

Prüfbericht-Nr.: <i>Test report No.:</i>	60379462 002	Auftrags-Nr.: <i>Order No.:</i>	168264037	Seite 1 von 13 <i>Page 1 of 13</i>
Kunden-Referenz-Nr.: <i>Client reference No.:</i>	N/A	Auftragsdatum: <i>Order date.:</i>	25.05.2020	
Auftraggeber: <i>Client:</i>	Amazon.com Services LLC 410 Terry Ave N, Seattle, Washington 98109, United States Of America			
Prüfgegenstand: <i>Test item:</i>	AMAZON LOCKER			
Bezeichnung / Typ-Nr.: <i>Identification / Type No.:</i>	ZL-ODIN-V1			
Auftrags-Inhalt: <i>Order content:</i>	FCC and IC approval			
Prüfgrundlage: <i>Test specification:</i>	CFR47 FCC Part 15: Subpart B Section 15.109 ICES-003 Issue 6 January 2016			
Wareneingangsdatum: <i>Date of receipt:</i>	25.05.2020	Please refer to photo documents		
Prüfmuster-Nr.: <i>Test sample No.:</i>	A000798751-001/002			
Prüfzeitraum: <i>Testing period:</i>	25.05.2020 - 15.06.2020			
Ort der Prüfung: <i>Place of testing:</i>	TÜV Rheinland (Shenzhen) Co., Ltd.			
Prüflaboratorium: <i>Testing laboratory:</i>	TÜV Rheinland (Shenzhen) Co., Ltd.			
Prüfergebnis*: <i>Test result*:</i>	Pass			
geprüft von / tested by:		kontrolliert von / reviewed by:		
 23.06.2020 Lin Lin / Project Manager		 23.06.2020 Sam Lin / Technical Certifier		
Datum <i>Date</i>	Name/Stellung <i>Name/Position</i>	Unterschrift <i>Signature</i>	Datum <i>Date</i>	Name/Stellung <i>Name/Position</i>
Sonstiges / Other:				
FCC ID: 2AWCC-5677				
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 2 = gut 3 = befriedigend 4 = ausreichend 5 = mangelhaft P(ass) = entspricht o.g. Prüfgrundlage(n) F(ail) = entspricht nicht o.g. Prüfgrundlage(n) N/A = nicht anwendbar N/T = nicht getestet Legend: 1 = very good 2 = good 3 = satisfactory 4 = sufficient 5 = poor P(ass) = passed a.m. test specifications(s) F(ail) = failed a.m. test specifications(s) N/A = not applicable N/T = not tested				
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>				

Prüfbericht - Nr.: 60379462 002
Test Report No.

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Test Summary

5.1.1 RADIATED EMISSIONS
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 Radiated Emissions

Appendix B: Photographs of the Test Set-up

2 Test Sites

2.1 Test Facilities

TÜV Rheinland (Shenzhen) Co., Ltd.

362 Huanguan Road Middle Longhua District, Shenzhen 518110 People's Republic of China

FCC Accreditation Designation No.: CN1260

ISED wireless device testing laboratory: 25069

2.2 List of Test and Measurement Instruments

Table 1: List of Test and Measurement Equipment

TÜV Rheinland (Shenzhen) Co., Ltd.

Radiated Emissions (3m)				
Equipment	Manufacturer	Model No.	Serial No.	Cal. Until
EMI Test Receiver	R&S	ESR 7	102021	2020-08-19
Signal Analyzer	R&S	FSV 40	101439	2020-08-21
System Controller Interface	R&S	SCI-100	S10010038	N/A
Filterbank	R&S	Wlan	100759	2020-08-21
OSP	R&S	OSP 120	102040	N/A
Pre-amplifier	R&S	SCU08F1	08320031	2020-08-20
Amplifier	R&S	SCU-18F	180070	2020-08-20
Amplifier	R&S	SCU40A	100475	2020-08-20
Trilog Broadband Antenna (30 MHz - 7 GHz)	Schwarzbeck	VULB 9162	193	2020-09-02
Double-Ridged Antenna (1 -18 GHz)	ETS-LINDGREN	3117	00218717	2020-09-02
Wideband Ridged Horn Antenna (18-40 GHz)	Steatite	QMS-00880	19067	2020-09-02
Active Loop Antenna	Schwarzbeck	FMZB 1513	302	2020-09-01
Wideband Ridged Horn Antenna (12-18 GHz)	Steatite	QMS-00208	18313	2020-09-02
Test software	R&S	EMC32 (V10.50.40)	N/A	N/A
Control PC	Dell	OptiPlex 7050	36NV9P2	N/A
3m Semi-Anechoic Chamber	Albatross	SAC-3m	APC17151-SAC	2020-07-06

Radiated Emissions (10m)

Equipment	Manufacturer	Model No.	Serial No.	Cal. Until
10m SAC	ETS	SAC10	CT001632-Q1399	2021-08-31
EMI Test Receiver	R&S	ESR7	102022	2020-08-19
EMI Test Receiver	R&S	ESR7	102023	2020-08-19
Bilog Antenna	TESEQ	CBL6112D	51321	2020-08-29
Bilog Antenna	TESEQ	CBL6112D	51322	2020-08-29
Preamplifier	SCHWARZBECK	BBV9745	115	2019-10-09
Preamplifier	EMCI	EMC9135-P	980629	2020-01-05
Preamplifier	FIT	SCU-18F	180076	2020-08-19
Horn Antenna	R&S	HF907	102707	2020-09-01
Switching Controller Interface	R&S	OSP 120	102038	N/A
EMC32 test software	R&S	EMC32(Ver.10.50.01)	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 as below table.

Parameter	Uncertainty
Radiated Emission (3m SAC), 30MHz to 1000MHz	± 4.52 dB
Radiated Emission (3m SAC), above 1000MHz	± 4.37 dB
Radiated Emission (10m SAC), 30MHz to 1000MHz	± 4.66 dB
Radiated Emission (10m SAC), above 1000MHz	± 4.35 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 362 Huanguan Road Middle Longhua District, Shenzhen 518110 People's Republic of 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 an Amazon Locker which supports Bluetooth LE functions.

Note: This product contains transmitter module.

Contains FCC ID: XMR201707BG96

Contains IC: 10224A-201709BG96

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

3.2 Ratings and System Details

Table 2: Technical Specification of EUT

General Information of EUT	Value
Kind of Equipment	AMAZON LOCKER
Type Designation	ZL-ODIN-V1
FCC ID	2AWCC-5677
Battery Specification	Model: 26S1024 Nominal Voltage: 6Vdc Typical Capacity: 40.8Ah
Testing Voltage	6Vdc
Work Temperature	-20°C ~ +55°C
Equipment Class	Class B
Bluetooth	
Bluetooth Version:	V5.0
Frequency Range:	2402-2480MHz
Type of Modulation:	GFSK
Data Rate:	1Mbps
Quantity of Channels	40
Channel Separation:	2MHz
Type of Antenna:	Integral Antenna
Antenna number:	1
Antenna Gain:	-4dBi
GPRS/EGPRS	
Wireless Technology:	GPRS, EGPRS
Operation Frequency band(s)	GPRS/EGPRS: 850/1900
Power Class:	GPRS 900: Class 4 GPRS1800: Class 1 EGPRS 900/1800: E2
GPRS Class	Multi-slot:12
EGPRS Class	Multi-slot:12
Type of Modulation:	GPRS: GMSK EGPRS: GMSK, 8PSK
Channel separation	200KHz
Type of Antenna:	External Antenna
Antenna number:	1
Antenna Gain:	2dBi

HW version:	R1.0
SW version:	BG96MAR02A02M1G
eMTC	
Wireless Technology:	eMTC
Operation Frequency band(s)	Band 2/4/5/12/13/26
Power Class:	Class 3
Type of Modulation:	QPSK, 16QAM
Type of Antenna:	External Antenna
Antenna number:	1
Antenna Gain:	2dBi
HW version:	R1.0
SW version:	BG96MAR02A02M1G
NB-IoT	
Wireless Technology:	NB-IoT
Operation Frequency band(s)	Band 2/5/12/13/26
Power Class:	Class 3
Type of Modulation:	BPSK, QPSK
Type of Antenna:	External Antenna
Antenna number:	1
Antenna Gain:	2dBi
HW version:	R1.0
SW version:	BG96MAR02A02M1G

3.3 Independent Operation Modes

The basic operation modes are:

- A. Normal operation
 - 1. Bluetooth link + GPRS/EGPRS link + door opening
 - 2. Bluetooth link + eMTC link + door opening
 - 3. Bluetooth link + NB-IoT link + door opening
 - 4. Bluetooth link + (worst case mode of license radio link) + Vibrator

3.4 Noise Generating and Noise Suppressing Parts

Refer to Circuit Diagram for further details.

3.5 Submitted Documents

- FCC/IC Label and Location Info

- User Manual

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.

4.2 Test Operation and Test Software

Test operation refers to test setup in chapter 5. All tests were performed according to the procedures in ANSI C63.4: 2014.

According to clause 3.1, all tests were performed on model ZL-ODIN-V1 in this report.

4.3 Special Accessories and Auxiliary Equipment

Table 3: List of Accessories and Auxiliary Equipment

Description	Manufacturer	Model	S/N	Rating
Wideband Radio Communication Tester	Rohde & Schwarz	CMW500	166305	N/A

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 1GHz)

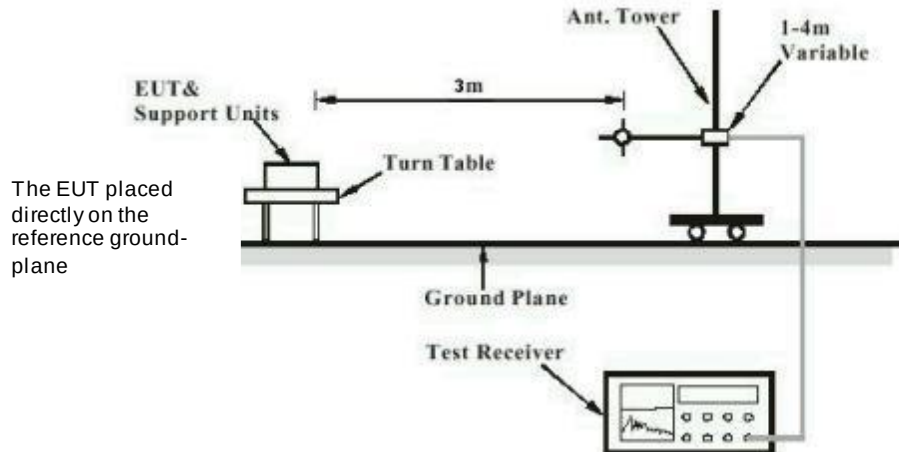
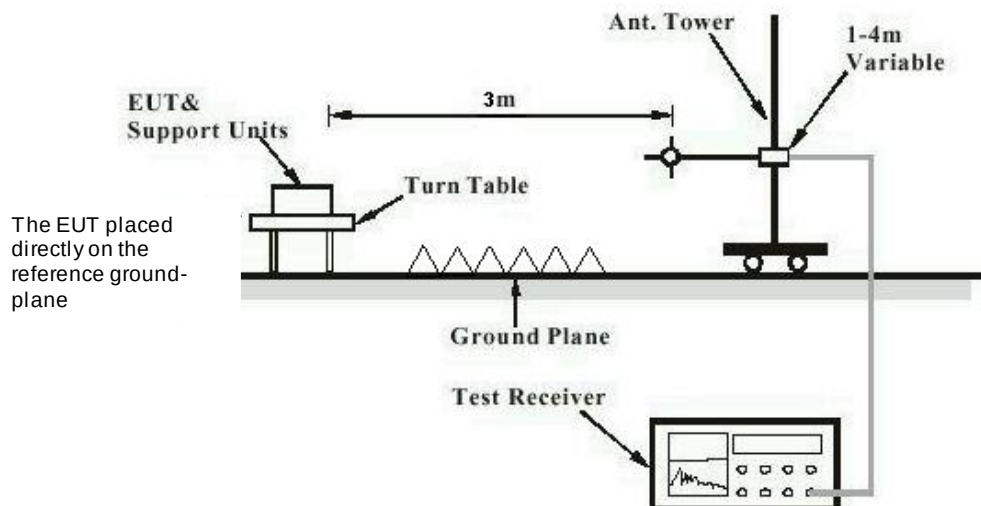


Diagram of Measurement Configuration for Radiation Test (Above 1GHz)



5 Test Results

5.1 EMC

5.1.1 Radiated Emissions

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

Test standard	: FCC Part 15.109(a) ICES-003
Basic standard	: ANSI C63.4: 2014 30MHz to 13GHz
Frequency range	: *The internal highest frequency is 2.48GHz, so the upper frequency of measurement range is 5 th harmonic of the highest frequency.
Classification	: Class B
Limits	: FCC Part 15.109(a) ICES-003 Table 5 & Table 7
Kind of test site	: 10m Semi-anechoic Chamber & 3m Full-anechoic Chamber

Test Setup

Date of testing	: 03.06.2020
Input voltage	: 6Vdc
Operation mode	: A
Earthing	: Not connected
Ambient temperature	: 24 °C
Relative humidity	: 52 %
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.

7 List of Tables

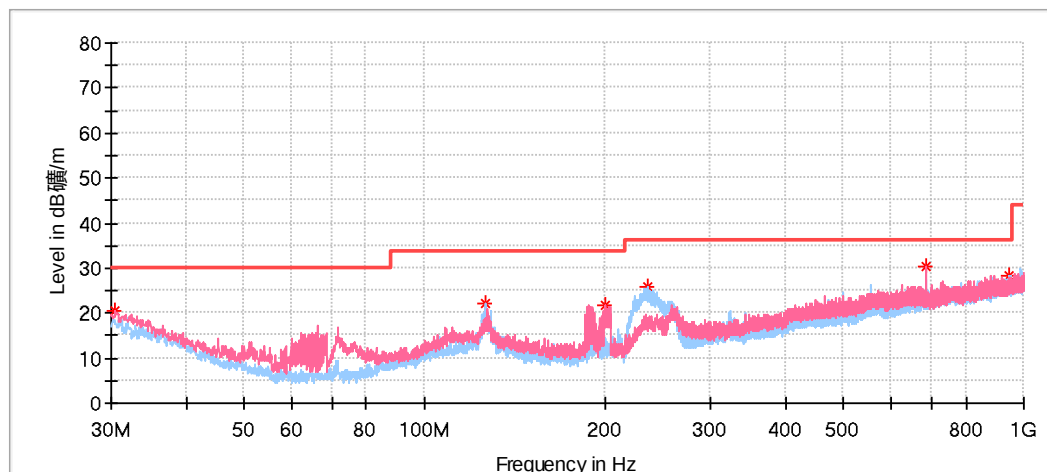
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Appendix A: Test Results of Radiated Emissions

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Appendix A.1: Radiated Emissions, below 1GHz

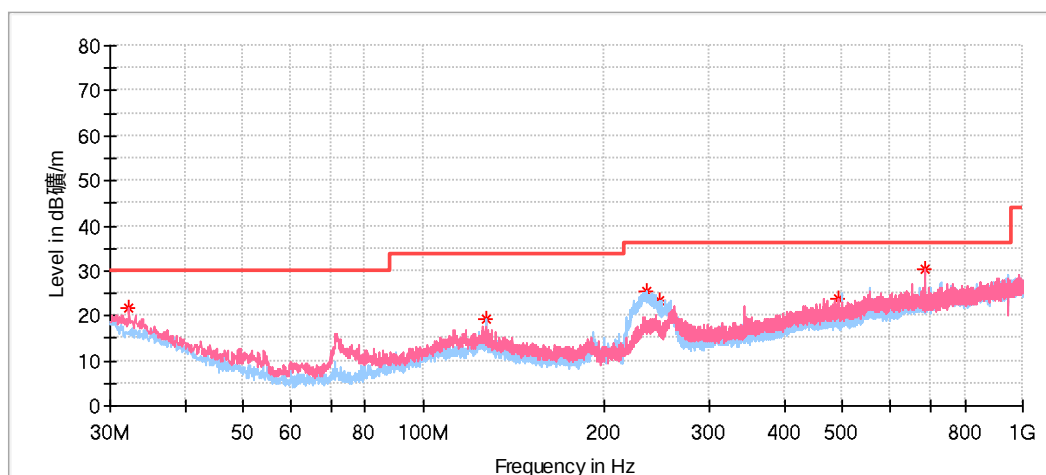
EUT Name: AMAZON LOCKER
Model: ZL-ODIN-V1
Test Mode: BT link + eMTC link + Door Opening
Test Voltage: Battery operation
Test By: Charlie Wang
Review By: Gary Chen
Remark:



Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)
946.434444	28.47	36.00	7.53	300.0	H	32.0
236.394444	25.69	36.00	10.31	300.0	H	145.0
126.353333	22.32	33.50	11.18	400.0	H	351.0
200.396667	21.70	33.50	11.80	100.0	V	0.0
30.485000	20.57	30.00	9.43	100.0	V	82.0
688.145000	30.20	36.00	5.80	200.0	V	88.0

Produkte
Products

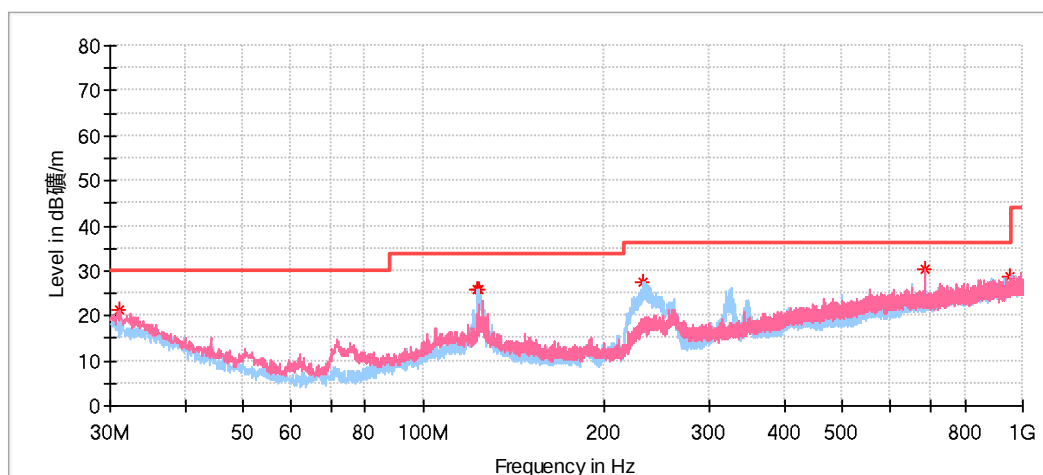
EUT Name: AMAZON LOCKER
Model: ZL-ODIN-V1
Test Mode: BT link + GPRS link + Door Opening
Test Voltage: Battery operation
Test By: Charlie Wang
Review By: Gary Chen
Remark:



Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)
32.209444	21.81	30.00	8.19	300.0	V	215.0
127.269444	19.17	33.50	14.33	200.0	H	1.0
235.424444	25.32	36.00	10.68	400.0	H	47.0
247.711111	23.58	36.00	12.42	400.0	H	93.0
491.181111	23.77	36.00	12.23	400.0	V	19.0
688.145000	30.35	36.00	5.65	200.0	V	23.0

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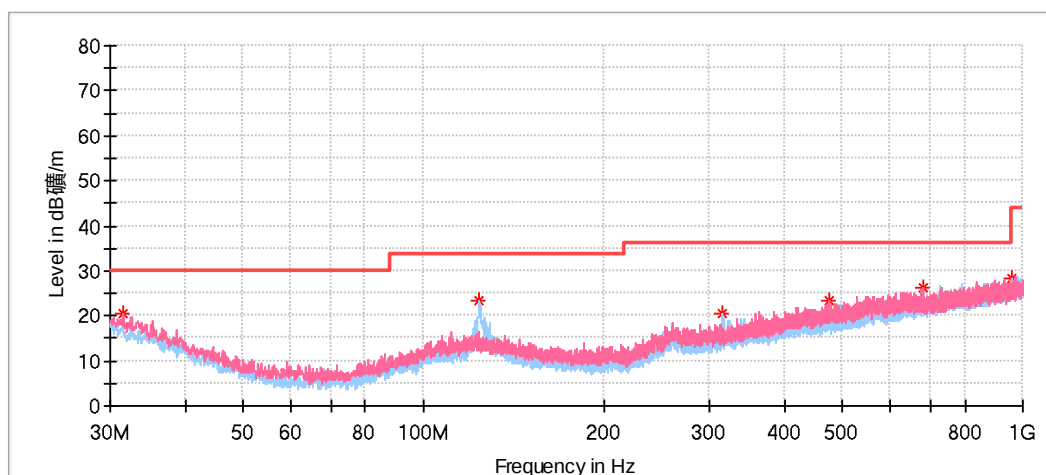
EUT Name: AMAZON LOCKER
Model: ZL-ODIN-V1
Test Mode: BT link + NB-IoT link + Door Opening
Test Voltage: Battery operation
Test By: Charlie Wang
Review By: Gary Chen
Remark:



Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)
31.185556	21.49	30.00	8.51	300.0	V	274.0
123.012222	25.91	33.50	7.59	300.0	H	71.0
123.766667	25.90	33.50	7.60	400.0	H	0.0
233.053333	27.60	36.00	8.40	400.0	H	93.0
688.145000	30.30	36.00	5.70	200.0	V	160.0
952.308333	28.77	36.00	7.23	100.0	H	92.0

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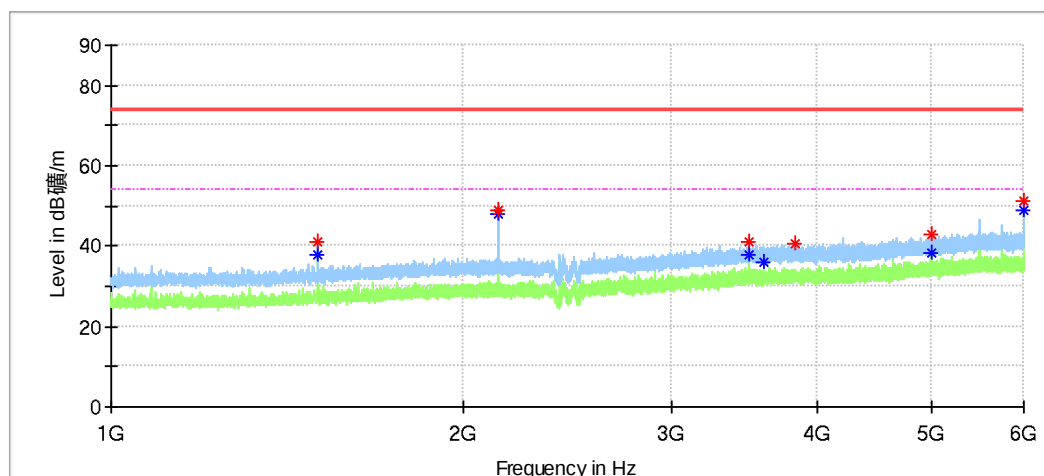
EUT Name: AMAZON LOCKER
Model: ZL-ODIN-V1
Test Mode: BT link + NB-IoT link + Vibrator
Test Voltage: Battery operation
Test By: Charlie Wang
Review By: Gary Chen
Remark:



Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)
957.589444	28.44	36.00	7.56	400.0	H	41.0
315.503333	20.52	36.00	15.48	400.0	H	154.0
124.143889	23.24	33.50	10.26	400.0	H	355.0
682.378889	26.08	36.00	9.92	100.0	V	0.0
31.562778	20.56	30.00	9.44	100.0	V	219.0
474.852778	23.43	36.00	12.57	400.0	V	126.0

Appendix A2: Radiated Emissions, 1GHz to 6GHz

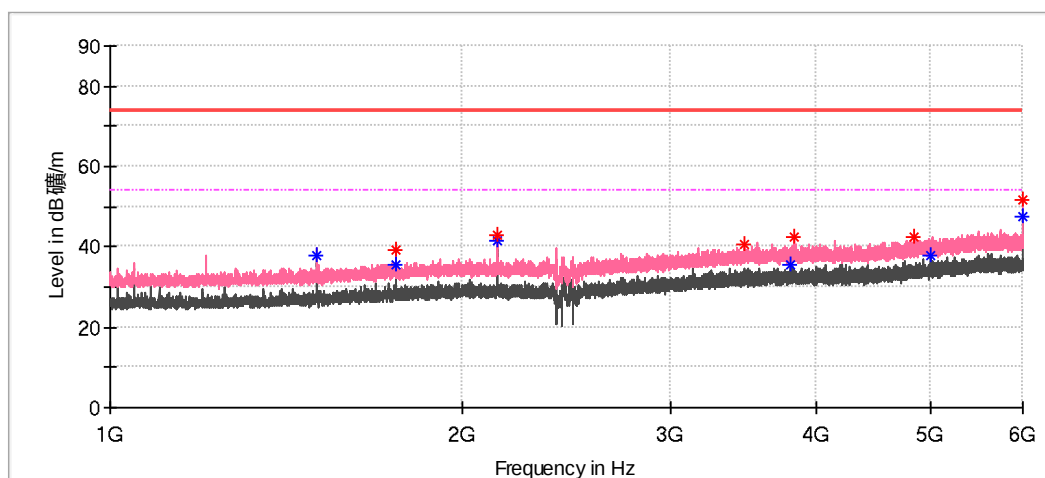
EUT Name: AMAZON LOCKER
 Model: ZL-ODIN-V1
 Test Mode: BT link + EMTC link + Door opening
 Test Voltage: Battery operation
 Test By: Charlie Wang
 Review By: Gary Chen
 Remark:



Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)
2140.208333	49.12	---	74.00	24.88	100.0	H	7.0
2140.208333	---	47.96	54.00	6.04	100.0	H	7.0
3599.583333	---	36.16	54.00	17.84	100.0	H	25.0
6000.000000	---	48.90	54.00	5.10	100.0	H	88.0
6000.000000	51.18	---	74.00	22.82	100.0	H	88.0
3500.000000	---	37.97	54.00	16.03	100.0	H	96.0
3500.208333	40.90	---	74.00	33.10	100.0	H	147.0
1499.583333	40.93	---	74.00	33.07	100.0	H	235.0
1500.208333	---	37.81	54.00	16.19	100.0	H	239.0
3836.041667	40.85	---	74.00	33.15	100.0	H	293.0
5000.208333	---	38.16	54.00	15.84	100.0	H	355.0
5000.208333	42.94	---	74.00	31.06	100.0	H	355.0

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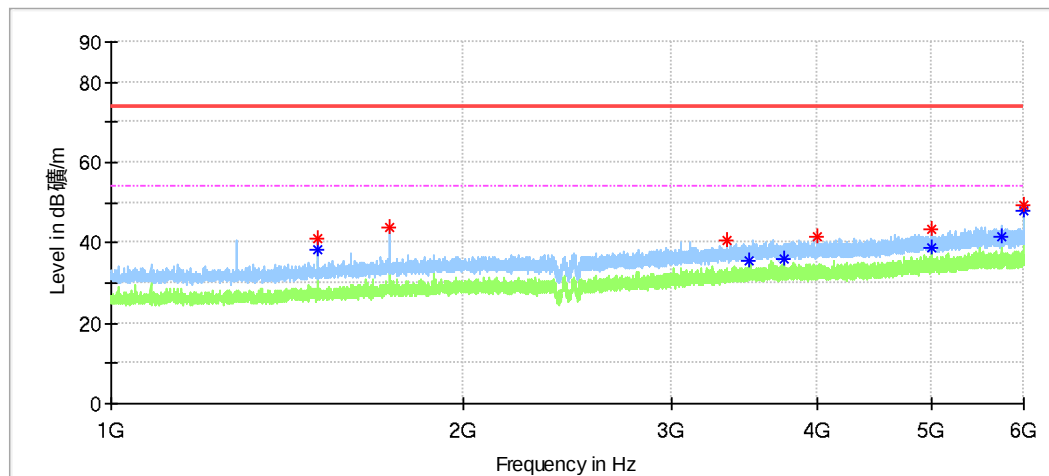
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Test Mode: BT link + EMTC link + Door opening
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Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)
1500.000000	---	38.00	54.00	16.00	100.0	V	235.0
1749.791667	---	35.43	54.00	18.57	100.0	V	144.0
1749.791667	39.10	---	74.00	34.90	100.0	V	144.0
2140.000000	---	41.75	54.00	12.25	100.0	V	99.0
2140.000000	43.02	---	74.00	30.98	100.0	V	99.0
3476.875000	40.52	---	74.00	33.48	100.0	V	10.0
3808.541667	---	35.68	54.00	18.32	100.0	V	209.0
3835.416667	42.28	---	74.00	31.72	100.0	V	27.0
4851.250000	42.28	---	74.00	31.72	100.0	V	180.0
5000.000000	---	37.70	54.00	16.30	100.0	V	327.0
6000.000000	---	47.43	54.00	6.57	100.0	V	322.0
6000.000000	51.46	---	74.00	22.54	100.0	V	322.0

Produkte
Products

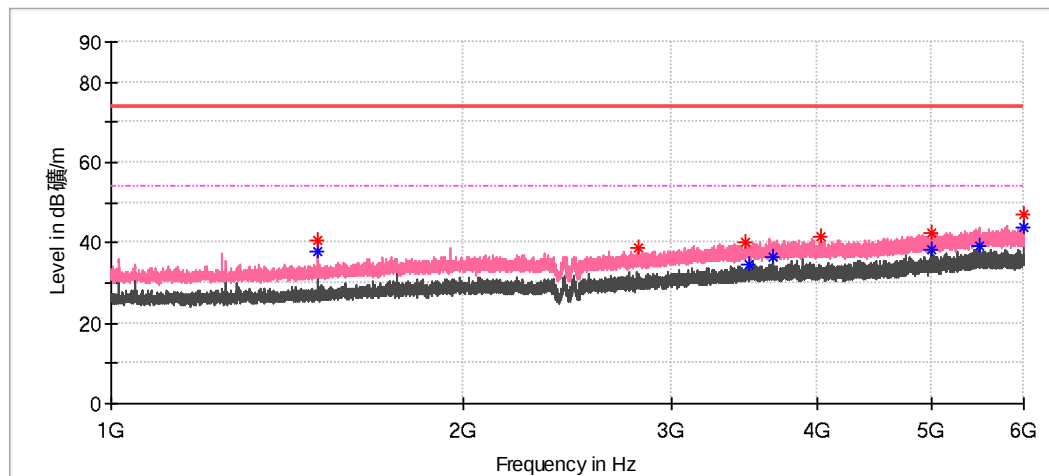
EUT Name: AMAZON LOCKER
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Test Mode: BT link + GPRS link + Door opening
Test Voltage: Battery operation
Test By: Charlie Wang
Review By: Gary Chen
Remark:



Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)
1728.333333	43.85	---	74.00	30.15	100.0	H	16.0
3353.541667	40.78	---	74.00	33.22	100.0	H	20.0
3752.291667	---	35.83 4154	54.00	18.17	100.0	H	29.0
5750.208333	---	41.53	54.00	12.47	100.0	H	87.0
5000.208333	43.48	---	74.00	30.52	100.0	H	98.0
6000.000000	---	48.17	54.00	5.83	100.0	H	231.0
6000.000000	49.45	---	74.00	24.55	100.0	H	231.0
1500.208333	---	38.42 35.035	54.00	15.58	100.0	H	235.0
3500.000000	---	35.74	54.00	18.26	100.0	H	278.0
4001.875000	41.32	---	74.00	32.68	100.0	H	286.0
1499.791667	41.10	---	74.00	32.90	100.0	H	328.0
5000.000000	---	38.86	54.00	15.14	100.0	H	332.0

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EUT Name: AMAZON LOCKER
Model: ZL-ODIN-V1
Test Mode: BT link + GPRS link + Door opening
Test Voltage: Battery operation
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Remark:

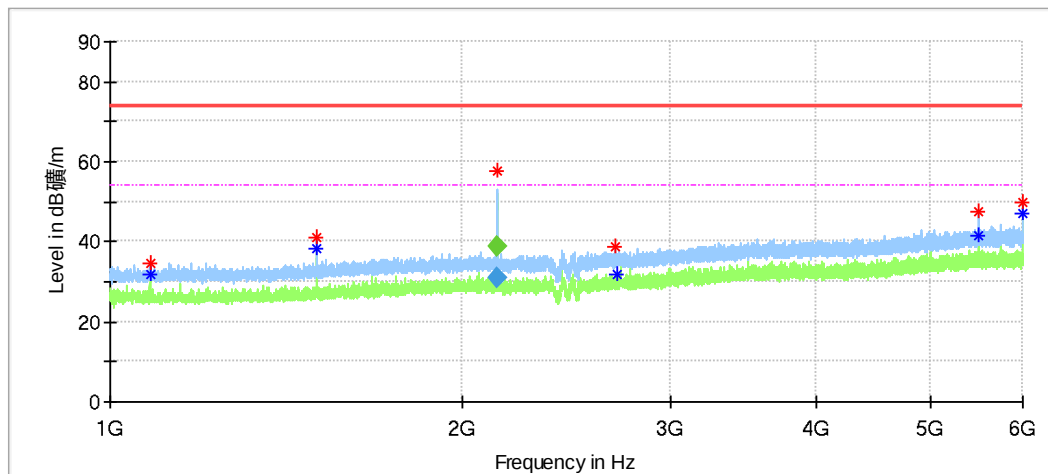


Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)
3664.375000	---	36.32	54.00	17.68	100.0	V	19.0
4029.375000	41.50	---	74.00	32.50	100.0	V	41.0
3475.208333	40.14	---	74.00	33.86	100.0	V	73.0
3500.208333	---	34.78	54.00	19.22	100.0	V	84.0
4999.791667	---	38.43	54.00	15.57	100.0	V	145.0
5000.208333	42.34	---	74.00	31.66	100.0	V	149.0
6000.000000	---	44.06	54.00	9.94	100.0	V	230.0
6000.000000	46.87	---	74.00	27.13	100.0	V	230.0
1499.791667	40.75	---	74.00	33.25	100.0	V	234.0
1499.791667	---	37.89	54.00	16.11	100.0	V	234.0
2817.291667	38.74	---	74.00	35.26	100.0	V	284.0
5500.000000	---	39.23	54.00	14.77	100.0	V	327.0

Produkte

Products

EUT Name: AMAZON LOCKER
 Model: ZL-ODIN-V1
 Test Mode: BT link + NB-IoT link + Door opening
 Test Voltage: Battery operation
 Test By: Charlie Wang
 Review By: Gary Chen
 Remark:



Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)
1081.250000	---	31.73	54.00	22.27	100.0	H	88.0
1081.250000	34.81	---	74.00	39.19	100.0	H	88.0
1500.000000	---	38.49	54.00	15.51	100.0	H	237.0
1500.000000	41.11	---	74.00	32.89	100.0	H	237.0
2139.708333	---	39.08	54.00	1.99	130.0	H	103.0
2139.708333	57.66	---	74.00	21.04	116.0	H	101.0
2699.375000	38.74	---	74.00	35.26	100.0	H	96.0
2701.458333	---	31.89	54.00	22.11	100.0	H	132.0
5500.208333	---	41.55	54.00	12.45	100.0	H	92.0
5500.208333	47.50	---	74.00	26.50	100.0	H	92.0
6000.000000	---	47.13	54.00	6.87	100.0	H	326.0
6000.000000	49.78	---	74.00	24.23	100.0	H	326.0

Final_Result

Frequency (MHz)	QuasiPeak (dBμV/m)	CAverage (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol
2139.708333	---	38.90	54.00	15.10	10000.0	1000.000	130.0	H
2139.708333	30.81	---	74.00	43.19	10000.0	1000.000	116.0	H

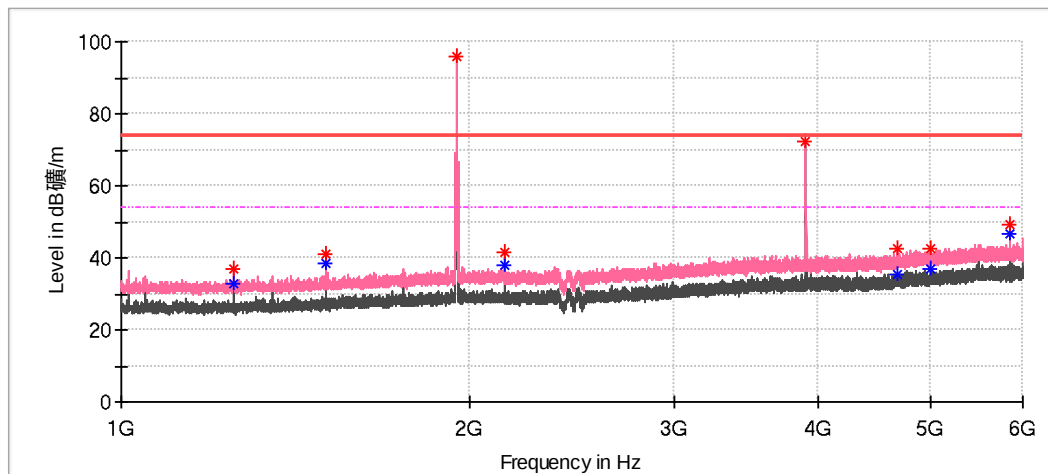
(continuation of the "Final_Result" table from column 14 ...)

Frequency (MHz)	Azimuth (deg)
2139.708333	104.0
2139.708333	101.0

Produkte

Products

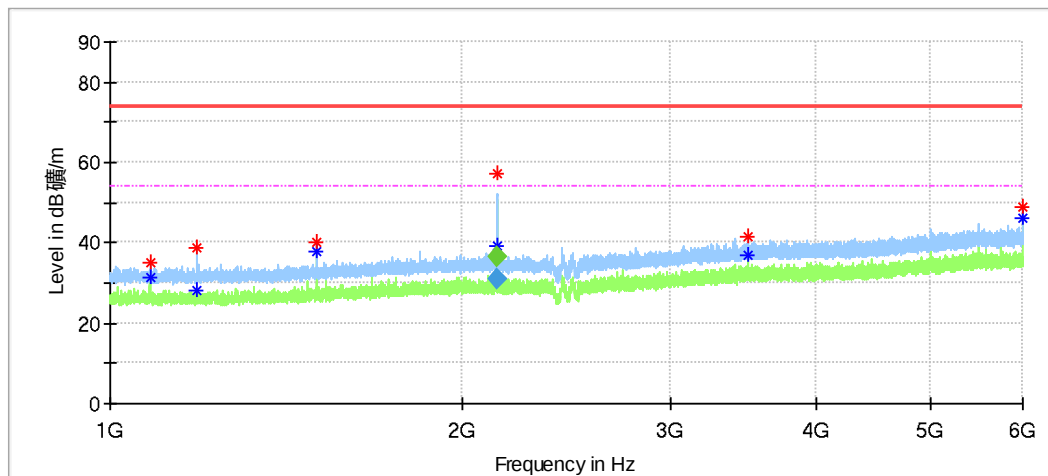
EUT Name: AMAZON LOCKER
 Model: ZL-ODIN-V1
 Test Mode: BT link + NB-IoT link + Door opening
 Test Voltage: Battery operation
 Test By: Charlie Wang
 Review By: Gary Chen
 Remark:



Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)
1249.791667	37.08	---	74.00	36.92	100.0	V	149.0
1249.791667	---	32.86	54.00	21.14	100.0	V	149.0
1499.583333	40.94	---	74.00	33.06	100.0	V	231.0
1500.000000	---	38.54	54.00	15.46	100.0	V	327.0
1950.208333	95.67	---	74.00	-21.67	100.0	V	2.0
2140.000000	---	37.93	54.00	16.07	100.0	V	0.0
2140.208333	41.35	---	74.00	32.65	100.0	V	164.0
3899.791667	72.14	---	74.00	1.86	100.0	V	0.0
4677.291667	42.56	---	74.00	31.44	100.0	V	267.0
4678.125000	---	35.48	54.00	18.52	100.0	V	359.0
4999.791667	42.53	---	74.00	31.47	100.0	V	242.0
5000.000000	---	37.15	54.00	16.85	100.0	V	327.0
5850.208333	48.98	---	74.00	25.02	100.0	V	0.0
5850.208333	---	46.56	54.00	7.44	100.0	V	0.0

Produkte
 Products

EUT Name: AMAZON LOCKER
 Model: ZL-ODIN-V1
 Test Mode: BT link + NB-IoT link + Vibrator
 Test Voltage: Battery operation
 Test By: Charlie Wang
 Review By: Gary Chen
 Remark:



Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)
1081.250000	---	31.49	54.00	22.51	100.0	H	328.0
1081.250000	35.07	---	74.00	38.93	100.0	H	328.0
1185.833333	38.86	---	74.00	35.14	100.0	H	0.0
1185.833333	---	28.38	54.00	25.62	100.0	H	0.0
1499.791667	---	37.90	54.00	16.10	100.0	H	234.0
1499.791667	40.19	---	74.00	33.81	100.0	H	234.0
2139.708333	---	39.18	54.00	3.26	145.0	H	102.0
2139.708333	57.35	---	74.00	21.77	116.0	H	102.0
3500.000000	---	37.11	54.00	16.89	100.0	H	178.0
3500.208333	41.70	---	74.00	32.30	100.0	H	278.0
6000.000000	---	46.10	54.00	7.90	100.0	H	320.0
6000.000000	49.04	---	74.00	24.96	100.0	H	320.0

Final_Result

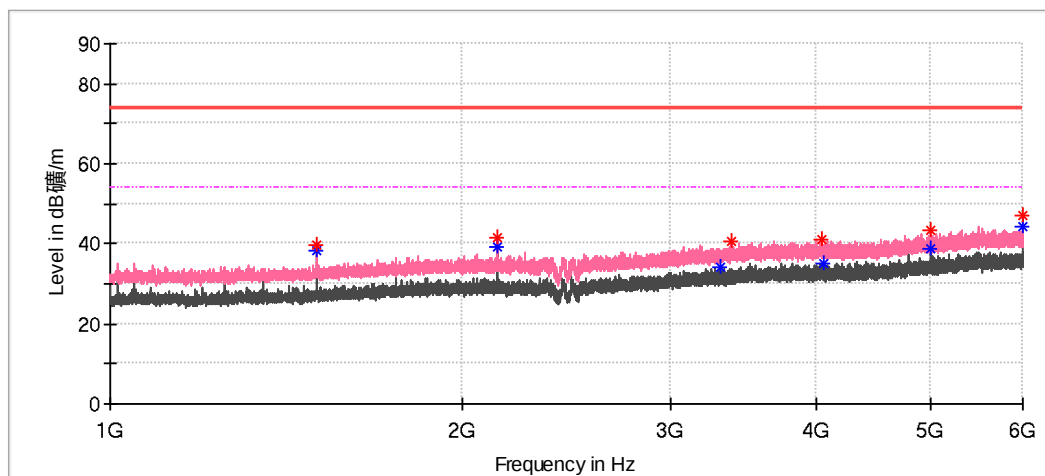
Frequency (MHz)	QuasiPeak (dBµV/m)	CAverage (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol
2139.708333	---	36.38	54.00	17.62	10000.0	1000.000	145.0	H
2139.708333	31.02	---	74.00	42.98	10000.0	1000.000	116.0	H

(continuation of the "Final_Result" table from column 14 ...)

Frequency (MHz)	Azimuth (deg)
2139.708333	103.0
2139.708333	102.0

Produkte
 Products

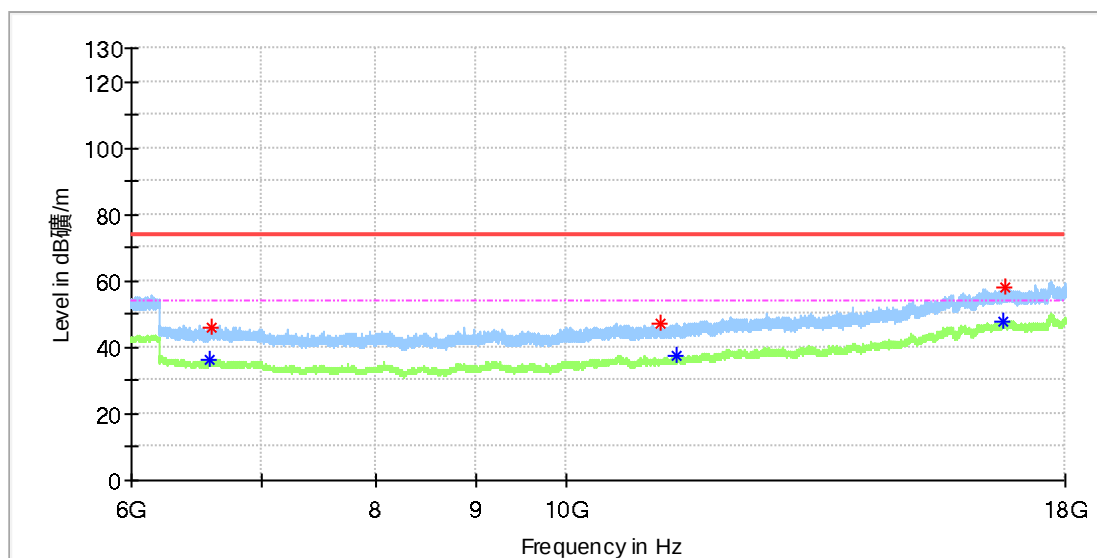
EUT Name: AMAZON LOCKER
 Model: ZL-ODIN-V1
 Test Mode: BT link + NB-IoT link + Vibrator
 Test Voltage: Battery operation
 Test By: Charlie Wang
 Review By: Gary Chen
 Remark:



Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)
3390.416667	40.46	---	74.00	33.54	100.0	V	50.0
5000.416667	43.48	---	74.00	30.52	100.0	V	144.0
6000.000000	47.00	---	74.00	27.00	100.0	V	230.0
6000.000000	---	44.53	54.00	9.47	100.0	V	230.0
1500.000000	---	38.23	54.00	15.77	100.0	V	233.0
4059.791667	---	35.05	54.00	18.95	100.0	V	240.0
4050.833333	40.97	---	74.00	33.03	100.0	V	255.0
3308.541667	---	34.32	54.00	19.68	100.0	V	305.0
1499.791667	39.80	---	74.00	34.20	100.0	V	327.0
5000.208333	---	38.69	54.00	15.31	100.0	V	327.0
2140.208333	41.59	---	74.00	32.41	100.0	V	331.0
2140.208333	---	39.20	54.00	14.80	100.0	V	331.0

Appendix A3: Radiated Emissions, above 6GHz

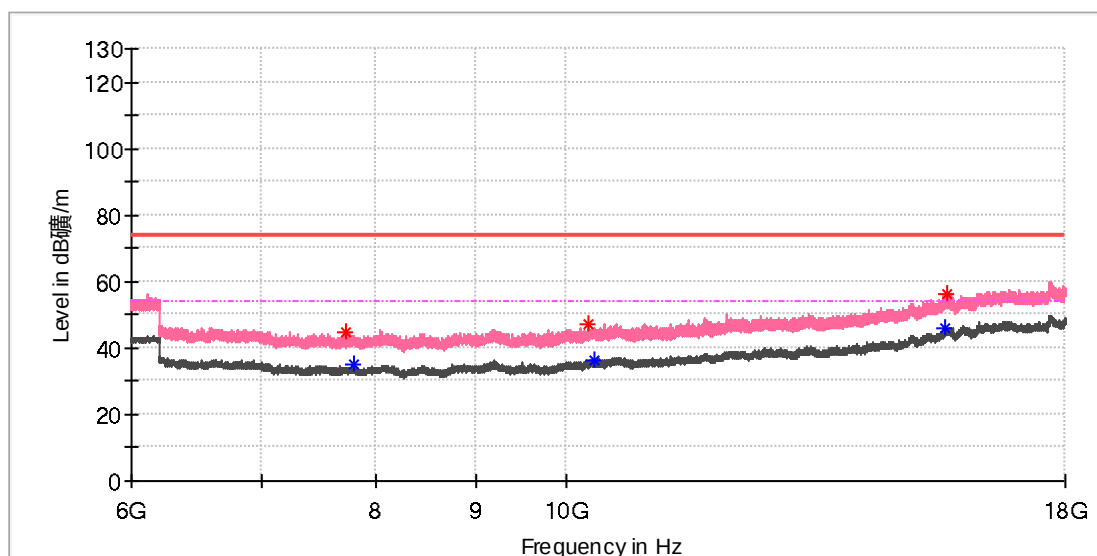
EUT Name: AMAZON LOCKER
 Model: ZL-ODIN-V1
 Test Mode: BT link + EMTC link + Door opening
 Test Voltage: Battery operation
 Test By: Kei Zhang
 Review By: Terry Yin
 Remark:



Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
6570.716667	---	36.12	54.00	17.88	100.0	H	78.0	8.7
6593.825000	46.23	---	74.00	27.77	100.0	H	148.0	8.7
11169.766667	46.92	---	74.00	27.08	100.0	H	96.0	12.5
11391.508333	---	37.39	54.00	16.61	100.0	H	197.0	12.7
16739.366667	---	47.71	54.00	6.29	100.0	H	359.0	21.7
16752.641667	58.08	---	74.00	15.92	100.0	H	305.0	21.7

Produkte
 Products

EUT Name: AMAZON LOCKER
 Model: ZL-ODIN-V1
 Test Mode: BT link + EMTC link + Door opening
 Test Voltage: Battery operation
 Test By: Kei Zhang
 Review By: Terry Yin
 Remark:

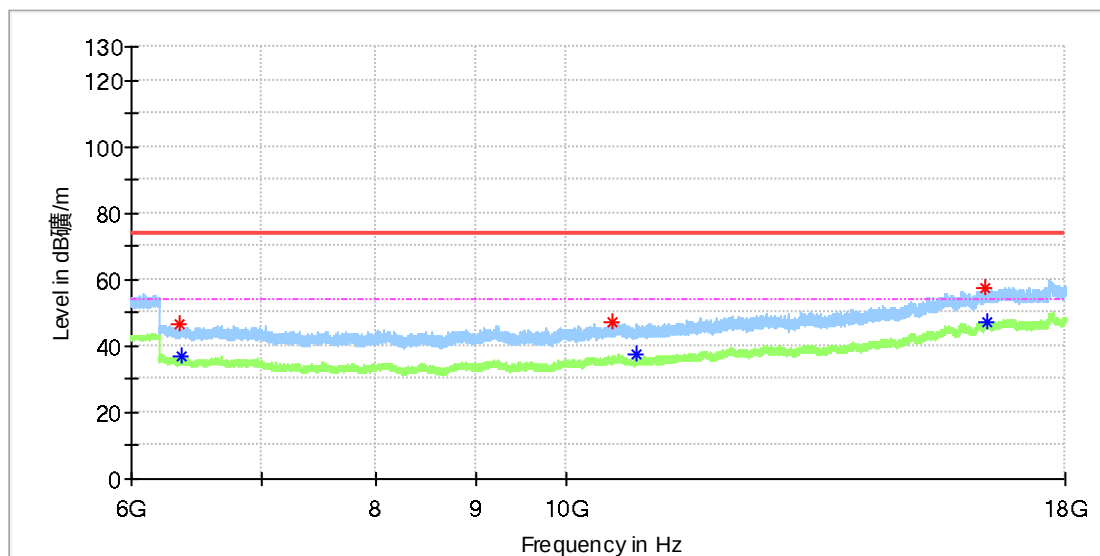


Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7721.216667	44.98	---	74.00	29.02	100.0	V	126.0	8.7
7796.933333	---	35.17	54.00	18.83	100.0	V	246.0	8.9
10276.900000	46.97	---	74.00	27.03	100.0	V	212.0	11.5
10338.358333	---	36.37	54.00	17.63	100.0	V	109.0	11.7
15630.166667	---	46.09	54.00	7.91	100.0	V	329.0	18.8
15656.225000	56.21	---	74.00	17.79	100.0	V	195.0	18.9

Produkte

Products

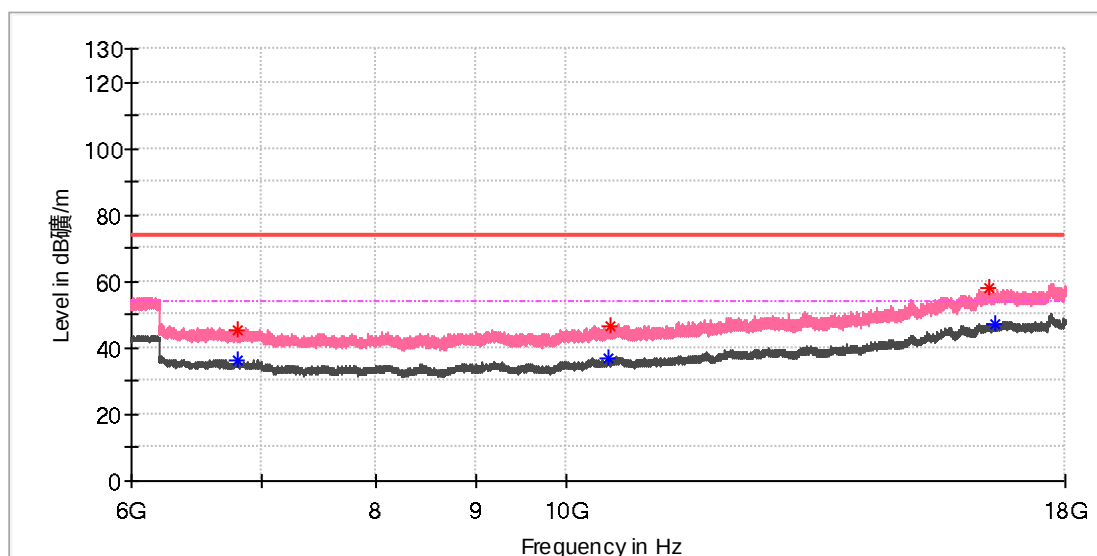
EUT Name: AMAZON LOCKER
 Model: ZL-ODIN-V1
 Test Mode: BT link + GPRS link + Door opening
 Test Voltage: Battery operation
 Test By: Kei Zhang
 Review By: Terry Yin
 Remark:



Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
6354.875000	46.75	---	74.00	27.25	100.0	H	7.0	8.9
6370.608333	---	36.67	54.00	17.33	100.0	H	202.0	8.9
10577.308333	46.91	---	74.00	27.09	100.0	H	293.0	12.0
10865.916667	---	37.57	54.00	16.43	100.0	H	270.0	12.2
16389.300000	57.27	---	74.00	16.73	100.0	H	186.0	21.1
16401.591667	---	47.34	54.00	6.66	100.0	H	218.0	21.1

Produkte
 Products

EUT Name: AMAZON LOCKER
 Model: ZL-ODIN-V1
 Test Mode: BT link + GPRS link + Door opening
 Test Voltage: Battery operation
 Test By: Kei Zhang
 Review By: Terry Yin
 Remark:

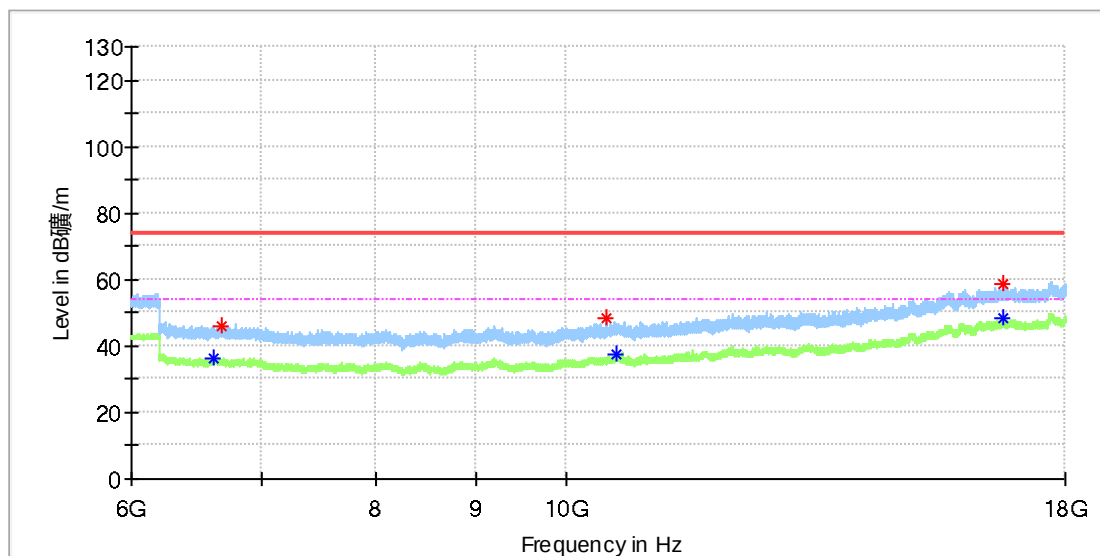


Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
6794.916667	45.41	---	74.00	28.59	100.0	V	243.0	8.6
6803.275000	---	36.05	54.00	17.95	100.0	V	151.0	8.6
10524.208333	---	36.93	54.00	17.07	100.0	V	227.0	12.0
10533.058333	46.68	---	74.00	27.32	100.0	V	167.0	12.0
16458.625000	57.94	---	74.00	16.06	100.0	V	167.0	21.2
16559.908333	---	47.44	54.00	6.56	100.0	V	260.0	21.1

Produkte

Products

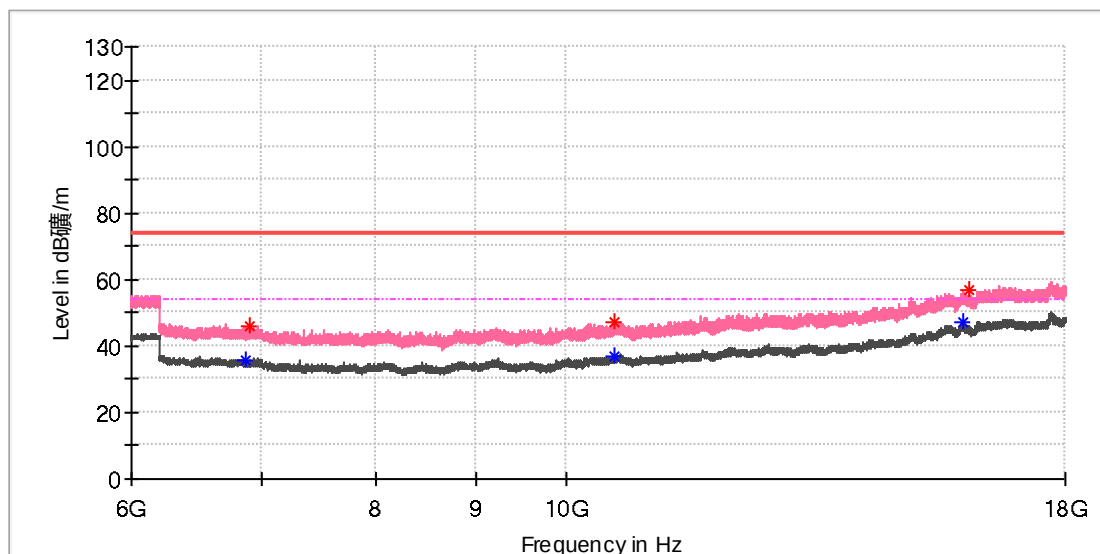
EUT Name: AMAZON LOCKER
 Model: ZL-ODIN-V1
 Test Mode: BT link + NB-IoT link + Door opening
 Test Voltage: Battery operation
 Test By: Kei Zhang
 Review By: Terry Yin
 Remark:



Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
6605.625000	---	36.39	54.00	17.61	100.0	H	314.0	8.8
6668.066667	46.22	---	74.00	27.78	100.0	H	314.0	8.9
10497.166667	48.13	---	74.00	25.87	100.0	H	314.0	12.0
10612.708333	---	37.61	54.00	16.39	100.0	H	250.0	12.0
16727.075000	58.54	---	74.00	15.46	100.0	H	283.0	21.6
16743.791667	---	48.17	54.00	5.83	100.0	H	96.0	21.7

Produkte
Products

EUT Name: AMAZON LOCKER
 Model: ZL-ODIN-V1
 Test Mode: BT link + NB-IoT link + Door opening
 Test Voltage: Battery operation
 Test By: Kei Zhang
 Review By: Terry Yin
 Remark:

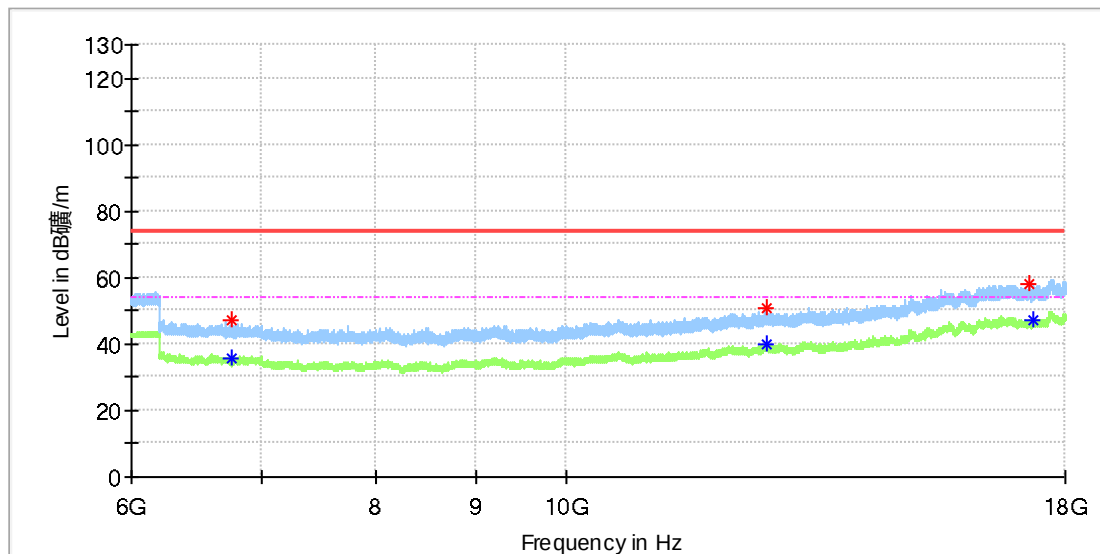


Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
6856.866667	---	35.95	54.00	18.05	100.0	V	176.0	8.6
6900.133333	45.91	---	74.00	28.09	100.0	V	124.0	8.6
10596.483333	---	36.90	54.00	17.10	100.0	V	331.0	12.1
10597.466667	47.01	---	74.00	26.99	100.0	V	124.0	12.1
15951.225000	---	46.90	54.00	7.10	100.0	V	280.0	19.6
16073.158333	56.82	---	74.00	17.18	100.0	V	24.0	19.9

Produkte

Products

EUT Name: AMAZON LOCKER
 Model: ZL-ODIN-V1
 Test Mode: BT link + NB-IoT link + Vibrator
 Test Voltage: Battery operation
 Test By: Kei Zhang
 Review By: Terry Yin
 Remark:

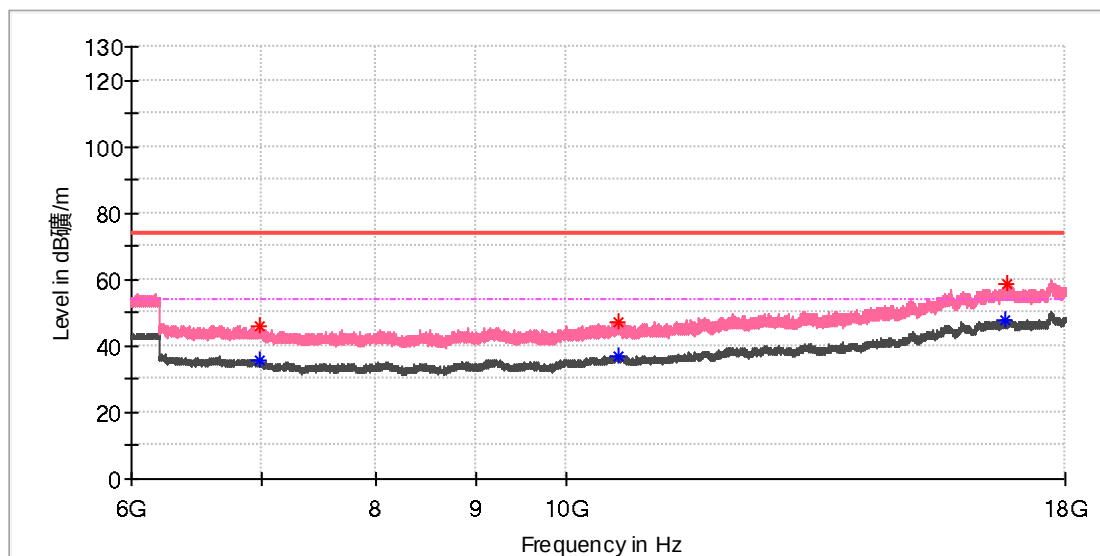


Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
6746.241667	---	35.70	54.00	18.30	100.0	H	222.0	8.6
6746.241667	46.89	---	74.00	27.11	100.0	H	222.0	8.6
12670.333333	---	40.08	54.00	13.92	100.0	H	328.0	15.1
12673.283333	50.82	---	74.00	23.18	100.0	H	328.0	15.1
17245.783333	58.31	---	74.00	15.69	100.0	H	240.0	21.8
17319.041667	---	47.23	54.00	6.77	100.0	H	258.0	21.8

Produkte

Products

EUT Name: AMAZON LOCKER
 Model: ZL-ODIN-V1
 Test Mode: BT link + NB-IoT link + Vibrator
 Test Voltage: Battery operation
 Test By: Kei Zhang
 Review By: Terry Yin
 Remark:



Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
6974.866667	---	35.59	54.00	18.41	100.0	V	272.0	8.6
6984.700000	45.97	---	74.00	28.03	100.0	V	184.0	8.6
10636.308333	47.09	---	74.00	26.91	100.0	V	321.0	12.0
10639.258333	---	36.89	54.00	17.11	100.0	V	288.0	12.0
16785.583333	---	47.65	54.00	6.35	100.0	V	272.0	21.8
16812.625000	58.78	---	74.00	15.22	100.0	V	254.0	21.9