

Prüfbericht-Nr.: Test report no.:	CN24BN33 001	Auftrags-Nr.: Order no.:	190157827	Seite 1 von 15 Page 1 of 15
Kunden-Referenz-Nr.: Client reference no.:	N/A	Auftragsdatum: Order date:	2024-07-23	
Auftraggeber: Client:	Ninebot (Changzhou) Tech Co., Ltd. 16F-17F, Block A, Building 3, No.18, Changwu Mid Rd, Wujin Dist., Changzhou, Jiangsu, P. R. China			
Prüfgegenstand: Test item:	Segway eKickScooter ZT3 Pro			
Bezeichnung / Typ-Nr.: Identification / Type no.:	051801E, 051801D, 051801A			
Auftrags-Inhalt: Order content:	EMC Test Report			
Prüfgrundlage: Test specification:	EN 17128:2020, Clause 9			
Wareneingangsdatum: Date of sample receipt:	2024-07-09			
Prüfmuster-Nr.: Test sample no.:	A003777403-001 A003777403-002			
Prüfzeitraum: Testing period:	2024-07-10 - 2024-07-11			
Ort der Prüfung: Place of testing:	Refer to section 2.1			
Prüflaboratorium: Testing laboratory:	TÜV Rheinland (China) Ltd.			
Prüfergebnis*: Test result*:	Pass			
geprüft von: tested by:		genehmigt von: authorized by:		
Wang Xingdi		Wu Yanping		
Datum: Date: 2024-07-24		Ausstellungsdatum: Issue date: 2024-07-24		
Wang Xingdi		Wu Yanping		
Stellung / Position: Project Engineer		Stellung / Position: Authorizer		
Sonstiges / Other:				
Zustand des Prüfgegenstandes bei Anlieferung: Condition of the test item at delivery:		Prüfmuster vollständig und unbeschädigt Test item complete and undamaged		
* Legende: P(ass) = entspricht o.g. Prüfgrundlage(n) F(ail) = entspricht nicht o.g. Prüfgrundlage(n) N/A = nicht anwendbar N/T = nicht getestet * Legend: P(ass) = passed a.m. test specification(s) F(ail) = failed a.m. test specification(s) N/A = not applicable N/T = not tested				
Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens. <i>This test report only relates to the above mentioned test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark.</i>				



Prüfbericht-Nr.:
Test report no.:

CN24BN33 001

Seite 2 von 15
Page 2 of 15

Anmerkungen
Remarks

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3	Prüfklausel mit der Note * wurden an qualifizierte Unterauftragnehmer vergeben und sind unter der jeweiligen Prüfklausel des Berichts beschrieben. Abweichungen von Prüfspezifikation(en) oder Kundenanforderungen sind in der jeweiligen Prüfklausel im Bericht aufgeführt. <i>Test clauses with remark of * are subcontracted to qualified subcontractors and described under the respective test clause in the report.</i> <i>Deviations of testing specification(s) or customer requirements are listed in specific test clause in the report.</i>
4	Die Entscheidungsregel für Konformitätserklärungen basierend auf numerischen Messergebnissen in diesem Prüfbericht basiert auf der "Null-Grenzwert-Regel" und der "Einfachen Akzeptanz" gemäß ILAC G8:2019 und IEC Guide 115:2021, es sei denn, in der auf Seite 1 dieses Berichts genannten angewandten Norm ist etwas anderes festgelegt oder vom Kunden gewünscht. Dies bedeutet, dass die Messunsicherheit nicht berücksichtigt wird und daher auch nicht im Prüfbericht angegeben wird. Zu weiteren Informationen bezüglich des Risikos durch diese Entscheidungsregel siehe ILAC G8:2019. <i>The decision rule for statements of conformity, based on numerical measurement results, in this test report is based on the "Zero Guard Band Rule" and "Simple Acceptance" in accordance with ILAC G8:2019 and IEC Guide 115:2021, unless otherwise specified in the applied standard mentioned on Page 1 of this report or requested by the customer. This means that measurement uncertainty is not taken in account and hence also not declared in the test report. For additional information to the resulting risk based of this decision rule please refer to ILAC G8:2019.</i>

Prüfbericht - Nr.:

Test Report No.:

CN24BN33 001

Seite 3 von 15

Page 3 of 15

TEST SUMMARY

4.1.1 RADIATED EMISSION

Result:

Passed

5.1.1 RADIO FREQUENCY ELECTROMAGNETIC FIELD

Result:

Passed

5.1.2 ELECTROSTATIC DISCHARGE IMMUNITY

Result:

Passed

Contents

1	GENERAL REMARKS.....	5
1.1	COMPLEMENTARY MATERIALS	5
2	TEST SITES.....	6
2.1	TEST FACILITIES	6
2.2	LIST OF TEST AND MEASUREMENT INSTRUMENTS	6
2.3	MEASUREMENT UNCERTAINTIES	7
3	GENERAL PRODUCT INFORMATION.....	8
3.1	PRODUCT FUNCTION AND INTENDED USE	8
3.2	RATINGS AND SYSTEM DETAILS	8
3.3	INDEPENDENT OPERATION MODES	8
3.4	NOISE GENERATING AND NOISE SUPPRESSING PARTS.....	8
3.5	SUBMITTED DOCUMENTS	9
4	TEST SET-UP AND OPERATION MODES	10
4.1	PRINCIPLE OF CONFIGURATION SELECTION	10
4.2	PHYSICAL CONFIGURATION FOR TESTING	10
4.3	TEST OPERATION AND TEST SOFTWARE.....	10
4.4	SPECIAL ACCESSORIES AND AUXILIARY EQUIPMENT	10
4.5	COUNTERMEASURES TO ACHIEVE EMC COMPLIANCE.....	10
5	TEST RESULTS EMISSION FOR ELECTRIC SCOOTER.....	11
5.1	EMISSION IN THE FREQUENCY RANGE ABOVE 30 MHz FOR ELECTRIC SCOOTER.....	11
5.1.1	<i>Radiated emission.....</i>	<i>11</i>
6	TEST RESULTS IMMUNITY	12
6.1	ENCLOSURE.....	13
6.1.1	<i>Radio Frequency Electromagnetic Field</i>	<i>13</i>
6.1.2	<i>Electrostatic Discharge Immunity.....</i>	<i>14</i>
7	LIST OF TABLES.....	15

Prüfbericht - Nr.:
Test Report No.:

CN24BN33 001

Seite 5 von 15
Page 5 of 15

1 General Remarks

1.1 Complementary Materials

All attachments are integral parts of this test report. This applies especially to the following appendix:

Appendix A: Test Results

Appendix B: Photographs of the Test Set-up

Prüfbericht - Nr.:
Test Report No.:

CN24BN33 001

Seite 6 von 15
Page 6 of 15

2 Test Sites

2.1 Test Facilities

Laboratory: National Center of Supervision & Inspection on Light Electric Vehicle & Battery Products Quality

Address: No.8 Chunxin Road, Xishan District, Wuxi, Jiangsu, China

The used test equipment is in accordance with CISPR 16-1 series standards for measurement of radio interference.

2.2 List of Test and Measurement Instruments

Table 1: List of Test and Measurement Equipment

No.	Equipment	Manufacturer	Model	Serial no.	Cal. due date
1	EMI Test Receiver	R&S	ESU26	ES03-33-01	2025-04-06
2	Ultra Broadband Antenna	SCHWARZBECK	SWB-VULB9163	ES03-33-03	2025-04-06
3	5m Semi-Anechoic Chamber	Albatross Projects GmbH	SAC-5-3	ES03-34	2025-12-09
4	Signal Generator	R&S	SMB100A	ES03-35-01	2025-04-06
5	Amplifier	R&S	BBA150-A1800	ES03-35-14	2025-04-06
6	Amplifier	R&S	BBA100-A125B500C250	ES03-35-03	2025-04-06
7	Amplifier	MILMEGA	AS0104-100/100	ES03-35-04	2025-04-06
8	Power Meter	R&S	NRP2	ES03-35-02	2025-04-06
9	High Gain EMS Antenna	SCHWARZBECK	VHBD9134-4+BBFA9146	ES03-35-16	-- --
10	EMS Antenna	R&S	HL046	ES03-35-05	-- --
11	High Gain Horn Antenna	Amplifier Research	ATH800M5G	ES03-35-06	-- --
12	Field Probe	Amplifier Research	FL7006/KIT	ES03-35-08	2025-06-10
13	ESD Simulator	TESEQ	NSG437	ES03-36-02	2025-04-07

2.3 Measurement Uncertainties

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus.

The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor of $k=2$, which for a normal distribution corresponds to a coverage probability of approximately 95%.

Table 2: Measurement Uncertainty levels

Test	Parameters	Expanded uncertainty (U_{CISPR})
Radiated Emission	Level accuracy (30MHz to 1000MHz)	$\pm 4.34\text{dB}$ (Horizontal polarization)
	Level accuracy (30MHz to 1000MHz)	$\pm 4.55\text{dB}$ (Vertical polarization)

As U_{lab} in all applicable tests listed above are less than U_{CISPR} according to CISPR 16-4-2:2003,

- compliance is deemed to occur if no measured disturbance exceeds the disturbance limit;
- non-compliance is deemed to occur if any measured disturbance exceeds the disturbance limit.

Decision rule is the rule that describes how measurement uncertainty is accounted for when stating conformity with a specified requirement. When decision rule is applicable, please refer to the current version announced in our website <https://www.tuv.com/landingpage/en/qm-gcn/>.

Prüfbericht - Nr.:
Test Report No.:

CN24BN33 001

Seite 8 von 15
Page 8 of 15

3 General Product Information

3.1 Product Function and Intended Use

The EUT (equipment under test) is a Segway eKickScooter ZT3 Pro. For the further information, refer to the user's manual.

3.2 Ratings and System Details

General Information of EUT	Value
Kind of Equipment	Segway eKickScooter ZT3 Pro
Type Designation	051801E, 051801D, 051801A
	051801E Motor Rated Power: 650 W Max. Speed: 25 km/h
	051801D Motor Rated Power: 500 W Max. Speed: 20 km/h
	051801A Motor Rated Power: 650 W Max. Speed: 25 km/h
Operating Temperature Range	-10 °C ~ +40 °C
Operating Voltage	DC 53.6V@3.9A input via power adapter DC 46.8V input via internal battery
Testing Voltage	DC 46.8V by internal Battery
Power Adapter	Model: NBW54D601D3D01 Input: AC 100-240V~50/60Hz Output: DC 53.6V@3.9A
Battery pack	Model: NZBF4813A Ratings: DC 46.8V, 12.75Ah, 597Wh Rated Output Power: 70W

Identities and difference:

This products have the same circuit diagram and appearance, only for difference motor and Model name as described above. Related testing considered, all tests were performed on models 051801E, and parts of test for verification on the model 051801D in this report.

3.3 Independent Operation Modes

The basic operation modes are:

- A. Emission according to B.2.2.3 and B.3.1.4 of Annex B of EN 17128:2020.
- B. Immunity according to B.4.4 of Annex B of EN 17128:2020.
- C. off

3.4 Noise Generating and Noise Suppressing Parts

Refer to the circuit diagram for further information.

Prüfbericht - Nr.:
Test Report No.:

CN24BN33 001

Seite 9 von 15
Page 9 of 15

3.5 Submitted Documents

Circuit diagram, BOM, User manual, Nameplate.

4 Test Set-up and Operation Modes

4.1 Principle of Configuration Selection

Emission: The equipment under test (EUT) was configured to measure its highest possible emission level. The test conditions were adapted accordingly in reference to the instructions for use.

Refer to the related paragraph of this report.

Immunity: The equipment under test (EUT) was configured to have its highest possible susceptibility against the tested phenomena. The test conditions were adapted accordingly in reference to the instructions for use.

Refer to the related paragraph of this report.

4.2 Physical Configuration for Testing

Refer to the related paragraph of this report.

4.3 Test Operation and Test Software

Refer to the related paragraph of this report. No software was used.

4.4 Special Accessories and Auxiliary Equipment

None.

4.5 Countermeasures to achieve EMC Compliance

None.

Prüfbericht - Nr.:
Test Report No.:

CN24BN33 001

Seite 11 von 15
Page 11 of 15

5 Test Results Emission for Electric Scooter

5.1 Emission in the Frequency Range above 30 MHz for Electric Scooter

5.1.1 Radiated emission

Result:

Passed

Date of testing : 2024-07-10 - 2024-07-11
Test procedure : EN 17128:2020, Annex B
Frequency range : 30 – 1000MHz
Limits : QuasiPeak limits (3m test distance):
30MHz-75MHz: 42dBuV/m
75MHz-400MHz: 42–53dBuV/m, Increasing linearly with the logarithm of the frequency
400MHz-1000MHz: 53dBuV/m
Average limits (3m test distance):
30MHz-75MHz: 32dBuV/m
75MHz-400MHz: 32–43dBuV/m, Increasing linearly with the logarithm of the frequency
400MHz-1000MHz: 43dBuV/m
MaxPeak limits (3m test distance):
30MHz-75MHz: 62dBuV/m
75MHz-400MHz: 62–73dBuV/m, Increasing linearly with the logarithm of the frequency
400MHz-1000MHz: 73dBuV/m
Kind of test site : Semi-anechoic chamber
Ambient conditions : Temperature: 24°C; Relative humidity: 57%
Operation mode : A

The radiated disturbance test was carried out in a semi-anechoic chamber. The test distance from the receiving antenna to the EUT is 3m. The normalized site attenuation of the semi-anechoic chamber is regularly calibrated to ensure the radiated disturbance test results are valid. The height of the antenna is $1.8\text{m} \pm 0.05\text{m}$ for vertical and horizontal polarity. When the test antenna is horizontal polarity, the engine midpoint should be positioned on normal from antenna midpoint. The test was performed with the antenna both in its horizontal and vertical polarizations.

The following figures were those measured and recorded by a test receiver. The curves in the figure were those measured with a peak detector for broad-band radiation and average detector for narrow-band radiation for the max measurement result. The results below show the worst case.

For the measurement records, refer to the appendix A.

Prüfbericht - Nr.:
Test Report No.:

CN24BN33 001

Seite 12 von 15
Page 12 of 15

6 Test Results Immunity

Annex B.4.6.2.1 of EN 17128:2020 for Electric Scooter:

A vehicle is deemed to fulfill the requisite immunity conditions if, during the tests carried out in the manner required by this clause, there are no abnormal changes in the speed of the vehicle's drive wheels, there are no signs of operational deterioration which might mislead other road users and there are no other noticeable phenomena which could result in a deterioration in the direct control of the vehicle.

Prüfbericht - Nr.:
Test Report No.:

CN24BN33 001

Seite 13 von 15
Page 13 of 15

6.1 Enclosure

6.1.1 Radio Frequency Electromagnetic Field

Result:	Passed
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Date of testing	:	2024-07-10 - 2024-07-11
Basic standard	:	EN 17128:2020 and ISO11451-1:2015
Test level	:	30V/m for Electric Scooter
Frequency range	:	20-2000MHz
Modulation	:	80% AM, 1kHz
Frequency scan speed	:	Frequency step: 1% Dwell time: 2s
Performance criteria	:	A
Ambient conditions	:	Temperature: 24°C; Relative humidity: 57%
Operation mode	:	B

The test was performed inside a semi-anechoic chamber with a test distance of 2m. The phase of mid-point of antenna is at a height of 1.5m above the vehicle plane.

For the measurement records, refer to the appendix A.

Prüfbericht - Nr.:

Test Report No.:

CN24BN33 001

Seite 14 von 15

Page 14 of 15

6.1.2 Electrostatic Discharge Immunity

Result:

Passed

Date of testing	:	2024-07-10 - 2024-07-11
Basic standard	:	EN 17128:2020
Charge voltage	:	±2.0kV, ±4.0kV (Contact Discharge) ±2.0kV, ±4.0kV, ±8.0kV (Air Discharge)
Polarity	:	positive / negative
Number of discharges	:	≥10
Performance criteria	:	A
Ambient conditions	:	Temperature: 24°C; Relative humidity: 57%
Operation mode	:	B

The immunity against electrostatic discharge was tested in accordance with EN 17128:2020. Test setup and ESD-Generator are according to EN 61000-4-2:2009.

The EUT is placed on 0,1m wood table above the ground plane. And the minimum distance between the EUT and all other conductive structures except the ground plane beneath the EUT is more than 0,5m.

The reference ground plane is an aluminum sheet of 0,25mm minimum thickness. The reference ground plane is connected to the protective earth. The size of the ground plane is 2m x 2m.

A Vertical coupling plane of dimensions 0,5m x 0,5m is placed parallel to and positioned at a distance of 0,1m from the EUT.

For the measurement records, refer to the appendix A.

Prüfbericht - Nr.:

Test Report No.:

CN24BN33 001

Seite 15 von 15

Page 15 of 15

7 List of Tables

Table 1: List of Test and Measurement Equipment.....	6
Table 2: Measurement Uncertainty levels.....	7

APPENDIX A: TEST RESULTS

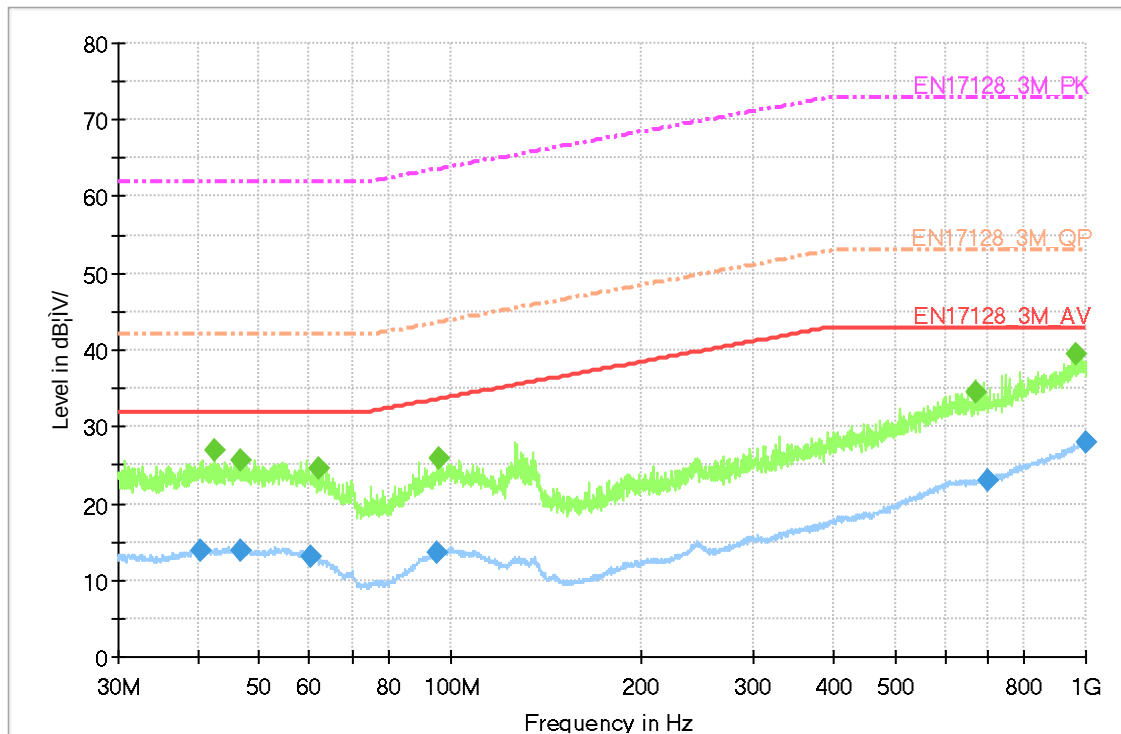
APPENDIX A: TEST RESULTS.....	1
APPENDIX A.1: TEST RESULTS OF RADIATED EMISSIONS.....	2
APPENDIX A.2: TEST RESULTS OF RADIO FREQUENCY ELECTROMAGNETIC FIELD.....	10
APPENDIX A.3: TEST RESULTS OF ELECTROSTATIC DISCHARGES IMMUNITY(ESD).....	11

APPENDIX A.1: TEST RESULTS OF RADIATED EMISSIONS

Remark: All modes were tested, only worst-case reported.

Model 051801E

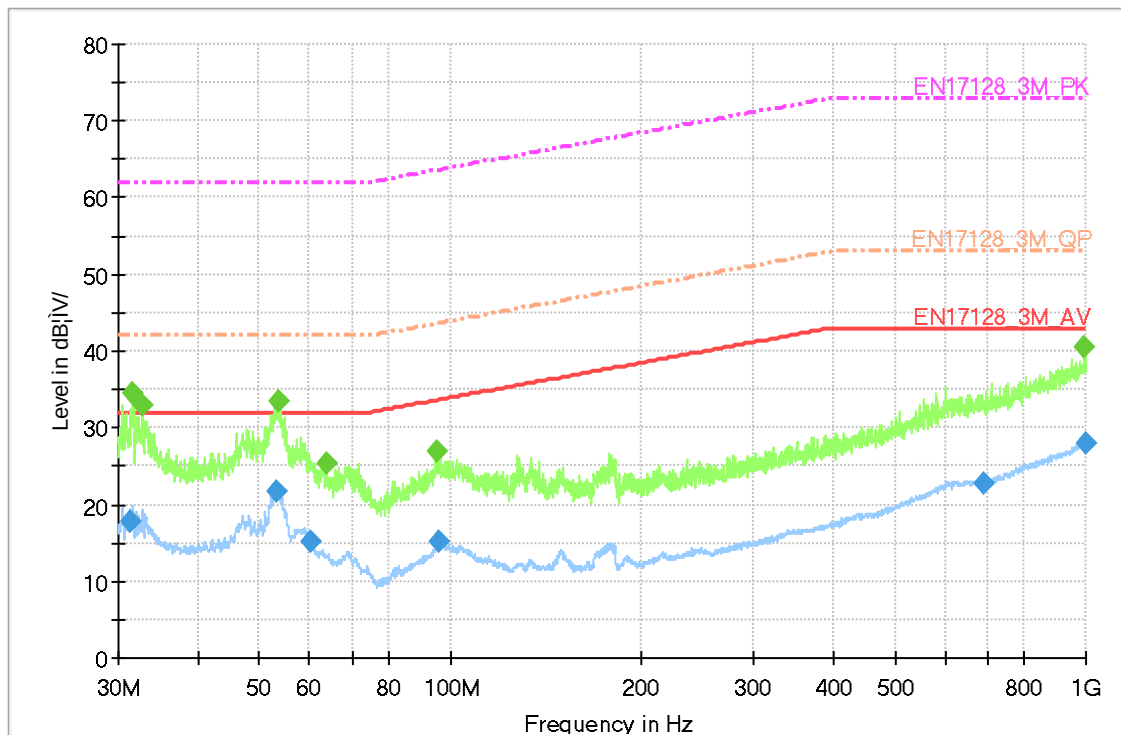
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**Final Result 1**

Frequency (MHz)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
40.444453	13.9	1000.0	120.000	180.0	H	0.0	14.3	18.1	32.0
46.574623	13.8	1000.0	120.000	180.0	H	0.0	14.2	18.2	32.0
60.337157	13.2	1000.0	120.000	180.0	H	0.0	13.4	18.8	32.0
95.040143	13.6	1000.0	120.000	180.0	H	0.0	14.0	19.9	33.6
698.185042	22.9	1000.0	120.000	180.0	H	0.0	22.1	20.1	43.0
999.089319	27.9	1000.0	120.000	180.0	H	0.0	25.8	15.1	43.0

Final Result 2

Frequency (MHz)	MaxPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
42.437143	26.9	1000.0	120.000	180.0	H	0.0	14.3	35.1	62.0
46.570977	25.5	1000.0	120.000	180.0	H	0.0	14.2	36.5	62.0
61.857640	24.5	1000.0	120.000	180.0	H	0.0	12.8	37.5	62.0
95.546999	25.9	1000.0	120.000	180.0	H	0.0	14.0	37.7	63.6
670.245737	34.6	1000.0	120.000	180.0	H	0.0	21.9	38.4	73.0
966.287625	39.4	1000.0	120.000	180.0	H	0.0	25.5	33.6	73.0



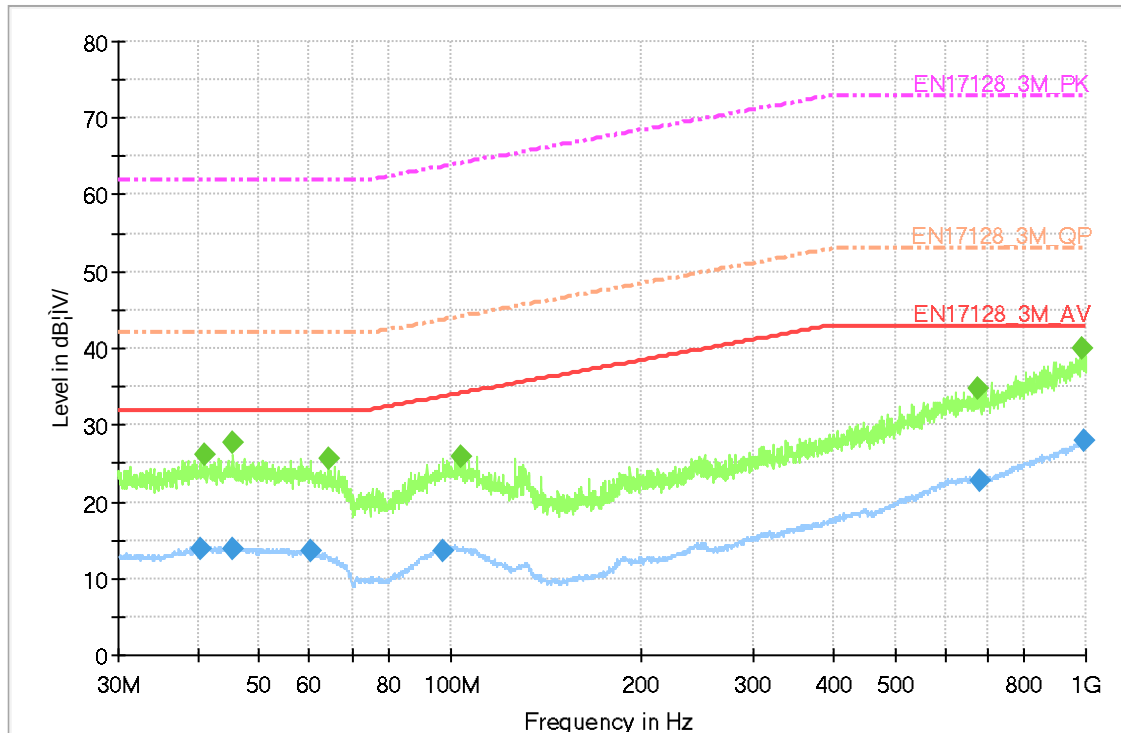
Final Result 1

Frequency (MHz)	Average (dB μ V/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dB μ V/m)
31.281783	17.7	1000.0	120.000	180.0	V	0.0	12.9	14.3	32.0
53.172364	21.8	1000.0	120.000	180.0	V	0.0	13.9	10.2	32.0
60.154710	15.1	1000.0	120.000	180.0	V	0.0	13.5	16.9	32.0
95.707423	15.0	1000.0	120.000	180.0	V	0.0	14.0	18.6	33.6
688.491709	22.9	1000.0	120.000	180.0	V	0.0	22.0	20.1	43.0
1000.000000	27.9	1000.0	120.000	180.0	V	0.0	25.8	15.1	43.0

Final Result 2

Frequency (MHz)	MaxPeak (dB μ V/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dB μ V/m)
31.663684	34.5	1000.0	120.000	180.0	V	0.0	12.9	27.5	62.0
32.692785	32.9	1000.0	120.000	180.0	V	0.0	13.0	29.1	62.0
53.726485	33.5	1000.0	120.000	180.0	V	0.0	13.9	28.5	62.0
63.804271	25.3	1000.0	120.000	180.0	V	0.0	12.1	36.7	62.0
95.356192	26.9	1000.0	120.000	180.0	V	0.0	14.0	36.7	63.6
994.705833	40.5	1000.0	120.000	180.0	V	0.0	25.7	32.5	73.0

Right side

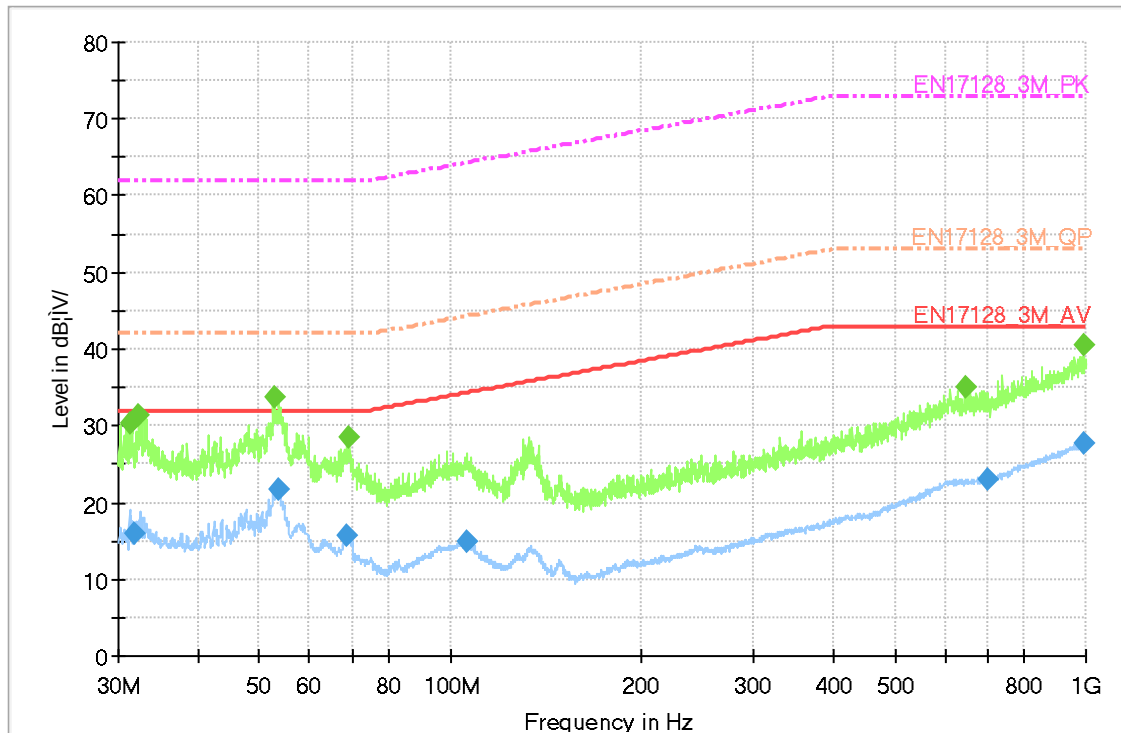


Final Result 1

Frequency (MHz)	Average (dB μ V/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dB μ V/m)
40.487970	13.9	1000.0	120.000	180.0	H	180.0	14.3	18.1	32.0
45.455123	13.9	1000.0	120.000	180.0	H	180.0	14.3	18.1	32.0
60.153510	13.5	1000.0	120.000	180.0	H	180.0	13.5	18.5	32.0
97.357320	13.7	1000.0	120.000	180.0	H	180.0	14.1	20.0	33.7
680.449875	22.8	1000.0	120.000	180.0	H	180.0	22.0	20.2	43.0
992.118802	27.9	1000.0	120.000	180.0	H	180.0	25.7	15.1	43.0

Final Result 2

Frequency (MHz)	MaxPeak (dB μ V/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dB μ V/m)
40.855563	26.1	1000.0	120.000	180.0	H	180.0	14.3	35.9	62.0
45.512591	27.6	1000.0	120.000	180.0	H	180.0	14.3	34.4	62.0
64.123931	25.7	1000.0	120.000	180.0	H	180.0	11.9	36.3	62.0
104.019231	26.0	1000.0	120.000	180.0	H	180.0	14.0	38.1	64.1
674.277279	34.9	1000.0	120.000	180.0	H	180.0	21.9	38.1	73.0
987.770661	40.0	1000.0	120.000	180.0	H	180.0	25.6	33.0	73.0

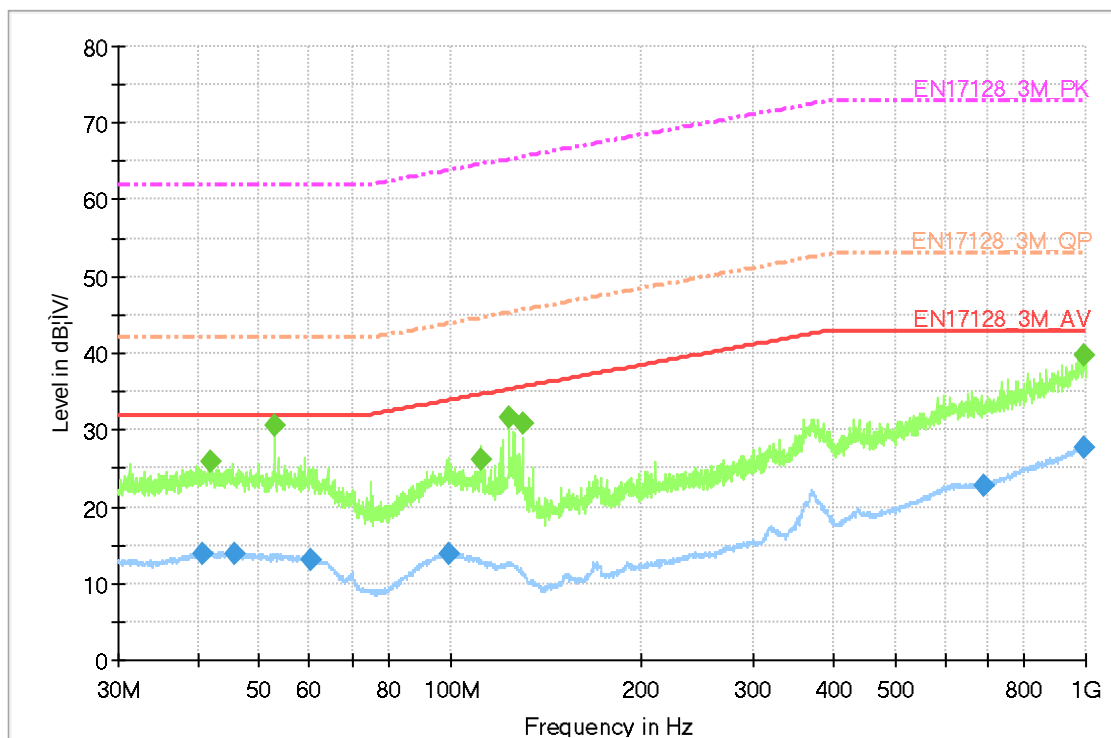


Final Result 1

Frequency (MHz)	Average (dB V/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dB V/m)
31.823699	15.9	1000.0	120.000	180.0	V	180.0	12.9	16.1	32.0
53.766306	21.6	1000.0	120.000	180.0	V	180.0	13.9	10.4	32.0
68.854609	15.7	1000.0	120.000	180.0	V	180.0	10.1	16.3	32.0
106.260354	15.0	1000.0	120.000	180.0	V	180.0	13.8	19.3	34.3
701.679950	23.1	1000.0	120.000	180.0	V	180.0	22.1	19.9	43.0
996.095640	27.8	1000.0	120.000	180.0	V	180.0	25.8	15.2	43.0

Final Result 2

Frequency (MHz)	MaxPeak (dB V/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dB V/m)
31.223699	30.4	1000.0	120.000	180.0	V	180.0	12.9	31.6	62.0
32.367648	31.2	1000.0	120.000	180.0	V	180.0	13.0	30.8	62.0
52.926998	33.8	1000.0	120.000	180.0	V	180.0	13.9	28.2	62.0
69.323133	28.6	1000.0	120.000	180.0	V	180.0	9.9	33.4	62.0
644.621875	35.1	1000.0	120.000	180.0	V	180.0	21.7	37.9	73.0
991.727674	40.5	1000.0	120.000	180.0	V	180.0	25.7	32.5	73.0

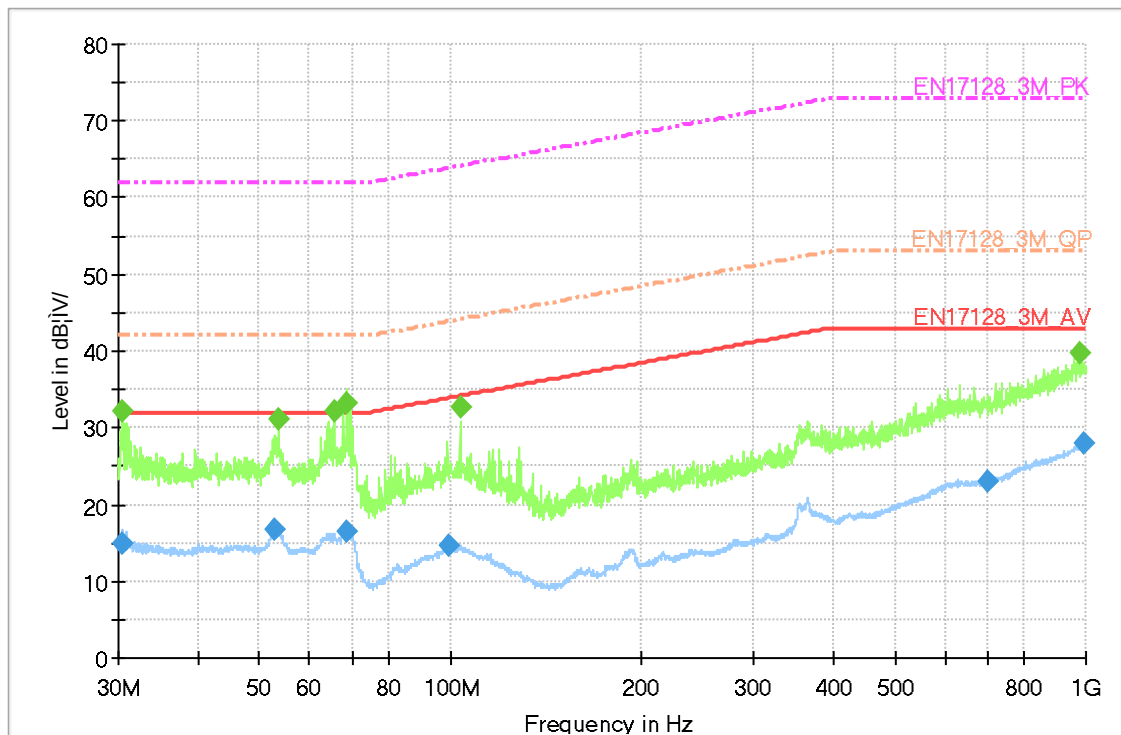
Model 051801D
Left side


Final Result 1

Frequency (MHz)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
40.687015	13.9	1000.0	120.000	180.0	H	0.0	14.3	18.1	32.0
45.584899	13.8	1000.0	120.000	180.0	H	0.0	14.3	18.2	32.0
60.275680	13.0	1000.0	120.000	180.0	H	0.0	13.4	19.0	32.0
99.535928	13.9	1000.0	120.000	180.0	H	0.0	14.3	20.0	33.9
688.491709	22.9	1000.0	120.000	180.0	H	0.0	22.0	20.1	43.0
994.312121	27.8	1000.0	120.000	180.0	H	0.0	25.7	15.2	43.0

Final Result 2

Frequency (MHz)	MaxPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
42.015096	25.8	1000.0	120.000	180.0	H	0.0	14.3	36.2	62.0
52.979925	30.5	1000.0	120.000	180.0	H	0.0	13.9	31.5	62.0
111.892582	26.0	1000.0	120.000	180.0	H	0.0	13.1	38.6	64.6
123.654249	31.6	1000.0	120.000	180.0	H	0.0	11.2	33.6	65.3
129.731298	30.9	1000.0	120.000	180.0	H	0.0	10.3	34.7	65.6
993.712121	39.8	1000.0	120.000	180.0	H	0.0	25.7	33.2	73.0



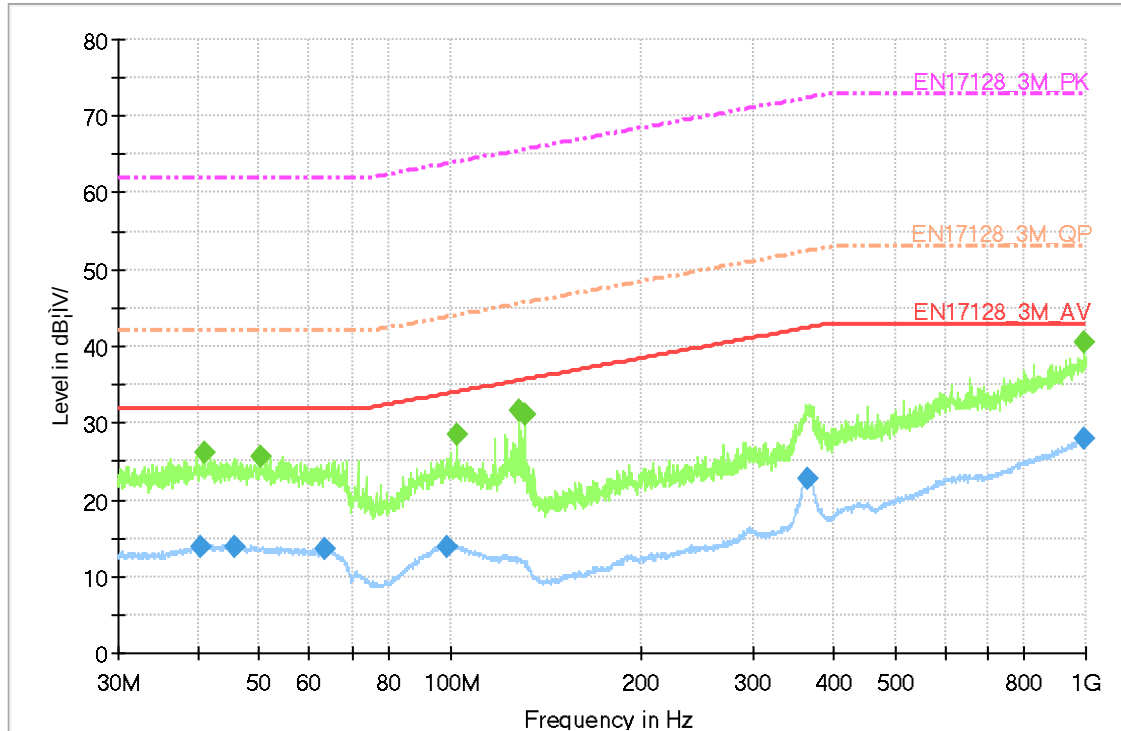
Final Result 1

Frequency (MHz)	Average (dB μ V/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dB μ V/m)
30.422741	15.0	1000.0	120.000	180.0	V	0.0	12.9	17.0	32.0
53.013166	16.8	1000.0	120.000	180.0	V	0.0	13.9	15.2	32.0
68.718920	16.6	1000.0	120.000	180.0	V	0.0	10.1	15.4	32.0
99.540157	14.8	1000.0	120.000	180.0	V	0.0	14.3	19.1	33.9
702.585294	23.0	1000.0	120.000	180.0	V	0.0	22.1	20.0	43.0
992.119402	27.9	1000.0	120.000	180.0	V	0.0	25.7	15.1	43.0

Final Result 2

Frequency (MHz)	MaxPeak (dB μ V/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dB μ V/m)
30.483617	32.1	1000.0	120.000	180.0	V	0.0	12.9	29.9	62.0
53.672812	31.1	1000.0	120.000	180.0	V	0.0	13.9	30.9	62.0
65.484085	32.0	1000.0	120.000	180.0	V	0.0	11.4	30.0	62.0
68.702333	33.3	1000.0	120.000	180.0	V	0.0	10.1	28.7	62.0
103.500692	32.6	1000.0	120.000	180.0	V	0.0	14.0	31.6	64.1
980.883841	39.7	1000.0	120.000	180.0	V	0.0	25.6	33.3	73.0

Right side

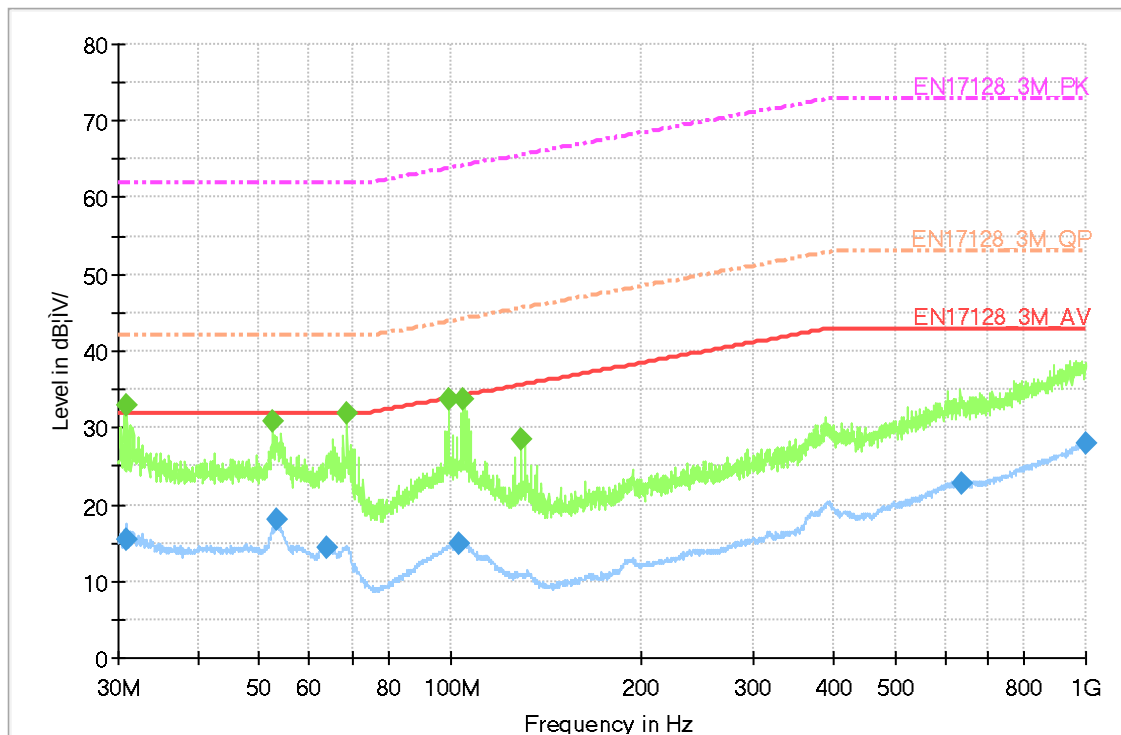


Final Result 1

Frequency (MHz)	Average (dB μ V/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dB μ V/m)
40.372830	13.9	1000.0	120.000	180.0	H	180.0	14.3	18.1	32.0
45.553926	13.8	1000.0	120.000	180.0	H	180.0	14.3	18.2	32.0
63.394073	13.6	1000.0	120.000	180.0	H	180.0	12.2	18.4	32.0
98.341992	13.9	1000.0	120.000	180.0	H	180.0	14.2	19.9	33.8
365.513515	22.7	1000.0	120.000	180.0	H	180.0	16.8	19.7	42.4
992.118802	27.9	1000.0	120.000	180.0	H	180.0	25.7	15.1	43.0

Final Result 2

Frequency (MHz)	MaxPeak (dB μ V/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dB μ V/m)
40.937315	26.1	1000.0	120.000	180.0	H	180.0	14.3	35.9	62.0
50.296679	25.5	1000.0	120.000	180.0	H	180.0	14.1	36.5	62.0
102.266719	28.5	1000.0	120.000	180.0	H	180.0	14.1	35.6	64.0
128.056537	31.8	1000.0	120.000	180.0	H	180.0	10.5	33.8	65.5
131.165499	31.2	1000.0	120.000	180.0	H	180.0	10.1	34.4	65.7
991.727674	40.5	1000.0	120.000	180.0	H	180.0	25.7	32.5	73.0



Final Result 1

Frequency (MHz)	Average (dB μ V/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dB μ V/m)
30.956768	15.4	1000.0	120.000	180.0	V	180.0	12.9	16.6	32.0
53.171756	17.9	1000.0	120.000	180.0	V	180.0	13.9	14.1	32.0
63.969330	14.5	1000.0	120.000	180.0	V	180.0	12.0	17.5	32.0
103.106596	14.9	1000.0	120.000	180.0	V	180.0	14.1	19.2	34.1
636.336459	22.7	1000.0	120.000	180.0	V	180.0	21.7	20.3	43.0
1000.000000	27.8	1000.0	120.000	180.0	V	180.0	25.8	15.2	43.0

Final Result 2

Frequency (MHz)	MaxPeak (dB μ V/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dB μ V/m)
30.975030	33.0	1000.0	120.000	180.0	V	180.0	12.9	29.0	62.0
52.348279	30.8	1000.0	120.000	180.0	V	180.0	13.9	31.2	62.0
68.702333	31.9	1000.0	120.000	180.0	V	180.0	10.1	30.1	62.0
99.146622	33.6	1000.0	120.000	180.0	V	180.0	14.3	30.2	63.8
104.540368	33.7	1000.0	120.000	180.0	V	180.0	13.9	30.5	64.2
128.826800	28.6	1000.0	120.000	180.0	V	180.0	10.4	37.0	65.6

APPENDIX A.2: TEST RESULTS OF RADIO FREQUENCY ELECTROMAGNETIC FIELD

Test Model	Test Frequency	Field polarization	Result	Observation
051801E	20MHz-2GHz	Vertical polarization	Pass	No degradation of performance or loss of function during test
051801D	20MHz-1GHz			

APPENDIX A.3: TEST RESULTS OF ELECTROSTATIC DISCHARGES IMMUNITY(ESD)

Test Model	Test Point	Discharge Type	Discharge Voltage(kV)	Performance
051801E and 051801D	Metal case	Contact	±2, 4	A
	Screw	Contact	±2, 4	A
	HCP	Contact	±2, 4	N/A
	VCP	Contact	±2, 4	A
	Panel	Air	±2, 4, 8	A
	Button	Air	±2, 4, 8	A
	Lamp	Air	±2, 4, 8	A

===== END OF APPENDIX =====

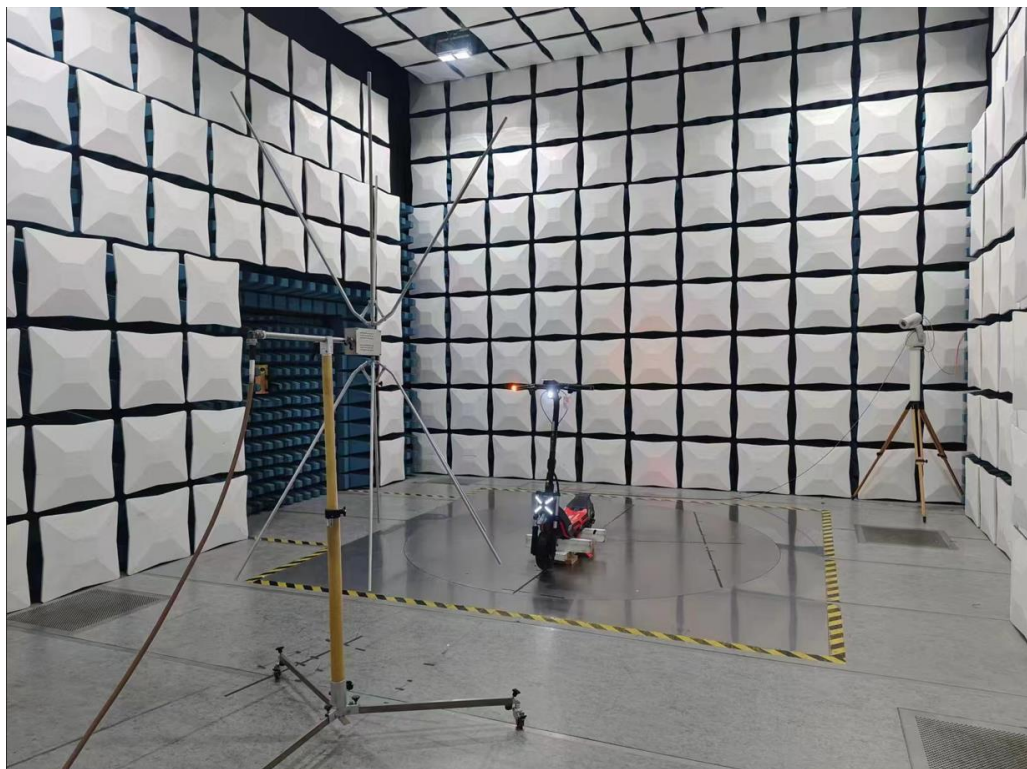
APPENDIX B: PHOTOGRAPHS OF THE TEST SET-UP

APPENDIX B: PHOTOGRAPHS OF THE TEST SET-UP 1
 APPENDIX B.1: SET-UP FOR RADIATED EMISSIONS 2
 APPENDIX B.2: SET-UP FOR RADIO FREQUENCY ELECTROMAGNETIC FIELD 2
 APPENDIX B.3: SET-UP FOR ELECTROSTATIC DISCHARGES IMMUNITY(ESD)..... 4

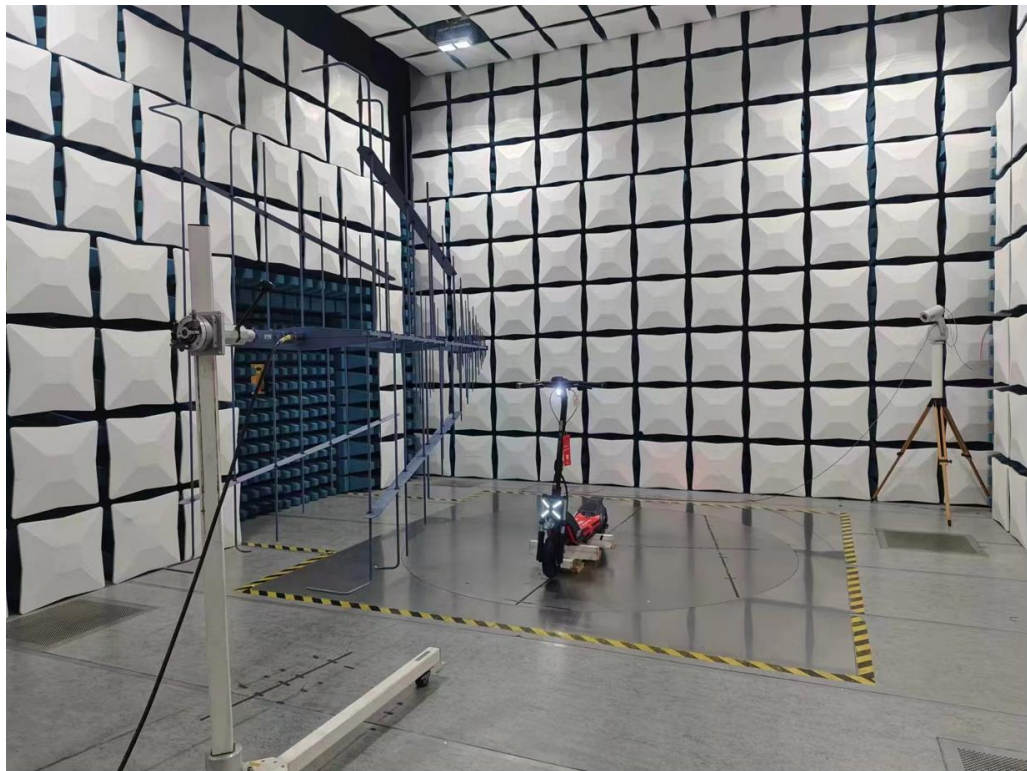
APPENDIX B.1: SET-UP FOR RADIATED EMISSIONS



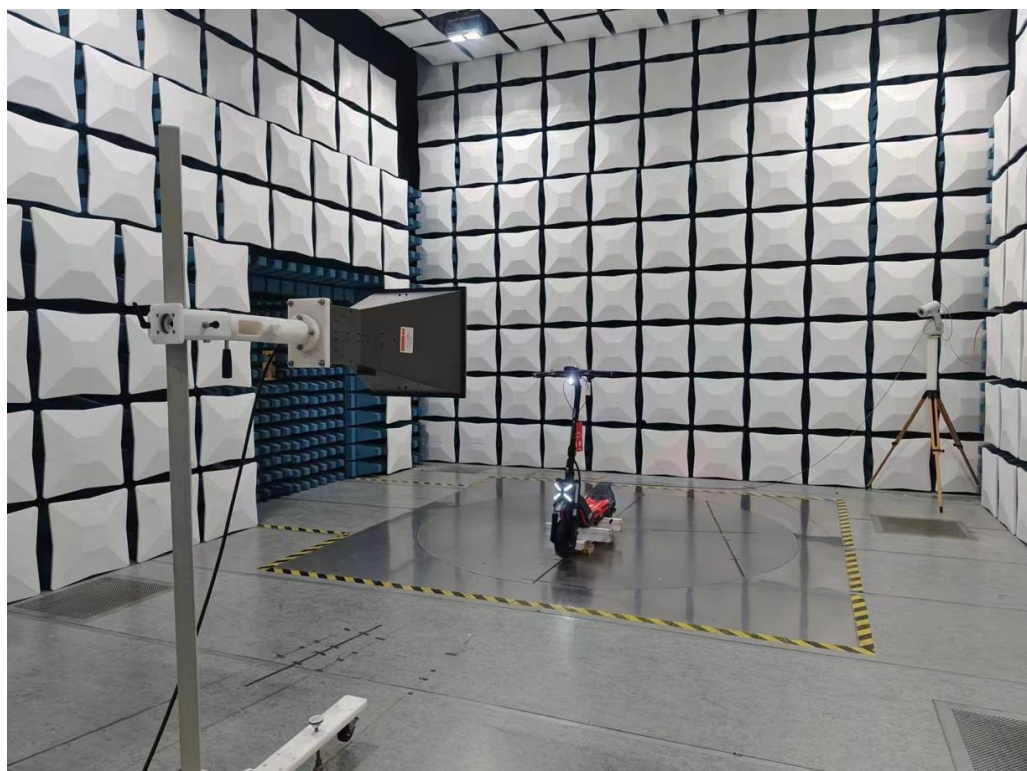
APPENDIX B.2: SET-UP FOR RADIO FREQUENCY ELECTROMAGNETIC FIELD



20-80MHz



80-1000MHz



1000-2000MHz

APPENDIX B.3: SET-UP FOR ELECTROSTATIC DISCHARGES IMMUNITY(ESD)



===== END OF APPENDIX =====