

FCC Radio Test Report

FCC ID: RWO-RZ090368QCNFA**This report concerns: Class II Permissive Changes**

Report No. : BTL-FCCP-4-2212C001
Equipment : Notebook PC
Model Name : RZ09-0482
Brand Name : RAZER
Applicant : Razer Inc.
Address : 9 Pasteur, Suite 100, Irvine, CA92618, USA.
Manufacturer : Razer Inc.
Address : 9 Pasteur, Suite 100, Irvine, CA92618, USA.

Radio Function : RLAN 5 GHz (U-NII 1, U-NII 2A, U-NII 2C, U-NII 3)

FCC Rule Part(s) : FCC CFR Title 47, Part 15, Subpart E (15.407)
Measurement Procedure(s) : ANSI C63.10-2013

Date of Receipt : 2022/12/19
Date of Test : 2022/12/19 ~ 2023/2/1
Issued Date : 2023/2/10

The above equipment has been tested and found in compliance with the requirement of the above standards by BTL Inc.

Prepared by : Eric Lee
 Eric Lee, Engineer

Approved by : Jerry Chuang
 Jerry Chuang, Supervisor

**BTL Inc.**

No.18, Ln. 171, Sec. 2, Jiuzong Rd., Neihu Dist., Taipei City 114, Taiwan

Tel: +886-2-2657-3299 Fax: +886-2-2657-3331 Web: www.newbtl.com Service mail: btl_qa@newbtl.com

Declaration

BTL represents to the client that testing is done in accordance with standard procedures as applicable and that test instruments used has been calibrated with standards traceable to international standard(s) and/or national standard(s).

BTL's reports apply only to the specific samples tested under conditions. It is manufacture's responsibility to ensure that additional production units of this model are manufactured with the identical electrical and mechanical components. **BTL** shall have no liability for any declarations, inferences or generalizations drawn by the client or others from **BTL** issued reports.

This report is the confidential property of the client. As a mutual protection to the clients, the public and ourselves, the test report shall not be reproduced, except in full, without our written approval.

BTL's laboratory quality assurance procedures are in compliance with the **ISO/IEC 17025** requirements, and accredited by the conformity assessment authorities listed in this test report.

BTL is not responsible for the sampling stage, so the results only apply to the sample as received.

The information, data and test plan are provided by manufacturer which may affect the validity of results, so it is manufacturer's responsibility to ensure that the apparatus meets the essential requirements of applied standards and in all the possible configurations as representative of its intended use.

Limitation

For the use of the authority's logo is limited unless the Test Standard(s)/Scope(s)/Item(s) mentioned in this test report is (are) included in the conformity assessment authorities acceptance respective.

Please note that the measurement uncertainty is provided for informational purpose only and are not use in determining the Pass/Fail results.

CONTENTS

REVISION HISTORY	4
1 SUMMARY OF TEST RESULTS	5
1.1 TEST FACILITY	6
1.2 MEASUREMENT UNCERTAINTY	6
1.3 TEST ENVIRONMENT CONDITIONS	6
1.4 TABLE OF PARAMETERS OF TEST SOFTWARE SETTING	7
2 GENERAL INFORMATION	9
2.1 DESCRIPTION OF EUT	9
2.2 TEST MODES	12
2.3 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED	13
2.4 SUPPORT UNITS	14
3 AC POWER LINE CONDUCTED EMISSIONS TEST	15
3.1 LIMIT	15
3.2 TEST PROCEDURE	15
3.3 DEVIATION FROM TEST STANDARD	15
3.4 TEST SETUP	16
3.5 TEST RESULT	16
4 RADIATED EMISSIONS TEST	17
4.1 LIMIT	17
4.2 TEST PROCEDURE	18
4.3 DEVIATION FROM TEST STANDARD	18
4.4 TEST SETUP	19
4.5 EUT OPERATING CONDITIONS	20
4.6 TEST RESULT – BELOW 30 MHZ	20
4.7 TEST RESULT – 30 MHZ TO 1 GHZ	20
4.8 TEST RESULT – ABOVE 1 GHZ	20
5 OUTPUT POWER TEST	21
5.1 LIMIT	21
5.2 TEST PROCEDURE	21
5.3 DEVIATION FROM TEST STANDARD	21
5.4 TEST SETUP	21
5.5 EUT OPERATING CONDITIONS	21
5.6 TEST RESULT	21
6 LIST OF MEASURING EQUIPMENTS	22
7 EUT TEST PHOTO	23
8 EUT PHOTOS	23
APPENDIX A AC POWER LINE CONDUCTED EMISSIONS	24
APPENDIX B RADIATED EMISSIONS - 30 MHZ TO 1 GHZ	29
APPENDIX C RADIATED EMISSIONS - ABOVE 1 GHZ	32
APPENDIX D OUTPUT POWER	63

REVISION HISTORY

Report No.	Version	Description	Issued Date	Note
BTL-FCCP-4-2212C001	R00	Original Report.	2023/2/10	Valid

1 SUMMARY OF TEST RESULTS

Test procedures according to the technical standards.

Standard(s) Section	Description	Test Result	Judgement	Remark
15.207	AC Power Line Conducted Emissions	APPENDIX A	Pass	-----
15.205 15.209 15.407(b)	Radiated Emissions	APPENDIX B APPENDIX C	Pass	-----
15.407(a)	Bandwidth	-----	Pass	-----
15.407(a)	Output Power	APPENDIX D	Pass	-----
15.407(a)	Power Spectral Density	-----	Pass	-----
15.203	Antenna Requirement	-----	Pass	-----
15.407(c)	Automatically Discontinue Transmission	-----	Pass	NOTE (3)

NOTE:

- (1) "N/A" denotes test is not applicable in this Test Report.
- (2) The report format version is TP.1.1.1.
- (3) The EUT can detect the controlling signal of ACK message transmitting from remote device and verify whether it shall resend or discontinue transmission.
- (4) The antenna gain of EUT is smaller than that of the module. So in this report the worst cases of radiated spurious emissions and AC Power Line Conducted Emissions were evaluated and recorded. And evaluated the output power items and recorded in the report. For the test results of all other test items please refer to module test reports.

1.1 TEST FACILITY

The test locations stated below are under the TAF Accreditation Number 0659.

The test location(s) used to collect the test data in this report are:

No. 68-1, Ln. 169, Sec. 2, Datong Rd., Xizhi Dist., New Taipei City 221, Taiwan
(FCC DN: TW0659)

C05 CB08 CB11 SR10 SR11

No. 72, Ln. 169, Sec. 2, Datong Rd., Xizhi Dist., New Taipei City 221, Taiwan
(FCC DN: TW0659)

C06 CB21 CB22

1.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement $y \pm U$, where expanded uncertainty U is based on a standard uncertainty multiplied by a coverage factor of $k = 2$, providing a level of confidence of approximately **95 %**. The measurement instrumentation uncertainty considerations contained in CISPR 16-4-2. The BTL measurement uncertainty is less than the CISPR 16-4-2 U_{cispr} requirement.

A. AC power line conducted emissions test:

Test Site	Method	Measurement Frequency Range	U (dB)
C05	CISPR	150 kHz ~ 30MHz	3.44

B. Radiated emissions test:

Test Site	Measurement Frequency Range	U (dB)
CB21	0.03 GHz ~ 0.2 GHz	4.17
	0.2 GHz ~ 1 GHz	4.72
	1 GHz ~ 6 GHz	5.21
	6 GHz ~ 18 GHz	5.51
	18 GHz ~ 26 GHz	3.69
	26 GHz ~ 40 GHz	4.23

C. Conducted test:

Test Item	U,(dB)
Output power	0.3669

NOTE:

Unless specifically mentioned, the uncertainty of measurement has not been taken into account to declare the compliance or non-compliance to the specification.

1.3 TEST ENVIRONMENT CONDITIONS

Test Item	Environment Condition	Test Voltage	Tested by
AC Power Line Conducted Emissions	21°C, 65%	AC 120V/60Hz	Paul Shen
Radiated emissions below 1 GHz	23°C, 59%	AC 120V/60Hz	Mark Wang
Radiated emissions above 1 GHz	23°C, 59%	AC 120V/60Hz	Mark Wang
Output Power	22.2°C, 56%	AC 120V/60Hz	Tim Lee

1.4 TABLE OF PARAMETERS OF TEST SOFTWARE SETTING

UNII-1				
Test Software	QRCT V4.0			
Mode	5180 MHz	5200 MHz	5240 MHz	Data Rate
IEEE 802.11a	15.5	18.5	17	6 Mbps
IEEE 802.11ac (VHT20)	15.5	15.5	15.5	MCS 0
IEEE 802.11ax (HE20)	16	16	16	MCS 0
Mode	5190 MHz	5230 MHz		Data Rate
IEEE 802.11ac (VHT40)	13.5	15		MCS 0
IEEE 802.11ax (HE40)	14	15.5		MCS 0
Mode	5210 MHz			Data Rate
IEEE 802.11ac (VHT80)	11			MCS 0
IEEE 802.11ax (HE80)	11.5			MCS 0

UNII-2A				
Test Software	QRCT V4.0			
Mode	5260 MHz	5300 MHz	5320 MHz	Data Rate
IEEE 802.11a	19	19	16	6 Mbps
IEEE 802.11ac (VHT20)	15.5	15.5	15.5	MCS 0
IEEE 802.11ax (HE20)	16	15.5	16	MCS 0
Mode	5270 MHz	5310 MHz		Data Rate
IEEE 802.11ac (VHT40)	15.5	15		MCS 0
IEEE 802.11ax (HE40)	15.5	15.5		MCS 0
Mode	5290 MHz			Data Rate
IEEE 802.11ac (VHT80)	12			MCS 0
IEEE 802.11ax (HE80)	12.5			MCS 0

UNII-1+ UNII-2A				
Test Software	QRCT V4.0			
Mode	5250 MHz			Data Rate
IEEE 802.11ac (VHT160)	7			MCS 0
IEEE 802.11ax (HE160)	7.5			MCS 0

UNII-2C					
Test Software	QRCT V4.0				
Mode	5500 MHz	5580 MHz	5700 MHz	5720 MHz	Data Rate
IEEE 802.11a	15.5	20	15	17.5	6 Mbps
IEEE 802.11ac (VHT20)	15	15	14.5	14.5	MCS 0
IEEE 802.11ax (HE20)	15.5	16.5	15.5	15	MCS 0
Mode	5510 MHz	5550 MHz	5670 MHz	5710 MHz	Data Rate
IEEE 802.11ac (VHT40)	14.5	15.5	16	15	MCS 0
IEEE 802.11ax (HE40)	14.5	16	16.5	16	MCS 0
Mode	5530 MHz	5610 MHz	5690 MHz		Data Rate
IEEE 802.11ac (VHT80)	13.5	15	14.5		MCS 0
IEEE 802.11ax (HE80)	14	15.5	15		MCS 0
Mode	5570 MHz				Data Rate
IEEE 802.11ac (VHT160)	13				MCS 0
IEEE 802.11ax (HE160)	13				MCS 0

UNII-3				
Test Software	QRCT V4.0			
Mode	5745 MHz	5785 MHz	5825 MHz	Data Rate
IEEE 802.11a	20	20	20	6 Mbps
IEEE 802.11ac (VHT20)	14.5	16	16	MCS 0
IEEE 802.11ax (HE20)	16.5	17	16.5	MCS 0
Mode	5755 MHz	5795 MHz		Data Rate
IEEE 802.11ac (VHT40)	16	16		MCS 0
IEEE 802.11ax (HE40)	16.5	16.5		MCS 0
Mode	5775 MHz			Data Rate
IEEE 802.11ac (VHT80)	15			MCS 0
IEEE 802.11ax (HE80)	15.5			MCS 0

2 GENERAL INFORMATION

2.1 DESCRIPTION OF EUT

Equipment	Notebook PC
Model Name	RZ09-0482
Brand Name	RAZER
Model Difference	N/A
Power Source	#1 DC voltage supplied from AC adapter. #2 Supplied from battery. Model: RC30-0482
Power Rating	#1 I/P: 100-240V~3.6A 50/60Hz O/P: 19.5V==11.8A #2 DC 15.4V, 4422mAh, 68.1Wh
Products Covered	1* POWER Adapter: RC30-024801
Operation Band	UNII-1: 5150 MHz to 5250 MHz UNII-2A: 5250 MHz to 5350 MHz UNII-2C: 5470 MHz to 5725 MHz UNII-3: 5725 MHz to 5850 MHz
Operation Frequency	UNII-1: 5180 MHz to 5240 MHz UNII-2A: 5260 MHz to 5320 MHz UNII-2C: 5500 MHz to 5700 MHz UNII-3: 5745 MHz to 5825 MHz
Modulation Technology	IEEE 802.11a/n/ac: OFDM IEEE 802.11ax: OFDMA
Transfer Rate	IEEE 802.11a: 54/48/36/24/18/12/9/6 Mbps IEEE 802.11n: up to 300 Mbps IEEE 802.11ac: up to 1733.4 Mbps IEEE 802.11ax: up to 2402 Mbps
Output Power Max. for UNII-1	IEEE 802.11a: 21.50 dBm (0.1413 W) IEEE 802.11ac (VHT20): 18.49 dBm (0.0706 W) IEEE 802.11ac (VHT40): 17.89 dBm (0.0615 W) IEEE 802.11ac (VHT80): 14.02 dBm (0.0252 W) IEEE 802.11ax (HE20): 18.89 dBm (0.0775 W) IEEE 802.11ax (HE40): 18.05 dBm (0.0638 W) IEEE 802.11ax (HE80): 14.33 dBm (0.0271 W)
Output Power Max. for UNII-2A	IEEE 802.11a: 21.71 dBm (0.1484 W) IEEE 802.11ac (VHT20): 18.51 dBm (0.0710 W) IEEE 802.11ac (VHT40): 18.34 dBm (0.0682 W) IEEE 802.11ac (VHT80): 15.15 dBm (0.0327 W) IEEE 802.11ax (HE20): 18.84 dBm (0.0766 W) IEEE 802.11ax (HE40): 18.10 dBm (0.0646 W) IEEE 802.11ax (HE80): 15.50 dBm (0.0354 W)
Output Power Max. for UNII-1+ UNII-2A	IEEE 802.11ac (VHT160): 10.40 dBm (0.0110 W) IEEE 802.11ax (HE160): 10.93 dBm (0.0124 W)
Output Power Max. for UNII-2C	IEEE 802.11a: 21.73 dBm (0.1491 W) IEEE 802.11ac (VHT20): 18.45 dBm (0.0700 W) IEEE 802.11ac (VHT40): 18.09 dBm (0.0643 W) IEEE 802.11ac (VHT80): 17.25 dBm (0.0531 W) IEEE 802.11ac (VHT160): 15.21 dBm (0.0332 W) IEEE 802.11ax (HE20): 18.58 dBm (0.0721 W) IEEE 802.11ax (HE40): 18.36 dBm (0.0686 W) IEEE 802.11ax (HE80): 17.58 dBm (0.0573 W) IEEE 802.11ax (HE160): 15.37 dBm (0.0344 W)

Output Power Max. for UNII-3	IEEE 802.11a: 21.50 dBm (0.1412 W) IEEE 802.11ac (VHT20): 18.63 dBm (0.0729 W) IEEE 802.11ac (VHT40): 18.11 dBm (0.0647 W) IEEE 802.11ac (VHT80): 17.41 dBm (0.0551 W) IEEE 802.11ax (HE20): 18.89 dBm (0.0775 W) IEEE 802.11ax (HE40): 18.23 dBm (0.0665 W) IEEE 802.11ax (HE80): 17.51 dBm (0.0563 W)
Output Power Max. for Straddle Channel	IEEE 802.11a: 19.83 dBm (0.0962 W) IEEE 802.11ac (VHT20): 17.24 dBm (0.0529 W) IEEE 802.11ac (VHT40): 17.38 dBm (0.0547 W) IEEE 802.11ac (VHT80): 16.65 dBm (0.0462 W) IEEE 802.11ax (HE20): 17.42 dBm (0.0552 W) IEEE 802.11ax (HE40): 17.96 dBm (0.0625 W) IEEE 802.11ax (HE80): 17.09 dBm (0.0512 W)
Test Model	RZ09-0482
Sample Status	Engineering Sample
EUT Modification(s)	N/A

NOTE:

(1) 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.

(2) Channel List:

IEEE 802.11a IEEE 802.11n (HT20) IEEE 802.11ac (VHT20) IEEE 802.11ax (HE20)		IEEE 802.11n (HT40) IEEE 802.11ac (VHT40) IEEE 802.11ax (HE40)		IEEE 802.11ac (VHT80) IEEE 802.11ax (HE80)	
UNII-1		UNII-1		UNII-1	
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
36	5180	38	5190	42	5210
40	5200	46	5230		
44	5220				
48	5240				

IEEE 802.11a IEEE 802.11n (HT20) IEEE 802.11ac (VHT20) IEEE 802.11ax (HE20)		IEEE 802.11n (HT40) IEEE 802.11ac (VHT40) IEEE 802.11ax (HE40)		IEEE 802.11ac (VHT80) IEEE 802.11ax (HE80)	
UNII-2A		UNII-2A		UNII-2A	
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
52	5260	54	5270	58	5290
56	5280	62	5310		
60	5300				
64	5320				

IEEE 802.11ac (VHT160) IEEE 802.11ax (HE160)	
UNII-1+ UNII-2A	
Channel	Frequency (MHz)
50	5250

IEEE 802.11a IEEE 802.11n (HT20) IEEE 802.11ac (VHT20) IEEE 802.11ax (HE20)		IEEE 802.11n (HT40) IEEE 802.11ac (VHT40) IEEE 802.11ax (HE40)		IEEE 802.11ac (VHT80) IEEE 802.11ax (HE80)	
UNII-2C		UNII-2C		UNII-2C	
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
100	5500	102	5510	106	5530
104	5520	110	5550	122	5610
108	5540	118	5590	138	5690
112	5560	126	5630		
116	5580	134	5670		
120	5600	142	5710		
124	5620				
128	5640				
132	5660				
136	5680				
140	5700				
144	5720				

IEEE 802.11ac (VHT160) IEEE 802.11ax (HE160)	
UNII-2C	
Channel	Frequency (MHz)
114	5570

IEEE 802.11a IEEE 802.11n (HT20) IEEE 802.11ac (VHT20) IEEE 802.11ax (HE20)		IEEE 802.11n (HT40) IEEE 802.11ac (VHT40) IEEE 802.11ax (HE40)		IEEE 802.11ac (VHT80) IEEE 802.11ax (HE80)	
UNII-3		UNII-3		UNII-3	
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
149	5745	151	5755	155	5775
153	5765	159	5795		
157	5785				
161	5805				
165	5825				

(3) Table for Filed Antenna:

Ant.	Manufacturer	P/N	Type	Connector	Gain (dBi)
1	Amphenol	BY5973-15-001-C	PIFA	N/A	4.24
2	Amphenol	BY5962-15-002-C	PIFA	N/A	4.33

Note:

- 1) This EUT supports MIMO 2X2, any transmit signals are uncorrelated with each other, so Directional gain = $10\log[(10^{G1/10} + 10^{G2/10} + \dots + 10^{GN/10})/N]$ dBi, that is Directional gain = $10\log[(10^{4.24/10} + 10^{4.33/10})/2]$ dBi = 4.29.
- 2) Ant.1 refers to main antenna, Ant.2 refers to aux antenna.
- 3) The AUX antenna connector of the module connected to the MAIN antenna of the EUT and the MAIN antenna connector of the module connected to the AUX antenna of the EUT.

- (4) The above Antenna information are derived from the antenna data sheet provided by manufacturer and for more detailed features description, please refer to the manufacturer's specifications, the laboratory shall not be held responsible.

2.2 TEST MODES

Test Items	Test mode	Channel	Note
AC power line conducted emissions	Normal/Idle	-	-
Transmitter Radiated Emissions (below 1GHz)	TX Mode_IEEE 802.11ax (HE160)	114	-
Transmitter Radiated Emissions (above 1GHz)	TX Mode_IEEE 802.11a	48/52/100/165	Bandedge
	TX Mode_IEEE 802.11ac (VHT80)	42/58/122/155	
	TX Mode_IEEE 802.11ax (HE160)	50/114	
	TX Mode_IEEE 802.11a	40/60/116/165	Harmonic
	TX Mode_IEEE 802.11ac (VHT80)	42/58/122/155	
	TX Mode_IEEE 802.11ax (HE160)	50/114	
Output Power	TX Mode_IEEE 802.11a	36/40/48 52/60/64	-
	TX Mode_IEEE 802.11ac (VHT20) TX Mode_IEEE 802.11ax (HE20)	100/116/140/144 149/157/165	
	TX Mode_IEEE 802.11ac (VHT40) TX Mode_IEEE 802.11ax (HE40)	38/46 54/62 102/110/134/142 151/159	
	TX Mode_IEEE 802.11ac (VHT80) TX Mode_IEEE 802.11ax (HE80)	42 58 106/122/138 155	
	TX Mode_IEEE 802.11ac (VHT160) TX Mode_IEEE 802.11ax (HE160)	50/114	

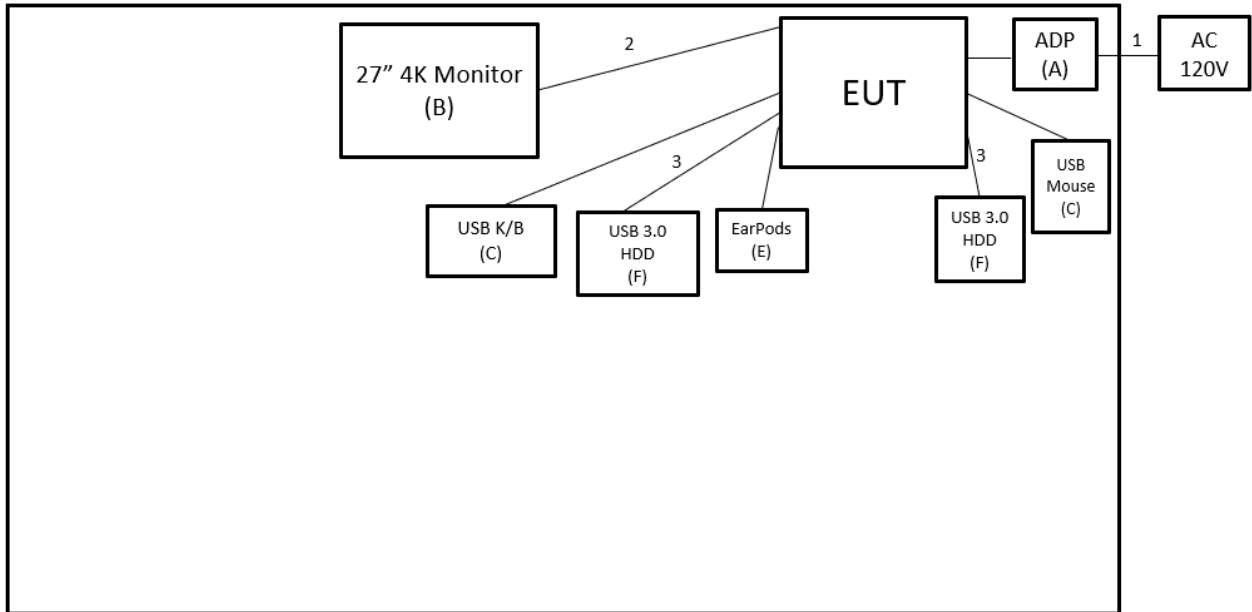
NOTE:

- (1) For radiated emission band edge test, both Vertical and Horizontal are evaluated, but only the worst case (Horizontal) is recorded.

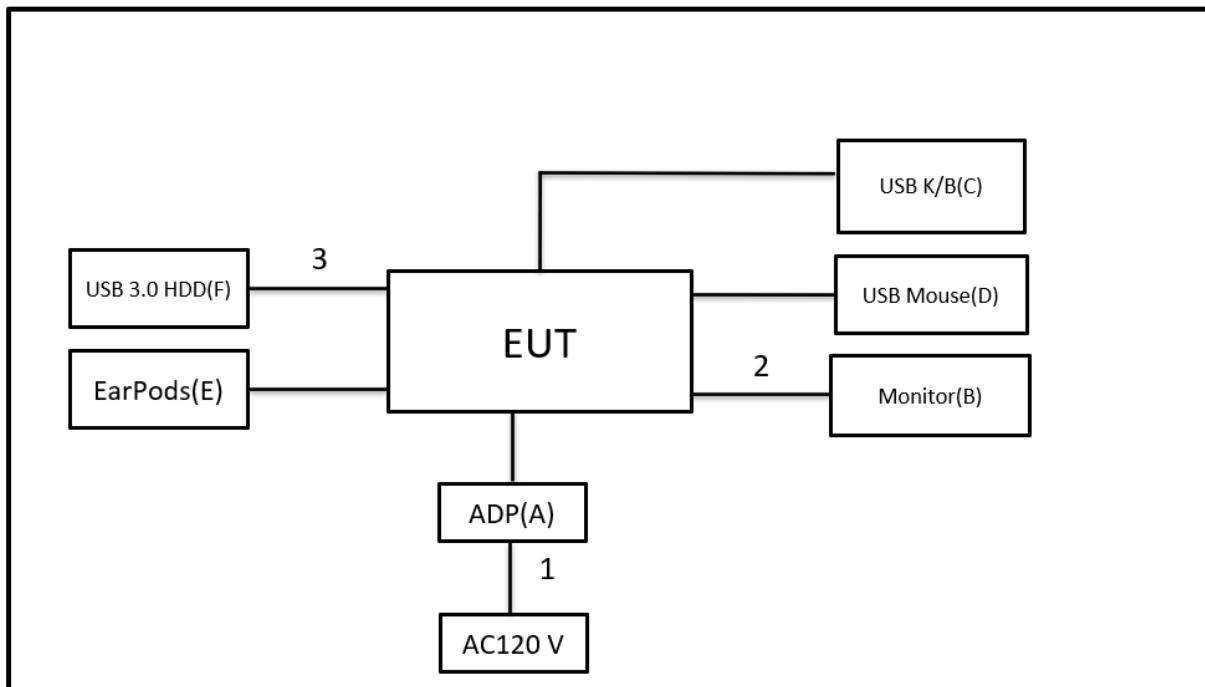
2.3 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

Equipment letters and Cable numbers refer to item numbers described in the tables of clause 2.4.

AC power line conducted emissions



Radiated Emissions



2.4 SUPPORT UNITS

AC power line conducted emissions

Item	Equipment	Brand	Model No.	Series No.	Remarks
A	ADP	Razer	RC30-024801	N/A	Supplied by test requester.
B	27" 4K Monitor	DELL	U2720Q	CN-083VF-WSL00-0B7-332L	Furnished by test lab.
C	USB K/B	DELL	KB216t	CN-0W33XP-L0300-797-05TY-A03	Furnished by test lab.
D	USB Mouse	DELL	MOCZUL	CN-049TWY-PRC00-79E-01HA	Furnished by test lab.
E	EarPods	Apple	A1472	N/A	Furnished by test lab.
F	USB 3.0 HDD	WD	WDBC3C0010BSL-0B	WX81A88ALJUC	Furnished by test lab.

Item	Shielded	Ferrite Core	Length	Cable Type	Remarks
1	N/A	N/A	1m	Power Cord	Furnished by test lab.
2	N/A	N/A	1.7m	HDMI Cable	Furnished by test lab.
3	N/A	N/A	0.18m	Type C to Type C Cable	Furnished by test lab.

Radiated Emissions

Item	Equipment	Brand	Model No.	Series No.	Remarks
A	ADP	Razer	RC30-024801	N/A	Supplied by test requester.
B	27" 4K Monitor	DELL	U2720Q	CN-083VF-WSL00-0B7-332L	Furnished by test lab.
C	USB K/B	DELL	KB216t	CN-0W33XP-L0300-797-05TY-A03	Furnished by test lab.
D	USB Mouse	DELL	MOCZUL	CN-049TWY-PRC00-79E-01HA	Furnished by test lab.
E	EarPods	Apple	A1472	N/A	Furnished by test lab.
F	USB 3.0 HDD	WD	WDBC3C0010BSL-0B	WX81A88ALJUC	Furnished by test lab.

Item	Shielded	Ferrite Core	Length	Cable Type	Remarks
1	N/A	N/A	1m	Power Cord	Supplied by test requester.
2	N/A	N/A	1.7m	HDMI Cable	Furnished by test lab.
3	N/A	N/A	0.18m	Type C to Type C Cable	Furnished by test lab.

3 AC POWER LINE CONDUCTED EMISSIONS TEST

3.1 LIMIT

Frequency (MHz)	Limit (dB μ V)	
	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 tighter limit applies at the band edges.
- (2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.
- (3) The test result calculated as following:
 Measurement Value = Reading Level + Correct Factor
 Correct Factor = Insertion Loss + Cable Loss + Attenuator Factor (if use)
 Margin Level = Measurement Value – Limit Value
 Calculation example:

Reading Level		Correct Factor		Measurement Value
38.22	+	3.45	=	41.67

Measurement Value		Limit Value		Margin Level
41.67	-	60	=	-18.33

The following table is the setting of the receiver.

Receiver Parameter	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 KHz

3.2 TEST PROCEDURE

- a. The EUT was placed 0.8 m above the horizontal ground plane with the EUT being connected to the power mains through a line impedance stabilization network (LISN).
 All other support equipment were powered from an additional LISN(s).
 The LISN provides 50 Ohm/50uH of impedance for the measuring instrument.
- b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle to keep the cable above 40 cm.
- c. Excess I/O cables that are not connected to a peripheral shall be bundled in the center.
 The end of the cable will be terminated, using the correct terminating impedance.
 The overall length shall not exceed 1 m.
- d. The LISN is spaced at least 80 cm from the nearest part of the EUT chassis.
- e. For the actual test configuration, please refer to the related Item - EUT TEST PHOTO.

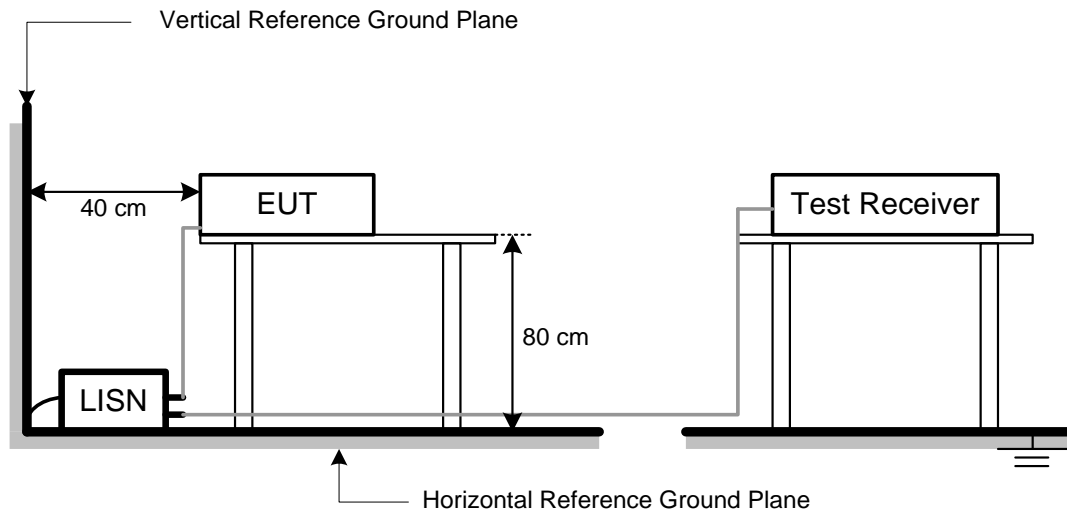
NOTE:

- (1) In the results, each reading is marked as Peak, QP or AVG per the detector used.
 BW=9 kHz (6 dB Bandwidth)
- (2) All readings are Peak unless otherwise stated QP or AVG in column of Note. Both the QP and the AVG readings must be less than the limit for compliance.

3.3 DEVIATION FROM TEST STANDARD

No deviation.

3.4 TEST SETUP



3.5 TEST RESULT

Please refer to the APPENDIX A.

4 RADIATED EMISSIONS TEST

4.1 LIMIT

In case the emission fall within the restricted band specified on 15.205, then the 15.209 limit in the table below has to be followed.

LIMITS OF RADIATED EMISSIONS MEASUREMENT (9 kHz to 1000 MHz)

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
960~1000	500	3

LIMITS OF UNWANTED EMISSION OUT OF THE RESTRICTED BANDS

Frequency (MHz)	EIRP Limit (dBm)	Equivalent Field Strength at 3m (dBµV/m)
5150-5250	-27	68.3
5250-5350	-27	68.3
5470-5725	-27	68.3
5725-5850	-27 (NOTE 2)	68.3
	10 (NOTE 2)	105.3
	15.6 (NOTE 2)	110.9
	27 (NOTE 2)	122.3

NOTE:

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

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

(2) According to FCC 16-24, All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

(3) The test result calculated as following:

Measurement Value = Reading Level + Correct Factor

Correct Factor = Antenna Factor + Cable Loss - Amplifier Gain(if use)

Margin Level = Measurement Value - Limit Value

Calculation example:

Reading Level		Correct Factor		Measurement Value
36.23	+	-11.97	=	24.26

Measurement Value		Limit Value		Margin Level
24.26	-	40	=	-15.74

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	10th carrier harmonic
RBW / VBW (Emission in restricted band)	1MHz / 3MHz for Peak, 1MHz / 1/T for Average

Spectrum Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9KHz~90KHz for PK/AVG detector
Start ~ Stop Frequency	90KHz~110KHz for QP detector
Start ~ Stop Frequency	110KHz~490KHz for PK/AVG detector
Start ~ Stop Frequency	490KHz~30MHz for QP detector
Start ~ Stop Frequency	30MHz~1000MHz for QP detector

4.2 TEST PROCEDURE

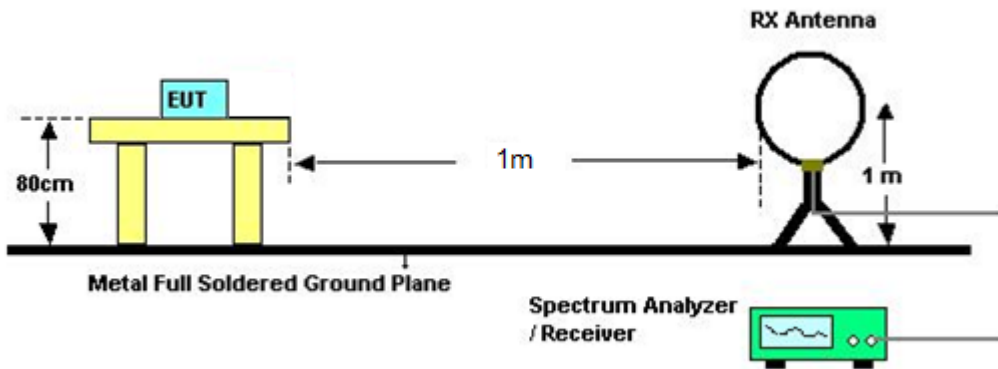
- a. The measuring distance of 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 0.8 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(below 1GHz)
- b. The measuring distance of 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 1.5 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(above 1GHz)
- c. The height of the equipment or of the substitution antenna shall be 0.8 m or 1.5 m, the height of the test antenna shall vary between 1 m to 4 m. 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 find the maximum reading (used Bore sight function).
- e. The receiver system was set to peak and average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1GHz.
- f. The initial step in collecting radiated emission data is a receiver peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
- g. All readings are Peak unless otherwise stated QP in column of Note. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform. (below 1GHz)
- h. All readings are Peak Mode value unless otherwise stated AVG in column of Note. If the Peak Mode Measured value compliance with the Peak Limits and lower than AVG Limits, the EUT shall be deemed to meet both Peak & AVG Limits and then only Peak Mode was measured, but AVG Mode didn't perform. (above 1GHz)
- i. For the actual test configuration, please refer to the related Item – EUT TEST PHOTO.

4.3 DEVIATION FROM TEST STANDARD

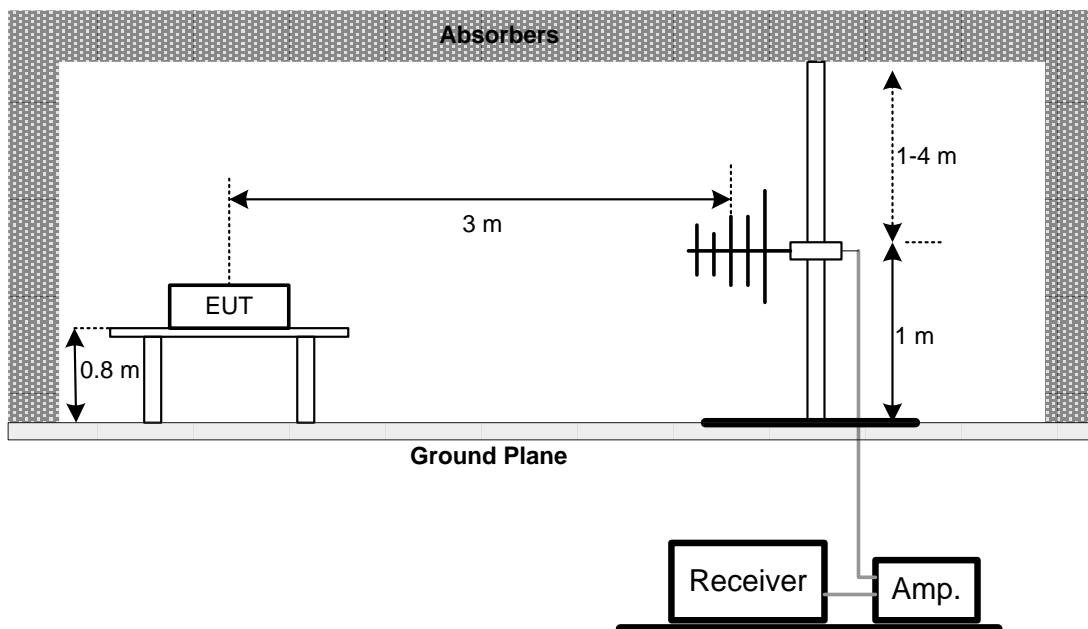
No deviation.

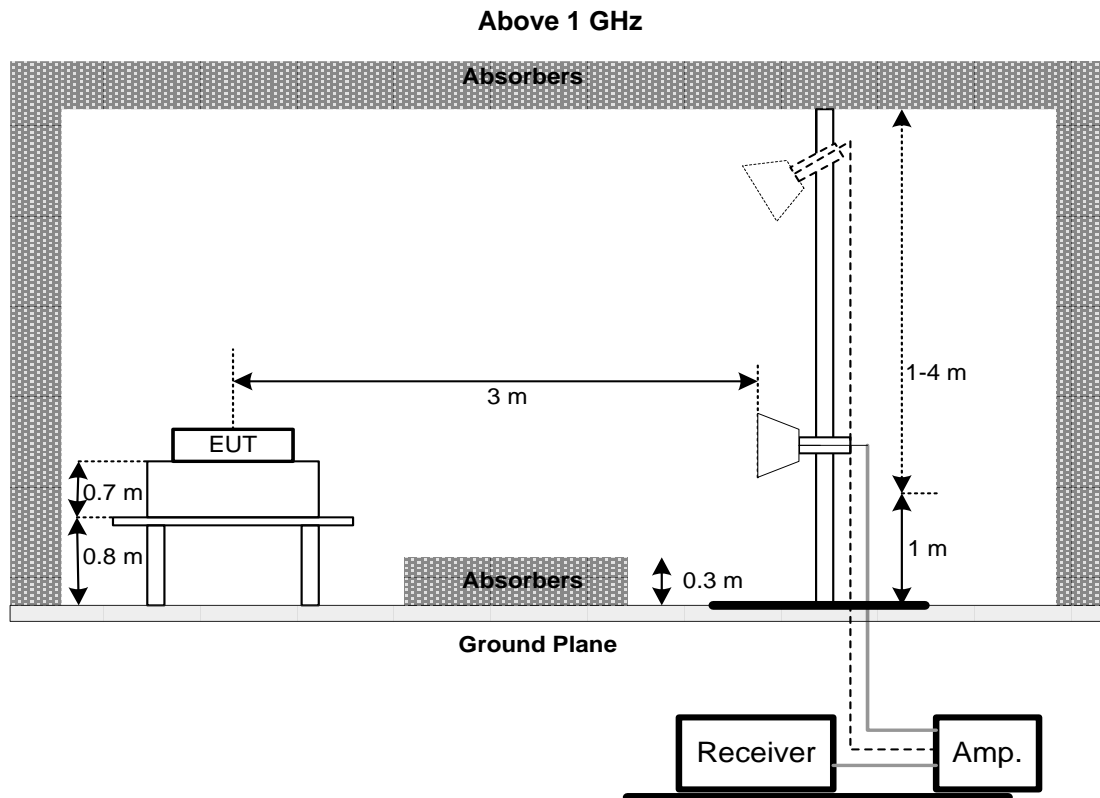
4.4 TEST SETUP

9 kHz to 30 MHz



30 MHz to 1 GHz





4.5 EUT OPERATING CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

4.6 TEST RESULT – BELOW 30 MHZ

There were no emissions found below 30 MHz within 20 dB of the limit.

4.7 TEST RESULT – 30 MHZ TO 1 GHZ

Please refer to the APPENDIX B.

4.8 TEST RESULT – ABOVE 1 GHZ

Please refer to the APPENDIX C.

NOTE:

- (1) No limit: This is fundamental signal, the judgment is not applicable. For fundamental signal judgment was referred to Peak output test.

5 OUTPUT POWER TEST

5.1 LIMIT

Section	Test Item	Limit	Frequency Range (MHz)
15.407(a)	Maximum Output Power	Fixed: 1 Watt (30 dBm) Mobile and portable: 250 mW (24 dBm)	5150-5250
		250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz	5250-5350
			5470-5725
		1 Watt (30dBm)	5725-5850

Note: The maximum e.i.r.p at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW(21 dBm).

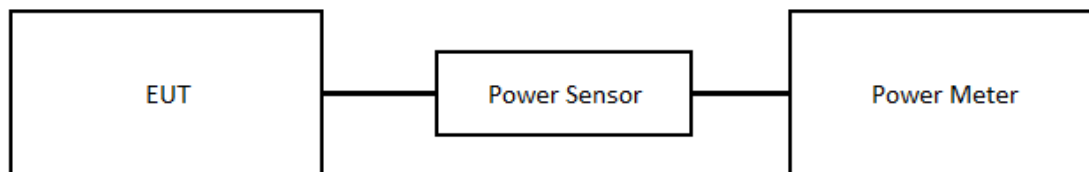
5.2 TEST PROCEDURE

- The EUT was directly connected to the power meter and antenna output port as show in the block diagram below.
- Method PM-G (Measurement using a gated RF average power meter):
Measurements may be performed using a wideband gated RF power meter provided that the gateparameters are adjusted such that the power is measured only when the EUT is transmitting at itsmaximum power control level. Since the measurement is made only during the ON time of thetransmitter, no duty cycle correction factor is required.

5.3 DEVIATION FROM TEST STANDARD

No deviation.

5.4 TEST SETUP



5.5 EUT OPERATING CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

5.6 TEST RESULT

Please refer to the APPENDIX D.

6 LIST OF MEASURING EQUIPMENTS

AC Power Line Conducted Emissions						
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated Date	Calibrated Until
1	TWO-LINE V-NETWORK	R&S	ENV216	101521	2022/9/28	2023/9/27
2	Test Cable	EMCI	EMCCFD300-BM-BMR-5000	220331	2022/3/31	2023/3/30
3	EMI Test Receiver	R&S	ESR 7	101433	2022/11/16	2023/11/15
4	Measurement Software	EZ	EZ EMC (Version NB-03A1-01)	N/A	N/A	N/A

Radiated Emissions						
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated Date	Calibrated Until
1	Preamplifier	EMCI	EMC330N	980850	2022/9/19	2023/9/18
2	Preamplifier	EMCI	EMC118A45SE	980819	2022/3/8	2023/3/7
3	Preamplifier	EMCI	EMC184045SE	980882	2022/2/9	2023/2/8
4	Preamplifier	EMCI	EMC001340	980579	2022/9/30	2023/9/29
5	Test Cable	EMCI	EMC104-SM-SM-1000	220319	2022/3/15	2023/3/14
6	Test Cable	EMCI	EMC104-SM-SM-3000	220322	2022/3/15	2023/3/14
7	Test Cable	EMCI	EMC104-SM-SM-7000	220324	2022/3/15	2023/3/14
8	EXA Signal Analyzer	keysight	N9020B	MY57120120	2022/3/7	2023/3/6
9	Loop Ant	Electro-Metrics	EMCI-LPA600	291	2022/9/19	2023/9/18
10	Horn Antenna	RFSPIN	DRH18-E	211202A18EN	2022/5/18	2023/5/17
11	Horn Ant	Schwarzbeck	BBHA 9170D	1136	2022/5/18	2023/5/17
12	Log-bicon Antenna	Schwarzbeck	VULB9168	1369	2022/5/20	2023/5/19
13	6dB Attenuator	EMCI	EMCI-N-6-06	AT-N0625	2022/5/20	2023/5/19
14	Test Cable	EMCI	EMC101G-KM-KM-3000	220329	2022/3/15	2023/3/14
15	Test Cable	EMCI	EMC102-KM-KM-1000	220327	2022/3/15	2023/3/14
16	Measurement Software	EZ	EZ EMC (Version NB-03A1-01)	N/A	N/A	N/A

Output Power						
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated Date	Calibrated Until
1	Power Meter	Anritsu	ML2495A	1128008	2022/6/1	2023/5/31
2	Power Sensor	Anritsu	MA2411B	1126001	2022/6/1	2023/5/31

Remark: "N/A" denotes no model name, no serial no. or no calibration specified.
All calibration period of equipment list is one year.

7 EUT TEST PHOTO

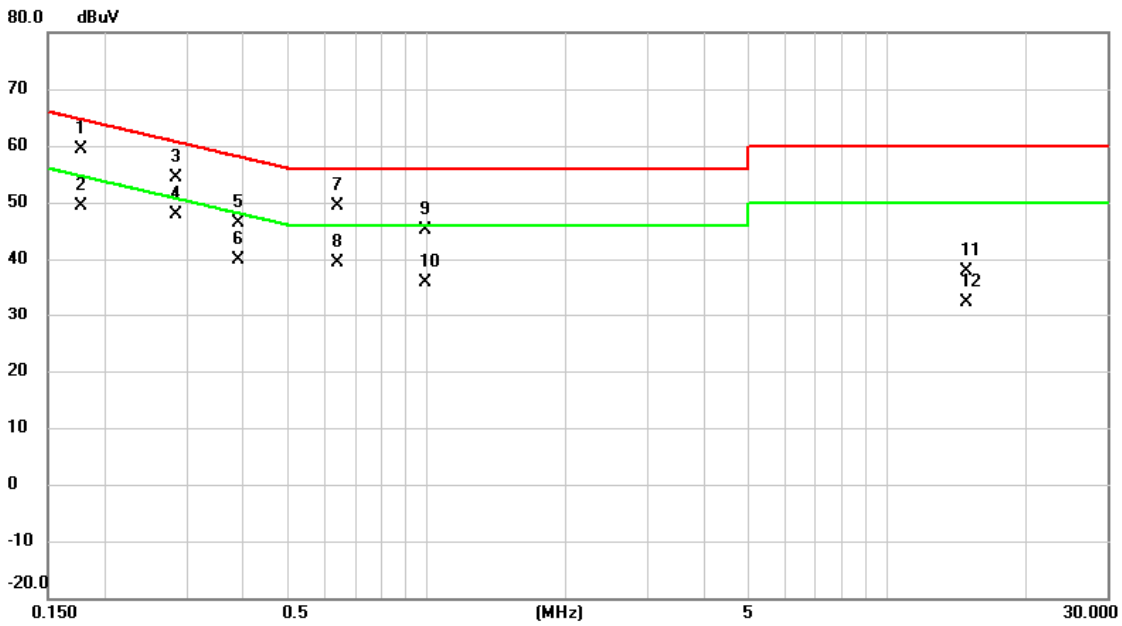
Please refer to document Appendix No.: TP-2212C001-1 (APPENDIX-TEST PHOTOS).

8 EUT PHOTOS

Please refer to document Appendix No.: EP-2212C001-1 (APPENDIX-EUT PHOTOS).

APPENDIX A AC POWER LINE CONDUCTED EMISSIONS

Test Mode	Normal	Tested Date	2023/1/6
Test Frequency	-	Phase	Line



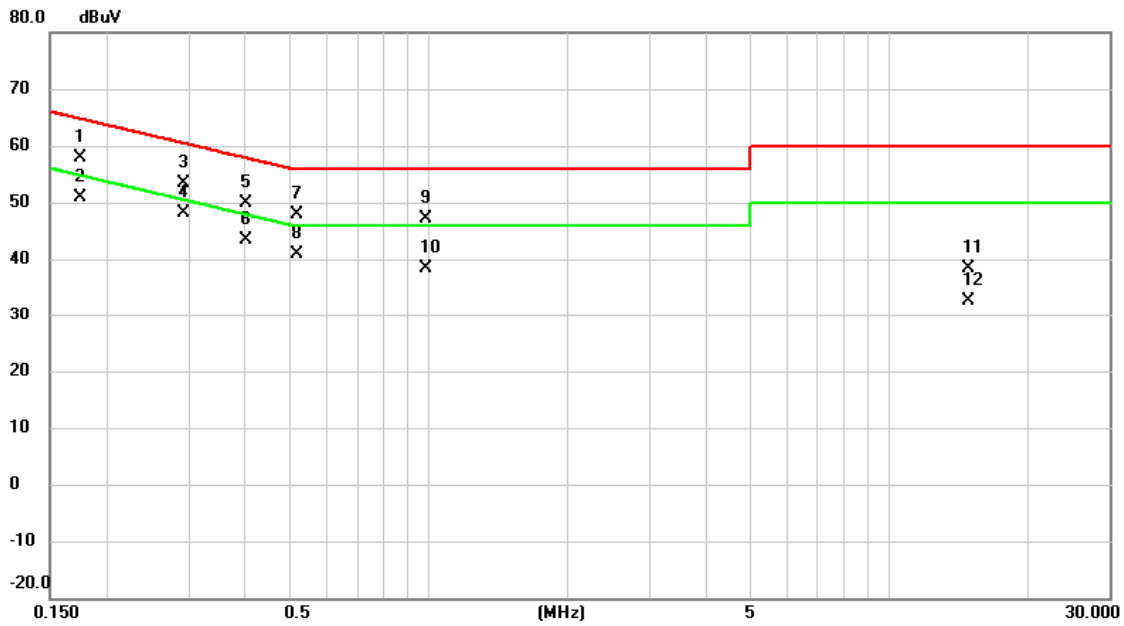
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Margin dB	Detector	Comment
1		0.1770	49.65	9.63	59.28	64.63	-5.35	QP	
2		0.1770	39.72	9.63	49.35	54.63	-5.28	AVG	
3		0.2850	44.70	9.63	54.33	60.67	-6.34	QP	
4	*	0.2850	38.24	9.63	47.87	50.67	-2.80	AVG	
5		0.3907	36.82	9.63	46.45	58.05	-11.60	QP	
6		0.3907	30.37	9.63	40.00	48.05	-8.05	AVG	
7		0.6405	39.69	9.64	49.33	56.00	-6.67	QP	
8		0.6405	29.65	9.64	39.29	46.00	-6.71	AVG	
9		0.9960	35.34	9.67	45.01	56.00	-10.99	QP	
10		0.9960	26.10	9.67	35.77	46.00	-10.23	AVG	
11		14.8830	27.99	9.89	37.88	60.00	-22.12	QP	
12		14.8830	22.40	9.89	32.29	50.00	-17.71	AVG	

REMARKS:

(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

Test Mode	Normal	Tested Date	2023/1/6
Test Frequency	-	Phase	Neutral



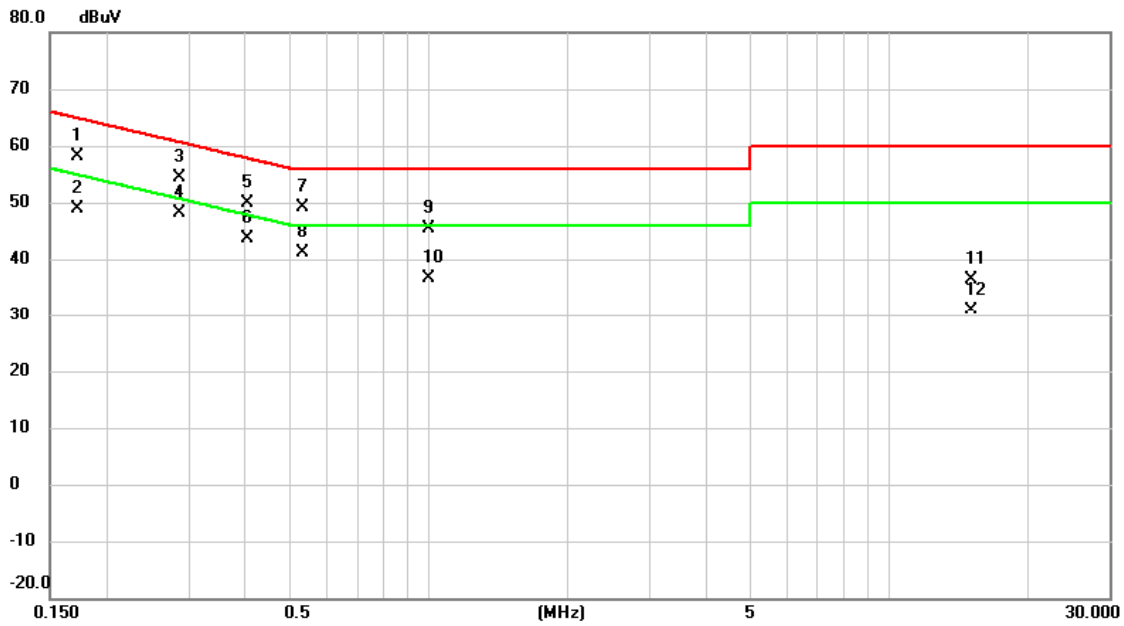
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Margin dB	Detector	Comment
1		0.1748	48.22	9.65	57.87	64.73	-6.86	QP	
2		0.1748	41.29	9.65	50.94	54.73	-3.79	AVG	
3		0.2917	43.65	9.64	53.29	60.48	-7.19	QP	
4	*	0.2917	38.42	9.64	48.06	50.48	-2.42	AVG	
5		0.4020	40.26	9.64	49.90	57.81	-7.91	QP	
6		0.4020	33.83	9.64	43.47	47.81	-4.34	AVG	
7		0.5167	38.22	9.64	47.86	56.00	-8.14	QP	
8		0.5167	31.16	9.64	40.80	46.00	-5.20	AVG	
9		0.9870	37.34	9.68	47.02	56.00	-8.98	QP	
10		0.9870	28.65	9.68	38.33	46.00	-7.67	AVG	
11		14.8853	28.53	9.97	38.50	60.00	-21.50	QP	
12		14.8853	22.73	9.97	32.70	50.00	-17.30	AVG	

REMARKS:

(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

Test Mode	Idle	Tested Date	2023/1/6
Test Frequency	-	Phase	Line



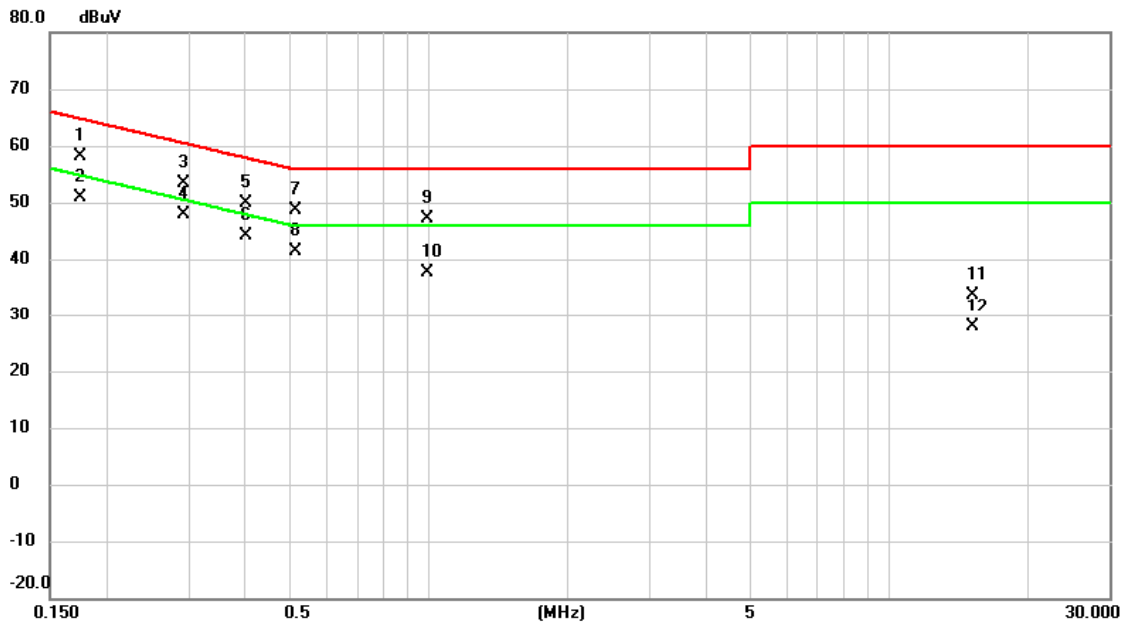
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Margin dB	Detector	Comment
1		0.1725	48.52	9.64	58.16	64.84	-6.68	QP	
2		0.1725	39.22	9.64	48.86	54.84	-5.98	AVG	
3		0.2872	44.76	9.63	54.39	60.60	-6.21	QP	
4	*	0.2872	38.54	9.63	48.17	50.60	-2.43	AVG	
5		0.4042	40.28	9.63	49.91	57.77	-7.86	QP	
6		0.4042	33.88	9.63	43.51	47.77	-4.26	AVG	
7		0.5325	39.43	9.63	49.06	56.00	-6.94	QP	
8		0.5325	31.52	9.63	41.15	46.00	-4.85	AVG	
9		1.0005	35.62	9.67	45.29	56.00	-10.71	QP	
10		1.0005	27.04	9.67	36.71	46.00	-9.29	AVG	
11		15.0833	26.54	9.90	36.44	60.00	-23.56	QP	
12		15.0833	20.95	9.90	30.85	50.00	-19.15	AVG	

REMARKS:

(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

Test Mode	Idle	Tested Date	2023/1/6
Test Frequency	-	Phase	Neutral



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Margin dB	Detector	Comment
1		0.1748	48.52	9.65	58.17	64.73	-6.56	QP	
2		0.1748	41.23	9.65	50.88	54.73	-3.85	AVG	
3		0.2917	43.65	9.64	53.29	60.48	-7.19	QP	
4	*	0.2917	38.19	9.64	47.83	50.48	-2.65	AVG	
5		0.4020	40.23	9.64	49.87	57.81	-7.94	QP	
6		0.4020	34.52	9.64	44.16	47.81	-3.65	AVG	
7		0.5144	38.91	9.64	48.55	56.00	-7.45	QP	
8		0.5144	31.62	9.64	41.26	46.00	-4.74	AVG	
9		0.9892	37.42	9.68	47.10	56.00	-8.90	QP	
10		0.9892	28.06	9.68	37.74	46.00	-8.26	AVG	
11		15.1463	23.61	9.98	33.59	60.00	-26.41	QP	
12		15.1463	17.83	9.98	27.81	50.00	-22.19	AVG	

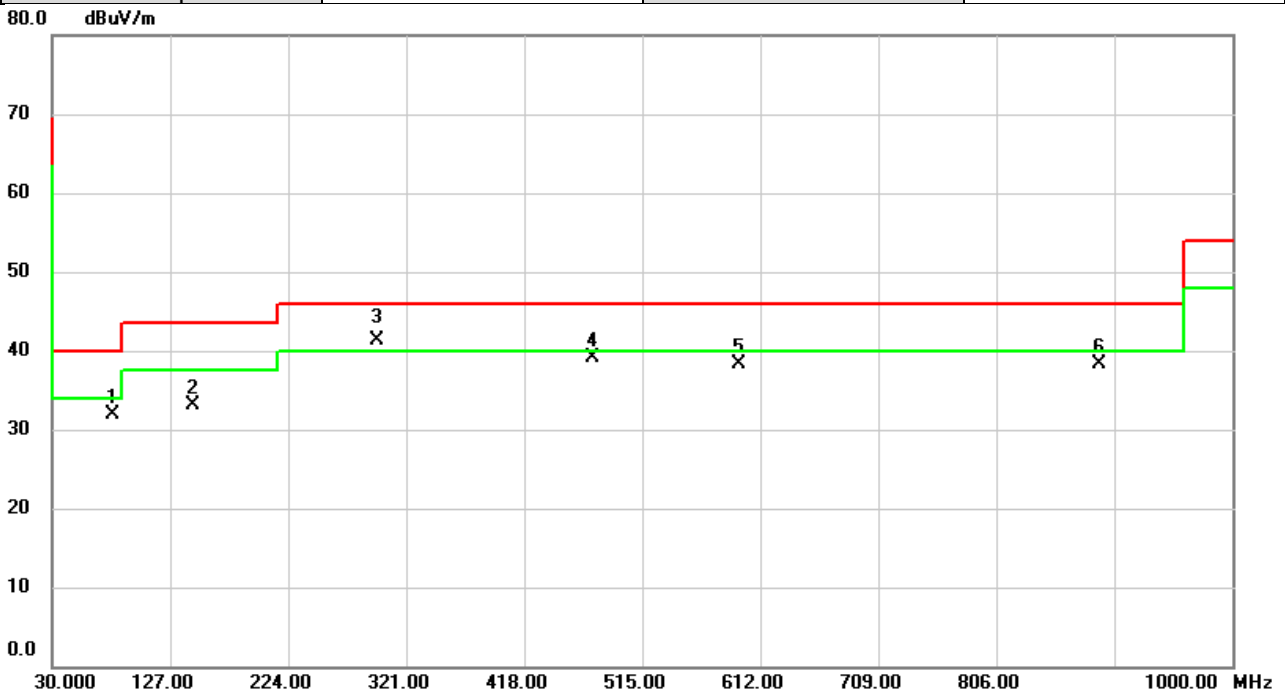
REMARKS:

(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

APPENDIX B RADIATED EMISSIONS - 30 MHZ TO 1 GHZ

Test Mode	IEEE 802.11ax (HE160)	Test Date	2023/1/5
Test Frequency	5570MHz	Polarization	Vertical
Temp	23°C	Hum.	59%

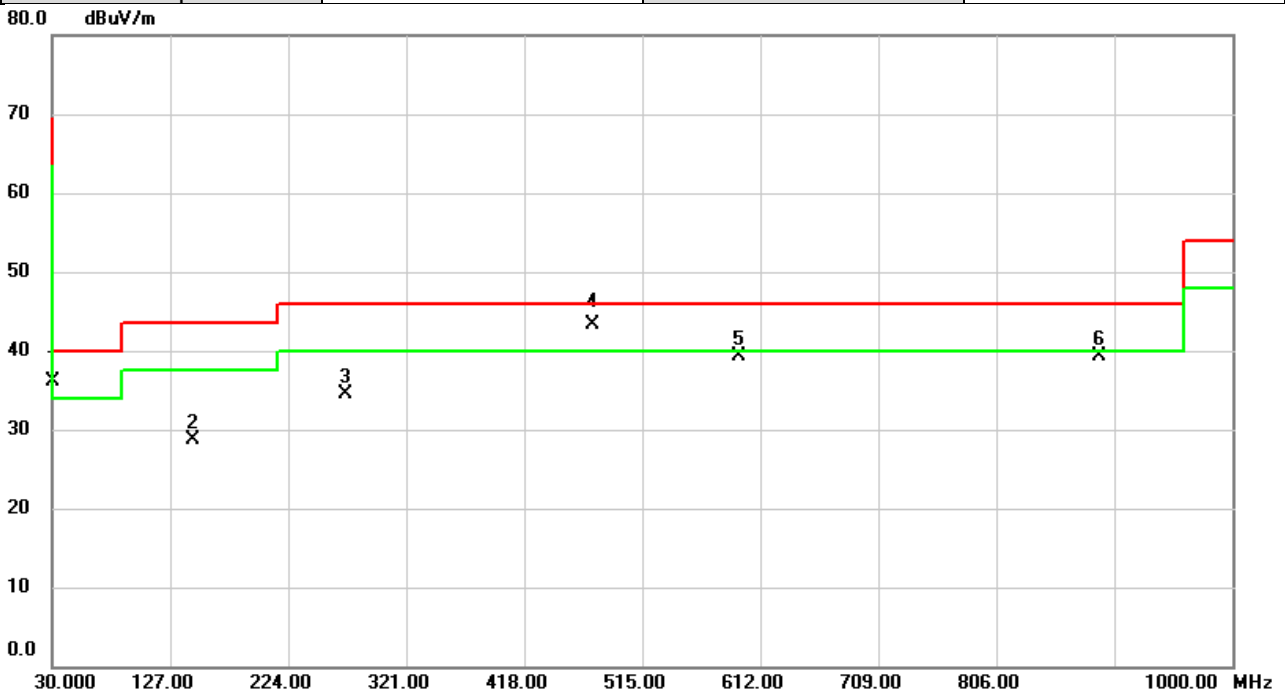


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1		79.5023	48.39	-16.53	31.86	40.00	-8.14	peak	
2		145.8180	45.26	-12.09	33.17	43.50	-10.33	peak	
3	*	297.0087	52.73	-11.51	41.22	46.00	-4.78	QP	
4		474.6803	46.03	-6.97	39.06	46.00	-6.94	peak	
5		593.9580	42.64	-4.34	38.30	46.00	-7.70	peak	
6		890.9720	38.43	-0.04	38.39	46.00	-7.61	peak	

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	IEEE 802.11ax (HE160)	Test Date	2023/1/5
Test Frequency	5570MHz	Polarization	Horizontal
Temp	23°C	Hum.	59%



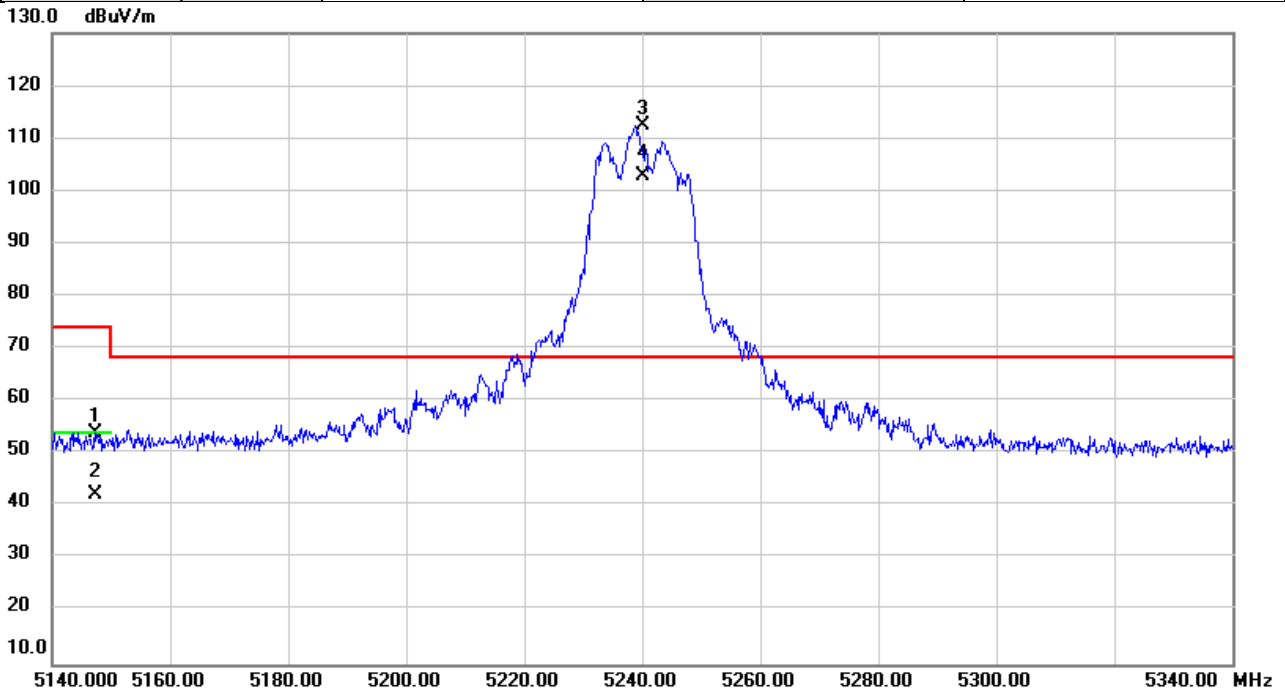
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1	!	31.2287	48.78	-12.72	36.06	40.00	-3.94	QP	
2		145.8503	40.71	-12.09	28.62	43.50	-14.88	peak	
3		270.8510	46.64	-12.20	34.44	46.00	-11.56	peak	
4	*	474.0660	50.31	-6.98	43.33	46.00	-2.67	QP	
5		594.0227	43.68	-4.34	39.34	46.00	-6.66	peak	
6		891.0043	39.37	-0.04	39.33	46.00	-6.67	peak	

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

APPENDIX C RADIATED EMISSIONS - ABOVE 1 GHZ

Test Mode	IEEE 802.11a	Test Date	2023/1/30
Test Frequency	5240MHz	Polarization	Horizontal
Temp	23°C	Hum.	59%

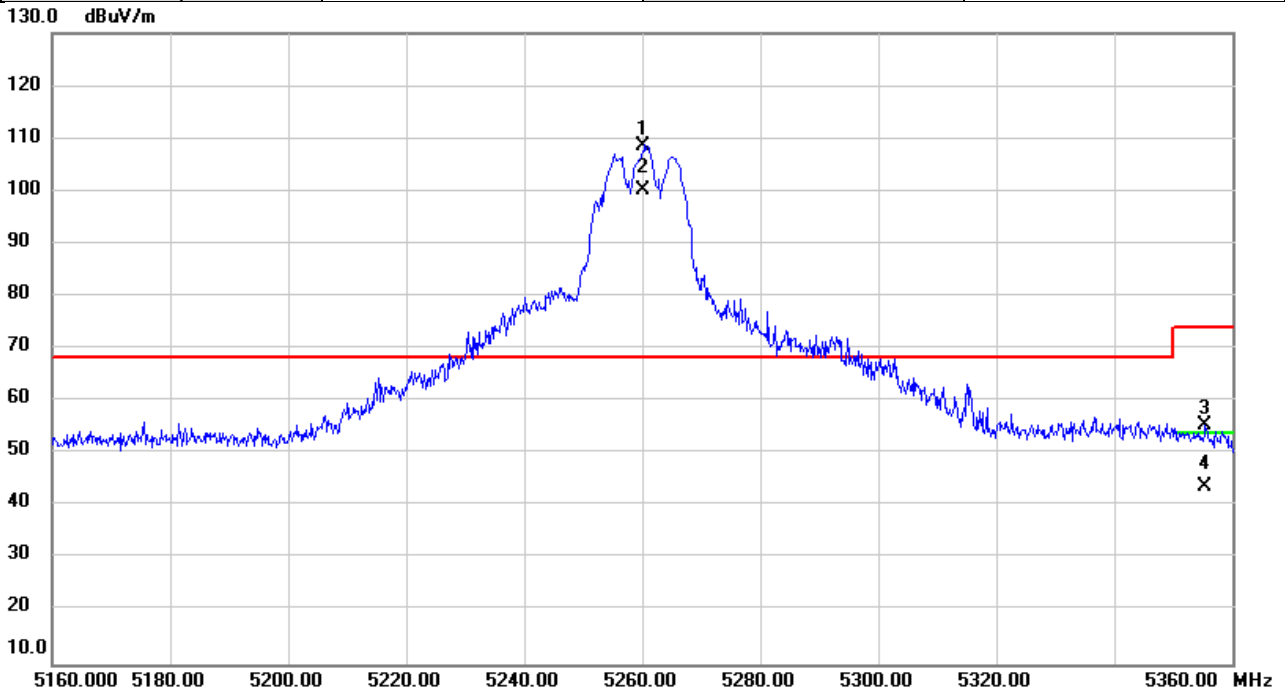


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1		5147.373	52.70	1.37	54.07	74.00	-19.93	peak	
2		5147.373	41.00	1.37	42.37	54.00	-11.63	AVG	
3	*	5240.000	111.10	1.40	112.50	68.20	44.30	peak	NoLimit
4	X	5240.000	101.47	1.40	102.87	68.20	34.67	AVG	NoLimit

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	IEEE 802.11a	Test Date	2023/1/30
Test Frequency	5260MHz	Polarization	Horizontal
Temp	23°C	Hum.	59%

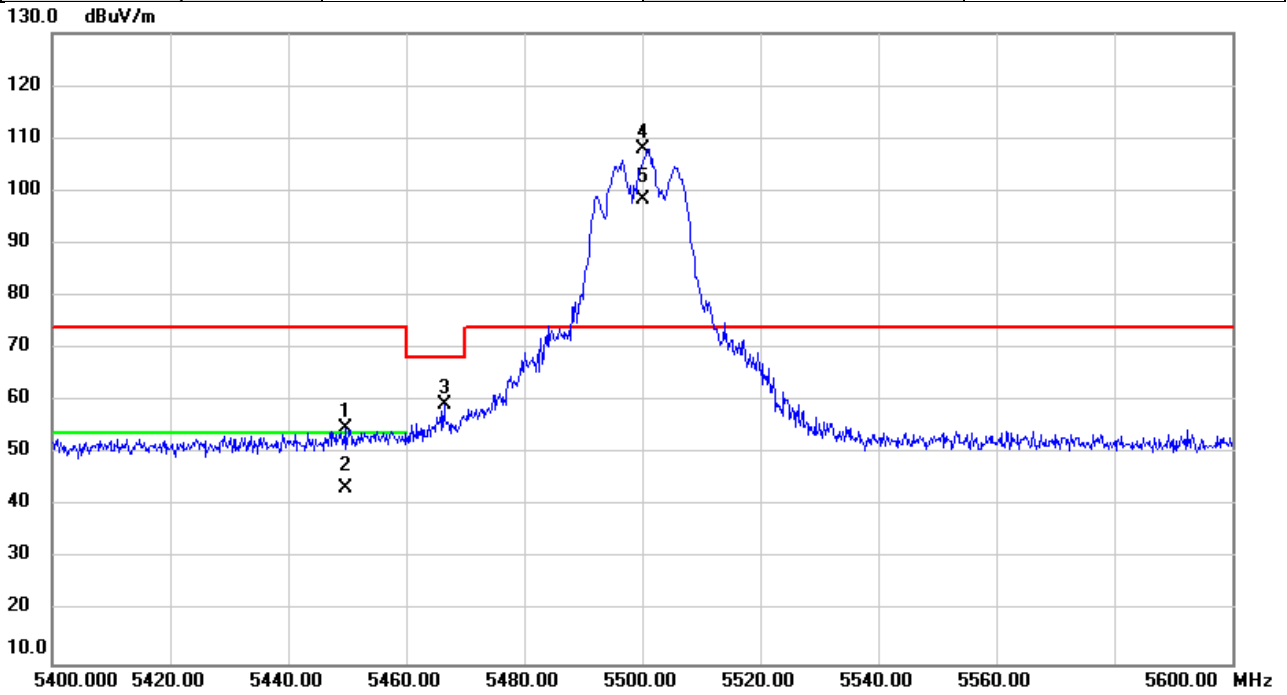


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1	*	5260.000	107.29	1.41	108.70	68.20	40.50	peak	NoLimit
2	X	5260.000	98.62	1.41	100.03	68.20	31.83	AVG	NoLimit
3		5355.460	53.97	1.44	55.41	74.00	-18.59	peak	
4		5355.460	42.39	1.44	43.83	54.00	-10.17	AVG	

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	IEEE 802.11a	Test Date	2023/1/30
Test Frequency	5500MHz	Polarization	Horizontal
Temp	23°C	Hum.	59%

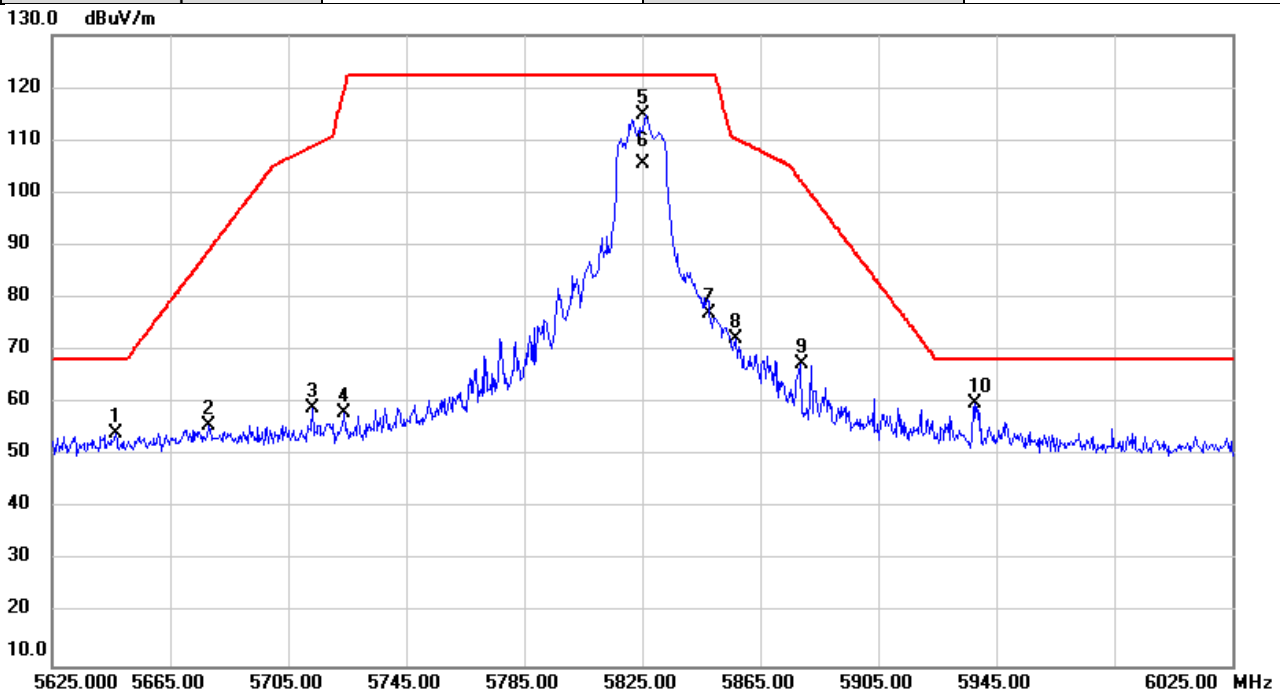


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1		5449.753	53.37	1.48	54.85	74.00	-19.15	peak	
2		5449.753	42.06	1.48	43.54	54.00	-10.46	AVG	
3		5466.427	57.85	1.48	59.33	68.20	-8.87	peak	
4	*	5500.000	106.39	1.49	107.88	74.00	33.88	peak	NoLimit
5	X	5500.000	96.81	1.49	98.30	74.00	24.30	AVG	NoLimit

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	IEEE 802.11a	Test Date	2023/1/30
Test Frequency	5825MHz	Polarization	Horizontal
Temp	23°C	Hum.	59%

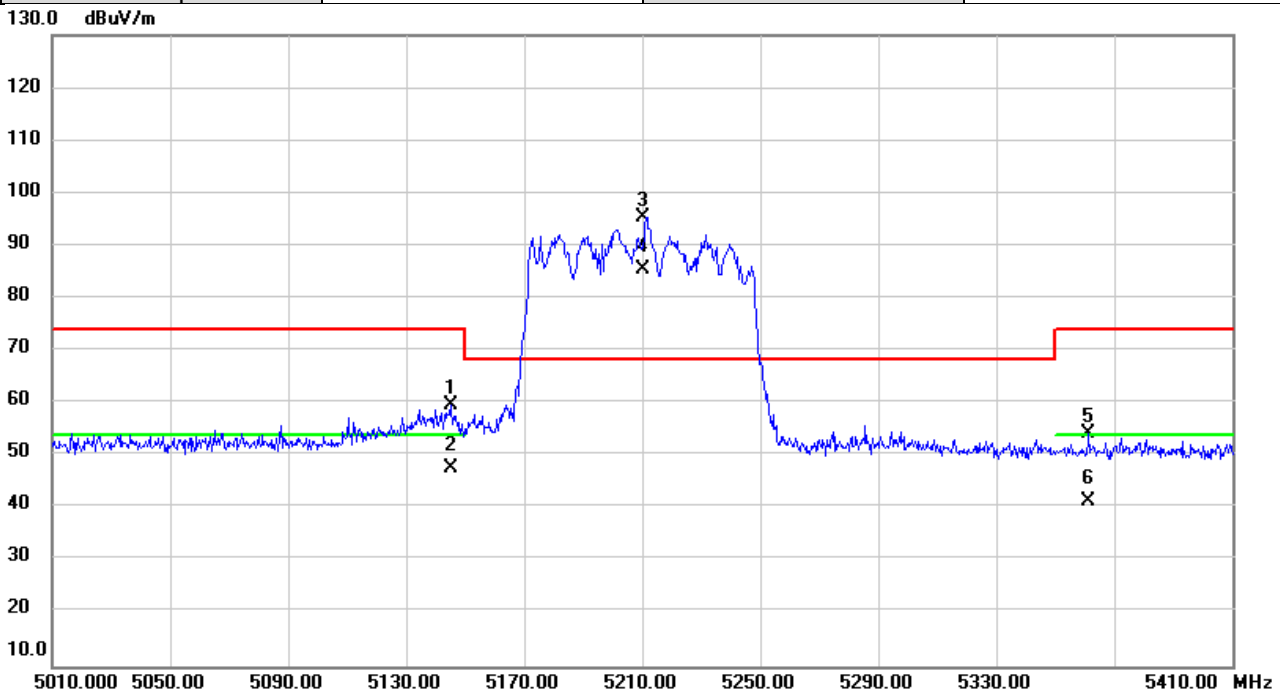


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1		5646.373	52.34	1.78	54.12	68.20	-14.08	peak	
2		5678.147	53.91	1.85	55.76	89.07	-33.31	peak	
3		5713.240	57.08	1.92	59.00	108.91	-49.91	peak	
4		5723.813	56.31	1.93	58.24	119.49	-61.25	peak	
5	*	5825.000	112.56	2.16	114.72	122.20	-7.48	peak	NoLimit
6		5825.000	103.44	2.16	105.60	122.20	-16.60	AVG	NoLimit
7		5847.880	74.85	2.20	77.05	122.20	-45.15	peak	
8		5856.840	70.00	2.21	72.21	110.28	-38.07	peak	
9		5878.867	65.33	2.26	67.59	102.33	-34.74	peak	
10		5937.693	57.48	2.37	59.85	68.20	-8.35	peak	

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	IEEE 802.11ac (VHT80)	Test Date	2023/1/31
Test Frequency	5210MHz	Polarization	Horizontal
Temp	23°C	Hum.	59%

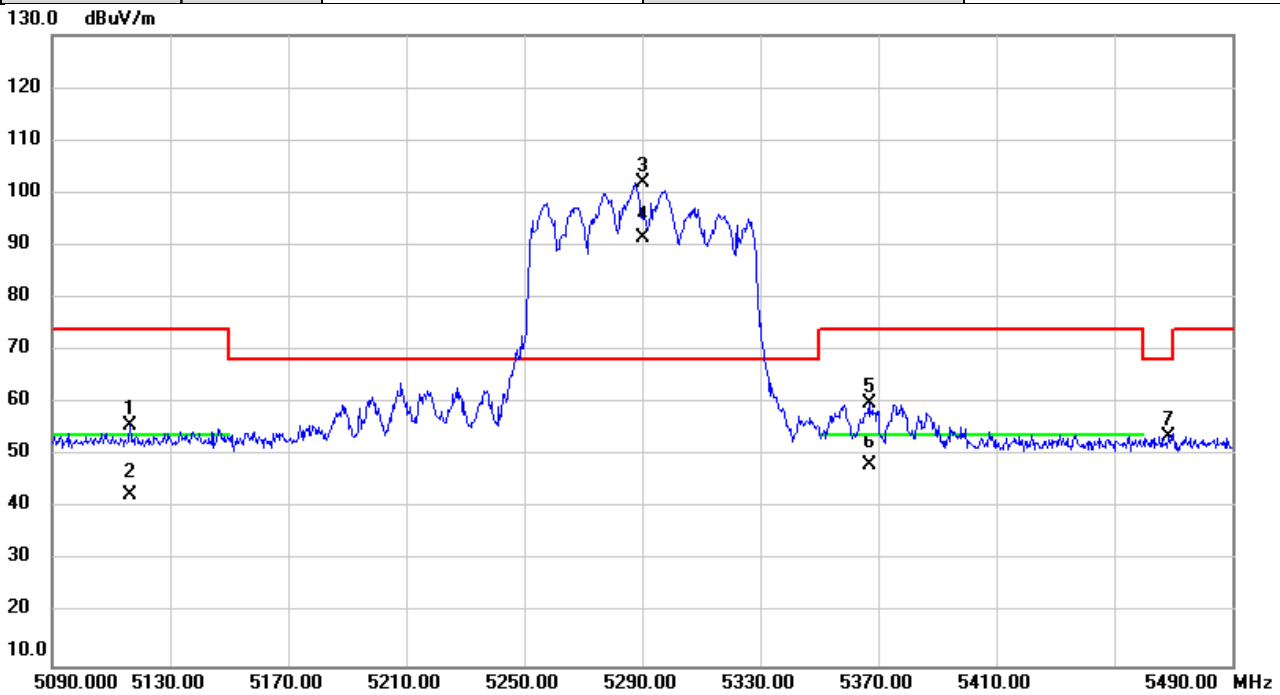


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1		5145.133	58.34	1.37	59.71	74.00	-14.29	peak	
2		5145.133	46.29	1.37	47.66	54.00	-6.34	AVG	
3	*	5210.000	94.08	1.39	95.47	68.20	27.27	peak	NoLimit
4	X	5210.000	84.13	1.39	85.52	68.20	17.32	AVG	NoLimit
5		5361.227	52.84	1.44	54.28	74.00	-19.72	peak	
6		5361.227	39.93	1.44	41.37	54.00	-12.63	AVG	

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	IEEE 802.11ac (VHT80)	Test Date	2023/1/31
Test Frequency	5290MHz	Polarization	Horizontal
Temp	23°C	Hum.	59%

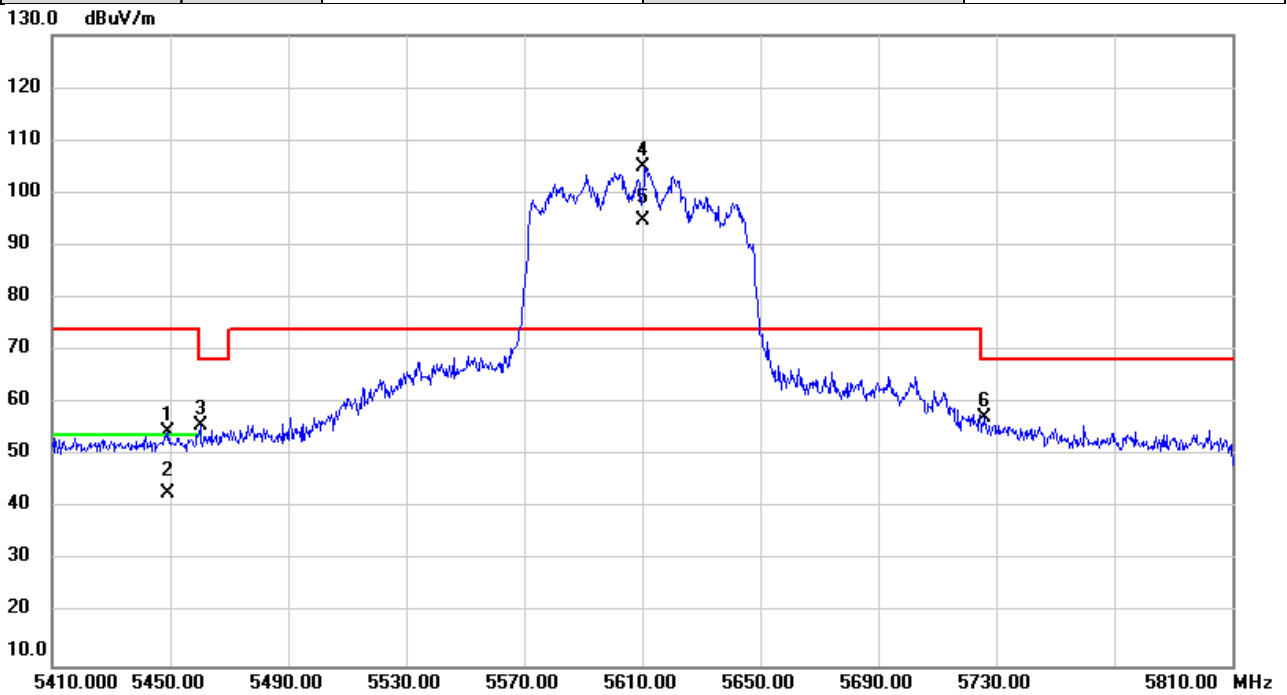


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1		5116.267	54.40	1.36	55.76	74.00	-18.24	peak	
2		5116.267	41.31	1.36	42.67	54.00	-11.33	AVG	
3	*	5290.000	100.64	1.42	102.06	68.20	33.86	peak	NoLimit
4	X	5290.000	90.13	1.42	91.55	68.20	23.35	AVG	NoLimit
5		5366.947	58.61	1.44	60.05	74.00	-13.95	peak	
6		5366.947	46.78	1.44	48.22	54.00	-5.78	AVG	
7		5468.347	52.21	1.48	53.69	68.20	-14.51	peak	

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	IEEE 802.11ac (VHT80)	Test Date	2023/1/31
Test Frequency	5610MHz	Polarization	Horizontal
Temp	23°C	Hum.	59%

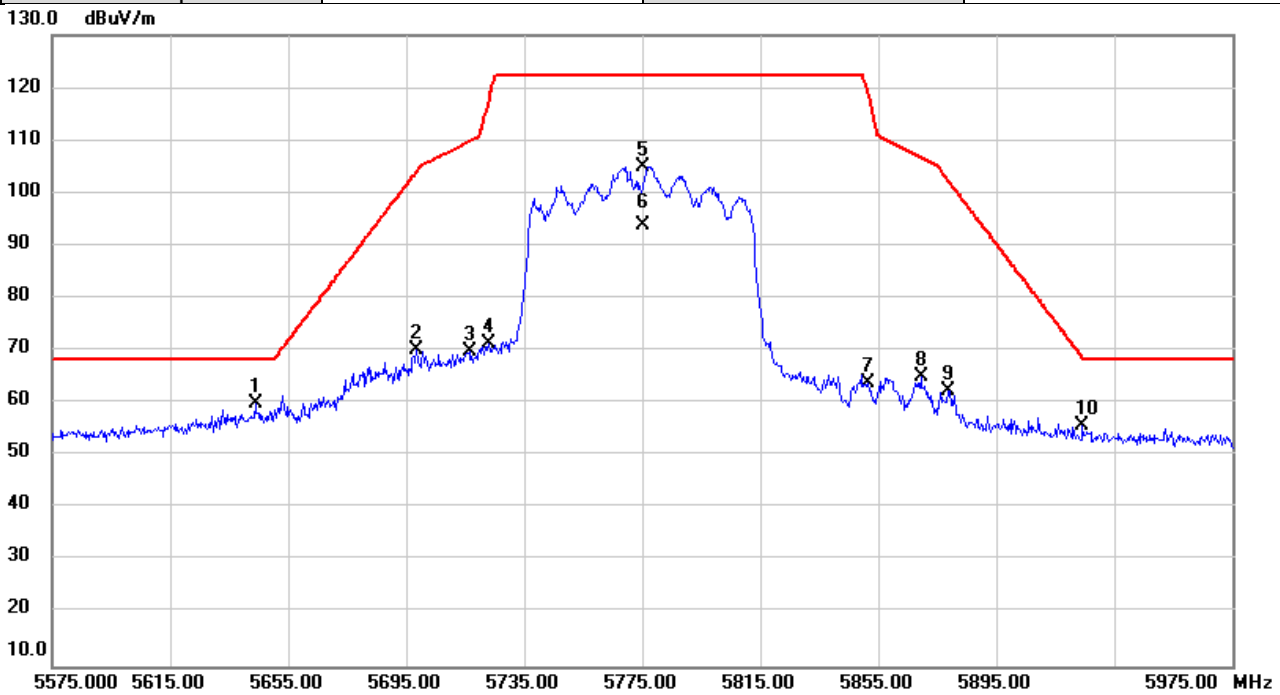


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1		5449.240	53.03	1.48	54.51	74.00	-19.49	peak	
2		5449.240	41.46	1.48	42.94	54.00	-11.06	AVG	
3		5460.320	54.26	1.47	55.73	68.20	-12.47	peak	
4	*	5610.000	103.22	1.71	104.93	74.00	30.93	peak	NoLimit
5	X	5610.000	92.91	1.71	94.62	74.00	20.62	AVG	NoLimit
6		5726.107	55.33	1.95	57.28	68.20	-10.92	peak	

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	IEEE 802.11ac (VHT80)	Test Date	2023/1/31
Test Frequency	5775MHz	Polarization	Horizontal
Temp	23°C	Hum.	59%

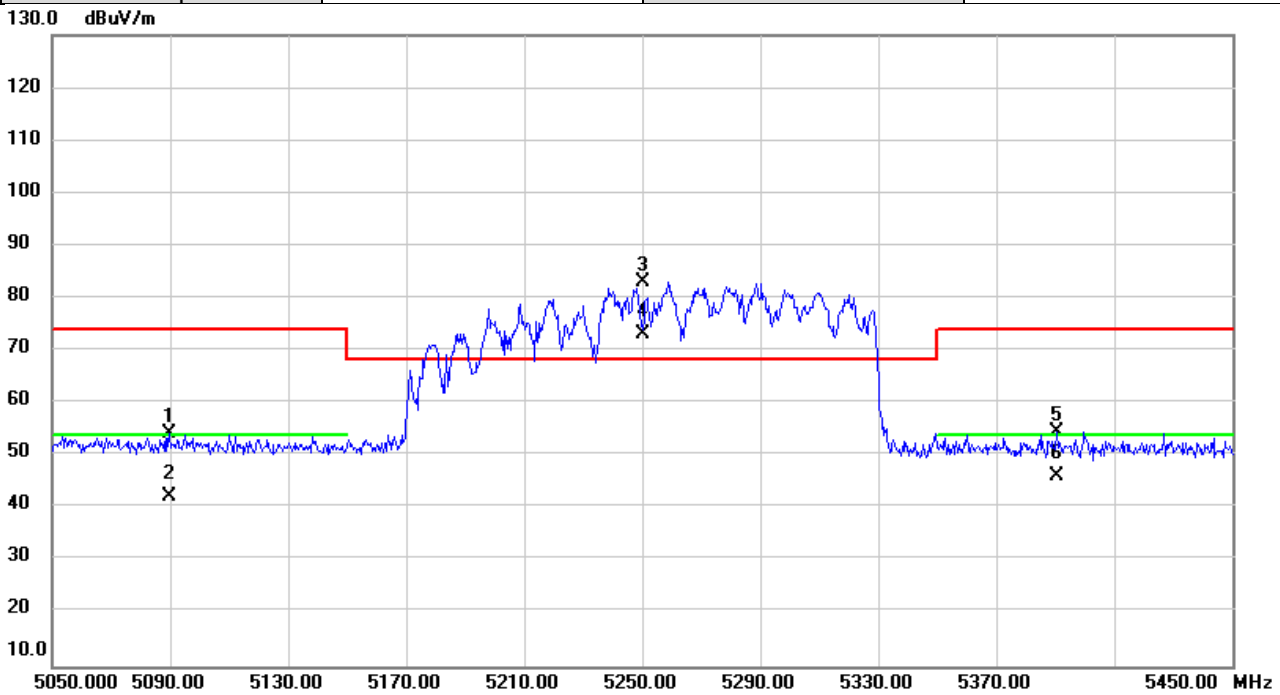


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1	*	5643.907	58.19	1.78	59.97	68.20	-8.23	peak	
2		5698.493	68.30	1.89	70.19	104.09	-33.90	peak	
3		5716.480	67.96	1.92	69.88	109.82	-39.94	peak	
4		5722.813	69.49	1.93	71.42	117.21	-45.79	peak	
5		5775.000	102.81	2.06	104.87	122.20	-17.33	peak	NoLimit
6		5775.000	91.85	2.06	93.91	122.20	-28.29	AVG	NoLimit
7		5851.400	61.63	2.20	63.83	119.01	-55.18	peak	
8		5869.733	62.95	2.24	65.19	106.67	-41.48	peak	
9		5878.853	60.19	2.26	62.45	102.34	-39.89	peak	
10		5924.240	53.34	2.34	55.68	68.76	-13.08	peak	

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	IEEE 802.11ax (HE160)	Test Date	2023/1/31
Test Frequency	5250MHz	Polarization	Horizontal
Temp	23°C	Hum.	59%

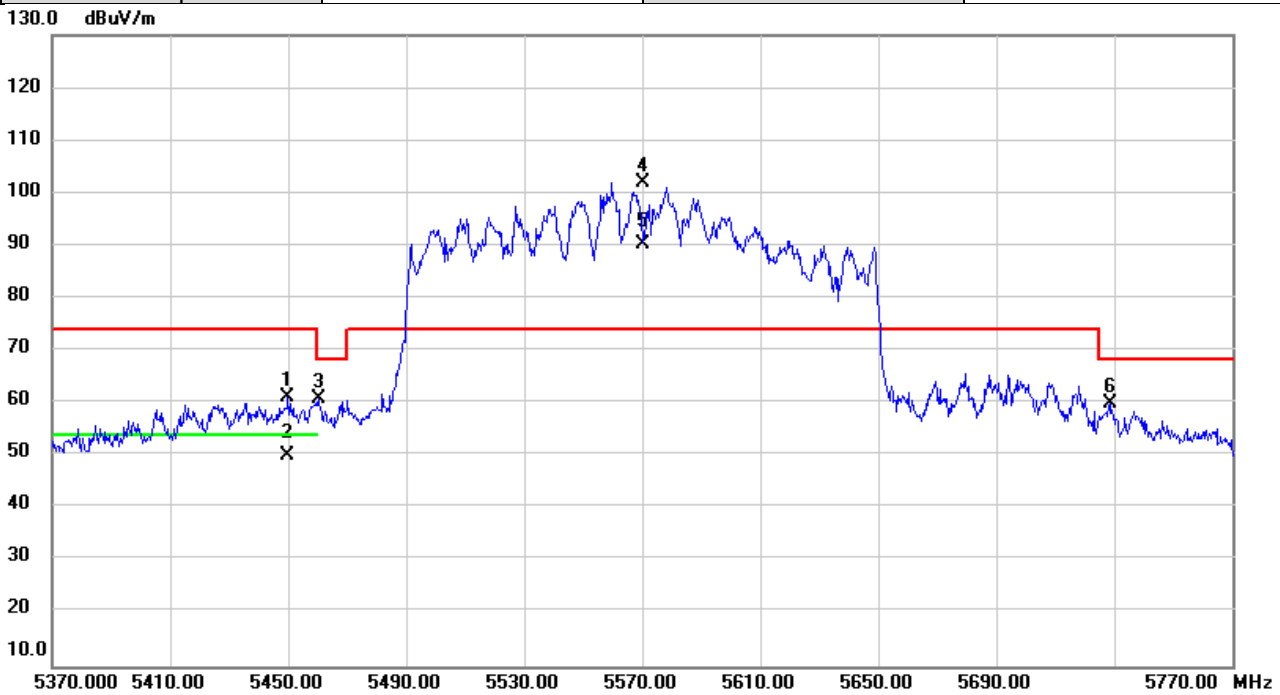


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1		5089.573	52.89	1.35	54.24	74.00	-19.76	peak	
2		5089.573	40.86	1.35	42.21	54.00	-11.79	AVG	
3	*	5250.000	81.66	1.41	83.07	68.20	14.87	peak	NoLimit
4	X	5250.000	71.75	1.41	73.16	68.20	4.96	AVG	NoLimit
5		5390.600	53.17	1.45	54.62	74.00	-19.38	peak	
6		5390.600	44.64	1.45	46.09	54.00	-7.91	AVG	

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	IEEE 802.11ax (HE160)	Test Date	2023/1/31
Test Frequency	5570MHz	Polarization	Horizontal
Temp	23°C	Hum.	59%

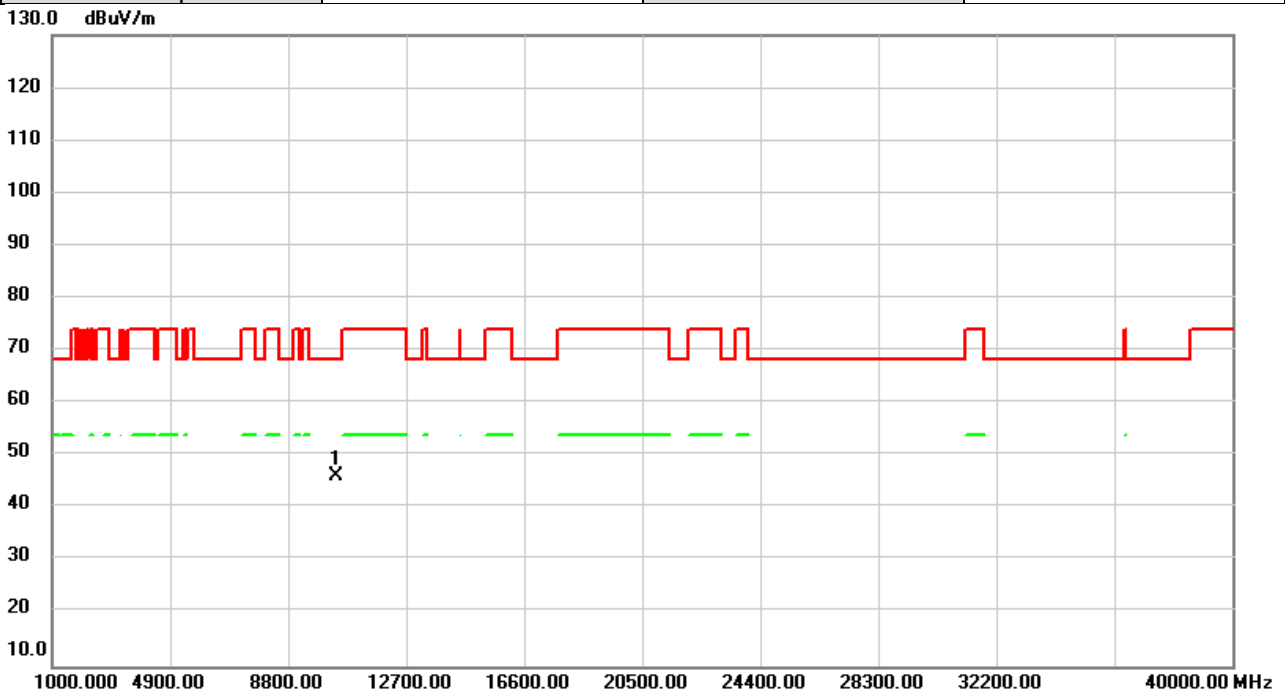


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1		5449.867	59.65	1.48	61.13	74.00	-12.87	peak	
2		5449.867	48.50	1.48	49.98	54.00	-4.02	AVG	
3		5460.267	59.47	1.47	60.94	68.20	-7.26	peak	
4	*	5570.000	100.37	1.63	102.00	74.00	28.00	peak	NoLimit
5	X	5570.000	88.70	1.63	90.33	74.00	16.33	AVG	NoLimit
6		5728.667	58.13	1.95	60.08	68.20	-8.12	peak	

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	IEEE 802.11a	Test Date	2023/1/31
Test Frequency	5200MHz	Polarization	Vertical
Temp	23°C	Hum.	59%

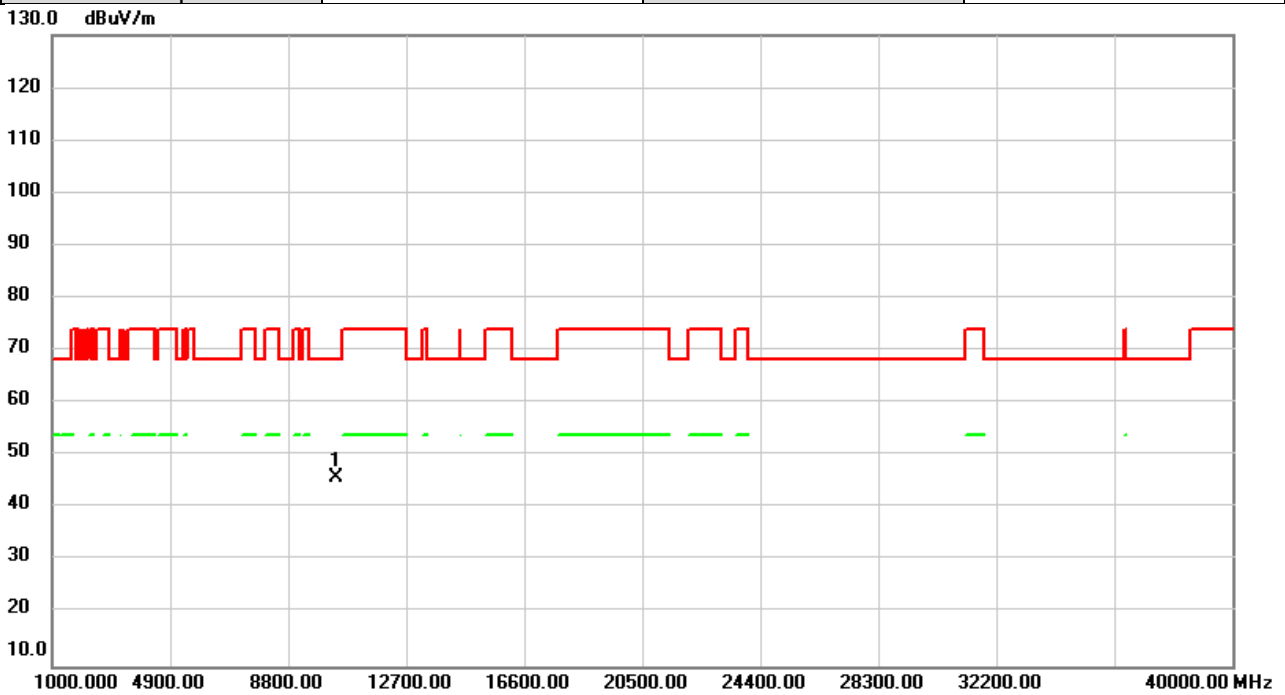


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1	*	10400.00	40.45	5.80	46.25	68.20	-21.95	peak	

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	IEEE 802.11a	Test Date	2023/1/31
Test Frequency	5200MHz	Polarization	Horizontal
Temp	23°C	Hum.	59%

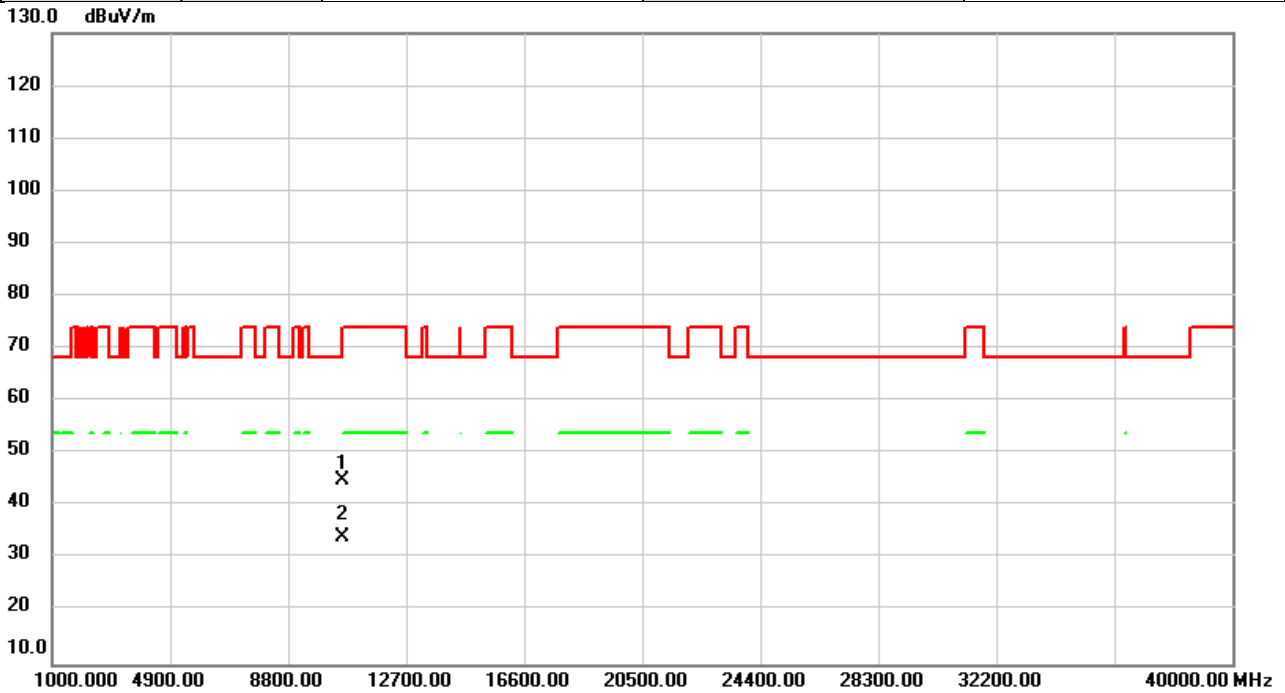


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	*	10400.00	39.91	5.80	45.71	68.20	-22.49	peak	

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	IEEE 802.11a	Test Date	2023/1/31
Test Frequency	5300MHz	Polarization	Vertical
Temp	23°C	Hum.	59%

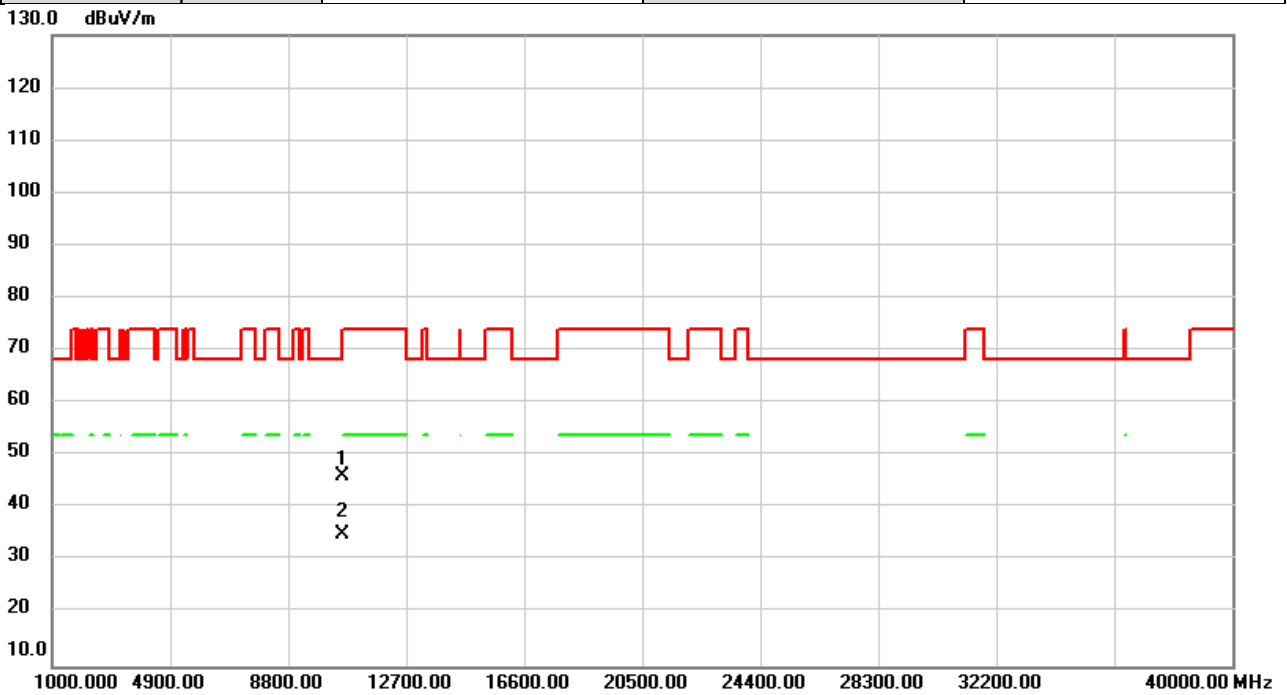


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		10600.00	39.17	5.68	44.85	68.20	-23.35	peak	
2	*	10600.00	28.59	5.68	34.27	54.00	-19.73	AVG	

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	IEEE 802.11a	Test Date	2023/1/31
Test Frequency	5300MHz	Polarization	Horizontal
Temp	23°C	Hum.	59%

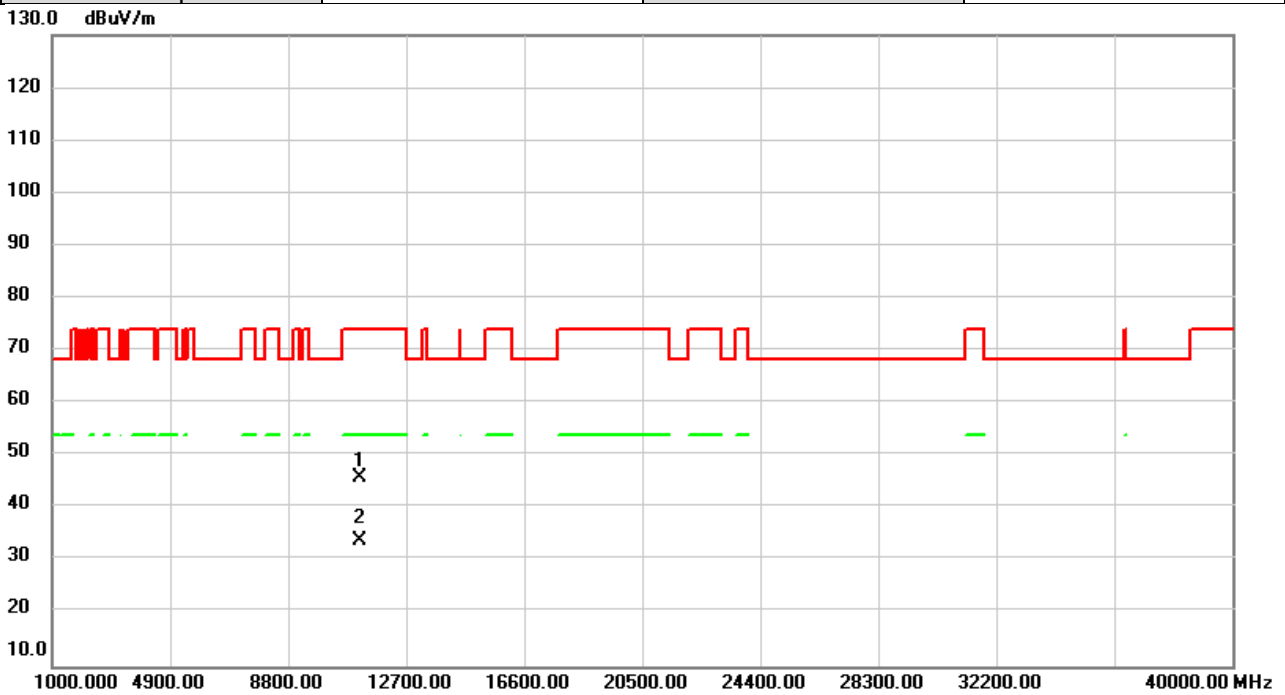


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1		10600.00	40.53	5.68	46.21	68.20	-21.99	peak	
2	*	10600.00	29.36	5.68	35.04	54.00	-18.96	AVG	

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	IEEE 802.11a	Test Date	2023/1/31
Test Frequency	5580MHz	Polarization	Vertical
Temp	23°C	Hum.	59%

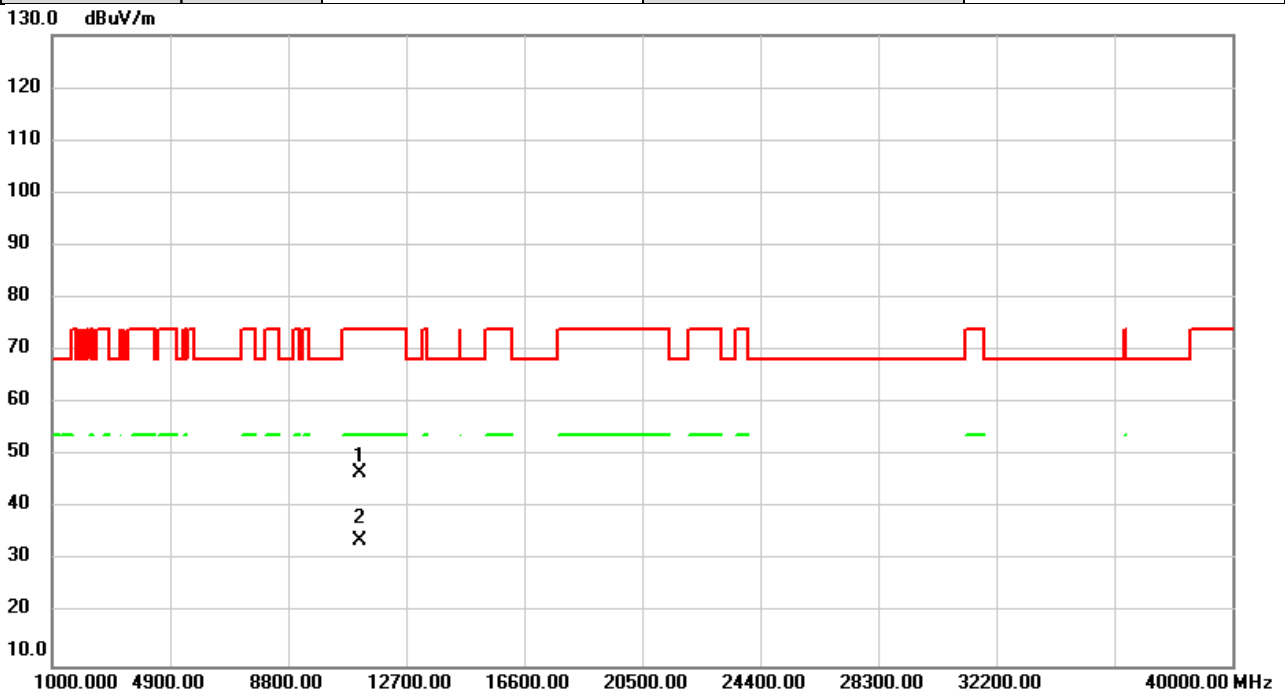


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		11160.00	40.26	5.73	45.99	74.00	-28.01	peak	
2	*	11160.00	28.09	5.73	33.82	54.00	-20.18	AVG	

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	IEEE 802.11a	Test Date	2023/1/31
Test Frequency	5580MHz	Polarization	Horizontal
Temp	23°C	Hum.	59%

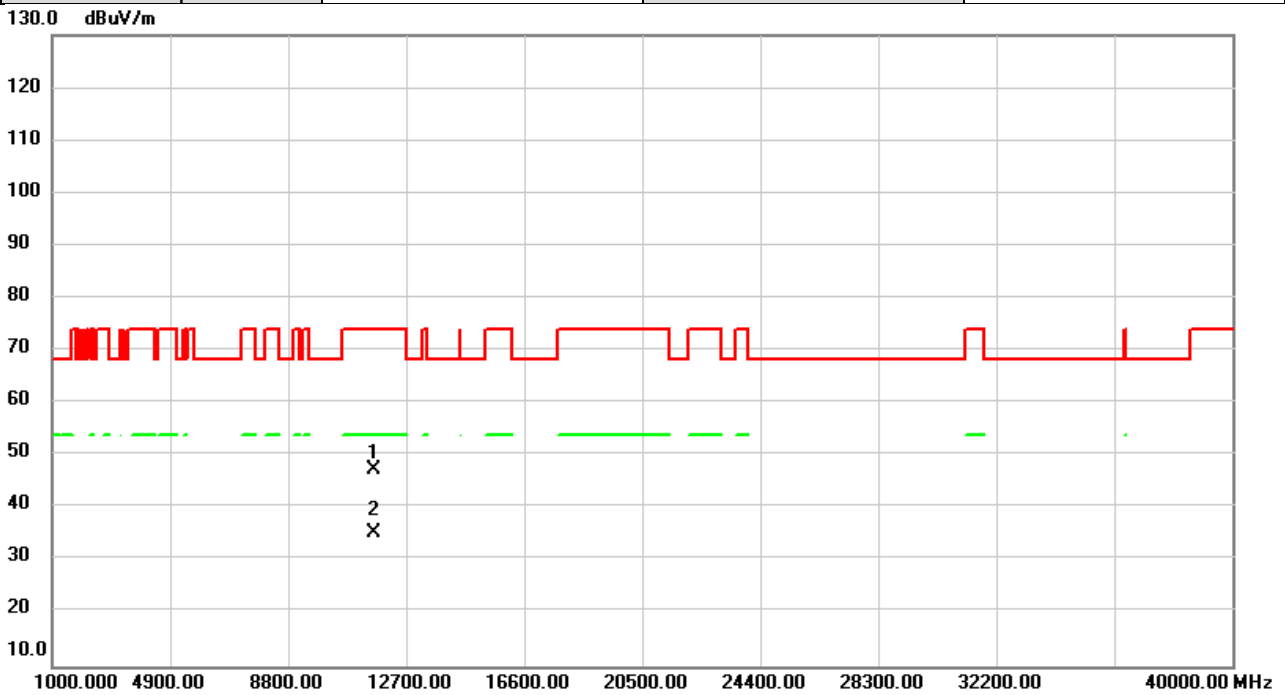


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		11160.00	40.97	5.73	46.70	74.00	-27.30	peak	
2	*	11160.00	28.05	5.73	33.78	54.00	-20.22	AVG	

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	IEEE 802.11a	Test Date	2023/1/31
Test Frequency	5825MHz	Polarization	Vertical
Temp	23°C	Hum.	59%

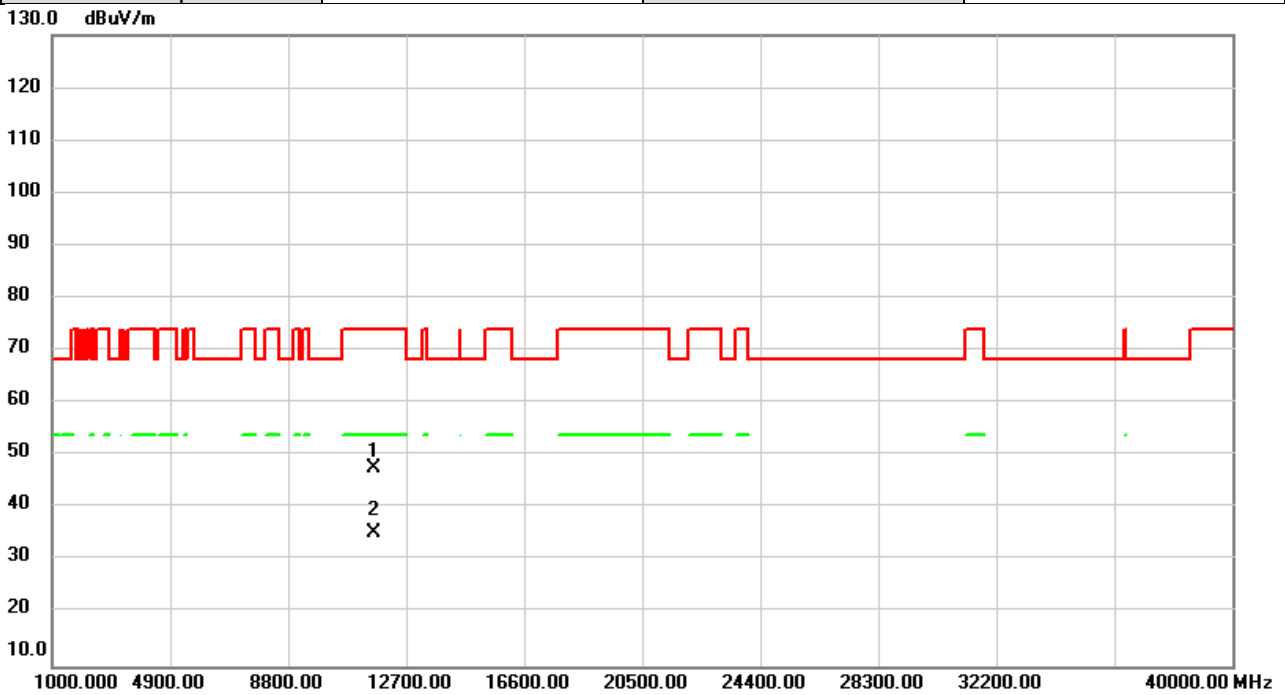


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1		11650.00	41.10	6.37	47.47	74.00	-26.53	peak	
2	*	11650.00	28.83	6.37	35.20	54.00	-18.80	AVG	

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	IEEE 802.11a	Test Date	2023/1/31
Test Frequency	5825MHz	Polarization	Horizontal
Temp	23°C	Hum.	59%

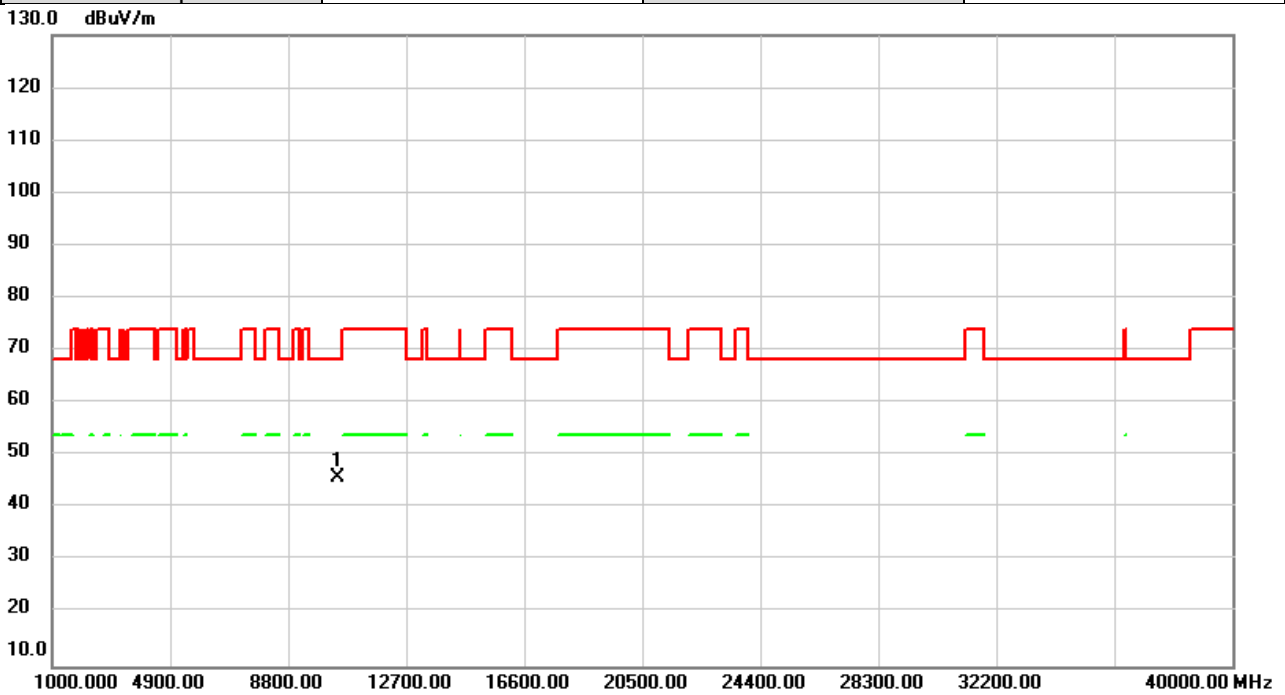


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		11650.00	41.39	6.37	47.76	74.00	-26.24	peak	
2	*	11650.00	28.96	6.37	35.33	54.00	-18.67	AVG	

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	IEEE 802.11ac (VHT80)	Test Date	2023/1/31
Test Frequency	5210MHz	Polarization	Vertical
Temp	23°C	Hum.	59%

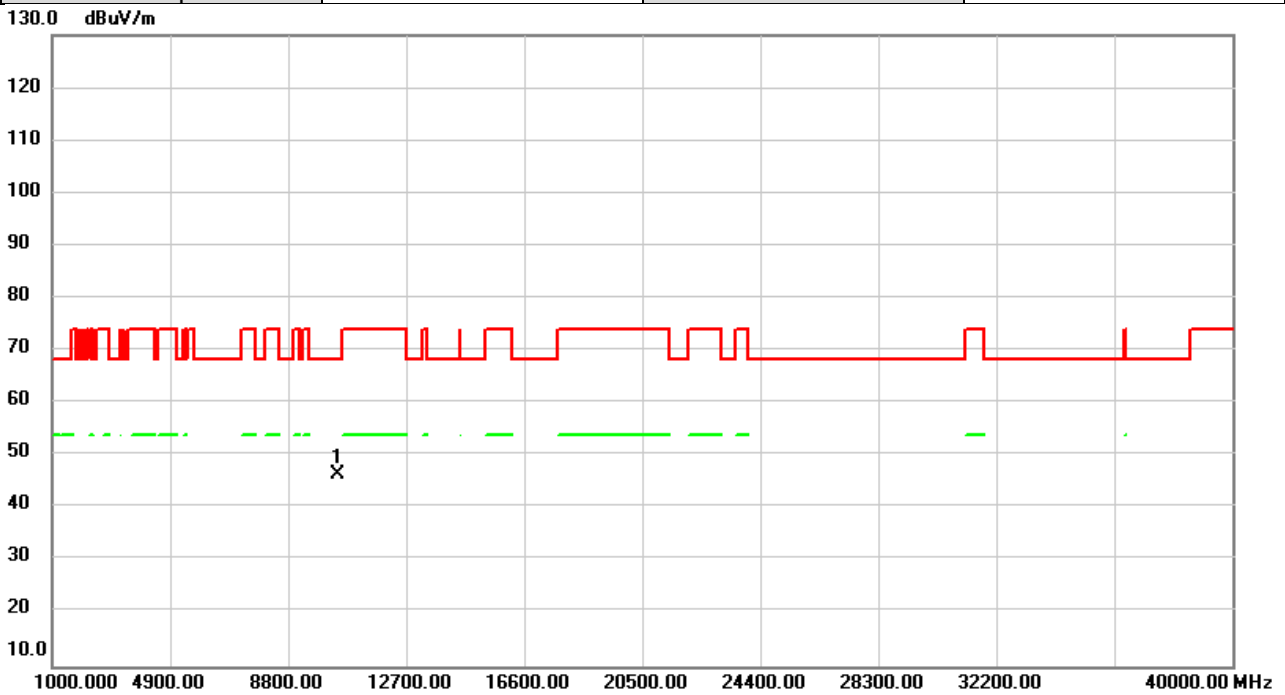


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1	*	10420.00	40.12	5.78	45.90	68.20	-22.30	peak	

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	IEEE 802.11ac (VHT80)	Test Date	2023/1/31
Test Frequency	5210MHz	Polarization	Horizontal
Temp	23°C	Hum.	59%

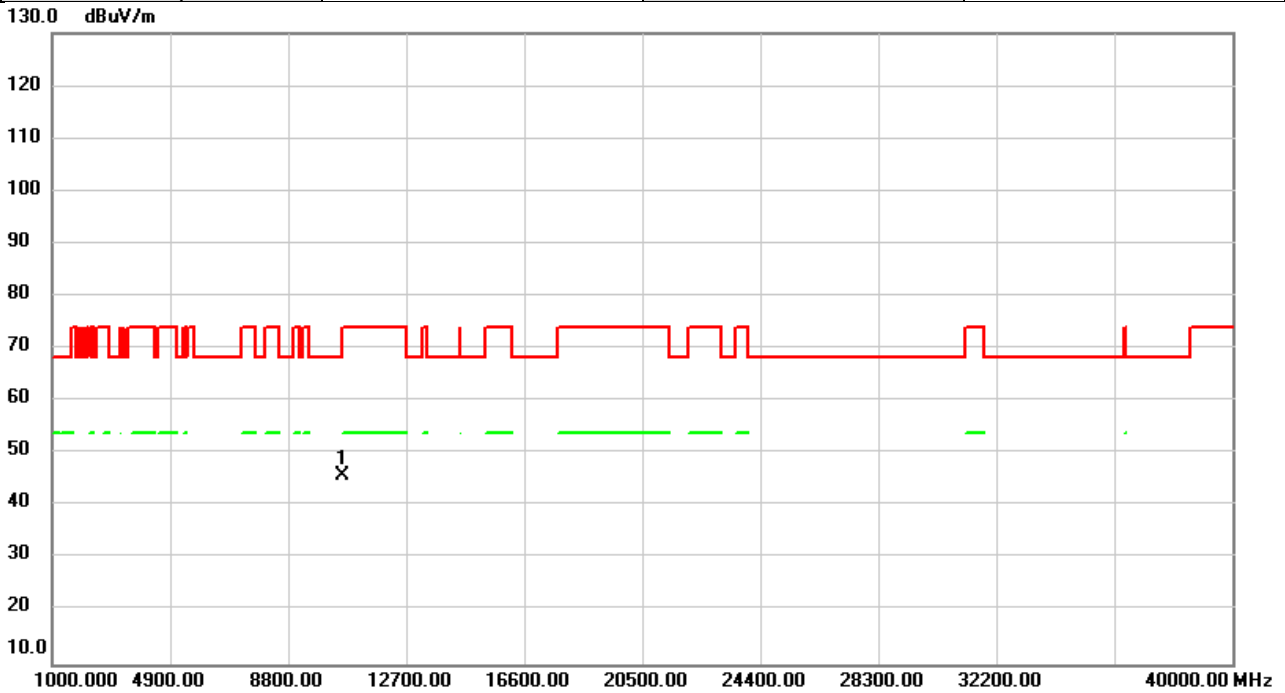


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1	*	10420.00	40.70	5.78	46.48	68.20	-21.72	peak	

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	IEEE 802.11ac (VHT80)	Test Date	2023/1/31
Test Frequency	5290MHz	Polarization	Vertical
Temp	23°C	Hum.	59%

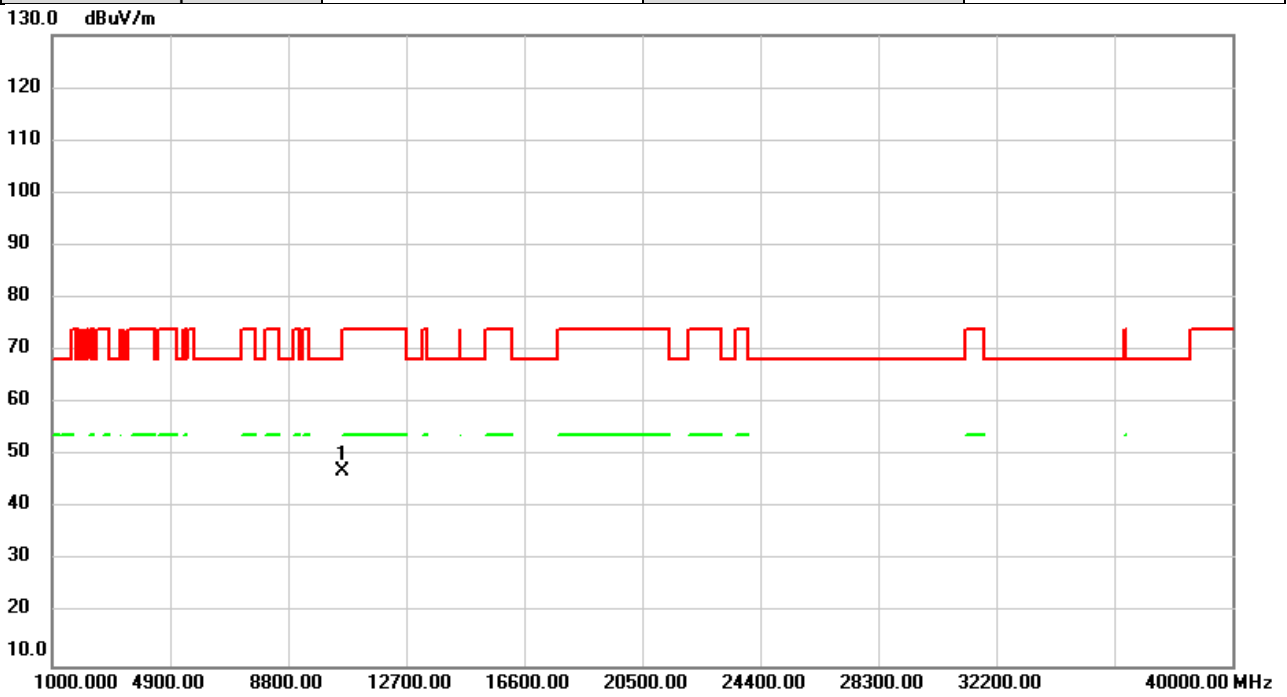


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1	*	10580.00	40.13	5.69	45.82	68.20	-22.38	peak	

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	IEEE 802.11ac (VHT80)	Test Date	2023/1/31
Test Frequency	5290MHz	Polarization	Horizontal
Temp	23°C	Hum.	59%

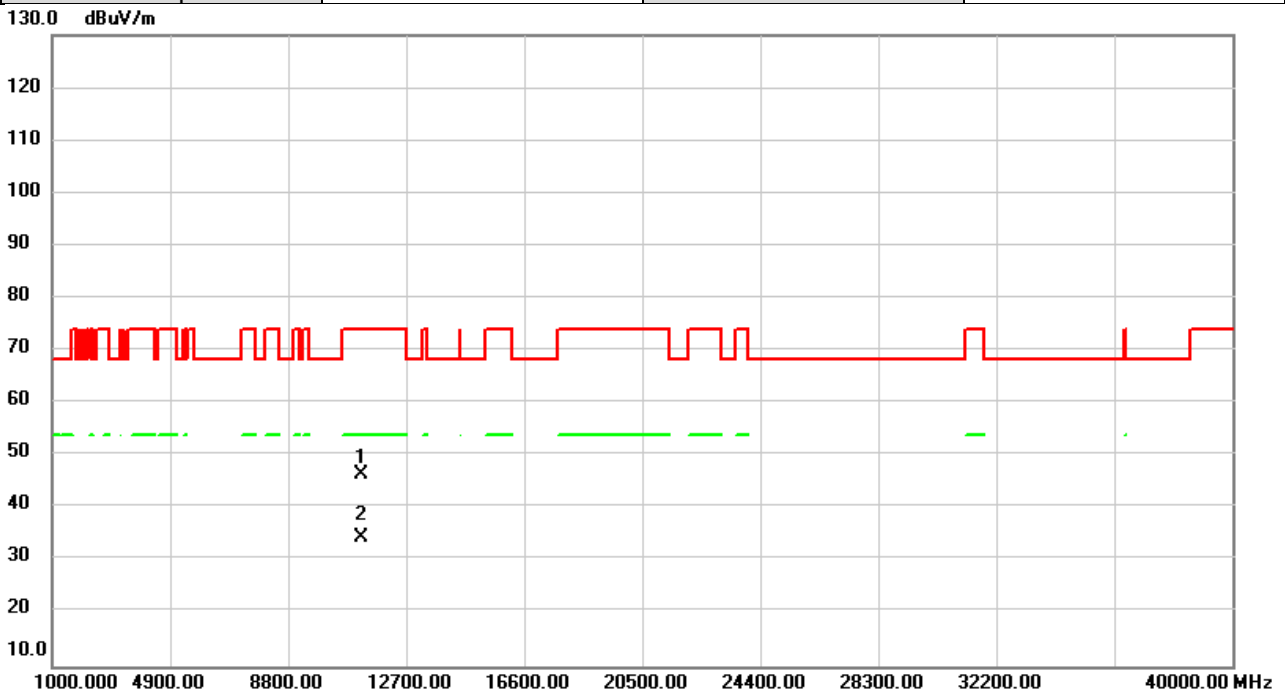


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1	*	10580.00	41.46	5.69	47.15	68.20	-21.05	peak	

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	IEEE 802.11ac (VHT80)	Test Date	2023/1/31
Test Frequency	5610MHz	Polarization	Vertical
Temp	23°C	Hum.	59%

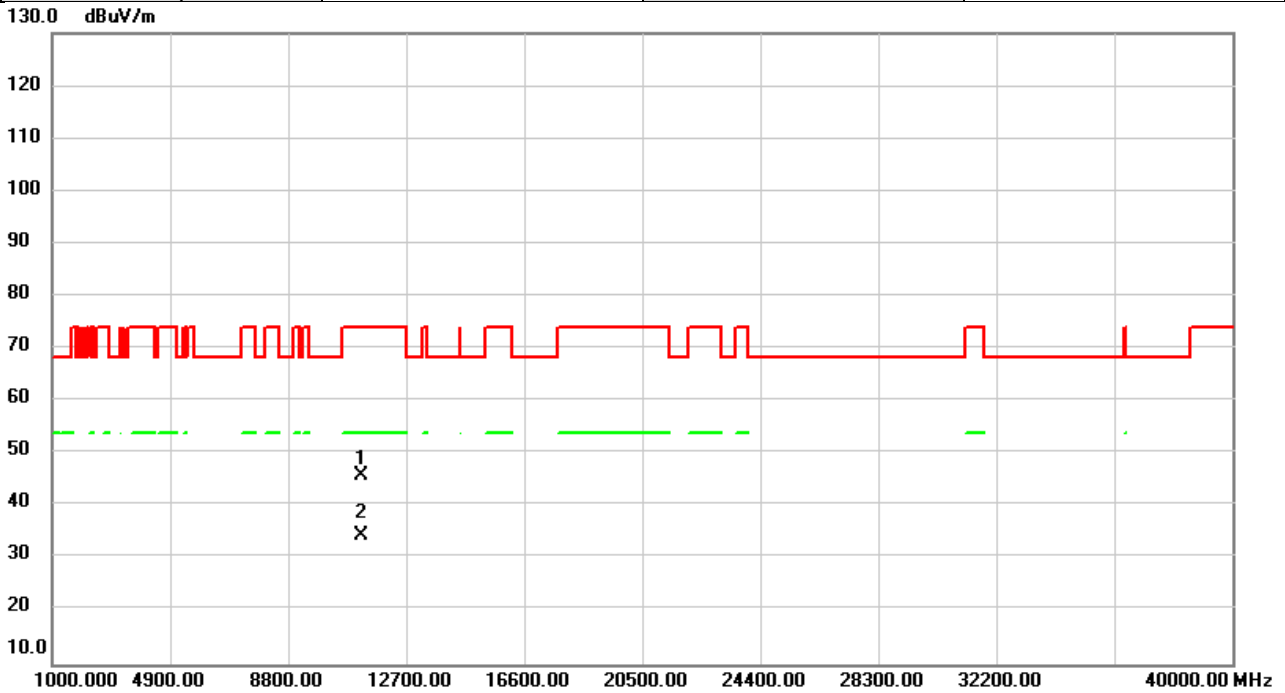


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1		11220.00	40.63	5.82	46.45	74.00	-27.55	peak	
2	*	11220.00	28.65	5.82	34.47	54.00	-19.53	AVG	

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	IEEE 802.11ac (VHT80)	Test Date	2023/1/31
Test Frequency	5610MHz	Polarization	Horizontal
Temp	23°C	Hum.	59%

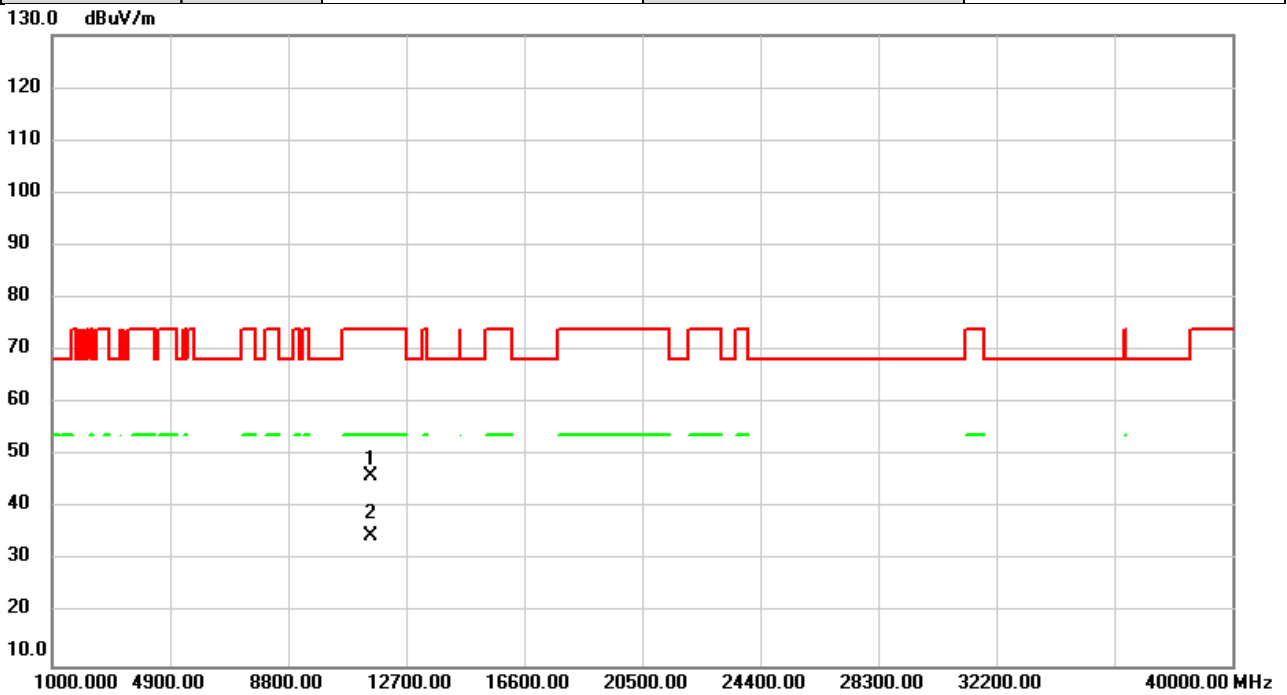


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		11220.00	40.00	5.82	45.82	74.00	-28.18	peak	
2	*	11220.00	28.69	5.82	34.51	54.00	-19.49	AVG	

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	IEEE 802.11ac (VHT80)	Test Date	2023/1/31
Test Frequency	5775MHz	Polarization	Vertical
Temp	23°C	Hum.	59%

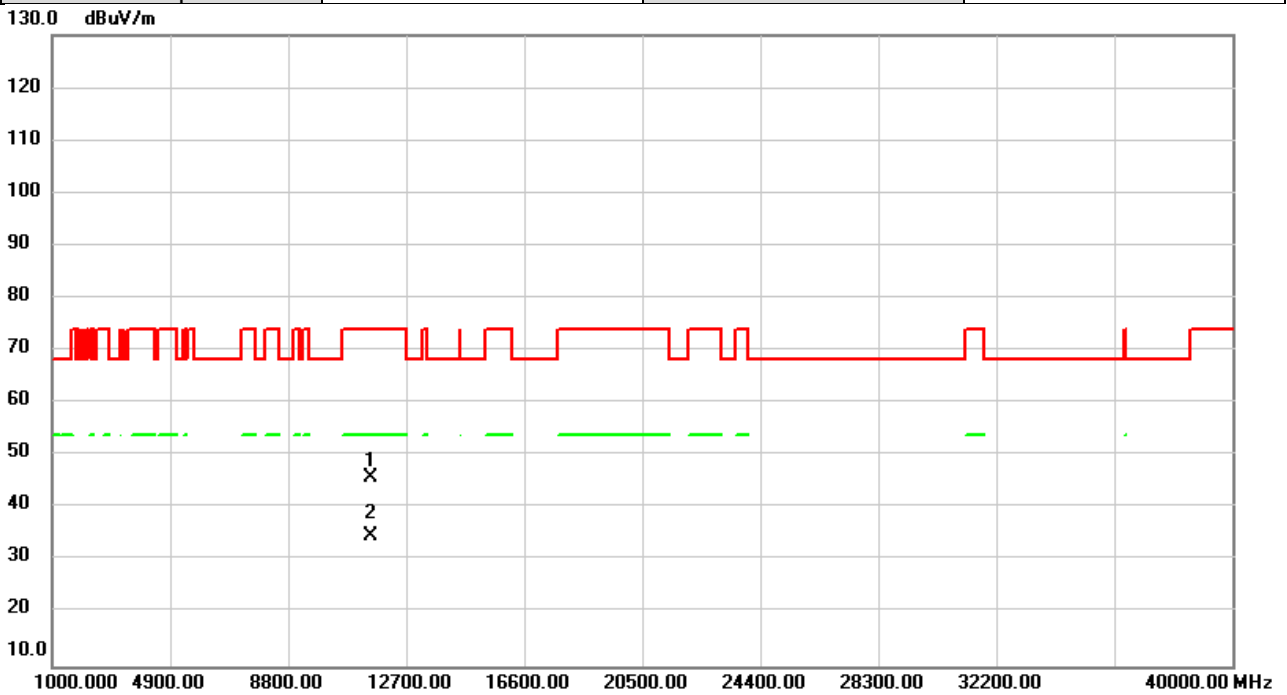


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		11550.00	39.78	6.31	46.09	74.00	-27.91	peak	
2	*	11550.00	28.42	6.31	34.73	54.00	-19.27	AVG	

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	IEEE 802.11ac (VHT80)	Test Date	2023/1/31
Test Frequency	5775MHz	Polarization	Horizontal
Temp	23°C	Hum.	59%

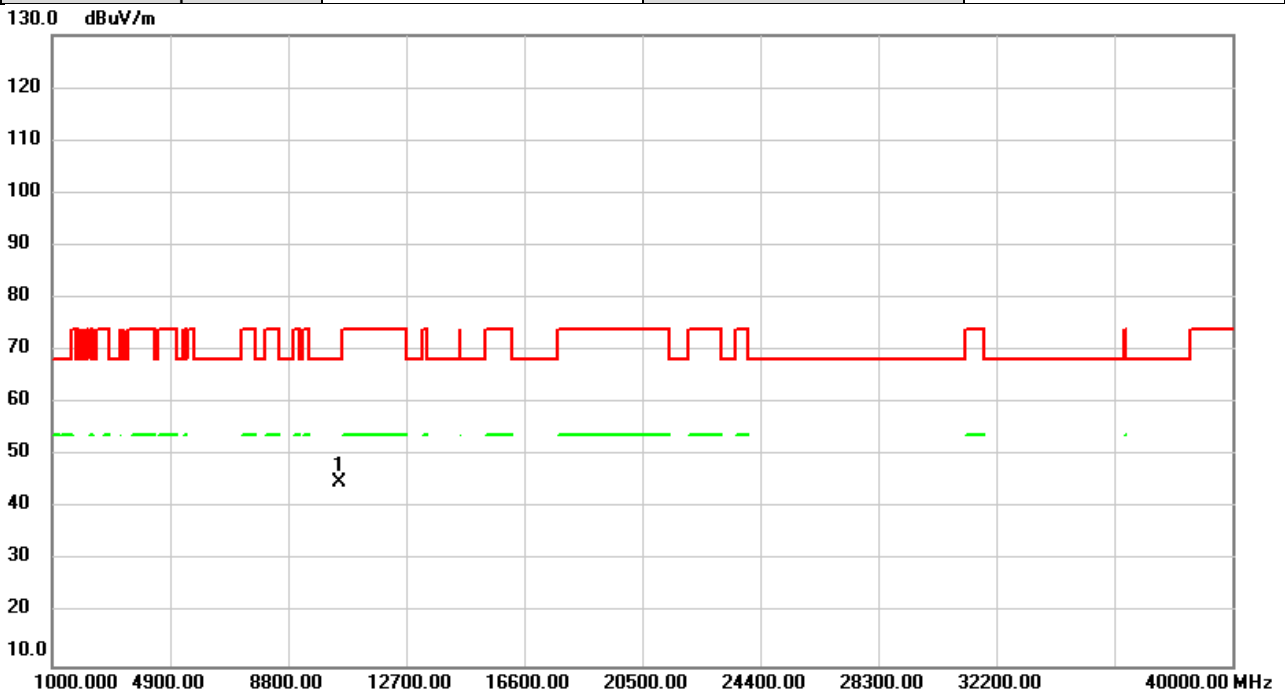


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		11550.00	39.49	6.31	45.80	74.00	-28.20	peak	
2	*	11550.00	28.38	6.31	34.69	54.00	-19.31	AVG	

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	IEEE 802.11ax (HE160)	Test Date	2023/1/31
Test Frequency	5250MHz	Polarization	Vertical
Temp	23°C	Hum.	59%

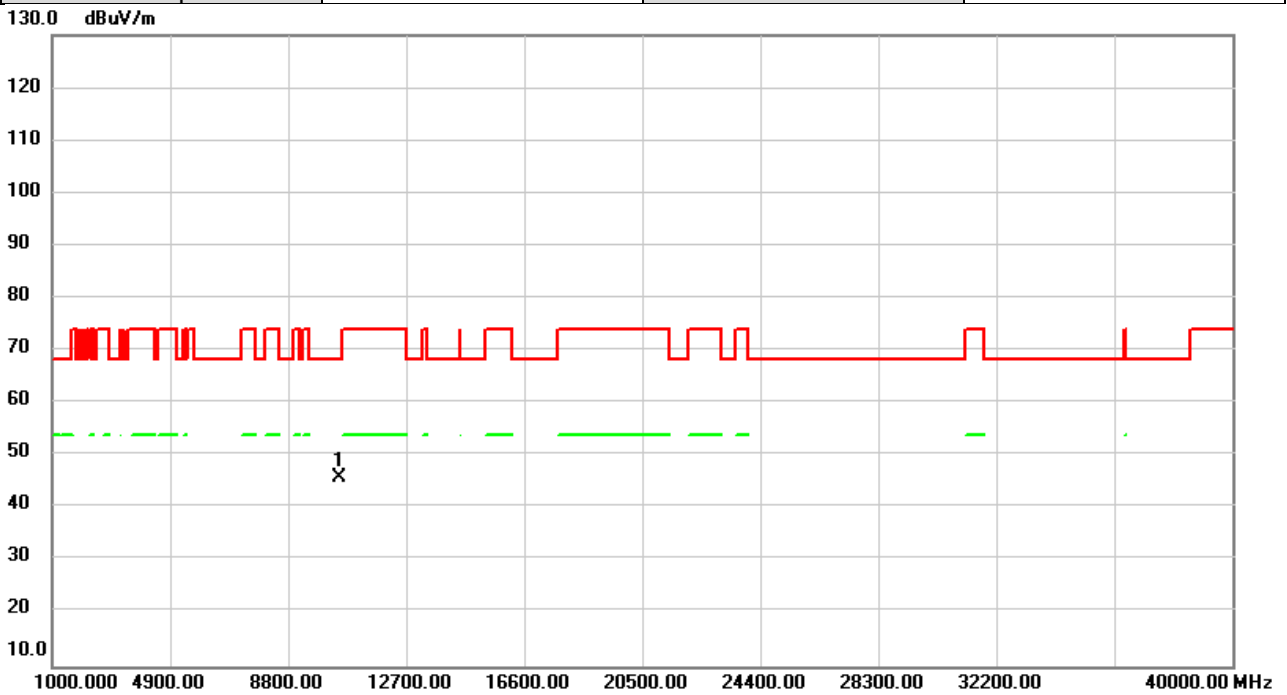


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1	*	10500.00	39.11	5.73	44.84	68.20	-23.36	peak	

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	IEEE 802.11ax (HE160)	Test Date	2023/1/31
Test Frequency	5250MHz	Polarization	Horizontal
Temp	23°C	Hum.	59%

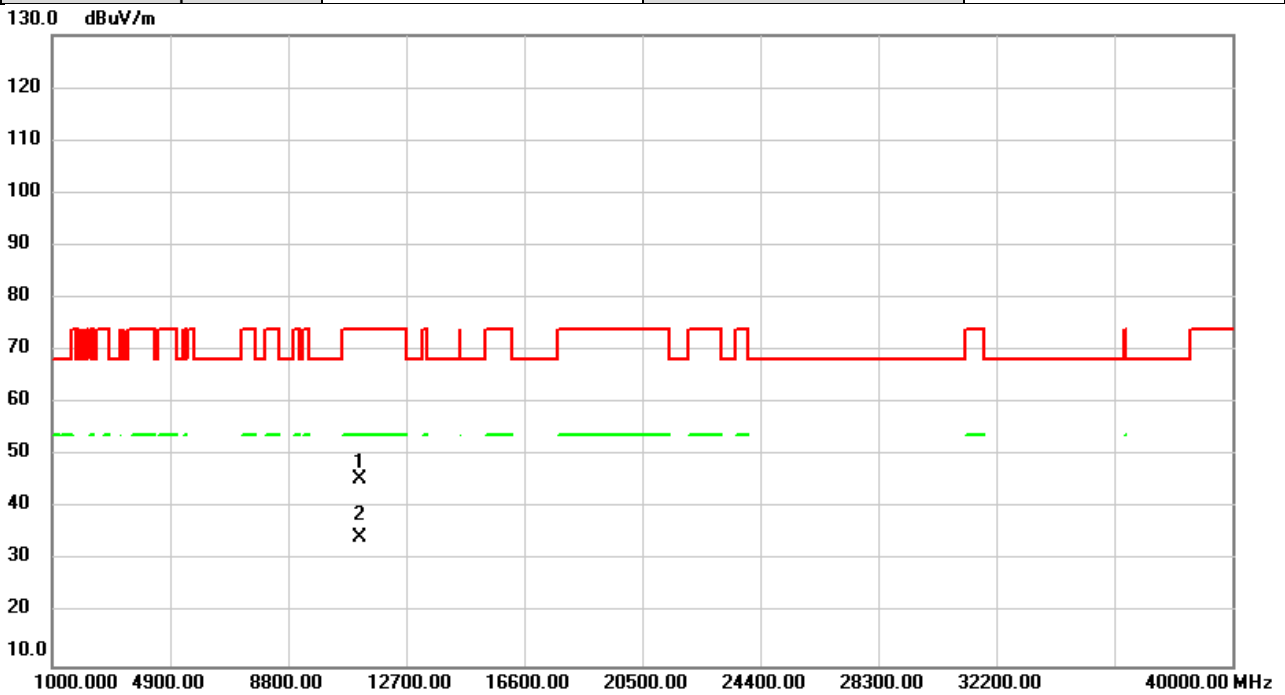


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	*	10500.00	40.13	5.73	45.86	68.20	-22.34	peak	

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	IEEE 802.11ax (HE160)	Test Date	2023/1/31
Test Frequency	5570MHz	Polarization	Vertical
Temp	23°C	Hum.	59%

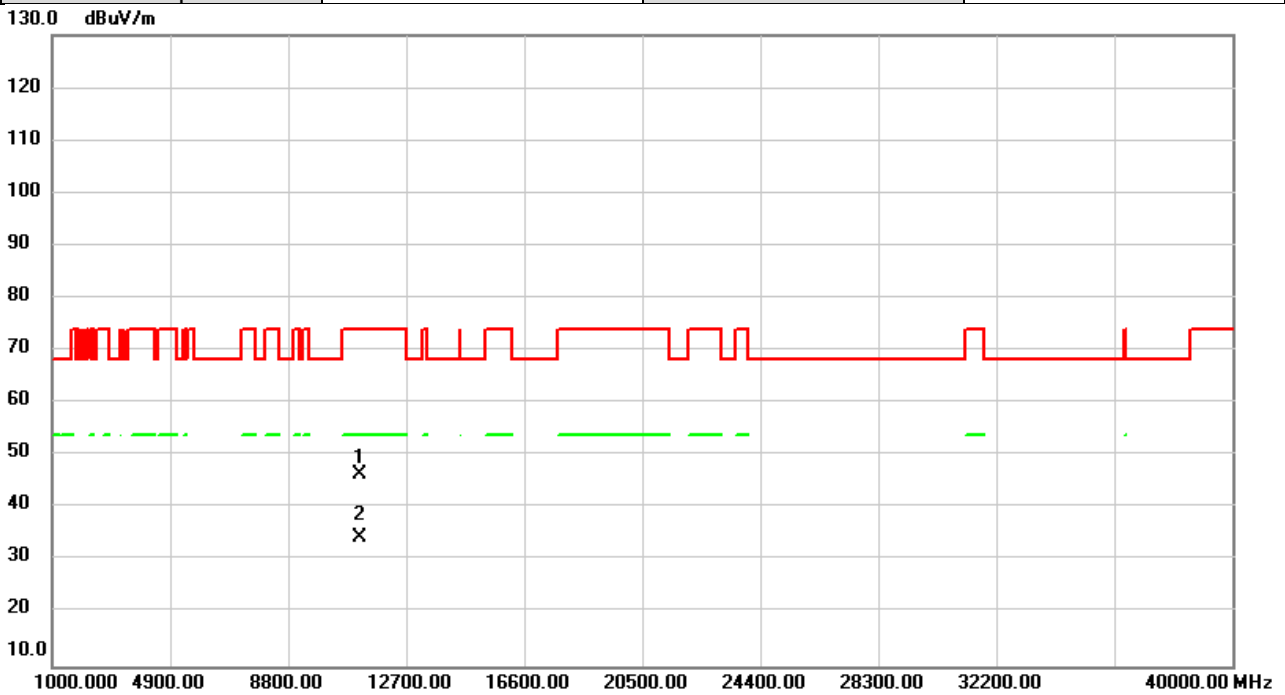


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		11140.00	39.96	5.69	45.65	74.00	-28.35	peak	
2	*	11140.00	28.78	5.69	34.47	54.00	-19.53	AVG	

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	IEEE 802.11ax (HE160)	Test Date	2023/1/31
Test Frequency	5570MHz	Polarization	Horizontal
Temp	23°C	Hum.	59%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1		11140.00	40.74	5.69	46.43	74.00	-27.57	peak	
2	*	11140.00	28.89	5.69	34.58	54.00	-19.42	AVG	

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

APPENDIX D OUTPUT POWER

Test Mode	IEEE 802.11a_Ant. 1	Tested Date	2023/1/15
-----------	---------------------	-------------	-----------

Test Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
5180	15.61	0.0364	23.98	0.2500	Pass
5200	18.47	0.0703	23.98	0.2500	Pass
5240	16.92	0.0492	23.98	0.2500	Pass
5260	18.47	0.0703	23.98	0.2500	Pass
5300	18.55	0.0716	23.98	0.2500	Pass
5320	15.85	0.0385	23.98	0.2500	Pass
5500	15.09	0.0323	23.98	0.2500	Pass
5580	18.52	0.0711	23.98	0.2500	Pass
5700	14.27	0.0267	23.98	0.2500	Pass
5745	18.60	0.0724	30.00	1.0000	Pass
5785	18.35	0.0684	30.00	1.0000	Pass
5825	18.76	0.0752	30.00	1.0000	Pass

Test Mode	IEEE 802.11a_Ant. 2	Tested Date	2023/1/15
-----------	---------------------	-------------	-----------

Test Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
5180	15.61	0.0364	23.98	0.2500	Pass
5200	18.51	0.0710	23.98	0.2500	Pass
5240	17.14	0.0518	23.98	0.2500	Pass
5260	18.63	0.0729	23.98	0.2500	Pass
5300	18.85	0.0767	23.98	0.2500	Pass
5320	16.35	0.0432	23.98	0.2500	Pass
5500	15.22	0.0333	23.98	0.2500	Pass
5580	18.92	0.0780	23.98	0.2500	Pass
5700	14.72	0.0296	23.98	0.2500	Pass
5745	18.11	0.0647	30.00	1.0000	Pass
5785	18.45	0.0700	30.00	1.0000	Pass
5825	18.20	0.0661	30.00	1.0000	Pass

Test Mode	IEEE 802.11a_Total	Tested Date	2023/1/15
-----------	--------------------	-------------	-----------

Test Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
5180	18.62	0.0728	23.98	0.2500	Pass
5200	21.50	0.1413	23.98	0.2500	Pass
5240	20.04	0.1010	23.98	0.2500	Pass
5260	21.56	0.1433	23.98	0.2500	Pass
5300	21.71	0.1484	23.98	0.2500	Pass
5320	19.12	0.0816	23.98	0.2500	Pass
5500	18.17	0.0656	23.98	0.2500	Pass
5580	21.73	0.1491	23.98	0.2500	Pass
5700	17.51	0.0564	23.98	0.2500	Pass
5745	21.37	0.1372	30.00	1.0000	Pass
5785	21.41	0.1384	30.00	1.0000	Pass
5825	21.50	0.1412	30.00	1.0000	Pass

Test Mode	IEEE 802.11ac (VHT20)_Ant. 1	Tested Date	2023/1/15
-----------	------------------------------	-------------	-----------

Test Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
5180	15.40	0.0347	23.98	0.2500	Pass
5200	15.23	0.0333	23.98	0.2500	Pass
5240	15.44	0.0350	23.98	0.2500	Pass
5260	15.42	0.0348	23.98	0.2500	Pass
5300	15.37	0.0344	23.98	0.2500	Pass
5320	15.33	0.0341	23.98	0.2500	Pass
5500	14.70	0.0295	23.98	0.2500	Pass
5580	15.03	0.0318	23.98	0.2500	Pass
5700	14.16	0.0261	23.98	0.2500	Pass
5745	15.42	0.0348	30.00	1.0000	Pass
5785	15.13	0.0326	30.00	1.0000	Pass
5825	15.35	0.0343	30.00	1.0000	Pass

Test Mode	IEEE 802.11ac (VHT20)_Ant. 2	Tested Date	2023/1/15
-----------	------------------------------	-------------	-----------

Test Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
5180	15.49	0.0354	23.98	0.2500	Pass
5200	15.61	0.0364	23.98	0.2500	Pass
5240	15.52	0.0356	23.98	0.2500	Pass
5260	15.36	0.0344	23.98	0.2500	Pass
5300	15.63	0.0366	23.98	0.2500	Pass
5320	15.65	0.0367	23.98	0.2500	Pass
5500	14.79	0.0301	23.98	0.2500	Pass
5580	15.82	0.0382	23.98	0.2500	Pass
5700	14.94	0.0312	23.98	0.2500	Pass
5745	15.81	0.0381	30.00	1.0000	Pass
5785	15.76	0.0377	30.00	1.0000	Pass
5825	15.70	0.0372	30.00	1.0000	Pass

Test Mode	IEEE 802.11ac (VHT20)_Total	Tested Date	2023/1/15
-----------	-----------------------------	-------------	-----------

Test Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
5180	18.46	0.0701	23.98	0.2500	Pass
5200	18.43	0.0697	23.98	0.2500	Pass
5240	18.49	0.0706	23.98	0.2500	Pass
5260	18.40	0.0692	23.98	0.2500	Pass
5300	18.51	0.0710	23.98	0.2500	Pass
5320	18.50	0.0708	23.98	0.2500	Pass
5500	17.76	0.0596	23.98	0.2500	Pass
5580	18.45	0.0700	23.98	0.2500	Pass
5700	17.58	0.0573	23.98	0.2500	Pass
5745	18.63	0.0729	30.00	1.0000	Pass
5785	18.47	0.0703	30.00	1.0000	Pass
5825	18.54	0.0714	30.00	1.0000	Pass

Test Mode	IEEE 802.11ac (VHT40)_Ant. 1	Tested Date	2023/1/15
-----------	------------------------------	-------------	-----------

Test Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
5190	13.53	0.0225	23.98	0.2500	Pass
5230	15.01	0.0317	23.98	0.2500	Pass
5270	15.49	0.0354	23.98	0.2500	Pass
5310	14.86	0.0306	23.98	0.2500	Pass
5510	14.02	0.0252	23.98	0.2500	Pass
5550	15.05	0.0320	23.98	0.2500	Pass
5670	15.04	0.0319	23.98	0.2500	Pass
5755	15.02	0.0318	30.00	1.0000	Pass
5795	14.96	0.0313	30.00	1.0000	Pass

Test Mode	IEEE 802.11ac (VHT40)_Ant. 2	Tested Date	2023/1/15
-----------	------------------------------	-------------	-----------

Test Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
5190	13.40	0.0219	23.98	0.2500	Pass
5230	14.75	0.0299	23.98	0.2500	Pass
5270	15.16	0.0328	23.98	0.2500	Pass
5310	14.90	0.0309	23.98	0.2500	Pass
5510	14.00	0.0251	23.98	0.2500	Pass
5550	15.10	0.0324	23.98	0.2500	Pass
5670	15.09	0.0323	23.98	0.2500	Pass
5755	15.18	0.0330	30.00	1.0000	Pass
5795	15.21	0.0332	30.00	1.0000	Pass

Test Mode	IEEE 802.11ac (VHT40)_Total	Tested Date	2023/1/15
-----------	-----------------------------	-------------	-----------

Test Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
5190	16.48	0.0444	23.98	0.2500	Pass
5230	17.89	0.0615	23.98	0.2500	Pass
5270	18.34	0.0682	23.98	0.2500	Pass
5310	17.89	0.0615	23.98	0.2500	Pass
5510	17.02	0.0504	23.98	0.2500	Pass
5550	18.09	0.0643	23.98	0.2500	Pass
5670	18.08	0.0642	23.98	0.2500	Pass
5755	18.11	0.0647	30.00	1.0000	Pass
5795	18.10	0.0645	30.00	1.0000	Pass

Test Mode	IEEE 802.11ac (VHT80)_Ant. 1	Tested Date	2023/1/15
-----------	------------------------------	-------------	-----------

Test Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
5210	10.94	0.0124	23.98	0.2500	Pass
5290	12.11	0.0163	23.98	0.2500	Pass
5530	13.05	0.0202	23.98	0.2500	Pass
5610	13.88	0.0244	23.98	0.2500	Pass
5775	14.11	0.0258	30.00	1.0000	Pass

Test Mode	IEEE 802.11ac (VHT80)_Ant. 2	Tested Date	2023/1/15
-----------	------------------------------	-------------	-----------

Test Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
5210	11.08	0.0128	23.98	0.2500	Pass
5290	12.16	0.0164	23.98	0.2500	Pass
5530	13.14	0.0206	23.98	0.2500	Pass
5610	14.58	0.0287	23.98	0.2500	Pass
5775	14.68	0.0294	30.00	1.0000	Pass

Test Mode	IEEE 802.11ac (VHT80)_Total	Tested Date	2023/1/15
-----------	-----------------------------	-------------	-----------

Test Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
5210	14.02	0.0252	23.98	0.2500	Pass
5290	15.15	0.0327	23.98	0.2500	Pass
5530	16.11	0.0408	23.98	0.2500	Pass
5610	17.25	0.0531	23.98	0.2500	Pass
5775	17.41	0.0551	30.00	1.0000	Pass

Test Mode	IEEE 802.11ac (VHT160)_Ant. 1	Tested Date	2023/1/15
-----------	-------------------------------	-------------	-----------

Test Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
5250	7.15	0.0052	23.98	0.2500	Pass
5250	6.89	0.0049	23.98	0.2500	Pass
5570	12.00	0.0158	23.98	0.2500	Pass

Test Mode	IEEE 802.11ac (VHT160)_Ant. 2	Tested Date	2023/1/15
-----------	-------------------------------	-------------	-----------

Test Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
5250	7.62	0.0058	23.98	0.2500	Pass
5250	7.25	0.0053	23.98	0.2500	Pass
5570	12.40	0.0174	23.98	0.2500	Pass

Test Mode	IEEE 802.11ac (VHT160)_Total	Tested Date	2023/1/15
-----------	------------------------------	-------------	-----------

Test Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
5250	10.40	0.0110	23.98	0.2500	Pass
5250	10.08	0.0102	23.98	0.2500	Pass
5570	15.21	0.0332	23.98	0.2500	Pass

Test Mode	IEEE 802.11ax (HE20)_Ant. 1	Tested Date	2023/1/15
-----------	-----------------------------	-------------	-----------

Test Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
5180	15.93	0.0392	23.98	0.2500	Pass
5200	16.02	0.0400	23.98	0.2500	Pass
5240	15.84	0.0384	23.98	0.2500	Pass
5260	15.65	0.0367	23.98	0.2500	Pass
5300	15.64	0.0366	23.98	0.2500	Pass
5320	15.65	0.0367	23.98	0.2500	Pass
5500	14.96	0.0313	23.98	0.2500	Pass
5580	15.37	0.0344	23.98	0.2500	Pass
5700	14.52	0.0283	23.98	0.2500	Pass
5745	15.47	0.0352	30.00	1.0000	Pass
5785	15.81	0.0381	30.00	1.0000	Pass
5825	15.61	0.0364	30.00	1.0000	Pass

Test Mode	IEEE 802.11ax (HE20)_Ant. 2	Tested Date	2023/1/15
-----------	-----------------------------	-------------	-----------

Test Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
5180	15.61	0.0364	23.98	0.2500	Pass
5200	15.74	0.0375	23.98	0.2500	Pass
5240	15.85	0.0385	23.98	0.2500	Pass
5260	15.62	0.0365	23.98	0.2500	Pass
5300	15.47	0.0352	23.98	0.2500	Pass
5320	16.01	0.0399	23.98	0.2500	Pass
5500	15.04	0.0319	23.98	0.2500	Pass
5580	15.76	0.0377	23.98	0.2500	Pass
5700	14.84	0.0305	23.98	0.2500	Pass
5745	15.64	0.0366	30.00	1.0000	Pass
5785	15.95	0.0394	30.00	1.0000	Pass
5825	15.64	0.0366	30.00	1.0000	Pass

Test Mode	IEEE 802.11ax (HE20)_Total	Tested Date	2023/1/15
-----------	----------------------------	-------------	-----------

Test Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
5180	18.78	0.0756	23.98	0.2500	Pass
5200	18.89	0.0775	23.98	0.2500	Pass
5240	18.86	0.0768	23.98	0.2500	Pass
5260	18.65	0.0732	23.98	0.2500	Pass
5300	18.57	0.0719	23.98	0.2500	Pass
5320	18.84	0.0766	23.98	0.2500	Pass
5500	18.01	0.0632	23.98	0.2500	Pass
5580	18.58	0.0721	23.98	0.2500	Pass
5700	17.69	0.0588	23.98	0.2500	Pass
5745	18.57	0.0719	30.00	1.0000	Pass
5785	18.89	0.0775	30.00	1.0000	Pass
5825	18.64	0.0730	30.00	1.0000	Pass

Test Mode	IEEE 802.11ax (HE40)_Ant. 1	Tested Date	2023/1/15
-----------	-----------------------------	-------------	-----------

Test Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
5190	13.93	0.0247	23.98	0.2500	Pass
5230	15.14	0.0327	23.98	0.2500	Pass
5270	15.22	0.0333	23.98	0.2500	Pass
5310	15.07	0.0321	23.98	0.2500	Pass
5510	13.82	0.0241	23.98	0.2500	Pass
5550	15.37	0.0344	23.98	0.2500	Pass
5670	15.42	0.0348	23.98	0.2500	Pass
5755	15.24	0.0334	30.00	1.0000	Pass
5795	15.22	0.0333	30.00	1.0000	Pass

Test Mode	IEEE 802.11ax (HE40)_Ant. 2	Tested Date	2023/1/15
-----------	-----------------------------	-------------	-----------

Test Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
5190	13.56	0.0227	23.98	0.2500	Pass
5230	14.93	0.0311	23.98	0.2500	Pass
5270	14.75	0.0299	23.98	0.2500	Pass
5310	15.11	0.0324	23.98	0.2500	Pass
5510	13.68	0.0233	23.98	0.2500	Pass
5550	15.33	0.0341	23.98	0.2500	Pass
5670	15.21	0.0332	23.98	0.2500	Pass
5755	15.19	0.0330	30.00	1.0000	Pass
5795	15.17	0.0329	30.00	1.0000	Pass

Test Mode	IEEE 802.11ax (HE40)_Total	Tested Date	2023/1/15
-----------	----------------------------	-------------	-----------

Test Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
5190	16.76	0.0474	23.98	0.2500	Pass
5230	18.05	0.0638	23.98	0.2500	Pass
5270	18.00	0.0631	23.98	0.2500	Pass
5310	18.10	0.0646	23.98	0.2500	Pass
5510	16.76	0.0474	23.98	0.2500	Pass
5550	18.36	0.0686	23.98	0.2500	Pass
5670	18.33	0.0680	23.98	0.2500	Pass
5755	18.23	0.0665	30.00	1.0000	Pass
5795	18.21	0.0662	30.00	1.0000	Pass

Test Mode	IEEE 802.11ax (HE80)_Ant. 1	Tested Date	2023/1/15
-----------	-----------------------------	-------------	-----------

Test Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
5210	11.23	0.0133	23.98	0.2500	Pass
5290	12.46	0.0176	23.98	0.2500	Pass
5530	13.41	0.0219	23.98	0.2500	Pass
5610	14.23	0.0265	23.98	0.2500	Pass
5775	14.35	0.0272	30.00	1.0000	Pass

Test Mode	IEEE 802.11ax (HE80)_Ant. 2	Tested Date	2023/1/15
-----------	-----------------------------	-------------	-----------

Test Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
5210	11.41	0.0138	23.98	0.2500	Pass
5290	12.51	0.0178	23.98	0.2500	Pass
5530	13.51	0.0224	23.98	0.2500	Pass
5610	14.89	0.0308	23.98	0.2500	Pass
5775	14.64	0.0291	30.00	1.0000	Pass

Test Mode	IEEE 802.11ax (HE80)_Total	Tested Date	2023/1/15
-----------	----------------------------	-------------	-----------

Test Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
5210	14.33	0.0271	23.98	0.2500	Pass
5290	15.50	0.0354	23.98	0.2500	Pass
5530	16.47	0.0444	23.98	0.2500	Pass
5610	17.58	0.0573	23.98	0.2500	Pass
5775	17.51	0.0563	30.00	1.0000	Pass

Test Mode	IEEE 802.11ax (HE160)_Ant. 1	Tested Date	2023/1/15
-----------	------------------------------	-------------	-----------

Test Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
5250	7.72	0.0059	23.98	0.2500	Pass
5250	7.61	0.0058	23.98	0.2500	Pass
5570	12.16	0.0164	23.98	0.2500	Pass

Test Mode	IEEE 802.11ax (HE160)_Ant. 2	Tested Date	2023/1/15
-----------	------------------------------	-------------	-----------

Test Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
5250	8.11	0.0065	23.98	0.2500	Pass
5250	8.05	0.0064	23.98	0.2500	Pass
5570	12.55	0.0180	23.98	0.2500	Pass

Test Mode	IEEE 802.11ax (HE160)_Total	Tested Date	2023/1/15
-----------	-----------------------------	-------------	-----------

Test Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
5250	10.93	0.0124	23.98	0.2500	Pass
5250	10.85	0.0122	23.98	0.2500	Pass
5570	15.37	0.0344	23.98	0.2500	Pass

For Straddle Channel:

Test Mode	IEEE 802.11a_Ant. 1	Tested Date	2023/1/15
-----------	---------------------	-------------	-----------

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
5720	16.83	0.0482	24.00	0.2512	Pass
5720	9.02	0.0080	30.00	1.0000	Pass

Test Mode	IEEE 802.11a_Ant. 2	Tested Date	2023/1/15
-----------	---------------------	-------------	-----------

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
5720	16.81	0.0480	24.00	0.2512	Pass
5720	8.71	0.0074	30.00	1.0000	Pass

Test Mode	IEEE 802.11a_Total	Tested Date	2023/1/15
-----------	--------------------	-------------	-----------

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
5720	19.83	0.0962	24.00	0.2512	Pass
5720	11.88	0.0154	30.00	1.0000	Pass

Test Mode	IEEE 802.11ac (VHT20)_Ant. 1	Tested Date	2023/1/15
-----------	------------------------------	-------------	-----------

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
5720	13.85	0.0243	24.00	0.2512	Pass
5720	6.80	0.0048	30.00	1.0000	Pass

Test Mode	IEEE 802.11ac (VHT20)_Ant. 2	Tested Date	2023/1/15
-----------	------------------------------	-------------	-----------

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
5720	14.57	0.0286	24.00	0.2512	Pass
5720	7.62	0.0058	30.00	1.0000	Pass

Test Mode	IEEE 802.11ac (VHT20)_Total	Tested Date	2023/1/15
-----------	-----------------------------	-------------	-----------

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
5720	17.24	0.0529	24.00	0.2512	Pass
5720	10.24	0.0106	30.00	1.0000	Pass

Test Mode	IEEE 802.11ac (VHT40)_Ant. 1	Tested Date	2023/1/15
-----------	------------------------------	-------------	-----------

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
5710	14.19	0.0262	24.00	0.2512	Pass
5710	2.54	0.0018	30.00	1.0000	Pass

Test Mode	IEEE 802.11ac (VHT40)_Ant. 2	Tested Date	2023/1/15
-----------	------------------------------	-------------	-----------

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
5710	14.54	0.0284	24.00	0.2512	Pass
5710	3.11	0.0020	30.00	1.0000	Pass

Test Mode	IEEE 802.11ac (VHT40)_Total	Tested Date	2023/1/15
-----------	-----------------------------	-------------	-----------

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
5710	17.38	0.0547	24.00	0.2512	Pass
5710	5.84	0.0038	30.00	1.0000	Pass

Test Mode	IEEE 802.11ac (VHT80)_Ant. 1	Tested Date	2023/1/15
-----------	------------------------------	-------------	-----------

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
5690	13.42	0.0220	24.00	0.2512	Pass
5690	-2.66	0.0005	30.00	1.0000	Pass

Test Mode	IEEE 802.11ac (VHT80)_Ant. 2	Tested Date	2023/1/15
-----------	------------------------------	-------------	-----------

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
5690	13.85	0.0243	24.00	0.2512	Pass
5690	-2.07	0.0006	30.00	1.0000	Pass

Test Mode	IEEE 802.11ac (VHT80)_Total	Tested Date	2023/1/15
-----------	-----------------------------	-------------	-----------

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
5690	16.65	0.0462	24.00	0.2512	Pass
5690	0.66	0.0012	30.00	1.0000	Pass

Test Mode	IEEE 802.11ax (HE20)_Ant. 1	Tested Date	2023/1/15
-----------	-----------------------------	-------------	-----------

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
5720	14.28	0.0268	24.00	0.2512	Pass
5720	7.15	0.0052	30.00	1.0000	Pass

Test Mode	IEEE 802.11ax (HE20)_Ant. 2	Tested Date	2023/1/15
-----------	-----------------------------	-------------	-----------

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
5720	14.53	0.0284	24.00	0.2512	Pass
5720	7.73	0.0059	30.00	1.0000	Pass

Test Mode	IEEE 802.11ax (HE20)_Total	Tested Date	2023/1/15
-----------	----------------------------	-------------	-----------

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
5720	17.42	0.0552	24.00	0.2512	Pass
5720	10.46	0.0111	30.00	1.0000	Pass

Test Mode	IEEE 802.11ax (HE40)_Ant. 1	Tested Date	2023/1/15
-----------	-----------------------------	-------------	-----------

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
5710	14.91	0.0310	24.00	0.2512	Pass
5710	3.12	0.0021	30.00	1.0000	Pass

Test Mode	IEEE 802.11ax (HE40)_Ant. 2	Tested Date	2023/1/15
-----------	-----------------------------	-------------	-----------

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
5710	14.99	0.0316	24.00	0.2512	Pass
5710	3.44	0.0022	30.00	1.0000	Pass

Test Mode	IEEE 802.11ax (HE40)_Total	Tested Date	2023/1/15
-----------	----------------------------	-------------	-----------

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
5710	17.96	0.0625	24.00	0.2512	Pass
5710	6.29	0.0043	30.00	1.0000	Pass

Test Mode	IEEE 802.11ax (HE80)_Ant. 1	Tested Date	2023/1/15
-----------	-----------------------------	-------------	-----------

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
5690	13.95	0.0248	24.00	0.2512	Pass
5690	-2.33	0.0006	30.00	1.0000	Pass

Test Mode	IEEE 802.11ax (HE80)_Ant. 2	Tested Date	2023/1/15
-----------	-----------------------------	-------------	-----------

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
5690	14.21	0.0264	24.00	0.2512	Pass
5690	-1.74	0.0007	30.00	1.0000	Pass

Test Mode	IEEE 802.11ax (HE80)_Total	Tested Date	2023/1/15
-----------	----------------------------	-------------	-----------

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
5690	17.09	0.0512	24.00	0.2512	Pass
5690	0.99	0.0013	30.00	1.0000	Pass

End of Test Report