



TEST REPORT

Reference No..... : WTX22X10201806E001
 Applicant : Adapy, inc
 Address : 225 S. 700 E., St. George , Utah 84770
 Manufacturer : Adapy, inc
 Address : 225 S. 700 E., St. George , Utah 84770
 Product Name : Smart Mobility System
 Model No..... : SMSV1
 Standards : ICES-003 Issue 7
 Date of Receipt sample : 2022-10-11
 Date of Test..... : 2022-10-11 to 2022-10-28
 Date of Issue : 2022-10-28
 Test Report Form No. : WTX_ICES-003_Issue 7_A
 Test Result..... : Pass

Remarks:

The results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of approver.

Prepared By:

Waltek Testing Group (Shenzhen) Co., Ltd.

Address: 1/F., Room 101, Building 1, Hongwei Industrial Park, Liuxian 2nd Road,
Block 70 Bao'an District, Shenzhen, Guangdong, China
Tel.: +86-755-33663308 Fax.: +86-755-33663309 Email: sem@waltek.com.cn

Tested by:

Tom Ma

Tom Ma

Approved by:

Silin Chen

Silin Chen



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Report version

Version No.	Date of issue	Description
Rev.00	2022-10-28	Original
/	/	/

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1.GENERAL INFORMATION

1.1 Product Description for Equipment Under Test (EUT)

General Description of EUT	
Product Name:	Smart Mobility System
Trade Name:	/
Model No.:	SMSV1
Adding Model(s):	/
<i>Note: The test data is gathered from a production sample, provided by the manufacturer.</i>	

Technical Characteristics of EUT	
Rated Voltage:	DC 12V
Rated Current:	/
Rated Power:	/
Power Adaptor Model:	/
Lowest Internal Frequency:	/
Highest Internal Frequency:	Below 108MHz
Classification of ITE:	Class A



1.2 Test Standards

The tests were performed according to following standards:

ICES-003 Issue 7: Information Technology Equipment (ITE) – Limits and methods of measurement.

ANSI C63.4-2014: American National Standard for Methods of Measurement of Radio-Noise Emissions from low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz.

Maintenance of compliance is the responsibility of the manufacturer. Any modification of the product, which result in lowering the emission, should be checked to ensure compliance has been maintained.

1.3 Test Methodology

All measurements contained in this report were conducted with ANSI C63.4-2014, American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9 kHz to 40 GHz.

1.4 Test Facility

Address of the test laboratory

Laboratory: Waltek Testing Group (Shenzhen) Co., Ltd.

Address: 1/F., Room 101, Building 1, Hongwei Industrial Park, Liuxian 2nd Road, Block 70 Bao'an District, Shenzhen, Guangdong, China

FCC – Registration No.: 125990

Waltek Testing Group (Shenzhen) 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. The Designation Number is CN5010, and Test Firm Registration Number is 125990.

Industry Canada (IC) Registration No.: 11464A

The 3m Semi-anechoic chamber of Waltek Testing Group (Shenzhen) Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 11464A.



1.5 EUT Setup and Operation Mode

The equipment under test (EUT) was configured to measure its highest possible emission. The test modes were adapted according to the operation manual for use, more detailed description as follows:

Test Mode List			
Test Mode	Description	Remark	Power Supply Mode
TM1	Working Mode	/	DC 12V(With an adapter input AC120V/60Hz)

EUT Cable List and Details				
Cable Description	Length (m)	Shielded/Unshielded	With / Without Ferrite	With / Without Chip
/	/	/	/	/

Special Cable List and Details				
Cable Description	Length (m)	Shielded/Unshielded	With / Without Ferrite	With / Without Chip
/	/	/	/	/

Auxiliary Equipment List and Details			
Description	Manufacturer	Model	Serial Number
Adapter	/	PA-30360W-ZMX	/



1.6 Test Equipment List and Details

Description	Manufacturer	Model	Serial No.	Cal. Date	Due. Date
<input type="checkbox"/> Chamber A: Below 1GHz					
Spectrum Analyzer	Rohde & Schwarz	FSP30	836079/035	2022-03-22	2023-03-21
EMI Test Receiver	Rohde & Schwarz	ESVB	825471/005	2022-03-22	2023-03-21
Trilog Broadband Antenna	Schwarz beck	VULB9163	9163-333	2021-03-20	2023-03-19
Loop Antenna	Schwarz beck	FMZB 1516	9773	2021-03-20	2023-03-19
Amplifier	HP	8447F	2805A03475	2022-01-07	2023-01-06
<input type="checkbox"/> Chamber A: Above 1GHz					
Amplifier	C&D	PAP-1G18	2002	2022-03-22	2023-03-21
Horn Antenna	ETS	3117	00086197	2021-03-19	2023-03-18
<input checked="" type="checkbox"/> Chamber B: Below 1GHz					
Trilog Broadband Antenna	Schwarz beck	VULB9163(B)	9163-635	2021-04-09	2023-04-08
Amplifier	Agilent	8447D	2944A10179	2022-03-22	2023-03-21
EMI Test Receiver	Rohde & Schwarz	ESPI	101391	2022-03-25	2023-03-24
<input type="checkbox"/> Chamber C: Below 1GHz					
EMI Test Receiver	Rohde & Schwarz	ESIB 26	100401	2022-01-07	2023-01-06
Trilog Broadband Antenna	Schwarz beck	VULB 9168	1194	2021-05-28	2023-05-27
Amplifier	HP	8447F	2944A03869	2022-03-22	2023-03-21
<input type="checkbox"/> Chamber C: Above 1GHz					
Horn Antenna	POAM	RTF-11A	LP228060221	2022-06-16	2024-06-14
Amplifier	Tonscend	TAP01018050	AP22E806235	2022-06-17	2023-06-16
<input checked="" type="checkbox"/> Conducted Room 1#					
EMI Test Receiver	Rohde & Schwarz	ESPI	101611	2022-03-22	2023-03-21
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100911	2022-03-25	2023-03-24
AC LISN	Schwarz beck	NSLK8126	8126-224	2022-03-22	2023-03-21
8-WIRE LISN	Schwarz beck	8158	CAT3-8158-00 59	2022-03-22	2023-03-21
8-WIRE LISN	Schwarz beck	8158	CAT5-8158-011 7	2022-03-22	2023-03-21
<input type="checkbox"/> Conducted Room 2#					
EMI Test Receiver	Rohde & Schwarz	ESPI	10129	2022-03-22	2023-03-21
LISN	Rohde & Schwarz	ENV 216	100097	2022-03-22	2023-03-21



Software List			
Description	Manufacturer	Model	Version
EMI Test Software (Radiated Emission)*	Farad	EZ-EMC	RA-03A1
EMI Test Software (Conducted Emission)*	Farad	EZ-EMC	RA-03A1

*Remark: indicates software version used in the compliance certification testing.

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2. SUMMARY OF TEST RESULTS

Standards	Description of Test Item	Result
ICES-003	Conducted Disturbance	Compliant
	Radiated Disturbance	Compliant

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3. Conducted Disturbance

3.1 Measurement Uncertainty

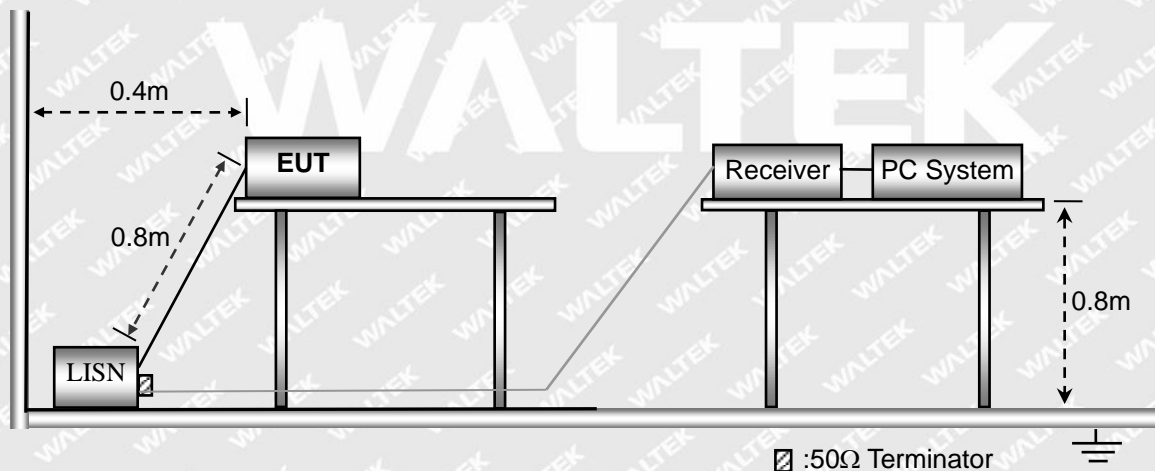
Based on NIS 81, the Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of any conducted emissions measurement:

Measurement uncertainty		
Parameter	Conditions	Uncertainty
Conducted Emissions	Conducted	9-150kHz ± 3.74 dB
		0.15-30MHz ± 3.34 dB

3.2 Test Procedure

The test is conducted under the description of ANSI C63.4-2014, American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9 kHz to 40 GHz.

3.3 Basic Test Setup Block Diagram



3.4 Environmental Conditions

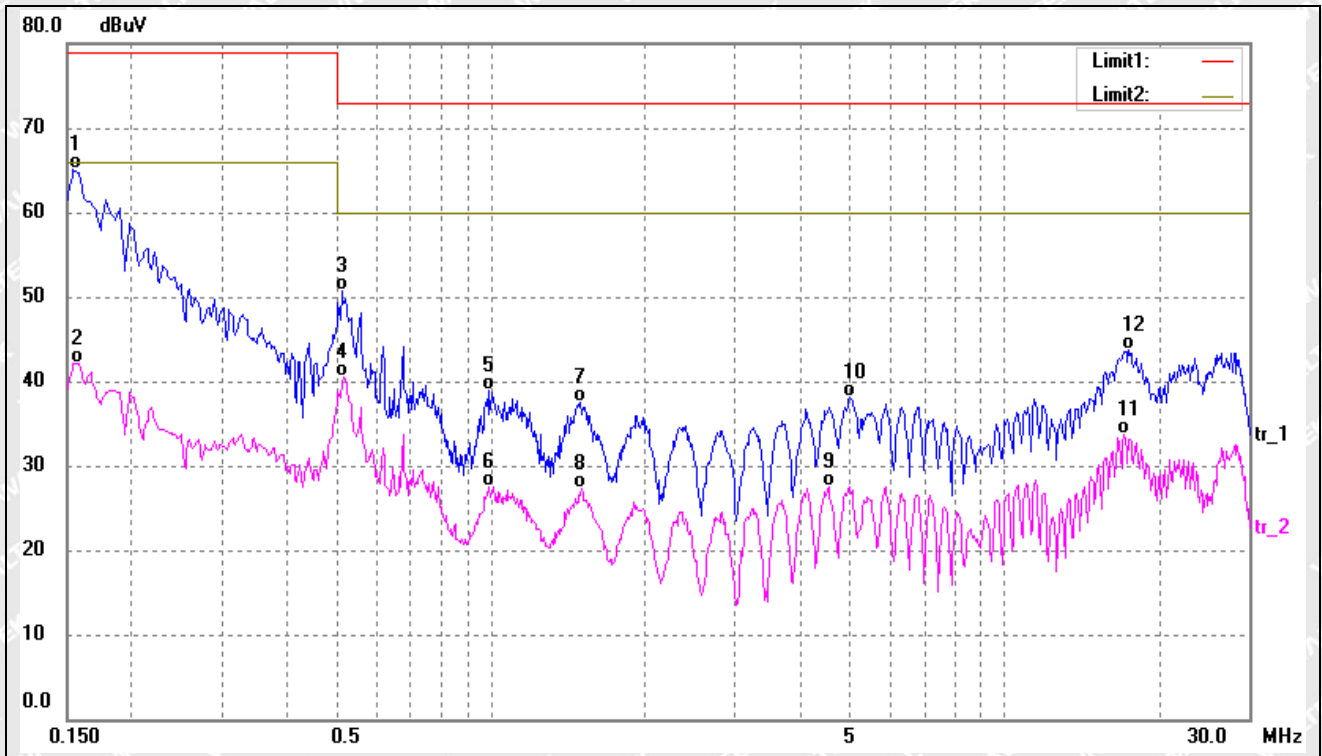
Temperature:	23.5 °C
Relative Humidity:	54 %
ATM Pressure:	997 mbar

3.5 Summary of Test Results

Please find the results below:



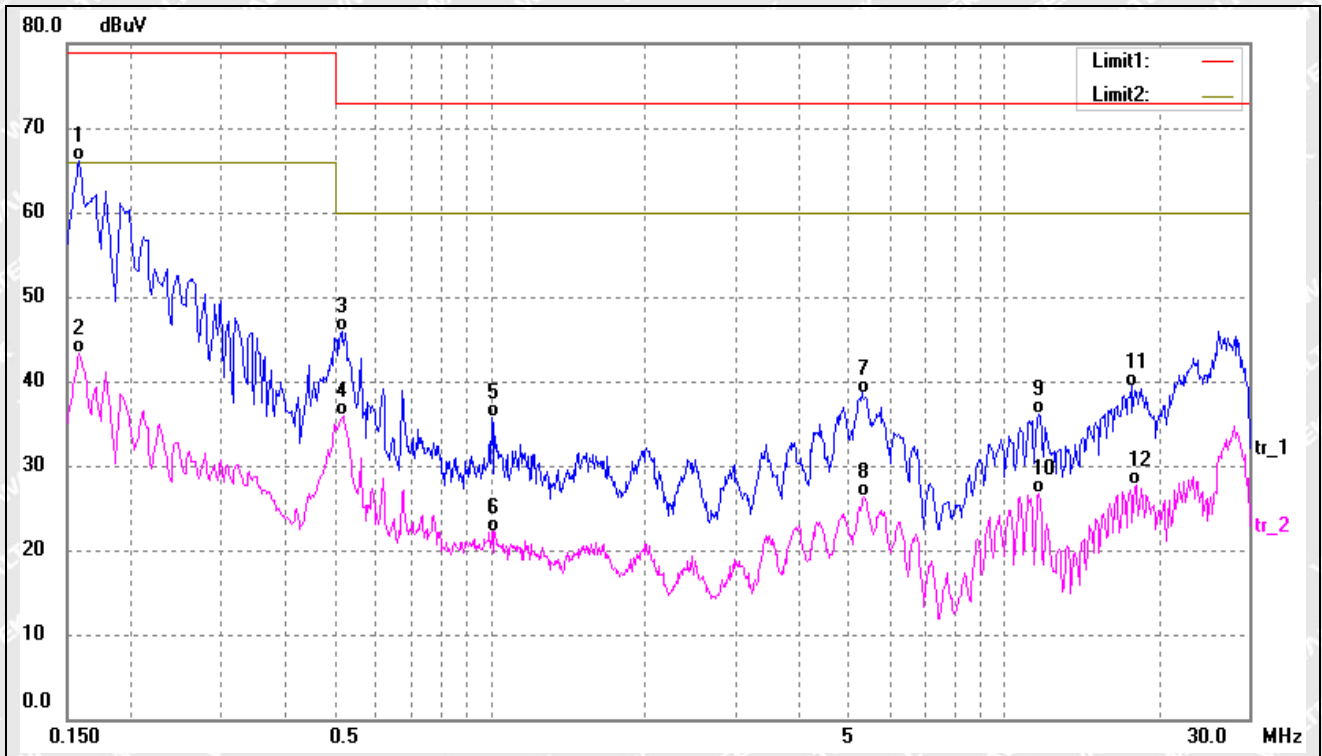
Test mode:	TM1	Polarity:	Line
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No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1*	0.1539	54.75	10.32	65.07	79.00	-13.93	QP
2	0.1580	31.87	10.31	42.18	66.00	-23.82	AVG
3	0.5128	40.41	10.22	50.63	73.00	-22.37	QP
4	0.5180	30.33	10.22	40.55	60.00	-19.45	AVG
5	0.9943	28.83	10.14	38.97	73.00	-34.03	QP
6	0.9980	17.45	10.14	27.59	60.00	-32.41	AVG
7	1.4953	27.24	10.19	37.43	73.00	-35.57	QP
8	1.5100	17.05	10.19	27.24	60.00	-32.76	AVG
9	4.5580	17.26	10.32	27.58	60.00	-32.42	AVG
10	5.0045	27.72	10.33	38.05	73.00	-34.95	QP
11	17.1860	23.34	10.29	33.63	60.00	-26.37	AVG
12	17.4750	33.47	10.30	43.77	73.00	-29.23	QP



Test mode:	TM1	Polarity:	Neutral
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No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1*	0.1582	55.72	10.31	66.03	79.00	-12.97	QP
2	0.1582	32.95	10.31	43.26	66.00	-22.74	AVG
3	0.5128	35.59	10.22	45.81	73.00	-27.19	QP
4	0.5181	25.62	10.22	35.84	60.00	-24.16	AVG
5	1.0048	25.66	10.14	35.80	73.00	-37.20	QP
6	1.0157	12.06	10.14	22.20	60.00	-37.80	AVG
7	5.2770	28.27	10.33	38.60	73.00	-34.40	QP
8	5.3330	15.88	10.33	26.21	60.00	-33.79	AVG
9	11.6826	25.79	10.32	36.11	73.00	-36.89	QP
10	11.6826	16.30	10.32	26.62	60.00	-33.38	AVG
11	17.6611	29.09	10.31	39.40	73.00	-33.60	QP
12	18.0393	17.46	10.32	27.78	60.00	-32.22	AVG

4. Radiated Disturbance

4.1 Measurement Uncertainty

Based on NIS 81, the Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of any radiation emissions measurement:

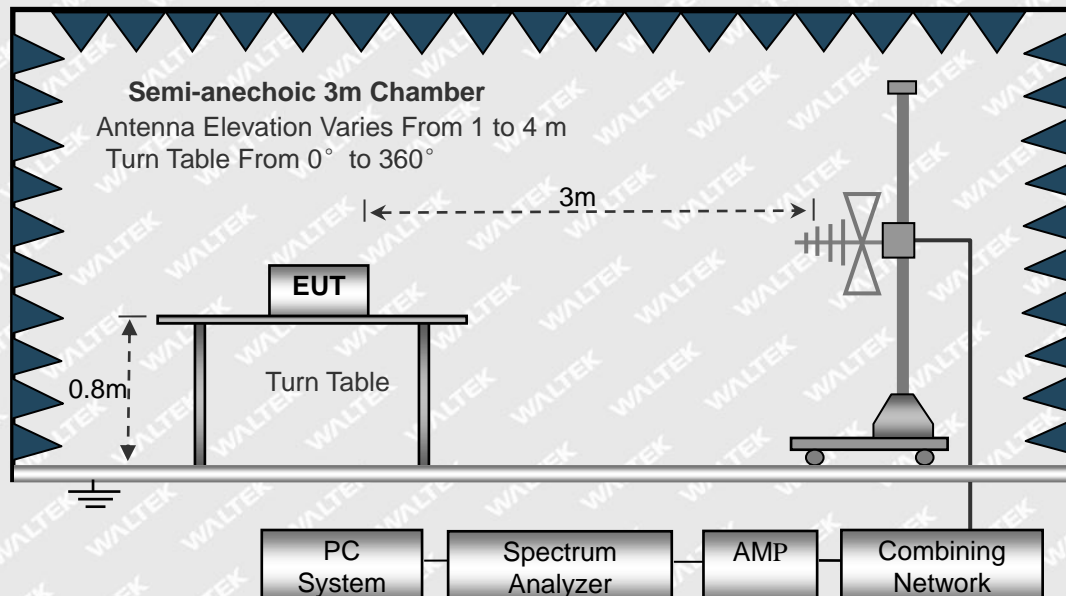
Measurement uncertainty		
Parameter	Conditions	Uncertainty
Radiated Emissions	Radiated	30-200MHz ± 4.52 dB
		0.2-1GHz ± 5.56 dB
		1-6GHz ± 3.84 dB
		6-18GHz ± 3.92 dB

4.2 Test Procedure

The setup of EUT is according with per ANSI C63.4-2014 measurement procedure. The specification used was with the ICES-003 Limit.

The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle. The spacing between the peripherals was 10 cm.

4.3 Block Diagram of Test Setup





4.4 Test Receiver Setup

During the radiated emission test for above 1GHz, the test receiver was set with the following configurations:

For peak detector:

RBW = 1000kHz, VBW = 3000kHz, Sweep Time = Auto

For average detector:

RBW = 1000kHz, VBW = 10Hz, Sweep Time = Auto

4.5 Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Factor and the Cable Factor, and subtracting the Amplifier Gain from the Amplitude reading. The basic equation is as follows:

$$\text{Corr. Ampl.} = \text{Indicated Reading} + \text{Correct} \\ \text{Correct} = \text{Ant. Factor} + \text{Cable Loss} - \text{Ampl. Gain}$$

The "**Margin**" column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of -6dB means the emission is 6dB below the maximum limit for a Class A device. The equation for margin calculation is as follows:

$$\text{Margin} = \text{Corr. Ampl.} - \text{ICES-003 Limit}$$

4.6 Environmental Conditions

Temperature:	22.5 °C
Relative Humidity:	54 %
ATM Pressure:	997 mbar

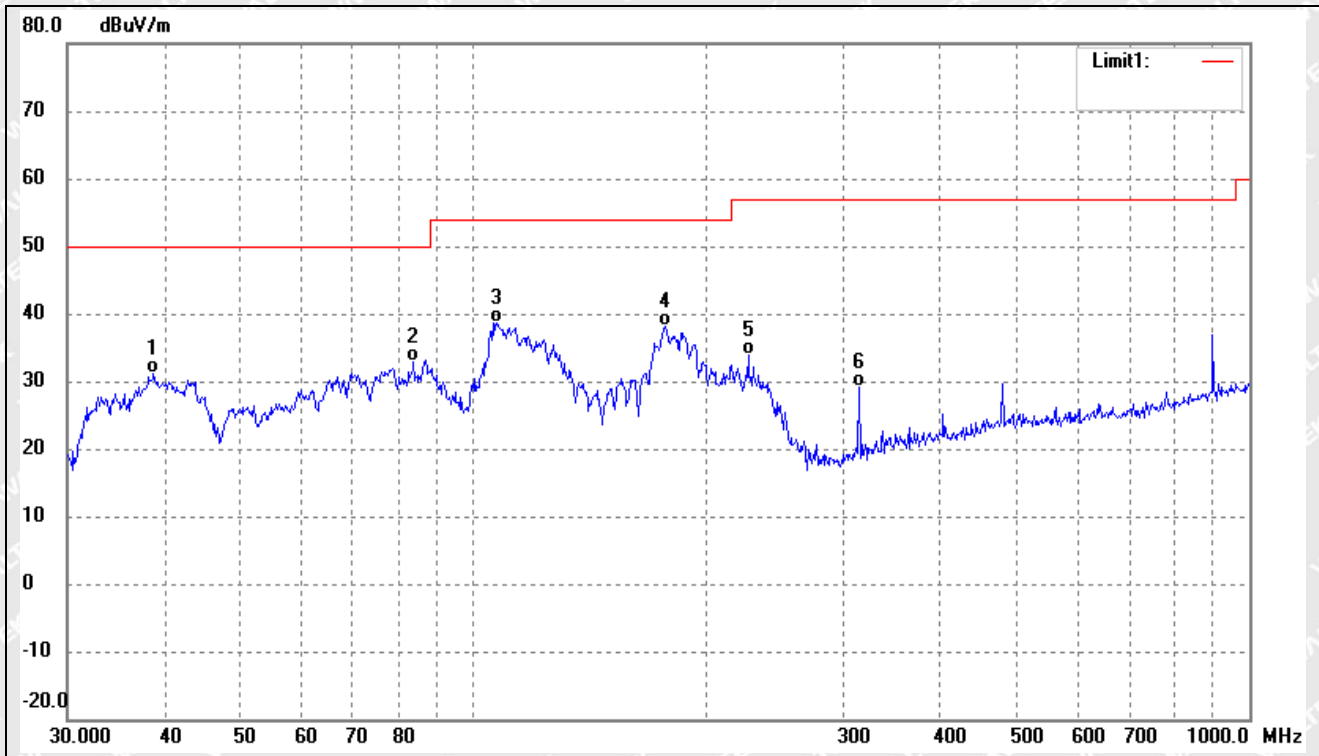
4.7 Summary of Test Results

Please find the results below:



30MHz-1GHz

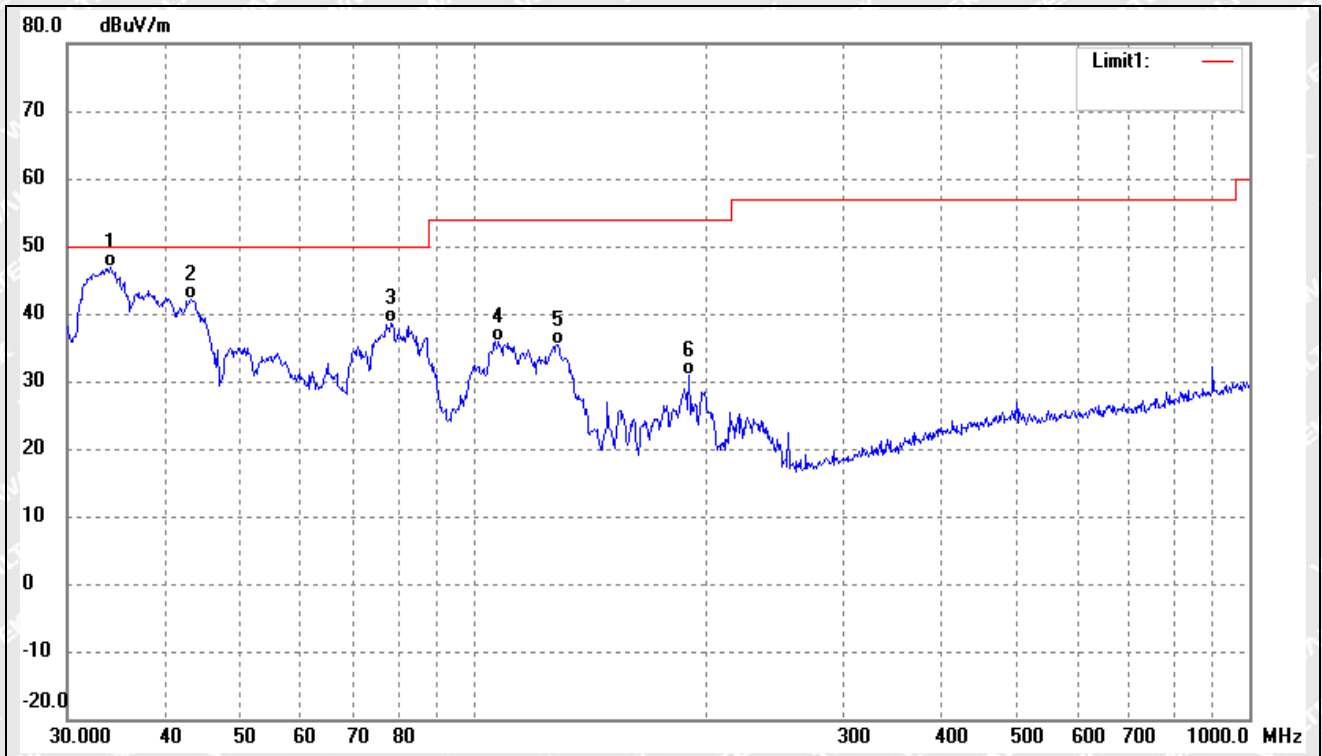
Test mode:	TM1	Polarity:	Horizontal
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No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	38.7518	40.96	-9.85	31.11	50.00	-18.89	231	100	QP
2	83.8156	45.98	-13.06	32.92	50.00	-17.08	340	100	QP
3	107.1337	49.82	-11.24	38.58	54.00	-15.42	82	100	QP
4	176.8878	51.17	-13.01	38.16	54.00	-15.84	183	100	QP
5	226.0994	44.48	-10.53	33.95	56.90	-22.95	340	100	QP
6	314.3765	36.94	-7.76	29.18	57.00	-27.82	245	100	QP



Test mode:	TM1	Polarity:	Vertical
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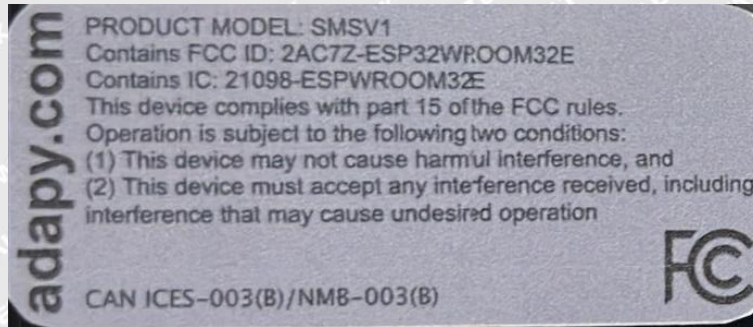


No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	34.0363	57.56	-10.63	46.93	50.00	-3.07	254	100	QP
2	43.2017	51.66	-9.64	42.02	50.00	-7.98	223	100	QP
3	78.4133	52.62	-14.01	38.61	50.00	-11.39	98	100	QP
4	107.8877	47.16	-11.28	35.88	54.00	-18.12	296	100	QP
5	128.5630	48.83	-13.50	35.33	54.00	-18.67	143	100	QP
6	189.7385	42.66	-11.73	30.93	54.00	-23.07	311	100	QP



EXHIBIT 1 - PRODUCT LABELING

Proposed IC Label Format



Specifications: Text is Black in color and is justified. The label shall be permanently affixed to the ITE or displayed electronically and its text must be clearly legible. When the dimension of the device is too small or it is otherwise not practical to place the label on the ITE, the label shall be placed in a prominent location in the user manual supplied with the ITE. The user manual may be in an electronic format and must be readily available.

Proposed Label Location on EUT

IC Label Location

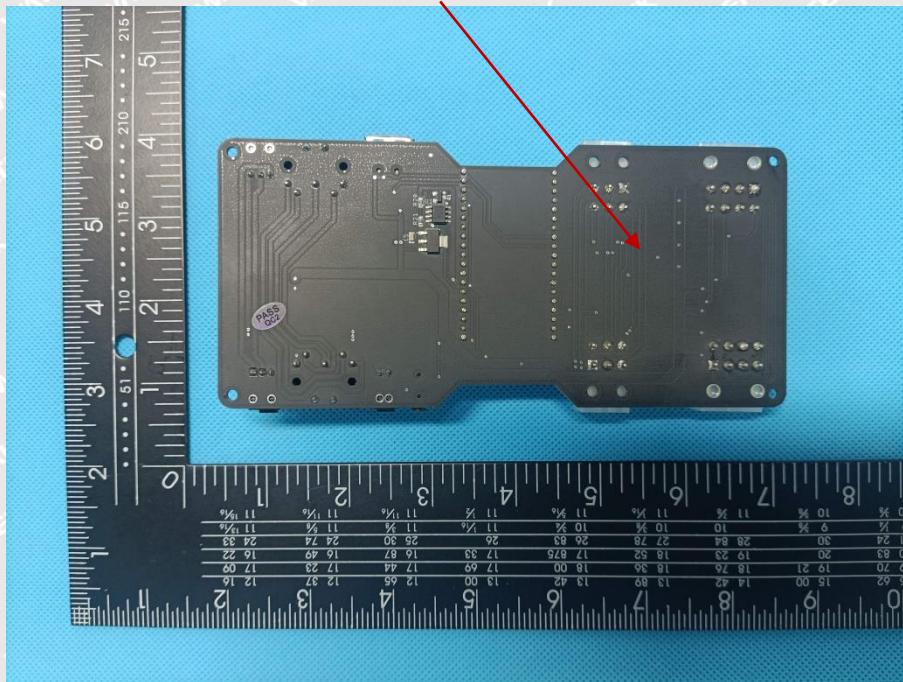




EXHIBIT 2 - EUT PHOTOGRAPHS

EUT View 1

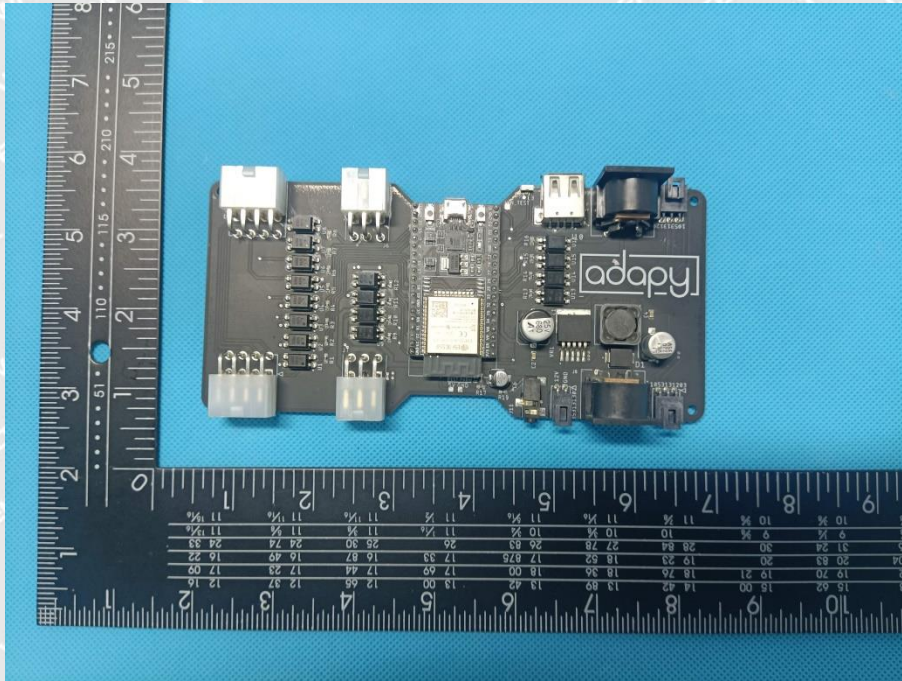
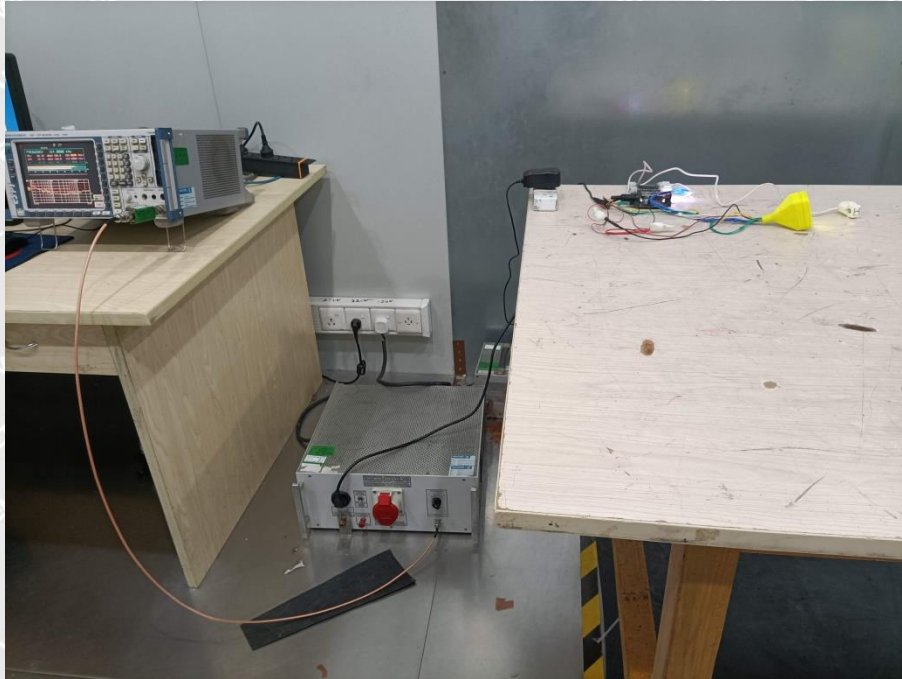


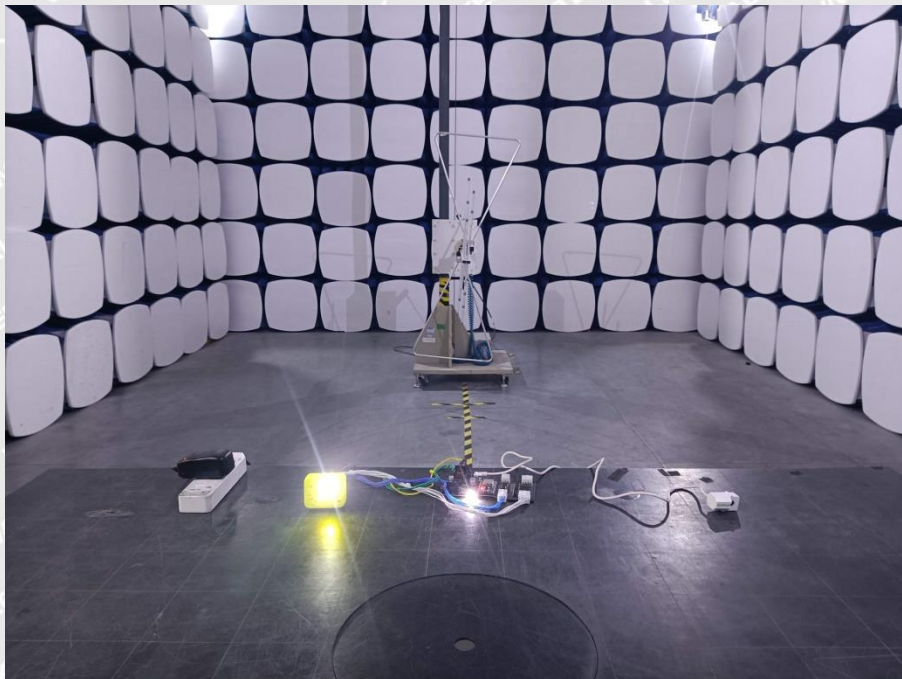


EXHIBIT 2 - TEST SETUP PHOTOGRAPHS

Conduction Emission Test View



Radiation Emission Test View (Below 1GHz)



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