

<b>Prüfbericht-Nr.:</b> <i>Test report no.:</i>	<b>CN23T4C2 004</b>	<b>Auftrags-Nr.:</b> <i>Order no.:</i>	<b>168421836</b>	Seite 1 von 17 Page 1 of 17
<b>Kunden-Referenz-Nr.:</b> <i>Client reference no.:</i>	N/A	<b>Auftragsdatum:</b> <i>Order date:</i>	2023-03-21	
<b>Auftraggeber:</b> <i>Client:</i>	<b>Lenovo (Beijing) Limited</b> 201-H2-6, Floor 2, Building 2, No.6 Shangdi West Road, Haidian District, 100085 Beijing, P. R. China			
<b>Prüfgegenstand:</b> <i>Test item:</i>	ThinkBook Wireless Dock			
<b>Bezeichnung / Typ-Nr.:</b> <i>Identification / Type no.:</i>	L01WC014-CS-H			
<b>Auftrags-Inhalt:</b> <i>Order content:</i>	Test Report			
<b>Prüfgrundlage:</b> <i>Test specification:</i>	CFR47 FCC Part 15: Subpart C Section 15.207 CFR47 FCC Part 15: Subpart C Section 15.209 CFR47 FCC Part 15: Subpart C Section 15.215			
<b>Wareneingangsdatum:</b> <i>Date of sample receipt:</i>	2023-03-21	Please refer to Photo Document		
<b>Prüfmuster-Nr.:</b> <i>Test sample no.:</i>	A003448177-001			
<b>Prüfzeitraum:</b> <i>Testing period:</i>	2023-03-27 - 2023-04-17			
<b>Ort der Prüfung:</b> <i>Place of testing:</i>	TÜV Rheinland (Shenzhen) Co., Ltd.			
<b>Prüflaboratorium:</b> <i>Testing laboratory:</i>	TÜV Rheinland (Shenzhen) Co., Ltd.			
<b>Prüfergebnis*:</b> <i>Test result*:</i>	Pass			
<b>geprüft von:</b> <i>tested by:</i>	 <b>Hardy Suo</b>		<b>genehmigt von:</b> <i>authorized by:</i>	 <b>Lin Lin</b>
<b>Datum:</b> <i>Date:</i>	2023-07-18		<b>Ausstellungsdatum:</b> <i>Issue date:</i>	2023-07-18
<b>Stellung / Position:</b>	Sachverständige(r)/Expert		<b>Stellung / Position:</b>	Sachverständige(r)/Expert
<b>Sonstiges /</b> <i>Other:</i>	FCC ID: A5ML01WC014			
<b>Zustand des Prüfgegenstandes bei Anlieferung:</b> <i>Condition of the test item at delivery:</i>	Prüfmuster vollständig und unbeschädigt <i>Test item complete and undamaged</i>			
* Legende:	P(ass) = entspricht o.g. Prüfgrundlage(n)	F(ail) = entspricht nicht o.g. Prüfgrundlage(n)	N/A = nicht anwendbar	N/T = nicht getestet
* Legend:	P(ass) = passed a.m. test specification(s)	F(ail) = failed a.m. test specification(s)	N/A = not applicable	N/T = not tested
<b>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.</b> <i>This test report only relates to the above mentioned 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>				

v05

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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. 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>
2	<p>Wie vertraglich vereinbart, wurde dieses Dokument nur digital unterzeichnet. Der TÜV Rheinland hat nicht überprüft, welche rechtlichen oder sonstigen diesbezüglichen Anforderungen für dieses Dokument gelten. Diese Überprüfung liegt in der Verantwortung des Benutzers dieses Dokuments. Auf Verlangen des Kunden kann der TÜV Rheinland die Gültigkeit der digitalen Signatur durch ein gesondertes Dokument bestätigen. Diese Anfrage ist an unseren Vertrieb zu richten. Eine Umweltgebühr für einen solchen zusätzlichen Service wird erhoben.</p> <p><i>As contractually agreed, this document has been signed digitally only. TÜV Rheinland has not verified and unable to verify which legal or other pertaining requirements are applicable for this document. Such verification is within the responsibility of the user of this document. Upon request by its client, TÜV Rheinland can confirm the validity of the digital signature by a separate document. Such request shall be addressed to our Sales department. An environmental fee for such additional service will be charged.</i></p>
3	<p>Prüfklausel mit der Note * wurden an qualifizierte Unterauftragnehmer vergeben und sind unter der jeweiligen Prüfklausel des Berichts beschrieben. 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> <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 115:2021, 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 115:2021, 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>

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## **Test Summary**

**5.1.1 ANTENNA REQUIREMENT**

*RESULT: Pass*

**5.1.2 99% BANDWIDTH**

*RESULT: Pass*

**5.1.3 20dB BANDWIDTH**

*RESULT: Pass*

**5.1.4 CONDUCTED EMISSION ON AC MAINS**

*RESULT: Pass*

**5.1.5 RADIATED SPURIOUS EMISSION**

*RESULT: Pass*

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# 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 Results of WPT

Appendix B: Photographs of the Test Set-up

## 2 Test Sites

### 2.1 Test Facilities

**TÜV Rheinland (Shenzhen) Co., Ltd.**

No.362, Huanguan Middle Road, Songyuansha Community, Guanhu Subdistrict, Longhua District, Shenzhen 518110, Guangdong, China

FCC Registration No.: 694916

ISED Wireless Device Testing Laboratory: 25069

### 2.2 List of Test and Measurement Instruments

**Table 1: List of Test and Measurement Equipment**

<b>Radio Spectrum Testing (TS8997)</b>				
<b>Equipment</b>	<b>Manufacturer</b>	<b>Model</b>	<b>Serial No.</b>	<b>Cal. until</b>
Signal Analyzer	R&S	FSV 40	101441	2023-08-01
OSP	R&S	OSP 150	101017	2023-11-21
Control PC	DELL	OptiPlex 7050	FTJZ9P2	N/A
Test Software	R&S	WMS32 (V11.00.00)	N/A	N/A
Power Meter	R&S	NRP2	107105	2023-11-21
Wideband Power Sensor	R&S	NRP-Z81	105677	2023-08-01
Shielding Room 8#	Albatross	SR8	APC17151-SR8	2024-06-22
<b>Unwanted Emission Testing (TS9975)</b>				
<b>Equipment</b>	<b>Manufacturer</b>	<b>Model</b>	<b>Serial No.</b>	<b>Cal. until</b>
EMI Test Receiver	R&S	ESR 7	102021	2023-08-02
Signal Analyzer	R&S	FSV 40	101439	2023-08-01
System Controller Interface	R&S	SCI-100	S10010038	N/A
Filterbank	R&S	Wlan	100759	2023-08-01
OSP	R&S	OSP 120	102040	N/A
Pre-amplifier	R&S	SCU08F1	08320031	2023-08-02
Amplifier	R&S	SCU-18F	180070	2023-08-02
Amplifier	R&S	SCU40A	100475	2023-08-02
Trilog Broadband Antenna (30 MHz - 7 GHz)	Schwarzbeck	VULB 9162	193	2024-08-06
Double-Ridged Antenna (1 -18 GHz)	ETS-LINDGREN	3117	00218717	2024-08-06
Wideband Ridged Horn Antenna (18-40 GHz)	Steatite	QMS-00880	19067	2024-08-27
Active Loop Antenna	Schwarzbeck	FMZB 1513	302	2023-08-06
Test software	R&S	EMC32 (V10.60.10)	N/A	N/A
Control PC	Dell	OptiPlex 7050	36NV9P2	N/A
3m Semi-Anechoic Chamber	Albatross	SAC-3m	APC17151-SAC	2024-06-22
<b>Conducted Emission</b>				
<b>Equipment</b>	<b>Manufacturer</b>	<b>Model No.</b>	<b>Serial No.</b>	<b>Cal. Until</b>

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EMI Test Receiver	R&S	ESR3	102428	2023-07-31
Artificial Mains Network	R&S	ENV216	102333	2023-08-01
EMC32 test software	R&S	EMC32(Ver.10.50.00)	N/A	N/A

## 2.3 Traceability

All measurement equipment calibrations are traceable to NIM (National Institute of Metrology) or where calibration is performed in other countries, to equivalent nationally recognized standards organizations.

## 2.4 Calibration

Equipment requiring calibration is calibrated periodically by the manufacturer or according to manufacturer's specifications. Additionally all equipment is verified for proper performance on a regular basis using in house standards or comparisons.

## 2.5 Measurement Uncertainty

The estimated combined standard uncertainty for radiated emissions and conducted emissions measurements as below table

**Table 2: Measurement Uncertainty**

Parameter	Uncertainty (k=2)
Occupied Channel Bandwidth	± 2.08 %
All emissions, radiated	± 4.17 dB

## 2.6 Location of Original Data

The original copies of all test data taken during actual testing were attached at Appendix A & B of this report and delivered to the applicant. A copy has been retained in the TÜV Rheinland (Shenzhen) Co., Ltd. file for certification follow-up purposes.

## 2.7 Status of Facility Used for Testing

The TÜV Rheinland (Shenzhen) Co., Ltd. Test facility located at No.362, Huanguan Middle Road, Songyuansha Community, Guanhu Subdistrict, Longhua District, Shenzhen 518110, Guangdong, China is listed on the US Federal Communications Commission list of facilities approved to perform measurements.

## 3 General Product Information

### 3.1 Product Function and Intended Use

The EUT is a ThinkBook Wireless Dock which supports 2.4GHz Wi-Fi, 5GHz Wi-Fi and wireless charging (WPT) functions.

For details refer to the User Manual, Technical Description and Circuit Diagram.

### 3.2 Ratings and System Details

Table 3: Technical Specification of EUT

General Information of EUT	Value
Kind of Equipment:	ThinkBook Wireless Dock
Type Designation:	L01WC014-CS-H
FCC ID:	A5ML01WC014
Operating Voltage:	DC 20V@6.75A input via AC Adapter
Testing Voltage:	AC 120V, 60Hz
Operating Temperature Range:	0 °C ~ 40 °C
Technical Specification of WPT	
Frequency Range:	110~205KHz
Type of Modulation:	FSK
Antenna Type:	Coil antenna
Wireless output power:	10W
Antenna Gain:	0dBi (provided by client)

### 3.3 Independent Operation Modes

The basic operation modes are:

- A. On, Wireless charging
- B. Off

### 3.4 Noise Generating and Noise Suppressing Parts

Refer to Circuit Diagram for further details.



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### **3.5 Submitted Documents**

- Application Form
- Operation Description
- User Manual
- Rating Label

## 4 Test Set-up and Operation Modes

### 4.1 Principle of Configuration Selection

**Emission:** The equipment under test (EUT) was configured to measure its highest possible radiation level. The test modes were adapted accordingly in reference to the instructions for use.

**Radio Spectrum:** The equipment under test (EUT) was configured at its highest power output in order to measure its highest possible radiation and conducted level. The test modes were adapted accordingly in reference to the instructions for use.

### 4.2 Test Operation and Test Software

Test operation refers to test setup in chapter 5 & 6. All testing were performed according to the procedures in ANSI C63.10: 2013.

According to clause 3.1, all tests were performed on model L01WC014-CS-H in this report.

### 4.3 Special Accessories and Auxiliary Equipment

**Table 4: List of Accessories and Auxiliary Equipment**

Description	Manufacturer	Model	S/N	Rating
Laptop	Lenovo	T480	PF-16A6N8	N/A
Portable Laptop	Lenovo	ThinkPad T480	10Q67059	N/A
HDMI Display	PHILIPS	272P7V	N/A	AC 100-240V
USB-C Display	Lenovo	A19238QP1	V307KY40	AC 100-240V
USB Disk	Kingston	DTX/32G	N/A	N/A
Intelligent wireless charging full function test module	N/A	YBZ	N/A	5W, 7.5W, 10W, 15W
AC/DC Adapter	Lenovo	ADL135SLC3A	N/A	Input: 100-240V~2.5A, 50/60Hz Output: 20V, 6.75A, 135.0W

### 4.4 Countermeasures to Achieve EMC Compliance

The test sample which has been tested contained the noise suppression parts as described in the Technical Construction File (TCF).

No additional measures were employed to achieve compliance.

## 4.5 Test Setup Diagram

Diagram of Measurement Configuration for Radiation Test (Below 30MHz)

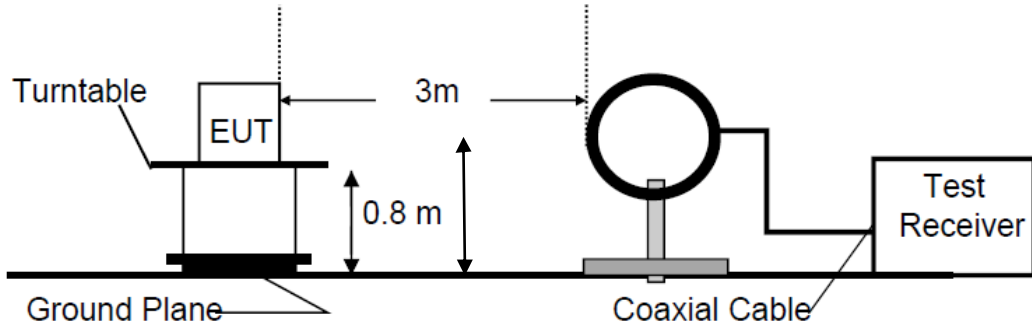


Diagram of Measurement Configuration for Radiation Test (Below 1GHz)

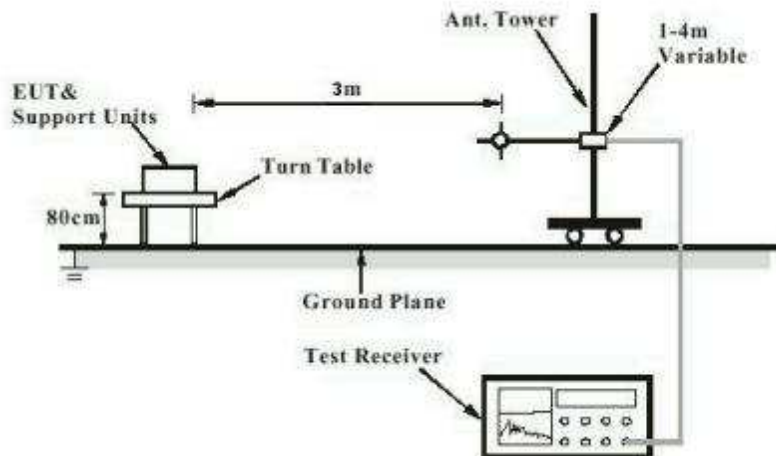
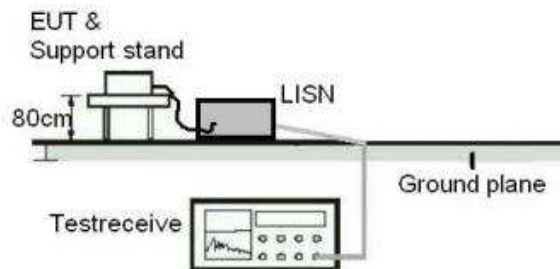


Diagram of Measurement Configuration for Mains Conduction Measurement



## 5 Test Results

### 5.1 Transmitter Requirement & Test Suites

#### 5.1.1 Antenna Requirement

**RESULT:****Pass****Test Specification**

Test standard : Part 15.203

According to the manufacturer declared, the EUT has one internal antenna, and the antenna is permanent attachment and no consideration of replacement. Therefore the EUT is considered sufficient to comply with the provision.

Refer to EUT Photo for further details.

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### 5.1.2 99% Bandwidth

**RESULT:****Pass****Test Specification**

Basic standard : ANSI C63.10: 2013  
Kind of test site : Shielded Room

**Test Setup**

Date of testing : 2023-04-17  
Input voltage : AC 120V, 60Hz  
Operation mode : A  
Ambient temperature : 22 °C  
Relative humidity : 55 %  
Atmospheric pressure : 101 kPa

For the measurement records, refer to the appendix A.

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### 5.1.3 20dB Bandwidth

**RESULT:****Pass****Test Specification**

Test standard : FCC Part 15.215(c)  
Basic standard : ANSI C63.10: 2013  
Kind of test site : Shielded Room

**Test Setup**

Date of testing : 2023-04-17  
Input voltage : AC 120V, 60Hz  
Operation mode : A  
Ambient temperature : 22 °C  
Relative humidity : 55 %  
Atmospheric pressure : 101 kPa

For the measurement records, refer to the appendix A.

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### 5.1.4 Conducted Emission on AC Mains

**RESULT:****Pass****Test Specification**

Test standard	:	FCC Part 15.207
Basic standard	:	ANSI C63.4:2014
Frequency range	:	0.15 – 30MHz
Classification	:	Class B
Limits	:	FCC Part 15.107(a)
Kind of test site	:	Shielded Room

**Test Setup**

Date of testing	:	2023-03-27
Input voltage	:	AC 120V, 60Hz
Operation mode	:	A
Earthing	:	Connected
Ambient temperature	:	23.0 °C
Relative humidity	:	50.8 %
Atmospheric pressure	:	101 kPa

For the measurement records, refer to the appendix A.

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### 5.1.5 Radiated Spurious Emission

**RESULT:****Pass****Test Specification**

Test standard : FCC Part 15.209 & 15.205  
Basic standard : ANSI C63.10: 2013  
Limits : Refer to 15.209(a)  
Kind of test site : 3m Semi-anechoic Chamber

**Test Setup**

Date of testing : 2023-04-14 to 2023-04-17  
Input voltage : AC 120V, 60Hz  
Operation mode : A  
Ambient temperature : 22 °C  
Relative humidity : 55 %  
Atmospheric pressure : 101 kPa

For the measurement records, refer to the appendix A.



## 6 Photographs of the Test Set-Up

For photographs of the test set-up, refer to the appendix B.

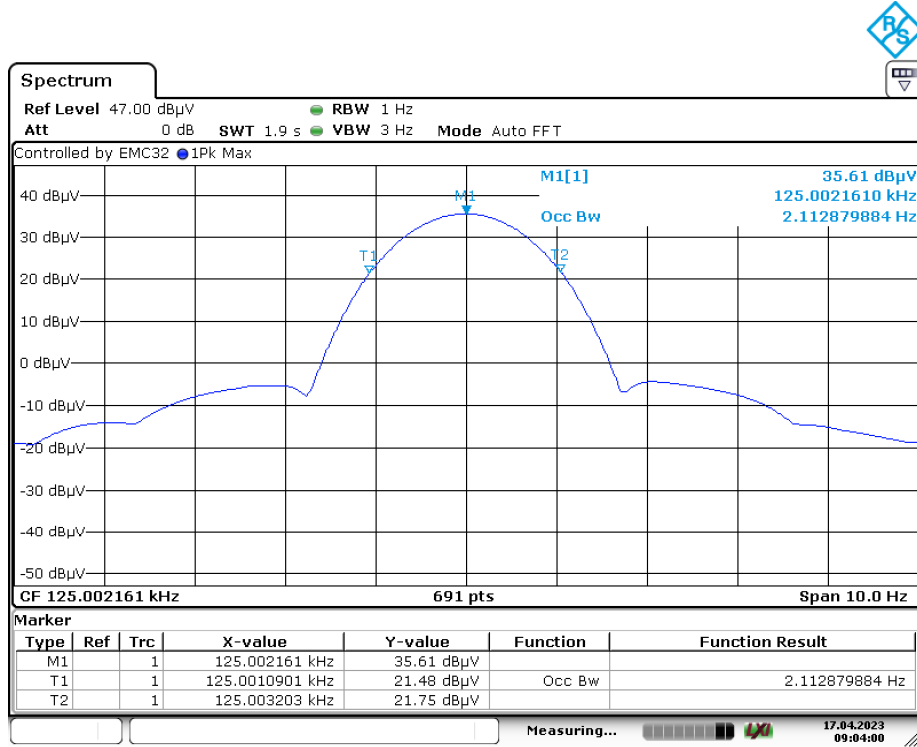
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## Appendix A: Test Results of WPT

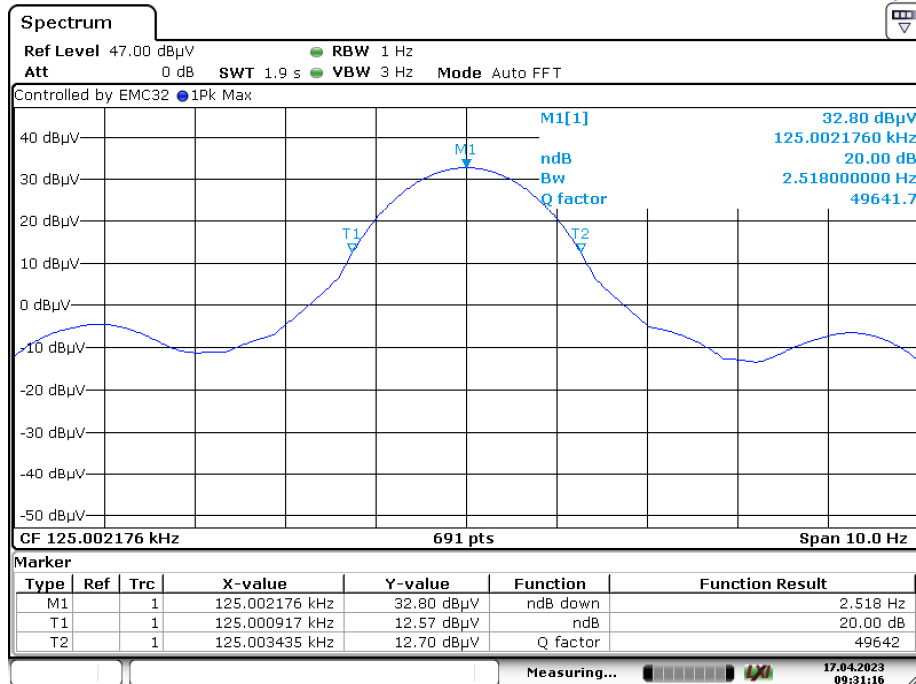
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### Appendix A.1: Test Results of 99% Bandwidth



Date: 17.APR.2023 09:04:00

### Appendix A.2: Test Results of 20dB Bandwidth



Date: 17.APR.2023 09:31:16

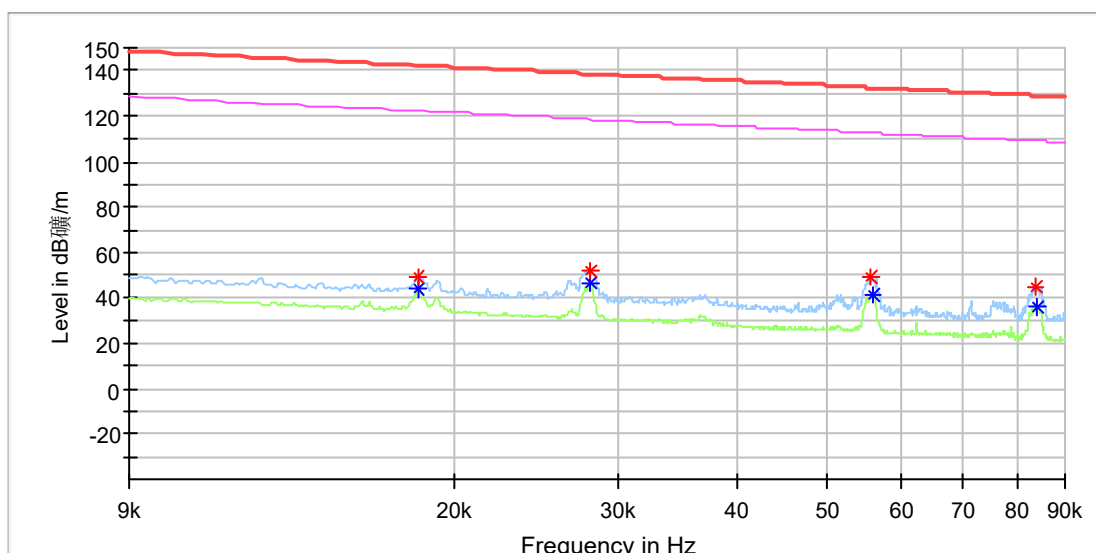
### Appendix A.3: Test Results of Radiated Spurious Emission

Note: The highest waveform in the figure is Fundamental.

9kHz - 90kHz

#### EUT Information

EUT Name:	ThinkBook Wireless Dock
Model:	L01WC014-CS-H
Test Mode:	Charging
Order No/Sample No:	168421836/A003448177-001
Test Voltage:	120V/60Hz
Remark:	Temp 22 Humi:55%
Test Standard:	FCC Part 15C
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

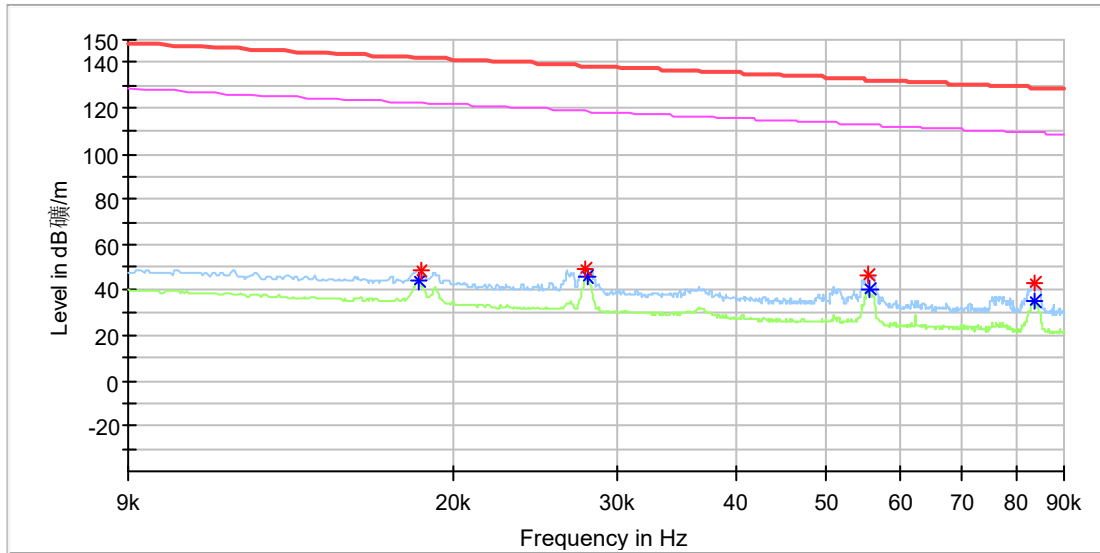


#### Critical Freqs

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
0.018315	49.11	---	142.33	93.22	100.0	X	25.0	20.0
0.018315	---	44.19	122.33	78.14	100.0	X	25.0	20.0
0.027919	---	46.40	118.67	72.27	100.0	X	325.0	20.0
0.028035	51.69	---	138.64	86.95	100.0	X	313.0	20.0
0.055806	48.84	---	132.66	83.82	100.0	X	325.0	20.0
0.056096	---	41.26	112.62	71.36	100.0	X	313.0	20.0
0.083751	44.89	---	129.14	84.25	100.0	X	318.0	20.0
0.083809	---	36.39	109.13	72.74	100.0	X	318.0	20.0

### EUT Information

EUT Name: ThinkBook Wireless Dock  
 Model: L01WC014-CS-H  
 Test Mode: Charging  
 Order No/Sample No: 168421836/A003448177-001  
 Test Voltage: 120V/60Hz  
 Remark: Temp 22 Humi:55%  
 Test Standard: FCC Part 15C  
 Tested By: Kei Zhang  
 Reviewed By: Terry Yin

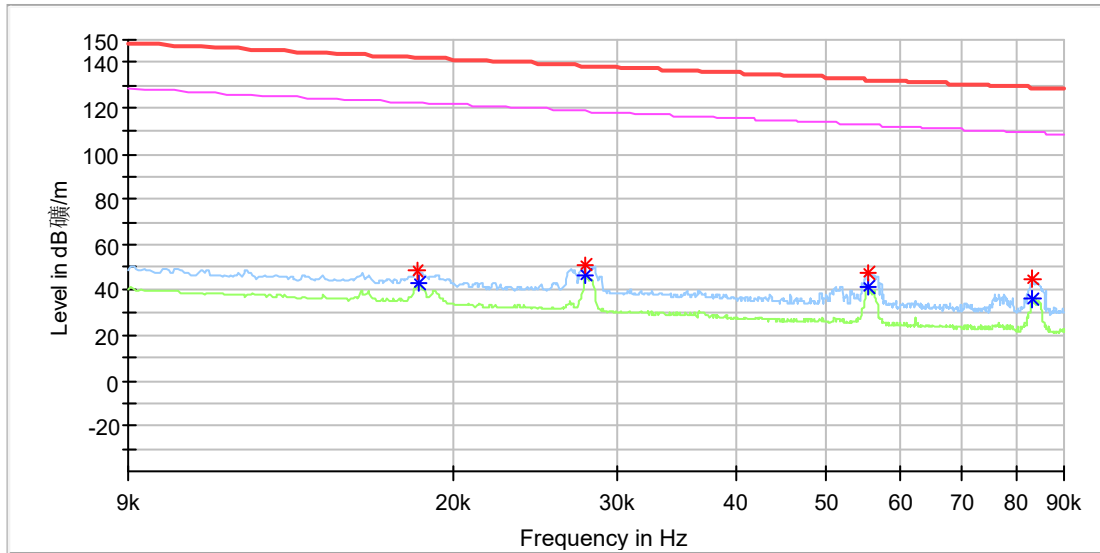


### Critical Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
0.018373	---	44.08	122.31	78.23	100.0	Y	352.0	20.0
0.018489	48.28	---	142.25	93.97	100.0	Y	217.0	20.0
0.027688	49.52	---	138.74	89.22	100.0	Y	359.0	20.0
0.027861	---	45.47	118.69	73.22	100.0	Y	0.0	20.0
0.055401	46.85	---	132.72	85.87	100.0	Y	359.0	20.0
0.055691	---	40.09	112.68	72.59	100.0	Y	0.0	20.0
0.083578	43.18	---	129.15	85.97	100.0	Y	0.0	20.0
0.083578	---	35.30	109.15	73.85	100.0	Y	0.0	20.0

### EUT Information

EUT Name:	ThinkBook Wireless Dock
Model:	L01WC014-CS-H
Test Mode:	Charging
Order No/Sample No:	168421836/A003448177-001
Test Voltage:	120V/60Hz
Remark:	Temp 22 Humi:55%
Test Standard:	FCC Part 15C
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



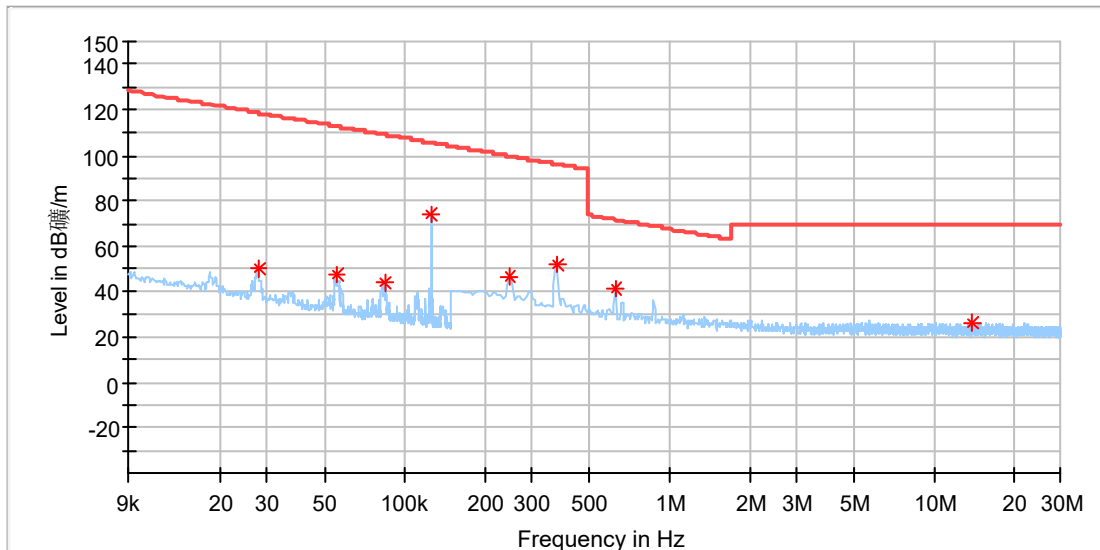
### Critical Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
0.018315	48.68	---	142.33	93.66	100.0	Z	185.0	20.0
0.018373	---	43.17	122.31	79.13	100.0	Z	185.0	20.0
0.027746	51.28	---	138.73	87.45	100.0	Z	331.0	20.0
0.027746	---	46.28	118.73	72.45	100.0	Z	331.0	20.0
0.055459	47.91	---	132.71	84.80	100.0	Z	325.0	20.0
0.055575	---	41.09	112.70	71.61	100.0	Z	325.0	20.0
0.083115	---	36.10	109.20	73.10	100.0	Z	331.0	20.0
0.083231	44.47	---	129.19	84.72	100.0	Z	325.0	20.0

9KHz – 30MHz

### EUT Information

EUT Name:	ThinkBook Wireless Dock
Model:	L01WC014-CS-H
Test Mode:	Charging
Order No/Sample No:	168421836/A003448177-001
Test Voltage:	120V/60Hz
Remark:	Temp 22 Humi:55%
Test Standard:	FCC Part 15C
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



### Critical Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
0.027733	50.42	118.73	68.31	100.0	X	342.0	20.1
0.055429	47.78	112.72	64.94	100.0	X	342.0	20.1
0.083226	44.10	109.19	65.09	100.0	X	342.0	20.1
0.125023	74.17	105.66	31.49	100.0	X	24.0	20.1
0.246574	46.85	99.76	52.91	100.0	X	69.0	20.1
0.373875	52.18	96.15	43.97	100.0	X	15.0	20.1
0.624088	41.57	71.71	30.14	100.0	X	22.0	20.1
13.907338	26.26	69.50	43.24	100.0	X	223.0	20.5

### Final Result

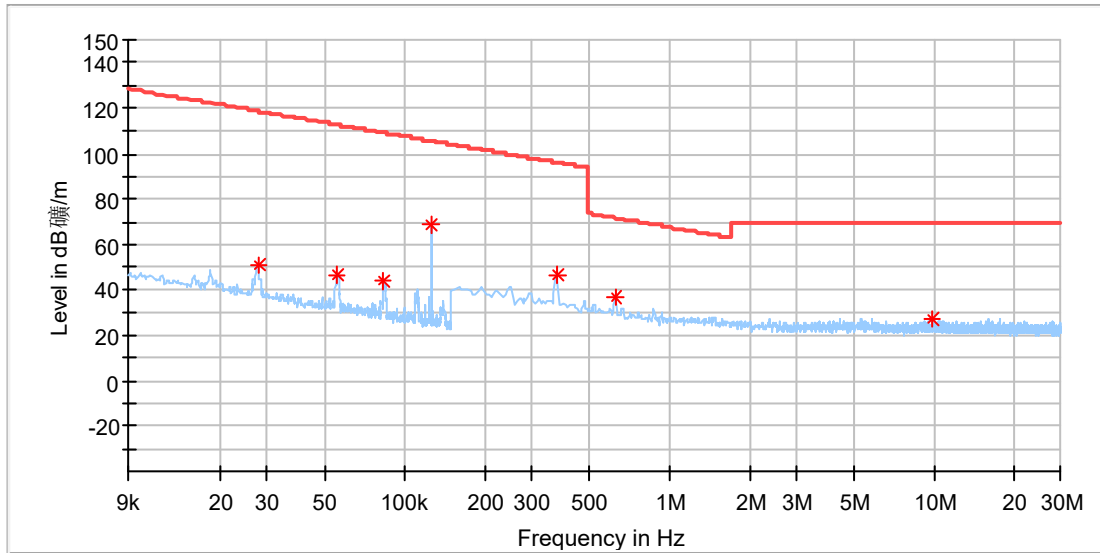
Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---





### EUT Information

EUT Name: ThinkBook Wireless Dock  
 Model: L01WC014-CS-H  
 Test Mode: Charging  
 Order No/Sample No: 168421836/A003448177-001  
 Test Voltage: 120V/60Hz  
 Remark: Temp 22 Humi:55%  
 Test Standard: FCC Part 15C  
 Tested By: Kei Zhang  
 Reviewed By: Terry Yin



### Critical Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
0.027834	50.76	118.70	67.94	100.0	Z	339.0	20.1
0.055329	46.92	112.74	65.82	100.0	Z	324.0	20.1
0.083025	44.37	109.21	64.84	100.0	Z	324.0	20.1
0.125023	68.77	105.66	36.88	100.0	Z	30.0	20.1
0.373875	46.83	96.15	49.32	100.0	Z	53.0	20.1
0.624088	37.23	71.71	34.48	100.0	Z	28.0	20.1
9.864419	27.55	69.50	41.95	100.0	Z	263.0	20.4

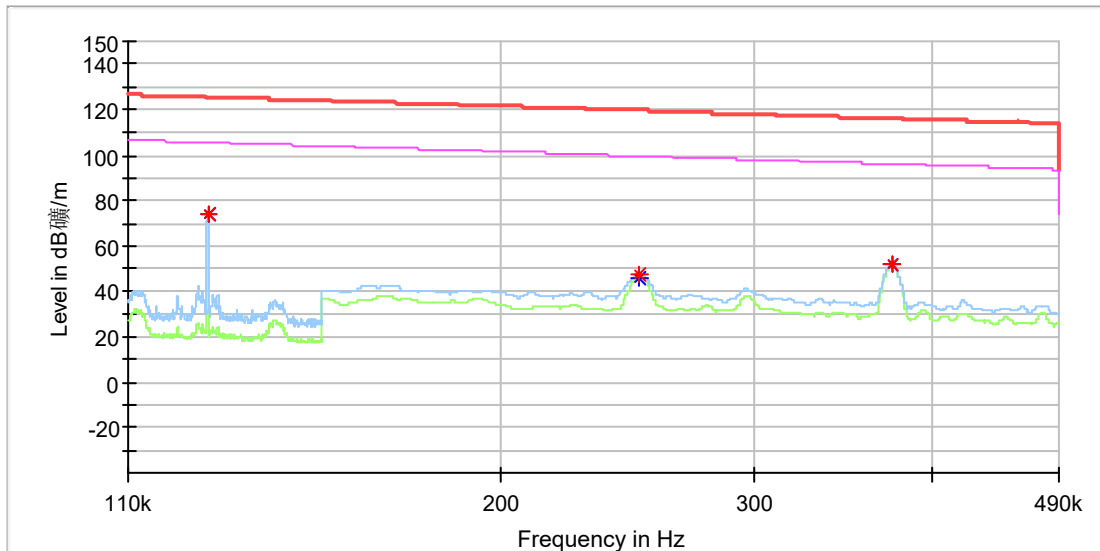
### Final Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

110KHz - 490KHz

### EUT Information

EUT Name:	ThinkBook Wireless Dock
Model:	L01WC014-CS-H
Test Mode:	Charging
Order No/Sample No:	168421836/A003448177-001
Test Voltage:	120V/60Hz
Remark:	Temp 22 Humi:55%
Test Standard:	FCC Part 15C
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

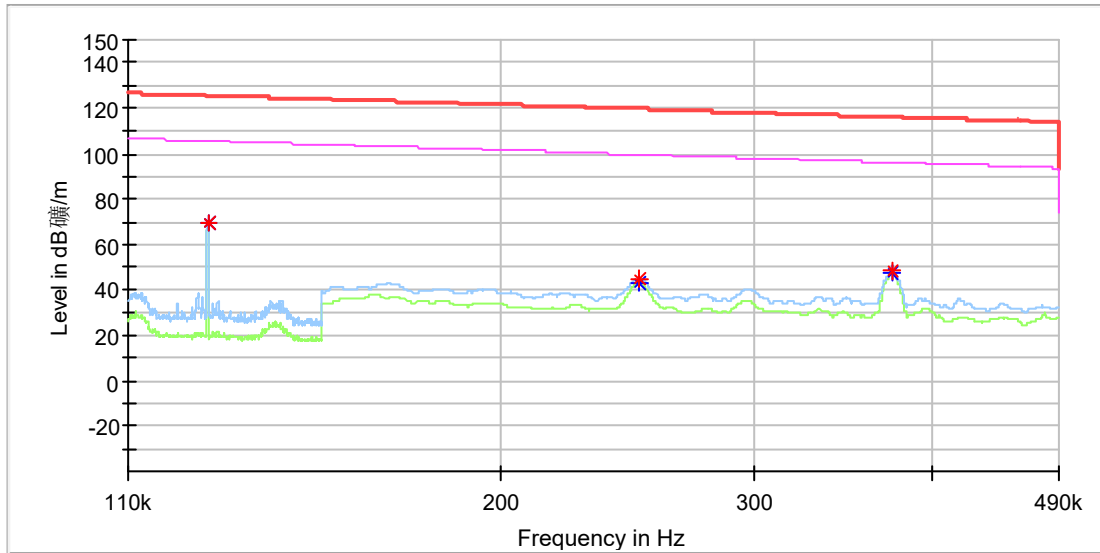


### Critical Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
0.125000	74.19	---	125.66	51.47	100.0	X	21.0	20.0
0.125000	---	74.12	105.66	31.53	100.0	X	21.0	20.0
0.249850	47.66	---	119.65	71.99	100.0	X	54.0	20.0
0.250000	---	45.84	99.64	53.80	100.0	X	54.0	20.0
0.375050	52.09	---	116.12	64.03	100.0	X	23.0	20.0
0.375050	---	51.67	96.12	44.45	100.0	X	23.0	20.0

### EUT Information

EUT Name:	ThinkBook Wireless Dock
Model:	L01WC014-CS-H
Test Mode:	Charging
Order No/Sample No:	168421836/A003448177-001
Test Voltage:	120V/60Hz
Remark:	Temp 22 Humi:55%
Test Standard:	FCC Part 15C
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

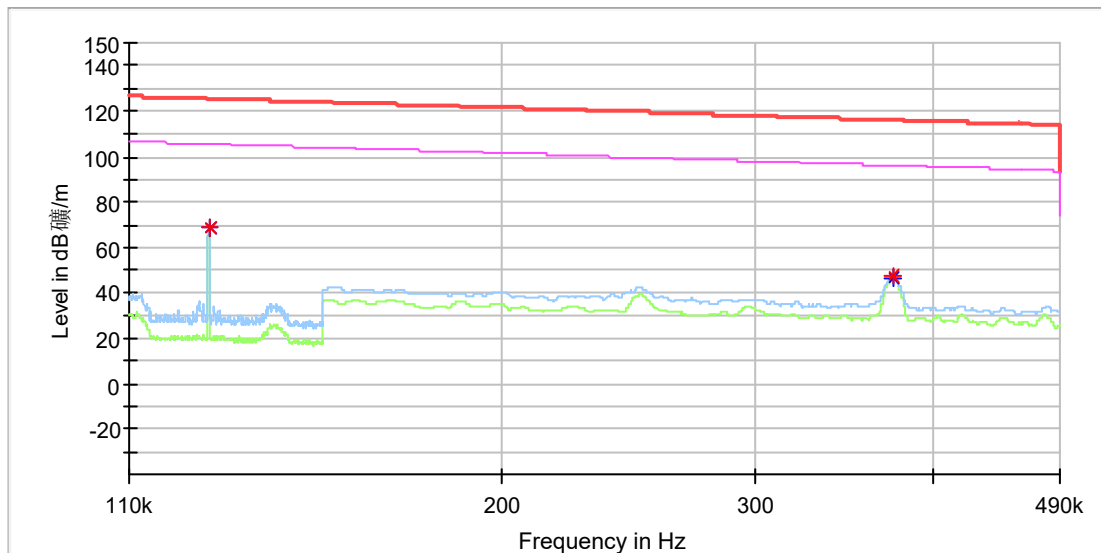


### Critical Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
0.125000	69.98	---	125.66	55.68	100.0	Y	108.0	20.0
0.125000	---	69.88	105.66	35.78	100.0	Y	108.0	20.0
0.250050	---	42.87	99.64	56.77	100.0	Y	333.0	20.0
0.250100	44.42	---	119.64	75.22	100.0	Y	333.0	20.0
0.374850	48.16	---	116.13	67.97	100.0	Y	293.0	20.0
0.374950	---	47.45	96.12	48.67	100.0	Y	293.0	20.0

### EUT Information

EUT Name:	ThinkBook Wireless Dock
Model:	L01WC014-CS-H
Test Mode:	Charging
Order No/Sample No:	168421836/A003448177-001
Test Voltage:	120V/60Hz
Remark:	Temp 22 Humi:55%
Test Standard:	FCC Part 15C
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



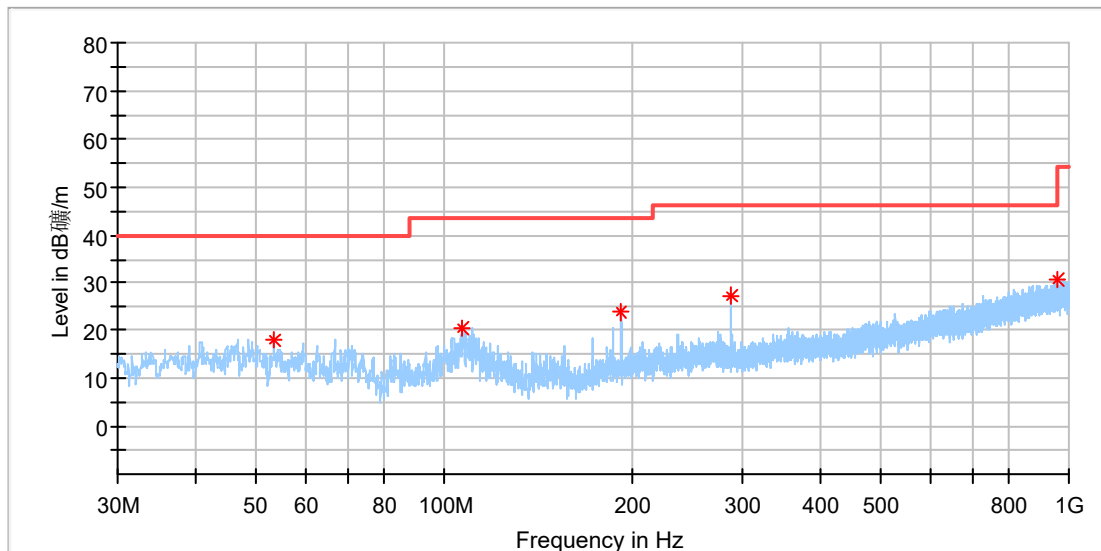
### Critical Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
0.125000	68.73	---	125.66	56.93	100.0	Z	22.0	20.0
0.125000	---	68.66	105.66	37.00	100.0	Z	22.0	20.0
0.374900	47.49	---	116.12	68.64	100.0	Z	32.0	20.0
0.374900	---	46.46	96.12	49.66	100.0	Z	32.0	20.0

30MHz - 1GHz

### EUT Information

EUT Name:	ThinkBook Wireless Dock
Model:	L01WC014-CS-H
Test Mode:	Charging
Order No/Sample No:	168421836/A003448177-001
Test Voltage:	120V/60Hz
Remark:	Temp 22 Humi:55%
Test Standard:	FCC Part 15C
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



### Critical Freqs

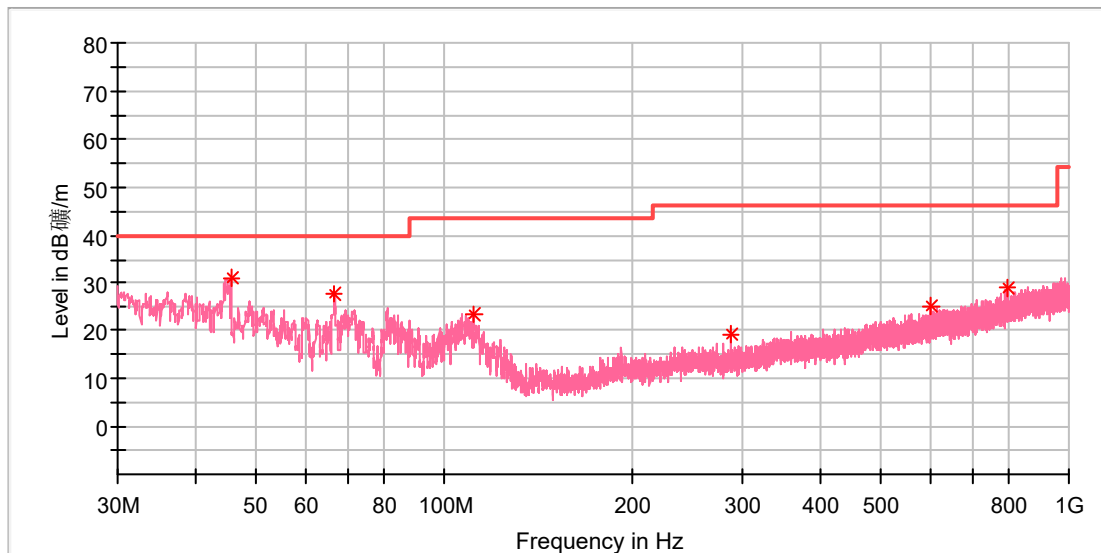
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
53.425500	18.16	40.00	21.84	100.0	H	58.0	-18.4
106.921000	20.38	43.50	23.12	100.0	H	231.0	-18.9
191.990000	23.83	43.50	19.67	100.0	H	195.0	-19.4
287.971500	27.30	46.00	18.70	100.0	H	181.0	-16.6
956.398500	30.50	46.00	15.50	100.0	H	268.0	-4.3

### Final Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

### EUT Information

EUT Name: ThinkBook Wireless Dock  
 Model: L01WC014-CS-H  
 Test Mode: Charging  
 Order No/Sample No: 168421836/A003448177-001  
 Test Voltage: 120V/60Hz  
 Remark: Temp 22 Humi:55%  
 Test Standard: FCC Part 15C  
 Tested By: Kei Zhang  
 Reviewed By: Terry Yin



### Critical Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
45.568500	30.85	40.00	9.15	100.0	V	230.0	-18.7
66.811500	27.79	40.00	12.21	100.0	V	177.0	-20.7
111.916500	23.58	43.50	19.92	100.0	V	271.0	-19.3
287.971500	19.37	46.00	26.63	100.0	V	0.0	-16.6
599.487000	25.08	46.00	20.92	100.0	V	328.0	-9.8
797.561000	28.92	46.00	17.08	100.0	V	213.0	-6.4

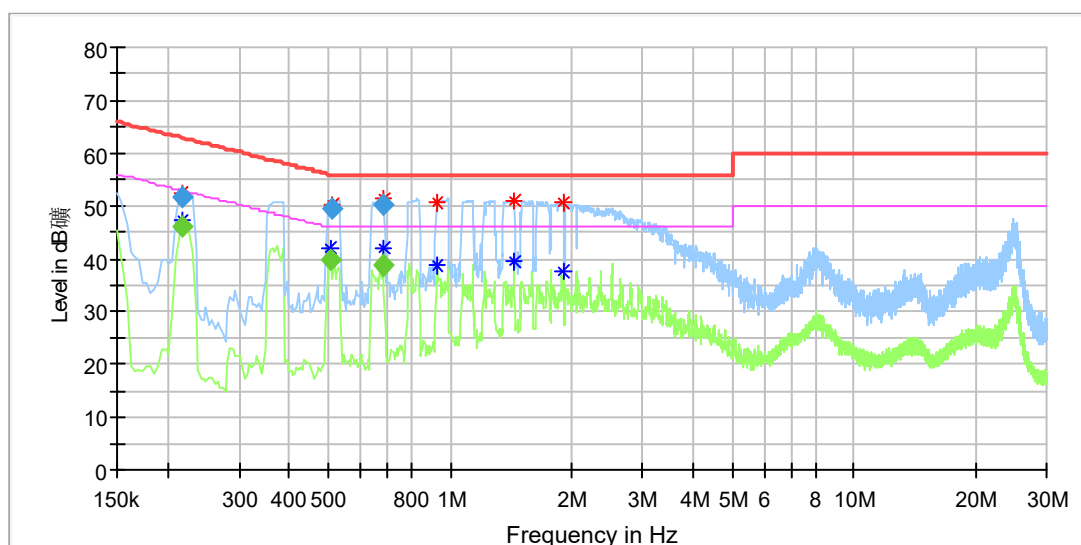
### Final Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

## Appendix A.4: Test Results of Conducted Emission on AC Mains

### EUT Information

EUT Name: ThinkBook Wireless Dock  
 Order No: 168421836(P01020675)  
 Model: L01WC014-CS-H  
 Test Mode: Charging  
 Test Voltage: AC 120V/ 60Hz  
 Test By:/Review By: Soloman Wu/Gary Chen  
 Standard: FCC Part 15  
 Tem./Hum./Pressure: 23.0°C/50.8%/101kPa  
 Remark: SR1



### Critical Freqs

Frequency (MHz)	MaxPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)
0.216500	52.38	---	62.90	10.51	L1	9.8
0.216500	---	47.41	52.90	5.48	L1	9.8
0.504000	---	42.11	46.00	3.89	L1	10.0
0.513500	50.19	---	56.00	5.81	L1	10.0
0.682500	---	42.07	46.00	3.93	L1	9.9
0.682500	51.18	---	56.00	4.82	L1	9.9
0.924000	50.63	---	56.00	5.37	L1	9.8
0.928000	---	38.70	46.00	7.30	L1	9.8
1.436000	50.87	---	56.00	5.13	L1	9.9
1.440000	---	39.59	46.00	6.41	L1	9.9
1.904000	---	37.53	46.00	8.47	L1	9.9
1.904000	50.71	---	56.00	5.29	L1	9.9

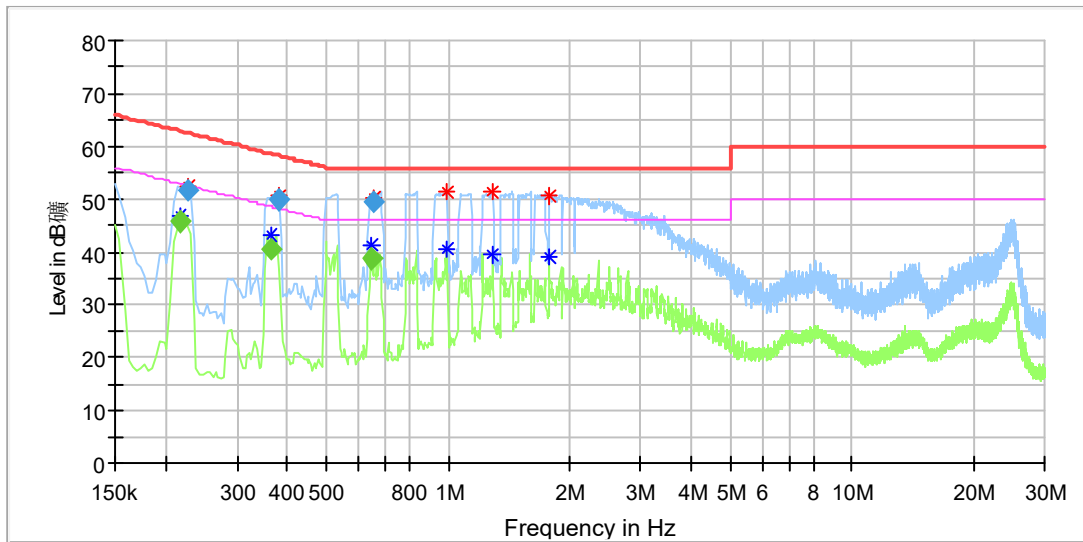
### Final Result

Frequency (MHz)	QuasiPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.216500	---	46.20	52.95	6.75	1000.0	9.000	L1	9.8
0.216500	51.72	---	62.95	11.23	1000.0	9.000	L1	9.8
0.504000	---	39.72	46.00	6.28	1000.0	9.000	L1	10.0
0.513500	49.45	---	56.00	6.55	1000.0	9.000	L1	10.0
0.682500	---	38.55	46.00	7.45	1000.0	9.000	L1	9.9
0.682500	50.21	---	56.00	5.79	1000.0	9.000	L1	9.9



### EUT Information

EUT Name: ThinkBook Wireless Dock  
 Order No: 168421836(P01020675)  
 Model: L01WC014-CS-H  
 Test Mode: Charging  
 Test Voltage: AC 120V/ 60Hz  
 Test By:/Review By: Soloman Wu/Gary Chen  
 Standard: FCC Part 15  
 Tem./Hum./Pressure: 23.0°C/50.8%/101kPa  
 Remark: SR1



### Critical Freqs

Frequency (MHz)	MaxPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)
0.216500	---	47.00	52.90	5.89	N	9.7
0.227500	52.59	---	63.05	10.46	N	9.7
0.364500	---	43.24	48.32	5.08	N	9.8
0.380500	50.63	---	58.32	7.69	N	9.8
0.646500	---	41.47	46.00	4.53	N	9.9
0.657500	50.42	---	56.00	5.58	N	9.9
0.996000	51.17	---	56.00	4.83	N	9.7
0.996000	---	40.52	46.00	5.48	N	9.7
1.288000	51.19	---	56.00	4.81	N	9.8
1.288000	---	39.40	46.00	6.60	N	9.8
1.784000	50.47	---	56.00	5.53	N	10.0
1.784000	---	39.09	46.00	6.91	N	10.0

### Final Result

Frequency (MHz)	QuasiPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.216500	---	45.93	52.95	7.02	1000.0	9.000	N	9.7
0.227500	51.57	---	62.54	10.97	1000.0	9.000	N	9.7
0.364500	---	40.61	48.63	8.01	1000.0	9.000	N	9.8
0.380500	49.75	---	58.27	8.52	1000.0	9.000	N	9.8
0.646500	---	38.84	46.00	7.16	1000.0	9.000	N	9.9
0.657500	49.37	---	56.00	6.63	1000.0	9.000	N	9.9