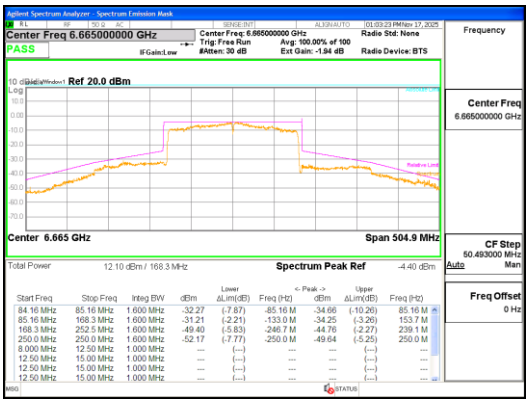
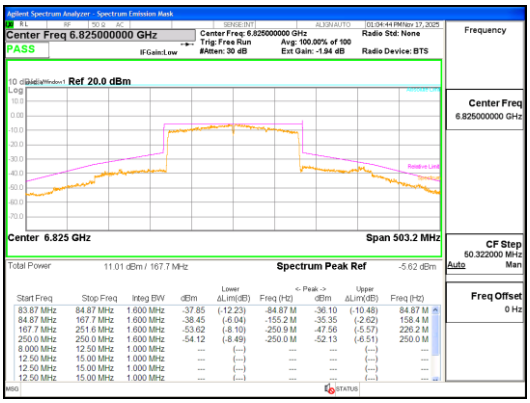
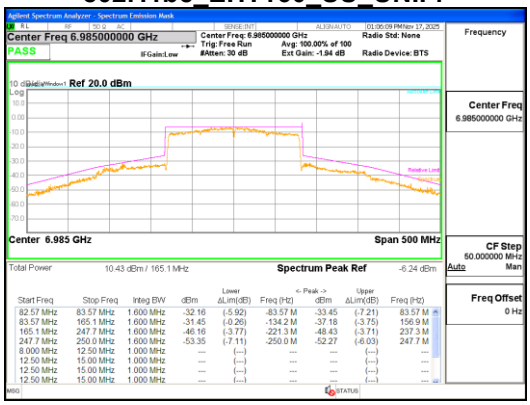




802.11be_EHT160_SU_UNII 7



802.11be_EHT160_SU_UNII 8

4.5 Frequency Stability

Test Procedures

KDB 789033 – Section A.3

The EUT was placed inside of an environmental chamber as the temperature in the chamber was varied between -20 ℃ and +50 ℃(Declaration by the Manufacturer). The temperature was incremented by 10 ℃ intervals and the unit was allowed to stabilize at each temperature before each measurement. The center frequency of the transmitting channel was evaluated at each temperature and the frequency deviation from the channel's center frequency was recorded.
Data for the worst case channel is shown below.

Measured Frequency Error (kHz)								
Voltage (VDC)	Temperature (℃)	Test Frequency (MHz)						
		5 955 MHz	6 175 MHz	6 415 MHz	6 435 MHz	6 475 MHz	6 515 MHz	6 535 MHz
5.0	-20	11 435	13 180	14 260	14 675	14 865	15 720	16 530
5.0	-10	23 610	24 495	25 450	25 565	25 725	25 940	26 115
5.0	0	22 045	22 530	23 295	23 265	23 365	23 235	23 100
5.0	10	11 915	12 275	12 795	12 450	12 400	11 755	11 485
5.0	20(Ref)	-25 047	-25 676	-27 527	-29 555	-29 425	-30 880	-31 965
5.0	30	-19 055	-20 640	-22 145	-22 580	-22 540	-23 765	-24 310
5.0	40	-34 955	-36 695	-38 415	-38 790	-39 275	-40 260	-40 870
5.0	50	-44 375	-46 120	-47 855	-47 960	-48 220	-48 260	-48 190
4.25	20(Ref)	-25 925	-36 245	-37 445	-38 555	-38 595	-39 280	-40 615
5.75	20(Ref)	-28 620	-29 990	-35 365	-37 460	-37 365	-39 100	-41 965

Measured Frequency Error							
Voltage (VDC)	Temperature (℃)	Test Frequency					
		6 695 MHz	6 855 MHz	6 875 MHz	6 995 MHz	7 095 MHz	7 115 MHz
5.0	-20	16 205	17 185	17 290	17 680	17 925	17 880
5.0	-10	26 775	27 405	27 445	27 905	28 310	28 410
5.0	0	23 370	23 865	23 860	24 525	24 935	25 005
5.0	10	11 575	11 800	11 835	12 635	12 990	12 850
5.0	20(Ref)	-33 125	-34 550	-35 545	-39 930	-40 075	-42 690
5.0	30	-24 790	-25 395	-25 660	-25 855	-26 135	-25 970
5.0	40	-41 920	-43 010	-43 155	-43 560	-44 175	-44 455
5.0	50	-49 345	-50 360	-50 490	-51 300	-52 095	-52 280
4.25	20(Ref)	-41 500	-42 230	-42 810	-43 310	-43 835	-46 380
5.75	20(Ref)	-41 735	-43 525	-42 965	-43 205	-43 500	-43 565

Note :

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency deviation noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature range as tested.

4.6 Contention Based Protocol

Test Procedures

KDB 987594 – Section I

1. Configure the EUT to transmit with a constant duty cycle.
2. Set the operating parameters of the EUT including power level, operating frequency, modulation and bandwidth.
3. Set the signal analyzer center frequency to the nominal EUT channel center frequency. The span range of the signal analyzer shall be between two times and five times the OBW of the EUT. Connect the output port of the EUT to the signal analyzer 2, as shown in Figure 2. Ensure that the attenuator 2 provides enough attenuation to not overload the signal analyzer 2 receiver.
4. Monitoring the signal analyzer 2, verify the EUT is operating and transmitting with the parameters set at step two.
5. Using an AWGN signal source, generate (but do not transmit, i.e., RF OFF) a 10 MHz-wide AWGN signal. Use Table 1 to determine the center frequency of the 10 MHz AWGN signal relative to the EUT's channel bandwidth and center frequency.
6. Set the AWGN signal power to an extremely low level (more than 20 dB below the -62 dBm threshold). Connect the AWGN signal source, via a 3-dB splitter, to the signal analyzer 1 and the EUT as shown in Figure 2.
7. Transmit the AWGN signal (RF ON) and verify its characteristics on the signal analyzer 1.
8. Monitor the signal analyzer 2 to verify if the AWGN signal has been detected and the EUT has ceased transmission. If the EUT continues to transmit, then incrementally increase the AWGN signal power level until the EUT stops transmitting.
9. (Including all losses in the RF paths) Determine and record the AWGN signal power level (at the EUT's antenna port) at which the EUT ceased transmission. Repeat the procedure at least 10 times to verify the EUT can detect an AWGN signal with 90% (or better) level of certainty.
10. Refer to Table 1 to determine number of times the detection threshold testing needs to be repeated. If testing is required more than once, then go back to step 5, choose a different center frequency for the AWGN signal and repeat the process.

Limit

Unlicensed low-power indoor devices must detect co-channel radio frequency power that is at least -62 dBm or lower.
Additionally, low-power indoor devices must detect co-channel energy with 90% or greater certainty.

Test Data

Test mode : UNII-5

Contention Based Protocol Measurement

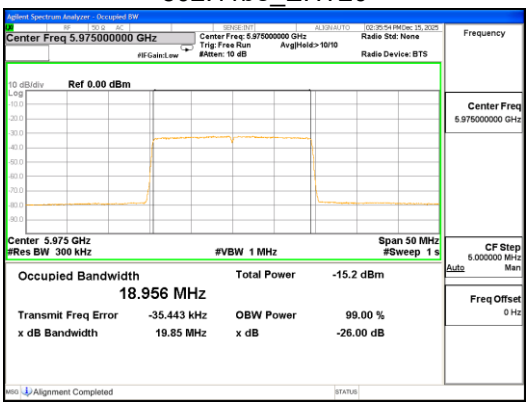
Test Mode	Channel BW (MHz)	Frequency (MHz)	Injected Signal (AWGN)		Antenna Gain (dBi)	Adjusted Power (dBm)	Detection Limit (dBm)	EUT Tx Status
			Frequency (MHz)	Power (dBm)				
802.11be	20	5 975	5 975	-62.10	1.90	-64.00	-62.00	OFF
				-70.25	1.90	-72.15	-62.00	Minimal
				-80.10	1.90	-82.00	-62.00	ON
	160	6 025	5 950	-62.10	1.90	-64.00	-62.00	OFF
				-68.12	1.90	-70.02	-62.00	Minimal
				-80.10	1.90	-86.79	-62.00	ON
			6 025	-62.10	1.90	-64.00	-62.00	OFF
				-70.15	1.90	-72.05	-62.00	Minimal
				-80.10	1.90	-82.00	-62.00	ON
			6 100	-62.10	1.90	-64.00	-62.00	OFF
				-69.21	1.90	-71.11	-62.00	Minimal
				-80.10	1.90	-82.00	-62.00	ON

Contention Based Protocol Measurement Detection Probability

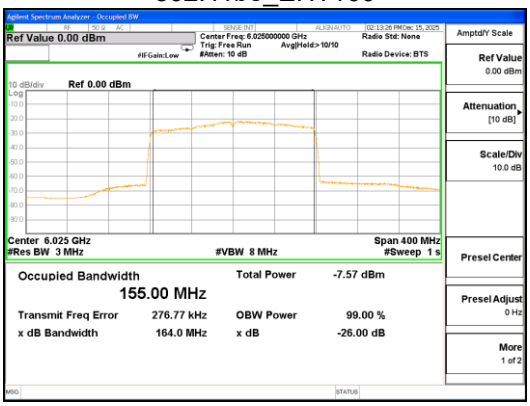
Test Mode	Channel BW (MHz)	Frequency (MHz)	Injected Signal (AWGN) (MHz)	#01	#02	#03	#04	#05	#06	#07	#08	#09	#10	Detection Probability	Detection Limit	Test Result
802.11be	20	5 975	5 975	v	v	v	v	v	v	v	v	v	v	100 %	90 %	Pass
	160	6 025	5 950	v	v	v	v	v	v	v	v	v	v	100 %	90 %	Pass
			6 025	v	v	v	v	v	v	v	v	v	v	100 %	90 %	Pass
			6 100	v	v	v	v	v	v	v	v	v	v	100 %	90 %	Pass

See next pages for actual measured spectrum plots.

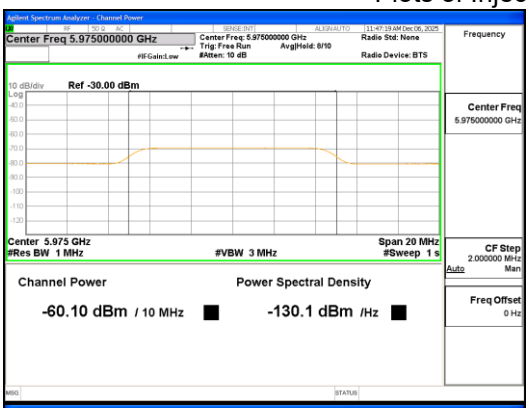
802.11be_EHT20

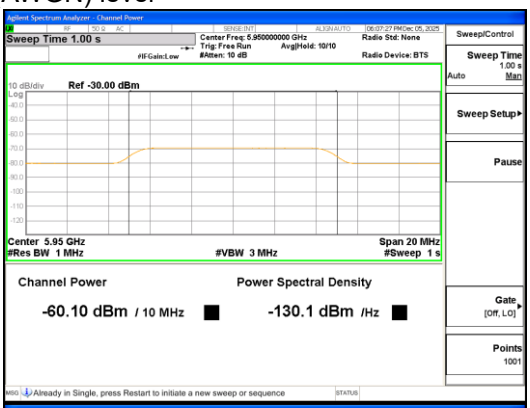


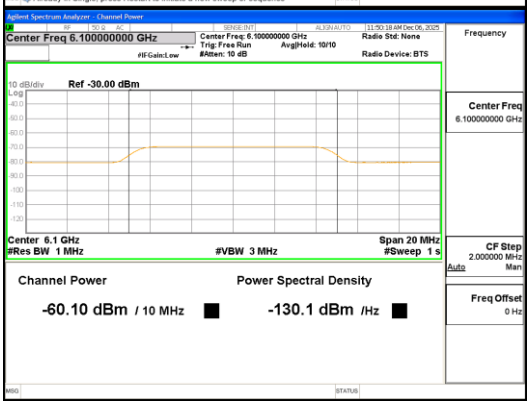
802.11be_EHT160



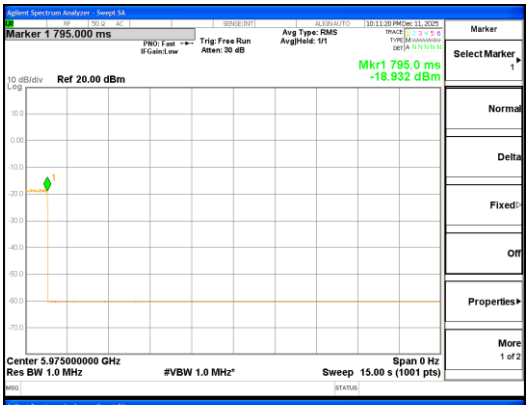
Plots of Injected signal (AWGN) level

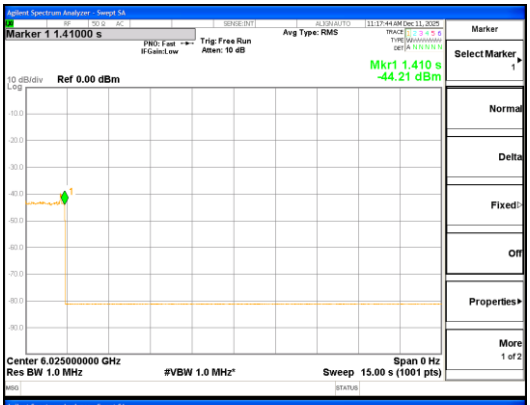


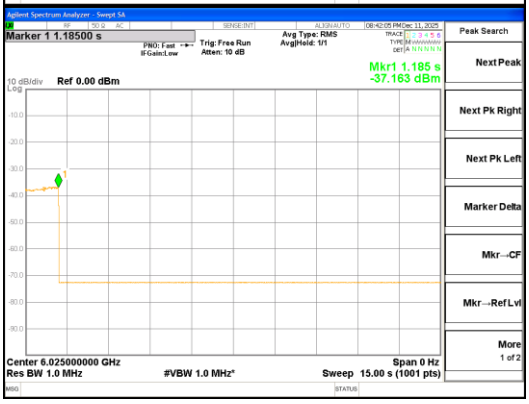


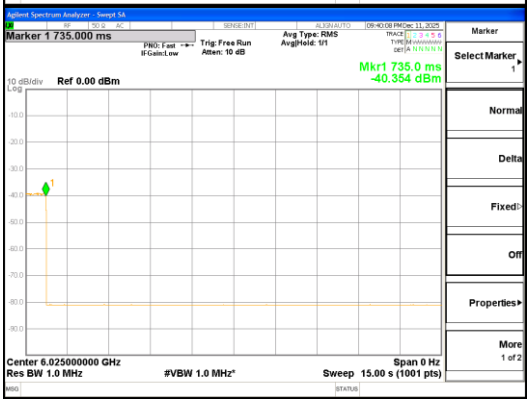


Plots of EUT ceased transmission in the time domain









Test mode : UNII-6

Contention Based Protocol Measurement

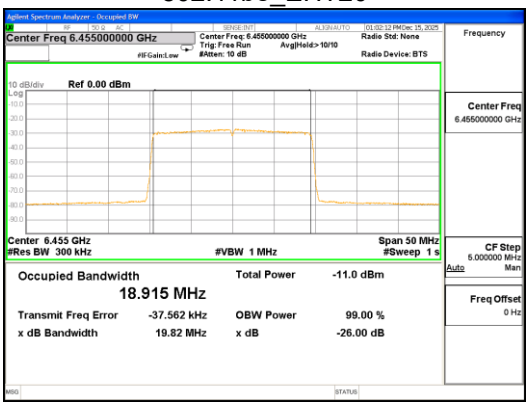
Test Mode	Channel BW (MHz)	Frequency (MHz)	Injected Signal (AWGN)		Antenna Gain (dBi)	Adjusted Power (dBm)	Detection Limit (dBm)	EUT Tx Status
			Frequency (MHz)	Power (dBm)				
802.11be	20	6 455	6 455	-62.10	1.90	-64.00	-62.00	OFF
				-71.25	1.90	-73.15	-62.00	Minimal
				-80.10	1.90	-82.00	-62.00	ON
	160	6 505	6 430	-62.10	1.90	-64.00	-62.00	OFF
				-68.84	1.90	-70.74	-62.00	Minimal
				-80.10	1.90	-86.79	-62.00	ON
			6 505	-62.10	1.90	-64.00	-62.00	OFF
				-71.02	1.90	-72.92	-62.00	Minimal
				-80.10	1.90	-82.00	-62.00	ON
			6 580	-62.10	1.90	-64.00	-62.00	OFF
				-69.21	1.90	-71.11	-62.00	Minimal
				-80.10	1.90	-82.00	-62.00	ON

Contention Based Protocol Measurement Detection Probability

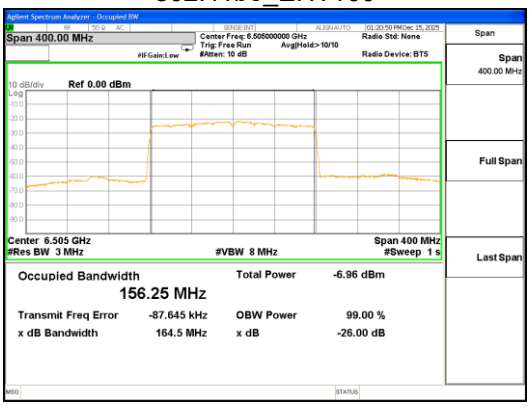
Test Mode	Channel BW (MHz)	Frequency (MHz)	Injected Signal (AWGN) (MHz)	#01	#02	#03	#04	#05	#06	#07	#08	#09	#10	Detection Probability	Detection Limit	Test Result
802.11be	20	6 455	6 455	v	v	v	v	v	v	v	v	v	v	100 %	90 %	Pass
	160	6 505	6 430	v	v	v	v	v	v	v	v	v	v	100 %	90 %	Pass
			6 505	v	v	v	v	v	v	v	v	v	v	100 %	90 %	Pass
			6 580	v	v	v	v	v	v	v	v	v	v	100 %	90 %	Pass

See next pages for actual measured spectrum plots.

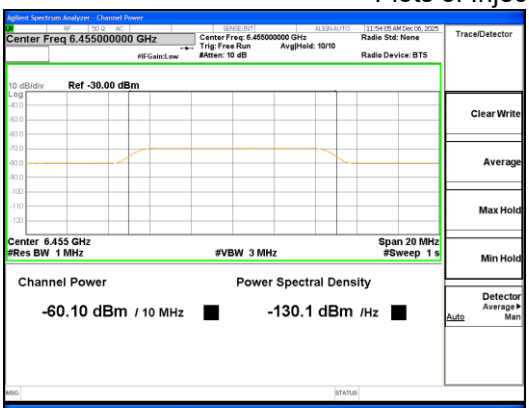
802.11be_EHT20

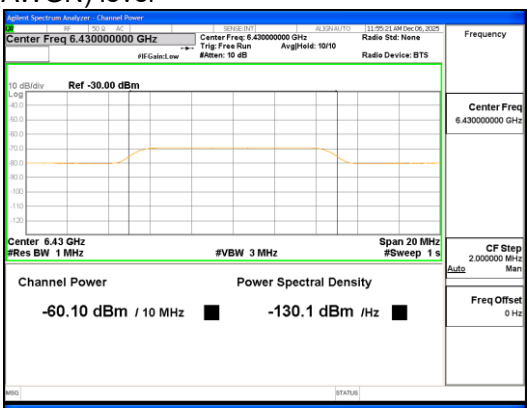


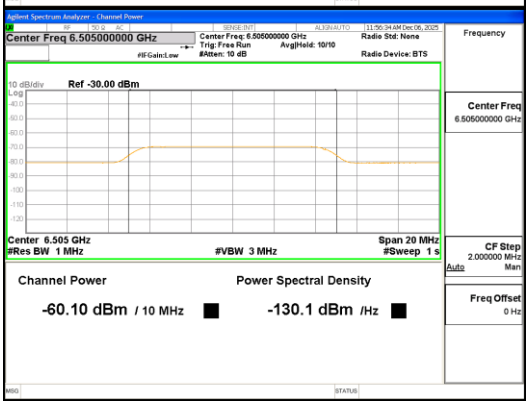
802.11be_EHT160

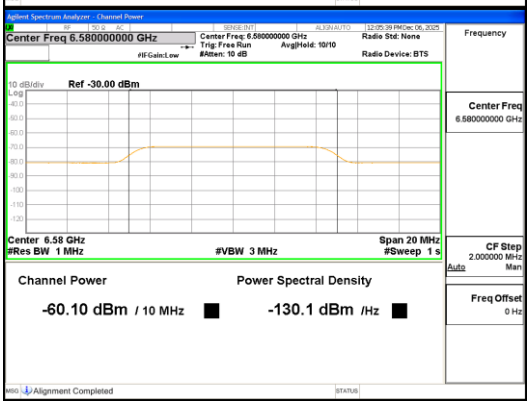


Plots of Injected signal (AWGN) level

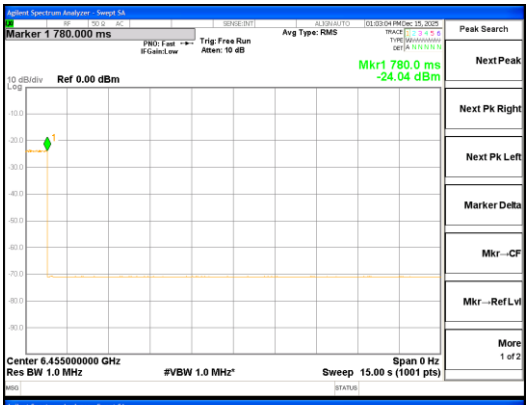


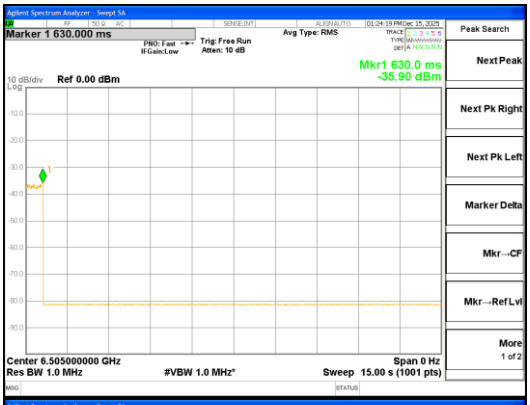


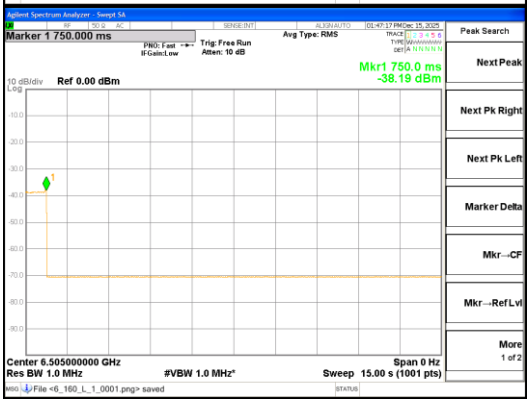




Plots of EUT ceased transmission in the time domain







Test mode : UNII-7

Contention Based Protocol Measurement

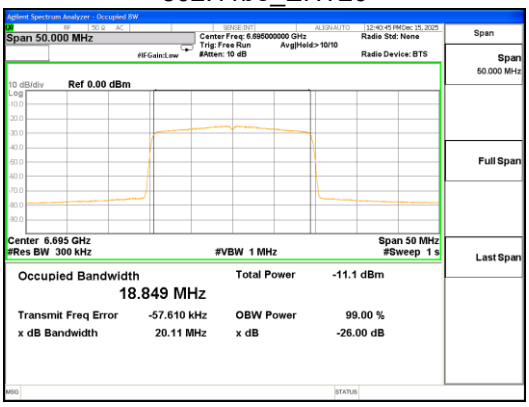
Test Mode	Channel BW (MHz)	Frequency (MHz)	Injected Signal (AWGN)		Antenna Gain (dBi)	Adjusted Power (dBm)	Detection Limit (dBm)	EUT Tx Status
			Frequency (MHz)	Power (dBm)				
802.11be	20	6 695	6 695	-62.10	1.90	-64.00	-62.00	OFF
				-70.91	1.90	-72.81	-62.00	Minimal
				-80.10	1.90	-82.00	-62.00	ON
	160	6 665	6 590	-62.10	1.90	-64.00	-62.00	OFF
				-68.21	1.90	-70.11	-62.00	Minimal
				-80.10	1.90	-86.79	-62.00	ON
			6 665	-62.10	1.90	-64.00	-62.00	OFF
				-69.89	1.90	-71.79	-62.00	Minimal
				-80.10	1.90	-82.00	-62.00	ON
			6 740	-62.10	1.90	-64.00	-62.00	OFF
				-69.05	1.90	-70.95	-62.00	Minimal
				-80.10	1.90	-82.00	-62.00	ON

Contention Based Protocol Measurement Detection Probability

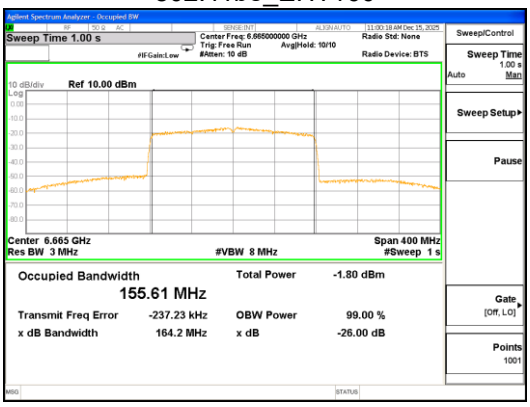
Test Mode	Channel BW (MHz)	Frequency (MHz)	Injected Signal (AWGN) (MHz)	#01	#02	#03	#04	#05	#06	#07	#08	#09	#10	Detection Probability	Detection Limit	Test Result
802.11be	20	6 695	6 695	v	v	v	v	v	v	v	v	v	v	100 %	90 %	Pass
	160	6 665	6 590	v	v	v	v	v	v	v	v	v	v	100 %	90 %	Pass
			6 665	v	v	v	v	v	v	v	v	v	v	100 %	90 %	Pass
			6 740	v	v	v	v	v	v	v	v	v	v	100 %	90 %	Pass

See next pages for actual measured spectrum plots.

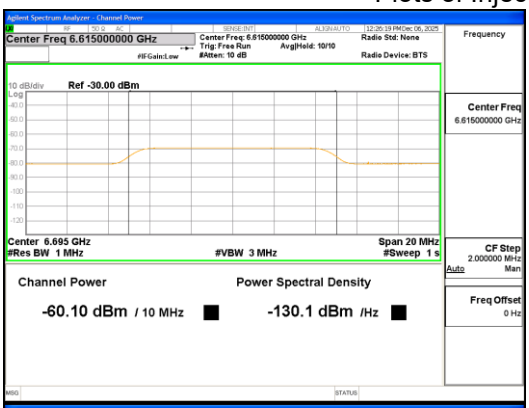
802.11be_EHT20

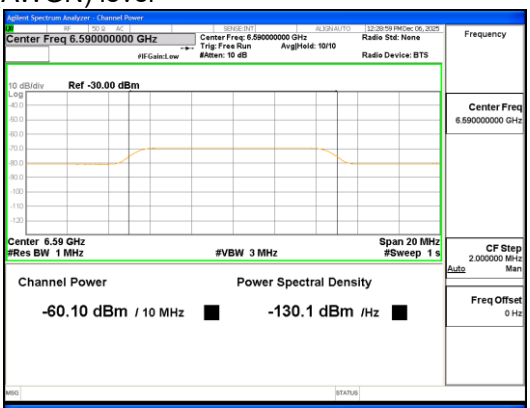


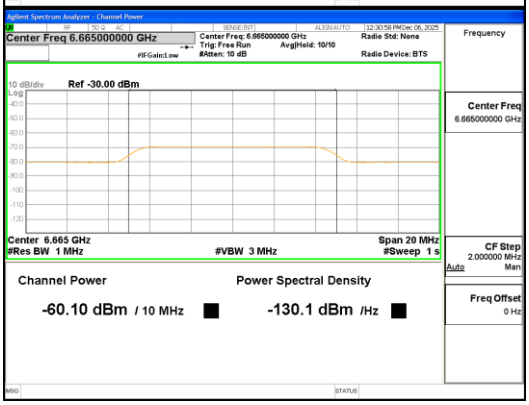
802.11be_EHT160

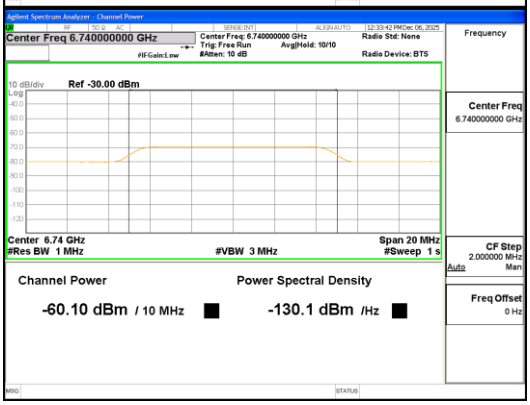


Plots of Injected signal (AWGN) level

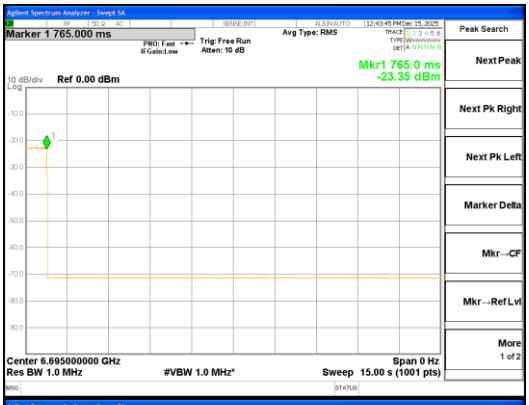


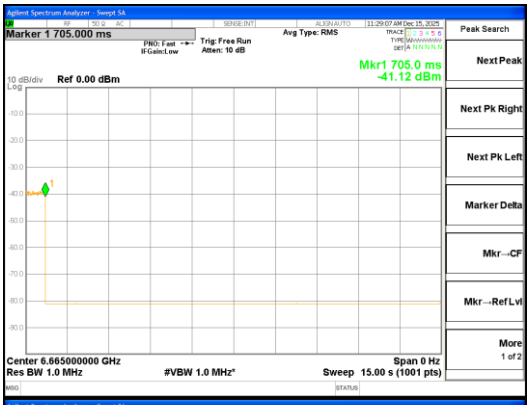


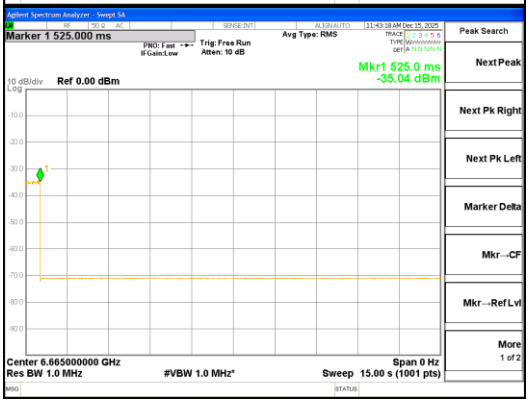


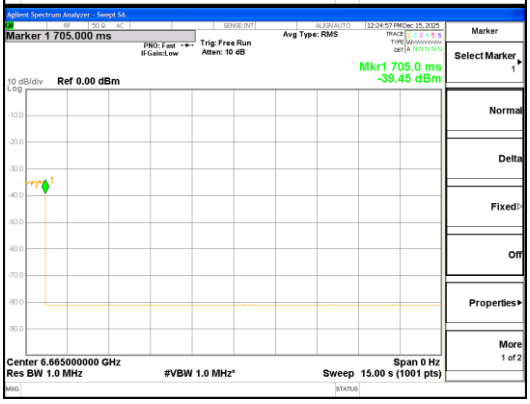


Plots of EUT ceased transmission in the time domain









Test mode : UNII-8

Contention Based Protocol Measurement

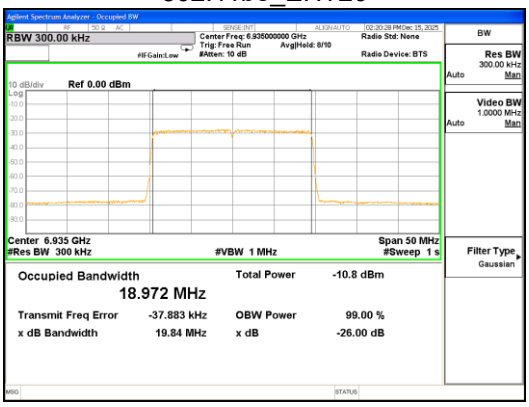
Test Mode	Channel BW (MHz)	Frequency (MHz)	Injected Signal (AWGN)		Antenna Gain (dBi)	Adjusted Power (dBm)	Detection Limit (dBm)	EUT Tx Status
			Frequency (MHz)	Power (dBm)				
802.11be	20	6 935	6 935	-62.10	1.90	-64.00	-62.00	OFF
				-67.22	1.90	-69.12	-62.00	Minimal
				-80.10	1.90	-82.00	-62.00	ON
	160	6 985	6 910	-62.10	1.90	-64.00	-62.00	OFF
				-69.11	1.90	-71.01	-62.00	Minimal
				-80.10	1.90	-86.79	-62.00	ON
			6 985	-62.10	1.90	-64.00	-62.00	OFF
				-68.57	1.90	-70.47	-62.00	Minimal
				-80.10	1.90	-82.00	-62.00	ON
			7 060	-62.10	1.90	-64.00	-62.00	OFF
				-69.12	1.90	-71.02	-62.00	Minimal
				-80.10	1.90	-82.00	-62.00	ON

Contention Based Protocol Measurement Detection Probability

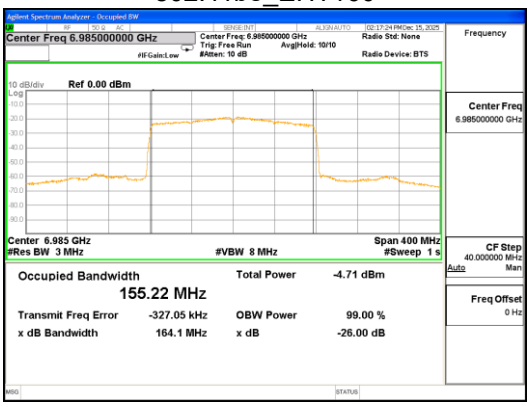
Test Mode	Channel BW (MHz)	Frequency (MHz)	Injected Signal (AWGN) (MHz)	#01	#02	#03	#04	#05	#06	#07	#08	#09	#10	Detection Probability	Detection Limit	Test Result
802.11be	20	6 935	6 935	v	v	v	v	v	v	v	v	v	v	100 %	90 %	Pass
	160	6 985	6 910	v	v	v	v	v	v	v	v	v	v	100 %	90 %	Pass
			6 985	v	v	v	v	v	v	v	v	v	v	100 %	90 %	Pass
			7 060	v	v	v	v	v	v	v	v	v	v	100 %	90 %	Pass

See next pages for actual measured spectrum plots.

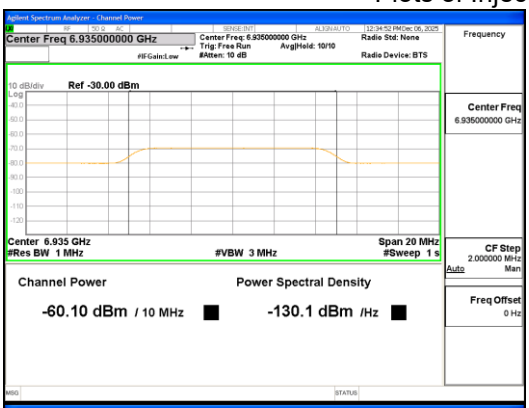
802.11be_EHT20

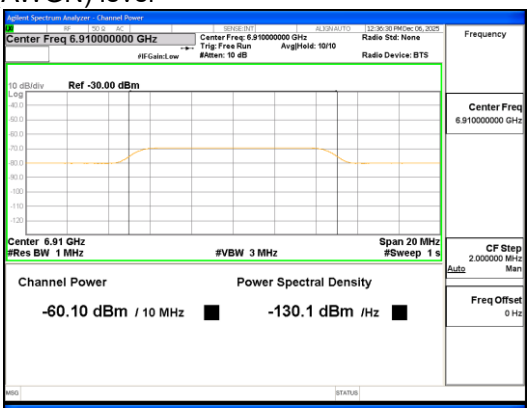


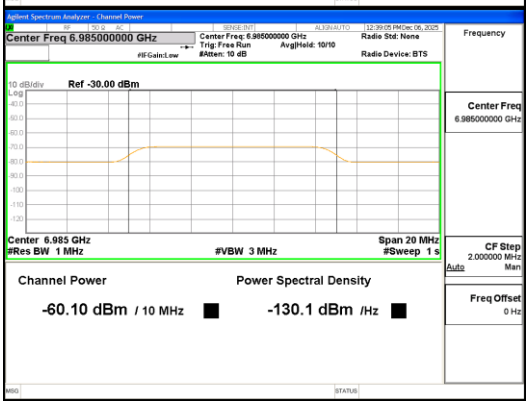
802.11be_EHT160

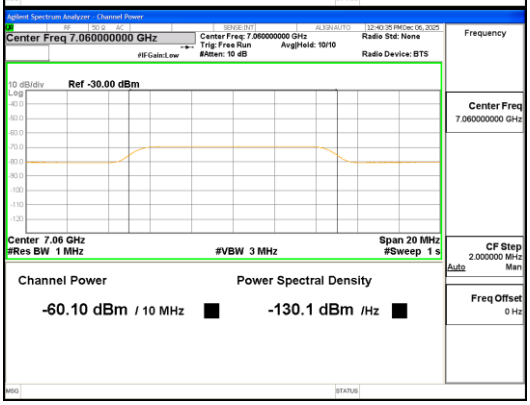


Plots of Injected signal (AWGN) level

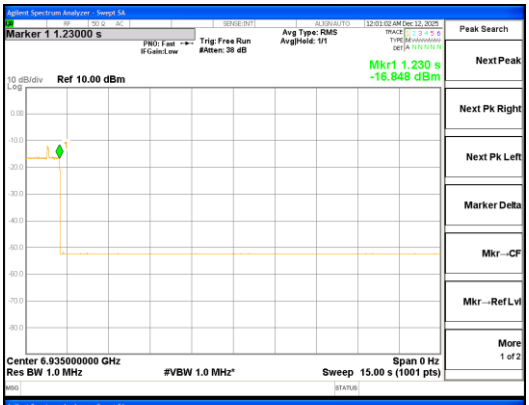


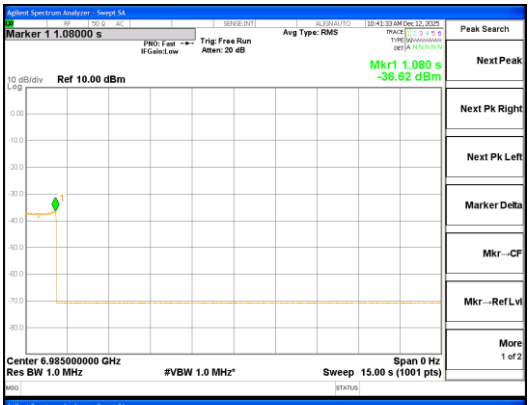


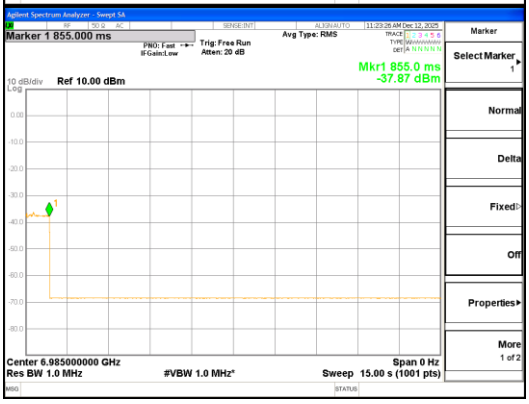




Plots of EUT ceased transmission in the time domain







4.7 Unwanted Emissions

Test Location

☒ 10 m SAC (test distance : ☐ 10 m, ☒ 3 m)
☒ 3 m SAC (test distance : 3 m)

Test Procedures

KDB 987594 - Section G
KDB 789033 - Section G
ANSI C63.10-2020 – Section 12.7

1) In the frequency range of 9 kHz to 30 MHz, magnetic field is measured with Loop Antenna. The Test Antenna is positioned with its plane vertical at 1m distance from the EUT. The center of the Loop Test Antenna is 1m above the ground. During the measurement the Loop Test Antenna rotates about its vertical axis for maximum response at each azimuth about the EUT.
2) In the frequency rage above 30 MHz, Bi-Log Test Antenna(30 MHz to 1 GHz) and Horn Test Antenna(above 1 GHz) are used. Test Antenna is 3m away from the EUT. Test Antenna height is carried from 1m to 4m above the ground to determine the maximum value of the field strength. The emissions levels at both horizontal and vertical polarizations should be tested.

Test Settings:

Frequency Range = 9 kHz ~ 1 GHz

a) RBW = 100 kHz for f < 1 GHz, 9 kHz for f < 30 MHz

b) VBW ≥ RBW

c) Detector = CISPR Quasi-peak

d) Sweep time = auto couple

- Peak

Frequency Range = 1 GHz ~ 40 GHz

a) RBW = 1 MHz

b) VBW ≥ 3 x RBW

c) Detector = Peak

d) Sweep time = auto

e) Trace mode = max hold

- Average (duty cycle ≥ 98%)

Frequency Range = 1 GHz ~ 40 GHz

a) RBW = 1 MHz

b) VBW ≥ 3 x RBW

c) Detector = RMS

d) Sweep time = auto

e) Averaging type = power (i.e., RMS)

f) Trace mode = average (at least 100 traces)

- Average (duty cycle < 98%)

Frequency Range = 1 GHz ~ 40 GHz

a) RBW = 1 MHz

b) VBW ≥ 3 x RBW

c) Detector = RMS

d) Sweep time = auto

e) Averaging type = power (i.e., RMS)

f) Trace mode = average (at least 100 traces)
If power averaging (RMS) mode, then the applicable correction factor is 10 log(1/x), where x is the duty cycle.

Test mode	Duty Cycle Factor (dB)
802.11a	1.17
802.11ax_HE20_SU	3.78
802.11ax_HE40_SU	3.78
802.11ax HE80_SU	3.90
802.11ax HE160_SU	3.88
802.11be_EHT20_SU	3.39
802.11be_EHT40_SU	3.39
802.11be_EHT80_SU	3.50
802.11be_EHT160_SU	3.48

Limit

- **15.407, KDB 987594**

E.I.R.P -27 dBm/MHz

E[dBuV/m] = EIRP[dBm] + 95.2, for d = 3m

1. Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in § 15.209.

- 15.209(a)

Frequency(MHz)	Field Strength uV/m@3m	Field Strength dBuV/m@3m	Deasurement Distance (meters)
0.009-0.490	2400/F(kHz)	-	300
0.490-1.705	24000/F(kHz)	-	30
1.705-30	30	-	30
30-88	100**	40	3
88-216	150**	43.5	3
216-960	200**	46	3
Above 960	500	54	3

** Except as provided in 15.209(g).fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54-72MHz, 76-88MHz, 174-216MHz, 470-806MHz. However, operation within these frequency bands is permitted under other sections of this Part, e.g.15.231 and 15.241.

2. FCC Part 15 § 15.205 (a) Except as shown in paragraph (d) of this section, only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	MHz	MHz	GHz
0.09-0.11	8.37626-8.38675	73-74.6	399.9-410	2690-2900	10.6-12.7
[1]0.495-0.505	8.41425-8.41475	74.8-75.2	608-614	3260-3267	13.25-13.4
2.1735-2.1905	12.29-12.293	108-121.94	960-1240	3332-3339	14.47-14.5
4.125-4.128	12.51975-12.52025	123-138	1300-1427	3345.8-3358	15.35-16.2
4.17725-4.17775	12.57675-12.57725	149.9-150.05	1435-1626.5	3600-4400	17.7-21.4
4.20725-4.20775	13.36-13.41	156.52475-156.52525	1645.5-1646.5	4500-5150	22.01-23.12
6.215-6.218	16.42-16.423	156.7-156.9	1660-1710	5350-5460	23.6-24
6.26775-6.26825	16.69475-16.69525	162.0125-167.17	1718.8-1722.2	7250-7750	31.2-31.8
6.31175-6.31225	16.80425-16.80475	167.72-173.2	2200-2300	8025-8500	36.43-36.5
8.291-8.294	25.5-25.67	240-285	2310-2390	9000-9200	[2]Above 38.6
8.362-8.366	37.5-38.25	322-335.4	2483.5-2500	9300-9500	

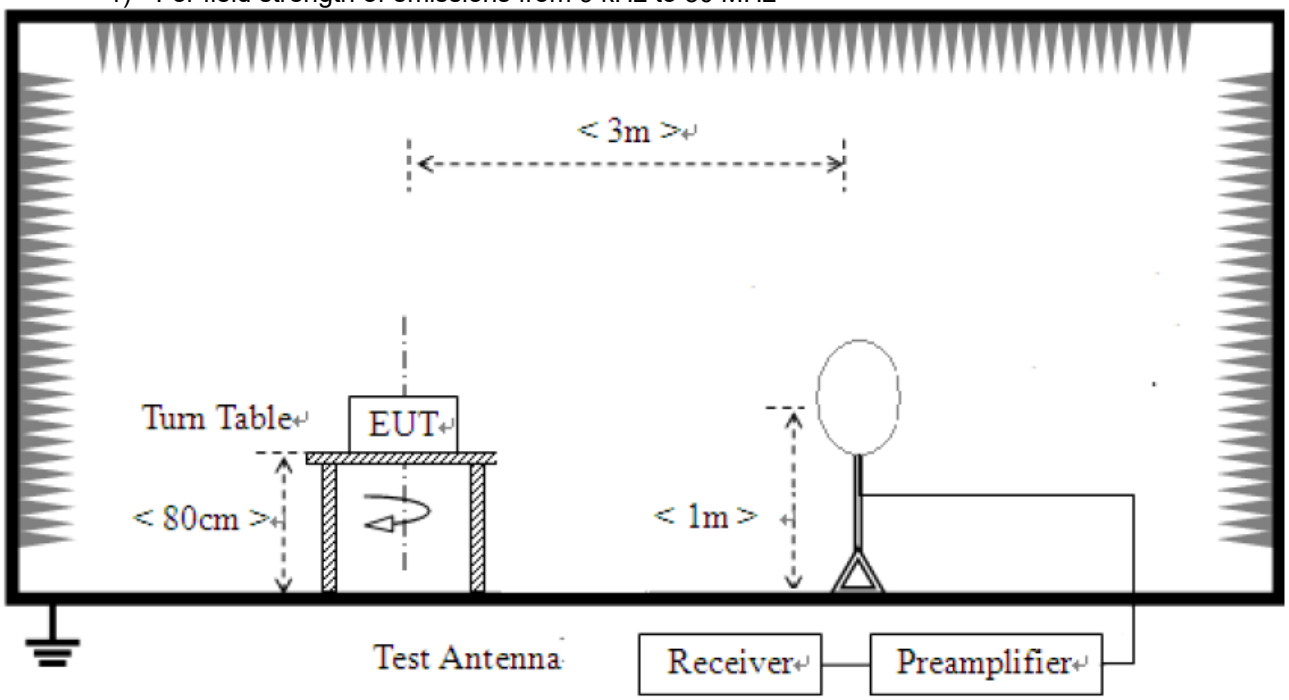
[1] Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.

[2] Above 38.6

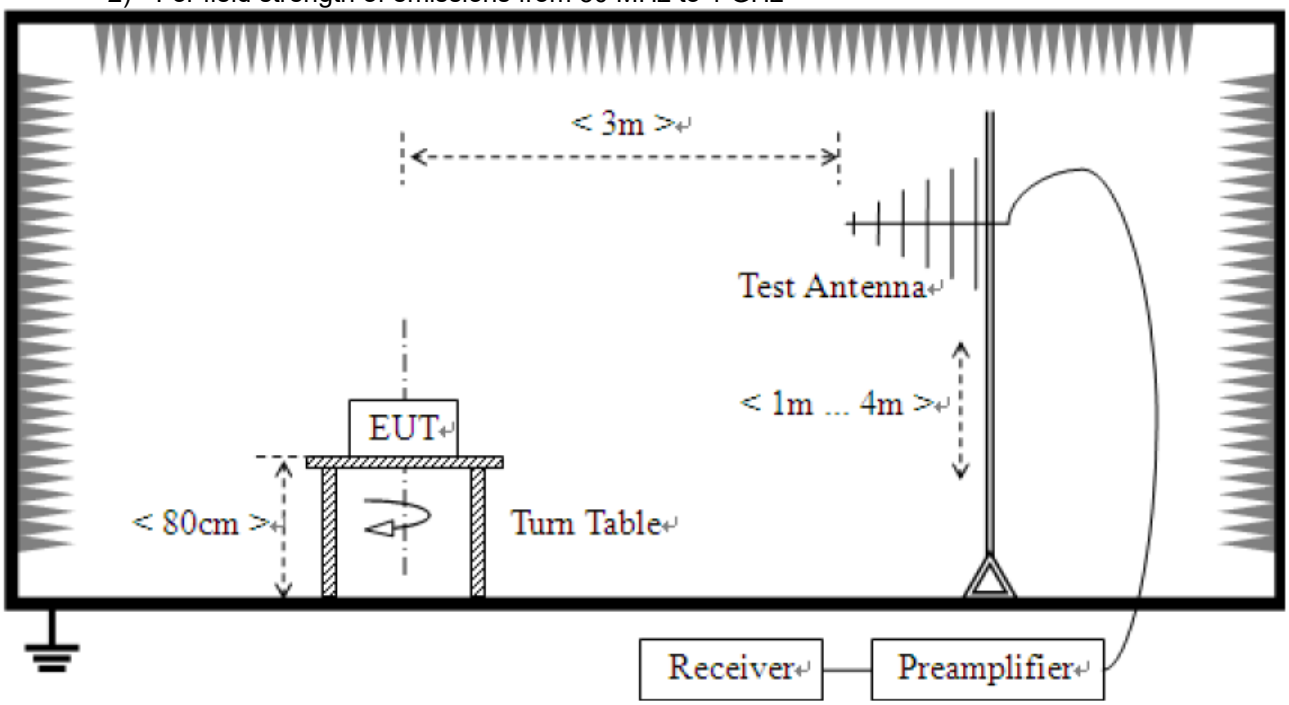
§ 15.205 (b) Except as provided in paragraphs (d) and (e), the field strength of emissions appearing within these frequency bands shall not exceed the limits shown is Section 15.209. At frequencies equal to or less than 1000 MHz, compliance with the limits in Section 15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1000 MHz, compliance with the emission limits in Section 15.209 shall be demonstrated based on the average value of the measured emissions.
The provisions in Section 15.35 apply to these measurements.

Test Setup:

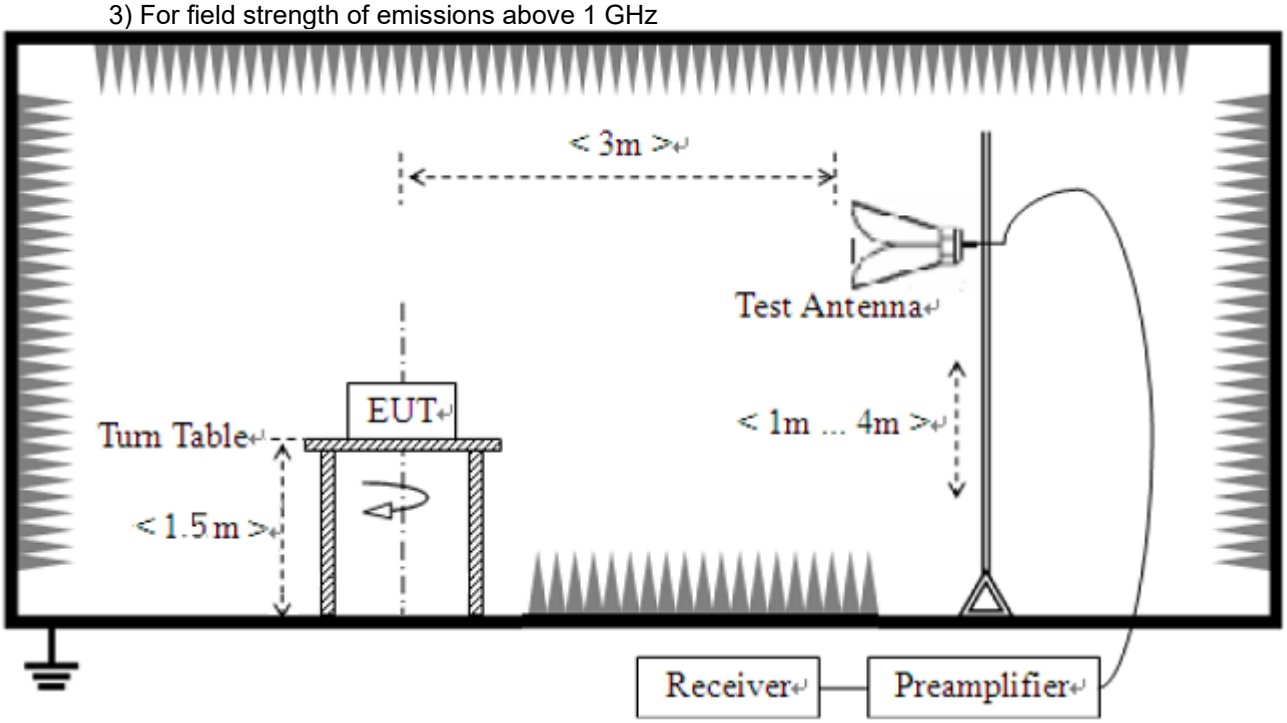
1) For field strength of emissions from 9 kHz to 30 MHz



2) For field strength of emissions from 30 MHz to 1 GHz



3) For field strength of emissions above 1 GHz



Test Mode

We have done all test mode.
The worst case antenna configuration and Test mode are determined to be as follows.

802.11a/ax/be mode : ANT 0

So the results are only attached worst cases.

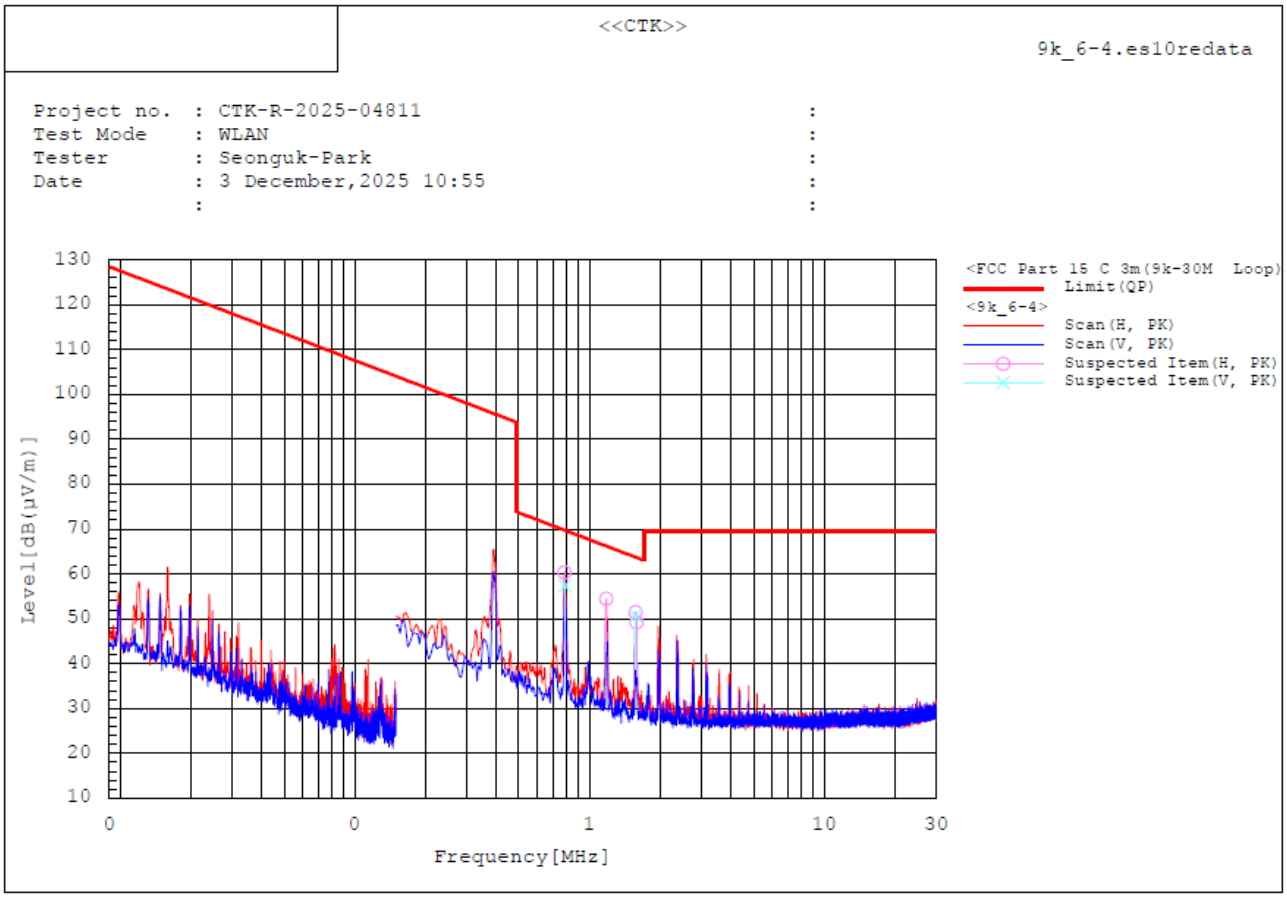
Test Results

1) 9 kHz to 30 MHz

Test mode : Transmitter, UNII-8_F1 (Worst Case)

The requirements are:
☒ Complies

Test Data



Spectrum Selection

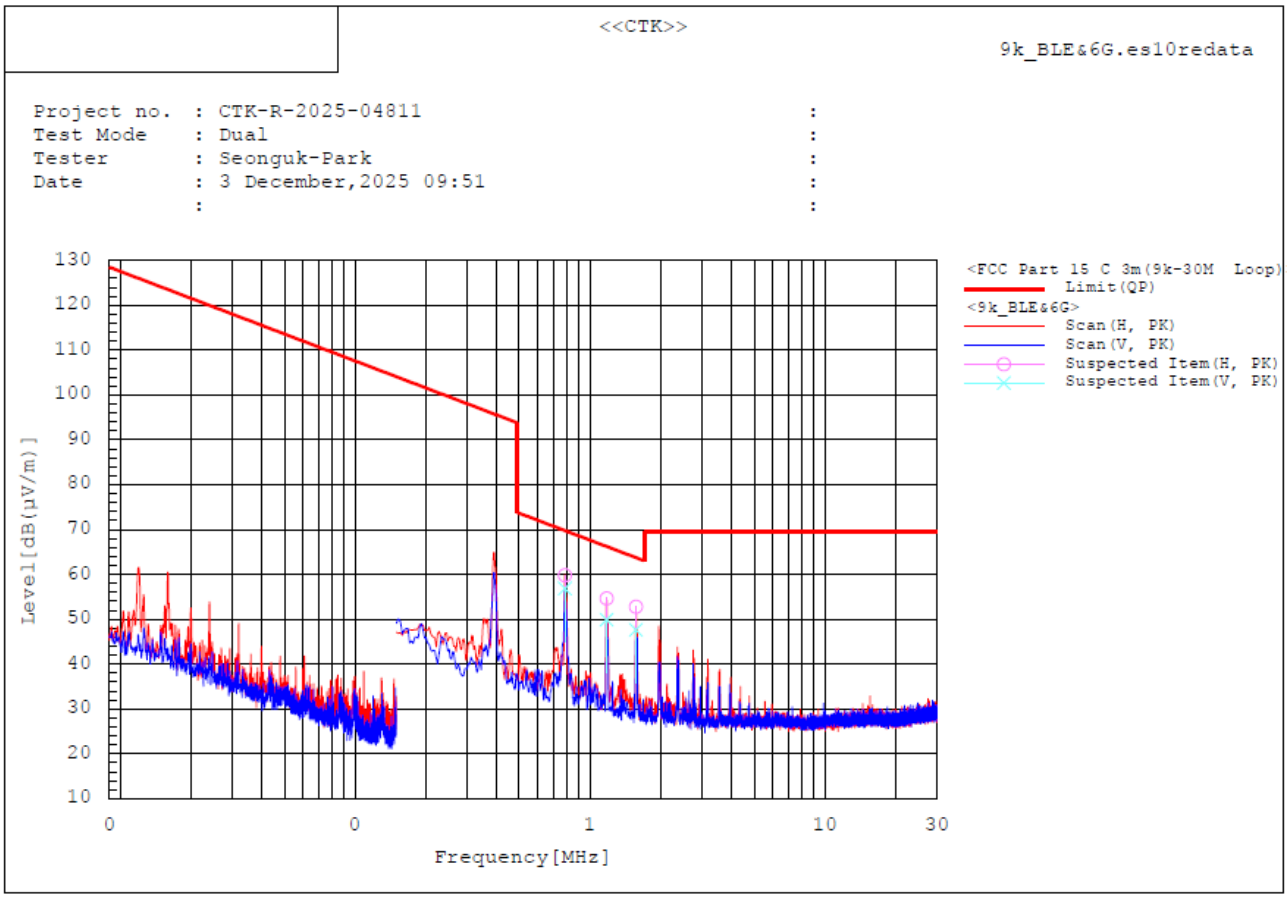
No.	Frequency [MHz]	Pol	Reading PK [dB(μV)]	c.f [dB(1/m)]	Result PK [dB(μV/m)]	Limit QP [dB(μV/m)]	Margin QP-PK [dB]	Height [cm]	Angle [deg]	Remark
1	0.783	H	35.4	24.9	60.3	69.7	9.4	100.0	104.0	
2	0.786	V	32.5	24.9	57.4	69.7	12.3	100.0	70.2	
3	1.177	H	29.6	24.9	54.5	66.2	11.7	100.0	63.3	
4	1.571	H	26.5	25.0	51.5	63.7	12.2	100.0	359.7	
5	1.571	V	25.7	25.0	50.7	63.7	13.0	100.0	70.2	
6	1.586	H	24.2	25.0	49.2	63.6	14.4	100.0	104.0	

Remark :
1. The unwanted emission was measured in the following position: EUT stand-up position(Z axis), lie-down positon(X,Y axis). The worst emission was found in lie-down positon(Y axis) and the worst case was recorded.
2. Result = Reading + c.f(Correction factor)
3. Correction factor = Antenna factor + Cable loss + 6 dB attenuator - Amp Gain
4. This data is the Peak(PK) value.

Test mode : Transmitter (simultaneous transmissions BLE + 6ID)

The requirements are:
☒ Complies

Test Data



Spectrum Selection

No.	Frequency [MHz]	Pol	Reading PK [dB(μV)]	c.f [dB(1/m)]	Result PK [dB(μV/m)]	Limit QP [dB(μV/m)]	Margin QP-PK [dB]	Height [cm]	Angle [deg]	Remark
1	0.783	H	34.9	24.9	59.8	69.7	9.9	100.0	3.2	
2	0.783	V	31.9	24.9	56.8	69.7	12.9	100.0	85.7	
3	1.177	H	29.7	24.9	54.6	66.2	11.6	100.0	211.0	
4	1.177	V	25.0	24.9	49.9	66.2	16.3	100.0	95.1	
5	1.568	V	22.6	25.0	47.6	63.7	16.1	100.0	85.7	
6	1.571	H	27.8	25.0	52.8	63.7	10.9	100.0	7.5	

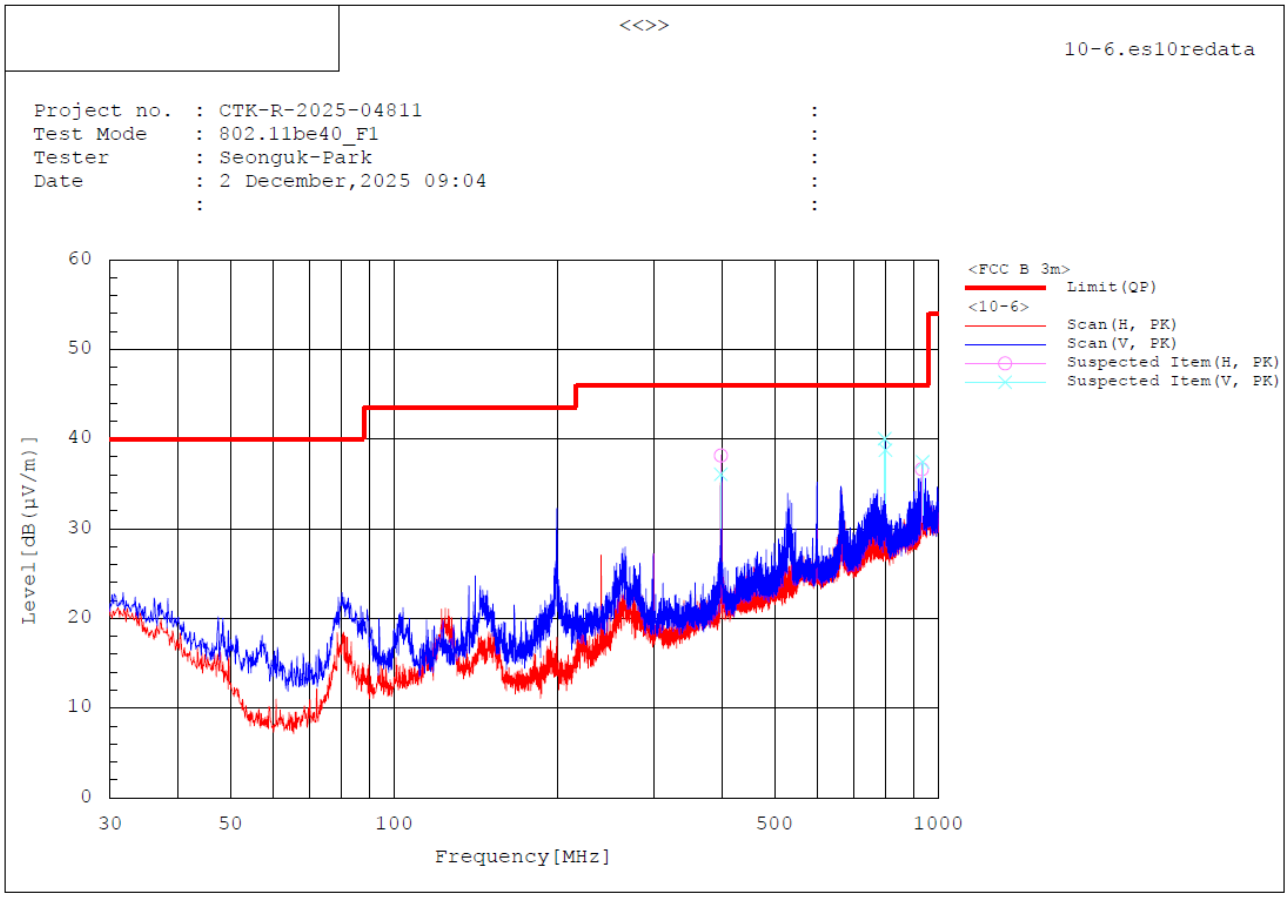
Remark :
1. The unwanted emission was measured in the following position: EUT stand-up position(Z axis), lie-down positon(X,Y axis). The worst emission was found in lie-down positon(Y axis) and the worst case was recorded.
2. Result = Reading + c.f(Correction factor)
3. Correction factor = Antenna factor + Cable loss + 6 dB attenuator - Amp Gain
4. This data is the Peak(PK) value.

2) 30 MHz to 1 GHz

Test mode : Transmitter, UNII-8_F1 (Worst Case)

The requirements are:
☒ Complies

Test Data



Spectrum Selection

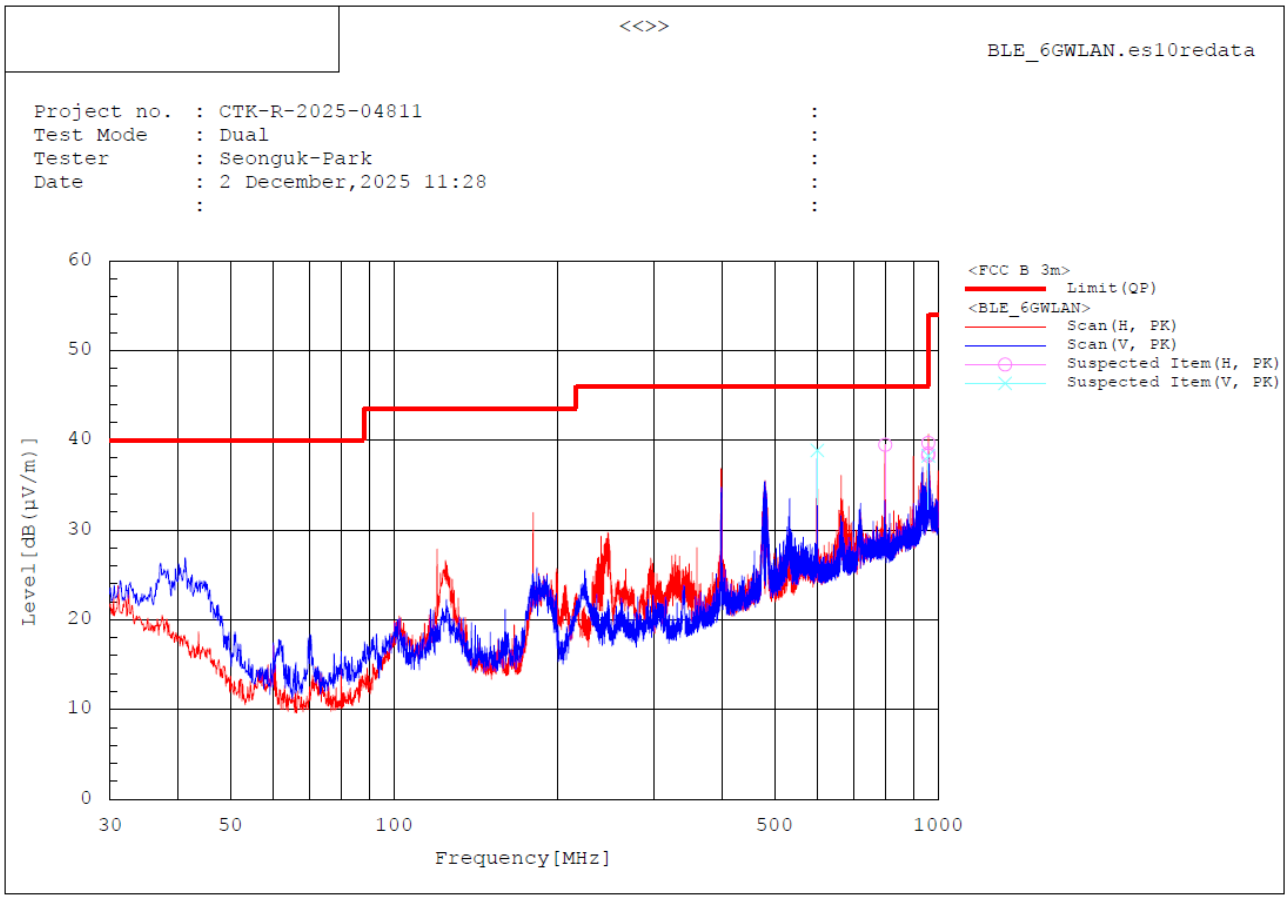
No.	Frequency [MHz]	Pol	Reading PK [dB(µV)]	c.f [dB(1/m)]	Result PK [dB(µV/m)]	Limit QP [dB(µV/m)]	Margin QP-PK [dB]	Height [cm]	Angle [deg]	Remark
1	398.600	H	44.7	-6.5	38.2	46.0	7.8	100.1	92.9	
2	398.794	V	42.5	-6.5	36.0	46.0	10.0	99.9	1.0	
3	797.173	V	38.1	1.9	40.0	46.0	6.0	99.9	208.8	
4	799.889	V	36.9	1.9	38.8	46.0	7.2	99.9	86.3	
5	933.361	H	31.5	5.1	36.6	46.0	9.4	100.1	315.1	
6	936.756	V	32.1	5.3	37.4	46.0	8.6	99.9	358.0	

Remark :
1. The unwanted emission was measured in the following position: EUT stand-up position(Z axis), lie-down positon(X,Y axis). The worst emission was found in lie-down positon(Y axis) and the worst case was recorded.
2. Result = Reading + c.f(Correction factor)
3. Correction factor = Antenna factor + Cable loss + 6 dB attenuator - Amp Gain

Test mode : Transmitter (simultaneous transmissions BLE + 6XD)

The requirements are:
☒ Complies

Test Data



Spectrum Selection

No.	Frequency [MHz]	Pol	Reading PK [dB(μV)]	c.f [dB(1/m)]	Result PK [dB(μV/m)]	Limit QP [dB(μV/m)]	Margin QP-PK [dB]	Height [cm]	Angle [deg]	Remark
1	599.293	V	40.2	-1.3	38.9	46.0	7.1	99.9	3.8	
2	798.919	H	37.6	1.9	39.5	46.0	6.5	99.9	60.9	
3	958.484	H	31.9	6.4	38.3	46.0	7.7	99.9	339.9	
4	959.066	H	32.1	6.4	38.5	46.0	7.5	99.9	1.3	
5	959.648	H	33.3	6.4	39.7	46.0	6.3	99.9	339.9	
6	959.648	V	31.9	6.4	38.3	46.0	7.7	99.9	8.0	

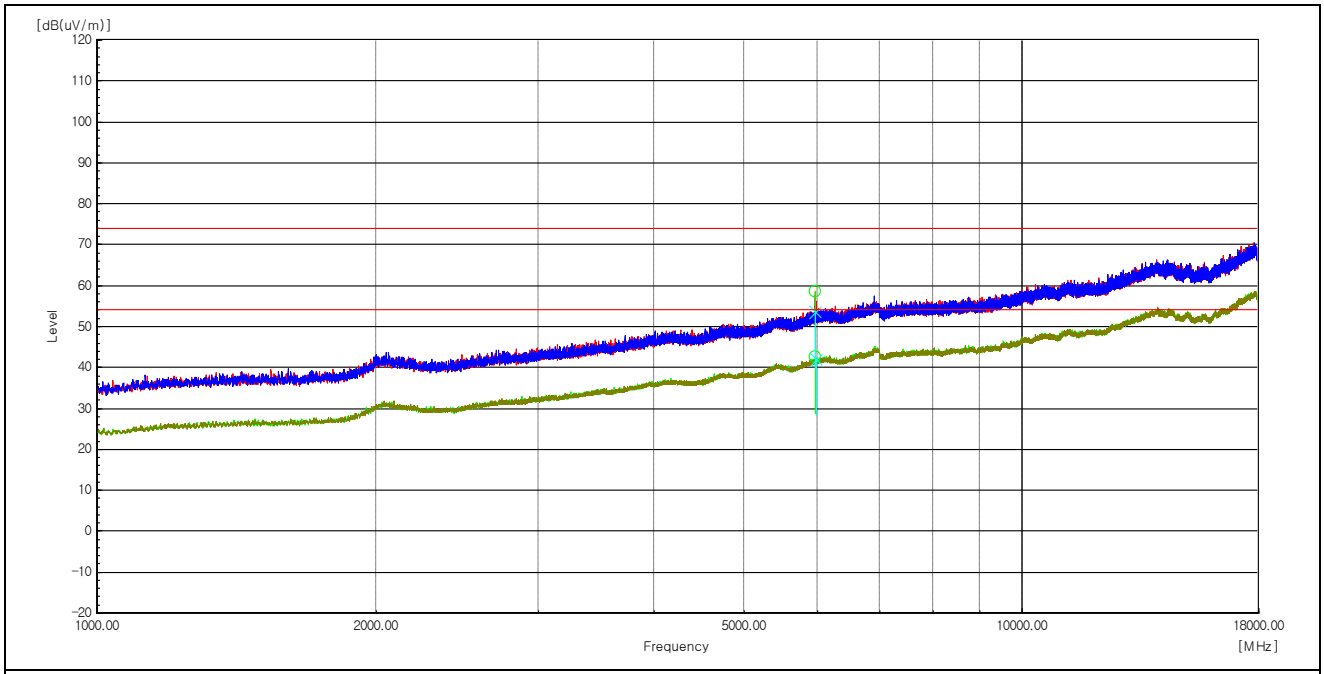
Remark :
1. The unwanted emission was measured in the following position: EUT stand-up position(Z axis), lie-down positon(X,Y axis). The worst emission was found in lie-down positon(Y axis) and the worst case was recorded.
2. Result = Reading + c.f(Correction factor)
3. Correction factor = Antenna factor + Cable loss + 6 dB attenuator - Amp Gain

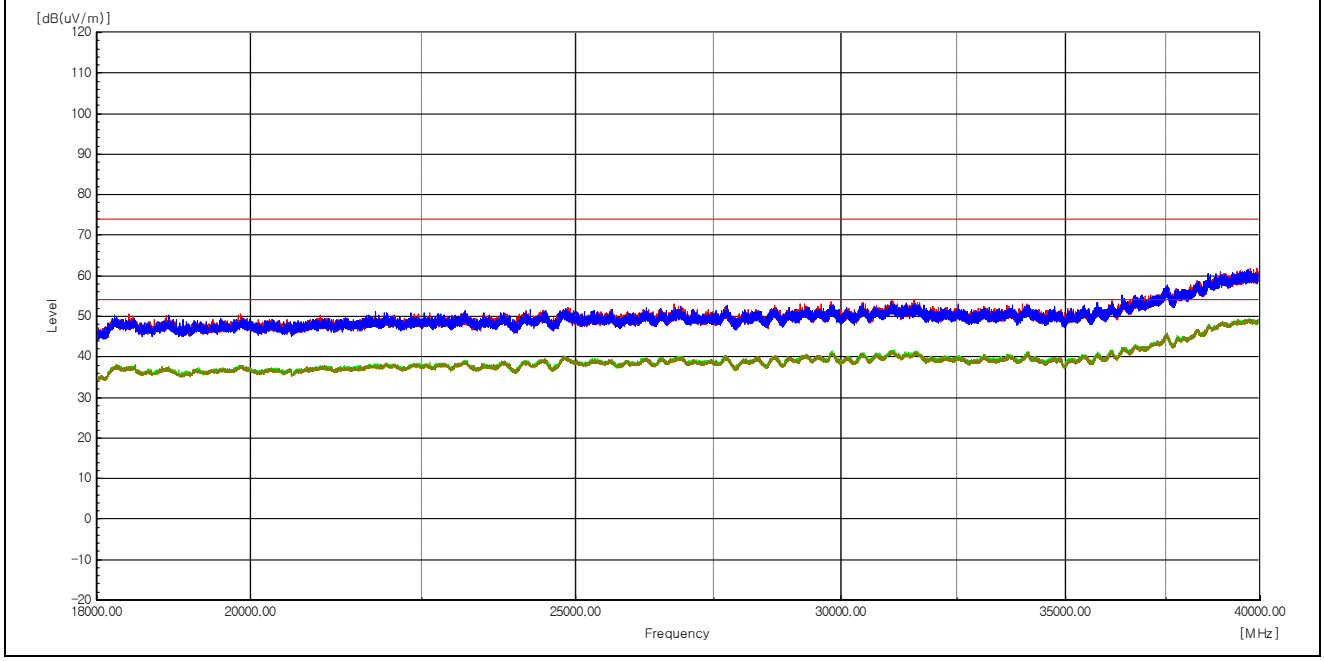
3) above 1 GHz

Remark :
- : Peak data (H)
- : Avearage data (H)
- : Peak data (V)
- : Avearage data (V)

The requirements are:
☒ Complies

Test Data





Test mode : Transmitter,(simultaneous transmissions DSS + 6ID)

The requirements are:
☒ Complies

Test Data

Frequency [MHz]	(P)	Reading [dBuV]	c.f [dB(1/m)]	Duty Cycle Factor [dB]	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]	Note
The emissions above 1 GHz were 20 dB lower than the limit.											

Remarks

1. The unwanted emission was measured in the following position: EUT stand-up position(Z axis), lie-down positon(X,Y axis). The worst emission was found in lie-down positon(Z axis) and the worst case was recorded.
2. Peak Result = Reading + c.f(Correction factor)
   Average Result = Reading + c.f(Correction factor) + Duty Cycle Factor
3. Correction factor = Antenna factor + Cable loss - Amp Gain
4. The 18 GHz end had no signal detected. As a result of the measurement, no signal was detected in the corresponding spectrum range.

Test mode : Transmitter, 802.11a

The requirements are:
☒ Complies

Test Data

Ch.5(5 975 MHz)

Frequency [MHz]	(P)	Reading [dBuV]	c.f [dB(1/m)]	Duty Cycle Factor [dB]	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]	Note
The emissions above 1 GHz were 20 dB lower than the limit.											

Ch.53(6 215 MHz)

Frequency [MHz]	(P)	Reading [dBuV]	c.f [dB(1/m)]	Duty Cycle Factor [dB]	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]	Note
The emissions above 1 GHz were 20 dB lower than the limit.											

Ch.85(6 375 MHz)

Frequency [MHz]	(P)	Reading [dBuV]	c.f [dB(1/m)]	Duty Cycle Factor [dB]	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]	Note
The emissions above 1 GHz were 20 dB lower than the limit.											

Ch.101(6 455 MHz)

Frequency [MHz]	(P)	Reading [dBuV]	c.f [dB(1/m)]	Duty Cycle Factor [dB]	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]	Note
The emissions above 1 GHz were 20 dB lower than the limit.											

Ch.117(6 535 MHz)

Frequency [MHz]	(P)	Reading [dBuV]	c.f [dB(1/m)]	Duty Cycle Factor [dB]	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]	Note
The emissions above 1 GHz were 20 dB lower than the limit.											

Ch.149(6 695 MHz)

Frequency [MHz]	(P)	Reading [dBuV]	c.f [dB(1/m)]	Duty Cycle Factor [dB]	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]	Note
The emissions above 1 GHz were 20 dB lower than the limit.											

Ch.181(6 855 MHz)

Frequency [MHz]	(P)	Reading [dBuV]	c.f [dB(1/m)]	Duty Cycle Factor [dB]	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]	Note
The emissions above 1 GHz were 20 dB lower than the limit.											

Ch.197(6 935 MHz)

Frequency [MHz]	(P)	Reading [dBuV]	c.f [dB(1/m)]	Duty Cycle Factor [dB]	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]	Note
The emissions above 1 GHz were 20 dB lower than the limit.											

Ch.213(7 015 MHz)

Frequency [MHz]	(P)	Reading [dBuV]	c.f [dB(1/m)]	Duty Cycle Factor [dB]	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]	Note
The emissions above 1 GHz were 20 dB lower than the limit.											

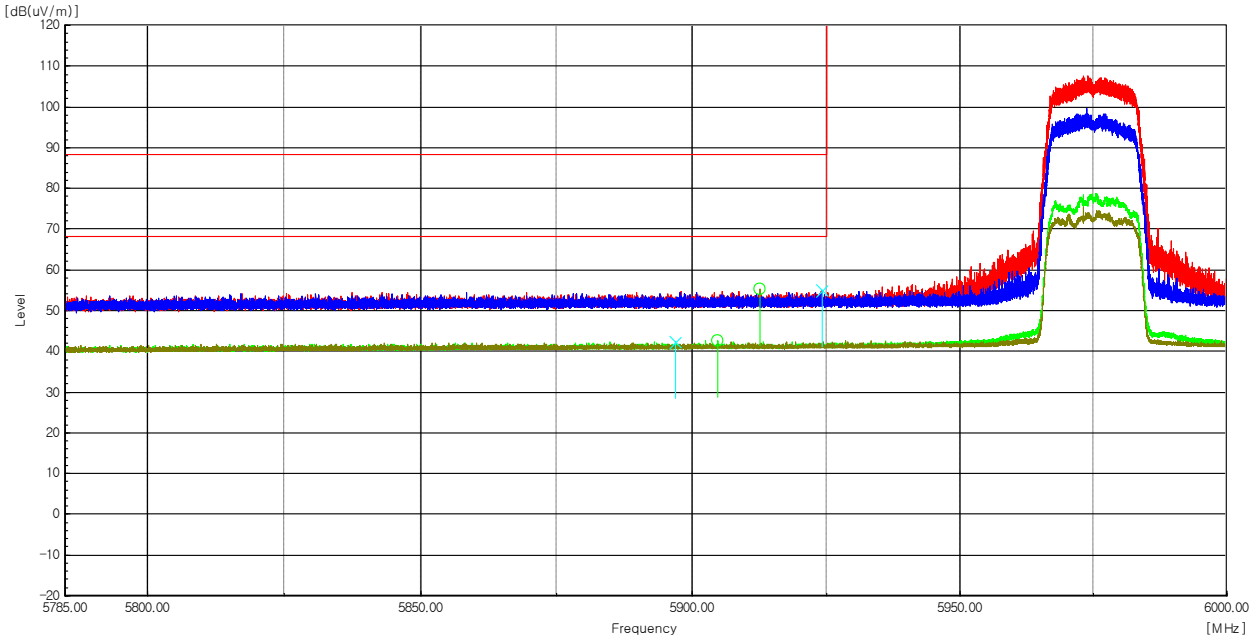
Ch.229(7 095 MHz)

Frequency [MHz]	(P)	Reading [dBuV]	c.f [dB(1/m)]	Duty Cycle Factor [dB]	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]	Note
The emissions above 1 GHz were 20 dB lower than the limit.											

Remarks

1. The unwanted emission was measured in the following position: EUT stand-up position(Z axis), lie-down positon(X,Y axis). The worst emission was found in lie-down positon(Y axis) and the worst case was recorded.
2. Peak Result = Reading + c.f(Correction factor)
   Average Result = Reading + c.f(Correction factor) + Duty Cycle Factor
3. Correction factor = Antenna factor + Cable loss - Amp Gain
4. The 18 GHz end had no signal detected. As a result of the measurement, no signal was detected in the corresponding spectrum range.

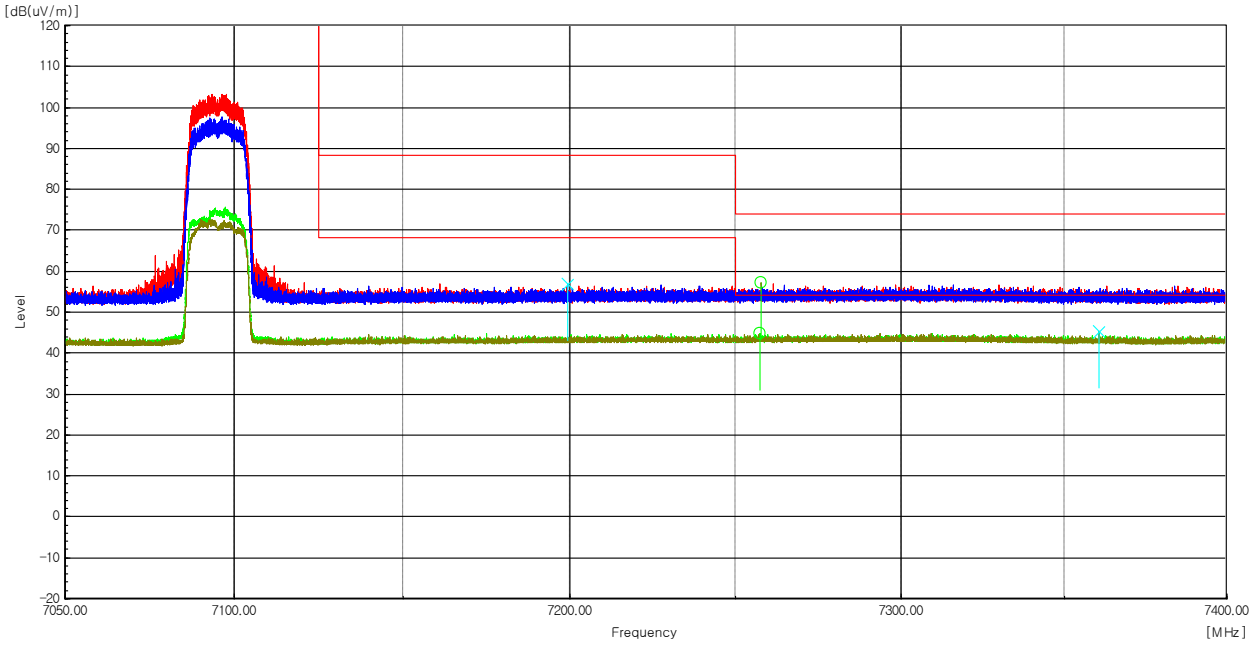
Worst Case Mode :	802.11a
Worst Case Transfer Rate :	6 Mbps
Distance of Measurements :	3 Meters
Operating Frequency :	5 975 MHz
Channel :	5



Frequency [MHz]	(P)	Reading [dBuV]	c.f [dB(1/m)]	Duty Cycle Factor [dB]	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]	Note
The emissions above 1 GHz were 20 dB lower than the limit.											

Radiated Restricted Band Edge Plot

Worst Case Mode :	802.11a
Worst Case Transfer Rate :	6 Mbps
Distance of Measurements :	3 Meters
Operating Frequency :	7 095 MHz
Channel :	229



Frequency [MHz]	(P)	Reading [dBuV]	c.f [dB(1/m)]	Duty Cycle Factor [dB]	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]	Note
The emissions above 1 GHz were 20 dB lower than the limit.											

Radiated Restricted Band Edge Plot

Test mode : Transmitter, 802.11ax_HE20_SU

The requirements are:
☒ Complies

Test Data

Ch.1(5 955 MHz)

Frequency [MHz]	(P)	Reading [dBuV]	c.f [dB(1/m)]	Duty Cycle Factor [dB]	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]	Note
The emissions above 1 GHz were 20 dB lower than the limit.											

Ch.45(6 175 MHz)

Frequency [MHz]	(P)	Reading [dBuV]	c.f [dB(1/m)]	Duty Cycle Factor [dB]	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]	Note
The emissions above 1 GHz were 20 dB lower than the limit.											

Ch.93(6 415 MHz)

Frequency [MHz]	(P)	Reading [dBuV]	c.f [dB(1/m)]	Duty Cycle Factor [dB]	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]	Note
The emissions above 1 GHz were 20 dB lower than the limit.											

Ch.97(6 435 MHz)

Frequency [MHz]	(P)	Reading [dBuV]	c.f [dB(1/m)]	Duty Cycle Factor [dB]	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]	Note
The emissions above 1 GHz were 20 dB lower than the limit.											

Ch.105(6 475 MHz)

Frequency [MHz]	(P)	Reading [dBuV]	c.f [dB(1/m)]	Duty Cycle Factor [dB]	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]	Note
The emissions above 1 GHz were 20 dB lower than the limit.											

Ch.113(6 515 MHz)

Frequency [MHz]	(P)	Reading [dBuV]	c.f [dB(1/m)]	Duty Cycle Factor [dB]	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]	Note
The emissions above 1 GHz were 20 dB lower than the limit.											

Ch.117(6 535 MHz)

Frequency [MHz]	(P)	Reading [dBuV]	c.f [dB(1/m)]	Duty Cycle Factor [dB]	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]	Note
The emissions above 1 GHz were 20 dB lower than the limit.											

Ch.149(6 695 MHz)

Frequency [MHz]	(P)	Reading [dBuV]	c.f [dB(1/m)]	Duty Cycle Factor [dB]	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]	Note
The emissions above 1 GHz were 20 dB lower than the limit.											

Ch.181(6 855 MHz)

Frequency [MHz]	(P)	Reading [dBuV]	c.f [dB(1/m)]	Duty Cycle Factor [dB]	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]	Note
The emissions above 1 GHz were 20 dB lower than the limit.											

Ch.185(6 875 MHz)

Frequency [MHz]	(P)	Reading [dBuV]	c.f [dB(1/m)]	Duty Cycle Factor [dB]	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]	Note
The emissions above 1 GHz were 20 dB lower than the limit.											

Ch.209(6 995 MHz)

Frequency [MHz]	(P)	Reading [dBuV]	c.f [dB(1/m)]	Duty Cycle Factor [dB]	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]	Note
The emissions above 1 GHz were 20 dB lower than the limit.											

Ch.229(7 095 MHz)

Frequency [MHz]	(P)	Reading [dBuV]	c.f [dB(1/m)]	Duty Cycle Factor [dB]	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]	Note
The emissions above 1 GHz were 20 dB lower than the limit.											

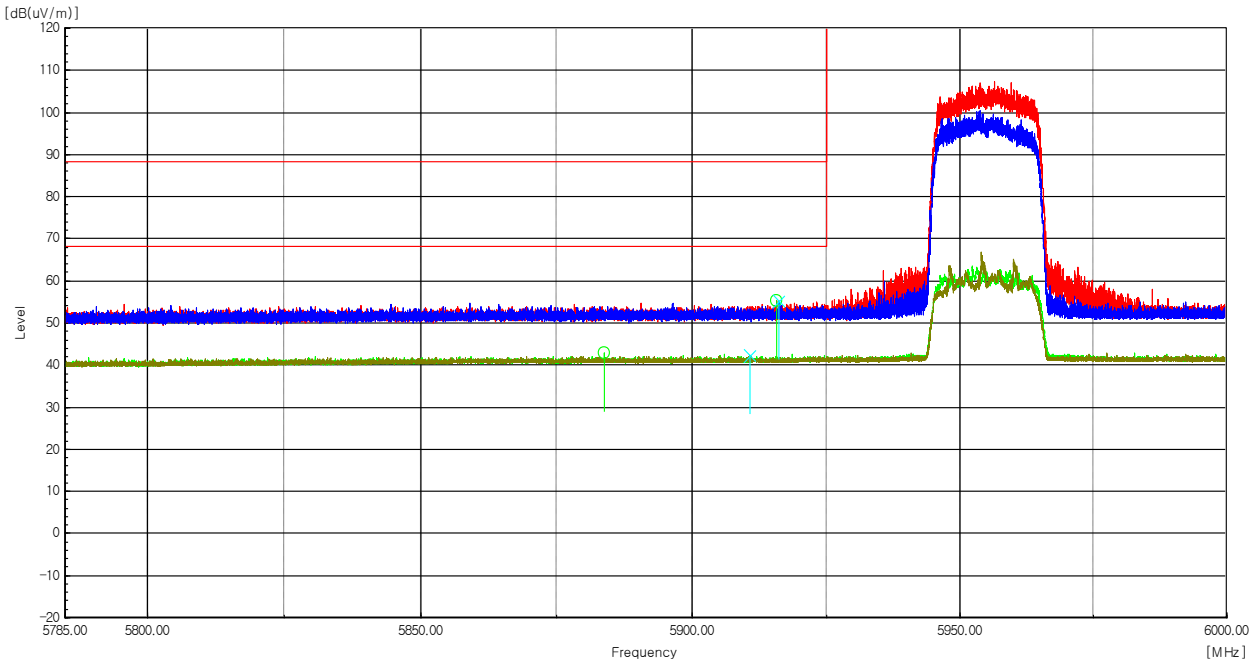
Ch.233(7 115 MHz)

Frequency [MHz]	(P)	Reading [dBuV]	c.f [dB(1/m)]	Duty Cycle Factor [dB]	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]	Note
The emissions above 1 GHz were 20 dB lower than the limit.											

Remarks

1. The unwanted emission was measured in the following position: EUT stand-up position(Z axis), lie-down positon(X,Y axis). The worst emission was found in lie-down positon(Y axis) and the worst case was recorded.
2. Peak Result = Reading + c.f(Correction factor)
   Average Result = Reading + c.f(Correction factor) + Duty Cycle Factor
3. Correction factor = Antenna factor + Cable loss - Amp Gain
4. The 18 GHz end had no signal detected. As a result of the measurement, no signal was detected in the corresponding spectrum range.

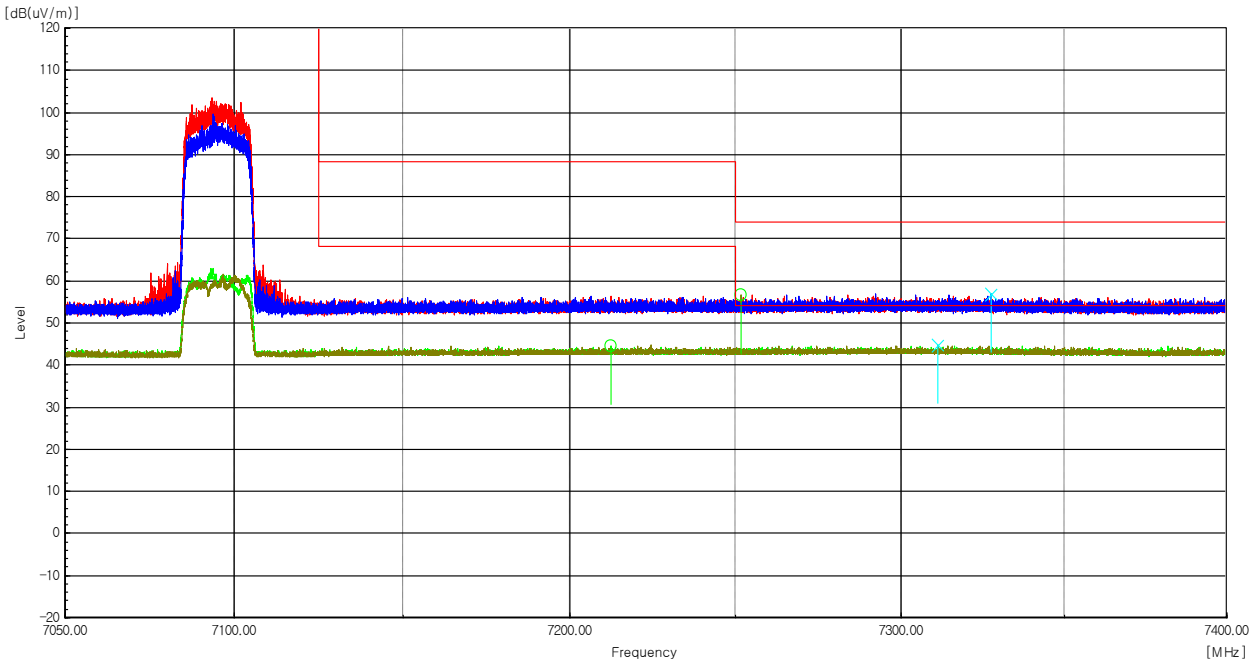
Worst Case Mode :	802.11ax_HE20_SU
Worst Case Transfer Rate :	MCS 0
Distance of Measurements :	3 Meters
Operating Frequency :	5 955 MHz
Channel :	1



Frequency [MHz]	(P)	Reading [dBuV]	c.f [dB(1/m)]	Duty Cycle Factor [dB]	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]	Note
The emissions above 1 GHz were 20 dB lower than the limit.											

Radiated Restricted Band Edge Plot

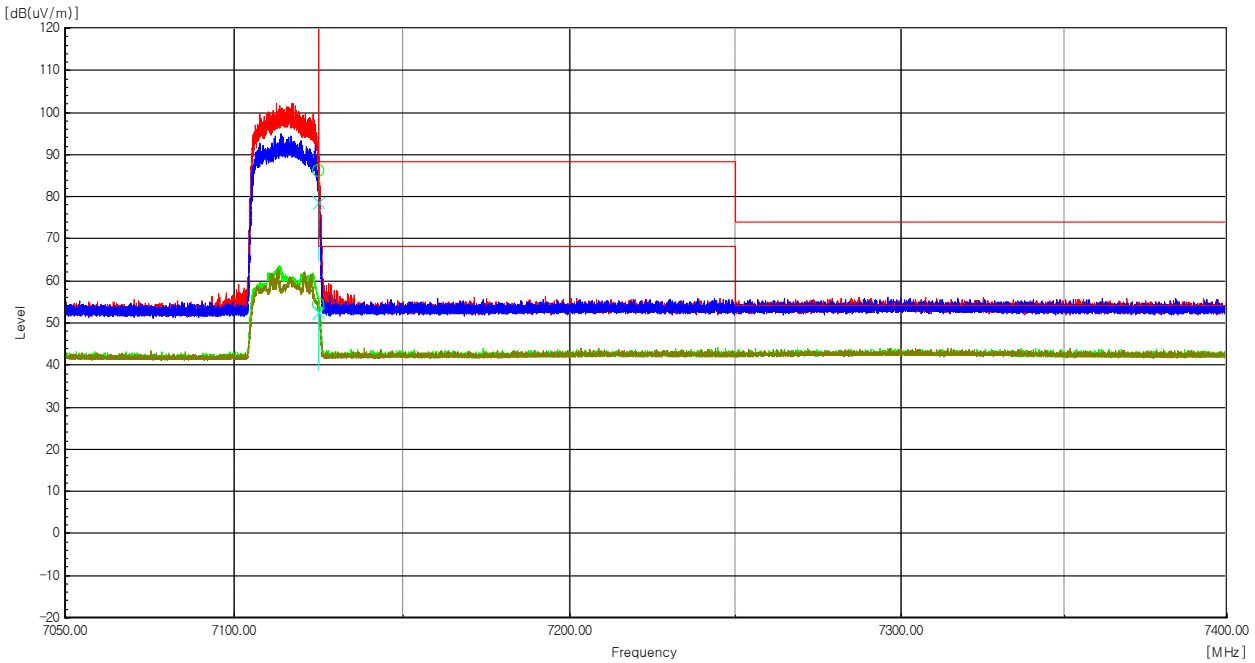
Worst Case Mode :	802.11ax_HE20_SU
Worst Case Transfer Rate :	MCS 0
Distance of Measurements :	3 Meters
Operating Frequency :	7 095 MHz
Channel :	229



Frequency [MHz]	(P)	Reading [dBuV]	c.f [dB(1/m)]	Duty Cycle Factor [dB]	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]	Note
The emissions above 1 GHz were 20 dB lower than the limit.											

Radiated Restricted Band Edge Plot

Worst Case Mode :	802.11ax_HE20_SU
Worst Case Transfer Rate :	MCS 0
Distance of Measurements :	3 Meters
Operating Frequency :	7 115 MHz
Channel :	233



Frequency [MHz]	(P)	Reading [dBuV]	c.f [dB(1/m)]	Duty Cycle Factor [dB]	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]	Note
7 125.00	H	77.50	8.70	-----	86.20	-----	88.20	-----	2.00	-----	Peak
7 125.00	V	70.00	8.70	-----	78.70	-----	88.20	-----	9.50	-----	Peak
7 125.02	H	45.80	8.70	3.78	-----	58.28	-----	68.20	-----	9.92	Average
7 125.02	V	43.70	8.70	3.78	-----	56.18	-----	68.20	-----	12.02	Average

Radiated Restricted Band Edge Plot

Test mode : Transmitter, 802.11ax_HE40_SU

The requirements are:
☒ Complies

Test Data

Ch.3(5 965 MHz)

Frequency [MHz]	(P)	Reading [dBuV]	c.f [dB(1/m)]	Duty Cycle Factor [dB]	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]	Note
The emissions above 1 GHz were 20 dB lower than the limit.											

Ch.43(6 165 MHz)

Frequency [MHz]	(P)	Reading [dBuV]	c.f [dB(1/m)]	Duty Cycle Factor [dB]	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]	Note
The emissions above 1 GHz were 20 dB lower than the limit.											

Ch.91(6 405 MHz)

Frequency [MHz]	(P)	Reading [dBuV]	c.f [dB(1/m)]	Duty Cycle Factor [dB]	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]	Note
The emissions above 1 GHz were 20 dB lower than the limit.											

Ch.99(6 445 MHz)

Frequency [MHz]	(P)	Reading [dBuV]	c.f [dB(1/m)]	Duty Cycle Factor [dB]	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]	Note
The emissions above 1 GHz were 20 dB lower than the limit.											

Ch.107(6 485 MHz)

Frequency [MHz]	(P)	Reading [dBuV]	c.f [dB(1/m)]	Duty Cycle Factor [dB]	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]	Note
The emissions above 1 GHz were 20 dB lower than the limit.											

Ch.115(6 525 MHz)

Frequency [MHz]	(P)	Reading [dBuV]	c.f [dB(1/m)]	Duty Cycle Factor [dB]	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]	Note
The emissions above 1 GHz were 20 dB lower than the limit.											