

Radiated Spurious Emissions data(9 kHz ~ 40 GHz) : MIMO(SDM) & 802.11ac(VHT80)

Band	Tested Channel	Freq. (MHz)	ANT Pol	EUT Position (Axis)	Detector Mode	Reading (dBuV)	T.F (dB/m)	DCCF (dB)	DCF (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
U-NII 1	42 (5210 MHz)	5148.81	V	Z	PK	50.77	6.49	N/A	N/A	57.26	74.00	16.74
		5149.09	V	Z	AV	37.68	6.49	0.60	N/A	44.77	54.00	9.23
		10418.94	V	Z	PK	45.12	12.56	N/A	-9.54	48.14	68.20	20.06
U-NII 2A	58 (5290 MHz)	5350.98	V	Z	PK	52.45	6.70	N/A	N/A	59.15	74.00	14.85
		5350.44	V	Z	AV	40.89	6.70	0.60	N/A	48.19	54.00	5.81
		10579.21	V	Z	PK	44.47	12.90	N/A	-9.54	47.83	68.20	20.37
U-NII 2C	106 (5530 MHz)	5458.03	V	Z	PK	47.36	6.75	N/A	N/A	54.11	74.00	19.89
		5458.29	V	Z	AV	35.94	6.75	0.60	N/A	43.29	54.00	10.71
		5469.30	V	Z	PK	48.19	6.75	N/A	N/A	54.94	68.20	13.26
		11060.93	V	Z	PK	44.43	13.81	N/A	-9.54	48.70	74.00	25.30
		11060.85	V	Z	AV	34.82	13.81	0.60	-9.54	39.69	54.00	14.31
	122 (5610 MHz)	11218.45	V	Z	PK	44.24	13.98	N/A	-9.54	48.68	74.00	25.32
		11218.92	V	Z	AV	34.44	13.98	0.60	-9.54	39.48	54.00	14.52
	138 (5690 MHz)	11378.83	V	Z	PK	44.56	14.14	N/A	-9.54	49.16	74.00	24.84
		11379.23	V	Z	AV	34.59	14.14	0.60	-9.54	39.79	54.00	14.21
U-NII 3	155 (5775 MHz)	5714.06	V	Z	PK	56.71	7.25	N/A	N/A	63.96	68.20	4.24
		5723.93	V	Z	PK	60.93	7.43	N/A	N/A	68.36	78.20	9.84
		5854.84	V	Z	PK	56.81	7.79	N/A	N/A	64.60	78.20	13.60
		5869.36	V	Z	PK	54.44	7.83	N/A	N/A	62.27	68.20	5.93
		11549.61	V	Z	PK	44.37	14.31	N/A	-9.54	49.14	74.00	24.86
		11548.42	V	Z	AV	34.69	14.31	0.60	-9.54	40.06	54.00	13.94

Note.

1. No other spurious and harmonic emissions were found greater than listed emissions on above table.

2. Sample Calculation.

$$\text{Margin} = \text{Limit} - \text{Result} \quad / \quad \text{Result} = \text{Reading} + \text{T.F} + \text{DCCF} + \text{DCF} \quad / \quad \text{T.F} = \text{AF} + \text{CL} - \text{AG}$$

Where, T.F = Total Factor, AF = Antenna Factor, CL = Cable Loss, AG = Amplifier Gain,

DCCF = Duty Cycle Correction Factor, DCF = Distance Correction Factor

3. Information of Distance Factor

For finding emissions, the test distance might be reduced from 3m to 1m. In this case, the distance factor(-9.54dB) is applied to the result.

- Calculation of distance factor = $20 \log(\text{applied distance} / \text{required distance}) = 20 \log(1 \text{ m} / 3 \text{ m}) = -9.54 \text{ dB}$

When distance factor is "N/A", the distance is 3 m and distance factor is not applied.

4. The limit is converted to field strength.

$$E[\text{dBuV/m}] = \text{EIRP}[\text{dBm}] + 95.2 \text{ dB} = -27 \text{ dBm} + 95.2 = 68.2 \text{ dBuV/m}$$

8.6 AC Conducted Emissions

■ Test Requirements and limit, §15.207

For an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table, as measured using a 50 μ H/50 ohms line impedance stabilization network (LISN).

Frequency Range (MHz)	Conducted Limit (dBuV)	
	Quasi-Peak	Average
0.15 ~ 0.5	66 to 56 *	56 to 46 *
0.5 ~ 5	56	46
5 ~ 30	60	50

* Decreases with the logarithm of the frequency

Compliance with this provision shall be based on the measurement of the radio frequency voltage between each power line (LINE and NEUTRAL) and ground at the power terminals.

■ Test Configuration

See test photographs for the actual connections between EUT and support equipment.

■ Test Procedure

Conducted emissions from the EUT were measured according to the ANSI C63.10-2013.

1. The test procedure is performed in a 6.5 m $\times$ 3.5 m $\times$ 3.5 m (L $\times$ W $\times$ H) shielded room. The EUT along with its peripherals were placed on a 1.0 m (W) $\times$ 1.5 m (L) and 0.8 m in height wooden table and the EUT was adjusted to maintain a 0.4 meter space from a vertical reference plane.
2. The EUT was connected to power mains through a line impedance stabilization network (LISN) which provides 50 ohm coupling impedance for measuring instrument and the chassis ground was bounded to the horizontal ground plane of shielded room.
3. All peripherals were connected to the second LISN and the chassis ground also bounded to the horizontal ground plane of shielded room.
4. The excess power cable between the EUT and the LISN was bundled. The power cables of peripherals were unbundled. All connecting cables of EUT and peripherals were moved to find the maximum emission.

■ Test Results: **Comply**

Note 1: See next pages for actual measured spectrum plots and data for worst case result.

AC Line Conducted Emissions (Graph)

Test Mode: U-NII 1 & 802.11a & MIMO(CDD) & 5240 MHz

Results of Conducted Emission

DTNC

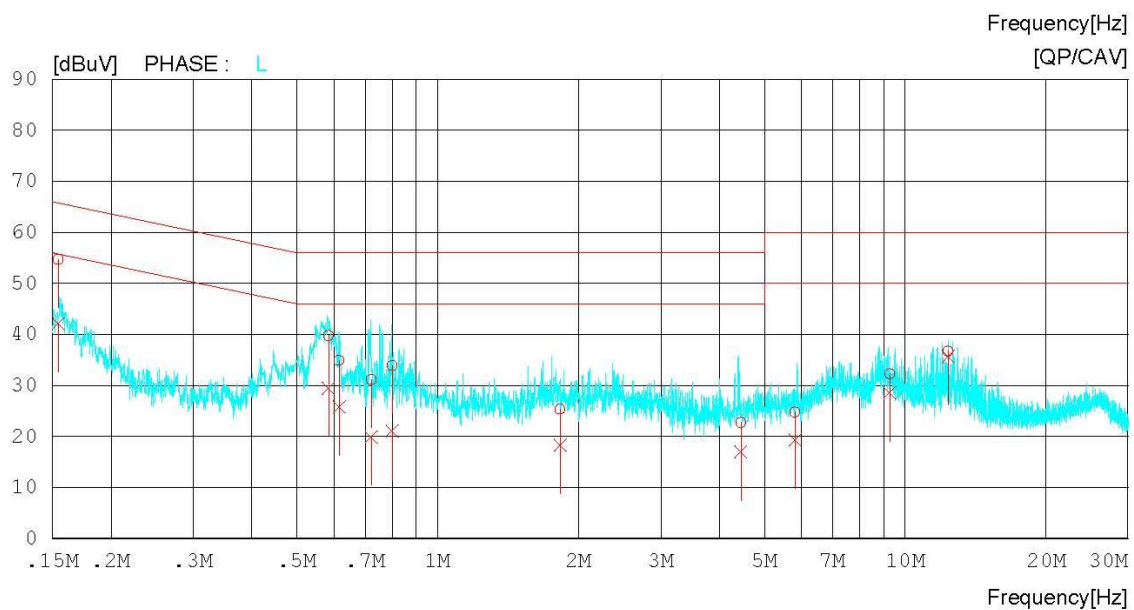
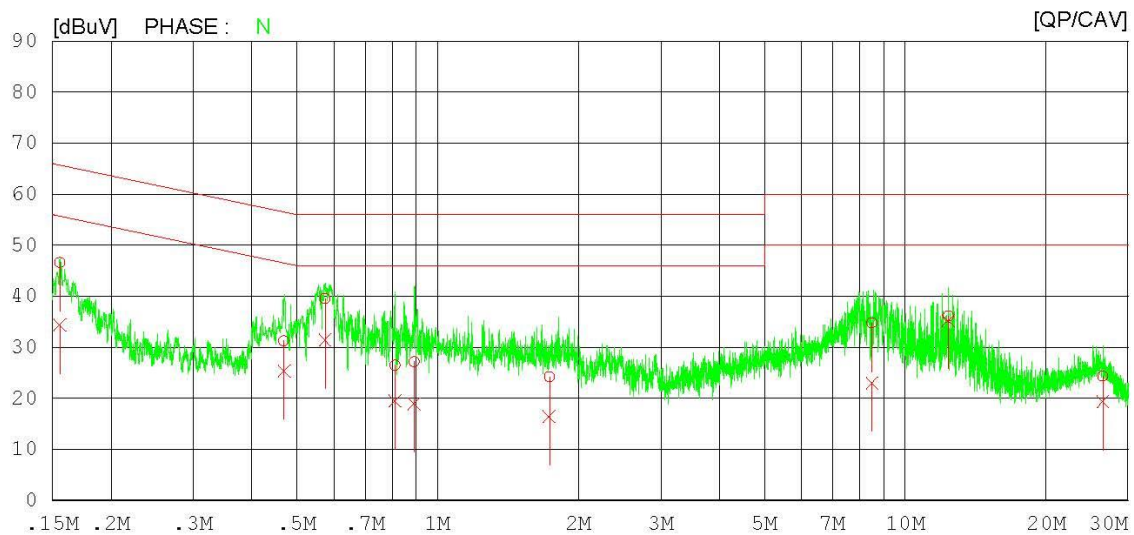
Date 2019-12-06

Order No.
Model No. LF-F200U
Serial No.
Test Condition 5.1G WLAN

Reference No.
Power Supply 120 V, 60 Hz
Temp/Humi. 23 'C / 39 %
Operator InHee Bae

Memo

LIMIT : FCC P15.207 QP
FCC P15.207 AV



AC Line Conducted Emissions (Data List)

Test Mode: U-NII 1 & 802.11a & MIMO(CDD) & 5240 MHz

Results of Conducted Emission

DTNC

Date 2019-12-06

Order No.		Reference No.	
Model No.	LF-F200U	Power Supply	120 V, 60 Hz
Serial No.		Temp/Humi.	23 °C / 39 %
Test Condition	5.1G WLAN	Operator	InHee Bae

Memo

LIMIT : FCC P15.207 QP
FCC P15.207 AV

NO	FREQ [MHz]	READING		C.FACTOR [dB]	RESULT		LIMIT		MARGIN		PHASE
		QP [dBuV]	CAV [dBuV]		QP [dBuV]	CAV [dBuV]	QP [dBuV]	CAV [dBuV]	QP [dBuV]	CAV [dBuV]	
1	0.15541	36.63	24.45	9.94	46.57	34.39	65.71	55.71	19.14	21.32	N
2	0.46901	21.28	15.39	9.95	31.23	25.34	56.53	46.53	25.30	21.19	N
3	0.57441	29.54	21.47	9.95	39.49	31.42	56.00	46.00	16.51	14.58	N
4	0.81054	16.48	9.52	9.97	26.45	19.49	56.00	46.00	29.55	26.51	N
5	0.89085	17.22	8.97	9.97	27.19	18.94	56.00	46.00	28.81	27.06	N
6	1.73320	14.20	6.41	10.01	24.21	16.42	56.00	46.00	31.79	29.58	N
7	8.48640	24.47	12.75	10.27	34.74	23.02	60.00	50.00	25.26	26.98	N
8	12.35820	25.69	24.83	10.41	36.10	35.24	60.00	50.00	23.90	14.76	N
9	26.45560	13.65	8.68	10.68	24.33	19.36	60.00	50.00	35.67	30.64	N
10	0.15453	44.68	32.18	9.94	54.62	42.12	65.75	55.75	11.13	13.63	L
11	0.58344	29.78	19.51	9.95	39.73	29.46	56.00	46.00	16.27	16.54	L
12	0.61511	24.91	15.88	9.96	34.87	25.84	56.00	46.00	21.13	20.16	L
13	0.72097	21.15	9.97	9.96	31.11	19.93	56.00	46.00	24.89	26.07	L
14	0.79928	23.90	11.09	9.96	33.86	21.05	56.00	46.00	22.14	24.95	L
15	1.82660	15.24	8.30	10.02	25.26	18.32	56.00	46.00	30.74	27.68	L
16	4.44640	12.57	6.83	10.13	22.70	16.96	56.00	46.00	33.30	29.04	L
17	5.80760	14.49	9.13	10.18	24.67	19.31	60.00	50.00	35.33	30.69	L
18	9.26840	21.92	18.21	10.32	32.24	28.53	60.00	50.00	27.76	21.47	L
19	12.35740	26.28	25.32	10.39	36.67	35.71	60.00	50.00	23.33	14.29	L

AC Line Conducted Emissions (Graph)

Test Mode: U-NII 2A & 802.11a & MIMO(CDD) & 5320 MHz

Results of Conducted Emission

DTNC

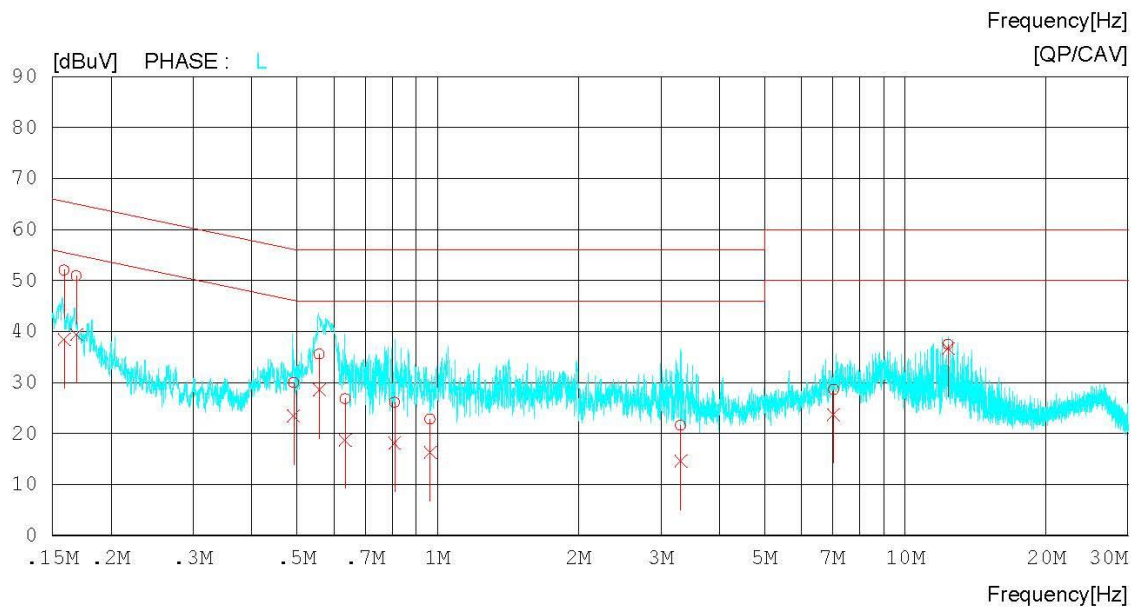
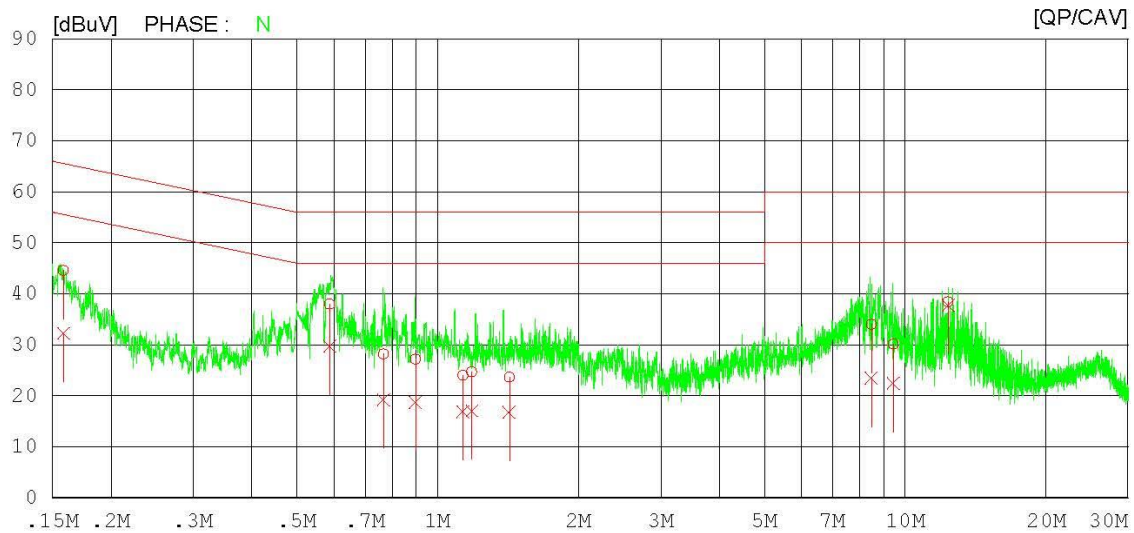
Date 2019-12-06

Order No.
Model No. LF-F200U
Serial No.
Test Condition 5.3G WLAN

Reference No.
Power Supply 120 V, 60 Hz
Temp/Humi. 23 'C / 39 %
Operator InHee Bae

Memo

LIMIT : FCC P15.207 QP
FCC P15.207 AV



AC Line Conducted Emissions (Data List)

Test Mode: U-NII 2A & 802.11a & MIMO(CDD) & 5320 MHz

Results of Conducted Emission

DTNC

Date 2019-12-06

Order No.		Reference No.	
Model No.	LF-F200U	Power Supply	120 V, 60 Hz
Serial No.		Temp/Humi.	23 °C / 39 %
Test Condition	5.3G WLAN	Operator	InHee Bae

Memo

LIMIT : FCC P15.207 QP
FCC P15.207 AV

NO	FREQ [MHz]	READING		C.FACTOR [dB]	RESULT		LIMIT		MARGIN		PHASE
		QP [dBuV]	CAV [dBuV]		QP [dBuV]	CAV [dBuV]	QP [dBuV]	CAV [dBuV]	QP [dBuV]	CAV [dBuV]	
1	0.15833	34.59	22.34	9.94	44.53	32.28	65.55	55.55	21.02	23.27	N
2	0.58809	28.00	19.77	9.95	37.95	29.72	56.00	46.00	18.05	16.28	N
3	0.76526	18.22	9.24	9.97	28.19	19.21	56.00	46.00	27.81	26.79	N
4	0.89609	17.16	8.76	9.97	27.13	18.73	56.00	46.00	28.87	27.27	N
5	1.18240	14.72	7.06	9.99	24.71	17.05	56.00	46.00	31.29	28.95	N
6	1.13220	14.01	6.91	9.98	23.99	16.89	56.00	46.00	32.01	29.11	N
7	1.42180	13.59	6.75	9.99	23.58	16.74	56.00	46.00	32.42	29.26	N
8	8.46040	23.74	13.22	10.27	34.01	23.49	60.00	50.00	25.99	26.51	N
9	9.42680	19.82	12.07	10.32	30.14	22.39	60.00	50.00	29.86	27.61	N
10	12.35620	27.95	27.39	10.41	38.36	37.80	60.00	50.00	21.64	12.20	N
11	0.15892	42.09	28.49	9.94	52.03	38.43	65.52	55.52	13.49	17.09	L
12	0.16874	40.96	29.44	9.94	50.90	39.38	65.02	55.02	14.12	15.64	L
13	0.49192	20.00	13.47	9.95	29.95	23.42	56.14	46.14	26.19	22.72	L
14	0.55850	25.59	18.60	9.95	35.54	28.55	56.00	46.00	20.46	17.45	L
15	0.63386	16.83	8.74	9.96	26.79	18.70	56.00	46.00	29.21	27.30	L
16	0.80920	16.18	8.11	9.96	26.14	18.07	56.00	46.00	29.86	27.93	L
17	0.96340	12.86	6.30	9.97	22.83	16.27	56.00	46.00	33.17	29.73	L
18	3.30840	11.43	4.46	10.08	21.51	14.54	56.00	46.00	34.49	31.46	L
19	7.02460	18.31	13.40	10.22	28.53	23.62	60.00	50.00	31.47	26.38	L
20	12.35740	27.06	26.28	10.39	37.45	36.67	60.00	50.00	22.55	13.33	L

AC Line Conducted Emissions (Graph)

Test Mode: U-NII 2C & 802.11a & MIMO(CDD) & 5500 MHz

Results of Conducted Emission

DTNC

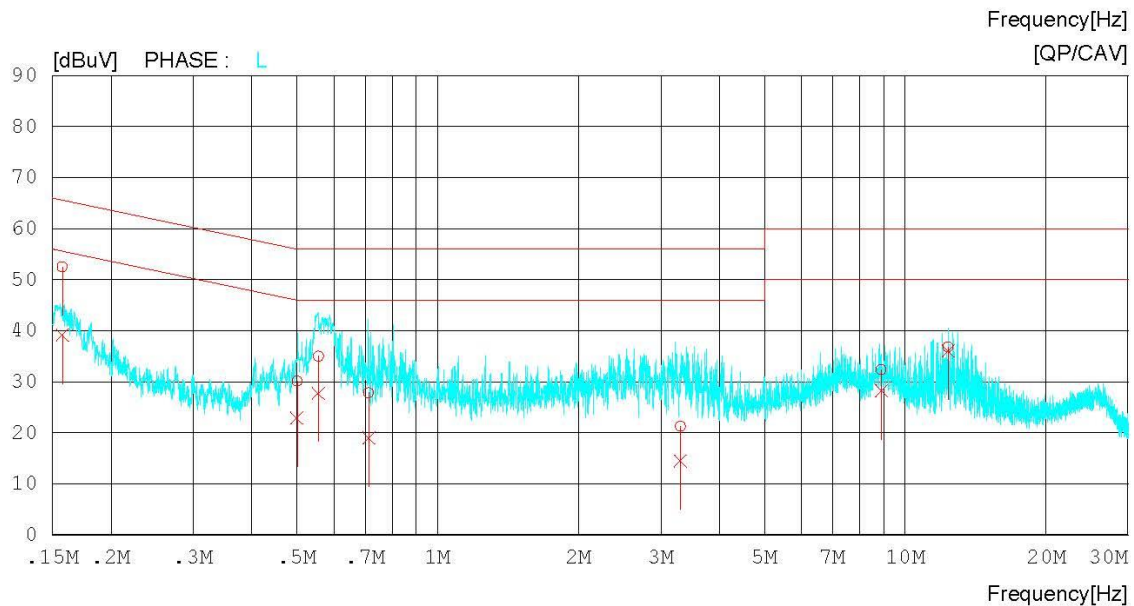
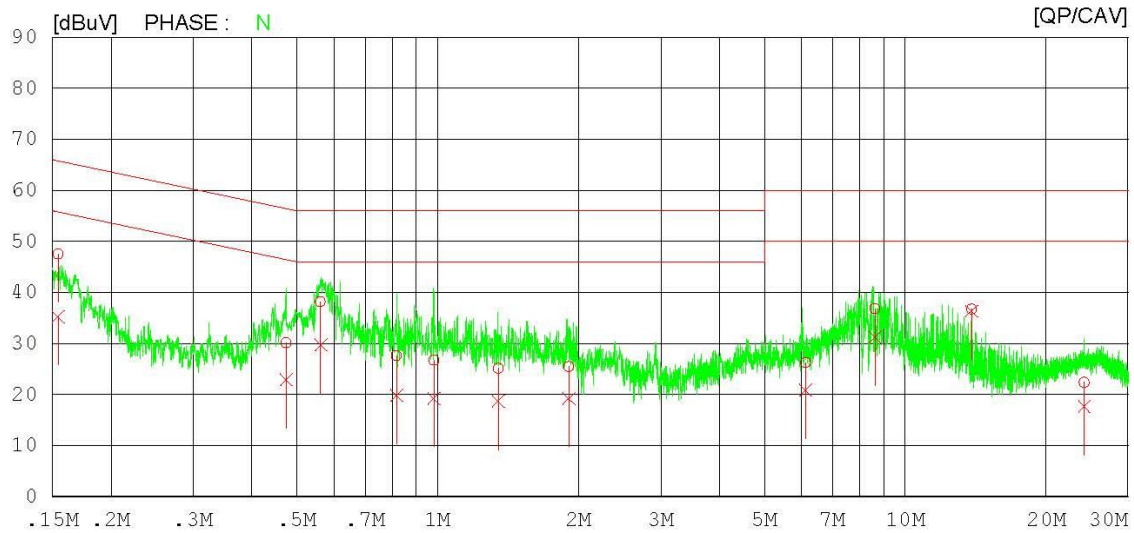
Date 2019-12-06

Order No.
Model No. LF-F200U
Serial No.
Test Condition 5.5G WLAN

Reference No.
Power Supply 120 V, 60 Hz
Temp/Humi. 23 'C / 39 %
Operator InHee Bae

Memo

LIMIT : FCC P15.207 QP
FCC P15.207 AV



AC Line Conducted Emissions (Data List)

Test Mode: U-NII 2C & 802.11a & MIMO(CDD) & 5500 MHz

Results of Conducted Emission

DTNC

Date 2019-12-06

Order No.		Reference No.	
Model No.	LF-F200U	Power Supply	120 V, 60 Hz
Serial No.		Temp/Humi.	23 °C / 39 %
Test Condition	5.5G WLAN	Operator	InHee Bae

Memo

LIMIT : FCC P15.207 QP
FCC P15.207 AV

NO	FREQ [MHz]	READING		C.FACTOR [dB]	RESULT		LIMIT		MARGIN		PHASE
		QP	CAV		QP	CAV	QP	CAV	QP	CAV	
		[dBuV]	[dBuV]		[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	
1	0.15419	37.57	25.39	9.94	47.51	35.33	65.77	55.77	18.26	20.44	N
2	0.47411	20.17	12.90	9.95	30.12	22.85	56.44	46.44	26.32	23.59	N
3	0.56172	28.27	19.76	9.95	38.22	29.71	56.00	46.00	17.78	16.29	N
4	0.81676	17.61	9.86	9.97	27.58	19.83	56.00	46.00	28.42	26.17	N
5	0.98157	16.80	9.26	9.97	26.77	19.23	56.00	46.00	29.23	26.77	N
6	1.34680	15.15	8.67	9.99	25.14	18.66	56.00	46.00	30.86	27.34	N
7	1.90740	15.45	9.18	10.03	25.48	19.21	56.00	46.00	30.52	26.79	N
8	6.12120	16.10	10.68	10.20	26.30	20.88	60.00	50.00	33.70	29.12	N
9	8.61300	26.55	21.00	10.29	36.84	31.29	60.00	50.00	23.16	18.71	N
10	13.85500	26.26	25.92	10.46	36.72	36.38	60.00	50.00	23.28	13.62	N
11	24.14840	11.72	7.07	10.63	22.35	17.70	60.00	50.00	37.65	32.30	N
12	0.15755	42.57	29.19	9.94	52.51	39.13	65.59	55.59	13.08	16.46	L
13	0.50042	20.16	12.87	9.95	30.11	22.82	56.00	46.00	25.89	23.18	L
14	0.55622	25.03	17.73	9.95	34.98	27.68	56.00	46.00	21.02	18.32	L
15	0.71180	17.90	9.04	9.96	27.86	19.00	56.00	46.00	28.14	27.00	L
16	3.30520	11.07	4.38	10.08	21.15	14.46	56.00	46.00	34.85	31.54	L
17	8.89500	22.01	17.89	10.30	32.31	28.19	60.00	50.00	27.69	21.81	L
18	12.35700	26.42	25.63	10.39	36.81	36.02	60.00	50.00	23.19	13.98	L

AC Line Conducted Emissions (Graph)

Test Mode: U-NII 2C & 802.11a & MIMO(CDD) & 5785 MHz

Results of Conducted Emission

DTNC

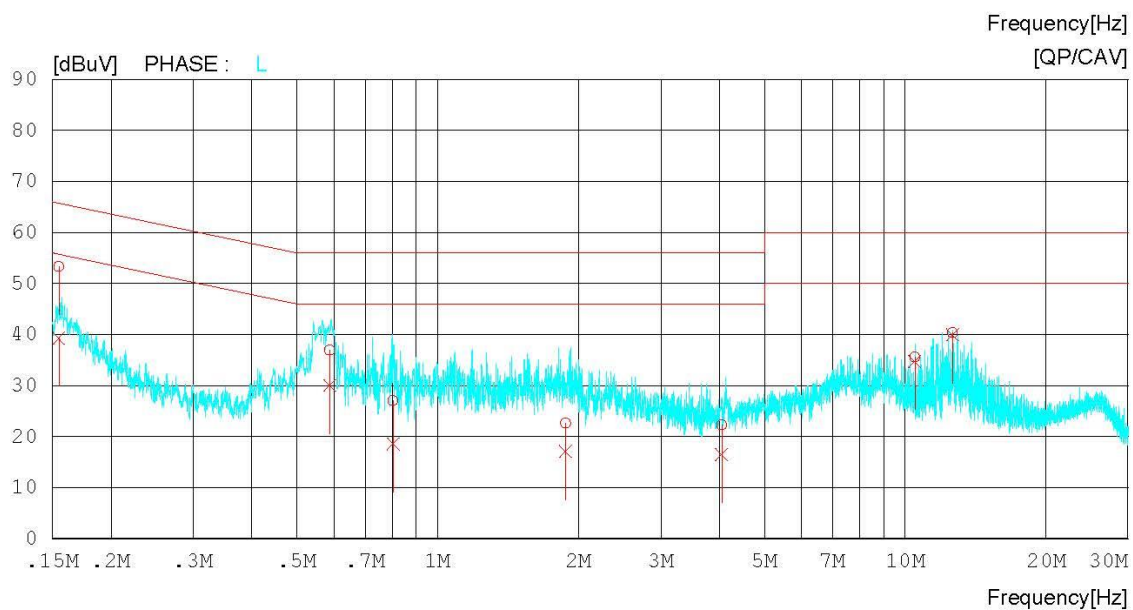
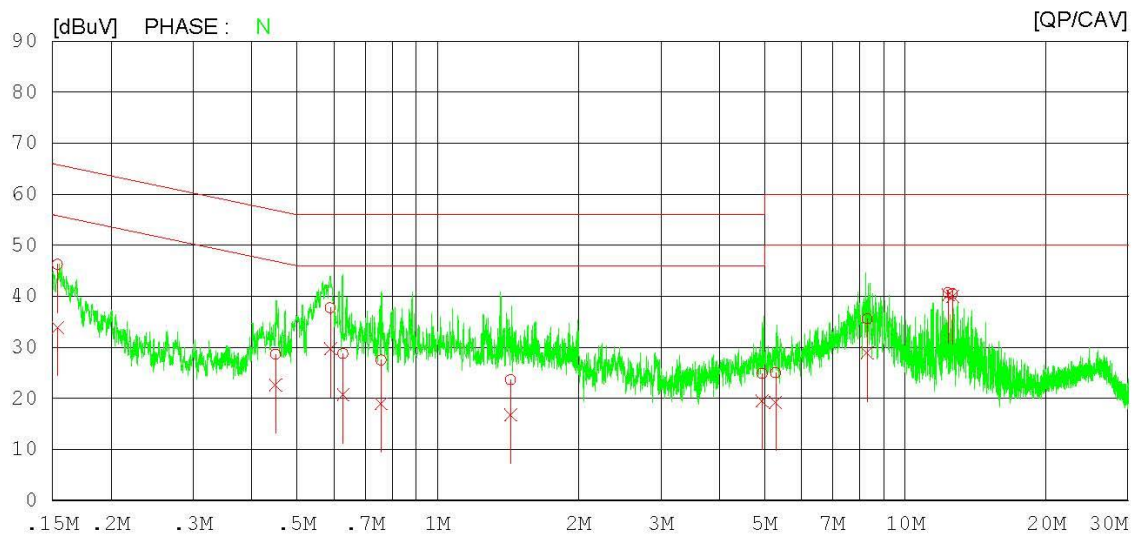
Date 2019-12-06

Order No.
Model No. LF-F200U
Serial No.
Test Condition 5.7G WLAN

Reference No.
Power Supply 120 V, 60 Hz
Temp/Humi. 23 'C / 39 %
Operator InHee Bae

Memo

LIMIT : FCC P15.207 QP
FCC P15.207 AV



AC Line Conducted Emissions (Data List)

Test Mode: U-NII 2C & 802.11a & MIMO(CDD) & 5785 MHz

Results of Conducted Emission

DTNC

Date 2019-12-08

Order No.
Model No. LF-F200U
Serial No.
Test Condition 5.7G WLAN

Reference No.
Power Supply 120 V, 60 Hz
Temp/Humi. 23 'C / 39 %
Operator InHee Bae

Memo

LIMIT : FCC P15.207 QP
FCC P15.207 AV

NO	FREQ [MHz]	READING		C.FACTOR [dB]	RESULT		LIMIT		MARGIN		PHASE
		QP	CAV		QP	CAV	QP	CAV	QP	CAV	
		[dBuV]	[dBuV]		[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	
1	0.15389	36.25	23.87	10.00	46.25	33.87	65.79	55.79	19.54	21.92	N
2	0.45018	18.64	12.69	10.03	28.67	22.72	56.87	46.87	28.20	24.15	N
3	0.58976	27.68	19.64	10.03	37.71	29.67	56.00	46.00	18.29	16.33	N
4	0.62750	18.76	10.66	10.04	28.80	20.70	56.00	46.00	27.20	25.30	N
5	0.75683	17.47	8.93	10.05	27.52	18.98	56.00	46.00	28.48	27.02	N
6	1.43440	13.62	6.69	10.07	23.69	16.76	56.00	46.00	32.31	29.24	N
7	4.94400	14.66	9.24	10.22	24.88	19.46	56.00	46.00	31.12	26.54	N
8	5.27960	14.73	9.00	10.22	24.95	19.22	60.00	50.00	35.05	30.78	N
9	8.28780	25.26	18.62	10.33	35.59	28.95	60.00	50.00	24.41	21.05	N
10	12.35620	30.23	29.86	10.43	40.66	40.29	60.00	50.00	19.34	9.71	N
11	12.63740	30.00	29.62	10.42	40.42	40.04	60.00	50.00	19.58	9.96	N
12	0.15479	43.27	29.28	10.00	53.27	39.28	65.74	55.74	12.47	16.46	L
13	0.58737	26.81	19.93	10.03	36.84	29.96	56.00	46.00	19.16	16.04	L
14	0.80245	16.96	8.53	10.04	27.00	18.57	56.00	46.00	29.00	27.43	L
15	1.87800	12.44	6.93	10.11	22.55	17.04	56.00	46.00	33.45	28.96	L
16	4.04500	12.02	6.33	10.18	22.20	16.51	56.00	46.00	33.80	29.49	L
17	10.48600	25.15	24.34	10.39	35.54	34.73	60.00	50.00	24.46	15.27	L
18	12.63740	29.95	29.51	10.41	40.36	39.92	60.00	50.00	19.64	10.08	L

9. LIST OF TEST EQUIPMENT

Type	Manufacturer	Model	Cal.Date (yy/mm/dd)	Next.Cal.Date (yy/mm/dd)	S/N
Spectrum Analyzer	Agilent Technologies	N9020A	18/12/19	19/12/19	MY50410357
Spectrum Analyzer	Agilent Technologies	N9020A	19/12/18	20/12/18	MY48011700
Spectrum Analyzer	Agilent Technologies	N9030A	18/12/19	19/12/19	MY53310140
DC Power Supply	Agilent Technologies	66332A	19/03/15	20/03/15	MY43000211
Multimeter	FLUKE	17B	19/06/25	20/06/25	26030065WS
Signal Generator	Rohde Schwarz	SMBV100A	18/12/18	19/12/18	255571
Signal Generator	ANRITSU	MG3695C	19/12/16	20/12/16	173501
Thermohygrometer	BODYCOM	BJ5478	18/12/20	19/12/20	120612-1
Thermohygrometer	BODYCOM	BJ5478	19/12/16	20/12/16	120612-2
Thermohygrometer	BODYCOM	BJ5478	18/12/27	19/12/27	N/A
HYGROMETER	TESTO	608-H1	19/07/03	20/07/03	34862883
Loop Antenna	Schwarzbeck	6502	19/01/31	20/01/31	00226186
BILOG ANTENNA	Schwarzbeck	VULB 9160	19/09/18	21/09/18	9160-3362
Horn Antenna	ETS-Lindgren	3115	19/04/23	21/04/23	6419
Horn Antenna	A.H.Systems Inc.	SAS-574	18/01/30	20/01/30	155
PreAmplifier	tsj	MLA-0118-B01-40	19/07/03	21/07/03	1852267
PreAmplifier	tsj	MLA-1840-J02-45	18/12/18	19/12/18	16966-10728
PreAmplifier	H.P	8447D	19/12/16	20/12/16	2944A07774
Attenuator	Aeroflex/Weinschel	20515	19/06/27	20/06/27	Y2370
Attenuator	SMAJK	SMAJK-2-3	19/06/27	20/06/27	2
Attenuator	SRTechnology	F01-B0606-01	19/06/27	20/06/27	13092403
Attenuator	Hefei Shunze	SS5T2.92-10-40	19/06/27	20/06/27	16012202
Attenuator	SMAJK	SMAJK-50-10	19/08/07	20/08/07	15081901
High Pass Filter	Wainwright Instruments	WHNX8.0/26.5-6SS	19/06/27	20/06/27	3
High Pass Filter	Wainwright Instruments	WHKX12-935-1000-15000-40SS	19/06/26	20/06/26	8
High Pass Filter	Wainwright Instruments	WHKX10-2838-3300-18000-60SS	19/06/26	20/06/26	1
Power Meter & Wide Bandwidth Sensor	Anritsu	ML2496A	18/12/19	19/12/19	1338004
EMI Test Receiver	Rohde Schwarz	MA2411B	19/12/16	20/12/16	1306053
PULSE LIMITER	Rohde Schwarz	ESC17	19/01/30	20/01/30	100910
LISN	SCHWARZBECK	ESH3-Z2	19/09/17	20/09/17	06183
Cable	Radiall	NNLK 8121	19/03/19	20/03/19	M-01
Cable	Junkosha	TESTPRO3	19/01/16	20/01/16	M-05
Cable	Junkosha	MWX315	19/01/16	20/01/16	M-06
Cable	Junkosha	MWX315	19/01/14	20/01/14	G-4
Cable	Junkosha	MWX241	19/01/14	20/01/14	G-7
Cable	DT&C	Cable	19/01/14	20/01/14	G-13
Cable	DT&C	Cable	19/01/14	20/01/14	G-14
Cable	HUBER+SUHNER	SUCOFLEX 104	19/01/14	20/01/14	G-15
Cable	DT&C	Cable	19/01/16	20/01/16	RF-82
Test Software	tsj	Radiated Emission Measurement	NA	NA	Version Rev.05
Test Software	tsj	Noise Terminal Voltage Measurement	NA	NA	Version MR5 1.5.1

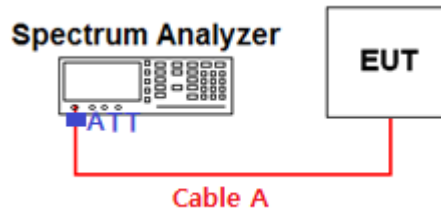
Note 1: The measurement antennas were calibrated in accordance to the requirements of ANSI C63.5-2017

Note 2: The cable is not a regular calibration item, so it has been calibrated by DT & C itself.

APPENDIX I

Conducted Test set up Diagram

- Conducted Measurement



APPENDIX II

Duty Cycle Information

■ Test Procedure

Duty Cycle [$X = \text{On Time} / (\text{On} + \text{Off time})$] is measured using Measurement Procedure of **KDB789033 D02v02r01**

1. Set the center frequency of the spectrum analyzer to the center frequency of the transmission.
2. Set RBW $\geq$ EBW if possible; otherwise, set RBW to the largest available value.
3. Set VBW $\geq$ RBW. Set detector = peak.
4. Note : The zero-span measurement method shall not be used unless both **RBW and VBW are $> 50/T$** , where T is defined in section II.B.1.a), and **the number of sweep points across duration T exceeds 100**. (For example, if VBW and/or RBW are limited to 3 MHz, then the zero-span method of measuring duty cycle shall not be used if $T \leq 16.7$ microseconds.)

T : The minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

($T = \text{On time}$ of the above table since the EUT operates with above fixed Duty Cycle and it is the minimum On time)

■ Test Results:

Duty cycle

Mode	Data Rate	Tested Frequency [MHz]	Maximum Achievable Duty Cycle ($x = \text{On} / (\text{On} + \text{Off})$)			DCCF = $10 \log(1/x)$ [dB]	$50/T$ [kHz]
			T=On Time [ms]	(On+Off) Time [ms]	x		
802.11a	6Mbps	5180	2.055	2.110	0.9739	0.11	24.33
802.11n (HT20)	MCS0	5180	1.915	1.970	0.9721	0.12	26.11
802.11n (HT40)	MCS0	5190	0.945	0.991	0.9540	0.20	52.92
802.11ac (VHT80)	MCS0 (1SS)	5210	0.462	0.502	0.9203	0.36	108.23

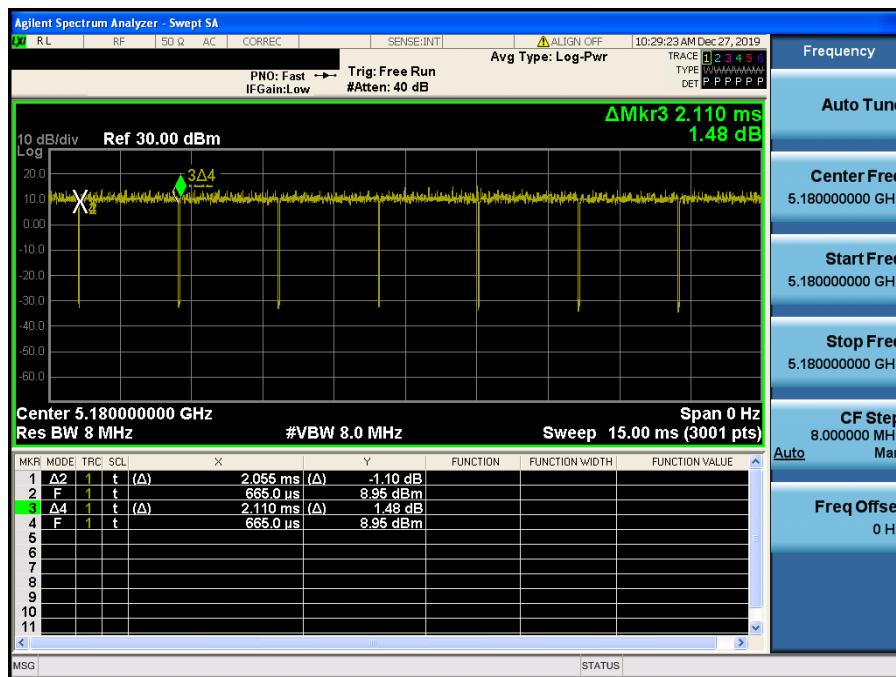
Mode	Data Rate	Tested Frequency [MHz]	Maximum Achievable Duty Cycle ($x = \text{On} / (\text{On} + \text{Off})$)			DCCF = $10 \log(1/x)$ [dB]	$50/T$ [kHz]
			T=On Time [ms]	(On+Off) Time [ms]	x		
802.11n (HT20)	MCS8	5180	0.980	1.026	0.9556	0.20	51.00
802.11n (HT40)	MCS8	5190	0.493	0.535	0.9226	0.35	101.36
802.11ac (VHT80)	MCS0 (2SS)	5210	0.255	0.293	0.8704	0.60	195.85

■ Test Plot:

Single Transmit

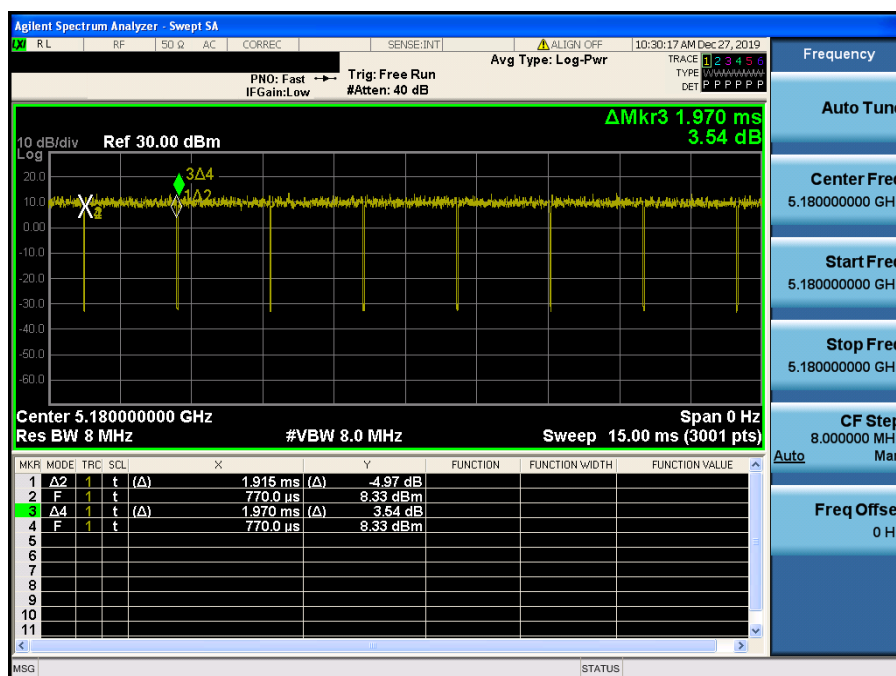
Duty Cycle

Test Mode: 802.11a & Ch.36



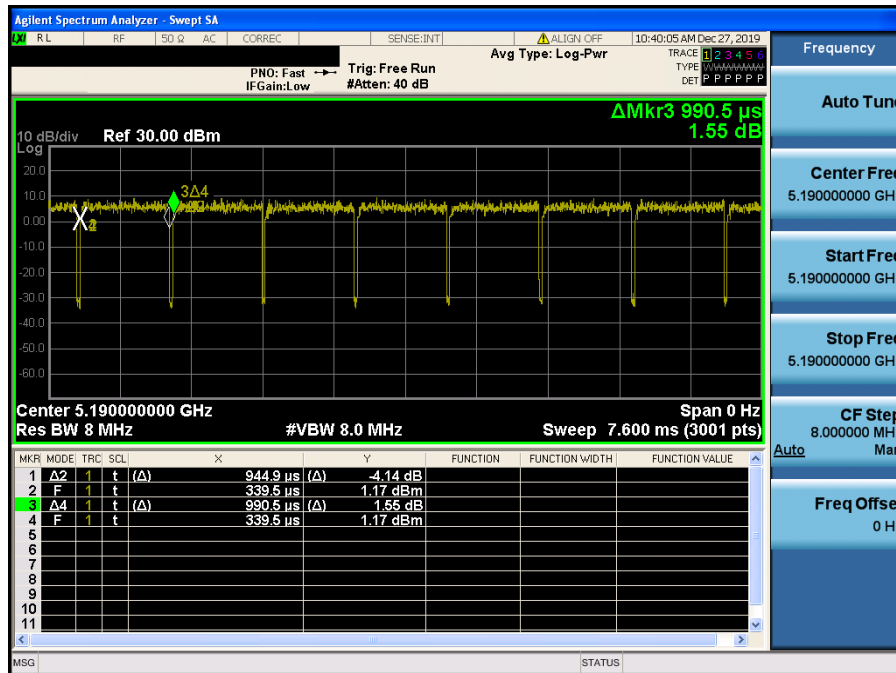
Duty Cycle

Test Mode: 802.11n HT20 & Ch.36



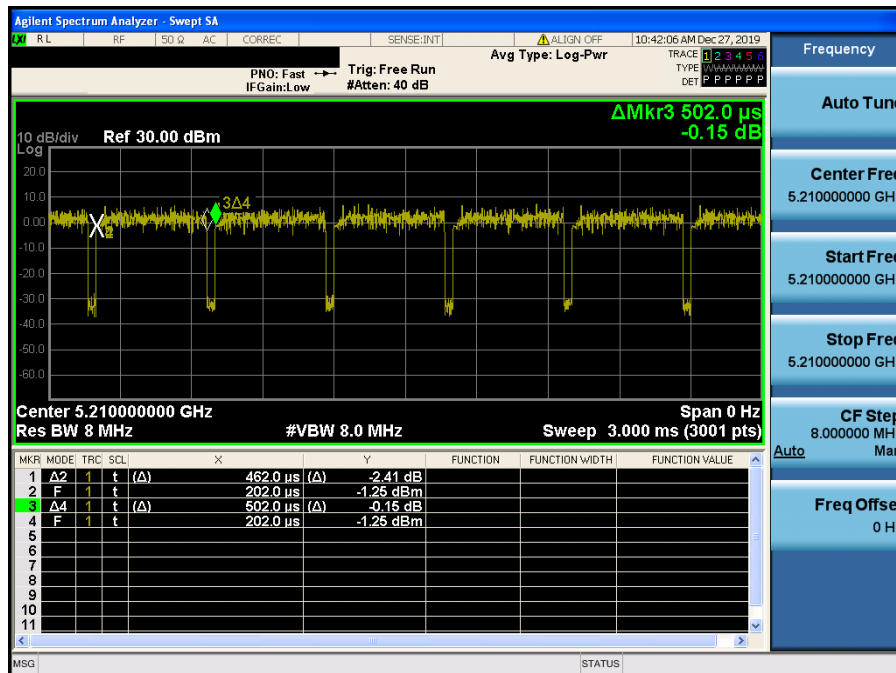
Duty Cycle

Test Mode: 802.11n HT40 & Ch.38



Duty Cycle

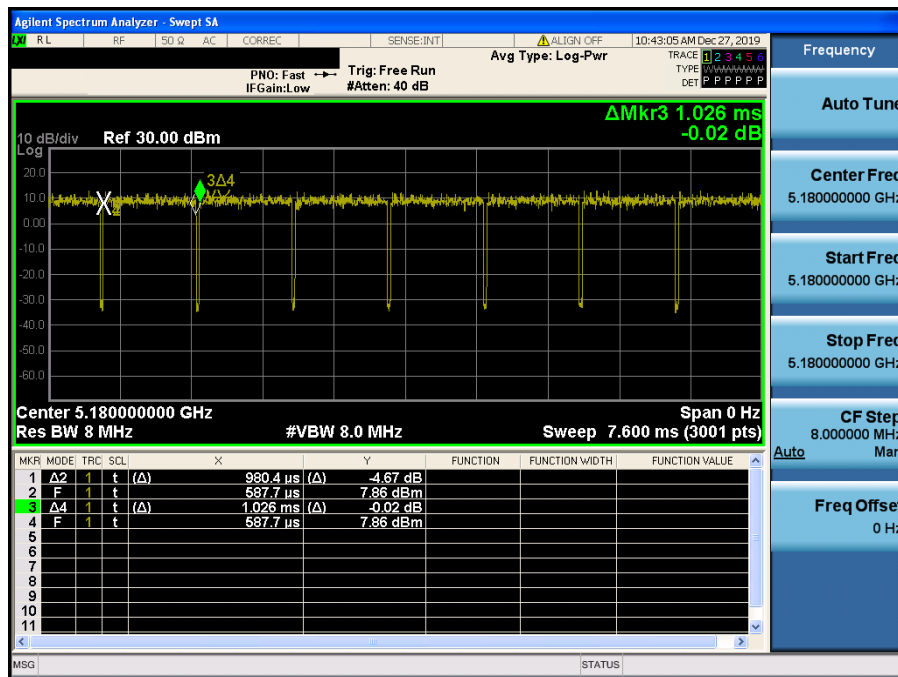
Test Mode: 802.11ac VHT80 & Ch.42



Multiple Transmit _ SDM

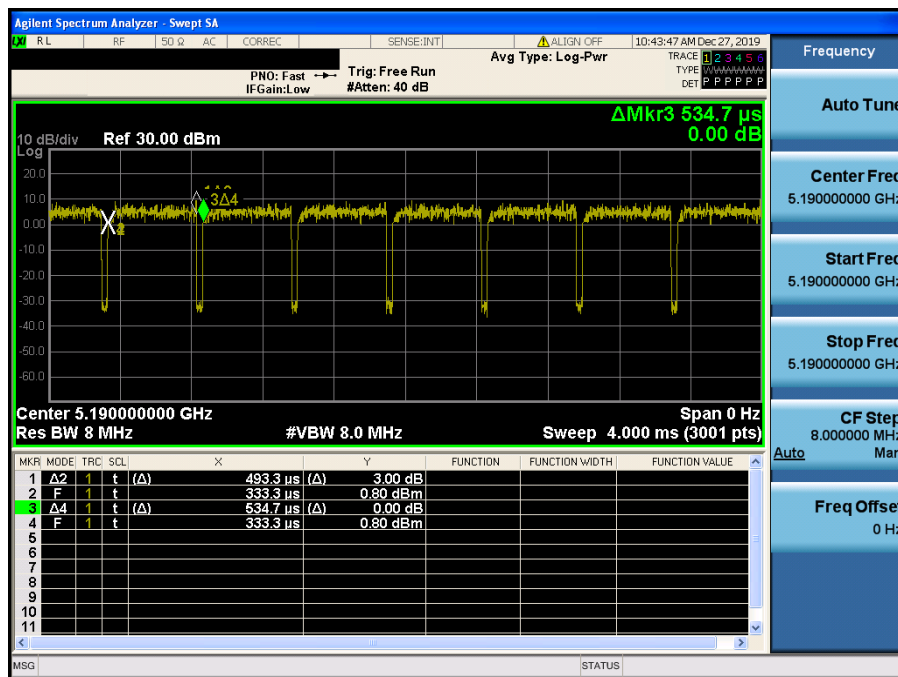
Duty Cycle

Test Mode: 802.11n HT20 & Ch.36



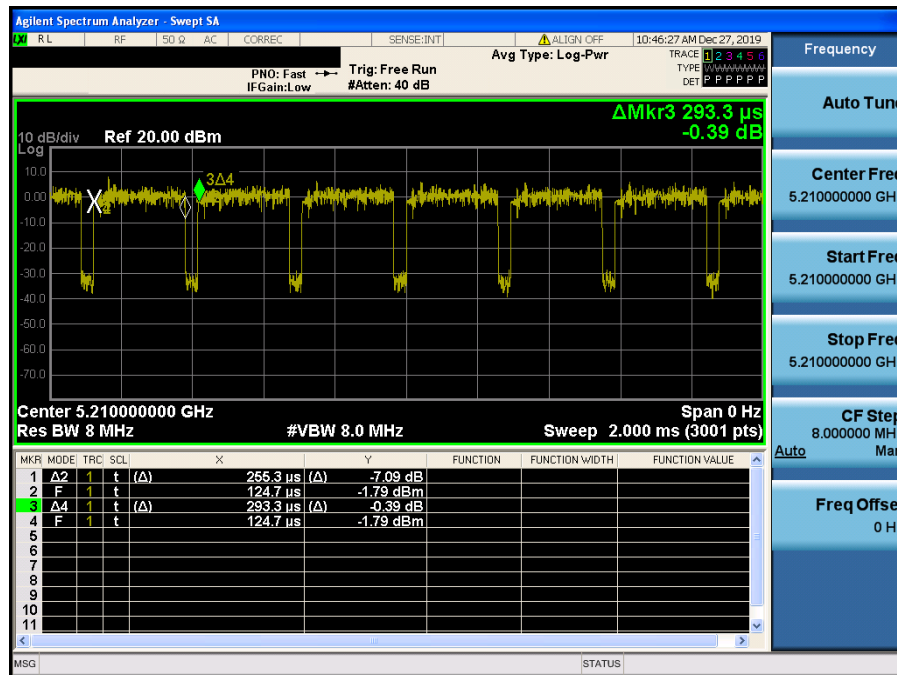
Duty Cycle

Test Mode: 802.11n HT40 & Ch.38



Duty Cycle

Test Mode: 802.11ac VHT80 & Ch.42

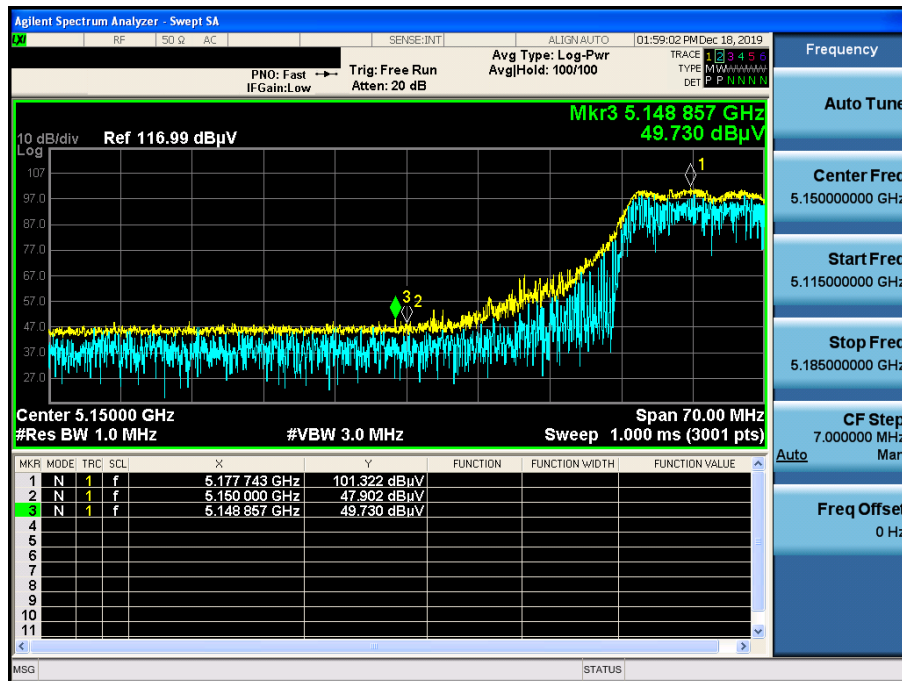


APPENDIX III

Unwanted Emissions (Radiated) Test Plot: MIMO(CDD)

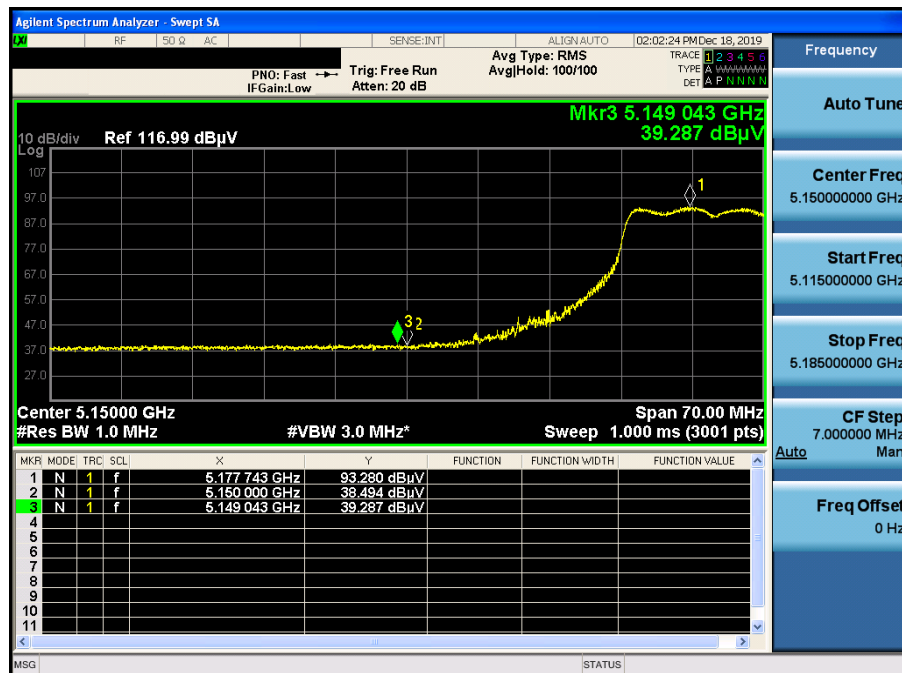
802.11a & U-NII 1 & Ch.36 & X axis & Hor

Detector Mode : PK

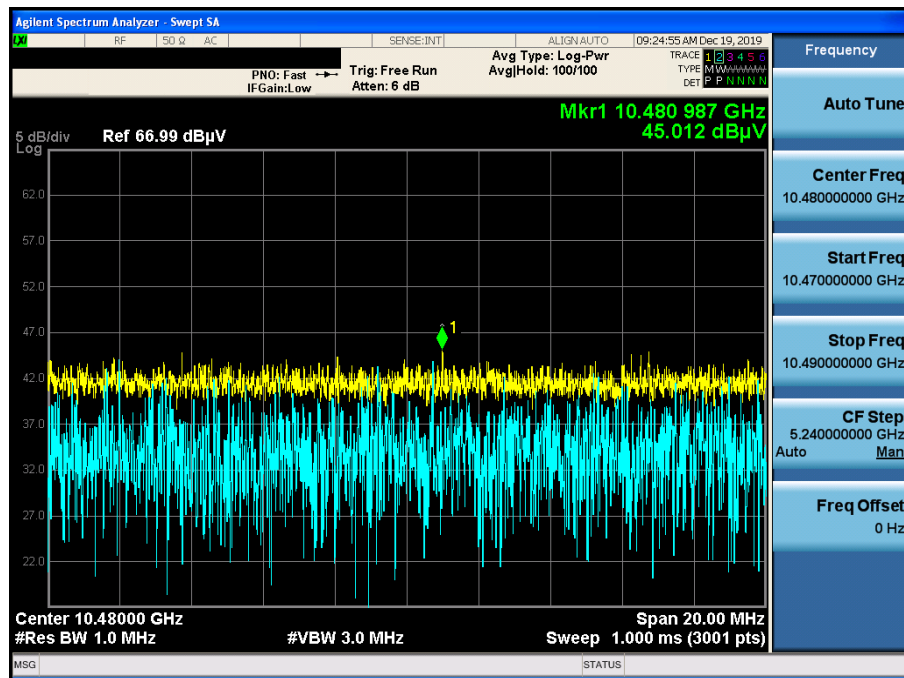


802.11a & U-NII 1 & Ch.36 & X axis & Hor

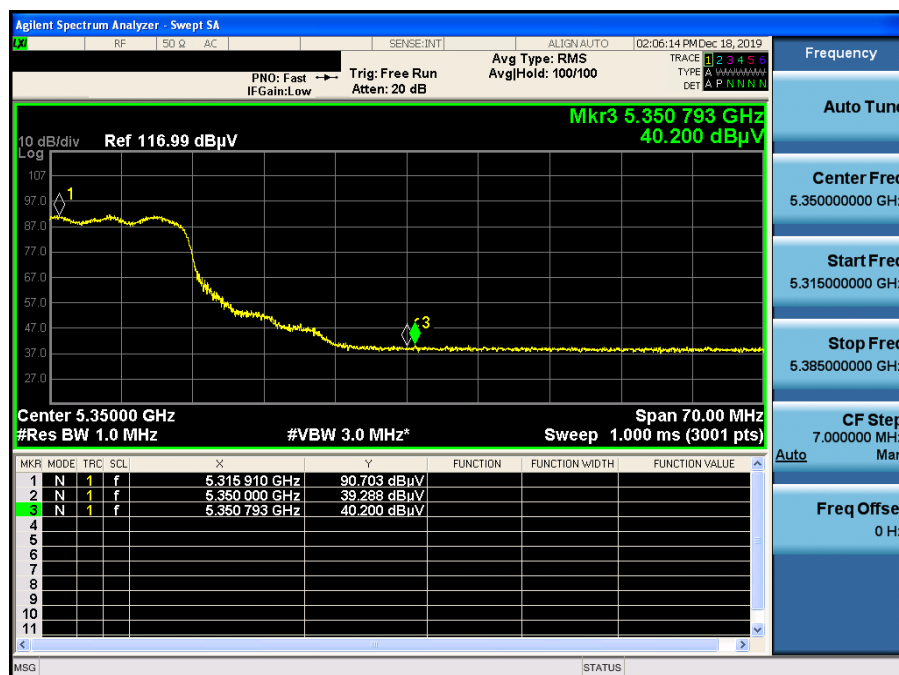
Detector Mode : AV



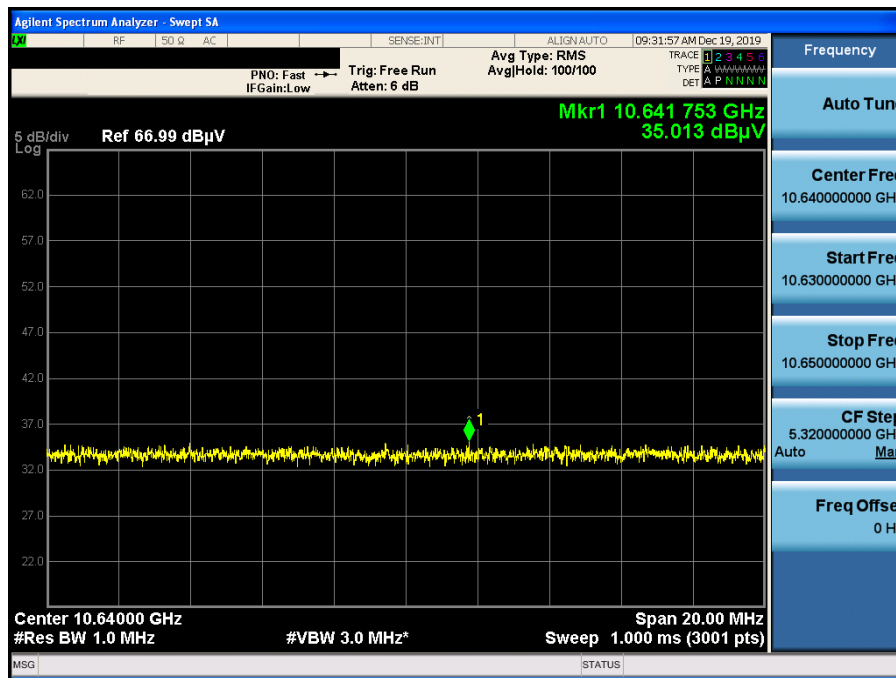
Detector Mode : PK



Detector Mode : PK

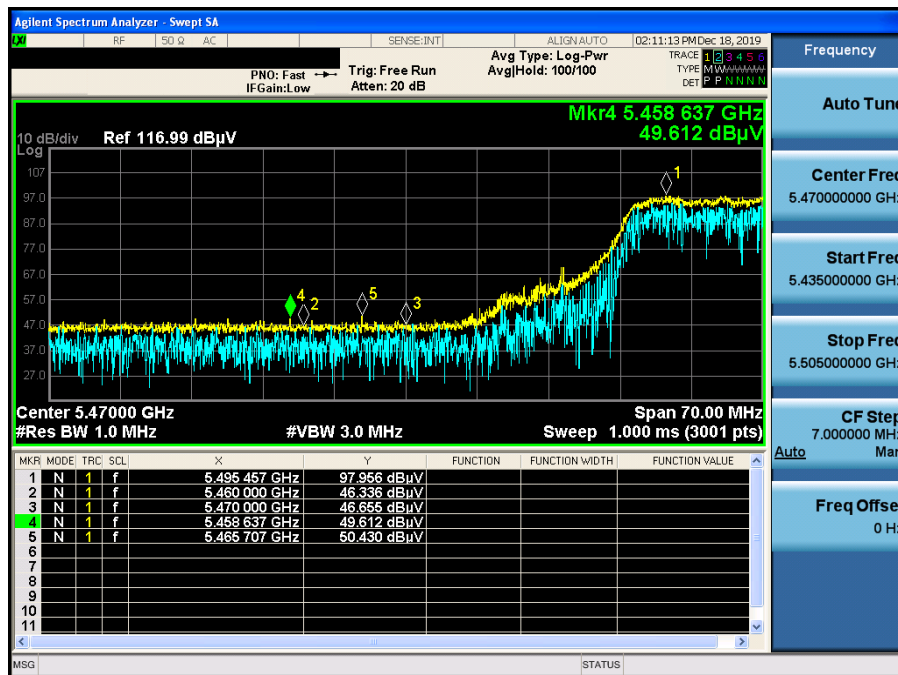


Detector Mode : AV



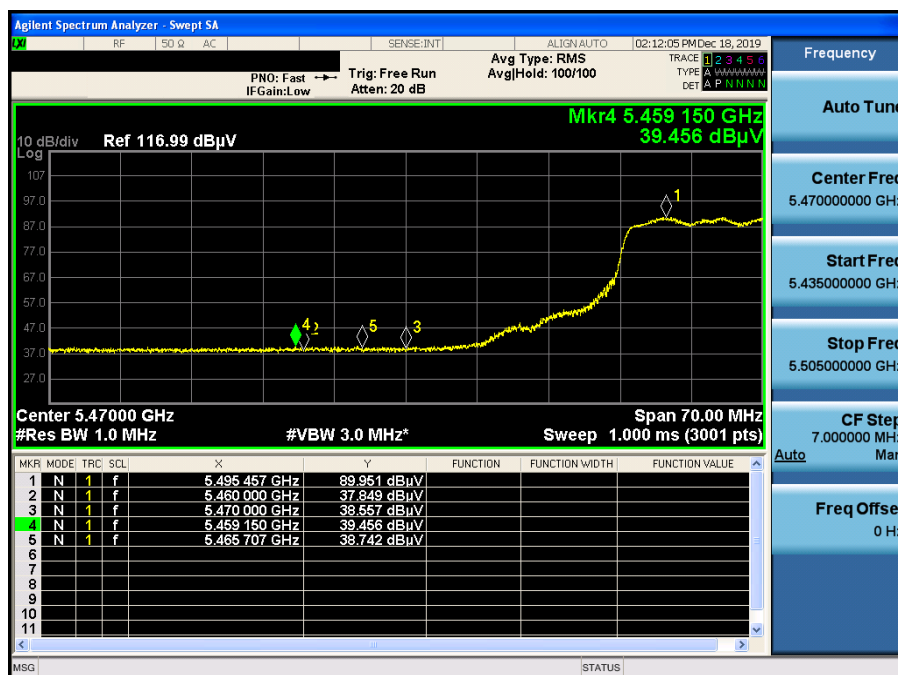
802.11a & U-NII 2C & Ch.100 & X axis & Hor

Detector Mode : PK

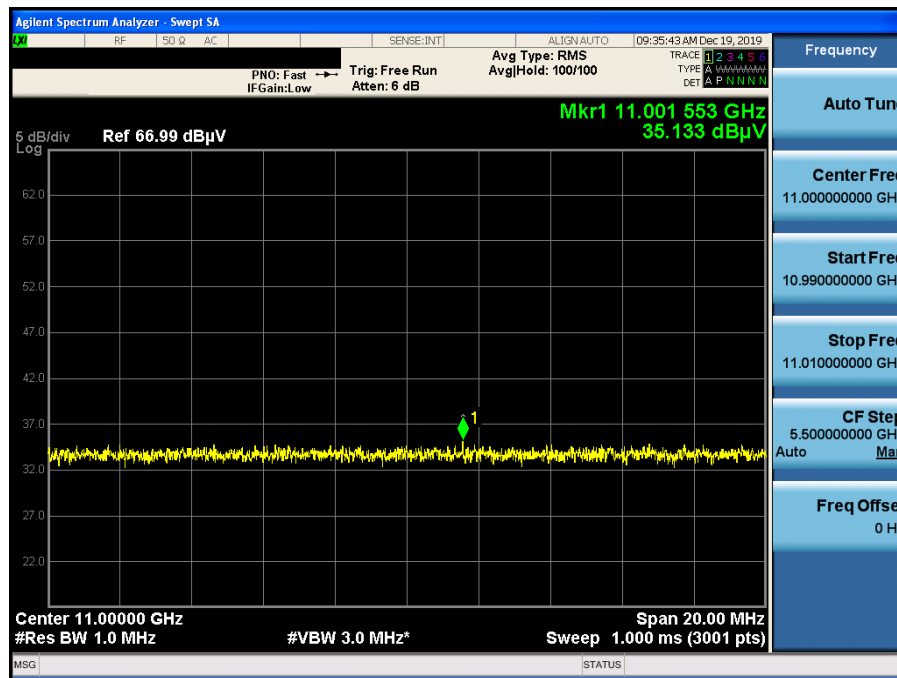


802.11a & U-NII 2C & Ch.100 & X axis & Hor

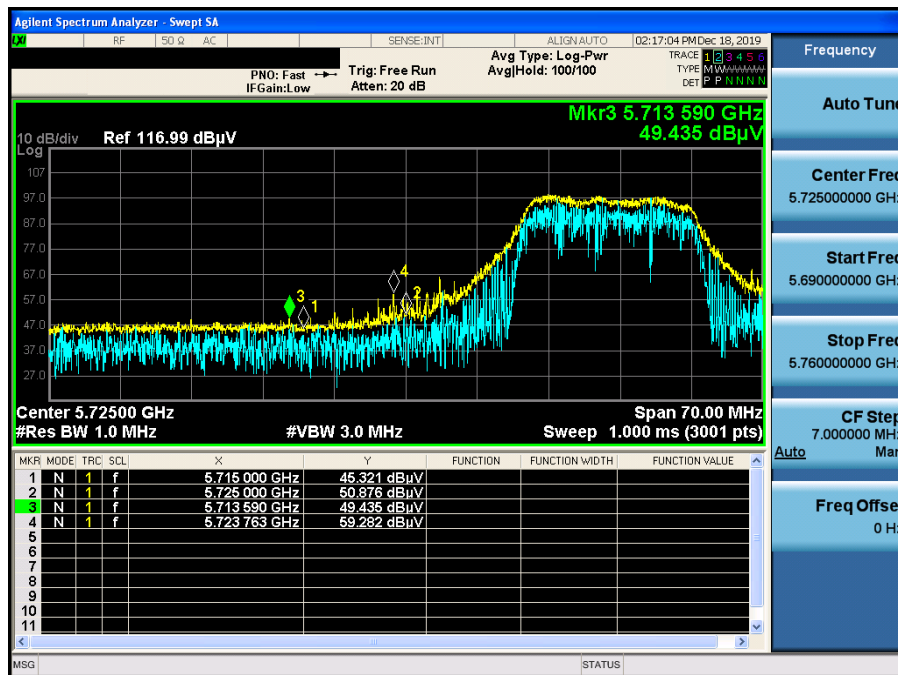
Detector Mode : AV



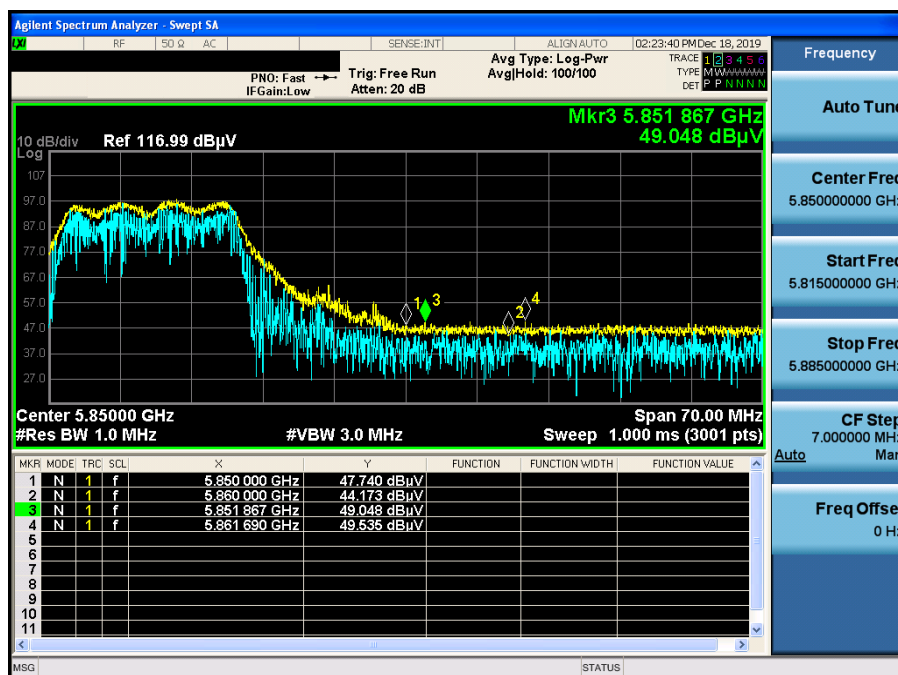
Detector Mode : AV



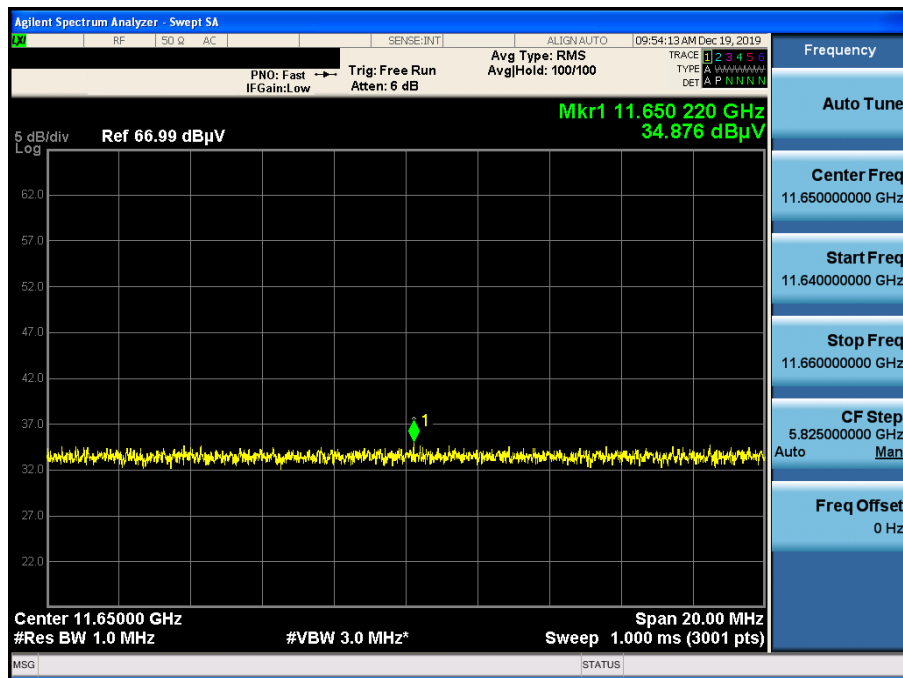
Detector Mode : PK



Detector Mode : PK

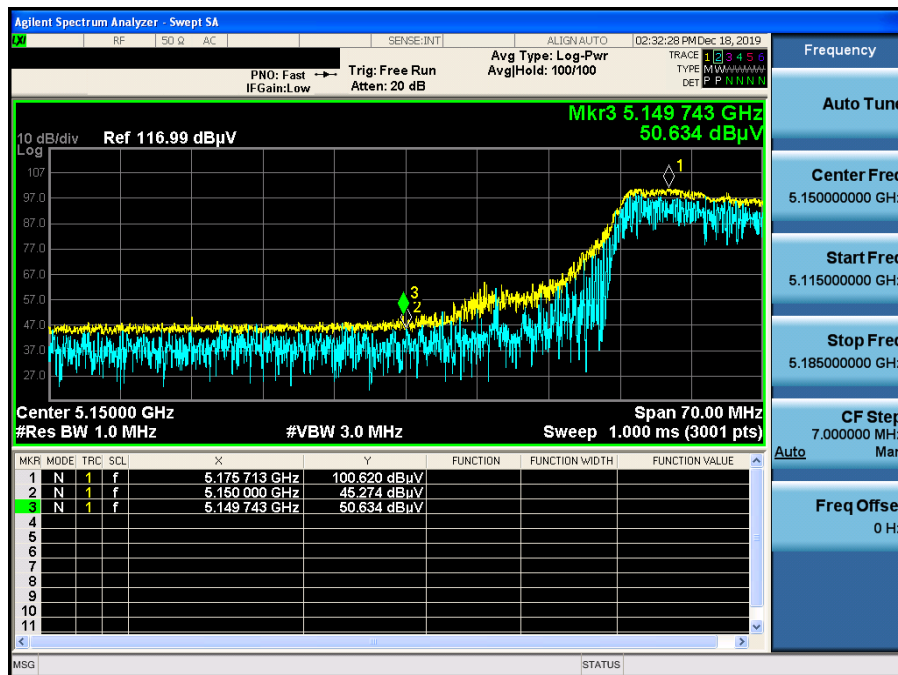


Detector Mode : AV



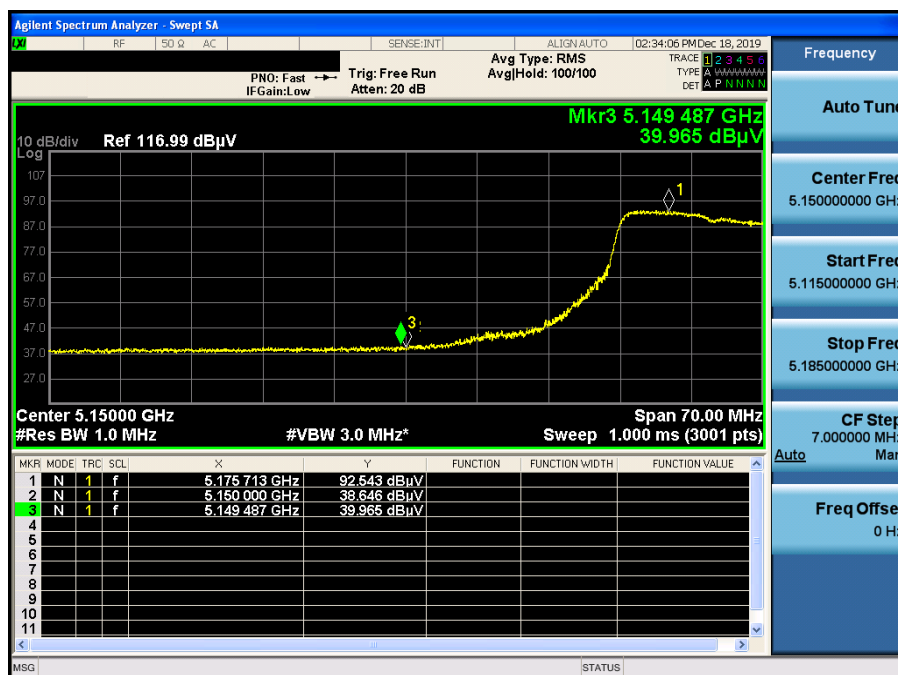
802.11n(HT20) & U-NII 1 & Ch.36 & X axis & Hor

Detector Mode : PK



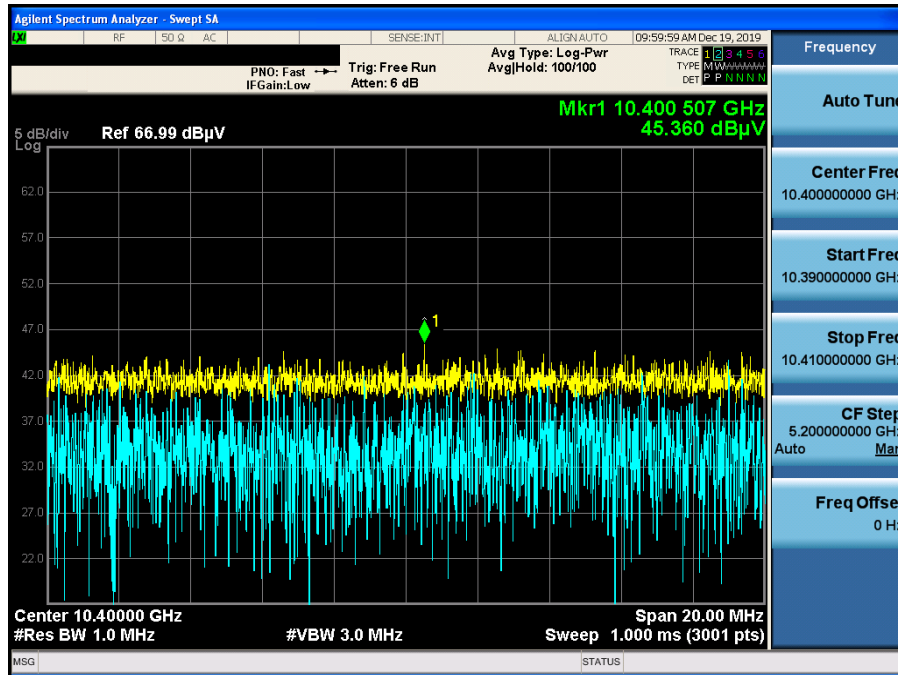
802.11n(HT20) & U-NII 1 & Ch.36 & X axis & Hor

Detector Mode : AV

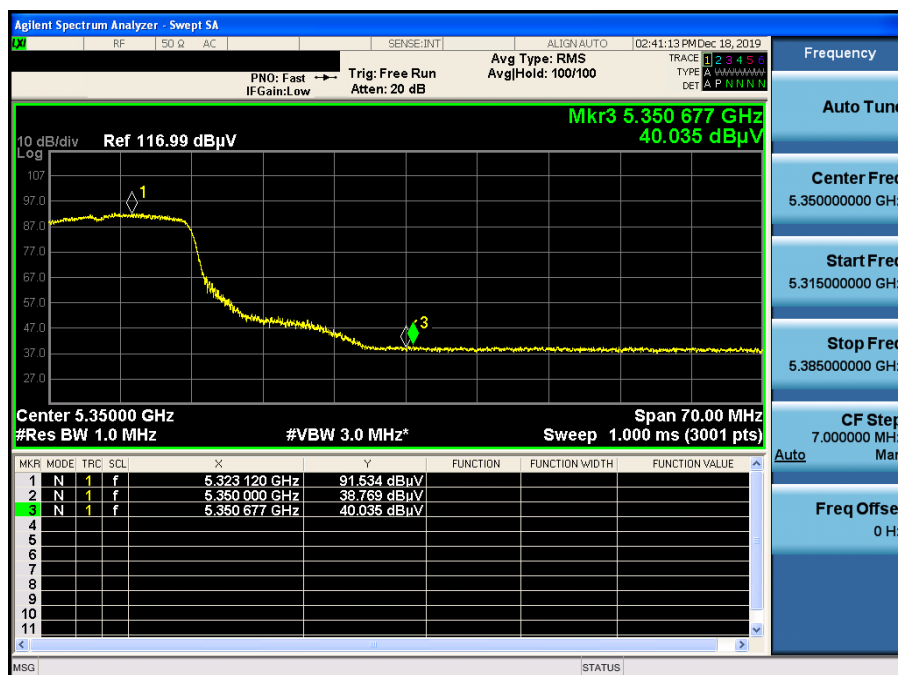


802.11n(HT20) & U-NII 1 & Ch.40 & Z axis & Ver

Detector Mode : PK

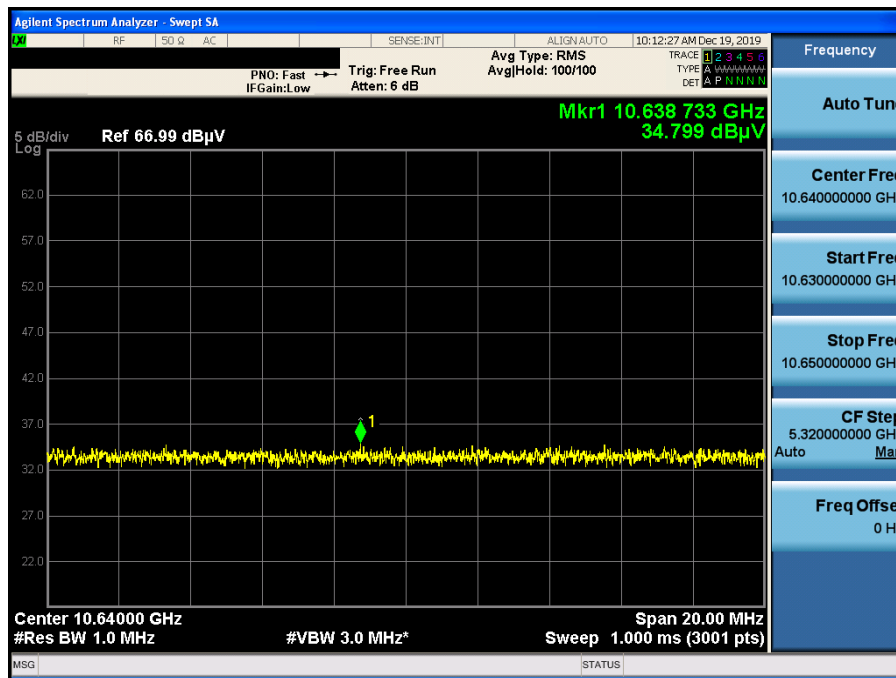


Detector Mode : PK



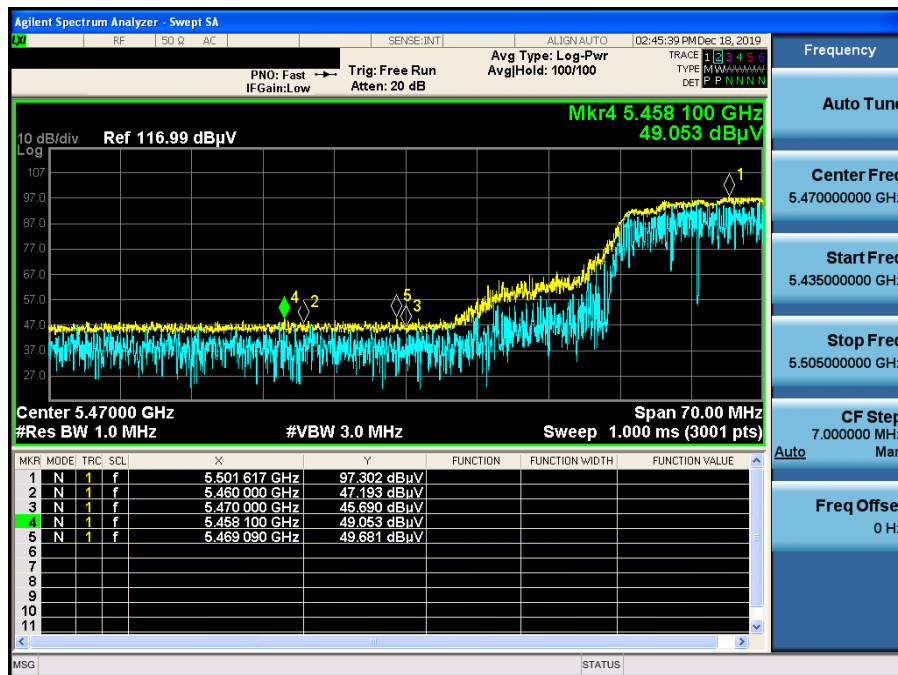
802.11n(HT20) & U-NII 2A & Ch.64 & Z axis & Ver

Detector Mode : AV



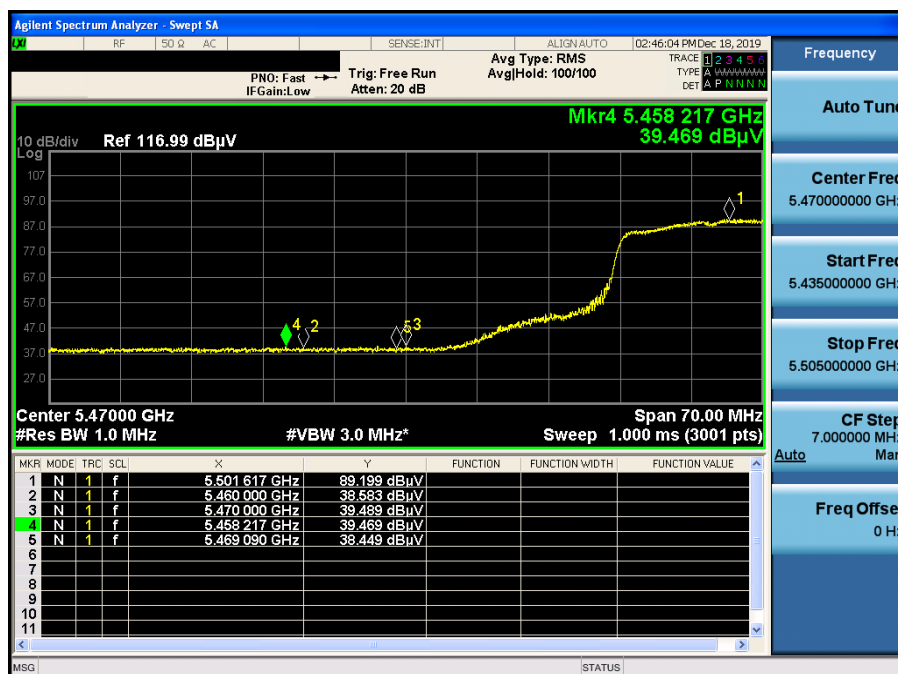
802.11n(HT20) & U-NII 2C & Ch.100 & X axis & Hor

Detector Mode : PK

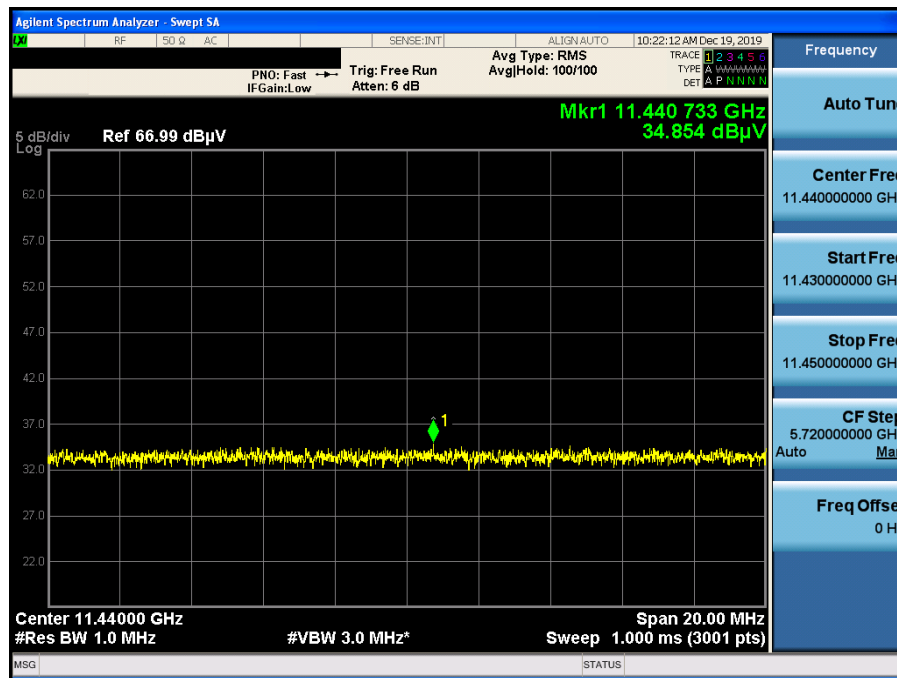


802.11n(HT20) & U-NII 2C & Ch.100 & X axis & Hor

Detector Mode : AV

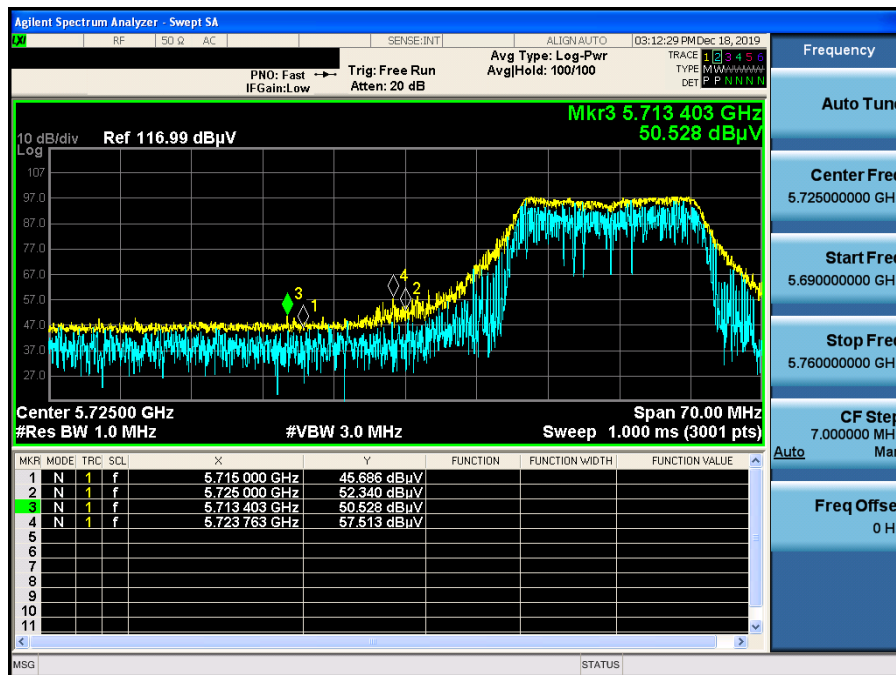


Detector Mode : AV



802.11n(HT20) & U-NII 3 & Ch.149 & X axis & Hor

Detector Mode : PK



802.11n(HT20) & U-NII 3 & Ch.165 & X axis & Hor

Detector Mode : PK

