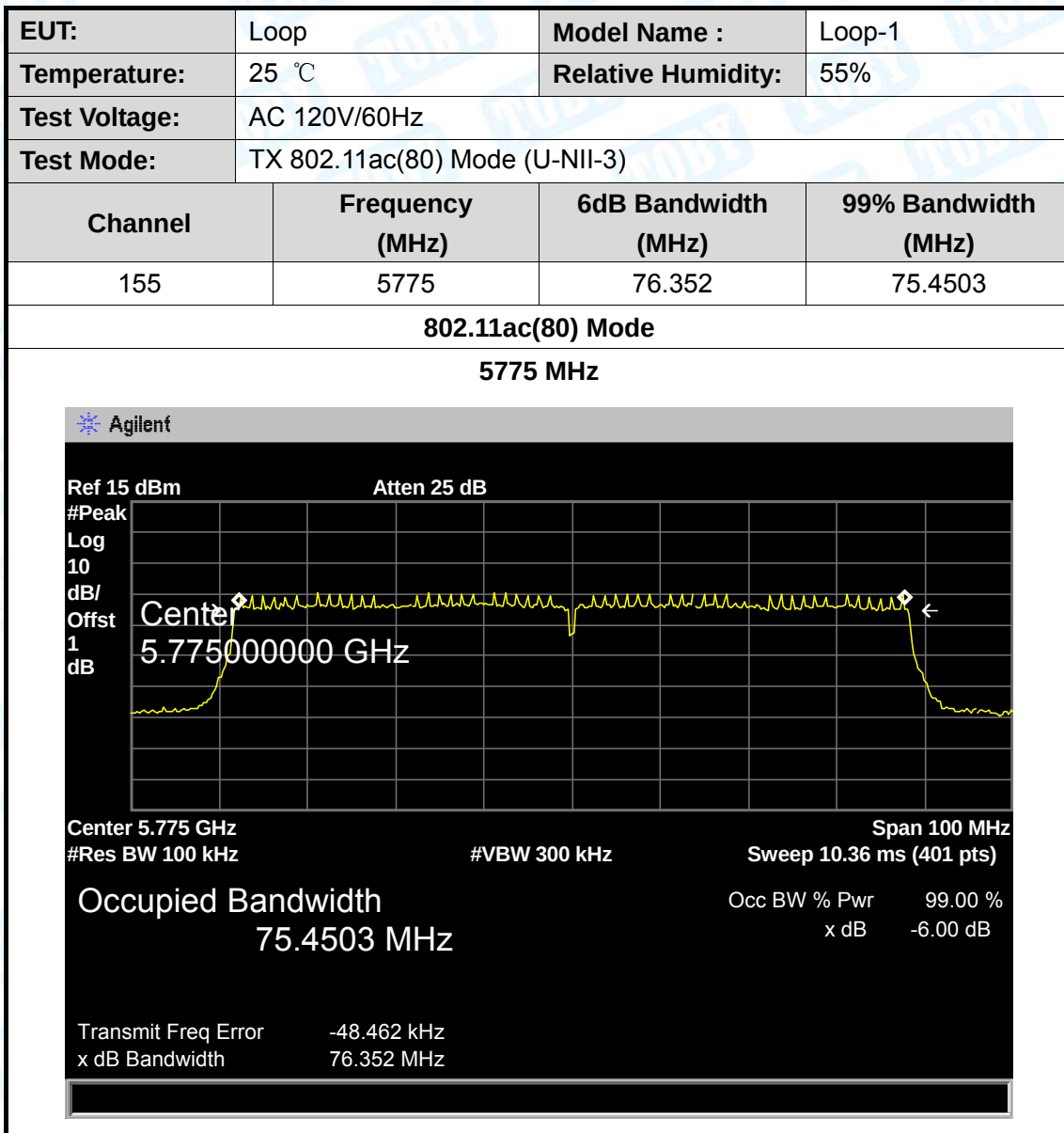


EUT:	Loop	Model Name :	Loop-1
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX 802.11ac(40) Mode (U-NII-3)		
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	99% Bandwidth (MHz)
151	5755	36.478	36.1481
159	5795	36.435	36.1224
802.11ac(40) Mode			
5755 MHz			
 Agilent Ref 15 dBm Atten 25 dB #Peak Log 10 dB/Offst 1 dB Center 5.755000000 GHz Center 5.755 GHz #Res BW 100 kHz #VBW 300 kHz Span 60 MHz Sweep 6.216 ms (401 pts) Occupied Bandwidth 36.1481 MHz Occ BW % Pwr 99.00 % x dB -6.00 dB Transmit Freq Error -12.755 kHz x dB Bandwidth 36.478 MHz			

802.11ac(40) Mode

5795 MHz





8. Output Power Test

8.1 Test Standard and Limit

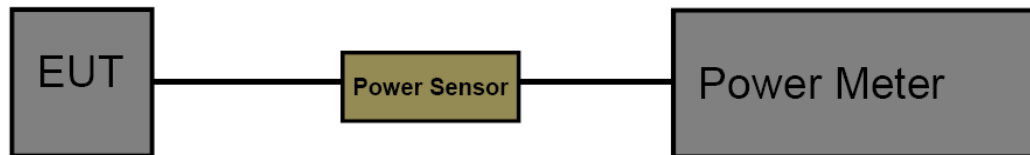
8.1.1 Test Standard

FCC Part 15.407 (a)

8.1.2 Test Limit

FCC Part 15 Subpart E(15.407)/RSS-210		
Test Item	Limit	Frequency Range(MHz)
Conducted Output Power	Fixed: 1 Watt (30dBm) Mobile and Portable: 250mW (24dBm)	5150~5250
	250mW (24dBm)	5250~5350
	250mW (24dBm)	5500~5700
	1 Watt (30dBm)	5725~5850

8.2 Test Setup



8.3 Test Procedure

The measurement is according to section 3 of KDB 789033 D02 General UNII Test Procedures New Rules V01r04.

The EUT was connected to RF power meter via a broadband power sensor as show the block above.

8.4 EUT Operating Condition

The EUT was set to continuously transmitting in the max power during the test.

8.5 Test Date

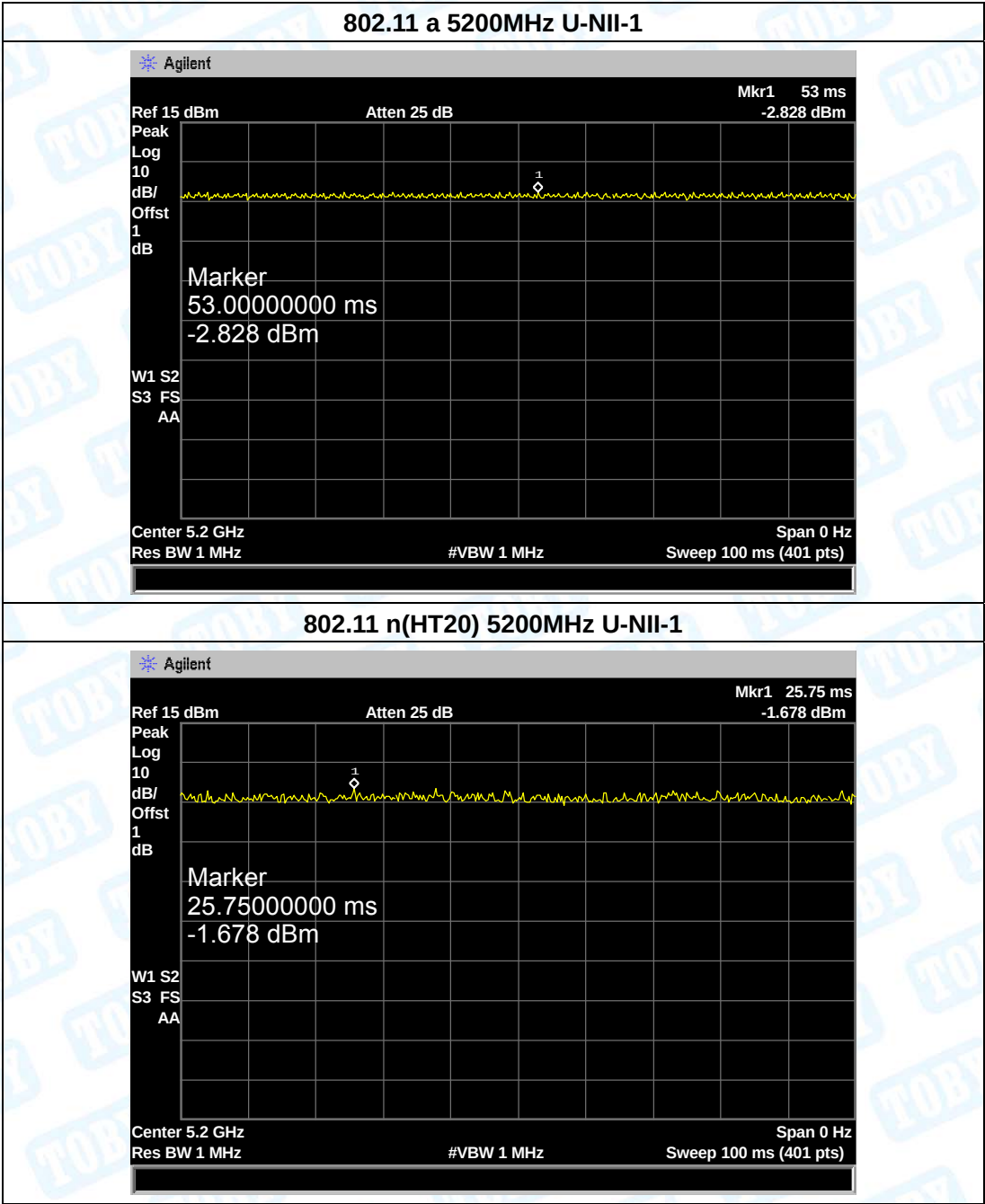
EUT:	Loop	Model Name :	Loop-1			
Temperature:	25 °C	Relative Humidity:	55%			
Test Voltage:	AC 120V/60Hz					
U-NII-1						
Test Mode	Frequency (MHz)	Test Data			Limit (dBm)	
		Conducted Power (dBm)	Duty Factor (dB)	Total Power (dBm)		
802.11a	5180	6.98	0	6.98	23.5	
	5200	6.95	0	6.95		
	5240	6.96	0	6.96		
802.11n (HT20)	5180	6.86	0	6.86		
	5200	6.91	0	6.91		
	5240	6.92	0	6.92		
802.11ac (HT20)	5180	6.84	0	6.84		
	5200	6.83	0	6.83		
	5240	6.86	0	6.86		
802.11n (HT40)	5190	6.79	0	6.79		
	5230	6.81	0	6.81		
802.11 ac(40)	5190	6.76	0	6.76		
	5230	6.80	0	6.80		
802.11 ac(80)	5210	6.81	0	6.81		
Result: PASS						
Remark: the Directional Gain=6.5dBi>6 dBi. So P _{out} =P _{limit} -(G _{TX} -6)] =24-0.5=23.5dBm						

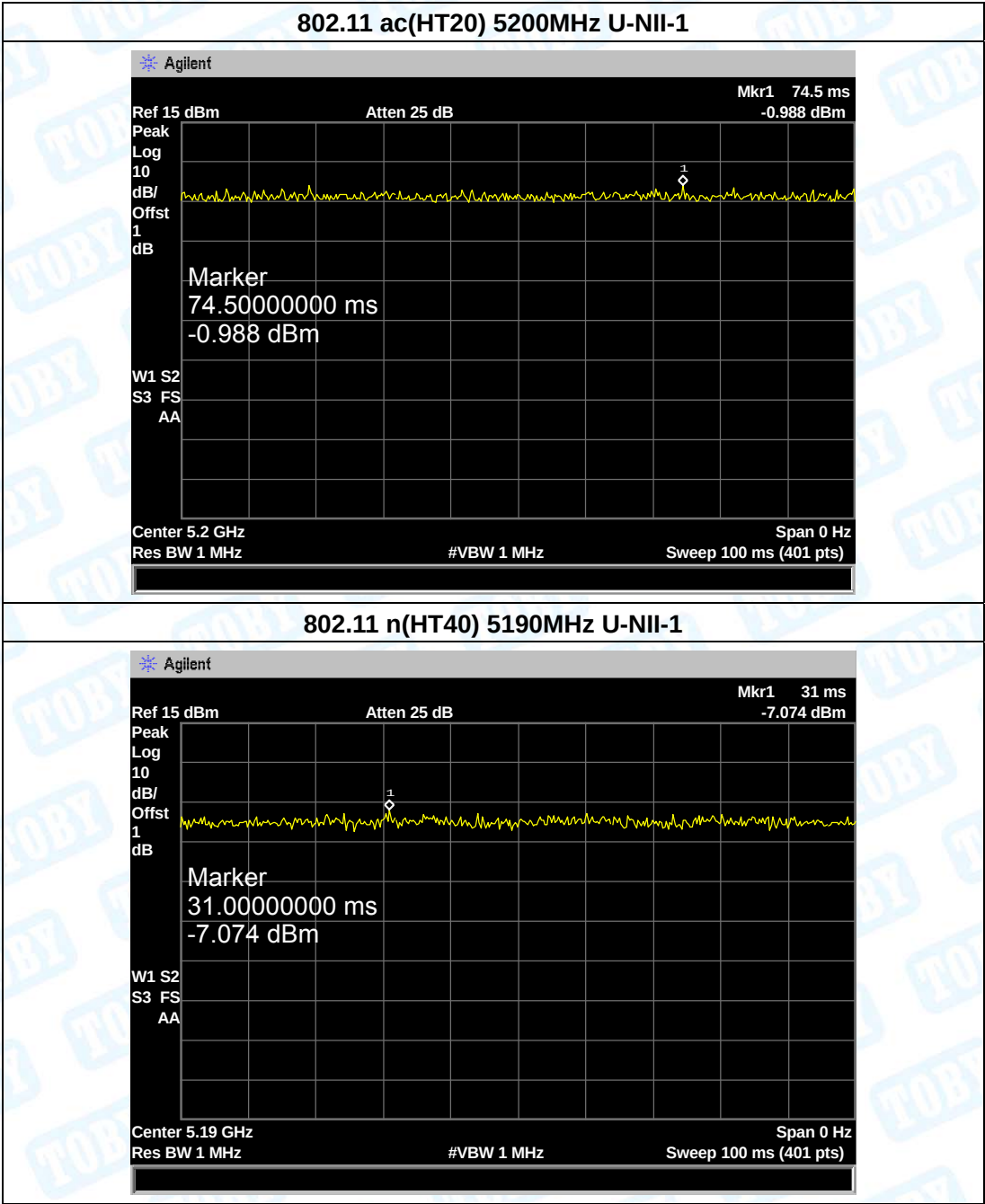
EUT:	Loop	Model Name :	Loop-1		
Temperature:	25 °C	Relative Humidity:	55%		
Test Voltage:	AC 120V/60Hz				
U-NII-2A					
Test Mode	Frequency (MHz)	Test Data			Limit (dBm)
		Conducted Power (dBm)	Duty Factor (dB)	Total Power (dBm)	
802.11a	5260	6.96	0	6.96	23.5
	5280	6.89	0	6.89	
	5320	6.95	0	6.95	
802.11n (HT20)	5260	6.82	0	6.82	
	5280	6.86	0	6.86	
	5320	6.76	0	6.76	
802.11ac (HT20)	5260	6.65	0	6.65	
	5280	6.69	0	6.69	
	5320	6.73	0	6.73	
802.11n (HT40)	5270	6.68	0	6.68	
	5310	6.62	0	6.62	
802.11ac(40)	5270	6.77	0	6.77	
	5310	6.75	0	6.75	
802.11ac(80)	5290	6.61	0	6.61	
Result: PASS					
Remark: the Directional Gain=6.5dBi>6 dBi. So P _{out} =P _{limit} -(G _{TX} -6)] =24-0.5=23.5dBm					

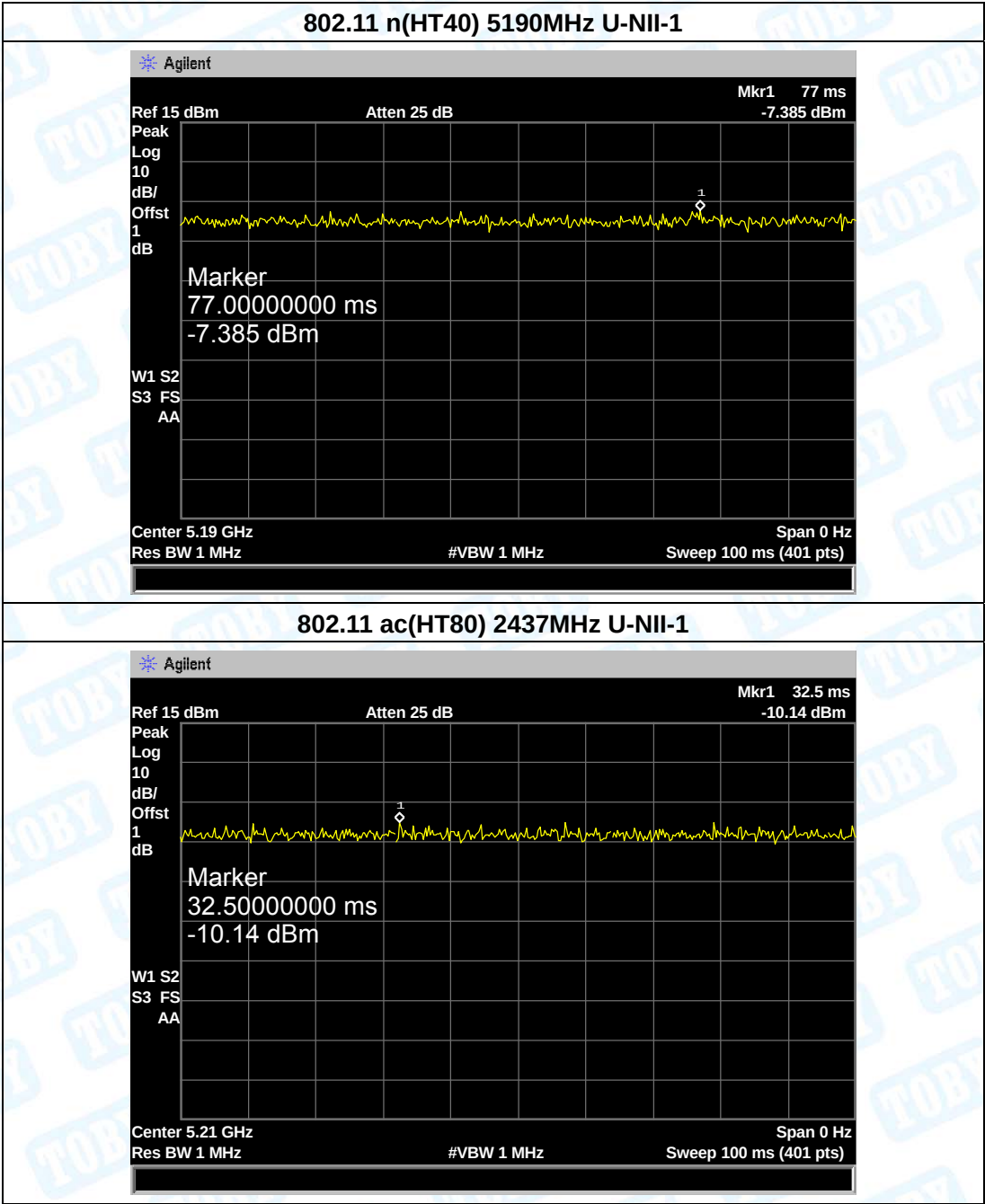
EUT:	Loop	Model Name :	Loop-1		
Temperature:	25 °C	Relative Humidity:	55%		
Test Voltage:	AC 120V/60Hz				
U-NII-2C					
Test Mode	Frequency (MHz)	Test Data			Limit (dBm)
		Conducted Power (dBm)	Duty Factor (dB)	Total Power (dBm)	
802.11a	5500	6.27	0	6.27	23.5
	5600	6.23	0	6.23	
	5700	6.37	0	6.37	
802.11n (HT20)	5500	6.13	0	6.13	
	5600	6.11	0	6.11	
	5700	6.06	0	6.06	
802.11ac (HT20)	5500	6.21	0	6.21	
	5600	6.47	0	6.47	
	5700	6.24	0	6.24	
802.11n (HT40)	5510	6.15	0	6.15	
	5590	6.11	0	6.11	
	5710	6.26	0	6.26	
802.11 ac(40)	5510	6.05	0	6.05	
	5590	6.24	0	6.24	
	5710	6.33	0	6.33	
802.11 ac(80)	5530	6.19	0	6.19	
	5610	6.13	0	6.13	
	5690	6.26	0	6.26	
Result: PASS					
Remark: the Directional Gain=6.5dBi>6 dBi. So P _{out} =P _{limit} *(G _{TX} -6)]=24-0.5=23.5dBm					

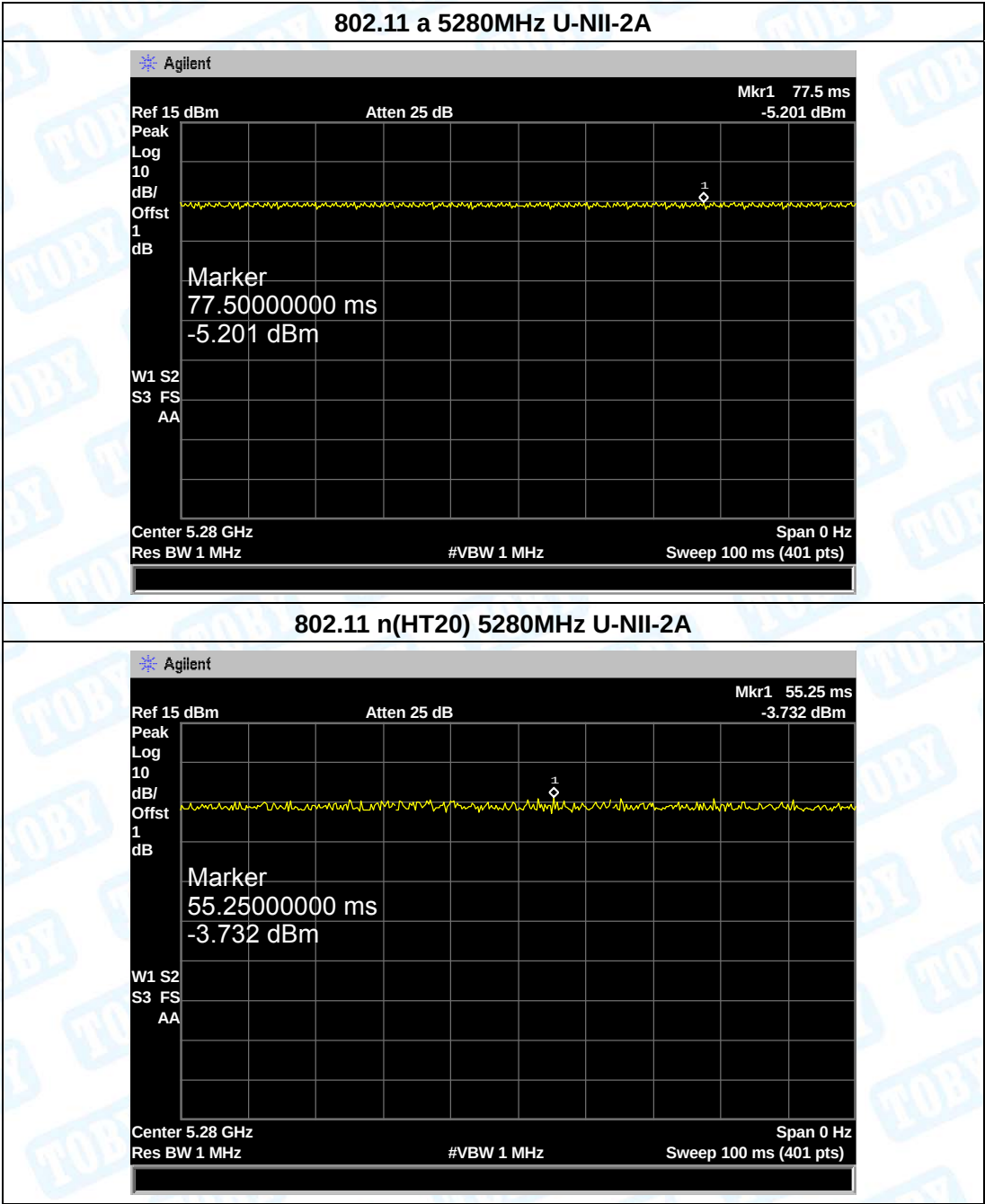
EUT:	Loop	Model Name :	Loop-1			
Temperature:	25 °C	Relative Humidity:	55%			
Test Voltage:	AC 120V/60Hz					
U-NII-3						
Test Mode	Frequency (MHz)	Test Data			Limit (dBm)	
		Conducted Power (dBm)	Duty Factor (dB)	Total Power (dBm)		
802.11a	5745	6.25	0	6.25	29.5	
	5785	6.32	0	6.32		
	5825	6.23	0	6.23		
802.11n (HT20)	5745	6.13	0	6.13		
	5785	6.28	0	6.28		
	5825	6.46	0	6.46		
802.11ac (HT20)	5745	6.24	0	6.24		
	5785	6.29	0	6.29		
	5825	6.30	0	6.30		
802.11n (HT40)	5755	6.23	0	6.23		
	5795	6.29	0	6.29		
802.11ac(40)	5755	6.16	0	6.16		
	5795	6.11	0	6.11		
802.11ac(80)	5775	6.35	0	6.35		
Result: PASS						
Remark: the Directional Gain=6.5dBi>6 dBi. So P _{out} =P _{limit} -(G _{TX} -6)]=30-0.5=29.5dBm						

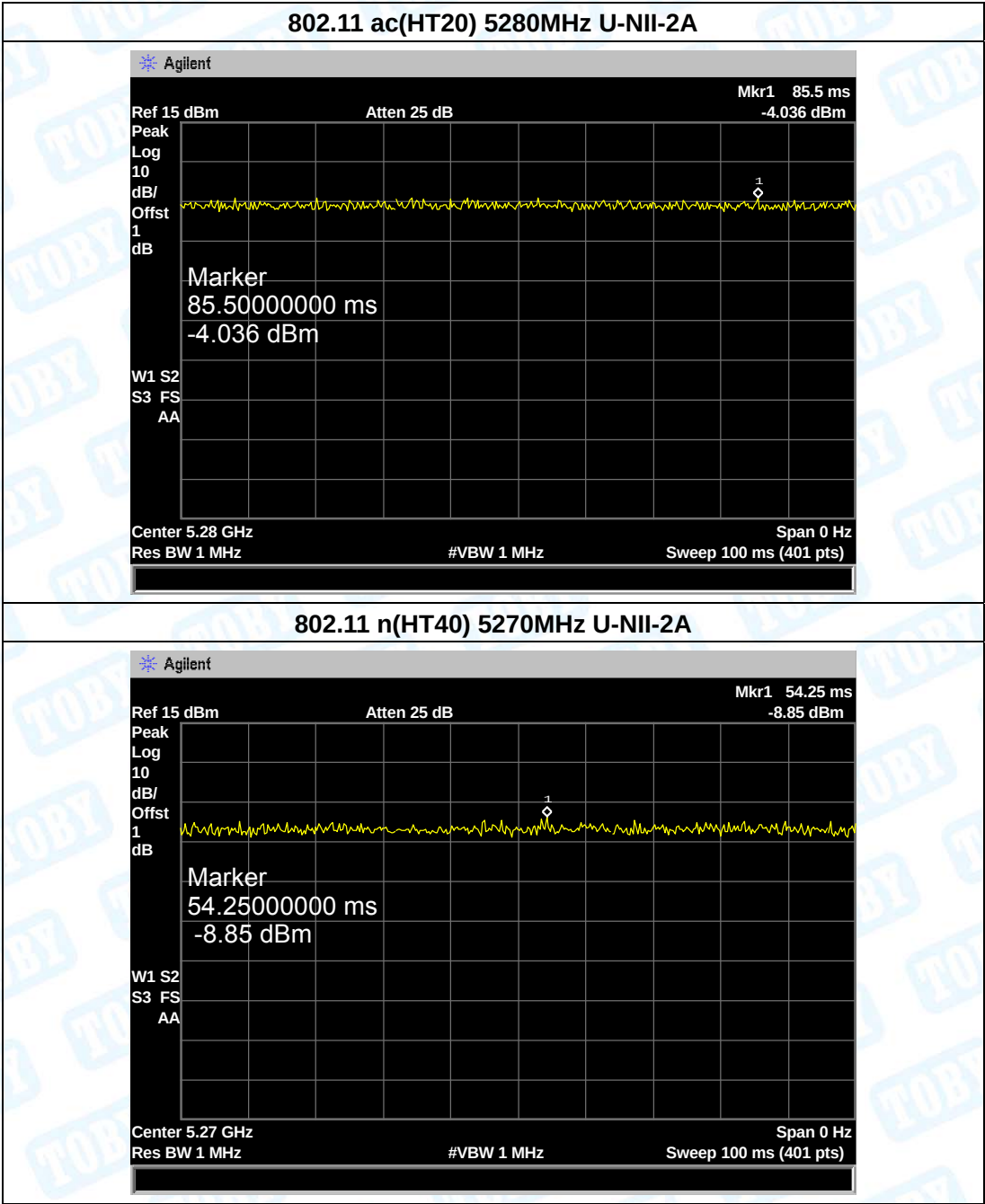
Test Mode		Duty cycle
U-NII-1	802.11 a	>98%
	802.11 n(HT20)	
	802.11 ac(HT20)	
	802.11 n(HT40)	
	802.11 ac(HT40)	
	802.11 ac(HT80)	
U-NII-2A	802.11 a	
	802.11 n(HT20)	
	802.11 ac(HT20)	
	802.11 n(HT40)	
	802.11 ac(HT40)	
	802.11 ac(HT80)	
U-NII-2C	802.11 a	
	802.11 n(HT20)	
	802.11 ac(HT20)	
	802.11 n(HT40)	
	802.11 ac(HT40)	
	802.11 ac(HT80)	
U-NII-3	802.11 a	
	802.11 n(HT20)	
	802.11 ac(HT20)	
	802.11 n(HT40)	
	802.11 ac(HT40)	
	802.11 ac(HT80)	
Please see the next plots.		

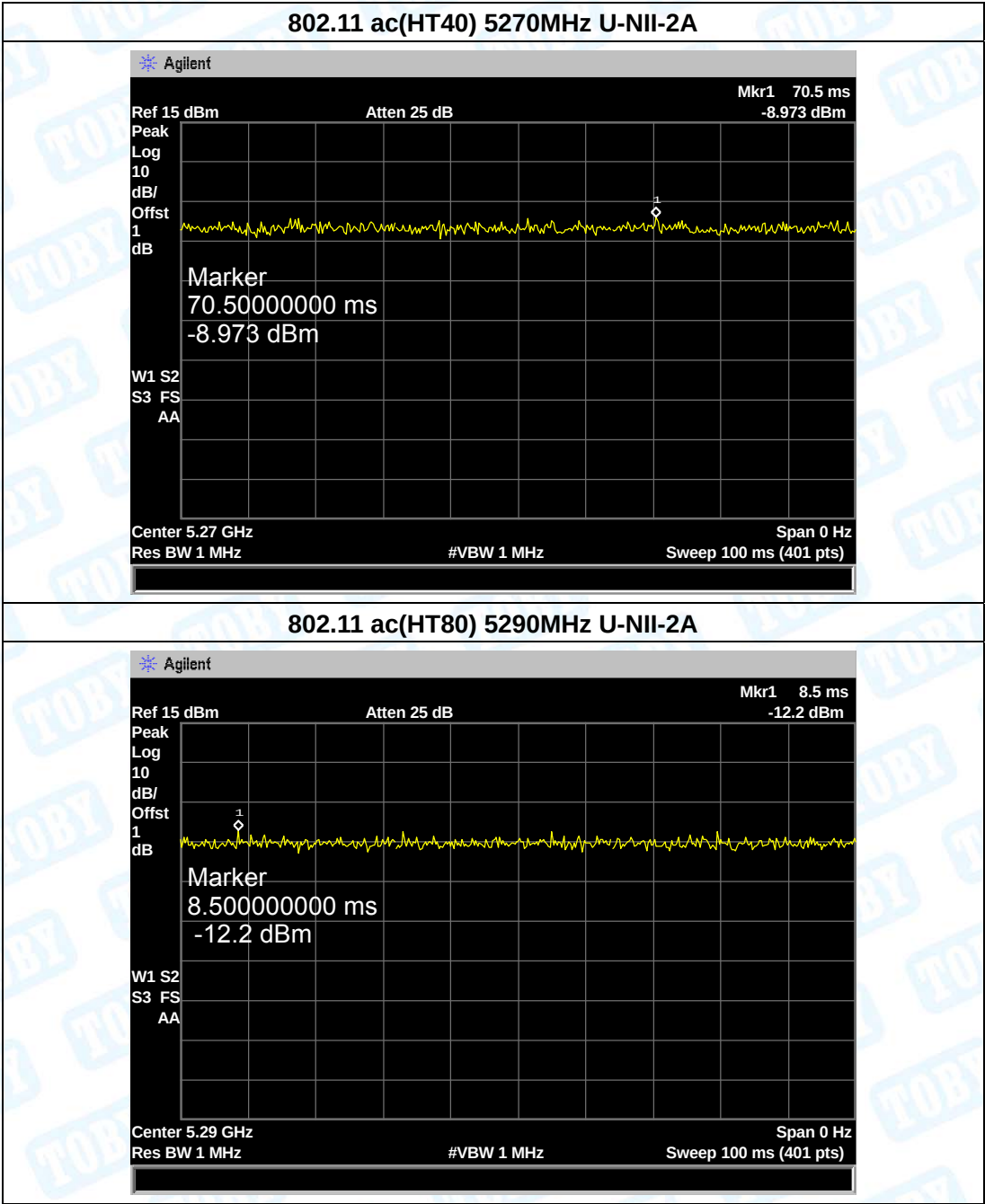


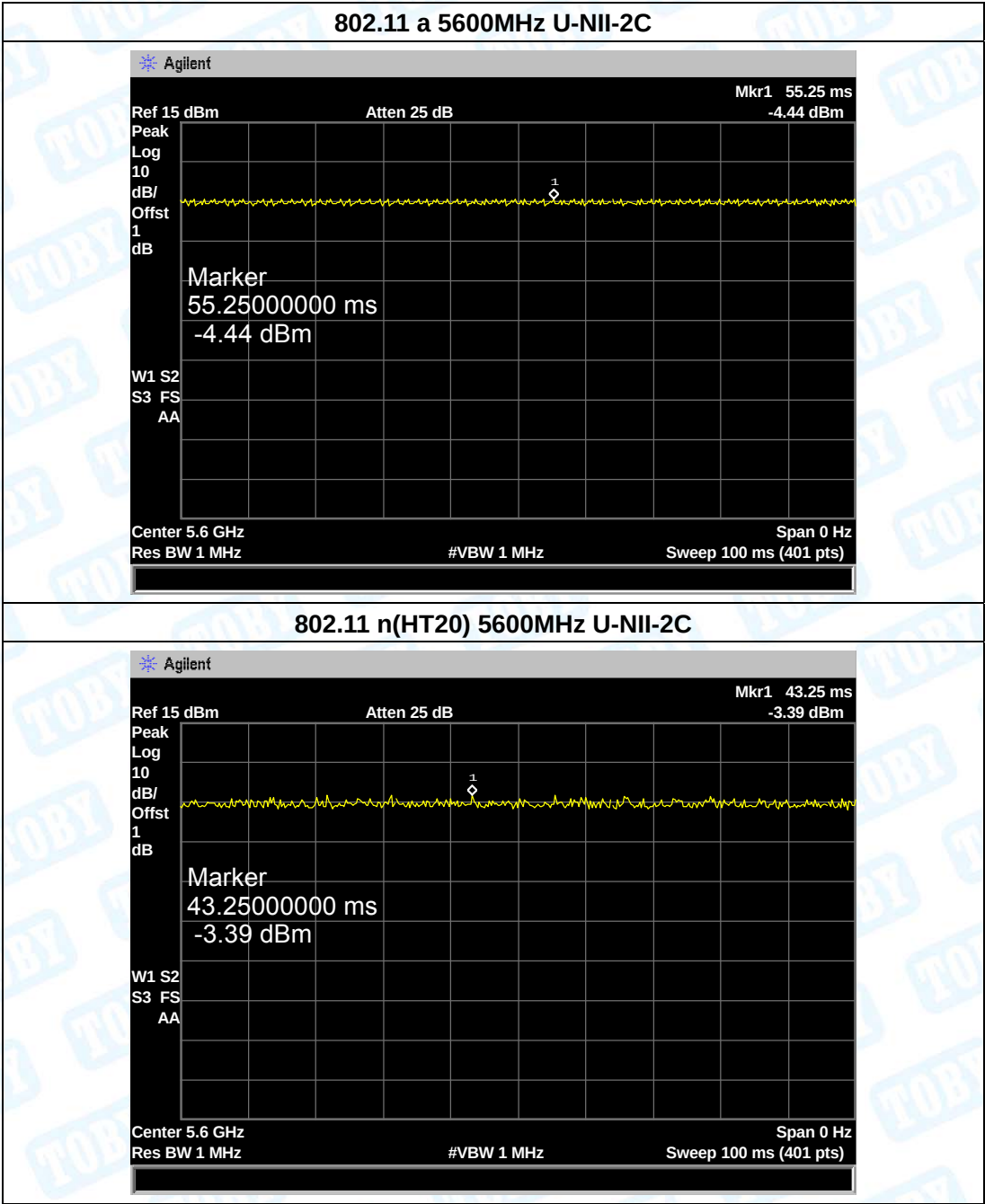


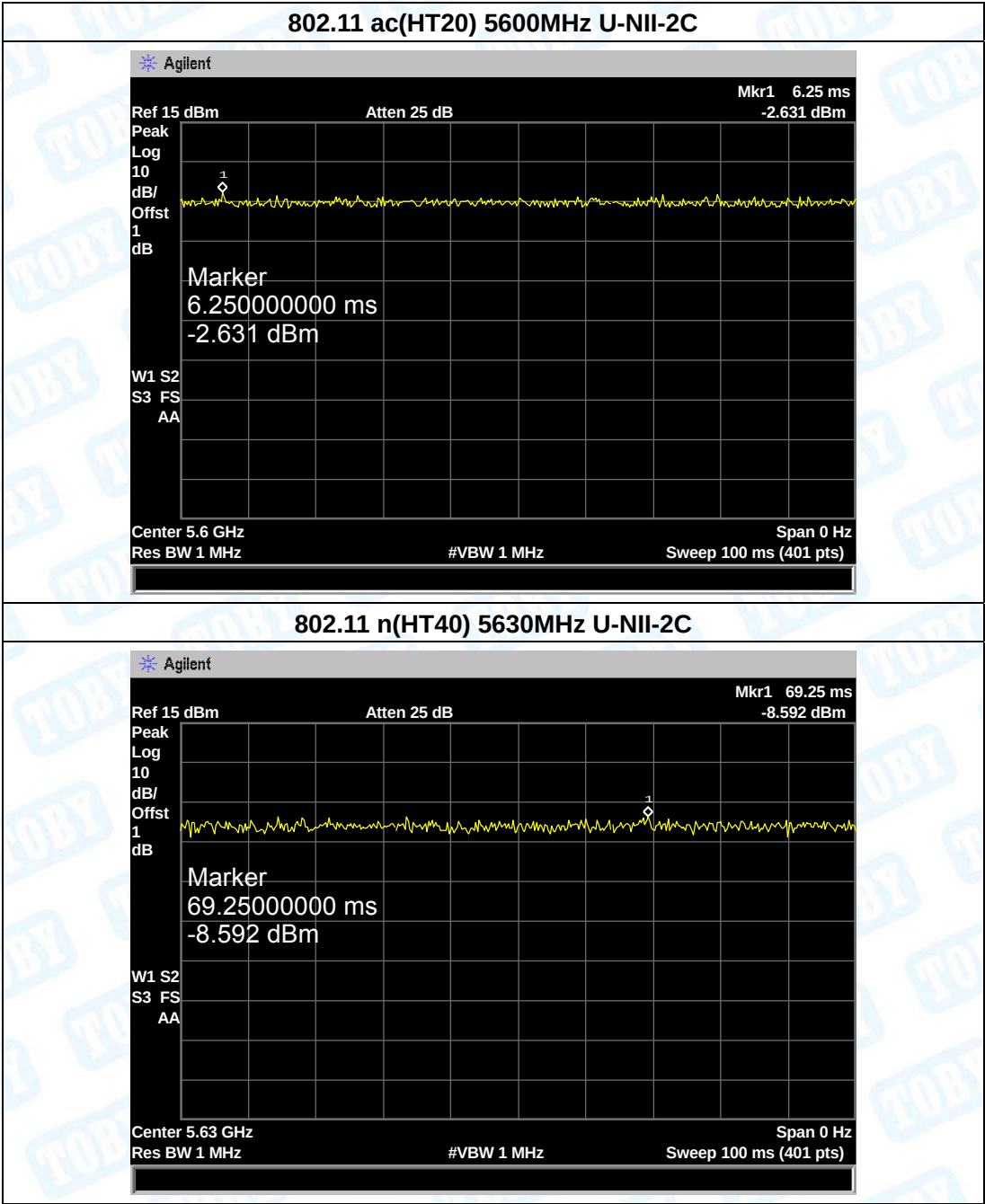


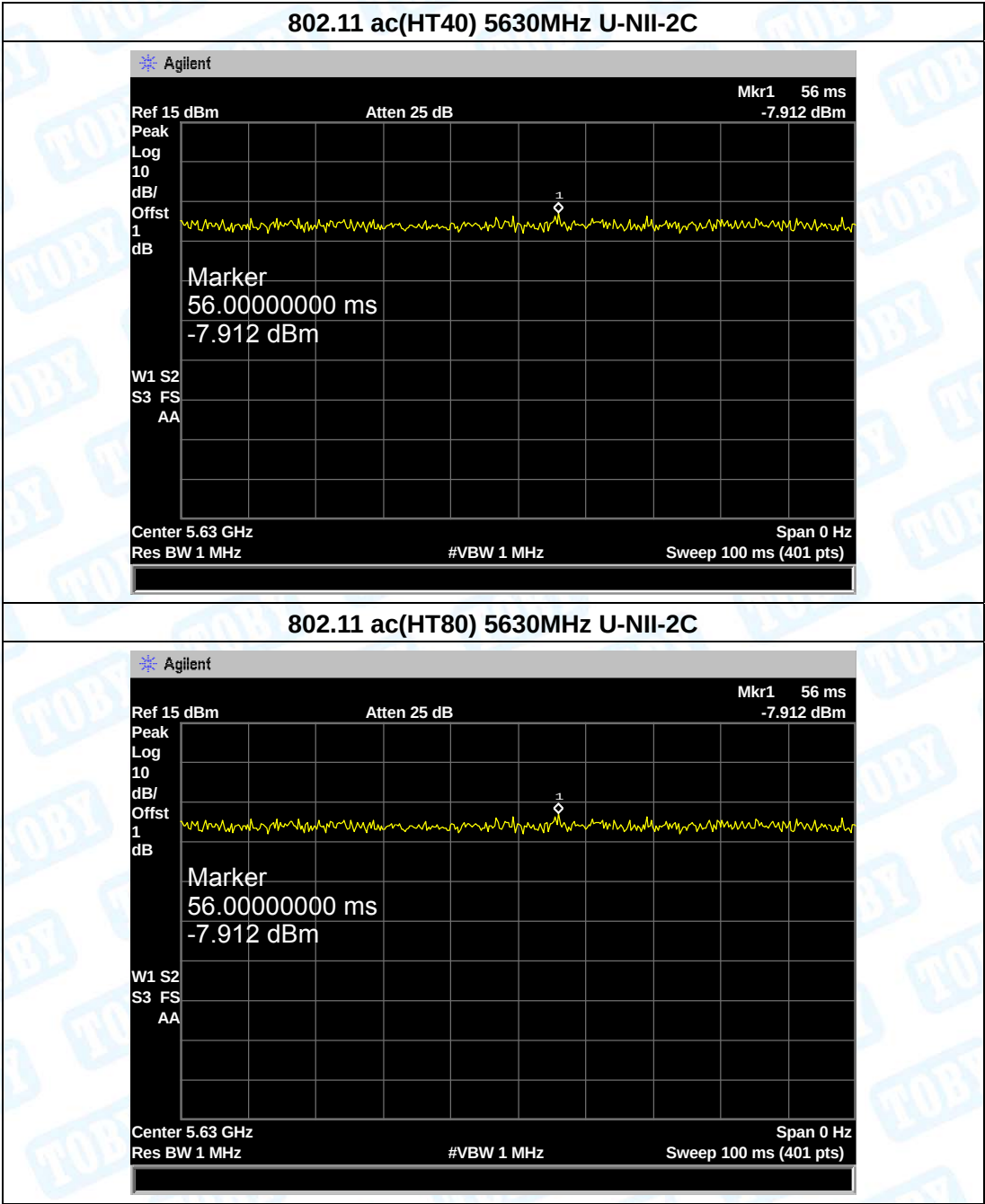


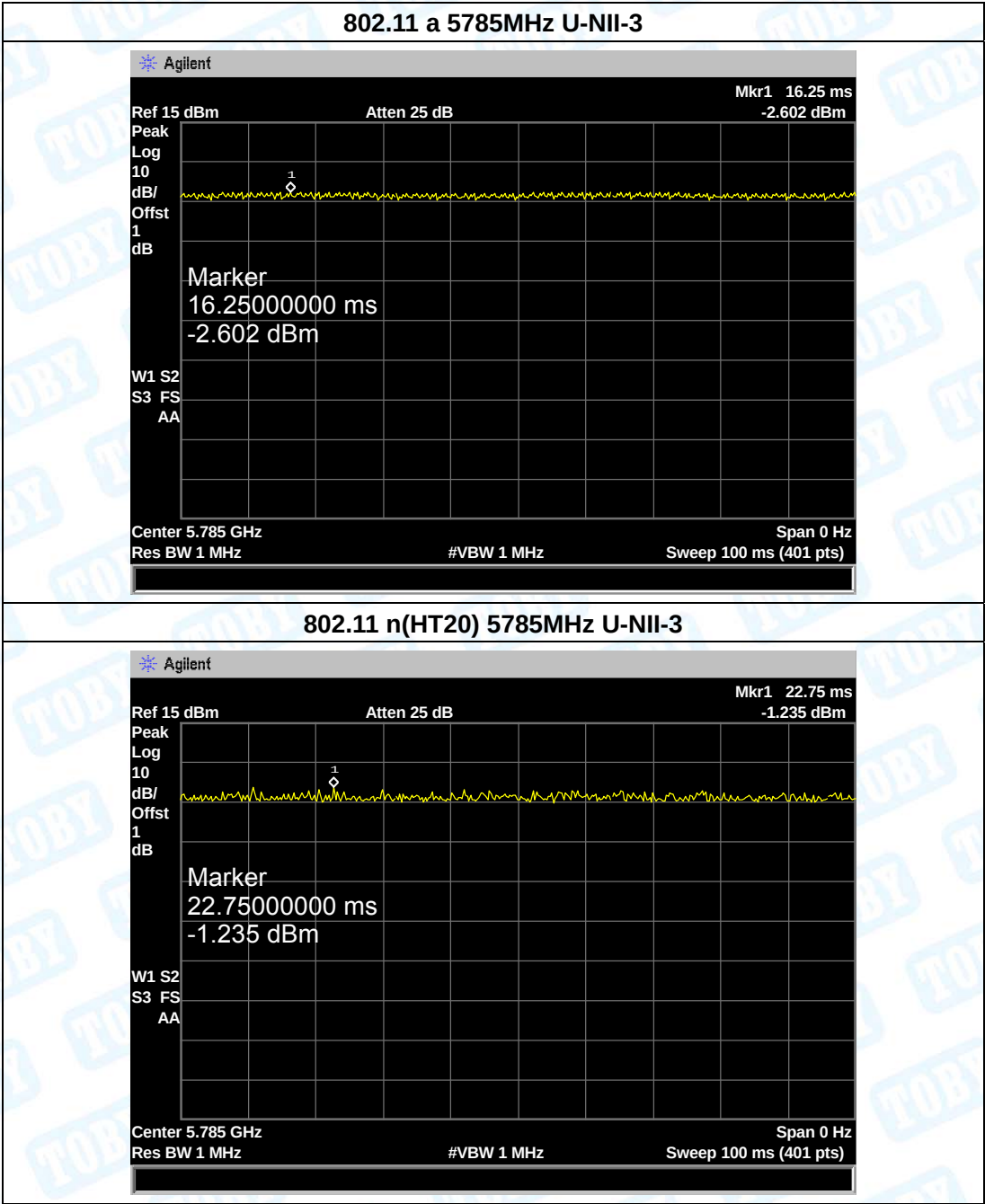


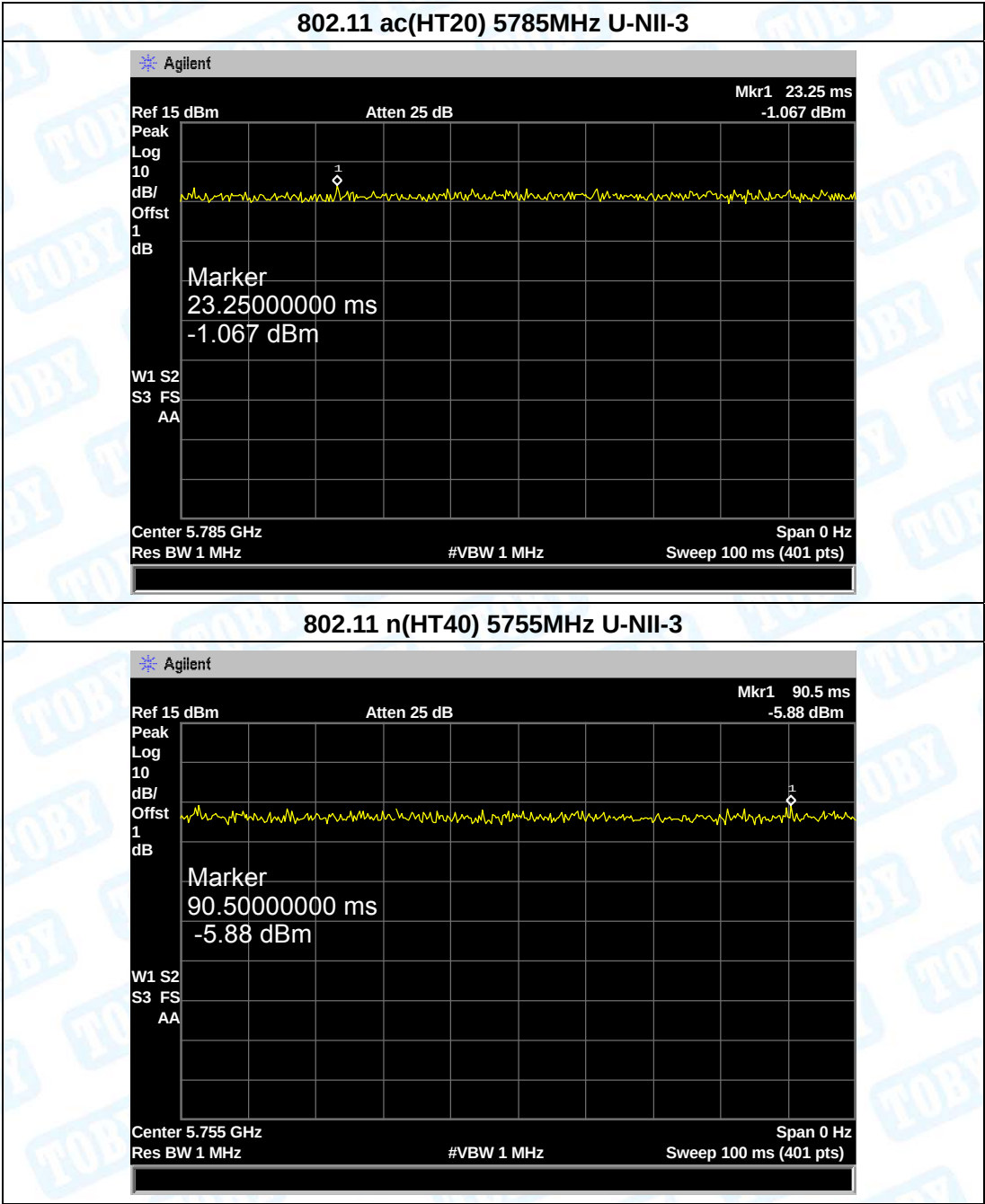


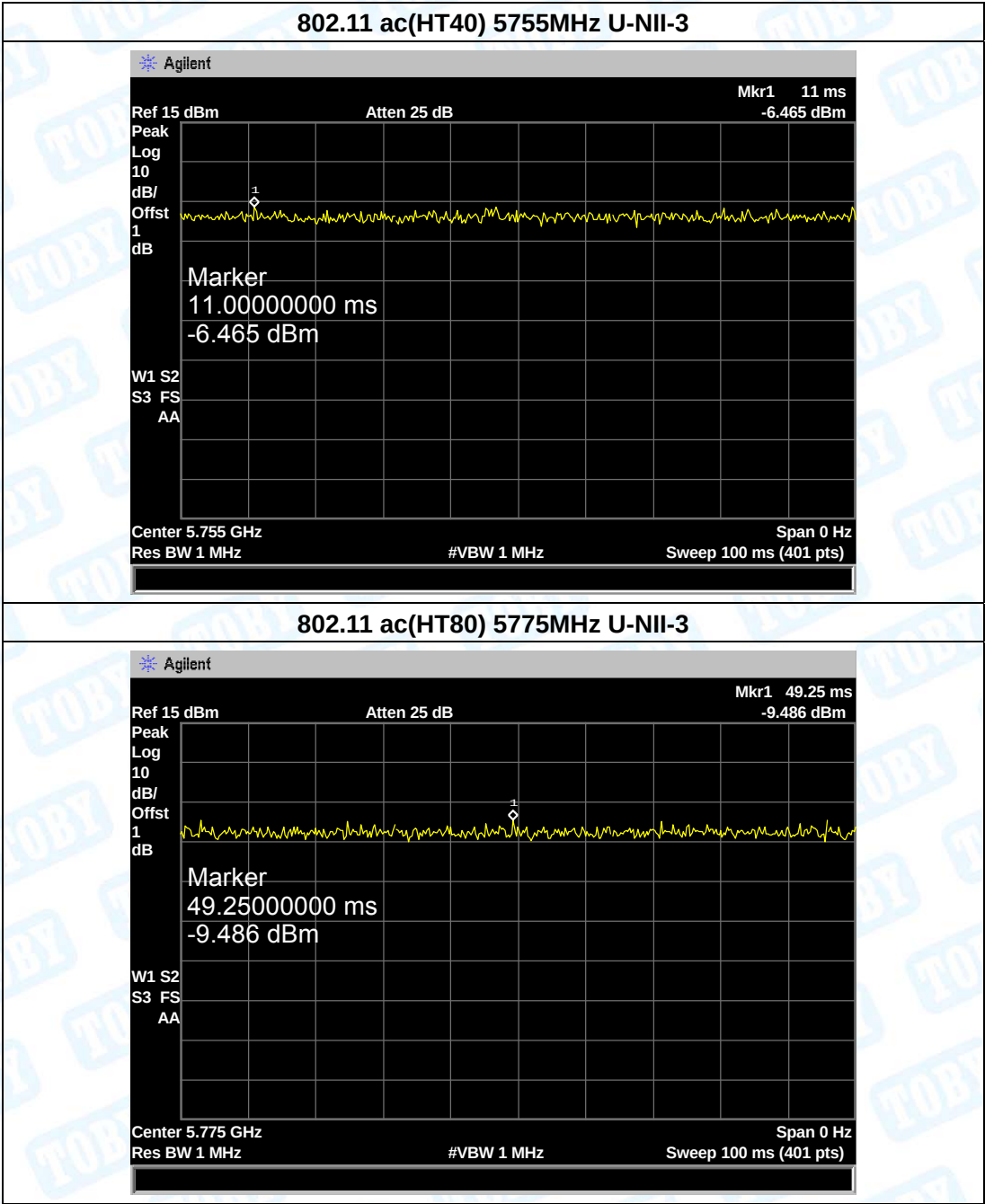












9. Power Spectral Density Test

9.1 Test Standard and Limit

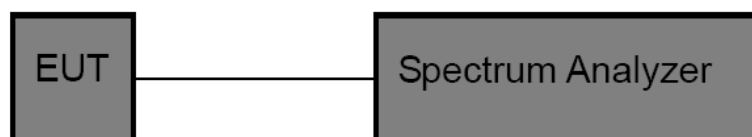
9.1.1 Test Standard

FCC Part 15.407 (a)

9.1.2 Test Limit

FCC Part 15 Subpart E(15.407)		
Test Item	Limit	Frequency Range(MHz)
Power Spectral Density	Other than Mobile and Portable : 17dBm/MHz Mobile and Portable : 11dBm/MHz	5150~5250
	11dBm/MHz	5250~5350
	11dBm/MHz	5500~5700
	30dBm/500kHz	5725~5850

9.2 Test Setup



9.3 Test Procedure

The EUT was directly connected to the Spectrum Analyzer and antenna output port as show in the block diagram above. The measurement is according to KDB 789033 D02 General UNII Test Procedures New Rules V01r04.

(1) The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram above.

(2) Set analyser centre frequency to transmitting frequency.

(3) Set the span to encompass the entire emissions bandwidth (EBW)(alternatively, the entire 99% OBW) of the signal.

(4) Set the RBW to: 1 MHz

(5) Set the VBW to: 3 MHz

(6) Detector: RMS

(7) Trace: Max Hold

(7) Sweep time: auto

(8) Trace average at least 100 traces in power averaging.

- (9) User the peak marker function to determine the maximum amplitude level within the RBW.
Apply correction to the result if different RBW is used.

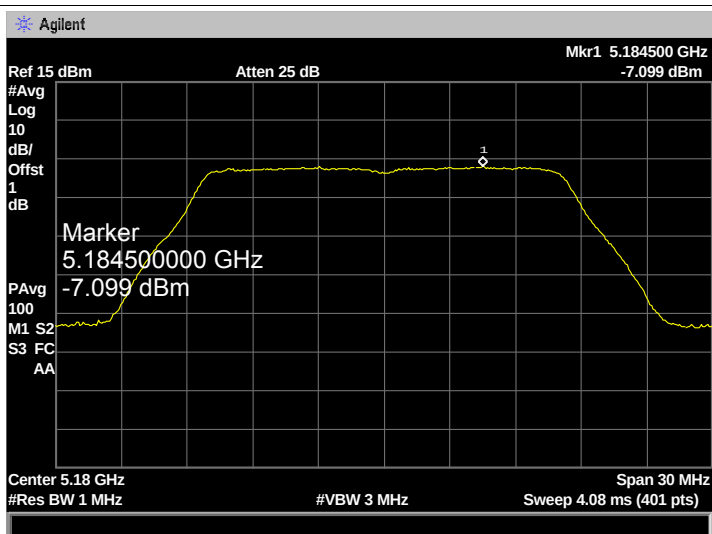
9.4 EUT Operating Condition

The EUT was set to continuously transmitting in each mode and low, Middle and high channel for the test.

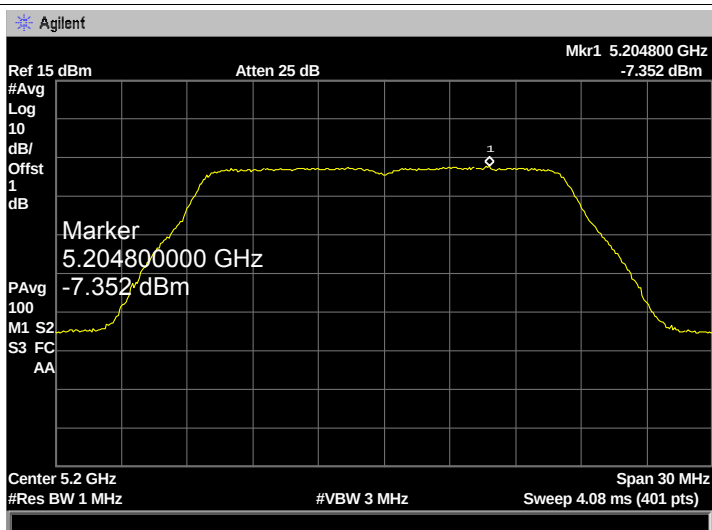
9.5 Test Data

EUT:	Loop	Model Name :	Loop-1	
Temperature:	25 °C	Relative Humidity:	55%	
Test Voltage:	AC 120V/60Hz			
U-NII-1				
Test Mode	Frequency (MHz)	Test Data	Limit (dBm)	
		Power Density (dBm/MHz)		
802.11a	5180	-7.099	10.5	
	5200	-7.352		
	5240	-8.075		
802.11n (HT20)	5180	-9.296		
	5200	-9.288		
	5240	-8.195		
802.11ac (HT20)	5180	-7.437		
	5200	-7.123		
	5240	-8.043		
802.11n (HT40)	5190	-10.600		
	5230	-11.260		
802.11ac(40)	5190	-10.700		
	5230	-11.010		
802.11ac(80)	5210	-14.030		
Result: PASS				
Remark: the Directional Gain=6.5dBi>6 dBi. So P _{out} =P _{limit} -(G _{TX} -6)] =11-0.5=10.5dBm				
Test plots please refer to below pages:				

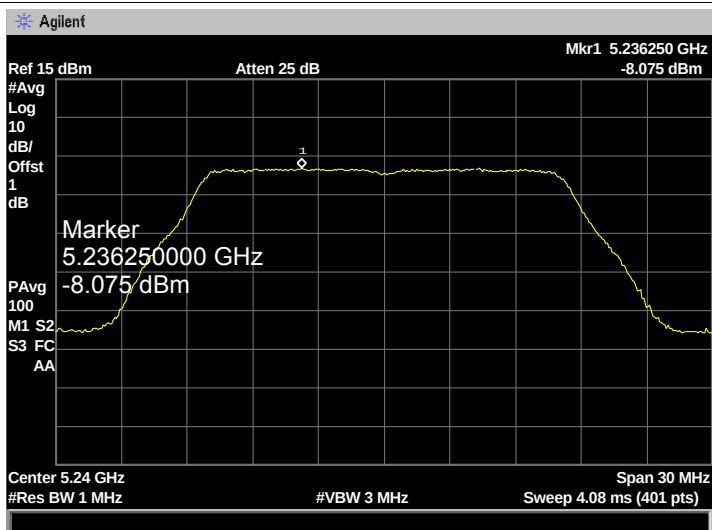
802.11 a 5180 MHz



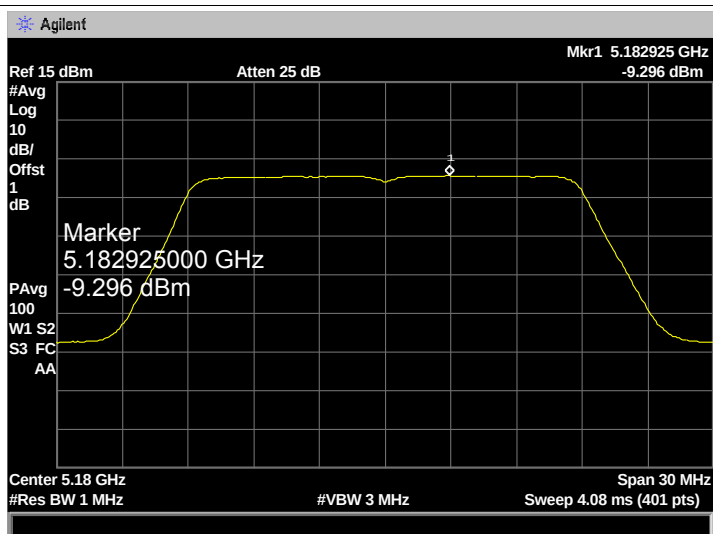
802.11 a 5200 MHz



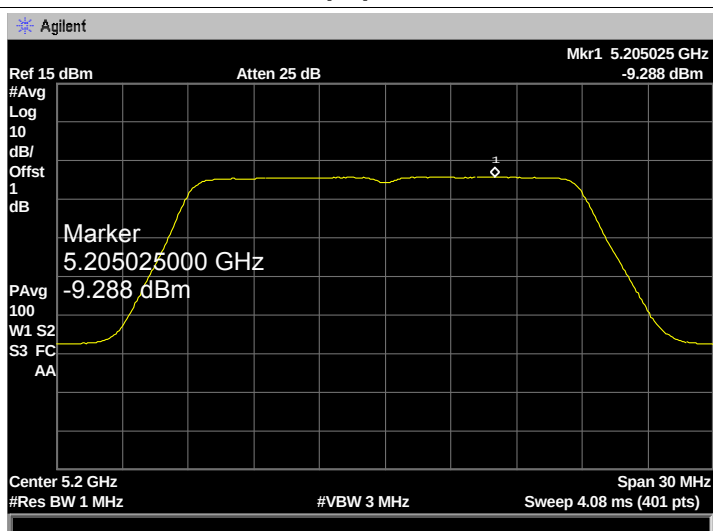
802.11 a 5240 MHz



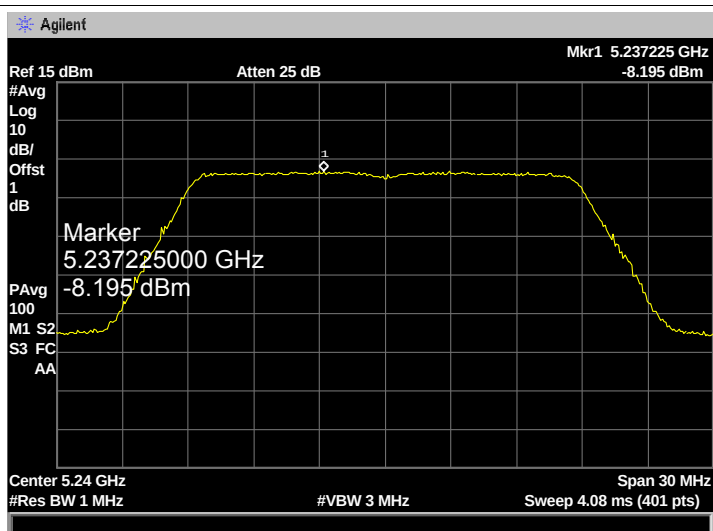
802.11 n(20) 5180 MHz



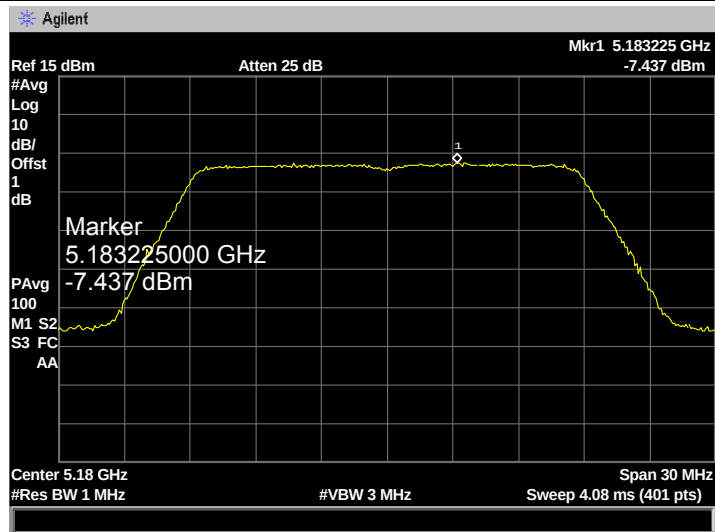
802.11 n(20) 5200 MHz



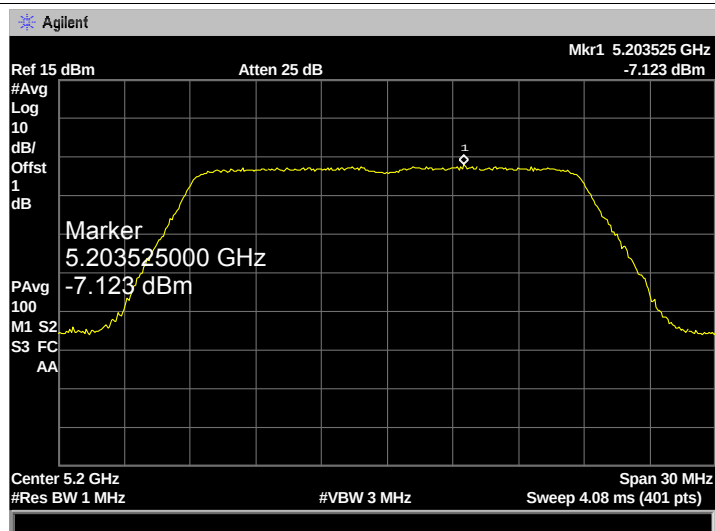
802.11 n(20) 5240 MHz



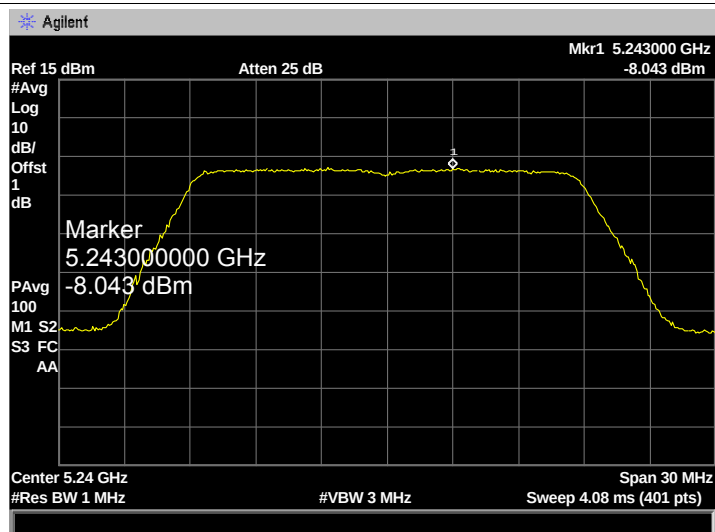
802.11 ac(20) 5180 MHz



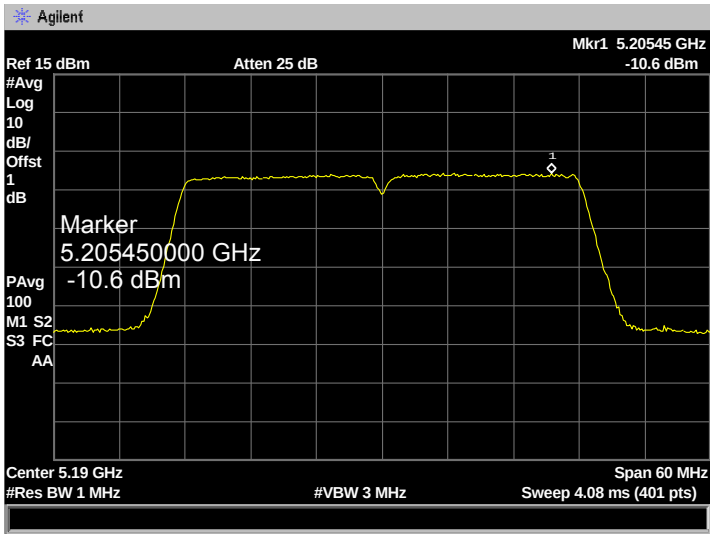
802.11 ac(20) 5200 MHz



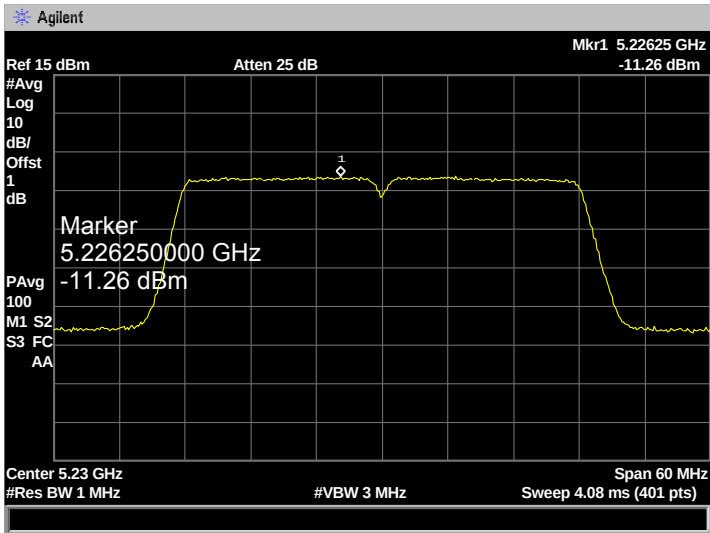
802.11 ac(20) 5240 MHz



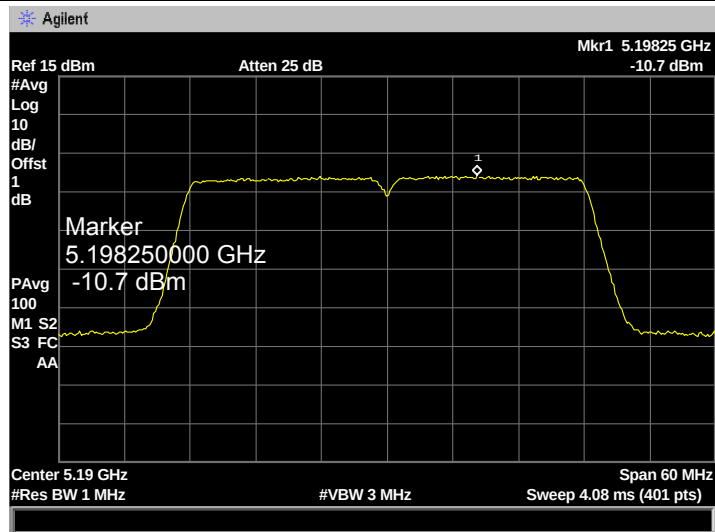
802.11 n(40) 5190 MHz



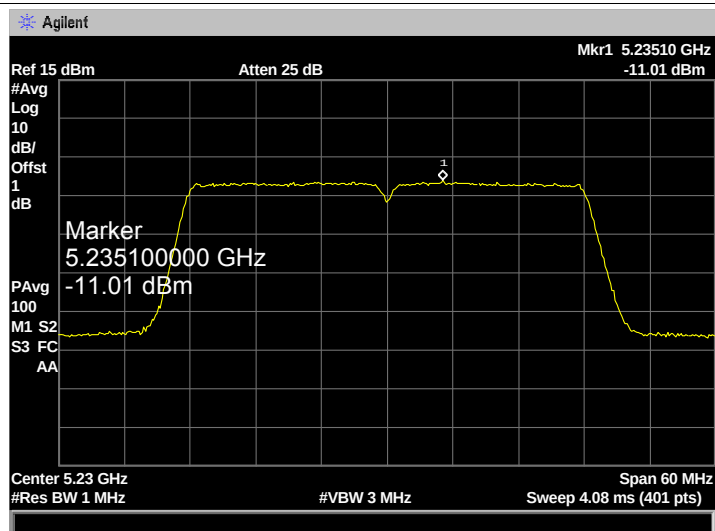
802.11 n(40) 5230 MHz



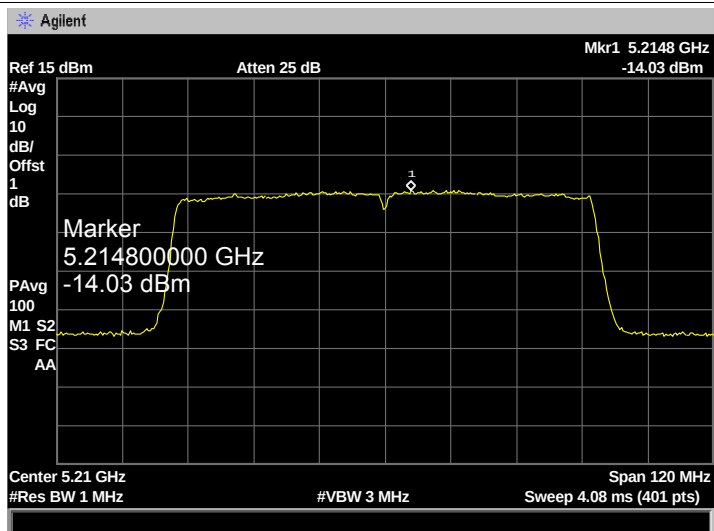
802.11 ac(40) 5190 MHz



802.11 ac(40) 5230 MHz

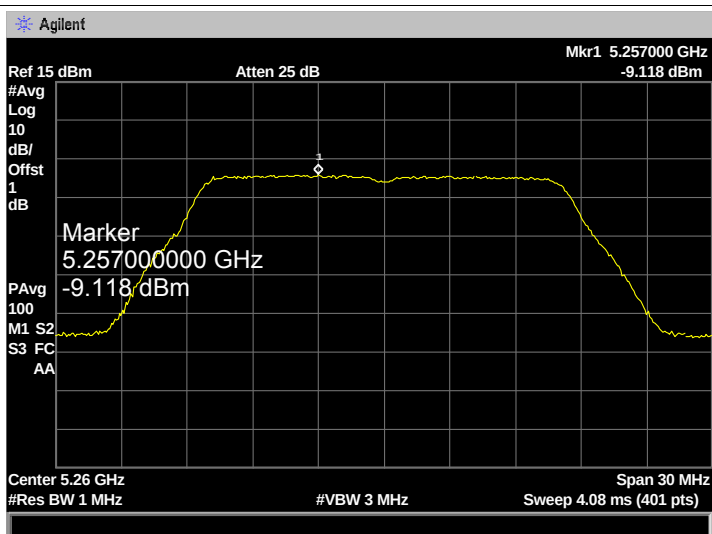


802.11 ac(80) 5210 MHz

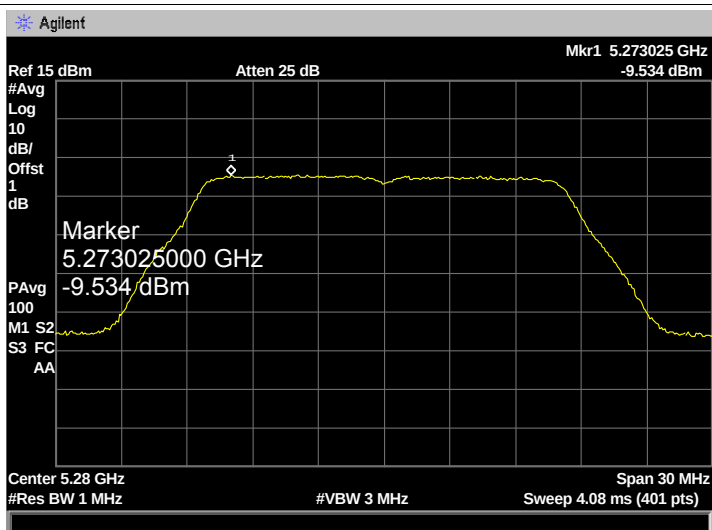


EUT:	Loop	Model Name :	Loop-1	
Temperature:	25 °C	Relative Humidity:	55%	
Test Voltage:	AC 120V/60Hz			
U-NII-2A				
Test Mode	Frequency (MHz)	Test Data	Limit (dBm)	
		Power Density (dBm/MHz)		
802.11a	5260	-9.118	10.5	
	5280	-9.534		
	5320	-9.694		
802.11n (HT20)	5260	-9.130		
	5280	-9.185		
	5320	-9.928		
802.11ac (HT20)	5260	-8.884		
	5280	-9.650		
	5320	-9.979		
802.11n (HT40)	5270	-12.640		
	5310	-13.070		
802.11ac(40)	5270	-12.680		
	5310	-13.250		
802.11ac(80)	5290	-15.270		
Result: PASS				
Remark: the Directional Gain=6.5dBi>6 dBi. So P _{out} =P _{limit} -(G _{TX} -6)] =11-0.5=10.5dBm				
Test plots please refer to below pages:				

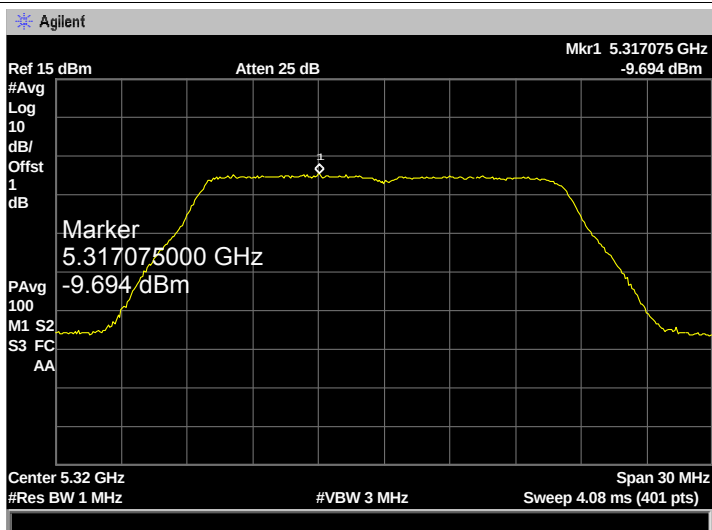
802.11 a 5260 MHz



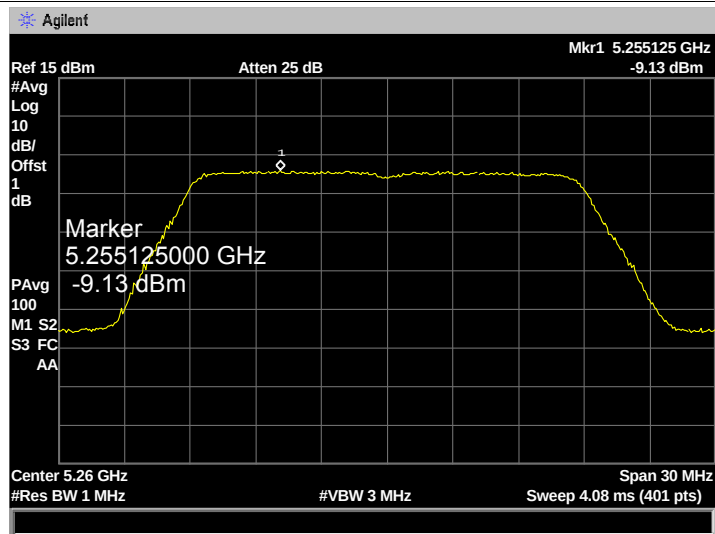
802.11 a 5280 MHz



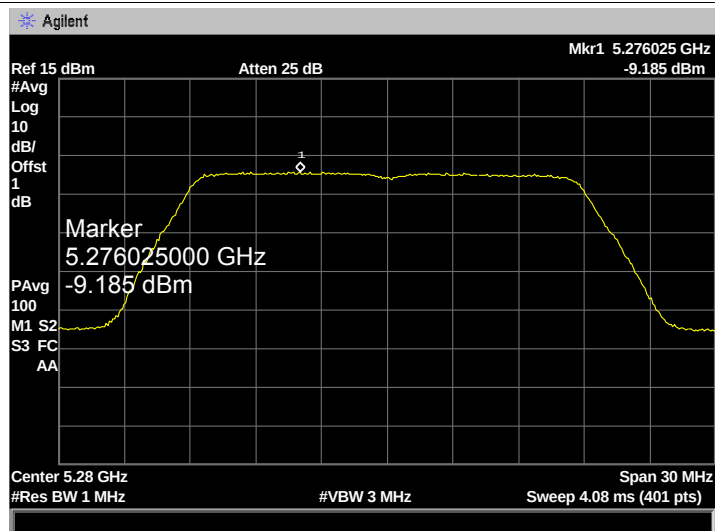
802.11 a 5320 MHz



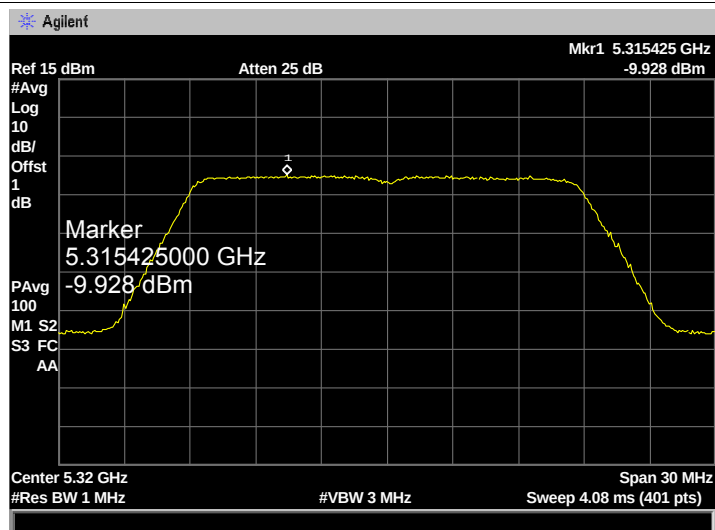
802.11 n(20) 5260 MHz



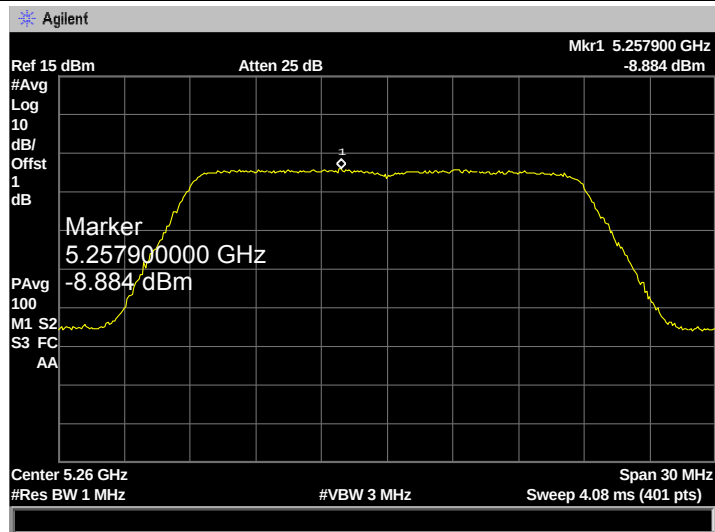
802.11 n(20) 5280 MHz



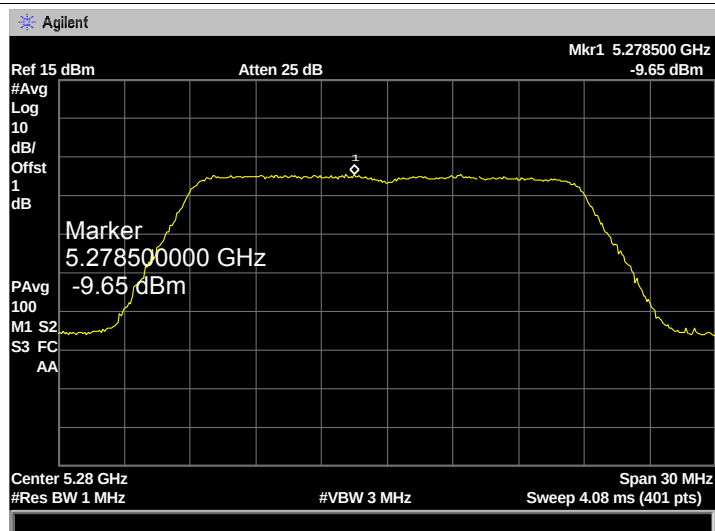
802.11 n(20) 5320 MHz



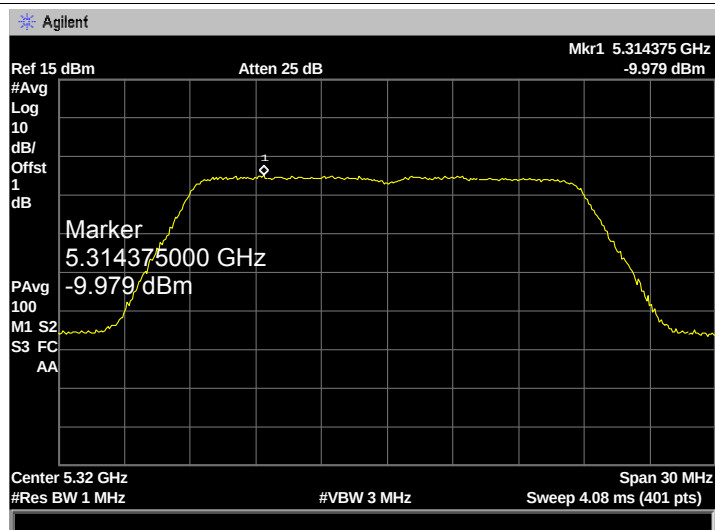
802.11 ac(20) 5260 MHz



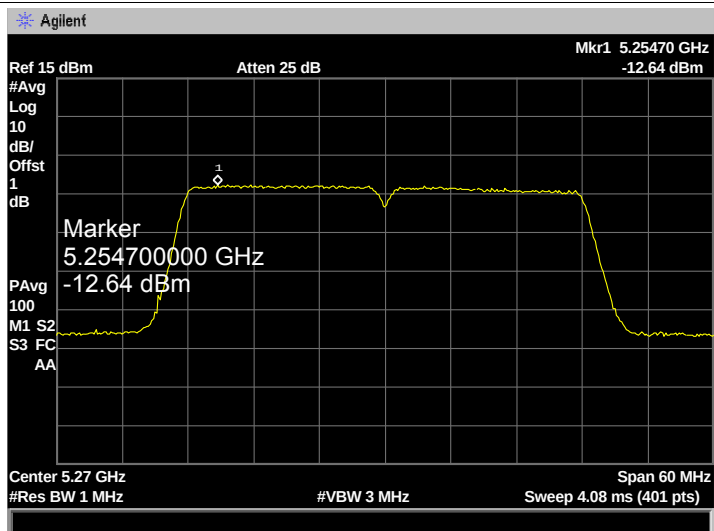
802.11 ac(20) 5280 MHz



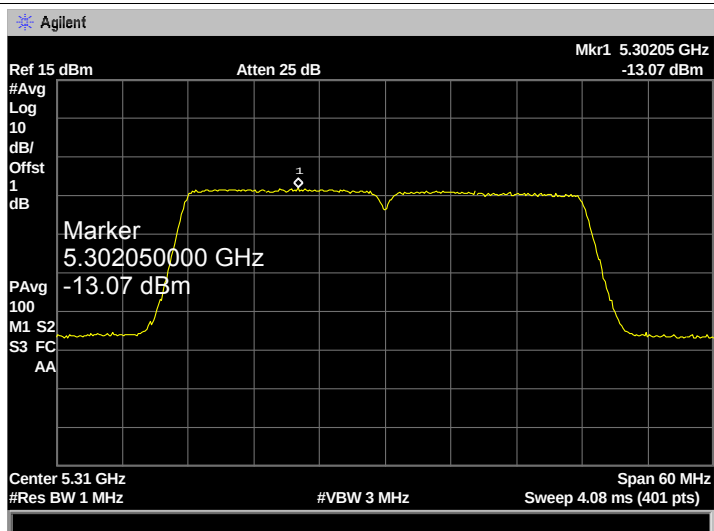
802.11 ac(20) 5320 MHz



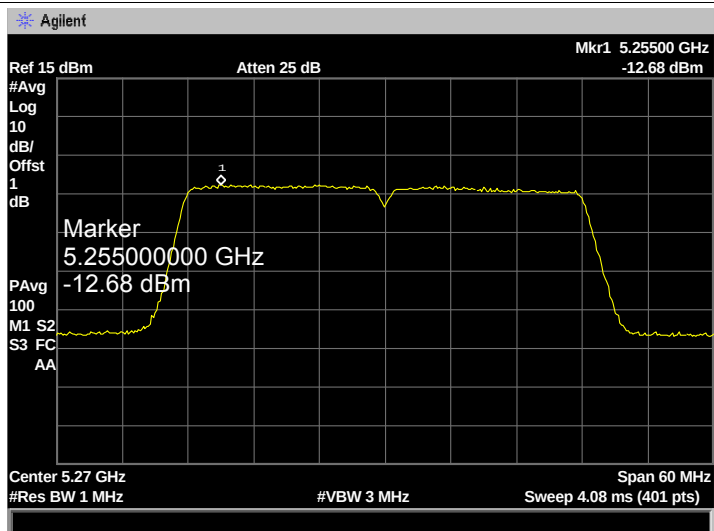
802.11 n(40) 5270 MHz



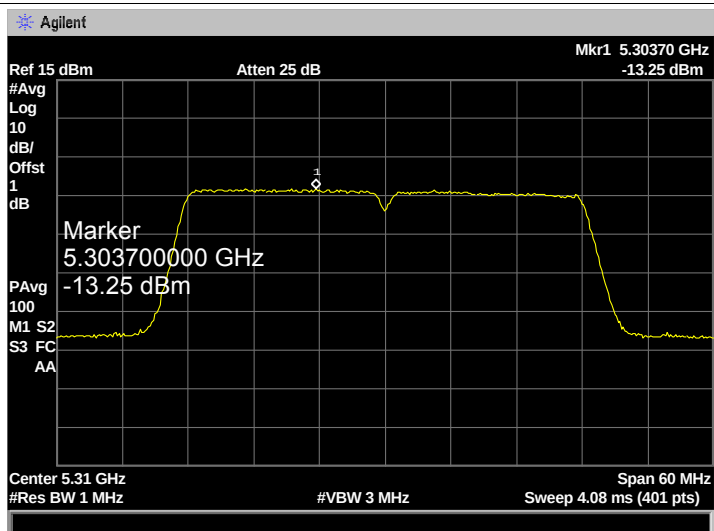
802.11 n(40) 5310 MHz

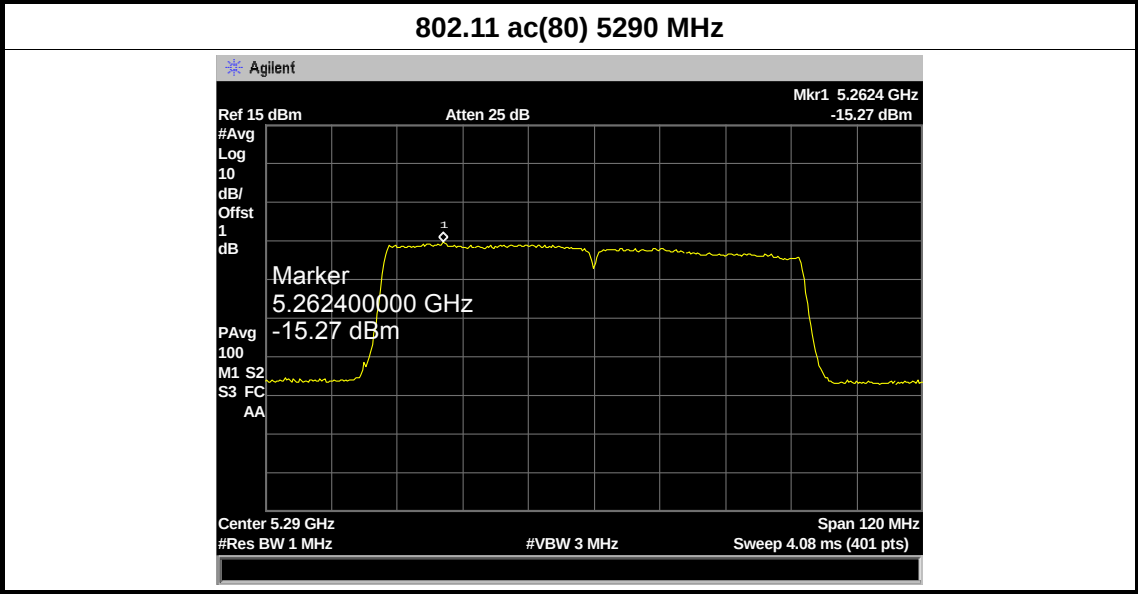


802.11 ac(40) 5270 MHz



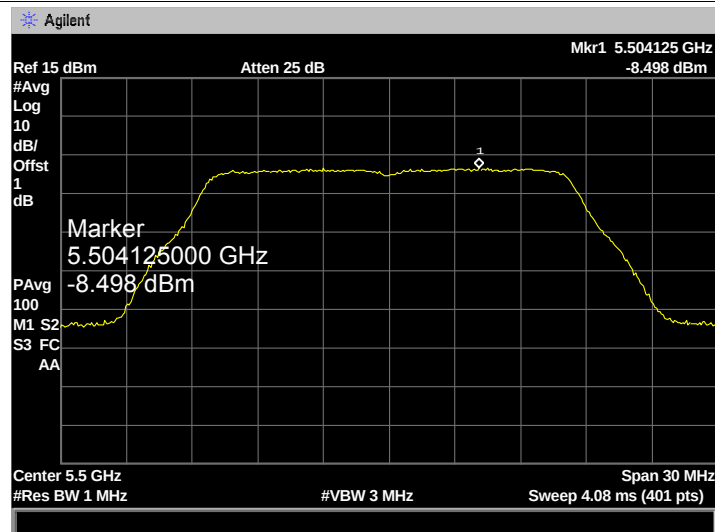
802.11 ac(40) 5310 MHz



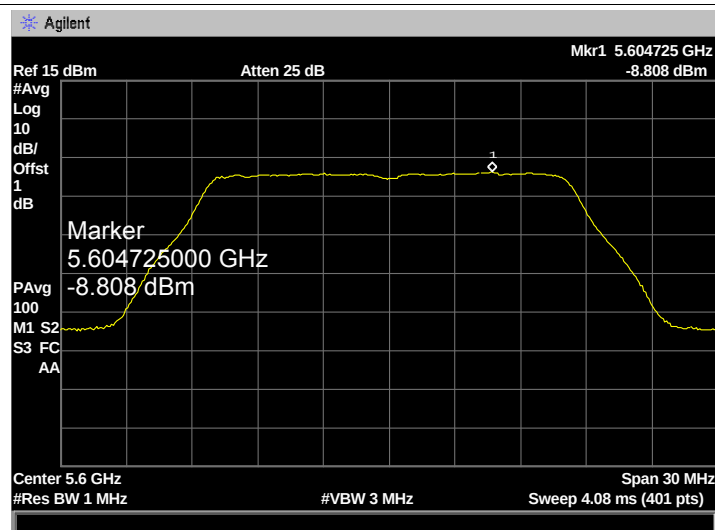


EUT:	Loop	Model Name :	Loop-1	
Temperature:	25 °C	Relative Humidity:	55%	
Test Voltage:	AC 120V/60Hz			
U-NII-2C				
Test Mode	Frequency (MHz)	Test Data	Limit (dBm)	
		Power Density (dBm/MHz)		
802.11a	5500	-8.498	10.5	
	5600	-8.808		
	5700	-7.382		
802.11n (HT20)	5500	-8.271		
	5600	-8.874		
	5700	-7.721		
802.11ac (HT20)	5500	-7.800		
	5600	-8.663		
	5700	-7.848		
802.11n (HT40)	5510	-11.870		
	5590	-11.780		
	5710	-10.930		
802.11ac(40)	5510	-11.890		
	5590	-10.650		
	5710	-9.510		
802.11ac(80)	5530	-14.510		
	5610	-14.810		
	5690	-14.000		
Result: PASS				
Remark: the Directional Gain=6.5dBi>6 dBi. So $P_{out} = P_{limit} - (G_{TX} - 6) = 11 - 0.5 = 10.5 \text{ dBm}$				
Test plots please refer to below pages:				

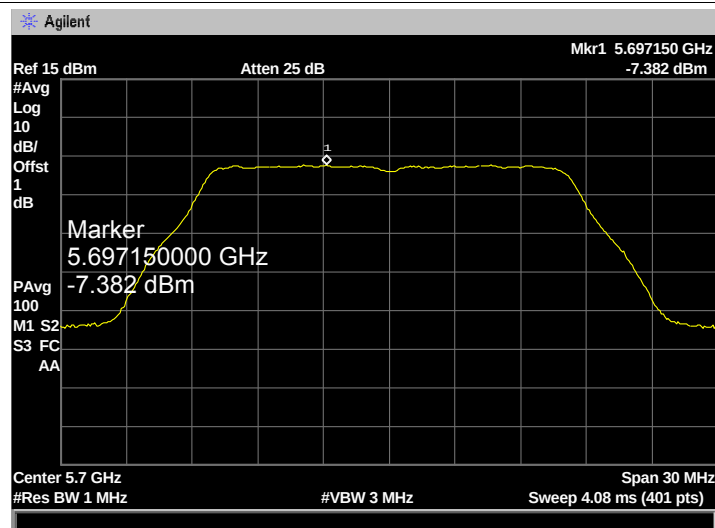
802.11 a 5500 MHz



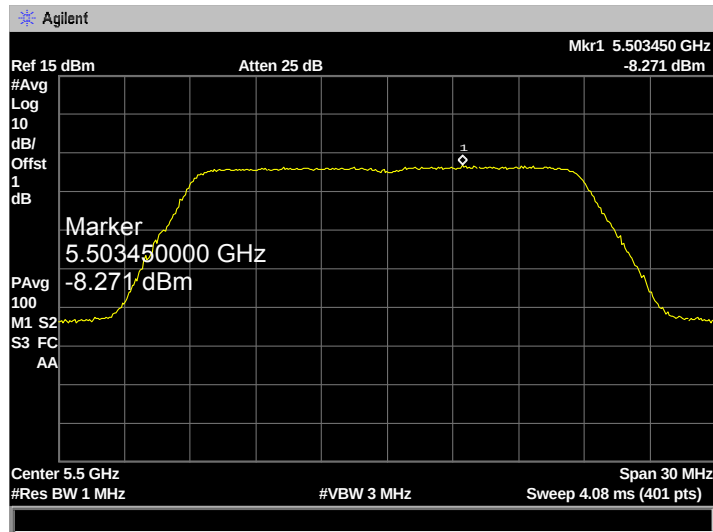
802.11 a 5600 MHz



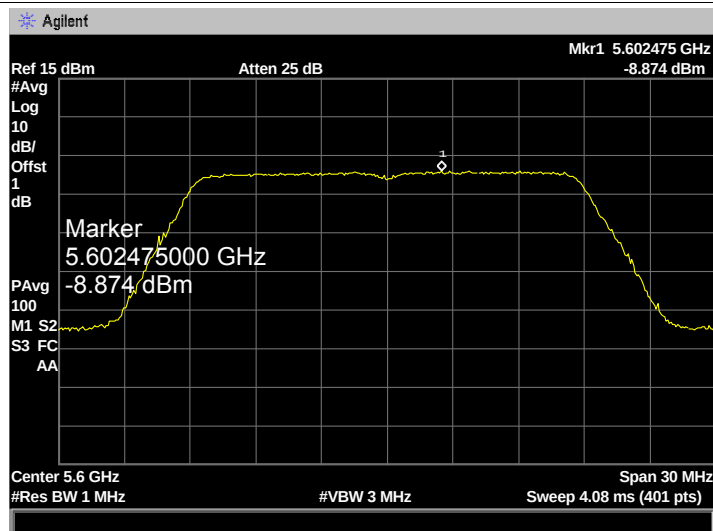
802.11 a 5700 MHz



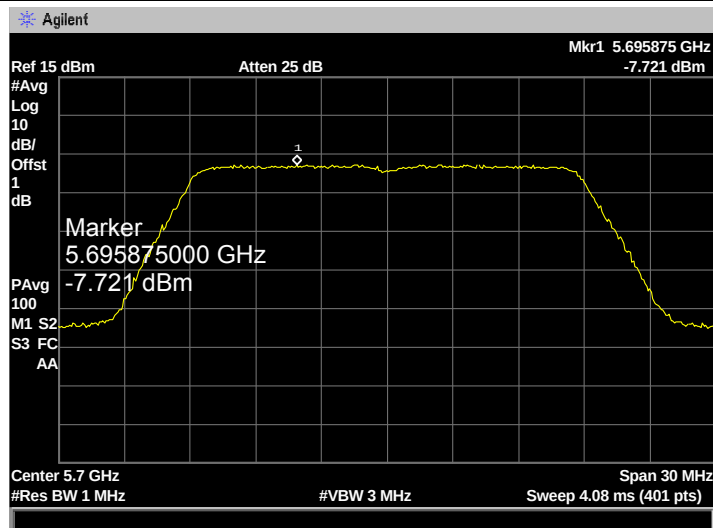
802.11 n(20) 5500 MHz



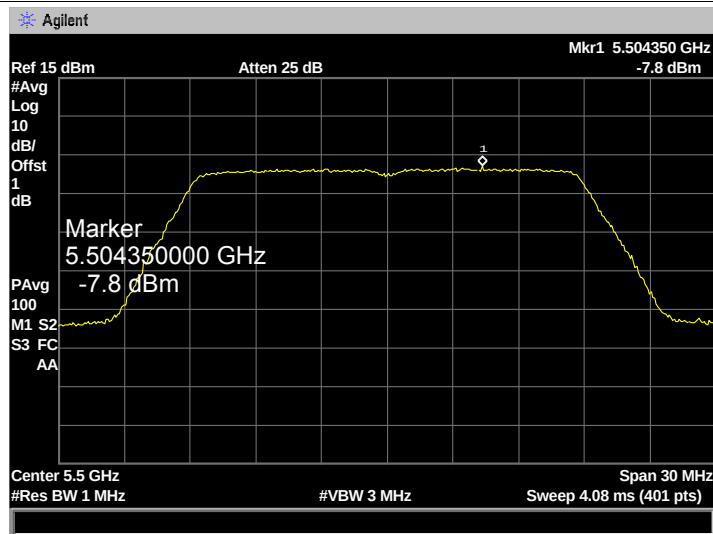
802.11 n(20) 5600 MHz



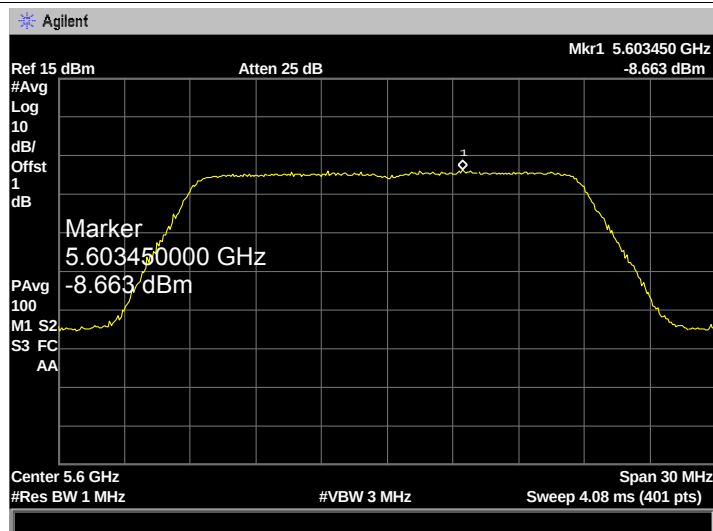
802.11 n(20) 5700 MHz



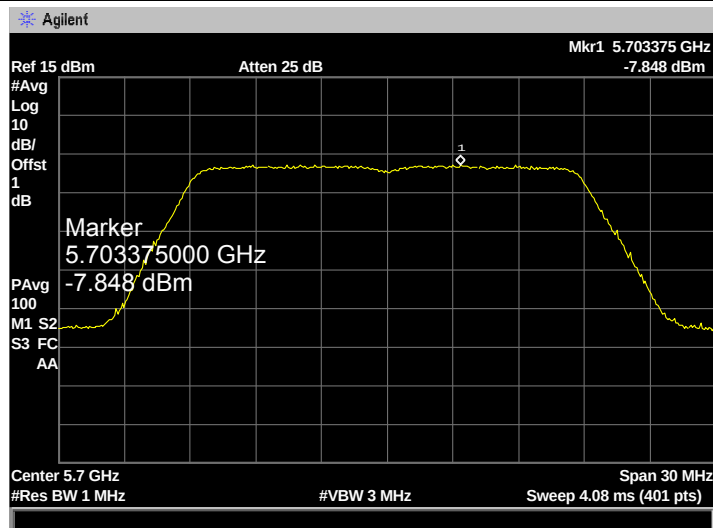
802.11 ac(20) 5500 MHz



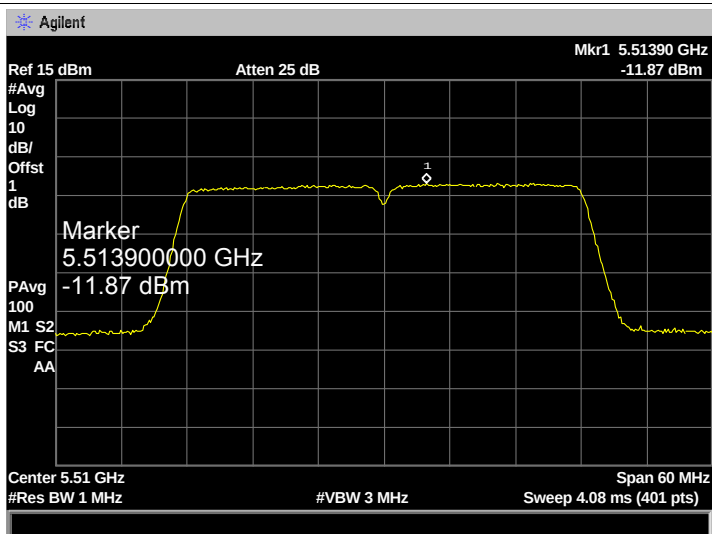
802.11 ac(20) 5600 MHz



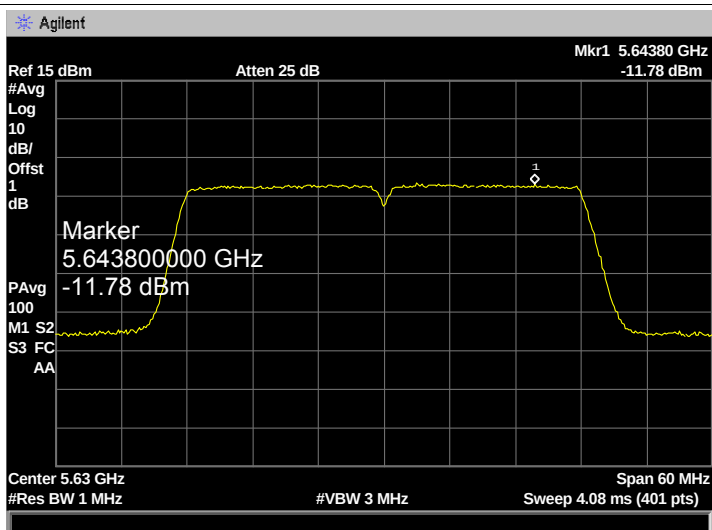
802.11 ac(20) 5700 MHz



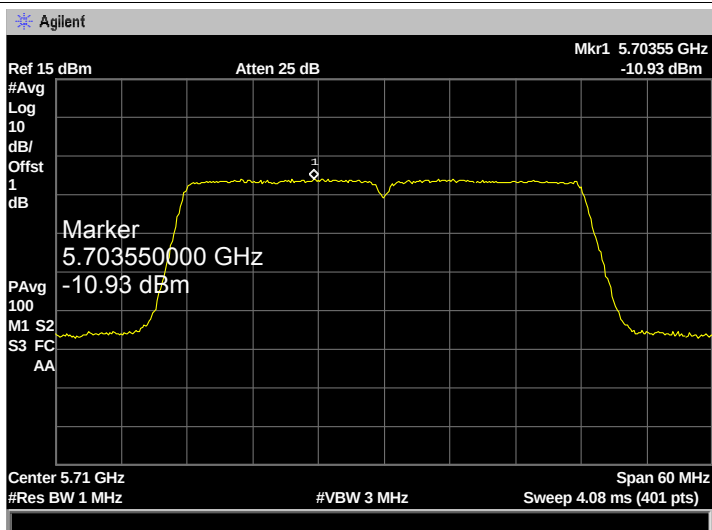
802.11 n(40) 5510 MHz



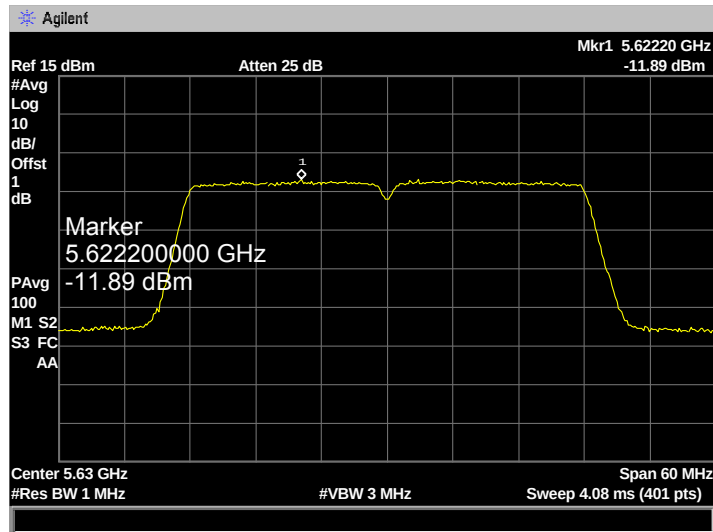
802.11 n(40) 5590 MHz



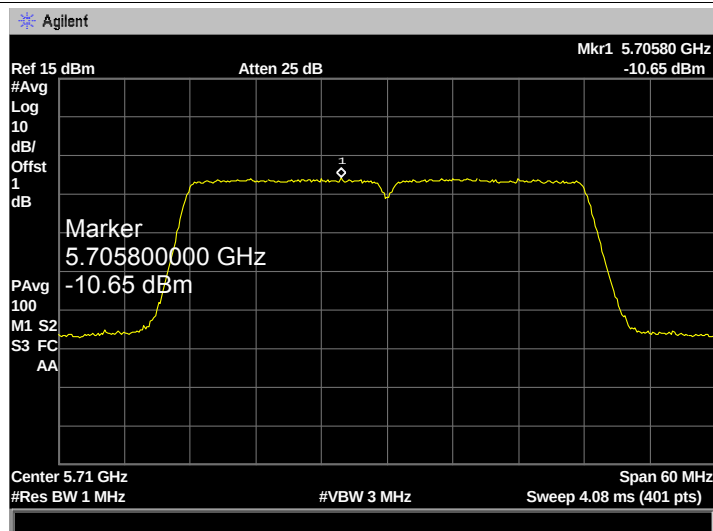
802.11 n(40) 5710 MHz



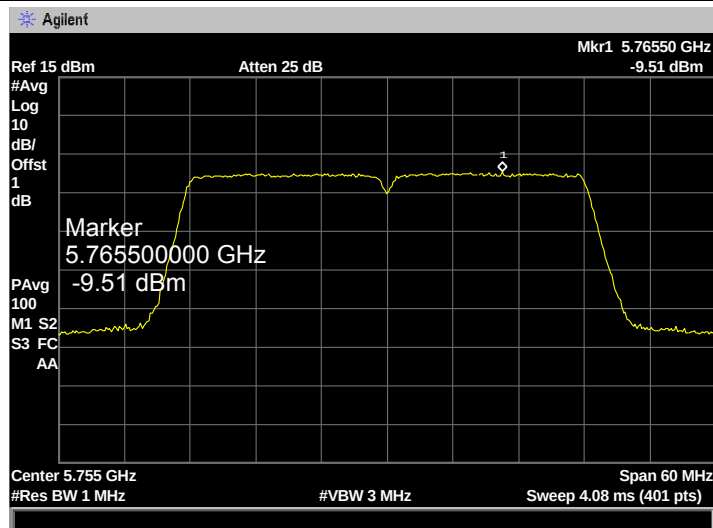
802.11 ac(40) 5510 MHz



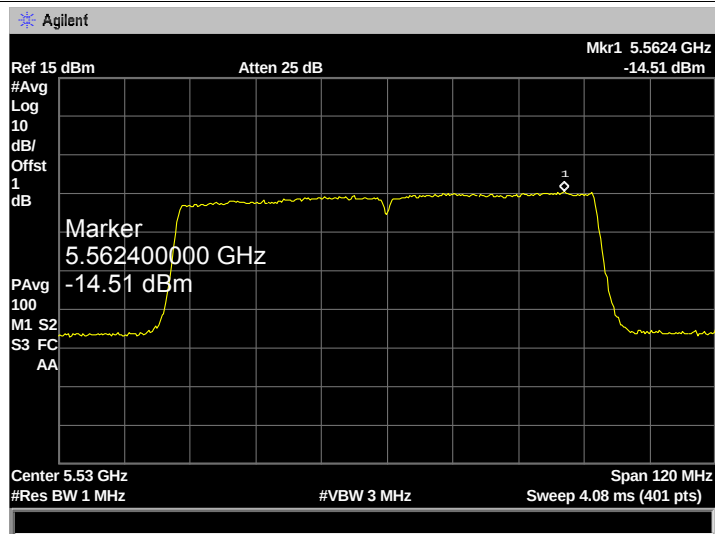
802.11 ac(40) 5590 MHz



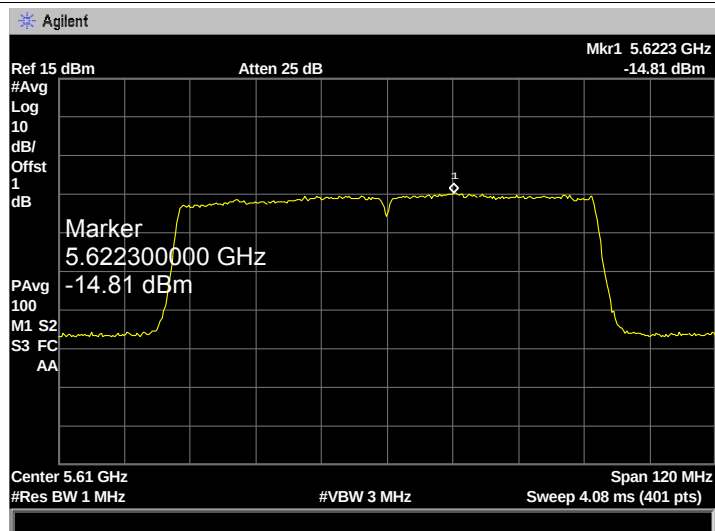
802.11 ac(40) 5710 MHz



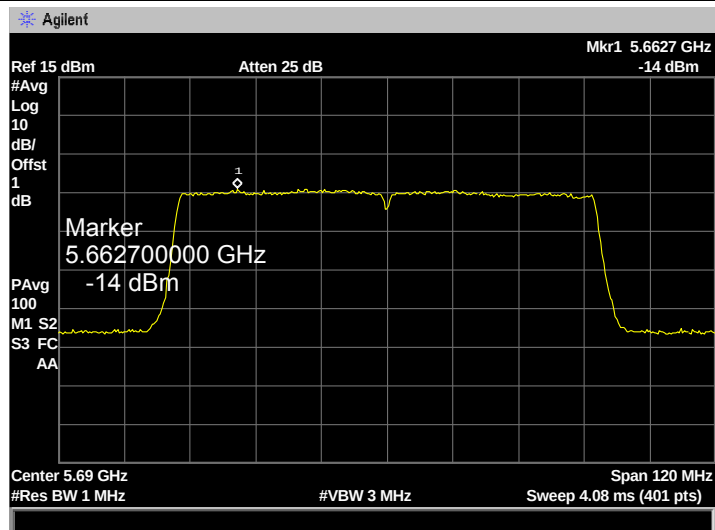
802.11 ac(80) 5530 MHz



802.11 ac(80) 5610 MHz

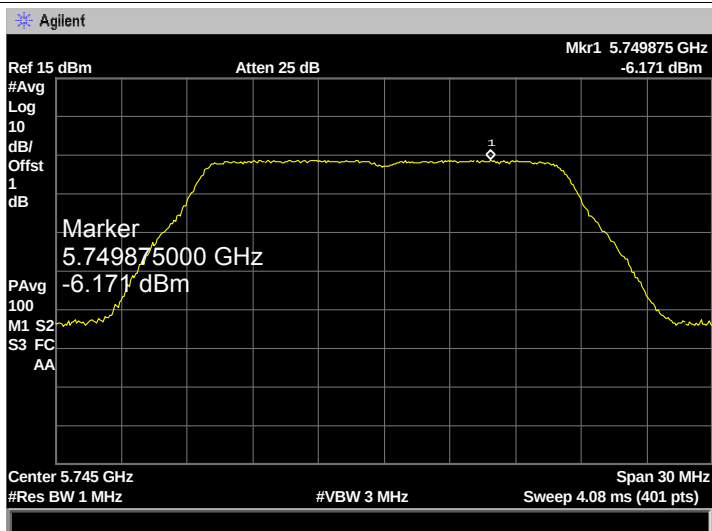


802.11 ac(80) 5690 MHz

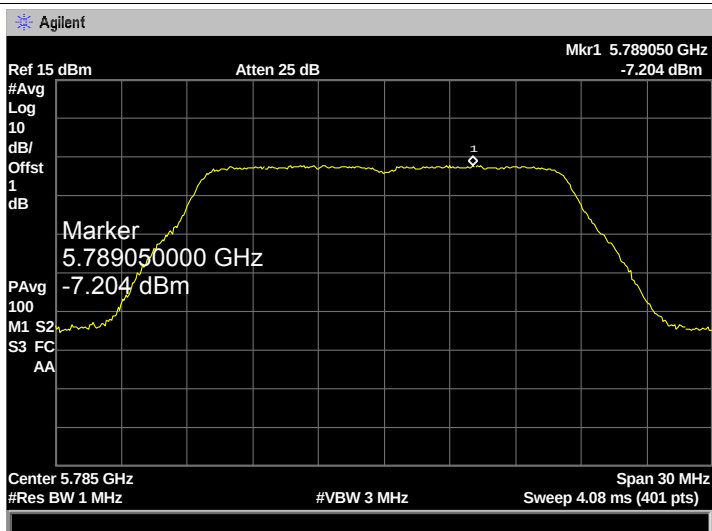


EUT:	Loop	Model Name :	Loop-1	
Temperature:	25 °C	Relative Humidity:	55%	
Test Voltage:	AC 120V/60Hz			
U-NII-3				
Test Mode	Frequency (MHz)	Test Data	Limit (dBm)	
		Power Density (dBm/MHz)		
802.11a	5745	-6.171	29.5	
	5785	-7.204		
	5825	-10.430		
802.11n (HT20)	5745	-6.511		
	5785	-7.372		
	5825	-8.329		
802.11ac (HT20)	5745	-6.221		
	5785	-7.440		
	5825	-8.448		
802.11n (HT40)	5755	-9.557		
	5795	-10.920		
802.11ac(40)	5755	-10.890		
	5795	-11.820		
802.11ac(80)	5775	-13.270		
Result: PASS				
Remark: the Directional Gain=6.5dBi>6 dBi. So $P_{out} = P_{limit} - (G_{TX} - 6) = 30 - 0.5 = 29.5 \text{ dBm}$				
Test plots please refer to below pages:				

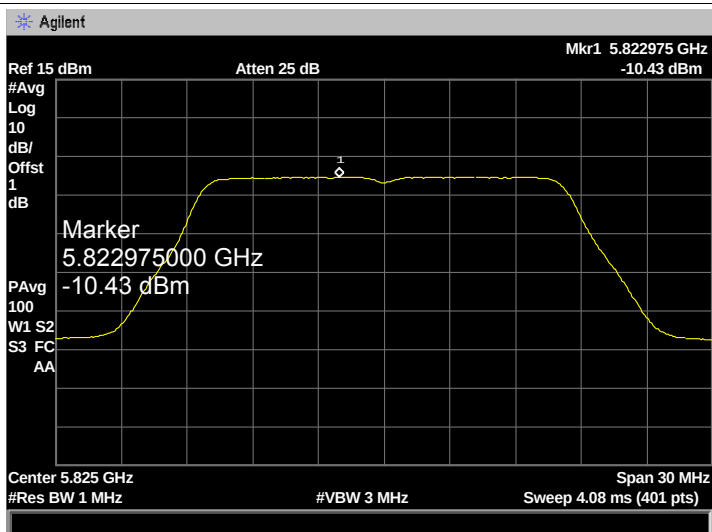
802.11 a 5745 MHz



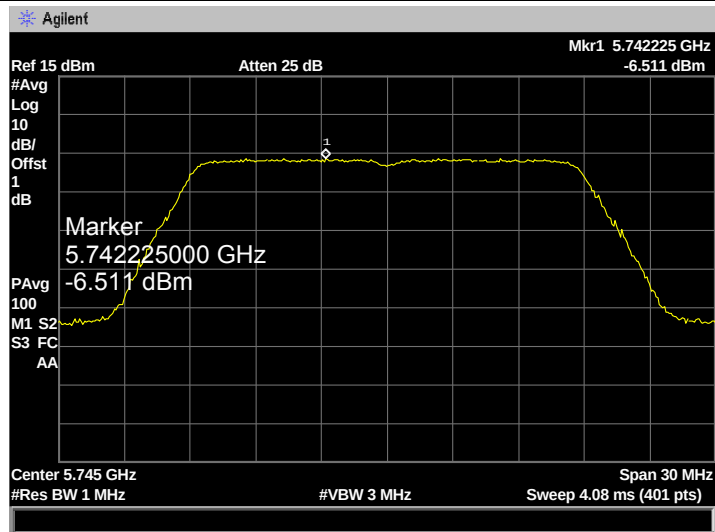
802.11 a 5785 MHz



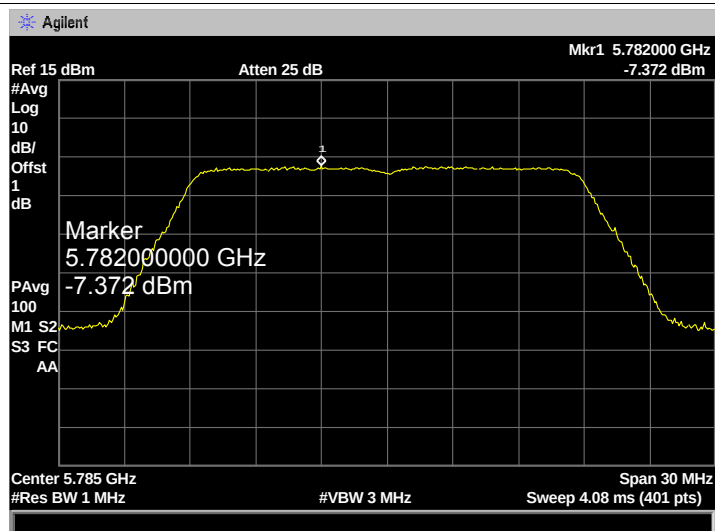
802.11 a 5825 MHz



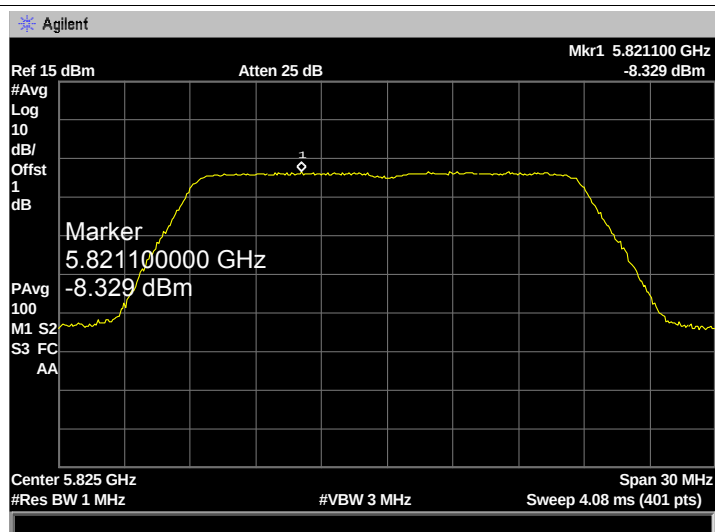
802.11 n(20) 5745 MHz



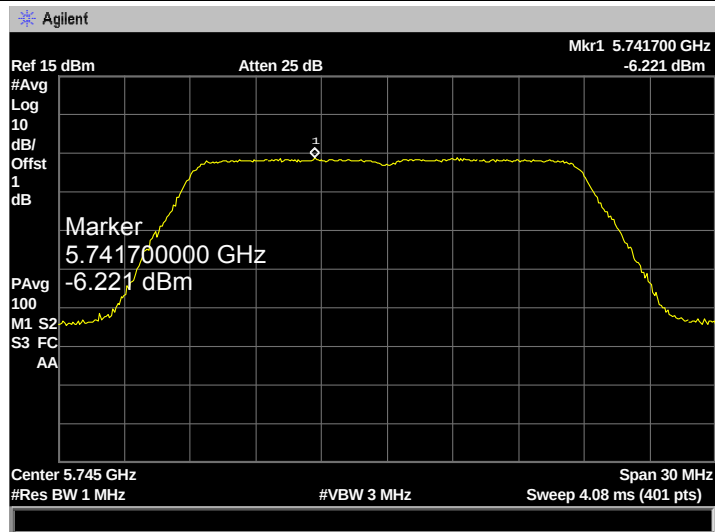
802.11 n(20) 5785 MHz



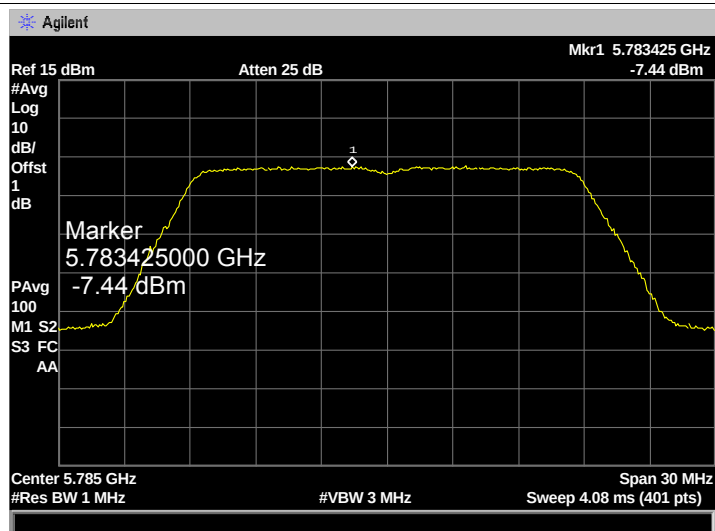
802.11 n(20) 5825 MHz



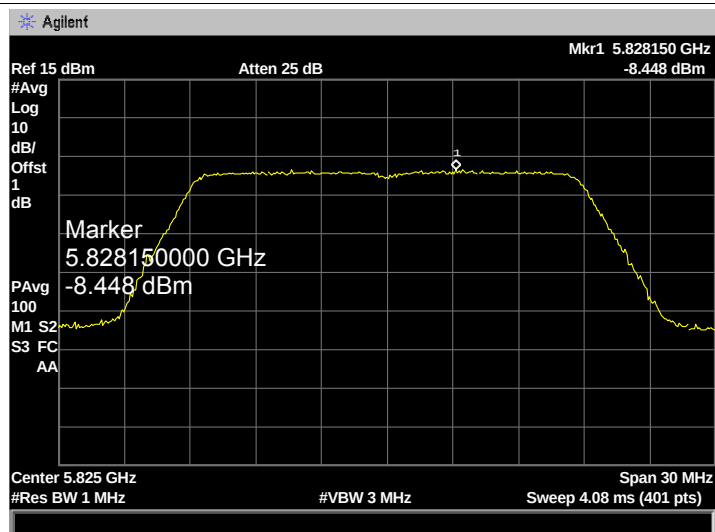
802.11 ac(20) 5745 MHz



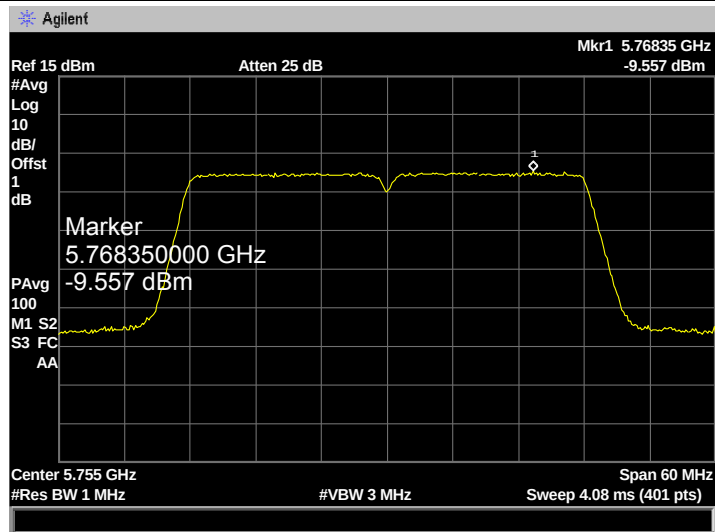
802.11 ac(20) 5785 MHz



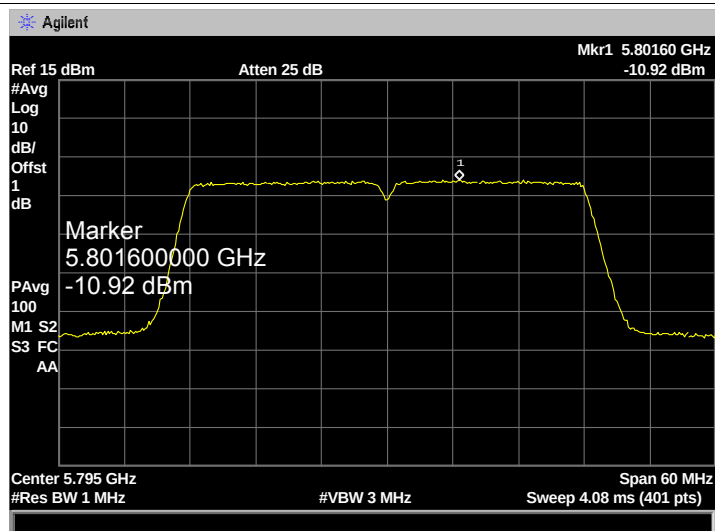
802.11 ac(20) 5825 MHz



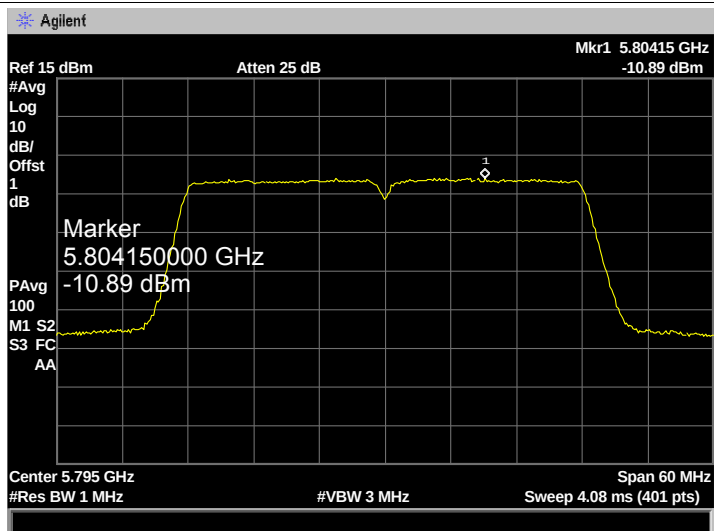
802.11 n(40) 5755 MHz



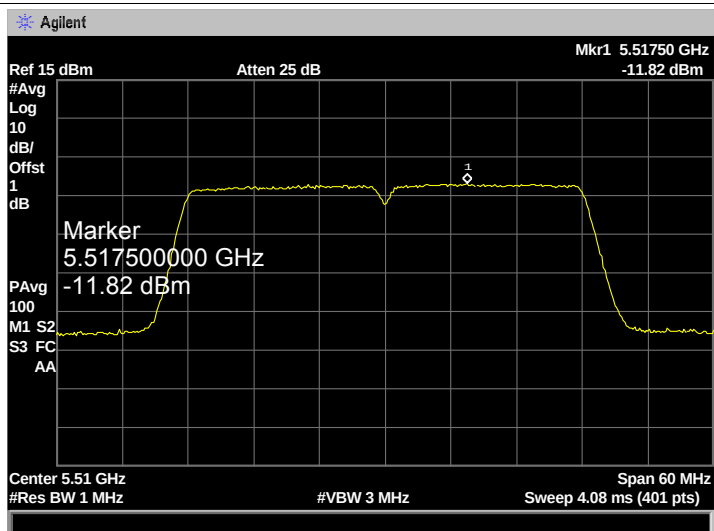
802.11 n(40) 5795 MHz

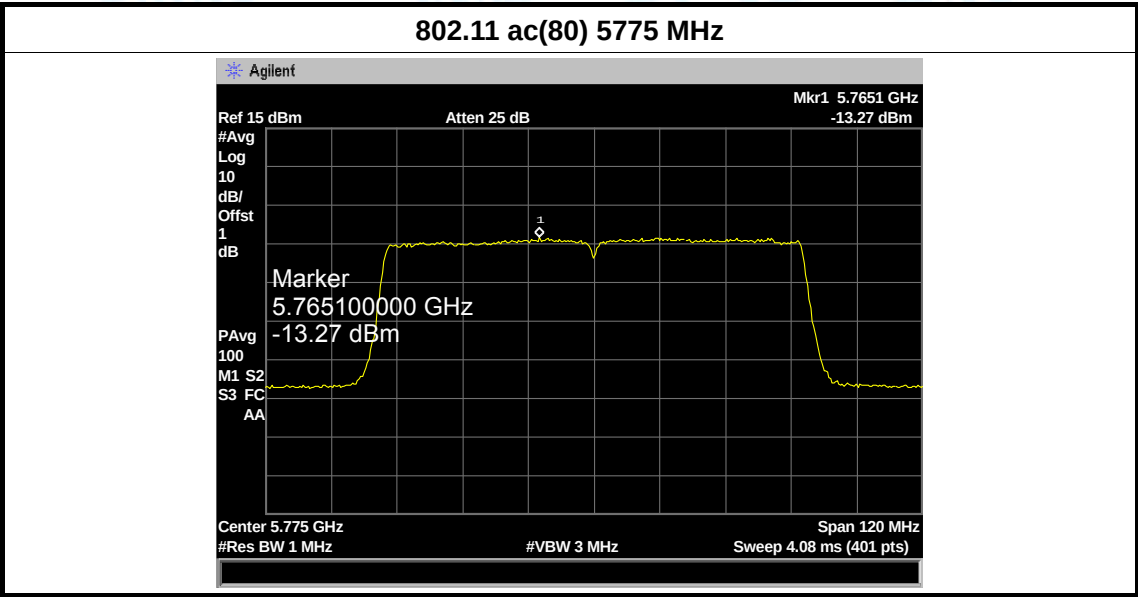


802.11 ac(40) 5755 MHz



802.11 ac(40) 5795 MHz





10. Frequency Stability Measurement

10.1 Test Standard and Limit

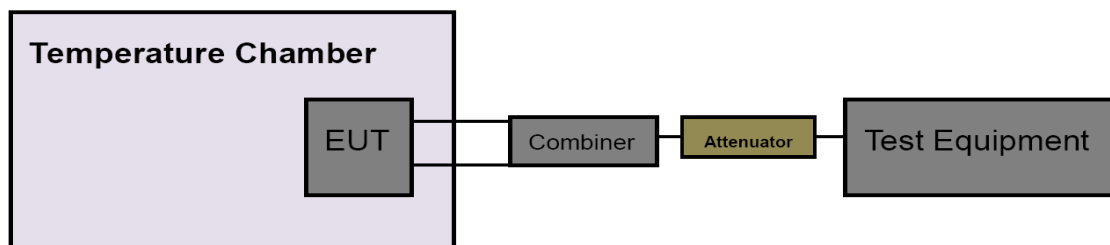
10.1.1 Test Standard

FCC Part 15.407

10.1.2 Test Limit

FCC Part 15 Subpart C(15.407)		
Test Item	Limit	Frequency Range(MHz)
Peak Excursion Measurement	Specified in the user's manual, the transmitter center frequency tolerance shall be ± 20 ppm maximum for the 5 GHz band (IEEE 802.11n specification)	5150~5250
		5250~5350
		5500~5700
		5725~5850

10.2 Test Setup



10.3 Test Procedure

The EUT was directly connected to the Spectrum Analyzer and antenna output port as show in the block diagram above.

- (1) The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram above.
- (2) Set analyser centre frequency to transmitting frequency.
- (3) Set the span to encompass the entire emissions bandwidth (EBW) of the signal.
- (4) Set the RBW to: 10 kHz, VBW=10 kHz with peak detector and maxhold settings.
- (5) The test extreme voltage is to change the primary supply voltage from 85 to 115 percent of the nominal value.
- (6) Extreme temperature is 0°C~50°C

10.4 EUT Operating Condition

The EUT was set to continuously transmitting in continuously un-modulation transmitting mode.

10.5 Test Data

801.11a U-NII-1: 5180 MHz	
Voltage vs. Frequency Stability	
Voltage (V)	Measurement Frequency (MHz)
132	5179.9926
120	5179.9954
118	5179.9975
Max. Deviation (MHz)	0.0074
Max. Deviation (ppm)	1.42
Temperature vs. Frequency Stability	
Temperature (°C)	Measurement Frequency (MHz)
0	5179.9928
10	5179.9947
20	5179.9966
30	5179.9973
40	5179.9978
50	5179.9988
Max. Deviation (MHz)	0.0072
Max. Deviation (ppm)	1.38
Limit (ppm)	20
Result	Pass

801.11a U-NII-2A: 5260 MHz	
Voltage vs. Frequency Stability	
Voltage (V)	Measurement Frequency (MHz)
132	5280.0024
120	5280.0054
118	5280.0037
Max. Deviation (MHz)	0.0054
Max. Deviation (ppm)	1.42
Temperature vs. Frequency Stability	
Temperature (°C)	Measurement Frequency (MHz)
0	5280.0071
10	5280.0026
20	5280.0048
30	5280.0035
40	5280.0042
50	5280.0047
Max. Deviation (MHz)	0.0071
Max. Deviation (ppm)	1.35
Limit (ppm)	20
Result	Pass

801.11a U-NII-2C: 5500 MHz	
Voltage vs. Frequency Stability	
Voltage (V)	Measurement Frequency (MHz)
132	5499.9942
120	5499.9934
118	5499.9953
Max. Deviation (MHz)	0.0066
Max. Deviation (ppm)	1.42
Temperature vs. Frequency Stability	
Temperature (°C)	Measurement Frequency (MHz)
0	5499.9929
10	5499.9937
20	5499.9941
30	5499.9957
40	5499.9917
50	5499.9933
Max. Deviation (MHz)	0.0074
Max. Deviation (ppm)	1.51
Limit (ppm)	20
Result	Pass

801.11a U-NII-3: 5745 MHz	
Voltage vs. Frequency Stability	
Voltage (V)	Measurement Frequency (MHz)
132	5745.0086
120	5745.0092
118	5745.0098
Max. Deviation (MHz)	0.0098
Max. Deviation (ppm)	1.71
Temperature vs. Frequency Stability	
Temperature (°C)	Measurement Frequency (MHz)
0	5745.0023
10	5745.0016
20	5745.0018
30	5745.0026
40	5745.0033
50	5745.0068
Max. Deviation (MHz)	0.0068
Max. Deviation (ppm)	1.18
Limit (ppm)	20
Result	Pass

11. Antenna Requirement

11.1 Standard Requirement

11.1.1 Standard

FCC Part 15.203

11.1.2 Requirement

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. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this Section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

11.2 Antenna Connected Construction

The directional gains of the antenna used for transmitting is 6.5 dBi, and the antenna de-signed with permanent attachment and no consideration of replacement. Please see the EUT photo for details.

11.3 Result

The EUT antennas are PIFA Antenna. It complies with the standard requirement.

Antenna Type
☐ Permanent attached antenna
☒ Unique connector antenna
☐ Professional installation antenna