

FCC TEST REPORT

Report No.....: AB26060078FW02
FCC ID.....: 2AGOFRC421K
Applicant.....: HCS (Suzhou) Limited
Address.....: 19F-20F, Building B-3rd, No.209 Zhuyuan Road, New District,
Suzhou, P.R.China
Manufacturer.....: HCS (Suzhou) Limited
Address.....: 19F-20F, Building B-3rd, No.209 Zhuyuan Road, New District,
Suzhou, P.R.China
Product Name.....: Remote Control
Trade Mark.....: /
Test Model.....: RC4213803/02BR
Additional Model(s).....: See section 1.1
Standard.....: FCC 47 CFR Part 15 Sub part C (Part 15.249)
Date of Receipt.....: 2026.06.08
Date of Test Date.....: 2026.06.08-2026.06.23
Date of Issue.....: 2026.06.23
Test Result.....: Pass

Compiled by:
(Printed Name + Signature) Huaijie Li *Huaijie Li*

Supervised by:
(Printed Name + Signature) David Huang *David Huang*

Approved by:
(Printed Name + Signature) Jay Liu *Jay Liu*

Testing Laboratory Name.....: Aibo Standard Technology (Shenzhen) Co., Ltd.
Address.....: 101, Building B, Tuori New Energy Industrial Park, High-tech Park,
Tianliao Community, Yutang Street, Guangming District, Shenzhen
City, Guangdong Province, China

This test report may be duplicated completely for legal use with the approval of the applicant. It should not be reproduced except in full, without the written approval of our laboratory. The client should not use it to claim product endorsement by Aibo. The test results in the report only apply to the tested sample. The test report shall be invalid without all the signatures of testing engineers, reviewer and approver. Any objections must be raised to Aibo within 15 days since the date when the report is received. It will not be taken into consideration beyond this limit. The test report merely correspond to the test sample.

FCC TEST REPORT

EUT.....	: Remote Control
Test Model.....	: RC4213803/02BR
Applicant.....	: HCS (Suzhou) Limited
Address.....	: 19F-20F, Building B-3rd, No.209 Zhuyuan Road, New District, Suzhou, P.R.China
Manufacturer.....	: HCS (Suzhou) Limited
Address.....	: 19F-20F, Building B-3rd, No.209 Zhuyuan Road, New District, Suzhou, P.R.China

Test Result	Positive
--------------------	-----------------

The test report merely corresponds to the test sample.

It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

REPORT VERSION

Version No.	Issue Date	Description
01	2026.06.23	Initial Issue

TABLE OF CONTENTS

1. GENERAL INFORMATION	5
1.1. GENERAL DESCRIPTION OF EUT	5
1.1. DESCRIPTION OF SUPPORT EQUIPMENT	5
1.2. DESCRIPTION OF EXTERNAL I/O	5
1.4. GENERAL DESCRIPTION OF APPLIED STANDARDS	6
1.5. DESCRIPTION OF TEST FACILITY	6
1.6. MEASUREMENT UNCERTAINTY	7
1.7. ENVIRONMENTAL CONDITIONS	7
1.8. DESCRIPTION OF TEST MODES	8
2. SUMMARY OF TEST RESULT	10
3. MEASUREMENT INSTRUMENTS LIST	11
4. RADIATED EMISSIONS MEASUREMENT	12
4.1. LIMIT	12
4.2. TEST SETUP	13
4.3. TEST PROCEDURE	14
4.4. TEST RESULT	15
5. 20DB BANDWIDTH AND OCCUPIED BANDWIDTH	21
5.1. LIMIT	21
5.2. TEST SETUP	21
5.3. TEST PROCEDURE	21
5.4. TEST RESULT	22
6. PHOTOGRAPHS OF TEST SETUP	24
7. EXTERNAL PHOTOGRAPHS OF THE EUT	24
8. INTERNAL PHOTOGRAPHS OF THE EUT	24

1. GENERAL INFORMATION

1.1. GENERAL DESCRIPTION OF EUT

Product Name:	Remote Control
Trade Mark:	/
Test Model:	RC4213803/02BR
Additional Model(s):	RC4213407/02BR, RC4213408/02BR, RC4213409/02BR, RC4213410/02BR, Babylon RCU, RC421XXXX/XXR, RC421XXXX/XXBR ('X'=0-9, 'B' means packed with battery)
Model Difference:	All models are the same circuit and RF module, except the model name
Hardware Version:	/
Software Version:	V2.11
Power Supply:	DC 3V from battery
Battery	/
Test Sample(s) Number:	AB26060078-01 (Engineer Sample)
Radio Specification Subject to this Report	
Frequency Range:	2405-2480MHz
Modulation Type:	GFSK
Channel Spacing:	2MHz
Channel Number(s):	5
Antenna Type:	Internal Antenna
Antenna Gain:	1.3dBi

1.1. DESCRIPTION OF SUPPORT EQUIPMENT

Description	Manufacturer	Model	Serial Number	Supplied by
Computer	ACER	N22C5	NXEGXCN0022400 3D943400	Applicant
Programmer	Telink	/	/	Applicant

1.2. DESCRIPTION OF EXTERNAL I/O

I/O Port Description	Quantity	Cable
Mini-B Interface	1	0.8m, unshielded

1.4. GENERAL DESCRIPTION OF APPLIED STANDARDS

The tests were performed according to following standards:

[FCC Rules Part 15.249](#) - Frequency Hopping, Direct Spread Spectrum and Hybrid Systems that are in operation within the bands of 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz and 24.0-24.25 GHz.

[ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024](#) - American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices.

1.5. DESCRIPTION OF TEST FACILITY

Test Lab: Aibo Standard Technology (Shenzhen) Co., Ltd.

Address: 101, Building B, Tuori New Energy Industrial Park, High-tech Park, Tianliao Community, Yutang Street, Guangming District, Shenzhen City, Guangdong Province, China

Tel.: +(86) 0755 85250797

E-mail: aibo@aibonorm.com

Website: www.Aibonorm.com

The test facility is recognized, certified, or accredited by the following organizations:

A2LA-Lab Certificate No.: 7514.01

Aibo Standard Technology (Shenzhen) Co., Ltd. has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

FCC Accredited Lab.

Designation Number: CN1411

Test Firm Registration Number: 567066

ISED Wireless Device Testing Laboratories

Company Number: 33924

CAB identifier: CN0185

1.6. MEASUREMENT UNCERTAINTY

The measurement data show herein meets or exceeds the CISPR measurement uncertainty values specified in CISPR 16-4-2 and can be compared directly to specified limit to determine compliance.

Items	Measurement Uncertainty
Power Line Conducted Emission (9kHz~ 150kHz)	±3.62dB
Power Line Conducted Emission (150kHz~30MHz)	±3.38dB
Radiated Emission (9kHz~30MHz)	±3.10dB
Radiated Emission (30MHz~ 1GHz)	±4.90dB
Radiated Emission (1GHz~ 18GHz)	±3.88dB
Radiated Emission (8GHz~40GHz)	±5.32dB
RF Conducted Power	±0.57dB
Conducted Spurious Emissions	±1.60dB
RF Frequency	±6.0 x 10 ⁻⁷
Occupied Channel Bandwidth	±28.87KHz

Note: All measurement uncertainty values are shown with a coverage factor of k = 2 to indicate a 95 % level of confidence.

1.7. ENVIRONMENTAL CONDITIONS

During the measurement the environmental conditions were within the listed ranges:

Normal Temperature:	+15°C ~ +35°C
Lative Humidity	20 % ~ 75 %
Air Pressure	98KPa ~ 101KPa

1.8. DESCRIPTION OF TEST MODES

The EUT was tested under the following mode.

EUT CONFIGURE MODE	APPLICABLE TO				DESCRIPTION
	RE<1G	RE≥1G	PLC	BW	
A	√	√	√	√	DC 3V from Battery

Where **RE<1G**: Radiated Emission below 1GHz
PLC: Power Line Conducted Emission

RE≥1G: Radiated Emission above 1GHz
BW: 20db bandwidth

Following channel(s) was (were) selected for the test as listed below.

Operation Frequency List	
Channel Number	Frequency (MHz)
11	2405
15	2425
20	2450
25	2475
26	2480

Power setting during the test:

During testing, Channel & Power Controlling Software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product.

Frequency	2405MHz	2450MHz	2480MHz
RF Power Parameter(s)	Default	Default	Default

2. SUMMARY OF TEST RESULT

FCC 47 CFR Part 15 Subpart C (SECTION 15.249)&RSS-210 Test Cases			
FCC&IC Rule	Description of Test Item(s)	Result	REMARK
Part 15.203	Antenna Requirement	Pass	No antenna connector is used
Part 15.207(a) RSS-Gen 8.8	Conducted Emission	/(Note 1)	/
Part 15.205 RSS-Gen 8.10 Table 7	Restricted Band of Operation	Pass	Compliant
Part 15.209,Part 15.249(a) RSS-210B10 (a),B10 (b)	Radiated Emission	Pass	Compliant
Part 15.215(c) RSS-Gen 6.7	20dB Bandwidth Test&Occupied Bandwidth Measurement	Pass	Compliant

Note:1.This Remote Control, model RC4213803/02BR, is Battery powered; therefore, this test item is not applicable.

2. The PCB board used in this experiment for testing the sample is FR4 PCB.

3. MEASUREMENT INSTRUMENTS LIST

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Until
1	Loop Antenna	Schwarzbeck	FMZB 1519	1519-025	01/18/2026	01/17/2028
2	ESCI EMI TEST RECEIVER	ROHDE & SCHWARZ	ESPI 7	/	01/20/2026	01/19/2027
3	Power Amplifier	HZEMC	HPA-9K0133	HYP A23029	01/20/2026	01/19/2027
4	Broadband Antenna	Schwarzbeck	VULB 9168	01763	01/29/2026	01/28/2028
5	Attenuator	PRM	ATT50-6-3	ATT50-6-3	01/20/2026	01/19/2027
6	Spectrum Analyzer	R&S	FSV40-N	101365	01/20/2026	01/19/2027
7	Horn Antenna	Schwarzbeck	BBHA 9120 D	02786	02/19/2026	02/18/2028
8	Horn Antenna	KMW	ZLB7-18-40G-77	072410839	02/19/2026	02/18/2028
9	Power Amplifier	HZEMC	PA0118-43	HYP A23030	01/20/2026	01/19/2027
10	Power Amplifier	HZEMC	PA01840-45	HYP A23031	01/20/2026	01/19/2027
11	EMI Test Receiver	R&S	ESCI	101196	01/20/2026	01/19/2027
12	LISN	R&S	ENV216	102374	01/20/2026	01/19/2027
13	Pulse Limiter	Schwarzbeck	ESH3-Z2	0357.8810.54	01/20/2026	01/19/2027
14	MXA Signal Analyzer	Keysight	N9020A	MY52091389	01/20/2026	01/19/2027
15	Power Sensor	Agilent	U2021XA	MY54110007	01/20/2026	01/19/2027
16	Power Sensor	Agilent	U2021XA	MY54110009	01/20/2026	01/19/2027
17	MXG Vector Signal Generator	Agilent	N5182A	MY47070153	01/20/2026	01/19/2027
18	Analog Signal Source	Keysight	N5173B	MY60403029	01/20/2026	01/19/2027
19	Vector Signal Generator	R&S	SMCV100B	106103	01/20/2026	01/19/2027
20	WIDEBAND RADIO COMMUNICATION TESTER	R&S	CMW500	118780	01/20/2026	01/19/2027
21	DC POWER SUPPLY	MAISHENG	MT-305DS	2021040016	02/28/2026	02/27/2027
22	Const Temp. & Humidity Chamber	GRT	GR-HWX-150L	GR25010601	01/20/2026	01/19/2027

Test Software		
Software name	Model	Version
Conducted Emission Measurement Software	FASLAB	V4.1
Radiated Emission Measurement Software	FASLAB	V4.1
Bluetooth and WIFI Test System	MTS 8310	V3.0.0.0

4. RADIATED EMISSIONS MEASUREMENT

4.1. LIMIT

Emissions radiated outside of the specified bands, shall be according to the general radiated limits in FCC 15.209 and IC RSS-210 as following:

FREQUENCIES (MHz)	FIELD STRENGTH (microvolts/meter)	MEASUREMENT DISTANCE (meters)
0.009 ~ 0.490	2400/F(kHz)	300
0.490 ~ 1.705	24000/F(kHz)	30
1.705 ~ 30.0	30	30
30 ~ 88	100	3
88 ~ 216	150	3
216 ~ 960	200	3
Above 960	500	3

According to § 15.249(a) and IC RSS-210, the field strength of emissions from intentional radiators operated within these frequency bands shall comply with the following:

Fundamental Frequency	Field strength of fundamental (milli-volts/meter)	Field strength of harmonics (micro-volts/meter)
902-928 MHz	50	500
2400-2483.5 MHz	50	500
5725-5875 MHz	50	500
24.0-24.25 GHz	250	2500

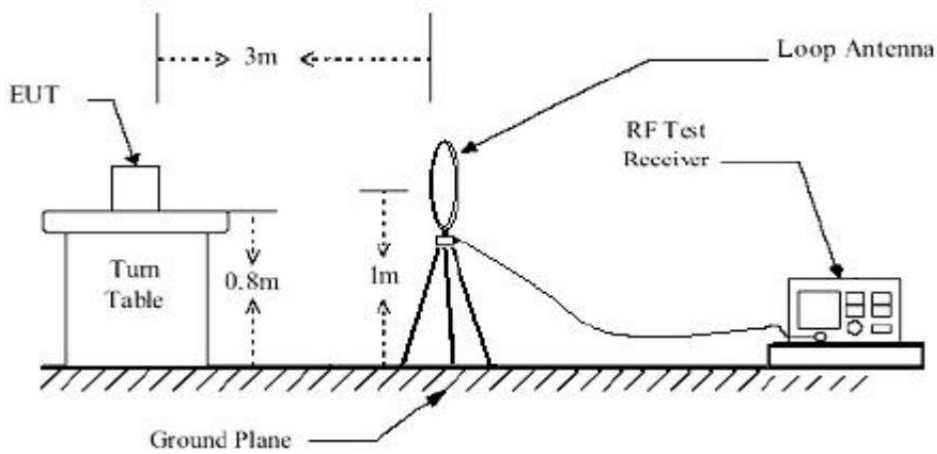
The emission limit in this paragraph is based on measurement instrumentation employing an average detector. The provisions in § 15.35 for limiting peak emissions apply.

NOTE:

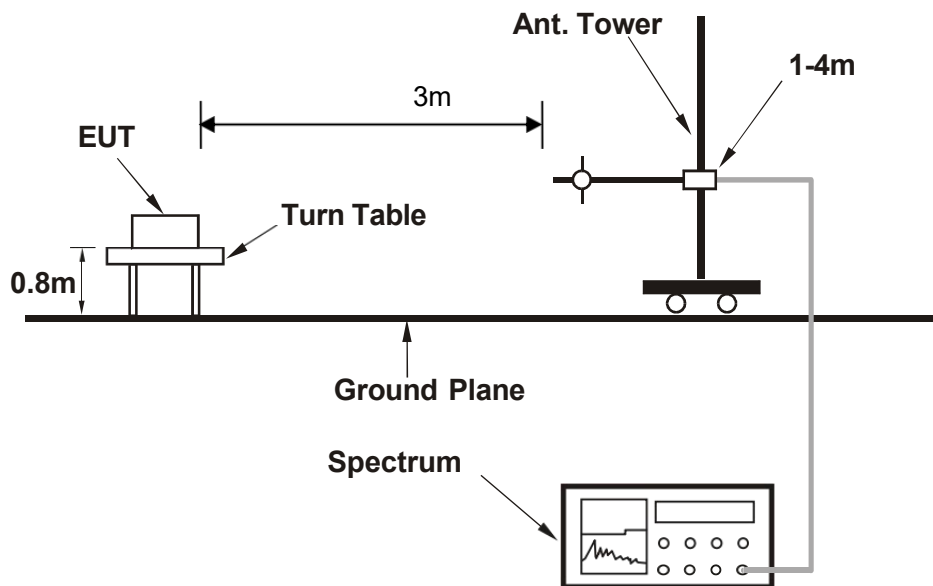
1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. As shown in 15.35(b), for frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.

4.2. TEST SETUP

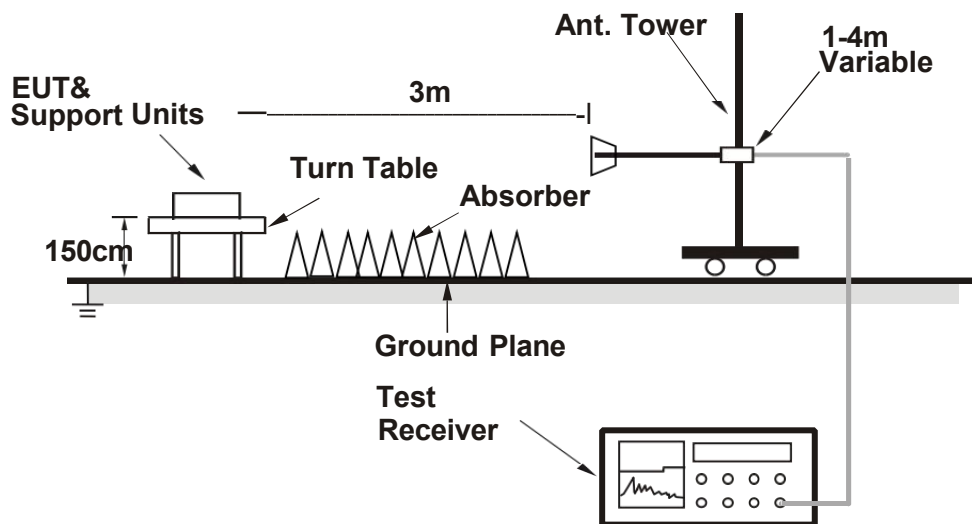
Below 30MHz test setup



Below 1GHz test setup



Above 1GHz test setup



Note: For the actual test configuration, please refer to the attached file (Test Setup Photo).

4.3. TEST PROCEDURE

- a. The EUT was placed on the top of a rotating table 1.5 meters (above 1GHz) and 0.8 meters (below 1GHz) above the ground at a 3 meters semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The antenna is a broadband antenna, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. For below 30MHz, a loop antenna with its vertical plane is place 3m from the EUT and rotated about its vertical axis for maximum response at each azimuth about the EUT. And the centre of the loop shall be 1m above the ground.
- g. If the emission level of the EUT in peak mode was lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

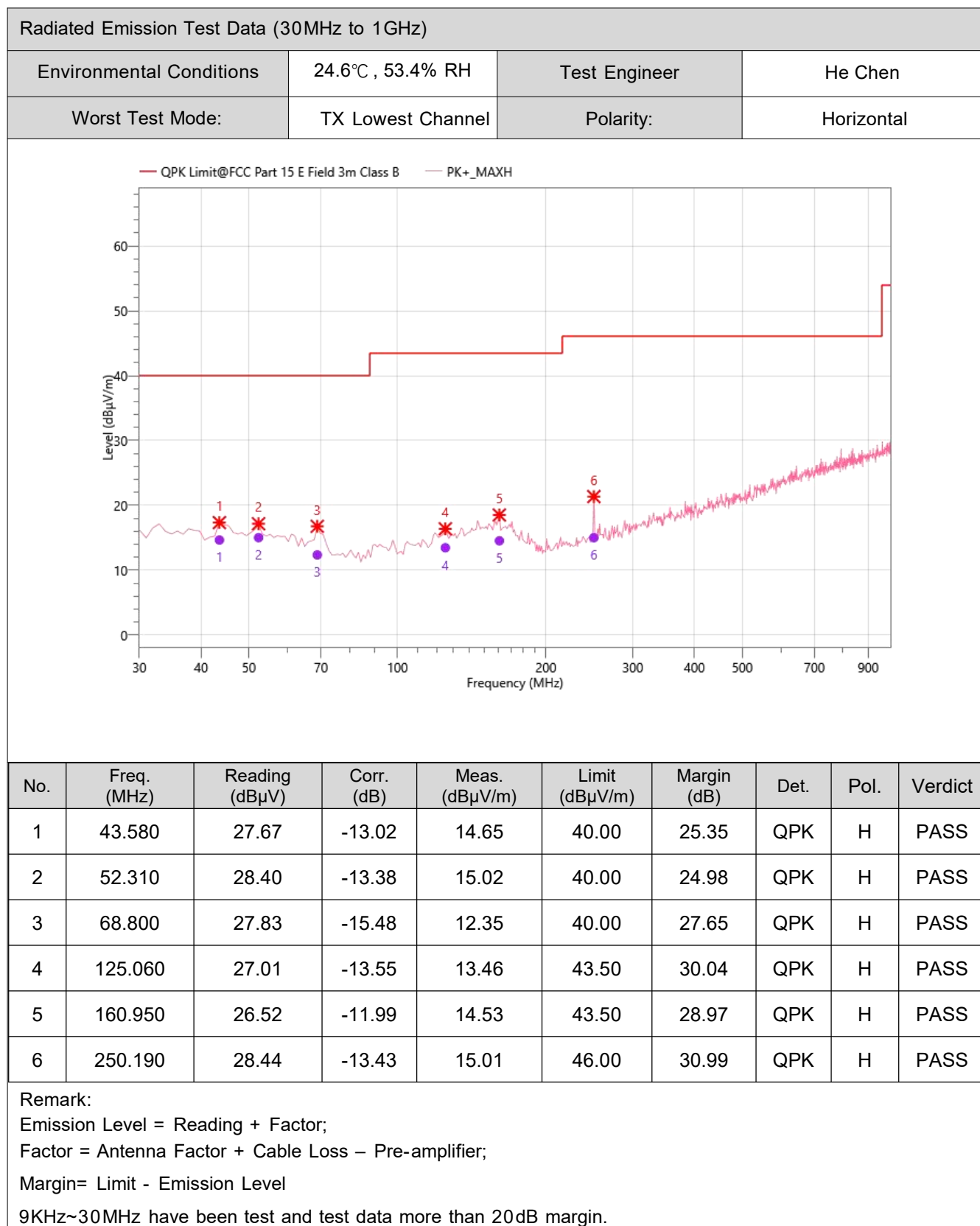
NOTE:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 10Hz for Average detection (AV) at frequency above 1GHz.
4. All modes of operation were investigated and the worst-case emissions are reported.
5. The testing of the EUT was performed on all 3 orthogonal axes; the worst-case test configuration was reported on the file test setup photo.

4.4. TEST RESULT

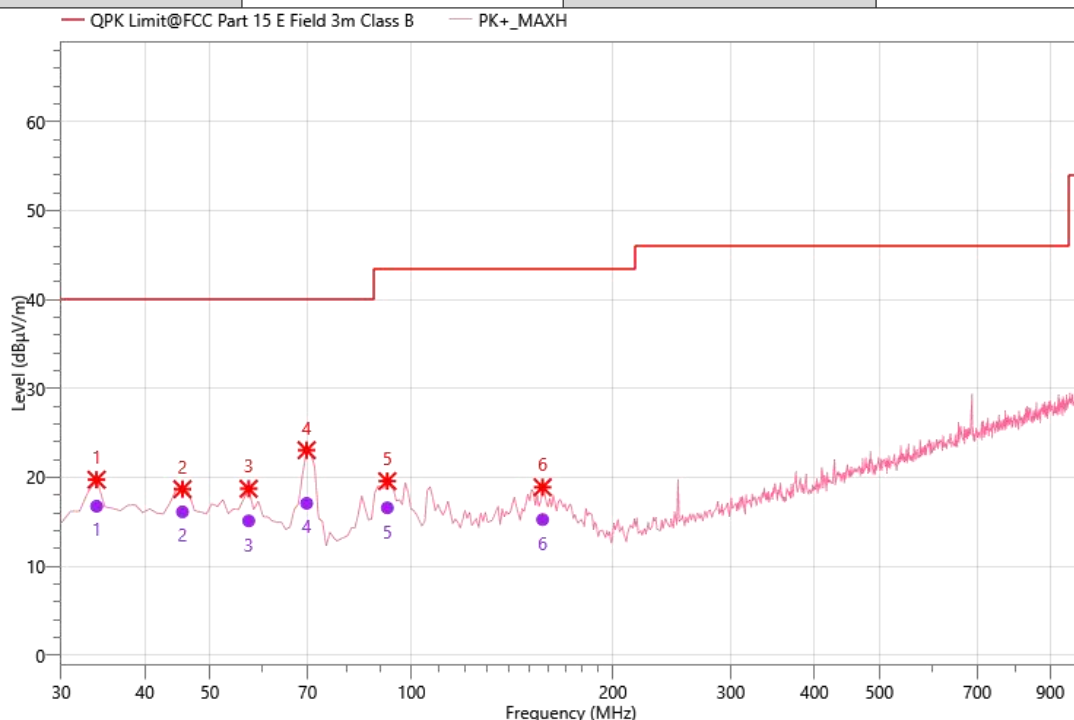
BELOW 1GHz

Radiated Spurious Emissions 9kHz~1GHz, the worst case lowest channel in the Radiated Spurious Emissions above 1GHz was tested.



Radiated Emission Test Data (30MHz to 1GHz)

Environmental Conditions	24.6°C , 53.4% RH	Test Engineer	He Chen
Worst Test Mode:	TX Lowest Channel	Polarity:	Vertical



No.	Freq. (MHz)	Reading (dBμV)	Corr. (dB)	Meas. (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Det.	Pol.	Verdict
1	33.880	30.21	-13.47	16.74	40.00	23.26	QPK	V	PASS
2	45.520	29.21	-13.1	16.11	40.00	23.89	QPK	V	PASS
3	57.160	28.65	-13.56	15.09	40.00	24.91	QPK	V	PASS
4	69.770	32.66	-15.59	17.07	40.00	22.93	QPK	V	PASS
5	92.080	33.25	-16.69	16.56	43.50	26.94	QPK	V	PASS
6	157.070	27.04	-11.8	15.24	43.50	28.26	QPK	V	PASS

Remark:

Emission Level = Reading + Factor;

Factor = Antenna Factor + Cable Loss – Pre-amplifier;

Margin= Limit - Emission Level

9KHz~30MHz have been test and test data more than 20dB margin.

ABOVE 1GHz WORST-CASE DATA:

Field strength of fundamental&Radiated Emission Test Data (Above 1GHz)							
Environmental Conditions			24.6℃ , 53.4% RH		Test Engineer		He Chen
Lowest Channel (Worst Case: zigbee_2405MHz)							
Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector (PEAK/AVG)	Polar (H/V)
1120.000	47.79	-11.83	35.96	74.00	-38.04	PK+	H
1120.000	43.46	-11.83	31.63	54.00	-22.37	AVG	H
2358.000	49.23	-8.9	40.33	74.00	-33.67	PK+	H
2358.000	46.03	-8.9	37.13	54.00	-16.87	AVG	H
*2404.900	91.50	-3.67	87.83	114	-26.17	PK+	H
*2404.900	90.80	-3.67	87.13	94	-6.87	AVG	H
4800.000	63.64	-13.66	49.98	74.00	-24.02	PK+	H
4800.000	46.18	-13.66	32.52	54.00	-21.48	AVG	H
7215.000	62.85	-6.69	56.16	74.00	-17.84	PK+	H
7215.000	45.31	-6.69	38.62	54.00	-15.38	AVG	H
12030.000	51.00	-1.37	49.63	74.00	-24.37	PK+	H
12030.000	36.50	-1.37	35.13	54.00	-18.87	AVG	H
17985.000	41.25	7.57	48.82	74.00	-25.18	PK+	H
18000.000	31.58	7.7	39.28	54.00	-14.72	AVG	H
1118.000	43.25	-11.84	31.41	54.00	-22.59	AVG	V
1122.000	46.97	-11.81	35.16	74.00	-38.84	PK+	V
2358.000	49.16	-8.9	40.26	74.00	-33.74	PK+	V
2358.000	45.65	-8.9	36.75	54.00	-17.25	AVG	V
*2404.900	91.78	-3.67	88.11	114	-25.89	PK+	V
*2404.900	91.29	-3.67	87.62	94	-6.38	AVG	V
4800.000	61.73	-13.66	48.07	74.00	-25.93	PK+	V
4800.000	44.84	-13.66	31.18	54.00	-22.82	AVG	V
7215.000	64.86	-6.69	58.17	74.00	-15.83	PK+	V
7215.000	46.72	-6.69	40.03	54.00	-13.97	AVG	V
14430.000	46.47	1.12	47.59	74.00	-26.41	PK+	V
14430.000	34.09	1.12	35.21	54.00	-18.79	AVG	V
17910.000	43.35	6.9	50.25	74.00	-23.75	PK+	V
17955.000	32.05	7.3	39.35	54.00	-14.65	AVG	V

Middle Channel (Worst Case: zigbee_2450MHz)							
Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector (PEAK/AVG)	Polar (H/V)
1116.000	43.21	-11.86	31.35	54.00	-22.65	AVG	H
1124.000	46.11	-11.8	34.31	74.00	-39.69	PK+	H
2500.000	47.87	-8.5	39.37	74.00	-34.63	PK+	H
2500.000	43.54	-8.5	35.04	54.00	-18.96	AVG	H
*2450.049	90.26	-3.63	86.63	114	-27.37	PK+	H
*2450.049	89.85	-3.63	86.22	94	-7.78	AVG	H
4890.000	63.38	-12.8	50.58	74.00	-23.42	PK+	H
4890.000	45.87	-12.8	33.07	54.00	-20.93	AVG	H
7350.000	58.29	-6.4	51.89	74.00	-22.11	PK+	H
7350.000	41.59	-6.4	35.19	54.00	-18.81	AVG	H
12255.000	51.95	-1.37	50.58	74.00	-23.42	PK+	H
12255.000	37.12	-1.37	35.75	54.00	-18.25	AVG	H
17970.000	42.09	7.43	49.52	74.00	-24.48	PK+	H
18000.000	31.55	7.7	39.25	54.00	-14.75	AVG	H
1118.000	43.13	-11.84	31.29	54.00	-22.71	AVG	V
1120.000	46.51	-11.83	34.68	74.00	-39.32	PK+	V
2304.000	46.63	-8.9	37.73	74.00	-36.27	PK+	V
2314.000	42.29	-8.9	33.39	54.00	-20.61	AVG	V
*2450.049	90.44	-3.63	86.81	114	-27.19	PK+	V
*2450.049	89.97	-3.63	86.34	94	-7.66	AVG	V
4890.000	65.24	-12.8	52.44	74.00	-21.56	PK+	V
4890.000	47.37	-12.8	34.57	54.00	-19.43	AVG	V
7350.000	65.16	-6.4	58.76	74.00	-15.24	PK+	V
7350.000	46.91	-6.4	40.51	54.00	-13.49	AVG	V
12255.000	46.34	-1.37	44.97	74.00	-29.03	PK+	V
12255.000	34.34	-1.37	32.97	54.00	-21.03	AVG	V
18000.000	42.34	7.7	50.04	74.00	-23.96	PK+	V
18000.000	31.52	7.7	39.22	54.00	-14.78	AVG	V

Highest Channel (Worst Case: zigbee_2480MHz)							
Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector (PEAK/AVG)	Polar (H/V)
1116.000	41.98	-11.86	30.12	54.00	-23.88	AVG	H
1124.000	45.29	-11.8	33.49	74.00	-40.51	PK+	H
2372.000	46.41	-8.9	37.51	74.00	-36.49	PK+	H
2374.000	41.66	-8.9	32.76	54.00	-21.24	AVG	H
*2480.000	90.37	-3.55	86.82	114	-27.18	PK+	H
*2480.000	89.78	-3.55	86.23	94	-7.77	AVG	H
4950.000	59.82	-12.4	47.42	74.00	-26.58	PK+	H
4950.000	43.40	-12.4	31.00	54.00	-23	AVG	H
7440.000	50.26	-6.32	43.94	74.00	-30.06	PK+	H
7440.000	37.20	-6.32	30.88	54.00	-23.12	AVG	H
12405.000	52.80	-1.45	51.35	74.00	-22.65	PK+	H
12405.000	37.15	-1.45	35.70	54.00	-18.3	AVG	H
18000.000	42.09	7.7	49.79	74.00	-24.21	PK+	H
18000.000	31.68	7.7	39.38	54.00	-14.62	AVG	H
1382.000	46.64	-11.06	35.58	74.00	-38.42	PK+	V
1382.000	41.89	-11.06	30.83	54.00	-23.17	AVG	V
2080.000	42.04	-9.22	32.82	54.00	-21.18	AVG	V
2100.000	46.92	-9.1	37.82	74.00	-36.18	PK+	V
*2480.000	80.65	-3.55	77.10	114	-36.9	PK+	V
*2480.000	80.43	-3.55	76.88	94	-17.12	AVG	V
4950.000	66.15	-12.4	53.75	74.00	-20.25	PK+	V
4950.000	48.10	-12.4	35.70	54.00	-18.3	AVG	V
7440.000	65.22	-6.32	58.90	74.00	-15.1	PK+	V
7440.000	46.00	-6.32	39.68	54.00	-14.32	AVG	V
12405.000	45.84	-1.45	44.39	74.00	-29.61	PK+	V
12405.000	33.97	-1.45	32.52	54.00	-21.48	AVG	V
17985.000	31.56	7.57	39.13	54.00	-14.87	AVG	V
18000.000	41.51	7.7	49.21	74.00	-24.79	PK+	V
Remark: Emission Level = Reading + Factor; Factor = Antenna Factor + Cable Loss – Pre-amplifier; Margin=Emission Level - Limit . Testing is carried out with frequency rang 9kHz to the tenth harmonics. The measurements greater than 20dB below the limit from 18GHz to 25GHz.							

Radiated Band Edges Test Data							
Environmental Conditions			24.6°C , 53.4% RH		Test Engineer		He Chen
Lowest Channel (Worst Case: zigbee_2405MHz)							
Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector (PEAK/AVG)	Polar (H/V)
2310.000	43.86	-3.62	40.24	74.00	33.76	PK+	H
2310.000	39.63	-3.62	36.01	54.00	17.99	AVG	H
2389.950	44.21	-3.67	40.54	74.00	33.46	PK+	H
2389.950	40.00	-3.67	36.33	54.00	17.67	AVG	H
2400.090	44.68	-3.68	41.00	74.00	33.00	PK+	H
2400.090	39.96	-3.68	36.28	54.00	17.72	AVG	H
2310.000	45.58	-3.62	41.96	74.00	32.04	PK+	V
2310.000	41.28	-3.62	37.66	54.00	16.34	AVG	V
2390.080	47.13	-3.67	43.46	74.00	30.54	PK+	V
2390.080	41.72	-3.67	38.05	54.00	15.95	AVG	V
2400.090	45.03	-3.68	41.35	74.00	32.65	PK+	V
2400.090	40.70	-3.68	37.02	54.00	16.98	AVG	V
Highest Channel Worst Case: zigbee_2410MHz)							
Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector (PEAK/AVG)	Polar (H/V)
2483.500	45.12	-3.54	41.58	74.00	32.42	PK+	H
2483.500	40.69	-3.54	37.15	54.00	16.85	AVG	H
2500.000	45.46	-3.5	41.96	74.00	32.04	PK+	H
2500.000	40.83	-3.5	37.33	54.00	16.67	AVG	H
2483.500	46.44	-3.54	42.90	74.00	31.10	PK+	V
2483.500	41.79	-3.54	38.25	54.00	15.75	AVG	V
2500.000	46.15	-3.5	42.65	74.00	31.35	PK+	V
2500.000	41.67	-3.5	38.17	54.00	15.83	AVG	V
Remark: Emission Level = Reading + Factor; Factor = Antenna Factor + Cable Loss – Pre-amplifier; Margin= Limit - Emission Level . The emission levels of other frequencies were greater than 20dB margin.							

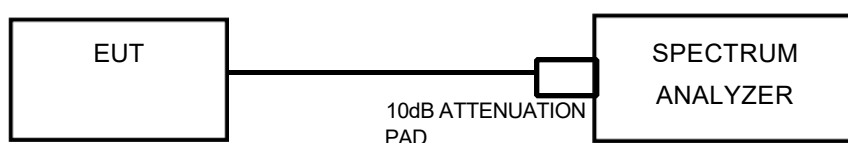
5. 20DB BANDWIDTH AND OCCUPIED BANDWIDTH

5.1. LIMIT

According to FCC 15.215(c) and RSS-Gen, 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.

According to RSS-Gen 6.7, The occupied bandwidth shall be reported for all equipment in addition to the specified bandwidth required in the applicable RSSs.

5.2. TEST SETUP



5.3. TEST PROCEDURE

For 20dB Bandwidth Measurement:

- Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
- Turn on the EUT and connect it to measurement instrument. Then set it to any one convenient frequency within its operating range. Set a reference level on the measuring instrument equal to the highest peak value.
- Measure the frequency difference of two frequencies that were attenuated 20dB from the reference level. Record the frequency difference as the emission bandwidth.
- Repeat above procedures until all frequencies measured were complete.
- The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with 30 KHz RBW and 100 KHz VBW. The 20dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 20dB. Measured the 20dB bandwidth by related function of the spectrum analyzer.

For 99% Occupied Bandwidth Measurement:

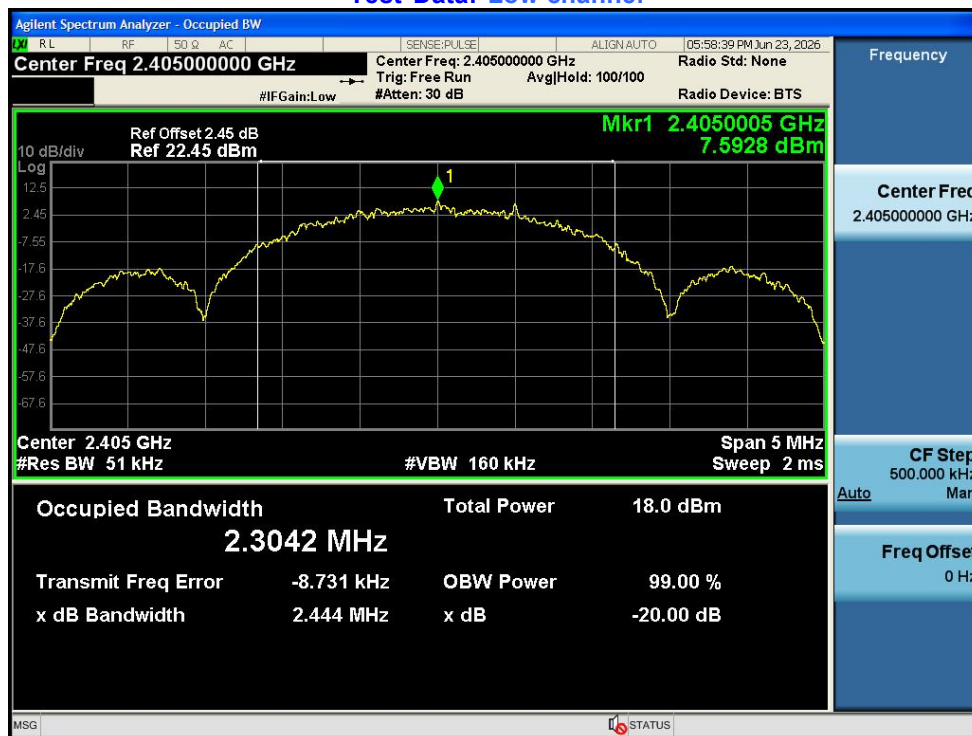
- Span = approximately 1.5 to 5 times the OBW, centered on the test channel.
- RBW = 1% to 5% of the OBW.
- $VBW \geq 3 \times RBW$
- Sweep = auto;
- Detector function = peak
- Trace = max hold

g. Use the 99% power bandwidth function of the instrument to measure the Occupied Bandwidth and recoded.

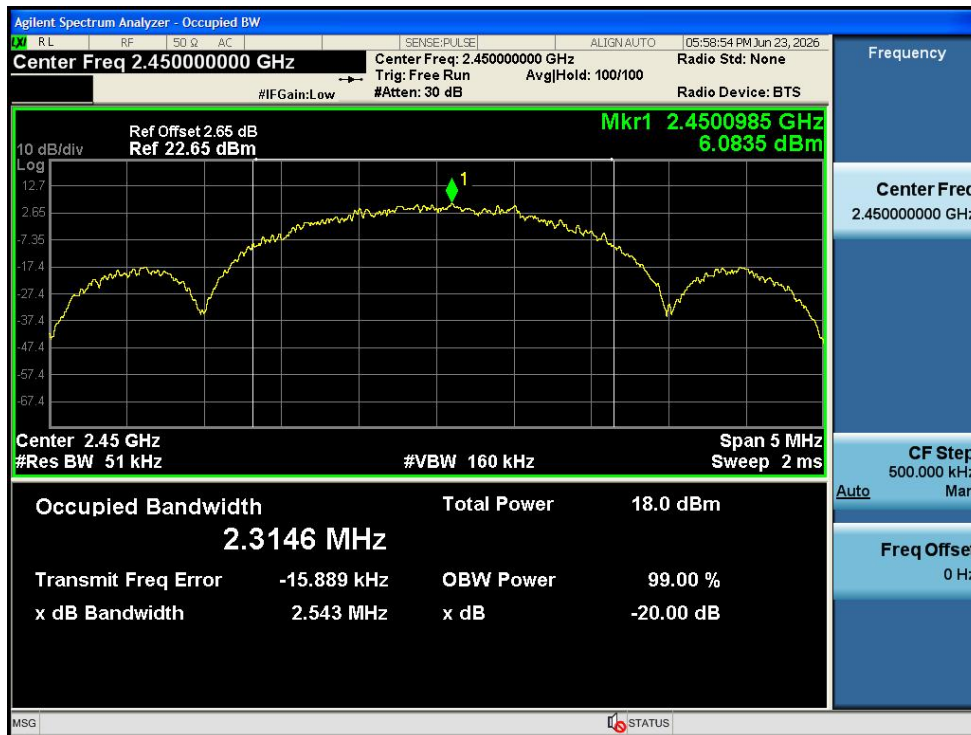
5.4. TEST RESULT

CHANNEL	CHANNEL FREQUENCY (MHz)	99% OCCUPIED BANDWIDTH (MHz)	20dB BANDWIDTH (MHz)
Low	2405	2.3042	2.444
Middle	2450	2.3146	2.543
High	2480	2.3051	2.563

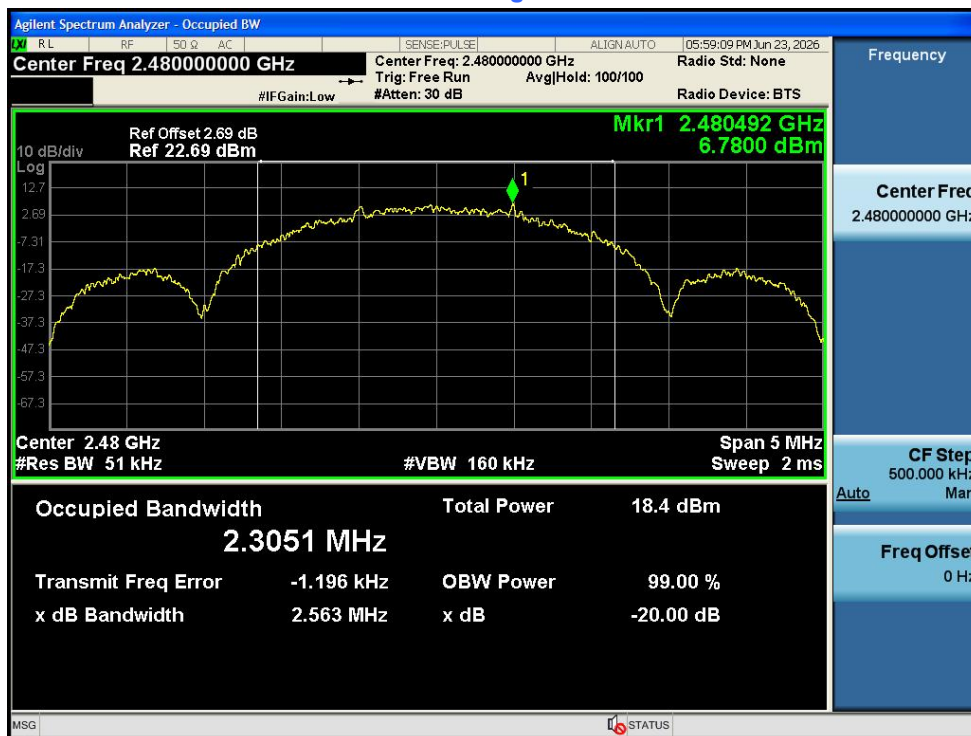
Test Data: Low channel



Test Data: Middle channel



Test Data: High channel



6. PHOTOGRAPHS OF TEST SETUP

Please refer to Appendix A for Test Setup Photos of the EUT.

7. EXTERNAL PHOTOGRAPHS OF THE EUT

Please refer to Appendix B for External Photos of the EUT.

8. INTERNAL PHOTOGRAPHS OF THE EUT

Please refer to Appendix C for Internal Photos of the EUT.

*****THE END*****