



EMC TEST REPORT

Report No.: 20230717G07547X- W1

Product Name: UAM025

FCC ID: 2A68EJX-UAM025

Model No. : UAM025

Applicant: Shenzhen Uascent Technology Co.,Ltd

Address: 7th Floor, Building A2, Chuangzhiyuncheng, Liuxian Avenue, Xili Community, Xili Street, Nanshan District, Shenzhen

Received Date: 2023.07.04

Dates of Testing: 2023.07.10—2023.07.13

Issued by: CCIC Southern Testing Co., Ltd.

Lab Location: Electronic Testing Building, No. 43 Shahe Road, Xili Street,
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Test Report

Product Name..... UAM025

Model No. UAM025

Trade name..... Uascent

Brand Name..... Uascent

Applicant..... Shenzhen Uascent Technology Co.,Ltd

Applicant Address..... 7th Floor, Building A2, Chuangzhiyuncheng, Liuxian Avenue, Xili Community, Xili Street, Nanshan District, Shenzhen

Manufacturer ShengXianZhiKongCo.,Ltd

Manufacturer Address Room 804, one of No.9 Yucheng Road, Chang'an Town, Dongguan City, Guangdong Province

Test Standards..... 47 CFR Part 15 Subpart B

Test Result..... PASS

Tested by Ruihong Xie

Ruihong Xie Test Engineer

2023.07.17

Reviewed by Chris You

Chris You Senior Engineer

2023.07.17

Approved by Yang Fan

Yang Fan, Manager

2023.07.17



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Change History		
Issue	Date	Reason for change
1.0	2023.07.17	First edition



1. GENERAL INFORMATION

1.1 EUT Description

EUT Name : UAM025

Trade Name.....: Uascent

Brand Name.....: Uascent

Hardware Version..... : V1.0

Software Version..... : V1.0.6

*Note1:*The EUT is a UAM025;

*Note2 :*For a more detailed description, please refer to Specification or User's Manual supplied by the applicant and/or manufacturer.



1.2 Test Standards and Results

The objective of the report is to perform testing according to 47 CFR Part 15 Subpart B:

No.	Identity	Document Title
1	47 CFR Part 15 Subpart B	Radio Frequency Devices

Test detailed items/section required by FCC rules and results are as below:

No.	Section	Description	Result
1	15.107	Conducted Emission	N/A
2	15.109	Radiated Emission	PASS

NOTE:

- (1) The EUT has been tested according to 47 CFR Part 15 Subpart B, Class B. The test procedure is according to ANSI C63.4:2014.



Facilities and Accreditations

1.2.1 Facilities

FCC-Registration No.: CN1283

CCIC Southern Testing Co., Ltd EMC Laboratory 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. Designation Number: CN1283, valid time is until Sep.30, 2023.

ISED Registration: 11185A-1

CCIC Southern Testing Co., Ltd. EMC Laboratory has been registered by Certification and Engineering Bureau of Industry Canada for the performance of radiated measurements with Registration No. 11185A-1 on Aug. 04, 2016, valid time is until Sep.30, 2023.

A2LA Code: 5721.01

CCIC-SET is a third party testing organization accredited by A2LA according to ISO/IEC 17025. The accreditation certificate number is 5721.01.

1.2.2 Test Environment Conditions

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

Temperature (°C):	15 °C - 35 °C
Relative Humidity (%):	25% -75%
Atmospheric Pressure (kPa):	86kPa-106kPa

1.2.3 Measurement Uncertainty

The uncertainty is calculated using the methods suggested in the "Guide to the Expression of Uncertainty in Measurement" (GUM) published by ISO.

Uncertainty of Conducted Emission:	Uc = 3.2 dB (k=2)
Uncertainty of Radiated Emission: (30MHz~1GHz)	Uc = 5.8 dB (k=2)
Uncertainty of Radiated Emission: (1~6GHz)	Uc = 5.1 dB (k=2)
Uncertainty of Radiated Emission: (6~18GHz)	Uc = 5.5 dB (k=2)



2. TEST CONDITIONS SETTING

2.1 Test Peripherals

The following is a listing of the EUT and peripherals utilized during the performance of EMC test:

Support Equipment:

Description	Brand name	Model	Serial No.	FCCID
Laptop	Lenovo	X240	/	/
Mouse	Lenovo	MO20BOA	/	/

Support Cable:

Description	Shield Type	Ferrite Core	Length
DC Power Cable	Un- shielding	No	1.2m

2.2 Test Mode

The EUT have the following typical setups during the test:

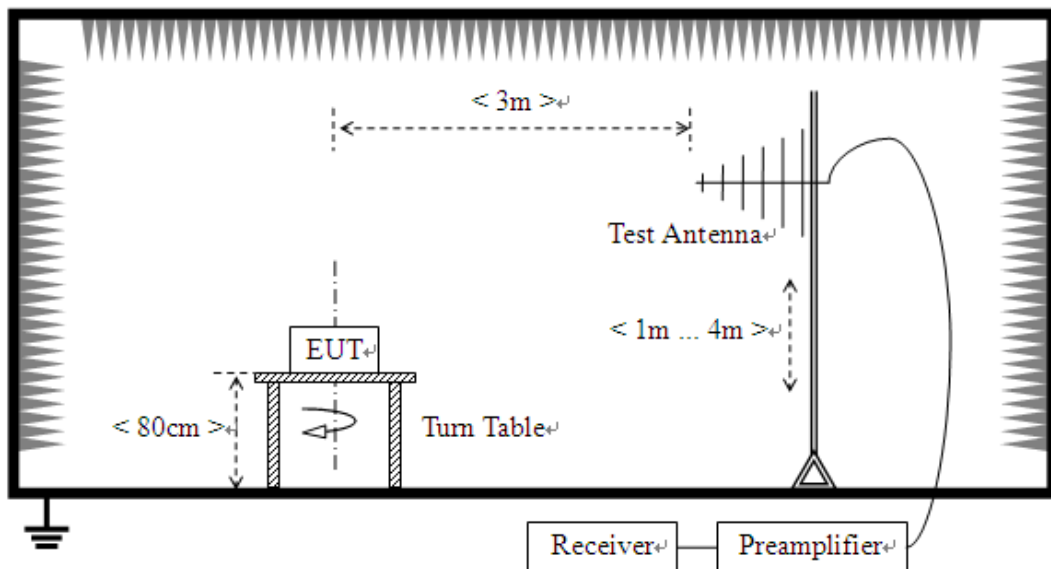
Setup1: EUT Working;

2.3 Test Setup and Equipments List

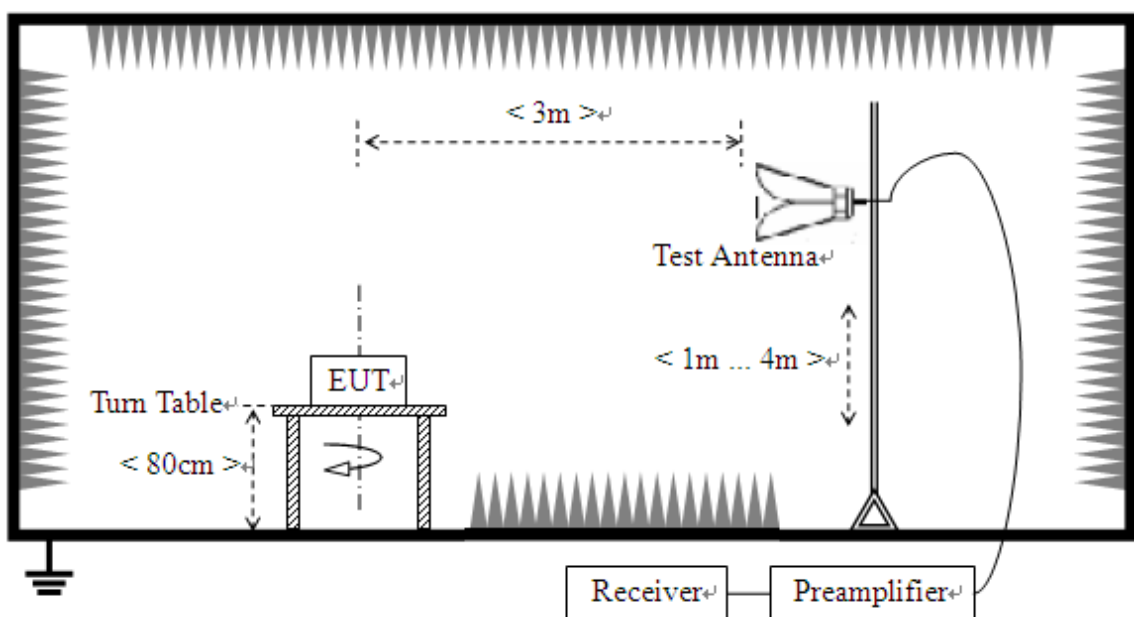
2.3.1 Radiated Emission

A. Test Setup:

- 1) For radiated emissions from 30MHz to 1GHz



- 2) For radiated emissions above 1GHz



**B. Test Procedure**

The test is performed in a 3m Semi-Anechoic Chamber; the antenna factor, cable loss and so on of the site (factors) is calculated to correct the reading. The EUT is placed on a 0.8m high insulating Turn Table, and keeps 3m away from the Test Antenna, which is mounted on a variable-height antenna master tower.

For the test Antenna:

- 1) In the frequency range above 30MHz, Bi-Log Test Antenna (30MHz to 1GHz) and Horn Test Antenna (above 1GHz) are used. Test Antenna is 3m away from the EUT. Test Antenna height is varied from 1m to 4m above the ground to determine the maximum value of the field strength. The emission levels at both horizontal and vertical polarizations should be tested.

C. Equipments List:

Description	Manufacturer	Model	Serial No.	Calibration Date	Calibration Due. Date
EMI Test Receiver	ROHDE&SCHWARZ	ESIB7	A0501375	2023.03.16	2024.03.15
Broadband Ant.	ETC	MCTD2786	A150402239	2021.09.16	2024.09.15
3M Anechoic Chamber	Albatross	SAC-3MAC 9*6*6m	A0412375	2021.03.26	2024.03.25
EMI Test Receiver	ROHDE&SCHWARZ	ESW26	A180502935	2022.07.21	2023.07.20
5M Anechoic Chamber	Albatross	SAC-5MAC 12.8x6.8x6.4m	A0304210	2022.03.25	2025.03.24
EMI Horn Ant.	ROHDE&SCHWARZ	HF906	A0304225	2022.04.12	2025.04.11

3. 47 CFR PART 15B REQUIREMENTS

3.1 Conducted Emission

3.1.1 Requirement

According to FCC section 15.107, the radio frequency voltage that is conducted back onto the AC power line on any frequency within the band 150kHz to 30MHz shall not exceed the limits in the following table, as measured using a 50 μ H/50 Ω line impedance stabilization network (LISN).

Frequency range (MHz)	Conducted Limit (dB μ V)	
	Quasi-peak	Average
0.15 - 0.50	66 to 56	56 to 46
0.50 - 5	56	46
5 - 30	60	50

Note:

- a) The limit subjects to the Class B digital device.
- b) The lower limit shall apply at the band edges.
- c) The limit decreases linearly with the logarithm of the frequency in the range 0.15 - 0.50MHz.

3.1.2 Test Result

Not applicable for this DC Power supply device

3.2 Radiated Emission

3.2.1 Requirement

According to FCC section 15.109, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values:

Frequency range (MHz)	Field Strength		Field Strength Limitation at 3m Measurement Dist	
	$\mu\text{V/m}$	Dist	($\mu\text{V/m}$)	(dBuV/m)
30.0 - 88.0	100	3m	100	$20\log 100$
88.0 - 216.0	150	3m	150	$20\log 150$
216.0 - 960.0	200	3m	200	$20\log 200$
Above 960.0	500	3m	500	$20\log 500$

- For frequencies above 1000MHz, the field strength limits are based on average detector. When average radiated emission measurements are specified in this part, including emission measurements below 1000MHz, there also is a limit on the radio frequency emissions, as measured using instrumentation with a peak detector function, corresponding to 20dB above the maximum permitted average limit for the frequency being investigated unless a different peak emission limit is otherwise specified in the rules.
- Test Antenna is 3m away from the EUT. Test Antenna height is varied from 1m to 4m above the ground to determine the maximum value of the field strength.
- For below 1G :QP detector RBW 120kHz ,VBW 300kHz.

For Above 1G: PK detector RBW 1MHz,VBW 3MHz for PK value ;AV detector RBW 1MHz, VBW 10Hz for AV value.

Note:

- The tighter limit shall apply at the boundary between two frequency range.
- Limitation expressed in dBuV/m is calculated by $20\log \text{Emission Level}(\mu\text{V/m})$.
- If measurement is made at 3m distance, then F.S Limitation at 3m distance is adjusted by using the formula of $Ld1 = Ld2 * (d2/d1)^2$.

Example:

F.S Limit at 30m distance is $30\mu\text{V/m}$, then F.S Limitation at 3m distance is adjusted as

$$Ld1 = L1 = 30\mu\text{V/m} * (10)^2 = 100 * 30\mu\text{V/m}.$$

3.2.2 Test Description

See section 2.3.2 of this report.

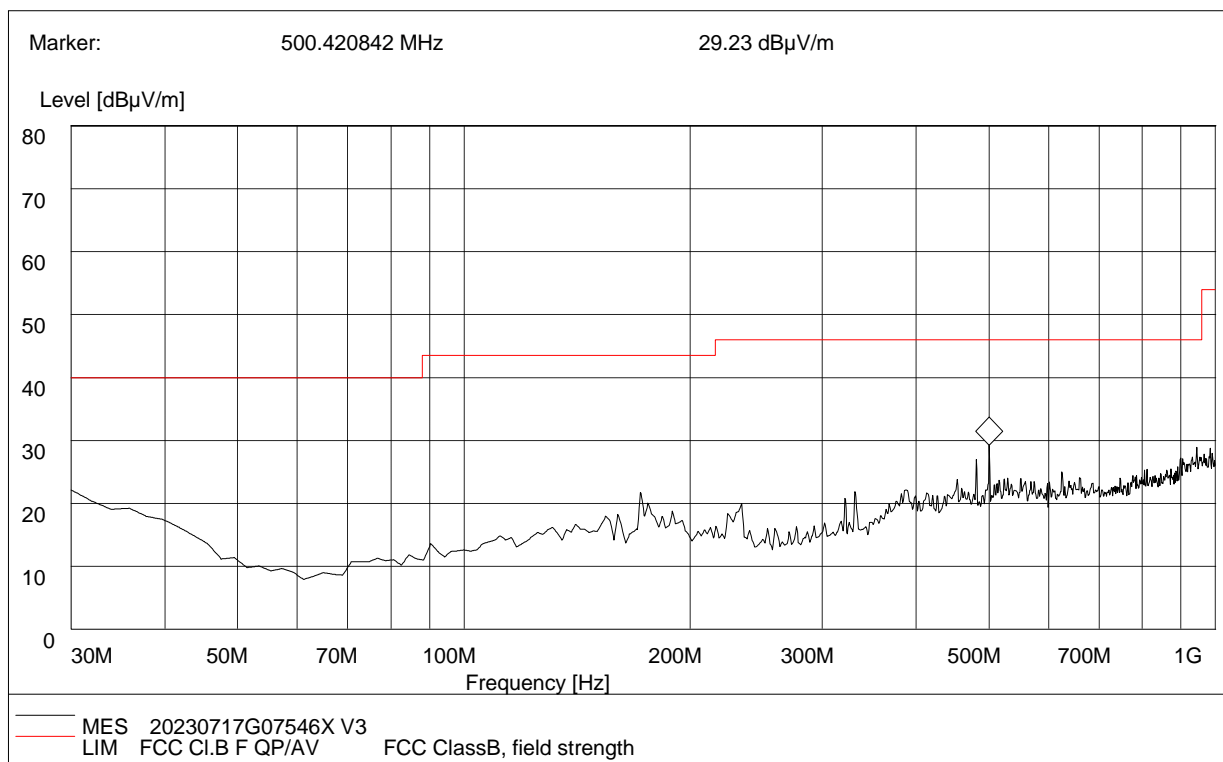
3.2.3 Test Result

The maximum radiated emission is searched using PK, QP and AV detectors; the emission levels more than the limits, and that have narrow margins from the limits will be re-measured with AV and QP detectors. Both the vertical and the horizontal polarizations of the Test Antenna are considered to perform the tests. All test modes are considered, refer to recorded points and plots below.

The amplitude of spurious emissions which are attenuated more than 20 dB below the permissible value need not be reported.

Note: All radiated emission tests were performed in X, Y, Z axis direction, and only the worst axis test condition was recorded in this test report.

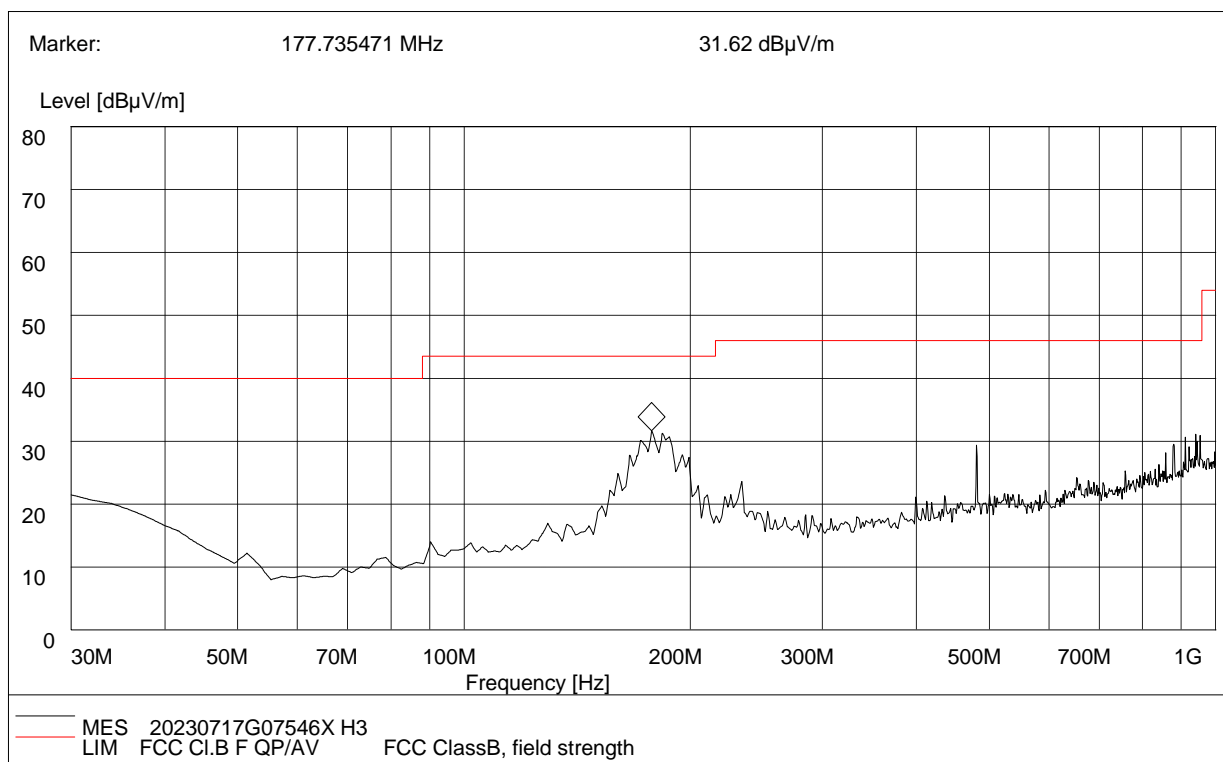
A.Radiation disturbances, antenna polarization: Vertical, Setup1, 3.3V DC



(Plot C: Test Antenna Vertical 30M - 1G)

Frequency (MHz)	QuasiPeak (dB μ V/m)	Bandwidth (kHz)	Antenna height (cm)	Limit (dB μ V/m)	Margin (dB)	Antenna	Cable Loss(dB)	ANT. Factor(dB)	Verdict
30.45	21.11	120.000	104	40.00	18.89	Vertical	0.5	18.8	Pass
35.86	18.22	120.000	107	40.00	21.78	Vertical	0.5	16.2	Pass
160.24	17.25	120.000	107	43.50	26.25	Vertical	1.2	11.3	Pass
171.32	20.76	120.000	102	43.50	22.74	Vertical	1.5	10.9	Pass
480.13	25.95	120.000	103	46.00	20.05	Vertical	1.5	18.1	Pass
500.42	28.23	120.000	102	46.00	17.77	Vertical	1.5	18	Pass

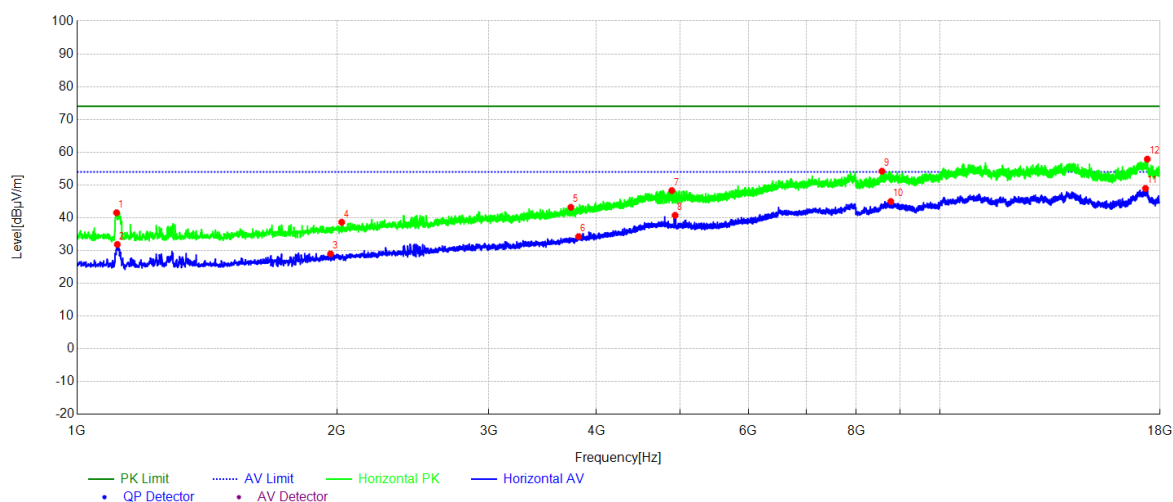
B.Radiation disturbances, antenna polarization: Horizontal, Setup1, 3.3V DC



(Plot D: Test Antenna Horizontal 30M - 1G)

Frequency (MHz)	QuasiPeak (dB μ V/m)	Bandwidth (kHz)	Antenna height (cm)	Limit (dB μ V/m)	Margin (dB)	Antenna	Cable Loss(dB)	ANT. Factor(dB)	Verdict
30.24	20.46	120.000	104	40.00	19.54	Vertical	0.5	18.8	Pass
51.34	12.20	120.000	103	40.00	27.80	Vertical	0.5	8.1	Pass
166.07	26.77	120.000	103	43.50	16.73	Vertical	1.2	10.9	Pass
177.59	30.62	120.000	107	43.50	12.88	Vertical	1.2	9.6	Pass
234.10	22.63	120.000	105	46.00	23.37	Vertical	1.2	10.6	Pass
480.25	28.37	120.000	102	46.00	17.63	Vertical	1.5	17.7	Pass

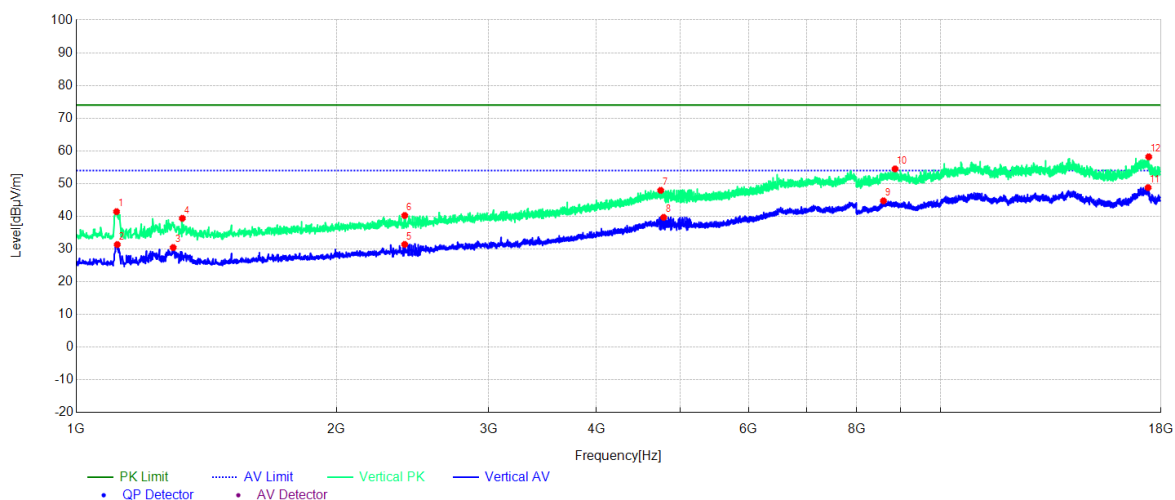
A.Radiation disturbances, antenna polarization: Horizontal ,Setup1, 3.3V DC



(Plot M: Test Antenna Horizontal 1G – 18G)

NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin[dB μV/m]	Trace	Height [cm]	Angle [°]	Polarity
1	1111.12	41.53	-13.10	74.00	32.47	PK	104	91	Horizontal
2	1113.32	31.86	-13.11	54.00	22.14	AV	106	80	Horizontal
3	1967.09	28.98	-10.80	54.00	25.02	AV	100	274	Horizontal
4	2026.51	38.63	-10.52	74.00	35.37	PK	105	36	Horizontal
5	3735.15	43.20	-4.63	74.00	30.80	PK	105	162	Horizontal
6	3813.26	34.25	-4.18	54.00	19.75	AV	103	310	Horizontal
7	4890.38	48.29	0.45	74.00	25.71	PK	102	231	Horizontal
8	4933.29	40.76	0.43	54.00	13.24	AV	107	125	Horizontal
9	8568.11	54.20	8.02	74.00	19.80	PK	106	156	Horizontal
10	8772.85	44.97	7.94	54.00	9.03	AV	103	351	Horizontal
11	17309.86	48.95	16.13	54.00	5.05	AV	105	257	Horizontal
12	17397.28	57.89	16.32	74.00	16.11	PK	107	43	Horizontal

B.Radiation disturbances, antenna polarization: Vertical,Setup1, 3.3V DC



(Plot N: Test Antenna Vertical 1G – 18G)

NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin[dB μV/m]	Trace	Height [cm]	Angle [°]	Polarity
1	1113.32	41.43	-13.11	74.00	32.57	PK	103	72	Vertical
2	1115.52	31.37	-13.11	54.00	22.63	AV	103	63	Vertical
3	1294.86	30.46	-13.16	54.00	23.54	AV	107	60	Vertical
4	1326.77	39.38	-13.13	74.00	34.62	PK	110	241	Vertical
5	2399.48	31.41	-9.20	54.00	22.46	AV	109	71	Vertical
6	2399.48	40.25	-9.20	74.00	33.75	PK	112	70	Vertical
7	4746.25	47.93	0.71	74.00	26.07	PK	104	282	Vertical
8	4783.66	39.68	0.85	54.00	14.32	AV	106	140	Vertical
9	8593.42	44.73	8.07	54.00	9.27	AV	103	142	Vertical
10	8862.57	54.49	7.86	74.00	19.51	PK	107	163	Vertical
11	17392.6	48.77	16.31	54.00	5.23	AV	106	170	Vertical
12	17420.2	58.18	15.92	74.00	15.82	PK	108	34	Vertical

-----End of Report-----