

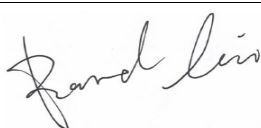
FCC PART 15F TEST REPORT

For

SPACEWALKER PTE. LTD.

60 PAYA LEBAR ROAD SINGAPORE Singapore

FCC ID: 2BK3M-BIR3X02

Report Type: Original Report	Product Name: Electric Golf Push Cart
Report Number: <u>RKSA250527003-00C</u>	
Report Date: <u>2025-08-26</u>	
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Note: This test report is prepared for the customer shown above and for the device described herein. It may not be duplicated or used in part without prior written consent from Bay Area Compliance Laboratories Corp. (Kunshan). This report must not be used by the customer to claim product certification, approval, or endorsement by NVLAP, or any agency of the U.S. Government.

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REPORT REVISION HISTORY

Number of Revisions	Report No.	Version	Issue Date	Description
0	RKSA250527003-00C	R1V1	2025-08-26	Initial Release

GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

Applicant:	SPACEWALKER PTE. LTD.
Tested Model:	Birdie 3X-U
Product Name:	Electric Golf Push Cart
Power Supply:	DC 21.6V from battery or DC 25.2V from adapter
RF Function:	UWB
Operating Band/Frequency:	7987.2 MHz
Modulation Type	BPSK
Antenna Type:	PCB Antenna
★Maximum Antenna Gain:	1.84 dBi

*Note: 1. The EUT have two Antenna, Antenna 2 that marked in EUT INTERNAL PHOTOGRAPHS only support RX
2. The subclass of UWB device is hand held device*

Adapter Information:

Model: FY0422521500

Input: 100-240V 50/60Hz 1.5A

Output: 25.2V, 1.5A

Note: The maximum antenna gain was provided by the applicant.

All measurement and tested data in this report was gathered from production sample serial number:

*RKSA250527003-1 (for conducted emissions and radiated emissions test), RKSA250527003-2 (for RF conducted test)
(Assigned by BACL (Kunshan). The EUT supplied by the applicant was received on 2025-05-27.)*

Objective

This report is prepared for *SPACEWALKER PTE. LTD.* in accordance with Part 2-Subpart J, Part 15-Subparts A and F of the Federal Communication Commission's rules.

The tests were performed in order to determine compliance with FCC Part 15, Subpart F, and section 15.203, 15.205, 15.207, 15.209 and 15.519 rules.

Test Methodology

All measurements contained in this report were conducted with ANSI C63.10-2020 American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices.

Measurement Uncertainty

Item		Uncertainty
AC Power Lines Conducted Emissions		3.19 dB
RF conducted test with spectrum		0.9 dB
RF Output Power with Power meter		0.5 dB
Radiated emissions	9 kHz~150 kHz	3.8 dB
	150 kHz~30 MHz	3.4 dB
	30MHz~1GHz	6.11 dB
	1GHz~6GHz	4.45 dB
	6GHz~18GHz	5.23 dB
	18GHz~40GHz	5.65 dB
Occupied Bandwidth		0.5 kHz
Temperature		1.0 °C
Humidity		6 %

Test Facility

The Test site used by Bay Area Compliance Laboratories Corp. (Kunshan) to collect test data is located on the No.248 Chenghu Road, Kunshan, Jiangsu Province, China.

Bay Area Compliance Laboratories Corp. (Kunshan) is accredited in accordance with ISO/IEC 17025:2017 by NVLAP (Lab code: 600338-0), and the lab has been recognized as the FCC accredited lab under the KDB 974614 D01, the FCC Designation No.: CN5055.

SYSTEM TEST CONFIGURATION

Description of Test Configuration

The system was configured for testing by manufacturer.

Equipment Modifications

No modification was made to the EUT tested.

EUT Exercise Software

“RTL8762x_RFTTestTool” exercise software was used

RF Test Tool: RTL8762x_RFTTestTool

★Power level: default

Note: The power level was declared by the applicant.

Support Equipment List and Details

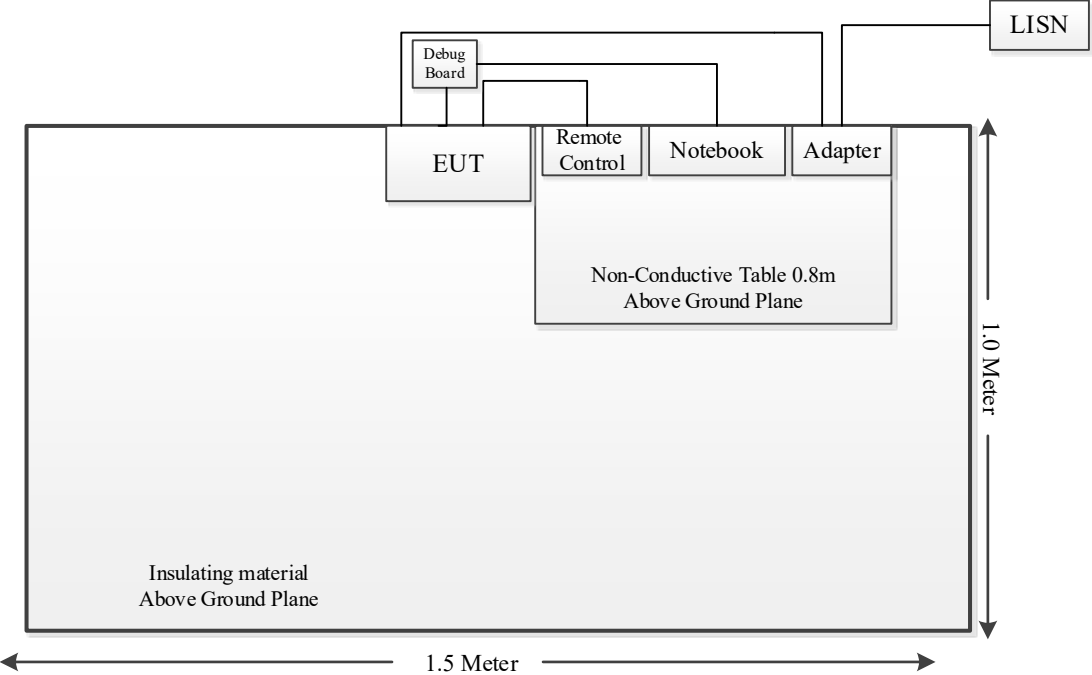
Manufacturer	Description	Model	Serial Number
Lenovo	Notebook	Thinkpad T470S	83ECA1B-E1AF-4053-95DE-2E51B8D188D7
Unknown	Debug Board	Unknown	Unknown
SPACEWALKER PTE. LTD.	Remote Control	Birdie 3-A1-U	Unknown

External I/O Cable

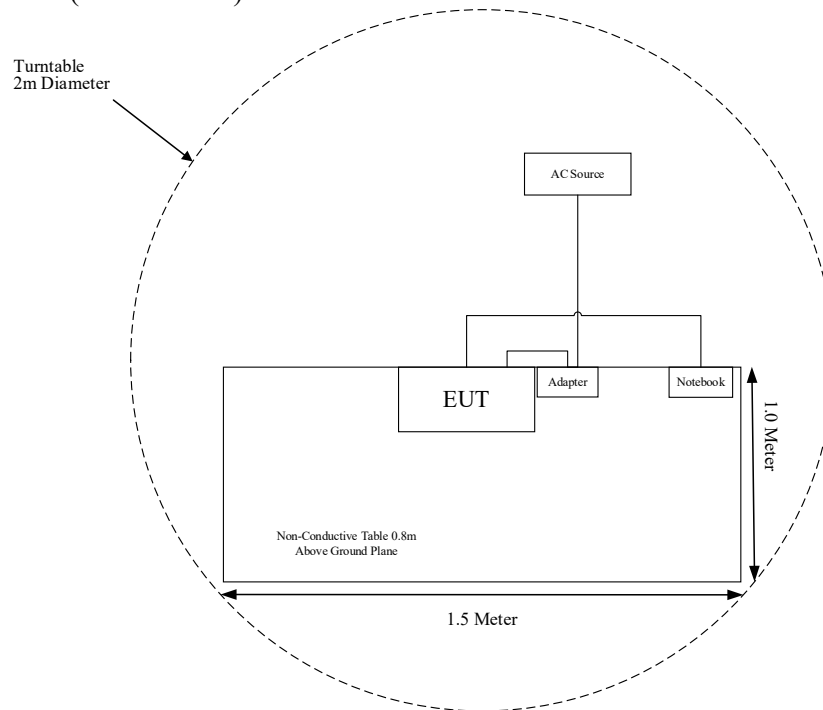
Cable Description	Length (m)	From Port	To Port
Power Cable 1	1.5	LISN/AC Source	Adapter
Power Cable 2	1.5	Adapter	EUT
Data Cable 1	0.3	EUT	Debug Board
Data Cable 2	1.5	Debug Board	Notebook
Data Cable 3	1.5	EUT	Notebook
USB Cable	1.0	EUT	Remote Control

Block Diagram of Test Setup

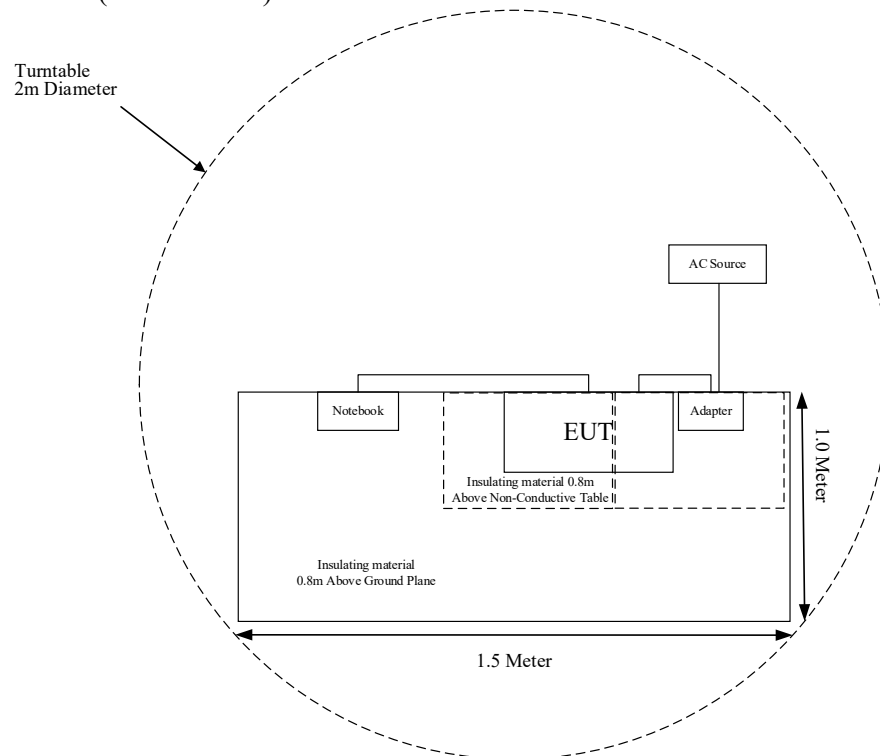
For Conducted Emissions:



For Radiated Emissions(Below 1GHz):



For Radiated Emissions(Above 1GHz):



Note: The EUT Antenna 1.5m above Ground Plane

SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
§1.1310, §2.1093	RF Exposure	Compliance
§15.203	Antenna Requirement	Compliance
§15.207(a)	AC Line Conducted Emissions	Compliance
§15.519(a)(1)	Shutoff Timing Requirement	Compliance
§15.503 (a)(d), §15.519(b)	UWB Operation bandwidth	Compliance
§15.209, §15.519(c)(d)	Radiated Emissions	Compliance
§15.519(e)	Peak Emission in a 50 MHz bandwidth	Compliance

TEST EQUIPMENT LIST

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Radiated Emission Test (Chamber #1)					
Rohde & Schwarz	EMI Test Receiver	ESCI	100195	2025-04-09	2026-04-08
Sunol Sciences	Broadband Antenna	JB3	A090314-1	2024-11-08	2027-11-07
Narda	6dB Attenuator	773-6	10690812-2-1	2024-10-29	2027-10-28
BACL	Active Loop Antenna	1313-1A	4041511	2024-11-22	2027-11-21
Sonoma Instrument	Pre-amplifier	310N	171205	2025-04-09	2026-04-08
Rohde & Schwarz	Auto Test Software	EMC32	100361	N/A	N/A
MICRO-COAX	Coaxial Cable	Cable-8	008	2025-04-09	2026-04-08
MICRO-COAX	Coaxial Cable	Cable-9	009	2025-04-09	2026-04-08
MICRO-COAX	Coaxial Cable	Cable-10	010	2025-04-09	2026-04-08
Radiated Emission Test (Chamber #2)					
Rohde & Schwarz	EMI Test Receiver	ESU40	100207/040	2025-04-09	2026-04-08
Rohde & Schwarz	Signal Analyzer	FSV40	101116	2025-04-09	2026-04-08
Rohde & Schwarz	Spectrum Analyzer	FSU26	200103	2025-04-09	2026-04-08
ETS-LINDGREN	Horn Antenna	3115	9311-4159	2024-12-02	2025-12-01
ETS-LINDGREN	Horn Antenna	3116	2516	2024-12-12	2027-12-11
A.H.Systems, inc	Amplifier	PAM-0118P	512	2025-04-09	2026-04-08
SELECTOR	Amplifier	EM18G40G	060726	2025-04-09	2026-04-08
Narda	Attenuator	10dB	010	2025-04-08	2026-04-07
Rohde & Schwarz	Auto test Software	EMC32	100361	N/A	N/A
MICRO-COAX	Coaxial Cable	Cable-6	006	2025-04-09	2026-04-08
MICRO-COAX	Coaxial Cable	Cable-11	011	2025-04-09	2026-04-08
MICRO-COAX	Coaxial Cable	Cable-12	012	2025-04-09	2026-04-08
MICRO-COAX	Coaxial Cable	Cable-13	013	2025-04-09	2026-04-08
Conducted Emission Test					
Rohde & Schwarz	EMI Test Receiver	ESR	1316.3003K03-101746-zn	2024-07-28	2025-07-27
Rohde & Schwarz	LISN	ENV216	101115	2025-04-08	2026-04-07
Audix	Test Software	e3	V9	N/A	N/A
Rohde & Schwarz	Pulse limiter	ESH3-Z2	100552	2025-04-08	2026-04-07
MICRO-COAX	Coaxial Cable	Cable-15	015	2025-04-08	2026-04-07

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

FCC §1.1307(b) & §2.1093 - RF EXPOSURE

Applicable Standard

According to §2.1093 and §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensure that the public is not exposed to radio frequency energy level in excess of the Commission's guideline.

According to KDB 447498 D01 General RF Exposure Guidance

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] / \sqrt{f(\text{GHz})} \leq 3.0$ for 1-g SAR and ≤ 7.5 for 10-g extremity SAR, where

1. f (GHz) is the RF channel transmit frequency in GHz.
2. Power and distance are rounded to the nearest mW and mm before calculation.
3. The result is rounded to one decimal place for comparison.
4. When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test Exclusion.

RF Exposure for devices that operate above 6 GHz (1.1310):

2.1093 (d): Portable devices that transmit at frequencies above 6 GHz are to be evaluated in terms of the MPE limits specified 47 CFR 1.1310. Measurements and calculations to demonstrate compliance with MPE Field strength or power density limits for device operating above 6 GHz should be made at a minimum distance of 0.5 cm from the radiating source.

Limits for General Population/Uncontrolled Exposure

Limits for General Population/Uncontrolled Exposure				
Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Averaging Time (minutes)
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f ²)	30
30-300	27.5	0.073	0.2	30
300-1500	/	/	f/1500	30
1500-100,000	/	/	1.0	30

f = frequency in MHz; * = Plane-wave equivalent power density

Calculated Formulary:

Predication of MPE limit at a given distance

$S = PG/4 \pi R^2$ = power density (in appropriate units, e.g. mW/cm²);

P = power input to the antenna (in appropriate units, e.g., mW);

G = power gain of the antenna in the direction of interest relative to an isotropic radiator, the power gain factor, is normally numeric gain;

R = distance to the center of radiation of the antenna (appropriate units, e.g., cm);

Calculated Data:

Mode	Frequency Range (MHz)	★Max Tune-up Conducted Power		Calculated Distance (mm)	Calculated Value	Threshold (1-g SAR)	SAR Test Exclusion
		(dBm)	(mW)				
BLE 1M	2402-2480	4.5	2.82	5.0	0.9	3.0	Yes
BLE 2M	2404-2478	4.5	2.82	5.0	0.9	3.0	Yes

Mode	Frequency Range (MHz)	Antenna Gain★		Max Tune-up Conducted Power★		Evaluation Distance (cm)	Power Density (mW/cm ²)	MPE Limit (mW/cm ²)
		(dBi)	(numeric)	(dBm)	(mW)			
UWB	7987.2	1.84	1.53	-7.0	0.20	0.5	0.097	1.00

BLE and UWB can Simultaneous Transmit

For simultaneously transmit, the worst condition is below:

$$\sum_i \frac{S_i}{S_{Limit,i}} \leq 1$$

$$=0.9/3.0+0.097/1=0.397 < 1.0$$

Result: No SAR test is required.

FCC §15.203 – ANTENNA REQUIREMENT

Applicable Standard

According to FCC § 15.203, 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.

Antenna Connector Construction

The EUT has two PCB Antennas for UWB, and the maximum antenna gain is 1.84 dBi, which is permanently attached to the unit, fulfill the requirement of this section. Please refer to the EUT photos.

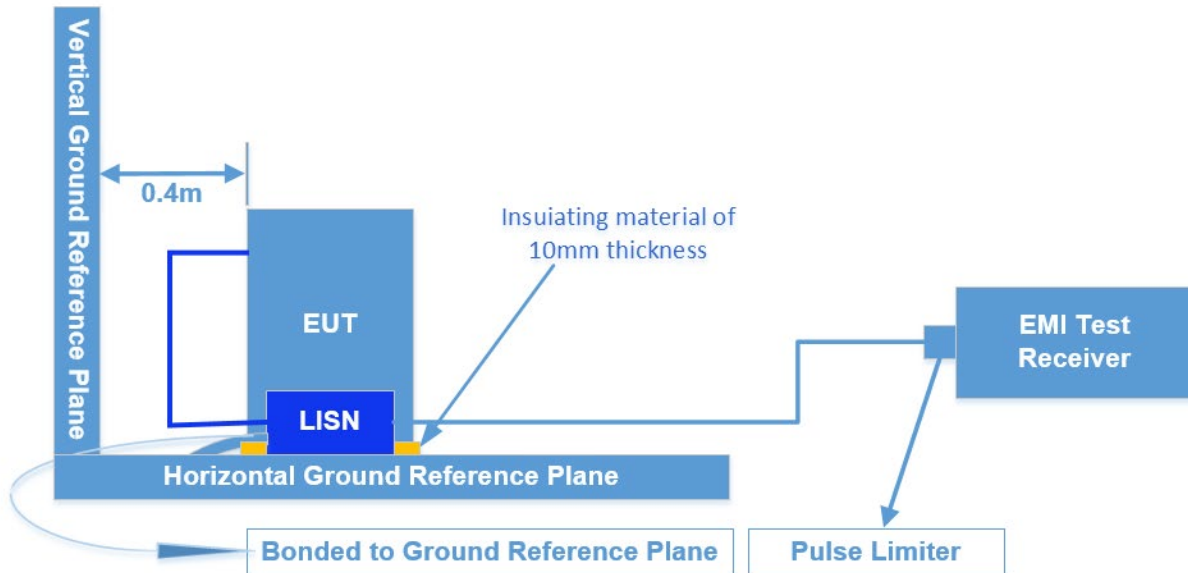
Result: Compliant.

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 C63.10-2020. The related limit was specified in FCC Part 15.207.

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 C63.10-2020 clause 6.2

During the conducted emission test, the adapter 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 & Over Limit 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:

Factor (dB) = LISN VDF (dB) + Cable Loss (dB) + Transient Limiter Attenuation (dB)

Level (dBμV) = Read level (dBμV) + Factor (dB)

The “**Over Limit**” column of the following data tables indicates the degree of compliance with the applicable limit. For example, an Over Limit of 7 dB means the emission is 7 dB above the limit. The equation for Over Limit calculation is as follows:

Over Limit (dB) = Level (dBμV) - Limit (dBμV)

Test Results Summary

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

Test Data: See Appendix

FCC §15.209, §15.519(c)(d)- SPURIOUS EMISSIONS**Applicable Standard**

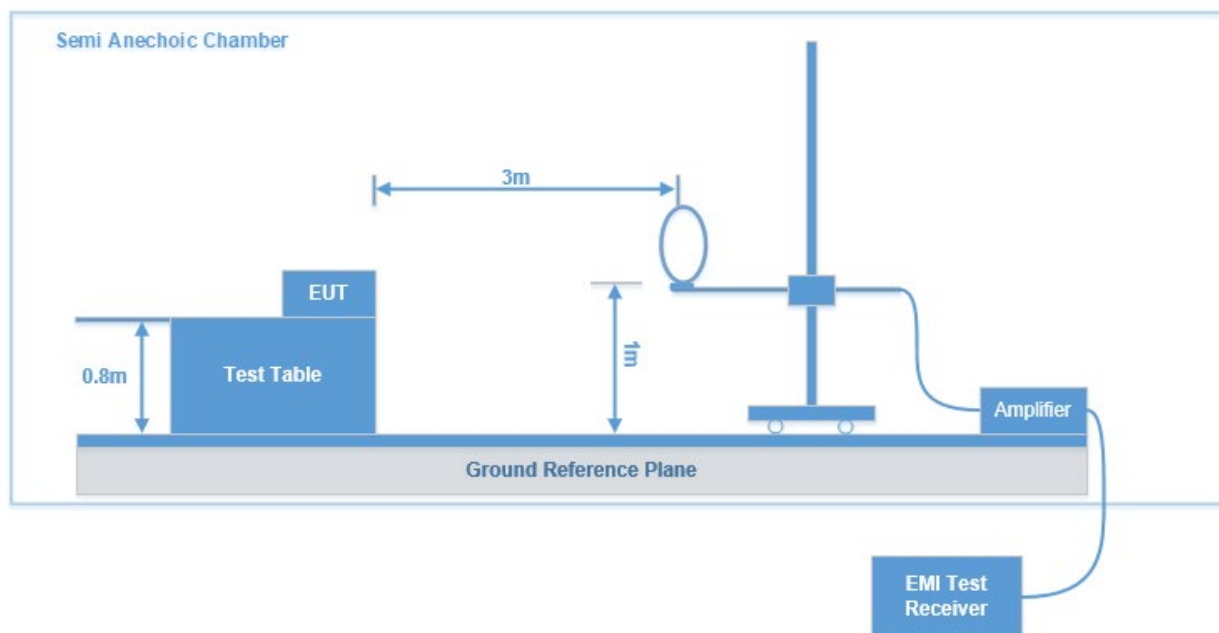
FCC §15.209; §15.519(c)(d);

(c) The radiated emissions at or below 960 MHz from a device operating under the provisions of this section shall not exceed the emission levels in §15.209. The radiated emissions above 960 MHz from a device operating under the provisions of this section shall not exceed the following average limits when measured using a resolution bandwidth of 1 MHz:

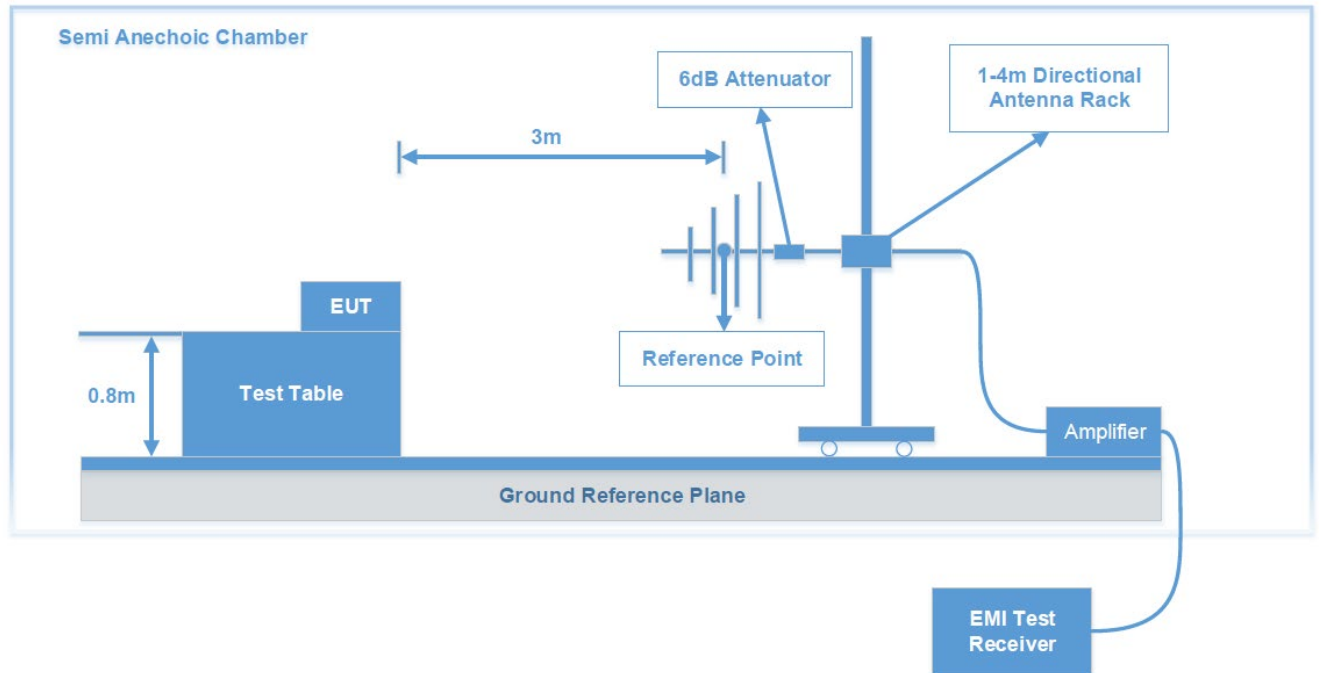
Frequency in MHz	EIRP in dBm
960-1610	-75.3
1610-1990	-63.3
1990-3100	-61.3
3100-10600	-41.3
Above 10600	-61.3

(d) In addition to the radiated emission limits specified in the table in paragraph (c) of this section, UWB transmitters operating under the provisions of this section shall not exceed the following average limits when measured using a resolution bandwidth of no less than 1 kHz:

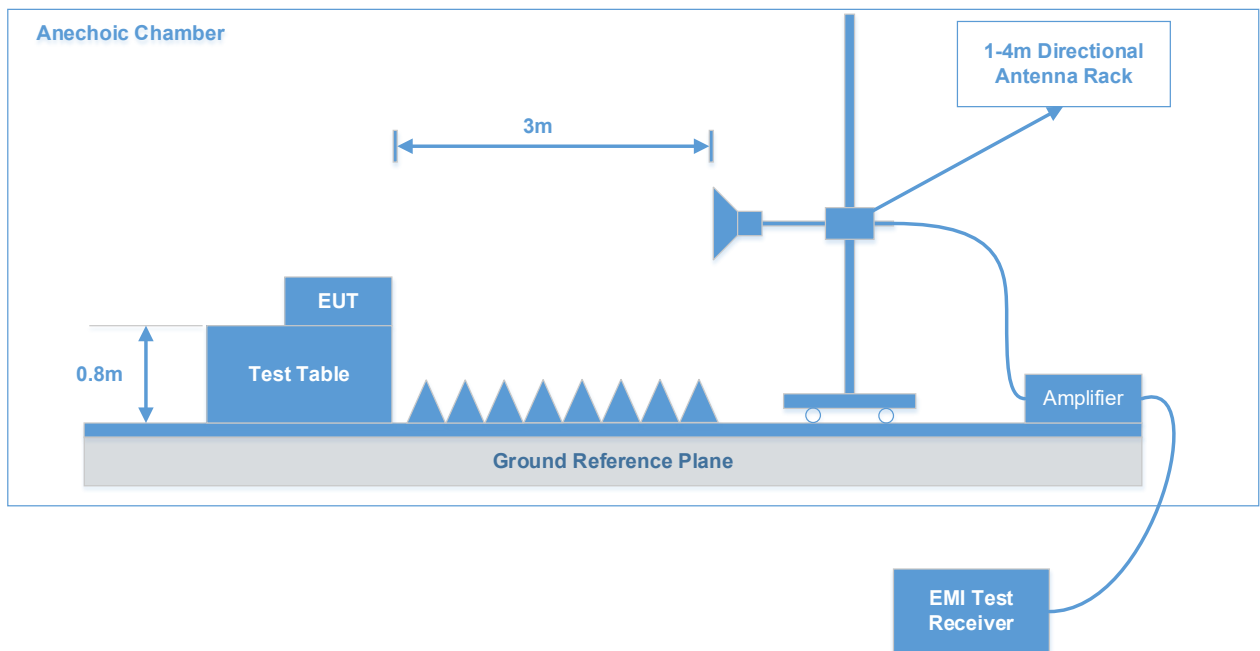
Frequency in MHz	EIRP in dBm
1164-1240	-85.3
1559-1610	-85.3

EUT Setup**9 kHz - 30 MHz:**

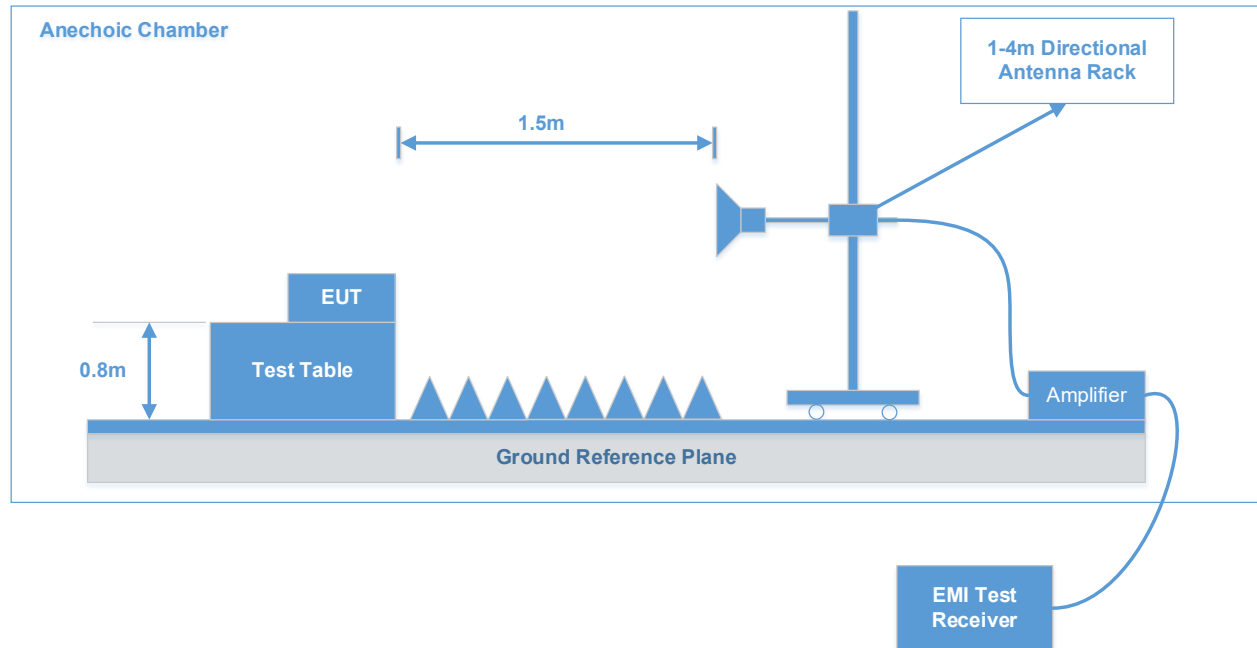
30 MHz - 1 GHz:



1 GHz - 18 GHz:



Note: The EUT Antenna 1.5m above Ground Plane.

18 GHz - 40 GHz:

Note: The EUT Antenna 1.5m above Ground Plane.

The radiated emission tests were performed in the 3 meters chamber, using the setup accordance with the ANSI C63.10-2020. The specification used was the FCC 15.209, and FCC 15.519 limits.

EMI Test Receiver & Spectrum Analyzer Setup

During the radiated emission test, the EMI test receiver & Spectrum Analyzer Setup were set with the following configurations:

Frequency Range	RBW	VBW	IF B/W	Measurement
9 kHz - 150 kHz	200 Hz	1 kHz	200 Hz	QP/Average
150 kHz - 30 MHz	9 kHz	30 kHz	9 kHz	QP/ Average
30 MHz - 960 MHz	100 kHz	300 kHz	/	Peak
	/	/	120 kHz	QP
Above 960 MHz	1MHz	3 MHz	/	Average
1164-1240 MHz	1kHz	3 kHz	/	Average
1559-1610 MHz	1kHz	3 kHz	/	Average

Test Procedure

Refer to the C63.10 -2020 Section 10.2 & 10.3

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

If the measured peak level of the emissions that the measuring receiver reading level plus corrected factor is at least 6 dB below the QP emission limit, there's no need to record the measured QP level of the emissions in the report.

For 9 kHz-30MHz test, the lowest height of the magnetic antenna shall be 1 m above the ground and three antenna orientations (parallel, perpendicular, and ground-parallel) shall be measured.

The 18 GHz to 40 GHz test result shall be extrapolated to the specified distance using an extrapolation factor of 20dB/decade from 3m to 1.5m

Distance extrapolation factor = $20 \log (\text{specific distance [3m]}/\text{test distance [1.5m]})$ dB = 6 dB

$\text{EIRP[dBm]} = E [\text{dB}\mu\text{V/m}] - 95.3$, for $d = 3$ meters.

Frequency (MHz)	EIRP Limit (dBm)	Field Strength limit in 3m (dB μ V/m)
960-1610	-75.3	20
1610-1990	-63.3	32
1990-3100	-61.3	34
3100-10600	-41.3	54
Above 10600	-61.3	34
1164-1240	-85.3	10
1559-1610	-85.3	10

Corrected Amplitude & Margin Calculation

The Corrected Amplitude 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:

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

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:

Margin (dB) = Limit (dB μ V/m) – Corrected Amplitude (dB μ V/m)

Note: The QuasiPeak (dB μ V/m), MaxPeak (dB μ V/m), Average (dB μ V/m) which shown in the data table are all Corrected Amplitude.

Test Results Summary

According to the EUT complied with the FCC Title 47, Part 15, Subpart F, section 15.205, 15.209 and 15.519.

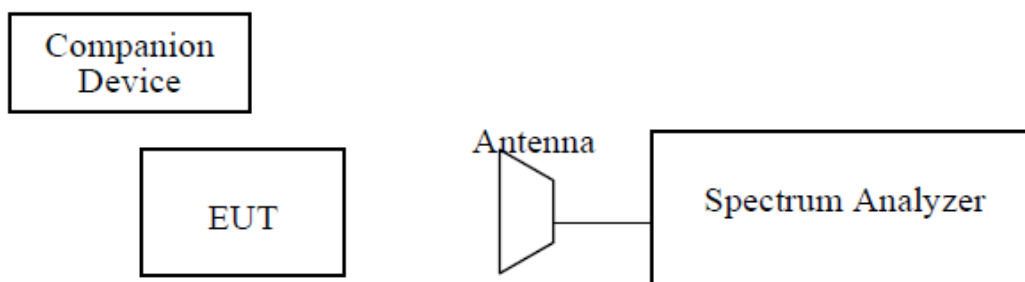
Test Data: See Appendix

§15.519(a) (1) - TRANSMISSION TIME

(1) A UWB device operating under the provisions of this section shall transmit only when it is sending information to an associated receiver. The UWB intentional radiator shall cease transmission within 10 seconds unless it receives an acknowledgement from the associated receiver that its transmission is being received. An acknowledgment of reception must continue to be received by the UWB intentional radiator at least every 10 seconds or the UWB device must cease transmitting.

Test Procedure

1. Set the EUT in normal operating mode.
2. RBW/VBW=1MHz/3MHz.
3. SWT=20S



Test Data: See Appendix

§15.503 (a)(d), §15.519(b) – UWB OPEARTION BANDWIDTH

Applicable Standard

(a) UWB bandwidth. For the purpose of this subpart, the UWB bandwidth is the frequency band bounded by the points that are 10 dB below the highest radiated emission, as based on the complete transmission system including the antenna. The upper boundary is designated f_H and the lower boundary is designated f_L . The frequency at which the highest radiated emission occurs is designated f_M .

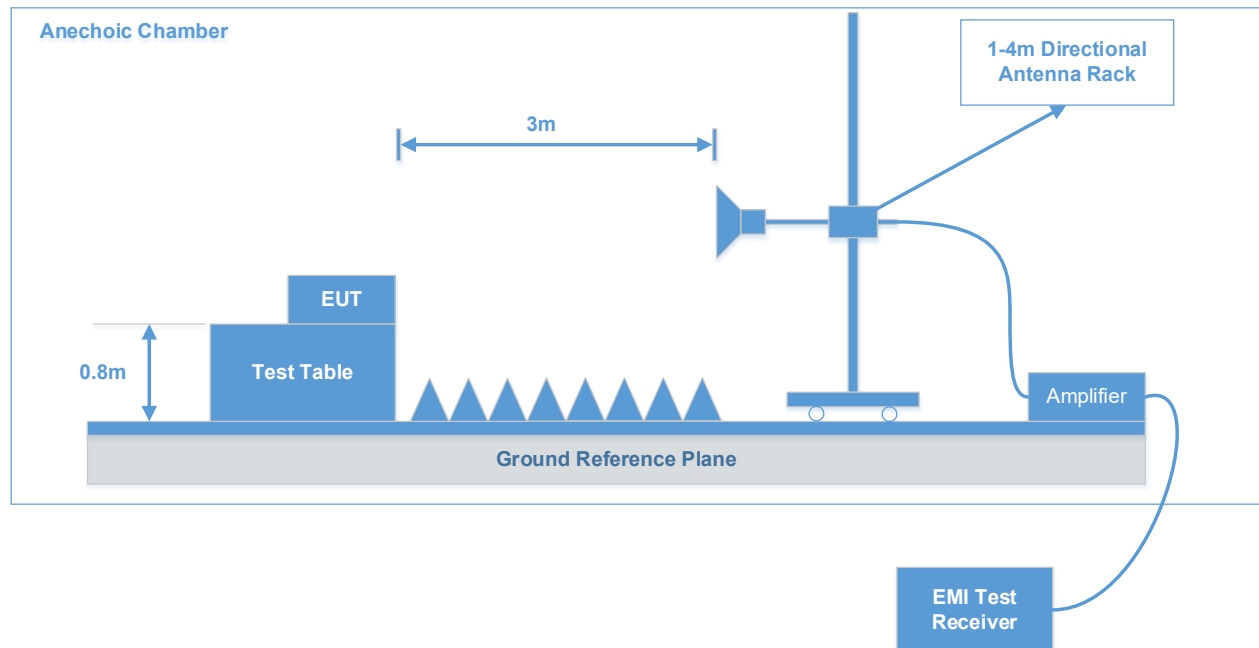
(d) Ultra-wideband (UWB) transmitter. An intentional radiator that, at any point in time, has a fractional bandwidth equal to or greater than 0.20 or has a UWB bandwidth equal to or greater than 500 MHz, regardless of the fractional bandwidth.

(b) The UWB bandwidth of a UWB system operating under the provisions of this section must be contained between 3100 MHz and 10,600 MHz.

Test Procedure

Refer to the C63.10-2020 Section 10.1

EUT Setup



Test Data: See Appendix

§15.519(e) - PEAK EMISSION IN A 50 MHZ BANDWIDTH

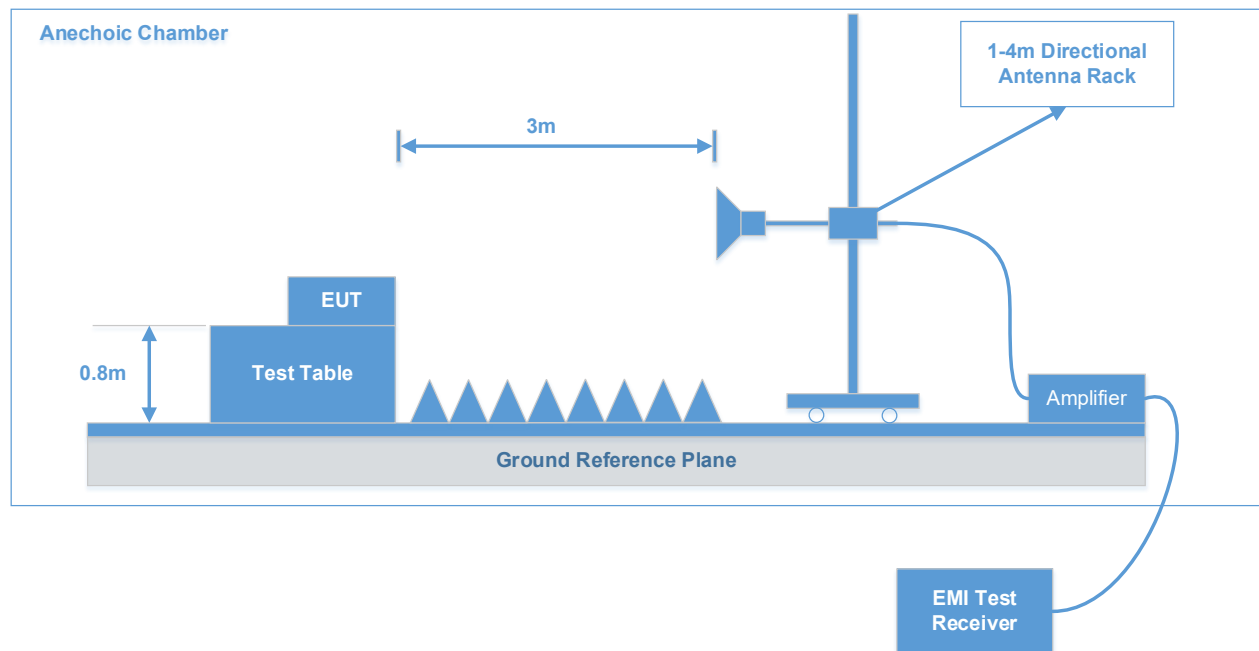
Applicable Standard

There is a limit on the peak level of the emissions contained within a 50 MHz bandwidth centered on the frequency at which the highest radiated emission occurs, f_M . That limit is 0 dBm EIRP. It is acceptable to employ a different resolution bandwidth, and a correspondingly different peak emission limit, following the procedures described in §15.521.

Test Procedure

Refer to the C63.10 -2020 Section 10.3.5 and 10.3.6

EUT Setup



Test Data: See Appendix

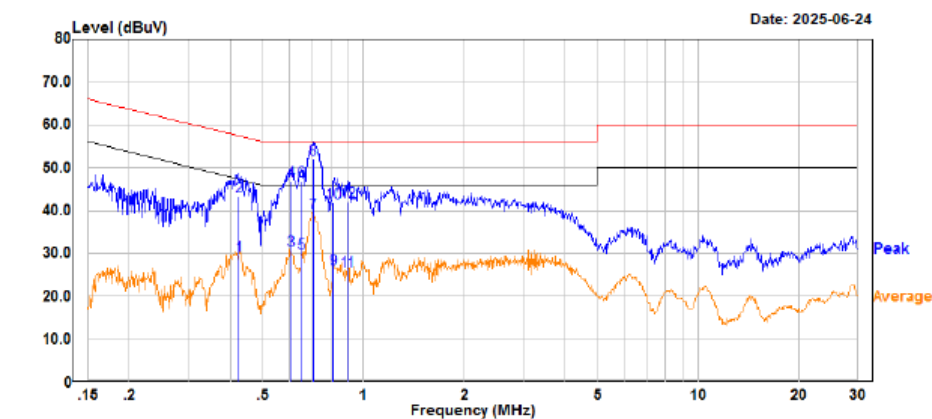
APPENDIX - TEST DATA

AC LINE CONDUCTED EMISSIONS

Environmental Conditions & Test Information

Test Date:	2025-06-24
Temperature:	24.1 °C
Relative Humidity:	65 %
ATM Pressure:	101.1 kPa
Test Result:	Pass
Test Engineer:	Myles Miao

EUT operation mode: Transmitting & Charging
AC 120V/60 Hz, Line

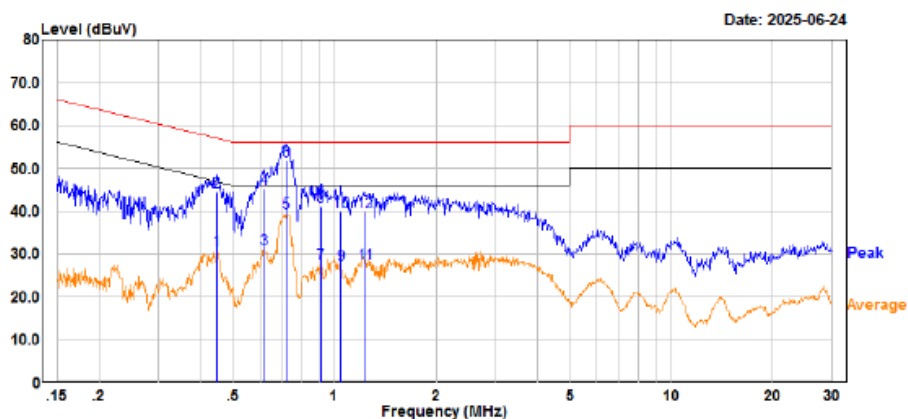


Trace: 1

Site : CE
Condition : limit\FCC PART 15.207
DET:Peak
Project No. : RKSA250527003
Model : Birdie 3X-U
Phase : L
Voltage : 120V/60Hz
Mode : UWB
Test Equipment : ENV216,ESR3
Receiver Setting : RBW: 9 kHz,Sweep Time: Auto
Temperature : 24.1°C
Humidity : 65%
Atmospheric pressure: 101.1kPa
Test Engineer : Myles Miao

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	
1	0.425	9.19	20.26	29.45	47.35	-17.90	Average
2	0.425	22.99	20.26	43.25	57.35	-14.10	QP
3	0.609	10.61	20.19	30.80	46.00	-15.20	Average
4	0.609	26.61	20.19	46.80	56.00	-9.20	QP
5	0.653	9.90	20.20	30.10	46.00	-15.90	Average
6	0.653	26.60	20.20	46.80	56.00	-9.20	QP
7	0.707	19.30	20.19	39.49	46.00	-6.51	Average
8	0.707	31.70	20.19	51.89	56.00	-4.11	QP
9	0.813	6.50	19.97	26.47	46.00	-19.53	Average
10	0.813	21.80	19.97	41.77	56.00	-14.23	QP
11	0.893	6.10	19.83	25.93	46.00	-20.07	Average
12	0.893	22.20	19.83	42.03	56.00	-13.97	QP

AC 120V/60 Hz, Neutral



Site : CE
Condition : limit\FCC PART 15.207
: DET:Peak
Project No. : RKSA250527003
Model : Birdie 3X-U
Phase : N
Voltage : 120V/60Hz
Mode : UWB
Test Equipment : ENV216,ESR3
Receiver Setting : RBW: 9 kHz,Sweep Time: Auto
Temperature : 24.1℃
Humidity : 65%
Atmospheric pressure: 101.1kPa
Test Engineer : Myles Miao

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	
1	0.445	10.60	20.26	30.86	46.98	-16.12	Average
2	0.445	24.20	20.26	44.46	56.98	-12.52	QP
3	0.618	10.91	20.19	31.10	46.00	-14.90	Average
4	0.618	25.11	20.19	45.30	56.00	-10.70	QP
5	0.717	19.60	20.16	39.76	46.00	-6.24	Average
6	0.717	31.60	20.16	51.76	56.00	-4.24	QP
7	0.907	7.90	19.81	27.71	46.00	-18.29	Average
8	0.907	21.30	19.81	41.11	56.00	-14.89	QP
9	1.043	7.90	19.69	27.59	46.00	-18.41	Average
10	1.043	20.20	19.69	39.89	56.00	-16.11	QP
11	1.229	7.90	19.81	27.71	46.00	-18.29	Average
12	1.229	20.00	19.81	39.81	56.00	-16.19	QP

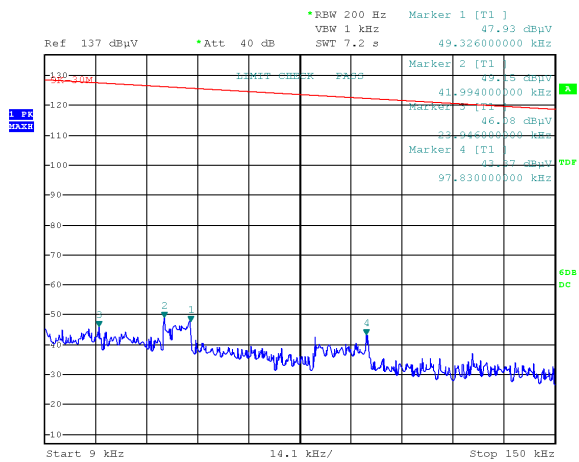
SPURIOUS EMISSIONS**Environmental Conditions & Test Information**

Frequency Range:	9kHz - 1GHz	1 GHz - 18 GHz	18 GHz - 40 GHz
Test Date:	2025-06-10 to 2025-07-16	2025-07-09 to 2025-07-21	2025-08-26
Temperature:	22.1-25 °C	26.1-27.4 °C	27.1 °C
Relative Humidity:	46-50 %	45-50 %	49 %
ATM Pressure:	100.2-102.2 kPa	100.0-101.1 kPa	101.5 kPa
Test Result:	Pass	Pass	Pass
Test Engineer:	Link Xia	Destine Hu	Hugh Wu

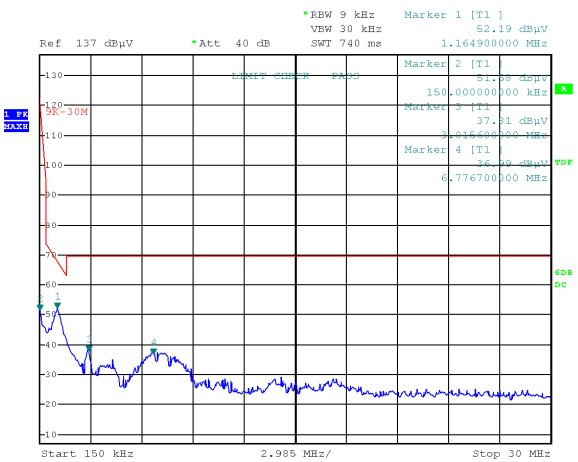
EUT operation mode: Transmitting

9 kHz-30MHz:
Parallel(worst case)

9kHz-150kHz



150kHz-30MHz



Project No.RKSA250527003
Date: 10.JUN.2025 14:17:19

Tester:Jonathan

Project No.RKSA250527003
Date: 10.JUN.2025 14:20:53

Tester:Jonathan

9 kHz-150 kHz

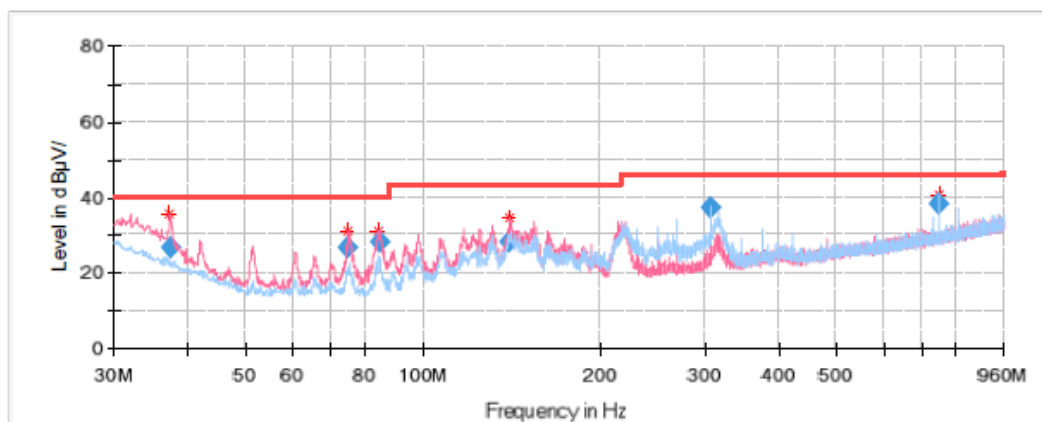
Frequency (MHz)	Corrected Amplitude (dBμV/m) @3m	Detector PK/QP/Ave.	Corrected Factor (dB/m)	Limit (dBμV/m) @3m	Margin (dB)
0.023946	46.08	PK	-0.58	120.02	73.94
0.041994	49.15	PK	-2.53	115.14	65.99
0.049326	47.93	PK	-3.70	113.74	65.81
0.097830	43.37	PK	-9.00	107.80	64.43

150 kHz-30 MHz

Frequency (MHz)	Corrected Amplitude (dBμV/m) @3m	Detector PK/QP/Ave.	Corrected Factor (dB/m)	Limit (dBμV/m) @3m	Margin (dB)
0.15000	51.58	PK	-11.34	104.08	52.50
1.16490	52.19	PK	-28.15	66.28	14.09
3.01560	37.81	PK	-31.42	69.54	31.73
6.77670	36.99	PK	-32.33	69.54	32.55

30MHz-960MHz:**Common Information**

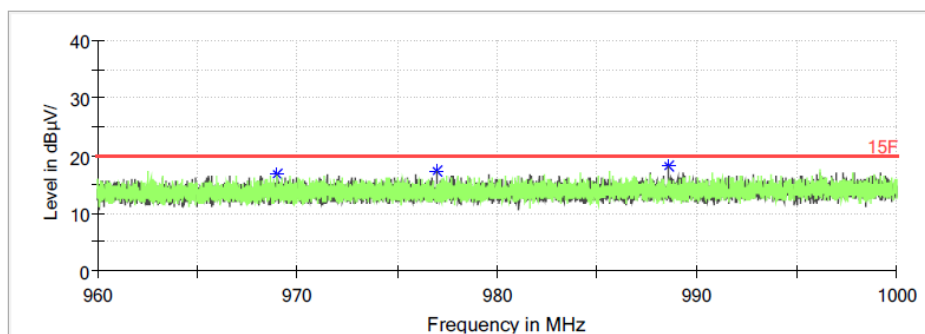
Project No:	RKSA250527003
EUT Model:	Birdie 3X-U
Test Mode:	UWB
Standard:	FCC Part 15F
Test Equipment:	ESCI, JB3, 310N
Receiver Setting:	RBW:100 kHz, VBW: 300 kHz, Sweep Time: Auto
Temperature:	22.1 °C
Humidity:	46%
Barometric Pressure:	100.2kPa
Test Engineer:	Link Xia
Test Date:	2025/7/16

**Final Result**

Frequency (MHz)	QuasiPeak (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Pol	Corr. (dB/m)
37.549650	26.75	40.00	13.25	V	-9.7
74.845350	26.79	40.00	13.21	V	-16.8
84.368250	27.97	40.00	12.03	V	-17.0
140.260650	28.33	43.50	15.17	V	-11.2
307.189950	37.10	46.00	8.90	H	-10.1
748.812600	38.02	46.00	7.98	H	-1.6

0.96 GHz-1 GHz:**Common Information**

Project No: RKSA250527003
EUT Model: Birdie 3X-U
Test Mode: UWB
Standard: FCC Part 15F
Test Equipment: ESU40,3115,PAM-0118P
Receiver Setting: RBW:1 MHz, VBW: 3 MHz, Sweep Time: Auto
Temperature: 26.5°C
Humidity: 45%
Barometric Pressure: 100.6kPa
Test Engineer: Destine Hu
Test Date: 2025/7/9

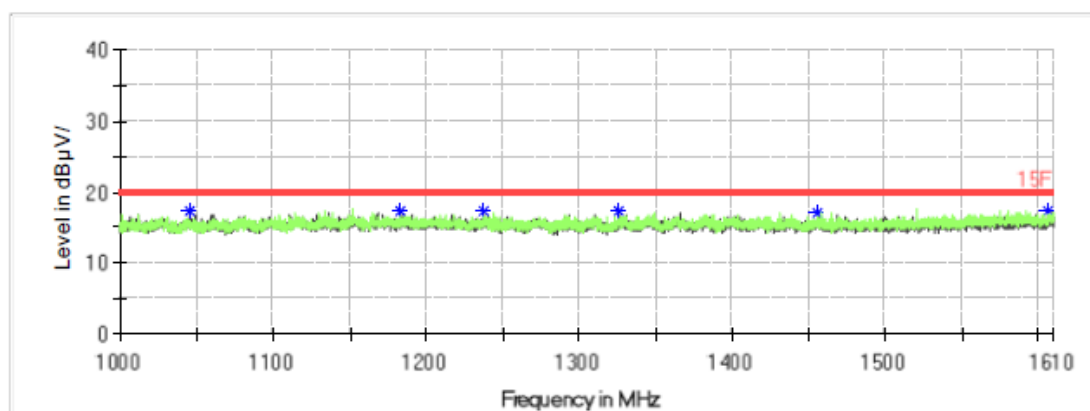
**Critical_Freqs**

Frequency (MHz)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Pol	Corr. (dB/m)
968.985000	16.84	20	3.16	V	-17.0
976.995000	17.22	20	2.78	V	-17.0
988.560000	18.06	20	1.94	V	-17.0

1GHz-1.61 GHz:**Common Information**

Project No.: RKSA250527003
EUT Model: Birdie 3X-U
Test Mode: UWB
Standard: FCC Part 15F
Test Equipment: ESU40,3115,PAM-0118P
Receiver Setting: RBW: 1MHz, VBW: 3MHz, Sweep Time: Auto
Temperature: 26.5°C
Humidity: 45%
Atmospheric Pressure: 100.6kPa
Test Engineer: Destine Hu
Test Date: 2025/7/9

Full Spectrum

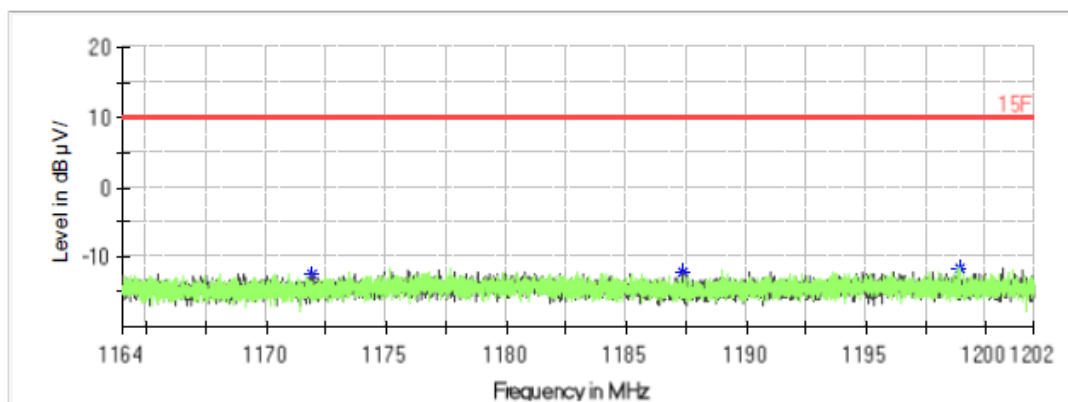
**Critical Freqs**

Frequency (MHz)	MaxPeak (dB µ V/m)	Average (dB µ V/m)	Limit (dB µ V/m)	Margin (dB)	Pol	Corr. (dB/m)
1045.384000	---	17.43	20.00	2.57	V	-19.0
1183.000000	---	17.23	20.00	2.77	V	-18.6
1237.168000	---	17.32	20.00	2.68	V	-18.4
1325.374000	---	17.23	20.00	2.77	V	-18.1
1455.548000	---	17.08	20.00	2.92	V	-17.6
1606.340000	---	17.30	20.00	2.70	V	-16.7

1.164GHz-1.202GHz:**Common Information**

Project No: RKSA250527003
EUT Model: Birdie 3X-U
Test Mode: UWB
Standard: FCC Part 15F
Test Equipment: ESU40,3115,PAM-0118P
Receiver Setting: RBW:1 kHz, VBW: 3 kHz, Sweep Time: Auto
Temperature: 27.4℃
Humidity: 50%
Barometric Pressure: 101.1kPa
Test Engineer: Destine Hu
Test Date: 2025/7/21

Full Spectrum

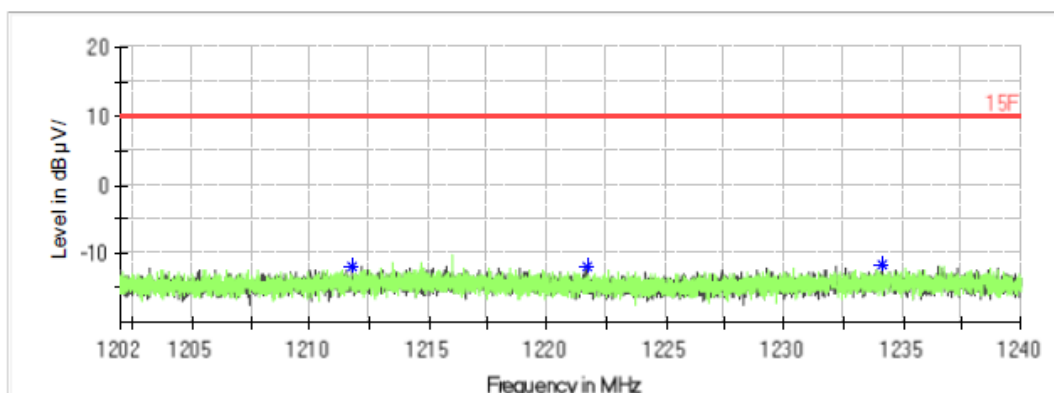
**Critical Freqs**

Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Pol	Corr. (dB/m)
1171.919200	---	-12.31	10.00	12.31	V	-18.6
1187.316800	---	-12.03	10.00	12.03	V	-18.5
1198.868800	---	-11.53	10.00	11.53	H	-18.5

1.202GHz-1.240GHz:**Common Information**

Project No: RKSA250527003
EUT Model: Birdie 3X-U
Test Mode: UWB
Standard: FCC Part 15F
Test Equipment: ESU40,3115,PAM-0118P
Receiver Setting: RBW:1 kHz, VBW: 3 kHz, Sweep Time: Auto
Temperature: 27.4°C
Humidity: 50%
Barometric Pressure: 101.1kPa
Test Engineer: Destine Hu
Test Date: 2025/7/21

Full Spectrum

**Critical Freqs**

Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Pol	Corr. (dB/m)
1211.781200	---	-11.83	10.00	21.83	V	-18.5
1221.653600	---	-11.96	10.00	21.96	V	-18.4
1234.163200	---	-11.68	10.00	21.68	V	-18.4

1.559GHz-1.61 GHz:

Common Information

Project No: RKSA250527003

EUT Model: Birdie 3X-U

Test Mode: UWB

Standard: FCC Part 15F

Test Equipment: ESU40,3115,PAM-0118P

Receiver Setting: RBW:1 kHz, VBW: 3 kHz, Sweep Time: Auto

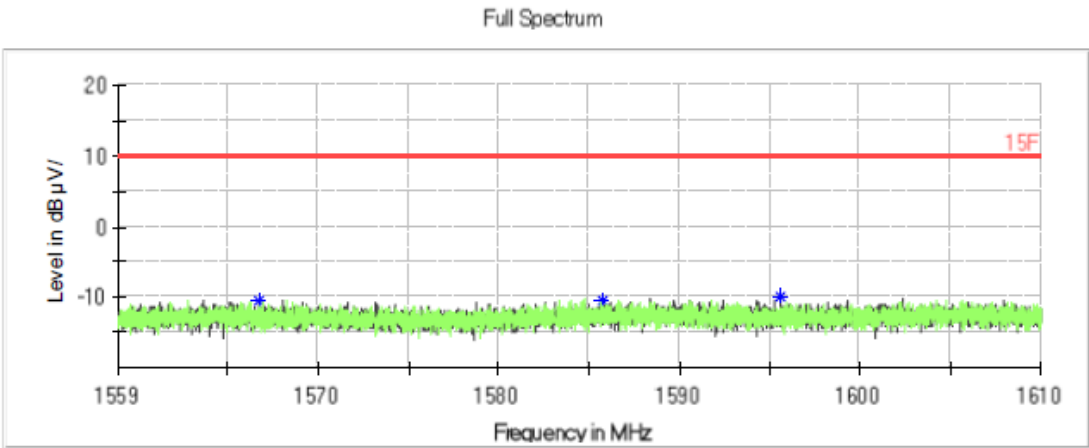
Temperature: 27.4°C

Humidity: 50%

Barometric Pressure: 101.1kPa

Test Engineer: Destine Hu

Test Date: 2025/7/21



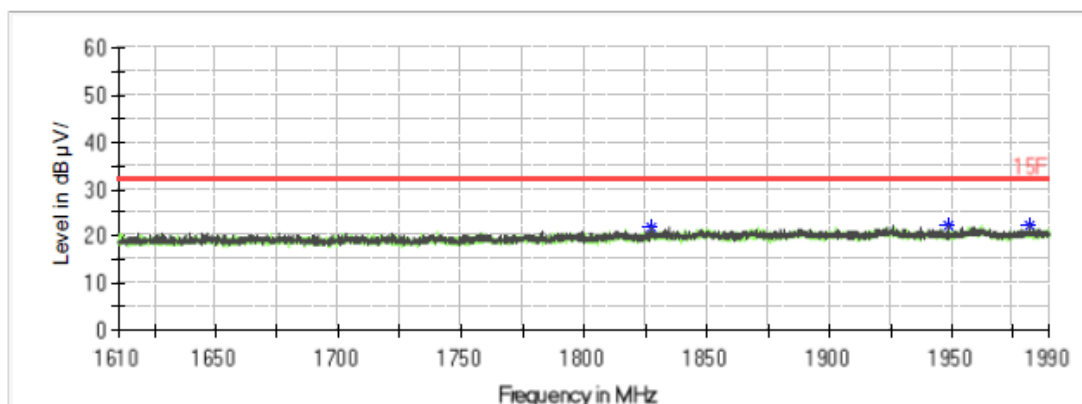
Critical Freqs

Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Pol	Corr. (dB/m)
1566.803000	---	-10.36	10.00	20.36	V	-17.1
1585.785200	---	-10.38	10.00	20.38	V	-17.0
1595.556800	---	-9.97	10.00	19.97	V	-17.0

1.61GHz-1.99 GHz:**Common Information**

Project No: RKSA250527003
EUT Model: Birdie 3X-U
Test Mode: UWB
Standard: FCC Part 15F
Test Equipment: ESU40,3115,PAM-0118P
Receiver Setting: RBW:1 MHz, VBW: 3 MHz, Sweep Time: Auto
Temperature: 27.4°C
Humidity: 50%
Barometric Pressure: 101.1kPa
Test Engineer: Destine Hu
Test Date: 2025/7/21

Full Spectrum

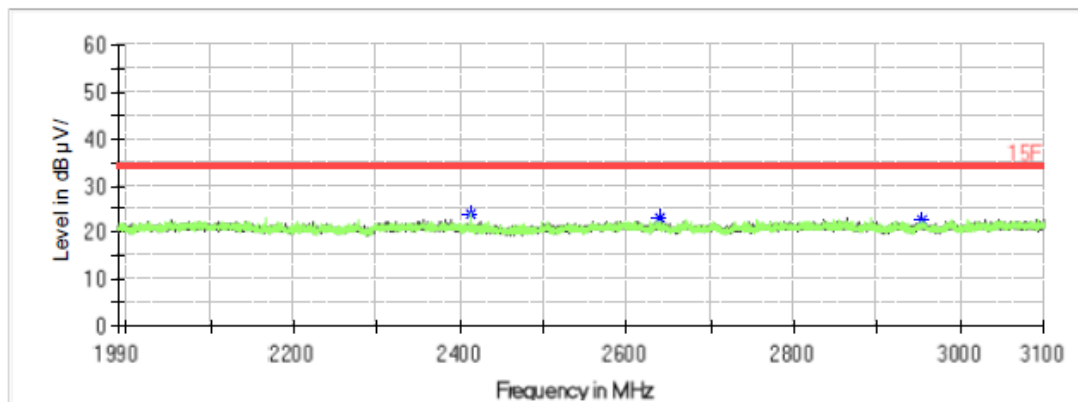
**Critical Freqs**

Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Pol	Corr. (dB/m)
1827.664000	---	21.78	32.00	10.22	V	-15.8
1948.884000	---	22.08	32.00	9.92	V	-15.3
1982.020000	---	22.22	32.00	9.78	V	-15.1

1.99GHz-3.1 GHz:**Common Information**

Project No:	RKSA250527003
EUT Model:	Birdie 3X-U
Test Mode:	UWB
Standard:	FCC Part 15F
Test Equipment:	ESU40,3115,PAM-0118P
Receiver Setting:	RBW:1 MHz, VBW: 3 MHz, Sweep Time: Auto
Temperature:	27.4°C
Humidity:	50%
Barometric Pressure:	101.1kPa
Test Engineer:	Destine Hu
Test Date:	2025/7/21

Full Spectrum

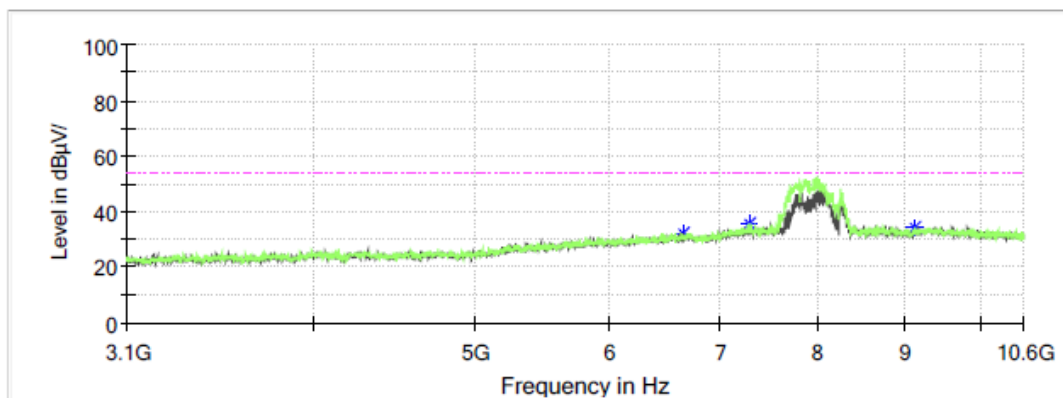
**Critical_Freqs**

Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Pol	Corr. (dB/m)
2412.244000	---	23.72	34.00	10.28	H	-15.3
2639.572000	---	22.95	34.00	11.05	V	-15.3
2954.590000	---	22.79	34.00	11.21	V	-15.1

3.1GHz-10.6 GHz:**Common Information**

Project No: RKSA250527003
EUT Model: Birdie 3X-U
Test Mode: UWB
Standard: FCC Part 15F
Test Equipment: ESU40,3115,PAM-0118P
Receiver Setting: RBW:1 kHz, VBW: 3 kHz, Sweep Time: Auto
Temperature: 27.4 °C
Humidity: 50%
Barometric Pressure: 101.1kPa
Test Engineer: Destine Hu
Test Date: 2025/7/21

Full Spectrum

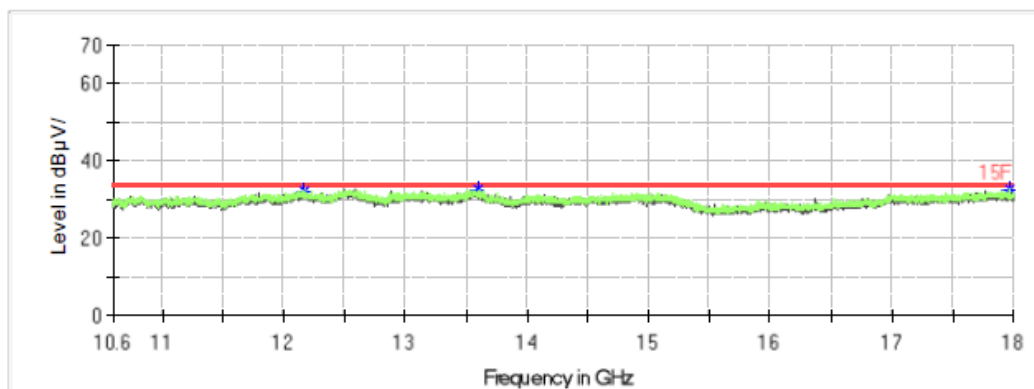
**Critical_Freqs**

Frequency (MHz)	MaxPeak (dB µ V/m)	Average (dB µ V/m)	Limit (dB µ V/m)	Margin (dB)	Pol	Corr. (dB/m)
6643.000000	---	32.19	54.00	21.81	V	-8.1
7279.000000	---	35.36	54.00	18.64	H	-5.9
9122.500000	---	33.98	54.00	20.02	H	-4.8

10.6GHz-18 GHz:**Common Information**

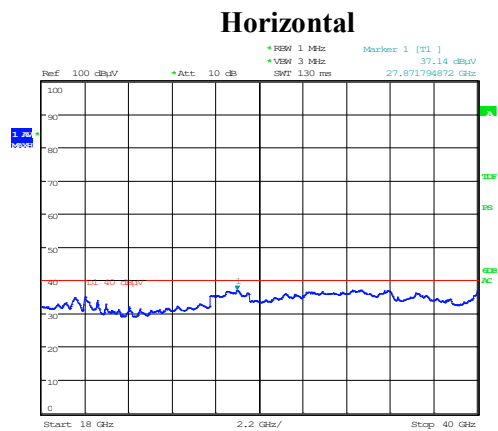
Project No.: RKSA250527003
EUT Model: Birdie 3X-U
Test Mode: UWB
Standard: FCC Part 15F
Test Equipment: ESU40,3115,PAM-0118P
Receiver Setting: RBW: 1MHz, VBW: 3MHz, Sweep Time: Auto
Temperature: 20.3℃
Humidity: 52%
Atmospheric Pressure: 100.6kPa
Test Engineer: Destine Hu
Test Date: 2025/7/9

Full Spectrum

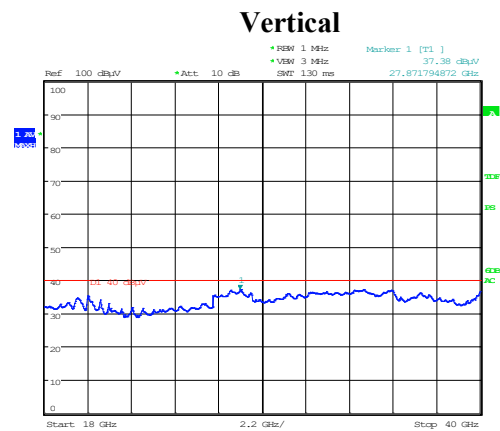
**Critical Freqs**

Frequency (MHz)	MaxPeak (dB µ V/m)	Average (dB µ V/m)	Limit (dB µ V/m)	Margin (dB)	Pol	Corr. (dB/m)
12177.680000	---	32.43	34.00	1.57	V	-4.0
13597.000000	---	32.92	34.00	1.08	V	-3.5
17967.440000	---	32.59	34.00	1.41	H	-1.9

18 GHz - 40 GHz :



Project No.: RKSA250527003 Tester: Hugh Wu
Date: 26.AUG.2025 20:50:27



Project No.: RKSA250527003 Tester: Hugh Wu
Date: 26.AUG.2025 21:21:50

Frequency (GHz)	Max Peak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
27.87	---	37.38	40	2.62	V	6.5
27.87	---	37.14	40	2.86	H	6.5

Note: The test distance is 1.5m

TRANSMISSION TIME

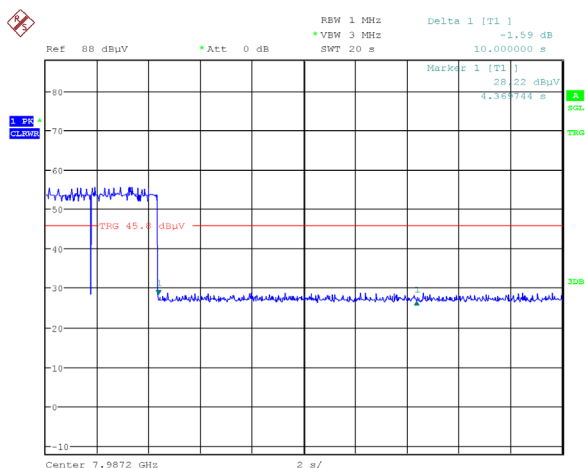
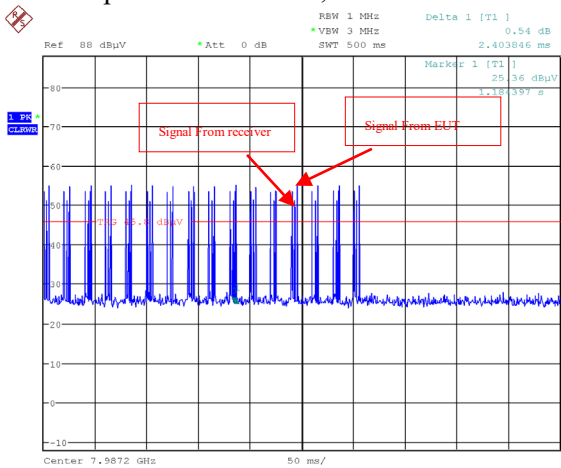
Environmental Conditions & Test Information

Test Date:	2025-07-11
Temperature:	24.5 °C
Relative Humidity:	50 %
ATM Pressure:	100.8 kPa
Test Result:	Pass
Test Engineer:	Hardy Huang

EUT operation mode: Transmitting

Frequency (MHz)	Limit (s)
7987.2	≤10

Communication with receiver, EUT start transmit,
power off receiver, EUT cease transmit



UWB OPEARTION BANDWIDTH

Environmental Conditions & Test Information

Test Date:	2025-07-10
Temperature:	24.7 °C
Relative Humidity:	52 %
ATM Pressure:	101.2 kPa
Test Result:	Pass
Test Engineer:	Hardy Huang

Test Result: Pass.

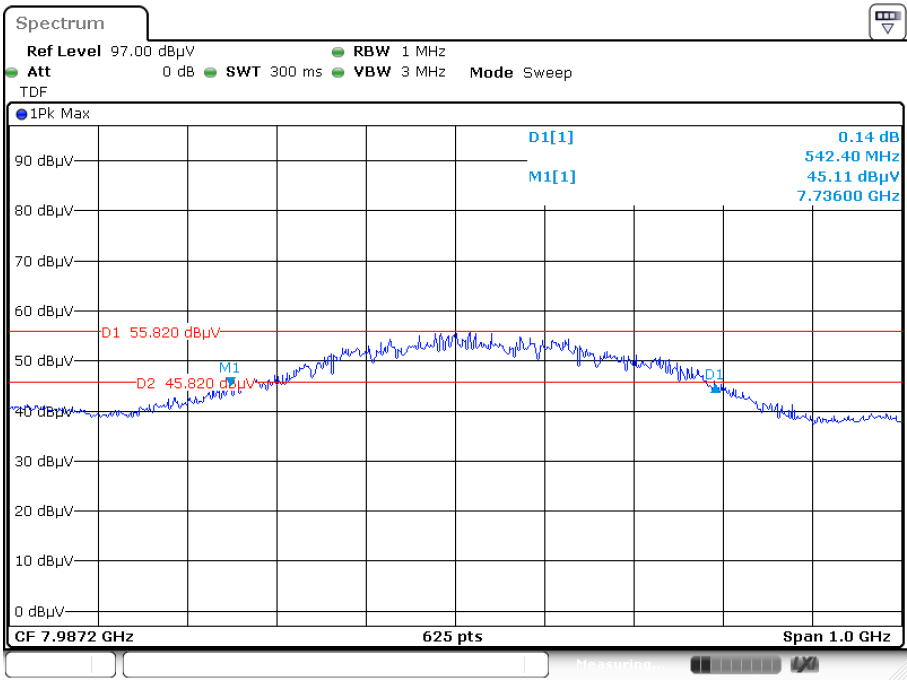
EUT operation mode: Transmitting

Please refer to the following table and plots.

Test distance is 3m.

Frequency (MHz)	F _L (MHz)	F _H (MHz)	Limit	-10dB Bandwidth (MHz)	Bandwidth Limit (MHz)
7987.2	7736.00	8278.40	Within 3100MHz to 10600MHz	542.40	≥500

-10dB Bandwidth



ProjectNo.:RKSA250527003. Tester:Hardy Huang
Date: 10.JUL.2025 14:32:44

PEAK EMISSION IN A 50 MHZ BANDWIDTH

Environmental Conditions & Test Information

Test Date:	2025-07-10
Temperature:	24.1 °C
Relative Humidity:	65 %
ATM Pressure:	101.1 kPa
Test Result:	Pass
Test Engineer:	Hardy Huang

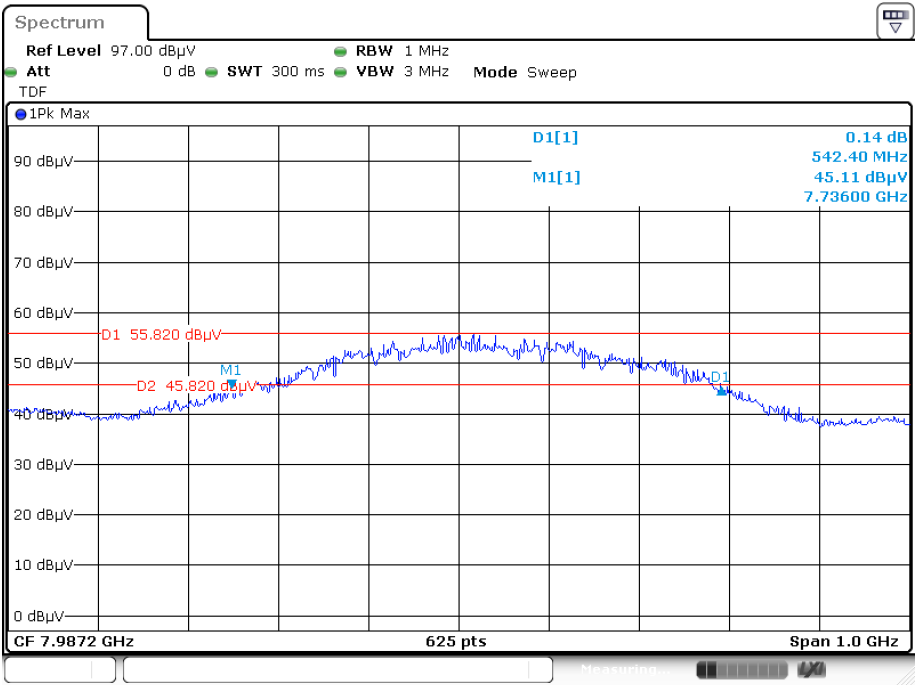
EUT operation mode: Transmitting

Frequency (MHz)	Result (dBμV/m)	Detector	Polar (H/V)	EIRP (dBm/MHz)	EIRP (dBm/50MHz)	Limit (dBm/50MHz)	Margin (dB)
7987.2	55.82	Peak	H	-39.48	-5.5	0	5.5

Note:

$EIRP[dBm/MHz] = Result [dB \mu V/m] - 95.3$

$EIRP[dBm/50MHz] = EIRP[dBm/MHz] - 20 \log(1MHz/50MHz)$



ProjectNo.:RKSA250527003. Tester:Hardy Huang
Date: 10 JUL 2025 14:32:44

EUT PHOTOGRAPHS

Please refer to the attachment EXHIBIT A-EUT EXTERNAL PHOTOGRAPHS and EXHIBIT B-EUT INTERNAL PHOTOGRAPHS.

TEST SETUP PHOTOGRAPHS

Please refer to the attachment EXHIBIT D-TEST SETUP PHOTOGRAPHS.

Declarations

1. The laboratory is not responsible for the authenticity of any information provided by the applicant. Information from the applicant that may affect test results is marked with “★”.
2. The test data was only valid for the test sample(s).
3. 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.
4. Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty.
5. 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.

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