

TEST REPORT

Report No.: SHE24030021-02DE

Date: 2024-04-30

Page 1 of 54

Applicant : Ehong Technology Co.,Ltd
Address of Applicant : Room 501, No.485 Xingmei Road,
Minhang Dis,Shanghai, China.

Product Name : BLE Module
Brand Name : Ehong
Model Name : EH-MC26, EH-MC26B
Sample Acquisition Method : Sent by Client
Sample No. : E24030021-01#01(Conducted Sample)
E24030021-01#02(Radiation Sample-EH-MC26)
E24030021-01#05(Radiation Sample-EH-MC26B)

FCC ID : 2ACCRM26
ISED Number : 20625-MC26

Standards : FCC CFR47 Part 15, Subpart C
RSS-Gen (Issue 5, Amd.2-Feb 2021)
RSS-247 (Issue 3, August 2023)

Date of Receipt : 2024-03-12(Corresponding Model-EH-MC26)
2024-04-12(Corresponding Model-EH-MC26B)
Date of Test : 2024-03-15~ 2024-04-18
Date of Issue : 2024-04-30

Remark:

This report details the results of the testing carried out on one sample, the results contained in this report do not relate to other samples of the same product. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

Prepared by:



(Erik Yang)

Reviewed by:



(Jennifer Zhou)

Approved by:



(Authorized signatory: Echo Mu)

TEST REPORT

Report No.: SHE24030021-02DE

Date: 2024-04-30

Page 2 of 54

Contents

1	GENERAL INFORMATION	3
1.1	TESTING LABORATORY.....	3
1.2	DETAILS OF APPLICATION	3
1.3	DETAILS OF EUT	3
1.4	TEST METHODOLOGY.....	4
1.5	TEST SUMMARY.....	5
2	TEST CONDITION	6
2.1	ENVIRONMENTAL CONDITIONS	6
2.2	EQUIPMENT LIST	6
2.3	MEASUREMENT UNCERTAINTY.....	7
3	TEST SET-UP AND OPERATION MODES	8
3.1	DETAILS OF TEST MODE	8
3.2	SPECIAL ACCESSORIES AND AUXILIARY EQUIPMENT	8
3.3	SUPPORT SOFTWARE.....	8
3.4	TEST SETUP DIAGRAM	9
4	TEST RESULTS	11
4.1	TRANSMITTER REQUIREMENT & TEST SUITES	11
4.1.1	<i>Antenna Requirement</i>	<i>11</i>
4.1.2	<i>Maximum peak conducted output power and E.I.R.P</i>	<i>12</i>
4.1.3	<i>6dB Bandwidth and 99% Bandwidth.....</i>	<i>17</i>
4.1.4	<i>Maximum conducted output power spectral density.....</i>	<i>24</i>
4.1.5	<i>Conducted Spurious Emission & Authorized-band band-edge.....</i>	<i>28</i>
4.1.6	<i>Radiated Emission.....</i>	<i>40</i>
4.1.7	<i>Band Edge (Restricted-band band-edge)</i>	<i>41</i>
4.2	MAINS EMISSIONS	42
4.2.1	<i>Conducted Emission on AC Mains.....</i>	<i>42</i>
5	APPENDIXES	47
5.1	PHOTOGRAPHS OF THE SAMPLE.....	47
5.2	SET-UP FOR CONDUCTED RF TEST AT ANTENNA PORT	51
5.3	SET-UP FOR CONDUCTED EMISSIONS	52
5.4	SET-UP FOR SPURIOUS EMISSIONS BELOW 1GHZ.....	53
5.5	SET-UP FOR SPURIOUS EMISSIONS ABOVE 1GHZ.....	54

TEST REPORT

Report No.: SHE24030021-02DE

Date: 2024-04-30

Page 3 of 54

1 General Information

1.1 Testing Laboratory

ISED CAB identifier #	CN0081
Company number #	25174
Company Name	ICAS Testing Technology Service (Shanghai) Co., Ltd.
Address	No.1298 Pingan Road, Minhang District, Shanghai, China
Telephone	0086 21-51682999
Fax	0086 21-54711112
Homepage	www.icasiso.com

1.2 Details of Application

Applicant Company Name	Ehong Technology Co.,Ltd
Address	Room 501, No.485 Xingmei Road, Minhang Dis,Shanghai, China.
Contact Person	Rik Tang
Telephone	02164769993
Email	rik.tang@ehonglink.com
Manufacturer Company Name	Ehong Technology Co.,Ltd
Address	Room 501, No.485 Xingmei Road, Minhang Dis,Shanghai, China.
Factory Company Name	Ehong Technology Co.,Ltd
Address	Room 501, No.485 Xingmei Road, Minhang Dis,Shanghai, China.

1.3 Details of EUT

Product Name	BLE Module
Brand Name	Ehong
Test Model Name	EH-MC26
Series Model Name	EH-MC26B
Difference Description	All the same except for the antenna type: EH-MC26 Model is the pcb antenna EH-MC26B Model is the external antenna
FCC ID	2ACCRMC26
ISED Number	20625-MC26
Mode of Operation	Bluetooth BLE Version 5.3
Frequency Range	2402MHz ~ 2480MHz
Number of Channels	40 (at intervals of 2 MHz)
Modulation Type	BLE ☒ GFSK 1Mbps ☒ GFSK 2Mbps
Max RF Output Power-Conducted	4.24dBm
Antenna Type	EH-MC26 (PCB Antenna) EH-MC26B (External Antenna)

TEST REPORT

Report No.: SHE24030021-02DE

Date: 2024-04-30

Page 4 of 54

Antenna Gain	EH-MC26 (2.5dBi) EH-MC26B (3.0dBi)
Extreme Temperature Range	-40°C~ +85°C
Test Voltage	DC 3.3V
Hardware Version	V1.0
Software Version	V1.0
RF power setting in TEST SW	662x_FCC_Rev1.9_Power level setting_Default

- Note:
- The above information was declared by the manufacture.
 - For more details, please refer to the User's manual of the EUT.

Channel List

Channel	Frequency	Channel	Frequency	Channel	Frequency
0	2.402GHz	14	2.430GHz	28	2.458GHz
1	2.404GHz	15	2.432GHz	29	2.460GHz
2	2.406GHz	16	2.434GHz	30	2.462GHz
3	2.408GHz	17	2.436GHz	31	2.464GHz
4	2.410GHz	18	2.438GHz	32	2.466GHz
5	2.412GHz	19	2.440GHz	33	2.468GHz
6	2.414GHz	20	2.442GHz	34	2.470GHz
7	2.416GHz	21	2.444GHz	35	2.472GHz
8	2.418GHz	22	2.446GHz	36	2.474GHz
9	2.420GHz	23	2.448GHz	37	2.476GHz
10	2.422GHz	24	2.450GHz	38	2.478GHz
11	2.424GHz	25	2.452GHz	39	2.480GHz
12	2.426GHz	26	2.454GHz		
13	2.428GHz	27	2.456GHz		

1.4 Test Methodology

47 CFR Part 15, Subpart C	Telecommunication-Radio Frequency Devices-Intentional Radiators
KDB Publication 558074 D01 v05r02	15.247 Meas Guidance.
ANSI C63.10-2013	American National Standard for Testing Unlicensed Wireless Devices
RSS-Gen (Issue 5, Amd.2-Feb 2021)	General Requirements for Compliance of Radio Apparatus
RSS-247 (Issue 3, August 2023)	Digital Transmission Systems (DTSs), Frequency Hopping Systems (FHSs) and Licence-Exempt Local Area Network (LE-LAN) Devices

Note(s):

All test items were verified and recorded according to the standards and without any addition/deviation/exclusion during the test.

TEST REPORT

Report No.: SHE24030021-02DE

Date: 2024-04-30

Page 5 of 54

1.5 Test Summary

Test Item	FCC Rules	ISED Rules	Result
Antenna Requirement	FCC Part 15.247(b)(4), Part 15.203	RSS-247 5.4(f) RSS-GEN 6.8	PASS
Maximum peak conducted output power and E.I.R.P	FCC Part 15.247(b)(3)	RSS-247 5.4(d)	PASS
6dB Bandwidth and 99% Bandwidth	FCC Part 15.247(a)(2)	RSS-247 5.2(a) RSS-Gen 6.7	PASS
Maximum conducted output power spectral density	FCC Part 15.247(e)	RSS-247 5.2(b)	PASS
Conducted Spurious Emission & Authorized-band band-edge	FCC Part 15.247(d)	RSS-247 5.5	PASS
Radiated Emission	FCC Part 15.247(d), 15.205, 15.209	RSS-GEN 8.9	PASS
Band Edge (Restricted-band band-edge)	FCC Part 15.247(d), 15.205, 15.209	RSS-GEN 8.10	PASS
Conducted Emission on AC Mains	FCC Part 15.207(a)	RSS-Gen 8.8	PASS

TEST REPORT

Report No.:SHE24030021-02DE

Date:2024-04-30

Page 6 of 54

2 Test Condition

2.1 Environmental conditions

Temperature (°C)	18-25
Humidity (%RH)	40-65
Barometric Pressure (mbar)	960-1060

2.2 Equipment List

Name of Equipment	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
Spectrum Analyzer	Keysight	N9020B	MY59260184	2023-07-27	2024-07-26
Spectrum Analyzer	Rohde & Schwarz	FSV40N	101450	2023-06-08	2024-06-07
Signal Generator	Rohde & Schwarz	SMR27	100184	2023-07-27	2024-07-26
EMI Test Receiver	Rohde & Schwarz	ESPI3	100173	2023-06-08	2024-06-07
EMI Test Receiver	Rohde & Schwarz	ESR 7	101911	2023-06-08	2024-06-07
V-network	SCHWARZBECK	NSLK 8127	8127-902	2023-06-07	2024-06-06
Attenuator	SCHWARZBECK	VTSD 9561-FN	/	2023-06-06	2024-06-05
Broadband Antenna	SCHWARZBECK	VULB9163	9163-1037	2023-03-22	2025-03-21
Horn Antenna-18G	SCHWARZBECK	BBHA9120D	9120D-1775	2023-06-13	2025-06-12
Loop Antenna	SCHWARZBECK	FMZB 1513	/	2023-06-09	2024-06-08
Horn Antenna-40G	YINGLIAN	LB-180400-KF	N/A	2023-06-18	2025-06-17
Broadband Preamplifier	SCHWARZBECK	BBV 9718	346	2023-06-08	2024-06-07
EMC chamber 9*6*6(L*W*H)	CHANGNING	966	N/A	2023-06-09	2024-06-08
Shielded Enclosure 8*5*4(L*W*H)	CHANGNING	854	N/A	2023-06-09	2025-06-08
Test Software	BL	BL410_E	Version:2.1.1.436	N/A	N/A
Test Software	BL	BL410_R	Version:2.1.1.409	N/A	N/A

TEST REPORT

Report No.: SHE24030021-02DE

Date: 2024-04-30

Page 7 of 54

2.3 Measurement Uncertainty

The uncertainty is calculated using the methods suggested in the “Guide to the Expression of Uncertainty in measurement” (GUM) published by CISPR and ANSI. The reported uncertainty of measurement $y \pm U$, where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95.45%.

Parameter		Uncertainty
Antenna Port Conducted Emission	< 1GHz	± 1.5 dB
	> 1GHz	± 1.5 dB
Radiated Emission	9KHz – 30MHz	± 3.42 dB
	30 MHz – 1GHz	± 5.01 dB
	> 1GHz	± 5.21 dB
Conducted Emission on AC Mains	150kHz-30MHz	± 2.68 dB
Occupied Channel Bandwidth		± 5 %
Maximum Conducted Output Power and E.I.R.P		± 0.64 dB
Maximum Conducted Output Power Spectral Density		± 1.18 dB

TEST REPORT

Report No.: SHE24030021-02DE

Date: 2024-04-30

Page 8 of 54

3 Test Set-up and Operation Modes

3.1 Details of Test Mode

Using test software was control EUT work in continuous transmitting mode. Select test channel as below:

Channel	Frequency
The lowest channel(CH00)	2402MHz
The middle channel(CH19)	2440MHz
The highest channel(CH39)	2480MHz

The basic operation modes are:

- A. On
1. BLE mode

a. Transmitting

i. Low Channel

ii. Middle Channel

iii. High Channel

b. Receiving
2. Normal working with Bluetooth on
- B. Standby
- C. Off

3.2 Special Accessories and Auxiliary Equipment

Description	Manufacturer	Model Name	Serial No.
Laptop 1	Lenovo	TP00083A	PF-0PRDGN
Laptop 2	Lenovo	Lenovo V14 G1 IML	PS008CKA
AC Adapter	Lenovo	ADL45WCA	8SSA10M42726C2TJ1CB02CR
USB Cable	N/A	N/A	1.00m Unshielded

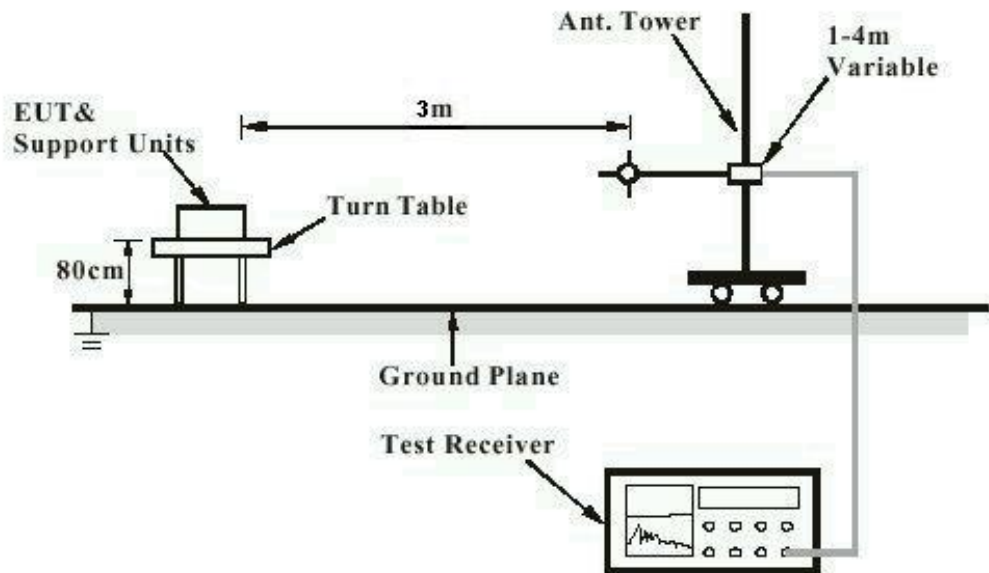
3.3 Support Software

Description	Manufacturer	Software Name
Software	N/A	662x_FCC_Rev1.9

TEST REPORT

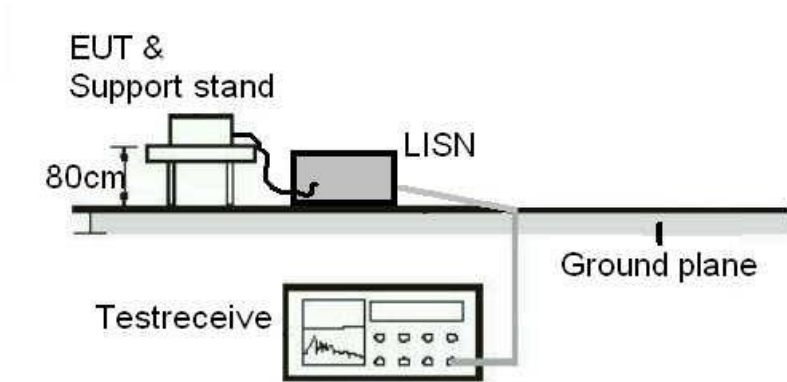
3.4 Test Setup Diagram

Diagram of Measurement Configuration for Radiation Test



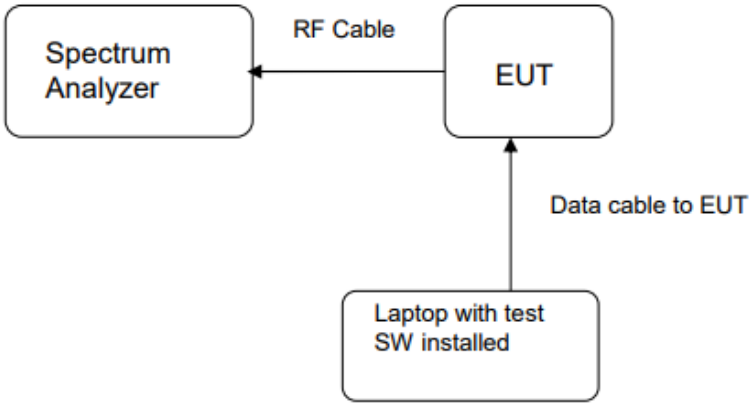
Note: Measurements above 1GHz are done with a table height of 1.5m. In addition, there is RF absorbing material on the floor of the test site for above 1GHz measurement.

Diagram of Measurement Equipment Configuration for Conduction Measurement



TEST REPORT

Diagram of Measurement Equipment Configuration for Transmitter Test



TEST REPORT

Report No.: SHE24030021-02DE

Date: 2024-04-30

Page 11 of 54

4 Test Results

4.1 Transmitter Requirement & Test Suites

4.1.1 Antenna Requirement

RESULT:

PASS

Test standard	: FCC Part 15.247(b)(4), Part 15.203 RSS-247 5.4(f), RSS-GEN 6.8
Requirement	: An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. In addition, If transmitting antennas of directional gain greater than 6dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

According to the manufacturer declaration, EH-MC26 model has an antenna with a directional gain of 2.5dBi. The antenna is PCB antenna with no possibility of replacement with a non-approved antenna by the end-user.

Series Model EH-MC26B has an antenna with a directional gain of 3dBi. The antenna is External antenna with no possibility of replacement with a non-approved antenna by the end-user.

The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

Therefore, the EUT is considered to comply with this provision.

TEST REPORT

Report No.: SHE24030021-02DE

Date: 2024-04-30

Page 12 of 54

4.1.2 Maximum peak conducted output power and E.I.R.P

RESULT:

PASS

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

Requirement : ANSI C63.10-2013 clause 11.9.1.1,
KDB 558074 D01 v05r02, Clause 8.3.1

Kind of test site : Shielded room

Test setup

Test Channel : Low/Middle/High

Operation Mode : A.1.a

Ambient temperature : 21.3°C

Relative humidity : 49%

Table 1: Maximum peak conducted output power

Test Mode	Test Channel (MHz)	Maximum peak conducted output power		Limit (W)
		(dBm)	(mW)	
BLE-1Mbps	2402	3.91	2.46	< 1
	2440	3.90	2.45	
	2480	3.93	2.47	
BLE-2Mbps	2402	4.24	2.65	< 1
	2440	4.19	2.62	
	2480	4.20	2.63	

Table 2: E.I.R.P_EH-MC26

Test Mode	Test Channel (MHz)	E.I.R.P		Limit (W)
		(dBm)	(mW)	
BLE-1Mbps	2402	6.41	4.38	< 4
	2440	6.40	4.37	
	2480	6.43	4.40	
BLE-2Mbps	2402	6.74	4.72	
	2440	6.69	4.67	
	2480	6.70	4.68	

Note: The antenna gain is 2.5dBi
E.I.R.P= peak conducted output power+antenna gain

TEST REPORT

Report No.: SHE24030021-02DE

Date: 2024-04-30

Page 13 of 54

Table 3: E.I.R.P_EH-MC26B

Test Mode	Test Channel (MHz)	E.I.R.P		Limit (W)
		(dBm)	(mW)	
BLE-1Mbps	2402	6.91	4.91	< 4
	2440	6.90	4.90	
	2480	6.93	4.93	
BLE-2Mbps	2402	7.24	5.30	
	2440	7.19	5.24	
	2480	7.20	5.25	

Note: The antenna gain is 3dBi
E.I.R.P= peak conducted output power+antenna gain

TEST REPORT

Report No.: SHE24030021-02DE Date: 2024-04-30 Page 14 of 54

Figure 1: Peak Output Power, 2402MHz, BLE-1Mbps



Figure 2: Peak Output Power, 2440MHz, BLE-1Mbps



TEST REPORT

Report No.: SHE24030021-02DE Date: 2024-04-30 Page 15 of 54

Figure 3: Peak Output Power, 2480MHz, BLE-1Mbps



Figure 4: Peak Output Power, 2402MHz, BLE-2Mbps



TEST REPORT

Report No.: SHE24030021-02DE Date: 2024-04-30 Page 16 of 54

Figure 5: Peak Output Power, 2440MHz, BLE-2Mbps



Figure 6: Peak Output Power, 2480MHz, BLE-2Mbps



TEST REPORT

Report No.: SHE24030021-02DE

Date: 2024-04-30

Page 17 of 54

4.1.3 6dB Bandwidth and 99% Bandwidth

RESULT:

PASS

Test standard

: FCC Part 15.247(a)(2), RSS-247 5.2(a)
RSS-Gen 6.7

Requirement

: ANSI C63.10-2013 clause 11.8.1,
KDB 558074 D01 v05r02, Clause 8.2

Kind of test site

: Shielded room

Test setup

Test Channel

: Low/Middle/High

Operation Mode

: A.1.a

Ambient temperature

: 21.3°C

Relative humidity

: 49%

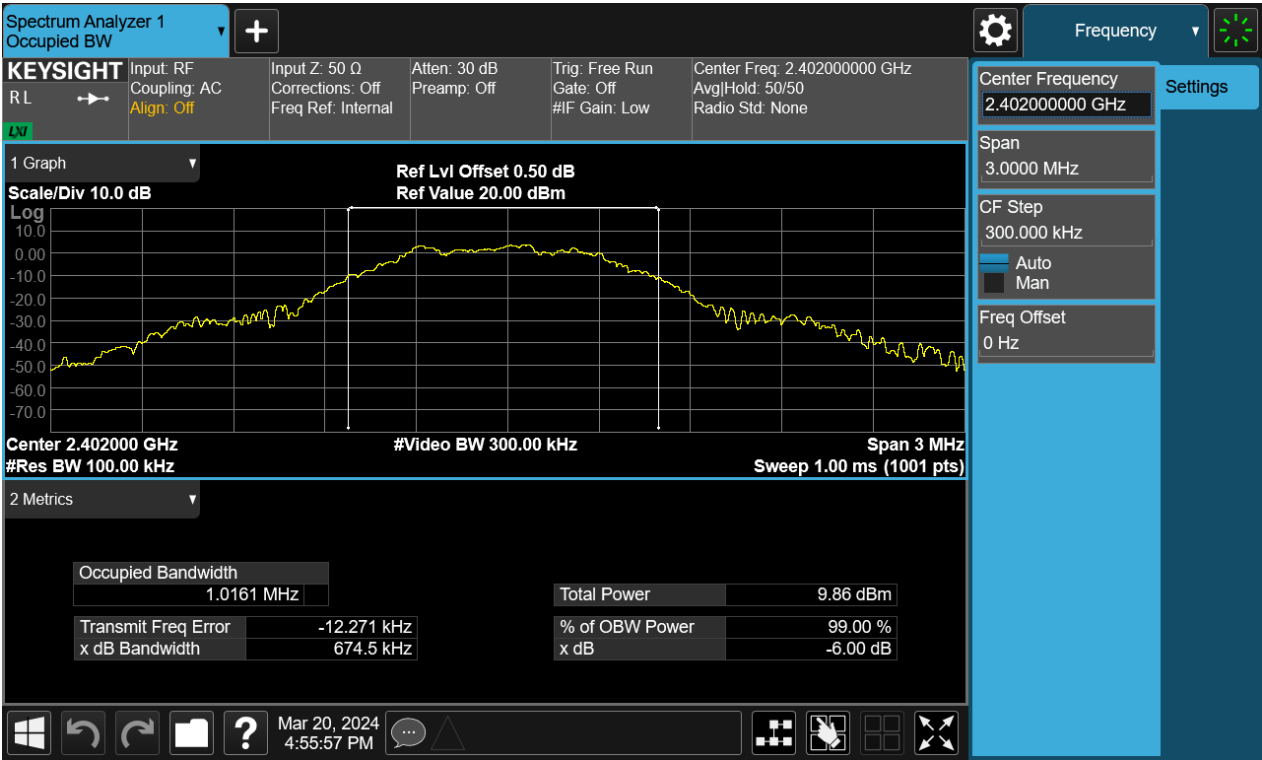
Table 3: 6dB Bandwidth and 99% Bandwidth

Test Mode	Test Channel (MHz)	6dB Bandwidth (MHz)	99% Bandwidth (MHz)	6dB Bandwidth Limit
BLE-1Mbps	2402	0.6745	1.0034	>0.5 MHz
	2440	0.6782	1.0012	
	2480	0.6698	1.0043	
BLE-2Mbps	2402	1.1700	2.0068	
	2440	1.1520	2.0081	
	2480	1.1150	2.0019	

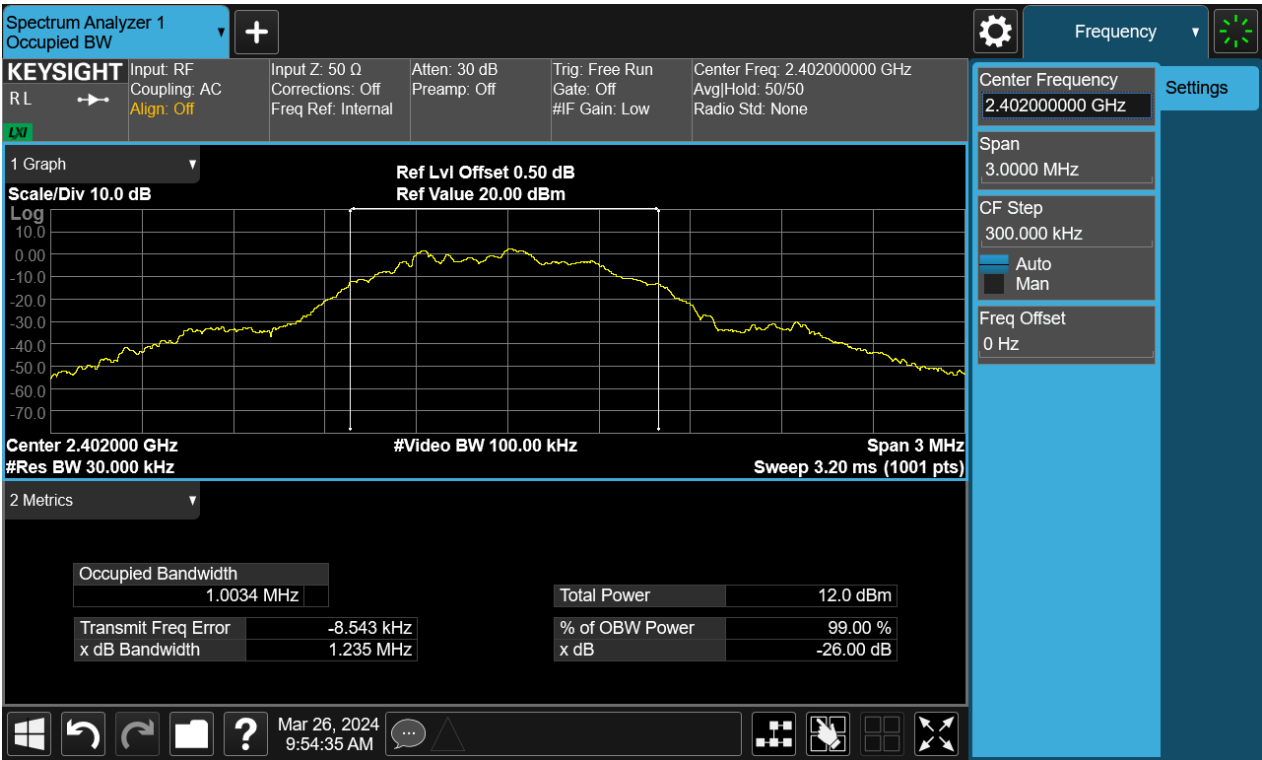
TEST REPORT

Report No.: SHE24030021-02DE Date: 2024-04-30 Page 18 of 54

Figure 7: 6dB Bandwidth, 2402MHz, BLE-1Mbps



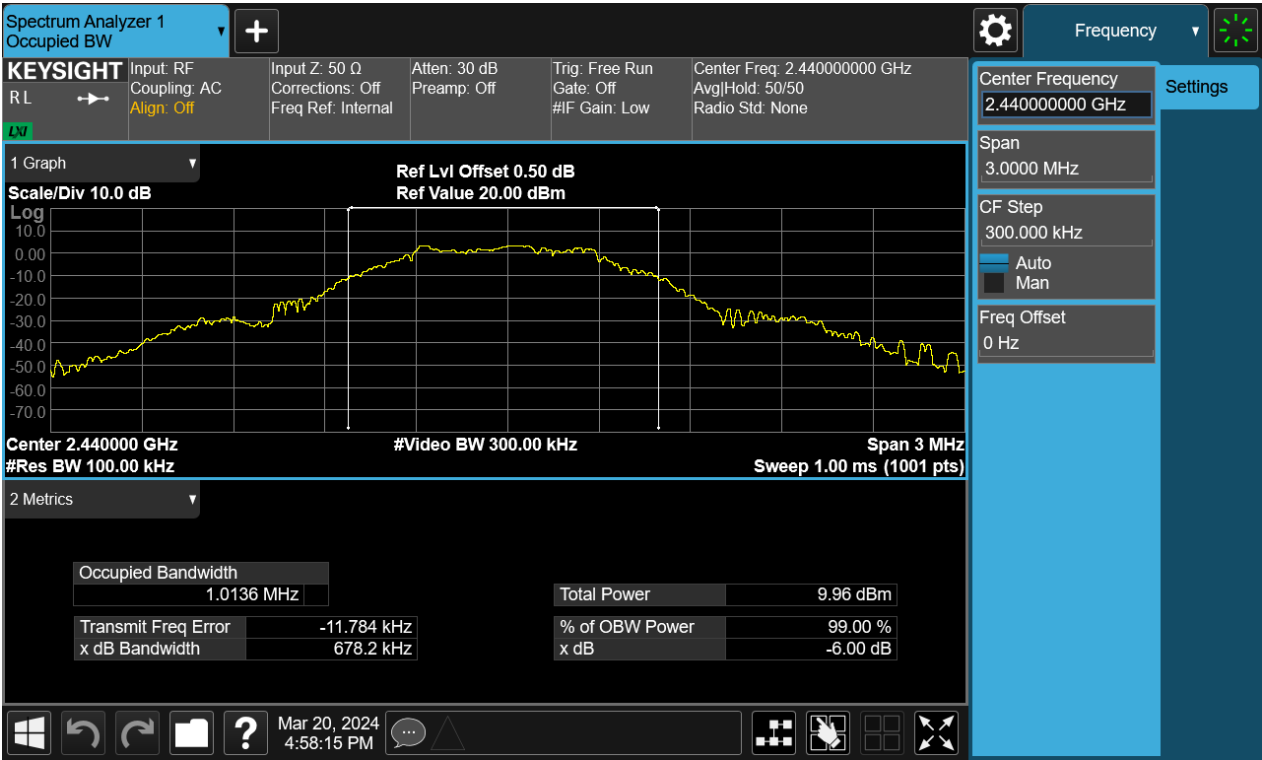
99% Bandwidth, 2402MHz, BLE-1Mbps



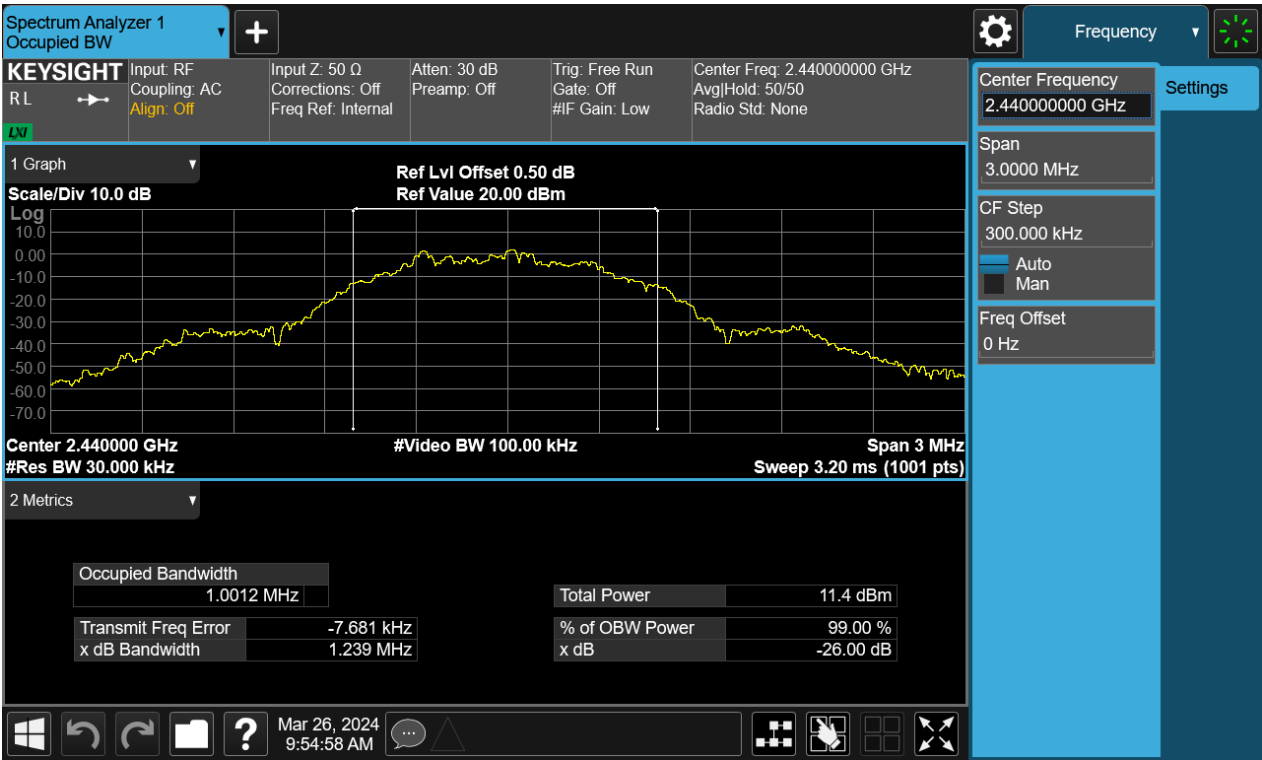
TEST REPORT

Report No.: SHE24030021-02DE Date: 2024-04-30 Page 19 of 54

Figure 8: 6dB Bandwidth, 2440MHz, BLE-1Mbps



99% Bandwidth, 2440MHz, BLE-1Mbps



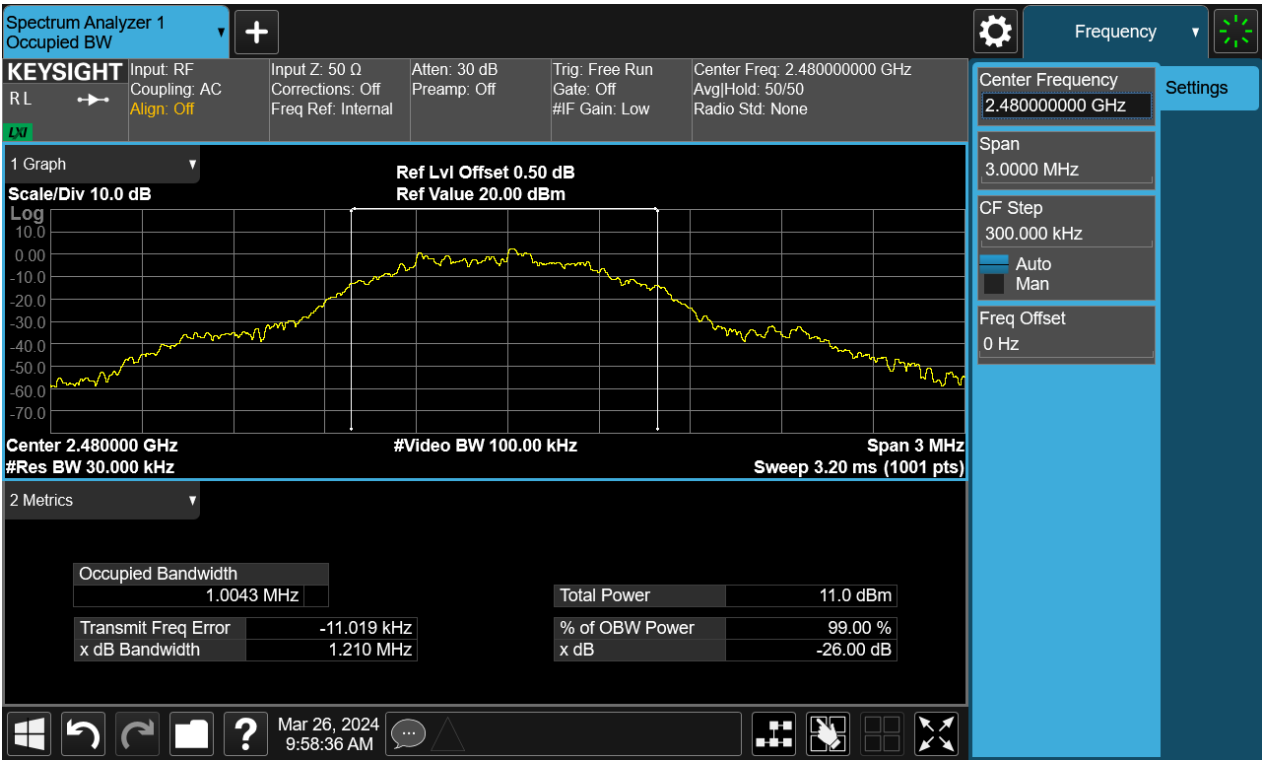
TEST REPORT

Report No.: SHE24030021-02DE Date: 2024-04-30 Page 20 of 54

Figure 9: 6dB Bandwidth, 2480MHz, BLE-1Mbps



99% Bandwidth, 2480MHz, BLE-1Mbps



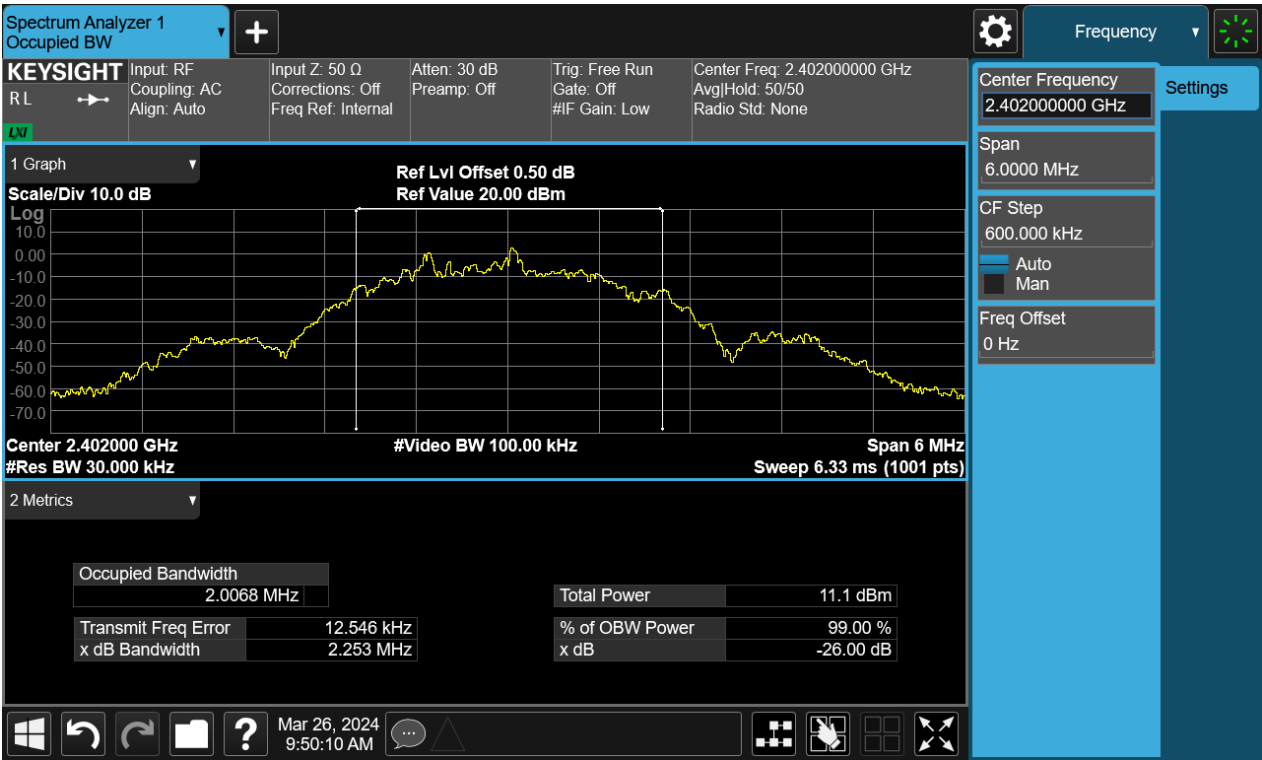
TEST REPORT

Report No.: SHE24030021-02DE Date: 2024-04-30 Page 21 of 54

Figure 10: 6dB Bandwidth, 2402MHz, BLE-2Mbps



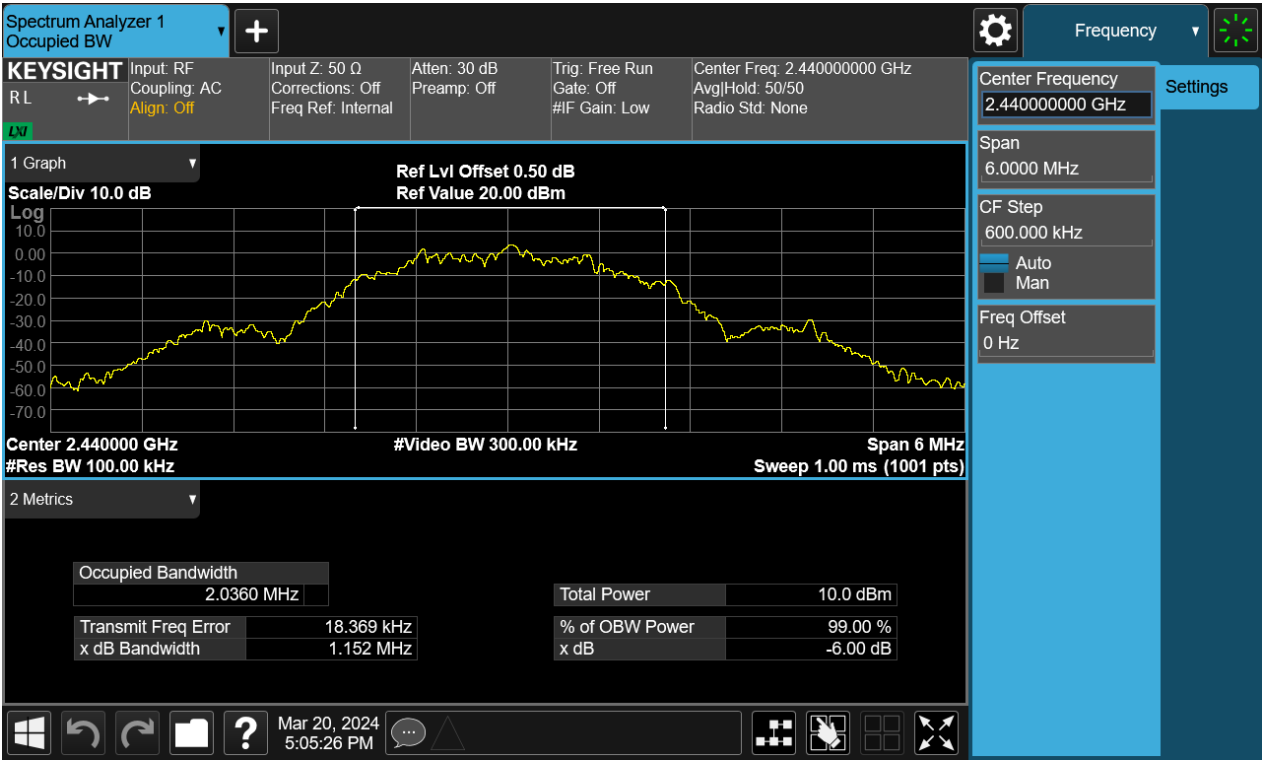
99% Bandwidth, 2402MHz, BLE-2Mbps



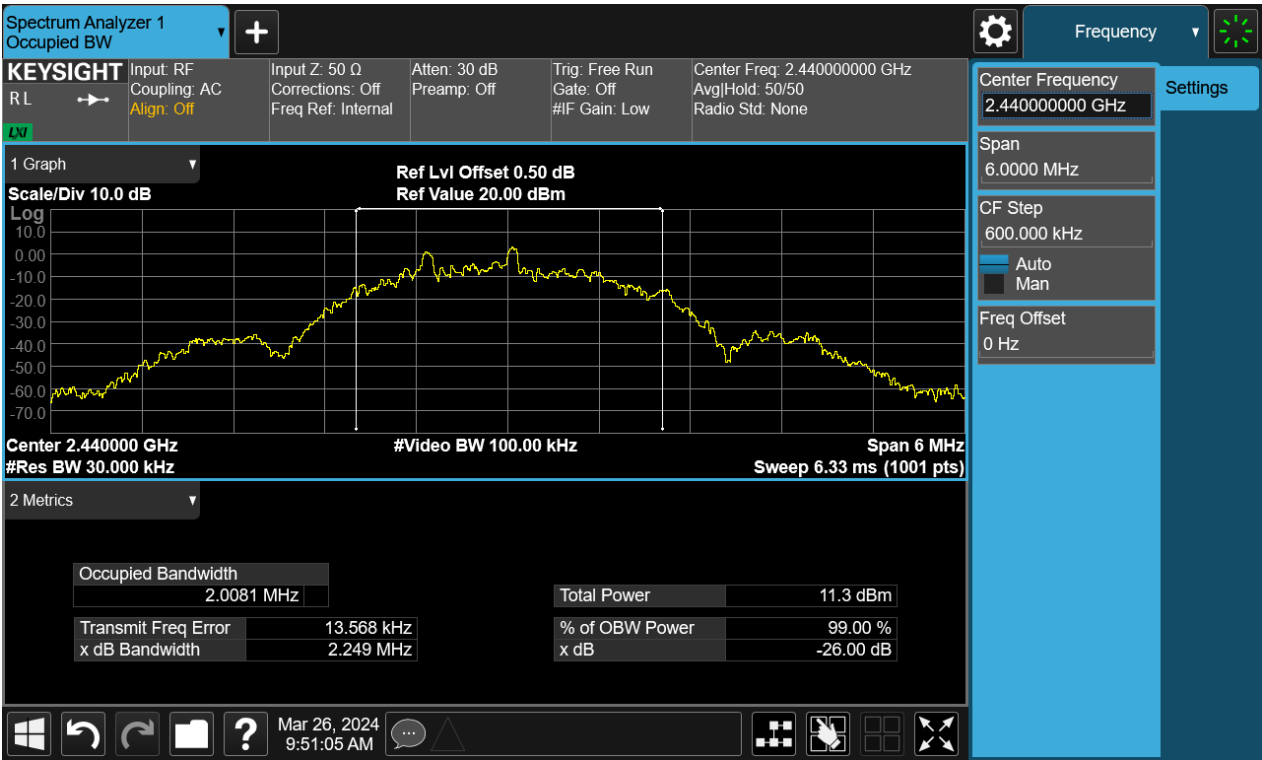
TEST REPORT

Report No.: SHE24030021-02DE Date: 2024-04-30 Page 22 of 54

Figure 11: 6dB Bandwidth, 2440MHz, BLE-2Mbps



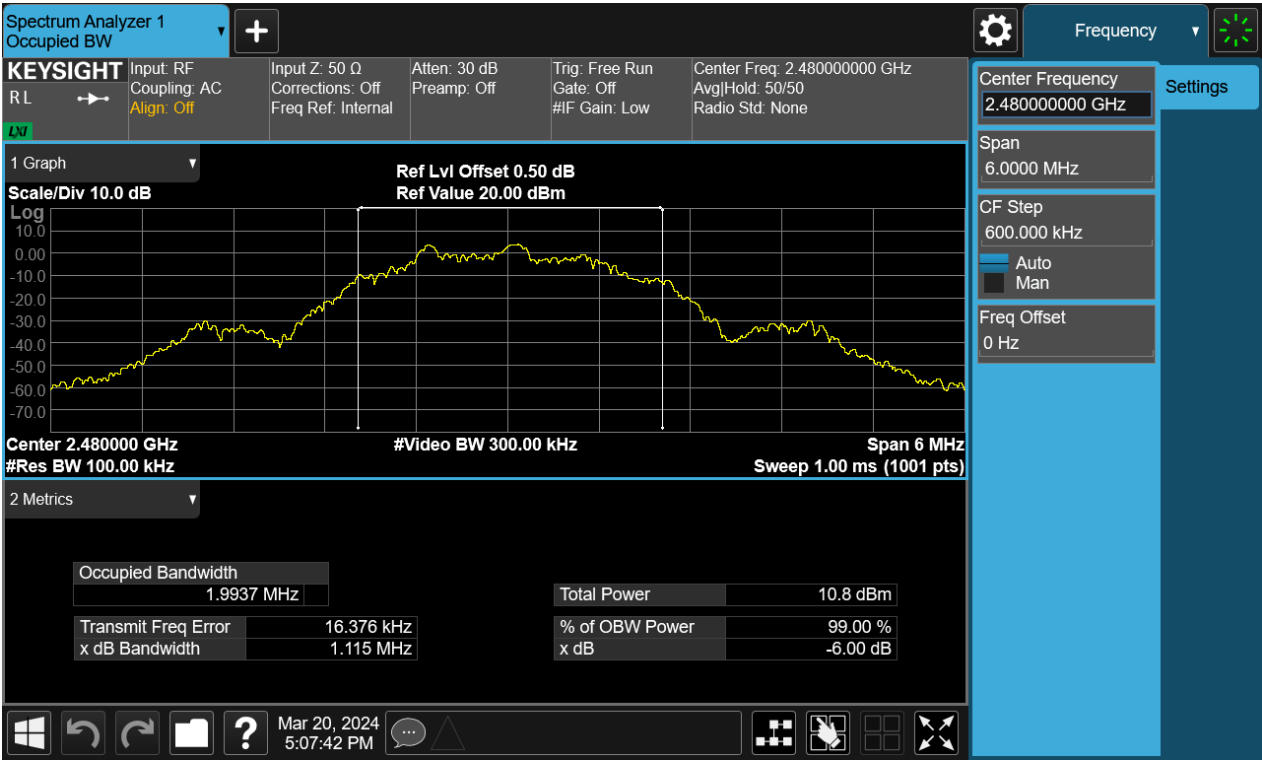
99% Bandwidth, 2440MHz, BLE-2Mbps



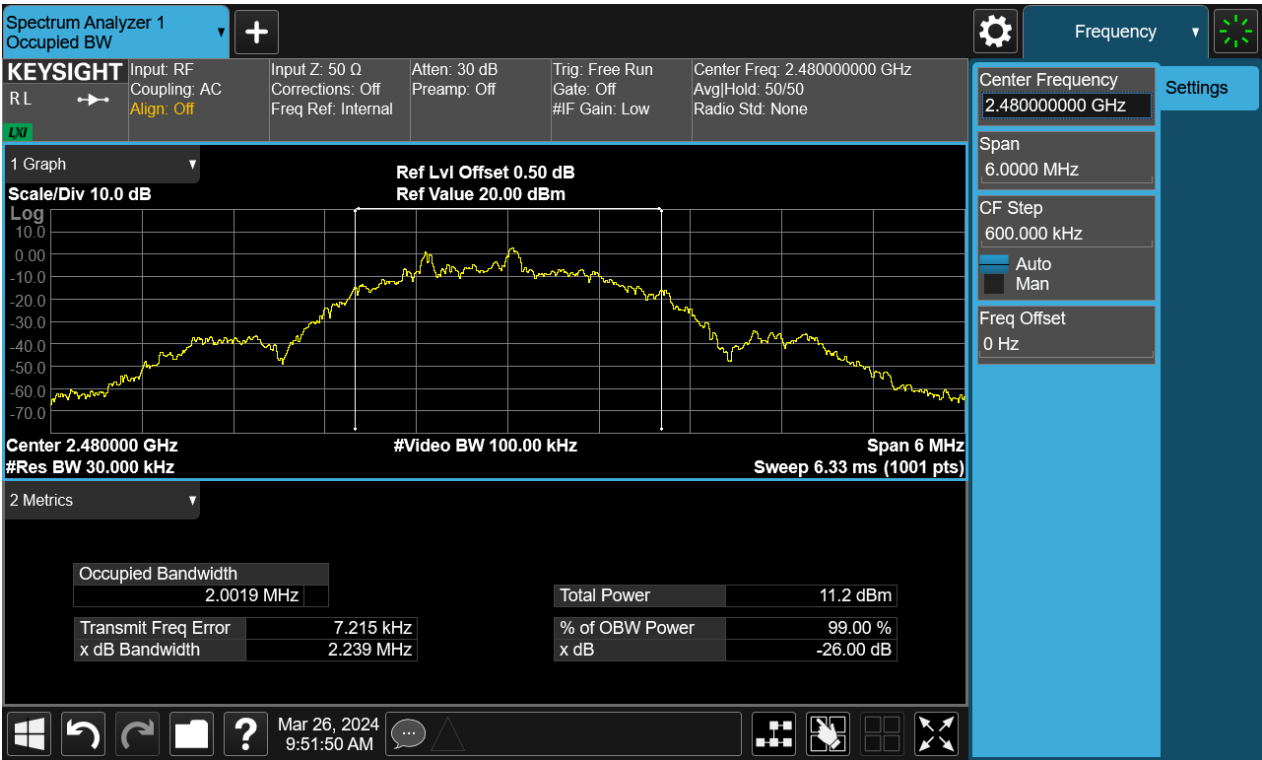
TEST REPORT

Report No.: SHE24030021-02DE Date: 2024-04-30 Page 23 of 54

Figure 12: 6dB Bandwidth, 2480MHz, BLE-2Mbps



99% Bandwidth, 2480MHz, BLE-2Mbps



TEST REPORT

Report No.: SHE24030021-02DE

Date: 2024-04-30

Page 24 of 54

4.1.4 Maximum conducted output power spectral density

RESULT:

PASS

Test standard : FCC Part 15.247(e), RSS-247 5.2(b)

Requirement : ANSI C63.10-2013 clause 11.10.2,
KDB 558074 D01 v05r02, Clause 8.4

Kind of test site : Shielded room

Test setup

Test Channel : Low/Middle/High

Operation Mode : A.1.a

Ambient temperature : 21.3°C

Relative humidity : 49%

Table 4: Maximum conducted output power spectral density

Test Mode	Test Channel (MHz)	Measured Result (dBm/3kHz)	Limit (dBm/3kHz)
BLE-1Mbps	2402	-12.53	8
	2440	-12.29	
	2480	-12.49	
BLE-2Mbps	2402	-12.40	
	2440	-12.60	
	2480	-12.71	

TEST REPORT

Report No.: SHE24030021-02DE Date: 2024-04-30 Page 25 of 54

Figure 13: Power Spectral Density, 2402MHz, BLE-1Mbps

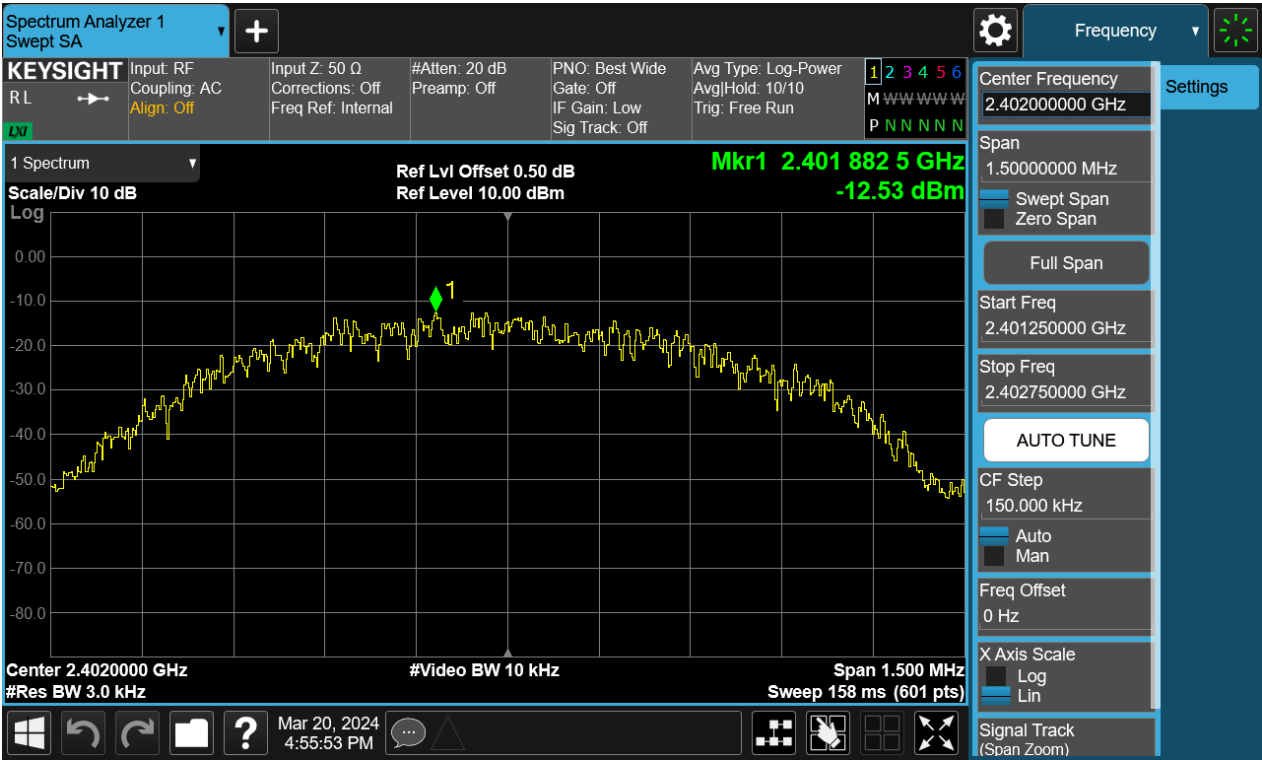
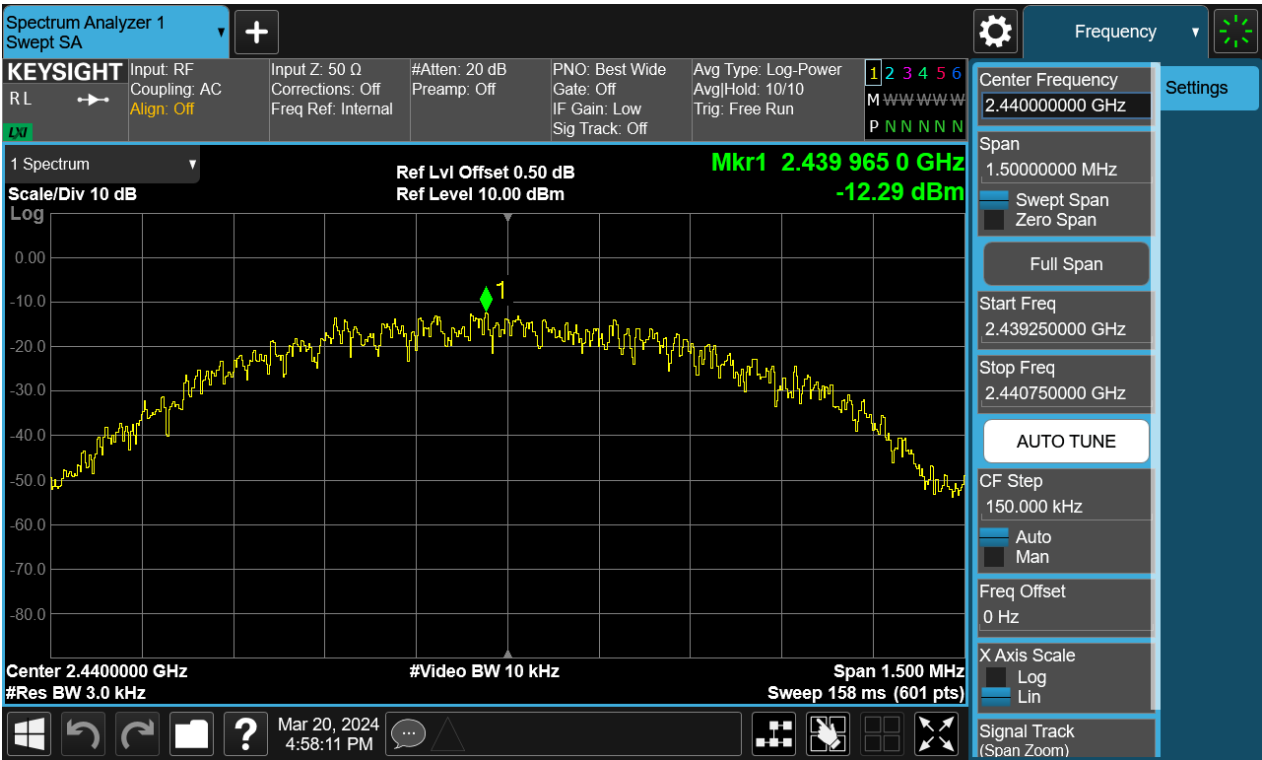


Figure 14: Power Spectral Density, 2440MHz, BLE-1Mbps



TEST REPORT

Report No.: SHE24030021-02DE Date: 2024-04-30 Page 26 of 54

Figure 15: Power Spectral Density, 2480MHz, BLE-1Mbps

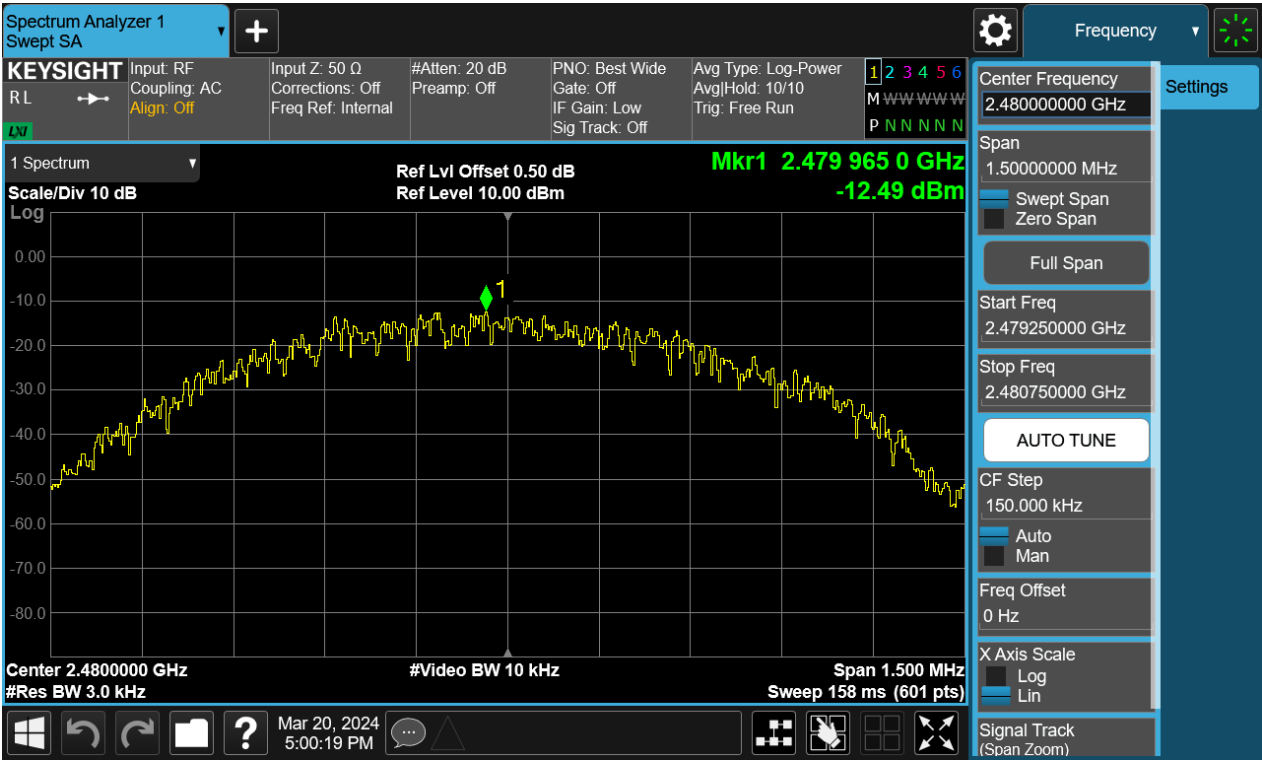
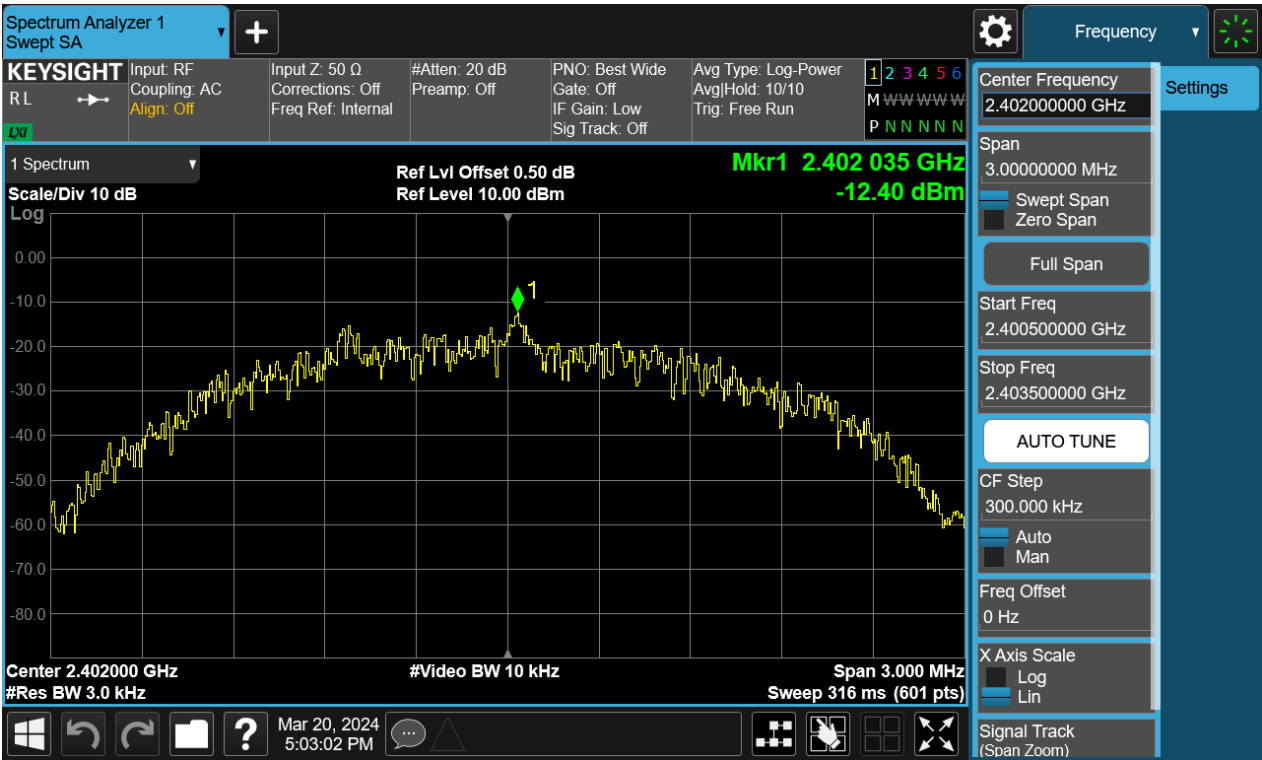


Figure 16: Power Spectral Density, 2402MHz, BLE-2Mbps



TEST REPORT

Report No.: SHE24030021-02DE Date: 2024-04-30 Page 27 of 54

Figure 17: Power Spectral Density, 2440MHz, BLE-2Mbps

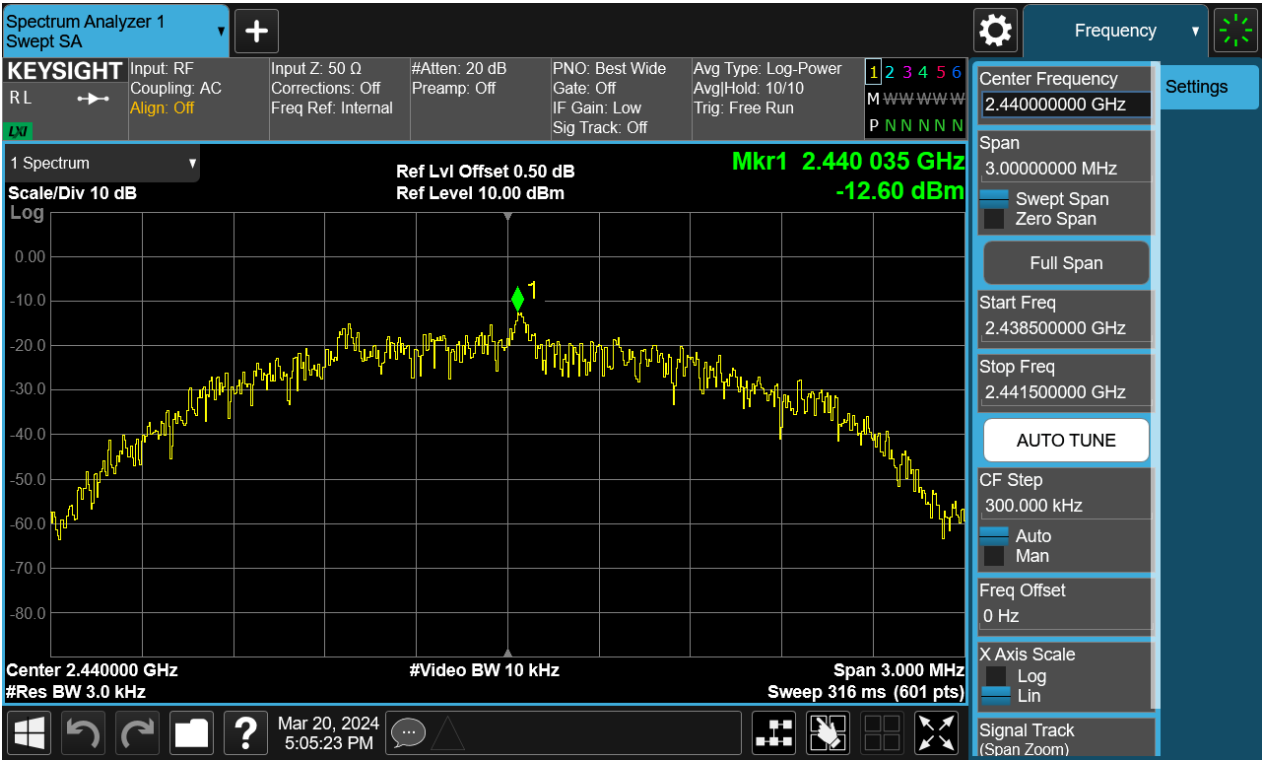
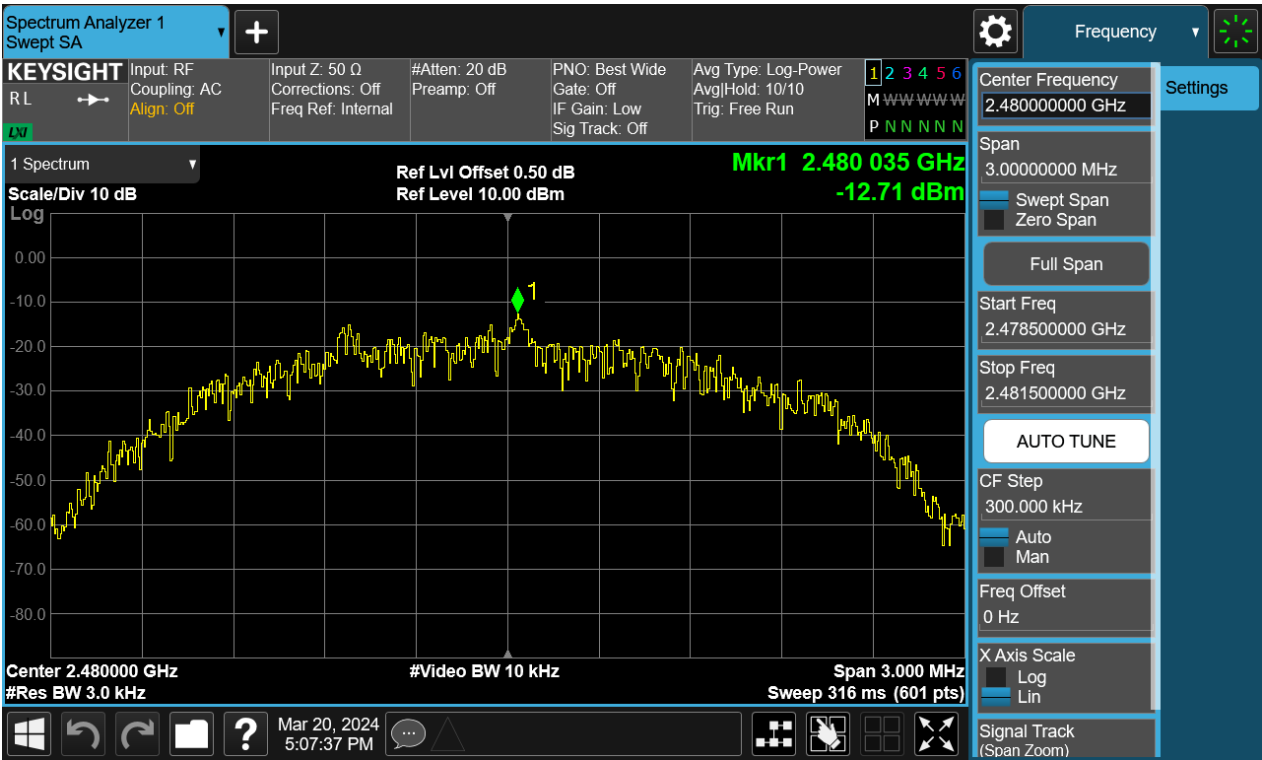


Figure 18: Power Spectral Density, 2480MHz, BLE-2Mbps



TEST REPORT

Report No.: SHE24030021-02DE

Date: 2024-04-30

Page 28 of 54

4.1.5 Conducted Spurious Emission & Authorized-band band-edge

RESULT:

PASS

Test standard	: FCC Part 15.247(d), RSS-247 5.5
Requirement	: ANSI C63.10-2013, Clause 11.11.1(a) KDB 558074 D01 v05r02, Clause 8.5
Kind of test site	: Shielded room

Test setup

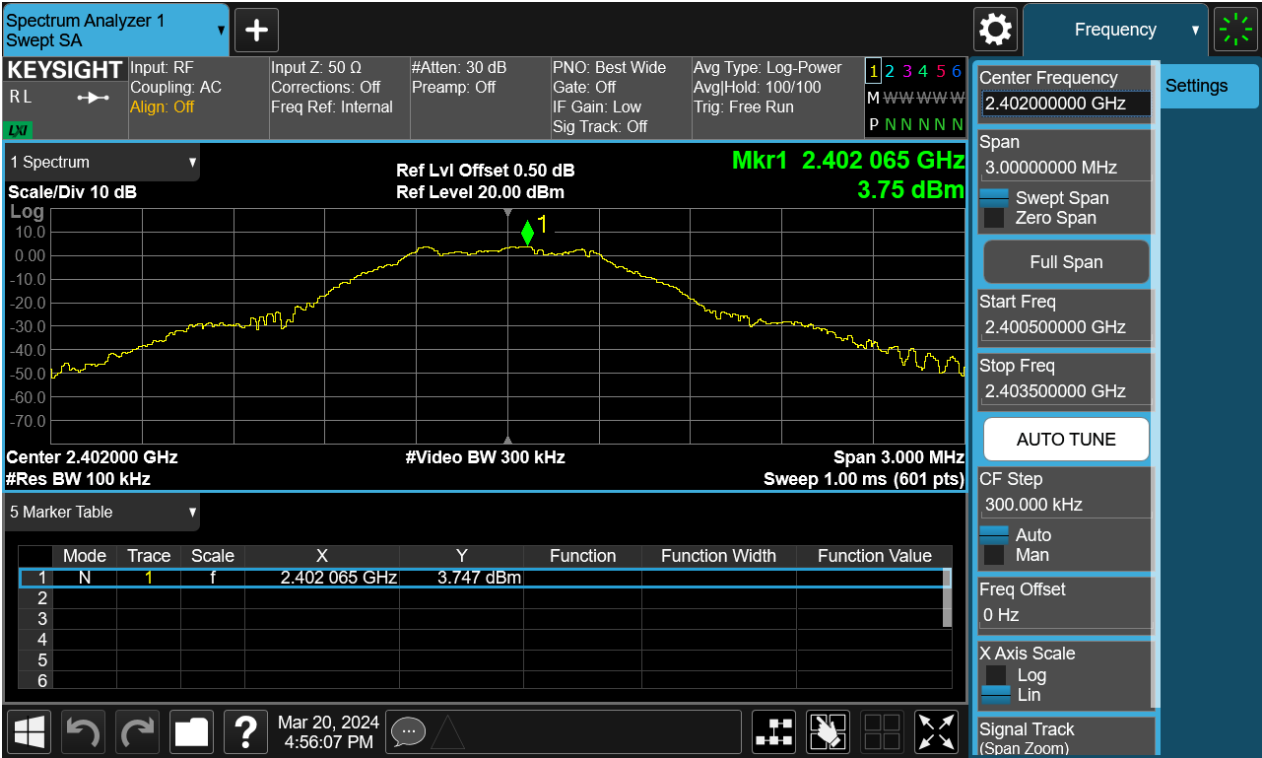
Test Channel	: Low/Middle/High for spurious, Low/High for Band Edge
Operation Mode	: A.1.a
Ambient temperature	: 21.3°C
Relative humidity	: 49%

For details refer to following test plot.

TEST REPORT

Report No.: SHE24030021-02DE Date: 2024-04-30 Page 29 of 54

Figure 19: Conducted Spurious Emission & Authorized-band band-edge, 2402MHz, BLE-1Mbps Carrier Level



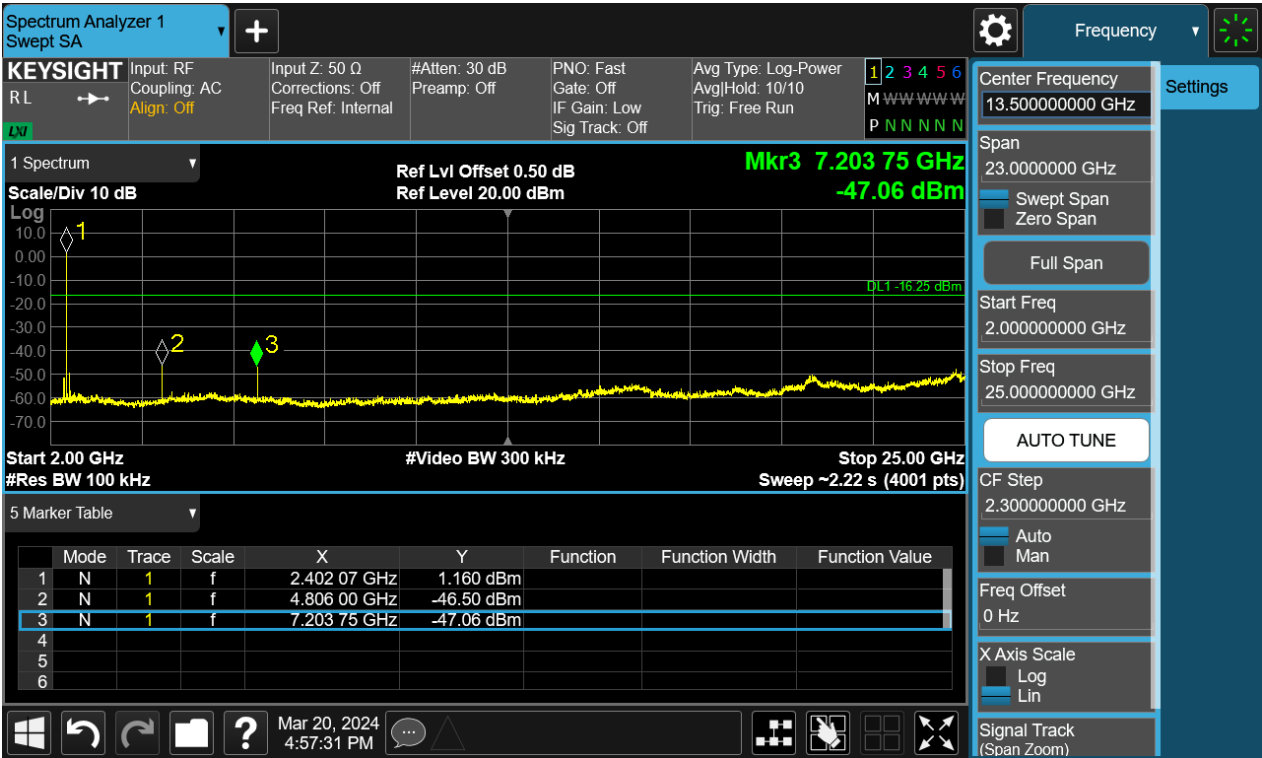
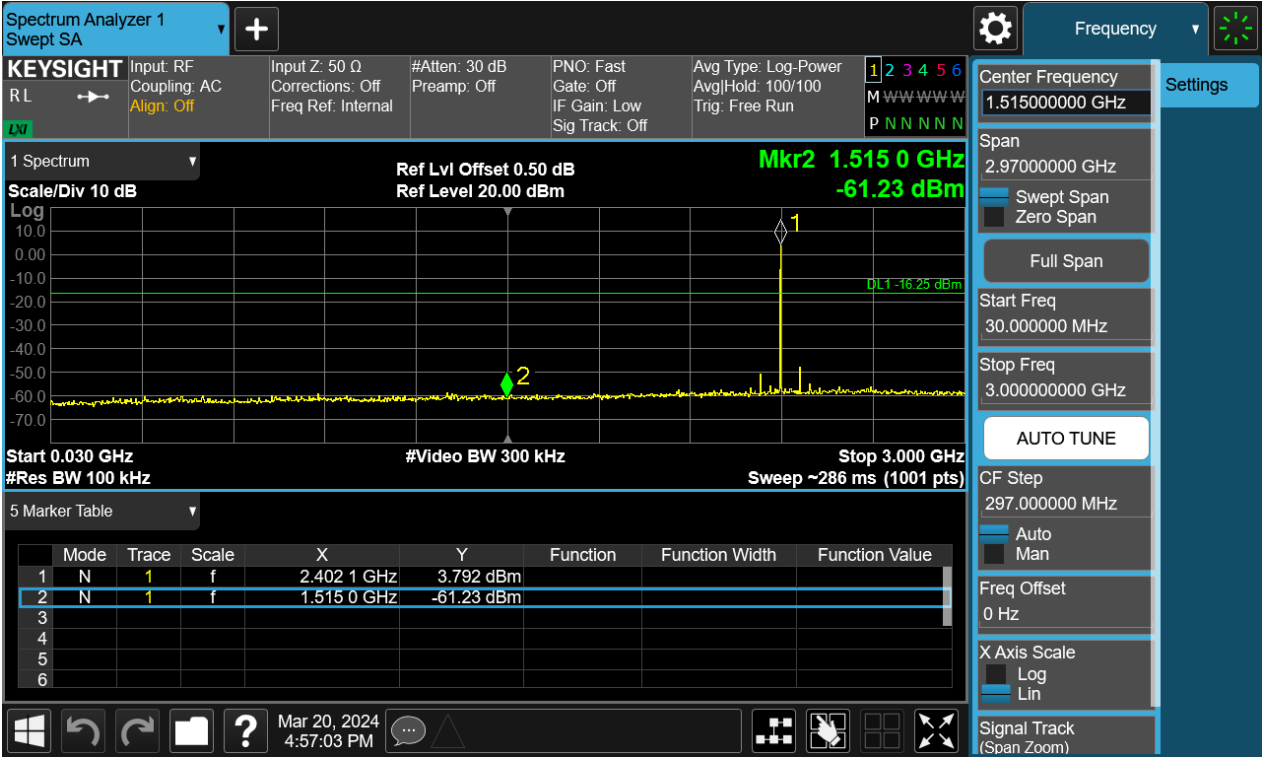
Band Edge



TEST REPORT

Report No.: SHE24030021-02DE Date: 2024-04-30 Page 30 of 54

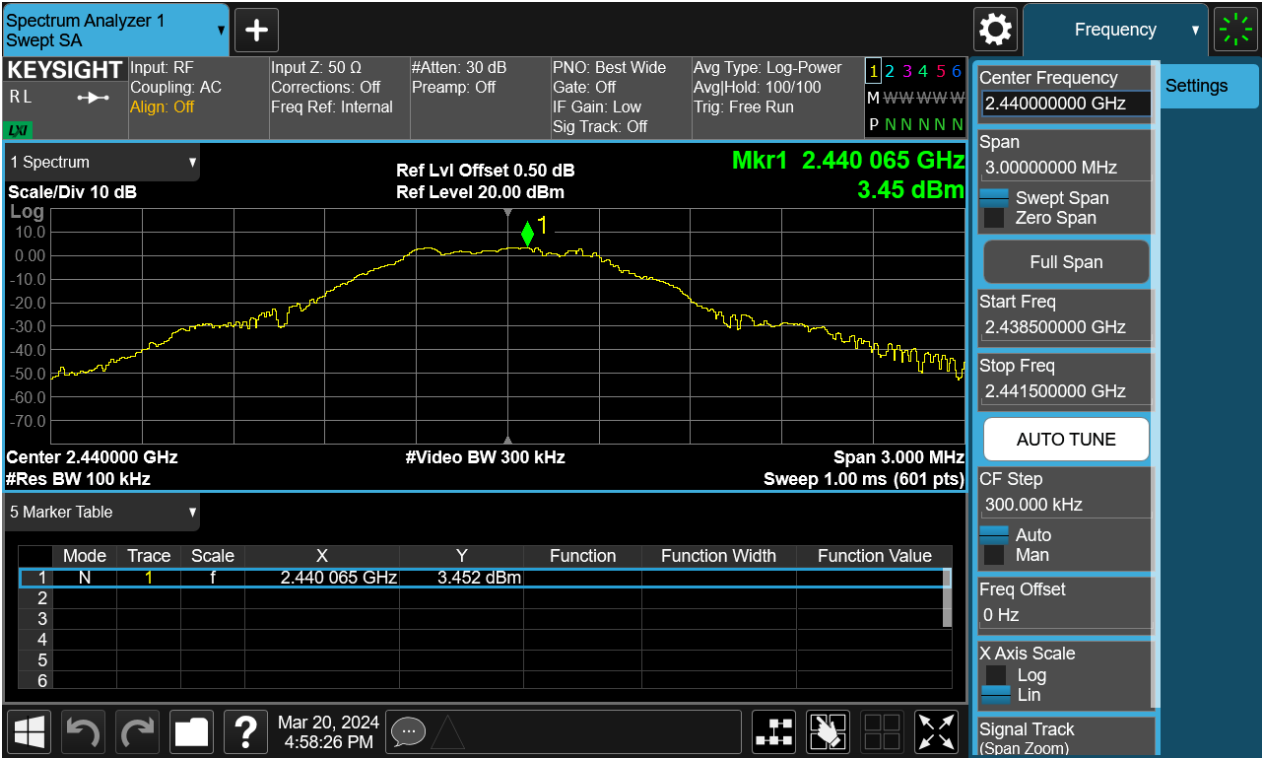
Conducted spurious emissions 30MHz-25GHz



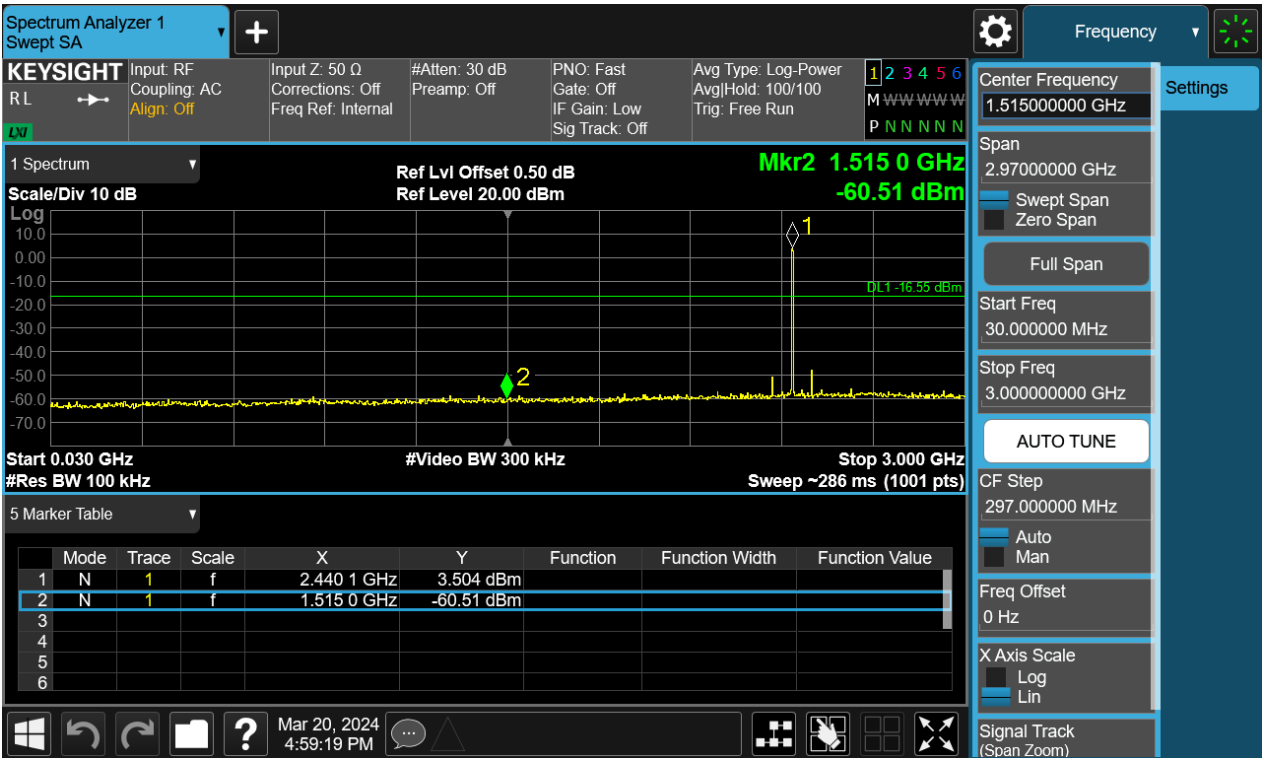
TEST REPORT

Report No.: SHE24030021-02DE Date: 2024-04-30 Page 31 of 54

Figure 20: Conducted Spurious Emission & Authorized-band band-edge, 2440MHz, BLE-1Mbps Carrier Level



Conducted spurious emissions 30MHz-25GHz



TEST REPORT

Report No.: SHE24030021-02DE Date: 2024-04-30 Page 32 of 54

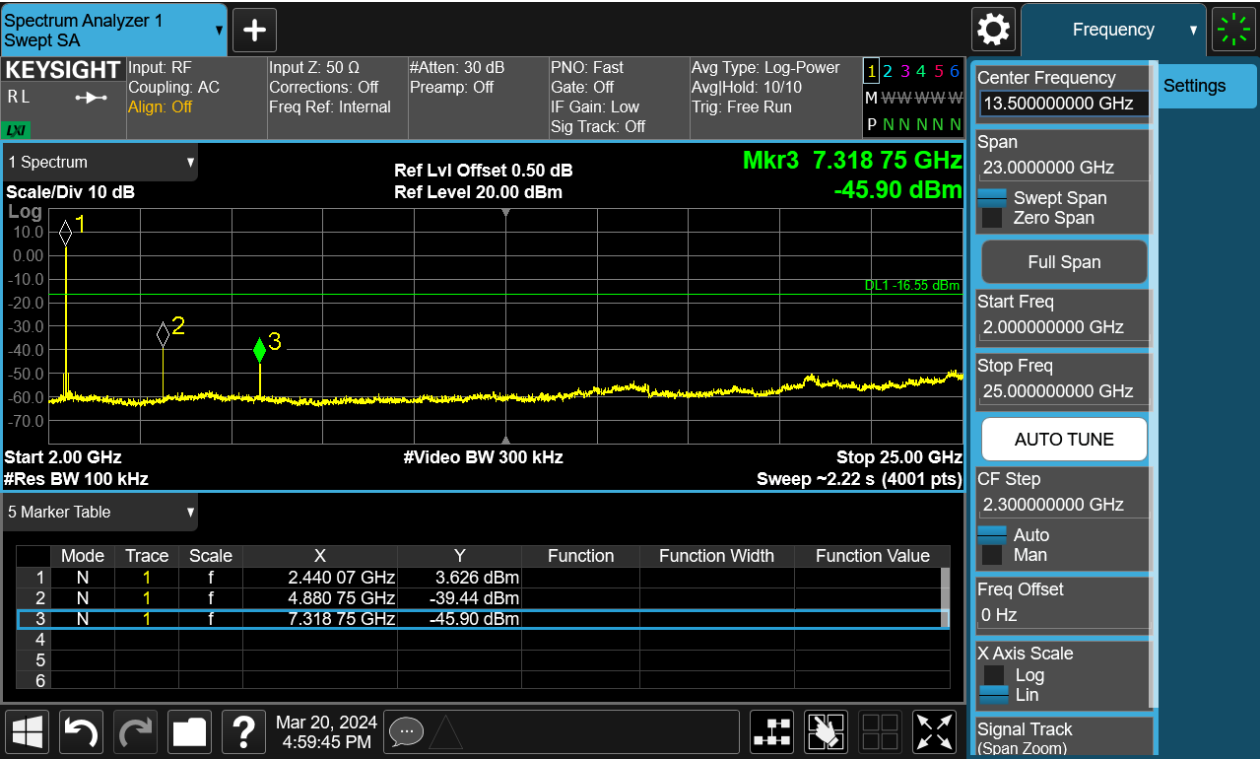


Figure 21: Conducted Spurious Emission & Authorized-band band-edge, 2480MHz, BLE-1Mbps Carrier Level



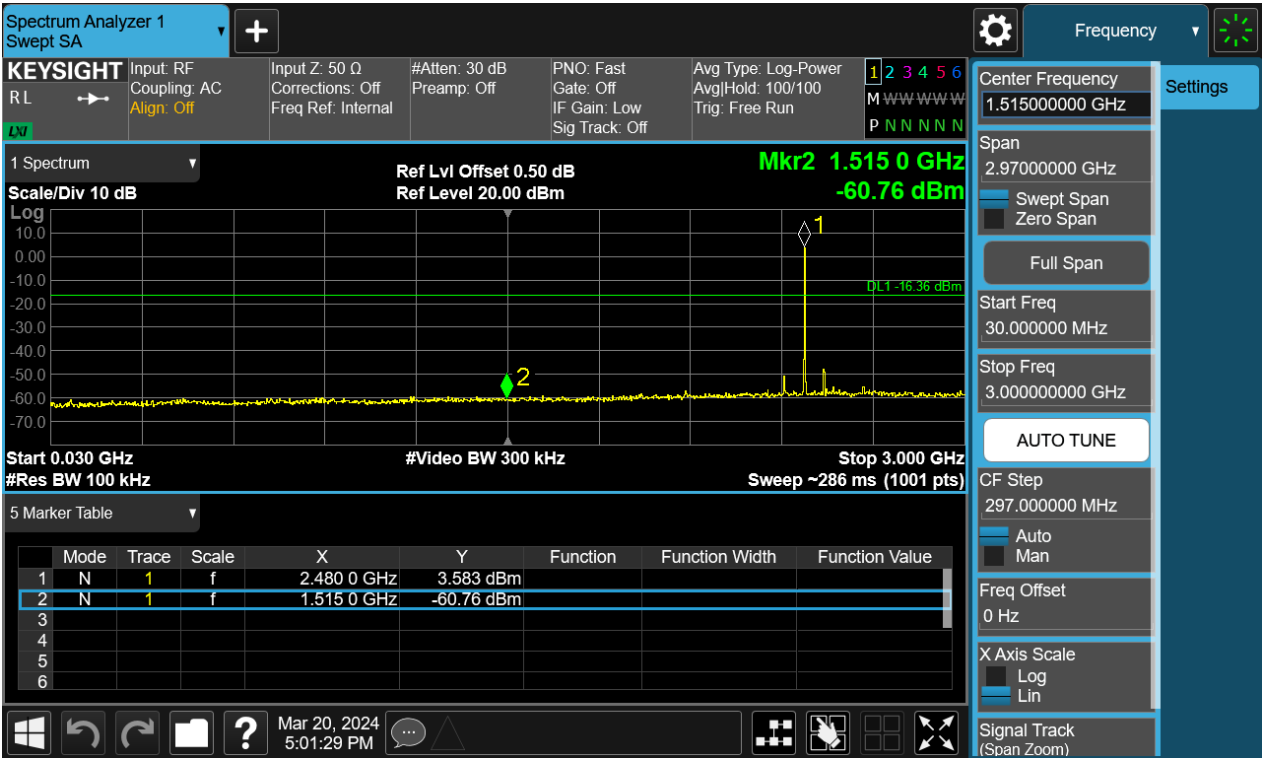
TEST REPORT

Report No.: SHE24030021-02DE Date: 2024-04-30 Page 33 of 54

Band Edge



Conducted spurious emissions 30MHz-25GHz



TEST REPORT

Report No.: SHE24030021-02DE Date: 2024-04-30 Page 34 of 54

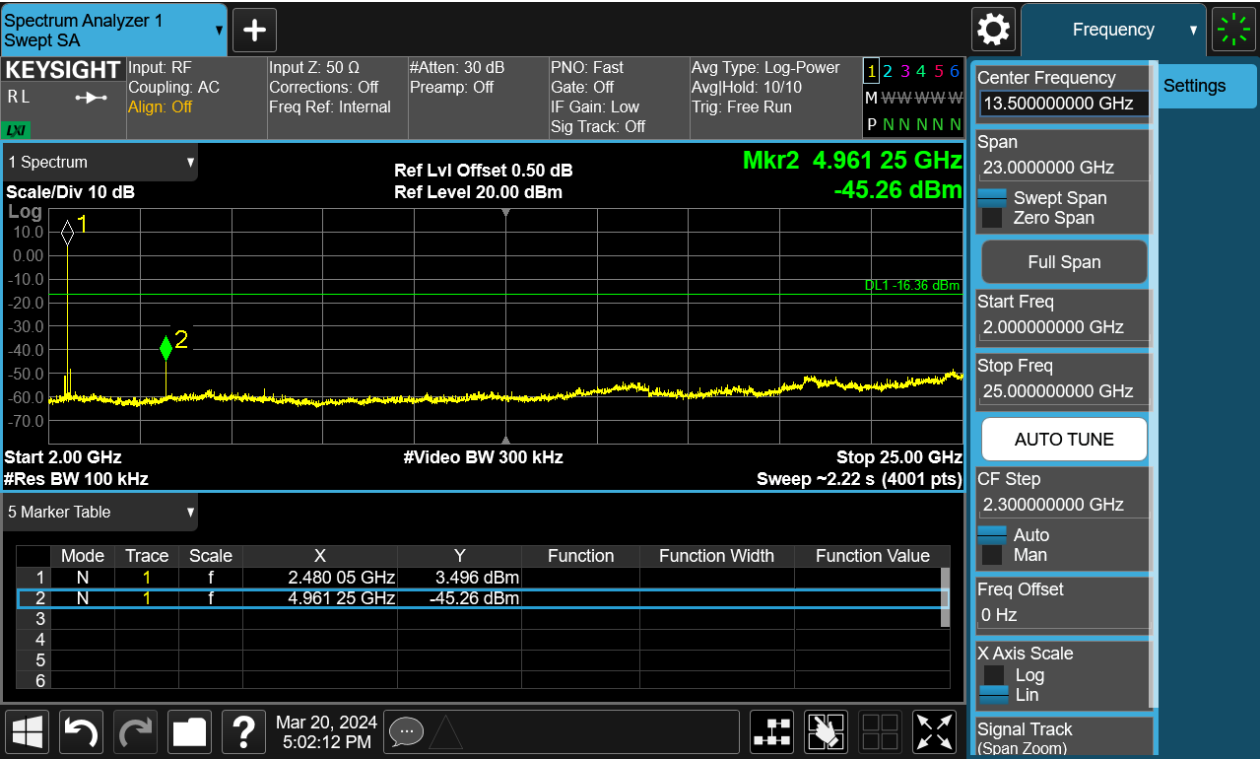


Figure 22: Conducted Spurious Emission & Authorized-band band-edge, 2402MHz, BLE-2Mbps Carrier Level



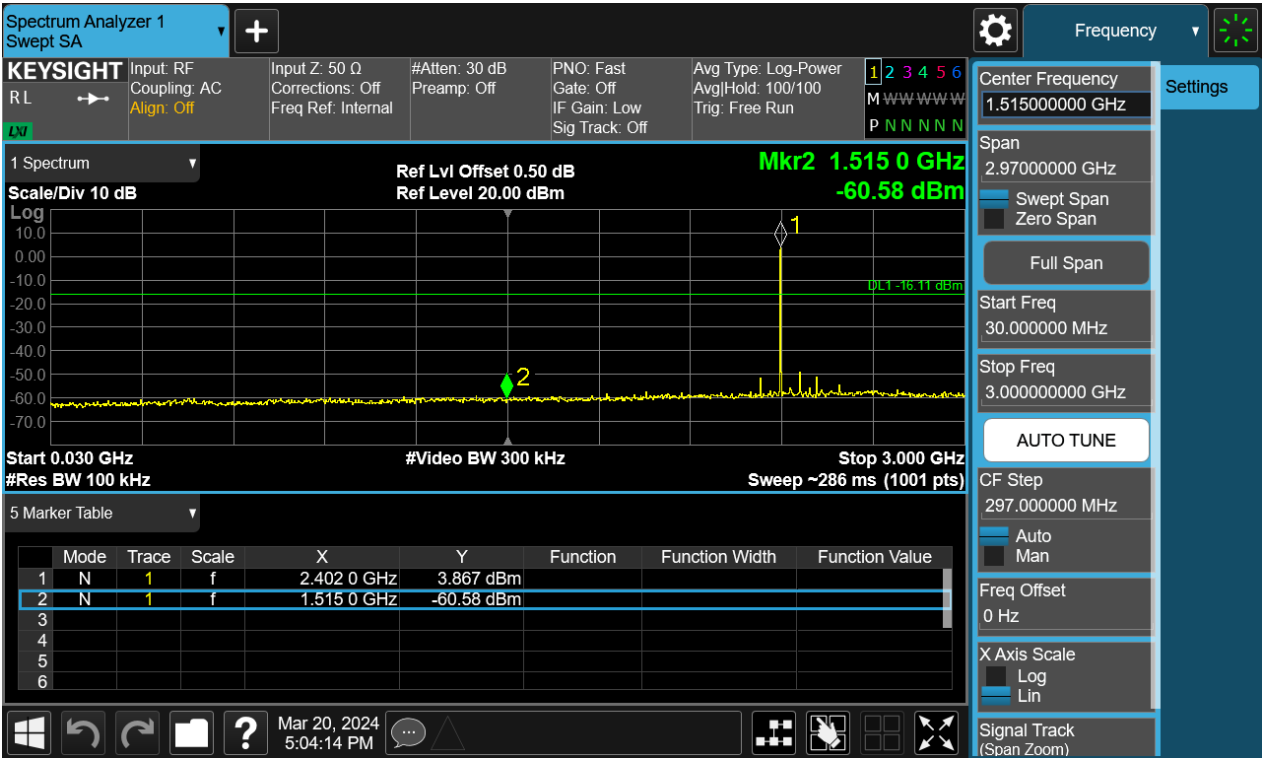
TEST REPORT

Report No.: SHE24030021-02DE Date: 2024-04-30 Page 35 of 54

Band Edge



Conducted spurious emissions 30MHz-25GHz



TEST REPORT

Report No.: SHE24030021-02DE Date: 2024-04-30 Page 36 of 54

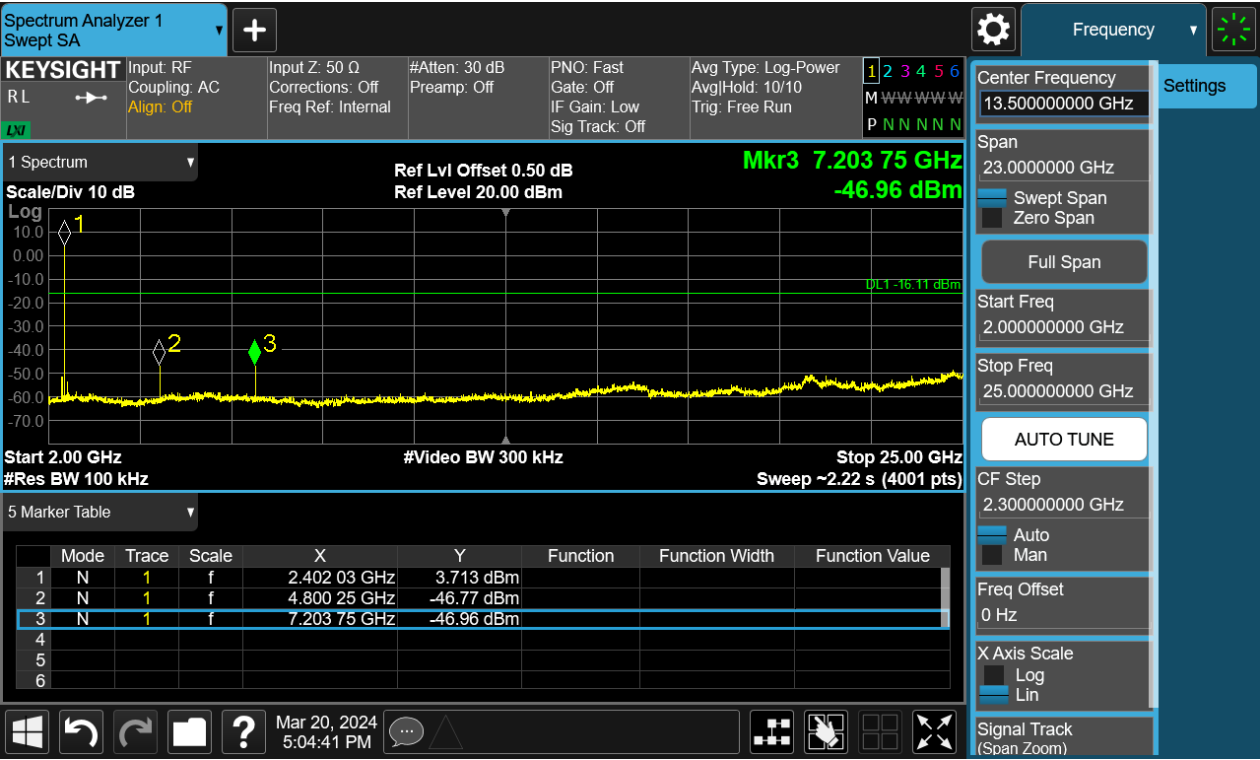


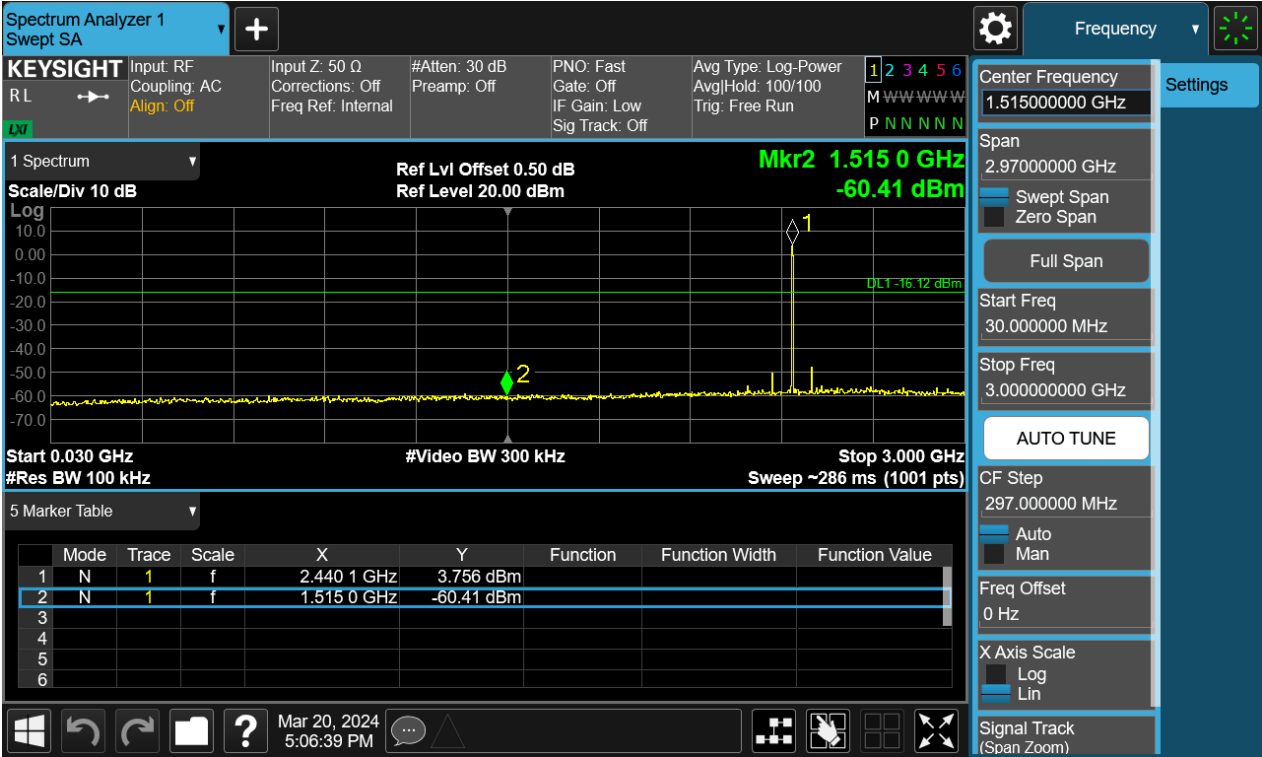
Figure 23: Conducted Spurious Emission & Authorized-band band-edge, 2440MHz, BLE-2Mbps Carrier Level



TEST REPORT

Report No.: SHE24030021-02DE Date: 2024-04-30 Page 37 of 54

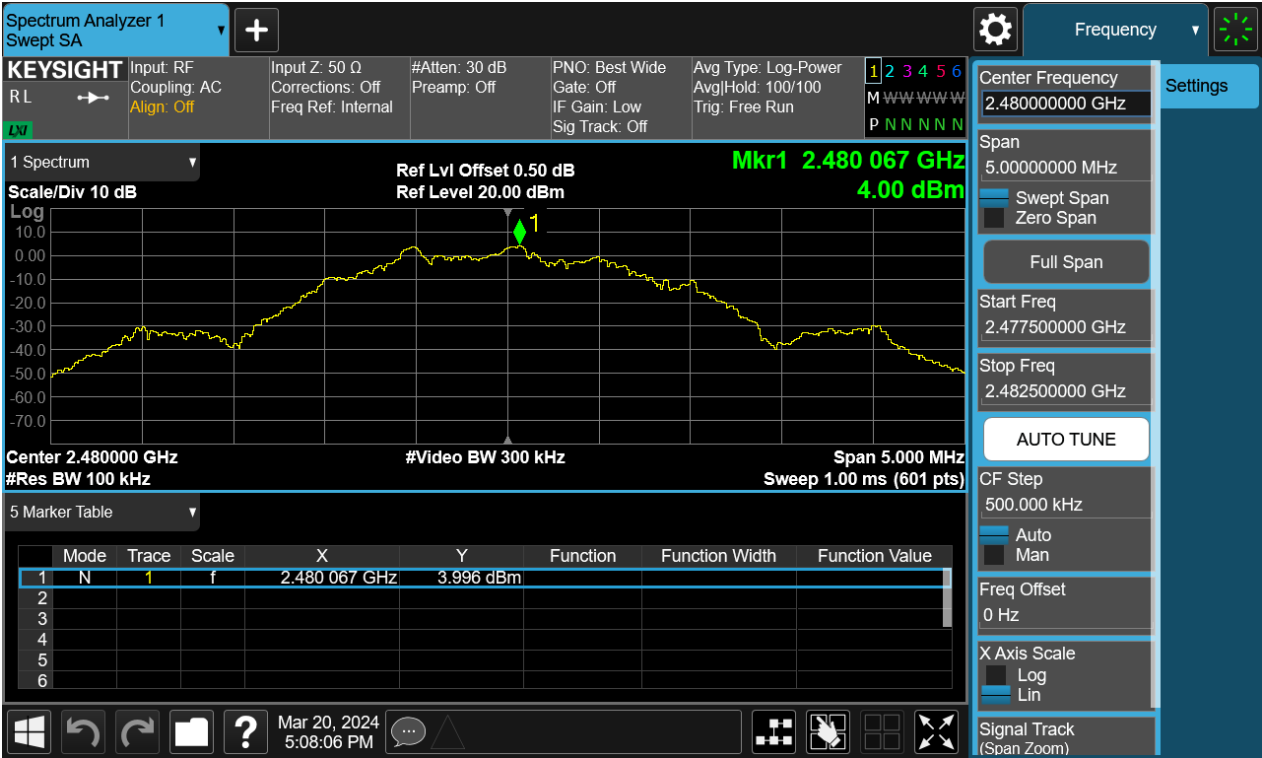
Conducted spurious emissions 30MHz-25GHz



TEST REPORT

Report No.: SHE24030021-02DE Date: 2024-04-30 Page 38 of 54

Figure 24: Conducted Spurious Emission & Authorized-band band-edge, 2480MHz, BLE-2Mbps Carrier Level



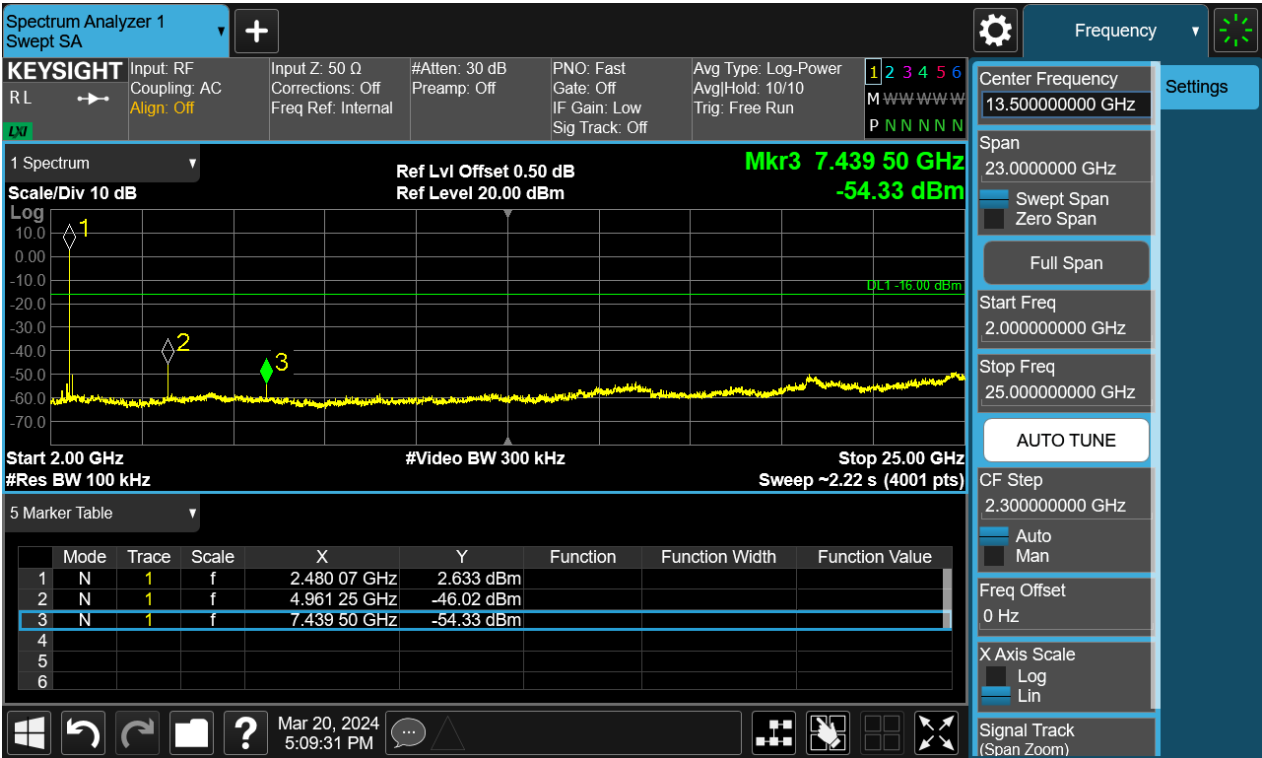
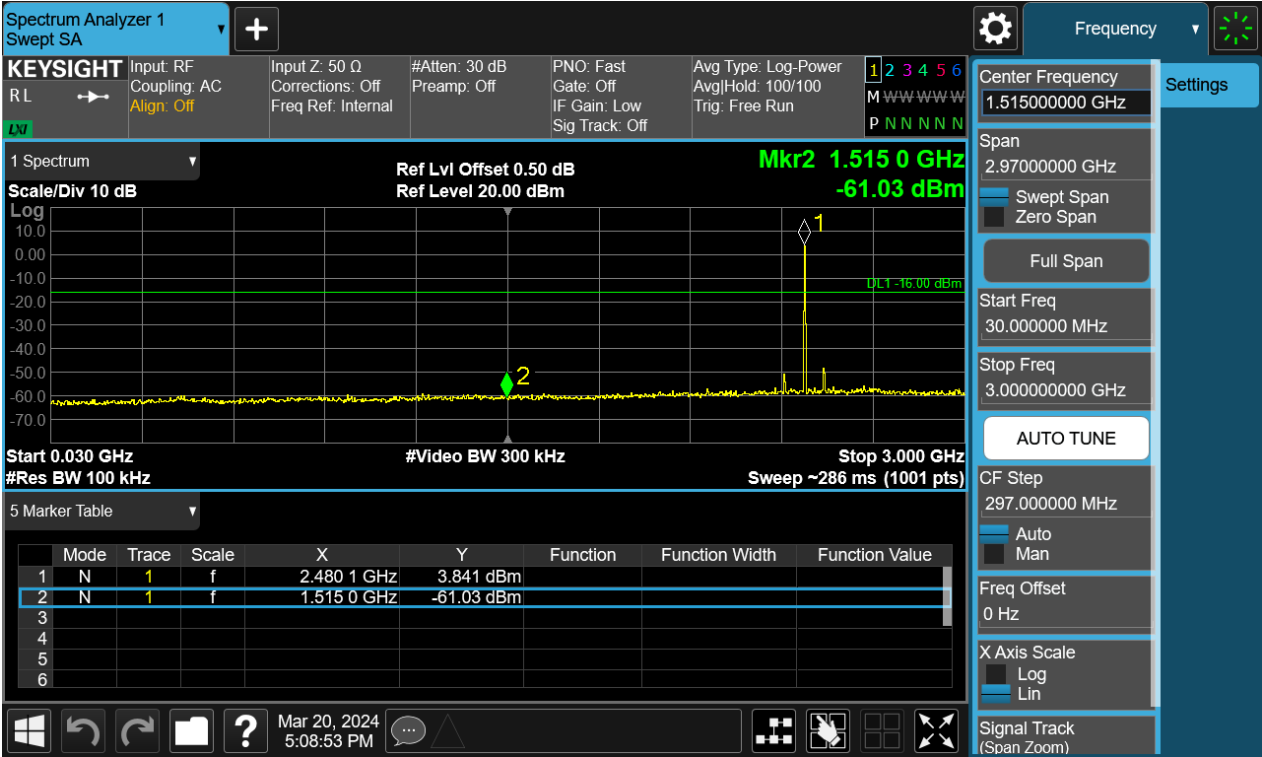
Band Edge



TEST REPORT

Report No.: SHE24030021-02DE Date: 2024-04-30 Page 39 of 54

Conducted spurious emissions 30MHz-25GHz



TEST REPORT

Report No.: SHE24030021-02DE

Date: 2024-04-30

Page 40 of 54

4.1.6 Radiated Emission

RESULT:

PASS

Test standard	: FCC Part 15.247(d), 15.205, 15.209 RSS-GEN 8.9
Requirement	: ANSI C63.10-2013 clause 11.12, KDB 558074 D01 v05r02, Clause 8.6
Kind of test site	: 3m Semi-Anechoic Chamber

Test setup

Test Channel	: Low/Middle/High
Operation Mode	: A
Ambient temperature	: 22°C&23.2°C
Relative humidity	: 48%&50%

Notes

Test plots please refer to the annex document "SHE24030021-02DE DATA BLE-TX EXHIBIT A of EH-MC26 Model".

Test plots please refer to the annex document "SHE24030021-02DE DATA BLE-TX EXHIBIT A of EH-MC26B Model".

1. For 9 kHz ~ 30 MHz, the amplitude of spurious emissions that are attenuated by more than 20dB below the permissible. The value has no need to be reported. In addition, During 30MHz to 1GHz test frequency range, only the worst mode data was reported in this report.
2. The spurious above 18GHz is noise only and 20dB below the limit. The value has no need to be reported.
3. The EUT was pretested with 3 orientations placed on the table for the radiated emission measurement –X, Y, and Z-plane. The X-plane results were found as the worst case and were shown in this report.

TEST REPORT

Report No.: SHE24030021-02DE

Date: 2024-04-30

Page 41 of 54

4.1.7 Band Edge (Restricted-band band-edge)

RESULT:

PASS

Test standard

: FCC Part 15.247(d), 15.205, 15.209
RSS-GEN 8.10

Requirement

: ANSI C63.10-2013 clause 11.13,
KDB 558074 D01 v05r02, Clause 8.7

Kind of test site

: 3m Semi-Anechoic Chamber

Test setup

Test Channel

: Low/Middle/High

Operation Mode

: A.1

Ambient temperature

: 22°C&23.2°C

Relative humidity

: 48%&50%

Notes

Test plots please refer to the annex document “SHE24030021-02DE DATA BLE-TX EXHIBIT A of EH-MC26 Model ”.

Test plots please refer to the annex document “SHE24030021-02DE DATA BLE-TX EXHIBIT A of EH-MC26B Model ”.

TEST REPORT

Report No.: SHE24030021-02DE

Date: 2024-04-30

Page 42 of 54

4.2 Mains Emissions

4.2.1 Conducted Emission on AC Mains

RESULT:

PASS

Test standard	: FCC Part 15.207(a), RSS-Gen 8.8
Requirement	: ANSI C63.10-2013, Clause 6.2
Kind of test site	: Shielded room

Test setup

Input Voltage	: which received AC 120V, 60Hz Power
Operation Mode	: A.1.a
Earthing	: Connected to GND
Ambient temperature	: 23.1°C&23°C
Relative humidity	: 50%&51%

For details refer to following test plot.

TEST REPORT

Report No.:

SHE24030021-02DE

Date:

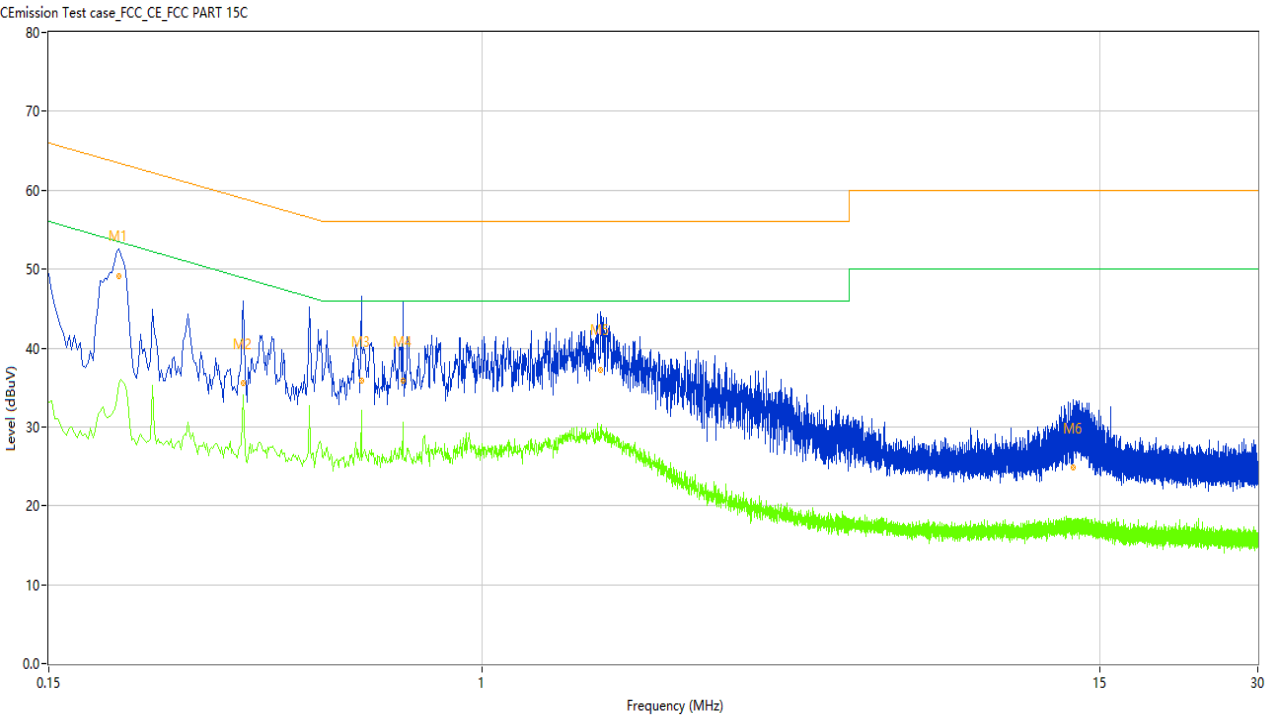
2024-04-30

Page 43 of 54

Note: The all configurations were tested respectively, but only the worst data (at low channel) shown here.

EH-MC26 Model

Figure 25: Conducted Emission on AC Mains, L Phase



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.204	52.78	10.03	63.45	10.67	Peak	L	Pass
1*	0.204	49.13	10.03	63.45	14.32	QP	L	Pass
1**	0.204	35.49	10.03	53.45	17.96	AV	L	Pass
2	0.352	46.87	10.06	58.92	12.05	Peak	L	Pass
2*	0.352	35.57	10.06	58.92	23.35	QP	L	Pass
2**	0.352	33.99	10.06	48.92	14.93	AV	L	Pass
3	0.590	48.75	10.07	56.00	7.25	Peak	L	Pass
3*	0.590	35.80	10.07	56.00	20.20	QP	L	Pass
3**	0.590	32.03	10.07	46.00	13.97	AV	L	Pass
4	0.708	47.96	10.04	56.00	8.04	Peak	L	Pass
4*	0.708	35.80	10.04	56.00	20.20	QP	L	Pass
4**	0.708	30.52	10.04	46.00	15.48	AV	L	Pass
5	1.686	44.35	9.94	56.00	11.65	Peak	L	Pass
5*	1.686	37.14	9.94	56.00	18.86	QP	L	Pass
5**	1.686	29.88	9.94	46.00	16.12	AV	L	Pass
6	13.372	33.17	9.66	60.00	26.83	Peak	L	Pass
6*	13.372	24.81	9.66	60.00	35.19	QP	L	Pass
6**	13.372	17.99	9.66	50.00	32.01	AV	L	Pass

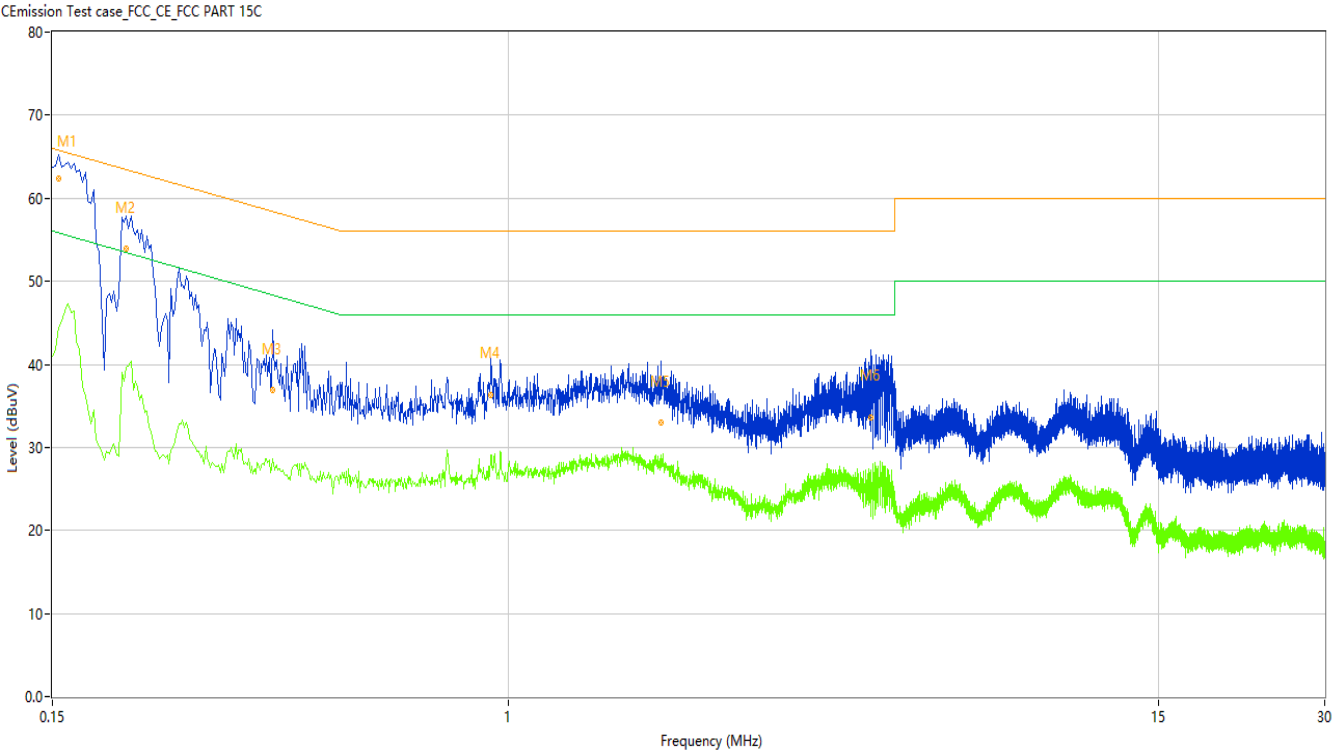
TEST REPORT

Report No.: SHE24030021-02DE

Date: 2024-04-30

Page 44 of 54

Figure 26: Conducted Emission on AC Mains, N Phase



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.154	64.29	10.02	65.78	1.49	Peak	N	Pass
1*	0.154	62.31	10.02	65.78	3.47	QP	N	Pass
1**	0.154	44.51	10.02	55.78	11.27	AV	N	Pass
2	0.204	56.69	10.03	63.45	6.76	Peak	N	Pass
2*	0.204	53.88	10.03	63.45	9.57	QP	N	Pass
2**	0.204	39.63	10.03	53.45	13.82	AV	N	Pass
3	0.376	42.03	10.06	58.37	16.34	Peak	N	Pass
3*	0.376	36.97	10.06	58.37	21.40	QP	N	Pass
3**	0.376	28.59	10.06	48.37	19.78	AV	N	Pass
4	0.932	41.51	10.04	56.00	14.49	Peak	N	Pass
4*	0.932	36.29	10.04	56.00	19.71	QP	N	Pass
4**	0.932	29.12	10.04	46.00	16.88	AV	N	Pass
5	1.890	38.72	9.94	56.00	17.28	Peak	N	Pass
5*	1.890	33.04	9.94	56.00	22.96	QP	N	Pass
5**	1.890	29.11	9.94	46.00	16.89	AV	N	Pass
6	4.540	41.68	9.79	56.00	14.32	Peak	N	Pass
6*	4.540	33.61	9.79	56.00	22.39	QP	N	Pass
6**	4.540	26.82	9.79	46.00	19.18	AV	N	Pass

TEST REPORT

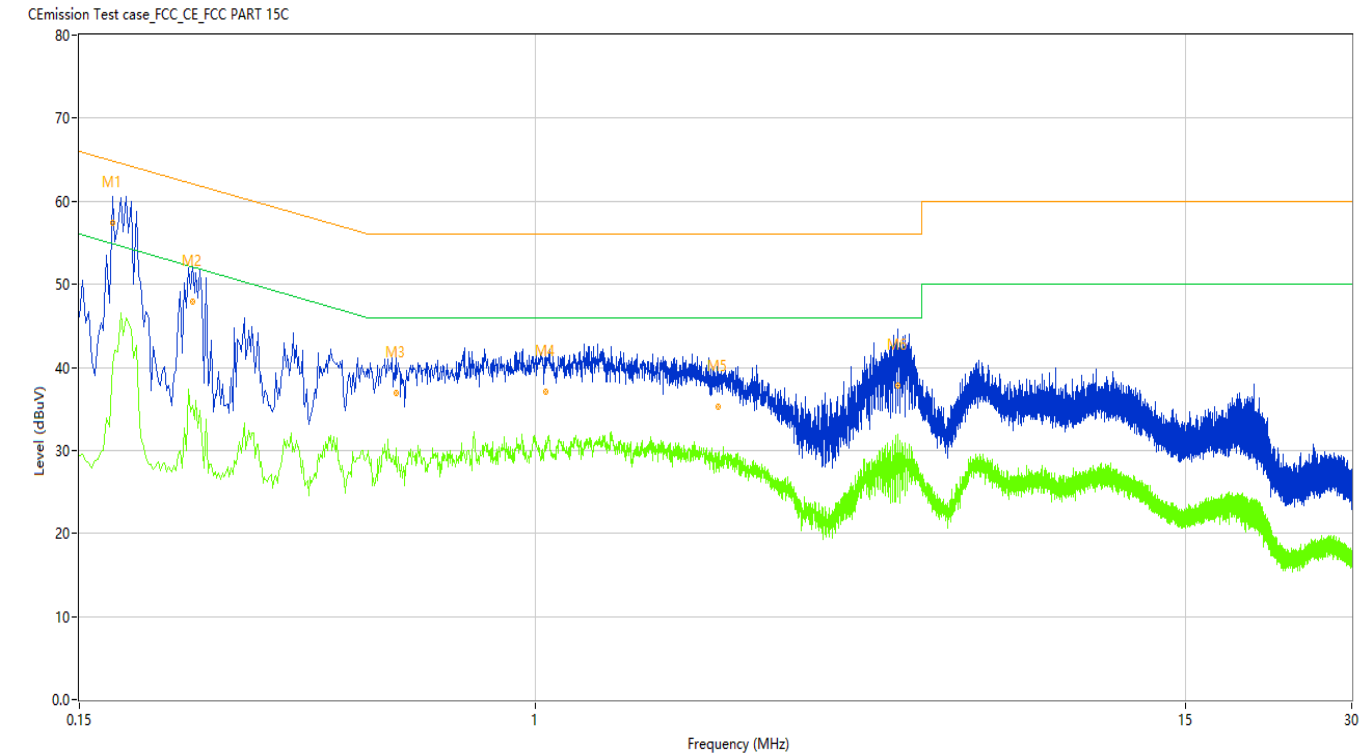
Report No.: SHE24030021-02DE

Date: 2024-04-30

Page 45 of 54

EH-MC26B Model

Figure 27: Conducted Emission on AC Mains, L Phase



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.172	61.09	9.93	64.86	3.77	Peak	L	Pass
1*	0.172	57.36	9.93	64.86	7.50	QP	L	Pass
1**	0.172	40.41	9.93	54.86	14.45	AV	L	Pass
2	0.240	51.77	9.96	62.10	10.33	Peak	L	Pass
2*	0.240	47.96	9.96	62.10	14.14	QP	L	Pass
2**	0.240	35.46	9.96	52.10	16.64	AV	L	Pass
3	0.560	40.74	9.96	56.00	15.26	Peak	L	Pass
3*	0.560	36.86	9.96	56.00	19.14	QP	L	Pass
3**	0.560	30.23	9.96	46.00	15.77	AV	L	Pass
4	1.044	41.53	9.83	56.00	14.47	Peak	L	Pass
4*	1.044	36.99	9.83	56.00	19.01	QP	L	Pass
4**	1.044	31.14	9.83	46.00	14.86	AV	L	Pass
5	2.148	40.43	9.85	56.00	15.57	Peak	L	Pass
5*	2.148	35.19	9.85	56.00	20.81	QP	L	Pass
5**	2.148	29.21	9.85	46.00	16.79	AV	L	Pass
6	4.536	45.00	9.82	56.00	11.00	Peak	L	Pass
6*	4.536	37.84	9.82	56.00	18.16	QP	L	Pass
6**	4.536	31.89	9.82	46.00	14.11	AV	L	Pass

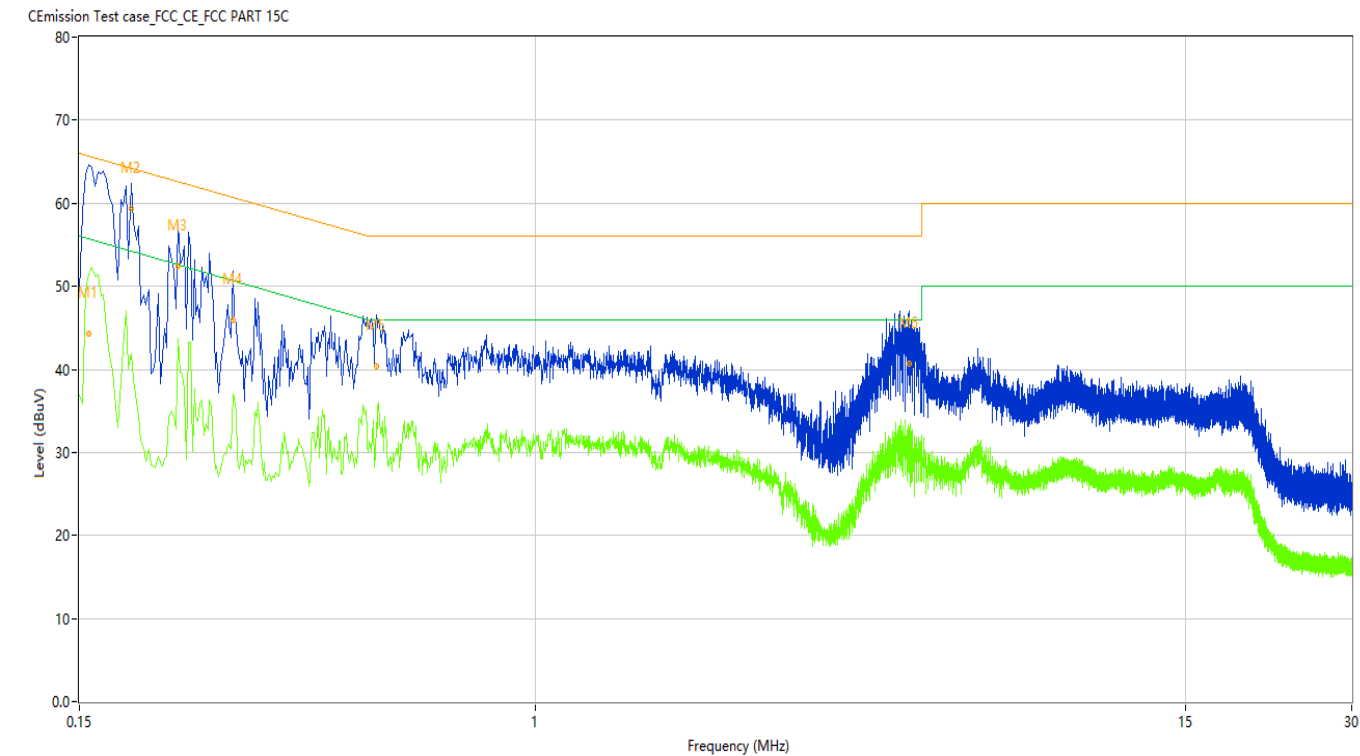
TEST REPORT

Report No.: SHE24030021-02DE

Date: 2024-04-30

Page 46 of 54

Figure 28: Conducted Emission on AC Mains, N Phase



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.156	61.34	10.03	65.67	4.33	Peak	N	Pass
1*	0.156	44.32	10.03	65.67	21.35	QP	N	Pass
1**	0.156	51.54	10.03	55.67	4.13	AV	N	Pass
2	0.186	62.25	10.03	64.21	1.96	Peak	N	Pass
2*	0.186	59.37	10.03	64.21	4.84	QP	N	Pass
2**	0.186	41.92	10.03	54.21	12.29	AV	N	Pass
3	0.226	56.34	10.05	62.60	6.26	Peak	N	Pass
3*	0.226	52.47	10.05	62.60	10.13	QP	N	Pass
3**	0.226	43.69	10.05	52.60	8.91	AV	N	Pass
4	0.284	51.27	10.06	60.70	9.43	Peak	N	Pass
4*	0.284	45.98	10.06	60.70	14.72	QP	N	Pass
4**	0.284	37.05	10.06	50.70	13.65	AV	N	Pass
5	0.516	46.44	10.07	56.00	9.56	Peak	N	Pass
5*	0.516	40.43	10.07	56.00	15.57	QP	N	Pass
5**	0.516	33.60	10.07	46.00	12.40	AV	N	Pass
6	4.744	47.48	9.76	56.00	8.52	Peak	N	Pass
6*	4.744	40.67	9.76	56.00	15.33	QP	N	Pass
6**	4.744	30.31	9.76	46.00	15.69	AV	N	Pass

TEST REPORT

Report No.: SHE24030021-02DE

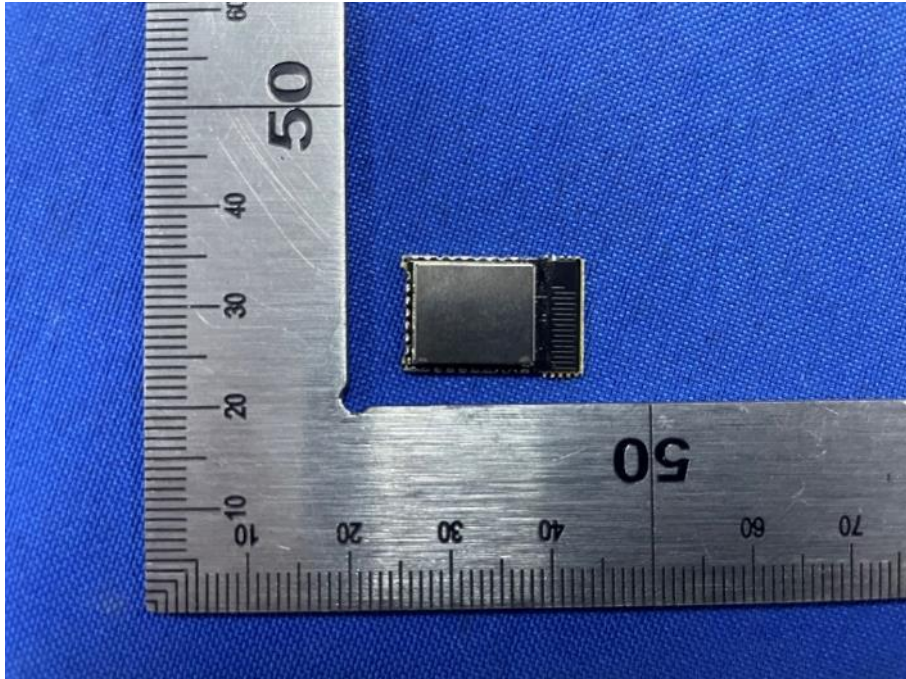
Date: 2024-04-30

Page 47 of 54

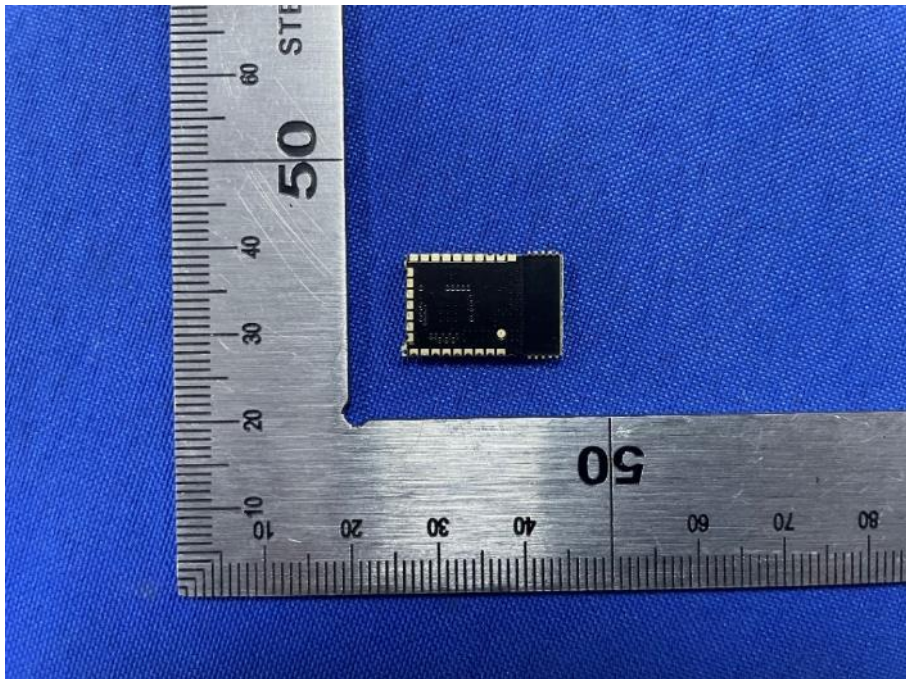
5 Appendixes

5.1 Photographs of the Sample

EH-MC26 Model

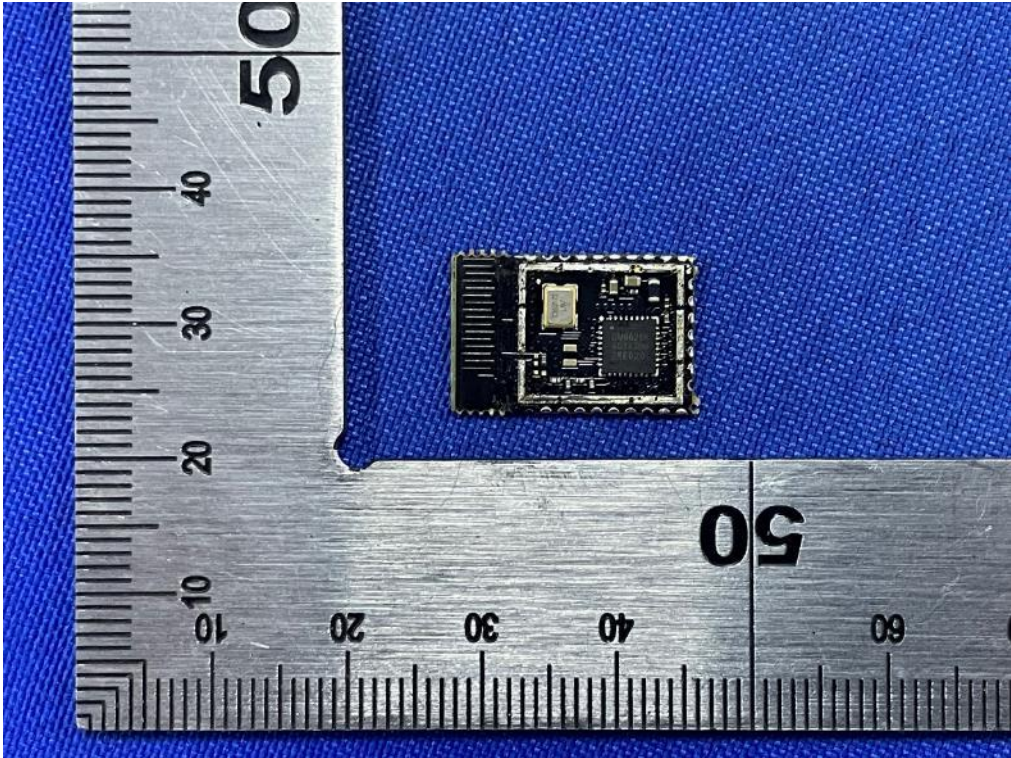


Front of the sample

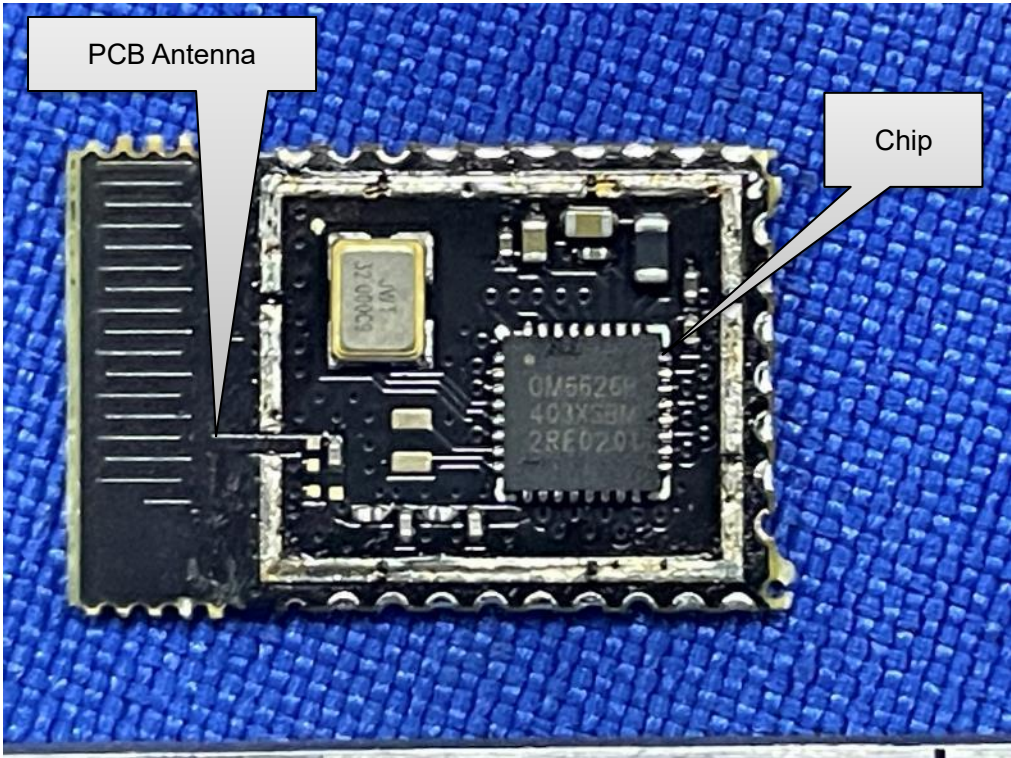


Rear of the sample

TEST REPORT



Internal of the sample



Antenna Position

TEST REPORT

Report No.:

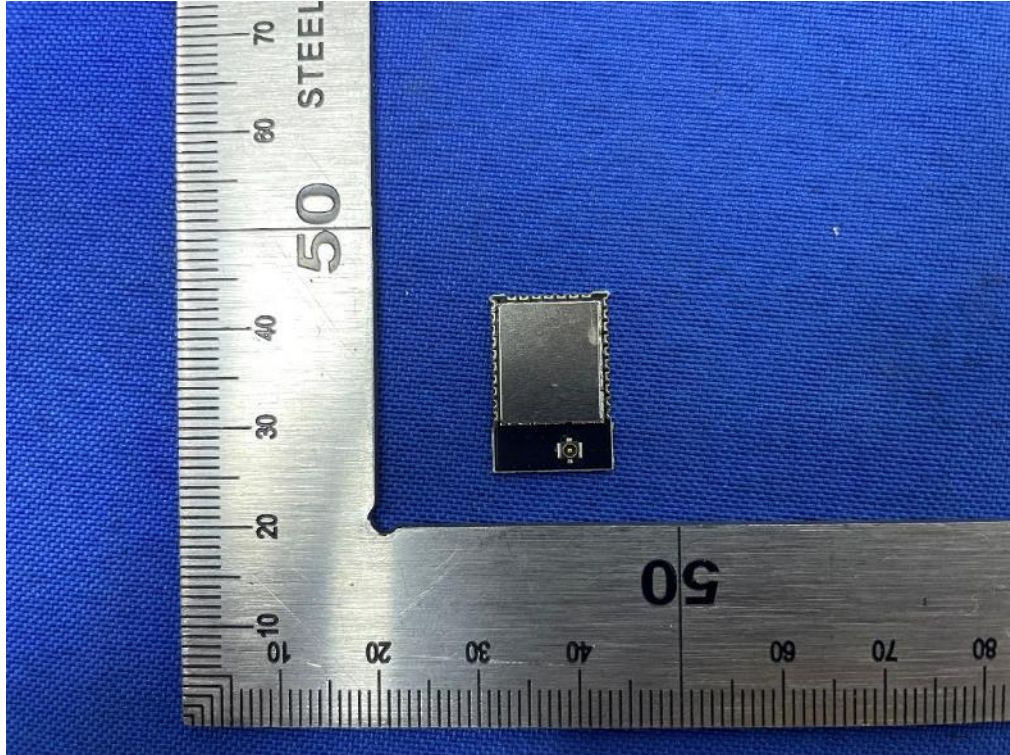
SHE24030021-02DE

Date:

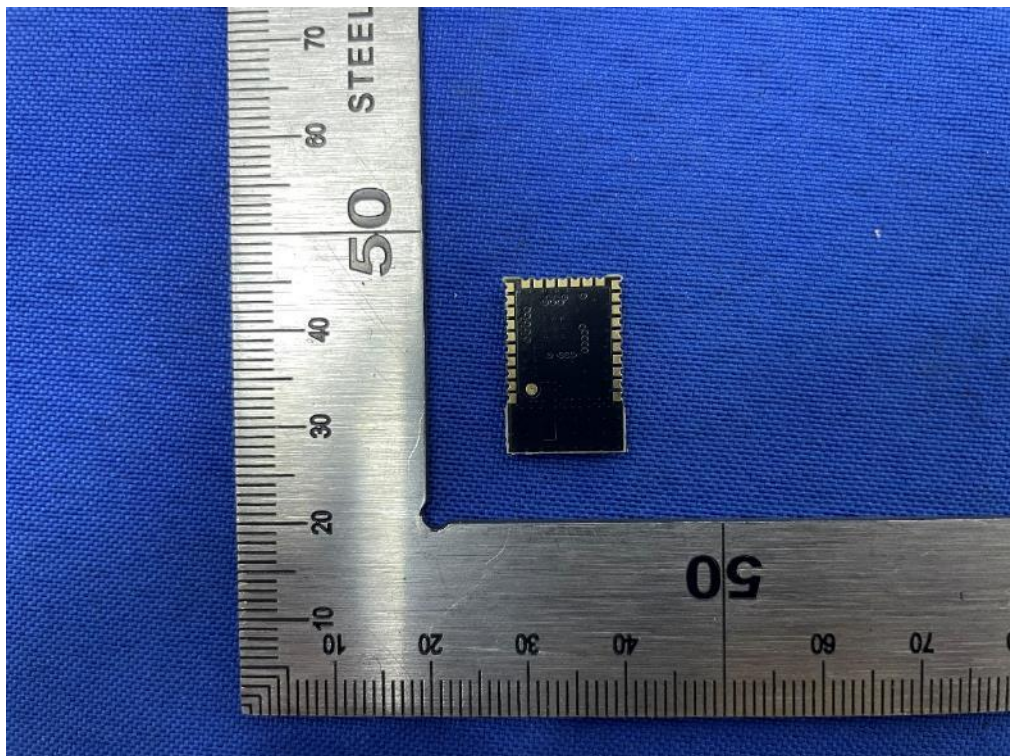
2024-04-30

Page 49 of 54

EH-MC26B Model

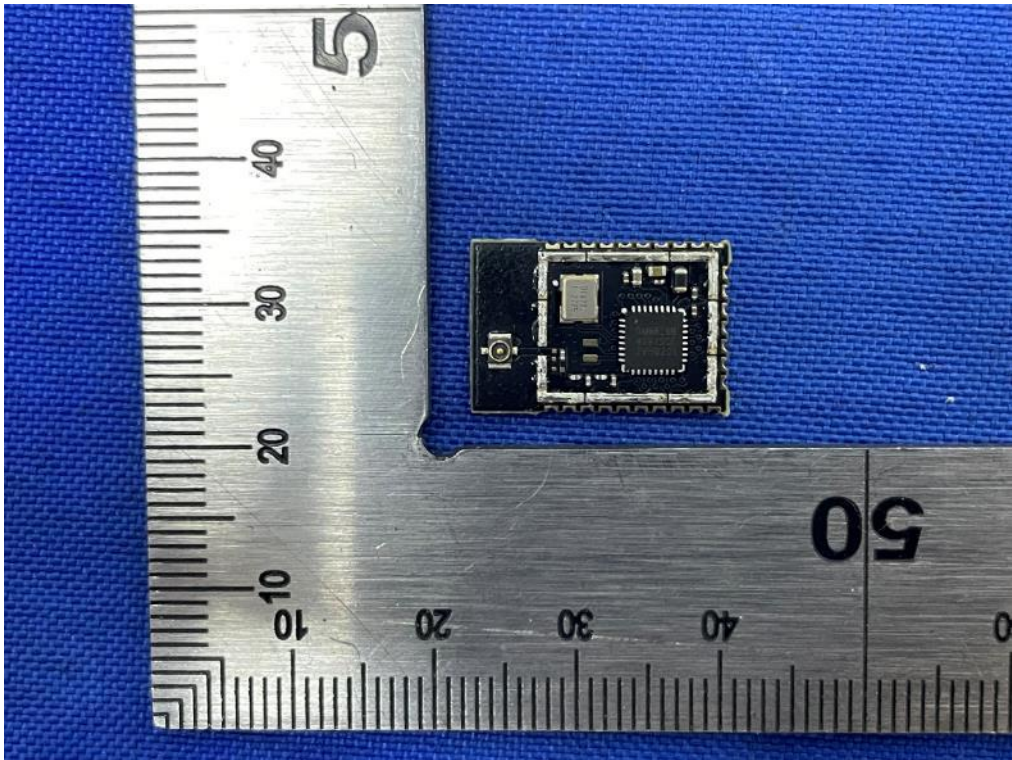


Front of the sample

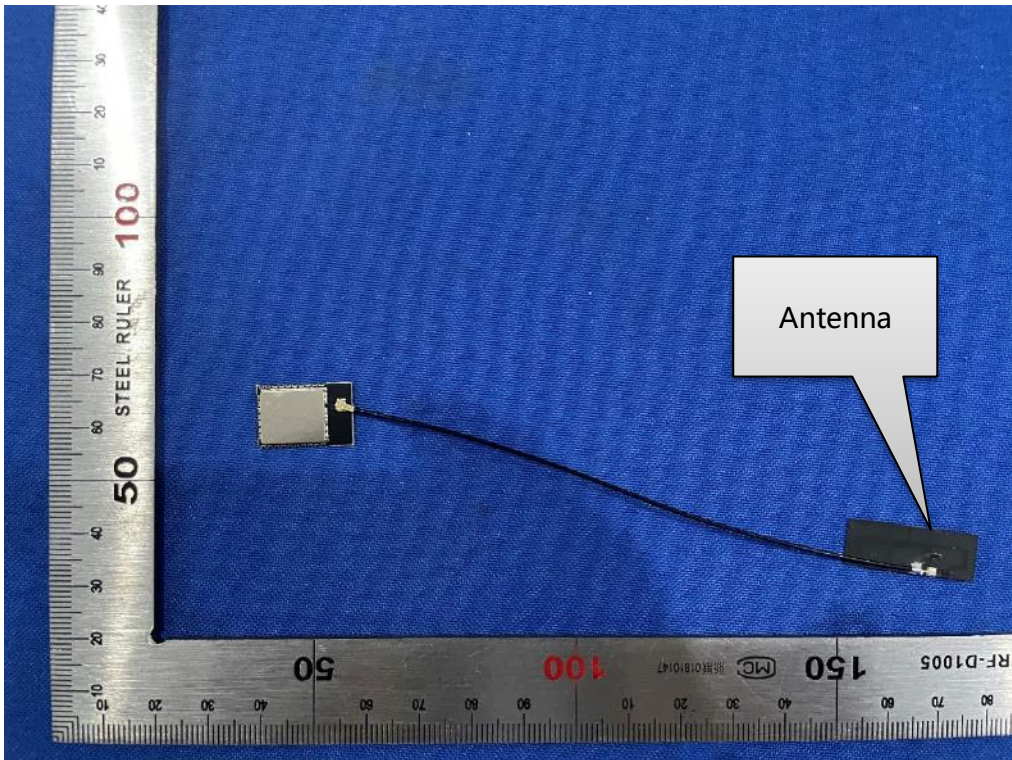


Rear of the sample

TEST REPORT



Internal of the sample



Antenna Position

TEST REPORT

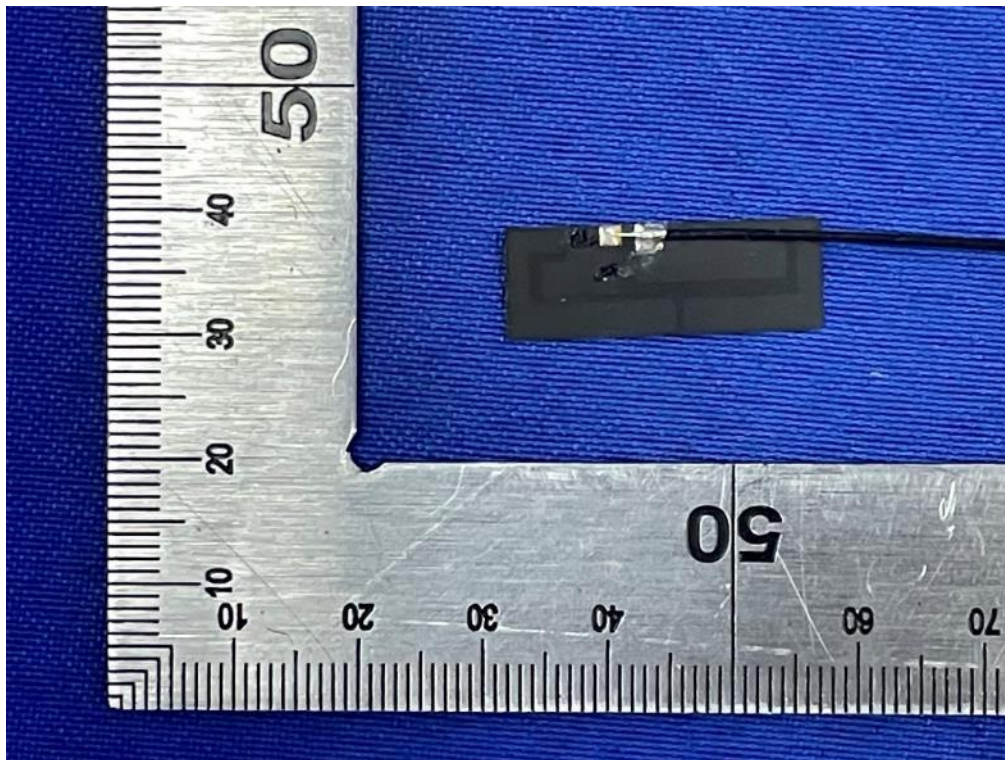
Report No.:

SHE24030021-02DE

Date:

2024-04-30

Page 51 of 54



External Antenna

5.2 Set-up for Conducted RF test at Antenna Port



TEST REPORT

Report No.: SHE24030021-02DE

Date: 2024-04-30

Page 52 of 54

5.3 Set-up for Conducted Emissions



EH-MC26 Model



EH-MC26B Model

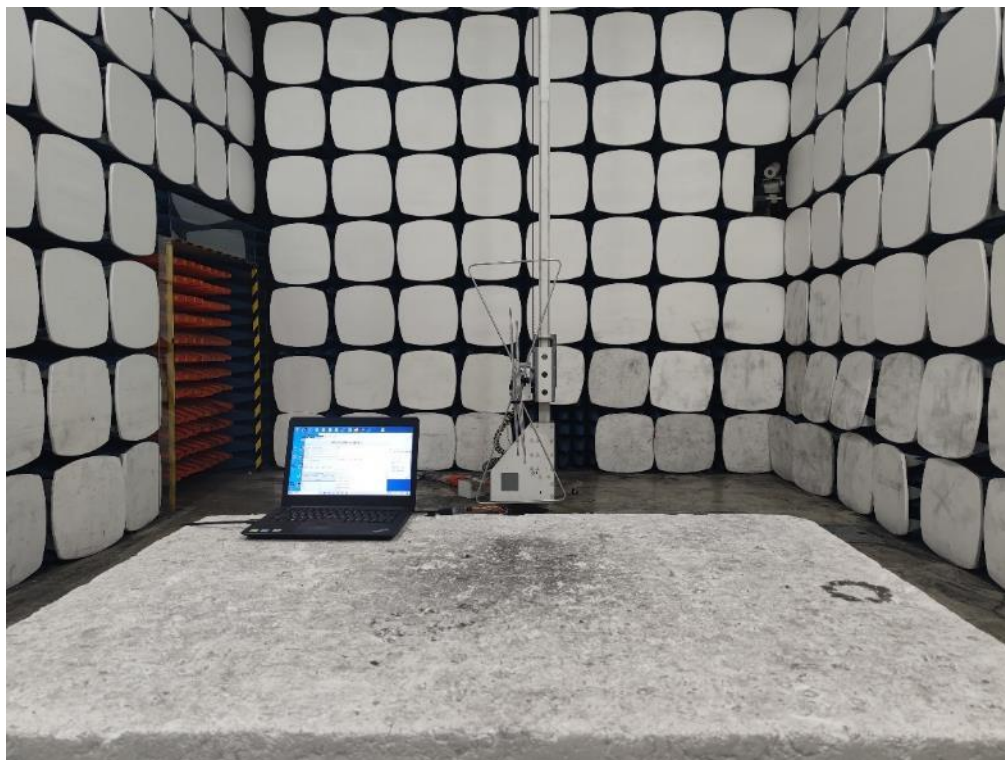
TEST REPORT

Report No.: SHE24030021-02DE

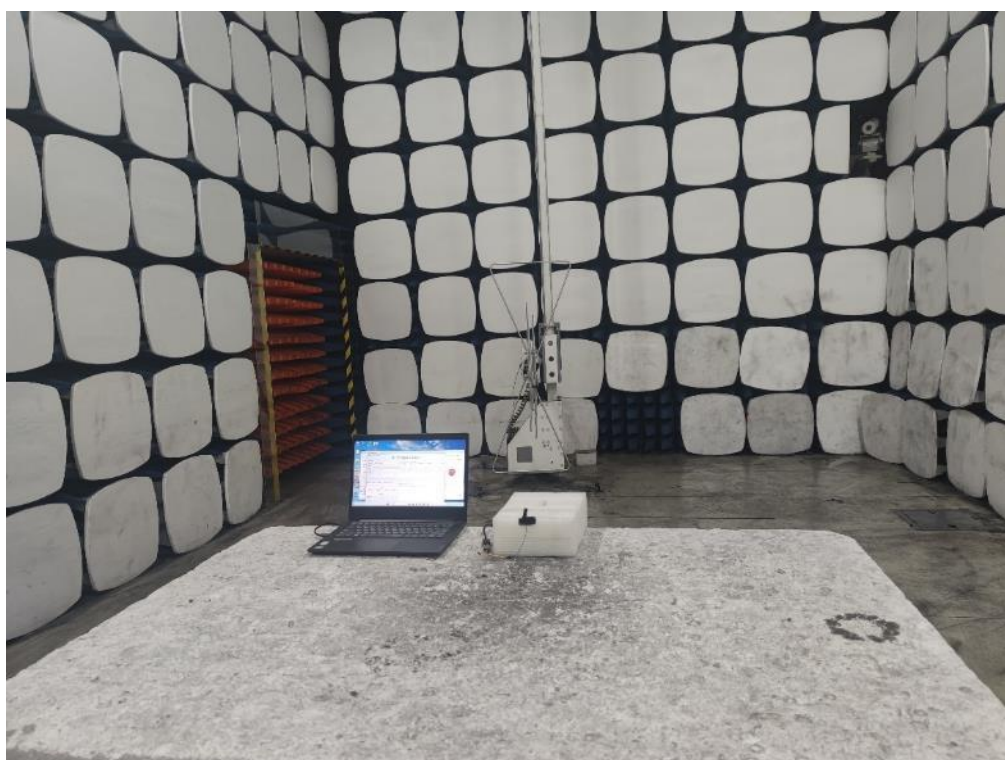
Date: 2024-04-30

Page 53 of 54

5.4 Set-up for Spurious Emissions below 1GHz



EH-MC26 Model



EH-MC26B Model

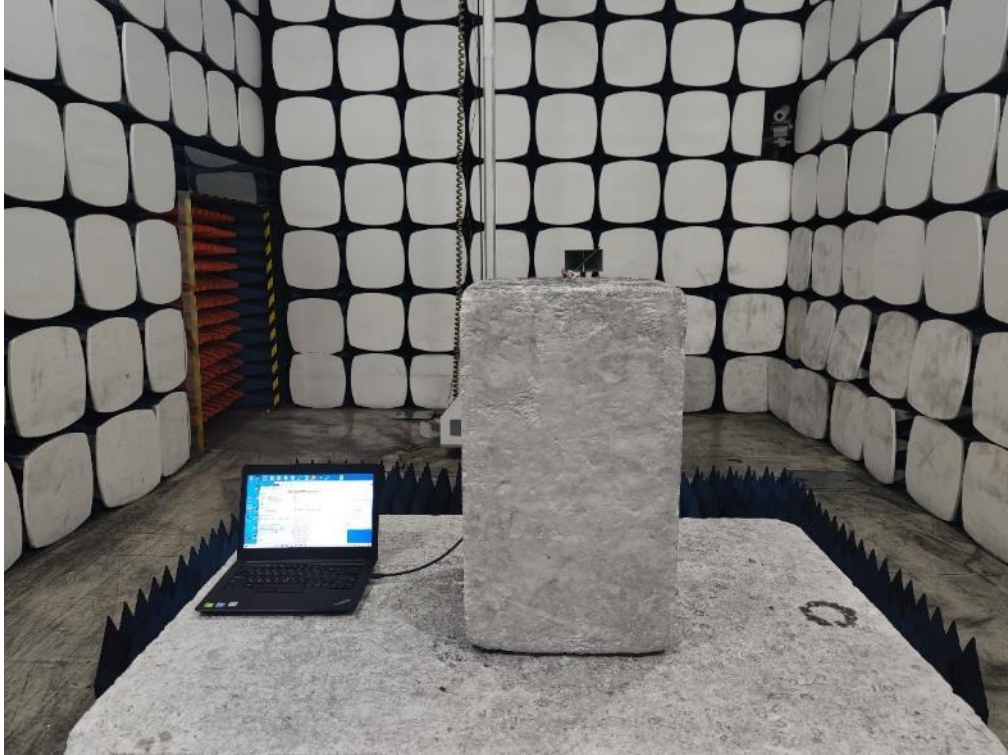
TEST REPORT

Report No.: SHE24030021-02DE

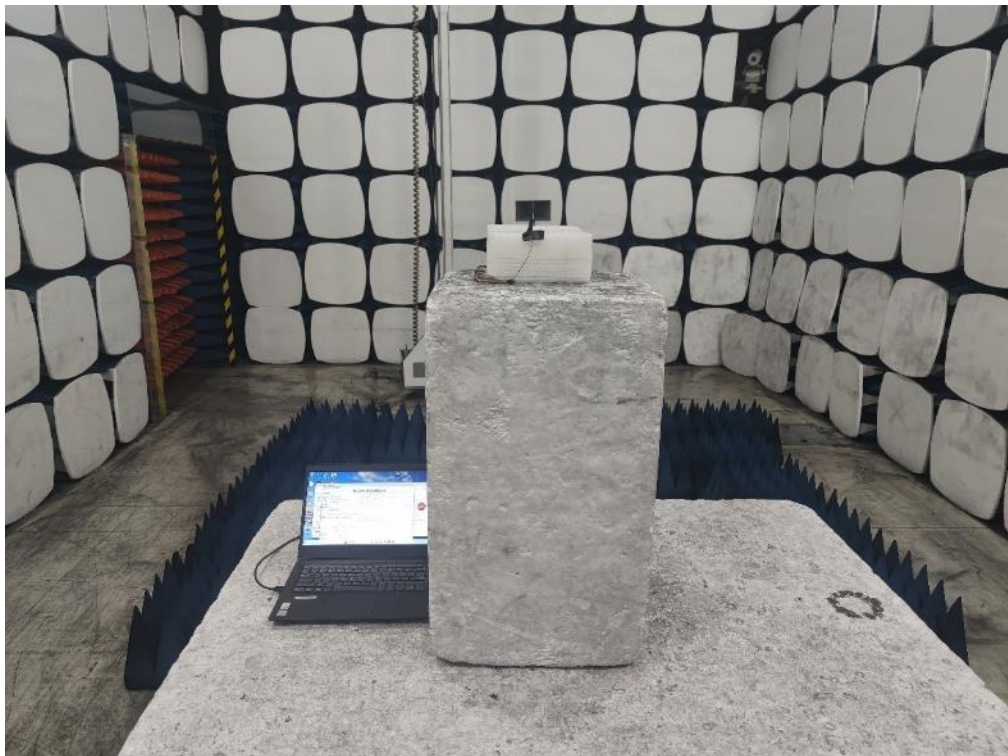
Date: 2024-04-30

Page 54 of 54

5.5 Set-up for Spurious Emissions above 1GHz



EH-MC26 Model



EH-MC26B Model

End of the report