



FCC PART 15.249

TEST REPORT

For

Xiamen ZiFiSense InfoTech Co., Ltd

Room 803, Building A-05, Software Park Phase III, Jimei District, Xiamen, China

FCC ID: 2AY22-B485ZT-R3

Report Type: Original	Product Name: 485 Transceiver
Report Number: 2407T35767E-RF-01	
Report Date:	2024-09-27
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REPORT REVISION HISTORY

Number of Revisions	Report No.	Version	Issue Date	Description
0	2407T35767E-RF-01	R1V1	2024-09-27	Initial Release

GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

Applicant:	Xiamen ZiFiSense InfoTech Co., Ltd
Tested Model:	B485ZT-R3
Product Name:	485 Transceiver
Power Supply:	DC 3.6V from Battery
Maximum Field Strength:	92.41dB μ V/m@3m
RF Function:	SRD
Operating Band/Frequency:	920-925MHz
Channel Number:	3
Modulation Type:	FSK
Antenna Type:	omnidirectional antenna
★Maximum Antenna Gain:	0.85 dBi
EUT Receive Status:	Good

Note:

1. The maximum antenna gain is provided by the applicant.
2. All measurement and test data in this report was gathered from production sample serial number: 2NZD-1 (Assigned by the BACL (Xiamen). The EUT supplied by the applicant was received on 2024-06-28)

Objective

This test report is prepared for *Xiamen ZiFiSense InfoTech Co., Ltd* in accordance with Part 2-Subpart J, and Part 15-Subparts A and C of the Federal Communication Commission rules.

The tests were performed in order to determine compliance with FCC Part 15, Subpart C, and section 15.203, 15.205, 15.207, 15.209, 15.215 and 15.249 rules.

Test Methodology

All measurements contained in this report were conducted with ANSI C63.10-2013, American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices.

Measurement Uncertainty

Item		U _{lab}
Conducted Emissions	150kHz-30MHz	2.33dB
	9kHz-30MHz	2.59dB
	30MHz~200MHz	4.38dB
Radiated Disturbance	200MHz~1GHz	4.50dB
	1GHz~6GHz	4.58dB
	6GHz~18GHz	5.43dB
Occupied Bandwidth		0.053kHz
Temperature		1°C
Humidity		5%

Test Facility

The Test site used by Bay Area Compliance Laboratories Corp. (Xiamen) to collect test data is located on the Unit 102, No. 902 Meifeng South Road, Binhai West Avenue, Science and Technology Innovation Park, Torch High tech Zone XiaMen.

Bay Area Compliance Laboratories Corp. (Xiamen) Lab is accredited to ISO/IEC 17025 by A2LA (Certificate Number: 7134.01) and the lab has been recognized as the FCC accredited lab under the KDB 974614 D01, FCC Registration No.: 485720, the FCC Designation No.: CN1384.

SYSTEM TEST CONFIGURATION

Test Mode and Voltage

The system was configured for testing in a typical mode (as normally used by a typical user).

Test mode:	Test Mode 1: Transmitting
Test voltage:	Test Mode 1: DC 3.6V from battery
Remark:	During all emission tests, the EUT was configured to measure its highest possible emission level and the worst case's test data was presented in this test report.

Justification

The system was configured in testing mode which was provided by manufacturer.

Channel List:

Channel	Frequency (MHz)
1	920
2	922.5
3	925

EUT Exercise Software

Engineering Mode was provided by manufacturer.

Equipment Modifications

No modification was made to the EUT.

Support Equipment List and Details

Manufacturer	Description	Model	Serial Number
Thinkpad	PC	TA80	B6B1ABD0-4BE1-431B-9C95-C4F23F04BBA4
/	Debug board	CH340G	/

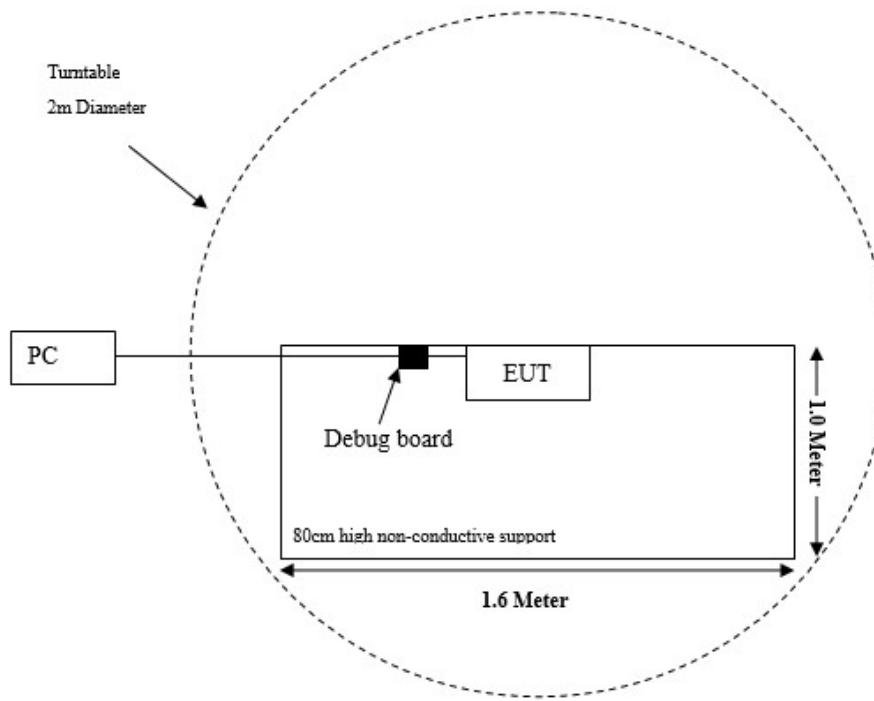
External I/O Cable

Cable Description	Length (m)	From Port	To Port
Dupont Line	0.1	EUT	Debug board
USB cable	8.0	Debug board	PC

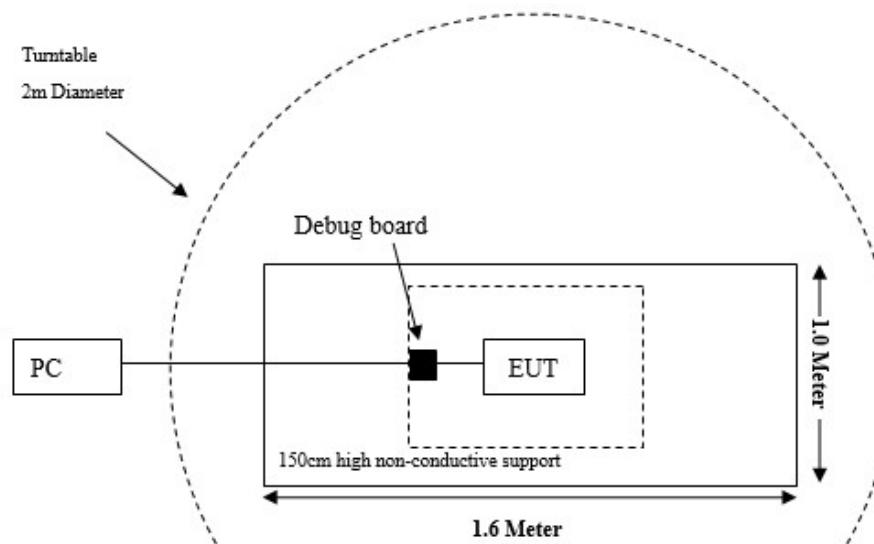
Block Diagram of Test Setup

For Radiated Emissions:

Below 1GHz:



Above 1GHz



SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
§15.203	Antenna Requirement	Compliant
§15.207(a)	Conducted Emissions	Not Applicable (See Note 1)
§15.205, §15.209, §15.249	Radiated Emissions& Out of Band Emission	Compliant
§15.15.215(c)	20dB Emission Bandwidth	Compliant
§1.1307	RF Exposure Evaluation	Compliant

Note 1: The EUT is power by Battery

TEST EQUIPMENT LIST

Test Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due Date
Radiated Emissions Below 1 GHz					
EMI Test Receiver	Rohde & Schwarz	ESR3	103103	2024/03/29	2025/03/28
Loop Antenna	Rohde & Schwarz	HFH2-Z2	830749/001	2023/07/27	2026/07/26
Antenna	Sunol Sciences	JB6	A122022-5	2023/07/27	2026/07/26
Amplifier	Sonoma	310B	120903	2024/03/29	2025/03/28
Coaxial Cable	XINHANGWEIBO	XH400T-N-4M	CC002	2024/03/29	2025/03/28
Coaxial Cable	XINHANGWEIBO	XH460B-N-2M	CC006	2024/03/29	2025/03/28
Coaxial Cable	XINHANGWEIBO	XH460B-N-12M	CC007	2024/03/29	2025/03/28
Test Software	Audix	E3	18621a	N/A	N/A
Radiated Emissions Above 1 GHz					
Spectrum Analyzer	Rohde & Schwarz	FSV40-N	102051	2024/03/29	2025/03/28
Double Ridge Guide Horn Antenna	A.H.Systems	SAS-571	1980	2023/07/28	2026/07/27
Preamplifier	A.H.Systems	PAM-0118P	489	2024/03/29	2025/03/28
Coaxial Cable	XINHANGWEIBO	XH800A-N-6M	CC003	2024/03/29	2025/03/28
Coaxial Cable	XINHANGWEIBO	XH800A-N-1M	CC005	2024/03/29	2025/03/28
Test Software	Audix	E3	18621a	N/A	N/A
RF Conducted Test (20 dB Bandwidth)					
EMI Test Receiver	Rohde & Schwarz	ESR	103105	2024/03/29	2025/03/28

Statement of Traceability: Bay Area Compliance Laboratories Corp. (Xiamen) attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

FCC§15.203 - ANTENNA REQUIREMENT

Applicable Standard

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.

Antenna Connected Construction

The EUT has a omnidirectional antenna with unique antenna connector which the antenna gain is 0.85 dBi, fulfill the requirement of this section. Please refer to EUT photos.

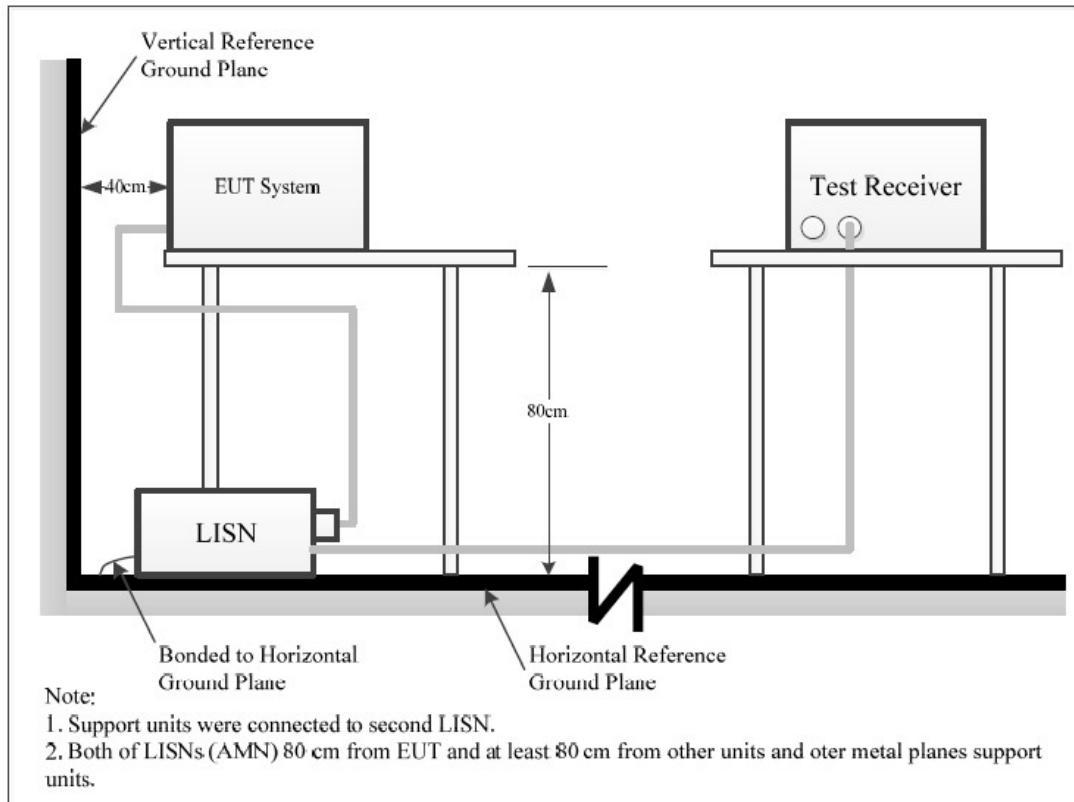
Result: Compliant.

FCC §15.207 (a) – AC LINE CONDUCTED EMISSIONS

Applicable Standard

FCC §15.207(a)

Test System Setup



The measurement procedure of EUT setup is according with ANSI C63.10-2013. The related limit was specified in FCC Part 15.207.

The spacing between the peripherals was 10 cm.

EMI Test Receiver Setup

The EMI test receiver was set to investigate the spectrum from 150 kHz to 30 MHz.

During the conducted emission test, the EMI test receiver was set with the following configurations:

Frequency Range	RBW	VBW
150 kHz - 30 MHz	9 kHz	30 kHz

Test Procedure

ANSI C63.10-2013 clause 6.2

During the conducted emission test, the EUT was connected to the outlet of the LISN.

Maximizing procedure was performed on the six (6) highest emissions of the EUT.

If the maximum peak value of the emissions is below the average limit, the QP value and average value measurement will not need to be performed and only record the maximum peak measured value to meet the requirements.

Level & Margin Calculation

The Level is calculated by adding LISN VDF (Voltage Division Factor), Cable Loss and Transient Limiter Attenuation from the Meter Reading. The basic equation is as follows:

$$\begin{aligned} \text{Factor (dB)} &= \text{LISN VDF (dB)} + \text{Cable Loss (dB)} + \text{Transient Limiter Attenuation (dB)} \\ \text{Level (dB}\mu\text{V)} &= \text{Reading (dB}\mu\text{V)} + \text{Factor (dB)} \end{aligned}$$

The “Margin” column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of 7dB means the emission is 7dB below the limit. The equation for margin calculation is as follows:

$$\text{Margin (dB)} = \text{Limit (dB}\mu\text{V)} - \text{Level (dB}\mu\text{V)}$$

Test Results Summary

According to the recorded data in following table, the EUT complied with the FCC Title 47, FCC Part 15.207.

Test Data

Result: N/A

Note: The EUT is power by Battery

FCC §15.205, §15.209, §15.249 - RADIATED EMISSIONS & OUT OF BAND EMISSION

Applicable Standard

As per FCC§15.249 (a), except as provided in paragraph (b) of this section, the field strength of emissions from intentional radiators operated within these frequency bands shall comply with the following:

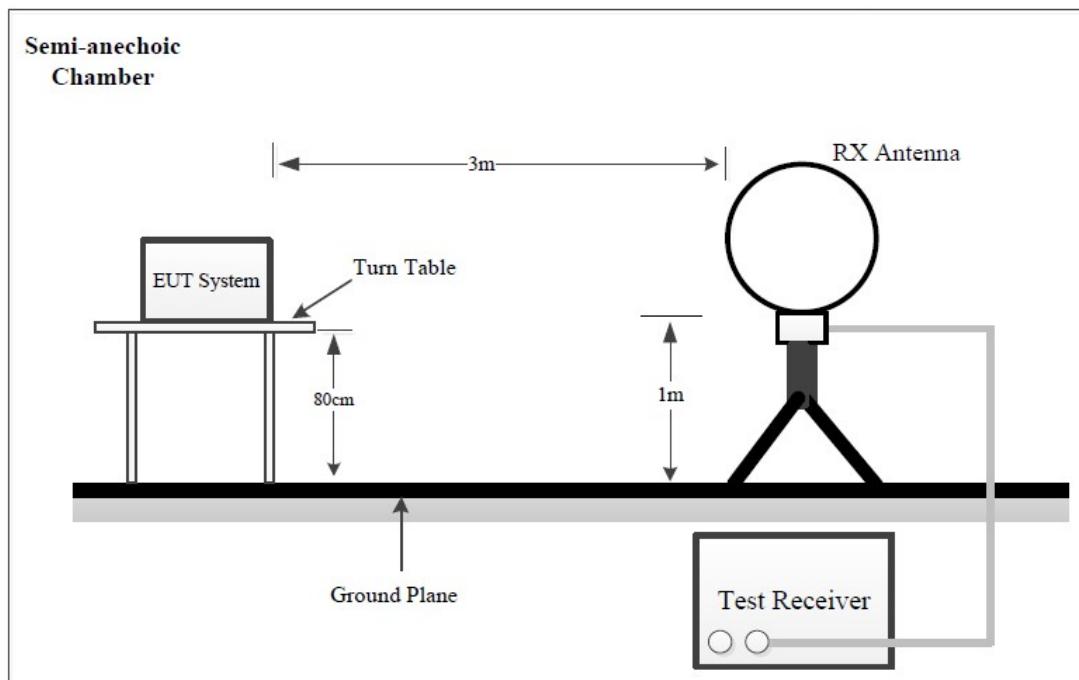
Fundamental frequency	Field strength of fundamental (millivolts/meter)	Field strength of harmonics (microvolts/meter)
902–928 MHz	50	500
2400–2483.5 MHz	50	500
5725–5875 MHz	50	500
24.0–24.25 GHz	250	2500

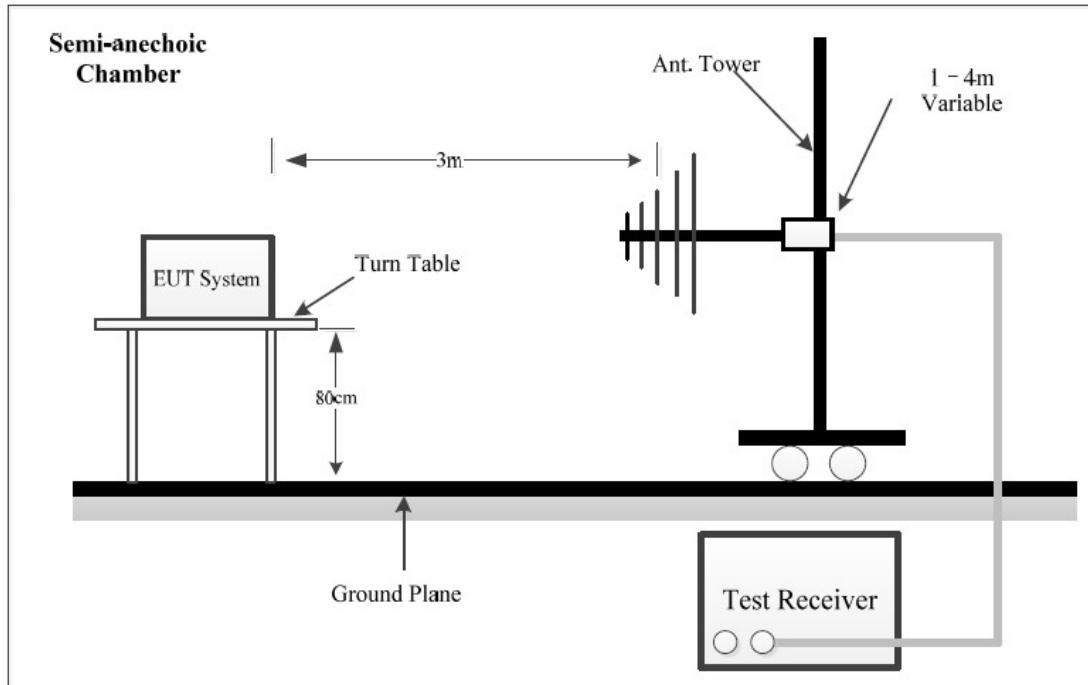
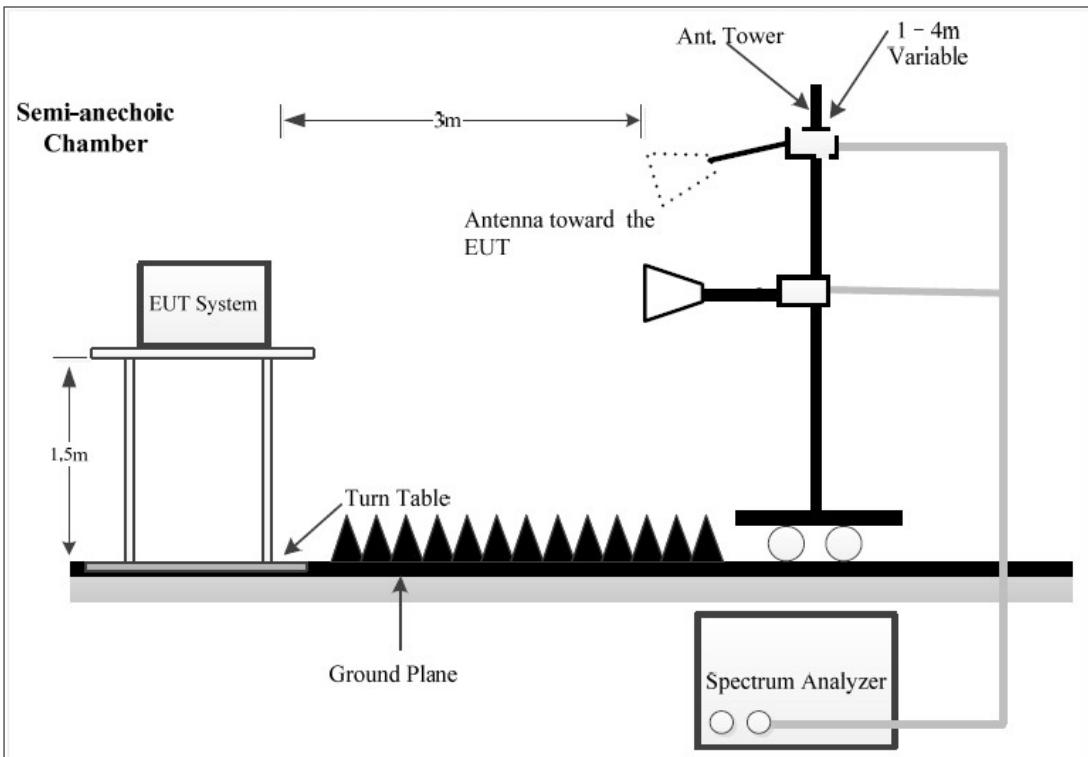
As per FCC§15.249 (c), Field strength limits are specified at a distance of 3 meters.

(d) Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in §15.209, whichever is the lesser attenuation.

Test System Setup

9 kHz-30MHz:



30MHz-1GHz:**Above 1GHz:**

The radiated emission and out of band emission tests were performed in the 3 meters chamber test site, using the setup accordance with the ANSI C63.10-2013 The specification used was the FCC 15.209/15.205 and FCC 15.249 limits.

The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle.

EMI Test Receiver Setup

The system was investigated from 9 kHz to 9.5GHz.

During the radiated emission test, the EMI test Receiver was set with the following configurations:

Frequency Range	RBW	VBW	Measurement
9 kHz – 150 kHz	200Hz	1 kHz	PK
	200Hz	/	QP/AV
150 kHz – 30 MHz	10 kHz	30 kHz	PK
	9kHz	/	QP/AV
30 MHz – 1000 MHz	100 kHz	300 kHz	PK
	120kHz	/	QP
Above 1 GHz	1 MHz	3 MHz	PK
	1 MHz	10Hz	AV

Test Procedure

According to section 6.3, 6.4, 6.5, 6.6 of standard ANSI C63.10-2013

Maximizing procedure was performed on the highest emissions to ensure that the EUT complied with all installation combinations.

For each measurement antenna alignment, the EUT shall be rotated through 0° to 360° on a turntable. The report shall list the six emissions with the smallest margin relative to the limit, for each of the three antenna orientations (parallel, perpendicular, and ground parallel) unless the margin is greater than 20 dB, then the following statement shall be made: “all emissions were greater than 20 dB below the limit.”

If the measured peak level of the emissions that the measuring receiver reading level plus corrected factor is at least 10 dB below the QP emission limit, there's no need to record the measured QP level of the emissions in the report.

If the measured peak level of the emissions that the measuring receiver reading level plus corrected factor is at below the AV emission limit, there's no need to record the measured AV level of the emissions in the report.

Level & Margin Calculation

The Level is calculated by adding the Antenna Factor and Cable Loss, and subtracting the Amplifier Gain from the Meter Reading. The basic equation is as follows:

Factor (dB/m) =Antenna Factor (dB/m) + Cable Loss (dB) - Amplifier Gain (dB)
 Level (dB μ V/m) = Reading (dB μ V) + Factor (dB/m)

The “Margin” column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of 7dB means the emission is 7dB below the limit. The equation for margin calculation is as follows:

$$\text{Margin (dB)} = \text{Limit (dB}\mu\text{V/m)} - \text{Level (dB}\mu\text{V/m)}$$

Test Results Summary

According to the data in the following table, the EUT complied with the FCC Part 15.209 &15.205 & 15.249.

Test Data

Frequency Range:	Below 1 GHz	Above 1 GHz
Temperature:	23.5°C	23.5°C
Relative Humidity:	54 %	54 %
ATM Pressure:	100.1kPa	100.1 kPa
Test Date:	2024-06-29	2024-06-29
Test Engineer:	Ash Lin	Ash Lin

Note: Pre-scan in the X, Y and Z axes of orientation, the worst case Z-axis of orientation was recorded.

1) 9 kHz~30MHz

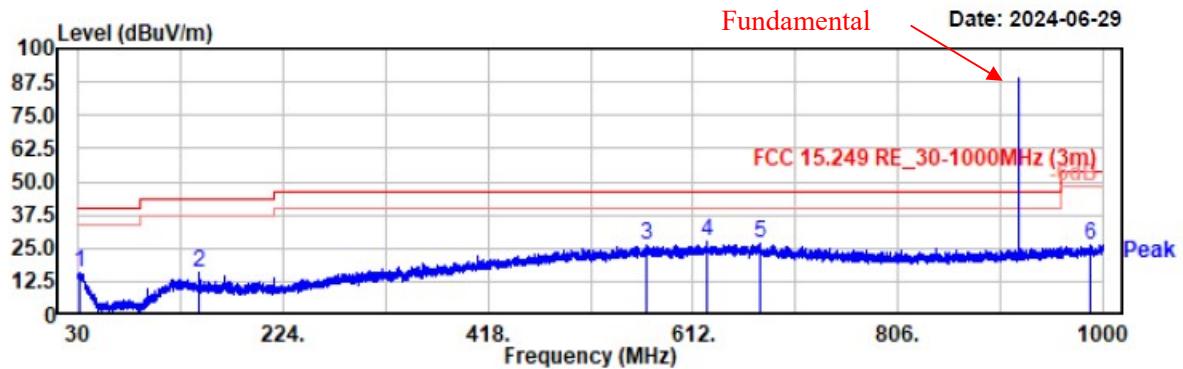
EUT Operation mode: Transmitting in high channel (925MHz)

Pre-scan in parallel, ground-parallel and perpendicular of orientation of loop antenna, the amplitude of spurious emissions attenuated is more than 20 dB below the permissible value, which is not required to be report.

2) 30MHz ~ 1GHz

Project No.: 2407T35767E-RF
Test Mode: Tx 920MHz
EUT Model: B485ZT-R3
Test distance: 3m

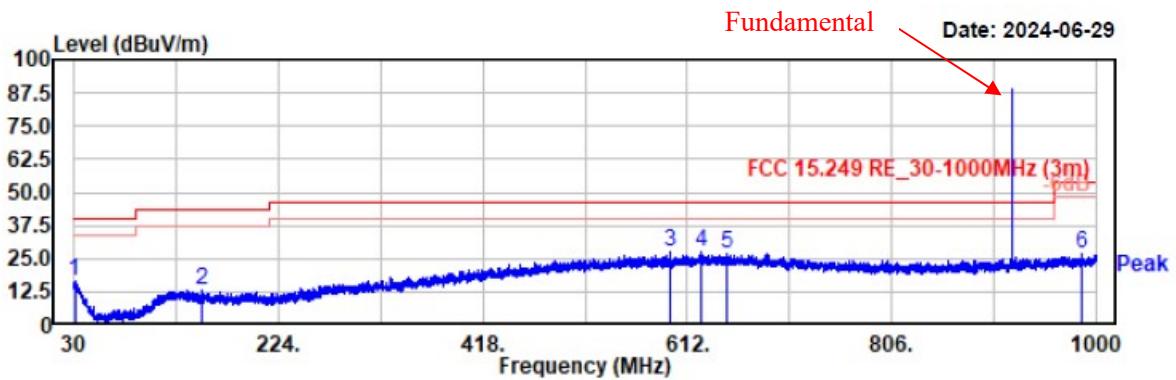
Temp/Humi/ATM: 23.5°C/54%/101.1kPa
Tested by: Ash Lin
Power Source: DC 3.6V from battery



Freq MHz	Reading dB _{uV}	Factor dB/m	Result dB _{uV/m}	Limit dB _{uV/m}	Margin dB	Polarity	Remark
30.87	21.40	-5.82	15.58	40.00	24.42	Horizontal	Peak
143.98	27.07	-10.98	16.09	43.50	27.41	Horizontal	Peak
224.00	28.36	-2.46	25.90	46.00	20.10	Horizontal	Peak
418.00	28.66	-1.40	27.26	46.00	18.74	Horizontal	Peak
567.67	27.70	-0.64	27.06	46.00	18.94	Horizontal	Peak
625.00	22.32	3.87	26.19	54.00	27.81	Horizontal	Peak
676.31							
988.85							
1000.00							

Project No.: 2407T35767E-RF
Test Mode: Tx 920MHz
EUT Model: B485ZT-R3
Test distance: 3m

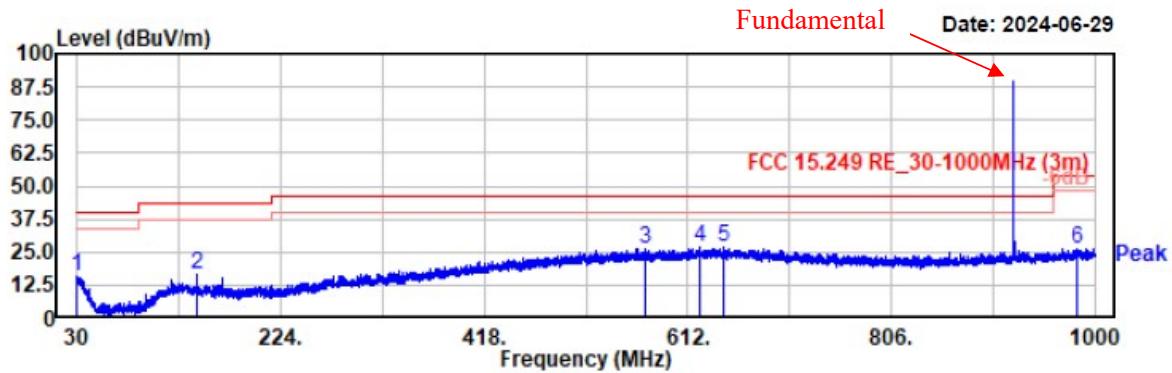
Temp/Humi/ATM: 23.5°C/54%/101.1kPa
Tested by: Ash Lin
Power Source: DC 3.6V from battery



Freq MHz	Reading dB _u V	Factor dB/m	Result dB _u V/m	Limit dB _u V/m	Margin dB	Polarity	Remark
30.58	22.24	-5.74	16.50	40.00	23.50	Vertical	Peak
151.15	24.58	-11.15	13.43	43.50	30.07	Vertical	Peak
596.38	29.74	-2.38	27.36	46.00	18.64	Vertical	Peak
624.61	28.88	-1.42	27.46	46.00	18.54	Vertical	Peak
650.41	28.05	-0.91	27.14	46.00	18.86	Vertical	Peak
986.52	23.33	3.81	27.14	54.00	26.86	Vertical	Peak

Project No.: 2407T35767E-RF
Test Mode: Tx 922.5MHz
EUT Model: B485ZT-R3
Test distance: 3m

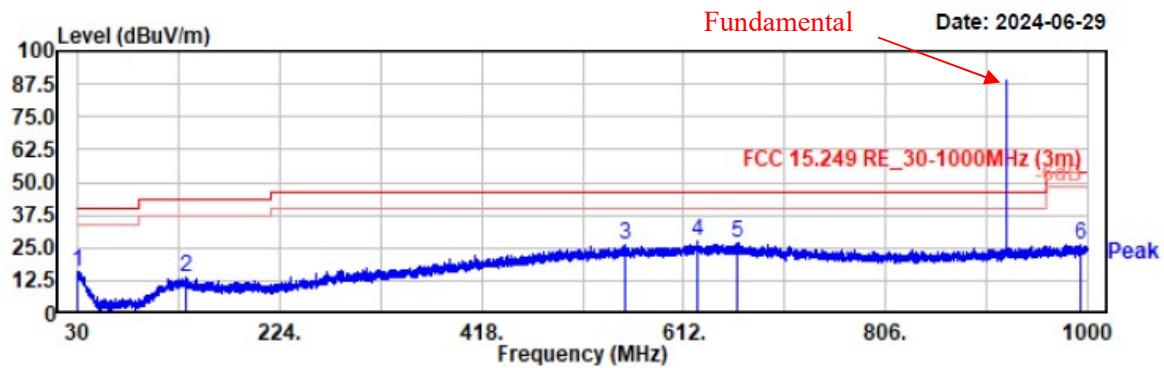
Temp/Humi/ATM: 23.5°C /54%/101.1kPa
Tested by: Ash Lin
Power Source: DC 3.6V from battery



Freq MHz	Reading dB _{uV}	Factor dB/m	Result dB _{uV} /m	Limit dB _{uV} /m	Margin dB	Polarity	Remark
30.29	21.64	-5.68	15.96	40.00	24.04	Horizontal	Peak
143.98	27.43	-10.98	16.45	43.50	27.05	Horizontal	Peak
571.36	28.86	-2.47	26.39	46.00	19.61	Horizontal	Peak
623.74	28.18	-1.45	26.73	46.00	19.27	Horizontal	Peak
645.37	28.01	-1.00	27.01	46.00	18.99	Horizontal	Peak
982.54	22.60	3.72	26.32	54.00	27.68	Horizontal	Peak

Project No.: 2407T35767E-RF
Test Mode: Tx 922.5MHz
EUT Model: B485ZT-R3
Test distance: 3m

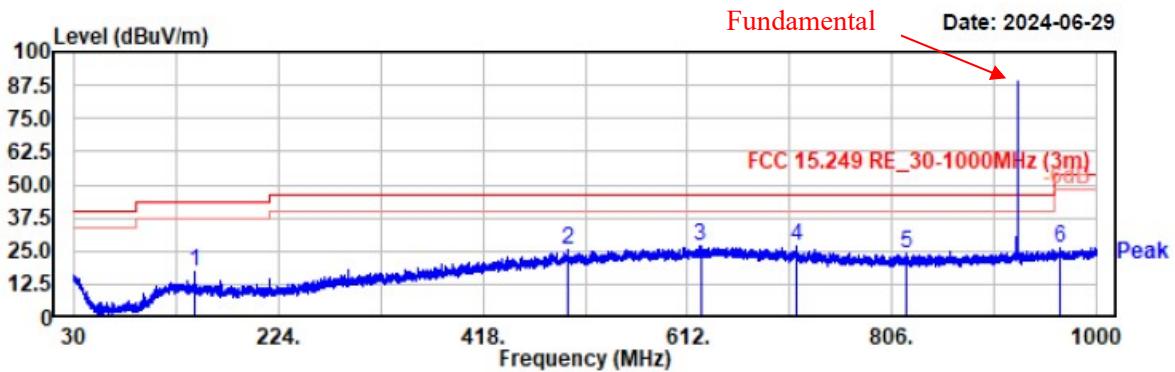
Temp/Humi/ATM: 23.5°C/54%/101.1kPa
Tested by: Ash Lin
Power Source: DC 3.6V from battery



Freq MHz	Reading dB _{uV}	Factor dB/m	Result dB _{uV} /m	Limit dB _{uV} /m	Margin dB	Polarity	Remark
30.19	21.85	-5.65	16.20	40.00	23.80	Vertical	Peak
133.69	23.96	-10.25	13.71	43.50	29.79	Vertical	Peak
555.35	28.61	-2.62	25.99	46.00	20.01	Vertical	Peak
625.68	28.91	-1.39	27.52	46.00	18.48	Vertical	Peak
662.83	27.92	-0.79	27.13	46.00	18.87	Vertical	Peak
993.50	22.57	3.98	26.55	54.00	27.45	Vertical	Peak

Project No.: 2407T35767E-RF
Test Mode: Tx 925MHz
EUT Model: B485ZT-R3
Test distance: 3m

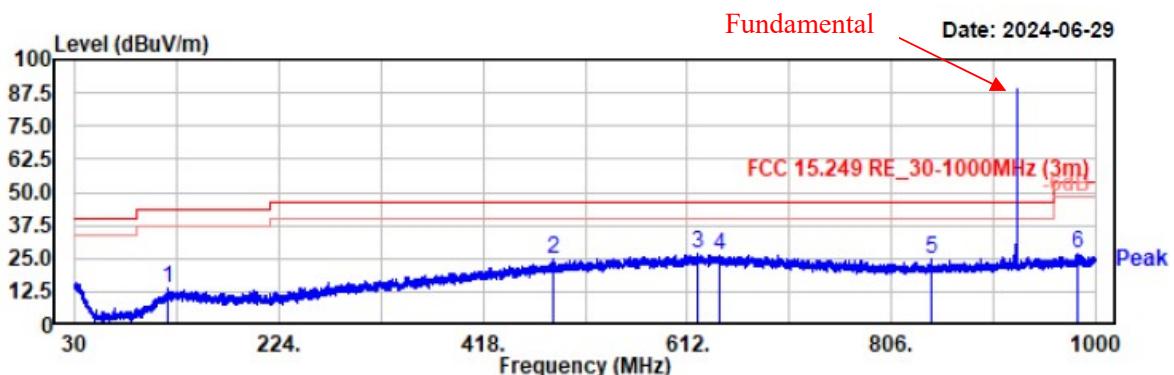
Temp/Humi/ATM: 23.5°C/54%/101.1kPa
Tested by: Ash Lin
Power Source: DC 3.6V from battery



Freq MHz	Reading dB _B V	Factor dB/m	Result dB _B V/m	Limit dB _B V/m	Margin dB	Polarity	Remark
143.98	28.24	-10.98	17.26	43.50	26.24	Horizontal	Peak
498.22	28.62	-3.45	25.17	46.00	20.83	Horizontal	Peak
624.42	28.50	-1.42	27.08	46.00	18.92	Horizontal	Peak
715.21	26.74	-0.07	26.67	46.00	19.33	Horizontal	Peak
819.48	22.31	1.60	23.91	46.00	22.09	Horizontal	Peak
965.27	22.89	3.48	26.37	54.00	27.63	Horizontal	Peak

Project No.: 2407T35767E-RF
Test Mode: Tx 925MHz
EUT Model: B485ZT-R3
Test distance: 3m

Temp/Humi/ATM: 23.5°C/54%/101.1kPa
Tested by: Ash Lin
Power Source: DC 3.6V from battery

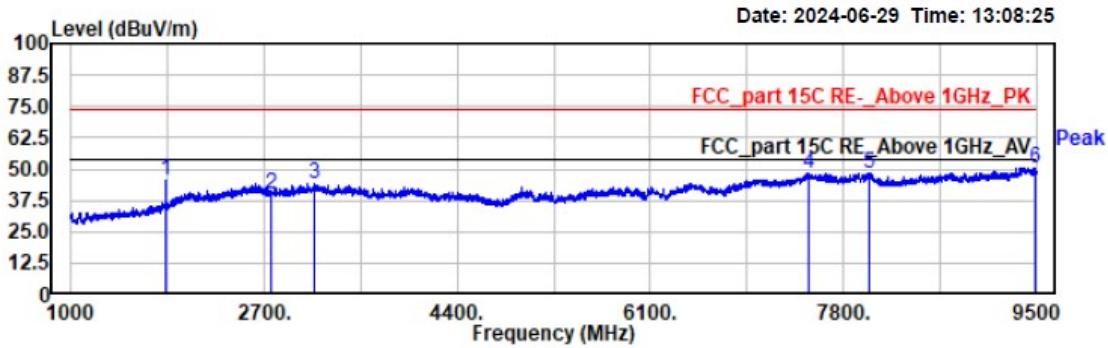


Freq MHz	Reading dB _{BuV}	Factor dB/m	Result dB _{BuV/m}	Limit dB _{BuV/m}	Margin dB	Polarity	Remark
118.46	24.30	-10.49	13.81	43.50	29.69	Vertical	Peak
484.54	28.61	-3.62	24.99	46.00	21.01	Vertical	Peak
621.60	28.14	-1.55	26.59	46.00	19.41	Vertical	Peak
642.75	27.51	-1.07	26.44	46.00	19.56	Vertical	Peak
843.64	22.99	1.82	24.81	46.00	21.19	Vertical	Peak
983.80	22.98	3.75	26.73	54.00	27.27	Vertical	Peak

3) 1GHz ~ 9.5 GHz

Project No.: 2407T35767E-RF
Test Mode: Tx 920MHz
EUT Model: B485ZT-R3
Test distance: 3m

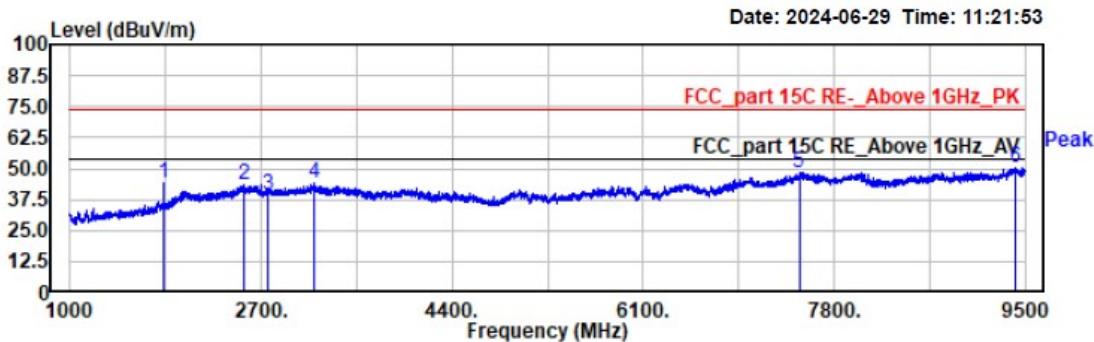
Temp/Humi: 23.5°C/54%
Tested by: Ash Lin
Power Source: DC 3.6V from battery



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
1839.80	52.92	-7.10	45.82	74.00	28.18	horizontal	Peak
2760.00	40.79	-0.96	39.83	74.00	34.17	horizontal	Peak
3147.10	43.19	0.97	44.16	74.00	29.84	horizontal	Peak
7497.40	41.44	7.00	48.44	74.00	25.56	horizontal	Peak
8032.90	42.42	6.04	48.46	74.00	25.54	horizontal	Peak
9493.20	42.18	8.46	50.64	74.00	23.36	horizontal	Peak

Project No.: 2407T35767E-RF
Test Mode: Tx 920MHz
EUT Model: B485ZT-R3
Test distance: 3m

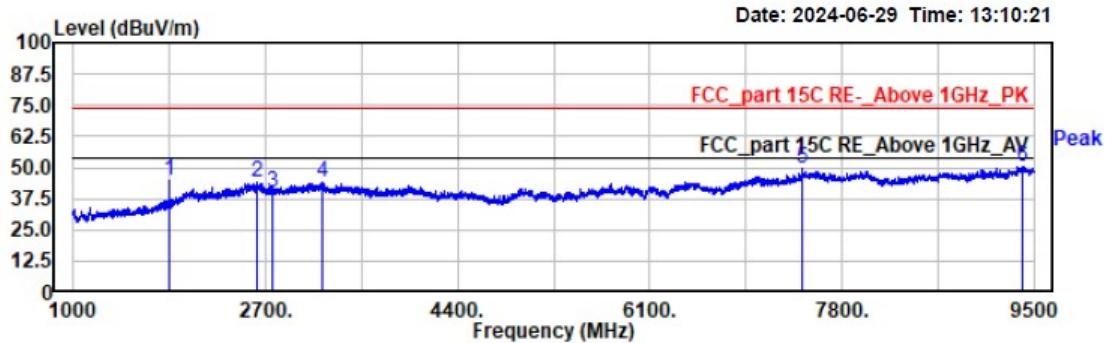
Temp/Humi: 23.5°C/54%
Tested by: Ash Lin
Power Source: DC 3.6V from battery



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
1839.80	51.08	-7.10	43.98	74.00	30.02	vertical	Peak
2552.10	43.34	0.28	43.62	74.00	30.38	vertical	Peak
2759.50	40.16	-0.97	39.19	74.00	34.81	vertical	Peak
3176.00	42.96	1.02	43.98	74.00	30.02	vertical	Peak
7487.20	41.42	6.94	48.36	74.00	25.64	vertical	Peak
9418.40	41.15	8.96	50.11	74.00	23.89	vertical	Peak

Project No.: 2407T35767E-RF
Test Mode: Tx 922.5MHz
EUT Model: B485ZT-R3
Test distance: 3m

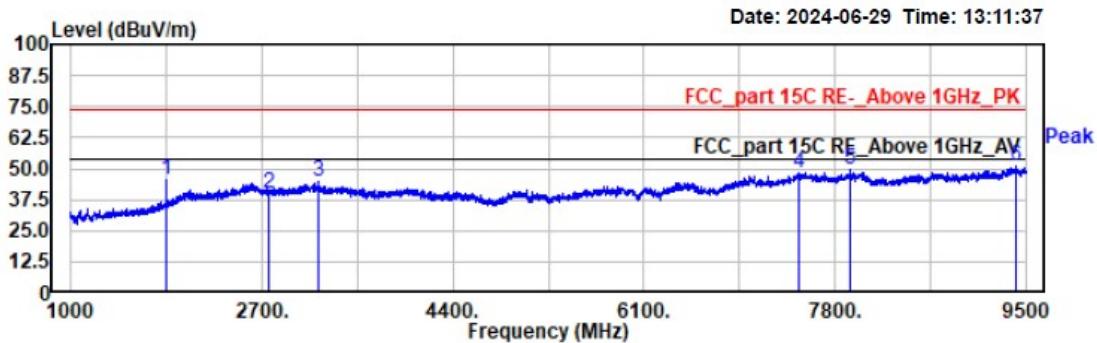
Temp/Humi: 23.5°C/54%
Tested by: Ash Lin
Power Source: DC 3.6V from battery



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
1844.90	52.07	-7.08	44.99	74.00	29.01	horizontal	Peak
2630.30	43.93	0.47	44.40	74.00	29.60	horizontal	Peak
2767.50	40.79	-0.94	39.85	74.00	34.15	horizontal	Peak
3206.60	43.48	0.92	44.40	74.00	29.60	horizontal	Peak
7448.10	42.88	6.69	49.57	74.00	24.43	horizontal	Peak
9389.50	41.61	9.08	50.69	74.00	23.31	horizontal	Peak

Project No.: 2407T35767E-RF
Test Mode: Tx 922.5MHz
EUT Model: B485ZT-R3
Test distance: 3m

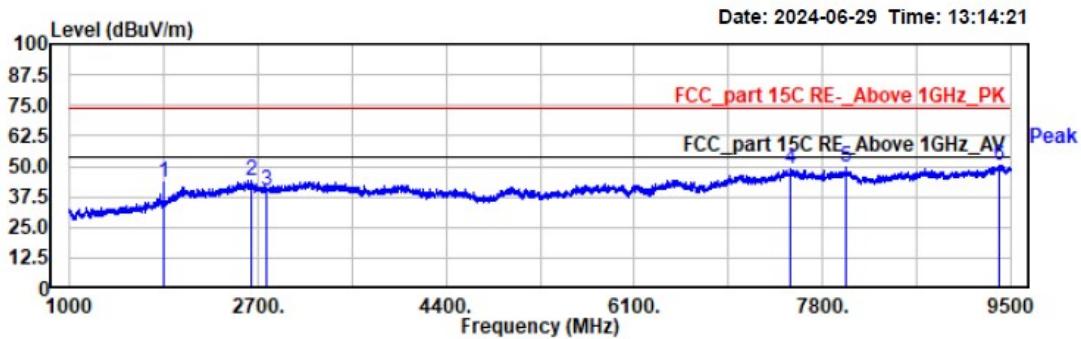
Temp/Humi: 23.5°C/54%
Tested by: Ash Lin
Power Source: DC 3.6V from battery



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
1844.90	52.33	-7.08	45.25	74.00	28.75	vertical	Peak
2767.50	40.60	-0.94	39.66	74.00	34.34	vertical	Peak
3198.10	43.87	1.03	44.90	74.00	29.10	vertical	Peak
7482.10	41.20	6.91	48.11	74.00	25.89	vertical	Peak
7942.80	42.80	6.65	49.45	74.00	24.55	vertical	Peak
9415.00	41.88	9.01	50.89	74.00	23.11	vertical	Peak

Project No.: 2407T35767E-RF
Test Mode: Tx 925MHz
EUT Model: B485ZT-R3
Test distance: 3m

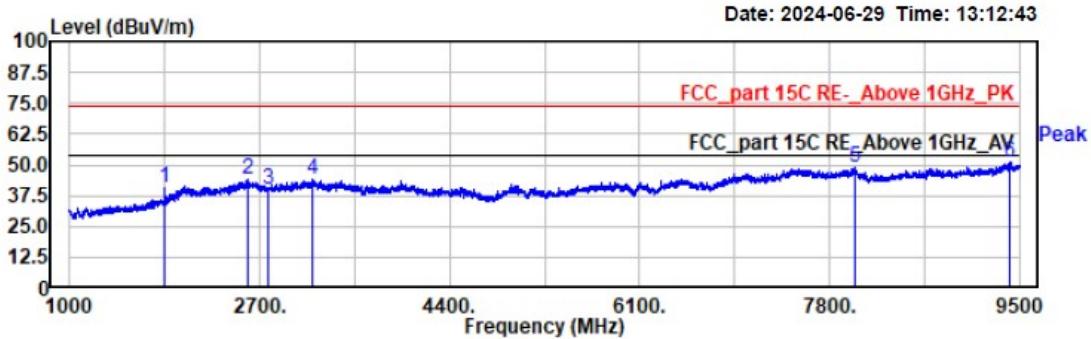
Temp/Humi: 23.5°C/54%
Tested by: Ash Lin
Power Source: DC 3.6V from battery



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
1850.00	50.27	-7.06	43.21	74.00	30.79	horizontal	Peak
2645.60	43.56	0.45	44.01	74.00	29.99	horizontal	Peak
2775.00	40.80	-0.93	39.87	74.00	34.13	horizontal	Peak
7511.00	41.84	6.95	48.79	74.00	25.21	horizontal	Peak
8009.10	43.34	6.29	49.63	74.00	24.37	horizontal	Peak
9403.10	41.11	9.17	50.28	74.00	23.72	horizontal	Peak

Project No.: 2407T35767E-RF
Test Mode: Tx 925MHz
EUT Model: B485ZT-R3
Test distance: 3m

Temp/Humi: 23.5°C/54%
Tested by: Ash Lin
Power Source: DC 3.6V from battery



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
1850.00	48.09	-7.06	41.03	74.00	32.97	vertical	Peak
2596.30	43.33	0.49	43.82	74.00	30.18	vertical	Peak
2774.80	40.85	-0.93	39.92	74.00	34.08	vertical	Peak
3177.70	43.42	1.02	44.44	74.00	29.56	vertical	Peak
8029.50	42.69	6.08	48.77	74.00	25.23	vertical	Peak
9413.30	41.78	9.03	50.81	74.00	23.19	vertical	Peak

Fundamental Test:*(Pre-scan in the X, Y and Z ax of orientation, the worst case Z-axis of orientation was recorded.)*

Note:

Factor (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB) - Amplifier Gain (dB)

Level (dB μ V/m) = Reading (dB μ V) + Factor (dB/m)Margin (dB) = Limit (dB μ V/m) - Level (dB μ V/m)

Frequency	Receiver	Rx Antenna Polar	Factor	Level	Limit	Margin	Detector
	Reading						
MHz	dB μ V	H/V	dB/m	dB μ V/m	dB μ V/m	dB	
Low Channel: 920MHz							
920.00	57.72	H	34.44	92.16	94.00	1.84	QP
920.00	56.67	V	34.44	91.11	94.00	2.89	QP
Middle Channel: 922.5MHz							
922.50	57.84	H	34.50	92.34	94.00	1.66	QP
922.50	55.62	V	34.50	90.12	94.00	3.88	QP
High Channel: 925MHz							
925.00	57.85	H	34.56	92.41	94.00	1.59	QP
925.00	57.82	V	34.56	92.38	94.00	1.62	QP

FCC §15.215(c) - 20dB EMISSION BANDWIDTH TESTING

Applicable Standard

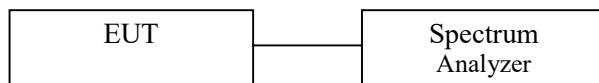
Intentional radiators operating under the alternative provisions to the general emission limits, as contained in §§ 15.217 through 15.257 and in Subpart E of this part, must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated.

Test Procedure

According to section 6.9 of standard ANSI C63.10-2013.

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Measure the frequency difference of two frequencies that were attenuated 20 dB from the reference level. Record the frequency difference as the emission bandwidth.
3. Repeat above procedures until all frequencies measured were complete.

Test Setup



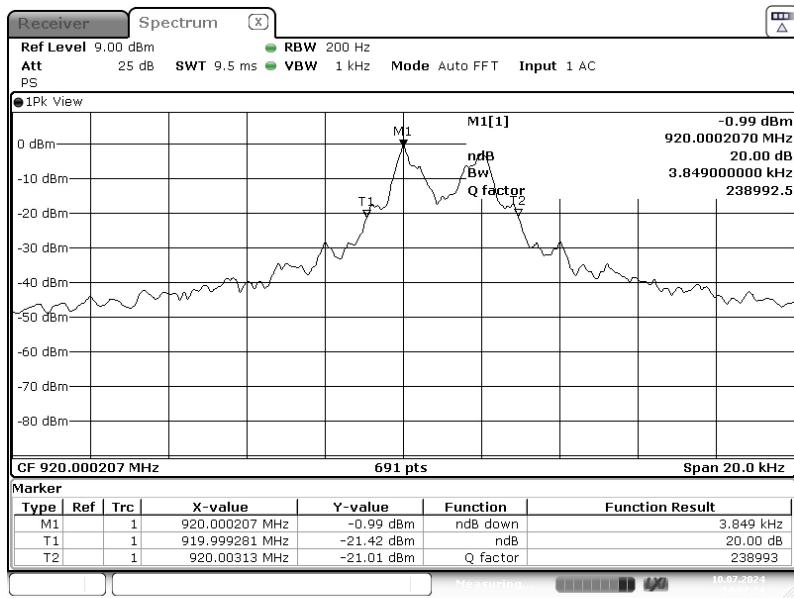
Test Data

Test Mode:	Transmitting
Test Engineer:	Ash Lin
Test Voltage:	DC 3.6V from battery
Test Frequency:	920MHz, 922.5MHz, 925MHz
Environment:	Temp.: 23.6°C Humi.: 55% Atm: 100.2kPa
Test Date:	2024-07-10

Test Result: Compliant.

Channel	Frequency (MHz)	20 dB Bandwidth (kHz)
Low	920	3.85
Middle	922.5	3.82
High	925	3.85

Low Channel



Middle Channel



High Channel



RF EXPOSURE EVALUATION

Applicable Standard

§1.1307(b)(3)(i) For single RF sources (*i.e.*, any single fixed RF source, mobile device, or portable device, as defined in paragraph (b)(2) of this section): A single RF source is exempt if:

(A) The available maximum time-averaged power is no more than 1 mW, regardless of separation distance. This exemption may not be used in conjunction with other exemption criteria other than those in paragraph (b)(3)(ii)(A) of this section. Medical implant devices may only use this exemption and that in paragraph (b)(3)(ii)(A).

Measurement Result

Frequency(MHz)	Maximum ERP		1-mW Test Exemption
	dBm	mW	
920-925MHz	-4.94	0.3206	Compliant

Note:

1. Chose the maximum power to do MPE analysis.
2. This device maximum E-Field level is 92.41dB μ V/m at 3m, so the EIRP power is -2.79dBm.
3. Pout EIRP (dBm)= Field Strength of Fundamental(dB μ V/m)-95.2
4. ERP(dBm)= EIRP(dBm)-2.15dB

Result: Compliant. RF Exposure is exemption.

EUT PHOTOGRAPHS

Please refer to the attachment 2407T35767E-RF-EXP EUT EXTERNAL PHOTOGRAPHS and 2407T35767E-RF-INP EUT INTERNAL PHOTOGRAPHS.

TEST SETUP PHOTOGRAPHS

Please refer to the attachment 2407T35767E-RF-TSP TEST SETUP PHOTOGRAPHS.

Declarations

1. Bay Area Compliance Laboratories Corp. (Xiamen) is not responsible for authenticity of any information provided by the applicant. Information from the applicant that may affect test results are marked with an asterisk “★”.
2. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested.
3. Unless required by the rule provided by the applicant or product regulations, then decision rule in this report did not consider the uncertainty.
4. The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor $k=2$ with the 95.45% confidence interval.
5. This report cannot be reproduced except in full, without prior written approval of Bay Area Compliance Laboratories Corp. (Xiamen).
6. This report is valid only with a valid digital signature. The digital signature may be available only under the adobe software above version 7.0.

******* END OF REPORT *******