

Prüfbericht-Nr.: <i>Test report no.:</i>	CN24AWWG 003	Auftrags-Nr.: <i>Order no.:</i>	168487434 P01514699	Seite 1 von 15 Page 1 of 15
Kunden-Referenz-Nr.: <i>Client reference no.:</i>	N/A	Auftragsdatum: <i>Order date:</i>	2024-05-31	
Auftraggeber: <i>Client:</i>	Shenzhen Baseus Technology Co., Ltd. 2nd Floor, Building B, Baseus Intelligence Park, No.2008, Xuegang Rd, Gangtou Community, Bantian Street, Longgang District, Shenzhen, China			
Prüfgegenstand: <i>Test item:</i>	Baseus NOMOS 5-in-1 Desktop Charger 3C+U 140W			
Bezeichnung / Typ-Nr.: <i>Identification / Type no.:</i>	CCNMS140 (Trademark: baseus)			
Auftrags-Inhalt: <i>Order content:</i>	Test Report			
Prüfgrundlage: <i>Test specification:</i>	CFR47 FCC Part 2.1093 KDB 680106 D01 Wireless Power Transfer v04			
Wareneingangsdatum: <i>Date of sample receipt:</i>	2024-06-06	Please refer to Photo Document		
Prüfmuster-Nr.: <i>Test sample no.:</i>	A003733747-001			
Prüfzeitraum: <i>Testing period:</i>	2024-07-12			
Ort der Prüfung: <i>Place of testing:</i>	Shenzhen Microtest Co., Ltd.			
Prüflaboratorium: <i>Testing laboratory:</i>	TÜV Rheinland (Shenzhen) Co., Ltd.			
Prüfergebnis*: <i>Test result*:</i>	Pass			
geprüft von: <i>tested by:</i>	Hardy <i>X Hardy Suo</i>		genehmigt von: <i>authorized by:</i>	Bell <i>Bell Hu</i>
Datum: <i>Date:</i>	2024-07-15		Ausstellungsdatum: <i>Issue date:</i>	2024-07-15
Stellung / Position:	Sachverständige(r)/Expert		Stellung / Position:	Sachverständige(r)/Expert
Sonstiges / <i>Other:</i>	FCC ID: 2A482-CCNMS140			
Zustand des Prüfgegenstandes bei Anlieferung: <i>Condition of the test item at delivery:</i>	Prüfmuster vollständig und unbeschädigt <i>Test item complete and undamaged</i>			
* Legende: <i>* Legend:</i>	P(ass) = entspricht o.g. Prüfgrundlage(n) P(ass) = passed a.m. test specification(s) F(ail) = entspricht nicht o.g. Prüfgrundlage(n) F(ail) = failed a.m. test specification(s) N/A = nicht anwendbar N/A = not applicable N/T = nicht getestet N/T = not tested			
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Anmerkungen
Remarks

1	Alle eingesetzten Prüfmittel waren zum angegebenen Prüfzeitraum gemäß eines festgelegten Kalibrierungsprogramms unseres Prüfhauses kalibriert. Sie entsprechen den in den Prüfprogrammen hinterlegten Anforderungen. Die Rückverfolgbarkeit der eingesetzten Prüfmittel ist durch die Einhaltung der Regelungen unseres Managementsystems gegeben. Detaillierte Informationen bezüglich Prüfkonditionen, Prüfequipment und Messunsicherheiten sind im Prüflabor vorhanden und können auf Wunsch bereitgestellt werden. <i>The equipment used during the specified testing period was calibrated according to our test laboratory calibration program. The equipment fulfils the requirements included in the relevant standards. The traceability of the test equipment used is ensured by compliance with the regulations of our management system. Detailed information regarding test conditions, equipment and measurement uncertainty is available in the test laboratory and could be provided on request.</i>
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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>

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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: Photographs of the Test Set-up

2 Test Sites

2.1 Test Facilities

Shenzhen Microtest Co., Ltd.

Headquarters: Microtest Hi-tech Building, Zone 2, Xinxing Industrial Park, Fuhai Avenue, Bao'an District, Shenzhen, Guangdong, China.

A2LA Registration No.: 4674.01

FCC Accreditation Designation No.: CN1226

2.2 List of Test and Measurement Instruments

Table 1: List of Test and Measurement Equipment

For Exposure test

Equipment	Manufacturer	Model No.	Serial No.	Cal. until
Near-field Electric and Magnetic Field Sensor System	Speage	MAGPy-8H3D+ED3 V2	3101	2025-04-12

2.3 Traceability

All measurement equipment calibrations are traceable to NIM (National Institute of Metrology) or where calibration is performed in other countries, to equivalent nationally recognized standards organizations.

2.4 Calibration

Equipment requiring calibration is calibrated periodically by the manufacturer or according to manufacturer's specifications. Additionally all equipment is verified for proper performance on a regular basis using in house standards or comparisons.

2.5 Measurement Uncertainty

The estimated combined standard uncertainty for radiated emissions and conducted emissions measurements as below table.

Table 2: Measurement Uncertainty

Parameter	Uncertainty
Uncertainty for EMF	5.03 dB

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2.6 Location of Original Data

The original copies of all test data taken during actual testing were attached at Appendix A of this report and delivered to the applicant. A copy has been retained in the TÜV Rheinland (Shenzhen) Co., Ltd. file for certification follow-up purposes.

2.7 Status of Facility Used for Testing

Shenzhen Microtest Co., Ltd. test facility located at Headquarters: Microtest Hi-tech Building, Zone 2, Xinxing Industrial Park, Fuhai Avenue, Bao'an District, Shenzhen, Guangdong, China. is listed on the US Federal Communications Commission list of facilities approved to perform measurements.

3 General Product Information

3.1 Product Function and Intended Use

The EUT is a wireless charger, it supports wireless charging function.

For details refer to the User Manual, Technical Description and Circuit Diagram.

3.2 Ratings and System Details

Table 3: Technical Specification of EUT

General Information of EUT	Value
Kind of Equipment:	Baseus NOMOS 5-in-1 Desktop Charger 3C+U 140W
Type Designation:	CCNMS140CS
Trade Mark	baseus
FCC ID:	2A482-CCNMS140
Operating Temperature Range	0°C to +25°C
Rated Input	AC 100-240V, 50/60Hz, 2.5A Max.
Rated Output	1) Type-C1/Type-C2 Output: 5.0V=3.0A (15.0W); 9.0V=3.0A (27.0W); 12.0V=3.0A (36.0W); 15.0V=3.0A (45.0W); 20.0V=5.0A (100.0W) Max. 2) Type-C3 Output: 5.0V=3.0A (15.0W); 9.0V=3.0A (27.0W); 12.0V=3.0A (36.0W); 15.0V=3.0A (45.0W); 20.0V=5.0A (100.0W); 28.0V=5.0A (140.0W) Max. 3) USB1 Output: 5.0V=3.0A (15.0W) Max. 4) Wireless charging QI2 Output: 15.0W Max.
Test Voltage:	AC 120V, 60Hz
Technical Specification of WPT	
Frequency Range:	110.5kHz to 205kHz 360kHz
Type of Modulation:	ASK, FSK
Antenna Type:	Coil antenna
Antenna Number:	1
Wireless output power:	110.5kHz to 205kHz: 5W, 7.5W 360kHz: 15W

3.3 Test Mode

Test Mode	Description of Mode
1	EUT + Mobile Phone @110.5kHz to 205kHz (Battery Status: <1%)
2	EUT + Mobile Phone @110.5kHz to 205kHz (Battery Status: <50%)
3	EUT + Mobile Phone @110.5kHz to 205kHz (Battery Status: <99%)
4	EUT + Mobile Phone @360kHz (Battery Status: <1%)

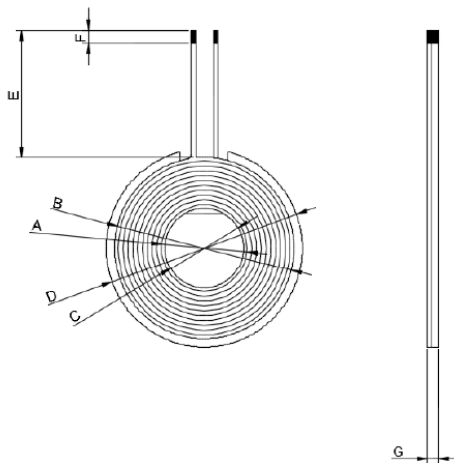
5	EUT + Mobile Phone @360kHz (Battery Status: <50%)
6	EUT + Mobile Phone @360kHz (Battery Status: <99%)
7	Stand-by mode

Test Item	Description of Mode
H-field	1/2/3/4
E-field	1/2/3/4

3.4 Coil Description

Configuration	Mode	Description
1	Standby (Flatbed Position)	EUT Alone powered by AC/DC adapter
2	Operating (Flatbed Position) (@110.5kHz-205kHz, ~10%, 20~50%, and >75%, Power Charging)	EUT with lightning to AC/DC Adapter & Wireless Charging to WPT Client
3	Operating (Flatbed Position) (@360kHz, ~10%, 20~50%, and >75%, Power Charging)	EUT with lightning to AC/DC Adapter & Wireless Charging to WPT Client

3.5 Coil Specifications



单位(Unit):毫米(mm)

A	B	C	D	E	F	G
20.5±0.5	39±1	19.5±0.3	42.5±0.5	8±1	4±1.5	2.05±0.1

圈数 Turns	线径 Wire Dia.	绕线方式疏/密 Wdg. Type Spred/Close	绕线方向 Wdg. Direction	相交是/否 Intersect Yes/Not	线圈正/反贴 Coil Positive/Anti Paste
11T S	0.08*80P 热风绞线 (Silk-Covered Wire)	密绕 (Close)	逆时针 (Anticlockwise)	相交 (Yes)	反贴 (Anti-/Paste)

3.6 Noise Generating and Noise Suppressing Parts

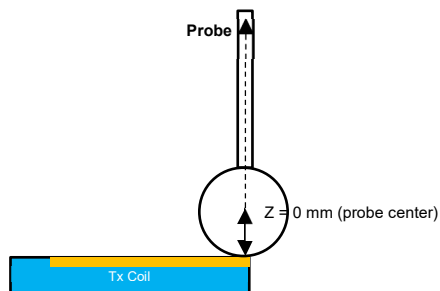
Refer to Circuit Diagram for further details.

3.7 Submitted Documents

- | | |
|------------------------------|-------------------------|
| - Application Form | - User Manual |
| - Block Diagram | - Schematics |
| - ID Label and Location Info | - Operation Description |

3.8 Test Procedures

A grid of 10mm by 10mm is used due to the size of the EUT and the probe.
A probe MAGPy-8H3D+ED3 V2 is used to measure the E- and stemming from the EUT.
These initial measurements are made at $Z = 50$ mm from the surface of the XY plane.



4 Safety Human Exposure

4.1 Radio Frequency Exposure Compliance

4.1.1 Test Procedures According to the Technical Standards

Standards	Test Item	Judgment	Remark
FCC CFR 47 part1, 1.1310 KDB 680106 D01 Wireless Power Transfer v04	Electric Field Strength (E) (V/m)	PASS	-
	Magnetic Field Strength (H) (A/m)	PASS	-

4.1.2 Limit of Maximum Permissible Exposure

Limit of Maximum Permissible Exposure:

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposure				
0.3-3.0	614	1.63	*100	6
3.0-30	1842/f	4.89/f	*900/f ²	6
30-300	61.4	0.163	1.0	6
300-1,500			f/300	6
1,500-100,000			5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*100	30
1.34-30	824/f	2.19/f	*180/f ²	30
30-300	27.5	0.073	0.2	30
300-1,500			f/1500	30
1,500-100,000			1.0	30

f = frequency in MHz * = Plane-wave equivalent power density

Note 1: f = frequency in MHz ; *Plane-wave equivalent power density.

Note 2: For the applicable limit, see FCC 1.1310, KDB 680106 D01 Wireless Power Transfer v04.

4.1.3 Data Collecting Process

Distance (mm)	E-Field (V/m): EUT + Mobile Phone (Battery Status: <1%)	H-Field (A/m): EUT + Mobile Phone (Battery Status: <1%)
50	4.84	0.23
55	4.67	0.22
69	4.38	0.21
65	4.15	0.19
70	3.98	0.17
75	3.75	0.16
80	3.64	0.14
85	3.45	0.12
90	3.26	0.11
95	3.05	0.09
100	2.87	0.09

Test modes 1-7 use the same test method, only the power of the test load is changed. The data only reflects the worst mode EUT+Mobile Phone (battery status: <1%)

4.1.4 Performing Curve-fitting

Four (3) regression techniques were used to validate their model errors.

Model 1: Quadratic Regression

Model 2: Cubic Regression

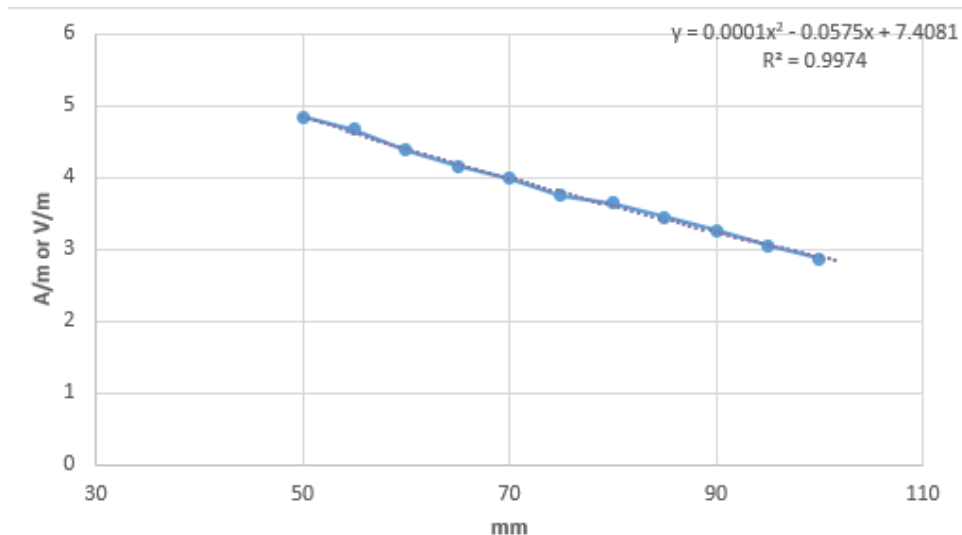
Model 3: Quartic Regression

Each regression model will use the 11 data points from chapter 4.1.5 In this example, the Data Analysis package included in MS Excel was used to perform the regression analyses.

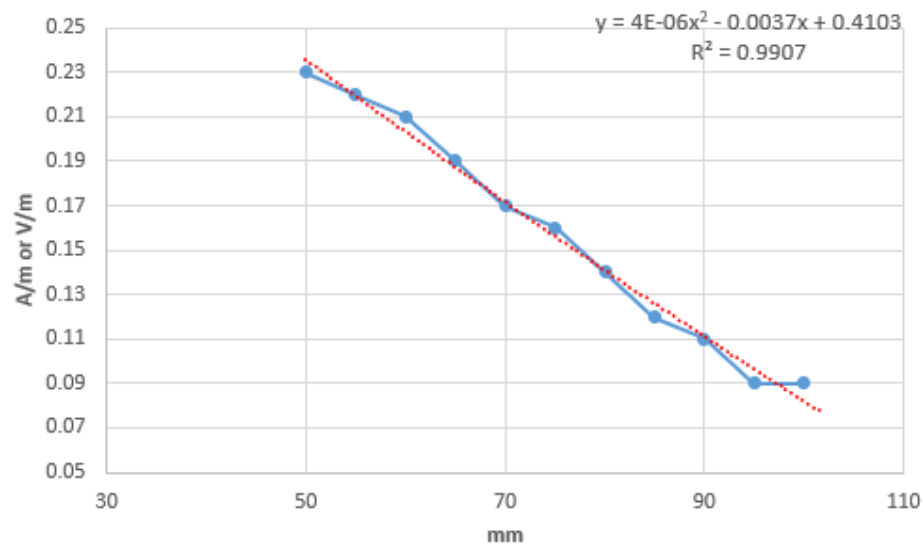
EUT + Mobile Phone(Battery Status: <1%):

Model 1: Quadratic Regression

E-Field

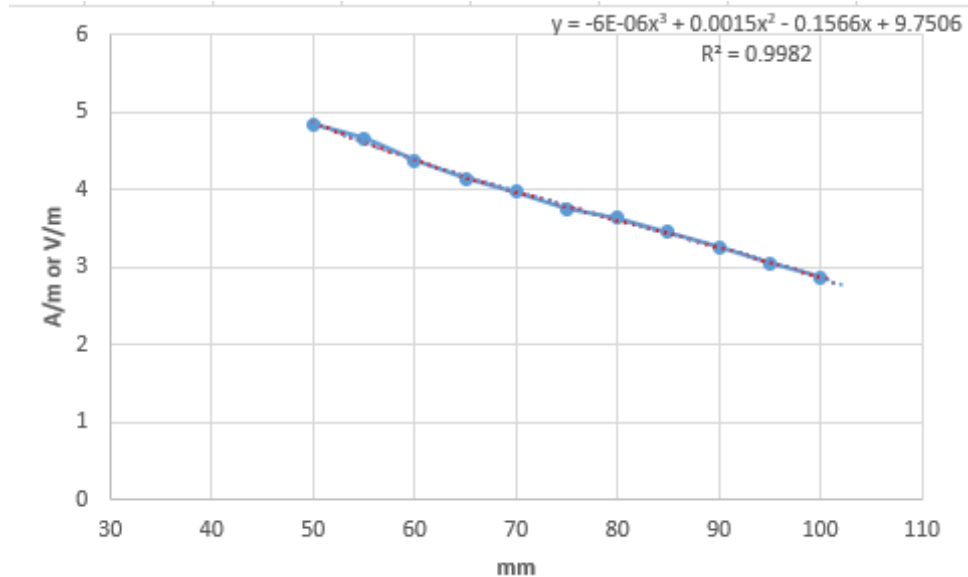


H-Field

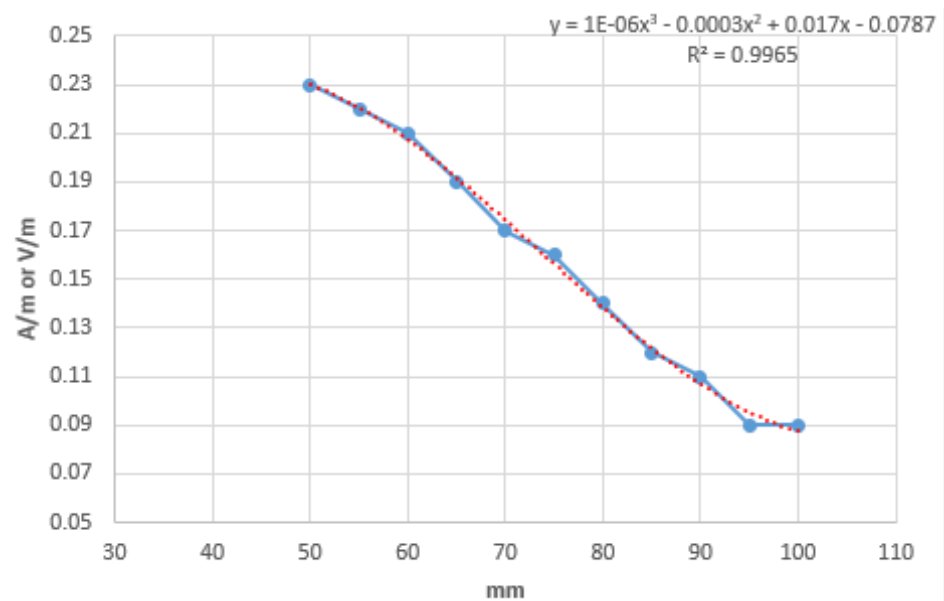


Model 2: Cubic Regression

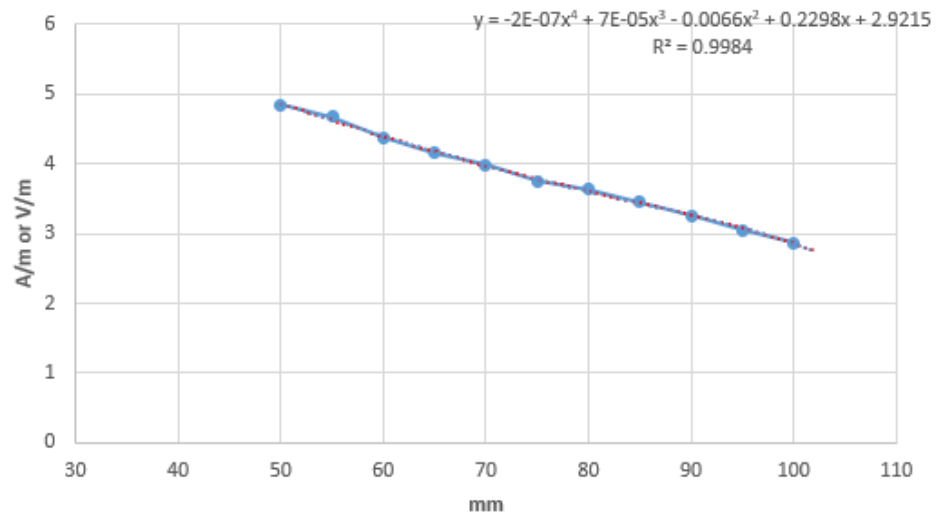
E-Field



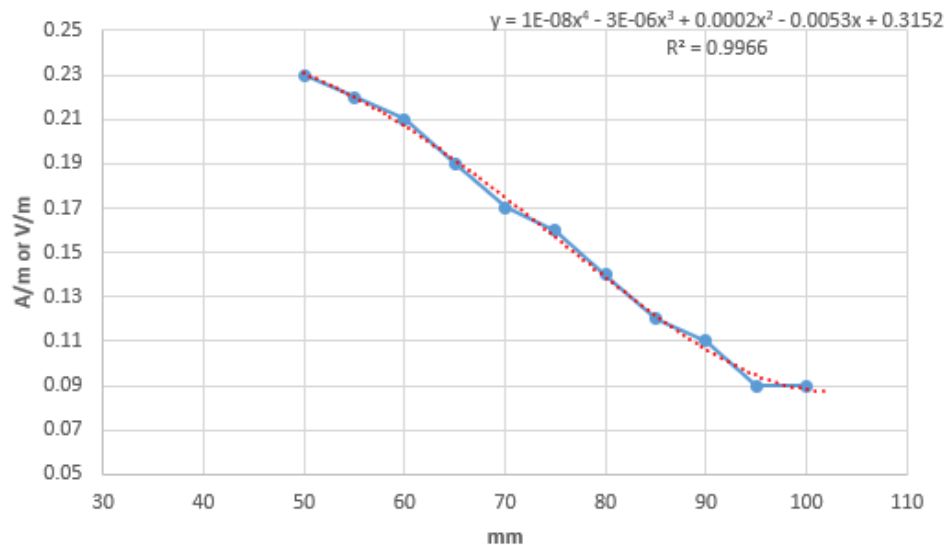
H-Field



Model 3: Quartic Regression
E-Field



H-Field



4.1.5 Analyzing Results

EUT + Phone (Battery Status: <1%):

E-Field

Parameter	Quadratic Regression	Cubic Regression	Quartic Regression
Multiple R	0.999	0.999	0.999
R Square	0.997	0.998	0.998
Adjusted R Square	0.997	0.997	0.997
Standard Error (S)	0.037	0.033	0.033
Number of data points used	11	11	11
Estimated magnetic field strength at touch position (V/m)	7.048	9.751	2.922

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H-Field

Parameter	Quadratic Regression	Cubic Regression	Quartic Regression
Multiple R	0.995	0.998	0.998
R Square	0.991	0.997	0.997
Adjusted R Square	0.988	0.995	0.994
Standard Error (S)	0.006	0.004	0.004
Number of data points used	11	11	11
Estimated magnetic field strength at touch position (A/m)	0.410	-0.079	0.315

5 Photographs of the Test Set-Up

For photographs of the test set-up, refer to the appendix A.

6 List of Tables

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