

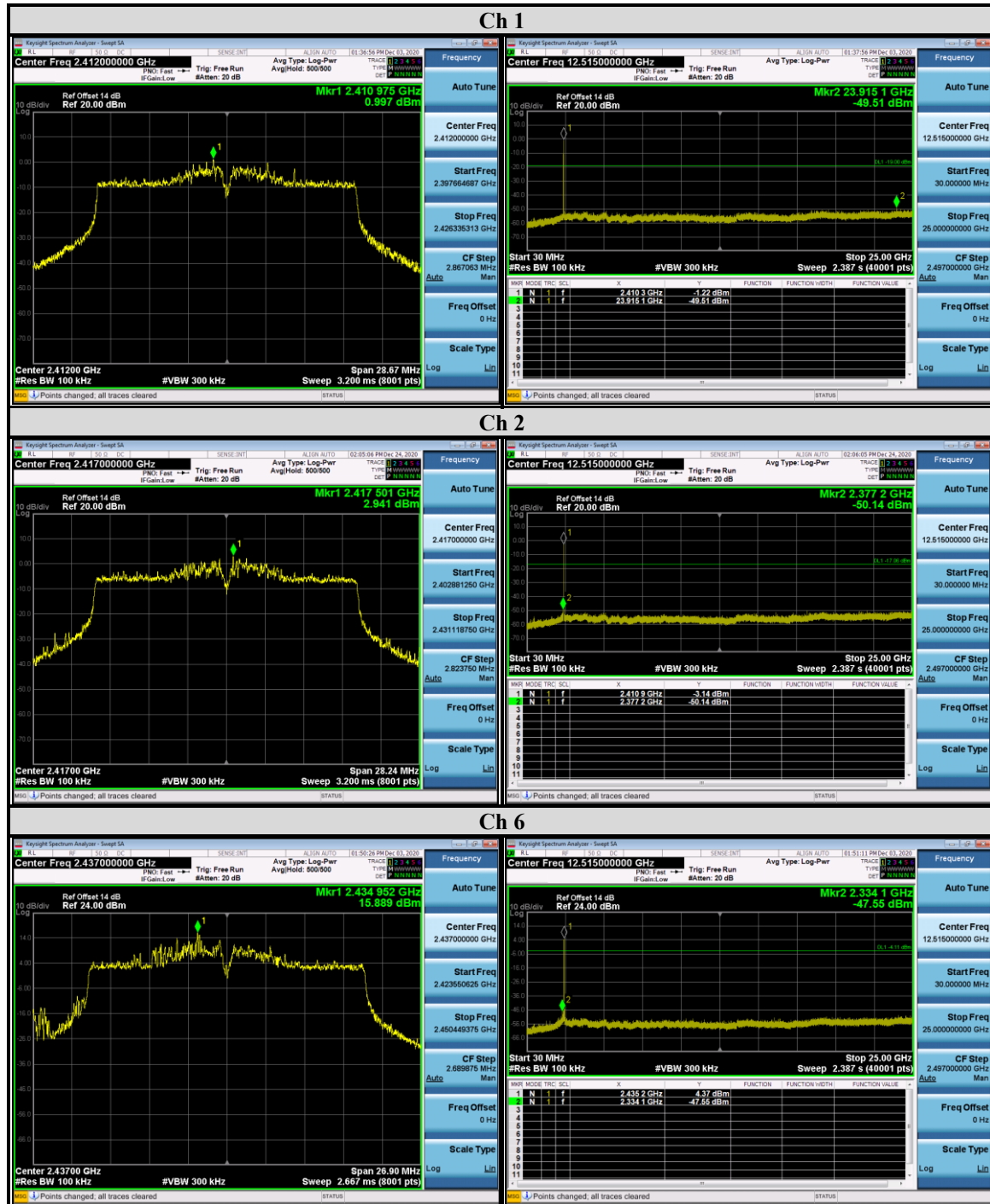


Test report No. : 4789400505B-US-R0-V0
Page : 62 of 167
Issued date : Mar. 31, 2021
FCC ID : VGY2865AX

Beamforming mode

802.11ax (HE20)

CHAIN 0



Underwriters Laboratories Taiwan Co., Ltd.

Building B and Building E, No. 372-7, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County, Taiwan

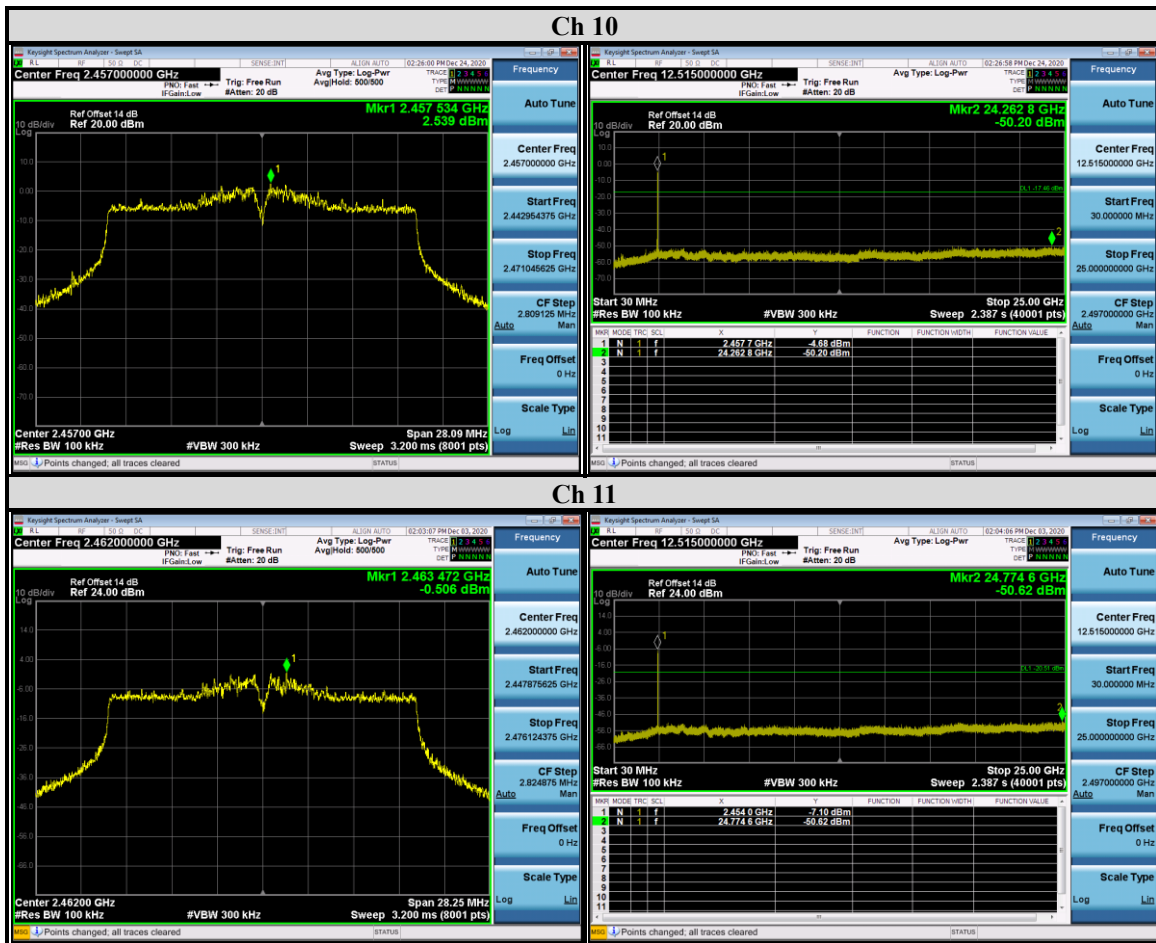
Telephone : +886-2-7737-3000

Facsimile (FAX) : +886-3-583-7948

Doc No: 17-EM-F0876 / 5.0



Test report No. : 4789400505B-US-R0-V0
Page : 63 of 167
Issued date : Mar. 31, 2021
FCC ID : VGY2865AX



Underwriters Laboratories Taiwan Co., Ltd.

Building B and Building E, No. 372-7, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County, Taiwan

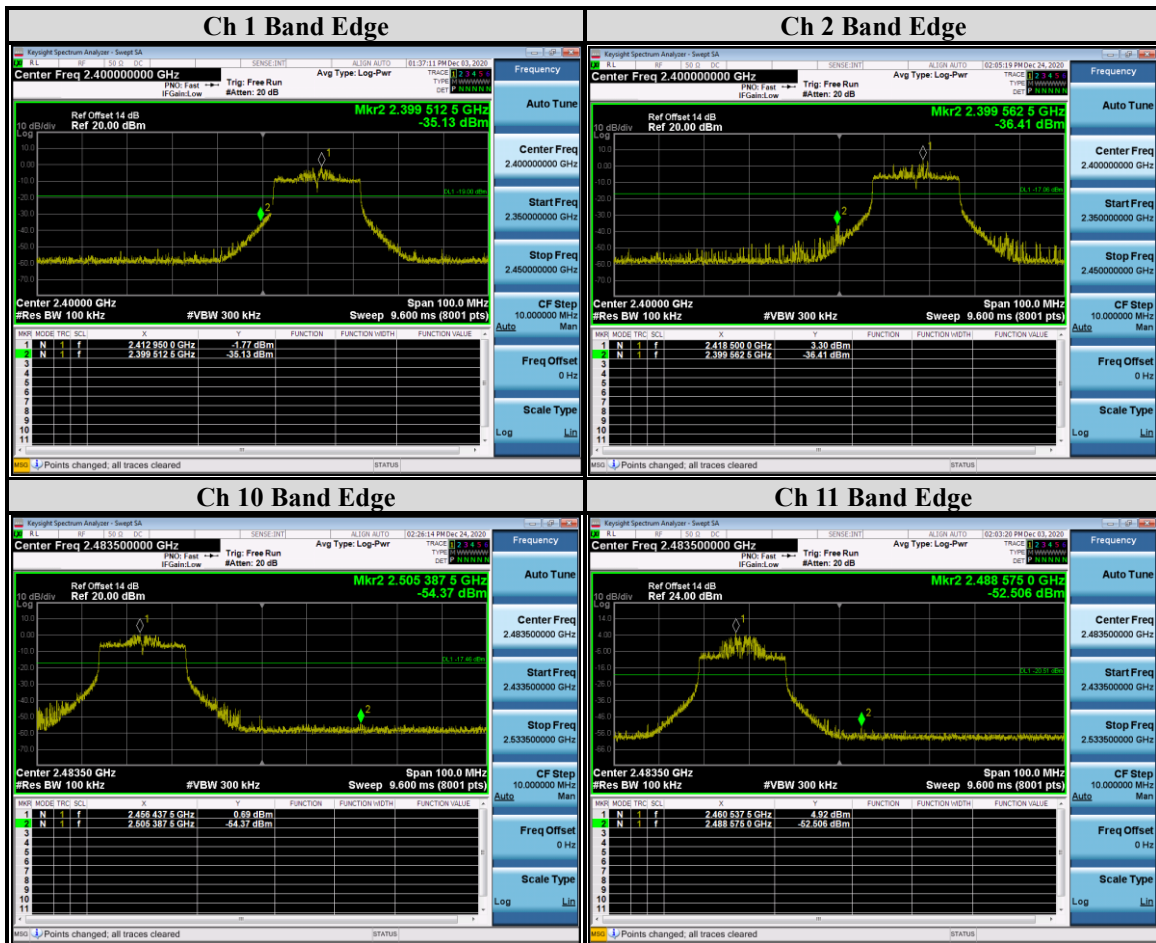
Telephone : +886-2-7737-3000

Facsimile (FAX) : +886-3-583-7948

Doc No: 17-EM-F0876 / 5.0



Test report No. : 4789400505B-US-R0-V0
Page : 64 of 167
Issued date : Mar. 31, 2021
FCC ID : VGY2865AX



Underwriters Laboratories Taiwan Co., Ltd.

Building B and Building E, No. 372-7, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County, Taiwan

Telephone : +886-2-7737-3000

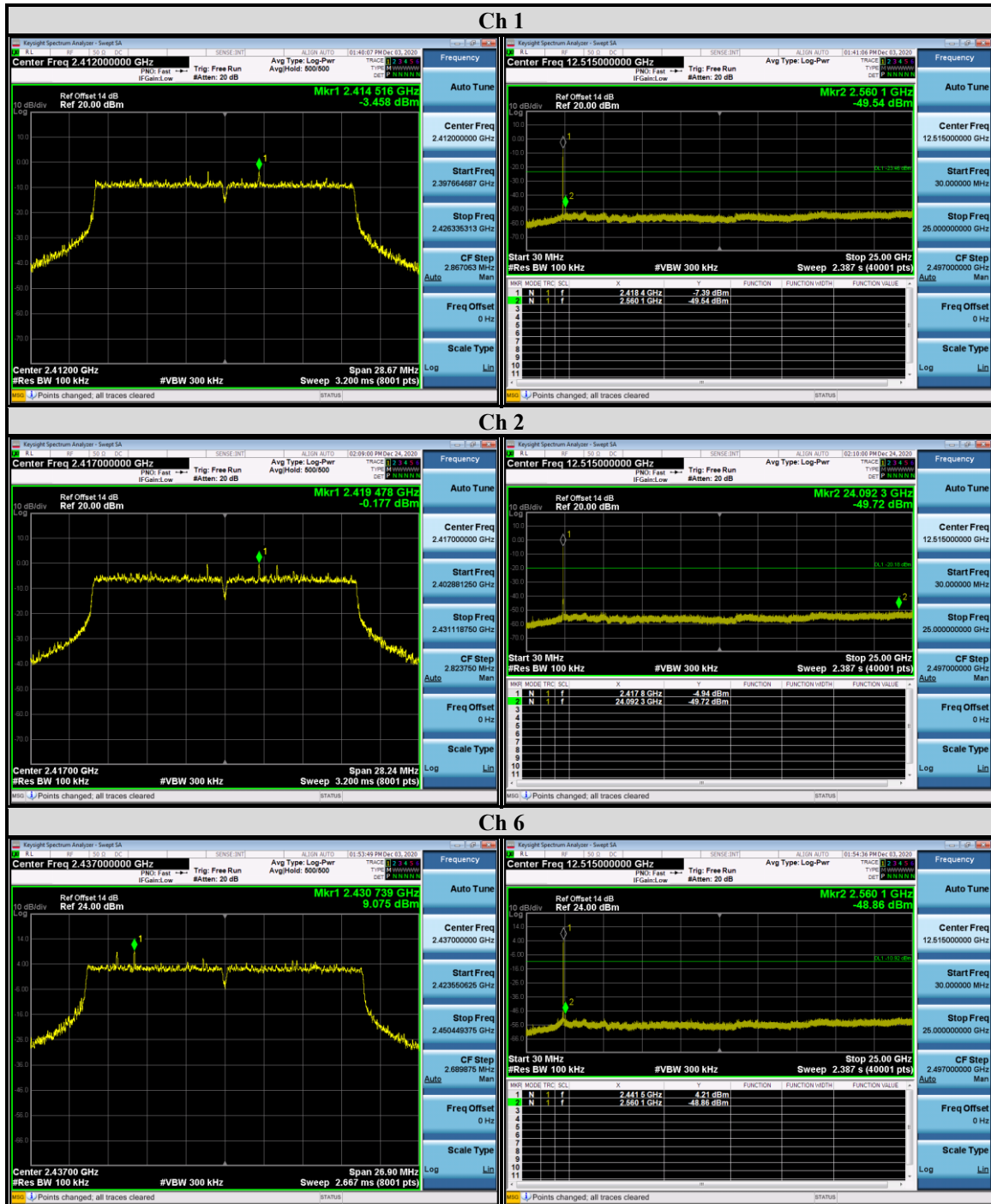
Facsimile (FAX) : +886-3-583-7948

Doc No: 17-EM-F0876 / 5.0



Test report No. : 4789400505B-US-R0-V0
Page : 65 of 167
Issued date : Mar. 31, 2021
FCC ID : VGY2865AX

CHAIN 1



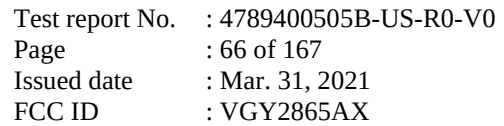
Underwriters Laboratories Taiwan Co., Ltd.

Building B and Building E, No. 372-7, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County, Taiwan

Telephone : +886-2-7737-3000

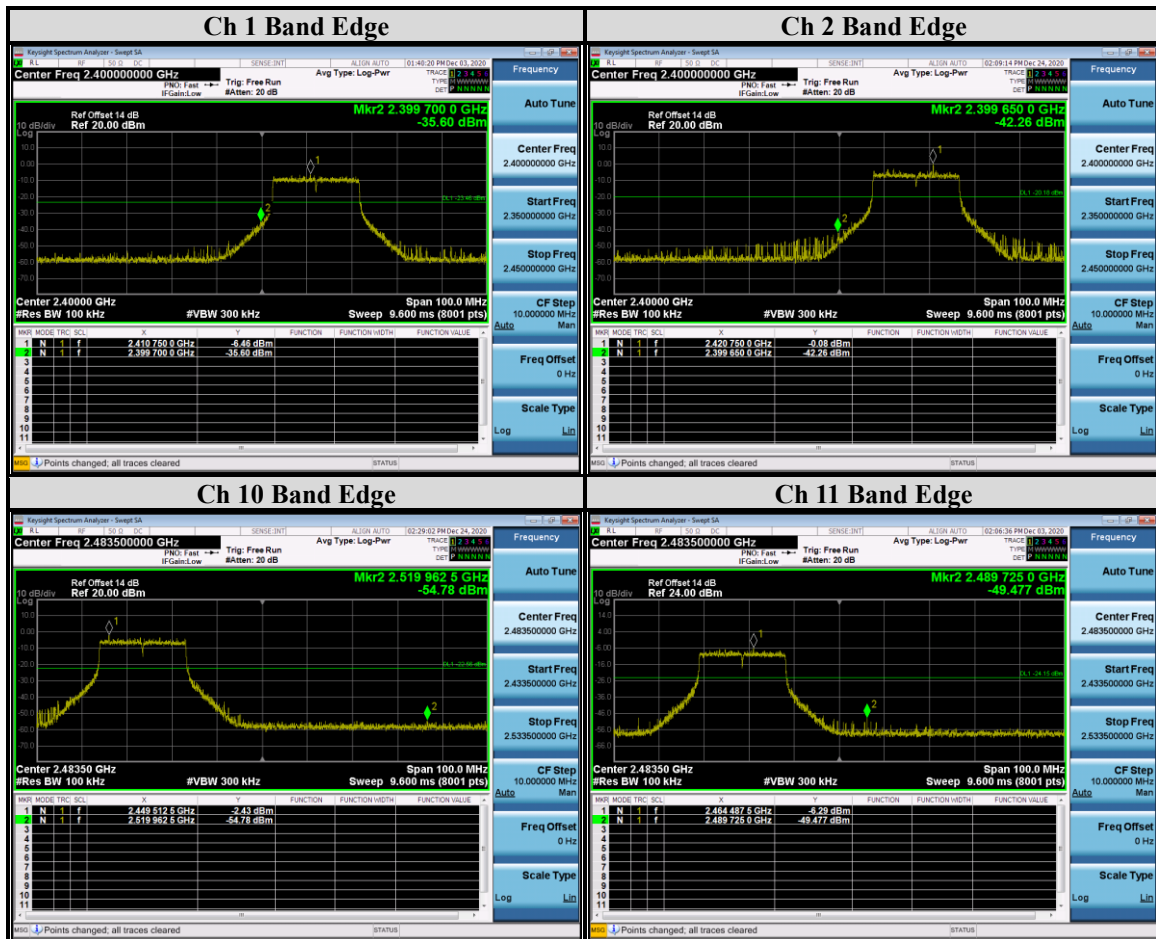
Facsimile (FAX) : +886-3-583-7948

Doc No: 17-EM-F0876 / 5.0





Test report No. : 4789400505B-US-R0-V0
Page : 67 of 167
Issued date : Mar. 31, 2021
FCC ID : VGY2865AX



Underwriters Laboratories Taiwan Co., Ltd.

Building B and Building E, No. 372-7, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County, Taiwan

Telephone : +886-2-7737-3000

Facsimile (FAX) : +886-3-583-7948

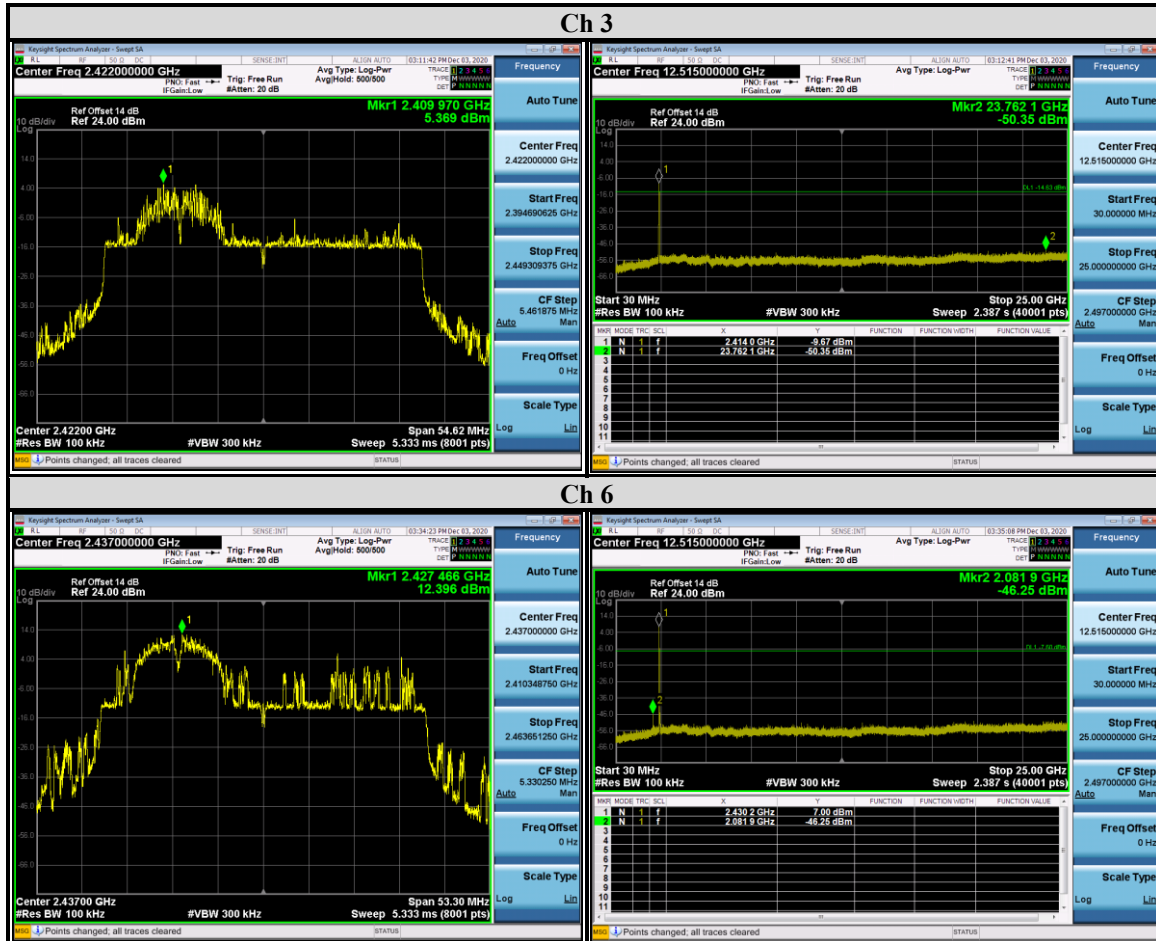
Doc No: 17-EM-F0876 / 5.0



Test report No. : 4789400505B-US-R0-V0
Page : 68 of 167
Issued date : Mar. 31, 2021
FCC ID : VGY2865AX

802.11ax (HE40)

CHAIN 0



Underwriters Laboratories Taiwan Co., Ltd.

Building B and Building E, No. 372-7, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County, Taiwan

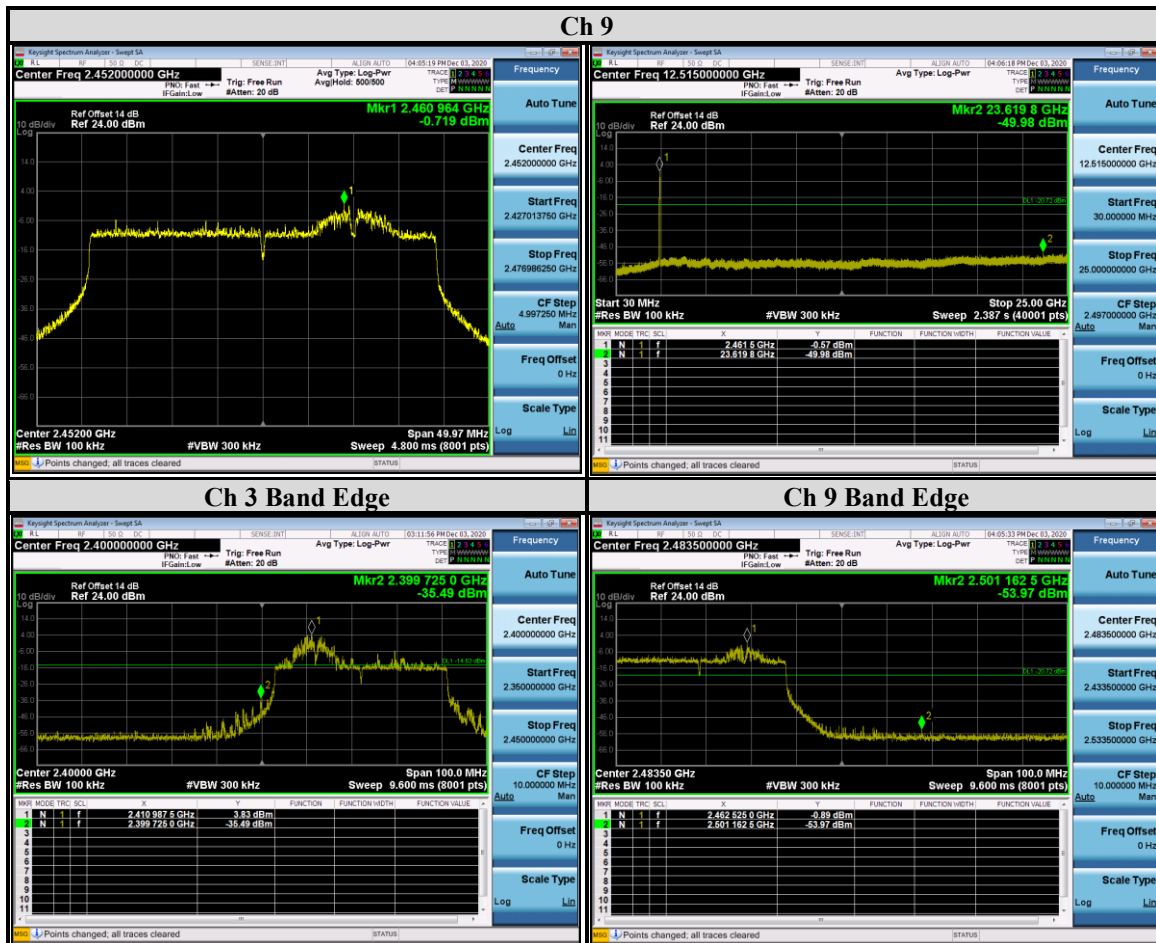
Telephone : +886-2-7737-3000

Facsimile (FAX) : +886-3-583-7948

Doc No: 17-EM-F0876 / 5.0



Test report No. : 4789400505B-US-R0-V0
Page : 69 of 167
Issued date : Mar. 31, 2021
FCC ID : VGY2865AX



Underwriters Laboratories Taiwan Co., Ltd.

Building B and Building E, No. 372-7, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County, Taiwan

Telephone : +886-2-7737-3000

Facsimile (FAX) : +886-3-583-7948

Doc No: 17-EM-F0876 / 5.0



Test report No. : 4789400505B-US-R0-V0
Page : 70 of 167
Issued date : Mar. 31, 2021
FCC ID : VGY2865AX

CHAIN 1



Underwriters Laboratories Taiwan Co., Ltd.

Building B and Building E, No. 372-7, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County, Taiwan

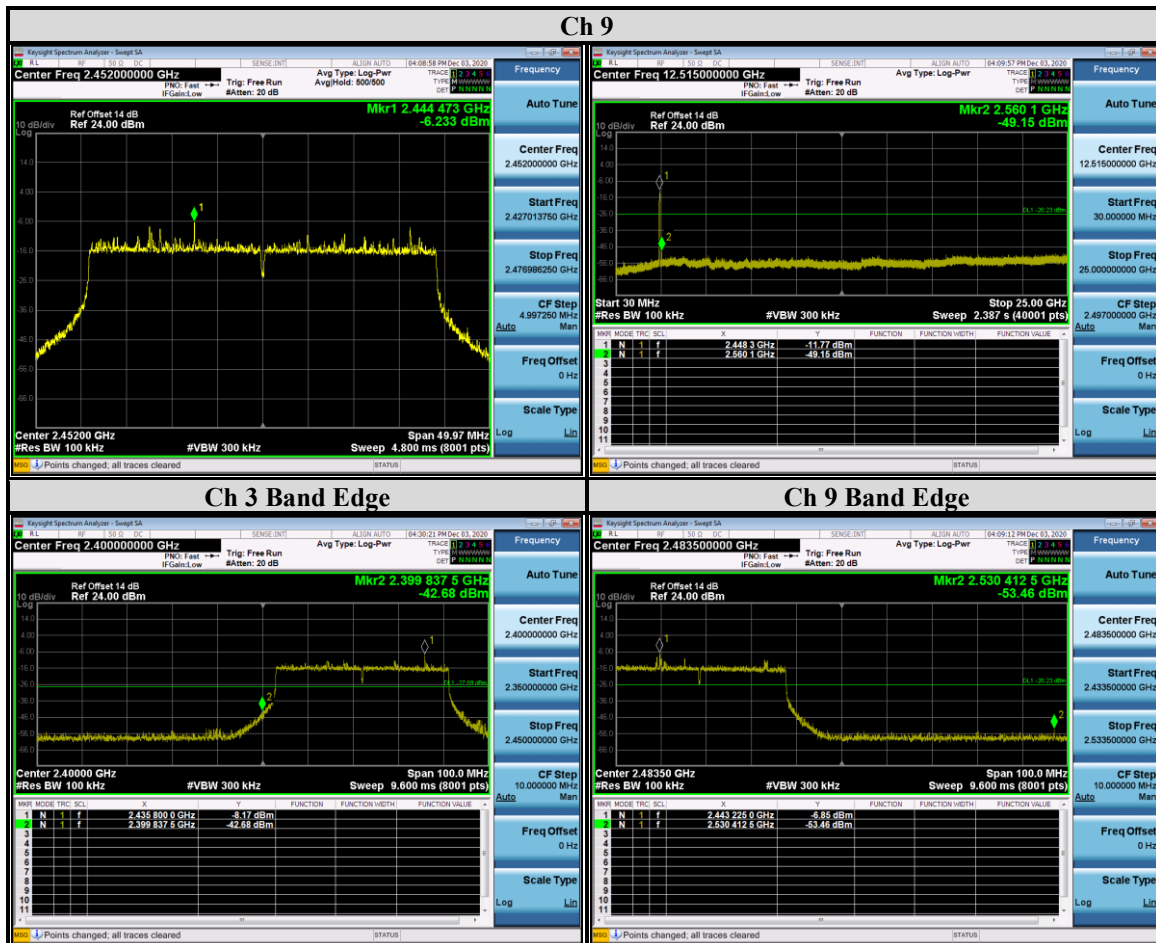
Telephone : +886-2-7737-3000

Facsimile (FAX) : +886-3-583-7948

Doc No: 17-EM-F0876 / 5.0



Test report No. : 4789400505B-US-R0-V0
Page : 71 of 167
Issued date : Mar. 31, 2021
FCC ID : VGY2865AX



Underwriters Laboratories Taiwan Co., Ltd.

Building B and Building E, No. 372-7, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County, Taiwan

Telephone : +886-2-7737-3000

Facsimile (FAX) : +886-3-583-7948

Doc No: 17-EM-F0876 / 5.0



9.5. Radiated Spurious Emission

Requirements

Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table. Other emissions shall be at least 20dB below the highest level of the desired power:

Frequency(MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

NOTE:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. For frequencies above 1000MHz, 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 20dB under any condition of modulation.

Underwriters Laboratories Taiwan Co., Ltd.

Building B and Building E, No. 372-7, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County, Taiwan

Telephone :+886-2-7737-3000

Facsimile (FAX) :+886-3-583-7948

Doc No: 17-EM-F0876 / 5.0



Test Procedures

[For 9 kHz ~ 30 MHz]

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter chamber room. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. Parallel, perpendicular, and ground-parallel orientations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. For measurement below 30MHz, the initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured. If the emission level of the EUT measured by the peak detector is lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.

NOTE:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 9kHz at frequency below 30MHz.

[For above 30 MHz]

- a. The EUT was placed on the top of a rotating table 0.8 meters (for 30MHz ~ 1GHz) / 1.5 meters (for above 1GHz) above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. 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.
- d. 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.
- e. For measurement below 1GHz, the initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured. If the emission level of the EUT measured by the peak detector is lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.
- f. The test-receiver system was set to peak and average detects 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.

Underwriters Laboratories Taiwan Co., Ltd.

Building B and Building E, No. 372-7, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County, Taiwan

Telephone : +886-2-7737-3000

Facsimile (FAX) : +886-3-583-7948

Doc No: 17-EM-F0876 / 5.0



Note:

- The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
- 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 1GHz.
- The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is $\geq 1/T$ (Duty cycle < 98%) or 10Hz (Duty cycle $\geq 98\%$) for Average detection (AV) at frequency above 1GHz.

Configuration	Average	
	RBW	VBW
802.11b	1MHz	10 Hz
802.11g		10 Hz
802.11ax (HE20)		10 Hz
802.11ax (HE40)		10 Hz

Note: Refer to section 6.6 for duty cycle.

- All modes of operation were investigated (includes all external accessories) and the worst-case emissions are reported.

Underwriters Laboratories Taiwan Co., Ltd.

Building B and Building E, No. 372-7, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County, Taiwan

Telephone :+886-2-7737-3000

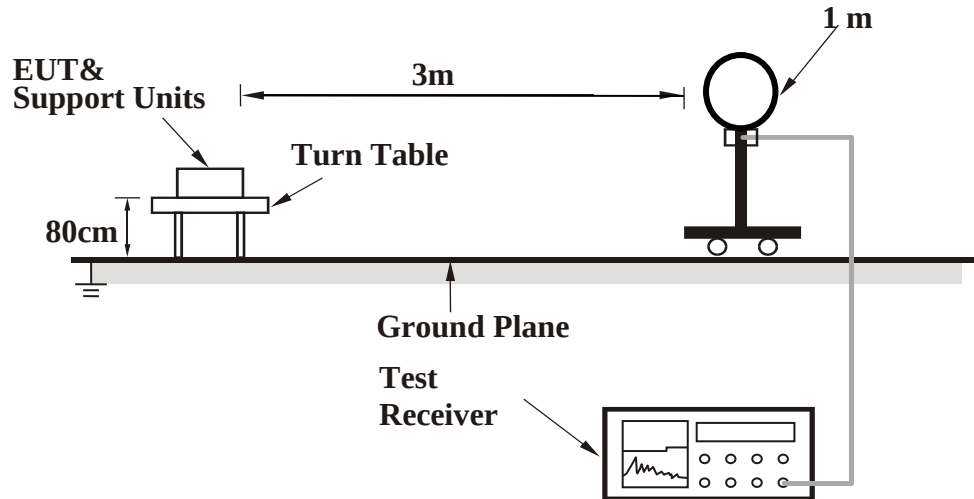
Facsimile (FAX) :+886-3-583-7948

Doc No: 17-EM-F0876 / 5.0

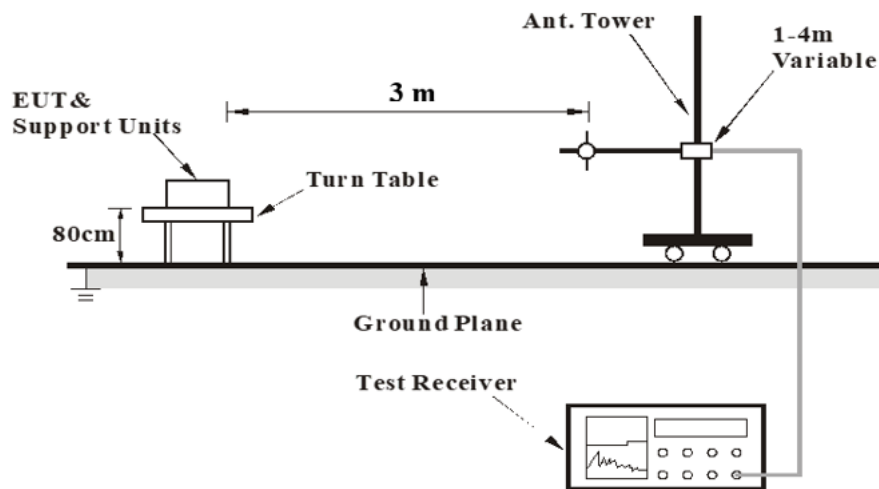


Test Setup

<Frequency Range 9 kHz ~ 30 MHz>



<Frequency Range 30 MHz ~ 1 GHz >



Underwriters Laboratories Taiwan Co., Ltd.

Building B and Building E, No. 372-7, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County, Taiwan

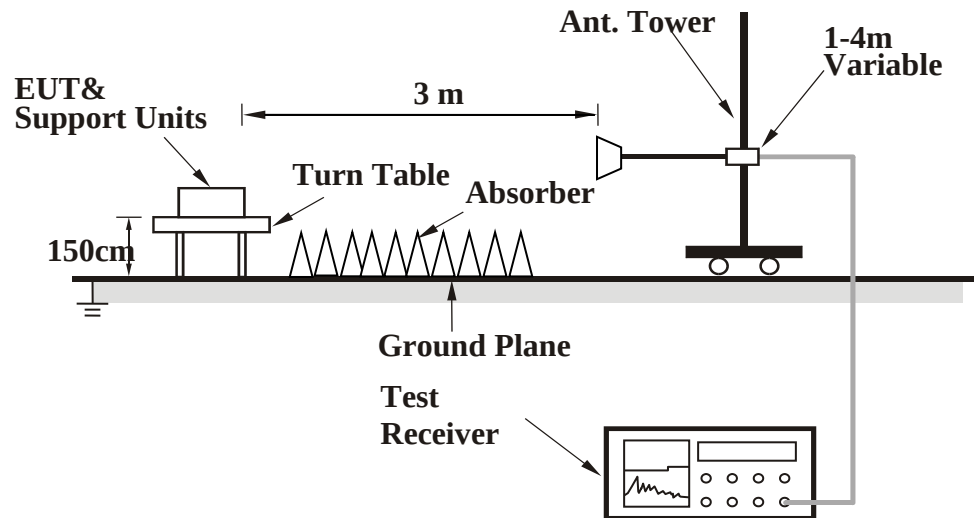
Telephone : +886-2-7737-3000

Facsimile (FAX) : +886-3-583-7948

Doc No: 17-EM-F0876 / 5.0



<Frequency Range above 1 GHz>



For the actual test configuration, please refer to the Setup Configurations.

Underwriters Laboratories Taiwan Co., Ltd.

Building B and Building E, No. 372-7, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County, Taiwan

Telephone : +886-2-7737-3000

Facsimile (FAX) : +886-3-583-7948

Doc No: 17-EM-F0876 / 5.0



Test Data

Above 1GHz Data

Non-Beamforming Mode

802.11b

EUT Test Condition		Measurement Detail	
Channel	Channel 1	Frequency Range	1 GHz ~ 26.5 GHz

Antenna Polarity & Test Distance: Horizontal at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
-	2381.8	46.95	6.74	53.69	74	-20.31	Peak
@	2412	95.11	6.68	101.79	-	-	Peak
-	2327	38.31	6.74	45.05	54	-8.95	Average
@	2412	93.23	6.68	99.91	-	-	Average
*	3992	44.24	1.15	45.39	74	-28.61	Peak
*	4824	38.72	3.53	42.25	74	-31.75	Peak
*	4995	41.64	3.85	45.49	74	-28.51	Peak
Antenna Polarity & Test Distance: Vertical at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
-	2385.8	51.81	6.74	58.55	74	-15.45	Peak
@	2412	105.28	6.68	111.96	-	-	Peak
-	2387	46.67	6.74	53.41	54	-0.59	Average
@	2412	101.67	6.68	108.35	-	-	Average
*	3992	49.57	1.15	50.72	74	-23.28	Peak
*	4824	41.6	3.53	45.13	74	-28.87	Peak
*	4995	45.79	3.85	49.64	74	-24.36	Peak

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. "@": Fundamental Frequency.
5. " * ": The peak result under 20 dB above and complies with AVG limit, AVG result is deemed to comply with AVG limit.
6. The other emission levels were very low against the limit.

Underwriters Laboratories Taiwan Co., Ltd.

Building B and Building E, No. 372-7, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County, Taiwan

Telephone :+886-2-7737-3000

Facsimile (FAX) :+886-3-583-7948

Doc No: 17-EM-F0876 / 5.0



Test report No. : 4789400505B-US-R0-V0
Page : 78 of 167
Issued date : Mar. 31, 2021
FCC ID : VGY2865AX

EUT Test Condition		Measurement Detail	
Channel	Channel 2	Frequency Range	1 GHz ~ 26.5 GHz

Antenna Polarity & Test Distance: Horizontal at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
-	2343	47.47	6.73	54.2	74	-19.8	Peak
@	2417	98.12	6.66	104.78	-	-	Peak
-	2339.8	38.89	6.74	45.63	54	-8.37	Average
@	2417	94.58	6.66	101.24	-	-	Average
*	3992	40.64	1.15	41.79	74	-32.21	Peak
*	4834	40.16	3.56	43.72	74	-30.28	Peak
*	4995	40.4	3.85	44.25	74	-29.75	Peak
Antenna Polarity & Test Distance: Vertical at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
-	2332.8	51.19	6.73	57.92	74	-16.08	Peak
@	2417	104.9	6.66	111.56	-	-	Peak
-	2340	46.27	6.74	53.01	54	-0.99	Average
@	2417	101.59	6.66	108.25	-	-	Average
*	3992	41.18	1.15	42.33	74	-31.67	Peak
*	4834	42.72	3.56	46.28	74	-27.72	Peak
*	4995	43.62	3.85	47.47	74	-26.53	Peak

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. "@": Fundamental Frequency.
5. " * ": The peak result under 20 dB above and complies with AVG limit, AVG result is deemed to comply with AVG limit.
6. The other emission levels were very low against the limit.

Underwriters Laboratories Taiwan Co., Ltd.

Building B and Building E, No. 372-7, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County, Taiwan

Telephone :+886-2-7737-3000

Facsimile (FAX) :+886-3-583-7948

Doc No: 17-EM-F0876 / 5.0



Test report No. : 4789400505B-US-R0-V0
Page : 79 of 167
Issued date : Mar. 31, 2021
FCC ID : VGY2865AX

EUT Test Condition		Measurement Detail	
Channel	Channel 6	Frequency Range	1 GHz ~ 26.5 GHz

Antenna Polarity & Test Distance: Horizontal at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
-	2362.6	47.57	6.73	54.3	74	-19.7	Peak
@	2437	97.86	6.59	104.45	-	-	Peak
-	2499.6	47.05	6.53	53.58	74	-20.42	Peak
-	2362.8	38.53	6.73	45.26	54	-8.74	Average
@	2437	95.12	6.59	101.71	-	-	Average
-	2493.8	36.81	6.53	43.34	54	-10.66	Average
*	3992	45.27	1.15	46.42	74	-27.58	Peak
*	4874	39.24	3.63	42.87	74	-31.13	Peak
*	4995	41.67	3.85	45.52	74	-28.48	Peak
Antenna Polarity & Test Distance: Vertical at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
-	2359.6	52.49	6.73	59.22	74	-14.78	Peak
@	2437	103.54	6.59	110.13	-	-	Peak
-	2494.2	48.86	6.53	55.39	74	-18.61	Peak
-	2341	44.81	6.74	51.55	54	-2.45	Average
@	2437	101.88	6.59	108.47	-	-	Average
-	2495.6	38.96	6.53	45.49	54	-8.51	Average
*	3992	49.97	1.15	51.12	74	-22.88	Peak
*	4874	42.53	3.63	46.16	74	-27.84	Peak
*	4995	47	3.85	50.85	74	-23.15	Peak

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. "@": Fundamental Frequency.
5. " * ": The peak result under 20 dB above and complies with AVG limit, AVG result is deemed to comply with AVG limit.
6. The other emission levels were very low against the limit.

Underwriters Laboratories Taiwan Co., Ltd.

Building B and Building E, No. 372-7, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County, Taiwan

Telephone :+886-2-7737-3000

Facsimile (FAX) :+886-3-583-7948

Doc No: 17-EM-F0876 / 5.0



Test report No. : 4789400505B-US-R0-V0
Page : 80 of 167
Issued date : Mar. 31, 2021
FCC ID : VGY2865AX

EUT Test Condition		Measurement Detail	
Channel	Channel 10	Frequency Range	1 GHz ~ 26.5 GHz

Antenna Polarity & Test Distance: Horizontal at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
-	2333.8	47.41	6.73	54.14	74	-19.86	Peak
@	2457	93.97	6.54	100.51	-	-	Peak
-	2491.4	46.05	6.53	52.58	74	-21.42	Peak
-	2372	38.93	6.74	45.67	54	-8.33	Average
@	2457	93.35	6.54	99.89	-	-	Average
-	2497.2	37.38	6.53	43.91	54	-10.09	Average
*	3992	38.19	1.15	39.34	74	-34.66	Peak
*	4914	37.94	3.68	41.62	74	-32.38	Peak
*	4995	40.34	3.85	44.19	74	-29.81	Peak
Antenna Polarity & Test Distance: Vertical at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
-	2380.2	50.67	6.73	57.4	74	-16.6	Peak
@	2457	104.16	6.54	110.7	-	-	Peak
-	2496.8	48.51	6.53	55.04	74	-18.96	Peak
-	2372	44.96	6.74	51.7	54	-2.3	Average
@	2457	101.21	6.54	107.75	-	-	Average
-	2497.6	39.99	6.53	46.52	54	-7.48	Average
*	3992	42.01	1.15	43.16	74	-30.84	Peak
*	4914	42.83	3.68	46.51	74	-27.49	Peak
*	4995	43.84	3.85	47.69	74	-26.31	Peak

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. "@": Fundamental Frequency.
5. " * ": The peak result under 20 dB above and complies with AVG limit, AVG result is deemed to comply with AVG limit.
6. The other emission levels were very low against the limit.

Underwriters Laboratories Taiwan Co., Ltd.

Building B and Building E, No. 372-7, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County, Taiwan

Telephone :+886-2-7737-3000

Facsimile (FAX) :+886-3-583-7948

Doc No: 17-EM-F0876 / 5.0



Test report No. : 4789400505B-US-R0-V0
Page : 81 of 167
Issued date : Mar. 31, 2021
FCC ID : VGY2865AX

EUT Test Condition		Measurement Detail	
Channel	Channel 11	Frequency Range	1 GHz ~ 26.5 GHz

Antenna Polarity & Test Distance: Horizontal at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
@	2462	97.41	6.54	103.95	-	-	Peak
-	2490	47.51	6.53	54.04	74	-19.96	Peak
@	2462	94.23	6.54	100.77	-	-	Average
-	2484.4	37.09	6.53	43.62	54	-10.38	Average
*	3992	44.04	1.15	45.19	74	-28.81	Peak
*	4924	39.39	3.69	43.08	74	-30.92	Peak
*	4995	41.55	3.85	45.4	74	-28.6	Peak
Antenna Polarity & Test Distance: Vertical at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
@	2462	104.79	6.54	111.33	-	-	Peak
-	2484	50.96	6.53	57.49	74	-16.51	Peak
@	2462	101.67	6.54	108.21	-	-	Average
-	2483.6	44.94	6.53	51.47	54	-2.53	Average
*	3992	50.06	1.15	51.21	74	-22.79	Peak
*	4924	43.33	3.69	47.02	74	-26.98	Peak
*	4995	46.56	3.85	50.41	74	-23.59	Peak

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. "@": Fundamental Frequency.
5. " * ": The peak result under 20 dB above and complies with AVG limit, AVG result is deemed to comply with AVG limit.
6. The other emission levels were very low against the limit.

Underwriters Laboratories Taiwan Co., Ltd.

Building B and Building E, No. 372-7, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County, Taiwan

Telephone :+886-2-7737-3000

Facsimile (FAX) :+886-3-583-7948

Doc No: 17-EM-F0876 / 5.0



Test report No. : 4789400505B-US-R0-V0
Page : 82 of 167
Issued date : Mar. 31, 2021
FCC ID : VGY2865AX

802.11g

EUT Test Condition		Measurement Detail	
Channel	Channel 1	Frequency Range	1 GHz ~ 26.5 GHz

Antenna Polarity & Test Distance: Horizontal at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
-	2384.6	47.79	6.73	54.52	74	-19.48	Peak
@	2412	91.86	6.68	98.54	-	-	Peak
-	2362.2	36.51	6.74	43.25	54	-10.75	Average
@	2412	84.13	6.68	90.81	-	-	Average
*	3992	44.11	1.15	45.26	74	-28.74	Peak
*	4824	35.16	3.53	38.69	74	-35.31	Peak
*	4995	40.49	3.85	44.34	74	-29.66	Peak
Antenna Polarity & Test Distance: Vertical at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
-	2390	64.62	6.74	71.36	74	-2.64	Peak
@-	2412	101.88	6.68	108.56	-	-	Peak
	2389.8	46.63	6.74	53.37	54	-0.63	Average
@	2412	95.21	6.68	101.89	-	-	Average
*	3992	49.02	1.15	50.17	74	-23.83	Peak
*	4824	36.08	3.53	39.61	74	-34.39	Peak
*	4995	45.96	3.85	49.81	74	-24.19	Peak

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. "@": Fundamental Frequency.
5. " * ": The peak result under 20 dB above and complies with AVG limit, AVG result is deemed to comply with AVG limit.
6. The other emission levels were very low against the limit.

Underwriters Laboratories Taiwan Co., Ltd.

Building B and Building E, No. 372-7, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County, Taiwan

Telephone :+886-2-7737-3000

Facsimile (FAX) :+886-3-583-7948

Doc No: 17-EM-F0876 / 5.0



Test report No. : 4789400505B-US-R0-V0
Page : 83 of 167
Issued date : Mar. 31, 2021
FCC ID : VGY2865AX

EUT Test Condition		Measurement Detail	
Channel	Channel 2	Frequency Range	1 GHz ~ 26.5 GHz

Antenna Polarity & Test Distance: Horizontal at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
-	2389.4	53.85	6.73	60.58	74	-13.42	Peak
@	2417	94.72	6.66	101.38	-	-	Peak
-	2389.8	38.2	6.74	44.94	54	-9.06	Average
@	2417	87.58	6.66	94.24	-	-	Average
-	3992	39.52	1.15	40.67	74	-33.33	Peak
-	4834	36.1	3.56	39.66	74	-34.34	Peak
-	4995	38.68	3.85	42.53	74	-31.47	Peak
Antenna Polarity & Test Distance: Vertical at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
-	2390	64.24	6.74	70.98	74	-3.02	Peak
@	2417	105.32	6.66	111.98	-	-	Peak
-	2389.2	46.75	6.73	53.48	54	-0.52	Average
@	2417	97.74	6.66	104.4	-	-	Average
*	3992	40.87	1.15	42.02	74	-31.98	Peak
*	4834	37.8	3.56	41.36	74	-32.64	Peak
*	4995	43.38	3.85	47.23	74	-26.77	Peak

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. "@": Fundamental Frequency.
5. " * ": The peak result under 20 dB above and complies with AVG limit, AVG result is deemed to comply with AVG limit.
6. The other emission levels were very low against the limit.

Underwriters Laboratories Taiwan Co., Ltd.

Building B and Building E, No. 372-7, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County, Taiwan

Telephone :+886-2-7737-3000

Facsimile (FAX) :+886-3-583-7948

Doc No: 17-EM-F0876 / 5.0



Test report No. : 4789400505B-US-R0-V0
Page : 84 of 167
Issued date : Mar. 31, 2021
FCC ID : VGY2865AX

EUT Test Condition		Measurement Detail	
Channel	Channel 6	Frequency Range	1 GHz ~ 26.5 GHz

Antenna Polarity & Test Distance: Horizontal at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
-	2345.4	47.78	6.73	54.51	74	-19.49	Peak
@	2437	95.74	6.59	102.33	-	-	Peak
-	2489.2	48.17	6.53	54.7	74	-19.3	Peak
-	2378	36.89	6.73	43.62	54	-10.38	Average
@	2437	88.83	6.59	95.42	-	-	Average
-	2487.2	36.76	6.53	43.29	54	-10.71	Average
*	3992	43.67	1.15	44.82	74	-29.18	Peak
*	4874	38.9	3.63	42.53	74	-31.47	Peak
*	4995	41	3.85	44.85	74	-29.15	Peak
Antenna Polarity & Test Distance: Vertical at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
-	2389.4	51.47	6.73	58.2	74	-15.8	Peak
@	2437	106.59	6.59	113.18	-	-	Peak
-	2488.6	51.99	6.53	58.52	74	-15.48	Peak
-	2384.8	40.73	6.73	47.46	54	-6.54	Average
@	2437	99.32	6.59	105.91	-	-	Average
-	2485.4	40.27	6.53	46.8	54	-7.2	Average
*	3992	49.16	1.15	50.31	74	-23.69	Peak
*	4874	42.07	3.63	45.7	74	-28.3	Peak
*	4995	46	3.85	49.85	74	-24.15	Peak

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. "@": Fundamental Frequency.
5. " * ": The peak result under 20 dB above and complies with AVG limit, AVG result is deemed to comply with AVG limit.
6. The other emission levels were very low against the limit.

Underwriters Laboratories Taiwan Co., Ltd.

Building B and Building E, No. 372-7, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County, Taiwan

Telephone :+886-2-7737-3000

Facsimile (FAX) :+886-3-583-7948

Doc No: 17-EM-F0876 / 5.0



Test report No. : 4789400505B-US-R0-V0
Page : 85 of 167
Issued date : Mar. 31, 2021
FCC ID : VGY2865AX

EUT Test Condition		Measurement Detail	
Channel	Channel 10	Frequency Range	1 GHz ~ 26.5 GHz

Antenna Polarity & Test Distance: Horizontal at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
@	2457	95.21	6.54	101.75	-	-	Peak
-	2484.2	48.9	6.53	55.43	74	-18.57	Peak
@	2457	88.41	6.54	94.95	-	-	Average
-	2483.6	37.26	6.53	43.79	54	-10.21	Average
*	3992	39.08	1.15	40.23	74	-33.77	Peak
*	4914	35.09	3.68	38.77	74	-35.23	Peak
*	4995	40.07	3.85	43.92	74	-30.08	Peak
Antenna Polarity & Test Distance: Vertical at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
@	2457	105.5	6.54	112.04	-	-	Peak
-	2484.8	61.85	6.53	68.38	74	-5.62	Peak
@	2457	97.63	6.54	104.17	-	-	Average
-	2484	46.61	6.53	53.14	54	-0.86	Average
*	3992	39.65	1.15	40.8	74	-33.2	Peak
*	4914	37.13	3.68	40.81	74	-33.19	Peak
*	4995	43	3.85	46.85	74	-27.15	Peak

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. "@": Fundamental Frequency.
5. " * ": The peak result under 20 dB above and complies with AVG limit, AVG result is deemed to comply with AVG limit.
6. The other emission levels were very low against the limit.

Underwriters Laboratories Taiwan Co., Ltd.

Building B and Building E, No. 372-7, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County, Taiwan

Telephone :+886-2-7737-3000

Facsimile (FAX) :+886-3-583-7948

Doc No: 17-EM-F0876 / 5.0



Test report No. : 4789400505B-US-R0-V0
Page : 86 of 167
Issued date : Mar. 31, 2021
FCC ID : VGY2865AX

EUT Test Condition		Measurement Detail	
Channel	Channel 11	Frequency Range	1 GHz ~ 26.5 GHz

Antenna Polarity & Test Distance: Horizontal at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
@	2462	91.68	6.54	98.22	-	-	Peak
-	2499.4	46.58	6.53	53.11	74	-20.89	Peak
@	2462	84.47	6.54	91.01	-	-	Average
-	2499.8	36.82	6.53	43.35	54	-10.65	Average
*	3992	44.05	1.15	45.2	74	-28.8	Peak
*	4924	35.8	3.69	39.49	74	-34.51	Peak
*	4995	40.99	3.85	44.84	74	-29.16	Peak
Antenna Polarity & Test Distance: Vertical at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
@	2462	101.58	6.54	108.12	-	-	Peak
-	2484	58.22	6.53	64.75	74	-9.25	Peak
@	2462	93.98	6.54	100.52	-	-	Average
-	2483.8	46.91	6.53	53.44	54	-0.56	Average
*	3992	50.58	1.15	51.73	74	-22.27	Peak
*	4924	36.57	3.69	40.26	74	-33.74	Peak
*	4995	46.51	3.85	50.36	74	-23.64	Peak

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. "@": Fundamental Frequency.
5. " * ": The peak result under 20 dB above and complies with AVG limit, AVG result is deemed to comply with AVG limit.
6. The other emission levels were very low against the limit.

Underwriters Laboratories Taiwan Co., Ltd.

Building B and Building E, No. 372-7, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County, Taiwan

Telephone :+886-2-7737-3000

Facsimile (FAX) :+886-3-583-7948

Doc No: 17-EM-F0876 / 5.0



Test report No. : 4789400505B-US-R0-V0
Page : 87 of 167
Issued date : Mar. 31, 2021
FCC ID : VGY2865AX

802.11ax (HE20)

EUT Test Condition		Measurement Detail	
Channel	Channel 1	Frequency Range	1 GHz ~ 26.5 GHz

Antenna Polarity & Test Distance: Horizontal at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
-	2321.6	46.87	6.74	53.61	74	-20.39	Peak
@	2412	91.46	6.68	98.14	-	-	Peak
-	2378	36.39	6.73	43.12	54	-10.88	Average
@	2412	83.4	6.68	90.08	-	-	Average
*	3992	43.47	1.15	44.62	74	-29.38	Peak
*	4824	35.52	3.53	39.05	74	-34.95	Peak
*	4995	42.34	3.85	46.19	74	-27.81	Peak
Antenna Polarity & Test Distance: Vertical at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
-	2388.8	60.85	6.73	67.58	74	-6.42	Peak
@	2412	102.49	6.68	109.17	-	-	Peak
-	2390	46.43	6.74	53.17	54	-0.83	Average
@	2412	93.09	6.68	99.77	-	-	Average
*	3992	48.79	1.15	49.94	74	-24.06	Peak
*	4824	35.85	3.53	39.38	74	-34.62	Peak
*	4995	46.05	3.85	49.9	74	-24.1	Peak

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. "@": Fundamental Frequency.
5. "* * ": The peak result under 20 dB above and complies with AVG limit, AVG result is deemed to comply with AVG limit.
6. The other emission levels were very low against the limit.

Underwriters Laboratories Taiwan Co., Ltd.

Building B and Building E, No. 372-7, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County, Taiwan

Telephone :+886-2-7737-3000

Facsimile (FAX) :+886-3-583-7948

Doc No: 17-EM-F0876 / 5.0



Test report No. : 4789400505B-US-R0-V0
Page : 88 of 167
Issued date : Mar. 31, 2021
FCC ID : VGY2865AX

EUT Test Condition		Measurement Detail	
Channel	Channel 2	Frequency Range	1 GHz ~ 26.5 GHz

Antenna Polarity & Test Distance: Horizontal at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
-	2388.8	48.65	6.73	55.38	74	-18.62	Peak
@	2417	95.67	6.66	102.33	-	-	Peak
-	2355.2	36.53	6.73	43.26	54	-10.74	Average
@	2417	86.25	6.66	92.91	-	-	Average
*	3992	40	1.15	41.15	74	-32.85	Peak
*	4834	36.22	3.56	39.78	74	-34.22	Peak
*	4995	37.69	3.85	41.54	74	-32.46	Peak
Antenna Polarity & Test Distance: Vertical at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
-	2390	58.75	6.74	65.49	74	-8.51	Peak
@	2417	104.39	6.66	111.05	-	-	Peak
-	2390	46.41	6.74	53.15	54	-0.85	Average
@	2417	96.23	6.66	102.89	-	-	Average
*	3992	41.33	1.15	42.48	74	-31.52	Peak
*	4834	36.94	3.56	40.5	74	-33.5	Peak
*	4995	44.08	3.85	47.93	74	-26.07	Peak

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. "@": Fundamental Frequency.
5. " * ": The peak result under 20 dB above and complies with AVG limit, AVG result is deemed to comply with AVG limit.
6. The other emission levels were very low against the limit.

Underwriters Laboratories Taiwan Co., Ltd.

Building B and Building E, No. 372-7, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County, Taiwan

Telephone :+886-2-7737-3000

Facsimile (FAX) :+886-3-583-7948

Doc No: 17-EM-F0876 / 5.0



Test report No. : 4789400505B-US-R0-V0
Page : 89 of 167
Issued date : Mar. 31, 2021
FCC ID : VGY2865AX

EUT Test Condition		Measurement Detail	
Channel	Channel 6	Frequency Range	1 GHz ~ 26.5 GHz

Antenna Polarity & Test Distance: Horizontal at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
-	2349.8	47.18	6.73	53.91	74	-20.09	Peak
@	2437	98.44	6.59	105.03	-	-	Peak
-	2484.6	46.62	6.53	53.15	74	-20.85	Peak
-	2371	36.8	6.73	43.53	54	-10.47	Average
@	2437	88.83	6.59	95.42	-	-	Average
-	2495.2	36.92	6.53	43.45	54	-10.55	Average
*	3992	44.92	1.15	46.07	74	-27.93	Peak
*	4874	38.82	3.63	42.45	74	-31.55	Peak
*	4995	41.77	3.85	45.62	74	-28.38	Peak
Antenna Polarity & Test Distance: Vertical at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
-	2388.8	51.41	6.73	58.14	74	-15.86	Peak
@	2437	107.25	6.59	113.84	-	-	Peak
-	2483.6	51.5	6.53	58.03	74	-15.97	Peak
-	2390	41.86	6.74	48.6	54	-5.4	Average
@	2437	98.79	6.59	105.38	-	-	Average
-	2483.8	42.08	6.53	48.61	54	-5.39	Average
*	3992	49.07	1.15	50.22	74	-23.78	Peak
*	4874	43.2	3.63	46.83	74	-27.17	Peak
*	4995	45.9	3.85	49.75	74	-24.25	Peak

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. "@": Fundamental Frequency.
5. " * ": The peak result under 20 dB above and complies with AVG limit, AVG result is deemed to comply with AVG limit.
6. The other emission levels were very low against the limit.

Underwriters Laboratories Taiwan Co., Ltd.

Building B and Building E, No. 372-7, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County, Taiwan

Telephone :+886-2-7737-3000

Facsimile (FAX) :+886-3-583-7948

Doc No: 17-EM-F0876 / 5.0



Test report No. : 4789400505B-US-R0-V0
Page : 90 of 167
Issued date : Mar. 31, 2021
FCC ID : VGY2865AX

EUT Test Condition		Measurement Detail	
Channel	Channel 10	Frequency Range	1 GHz ~ 26.5 GHz

Antenna Polarity & Test Distance: Horizontal at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
@	2457	93.51	6.54	100.05	-	-	Peak
-	2486.2	47.56	6.53	54.09	74	-19.91	Peak
@	2457	86.76	6.54	93.3	-	-	Average
-	2484.8	37.26	6.53	43.79	54	-10.21	Average
*	3992	39.26	1.15	40.41	74	-33.59	Peak
*	4914	35.12	3.68	38.8	74	-35.2	Peak
*	4995	38.99	3.85	42.84	74	-31.16	Peak
Antenna Polarity & Test Distance: Vertical at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
@	2457	105.13	6.54	111.67	-	-	Peak
-	2483.6	60.89	6.53	67.42	74	-6.58	Peak
@	2457	95.8	6.54	102.34	-	-	Average
-	2483.6	46.7	6.53	53.23	54	-0.77	Average
*	3992	40.53	1.15	41.68	74	-32.32	Peak
*	4914	35.88	3.68	39.56	74	-34.44	Peak
*	4995	44.44	3.85	48.29	74	-25.71	Peak

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. "@": Fundamental Frequency.
5. " * ": The peak result under 20 dB above and complies with AVG limit, AVG result is deemed to comply with AVG limit.
6. The other emission levels were very low against the limit.

Underwriters Laboratories Taiwan Co., Ltd.

Building B and Building E, No. 372-7, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County, Taiwan

Telephone :+886-2-7737-3000

Facsimile (FAX) :+886-3-583-7948

Doc No: 17-EM-F0876 / 5.0



Test report No. : 4789400505B-US-R0-V0
Page : 91 of 167
Issued date : Mar. 31, 2021
FCC ID : VGY2865AX

EUT Test Condition		Measurement Detail	
Channel	Channel 11	Frequency Range	1 GHz ~ 26.5 GHz

Antenna Polarity & Test Distance: Horizontal at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
@	2462	90.82	6.54	97.36	-	-	Peak
-	2491	46.6	6.53	53.13	74	-20.87	Peak
@	2462	83.94	6.54	90.48	-	-	Average
-	2490	36.98	6.53	43.51	54	-10.49	Average
*	3992	43.77	1.15	44.92	74	-29.08	Peak
*	4924	34.66	3.69	38.35	74	-35.65	Peak
*	4995	42.27	3.85	46.12	74	-27.88	Peak
Antenna Polarity & Test Distance: Vertical at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
@	2462	102.23	6.54	108.77	-	-	Peak
-	2486.2	63.36	6.53	69.89	74	-4.11	Peak
@	2462	93.12	6.54	99.66	-	-	Average
-	2484	46.63	6.53	53.16	54	-0.84	Average
*	3992	48.64	1.15	49.79	74	-24.21	Peak
*	4924	36.74	3.69	40.43	74	-33.57	Peak
*	4995	45.71	3.85	49.56	74	-24.44	Peak

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. "@": Fundamental Frequency.
5. " * ": The peak result under 20 dB above and complies with AVG limit, AVG result is deemed to comply with AVG limit.
6. The other emission levels were very low against the limit.

Underwriters Laboratories Taiwan Co., Ltd.

Building B and Building E, No. 372-7, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County, Taiwan

Telephone :+886-2-7737-3000

Facsimile (FAX) :+886-3-583-7948

Doc No: 17-EM-F0876 / 5.0



Test report No. : 4789400505B-US-R0-V0
Page : 92 of 167
Issued date : Mar. 31, 2021
FCC ID : VGY2865AX

802.11ax (HE40)

EUT Test Condition		Measurement Detail	
Channel	Channel 3	Frequency Range	1 GHz ~ 26.5 GHz

Antenna Polarity & Test Distance: Horizontal at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
-	2316.2	47.14	6.73	53.87	74	-20.13	Peak
@	2422	86.86	6.65	93.51	-	-	Peak
-	2381.4	36.75	6.74	43.49	54	-10.51	Average
@	2422	79.41	6.65	86.06	-	-	Average
*	3992	44.09	1.15	45.24	74	-28.76	Peak
*	4844	34.91	3.6	38.51	74	-35.49	Peak
*	4995	40.66	3.85	44.51	74	-29.49	Peak
Antenna Polarity & Test Distance: Vertical at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
-	2384.2	59.27	6.73	66	74	-8	Peak
@	2422	98.74	6.65	105.39	-	-	Peak
-	2389.4	46.83	6.73	53.56	54	-0.44	Average
@	2422	89.47	6.65	96.12	-	-	Average
*	3992	48.68	1.15	49.83	74	-24.17	Peak
*	4844	35.38	3.6	38.98	74	-35.02	Peak
*	4995	46.94	3.85	50.79	74	-23.21	Peak

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. "@": Fundamental Frequency.
5. "* * ": The peak result under 20 dB above and complies with AVG limit, AVG result is deemed to comply with AVG limit.
6. The other emission levels were very low against the limit.

Underwriters Laboratories Taiwan Co., Ltd.

Building B and Building E, No. 372-7, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County, Taiwan

Telephone :+886-2-7737-3000

Facsimile (FAX) :+886-3-583-7948

Doc No: 17-EM-F0876 / 5.0



Test report No. : 4789400505B-US-R0-V0
Page : 93 of 167
Issued date : Mar. 31, 2021
FCC ID : VGY2865AX

EUT Test Condition		Measurement Detail	
Channel	Channel 4	Frequency Range	1 GHz ~ 26.5 GHz

Antenna Polarity & Test Distance: Horizontal at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
-	2345.4	47.34	6.73	54.07	74	-19.93	Peak
@	2427	86.64	6.63	93.27	-	-	Peak
-	2371.6	36.68	6.74	43.42	54	-10.58	Average
@	2427	79.85	6.63	86.48	-	-	Average
*	3992	39.32	1.15	40.47	74	-33.53	Peak
*	4854	35.29	3.61	38.9	74	-35.1	Peak
*	4995	39.67	3.85	43.52	74	-30.48	Peak
Antenna Polarity & Test Distance: Vertical at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
-	2389.6	61.45	6.74	68.19	74	-5.81	Peak
@	2427	98.58	6.63	105.21	-	-	Peak
-	2388.8	45.32	6.73	52.05	54	-1.95	Average
@	2427	89.49	6.63	96.12	-	-	Average
*	3992	41.35	1.15	42.5	74	-31.5	Peak
*	4854	36.36	3.61	39.97	74	-34.03	Peak
*	4995	44.74	3.85	48.59	74	-25.41	Peak

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. "@": Fundamental Frequency.
5. " * ": The peak result under 20 dB above and complies with AVG limit, AVG result is deemed to comply with AVG limit.
6. The other emission levels were very low against the limit.

Underwriters Laboratories Taiwan Co., Ltd.

Building B and Building E, No. 372-7, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County, Taiwan

Telephone :+886-2-7737-3000

Facsimile (FAX) :+886-3-583-7948

Doc No: 17-EM-F0876 / 5.0



Test report No. : 4789400505B-US-R0-V0
Page : 94 of 167
Issued date : Mar. 31, 2021
FCC ID : VGY2865AX

EUT Test Condition		Measurement Detail	
Channel	Channel 6	Frequency Range	1 GHz ~ 26.5 GHz

Antenna Polarity & Test Distance: Horizontal at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
-	2354.6	47.25	6.73	53.98	74	-20.02	Peak
@	2437	89.07	6.59	95.66	-	-	Peak
-	2496.8	46.8	6.53	53.33	74	-20.67	Peak
-	2359.4	36.47	6.73	43.2	54	-10.8	Average
@	2437	81.62	6.59	88.21	-	-	Average
-	2494.8	36.55	6.53	43.08	54	-10.92	Average
*	3992	44.93	1.15	46.08	74	-27.92	Peak
*	4874	36.51	3.63	40.14	74	-33.86	Peak
*	4995	41.56	3.85	45.41	74	-28.59	Peak
Antenna Polarity & Test Distance: Vertical at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
-	2389.6	55.83	6.74	62.57	74	-11.43	Peak
@	2437	99.85	6.59	106.44	-	-	Peak
-	2483.6	61.73	6.53	68.26	74	-5.74	Peak
-	2389.4	46.45	6.73	53.18	54	-0.82	Average
@	2437	91.13	6.59	97.72	-	-	Average
-	2483.6	46.05	6.53	52.58	54	-1.42	Average
*	3992	49.48	1.15	50.63	74	-23.37	Peak
*	4874	36.18	3.63	39.81	74	-34.19	Peak
*	4995	46.83	3.85	50.68	74	-23.32	Peak

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. "@": Fundamental Frequency.
5. " * ": The peak result under 20 dB above and complies with AVG limit, AVG result is deemed to comply with AVG limit.
6. The other emission levels were very low against the limit.

Underwriters Laboratories Taiwan Co., Ltd.

Building B and Building E, No. 372-7, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County, Taiwan

Telephone :+886-2-7737-3000

Facsimile (FAX) :+886-3-583-7948

Doc No: 17-EM-F0876 / 5.0



Test report No. : 4789400505B-US-R0-V0
Page : 95 of 167
Issued date : Mar. 31, 2021
FCC ID : VGY2865AX

EUT Test Condition		Measurement Detail	
Channel	Channel 8	Frequency Range	1 GHz ~ 26.5 GHz

Antenna Polarity & Test Distance: Horizontal at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
@	2447	88.4	6.55	94.95	-	-	Peak
-	2488.8	47.63	6.53	54.16	74	-19.84	Peak
@	2447	80.38	6.55	86.93	-	-	Average
-	2484.2	36.72	6.53	43.25	54	-10.75	Average
*	3992	38.2	1.15	39.35	74	-34.65	Peak
*	4894	35.37	3.66	39.03	74	-34.97	Peak
*	4995	40.25	3.85	44.1	74	-29.9	Peak
Antenna Polarity & Test Distance: Vertical at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
@	2447	99.14	6.55	105.69	-	-	Peak
-	2484.4	61.68	6.53	68.21	74	-5.79	Peak
@	2447	89.54	6.55	96.09	-	-	Average
-	2485	46.62	6.53	53.15	54	-0.85	Average
*	3992	39.98	1.15	41.13	74	-32.87	Peak
*	4894	35.2	3.66	38.86	74	-35.14	Peak
*	4995	43.85	3.85	47.7	74	-26.3	Peak

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. "@": Fundamental Frequency.
5. " * ": The peak result under 20 dB above and complies with AVG limit, AVG result is deemed to comply with AVG limit.
6. The other emission levels were very low against the limit.

Underwriters Laboratories Taiwan Co., Ltd.

Building B and Building E, No. 372-7, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County, Taiwan

Telephone :+886-2-7737-3000

Facsimile (FAX) :+886-3-583-7948

Doc No: 17-EM-F0876 / 5.0



Test report No. : 4789400505B-US-R0-V0
Page : 96 of 167
Issued date : Mar. 31, 2021
FCC ID : VGY2865AX

EUT Test Condition		Measurement Detail	
Channel	Channel 9	Frequency Range	1 GHz ~ 26.5 GHz

Antenna Polarity & Test Distance: Horizontal at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
@	2452	88.2	6.54	94.74	-	-	Peak
-	2489.2	47.4	6.53	53.93	74	-20.07	Peak
@	2452	79.46	6.54	86	-	-	Average
-	2487.6	36.66	6.52	43.18	54	-10.82	Average
*	3992	44.78	1.15	45.93	74	-28.07	Peak
*	4904	35.63	3.67	39.3	74	-34.7	Peak
*	4995	40.26	3.85	44.11	74	-29.89	Peak
Antenna Polarity & Test Distance: Vertical at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
@	2452	99.29	6.54	105.83	-	-	Peak
-	2492.2	58.07	6.53	64.6	74	-9.4	Peak
@	2452	89.39	6.54	95.93	-	-	Average
-	2484.6	46.86	6.53	53.39	54	-0.61	Average
*	3992	48.93	1.15	50.08	74	-23.92	Peak
*	4904	36.2	3.67	39.87	74	-34.13	Peak
*	4995	46.56	3.85	50.41	74	-23.59	Peak

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. "@": Fundamental Frequency.
5. " * ": The peak result under 20 dB above and complies with AVG limit, AVG result is deemed to comply with AVG limit.
6. The other emission levels were very low against the limit.

Underwriters Laboratories Taiwan Co., Ltd.

Building B and Building E, No. 372-7, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County, Taiwan

Telephone :+886-2-7737-3000

Facsimile (FAX) :+886-3-583-7948

Doc No: 17-EM-F0876 / 5.0



Beamforming mode

802.11ax (HE20)

EUT Test Condition		Measurement Detail	
Channel	Channel 1	Frequency Range	1 GHz ~ 26.5 GHz

Antenna Polarity & Test Distance: Horizontal at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
-	2367.2	48.26	6.74	55	74	-19	Peak
@	2412	89.89	6.68	96.57	-	-	Peak
-	2349.4	36.38	6.73	43.11	54	-10.89	Average
@	2412	82.75	6.68	89.43	-	-	Average
*	3992	39.84	1.15	40.99	74	-33.01	Peak
*	4824	36.52	3.53	40.05	74	-33.95	Peak
*	4995	39.12	3.85	42.97	74	-31.03	Peak
Antenna Polarity & Test Distance: Vertical at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
-	2386.8	56.23	6.74	62.97	74	-11.03	Peak
@	2412	96.94	6.68	103.62	-	-	Peak
-	2390	37.26	6.74	44	54	-10	Average
@	2412	91	6.68	97.68	-	-	Average
*	3992	42.41	1.15	43.56	74	-30.44	Peak
*	4824	37.02	3.53	40.55	74	-33.45	Peak
*	4995	41.56	3.85	45.41	74	-28.59	Peak

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. "@": Fundamental Frequency.
5. " * ": The peak result under 20 dB above and complies with AVG limit, AVG result is deemed to comply with AVG limit.
6. The other emission levels were very low against the limit.

Underwriters Laboratories Taiwan Co., Ltd.

Building B and Building E, No. 372-7, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County, Taiwan

Telephone :+886-2-7737-3000

Facsimile (FAX) :+886-3-583-7948

Doc No: 17-EM-F0876 / 5.0



Test report No. : 4789400505B-US-R0-V0
Page : 98 of 167
Issued date : Mar. 31, 2021
FCC ID : VGY2865AX

EUT Test Condition		Measurement Detail	
Channel	Channel 2	Frequency Range	1 GHz ~ 26.5 GHz

Antenna Polarity & Test Distance: Horizontal at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
-	2386.2	55.84	6.74	62.58	74	-11.42	Peak
@	2417	92.35	6.66	99.01	-	-	Peak
-	2336	37	6.74	43.74	54	-10.26	Average
@	2417	89.04	6.66	95.7	-	-	Average
*	3992	39.79	1.15	40.94	74	-33.06	Peak
*	4834	36.77	3.56	40.33	74	-33.67	Peak
*	4995	40.48	3.85	44.33	74	-29.67	Peak
Antenna Polarity & Test Distance: Vertical at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
-	2375.2	60.43	6.73	67.16	74	-6.84	Peak
@	2417	99.53	6.66	106.19	-	-	Peak
-	2340	43.1	6.74	49.84	54	-4.16	Average
@	2417	96.49	6.66	103.15	-	-	Average
*	3992	43.01	1.15	44.16	74	-29.84	Peak
*	4834	37.07	3.56	40.63	74	-33.37	Peak
*	4995	43.41	3.85	47.26	74	-26.74	Peak

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. "@": Fundamental Frequency.
5. " * ": The peak result under 20 dB above and complies with AVG limit, AVG result is deemed to comply with AVG limit.
6. The other emission levels were very low against the limit.

Underwriters Laboratories Taiwan Co., Ltd.

Building B and Building E, No. 372-7, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County, Taiwan

Telephone :+886-2-7737-3000

Facsimile (FAX) :+886-3-583-7948

Doc No: 17-EM-F0876 / 5.0



Test report No. : 4789400505B-US-R0-V0
Page : 99 of 167
Issued date : Mar. 31, 2021
FCC ID : VGY2865AX

EUT Test Condition		Measurement Detail	
Channel	Channel 6	Frequency Range	1 GHz ~ 26.5 GHz

Antenna Polarity & Test Distance: Horizontal at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
-	2339.2	49.34	6.73	56.07	74	-17.93	Peak
@	2437	96.34	6.59	102.93	-	-	Peak
-	2485	46.34	6.53	52.87	74	-21.13	Peak
-	2352.2	40.68	6.73	47.41	54	-6.59	Average
@	2437	94.45	6.59	101.04	-	-	Average
-	2486.6	36.65	6.53	43.18	54	-10.82	Average
*	3992	40.1	1.15	41.25	74	-32.75	Peak
*	4874	37.31	3.63	40.94	74	-33.06	Peak
*	4995	38.33	3.85	42.18	74	-31.82	Peak
Antenna Polarity & Test Distance: Vertical at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
-	2384.4	59.42	6.73	66.15	74	-7.85	Peak
@	2437	106.69	6.59	113.28	-	-	Peak
-	2483.6	62.75	6.53	69.28	74	-4.72	Peak
-	2351.8	44.82	6.73	51.55	54	-2.45	Average
@	2437	103.23	6.59	109.82	-	-	Average
-	2492	40.33	6.53	46.86	54	-7.14	Average
*	3992	41.36	1.15	42.51	74	-31.49	Peak
*	4874	44.63	3.63	48.26	74	-25.74	Peak
*	4995	40.74	3.85	44.59	74	-29.41	Peak

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. "@": Fundamental Frequency.
5. " * ": The peak result under 20 dB above and complies with AVG limit, AVG result is deemed to comply with AVG limit.
6. The other emission levels were very low against the limit.

Underwriters Laboratories Taiwan Co., Ltd.

Building B and Building E, No. 372-7, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County, Taiwan

Telephone :+886-2-7737-3000

Facsimile (FAX) :+886-3-583-7948

Doc No: 17-EM-F0876 / 5.0



Test report No. : 4789400505B-US-R0-V0
Page : 100 of 167
Issued date : Mar. 31, 2021
FCC ID : VGY2865AX

EUT Test Condition		Measurement Detail	
Channel	Channel 10	Frequency Range	1 GHz ~ 26.5 GHz

Antenna Polarity & Test Distance: Horizontal at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
@	2457	90.03	6.54	96.57	-	-	Peak
-	2486.6	46.02	6.53	52.55	74	-21.45	Peak
@	2457	83.91	6.54	90.45	-	-	Average
-	2491.2	36.64	6.53	43.17	54	-10.83	Average
*	3992	40.98	1.15	42.13	74	-31.87	Peak
*	4914	35	3.68	38.68	74	-35.32	Peak
*	4995	39.68	3.85	43.53	74	-30.47	Peak
Antenna Polarity & Test Distance: Vertical at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
@	2457	99.36	6.54	105.9	-	-	Peak
-	2486	57.99	6.53	64.52	74	-9.48	Peak
@	2457	95.13	6.54	101.67	-	-	Average
-	2483.8	39.83	6.53	46.36	54	-7.64	Average
*	3992	42.66	1.15	43.81	74	-30.19	Peak
*	4914	36.11	3.68	39.79	74	-34.21	Peak
*	4995	43.4	3.85	47.25	74	-26.75	Peak

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. "@": Fundamental Frequency.
5. " * ": The peak result under 20 dB above and complies with AVG limit, AVG result is deemed to comply with AVG limit.
6. The other emission levels were very low against the limit.

Underwriters Laboratories Taiwan Co., Ltd.

Building B and Building E, No. 372-7, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County, Taiwan

Telephone :+886-2-7737-3000

Facsimile (FAX) :+886-3-583-7948

Doc No: 17-EM-F0876 / 5.0



Test report No. : 4789400505B-US-R0-V0
Page : 101 of 167
Issued date : Mar. 31, 2021
FCC ID : VGY2865AX

EUT Test Condition		Measurement Detail	
Channel	Channel 11	Frequency Range	1 GHz ~ 26.5 GHz

Antenna Polarity & Test Distance: Horizontal at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
@	2462	84.27	6.54	90.81	-	-	Peak
-	2499.2	47.54	6.53	54.07	74	-19.93	Peak
@	2462	81.42	6.54	87.96	-	-	Average
-	2496.6	36.57	6.53	43.1	54	-10.9	Average
*	3992	41.5	1.15	42.65	74	-31.35	Peak
*	4924	35.61	3.69	39.3	74	-34.7	Peak
*	4995	38.11	3.85	41.96	74	-32.04	Peak
Antenna Polarity & Test Distance: Vertical at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
@	2462	98.31	6.54	104.85	-	-	Peak
-	2491.8	58.92	6.53	65.45	74	-8.55	Peak
@	2462	90.85	6.54	97.39	-	-	Average
-	2484.6	37.64	6.53	44.17	54	-9.83	Average
*	3992	43.11	1.15	44.26	74	-29.74	Peak
*	4924	36.41	3.69	40.1	74	-33.9	Peak
*	4995	41.35	3.85	45.2	74	-28.8	Peak

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. "@": Fundamental Frequency.
5. " * ": The peak result under 20 dB above and complies with AVG limit, AVG result is deemed to comply with AVG limit.
6. The other emission levels were very low against the limit.

Underwriters Laboratories Taiwan Co., Ltd.

Building B and Building E, No. 372-7, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County, Taiwan

Telephone :+886-2-7737-3000

Facsimile (FAX) :+886-3-583-7948

Doc No: 17-EM-F0876 / 5.0



Test report No. : 4789400505B-US-R0-V0
Page : 102 of 167
Issued date : Mar. 31, 2021
FCC ID : VGY2865AX

802.11ax (HE40)

EUT Test Condition		Measurement Detail	
Channel	Channel 3	Frequency Range	1 GHz ~ 26.5 GHz

Antenna Polarity & Test Distance: Horizontal at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
-	2355.6	46.25	6.73	52.98	74	-21.02	Peak
@	2422	84.67	6.65	91.32	-	-	Peak
-	2363.4	36.51	6.73	43.24	54	-10.76	Average
@	2422	81.96	6.65	88.61	-	-	Average
*	3992	39.3	1.15	40.45	74	-33.55	Peak
*	4844	36.91	3.6	40.51	74	-33.49	Peak
*	4995	38.31	3.85	42.16	74	-31.84	Peak
Antenna Polarity & Test Distance: Vertical at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
-	2378	53.01	6.73	59.74	74	-14.26	Peak
@	2422	90.24	6.65	96.89	-	-	Peak
-	2384	42.47	6.73	49.2	54	-4.8	Average
@	2422	89.25	6.65	95.9	-	-	Average
*	3992	42.57	1.15	43.72	74	-30.28	Peak
*	4844	39.44	3.6	43.04	74	-30.96	Peak
*	4995	40.97	3.85	44.82	74	-29.18	Peak

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. "@": Fundamental Frequency.
5. "* * ": The peak result under 20 dB above and complies with AVG limit, AVG result is deemed to comply with AVG limit.
6. The other emission levels were very low against the limit.

Underwriters Laboratories Taiwan Co., Ltd.

Building B and Building E, No. 372-7, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County, Taiwan

Telephone :+886-2-7737-3000

Facsimile (FAX) :+886-3-583-7948

Doc No: 17-EM-F0876 / 5.0



Test report No. : 4789400505B-US-R0-V0
Page : 103 of 167
Issued date : Mar. 31, 2021
FCC ID : VGY2865AX

EUT Test Condition		Measurement Detail	
Channel	Channel 6	Frequency Range	1 GHz ~ 26.5 GHz

Antenna Polarity & Test Distance: Horizontal at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
-	2386.4	50.73	6.74	57.47	74	-16.53	Peak
@	2437	85.14	6.59	91.73	-	-	Peak
-	2498	47.08	6.53	53.61	74	-20.39	Peak
-	2389.4	41.66	6.73	48.39	54	-5.61	Average
@	2437	83.15	6.59	89.74	-	-	Average
-	2488.6	37.06	6.53	43.59	54	-10.41	Average
*	3992	40.19	1.15	41.34	74	-32.66	Peak
*	4874	35.61	3.63	39.24	74	-34.76	Peak
*	4995	38.01	3.85	41.86	74	-32.14	Peak
Antenna Polarity & Test Distance: Vertical at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
-	2370.4	57.74	6.73	64.47	74	-9.53	Peak
@	2437	97.17	6.59	103.76	-	-	Peak
-	2488.4	60.38	6.53	66.91	74	-7.09	Peak
-	2387.4	43.3	6.74	50.04	54	-3.96	Average
@	2437	91.15	6.59	97.74	-	-	Average
-	2483.8	40.02	6.53	46.55	54	-7.45	Average
*	3992	42.33	1.15	43.48	74	-30.52	Peak
*	4874	40.47	3.63	44.1	74	-29.9	Peak
*	4995	40.63	3.85	44.48	74	-29.52	Peak

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. "@": Fundamental Frequency.
5. " * ": The peak result under 20 dB above and complies with AVG limit, AVG result is deemed to comply with AVG limit.
6. The other emission levels were very low against the limit.

Underwriters Laboratories Taiwan Co., Ltd.

Building B and Building E, No. 372-7, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County, Taiwan

Telephone :+886-2-7737-3000

Facsimile (FAX) :+886-3-583-7948

Doc No: 17-EM-F0876 / 5.0



Test report No. : 4789400505B-US-R0-V0
Page : 104 of 167
Issued date : Mar. 31, 2021
FCC ID : VGY2865AX

EUT Test Condition		Measurement Detail	
Channel	Channel 9	Frequency Range	1 GHz ~ 26.5 GHz

Antenna Polarity & Test Distance: Horizontal at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
@	2452	84.42	6.54	90.96	-	-	Peak
-	2487.8	46.65	6.52	53.17	74	-20.83	Peak
@	2452	81.47	6.54	88.01	-	-	Average
-	2492.4	36.5	6.53	43.03	54	-10.97	Average
*	3992	39.79	1.15	40.94	74	-33.06	Peak
*	4904	34.74	3.67	38.41	74	-35.59	Peak
*	4995	37.82	3.85	41.67	74	-32.33	Peak
Antenna Polarity & Test Distance: Vertical at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
@	2452	93.86	6.54	100.4	-	-	Peak
-	2485.6	49.81	6.53	56.34	74	-17.66	Peak
@	2452	90.43	6.54	96.97	-	-	Average
-	2497.6	38.02	6.53	44.55	54	-9.45	Average
*	3992	42.2	1.15	43.35	74	-30.65	Peak
*	4904	38.27	3.67	41.94	74	-32.06	Peak
*	4995	40.42	3.85	44.27	74	-29.73	Peak

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. "@": Fundamental Frequency.
5. " * ": The peak result under 20 dB above and complies with AVG limit, AVG result is deemed to comply with AVG limit.
6. The other emission levels were very low against the limit.

Underwriters Laboratories Taiwan Co., Ltd.

Building B and Building E, No. 372-7, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County, Taiwan

Telephone :+886-2-7737-3000

Facsimile (FAX) :+886-3-583-7948

Doc No: 17-EM-F0876 / 5.0



Test report No. : 4789400505B-US-R0-V0
Page : 105 of 167
Issued date : Mar. 31, 2021
FCC ID : VGY2865AX

Co-Location Mode

Non-Beamforming mode

802.11b + 802.11a

EUT Test Condition		Measurement Detail	
Channel	Channel 11 + Channel 149	Frequency Range	1 GHz ~ 40 GHz

Antenna Polarity & Test Distance: Horizontal at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
*	3992	42.93	1.15	44.08	74	-29.92	Peak
*	4924	39.26	3.69	42.95	74	-31.05	Peak
*	4995	41.02	3.85	44.87	74	-29.13	Peak
*	8208	34.03	13.65	47.68	74	-26.32	Peak
-	11490	26.73	20.73	47.46	54	-6.54	Average
-	11490	37.59	20.73	58.32	74	-15.68	Peak
Antenna Polarity & Test Distance: Vertical at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
*	3992	49.64	1.15	50.79	74	-23.21	Peak
*	4924	42.48	3.69	46.17	74	-27.83	Peak
*	4995	45.64	3.85	49.49	74	-24.51	Peak
*	7681	37.25	12.46	49.71	74	-24.29	Peak
-	11490	32.5	20.73	53.23	54	-0.77	Average
-	11490	42.41	20.73	63.14	74	-10.86	Peak

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. " * ": The peak result under 20 dB above and complies with AVG limit, AVG result is deemed to comply with AVG limit.
5. The other emission levels were very low against the limit.

Underwriters Laboratories Taiwan Co., Ltd.

Building B and Building E, No. 372-7, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County, Taiwan

Telephone :+886-2-7737-3000

Facsimile (FAX) :+886-3-583-7948

Doc No: 17-EM-F0876 / 5.0



Beamforming mode

802.11ax (HE20) + 802.11ax (HE20)

EUT Test Condition		Measurement Detail	
Channel	Channel 6 + Channel 165	Frequency Range	1 GHz ~ 40 GHz

Antenna Polarity & Test Distance: Horizontal at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
*	1204	54.25	-8.29	45.96	74	-28.04	Peak
*	3839	41.98	0.64	42.62	74	-31.38	Peak
*	3992	39.33	1.15	40.48	74	-33.52	Peak
*	4874	36.68	3.63	40.31	74	-33.69	Peak
-	7613	33.2	12.43	45.63	74	-28.37	Peak
-	11650	31.01	20.28	51.29	74	-22.71	Peak
Antenna Polarity & Test Distance: Vertical at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
*	1204	56.68	-8.29	48.39	74	-25.61	Peak
*	3839	47.4	0.64	48.04	74	-25.96	Peak
*	3992	41.56	1.15	42.71	74	-31.29	Peak
*	4874	44.61	3.63	48.24	74	-25.76	Peak
-	11650	31.71	20.28	51.99	54	-2.01	Average
-	11650	37.02	20.28	57.3	74	-16.7	Peak

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. " * ": The peak result under 20 dB above and complies with AVG limit, AVG result is deemed to comply with AVG limit.
5. The other emission levels were very low against the limit.

Underwriters Laboratories Taiwan Co., Ltd.

Building B and Building E, No. 372-7, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County, Taiwan

Telephone :+886-2-7737-3000

Facsimile (FAX) :+886-3-583-7948

Doc No: 17-EM-F0876 / 5.0



9 kHz ~ 30 MHz Data

For 9 kHz to 30 MHz radiated emission have performed all modes of operation were investigated. The amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required to be report.

No non-compliance noted:

KDB 414788 D01 OATS and Chamber Correlation Justification

- Base on FCC 15.31 (f) (2): measurements may be performed at a distance closer than that specified in the regulations; however, an attempt should be made to avoid making measurements in the near field.

- OATs and chamber correlation testing had been performed and chamber measured test results is the worst case test result.

Although these tests were performed other than open area test site, adequate comparison measurements were confirmed against 30m open area test site. Therefore sufficient tests were made to demonstrate that the alternative site produces results that correlate with the ones of tests made in an open field based on KDB 414788.

Underwriters Laboratories Taiwan Co., Ltd.

Building B and Building E, No. 372-7, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County, Taiwan

Telephone :+886-2-7737-3000

Facsimile (FAX) :+886-3-583-7948

Doc No: 17-EM-F0876 / 5.0



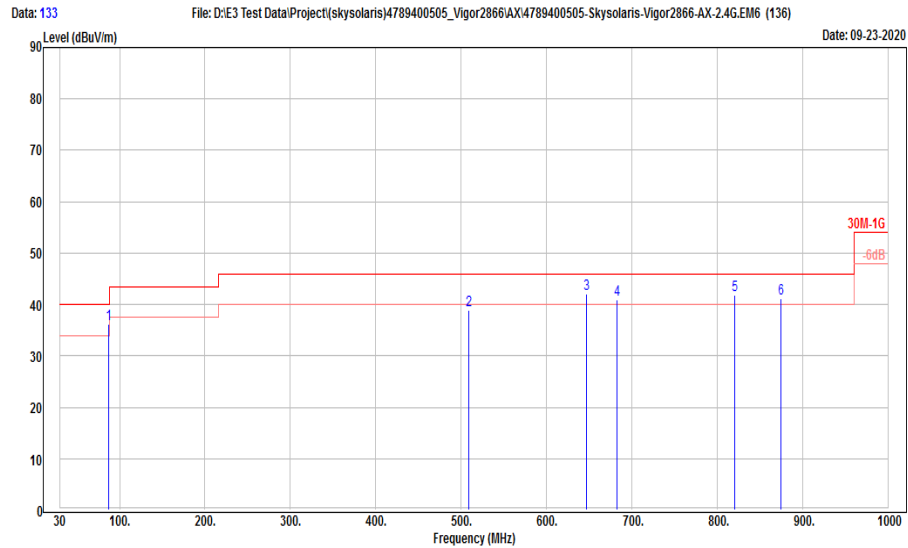
30 MHz ~ 1 GHz Data

Non-Beamforming Mode

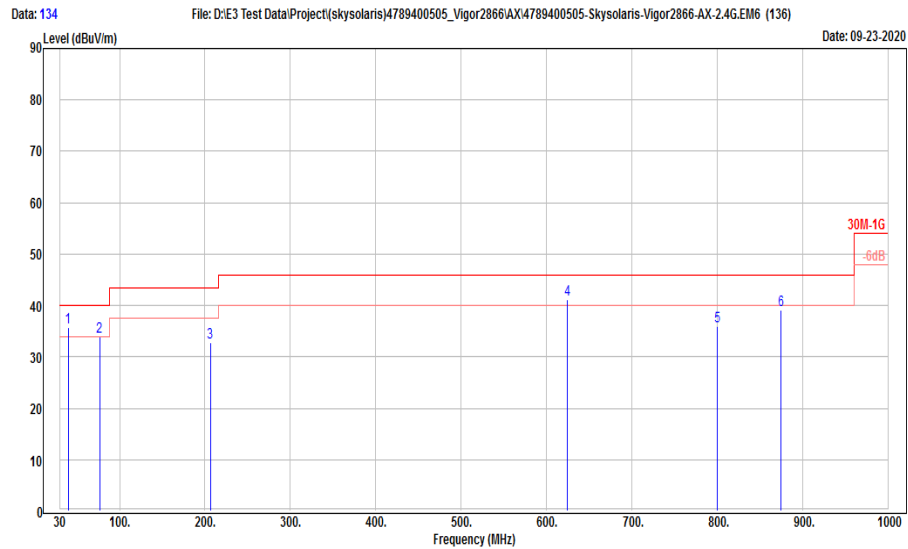
802.11b

EUT Test Condition		Measurement Detail	
Channel	Channel 11	Frequency Range	30 MHz ~ 1 GHz

Horizontal



Vertical



Underwriters Laboratories Taiwan Co., Ltd.

Building B and Building E, No. 372-7, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County, Taiwan

Telephone : +886-2-7737-3000

Facsimile (FAX) : +886-3-583-7948

Doc No: 17-EM-F0876 / 5.0



Test report No. : 4789400505B-US-R0-V0
Page : 109 of 167
Issued date : Mar. 31, 2021
FCC ID : VGY2865AX

Antenna Polarity & Test Distance: Horizontal at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
-	87.23	53.79	-17.59	36.2	40	-3.8	Peak
-	509.18	43.09	-4.26	38.83	46	-7.17	Peak
-	646.92	43.29	-1.27	42.02	46	-3.98	Peak
-	682.81	41.97	-0.97	41	46	-5	Peak
-	820.55	40.61	1.29	41.9	46	-4.1	Peak
-	874.87	38.61	2.5	41.11	46	-4.89	Peak
Antenna Polarity & Test Distance: Vertical at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
-	39.7	47.61	-11.91	35.7	40	-4.3	Peak
-	76.56	49.54	-15.51	34.03	40	-5.97	Peak
-	206.54	46.68	-13.85	32.83	43.5	-10.67	Peak
-	624.61	42.57	-1.33	41.24	46	-4.76	Peak
-	800.18	35.07	0.95	36.02	46	-9.98	Peak
-	874.87	36.73	2.5	39.23	46	-6.77	Peak

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. The peak result complies with QP limit, QP result is deemed to comply with QP limit.
5. The other emission levels were very low against the limit.

Underwriters Laboratories Taiwan Co., Ltd.

Building B and Building E, No. 372-7, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County, Taiwan

Telephone :+886-2-7737-3000

Facsimile (FAX) :+886-3-583-7948

Doc No: 17-EM-F0876 / 5.0

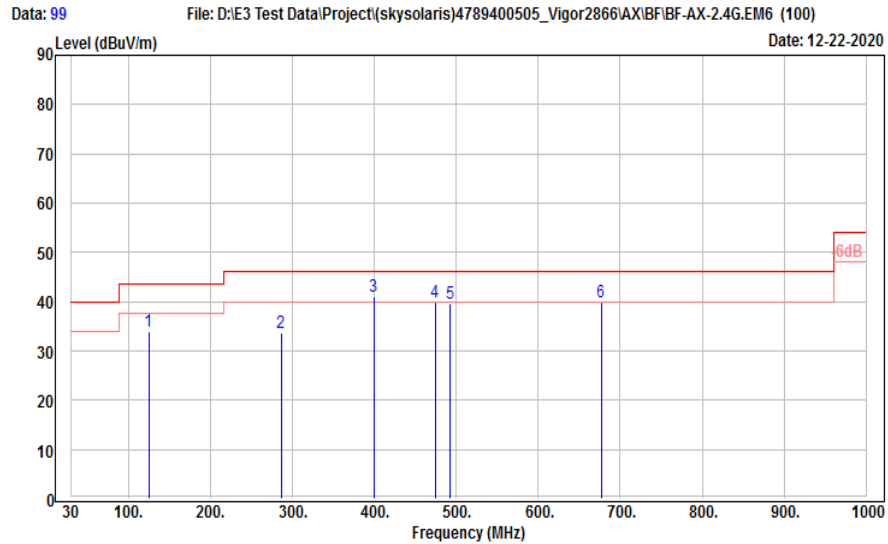


Beamforming mode

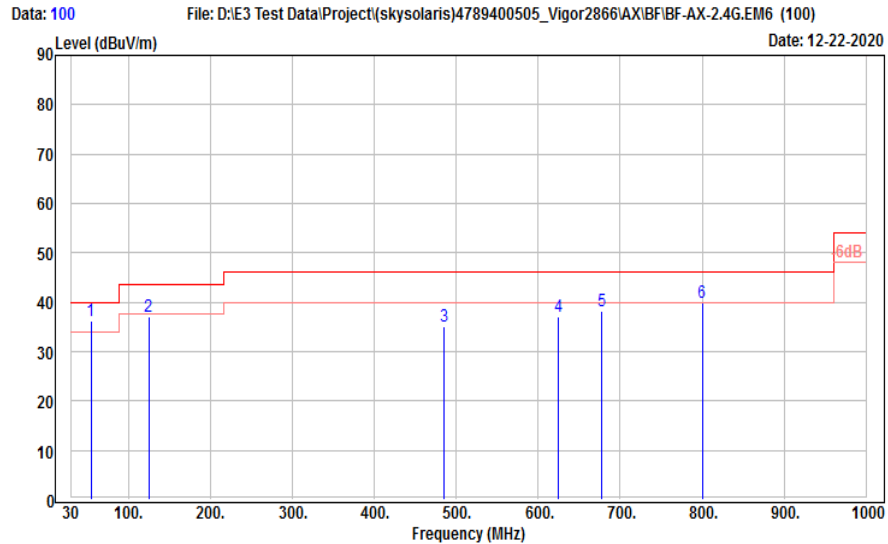
802.11ax (HE20)

EUT Test Condition		Measurement Detail	
Channel	Channel 6	Frequency Range	30 MHz ~ 1 GHz

Horizontal



Vertical



Underwriters Laboratories Taiwan Co., Ltd.

Building B and Building E, No. 372-7, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County, Taiwan

Telephone : +886-2-7737-3000

Facsimile (FAX) : +886-3-583-7948

Doc No: 17-EM-F0876 / 5.0



Test report No. : 4789400505B-US-R0-V0
Page : 111 of 167
Issued date : Mar. 31, 2021
FCC ID : VGY2865AX

Antenna Polarity & Test Distance: Horizontal at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
-	125.06	47.39	-13.51	33.88	43.5	-9.62	Peak
-	286.08	44.23	-10.41	33.82	46	-12.18	Peak
-	399.57	48.14	-7.16	40.98	46	-5.02	Peak
-	474.26	44.85	-4.95	39.9	46	-6.1	Peak
-	492.69	44.33	-4.61	39.72	46	-6.28	Peak
-	676.99	41.11	-1.11	40	46	-6	Peak
Antenna Polarity & Test Distance: Vertical at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
-	54.25	47.69	-11.5	36.19	40	-3.81	Peak
-	125.06	50.66	-13.51	37.15	43.5	-6.35	Peak
-	484.93	39.78	-4.77	35.01	46	-10.99	Peak
-	624.61	38.32	-1.33	36.99	46	-9.01	Peak
-	677.96	39.42	-1.07	38.35	46	-7.65	Peak
-	800.18	38.89	0.95	39.84	46	-6.16	Peak

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. The peak result complies with QP limit, QP result is deemed to comply with QP limit.
5. The other emission levels were very low against the limit.

Underwriters Laboratories Taiwan Co., Ltd.

Building B and Building E, No. 372-7, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County, Taiwan

Telephone :+886-2-7737-3000

Facsimile (FAX) :+886-3-583-7948

Doc No: 17-EM-F0876 / 5.0