

TEST REPORT

Client Information:

Applicant: PICA Product Development
Applicant add.: 4 Ash Street Extension, Derry, NH 03038 USA
Manufacturer: PICA Product Development
Manufacturer add.: 4 Ash Street Extension, Derry, NH 03038 USA

Product Information:

Product Name: Skyhawk Duo Sensor
Model No.: SHDUOG
Brand Name: N/A
FCC ID: UOXSKEYHAWKDUOSEN1

Applicable standards: FCC CFR Title 47 Part 15 Subpart C Section 15.247

Prepared By:

Dongguan Yaxu (AiT) Technology Limited

No.22, Jinqianling 3rd Street, Jitigang, Huangjiang, Dongguan,
Guangdong, China

Tel.: +86-769-8202 0499 Fax.: +86-769-8202 0495

Date of Receipt: 31 Jul., 2025

Date of Test: 01 Aug., to 28 Aug., 2025

Date of Issue: 12 Nov., 2025

Test Result: Pass

This device described above has been tested by Dongguan Yaxu (AiT) Technology Limited and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.

Note: This report shall not be reproduced except in full, without the written approval of Dongguan Yaxu (AiT) Technology Limited, this document may be altered or revised by Dongguan Yaxu (AiT) Technology Limited, personal only, and shall be noted in the revision of the document. This test report must not be used by the client to claim product endorsement.

Reviewed by: Emiya Lin
Emiya Lin

Approved by: Simba Huang
Simba Huang

1 Contents

	Page
COVER PAGE	
1 CONTENTS	2
2 TEST SUMMARY	4
2.1 Statement of the Measurement Uncertainty	4
2.2 Measurement Uncertainty	4
3 TEST FACILITY	5
3.1 Deviation from standard	5
3.2 Abnormalities from standard conditions	5
3.3 Test Location	5
4 GENERAL INFORMATION	6
4.1 Test frequencies	7
4.2 EUT Peripheral List	8
4.3 Test Peripheral List	8
4.4 TEST METHODOLOGY	9
4.5 Description of Test Modes	10
5 EQUIPMENT USED DURING TEST	11
6 TEST RESULTS AND MEASUREMENT DATA	13
6.1 Antenna requirement	13
6.2 Peak Power Measurement	14
6.3 Frequency Separation and 20 dB Bandwidth	16
6.4 Number of Hopping Frequency	20
6.5 Time of Occupancy (Dwell Time)	22
6.6 Conducted Spurious Emissions and Band Edges Test	24
6.7 Radiated Emissions Measurement	27
7 TEST SETUP PHOTOGRAPHS OF EUT	57
8 EXTERNAL PHOTOGRAPHS OF EUT	57
9 INTERNAL PHOTOGRAPHS OF EUT	57

REPORT REVISE RECORD

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	/	12 Nov., 2025	Valid	Initial release

2 Test Summary

Test Item	Section in CFR 47	Result
Maximum Conducted Output Power	§15.247(b)	Pass
20dB Bandwidth	§15.247(a)	Pass
Frequency Separation	§15.247(a)	Pass
Number Of Hopping Frequency	§15.247(a)	Pass
Time Of Occupancy (Dwell Time)	§15.247(a)	Pass
Conducted Spurious Emissions and Band Edges Emissions	§15.205, §15.247(d)	Pass
Radiated Spurious Emissions	§15.209, §15.247(d)	Pass
Emissions at Restricted Band	§15.205	Pass
AC Mains Conducted Emissions	§15.207(a)	N/A
Antenna Requirements	§15.203	Pass

Note

1. Test according to ANSI C63.10:2020.
2. The measurement uncertainty is not included in the test result.
3. Test results in other test report (RF Exposure Evaluation Report)
4. N/A: Not Applicable.

2.1 Statement of the Measurement Uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. To CISPR 16 – 4 “Specification for radio disturbance and immunity measuring apparatus and methods – Part 4: Uncertainty in EMC Measurements” and is documented in the AiT quality system acc. To DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

2.2 Measurement Uncertainty

Test Item	Frequency Range	Measurement Uncertainty	Notes
Radiated Emission	0.009MHz-30MHz	3.10dB	(1)
Radiated Emission	30MHz-1GHz	3.75dB	(1)
Radiated Emission	1GHz-18GHz	3.88dB	(1)
Radiated Emission	18GHz-40GHz	3.88dB	(1)

Note (1): The measurement uncertainty is for coverage factor of k=2 and a level of confidence of 95%.

3 Test Facility

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

CNAS-Registration No: L6177

Dongguan Yaxu (AiT) technology Limited is accredited to ISO/IEC 17025:2017 general Requirements for the competence of testing and calibration laboratories (CNAS-CL01 Accreditation Criteria for the competence of testing and calibration laboratories) on April 18, 2022

FCC-Registration No.: 703111 Designation Number: CN1313

Dongguan Yaxu (AiT) technology Limited has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files.

IC-Registration No.: 6819A CAB identifier: CN0122

The 3m Semi-anechoic chamber of Dongguan Yaxu (AiT) technology Limited has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 6819A

A2LA-Lab Cert. No.: 6317.01

Dongguan Yaxu (AiT) technology Limited has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025: 2017 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

3.1 Deviation from standard

None

3.2 Abnormalities from standard conditions

None

3.3 Test Location

Dongguan Yaxu (AiT) Technology Limited

Address: No.22, Jinqianling 3rd Street, Jitigang, Huangjiang,Dongguan, Guangdong, China

Tel.: +86-769-8202 0499

Fax.: +86-769-8202 0495

4 General Information

EUT Name:	Skyhawk Duo Sensor
Model No:	SHDUOG
Serial Model:	/
Test sample(s) ID:	AiTDG-251127005-2
Sample(s) Status:	Engineer sample
Serial No.:	N/A
Operation frequency:	906 MHz – 923.5 MHz
Channel Number:	50 Channels
Modulation Technology:	Lora
Antenna Type:	PCB Antenna
Antenna gain:	3.42 dBi (declare by applicant)
Hardware version.:	/
Software version.:	/
Power Supply:	DC 3.0V(1.5V AA Battery *2)
Note:	For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.

4.1 Test frequencies

EUT channels and frequencies list:

Channel	Frequency (MHz)
0	906.0
1	906.25
...	...
...	...
...	...
26	912.75
...	...
...	...
...	...
48	923.25
49	923.5

4.2 EUT Peripheral List

No.	Equipment	Manufacturer	Model No.	Serial No.	Power cord	Signal cord
1	N/A	N/A	N/A	N/A	N/A	N/A

4.3 Test Peripheral List

No.	Equipment	Manufacturer	Model No.	Serial No.	Power cord	Signal cord
1	N/A	N/A	N/A	N/A	N/A	N/A

4.4 TEST METHODOLOGY

The tests documented in this report were performed in accordance with ANSI C63.10:2020, FCC CFR PART 15C 15.207, 15.209, 15.247 and KDB 558074 D01 15.247 Meas Guidance v05r02.

EUT Configuration

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner that intends to maximize its emission characteristics in a continuous normal application.

EUT Exercise

The EUT was operated in the normal operating mode for Hopping Numbers and Dwell Time test and a continuous transmits mode for other tests.

According to its specifications, the EUT must comply with the requirements of the Section 15.203, 15.205, 15.207, 15.209, 15.247, ANSI C63.10:2020 under the FCC Rules Part 15 Subpart C

General Test Procedures

Conducted Emissions

The EUT is placed on the turntable, which is 0.8 m above ground plane. According to the requirements in Section 6.2.1 of ANSI C63.10:2020 Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30MHz using Quasi-peak and average detector modes.

Radiated Emissions

The EUT is placed on a turn table, which is 0.8 m above ground plane. The turntable shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3m away from the receiving antenna, which varied from 1m to 4m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. In order to find out the maximum emissions, exploratory radiated emission measurements were made according to the requirements in Section 6.3 of ANSI C63.10:2020.

4.5 Description of Test Modes

The EUT has been tested under operating condition.

Worst-case mode and channel used for 9 KHz-1000 MHz radiated emissions was the mode and channel with the highest output power, that was determined to be TX(1Mbps-Low Channel).

This test was performed with EUT in X, Y, Z position and the worst case was found when EUT in X position.

In section 15.31(m), regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:

Transmitting mode	Keep the EUT in continuously transmitting mode.		
Frequency	906 MHz	912.75 MHz	923.5 MHz

5 Equipment Used during Test

No	Test Equipment	Manufacturer	Model No	Serial No	Cal. Date	Cal. Due Date
1	Spectrum Analyzer	R&S	FSV40	101470	2024.09.23	2025.09.22
2	Spectrum Analyzer	Keysight	N9010B	WXJ004-3	09-10-2024	09-09-2025
3	EMI Measuring Receiver	R&S	ESPI	101660	2024.09.23	2025.09.22
4	Low Noise Pre Amplifier	HP	HP8447E	1937A01855	2024.09.23	2025.09.22
5	Low Noise Pre Amplifier	Tsj	MLA-0120-A02-34	2648A04738	2024.09.23	2025.09.22
6	Passive Loop	ETS	6512	00165355	2024.09.04	2026.09.03
7	TRILOG Super Broadband test Antenna	SCHWARZBECK	VULB9160	9160-3206	2024.08.29	2026.08.28
8	Broadband Horn Antenna	SCHWARZBECK	BBHA9120D	452	2024.08.29	2026.08.28
9	SHF-EHF Horn Antenna 15-40GHz	SCHWARZBECK	BBHA9170	BBHA9170367d	2023.09.12	2026.09.11
10	EMI Test Receiver	R&S	ESCI	100124	2024.09.23	2025.09.22
11	LISN	R&S	ESH3-Z5	892785/016	2024.09.23	2025.09.22
12	Pro.Temp&Humi.chamber	MENTEK	MHP-150-1C	MAA08112501	2024.09.23	2025.09.22
13	RF Automatic Test system	MW	MW100-RFCB	21033016	2024.09.23	2025.09.22
14	Signal Generator	Agilent	N5182A	MY50143009	2024.09.23	2025.09.22
15	Wideband Radio communication tester	R&S	CMW500	1201.0002K50	2024.09.23	2025.09.22
16	RF Automatic Test system	MW	MW100-RFCB	21033016	2024.09.23	2025.09.22
17	Pulse Limiter	R&S	ESH3-Z2	03578810.54	2024.09.23	2025.09.22
18	Switch	MFJ Rhinos	MFJ-2702	CZ3457	2024.09.23	2025.09.22
19	DC power supply	ZHAOXIN	RXN-305D-2	28070002559	N/A	N/A
20	RE Software	EZ	EZ-EMC_RE	Ver.AIT-03A	N/A	N/A
21	CE Software	EZ	EZ-EMC_CE	Ver.AIT-03A	N/A	N/A
22	RF Software	MW	MTS 8310	2.0.0.0	N/A	N/A



23	temporary antenna connector(Note)	NTS	R001	N/A	N/A	N/A
24	RF Automatic Test system(Power meter)	MW	MW100-PSB	Frequency range: 9kHz-26.5GHz; Power measuring Range: 10MHz~6GHz z/ -40dBm~ +20dBm	2024.09.26	2025.09.25

Note: The temporary antenna connector is soldered on the PCB board in order to perform conducted tests and this temporary antenna connector is listed in the equipment list.

6 Test results and Measurement Data

6.1 Antenna requirement

6.1.1 Standard 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 re-placed by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of Sections 15.211, 15.213, 15.217, 15.219, or 15.221. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with Section 15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this Part are not exceeded.

15.247(b) (4) requirement:

(4) The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

6.1.2 EUT Antenna:

Note: The antenna information refer the manufacturer provide report, applicable only to the tested sa-mple identified in the report., reference to the Internal photos for details.

6.2 Peak Power Measurement

6.2.1 Standard requirement:

For frequency hopping systems operating in the 902-928 MHz band: 1 watt for systems employing at least 50 hopping channels; and, 0.25 watts for systems employing less than 50 hopping channels, but at least 25 hopping channels, as permitted under paragraph (a)(1)(i) of this section.

6.2.2 Measuring Instruments:

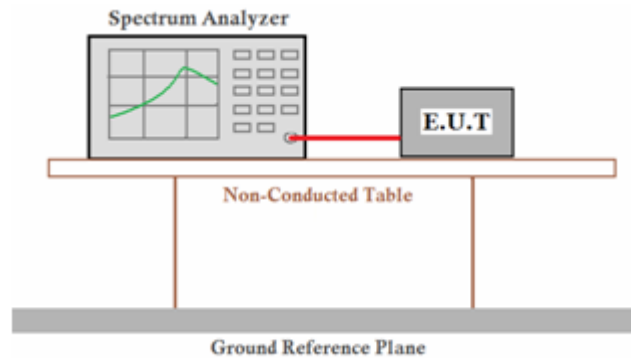
Please refer to equipment's list in this report.

6.2.3 Test Procedures:

According to ANSI C63.10-2020 Section 7.8.5

- Span: Approximately five times the 20 dB bandwidth, centered on a hopping channel.
- RBW > 20 dB bandwidth of the emission being measured.
- VBW $\geq$ RBW.
- Sweep: No faster than coupled (auto) time.
- Detector function: Peak.
- Trace: Max-hold.
- Allow trace to stabilize.
- Use the marker-to-peak function to set the marker to the peak of the emission.

6.2.4 Test Setup Layout



6.2.5 EUT Operation during Test

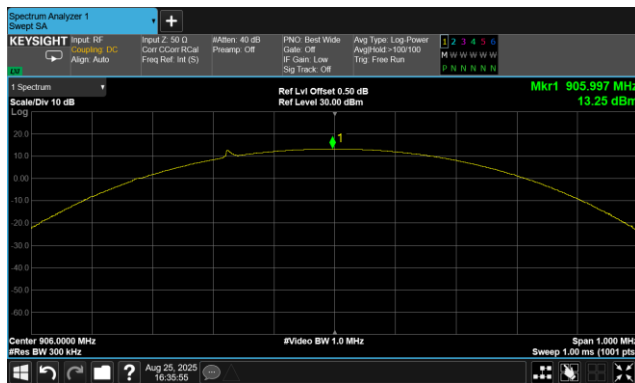
The EUT was programmed to be in continuously transmitting mode.

6.2.6 Test result

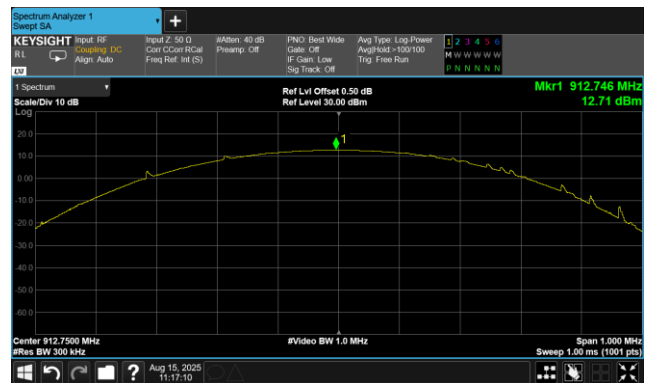
Test channel	Maximum Output Power (dBm)	Limit (dBm)	Result
Lowest channel	13.25	30	Pass
Middle channel	12.71	30	Pass
Highest channel	12.06	30	Pass

Test plot as follows:

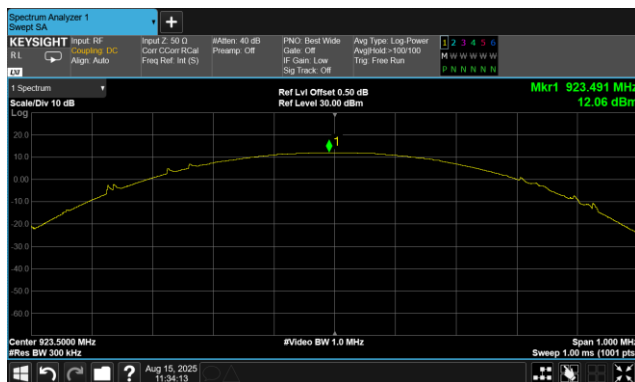
Lowest channel



Middle channel



Highest channel



6.3 Frequency Separation and 20 dB Bandwidth

6.3.1 Standard requirement:

According to §15.247(a) (1), Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater.

According to §15.247(a) (1)(i), For frequency hopping systems operating in the 902-928 MHz band: if the 20 dB bandwidth of the hopping channel is less than 250 kHz, the system shall use at least 50 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 20 second period; if the 20 dB bandwidth of the hopping channel is 250 kHz or greater, the system shall use at least 25 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 10 second period. The maximum allowed 20 dB bandwidth of the hopping channel is 500 kHz.

6.3.2 Measuring Instruments:

Please refer to equipment's list in this report.

6.3.3 Test Procedures

20dB Bandwidth:

According to ANSI C63.10-2020 Section 6.9.2

- a) The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The span range for the EMI receiver or spectrum analyzer shall be between two times and five times the OBW.
- b) The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1% to 5% of the OBW and video bandwidth (VBW) shall be at least three times RBW, unless otherwise specified by the applicable requirement.
- c) Set the reference level of the instrument as required, keeping the signal from exceeding the maximum input mixer level for linear operation. In general, the peak of the spectral envelope shall be more than $[10 \log (OBW/RBW)]$ below the reference level. Specific guidance is given in 4.1.6.2.
- d) Steps a) through c) might require iteration to adjust within the specified tolerances.
- e) The dynamic range of the instrument at the selected RBW shall be more than 10 dB below the target “-xx dB down” requirement; that is, if the requirement calls for measuring the -20 dB OBW, the instrument noise floor at the selected RBW shall be at least 30 dB below the reference value.
- f) Set detection mode to peak and trace mode to max-hold.

Frequency Separation:

According to ANSI C63.10-2020 Section 7.8.2

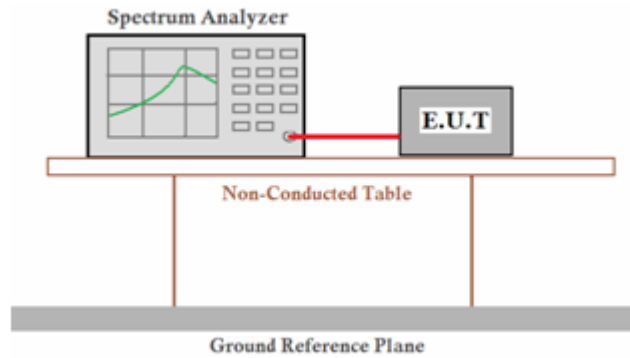
The EUT shall have its hopping function enabled. Use the following spectrum analyzer settings:

- a) Span: Wide enough to capture the peaks of two adjacent channels.
- b) RBW: Start with the RBW set to approximately 30% of the channel spacing; adjust as necessary

to best identify the center of each individual channel.

- c) Video (or average) bandwidth (VBW) $\geq$ RBW.
- d) Sweep: No faster than coupled (auto) time.
- e) Detector function: Peak.
- f) Trace: Max-hold.
- g) Allow the trace to stabilize.

6.3.4 Test Setup Layout



6.3.5 EUT Operation during Test

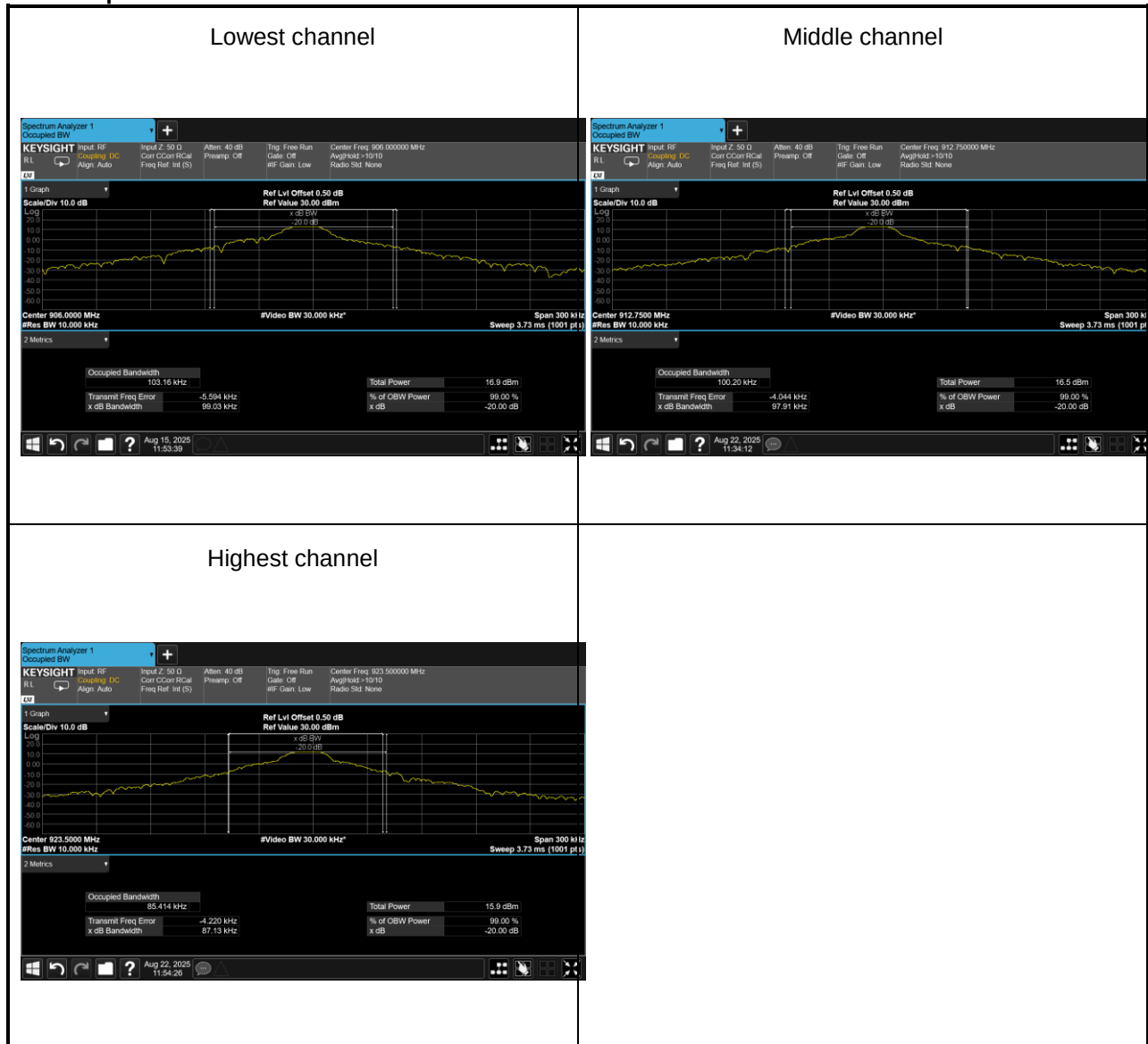
The EUT was programmed to be in continuously transmitting mode.

6.3.6 Test result

6.3.6.1 20dB Occupied Bandwidth

Test channel	20dB Occupy Bandwidth (kHz)	Limit (kHz)	Result
Lowest channel	99.03	250	Pass
Middle channel	97.91	250	Pass
Highest channel	87.13	250	Pass

Test plot as follows:



6.3.6.2 Carrier Frequencies Separation

Test channel	Carrier Frequencies Separation (kHz)	Limit (kHz)	Result
Lowest channel	250.0	193.8	Pass
Middle channel	250.0	193.8	Pass
Highest channel	250.0	193.8	Pass

Test plot as follows:



6.4 Number of Hopping Frequency

6.4.1 Standard requirement:

According to §15.247(a) (1)(i), For frequency hopping systems operating in the 902-928 MHz band: if the 20 dB bandwidth of the hopping channel is less than 250 kHz, the system shall use at least 50 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 20 second period; if the 20 dB bandwidth of the hopping channel is 250 kHz or greater, the system shall use at least 25 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 10 second period. The maximum allowed 20 dB bandwidth of the hopping channel is 500 kHz.

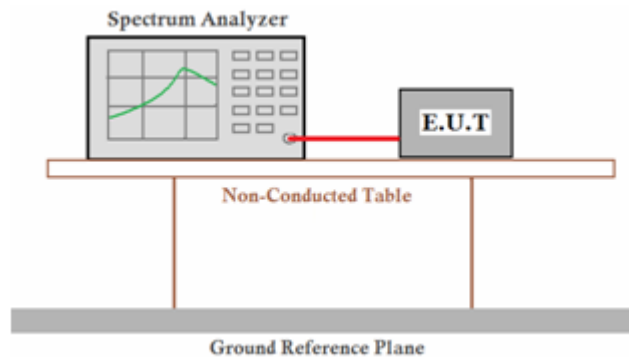
6.4.2 Measuring Instruments and Setting:

Please refer to equipment's list in this report.

6.4.3 Test Procedures

- 1). Place the EUT on the table and set it in transmitting mode.
- 2). Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the Spectrum Analyzer.
- 3). Set Spectrum Analyzer Start=902MHz, Stop = 928MHz, Sweep = auto.
- 4). Set the Spectrum Analyzer as RBW/VBW=100KHz/300KHz.
- 5). Max hold, view and count how many channel in the band.

6.4.4 Test Setup Layout



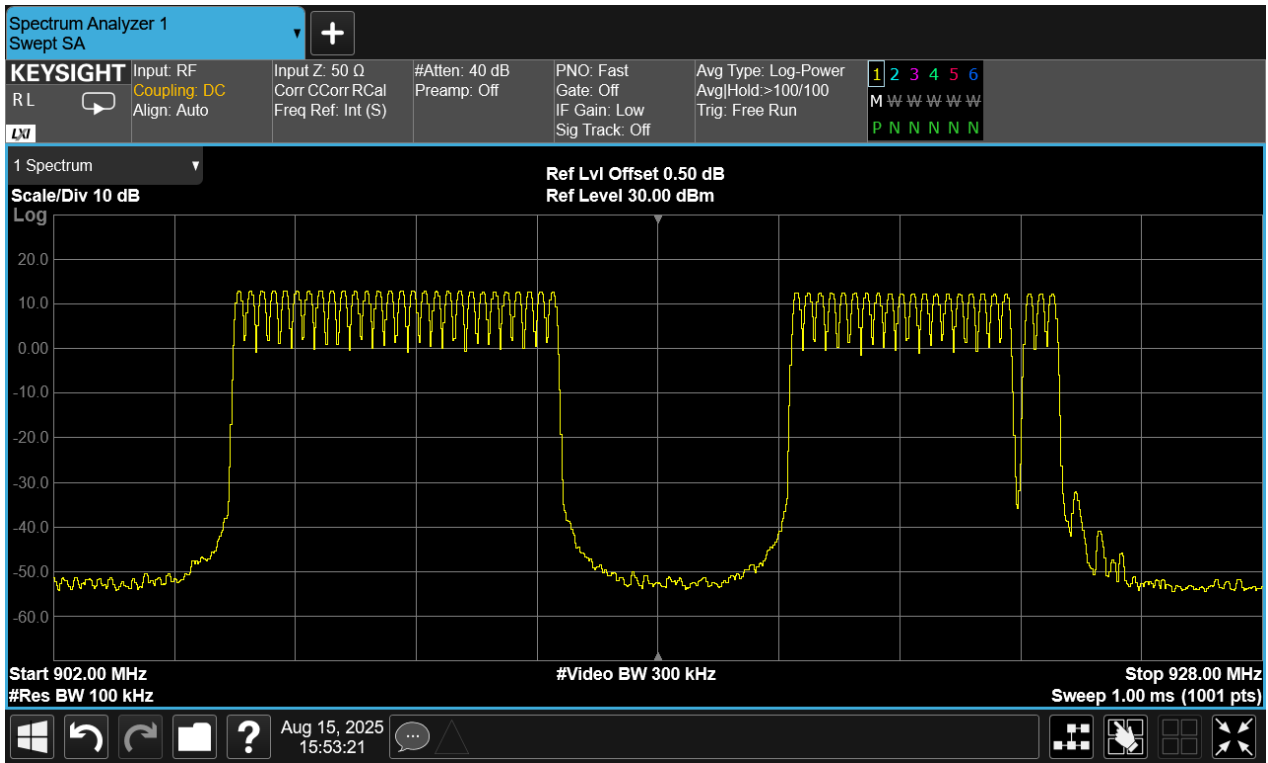
6.4.5 EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

6.4.6 Test result

Hopping channel numbers	Limit	Result
50	$N_{ch} \geq 50$	Pass

Test plot as follows



6.5 Time of Occupancy (Dwell Time)

6.5.1 Standard requirement:

According to §15.247(a)(1)(i), For frequency hopping systems operating in the 902-928 MHz band: if the 20 dB bandwidth of the hopping channel is less than 250 kHz, the system shall use at least 50 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 20 second period; if the 20 dB bandwidth of the hopping channel is 250 kHz or greater, the system shall use at least 25 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 10 second period. The maximum allowed 20 dB bandwidth of the hopping channel is 500 kHz.

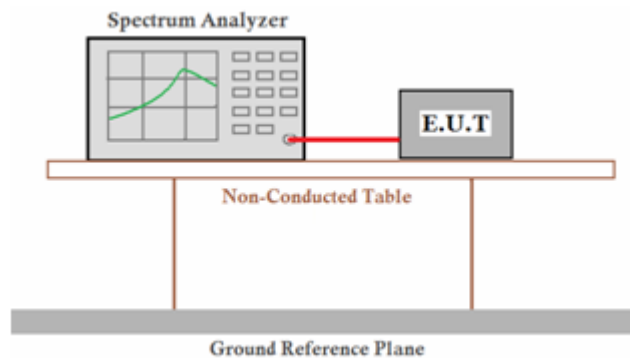
6.5.2 Measuring Instruments and Setting:

Please refer to equipment's list in this report. The following table is the setting of Spectrum Analyzer.

6.5.3 Test Procedures

- 1). Place the EUT on the table and set it in transmitting mode.
- 2). Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the Spectrum Analyzer.
- 3). Set center frequency of Spectrum Analyzer = operating frequency.
- 4). Set the Spectrum Analyzer as RBW shall be $\leq$ channel spacing and where possible RBW should be set $\gg 1/T$, where T is the expected transmission time per hop., Span = 0Hz, Sweep = auto.
- 5). Repeat above procedures until all frequency measured was complete.

6.5.4 Test Setup Layout



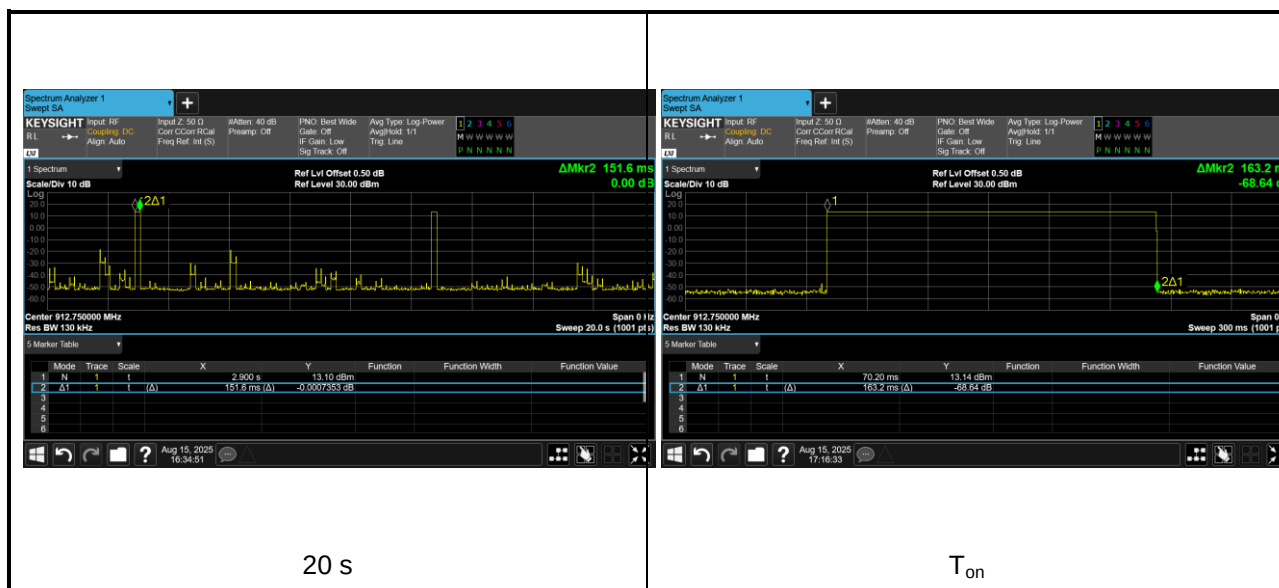
6.5.5 EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

6.5.6 Test result

T_{on} (s)	Hopping numbers (20 s period)	Dwell time (s)	Limit (s)	Result
0.1632	2	0.3264	0.4	Pass
Note: 1. T_{on} is time per hop. 2. Dwell time = $T_{on} * \text{Hopping numbers}$.				

Test plot as follows:



6.6 Conducted Spurious Emissions and Band Edges Test

6.6.1 Standard requirement:

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in § 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a) (see § 15.205(c)).

6.6.2 Measuring Instruments and Setting:

Please refer to equipment list in this report. The following table is the setting of the spectrum analyzer.

Spectrum Parameter	Setting
Detector	Peak
Attenuation	Auto
RB / VB (Emission in restricted band)	100KHz/300KHz
RB / VB (Emission in non-restricted band)	100KHz/300KHz

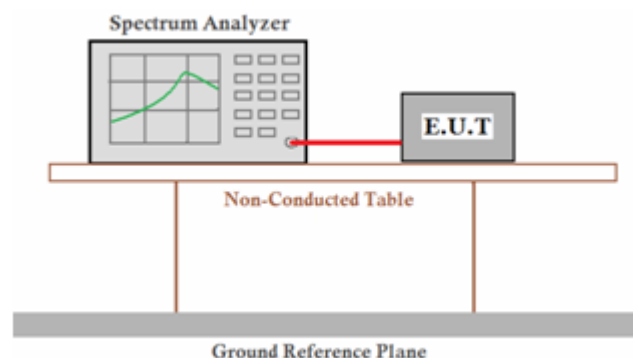
6.6.3 Test Procedures

Conducted RF measurements of the transmitter output were made to confirm that the EUT antenna port conducted emissions meet the specified limit and to identify any spurious signals that require further investigation or measurements on the radiated emissions site.

The transmitter output is connected to the spectrum analyzer. The resolution bandwidth is set to 100 KHz. The video bandwidth is set to 300 KHz.

Measurements are made over the 9kHz to 25GHz range with the transmitter set to the lowest, middle, and highest channels.

6.6.4 Test Setup Layout



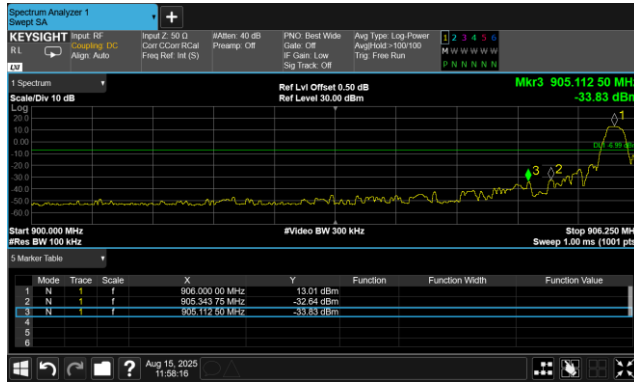
6.6.5 EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

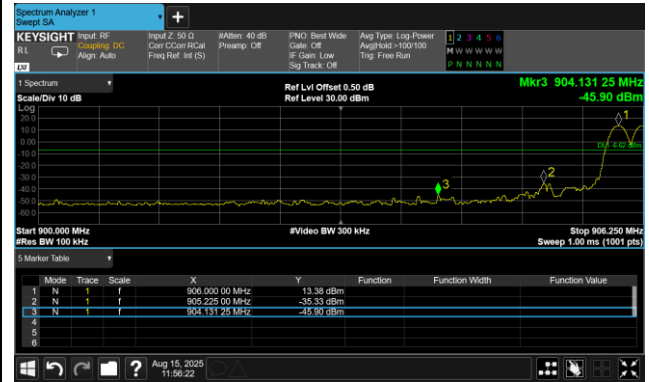
6.6.6 Test result

6.6.6.1 Band-edge Emission

Lowest Channel

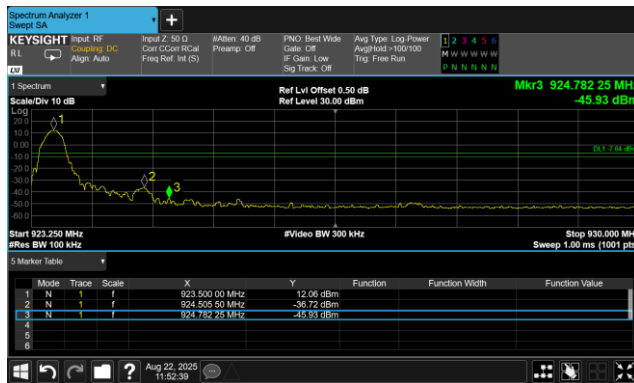


No-hopping mode

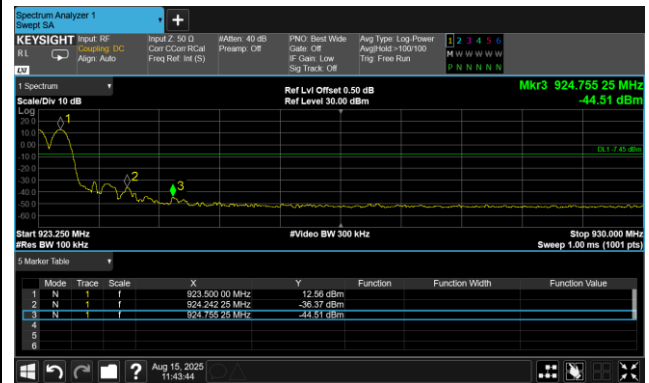


Hopping mode

Highest Channel



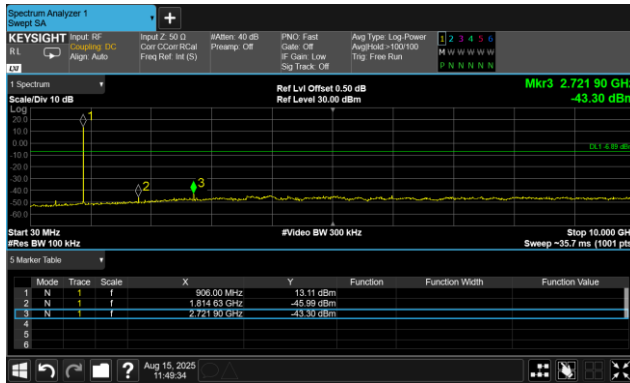
No-hopping mode



Hopping mode

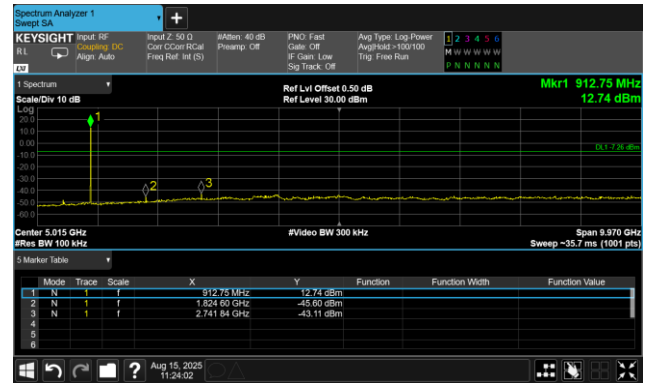
6.6.6.2 Conducted Spurious Emission

Lowest channel



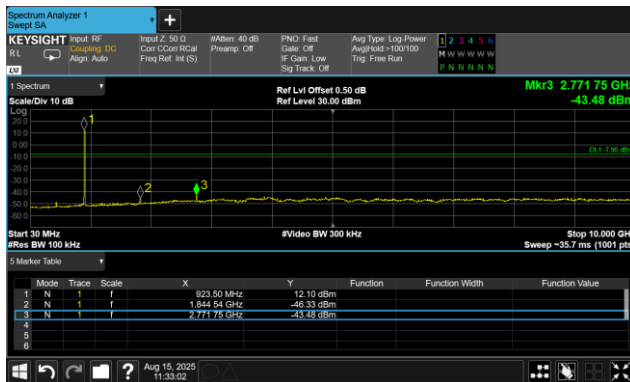
30MHz~10GHz

Middle channel



30MHz~10GHz

Highest channel



30MHz~10GHz

Remark:

Not recorded emission from 9 KHz to 30 MHz as emission level at least 20dBc lower than emission limit.

6.7 Radiated Emissions Measurement

6.8.1 Standard requirement:

According to §15.247 (d): 20dBc in any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.

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

6.8.2 Measuring Instruments and Setting:

Please refer to equipment list in this report. The following table is the setting of spectrum analyzer and receiver.

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	10 th carrier harmonic
RB / VB (Emission in restricted band)	1MHz / 1MHz for Peak, 1 MHz / 1/B kHz for Average
RB / VB (Emission in non-restricted band)	1MHz / 1MHz for Peak, 1 MHz / 1/B kHz for Average

Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~150kHz / RB/VB 200Hz/1kHz for QP/AVG
Start ~ Stop Frequency	150kHz~30MHz / RB/VB 9kHz/30kHz for QP/AVG
Start ~ Stop Frequency	30MHz~1000MHz / RB/VB 120kHz/1MHz for QP

6.8.3 Test Procedures

1) Sequence of testing 9 kHz to 30 MHz

Setup:

- The equipment was set up to simulate a typical usage like described in the user manual or described by manufacturer.
- If the EUT is a tabletop system, a rotatable table with 0.8 m height is used.
- If the EUT is a floor standing device, it is placed on the ground.
- Auxiliary equipment and cables were positioned to simulate normal operation conditions.
- The AC power port of the EUT (if available) is connected to a power outlet below the turntable.
- The measurement distance is 3 meter.
- The EUT was set into operation.

Premeasurement:

- The turntable rotates from 0° to 315° using 45° steps.
- The antenna height is 1.5 meter.
- At each turntable position the analyzer sweeps with peak detection to find the maximum of all emissions

Final measurement:

- Identified emissions during the premeasurement the software maximizes by rotating the turntable position (0° to 360°) and by rotating the elevation axes (0° to 360°).
- The final measurement will be done in the position (turntable and elevation) causing the highest emissions with QPK detector.
- The final levels, frequency, measuring time, bandwidth, turntable position, correction factor, margin to the limit and limit will be recorded. Also a plot with the graph of the premeasurement and the limit will be stored.

2) Sequence of testing 30 MHz to 1 GHz

Setup:

- The equipment was set up to simulate a typical usage like described in the user manual or described by manufacturer.
- If the EUT is a tabletop system, a table with 0.8 m height is used, which is placed on the ground plane.
- If the EUT is a floor standing device, it is placed on the ground plane with insulation between both.
- Auxiliary equipment and cables were positioned to simulate normal operation conditions
- The AC power port of the EUT (if available) is connected to a power outlet below the turntable.
- The measurement distance is 3 meter.
- The EUT was set into operation.

Premeasurement:

- The turntable rotates from 0° to 315° using 45° steps.
- The antenna is polarized vertical and horizontal.
- The antenna height changes from 1 to 3 meter.
- At each turntable position, antenna polarization and height the analyzer sweeps three times in peak to find the maximum of all emissions.

Final measurement:

- The final measurement will be performed with minimum the six highest peaks.
- According to the maximum antenna and turntable positions of premeasurement the software maximize the peaks by changing turntable position ($\pm 45^\circ$) and antenna movement between 1 and 4 meter.
- The final measurement will be done with QP detector with an EMI receiver.
- The final levels, frequency, measuring time, bandwidth, antenna height, antenna polarization, turntable angle, correction factor, margin to the limit and limit will be recorded. Also a plot with the graph of the premeasurement with marked maximum final measurements and the limit will be stored.

3) Sequence of testing 1 GHz to 18 GHz

Setup:

- The equipment was set up to simulate a typical usage like described in the user manual or described by manufacturer.
- If the EUT is a tabletop system, a rotatable table with 1.5 m height is used.
- If the EUT is a floor standing device, it is placed on the ground plane with insulation between both.
- Auxiliary equipment and cables were positioned to simulate normal operation conditions
- The AC power port of the EUT (if available) is connected to a power outlet below the turntable.
- The measurement distance is 3 meter.
- The EUT was set into operation.

Premeasurement:

- The turntable rotates from 0° to 315° using 45° steps.
- The antenna is polarized vertical and horizontal.
- The antenna height scan range is 1 meter to 2.5 meter.
- At each turntable position and antenna polarization the analyzer sweeps with peak detection to find the maximum of all emissions.

Final measurement:

- The final measurement will be performed with minimum the six highest peaks.
- According to the maximum antenna and turntable positions of premeasurement the software maximize the peaks by changing turntable position ($\pm 45^\circ$) and antenna movement between 1 and 4 meter. This procedure is repeated for both antenna polarizations.
- The final measurement will be done in the position (turntable, EUT-table and antenna polarization) causing the highest emissions with Peak and Average detector.
- The final levels, frequency, measuring time, bandwidth, turntable position, EUT-table position, antenna polarization, correction factor, margin to the limit and limit will be recorded. Also a plot with the graph of the premeasurement with marked maximum final measurements and the limit will be stored.

4) Sequence of testing above 18 GHz

Setup:

- The equipment was set up to simulate a typical usage like described in the user manual or described by manufacturer.
- If the EUT is a tabletop system, a rotatable table with 1.5 m height is used.
- If the EUT is a floor standing device, it is placed on the ground plane with insulation between both.
- Auxiliary equipment and cables were positioned to simulate normal operation conditions
- The AC power port of the EUT (if available) is connected to a power outlet below the turntable.
- The measurement distance is 1 meter.
- The EUT was set into operation.

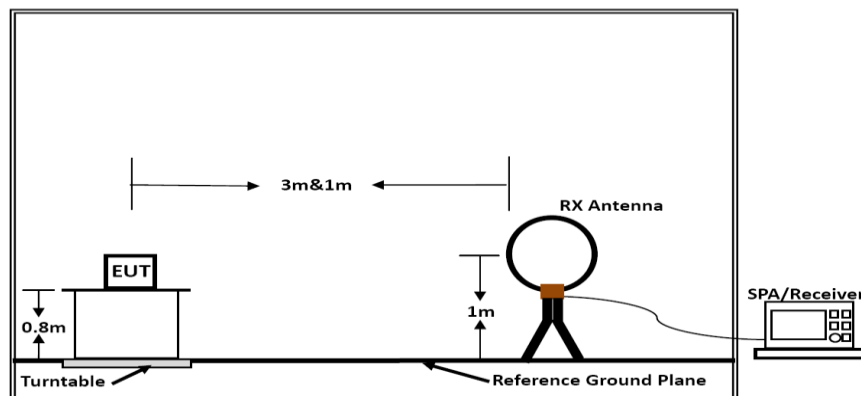
Premeasurement:

- The antenna is moved spherical over the EUT in different polarisations of the antenna.

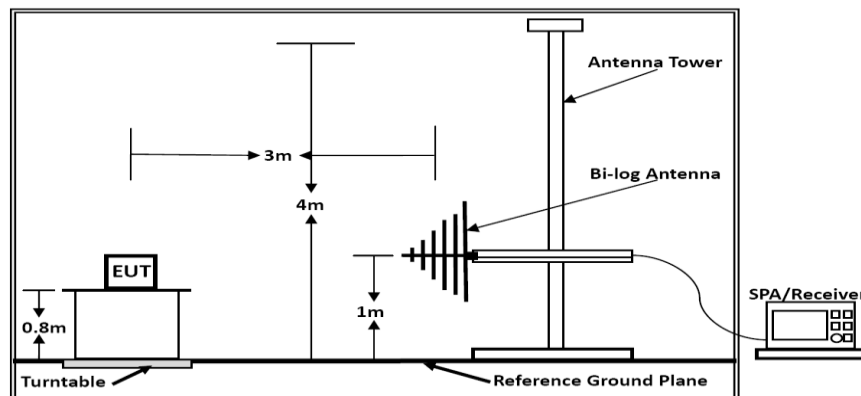
Final measurement:

- The final measurement will be performed at the position and antenna orientation for all detected emissions that were found during the premeasurements with Peak and Average detector.
- The final levels, frequency, measuring time, bandwidth, correction factor, margin to the limit and limit will be recorded. Also a plot with the graph of the premeasurement and the limit will be stored.

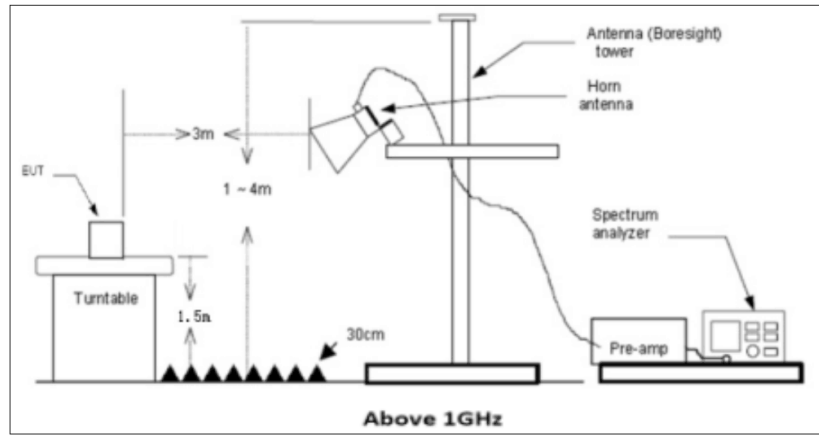
6.8.4 Test Setup Layout



Below 30MHz



Below 1GHz



Above 18 GHz shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade from 3m to 1m.

Distance extrapolation factor = $20 \log (\text{specific distance [3m]} / \text{test distance [1m]})$ (dB);

Limit line = specific limits (dBuV) + distance extrapolation factor [6 dB].

6.8.5 EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

6.8.6 Test result

Temperature	25.5°C	Humidity	52.2%
Test Engineer	Emiya Lin	Configurations	BT

Remarks:

1. Only the worst case Main Antenna test data.
2. Pre-scan all kind of the place mode (X-axis, Y-axis, Z-axis), and found the Y-axis which it is worse case.

■ Results of Radiated Emissions (9 KHz~30MHz)

Freq. (MHz)	Level (dBuV)	Over Limit (dB)	Over Limit (dBuV)	Remark
-	-	-	-	See Note

Note:

The emission from 9 kHz to 30MHz was pre-tested and found the result was 20dB lower than the limit, and the permissible value has no need to be reported.

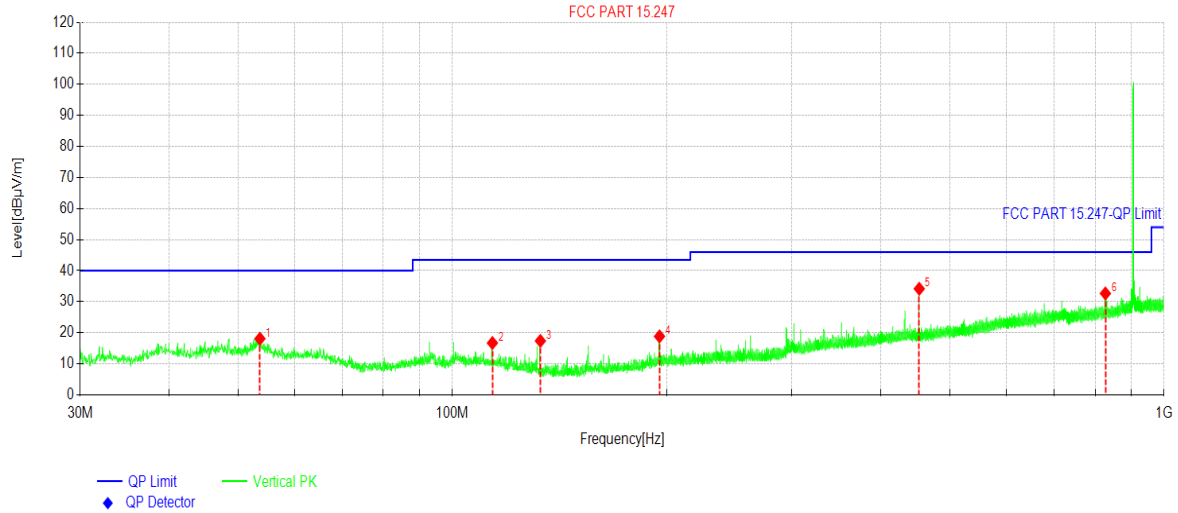
Distance extrapolation factor = $40 \log (\text{specific distance} / \text{test distance})$ (dB);

Limit line = specific limits (dBuV) + distance extrapolation factor.

Results of Radiated Emissions (30MHz~1GHz)

906 MHz:

Product Name:	Skyhawk Duo Sensor	Model name:	SHDUOG
Polarization :	Vertical	Test Result:	☒ Pass ☐ Fail



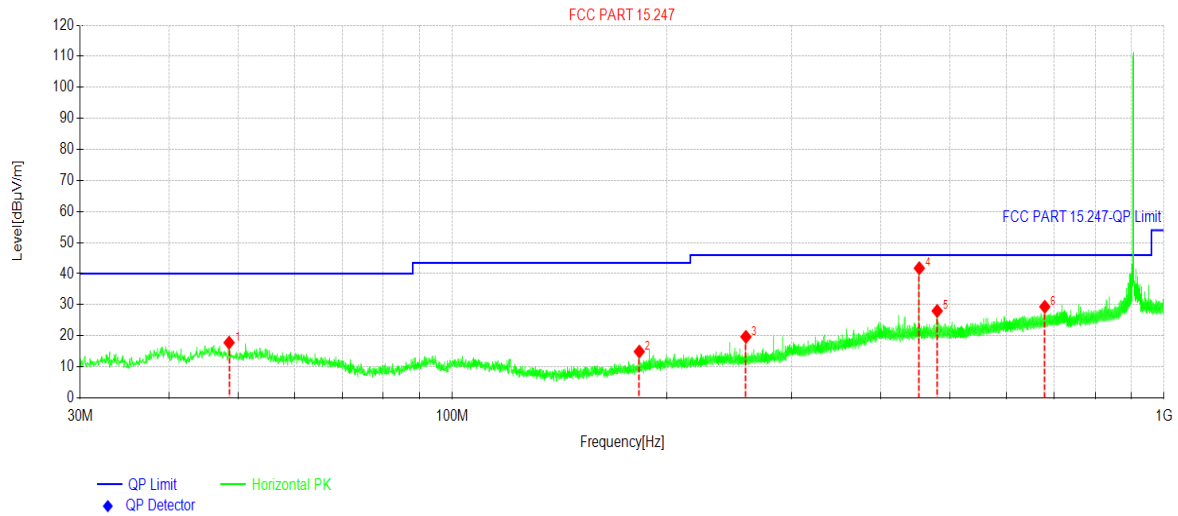
Remark:

1. Level = Reading + FactorAntenna Factor + Cable Loss – Preamplifier Factor).

Suspected Data List

NO.	Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Trace	Polarity
1	53.6692	30.95	-12.85	18.10	40.00	21.90	PK	Vertical
2	113.8607	31.71	-14.99	16.72	43.50	26.78	PK	Vertical
3	132.9706	34.93	-17.54	17.39	43.50	26.11	PK	Vertical
4	195.4903	33.71	-14.87	18.84	43.50	24.66	PK	Vertical
5	452.9896	42.73	-8.55	34.18	46.00	11.82	PK	Vertical
6	827.2344	33.68	-1.02	32.66	46.00	13.34	PK	Vertical

Product Name:	Skyhawk Duo Sensor	Model name:	SHDUOG
Polarization :	Horizontal	Test Result:	☒ Pass ☐ Fail



Remark:

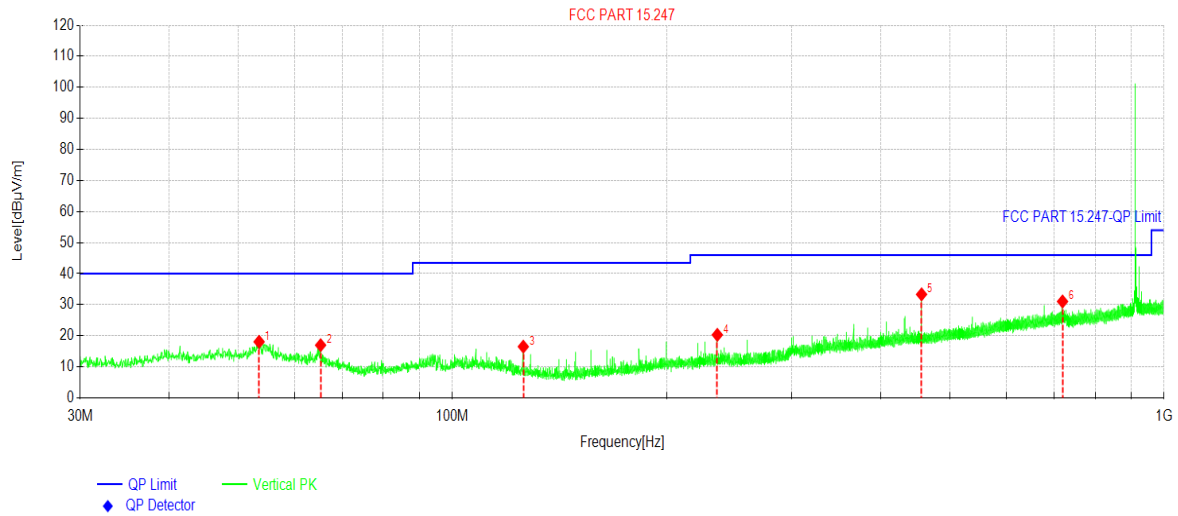
1. Level = Reading + FactorAntenna Factor + Cable Loss – Preamplifier Factor).

Suspected Data List

NO.	Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Trace	Polarity
1	48.5764	30.45	-12.67	17.78	40.00	22.22	PK	Horizontal
2	183.1222	30.92	-16.02	14.90	43.50	28.60	PK	Horizontal
3	258.5434	32.62	-12.96	19.66	46.00	26.34	PK	Horizontal
4	453.0382	50.31	-8.55	41.76	46.00	4.24	PK	Horizontal
5	480.0540	35.89	-7.90	27.99	46.00	18.01	PK	Horizontal
6	679.9810	32.96	-3.61	29.35	46.00	16.65	PK	Horizontal

912.75 MHz:

Product Name:	Skyhawk Duo Sensor	Model name:	SHDUOG
Polarization :	Vertical	Test Result:	☒ Pass ☐ Fail

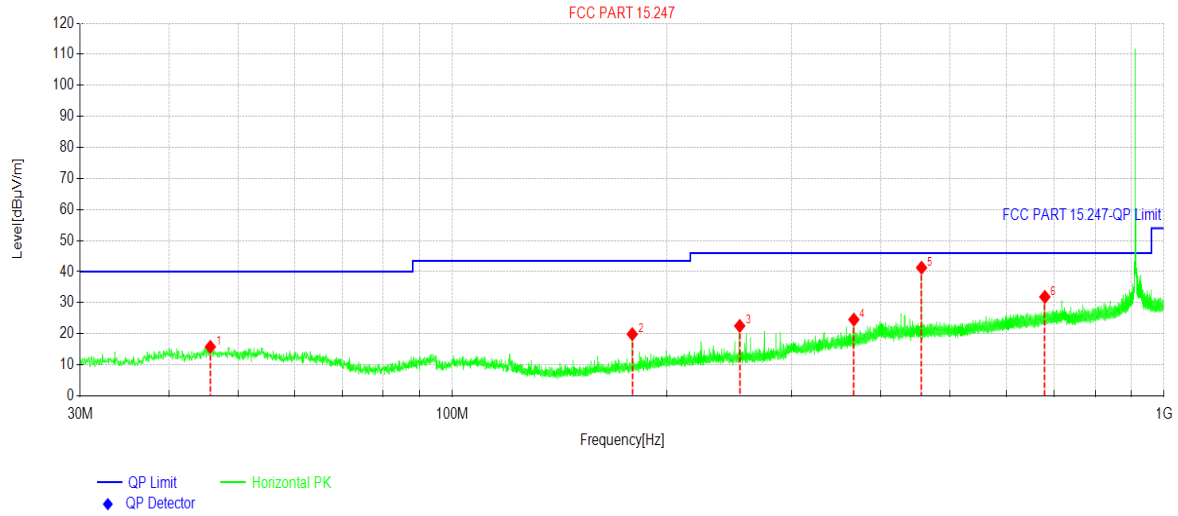

Remark:

1. Level = Reading + FactorAntenna Factor + Cable Loss – Preamplifier Factor).

Suspected Data List

NO.	Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Trace	Polarity
1	53.5237	30.88	-12.82	18.06	40.00	21.94	PK	Vertical
2	65.3098	31.79	-14.81	16.98	40.00	23.02	PK	Vertical
3	125.8408	33.63	-17.13	16.50	43.50	27.00	PK	Vertical
4	235.6988	33.84	-13.54	20.30	46.00	25.70	PK	Vertical
5	456.3848	41.85	-8.51	33.34	46.00	12.66	PK	Vertical
6	720.0440	33.81	-2.77	31.04	46.00	14.96	PK	Vertical

Product Name:	Skyhawk Duo Sensor	Model name:	SHDUOG
Polarization :	Horizontal	Test Result:	☒ Pass ☐ Fail



Remark:

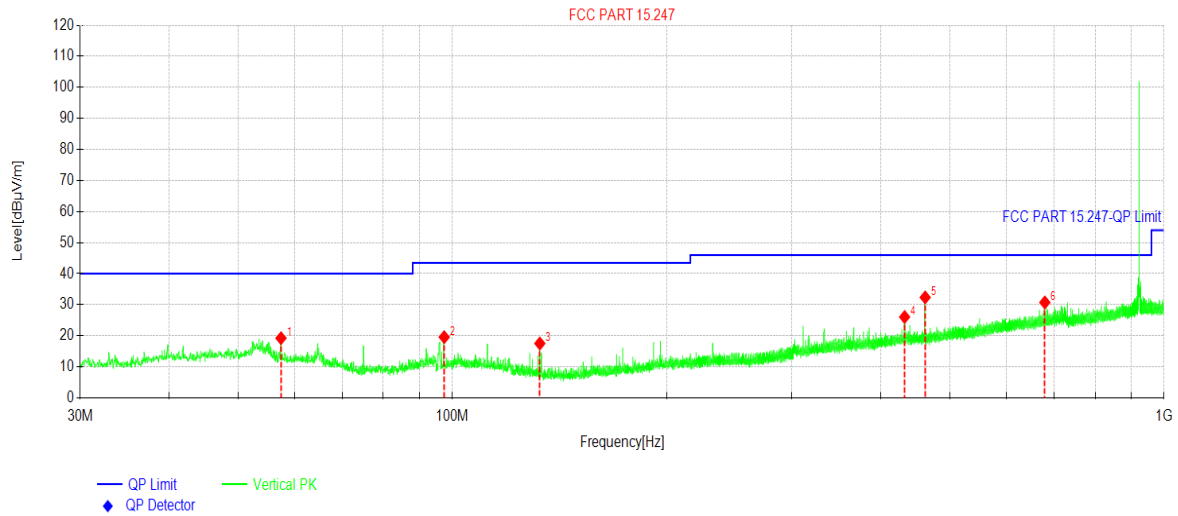
1. Level = Reading + FactorAntenna Factor + Cable Loss – Preamplifier Factor).

Suspected Data List

NO.	Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Trace	Polarity
1	45.7148	28.42	-12.64	15.78	40.00	24.22	PK	Horizontal
2	178.9995	36.27	-16.39	19.88	43.50	23.62	PK	Horizontal
3	253.4022	35.68	-13.15	22.53	46.00	23.47	PK	Horizontal
4	366.6068	34.96	-10.39	24.57	46.00	21.43	PK	Horizontal
5	456.3848	49.78	-8.51	41.27	46.00	4.73	PK	Horizontal
6	680.0295	35.48	-3.61	31.87	46.00	14.13	PK	Horizontal

923.5 MHz:

Product Name:	Skyhawk Duo Sensor	Model name:	SHDUOG
Polarization :	Vertical	Test Result:	☒ Pass ☐ Fail



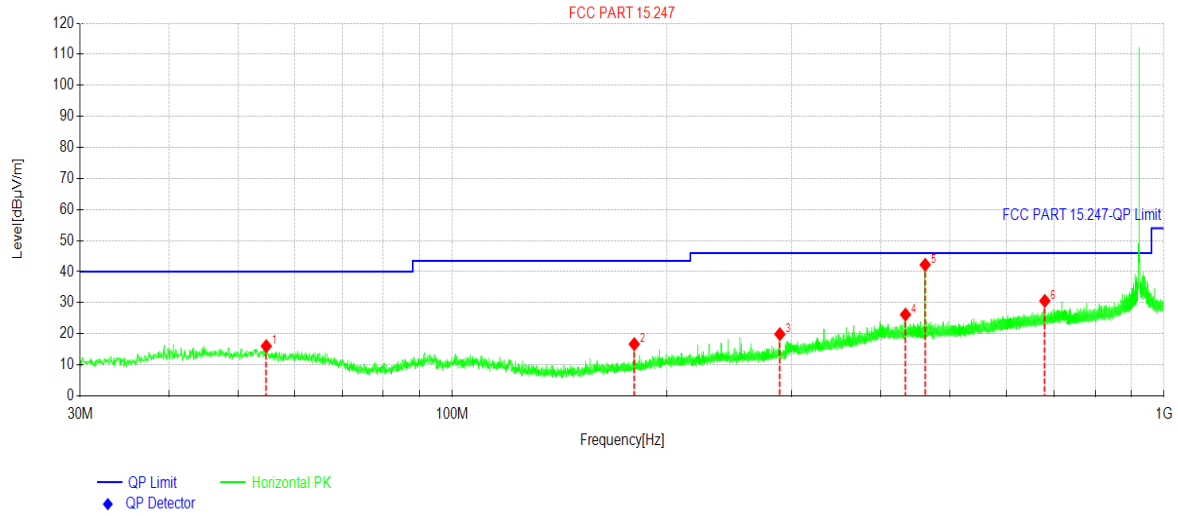
Remark:

1. Level = Reading + FactorAntenna Factor + Cable Loss – Preamplifier Factor).

Suspected Data List

NO.	Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Trace	Polarity
1	57.4524	32.99	-13.76	19.23	40.00	20.77	PK	Vertical
2	97.4184	34.31	-14.75	19.56	43.50	23.94	PK	Vertical
3	132.7281	35.06	-17.53	17.53	43.50	25.97	PK	Vertical
4	432.0366	34.88	-8.82	26.06	46.00	19.94	PK	Vertical
5	461.7201	40.77	-8.41	32.36	46.00	13.64	PK	Vertical
6	679.9810	34.34	-3.61	30.73	46.00	15.27	PK	Vertical

Product Name:	Skyhawk Duo Sensor	Model name:	SHDUOG
Polarization :	Horizontal	Test Result:	☒ Pass ☐ Fail



Remark:

1. Level = Reading + FactorAntenna Factor + Cable Loss – Preamplifier Factor).

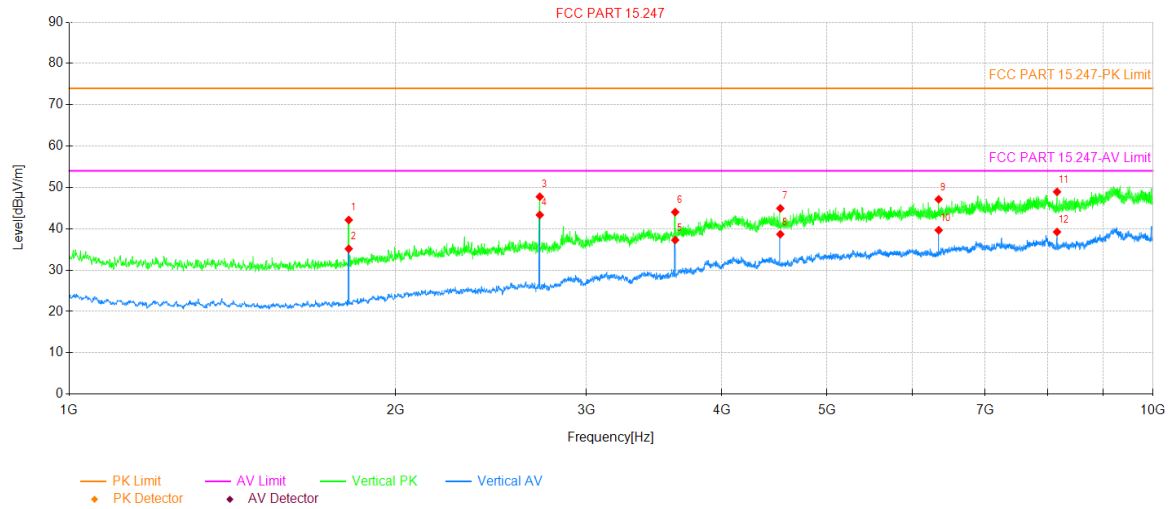
Suspected Data List

NO.	Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Trace	Polarity
1	54.7847	29.18	-13.15	16.03	40.00	23.97	PK	Horizontal
2	180.1635	32.92	-16.24	16.68	43.50	26.82	PK	Horizontal
3	288.5664	32.36	-12.48	19.88	46.00	26.12	PK	Horizontal
4	433.2492	34.96	-8.78	26.18	46.00	19.82	PK	Horizontal
5	461.7686	50.63	-8.41	42.22	46.00	3.78	PK	Horizontal
6	680.0295	34.20	-3.61	30.59	46.00	15.41	PK	Horizontal

Results for Radiated Emissions in Non-restricted Frequency Bands (Above 1GHz)

906 MHz:

Product Name:	Skyhawk Duo Sensor	Model name:	SHDUOG
Polarization :	Vertical	Test Result:	☒ Pass ☐ Fail

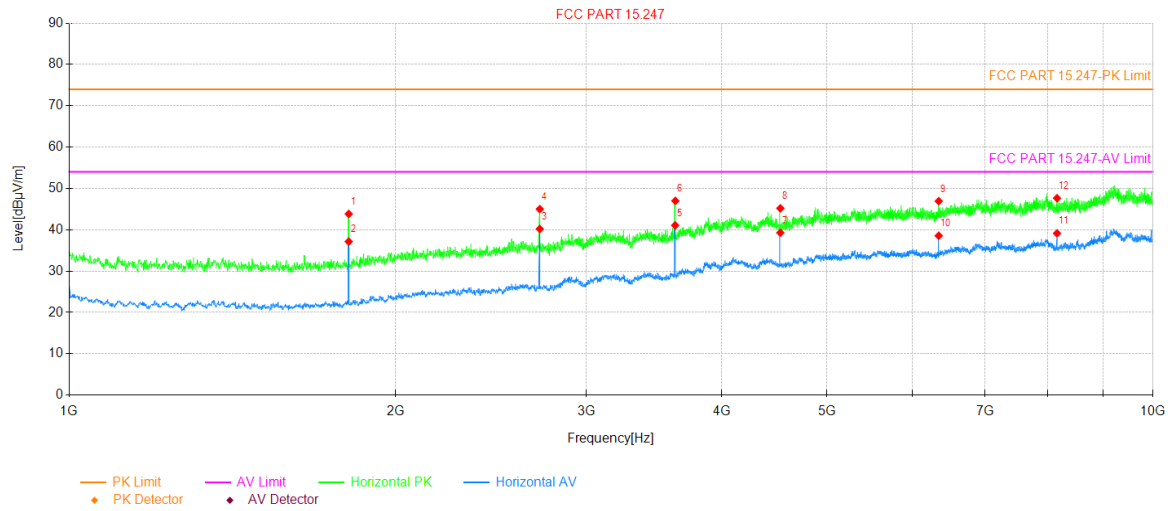


Remark:

1. Level = Reading + FactorAntenna Factor + Cable Loss – Preamplifier Factor).

Suspected Data List										
NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Verdict	Polarity
1	1811.13	64.84	-22.71	42.13	74.00	31.87	135	PK	PASS	Vertical
2	1811.13	57.87	-22.71	35.16	54.00	18.84	155	AV	PASS	Vertical
3	2717.88	65.29	-17.53	47.76	74.00	26.24	300	PK	PASS	Vertical
4	2717.88	60.87	-17.53	43.34	54.00	10.66	327	AV	PASS	Vertical
5	3623.50	50.15	-12.88	37.27	54.00	16.73	347	AV	PASS	Vertical
6	3623.50	56.92	-12.88	44.04	74.00	29.96	320	PK	PASS	Vertical
7	4530.25	53.98	-9.04	44.94	74.00	29.06	196	PK	PASS	Vertical
8	4530.25	47.73	-9.04	38.69	54.00	15.31	210	AV	PASS	Vertical
9	6341.50	53.15	-6.03	47.12	74.00	26.88	169	PK	PASS	Vertical
10	6342.63	45.69	-6.03	39.66	54.00	14.34	162	AV	PASS	Vertical
11	8155.00	51.19	-2.25	48.94	74.00	25.06	114	PK	PASS	Vertical
12	8155.00	41.49	-2.25	39.24	54.00	14.76	100	AV	PASS	Vertical

Product Name:	Skyhawk Duo Sensor	Model name:	SHDUOG
Polarization :	Horizontal	Test Result:	☒ Pass ☐ Fail



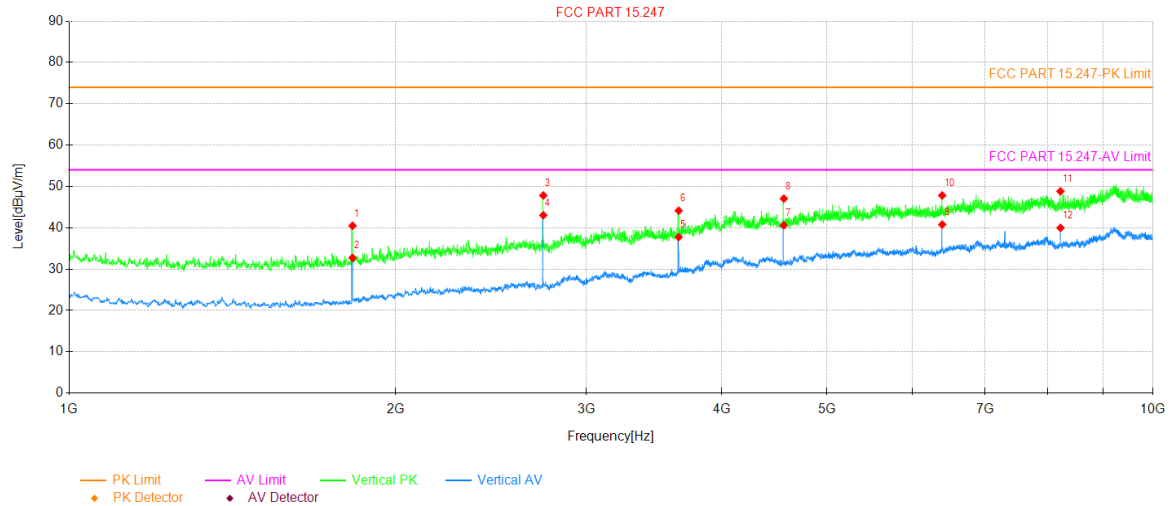
Remark:

1. Level = Reading + FactorAntenna Factor + Cable Loss – Preamplifier Factor).

Suspected Data List										
NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Verdict	Polarity
1	1811.13	66.54	-22.71	43.83	74.00	30.17	198	PK	PASS	Horizontal
2	1811.13	59.86	-22.71	37.15	54.00	16.85	191	AV	PASS	Horizontal
3	2717.88	57.73	-17.53	40.20	54.00	13.80	102	AV	PASS	Horizontal
4	2717.88	62.54	-17.53	45.01	74.00	28.99	20	PK	PASS	Horizontal
5	3623.50	53.95	-12.88	41.07	54.00	12.93	184	AV	PASS	Horizontal
6	3624.63	59.86	-12.86	47.00	74.00	27.00	355	PK	PASS	Horizontal
7	4530.25	48.33	-9.04	39.29	54.00	14.71	219	AV	PASS	Horizontal
8	4530.25	54.24	-9.04	45.20	74.00	28.80	211	PK	PASS	Horizontal
9	6342.63	52.96	-6.03	46.93	74.00	27.07	260	PK	PASS	Horizontal
10	6342.63	44.58	-6.03	38.55	54.00	15.45	253	AV	PASS	Horizontal
11	8155.00	41.39	-2.25	39.14	54.00	14.86	280	AV	PASS	Horizontal
12	8155.00	49.90	-2.25	47.65	74.00	26.35	280	PK	PASS	Horizontal

912.75 MHz:

Product Name:	Skyhawk Duo Sensor	Model name:	SHDUOG
Polarization :	Vertical	Test Result:	☒ Pass ☐ Fail

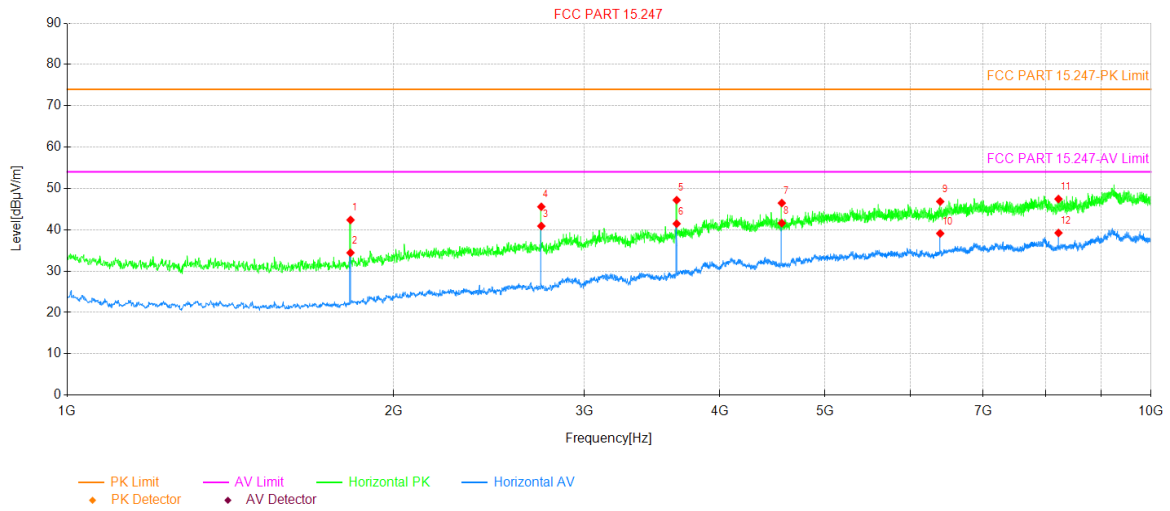


Remark:

1. Level = Reading + FactorAntenna Factor + Cable Loss – Preamplifier Factor).

Suspected Data List										
NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Verdict	Polarity
1	1825.75	63.03	-22.53	40.50	74.00	33.50	319	PK	PASS	Vertical
2	1825.75	55.25	-22.53	32.72	54.00	21.28	133	AV	PASS	Vertical
3	2738.13	65.31	-17.49	47.82	74.00	26.18	299	PK	PASS	Vertical
4	2738.13	60.53	-17.49	43.04	54.00	10.96	299	AV	PASS	Vertical
5	3650.50	50.07	-12.32	37.75	54.00	16.25	333	AV	PASS	Vertical
6	3650.50	56.47	-12.32	44.15	74.00	29.85	333	PK	PASS	Vertical
7	4564.00	49.70	-9.10	40.60	54.00	13.40	140	AV	PASS	Vertical
8	4564.00	56.15	-9.10	47.05	74.00	26.95	140	PK	PASS	Vertical
9	6389.88	46.47	-5.69	40.78	54.00	13.22	161	AV	PASS	Vertical
10	6389.88	53.51	-5.69	47.82	74.00	26.18	161	PK	PASS	Vertical
11	8214.63	51.18	-2.36	48.82	74.00	25.18	98	PK	PASS	Vertical
12	8215.75	42.35	-2.36	39.99	54.00	14.01	126	AV	PASS	Vertical

Product Name:	Skyhawk Duo Sensor	Model name:	SHDUOG
Polarization :	Horizontal	Test Result:	☒ Pass ☐ Fail



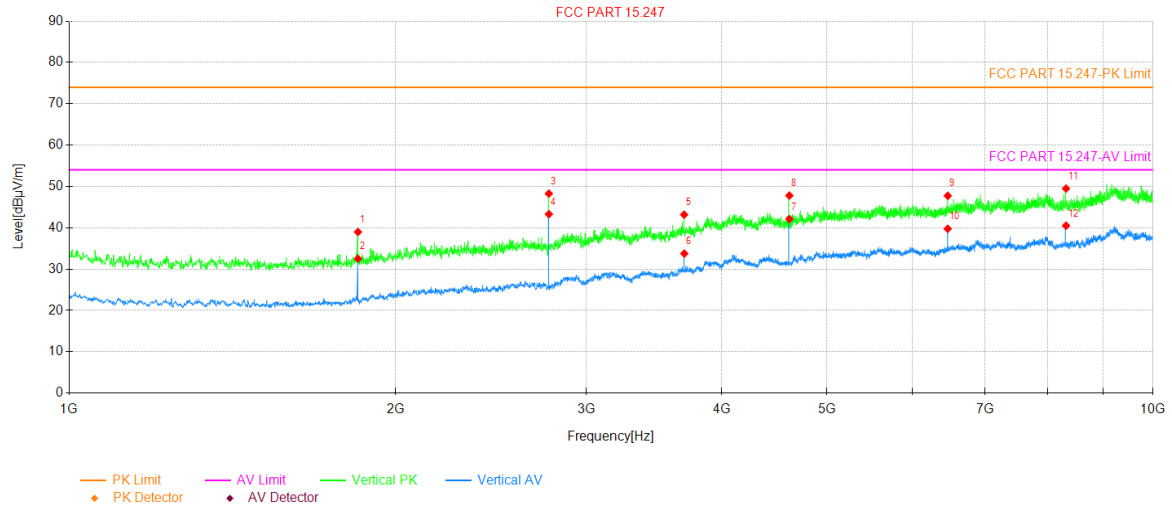
Remark:

1. Level = Reading + FactorAntenna Factor + Cable Loss – Preamplifier Factor).

Suspected Data List										
NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Verdict	Polarity
1	1825.75	64.91	-22.53	42.38	74.00	31.62	184	PK	PASS	Horizontal
2	1825.75	56.97	-22.53	34.44	54.00	19.56	192	AV	PASS	Horizontal
3	2738.13	58.39	-17.49	40.90	54.00	13.10	95	AV	PASS	Horizontal
4	2738.13	63.06	-17.49	45.57	74.00	28.43	81	PK	PASS	Horizontal
5	3650.50	59.50	-12.32	47.18	74.00	26.82	239	PK	PASS	Horizontal
6	3650.50	53.78	-12.32	41.46	54.00	12.54	343	AV	PASS	Horizontal
7	4564.00	55.57	-9.10	46.47	74.00	27.53	212	PK	PASS	Horizontal
8	4564.00	50.71	-9.10	41.61	54.00	12.39	212	AV	PASS	Horizontal
9	6389.88	52.53	-5.69	46.84	74.00	27.16	226	PK	PASS	Horizontal
10	6389.88	44.80	-5.69	39.11	54.00	14.89	246	AV	PASS	Horizontal
11	8214.63	49.81	-2.36	47.45	74.00	26.55	274	PK	PASS	Horizontal
12	8215.75	41.61	-2.36	39.25	54.00	14.75	246	AV	PASS	Horizontal

923.5 MHz:

Product Name:	Skyhawk Duo Sensor	Model name:	SHDUOG
Polarization :	Vertical	Test Result:	☒ Pass ☐ Fail

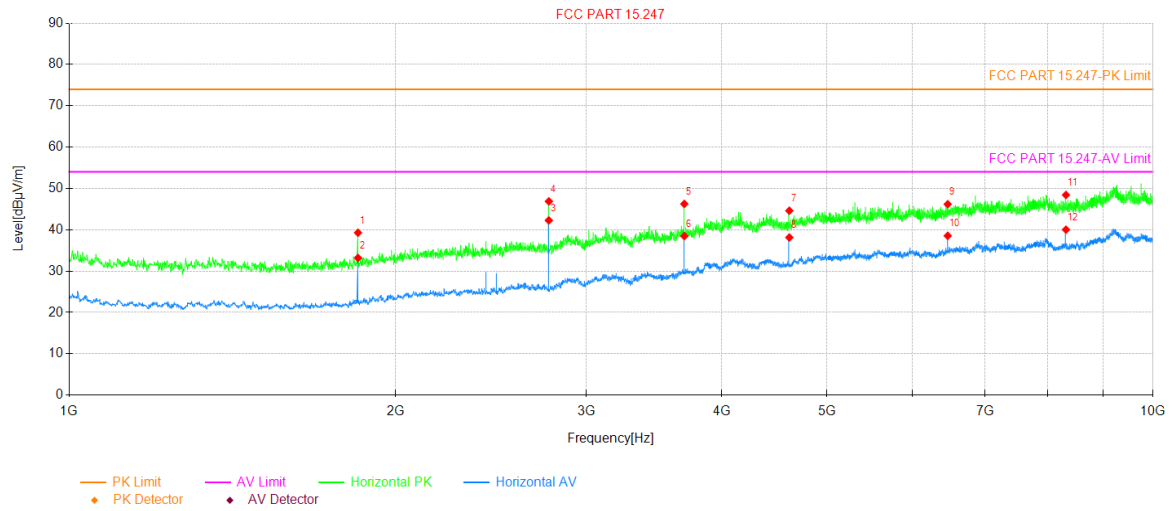


Remark:

1. Level = Reading + FactorAntenna Factor + Cable Loss – Preamplifier Factor).

Suspected Data List										
NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Verdict	Polarity
1	1847.13	61.27	-22.28	38.99	74.00	35.01	150	PK	PASS	Vertical
2	1847.13	54.80	-22.28	32.52	54.00	21.48	158	AV	PASS	Vertical
3	2770.75	65.69	-17.42	48.27	74.00	25.73	312	PK	PASS	Vertical
4	2770.75	60.71	-17.42	43.29	54.00	10.71	312	AV	PASS	Vertical
5	3693.25	54.51	-11.34	43.17	74.00	30.83	340	PK	PASS	Vertical
6	3694.38	45.07	-11.31	33.76	54.00	20.24	353	AV	PASS	Vertical
7	4618.00	51.04	-8.93	42.11	54.00	11.89	207	AV	PASS	Vertical
8	4618.00	56.72	-8.93	47.79	74.00	26.21	207	PK	PASS	Vertical
9	6465.25	52.94	-5.20	47.74	74.00	26.26	172	PK	PASS	Vertical
10	6465.25	44.96	-5.20	39.76	54.00	14.24	249	AV	PASS	Vertical
11	8312.50	51.78	-2.29	49.49	74.00	24.51	112	PK	PASS	Vertical
12	8312.50	42.80	-2.29	40.51	54.00	13.49	112	AV	PASS	Vertical

Product Name:	Skyhawk Duo Sensor	Model name:	SHDUOG
Polarization :	Horizontal	Test Result:	☒ Pass ☐ Fail



Remark:

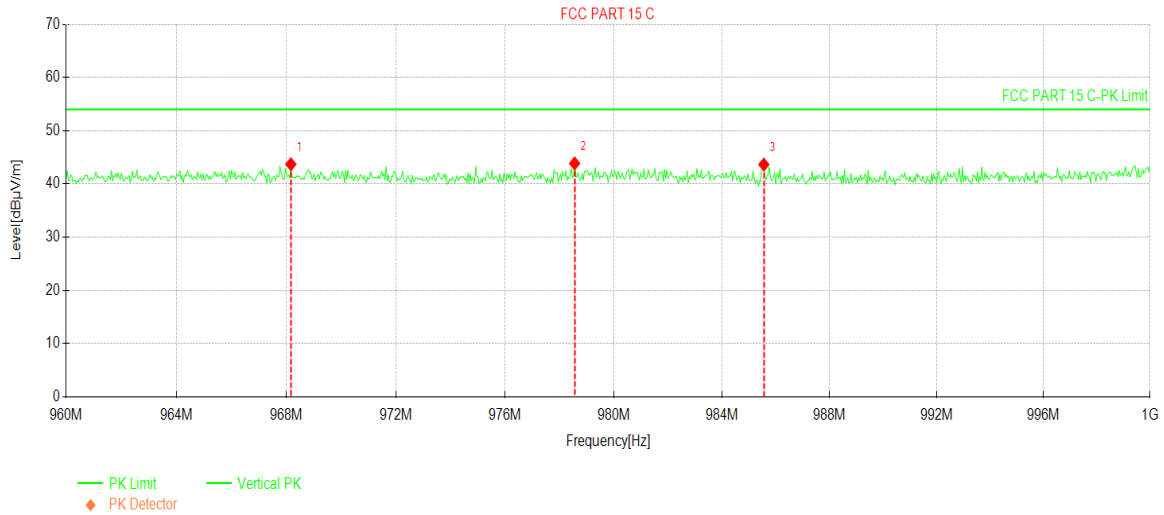
1. Level = Reading + FactorAntenna Factor + Cable Loss – Preamplifier Factor).

Suspected Data List										
NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Verdict	Polarity
1	1847.13	61.58	-22.28	39.30	74.00	34.70	199	PK	PASS	Horizontal
2	1847.13	55.47	-22.28	33.19	54.00	20.81	192	AV	PASS	Horizontal
3	2770.75	59.70	-17.42	42.28	54.00	11.72	82	AV	PASS	Horizontal
4	2770.75	64.30	-17.42	46.88	74.00	27.12	75	PK	PASS	Horizontal
5	3694.38	57.57	-11.31	46.26	74.00	27.74	357	PK	PASS	Horizontal
6	3694.38	49.79	-11.31	38.48	54.00	15.52	351	AV	PASS	Horizontal
7	4618.00	53.55	-8.93	44.62	74.00	29.38	344	PK	PASS	Horizontal
8	4618.00	47.07	-8.93	38.14	54.00	15.86	186	AV	PASS	Horizontal
9	6465.25	51.40	-5.20	46.20	74.00	27.80	33	PK	PASS	Horizontal
10	6465.25	43.75	-5.20	38.55	54.00	15.45	247	AV	PASS	Horizontal
11	8311.38	50.74	-2.30	48.44	74.00	25.56	240	PK	PASS	Horizontal
12	8311.38	42.34	-2.30	40.04	54.00	13.96	247	AV	PASS	Horizontal

Results for Radiated Emissions in Restricted Frequency Bands

906 MHz:

Product Name:	Skyhawk Duo Sensor	Model name:	SHDUOG
Test Channel:	Lowest channel	Polarization :	Vertical
Test Result:	☒ Pass ☐ Fail		



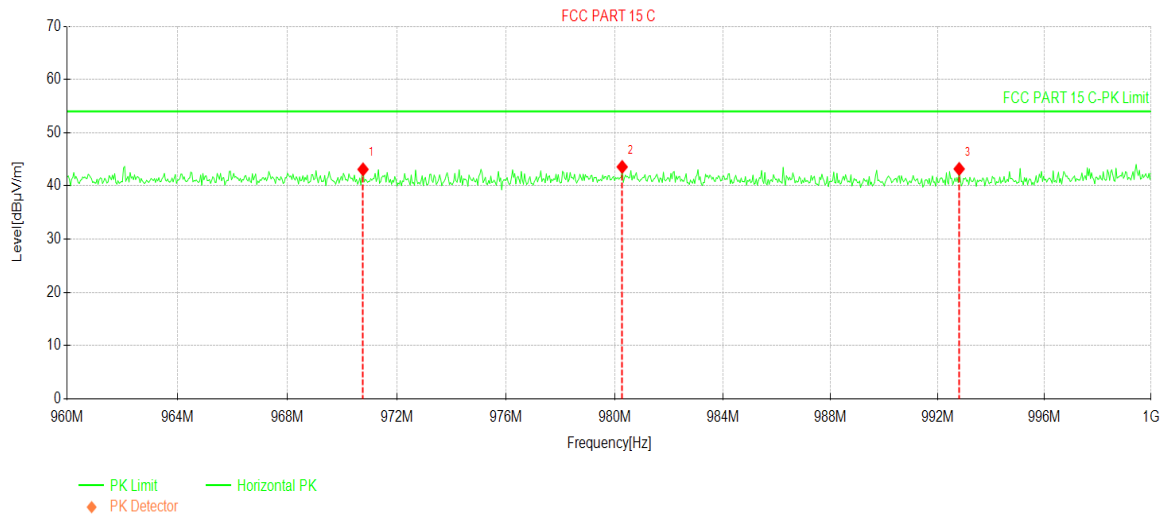
Remark:

1. Level = Reading + FactorAntenna Factor + Cable Loss – Preamplifier Factor).

Suspected Data List

NO.	Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Trace	Polarity
1	968.1600	15.72	27.99	43.71	54.00	10.29	PK	Vertical
2	978.5600	15.89	27.97	43.86	54.00	10.14	PK	Vertical
3	985.5600	15.66	27.98	43.64	54.00	10.36	PK	Vertical

Product Name:	Skyhawk Duo Sensor	Model name:	SHDUOG
Test Channel:	Lowest channel	Polarization :	Horizontal
Test Result:	☒ Pass ☐ Fail		



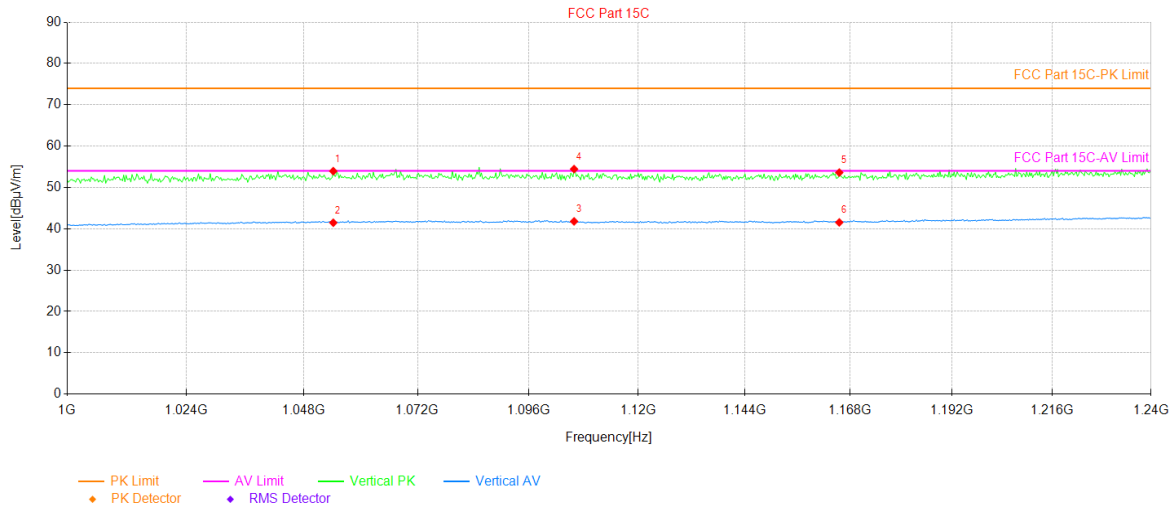
Remark:

1. Level = Reading + FactorAntenna Factor + Cable Loss – Preamplifier Factor).

Suspected Data List

NO.	Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Trace	Polarity
1	970.7600	15.09	28.02	43.11	54.00	10.89	PK	Horizontal
2	980.2800	15.60	27.97	43.57	54.00	10.43	PK	Horizontal
3	992.8000	15.12	28.07	43.19	54.00	10.81	PK	Horizontal

Product Name:	Skyhawk Duo Sensor	Model name:	SHDUOG
Test Channel:	Highest channel	Polarization :	Vertical
Test Result:	☒ Pass ☐ Fail		

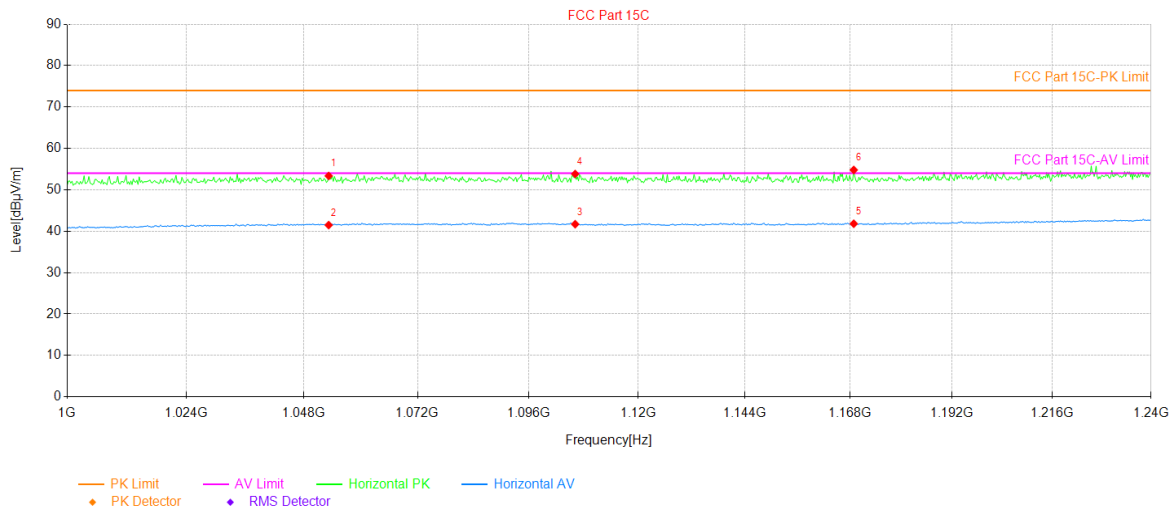


Remark:

1. Level = Reading + FactorAntenna Factor + Cable Loss – Preamplifier Factor).

Suspected Data List										
NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Verdict	Polarity
1	1054.24	23.78	30.17	53.95	74.00	20.05	190	PK	PASS	Vertical
2	1054.24	11.30	30.17	41.47	54.00	12.53	10	AV	PASS	Vertical
3	1105.84	11.37	30.43	41.80	54.00	12.20	60	AV	PASS	Vertical
4	1105.84	24.02	30.43	54.45	74.00	19.55	90	PK	PASS	Vertical
5	1165.60	22.96	30.65	53.61	74.00	20.39	260	PK	PASS	Vertical
6	1165.60	10.90	30.65	41.55	54.00	12.45	260	AV	PASS	Vertical

Product Name:	Skyhawk Duo Sensor	Model name:	SHDUOG
Test Channel:	Highest channel	Polarization :	Horizontal
Test Result:	☒ Pass ☐ Fail		



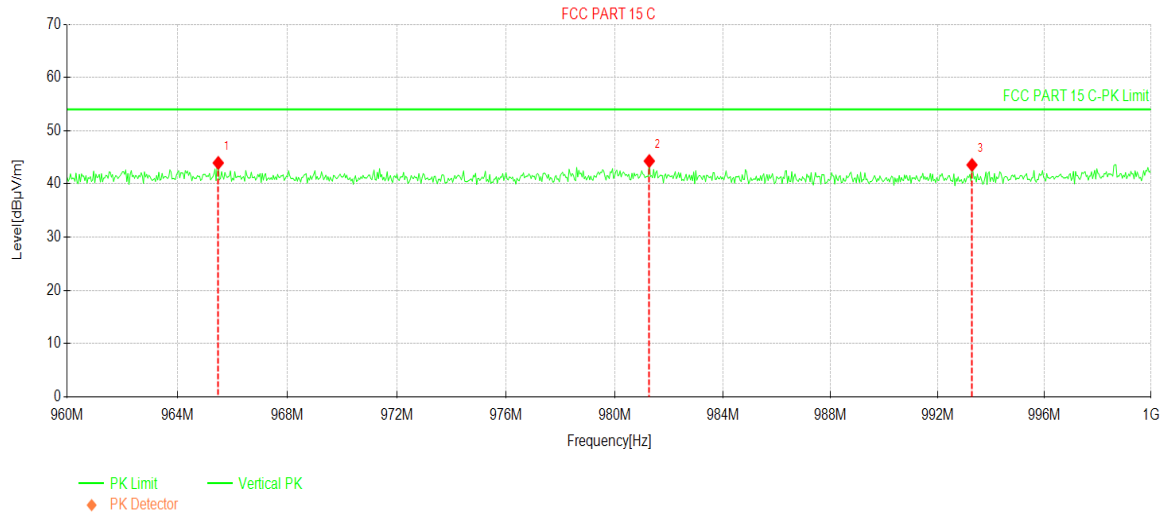
Remark:

1. Level = Reading + FactorAntenna Factor + Cable Loss – Preamplifier Factor).

Suspected Data List										
NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Verdict	Polarity
1	1053.28	23.19	30.17	53.36	74.00	20.64	220	PK	PASS	Horizont
2	1053.28	11.32	30.17	41.49	54.00	12.51	170	AV	PASS	Horizont
3	1106.08	11.27	30.43	41.70	54.00	12.30	230	AV	PASS	Horizont
4	1106.08	23.39	30.43	53.82	74.00	20.18	330	PK	PASS	Horizont
5	1168.96	11.16	30.66	41.82	54.00	12.18	50	AV	PASS	Horizont
6	1168.96	24.14	30.66	54.80	74.00	19.20	60	PK	PASS	Horizont

912.75 MHz:

Product Name:	Skyhawk Duo Sensor	Model name:	SHDUOG
Test Channel:	Lowest channel	Polarization :	Vertical
Test Result:	☒ Pass ☐ Fail		

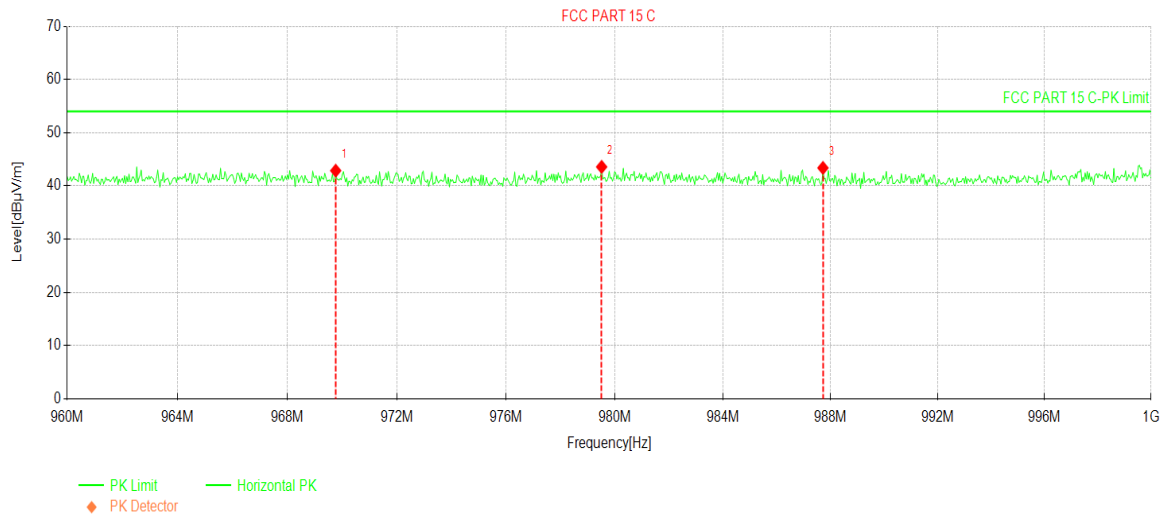

Remark:

1. Level = Reading + FactorAntenna Factor + Cable Loss – Preamplifier Factor).

Suspected Data List

NO.	Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Trace	Polarity
1	965.4800	16.03	27.92	43.95	54.00	10.05	PK	Vertical
2	981.2800	16.33	27.97	44.30	54.00	9.70	PK	Vertical
3	993.2800	15.48	28.09	43.57	54.00	10.43	PK	Vertical

Product Name:	Skyhawk Duo Sensor	Model name:	SHDUOG
Test Channel:	Lowest channel	Polarization :	Horizontal
Test Result:	☒ Pass ☐ Fail		



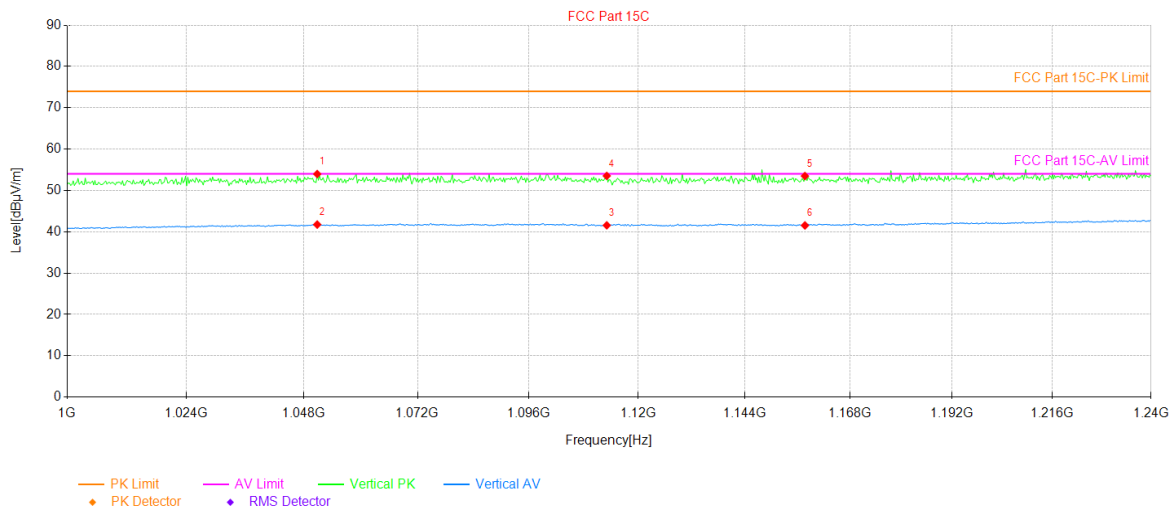
Remark:

1. Level = Reading + FactorAntenna Factor + Cable Loss – Preamplifier Factor).

Suspected Data List

NO.	Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Trace	Polarity
1	969.7600	14.84	28.03	42.87	54.00	11.13	PK	Horizontal
2	979.5200	15.61	27.97	43.58	54.00	10.42	PK	Horizontal
3	987.7200	15.45	27.94	43.39	54.00	10.61	PK	Horizontal

Product Name:	Skyhawk Duo Sensor	Model name:	SHDUOG
Test Channel:	Highest channel	Polarization :	Vertical
Test Result:	☒ Pass ☐ Fail		

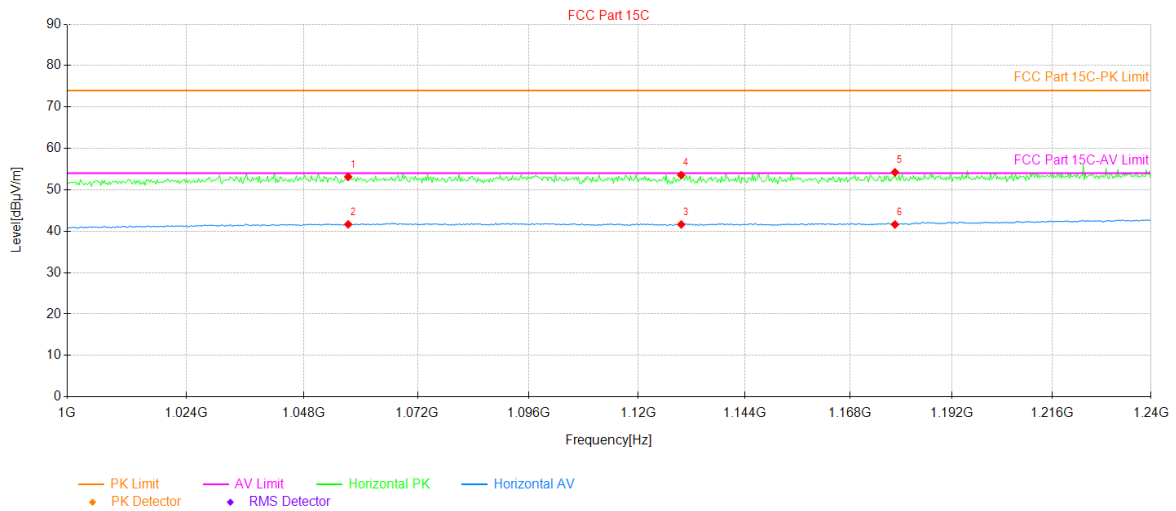


Remark:

1. Level = Reading + FactorAntenna Factor + Cable Loss – Preamplifier Factor).

Suspected Data List										
NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Verdict	Polarity
1	1050.88	23.83	30.15	53.98	74.00	20.02	140	PK	PASS	Vertical
2	1050.88	11.60	30.15	41.75	54.00	12.25	190	AV	PASS	Vertical
3	1113.04	11.09	30.47	41.56	54.00	12.44	170	AV	PASS	Vertical
4	1113.04	23.05	30.47	53.52	74.00	20.48	260	PK	PASS	Vertical
5	1157.68	22.85	30.64	53.49	74.00	20.51	110	PK	PASS	Vertical
6	1157.68	10.90	30.64	41.54	54.00	12.46	80	AV	PASS	Vertical

Product Name:	Skyhawk Duo Sensor	Model name:	SHDUOG
Test Channel:	Highest channel	Polarization :	Horizontal
Test Result:	☒ Pass ☐ Fail		



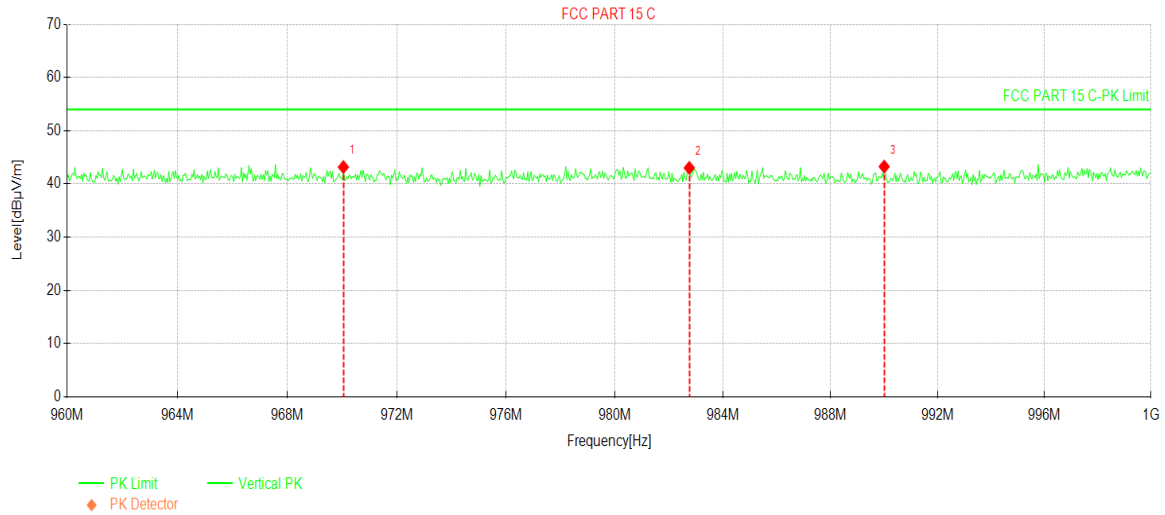
Remark:

1. Level = Reading + FactorAntenna Factor + Cable Loss – Preamplifier Factor).

Suspected Data List										
NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Verdict	Polarity
1	1057.36	22.96	30.18	53.14	74.00	20.86	160	PK	PASS	Horizontal
2	1057.36	11.48	30.18	41.66	54.00	12.34	40	AV	PASS	Horizontal
3	1129.60	11.09	30.55	41.64	54.00	12.36	180	AV	PASS	Horizontal
4	1129.60	23.02	30.55	53.57	74.00	20.43	280	PK	PASS	Horizontal
5	1178.56	23.56	30.68	54.24	74.00	19.76	20	PK	PASS	Horizontal
6	1178.56	10.95	30.68	41.63	54.00	12.37	230	AV	PASS	Horizontal

923.5 MHz:

Product Name:	Skyhawk Duo Sensor	Model name:	SHDUOG
Test Channel:	Lowest channel	Polarization :	Vertical
Test Result:	☒ Pass ☐ Fail		

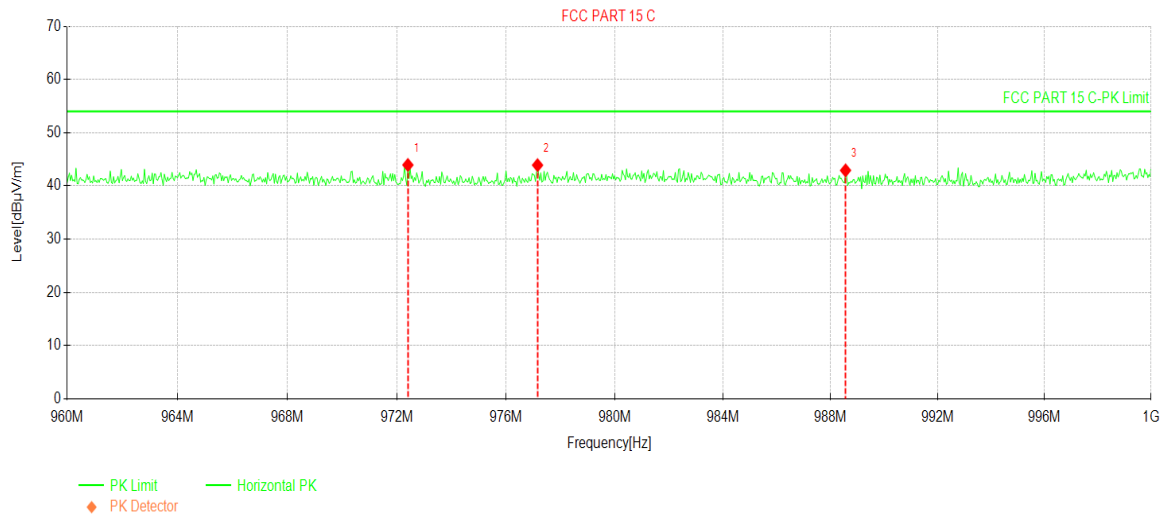

Remark:

1. Level = Reading + FactorAntenna Factor + Cable Loss – Preamplifier Factor).

Suspected Data List

NO.	Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Trace	Polarity
1	970.0400	15.14	28.03	43.17	54.00	10.83	PK	Vertical
2	982.7600	15.03	27.98	43.01	54.00	10.99	PK	Vertical
3	990.0000	15.30	27.96	43.26	54.00	10.74	PK	Vertical

Product Name:	Skyhawk Duo Sensor	Model name:	SHDUOG
Test Channel:	Lowest channel	Polarization :	Horizontal
Test Result:	☒ Pass ☐ Fail		



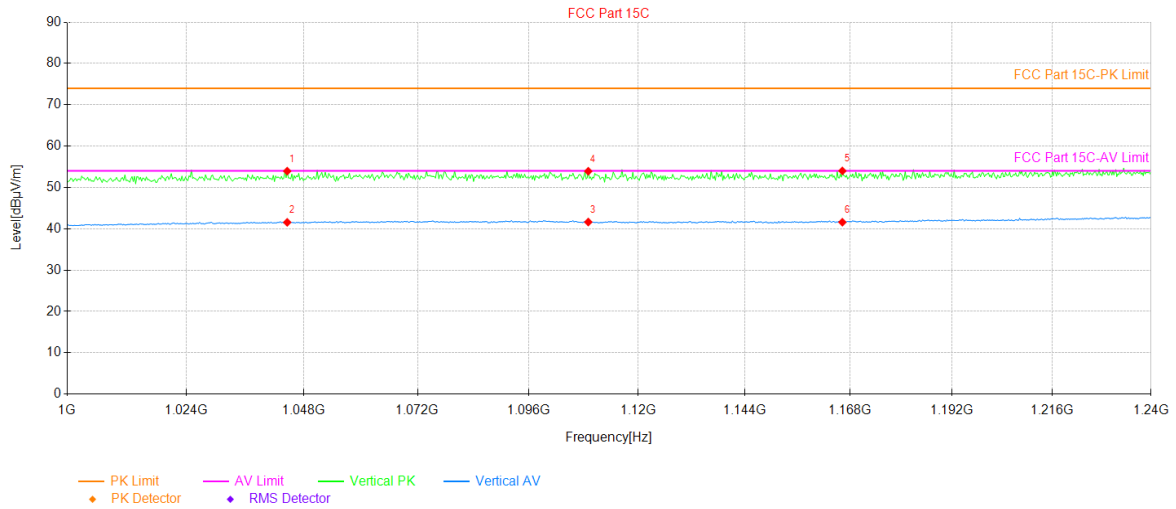
Remark:

1. Level = Reading + FactorAntenna Factor + Cable Loss – Preamplifier Factor).

Suspected Data List

NO.	Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Trace	Polarity
1	972.4000	15.94	28.00	43.94	54.00	10.06	PK	Horizontal
2	977.1600	15.95	27.96	43.91	54.00	10.09	PK	Horizontal
3	988.5600	14.99	27.93	42.92	54.00	11.08	PK	Horizontal

Product Name:	Skyhawk Duo Sensor	Model name:	SHDUOG
Test Channel:	Highest channel	Polarization :	Vertical
Test Result:	☒ Pass ☐ Fail		

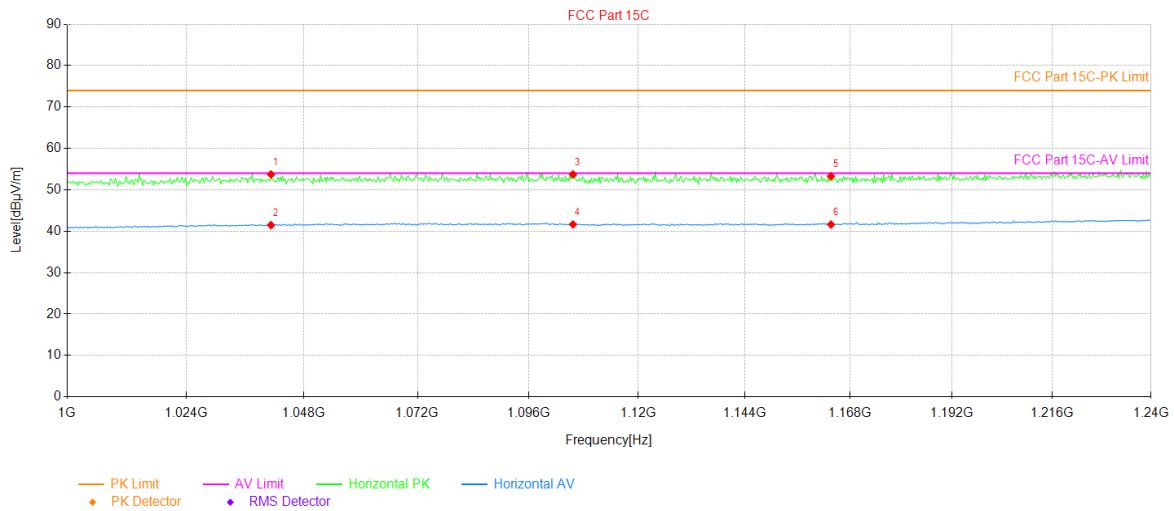


Remark:

1. Level = Reading + FactorAntenna Factor + Cable Loss – Preamplifier Factor).

Suspected Data List										
NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Verdict	Polarity
1	1044.64	23.84	30.11	53.95	74.00	20.05	150	PK	PASS	Vertical
2	1044.64	11.46	30.11	41.57	54.00	12.43	130	AV	PASS	Vertical
3	1108.96	11.19	30.45	41.64	54.00	12.36	90	AV	PASS	Vertical
4	1108.96	23.48	30.45	53.93	74.00	20.07	120	PK	PASS	Vertical
5	1166.32	23.36	30.65	54.01	74.00	19.99	350	PK	PASS	Vertical
6	1166.32	10.95	30.65	41.60	54.00	12.40	70	AV	PASS	Vertical

Product Name:	Skyhawk Duo Sensor	Model name:	SHDUOG
Test Channel:	Highest channel	Polarization :	Horizontal
Test Result:	☒ Pass ☐ Fail		



Remark:

1. Level = Reading + FactorAntenna Factor + Cable Loss – Preamplifier Factor).

Suspected Data List										
NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Verdict	Polarity
1	1041.28	23.63	30.09	53.72	74.00	20.28	90	PK	PASS	Horizontal
2	1041.28	11.39	30.09	41.48	54.00	12.52	110	AV	PASS	Horizontal
3	1105.60	23.29	30.43	53.72	74.00	20.28	310	PK	PASS	Horizontal
4	1105.60	11.22	30.43	41.65	54.00	12.35	80	AV	PASS	Horizontal
5	1163.68	22.64	30.65	53.29	74.00	20.71	260	PK	PASS	Horizontal
6	1163.68	10.98	30.65	41.63	54.00	12.37	180	AV	PASS	Horizontal

Remarks:

- 1). Measuring frequencies from 9 KHz - 10th harmonic or 26.5GHz (which is less), No emission found between lowest internal used/generated frequency to 30MHz.
- 2). Radiated emissions measured in frequency range from 9 KHz~10th harmonic or 26.5GHz (which is less) were made with an instrument using Peak detector mode.
- 3). All other emissions are attenuated more than 20dB below the permissible limits so it does not recorded in the report.

7 Test Setup Photographs of EUT

Please refer to separated files for Test Setup Photos of the EUT.

8 External Photographs of EUT

Please refer to separated files for External Photos of the EUT.

9 Internal Photographs of EUT

Please refer to separated files for Internal Photos of the EUT.

-----End-----