FCC RADIO TEST REPORT

Applicant	:	COMTREND CORPORATION
Address	:	3F-1, No. 10, Lane 609, Chung Hsin Road, Section 5, San Chung Dist., New Taipei City, Taiwan
Equipment	:	Home Gateway
Model No.	:	VR-3063
Series Model No.	:	VR-3063u
Trade Name	:	COMTREND
FCC ID	:	L9VVR3063U

I HEREBY CERTIFY THAT :

The sample was received on Apr. 18, 2018 and the testing was carried out on Aug. 22, 2018 at Cerpass Technology Corp. The test result refers exclusively to the test presented test model / sample. Without written approval of Cerpass Technology Corp., the test report shall not be reproduced except in full.

Approved by:

Mark Liao / Assistant Manager

Tested by:

Spree Yei / Engineer

Laboratory Accreditation:

Cerpass Technology Corporation Test Laboratory

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History of this test report

Report No.	Issue Date	Description
TEFE1801225	Sep. 06, 2018	Original

1. Summary of Test Procedure and Test Results

1.1. Applicable Standards

ANSI C63.4:2014

ANSI C63.10:2013

FCC Rules and Regulations Part 15 Subpart E §15.407

First R&O 14-30

KDB662911

KDB789033

KDB644545

FCC Rule	Description of Test	Result
15.203	Antenna Requirement	Pass
15.207(a)	AC Power Line Conducted Emission	Pass
15.407(b) 15.209	Radiated Spurious Emission	Pass
15.407(a)	26 dB Occupied Bandwidth	Pass
15.407	6 dB Bandwidth	Pass
15.407 (a) & (a)(3)	Average Power	Pass
15.407(a)	Maximum Power Spectral Density	Pass
15.407(g)	Frequency Stability	Pass
15.407(c)	Automatically Discontinue Transmission	Pass
2.1091	Radio Frequency Exposure	Pass

2. Test Configuration of Equipment under Test

2.1. Feature of Equipment under Test

Frequency Range	802.11b/g/n: 2412MHz-2462MHz 802.11a/n/ac: 5150MHz-5250MHz, 5725MHz-5850MHz
Modulation Technology	2.4GHz: 802.11b: DSSS 802.11g: OFDM 802.11n: OFDM
	5GHz: 802.11a: OFDM 802.11n: OFDM 802.11ac: OFDM
Modulation Type	2.4GHz: 802.11b: CCK, DQPSK, DBPSK 802.11g: 64QAM, 16QAM, QPSK, BPSK 802.11n: 64QAM, 16QAM, QPSK, BPSK
	5GHz: 802.11a: 64QAM, 16QAM, QPSK, BPSK 802.11n: 64QAM, 16QAM, QPSK, BPSK 802.11ac: 256QAM, 64QAM, 16QAM, QPSK, BPSK
Data Rate	2.4GHz: 802.11b: 1, 2, 5.5, 11Mbps 802.11g: 6, 9, 12, 18, 24, 36, 48, 54Mbps 802.11n: MCS0 – MCS31, HT20/40
	5GHz: 802.11a: 6, 9, 12, 18, 24, 36, 48, 54Mbps 802.11n: MCS0 – MCS31, HT20/40 802.11ac: MCS0 – MCS9, 802.11n HT20/40/80
Antenna Type	Dipole Antenna
Antenna Gain	2.4GHz: ANT A: 4.2 dBi ; ANT B: 4.5 dBi ; ANT C: 3.3 dBi
	5GHz: 5150MHz-5250MHz: ANT A: 3.5 dBi ; ANT B: 3.8 dBi ; ANT C: 3.5 dBi ; ANT D: 5.7 dBi 5725MHz-5850MHz: ANT A: 3.5 dBi ; ANT B: 3.8 dBi ; ANT C: 3.5 dBi ; ANT D: 5.7 dBi

2.2. The Difference of Model No.

The differences between all model numbers as below:

Model No.	Remark
VR-3063	The differences between these two model numbers are for marketing purpose, the circuit design and layout are the same.
VR-3063u	

2.3. Carrier Frequency of Channels

Band 1: 5150MHz-5250MHz
802.11a, 802.11n HT20, 802.11ac VHT20

Channel	Frequency(MHz)	Channel	Frequency(MHz)
***36**	**5180**	***44**	**5220**
40	5200	***48**	**5240**

802.11n HT40, 802.11ac VHT40

Channel	Frequency(MHz)	Channel	Frequency(MHz)
***38**	**5190**	***46**	**5230**

802.11ac VHT80

Channel	Frequency(MHz)
***42**	**5210**

Band 4: 5725MHz-5850MHz
802.11a, 802.11n HT20, 802.11ac VHT20

Channel	Frequency(MHz)	Channel	Frequency(MHz)
***149**	**5745**	161	5805
153	5765	***165**	**5825**
***157**	**5785**		

802.11n HT40, 802.11ac VHT40

Channel	Frequency(MHz)	Channel	Frequency(MHz)
***151**	**5755**	***159**	**5795**

802.11ac VHT80

Channel	Frequency(MHz)
***155**	**5775**

Note: Channels remarked * are selected to perform test.

2.4. Test Mode and Test Software

a. During testing, the interface cables and equipment positions were varied according to ANSI C63.4.
b. The complete test system included remote workstation and EUT for RF test. The remote workstation included Notebook.
c. An executive program, ”ATE Command” under WIN 8 was executed to transmit and receive data via WLAN.

d. The following test modes were performed for the test:

Conducted Emissions from the AC mains power ports	
Test Mode	Operating Description
1	Band 1, 802.11a (6Mbps)
2	Band 1, 802.11ac VHT20 (6.5Mbps)
3	Band 1, 802.11ac VHT40 (13.5Mbps)
4	Band 1, 802.11ac VHT80 (29.3Mbps)
5	Band 4, 802.11a (6Mbps)
6	Band 4, 802.11ac VHT20 (6.5Mbps)
7	Band 4, 802.11ac VHT40 (13.5Mbps)
8	Band 4, 802.11ac VHT80 (29.3Mbps)
caused “Test Mode 1,5” generated the worst case, they were reported as the final data.	
Radiation Emissions (30MHz ~ 1GHz)	
Test Mode	Operating Description
1	Band 1, 802.11a (6Mbps)
2	Band 1, 802.11ac VHT20 (6.5Mbps)
3	Band 1, 802.11ac VHT40 (13.5Mbps)
4	Band 1, 802.11ac VHT80 (29.3Mbps)
5	Band 4, 802.11a (6Mbps)
6	Band 4, 802.11ac VHT20 (6.5Mbps)
7	Band 4, 802.11ac VHT40 (13.5Mbps)
8	Band 4, 802.11ac VHT80 (29.3Mbps)
caused “Test Mode 1,5” generated the worst case, they were reported as the final data.	
Radiation Emissions (1GHz ~ 40GHz)	
Test Mode	Operating Description
1	Band 1, 802.11a (6Mbps)
2	Band 1, 802.11ac VHT20 (6.5Mbps)
3	Band 1, 802.11ac VHT40 (13.5Mbps)
4	Band 1, 802.11ac VHT80 (29.3Mbps)
5	Band 4, 802.11a (6Mbps)
6	Band 4, 802.11ac VHT20 (6.5Mbps)
7	Band 4, 802.11ac VHT40 (13.5Mbps)
8	Band 4, 802.11ac VHT80 (29.3Mbps)
caused “Test Mode 1~8” generated the worst case, they were reported as the final data.	

2.5. Description of Test System

Device	Manufacturer	Model No.	Description
Remote workstation			
Notebook	ASUS	P2430U	Power Cable, Unshielding, 1.8m

2.6. General Information of Test

Test Site	**Cerpass Technology Corporation Test Laboratory** Address: No.10, Ln. 2, Lianfu St., Luzhu Dist., Taoyuan City 33848, Taiwan (R.O.C.) Tel:+886-3-3226-888 Fax:+886-3-3226-881 Address: No.68-1, Shihbachongsi, Shihding Township, New Taipei City 223, Taiwan, R.O.C. Tel: +886-2-2663-8582	
	FCC	TW1079, TW1061, TW1439
	IC	4934E-1, 4934E-2
	VCCI	T-2205 for Telecommunication Test C-4663 for Conducted emission test R-4399, R-4218 for Radiated emission test G-10812, G-10813 for radiated disturbance above 1GHz
Frequency Range Investigated:	Conducted: from 150kHz to 30 MHz Radiation: from 30 MHz to 40,000MHz	
Test Distance:	The test distance of radiated emission from antenna to EUT is 3 M.	

2.7. Measurement Uncertainty

Measurement Item	Uncertainty
Radiated Spurious Emission(9KHz~30MHz)	±5.007dB
Radiated Spurious Emission(30MHz~1GHz)	±5.157dB
Radiated Spurious Emission(1GHz~18GHz)	±6.383dB
Radiated Spurious Emission(18GHz~40GHz)	±6.648dB
Conducted Spurious Emission	±1.253dB
6dB Bandwidth	±6.89%
Power Spectral Density	±0.630dB
26 dB Occupied Bandwidth	±6.10%
Frequency Stability	±375KHz
Channel Frequencies Separation	±6.10%
20dB Bandwidth	±6.12%
Dwell Time	±1.34%
Peak Output Power(Conducted Power Meter)	±0.86dB
Temperature	±1.2℃
Humidity	±2.7%
Channel Move Time	±4.53%
Channel Closing Transmission Time	±6.61%
Threshold	±0.631dB
Non occupancy period	±1.17%

3. Test Equipment and Ancillaries Used for Tests

Instrument	Manufacturer	Model No.	Serial No.	Calibration Date	Valid Date
EMI Receiver	R&S	ESCI3	100821	2017/09/08	2018/09/07
LISN	Schwarzbeck	NSLK 8127	8127-568	2018/02/26	2019/02/25
Pulse Limiter	R&S	ESH3-Z2	101934	2018/02/22	2019/02/21
Bilog Antenna	Schwarzbeck	VULB9168	275	2017/08/31	2018/08/30
Horn Antenna	EMCO	3115	31601	2017/09/11	2018/09/10
Horn Antenna	EMCO	3116	31970	2018/03/23	2019/03/22
Preamplifier	EM	EM330	60658	2017/09/08	2018/09/07
Preamplifier	EMC INSTRUMENTS	EMC051845SE	980333	2017/09/20	2018/09/19
Preamplifier	EMC INSTRUMENTS	EMC184045	980065	2017/11/10	2018/11/09
MXG MW Analog Signal Generator	KEYSIGHT	N5183A	MY50142931	2018/04/10	2019/04/09
Spectrum Analyzer	R&S	FSP40	100219	2018/07/03	2019/07/02
BLUETOOTH TESTER	R&S	CBT	101133	2018/04/02	2019/04/01
Attenuator	KEYSIGHT	8491B	MY39250705	2017/09/04	2018/09/03
Rotary Attenuator	Agilent	8495B	MY42146680	2018/03/29	2019/03/28
Temp & Humi chamber	T-MACHINE	TMJ-9712	T-12-040111	2017/09/04	2018/09/03
Series Power Meter	Anritsu	ML2495A	1224005	2018/03/23	2019/03/22
Power Sensor	Anritsu	MA2411B	1207295	2018/03/23	2019/03/22
Software	Farad	Ez-EMC	ver.ct3a1	N/A	N/A
Software	AUDIX	E3	V8.2014-8-6	N/A	N/A
Software	Keysight	N7607B Signal Studio	V3.0.0.0	N/A	N/A
Software	Keysight	Inservice MonitorUtility	N/A	N/A	N/A

4. Antenna Requirements

4.1. Standard Applicable

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

And according to FCC 47 CFR Section 15.407 (a), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

4.2. Antenna Construction and Directional Gain

Antenna Type	Dipole Antenna
Antenna Gain	2.4GHz: ANT A: 4.2 dBi ; ANT B: 4.5 dBi ; ANT C: 3.3 dBi
	5GHz: 5150MHz-5250MHz: ANT A: 3.5 dBi ; ANT B: 3.8 dBi ; ANT C: 3.5 dBi ; ANT D: 5.7 dBi 5725MHz-5850MHz: ANT A: 3.5 dBi ; ANT B: 3.8 dBi ; ANT C: 3.5 dBi ; ANT D: 5.7 dBi

2412MHz-2462MHz, 802.11b
For Power directional gain= G_{ant}= 4.20 dBi For PSD directional gain = 10 log[$(10^{G1/20} + 10^{G2/20})^2$ /NANT] = 4.20 dBi
2412MHz-2462MHz, 802.11g, 802.11n HT20, HT40
For Power directional gain= G_{ant}= 4.50 dBi For PSD directional gain = 10 log[$(10^{G1/20} + 10^{G2/20})^2$ /NANT] = 8.79 dBi
5150MHz-5250MHz
For Power directional gain= G_{ant}= 5.70 dBi For PSD directional gain = 10 log[$(10^{G1/20} + 10^{G2/20})^2$ /NANT] = 10.20 dBi
5725MHz-5850MHz
For Power directional gain= G_{ant}= 5.70 dBi For PSD directional gain = 10 log[$(10^{G1/20} + 10^{G2/20})^2$ /NANT] = 10.20 dBi

5. Test of AC Power Line Conducted Emission

5.1. Test Limit

Conducted Emissions were measured from 150 kHz to 30 MHz with a bandwidth of 9 KHz, according to the methods defined in ANSI C63.4-2014. The EUT was placed on a nonmetallic stand in a shielded room 0.8 meters above the ground plane. The interface cables and equipment positioning were varied within limits of reasonable applications to determine the position produced maximum conducted emissions.

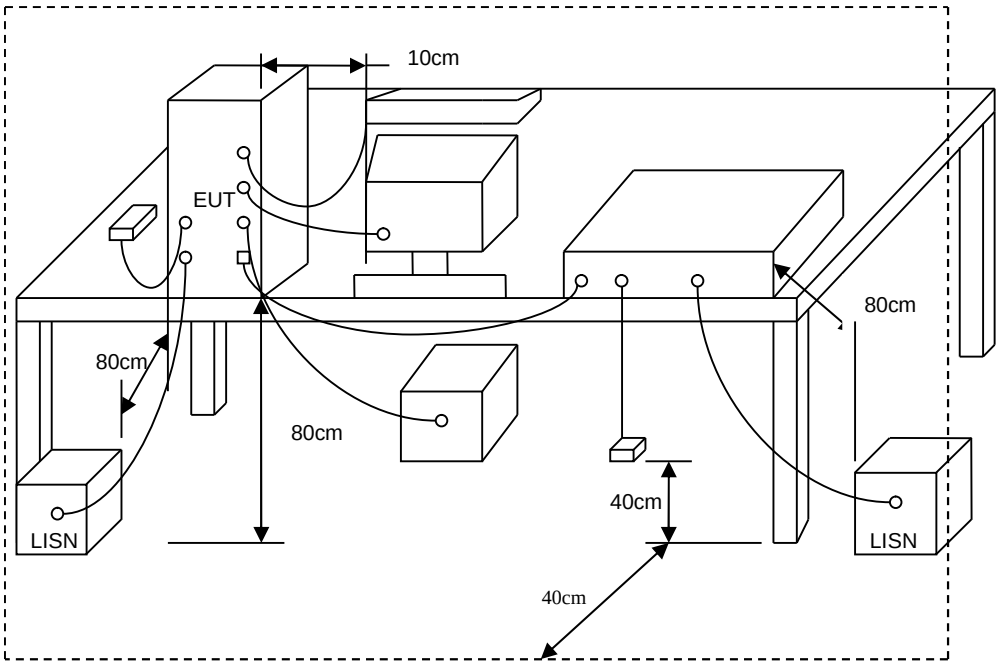
Frequency (MHz)	Quasi Peak (dBμV)	Average (dBμV)
0.15 – 0.5	66-56*	56-46*
0.5 – 5.0	56	46
5.0 – 30.0	60	50

*Decreases with the logarithm of the frequency.

5.2. Test Procedures

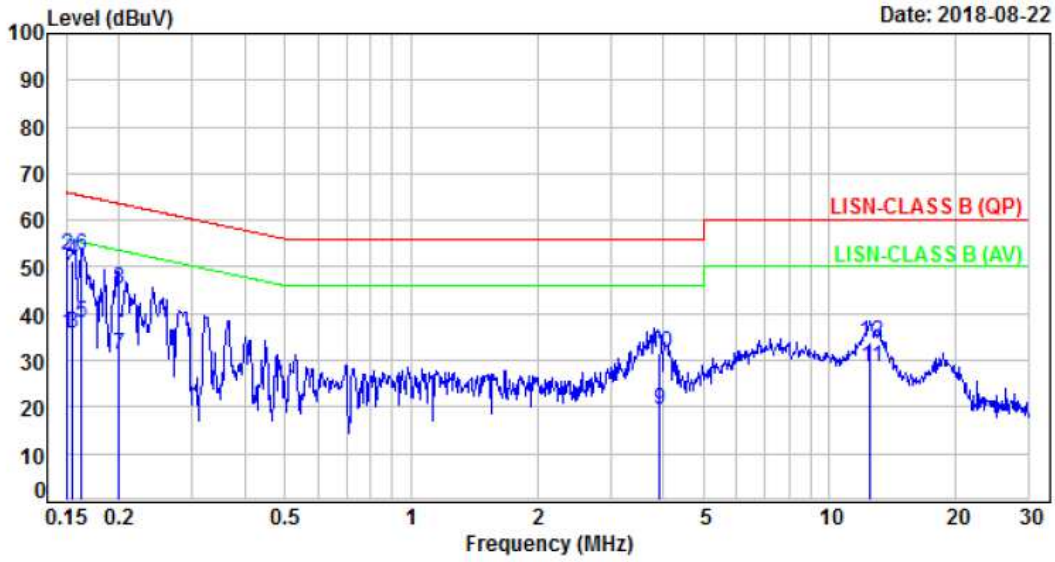
a. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
b. Connect EUT to the power mains through a line impedance stabilization network (LISN).
c. All the support units are connecting to the other LISN.
d. The LISN provides 50 ohm coupling impedance for the measuring instrument.
e. The FCC states that a 50 ohm, 50 micro-Henry LISN should be used.
f. Both sides of AC line were checked for maximum conducted interference.
g. The frequency range from 150 kHz to 30 MHz was searched.
h. Set the test-receiver system to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

5.3. Typical Test Setup



5.4. Test Result and Data

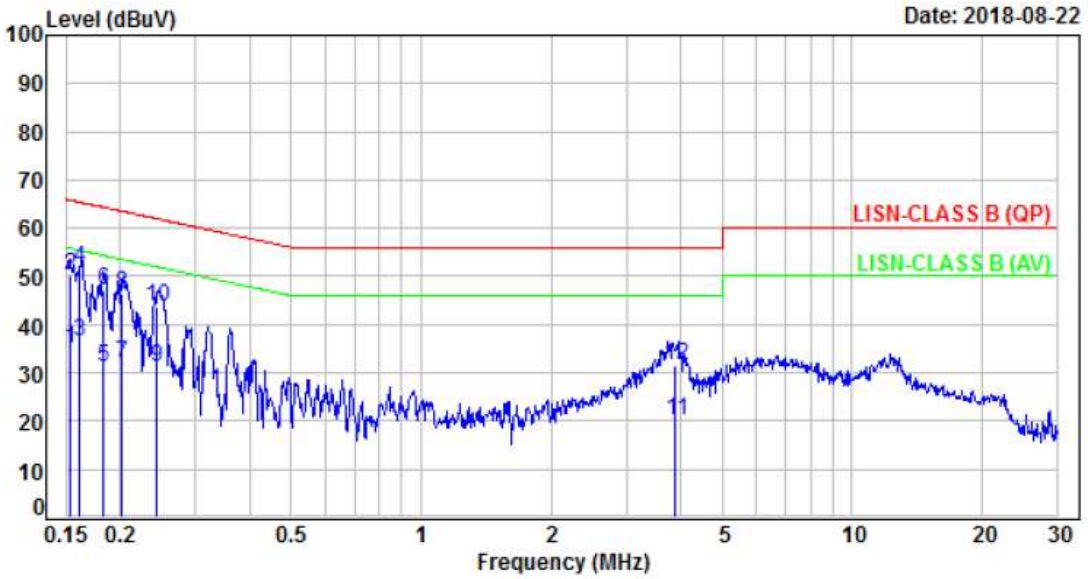
Power	:	AC 120V	Pol/Phase	:	LINE
Test Mode	:	Mode 1, Band 1	Temperature	:	22 °C
Test Date	:	Aug. 22, 2018	Humidity	:	43 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.15	9.70	26.06	35.76	55.99	-20.23	Average	P
2	0.15	9.70	42.70	52.40	65.99	-13.59	QP	P
3	0.16	9.70	25.98	35.68	55.73	-20.05	Average	P
4	0.16	9.70	41.72	51.42	65.73	-14.31	QP	P
5	0.16	9.70	28.29	37.99	55.30	-17.31	Average	P
6	0.16	9.70	42.93	52.63	65.30	-12.67	QP	P
7	0.20	9.69	21.42	31.11	53.61	-22.50	Average	P
8	0.20	9.69	35.71	45.40	63.61	-18.21	QP	P
9	3.93	9.84	9.72	19.56	46.00	-26.44	Average	P
10	3.93	9.84	21.79	31.63	56.00	-24.37	QP	P
11	12.51	9.96	18.59	28.55	50.00	-21.45	Average	P
12	12.51	9.96	23.89	33.85	60.00	-26.15	QP	P

Note: Level = Reading + Factor
Margin = Level – Limit
Factor = (LISN, ISN, PLC or current probe) Factor + Cable Loss+ Attenuator

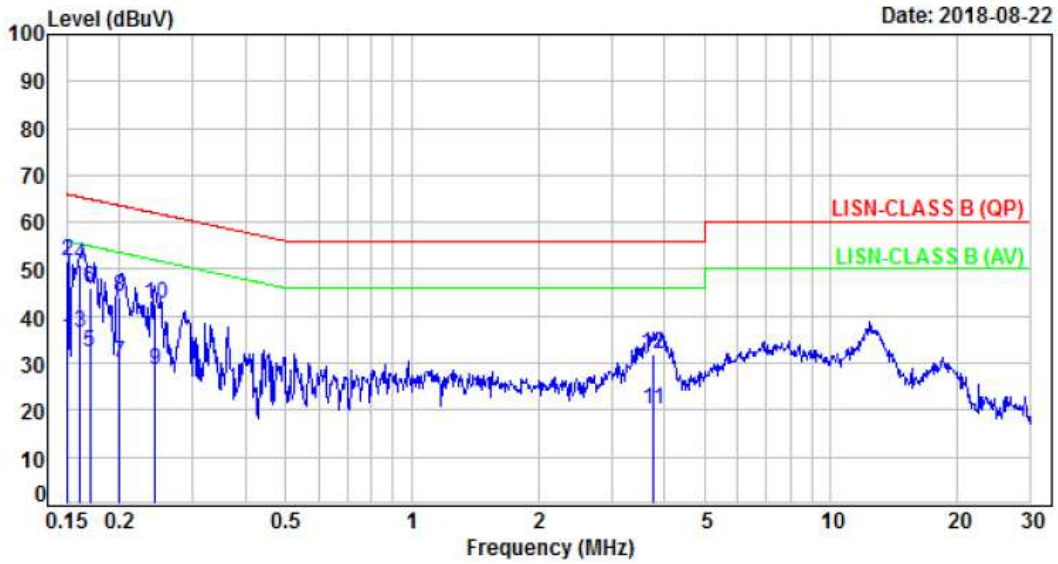
Power	:	AC 120V	Pol/Phase	:	NEUTRAL
Test Mode	:	Mode 1, Band 1	Temperature	:	22 °C
Test Date	:	Aug. 22, 2018	Humidity	:	43 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.15	9.70	25.29	34.99	55.78	-20.79	Average	P
2	0.15	9.70	40.59	50.29	65.78	-15.49	QP	P
3	0.16	9.70	26.97	36.67	55.40	-18.73	Average	P
4	0.16	9.70	41.88	51.58	65.40	-13.82	QP	P
5	0.18	9.70	21.44	31.14	54.37	-23.23	Average	P
6	0.18	9.70	37.37	47.07	64.37	-17.30	QP	P
7	0.20	9.70	22.15	31.85	53.52	-21.67	Average	P
8	0.20	9.70	36.80	46.50	63.52	-17.02	QP	P
9	0.24	9.70	21.52	31.22	51.95	-20.73	Average	P
10	0.24	9.70	34.09	43.79	61.95	-18.16	QP	P
11	3.89	9.85	10.15	20.00	46.00	-26.00	Average	P
12	3.89	9.85	21.57	31.42	56.00	-24.58	QP	P

Note: Level = Reading + Factor
Margin = Level – Limit
Factor = (LISN, ISN, PLC or current probe) Factor + Cable Loss+ Attenuator

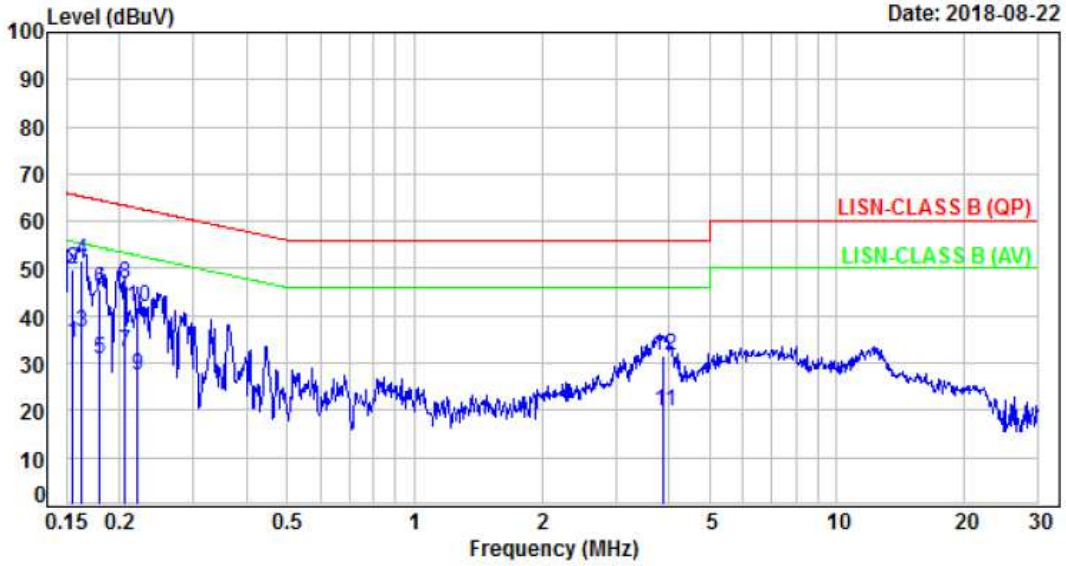
Power	:	AC 120V	Pol/Phase	:	LINE
Test Mode	:	Mode 5, Band 4	Temperature	:	22 °C
Test Date	:	Aug. 22, 2018	Humidity	:	43 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.15	9.70	25.49	35.19	55.99	-20.80	Average	P
2	0.15	9.70	41.84	51.54	65.99	-14.45	QP	P
3	0.16	9.70	26.97	36.67	55.43	-18.76	Average	P
4	0.16	9.70	41.33	51.03	65.43	-14.40	QP	P
5	0.17	9.70	22.50	32.20	54.96	-22.76	Average	P
6	0.17	9.70	36.13	45.83	64.96	-19.13	QP	P
7	0.20	9.69	20.33	30.02	53.64	-23.62	Average	P
8	0.20	9.69	34.32	44.01	63.64	-19.63	QP	P
9	0.24	9.69	18.70	28.39	52.01	-23.62	Average	P
10	0.24	9.69	33.04	42.73	62.01	-19.28	QP	P
11	3.75	9.83	10.19	20.02	46.00	-25.98	Average	P
12	3.75	9.83	22.19	32.02	56.00	-23.98	QP	P

Note: Level = Reading + Factor
Margin = Level – Limit
Factor = (LISN, ISN, PLC or current probe) Factor + Cable Loss+ Attenuator

Power	:	AC 120V	Pol/Phase	:	NEUTRAL
Test Mode	:	Mode 5, Band 4	Temperature	:	22 °C
Test Date	:	Aug. 22, 2018	Humidity	:	43 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.16	9.70	24.54	34.24	55.72	-21.48	Average	P
2	0.16	9.70	40.16	49.86	65.72	-15.86	QP	P
3	0.16	9.70	26.78	36.48	55.36	-18.88	Average	P
4	0.16	9.70	41.90	51.60	65.36	-13.76	QP	P
5	0.18	9.70	20.97	30.67	54.48	-23.81	Average	P
6	0.18	9.70	36.04	45.74	64.48	-18.74	QP	P
7	0.21	9.70	22.44	32.14	53.38	-21.24	Average	P
8	0.21	9.70	36.89	46.59	63.38	-16.79	QP	P
9	0.22	9.70	17.69	27.39	52.81	-25.42	Average	P
10	0.22	9.70	32.20	41.90	62.81	-20.91	QP	P
11	3.90	9.85	10.05	19.90	46.00	-26.10	Average	P
12	3.90	9.85	21.65	31.50	56.00	-24.50	QP	P

Note: Level = Reading + Factor
Margin = Level – Limit
Factor = (LISN, ISN, PLC or current probe) Factor + Cable Loss+ Attenuator

5.5. Test Photographs

Front View

Rear View

6. Test of Spurious Emission (Radiated)

6.1. Test Limit

Undesirable emission limits. Except as shown in paragraph (b)(7) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:

(1) For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

(2) For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

(3) For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

(4) For transmitters operating in the 5.725-5.85 GHz band:
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.

(5) The emission measurements shall be performed using a minimum resolution bandwidth of 1 MHz. A lower resolution bandwidth may be employed near the band edge, when necessary, provided the measured energy is integrated to show the total power over 1 MHz.

(6) Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in §15.209. Further, any U-NII devices using an AC power line are required to comply also with the conducted limits set forth in §15.207.

(7) The provisions of §15.205 apply to intentional radiators operating under this section.

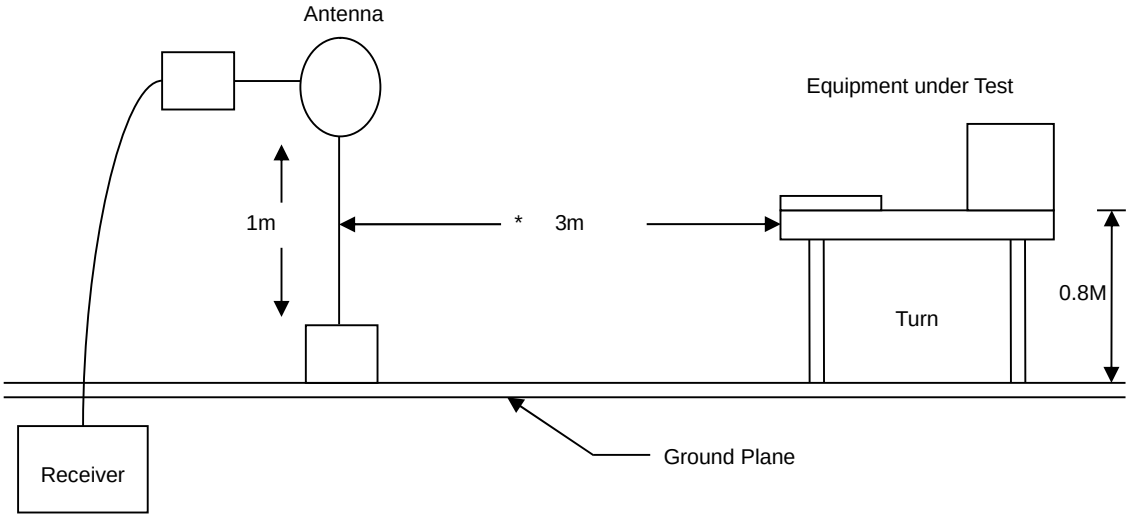
(8) When measuring the emission limits, the nominal carrier frequency shall be adjusted as close to the upper and lower frequency band edges as the design of the equipment permits.

6.2. Test Procedures

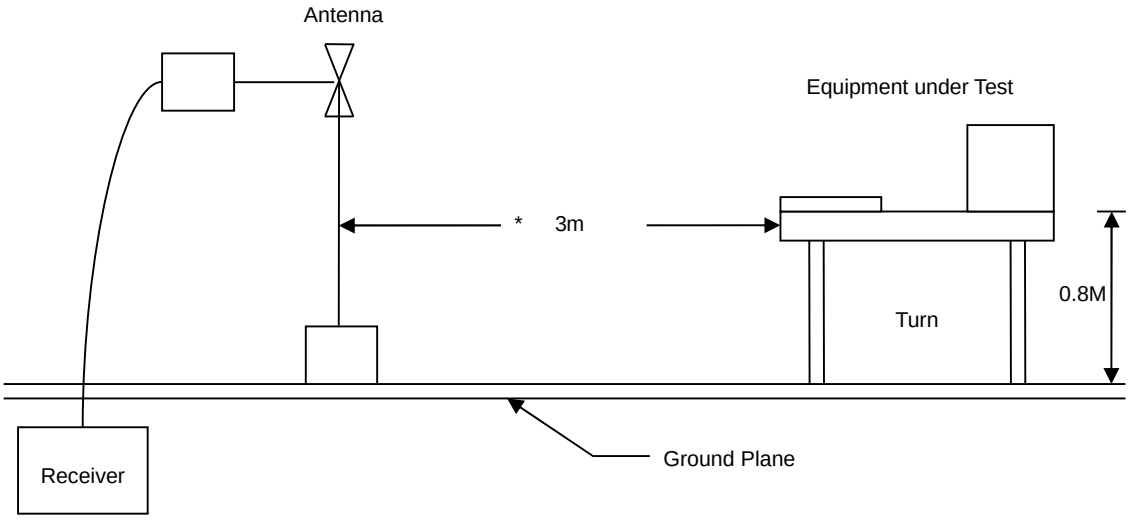
a. The EUT was placed on a rotatable table top 0.8 meter above ground.
b. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
c. The table was rotated 360 degrees to determine the position of the highest radiation.
d. The antenna is a broadband antenna and its height is varied between one meter and four meters above ground to find the maximum value of the field strength both horizontal polarization and vertical polarization of the antenna are set to make the measurement.
e. For each suspected emission the EUT was arranged to its worst case and then tune the antenna tower (from 1 M to 4 M) and turn table (from 0 degree to 360 degrees) to find the maximum reading.
f. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function and specified bandwidth with Maximum Hold Mode.
g. If the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 3 dB margin will be repeated one by one using the quasi-peak method and reported.
h. For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than average limit (that means the emission level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.
i. “Cone of radiation” has been considered to be 3dB bandwidth of the measurement antenna.

6.3. Typical Test Setup

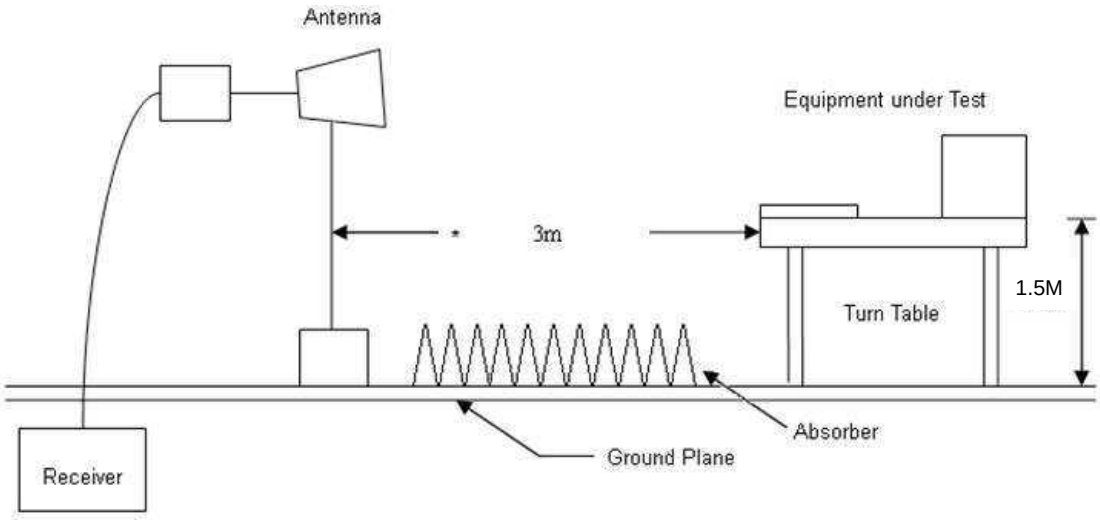
Below 30MHz test setup



30MHz- 1GHz Test Setup



Above 1GHz Test Setup

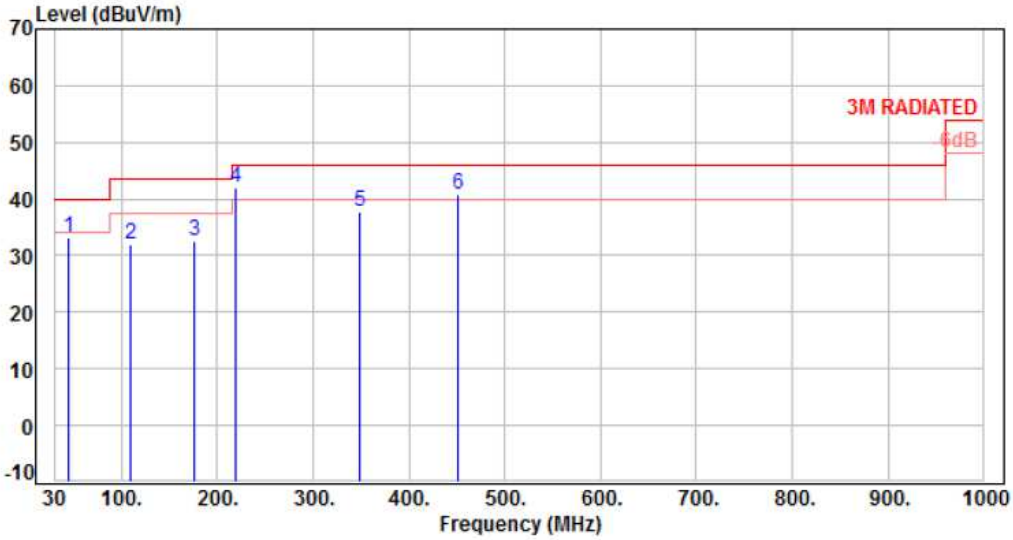


6.4. Test Result and Data (9kHz ~ 30MHz)

The 9kHz - 30MHz spurious emission is under limit 20dB more.

6.5. Test Result and Data (30MHz ~ 1GHz)

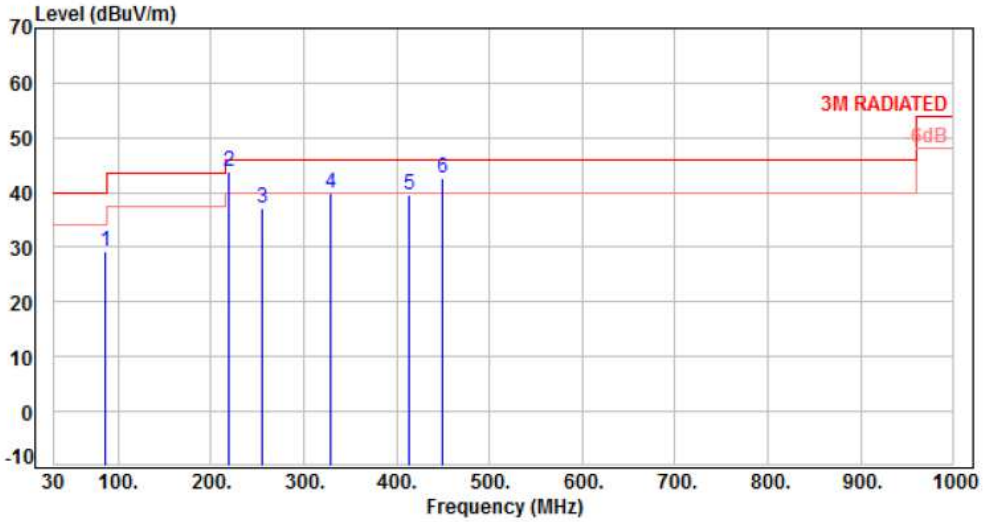
Power	:	AC 120V	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 1, Band 1	Temperature	:	21 °C
Test Date	:	Jul. 17, 2018	Humidity	:	62 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	44.55	-10.80	44.01	33.21	40.00	-6.79	QP	100	245	P
2	109.54	-14.29	46.32	32.03	43.50	-11.47	Peak	400	0	P
3	176.47	-11.74	44.24	32.50	43.50	-11.00	Peak	400	0	P
4	219.15	-12.89	55.00	42.11	46.00	-3.89	QP	100	331	P
5	348.16	-8.62	46.43	37.81	46.00	-8.19	Peak	400	0	P
6	450.98	-5.81	46.75	40.94	46.00	-5.06	Peak	400	0	P

Note: Level=Reading+Factor
Margin=Level-Limit
Factor=Antenna Factor + cable loss - Amplifier Factor

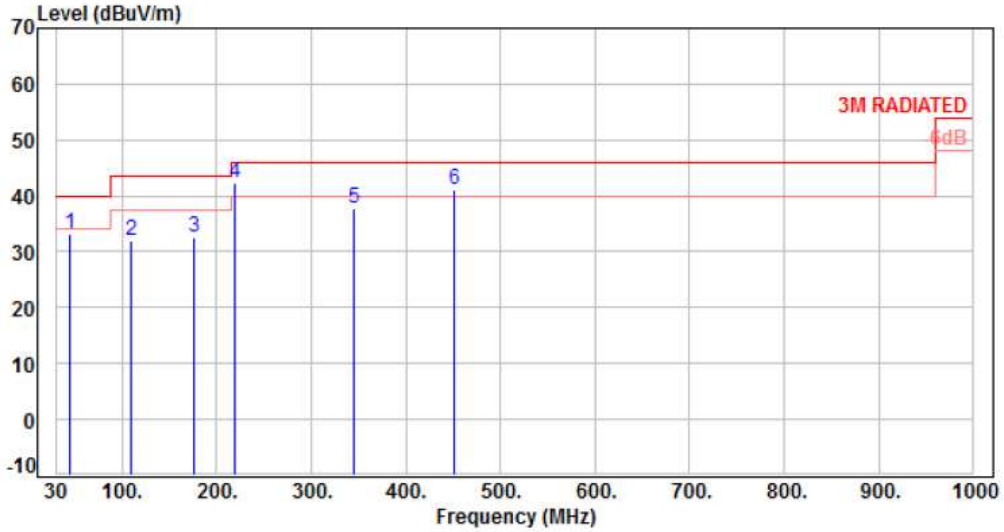
Power	:	AC 120V	Pol/Phase	:	HORIZONTAL
Test Mode	:	Mode 1, Band 1	Temperature	:	21 °C
Test Date	:	Jul. 17, 2018	Humidity	:	62 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	86.26	-16.14	45.53	29.39	40.00	-10.61	Peak	100	0	P
2	219.15	-12.89	56.85	43.96	46.00	-2.04	QP	100	109	P
3	256.01	-11.50	48.78	37.28	46.00	-8.72	Peak	100	0	P
4	328.76	-9.13	48.87	39.74	46.00	-6.26	Peak	100	0	P
5	414.12	-6.74	46.37	39.63	46.00	-6.37	Peak	100	0	P
6	450.01	-5.82	48.46	42.64	46.00	-3.36	Peak	100	0	P

Note: Level=Reading+Factor
Margin=Level-Limit
Factor=Antenna Factor + cable loss - Amplifier Factor

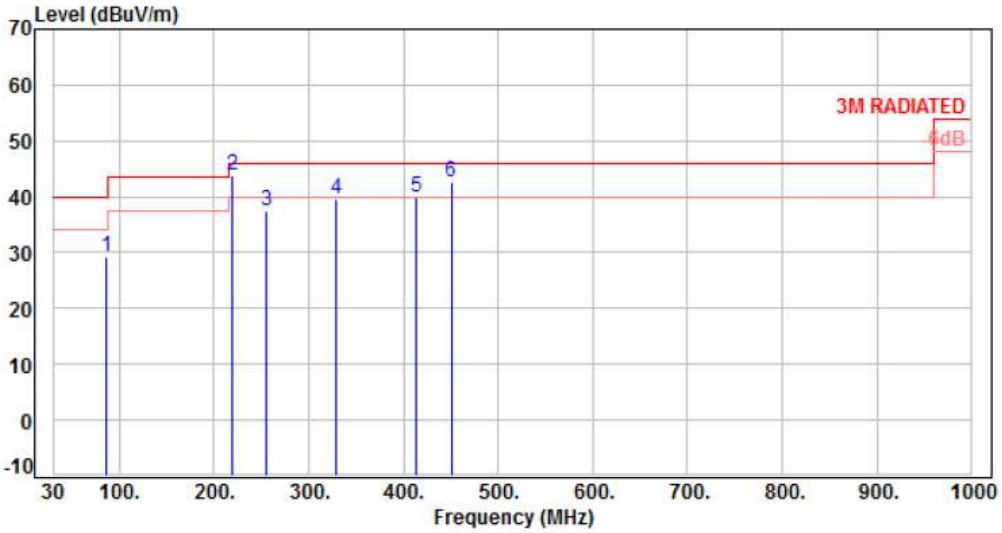
Power	:	AC 120V	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 5, Band 4	Temperature	:	21 °C
Test Date	:	Aug. 22, 2018	Humidity	:	62 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	45.22	-10.75	44.09	33.34	40.00	-6.66	QP	100	233	P
2	109.38	-14.32	46.15	31.83	43.50	-11.67	Peak	400	0	P
3	175.22	-11.60	44.17	32.57	43.50	-10.93	Peak	400	0	P
4	219.11	-12.89	55.20	42.31	46.00	-3.69	QP	100	327	P
5	345.61	-8.69	46.52	37.83	46.00	-8.17	Peak	400	0	P
6	451.23	-5.80	46.82	41.02	46.00	-4.98	Peak	400	0	P

Note: Level=Reading+Factor
Margin=Level-Limit
Factor=Antenna Factor + cable loss - Amplifier Factor

Power	:	AC 120V	Pol/Phase	:	HORIZONTAL
Test Mode	:	Mode 5, Band 4	Temperature	:	21 °C
Test Date	:	Aug. 22, 2018	Humidity	:	62 %

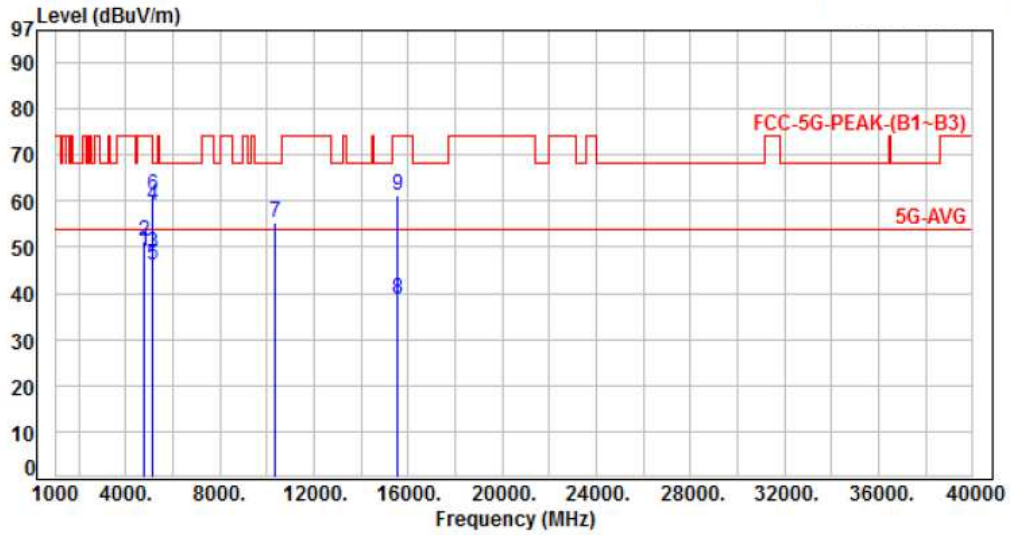


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	86.36	-16.16	45.52	29.36	40.00	-10.64	Peak	100	0	P
2	219.15	-12.89	56.79	43.90	46.00	-2.10	QP	100	104	P
3	256.00	-11.50	48.86	37.36	46.00	-8.64	Peak	100	0	P
4	328.51	-9.13	48.77	39.64	46.00	-6.36	Peak	100	0	P
5	414.26	-6.74	46.53	39.79	46.00	-6.21	Peak	100	0	P
6	450.33	-5.82	48.56	42.74	46.00	-3.26	Peak	100	0	P

Note: Level=Reading+Factor
Margin=Level-Limit
Factor=Antenna Factor + cable loss - Amplifier Factor

6.6. Test Result and Data (1GHz ~ 40GHz)

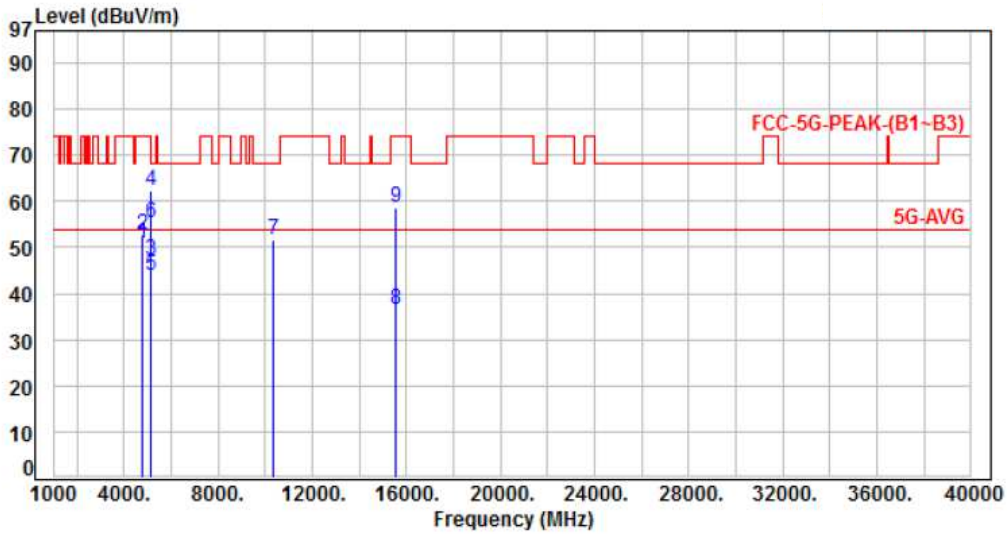
Power	:	AC 120V	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 1, CH36, Band 1	Temperature	:	21 °C
Test Date	:	Apr. 18, 2018	Humidity	:	62 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	4800.00	-8.88	57.98	49.10	54.00	-4.90	Average	100	85	P
2	4800.00	-8.88	60.12	51.24	74.00	-22.76	Peak	100	85	P
3	5147.00	-8.01	56.70	48.69	54.00	-5.31	Average	235	360	P
4	5147.00	-8.01	67.00	58.99	74.00	-15.01	Peak	235	360	P
5	5150.00	-8.01	54.20	46.19	54.00	-7.81	Average	235	360	P
6	5150.00	-8.01	69.20	61.19	74.00	-12.81	Peak	235	360	P
7	10360.00	-0.89	56.30	55.41	68.20	-12.79	Peak	100	55	P
8	15540.00	4.33	34.50	38.83	54.00	-15.17	Average	100	125	P
9	15540.00	4.33	57.00	61.33	74.00	-12.67	Peak	100	125	P

Note: Level=Reading+Factor
Margin=Level-Limit
Factor=Antenna Factor + cable loss - Amplifier Factor

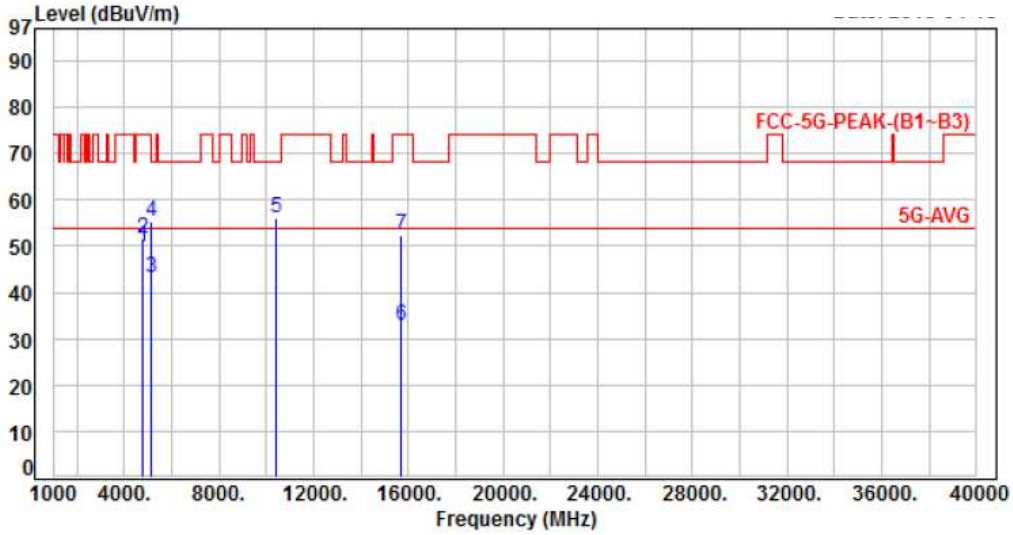
Power	:	AC 120V	Pol/Phase	:	HORIZONTAL
Test Mode	:	Mode 1, CH36, Band 1	Temperature	:	21 °C
Test Date	:	Apr. 18, 2018	Humidity	:	62 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	4800.00	-8.88	59.80	50.92	54.00	-3.08	Average	105	123	P
2	4800.00	-8.88	61.73	52.85	74.00	-21.15	Peak	105	123	P
3	5147.00	-8.01	55.20	47.19	54.00	-6.81	Average	100	65	P
4	5147.00	-8.01	70.30	62.29	74.00	-11.71	Peak	100	65	P
5	5150.00	-8.01	52.00	43.99	54.00	-10.01	Average	100	65	P
6	5150.00	-8.01	63.20	55.19	74.00	-18.81	Peak	100	65	P
7	10360.00	-0.89	52.70	51.81	68.20	-16.39	Peak	100	39	P
8	15540.00	4.33	32.30	36.63	54.00	-17.37	Average	100	121	P
9	15540.00	4.33	54.30	58.63	74.00	-15.37	Peak	100	121	P

Note: Level=Reading+Factor
Margin=Level-Limit
Factor=Antenna Factor + cable loss - Amplifier Factor

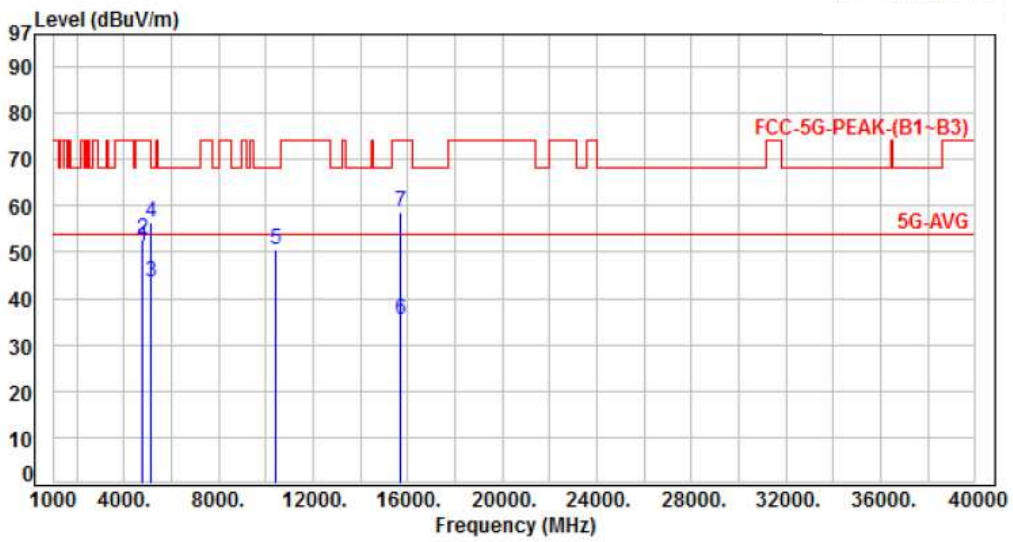
Power	:	AC 120V	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 1, CH44, Band 1	Temperature	:	21 °C
Test Date	:	Apr. 18, 2018	Humidity	:	62 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	4800.00	-8.88	58.67	49.79	54.00	-4.21	Average	100	102	P
2	4800.00	-8.88	60.53	51.65	74.00	-22.35	Peak	100	102	P
3	5150.00	-8.01	51.30	43.29	54.00	-10.71	Average	100	130	P
4	5150.00	-8.01	63.50	55.49	74.00	-18.51	Peak	100	130	P
5	10440.00	-0.82	56.70	55.88	68.20	-12.32	Peak	132	50	P
6	15660.00	4.39	28.60	32.99	54.00	-21.01	Average	132	125	P
7	15660.00	4.39	48.00	52.39	74.00	-21.61	Peak	132	125	P

Note: Level=Reading+Factor
Margin=Level-Limit
Factor=Antenna Factor + cable loss - Amplifier Factor

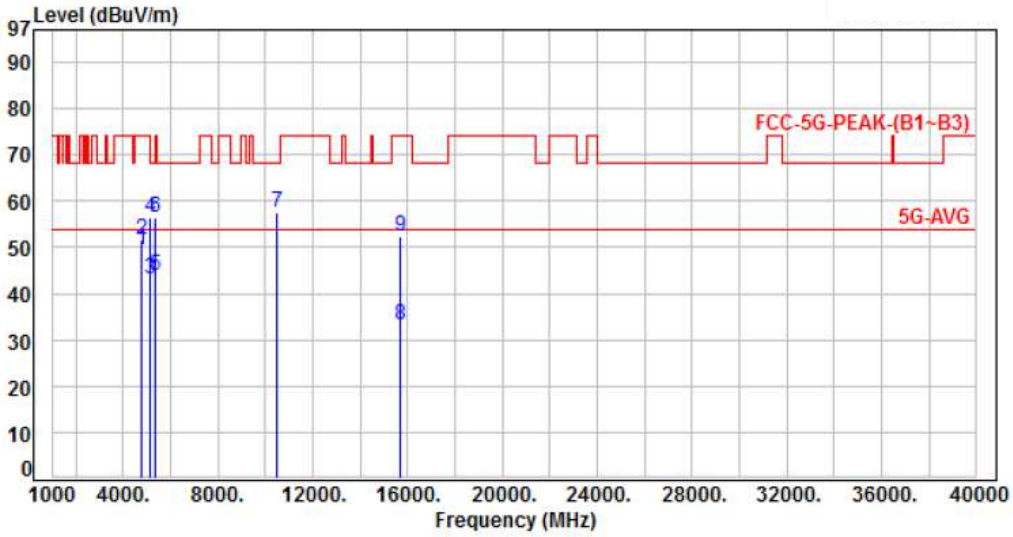
Power	:	AC 120V	Pol/Phase	:	HORIZONTAL
Test Mode	:	Mode 1, CH44, Band 1	Temperature	:	21 °C
Test Date	:	Apr. 18, 2018	Humidity	:	62 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	4800.00	-8.88	60.00	51.12	54.00	-2.88	Average	105	133	P
2	4800.00	-8.88	61.76	52.88	74.00	-21.12	Peak	105	133	P
3	5150.00	-8.01	51.40	43.39	54.00	-10.61	Average	112	69	P
4	5150.00	-8.01	64.50	56.49	74.00	-17.51	Peak	112	69	P
5	10440.00	-0.82	51.50	50.68	68.20	-17.52	Peak	100	87	P
6	15660.00	4.39	31.00	35.39	54.00	-18.61	Average	162	140	P
7	15660.00	4.39	54.20	58.59	74.00	-15.41	Peak	162	140	P

Note: Level=Reading+Factor
Margin=Level-Limit
Factor=Antenna Factor + cable loss - Amplifier Factor

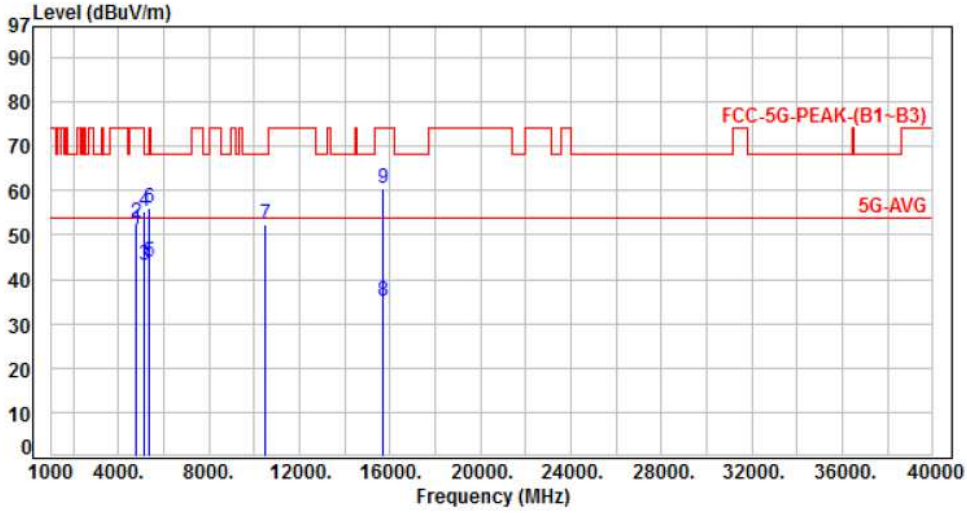
Power	:	AC 120V	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 1, CH48, Band 1	Temperature	:	21 °C
Test Date	:	Apr. 18, 2018	Humidity	:	62 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	4800.00	-8.88	58.43	49.55	54.00	-4.45	Average	122	82	P
2	4800.00	-8.88	60.58	51.70	74.00	-22.30	Peak	122	82	P
3	5150.00	-8.01	51.30	43.29	54.00	-10.71	Average	100	129	P
4	5150.00	-8.01	64.60	56.59	74.00	-17.41	Peak	100	129	P
5	5350.00	-7.67	51.50	43.83	54.00	-10.17	Average	100	129	P
6	5350.00	-7.67	64.20	56.53	74.00	-17.47	Peak	100	129	P
7	10480.00	-0.78	58.19	57.41	68.20	-10.79	Peak	180	51	P
8	15720.00	4.41	28.61	33.02	54.00	-20.98	Average	192	122	P
9	15720.00	4.41	47.81	52.22	74.00	-21.78	Peak	192	122	P

Note: Level=Reading+Factor
Margin=Level-Limit
Factor=Antenna Factor + cable loss - Amplifier Factor

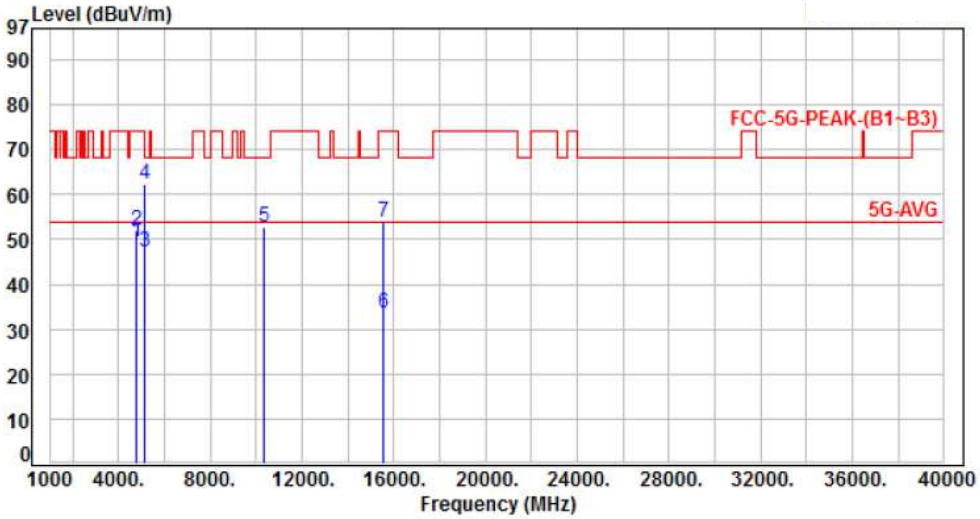
Power	:	AC 120V	Pol/Phase	:	HORIZONTAL
Test Mode	:	Mode 1, CH48, Band 1	Temperature	:	21 °C
Test Date	:	Apr. 18, 2018	Humidity	:	62 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	4800.00	-8.88	60.23	51.35	54.00	-2.65	Average	100	124	P
2	4800.00	-8.88	61.79	52.91	74.00	-21.09	Peak	100	124	P
3	5150.00	-8.01	51.00	42.99	54.00	-11.01	Average	100	88	P
4	5150.00	-8.01	63.50	55.49	74.00	-18.51	Peak	100	88	P
5	5350.00	-7.67	51.60	43.93	54.00	-10.07	Average	100	88	P
6	5350.00	-7.67	63.70	56.03	74.00	-17.97	Peak	100	88	P
7	10480.00	-0.78	53.19	52.41	68.20	-15.79	Peak	146	71	P
8	15720.00	4.41	30.51	34.92	54.00	-19.08	Average	100	144	P
9	15720.00	4.41	55.91	60.32	74.00	-13.68	Peak	100	144	P

Note: Level=Reading+Factor
Margin=Level-Limit
Factor=Antenna Factor + cable loss - Amplifier Factor

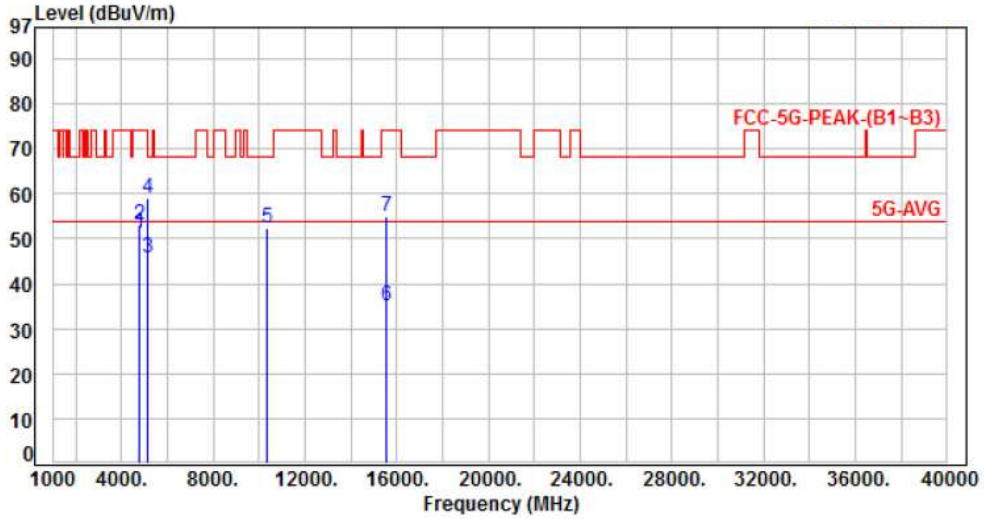
Power	:	AC 120V	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 2, CH36, Band 1	Temperature	:	21 °C
Test Date	:	Apr. 18, 2018	Humidity	:	62 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	4800.00	-8.88	58.31	49.43	54.00	-4.57	Average	100	89	P
2	4800.00	-8.88	61.00	52.12	74.00	-21.88	Peak	100	89	P
3	5150.00	-8.01	55.10	47.09	54.00	-6.91	Average	100	130	P
4	5150.00	-8.01	70.20	62.19	74.00	-11.81	Peak	100	130	P
5	10360.00	-0.89	53.70	52.81	68.20	-15.39	Peak	100	50	P
6	15540.00	4.33	29.30	33.63	54.00	-20.37	Average	143	124	P
7	15540.00	4.33	49.70	54.03	74.00	-19.97	Peak	143	124	P

Note: Level=Reading+Factor
Margin=Level-Limit
Factor=Antenna Factor + cable loss - Amplifier Factor

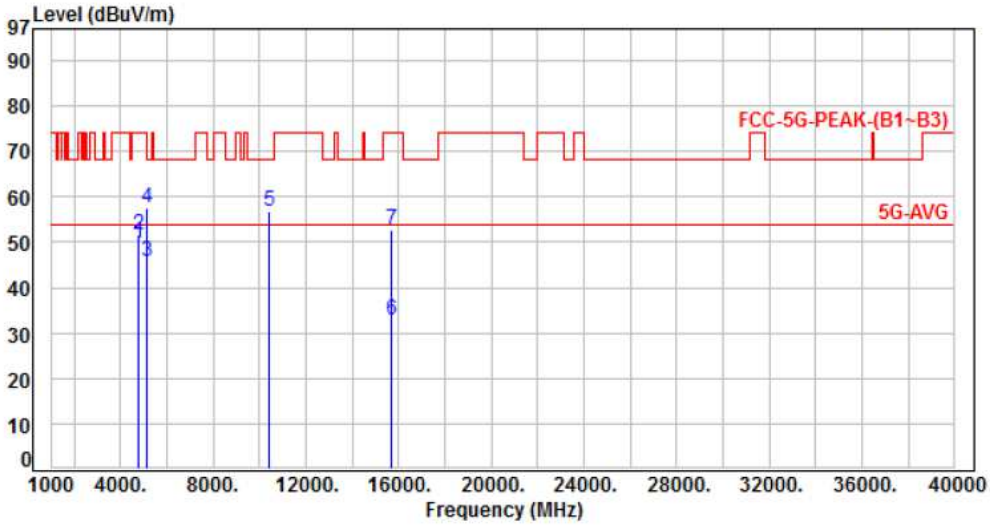
Power	:	AC 120V	Pol/Phase	:	HORIZONTAL
Test Mode	:	Mode 2, CH36, Band 1	Temperature	:	21 °C
Test Date	:	Apr. 18, 2018	Humidity	:	62 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	4800.00	-8.88	60.08	51.20	54.00	-2.80	Average	100	126	P
2	4800.00	-8.88	61.97	53.09	74.00	-20.91	Peak	100	126	P
3	5150.00	-8.01	53.60	45.59	54.00	-8.41	Average	100	50	P
4	5150.00	-8.01	67.20	59.19	74.00	-14.81	Peak	100	50	P
5	10360.00	-0.89	53.20	52.31	68.20	-15.89	Peak	100	39	P
6	15540.00	4.33	30.70	35.03	54.00	-18.97	Average	115	126	P
7	15540.00	4.33	50.60	54.93	74.00	-19.07	Peak	115	126	P

Note: Level=Reading+Factor
Margin=Level-Limit
Factor=Antenna Factor + cable loss - Amplifier Factor

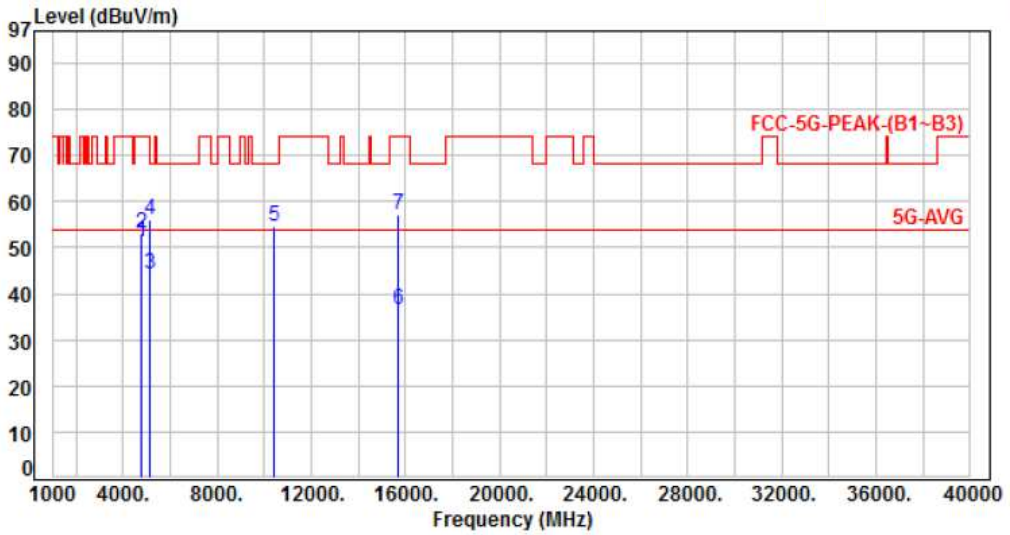
Power	:	AC 120V	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 2, CH44, Band 1	Temperature	:	21 °C
Test Date	:	Apr. 18, 2018	Humidity	:	62 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	4800.00	-8.88	58.63	49.75	54.00	-4.25	Average	100	28	P
2	4800.00	-8.88	60.37	51.49	74.00	-22.51	Peak	100	28	P
3	5150.00	-8.01	53.70	45.69	54.00	-8.31	Average	100	127	P
4	5150.00	-8.01	65.60	57.59	74.00	-16.41	Peak	100	127	P
5	10440.00	-0.82	57.60	56.78	68.20	-11.42	Peak	150	53	P
6	15660.00	4.39	28.60	32.99	54.00	-21.01	Average	180	123	P
7	15660.00	4.39	48.50	52.89	74.00	-21.11	Peak	180	123	P

Note: Level=Reading+Factor
Margin=Level-Limit
Factor=Antenna Factor + cable loss - Amplifier Factor

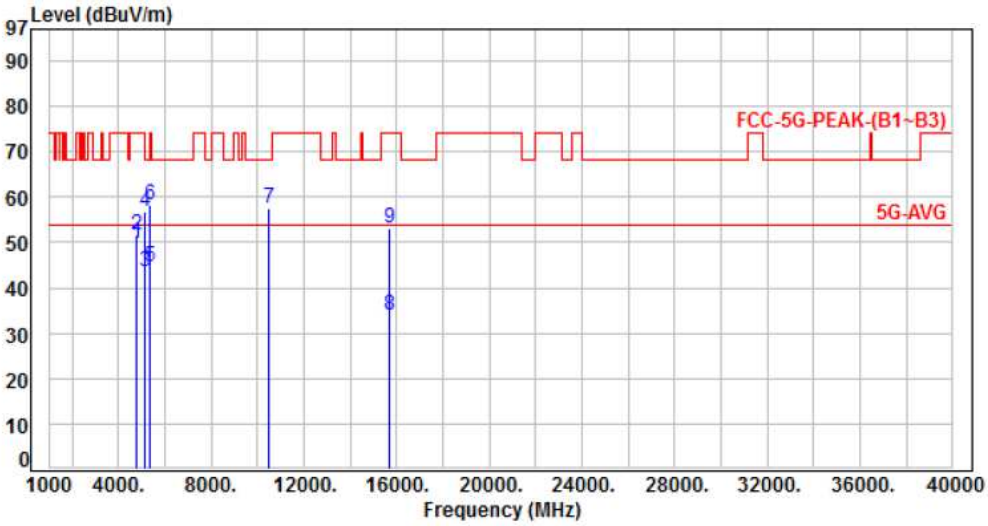
Power	:	AC 120V	Pol/Phase	:	HORIZONTAL
Test Mode	:	Mode 2, CH44, Band 1	Temperature	:	21 °C
Test Date	:	Apr. 18, 2018	Humidity	:	62 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	4800.00	-8.88	60.23	51.35	54.00	-2.65	Average	100	153	P
2	4800.00	-8.88	61.88	53.00	74.00	-21.00	Peak	100	153	P
3	5150.00	-8.01	52.20	44.19	54.00	-9.81	Average	278	64	P
4	5150.00	-8.01	63.90	55.89	74.00	-18.11	Peak	278	64	P
5	10440.00	-0.82	55.30	54.48	68.20	-13.72	Peak	140	81	P
6	15660.00	4.39	32.20	36.59	54.00	-17.41	Average	122	142	P
7	15660.00	4.39	52.60	56.99	74.00	-17.01	Peak	122	142	P

Note: Level=Reading+Factor
Margin=Level-Limit
Factor=Antenna Factor + cable loss - Amplifier Factor

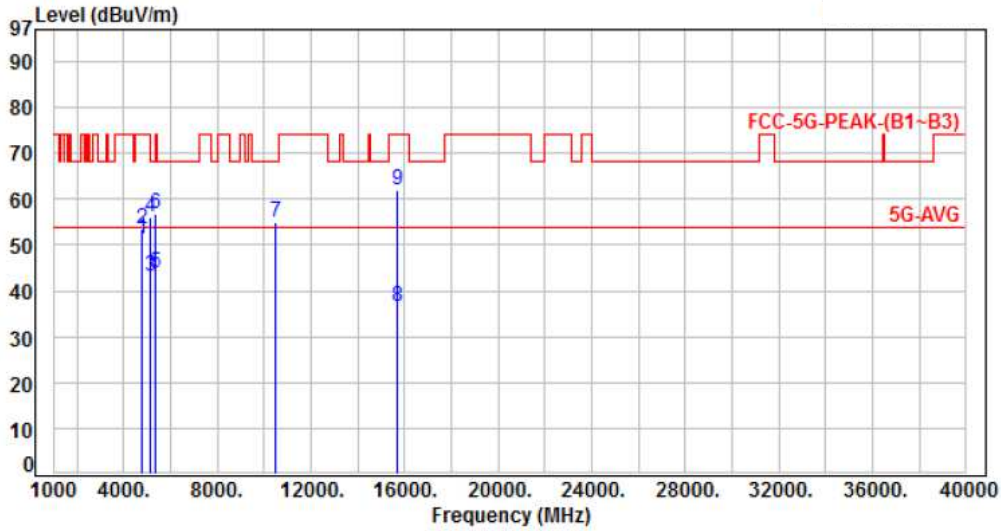
Power	:	AC 120V	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 2, CH48, Band 1	Temperature	:	21 °C
Test Date	:	Apr. 18, 2018	Humidity	:	62 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	4800.00	-8.88	58.63	49.75	54.00	-4.25	Average	100	82	P
2	4800.00	-8.88	60.57	51.69	74.00	-22.31	Peak	100	82	P
3	5150.00	-8.01	51.50	43.49	54.00	-10.51	Average	136	0	P
4	5150.00	-8.01	64.80	56.79	74.00	-17.21	Peak	136	0	P
5	5350.00	-7.67	52.20	44.53	54.00	-9.47	Average	136	0	P
6	5350.00	-7.67	65.80	58.13	74.00	-15.87	Peak	136	0	P
7	10480.00	-0.78	58.49	57.71	68.20	-10.49	Peak	155	50	P
8	15720.00	4.41	29.34	33.75	54.00	-20.25	Average	122	125	P
9	15720.00	4.41	48.61	53.02	74.00	-20.98	Peak	122	125	P

Note: Level=Reading+Factor
Margin=Level-Limit
Factor=Antenna Factor + cable loss - Amplifier Factor

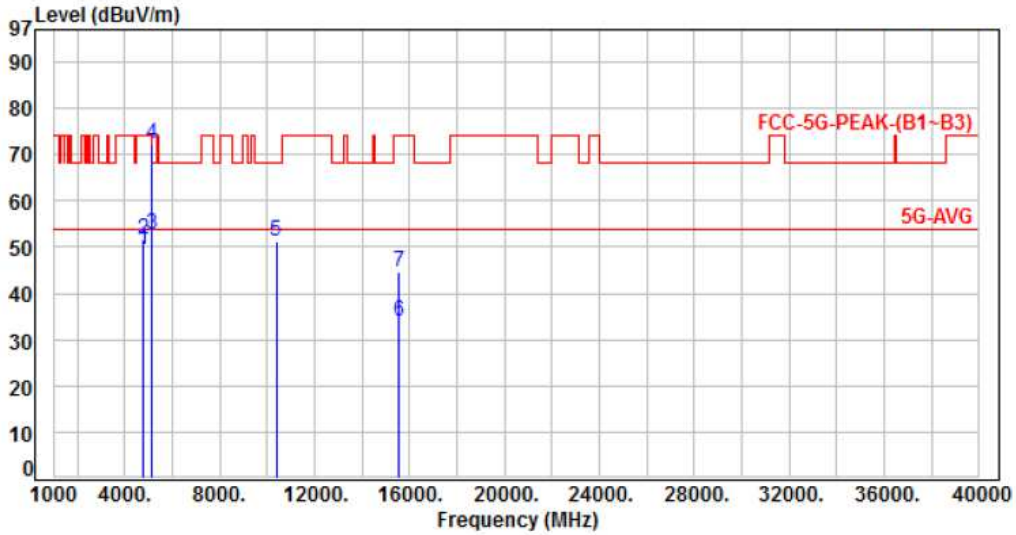
Power	:	AC 120V	Pol/Phase	:	HORIZONTAL
Test Mode	:	Mode 2, CH48, Band 1	Temperature	:	21 °C
Test Date	:	Apr. 18, 2018	Humidity	:	62 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	4800.00	-8.88	60.20	51.32	54.00	-2.68	Average	122	100	P
2	4800.00	-8.88	62.33	53.45	74.00	-20.55	Peak	122	100	P
3	5150.00	-8.01	51.30	43.29	54.00	-10.71	Average	100	53	P
4	5150.00	-8.01	63.90	55.89	74.00	-18.11	Peak	100	53	P
5	5350.00	-7.67	51.60	43.93	54.00	-10.07	Average	100	53	P
6	5350.00	-7.67	64.50	56.83	74.00	-17.17	Peak	100	53	P
7	10480.00	-0.78	55.59	54.81	68.20	-13.39	Peak	112	87	P
8	15720.00	4.41	32.23	36.64	54.00	-17.36	Average	100	139	P
9	15720.00	4.41	57.37	61.78	74.00	-12.22	Peak	100	139	P

Note: Level=Reading+Factor
Margin=Level-Limit
Factor=Antenna Factor + cable loss - Amplifier Factor

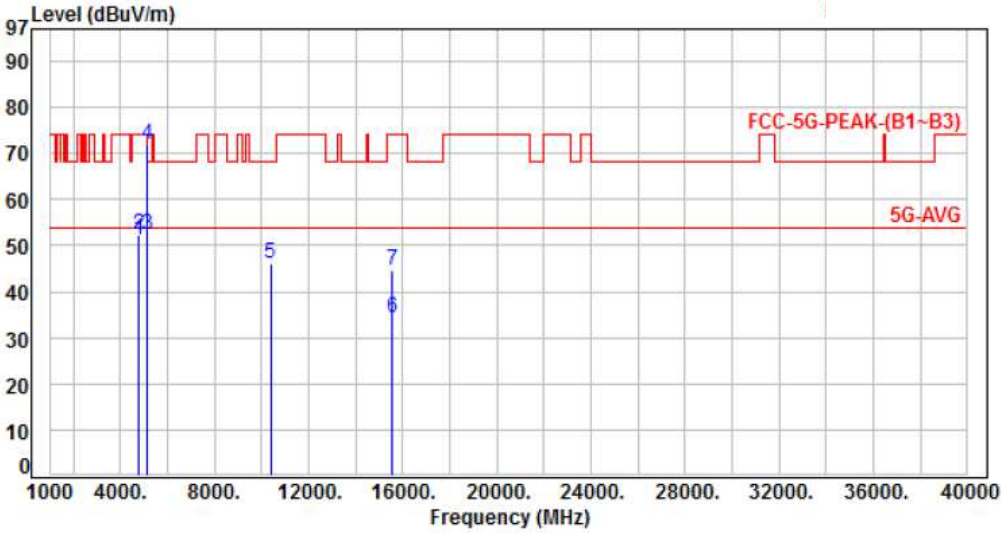
Power	:	AC 120V	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 3, CH38, Band 1	Temperature	:	21 °C
Test Date	:	Apr. 18, 2018	Humidity	:	62 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	4800.00	-8.88	58.36	49.48	54.00	-4.52	Average	142	89	P
2	4800.00	-8.88	60.55	51.67	74.00	-22.33	Peak	142	89	P
3	5150.00	-8.01	60.60	52.59	54.00	-1.41	Average	100	127	P
4	5150.00	-8.01	80.20	72.19	74.00	-1.81	Peak	100	127	P
5	10380.00	-0.87	52.20	51.33	68.20	-16.87	Peak	262	95	P
6	15570.00	4.34	29.67	34.01	54.00	-19.99	Average	107	122	P
7	15570.00	4.34	40.10	44.44	74.00	-29.56	Peak	107	122	P

Note: Level=Reading+Factor
Margin=Level-Limit
Factor=Antenna Factor + cable loss - Amplifier Factor

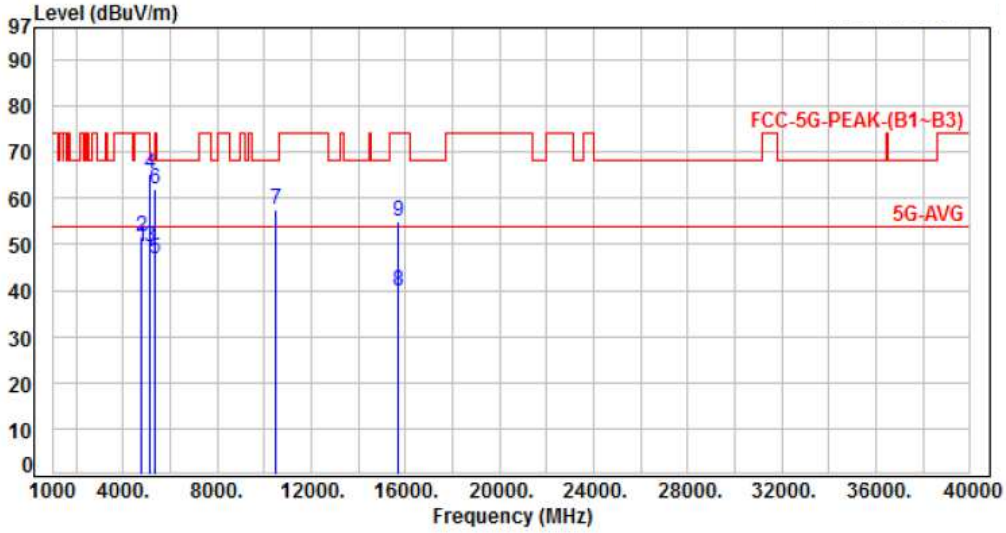
Power	:	AC 120V	Pol/Phase	:	HORIZONTAL
Test Mode	:	Mode 3, CH38, Band 1	Temperature	:	21 °C
Test Date	:	Apr. 18, 2018	Humidity	:	62 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	4800.00	-8.88	60.08	51.20	54.00	-2.80	Average	100	143	P
2	4800.00	-8.88	61.26	52.38	74.00	-21.62	Peak	100	143	P
3	5150.00	-8.01	60.40	52.39	54.00	-1.61	Average	100	66	P
4	5150.00	-8.01	80.00	71.99	74.00	-2.01	Peak	100	66	P
5	10380.00	-0.87	46.80	45.93	68.20	-22.27	Peak	100	103	P
6	15570.00	4.34	29.81	34.15	54.00	-19.85	Average	100	124	P
7	15570.00	4.34	40.20	44.54	74.00	-29.46	Peak	100	124	P

Note: Level=Reading+Factor
Margin=Level-Limit
Factor=Antenna Factor + cable loss - Amplifier Factor

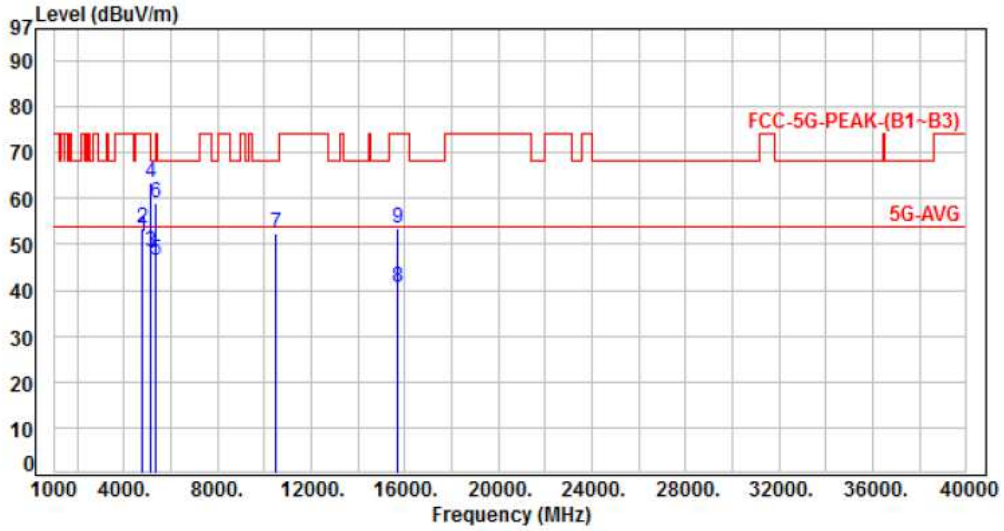
Power	:	AC 120V	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 3, CH46, Band 1	Temperature	:	21 °C
Test Date	:	Apr. 18, 2018	Humidity	:	62 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	4800.00	-8.88	58.30	49.42	54.00	-4.58	Average	100	46	P
2	4800.00	-8.88	60.40	51.52	74.00	-22.48	Peak	100	46	P
3	5150.00	-8.01	57.50	49.49	54.00	-4.51	Average	250	0	P
4	5150.00	-8.01	73.20	65.19	74.00	-8.81	Peak	250	0	P
5	5350.00	-7.67	54.60	46.93	54.00	-7.07	Average	250	0	P
6	5350.00	-7.67	69.50	61.83	74.00	-12.17	Peak	250	0	P
7	10460.00	-0.81	58.21	57.40	68.20	-10.80	Peak	165	53	P
8	15690.00	4.40	35.34	39.74	54.00	-14.26	Average	100	125	P
9	15690.00	4.40	50.61	55.01	74.00	-18.99	Peak	100	125	P

Note: Level=Reading+Factor
Margin=Level-Limit
Factor=Antenna Factor + cable loss - Amplifier Factor

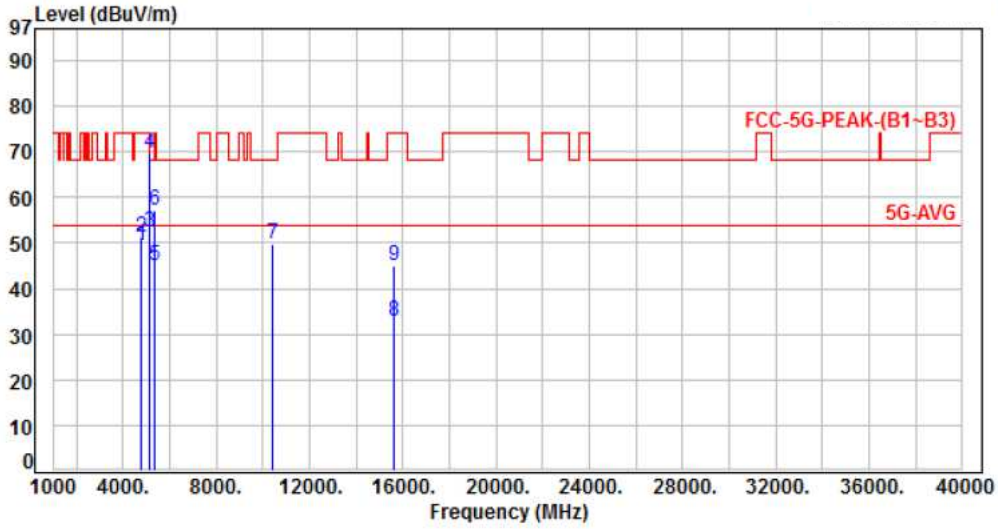
Power	:	AC 120V	Pol/Phase	:	HORIZONTAL
Test Mode	:	Mode 3, CH46, Band 1	Temperature	:	21 °C
Test Date	:	Apr. 18, 2018	Humidity	:	62 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	4800.00	-8.88	60.50	51.62	54.00	-2.38	Average	105	88	P
2	4800.00	-8.88	62.20	53.32	74.00	-20.68	Peak	105	88	P
3	5150.00	-8.01	56.20	48.19	54.00	-5.81	Average	289	66	P
4	5150.00	-8.01	71.50	63.49	74.00	-10.51	Peak	289	66	P
5	5350.00	-7.67	54.20	46.53	54.00	-7.47	Average	289	66	P
6	5350.00	-7.67	66.60	58.93	74.00	-15.07	Peak	289	66	P
7	10460.00	-0.81	53.21	52.40	68.20	-15.80	Peak	100	79	P
8	15690.00	4.40	36.20	40.60	54.00	-13.40	Average	100	140	P
9	15690.00	4.40	49.20	53.60	74.00	-20.40	Peak	100	140	P

Note: Level=Reading+Factor
Margin=Level-Limit
Factor=Antenna Factor + cable loss - Amplifier Factor

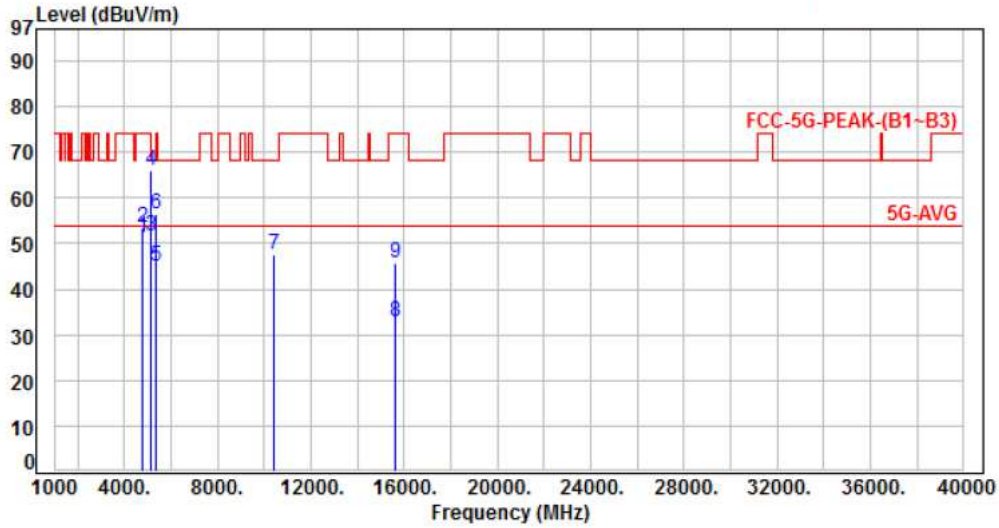
Power	:	AC 120V	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 4, CH42, Band 1	Temperature	:	21 °C
Test Date	:	Apr. 18, 2018	Humidity	:	62 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	4800.00	-8.88	58.44	49.56	54.00	-4.44	Average	100	82	P
2	4800.00	-8.88	60.31	51.43	74.00	-22.57	Peak	100	82	P
3	5150.00	-8.01	60.40	52.39	54.00	-1.61	Average	105	131	P
4	5150.00	-8.01	77.80	69.79	74.00	-4.21	Peak	105	131	P
5	5350.00	-7.67	52.60	44.93	54.00	-9.07	Average	105	131	P
6	5350.00	-7.67	64.90	57.23	74.00	-16.77	Peak	105	131	P
7	10420.00	-0.84	50.50	49.66	68.20	-18.54	Peak	261	92	P
8	15630.00	4.38	28.33	32.71	54.00	-21.29	Average	100	55	P
9	15630.00	4.38	40.50	44.88	74.00	-29.12	Peak	100	55	P

Note: Level=Reading+Factor
Margin=Level-Limit
Factor=Antenna Factor + cable loss - Amplifier Factor

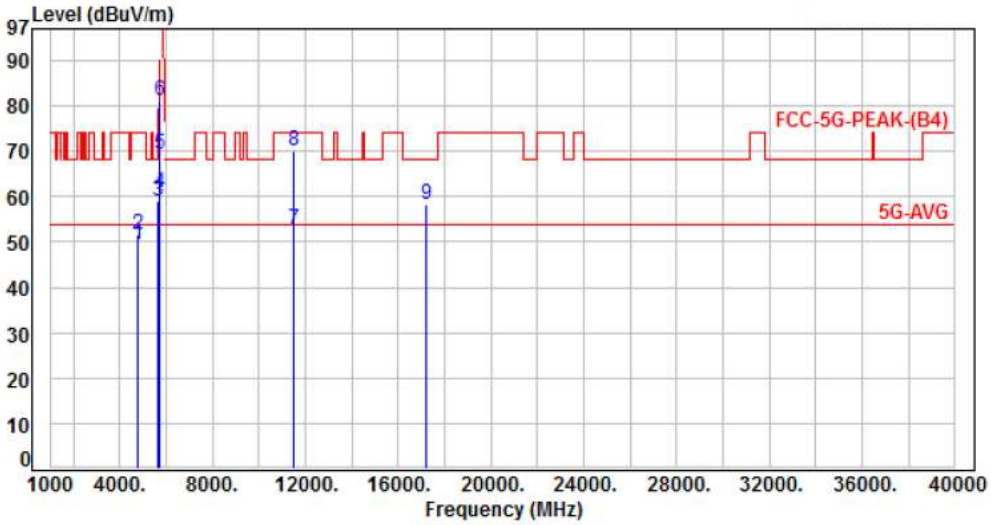
Power	:	AC 120V	Pol/Phase	:	HORIZONTAL
Test Mode	:	Mode 4, CH42, Band 1	Temperature	:	21 °C
Test Date	:	Apr. 18, 2018	Humidity	:	62 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	4800.00	-8.88	60.30	51.42	54.00	-2.58	Average	105	134	P
2	4800.00	-8.88	62.22	53.34	74.00	-20.66	Peak	105	134	P
3	5150.00	-8.01	59.50	51.49	54.00	-2.51	Average	100	45	P
4	5150.00	-8.01	74.20	66.19	74.00	-7.81	Peak	100	45	P
5	5350.00	-7.67	52.60	44.93	54.00	-9.07	Average	100	45	P
6	5350.00	-7.67	64.20	56.53	74.00	-17.47	Peak	100	45	P
7	10420.00	-0.84	48.50	47.66	68.20	-20.54	Peak	294	80	P
8	15630.00	4.38	28.50	32.88	54.00	-21.12	Average	100	133	P
9	15630.00	4.38	41.29	45.67	74.00	-28.33	Peak	100	133	P

Note: Level=Reading+Factor
Margin=Level-Limit
Factor=Antenna Factor + cable loss - Amplifier Factor

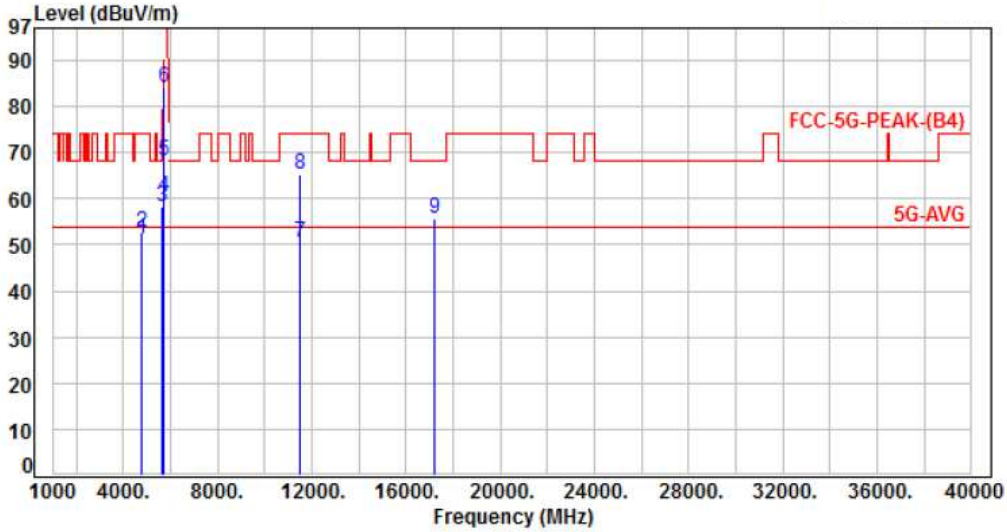
Power	:	AC 120V	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 5, CH149, Band 4	Temperature	:	21 °C
Test Date	:	Apr. 25, 2018	Humidity	:	62 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	4800.00	-8.88	58.36	49.48	54.00	-4.52	Average	100	88	P
2	4800.00	-8.88	60.63	51.75	74.00	-22.25	Peak	100	88	P
3	5650.00	-7.37	66.20	58.83	68.20	-9.37	Peak	100	132	P
4	5700.00	-7.35	68.20	60.85	105.20	-44.35	Peak	100	132	P
5	5720.00	-7.35	76.60	69.25	110.80	-41.55	Peak	100	132	P
6	5725.00	-7.35	88.61	81.26	122.20	-40.94	Peak	100	132	P
7	11490.00	0.78	51.80	52.58	54.00	-1.42	Average	100	50	P
8	11490.00	0.78	69.30	70.08	74.00	-3.92	Peak	100	50	P
9	17235.00	9.95	48.21	58.16	68.20	-10.04	Peak	140	69	P

Note: Level=Reading+Factor
Margin=Level-Limit
Factor=Antenna Factor + cable loss - Amplifier Factor

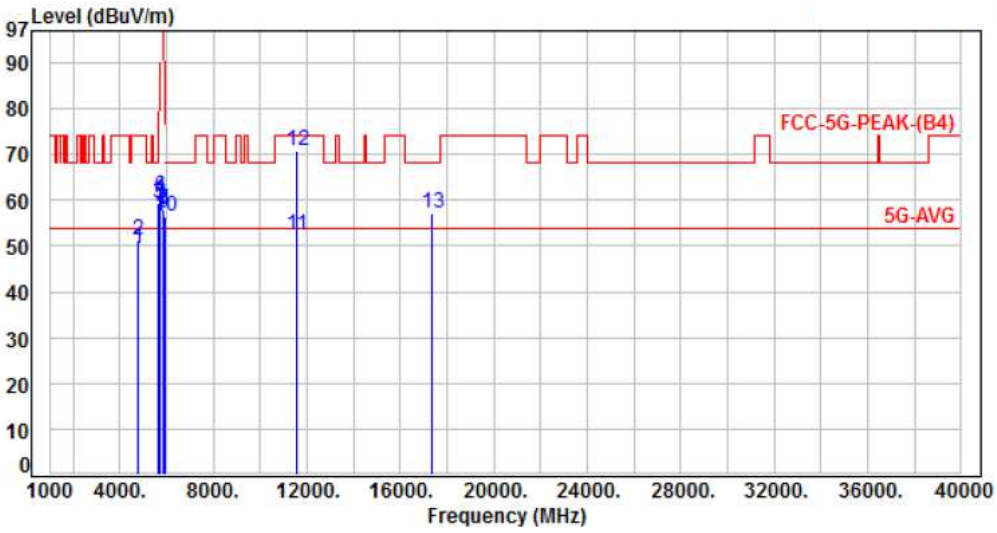
Power	:	AC 120V	Pol/Phase	:	HORIZONTAL
Test Mode	:	Mode 5, CH149, Band 4	Temperature	:	21 °C
Test Date	:	Apr. 25, 2018	Humidity	:	62 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	4800.00	-8.88	60.30	51.42	54.00	-2.58	Average	100	122	P
2	4800.00	-8.88	61.74	52.86	74.00	-21.14	Peak	100	122	P
3	5650.00	-7.37	65.60	58.23	68.20	-9.97	Peak	100	94	P
4	5700.00	-7.35	67.90	60.55	105.20	-44.65	Peak	100	94	P
5	5720.00	-7.35	75.60	68.25	110.80	-42.55	Peak	100	94	P
6	5725.00	-7.35	91.31	83.96	122.20	-38.24	Peak	100	94	P
7	11490.00	0.78	49.80	50.58	54.00	-3.42	Average	102	100	P
8	11490.00	0.78	64.60	65.38	74.00	-8.62	Peak	102	100	P
9	17235.00	9.95	45.61	55.56	68.20	-12.64	Peak	126	134	P

Note: Level=Reading+Factor
Margin=Level-Limit
Factor=Antenna Factor + cable loss - Amplifier Factor

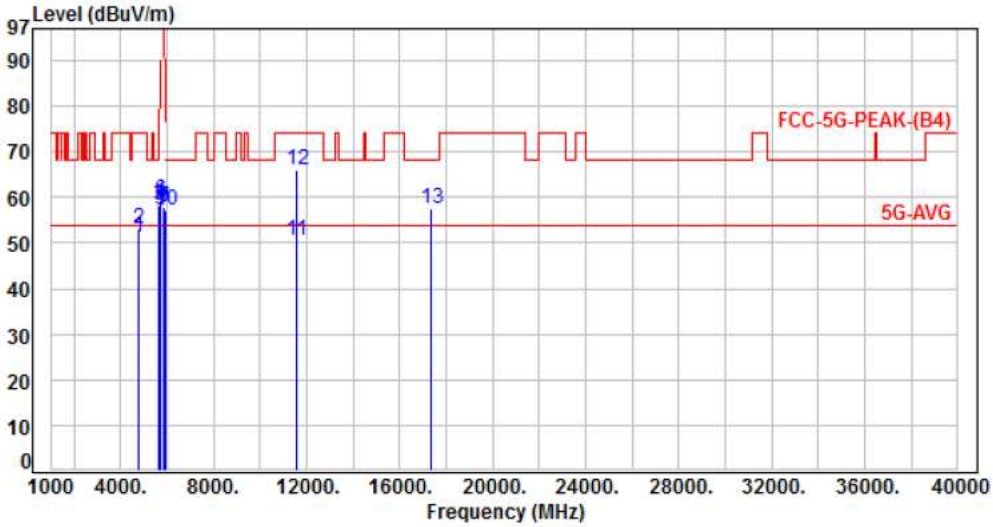
Power	:	AC 120V	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 5, CH157, Band 4	Temperature	:	21 °C
Test Date	:	Apr. 20, 2018	Humidity	:	62 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	4800.00	-8.88	58.33	49.45	54.00	-4.55	Average	100	51	P
2	4800.00	-8.88	60.30	51.42	74.00	-22.58	Peak	100	51	P
3	5650.00	-7.37	66.70	59.33	68.20	-8.87	Peak	220	0	P
4	5700.00	-7.35	67.80	60.45	105.20	-44.75	Peak	220	0	P
5	5720.00	-7.35	66.30	58.95	110.80	-51.85	Peak	220	0	P
6	5725.00	-7.35	68.21	60.86	122.20	-61.34	Peak	220	0	P
7	5850.00	-7.30	65.30	58.00	122.20	-64.20	Peak	220	0	P
8	5855.00	-7.30	65.20	57.90	110.80	-52.90	Peak	220	0	P
9	5875.00	-7.30	64.61	57.31	105.20	-47.89	Peak	220	0	P
10	5925.00	-7.28	63.80	56.52	68.20	-11.68	Peak	220	0	P
11	11570.00	0.85	51.60	52.45	54.00	-1.55	Average	193	53	P
12	11570.00	0.85	69.90	70.75	74.00	-3.25	Peak	193	53	P
13	17355.00	10.63	46.59	57.22	68.20	-10.98	Peak	121	75	P

Note: Level=Reading+Factor
Margin=Level-Limit
Factor=Antenna Factor + cable loss - Amplifier Factor

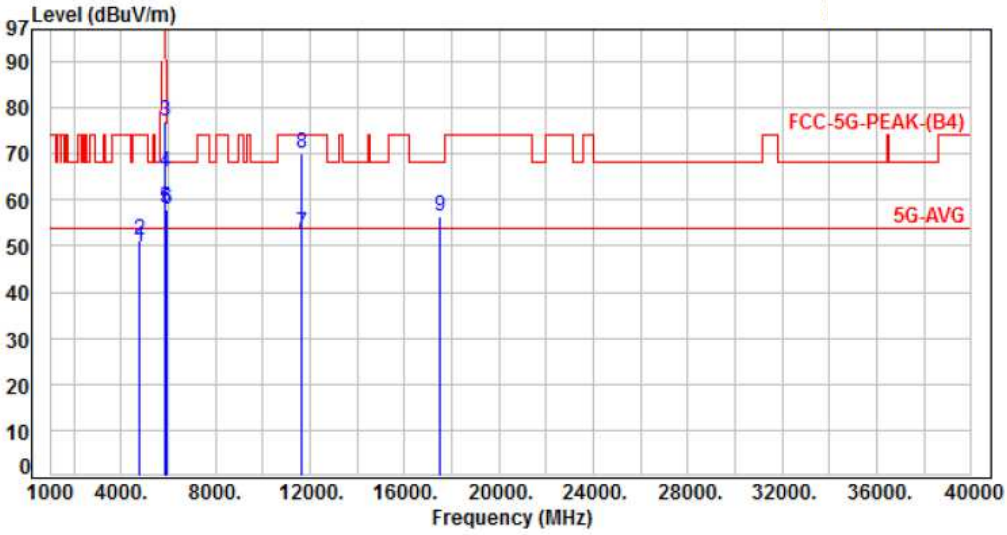
Power	:	AC 120V	Pol/Phase	:	HORIZONTAL
Test Mode	:	Mode 5, CH157, Band 4	Temperature	:	21 °C
Test Date	:	Apr. 20, 2018	Humidity	:	62 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	4800.00	-8.88	60.13	51.25	54.00	-2.75	Average	105	126	P
2	4800.00	-8.88	61.88	53.00	74.00	-21.00	Peak	105	126	P
3	5650.00	-7.37	65.60	58.23	68.20	-9.97	Peak	260	74	P
4	5700.00	-7.35	66.20	58.85	105.20	-46.35	Peak	260	74	P
5	5720.00	-7.35	64.60	57.25	110.80	-53.55	Peak	260	74	P
6	5725.00	-7.35	66.91	59.56	122.20	-62.64	Peak	260	74	P
7	5850.00	-7.30	65.10	57.80	122.20	-64.40	Peak	260	74	P
8	5855.00	-7.30	65.30	58.00	110.80	-52.80	Peak	260	74	P
9	5875.00	-7.30	65.04	57.74	105.20	-47.46	Peak	260	74	P
10	5925.00	-7.28	64.60	57.32	68.20	-10.88	Peak	260	74	P
11	11570.00	0.85	49.50	50.35	54.00	-3.65	Average	100	48	P
12	11570.00	0.85	65.20	66.05	74.00	-7.95	Peak	100	48	P
13	17355.00	10.63	46.89	57.52	68.20	-10.68	Peak	100	140	P

Note: Level=Reading+Factor
Margin=Level-Limit
Factor=Antenna Factor + cable loss - Amplifier Factor

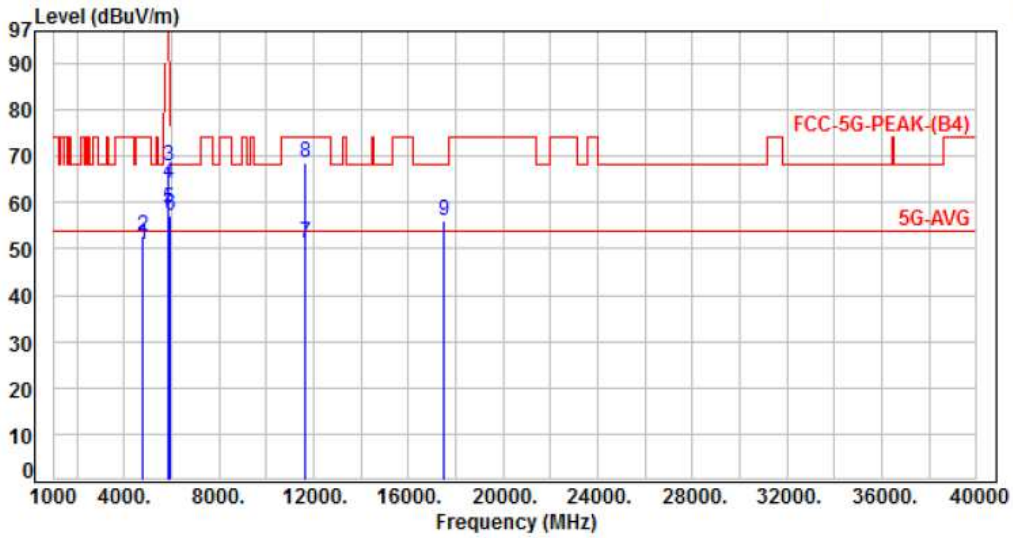
Power	:	AC 120V	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 5, CH165, Band 4	Temperature	:	21 °C
Test Date	:	Apr. 25, 2018	Humidity	:	62 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	4800.00	-8.88	58.67	49.79	54.00	-4.21	Average	100	88	P
2	4800.00	-8.88	60.25	51.37	74.00	-22.63	Peak	100	88	P
3	5850.00	-7.30	84.50	77.20	122.20	-45.00	Peak	140	130	P
4	5855.00	-7.30	73.20	65.90	110.80	-44.90	Peak	140	130	P
5	5875.00	-7.30	65.71	58.41	105.20	-46.79	Peak	140	130	P
6	5925.00	-7.28	65.10	57.82	68.20	-10.38	Peak	140	130	P
7	11650.00	0.91	51.70	52.61	54.00	-1.39	Average	275	54	P
8	11650.00	0.91	69.20	70.11	74.00	-3.89	Peak	275	54	P
9	17475.00	11.29	45.20	56.49	68.20	-11.71	Peak	100	85	P

Note: Level=Reading+Factor
Margin=Level-Limit
Factor=Antenna Factor + cable loss - Amplifier Factor

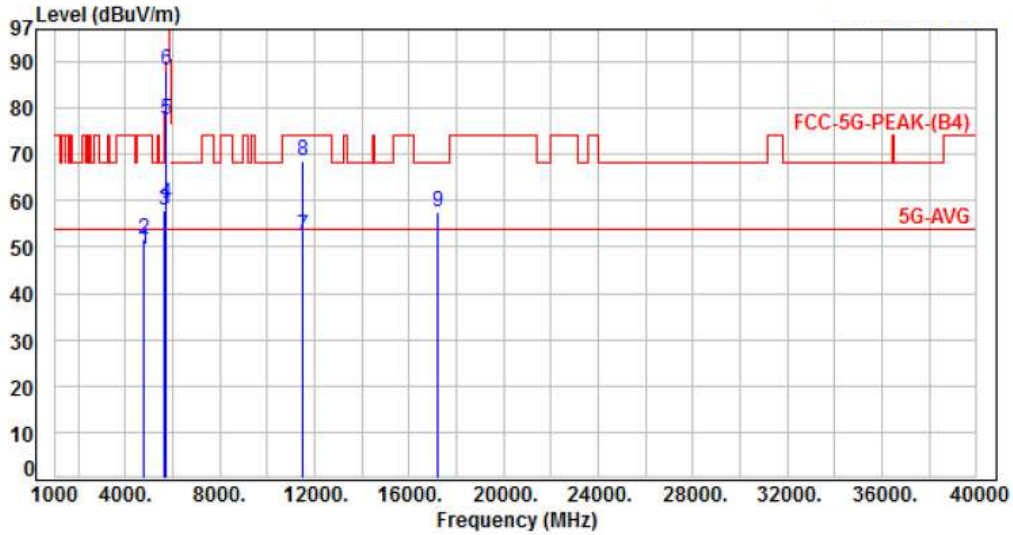
Power	:	AC 120V	Pol/Phase	:	HORIZONTAL
Test Mode	:	Mode 5, CH165, Band 4	Temperature	:	21 °C
Test Date	:	Apr. 25, 2018	Humidity	:	62 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	4800.00	-8.88	59.87	50.99	54.00	-3.01	Average	100	120	P
2	4800.00	-8.88	61.66	52.78	74.00	-21.22	Peak	100	120	P
3	5850.00	-7.30	75.20	67.90	122.20	-54.30	Peak	162	96	P
4	5855.00	-7.30	71.60	64.30	110.80	-46.50	Peak	162	96	P
5	5875.00	-7.30	65.91	58.61	105.20	-46.59	Peak	162	96	P
6	5925.00	-7.28	64.60	57.32	68.20	-10.88	Peak	162	96	P
7	11650.00	0.91	50.50	51.41	54.00	-2.59	Average	100	98	P
8	11650.00	0.91	67.80	68.71	74.00	-5.29	Peak	100	98	P
9	17475.00	11.29	44.60	55.89	68.20	-12.31	Peak	105	144	P

Note: Level=Reading+Factor
Margin=Level-Limit
Factor=Antenna Factor + cable loss - Amplifier Factor

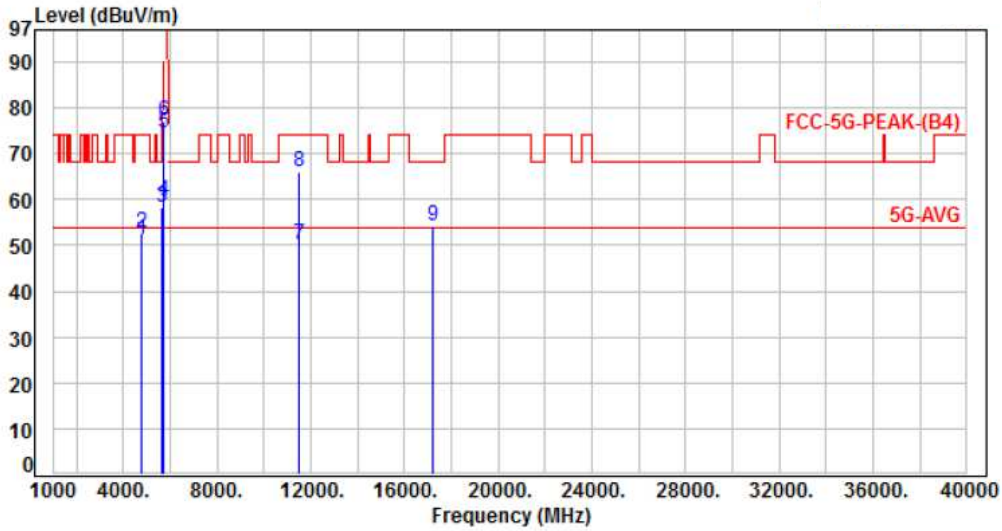
Power	:	AC 120V	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 6, CH149, Band 4	Temperature	:	21 °C
Test Date	:	Apr. 25, 2018	Humidity	:	62 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	4800.00	-8.88	58.36	49.48	54.00	-4.52	Average	102	88	P
2	4800.00	-8.88	60.67	51.79	74.00	-22.21	Peak	102	88	P
3	5650.00	-7.37	65.40	58.03	68.20	-10.17	Peak	180	360	P
4	5700.00	-7.35	66.90	59.55	105.20	-45.65	Peak	180	360	P
5	5720.00	-7.35	84.80	77.45	110.80	-33.35	Peak	180	360	P
6	5725.00	-7.35	95.51	88.16	122.20	-34.04	Peak	180	360	P
7	11490.00	0.78	51.60	52.38	54.00	-1.62	Average	150	104	P
8	11490.00	0.78	67.90	68.68	74.00	-5.32	Peak	150	104	P
9	17235.00	9.95	47.51	57.46	68.20	-10.74	Peak	140	68	P

Note: Level=Reading+Factor
Margin=Level-Limit
Factor=Antenna Factor + cable loss - Amplifier Factor

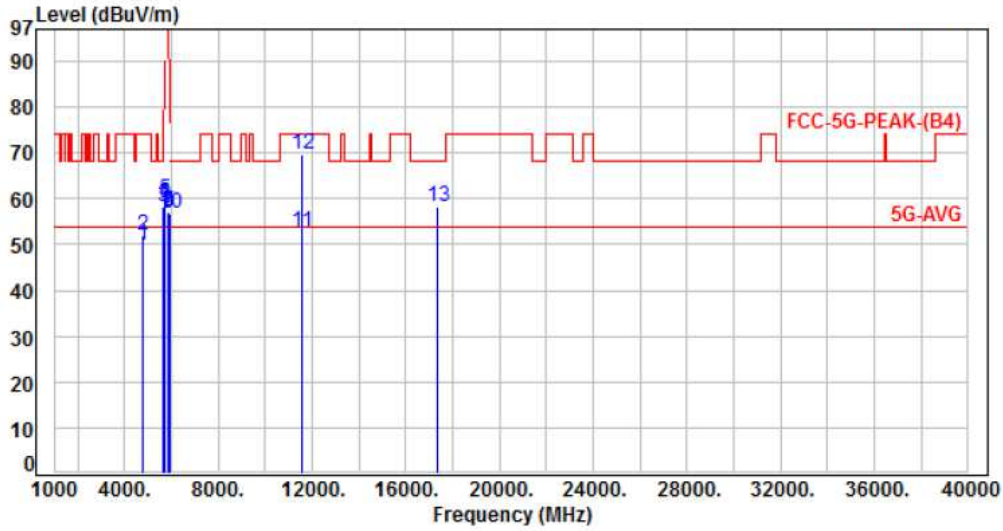
Power	:	AC 120V	Pol/Phase	:	HORIZONTAL
Test Mode	:	Mode 6, CH149, Band 4	Temperature	:	21 °C
Test Date	:	Apr. 25, 2018	Humidity	:	62 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	4800.00	-8.88	60.05	51.17	54.00	-2.83	Average	100	124	P
2	4800.00	-8.88	61.67	52.79	74.00	-21.21	Peak	100	124	P
3	5650.00	-7.37	65.50	58.13	68.20	-10.07	Peak	100	71	P
4	5700.00	-7.35	67.20	59.85	105.20	-45.35	Peak	100	71	P
5	5720.00	-7.35	81.90	74.55	110.80	-36.25	Peak	100	71	P
6	5725.00	-7.35	84.31	76.96	122.20	-45.24	Peak	100	71	P
7	11490.00	0.78	49.50	50.28	54.00	-3.72	Average	100	95	P
8	11490.00	0.78	65.20	65.98	74.00	-8.02	Peak	100	95	P
9	17235.00	9.95	44.21	54.16	68.20	-14.04	Peak	200	77	P

Note: Level=Reading+Factor
Margin=Level-Limit
Factor=Antenna Factor + cable loss - Amplifier Factor

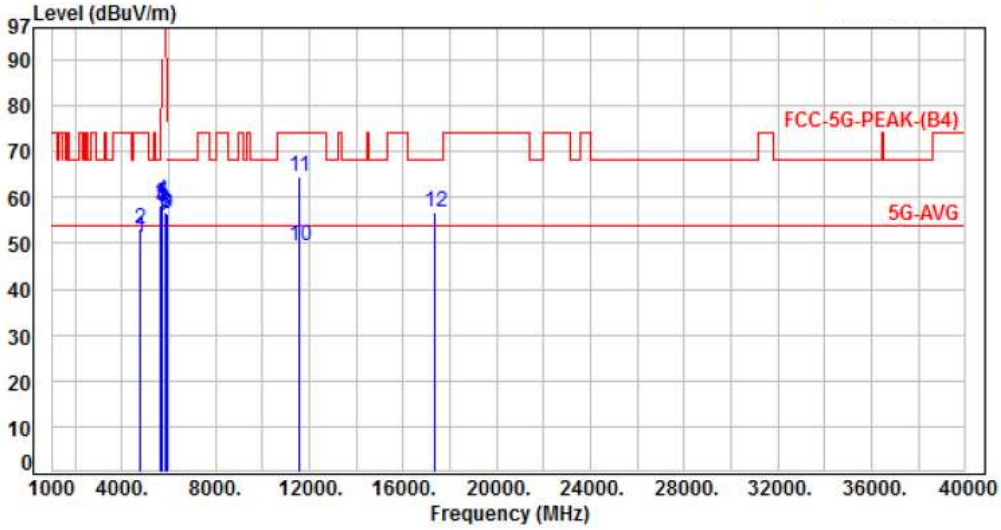
Power	:	AC 120V	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 6, CH157, Band 4	Temperature	:	21 °C
Test Date	:	Apr. 25, 2018	Humidity	:	62 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	4800.00	-8.88	58.67	49.79	54.00	-4.21	Average	100	69	P
2	4800.00	-8.88	60.88	52.00	74.00	-22.00	Peak	100	69	P
3	5650.00	-7.37	65.60	58.23	68.20	-9.97	Peak	171	355	P
4	5700.00	-7.35	66.20	58.85	105.20	-46.35	Peak	171	355	P
5	5720.00	-7.35	67.10	59.75	110.80	-51.05	Peak	171	355	P
6	5725.00	-7.35	66.21	58.86	122.20	-63.34	Peak	171	355	P
7	5850.00	-7.30	64.60	57.30	122.20	-64.90	Peak	171	355	P
8	5855.00	-7.30	64.30	57.00	110.80	-53.80	Peak	171	355	P
9	5875.00	-7.30	64.21	56.91	105.20	-48.29	Peak	171	355	P
10	5925.00	-7.28	63.90	56.62	68.20	-11.58	Peak	171	355	P
11	11570.00	0.85	51.80	52.65	54.00	-1.35	Average	155	47	P
12	11570.00	0.85	68.90	69.75	74.00	-4.25	Peak	155	47	P
13	17355.00	10.63	47.67	58.30	68.20	-9.90	Peak	152	66	P

Note: Level=Reading+Factor
Margin=Level-Limit
Factor=Antenna Factor + cable loss - Amplifier Factor

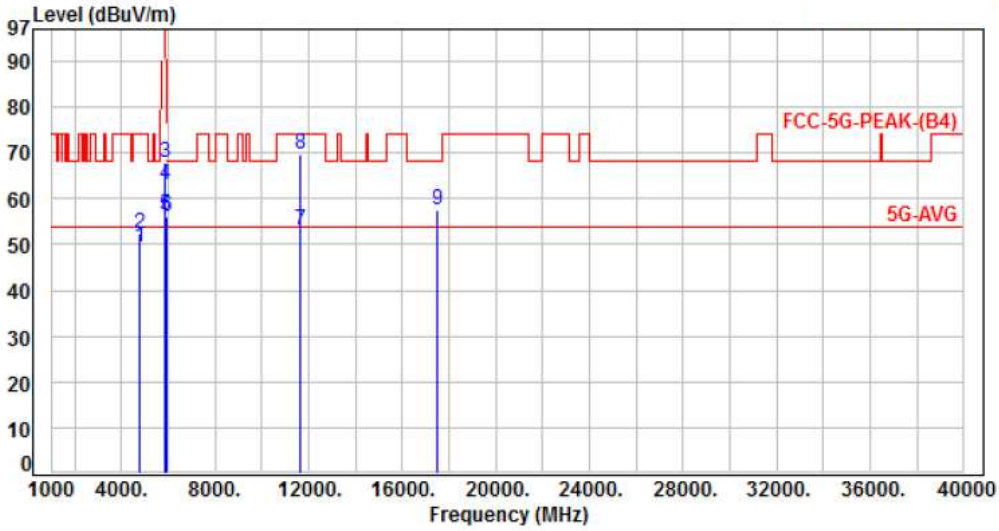
Power	:	AC 120V	Pol/Phase	:	HORIZONTAL
Test Mode	:	Mode 6, CH157, Band 4	Temperature	:	21 °C
Test Date	:	Apr. 25, 2018	Humidity	:	62 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	4800.00	-8.88	60.10	51.22	54.00	-2.78	Average	108	125	P
2	4800.00	-8.88	62.11	53.23	74.00	-20.77	Peak	108	125	P
3	5650.00	-7.37	65.80	58.43	68.20	-9.77	Peak	100	73	P
4	5700.00	-7.35	66.90	59.55	105.20	-45.65	Peak	100	73	P
5	5720.00	-7.35	65.81	58.46	110.80	-52.34	Peak	100	73	P
6	5725.00	-7.35	65.21	57.86	122.20	-64.34	Peak	100	73	P
7	5850.00	-7.30	63.50	56.20	122.20	-66.00	Peak	100	73	P
8	5875.00	-7.30	64.11	56.81	105.20	-48.39	Peak	100	73	P
9	5925.00	-7.28	63.70	56.42	68.20	-11.78	Peak	100	73	P
10	11570.00	0.85	48.60	49.45	54.00	-4.55	Average	100	100	P
11	11570.00	0.85	63.80	64.65	74.00	-9.35	Peak	100	100	P
12	17355.00	10.63	46.19	56.82	68.20	-11.38	Peak	133	140	P

Note: Level=Reading+Factor
Margin=Level-Limit
Factor=Antenna Factor + cable loss - Amplifier Factor

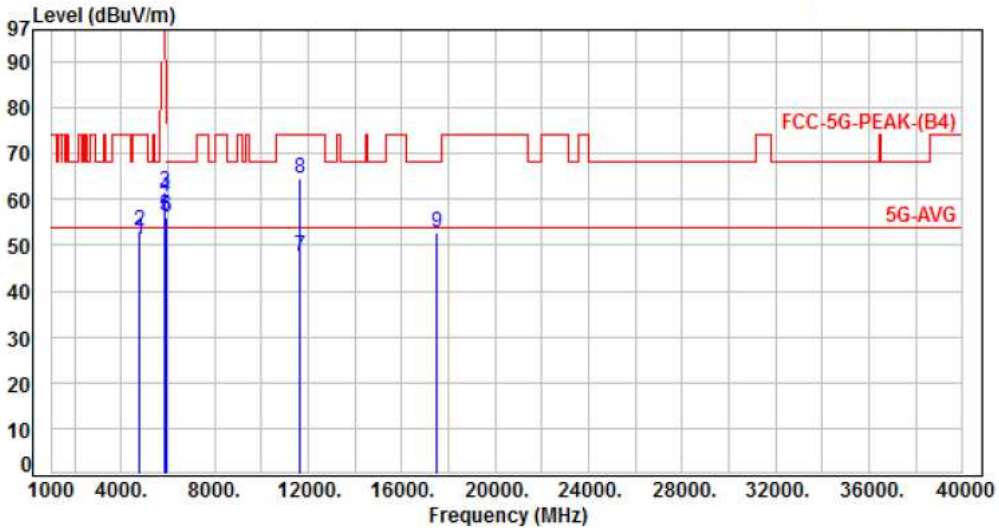
Power	:	AC 120V	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 6, CH165, Band 4	Temperature	:	21 °C
Test Date	:	Apr. 25, 2018	Humidity	:	62 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	4800.00	-8.88	58.23	49.35	54.00	-4.65	Average	100	88	P
2	4800.00	-8.88	61.20	52.32	74.00	-21.68	Peak	100	88	P
3	5850.00	-7.30	75.22	67.92	122.20	-54.28	Peak	241	23	P
4	5855.00	-7.30	70.20	62.90	110.80	-47.90	Peak	241	23	P
5	5875.00	-7.30	63.91	56.61	105.20	-48.59	Peak	241	23	P
6	5925.00	-7.28	63.50	56.22	68.20	-11.98	Peak	241	23	P
7	11650.00	0.91	52.04	52.95	54.00	-1.05	Average	102	105	P
8	11650.00	0.91	68.96	69.87	74.00	-4.13	Peak	102	105	P
9	17475.00	11.29	46.22	57.51	68.20	-10.69	Peak	133	80	P

Note: Level=Reading+Factor
Margin=Level-Limit
Factor=Antenna Factor + cable loss - Amplifier Factor

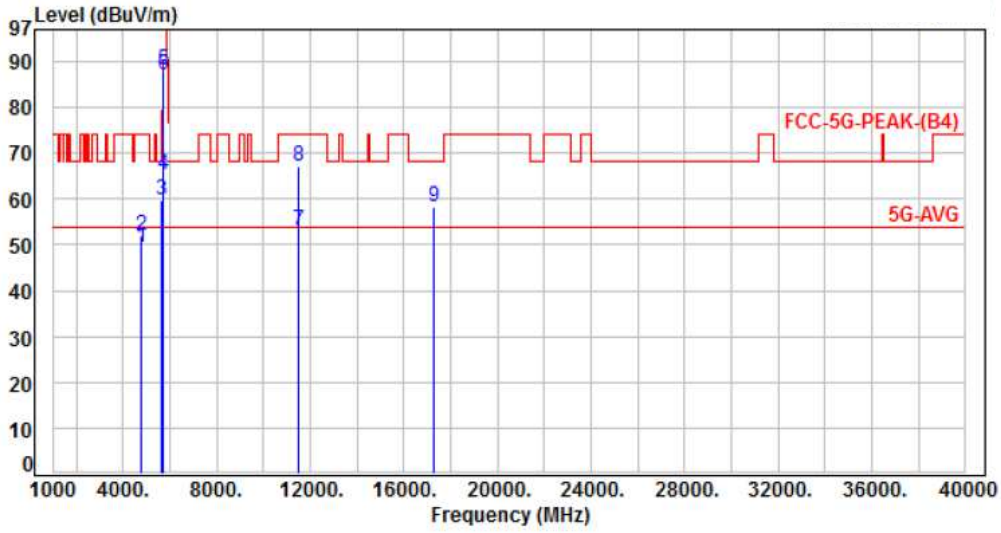
Power	:	AC 120V	Pol/Phase	:	HORIZONTAL
Test Mode	:	Mode 6, CH165, Band 4	Temperature	:	21 °C
Test Date	:	Apr. 25, 2018	Humidity	:	62 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	4800.00	-8.88	60.08	51.20	54.00	-2.80	Average	110	126	P
2	4800.00	-8.88	62.12	53.24	74.00	-20.76	Peak	110	126	P
3	5850.00	-7.30	68.90	61.60	122.20	-60.60	Peak	100	38	P
4	5855.00	-7.30	67.70	60.40	110.80	-50.40	Peak	100	38	P
5	5875.00	-7.30	63.61	56.31	105.20	-48.89	Peak	100	38	P
6	5925.00	-7.28	63.30	56.02	68.20	-12.18	Peak	100	38	P
7	11650.00	0.91	46.50	47.41	54.00	-6.59	Average	100	99	P
8	11650.00	0.91	63.50	64.41	74.00	-9.59	Peak	100	99	P
9	17475.00	11.29	41.55	52.84	68.20	-15.36	Peak	140	70	P

Note: Level=Reading+Factor
Margin=Level-Limit
Factor=Antenna Factor + cable loss - Amplifier Factor

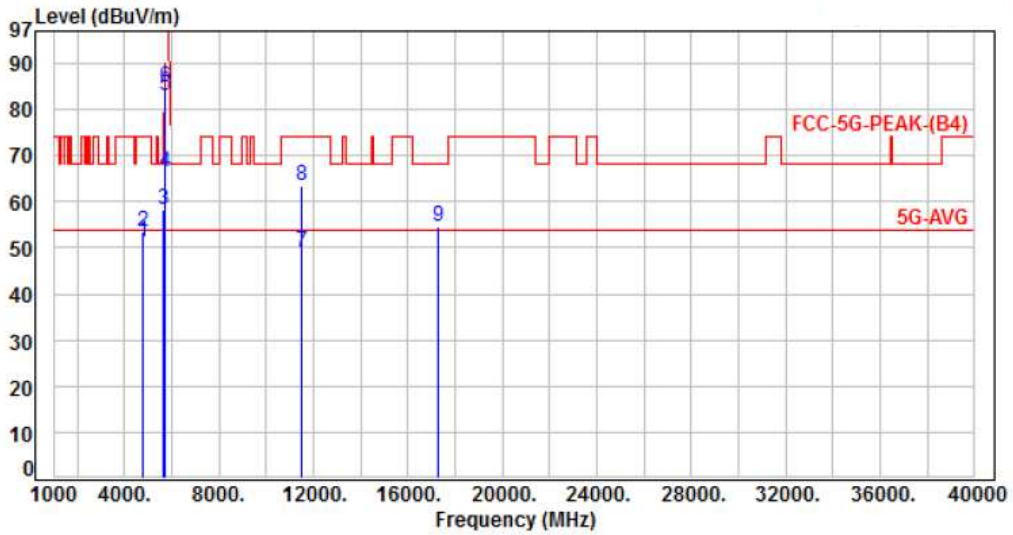
Power	:	AC 120V	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 7, CH151, Band 4	Temperature	:	21 °C
Test Date	:	Apr. 25, 2018	Humidity	:	62 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	4800.00	-8.88	58.33	49.45	54.00	-4.55	Average	105	71	P
2	4800.00	-8.88	60.85	51.97	74.00	-22.03	Peak	105	71	P
3	5650.00	-7.37	67.20	59.83	68.20	-8.37	Peak	100	128	P
4	5700.00	-7.35	72.80	65.45	105.20	-39.75	Peak	100	128	P
5	5720.00	-7.35	95.60	88.25	110.80	-22.55	Peak	100	128	P
6	5725.00	-7.35	94.42	87.07	122.20	-35.13	Peak	100	128	P
7	11510.00	0.81	52.13	52.94	54.00	-1.06	Average	130	50	P
8	11510.00	0.81	66.50	67.31	74.00	-6.69	Peak	130	50	P
9	17265.00	10.12	48.30	58.42	68.20	-9.78	Peak	170	69	P

Note: Level=Reading+Factor
Margin=Level-Limit
Factor=Antenna Factor + cable loss - Amplifier Factor

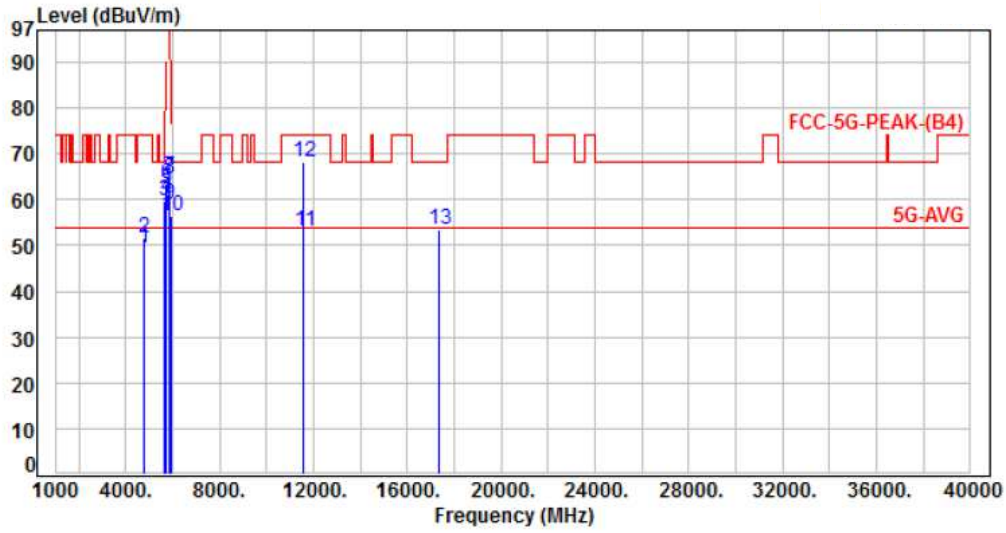
Power	:	AC 120V	Pol/Phase	:	HORIZONTAL
Test Mode	:	Mode 7, CH151, Band 4	Temperature	:	21 °C
Test Date	:	Apr. 25, 2018	Humidity	:	62 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	4800.00	-8.88	60.03	51.15	54.00	-2.85	Average	108	102	P
2	4800.00	-8.88	62.23	53.35	74.00	-20.65	Peak	108	102	P
3	5650.00	-7.37	65.80	58.43	68.20	-9.77	Peak	100	131	P
4	5700.00	-7.35	73.90	66.55	105.20	-38.65	Peak	100	131	P
5	5720.00	-7.35	90.30	82.95	110.80	-27.85	Peak	100	131	P
6	5725.00	-7.35	92.11	84.76	122.20	-37.44	Peak	100	131	P
7	11510.00	0.81	48.30	49.11	54.00	-4.89	Average	100	97	P
8	11510.00	0.81	62.50	63.31	74.00	-10.69	Peak	100	97	P
9	17265.00	10.12	44.62	54.74	68.20	-13.46	Peak	162	66	P

Note: Level=Reading+Factor
Margin=Level-Limit
Factor=Antenna Factor + cable loss - Amplifier Factor

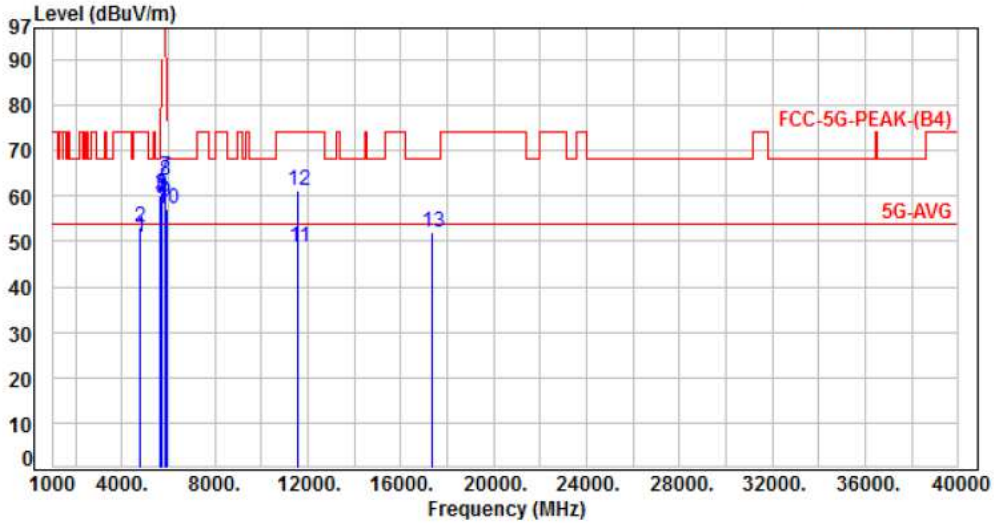
Power	:	AC 120V	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 7, CH159, Band 4	Temperature	:	21 °C
Test Date	:	Apr. 25, 2018	Humidity	:	62 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	4800.00	-8.88	58.33	49.45	54.00	-4.55	Average	100	71	P
2	4800.00	-8.88	60.63	51.75	74.00	-22.25	Peak	100	71	P
3	5650.00	-7.37	67.20	59.83	68.20	-8.37	Peak	100	130	P
4	5700.00	-7.35	67.80	60.45	105.20	-44.75	Peak	100	130	P
5	5720.00	-7.35	69.60	62.25	110.80	-48.55	Peak	100	130	P
6	5725.00	-7.35	70.61	63.26	122.20	-58.94	Peak	100	130	P
7	5850.00	-7.30	72.20	64.90	122.20	-57.30	Peak	100	130	P
8	5855.00	-7.30	71.80	64.50	110.80	-46.30	Peak	100	130	P
9	5875.00	-7.30	66.31	59.01	105.20	-46.19	Peak	100	130	P
10	5925.00	-7.28	63.60	56.32	68.20	-11.88	Peak	100	130	P
11	11590.00	0.86	52.10	52.96	54.00	-1.04	Average	151	46	P
12	11590.00	0.86	67.30	68.16	74.00	-5.84	Peak	151	46	P
13	17385.00	10.79	42.55	53.34	68.20	-14.86	Peak	133	77	P

Note: Level=Reading+Factor
Margin=Level-Limit
Factor=Antenna Factor + cable loss - Amplifier Factor

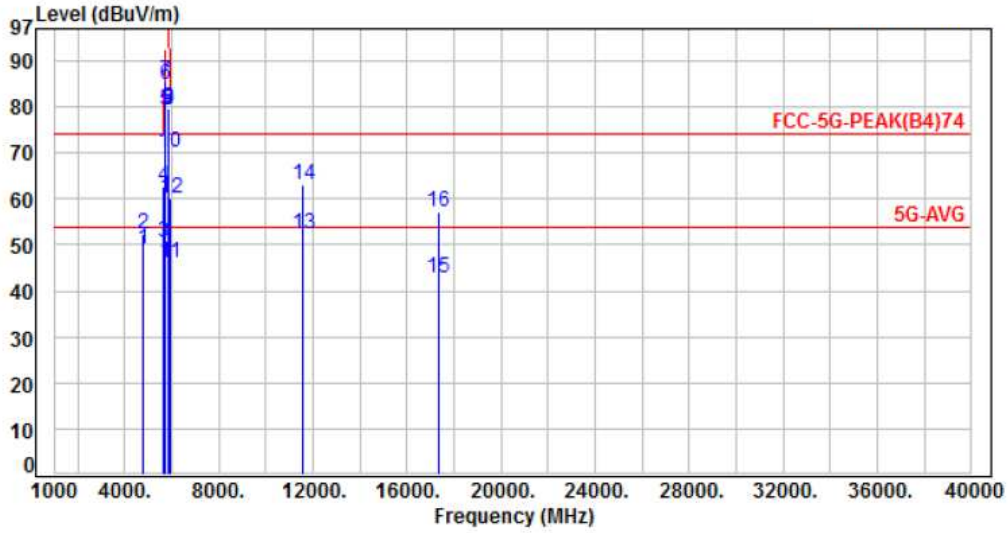
Power	:	AC 120V	Pol/Phase	:	HORIZONTAL
Test Mode	:	Mode 7, CH159, Band 4	Temperature	:	21 °C
Test Date	:	Apr. 25, 2018	Humidity	:	62 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	4800.00	-8.88	59.86	50.98	54.00	-3.02	Average	105	123	P
2	4800.00	-8.88	61.85	52.97	74.00	-21.03	Peak	105	123	P
3	5650.00	-7.37	67.50	60.13	68.20	-8.07	Peak	250	78	P
4	5700.00	-7.35	66.20	58.85	105.20	-46.35	Peak	250	78	P
5	5720.00	-7.35	67.80	60.45	110.80	-50.35	Peak	250	78	P
6	5725.00	-7.35	67.61	60.26	122.20	-61.94	Peak	250	78	P
7	5850.00	-7.30	71.30	64.00	122.20	-58.20	Peak	250	78	P
8	5855.00	-7.30	70.60	63.30	110.80	-47.50	Peak	250	78	P
9	5875.00	-7.30	65.91	58.61	105.20	-46.59	Peak	250	78	P
10	5925.00	-7.28	64.30	57.02	68.20	-11.18	Peak	250	78	P
11	11590.00	0.86	47.80	48.66	54.00	-5.34	Average	100	99	P
12	11590.00	0.86	60.50	61.36	74.00	-12.64	Peak	100	99	P
13	17385.00	10.79	41.22	52.01	68.20	-16.19	Peak	100	142	P

Note: Level=Reading+Factor
Margin=Level-Limit
Factor=Antenna Factor + cable loss - Amplifier Factor

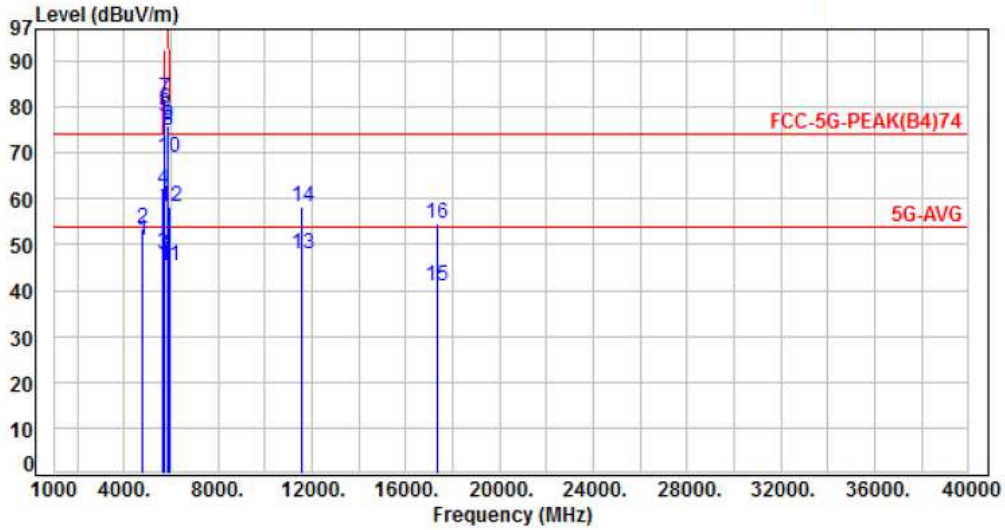
Power	:	AC 120V	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 8, CH155, Band 4	Temperature	:	21 °C
Test Date	:	Apr. 25, 2018	Humidity	:	62 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	4800.00	-8.88	58.10	49.22	54.00	-4.78	Average	108	88	P
2	4800.00	-8.88	61.20	52.32	74.00	-21.68	Peak	108	88	P
3	5650.00	-7.37	57.80	50.43	54.00	-3.57	Average	100	130	P
4	5650.00	-7.37	70.20	62.83	74.00	-11.17	Peak	100	130	P
5	5700.00	-7.35	86.50	79.15	105.20	-26.05	Peak	100	130	P
6	5720.00	-7.35	92.10	84.75	110.80	-26.05	Peak	100	130	P
7	5725.00	-7.35	92.91	85.56	122.20	-36.64	Peak	100	130	P
8	5850.00	-7.30	86.90	79.60	122.20	-42.60	Peak	100	130	P
9	5855.00	-7.30	86.70	79.40	110.80	-31.40	Peak	100	130	P
10	5875.00	-7.30	77.21	69.91	105.20	-35.29	Peak	100	130	P
11	5925.00	-7.28	53.50	46.22	54.00	-7.78	Average	100	130	P
12	5925.00	-7.28	67.40	60.12	74.00	-13.88	Peak	100	130	P
13	11550.00	0.84	51.56	52.40	54.00	-1.60	Average	191	50	P
14	11550.00	0.84	62.30	63.14	74.00	-10.86	Peak	191	50	P
15	17325.00	10.45	32.21	42.66	54.00	-11.34	Average	140	70	P
16	17325.00	10.45	46.71	57.16	74.00	-16.84	Peak	140	70	P

Note: Level=Reading+Factor
Margin=Level-Limit
Factor=Antenna Factor + cable loss - Amplifier Factor

Power	:	AC 120V	Pol/Phase	:	HORIZONTAL
Test Mode	:	Mode 8, CH155, Band 4	Temperature	:	21 °C
Test Date	:	Apr. 25, 2018	Humidity	:	62 %



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	4800.00	-8.88	59.91	51.03	54.00	-2.97	Average	108	122	P
2	4800.00	-8.88	62.33	53.45	74.00	-20.55	Peak	108	122	P
3	5650.00	-7.37	55.30	47.93	54.00	-6.07	Average	100	132	P
4	5650.00	-7.37	69.20	61.83	74.00	-12.17	Peak	100	132	P
5	5700.00	-7.35	85.10	77.75	105.20	-27.45	Peak	100	132	P
6	5720.00	-7.35	86.90	79.55	110.80	-31.25	Peak	100	132	P
7	5725.00	-7.35	89.21	81.86	122.20	-40.34	Peak	100	132	P
8	5850.00	-7.30	82.20	74.90	122.20	-47.30	Peak	100	132	P
9	5855.00	-7.30	83.10	75.80	110.80	-35.00	Peak	100	132	P
10	5875.00	-7.30	76.11	68.81	105.20	-36.39	Peak	100	132	P
11	5925.00	-7.28	52.60	45.32	54.00	-8.68	Average	100	132	P
12	5925.00	-7.28	65.70	58.42	74.00	-15.58	Peak	100	132	P
13	11550.00	0.84	47.10	47.94	54.00	-6.06	Average	110	97	P
14	11550.00	0.84	57.60	58.44	74.00	-15.56	Peak	110	97	P
15	17325.00	10.45	30.51	40.96	54.00	-13.04	Average	120	142	P
16	17325.00	10.45	44.23	54.68	74.00	-19.32	Peak	120	142	P

Note: Level=Reading+Factor
Margin=Level-Limit
Factor=Antenna Factor + cable loss - Amplifier Factor

6.7. Restricted Bands of Operation

Only spurious emissions are permitted in any of the frequency bands listed below:

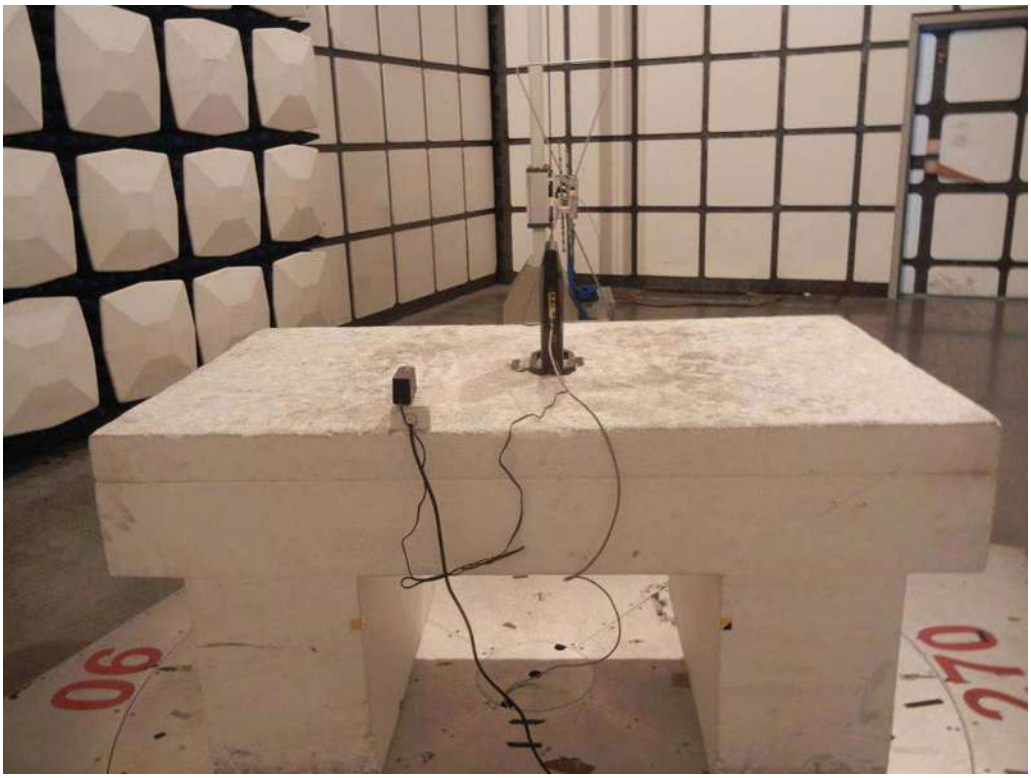
MHz	MHz	MHz	GHz
0.09000 – 0.11000	16.42000 – 16.42300	399.9 – 410.0	4.500 – 5.150
0.49500 – 0.505**	16.69475 – 16.69525	608.0 – 614.0	5.350 – 5.460
2.17350 – 2.19050	16.80425 – 16.80475	960.0 – 1240.0	7.250 – 7.750
4.12500 – 4.12800	25.50000 – 25.67000	1300.0 – 1427.0	8.025 – 8.500
4.17725 – 4.17775	37.50000 – 38.25000	1435.0 – 1626.5	9.000 – 9.200
4.20725 – 4.20775	73.00000 – 74.60000	1645.5 – 1646.5	9.300 – 9.500
6.21500 – 6.21800	74.80000 – 75.20000	1660.0 – 1710.0	10.600 – 12.700
6.26775 – 6.26825	108.00000 – 121.94000	1718.8 – 1722.2	13.250 – 13.400
6.31175 – 6.31225	123.00000 – 138.00000	2200.0 – 2300.0	14.470 – 14.500
8.29100 – 8.29400	149.90000 – 150.05000	2310.0 – 2390.0	15.350 – 16.200
8.36200 – 8.36600	156.52475 – 156.52525	2483.5 – 2500.0	17.700 – 21.400
8.37625 – 8.38675	156.70000 – 156.90000	2655.0 – 2900.0	22.010 – 23.120
8.41425 – 8.41475	162.01250 – 167.17000	3260.0 – 3267.0	23.600 – 24.000
12.29000 – 12.29300	167.72000 – 173.20000	3332.0 – 3339.0	31.200 – 31.800
12.51975 – 12.52025	240.00000 – 285.00000	3345.8 – 3358.0	36.430 – 36.500
12.57675 – 12.57725	322.00000 – 335.40000	3600.0 – 4400.0	Above 38.6
13.36000 – 13.41000			

**: Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz

6.8. Test Photographs (30MHz ~ 1GHz)

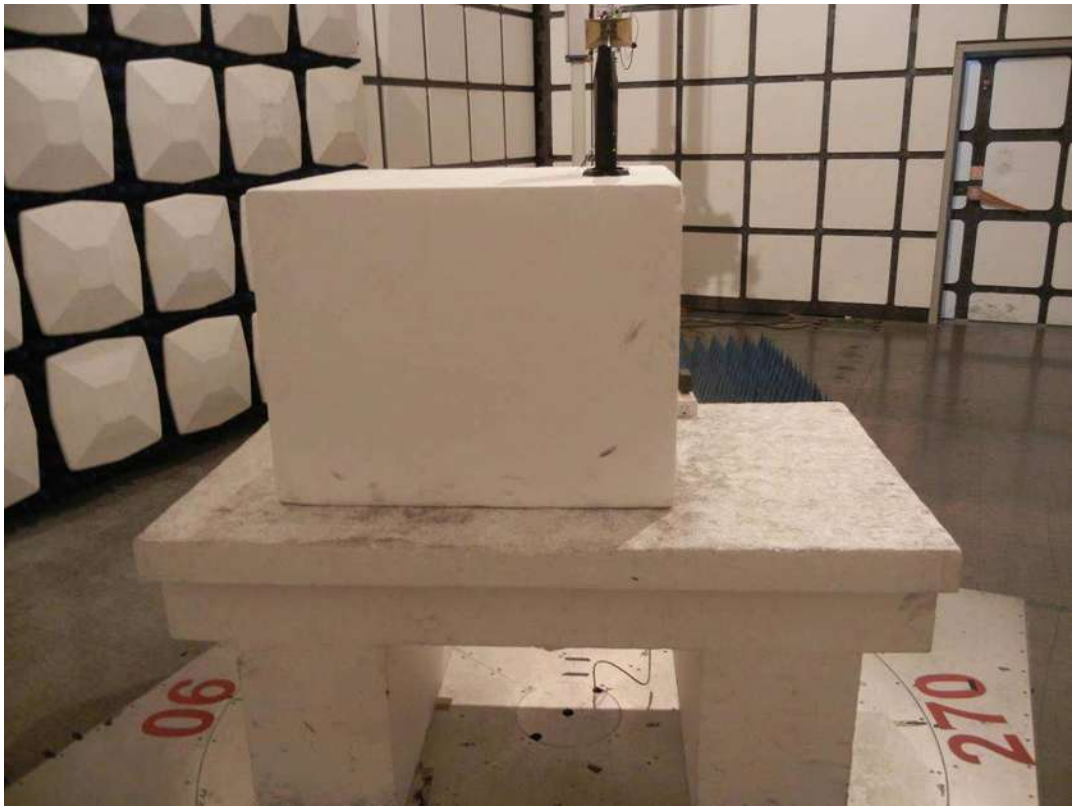
Front View

Rear View

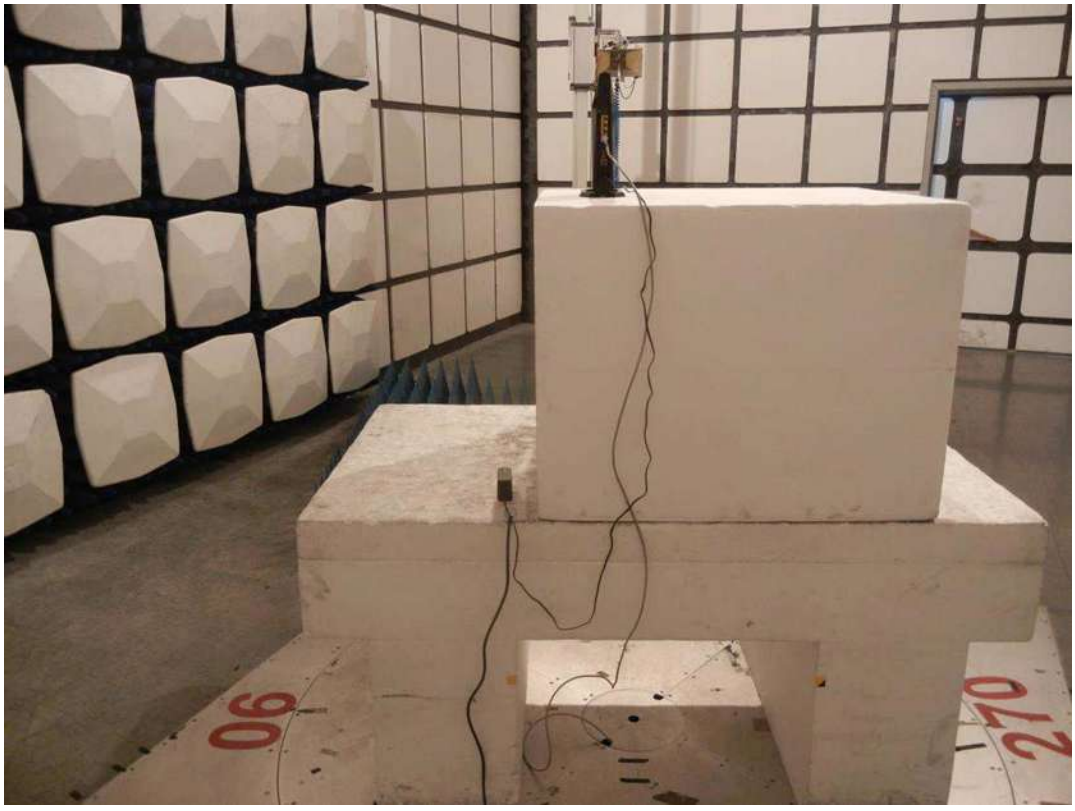


6.9. Test Photographs (1GHz ~ 40GHz)

Front View



Rear View



7. On Time, Duty Cycle and Measurement methods

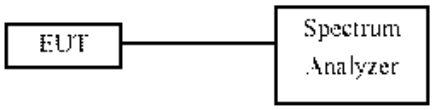
7.1. Test Limit

None; for reporting purposes only.

7.2. Test Procedure

KDB 789033 Zero-Span Spectrum Analyzer Method.

7.3. Test Setup Layout



7.4. Test Result and Data

Temperature: 22°C Humidity: 62%

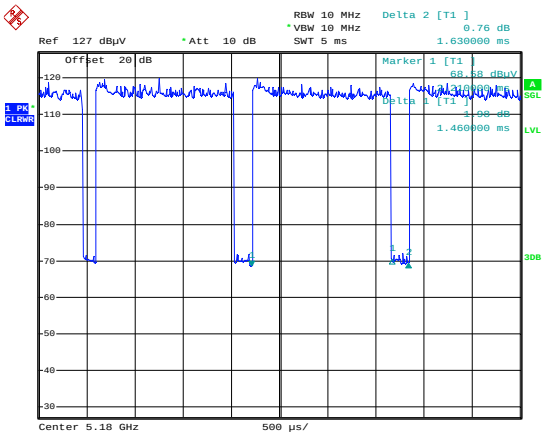
Test Date: Aug. 22, 2018

Modulation Type	On Time (msec)	Period Time (msec)	Duty Cycle (%)
802.11a	1.46	1.63	89.57%
802.11ac VHT20	1.38	1.55	89.03%
802.11ac VHT40	0.70	0.88	78.91%
802.11ac VHT80	0.35	0.54	63.97%

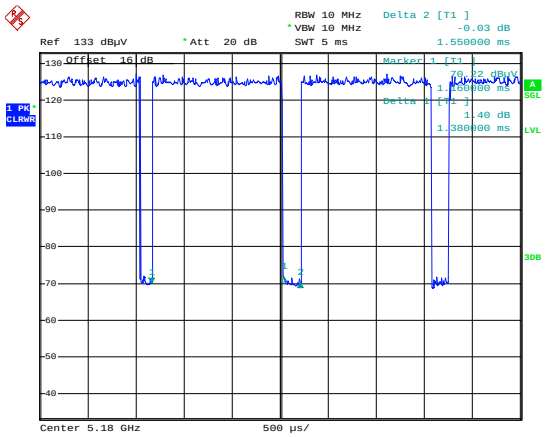
7.5. Measurement Methods

26 dB and 6dB Emission BW	KDB 789033 D02 v02r01, Section C
99% Occupied BW	KDB 789033 D02 v02r01, Section D
Conducted Output Power	KDB 789033 D02 v02r01, Section E.2.d and E.3.b (Method PM-G)
Power Spectral Density	KDB 789033 D02 v02r01, Section F
Unwanted emissions in restricted bands	KDB 789033 D02 v02r01, Sections G and H
Unwanted emissions in non-restricted bands	KDB 789033 D02 v02r01, Sections G and H

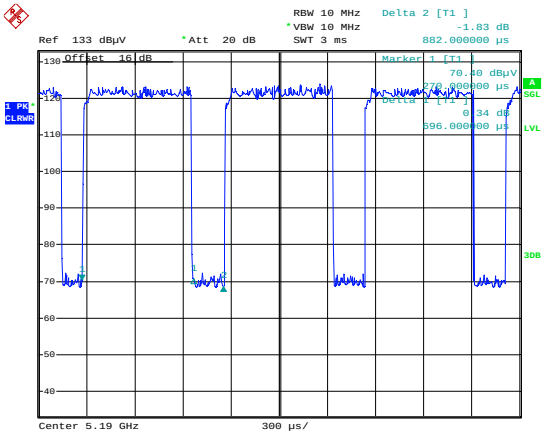
Modulation Standard: 802.11a (6Mbps)



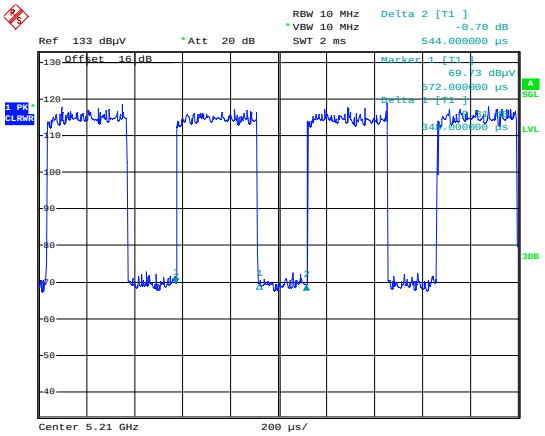
Modulation Standard: 802.11ac VHT20 (6.5Mbps)



Modulation Standard: 802.11ac VHT40 (13.5Mbps)



Modulation Standard: 802.11ac VHT80 (29.3Mbps)



8. 6dB Bandwidth & 99% Bandwidth

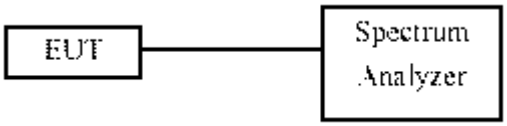
8.1. Test Limit

FCC §15.407
The minimum 6 dB bandwidth shall be at least 500 kHz.

8.2. Test Procedure

Reference to 789033 D02 General UNII Test Procedures New Rules v01: The transmitter output is connected to a spectrum analyzer with the RBW set to100KHz, the VBW >= 3 x RBW, peak detector and max hold.

8.3. Test Setup Layout



8.4. Test Result and Data (6dB Bandwidth)

Temperature: 22°C Humidity: 62%
Test Date: Aug. 22, 2018

In the 5.8G Band

Modulation Type	Channel	Frequency (MHz)	6dB Bandwidth (MHz)				Minimum Limit (MHz)
			ANT A	ANT B	ANT C	ANT D	
802.11a	149	5745	15.70	15.70	16.40	16.40	0.50
	157	5785	15.70	15.90	16.40	16.40	0.50
	165	5825	16.10	15.90	16.30	16.30	0.50
802.11ac VHT20	149	5745	16.50	16.20	16.70	16.30	0.50
	157	5785	16.40	16.30	16.90	16.60	0.50
	165	5825	16.80	15.90	17.10	16.60	0.50
802.11ac VHT40	151	5755	35.40	35.80	36.20	36.40	0.50
	159	5795	35.40	36.00	36.00	35.80	0.50
802.11ac VHT80	155	5775	74.20	74.20	75.80	75.80	0.50

8.5. Test Result and Data (99% Bandwidth)

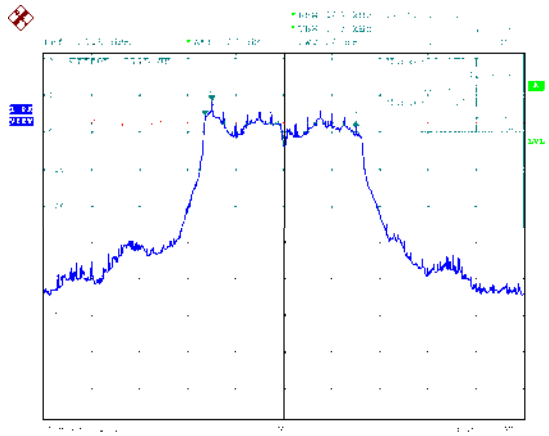
Temperature: 22°C Humidity: 62%

Test Date: Aug. 22, 2018

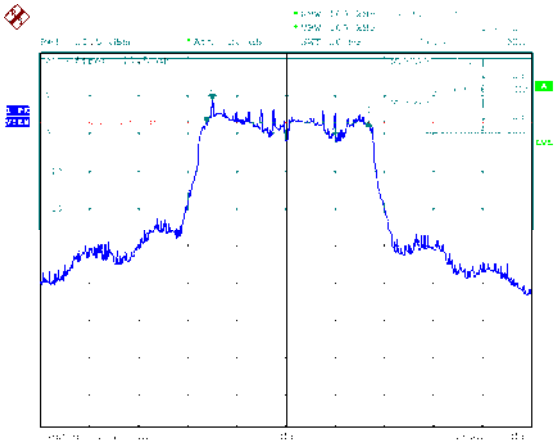
In the 5.8G Band

Modulation Type	Channel	Frequency (MHz)	99% Bandwidth (MHz)			
			ANT A	ANT B	ANT C	ANT D
802.11a	149	5745	16.60	16.90	16.70	16.80
	157	5785	16.60	16.60	16.70	16.70
	165	5825	16.60	16.60	16.70	16.70
802.11ac VHT20	149	5745	17.40	17.80	17.70	17.70
	157	5785	17.60	17.60	17.70	17.80
	165	5825	17.60	17.60	17.70	17.70
802.11ac VHT40	151	5755	36.80	36.60	36.60	36.60
	159	5795	36.80	36.80	36.40	36.60
802.11ac VHT80	155	5775	76.00	76.00	76.00	76.00

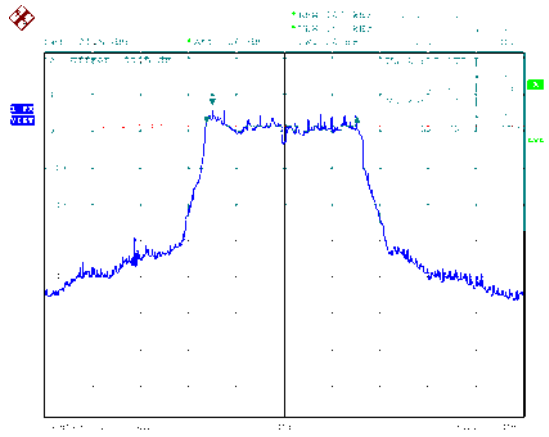
6dB Bandwidth
ANT A
Modulation Standard: 802.11a (6Mbps)
CH149



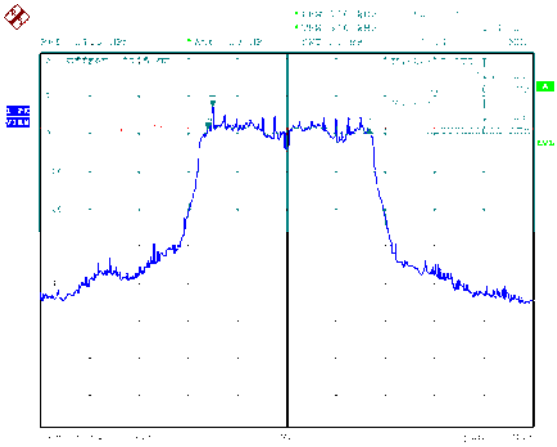
Modulation Standard: 802.11ac, VHT20 (6.5Mbps)
CH149



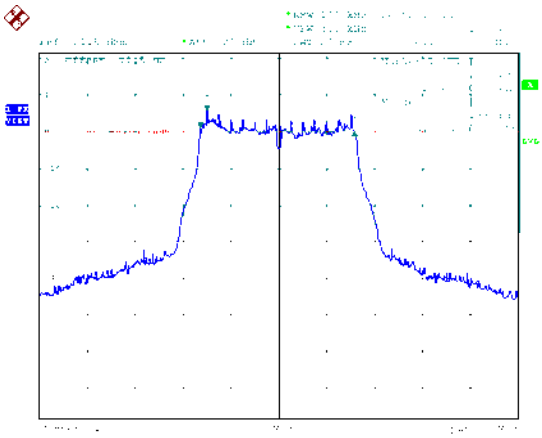
CH157



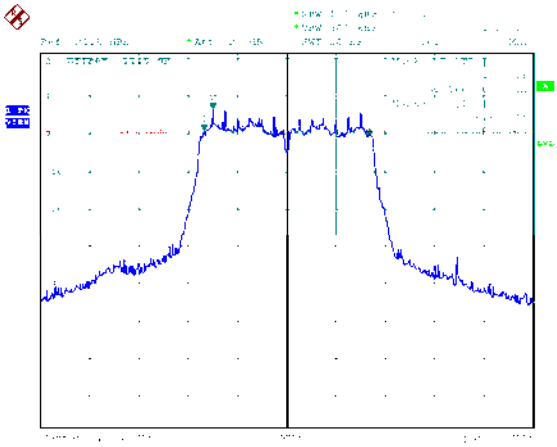
CH157



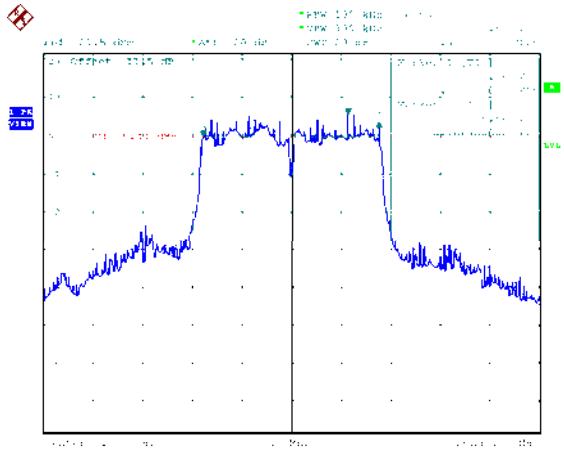
CH165



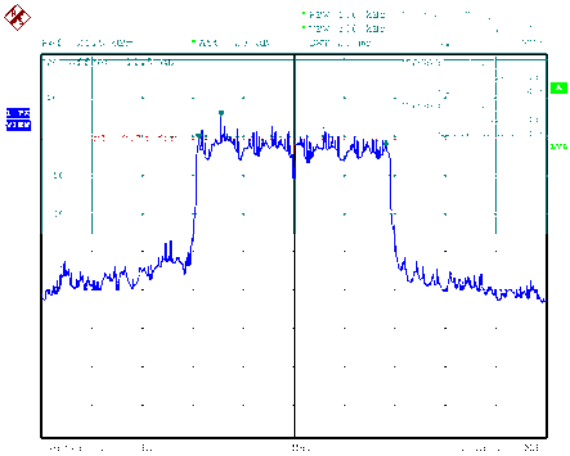
CH165



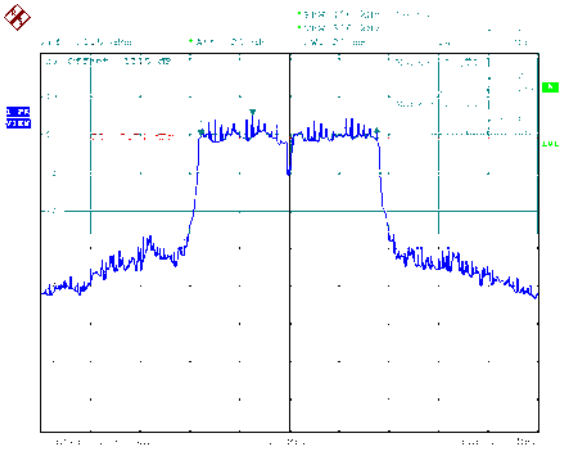
Modulation Standard: 802.11ac, VHT40 (13.5Mbps)
CH151



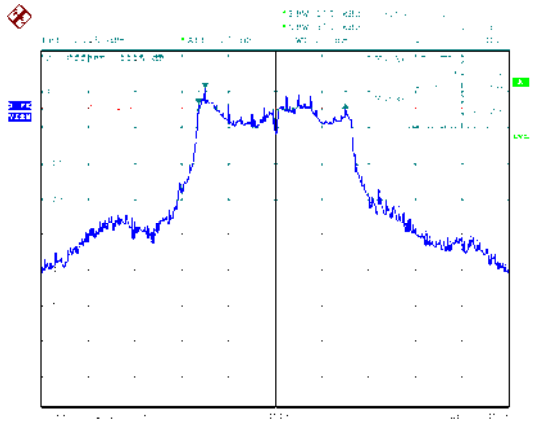
Modulation Standard: 802.11ac, VHT80 (29.3Mbps)
CH155



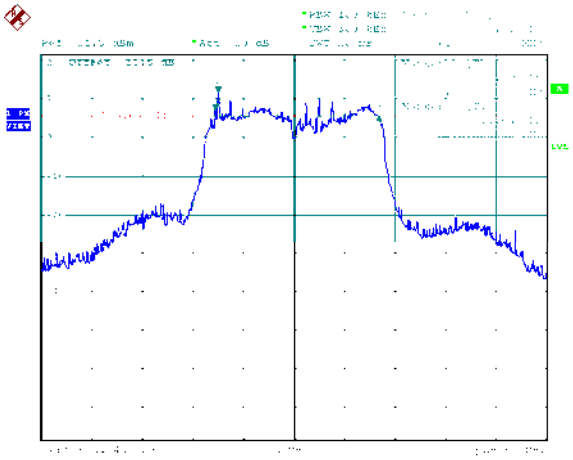
CH159



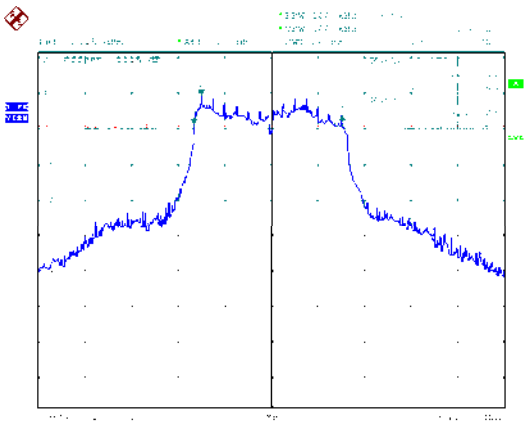
ANT B
Modulation Standard: 802.11a (6Mbps)
CH149



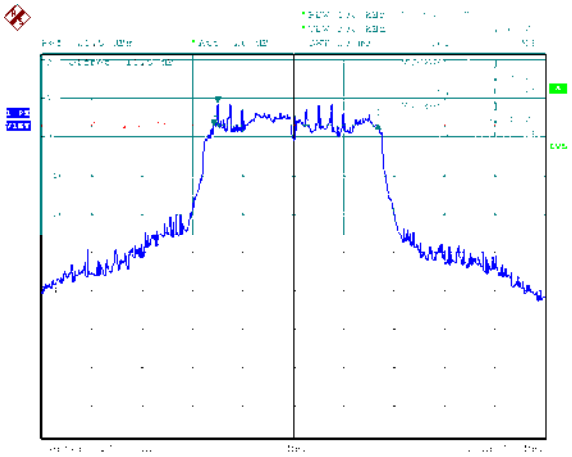
Modulation Standard: 802.11ac, VHT20 (6.5Mbps)
CH149



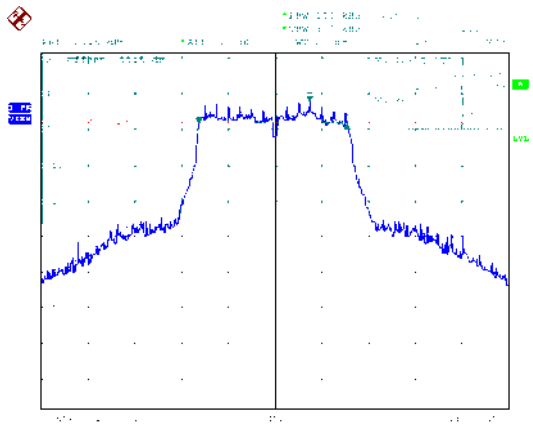
CH157



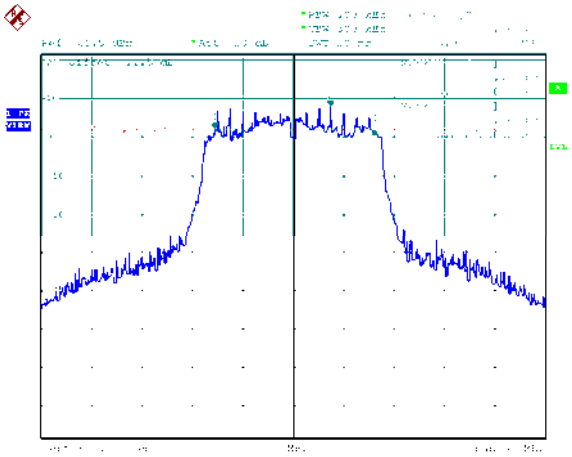
CH157



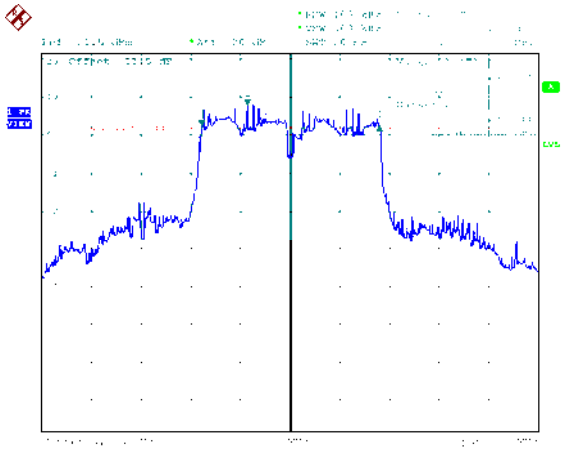
CH165



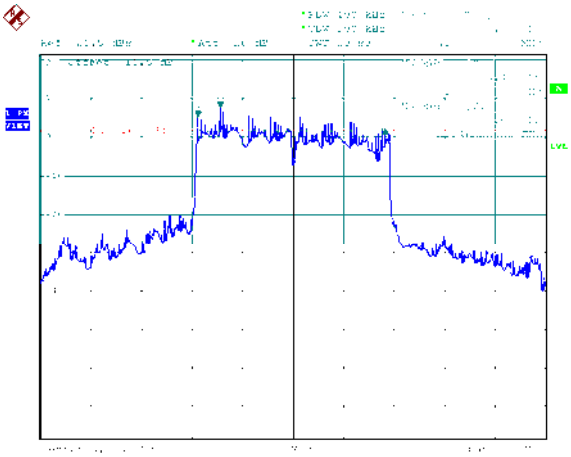
CH165



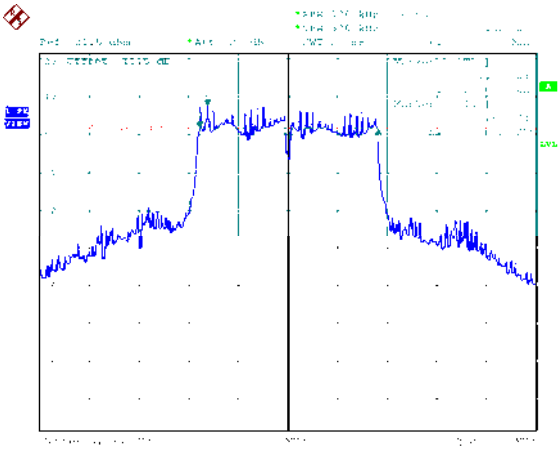
Modulation Standard: 802.11ac, VHT40 (13.5Mbps)
CH151



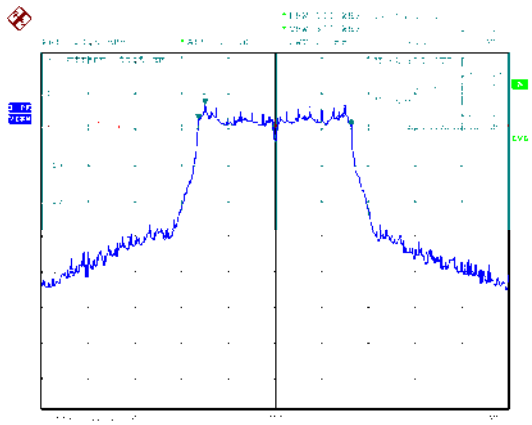
Modulation Standard: 802.11ac, VHT80 (29.3Mbps)
CH155



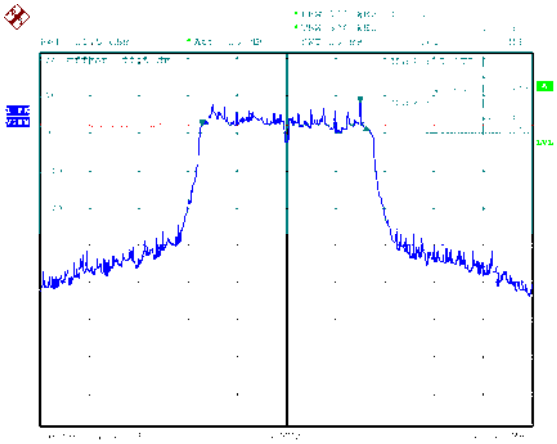
CH159



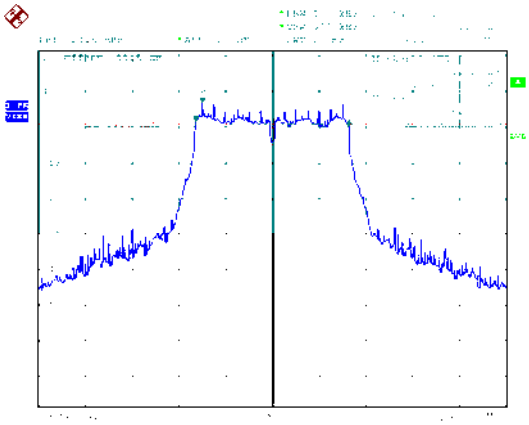
ANT C
Modulation Standard: 802.11a (6Mbps)
CH149



Modulation Standard: 802.11ac, VHT20 (6.5Mbps)
CH149



CH157



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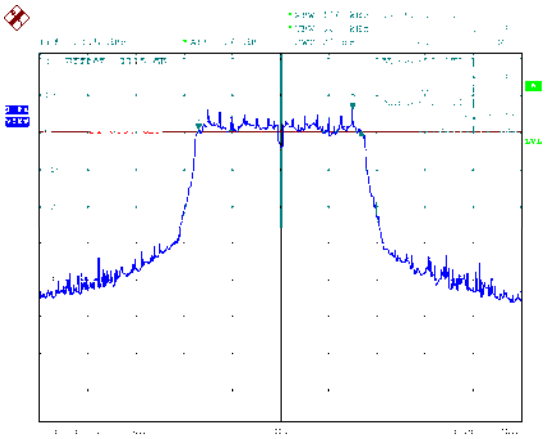

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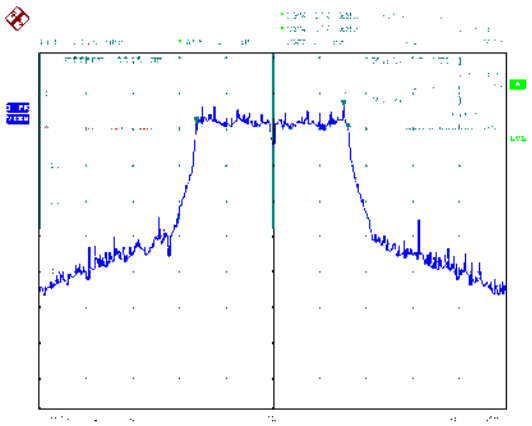
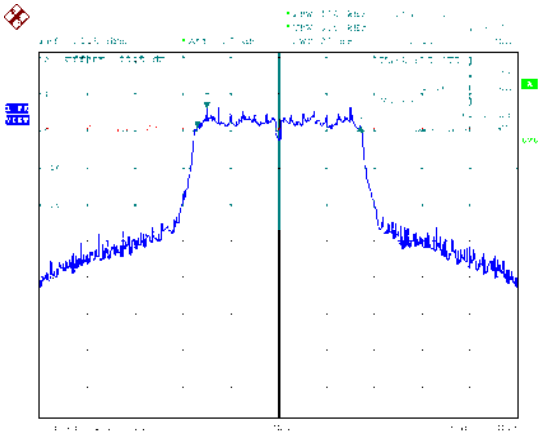
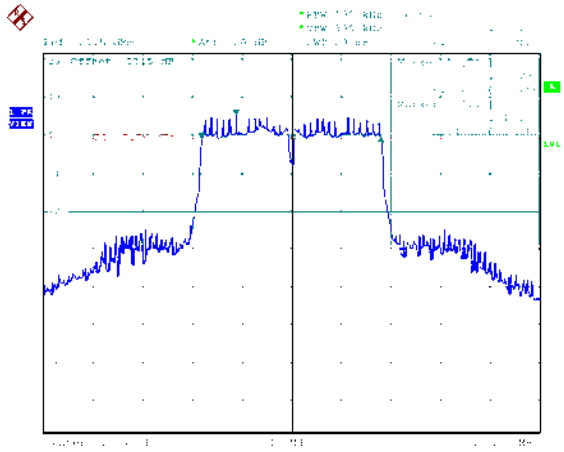


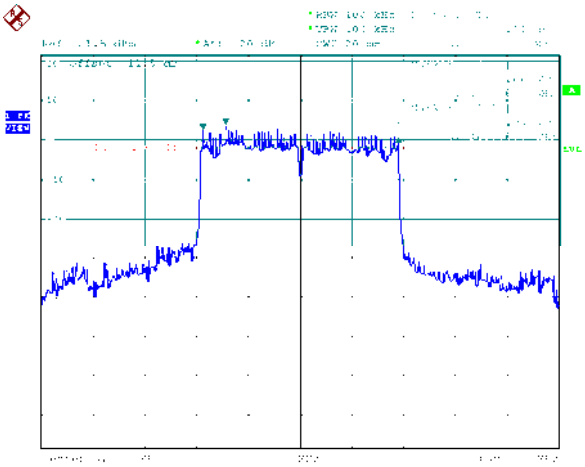
CH165



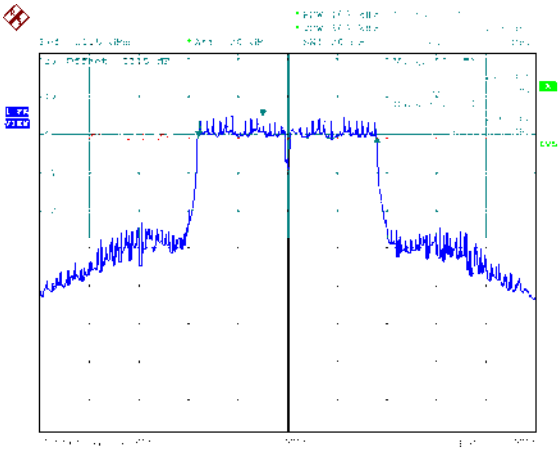
Modulation Standard: 802.11ac, VHT40 (13.5Mbps)
CH151



Modulation Standard: 802.11ac, VHT80 (29.3Mbps)
CH155



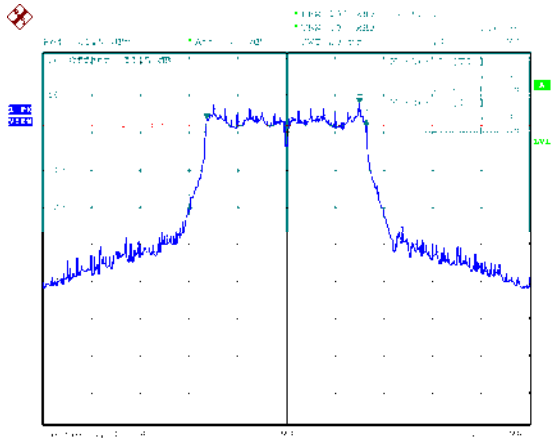
CH159



ANT D

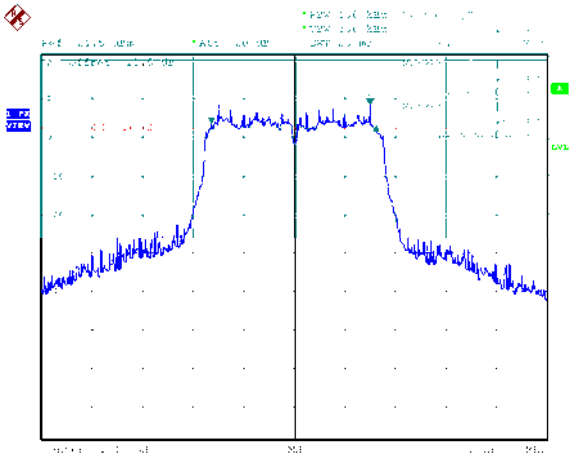
Modulation Standard: 802.11a (6Mbps)

CH149



Modulation Standard: 802.11ac, VHT20 (6.5Mbps)

CH149



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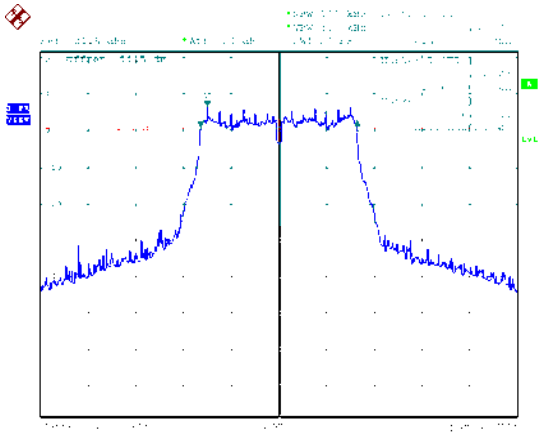

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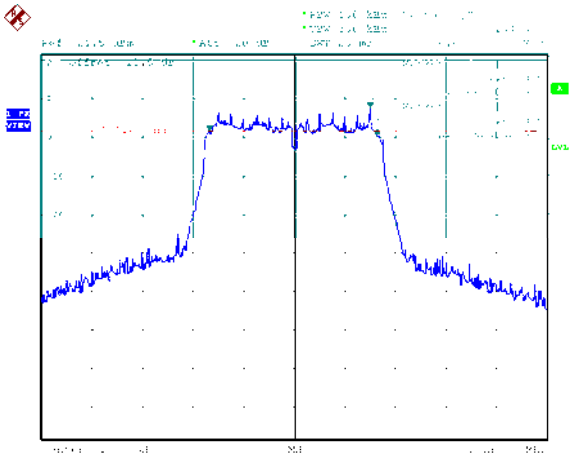
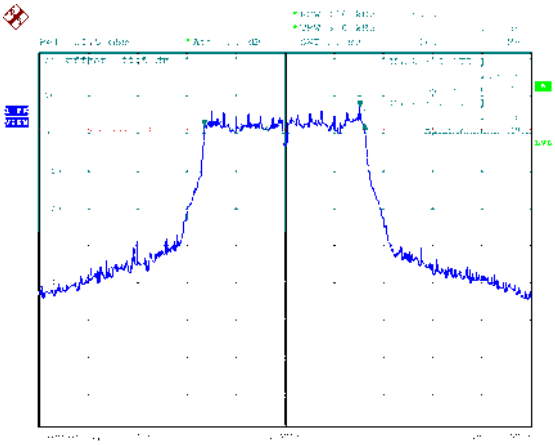


CH165



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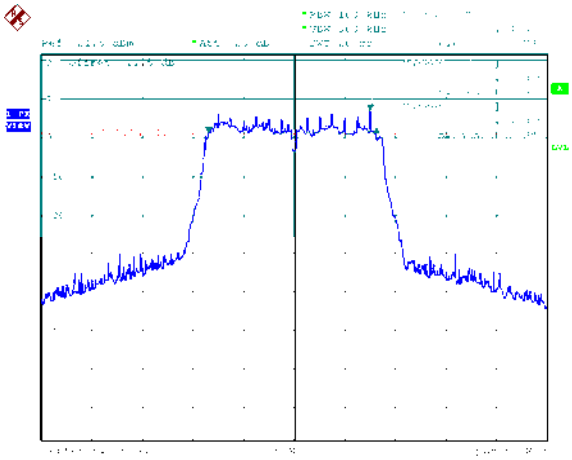
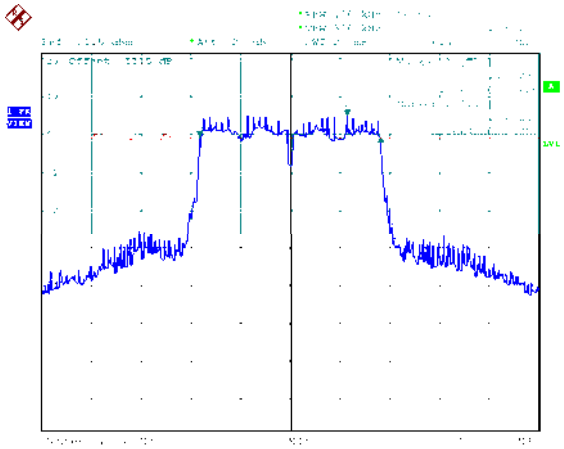
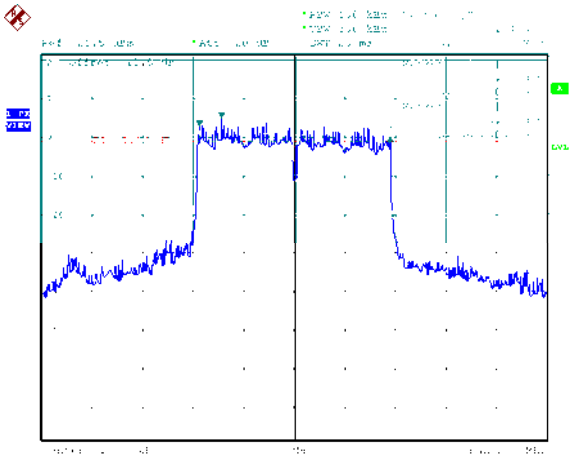


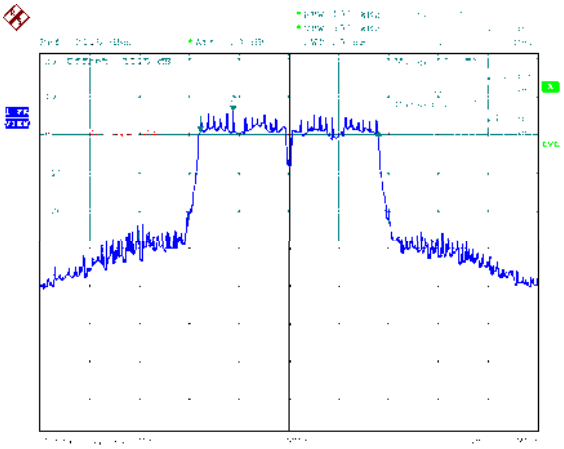
Modulation Standard: 802.11ac, VHT40 (13.5Mbps)
CH151



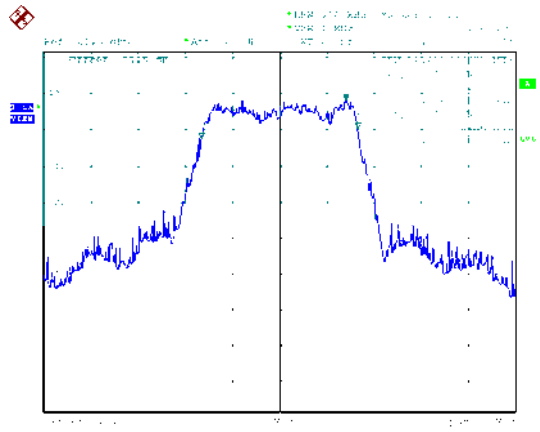
Modulation Standard: 802.11ac, VHT80 (29.3Mbps)
CH155



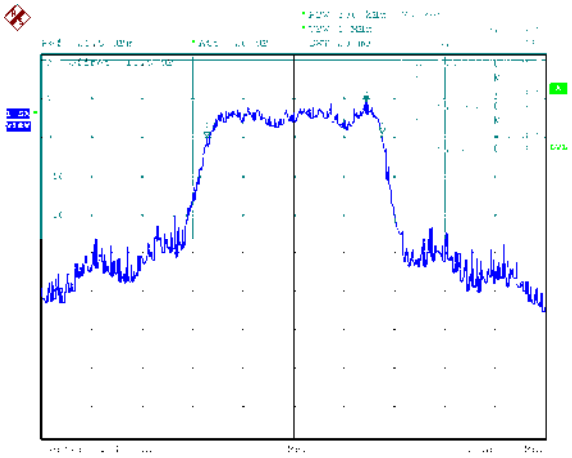
CH159



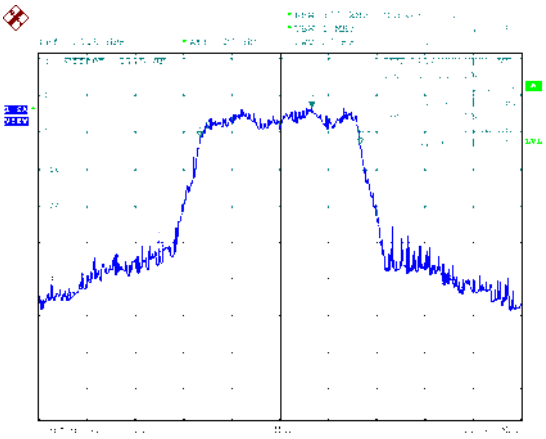
99% Bandwidth
ANT A
Modulation Standard: 802.11a (6Mbps)
CH149



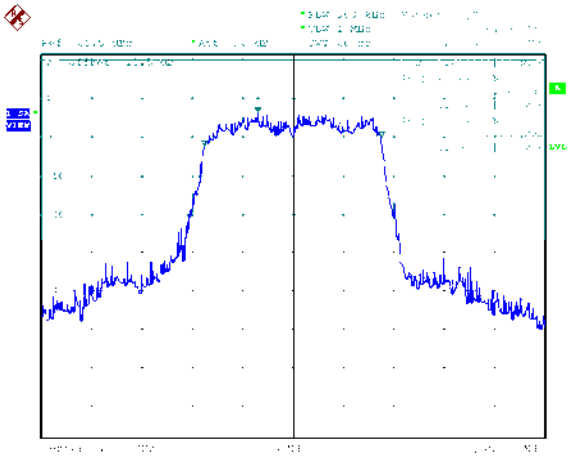
Modulation Standard: 802.11ac, VHT20 (6.5Mbps)
CH149



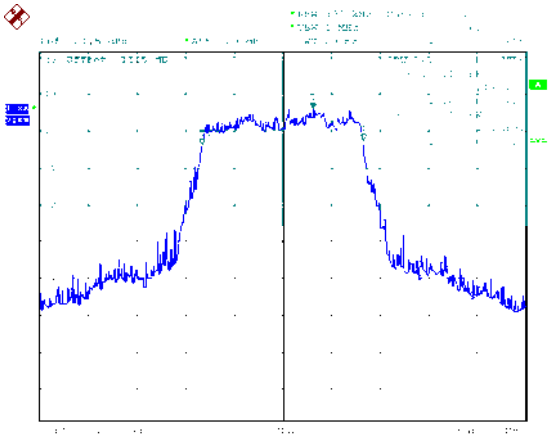
CH157



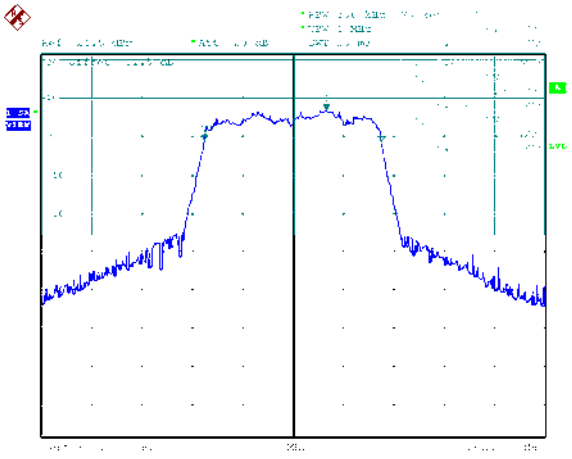
CH157



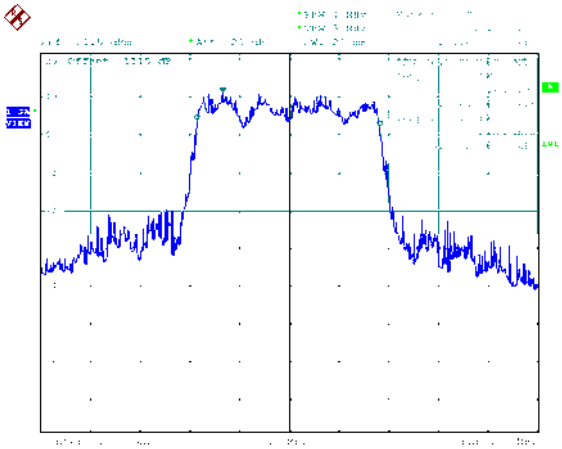
CH165



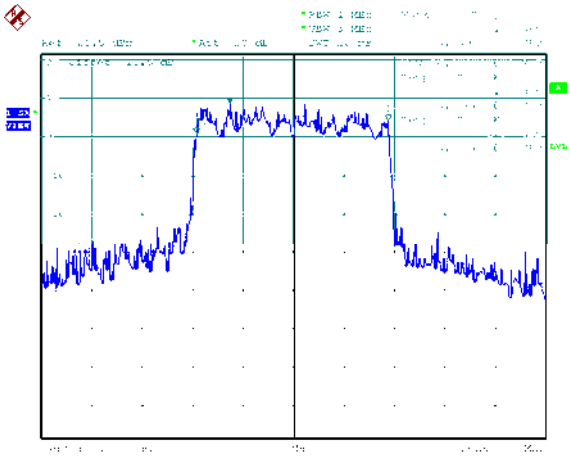
CH165



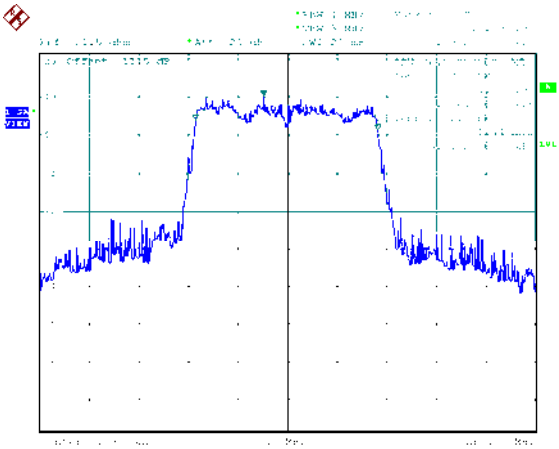
Modulation Standard: 802.11ac, VHT40 (13.5Mbps)
CH151



Modulation Standard: 802.11ac, VHT80 (29.3Mbps)
CH155



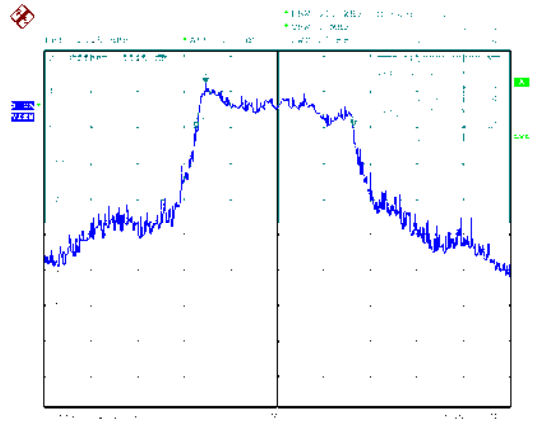
CH159



ANT B

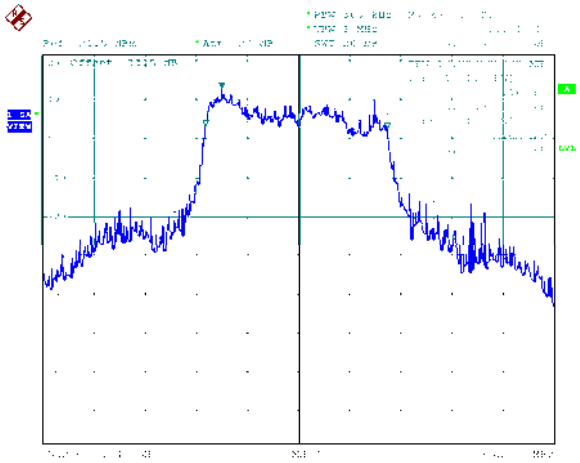
Modulation Standard: 802.11a (6Mbps)

CH149



Modulation Standard: 802.11ac, VHT20 (6.5Mbps)

CH149



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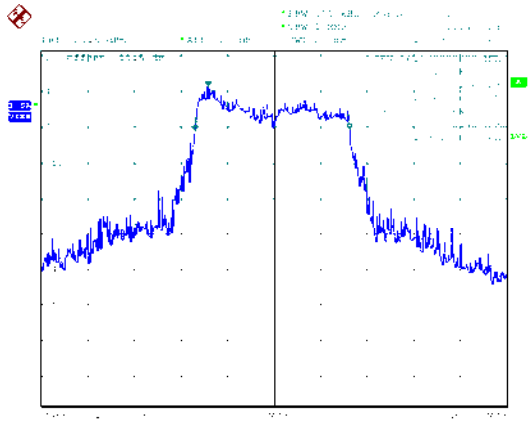
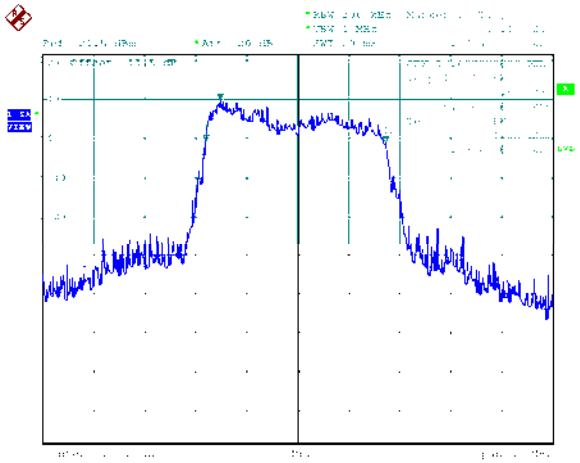


CH157



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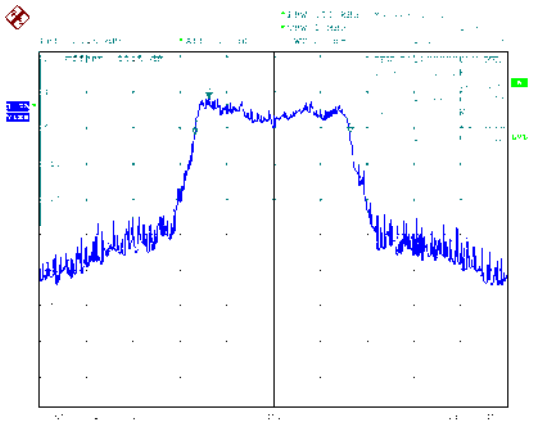
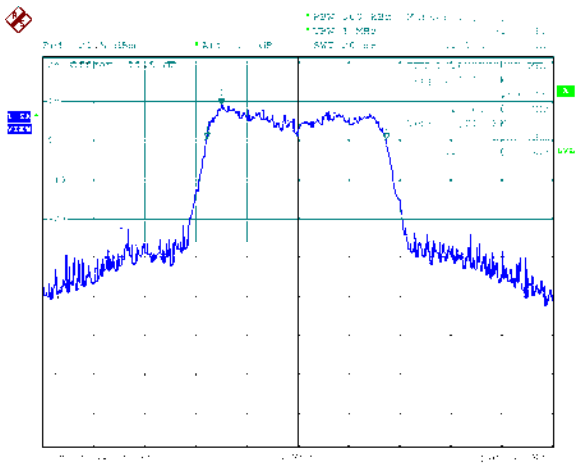
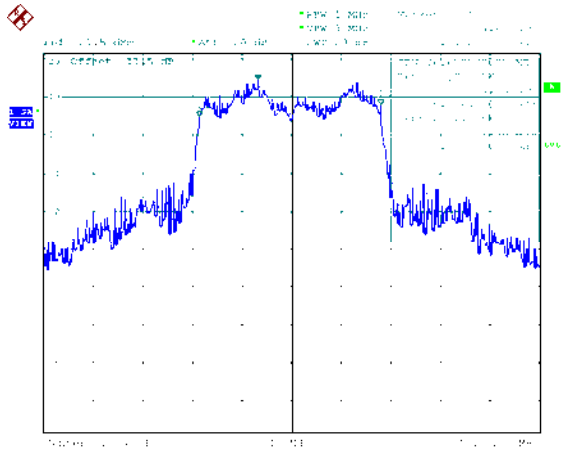


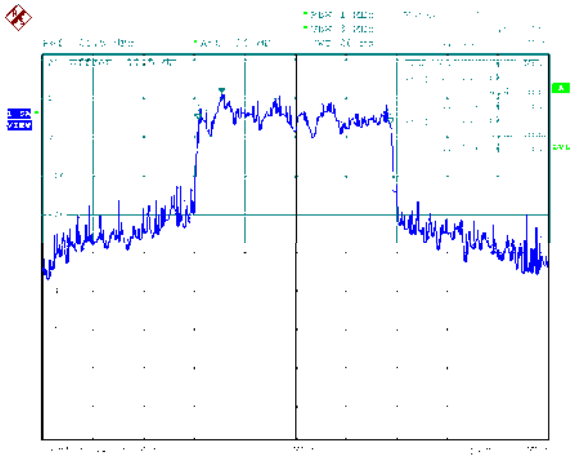
CH165



Modulation Standard: 802.11ac, VHT40 (13.5Mbps)
CH151



Modulation Standard: 802.11ac, VHT80 (29.3Mbps)
CH155



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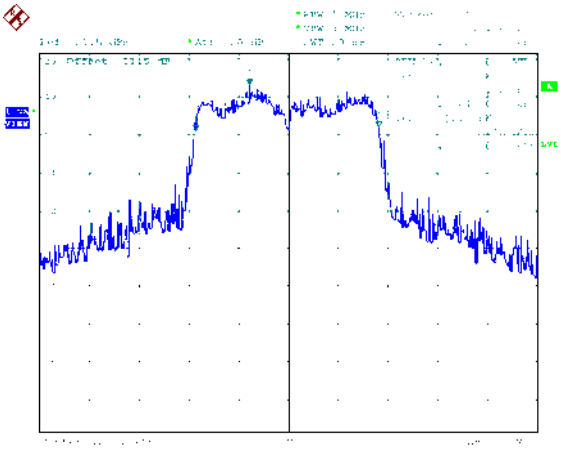
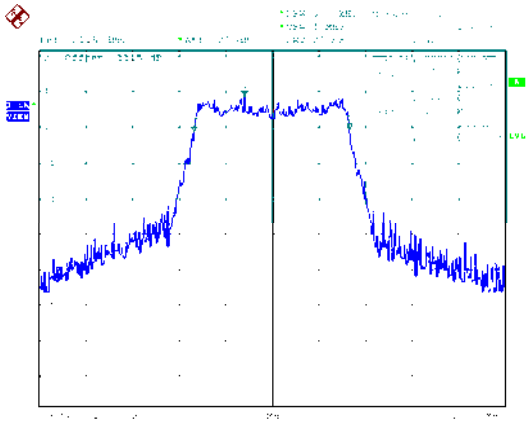


ANT C

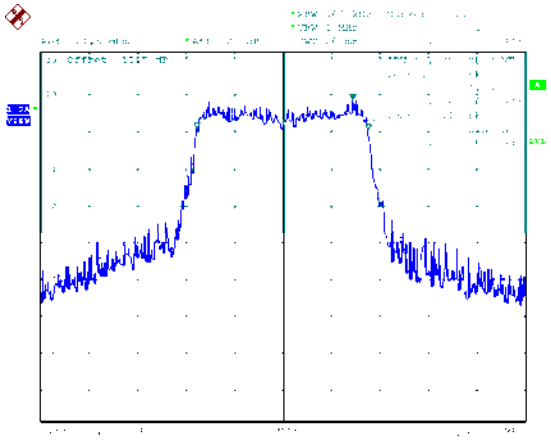
Modulation Standard: 802.11a (6Mbps)

CH149



Modulation Standard: 802.11ac, VHT20 (6.5Mbps)

CH149



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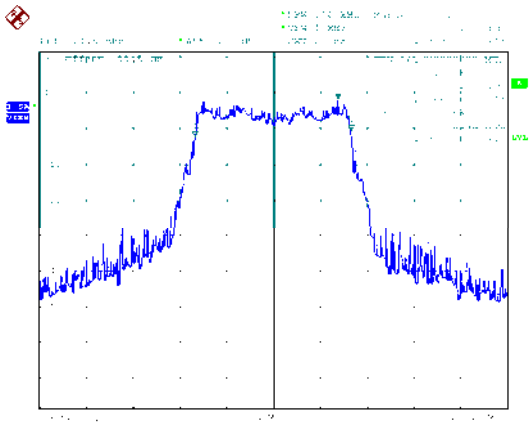

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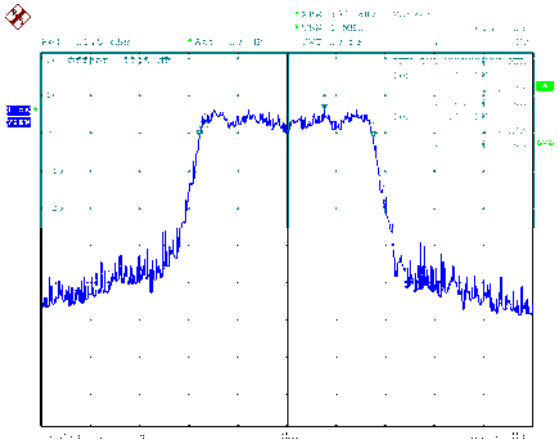
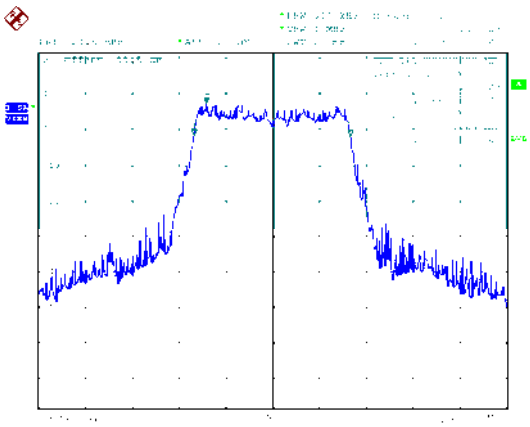


CH165



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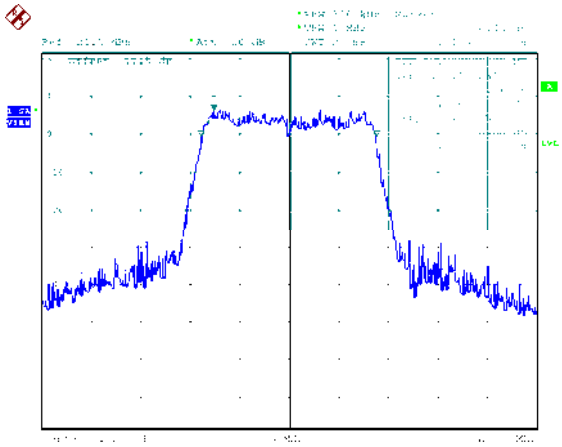
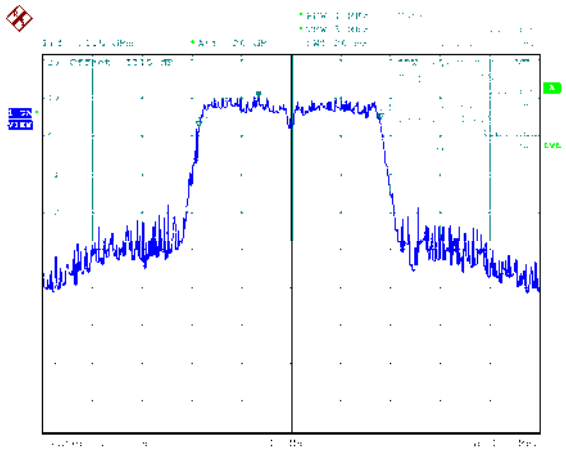
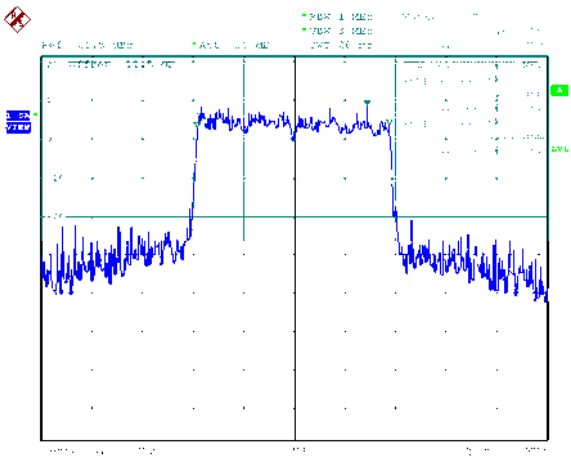


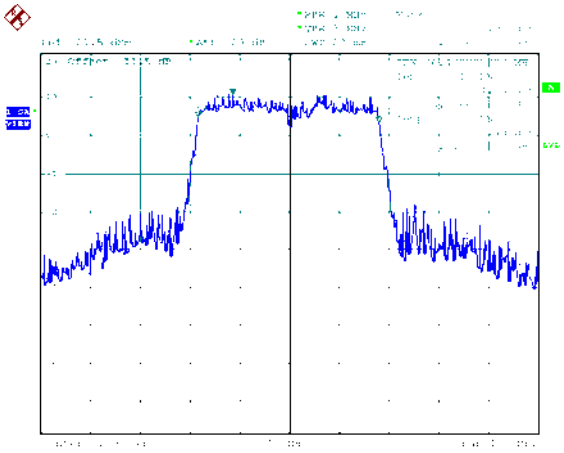
Modulation Standard: 802.11ac, VHT40 (13.5Mbps)
CH151



Modulation Standard: 802.11ac, VHT80 (29.3Mbps)
CH155



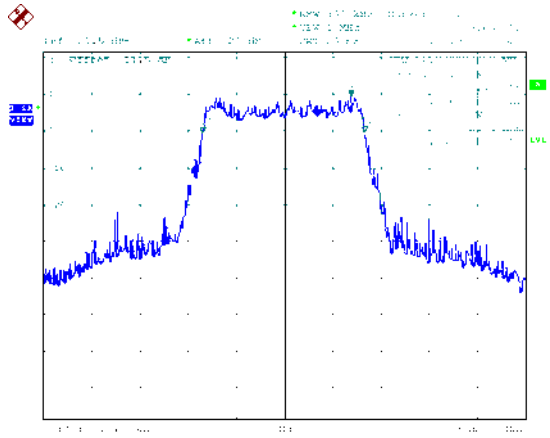
CH159



ANT D

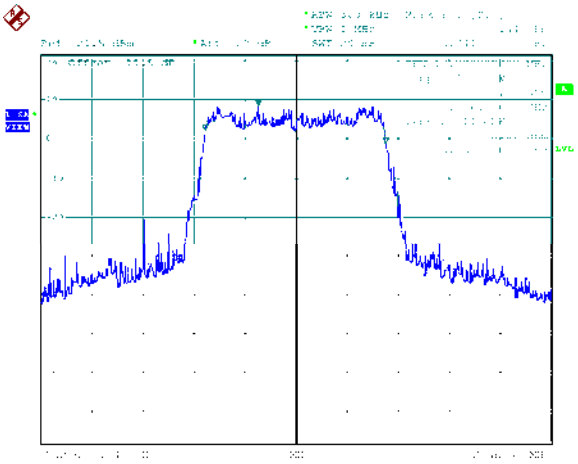
Modulation Standard: 802.11a (6Mbps)

CH149



Modulation Standard: 802.11ac, VHT20 (6.5Mbps)

CH149



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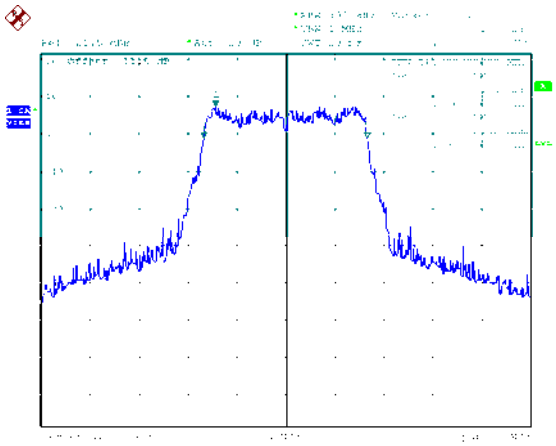

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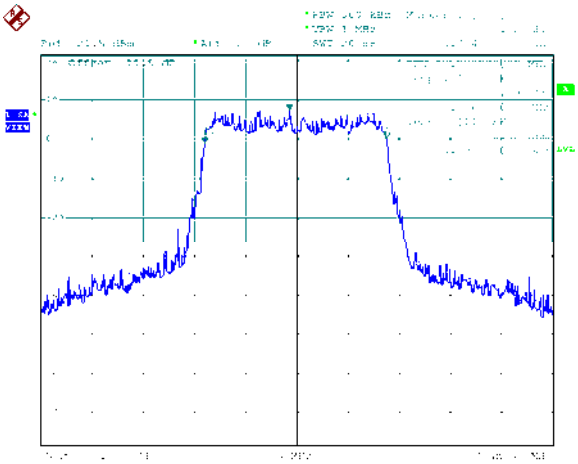

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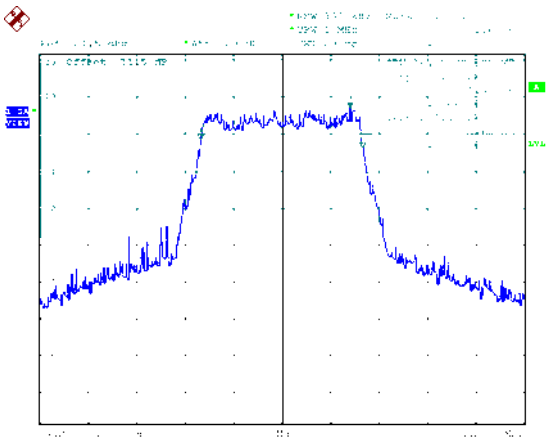

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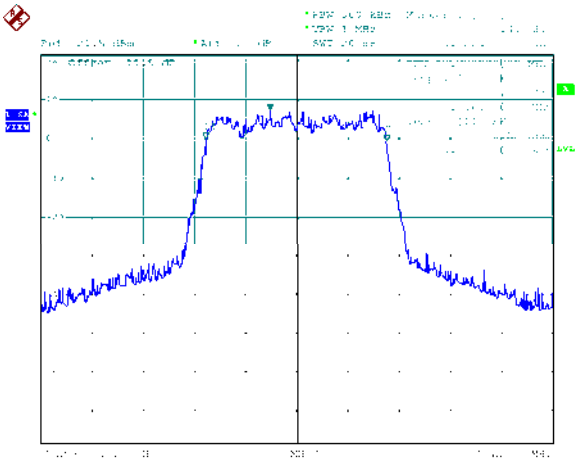
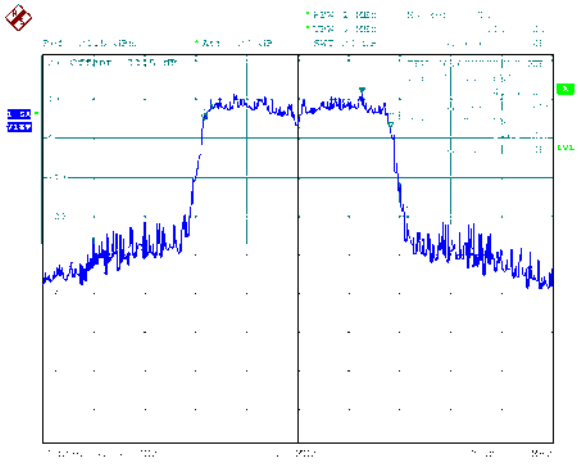
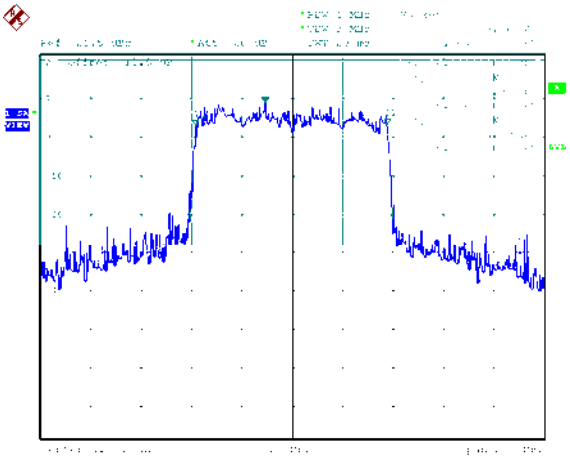


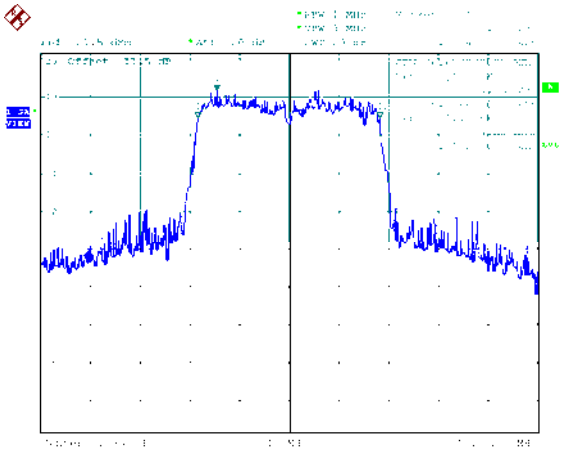
Modulation Standard: 802.11ac, VHT40 (13.5Mbps)
CH151



Modulation Standard: 802.11ac, VHT80 (29.3Mbps)
CH155



CH159



9. 26dB Bandwidth & 99% Bandwidth

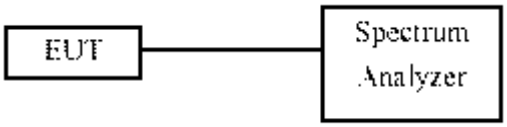
9.1. Test Limit

None; for reporting purposes only.

9.2. Test Procedure

Reference to 789033 D02 General UNII Test Procedures New Rules v01: The transmitter output is connected to a spectrum analyzer with the RBW = approximately 1% of the emission bandwidth, the VBW >= 3 x RBW, peak detector and max hold.

9.3. Test Setup Layout



9.4. Test Result and Data (26dB Bandwidth)

Temperature: 22°C Humidity: 62%
Test Date: Aug. 22, 2018

In the 5.2G Band

Modulation Type	Channel	Frequency (MHz)	26dB Bandwidth (MHz)			
			ANT A	ANT B	ANT C	ANT D
802.11a	36	5180	20.60	20.60	20.50	20.70
	44	5220	20.80	20.60	20.60	20.30
	48	5240	20.70	20.60	20.60	20.70
802.11ac VHT20	36	5180	21.00	20.80	20.70	20.80
	44	5220	20.80	20.80	20.70	20.80
	48	5240	20.80	20.80	20.90	20.70
802.11ac VHT40	38	5190	42.40	42.20	41.80	42.20
	46	5230	42.60	45.40	43.60	42.60
802.11ac VHT80	42	5210	82.80	82.40	82.00	82.00

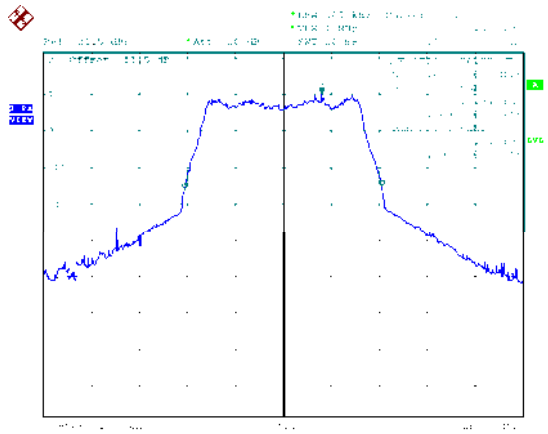
9.5. Test Result and Data (99% Bandwidth)

Temperature: 22°C Humidity: 62%
Test Date: Aug. 22, 2018

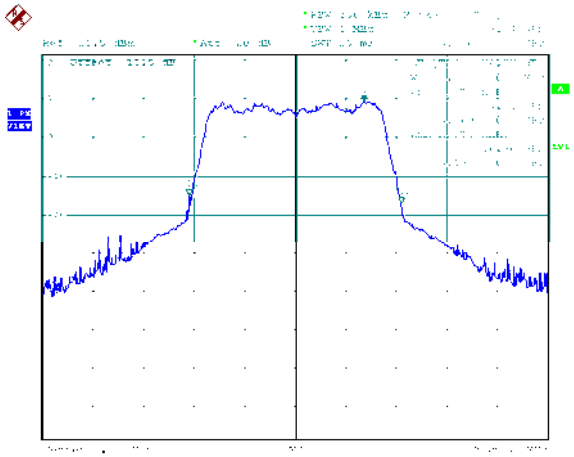
In the 5.2G Band

Modulation Type	Channel	Frequency (MHz)	99% Bandwidth (MHz)			
			ANT A	ANT B	ANT C	ANT D
802.11a	36	5180	16.70	16.60	16.70	16.60
	44	5220	16.70	16.60	16.70	16.70
	48	5240	16.70	16.60	16.90	16.70
802.11ac VHT20	36	5180	17.70	17.70	17.80	17.70
	44	5220	17.70	17.80	17.70	17.70
	48	5240	17.70	17.60	17.70	17.60
802.11ac VHT40	38	5190	36.60	36.60	36.60	36.60
	46	5230	36.80	36.60	36.60	36.60
802.11ac VHT80	42	5210	76.00	76.00	75.60	75.60

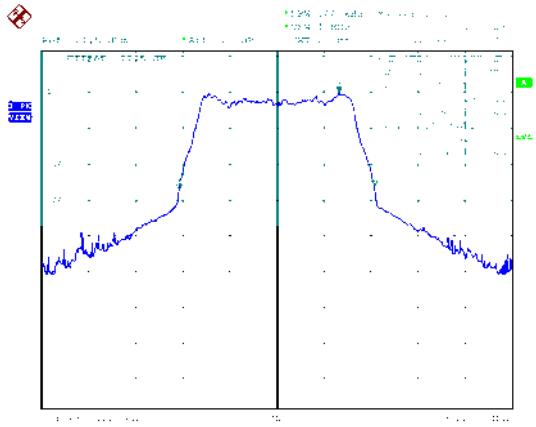
26dB Bandwidth
ANT A
Modulation Standard: 802.11a (6Mbps)
CH36



802.11ac VHT20 (6.5Mbps)
CH36



CH44



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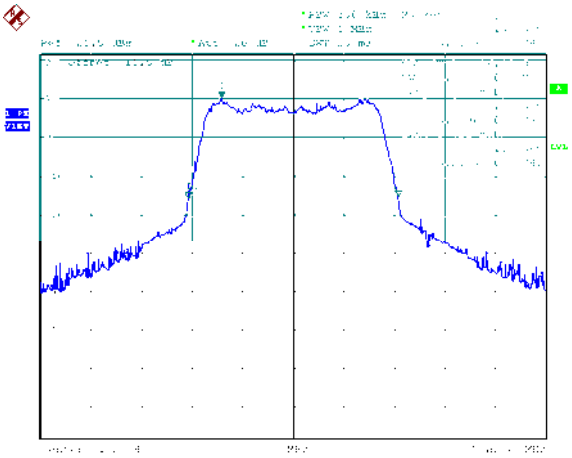
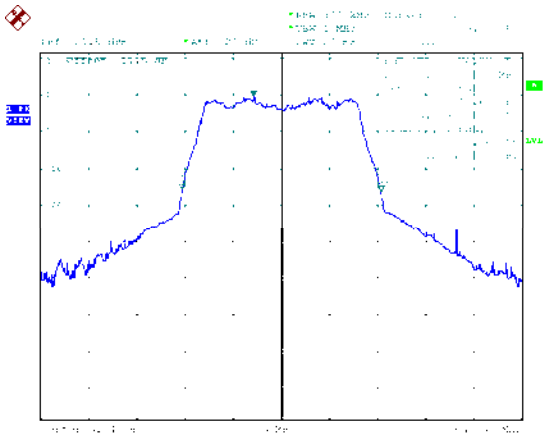


CH48



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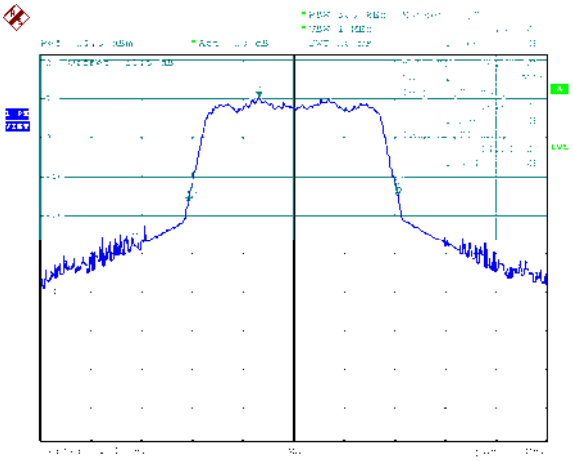
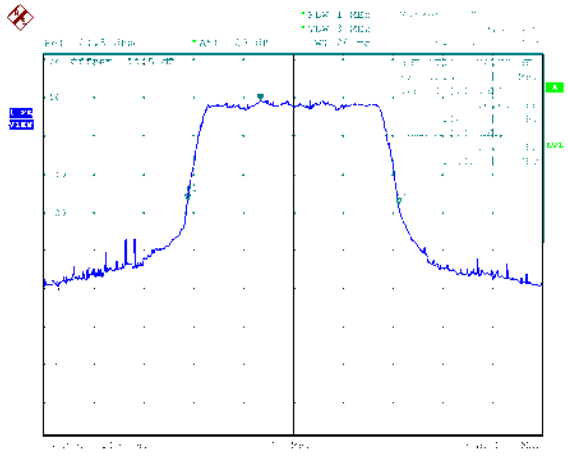
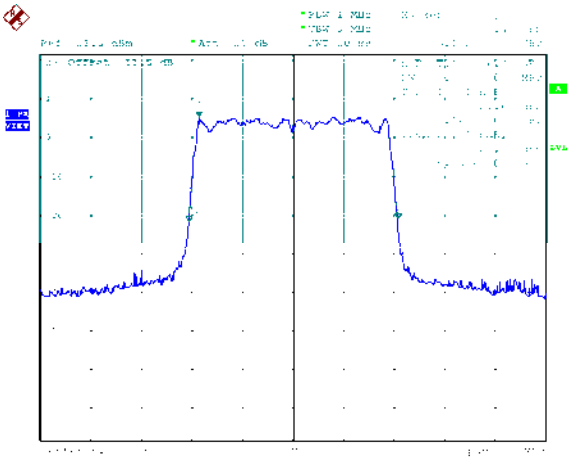


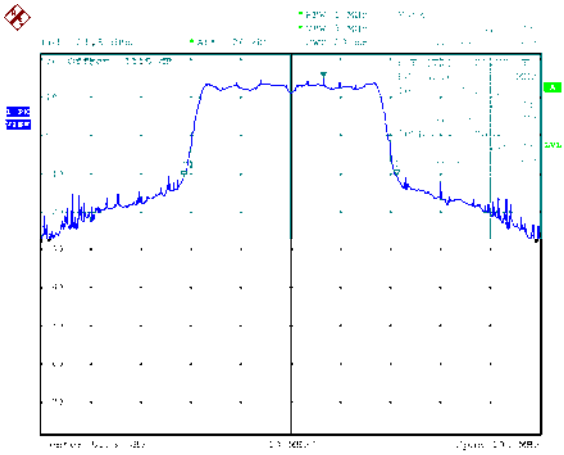
Modulation Standard: 802.11ac VHT40 (13.5Mbps)
CH38



Modulation Standard: 802.11ac VHT80 (29.3Mbps)
CH42



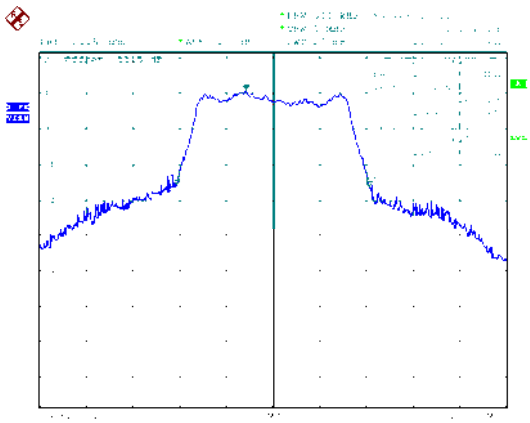
CH46



ANT B

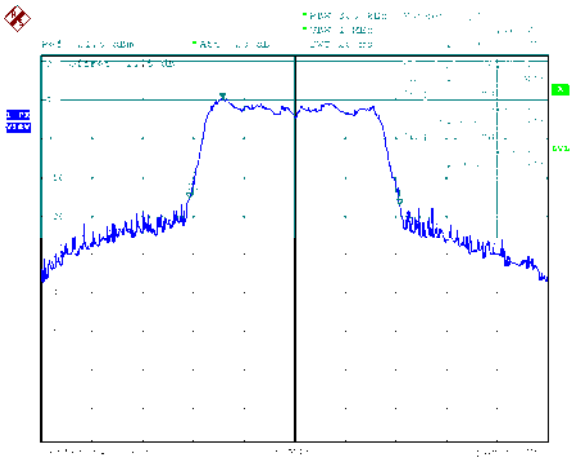
Modulation Standard: 802.11a (6Mbps)

CH36



802.11ac VHT20 (6.5Mbps)

CH36



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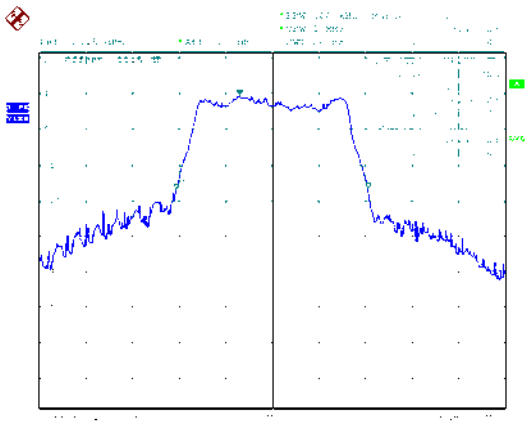

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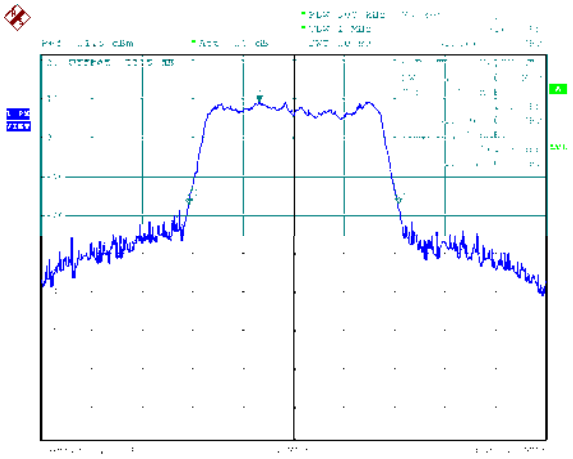

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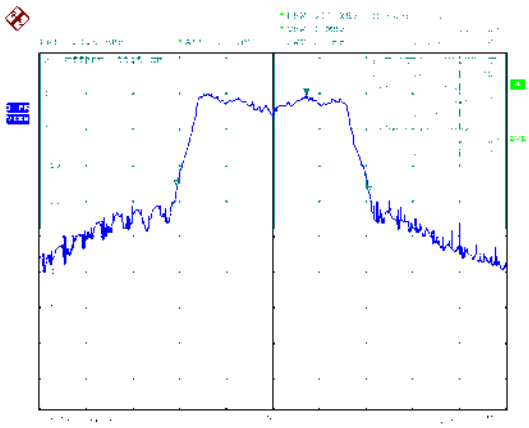

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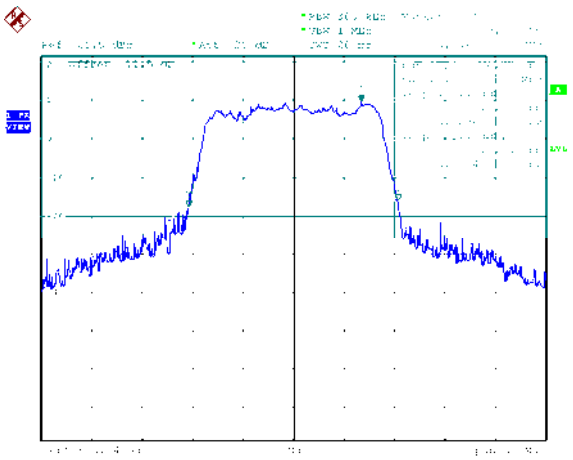
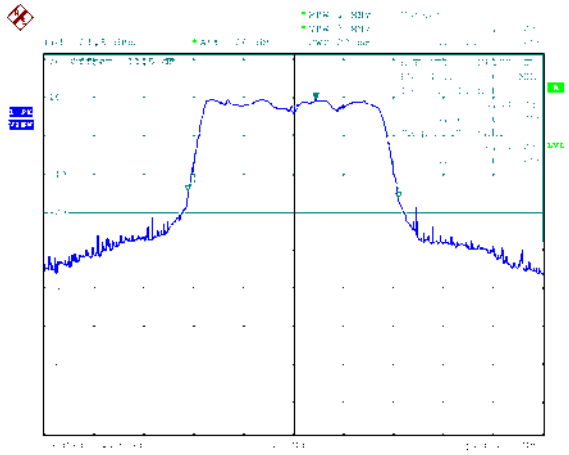
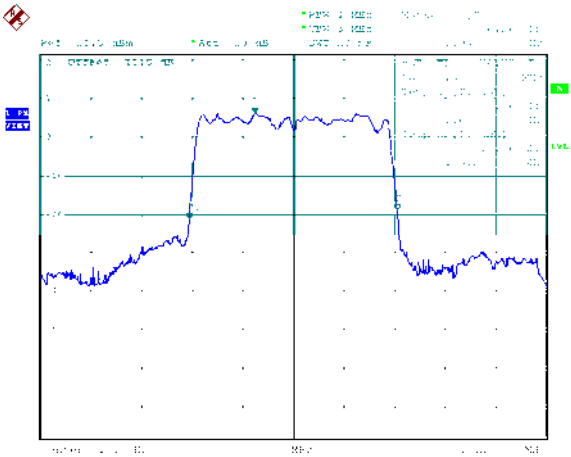


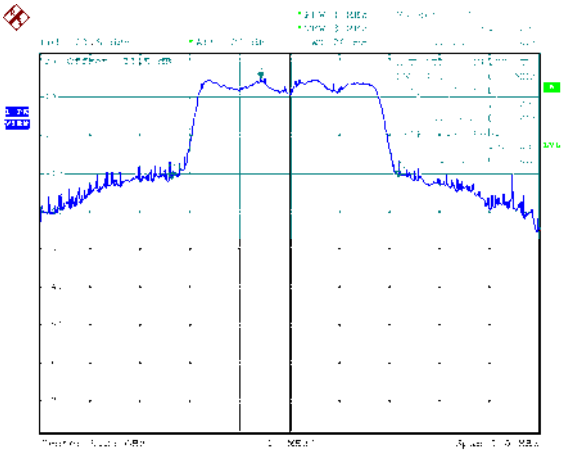
Modulation Standard: 802.11ac VHT40 (13.5Mbps)
CH38



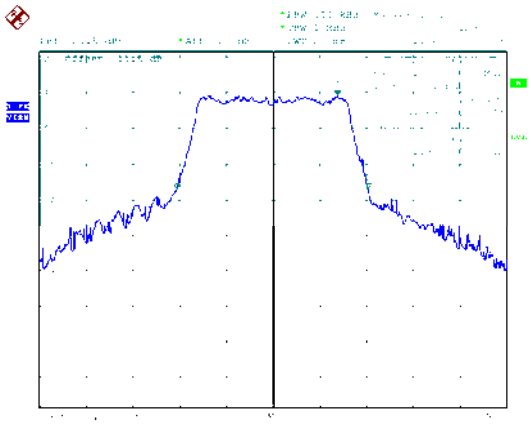
Modulation Standard: 802.11ac VHT80 (29.3Mbps)
CH42



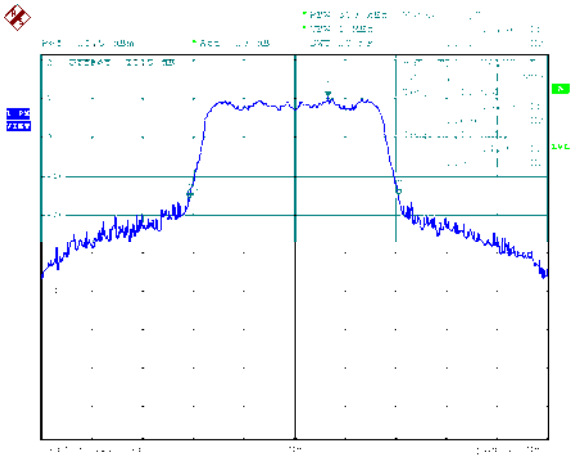
CH46



ANT C
Modulation Standard: 802.11a (6Mbps)
CH36



802.11ac VHT20 (6.5Mbps)
CH36



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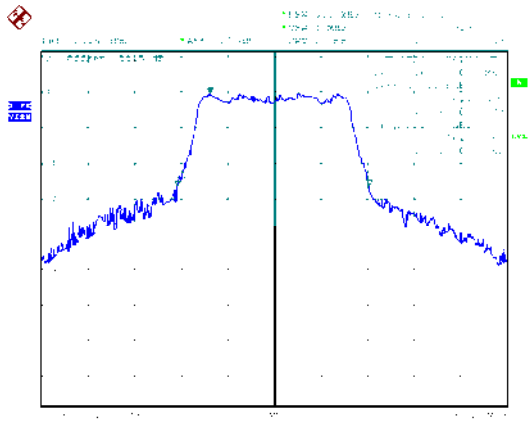

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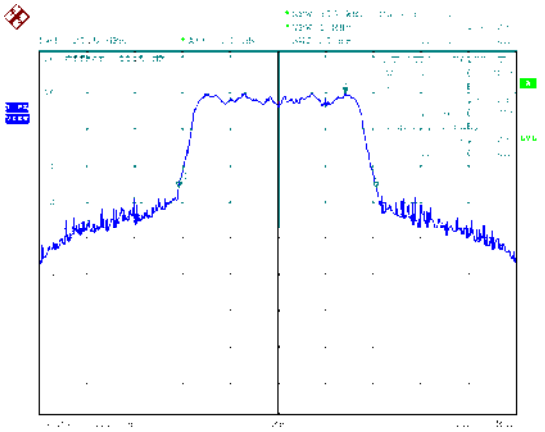

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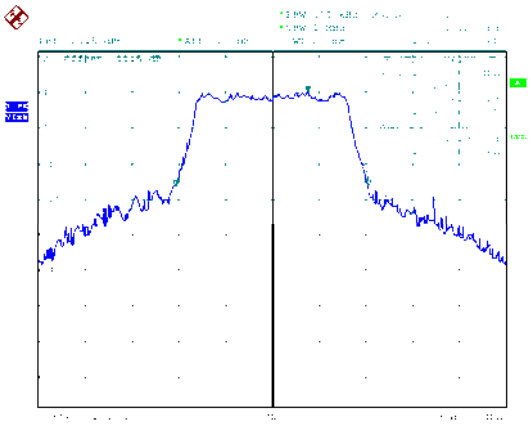

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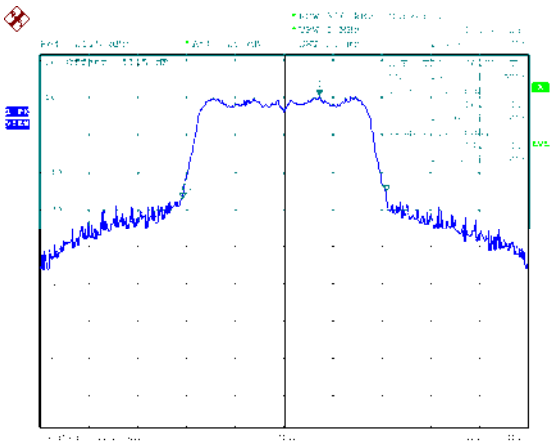
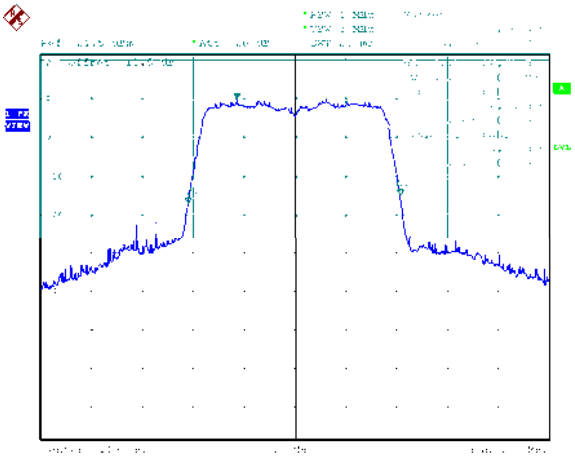
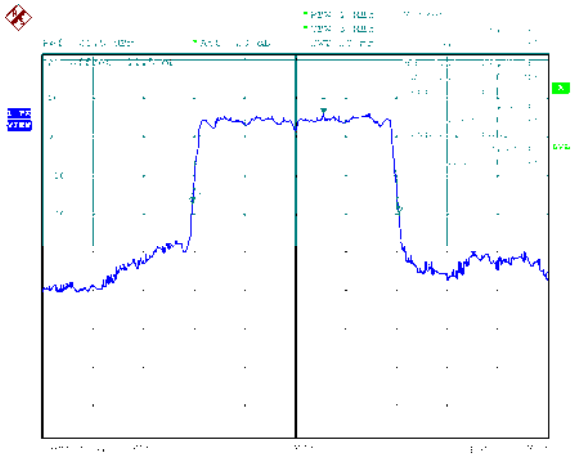


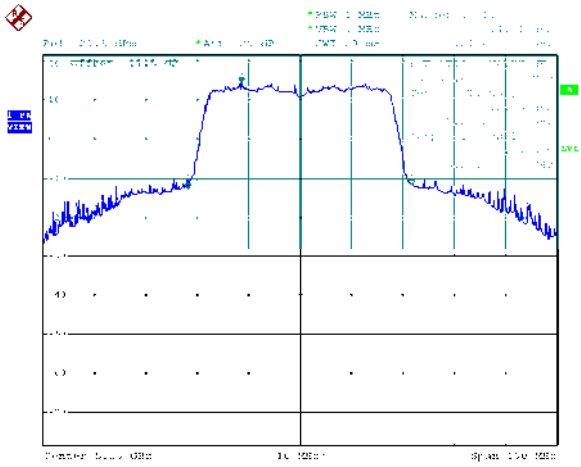
Modulation Standard: 802.11ac VHT40 (13.5Mbps)
CH38



Modulation Standard: 802.11ac VHT80 (29.3Mbps)
CH42



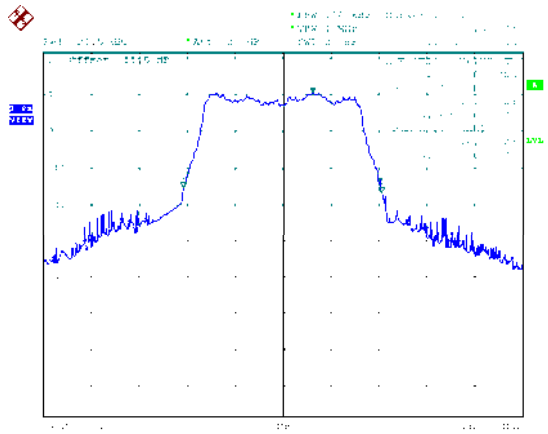
CH46



ANT D

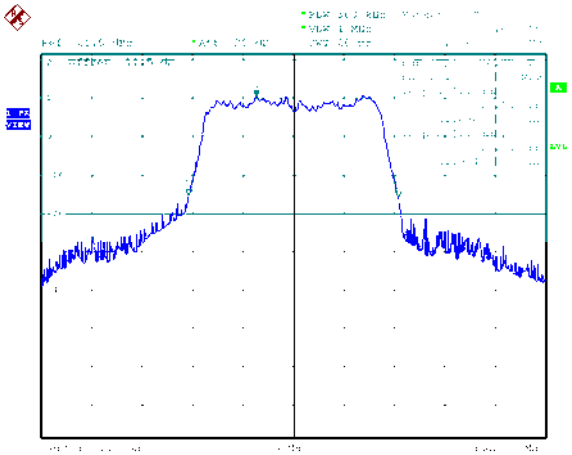
Modulation Standard: 802.11a (6Mbps)

CH36

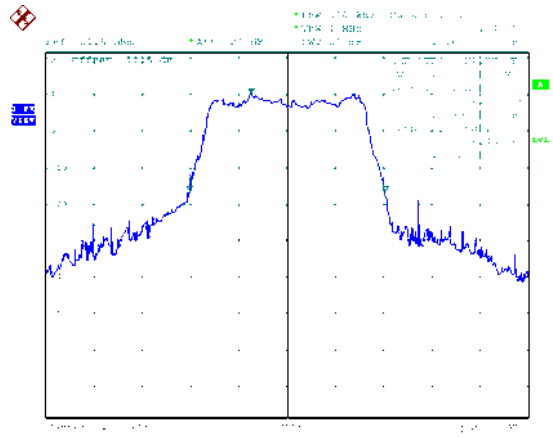


802.11ac VHT20 (6.5Mbps)

CH36



CH44



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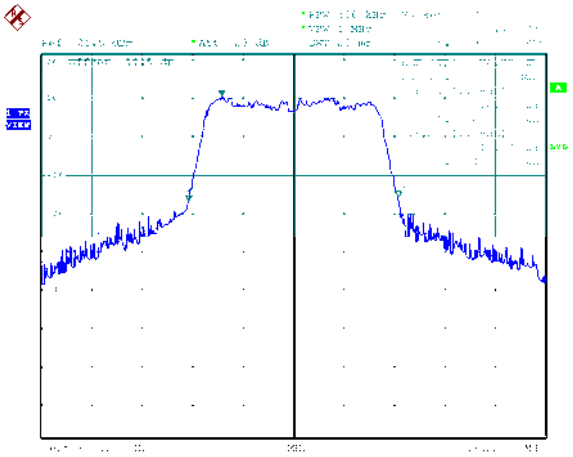

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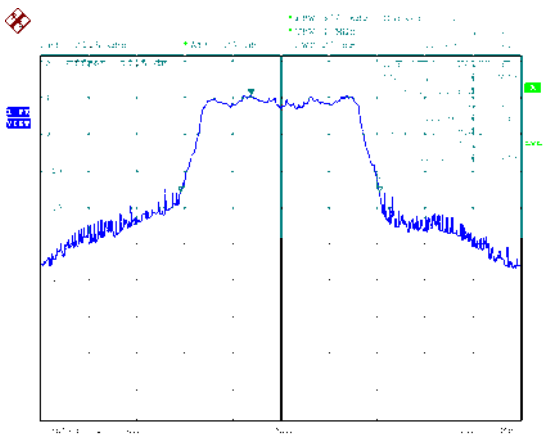

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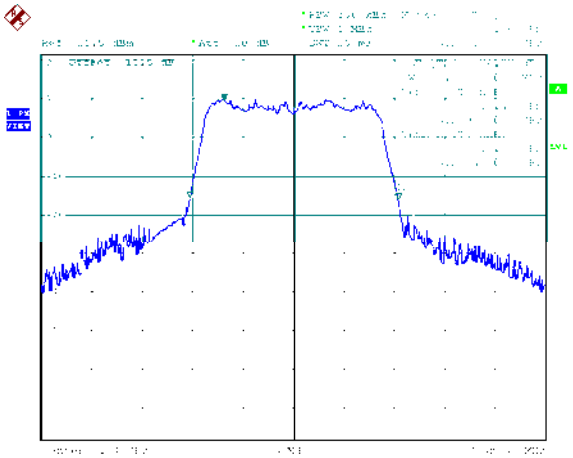
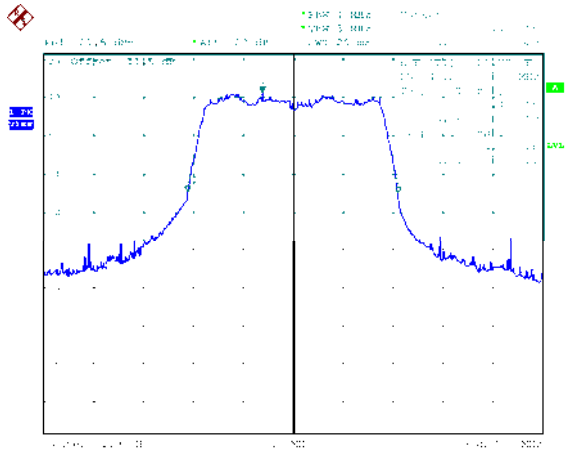
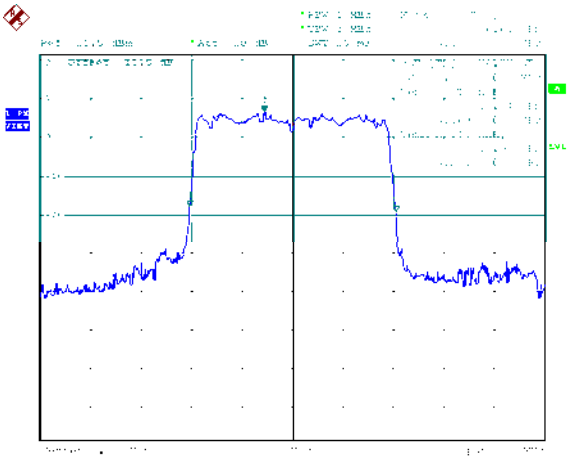


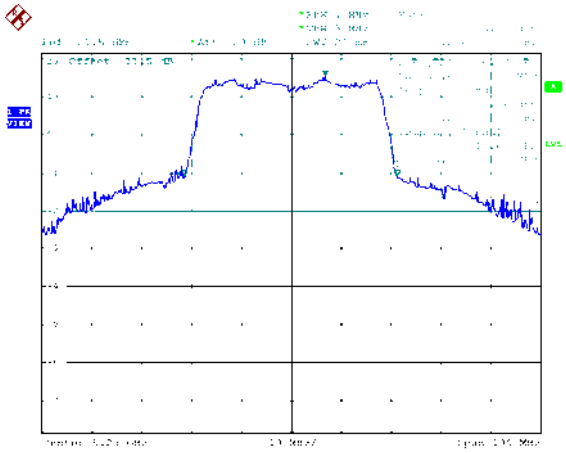
Modulation Standard: 802.11ac VHT40 (13.5Mbps)
CH38



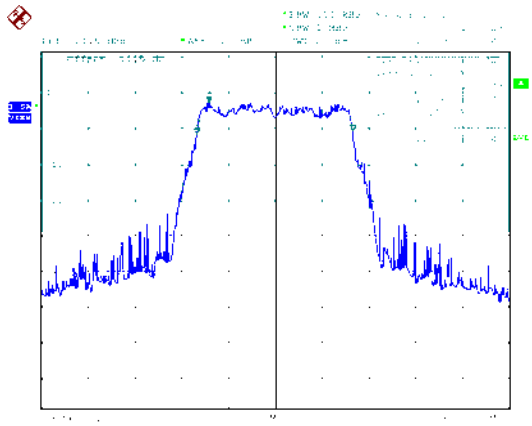
Modulation Standard: 802.11ac VHT80 (29.3Mbps)
CH42



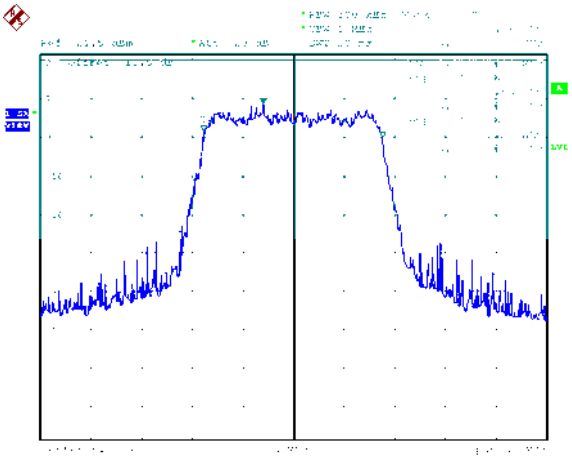
CH46



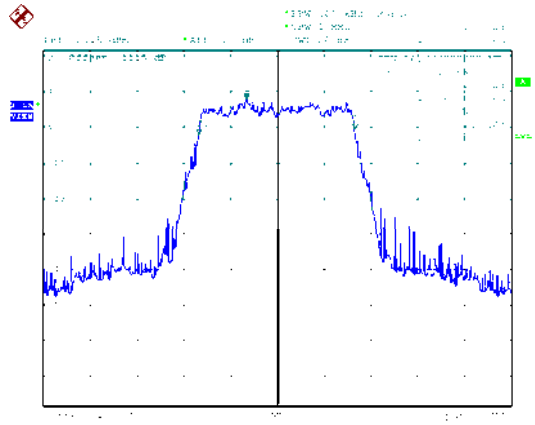
99% Bandwidth
ANT A
Modulation Standard: 802.11a (6Mbps)
CH36



802.11ac VHT20 (6.5Mbps)
CH36



CH44



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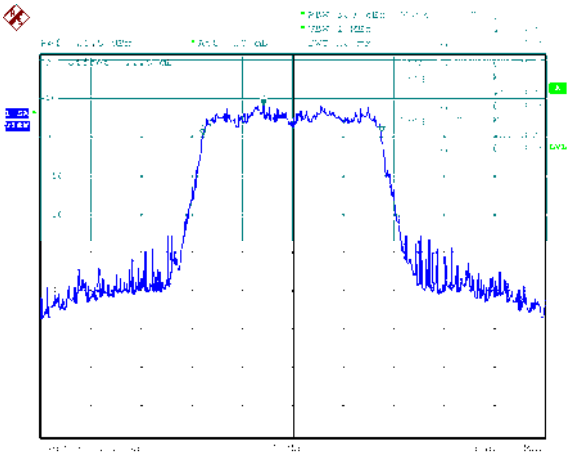

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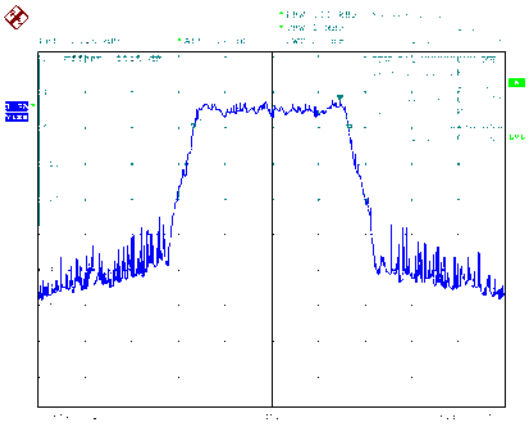

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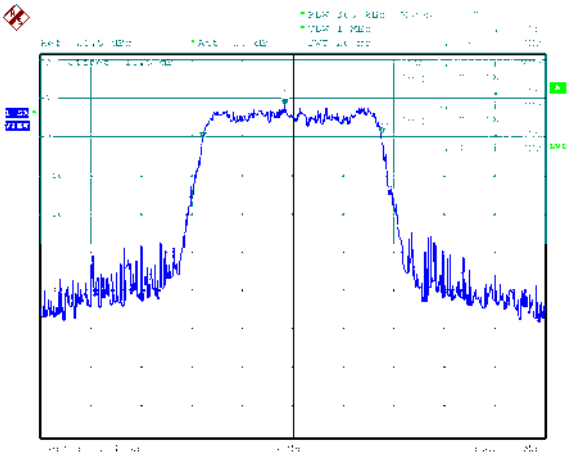
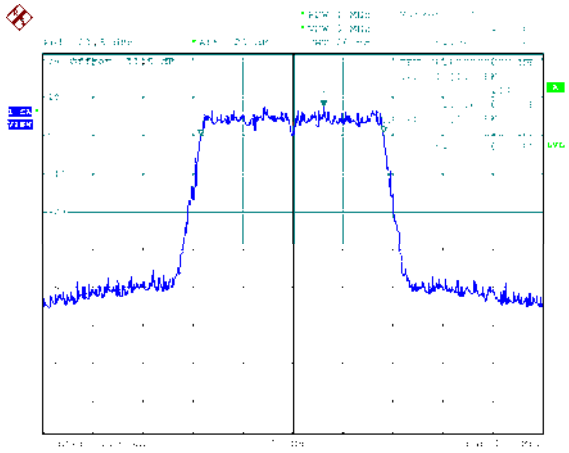
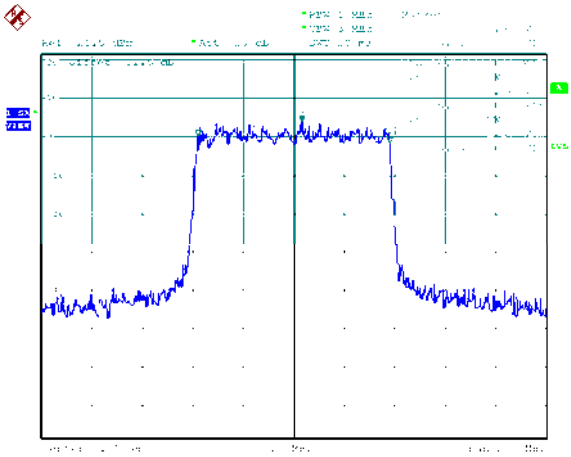


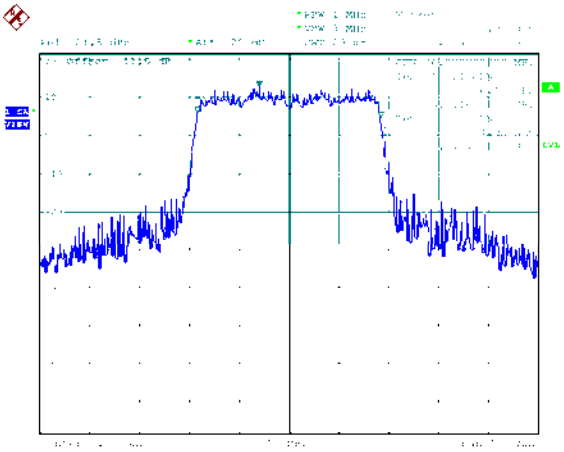
Modulation Standard: 802.11ac VHT40 (13.5Mbps)
CH38



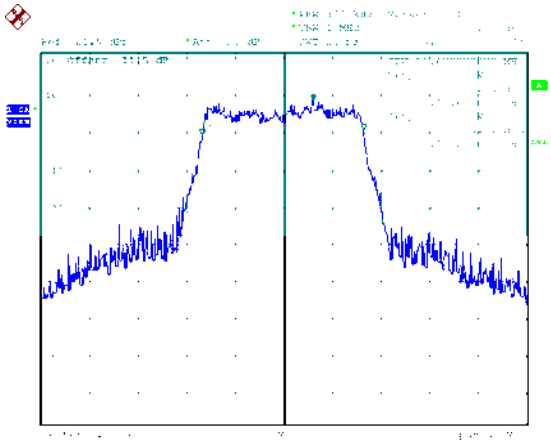
Modulation Standard: 802.11ac VHT80 (29.3Mbps)
CH42



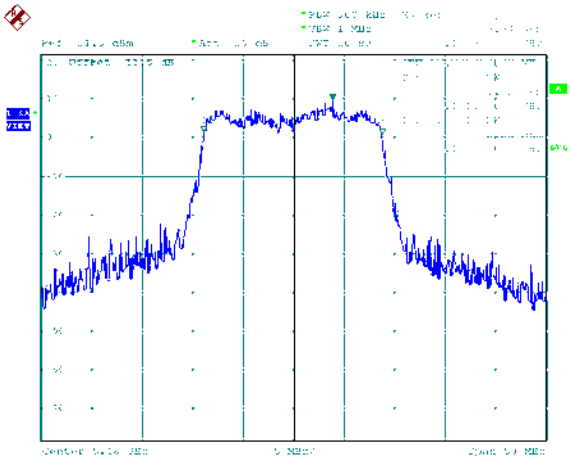
CH46



ANT B
Modulation Standard: 802.11a (6Mbps)
CH36



802.11ac VHT20 (6.5Mbps)
CH36



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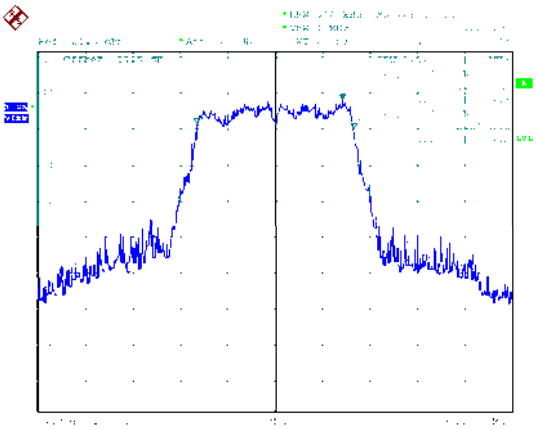

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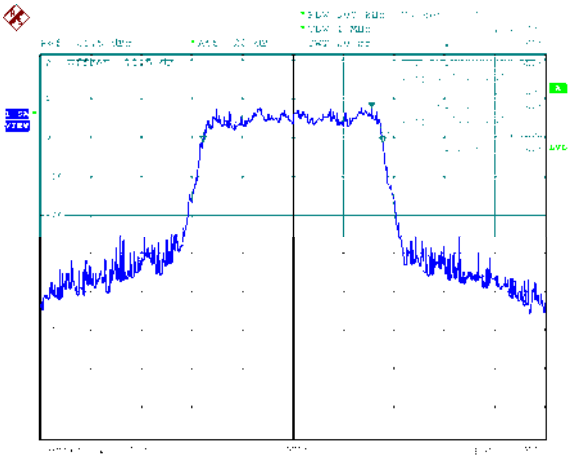

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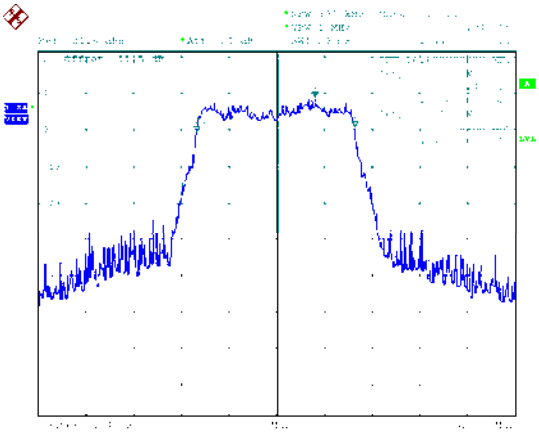

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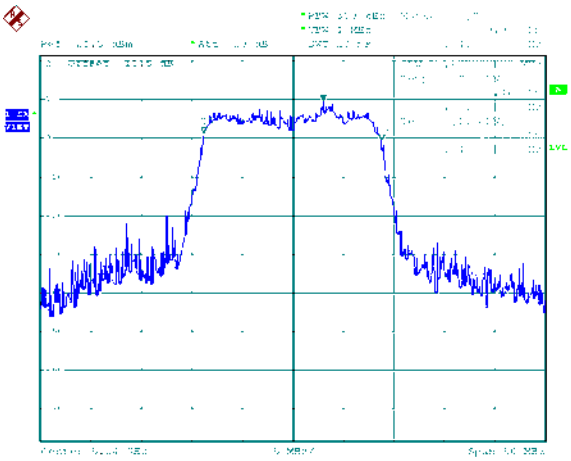
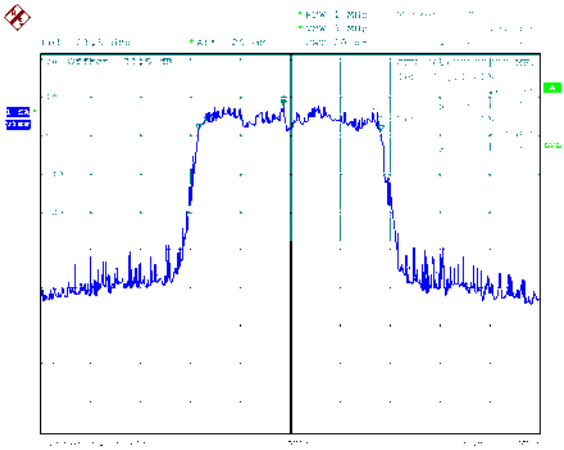
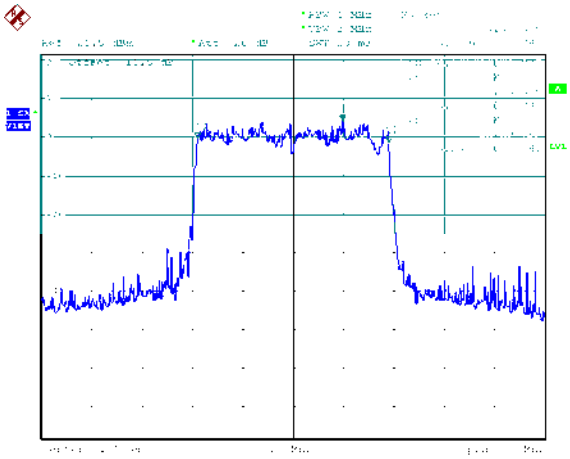


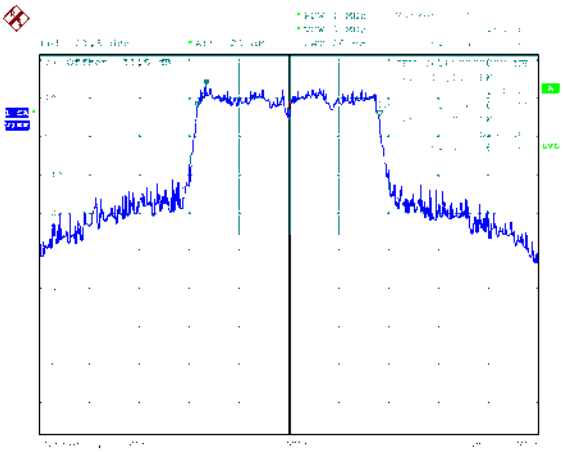
Modulation Standard: 802.11ac VHT40 (13.5Mbps)
CH38



Modulation Standard: 802.11ac VHT80 (29.3Mbps)
CH42



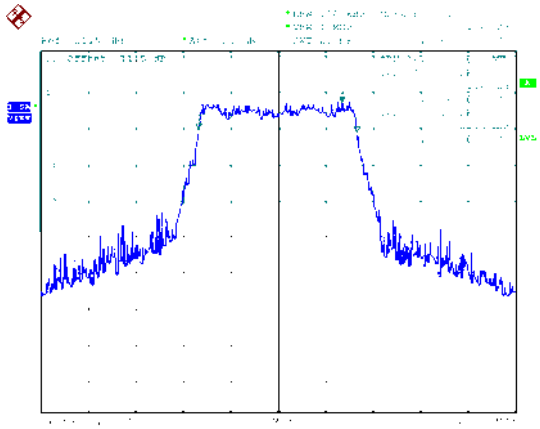
CH46



ANT C

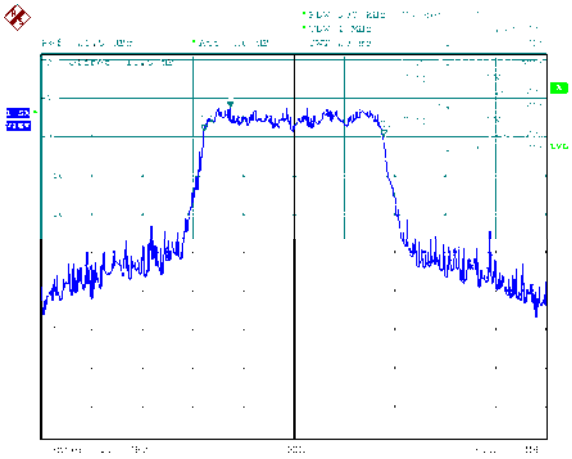
Modulation Standard: 802.11a (6Mbps)

CH36



802.11ac VHT20 (6.5Mbps)

CH36



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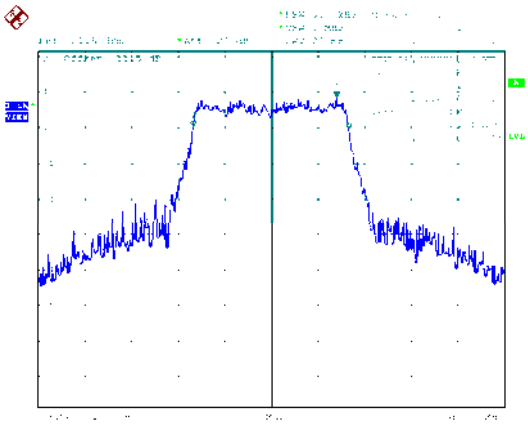

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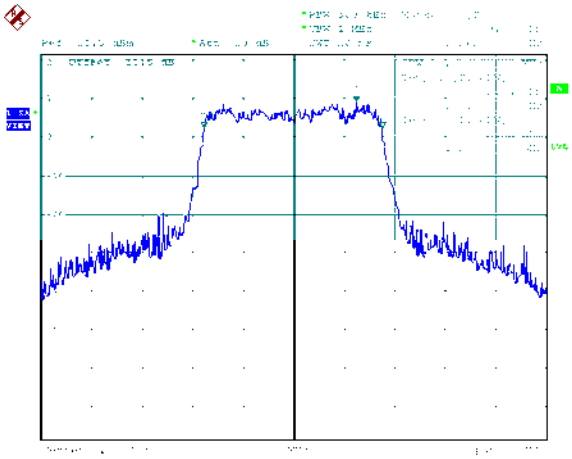
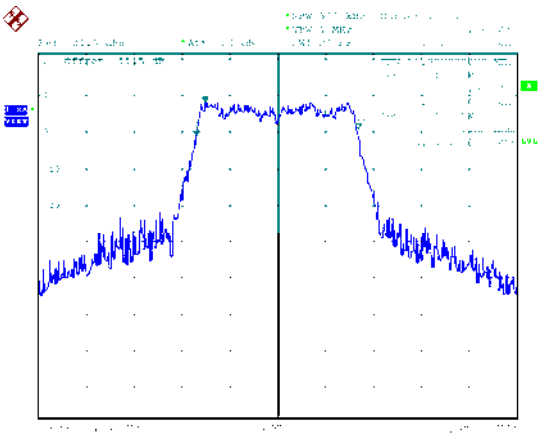


CH48



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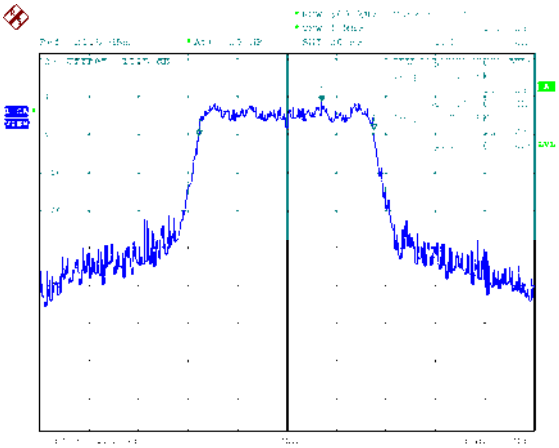
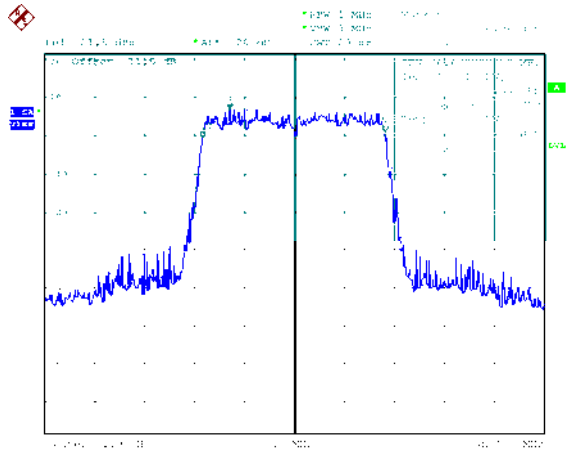
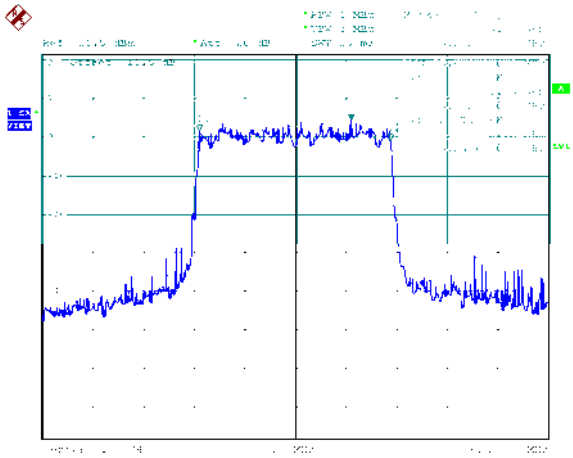


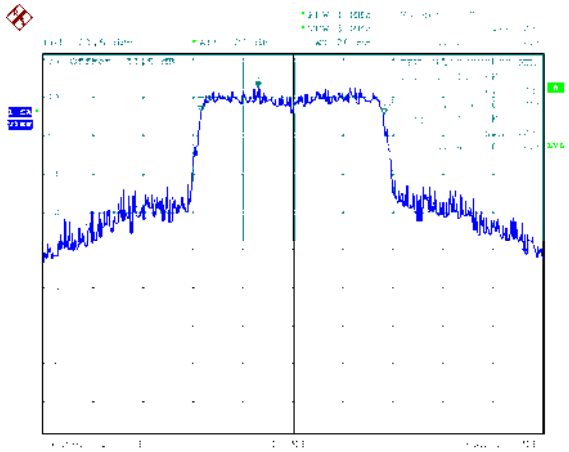
Modulation Standard: 802.11ac VHT40 (13.5Mbps)
CH38



Modulation Standard: 802.11ac VHT80 (29.3Mbps)
CH42



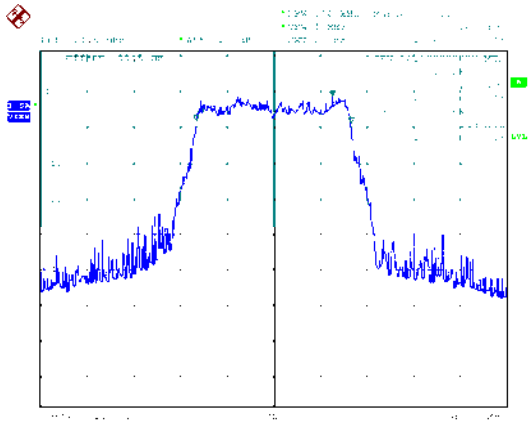
CH46



ANT D

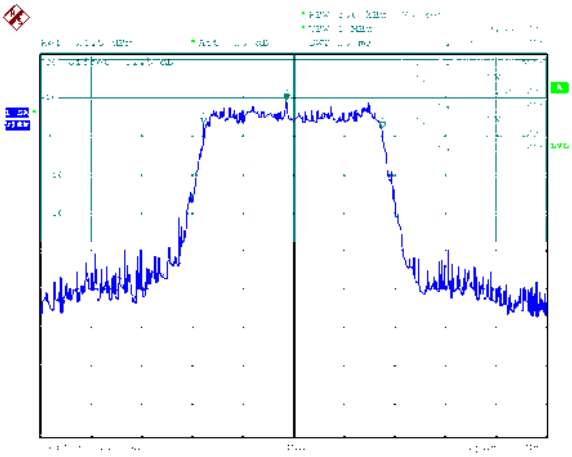
Modulation Standard: 802.11a (6Mbps)

CH36



802.11ac VHT20 (6.5Mbps)

CH36



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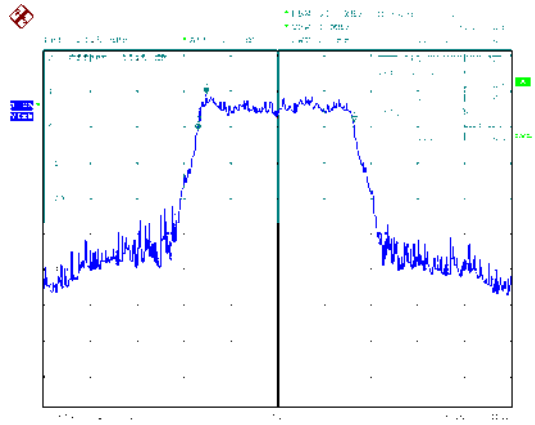

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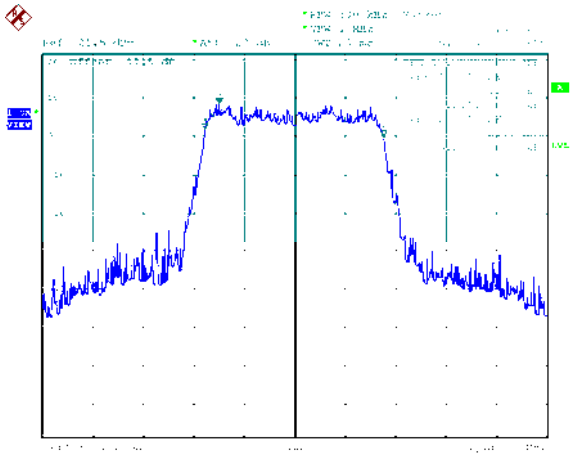

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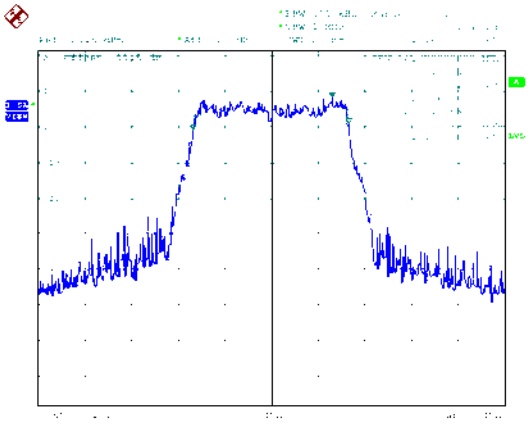

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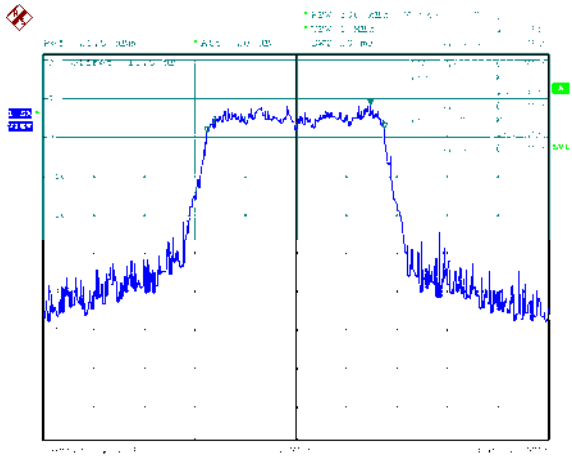
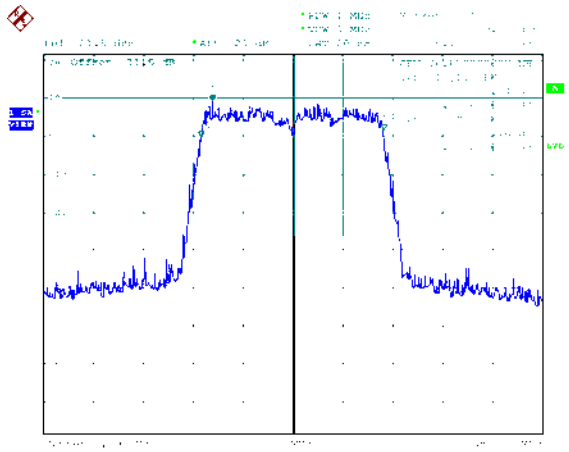
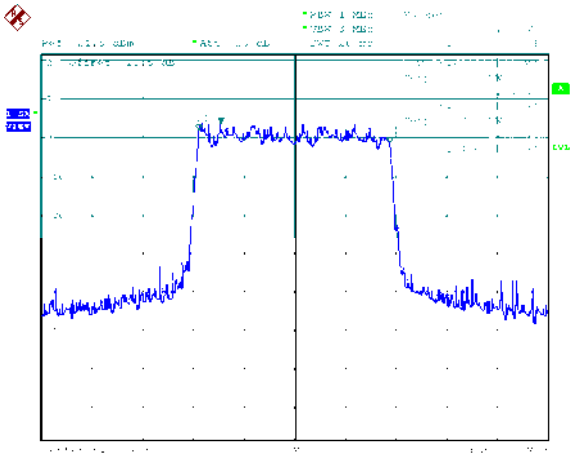


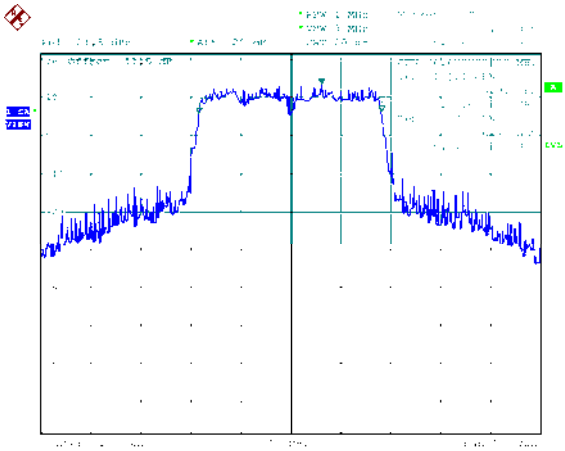
Modulation Standard: 802.11ac VHT40 (13.5Mbps)
CH38



Modulation Standard: 802.11ac VHT80 (29.3Mbps)
CH42



CH46



10. Average Power

10.1. Test Limit

Output Power:

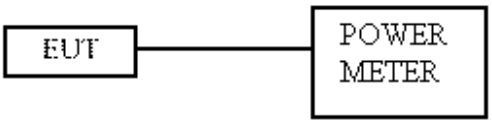
Frequency Band		Limit
☒	5.15~5.25GHz	
	Operating Mode	
	☐ Outdoor access point	The maximum conducted output power over the frequency band of operation shall not exceed 1 W (30dBm) provided the maximum antenna gain does not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. The maximum e.i.r.p. at any elevation angle above 30degrees as measured from the horizon must not exceed125 mW (21 dBm).
	☒ Indoor access point	The maximum conducted output power over the frequency band of operation shall not exceed 1 W (30dBm) provided the maximum antenna gain does not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.
	☐ Fixed point-to-point access points	The maximum conducted output power over the frequency band of operation shall not exceed 1 W (30dBm). Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power or maximum power spectral density. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum conducted output power and maximum power spectral density is required for each 1 dB of antenna gain in excess of 23 dBi.
	☐ client devices	The maximum conducted output power over the frequency band of operation shall not exceed 250 mW (24dBm) provided the maximum antenna gain does not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Frequency Band		Limit
☐	5.25-5.35 GHz	The maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW (24dBm) or 11 dBm 10 log B, where B is the 26 dB emission bandwidth in megahertz. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.
☐	5.470-5.725 GHz	
☒	5.725~5.85 GHz	The maximum conducted output power over the frequency band of operation shall not exceed 1 W (30dBm). If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power.

10.2.Test Procedure

The transmitter output is connected to a power meter.
The cable assembly insertion loss of 11 dB (including 10 dB pad and 1 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

10.3.Test Setup Layout



10.4.Test Result and Data

Temperature: 22°C Humidity: 62%
Test Date: Aug. 22, 2018

In the 5.2G Band

Modulation Type	Channel	Frequency (MHz)	Avg Power Output (dBm)				Total Power (dBm)	Total Power (mW)	Power Limit (dBm)
			ANT A	ANT B	ANT C	ANT D			
802.11a	36	5180	16.96	16.72	16.97	17.08	22.96	197.47	30.00
	44	5220	17.65	16.79	17.33	16.74	23.16	207.24	30.00
	48	5240	17.42	16.64	17.74	16.69	23.17	207.43	30.00
802.11an HT20	36	5180	17.89	17.65	17.16	17.34	23.54	225.93	30.00
	44	5220	18.02	17.46	18.08	17.50	23.80	239.61	30.00
	48	5240	17.78	17.08	18.22	17.41	23.66	232.48	30.00
802.11an HT40	38	5190	14.98	14.78	13.93	15.04	20.73	118.17	30.00
	46	5230	20.05	19.80	19.27	20.01	25.81	381.42	30.00
802.11ac VHT20	36	5180	17.92	17.69	17.20	17.35	23.57	227.50	30.00
	44	5220	18.04	17.47	18.15	17.52	23.83	241.33	30.00
	48	5240	17.81	17.13	18.25	17.45	23.70	234.46	30.00
802.11ac VHT40	38	5190	15.01	14.80	13.91	15.07	20.74	118.64	30.00
	46	5230	20.09	19.78	19.25	20.05	25.83	382.45	30.00
802.11ac VHT80	42	5210	14.03	13.97	13.83	13.90	19.95	98.94	30.00

In the 5.8G Band

Modulation Type	Channel	Frequency (MHz)	Avg Power Output (dBm)				Total Power (dBm)	Total Power (mW)	Power Limit (dBm)
			ANT A	ANT B	ANT C	ANT D			
802.11a	149	5745	18.02	19.56	17.79	18.42	24.52	283.37	30.00
	157	5785	17.26	17.76	17.18	17.56	23.47	222.17	30.00
	165	5825	16.64	16.94	17.11	16.97	22.94	196.74	30.00
802.11an HT20	149	5745	18.05	19.44	18.02	18.41	24.54	284.46	30.00
	157	5785	16.69	17.88	16.85	17.03	23.16	206.93	30.00
	165	5825	16.45	17.53	17.09	16.91	23.03	201.04	30.00
802.11an HT40	151	5755	17.78	19.42	18.09	18.66	24.55	285.35	30.00
	159	5795	17.84	19.33	18.13	18.47	24.50	281.84	30.00
802.11ac VHT20	149	5745	18.03	19.45	18.06	18.42	24.55	285.11	30.00
	157	5785	16.68	17.90	16.88	17.06	23.18	207.79	30.00
	165	5825	16.43	17.58	17.10	16.92	23.05	201.72	30.00
802.11ac VHT40	151	5755	17.81	19.46	18.07	18.69	24.58	286.78	30.00
	159	5795	17.85	19.38	18.16	18.44	24.52	282.94	30.00
802.11ac VHT80	155	5775	18.36	19.81	18.71	19.01	25.03	318.19	30.00

11. Maximum Power Spectral Density

11.1.Test Limit

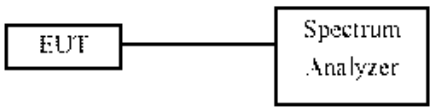
PSD:

Frequency Band			Limit
☒	5.15~5.25GHz		
	Operating Mode		
	☐	Outdoor access point	17 dBm/MHz
	☒	Indoor access point	17 dBm/MHz
	☐	Fixed point-to-point access points	17 dBm/MHz
	☐	client devices	11 dBm/MHz
☐	5.250~5.350 GHz		11 dBm/MHz
☐	5.470~5.725 GHz		11 dBm/MHz
☒	5.725~5.85 GHz		30 dBm/500kHz

11.2.Test Procedure

Reference to KDB789033 D02 General UNII Test Procedures New Rules v02r01

11.3.Test Setup Layout



11.4. Test Result and Data

Temperature: 22°C Humidity: 62%

Test Date: Aug. 22, 2018

In the 5.2G Band

Modulation Type	CH	Freq. (MHz)	Meas PSD (dBm/MHz)				Sum chain (dBm)	Duty Cycle CF(dB)	Total Corr'd PSD (dBm/MHz)	PSD Limit (dBm/MHz)
			ANT A	ANT B	ANT C	ANT D				
802.11a	36	5180	6.21	5.90	5.75	5.96	11.98	0.48	12.46	12.80
	44	5220	5.56	5.85	6.28	6.01	11.95	0.48	12.43	12.80
	48	5240	6.13	5.39	6.32	5.86	11.96	0.48	12.44	12.80
802.11ac VHT20	36	5180	5.83	6.12	5.83	6.13	12.00	0.50	12.50	12.80
	44	5220	6.00	5.40	6.00	6.37	11.98	0.50	12.48	12.80
	48	5240	5.58	6.14	6.47	5.90	12.06	0.50	12.56	12.80
802.11ac VHT40	38	5190	-0.37	0.40	-1.22	0.04	5.77	1.03	6.80	12.80
	46	5230	5.53	4.92	4.59	5.43	11.15	1.03	12.18	12.80
802.11ac VHT80	42	5210	-3.97	-4.86	-4.69	-4.54	1.52	1.94	3.46	12.80

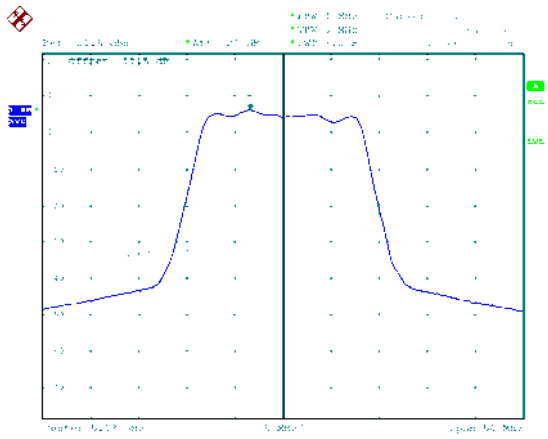
In the 5.8G Band

Modulation Type	CH	Freq. (MHz)	Meas PSD (dBm/MHz)				Sum chain (dBm)	Duty Cycle CF(dB)	10log(500 kHz/RBW) CF (dB)	Total Corr'd PSD (dBm/ 500kHz)	PSD Limit (dBm/ 500kHz)
			ANT A	ANT B	ANT C	ANT D					
802.11a	149	5745	7.56	11.46	7.97	8.76	15.25	0.48	-3.01	12.72	25.80
	157	5785	6.00	9.96	6.73	7.96	13.95	0.48	-3.01	11.42	25.80
	165	5825	5.25	7.77	5.92	6.91	12.59	0.48	-3.01	10.06	25.80
802.11ac VHT20	149	5745	7.06	11.10	7.04	8.20	14.72	0.50	-3.01	12.21	25.80
	157	5785	5.24	9.49	5.84	6.82	13.20	0.50	-3.01	10.69	25.80
	165	5825	5.27	8.09	5.90	6.32	12.55	0.50	-3.01	10.04	25.80
802.11ac VHT40	155	5755	4.46	7.71	4.21	5.12	11.64	1.03	-3.01	9.66	25.80
	159	5795	3.91	7.40	4.16	5.10	11.40	1.03	-3.01	9.42	25.80
802.11ac VHT80	155	5775	1.38	3.80	1.86	2.15	8.42	1.94	-3.01	7.35	25.80

5.2G Band 1, ANT A

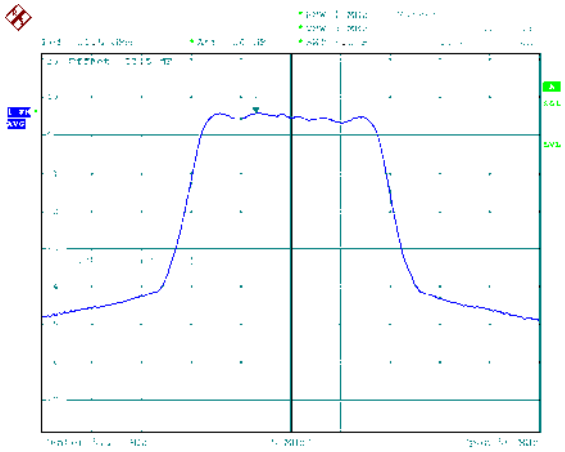
Modulation Standard: 802.11a (6Mbps)

CH36



Modulation Standard: 802.11ac VHT20 (6.5Mbps)

CH36



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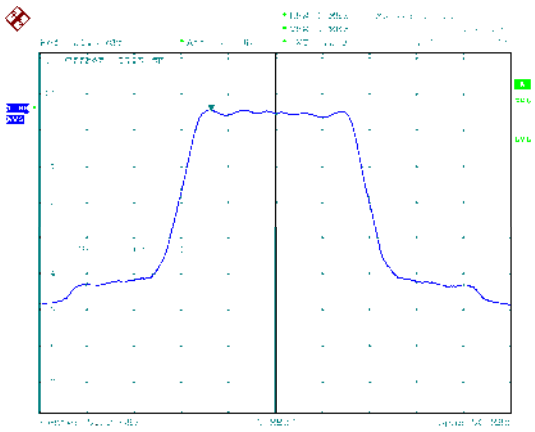

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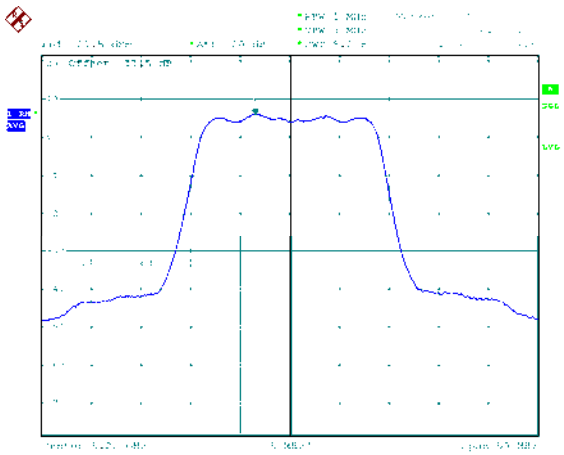

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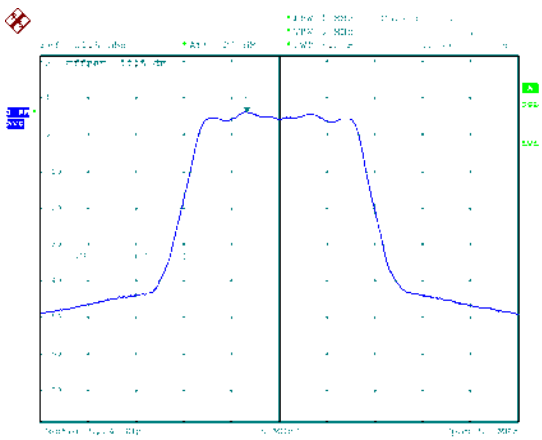

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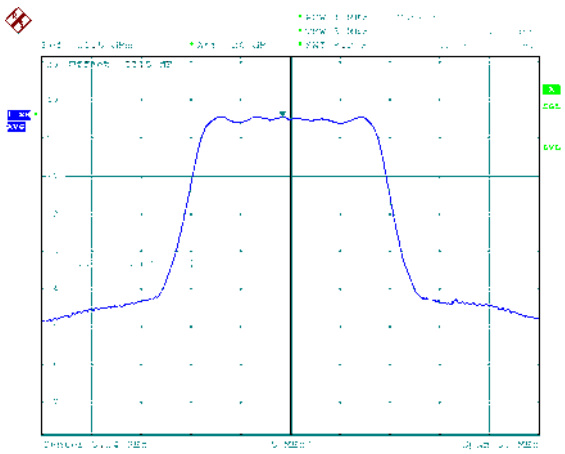
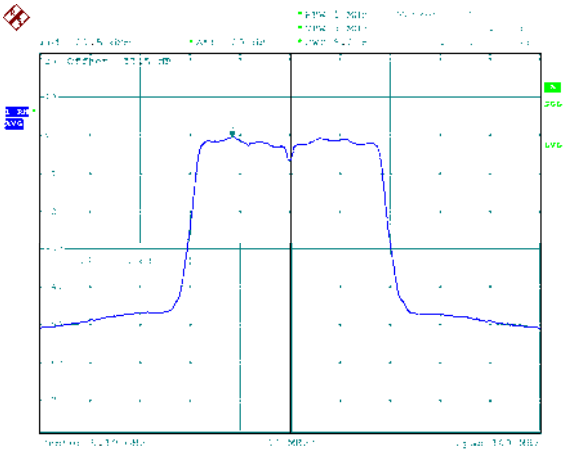
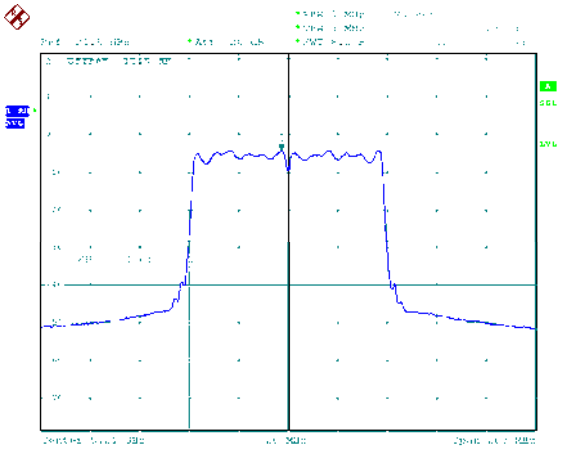


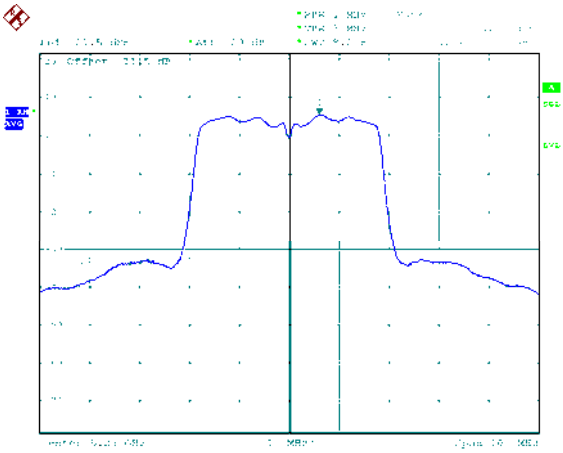
Modulation Standard: 802.11ac VHT40 (13.5Mbps)
CH38



Modulation Standard: 802.11ac VHT80 (29.3Mbps)
CH42



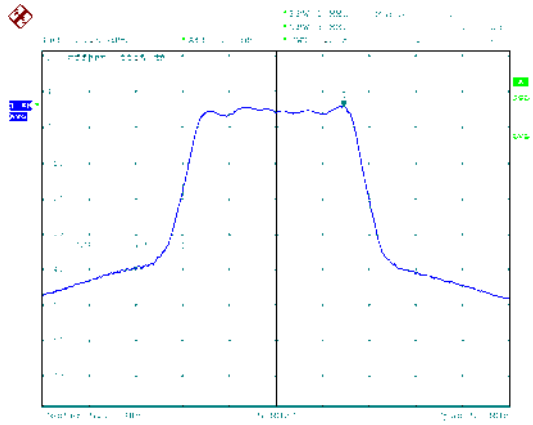
CH46



5.2G Band 1, ANT B

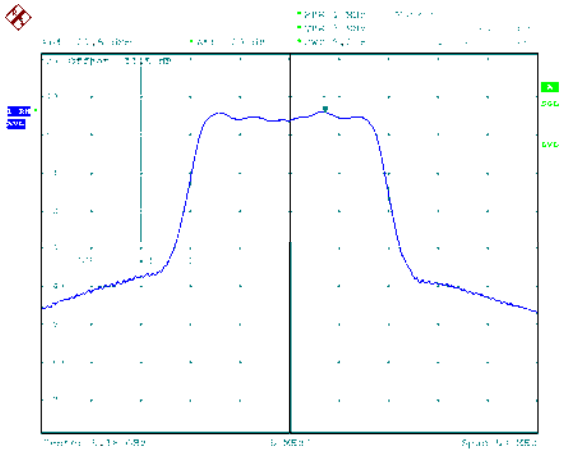
Modulation Standard: 802.11a (6Mbps)

CH36

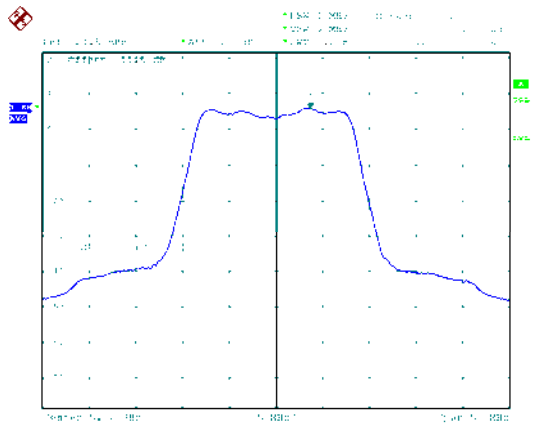


Modulation Standard: 802.11ac VHT20 (6.5Mbps)

CH36



CH44



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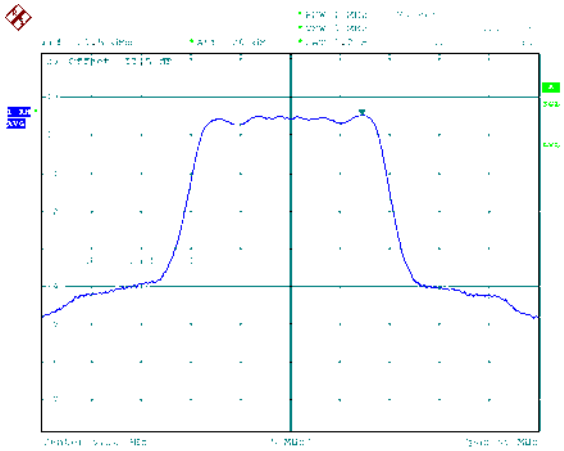

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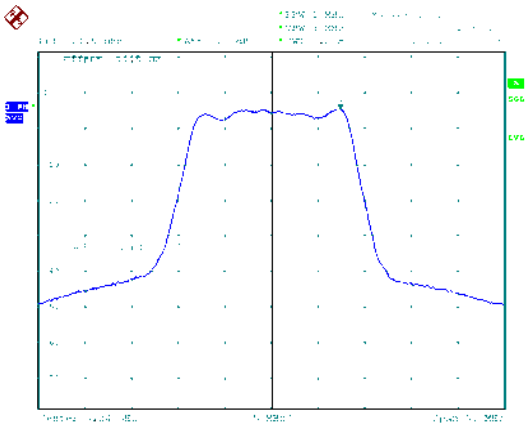
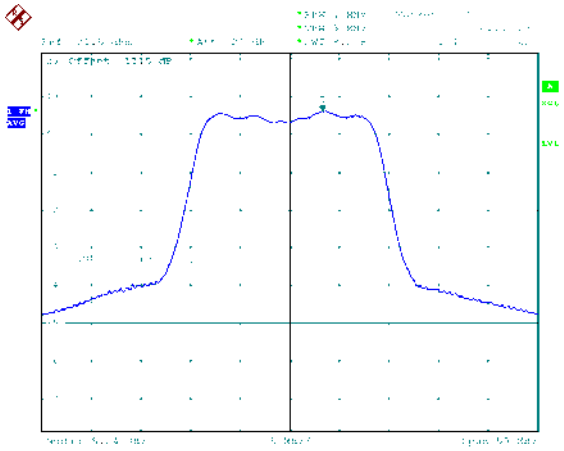
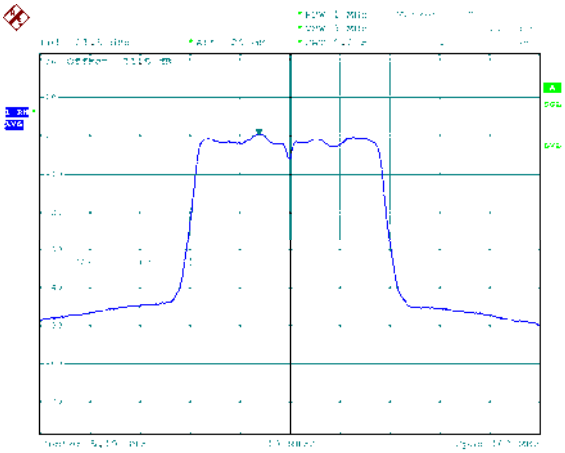


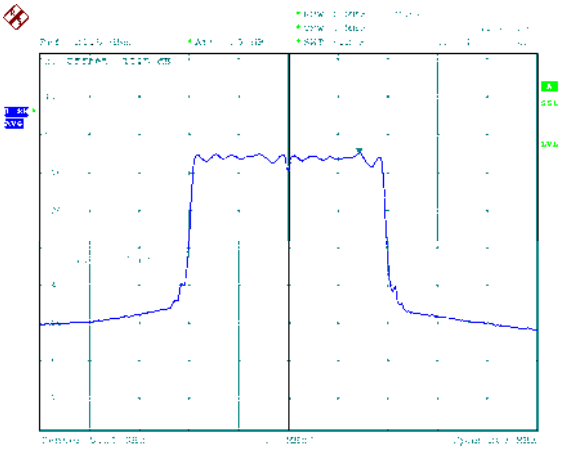
CH48



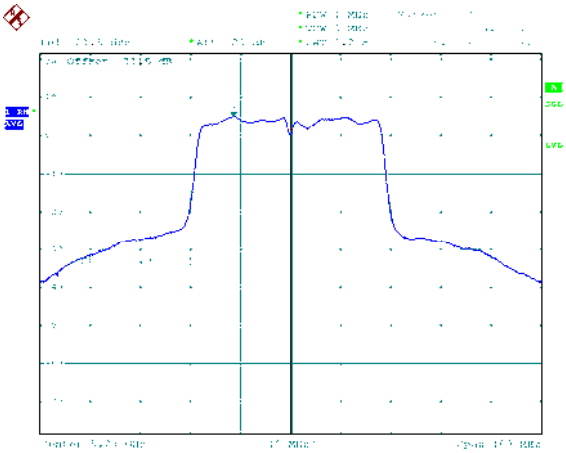
Modulation Standard: 802.11ac VHT40 (13.5Mbps)
CH38



Modulation Standard: 802.11ac VHT80 (29.3Mbps)
CH42



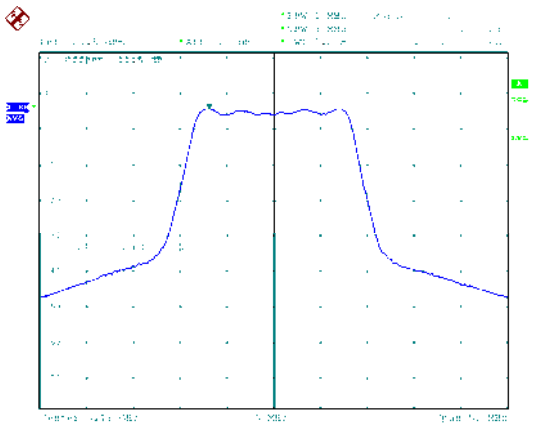
CH46



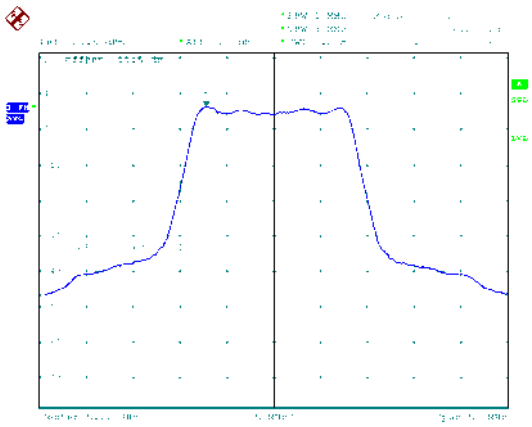
5.2G Band 1, ANT C

Modulation Standard: 802.11a (6Mbps)

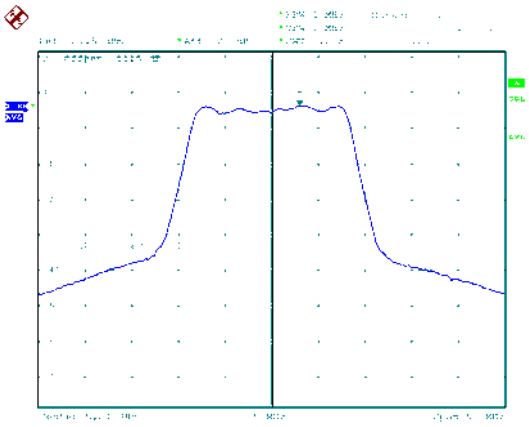
CH36



CH44

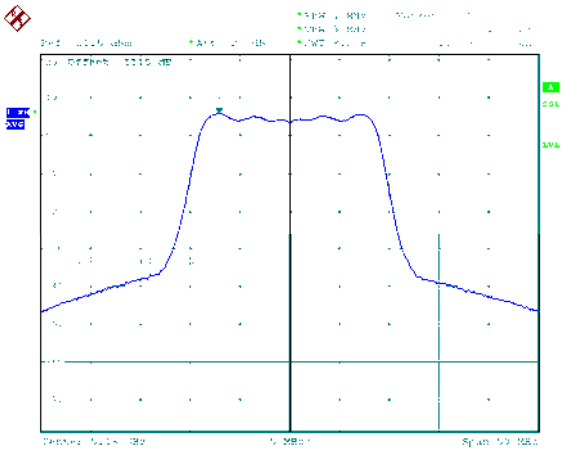


CH48

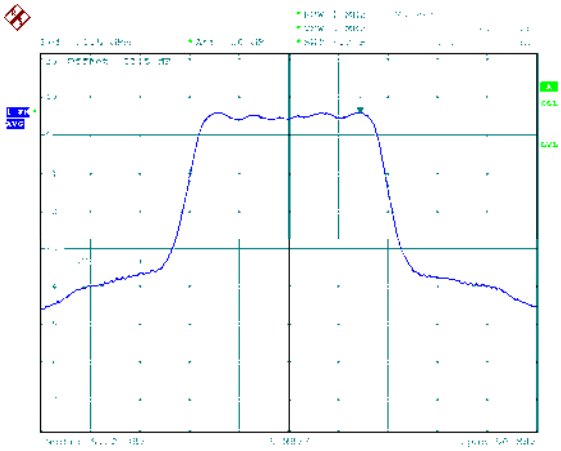


Modulation Standard: 802.11ac VHT20 (6.5Mbps)

CH36



CH44



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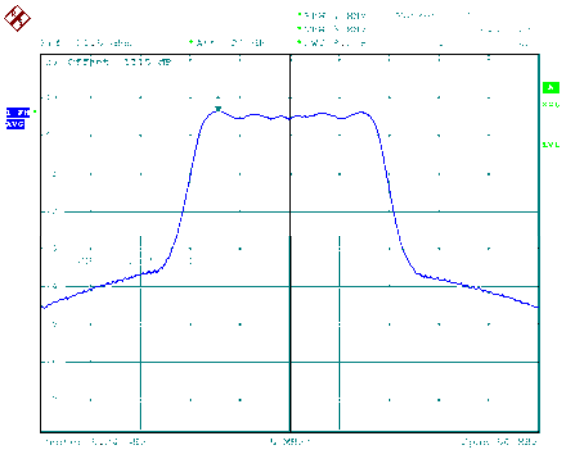
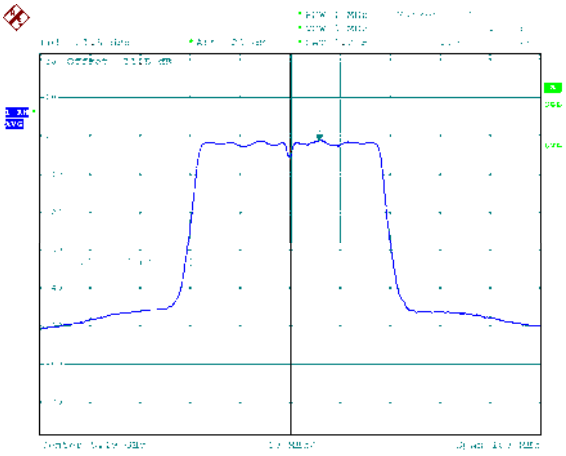
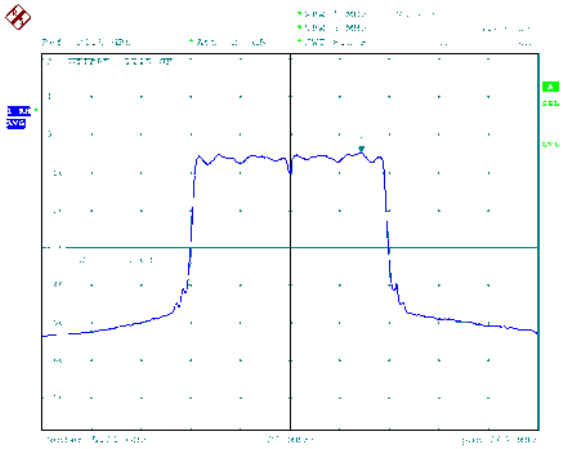


Modulation Standard: 802.11ac VHT40 (13.5Mbps)
CH38



Modulation Standard: 802.11ac VHT80 (29.3Mbps)
CH42



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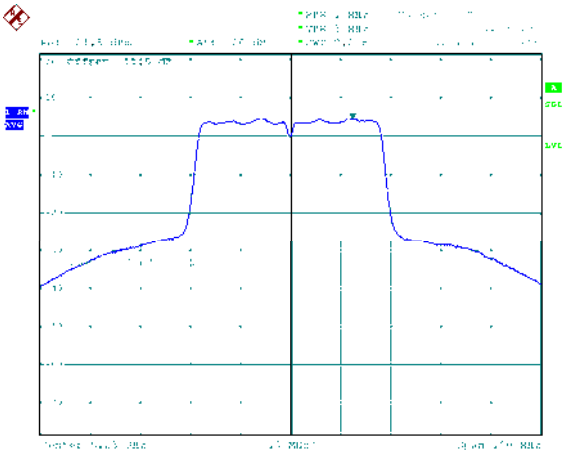
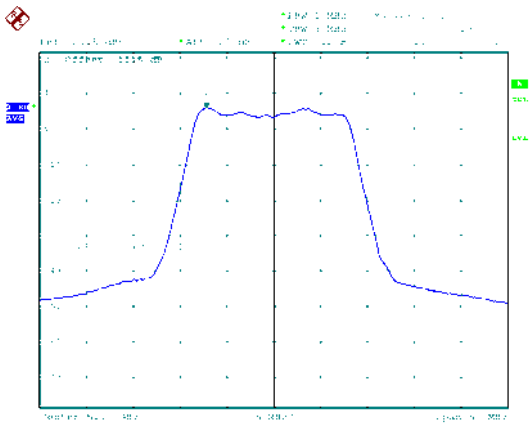


5.2G Band 1, ANT D

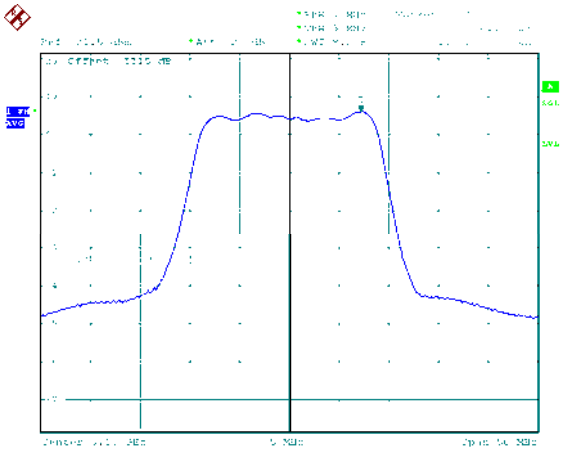
Modulation Standard: 802.11a (6Mbps)

CH36



Modulation Standard: 802.11ac VHT20 (6.5Mbps)

CH36



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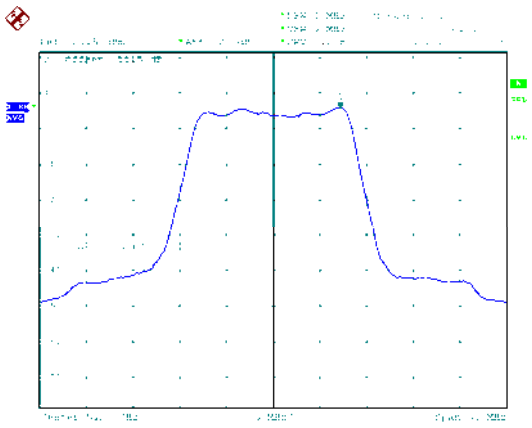

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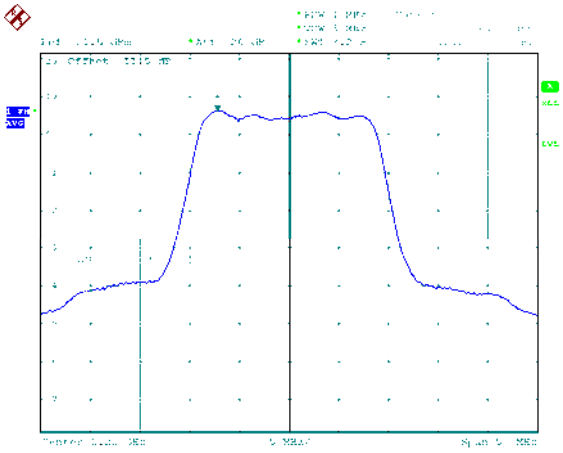
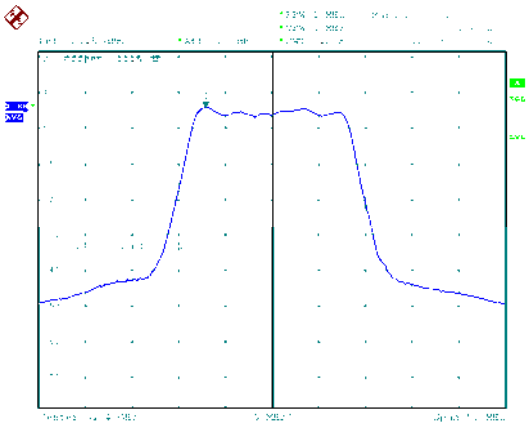
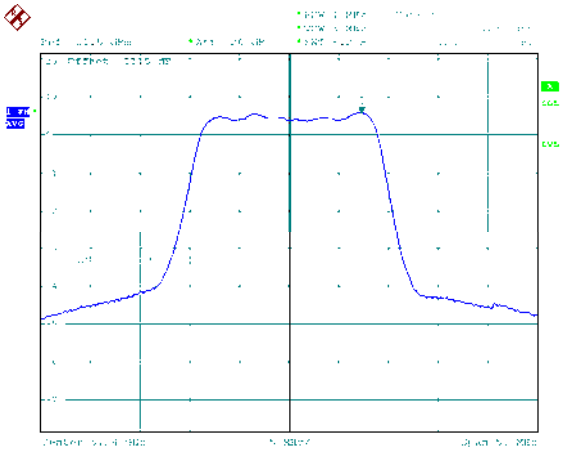


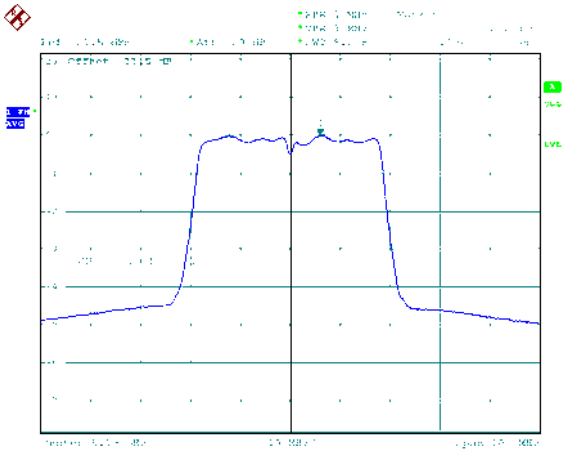
CH48



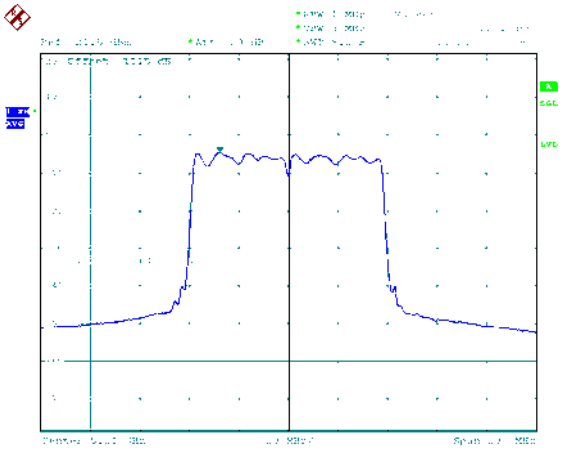
CH48



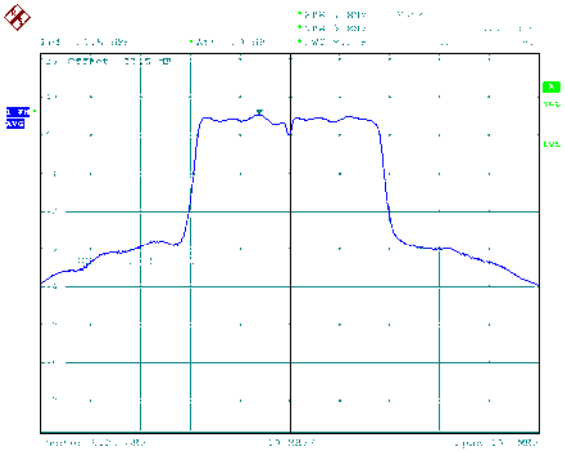
Modulation Standard: 802.11ac VHT40 (13.5Mbps)
CH38



Modulation Standard: 802.11ac VHT80 (29.3Mbps)
CH42



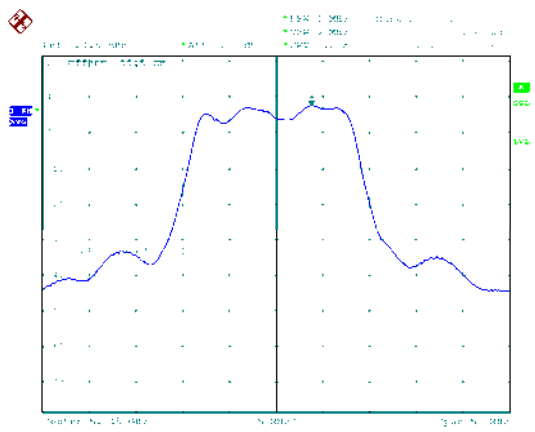
CH46



5.8G Band 4, ANT A

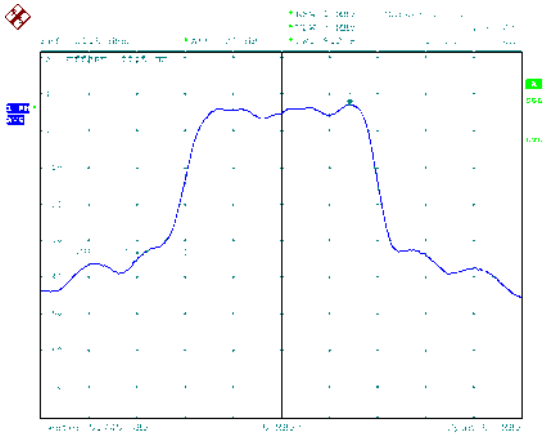
Modulation Standard: 802.11a (6Mbps)

CH149

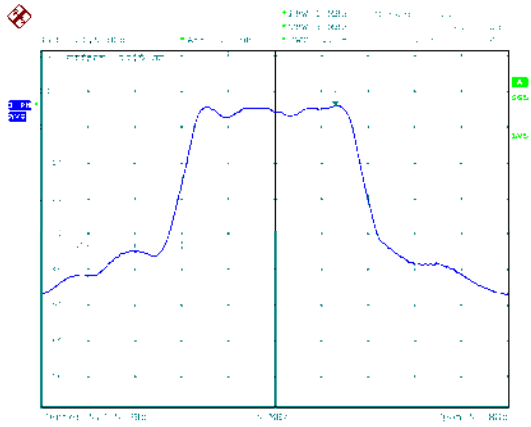


Modulation Standard: 802.11ac VHT20 (6.5Mbps)

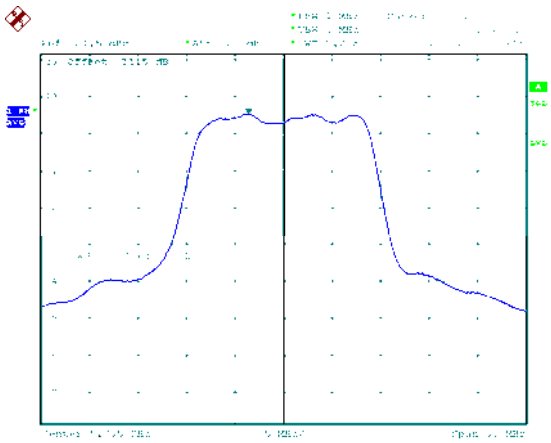
CH149



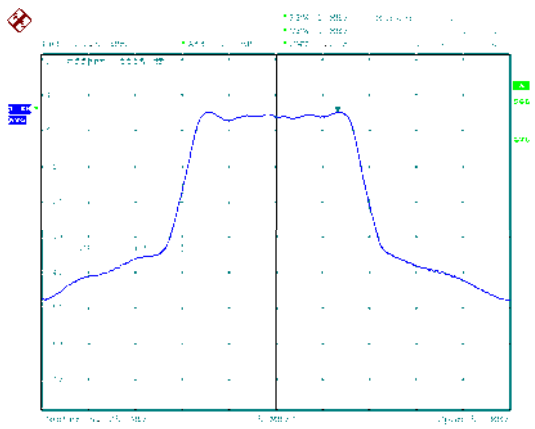
CH157



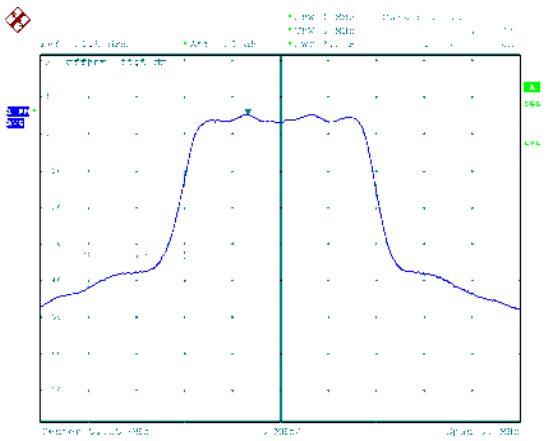
CH157



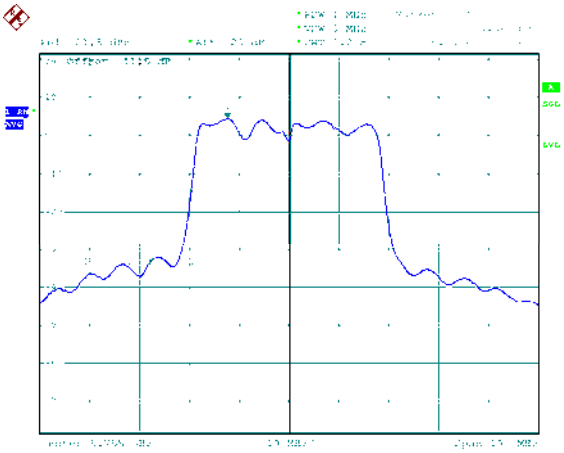
CH165



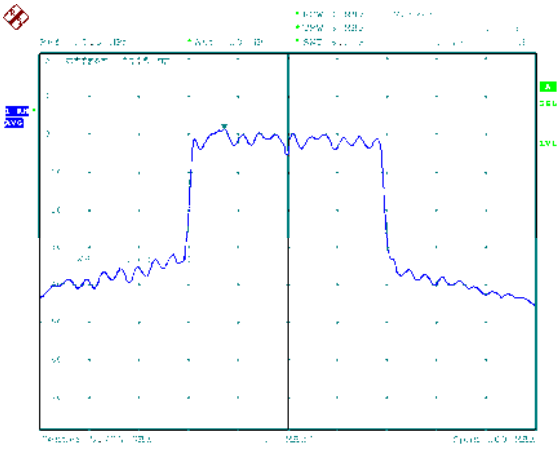
CH165



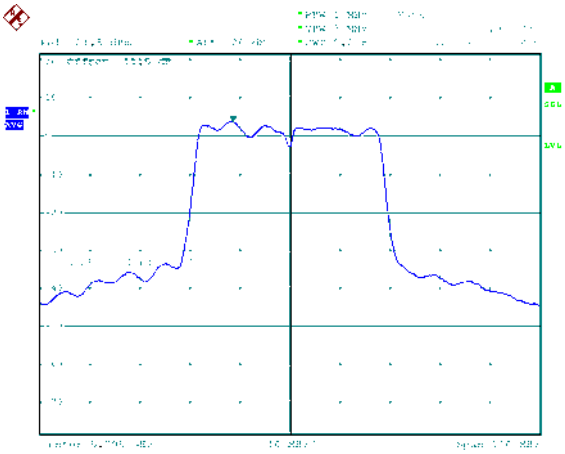
Modulation Standard: 802.11ac VHT40 (13.5Mbps)
CH151



Modulation Standard: 802.11ac VHT80 (29.3Mbps)
CH155



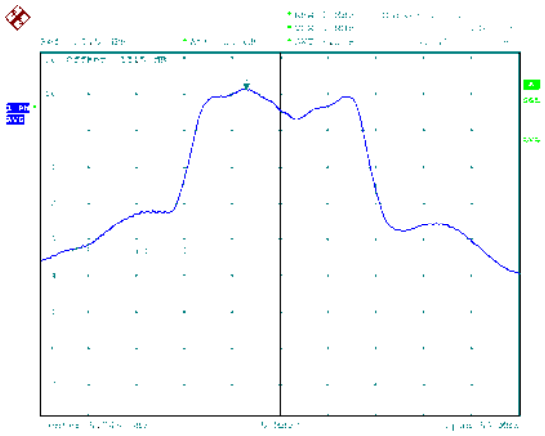
CH159



5.8G Band 4, ANT B

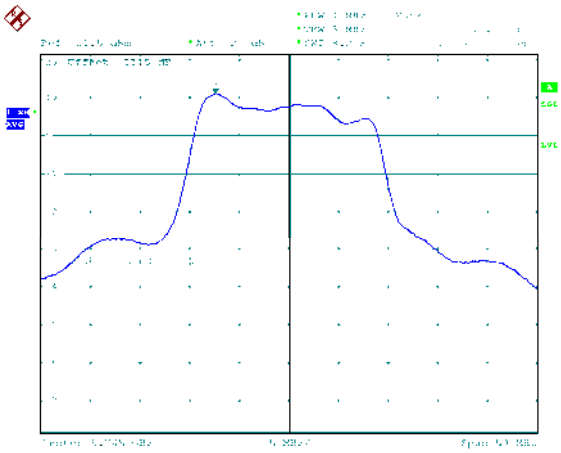
Modulation Standard: 802.11a (6Mbps)

CH149



Modulation Standard: 802.11ac VHT20 (6.5Mbps)

CH149



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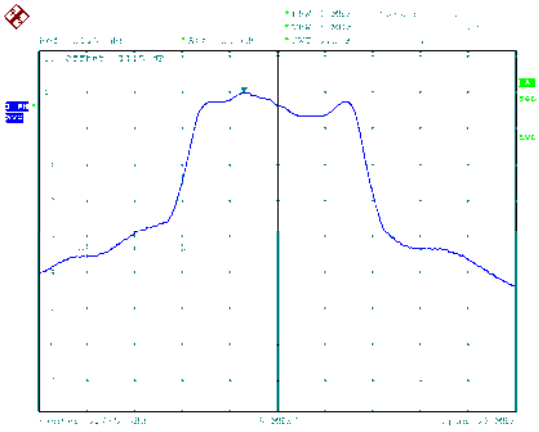
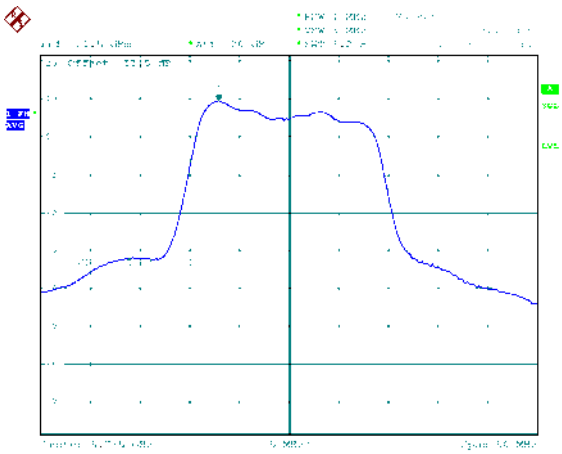
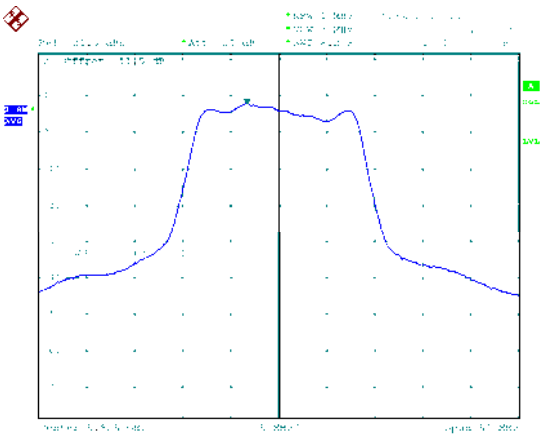


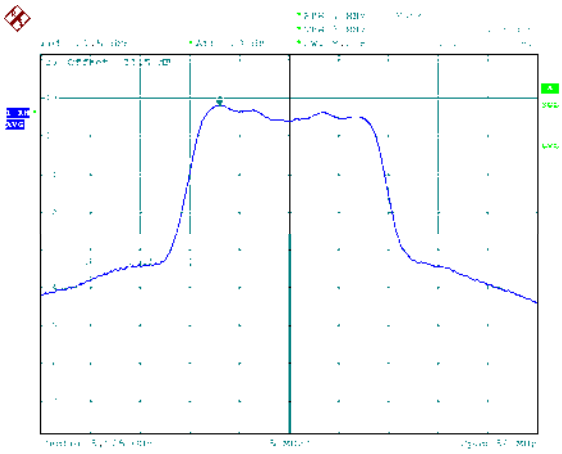
CH157



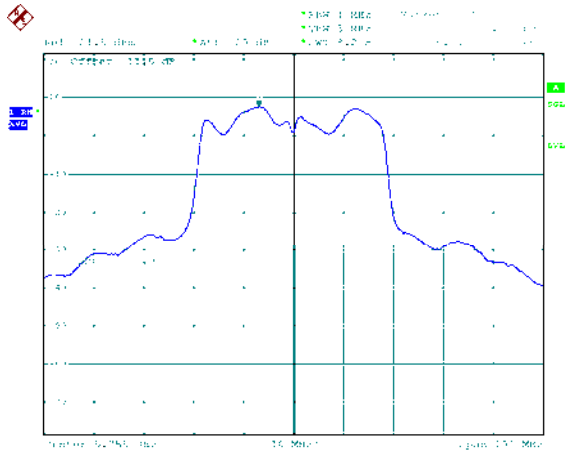
CH165



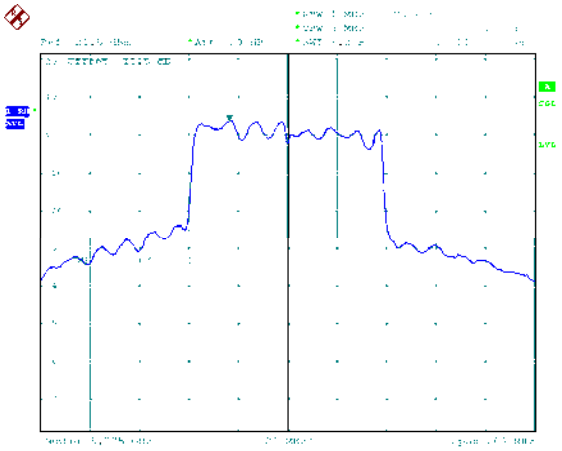
CH165



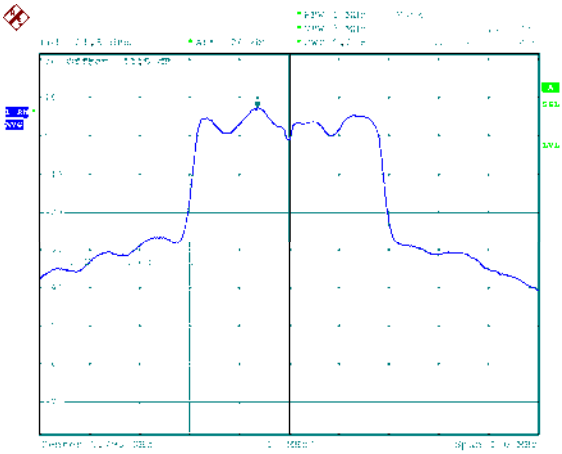
Modulation Standard: 802.11ac VHT40 (13.5Mbps)
CH151



Modulation Standard: 802.11ac VHT80 (29.3Mbps)
CH155



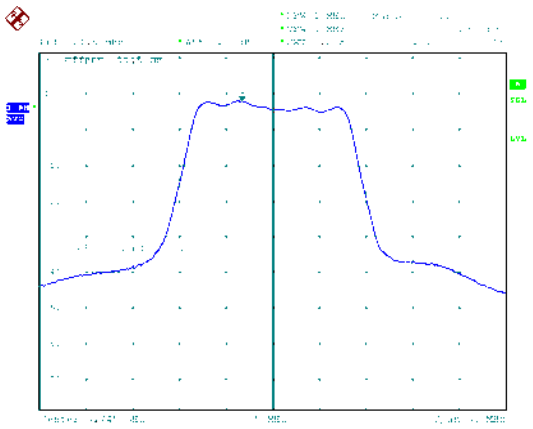
CH159



5.8G Band 4, ANT C

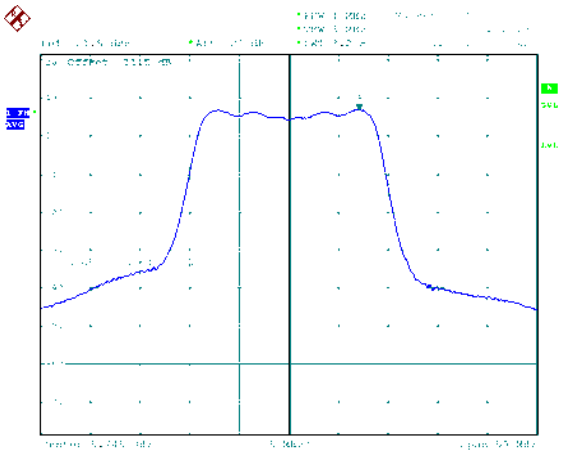
Modulation Standard: 802.11a (6Mbps)

CH149

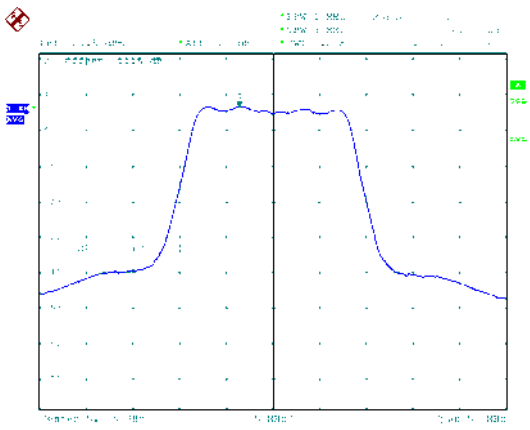


Modulation Standard: 802.11ac VHT20 (6.5Mbps)

CH149



CH157



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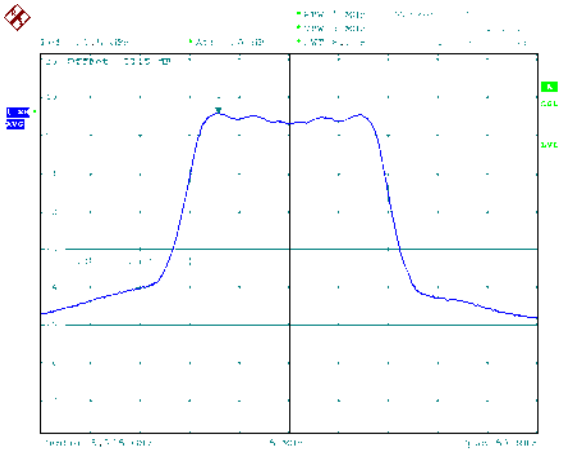

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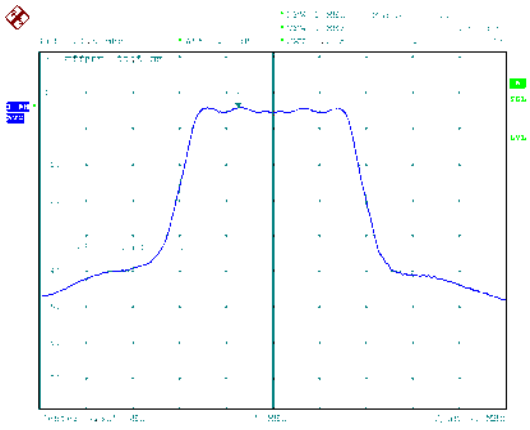

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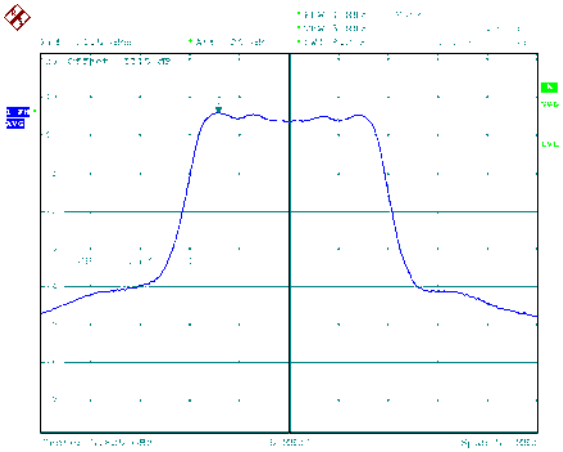
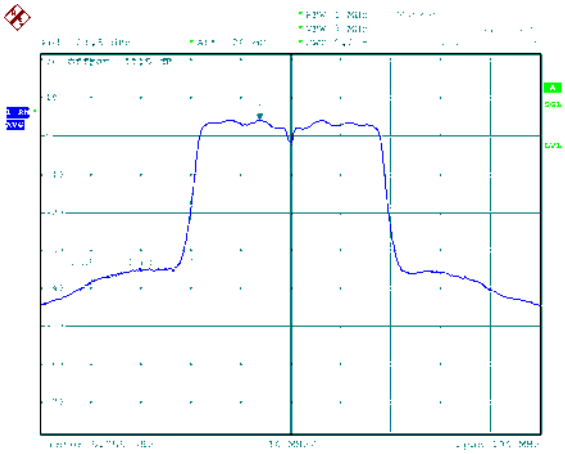
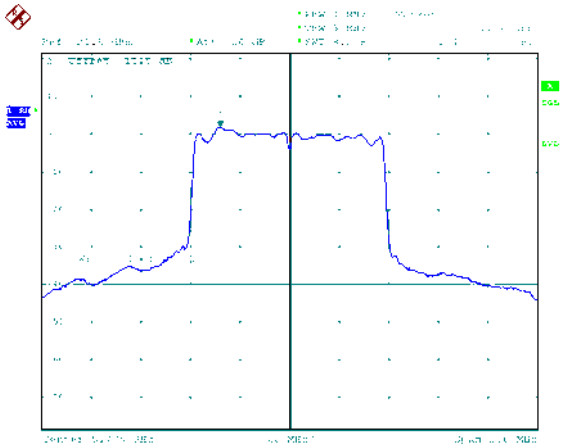


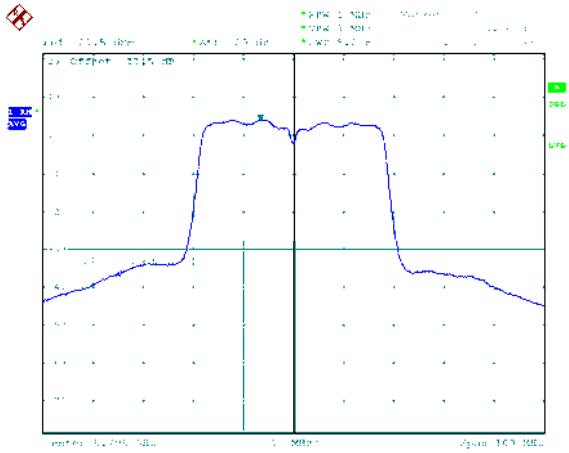
Modulation Standard: 802.11ac VHT40 (13.5Mbps)
CH151



Modulation Standard: 802.11ac VHT80 (29.3Mbps)
CH155



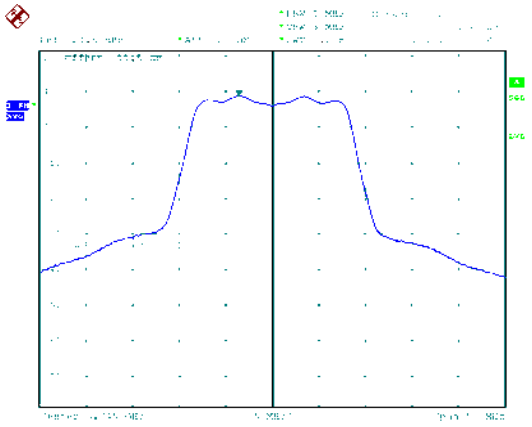
CH159



5.8G Band 4, ANT D

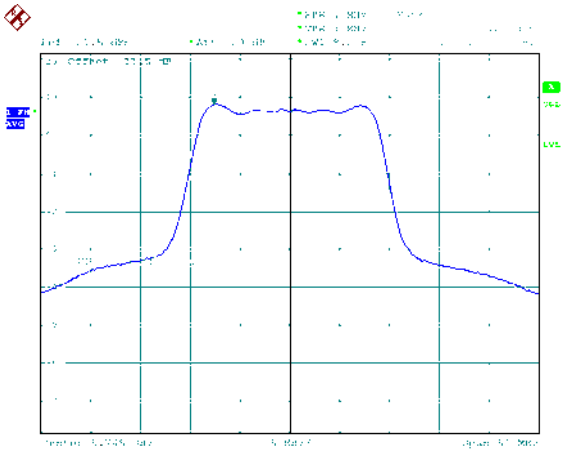
Modulation Standard: 802.11a (6Mbps)

CH149



Modulation Standard: 802.11ac VHT20 (6.5Mbps)

CH149



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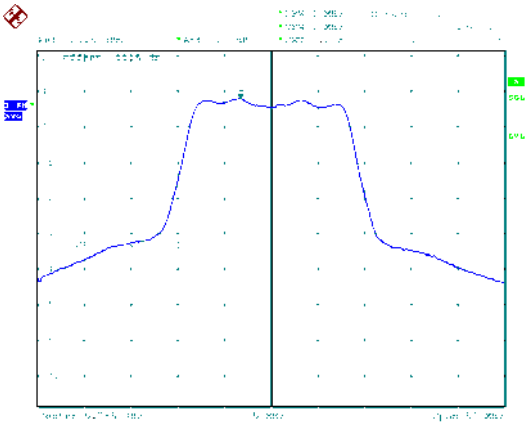

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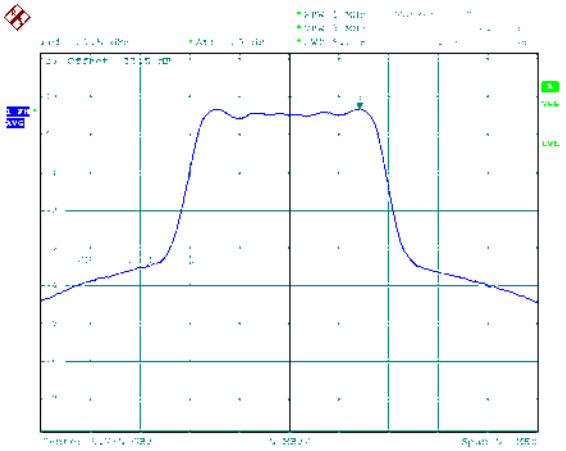

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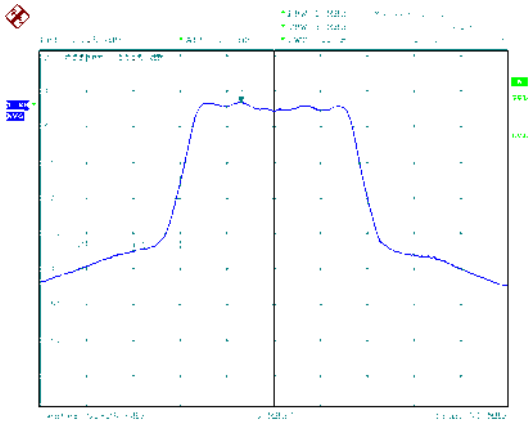

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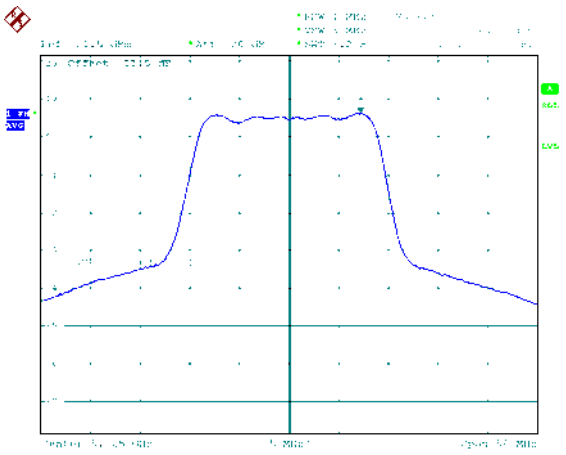
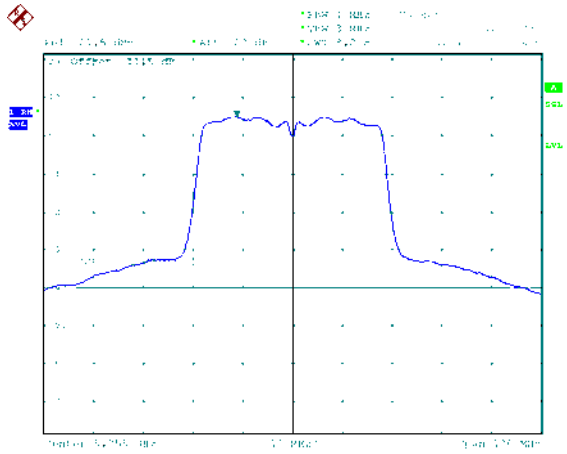
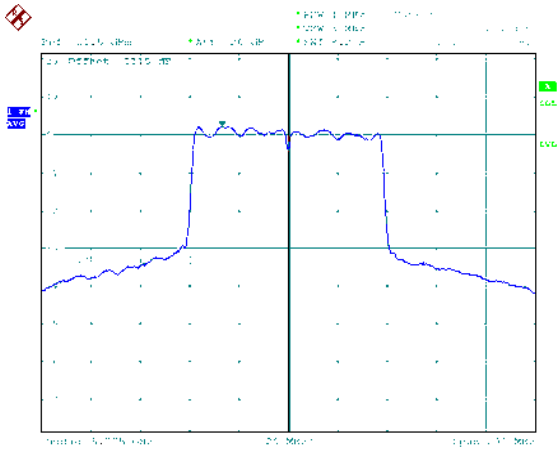


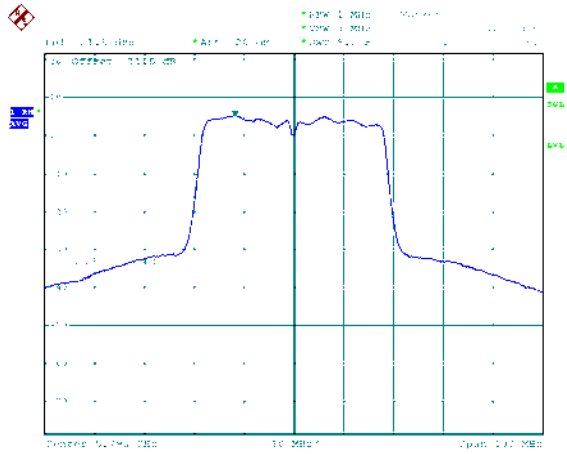
Modulation Standard: 802.11ac VHT40 (13.5Mbps)
CH151



Modulation Standard: 802.11ac VHT80 (29.3Mbps)
CH155



CH159

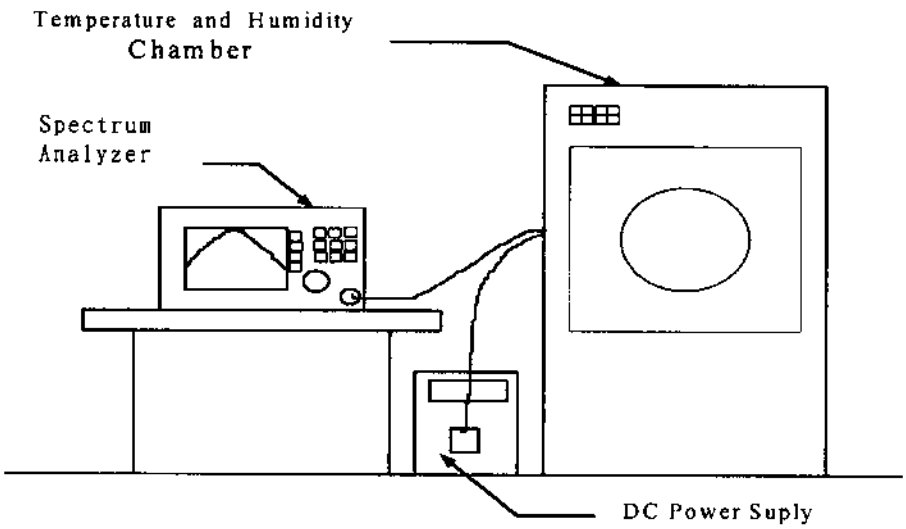


12. Frequency Stability

12.1.Test Procedure

1. The EUT was placed inside the Temperature and Humidity chamber.
2. The transmitter output was connected to spectrum analyzer.
3. Turn the EUT on and couple its output to a spectrum analyzer.
4. Turn the EUT off and set the chamber to the highest temperature specified.
5. Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize, turn the EUT on and measure the operating frequency after 2, 5, and 10 minutes.
6. Repeat step 2 and 3 with the temperature chamber set to the lowest temperature.
7. The test chamber was allowed to stabilize at +20 degree C for a minimum of 30 minutes. The supply voltage was then adjusted on the EUT from 85% to 115% and the frequency record.

12.2.Test Setup Layout



12.3.Test Result and Data

Temperature: 22°C Humidity: 62%

Test Date: Aug. 22, 2018

Operating frequency: 5180 MHz							
Temp	Power supply	2 minute		5 minute		10 minute	
(℃)	(V)	(MHz)	(%)	(MHz)	(%)	(MHz)	(%)
50	102	5180.0013	0.000025	5179.9590	-0.000791	5179.9520	-0.009270
	120	5179.9766	-0.000452	5180.0562	0.001085	5179.9800	-0.003863
	138	5180.0103	0.000199	5180.0006	0.000011	5179.9480	-0.010035
40	102	5180.0162	0.000313	5179.9531	-0.000905	5179.9579	-0.008124
	120	5180.0968	0.001870	5179.9199	-0.001546	5180.0343	0.006621
	138	5179.9420	-0.001120	5180.0168	0.000324	5180.0347	0.006694
30	102	5180.0990	0.001911	5179.9152	-0.001638	5179.9568	-0.008348
	120	5179.9424	-0.001111	5180.0517	0.000998	5179.9458	-0.010470
	138	5180.0591	0.001142	5179.9656	-0.000664	5179.9445	-0.010707
20	102	5180.0911	0.001760	5179.9598	-0.000777	5179.9545	-0.008792
	120	5180.0073	0.000141	5180.0917	0.001770	5180.0511	0.009862
	138	5180.0228	0.000441	5180.0243	0.000469	5180.0631	0.012174
10	102	5179.9707	-0.000566	5179.9177	-0.001590	5179.9777	-0.004307
	120	5180.0651	0.001256	5179.9514	-0.000939	5180.0693	0.013372
	138	5179.9894	-0.000205	5179.9518	-0.000930	5180.0639	0.012339
0	102	5179.9185	-0.001573	5179.9212	-0.001522	5179.9190	-0.015641
	120	5179.9528	-0.000912	5180.0492	0.000950	5180.0121	0.002334
	138	5180.0279	0.000539	5180.0431	0.000832	5180.0520	0.010034
-10	102	5179.9630	-0.000715	5180.0363	0.000701	5180.0718	0.013857
	120	5179.9326	-0.001302	5180.0729	0.001408	5180.0358	0.006908
	138	5180.0904	0.001745	5179.9010	-0.001912	5180.0449	0.008666
-20	102	5180.0504	0.000973	5179.9636	-0.000702	5180.0192	0.003716
	120	5180.0395	0.000763	5179.9078	-0.001780	5180.0964	0.018607
	138	5180.0816	0.001575	5179.9605	-0.000763	5179.9178	-0.015872
-30	102	5179.9317	-0.001319	5179.9002	-0.001928	5180.0758	0.014640
	120	5179.9504	-0.000958	5179.9321	-0.001311	5180.0143	0.002757
	138	5180.0489	0.000944	5179.9873	-0.000245	5179.9523	-0.009203

Limit:

Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the users manual.

13. Automatically Discontinue Transmission

13.1. Limit of Automatically Discontinue Transmission

The device shall automatically discontinue transmission in case of either absence of information to transmit or operational failure. These provisions are not intended to preclude the transmission of control or signaling information or the use of repetitive codes used by certain digital technologies to complete frame or burst intervals. Applicants shall include in their application for equipment authorization to describe how this requirement is met.

13.2. Test Result of Automatically Discontinue Transmission

While the EUT is not transmitting any information, the EUT can automatically discontinue transmission and become standby mode for power saving. The EUT can detect the controlling signal of ACK message transmitting from remote device and verify whether it shall resend or discontinue transmission.

14. Radio Frequency Exposure

14.1. Applicable Standards

The measurements shown in this test report were made in accordance with the procedures given in

FCC Part 2 (Section 2.1091)

KDB 447498

14.2. EUT Specification

Frequency band (Operating)	☒ WLAN: 2412MHz ~ 2462MHz ☒ WLAN: 5150MHz ~ 5250MHz ☐ WLAN: 5250MHz ~ 5350MHz ☐ WLAN: 5470MHz ~ 5725MHz ☒ WLAN: 5725MHz ~ 5850MHz ☐ Bluetooth: 2402MHz ~ 2480MHz
Device category	☐ Portable (<20cm separation) ☒ Mobile (>20cm separation)
Exposure classification	☐ Occupational/Controlled exposure (S = 5mW/cm^2) ☒ General Population/Uncontrolled exposure (S=1mW/cm^2)
Antenna diversity	☐ Single antenna ☒ Multiple antennas ☐ Tx diversity ☐ Rx diversity ☒ Tx/Rx diversity
Evaluation applied	☒ MPE Evaluation* ☐ SAR Evaluation ☐ N/A
Remark: 1. For mobile or fixed location transmitters, no SAR consideration applied. The maximum power density is 1.0 mW/cm^2 even if the calculation indicates that the power density would be larger.	

14.3. Test Results

No non-compliance noted.

14.4.Calculation

Given $E = \frac{\sqrt{30 \times P \times G}}{d}$ & $S = \frac{E^2}{3770}$

Where E = Field strength in Volts / meter

P = Power in Watts
G = Numeric antenna gain

d = Distance in meters

S = Power density in milliwatts / square centimeter

Combining equations and re-arranging the terms to express the distance as a function of the remaining variables yields:

$$S = \frac{30 \times P \times G}{3770 d^2}$$

Changing to units of mW and cm, using:

P (mW) = P (W) / 1000 and
d (cm) = d(m) / 100

Yields

$$S = \frac{30 \times (P/1000) \times G}{3770 \times (d/100)^2} = 0.0796 \times \frac{P \times G}{d^2}$$ **Equation 1**

Where d = Distance in cm
P = Power in mW
G = Numeric antenna gain
S = Power density in mW / cm^2

14.5.Maximum Permissible Exposure

Modulation Mode	Frequency band (MHz)	Max. Conducted output power (dBm)	Antenna gain (dBi)	Distance (cm)	Power density (mW/cm2)	Limit (mW/cm2)
802.11a	5150-5250	23.17	5.7	20	0.1533	1
802.11a	5725-5850	24.52	5.7	20	0.2095	1
802.11an HT20	5150-5250	23.80	5.7	20	0.1771	1
802.11an HT20	5725-5850	24.54	5.7	20	0.2103	1
802.11an HT40	5150-5250	25.81	5.7	20	0.2819	1
802.11an HT40	5725-5850	24.55	5.7	20	0.2109	1
802.11ac VHT20	5150-5250	23.83	5.7	20	0.1784	1
802.11ac VHT20	5725-5850	24.55	5.7	20	0.2107	1
802.11ac VHT40	5150-5250	25.83	5.7	20	0.2827	1
802.11ac VHT40	5725-5850	24.58	5.7	20	0.2120	1
802.11ac VHT80	5150-5250	19.95	5.7	20	0.0731	1
802.11ac VHT80	5725-5850	25.03	5.7	20	0.2352	1

Maximum Permissible Exposure (Co-location)

Modulation Mode	Frequency band (MHz)	Max. Conducted output power (dBm)	Antenna Gain(dBi)	Distance (cm)	Power Density (mW/cm^2)
802.11n HT20	2412-2462	29.61	4.5	20	0.5121
802.11ac VHT40	5150-5250	25.83	5.7	20	0.2827
Co-location Total					0.7948
Maximum Permissible Exposure Limit					1