Prüfbericht-Nr.: *Test report no.:*	**CN24ZEU2 001**	**Auftrags-Nr.:** *Order no.*:	**168499083**	**Seite 1 von 17** *Page 1 of 17*
Kunden-Referenz-Nr.: *Client reference no.:*	**N/A**	**Auftragsdatum:** *Order date:*	2024-07-30	
Auftraggeber: *Client:*	**Sanford LP dba Dymo** 3 Glenlake Parkway, NE Atlanta, GA 30328 United States			
Prüfgegenstand: *Test item:*	Label Maker			
Bezeichnung / Typ-Nr.: *Identification / Type no.:*	LabelManager Executive 640CB (Trademark: DYMO)			
Auftrags-Inhalt: *Order content*:	Test Report			
Prüfgrundlage: *Test specification:*	CFR47 FCC Part 15: Subpart C Section 15.249 CFR47 FCC Part 15: Subpart C Section 15.209		RSS-210 Issue 11 June 2024 RSS-Gen Issue 5 February 2021	

Wareneingangsdatum: *Date of sample receipt:*	2024-08-12	Please refer to Photo Document
Prüfmuster-Nr.: *Test sample no:*	A003791854	
Prüfzeitraum: *Testing period:*	2024-08-23 – 2024-10-09	
Ort der Prüfung: *Place of testing:*	Shenzhen Huaxia Testing Technology Co., Ltd.	
Prüflaboratorium: *Testing laboratory:*	TÜV Rheinland (Shenzhen) Co., Ltd.	
Prüfergebnis*: *Test result*:*	Pass	

geprüft von: *tested by:*	X Signed by: Harry W. C. Wu	**genehmigt von:** *authorized by:*	X Signed by: Alex Lan
Datum: *Date:* 2024-10-10		**Ausstellungsdatum:** *Issue date:* 2024-10-10	
Stellung */ Position:*	Sachverständige(r)/Expert	**Stellung** */ Position:*	Sachverständige(r)/Expert

Sonstiges */ Other:* FCC ID: RGDLM640
IC: 11034A-LM640, HVIN: LabelManager Executive 640CB

Zustand des Prüfgegenstandes bei Anlieferung: Prüfmuster vollständig und unbeschädigt
Condition of the test item at delivery: *Test item complete and undamaged*

* 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*

Remarks
Anmerkungen

1	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. *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.*
2	As contractually agreed, this document has been signed digitally only. TUV Rheinland has not verified and unable to verify which legal or other pertaining requirements are applcable for this document. Such verification is within the responsibility of the user of this document. Upon request by its client, TUV 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. *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.*
3	Test clauses with remark of * are subcontracted to qualified subcontractors and descripted under the respective test clause in the report. Deviations of testing specification(s) or customer requirements are listed in specific test clause in the report. *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.*
4	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. *Die Entscheidungsregel für Konformitätserklärungen basierend auf numerischen Messergebnisen 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 bezueglich des Risikos durch diese Entscheidungsregel siehe ILAC G8:2019.*

Test Summary

5.1.1 ANTENNA REQUIREMENT
RESULT: Pass

5.1.2 FUNDAMENTAL & HARMONICS RADIATED EMISSION
RESULT: Pass

5.1.3 20DB BANDWIDTH
RESULT: Pass

5.1.4 99% BANDWIDTH
RESULT: Pass

5.1.5 RADIATED SPURIOUS EMISSION & BAND EDGE
RESULT: Pass

Contents

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: Photographs of the Test Set-up

Appendix B: Test Results

2 Test Sites

2.1 Test Facilities

Shenzhen Huaxia Testing Technology Co., Ltd.
1F., Block A of Tongsheng Technology Building, Huahui Road, Dalang Street, Longhua District, Shenzhen, China

FCC Accreditation Designation No.: CN1224

ISED wireless device testing laboratory: 22984, CAB identifier: CN0055

The tests at the test sites have been conducted under the supervision of a TÜV engineer.

2.2 List of Test and Measurement Instruments

Table 1: List of Test and Measurement Equipment

Shenzhen Huaxia Testing Technology Co., Ltd.

RF Radiation Test Equipment					
Kind of Equipment	**Manufacturer**	**Type No.**	**Serial No.**	**Last Calibration**	**Calibrated Until**
Horn Antenna	R&S	HF906	CQA-012	2024/9/15	2027/9/14
Bilog Antenna	R&S	HL562	CQA-011	2024/9/15	2027/9/14
EMI Test Receiver	R&S	ESR7	CQA-005	2024/9/7	2025/9/6
Spectrum analyzer	R&S	FSU26	CQA-038	2024/9/7	2025/9/6
Preamplifier	MITEQ	AMF-6D-02001800-29-20P	CQA-036	2024/9/7	2025/9/6
Universal Radio Communication Tester	Rohde & Schwarz	CMW500	CQA-022	2024/9/7	2025/9/6
high-low temperature chamber	Auchno	OJN-9606	CQA-S003	2024/9/7	2025/9/6
Signal generator	R&S	SME06	CQA-024	2024/9/7	2025/9/6
Vector signal generator	R&S	SMBV100A	CQA-039	2024/9/7	2025/9/6
DC power	KEYSIGHT	E3631A	CQA-028	2024/9/7	2025/9/6
RF Control Unit	Tonsced	JS0806-2	CQA-057	2024/9/7	2025/9/6
Coaxial Cable (Above 1GHz)	CQA	N/A	C007	2024/9/7	2025/9/6
Coaxial Cable (Below 1GHz)	CQA	N/A	C013	2024/9/7	2025/9/6
RF Cable (9KHz~40GHz)	CQA	N/A	C005	2024/9/7	2025/9/6

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 basics 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.

Parameter	Uncertainty
Radio Frequency	±1 x 10-7
RF Power (conducted)	±2.5 dB
Radiated Emission of Transmitter, valid up to 26.5 GHz	±6 dB
Radiated Emission of Receiver, valid up to 26.5 GHz	±6 dB
Conducted Emission, (9kHz to 150kHz)/(150kHz to 30MHz)	±3.70 dB / ±3.30 dB
Radiated Emission (3m SAC), 30MHz to 1000MHz	±4.52 dB
Radiated Emission (3m SAC), above 1000MHz	±4.37 dB
Temperature	±1 °C
Humidity	±5 %
Voltage (DC)	±1 %
Voltage (AC, <10kHz)	±2 %

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 Shenzhen Huaxia Testing Technology Co., Ltd. Test facility located at 1F., Block A of Tongsheng Technology Building, Huahui Road, Dalang Street, Longhua District, Shenzhen, 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 label printer, which supports Bluetooth Low Energy technology.

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	Label Maker
Type Designation	LabelManager Executive 640CB
Trademark	DYMO
FCC ID	RGDLM640
IC	11034A-LM640
HVIN	LabelManager Executive 640CB
Operating Voltage	DC 5V, 2A via External AC/DC Adapter Or DC 7.2V, 2000mAh via built-in Li-ion battery
Extreme Temperature Range	0ºC to +45ºC for charging 0ºC to +60ºC for discharging
Technical Specification of Bluetooth low energy	
Bluetooth Core Version	Bluetooth 5.3
Operating Frequency band	2402 ~ 2480 MHz
Channel Number	40 channels
Channel separation	2MHz
Data rate	1Mbps
Modulation	GFSK
Antenna Type	PCB Antenna
Antenna Gain	4.54 dBi

Table 3: RF Channel and Frequency of Bluetooth Low Energy

RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)
0	**2402**	10	2422	20	2442	30	2462
1	2404	11	2424	21	2444	31	2464
2	2406	12	2426	22	2446	32	2466
3	2408	13	2428	23	2448	33	2468
4	2410	14	2430	24	2450	34	2470
5	2412	15	2432	25	2452	35	2472
6	2414	16	2434	26	2454	36	2474
7	2416	17	2436	27	2456	37	2476
8	2418	18	2438	28	2458	38	2478
9	2420	**19**	**2440**	29	2460	**39**	**2480**

Test frequencies are lowest channel: 2402 MHz, middle channel: 2440 MHz and highest channel: 2480 MHz

3.3 Independent Operation Modes

The basic operation modes are:

A. On, BLE transmitting mode
   1. Low channel
   2. Middle channel
   3. High channel

B. Off

Note: The Bluetooth will be disable while charging.

3.4 Noise Generating and Noise Suppressing Parts

Refer to Circuit Diagram for further details.

3.5 Submitted Documents

- Rating Label
- User Manual

4 Test Set-up and Operation Modes

4.1 Principle of Configuration Selection

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.

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 C63.10: 2013.

4.3 Special Accessories and Auxiliary Equipment

Table 4: Auxiliary Equipment Used during Test

Description	Manufacturer	Model	S/N
Laptop	Lenovo	T480	PF-16A6N8

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)

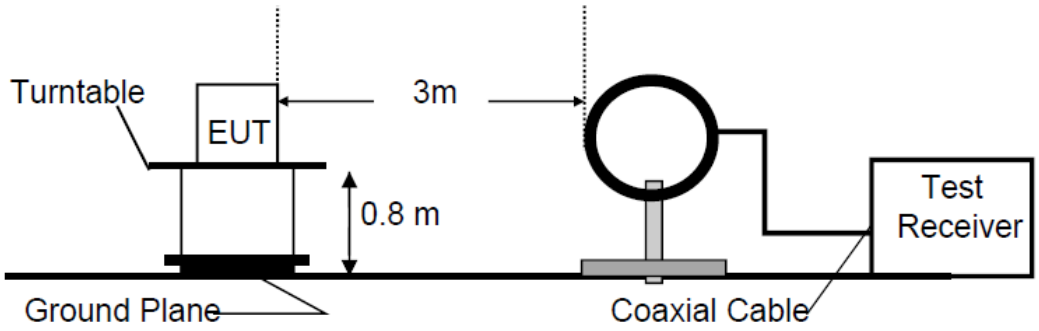


Diagram of Measurement Configuration for Radiation Test (Below 1GHz)

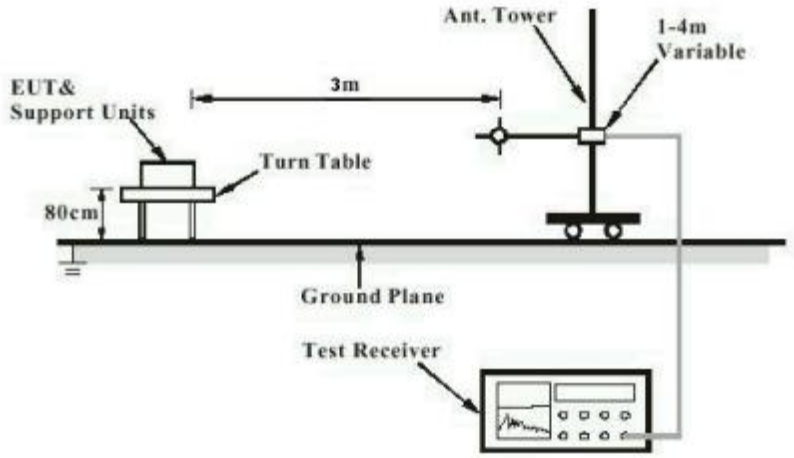
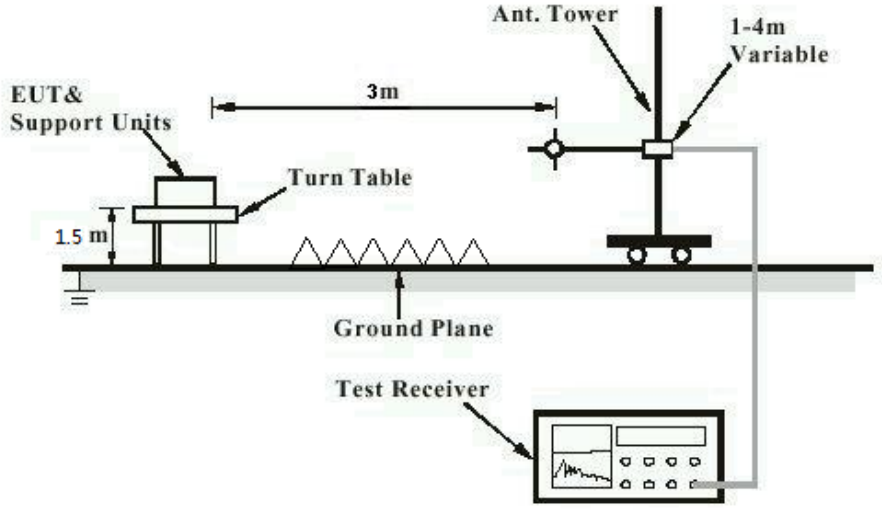


Diagram of Measurement Configuration for Radiation Test (Above 1GHz)



5 Test Results

5.1 Transmitter Requirement & Test Suites

5.1.1 Antenna Requirement

RESULT: **Pass**

Test Specification

Test standard : FCC Part 15.247(b)(4) and Part 15.203
RSS-Gen Clause 6.8

According to the manufacturer declared, the EUT has an internal antenna, the directional gain of antenna is 4.54 dBi, and the antenna connector is designed with 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.

5.1.2 Fundamental & Harmonics Radiated Emission

RESULT: **Pass**

Test Specification

Test standard	:	FCC Part 15.249(a) RSS-210 Issue 11 B.10
Basic standard	:	ANSI C63.10: 2013 RSS-210 Issue 11 B.10(a) & Table A2
Limits	:	Refer to FCC Part 15.249(a) & 15.209(a)
Kind of test site	:	3m Semi-anechoic Chamber & 3m Full-anechoic Chamber

Test Setup

Date of testing	:	2024-08-23 ~ 2024-10-09
Input voltage	:	Battery
Operation mode	:	A
Test channel	:	Low / Middle / High
Ambient temperature	:	25.5 ℃
Relative humidity	:	53 %
Atmospheric pressure	:	101 kPa

For the measurement records, refer to the appendix B.

5.1.3 20dB Bandwidth

RESULT: **Pass**

Test Specification

Test standard	:	FCC Part 15.215 RSS-Gen clause 6.7
Basic standard	:	ANSI C63.10: 2013
Kind of test site	:	Shielded Room

Test Setup

Date of testing	:	2024-08-23 ~ 2024-10-09
Input voltage	:	Battery
Operation mode	:	A
Test channel	:	Low / Middle / High
Ambient temperature	:	25.5 ℃
Relative humidity	:	53 %
Atmospheric pressure	:	101 kPa

For the measurement records, refer to the appendix B.

Table 5: Test Result of 20dB Bandwidth

Test mode	Test Channel (MHz)	Test Channel Frequency (MHz)	20dB Bandwidth (MHz)	Verdict
BLE 1Mbps	Low Channel	2402	1.13	PASS
	Middle Channel	2440	1.13	
	High Channel	2480	1.13	

5.1.4 99% Bandwidth

RESULT: **Pass**

Test Specification

Test standard	:	RSS-Gen clause 6.7
Basic standard	:	ANSI C63.10: 2013
Kind of test site	:	Shielded Room

Test Setup

Date of testing	:	2024-08-23 ~ 2024-10-09
Input voltage	:	Battery
Operation mode	:	A
Test channel	:	Low / Middle / High
Ambient temperature	:	25.5 ℃
Relative humidity	:	53 %
Atmospheric pressure	:	101 kPa

For the measurement records, refer to the appendix B.

Table 6: Test Result of 99% Bandwidth

Test mode	Test Channel (MHz)	Test Channel Frequency (MHz)	99% Bandwidth (MHz))	Verdict
BLE 1Mbps	Low Channel	2402	1.02	PASS
	Middle Channel	2440	1.02	
	High Channel	2480	1.02	

5.1.5 Radiated Spurious Emission & Band Edge

RESULT: **Pass**

Test Specification

Test standard	:	FCC Part 15.249(a) RSS-210 Issue 11 B.10
Basic standard	:	ANSI C63.10: 2013
Limits	:	Refer to FCC Part 15.249(a) & 15.209(a) RSS-210 Issue 11 B.10(a) & Table A2
Kind of test site	:	3m Semi-anechoic Chamber & 3m Full-anechoic Chamber

Test Setup

Date of testing	:	2024-08-23 ~ 2024-10-09
Input voltage	:	Battery
Operation mode	:	A
Test channel	:	Low / Middle / High
Ambient temperature	:	25 ℃
Relative humidity	:	56 %
Atmospheric pressure	:	101 kPa

Testing was carried out within frequency range 9kHz to the tenth harmonics. Only the worst case spurious emissions configuration of the each mode were reported.

For the measurement records, refer to the appendix B.

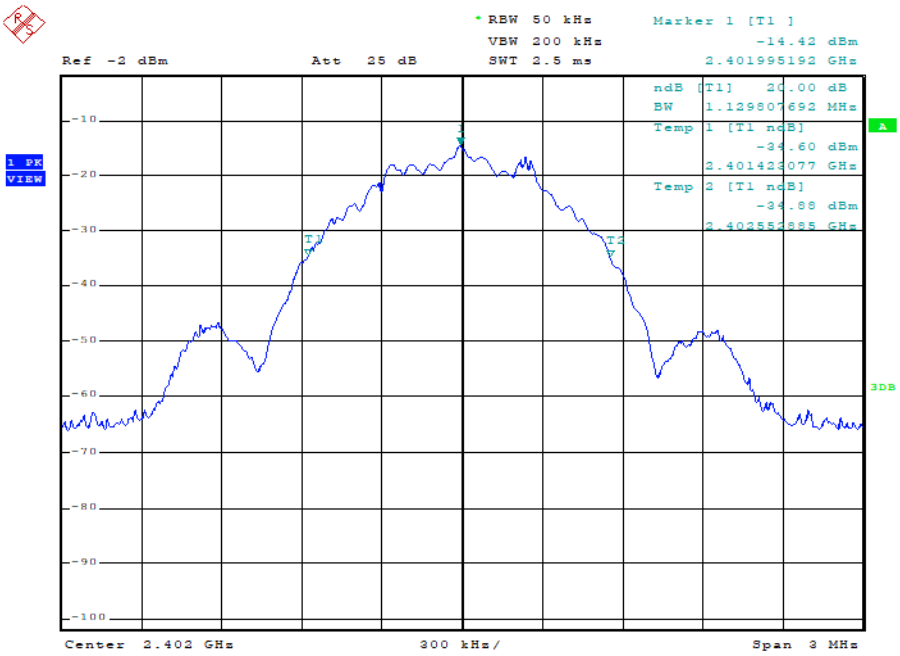
6 Photographs of the Test Set-Up

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

7 List of Tables

Appendix B: Test Results

Appendix B.1: Test Results of 20dB Bandwidth



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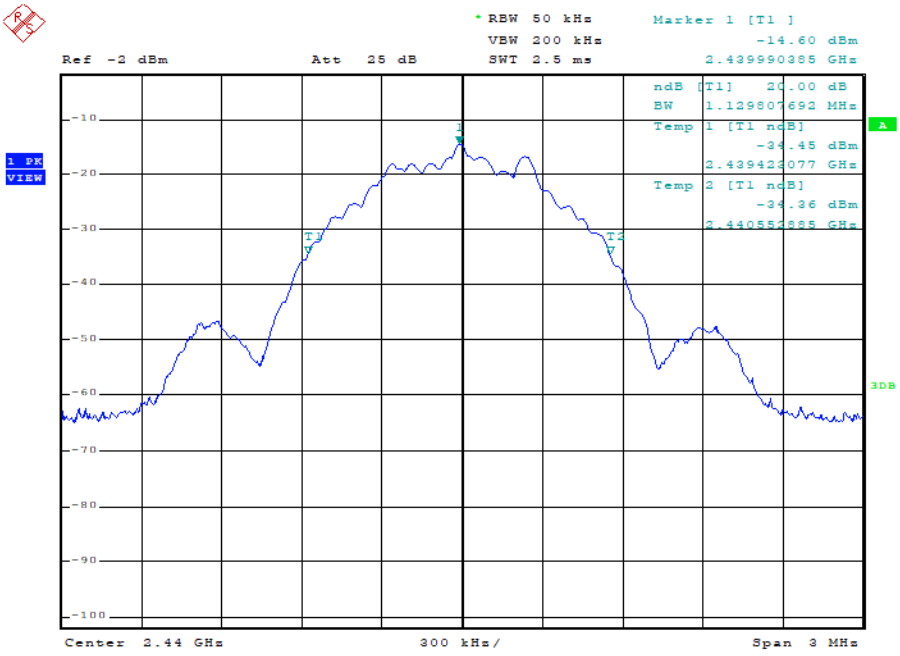

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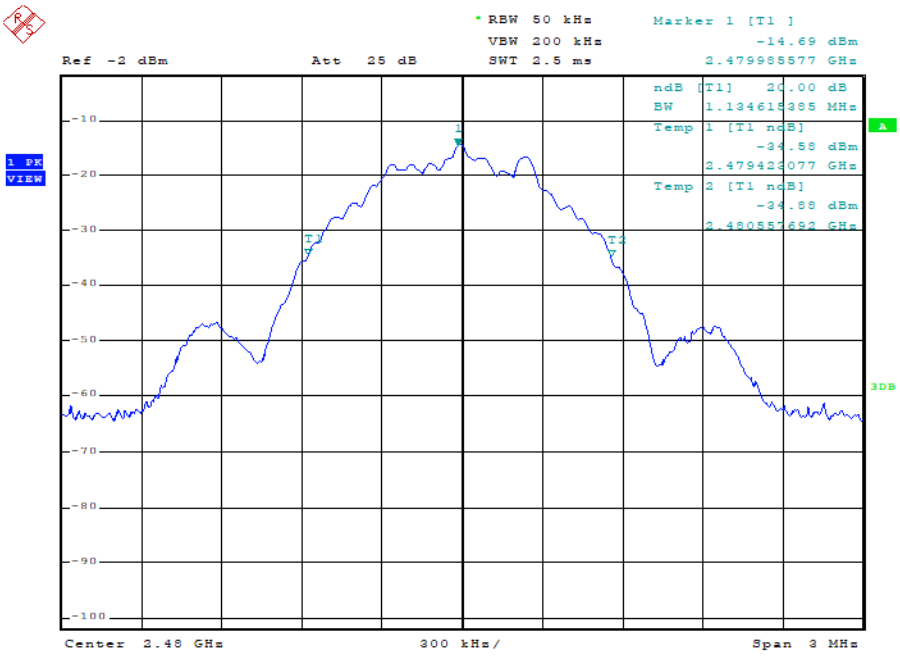
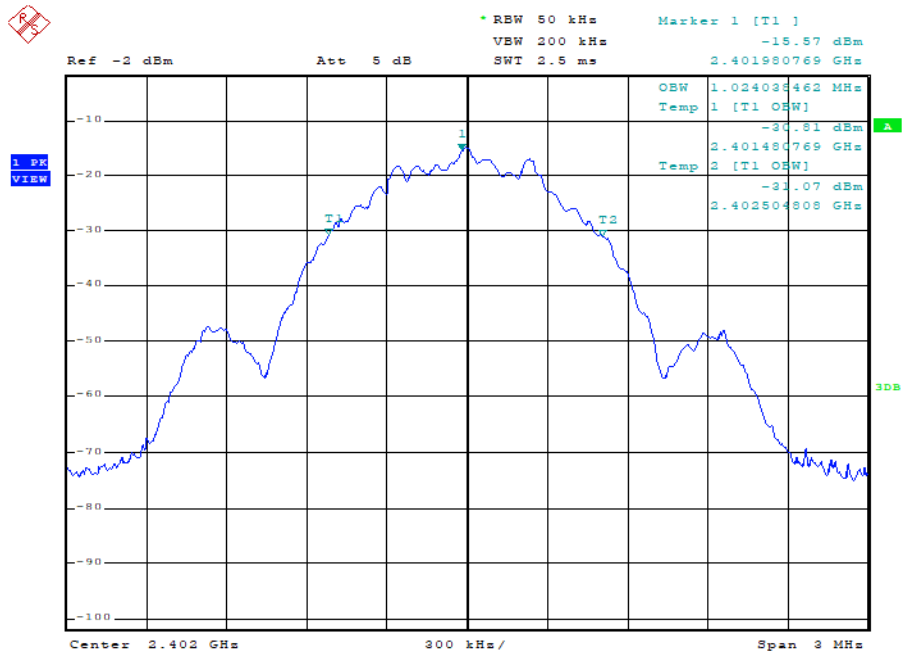


Date: 9.OCT.2024 11:59:27

Appendix B.2: Test Results of 99% Bandwidth



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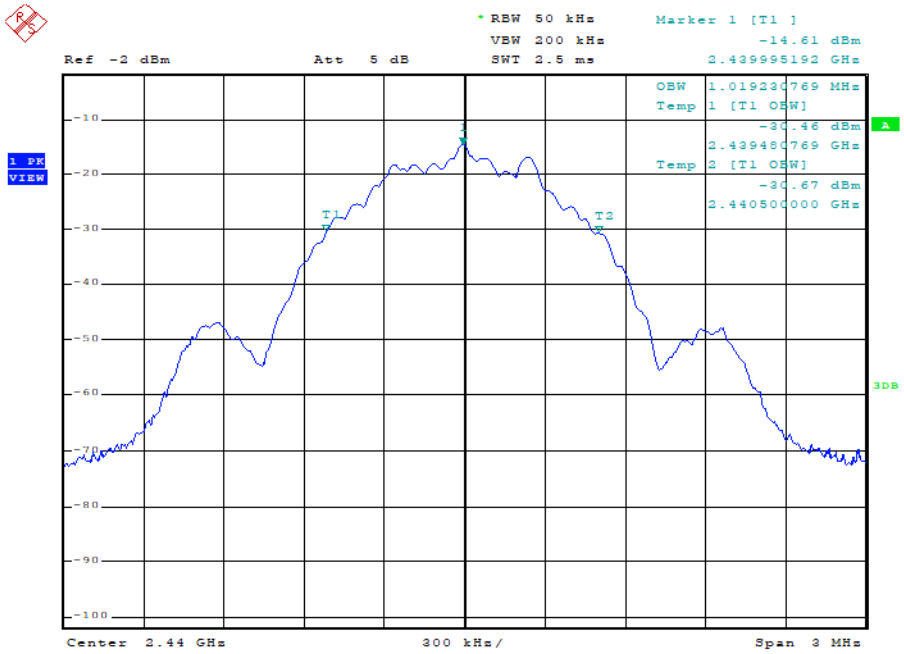
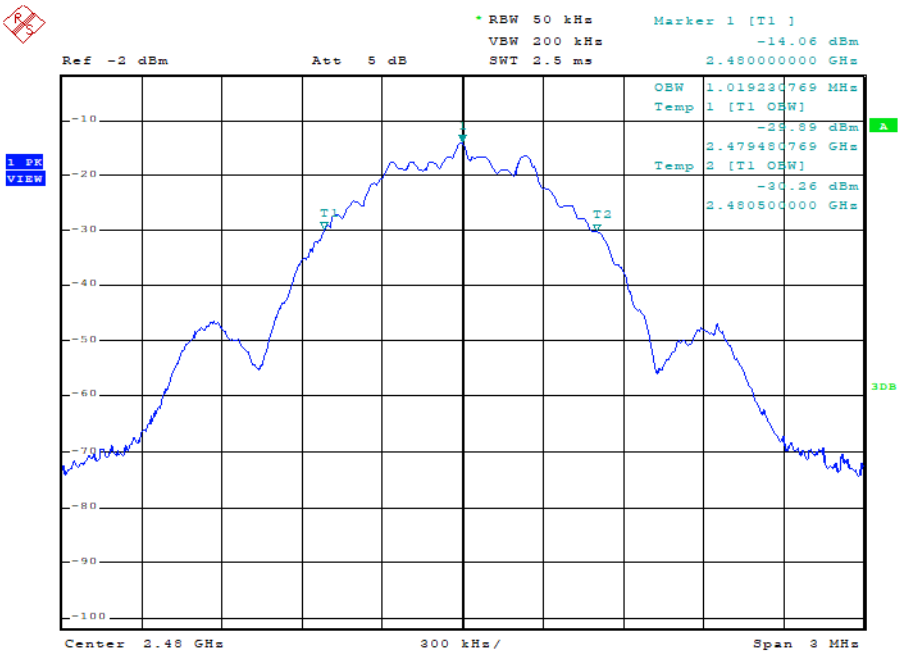


Date: 9.OCT.2024 11:54:18



Date: 9.OCT.2024 11:54:58

Note: Testing was carried out within frequency range 9kHz to the tenth harmonics. The measurement results below 30MHz and 18GHz -26.5GHz were greater than 20dB below the limit, so only the radiated spurious emissions from 30MHz to 18GHz were reported.

Appendix B.3: Fundamental & Harmonics Radiated Emission

30MHz - 1GHz

EUT Information

EUT Name:	Label Maker
Model:	LabelManager Executive 640CB
Test Mode:	BLE TX
Test Voltage:	Battery
Standard:	FCC 15.249
Tem./Hum./Pressure:	25.5°C/53.0%/101kPa

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Shenzhen Huaxia Testing Technology Co., Ltd.
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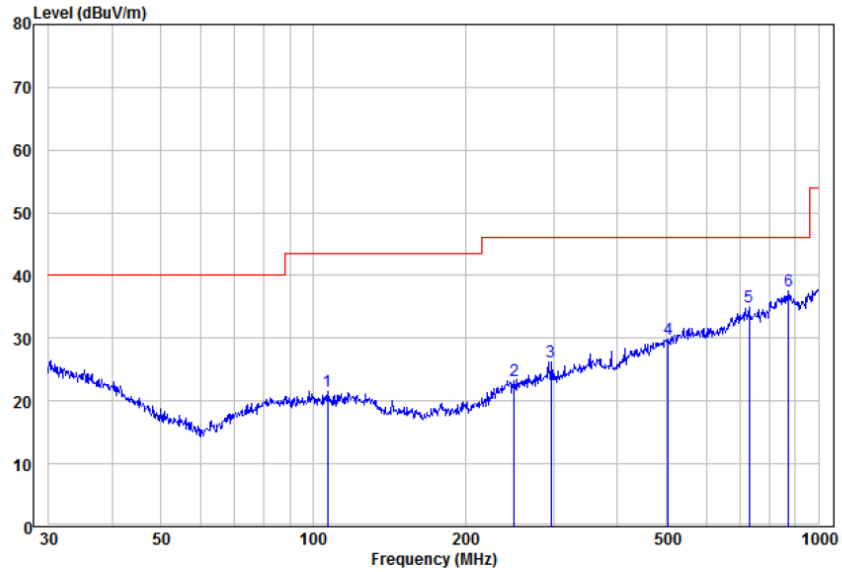
1/F., Block A of Tongsheng Technology Building, Huahui Road, Dalang Street, Longhua New District,



Test time : 2024.9.25
Test Engineer : Karin

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark	Pol/Phase	APos	TPos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB			cm	deg
1	106.76	10.15	11.46	21.61	43.50	-21.89	Peak	HORIZONTAL	---	0
2	250.30	9.58	13.63	23.21	46.00	-22.79	Peak	HORIZONTAL	---	0
3	296.18	11.11	15.19	26.30	46.00	-19.70	Peak	HORIZONTAL	---	0
4	504.71	9.51	20.36	29.87	46.00	-16.13	Peak	HORIZONTAL	---	0
5	729.36	11.32	23.57	34.89	46.00	-11.11	Peak	HORIZONTAL	---	0
6 pp	872.18	10.87	26.77	37.64	46.00	-8.36	Peak	HORIZONTAL	---	0

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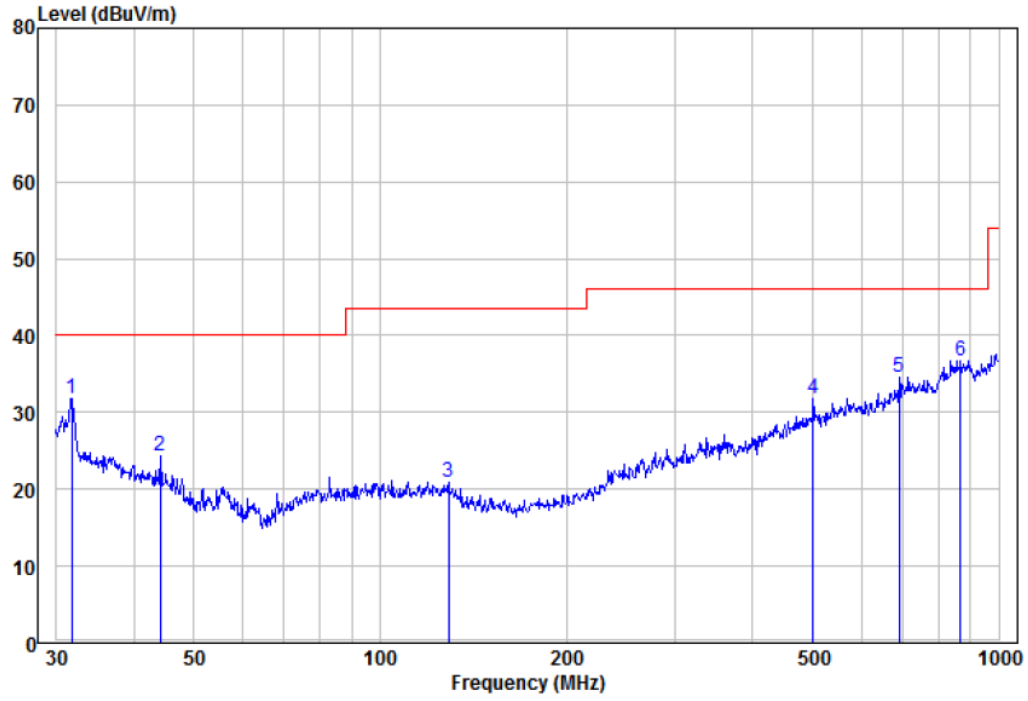
Shenzhen Huaxia Testing Technology Co., Ltd.
深圳市龙华新区大浪华辉路同胜科技大厦A座一楼
1/F., Block A of Tongsheng Technology Building, Huahui Road, Dalang Street,
Longhua New District,



Test time : 2024.9.25
Test Engineer : Karin

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark	Pol/Phase	APos	TPos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB			cm	deg
1 pp	31.73	16.10	15.71	31.81	40.00	-8.19	Peak	VERTICAL	---	360
2	44.12	12.82	11.54	24.36	40.00	-15.64	Peak	VERTICAL	---	360
3	129.01	9.34	11.59	20.93	43.50	-22.57	Peak	VERTICAL	---	360
4	501.18	11.56	20.31	31.87	46.00	-14.13	Peak	VERTICAL	---	360
5	689.56	11.46	23.16	34.62	46.00	-11.38	Peak	VERTICAL	---	360
6	869.13	10.00	26.78	36.78	46.00	-9.22	Peak	VERTICAL	---	360

1GHz -10GHz

EUT Information

EUT Name:	Label Maker
Model:	LabelManager Executive 640CB
Test Mode:	BLE TX 2402MHz
Test Voltage:	Battery
Standard:	FCC 15.249
Tem./Hum./Pressure:	25.5°C/53.0%/101kPa

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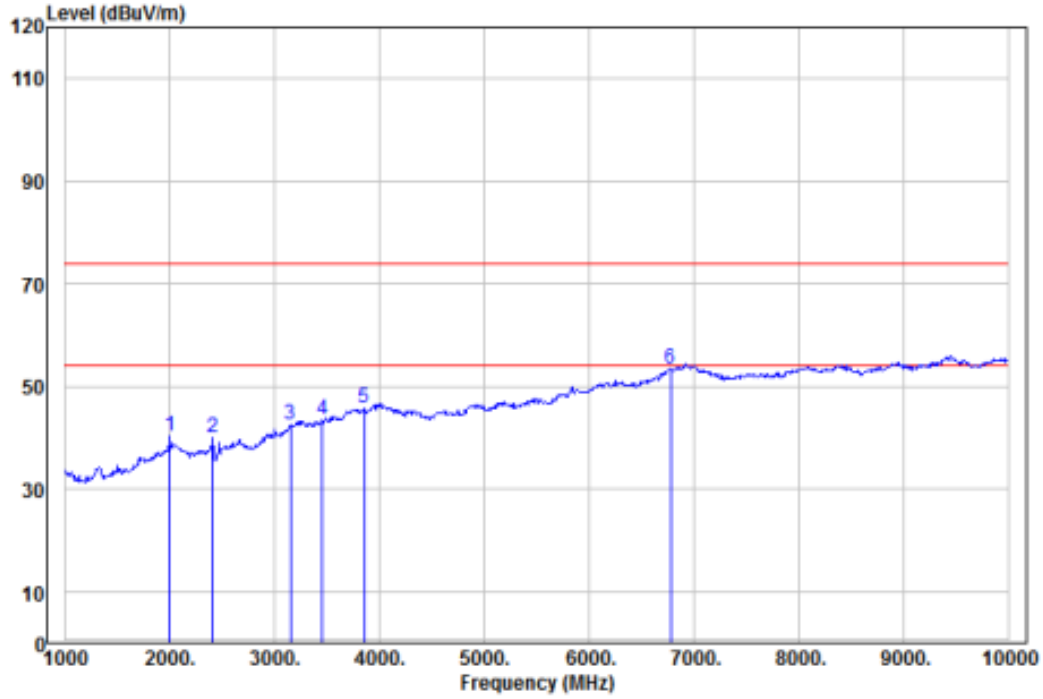

Test time : 2024.9.26
Test Engineer: Karin

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark	Pol/Phase	APos	TPos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB			cm	deg
1	1999.00	43.35	-3.15	40.20	74.00	-33.80	Average	HORIZONTAL	---	360
2	2404.00	44.59	-4.58	40.01	74.00	-33.99	Average	HORIZONTAL	---	360
3	3151.00	42.48	0.00	42.48	74.00	-31.52	Average	HORIZONTAL	---	360
4	3457.00	42.63	0.83	43.46	74.00	-30.54	Average	HORIZONTAL	---	360
5	3853.00	42.28	3.59	45.87	74.00	-28.13	Average	HORIZONTAL	---	360
6 pp	6778.00	38.45	15.03	53.48	74.00	-20.52	Average	HORIZONTAL	---	360

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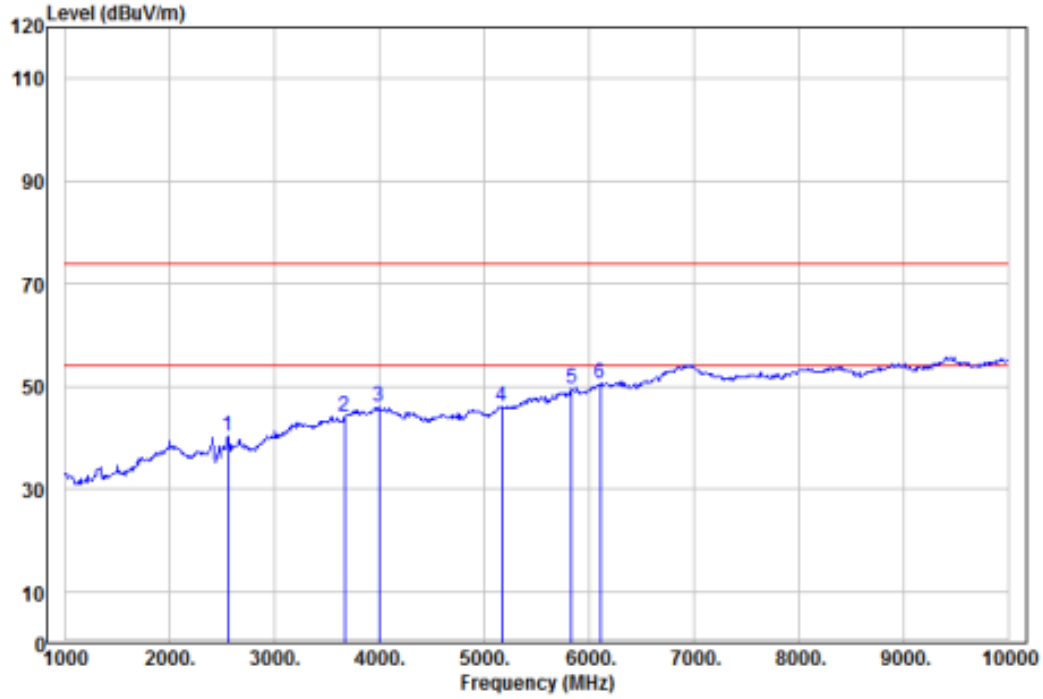

Test time : 2024.9.26
Test Engineer: Karin

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark	Pol/Phase	APos	TPos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB			cm	deg
1	2557.00	43.96	-3.56	40.40	74.00	-33.60	Average	VERTICAL	---	0
2	3664.00	41.79	2.44	44.23	74.00	-29.77	Average	VERTICAL	---	0
3	3997.00	41.74	4.19	45.93	74.00	-28.07	Average	VERTICAL	---	0
4	5167.00	38.62	7.53	46.15	74.00	-27.85	Average	VERTICAL	---	0
5	5833.00	39.15	10.54	49.69	74.00	-24.31	Average	VERTICAL	---	0
6 pp	6103.00	38.69	11.90	50.59	74.00	-23.41	Average	VERTICAL	---	0

EUT Information

EUT Name:	Label Maker
Model:	LabelManager Executive 640CB
Test Mode:	BLE TX 2480MHz
Test Voltage:	Battery
Standard:	FCC 15.249
Tem./Hum./Pressure:	25.5°C/53.0%/101kPa

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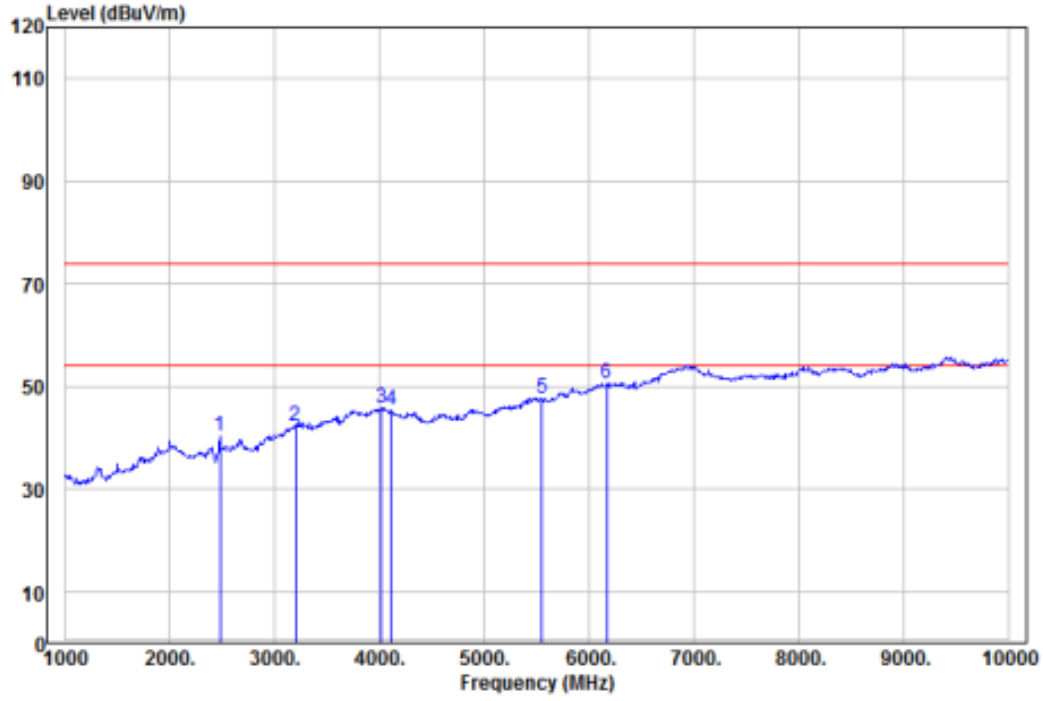

Test time : 2024.9.26
Test Engineer: Karin

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark	Pol/Phase	APos	TPos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB			cm	deg
1	2476.00	44.47	-4.17	40.30	74.00	-33.70	Average	VERTICAL	---	360
2	3196.00	42.07	0.25	42.32	74.00	-31.68	Average	VERTICAL	---	360
3	4015.00	41.45	4.22	45.67	74.00	-28.33	Average	VERTICAL	---	360
4	4114.00	41.05	4.27	45.32	74.00	-28.68	Average	VERTICAL	---	360
5	5554.00	38.87	8.90	47.77	74.00	-26.23	Average	VERTICAL	---	360
6 pp	6166.00	38.42	12.15	50.57	74.00	-23.43	Average	VERTICAL	---	360

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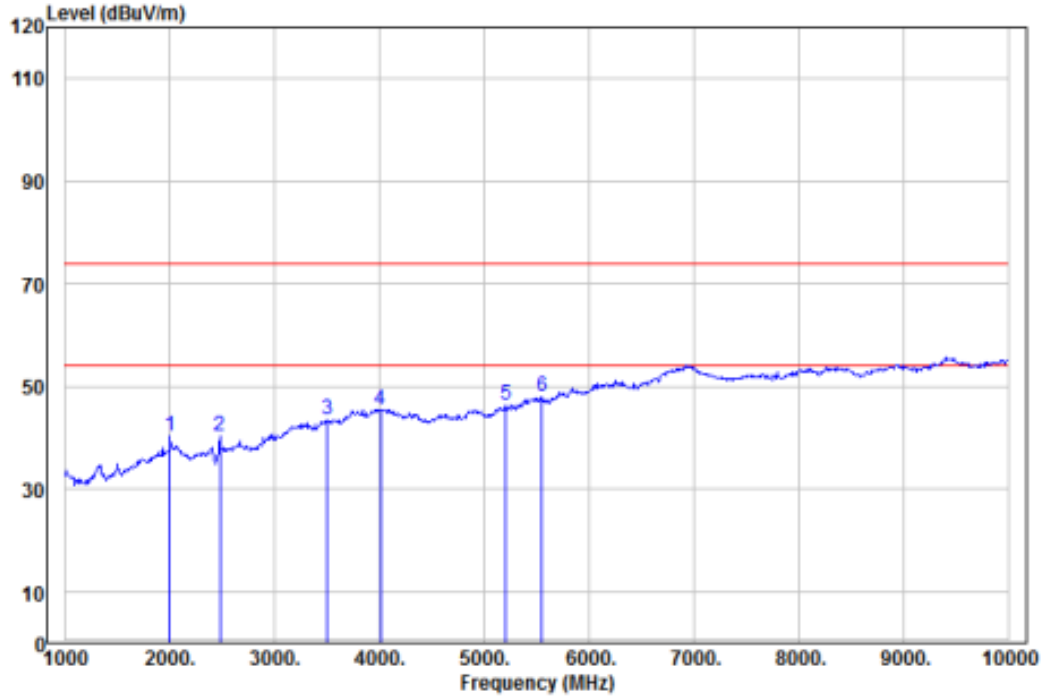

Test time : 2024.9.26
Test Engineer: Karin

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark	Pol/Phase	APos	TPos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB			cm	deg
1	1999.00	43.62	-3.15	40.47	74.00	-33.53	Average	HORIZONTAL	---	0
2	2476.00	44.58	-4.17	40.41	74.00	-33.59	Average	HORIZONTAL	---	0
3	3502.00	42.27	1.14	43.41	74.00	-30.59	Average	HORIZONTAL	---	0
4	4006.00	41.39	4.20	45.59	74.00	-28.41	Average	HORIZONTAL	---	0
5	5203.00	38.51	7.75	46.26	74.00	-27.74	Average	HORIZONTAL	---	0
6 pp	5554.00	39.11	8.90	48.01	74.00	-25.99	Average	HORIZONTAL	---	0

Results of Fundamental Radiated Emission

Test channel:	Antenna Polarization	Detector Type	Test data (dBµV/m)	Limit (dBµV/m)	Result
BLE 1Mbps 2402 MHz	Horizonatl	peak	83.18	114	PASS
		AVG	82.27	94	PASS
	Vertical	peak	82.39	114	PASS
		AVG	82.36	94	PASS
BLE 1Mbps 2440 MHz	Horizonatl	peak	82.19	114	PASS
		AVG	82.15	94	PASS
	Vertical	peak	82.20	114	PASS
		AVG	82.18	94	PASS
BLE 1Mbps 2480 MHz	Horizonatl	peak	82.22	114	PASS
		AVG	82.40	94	PASS
	Vertical	peak	82.33	114	PASS
		AVG	82.39	94	PASS

10GHz - 18GHz

Test mode:		GFSK(1Mbps)		Test channel:		Lowest 2402MHz	
Frequency	Meter Reading	Factor	Emission Level	Limits	Over	Detector Type	Ant. Pol.
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)		H/V
11253	64.39	-4.26	60.13	74	-13.87	peak	H
11253	49.93	-4.26	45.67	54	-8.33	AVG	H
15691	62.96	1.18	64.14	74	-9.86	peak	H
15691	50.86	1.18	52.04	54	-1.96	AVG	H
11253	68.15	-4.26	63.89	74	-10.11	peak	V
11253	50.69	-4.26	46.43	54	-7.57	AVG	V
15691	62.79	1.18	63.97	74	-10.03	peak	V
15691	48.92	1.18	50.1	54	-3.9	AVG	V

Test mode:		GFSK(1Mbps)		Test channel:		Middle 2440MHz	
Frequency	Meter Reading	Factor	Emission Level	Limits	Over	Detector Type	Ant. Pol.
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)		H/V
14586	63.25	-4.12	59.13	74	-14.87	peak	H
14586	48.14	-4.12	44.02	54	-9.98	AVG	H
15630	60.86	1.46	62.32	74	-11.68	peak	H
15630	47.69	1.46	49.15	54	-4.85	AVG	H
14586	64.46	-4.12	60.34	74	-13.66	peak	V
14586	48.38	-4.12	44.26	54	-9.74	AVG	V
15630	60.51	1.46	61.97	74	-12.03	peak	V
15630	48.65	1.46	50.11	54	-3.89	AVG	V

Test mode:		GFSK(1Mbps)		Test channel:		Highest 2480MHz	
Frequency	Meter Reading	Factor	Emission Level	Limits	Over	Detector Type	Ant. Pol.
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)		H/V
12743	63.26	-4.03	59.23	74	-14.77	peak	H
12743	50.22	-4.03	46.19	54	-7.81	AVG	H
17523	62.02	1.66	63.68	74	-10.32	peak	H
17523	49.7	1.66	51.36	54	-2.64	AVG	H
12743	65.55	-4.03	61.52	74	-12.48	peak	V
12743	49.64	-4.03	45.61	54	-8.39	AVG	V
17523	62.36	1.66	64.02	74	-9.98	peak	V
17523	49.56	1.66	51.22	54	-2.78	AVG	V

Appendix B.4: Test Results of Radiated Emissions in Restricted Bands

EUT Information

EUT Name:	Label Maker
Model:	LabelManager Executive 640CB
Test Mode:	BLE TX 2402MHz
Test Voltage:	Battery
Standard:	FCC 15.249
Tem./Hum./Pressure:	25.5°C/53.0%/101kPa

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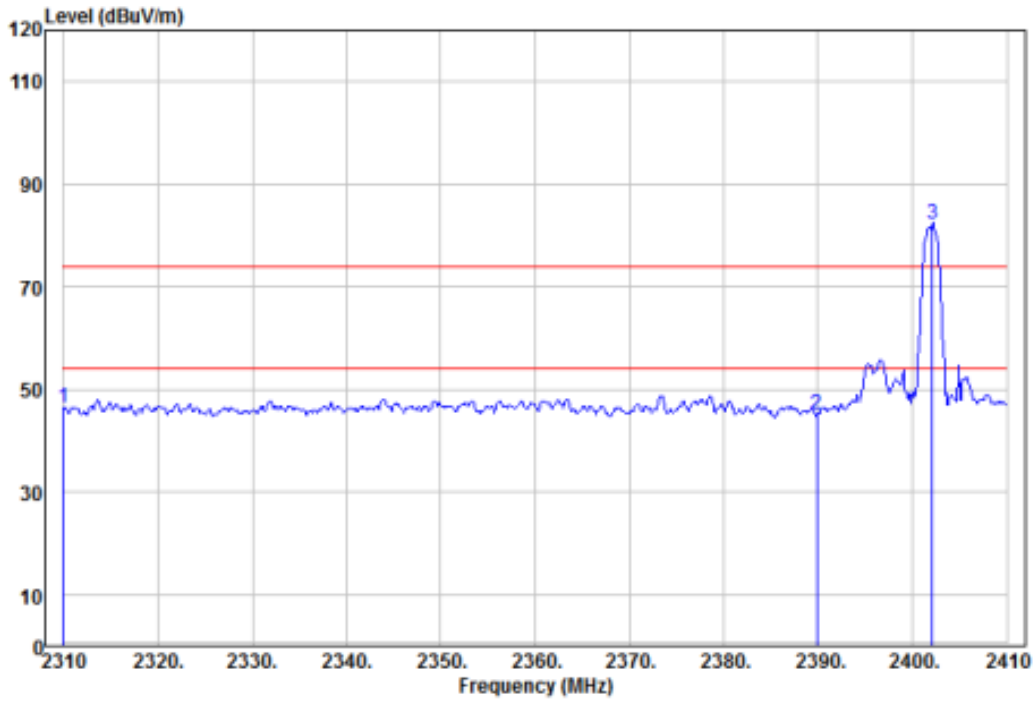

Condition : FCC PART 15B ABOVE 1G PEAK VERTICAL
Test time : 2024.9.29
Test Engineer: Karin

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark	Pol/Phase	APos	TPos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB			cm	deg
1	2310.00	49.38	-3.12	46.26	74.00	-27.74	Peak	VERTICAL	---	295
2	2389.90	47.83	-2.76	45.07	74.00	-28.93	Peak	VERTICAL	---	295
3 pp	2402.10	85.13	-2.74	82.39	74.00	8.39	Peak	VERTICAL	---	295

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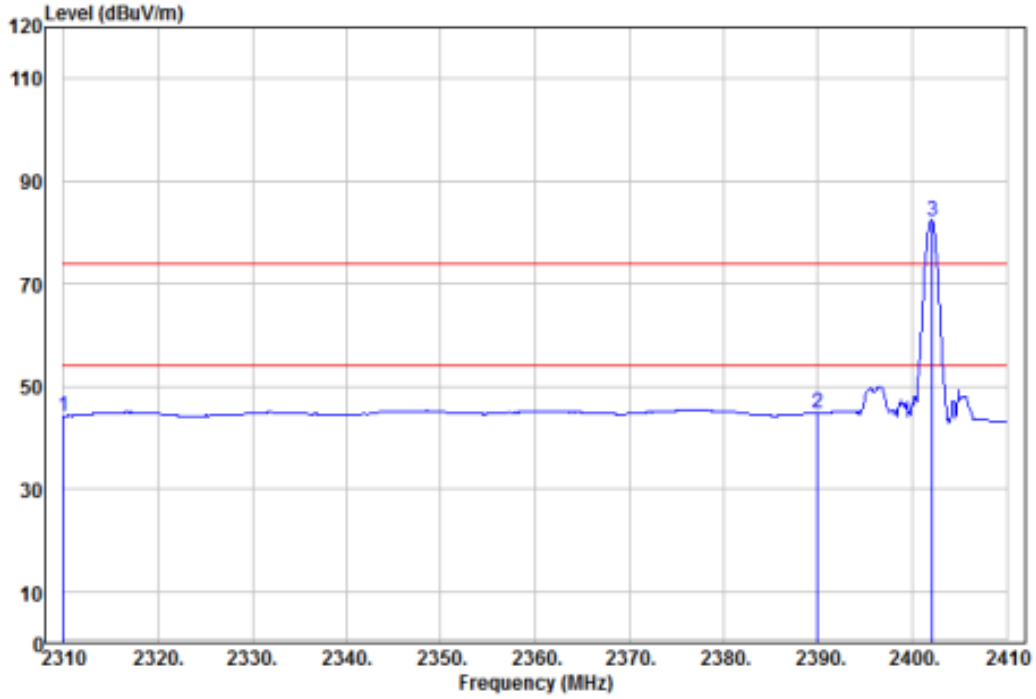

Condition : FCC PART 15B ABOVE 1G AV VERTICAL

Test time : 2024.9.29
Test Engineer: Karin

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark	Pol/Phase	APos	TPos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB			cm	deg
1	2310.00	48.34	-4.10	44.24	54.00	-9.76	Peak	VERTICAL	---	295
2	2390.00	48.70	-3.86	44.84	54.00	-9.16	Peak	VERTICAL	---	295
3 pp	2402.10	86.23	-3.87	82.36	54.00	28.36	Peak	VERTICAL	---	295

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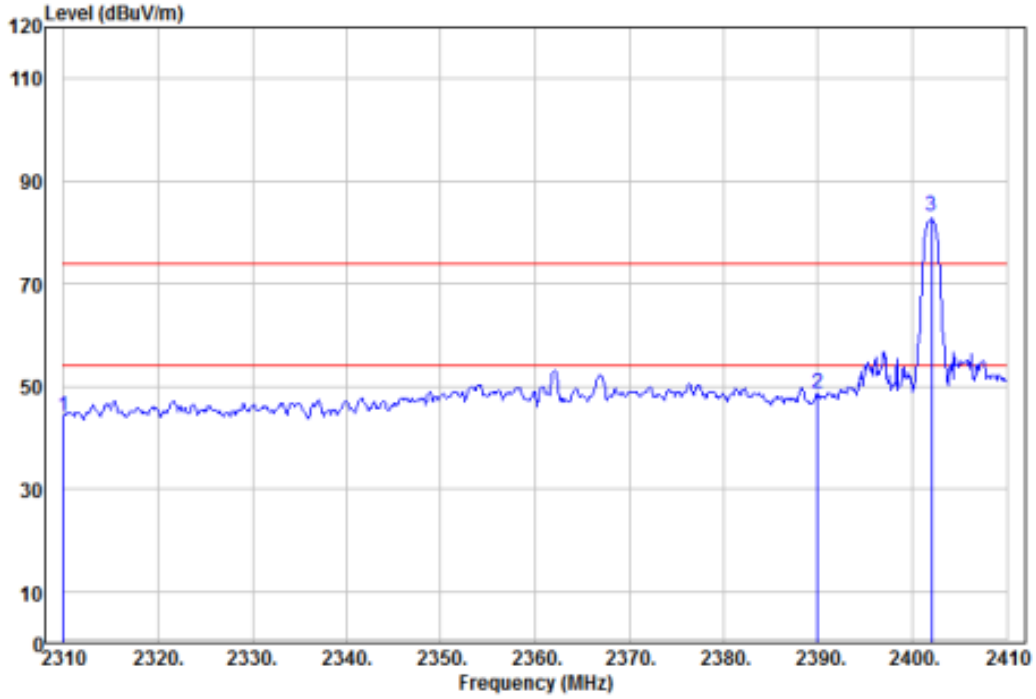

Condition : FCC PART 15B ABOVE 1G PEAK HORIZONTAL

Test time : 2024.9.29
Test Engineer: Karin

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark	Pol/Phase	APos	TPos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB			cm	deg
1	2310.00	47.24	-3.12	44.12	74.00	-29.88	Peak	HORIZONTAL	---	295
2	2390.00	51.44	-2.76	48.68	74.00	-25.32	Peak	HORIZONTAL	---	295
3 pp	2402.00	85.92	-2.74	83.18	74.00	9.18	Peak	HORIZONTAL	---	295

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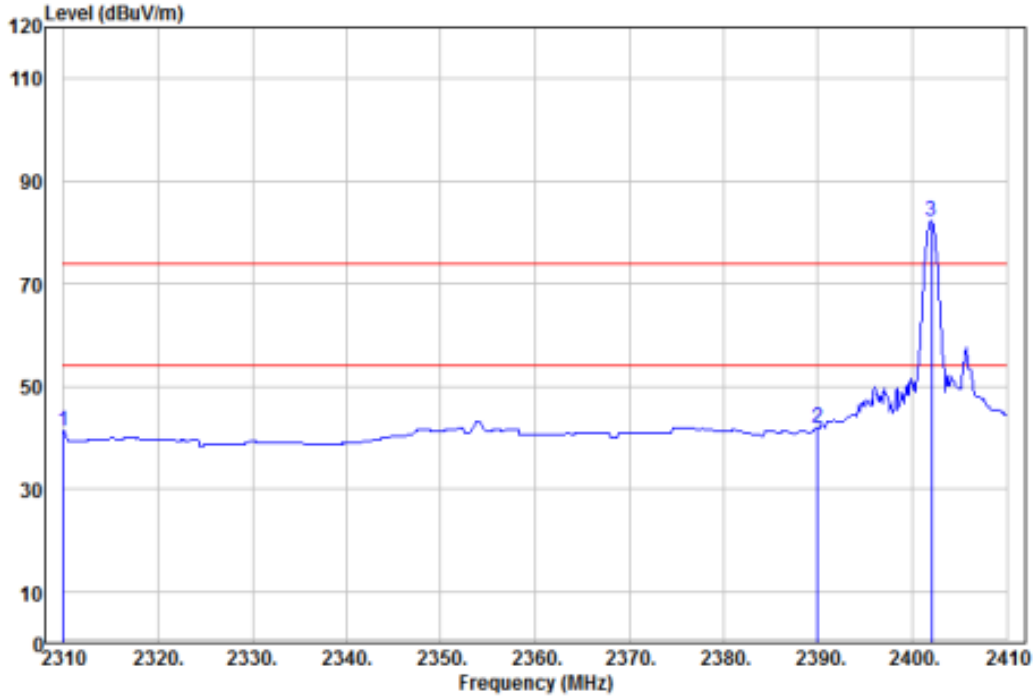

Condition : FCC PART 15B ABOVE 1G AV HORIZONTAL

Test time : 2024.9.29
Test Engineer: Karin

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark	Pol/Phase	APos	TPos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB			cm	deg
1	2310.00	44.42	-3.12	41.30	54.00	-12.70	Peak	HORIZONTAL	---	295
2	2390.00	44.74	-2.76	41.98	54.00	-12.02	Peak	HORIZONTAL	---	295
3 pp	2402.00	85.01	-2.74	82.27	54.00	28.27	Peak	HORIZONTAL	---	295

EUT Information

EUT Name:	Label Maker
Model:	LabelManager Executive 640CB
Test Mode:	BLE TX 2480MHz
Test Voltage:	Battery
Standard:	FCC 15.249
Tem./Hum./Pressure:	25.5°C/53.0%/101kPa

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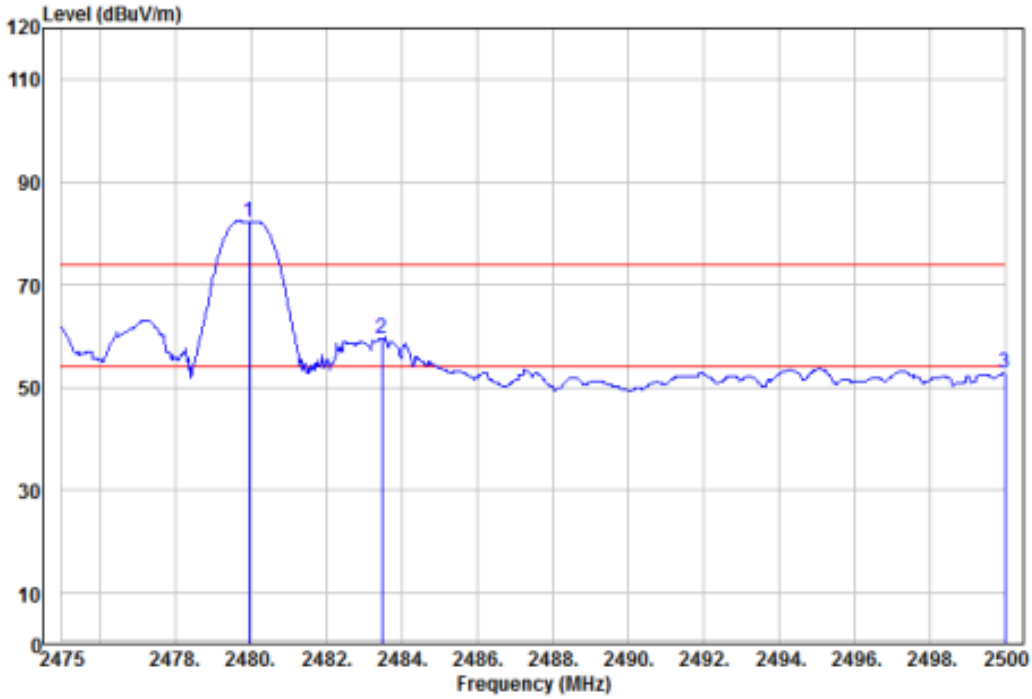

Condition : FCC PART 15B ABOVE 1G PEAK VERTICAL

Test time : 2024.9.29
Test Engineer: Karin

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark	Pol/Phase	APos	TPos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB			cm	deg
1 pp	2479.98	84.54	-2.21	82.33	74.00	8.33	Peak	VERTICAL	---	295
2	2483.50	61.85	-2.20	59.65	74.00	-14.35	Peak	VERTICAL	---	295
3	2500.00	54.85	-2.11	52.74	74.00	-21.26	Peak	VERTICAL	---	295

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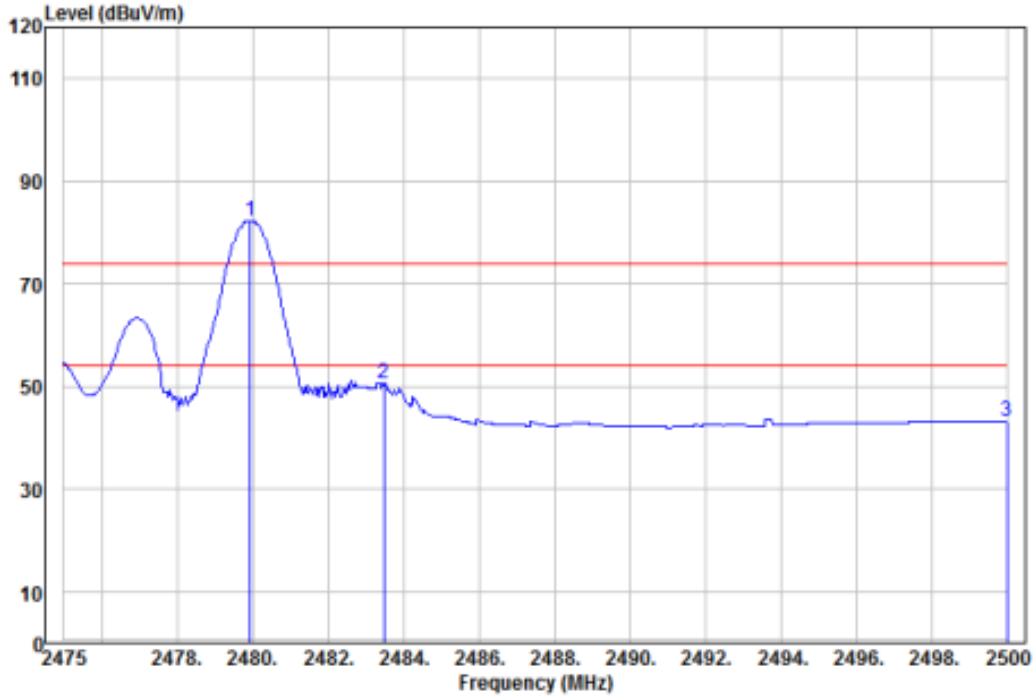

Condition : FCC PART 15B ABOVE 1G AV VERTICAL

Test time : 2024.9.29
Test Engineer: Karin

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark	Pol/Phase	APos	TPos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB			cm	deg
1 pp	2479.95	84.60	-2.21	82.39	54.00	28.39	Peak	VERTICAL	---	295
2	2483.50	52.85	-2.20	50.65	54.00	-3.35	Peak	VERTICAL	---	295
3	2500.00	45.45	-2.11	43.34	54.00	-10.66	Peak	VERTICAL	---	295

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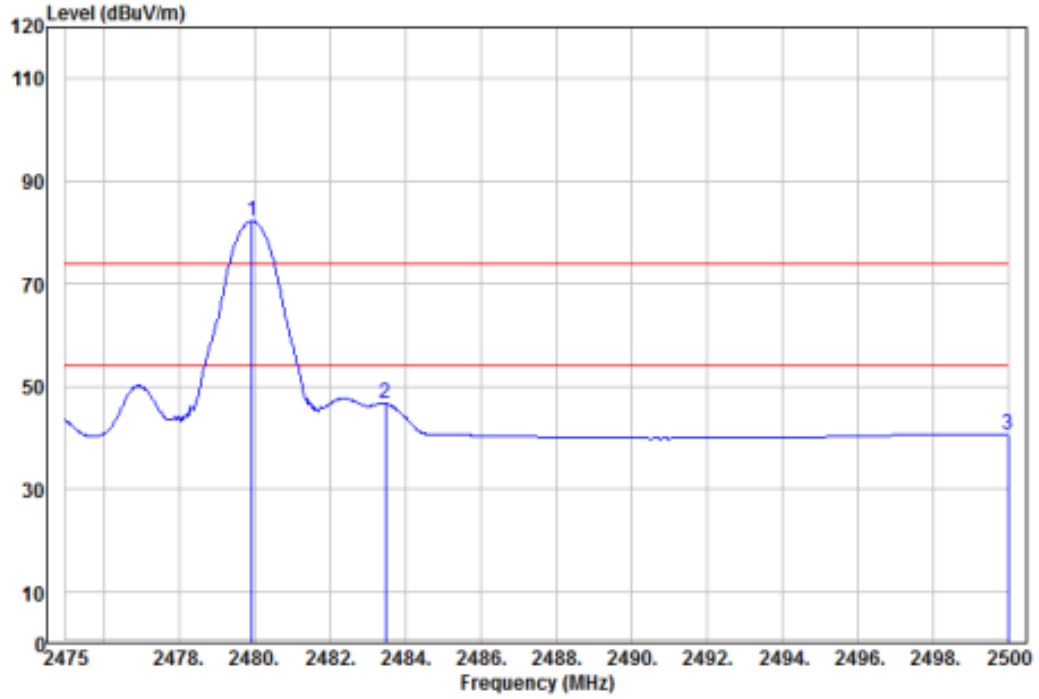

Condition : FCC PART 15B ABOVE 1G AV HORIZONTAL

Test time : 2024.9.29
Test Engineer: Karin

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark	Pol/Phase	APos	TPos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB			cm	deg
1 pp	2479.95	84.43	-2.21	82.22	54.00	28.22	Peak	HORIZONTAL	---	295
2	2483.50	48.86	-2.20	46.66	54.00	-7.34	Peak	HORIZONTAL	---	295
3	2500.00	42.70	-2.11	40.59	54.00	-13.41	Peak	HORIZONTAL	---	295

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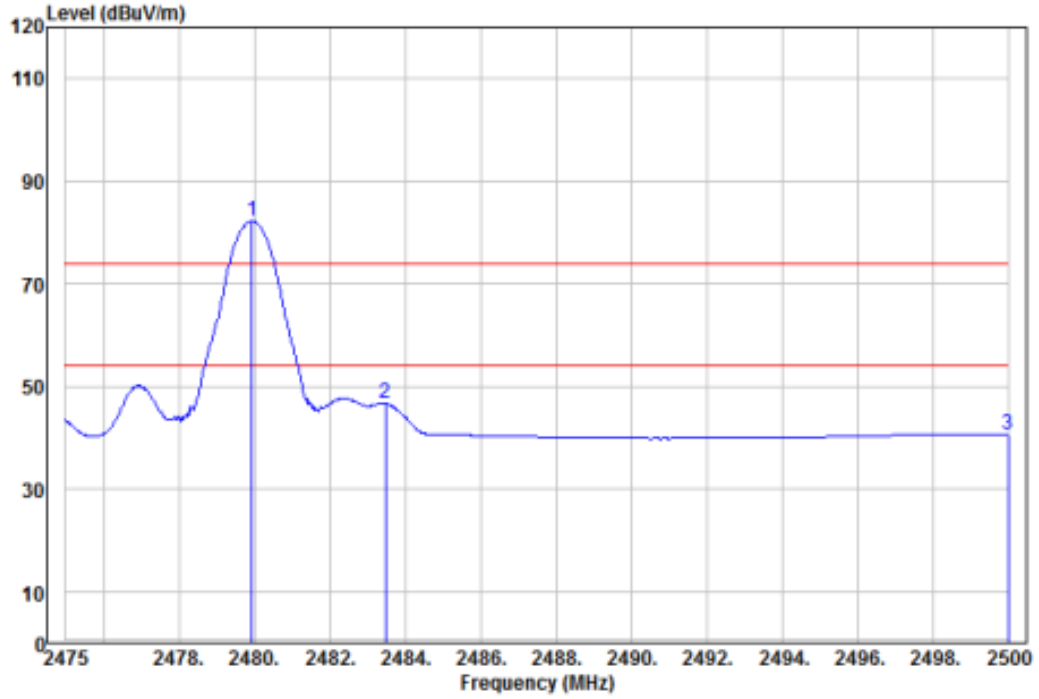

Condition : FCC PART 15B ABOVE 1G AV HORIZONTAL

Test time : 2024.9.29
Test Engineer: Karin

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark	Pol/Phase	APos	TPos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB			cm	deg
1 pp	2479.95	84.43	-2.21	82.22	54.00	28.22	Peak	HORIZONTAL	---	295
2	2483.50	48.86	-2.20	46.66	54.00	-7.34	Peak	HORIZONTAL	---	295
3	2500.00	42.70	-2.11	40.59	54.00	-13.41	Peak	HORIZONTAL	---	295