

Prüfbericht-Nr.: Test report no.:	CN25N264 001	Auftrags-Nr.: Order no.:	169825290	Seite 1 von 21 Page 1 of 21
Kunden-Referenz-Nr.: Client reference no.:	N/A	Auftragsdatum: Order date:	2024-11-24	
Auftraggeber: Client:	Zhejiang VALUE Mechanical & Electrical Products CO.,LTD No. 5, 3rd Street, East Industrial Park , Wenling , Zhejiang , China			
Prüfgegenstand: Test item:	Smart Refrigerant Scale			
Bezeichnung / Typ-Nr.: Identification / Type no.:	NRS2A			
Auftrags-Inhalt: Order content:	Test Report			
Prüfgrundlage: Test specification:	CFR Title 47 FCC Part 15: Subpart C Section 15.247 RSS-247 Issue 3 August 2023 RSS-Gen Issue 5 February 2021			
Wareneingangsdatum: Date of sample receipt:	2024-11-27	Please refer to Photo Document		
Prüfmuster-Nr.: Test sample no.:	A003866284-005/006			
Prüfzeitraum: Testing period:	2024-11-27 - 2024-12-27			
Ort der Prüfung: Place of testing:	TÜV Rheinland (Shenzhen) Co., Ltd.			
Prüflaboratorium: Testing laboratory:	TÜV Rheinland (Shenzhen) Co., Ltd.			
Prüfergebnis*: Test result*:	Pass			
geprüft von: tested by:			genehmigt von: authorized by:	
Datum: Date:	2025-07-14	Signed by: Jonathan Li	Ausstellungsdatum: Issue date:	2025-07-14 Signed by: Bell Hu
Stellung / Position:	Sachverständige(r)/Expert		Stellung / Position:	Sachverständige(r)/Expert
Sonstiges / Other:	FCC ID: 2ANTN-NRS2A IC: 23361-NRS2A , HVIN: NRS2A			
Zustand des Prüfgegenstandes bei Anlieferung: Condition of the test item at delivery:	Prüfmuster vollständig und unbeschädigt 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
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 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>				

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Anmerkungen
Remarks

1	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. <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>
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3	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. <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>
4	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. <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>

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Test Summary

5.1.1 ANTENNA REQUIREMENT

RESULT: Pass

5.1.2 MAXIMUM PEAK CONDUCTED OUTPUT POWER

RESULT: Pass

5.1.3 CONDUCTED POWER SPECTRAL DENSITY

RESULT: Pass

5.1.4 6dB BANDWIDTH

RESULT: Pass

5.1.5 99% BANDWIDTH

RESULT: Pass

5.1.6 CONDUCTED SPURIOUS EMISSIONS MEASURED IN 100 KHz BANDWIDTH

RESULT: Pass

5.1.7 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 Bluetooth LE

Appendix B: Photographs of the Test Set-up

2 Test Sites

2.1 Test Facilities

TÜV Rheinland (Shenzhen) Co., Ltd.

2-3F, 101 & 102, No.2, Nuclear Power Industrial Park, Fuming Community, Fucheng Street, Longhua District, Shenzhen 518000, China

A2LA Certificate Number: 5162.01

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

Radio Spectrum Testing (SRD-Tonscend)					
Equipment	Manufacturer	Model	Serial No.	Cal. Date	Cal. until
EXA Signal Analyzer, Multi-touch	Keysight	N9010B	MY60241175	2024-09-26	2025-09-25
MXG X-Series RF Vector Signal Generator	Keysight	N5182B	MY61250137	2024-09-26	2025-09-25
EXG X-Series Microwave Analog Signal Generator	Keysight	N5173B	MY61250141	2024-09-26	2025-09-25
DC power supply	Keysight	E3642A	MY61276100	2024-09-26	2025-09-25
Power Control Unit	Tonscend	JS0806-4ADC	N/A	2024-09-26	2025-09-25
Automation Control Unit	Tonscend	JS0806-2	21C8060396	2024-09-26	2025-09-25
Test Software	Tonscend	JS1120-3	N/A	N/A	N/A
Control PC	Lenovo	TianYi510S-071MB	YLX23JMF	N/A	N/A
Shielding Room	Albatross	SR1	APC17151-SR1	2024-09-14	2027-09-13
Unwanted Emission Testing (TS9975)					
Equipment	Manufacturer	Model	Serial No.	Cal. Date	Cal. until
EMI Test Receiver	R&S	ESR 7	102021	2024-09-29	2025-09-28
Signal Analyzer	R&S	FSV 40	101439	2024-09-29	2025-09-28
System Controller Interface	R&S	SCI-100	S10010038	N/A	N/A
Filterbank	R&S	Wlan	100759	2024-09-29	2025-09-28
OSP	R&S	OSP 120	102040	N/A	N/A
Pre-amplifier	R&S	SCU08F1	08320031	2024-09-29	2025-09-28
Amplifier	R&S	SCU-18F	180070	2024-09-29	2025-09-28
Amplifier	R&S	SCU40A	100475	2024-09-29	2025-09-28
Trilog Broadband Antenna	Schwarzbeck	VULB 9162	193	2024-09-28	2025-09-27

(30 MHz - 7 GHz)					
Double-Ridged Antenna (1-18 GHz)	ETS-LINDGREN	3117	00218717	2024-09-28	2025-09-27
Wideband Ridged Horn Antenna (18-40 GHz)	Steatite	QMS-00880	19067	2024-09-28	2025-09-27
Active Loop Antenna	Schwarzbeck	FMZB 1513	302	2024-09-28	2025-09-27
Test software	R&S	EMC32 (V10.60.10)	N/A	N/A	N/A
Control PC	Dell	OptiPlex 7050	36NV9P2	N/A	N/A
3m Semi-Anechoic Chamber	Albatross	SAC-3m	APC17151-SAC	2024-09-14	2027-09-13

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)
RF output power, conducted	± 0.99 dB
Occupied Channel Bandwidth	± 2.08 %
RF power density, conducted	± 0.99 dB
Unwanted Emissions, conducted	± 0.89 dB
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.

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2.7 Status of Facility Used for Testing

The TÜV Rheinland (Shenzhen) Co., Ltd. Test facility located at 2-3F, 101 & 102, No.2, Nuclear Power Industrial Park, Fuming Community, Fucheng Street, Longhua District, Shenzhen 518000, 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 Smart Refrigerant Scale, which supports Bluetooth low energy wireless technologies.

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:	Smart Refrigerant Scale
Type Designation:	NRS2A
FCC ID:	2ANTN-NRS2A
IC:	23361-NRS2A
HVIN:	NRS2A
Operating Voltage:	DC1.5Vx4 AA battery
Operating Temperature Range:	-10 °C ~ +40 °C
Technical Specification of Bluetooth LE	
Frequency Range:	2402 MHz to 2480 MHz
Type of Modulation:	GFSK
Channel Number:	40 channels
Channel Separation:	2 MHz
Data rate	1Mbps, 2Mbps
Antenna Type:	FPC Antenna
Antenna Gain:	1.9 dBi

Note: The correctness of all data provided by customer in the test report is ensured and responsible of the customer. Any misjudgment of the test results caused by the use of incorrect data provided by customer shall be borne by the customer.

Table 4: RF Channel and Frequency of Bluetooth Low Energy

RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)
00	2402.00	10	2422.00	20	2442.00	30	2462.00
01	2404.00	11	2424.00	21	2444.00	31	2464.00
02	2406.00	12	2426.00	22	2446.00	32	2466.00
03	2408.00	13	2428.00	23	2448.00	33	2468.00
04	2410.00	14	2430.00	24	2450.00	34	2470.00
05	2412.00	15	2432.00	25	2452.00	35	2472.00
06	2414.00	16	2434.00	26	2454.00	36	2474.00
07	2416.00	17	2436.00	27	2456.00	37	2476.00
08	2418.00	18	2438.00	28	2458.00	38	2478.00
09	2420.00	19	2440.00	29	2460.00	39	2480.00

3.3 Independent Operation Modes

The basic operation modes are:

- A. On, Bluetooth LE transmitting mode
 - 1) Low Channel
 - 2) Middle Channel
 - 3) High Channel
- B. Off

3.4 Noise Generating and Noise Suppressing Parts

Refer to Circuit Diagram for further details.

3.5 Submitted Documents

- Application Form
- FCC/IC Label and Location Info
- 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.

Table 5: Test environments

Environment Parameter	Values During Tests		
	Temperature	Voltage (Battery operated)	Relative Humidity
NTNV	25°C±2°C	DC1.5Vx4 AA battery	Ambient

Table 6: Test channel and frequency of Bluetooth LE

Mode	Test Channels (MHz)	Remark
Transmitting	L/M/H: 2402MHz, 2440MHz, 2480MHz	--

4.3 Special Accessories and Auxiliary Equipment

Table 7: 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
Dongle	Lenovo	RG95	N/A	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)

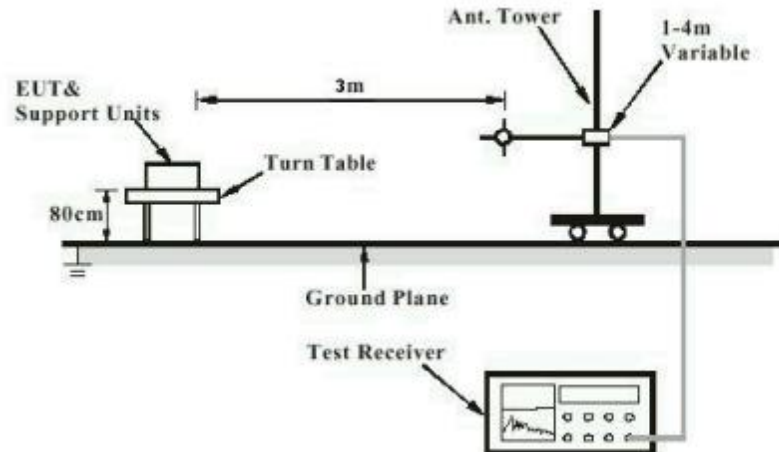


Diagram of Measurement Configuration for Radiation Test (Above 1GHz)

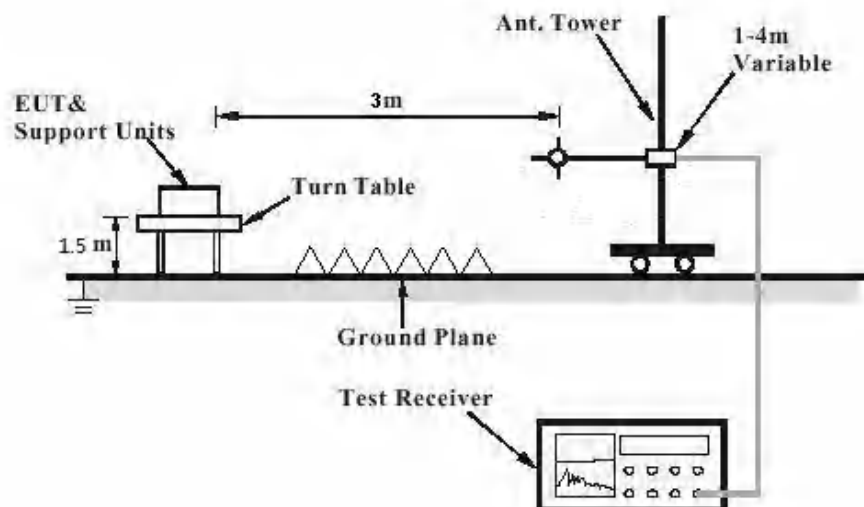
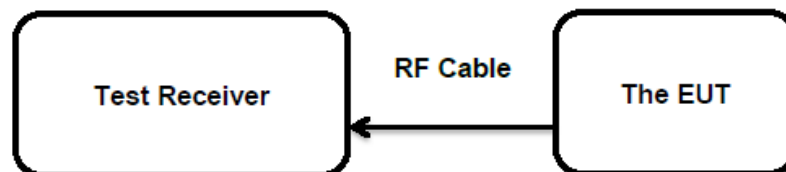


Diagram of Measurement Configuration for Conducted Transmitter Measurement



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 a FPC antenna, permanent attachment and no consideration of replacement, refer to section 3.2 for details.

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 Maximum Peak Conducted Output Power

RESULT:
Pass
Test Specification

Test standard : FCC Part 15.247(b)(3)
RSS-247 Section 5.4(d)

Basic standard : ANSI C63.10: 2013

Limits : 1.0 Watts

Kind of test site : Shielded Room

Test Setup

Date of testing : 2024-11-27 - 2024-12-27

Input voltage : DC1.5Vx4 AA battery

Operation mode : A

Test channel : Low / Middle / High

Ambient temperature : 25.6 °C

Relative humidity : 51 %

Atmospheric pressure : 101 kPa

Table 8: Test Result of Maximum Peak Conducted Output Power

Test Mode	Data Rate	Test Channel (MHz)	Measured Peak Power		Limit (W)
			(dBm)	(W)	
Bluetooth (Low Energy)	1 Mbps	2402	-2.54	0.0006	< 1.0
		2440	-2.01	0.0006	
		2480	-1.26	0.0007	
	2 Mbps	2402	-2.60	0.0005	
		2440	-2.07	0.0006	
		2480	-1.34	0.0007	
Maximum Measured Value			-1.26	0.0007	
Max. e.i.r.p.= -1.26dBm+1.9dBi=0.64dBm, which is less than 36dBm=4W.					

Note:

- 1) The cable loss is taken into account in results.
- 2) Antenna gain(G): 1.9dBi
e.i.r.p.= $P_{(\text{Peak power})} + G$, which is far below the 4 W

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5.1.3 Conducted Power Spectral Density

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

Test standard	: FCC Part 15.247(e) RSS-247 Section 5.2(b)
Basic standard	: ANSI C63.10: 2013
Limits	: < 8 dBm / 3kHz
Kind of test site	: Shielded Room

Test Setup

Date of testing	: 2024-11-27 - 2024-12-27
Input voltage	: DC1.5Vx4 AA battery
Operation mode	: A
Test channel	: Low / Middle / High
Ambient temperature	: 25.6 °C
Relative humidity	: 51 %
Atmospheric pressure	: 101 kPa

For the measurement records, refer to the appendix A.

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5.1.4 6dB Bandwidth

RESULT:

Pass

Test Specification

Test standard : FCC Part 15.247(a)(2)
RSS-247 Section 5.2(a)
Basic standard : ANSI C63.10: 2013
Limits : > 500 KHz
Kind of test site : Shielded Room

Test Setup

Date of testing : 2024-11-27 - 2024-12-27
Input voltage : DC1.5Vx4 AA battery
Operation mode : A
Test channel : Low / Middle / High
Ambient temperature : 25.6 °C
Relative humidity : 51 %
Atmospheric pressure : 101 kPa

For the measurement records, refer to the appendix A.

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5.1.5 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 : 2024-11-27 - 2024-12-27
Input voltage : DC1.5Vx4 AA battery
Operation mode : A
Test channel : Low / Middle / High
Ambient temperature : 25.6 °C
Relative humidity : 51 %
Atmospheric pressure : 101 kPa

For the measurement records, refer to the appendix A.

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Page 19 of 21**5.1.6 Conducted Spurious Emissions Measured in 100 kHz Bandwidth****RESULT:****Pass****Test Specification**

Test standard : FCC Part 15.247(d)
RSS-247 Section 5.5

Basic standard : ANSI C63.10: 2013

Limits : 20dB (below that in the 100kHz bandwidth within the band that contains the highest level of the desired power);
In addition, radiated emissions which fall in the restricted bands, must also comply with the radiated emission limits specified in 15.209(a)

Kind of test site : Shielded Room

Test Setup

Date of testing : 2024-11-27 - 2024-12-27

Input voltage : DC1.5Vx4 AA battery

Operation mode : A

Test channel : Low / Middle / High

Ambient temperature : 25.6 °C

Relative humidity : 51 %

Atmospheric pressure : 101 kPa

Test results of 100kHz Bandwidth of Frequency Band Edge by Conducted method refer to test plots, and compliance is achieved as well.

For the measurement records, refer to the appendix A.

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5.1.7 Radiated Spurious Emission

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

Test standard : FCC Part 15.247(d) & FCC Part 15.205
RSS-247 Section 3.3

Basic standard : ANSI C63.10: 2013

Limits : Refer to 15.209(a) of FCC part 15.247(d)
RSS-Gen Section 8.9 & 8.10

Kind of test site : 3m Semi-anechoic Chamber

Test Setup

Date of testing : 2024-11-27 - 2024-12-27

Input voltage : DC1.5Vx4 AA battery

Operation mode : A

Test channel : Low / Middle / High

Ambient temperature : Refer to test result

Relative humidity : Refer to test result

Atmospheric pressure : 101 kPa

Remark:

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 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 Bluetooth LE

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Appendix A.1: Test Results of 6dB Bandwidth

1.1.1 Test Result

TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.744	2401.640	2402.384	0.5	PASS
		2440	0.728	2439.624	2440.352	0.5	PASS
		2480	0.696	2479.656	2480.352	0.5	PASS
BLE_2M	Ant1	2402	1.336	2401.292	2402.628	0.5	PASS
		2440	1.352	2439.328	2440.680	0.5	PASS
		2480	1.500	2479.264	2480.764	0.5	PASS

1.1.2 Test Graphs





BLE 2M Ant1 2402



BLE 2M Ant1 2440



BLE 2M Ant1 2480



Appendix A.2: Test Results of 99% Bandwidth

1.1.3 Test Result

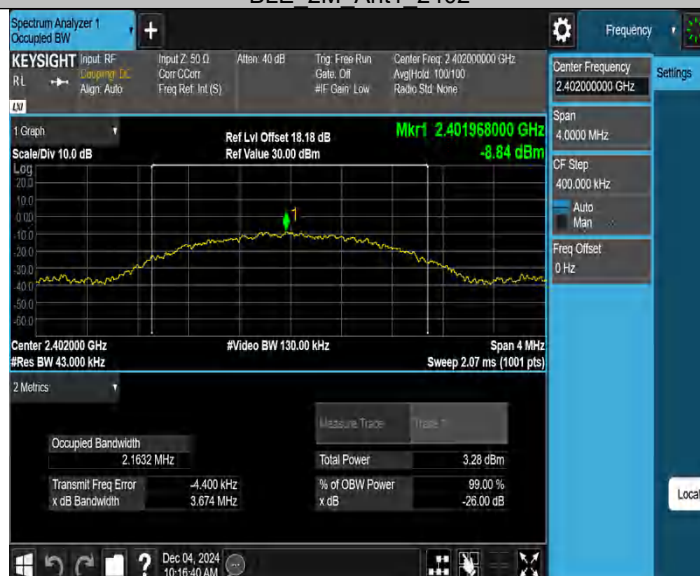
TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.1210	2401.4277	2402.5487	---	---
		2440	1.1118	2439.4398	2440.5516	---	---
		2480	1.1190	2479.4354	2480.5544	---	---
BLE_2M	Ant1	2402	2.1632	2400.9140	2403.0772	---	---
		2440	2.1540	2438.9042	2441.0582	---	---
		2480	2.1517	2478.9300	2481.0817	---	---

1.1.4 Test Graphs

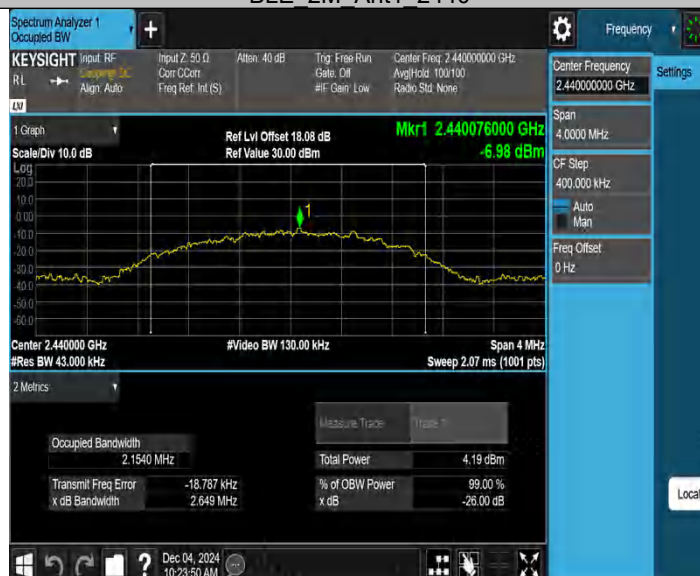




BLE 2M Ant1 2402



BLE 2M Ant1 2440



BLE 2M Ant1 2480

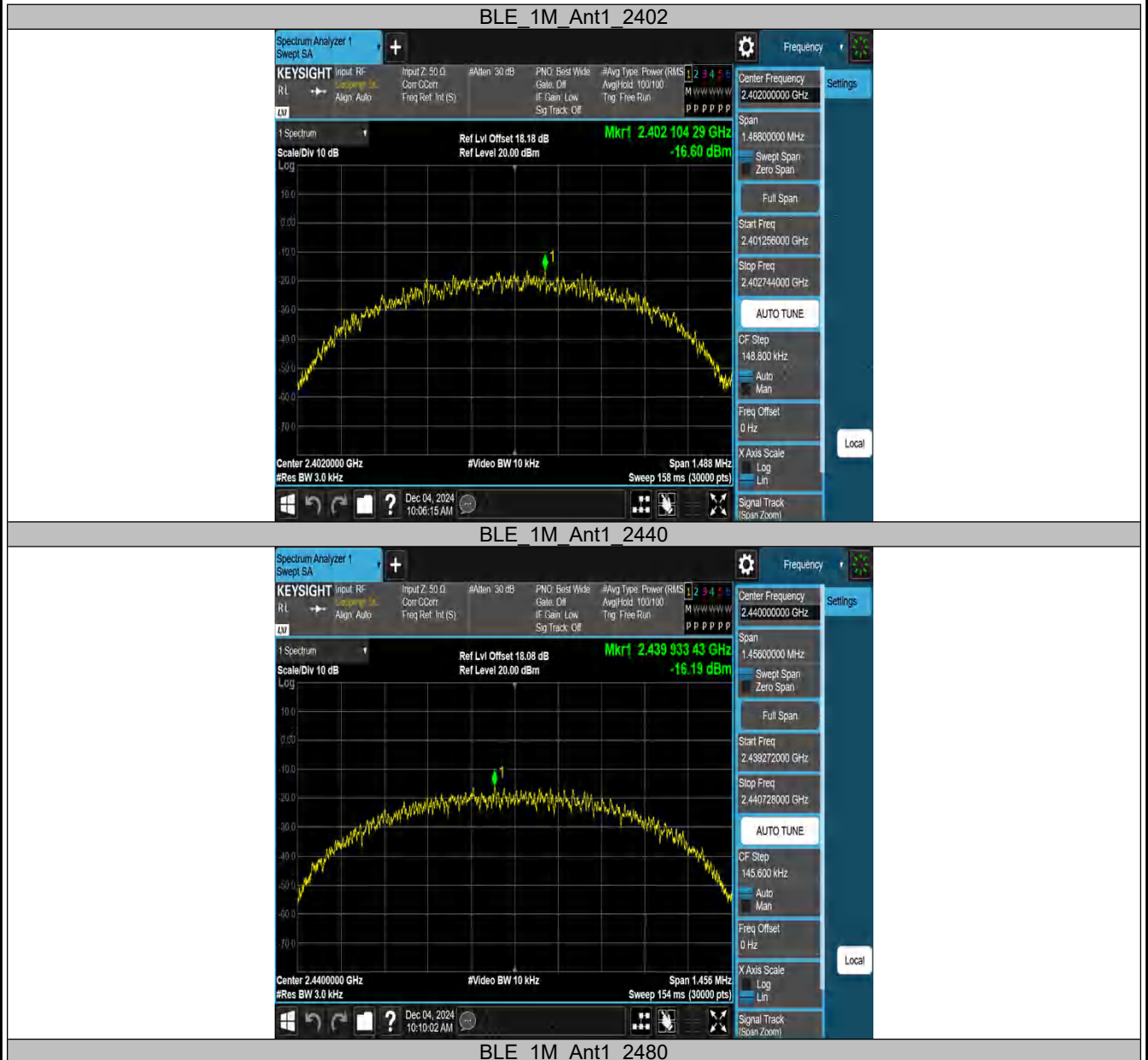


Appendix A.3: Test Results of Conducted Power Spectral Density

1.1.5 Test Result

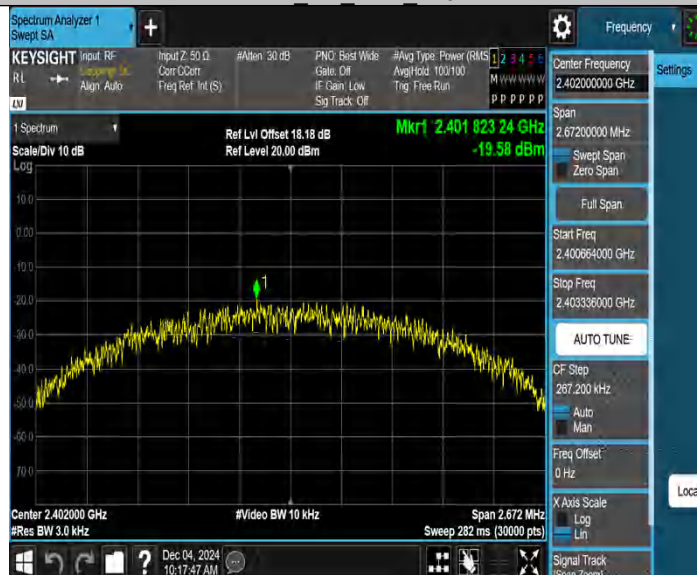
TestMode	Antenna	Channel	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-16.60	≤8.00	PASS
		2440	-16.19	≤8.00	PASS
		2480	-15.16	≤8.00	PASS
BLE_2M	Ant1	2402	-19.58	≤8.00	PASS
		2440	-18.71	≤8.00	PASS
		2480	-18.74	≤8.00	PASS

1.1.6 Test Graphs

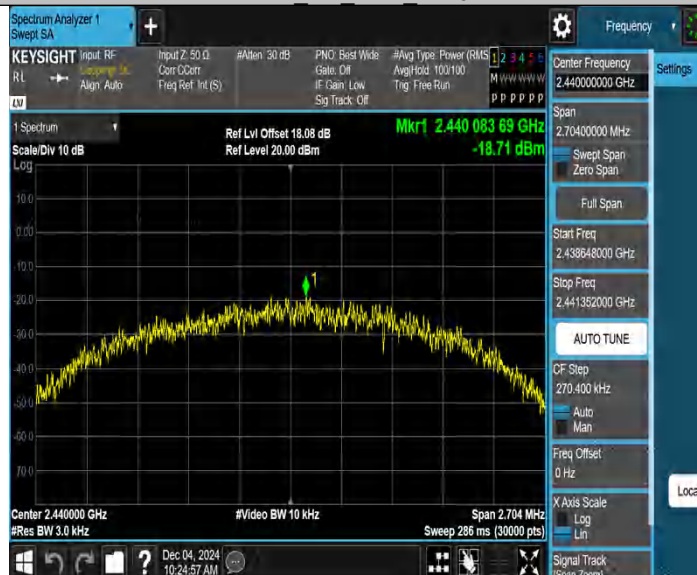




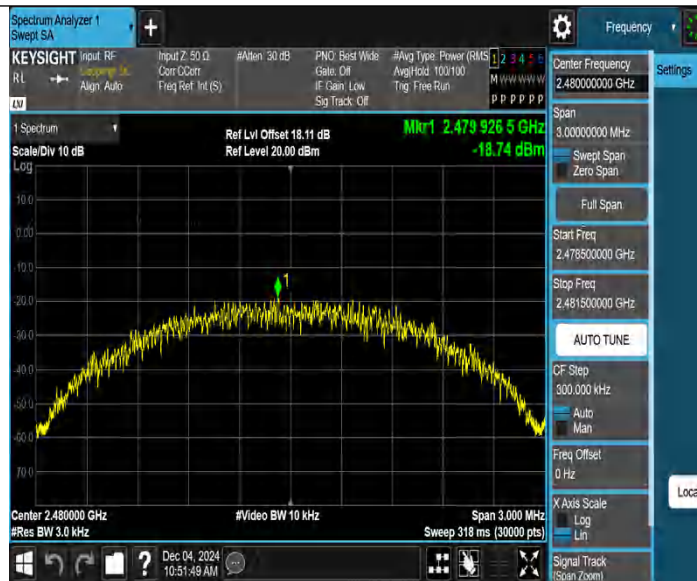
BLE 2M Ant1 2402



BLE 2M Ant1 2440



BLE 2M Ant1 2480



Appendix A.4: Test Results of Band Edge Measurements

1.1.7 Test Result

TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	-4.42	-43.61	≤-24.42	PASS
		High	2480	-2.68	-43.11	≤-22.68	PASS
BLE_2M	Ant1	Low	2402	-5.36	-36.46	≤-25.36	PASS
		High	2480	-4.38	-45.18	≤-24.38	PASS

1.1.8 Test Graphs



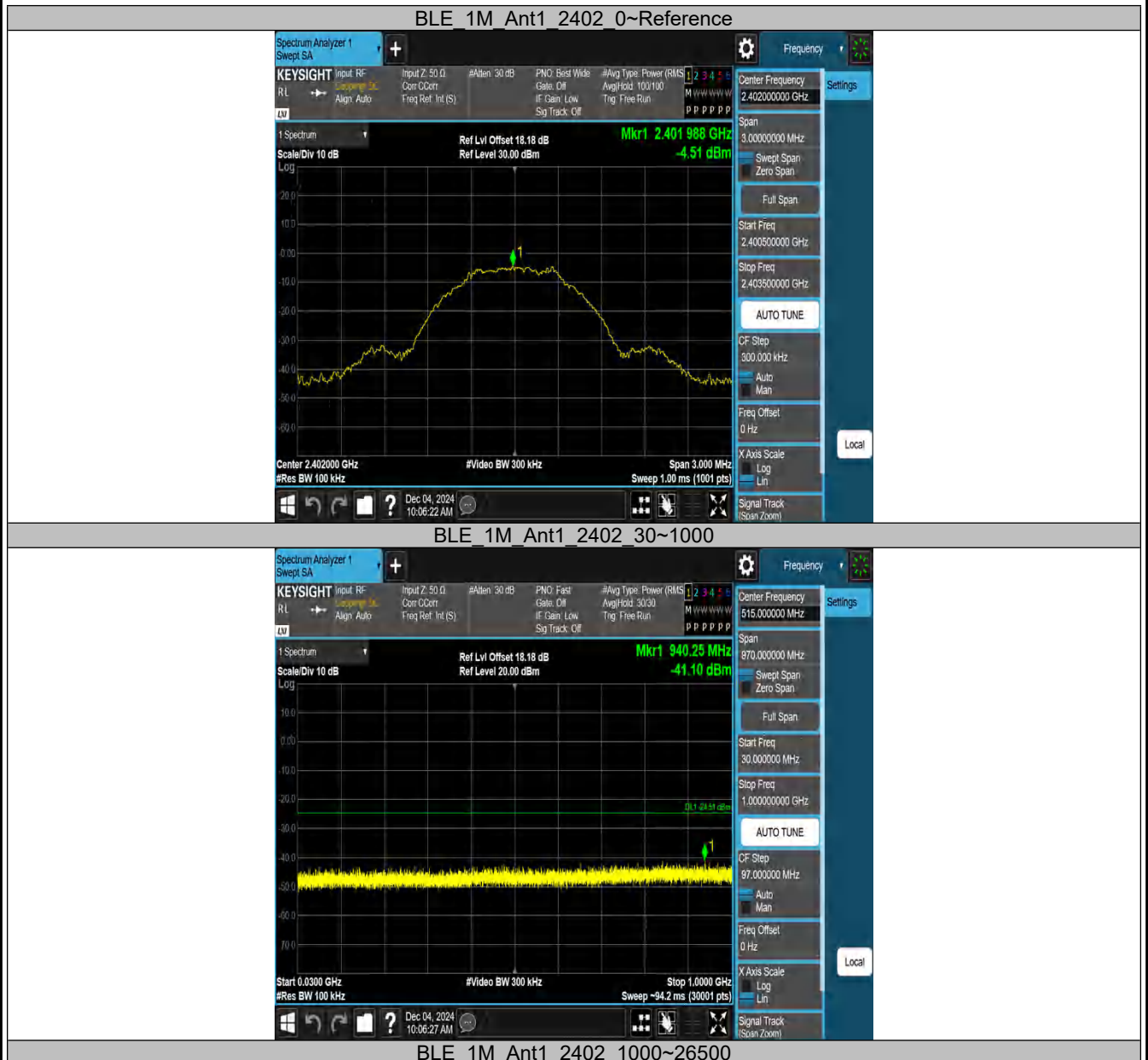


Appendix A.5: Test Results of Conducted Spurious Emission

1.1.9 Test Result

TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	-4.51	-4.51	---	PASS
			30~1000	-4.51	-41.1	≤-24.51	PASS
			1000~26500	-4.51	-32.3	≤-24.51	PASS
		2440	Reference	-3.28	-3.28	---	PASS
			30~1000	-3.28	-41.62	≤-23.28	PASS
			1000~26500	-3.28	-32.58	≤-23.28	PASS
		2480	Reference	-2.83	-2.83	---	PASS
			30~1000	-2.83	-41.55	≤-22.83	PASS
			1000~26500	-2.83	-32.16	≤-22.83	PASS
BLE_2M	Ant1	2402	Reference	-4.80	-4.80	---	PASS
			30~1000	-4.80	-41.75	≤-24.8	PASS
			1000~26500	-4.80	-31.15	≤-24.8	PASS
		2440	Reference	-4.85	-4.85	---	PASS
			30~1000	-4.85	-41.27	≤-24.85	PASS
			1000~26500	-4.85	-32.61	≤-24.85	PASS
		2480	Reference	-4.08	-4.08	---	PASS
			30~1000	-4.08	-41.49	≤-24.08	PASS
			1000~26500	-4.08	-32.52	≤-24.08	PASS

1.1.10 Test Graphs





BLE 1M Ant1 2440 0~Reference



BLE 1M Ant1 2440 30~1000



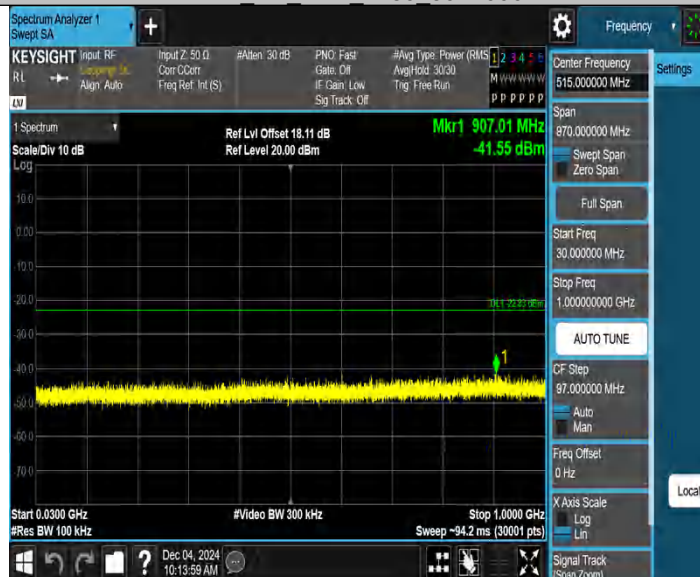
BLE 1M Ant1 2440 1000~26500



BLE 1M Ant1 2480 0~Reference



BLE 1M Ant1 2480 30~1000



BLE 1M Ant1 2480 1000~26500



BLE 2M Ant1 2402 0~Reference



BLE 2M Ant1 2402 30~1000



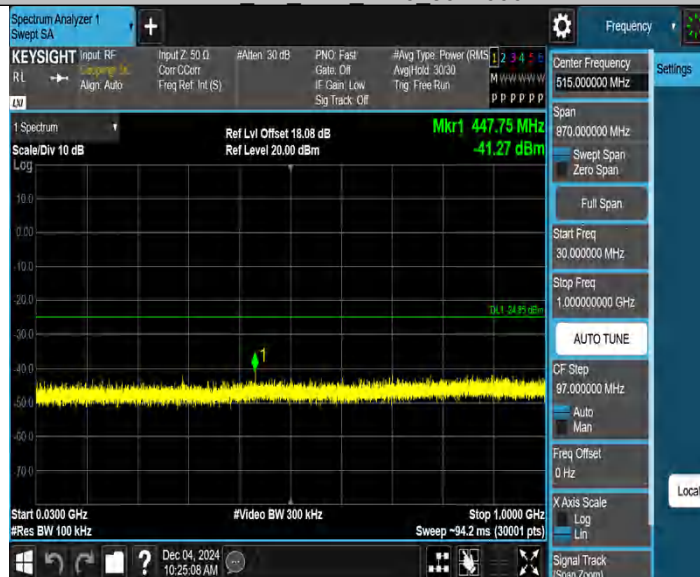
BLE 2M Ant1 2402 1000~26500



BLE 2M Ant1 2440 0~Reference



BLE 2M Ant1 2440 30~1000



BLE 2M Ant1 2440 1000~26500



BLE 2M Ant1 2480 0~Reference



BLE 2M Ant1 2480 30~1000



BLE 2M Ant1 2480 1000~26500



Appendix A.6: Test Results of Radiated Spurious Emissions

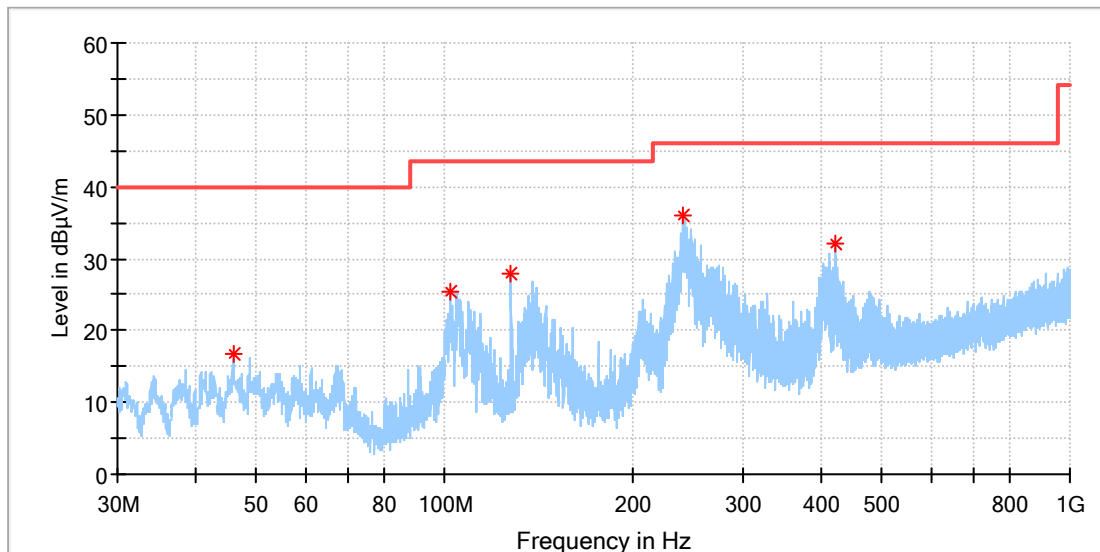
Note:

- 1) This testing was carried out on different modulations, but only the worst case was presented in this report.
- 2) This testing was carried out on Low/middle/high channels, here just the worst case data was shown.
- 3) 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.

Test Report

EUT Information

EUT Name:	Smart Refrigerant Scale
Model:	NRS2A
Test Mode:	BLE 1M_High channel
Order No/Sample No:	168514172/A003866284-005
Test Voltage::	DC 1.5V*4 AA battery
Remark:	Temp 23 Humi:58%
Test Standard:	FCC 15.247
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)
45.930385	16.65	40.00	23.35	100.0	H	0.0	-18.8
102.003846	25.35	43.50	18.15	100.0	H	213.0	-19.0
127.895385	27.94	43.50	15.56	100.0	H	220.0	-21.7
239.967692	36.11	46.00	9.89	100.0	H	0.0	-17.7
421.059231	32.08	46.00	13.92	100.0	H	6.0	-13.2

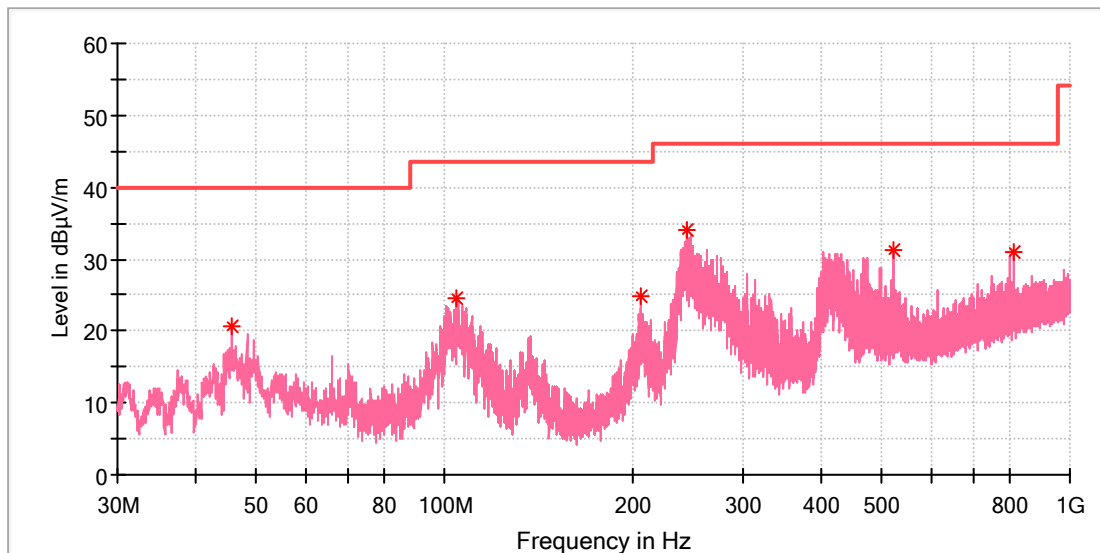
Final Result

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

Test Report

EUT Information

EUT Name:	Smart Refrigerant Scale
Model:	NRS2A
Test Mode:	BLE 1M_High channel
Order No/Sample No:	168514172/A003866284-005
Test Voltage::	DC 1.5V*4 AA battery
Remark:	Temp 23 Humi:58%
Test Standard:	FCC 15.247
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)
45.631923	20.74	40.00	19.26	100.0	V	113.0	-18.8
104.391539	24.49	43.50	19.01	100.0	V	82.0	-18.9
206.055000	24.70	43.50	18.80	100.0	V	345.0	-19.0
245.004231	34.02	46.00	11.98	100.0	V	329.0	-17.5
523.319615	31.36	46.00	14.64	100.0	V	202.0	-11.4
812.528846	30.94	46.00	15.06	100.0	V	242.0	-5.9

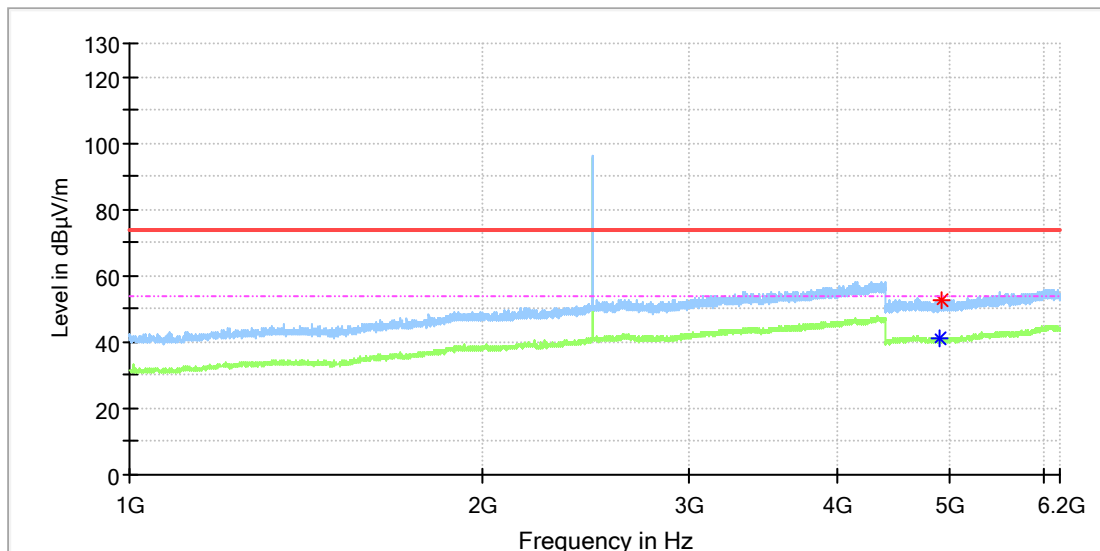
Final_Result

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

Test Report

EUT Information

EUT Name:	Smart Refrigerant Scale
Model:	NRS2A
Test Mode:	BLE 1M_High channel
Order No/Sample No:	168514172/A003866284-005
Test Voltage::	DC 1.5V*4 AA battery
Remark:	Temp 23 Humi:58%
Test Standard:	FCC 15.247
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)
4904.500000	---	41.16	54.00	12.84	150.0	H	38.0	13.3
4924.000000	52.87	---	74.00	21.13	150.0	H	164.0	13.3

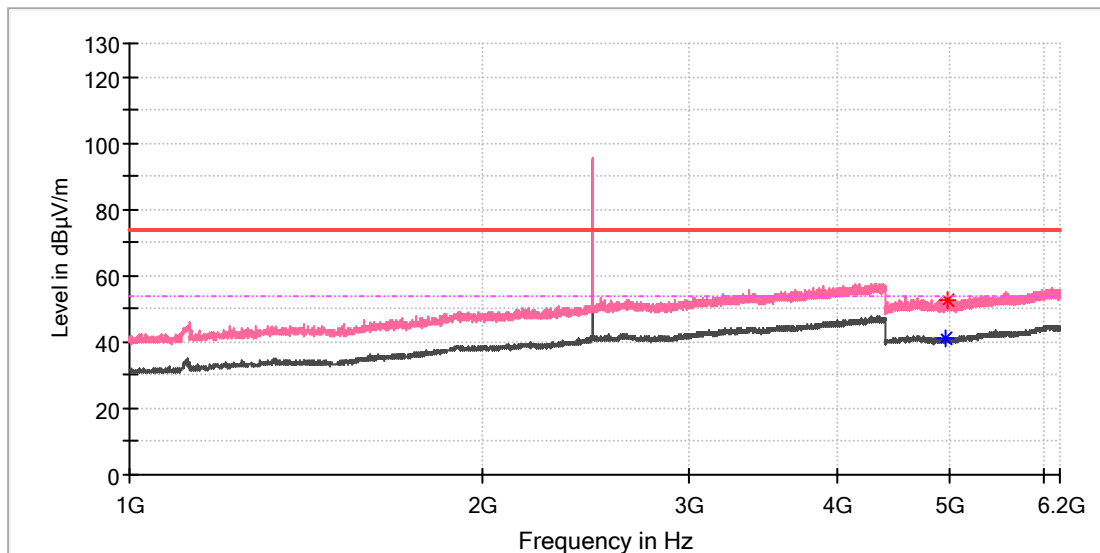
Final_Result

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

Test Report

EUT Information

EUT Name:	Smart Refrigerant Scale
Model:	NRS2A
Test Mode:	BLE 1M_High channel
Order No/Sample No:	168514172/A003866284-005
Test Voltage::	DC 1.5V*4 AA battery
Remark:	Temp 23 Humi:58%
Test Standard:	FCC 15.247
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)
4960.500000	---	41.30	54.00	12.70	150.0	V	199.0	13.3
4973.000000	52.38	---	74.00	21.62	150.0	V	99.0	13.3

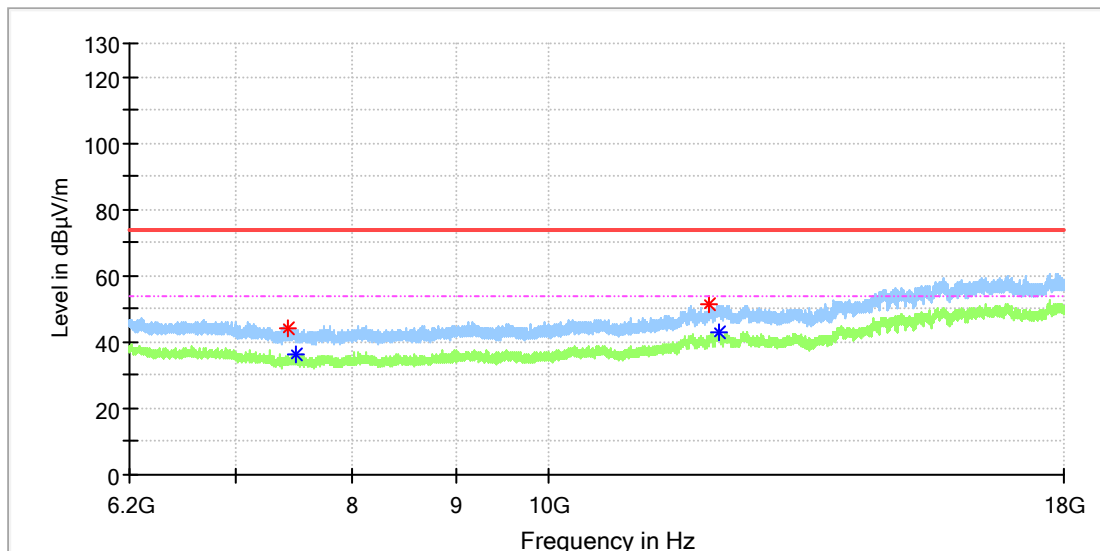
Final_Result

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

Test Report

EUT Information

EUT Name:	Smart Refrigerant Scale
Model:	NRS2A
Test Mode:	BLE 1M_High channel
Order No/Sample No:	168514172/A003866284-005
Test Voltage::	DC 1.5V*4 AA battery
Remark:	Temp 23 Humi:58%
Test Standard:	FCC 15.247
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)
7428.675000	44.38	---	74.00	29.62	150.0	H	186.0	8.4
7488.658333	---	36.23	54.00	17.77	150.0	H	161.0	8.7
12009.533333	51.17	---	74.00	22.83	150.0	H	211.0	15.5
12156.050000	---	42.98	54.00	11.02	150.0	H	0.0	16.4

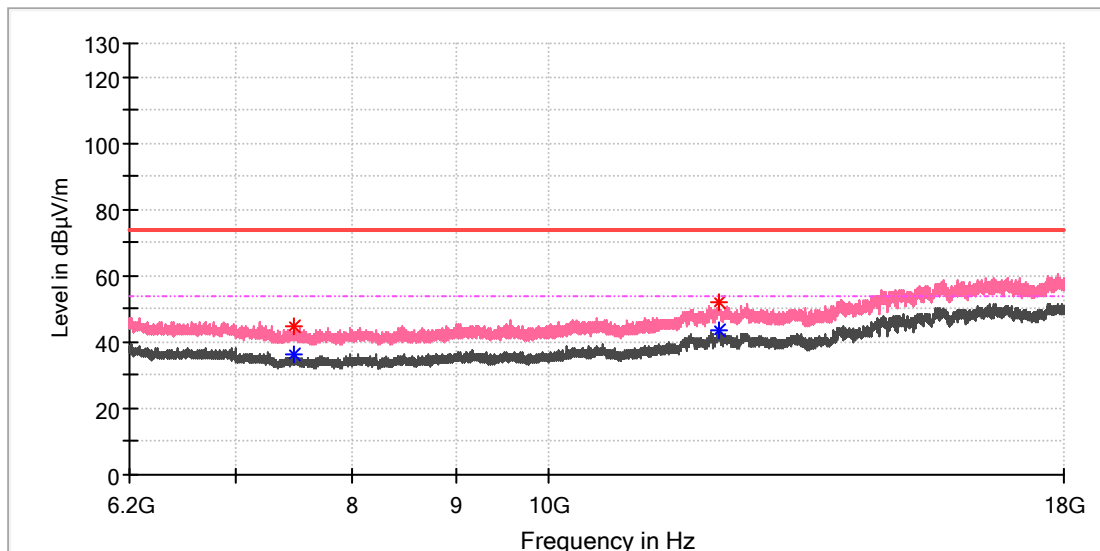
Final_Result

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

Test Report

EUT Information

EUT Name:	Smart Refrigerant Scale
Model:	NRS2A
Test Mode:	BLE 1M_High channel
Order No/Sample No:	168514172/A003866284-005
Test Voltage::	DC 1.5V*4 AA battery
Remark:	Temp 23 Humi:58%
Test Standard:	FCC 15.247
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)
7481.775000	44.53	---	74.00	29.47	150.0	V	5.0	8.7
7481.775000	---	36.30	54.00	17.70	150.0	V	5.0	8.7
12134.908333	51.72	---	74.00	22.28	150.0	V	216.0	16.3
12146.216667	---	43.27	54.00	10.73	150.0	V	327.0	16.6

Final_Result

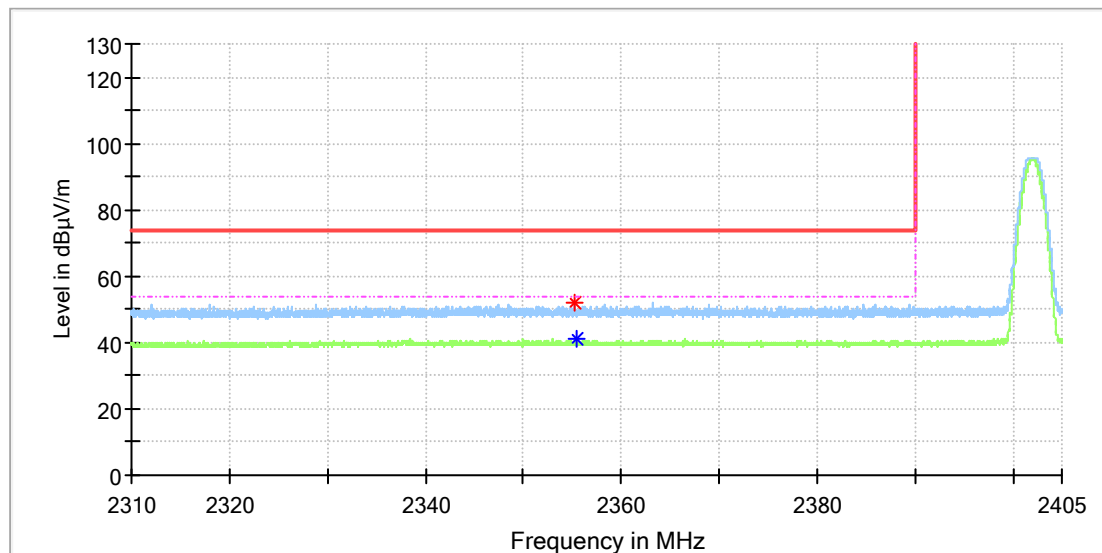
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
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Appendix A.7: Test Results of Radiated Emissions in Restricted Bands

Test Report

EUT Information

EUT Name:	Smart Refrigerant Scale
Model:	NRS2A
Test Mode:	BLE 1M_Low channel
Order No/Sample No:	168514172/A003866284-005
Test Voltage::	DC 1.5V*4 AA battery
Remark:	Temp 23 Humi:58%
Test Standard:	FCC 15.247
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)
2355.222794	52.17	---	74.00	21.83	150.0	H	1.0	8.5
2355.404412	---	41.00	54.00	13.00	150.0	H	328.0	8.5

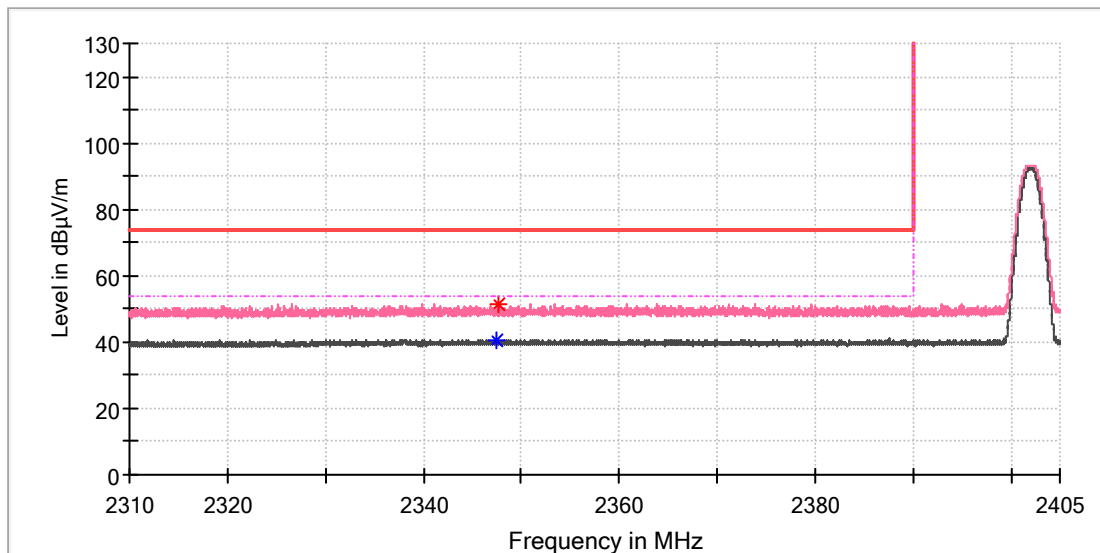
Final_Result

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

Test Report

EUT Information

EUT Name:	Smart Refrigerant Scale
Model:	NRS2A
Test Mode:	BLE 1M_Low channel
Order No/Sample No:	168514172/A003866284-005
Test Voltage::	DC 1.5V*4 AA battery
Remark:	Temp 23 Humi:58%
Test Standard:	FCC 15.247
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)
2347.552941	---	40.42	54.00	13.58	150.0	V	208.0	8.5
2347.748530	51.66	---	74.00	22.34	150.0	V	284.0	8.5

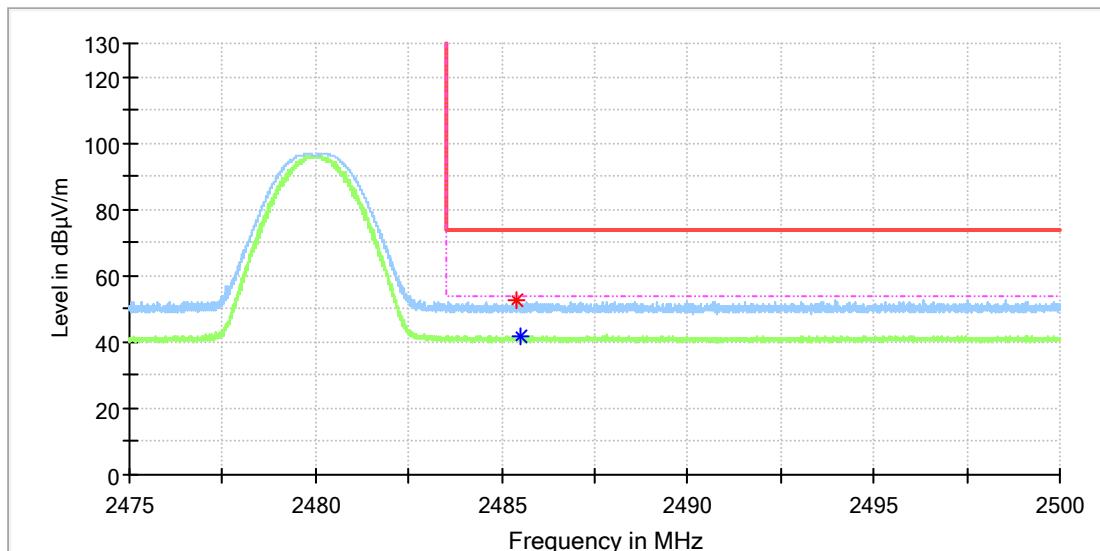
Final_Result

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

Test Report

EUT Information

EUT Name:	Smart Refrigerant Scale
Model:	NRS2A
Test Mode:	BLE 1M_High channel
Order No/Sample No:	168514172/A003866284-005
Test Voltage::	DC 1.5V*4 AA battery
Remark:	Temp 23 Humi:58%
Test Standard:	FCC 15.247
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)
2485.404412	52.77	---	74.00	21.23	150.0	H	14.0	9.0
2485.496324	---	41.83	54.00	12.17	150.0	H	177.0	9.0

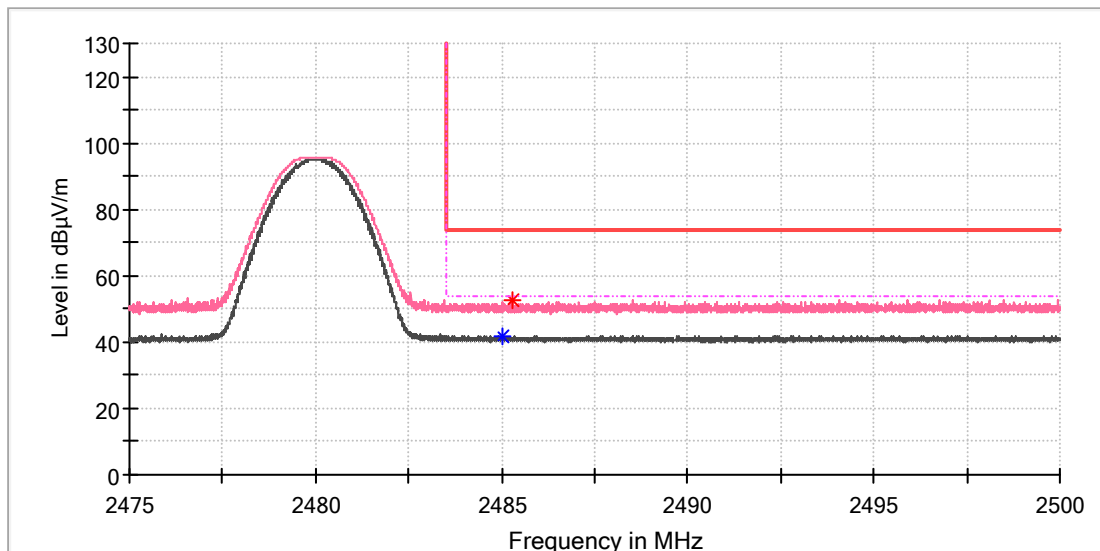
Final_Result

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

Test Report

EUT Information

EUT Name:	Smart Refrigerant Scale
Model:	NRS2A
Test Mode:	BLE 1M_High channel
Order No/Sample No:	168514172/A003866284-005
Test Voltage::	DC 1.5V*4 AA battery
Remark:	Temp 23 Humi:58%
Test Standard:	FCC 15.247
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)
2485.014706	---	41.62	54.00	12.38	150.0	V	230.0	9.0
2485.268382	52.46	---	74.00	21.54	150.0	V	250.0	9.0

Final_Result

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

s---End of this appendix---