



TEST REPORT

Reference No...... : WTX22X10201802E002
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 : **FCC PART 15.209**
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_FCC PART15.209_001
Test Result..... : **Pass**



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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.

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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 Adapter Model:	/
Lowest Internal Frequency:	/
Highest Internal Frequency:	Above 108MHz
Classification of ITE:	Class A



1.2 Test Standards

The tests were performed according to following standards:

FCC Rules Part 15.209: Radiated emission limits; general requirements.

ANSI C63.10-2013: American National Standard for Testing Unlicensed Wireless Devices.

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 C63.10-2013. The equipment under test (EUT) was configured to measure its highest possible emission level. The test modes were adapted accordingly in reference to the Operating Instructions.

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	RF Mode	Connected to the laptop	DC 5V

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 Measurement Uncertainty

Measurement uncertainty		
Parameter	Conditions	Uncertainty
Conducted Emissions	Conducted	9-150kHz ± 3.74 dB
		0.15-30MHz ± 3.34 dB
Radiated Emissions	Radiated	30-200MHz ± 4.52 dB
		0.2-1GHz ± 5.56 dB
		1-6GHz ± 3.84 dB
		6-18GHz ± 3.92 dB

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1.7 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 checked="" 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 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 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

Description of Test	Result
§15.209(b) Radiated Emission	Compliant

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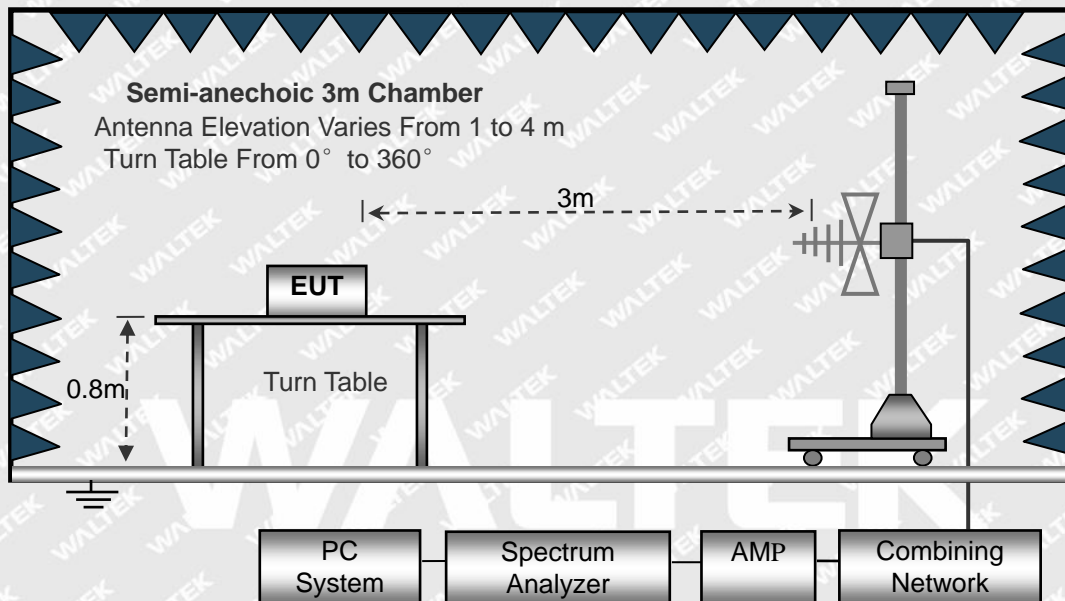


3. RADIATED EMISSION

3.1 Test Procedure

The specification used was to FCC Part 15.209 limits. The limits used for FCC Part 15.209 for spurious emissions are (74dBuV/m peak & 54dBuV/m average).

3.2 Block Diagram of Test Setup





3.3 Test Receiver Setup

Frequency :9kHz-30MHz

RBW=10KHz,

VBW =30KHz

Sweep time= Auto

Trace = max hold

Detector function = peak

Frequency :30MHz-1GHz

RBW=120KHz,

VBW=300KHz

Sweep time= Auto

Trace = max hold

Detector function = peak, QP

Frequency :Above 1GHz

RBW=1MHz,

VBW=3MHz(Peak), 10Hz(AV)

Sweep time= Auto

Trace = max hold

Detector function = peak, AV

3.4 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 μ V means the emission is 6dB μ V below the maximum limit for a Class A device. The equation for margin calculation is as follows:

$$\text{Margin} = \text{Corr. Ampl.} - \text{FCC Part 15.209(b) Limit}$$

3.5 Environmental Conditions

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

3.6 Summary of Test Results

Please find the results below:



1GHz-12.75GHz

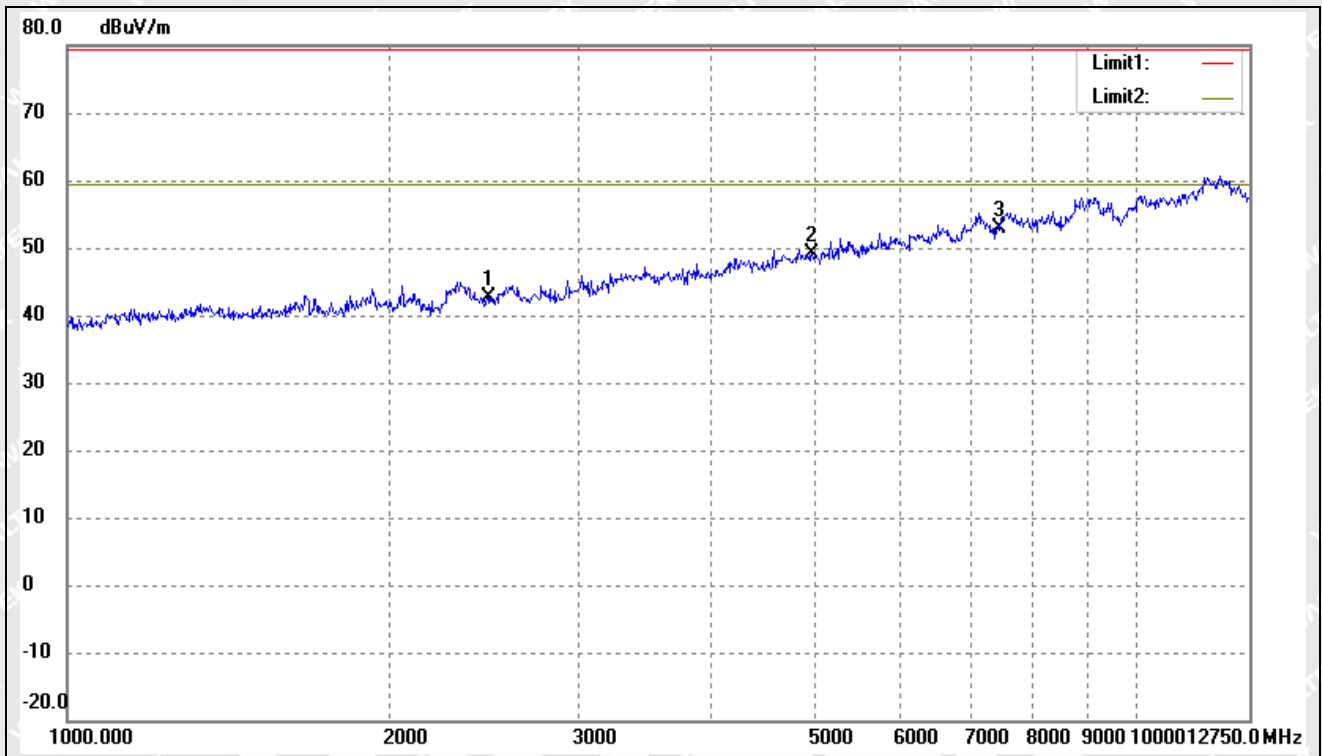
Test mode:	TM1	Polarity:	Horizontal
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No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	2493.895	50.73	-8.11	42.62	79.50	-36.88	148	100	peak
2	4987.790	51.32	-2.50	48.82	79.50	-30.68	282	100	peak
3	7481.685	50.09	3.70	53.79	79.50	-25.71	73	100	peak



Test mode:	TM1	Polarity:	Vertical
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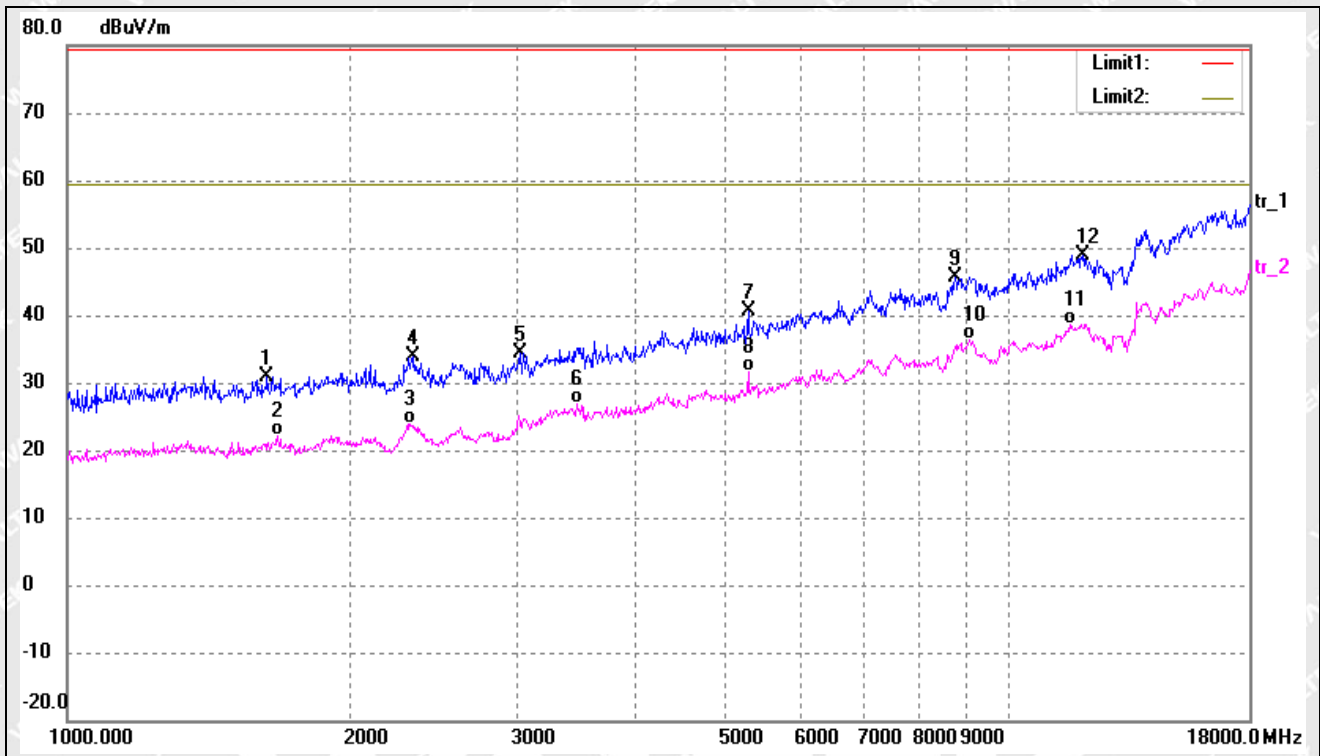


No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	2481.231	50.84	-8.15	42.69	79.50	-36.81	256	100	peak
2	4962.462	51.65	-2.56	49.09	79.50	-30.41	311	100	peak
3	7443.693	49.37	3.56	52.93	79.50	-26.57	54	100	peak



1GHz-18GHz

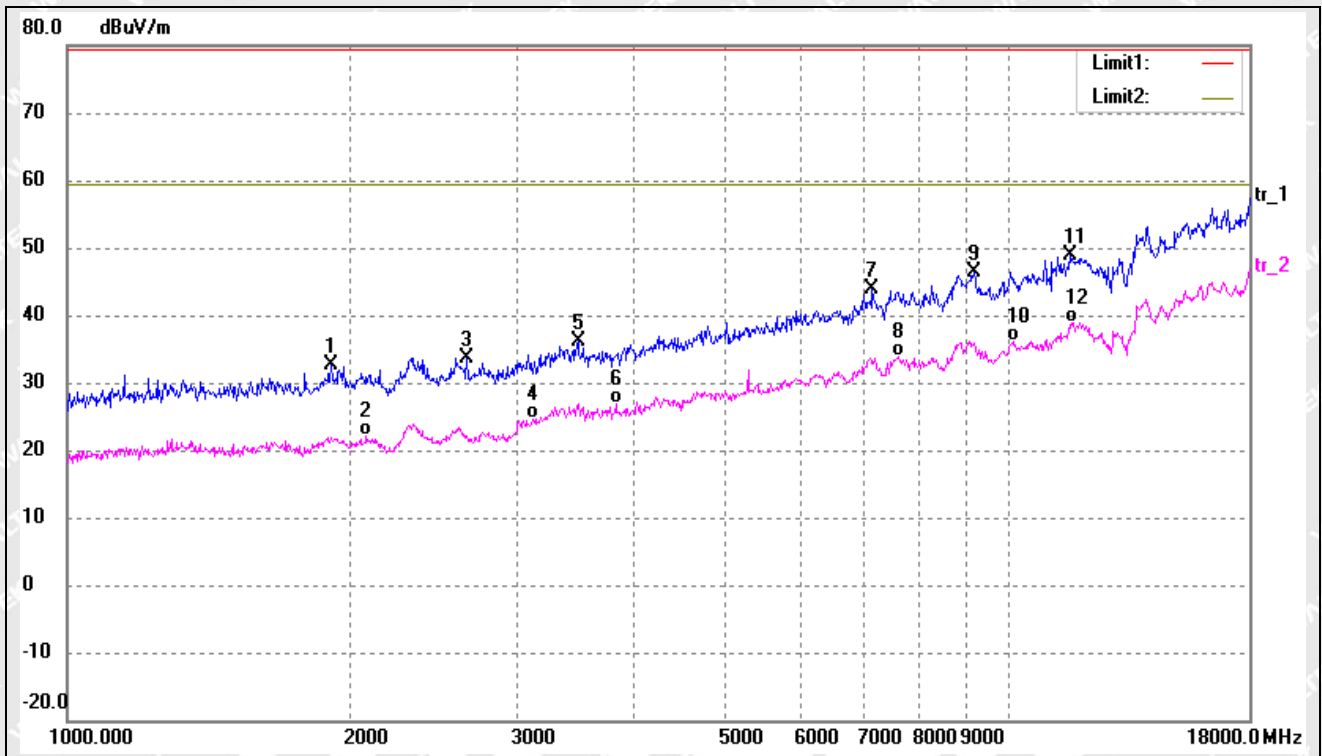
Test mode:	TM1	Polarity:	Horizontal
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No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	1629.825	42.03	-11.15	30.88	79.50	-48.62	128	100	peak
2	1672.779	33.12	-11.00	22.12	59.50	-37.38	190	100	AVG
3	2312.219	32.53	-8.77	23.76	59.50	-35.74	100	100	AVG
4	2332.356	42.62	-8.69	33.93	79.50	-45.57	99	100	peak
5	3025.306	41.76	-7.38	34.38	79.50	-45.12	303	100	peak
6	3475.541	32.62	-5.73	26.89	59.50	-32.61	260	100	AVG
7	5284.902	42.72	-2.00	40.72	79.50	-38.78	177	100	peak
8	5284.902	33.58	-2.00	31.58	59.50	-27.92	172	100	AVG
9	8764.147	40.71	4.91	45.62	79.50	-33.88	51	100	peak
10	9073.460	30.08	6.19	36.27	59.50	-23.23	126	100	AVG
11	11600.350	29.50	9.19	38.69	59.50	-20.81	176	100	AVG
12	11975.098	38.80	10.05	48.85	79.50	-30.65	310	100	peak



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	1905.135	42.75	-10.22	32.53	79.50	-46.97	68	100	peak
2	2077.705	31.79	-9.63	22.16	59.50	-37.34	154	100	AVG
3	2656.331	41.52	-7.89	33.63	79.50	-45.87	55	100	peak
4	3123.039	31.67	-7.03	24.64	59.50	-34.86	114	100	AVG
5	3485.601	41.73	-5.70	36.03	79.50	-43.47	276	100	peak
6	3823.371	32.54	-5.68	26.86	59.50	-32.64	158	100	AVG
7	7158.806	41.39	2.56	43.95	79.50	-35.55	84	100	peak
8	7628.806	30.33	3.56	33.89	59.50	-25.61	128	100	AVG
9	9178.971	40.53	5.78	46.31	79.50	-33.19	55	100	peak
10	10097.596	29.84	6.20	36.04	59.50	-23.46	142	100	AVG
11	11600.350	39.77	9.19	48.96	79.50	-30.54	210	100	peak
12	11667.603	29.52	9.34	38.86	59.50	-20.64	139	100	AVG

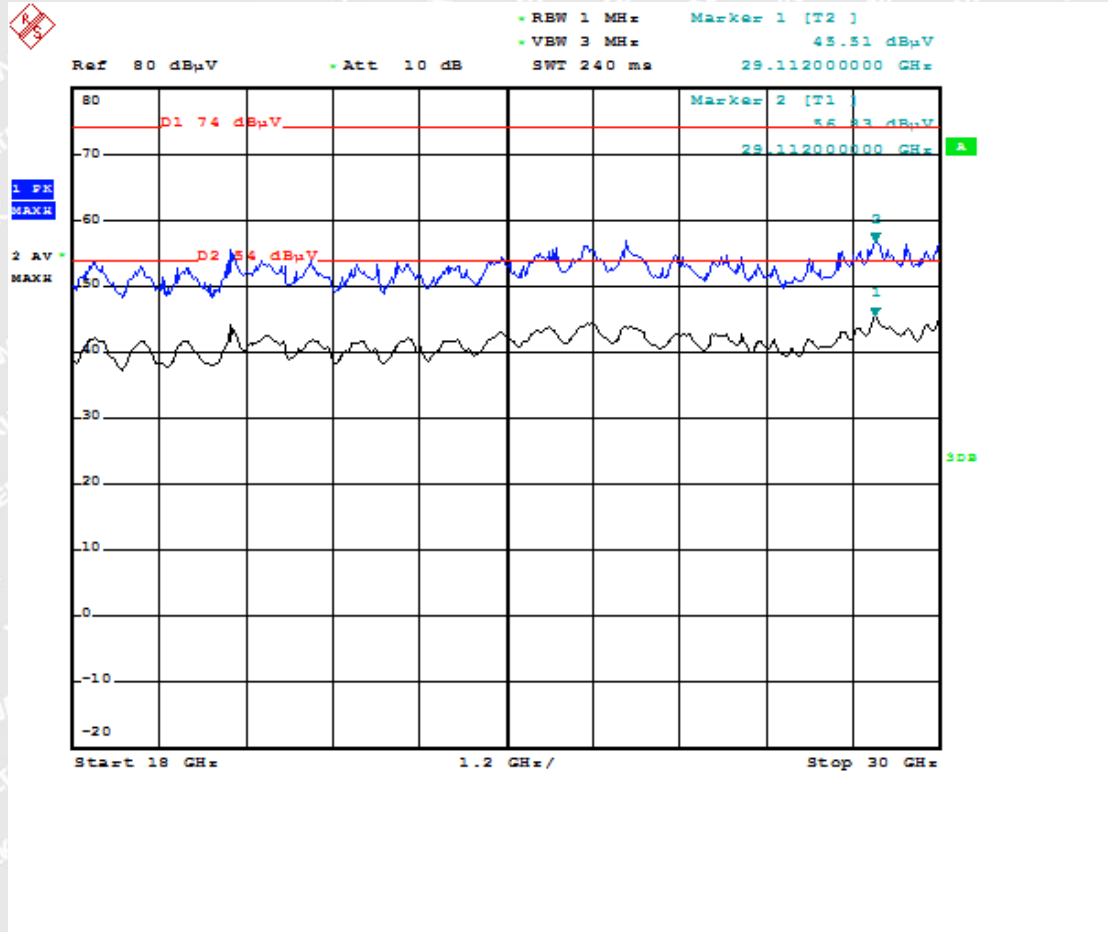


Reference No.: WTX22X10201802E002

18GHz-30GHz

Test mode:	TM1	Polarity:	Horizontal
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Polarization:Horizontal

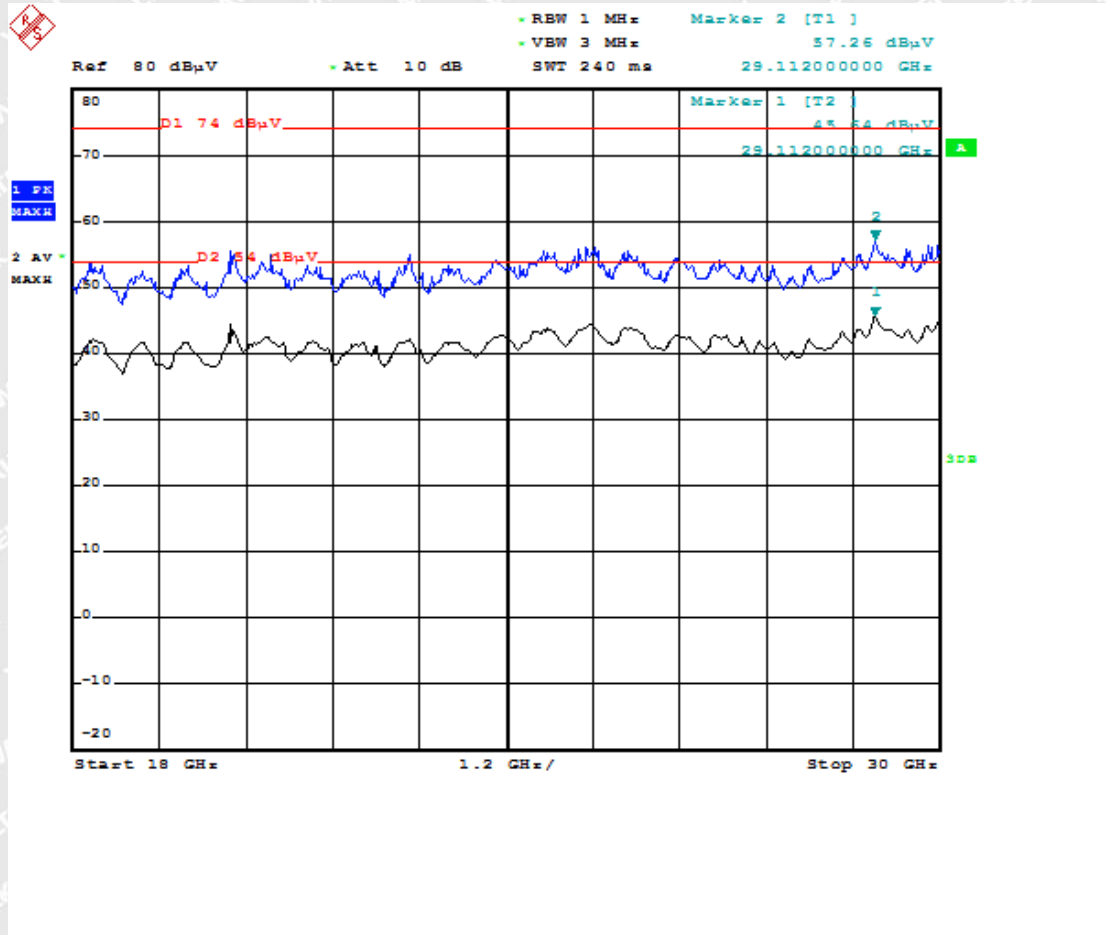


No.	Frequency (GHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	29.1120	56.83	74	-17.17	peak
2	29.1120	45.51	54	-8.49	AVG



Test mode:	TM1	Polarity:	Vertical
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Polarization: Vertical

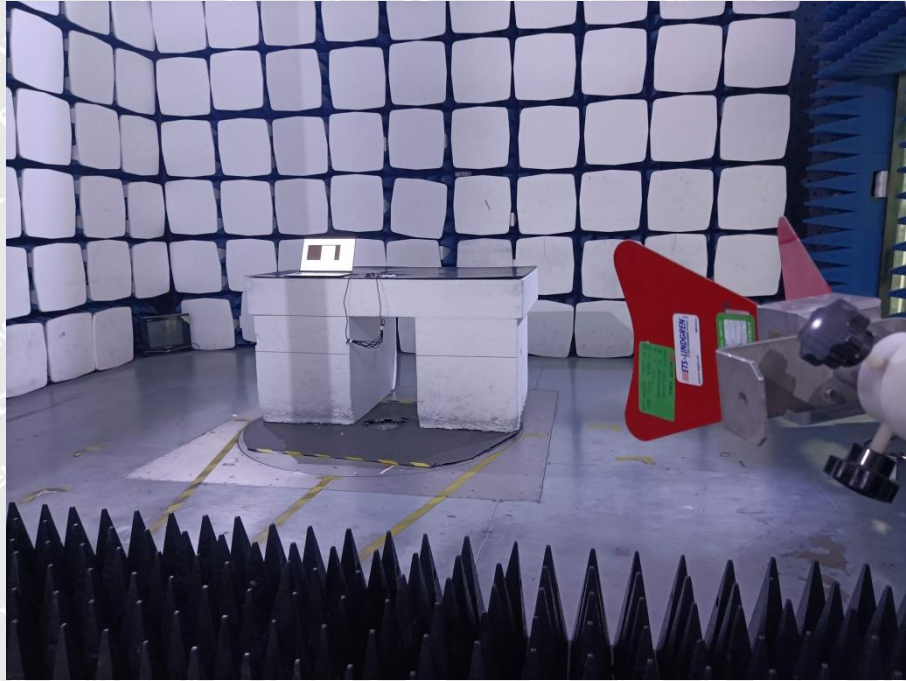


No.	Frequency (GHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	29.1120	57.26	74	-16.74	peak
2	29.1120	45.64	54	-8.36	AVG



EXHIBIT 1 - TEST SETUP PHOTOGRAPHS

Radiation Emission Test View (Above 1GHz)



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