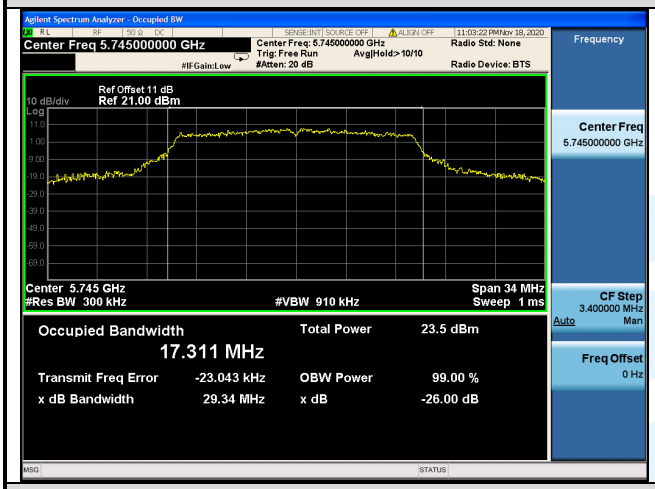
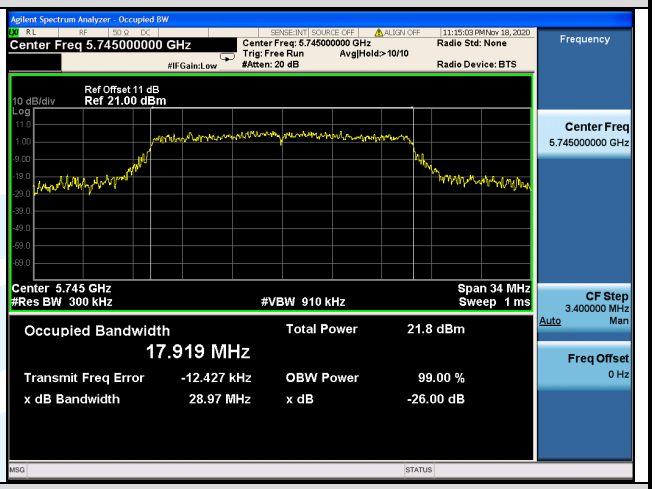
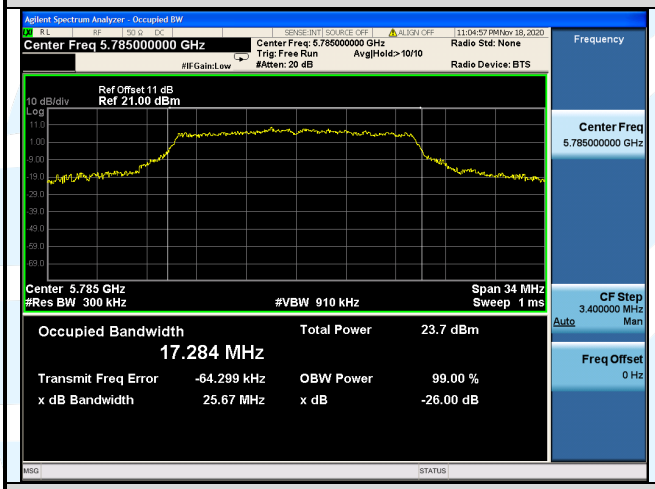
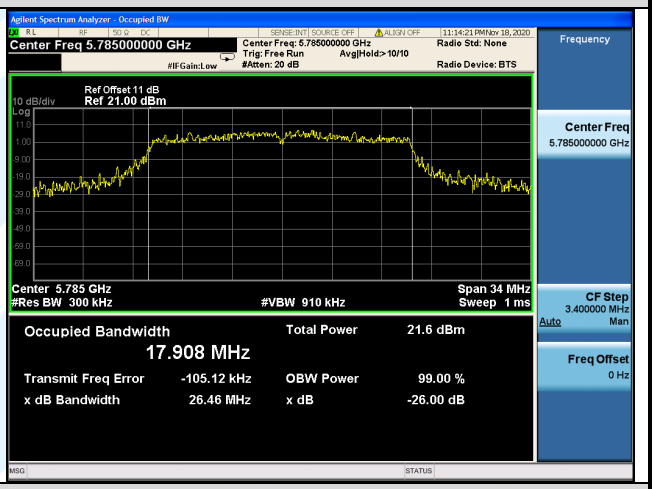
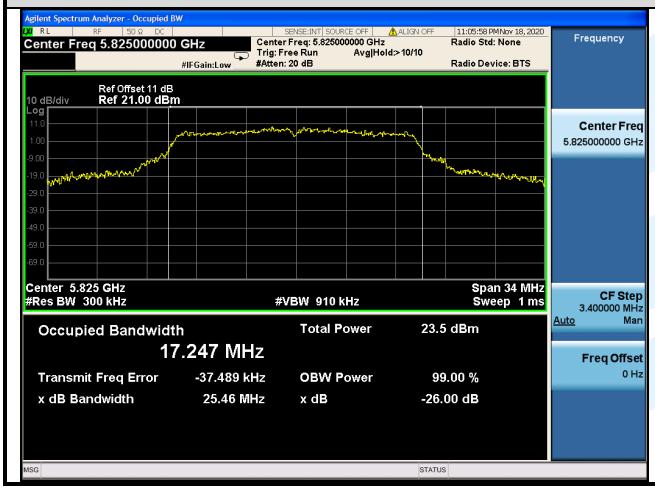
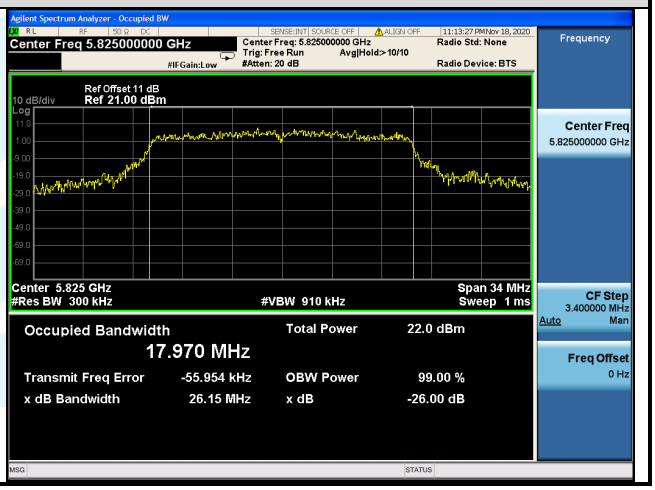
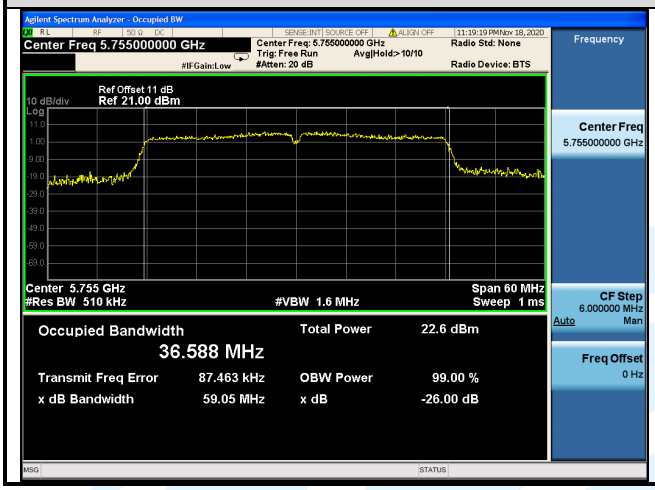
Occupied Bandwidth

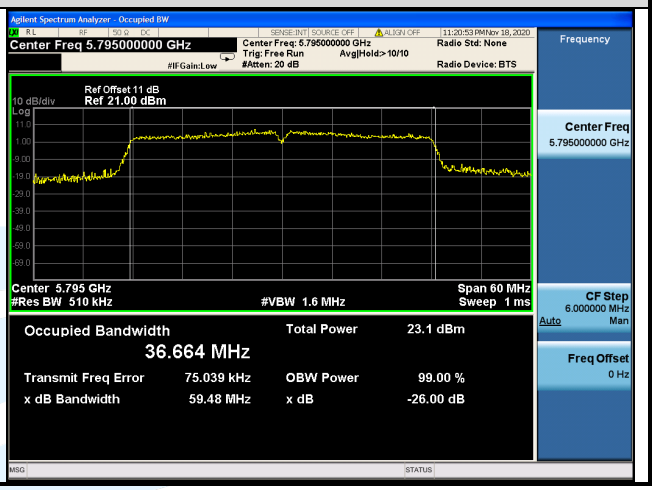
IEEE 802.11a	IEEE 802.11n-HT20
Channel 149	
	
Channel 157	
	
Channel 165	
	

IEEE 802.11n-HT40

Channel 151

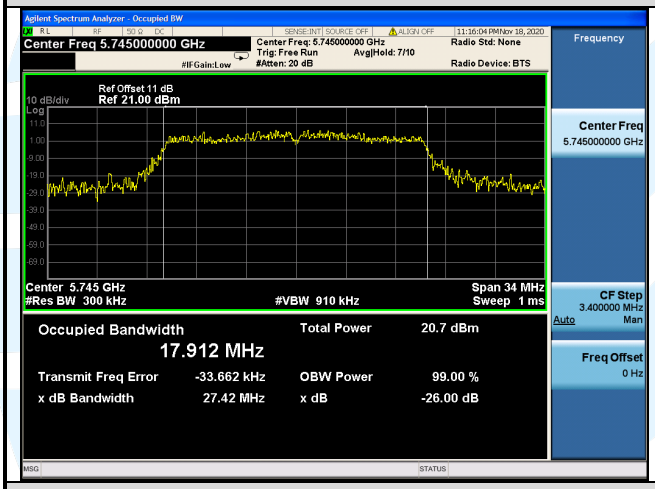


Channel 159

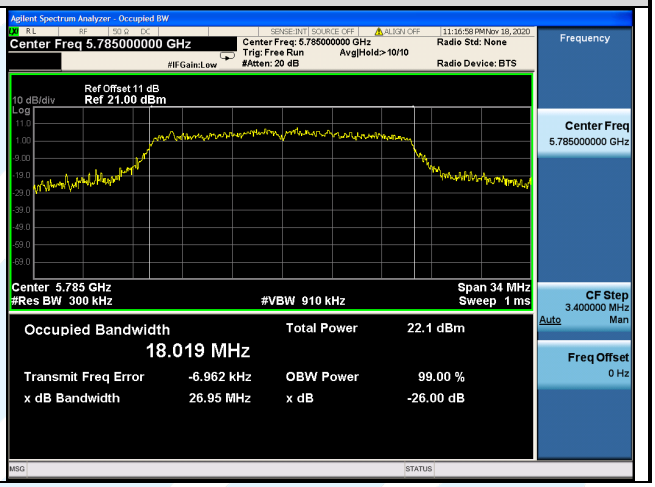


IEEE 802.11ac-VHT20

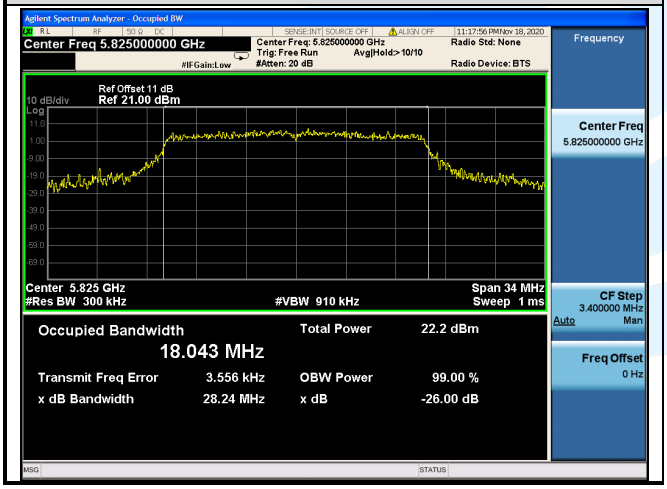
Channel 149



Channel 157

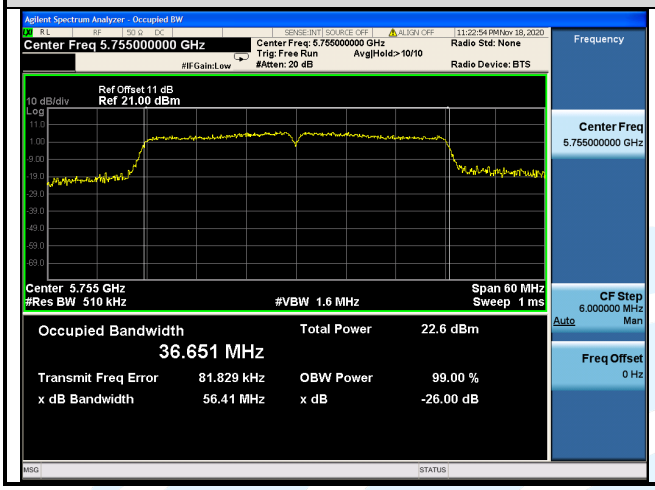


Channel 165

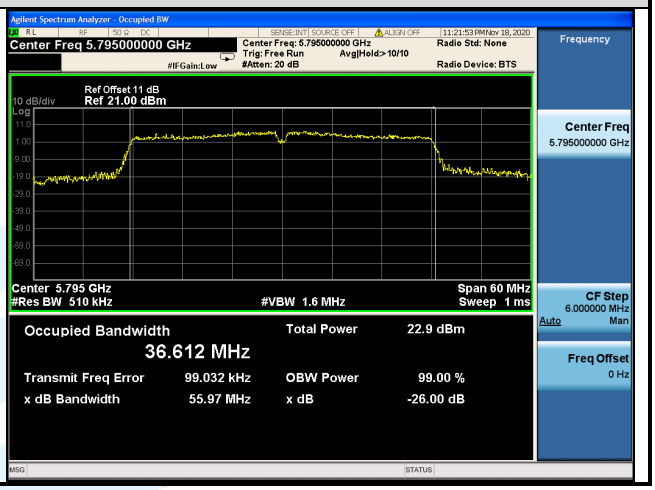


IEEE 802.11 ac-VHT40

Channel 151

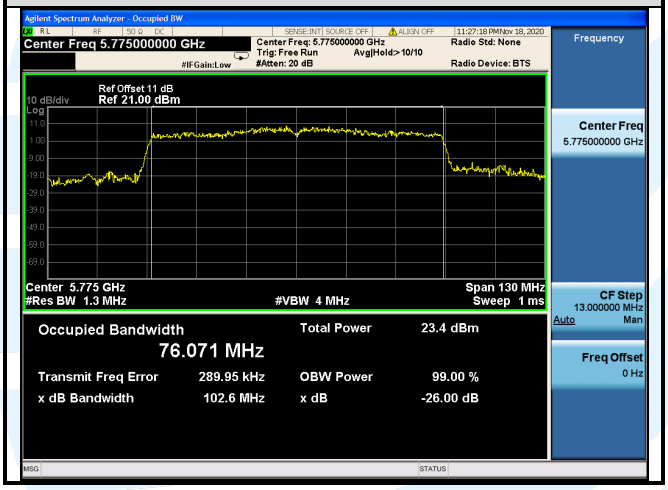


Channel 159



IEEE 802.11ac-VHT80

Channel 155



5.5 MAXIMUM CONDUCTED OUTPUT POWER OR E.I.R.P

Test Requirement:	FCC 47 CFR Part 15 Subpart E Section 15.407 (a)(1)(2)(3) RSS-247 Issue 2 Section 6.2.1.1/6.2.2.1/6.2.3.1/6.2.4.1
Test Method:	KDB 789033 D02 v02r01 Section E.3.a (Method PM)
Limits:	FCC 47 CFR Part 15 Subpart E

1. For the band 5.15-5.25 GHz.
   (i) For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. 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 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).

   (ii) For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. 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.

   (iii) For fixed point-to-point access points operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. 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. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

   (iv) For client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. 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.

2. For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. 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.

3. For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. 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. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

Limits: RSS-247 Issue 2

1. **Frequency band 5150-5250 MHz**
For OEM devices installed in vehicles, the maximum e.i.r.p. shall not exceed 30 mW or 1.76 + 10 $\log_{10}$B, dBm, whichever is less. Devices shall implement transmitter power control (TPC) in order to have the capability to operate at least 3 dB below the maximum permitted e.i.r.p. of 30 mW.

For other devices, the maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 $\log_{10}$B, dBm, whichever power is less. B is the 99% emission bandwidth in megahertz. The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band.

2. **Frequency band 5250-5350 MHz**
For OEM devices installed in vehicles, the maximum e.i.r.p. shall not exceed 30 mW or 1.76 + 10 $\log_{10}$B, dBm, whichever is less. Devices shall implement TPC in order to have the capability to operate at least 3 dB below the maximum permitted e.i.r.p. of 30 mW.

Devices, other than devices installed in vehicles, shall comply with the following:

a) The maximum conducted output power shall not exceed 250 mW or 11 + 10 $\log_{10}$B, dBm, whichever is less. The power spectral density shall not exceed 11 dBm in any 1.0 MHz band;

b) The maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 $\log_{10}$B, dBm, whichever is less. B is the 99% emission bandwidth in megahertz. Note that devices with a maximum e.i.r.p. greater than 500 mW shall implement TPC in order to have the capability to operate at least 6 dB below the maximum permitted e.i.r.p. of 1 W.

Additional requirements

In addition to the above requirements, devices shall comply with the following, where applicable:

a) Outdoor fixed devices with a maximum e.i.r.p. greater than 200 mW shall comply with the following e.i.r.p. at different elevations, where θ is the angle above the local horizontal plane (of the Earth) as shown below:

i. -13 dBW/MHz for $0^o \leq \theta < 8^o$

ii. -13 − 0.716 (θ-8) dBW/MHz for $8^o \leq \theta < 40^o$

iii. -35.9 − 1.22 (θ-40) dBW/MHz for $40^o \leq \theta \leq 45^o$

iv. -42 dBW/MHz for $\theta > 45^o$

The measurement procedure defined in Annex A of this document shall be used to verify the compliance to the e.i.r.p. at different elevations.

b) Devices, other than outdoor fixed devices, having an e.i.r.p. greater than 200 mW shall comply with either i. or ii. below:

i. devices shall comply with the e.i.r.p. elevation mask in 6.2.2.3(a); or

ii. devices shall implement a method to permanently reduce their e.i.r.p. via a firmwarefeature in the event that the Department requires it. The test report must demonstratehow the device's power table can be updated to meet this firmware requirement. Themanufacturer shall provide this firmware to update all systems automatically incompliance with the directions received from the Department.

3. **Frequency bands 5470-5600 MHz and 5650-5725 MHz**
The maximum conducted output power shall not exceed 250 mW or 11 + 10 $\log_{10}$B, dBm, whichever is less. The power spectral density shall not exceed 11 dBm in any 1.0 MHz band.

The maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 $\log_{10}$B, dBm, whichever is less. B is the 99% emission bandwidth in megahertz. Note that devices with a maximum e.i.r.p. greater than 500 mW shall implement TPC in order to have the capability to operate at least 6 dB below the maximum permitted e.i.r.p. of 1 W.

4. **Frequency band 5725-5850 MHz**

The maximum conducted output power shall not exceed 1 W. The output power spectral density shall not exceed 30 dBm in any 500 kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the output 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 devices

operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed point-to-point operations exclude the use of point-to-multipoint[3] systems, omnidirectional applications and multiple collocated transmitters transmitting the same information.

Test Procedure:

1. Connected the EUT's antenna port to measure device by 10dB attenuator.
2. Method PM is used to perform output power measurement, trigger and gating function of wide band power meter is enabled to measure max output power of Tx on burst.

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

Test Setup: Refer to section 4.5.3 for details.

Instruments Used: Refer to section 3 for details

Test Mode: Transmitter mode

Test Results: Pass

Test Data:

Directional gain and the maximum output power limit.

RSS-247 Issue 2

Frequency Band	Antenna Gain (dBi))	Power Limits (dBm)
U-NII-1	4.50	23.00
U-NII-2A	4.50	24.00
U-NII-2C	4.50	24.00
U-NII-3	4.50	30.00

FCC 47 CFR Part 15 Subpart E

Frequency Band	Antenna Gain (dBi))	Power Limits (dBm)
U-NII-1	4.50	24.00
U-NII-2A	4.50	24.00
U-NII-2C	4.50	24.00
U-NII-3	4.50	30.00

Frequency band 5150-5250 MHz
RSS-247 Issue 2:
For IEEE 802.11a, the minimum 99% emission bandwidth is 16.873 MHz
10 dBm + $10\log_{10}$ (16.873) = 22.27 dBm < 23 dBm
So the 22.27dB limit applicable

For IEEE 802.11n-HT20/ ac-VHT20, the minimum 99% emission bandwidth is 17.859MHz
10 dBm + $10\log_{10}$ (17.859) = 22.52 dBm < 23 dBm
So the 22.52dB limit applicable

For IEEE 802.11n-HT40/ ac-VHT40/ ac-VHT80, the minimum 99% emission bandwidth is 36.226 MHz
10 dBm + $10\log_{10}$ (36.226) = 25.59 dBm > 23 dBm
So the 23 dB limit applicable

Mode	Channel/ Frequency (MHz)	Maximum e.i.r.p (dBm)	Limit (dBm)	Pass / Fail
IEEE 802.11a	36 (5180)	20.67	22.27	Pass
	44 (5220)	20.49	22.27	Pass
	48 (5240)	20.72	22.27	Pass
IEEE 802.11n-HT20	36 (5180)	20.88	22.52	Pass
	44 (5220)	20.63	22.52	Pass
	48 (5240)	20.69	22.52	Pass
IEEE 802.11n-HT40	38 (5190)	19.90	23.00	Pass
	46 (5230)	19.78	23.00	Pass
IEEE 802.11ac-VHT20	36 (5180)	20.78	22.52	Pass
	44 (5220)	20.67	22.52	Pass
	48 (5240)	20.64	22.52	Pass
IEEE 802.11ac-VHT40	38 (5190)	19.86	23.00	Pass
	46 (5230)	19.82	23.00	Pass
IEEE 802.11ac-VHT80	42 (5210)	18.66	23.00	Pass

Remark:
1. Maximum e.i.r.p = Maximum conducted output power + Antenna Gain

FCC 47 CFR Part 15 Subpart E:

Mode	Channel/ Frequency (MHz)	Maximum conducted output power (dBm)		Limit (dBm)	Pass / Fail
		Meas Power	Corr'd Power		
IEEE 802.11a	36 (5180)	16.05	16.17	24.00	Pass
	44 (5220)	15.87	15.99	24.00	Pass
	48 (5240)	16.10	16.22	24.00	Pass
IEEE 802.11n-HT20	36 (5180)	16.25	16.38	24.00	Pass
	44 (5220)	16.00	16.13	24.00	Pass
	48 (5240)	16.06	16.19	24.00	Pass
IEEE 802.11n-HT40	38 (5190)	15.14	15.40	24.00	Pass
	46 (5230)	15.02	15.28	24.00	Pass
IEEE 802.11ac-VHT20	36 (5180)	16.18	16.28	24.00	Pass
	44 (5220)	16.07	16.17	24.00	Pass
	48 (5240)	16.04	16.14	24.00	Pass
IEEE 802.11ac-VHT40	38 (5190)	15.13	15.36	24.00	Pass
	46 (5230)	15.09	15.32	24.00	Pass
IEEE 802.11ac-VHT80	42 (5210)	11.96	14.16	24.00	Pass

Remark:

1. Corr'd Power = Meas Power + Duty Cycle Factor

Frequency band 5250-5350 MHz
RSS-247 Issue 2:
For IEEE 802.11 a, the minimum 99% emission bandwidth is 16.862MHz
11 dBm + $10\log_{10}$ (16.862) = 23.27dBm < 24dBm
So the 23.27 dB limit applicable

For IEEE 802.11n-HT20/ ac-VHT20, the minimum 99% emission bandwidth is 17.941 MHz
11 dBm + $10\log_{10}$ (17.941) =23.54 dBm < 24dBm
So the 23.54 dB limit applicable

For IEEE 802.11 n-HT40/ac-VHT40/ac-VHT80, the minimum 99% emission bandwidth is 36.226 MHz
11 dBm + $10\log_{10}$ (36.226) = 26.59dBm > 24 dBm (200mW)
So the 24 dB limit applicable

FCC 47 CFR Part 15 Subpart E:
For IEEE 802.11 a/n/ac, the minimum 26 dB emission bandwidth is 21.08MHz
11 dBm + $10\log_{10}$ (21.08) = 24.24 dBm> 24 dBm (200mW)
So the 24 dB limit applicable

Mode	Channel/ Frequency (MHz)	Maximum conducted output power (dBm)		Limit (dBm)		Pass / Fail
		Meas Power	Corr'd Power	FCC Part 15E	RSS-247	
IEEE 802.11a	52 (5260)	15.84	15.96	24.00	23.27	Pass
	60 (5300)	15.72	15.84	24.00	23.27	Pass
	64 (5320)	15.90	16.02	24.00	23.27	Pass
IEEE 802.11n-HT20	52 (5260)	15.98	16.11	24.00	23.54	Pass
	60 (5300)	15.82	15.95	24.00	23.54	Pass
	64 (5320)	16.02	16.15	24.00	23.54	Pass
IEEE 802.11n-HT40	54 (5270)	14.98	15.24	24.00	24.00	Pass
	62 (5310)	14.92	15.18	24.00	24.00	Pass
IEEE 802.11ac-VHT20	52 (5260)	15.96	16.06	24.00	23.54	Pass
	60 (5300)	15.83	15.93	24.00	23.54	Pass
	64 (5320)	15.97	16.07	24.00	23.54	Pass
IEEE 802.11ac-VHT40	54 (5270)	14.96	15.19	24.00	24.00	Pass
	62 (5310)	14.89	15.12	24.00	24.00	Pass
IEEE 802.11ac-VHT80	58 (5290)	11.88	14.08	24.00	24.00	Pass

Remark:
1. Maximum conducted output power = Conducted output power + Duty Cycle Factor

Frequency bands 5470-5725 MHz (RSS-247 Issue 2 Not including 5600-5650 MHz)
RSS-247 Issue 2:
For IEEE 802.11 a, the minimum 99% emission bandwidth is 16.906MHz
11 dBm + $10\log_{10}$ (16.906) = 23.28 dBm < 24 dBm
So the 23.28 dB limit applicable

For IEEE 802.11n-HT20/ac-VHT20, the minimum 99% emission bandwidth is 17.913MHz
11 dBm + $10\log_{10}$ (17.913) = 23.53 dBm < 24 dBm
So the 23.53 dB limit applicable

For IEEE 802.11 n-HT40/ac-VHT40/ac-VHT80, the minimum 99% emission bandwidth is 36.218MHz
11 dBm + $10\log_{10}$ (36.218) = 26.59dBm > 24 dBm
So the 24 dB limit applicable

FCC 47 CFR Part 15 Subpart E:
For IEEE 802.11 a/n/ac, the minimum 26 dB emission bandwidth is 21.23 MHz
11 dBm + $10\log_{10}$ (21.23) = 24.26 dBm > 24 dBm
So the 24 dB limit applicable

Mode	Channel/ Frequency (MHz)	Maximum conducted output power (dBm)		Limit (dBm)		Pass / Fail
		SISO				
		Meas Power	Corr'd Power	FCC Part 15E	RSS-247	
IEEE 802.11a	100 (5500)	15.00	15.12	24.00	23.28	Pass
	116 (5580)	14.64	14.76	24.00	23.28	Pass
	140 (5700)	13.64	13.76	24.00	23.28	Pass
IEEE 802.11n-HT20	100 (5500)	15.00	15.13	24.00	23.53	Pass
	116 (5580)	14.66	14.79	24.00	23.53	Pass
	140 (5700)	13.61	13.74	24.00	23.53	Pass
IEEE 802.11n-HT40	102 (5510)	13.11	13.37	24.00	24.00	Pass
	110 (5550)	12.66	12.92	24.00	24.00	Pass
	134 (5670)	12.06	12.32	24.00	24.00	Pass
IEEE 802.11ac-VHT20	100 (5500)	15.06	15.16	24.00	23.53	Pass
	116 (5580)	14.66	14.76	24.00	23.53	Pass
	140 (5700)	13.76	13.86	24.00	23.53	Pass
IEEE 802.11ac-VHT40	102 (5510)	13.19	13.42	24.00	24.00	Pass
	110 (5550)	12.66	12.89	24.00	24.00	Pass
	134 (5670)	12.01	12.24	24.00	24.00	Pass
IEEE 802.11ac-VHT80	106 (5530)	10.84	13.04	24.00	24.00	Pass

Remark:
1. Maximum conducted output power = Conducted output power + Duty Cycle Factor

Frequency band 5725-5850 MHz

Mode	Channel/ Frequency (MHz)	Maximum conducted output power (dBm)		Limit (dBm)	Pass / Fail
		Meas Power	Corr'd Power		
IEEE 802.11a	149 (5745)	17.70	17.82	30	Pass
	157 (5785)	17.94	18.06	30	Pass
	165 (5825)	17.88	18.00	30	Pass
IEEE 802.11n-HT20	149 (5745)	18.02	18.15	30	Pass
	157 (5785)	17.82	17.95	30	Pass
	165 (5825)	17.68	17.81	30	Pass
IEEE 802.11n-HT40	151 (5755)	18.36	18.62	30	Pass
	159 (5795)	18.21	18.47	30	Pass
IEEE 802.11ac-VHT20	149 (5745)	17.94	18.04	30	Pass
	157 (5785)	17.71	17.81	30	Pass
	165 (5825)	17.76	17.86	30	Pass
IEEE 802.11ac-VHT40	151 (5755)	18.38	18.61	30	Pass
	159 (5795)	18.17	18.40	30	Pass
IEEE 802.11ac-VHT80	155 (5775)	14.02	16.22	30	Pass

Remark:

1. Maximum conducted output power = Conducted output power + Duty Cycle Factor

5.6 PEAK POWER SPECTRAL DENSITY

Test Requirement:	FCC 47 CFR Part 15 Subpart E Section 15.407 (a)(1)(2)(3) RSS-247 Issue 2 Section 6.2.1.1/6.2.2.1/6.2.3.1/6.2.4.1
Test Method:	KDB 789033 D02 v02r01 Section F
Limits:	FCC 47 CFR Part 15 Subpart E

1. For the band 5.15-5.25 GHz.
   (i) For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. 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 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).

   (ii) For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. 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.

   (iii) For fixed point-to-point access points operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. 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. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

   (iv) For client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. 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.

2. For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. 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.

3. For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. 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. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

Limits: RSS-247 Issue 2

1. **Frequency band 5150-5250 MHz**
For OEM devices installed in vehicles, the maximum e.i.r.p. shall not exceed 30 mW or 1.76 + 10 $\log_{10}$B, dBm, whichever is less. Devices shall implement transmitter power control (TPC) in order to have the capability to operate at least 3 dB below the maximum permitted e.i.r.p. of 30 mW.

For other devices, the maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 $\log_{10}$B, dBm, whichever power is less. B is the 99% emission bandwidth in megahertz. The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band.

2. **Frequency band 5250-5350 MHz**
For OEM devices installed in vehicles, the maximum e.i.r.p. shall not exceed 30 mW or 1.76 + 10 $\log_{10}$B, dBm, whichever is less. Devices shall implement TPC in order to have the capability to operate at least 3 dB below the maximum permitted e.i.r.p. of 30 mW.

Devices, other than devices installed in vehicles, shall comply with the following:

a) The maximum conducted output power shall not exceed 250 mW or 11 + 10 $\log_{10}$B, dBm, whichever is less. The power spectral density shall not exceed 11 dBm in any 1.0 MHz band;

b) The maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 $\log_{10}$B, dBm, whichever is less. B is the 99% emission bandwidth in megahertz. Note that devices with a maximum e.i.r.p. greater than 500 mW shall implement TPC in order to have the capability to operate at least 6 dB below the maximum permitted e.i.r.p. of 1 W.

Additional requirements

In addition to the above requirements, devices shall comply with the following, where applicable:

a) Outdoor fixed devices with a maximum e.i.r.p. greater than 200 mW shall comply with the following e.i.r.p. at different elevations, where θ is the angle above the local horizontal plane (of the Earth) as shown below:

i. -13 dBW/MHz for $0^o \leq \theta < 8^o$

ii. -13 − 0.716 (θ-8) dBW/MHz for $8^o \leq \theta < 40^o$

iii. -35.9 − 1.22 (θ-40) dBW/MHz for $40^o \leq \theta \leq 45^o$

iv. -42 dBW/MHz for $\theta > 45^o$

The measurement procedure defined in Annex A of this document shall be used to verify the compliance to the e.i.r.p. at different elevations.

b) Devices, other than outdoor fixed devices, having an e.i.r.p. greater than 200 mW shall comply with either i. or ii. below:

iii. devices shall comply with the e.i.r.p. elevation mask in 6.2.2.3(a); or

iv. devices shall implement a method to permanently reduce their e.i.r.p. via a firmwarefeature in the event that the Department requires it. The test report must demonstratehow the device's power table can be updated to meet this firmware requirement. Themanufacturer shall provide this firmware to update all systems automatically incompliance with the directions received from the Department.

3. **Frequency bands 5470-5600 MHz and 5650-5725 MHz**
The maximum conducted output power shall not exceed 250 mW or 11 + 10 $\log_{10}$B, dBm, whichever is less. The power spectral density shall not exceed 11 dBm in any 1.0 MHz band.

The maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 $\log_{10}$B, dBm, whichever is less. B is the 99% emission bandwidth in megahertz. Note that devices with a maximum e.i.r.p. greater than 500 mW shall implement TPC in order to have the capability to operate at least 6 dB below the maximum permitted e.i.r.p. of 1 W.

4. **Frequency band 5725-5850 MHz**

The maximum conducted output power shall not exceed 1 W. The output power spectral density shall not exceed 30 dBm in any 500 kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the output 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 devices

operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed point-to-point operations exclude the use of point-to-multipoint[3] systems, omnidirectional applications and multiple collocated transmitters transmitting the same information.

Test Procedure:

The output from the transmitter was connected to an attenuator and then to the input of the RF Spectrum Analyzer.

Spectrum analyzer according to the following Settings:

1. For U-NII-1, U-NII-2A, U-NII-2C band:

Using method SA-2

a) Set span to encompass the entire emission bandwidth (EBW) of the signal.
b) Set RBW = 1 MHz, Set VBW ≥ 3 RBW, Detector = RMS
c) Sweep time = auto, trigger set to “free run”.
d) Trace average at least 100 traces in power averaging mode.
e) Record the max value and add 10 log (1/duty cycle)

2. For U-NII-3 band:

a) Set span to encompass the entire emission bandwidth (EBW) of the signal.
b) Set RBW = 500 kHz, Set VBW ≥ 3 RBW, Detector = RMS
c) Use the peak marker function to determine the maximum power level in any 500 kHz band segment within the fundamental EBW.
d) Sweep time = auto, trigger set to “free run”.
e) Trace average at least 100 traces in power averaging mode.
f) Record the max value and add 10 log (1/duty cycle)

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

Test Setup: Refer to section 4.5.3 for details.

Instruments Used: Refer to section 3 for details

Test Mode: Transmitter mode

Test Results: Pass

Test Data:

Directional gain and the maximum output power limit.

RSS-247 Issue 2:

Frequency Band	Antenna Gain (dBi))	PSD Limits (dBm/MHz or dBm/500kHz)
U-NII-1	4.50	10.00
U-NII-2A	4.50	11.00
U-NII-2C	4.50	11.00
U-NII-3	4.50	30.00

FCC 47 CFR Part 15 Subpart E:

Frequency Band	Antenna Gain (dBi))	PSD Limits (dBm/MHz or dBm/500kHz)
U-NII-1	4.50	11.00
U-NII-2A	4.50	11.00
U-NII-2C	4.50	11.00
U-NII-3	4.50	30.00

Frequency band 5150-5250 MHz
RSS-247 Issue 2

Mode	Channel/ Frequency (MHz)	e.i.r.p. spectral density (dBm/MHz)	Limit (dBm/MHz)	Pass / Fail
IEEE 802.11a	36 (5180)	9.954	10	Pass
	44 (5220)	9.974	10	Pass
	48 (5240)	9.963	10	Pass
IEEE 802.11n-HT20	36 (5180)	9.800	10	Pass
	44 (5220)	9.882	10	Pass
	48 (5240)	9.425	10	Pass
IEEE 802.11n-HT40	38 (5190)	5.960	10	Pass
	46 (5230)	5.844	10	Pass
IEEE 802.11ac-VHT20	36 (5180)	9.769	10	Pass
	44 (5220)	9.895	10	Pass
	48 (5240)	9.983	10	Pass
IEEE 802.11ac-VHT40	38 (5190)	5.572	10	Pass
	46 (5230)	5.872	10	Pass
IEEE 802.11ac-VHT80	42 (5210)	1.899	10	Pass

Remark:
1. e.i.r.p. spectral density = Power spectral density + Duty Cycle Factor + Antenna Gain

FCC 47 CFR Part 15 Subpart E

Mode	Channel/ Frequency (MHz)	Power spectral density (dBm/MHz)		Limit (dBm/MHz)	Pass / Fail
		Meas PSD	Corr'd PSD		
IEEE 802.11a	36 (5180)	5.334	5.454	11	Pass
	44 (5220)	5.354	5.474	11	Pass
	48 (5240)	5.339	5.463	11	Pass
IEEE 802.11n-HT20	36 (5180)	5.170	5.300	11	Pass
	44 (5220)	5.250	5.382	11	Pass
	48 (5240)	4.793	4.925	11	Pass
IEEE 802.11n-HT40	38 (5190)	1.198	1.460	11	Pass
	46 (5230)	1.082	1.344	11	Pass
IEEE 802.11ac-VHT20	36 (5180)	5.169	5.269	11	Pass
	44 (5220)	5.290	5.395	11	Pass
	48 (5240)	5.378	5.483	11	Pass
IEEE 802.11ac-VHT40	38 (5190)	0.839	1.072	11	Pass
	46 (5230)	1.139	1.372	11	Pass
IEEE 802.11ac-VHT80	42 (5210)	-4.797	-2.601	11	Pass

Remark:
1. Power spectral density = Conducted power spectral density + Duty Cycle Factor

Frequency band 5250-5350 MHz

Mode	Channel/ Frequency (MHz)	Power spectral density (dBm/MHz)		Limit (dBm/MHz)	Pass / Fail
		Meas PSD	Corr'd PSD		
IEEE 802.11a	52 (5260)	5.474	5.598	11	Pass
	60 (5300)	5.455	5.579	11	Pass
	64 (5320)	5.328	5.452	11	Pass
IEEE 802.11n-HT20	52 (5260)	5.248	5.380	11	Pass
	60 (5300)	4.994	5.126	11	Pass
	64 (5320)	4.584	4.716	11	Pass
IEEE 802.11n-HT40	54 (5270)	0.994	1.256	11	Pass
	62 (5310)	0.723	0.985	11	Pass
IEEE 802.11ac-VHT20	52 (5260)	4.948	5.053	11	Pass
	60 (5300)	4.743	4.848	11	Pass
	64 (5320)	4.699	4.804	11	Pass
IEEE 802.11ac-VHT40	54 (5270)	1.051	1.284	11	Pass
	62 (5310)	0.743	0.976	11	Pass
IEEE 802.11ac-VHT80	58 (5290)	-4.746	-2.550	11	Pass

Remark:

1. Power spectral density = Conducted power spectral density + Duty Cycle Factor

Frequency bands 5470-5725 MHz (RSS-247 Issue 2 Not including 5600-5650 MHz)

Mode	Channel/ Frequency (MHz)	Power spectral density (dBm/MHz)		Limit (dBm/MHz)	Pass / Fail
		Meas PSD	Corr'd PSD		
IEEE 802.11a	100 (5500)	4.292	4.416	11	Pass
	116 (5580)	4.133	4.257	11	Pass
	140 (5700)	4.463	4.587	11	Pass
IEEE 802.11n-HT20	100 (5500)	3.410	3.542	11	Pass
	116 (5580)	3.761	3.893	11	Pass
	140 (5700)	3.739	3.871	11	Pass
IEEE 802.11n-HT40	102 (5510)	-2.176	-1.914	11	Pass
	110 (5550)	-2.007	-1747	11	Pass
	134 (5670)	-2.040	-1.778	11	Pass
IEEE 802.11ac-VHT20	100 (5500)	3.652	3.757	11	Pass
	116 (5580)	3.611	3.716	11	Pass
	140 (5700)	3.954	4.059	11	Pass
IEEE 802.11ac-VHT40	102 (5510)	-2.553	-2.320	11	Pass
	110 (5550)	-1.761	-1.531	11	Pass
	134 (5670)	-2.048	-1.815	11	Pass
IEEE 802.11ac-VHT80	106 (5530)	-6.542	-4.346	11	Pass

Remark:

1. Power spectral density = Conducted power spectral density + Duty Cycle Factor

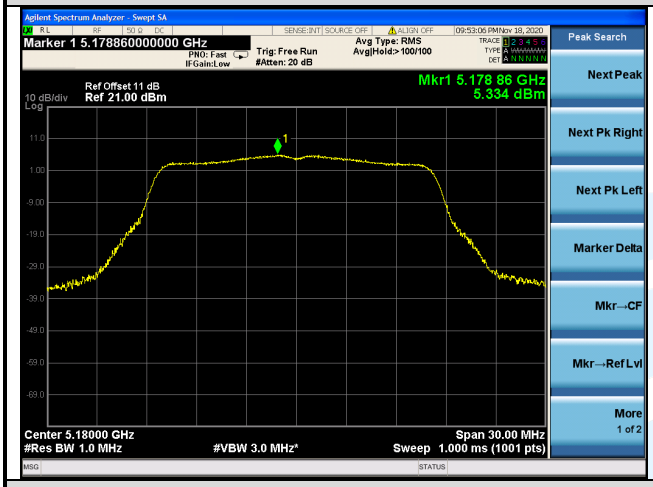
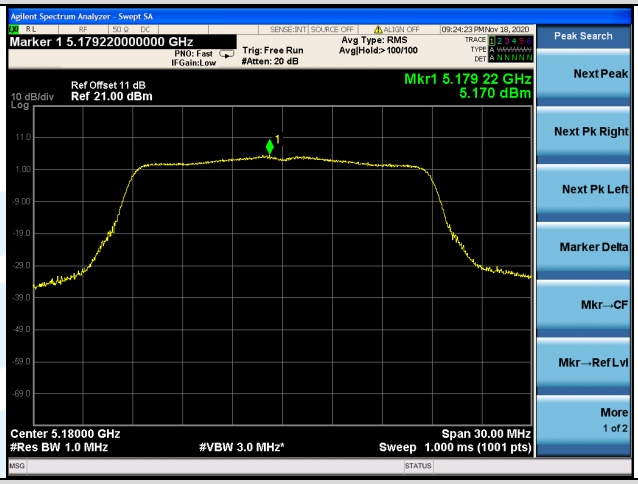
Frequency band 5725-5850 MHz

Mode	Channel/ Frequency (MHz)	Power spectral density (dBm/500kHz)		Limit (dBm/500KHz)	Pass / Fail
		Meas PSD	Corr'd PSD		
IEEE 802.11a	149 (5745)	5.925	6.049	30	Pass
	157 (5785)	5.640	5.764	30	Pass
	165 (5825)	6.167	6.291	30	Pass
IEEE 802.11n-HT20	149 (5745)	5.609	5.741	30	Pass
	157 (5785)	5.756	5.888	30	Pass
	165 (5825)	5.789	5.921	30	Pass
IEEE 802.11n-HT40	151 (5755)	1.883	2.145	30	Pass
	159 (5795)	2.152	2.414	30	Pass
IEEE 802.11ac-VHT20	149 (5745)	5.646	5.751	30	Pass
	157 (5785)	5.695	5.800	30	Pass
	165 (5825)	5.803	5.908	30	Pass
IEEE 802.11ac-VHT40	151 (5755)	2.085	2.318	30	Pass
	159 (5795)	2.632	2.865	30	Pass
IEEE 802.11ac-VHT80	155 (5775)	-4.075	-1.879	30	Pass

Remark:

1. Power spectral density = Conducted power spectral density + Duty Cycle Factor

The test plots as follows:

IEEE 802.11a	IEEE 802.11n-HT20
Channel 36	
	
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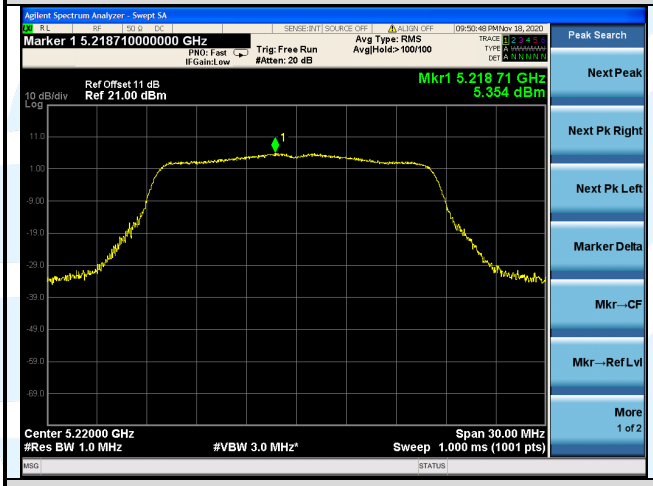	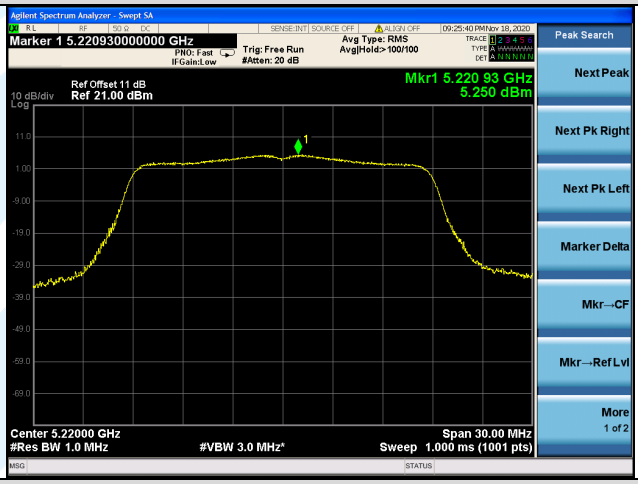
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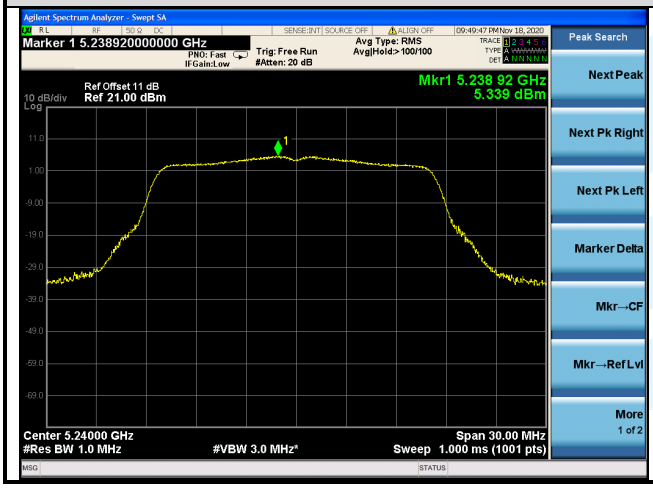	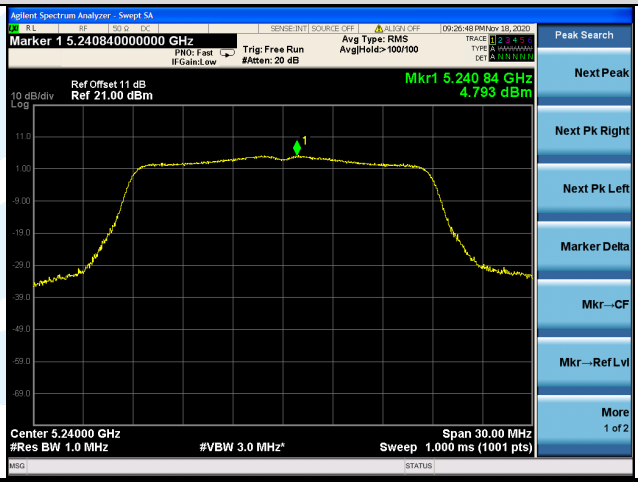

IEEE 802.11a	IEEE 802.11n-HT20
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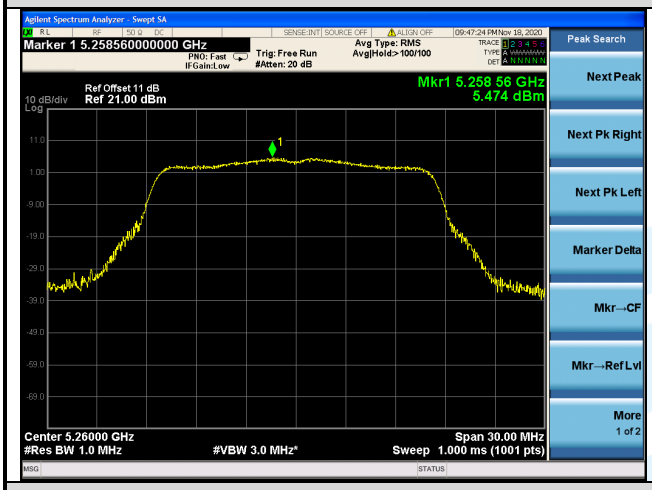	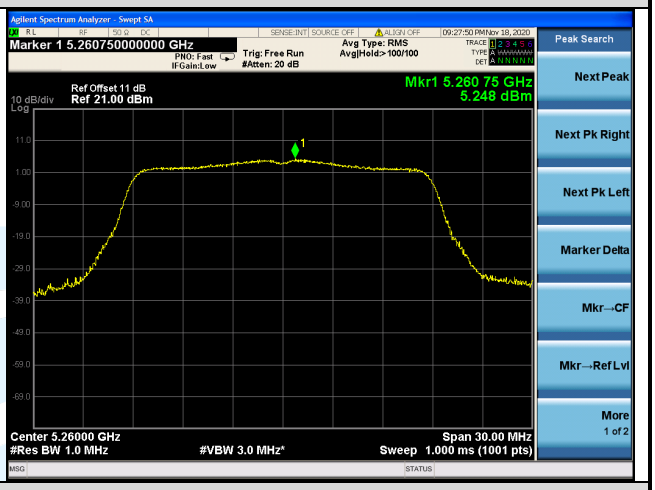
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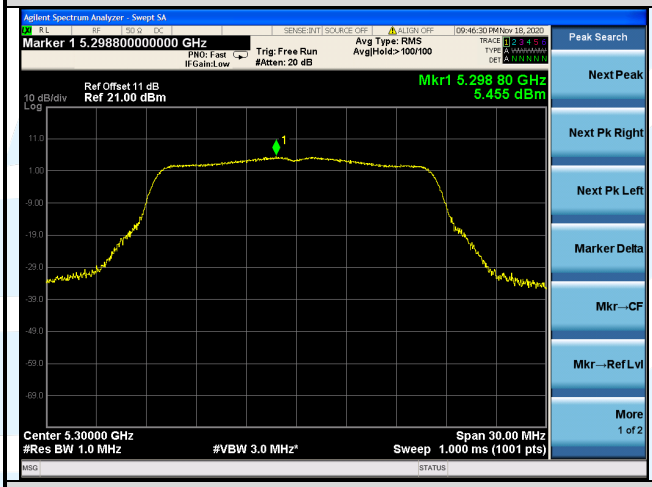	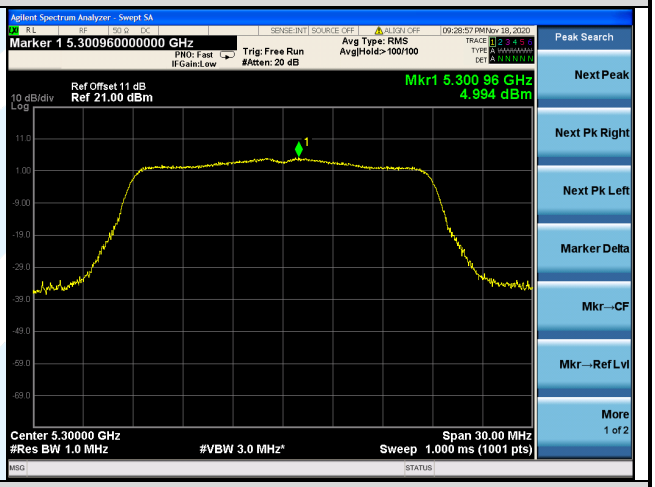
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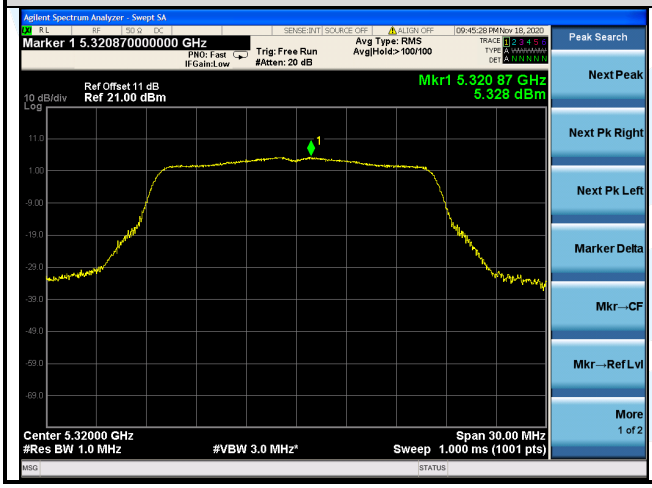	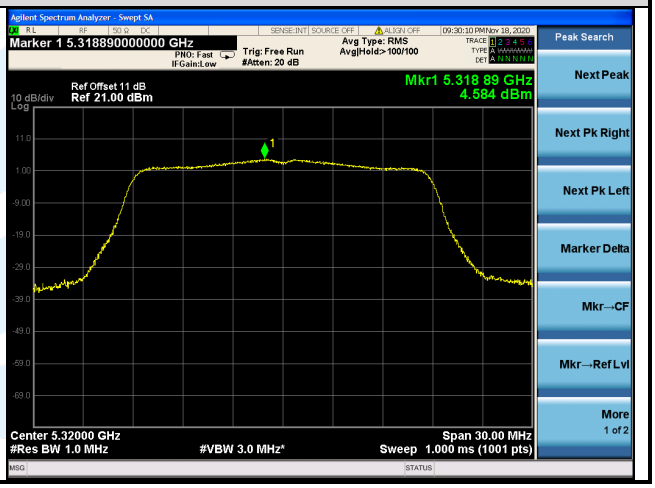

IEEE 802.11a	IEEE 802.11n-HT20
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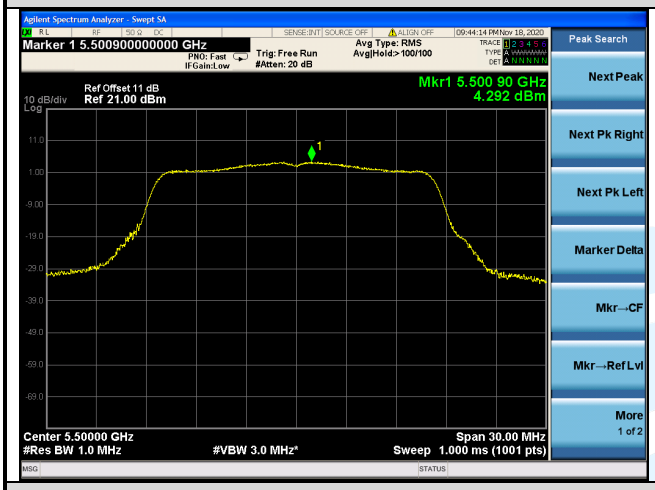	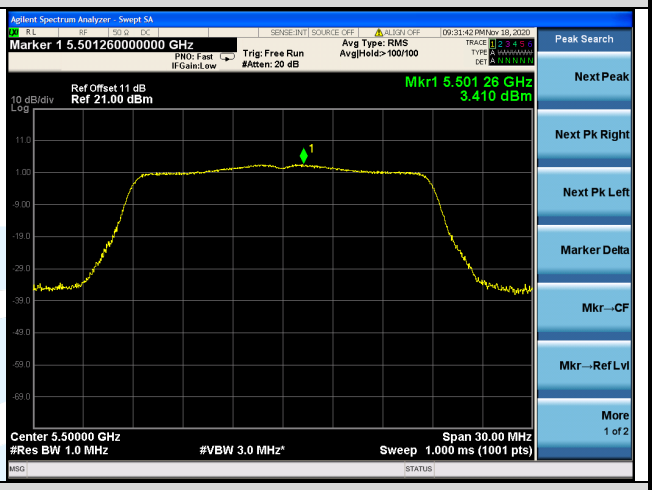
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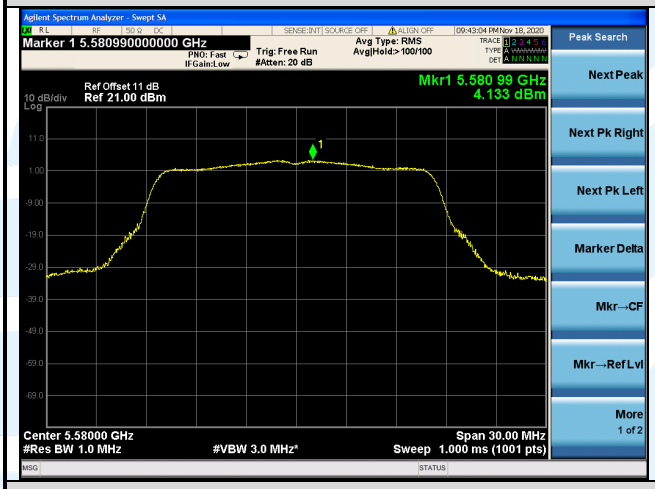	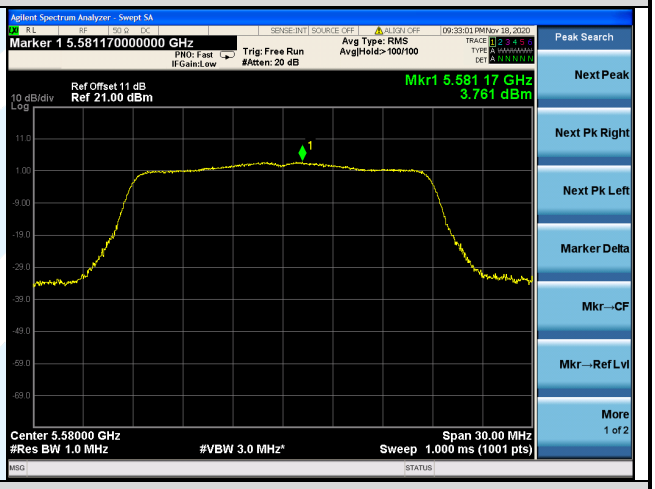
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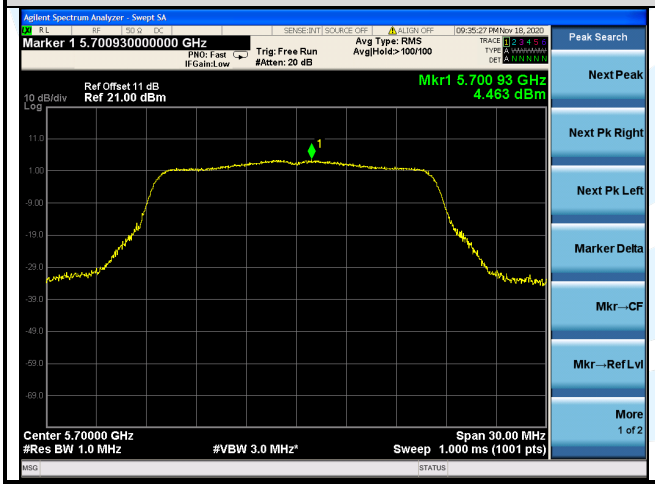	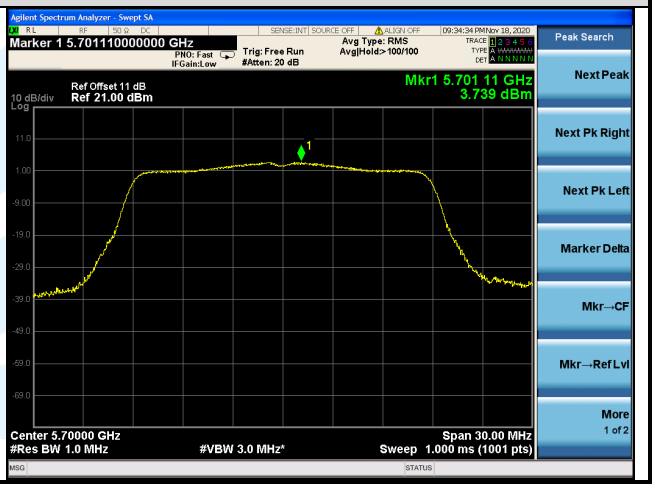

IEEE 802.11a	IEEE 802.11n-HT20
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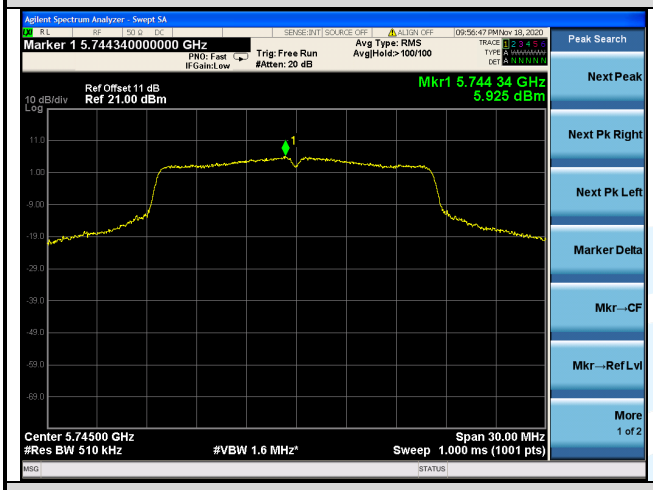	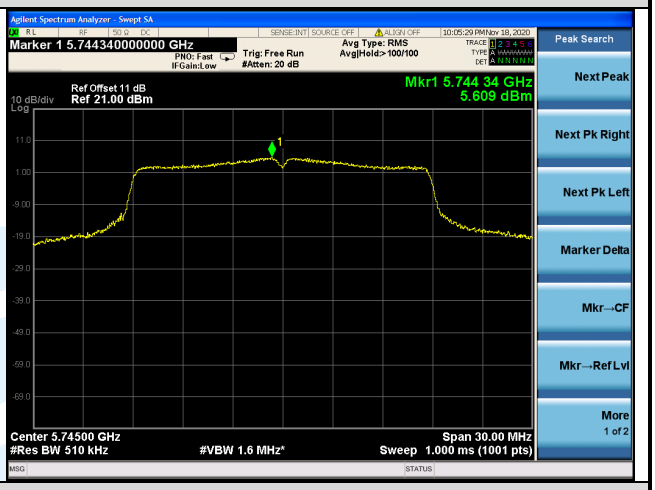
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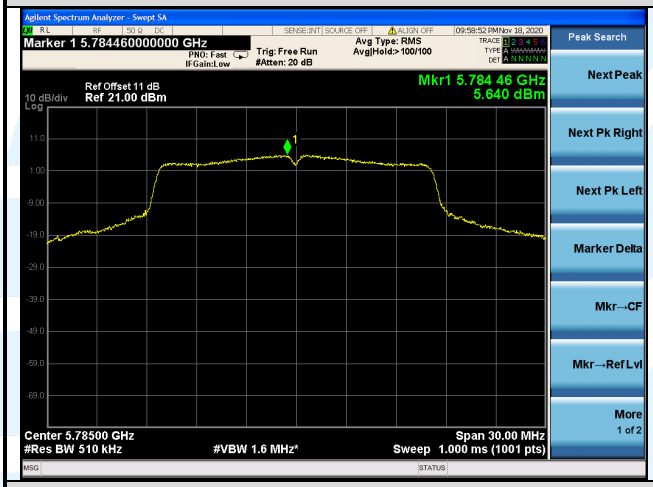	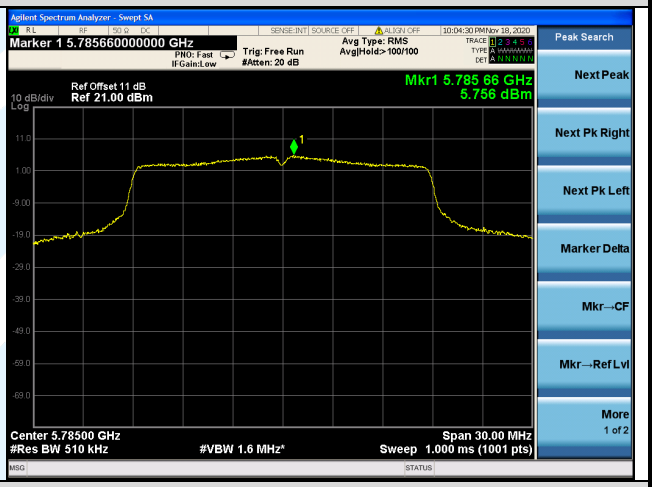
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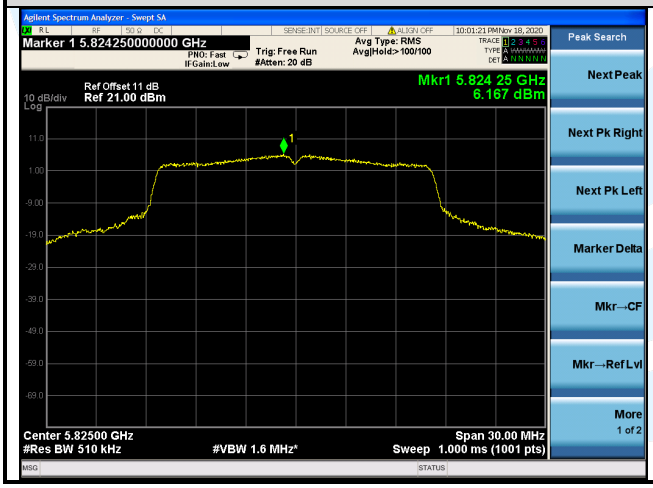
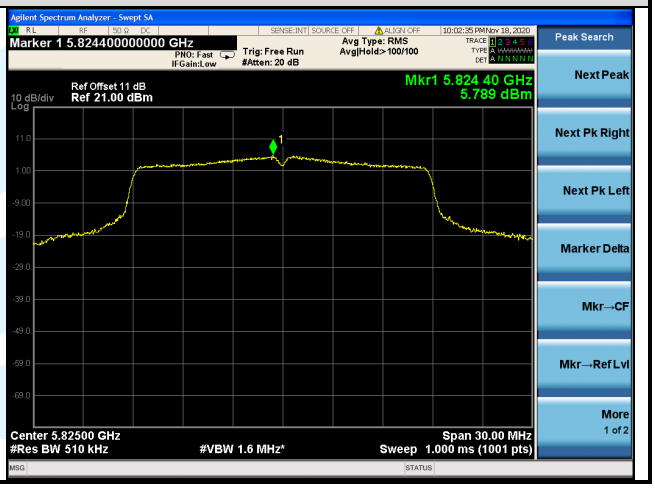
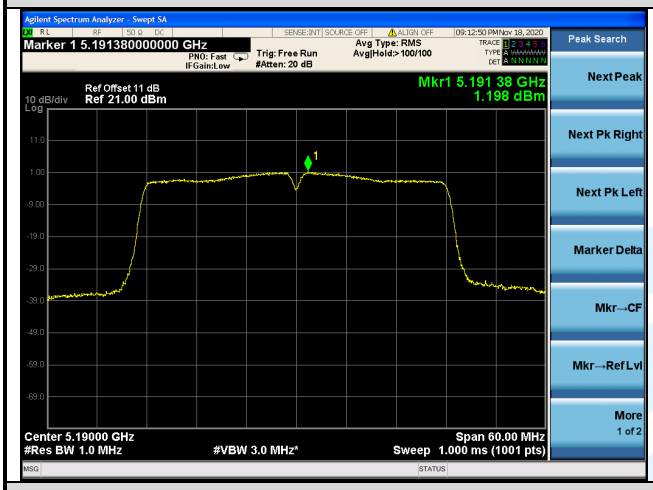
	

IEEE 802.11n-HT40

Channel 38



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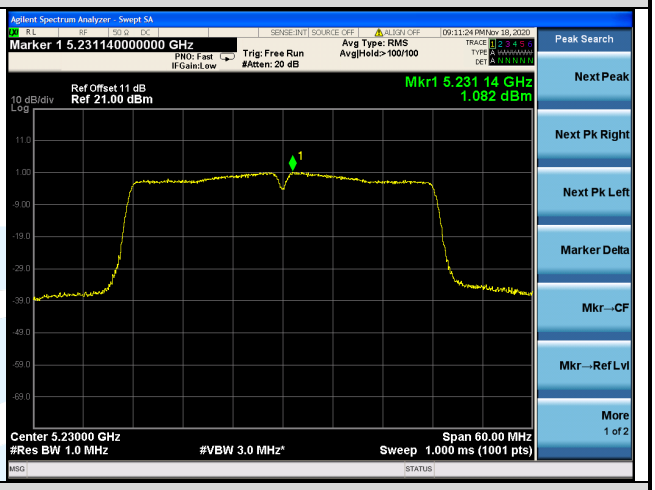

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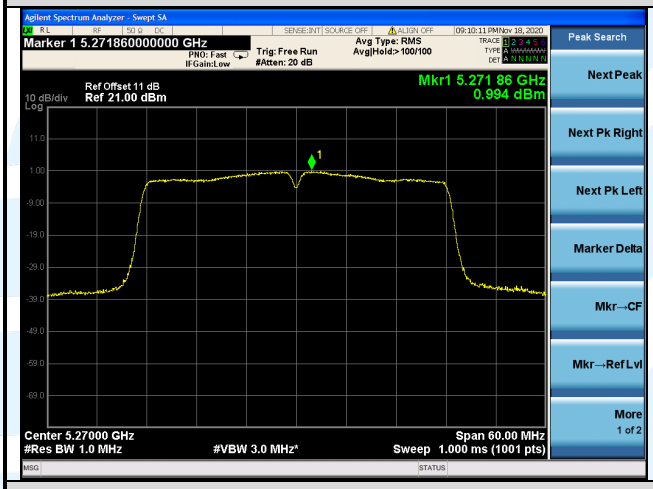

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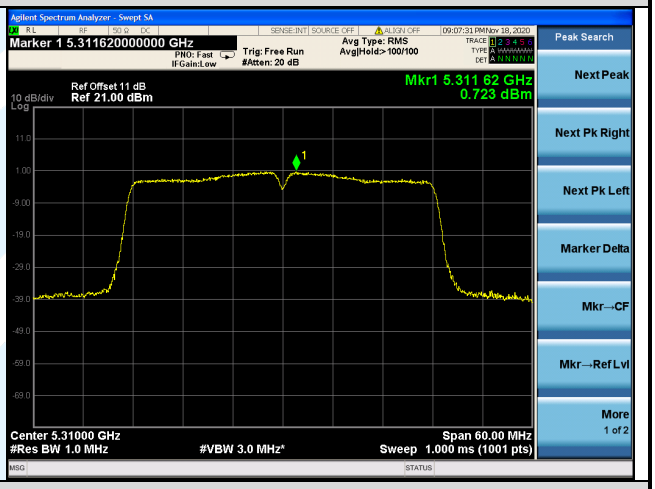
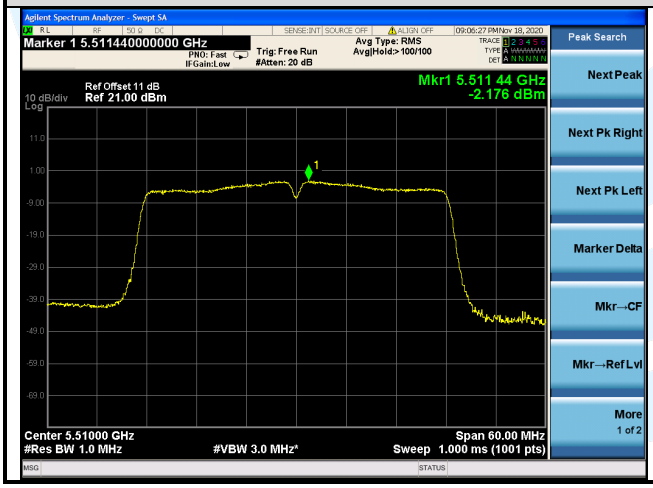
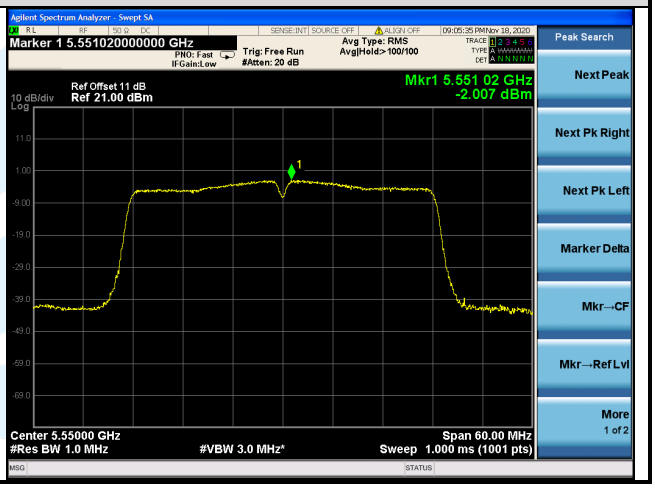


Channel 102



Channel 110



IEEE 802.11n-HT40

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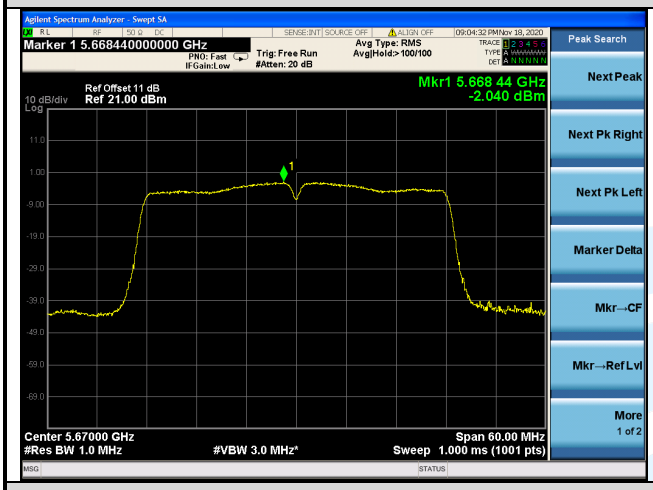
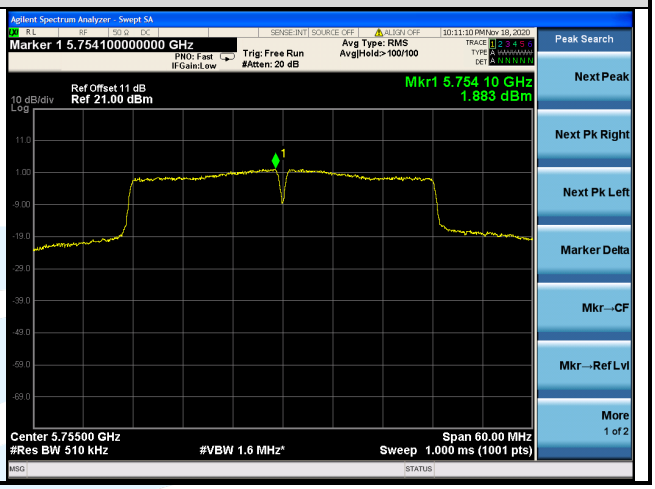
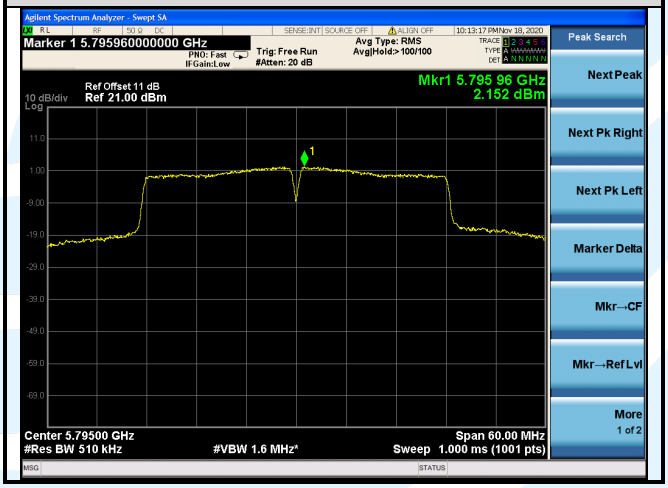
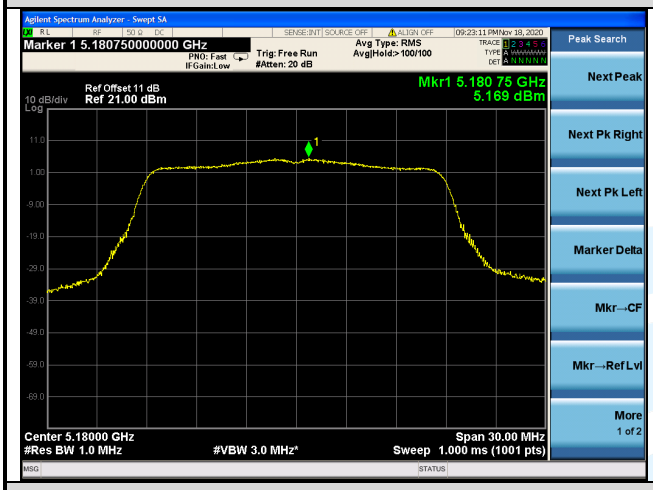
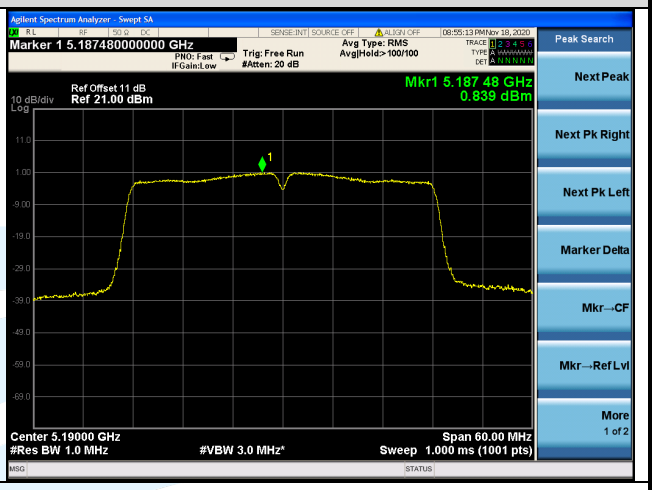


Channel 151



Channel 159



IEEE 802.11ac-VHT20	IEEE 802.11ac-VHT40
Channel 36	Channel 38
	
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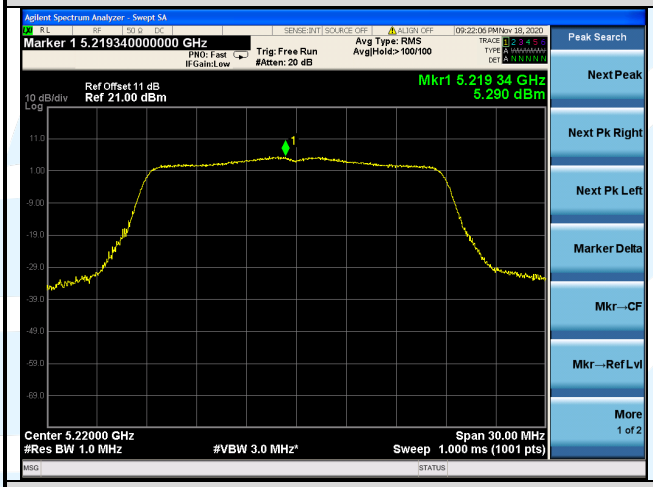	
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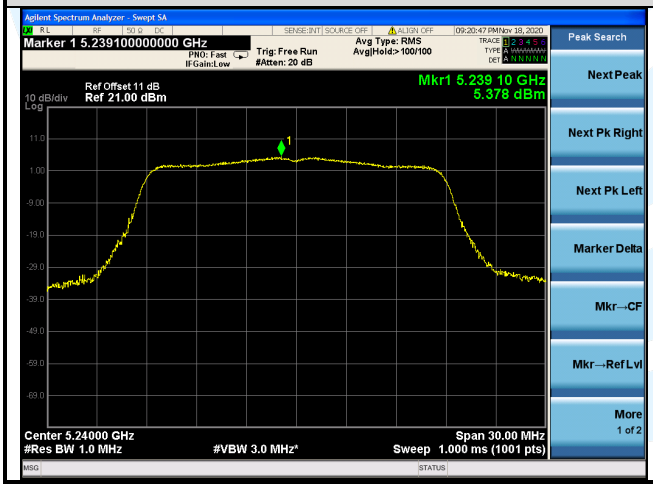
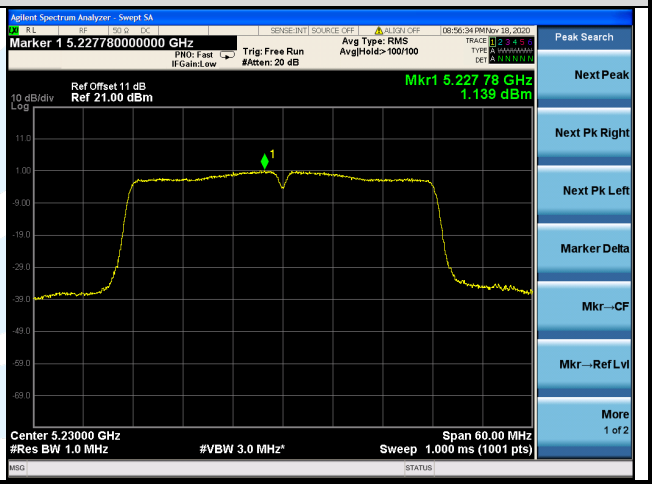
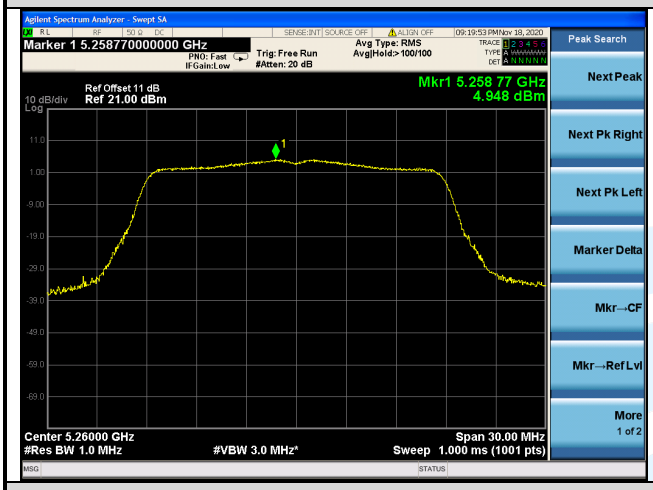
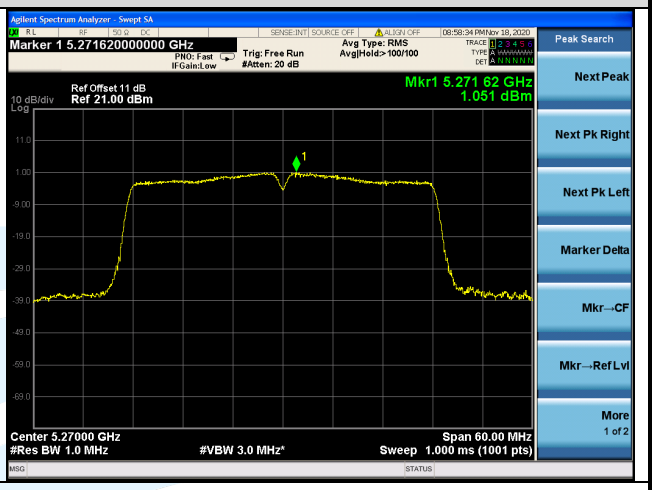
	

IEEE 802.11ac-VHT20	IEEE 802.11ac-VHT40
Channel 52	Channel 54
	
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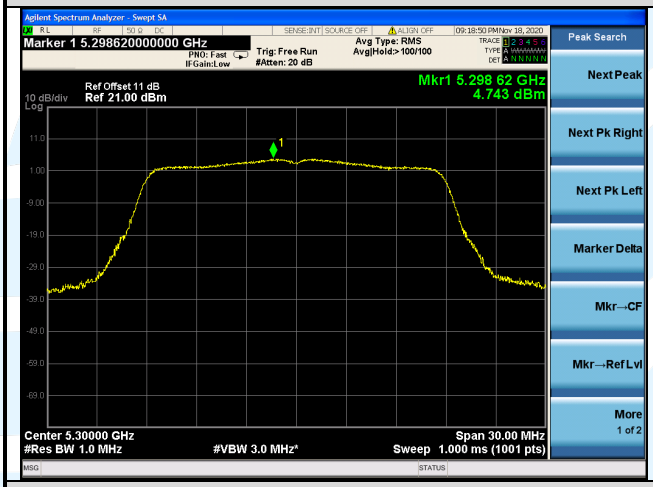
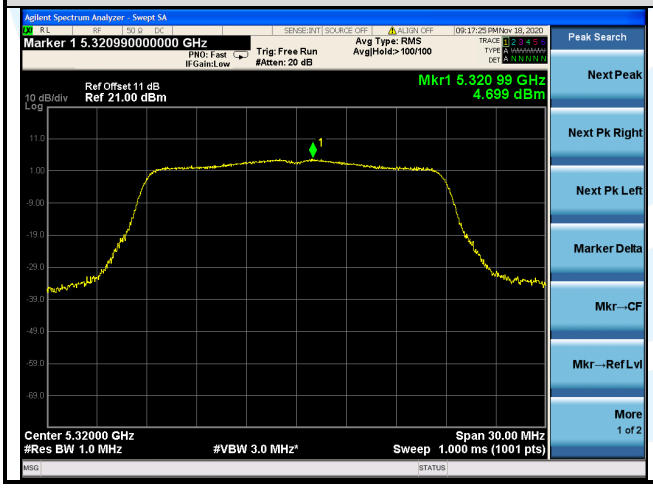
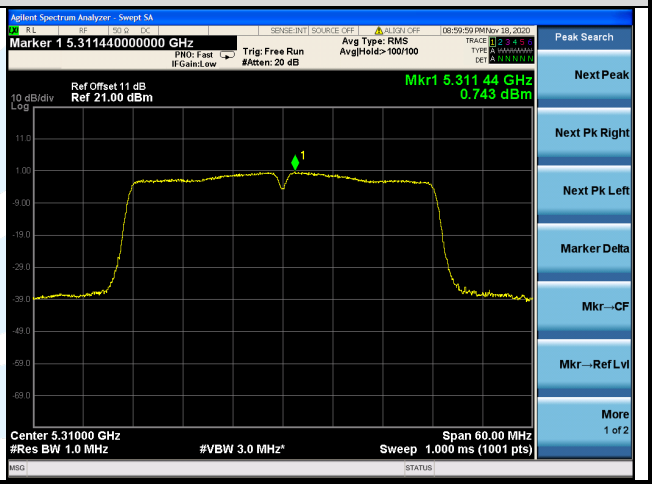
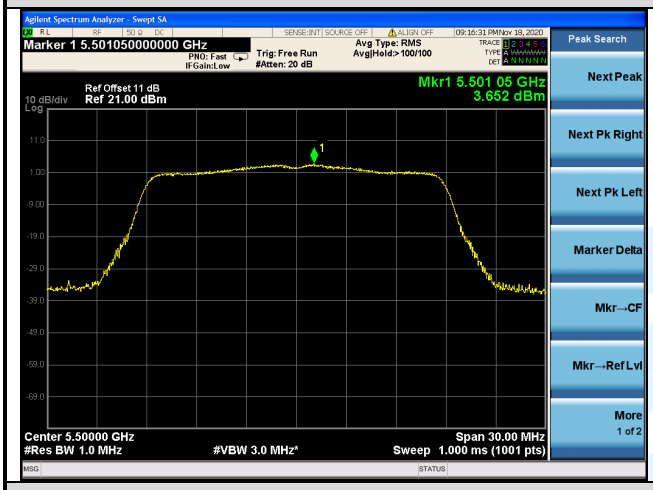
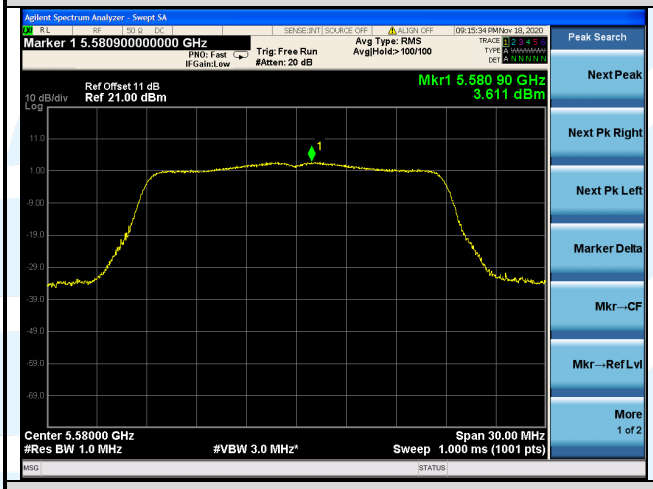
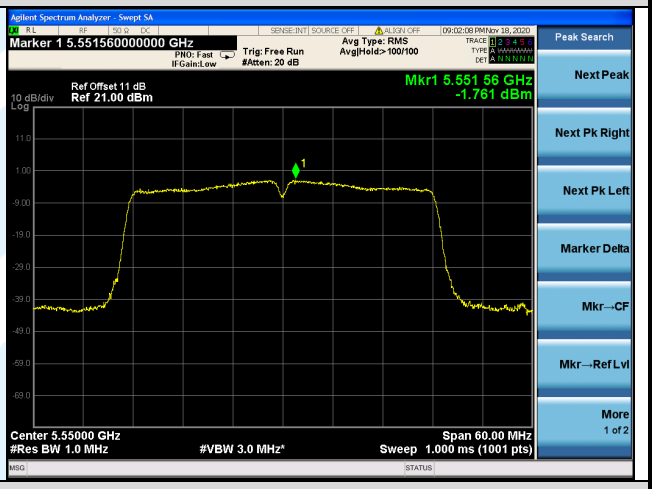
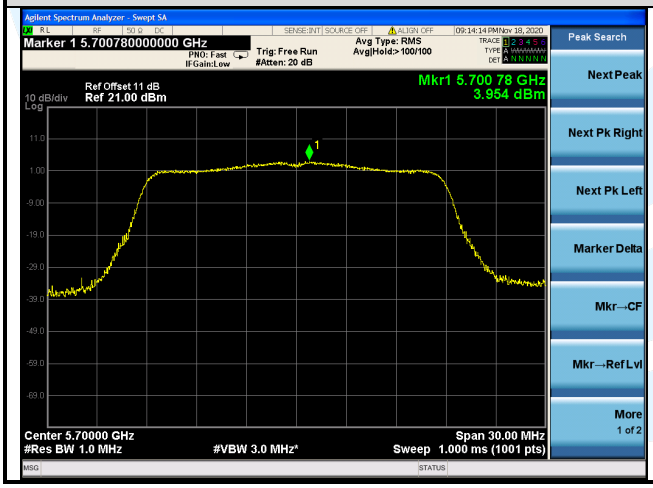
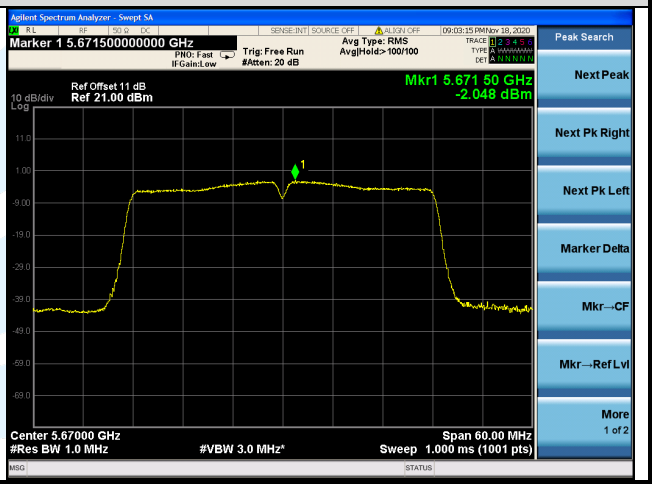
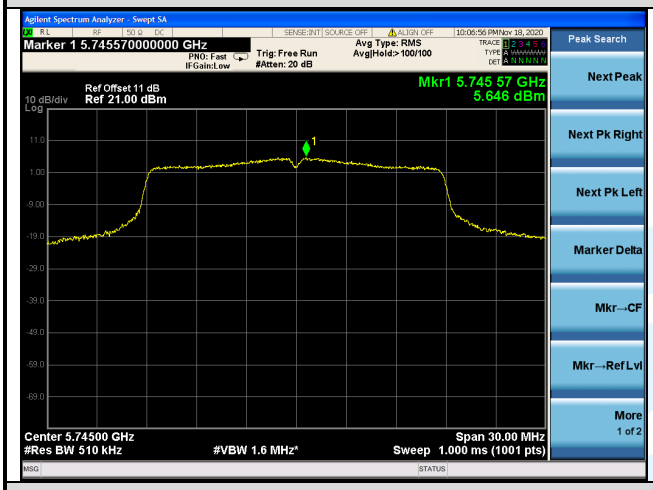
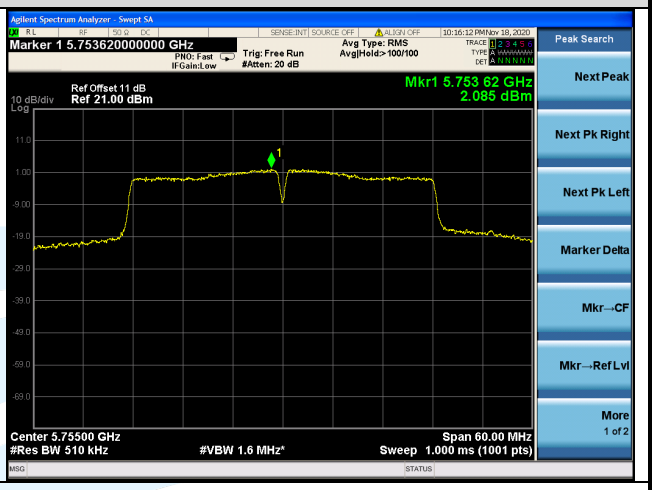
	/
Channel 64	Channel 62
	

IEEE 802.11ac-VHT20	IEEE 802.11ac-VHT40
Channel 100	Channel 102
	
Channel 116	Channel 110
	
Channel 140	Channel 134
	

IEEE 802.11ac-VHT20	IEEE 802.11ac-VHT40
Channel 149	Channel 151
	
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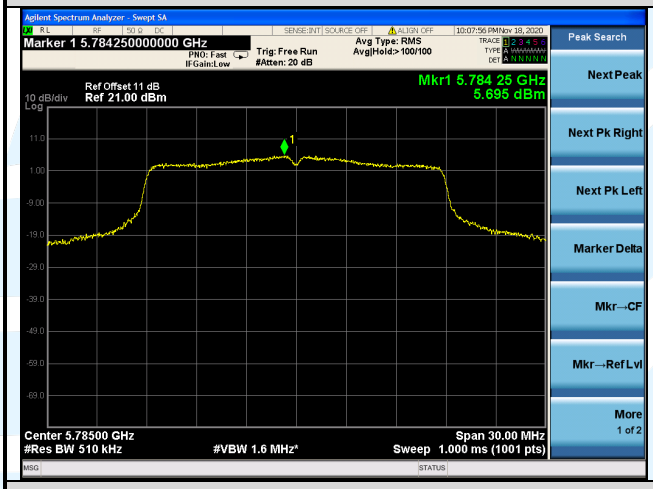
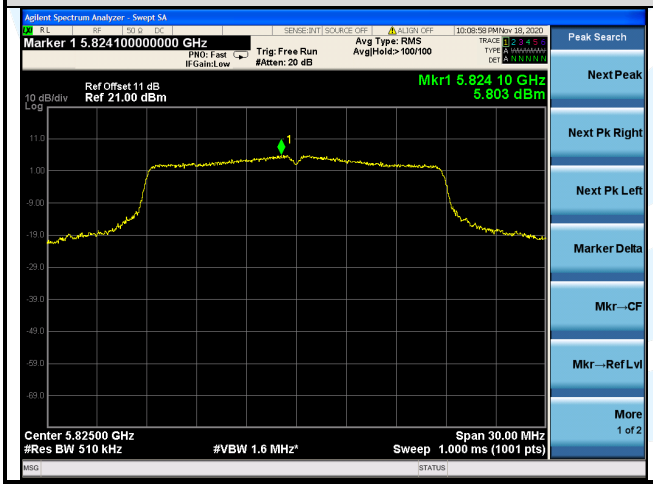
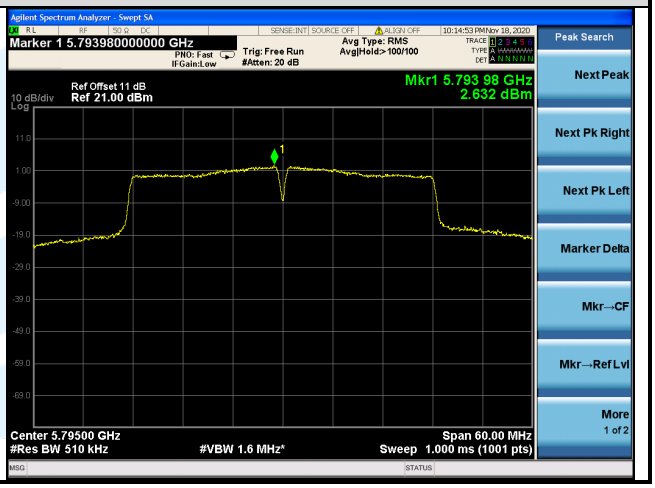
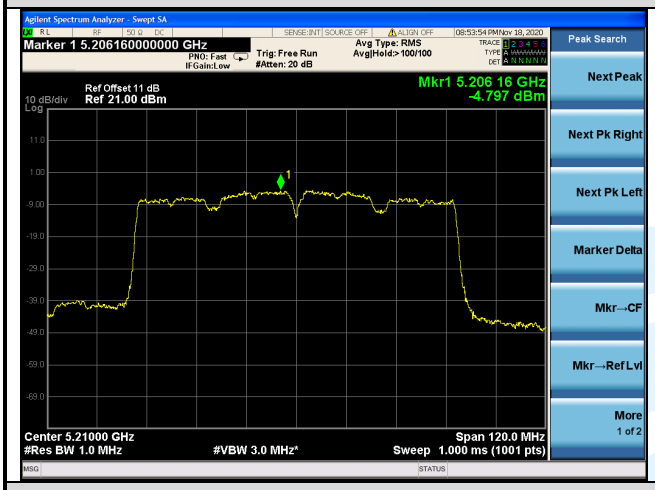
	/
Channel 165	Channel 159
	

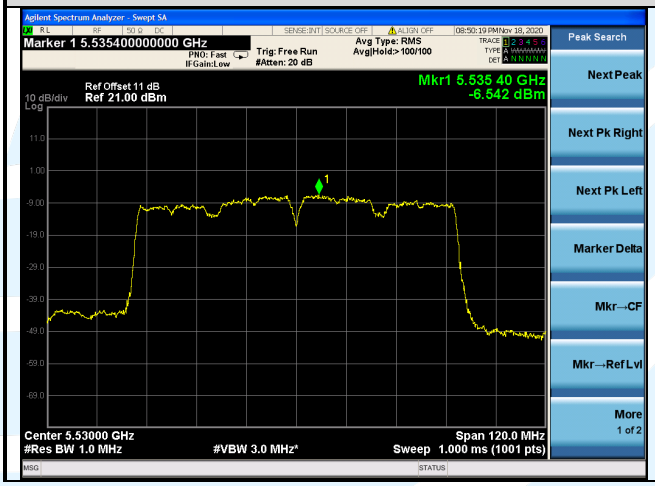
IEEE 802.11ac-VHT80

Channel 42



Channel 58

Channel 106



Channel 155

5.7 RADIATED EMISSIONS AND BAND EDGE MEASUREMENT

Test Requirement: FCC 47 CFR Part 15 Subpart E Section 15.407 (b)(1)(2)(3)(4)(6)
FCC 47 CFR Part 15 Subpart C Section 15.209/205
RSS-247 Issue 2 Section 6.2.1.2/6.2.2.2/6.2.3.2/6.2.4.2

Test Method: KDB 789033 D02 v02r01 Section G.3, G.4, G.5, and G.6

Receiver Setup:

Frequency	RBW
0.009 MHz-0.150 MHz	200/300 kHz
0.150 MHz -30 MHz	9/10 kHz
30 MHz-1 GHz	100/120 kHz
Above 1 GHz	1 MHz

Limits:

1. Limits of Radiated Emission and Band edge Measurement

Radiated emissions that fall in the restricted bands must comply with the general emissions limits in 15.209(a) as below table. Other emissions shall be at least 20 dB below the highest level of the desired power.

Frequency	Field strength (microvolt/meter)	Limit (dBμV/m)	Remark	Measurement distance (m)
0.009 MHz-0.490 MHz	2400/F(kHz)	--	--	300
0.490 MHz-1.705 MHz	24000/F(kHz)	--	--	30
1.705 MHz-30 MHz	30	--	--	30
30 MHz-88 MHz	100	40.0	Quasi-peak	3
88 MHz-216 MHz	150	43.5	Quasi-peak	3
216 MHz-960 MHz	200	46.0	Quasi-peak	3
960MHz-1GHz	500	54.0	Quasi-peak	3
Above 1 GHz	500	54.0	Average	3

Remark:

a. The lower limit shall apply at the transition frequencies.
b. Emission level (dBuV/m) = 20 log Emission level (uV/m).
c. For frequencies above 1000 MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20 dB under any condition of modulation.

2. Limits of Unwanted Emission Out of the Restricted Bands

Applicable To	Limit	
789033 D02 General U-NII Test Procedures New Rules v01r04	Field Strength at 3 m	
	PK: 74 (dBμV/m)	AV: 54 (dBμV/m)
Applicable To	EIRP Limit	Equivalent Field Strength at 3 m
RSS-247 Issue 2 Section 6.2.1.2	PK: -27 (dBm/MHz)	PK: 74 (dBμV/m)
RSS-247 Issue 2 Section 6.2.2.2	PK: -27 (dBm/MHz)	PK: 74 (dBμV/m)
RSS-247 Issue 2 Section 6.2.3.2	PK: -27 (dBm/MHz)	PK: 68.2 (dBμV/m)
RSS-247 Issue 2 Section 6.2.4.2	27 dBm/MHz at frequencies from the band edges decreasing linearly to 15.6 dBm/MHz at 5 MHz above or below the band edges;	PK: 68.2 (dBμV/m)
	15.6 dBm/MHz at 5 MHz above or below the band edges decreasing linearly to 10 dBm/MHz at 25 MHz above or below the band edges;	
	10 dBm/MHz at 25 MHz above or below the band edges decreasing linearly to -27 dBm/MHz at 75 MHz above or below the band edges;	
	-27 dBm/MHz at frequencies more than 75 MHz above or below the band edges.	

Test Setup: Refer to section 4.5.1 for details.

Test Procedures:

1. The EUT was placed on the top of a rotating table 0.8 meters (for below 1 GHz) / 1.5 meters (for above 1 GHz) above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
2. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
3. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
5. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.
6. The test-receiver system was set to peak and average detected function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

Remark:

a) The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 kHz for Quasi-peak detection (QP) at frequency below 1 GHz.
b) The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1 GHz.
c) The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for RMS Average (Duty cycle < 98 %) for Average detection (AV) at frequency above 1 GHz, then the measurement results was added to a correction factor (10 log(1/duty cycle)).
d) The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 10 Hz (Duty cycle ≥ 98 %) or ≥ 1/T(duty cycle is < 98%) for Average detection (AV) at frequency above 1 GHz.
e) All modes of operation were investigated and the worst-case emissions are reported.

Equipment Used: Refer to section 3 for details.

Test Result: Pass

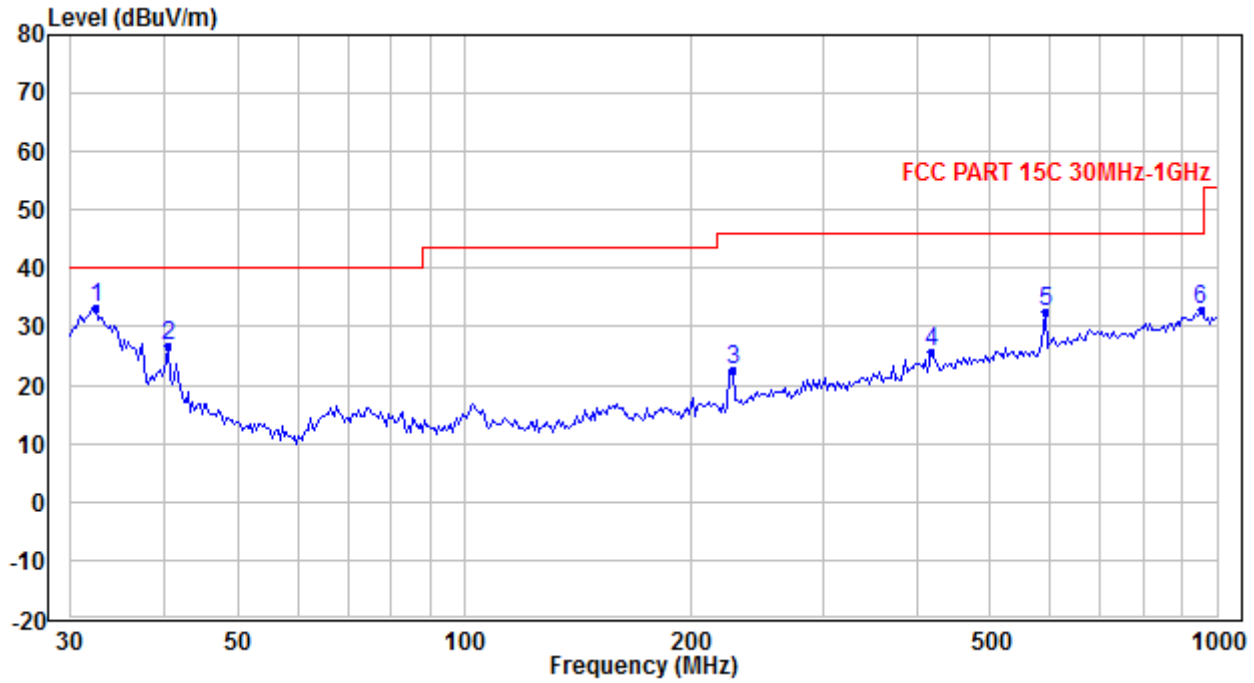
The measurement data as follows:

Radiated Emission Test Data (9 KHz ~ 30 MHz):
The amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required to be report.

Radiated Emission Test Data (30 MHz ~ 1 GHz Worst Case):

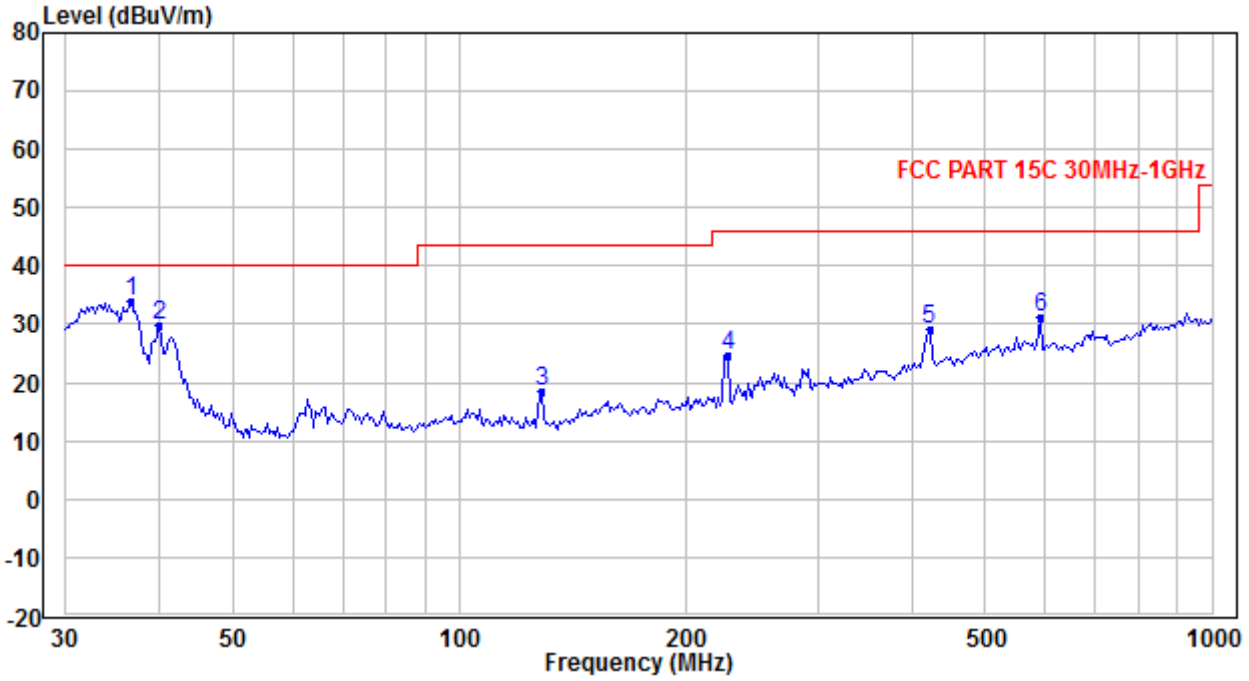
Worst-Case Configuration

Horizontal



No.	Frequency (MHz)	Reading (dBμV/m)	Correction factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	32.411	40.08	-6.66	33.42	40.00	-6.58	QP
2	40.299	37.27	-10.45	26.82	40.00	-13.18	QP
3	227.016	31.12	-8.53	22.59	46.00	-23.41	QP
4	418.378	28.19	-2.45	25.74	46.00	-20.26	QP
5	590.351	32.18	0.56	32.74	46.00	-13.26	QP
6	952.000	26.06	6.79	32.85	46.00	-13.15	QP

Vertical



No.	Frequency (MHz)	Reading (dBμV/m)	Correction factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	36.524	43.26	-9.20	34.06	40.00	-5.94	QP
2	40.017	41.14	-11.34	29.80	40.00	-10.20	QP
3	128.486	31.13	-12.51	18.62	43.50	-24.88	QP
4	227.016	33.26	-8.53	24.73	46.00	-21.27	QP
5	421.329	31.17	-2.10	29.07	46.00	-16.93	QP
6	590.351	30.97	0.21	31.18	46.00	-14.82	QP

Radiated Emission Test Data (Above 1GHz):

IEEE 802.11a_Channel 36

No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	10360.00	42.86	5.58	48.44	74.00	-25.56	Peak	Horizontal
2	10360.00	31.39	5.58	36.97	54.00	-17.03	Average	Horizontal
3	15540.00	40.88	10.97	51.85	74.00	-22.15	Peak	Horizontal
4	15540.00	28.49	10.97	39.46	54.00	-14.54	Average	Horizontal
5	10360.00	44.00	5.74	49.74	74.00	-24.26	Peak	Vertical
6	10360.00	31.18	5.74	36.92	54.00	-17.08	Average	Vertical
7	15540.00	40.85	11.07	51.92	74.00	-22.08	Peak	Vertical
8	15540.00	28.44	11.07	39.51	54.00	-14.49	Average	Vertical

IEEE 802.11a_Channel 44

No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	10440.00	43.14	5.68	48.82	74.00	-25.18	Peak	Horizontal
2	10440.00	31.20	5.68	36.88	54.00	-17.12	Average	Horizontal
3	15660.00	40.57	11.10	51.67	74.00	-22.33	Peak	Horizontal
4	15660.00	28.03	11.10	39.13	54.00	-14.87	Average	Horizontal
5	10440.00	43.27	5.80	49.07	74.00	-24.93	Peak	Vertical
6	10440.00	31.13	5.80	36.93	54.00	-17.07	Average	Vertical
7	15660.00	41.49	11.20	52.69	74.00	-21.31	Peak	Vertical
8	15660.00	28.03	11.20	39.23	54.00	-14.77	Average	Vertical

MIMO IEEE 802.11a_Channel 48

No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	10480.00	43.82	5.72	49.54	74.00	-24.46	Peak	Horizontal
2	10480.00	30.48	5.72	36.20	54.00	-17.80	Average	Horizontal
3	15720.00	40.35	11.18	51.53	74.00	-22.47	Peak	Horizontal
4	15720.00	27.89	11.18	39.07	54.00	-14.93	Average	Horizontal
5	10480.00	41.50	5.83	47.33	74.00	-26.67	Peak	Vertical
6	10480.00	30.38	5.83	36.21	54.00	-17.79	Average	Vertical
7	15720.00	38.18	11.28	49.46	74.00	-24.54	Peak	Vertical
8	15720.00	27.83	11.28	39.11	54.00	-14.89	Average	Vertical

IEEE 802.11a_Channel 52

No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	10520.00	44.44	5.72	50.16	74.00	-23.84	Peak	Horizontal
2	10520.00	30.48	5.72	36.20	54.00	-17.80	Average	Horizontal
3	15780.00	39.92	11.26	51.18	74.00	-22.82	Peak	Horizontal
4	15780.00	27.69	11.26	38.95	54.00	-15.05	Average	Horizontal
5	10520.00	43.81	5.83	49.64	74.00	-24.36	Peak	Vertical
6	10520.00	30.29	5.83	36.12	54.00	-17.88	Average	Vertical
7	15780.00	39.89	11.36	51.25	74.00	-22.75	Peak	Vertical
8	15780.00	27.69	11.36	39.05	54.00	-14.95	Average	Vertical

IEEE 802.11a_Channel 60

No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	10600.00	43.43	5.66	49.09	74.00	-24.91	Peak	Horizontal
2	10600.00	30.08	5.66	35.74	54.00	-18.26	Average	Horizontal
3	15900.00	41.01	11.41	52.42	74.00	-21.58	Peak	Horizontal
4	15900.00	28.12	11.41	39.53	54.00	-14.47	Average	Horizontal
5	10600.00	43.19	5.78	48.97	74.00	-25.03	Peak	Vertical
6	10600.00	29.99	5.78	35.77	54.00	-18.23	Average	Vertical
7	15900.00	40.41	11.51	51.92	74.00	-22.08	Peak	Vertical
8	15900.00	28.12	11.51	39.63	54.00	-14.37	Average	Vertical

IEEE 802.11a_Channel 64

No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	10640.00	42.99	5.63	48.62	74.00	-25.38	Peak	Horizontal
2	10640.00	30.02	5.63	35.65	54.00	-18.35	Average	Horizontal
3	15960.00	39.70	11.47	51.17	74.00	-22.83	Peak	Horizontal
4	15960.00	28.06	11.47	39.53	54.00	-14.47	Average	Horizontal
5	10640.00	42.92	5.76	48.68	74.00	-25.32	Peak	Vertical
6	10640.00	30.10	5.76	35.86	54.00	-18.14	Average	Vertical
7	15960.00	40.60	11.57	52.17	74.00	-21.83	Peak	Vertical
8	15960.00	27.94	11.57	39.51	54.00	-14.49	Average	Vertical

IEEE 802.11a_Channel 100

No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	11000.00	44.40	5.32	49.72	74.00	-24.28	Peak	Horizontal
2	11000.00	31.09	5.32	36.41	54.00	-17.59	Average	Horizontal
3	16500.00	40.05	12.55	52.60	74.00	-21.40	Peak	Horizontal
4	16500.00	28.19	12.55	40.74	54.00	-13.26	Average	Horizontal
5	11000.00	42.30	5.52	47.82	74.00	-26.18	Peak	Vertical
6	11000.00	31.17	5.52	36.69	54.00	-17.31	Average	Vertical
7	16500.00	39.91	12.85	52.76	74.00	-21.24	Peak	Vertical
8	16500.00	28.19	12.85	41.04	54.00	-12.96	Average	Vertical

IEEE 802.11a_Channel 116

No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	11160.00	43.65	5.57	49.22	74.00	-24.78	Peak	Horizontal
2	11160.00	29.44	5.57	35.01	54.00	-18.99	Average	Horizontal
3	16740.00	42.17	12.37	54.54	74.00	-19.46	Peak	Horizontal
4	16740.00	27.82	12.37	40.19	54.00	-13.81	Average	Horizontal
5	11160.00	42.93	5.74	48.67	74.00	-25.33	Peak	Vertical
6	11160.00	29.30	5.74	35.04	54.00	-18.96	Average	Vertical
7	16740.00	41.50	12.63	54.13	74.00	-19.87	Peak	Vertical
8	16740.00	27.88	12.63	40.51	54.00	-13.49	Average	Vertical

IEEE 802.11a_Channel 140

No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	11400.00	42.87	5.93	48.80	74.00	-25.20	Peak	Horizontal
2	11400.00	31.15	5.93	37.08	54.00	-16.92	Average	Horizontal
3	17100.00	40.30	12.50	52.80	74.00	-21.20	Peak	Horizontal
4	17100.00	27.19	12.50	39.69	54.00	-14.31	Average	Horizontal
5	11400.00	42.11	6.05	48.16	74.00	-25.84	Peak	Vertical
6	11400.00	30.99	6.05	37.04	54.00	-16.96	Average	Vertical
7	17100.00	41.39	12.66	54.05	74.00	-19.95	Peak	Vertical
8	17100.00	27.07	12.66	39.73	54.00	-14.27	Average	Vertical

IEEE 802.11a_Channel 149

No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	11490.00	43.52	6.07	49.59	74.00	-24.41	Peak	Horizontal
2	11490.00	31.04	6.07	37.11	54.00	-16.89	Average	Horizontal
3	17235.00	39.90	12.94	52.84	74.00	-21.16	Peak	Horizontal
4	17235.00	27.39	12.94	40.33	54.00	-13.67	Average	Horizontal
5	11490.00	43.47	6.17	49.64	74.00	-24.36	Peak	Vertical
6	11490.00	30.97	6.17	37.14	54.00	-16.86	Average	Vertical
7	17235.00	39.48	13.04	52.52	74.00	-21.48	Peak	Vertical
8	17235.00	27.44	13.04	40.48	54.00	-13.52	Average	Vertical

IEEE 802.11a_Channel 157

No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	11570.00	44.97	6.29	51.26	74.00	-22.74	Peak	Horizontal
2	11570.00	32.60	6.29	38.89	54.00	-15.11	Average	Horizontal
3	17355.00	40.04	13.32	53.36	74.00	-20.64	Peak	Horizontal
4	17355.00	28.06	13.32	41.38	54.00	-12.62	Average	Horizontal
5	11570.00	43.52	6.42	49.94	74.00	-24.06	Peak	Vertical
6	11570.00	29.56	6.42	35.98	54.00	-18.02	Average	Vertical
7	17355.00	39.60	13.38	52.98	74.00	-21.02	Peak	Vertical
8	17355.00	28.10	13.38	41.48	54.00	-12.52	Average	Vertical

IEEE 802.11a_Channel 165

No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	11650.00	42.64	6.52	49.16	74.00	-24.84	Peak	Horizontal
2	11650.00	30.39	6.52	36.91	54.00	-17.09	Average	Horizontal
3	17475.00	39.63	13.71	53.34	74.00	-20.66	Peak	Horizontal
4	17475.00	27.46	13.71	41.17	54.00	-12.83	Average	Horizontal
5	11650.00	42.25	6.68	48.93	74.00	-25.07	Peak	Vertical
6	11650.00	30.53	6.68	37.21	54.00	-16.79	Average	Vertical
7	17475.00	39.17	13.73	52.90	74.00	-21.10	Peak	Vertical
8	17475.00	27.32	13.73	41.05	54.00	-12.95	Average	Vertical

IEEE 802.11n-HT20_Channel 36

No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	10360.00	44.14	5.58	49.72	74.00	-24.28	Peak	Horizontal
2	10360.00	31.23	5.58	36.81	54.00	-17.19	Average	Horizontal
3	15540.00	41.70	10.97	52.67	74.00	-21.33	Peak	Horizontal
4	15540.00	28.16	10.97	39.13	54.00	-14.87	Average	Horizontal
5	10360.00	42.91	5.74	48.65	74.00	-25.35	Peak	Vertical
6	10360.00	30.98	5.74	36.72	54.00	-17.28	Average	Vertical
7	15540.00	41.51	16.49	58.00	74.00	-16.00	Peak	Vertical
8	15540.00	22.80	16.49	39.29	54.00	-14.71	Average	Vertical

IEEE 802.11n-HT20_Channel 44

No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	10440.00	44.75	5.68	50.43	74.00	-23.57	Peak	Horizontal
2	10440.00	30.96	5.68	36.64	54.00	-17.36	Average	Horizontal
3	15660.00	40.95	11.10	52.05	74.00	-21.95	Peak	Horizontal
4	15660.00	27.91	11.10	39.01	54.00	-14.99	Average	Horizontal
5	10440.00	42.93	5.80	48.73	74.00	-25.27	Peak	Vertical
6	10440.00	31.04	5.80	36.84	54.00	-17.16	Average	Vertical
7	15660.00	41.40	11.20	52.60	74.00	-21.40	Peak	Vertical
8	15660.00	27.85	11.20	39.05	54.00	-14.95	Average	Vertical

IEEE 802.11n-HT20_Channel 48

No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	10480.00	43.82	5.72	49.54	74.00	-24.46	Peak	Horizontal
2	10480.00	31.43	5.72	37.15	54.00	-16.85	Average	Horizontal
3	15720.00	42.55	11.18	53.73	74.00	-20.27	Peak	Horizontal
4	15720.00	28.71	11.18	39.89	54.00	-14.11	Average	Horizontal
5	10480.00	42.89	5.83	48.72	74.00	-25.28	Peak	Vertical
6	10480.00	30.25	5.83	36.08	54.00	-17.92	Average	Vertical
7	15720.00	40.66	11.28	51.94	74.00	-22.06	Peak	Vertical
8	15720.00	27.77	11.28	39.05	54.00	-14.95	Average	Vertical

IEEE 802.11n-HT20_Channel 52

No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	10520.00	42.94	5.72	48.66	74.00	-25.34	Peak	Horizontal
2	10520.00	30.43	5.72	36.15	54.00	-17.85	Average	Horizontal
3	15780.00	40.98	11.26	52.24	74.00	-21.76	Peak	Horizontal
4	15780.00	27.75	11.26	39.01	54.00	-14.99	Average	Horizontal
5	10520.00	43.94	5.83	49.77	74.00	-24.23	Peak	Vertical
6	10520.00	30.47	5.83	36.30	54.00	-17.70	Average	Vertical
7	15780.00	40.26	11.36	51.62	74.00	-22.38	Peak	Vertical
8	15780.00	27.81	11.36	39.17	54.00	-14.83	Average	Vertical

IEEE 802.11n-HT20_Channel 60

No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	10600.00	44.51	5.66	50.17	74.00	-23.83	Peak	Horizontal
2	10600.00	32.30	5.66	37.96	54.00	-16.04	Average	Horizontal
3	15900.00	41.36	11.41	52.77	74.00	-21.23	Peak	Horizontal
4	15900.00	28.23	11.41	39.64	54.00	-14.36	Average	Horizontal
5	10600.00	43.08	5.78	48.86	74.00	-25.14	Peak	Vertical
6	10600.00	31.99	5.78	37.77	54.00	-16.23	Average	Vertical
7	15900.00	42.52	11.51	54.03	74.00	-19.97	Peak	Vertical
8	15900.00	28.28	11.51	39.79	54.00	-14.21	Average	Vertical

IEEE 802.11n-HT20_Channel 64

No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	10640.00	44.54	5.63	50.17	74.00	-23.83	Peak	Horizontal
2	10640.00	32.20	5.63	37.83	54.00	-16.17	Average	Horizontal
3	15960.00	42.08	11.47	53.55	74.00	-20.45	Peak	Horizontal
4	15960.00	28.11	11.47	39.58	54.00	-14.42	Average	Horizontal
5	10640.00	43.76	5.76	49.52	74.00	-24.48	Peak	Vertical
6	10640.00	32.06	5.76	37.82	54.00	-16.18	Average	Vertical
7	15960.00	41.63	11.57	53.20	74.00	-20.80	Peak	Vertical
8	15960.00	28.28	11.57	39.85	54.00	-14.15	Average	Vertical

IEEE 802.11n-HT20_Channel 100

No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	11000.00	44.23	5.32	49.55	74.00	-24.45	Peak	Horizontal
2	11000.00	32.09	5.32	37.41	54.00	-16.59	Average	Horizontal
3	16500.00	40.51	12.55	53.06	74.00	-20.94	Peak	Horizontal
4	16500.00	28.24	12.55	40.79	54.00	-13.21	Average	Horizontal
5	11000.00	44.39	5.52	49.91	74.00	-24.09	Peak	Vertical
6	11000.00	32.00	5.52	37.52	54.00	-16.48	Average	Vertical
7	16500.00	40.00	12.85	52.85	74.00	-21.15	Peak	Vertical
8	16500.00	28.19	12.85	41.04	54.00	-12.96	Average	Vertical

IEEE 802.11n-HT20_Channel 116

No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	11160.00	44.73	5.57	50.30	74.00	-23.70	Peak	Horizontal
2	11160.00	29.34	5.57	34.91	54.00	-19.09	Average	Horizontal
3	16740.00	40.73	12.37	53.10	74.00	-20.90	Peak	Horizontal
4	16740.00	28.82	12.37	41.19	54.00	-12.81	Average	Horizontal
5	11160.00	43.55	5.74	49.29	74.00	-24.71	Peak	Vertical
6	11160.00	29.20	5.74	34.94	54.00	-19.06	Average	Vertical
7	16740.00	40.61	12.63	53.24	74.00	-20.76	Peak	Vertical
8	16740.00	27.76	12.63	40.39	54.00	-13.61	Average	Vertical

IEEE 802.11n-HT20_Channel 140

No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	11400.00	43.12	5.93	49.05	74.00	-24.95	Peak	Horizontal
2	11400.00	31.11	5.93	37.04	54.00	-16.96	Average	Horizontal
3	17100.00	41.59	12.50	54.09	74.00	-19.91	Peak	Horizontal
4	17100.00	27.25	12.50	39.75	54.00	-14.25	Average	Horizontal
5	11400.00	43.72	6.05	49.77	74.00	-24.23	Peak	Vertical
6	11400.00	31.07	6.05	37.12	54.00	-16.88	Average	Vertical
7	17100.00	41.38	12.66	54.04	74.00	-19.96	Peak	Vertical
8	17100.00	29.13	12.66	41.79	54.00	-12.21	Average	Vertical

IEEE 802.11n-HT20_Channel 149

No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	11490.00	43.96	6.07	50.03	74.00	-23.97	Peak	Horizontal
2	11490.00	30.88	6.07	36.95	54.00	-17.05	Average	Horizontal
3	17235.00	40.90	12.94	53.84	74.00	-20.16	Peak	Horizontal
4	17235.00	27.45	12.94	40.39	54.00	-13.61	Average	Horizontal
5	11490.00	43.96	6.17	50.13	74.00	-23.87	Peak	Vertical
6	11490.00	30.97	6.17	37.14	54.00	-16.86	Average	Vertical
7	17235.00	40.99	13.04	54.03	74.00	-19.97	Peak	Vertical
8	17235.00	27.31	13.04	40.35	54.00	-13.65	Average	Vertical

IEEE 802.11n-HT20_Channel 157

No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	11570.00	44.08	6.29	50.37	74.00	-23.63	Peak	Horizontal
2	11570.00	29.60	6.29	35.89	54.00	-18.11	Average	Horizontal
3	17355.00	40.47	13.32	53.79	74.00	-20.21	Peak	Horizontal
4	17355.00	28.06	13.32	41.38	54.00	-12.62	Average	Horizontal
5	11570.00	43.69	6.42	50.11	74.00	-23.89	Peak	Vertical
6	11570.00	32.51	6.42	38.93	54.00	-15.07	Average	Vertical
7	17355.00	40.60	13.38	53.98	74.00	-20.02	Peak	Vertical
8	17355.00	28.05	13.38	41.43	54.00	-12.57	Average	Vertical

IEEE 802.11n-HT20_Channel 165

No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	11650.00	41.81	6.52	48.33	74.00	-25.67	Peak	Horizontal
2	11650.00	30.44	6.52	36.96	54.00	-17.04	Average	Horizontal
3	17475.00	39.49	13.71	53.20	74.00	-20.80	Peak	Horizontal
4	17475.00	27.40	13.71	41.11	54.00	-12.89	Average	Horizontal
5	11650.00	43.65	6.68	50.33	74.00	-23.67	Peak	Vertical
6	11650.00	30.48	6.68	37.16	54.00	-16.84	Average	Vertical
7	17475.00	38.70	13.73	52.43	74.00	-21.57	Peak	Vertical
8	17475.00	27.44	13.73	41.17	54.00	-12.83	Average	Vertical

IEEE 802.11n-HT40_Channel 38

No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	10380.00	43.28	5.60	48.88	74.00	-25.12	Peak	Horizontal
2	10380.00	31.05	5.60	36.65	54.00	-17.35	Average	Horizontal
3	15570.00	40.60	10.99	51.59	74.00	-22.41	Peak	Horizontal
4	15570.00	28.20	10.99	39.19	54.00	-14.81	Average	Horizontal
5	10380.00	42.97	5.75	48.72	74.00	-25.28	Peak	Vertical
6	10380.00	30.97	5.75	36.72	54.00	-17.28	Average	Vertical
7	15570.00	40.77	11.09	51.86	74.00	-22.14	Peak	Vertical
8	15570.00	28.14	11.09	39.23	54.00	-14.77	Average	Vertical

IEEE 802.11n-HT40_Channel 46

No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	10460.00	43.82	5.70	49.52	74.00	-24.48	Peak	Horizontal
2	10460.00	31.22	5.70	36.92	54.00	-17.08	Average	Horizontal
3	15690.00	41.67	11.15	52.82	74.00	-21.18	Peak	Horizontal
4	15690.00	28.37	11.15	39.52	54.00	-14.48	Average	Horizontal
5	10460.00	44.54	5.82	50.36	74.00	-23.64	Peak	Vertical
6	10460.00	31.23	5.82	37.05	54.00	-16.95	Average	Vertical
7	15690.00	40.15	11.25	51.40	74.00	-22.60	Peak	Vertical
8	15690.00	28.37	11.25	39.62	54.00	-14.38	Average	Vertical

IEEE 802.11n-HT40_Channel 54

No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	10540.00	45.04	5.71	50.75	74.00	-23.25	Peak	Horizontal
2	10540.00	30.30	5.71	36.01	54.00	-17.99	Average	Horizontal
3	15810.00	41.65	11.29	52.94	74.00	-21.06	Peak	Horizontal
4	15810.00	27.95	11.29	39.24	54.00	-14.76	Average	Horizontal
5	10540.00	44.54	5.82	50.36	74.00	-23.64	Peak	Vertical
6	10540.00	30.22	5.82	36.04	54.00	-17.96	Average	Vertical
7	15810.00	42.15	11.39	53.54	74.00	-20.46	Peak	Vertical
8	15810.00	28.01	11.39	39.40	54.00	-14.60	Average	Vertical

IEEE 802.11n-HT40_Channel 62

No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	10620.00	44.79	5.64	50.43	74.00	-23.57	Peak	Horizontal
2	10620.00	30.75	5.64	36.39	54.00	-17.61	Average	Horizontal
3	15930.00	41.13	11.45	52.58	74.00	-21.42	Peak	Horizontal
4	15930.00	27.36	11.45	38.81	54.00	-15.19	Average	Horizontal
5	10620.00	44.75	5.77	50.52	74.00	-23.48	Peak	Vertical
6	10620.00	30.45	5.77	36.22	54.00	-17.78	Average	Vertical
7	15930.00	41.77	11.55	53.32	74.00	-20.68	Peak	Vertical
8	15930.00	27.84	11.55	39.39	54.00	-14.61	Average	Vertical

IEEE 802.11n-HT40_Channel 102

No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	11020.00	44.99	5.35	50.34	74.00	-23.66	Peak	Horizontal
2	11020.00	31.02	5.35	36.37	54.00	-17.63	Average	Horizontal
3	16530.00	39.80	12.54	52.34	74.00	-21.66	Peak	Horizontal
4	16530.00	27.62	12.54	40.16	54.00	-13.84	Average	Horizontal
5	11020.00	45.36	5.54	50.90	74.00	-23.10	Peak	Vertical
6	11020.00	33.07	5.54	38.61	54.00	-15.39	Average	Vertical
7	16530.00	40.87	12.83	53.70	74.00	-20.30	Peak	Vertical
8	16530.00	27.62	12.83	40.45	54.00	-13.55	Average	Vertical

IEEE 802.11n-HT40_Channel 110

No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	11100.00	43.41	5.47	48.88	74.00	-25.12	Peak	Horizontal
2	11100.00	32.29	5.47	37.76	54.00	-16.24	Average	Horizontal
3	16650.00	40.46	12.44	52.90	74.00	-21.10	Peak	Horizontal
4	16650.00	28.81	12.44	41.25	54.00	-12.75	Average	Horizontal
5	11100.00	44.72	5.65	50.37	74.00	-23.63	Peak	Vertical
6	11100.00	32.73	5.65	38.38	54.00	-15.62	Average	Vertical
7	16650.00	41.36	12.71	54.07	74.00	-19.93	Peak	Vertical
8	16650.00	27.38	12.71	40.09	54.00	-13.91	Average	Vertical

IEEE 802.11n-HT40_Channel 134

No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	11340.00	44.85	5.84	50.69	74.00	-23.31	Peak	Horizontal
2	11340.00	30.12	5.84	35.96	54.00	-18.04	Average	Horizontal
3	17010.00	42.08	12.21	54.29	74.00	-19.71	Peak	Horizontal
4	17010.00	29.40	12.21	41.61	54.00	-12.39	Average	Horizontal
5	11340.00	43.29	5.97	49.26	74.00	-24.74	Peak	Vertical
6	11340.00	30.39	5.97	36.36	54.00	-17.64	Average	Vertical
7	17010.00	41.46	12.41	53.87	74.00	-20.13	Peak	Vertical
8	17010.00	28.21	12.41	40.62	54.00	-13.38	Average	Vertical

IEEE 802.11n-HT40_Channel 151

No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	11510.00	43.41	6.11	49.52	74.00	-24.48	Peak	Horizontal
2	11510.00	30.41	6.11	36.52	54.00	-17.48	Average	Horizontal
3	17265.00	40.73	13.04	53.77	74.00	-20.23	Peak	Horizontal
4	17265.00	29.35	13.04	42.39	54.00	-11.61	Average	Horizontal
5	11510.00	45.02	6.21	51.23	74.00	-22.77	Peak	Vertical
6	11510.00	30.85	6.21	37.06	54.00	-16.94	Average	Vertical
7	17265.00	40.73	13.14	53.87	74.00	-20.13	Peak	Vertical
8	17265.00	28.89	13.14	42.03	54.00	-11.97	Average	Vertical

IEEE 802.11n-HT40_Channel 159

No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	11590.00	44.22	6.35	50.57	74.00	-23.43	Peak	Horizontal
2	11590.00	31.39	6.35	37.74	54.00	-16.26	Average	Horizontal
3	17385.00	38.81	13.42	52.23	74.00	-21.77	Peak	Horizontal
4	17385.00	28.25	13.42	41.67	54.00	-12.33	Average	Horizontal
5	11590.00	44.34	6.49	50.83	74.00	-23.17	Peak	Vertical
6	11590.00	31.63	6.49	38.12	54.00	-15.88	Average	Vertical
7	17385.00	38.96	13.46	52.42	74.00	-21.58	Peak	Vertical
8	17385.00	27.79	13.46	41.25	54.00	-12.75	Average	Vertical

IEEE 802.11ac-VHT80_Channel 42

No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	10460.00	42.88	5.70	48.58	74.00	-25.42	Peak	Horizontal
2	10460.00	31.65	5.70	37.35	54.00	-16.65	Average	Horizontal
3	15690.00	41.67	11.15	52.82	74.00	-21.18	Peak	Horizontal
4	15690.00	28.43	11.15	39.58	54.00	-14.42	Average	Horizontal
5	10460.00	44.80	5.82	50.62	74.00	-23.38	Peak	Vertical
6	10460.00	31.87	5.82	37.69	54.00	-16.31	Average	Vertical
7	15690.00	41.30	11.25	52.55	74.00	-21.45	Peak	Vertical
8	15690.00	28.09	11.25	39.34	54.00	-14.66	Average	Vertical

IEEE 802.11ac-VHT80_Channel 58

No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	10580.00	43.76	5.68	49.44	74.00	-24.56	Peak	Horizontal
2	10580.00	30.64	5.68	36.32	54.00	-17.68	Average	Horizontal
3	15870.00	41.63	11.37	53.00	74.00	-21.00	Peak	Horizontal
4	15870.00	27.69	11.37	39.06	54.00	-14.94	Average	Horizontal
5	10580.00	45.79	5.79	51.58	74.00	-22.42	Peak	Vertical
6	10580.00	30.85	5.79	36.64	54.00	-17.36	Average	Vertical
7	15870.00	42.54	11.47	54.01	74.00	-19.99	Peak	Vertical
8	15870.00	27.57	11.47	39.04	54.00	-14.96	Average	Vertical

IEEE 802.11ac-VHT80_Channel 106

No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	11060.00	43.77	5.41	49.18	74.00	-24.82	Peak	Horizontal
2	11060.00	30.72	5.41	36.13	54.00	-17.87	Average	Horizontal
3	16590.00	41.90	12.49	54.39	74.00	-19.61	Peak	Horizontal
4	16590.00	28.01	12.49	40.50	54.00	-13.50	Average	Horizontal
5	11060.00	45.33	5.60	50.93	74.00	-23.07	Peak	Vertical
6	11060.00	31.13	5.60	36.73	54.00	-17.27	Average	Vertical
7	16590.00	39.67	12.78	52.45	74.00	-21.55	Peak	Vertical
8	16590.00	27.58	12.78	40.36	54.00	-13.64	Average	Vertical

IEEE 802.11ac-VHT80_Channel 155

No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	11550.00	43.67	6.23	49.90	74.00	-24.10	Peak	Horizontal
2	11550.00	30.68	6.23	36.91	54.00	-17.09	Average	Horizontal
3	17325.00	41.24	13.23	54.47	74.00	-19.53	Peak	Horizontal
4	17325.00	29.77	13.23	43.00	54.00	-11.00	Average	Horizontal
5	11550.00	43.47	6.35	49.82	74.00	-24.18	Peak	Vertical
6	11550.00	31.16	6.35	37.51	54.00	-16.49	Average	Vertical
7	17325.00	40.50	13.29	53.79	74.00	-20.21	Peak	Vertical
8	17325.00	27.38	13.29	40.67	54.00	-13.33	Average	Vertical

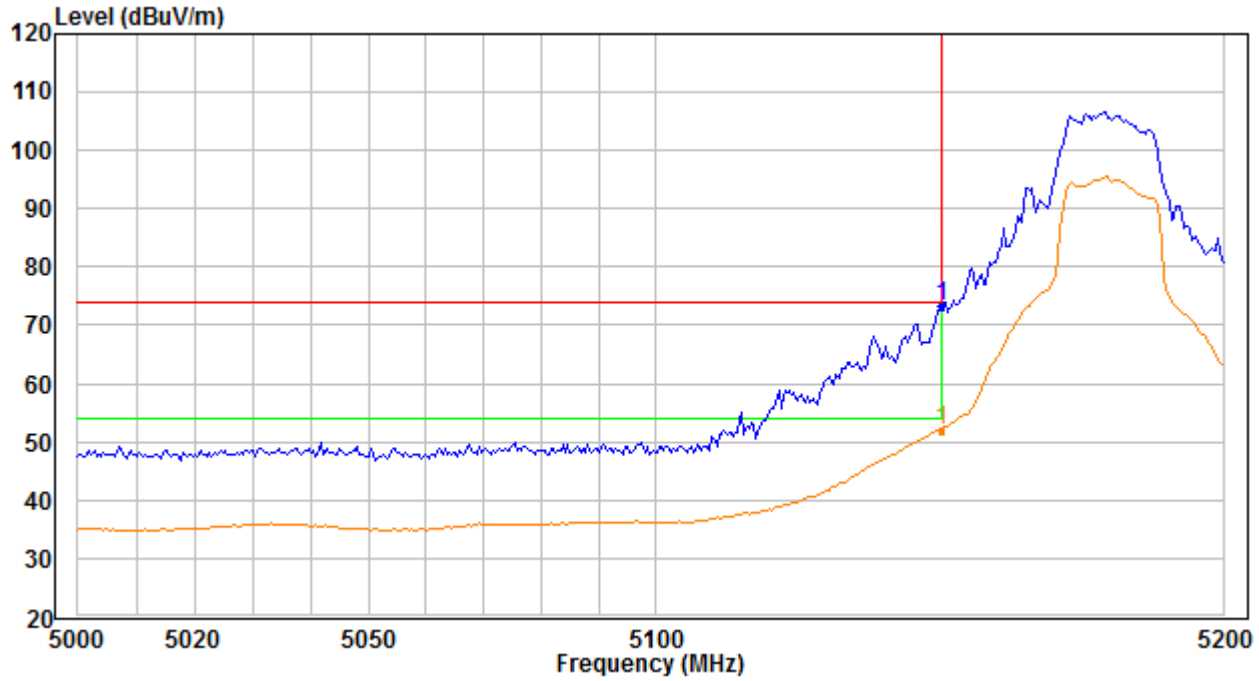
Remark:

1. Correct Factor = Antenna Factor + Cable Loss - Amplifier Gain, the value was added to Original Receiver Reading by the software automatically.
2. Result = Reading + Correct Factor.
3. Margin = Result – Limit

Band Edge Measurements (Radiated)

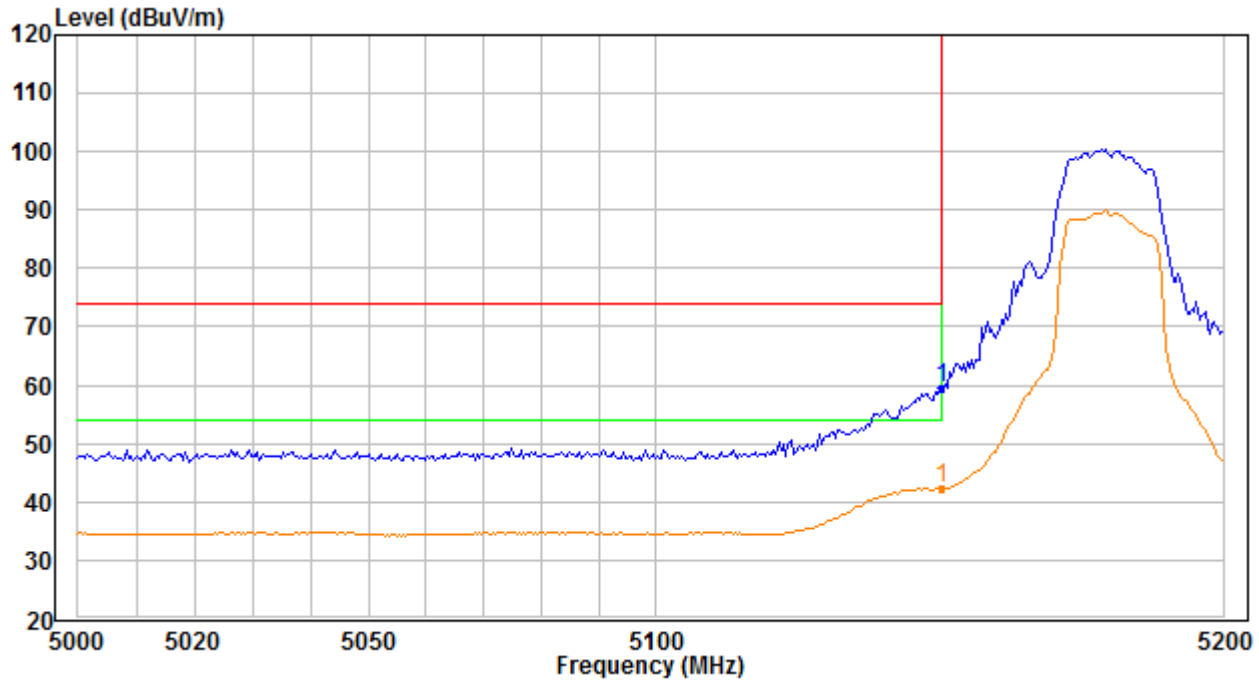
IEEE 802.11a

Test Channel:	Channel 36	Ant. Polar. :	Horizontal



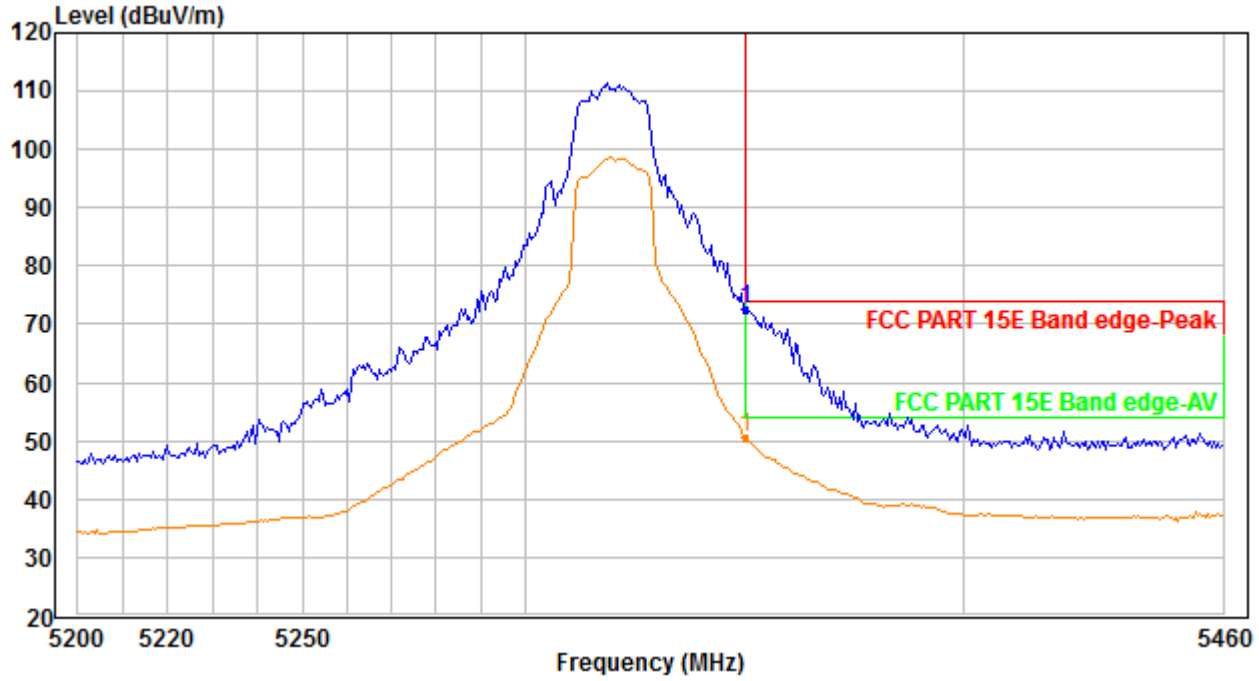
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5150.0000	73.15	74.00	52.11	54.00	Pass

Test Channel:	Channel 36	Ant. Polar. :	Vertical



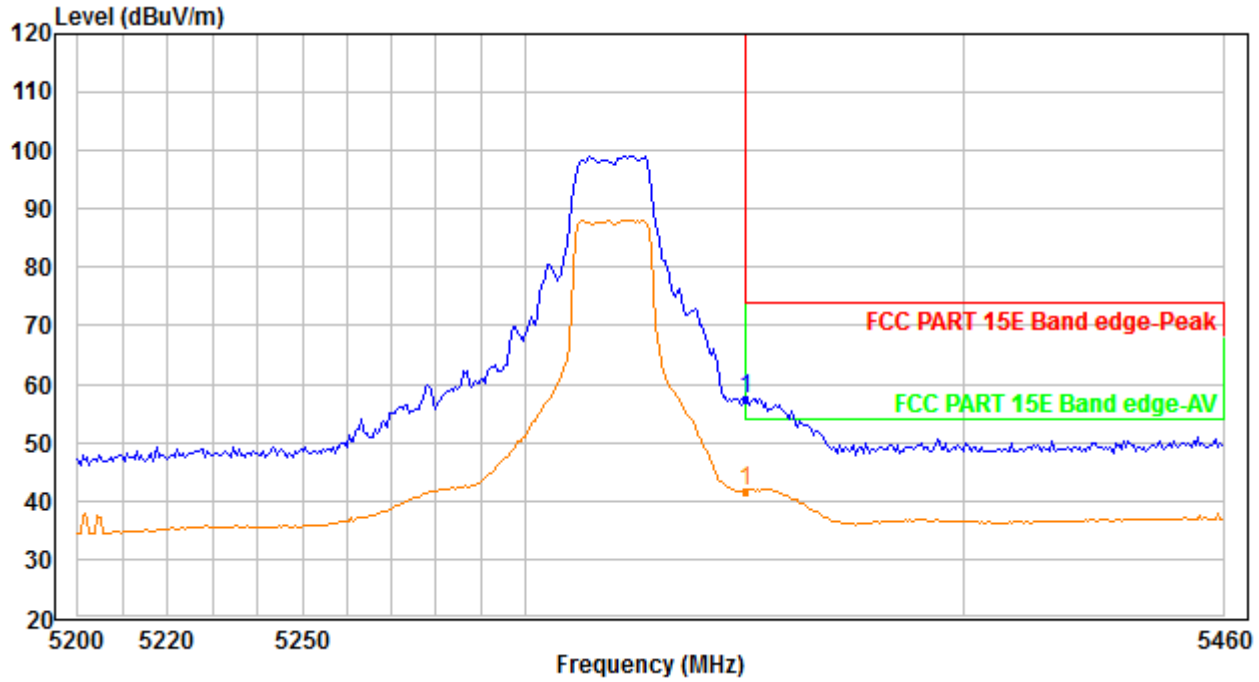
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5150.0000	59.41	74.00	42.23	54.00	Pass

Test Channel:	Channel 64	Ant. Polar. :	Horizontal



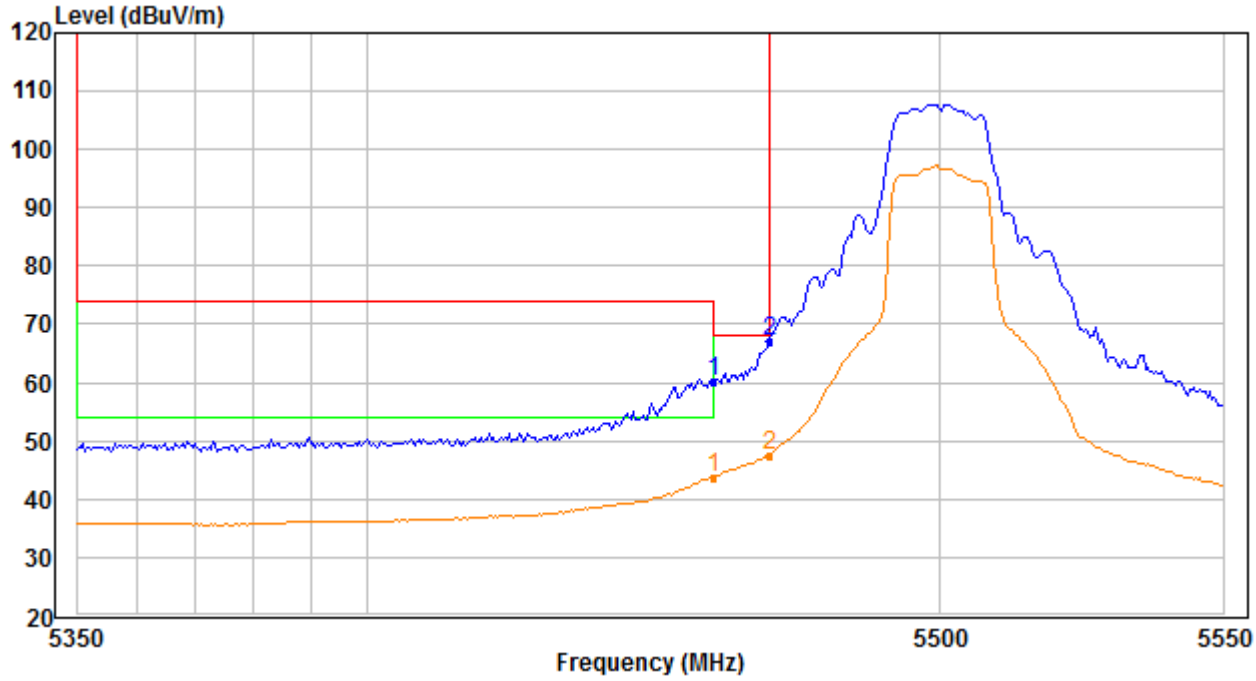
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5350.0000	72.42	74.00	50.47	54.00	Pass

Test Channel:	Channel 64	Ant. Polar. :	Vertical



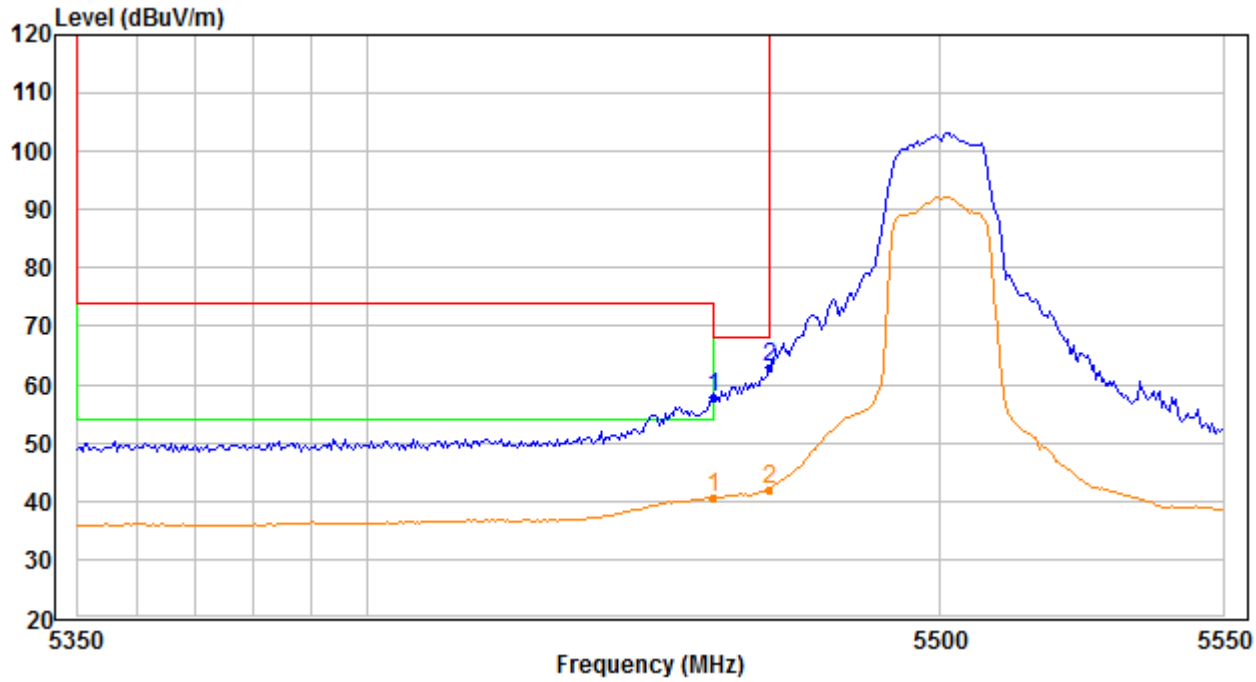
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5350.0000	57.48	74.00	41.65	54.00	Pass

Test Channel:	Channel 100	Ant. Polar. :	Horizontal



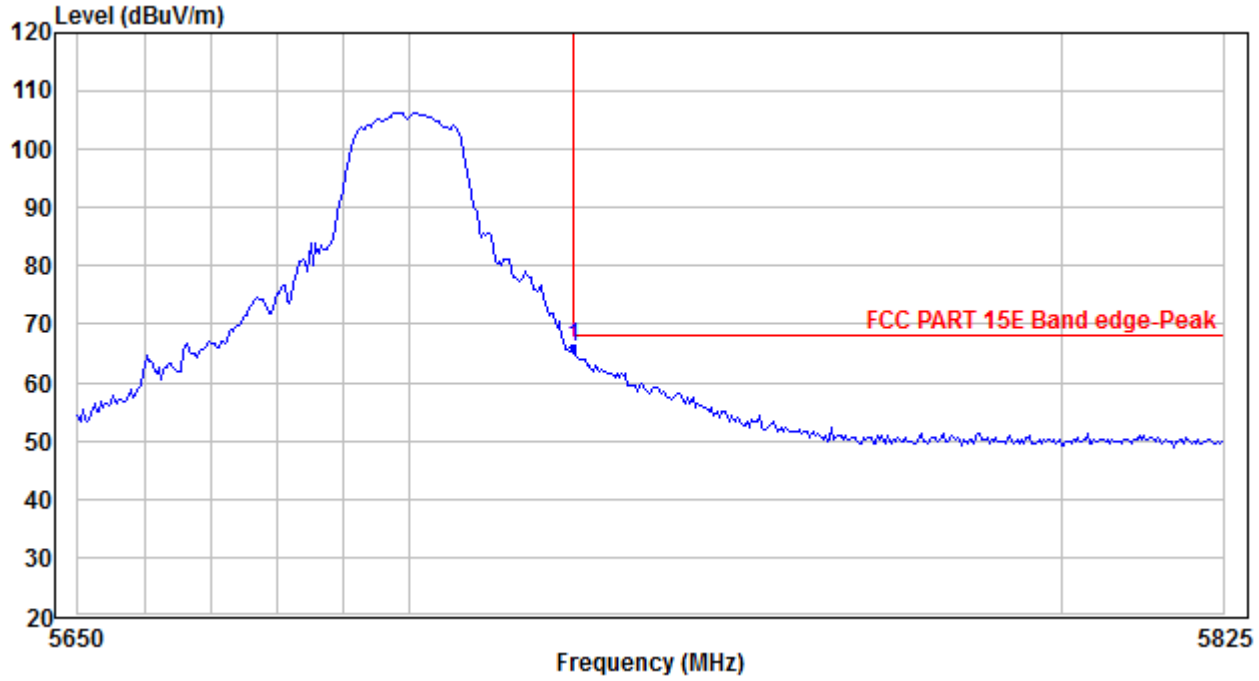
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5460.0000	60.05	68.20	43.63	54.00	Pass
5470.0000	66.94	68.20	47.65	54.00	Pass

Test Channel:	Channel 100	Ant. Polar. :	Vertical



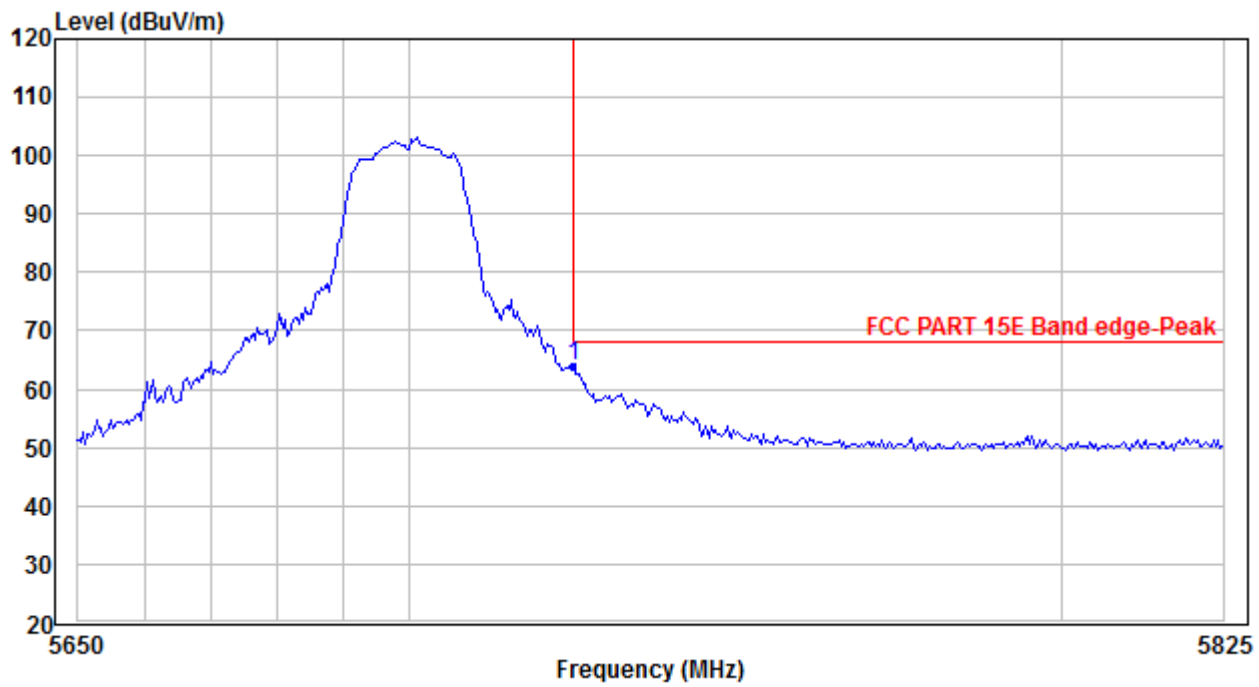
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5460.0000	57.83	68.20	40.69	54.00	Pass
5470.0000	62.97	68.20	42.16	54.00	Pass

Test Channel:	Channel 140	Ant. Polar. :	Horizontal



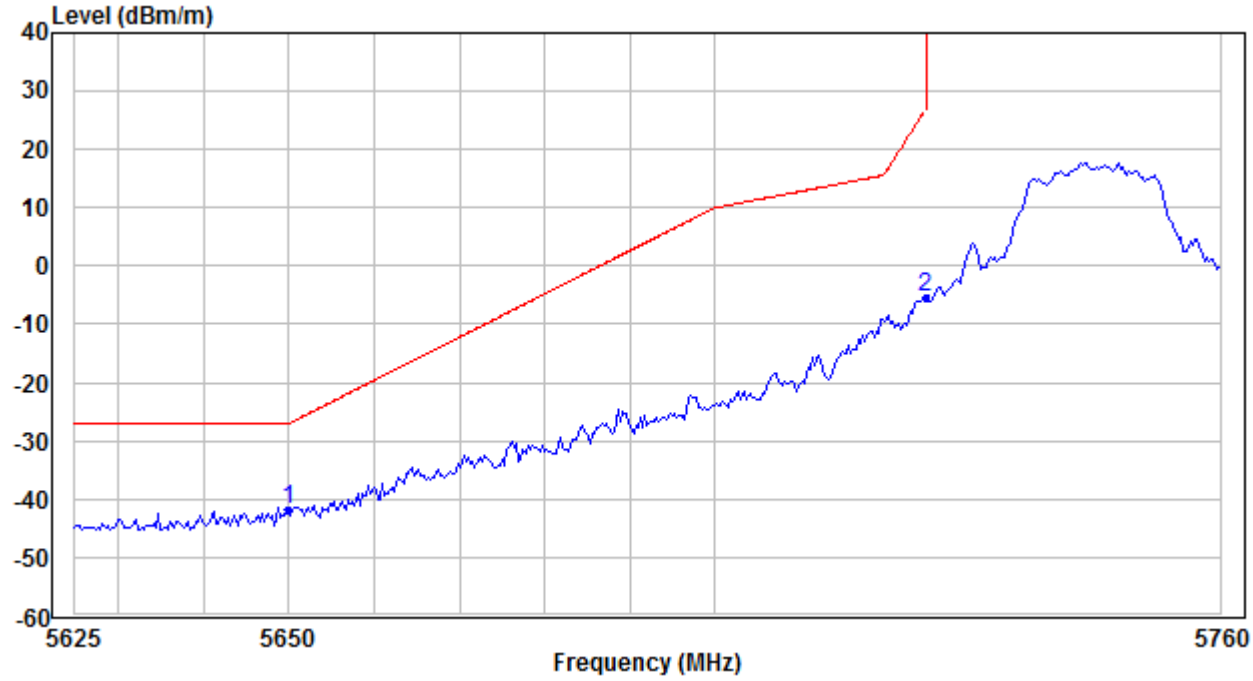
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	Conclusion
5725.0000	65.90	68.20	Pass

Test Channel:	Channel 140	Ant. Polar. :	Vertical



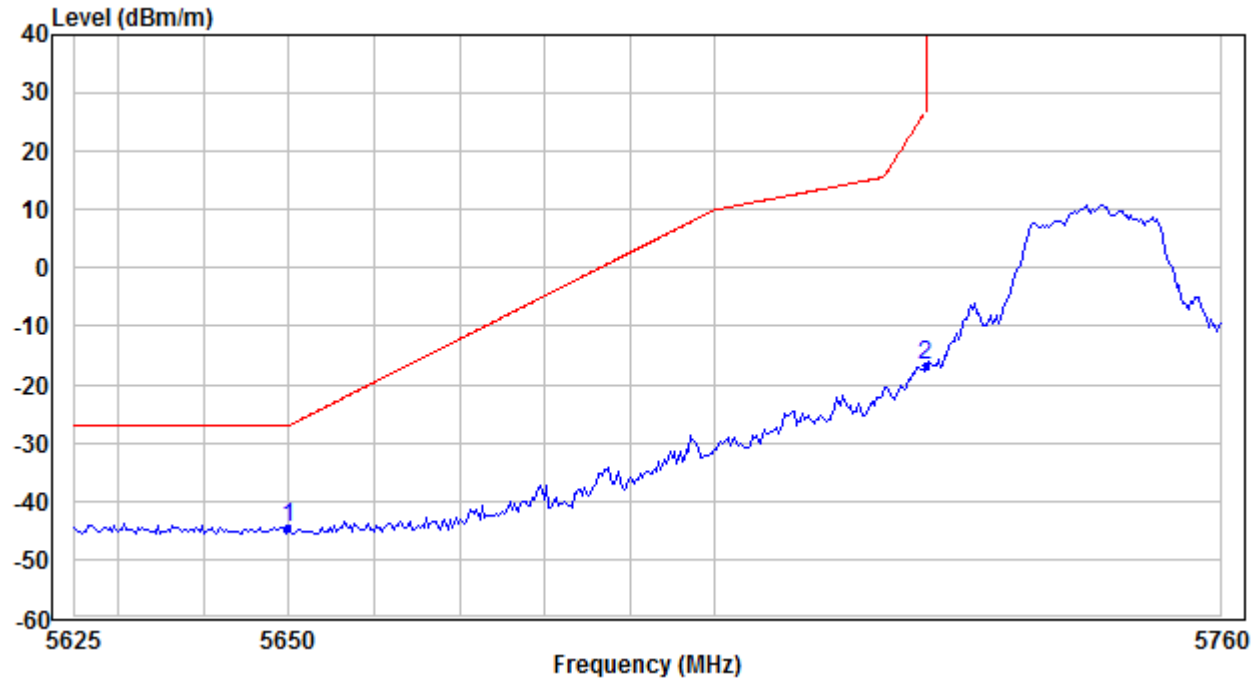
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	Conclusion
5725.0000	63.87	68.20	Pass

Test Channel:	Channel 149	Ant. Polar. :	Horizontal



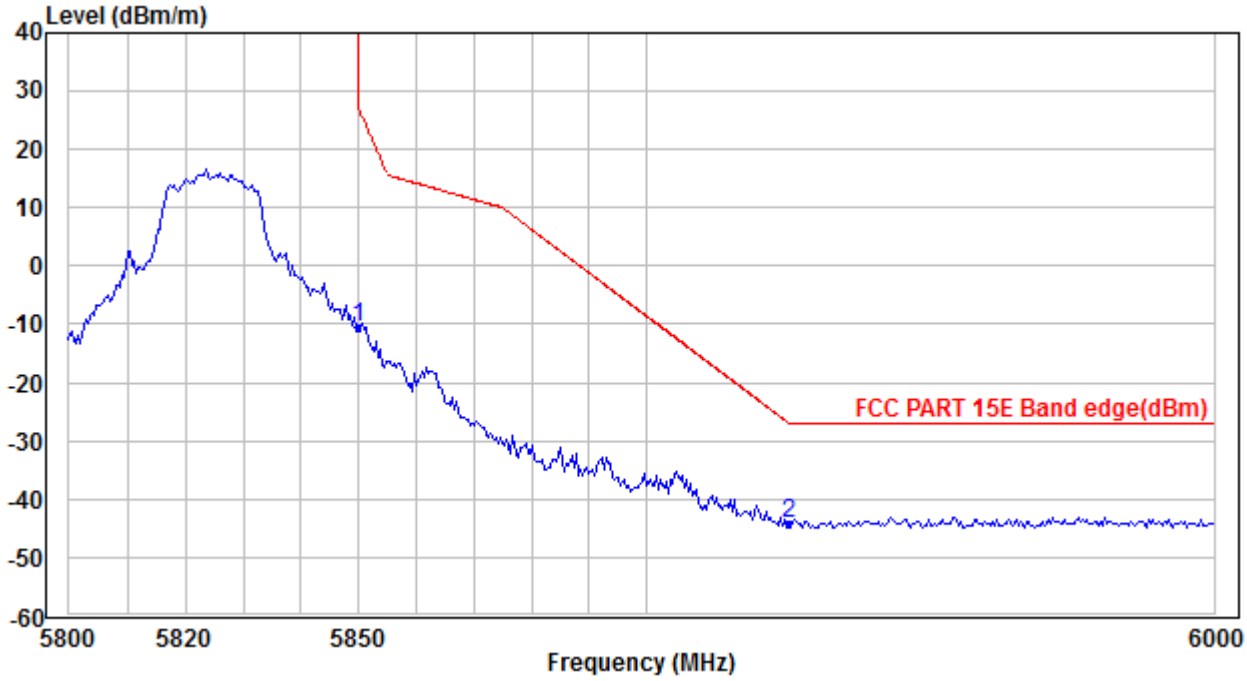
Frequency (MHz)	Peak level (dBm)	Peak Limit (dBm)	Conclusion
5650.0000	-41.88	-27.00	Pass
5725.0000	-5.49	27.00	Pass

Test Channel:	Channel 149	Ant. Polar. :	Vertical



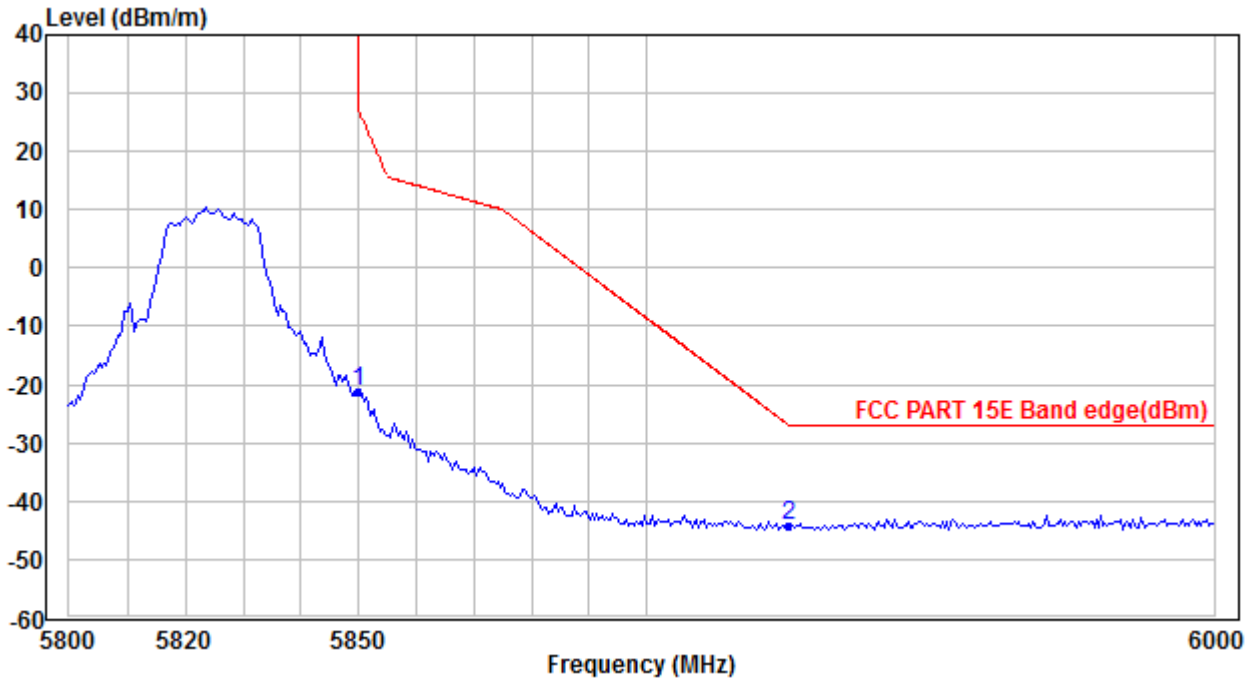
Frequency (MHz)	Peak level (dBm)	Peak Limit (dBm)	Conclusion
5650.0000	-44.62	-27.00	Pass
5725.0000	-16.82	27.00	Pass

Test Channel:	Channel 165	Ant. Polar. :	Horizontal



Frequency (MHz)	Peak level (dBm)	Peak Limit (dBm)	Conclusion
5850.0000	-10.45	27.00	Pass
5925.0000	-44.34	-27.00	Pass

Test Channel:	Channel 165	Ant. Polar. :	Vertical



Frequency (MHz)	Peak level (dBm)	Peak Limit (dBm)	Conclusion
5850.0000	-21.22	27.00	Pass
5925.0000	-44.25	-27.00	Pass

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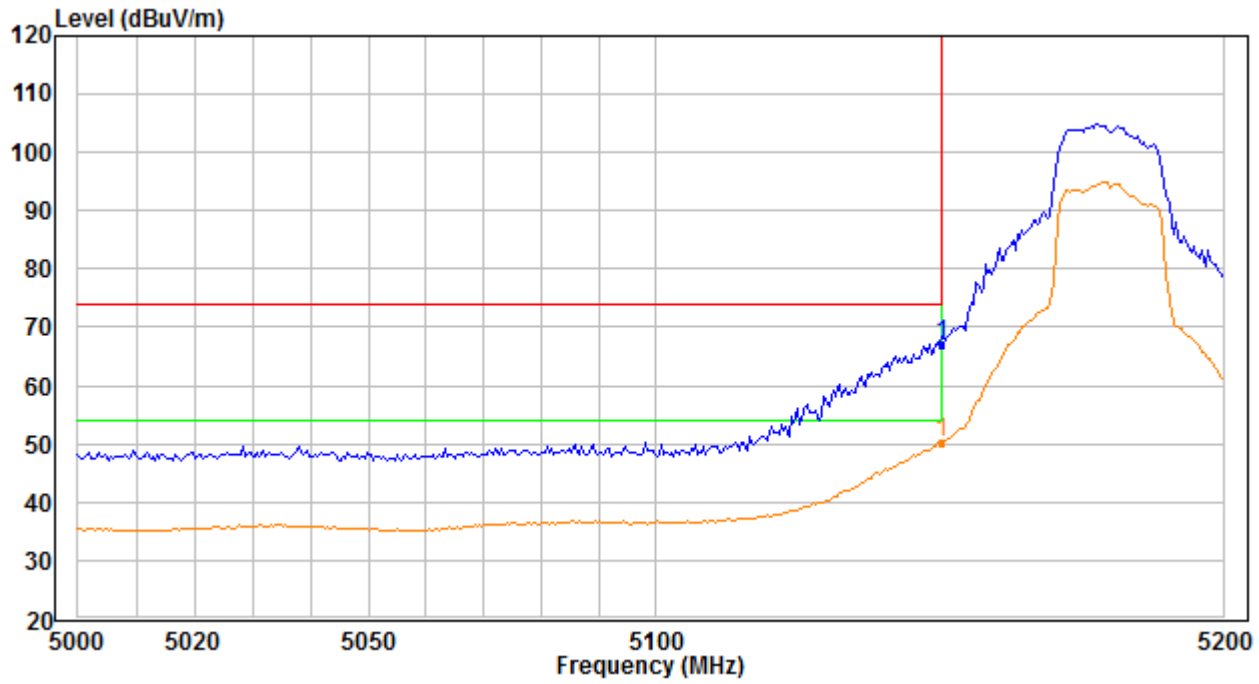
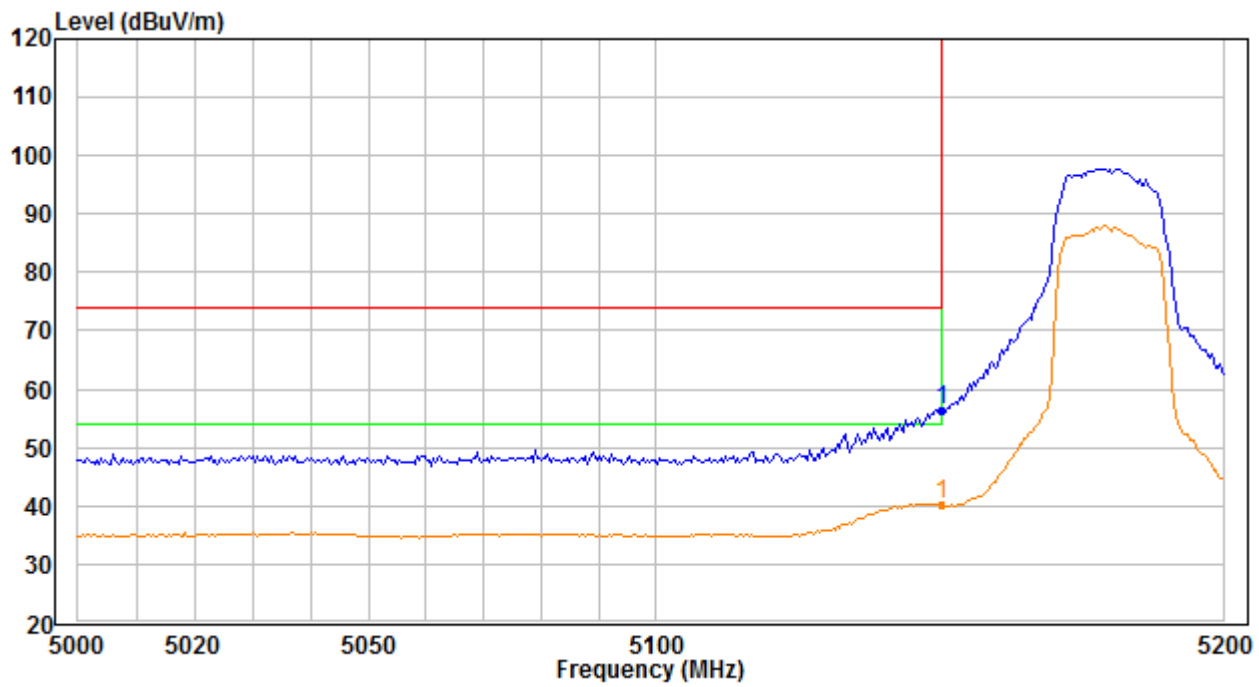
Test Channel:	Channel 36	Ant. Polar. :	Horizontal



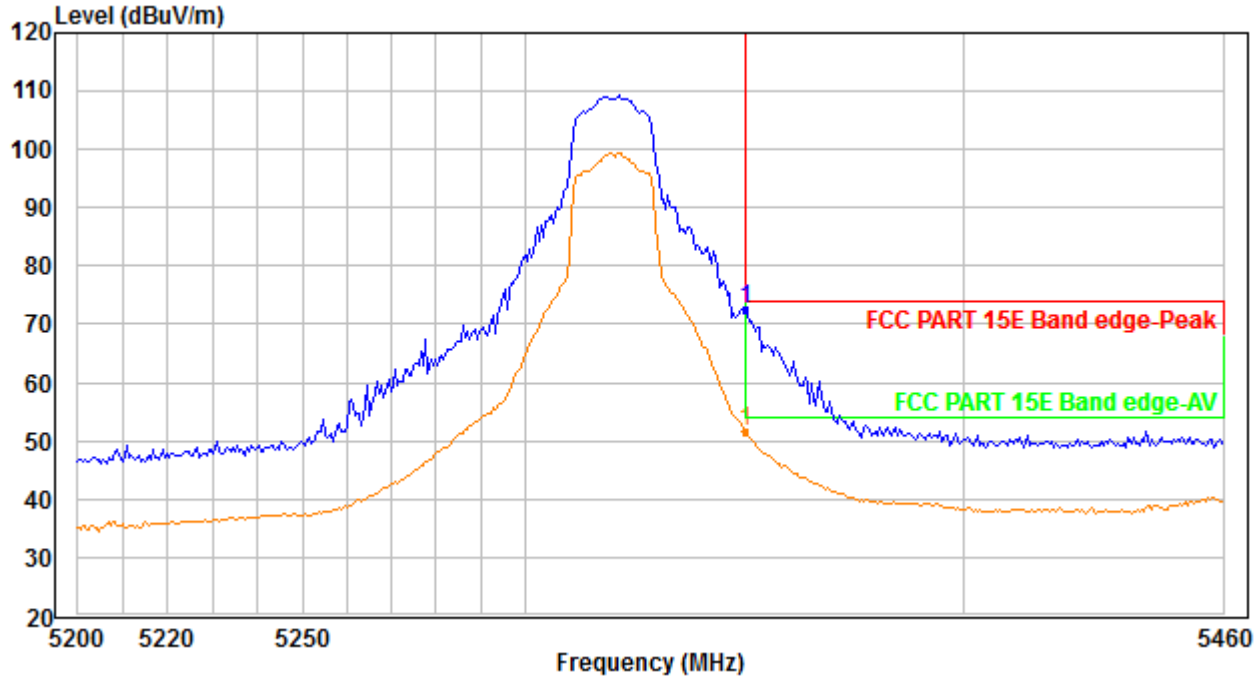
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5150.0000	66.95	74.00	50.27	54.00	Pass

Test Channel:	Channel 36	Ant. Polar. :	Vertical



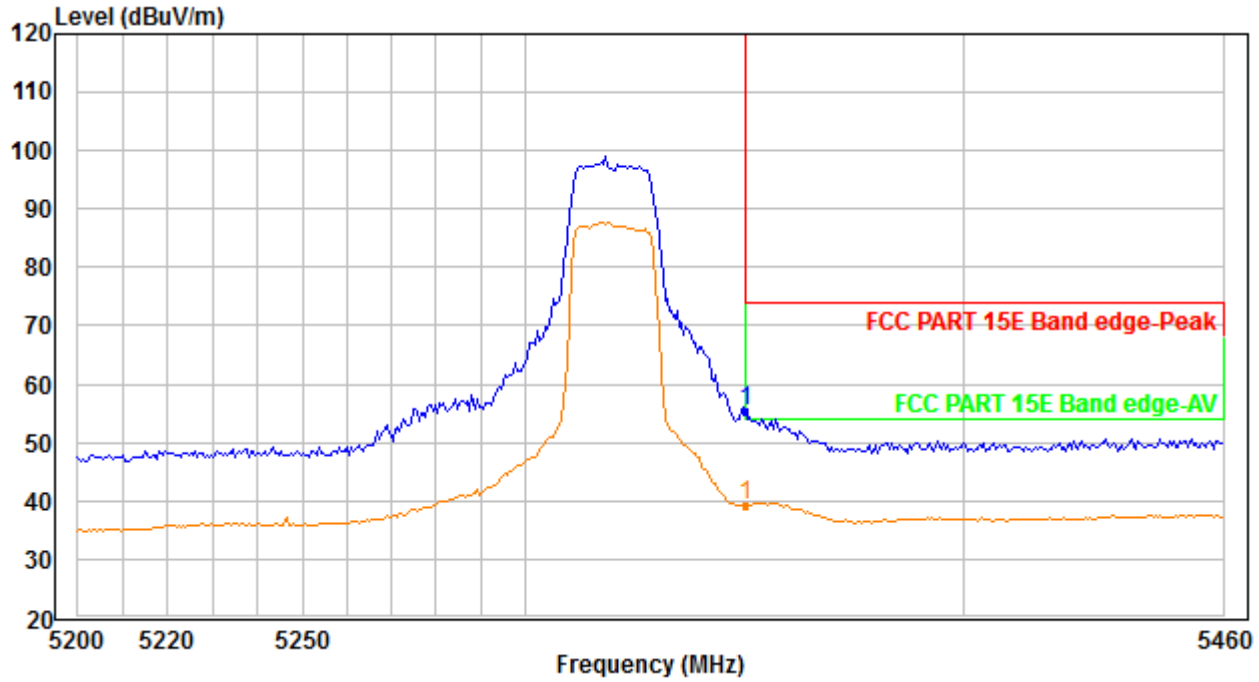
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5150.0000	56.28	74.00	40.20	54.00	Pass

Test Channel:	Channel 64	Ant. Polar. :	Horizontal



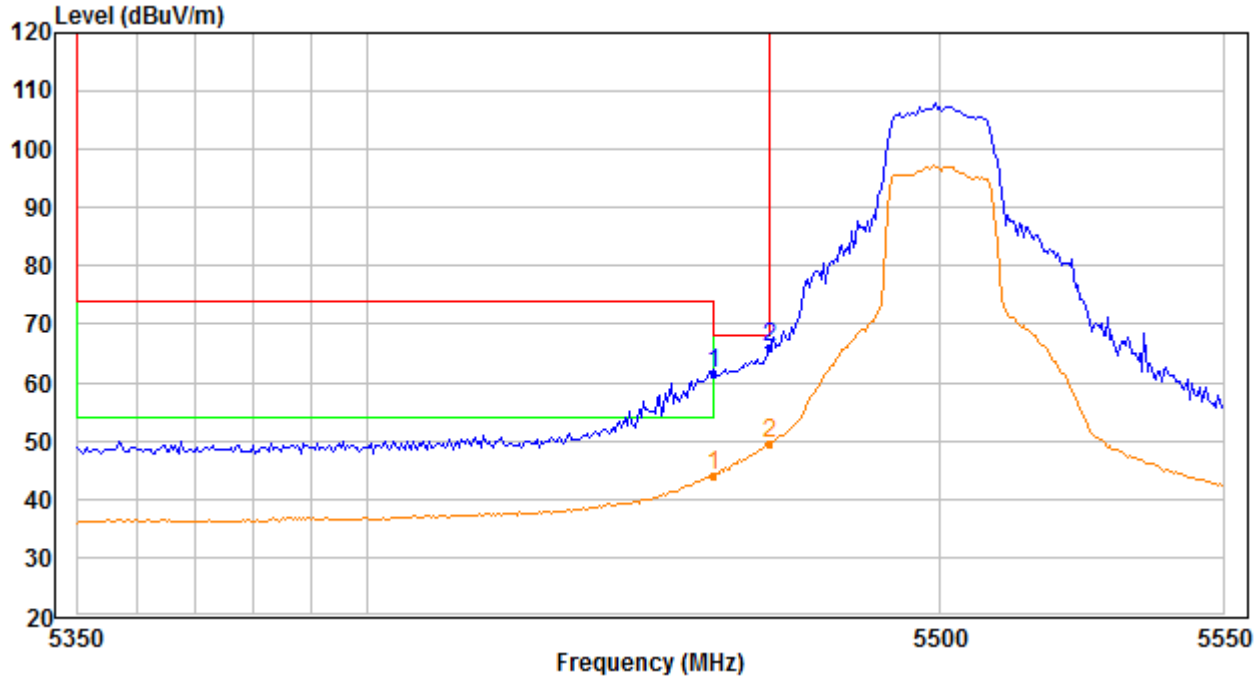
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5350.0000	72.57	74.00	51.63	54.00	Pass

Test Channel:	Channel 64	Ant. Polar. :	Vertical



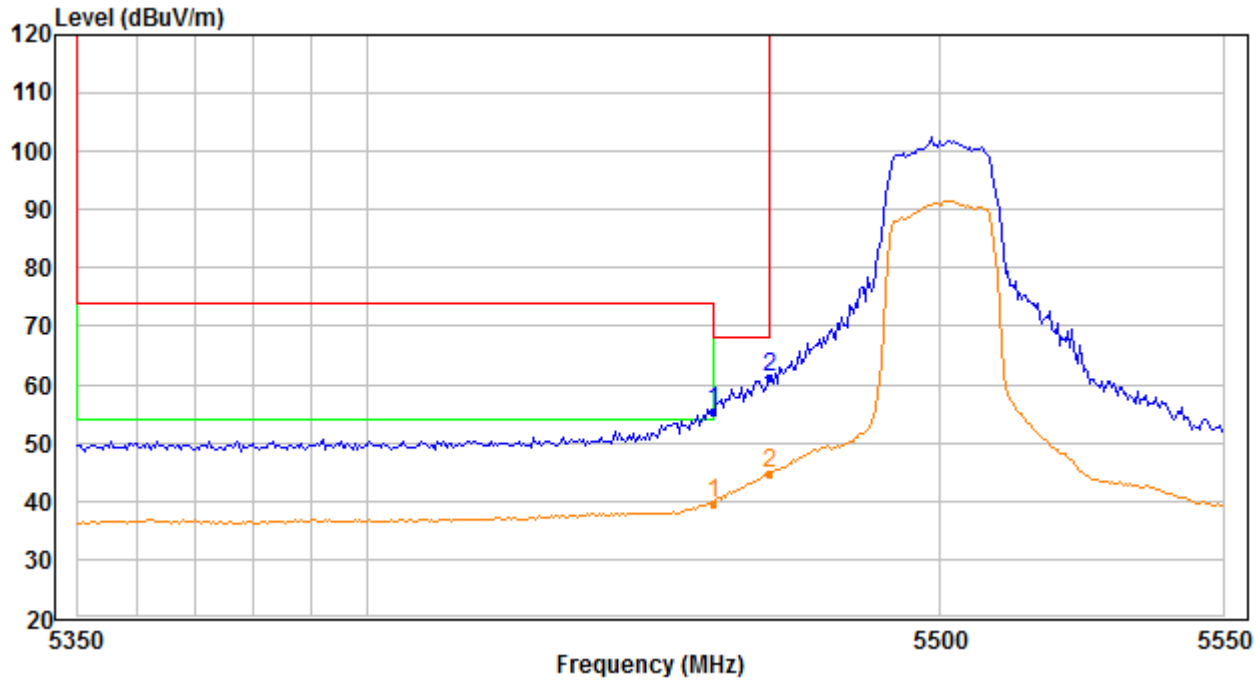
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5350.0000	55.39	74.00	39.41	54.00	Pass

Test Channel:	Channel 100	Ant. Polar. :	Horizontal



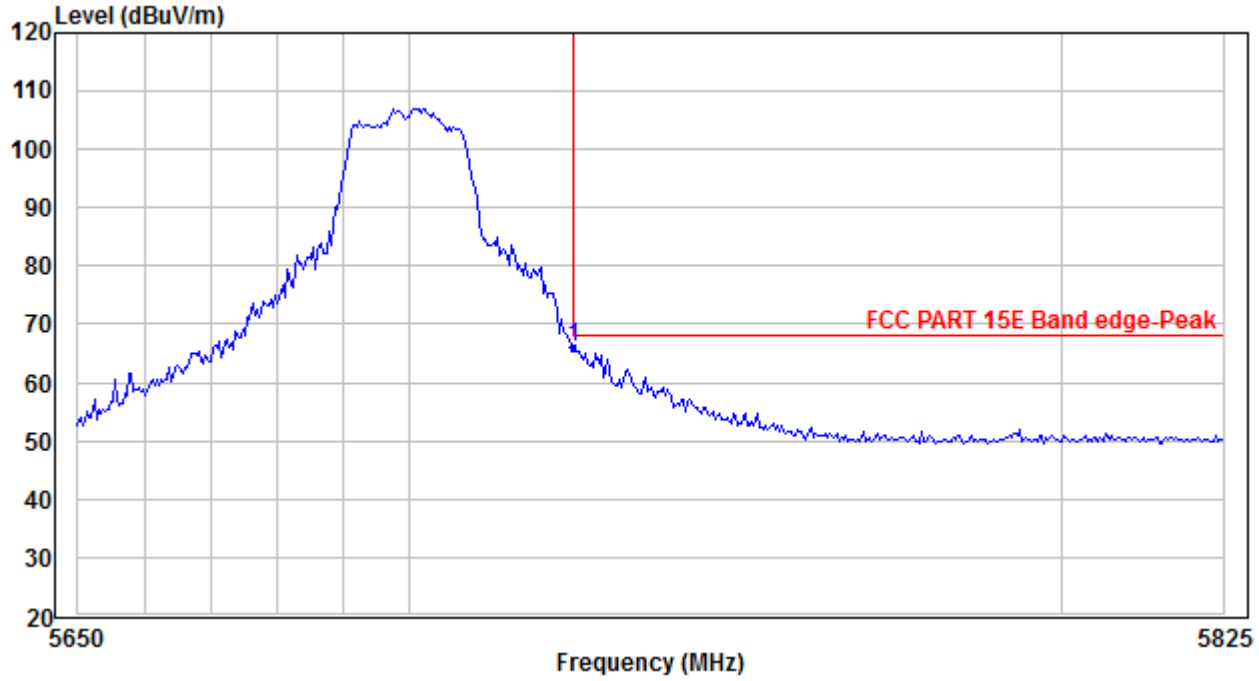
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5460.0000	61.44	68.20	44.06	54.00	Pass
5470.0000	65.92	68.20	49.54	54.00	Pass

Test Channel:	Channel 100	Ant. Polar. :	Vertical



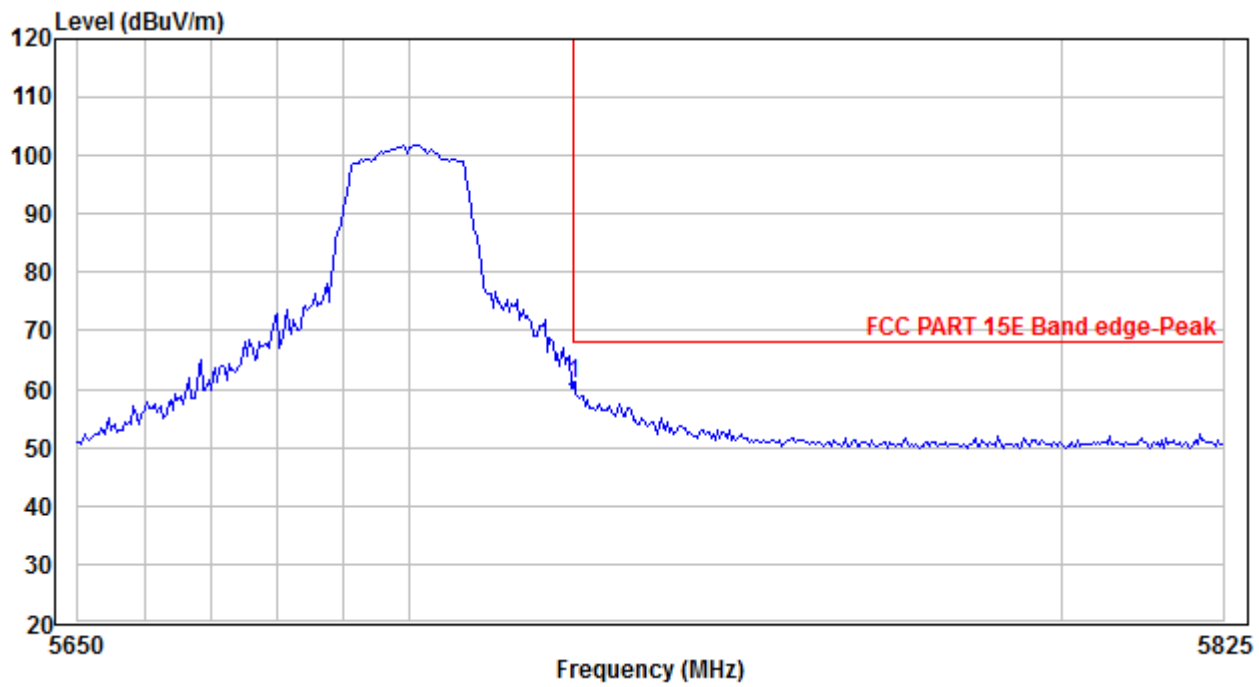
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5460.0000	55.36	68.20	39.73	54.00	Pass
5470.0000	61.21	68.20	44.68	54.00	Pass

Test Channel:	Channel 140	Ant. Polar. :	Horizontal



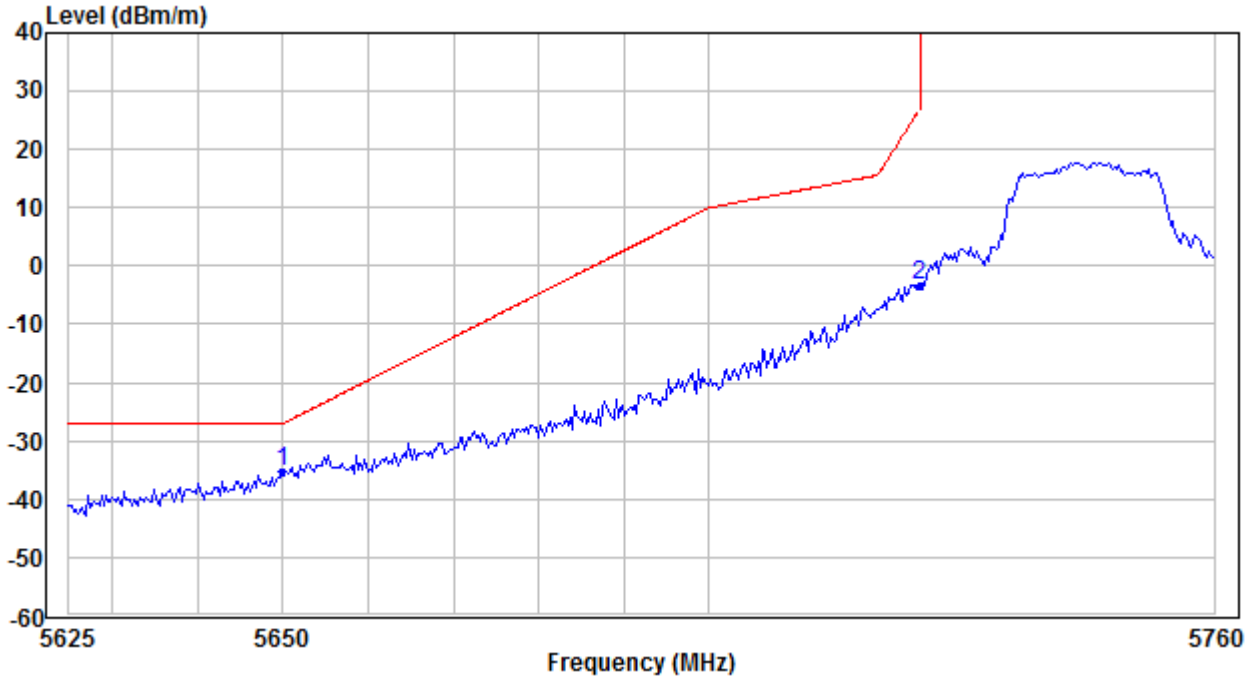
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	Conclusion
5725.0000	65.98	68.20	Pass

Test Channel:	Channel 140	Ant. Polar. :	Vertical



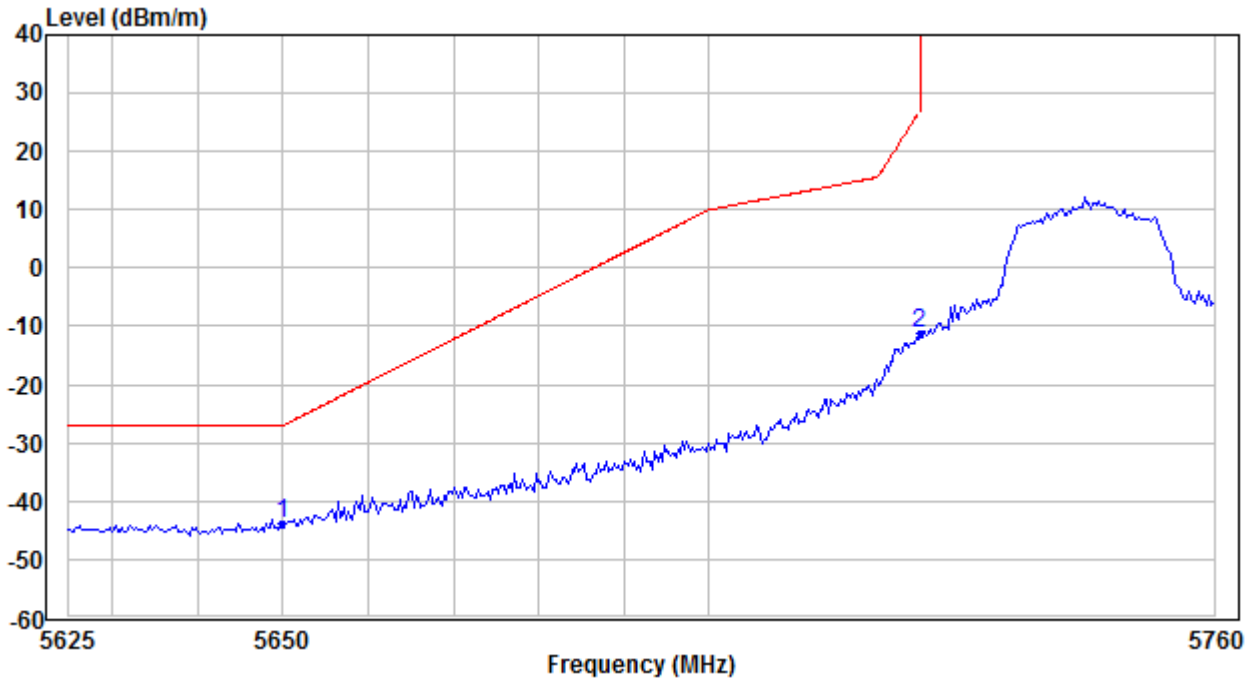
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	Conclusion
5725.0000	60.97	68.20	Pass

Test Channel:	Channel 149	Ant. Polar. :	Horizontal



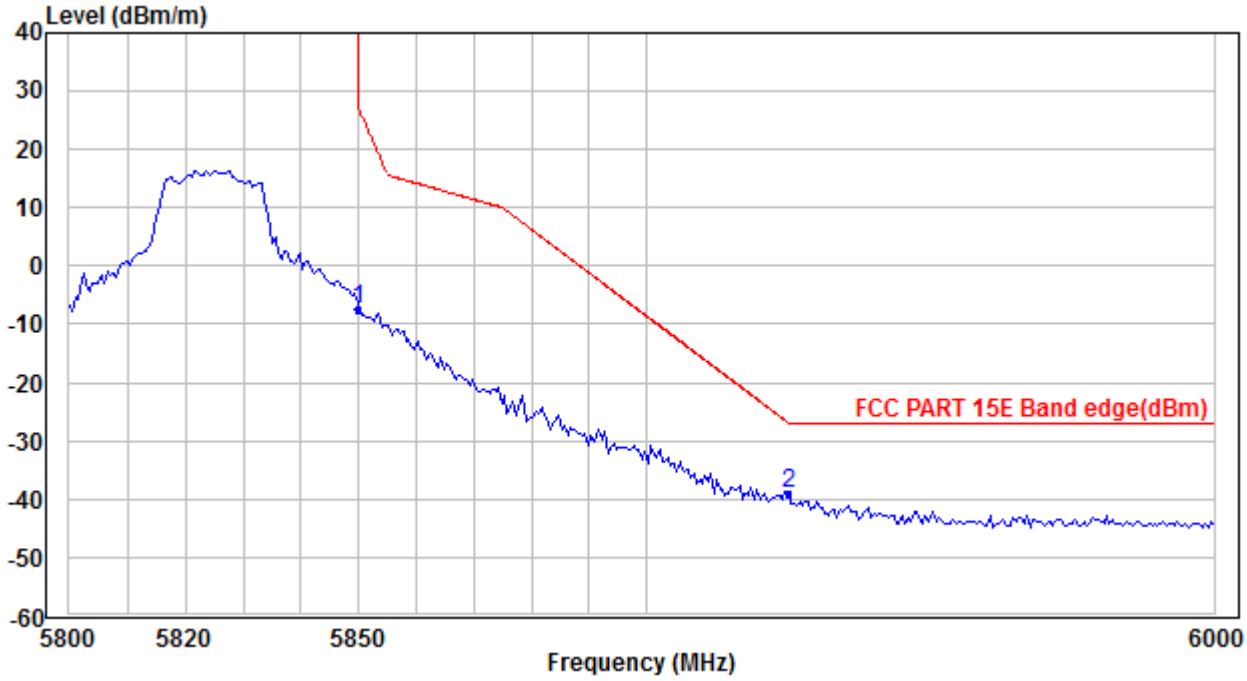
Frequency (MHz)	Peak level (dBm)	Peak Limit (dBm)	Conclusion
5650.0000	-35.36	-27.00	Pass
5725.0000	-3.20	27.00	Pass

Test Channel:	Channel 149	Ant. Polar. :	Vertical



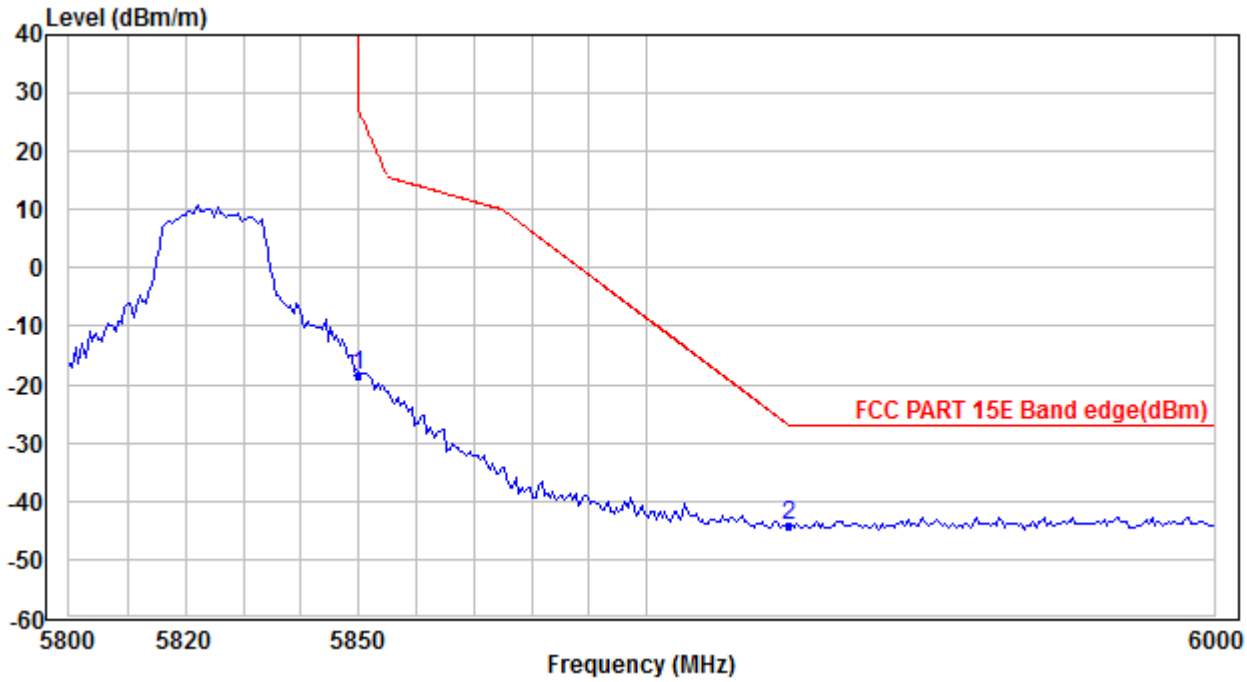
Frequency (MHz)	Peak level (dBm)	Peak Limit (dBm)	Conclusion
5650.0000	-43.96	-27.00	Pass
5725.0000	-11.20	27.00	Pass

Test Channel:	Channel 165	Ant. Polar. :	Horizontal



Frequency (MHz)	Peak level (dBm)	Peak Limit (dBm)	Conclusion
5850.0000	-7.55	27.00	Pass
5925.0000	-38.98	-27.00	Pass

Test Channel:	Channel 165	Ant. Polar. :	Vertical



Frequency (MHz)	Peak level (dBm)	Peak Limit (dBm)	Conclusion
5850.0000	-18.36	27.00	Pass
5925.0000	-44.31	-27.00	Pass

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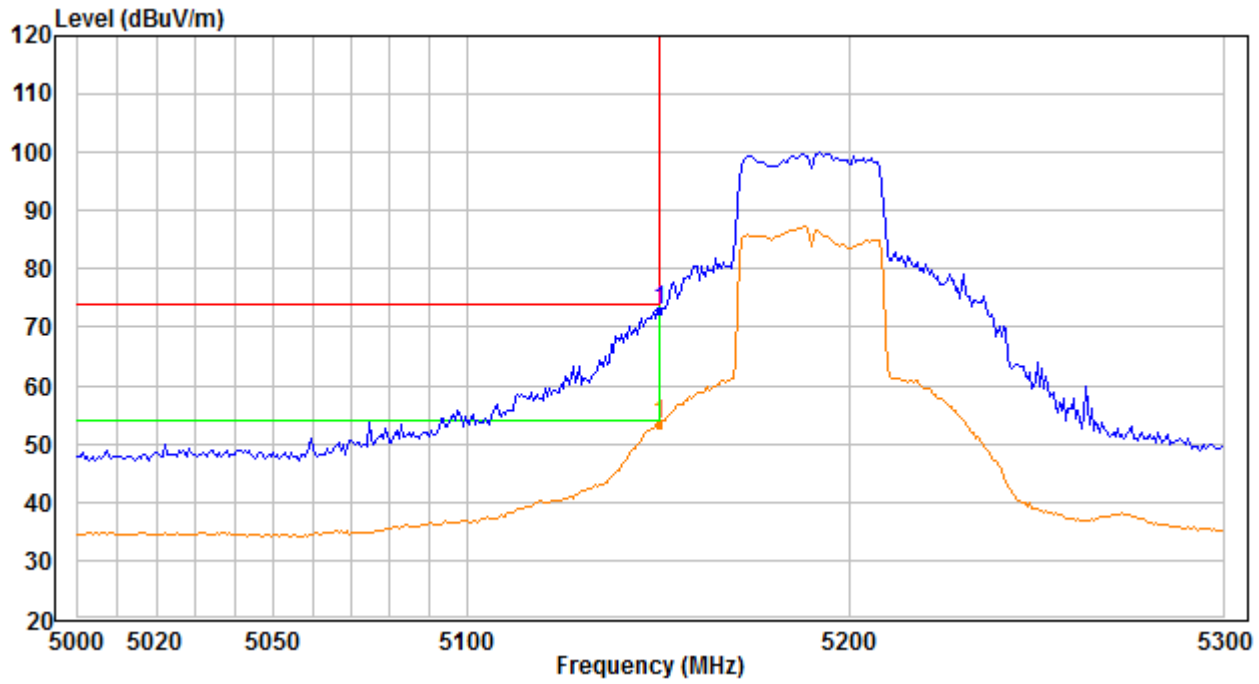
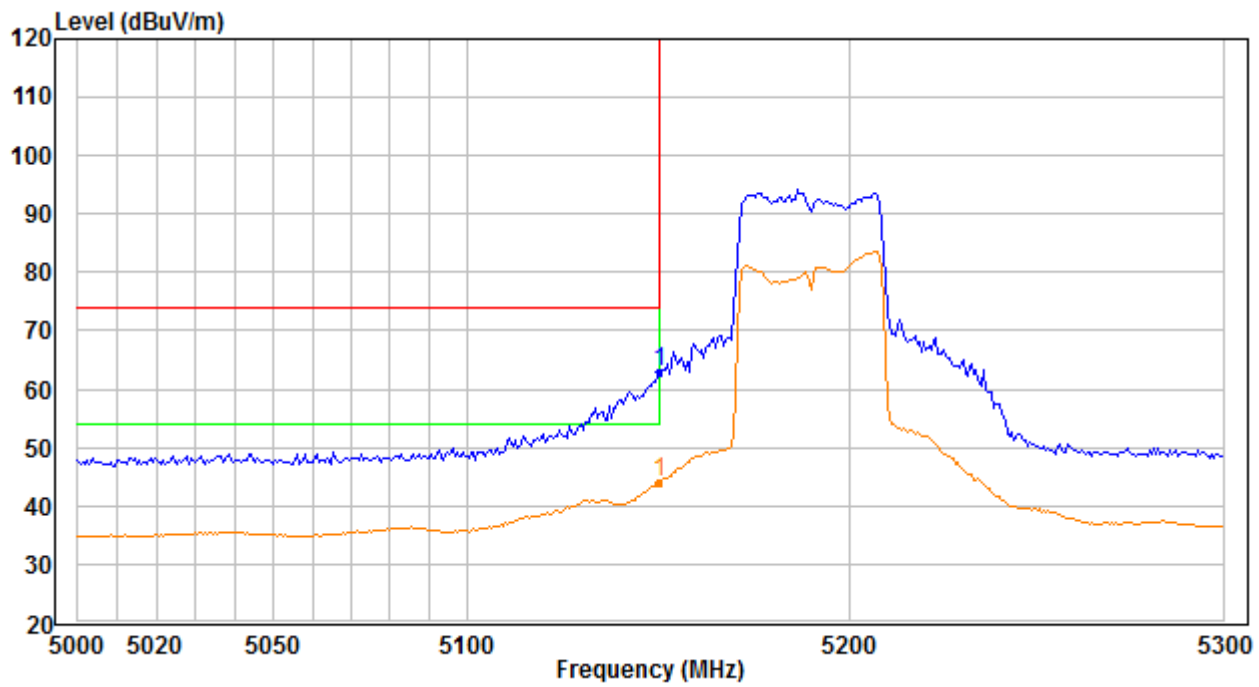
Test Channel:	Channel 38	Ant. Polar. :	Horizontal



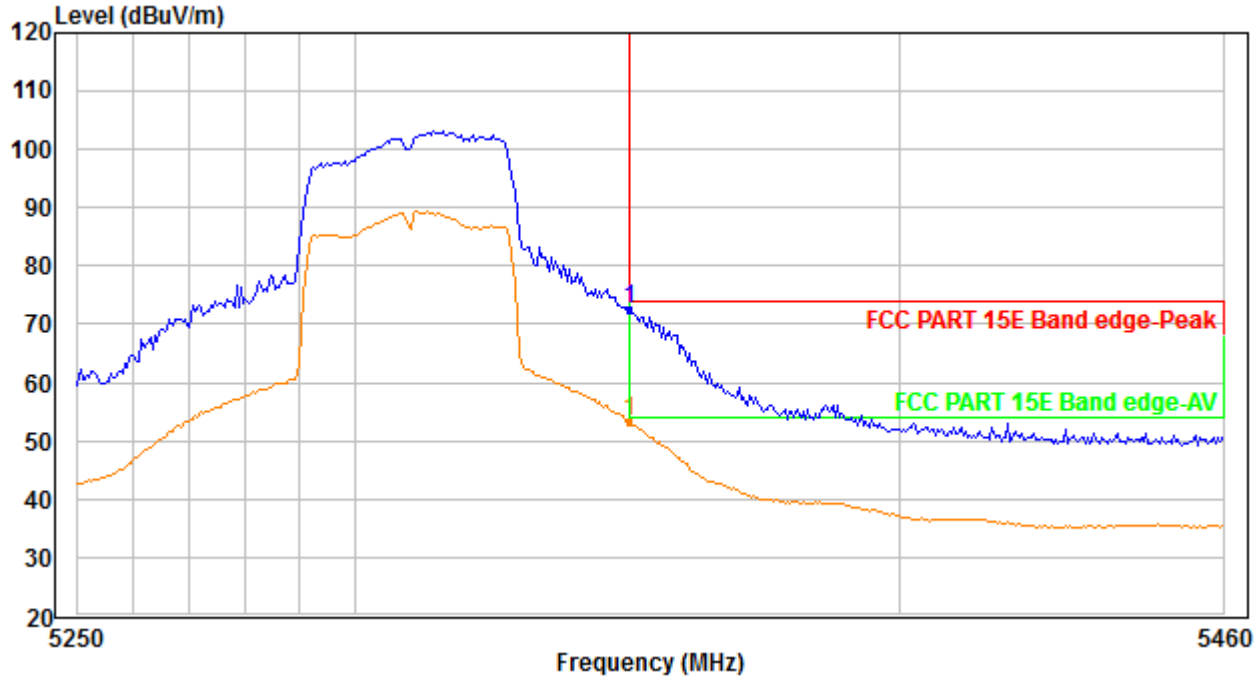
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5150.0000	73.08	74.00	53.16	54.00	Pass

Test Channel:	Channel 38	Ant. Polar. :	Vertical



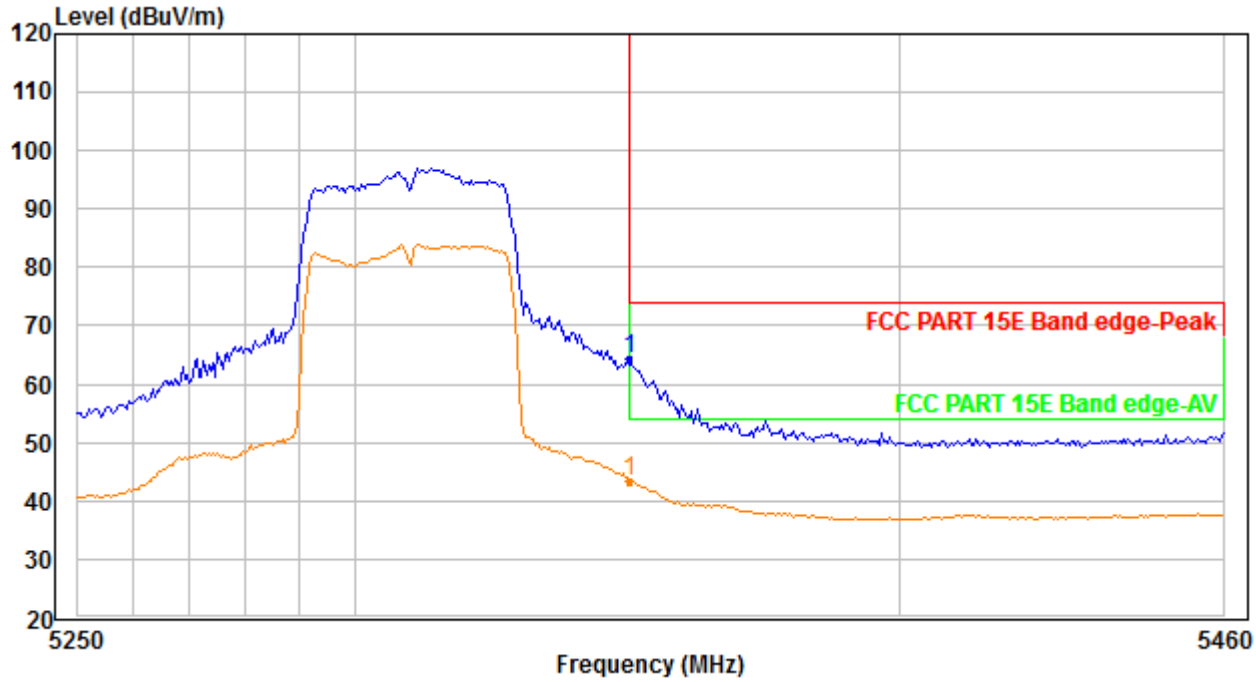
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5150.0000	63.09	74.00	43.95	54.00	Pass

Test Channel:	Channel 62	Ant. Polar. :	Horizontal



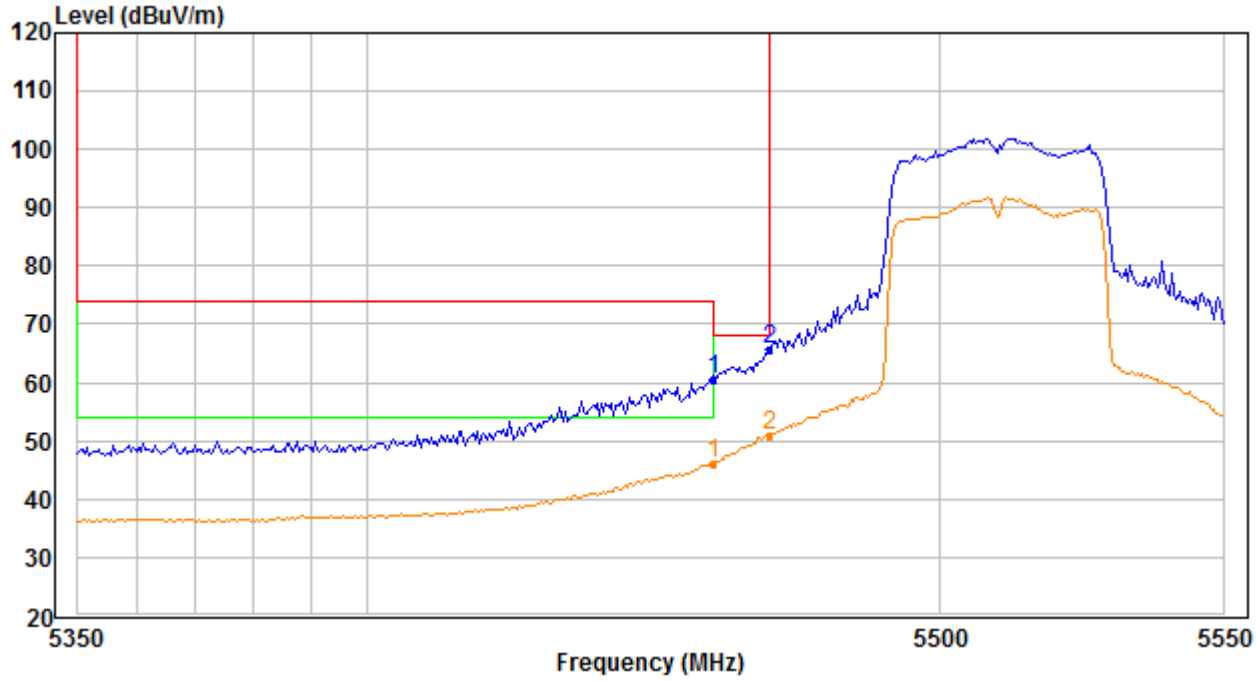
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5350.0000	72.70	74.00	53.19	54.00	Pass

Test Channel:	Channel 62	Ant. Polar. :	Vertical



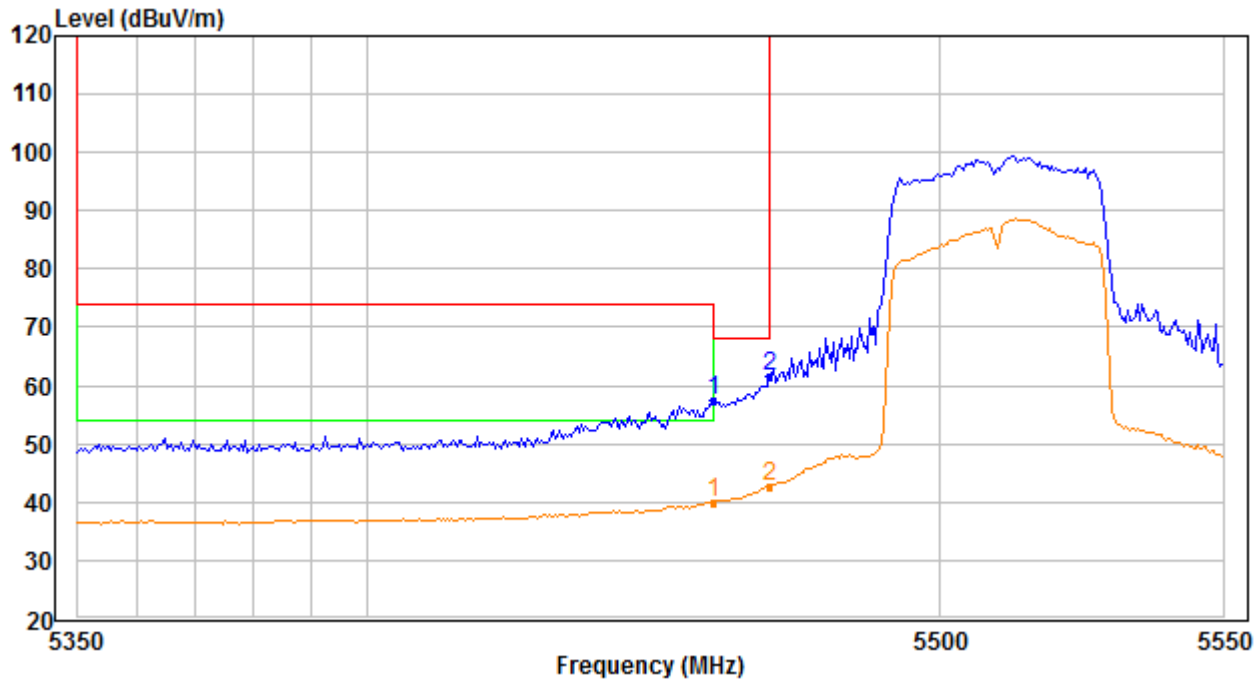
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5350.0000	64.21	74.00	43.51	54.00	Pass

Test Channel:	Channel 102	Ant. Polar. :	Horizontal



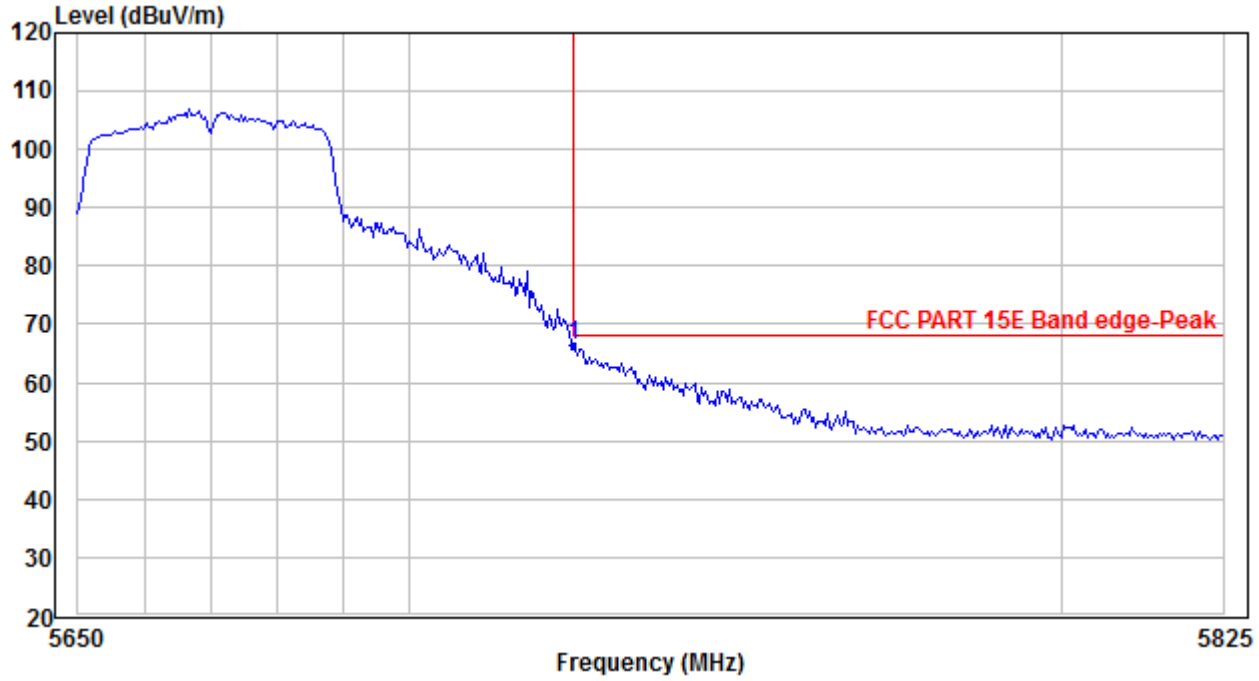
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5460.0000	60.40	68.20	46.14	54.00	Pass
5470.0000	65.72	68.20	50.97	54.00	Pass

Test Channel:	Channel 102	Ant. Polar. :	Vertical



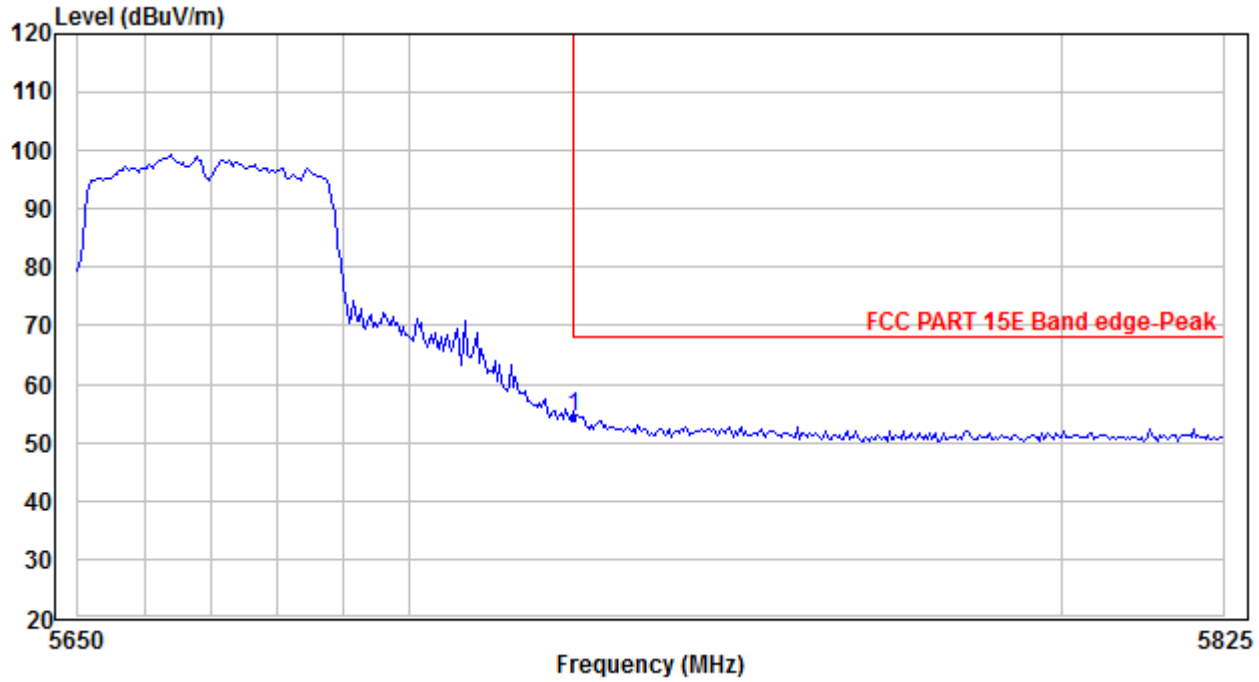
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5460.0000	57.31	68.20	39.97	54.00	Pass
5470.0000	61.44	68.20	42.53	54.00	Pass

Test Channel:	Channel 134	Ant. Polar. :	Horizontal



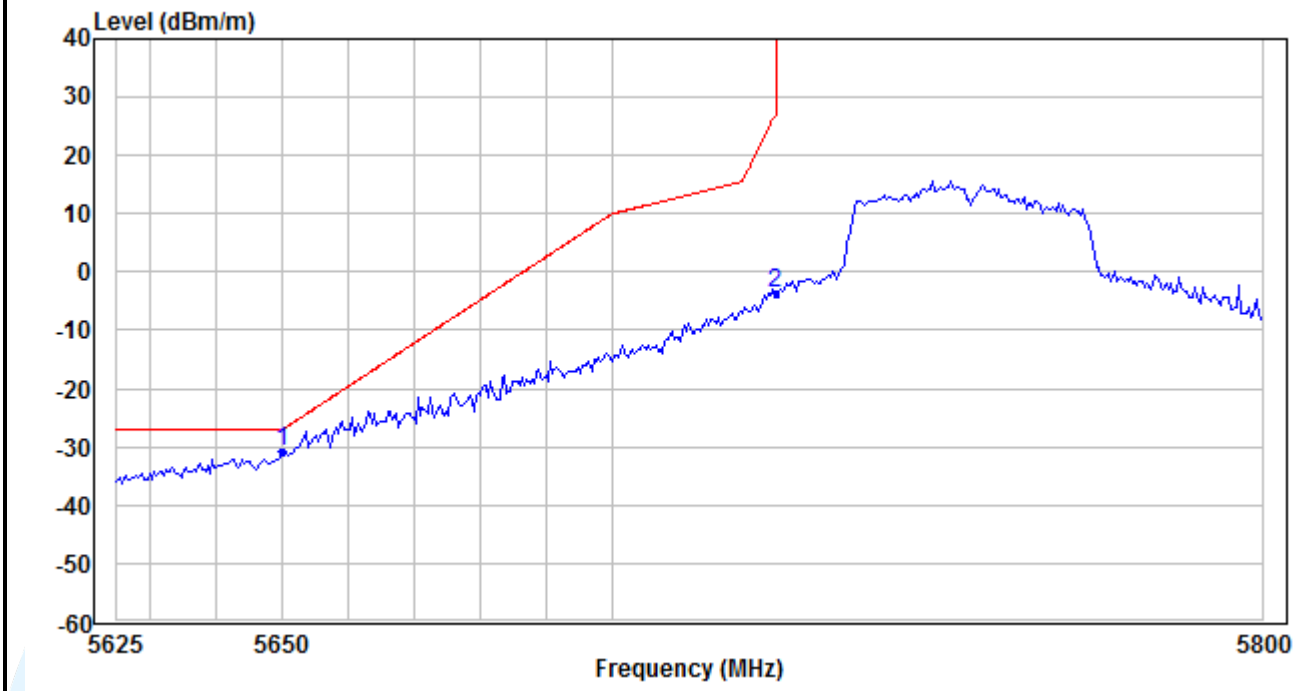
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	Conclusion
5725.0000	66.44	68.20	Pass

Test Channel:	Channel 134	Ant. Polar. :	Vertical



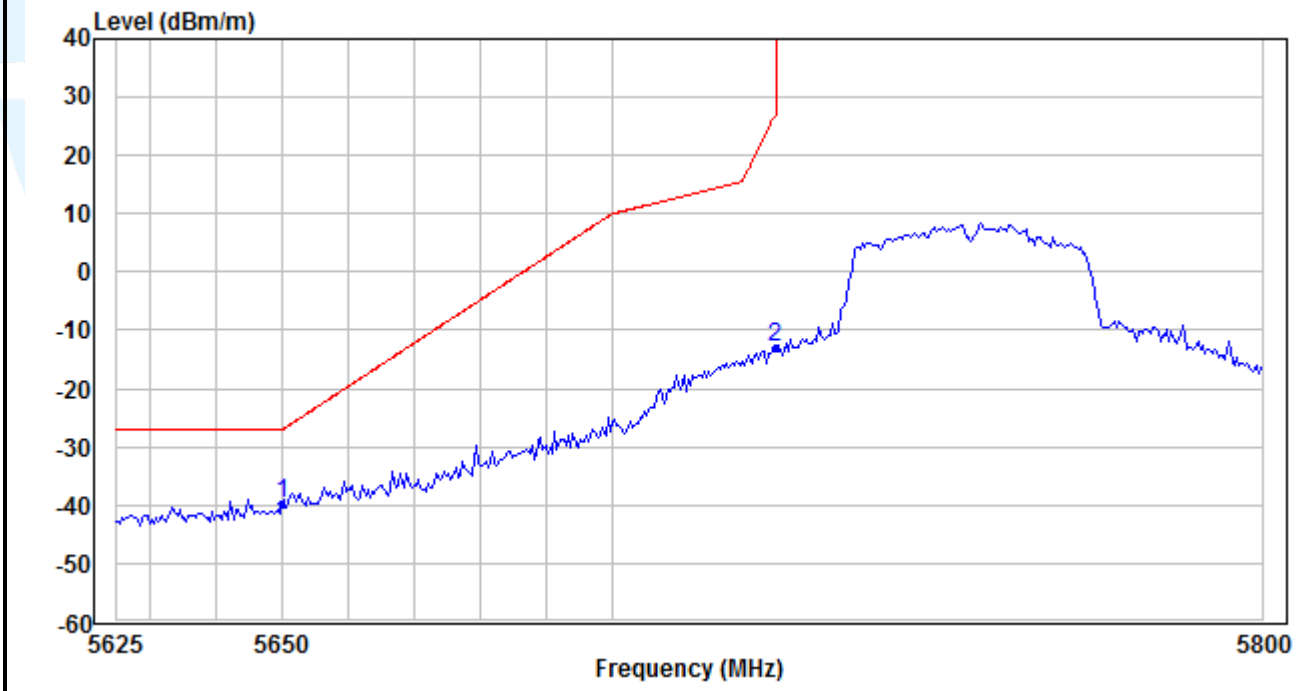
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	Conclusion
5725.0000	54.36	68.20	Pass

Test Channel:	Channel 151	Ant. Polar. :	Horizontal



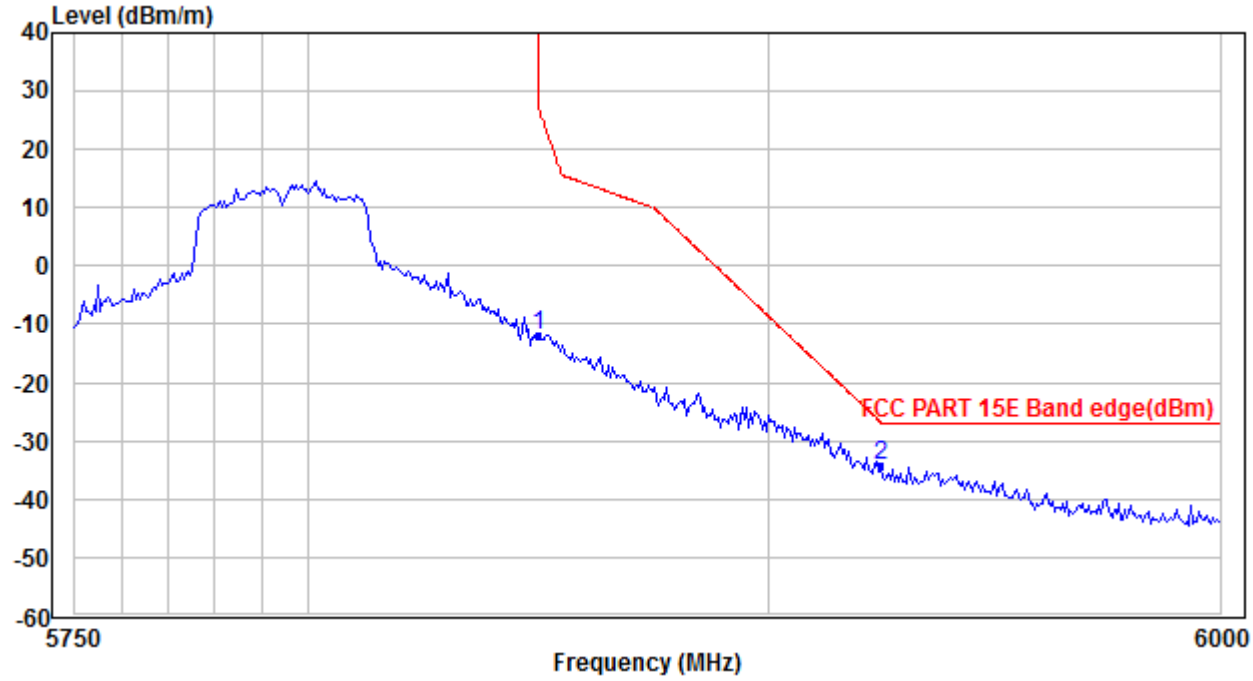
Frequency (MHz)	Peak level (dBm)	Peak Limit (dBm)	Conclusion
5650.0000	-30.84	-27.00	Pass
5725.0000	-3.49	27.00	Pass

Test Channel:	Channel 151	Ant. Polar. :	Vertical



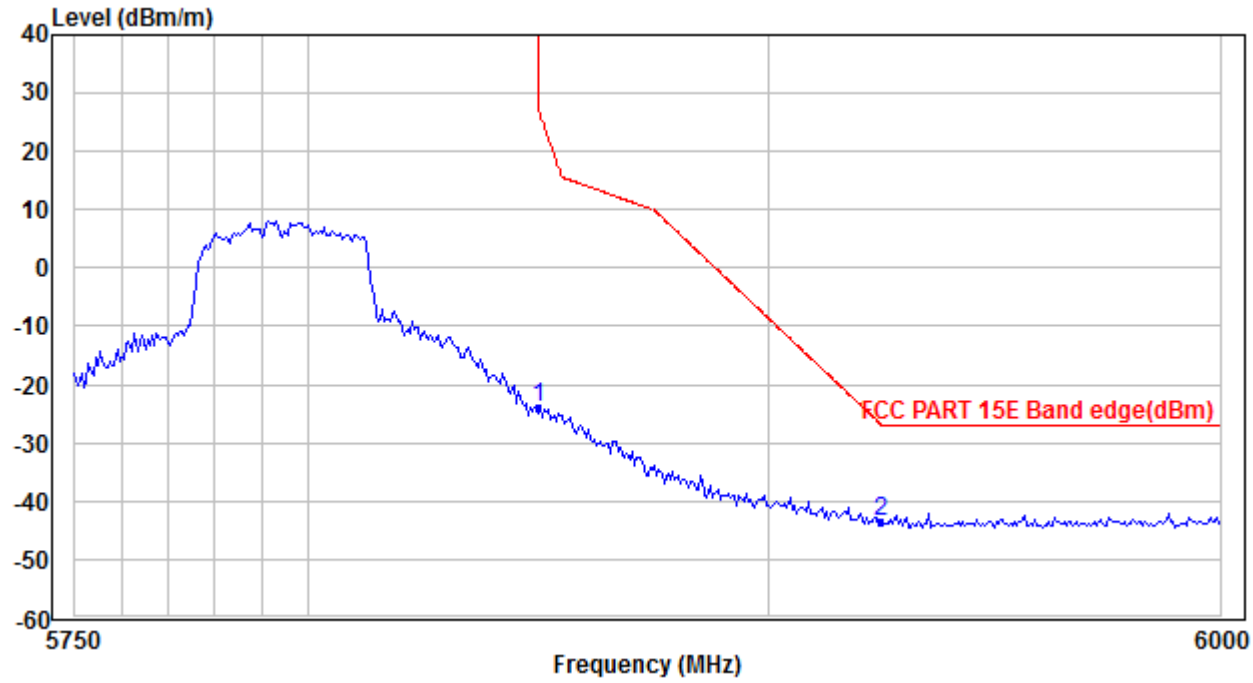
Frequency (MHz)	Peak level (dBm)	Peak Limit (dBm)	Conclusion
5650.0000	-39.69	-27.00	Pass
5725.0000	-12.88	27.00	Pass

Test Channel:	Channel 159	Ant. Polar. :	Horizontal



Frequency (MHz)	Peak level (dBm)	Peak Limit (dBm)	Conclusion
5850.00	-11.96	27.00	Pass
5925.00	-34.09	-27.00	Pass

Test Channel:	Channel 159	Ant. Polar. :	Vertical



Frequency (MHz)	Peak level (dBm)	Peak Limit (dBm)	Conclusion
5850.00	-23.78	27.00	Pass
5925.00	-43.38	-27.00	Pass

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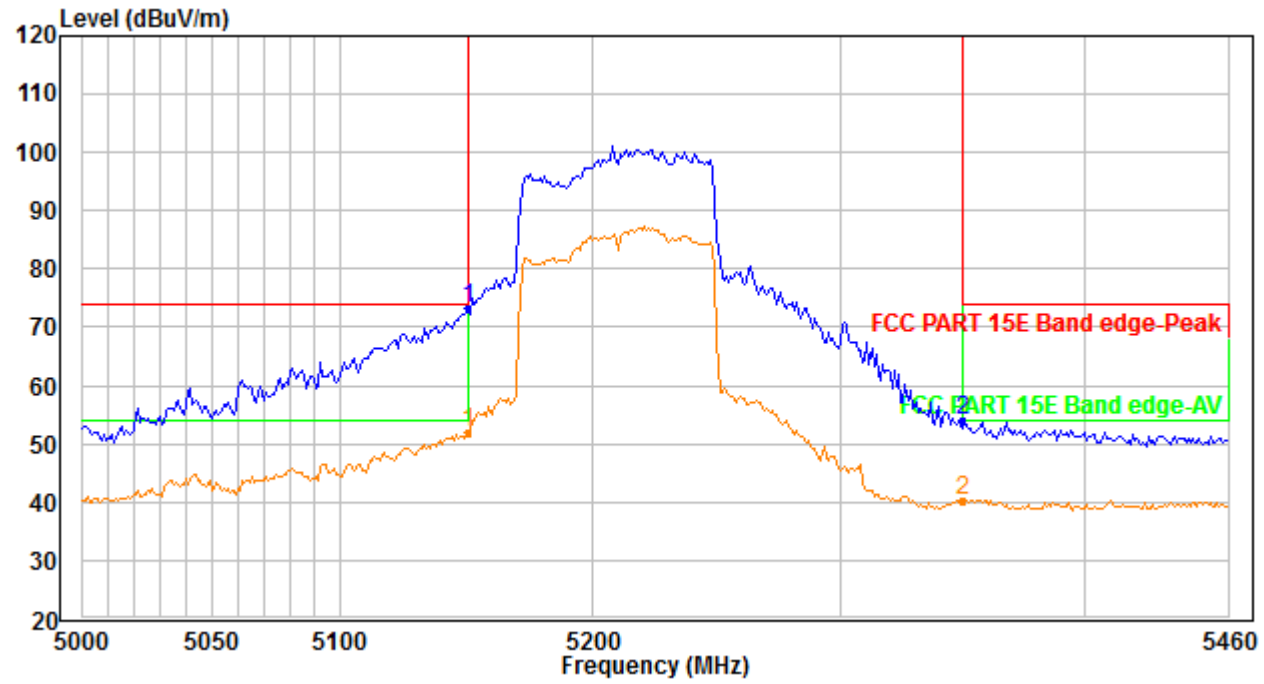
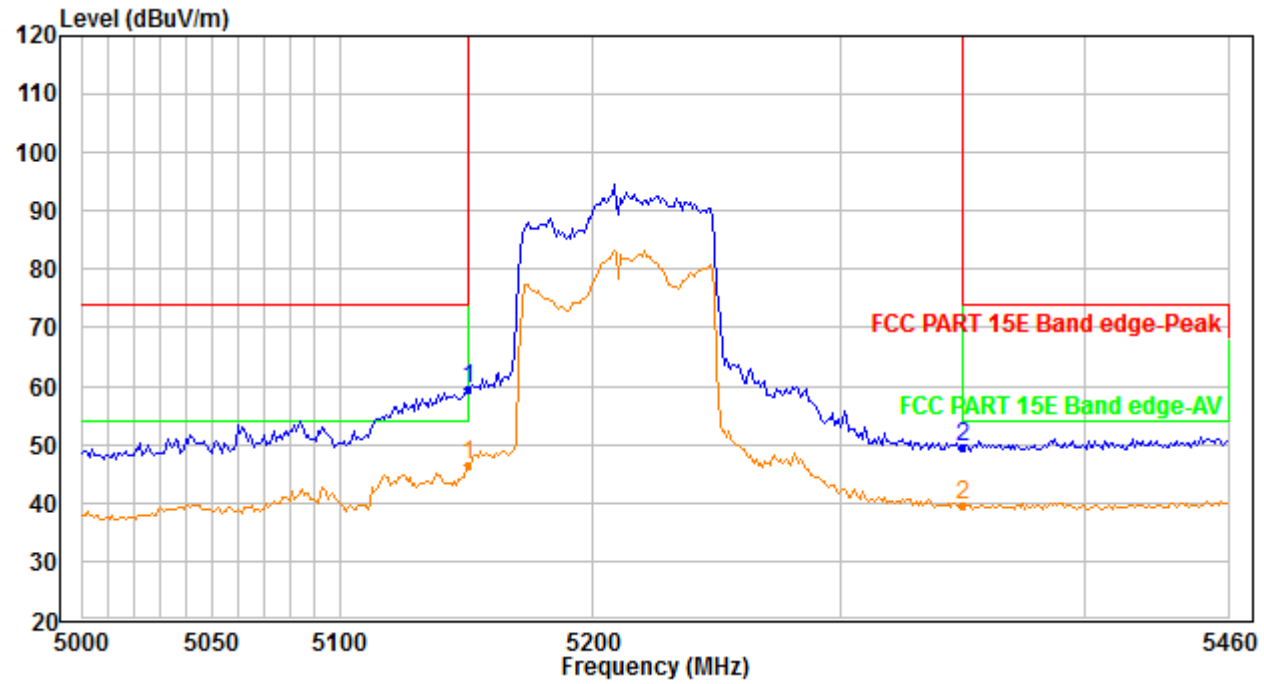
Test Channel:	Channel 42	Ant. Polar. :	Horizontal



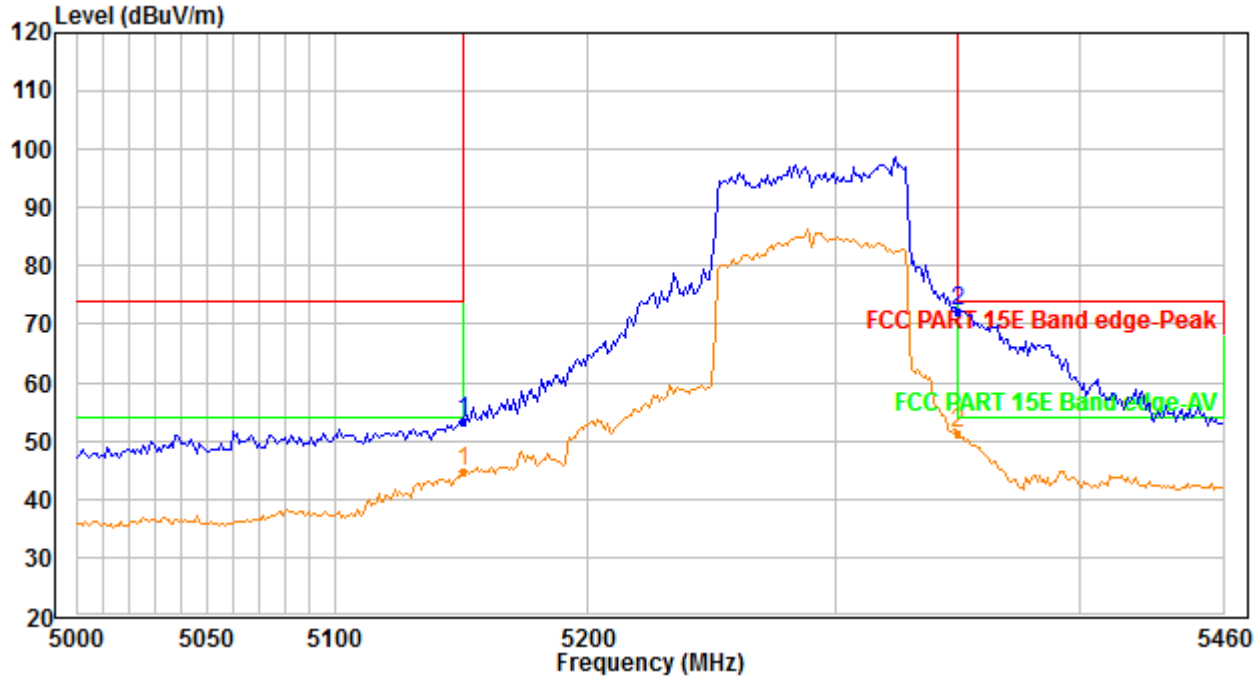
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5150.0000	73.27	74.00	52.09	54.00	Pass
5350.0000	53.94	74.00	40.21	54.00	Pass

Test Channel:	Channel 42	Ant. Polar. :	Vertical



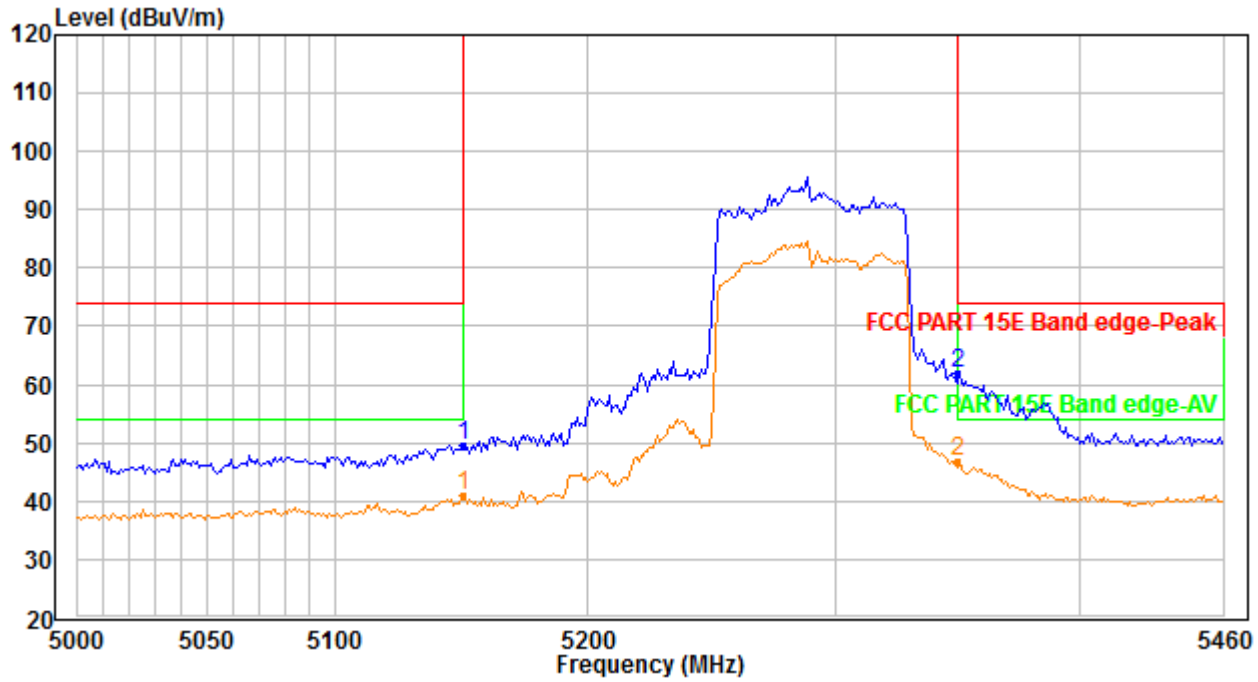
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5150.0000	59.54	74.00	46.45	54.00	Pass
5350.0000	49.40	74.00	39.52	54.00	Pass

Test Channel:	Channel 58	Ant. Polar. :	Horizontal



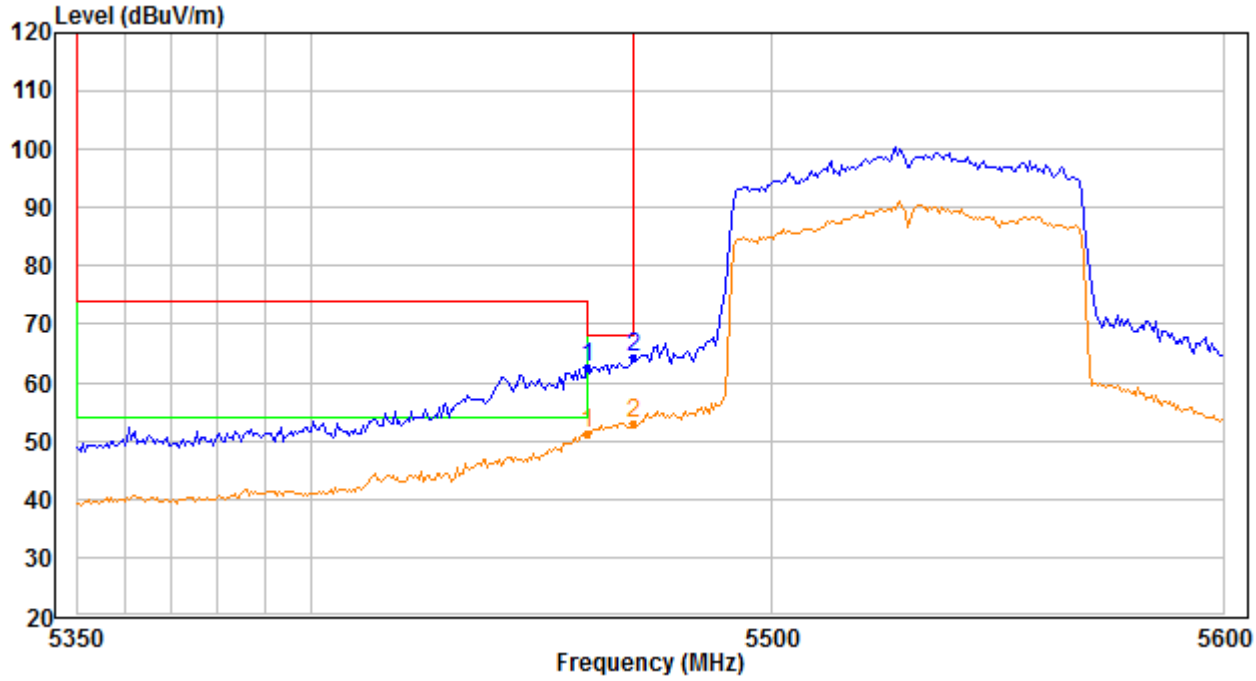
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5150.0000	53.47	74.00	44.58	54.00	Pass
5350.0000	72.16	74.00	51.38	54.00	Pass

Test Channel:	Channel 58	Ant. Polar. :	Vertical



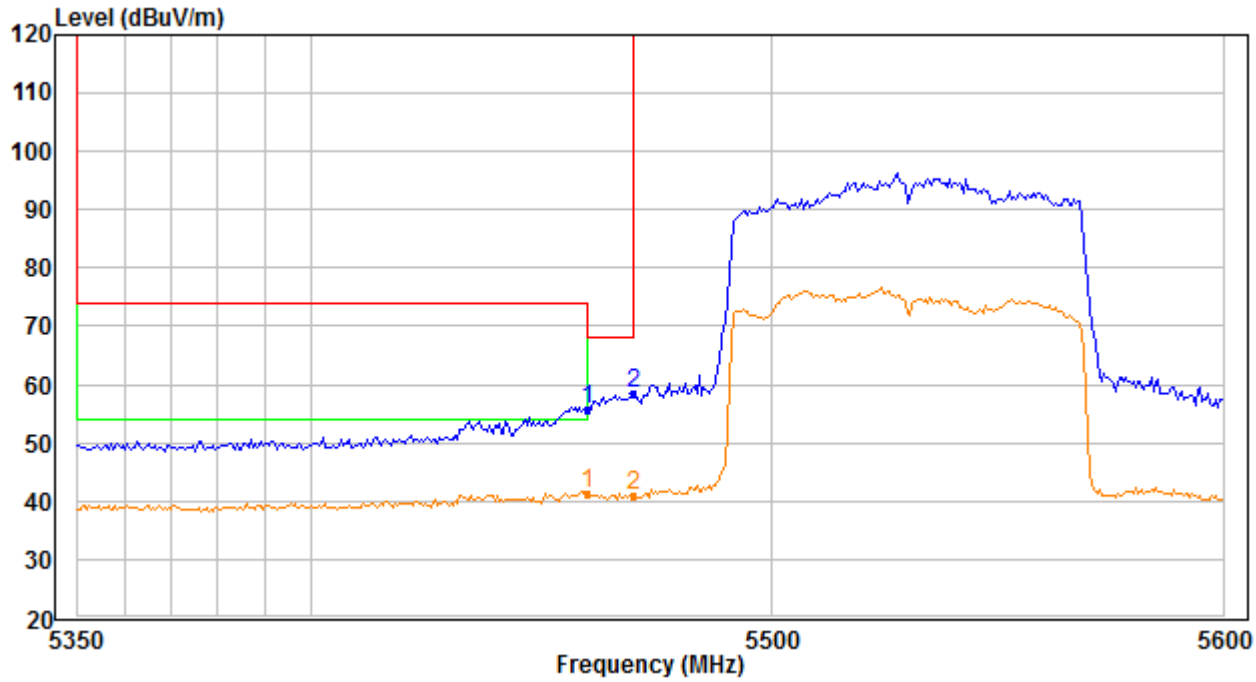
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5150.0000	49.72	74.00	40.79	54.00	Pass
5350.0000	61.97	74.00	46.66	54.00	Pass

Test Channel:	Channel 106	Ant. Polar. :	Horizontal



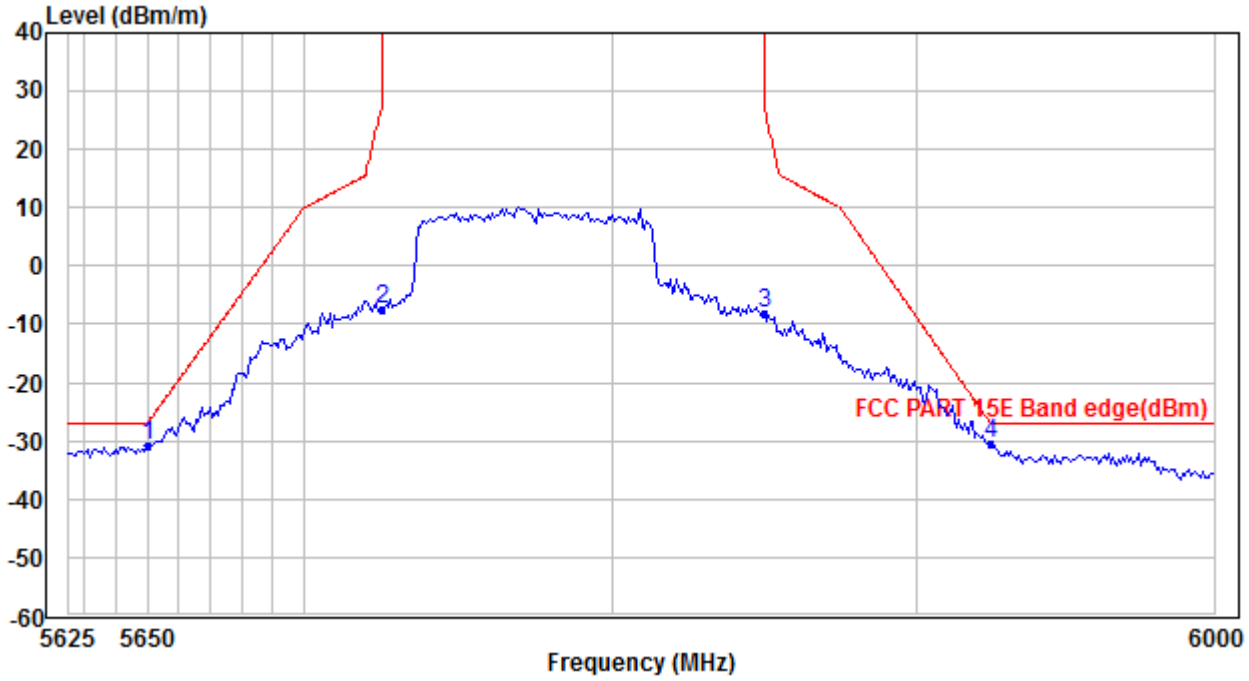
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5460.0000	62.56	68.20	51.31	54.00	Pass
5470.0000	64.45	68.20	52.83	54.00	Pass

Test Channel:	Channel 106	Ant. Polar. :	Vertical



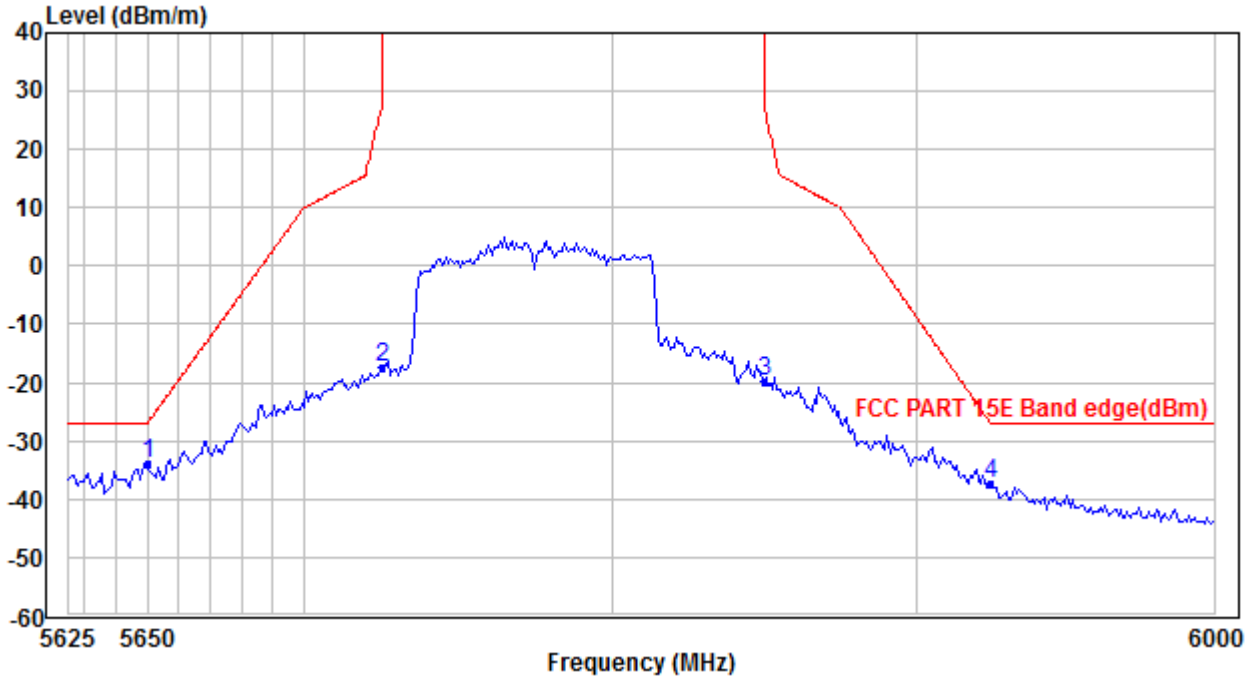
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5460.0000	55.68	68.20	41.34	54.00	Pass
5470.0000	58.55	68.20	40.91	54.00	Pass

Test Channel:	Channel 155	Ant. Polar. :	Horizontal



Frequency (MHz)	Peak level (dBm)	Peak Limit (dBm)	Conclusion
5650.0000	-30.92	-27.00	Pass
5725.0000	-7.32	27.00	Pass
5850.0000	-8.23	27.00	Pass
5925.0000	-30.58	-27.00	Pass

Test Channel:	Channel 155	Ant. Polar. :	Vertical



Frequency (MHz)	Peak level (dBm)	Peak Limit (dBm)	Conclusion
5650.0000	-33.84	-27.00	Pass
5725.0000	-17.40	27.00	Pass
5850.0000	-19.66	27.00	Pass
5925.0000	-37.46	-27.00	Pass