FCC Test Report

Report No.:	RFBARR-WTW-P21030485L-6
FCC ID:	RAS-MT7922A22M
Test Model:	MT7922A22M
Received Date:	2022/2/5
Test Date:	2022/3/15 ~ 2022/5/4
Issued Date:	2022/5/4
Applicant:	MediaTek Inc.
Address:	No. 1, Dusing 1st Rd., Hsinchu Science Park Hsinchu City 30078 Taiwan
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch Hsin Chu Laboratory
Lab Address:	E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300, Taiwan
Test Location:	E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300, Taiwan
FCC Registration / Designation Number:	723255 / TW2022

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Release Control Record

Issue No.	Description	Date Issued
RFBARR-WTW-P21030485L-6	Original release.	2022/5/4

1 Certificate of Conformity

Product:	2TX 11ax (WiFi6E) BW160 + BT/BLE Combo Card
Brand:	MediaTek
Test Model:	MT7922A22M
Sample Status:	Engineering sample
Applicant:	MediaTek Inc.
Test Date:	2022/3/15 ~ 2022/5/4
Standard:	47 CFR FCC Part 15, Subpart E (Section 15.407) ANSI C63.10: 2013

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

Prepared by : _____ , **Date:** 2022/5/4

Claire Kuan / Specialist

Approved by : _____ , **Date:** 2022/5/4

May Chen / Manager

2 Summary of Test Results

47 CFR FCC Part 15, Subpart E (Section 15.407)			
FCC Clause	Test Item	Result	Remarks
15.407(b)(8)	AC Power Conducted Emissions	PASS	Meet the requirement of limit. Minimum passing margin is -15.82dB at 0.45801MHz.
15.407(b)(5)(8)	Radiated Emissions	PASS	Meet the requirement of limit. Minimum passing margin is -0.4dB at 7125.00MHz.
15.407(b)(6)	In-Band Emission (Mask)	PASS	Meet the requirement of limit.
15.407(a)(4/5/6/7/8)	Max Average Transmit Power	PASS	Meet the requirement of limit.
15.407(a)(10)	Emission Bandwidth Measurement	PASS	Meet the requirement of limit.
15.407(a)(4/5/6/7/8)	Peak Power Spectral Density	PASS	Meet the requirement of limit.
15.407 (d)(6)	Contention-based Protocol	PASS	Meet the requirement of limit.
15.407(g)	Frequency Stability	PASS	Meet the requirement of limit.
15.407(a)(7)(8)	Dual Client- Proper Power Adjustment	N/A	Device associates with low power indoor AP only.
15.407(d)(5)	Operational restrictions for 6 GHz U-NII devices	PASS	Declaration by applicant
15.203	Antenna Requirement	PASS	Antenna connector is i-pex(MHF) not a standard connector.

Note:

1. Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

2.1 Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

Measurement	Frequency	Expanded Uncertainty (k=2) (±)
Conducted Emissions at mains ports	150kHz ~ 30MHz	1.9 dB
Radiated Emissions up to 1 GHz	30MHz ~ 1GHz	3.1 dB
Radiated Emissions above 1 GHz	1GHz ~ 6GHz	5.5 dB
	6GHz ~ 18GHz	5.1 dB
	18GHz ~ 40GHz	5.3 dB

2.2 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	2TX 11ax (WiFi6E) BW160 + BT/BLE Combo Card
Brand	MediaTek
Test Model	MT7922A22M
Status of EUT	Engineering sample
Power Supply Rating	3.3 Vdc from host equipment
Modulation Type	64QAM, 16QAM, QPSK, BPSK for OFDM 256QAM for OFDM in 11ac mode only 1024QAM for OFDMA in 11ax mode only
Modulation Technology	OFDM, OFDMA
Transfer Rate	802.11a: up to 54 Mbps 802.11ax: up to 2401.9 Mbps
Operating Frequency	5.955 ~ 6.415GHz, 6.435 ~ 6.525GHz, 6.525 ~ 6.875GHz, 6.875 ~ 7.115GHz
Number of Channel	802.11a/ax (HE20): 59 802.11ax (HE40): 29 802.11ax (HE80): 14 802.11ax (HE160): 7
Output Power	**5.955 ~ 6.415GHz:** 4.989 mW (EIRP: 11.74 dBm / 14.928 mW) **6.435 ~ 6.525GHz:** 5.383 mW (EIRP: 11.6 dBm / 14.454 mW) **6.525 ~ 6.855GHz:** 5.848 mW (EIRP: 12.28 dBm / 16.904 mW) **6.875 ~ 7.115GHz:** 5.888 mW (EIRP: 11.79 dBm / 15.101 mW)
Antenna Type	Refer to Note
Antenna Connector	Refer to Note
Accessory Device	NA
Data Cable Supplied	NA

Note:

1. This report is prepared for FCC class II change. The difference compared with the Report No.: RFBARR-WTW-P21030485A-6 (C2PC) and Report No.: RFBARR-WTW-P21030485K-4 (C1PC) change. As the following:
   - ◆ Enable WiFi 6E 802.11a SISO mode through software change.
2. According to above condition, all test items of 1TX mode for Wi-Fi 6GHz 11a needs to be performed. Only Verify Output Power and Radiated Emission tests according to original report worst channels. And all data were verified to meet the requirements.
3. There are Bluetooth and WLAN (2.4GHz & 5GHz & 5.9GHz & 6GHz) technology used for the EUT.
4. The equipment support 2 types of M.2 form factor A-E Key and E Key.
5. Simultaneously transmission condition.

Condition	Technology	
1	WLAN (5GHz)	Bluetooth
2	WLAN (6GHz)	Bluetooth
3	WLAN (5.9GHz)	Bluetooth
Note: The emission of the simultaneous operation has been evaluated and no non-compliance was found.		

6. The antennas provided to the EUT, please refer to the following table:

Ant. Set	RF Chain No.	Brand	Model	Antenna Net Gain (dBi)	Frequency Range (GHz)	Antenna Type	Connector Type	Cable Length (mm)
1	Chain0	PSA	RFMTA340718EMLB302	3.18 4.92	2.4~2.4835 5.15~5.895	PIFA	i-pex(MHF)	200
	Chain1	PSA	RFMTA340718EMLB302	3.18 4.92	2.4~2.4835 5.15~5.895	PIFA	i-pex(MHF)	200
2	Chain0	PSA	RFMTA311020EMMB301	1.71 4.82 4.76 4.29 4.61 4.09	2.4~2.4835 5.15~5.895 5.925~6.425 6.425~6.525 6.525~6.875 6.875~7.125	PIFA	i-pex(MHF)	200
	Chain1	PSA	RFMTA311020EMMB301	1.71 4.82 4.76 4.29 4.61 4.09	2.4~2.4835 5.15~5.895 5.925~6.425 6.425~6.525 6.525~6.875 6.875~7.125	PIFA	i-pex(MHF)	200
3	Chain0	VSO	JR2Q00340-1	1.62 3.2 3.93 3.61 3.61 3.14	2.4~2.4835 5.15~5.895 5.925~6.425 6.425~6.525 6.525~6.875 6.875~7.125	Dipole	RP SMA PLUG	40
	Chain1	VSO	JR2Q00340-1	1.62 3.2 3.93 3.61 3.61 3.14	2.4~2.4835 5.15~5.895 5.925~6.425 6.425~6.525 6.525~6.875 6.875~7.125	Dipole	RP SMA PLUG	40
4	Chain0	Cortec	AN2450-4902BRS	2.42 3.87	2.4~2.4835 5.15~5.895	Dipole	R-SMA	150
	Chain1	Cortec	AN2450-4902BRS	2.42 3.87	2.4~2.4835 5.15~5.895	Dipole	R-SMA	150
5	Chain0	MSI	WA-P-LE-02-045 (Main)	2.24 2.68 3.01 -1.23 -1.96 -3.68	2.4~2.4835 5.15~5.85 5.925~6.425 6.425~6.525 6.525~6.875 6.875~7.125	PIFA	IPEX-4L	190
	Chain1	MSI	WA-P-LE-02-046 (Aux)	-2.96 1.16 0.99 -2.31 -2.54 -7.44	2.4~2.4835 5.15~5.85 5.925~6.425 6.425~6.525 6.525~6.875 6.875~7.125	PIFA	IPEX-4L	325
6	Chain0	PSA	RFPCA460632IMMB701	-13.20 -13.67 -13.67 -13.09	5.925~6.425 6.425~6.525 6.525~6.875 6.875~7.125	Dipole	IPEX	320mm
	Chain1	PSA	RFPCA460632IMMB701	-13.20 -13.67 -13.67 -13.09	5.925~6.425 6.425~6.525 6.525~6.875 6.875~7.125	Dipole	IPEX	320mm

7	Chain0	PSA	RFMTA421230IMMB701	-13.92 -13.91 -13.91 -14.46	5.925~6.425 6.425~6.525 6.525~6.875 6.875~7.125	PIFA	IPEX	300mm
	Chain1	PSA	RFMTA421230IMMB701	-13.92 -13.91 -13.91 -14.46	5.925~6.425 6.425~6.525 6.525~6.875 6.875~7.125	PIFA	IPEX	300mm
Note: For above antennas, max. gain was selected for the final test.								

7. The EUT incorporates a MIMO function:

6GHz Band				
MODULATION MODE	**TX & RX CONFIGURATION**		**CDD mode**	**Beamforming mode**
802.11a	1TX or 2TX	2RX	Support	Not Support
802.11ax (HE20)	2TX	2RX	Support	Not Support
802.11ax (HE40)	2TX	2RX	Support	Not Support
802.11ax (HE80)	2TX	2RX	Support	Not Support
802.11ax (HE160)	2TX	2RX	Support	Not Support
802.11ax (RU26/52/106/242/484/996/1992)	2TX	2RX	Support	Not Support

8. The above EUT information is declared by manufacturer and for more detailed features description, please refers to the manufacturer's specifications or user's manual.
9. The above Antenna information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications, the laboratory shall not be held responsible.

3.2 Description of Test Modes

FOR 5925 ~ 6425MHz (U-NII-5 band)

24 channels are provided for 802.11a, 802.11ax (HE20):

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
1	5955 MHz	5	5975 MHz	9	5995 MHz	13	6015 MHz
17	6035 MHz	21	6055 MHz	25	6075 MHz	29	6095 MHz
33	6115 MHz	37	6135 MHz	41	6155 MHz	45	6175 MHz
49	6195 MHz	53	6215 MHz	57	6235 MHz	61	6255 MHz
65	6275 MHz	69	6295 MHz	73	6315 MHz	77	6335 MHz
81	6355 MHz	85	6375 MHz	89	6395 MHz	93	6415 MHz

12 channels are provided for 802.11ax (HE40):

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
3	5965 MHz	11	6005 MHz	19	6045 MHz	27	6085 MHz
35	6125 MHz	43	6165 MHz	51	6205 MHz	59	6245 MHz
67	6285 MHz	75	6325 MHz	83	6365 MHz	91	6405 MHz

6 channel is provided for 802.11ax (HE80):

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
7	5985 MHz	23	6065 MHz	39	6145 MHz	55	6225 MHz
71	6305 MHz	87	6385 MHz				

3 channels are provided for 802.11ax (HE160):

Channel	Frequency	Channel	Frequency	Channel	Frequency
15	6025 MHz	47	6185 MHz	79	6345 MHz

FOR 6425 ~ 6525MHz (U-NII-6 band)

5 channels are provided for 802.11a, 802.11ax (HE20):

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
97	6435 MHz	101	6455 MHz	105	6475 MHz	109	6495 MHz
113	6515 MHz						

3 channels are provided for 802.11ax (HE40):

Channel	Frequency	Channel	Frequency	Channel	Frequency
99	6445 MHz	107	6485 MHz	*115	6525 MHz

1 channel is provided for 802.11ax (HE80):

Channel	Frequency	Channel	Frequency
103	6465 MHz	*119	6545 MHz

1 channel is provided for 802.11ax (HE160):

Channel	Frequency
*111	6505 MHz

FOR 6525 ~ 6875MHz (U-NII-7 band)

18 channels are provided for 802.11a, 802.11ax (HE20):

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
117	6535 MHz	121	6555 MHz	125	6575 MHz	129	6595 MHz
133	6615 MHz	137	6635 MHz	141	6655 MHz	145	6675 MHz
149	6695 MHz	153	6715 MHz	157	6735 MHz	161	6755 MHz
165	6775 MHz	169	6795 MHz	173	6815 MHz	177	6835 MHz
181	6855 MHz	*185	6875 MHz				

8 channels are provided for 802.11ax (HE40):

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
123	6565 MHz	131	6605 MHz	139	6645 MHz	147	6685 MHz
155	6725 MHz	163	6765 MHz	171	6805 MHz	179	6845 MHz

5 channels are provided for 802.11ax (HE80):

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
*119	6545 MHz	135	6625 MHz	151	6705 MHz	167	6785 MHz
*183	6865 MHz						

2 channels are provided for 802.11ax (HE160):

Channel	Frequency	Channel	Frequency
143	6665 MHz	*175	6825 MHz

FOR 6875 ~ 7125MHz (U-NII-8 band):

12 channels are provided for 802.11a, 802.11ax (HE20):

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
189	6895 MHz	193	6915 MHz	197	6935 MHz	201	6955 MHz
205	6975 MHz	209	6995 MHz	213	7015 MHz	217	7035 MHz
221	7055 MHz	225	7075 MHz	229	7095 MHz	233	7115 MHz

6 channels are provided for 802.11ax (HE40):

Channel	Frequency	Channel	Frequency
*187	6885 MHz	203	6965 MHz
195	6925 MHz	227	7085 MHz
219	7045 MHz	211	7005 MHz

2 channel is provided for 802.11ax (HE80):

Channel	Frequency	Channel	Frequency
199	6945 MHz	215	7025 MHz

1 channel is provided for 802.11ax (HE160):

Channel	Frequency
207	6985 MHz

Note: * mean this's straddle channel.

3.2.1 Test Mode Applicability and Tested Channel Detail

EUT Configure Mode	Applicable To						Description
	RE≥1G	RE<1G	IBE	PLC	CBP	APCM	
1	√	√	√	√	√	√	1TX mode (E Key) With PIFA antenna
2	√	√	-	-	-	-	1TX mode (E Key) With Dipole antenna
3	√	-	-	-	-	√	2TX mode (E Key) With PIFA antenna
4	√	-	-	-	-	-	2TX mode (E Key) With Dipole antenna

Where **RE≥1G:** Radiated Emission above 1GHz **RE<1G:** Radiated Emission below 1GHz
PLC: Power Line Conducted Emission **APCM:** Antenna Port Conducted Measurement
IBE: In-Band Emission (MASK) **CBP:**Contention Based Protocol

Note: In the original report, the EUT's antenna (PIFA) had been pre-tested on the positioned of each 3 axis. The worst case was found when positioned on Z-plane

Radiated Emission Measurement (Above 1GHz):

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
☒ Following channel(s) was (were) selected for the final test as listed below.

Configure Mode	Mode	FREQ. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate Parameter
1, 2	802.11a	5955-6415	1 to 93	1, 45, 93	OFDM	BPSK	6Mb/s
		6435-6525	97 to 113	97, 105, 113	OFDM	BPSK	6Mb/s
		6525-6875	117 to 181	117, 153, 181	OFDM	BPSK	MCS0
		6875-7115	185 to 233	185, 213, 233	OFDM	BPSK	6Mb/s
3, 4	802.11ax (HE20)	5955-6415	1 to 93	113	OFDMA	BPSK	MCS0
		6435-6525	97 to 113		OFDMA	BPSK	MCS0
		6525-6875	117 to 181		OFDMA	BPSK	MCS0
		6875-7115	185 to 233		OFDMA	BPSK	MCS0
	802.11ax (HE40)	5955-6415	3 to 91	115	OFDMA	BPSK	MCS0
		6435-6525	99 to 115		OFDMA	BPSK	MCS0
		6525-6875	115 to 187		OFDMA	BPSK	MCS0
		6875-7115	187 to 227		OFDMA	BPSK	MCS0
	802.11ax (HE80)	5955-6415	7 to 87	119	OFDMA	BPSK	MCS0
		6435-6525	103 to 119		OFDMA	BPSK	MCS0
		6525-6875	119 to 183		OFDMA	BPSK	MCS0
		6875-7115	183 to 215		OFDMA	BPSK	MCS0
	802.11ax (HE160)	5955-6415	15 to 79	79	OFDMA	BPSK	MCS0
		6435-6525	111		OFDMA	BPSK	MCS0
		6525-6875	143 to 175		OFDMA	BPSK	MCS0
		6875-7115	207		OFDMA	BPSK	MCS0

Radiated Emission Measurement (Below 1GHz):

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

Configure Mode	Mode	FREQ. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate Parameter
1, 2	802.11a	5955-6415 6435-6525 6525-6875 6875-7115	1 to 93 97 to 113 117 to 181 185 to 233	181	OFDM	BPSK	6Mb/s

In-Band Emission (MASK) Measurement:

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

Configure Mode	Mode	FREQ. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate Parameter
1	802.11a	5955-6415	1 to 93	1, 45, 93	OFDM	BPSK	6Mb/s
		6435-6525	97 to 113	97, 105, 113	OFDM	BPSK	6Mb/s
		6525-6875	117 to 181	117, 153, 181	OFDM	BPSK	MCS0
		6875-7115	185 to 233	185, 213, 233	OFDM	BPSK	6Mb/s

Power Line Conducted Emission Measurement:

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

Configure Mode	Mode	FREQ. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate Parameter
1	802.11a	5955-6415 6435-6525 6525-6875 6875-7115	1 to 93 97 to 113 117 to 181 185 to 233	181	OFDM	BPSK	6Mb/s

Antenna Port Conducted Measurement:

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

Configure Mode	Mode	FREQ. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate Parameter
1	802.11a	5955-6415	1 to 93	1, 45, 93	OFDM	BPSK	6Mb/s
		6435-6525	97 to 113	97, 105, 113	OFDM	BPSK	6Mb/s
		6525-6875	117 to 181	117, 153, 181	OFDM	BPSK	MCS0
		6875-7115	185 to 233	185, 213, 233	OFDM	BPSK	6Mb/s
3 (For output power)	802.11ax (HE20)	5955-6415	1 to 93	113	OFDMA	BPSK	MCS0
		6435-6525	97 to 113		OFDMA	BPSK	MCS0
		6525-6875	117 to 181		OFDMA	BPSK	MCS0
		6875-7115	185 to 233		OFDMA	BPSK	MCS0
	802.11ax (HE40)	5955-6415	3 to 91	115	OFDMA	BPSK	MCS0
		6435-6525	99 to 115		OFDMA	BPSK	MCS0
		6525-6875	115 to 179		OFDMA	BPSK	MCS0
		6875-7115	187 to 227		OFDMA	BPSK	MCS0
	802.11ax (HE80)	5955-6415	7 to 87	119	OFDMA	BPSK	MCS0
		6435-6525	103 to 119		OFDMA	BPSK	MCS0
		6525-6875	119 to 167		OFDMA	BPSK	MCS0
		6875-7115	183 to 215		OFDMA	BPSK	MCS0
	802.11ax (HE160)	5955-6415	15 to 79	79	OFDMA	BPSK	MCS0
		6435-6525	111		OFDMA	BPSK	MCS0
		6525-6875	143 to 175		OFDMA	BPSK	MCS0
		6875-7115	207		OFDMA	BPSK	MCS0

Contention Based Protocol Measurement:

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

Mode	FREQ. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate Parameter
802.11a	5955-6415	1 to 93	1	OFDMA	BPSK	MCS0
	6435-6525	97 to 113	97	OFDMA	BPSK	MCS0
	6525-6855	117 to 185	129	OFDMA	BPSK	MCS0
	6875-7115	189 to 233	193	OFDMA	BPSK	MCS0

Test Condition:

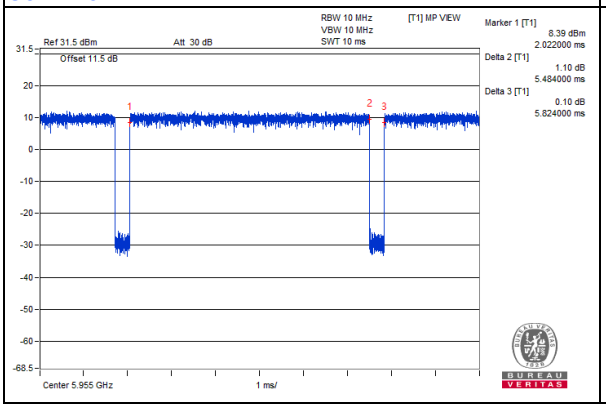
Applicable To	Environmental Conditions	Input Power (System)	Tested By
RE≥1G	25deg. C, 65%RH	120Vac, 60Hz	Nelson Teng
	25deg. C, 75%RH		Tom Yang
	24deg. C, 66%RH		Tom Yang
RE<1G	22deg. C, 62%RH	120Vac, 60Hz	Sampson Chen
PLC	22deg. C, 65%RH	120Vac, 60Hz	Sampson Chen
APCM	24deg. C, 62%RH	120Vac, 60Hz	Eric Peng
CBP	25deg. C, 60%RH	120Vac, 60Hz	Adele Chen

3.3 Duty Cycle of Test Signal

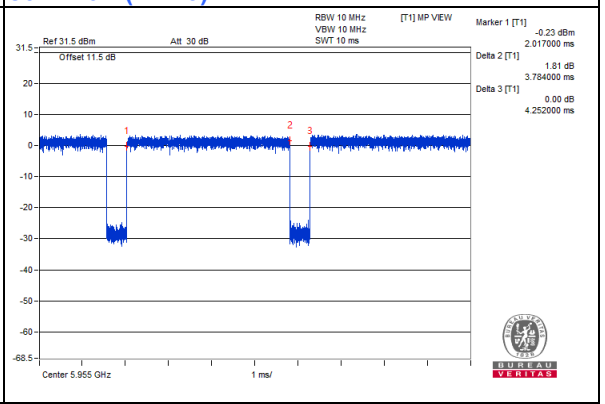
Duty cycle of test signal is < 98 %, duty factor is required

802.11a: Duty cycle = 5.484 ms/5.824 ms= 0.942, Duty factor = 10 * log(1/ Duty cycle) = 0.26 dB
802.11ax (HE20): Duty cycle = 3.784 ms/4.252 ms= 0.89, Duty factor = 10 * log(1/ Duty cycle) = 0.51 dB
802.11ax (HE40): Duty cycle = 3.786 ms/4.259 ms= 0.889, Duty factor = 10 * log(1/ Duty cycle) = 0.51 dB
802.11ax (HE80): Duty cycle = 1.836 ms/3.307 ms= 0.796, Duty factor = 10 * log(1/ Duty cycle) = 0.99 dB
802.11ax (HE160): Duty cycle = 0.955 ms/1.422 ms= 0.672, Duty factor = 10 * log(1/ Duty cycle) = 1.73 dB

802.11a



802.11ax (HE20)



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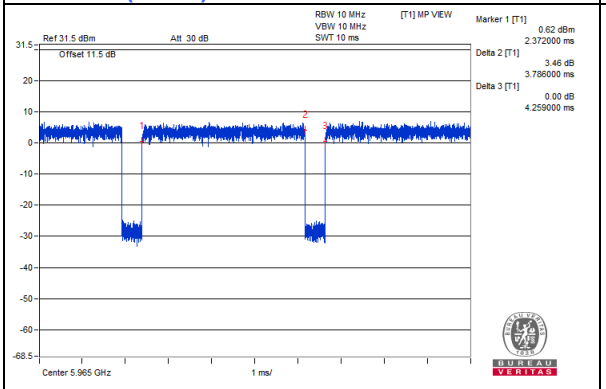

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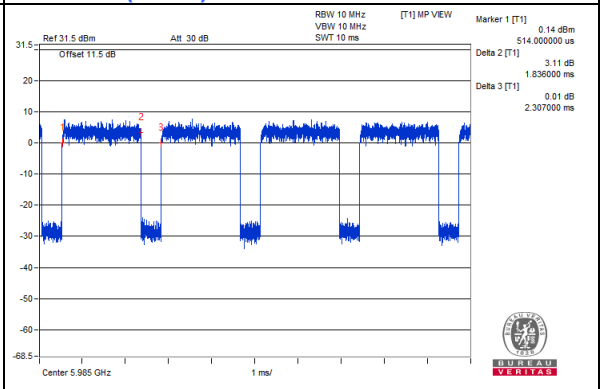

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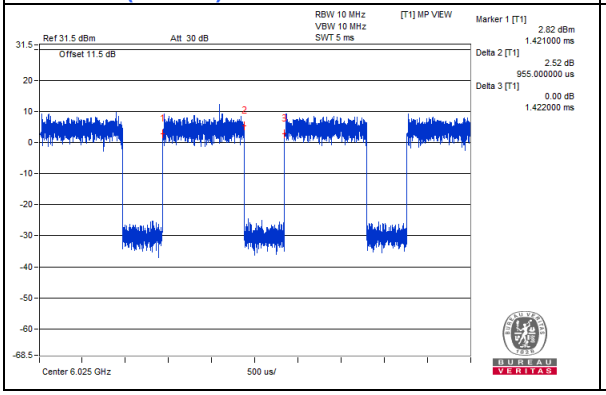


3.4 Description of Support Units

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

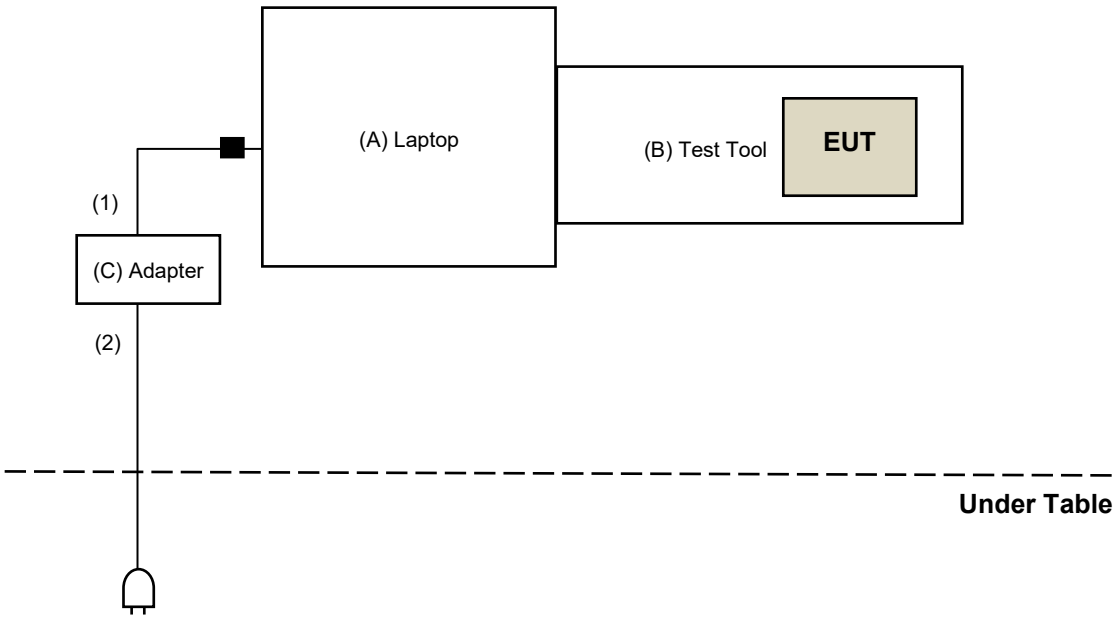
ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	Laptop	DELL	E5430	HYV4VY1	DoC	Provided by Lab
B.	Test Tool	MediaTek	MTK1849	NA	NA	Supplied by client
C.	Adapter	Dell	LA65NS2-01	NA	NA	Provided by Lab

ID	Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	DC Cable	1	1.8	No	1	Provided by Lab
2.	AC Cable	1	1.8	No	0	Provided by Lab

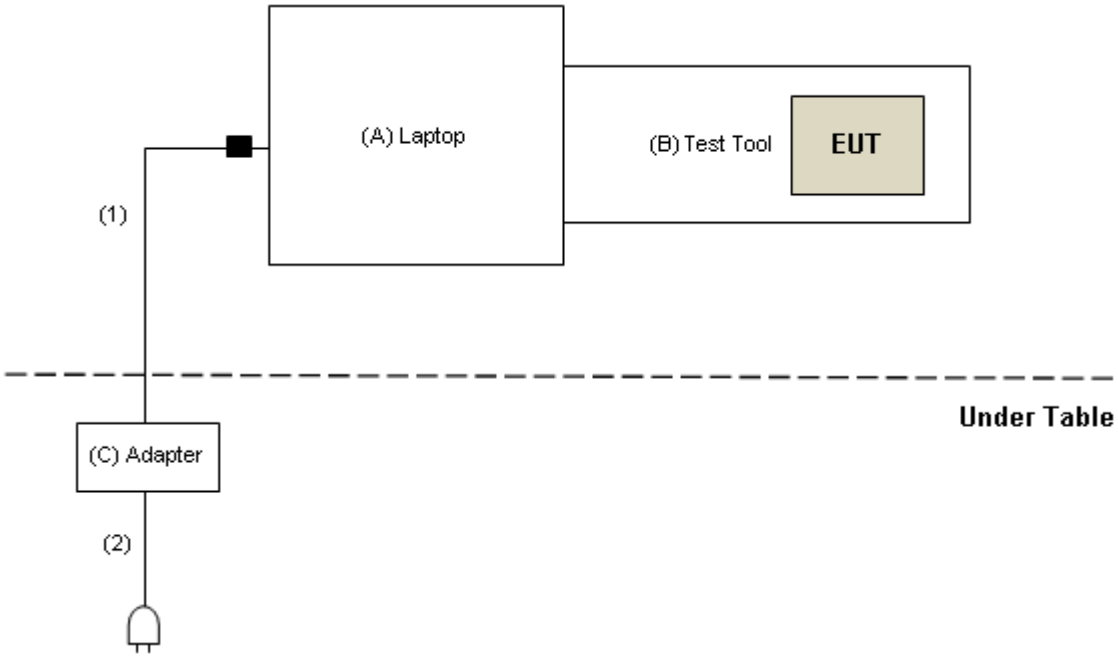
Note: The core(s) is(are) originally attached to the cable(s).

3.4.1 Configuration of System under Test

For AC Power Conducted Emission test:



For Radiated Emissions test:



3.5 General Description of Applied Standard

The EUT is a RF Product. According to the specifications of the manufacturer, it must comply with the requirements of the following standards and references:

Test Standard:
FCC Part 15, Subpart E (15.407)
ANSI C63.10-2013

All test items have been performed and recorded as per the above standards.

References Test Guidance:
KDB 987594 D02 EMC Measurement v01r01
KDB 789033 D02 General UNII Test Procedure New Rules v02r01
KDB 662911 D01 Multiple Transmitter Output v02r01

All test items have been performed as a reference to the above KDB test guidance.

4 Test Types and Results

4.1 Radiated Emission and Bandedge Measurement

4.1.1 Limits of Radiated Emission and Bandedge Measurement

Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table.

Frequencies (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.

Limits of unwanted emission out of the restricted bands

Frequencies (MHz)	EIRP Limit	Equivalent Field Strength at 3m
5925MHz > F > 7125MHz	Peak:-7 (dBm/MHz)	88.2(dBμV/m)
	Average: -27 (dBm/MHz)	68.2(dBμV/m)

Note:

The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength:

$$E = \frac{1000000\sqrt{30P}}{3}$$ μV/m, where P is the eirp (Watts).

4.1.2 Test Instruments

For Radiated emissiontest:

Description & Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Test Receiver Agilent	N9038A	MY51210202	2021/11/19	2022/11/18
Software	ADT_Radiated_V8.7.08	NA	NA	NA
Boresight Antenna Tower & Turn Table Max-Full	MF-7802BS	MF780208530	NA	NA
Pre_Amplifier EMCI	EMC001340	980142	2021/5/24	2022/5/23
Loop Antenna TESEQ	HLA 6121	45745	2021/7/21	2022/7/20
RF Coaxial Cable JYEBO	5D-FB	LOOPCAB-001	2022/1/6	2023/1/5
RF Coaxial Cable JYEBO	5D-FB	LOOPCAB-002	2022/1/6	2023/1/5
Pre_Amplifier EMCI	EMC330N	980701	2022/3/8	2023/3/7
Trilog Broadband Antenna Schwarzbeck	VULB 9168	9168-406	2021/10/27	2022/10/26
RF Coaxial Cable COMMATE/PEWC	8D	966-4-1	2022/3/8	2023/3/7
RF Coaxial Cable COMMATE/PEWC	8D	966-4-2	2022/3/8	2023/3/7
RF Coaxial Cable COMMATE/PEWC	8D	966-4-3	2022/3/8	2023/3/7
Fixed attenuator Mini-Circuits	UNAT-5+	PAD-ATT5-03	2022/1/10	2023/1/9
Horn Antenna Schwarzbeck	BBHA 9120D	9120D-783	2021/11/14	2022/11/13
Pre_Amplifier EMCI	EMC 12630 SE	980638	2021/4/7	2022/4/6
RF Cable-Frequency Range : 1-26.5GHz EMCI	EMC104-SM-SM-1200	160922	2021/12/24	2022/12/23
RF Coaxial Cable EMCI	EMC104-SM-SM-2000	180502	2021/4/26	2022/4/25
RF Coaxial Cable EMCI	EMC104-SM-SM-6000	210704	2021/11/9	2022/11/8

Note:

1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in 966 Chamber No. 4.
3. Tested Date: 2022/3/15 ~ 2022/3/22

For other test items:

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Spectrum Analyzer R&S	FSV40	100964	2021/5/31	2022/5/30
Attenuator WOKEN	MDCS18N-10	MDCS18N-10-01	2021/4/13	2022/4/12
Software	ADT_RF Test Software V6.6.5.4	NA	NA	NA
Power Meter Anritsu	ML2495A	1529002	2021/6/21	2022/6/20
Pulse Power Sensor Anritsu	MA2411B	1339443	2021/5/31	2022/5/30
DC POWER SUPPLY Topward	6603D	795558	NA	NA
Temperature & Humidity Chamber Giant Force	GTH-150-40-SP-AR	MAA0812-008	2022/1/14	2023/1/13
True RMS Clamp Meter Fluke	325	31130711WS	2021/6/2	2022/6/1

NOTE:
1. The test was performed in Oven room 2.
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
3. Tested Date: 2022/3/31

4.1.3 Test Procedure

For Radiated emission below 30MHz

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. The test-receiver system was set to Quasi-Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

NOTE:

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

For Radiated emission above 30MHz

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. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.

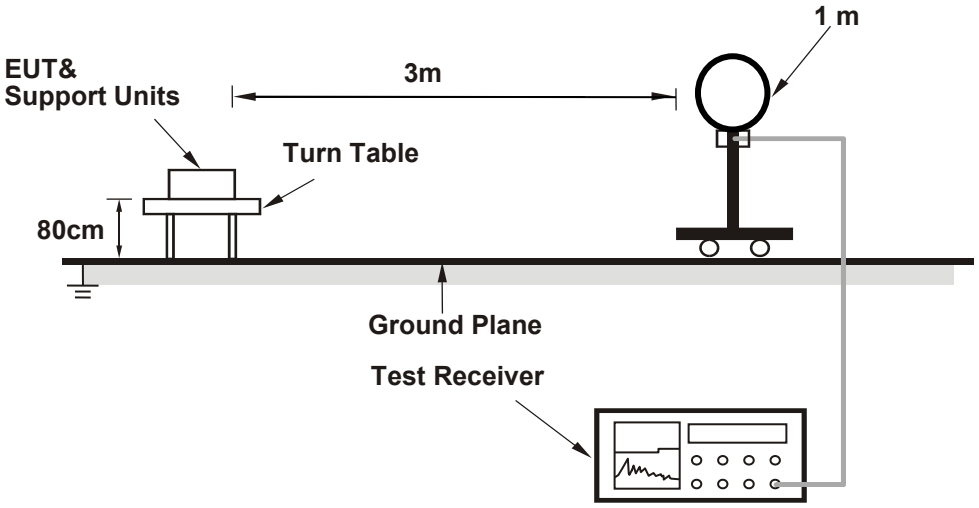
f. The test-receiver system was set to peak detects function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the RMS detector is unnecessary.

Note:

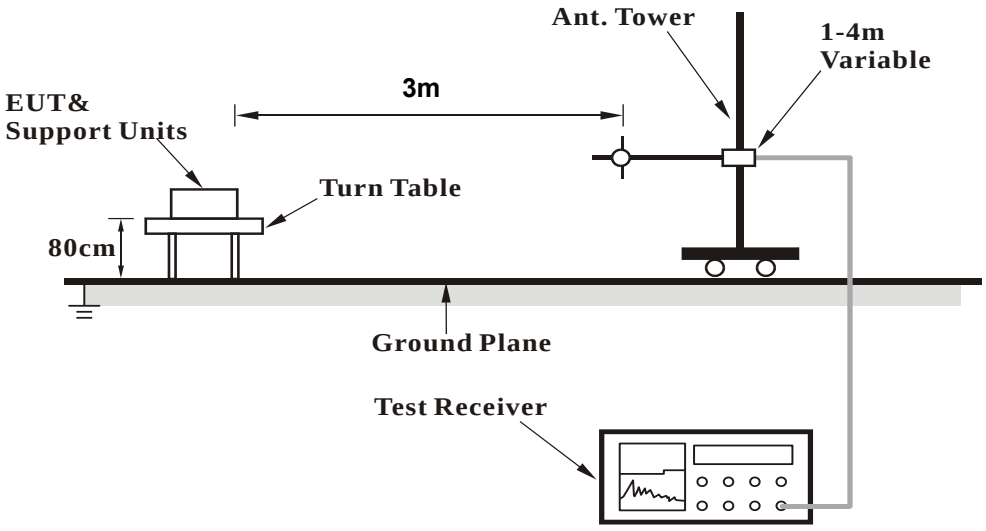
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
3. The detection is peak and the resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is ≥ 1/T (Duty cycle < 98%) or 10Hz (Duty cycle ≥ 98%) for Average measurement (AV) at frequency above 1GHz.
4. All modes of operation were investigated and the worst-case emissions are reported.

4.1.4 Test Setup

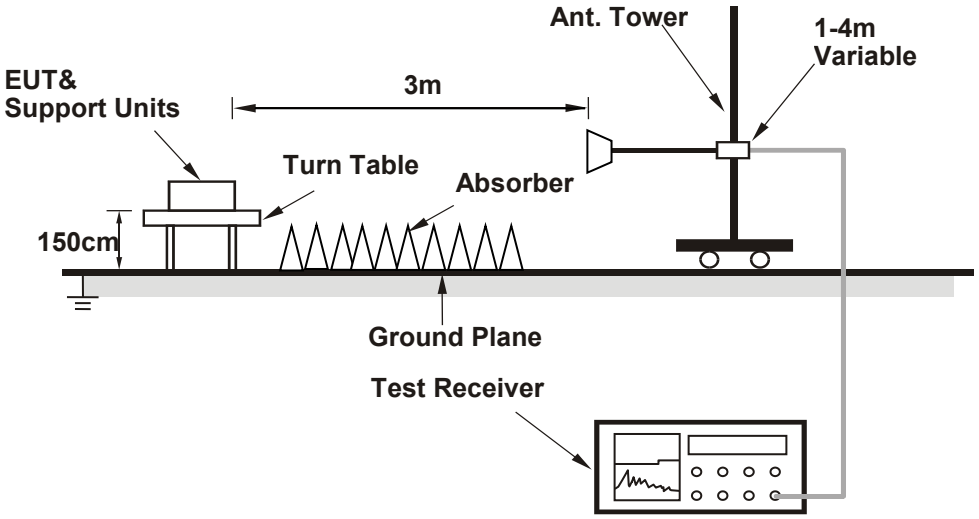
For Radiated emission below 30MHz



For Radiated emission 30MHz to 1GHz



For Radiated emission above 1GHz



For the actual test configuration, please refer to the attached file (Test Setup Photo).

4.1.5 EUT Operating Condition

a. Connected the EUT with the Laptop which is placed on the testing table.
b. Controlling software (QAtool_7922_HQA_20210310) has been activated to set the EUT under transmission condition continuously.

4.1.6 Test Results (Mode 1)

Above 1GHz Data:

RF Mode	TX 802.11a 6G	Channel	CH 1：5955 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 200 Hz
Input Power (System)	120Vac, 60Hz	Environmental Conditions	25 °C, 75 % RH
Tested By	Tom Yang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5925.00	64.9 PK	88.2	-23.3	2.14 H	92	59.0	5.9
2	#5925.00	49.7 AV	68.2	-18.5	2.14 H	92	43.8	5.9
3	*5955.00	115.0 PK			2.14 H	92	109.1	5.9
4	*5955.00	106.4 AV			2.14 H	92	100.5	5.9
5	11910.00	54.5 PK	74.0	-19.5	2.20 H	123	45.9	8.6
6	11910.00	44.3 AV	54.0	-9.7	2.20 H	123	35.7	8.6
7	17865.00	54.6 PK	74.0	-19.4	1.57 H	100	62.0	-7.4
8	17865.00	44.5 AV	54.0	-9.5	1.57 H	100	51.9	-7.4
9	23820.00	45.8 PK	74.0	-28.2	2.08 H	157	48.5	-2.7
10	23820.00	35.8 AV	54.0	-18.2	2.08 H	157	38.5	-2.7
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5925.00	58.3 PK	88.2	-29.9	2.08 V	40	52.4	5.9
2	#5925.00	47.9 AV	68.2	-20.3	2.08 V	40	42.0	5.9
3	*5955.00	109.7 PK			2.08 V	40	103.8	5.9
4	*5955.00	101.6 AV			2.08 V	40	95.7	5.9
5	11910.00	56.9 PK	74.0	-17.1	1.23 V	246	48.3	8.6
6	11910.00	45.5 AV	54.0	-8.5	1.23 V	246	36.9	8.6
7	17865.00	59.5 PK	74.0	-14.5	2.41 V	278	66.9	-7.4
8	17865.00	47.8 AV	54.0	-6.2	2.41 V	278	55.2	-7.4
9	23820.00	46.6 PK	74.0	-27.4	2.19 V	221	49.3	-2.7
10	23820.00	36.8 AV	54.0	-17.2	2.19 V	221	39.5	-2.7

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11a 6G	Channel	CH 45：6175 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 200 Hz
Input Power (System)	120Vac, 60Hz	Environmental Conditions	25 °C, 75 % RH
Tested By	Tom Yang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*6175.00	114.9 PK			2.12 H	91	108.8	6.1
2	*6175.00	106.4 AV			2.12 H	91	100.3	6.1
3	12350.00	54.2 PK	74.0	-19.8	2.16 H	124	45.4	8.8
4	12350.00	43.9 AV	54.0	-10.1	2.16 H	124	35.1	8.8
5	18525.00	54.6 PK	74.0	-19.4	1.55 H	110	61.8	-7.2
6	18525.00	44.6 AV	54.0	-9.4	1.55 H	110	51.8	-7.2
7	#24700.00	45.3 PK	88.2	-42.9	2.10 H	153	46.9	-1.6
8	#24700.00	35.5 AV	68.2	-32.7	2.10 H	153	37.1	-1.6
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*6175.00	109.1 PK			2.02 V	58	103.0	6.1
2	*6175.00	100.4 AV			2.02 V	58	94.3	6.1
3	12350.00	56.7 PK	74.0	-17.3	1.23 V	248	47.9	8.8
4	12350.00	45.4 AV	54.0	-8.6	1.23 V	248	36.6	8.8
5	18525.00	59.3 PK	74.0	-14.7	2.36 V	270	66.5	-7.2
6	18525.00	47.4 AV	54.0	-6.6	2.36 V	270	54.6	-7.2
7	#24700.00	47.4 PK	88.2	-40.8	2.23 V	219	49.0	-1.6
8	#24700.00	37.4 AV	68.2	-30.8	2.23 V	219	39.0	-1.6

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11a 6G	Channel	CH 93：6415 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 200 Hz
Input Power (System)	120Vac, 60Hz	Environmental Conditions	25 °C, 75 % RH
Tested By	Tom Yang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*6415.00	115.7 PK			2.10 H	94	109.6	6.1
2	*6415.00	106.9 AV			2.10 H	94	100.8	6.1
3	#12830.00	54.1 PK	88.2	-34.1	2.21 H	114	45.3	8.8
4	#12830.00	44.0 AV	68.2	-24.2	2.21 H	114	35.2	8.8
5	19245.00	54.4 PK	74.0	-19.6	1.57 H	115	61.3	-6.9
6	19245.00	44.1 AV	54.0	-9.9	1.57 H	115	51.0	-6.9
7	#25660.00	45.3 PK	88.2	-42.9	2.04 H	166	45.7	-0.4
8	#25660.00	35.5 AV	68.2	-32.7	2.04 H	166	35.9	-0.4
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*6415.00	109.8 PK			2.05 V	52	103.7	6.1
2	*6415.00	100.9 AV			2.05 V	52	94.8	6.1
3	#12830.00	56.7 PK	88.2	-31.5	1.28 V	259	47.9	8.8
4	#12830.00	45.3 AV	68.2	-22.9	1.28 V	259	36.5	8.8
5	19245.00	59.9 PK	74.0	-14.1	2.40 V	281	66.8	-6.9
6	19245.00	47.8 AV	54.0	-6.2	2.40 V	281	54.7	-6.9
7	#25660.00	47.4 PK	88.2	-40.8	2.23 V	242	47.8	-0.4
8	#25660.00	37.7 AV	68.2	-30.5	2.23 V	242	38.1	-0.4

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11a 6G	Channel	CH 97：6435 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 200 Hz
Input Power (System)	120Vac, 60Hz	Environmental Conditions	25 °C, 75 % RH
Tested By	Tom Yang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*6435.00	114.4 PK			2.11 H	95	108.2	6.2
2	*6435.00	105.9 AV			2.11 H	95	99.7	6.2
3	#12870.00	54.7 PK	88.2	-33.5	2.21 H	129	45.9	8.8
4	#12870.00	44.3 AV	68.2	-23.9	2.21 H	129	35.5	8.8
5	19305.00	54.8 PK	74.0	-19.2	1.51 H	104	62.0	-7.2
6	19305.00	44.4 AV	54.0	-9.6	1.51 H	104	51.6	-7.2
7	#25740.00	45.5 PK	88.2	-42.7	2.06 H	158	45.8	-0.3
8	#25740.00	35.4 AV	68.2	-32.8	2.06 H	158	35.7	-0.3
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*6435.00	109.1 PK			2.08 V	44	102.9	6.2
2	*6435.00	100.2 AV			2.08 V	44	94.0	6.2
3	#12870.00	56.9 PK	88.2	-31.3	1.24 V	231	48.1	8.8
4	#12870.00	45.5 AV	68.2	-22.7	1.24 V	231	36.7	8.8
5	19305.00	60.1 PK	74.0	-13.9	2.38 V	261	67.3	-7.2
6	19305.00	48.0 AV	54.0	-6.0	2.38 V	261	55.2	-7.2
7	#25740.00	46.9 PK	88.2	-41.3	2.25 V	237	47.2	-0.3
8	#25740.00	37.1 AV	68.2	-31.1	2.25 V	237	37.4	-0.3

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11a 6G	Channel	CH 105：6475 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 200 Hz
Input Power (System)	120Vac, 60Hz	Environmental Conditions	25 °C, 75 % RH
Tested By	Tom Yang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*6475.00	114.1 PK			2.09 H	85	107.9	6.2
2	*6475.00	105.7 AV			2.09 H	85	99.5	6.2
3	#12950.00	54.4 PK	88.2	-33.8	2.15 H	121	45.6	8.8
4	#12950.00	44.3 AV	68.2	-23.9	2.15 H	121	35.5	8.8
5	19425.00	55.1 PK	74.0	-18.9	1.63 H	101	62.0	-6.9
6	19425.00	44.9 AV	54.0	-9.1	1.63 H	101	51.8	-6.9
7	#25900.00	45.8 PK	88.2	-42.4	2.14 H	168	46.0	-0.2
8	#25900.00	35.7 AV	68.2	-32.5	2.14 H	168	35.9	-0.2
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*6475.00	109.4 PK			2.05 V	56	103.2	6.2
2	*6475.00	100.4 AV			2.05 V	56	94.2	6.2
3	#12950.00	56.9 PK	88.2	-31.3	1.23 V	254	48.1	8.8
4	#12950.00	45.4 AV	68.2	-22.8	1.23 V	254	36.6	8.8
5	19425.00	59.8 PK	74.0	-14.2	2.43 V	263	66.7	-6.9
6	19425.00	47.9 AV	54.0	-6.1	2.43 V	263	54.8	-6.9
7	#25900.00	47.3 PK	88.2	-40.9	2.22 V	232	47.5	-0.2
8	#25900.00	37.3 AV	68.2	-30.9	2.22 V	232	37.5	-0.2

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11a 6G	Channel	CH 113：6515 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 200 Hz
Input Power (System)	120Vac, 60Hz	Environmental Conditions	25 °C, 75 % RH
Tested By	Tom Yang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*6515.00	114.6 PK			2.15 H	94	108.4	6.2
2	*6515.00	105.7 AV			2.15 H	94	99.5	6.2
3	#13030.00	54.9 PK	88.2	-33.3	2.24 H	126	46.1	8.8
4	#13030.00	44.6 AV	68.2	-23.6	2.24 H	126	35.8	8.8
5	19545.00	54.5 PK	74.0	-19.5	1.62 H	109	61.1	-6.6
6	19545.00	44.4 AV	54.0	-9.6	1.62 H	109	51.0	-6.6
7	#26060.00	45.6 PK	88.2	-42.6	2.06 H	166	45.7	-0.1
8	#26060.00	35.3 AV	68.2	-32.9	2.06 H	166	35.4	-0.1
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*6515.00	109.4 PK			2.05 V	54	103.2	6.2
2	*6515.00	100.6 AV			2.05 V	54	94.4	6.2
3	#13030.00	57.1 PK	88.2	-31.1	1.22 V	254	48.3	8.8
4	#13030.00	45.7 AV	68.2	-22.5	1.22 V	254	36.9	8.8
5	19545.00	59.5 PK	74.0	-14.5	2.35 V	261	66.1	-6.6
6	19545.00	47.4 AV	54.0	-6.6	2.35 V	261	54.0	-6.6
7	#26060.00	46.4 PK	88.2	-41.8	2.19 V	233	46.5	-0.1
8	#26060.00	36.9 AV	68.2	-31.3	2.19 V	233	37.0	-0.1

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11a 6G	Channel	CH 117：6535 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 200 Hz
Input Power (System)	120Vac, 60Hz	Environmental Conditions	25 °C, 75 % RH
Tested By	Tom Yang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*6535.00	113.9 PK			2.08 H	101	107.7	6.2
2	*6535.00	105.4 AV			2.08 H	101	99.2	6.2
3	#13070.00	54.5 PK	88.2	-33.7	2.17 H	126	45.7	8.8
4	#13070.00	44.3 AV	68.2	-23.9	2.17 H	126	35.5	8.8
5	19605.00	54.7 PK	74.0	-19.3	1.55 H	99	61.2	-6.5
6	19605.00	44.7 AV	54.0	-9.3	1.55 H	99	51.2	-6.5
7	#26140.00	45.5 PK	88.2	-42.7	2.06 H	143	45.5	0.0
8	#26140.00	35.3 AV	68.2	-32.9	2.06 H	143	35.3	0.0
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*6535.00	109.6 PK			2.02 V	54	103.4	6.2
2	*6535.00	100.6 AV			2.02 V	54	94.4	6.2
3	#13070.00	56.6 PK	88.2	-31.6	1.27 V	230	47.8	8.8
4	#13070.00	45.0 AV	68.2	-23.2	1.27 V	230	36.2	8.8
5	19605.00	59.1 PK	74.0	-14.9	2.37 V	276	65.6	-6.5
6	19605.00	47.3 AV	54.0	-6.7	2.37 V	276	53.8	-6.5
7	#26140.00	47.3 PK	88.2	-40.9	2.16 V	242	47.3	0.0
8	#26140.00	37.5 AV	68.2	-30.7	2.16 V	242	37.5	0.0

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11a 6G	Channel	CH 153：6715 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 200 Hz
Input Power (System)	120Vac, 60Hz	Environmental Conditions	25 °C, 75 % RH
Tested By	Tom Yang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*6715.00	114.9 PK			2.06 H	102	108.7	6.2
2	*6715.00	106.3 AV			2.06 H	102	100.1	6.2
3	#13430.00	54.6 PK	88.2	-33.6	2.24 H	127	45.7	8.9
4	#13430.00	44.3 AV	68.2	-23.9	2.24 H	127	35.4	8.9
5	20145.00	54.1 PK	74.0	-19.9	1.52 H	107	60.1	-6.0
6	20145.00	44.2 AV	54.0	-9.8	1.52 H	107	50.2	-6.0
7	#26860.00	45.3 PK	88.2	-42.9	2.07 H	150	46.0	-0.7
8	#26860.00	35.4 AV	68.2	-32.8	2.07 H	150	36.1	-0.7
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*6715.00	109.5 PK			2.07 V	45	103.3	6.2
2	*6715.00	101.0 AV			2.07 V	45	94.8	6.2
3	#13430.00	56.3 PK	88.2	-31.9	1.28 V	238	47.4	8.9
4	#13430.00	45.0 AV	68.2	-23.2	1.28 V	238	36.1	8.9
5	20145.00	59.8 PK	74.0	-14.2	2.37 V	271	65.8	-6.0
6	20145.00	47.6 AV	54.0	-6.4	2.37 V	271	53.6	-6.0
7	#26860.00	47.1 PK	88.2	-41.1	2.25 V	217	47.8	-0.7
8	#26860.00	37.4 AV	68.2	-30.8	2.25 V	217	38.1	-0.7

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11a 6G	Channel	CH 181：6855 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 200 Hz
Input Power (System)	120Vac, 60Hz	Environmental Conditions	25 °C, 75 % RH
Tested By	Tom Yang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*6855.00	114.0 PK			2.15 H	79	107.7	6.3
2	*6855.00	105.5 AV			2.15 H	79	99.2	6.3
3	#13710.00	54.0 PK	88.2	-34.2	2.20 H	124	45.0	9.0
4	#13710.00	44.0 AV	68.2	-24.2	2.20 H	124	35.0	9.0
5	20565.00	54.6 PK	74.0	-19.4	1.52 H	96	59.8	-5.2
6	20565.00	44.7 AV	54.0	-9.3	1.52 H	96	49.9	-5.2
7	#27420.00	46.1 PK	88.2	-42.1	2.09 H	149	47.4	-1.3
8	#27420.00	36.0 AV	68.2	-32.2	2.09 H	149	37.3	-1.3
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*6855.00	110.0 PK			2.03 V	58	103.7	6.3
2	*6855.00	101.1 AV			2.03 V	58	94.8	6.3
3	#13710.00	57.0 PK	88.2	-31.2	1.21 V	243	48.0	9.0
4	#13710.00	45.3 AV	68.2	-22.9	1.21 V	243	36.3	9.0
5	20565.00	59.3 PK	74.0	-14.7	2.38 V	271	64.5	-5.2
6	20565.00	47.7 AV	54.0	-6.3	2.38 V	271	52.9	-5.2
7	#27420.00	46.9 PK	88.2	-41.3	2.17 V	217	48.2	-1.3
8	#27420.00	36.9 AV	68.2	-31.3	2.17 V	217	38.2	-1.3

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11a 6G	Channel	CH 185：6875 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 200 Hz
Input Power (System)	120Vac, 60Hz	Environmental Conditions	25 °C, 75 % RH
Tested By	Tom Yang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*6875.00	114.8 PK			2.14 H	110	108.5	6.3
2	*6875.00	106.1 AV			2.14 H	110	99.8	6.3
3	#13750.00	53.7 PK	88.2	-34.5	2.17 H	128	44.7	9.0
4	#13750.00	43.8 AV	68.2	-24.4	2.17 H	128	34.8	9.0
5	20625.00	54.9 PK	74.0	-19.1	1.55 H	106	60.1	-5.2
6	20625.00	44.6 AV	54.0	-9.4	1.55 H	106	49.8	-5.2
7	#27500.00	46.1 PK	88.2	-42.1	2.08 H	169	47.4	-1.3
8	#27500.00	35.9 AV	68.2	-32.3	2.08 H	169	37.2	-1.3
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*6875.00	109.3 PK			2.08 V	57	103.0	6.3
2	*6875.00	100.4 AV			2.08 V	57	94.1	6.3
3	#13750.00	56.6 PK	88.2	-31.6	1.25 V	242	47.6	9.0
4	#13750.00	45.1 AV	68.2	-23.1	1.25 V	242	36.1	9.0
5	20625.00	59.5 PK	74.0	-14.5	2.46 V	258	64.7	-5.2
6	20625.00	47.5 AV	54.0	-6.5	2.46 V	258	52.7	-5.2
7	#27500.00	46.6 PK	88.2	-41.6	2.20 V	244	47.9	-1.3
8	#27500.00	36.9 AV	68.2	-31.3	2.20 V	244	38.2	-1.3

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11a 6G	Channel	CH 213：7015 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 200 Hz
Input Power (System)	120Vac, 60Hz	Environmental Conditions	25 °C, 75 % RH
Tested By	Tom Yang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*7015.00	114.6 PK			2.15 H	83	108.2	6.4
2	*7015.00	106.1 AV			2.15 H	83	99.7	6.4
3	#14030.00	54.1 PK	88.2	-34.1	2.15 H	112	45.2	8.9
4	#14030.00	44.1 AV	68.2	-24.1	2.15 H	112	35.2	8.9
5	21045.00	54.5 PK	74.0	-19.5	1.61 H	90	59.3	-4.8
6	21045.00	44.4 AV	54.0	-9.6	1.61 H	90	49.2	-4.8
7	#28060.00	45.2 PK	88.2	-43.0	2.10 H	145	47.1	-1.9
8	#28060.00	35.3 AV	68.2	-32.9	2.10 H	145	37.2	-1.9
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*7015.00	109.9 PK			2.05 V	68	103.5	6.4
2	*7015.00	101.0 AV			2.05 V	68	94.6	6.4
3	#14030.00	56.6 PK	88.2	-31.6	1.23 V	253	47.7	8.9
4	#14030.00	45.1 AV	68.2	-23.1	1.23 V	253	36.2	8.9
5	21045.00	59.7 PK	74.0	-14.3	2.38 V	260	64.5	-4.8
6	21045.00	47.8 AV	54.0	-6.2	2.38 V	260	52.6	-4.8
7	#28060.00	47.5 PK	88.2	-40.7	2.23 V	245	49.4	-1.9
8	#28060.00	37.4 AV	68.2	-30.8	2.23 V	245	39.3	-1.9

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11a 6G	Channel	CH 233：7115 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 200 Hz
Input Power (System)	120Vac, 60Hz	Environmental Conditions	25 °C, 75 % RH
Tested By	Tom Yang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*7115.00	98.4 PK			1.17 H	44	91.9	6.5
2	*7115.00	91.0 AV			1.17 H	44	84.5	6.5
3	#7125.00	75.9 PK	88.2	-12.3	1.17 H	44	69.4	6.5
4	#7125.00	59.5 AV	68.2	-8.7	1.17 H	44	53.0	6.5
5	#14230.00	55.0 PK	88.2	-33.2	2.21 H	137	46.0	9.0
6	#14230.00	44.5 AV	68.2	-23.7	2.21 H	137	35.5	9.0
7	21345.00	54.4 PK	74.0	-19.6	1.55 H	109	58.9	-4.5
8	21345.00	44.4 AV	54.0	-9.6	1.55 H	109	48.9	-4.5
9	#28460.00	45.2 PK	88.2	-43.0	2.02 H	145	47.1	-1.9
10	#28460.00	35.4 AV	68.2	-32.8	2.02 H	145	37.3	-1.9
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*7115.00	106.0 PK			3.23 V	80	99.5	6.5
2	*7115.00	98.5 AV			3.23 V	80	92.0	6.5
3	#7125.00	85.1 PK	88.2	-3.1	3.23 V	80	78.6	6.5
4	**#7125.00**	**67.8 AV**	**68.2**	**-0.4**	**3.23 V**	**80**	**61.3**	**6.5**
5	#14230.00	57.0 PK	88.2	-31.2	1.28 V	253	48.0	9.0
6	#14230.00	45.7 AV	68.2	-22.5	1.28 V	253	36.7	9.0
7	21345.00	59.5 PK	74.0	-14.5	2.41 V	261	64.0	-4.5
8	21345.00	47.4 AV	54.0	-6.6	2.41 V	261	51.9	-4.5
9	#28460.00	47.2 PK	88.2	-41.0	2.21 V	229	49.1	-1.9
10	#28460.00	37.2 AV	68.2	-31.0	2.21 V	229	39.1	-1.9

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

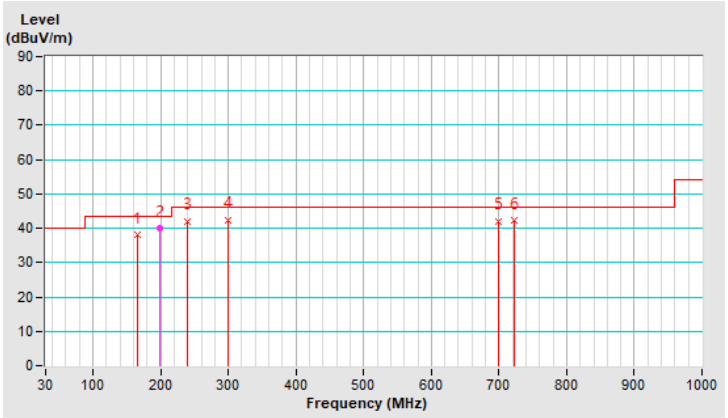
Below 1GHz Data:

RF Mode	TX 802.11a 6G	Channel	CH 181：6855 MHz
Frequency Range	9 kHz ~ 1 GHz	Detector Function & Bandwidth	(QP) RB = 120kHz
Input Power (System)	120Vac, 60Hz	Environmental Conditions	22 °C, 62 % RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	165.67	38.1 QP	43.5	-5.4	1.50 H	297	50.0	-11.9
2	198.89	39.9 QP	43.5	-3.6	1.00 H	67	54.6	-14.7
3	239.98	42.1 QP	46.0	-3.9	1.00 H	305	55.0	-12.9
4	298.96	42.5 QP	46.0	-3.5	1.50 H	294	52.9	-10.4
5	699.05	42.1 QP	46.0	-3.9	2.00 H	217	42.4	-0.3
6	722.05	42.3 QP	46.0	-3.7	1.00 H	256	42.3	0.0

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The emission levels were very low against the limit of frequency range 9 kHz ~ 30 MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

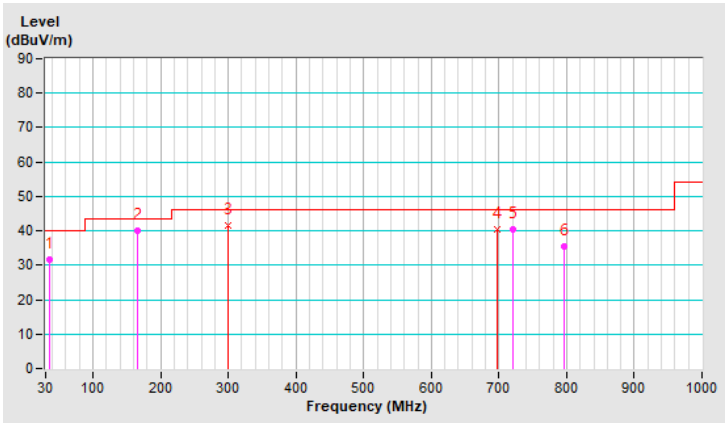


RF Mode	TX 802.11a 6G	Channel	CH 181：6855 MHz
Frequency Range	9 kHz ~ 1 GHz	Detector Function & Bandwidth	(QP) RB = 120kHz
Input Power (System)	120Vac, 60Hz	Environmental Conditions	22 °C, 62 % RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	34.97	31.6 QP	40.0	-8.4	1.00 V	198	44.7	-13.1
2	166.07	39.9 QP	43.5	-3.6	1.00 V	347	51.8	-11.9
3	299.03	41.5 QP	46.0	-4.5	3.00 V	356	51.9	-10.4
4	698.07	40.5 QP	46.0	-5.5	1.00 V	195	40.8	-0.3
5	720.05	40.5 QP	46.0	-5.5	1.50 V	280	40.6	-0.1
6	797.15	35.4 QP	46.0	-10.6	1.00 V	58	34.0	1.4

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The emission levels were very low against the limit of frequency range 9 kHz ~ 30 MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.



4.1.7 Test Results (Mode 2)

Above 1GHz Data:

RF Mode	TX 802.11a 6G	Channel	CH 1：5955 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 200 Hz
Input Power (System)	120Vac, 60Hz	Environmental Conditions	25 °C, 75 % RH
Tested By	Tom Yang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5925.00	49.4 PK	88.2	-38.8	1.58 H	14	43.5	5.9
2	#5925.00	38.4 AV	68.2	-29.8	1.58 H	14	32.5	5.9
3	*5955.00	97.2 PK			1.58 H	14	91.3	5.9
4	*5955.00	90.0 AV			1.58 H	14	84.1	5.9
5	11910.00	54.9 PK	74.0	-19.1	2.35 H	137	46.3	8.6
6	11910.00	44.5 AV	54.0	-9.5	2.35 H	137	35.9	8.6
7	17865.00	54.9 PK	74.0	-19.1	1.49 H	85	62.3	-7.4
8	17865.00	44.8 AV	54.0	-9.2	1.49 H	85	52.2	-7.4
9	23820.00	46.2 PK	74.0	-27.8	2.12 H	139	48.9	-2.7
10	23820.00	36.4 AV	54.0	-17.6	2.12 H	139	39.1	-2.7
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5925.00	49.7 PK	88.2	-38.5	1.08 V	259	43.8	5.9
2	#5925.00	37.9 AV	68.2	-30.3	1.08 V	259	32.0	5.9
3	*5955.00	98.2 PK			1.08 V	259	92.3	5.9
4	*5955.00	90.2 AV			1.08 V	259	84.3	5.9
5	11910.00	56.6 PK	74.0	-17.4	1.26 V	252	48.0	8.6
6	11910.00	45.4 AV	54.0	-8.6	1.26 V	252	36.8	8.6
7	17865.00	59.5 PK	74.0	-14.5	2.37 V	275	66.9	-7.4
8	17865.00	48.2 AV	54.0	-5.8	2.37 V	275	55.6	-7.4
9	23820.00	46.0 PK	74.0	-28.0	2.26 V	225	48.7	-2.7
10	23820.00	36.3 AV	54.0	-17.7	2.26 V	225	39.0	-2.7

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11a 6G	Channel	CH 45：6175 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 200 Hz
Input Power (System)	120Vac, 60Hz	Environmental Conditions	25 °C, 75 % RH
Tested By	Tom Yang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*6175.00	97.4 PK			1.57 H	0	91.3	6.1
2	*6175.00	90.0 AV			1.57 H	0	83.9	6.1
3	12350.00	55.4 PK	74.0	-18.6	2.33 H	129	46.6	8.8
4	12350.00	44.8 AV	54.0	-9.2	2.33 H	129	36.0	8.8
5	18525.00	54.7 PK	74.0	-19.3	1.49 H	93	61.9	-7.2
6	18525.00	44.4 AV	54.0	-9.6	1.49 H	93	51.6	-7.2
7	#24700.00	46.3 PK	88.2	-41.9	2.04 H	132	47.9	-1.6
8	#24700.00	37.0 AV	68.2	-31.2	2.04 H	132	38.6	-1.6
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*6175.00	98.1 PK			1.06 V	269	92.0	6.1
2	*6175.00	89.9 AV			1.06 V	269	83.8	6.1
3	12350.00	56.1 PK	74.0	-17.9	1.20 V	243	47.3	8.8
4	12350.00	45.0 AV	54.0	-9.0	1.20 V	243	36.2	8.8
5	18525.00	59.4 PK	74.0	-14.6	2.41 V	263	66.6	-7.2
6	18525.00	47.8 AV	54.0	-6.2	2.41 V	263	55.0	-7.2
7	#24700.00	46.4 PK	88.2	-41.8	2.26 V	235	48.0	-1.6
8	#24700.00	36.6 AV	68.2	-31.6	2.26 V	235	38.2	-1.6

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11a 6G	Channel	CH 93：6415 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 200 Hz
Input Power (System)	120Vac, 60Hz	Environmental Conditions	25 °C, 75 % RH
Tested By	Tom Yang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*6415.00	97.2 PK			1.63 H	3	91.1	6.1
2	*6415.00	89.9 AV			1.63 H	3	83.8	6.1
3	#12830.00	55.3 PK	88.2	-32.9	2.23 H	133	46.5	8.8
4	#12830.00	44.5 AV	68.2	-23.7	2.23 H	133	35.7	8.8
5	19245.00	54.0 PK	74.0	-20.0	1.46 H	105	60.9	-6.9
6	19245.00	44.0 AV	54.0	-10.0	1.46 H	105	50.9	-6.9
7	#25660.00	46.1 PK	88.2	-42.1	2.02 H	140	46.5	-0.4
8	#25660.00	36.4 AV	68.2	-31.8	2.02 H	140	36.8	-0.4
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*6415.00	97.9 PK			1.05 V	249	91.8	6.1
2	*6415.00	89.8 AV			1.05 V	249	83.7	6.1
3	#12830.00	56.9 PK	88.2	-31.3	1.20 V	267	48.1	8.8
4	#12830.00	45.8 AV	68.2	-22.4	1.20 V	267	37.0	8.8
5	19245.00	59.7 PK	74.0	-14.3	2.32 V	282	66.6	-6.9
6	19245.00	48.1 AV	54.0	-5.9	2.32 V	282	55.0	-6.9
7	#25660.00	46.7 PK	88.2	-41.5	2.24 V	216	47.1	-0.4
8	#25660.00	36.7 AV	68.2	-31.5	2.24 V	216	37.1	-0.4

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11a 6G	Channel	CH 97：6435 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 200 Hz
Input Power (System)	120Vac, 60Hz	Environmental Conditions	25 °C, 75 % RH
Tested By	Tom Yang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*6435.00	97.6 PK			1.63 H	2	91.4	6.2
2	*6435.00	89.9 AV			1.63 H	2	83.7	6.2
3	#12870.00	54.9 PK	88.2	-33.3	2.32 H	132	46.1	8.8
4	#12870.00	44.3 AV	68.2	-23.9	2.32 H	132	35.5	8.8
5	19305.00	54.7 PK	74.0	-19.3	1.47 H	95	61.9	-7.2
6	19305.00	44.6 AV	54.0	-9.4	1.47 H	95	51.8	-7.2
7	#25740.00	46.4 PK	88.2	-41.8	2.10 H	144	46.7	-0.3
8	#25740.00	36.8 AV	68.2	-31.4	2.10 H	144	37.1	-0.3
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*6435.00	98.5 PK			1.05 V	263	92.3	6.2
2	*6435.00	90.3 AV			1.05 V	263	84.1	6.2
3	#12870.00	56.7 PK	88.2	-31.5	1.29 V	239	47.9	8.8
4	#12870.00	45.3 AV	68.2	-22.9	1.29 V	239	36.5	8.8
5	19305.00	60.0 PK	74.0	-14.0	2.37 V	264	67.2	-7.2
6	19305.00	48.6 AV	54.0	-5.4	2.37 V	264	55.8	-7.2
7	#25740.00	46.3 PK	88.2	-41.9	2.24 V	237	46.6	-0.3
8	#25740.00	36.4 AV	68.2	-31.8	2.24 V	237	36.7	-0.3

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11a 6G	Channel	CH 105：6475 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 200 Hz
Input Power (System)	120Vac, 60Hz	Environmental Conditions	25 °C, 75 % RH
Tested By	Tom Yang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*6475.00	97.8 PK			1.57 H	11	91.6	6.2
2	*6475.00	90.1 AV			1.57 H	11	83.9	6.2
3	#12950.00	55.6 PK	88.2	-32.6	2.29 H	116	46.8	8.8
4	#12950.00	45.1 AV	68.2	-23.1	2.29 H	116	36.3	8.8
5	19425.00	54.5 PK	74.0	-19.5	1.54 H	106	61.4	-6.9
6	19425.00	44.3 AV	54.0	-9.7	1.54 H	106	51.2	-6.9
7	#25900.00	46.7 PK	88.2	-41.5	2.11 H	131	46.9	-0.2
8	#25900.00	37.1 AV	68.2	-31.1	2.11 H	131	37.3	-0.2
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*6475.00	98.0 PK			1.08 V	270	91.8	6.2
2	*6475.00	90.2 AV			1.08 V	270	84.0	6.2
3	#12950.00	56.8 PK	88.2	-31.4	1.24 V	260	48.0	8.8
4	#12950.00	45.8 AV	68.2	-22.4	1.24 V	260	37.0	8.8
5	19425.00	59.5 PK	74.0	-14.5	2.36 V	290	66.4	-6.9
6	19425.00	48.2 AV	54.0	-5.8	2.36 V	290	55.1	-6.9
7	#25900.00	45.7 PK	88.2	-42.5	2.21 V	211	45.9	-0.2
8	#25900.00	35.9 AV	68.2	-32.3	2.21 V	211	36.1	-0.2

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11a 6G	Channel	CH 113：6515 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 200 Hz
Input Power (System)	120Vac, 60Hz	Environmental Conditions	25 °C, 75 % RH
Tested By	Tom Yang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*6515.00	97.8 PK			1.59 H	21	91.6	6.2
2	*6515.00	90.4 AV			1.59 H	21	84.2	6.2
3	#13030.00	55.2 PK	88.2	-33.0	2.32 H	116	46.4	8.8
4	#13030.00	44.8 AV	68.2	-23.4	2.32 H	116	36.0	8.8
5	19545.00	54.4 PK	74.0	-19.6	1.48 H	113	61.0	-6.6
6	19545.00	44.4 AV	54.0	-9.6	1.48 H	113	51.0	-6.6
7	#26060.00	46.3 PK	88.2	-41.9	2.05 H	132	46.4	-0.1
8	#26060.00	36.5 AV	68.2	-31.7	2.05 H	132	36.6	-0.1
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*6515.00	98.1 PK			1.05 V	273	91.9	6.2
2	*6515.00	90.3 AV			1.05 V	273	84.1	6.2
3	#13030.00	56.1 PK	88.2	-32.1	1.20 V	259	47.3	8.8
4	#13030.00	45.0 AV	68.2	-23.2	1.20 V	259	36.2	8.8
5	19545.00	60.1 PK	74.0	-13.9	2.31 V	278	66.7	-6.6
6	**19545.00**	**48.6 AV**	**54.0**	**-5.4**	**2.31 V**	**278**	**55.2**	**-6.6**
7	#26060.00	46.6 PK	88.2	-41.6	2.30 V	230	46.7	-0.1
8	#26060.00	36.6 AV	68.2	-31.6	2.30 V	230	36.7	-0.1

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11a 6G	Channel	CH 117：6535 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 200 Hz
Input Power (System)	120Vac, 60Hz	Environmental Conditions	25 °C, 75 % RH
Tested By	Tom Yang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*6535.00	97.0 PK			1.57 H	27	90.8	6.2
2	*6535.00	89.5 AV			1.57 H	27	83.3	6.2
3	#13070.00	55.6 PK	88.2	-32.6	2.24 H	122	46.8	8.8
4	#13070.00	44.9 AV	68.2	-23.3	2.24 H	122	36.1	8.8
5	19605.00	54.3 PK	74.0	-19.7	1.49 H	95	60.8	-6.5
6	19605.00	44.1 AV	54.0	-9.9	1.49 H	95	50.6	-6.5
7	#26140.00	46.4 PK	88.2	-41.8	2.04 H	135	46.4	0.0
8	#26140.00	36.6 AV	68.2	-31.6	2.04 H	135	36.6	0.0
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*6535.00	98.2 PK			1.03 V	270	92.0	6.2
2	*6535.00	90.1 AV			1.03 V	270	83.9	6.2
3	#13070.00	56.3 PK	88.2	-31.9	1.25 V	255	47.5	8.8
4	#13070.00	45.1 AV	68.2	-23.1	1.25 V	255	36.3	8.8
5	19605.00	59.7 PK	74.0	-14.3	2.37 V	275	66.2	-6.5
6	19605.00	48.4 AV	54.0	-5.6	2.37 V	275	54.9	-6.5
7	#26140.00	46.5 PK	88.2	-41.7	2.24 V	223	46.5	0.0
8	#26140.00	36.7 AV	68.2	-31.5	2.24 V	223	36.7	0.0

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11a 6G	Channel	CH 153：6715 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 200 Hz
Input Power (System)	120Vac, 60Hz	Environmental Conditions	25 °C, 75 % RH
Tested By	Tom Yang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*6715.00	96.7 PK			1.54 H	25	90.5	6.2
2	*6715.00	89.5 AV			1.54 H	25	83.3	6.2
3	#13430.00	55.2 PK	88.2	-33.0	2.33 H	119	46.3	8.9
4	#13430.00	44.5 AV	68.2	-23.7	2.33 H	119	35.6	8.9
5	20145.00	55.0 PK	74.0	-19.0	1.53 H	93	61.0	-6.0
6	20145.00	44.7 AV	54.0	-9.3	1.53 H	93	50.7	-6.0
7	#26860.00	46.9 PK	88.2	-41.3	2.12 H	145	47.6	-0.7
8	#26860.00	37.0 AV	68.2	-31.2	2.12 H	145	37.7	-0.7
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*6715.00	98.5 PK			1.12 V	262	92.3	6.2
2	*6715.00	90.4 AV			1.12 V	262	84.2	6.2
3	#13430.00	56.3 PK	88.2	-31.9	1.27 V	247	47.4	8.9
4	#13430.00	45.0 AV	68.2	-23.2	1.27 V	247	36.1	8.9
5	20145.00	59.4 PK	74.0	-14.6	2.32 V	275	65.4	-6.0
6	20145.00	48.3 AV	54.0	-5.7	2.32 V	275	54.3	-6.0
7	#26860.00	45.9 PK	88.2	-42.3	2.24 V	209	46.6	-0.7
8	#26860.00	36.0 AV	68.2	-32.2	2.24 V	209	36.7	-0.7

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11a 6G	Channel	CH 181：6855 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 200 Hz
Input Power (System)	120Vac, 60Hz	Environmental Conditions	25 °C, 75 % RH
Tested By	Tom Yang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*6855.00	97.8 PK			1.63 H	5	91.5	6.3
2	*6855.00	90.2 AV			1.63 H	5	83.9	6.3
3	#13710.00	54.9 PK	88.2	-33.3	2.27 H	133	45.9	9.0
4	#13710.00	44.4 AV	68.2	-23.8	2.27 H	133	35.4	9.0
5	20565.00	54.8 PK	74.0	-19.2	1.44 H	89	60.0	-5.2
6	20565.00	44.6 AV	54.0	-9.4	1.44 H	89	49.8	-5.2
7	#27420.00	46.0 PK	88.2	-42.2	2.01 H	130	47.3	-1.3
8	#27420.00	36.6 AV	68.2	-31.6	2.01 H	130	37.9	-1.3
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*6855.00	98.3 PK			1.11 V	259	92.0	6.3
2	*6855.00	90.3 AV			1.11 V	259	84.0	6.3
3	#13710.00	56.4 PK	88.2	-31.8	1.22 V	257	47.4	9.0
4	#13710.00	45.2 AV	68.2	-23.0	1.22 V	257	36.2	9.0
5	20565.00	59.0 PK	74.0	-15.0	2.43 V	277	64.2	-5.2
6	20565.00	47.9 AV	54.0	-6.1	2.43 V	277	53.1	-5.2
7	#27420.00	45.9 PK	88.2	-42.3	2.24 V	216	47.2	-1.3
8	#27420.00	36.0 AV	68.2	-32.2	2.24 V	216	37.3	-1.3

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11a 6G	Channel	CH 185：6875 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 200 Hz
Input Power (System)	120Vac, 60Hz	Environmental Conditions	25 °C, 75 % RH
Tested By	Tom Yang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*6875.00	97.6 PK			1.56 H	18	91.3	6.3
2	*6875.00	90.1 AV			1.56 H	18	83.8	6.3
3	#13750.00	55.6 PK	88.2	-32.6	2.30 H	113	46.6	9.0
4	#13750.00	45.1 AV	68.2	-23.1	2.30 H	113	36.1	9.0
5	20625.00	55.0 PK	74.0	-19.0	1.46 H	90	60.2	-5.2
6	20625.00	44.5 AV	54.0	-9.5	1.46 H	90	49.7	-5.2
7	#27500.00	46.7 PK	88.2	-41.5	2.08 H	142	48.0	-1.3
8	#27500.00	37.2 AV	68.2	-31.0	2.08 H	142	38.5	-1.3
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*6875.00	97.8 PK			1.13 V	243	91.5	6.3
2	*6875.00	89.9 AV			1.13 V	243	83.6	6.3
3	#13750.00	56.4 PK	88.2	-31.8	1.27 V	238	47.4	9.0
4	#13750.00	45.2 AV	68.2	-23.0	1.27 V	238	36.2	9.0
5	20625.00	59.8 PK	74.0	-14.2	2.31 V	287	65.0	-5.2
6	20625.00	48.5 AV	54.0	-5.5	2.31 V	287	53.7	-5.2
7	#27500.00	46.4 PK	88.2	-41.8	2.30 V	233	47.7	-1.3
8	#27500.00	36.7 AV	68.2	-31.5	2.30 V	233	38.0	-1.3

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11a 6G	Channel	CH 213：7015 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 200 Hz
Input Power (System)	120Vac, 60Hz	Environmental Conditions	25 °C, 75 % RH
Tested By	Tom Yang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*7015.00	97.9 PK			1.56 H	26	91.5	6.4
2	*7015.00	90.2 AV			1.56 H	26	83.8	6.4
3	#14030.00	55.1 PK	88.2	-33.1	2.25 H	125	46.2	8.9
4	#14030.00	44.4 AV	68.2	-23.8	2.25 H	125	35.5	8.9
5	21045.00	54.6 PK	74.0	-19.4	1.53 H	110	59.4	-4.8
6	21045.00	44.4 AV	54.0	-9.6	1.53 H	110	49.2	-4.8
7	#28060.00	46.5 PK	88.2	-41.7	2.03 H	136	48.4	-1.9
8	#28060.00	37.2 AV	68.2	-31.0	2.03 H	136	39.1	-1.9
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*7015.00	98.3 PK			1.07 V	267	91.9	6.4
2	*7015.00	90.2 AV			1.07 V	267	83.8	6.4
3	#14030.00	56.8 PK	88.2	-31.4	1.27 V	255	47.9	8.9
4	#14030.00	45.8 AV	68.2	-22.4	1.27 V	255	36.9	8.9
5	21045.00	59.4 PK	74.0	-14.6	2.41 V	264	64.2	-4.8
6	21045.00	47.9 AV	54.0	-6.1	2.41 V	264	52.7	-4.8
7	#28060.00	46.1 PK	88.2	-42.1	2.27 V	221	48.0	-1.9
8	#28060.00	36.2 AV	68.2	-32.0	2.27 V	221	38.1	-1.9

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11a 6G	Channel	CH 233：7115 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 200 Hz
Input Power (System)	120Vac, 60Hz	Environmental Conditions	25 °C, 75 % RH
Tested By	Tom Yang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*7115.00	97.4 PK			1.63 H	15	90.9	6.5
2	*7115.00	89.9 AV			1.63 H	15	83.4	6.5
3	#7125.00	48.8 PK	88.2	-39.4	1.63 H	15	42.3	6.5
4	#7125.00	38.0 AV	68.2	-30.2	1.63 H	15	31.5	6.5
5	#14230.00	54.9 PK	88.2	-33.3	2.24 H	132	45.9	9.0
6	#14230.00	44.3 AV	68.2	-23.9	2.24 H	132	35.3	9.0
7	21345.00	55.2 PK	74.0	-18.8	1.50 H	86	59.7	-4.5
8	21345.00	44.8 AV	54.0	-9.2	1.50 H	86	49.3	-4.5
9	#28460.00	46.1 PK	88.2	-42.1	2.05 H	134	48.0	-1.9
10	#28460.00	36.5 AV	68.2	-31.7	2.05 H	134	38.4	-1.9
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*7115.00	98.3 PK			1.08 V	246	91.8	6.5
2	*7115.00	90.3 AV			1.08 V	246	83.8	6.5
3	#7125.00	49.1 PK	88.2	-39.1	1.08 V	246	42.6	6.5
4	#7125.00	37.4 AV	68.2	-30.8	1.08 V	246	30.9	6.5
5	#14230.00	56.7 PK	88.2	-31.5	1.24 V	260	47.7	9.0
6	#14230.00	45.8 AV	68.2	-22.4	1.24 V	260	36.8	9.0
7	21345.00	59.8 PK	74.0	-14.2	2.37 V	277	64.3	-4.5
8	21345.00	48.5 AV	54.0	-5.5	2.37 V	277	53.0	-4.5
9	#28460.00	46.5 PK	88.2	-41.7	2.27 V	216	48.4	-1.9
10	#28460.00	36.6 AV	68.2	-31.6	2.27 V	216	38.5	-1.9

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

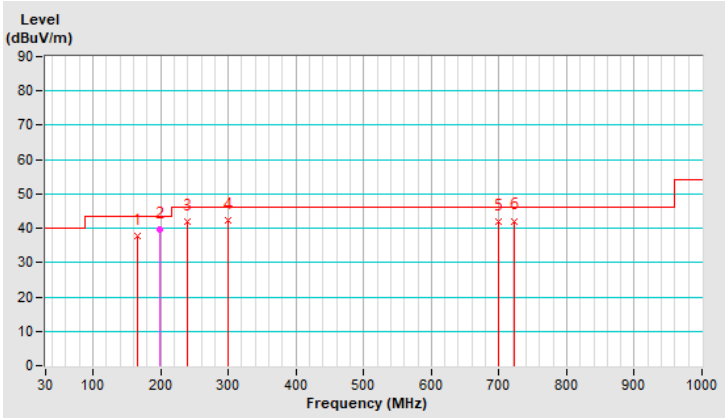
Below 1GHz Data:

RF Mode	TX 802.11a 6G	Channel	CH 181：6855 MHz
Frequency Range	9 kHz ~ 1 GHz	Detector Function & Bandwidth	(QP) RB = 120kHz
Input Power (System)	120Vac, 60Hz	Environmental Conditions	22 °C, 62 % RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	165.59	37.9 QP	43.5	-5.6	1.50 H	287	49.8	-11.9
2	198.85	39.7 QP	43.5	-3.8	1.00 H	51	54.4	-14.7
3	239.99	42.0 QP	46.0	-4.0	1.00 H	289	54.9	-12.9
4	298.93	42.3 QP	46.0	-3.7	1.50 H	303	52.8	-10.5
5	699.02	41.9 QP	46.0	-4.1	2.00 H	226	42.2	-0.3
6	722.03	42.1 QP	46.0	-3.9	1.00 H	242	42.1	0.0

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The emission levels were very low against the limit of frequency range 9 kHz ~ 30 MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

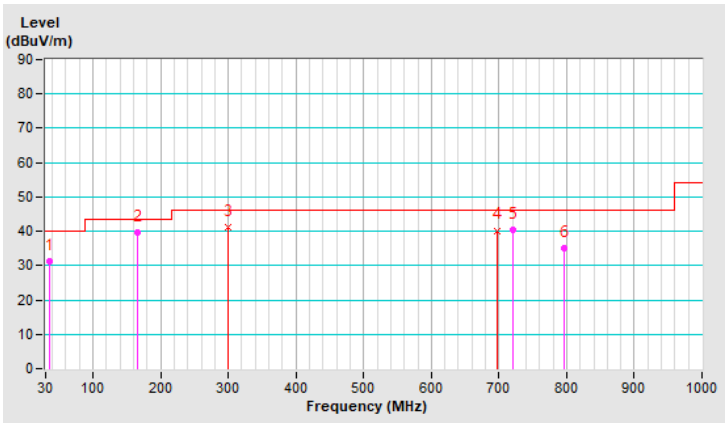


RF Mode	TX 802.11a 6G	Channel	CH 181：6855 MHz
Frequency Range	9 kHz ~ 1 GHz	Detector Function & Bandwidth	(QP) RB = 120kHz
Input Power (System)	120Vac, 60Hz	Environmental Conditions	22 °C, 62 % RH
Tested By	Sampson Chen		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	34.92	31.4 QP	40.0	-8.6	1.00 V	183	44.5	-13.1
2	166.03	39.7 QP	43.5	-3.8	1.00 V	352	51.6	-11.9
3	299.01	41.3 QP	46.0	-4.7	3.00 V	339	51.7	-10.4
4	698.04	40.2 QP	46.0	-5.8	1.00 V	178	40.5	-0.3
5	720.03	40.3 QP	46.0	-5.7	1.50 V	259	40.4	-0.1
6	797.11	35.2 QP	46.0	-10.8	1.00 V	42	33.8	1.4

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The emission levels were very low against the limit of frequency range 9 kHz ~ 30 MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.



4.1.8 Test Results (Mode 3)

Above 1GHz Data:

RF Mode	TX 802.11ax (HE20)	Channel	CH 113：6515 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 300 Hz
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75 % RH
Tested By	Tom Yang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*6515.00	115.8 PK			1.93 H	121	109.6	6.2
2	*6515.00	106.5 AV			1.93 H	121	100.3	6.2
3	#13030.00	54.1 PK	88.2	-34.1	2.20 H	111	45.3	8.8
4	#13030.00	44.1 AV	68.2	-24.1	2.20 H	111	35.3	8.8
5	19545.00	54.8 PK	74.0	-19.2	1.59 H	106	61.4	-6.6
6	19545.00	44.6 AV	54.0	-9.4	1.59 H	106	51.2	-6.6
7	#26060.00	46.1 PK	88.2	-42.1	2.07 H	168	46.2	-0.1
8	#26060.00	35.8 AV	68.2	-32.4	2.07 H	168	35.9	-0.1
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*6515.00	117.9 PK			2.34 V	109	111.7	6.2
2	*6515.00	109.4 AV			2.34 V	109	103.2	6.2
3	#13030.00	56.7 PK	88.2	-31.5	1.21 V	238	47.9	8.8
4	#13030.00	45.0 AV	68.2	-23.2	1.21 V	238	36.2	8.8
5	19545.00	59.0 PK	74.0	-15.0	2.38 V	290	65.6	-6.6
6	19545.00	47.4 AV	54.0	-6.6	2.38 V	290	54.0	-6.6
7	#26060.00	46.5 PK	88.2	-41.7	2.16 V	233	46.6	-0.1
8	#26060.00	36.9 AV	68.2	-31.3	2.16 V	233	37.0	-0.1

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11ax (HE40)	Channel	CH 115：6525 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 300 Hz
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75 % RH
Tested By	Tom Yang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*6525.00	115.2 PK			1.91 H	80	109.0	6.2
2	*6525.00	104.9 AV			1.91 H	80	98.7	6.2
3	#13050.00	54.2 PK	88.2	-34.0	2.14 H	135	45.4	8.8
4	#13050.00	44.1 AV	68.2	-24.1	2.14 H	135	35.3	8.8
5	19575.00	54.9 PK	74.0	-19.1	1.55 H	89	61.4	-6.5
6	19575.00	44.7 AV	54.0	-9.3	1.55 H	89	51.2	-6.5
7	#26100.00	45.2 PK	88.2	-43.0	2.12 H	153	45.2	0.0
8	#26100.00	35.5 AV	68.2	-32.7	2.12 H	153	35.5	0.0
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*6525.00	115.4 PK			1.88 V	85	109.2	6.2
2	*6525.00	105.1 AV			1.88 V	85	98.9	6.2
3	#13050.00	56.5 PK	88.2	-31.7	1.30 V	248	47.7	8.8
4	#13050.00	44.9 AV	68.2	-23.3	1.30 V	248	36.1	8.8
5	19575.00	59.2 PK	74.0	-14.8	2.45 V	289	65.7	-6.5
6	19575.00	47.3 AV	54.0	-6.7	2.45 V	289	53.8	-6.5
7	#26100.00	47.0 PK	88.2	-41.2	2.23 V	215	47.0	0.0
8	#26100.00	37.4 AV	68.2	-30.8	2.23 V	215	37.4	0.0

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11ax (HE80)	Channel	CH 119：6545 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75 % RH
Tested By	Tom Yang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*6545.00	109.9 PK			1.84 H	113	103.7	6.2
2	*6545.00	100.0 AV			1.84 H	113	93.8	6.2
3	#13090.00	54.2 PK	88.2	-34.0	2.23 H	109	45.4	8.8
4	#13090.00	44.0 AV	68.2	-24.2	2.23 H	109	35.2	8.8
5	19635.00	54.5 PK	74.0	-19.5	1.55 H	98	61.0	-6.5
6	19635.00	44.4 AV	54.0	-9.6	1.55 H	98	50.9	-6.5
7	#26180.00	46.5 PK	88.2	-41.7	2.09 H	150	46.6	-0.1
8	#26180.00	36.3 AV	68.2	-31.9	2.09 H	150	36.4	-0.1
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*6545.00	111.5 PK			2.43 V	94	105.3	6.2
2	*6545.00	102.1 AV			2.43 V	94	95.9	6.2
3	#13090.00	56.6 PK	88.2	-31.6	1.25 V	244	47.8	8.8
4	#13090.00	44.9 AV	68.2	-23.3	1.25 V	244	36.1	8.8
5	19635.00	59.0 PK	74.0	-15.0	2.40 V	276	65.5	-6.5
6	19635.00	47.1 AV	54.0	-6.9	2.40 V	276	53.6	-6.5
7	#26180.00	47.0 PK	88.2	-41.2	2.16 V	233	47.1	-0.1
8	#26180.00	37.3 AV	68.2	-30.9	2.16 V	233	37.4	-0.1

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11ax (HE160)	Channel	CH 79：6345 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 2 kHz
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75 % RH
Tested By	Tom Yang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*6345.00	105.4 PK			2.00 H	117	99.3	6.1
2	*6345.00	97.4 AV			2.00 H	117	91.3	6.1
3	12690.00	55.0 PK	74.0	-19.0	2.26 H	119	46.2	8.8
4	12690.00	44.6 AV	54.0	-9.4	2.26 H	119	35.8	8.8
5	19035.00	54.3 PK	74.0	-19.7	1.52 H	90	61.3	-7.0
6	19035.00	44.4 AV	54.0	-9.6	1.52 H	90	51.4	-7.0
7	#25380.00	46.0 PK	88.2	-42.2	2.02 H	158	46.7	-0.7
8	#25380.00	36.2 AV	68.2	-32.0	2.02 H	158	36.9	-0.7
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*6345.00	111.4 PK			2.25 V	132	105.3	6.1
2	*6345.00	102.4 AV			2.25 V	132	96.3	6.1
3	12690.00	56.5 PK	74.0	-17.5	1.29 V	249	47.7	8.8
4	12690.00	45.1 AV	54.0	-8.9	1.29 V	249	36.3	8.8
5	19035.00	59.9 PK	74.0	-14.1	2.45 V	280	66.9	-7.0
6	19035.00	47.8 AV	54.0	-6.2	2.45 V	280	54.8	-7.0
7	#25380.00	47.2 PK	88.2	-41.0	2.18 V	231	47.9	-0.7
8	#25380.00	37.4 AV	68.2	-30.8	2.18 V	231	38.1	-0.7

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

4.1.9 Test Results (Mode 4)

Above 1GHz Data:

RF Mode	TX 802.11ax (HE20)	Channel	CH 113：6515 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 300 Hz
Input Power (System)	120Vac, 60Hz	Environmental Conditions	25 °C, 75 % RH
Tested By	Tom Yang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*6515.00	115.8 PK			1.60 H	26	109.6	6.2
2	*6515.00	106.5 AV			1.60 H	26	100.3	6.2
3	#13030.00	55.4 PK	88.2	-32.8	2.26 H	122	46.6	8.8
4	#13030.00	44.4 AV	68.2	-23.8	2.26 H	122	35.6	8.8
5	19545.00	54.0 PK	74.0	-20.0	1.55 H	102	60.6	-6.6
6	19545.00	44.1 AV	54.0	-9.9	1.55 H	102	50.7	-6.6
7	#26060.00	46.5 PK	88.2	-41.7	2.12 H	138	46.6	-0.1
8	#26060.00	36.6 AV	68.2	-31.6	2.12 H	138	36.7	-0.1
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*6515.00	117.9 PK			1.12 V	257	111.7	6.2
2	*6515.00	109.4 AV			1.12 V	257	103.2	6.2
3	#13030.00	56.7 PK	88.2	-31.5	1.21 V	238	47.9	8.8
4	#13030.00	45.0 AV	68.2	-23.2	1.21 V	238	36.2	8.8
5	19545.00	59.0 PK	74.0	-15.0	2.38 V	290	65.6	-6.6
6	19545.00	47.4 AV	54.0	-6.6	2.38 V	290	54.0	-6.6
7	#26060.00	46.5 PK	88.2	-41.7	2.16 V	233	46.6	-0.1
8	#26060.00	36.9 AV	68.2	-31.3	2.16 V	233	37.0	-0.1

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11ax (HE40)	Channel	CH 115：6525 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 300 Hz
Input Power (System)	120Vac, 60Hz	Environmental Conditions	25 °C, 75 % RH
Tested By	Tom Yang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*6525.00	115.2 PK			1.58 H	14	109.0	6.2
2	*6525.00	104.9 AV			1.58 H	14	98.7	6.2
3	#13050.00	55.6 PK	88.2	-32.6	2.35 H	123	46.8	8.8
4	#13050.00	45.1 AV	68.2	-23.1	2.35 H	123	36.3	8.8
5	19575.00	54.8 PK	74.0	-19.2	1.45 H	86	61.3	-6.5
6	19575.00	44.4 AV	54.0	-9.6	1.45 H	86	50.9	-6.5
7	#26100.00	46.1 PK	88.2	-42.1	2.12 H	157	46.1	0.0
8	#26100.00	36.3 AV	68.2	-31.9	2.12 H	157	36.3	0.0
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*6525.00	115.4 PK			1.09 V	253	109.2	6.2
2	*6525.00	105.1 AV			1.09 V	253	98.9	6.2
3	#13050.00	56.6 PK	88.2	-31.6	1.31 V	261	47.8	8.8
4	#13050.00	45.5 AV	68.2	-22.7	1.31 V	261	36.7	8.8
5	19575.00	58.9 PK	74.0	-15.1	2.41 V	282	65.4	-6.5
6	19575.00	47.7 AV	54.0	-6.3	2.41 V	282	54.2	-6.5
7	#26100.00	45.7 PK	88.2	-42.5	2.23 V	232	45.7	0.0
8	#26100.00	36.2 AV	68.2	-32.0	2.23 V	232	36.2	0.0

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11ax (HE80)	Channel	CH 119：6545 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power (System)	120Vac, 60Hz	Environmental Conditions	25 °C, 75 % RH
Tested By	Tom Yang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*6545.00	109.9 PK			1.62 H	13	103.7	6.2
2	*6545.00	100.0 AV			1.62 H	13	93.8	6.2
3	#13090.00	55.6 PK	88.2	-32.6	2.26 H	114	46.8	8.8
4	#13090.00	44.8 AV	68.2	-23.4	2.26 H	114	36.0	8.8
5	19635.00	54.4 PK	74.0	-19.6	1.54 H	107	60.9	-6.5
6	19635.00	44.1 AV	54.0	-9.9	1.54 H	107	50.6	-6.5
7	#26180.00	45.8 PK	88.2	-42.4	2.10 H	130	45.9	-0.1
8	#26180.00	36.3 AV	68.2	-31.9	2.10 H	130	36.4	-0.1
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*6545.00	111.5 PK			1.04 V	266	105.3	6.2
2	*6545.00	102.1 AV			1.04 V	266	95.9	6.2
3	#13090.00	56.4 PK	88.2	-31.8	1.21 V	265	47.6	8.8
4	#13090.00	45.5 AV	68.2	-22.7	1.21 V	265	36.7	8.8
5	19635.00	59.5 PK	74.0	-14.5	2.38 V	287	66.0	-6.5
6	19635.00	48.4 AV	54.0	-5.6	2.38 V	287	54.9	-6.5
7	#26180.00	45.9 PK	88.2	-42.3	2.28 V	225	46.0	-0.1
8	#26180.00	36.1 AV	68.2	-32.1	2.28 V	225	36.2	-0.1

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11ax (HE160)	Channel	CH 79：6345 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 2 kHz
Input Power (System)	120Vac, 60Hz	Environmental Conditions	25 °C, 75 % RH
Tested By	Tom Yang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*6345.00	105.4 PK			1.63 H	19	99.3	6.1
2	*6345.00	97.4 AV			1.63 H	19	91.3	6.1
3	12690.00	55.4 PK	74.0	-18.6	2.29 H	123	46.6	8.8
4	12690.00	44.7 AV	54.0	-9.3	2.29 H	123	35.9	8.8
5	19035.00	54.7 PK	74.0	-19.3	1.49 H	98	61.7	-7.0
6	19035.00	44.5 AV	54.0	-9.5	1.49 H	98	51.5	-7.0
7	#25380.00	46.3 PK	88.2	-41.9	2.07 H	145	47.0	-0.7
8	#25380.00	36.7 AV	68.2	-31.5	2.07 H	145	37.4	-0.7
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*6345.00	111.4 PK			1.08 V	255	105.3	6.1
2	*6345.00	102.4 AV			1.08 V	255	96.3	6.1
3	12690.00	56.8 PK	74.0	-17.2	1.26 V	249	48.0	8.8
4	12690.00	45.6 AV	54.0	-8.4	1.26 V	249	36.8	8.8
5	19035.00	59.8 PK	74.0	-14.2	2.39 V	268	66.8	-7.0
6	19035.00	48.3 AV	54.0	-5.7	2.39 V	268	55.3	-7.0
7	#25380.00	45.8 PK	88.2	-42.4	2.20 V	213	46.5	-0.7
8	#25380.00	35.9 AV	68.2	-32.3	2.20 V	213	36.6	-0.7

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

4.2 In-Band Emission (Mask) Measurement

4.2.1 Limits of In-Band Emission (Mask) Measurement

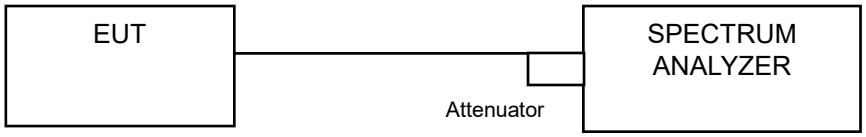
Test Item	Frequencies (MHz)	(X) dBc*1
Emission Mask	At 1 MHz outside of channel edge	20
	At one channel bandwidth from the channel center*2	28
	At one- and one-half times the channel bandwidth away from channel center*3	40
	More than one- and one-half times the channel bandwidth	40

*1 :The power spectral density must be suppressed by “x” dB

*2 : At frequencies between one megahertz outside an unlicensed device’s channel edge and one channel bandwidth from the center of the channel, the limits must be linearly interpolated between 20 dB and 28 dB suppression,

*3 : At frequencies between one and one- and one-half times an unlicensed device’s channel bandwidth, the limits must be linearly interpolated between 28 dB and 40 dB suppression.

4.2.2 Test Setup



4.2.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.2.4 Test Procedure

a. Connect output of the antenna port to a spectrum analyzer and adjust appropriate attenuation.

b. Measure the 26 dB EBW using the test procedure 12.4.1 of ANSI C63.10-2013. (Determine the channel edge.)

c. Measure the power spectral density (for emissions mask reference) using the following procedure:

   a) Set the span to encompass the entire 26 dB EBW of the signal.

   b) Set RBW = same RBW used for 26 dB EBW measurement.

   c) Set VBW ≥ 3 X RBW

   d) Number of points in sweep ≥ [2 X span / RBW].

   e) Sweep time = auto.

   f) Detector = RMS (i.e., power averaging)

   g) Trace average at least 100 traces in power averaging (rms) mode.

   h) Use the peak search function on the instrument to find the peak of the spectrum.

d. Using the measuring equipment limit line function, develop the emissions mask based on the following requirements. The emissions power spectral density must be reduced below the peak power spectral density (in dB) as follows:

   a) Suppressed by 20 dB at 1 MHz outside of the channel edge. (The channel edge is defined as the 26-dB point on either side of the carrier center frequency.)

   b) Suppressed by 28 dB at one channel bandwidth from the channel center.

   c) Suppressed by 40 dB at one- and one-half times the channel bandwidth from the channel center.

e. Adjust the span to encompass the entire mask as necessary and clear trace.

f. Trace average at least 100 traces in power averaging (rms) mode.

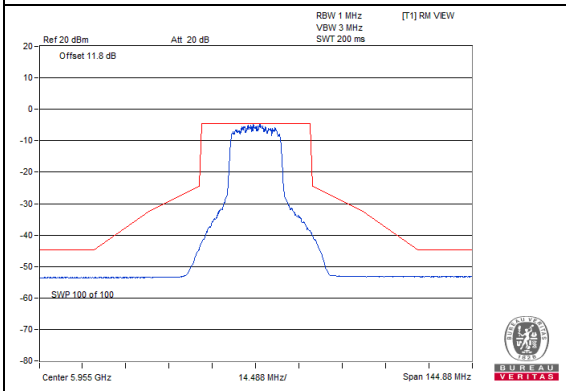
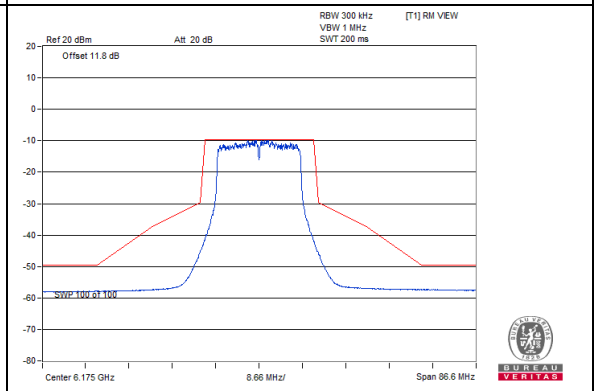
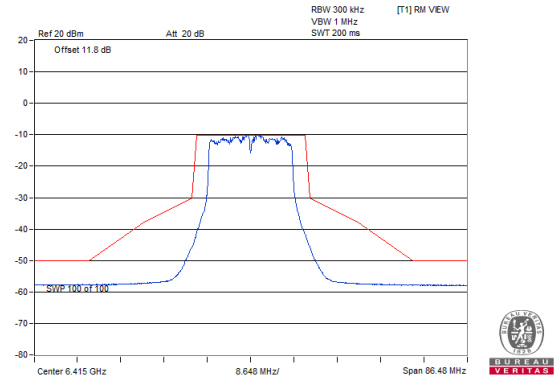
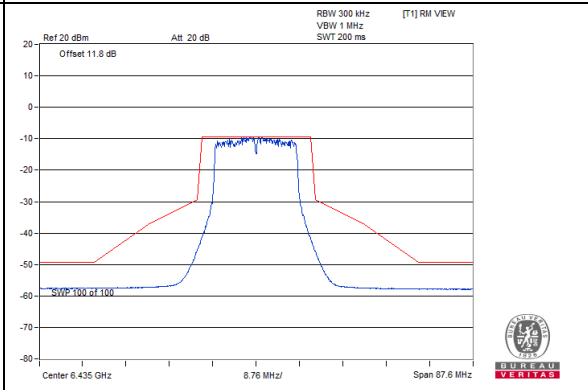
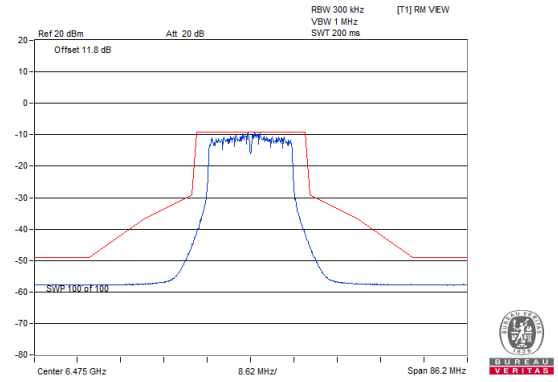
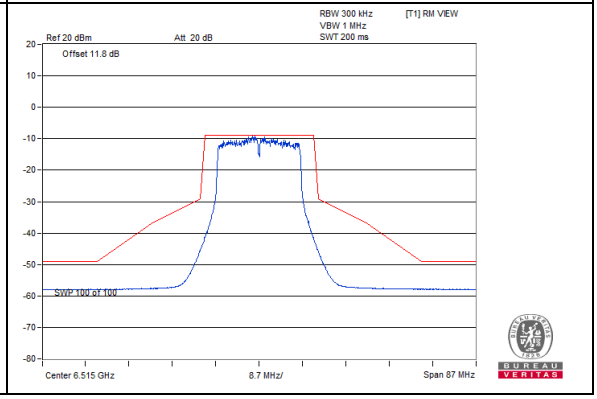
g. Adjust the reference level as necessary so that the crest of the channel touches the top of the emission mask

4.2.5 EUT Operating Condition

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

4.2.6 Test Results (Mode 1)

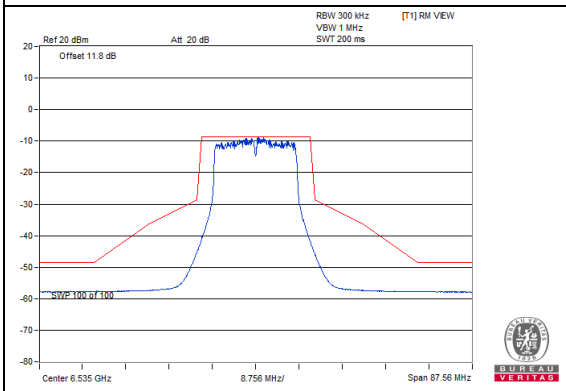
802.11a

Spectrum Plot of Worst Value	
Chain 0	
CH1	**CH45**
	
CH93	**CH97**
	
CH105	**CH113**
	

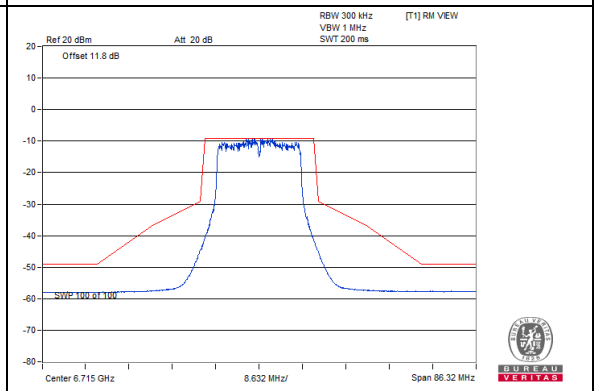
Spectrum Plot of Worst Value

Chain 0

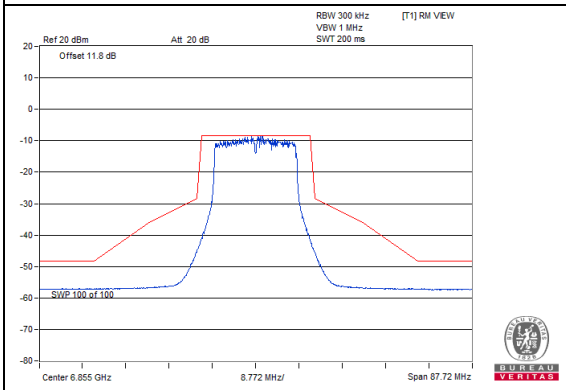
CH117



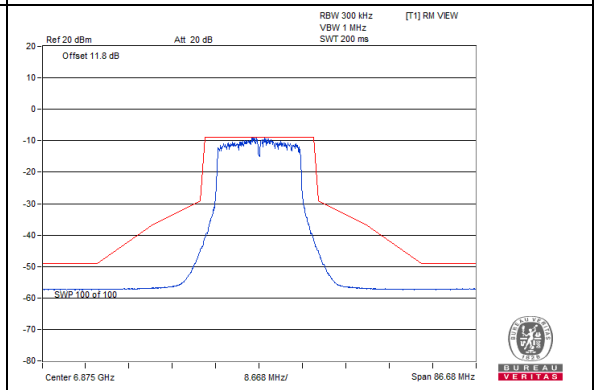
CH153



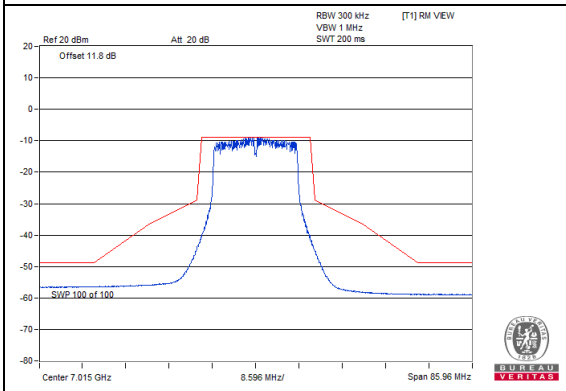
CH181



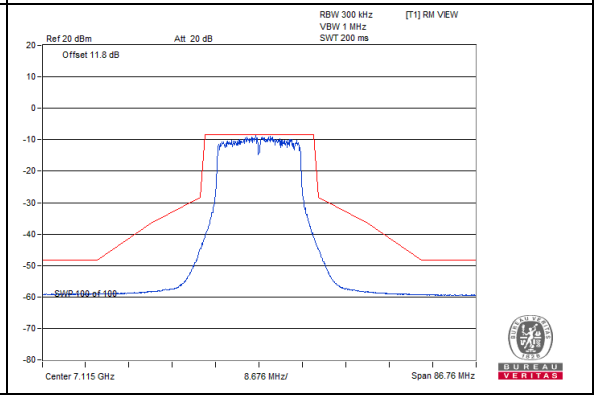
CH185



CH213



CH233



4.3 Conducted Emission Measurement

4.3.1 Limits of Conducted Emission Measurement

Frequency (MHz)	Conducted Limit (dBuV)	
	Quasi-peak	Average
0.15 - 0.5	66 - 56	56 - 46
0.50 - 5.0	56	46
5.0 - 30.0	60	50

Note: 1. The lower limit shall apply at the transition frequencies.
2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

4.3.2 Test Instruments

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
TEST RECEIVER R&S	ESCS 30	847124/029	2021/10/13	2022/10/12
LISN R&S	ESH3-Z5	848773/004	2021/10/29	2022/10/28
50 ohms Terminator NA	50	3	2021/10/27	2022/10/26
RF Coaxial Cable JYEBO	5D-FB	COCCAB-001	2021/9/25	2022/9/24
Fixed attenuator STI	STI02-2200-10	005	2021/8/27	2022/8/26
Software BVADT	BVADT_Cond_V7.3.7.4	NA	NA	NA

Note:
1. The calibration interval of the above test instruments are 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in Conduction 1.
3. Tested Date: 2022/3/28

4.3.3 Test Procedure

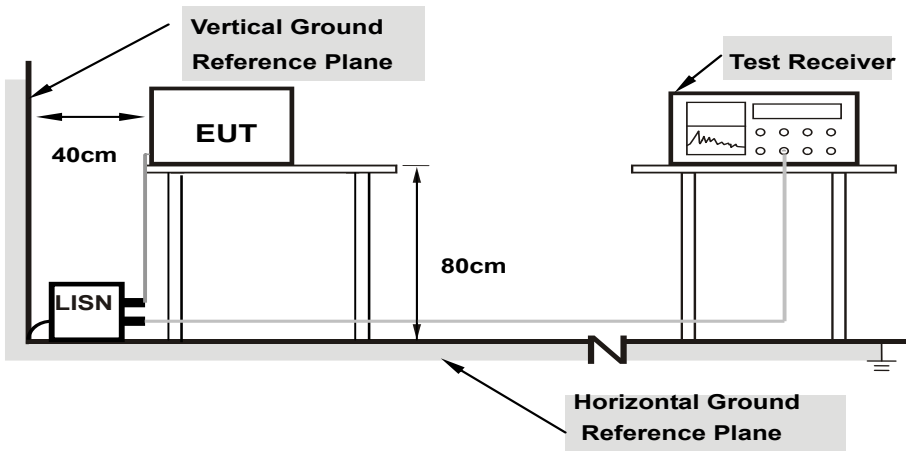
a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.

b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

NOTE: All modes of operation were investigated and the worst-case emissions are reported.

4.3.4 Test Setup



Note: 1.Support units were connected to second LISN.

For the actual test configuration, please refer to the attached file (Test Setup Photo). **2. Both LISNs (AMN) are 80 cm from the EUT and at least 80 from other units and other metal planes**

4.3.5 EUT Operating Condition

Same as 4.1.6.

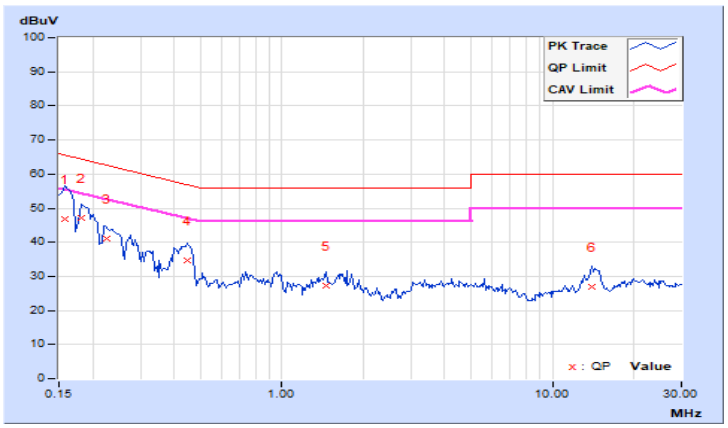
4.3.6 Test Results (Mode 1)

RF Mode	TX 802.11a 6G	**Channel**	CH 181 : 6855 MHz
Frequency Range	150 kHz ~ 30 MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power (System)	120 Vac, 60 Hz	**Environmental Conditions**	22 °C, 65 % RH
Tested By	Sampson Chen		

Phase Of Power : Line (L)										
No	**Frequency (MHz)**	**Correction Factor (dB)**	**Reading Value (dBuV)**		**Emission Level (dBuV)**		**Limit (dBuV)**		**Margin (dB)**	
			Q.P.	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**
1	0.15753	10.03	36.65	18.05	46.68	28.08	65.59	55.59	-18.91	-27.51
2	0.18105	10.04	37.23	28.47	47.27	38.51	64.44	54.44	-17.17	-15.93
3	0.22437	10.04	31.05	19.56	41.09	29.60	62.66	52.66	-21.57	-23.06
4	0.44705	10.05	24.47	17.38	34.52	27.43	56.93	46.93	-22.41	-19.50
5	1.45355	10.11	17.27	12.25	27.38	22.36	56.00	46.00	-28.62	-23.64
6	13.95647	10.92	16.12	8.67	27.04	19.59	60.00	50.00	-32.96	-30.41

Remarks:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level – Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value

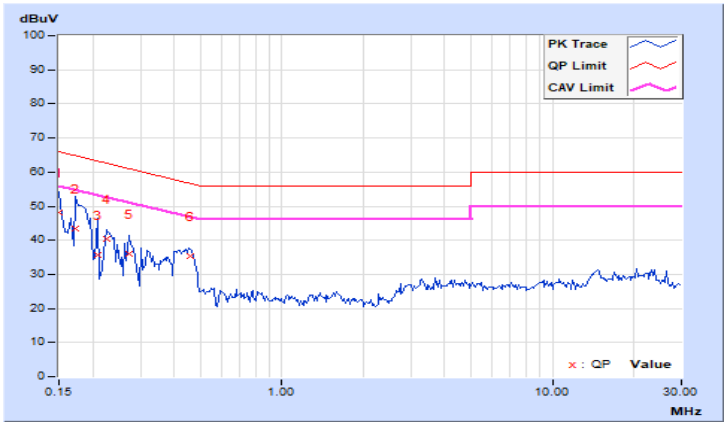


RF Mode	TX 802.11a 6G	Channel	CH 181 : 6855 MHz
Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	22 °C, 65 % RH
Tested By	Sampson Chen		

Phase Of Power : Neutral (N)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15023	10.04	38.14	19.24	48.18	29.28	65.99	55.99	-17.81	-26.71
2	0.17285	10.04	33.47	17.05	43.51	27.09	64.82	54.82	-21.31	-27.73
3	0.20748	10.04	25.55	9.11	35.59	19.15	63.31	53.31	-27.72	-34.16
4	0.22405	10.04	30.41	17.47	40.45	27.51	62.67	52.67	-22.22	-25.16
5	0.27208	10.05	25.88	16.23	35.93	26.28	61.05	51.05	-25.12	-24.77
6	**0.45801**	**10.06**	**25.27**	**20.85**	**35.33**	**30.91**	**56.73**	**46.73**	**-21.40**	**-15.82**

Remarks:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level – Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value



4.4 Transmit Power Measurement

4.4.1 Limits of Transmit Power Measurement

Operation Band	EUT Category	Limit
		Max Average Power
U-NII-5 U-NII-6 U-NII-7 U-NII-8	Client Devices (controlled of an indoor AP)	EIRP 24 dBm

Per KDB 662911 Method of conducted output power measurement on IEEE 802.11 devices,

Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$;
Array Gain = 0 dB (i.e., no array gain) for channel widths ≥ 40 MHz for any N_{ANT};
Array Gain = 5 log(N_{ANT}/N_{SS}) dB or 3 dB, whichever is less for 20-MHz channel widths with $N_{ANT} \geq 5$.

For power measurements on all other devices: Array Gain = 10 log(N_{ANT}/N_{SS}) dB.

4.4.2 Test Setup

FOR POWER OUTPUT MEASUREMENT

4.4.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.4.4 Test Procedure

FOR POWER OUTPUT MEASUREMENT

Conducted Power (dBm)
Method PM is used to perform output power measurement, trigger and gating function of wide band power meter is enabled to measure max output power of TX on burst. Duty factor is not added to measured value.

EIRP= Conducted Power (dBm) + Directional gain (antenna gain (dBi) + array gain (dB))

4.4.5 EUT Operating Condition

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

4.4.6 Test Result (Mode 1)

Power Output:

802.11a

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)	Max. Gain (dBi)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Pass / Fail
1	5955	4.498	6.53	4.76	13.459	11.29	24	Pass
45	6175	4.989	6.98	4.76	14.928	11.74	24	Pass
93	6415	4.764	6.78	4.76	14.256	11.54	24	Pass
97	6435	5.383	7.31	4.29	14.454	11.6	24	Pass
105	6475	5.2	7.16	4.29	13.964	11.45	24	Pass
113	6515	5.082	7.06	4.29	13.646	11.35	24	Pass
117	6535	5.188	7.15	4.61	14.997	11.76	24	Pass
153	6715	4.932	6.93	4.61	14.256	11.54	24	Pass
181	6855	5.848	7.67	4.61	16.904	12.28	24	Pass
185	6875	5.224	7.18	4.09	13.397	11.27	24	Pass
213	7015	5.888	7.70	4.09	15.101	11.79	24	Pass
233	7115	5.598	7.48	4.09	14.355	11.57	24	Pass

Note: 1. EIRP= Conducted Power (dBm) + Directional gain (antenna gain (dBi) + array gain (dB))

2. U-NII-5 Directional gain = antenna gain (dBi) + array gain (dB) = 4.76 + 0 dB = 4.76 dBi
   U-NII-6 Directional gain = antenna gain (dBi) + array gain (dB) = 4.29 + 0 dB = 4.29 dBi
   U-NII-7 Directional gain = antenna gain (dBi) + array gain (dB) = 4.61 + 0 dB = 4.61 dBi
   U-NII-8 Directional gain = antenna gain (dBi) + array gain (dB) = 4.09 + 0 dB = 4.09 dBi
3. Since this device support 1TX only, therefore array gain = 0 dB (i.e., no array gain) for NANT ≤ 4 (for conducted output power measurement)

4.4.7 Test Result (Mode 3)

Power Output:

802.11ax (HE20)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Max. Gain (dBi)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Pass / Fail
		Chain 0	Chain 1							
113	6515	1.84	2.05	3.131	4.96	4.29	8.414	9.25	24	Pass

Note: 1. EIRP= Conducted Power (dBm) + Directional gain (antenna gain (dBi) + array gain (dB))
2. U-NII-6 Directional gain = antenna gain (dBi) + array gain (dB) = 4.29 + 0 dB = 4.29 dBi
3. Since this device support 2TX only, therefore array gain = 0 dB (i.e., no array gain) for NANT ≤ 4 (for conducted output power measurement)

802.11ax (HE40)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Max. Gain (dBi)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Pass / Fail
		Chain 0	Chain 1							
115	6525	3.86	3.65	4.75	6.77	4.61	13.74	11.38	24	Pass

Note: 1. EIRP= Conducted Power (dBm) + Directional gain (antenna gain (dBi) + array gain (dB))
2. U-NII-7 Directional gain = antenna gain (dBi) + array gain (dB) = 4.61 + 0 dB = 4.61 dBi
3. Since this device support 2TX only, therefore array gain = 0 dB (i.e., no array gain) for NANT ≤ 4 (for conducted output power measurement)

802.11ax (HE80)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Max. Gain (dBi)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Pass / Fail
		Chain 0	Chain 1							
119	6545	6.91	7.26	10.23	10.10	4.61	29.58	14.71	24	Pass

Note: 1. EIRP= Conducted Power (dBm) + Directional gain (antenna gain (dBi) + array gain (dB))
2. U-NII-7 Directional gain = antenna gain (dBi) + array gain (dB) = 4.61 + 0 dB = 4.61 dBi
3. Since this device support 2TX only, therefore array gain = 0 dB (i.e., no array gain) for NANT ≤ 4 (for conducted output power measurement)

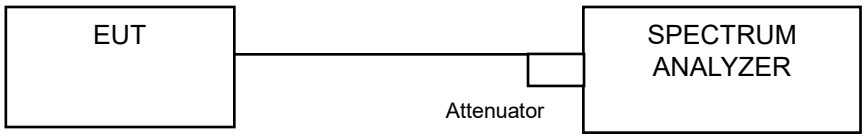
802.11ax (HE160)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Max. Gain (dBi)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Pass / Fail
		Chain 0	Chain 1							
79	6345	9.31	9.44	17.321	12.39	4.76	51.88	17.15	24	Pass

Note: 1. EIRP= Conducted Power (dBm) + Directional gain (antenna gain (dBi) + array gain (dB))
2. U-NII-5 Directional gain = antenna gain (dBi) + array gain (dB) = 4.76 + 0 dB = 4.76 dBi
3. Since this device support 2TX only, therefore array gain = 0 dB (i.e., no array gain) for NANT ≤ 4 (for conducted output power measurement)

4.5 Emission Bandwidth Measurement

4.5.1 Test Setup



4.5.2 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.5.3 Test Procedure

FOR 99% OCCUPIED BANDWIDTH

The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with resolution bandwidth in the range of 1% to 5% of the anticipated emission bandwidth, and a video bandwidth at least 3x the resolution bandwidth and set the detector to SAMPLE. The width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5 %of the total mean power of a given emission.

FOR 26dB BANDWIDTH

a. Set RBW = approximately 1% of the emission bandwidth.
b. Set the VBW > RBW.
c. Detector = Peak.
d. Trace mode = max hold.
e. Measure the maximum width of the emission that is 26 dB down from the peak of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

4.5.4 Test Results (Mode 1)

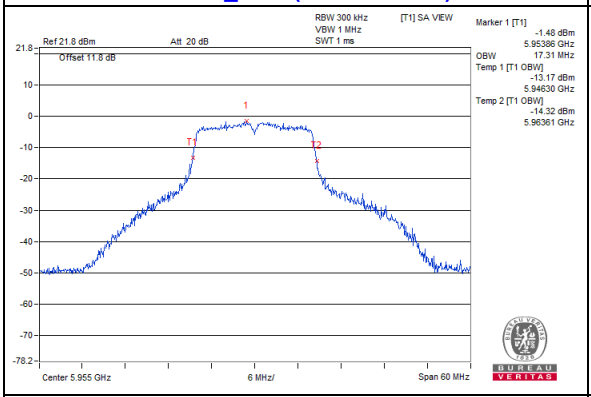
99% Occupied Bandwidth:

802.11a

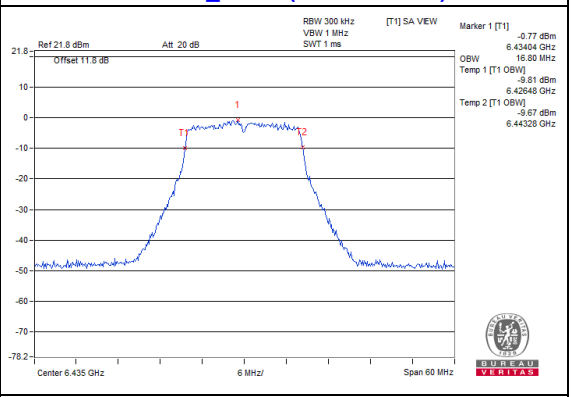
Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
1	5955	17.31
45	6175	16.8
93	6415	16.8
97	6435	16.8
105	6475	16.68
113	6515	16.68
117	6535	16.8
153	6715	16.8
181	6855	16.8
185	6875	16.68
213	7015	16.56
233	7115	16.8

Spectrum Plot of Max. Value

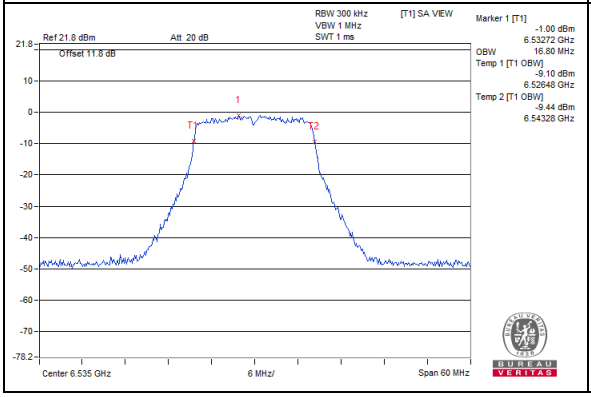
802.11a_CH1 (U-NII-5 Band)



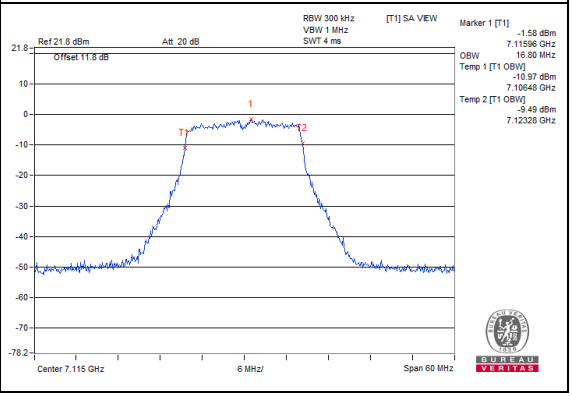
802.11a_CH97 (U-NII-6 Band)



802.11a_CH117 (U-NII-7 Band)



802.11a_CH233 (U-NII-8 Band)



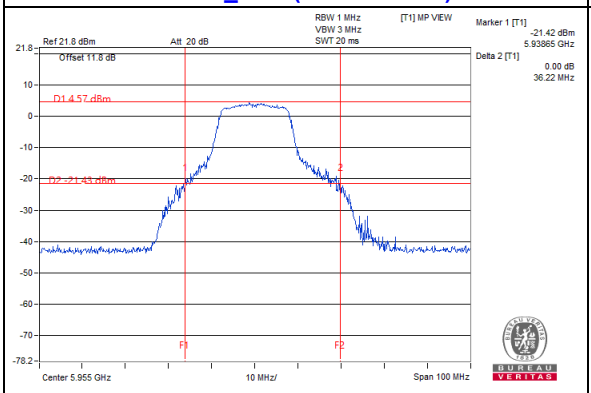
26dB Bandwidth:

802.11a

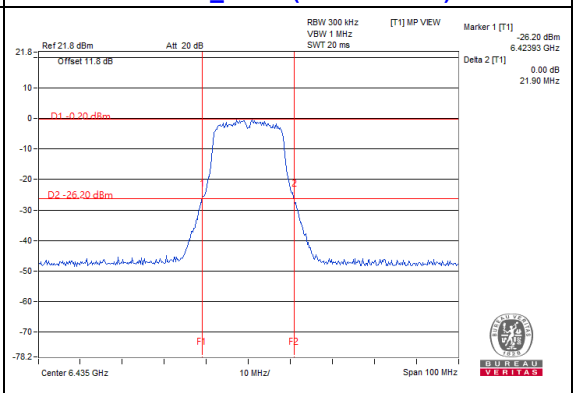
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	Limit (MHz)
1	5955	36.22	320
45	6175	21.65	320
93	6415	21.62	320
97	6435	21.9	320
105	6475	21.55	320
113	6515	21.75	320
117	6535	21.89	320
153	6715	21.58	320
181	6855	21.93	320
185	6875	21.67	320
213	7015	21.49	320
233	7115	21.69	320

Spectrum Plot of Max. Value

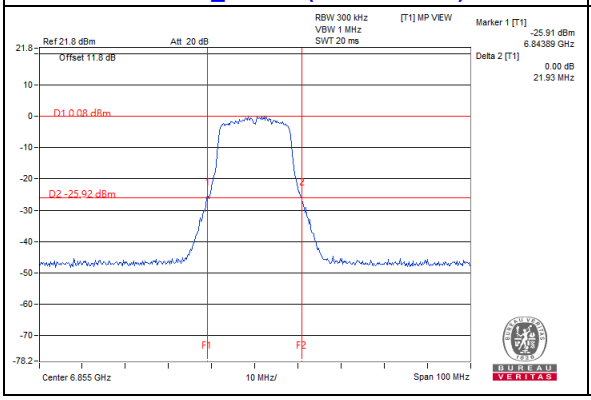
802.11a_CH1 (U-NII-5 Band)



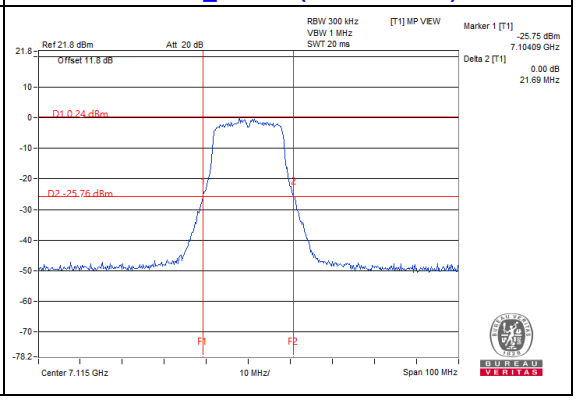
802.11a_CH97 (U-NII-6 Band)



802.11a_CH181 (U-NII-7 Band)



802.11a_CH233 (U-NII-8 Band)



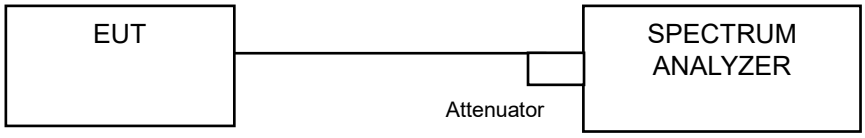
4.6 Peak Power Spectral Density Measurement

4.6.1 Limits of Peak Power Spectral Density Measurement

Operation Band	EUT Category	Limit
		Peak Power Density (EIRP)
U-NII-5 U-NII-6 U-NII-7 U-NII-8	Client Devices (controlled of an indoor AP)	-1 dBm/MHz

4.6.2 Test Setup

For Conducted Method



4.6.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.6.4 Test Procedure

Using method SA-2

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

4.6.5 EUT Operating Condition

Same as Item 4.3.6.

4.6.6 Test Results (Mode 1)

802.11a

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD (dBm/MHz)	Directional Gain (dBi)	EIRP PSD (dBm/MHz)	EIRP PSD Limit (dBm/MHz)	Pass / Fail
1	5955	-6.11	0.26	-5.85	4.76	-1.09	-1	Pass
45	6175	-6.09	0.26	-5.83	4.76	-1.07	-1	Pass
93	6415	-6.33	0.26	-6.07	4.76	-1.31	-1	Pass
97	6435	-5.64	0.26	-5.38	4.29	-1.09	-1	Pass
105	6475	-5.8	0.26	-5.54	4.29	-1.25	-1	Pass
113	6515	-5.75	0.26	-5.49	4.29	-1.2	-1	Pass
117	6535	-6.41	0.26	-6.15	4.61	-1.54	-1	Pass
153	6715	-6.12	0.26	-5.86	4.61	-1.25	-1	Pass
181	6855	-5.93	0.26	-5.67	4.61	-1.06	-1	Pass
185	6875	-5.49	0.26	-5.23	4.09	-1.14	-1	Pass
213	7015	-5.45	0.26	-5.19	4.09	-1.1	-1	Pass
233	7115	-5.48	0.26	-5.22	4.09	-1.13	-1	Pass

Note: 1. Refer to section 3.3 for duty cycle spectrum plot.

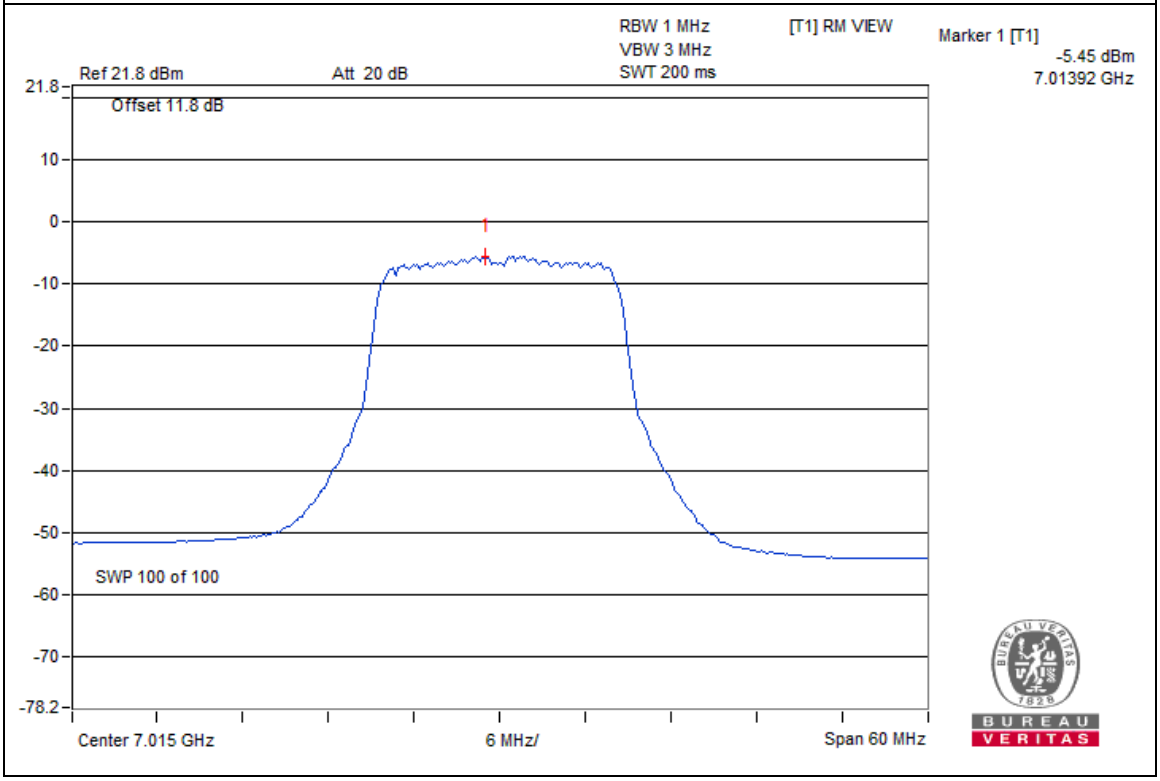
2. EIRP PSD= Conducted PSD (dBm) + Directional gain (antenna gain (dBi) + array gain (dB))

3. U-NII-5 Directional gain = antenna gain (dBi) + array gain (dB) = 4.76 + 0 dB = 4.76 dBi
   U-NII-6 Directional gain = antenna gain (dBi) + array gain (dB) = 4.29 + 0 dB = 4.29 dBi
   U-NII-7 Directional gain = antenna gain (dBi) + array gain (dB) = 4.61 + 0 dB = 4.61 dBi
   U-NII-8 Directional gain = antenna gain (dBi) + array gain (dB) = 4.09 + 0 dB = 4.09 dBi

4. Array Gain = 10 log(N_{ANT}/N_{SS}) dB = 10 log(1/1) dB = 0 dB

Spectrum Plot of Worst Value

802.11a_ CH213

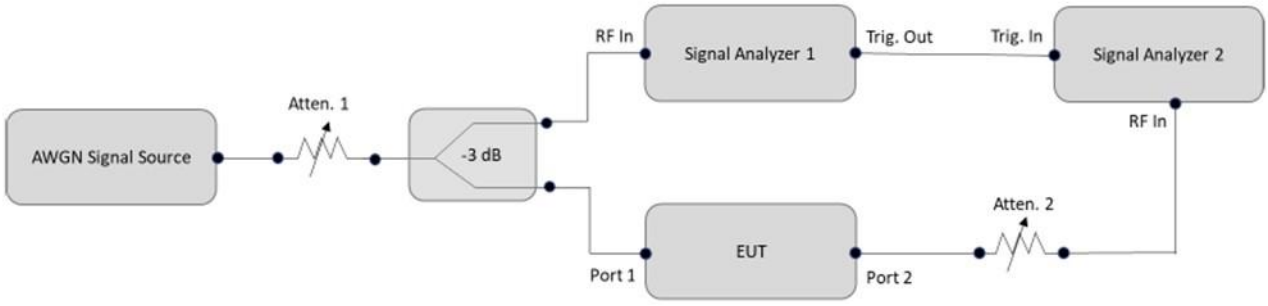


4.7 Contention Based Protocol Measurement

4.7.1 Limits of Contention Based Protocol Measurement

Unlicensed indoor low-power devices must detect co-channel radio frequency power that is at least -62 dBm (The threshold is referenced to a 0 dBi antenna gain.) or lower. Additionally, indoor low-power devices must detect co-channel energy with 90% or greater certainty.

4.7.2 Test Setup



4.7.3 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Spectrum Analyzer R&S	FSW8	101497	2021/8/25	2022/8/24
Spectrum Analyzer R&S	FSV40	101516	2022/3/7	2023/3/6
MXG X-Series RF Vector Signal Generator Keysight	N5182B	MY53052647	2021/11/5	2022/11/4
N5182BU KEYSIGHT	N5182BX07	MY59360203	2021/12/10	2022/12/09
Power Splitter/combiner Mini-Circuits	ZFRSC-123-S+	F698501347_01	2022/1/26	2023/1/25

Note: 1. The test was performed in Femtocell room.
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
3. Tested Date: 2022/5/4

4.7.4 Test Procedure

a. Set the signal analyzer center frequency to the nominal EUT channel center frequency. The span range of the signal analyzer shall be between two times and five times the OBW of the EUT. Connect the output port of the EUT to the signal analyzer 2. Ensure that the attenuator 2 provides enough attenuation to not overload the signal analyzer 2 receiver.
b. Monitoring the signal analyzer 2, verify the EUT is operating and transmitting with the parameters (set as following section 4.7.5 EUT operating condition).

c. Determine number of times detection threshold test as following table,

If	Number of Tests	Placement of Incumbent Transmission
$BW_{EUT} \leqq BW_{Inc}$	Once	Same as EUT transmission
$BW_{Inc} < BW_{EUT} \leqq 2xBW_{Inc}$	Once	Contained within BW_{EUT}
$2xBW_{Inc} < BW_{EUT} \leqq 4xBW_{Inc}$	Twice. (Incumbent transmission is contained within BW_{EUT})	Closely to the lower edge and upper edge of the EUT Channel
$BW_{EUT} > 4xBW_{Inc}$	Three times	Closely to the lower edge ,in the middle and upper edge of the EUT Channel

d. Using an AWGN signal source, generate (but do not transmit, i.e., RF OFF) a 10 MHz-wide AWGN signal. Use step c table to determine the center frequency of the 10 MHz AWGN signal relative to the EUT's channel bandwidth and center frequency.
e. 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.
f. Transmit the AWGN signal (RF ON) and verify its characteristics on the signal analyzer 1.
g. 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.
h. (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.
i. Refer to step c table 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 d, choose a different center frequency for the AWGN signal and repeat the process.

4.7.5 EUT Operating Condition

Set the EUT to transmit with a constant duty cycle and relative operating parameters which including power level, operating frequency,modulation and bandwidth.

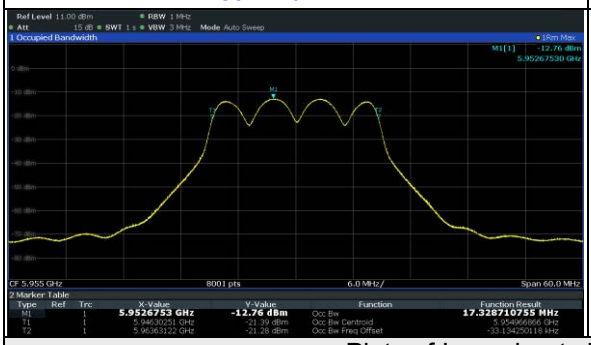
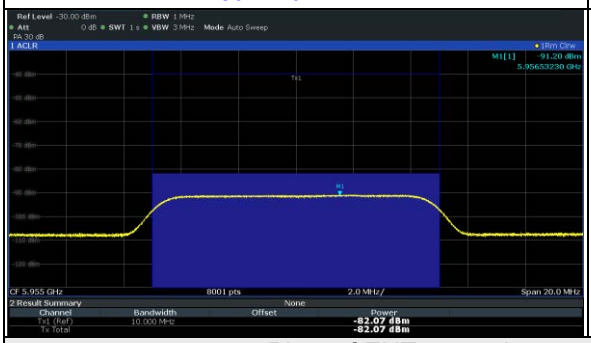
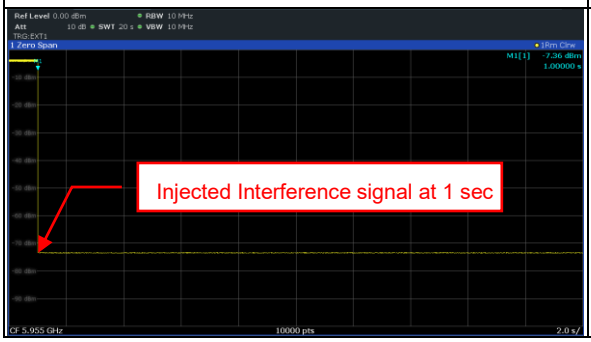
4.7.6 Test Results

For U-NII-5 band

Contention Based Protocol Measurement									
Measurement Mode :		Conducted measurement		**The Incumbent Signal(AWGN) Level(dBm) :**			-82	at the antenna connector	
Device Type :		Indoor Client		**Antenna Gain(dBi) :**			-14.46		
Operation Mode	**Channel Bandwidth (MHz)**	**Channel Number**	**Channel Frequency (MHz)**	**AWGN Signal Frequency (MHz)**	**Number of Times**	**Number of Detected**	**Detection Rate**	**Minimum Limit**	**Pass/Fail**
802.11a	20	1	5955	5955	10	10	100%	90%	Pass
Result	Complied								

Lowest Interference(AWGN) Level Check						
Operation Mode	**Channel Bandwidth (MHz)**	**Channel Number**	**Channel Frequency (MHz)**	**AWGN Signal Frequency (MHz)**	**Threshold Level (dBm)**	**EUT Status**
802.11a	20	1	5955	5955	-83	Start transmitting

Note: Detection criterion = -62dBm + min Gain (-14.46dBi) = -76.46 dBm.

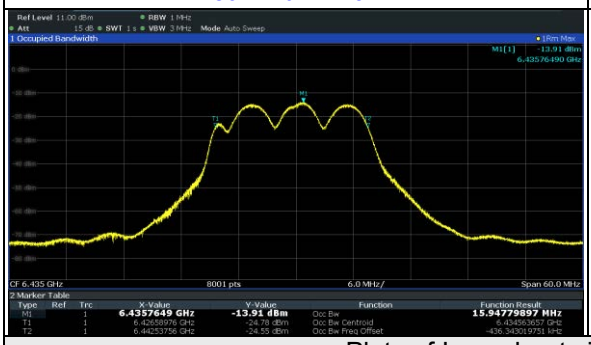
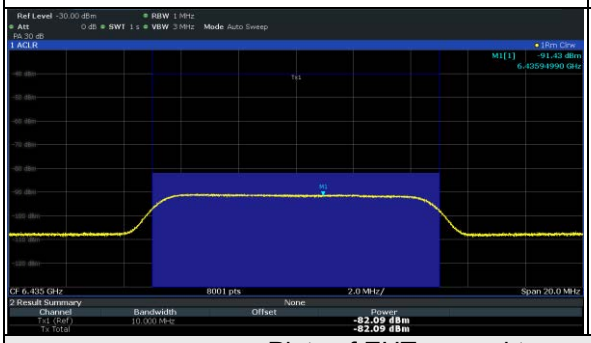
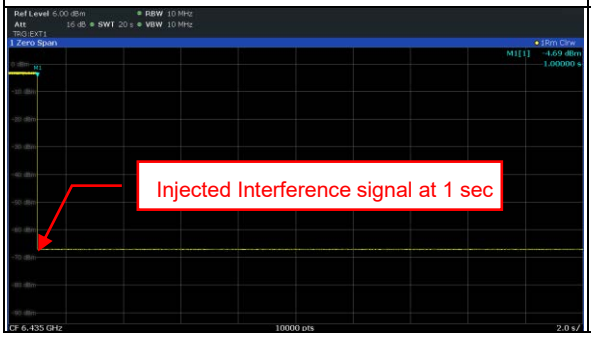
Plots of EUT Tx waveform	
802.11a / CH1	
	
Plots of Incumbent signal(AWGN) Level	
802.11a / CH1	
	
Plots of EUT ceased transmission in the time domain	
802.11a / CH1	
	

For U-NII-6 band

Contention Based Protocol Measurement									
Measurement Mode :		Conducted measurement		**The Incumbent Signal(AWGN) Level(dBm) :**			-82	at the antenna connector	
Device Type :		Indoor Client		**Antenna Gain(dBi) :**			-14.46		
Operation Mode	**Channel Bandwidth (MHz)**	**Channel Number**	**Channel Frequency (MHz)**	**AWGN Signal Frequency (MHz)**	**Number of Times**	**Number of Detected**	**Detection Rate**	**Minimum Limit**	**Pass/Fail**
802.11a	20	97	6435	6435	10	10	100%	90%	Pass
Result	Complied								

Lowest Interference(AWGN) Level Check						
Operation Mode	**Channel Bandwidth (MHz)**	**Channel Number**	**Channel Frequency (MHz)**	**AWGN Signal Frequency (MHz)**	**Threshold Level (dBm)**	**EUT Status**
802.11a	20	97	6435	6435	-83	Start transmitting

Note: Detection criterion = -62dBm + min Gain (-14.46dBi) = -76.46 dBm.

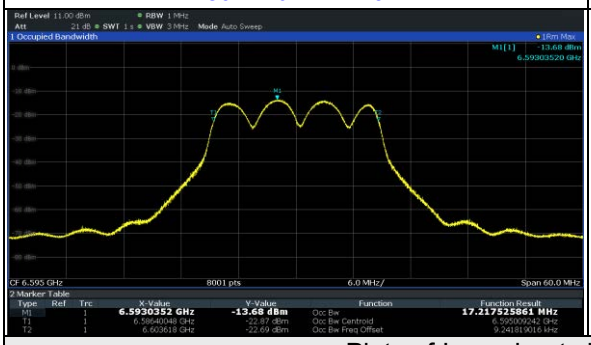
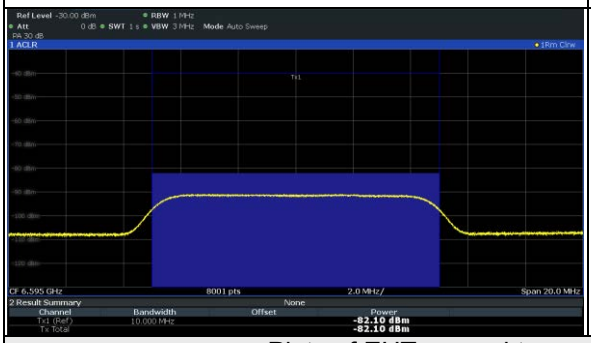
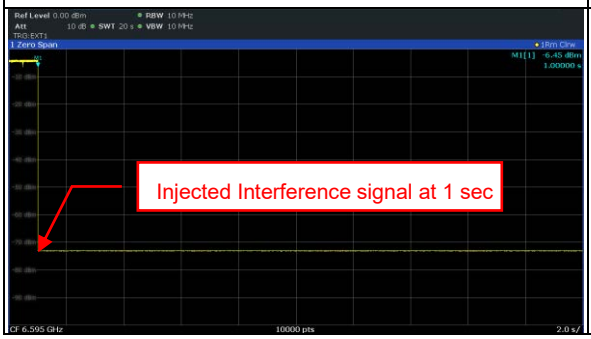
Plots of EUT Tx waveform	
802.11a / CH97	
	
Plots of Incumbent signal(AWGN) Level	
802.11a / CH97	
	
Plots of EUT ceased transmission in the time domain	
802.11a / CH97	
	

For U-NII-7 band

Contention Based Protocol Measurement									
Measurement Mode :		Conducted measurement		**The Incumbent Signal(AWGN) Level(dBm) :**			-82	at the antenna connector	
Device Type :		Indoor Client		**Antenna Gain(dBi) :**			-14.46		
Operation Mode	**Channel Bandwidth (MHz)**	**Channel Number**	**Channel Frequency (MHz)**	**AWGN Signal Frequency (MHz)**	**Number of Times**	**Number of Detected**	**Detection Rate**	**Minimum Limit**	**Pass/Fail**
802.11a	20	129	6595	6595	10	10	100%	90%	Pass
Result	Complied								

Lowest Interference(AWGN) Level Check						
Operation Mode	**Channel Bandwidth (MHz)**	**Channel Number**	**Channel Frequency (MHz)**	**AWGN Signal Frequency (MHz)**	**Threshold Level (dBm)**	**EUT Status**
802.11a	20	129	6595	6595	-83	Start transmitting

Note: Detection criterion = -62dBm + min Gain (-14.46dBi) = -76.46 dBm.

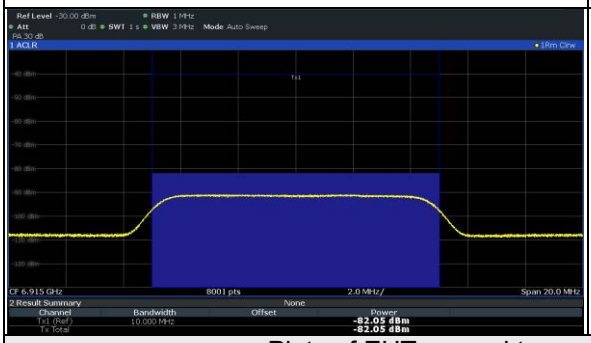
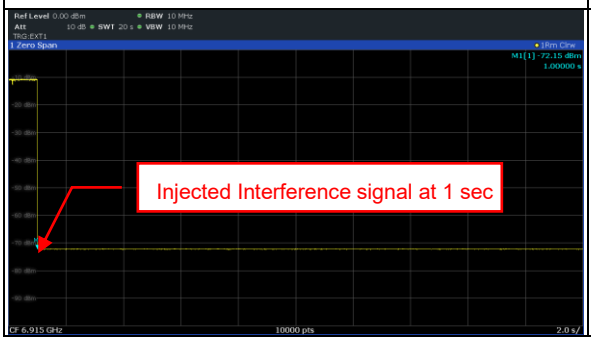
Plots of EUT Tx waveform	
802.11a / CH129	
	
Plots of Incumbent signal(AWGN) Level	
802.11a / CH129	
	
Plots of EUT ceased transmission in the time domain	
802.11a / CH129	
	

For U-NII-8 band

Contention Based Protocol Measurement									
Measurement Mode :		Conducted measurement		**The Incumbent Signal(AWGN) Level(dBm) :**			-82	at the antenna connector	
Device Type :		Indoor Client		**Antenna Gain(dBi) :**			-14.46		
Operation Mode	**Channel Bandwidth (MHz)**	**Channel Number**	**Channel Frequency (MHz)**	**AWGN Signal Frequency (MHz)**	**Number of Times**	**Number of Detected**	**Detection Rate**	**Minimum Limit**	**Pass/Fail**
802.11a	20	193	6915	6915	10	10	100%	90%	Pass
Result	Complied								

Lowest Interference(AWGN) Level Check						
Operation Mode	**Channel Bandwidth (MHz)**	**Channel Number**	**Channel Frequency (MHz)**	**AWGN Signal Frequency (MHz)**	**Threshold Level (dBm)**	**EUT Status**
802.11a	20	193	6915	6915	-83	Start transmitting

Note: Detection criterion = -62dBm + min Gain (-14.46dBi) = -76.46 dBm.

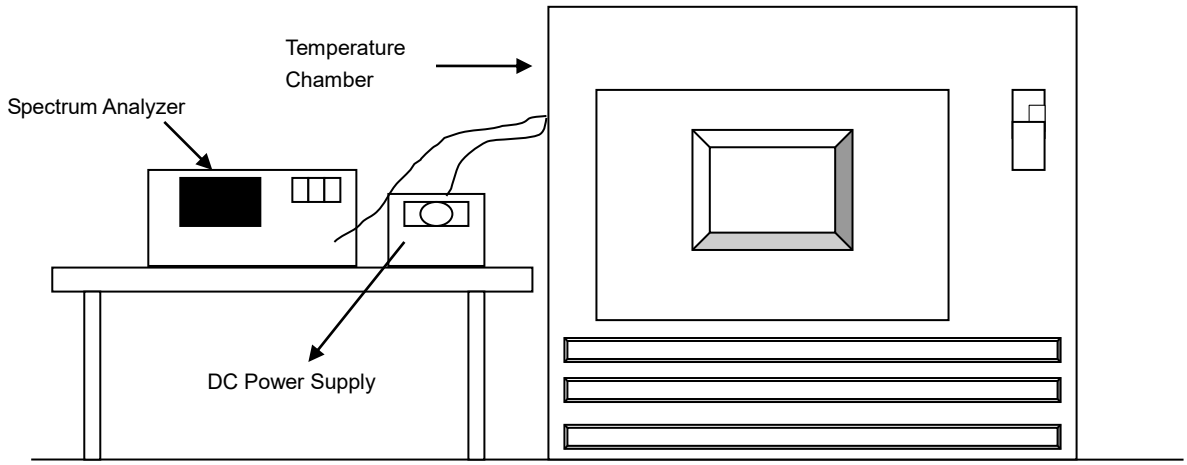
Plots of EUT Tx waveform	
802.11a / CH193	
	
Plots of Incumbent signal(AWGN) Level	
802.11a / CH193	
	
Plots of EUT ceased transmission in the time domain	
802.11a / CH193	
	

4.8 Frequency Stability Measurement

4.8.1 Limits of Frequency Stability Measurement

The frequency of the carrier signal shall be maintained within band of operation

4.8.2 Test Setup



4.8.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.8.4 Test Procedure

a. The EUT was placed inside the environmental test chamber and powered by nominal DC voltage.
b. Turn the EUT on and couple its output to a spectrum analyzer.
c. Turn the EUT off and set the chamber to the highest temperature specified.
d. Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize, turn the EUT on and measure the operating frequency after 2, 5, and 10 Minutes.
e. Repeat step (d) with the temperature chamber set to the next desired temperature until measurements down to the lowest specified temperature have been completed..
f. The test chamber was allowed to stabilize at +20 degree C for a minimum of 30 Minutes. The supply voltage was then adjusted on the EUT from 85% to 115% and the frequency record.

.

4.8.5 EUT Operating Condition

Set the EUT transmit at un-modulation mode to test frequency stability.

4.8.6 Test Results (Mode 1)

Frequency Stability Versus Temp.									
Operating Frequency: 5955MHz									
TEMP. (℃)	Power Supply (Vdc)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail
70	3.3	5954.9952	Pass	5955.0002	Pass	5954.9974	Pass	5954.9972	Pass
60	3.3	5955.0073	Pass	5955.0095	Pass	5955.0072	Pass	5955.0066	Pass
50	3.3	5955.0013	Pass	5955.0052	Pass	5955.0052	Pass	5955.0012	Pass
40	3.3	5955.0183	Pass	5955.0178	Pass	5955.0216	Pass	5955.0177	Pass
30	3.3	5954.9731	Pass	5954.9729	Pass	5954.9771	Pass	5954.976	Pass
20	3.3	5954.9892	Pass	5954.9857	Pass	5954.985	Pass	5954.9845	Pass
10	3.3	5955.0225	Pass	5955.0235	Pass	5955.0228	Pass	5955.0251	Pass
0	3.3	5955.0162	Pass	5955.0147	Pass	5955.0197	Pass	5955.0182	Pass
-10	3.3	5954.9889	Pass	5954.9891	Pass	5954.9858	Pass	5954.9896	Pass

Frequency Stability Versus Voltage									
Operating Frequency: 5955MHz									
TEMP. (℃)	Power Supply (Vdc)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail
20	3.795	5954.9986	Pass	5954.9997	Pass	5954.997	Pass	5954.9985	Pass
	3.3	5954.9892	Pass	5954.9857	Pass	5954.985	Pass	5954.9845	Pass
	2.805	5954.9825	Pass	5954.9873	Pass	5954.9825	Pass	5954.983	Pass

4.9 Operational Restrictions for 6 GHz U-NII Devices

4.9.1 Limits of Operational Restrictions for 6 GHz U-NII Devices

In the 5.925-7.125 GHz band, client devices, except fixed client devices, must operate under the control of a standard power access point, indoor access point or subordinate devices; Subordinate devices must operate under the control of an indoor access point.

4.9.2 Test Setup

N/A

4.9.3 Test Instruments

N/A

4.9.4 Test Procedure

N/A.

4.9.5 Test Results

Device is an indoor client device under the control of a low power indoor access point. Please refer to the declaration letter exhibit supplied within this application.

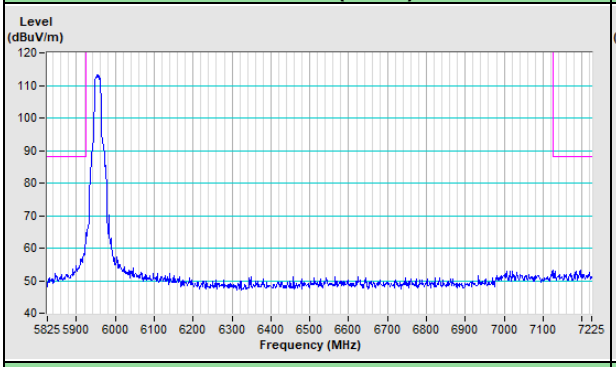
5 Pictures of Test Arrangements

Please refer to the attached file (Test Setup Photo).

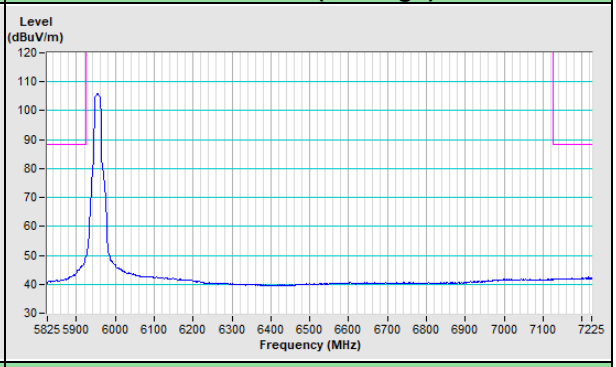
Annex A - Band-Edge Measurement (Mode 1)

802.11a 6G Channel 1

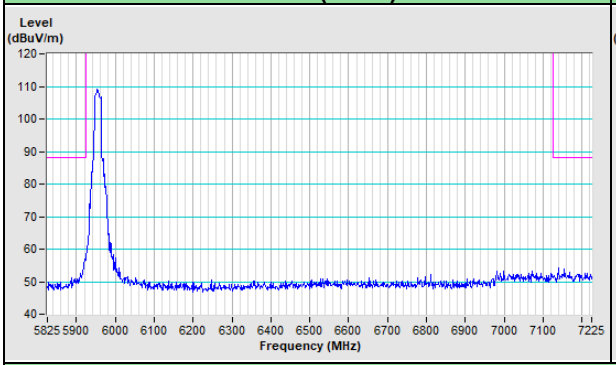
Horizontal (Peak)



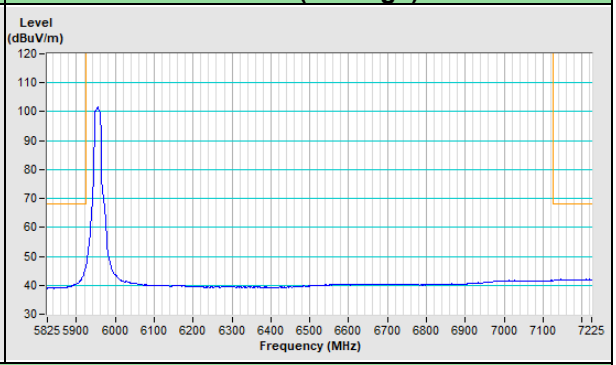
Horizontal (Average)



Vertical (Peak)

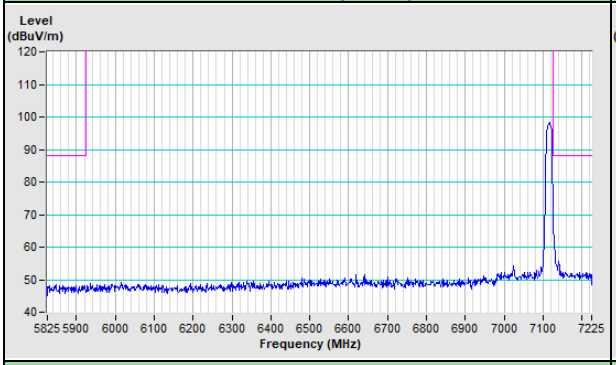


Vertical (Average)

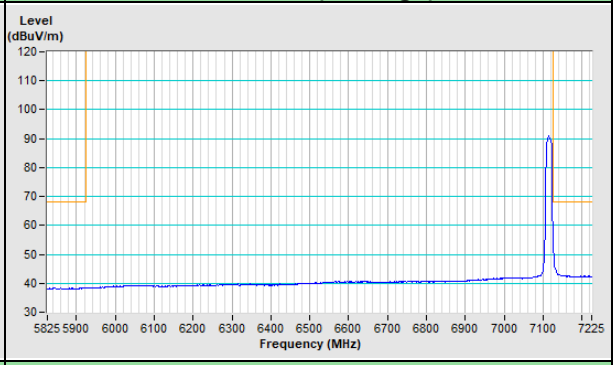


802.11a 6G Channel 233

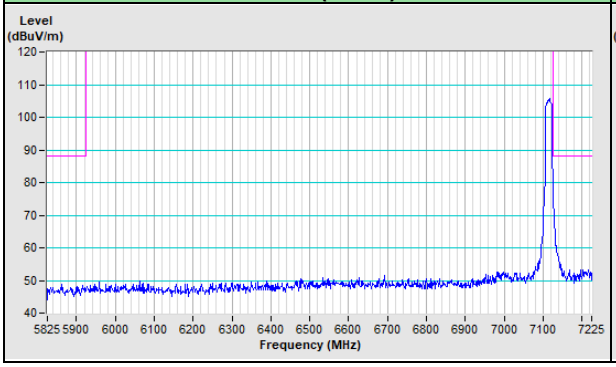
Horizontal (Peak)



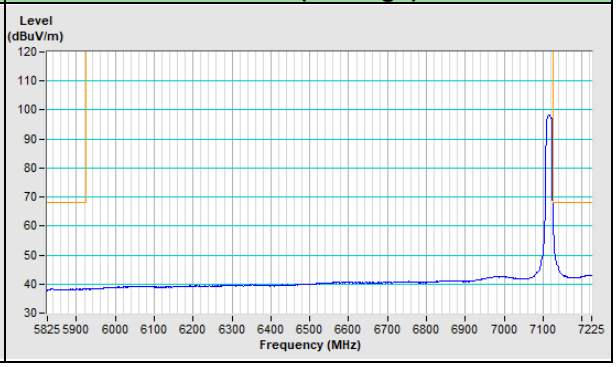
Horizontal (Average)



Vertical (Peak)



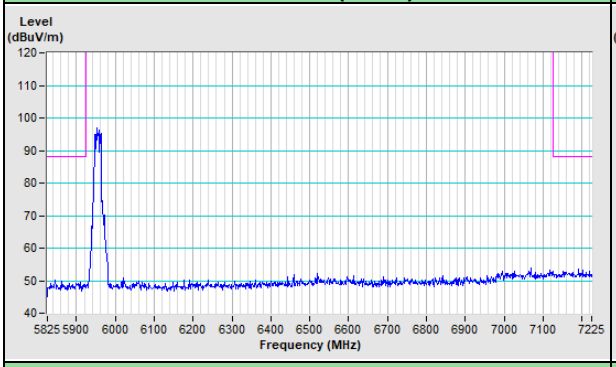
Vertical (Average)



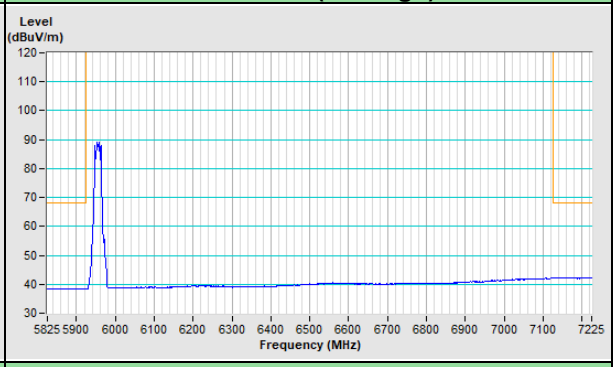
Annex A - Band-Edge Measurement (Mode 2)

802.11a 6G Channel 1

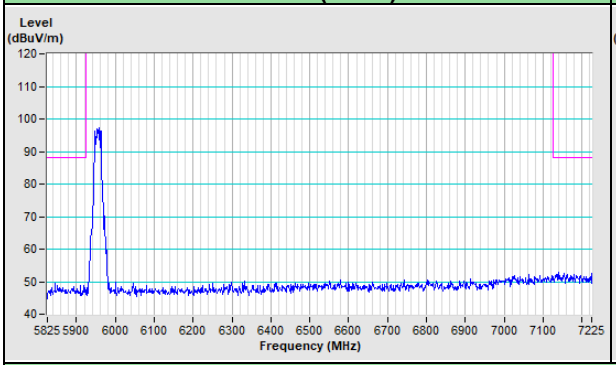
Horizontal (Peak)



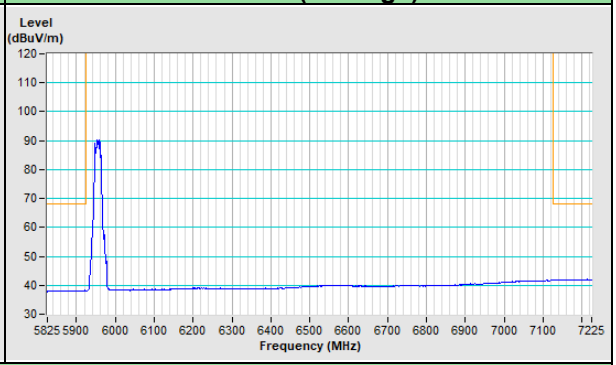
Horizontal (Average)



Vertical (Peak)

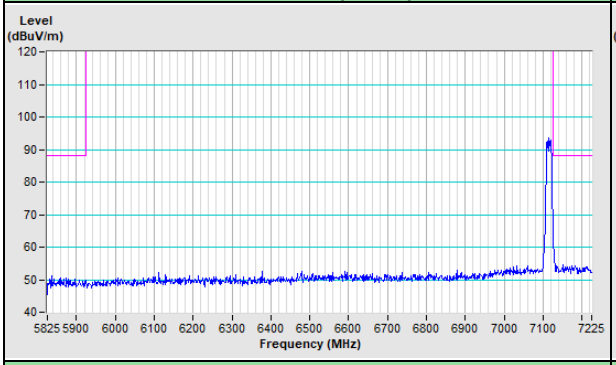


Vertical (Average)

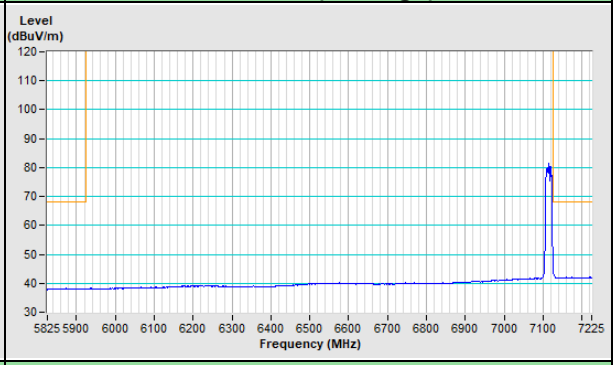


802.11a 6G Channel 233

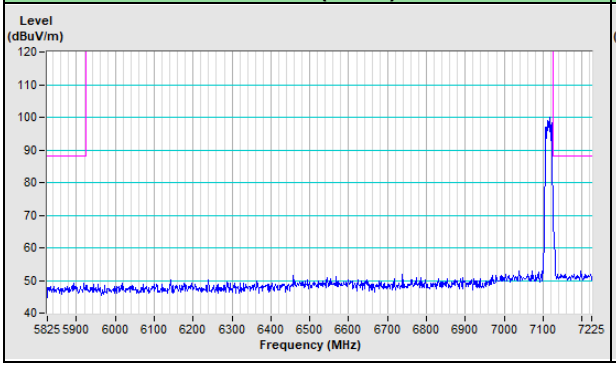
Horizontal (Peak)



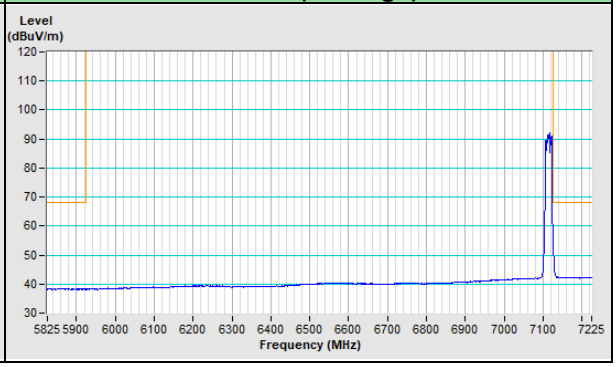
Horizontal (Average)



Vertical (Peak)



Vertical (Average)



Appendix A– Information of the Testing Laboratories

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are FCC recognized accredited test firms and accredited according to ISO/IEC 17025.

If you have any comments, please feel free to contact us at the following:

Lin Kou EMC/RF Lab
Tel: 886-2-26052180
Fax: 886-2-26051924

Hsin Chu EMC/RF/Telecom Lab
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Fax: 886-3-6668323

Hwa Ya EMC/RF/Safety Lab
Tel: 886-3-3183232
Fax: 886-3-3270892

Email: service.adt@tw.bureauveritas.com
Web Site: www.bureauveritas-adt.com

The address and road map of all our labs can be found in our web site also.

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