REPORT NO: U-4791479704-FR5V3 FCC ID: A3LWCF933M IC: 649E-WCF933M

	i tootinotoa noquoi	ley ballae			
MHz	MHz	MHz	MHz	MHz	GHz
0.090 - 0.110	8.41425 - 8.41475	149.9 - 150.05	1435 - 1626.5	4500 - 5150	9.0 - 9.2
0.495 - 0.505	12.29 - 12.293	156.52475 -	1645.5 - 1646.5	5350 - 5460	9.3 - 9.5
2.1735 - 2.1905	12.51975 - 12.52025	156.52525	1660 - 1710	7250 - 7750	10.6 - 12.7
3.020 - 3.026	12.57675 - 12.57725	156.7 - 156.9	1718.8 - 1722.2	8025 – 8500	13.25 - 13.4
4.125 - 4.128	13.36 - 13.41	162.0125 - 167.17	2200 - 2300		14.47 - 14.5
4.17725 - 4.17775	16.42 - 16.423	167.72 - 173.2	2310 - 2390		15.35 - 16.2
4.20725 - 4.20775	16.69475 - 16.69525	240 – 285	2483.5 - 2500		17.7 - 21.4
5.677 - 5.683	16.80425 - 16.80475	322 - 335.4	2655 - 2900		22.01 - 23.12
6.215 - 6.218	25.5 - 25.67	399.9 - 410	3260 - 3267		23.6 - 24.0
6.26775 - 6.26825	37.5 - 38.25	608 - 614	3332 - 3339		31.2 - 31.8
6.31175 - 6.31225	73 - 74.6	960 - 1427	3345.8 - 3358		36.43 - 36.5
8.291 - 8.294	74.8 - 75.2		3500 - 4400		Above 38.6
8.362 - 8.366					
8.37625 - 8.38675					

RSS-Gen (8.10) : Restricted frequency bands

• Note 1: Certain frequency bands listed in table 7 and in bands above 38.6 GHz are designated for licence-exempt applications. These frequency bands and the requirements that apply to related devices are set out in the 200 and 300 series of RSSs.

FCC §15.407 (b)

(6) For transmitters operating within the 5.925-7.125 GHz band: Any emissions outside of the 5.925-7.125 GHz band must not exceed an e.i.r.p. of -27 dBm/MHz.

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

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

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

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

RSS-248 4.6.2 (a)

a. any emissions outside of the 5925-7125 MHz frequency band shall not exceed –27 dBm/MHz e.i.r.p. spectral density

<u>Note</u>

- Limit translation to field strength level (FCC §15.407)

E[dBuV/m] = EIRP[dBm] + 95.2 = -27dBm + 95.2 = 68.2dBuV/m

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TEST PROCEDURE

The EUT is placed on a non-conducting table 80 cm above the ground plane for below 1GHz and 100 cm for above 1GHz. EUT is set 3 meters away from the receiving antenna and scan from 1m to 4m to find out the highest emission.

The EUT is configured in accordance with ANSI C63.10. The EUT is set to transmit in a continuous mode.

For measurements below 1 GHz the resolution bandwidth is set to 100 kHz for peak detection measurements or 120 kHz for quasi-peak detection measurements. Peak detection is used unless otherwise noted as quasi-peak.

Reference to KDB 789033 D02 v02r01 UNII part G) 6) c) Method AD: For measurements above 1 GHz the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 3 MHz for peak measurements and add duty cycle factor to the reading offset for average measurements.

Pre-scans to detect harmonic and spurious emissions, the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 30 kHz for peak measurements.

Radiated harmonics spurious 1~18 GHz Low/Mid/High channels,18-40GHz were performed with the EUT set at the 2TX MIMO mode.

(From 30MHz to 1GHz, test was performed with the EUT set to transmit at the channel with highest output power)

The frequency range of interest is monitored at a fixed antenna height and EUT azimuth. The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are made with the antenna polarized in both the vertical and the horizontal positions.

Note : Emission was pre-scanned from 9kHz to 30MHz; No emissions were detected which was at least 20dB below the specification limit (consider distance correction factor). Per FCC part 15.31(o), test results were not reported.

Although these tests were performed other than open field test site, adequate comparison measurements were confirmed against 30 m open are test site.

Therefore sufficient tests were made to demonstrate that the alternative site produces results that correlate with the one of tests made in an open field based on KDB 414788.

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FORM ID: FCC_15E(05) TEL: (031) 389-9603 FAX: (031) 462-8355

12.1. TX ABOVE 1GHz 1Tx & 2Tx MODE IN U-NII-5 BAND

BANDEDGE (WORST CASE: 802.11ax HE80 / 5985 MHz)



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	CH1_AF_1- 18G_3117_240 924 (dB/m)	FB1_PL_1- 18G_10dB_2407 18 (dB)	CH1_CL_1- 40G_Thru_2411 04 (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.92499	42.07	Pk	34.9	-30.3	10.8	0	57.47	-	-	88	-30.53	324	103	Н
2	5.91385	44.3	Pk	34.9	-30.3	10.8	0	59.7		-	88	-28.3	324	103	Н
3	5.92499	30.04	RMS	34.9	-30.3	10.8	1.65	47.09	68	-20.91	-	-	324	103	Н
4	5.92091	31.87	RMS	34.9	-30.3	10.8	1.65	48.92	68	-19.08	-	-	324	103	Н

Pk - Peak detector RMS - RMS detection

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FORM ID: FCC_15E(05) veonggi-do, Republic of Korea TEL: (031) 389-9603 FAX: (031) 462-8355 UL KOREA LTD. Confidential

BANDEDGE TEST DATA

Mada	Freq.	Antonno	Frequency	Reading	Detector	ANT Factor	FB Gain	Loss	DC Corr	Result	AV Limit	AV Margin	PK Limit	PK Margin	Azimuth	Height	Delarity
wode	[MHz]	Antenna	[GHz]	[dBuV]	Mode	[dB/m]	[dB]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	[dBuV/m]	[dB]	[Degs]	[cm]	Folanty
		· · · · · · · · · · · · · · · · · · ·	5.92499	38.71	Pk	34.90	-30.30	10.80	0.00	54.11	-	-	88.00	-33.89	323	101	Н
			5.91853	42.07	Pk	34.90	-30.30	10.80	0.00	57.47	-	-	88.00	-30.53	323	101	Н
			5.92499	29.04	RMS	34.90	-30.30	10.80	0.66	45.10	68.00	-22.90	-	-	323	101	Н
	5055	ANITO	5.86184	29.74	RMS	34.80	-30.30	11.40	0.66	46.30	68.00	-21.70	-	-	323	101	Н
	5955	ANTO	5.92499	37.14	Pk	34.90	-30.30	10.80	0.00	52.54	-	-	88.00	-35.46	175	369	V
			5.85502	40.43	Pk	34.80	-30.30	11.50	0.00	56.43	-	-	88.00	-31.57	175	369	V
			5.92499	27.43	RMS	34.90	-30.30	10.80	0.66	43.49	68.00	-24.51	-	-	175	369	V
			5.84750	28.58	RMS	34.80	-30.30	11.60	0.66	45.34	68.00	-22.66	-	-	175	369	V
802.11a			5.92499	40.28	Pk	34.90	-30.30	10.80	0.00	55.68	-	-	88.00	-32.32	283	101	Н
			5.89823	42.61	Pk	34,90	-30.30	10.80	0.00	58.01	-	-	88.00	-29.99	283	101	Н
			5,92499	29.34	RMS	34.90	-30.30	10.80	0.66	45.40	68.00	-22.60	-	-	283	101	H
			5.92475	30.48	RMS	34.90	-30.30	10.80	0.66	46.54	68.00	-21.46	-	-	283	101	Н
	5955	ANT1	5 92499	39.50	Pk	34.90	-30.30	10.80	0.00	54 90	-	-	88.00	-33 10	2	350	V
			5 85574	40.33	Pk	34.80	-30.30	11.50	0.00	56.33	-	-	88.00	-31.67	2	350	v
			5 92499	27.30	RMS	34.90	-30.30	10.80	0.66	43.36	68.00	-24 64	-	-	2	350	v
			5.84768	28.93	RMS	34.80	-30.30	11.60	0.66	45.69	68.00	-22.31			2	350	V
			5.92/99	38.70	Dk	34.90	-30.30	10.80	0.00	54.10	00.00	22.01	88.00	-33.90	229	102	H
			5.85468	40.70	Dk	34.80	-30.30	11.50	0.00	56.70			88.00	-31.30	220	102	H
			5 92499	28.26	PMS	34.00	-30.30	10.80	1 35	45.01	68.00	-22.99	00.00	-01.00	220	102	H
802 11ov			5.96606	20.20	DMS	34.90	30.30	11 30	1.35	45.01	68.00	21.00			220	102	
(HE20)	5955	MIMO	5.00000	29.00	DL	34.00	30.30	10.90	0.00	40.73 53.44	00.00	-21.21	88.00	34.56	223	302	V
(11220)			5.02001	41.40		24.00	-30.30	10.00	0.00	50.44			00.00	21.11		202	V
			5.92091	27.39	DMS	34.90	-30.30	10.00	1.35	30.03	68.00	23.97	00.00	-31.11	3	392	V
			5.95100	20.00	DMC	24.90	20.20	11.00	1.35	44.13	69.00	21.62				202	V
<u> </u>			5.05102	29.02	RIVIO	34.00	-30.30	10.00	1.35	40.37	00.00	-21.03	-	22.00	225	392	V
			5.92499	40.00	PK	34.90	-30.30	10.00	0.00	50.40	-	-	00.00	-32.60	325	106	
			5.92203	42.93	PK	34.90	-30.30	10.00	0.00	20.33		-	00.00	-29.67	325	100	
000 44			5.92499	30.47	RIVIS	34.90	-30.30	10.00	1.45	47.52	00.00	-20.00	-	-	325	106	
802.11ax	5965	MIMO	5.91551	31.11	RMS	34.90	-30.30	10.80	1.45	47.96	68.00	-20.04	-	-	325	106	H
(HE40)			5.92499	39.26	PK	34.90	-30.30	10.80	0.00	54.66	-	-	88.00	-33.34	23	319	V
			5.92257	41.26	PK	34.90	-30.30	10.80	0.00	56.66	-	-	88.00	-31.34	23	319	V
			5.92499	28.15	RMS	34.90	-30.30	10.80	1.45	45.00	68.00	-23.00	-	-	23	319	V
<u> </u>			5.92399	29.99	RMS	34.90	-30.30	10.80	1.45	46.84	68.00	-21.16	-	-	23	319	V
			5.92499	42.07	Pk	34.90	-30.30	10.80	0.00	57.47	-	-	88.00	-30.53	324	103	Н
			5.91385	44.30	Pk	34.90	-30.30	10.80	0.00	59.70	-	-	88.00	-28.30	324	103	H
			5.92499	30.04	RMS	34.90	-30.30	10.80	1.65	47.09	68.00	-20.91	-	-	324	103	н
802.11ax	5985	MIMO	5.92091	31.87	RMS	34.90	-30.30	10.80	1.65	48.92	68.00	-19.08	-	-	324	103	H
(HE80)			5.92499	39.22	Pk	34.90	-30.30	10.80	0.00	54.62	-	-	88.00	-33.38	26	317	V
			5.85852	41.32	Pk	34.80	-30.30	11.40	0.00	57.22	-	-	88.00	-30.78	26	317	V
			5.92499	28.48	RMS	34.90	-30.30	10.80	1.65	45.53	68.00	-22.47	-	-	26	317	V
			5.85262	29.29	RMS	34.80	-30.30	11.50	1.65	46.94	68.00	-21.06	-	-	26	317	V
			5.92499	39.18	Pk	35.00	-32.90	10.60	0.00	51.88	-	-	88.00	-36.12	314	102	Н
802.11ax			5.91495	41.49	Pk	35.00	-32.90	10.60	0.00	54.19	-	-	88.00	-33.81	314	102	Н
HE20			5.92499	27.67	RMS	35.00	-32.90	10.60	1.00	41.37	68.00	-26.63	-	-	314	102	Н
RU mode	5955	MIMO	5.87606	29.90	RMS	34.90	-32.90	10.60	1.00	43.50	68.00	-24.50	-	-	314	102	Н
26 Tone			5.92499	38.81	Pk	35.00	-32.90	10.60	0.00	51.51	-	-	88.00	-36.49	124	292	V
offset 0			5.88819	41.52	Pk	35.00	-32.90	10.60	0.00	54.22	-	-	88.00	-33.78	124	292	V
Spot-check			5.92499	28.80	RMS	35.00	-32.90	10.60	1.00	42.50	68.00	-25.50	-	-	124	292	V
			5.85928	29.84	RMS	34.80	-32.90	10.60	1.00	43.34	68.00	-24.66	-	-	124	292	V

Note1. Pk - Peak detector, RMS - RMS detector Note2. * - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

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42, Obongsandan 1-ro, Uiwang-si, Gyeonggi-do, Republic of Korea

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HARMONICS AND SPURIOUS EMISSIONS(WORST CASE: 802.11a / 6415 MHz / ANT1)



HORIZONTAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	CH1_AF_1- 18G_3117_2 40924 (dB/m)	FB1_PL_1- 18G_8G HP_241003 (dB)	CH1_CL_1- 40G_Thru_24 1104 (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non- Restricted (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
9.62352	37.01	PK-U	36.5	-38.1	14.7	0	50.11	-	-	-	-	68.2	-18.09	0	100	н
9.61919	36.88	PK-U	36.5	-38.1	14.6	0	49.88	-	-	-	-	68.2	-18.32	0	100	V
12.83299	35.8	PK-U	38.9	-36.8	15.7	0	53.6	-	-	-	-	68.2	-14.6	44	107	н
12.82968	42.31	PK-U	38.9	-36.8	15.8	0	60.21	-	-	-	-	68.2	-7.99	143	102	V
* 16.03964	34.89	PK-U	40.5	-37.8	17.2	0	54.79	-	-	74	-19.21	-	-	0	100	Н
* 16.03466	34.65	PK-U	40.5	-37.8	17.3	0	54.65	-	-	74	-19.35	-	-	0	100	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band PK-U - U-NII: Maximum Peak ADR - U-NII AD primary method, RMS average

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UL Korea, Ltd. Uiwang Laboratory

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FORM ID: FCC_15E(05) TEL: (031) 389-9603 FAX: (031) 462-8355

Mode	Freq.	Antenna	Frequency	Reading	Detector	ANT Factor	FB Gain	Loss	DC Corr	Result	AV Limit	AV Margin	PK Limit	PK Margin	Non-Restricted	Margin	Azimuth	Height	Polarity
<u> </u>	[MHZ]		8 02975	29.49	PKII	25.90	28.40	13.20		49.28	[abuv/m]	[db]	[dbuv/m]	[ab]		18.02	[Degs]	[Cm]	
			8 94242	38.84	PK-U	35.90	-38.40	13.20	0.00	49.20					68.20	-18.66	0	100	v
			* 11.90149	34.89	PK-U	38.40	-36.80	14.90	0.00	51.39	-	-	74.00	-22.61	-	-10.00	360	228	н
	5055	ANITO	* 11.91232	23.72	ADR	38.40	-36.80	15.00	0.66	40.98	54.00	-13.02	-		-	-	360	228	н
	5855	ANTO	* 11.90247	35.06	PK-U	38.40	-36.80	14.90	0.00	51.56	-	-	74.00	-22.44	-	•	234	101	V
			* 11.91003	24.05	ADR	38.40	-36.80	15.00	0.66	41.31	54.00	-12.69			-		234	101	V
			14.88679	35.22	PK-U	39.50	-37.60	17.50	0.00	54.62	· ·	•	<u> </u>	· .	68.20	-13.58	0	100	H
	L		14.88539	35.11	PK-U	39.50	-37.60	17.50	0.00	54.51					68.20	-13.69	0	100	V
			9.26525	37.05	PK-U	36.20	-38.30	14.00	0.00	49.55					68.20	-18.58	0	100	v
			* 12.3495	34.98	PK-U	38.70	-36.80	16.10	0.00	52.98	-	-	74.00	-21.02	-	-	163	108	H
	6175	ANITO	* 12.34994	23.56	ADR	38.70	-36.80	16.10	0.66	42.22	54.00	-11.78	-	-	-	-	163	108	н
	01/5	ANTO	* 12.34936	35.12	PK-U	38.70	-36.80	16.10	0.00	53.12	-	-	74.00	-20.88	-	•	234	105	V
			* 12.34973	23.79	ADR	38.70	-36.80	16.10	0.66	42.45	54.00	-11.55	-	•		-	234	105	V
			* 15.44618	35.17	PK-U	39.70	-37.70	17.30	0.00	54.47	· ·	· · · · · ·	74.00	-19.53	-	· · · · ·	0	100	H
	<u> </u>		* 15.441	35.52	PK-U	39.70	-37.70	17.30	0.00	54.82			/4.00	-19.18	-	17.02	0	100	V
			9.61861	37.34	PK-U	36.50	-38.10	14.60	0.00	50.20					68.20	-17.86	0	100	v
			12.82996	35.49	PK-U	38.90	-36.80	15.80	0.00	53.39		-	-		68.20	-14.81	40	110	н
	6415	ANTO	12.82995	34.70	PK-U	38.90	-36.80	15.80	0.00	52.60	-	-	-		68.20	-15.60	145	103	V
			* 16.04246	34.81	PK-U	40.50	-37.80	17.20	0.00	54.71	-	-	74.00	-19.29	-	-	0	100	н
802.11a			* 16.04373	34.59	PK-U	40.50	-37.80	17.20	0.00	54.49			74.00	-19.51	-		0	100	V
			8.94007	38.74	PK-U	35.90	-38.40	13.20	0.00	49.44		•			68.20	-18.76	0	100	H
			8.92614	38.51	PK-U	35.90	-38.40	13.30	0.00	49.31	•	-		-	68.20	-18.89	0	100	V
			* 11.90683	24.23	ADR	38.40	-30.80	14.90	0.00	51.79	54.00	.12.51	74.00	-22.21			163	100	н
	5955	ANT1	* 11.90911	35.51	PK-U	38.40	-36.80	15.00	0.00	52.11		-12.51	74.00	-21.89			353	229	V
			* 11.91001	24.39	ADR	38.40	-36.80	15.00	0.66	41.65	54.00	-12.35			-	-	353	229	v
			14.88318	35.44	PK-U	39.50	-37.60	17.50	0.00	54.84	-	-	-		68.20	-13.36	0	100	н
			14.88235	35.16	PK-U	39.50	-37.60	17.50	0.00	54.56	-	-			68.20	-13.64	0	100	V
			9.26017	37.93	PK-U	36.20	-38.30	14.00	0.00	49.83	-	-	-	· .	68.20	-18.37	0	100	H
			9.26077	37.39	PK-U	36.20	-38.30	14.00	0.00	49.29	· · ·	-	-		68.20	-18.91	0	100	V
			* 12.34928	34.69	PK-U	38.70	-36.80	16.10	0.00	52.69	-	- 11.06	74.00	-21.31			161	101	H
	6175	ANT1	* 12 35592	34 22	PK-U	38.70	-36.80	16.00	0.00	52.12	54.00	-11.90	74.00	-21.88	· · · ·		233	113	N N
			* 12.34984	23.04	ADR	38,70	-36.80	16.10	0.66	41.70	54.00	-12.30	-		-	-	233	113	v
			* 15.44505	35.02	PK-U	39.70	-37.70	17.30	0.00	54.32	-		74.00	-19.68	-		0	100	н
			* 15.43609	35.49	PK-U	39.70	-37.70	17.30	0.00	54.79			74.00	-19.21	-		0	100	V
			9.62352	37.01	PK-U	36.50	-38.10	14.70	0.00	50.11	· ·	-			68.20	-18.09	0	100	н
			9.61919	36.88	PK-U	36.50	-38.10	14.60	0.00	49.88				·	68.20	-18.32	0	100	V
	6415	ANT1	12.83299	35.80	PK-U	38.90	-36.80	15.70	0.00	53.60	· · · ·			·····	68.20	-14.60	44	107	H
			* 16 03964	34.89	PK-U	40.50	-37.80	17.20	0.00	54.79			74.00	-19.21	00.20	-1.33	0	102	H
			* 16.03466	34.65	PK-U	40.50	-37.80	17.30	0.00	54.65			74.00	-19.35	-		0	100	v
<u> </u>	í		8.92372	38.67	PK-U	35.90	-38.50	13.30	0.00	49.37		-		-	68.20	-18.83	0	100	H
			8.93771	38.66	PK-U	35.90	-38.40	13.20	0.00	49.36	-	-	-	-	68.20	-18.84	0	100	V
			* 11.9144	35.90	PK-U	38.40	-36.80	15.00	0.00	52.50	•		74.00	-21.50	-	•	162	102	H
	5955	MIMO	* 11.90961	24.03	ADR	38.40	-36.80	15.00	1.35	41.98	54.00	-12.02				-	162	102	н
			* 11.90965	36.35	PK-U	38.40	-36.80	15.00	0.00	52.95	-	-	74.00	-21.05		· · · · ·	332	114	V
			14 88390	35.64	PK-II	39.50	-30.00	17.50	1.35	42.23	54.00	-11.77			68.20	-13.16	0	100	H
			14.88550	35.08	PK-U	39.50	-37.60	17.50	0.00	54.48	-		-		68.20	-13.72	0	100	V
			9.25882	37.59	PK-U	36.20	-38.30	14.00	0.00	49.49	•	-	-		68.20	-18.71	0	100	Н
802 110			9.26724	37.63	PK-U	36.20	-38.30	14.00	0.00	49.53					68.20	-18.67	0	100	V
(HE20)			* 12.3501	22.89	ADR	38.70	-36.80	16.10	0.00	42.24	54.00	-11.76	74.00	-21.20		· · · ·	68	234	H
	6175	MIMO	* 12.3522	35.04	PK-U	38.70	-36.80	16.10	0.00	53.04			74.00	-20.96	-		144	102	v
			* 12.3498	23.88	ADR	38.70	-36.80	16.10	1.35	43.23	54.00	-10.77	-	-	-	-	144	102	V
			* 15.43889	35.86	PK-U	39.70	-37.70	17.30	0.00	55.16	-	-	74.00	-18.84	-	-	0	100	н
	L		* 15.4441	35.03	PK-U	39.70	-37.70	17.30	0.00	54.33			74.00	-19.67			0	100	V
			9.61646	37.30	PK-U	36.50	-38.10	14.60	0.00	50.30	-	-			68.20	-17.90	0	100	H
			12.82999	35.42	PK-U	38.90	-36.80	15.80	0.00	53.32		:			68.20	-17.00	42	100	H
	6415	MIMO	12.82967	39.25	PK-U	38.90	-36.80	15.80	0.00	57.15				-	68.20	-11.05	146	101	V
			* 16.04551	35.25	PK-U	40.50	-37.80	17.20	0.00	55.15	-	-	74.00	-18.85	-	-	0	100	н
			* 16.04539	34.96	PK-U	40.50	-37.80	17.20	0.00	54.86			74.00	-19.14			0	100	V
			9.271	38.26	PK-U	36.20	-38.30	14.00	0.00	50.16	· ·	•			68.20	-18.04	0	100	H
802.11ax			9.262	37.55	PK-U	36.20	-38.30	14.00	0.00	49.45	-	-	-	-	68.20	-18.75	184	100	V
RU mode			* 12.35066	24.03	ADR	38.70	-36.80	16.10	1.00	43.03	54.00	-10.97	74.00	-21.09			164	103	H
26 Tone	6175	MIMO	* 12.34953	34.83	PK-U	38.70	-36.80	16.10	0.00	52.83	-	-10.07	74.00	-21.17			146	104	V
offset 0			* 12.34985	23.71	ADR	38.70	-36.80	16.10	1.00	42.71	54.00	-11.29	-		-	-	146	104	V
Spot-check			* 15.44504	35.90	PK-U	39.70	-37.70	17.30	0.00	55.20		-	74.00	-18.80	-	-	0	100	н
		-	* 15.4376	35.56	PK-U	39.70	-37.70	17.30	0.00	54.86			74.00	-19.14	-		0	100	V

HARMONICS AND SPURIOUS EMISSIONS TEST DATA

Note1. PK-U - U-NII: Maximum Peak, ADR - U-NII AD primary method, RMS average Note2. * - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

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12.2. TX ABOVE 1GHz 1Tx & 2Tx MODE IN U-NII-6 BAND

HARMONICS AND SPURIOUS EMISSIONS(WORST CASE: 802.11a / 6435 MHz / ANT1)



VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	CH1_AF_1- 18G_3117_2 40924 (dB/m)	FB1_PL_1- 18G_8G HP_241003 (dB)	CH1_CL_1- 40G_Thru_24 1104 (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non- Restricted (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
9.6619	37.95	PK-U	36.6	-38	15.2	0	51.75	-		-	-	68.2	-16.45	0	100	н
9.65933	37.68	PK-U	36.6	-38	15.2	0	51.48	-	-	-	-	68.2	-16.72	0	100	V
12.87021	37.15	PK-U	38.9	-36.9	15.6	0	54.75	-	-	-	-	68.2	-13.45	30	111	н
12.87004	43.37	PK-U	38.9	-36.9	15.6	0	60.97	-	-	-	-	68.2	-7.23	144	102	V
* 16.08665	34.7	PK-U	40.6	-37.8	17.4	0	54.9	-	-	74	-19.1	-		0	100	н
* 16.09288	35.36	PK-U	40.6	-37.8	17.5	0	55.66	-	-	74	-18.34	-	-	0	100	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

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UL Korea, Ltd. Uiwang Laboratory

42, Obongsandan 1-ro, Uiwang-si, Gyeonggi-do, Republic of Korea UL KOREA LTD. Confidential FORM ID: FCC_15E(05) TEL: (031) 389-9603 FAX: (031) 462-8355

REPORT NO: U-4791479704-FR5V3 FCC ID: A3LWCF933M IC: 649E-WCF933M

Note Note <t< th=""><th></th><th></th><th>1</th><th></th><th></th><th>Detector</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th>I man a second</th><th>-</th><th></th><th></th><th></th><th></th><th>1</th></t<>			1			Detector								I man a second	-					1
Image Image <th< th=""><th>Mode</th><th>Freq.</th><th>Antenna</th><th>Frequency</th><th>Reading</th><th>Detector</th><th>ANT Factor</th><th>FB Gain</th><th>Loss</th><th>DC Corr</th><th>Result</th><th>AV Limit</th><th>AV Margin</th><th>PK Limit</th><th>PK Margin</th><th>Non-Restricted</th><th>Margin</th><th>Azimuth</th><th>Height</th><th>Polarity</th></th<>	Mode	Freq.	Antenna	Frequency	Reading	Detector	ANT Factor	FB Gain	Loss	DC Corr	Result	AV Limit	AV Margin	PK Limit	PK Margin	Non-Restricted	Margin	Azimuth	Height	Polarity
Part Part <th< td=""><td></td><td>[MHz]</td><td></td><td>[GHz]</td><td>[dBuV]</td><td>Mode</td><td>[dB/m]</td><td>[dB]</td><td>[dB]</td><td>[dB]</td><td>[dBuV/m</td><td>[dBuV/m]</td><td>[dB]</td><td>[dBuV/m]</td><td>[dB]</td><td>[dBuV/m]</td><td>[dB]</td><td>[Degs]</td><td>[cm]</td><td>-</td></th<>		[MHz]		[GHz]	[dBuV]	Mode	[dB/m]	[dB]	[dB]	[dB]	[dBuV/m	[dBuV/m]	[dB]	[dBuV/m]	[dB]	[dBuV/m]	[dB]	[Degs]	[cm]	-
Res Ant Res Res <td></td> <td></td> <td></td> <td>9.65687</td> <td>38.03</td> <td>PK-U</td> <td>36.60</td> <td>-38.00</td> <td>15.20</td> <td>0.00</td> <td>51.83</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>68.20</td> <td>-16.37</td> <td>0</td> <td>100</td> <td>н</td>				9.65687	38.03	PK-U	36.60	-38.00	15.20	0.00	51.83	-	-	-	-	68.20	-16.37	0	100	н
		1		9.65239	37.70	PK-U	36.60	-38.00	15.20	0.00	51.50	-	-	-	-	68.20	-16.70	0	100	V
No. No. <td></td> <td>0.005</td> <td>44170</td> <td>12.87003</td> <td>35.35</td> <td>PK-U</td> <td>38.90</td> <td>-38.90</td> <td>15.60</td> <td>0.00</td> <td>52.95</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>68.20</td> <td>-15.25</td> <td>42</td> <td>103</td> <td>H</td>		0.005	44170	12.87003	35.35	PK-U	38.90	-38.90	15.60	0.00	52.95	-	-	-	-	68.20	-15.25	42	103	H
No. No. 10.00 + 10.00		0430	ANTO	12.87244	37.60	PK-U	38.90	-36.90	15.60	0.00	55.20	-	-	-	-	68.20	-13.00	33	105	V
No. 100 (100 (200)) 100 (200) <t< td=""><td></td><td></td><td></td><td>* 16.08744</td><td>34.58</td><td>PK-U</td><td>40.60</td><td>-37.80</td><td>17.40</td><td>0.00</td><td>54.78</td><td>-</td><td>-</td><td>74.00</td><td>-19.22</td><td>-</td><td>-</td><td>0</td><td>100</td><td>H</td></t<>				* 16.08744	34.58	PK-U	40.60	-37.80	17.40	0.00	54.78	-	-	74.00	-19.22	-	-	0	100	H
No. Price P				* 18 09239	24.22	PK-II	40.60	.37.90	17.40	0.00	54.52			74.00	-10.47			0	100	v
Rev Arrow Sine Sine <th< td=""><td></td><td></td><td></td><td>0.70050</td><td>07.50</td><td>DK U</td><td>40.00</td><td>07.00</td><td>14.00</td><td>0.00</td><td>54.00</td><td></td><td>-</td><td>74.00</td><td>-10.47</td><td>80.00</td><td>17.01</td><td>0</td><td>100</td><td><u> </u></td></th<>				0.70050	07.50	DK U	40.00	07.00	14.00	0.00	54.00		-	74.00	-10.47	80.00	17.01	0	100	<u> </u>
6473 Arro 1 </td <td></td> <td>1</td> <td></td> <td>9.72008</td> <td>37.08</td> <td>PK-U</td> <td>30.00</td> <td>-37.90</td> <td>14.80</td> <td>0.00</td> <td>51.18</td> <td>·</td> <td></td> <td></td> <td>·</td> <td>00.20</td> <td>-17.01</td> <td></td> <td>100</td> <td></td>		1		9.72008	37.08	PK-U	30.00	-37.90	14.80	0.00	51.18	·			·	00.20	-17.01		100	
6479 Arr 12 Perso 38.0 Price 100 Price - - - - <td></td> <td>1</td> <td></td> <td>8./1042</td> <td>31.13</td> <td>PK-U</td> <td>30.00</td> <td>-38.00</td> <td>10.00</td> <td>0.00</td> <td>01.33</td> <td></td> <td></td> <td></td> <td></td> <td>08.20</td> <td>-10.87</td> <td>0</td> <td>100</td> <td>×</td>		1		8./1042	31.13	PK-U	30.00	-38.00	10.00	0.00	01.33					08.20	-10.87	0	100	×
822.11s 10 </td <td></td> <td>6475</td> <td>ANTO</td> <td>12.94982</td> <td>36.91</td> <td>PK-U</td> <td>38.80</td> <td>-36.90</td> <td>16.40</td> <td>0.00</td> <td>55.21</td> <td>-</td> <td></td> <td>-</td> <td>-</td> <td>68.20</td> <td>-12.99</td> <td>162</td> <td>105</td> <td>H</td>		6475	ANTO	12.94982	36.91	PK-U	38.80	-36.90	16.40	0.00	55.21	-		-	-	68.20	-12.99	162	105	H
No. 1				12.94903	38.19	PK-U	38.80	-36.90	16.40	0.00	56.49	-		-		68.20	-11.71	47	102	V
No. 1		1		* 16.18909	35.87	PK-U	40.70	-37.90	17.80	0.00	56.47	-	-	74.00	-17.53	-	-	0	100	н
Part of the state				* 16.19324	35.21	PK-U	40.70	-37.90	17.90	0.00	55.91			74.00	-18.09		-	0	100	V
Both 9.700 92.30 PPUJ 98.90 77.70 94.90 90.90 96.91 1 1 1 1 1 1 99.20 17.77 0 1000 V 13.0004 3.837 PPUJ 38.70 38.60 10.00 0.00 58.67 68.20 11.27 0 1000 V 13.02045 3.837 PPUJ 38.70 38.00 17.80 0.00 58.44 68.20 14.20 0.00 V 13.02045 3.850 PPUJ 38.60 38.00 18.20 0.00 51.44 68.20 14.61 0.0 V V 1 <td></td> <td></td> <td></td> <td>9.78785</td> <td>37.68</td> <td>PK-U</td> <td>36.70</td> <td>-37.80</td> <td>14.40</td> <td>0.00</td> <td>50.98</td> <td></td> <td></td> <td></td> <td></td> <td>68.20</td> <td>-17.22</td> <td>0</td> <td>100</td> <td>н</td>				9.78785	37.68	PK-U	36.70	-37.80	14.40	0.00	50.98					68.20	-17.22	0	100	н
6515 ATT 13.0284 39.87 99.00 98.70 99.00 100 0.00 54.37 1 1 0 98.20 13.53 103 113 H 802.118 # 10.29841 32.001 37.20 178.0 100 0.00 55.3 - - - 68.20 117.0 0 100 H 10.29845 32.00 Pr.U 40.70 77.00 178.0 0.00 64.81 - - 68.20 117.0 0 100 H 10.29855 32.01 Pr.U 38.00 38.00 15.00 0.00 64.71 - - 68.20 17.2 0 100 V V 0 100 V 0 100 V 100 V 100 V 0 100 V 100 V 100 V 100 100 V 110 100 100 V 100 100 100		1		9,77962	37.33	PK-U	36.80	-37.70	14.40	0.00	50.83	-	-	-	-	68.20	-17.37	0	100	V
6515 Arro 13.0241 27.71 PH/J 38.70 39.80 10.0 0.0 0.5 1 <th1< th=""> <th1< th=""> 1 <</th1<></th1<>				13.02988	36.87	PK-U	38.70	-36.90	18.00	0.00	54 67					68.20	-13.53	163	118	H
Bits Integrat Sold Privi 4.970 4.720 1.720 1.72 1.7		6515	ANTO	13 02041	37.73	PK-U	38.70	-38.90	18.00	0.00	55.52					68.20	.12.87	35	104	V
B02 113 B02 113 C <				18 20877	25.00	DK U	40.70	-30.00	17.00	0.00	50.00					49.20	44.70	0	100	
B02.11a 1 </td <td></td> <td>1</td> <td></td> <td>10.20077</td> <td>30.80</td> <td>PK-U</td> <td>40.70</td> <td>-37.80</td> <td>17.00</td> <td>0.00</td> <td>50.00</td> <td></td> <td></td> <td></td> <td></td> <td>00.20</td> <td>-11.70</td> <td></td> <td>100</td> <td></td>		1		10.20077	30.80	PK-U	40.70	-37.80	17.00	0.00	50.00					00.20	-11.70		100	
B02.11a 417 - - - -<		<u> </u>		10.28000	30.88	PK-U	40.70	-37.80	17.80	0.00	00.48					08.20	-11.72	0	100	-
9436 Av11 1/22/021 37.66 Pic-U 38.60 -1.62.0 0.00 64.72 - - - - - - - - - - - - - - - 68.30 -1.02.4 0.02 1.02 V 1.0 1.0 1.0 1.0 0.0 0.00 1.0 0.00 1.0 0.00 0.00 1.0 0.00 1.0 0.00 1.0 0.00 1.0 0.00 1.0 0.00 1.0 0.00 1.0 0.00 1.0 0.00 1.0 0.00 1.0 0.00 1.0 0.00 1.0 1.0 0.00 1.0 1.0 0.00 1.0 1.0 1.0 1.00 1.0	802.11a	1		9.66190	37.95	PK-U	36.60	-38.00	15.20	0.00	51.75		•			68.20	-16.45	0	100	H
P418 ANT 12.87021 37.3 PH-W 38.40 -38.60 16.80 0.00 64.75 - - - 68.20 -13.48 300 111 H 12.87024 34.37 PH-W 38.20 -37.80 11.0 40 0.00 64.70 - - - 68.20 -1.8.4 0.00 11.0 H 13.0010 39.24 PH-W 48.00 -37.60 11.0 0.00 55.24 - - 74.20 -1.8.94 0.0 0.00 H 13.0011 42.53 PH-W 38.80 -38.00 11.0 0.00 55.81 - - - - 68.20 -18.94 0.00 H 12.54 PH-W 38.80 -38.00 11.0 0.00 55.17 - - - 0 10.0 H 11.5 H 12.54 PH-W 38.00 -38.00 10.0 H 11.5 H 10.0 W		1		9.65933	37.68	PK-U	36.60	-38.00	15.20	0.00	51.48	-			-	68.20	-16.72	0	100	V
No. No. 12.8704 42.37 Ph-U 38.00 -38.00 19.00 00.07 - - - 0.00 00.07 - - - 0.00 0.00 7.20 11.00 - - 0.00 0.00 V 10.0028 32.83 Ph-U 40.80 -37.60 17.00 10.00 10.00 V - - 0.00 0.00 V 0.00 10.24 - - 0.00 10.00 V 0.00 10.24 - - - 0.00 10.00 V 0.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00 V<		8425	ANT1	12.87021	37.15	PK-U	38.90	-38.90	15.60	0.00	54.75	-	-	-	-	68.20	-13.45	30	111	н
Image: book book book book book book book boo		0450	ANTI	12.87004	43.37	PK-U	38.90	-36.90	15.60	0.00	60.97	-	-	-	-	68.20	-7.23	144	102	V
No. No. <td></td> <td>1</td> <td></td> <td>* 16.08665</td> <td>34.70</td> <td>PK-U</td> <td>40.60</td> <td>-37.80</td> <td>17.40</td> <td>0.00</td> <td>54.90</td> <td>-</td> <td>-</td> <td>74.00</td> <td>-19.10</td> <td></td> <td></td> <td>0</td> <td>100</td> <td>H</td>		1		* 16.08665	34.70	PK-U	40.60	-37.80	17.40	0.00	54.90	-	-	74.00	-19.10			0	100	H
Best function Provide 97.0511 97.04 Provide 98.00 <td></td> <td></td> <td></td> <td>* 16.09288</td> <td>35.38</td> <td>PK-U</td> <td>40.60</td> <td>-37.80</td> <td>17.50</td> <td>0.00</td> <td>55.66</td> <td>-</td> <td>-</td> <td>74.00</td> <td>-18.34</td> <td>-</td> <td></td> <td>0</td> <td>100</td> <td>V</td>				* 16.09288	35.38	PK-U	40.60	-37.80	17.50	0.00	55.66	-	-	74.00	-18.34	-		0	100	V
Bears Antil 970999 98.07 PH/U 98.80 1510 0.00 97.77 1 - - - 88.20 -16.45 0 100 V 12.05000 37.56 77.60 1.00 90.0 1640 0.00 56.86 - - - 0 68.20 -1.23.4 37. 100 H 11.01.02 2.2.9101 42.53 PH/U 38.80 75.00 17.00 0.00 66.91 - - 0 100 H 11.01.02 2.3.77 ADR 40.70 37.90 17.80 0.00 66.91 - - - 0 100 H 11.01.020 2.3.70 ADR 40.70 37.90 17.80 0.00 66.91 - - - 0.0 100 V 13.00008 2.3.77 PH/U 38.00 11.40 0.00 65.97 - - - 68.20 11.43				9.70511	37.54	PK-U	36.60	-38.00	15.10	0.00	51.24					68.20	-16.98	0	100	Ĥ
6472 ANTI 12.0598.0 37.00 PH/L 38.80 16.40 0.00 P5.86 .		1		0 70 903	39.07	PK-II	28.80	-28.00	15.10	0.00	51.77					89.20	-18.42	0	100	v
6475 ANTI 12,8008 37.80 PH-U 38.80 -38.90 10.40 59.88 - 0 10.0		1		9.70085	30.07	PK-U	30.00	-30.00	10.10	0.00	51.77					00.20	-10.43		100	
B475 ANTI 12,29101 42,23 Pri-U 38,80 17,80 0.00 0.08 0.00 0.08 0.00 77,70 71,00 77,70 71,00 77,		1		12.95086	37.00	PK-U	38.80	-30.90	10.40	0.00	00.80		·	· · · · · · · · · · · · · · · · · · ·		68.20	-12.34	3/	101	H
Home Home <th< td=""><td></td><td>6475</td><td>ANT1</td><td>12.95101</td><td>42.53</td><td>PK-U</td><td>38.80</td><td>-36.90</td><td>16.40</td><td>0.00</td><td>60.83</td><td></td><td></td><td>·</td><td>-</td><td>68.20</td><td>-7.37</td><td>145</td><td>102</td><td>V</td></th<>		6475	ANT1	12.95101	42.53	PK-U	38.80	-36.90	16.40	0.00	60.83			·	-	68.20	-7.37	145	102	V
Horison 10.16972 23.77 ADR 40.70 -37.60 17.80 0.00 58.27 - - - - 0 100 H 110.16902 35.60 HXU 40.70 -37.60 17.80 0.00 56.20 - - - 0 100 V 9515 NMT 110.5902 35.65 HXU 38.80 -37.70 14.40 0.00 50.27 - - - 68.20 -17.33 0 100 V 977535 37.57 PK-U 38.80 -37.70 14.40 0.00 50.87 - - - 68.20 -17.33 0 100 V 13.03038 42.61 PK-U 38.70 -38.60 16.00 0.00 50.67 - - 68.20 -17.70 14.40 100 V 13.03038 42.61 PK-U 38.60 -38.00 15.10 0.00 51.33 - - <td></td> <td></td> <td></td> <td>* 16.1939</td> <td>35.81</td> <td>PK-U</td> <td>40.70</td> <td>-37.90</td> <td>17.90</td> <td>0.00</td> <td>56.51</td> <td>-</td> <td>-</td> <td>74.00</td> <td>-17.49</td> <td></td> <td></td> <td>0</td> <td>100</td> <td>H</td>				* 16.1939	35.81	PK-U	40.70	-37.90	17.90	0.00	56.51	-	-	74.00	-17.49			0	100	H
Horizon 10.10002 35.00 PH-U 40.70 -37.60 17.80 0.00 66.20 - - - 0 100 V 10.11416 23.70 ADR 40.70 -37.60 17.80 0.00 50.80 - - - 0 000 V 9.75038 37.75 PH-U 38.80 -37.70 14.40 0.00 50.87 - - - 68.20 -17.15 0 100 V 13.03008 38.44 PK-U 38.70 -38.40 16.00 0.00 60.41 - - - 68.20 -77.70 14.4 10.0 100 V 12.03008 38.44 PK-U 38.70 -38.40 16.00 0.00 66.87 - - - 68.20 -11.164 0 100 V 12.8902 35.87 PK-U 38.40 15.80 0.00 63.83 - - - 68.20		1		* 16.19372	23.77	ADR	40.70	-37.90	17.90	0.66	45.13	54.00	-8.87		-	-		0	100	н
Heat 1*16.18416 23.70 AAR 40.70 -37.00 17.80 0.88 45.00 68.86 - - - - 0 000 V #515 #ANT #408 0.80 -37.70 14.40 0.00 50.87 - - - 68.20 -17.83 0 100 V #07755 37.37 PK-U 38.80 -37.70 14.40 0.00 50.87 - - - 68.20 -17.83 0 100 V #0000 85.85 PK-U 38.70 -36.80 16.00 0.00 66.86 - - - 68.20 -17.84 100 H #0.8660 37.35 PK-U 38.00 15.10 0.00 68.67 - - - 68.20 -17.16 0 100 H #0.435 MIMO 12.89892 38.67 PK-U 38.00 15.10 0.00 58.85 -		1		* 16.19062	35.60	PK-U	40.70	-37.90	17.80	0.00	56.20		-	74.00	-17.80			0	100	V
P0008 97.0038 97.00 97.70 14.40 0.00 91.05 - - - 0 08.20 -17.75 0 10.0 H 8515 ANT1 13.03008 38.40 PK-U 38.80 -37.70 14.40 0.00 59.20 -17.33 0 100 H 13.03008 38.80 PK-U 38.70 -36.80 18.00 0.00 54.20 - - - 68.20 -7.70 14.5 101 H 10.20000 35.88 PK-U 40.70 -37.90 17.80 0.00 68.68 - - - 68.20 -7.716 14.5 100 H 10.20000 35.88 PK-U 96.00 -56.00 15.10 0.00 63.85 - - - 68.20 -7.716 14.3 H 103 H H 102.1716 0 100 H 100 H 100 H 100.172 -				* 16.18416	23.79	ADR	40.70	-37.90	17.80	0.66	45.05	54.00	-8.95	-	-	-	-	0	100	V
B011 ANTI 97.753.8 37.37 PH-U 39.80 -3.70 14.40 0.00 69.07 - - - - - 98.20 -17.33 0.100 V 13.0008 34.04 PH-U 38.70 -36.80 16.00 0.00 42.81 - - - - 68.20 -1.31 43 10 10 V 10.30078 34.04 PH-U 38.70 -36.80 10.00 40.41 - - - 68.20 -116.4 0 100 H 10.28583 25.87 PH-U 40.70 -37.60 17.80 0.00 65.65 - - - 68.20 -116.3 0 100 H 6435 MIMO 12.8942 35.87 PH-U 38.00 15.10 0.00 53.85 - - - 68.20 -114.39 H4 103 H - - - 68.20 -177.80 <				9.78038	37.55	PK-U	36.80	-37.70	14.40	0.00	51.05			-		68.20	-17.15	0	100	н
8515 ANT1 13.0000 89.49 PL/U 98.70 -30.80 10.00 0.00 44.25 - - - 0 98.20 13.91 43 103 H 10.3000 85.85 PL/U 40.70 -37.80 17.80 0.00 64.55 - - 58.20 -17.16 0 100 H 10.3000 85.85 PL/U 40.70 -37.80 17.80 0.00 65.67 - - 68.20 -17.16 0 100 H 10.425 PL/U 40.70 -37.80 17.80 0.00 68.57 - - - 68.20 -17.16 0 100 H 10.425 PL/U 88.60 -38.60 15.00 0.00 63.85 - - - 68.20 -17.85 44 103 H H H H H H H H H H H H H H		1		9.77535	37.37	PK-U	36.80	-37 70	14 40	0.00	50.87		-	-	-	68.20	-17.33	0	100	v
6515 ANT1 10.30005 10.2000 42.25 20.01 Pr-U (10.2000) 30.80 20.80 10.200 10.200 10.2000 20.810 10.2000 10.2000 10.2000 20.810 10.2000 10.2000 10.2000 20.810 10.2000 10.2000 10.2000 80.810 10.2000 10.2000 10.2000 80.810 10.2000 10.2000 10.2000 80.820 11.84 0 10.000 H 10.2000 55.85 Pr-U 40.70 -37.60 17.60 0.00 56.85 - - - 68.20 -11.68 0 100 H 6.435 0.4402 37.35 Pr-U 38.60 -51.00 0.00 51.35 - - - 68.20 -11.69 0 100 H 6.435 MIMO 12.8042 38.60 15.00 0.00 53.85 - - - 68.20 -11.439 H4 103 H 12.8042 38.77 Pr-U 40.60 -37.80 17.60 0.00 65.07 - 74.00 -14.28 - -				12.02009	28.40	PK-II	29.70	-28.00	18.00	0.00	54 20					89.20	.12.01	42	102	L L
B02.11ax B42.01 Price B2.00 S8.00 Price B2.00 B3.00		6515	ANT1	12.02020	42.81	PK U	29.70	28.00	18.00	0.00	80.41					89.20	7 70	145	101	N N
B02.11ax (HE20) 64.75 MIMO 63.86 0 - </td <td></td> <td></td> <td></td> <td>13.03030</td> <td>42.01</td> <td>PICH</td> <td>40.70</td> <td>-30.00</td> <td>17.00</td> <td>0.00</td> <td>50.50</td> <td></td> <td></td> <td></td> <td></td> <td>00.20</td> <td>-1.70</td> <td>140</td> <td>101</td> <td></td>				13.03030	42.01	PICH	40.70	-30.00	17.00	0.00	50.50					00.20	-1.70	140	101	
B02.11ax B475 B470 B7.00 T 780 D.00 88.67 - - - -		1		10.28000	30.80	PK-U	40.70	-37.90	17.80	0.00	00.00					08.20	-11.04	0	100	H
B02.11ax (HE20) 64.4606 37.36 PH-U 38.60 - - - 68.20 -10.71 0 100 H 64.35 MIMO 12.80982 38.60 38.60 15.10 0.00 61.33 - - - 68.20 -10.67 0 100 H 64.35 MIMO 12.80982 38.60 38.60 15.00 0.00 63.85 - - - 68.20 -16.67 0 100 H 10.0007 34.77 PK-U 38.90 -35.80 17.80 0.00 65.07 - 74.00 -18.98 - 0 1000 H 0.71787 38.61 PK-U 38.80 -38.80 15.00 0.00 56.31 - - - 68.20 -17.80 0 1000 H 10.4 10.4 10.4 10.4 10.4 10.4 10.4 10.00 18.0 - - - -		<u> </u>		16.28593	35.97	PK-U	40.70	-37.90	17.80	0.00	56.57	-		-		68.20	-11.63	0	100	V
Part Part Part Part Part Part Part Part				9.64609	37.35	PK-U	36.60	-38.00	15.10	0.00	51.05	-	-	-	•	68.20	-17.15	0	100	н
PMINO 12.869/2 98.20 98.00 39.80 39.80 39.80 39.80 5.80 10.00 63.85 - - - 08.20 114.39 144 103 H 10.001 11.0001 34.77 PK-U 38.00 35.80 15.60 0.00 53.85 - - - 0.62.00 114.39 144 103 H 10.0007 34.77 PK-U 40.60 -37.80 17.80 0.00 56.07 - 74.00 -18.89 - 0 1000 H 0.001 11.80 2.001 38.80 -38.80 15.00 0.00 50.31 - - 0.82.00 -17.80 0 100 H 11.18 72.04 PK-U 38.80 -38.80 15.00 0.00 56.20 - - 0.82.00 -17.40 0 100 H 14.40 10.4 14.40 10.40 18.44 - - 0		1		9.64728	37.63	PK-U	36.60	-38.00	15.10	0.00	51.33	-	-	-	-	68.20	-16.87	0	100	V
B02.11ax MIMO 12.80640 38.21 PK-U 38.80 -36.80 10.80 - - - 08.20 -14.39 14.5 104 V 802.11ax 10.0061 34.71 PK-U 40.00 -37.80 17.50 0.00 55.04 - - 74.00 -18.89 - - 0 100 V 110.0067 34.74 PK-U 40.00 -37.80 17.50 0.00 55.04 - - 74.00 -18.89 - 0 100 V 97.11787 38.81 PK-U 38.80 -38.00 14.80 0.00 60.31 - - - 68.20 -17.84 0 100 V 12.94068 38.20 PK-U 38.80 -38.60 16.40 0.00 54.50 - - - 68.20 -17.94 0 100 V 12.94068 37.77 PK-U 38.70 -37.60 17.80		8435	MIMO	12.86992	36.25	PK-U	38.90	-36.90	15.60	0.00	53.85	-	-	-	-	68.20	-14.35	44	103	H
NIMO 1*0.09691 94.77 PK-U 40.00 -37.80 17.50 0.00 65.07 - - 74.00 -18.89 - - 0 100 H 802.11ax (HE20) # \$0.007 \$47.4 PK-U \$0.00 \$5.07 - 74.00 -18.89 - 0 100 H 802.11ax (HE20) \$6.7787 78.01 98.00 -38.00 15.00 0.00 50.31 - - 0 0.02 17.89 0 100 H 12.44022 35.71 PK-U 38.80 -38.80 16.40 0.00 54.01 - - 0.82.00 17.01 37.00 17.80 0.00 54.01 - - 0.82.00 17.01 37.00 17.80 0.00 55.00 - - 1.00 18.44 - 0 100 H 10.0 1.00 18.44 - 0 100 H 10.0 1.00 1.00		0100		12.88949	36.21	PK-U	38.90	-36.90	15.60	0.00	53.81	-	-	-	-	68.20	-14.39	145	104	V
MIMO *18.0687 94.74 PK-U 40.00 -37.80 17.00 0.00 65.04 - - 74.00 -18.80 - - 74.00 -18.80 - - 74.00 -18.80 -<		1		* 16.09861	34.77	PK-U	40.60	-37.80	17.50	0.00	55.07	-	-	74.00	-18.93	-	-	0	100	H
B02.11ax (HE20) 9.71787 38.81 PK-U 38.00 -38.00 14.00 0.00 69.31 - - - 68.20 -17.89 0 100 H (HE20) MIMO 12.94022 35.71 PK-U 38.80 -38.80 16.00 0.00 54.01 - - 68.20 -17.24 0 100 H 12.94022 35.71 PK-U 38.80 -38.80 16.40 0.00 54.01 - - 68.20 -17.12 100 H 11.94492 38.60 77.00 17.80 0.00 55.20 - - 74.00 -18.44 - 0 100 H 0.70695 37.77 PK-U 38.70 -37.80 14.40 0.00 55.20 - - 74.00 -18.44 - 0 100 H 13.02971 38.30 PK-U 38.70 -36.80 16.00 0.00 54.10 - - <td></td> <td></td> <td></td> <td>* 16.0967</td> <td>34.74</td> <td>PK-U</td> <td>40.60</td> <td>-37.80</td> <td>17.50</td> <td>0.00</td> <td>55.04</td> <td>-</td> <td>-</td> <td>74.00</td> <td>-18.96</td> <td></td> <td>-</td> <td>0</td> <td>100</td> <td>V</td>				* 16.0967	34.74	PK-U	40.60	-37.80	17.50	0.00	55.04	-	-	74.00	-18.96		-	0	100	V
B02.11ax (HE20) 6475 MIMO 97.211 8 (HE20) 97.111 8 (HE20) 97.20 (HE20) 97.20 (HE20) <th< td=""><td></td><td></td><td></td><td>9.71787</td><td>36.81</td><td>PK-U</td><td>36.60</td><td>-38.00</td><td>14.90</td><td>0.00</td><td>50.31</td><td></td><td></td><td></td><td></td><td>68.20</td><td>-17.89</td><td>0</td><td>100</td><td>н</td></th<>				9.71787	36.81	PK-U	36.60	-38.00	14.90	0.00	50.31					68.20	-17.89	0	100	н
B02.11ax (HE20) 6475 MIMO 12.64922 (HE20) 38.71 PK-U 38.80 -38.80 -38.80 -38.40 0.00 54.01 - - - 68.20 -14.10 114.10		1		9,71118	37.28	PK-U	36.60	-38.00	15.00	0.00	50.86	-	-	-		68.20	-17.34	0	100	V
(HE20) P475 MIMO 12.94968 39.20 P1/-U 39.800 -38.00 -4.60 - - - 98.20 -13.70 33 103 V (HE20) 12.94968 39.20 P1/-U 38.80 -39.00 17.80 0.00 54.50 - - 74.00 -18.80 - 0 100 V 11.818 34.98 P1/-U 40.70 -37.60 17.80 0.00 55.50 - - 74.00 -18.44 - 0 100 V 6:16 NIMO 8.706/78 37.27 P1/-U 38.70 -37.80 14.40 0.00 56.20 - - - 68.20 -17.17.80 0 100 V 13.02971 36.30 P1/-U 38.70 -38.60 16.00 0.00 64.00 - - - 68.20 -114.10 48 105 H 13.02971 36.30 P1/-U 38.70	802.11ax			12,94922	35.71	PK-U	38.80	-36.90	16.40	0.00	54.01	-	-	-	-	68.20	-14.19	184	104	H
MIMO 18.18484 34.00 PK-U 40.70 -37.90 17.80 0.00 55.20 - - 74.00 -18.60 - - 0 100 H #10.1988 34.80 PK-U 40.70 -37.90 17.80 0.00 55.20 - 74.00 -18.60 - 0 100 H #515 MIMO 9.708/55 37.77 PK-U 38.70 -37.80 14.40 0.00 56.20 - - 68.20 -17.18 0 100 H 13.02971 38.30 PK-U 38.70 -36.80 16.00 0.00 54.10 - - - 68.20 -17.68 0 100 H 32.02971 38.30 PK-U 38.70 -36.80 16.00 0.00 54.40 - - - 68.20 -17.80 0 100 H 30.00 100 H 30.00 100.94 100 H 100.9	(HE20)	6475	MIMO	12 94998	36.20	PK-U	38.80	-36.90	18 40	0.00	54.50					68.20	-13 70	33	103	V
Home *16.19188 34.68 Pic.U 40.70 -37.60 17.40 0.00 65.85 - - 74.00 -18.44 - - - 0 100 Y 6515 MIMO 8.766/65 37.77 Pic.U 38.70 -37.60 14.40 0.00 65.85 - - - 68.20 -17.13 0 100 Y 6515 MIMO 13.02971 36.30 Pic.U 38.70 -33.60 16.00 60.02 - - - 68.20 -17.78 0 100 Y 13.02971 36.30 Pic.U 38.70 -38.60 16.00 0.00 54.10 - - - 68.20 -13.40 35 103 Y 12.29692 38.17 Pic.U 40.70 -37.60 17.80 0.00 56.87 - - 68.20 -11.43 0 100 HE 10.29692 38.17 Pic.U		1		* 18 18484	34.60	PK-U	40.70	-37.90	17.80	0.00	55.20			74.00	-18.80		***********	0	100	H
MIMO 10.017989 24.87 Ph/U 10.17 0.100 10.0 10.0		1		10.10100	24.08	PK II	40.70	27.00	17.00	0.00	55.50			74.00	10.00			0	100	
Bit Depose 31.71 Pr-U 38.70 -37.80 14.40 0.00 51.02 - - - - 08.20 -17.13 0 1000 TV 13.02971 36.30 Pr-U 38.70 -37.80 14.40 0.00 50.22 - - - - 68.20 -17.13 0 1000 TV 13.02971 36.30 Pr-U 38.70 -37.80 14.40 0.00 64.10 - - - 68.20 -114.10 48 105 H 13.02971 36.30 Pr-U 38.70 -38.60 16.00 0.00 64.00 - - - 68.20 -13.60 35 103 V 10.28962 38.17 Pr-U 40.70 -37.00 17.80 0.00 67.32 - - - 68.20 -114.30 100 H 4E20 110.2466 87.47 Pr-U 38.80 -38.80 15.00		<u> </u>		0.78055	34.80	PK-U	40.70	-37.80	14.40	0.00	51.07			74.00	-10.44	80.00	17.10	0	100	<u> </u>
br./09/76 3/.22 Pr-V0 38/.70 -38.80 14.40 0.000 50.52 - - - 08.20 -1/.708 0 100 V 6515 MIMO 13.02969 38.80 Pr-U 38.70 -38.60 16.00 0.00 54.60 - - - 68.20 -14.10 48 108 V 13.02969 38.80 Pr-U 38.70 -38.60 16.00 0.00 54.60 - - - 68.20 -14.10 48 108 V 13.02969 38.67 Pr-U 47.70 - - - 68.20 -14.410 48 108 V 12.29662 38.77 Pr-U 47.70 - 77.80 10.00 56.77 - - 68.20 -11.43 0 100 V 12.29668 38.77 Pr-U 38.60 -38.60 15.00 0.00 51.24 - - - 68		1		9.70900	37.77	PK-U	30.70	-37.60	14.40	0.00	51.07					00.20	-17.13	0	100	
6515 NIMO 13.442/1 38.40 PH-U 38.70 -36.80 10.00 60.00 54.10 - - - 68.20 -14.10 48 105 H 10.26962 36.00 PH-U 38.70 -38.60 16.00 0.00 54.10 - - - 68.20 -13.60 35 H 10.26962 36.17 PH-U 40.70 -37.60 17.80 0.00 56.60 - - - 68.20 -13.60 35 103 H 10.26962 38.17 PH-U 40.70 -37.60 17.80 0.00 56.77 - - - 68.20 -10.80 100 H 4E20 114.71 47.77 PH-U 38.60 - - - - 68.20 -10.80 100 H 4E20 10.7211 37.64 PH-U 38.60 - - - 68.20 -10.80 H 100		1		8.70870	51.22	FR-0	30.70	-37.80	14.40	0.00	00.02					08.20	-17.08		100	
13 02/09/0 38 00 94.00 00.00 54.60 - - - 68.20 -13.80 35 103 V 10 12.89902 38.17 PK-U 40.70 -37.00 17.80 0.00 56.77 - - 68.20 -11.43 0 100 V 10 29456 38.77 PK-U 40.70 -37.60 17.80 0.00 56.77 - - 68.20 -11.43 0 100 V 902.11ax 12.2456 38.76 PK-U 40.70 -37.60 17.80 0.00 51.77 - - 68.20 -10.84 0 100 V HE20 RU mode 2 9.70266 37.47 PK-U 38.60 -58.00 15.00 0.00 51.24 - - - 68.20 -16.86 0 100 V 26 Torne 12.6004 36.42 PK-U 38.60 -58.00 1		6515	MIMO	13.02971	36.30	PK-U	38.70	-36.90	16.00	0.00	54.10	·	· · · · · · · · · · · · · · · · · · ·	·	·	68.20	-14.10	48	105	H
10.28902 38.17 PK-U 40.70 -37.00 17.80 0.00 56.77 - - - 68.20 -11.43 0 100 H 18.2011ax 18.2465 85.77 PK-U 40.70 -37.00 17.80 0.00 56.77 - - - 68.20 -10.84 0 100 H 802.11ax HE20 6.70968 37.47 PK-U 38.00 15.00 0.00 51.07 - - 68.20 -10.84 0 100 H 0.100 mde 6.71281 37.64 PK-U 38.80 15.00 0.00 51.27 - - 68.20 -10.89 0 100 H 0.20 mode 26 Tone 12.85064 38.42 PK-U 38.80 -38.80 16.40 0.00 54.72 - - - 68.20 -16.89 0 100 H 26 Tone 12.85064 38.42 PK-U 38.80 <td< td=""><td></td><td></td><td></td><td>13.02969</td><td>36.80</td><td>PK-U</td><td>38.70</td><td>-38.90</td><td>16.00</td><td>0.00</td><td>54.60</td><td></td><td></td><td></td><td></td><td>68.20</td><td>-13.60</td><td>35</td><td>103</td><td>V</td></td<>				13.02969	36.80	PK-U	38.70	-38.90	16.00	0.00	54.60					68.20	-13.60	35	103	V
B02.11av IB.20458 38.76 PK-U 40.70 -37.60 17.80 0.00 57.38 - - - 68.20 -10.84 0 100 V HE20 HE20 80.71 PK-U 98.60 15.00 0.00 51.24 - - - 68.20 -10.84 0 100 V HE20 RU mode 27.7261 37.64 PK-U 98.60 -38.00 15.00 0.00 51.24 - - - 68.20 -10.64 0 100 V 26 Torne 12.650e4 38.42 PK-U 38.80 -38.60 16.40 0.00 64.72 - - - 68.20 -13.46 47 106 H 26 Torne 12.650e4 38.42 PK-U 38.80 -38.60 16.30 0.00 64.22 - - - 68.20 -13.46 47 106 H 25 torne 716.1988 55.22		1		16.28962	36.17	PK-U	40.70	-37.90	17.80	0.00	58.77	· · ·	· · ·	•	·	68.20	-11.43	0	100	H
B02.11 ax HE20 €.70968 37.47 PK-U 38.00 15.00 0.00 51.07 - - - 68.20 -17.13 0 100 H ME20 RU mode 26 Tone dfset 8 8475 Y PK-U 38.60 15.00 0.00 51.07 - - 68.20 -16.69 0 100 H RU mode 26 Tone dfset 8 8475 XIIIAO 12.6504 98.60 -38.00 15.00 0.00 51.27 - - 68.20 -16.69 0 100 H 90 constraints 88.00 38.60 15.00 0.00 54.24 - - - 68.20 -16.69 0 100 H 91 constraints 88.0 -38.60 16.30 0.00 54.28 - - - - 68.20 -16.90 0 108 H 108 - - - - - 68.20 -16.90 108.9 108 108		<u> </u>		16.29456	38.76	PK-U	40.70	-37.90	17.80	0.00	57.38					68.20	-10.84	0	100	V
HE20 RU mode 26 Tone effet® Spot-heek 6475 97.1281 37.64 PK-U 38.60 -38.00 16.00 0.00 51.24 - - - 68.20 -16.69 0 100 V 26 Tone effet® 12.65004 38.42 PK-U 38.80 -38.60 16.40 0.00 54.72 - - 68.20 -13.48 47 108 H 12.65004 36.02 PK-U 38.60 -38.60 16.80 0.00 54.72 - - - 68.20 -13.48 47 108 H 5050-heek 11.04807 35.82 27.40 17.80 0.00 55.52 - - 74.00 -17.77 - 0 100 H	802.11ax			9.70966	37.47	PK-U	36.60	-38.00	15.00	0.00	51.07		-	-		68.20	-17.13	0	100	н
RU mode 20 Tone strate 6475 MMO 12,85094 38,42 PK-U 38,80 -38,80 16,40 0.00 54,72 - - - 68,20 -13,46 47 108 H 20 Tone strate1 24,4001 36,00 PK-U 38,80 -38,60 16,40 0.00 54,72 - - - 68,20 -13,46 47 108 H 20 Tone strate1 35,22 PK-U 49,80 - 0.00 54,22 - - - - 68,20 -13,44 47 108 H 50 cb-thevic 11,81947 35,822 PK-U 40,70 -37,60 17,80 0.00 55,82 - - 74,00 -118,19 - 0 100 H 10,1847 35,823 PK-U 40,70 -37,60 17,80 0.00 55,82 - - 74,00 -17,77 - 0 100 H 10,1847 19407	HE20	1		9.71261	37.64	PK-U	36.60	-38.00	15.00	0.00	51.24					68.20	-16.98	0	100	V
28 Tone offset 8 Spot-check 12,94801 38.08 PK-U 38.80 -38.90 16.30 0.00 54.28	RU mode	8475	MINIC	12.95094	38.42	PK-U	38.80	-36.90	16.40	0.00	54.72					68.20	-13.48	47	108	H
offset 8 16,1888 35,22 PK-U 40,70 -37,80 17,80 0.00 55,82 74,00 -18,18 0 100 H Spot-check 16,18497 35,63 PK-U 40,70 -37,80 17,80 0.00 56,23 - 74,00 -17,77 - 0 100 V	26 Tone	04/0	OWING	12.94601	36.06	PK-U	38.80	-36.90	16.30	0.00	54.28	-				68.20	-13.94	32	103	V
Spot-check 16.18497 35.63 PK-U 40.70 -37.80 17.80 0.00 56.23 - 74.00 -17.77 - 0 100 V	offset 8	1		* 16.1888	35.22	PK-U	40.70	-37.90	17.80	0.00	55.82			74.00	-18.18	-	-	0	100	н
	Spot-check			* 16,18497	35.63	PK-U	40.70	-37.90	17.80	0.00	58.23			74.00	-17.77			0	100	V

HARMONICS AND SPURIOUS EMISSIONS TEST DATA

Note1. PK-U - U-NII: Maximum Peak / ADR - U-NII AD primary method, RMS average Note2. * - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

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42, Obongsandan 1-ro, Uiwang-si, Gyeonggi-do, Republic of Korea

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TX ABOVE 1GHz 1Tx & 2Tx MODE IN U-NII-7 BAND 12.3.

HARMONICS AND SPURIOUS EMISSIONS(WORST CASE: 802. 11a / 6695 MHz / ANT1)



VERTICAL



Note. Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	CH1_AF_1- 18G_3117_2 40924 (dB/m)	FB1_PL_1- 18G_8G HP_241003 (dB)	CH1_CL_1- 40G_Thru_24 1104 (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non- Restricted (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
10.04814	37.07	PK-U	37.2	-37.6	14.3	0	50.97	-	-	-	-	68.2	-17.23	0	100	н
10.03654	36.44	PK-U	37.2	-37.6	14.2	0	50.24	-	-	-	-	68.2	-17.96	0	100	V
* 13.38937	36.81	PK-U	38.7	-37.1	16.2	0	54.61	-	-	74	-19.39	-	-	48	108	Н
* 13.38964	26.35	ADR	38.7	-37.1	16.2	.66	44.81	54	-9.19	-	-	-	-	48	108	н
* 13.3898	38.49	PK-U	38.7	-37.1	16.2	0	56.29	-	-	74	-17.71	-	-	37	104	V
* 13.3898	29.25	ADR	38.7	-37.1	16.2	.66	47.71	54	-6.29	-	-	-		37	104	V
16.73119	36.16	PK-U	41.4	-38	17.8	0	57.36	-	-	-	-	68.2	-10.84	0	100	Н
16.73792	36.19	PK-U	41.4	-38	17.8	0	57.39		-	-	-	68.2	-10.81	0	100	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

PK-U - U-NII: Maximum Peak ADR - U-NII AD primary method, RMS average

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UL Korea, Ltd. Uiwang Laboratory

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FORM ID: FCC_15E(05) TEL: (031) 389-9603 FAX: (031) 462-8355

Mode	Freq.	Antenna	Frequency	Reading	Detector	ANT Factor	FB Gain	Loss	DC Corr	Result	AV Limit	AV Margin	PK Limit	PK Margin	Non-Restricted	Margin	Azimuth	Height	Polarity
	[MHz]	Tuncinia	[GHz]	[dBuV]	Mode	[dB/m]	[dB]	[dB]	[dB]	[dBuV/m	[dBuV/m	[dB]	[dBuV/m]	[dB]	[dBuV/m]	[dB]	[Degs]	[cm]	
			9.79395	37.41	PK-U	38.80	-37.60	14.30	0.00	50.91					68.20	-17.29	0	100	н
			9.79679	37.16	PK-U	36.80	-37.60	14.30	0.00	50.66				·	68.20	-17.54	0	100	V
	6535	ANTO	13.06975	36.31	PK-U	38.70	-38.90	15.80	0.00	53.91		·		· · · · ·	68.20	-14.29	51	109	H
			13.06990	37.40	PK-U	38.70	-36.90	15.80	0.00	50.00					68.20	-13.20	35	106	·····
			16.33990	36.20	PK-U	40.80	-38.10	18.00	0.00	57.12					68.20	-11.20	0	100	v v
	<u> </u>		10.04415	38.74	PK-U	37.20	-37.60	14.30	0.00	50.64					68.20	-17.58	Ő	100	H H
			10.03575	38.74	PK-U	37.20	-37.60	14.20	0.00	50.54					68.20	-17.66	0	100	v
			* 13.38991	36.24	PK-U	38.70	-37.10	16.20	0.00	54.04	-	-	74.00	-19.98			48	105	H
	8805	41170	* 13.38977	28.58	ADR	38.70	-37.10	16.20	0.66	45.02	54.00	-8.98	-	-	-	-	48	105	н
	0090	ANTO	* 13.38983	37.61	PK-U	38.70	-37.10	16.20	0.00	55.41	-	-	74.00	-18.59	-	-	38	109	V
			* 13.38973	28.28	ADR	38.70	-37.10	16.20	0.66	48.74	54.00	-7.28	-	•	-	•	38	109	V
			18.74127	36.41	PK-U	41.40	-38.10	17.80	0.00	57.51					68.20	-10.69	0	100	н
			16,73359	38.17	PK-U	41.40	-38.00	17.80	0.00	57.37		-	•	•	68.20	-10.83	0	100	V
			10.31540	38.13	PK-U	37.30	-37.20	14.00	0.00	50.23		· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·	68.20	-17.97	0	100	H
			10.31435	38.45	PK-U	37.30	-37.20	14.00	0.00	50.55			•	· · ·	68.20	-17.65	0	100	×
	6875	ANTO	13.70007	30.41	PK-U	38.00	-37.10	10.40	0.00	54.70		· · · · · · · · · · · · · · · · · · ·	·····	·····	08.20	-13.99	197	112	H
			17 10003	35.60	PK-U	40.90	-39.20	18.00	0.00	58.30					89.20	-11.00	214	100	H
1. Second			17.19426	35.00	PK-U	40.90	-38.20	18.00	0.00	55.82					68.20	-12.38	0	100	v v
802.11a	<u> </u>		9.80532	37.39	PK-U	38.80	-37.60	14.40	0.00	50,99					68.20	-17.21	0	100	H
			9.79599	36.87	PK-U	38.80	-37.60	14.30	0.00	50.37	-	-	-		68.20	-17.83	0	100	V
	8525	ANTI	13.08907	38.02	PK-U	38.70	-38.90	15.80	0.00	53.62	-	-	-	-	68.20	-14.58	46	110	н
	0030	- ANTI	13.07581	41.99	PK-U	38.70	-36.90	15.80	0.00	59.59	-	-	-		68.20	-8.61	148	104	V
			18.33248	38.10	PK-U	40.80	-38.00	18.00	0.00	56.90	-		-		68.20	-11.30	0	100	н
			16.33471	36.18	PK-U	40.80	-38.00	18.00	0.00	56.98		-			68.20	-11.22	0	100	V
			10.04814	37.07	PK-U	37.20	-37.60	14.30	0.00	50.97			·	·	68.20	-17.23	0	100	H
			10.03654	36.44	PK-U	37.20	-37.60	14.20	0.00	50.24		·			68.20	-17.98	0	100	V
			13.38937	30.81	PK-U	38.70	-37.10	10.20	0.00	04.01	54.00		/4.00	-19.39	· · · · ·	· · · · · · · · · · · · · · · · · · ·	48	108	H
	6695	ANT1	13.35904	20.30	PK-II	38.70	-37.10	18.20	0.00	68.20	04.00	-8.18	74.00	.47.74			40	106	v v
			13.3090	20.25	ADR	38.70	-37.10	18.20	0.00	47.71	54.00		74.00	-17.71			37	104	v v
			18,73119	38.18	PK-U	41.40	-38.00	17.80	0.00	57.38		-0.20			68.20	-10.84	0	100	H
			16,73792	38,19	PK-U	41.40	-38.00	17.80	0.00	57.39		-			68.20	-10.81	0	100	V
			10.32078	36.10	PK-U	37.30	-37.20	14.00	0.00	50.20		-			68.20	-18.00	0	100	н
			10.30499	36.12	PK-U	37.30	-37.10	14.00	0.00	50.32	-	-	-	-	68.20	-17.88	0	100	V
	8975	ANT1	13.74812	40.61	PK-U	38.50	-37.10	16.40	0.00	58.41	-			-	68.20	-9.79	165	111	н
	0070	0000	13.75187	43.39	PK-U	38.50	-37.10	16.40	0.00	61.19	-		-	-	68.20	-7.01	223	105	V
			17.19130	34.95	PK-U	40.90	-38.20	18.00	0.00	55.65				·	68.20	-12.55	0	100	н
	ļ		17.19802	35.33	PK-U	40.90	-38.20	18.00	0.00	58.03		-			68.20	-12.17	0	100	V
			9.80516	37.44	PK-U	38.80	-37.60	14.40	0.00	51.04		·		·	68.20	-17.18	0	100	H
			9.80725	37.12	PK-U	30.80	-37.00	15.00	0.00	52.71		· · · ·		· · · · · · · · · · · · · · · · · · ·	89.20	-17.48	48	100	- V
	6535	MIMO	13.07000	36.63	PK-U	38.70	-36.90	15.80	0.00	54 23					68.20	-13.97	35	108	v
			16.33847	38.93	PK-U	40.80	-38.10	18.00	0.00	57.63	-	•		-	68.20	-10.57	0	100	H
			16.33840	38.45	PK-U	40.80	-38.10	18.00	0.00	57.15	-				68.20	-11.05	0	100	V
			10.03961	36.88	PK-U	37.20	-37.60	14.30	0.00	50.78	-			•	68.20	-17.44	0	100	н
			10.04356	36.82	PK-U	37.20	-37.60	14.30	0.00	50.72		-			68.20	-17.48	0	100	V
002 11av			13.38985	36.71	PK-U	38.70	-37.10	16.20	0.00	54.51	-	-	74.00	-19.49	·	•	48	108	H
(HE20)	6695	MIMO	13.30973	27.03	PK-U	38.70	-37.10	18.20	0.00	40.10	04.00	-0.02	74.00	.10.02			40	105	N N
(),====,			* 13.38973	28.45	ADR	38.70	-37.10	18.20	1.35	47.60	54.00	-8.40	-	-10.65			39	105	v
			16.74207	35.89	PK-U	41.40	-38.10	17.80	0.00	58.99			-		68.20	-11.21	0	100	H
			16.73932	35.88	PK-U	41.40	-38.00	17.80	0.00	57.08	-		-	-	68.20	-11.14	0	100	V
			10.31168	35.64	PK-U	37.30	-37.20	14.00	0.00	49.74	•			-	68.20	-18.46	0	100	н
			10.31063	38.08	PK-U	37.30	-37.20	14.00	0.00	50.16		-		•	68.20	-18.04	0	100	V
	6875	MIMO	13.75021	37.60	PK-U	38.50	-37.10	16.40	0.00	55.40				-	68.20	-12.80	199	108	H
			13.75012	37.34	PK-U	38.50	-37.10	16.40	0.00	55.14		· · · ·		· · · · ·	68.20	-13.06	216	112	V
			17.19210	34.90	PK-U	40.90	-38.20	18.00	0.00	55.60					68.20	-12.60		100	H H
802 11av	t		10.32034	36.15	PK-U	37.30	-37.20	14.00	0.00	50.25					68.20	-17.95	0	100	H
HE20			10.31686	38.59	PK-U	37.30	-37.20	14.00	0.00	50.69			-		68.20	-17.51	0	100	V
RU mode	8975	MINO	13.74972	35.67	PK-U	38.50	-37.10	18.40	0.00	53.47	-		-		68.20	-14.73	198	108	н
26 Tone	0070	MIMO	13.74983	35.75	PK-U	38.50	-37.10	16.40	0.00	53.55	-		-	-	68.20	-14.65	34	107	V
offset 8			17.18918	35.48	PK-U	40.90	-38.20	18.00	0.00	56.16				-	68.20	-12.04	0	100	н
Spot-check	1		17.18582	35.20	PK-U	40.90	-38.10	18.00	0.00	56.00	-		-		68.20	-12.20	0	100	V

HARMONICS AND SPURIOUS EMISSIONS TEST DATA

Note1. PK-U - U-NII: Maximum Peak / ADR - U-NII AD primary method, RMS average Note2. * - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

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FORM ID: FCC_15E(05) veonggi-do, Republic of Korea TEL: (031) 389-9603 FAX: (031) 462-8355 UL KOREA LTD. Confidential

12.4. TX ABOVE 1GHz 1Tx & 2Tx MODE IN U-NII-8 BAND



BANDEDGE (WORST CASE: 802.11a / 7115 MHz / ANT1)

HORIZONTAL PEAK AND AVERAGE DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	CH2_AF_1- 18G_3117_240920 (dB/m)	FB2_PL_1- 18G_10dB_240409 (dB)	CH2_CL_1- 40G_Thru_240617 (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	7.12549	65.97	Pk	35.7	-31.8	11.5	0	81.37	-	-	88	-6.63	74	108	Н
3	7.12551	67.2	Pk	35.7	-31.8	11.5	0	82.6	-	-	88	-5.4	74	108	Н
2	7.12549	48.45	RMS	35.7	-31.8	11.5	.66	64.51	68	-3.49	-	-	74	108	Н
4	7.12553	49.67	RMS	35.7	-31.8	11.5	.66	65.73	68	-2.27	-	-	74	108	Н

Pk - Peak detector

RMS - RMS detection

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BANDEDGE TEST DATA

Mode	Freq.	Antenna	Frequency	Reading	Detector	ANT Factor	FB Gain	Loss	DC Corr	Result	AV Limit	AV Margin	PK Limit	PK Margin	Azimuth	Height	Polarity
mode	[MHz]	Anterina	[GHz]	[dBuV]	Mode	[dB/m]	[dB]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	[dBuV/m]	[dB]	[Degs]	[cm]	rolancy
			7.12501	66.25	Pk	35.70	-31.80	11.50	0.00	81.65	-	-	88.00	-6.35	50	117	Н
			7.12519	67.02	Pk	35.70	-31.80	11.50	0.00	82.42	-	-	88.00	-5.58	50	117	Н
			7.12501	49.14	RMS	35.70	-31.80	11.50	0.66	65.20	68.00	-2.80	-	-	50	117	Н
	7115	ANTO	7.12511	48.55	RMS	35.70	-31.80	11.50	0.66	64.61	68.00	-3.39	-	-	50	117	H
	1115	ANIO	7.12501	53.03	Pk	35.70	-31.80	11.50	0.00	68.43	-	-	88.00	-19.57	54	244	V
			7.12507	55.33	Pk	35.70	-31.80	11.50	0.00	70.73	-	-	88.00	-17.27	54	244	V
			7.12501	37.03	RMS	35.70	-31.80	11.50	0.66	53.09	68.00	-14.91	-	-	54	244	V
802 11a			7.12507	36.96	RMS	35.70	-31.80	11.50	0.66	53.02	68.00	-14.98	-	-	54	244	V
002.114			7.12549	65.97	Pk	35.70	-31.80	11.50	0.00	81.37	-	-	88.00	-6.63	74	108	Н
			7.12551	67.20	Pk	35.70	-31.80	11.50	0.00	82.60	-	-	88.00	-5.40	74	108	H
			7.12549	48.45	RMS	35.70	-31.80	11.50	0.66	64.51	68.00	-3.49	-	-	74	108	Н
	7115	ANT1	7.12553	49.67	RMS	35.70	-31.80	11.50	0.66	65.73	68.00	-2.27	-	-	74	108	Н
	1115	ZINTI	7.12549	66.54	Pk	35.70	-31.80	11.50	0.00	81.94	-	-	88.00	-6.06	193	296	V
			7.12557	68.62	Pk	35.70	-31.80	11.50	0.00	84.02	-	-	88.00	-3.98	193	296	V
			7.12549	48.59	RMS	35.70	-31.80	11.50	0.66	64.65	68.00	-3.35	-	-	193	296	V
			7.12553	47.96	RMS	35.70	-31.80	11.50	0.66	64.02	68.00	-3.98	-	-	193	296	V
			7.12551	66.77	Pk	35.60	-30.00	13.00	0.00	85.37	-	-	88.00	-2.63	238	102	Н
			7.12555	65.69	Pk	35.60	-30.00	13.00	0.00	84.29	-	-	88.00	-3.71	238	102	Н
			7.12551	40.85	RMS	35.60	-30.00	13.00	1.35	60.80	68.00	-7.20	-	-	238	102	н
802.11ax	7115	MIMO	7.12557	41.00	RMS	35.60	-30.00	13.00	1.35	60.95	68.00	-7.05	-	-	238	102	Н
HE20	/115	WIIWO	7.12551	62.50	Pk	35.60	-30.00	13.00	0.00	81.10	-	-	88.00	-6.90	10	296	V
			7.12559	61.14	Pk	35.60	-30.00	13.00	0.00	79.74	-	-	88.00	-8.26	10	296	V
			7.12551	40.65	RMS	35.60	-30.00	13.00	1.35	60.60	68.00	-7.40	-	-	10	296	V
			7.12569	38.60	RMS	35.60	-30.00	13.00	1.35	58.55	68.00	-9.45	-	-	10	296	V
			7.12501	40.84	Pk	35.60	-30.00	13.00	0.00	59.44	-	-	88.00	-28.56	236	120	Н
			7.12649	42.41	Pk	35.60	-30.00	13.00	0.00	61.01	-	-	88.00	-26.99	236	120	Н
			7.12501	29.07	RMS	35.60	-30.00	13.00	1.45	49.12	68.00	-18.88	-	-	236	120	Н
802.11ax	7005	MINO	7.13137	29.85	RMS	35.60	-30.00	13.10	1.45	50.00	68.00	-18.00	-	-	236	120	н
HE40	7065	WIIWO	7.12501	38.23	Pk	35.60	-30.00	13.00	0.00	56.83	-	-	88.00	-31.17	165	389	V
			7.15678	39.57	Pk	35.60	-30.00	13.40	0.00	58.57	-	-	88.00	-29.43	165	389	V
			7.12501	27.54	RMS	35.60	-30.00	13.00	1.45	47.59	68.00	-20.41	-	-	165	389	V
			7.12795	28.70	RMS	35.60	-30.00	13.10	1.45	48.85	68.00	-19.15	-	-	165	389	V
			7.12501	38.29	Pk	35.60	-30.00	13.00	0.00	56.89	-	-	88.00	-31.11	272	113	Н
			7.12551	41.29	Pk	35.60	-30.00	13.00	0.00	59.89	-	-	88.00	-28.11	272	113	Н
			7.12501	28.18	RMS	35.60	-30.00	13.00	1.65	48.43	68.00	-19.57	-	-	272	113	Н
802.11ax	7005	MIMO	7.12555	29.61	RMS	35.60	-30.00	13.00	1.65	49.86	68.00	-18.14	-	-	272	113	Н
HE80	1025	OMIN	7.12501	37.03	Pk	35.60	-30.00	13.00	0.00	55.63	-	-	88.00	-32.37	55	307	V
			7.15990	39.45	Pk	35.60	-30.00	13.40	0.00	58.45	-	-	88.00	-29.55	55	307	V
			7.12501	26.87	RMS	35.60	-30.00	13.00	1.65	47.12	68.00	-20.88	-	-	55	307	V
			7.15058	27.74	RMS	35.60	-30.00	13.50	1.65	48.49	68.00	-19.51	-	-	55	307	V

Note1. PK-U - U-NII: Maximum Peak / ADR - U-NII AD primary method, RMS average

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HARMONICS AND SPURIOUS EMISSIONS(WORST CASE: 802.11a / 6895 MHz / ANT1)

HORIZONTAL 110 UL UIWANG Lab Chamber 1 Radiated Emissions 3-Meters Project Number:4791479704 Llient:Samsung Sonfig:EUT / AC Adapter Indee:UNIL-8 HARM Ila_6895_A1 fested by:27905 7 AC 120 V, 60 Hz 100 90 80 contal 76 Hori 60 (dBuU/m) Avg Limit (dBuV/m) 50 40 20 Frequency (GHz)
Pts #Saps/Mode
Range (GHz)
5001 H900
 RBM/UBU
 Ref/Attn
 Det/Avg
 Mode

 1MK-3dB)/38k
 87/8
 PEAK/LooPer-Video

 RBW/V8W
 Ref/Attn

 1M(-3aB)/38k
 87/18

 1M(-3aB)/38k
 107/10
 Det/Avg Mode PEAK/LogPur-Video Suee Pts #Sups/Node 22k MRXH Sweep Auto Conge (GHz) :1-5.88



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	CH1_AF_1- 18G_3117_2 40924 (dB/m)	FB1_PL_1- 18G_8G HP_241003 (dB)	CH1_CL_1- 40G_Thru_24 1104 (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non- Restricted (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
10.34417	35.96	PK-U	37.2	-37.4	14	0	49.76	-	-	-	-	68.2	-18.44	0	100	Н
10.34649	36.98	PK-U	37.2	-37.4	14	0	50.78	-	-	-	-	68.2	-17.42	0	100	V
13.79081	43.42	PK-U	38.5	-37.2	16.2	0	60.92	-	-	-	-	68.2	-7.28	165	113	н
13.79161	45.83	PK-U	38.5	-37.2	16.2	0	63.33	-	-	-	-	68.2	-4.87	221	108	V
17.2426	35.51	PK-U	40.8	-38.3	18.1	0	56.11	-	-	-	-	68.2	-12.09	0	100	н
17.2349	35.76	PK-U	40.8	-38.3	18	0	56.26	-	-		-	68.2	-11.94	0	100	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band PK-U - U-NII: Maximum Peak

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UL Korea, Ltd. Uiwang Laboratory

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HARMONICS AND SPURIOUS EMISSIONS TEST DATA

Mode	Freq. [MHz]	Antenna	Frequency [GHz]	Reading [dBuV]	Detector Mode	ANT Factor [dB/m]	FB Gain [dB]	Loss [dB]	DC Corr [dB]	Result [dBuV/m	AV Limit [dBuV/m]	AV Margin [dB]	PK Limit [dBuV/m]	PK Margin [dB]	Non-Restricted [dBuV/m]	Margin [dB]	Azimuth [Degs]	Height [cm]	Polarity
			10.34119	36.26	PK-U	37.20	-37.40	14.00	0.00	50.06	-	-	-	-	68.20	-18.14	0	100	Н
	6005	ANITO	10.34461 13.79351	36.38	PK-U PK-U	37.20 38.50	-37.40	14.00	0.00	54.96	-	-			68.20	-18.02	199	100	H
	0095	ANTO	13.79142	37.75	PK-U	38.50	-37.20	16.20	0.00	55.25	-	-	-	-	68.20	-12.95	213	118	V
			17.22909	35.93	PK-U	40.80	-38.30	18.00	0.00	56.00	-	-		-	68.20	-11.77	92	100	V N
			10.49392	36.50	PK-U	37.40	-37.20	14.10	0.00	50.80	-	-		-	68.20	-17.40	0	100	H
802 119	6005	ANTO	13.98906	37.71	PK-U	38.70	-37.30	16.60	0.00	55.71	-	-		-	68.20	-12.49	199	113	H
002.114	0000	Citro	13.99015	41.15	PK-U	38.70	-37.30	16.60	0.00	59.15	-	-	-	-	68.20	-9.05	316	112	V
			17.48948	36.16	PK-U	40.90	-38.40	18.20	0.00	56.86					68.20	-11.34	0	100	V
			* 10.67163	36.75	PK-U	37.50	-36.70	14.40	0.00	51.95			74.00	-22.05	:		0	100	H
	7115	ANTO	14.22704	38.50	PK-U	38.90	-37.40	16.30	0.00	56.30	-	-	-	-	68.20	-11.90	198	109	н
	1.5.655		14.22962	38.01	PK-U PK-U	38.90	-37.40	16.30	0.00	55.81			- 74 00	-16 19	68.20	-12.39	160	109	V H
			* 17.78769	36.69	PK-U	41.40	-38.40	18.60	0.00	58.29	-	-	74.00	-15.71		-	0	100	V
			10.34417	35.96	PK-U PK-U	37.20	-37.40	14.00	0.00	49.76	-	-		-	68.20	-18.44	0	100	H V
	6895	ANT1	13.79081	43.42	PK-U	38.50	-37.20	16.20	0.00	60.92	-	-	-	-	68.20	-7.28	165	113	H
			17.24260	45.83 35.51	PK-U	40.80	-37.20	18.10	0.00	56.11	-	-	-	-	68.20	-4.87	0	108	H
	<u> </u>		17.23490	35.76	PK-U	40.80	-38.30	18.00	0.00	56.26	-	-	-	-	68.20	-11.94	0	100	V
			10.49893	35.33	PK-U	37.40	-37.20	14.10	0.00	49.63	-	-		-	68.20	-18.57	Ő	100	v
802.11a	6995	ANT1	13.99543 13.98939	41.96	PK-U PK-U	38.70	-37.30	16.60 16.60	0.00	59.96 60.60				-	68.20 68.20	-8.24	35	105	H V
			17.48069	35.51	PK-U	40.90	-38.40	18.20	0.00	56.21	-	-	-	-	68.20	-11.99	0	100	H
			* 10.66413	36.50	PK-U	37.50	-36.70	14.40	0.00	51.70	-	-	74.00	-22.30	-	-11.01	0	100	н
			* 10.67869	36.42	PK-U	37.50	-36.60	14.40	0.00	51.72	-	-	74.00	-22.28	- 68.20	-11.98	0	100	V
	7115	ANT1	14.22833	43.66	PK-U	38.90	-37.40	16.30	0.00	61.46	-	-	-		68.20	-6.74	162	108	v
			* 17.79464 * 17.78045	36.19 35.92	PK-U PK-U	41.40	-38.30	18.60	0.00	57.89	-	-	74.00	-16.11 -16.48		-	0	100	H V
	1		10.34018	36.34	PK-U	37.20	-37.40	14.00	0.00	50.14	-	-	-	-	68.20	-18.06	0	100	Н
	6895	MIMO	13.78868	40.82	PK-U	38.50	-37.40	16.20	0.00	58.32	-				68.20	-18.01 -9.88	168	110	H
			13.79443 17.23981	38.67	PK-U PK-U	38.50	-37.20	16.20	0.00	56.17	-			-	68.20	-12.03	162	109	V H
			17.23812	35.49	PK-U	40.80	-38.30	18.00	0.00	55.99	-	-	-	-	68.20	-12.21	0	100	V
			10.48283	36.12	PK-U PK-U	37.40	-37.10	14.10	0.00	50.52	-	-		-	68.20	-17.68	0	100	V N
802.11ax (HE20)	6995	MIMO	13.98639	38.44	PK-U	38.70	-37.30	16.60	0.00	56.44	-	-	-	-	68.20	-11.76	36	111	H
			17.49349	35.61	PK-U	40.90	-37.30	18.20	0.00	56.31	-	-		-	68.20	-11.89	0	100	H
	<u> </u>	-	17.49066 * 10.67288	35.49	PK-U PK-U	40.90	-38.40	18.20	0.00	56.19 52.39		-	- 74.00	-21.61	68.20	-12.01	0	100	V H
			* 10.67343	37.24	PK-U	37.50	-36.60	14.40	0.00	52.54	-	-	74.00	-21.46		-	0	100	V
	7115	MIMO	14.22923	38.39 40.71	PK-U PK-U	38.90	-37.40	16.30	0.00	58.51	-	-			68.20	-12.01	50 30	318	N N
			* 17.78595	36.52	PK-U	41.40	-38.40	18.60	0.00	58.12	-	-	74.00	-15.88	-	-	0	100	H
	<u> </u>		10.33583	36.70	PK-U	37.20	-37.30	14.00	0.00	50.60	-	-	-	-15.05	68.20	-17.60	176	100	Ĥ
	0005		10.34018	36.23	PK-U PK-U	37.20	-37.40	14.00	0.00	50.03			- :		68.20 68.20	-18.17	81 216	100	V H
	0880	MIMO	13.76445	42.89	PK-U	38.50	-37.20	16.30	0.00	60.49	-	-	-	-	68.20	-7.71	321	114	V
			17.22468	35.58	PK-U	40.90	-38.20	18.00	0.00	56.18	-	-		-	68.20	-12.22	205	100	V
			10.40819	35.87	PK-U PK-U	37.30	-37.20	14.20	0.00	50.17 49.91	-	-			68.20 68.20	-18.03	113 133	100	H
802.11ax	6965	MIMO 13.9 13.9 17.4	13.93429	40.83	PK-U	38.70	-37.10	16.60	0.00	59.03	-	-	-	-	68.20	-9.17	215	107	н
(HE40)			13.93453	39.97	PK-U PK-U	38.70 40.90	-37.10	16.60	0.00	56.28	-	-			68.20	-10.03	303	100	H
			17.41450	36.26	PK-U	40.80	-38.30	18.30	0.00	57.06	-	-	-	-	68.20	-11.14	17	100	V
			* 10.6321	36.80	PK-U	37.50	-36.90	14.60	0.00	52.00			74.00	-22.00			0	100	V
	7085	MIMO	14.16967 14.16545	36.35	PK-U PK-U	38.90	-37.30	16.30	0.00	54.25	-	-		-	68.20 68.20	-13.95	198 11	113 299	H V
			* 17.70807	36.40	PK-U	41.20	-38.40	18.30	0.00	57.50	-	-	74.00	-16.50	-	-	0	100	H
	<u>i</u>		10.40274	36.16	PK-U	37.30	-38.40	14.20	0.00	50.36	-			-10.20	68.20	-17.84	90	100	н
			10.38812	35.89	PK-U	37.30	-37.30	14.10	0.00	49.99	-				68.20	-18.21	268	100	V H
	6945	MIMO	13.88997	40.00	PK-U	38.60	-37.00	16.70	0.00	58.30	-	-	-	-	68.20	-9.90	235	110	V
802.11ax			17.37106	35.53	PK-U PK-U	40.80	-38.30	18.40	0.00	56.57	-			-	68.20	-11.77	318	100	V H
(HE80)			10.54767	36.48	PK-U	37.50	-37.30	14.60	0.00	51.28	-			-	68.20	-16.92	0	100	H
	7025	MIMO	14.03928	37.67	PK-U	38.80	-37.30	16.70	0.00	55.87	-	-	-	-	68.20	-12.33	37	105	H
			14.04961 17.55390	40.13 36.19	PK-U PK-U	38.80 41.00	-37.30	16.70	0.00	58.33	-	-		-	68.20	-9.87	0	312 100	H
202 11ev			17.56370	35.75	PK-U	41.00	-38.20	18.50	0.00	57.05	-	-		-	68.20	-11.15	0	100	V
HE20			10.49059	36.18	PK-U	37.40	-37.10	14.10	0.00	50.52	-	-		-	68.20	-17.62	0	100	V
RU mode 26 Tone	6995	MIMO	13.98998 13.98980	35.90	PK-U	38.70 38.70	-37.30	16.60	0.00	53.90	-	-		-	68.20 68.20	-14.30	194 35	108	H
offset 0 Spot-check			17.49757	35.70	PK-U	40.90	-38.40	18.20	0.00	56.40	-	-		-	68.20	-11.80	0	100	H
802.11ax			17.49611 10.45220	36.26	PK-U PK-U	40.90	-38.40	18.20	0.00	50.66		-		-	68.20	-11.59	17	100	H
H40 Blumode			10.43202	36.27	PK-U	37.30	-37.10	14.10	0.00	50.57					68.20	-17.63	158	100	V
26 Tone	6965	MIMO	13.92998	35.81	PK-U	38.70	-37.10	16.60	0.00	54.01	-		-	-	68.20	-14.19	36	275	V
Spot-check			17.41446	35.67 36.22	PK-U PK-U	40.80	-38.30 -38.20	18.30	0.00	56.47					68.20 68.20	-11.73	27	100	H
802.11ax			10.56279	36.02	PK-U	37.50	-37.30	14.70	0.00	50.92	-	-	-	-	68.20	-17.28	348	100	H
RU mode	7025	MIMO	14.05011	30.48	PK-U PK-U	37.50	-37.30	14.70	0.00	53.41	-	-		-	68.20	-10.82	204	111	H
26 Tone offset 0	1020	in the second	14.04949	36.02 36.01	PK-U PK-U	38.80 41.00	-37.30	16.70	0.00	54.22	-	-		-	68.20 68.20	-13.98	214	317	V
Spot-check			17.59931	35.92	PK-U	41.10	-38.20	18.40	0.00	57.22	-	-	-	-	68.20	-10.98	15	100	V

Note1. PK-U - U-NII: Maximum Peak / ADR - U-NII AD primary method, RMS average Note2. * - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

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13. WORST-CASE BELOW 1 GHz SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION, HORIZONTAL)







Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	VULB 9163 (dB/m)	1Cham_30M- 1000M_AMP(ELNA 03-40D) (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	47.6558	45.95	Pk	19.6	-39.9	25.65	40	-14.35	0-360	300	Н
2	75.8857	59.87	Pk	13	-39.7	33.17	40	-6.83	0-360	100	V
3	75.8857	59.44	Qp	13	-39.7	32.74	40	-7.26	185	138	V
4	196.2751	60.75	Pk	17.6	-39.1	39.25	43.52	-4.27	0-360	100	Н
5	196.2751	57.88	Qp	17.6	-39.1	36.38	43.52	-7.14	26	155	Н
6	199.5735	54.04	Pk	17.1	-39.1	32.04	43.52	-11.48	0-360	100	V
7	248.4665	54.57	Pk	18.5	-38.9	34.17	46.02	-11.85	0-360	100	н
8	339.2679	46.05	Pk	20.3	-38.5	27.85	46.02	-18.17	0-360	100	V

Pk - Peak detector

Qp - Quasi-Peak detector

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14. AC POWER LINE CONDUCTED EMISSIONS

LIMITS

FCC §15.207 (a) IC RSS-GEN Clause 8.8

Frequency of Emission (MHz)	Conducted L	imit (dBuV)
	Quasi-peak	Average
0.15-0.5	66 to 56	56 to 46
0.5-5	56	46
5-30	60	50

* Decreases with the logarithm of the frequency.

TEST PROCEDURE

The EUT is placed on a non-conducting table 40 cm from the vertical ground plane and 80 cm above the horizontal ground plane. The EUT is configured in accordance with ANSI C63.10.

The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

Line conducted data is recorded for both NEUTRAL and HOT lines.

RESULTS

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WORST EMISSIONS

LINE 1 DATA

AC LINE UNII 6E-L 1/1 **Test Report Common Information** Project No: 4791479704 Shielded Room#1, Conducted Emission Test Description: Fice de Room#1, Conc FCC Part 15 Subpart C WCF933M AC 120 V, 60 Hz AC Line UNII 6E Test Standard: Model Name: Test Voltage: Test Mode: Opeartor: 27905 Line: LINE Remark: 90 80 70 Class B QP 60 Class B CAV 50



Final Result

Frequency (MHz)	QuasiPeak (dBµV)	CAverage (dBµV)	Limit (dBµV)	Margin (dB)	Bandwidth (kHz)	Line	Filter	Corr. (dB)			
0.160920	47.57		65.42	17.85	9.000	L1	ON	9.8			
0.160920		37.73	55.42	17.68	9.000	L1	ON	9.8			
0.617740	36.75		56.00	19.25	9.000	L1	ON	9.8			
0.617740		31.88	46.00	14.12	9.000	L1	ON	9.8			
13.523990	29.60		60.00	30.40	9.000	L1	ON	10.0			
13.523990		24.10	50.00	25.90	9.000	L1	ON	10.0			
13.657730	31.64		60.00	28.36	9.000	L1	ON	10.0			
13.657730		26.01	50.00	23.99	9.000	L1	ON	10.0			

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LINE 2 DATA

AC LINE UNII 6E-N

1/1

Test Report

Common Information

Project No: Test Description: Test Standard: Model Name: Test Voltage: Test Mode: Opeartor: Line: Remark:

4791479704 Shielded Room#1, Conducted Emission FCC Part 15 Subpart C WCF933M AC 120 V, 60 Hz AC Line UNII 6E 27905 NEUTRAL





Final Result

Frequency	QuasiPeak	CAverage	Limit	Margin	Bandwidth	Line	Filter	Corr.
(MHz)	(dBµV)	(dBµV)	(dBµV)	(dB)	(kHz)			(dB)
0.165580	45.79		65.18	19.38	9.000	N	ON	9.9
0.165580		37.21	55.18	17.96	9.000	N	ON	9.9
0.173440	43.53		64.79	21.26	9.000	N	ON	9.9
0.173440		35.27	54.79	19.53	9.000	N	ON	9.9
0.605970	36.07		56.00	19.93	9.000	N	ON	9.8
0.605970		30.59	46.00	15.41	9.000	N	ON	9.8
0.614040	35.43		56.00	20.57	9.000	N	ON	9.8
0.614040		30.45	46.00	15.55	9.000	N	ON	9.8
13.158690	28.80		60.00	31.20	9.000	N	ON	10.0
13.158690		23.14	50.00	26.86	9.000	N	ON	10.0
13.208370	28.80		60.00	31.20	9.000	N	ON	10.0
13.208370		23.31	50.00	26.69	9.000	N	ON	10.0

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UL Korea, Ltd. Uiwang Laboratory

42, Obongsandan 1-ro, Uiwang-si, Gyeonggi-do, Republic of Korea UL KOREA LTD. Confidential FORM ID: FCC_15E(05) TEL: (031) 389-9603 FAX: (031) 462-8355

15. Contention Based Protocol

15.1. OVERVIEW

15.1.1. LIMITS

FCC

§15.407 (d) (6) / RSS-248 Issue 3 (4.7) KDB 987594 D02

Indoor access points, subordinate devices and client devices operating in the 5.925-7.125 GHz band (herein referred to as unlicensed devices) are required to use technologies that include a contention-based protocol to avoid co-channel interference with incumbent devices sharing the band. To ensure incumbent co-channel operations are detected in a technology-agnostic manner, unlicensed devices are required to detect co-channel radio frequency energy (energy detect) and avoid simultaneous transmission.

Unlicensed low-power indoor devices must detect co-channel radio frequency power that is at least -62 dBm or lower. Upon detection of energy in the band, unlicensed low power indoor devices must vacate the channel (in which incumbent signal is transmitted) and stay off the incumbent channel as long as detected radio frequency power is equal to or greater than the threshold (-62 dBm)1. The -62 dBm (or lower) threshold is referenced to a 0 dBi antenna gain.

To ensure incumbent operations are reliably detected in the band, low power indoor devices must detect RF energy throughout their intended operating channel. For example, an 802.11 device that plans to transmit a 40 MHz- wide signal (on a primary 20 MHz channel and a secondary 20 MHz channel) must detect energy throughout the entire 40 MHz channel. Additionally, low-power indoor devices must detect co-channel energy with 90% or greater certainty.

CHANNEL PUNCTURING AND BANDWIDTH REDUCTION (802.11ax)

This EUT does not support channel puncturing and bandwidth reduction.

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15.1.2. TEST AND MEASUREMENT SYSTEM

CONDUCTED METHOD SYSTEM BLOCK DIAGRAM



TEST SETTING

- 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 EEUT 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.

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TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the tests documented in this report:

TEST EQUIPMENT LIST									
Description	Manufacturer	Model	S/N	Next Cal Due					
Spectrum Analyzer	Keysight	N9030B	MY57143652	2025-07-22					
Vector Signal Generator	R&S	SMW200A	110251	2025-07-24					
Power Splitter	WEINSCHEL	WA1534	UL005	2025-01-17					
Power Splitter	WEINSCHEL	WA1534	UL010	2025-01-17					
Attenuator	AGILENT	8494B	MY42155321	2025-07-24					
Attenuator	AGILENT	8494B	MY42149775	2025-07-24					

SUPPORT EQUIPMENT

The following support equipment was utilized for the CBP tests documented in this report:

PERIPHERAL SUPPORT EQUIPMENT LIST									
Description	Manufacturer	Model	Serial Number	FCC ID					
Wireless Access Point	ASUS	GT-AXE11000	NBIG0X401037X8D	MSQ-RTAXJF00					
Notebook PC (Controller/Server)	Lenovo	TP00050C	XU100606-15005A	DoC					

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15.2. TEST RESULTS



15.2.1. AWGN Sample signal

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15.2.2. Contention Based Protocol Timing Plot (Measurement Criteria)



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