



Prüfbericht-Nr.: <i>Test report no.:</i>	CN25FAE1 001	Auftrags-Nr.: <i>Order no.:</i>	48254698	Seite 1 von 33 Page 1 of 33
Kunden-Referenz-Nr.: <i>Client reference no.:</i>	N/A	Auftragsdatum: <i>Order date:</i>	2024-11-19	
Auftraggeber: <i>Client:</i>	Acer Incorporated 8F, 88, Sec. 1, Xintai 5th Rd. Xizhi, New Taipei City 221 Taiwan			
Prüfgegenstand: <i>Test item:</i>	Wi-Fi 7 USB Adapter			
Bezeichnung / Typ-Nr.: <i>Identification / Type no.:</i>	D7			
Auftrags-Inhalt: <i>Order content:</i>	FCC Part 15E Test report (WiFi 6GHz)			
Prüfgrundlage: <i>Test specification:</i>	FCC 47CFR Part 15: Subpart E Section 15.407			
Wareneingangsdatum: <i>Date of sample receipt:</i>	2025-01-23			
Prüfmuster-Nr.: <i>Test sample no:</i>	A003917356-004			
Prüfzeitraum: <i>Testing period:</i>	2025-03-20 - 2025-04-18			
Ort der Prüfung: <i>Place of testing:</i>	EMC/RF Taipei Testing Site			
Prüflaboratorium: <i>Testing laboratory:</i>	Taipei Testing Laboratories			
Prüfergebnis*: <i>Test result*:</i>	Pass			
überprüft von: <i>compiled by:</i>	genehmigt von: <i>authorized by:</i>			
Datum: <i>Date:</i>	Ausstellungsdatum: <i>Issue date:</i>			
Stellung / Position:	Stellung / Position:			
Sonstiges / Other:	This report (CIIPC) is supplementary of report no.: CN255RA2 001 to change the applicant, product name, model name, appearance of EUT, cradle, and antenna gain. Only radiated spurious emissions, mains conducted emission, and CBP tests were verified.			
Zustand des Prüfgegenstandes bei Anlieferung: <i>Condition of the test item at delivery:</i>	Prüfmuster vollständig und unbeschädigt <i>Test item complete and undamaged</i>			
* Legende:	1 = sehr gut P(ass) = entspricht o.g. Prüfgrundlage(n)	2 = gut F(ail) = entspricht nicht o.g. Prüfgrundlage(n)	3 = befriedigend F(ail) = entspricht nicht o.g. Prüfgrundlage(n)	4 = ausreichend N/A = nicht anwendbar
* Legend:	1 = very good P(ass) = passed a.m. test specification(s)	2 = good F(ail) = failed a.m. test specification(s)	3 = satisfactory F(ail) = failed a.m. test specification(s)	4 = sufficient N/A = not applicable
Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens. <i>This test report only relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark.</i>				

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Anmerkungen
Remarks

- | | |
|----------|--|
| 1 | <p>Alle eingesetzten Prüfmittel waren zum angegebenen Prüfzeitraum gemäß eines festgelegten Kalibrierungsprogramms unseres Prüfhauses kalibriert. Sie entsprechen den in den Prüfprogrammen hinterlegten Anforderungen. Die Rückverfolgbarkeit der eingesetzten Prüfmittel ist durch die Einhaltung der Regelungen unseres Managementsystems gegeben.</p> <p>Detaillierte Informationen bezüglich Prüfkonditionen, Prüfequipment und Messunsicherheiten sind im Prüflabor vorhanden und können auf Wunsch bereitgestellt werden.</p> <p><i>The equipment used during the specified testing period was calibrated according to our test laboratory calibration program. The equipment fulfils the requirements included in the relevant standards. The traceability of the test equipment used is ensured by compliance with the regulations of our management system. Detailed information regarding test conditions, equipment and measurement uncertainty is available in the test laboratory and could be provided on request.</i></p> |
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| 3 | <p>Prüfklausel mit der Note * wurden an qualifizierte Unterauftragnehmer vergeben und sind unter der jeweiligen Prüfklausel des Berichts beschrieben.</p> <p>Abweichungen von Prüfspezifikation(en) oder Kundenanforderungen sind in der jeweiligen Prüfklausel im Bericht aufgeführt.</p> <p><i>Test clauses with remark of * are subcontracted to qualified subcontractors and described under the respective test clause in the report.</i></p> <p><i>Deviations of testing specification(s) or customer requirements are listed in specific test clause in the report.</i></p> |
| 4 | <p>Die Entscheidungsregel für Konformitätserklärungen basierend auf numerischen Messergebnissen in diesem Prüfbericht basiert auf der "Null-Grenzwert-Regel" und der "Einfachen Akzeptanz" gemäß ILAC G8:2019 und IEC Guide 115:2023, es sei denn, in der auf Seite 1 dieses Berichts genannten angewandten Norm ist etwas anderes festgelegt oder vom Kunden gewünscht. Dies bedeutet, dass die Messunsicherheit nicht berücksichtigt wird und daher auch nicht im Prüfbericht angegeben wird. Zu weiteren Informationen bezüglich des Risikos durch diese Entscheidungsregel siehe ILAC G8:2019.</p> <p><i>The decision rule for statements of conformity, based on numerical measurement results, in this test report is based on the "Zero Guard Band Rule" and "Simple Acceptance" in accordance with ILAC G8:2019 and IEC Guide 115:2023, unless otherwise specified in the applied standard mentioned on Page 1 of this report or requested by the customer. This means that measurement uncertainty is not taken in account and hence also not declared in the test report. For additional information to the resulting risk based of this decision rule please refer to ILAC G8:2019.</i></p> |

TEST SUMMARY

Report Section	FCC Clause	Test Item	Result
5.1.1	15.203	Antenna Requirement	Pass
-	15.407(a)	Maximum e.i.r.p.	Note 1
-	15.407(a)	Emission Bandwidth	Note 1
-	15.407(g)	Frequency Stability	Note 1
-	15.407(a)	Maximum Power Spectral Density (e.i.r.p.)	Note 1
5.1.2	15.407(b)	Radiated Spurious Emissions	Pass
-	15.407(b)	In-Band Emissions (Channel Mask)	Note 1
5.1.3	15.407(d)	Contention-Based Protocol	Pass
5.2.1	15.207	Mains Conducted Emission	Pass

Note:

1. Refer to original report.
2. Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

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APPENDIX A - TEST RESULT OF RADIATED EMISSIONS & MAINS CONDUCTED EMISSION

APPENDIX B - CONTENTION-BASED PROTOCOL

APPENDIX SP - PHOTOGRAPHS OF TEST SETUP

APPENDIX EP - PHOTOGRAPHS OF EUT

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HISTORY OF THIS TEST REPORT

Revision	Description	Date Issued
R01	Original Release	2025-05-06

1. General Remarks

1.1 Complementary Materials

All attachments are integral parts of this test report. This applies especially to the following appendix:

Appendix A - Test Result of Radiated Emissions & Mains Conducted Emission

Appendix B - Contention-Based Protocol

Appendix SP - Photographs of Test Setup

Appendix EP - Photographs of EUT

Applied Standard and Test Levels

Radio
FCC 47CFR Part 15: Subpart E Section 15.407
ANSI C63.10:2013
KDB 789033 D02 General UNII Test Procedures New Rules v02r01
KDB 987594 D02 U-NII 6 GHz EMC Measurement v01r01
KDB 662911 D01 Multiple Transmitter Output v02r01

1.2 Decision Rule of Conformity

The decision rule of conformity of this test report is following the requirements of the requested standard in the quotation, and agreed among testing laboratory and manufacturer (applicant) to exclude the consideration of Measurement Uncertainty, unless it is required by the specific standard.

2. Test Sites

2.1 Test Laboratory

Taipei Testing Laboratories

11F. No.758, Sec. 4, Bade Rd., Songshan Dist.
Taipei City 105
Taiwan (R.O.C.)

2.2 Test Facility

Taipei Testing Laboratories

No.458-18, Sec. 2, Fenliao Rd., Linkou Dist.,
New Taipei City 244
Taiwan (R.O.C.)
FCC Registration No.: 180491
ISED Registration No.: 25563

2.3 Traceability

All measurement equipment calibrations are traceable to NML(Taiwan)/NIST(USA) or where calibration is performed outside Taiwan, to equivalent nationally recognized standards organizations.

2.4 Calibration

Equipment requiring calibration is calibrated periodically in a suitably accredited Calibration Lab. Additionally all equipment is verified for proper performance on a regular basis using in house standards or comparisons.

2.5 Measurement Uncertainty

All measurement uncertainty values are shown with a coverage factor of $k=2$ to indicate a 95% level of confidence.

Emission Measurement Uncertainty

Parameter	Uncertainty
Radiated Emission (9 kHz ~ 30 MHz)	± 1.15 dB
Radiated Emission (30 MHz ~ 200 MHz)	± 1.32 dB
Radiated Emission (200 MHz ~ 1 GHz)	± 1.31 dB
Radiated Emission (1 GHz ~ 18 GHz)	± 1.53 dB
Radiated Emission (18 GHz ~ 40 GHz)	± 2.50 dB
Mains Conducted Emission	± 1.65 dB

3. General Product Information

3.1 Product Function and Intended Use

The EUT is a Wi-Fi 7 USB Adapter. It contains a WLAN compatible module enabling the user to communicate data through a Wireless interface.

For details refer to the User Guide, Data Sheet and Circuit Diagram.

3.2 System Details and Ratings

Basic Information of EUT

Item	EUT information
Kind of Equipment/Test Item	Wi-Fi 7 USB Adapter
Type Identification	D7
FCC ID	HLZD7

Technical Specification of EUT

Item	EUT information
Operating Frequency	Band 5: 5955 MHz ~ 6415 MHz Band 6: 6435 MHz ~ 6525 MHz Band 7: 6525 MHz ~ 6875 MHz Band 8: 6875 MHz ~ 7115 MHz
Channel Number	Band 5~8: 59 for 802.11ax/be HE20/EHT20 29 for 802.11ax/be HE40/EHT40 14 for 802.11ax/be HE80/EHT80 7 for 802.11ax/be HE160/EHT160
Data Rate	802.11ax: up to MCS11 802.11be: up to MCS13
Operation Voltage	5 Vdc
Modulation	OFDM/OFDMA : (BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM, 4096QAM)
Antenna Information	Refer to 5.1.1
Accessory Device	Refer to 4.4

Note: There're 2 configurations of the EUT listed as below. Since the only difference is the thermal pad which does not affect the RF characteristics, only the main sample was chosen for the final test.

EUT	Difference
Main sample	EUT with heat sink
2 nd sample	EUT with heat sink and thermal pad

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3.3 Noise Generating and Noise Suppressing Parts

Refer to the Circuit Diagram.

3.4 Submitted Documents

- Circuit Diagram
- Instruction Manual
- Rating Label
- Technical Description

4. Test Set-up and Operation Modes

4.1 Principle of Configuration Selection

The test modes were adapted accordingly in reference to the instructions for use.

During testing, Channel and Power Controlling Software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output expected by the customer and is going to be fixed on the firmware of the final end product.

4.2 Carrier Frequency and Channel

Band	Channel	Frequency (MHz)	802.11ax HE20 802.11be EHT20	802.11ax HE40 802.11be EHT40	802.11ax HE80 802.11be EHT80	802.11ax HE160 802.11be EHT160
U-NII-5 (Band 5)	1	5955	V			
	3	5965		V		
	5	5975	V			
	7	5985			V	
	9	5995	V			
	11	6005		V		
	13	6015	V			
	15	6025				V
	17	6035	V			
	19	6045		V		
	21	6055	V			
	23	6065			V	
	25	6075	V			
	27	6085		V		
	29	6095	V			
	33	6115	V			
	35	6125		V		
	37	6135	V			
	39	6145			V	
	41	6155	V			
	43	6165		V		
	45	6175	V			
	47	6185				V
	49	6195	V			
	51	6205		V		
	53	6215	V			
	55	6225			V	
	57	6235	V			
	59	6245		V		
	61	6255	V			
	65	6275	V			
	67	6285		V		
	69	6295	V			
	71	6305			V	
	73	6315	V			
	75	6325		V		
	77	6335	V			
	79	6345				V
	81	6355	V			
	83	6365		V		
	85	6375	V			
	87	6385			V	
	89	6395	V			
	91	6405		V		
	93	6415	V			

Band	Channel	Frequency (MHz)	802.11ax HE20 802.11be EHT20	802.11ax HE40 802.11be EHT40	802.11ax HE80 802.11be EHT80	802.11ax HE160 802.11be EHT160
U-NII-6 (Band 6)	97	6435	V			
	99	6445		V		
	101	6455	V			
	103	6465			V	
	105	6475	V			
	107	6485		V		
	109	6495	V			
	113	6515	V			
Straddle Channel	111	6505				V
	115	6525		V		
	119	6545			V	
U-NII-7 (Band 7)	117	6535	V			
	121	6555	V			
	123	6565		V		
	125	6575	V			
	129	6595	V			
	131	6605		V		
	133	6615	V			
	135	6625			V	
	137	6635	V			
	139	6645		V		
	141	6655	V			
	143	6665				V
	145	6675	V			
	147	6685		V		
	149	6695	V			
	151	6705			V	
	153	6715	V			
	155	6725		V		
	157	6735	V			
	161	6755	V			
	163	6765		V		
	165	6775	V			
	167	6785			V	
	169	6795	V			
	171	6805		V		
	173	6815	V			
	177	6835	V			
	179	6845		V		
	181	6855	V			
Straddle Channel	175	6825				V
	183	6865			V	
	185	6875	V			
	187	6885		V		

Band	Channel	Frequency (MHz)	802.11ax HE20 802.11be EHT20	802.11ax HE40 802.11be EHT40	802.11ax HE80 802.11be EHT80	802.11ax HE160 802.11be EHT160
U-NII-8 (Band 8)	189	6895	V			
	193	6915	V			
	195	6925		V		
	197	6935	V			
	199	6945			V	
	201	6955	V			
	203	6965		V		
	205	6975	V			
	207	6985				V
	209	6995	V			
	211	7005		V		
	213	7015	V			
	215	7025			V	
	217	7035	V			
	219	7045		V		
	221	7055	V			
	225	7075	V			
	227	7085		V		
	229	7095	V			
	233	7115	V			

4.3 Test Operation and Test Software

Setup for testing: Test samples are provided with USB interface which makes it possible to control them through a test software installed on a notebook computer.

This software was running on the laptop computer connected to the EUT. It was used to enable the operation modes listed as below.

Test Software	AX Series MP Tool V2.0.44
---------------	---------------------------

The samples were used as follows:
A003917356-004

Full test was applied on all test modes, but only worst case was shown.

The EUT provides two completed transmitters and receivers.

Modulation Mode	Tx Function
802.11ax HE20	2TX
802.11ax HE40	2TX
802.11ax HE80	2TX
802.11ax HE160	2TX
802.11be EHT20	2TX
802.11be EHT40	2TX
802.11be EHT80	2TX
802.11be EHT160	2TX

* The modulation and bandwidth are similar for 802.11ax mode HE20/HE40/HE80/HE160 and 802.11be mode EHT20/EHT40/EHT80/EHT160, therefore, only investigated worse case as representative mode in test report.

** The EUT only supports Full RU, not support Partial RUs.

EUT Configure Mode	Applicable To				Description
	Contention-Based Protocol	Radiated Spurious Emissions above 1 GHz	Radiated Spurious Emissions below 1 GHz	Mains Conducted Emission	
-	√	√	√	√	-

Note:

1. The EUT had been pre-tested on the positioned of each 3 axis. The worst case was found when position on **Z-plane**.
2. "-" means no effect.

Contention-Based Protocol

- ☒ Pre-Scan full test was applied on all test modes, but only worst case was shown.
- ☒ Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Mode	Frequency (MHz)	Available Channel	Tested Channel	Date Rate (Mbps)
-	802.11be EHT20	5955-6415	1 to 93	45	NSS1 MCS0
-		6435-6525	97 to 113	105	
-		6525-6875	117 to 185	149	
-		6875-7115	189 to 233	209	
-	802.11be EHT160	5955-6415	15 to 79	47	NSS1 MCS0
-		6435-6525	111	111	
-		6525-6875	143 to 175	143	
-		6875-7115	207	207	

Radiated Spurious Emissions (Above 1 GHz)

- ☒ Pre-Scan full test was applied on all test modes, but only worst case was shown.
- ☒ Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Mode	Frequency (MHz)	Available Channel	Tested Channel	Date Rate (Mbps)
-	802.11be EHT20	6525-6875	117 to 185	149	NSS1 MCS0
-		6875-7115	189 to 233	233	
-	802.11be EHT40	6435-6525	99 to 115	99	NSS1 MCS0
-	802.11be EHT160	5955-6415	15 to 79	79	NSS1 MCS0
-		6435-6525	111	111	
-		6525-6875	143 to 175	175	

Radiated Spurious Emissions (Below 1 GHz)

- ☒ Pre-Scan full test was applied on all test modes, but only worst case was shown.
- ☒ Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Mode	Frequency (MHz)	Available Channel	Tested Channel	Date Rate (Mbps)
EUT with Notebook	802.11be EHT80	6435-6525	103 to 119	119	NSS1 MCS0
EUT with Cradle	802.11be EHT80	6435-6525	103 to 119	119	NSS1 MCS0

Mains Conducted Emission Test

- ☒ Pre-Scan full test was applied on all test modes, but only worst case was shown.
- ☒ Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Mode	Frequency (MHz)	Available Channel	Tested Channel	Date Rate (Mbps)
EUT with Notebook	802.11be EHT80	6435-6525	103 to 119	119	NSS1 MCS0
EUT with Cradle	802.11be EHT80	6435-6525	103 to 119	119	NSS1 MCS0

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Test Condition

Test Item	Ambient Temperature	Relative Humidity	Tested by
Contention-Based Protocol	22.1-22.9 °C	56-57 %	Nick Hsu
Radiated Spurious Emissions above 1 GHz	22.8-24.4 °C	53-56 %	Ivan Chiang
Radiated Spurious Emissions below 1 GHz	22.8-24.4 °C	53-56 %	Ivan Chiang
Mains Conducted Emission	22.1 °C	55 %	Chuan Chu

4.4 Special Accessories and Auxiliary Equipment

The product has been tested together with the following additional accessories:

Accessory of EUT

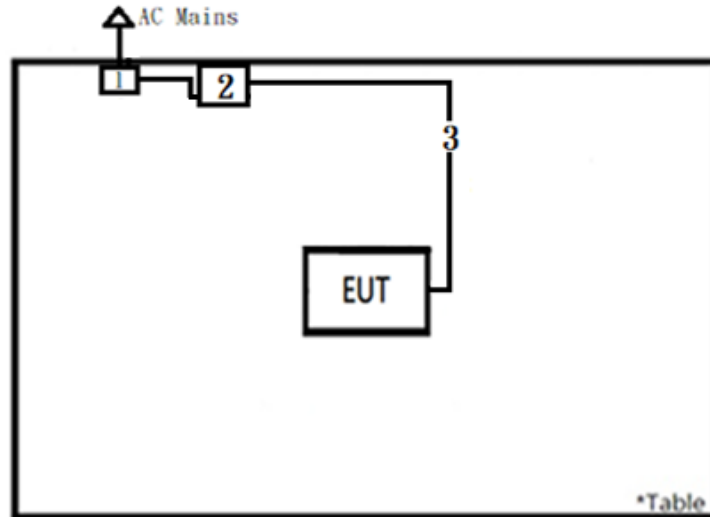
No.	Product	Brand	Model	Description
A	Cradle	Acer	D7 Cradle	--

Support Unit

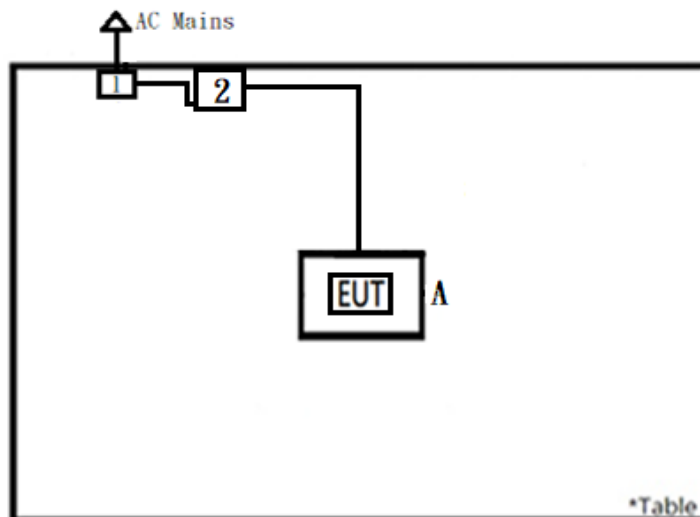
Support Unit								
No	Description	Brand	Model	S/N	Shielded	Ferrite Core (Qty)	Length (cm)	Remark
1	Adapter	Acer	A18-065N3A	N/A	NO	NO	150	--
2	Notebook	Acer	N20C4	NXA1UTA001 14210F853400	-	-	-	--
3	USB Cable	E-books	E-IPD235	N/A	NO	NO	200	--

4.5 Test Setup Diagram

<Radiated Spurious Emissions mode>
EUT with Notebook

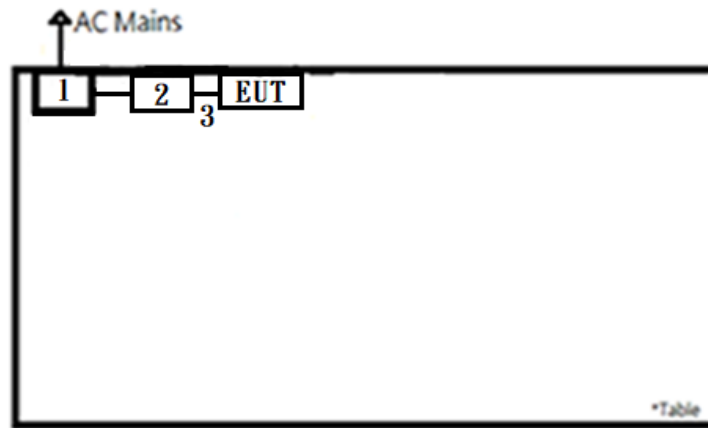


EUT with Cradle

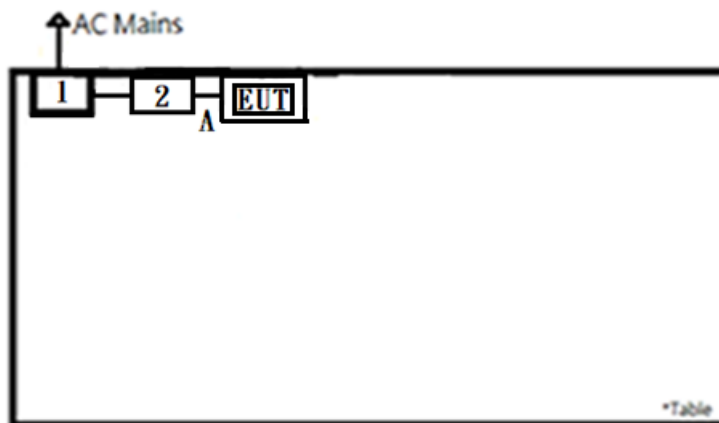


<Mains Conducted Emission mode>

EUT with Notebook



EUT with Cradle



5. Test Results

5.1 Transmitter Requirement & Test Suites

5.1.1 Antenna Requirement

Requirement Use of approved antennas only

The gain value is derived from Antenna datasheet, the EUT's antenna specifications are described as below. The antenna is used with no possibility of replacement with a non-approved antenna by the end-user. Therefore, the EUT is considered to comply with this provision.

ANT	Gain (dBi)				Antenna Type
	Band 5	Band 6	Band 7	Band 8	
1	3.1	3.3	3.3	3.6	PIFA
2	3.9	3.3	3.3	2.6	PIFA
Max Peak Gain	3.9	3.3	3.3	3.6	-
Power Directional Gain	3.9	3.3	3.3	3.6	-
PSD Directional Gain	6.52	6.31	6.31	6.12	-

Note: PSD Directional Gain = $10\log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{ANT}]$

Minimum antenna gain for Contention-Based Protocol

Gain (dBi)
2.6

Refer to EUT photo for details.

5.1.2 Radiated Spurious Emissions

Limit

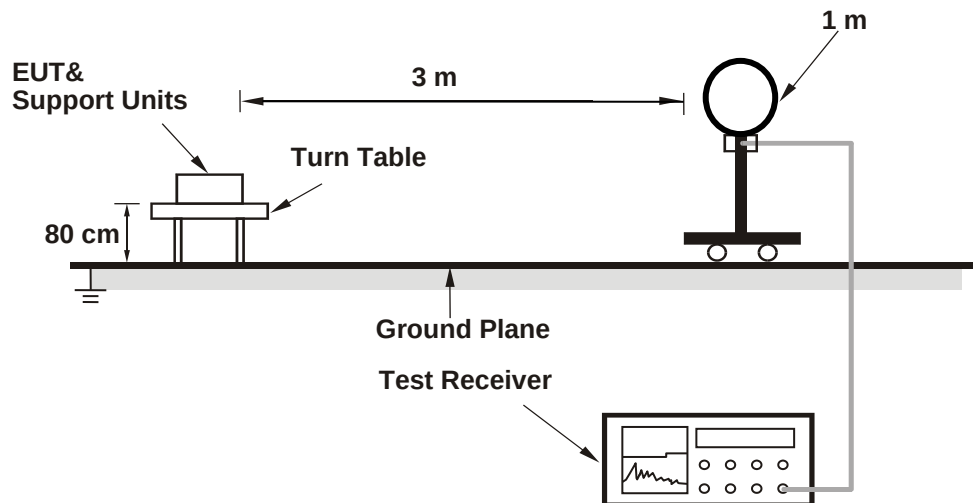
For transmitters operating within the 5.925-7.125 GHz band: Any emissions outside of the 5.925-7.125 GHz band must not exceed an e.i.r.p. of -27 dBm/MHz.

Radiated emissions which fall in the restricted bands, as defined in §15.205(a), must comply with the radiated emission limits specified in §15.209(a).

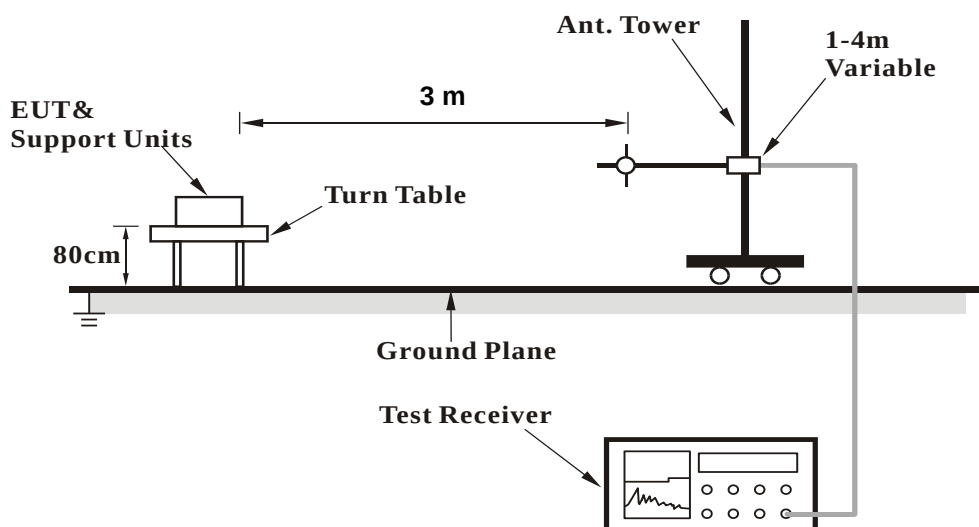
Kind of Test Site 3m Semi-Anechoic Chamber

Test Setup

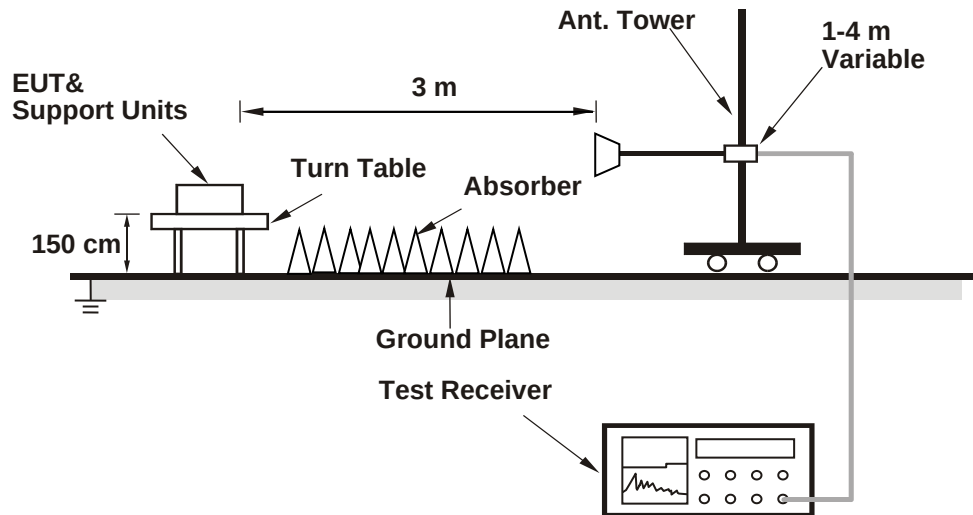
<Radiated Emissions below 30 MHz>



<Radiated Emissions 30 MHz to 1 GHz>



<Radiated Emissions above 1 GHz>



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

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Test Instruments

Test Period: 2025-04-17 ~ 2025-04-18

Kind of Equipment	Manufacturer	Type	S/N	Calibration Date	Calibration Due Date
Above 1 GHz					
Signal Analyzer	R&S	FSV40	101509	2024/4/30	2025/4/29
Horn Antenna	ETS-Lindgren	3117	00218930	2024/12/10	2025/12/9
Horn Antenna	SCHWARZBECK	BBHA 9170	00890	2024/4/30	2025/4/29
HF-AMP + AC source	EMCI	EMC051845SE	980633	2025/1/15	2026/1/14
HF-AMP + AC source	EMCI	EMC184045SE	980656	2025/1/15	2026/1/14
Test Software	Audix E3	15914a_20191106 tuv	PK-001087	N/A	N/A
30 MHz ~ 1 GHz					
Receiver	R&S	ESR7	102108	2024/7/4	2025/7/3
Bilog Antenna	SCHWARZBECK	VULB-9168	00950	2024/5/9	2025/5/8
LF-AMP	Agilent	8447D	2727A05146	2025/1/15	2026/1/14
Test Software	Audix E3	15914a_20191106 tuv	PK-001087	N/A	N/A
Below 30 MHz					
Receiver	R&S	ESR7	102108	2024/7/4	2025/7/3
Loop Antenna	SCHWARZBECK	FMZB 1519B	00215	2024/12/11	2025/12/10
Test Software	Audix E3	15914a_20191106 tuv	PK-001087	N/A	N/A

Test Procedures**For Radiated Emissions below 30 MHz**

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter chamber room. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. Parallel (OPEN), perpendicular (CLOSE), and ground-parallel (GROUND) 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 9 kHz at frequency below 30 MHz.
2. All modes of operation were investigated and the worst-case emissions are reported.

For Radiated Emissions above 30 MHz

- a. The EUT was placed on the top of a rotating table 0.8 meters (for 30 MHz ~ 1 GHz) / 1.5 meters (for above 1 GHz) 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 and average detected function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

Note:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 kHz for Quasi-peak detection (QP) or Peak detection (PK) at frequency below 1 GHz.
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 1 GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is $\geq 1/T$ (Duty cycle $< 98\%$) or 10 Hz (Duty cycle $\geq 98\%$) for Average detection (AV) at frequency above 1 GHz.
4. All modes of operation were investigated and the worst-case emissions are reported.
5. The Radiated Emissions testing was performed in the X(E1), Y(H) and Z(E2) axis orientation. The worst-case Axis orientation is recorded in this test report.
6. The emission levels of other frequencies (including the 10th harmonic of the highest fundamental frequency) are very lower than the limit and are not shown in the test report.

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Test Results

Factor (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB)

Level (dBuV/m) = Reading (dBuV) + Factor (dB/m)

Please refer to Appendix A.

5.1.3 Contention-Based Protocol

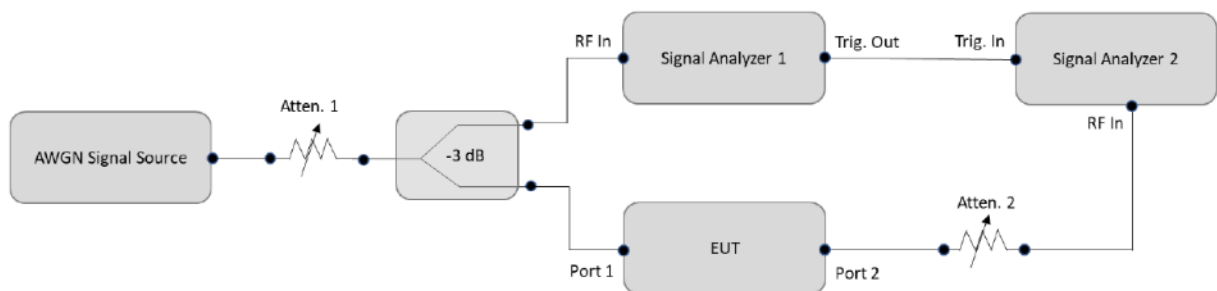
Limit

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

Additionally, low-power indoor devices must detect co-channel energy with 90% or greater certainty.

Kind of Test Site Shielded room

Test Setup



Test Instruments

Kind of Equipment	Manufacturer	Type	S/N	Calibration Date	Calibration Due Date	Test Date	
						From	Until
Spectrum Analyzer	Keysight	N9000B	MY62361339	2025/02/13	2026/02/12	2025/3/20	2025/4/6
EXG Vector Signal Generator	Keysight	N5172B	MY61253270	2024/12/24	2025/12/23	2025/3/20	2025/4/6
Frequency Extender	Keysight	N5182BX07	MY61500182	2024/12/24	2025/12/23	2025/3/20	2025/4/6

Test Procedures

1. Configure the EUT to transmit with a constant duty cycle.
2. Set the operating parameters of the EUT including power level, operating frequency, modulation and bandwidth.
3. Set the signal analyzer center frequency to the nominal EUT channel center frequency. The span range of the signal analyzer shall be between two times and five times the OBW of the EUT.
Connect the output port of the EUT to the signal analyzer 2, as shown in Test Setup. Ensure that the attenuator 2 provides enough attenuation to not overload the signal analyzer 2 receiver.
4. Monitoring the signal analyzer 2, verify the EUT is operating and transmitting with the parameters set at step 2.

5. Using an AWGN signal source, generate (but do not transmit, i.e., RF OFF) a 10 MHz-wide AWGN signal. Use Table 1 to determine the center frequency of the 10 MHz AWGN signal relative to the EUT's channel bandwidth and center frequency.

Table 1. Criteria to determine number of times detection threshold test may be performed

If	Number of Tests	Placement of Incumbent Transmission
$BW_{EUT} \leq BW_{Inc}$	Once	Tune incumbent and EUT transmissions ($f_{c1} = f_{c2}$)
$BW_{Inc} < BW_{EUT} \leq 2BW_{Inc}$	Once	Incumbent transmission is contained within BW_{EUT}
$2BW_{Inc} < BW_{EUT} \leq 4BW_{Inc}$	Twice. Incumbent transmission is contained within BW_{EUT}	Incumbent transmission is located as closely as possible to the lower edge and upper edge, respectively, of the EUT channel
$BW_{EUT} > 4BW_{Inc}$	Three times	Incumbent transmission is located as closely as possible to the lower edge of the EUT channel, in the middle of EUT channel, and as closely as possible to the upper edge of the EUT channel

where:

BW_{EUT} : Transmission bandwidth of EUT signal

BW_{Inc} : Transmission bandwidth of the simulated incumbent signal (10 MHz wide AWGN signal)

f_{c1} : Center frequency of EUT transmission

f_{c2} : Center frequency of simulated incumbent signal

6. Set the AWGN signal power to an extremely low level (more than 20 dB below the -62 dBm threshold). Connect the AWGN signal source, via a 3-dB splitter, to the signal analyzer 1 and the EUT as shown in Test Setup.
7. Transmit the AWGN signal (RF ON) and verify its characteristics on the signal analyzer 1.
8. Monitor the signal analyzer 2 to verify if the AWGN signal has been detected and the EUT has ceased transmission. If the EUT continues to transmit, then incrementally increase the AWGN signal power level until the EUT stops transmitting.
9. (Including all losses in the RF paths) Determine and record the AWGN signal power level (at the EUT's antenna port) at which the EUT ceased transmission. Repeat the procedure at least 10 times to verify the EUT can detect an AWGN signal with 90% (or better) level of certainty.
10. Refer to Table 1 to determine number of times the detection threshold testing needs to be repeated. If testing is required more than once, then go back to step 5, choose a different center frequency for the AWGN signal and repeat the process.

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Test Results

<802.11be EHT20>

Contention Based protocol Measurement									
UNII Band	Test Channel	Freq. (MHz)	Interference Frequency (MHz)	Injected AWGN Power (dBm)	Number of Times	Number of Detected	Detection Rate (%)	Limit (%)	Test Result
5	45	6175	6175	-60	10	9	90	90	Pass
6	105	6475	6475	-60	10	10	100	90	Pass
7	149	6695	6695	-60	10	10	100	90	Pass
8	209	6995	6995	-60	10	9	90	90	Pass

UNII Band	Test Channel	Freq. (MHz)	Interference Frequency (MHz)	Injected AWGN Power (dBm)	Antenna Gain (dBi)	Adjusted Power (dBm)	Detection Limit (dBm)	EUT Tx Status
5	45	6175	6175	-60	2.6	-62.6	-62	Ceased
				-74		-76.6		Minimal
				-75		-77.6		Normal
6	105	6475	6475	-60	2.6	-62.6	-62	Ceased
				-74		-76.6		Minimal
				-75		-77.6		Normal
7	149	6695	6695	-60	2.6	-62.6	-62	Ceased
				-73		-75.6		Minimal
				-74		-76.6		Normal
8	209	6995	6995	-60	2.6	-62.6	-62	Ceased
				-74		-76.6		Minimal
				-75		-77.6		Normal

Note:

- Adjusted Power = Injected AWGN Power (dBm) – Minimum Antenna Gain (dBi)
- Include calibrated path loss in Injected AWGN power

<802.11be EHT160>

Contention Based protocol Measurement									
UNII Band	Test Channel	Freq. (MHz)	Interference Frequency (MHz)	Injected AWGN Power (dBm)	Number of Times	Number of Detected	Detection Rate (%)	Limit (%)	Test Result
5	47	6185	6110	-60	10	9	90	90	Pass
			6185	-60	10	9	90	90	Pass
			6260	-60	10	9	90	90	Pass
6	111	6505	6430	-60	10	9	90	90	Pass
			6505	-60	10	9	90	90	Pass
			6580	-60	10	9	90	90	Pass
7	143	6665	6590	-60	10	9	90	90	Pass
			6665	-60	10	9	90	90	Pass
			6740	-60	10	10	100	90	Pass
8	207	6985	6910	-60	10	9	90	90	Pass
			6985	-60	10	10	100	90	Pass
			7060	-60	10	9	90	90	Pass

UNII Band	Test Channel	Freq. (MHz)	Interference Frequency (MHz)	Injected AWGN Power (dBm)	Antenna Gain (dBi)	Adjusted Power (dBm)	Detection Limit (dBm)	EUT Tx Status
5	45	6175	6110	-60	2.6	-62.6	-62	Ceased
				-74		-76.6	-62	Minimal
				-75		-77.6	-62	Normal
			6185	-60	2.6	-62.6	-62	Ceased
				-74		-76.6	-62	Minimal
				-75		-77.6	-62	Normal
			6260	-60	2.6	-62.6	-62	Ceased
				-74		-76.6	-62	Minimal
				-75		-77.6	-62	Normal
6	105	6475	6430	-60	2.6	-62.6	-62	Ceased
				-74		-76.6	-62	Minimal
				-75		-77.6	-62	Normal
			6505	-60	2.6	-62.6	-62	Ceased
				-74		-76.6	-62	Minimal
				-75		-77.6	-62	Normal
			6580	-60	2.6	-62.6	-62	Ceased
				-74		-76.6	-62	Minimal
				-75		-77.6	-62	Normal

UNII Band	Test Channel	Freq. (MHz)	Interference Frequency (MHz)	Injected AWGN Power (dBm)	Antenna Gain (dBi)	Adjusted Power (dBm)	Detection Limit (dBm)	EUT Tx Status
7	149	6695	6590	-60	2.6	-62.6	-62	Ceased
				-74		-76.6	-62	Minimal
				-75		-77.6	-62	Normal
			6665	-60	2.6	-62.6	-62	Ceased
				-74		-76.6	-62	Minimal
				-75		-77.6	-62	Normal
			6740	-60	2.6	-62.6	-62	Ceased
				-74		-76.6	-62	Minimal
				-75		-77.6	-62	Normal
8	209	6995	6910	-60	2.6	-62.6	-62	Ceased
				-74		-76.6	-62	Minimal
				-75		-77.6	-62	Normal
			6985	-60	2.6	-62.6	-62	Ceased
				-74		-76.6	-62	Minimal
				-75		-77.6	-62	Normal
			7060	-60	2.6	-62.6	-62	Ceased
				-74		-76.6	-62	Minimal
				-75		-77.6	-62	Normal

Note:

- Adjusted Power = Injected AWGN Power (dBm) – Minimum Antenna Gain (dBi)
- Include calibrated path loss in Injected AWGN power

Please refer to Appendix B for the details.

5.2 Mains Emission

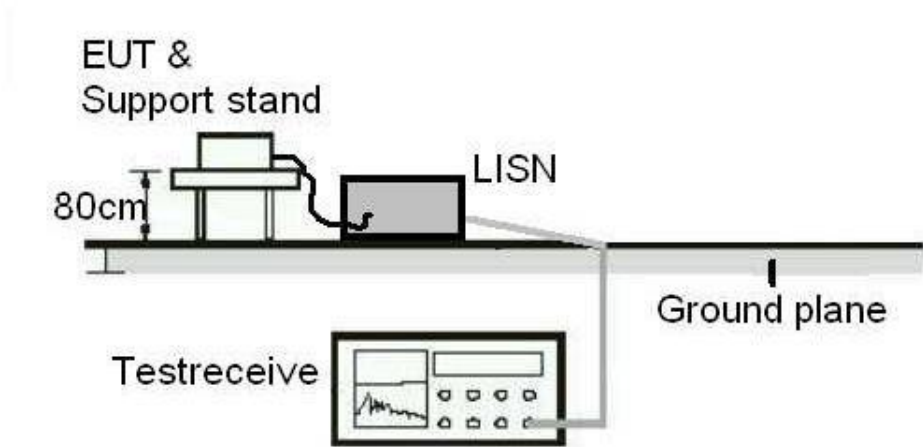
5.2.1 Mains Conducted Emission

Limit

Mains Conducted emissions as defined in §15.207 must comply with the mains conducted emission limits.

Kind of Test Site Shielded room

Test Setup



Test Instruments

Kind of Equipment	Manufacturer	Type	S/N	Calibration Date	Calibration Due Date
Two-Line V-Network	Rohde & Schwarz	ENV216	101938	2024/10/22	2025/10/21
EMI Test Receiver	R&S	ESCI	101094	2024/11/26	2025/11/25

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Test Procedures

- 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/50 uH 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 150 kHz to 30 MHz was searched. Emission levels under (Limit – 20 dB) was not recorded.

Note: The resolution bandwidth and video bandwidth of test receiver is 9 kHz for quasi-peak detection (QP) and average detection (AV) at frequency 0.15 MHz – 30 MHz.

Test Results

Please refer to Appendix A.

Appendix A: Test Results of Radiated Spurious Emissions & Mains

Conducted Emission Test

<EUT with Notebook>

Band Edges, 5.46GHz ~ 7.250GHz

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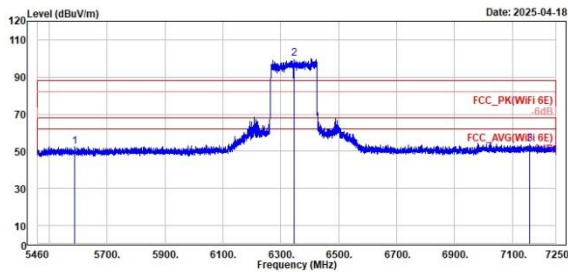
802.11be EHT160

CH79 (Horizontal) Peak

CH79 (Vertical) Peak



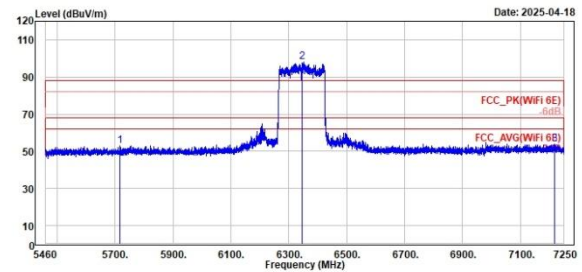
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No. 438-18, Sec. 2, Fenliiao, Linkou Dist., New Taipei City 244, Taiwan(R.O.C.)
Tel: +886-2172-1000 Fax: +886-2172-1322



	Freq	Level	Read	Level	Factor	Limit	Over	Apos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg				
1	5588.70	52.56	59.33	-6.77	88.20	-35.64	100	228	Peak	Horizontal		
2 *	6345.00	99.74	105.58	-5.84	88.20	11.54	100	228	Peak	Horizontal		
3	7161.04	53.75	58.97	-5.22	88.20	-34.45	100	228	Peak	Horizontal		



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	Freq	Level	Read	Level	Factor	Limit	Over	Apos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg				
1	5715.97	53.06	59.71	-6.65	88.20	-35.14	100	102	Peak	Vertical		
2 *	6345.00	98.05	103.89	-5.84	88.20	9.85	100	102	Peak	Vertical		
3	7219.57	53.75	58.89	-5.14	88.20	-34.45	100	102	Peak	Vertical		

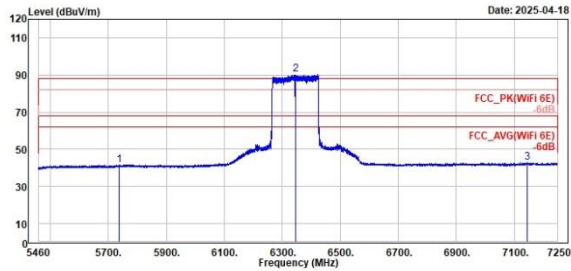
802.11be EHT160

CH79 (Horizontal) RMS

CH79 (Vertical) RMS



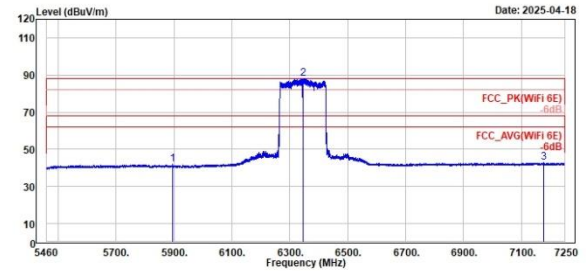
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Freq	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg				
1	5736.73	41.74	48.23	-6.49	68.20	-26.46	100	228 RMS	Horizontal		
2 *	6345.00	90.18	96.02	-5.84	68.20	21.98	100	228 RMS	Horizontal		
3	7144.39	42.83	48.06	-5.23	68.20	-25.37	100	228 RMS	Horizontal		



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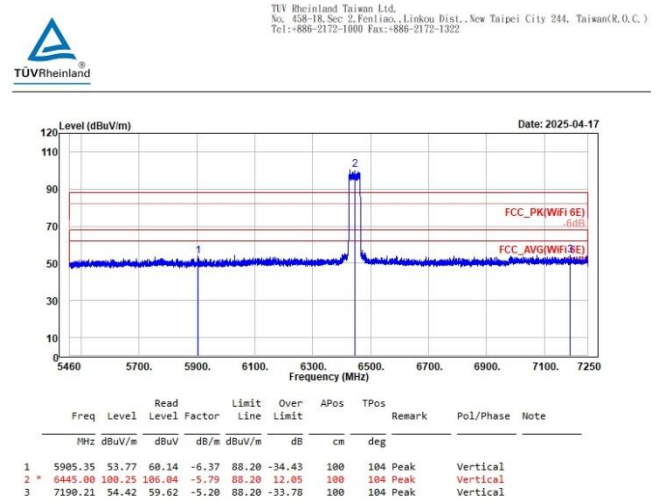
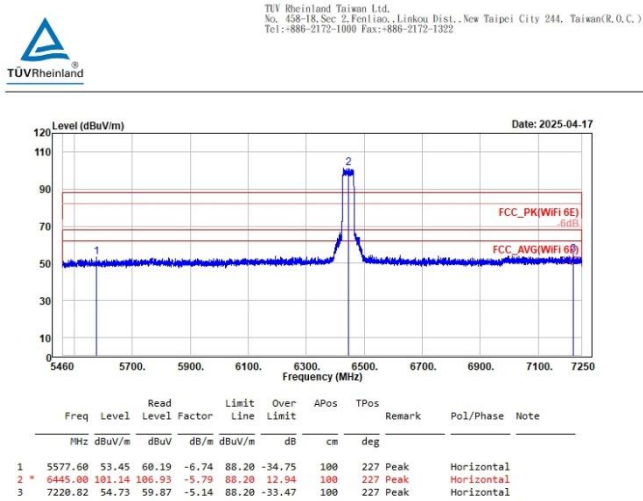
Freq	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg				
1	5894.25	41.94	48.33	-6.39	68.20	-26.26	100	102 RMS	Vertical		
2 *	6345.00	87.95	93.79	-5.84	68.20	19.75	100	102 RMS	Vertical		
3	7177.68	42.69	47.89	-5.20	68.20	-25.51	100	102 RMS	Vertical		

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802.11be EHT40

CH99 (Horizontal) Peak

CH99 (Vertical) Peak



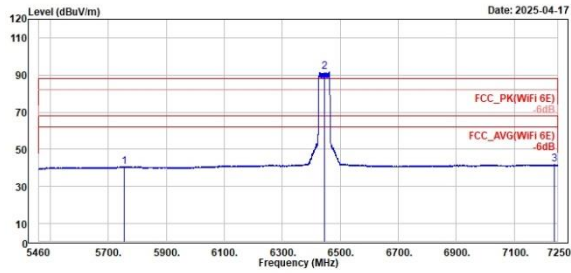
802.11be EHT40

CH99 (Horizontal) RMS

CH99 (Vertical) RMS



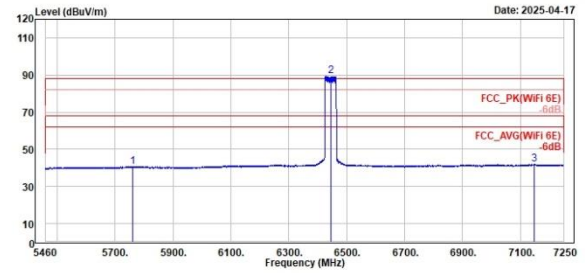
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Freq	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg				
1	5755.53	40.72	47.11	-6.39	68.20	-27.48	100	227 RMS	Horizontal		
2 *	6445.00	91.85	97.64	-5.79	68.20	23.65	100	227 RMS	Horizontal		
3	7238.90	41.77	46.86	-5.09	68.20	-26.43	100	227 RMS	Horizontal		



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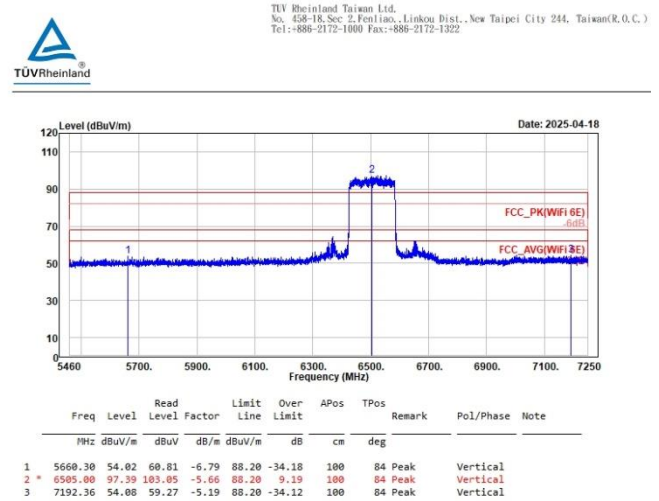
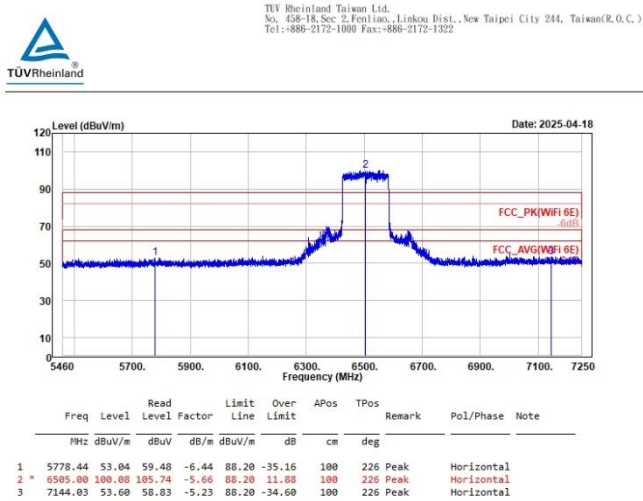
Freq	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg				
1	5759.83	40.77	47.17	-6.40	68.20	-27.43	100	104 RMS	Vertical		
2 *	6445.00	89.36	95.15	-5.79	68.20	21.16	100	104 RMS	Vertical		
3	7148.87	41.79	47.01	-5.22	68.20	-26.41	100	104 RMS	Vertical		

U-NII 6&7

802.11be EHT160

CH111 (Horizontal) Peak

CH111 (Vertical) Peak



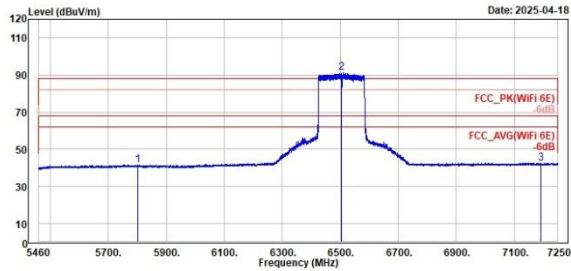
802.11be EHT160

CH111 (Horizontal) RMS

CH111 (Vertical) RMS



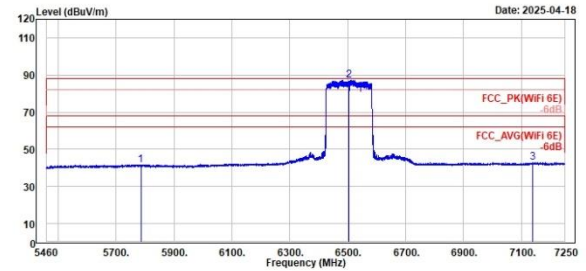
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Tel: +886-2172-1000 Fax: +886-2172-1322



Freq	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg				
1	5880.82	41.54	48.02	-6.48	68.20	-26.66	100	226 RMS	Horizontal		
2 *	6505.00	91.06	96.72	-5.66	68.20	22.86	100	226 RMS	Horizontal		
3	7192.90	42.66	47.85	-5.19	68.20	-25.54	100	226 RMS	Horizontal		



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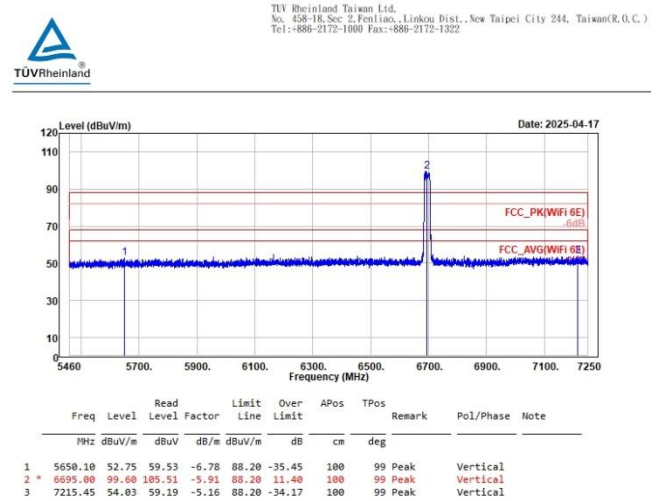
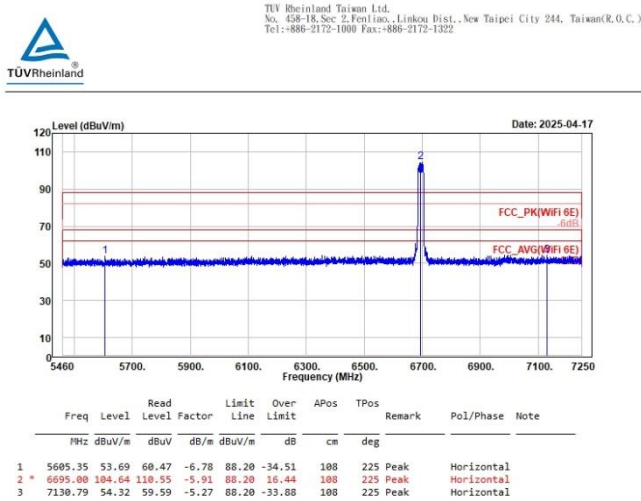
Freq	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg				
1	5785.78	41.65	48.10	-6.45	68.20	-26.55	100	84 RMS	Vertical		
2 *	6505.00	87.28	92.94	-5.66	68.20	19.08	100	84 RMS	Vertical		
3	7140.81	42.94	48.18	-5.24	68.20	-25.26	100	84 RMS	Vertical		

U-NII 7

802.11be EHT20

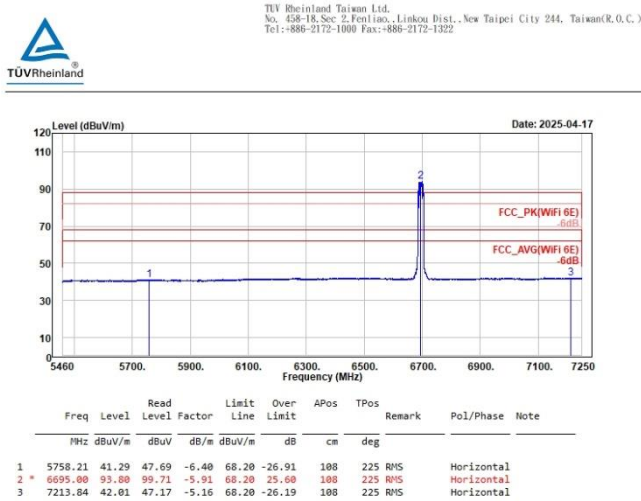
CH149 (Horizontal) Peak

CH149 (Vertical) Peak

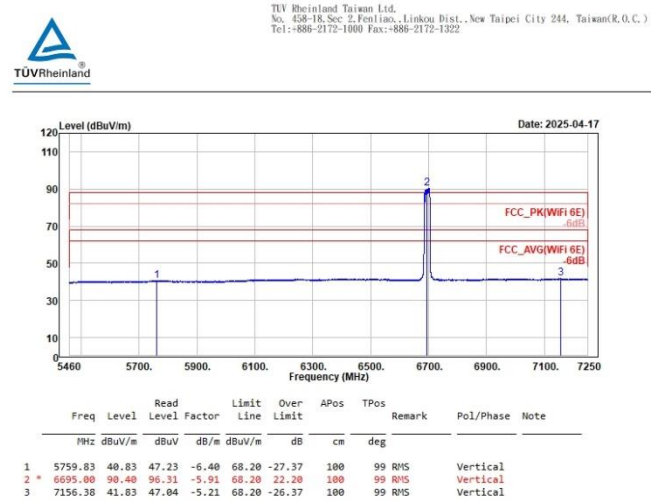


802.11be EHT20

CH149 (Horizontal) RMS



CH149 (Vertical) RMS

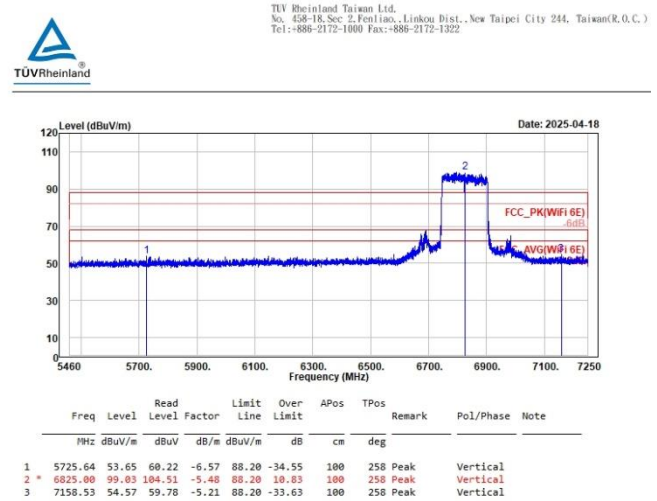
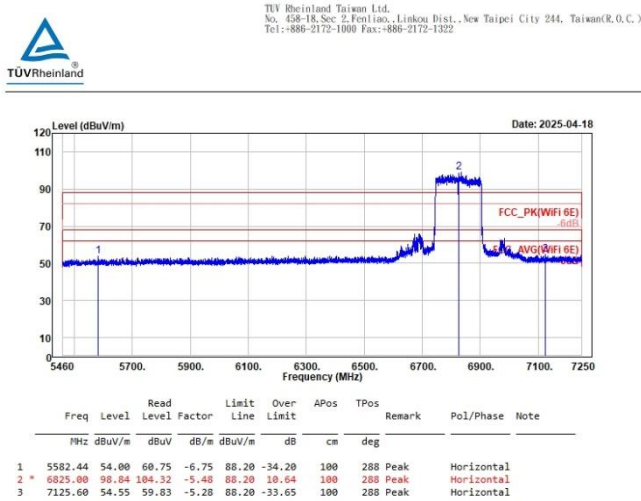


U-NII 7&8

802.11be EHT160

CH175 (Horizontal) Peak

CH175 (Vertical) Peak



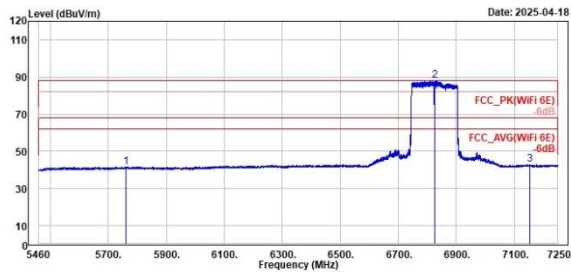
802.11be EHT160

CH175 (Horizontal) RMS

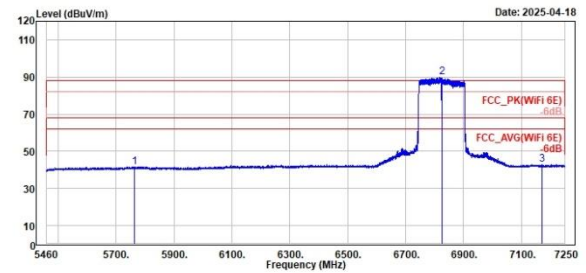
CH175 (Vertical) RMS



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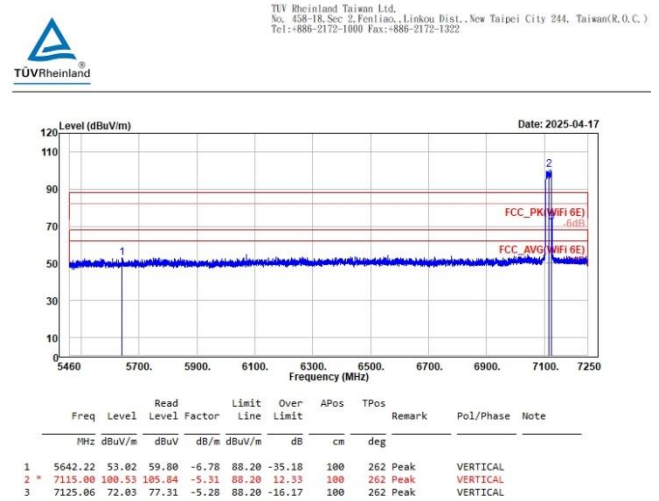
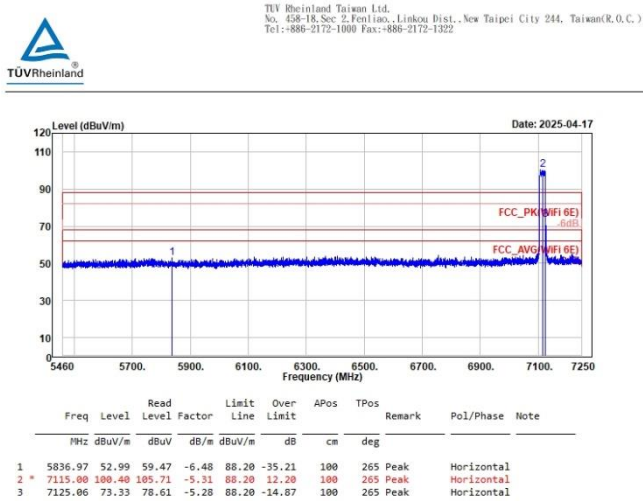


U-NII 8

802.11be EHT20

CH233 (Horizontal) Peak

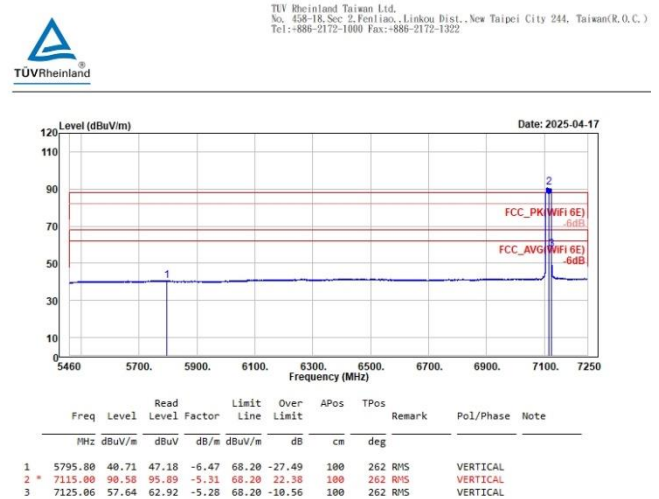
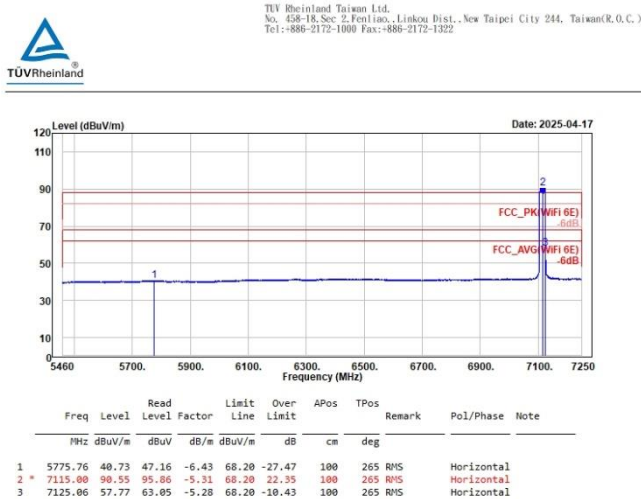
CH233 (Vertical) Peak



802.11be EHT20

CH233 (Horizontal) RMS

CH233 (Vertical) RMS



Spurious Emissions, Tx Mode, 9kHz ~ 30MHz

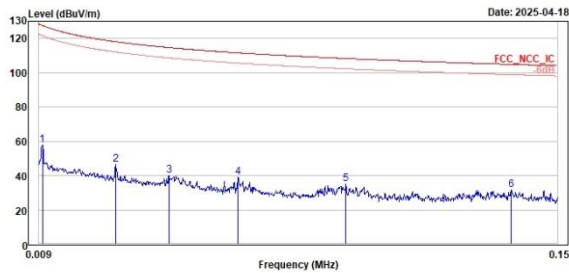
802.11be EHT80

CH119 9kHz~150kHz(Open)

CH119 150kHz~30MHz(Open)



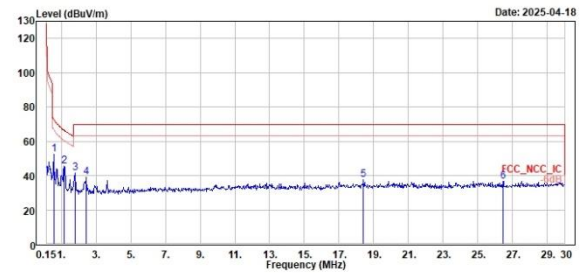
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Freq	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg				
1	0.01	58.00	39.89	18.11	127.60	-69.60	100	273	Peak	Open	
2	0.03	46.37	26.37	20.00	118.09	-71.72	100	171	Peak	Open	
3	0.04	39.89	20.88	19.01	114.65	-74.76	100	185	Peak	Open	
4	0.06	38.99	20.88	18.11	111.59	-72.60	100	237	Peak	Open	
5	0.09	35.25	17.23	18.02	108.28	-73.03	100	218	Peak	Open	
6	0.14	31.62	13.37	18.25	104.04	-73.22	100	270	Peak	Open	



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Freq	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg				
1	0.57	52.26	33.50	18.76	72.52	-20.26	100	248	Peak	Open	
2	1.16	45.26	26.46	18.80	66.28	-21.02	100	248	Peak	Open	
3	1.02	41.56	22.73	18.83	69.50	-27.94	100	255	Peak	Open	
4	2.45	38.89	19.99	18.90	69.50	-30.61	100	254	Peak	Open	
5	18.42	37.34	14.66	22.68	69.50	-32.16	100	347	Peak	Open	
6	26.45	36.69	13.78	22.91	69.50	-32.81	100	158	Peak	Open	

Spurious Emissions, Tx Mode, 30MHz ~ 1GHz

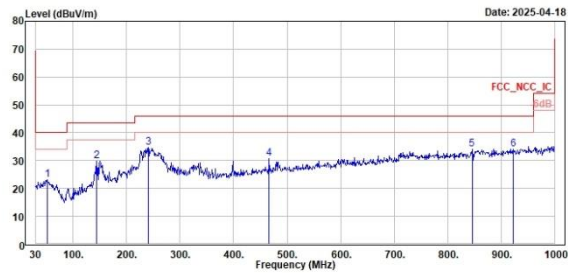
802.11be EHT80

CH119 (Horizontal)

CH119 (Vertical)



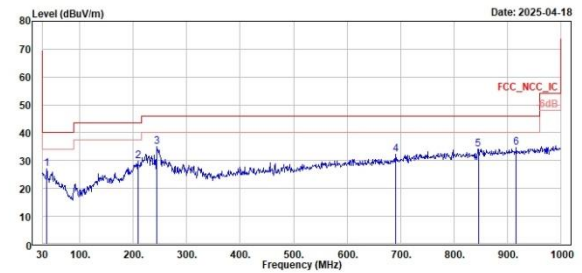
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	Freq	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	dB	cm	deg			
1	51.34	23.16	28.84	-5.68	40.00	-16.84	200	260	Peak	Horizontal		
2	143.49	29.83	36.24	-6.41	43.50	-13.67	200	338	Peak	Horizontal		
3	240.49	34.53	41.30	-6.77	46.00	-11.47	100	95	Peak	Horizontal		
4	466.50	30.83	32.97	-2.14	46.00	-15.17	100	158	Peak	Horizontal		
5	845.77	34.17	30.08	4.09	46.00	-11.83	200	301	Peak	Horizontal		
6	923.37	33.96	28.80	5.16	46.00	-12.04	200	342	Peak	Horizontal		



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	Freq	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	dB	cm	deg			
1	37.76	27.20	34.19	-6.99	40.00	-12.80	100	360	Peak	Vertical		
2	200.48	29.73	38.05	-8.32	43.50	-13.77	100	205	Peak	Vertical		
3	244.37	35.05	41.75	-6.70	46.00	-10.95	200	176	Peak	Vertical		
4	690.57	32.10	30.00	2.10	46.00	-13.90	175	360	Peak	Vertical		
5	845.77	34.17	30.08	4.09	46.00	-11.83	100	153	Peak	Vertical		
6	916.50	34.58	29.37	5.21	46.00	-11.42	200	77	Peak	Vertical		

Spurious Emissions, Tx Mode, 1GHz ~ 40GHz **U-NII 5**

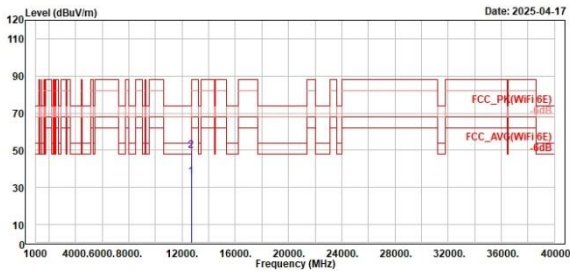
802.11be EHT160

CH79 (Horizontal)

CH79 (Vertical)



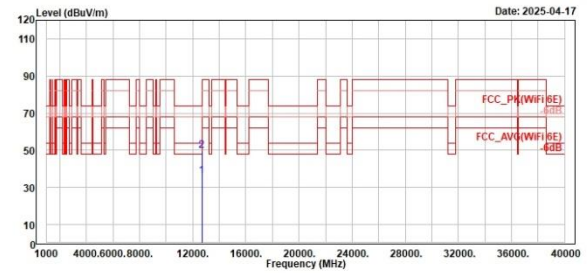
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	Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	12690.00	35.70	34.47	1.23	54.00	-18.30	100	342 Average	Horizontal	
2	12690.00	49.74	48.51	1.23	74.00	-24.26	100	342 Peak	Horizontal	



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	Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	12690.00	35.82	34.59	1.23	54.00	-18.18	200	76 Average	Vertical	
2	12690.00	49.64	48.41	1.23	74.00	-24.36	200	76 Peak	Vertical	

U-NII 6

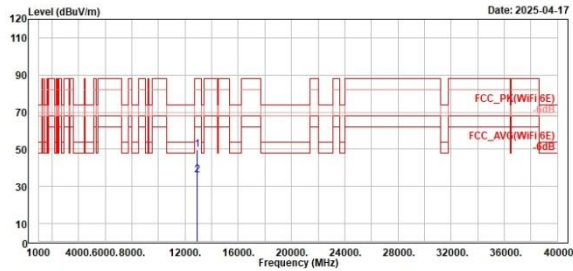
802.11be40 EHT

CH99 (Horizontal)

CH99 (Vertical)



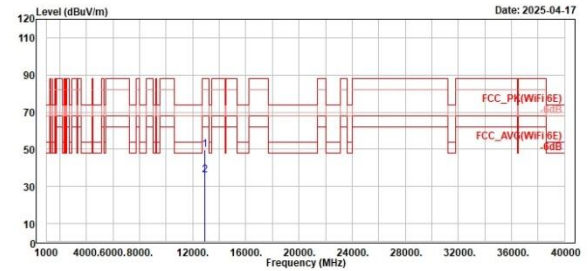
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	Freq	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	dB	cm	deg			
1	12890.00	49.81	48.40	1.41	88.20	-38.39	100	261	Peak	Horizontal		
2	12890.00	36.00	34.59	1.41	68.20	-32.20	100	261	RMS	Horizontal		



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	Freq	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	dB	cm	deg			
1	12890.00	49.75	48.34	1.41	88.20	-38.45	100	105	Peak	Vertical		
2	12890.00	35.98	34.57	1.41	68.20	-32.22	100	105	RMS	Vertical		

U-NII 6&7

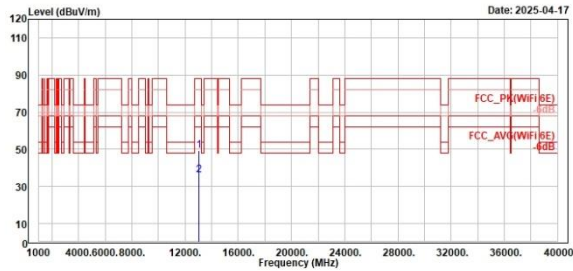
802.11be EHT160

CH111 (Horizontal)

CH111 (Vertical)



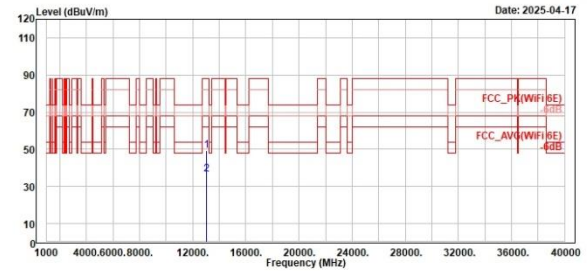
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Freq	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg				
1	13010.00	49.44	48.15	1.29	88.20	-38.76	113	360	Peak	Horizontal	
2	13010.00	36.13	34.64	1.29	68.20	-32.07	113	360	RMS	Horizontal	



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Freq	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg				
1	13010.00	49.26	47.97	1.29	88.20	-38.94	200	69	Peak	Vertical	
2	13010.00	36.44	35.15	1.29	68.20	-31.76	200	69	RMS	Vertical	