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SAMM 086

TEST REPORT

REPORT NO.: 2022RE0120
FCC ID :: 2A65I-GC866995

PAGE : 1 OF 10

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THIS TEST REPORT IS ISSUED IN SECURED PDF SOFTCOPY

Applicant	:	PICOSYS SDN. BHD. (1274094-H) SS-02-26 Sky-Pod Square, Persiaran Puchong Jaya Selatan, Pusat Bandar Puchong, 471000 Puchong Selangor, Malaysia
Manufacturer	:	PICOSYS SDN. BHD. (1274094-H)
Product	:	Online Rehab Virtual Assistance
Reference Standard / Method of test	:	FCC Part 15 Subpart B/ ANSI C63.4: 2014
Description of Sample	:	Brand Name : PICOSYS Model : ORVA
Date Received of Complete Application	:	07 FEBRUARY 2023
Job No.	:	J20221410015
Overall Test Result	:	The test results for submitted test sample as described in this test report complied with the requirement of the above Reference Standard
Issued Date	:	09 MARCH 2023

Approved Signatories,

.....
(AZIZUL AZMAN JAAFAR)
Group Leader
EMC Laboratory



.....
(ZARISMAIL ABD RAHMAN)
Head
RF & EMC Testing Section
Testing Services Department

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1. SUMMARY OF TEST RESULTS

Measurement Item	Result	Testing Date
1. AC Power Conducted Emission Measurement	*N/A	-
2. Radiated Emission Measurement	PASS	7 February 2023

*Note : N/A – Not tested due to product is battery operated and adapter is not included in sample set.

ADDITIONAL INFORMATION

Tested by	MUHAMMAD ZAREF ZAINORDIN
Reviewed by	AZIZUL AZMAN JAAFAR



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2. TEST METHODOLOGY

Radio disturbance characteristic measurement was performed in the semi-anechoic chamber and shielded enclosure room for radiated and conducted emission respectively according to the **FCC Rules and Regulations Part 15 Subpart B.**

3. OPERATING CONDITION

3.1 EUT description

No	Item	Description
1.	Product Name	Online Rehab Virtual Assistance
2.	Model No.	ORVA
3.	Serial No.	-
4.	EUT Power rating	80mAH
5.	Highest Frequency of Internal source of EUT	> 1 GHz
6.	Operating Mode	Normal Operating – Pairing with ORVA Test App version v0.01 via Bluetooth mode
7.	Device Class	Class B

3.2 Description of Supporting Equipment Used During Test: NIL

3.3 Modification on EUT NIL

3.4 Testing Facility

FCC Designation No : MY 0005
SIRIM QAS International Sdn Bhd
Block 11, Sirim Complex
No. 1, Persiaran Dato Menteri, Section 2
40 700 Shah Alam, Selangor Darul Ehsan
Malaysia



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3.3 Measurement Uncertainty

Where relevant, the following measurement uncertainty levels has been estimated for tests performed on the EUT as specified in CISPR-16-4-2.

This measurement uncertainty represents an expanded uncertainty expressed approximately the 95% confidence level using a coverage factor of $k=2$

Measurement	Frequency	Lab Uncertainty, U_{lab} (dB)
Conducted Emission	150kHz – 30MHz	± 2.33
Radiated Emission	30MHz – 1GHz	± 3.93
	1GHz – 6GHz	± 4.93
	6GHz – 18GHz	± 4.98
	18GHz – 26GHz	± 5.03
	26GHz – 40GHz	± 4.88

The listed uncertainties are the worst-case uncertainty for the entire range of measurement. Please note that the measurement uncertainty values are provided for informational purposes only and are not used in determining the PASS/FAIL results in condition of U_{lab} is smaller than U_{CISPR} given in CISPR 16-4-2.



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4. RADIATED EMISSIONS MEASUREMENT

4.1 Test Description

- 4.2.1 The radiated emission measurement was performed in accordance to the procedure set forth in the FCC Part 15 Subpart B (as shown in Figure 1 and Figure 2)
- 4.2.2 The test was performed in Semi Anechoic Chamber.
- 4.2.3 The relevant antenna was mounted on a remotely controlled antenna mast and the antenna was set at a distance 3m away from the EUT.
- 4.2.4 The antenna height varied from 1m to 4m above the ground to determine the maximum value of the field strength. The table was rotated 360° for both horizontal and vertical polarization.

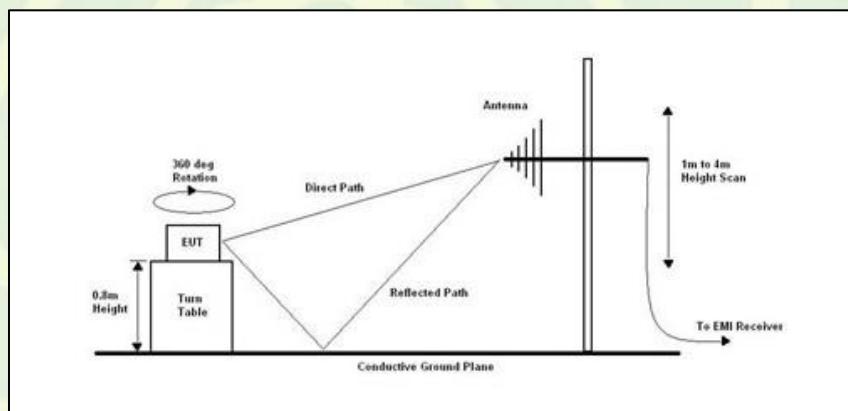


Figure 4.1-1: Test set-up Radiated Emission Measurement Below 1GHz

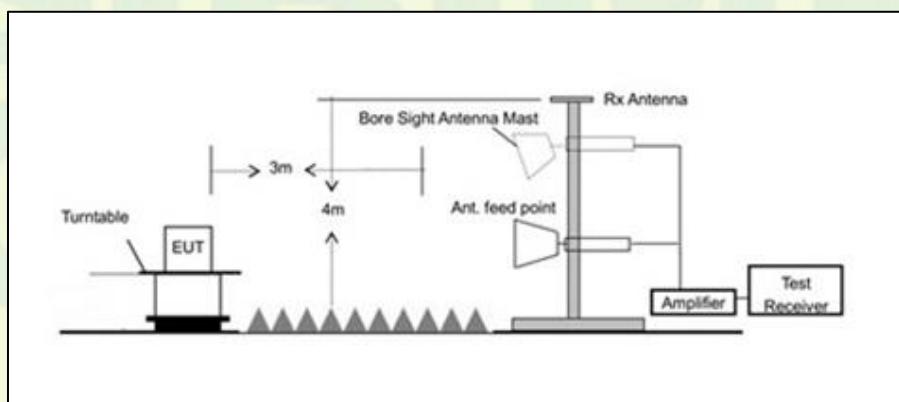
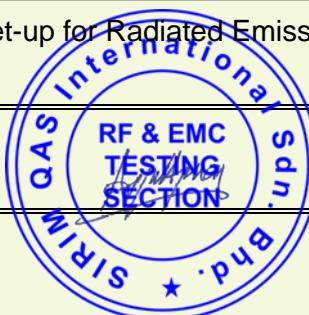


Figure 4.1-2: Test set-up for Radiated Emission Measurement Above 1 GHz



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4.3 Test Method

- 4.3.1 The EUT and EMI Test System were switched on and allowed to warm up for a period of approximately 30 minutes.
- 4.3.2 The antenna mast was set at 3m from the EUT. Trilog antenna was used for measurement from 30MHz to 1GHz. For above 1GHz measurement, boresight antenna mast has been set. Horn antenna was used for measurement 1GHz to 40GHz.
- 4.3.3 A pre-scan from 30MHz to 1GHz with PEAK detection mode is carried out. The EUT has been rotated through three orthogonal axis in x-y-z orientation as in Figure 4.3 to determine the maximum emissions and only worst case orientation is recorded in the test report.

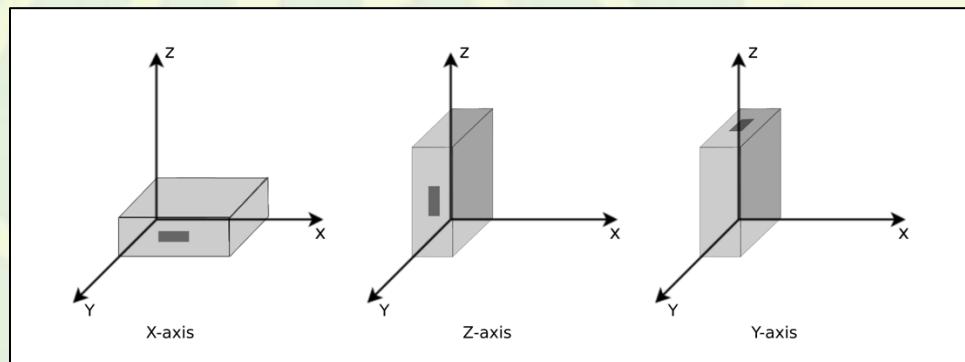


Figure 4.3: X-Y-Z axis position

- 4.3.5 Several highest frequencies for quasi-peak measurement were selected and compared with the quasi-peak limit line for measurement below 1GHz.
- 4.3.6 Step 4.3.3 above was repeated for frequency range of 1GHz to 8GHz, 8GHz to 18GHz and 18GHz to 40GHz.
- 4.3.7 Several highest frequencies for peak measurement were selected and compared with the peak limit line as well as for average reading respectively.



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4.4 Test Limit

Testing limits are as defined in FCC Part 15 Subpart B Section 15.109

Testing limit for 30 MHz to 1 GHz measurement

Class	Frequency (MHz)	Limit (dBuV/m) Quasi Peak
Class B	30 to 88	40
	88 to 216	43.5
	216 to 960	46
	960 to 1000	54

Testing limit for 1 GHz to 40 GHz measurement

Class	Frequency (MHz)	Limit (dBuV/m) Peak	Limit (dBuV/m) Average
Class B	1000 to 40 000	74	54

4.4 Test Results

No.	Mode	Frequency Range	Antenna Polarity	Result	Remark
1	Normal Operating – Pairing with ORVA Test App version v0.01 via Bluetooth mode (The maximum emissions were detected at y-axis.)	30 - 1000 MHz	Horizontal & Vertical	Pass	Appendix I
2		1 - 8 GHz	Horizontal & Vertical	Pass	Appendix II
3		8 - 18 GHz	Horizontal & Vertical	Pass	Appendix III
4		18 - 40 GHz	Horizontal & Vertical	Pass	Appendix IV



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5. TEST INSTRUMENTS

No.	Equipment	Manufacturer	Model	Serial No.	Cal Due
1	EMI Receiver System	Rohde & Schwarz	ESW8	101094	30.11.2023
2.	Trilog Broadband Antenna	Schwarzbeck	VULB 9163	9163-567	06.10.2023
3.	Horn Antenna	Schwarzbeck	BBHA 9120D	D221	15.07.2024
4.	Horn Antenna 40GB	A INFO	LB-180400-20-C-KF	J211060430	17.10.2023
5.	Pre-amplifier	A.H. Systems, inc.	PAM-0207	264	-
6.	RF Cable	-	-	-	-



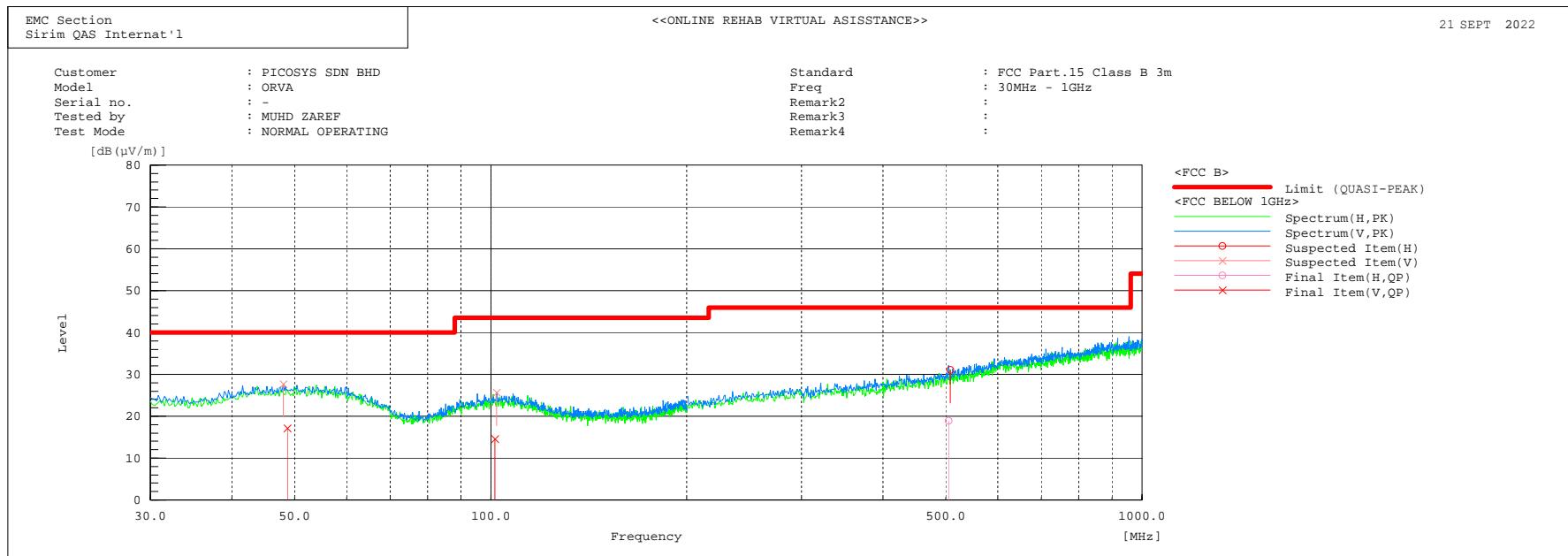
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CONDITIONS RELATING TO THE USE OF SIRIM QAS INTERNATIONAL TEST REPORT

1. A Test Report will be issued in respect of Testing Services conducted and shall relate only to the sample actually tested. SIRIM QAS International makes no warranty whatsoever and the Applicant shall not represent in any manner that any duplication or mass production of the Product is same as the sample actually tested or that SIRIM QAS International has tested any of the duplicated or mass-produced Product. Measurement uncertainty shall be included in the Test Report when there is no statement of conformity required. When a statement of conformity to a specification or standard is applied, the Simple Acceptance Rule is used. Unless otherwise stated, the Acceptance Rule with Guard Band is used.
2. The Test Report shall not be misused, amended, changed, varied or modified in any manner whatsoever by the Applicant or otherwise.
3. If the Test Report is to be furnished to any third party or to the public, each such Test Report shall be furnished in full, legible and in its entirety.
4. The Test Report shall not be reproduced and shall not in any event be used for any advertising purposes or whatsoever without written approval from the Head of Quality, Occupational Safety and Health & Environment (QOSHE) of SIRIM QAS International of No 1, Persiaran Dato' Menteri, Building 8, Section 2, P.O. Box 7035, 40700 Shah Alam, Selangor Darul Ehsan.
5. Customer (Applicant/Manufacture/Factory,etc.) is not permitted to use any SIRIM QAS International, SIRIM or other SIRIM's subsidiaries logo or words on packaging, sample's manual, technical specification, items and products.
6. Subject to consent and written approval from the Head of Quality, Occupational Safety and Health & Environment (QOSHE) of SIRIM QAS International, the customer (Applicant/Manufacture/Factory,etc.) may use SIRIM QAS International logo or word on the promotional materials and the Applicant shall only include the phrase, "A sample of this product has been tested by SIRIM QAS International ... (Test Report No) ... (dated) ... (for what test) ... (to which standard)" or such similar words which stress that only the sample was actually tested. This phrase shall only be used for the purpose of product advertisement or product promotion (eg; brochures/flyers/official website). For avoidance of doubt, the statement shall not be used on the sample, packaging of the sample, items and products.
7. In the event there is an investigation from a Government Regulatory Agency concerning the Applicant's Test Report, SIRIM QAS International may disclose the information pertaining to the Test Report for purposes of such investigation.
8. In the event the Applicant is found in breach of this provision, SIRIM QAS International, SIRIM and/or other SIRIM's subsidiaries without prejudice to any other rights and remedies may take whatever action necessary including but not limited to:
 - a) Informing and placing a notice in the media;
 - b) Obtaining an injunction from Court (cost on a solicitor-client basis to be borne by the Applicant);
 - c) Refusing to accept any further Product for Testing Services from the Applicant or whosoever related to the Applicant, whether subsidiary or otherwise;
 - d) Instructing the Applicant to withdraw and recall the advertisement, statement or document in question and advertise a clarification and apology to SIRIM QAS International, SIRIM and/or other SIRIM's subsidiaries twice in a national publication of SIRIM QAS International's choice at the Applicant's sole cost; and
 - e) Informing or lodging a report pertaining to the Applicant's Test Report with the relevant authorities.
9. SIRIM QAS International is committed in supporting an environmentally-friendly business practices by reducing paper consumption, therefore we do not issue any hard copy of Test Report to the Applicant. However, additional certified true copy(ies) or softcopy of the Test Report may be issued upon request by the Applicant upon payment of the relevant fee. The certified true copy(ies) or softcopy of test report shall only be given for test report issued not more than three (3) years from the date of issuance.
10. Issuance of Amendment Report due to the following reasons are chargeable to the Applicant :
 - a) Changes in details of the Applicant name and/or address;
 - b) Changes in details of the Manufacturer's name and/or address;
 - c) Changes in details of the Factory location name and/or address;
 - d) Changes in details of the model and/or type designation
11. However, issuance of Supplementary Report due to the following reasons are FOC :
 - a) Misprints and typo errors;
 - b) Missing technical information as agreed in PP1 form;
 - c) Test data not reported;
 - d) Mistake in reporting of test data
12. Corrections to report shall only be allowed if the date of issuance of the original report has not exceeded 6 months and shall be limited to a maximum 3 times, after either case whichever occurs earlier, an Amendment or a Supplementary Report shall not be issued.



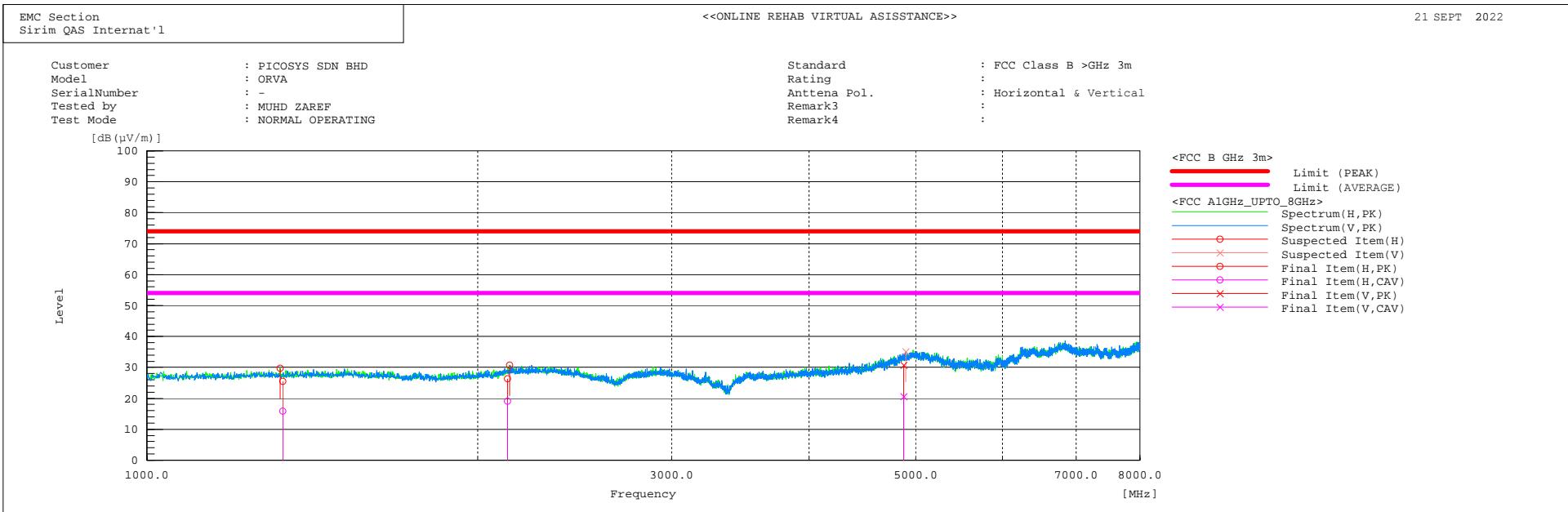
APPENDIX I
J20221410015
2022RE0120



Final Result

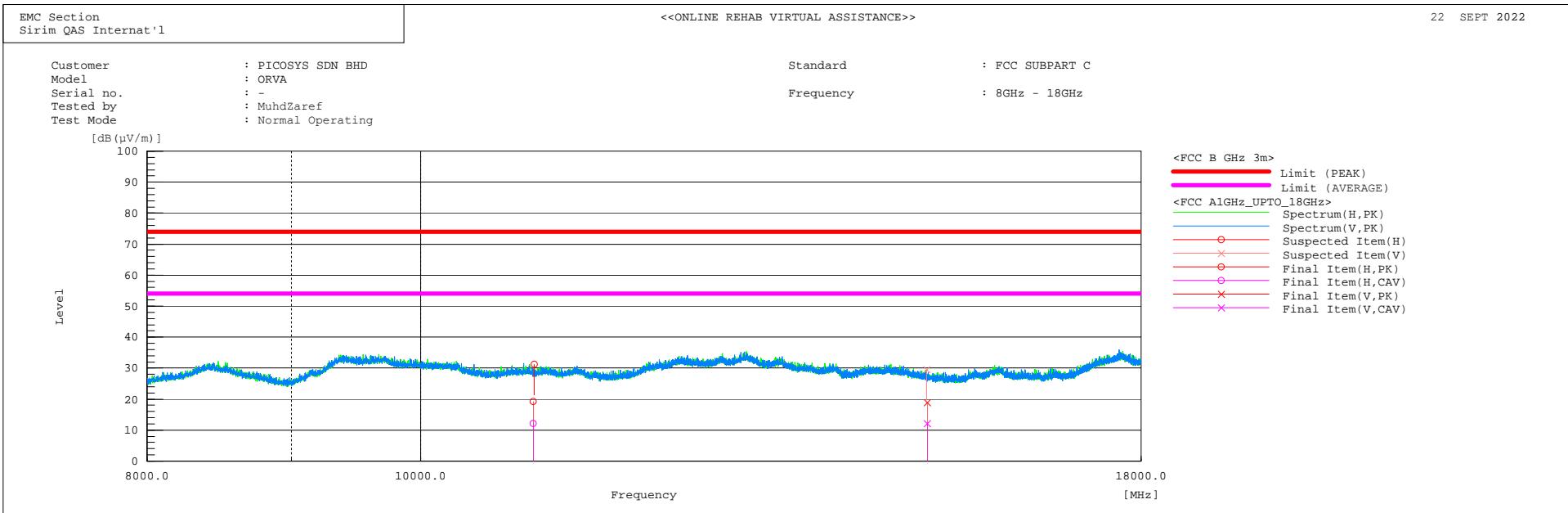
No.	Frequency [MHz]	(P)	Reading QP [dB(µV)]	c.f	Result QP [dB(1/m)]	Limit QP [dB(µV/m)]	Margin QP [dB]	Height [cm]	Angle [°]	Remark
1	48.674	V	1.8	15.3	17.1	40.0	22.9	100.0	288.0	
2	101.469	V	3.2	11.4	14.6	43.5	28.9	257.0	222.0	
3	504.875	H	-1.3	20.2	18.9	46.0	27.1	177.0	332.0	

APPENDIX II
J20221410015
2022RE0120



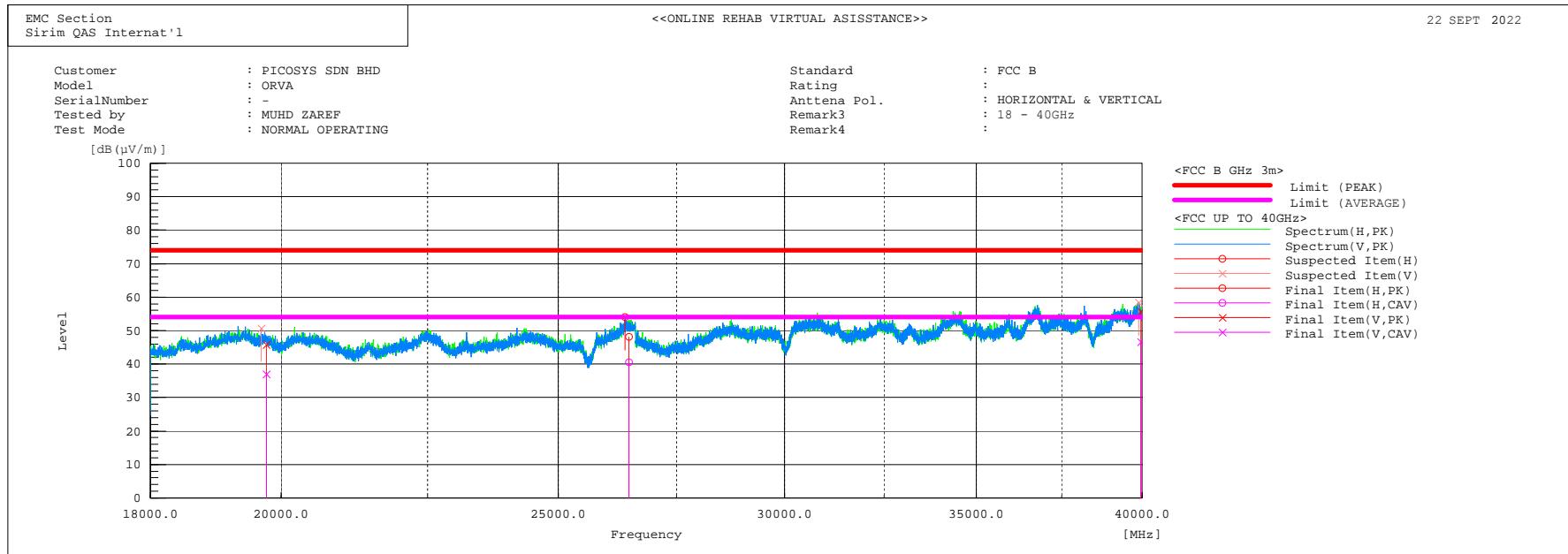
Final Result

No.	Frequency	(P)	Reading	Reading	c.f.	Result	Result	Limit	Limit	Margin	Margin	Height	Angle	Remark
	[MHz]		PK	CAV	[dB(1/m)]	[dB(µV/m)]	PK	CAV	PK	AV	PK	CAV	[cm]	[°]
1	2126.809	H	36.1	28.9	-9.8	26.3	19.1	74.0	54.0	47.7	34.9	100.0	300.0	
2	1328.465	H	38.6	29.0	-13.1	25.5	15.9	74.0	54.0	48.5	38.1	100.0	320.0	
3	4878.992	V	29.9	19.7	0.9	30.8	20.6	74.0	54.0	43.2	33.4	100.0	234.0	



Final Result

No.	Frequency	(P)	Reading	Reading	c.f.	Result	Result	Limit	Limit	Margin	Margin	Height	Angle	Remark
	[MHz]		PK	CAV	[dB(1/m)]	[dB(μV/m)]	[dB(μV/m)]	PK	AV	PK	CAV	[cm]	[°]	
			[dB(μV)]	[dB(μV)]				[dB(μV/m)]	[dB(μV/m)]	[dB]	[dB]			
1	10959.770	H	31.9	24.9	-12.7	19.2	12.2	74.0	54.0	54.8	41.8	100.0	87.5	
2	15113.640	V	34.1	27.3	-15.1	19.0	12.2	74.0	54.0	55.0	41.8	130.0	307.0	



Final Result

No.	Frequency [MHz]	(P)	Reading PK [dB(µV)]	Reading CAV [dB(µV)]	c.f [dB(1/m)]	Result PK [dB(µV/m)]	Result CAV [dB(µV/m)]	Limit PK [dB(µV/m)]	Limit AV [dB(µV/m)]	Margin PK [dB]	Margin CAV [dB]	Height [cm]	Angle [°]	Remark
1	19760.310	V	27.0	18.2	18.8	45.8	37.0	74.0	54.0	28.2	17.0	100.0	0.5	
2	26459.310	H	26.1	18.6	22.0	48.1	40.6	74.0	54.0	25.9	13.4	200.0	137.3	
3	39965.112	V	32.5	23.4	23.3	55.8	46.7	74.0	54.0	18.2	7.3	100.0	137.3	