TEST REPORT

Product Name	:	AiDiA
Brand Name	:	N/A
Model	:	WPT4
Series Model	:	NC
Applicant	:	**Textron Technolgy Ltd**
Address	:	University of the West Indies Mona, Kingston, Jamaica WI
Manufacturer	:	**Shenzhen Xinditai Electronics Co., Ltd.**
Address	:	3rd Floor, Building C, Tongju Industrial Park, No. 4 Longping West Road, Shengping Community, Longcheng Street, Longgang District, Shenzhen
Standard(s)	:	ETSI EN 301 489-1 V2.2.3 (2019-11) ETSI EN 301 489-17 V3.3.1 (2024-09)
Date of Receipt	:	Jan 27, 2025
Date of Test	:	Jan 27, 2025~ Feb 02, 2026
Issued Date	:	Mar 20, 2026

Issued By: **Guangdong Asia Hongke Test Technology Limited**
B1/F, Building 11, Junfeng Industrial Park, Chongqing Road, Heping Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China
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Reviewed by: Aalen.Ye **Approved by:** Allen Wang

Note: This device has been tested and found to comply with the standard(s) listed, this test report merely corresponds to the test sample. It is not permitted to copy extracts of these test result without the written permission of the test laboratory. This report shall not be reproduced except in full, without the written approval of Guangdong Asia Hongke Test Technology Limited. If there is a need to alter or revise this document, the right belongs to Guangdong Asia Hongke Test Technology Limited, and it should give a prior written notice of the revision document. This test report must not be used by the client to claim product endorsement.

Report Revise Record

Report Version	Issued Date	Notes
M0	Mar 20, 2026	Initial Release

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1 TEST SUMMARY

1.1 Test Standards

The tests were performed according to following standards:

ETSI EN 301 489-1 V2.2.3 (2019-11) ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements; Harmonised Standard for ElectroMagnetic Compatibility

ETSI EN 301 489-17 V3.3.1 (2024-09) ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 17: Specific conditions for Broadband Data Transmission Systems; Harmonised Standard for ElectroMagnetic Compatibility

1.2 Test Summary

Test Items	Test Method	Result
Conducted Emission	EN 55032: 2015+A11:2020	PASS
Radiated Emission	EN 55032: 2015+A11:2020	PASS
Harmonic Current Emissions	EN IEC 61000-3-2:2019+A1:2021	N/A
Voltage Fluctuations and Flicker	EN 61000-3-3:2013+A2:2021	N/A
Electrostatic Discharge	EN 61000-4-2: 2009 EN 55035:2017+A11:2020	PASS
RF Electromagnetic Field	EN IEC 61000-4-3:2020 EN 55035:2017+A11:2020	PASS
Fast Transients Common Mode	EN 61000-4-4: 2012 EN 55035:2017+A11:2020	N/A
Surges	EN 61000-4-5:2014+A1:2017 EN 55035:2017+A11:2020	N/A
RF Common Mode 0,15 MHz to 80 MHz	EN 61000-4-6: 2014+AC:2015 EN 55035:2017+A11:2020	N/A
Voltage Dips and Interruptions	EN IEC 61000-4-11:2020+AC:2022-10 EN 55035:2017+A11:2020	N/A
Power Frequency magnetic Field	EN 61000-4-8:2010 EN 55035:2017+A11:2020	N/A

1.3 Test Facility

Test Laboratory:
Guangdong Asia Hongke Test Technology Limited
B1/F, Building 11, Junfeng Industrial Park, Chongqing Road, Heping Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China

The test facility is recognized, certified or accredited by the following organizations:
FCC-Registration No.: 251906 Designation Number: CN1376
Guangdong Asia Hongke Test Technology Limited 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.

IC —Registration No.: 31737 CAB identifier: CN0165
The 3m Semi-anechoic chamber of Guangdong Asia Hongke Test Technology Limited has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 31737

A2LA-Lab Cert. No.: 7133.01
Guangdong Asia Hongke Test Technology Limited has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025: 2017 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

1.4 Measurement uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report according to CISPR 16 - 4 “Specification for radio disturbance and immunity measuring apparatus and methods – Part 4: Uncertainty in EMC Measurements” and is documented in the Guangdong Asia Hongke Test Technology Limited’s quality system according to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.
Hereafter the best measurement capability for Asia Hongke laboratory is reported:

Test	Range	Measurement Uncertainty	Notes
Power Line Conducted Emission	150KHz~30MHz	±1.20 dB	(1)
Disturbance Power Emission	30MHz~300MHz	±2.96 dB	(1)
Radiated Emission Test	30MHz~1GHz	±3.75 dB	(1)
Radiated Emission Test	1GHz~18GHz	±3.88 dB	(1)

The report uncertainty of measurement y ± U, where expended uncertainty U is based on a standard uncertainty Multiplied by a coverage factor of k=2 , providing a level of confidence of approximately 95%

2 GENERAL INFORMATION

2.1 Environmental conditions

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

Normal Temperature:	15°C -35°C
Relative Humidity	35%-55 %
Air Pressure	101KPa

2.2 General Description of EUT

Product Name:	AiDiA
Model/Type reference:	WPT4
Serial Model:	NC
Model difference:	All models are same as the samples except model name, all the models are electrical identical same mechanical structure and design.
Power Supply:	DC 3.7V from battery or DC 5V from external circuit
Hardware Version:	N/A
Software Version:	N/A
Bluetooth LE:	
Supported type:	Bluetooth Low Energy
Modulation:	GFSK
Operation frequency:	2402MHz to 2480MHz
Channel number:	40
Channel separation:	2 MHz
Antenna type:	PCB antenna
Antenna gain:	0dBi
WIFI 2.4GHz	
Supported type:	802.11b/g/n(H20)/n(H40)/ax(HE20)/ax(HE40)
Modulation:	802.11b: DSSS (CCK, DQPSK, DBPSK) 802.11g/n: OFDM (64QAM, 16QAM, QPSK, BPSK) 802.11ax: OFDMA (1024QAM, 256QAM, 64QAM, 16QAM, QPSK, BPSK)
Operation frequency:	802.11b/g/n(H20)/ax(HE20): 2412MHz~2472MHz 802.11n(H40)/ax(HE40):2422MHz~2462MHz
Channel number:	802.11b/g/n(H20)/ax(HE20): 13 802.11n(H40)/ax(HE40):9
Channel separation:	5MHz
Antenna type:	PCB antenna
Antenna gain:	0dBi
Remark: The above DUT's information was declared by manufacturer. For more detailed features description, please refer to the manufacturer's specifications or the User's Manual.	

2.3 Description of Test Modes

The device is a multimedia equipment. According to the function of the EUT, select the following operating modes for testing.

Test Mode	Function	Description
1	Transmitting	WIFI stay in Transmitting mode
2	Receiving	WIFI stay in Receiving mode
3	Transmitting	BT stay in Transmitting mode
4	Receiving	BT stay in Receiving mode
5	Standby	Just power on

Scan above all test mode, found below test mode which it was worse case mode. Test results reported represents the worst-case condition.

Test item	Test mode
Conducted emission	Mode 1
Radiated emission	Mode 1
EMS	All modes

2.4 Special Accessories

Follow auxiliary equipment(s) test with EUT that provided by the manufacturer or laboratory is listed as follow:

Description	Manufacturer	Model	Serial No.	Provided by
Adapter	xiaomi	MDY-14-EU	A62502T103407S	Test lab
/	/	/	/	/

2.5 Equipments List for the Test

☒ **Radiation Emission Test Equipment (AiT 966 chamber)**

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal.Due
1	EMI Measuring Receiver	R&S	ESR	101160	2025.09.23	2026.09.22
2	Low Noise Pre Amplifier	SCHWARZBECK	BBV 9745	00282	2025.09.23	2026.09.22
3	Low Noise Pre Amplifier	CESHENG	CSKJLNA231 016A	CSKJLNA 231016A	2025.09.23	2026.09.22
4	Spectrum Analyzer	R&S	FSV40	101470	2025.09.23	2026.09.22
5	Passive Loop	ETS	6512	00165355	2024.08.29	2026.08.28
6	TRILOG Super Broadband test Antenna	SCHWARZBECK	VULB9168	01434	2024.08.29	2026.08.28
7	Broadband Horn Antenna	Schwarzbeck	BBHA 9120D	452	2024.08.29	2026.08.28
8	6dB Attenuator	JFW	50FPE-006	4360846-949-1	2025.09.23	2026.09.22
9	Filter	MICRO-TRONICS	BRM50702-02	16	2025.09.23	2026.09.22
10	Filter	MICRO-TRONICS	BRC50703-02	17	2025.09.23	2026.09.22
11	Filter	MICRO-TRONICS	BRC50705-02	18	2025.09.23	2026.09.22
12	RE test Software	EZ	EZ-EMC_RE	Ver.AIT-03A	N/A	N/A

☒ **Conducted Emission Test Equipment (AiT shiled room)**

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal.Due
1	EMI Test Receiver	R&S	ESPI	100771	2025.09.23	2026.09.22
2	LISN	R&S	NNLK 8129	8130179	2025.09.23	2026.09.22
3	ISN	TESEQ	T800	29429	2025.09.23	2026.09.22
4	Pulse Limiter	R&S	ESH3-Z2	102789	2025.09.23	2026.09.22
5	CE test Software	EZ	EZ-EMC_CE	Ver.AIT-03A	N/A	N/A

☒ **ESD Test Equipment**

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal.Due
1	ESD Simulator	Schloder	SESD 30000	509325	2025.09.23	2026.09.22

☒ **R/S Test Equipment**

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal.Due
1	MXG analog signal generator	Agilent	N5181A	MY46240859	2025.09.23	2026.09.22
2	Power Amplifier	Schaffner	CBA9433	T43574	2025.09.23	2026.09.22
3	Power Amplifier	Schaffner	CBA9409	T43605	2025.09.23	2026.09.22
4	Power Amplifier	Micotop	MPA-3000-6000-50	MPA03724	2025.09.23	2026.09.22
5	Logarithmic-periodic Antenna	Schwarzbeck	VULP9118E	820	2025.09.23	2026.09.22
6	Broadband Horn Antenna	Schwarzbeck	BBHA 9120LF	255	2025.09.23	2026.09.22
7	Power meter	Agilent	E4419B	MY45102079	2025.09.23	2026.09.22
8	Power sensor	Agilent	8481A	MY41097696	2025.09.23	2026.09.22
9	Power sensor	Agilent	8481A	MY41097697	2025.09.23	2026.09.22
10	RF Relay matrix	tsj	RFM-S621	04261	2025.09.23	2026.09.22
11	R/S test Software	TEPTO	TEPTP-RS	4.07.0017	N/A	N/A

☒ **Others Test Equipment**

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal.Due
1	Wideband communication tester	R&S	CMW500	1201.0002K50	2025.09.23	2026.09.22

Note: ☐ is not applicable in this Test Report. ☒ is applicable in this Test Report.

3 TEST CONDITIONS AND RESULTS

3.1 EMC EMISSION TEST

3.1.1 Conducted Emission

LIMIT

FREQUENCY (MHz)	☐Class A (dBuV)		☒Class B (dBuV)	
	Quasi-peak	Average	Quasi-peak	Average
0.15 -0.5	79.00	66.00	66 - 56 *	56 - 46 *
0.50 -5.0	73.00	60.00	56.00	46.00
5.0 -30.0	73.00	60.00	60.00	50.00

Note: (1)The tighter limit applies at the band edges.

(2)The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

TEST PROCEDURE

a) The EUT was placed 0.4 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.

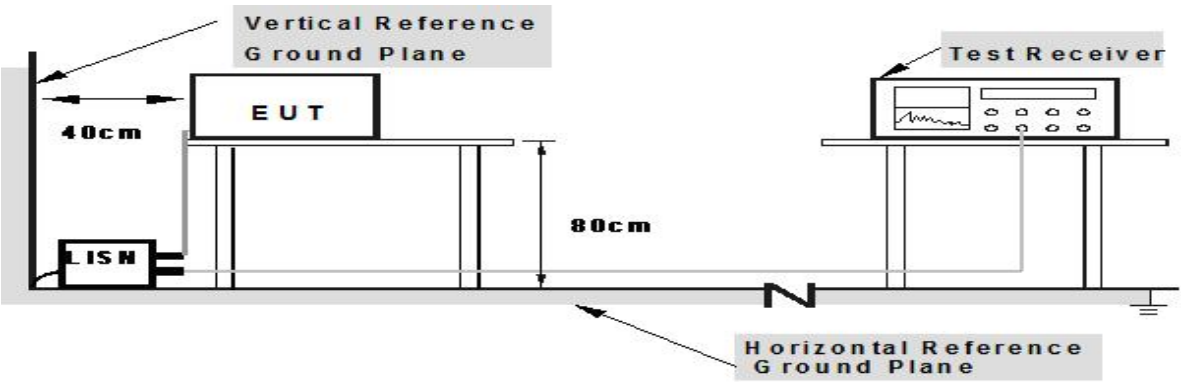
b) Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.

c) I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.

d) LISN at least 80 cm from nearest part of EUT chassis.

e) For the actual test configuration, please refer to the related Item –EUT Test Photos.

TEST SETUP



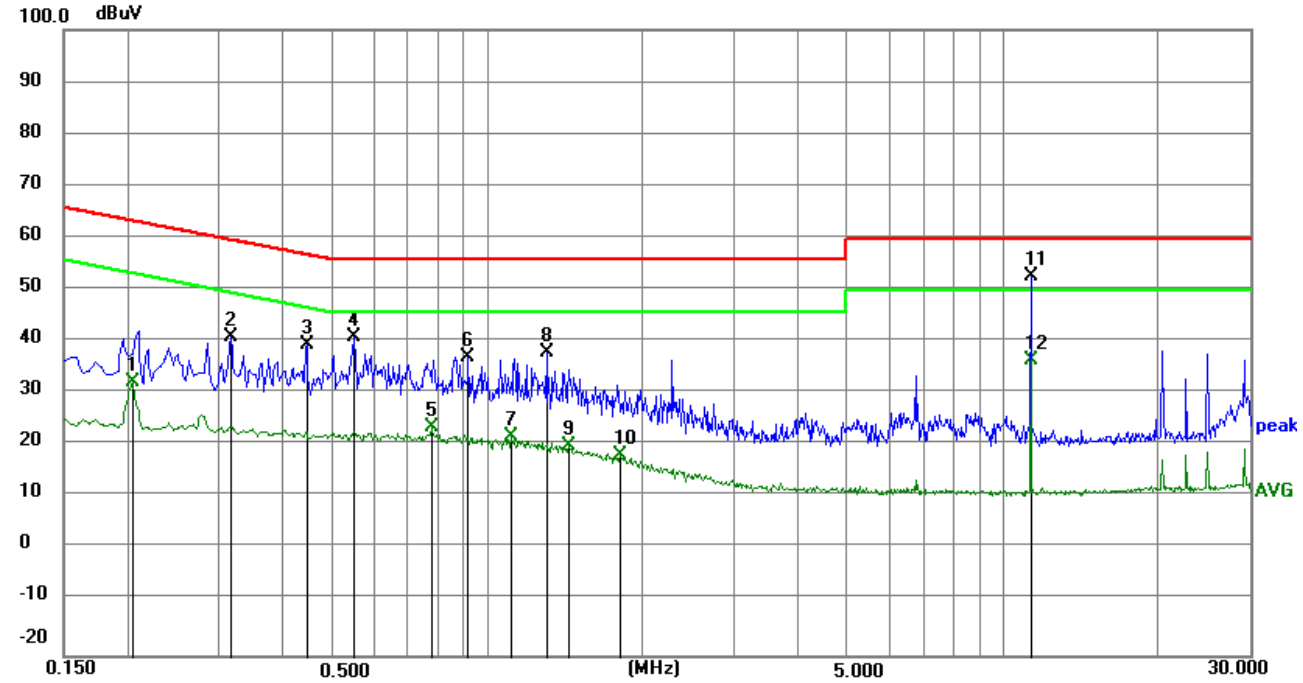
Note: 1.Support units were connected to second LISN.
2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

TEST RESULTS

------Passed------

Please refer to the below test data:

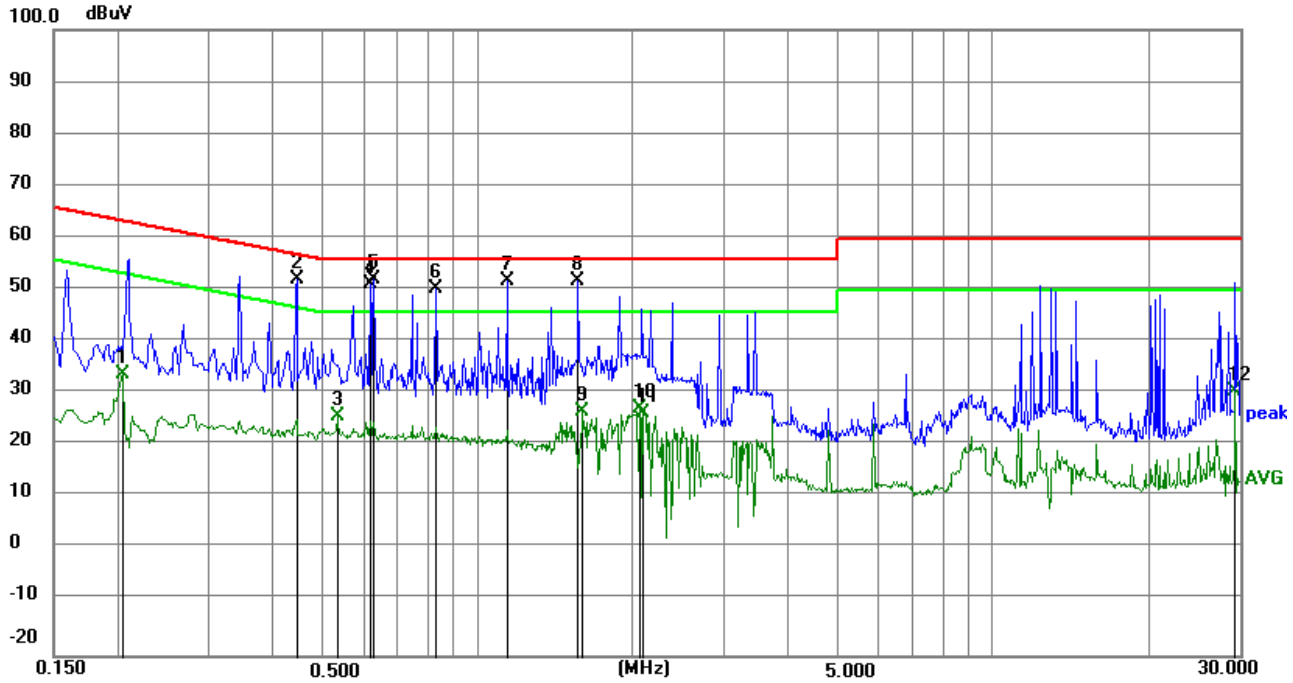
Line:	L



Remark: Correct Factor = Insertion loss of LISN + Cable loss + Insertion loss of Pulse Limiter;
Measurement Result = Reading Level +Correct Factor;
Margin = Measurement Result- Limit

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.2040	21.48	11.06	32.54	53.45	-20.91	AVG
2	0.3165	30.13	11.07	41.20	59.80	-18.60	peak
3	0.4425	28.73	11.06	39.79	57.01	-17.22	peak
4	0.5505	30.18	11.06	41.24	56.00	-14.76	peak
5	0.7755	12.94	11.04	23.98	46.00	-22.02	AVG
6	0.9150	26.23	11.07	37.30	56.00	-18.70	peak
7	1.1085	11.02	11.07	22.09	46.00	-23.91	AVG
8	1.2975	27.09	11.06	38.15	56.00	-17.85	peak
9	1.4370	9.27	11.06	20.33	46.00	-25.67	AVG
10	1.8015	7.61	11.05	18.66	46.00	-27.34	AVG
11	11.3010	41.46	11.31	52.77	60.00	-7.23	peak
12	11.3010	25.34	11.31	36.65	50.00	-13.35	AVG

Line:	N



Remark: Correct Factor = Insertion loss of LISN + Cable loss + Insertion loss of Pulse Limiter;
Measurement Result = Reading Level +Correct Factor;
Margin = Measurement Result- Limit

No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB)	(dBuV)	(dBuV)	(dB)	
1	0.2040	23.16	10.98	34.14	53.45	-19.31	AVG
2	0.4425	41.33	10.99	52.32	57.01	-4.69	peak
3	0.5322	15.12	11.00	26.12	46.00	-19.88	AVG
4	0.6180	40.21	10.99	51.20	56.00	-4.80	peak
5	0.6270	41.22	10.99	52.21	56.00	-3.79	peak
6	0.8295	39.58	10.99	50.57	56.00	-5.43	peak
7	1.1352	41.01	11.00	52.01	56.00	-3.99	peak
8	1.5630	41.04	10.99	52.03	56.00	-3.97	peak
9	1.5945	15.98	10.99	26.97	46.00	-19.03	AVG
10	2.0625	16.37	10.98	27.35	46.00	-18.65	AVG
11	2.0940	15.52	10.98	26.50	46.00	-19.50	AVG
12	29.3730	18.89	12.01	30.90	50.00	-19.10	AVG

3.1.2 Radiated Emission

LIMIT

LIMITS OF RADIATED EMISSION MEASUREMENT (Below 1000MHz)

FREQUENCY (MHz)	☐Class B(at 10m)	☒Class B (at 3m)
	dBuV/m	dBuV/m
30 – 230	30	40
230 – 1000	37	47

LIMITS OF RADIATED EMISSION MEASUREMENT(Above 1000MHz)

FREQUENCY (MHz)	☐Class A (at 10m) dBuV/m		☒Class B (at 3m) dBuV/m	
	Peak	Avg	Peak	Avg
1000-3000	76	56	70	50
3000-6000	80	60	74	54

Notes: (1)The limit for radiated test was performed according to as following:
ETSI EN 301 489-1/EN 55032
(2)The tighter limit applies at the band edges.

TEST PROCEDURE

a) The EUT was placed on the top of a rotating table 3 meters away from the receiver antenna and 0.8 meters above the ground at a 9X9X6 anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.

b) The height of the equipment shall be 0.8 m; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

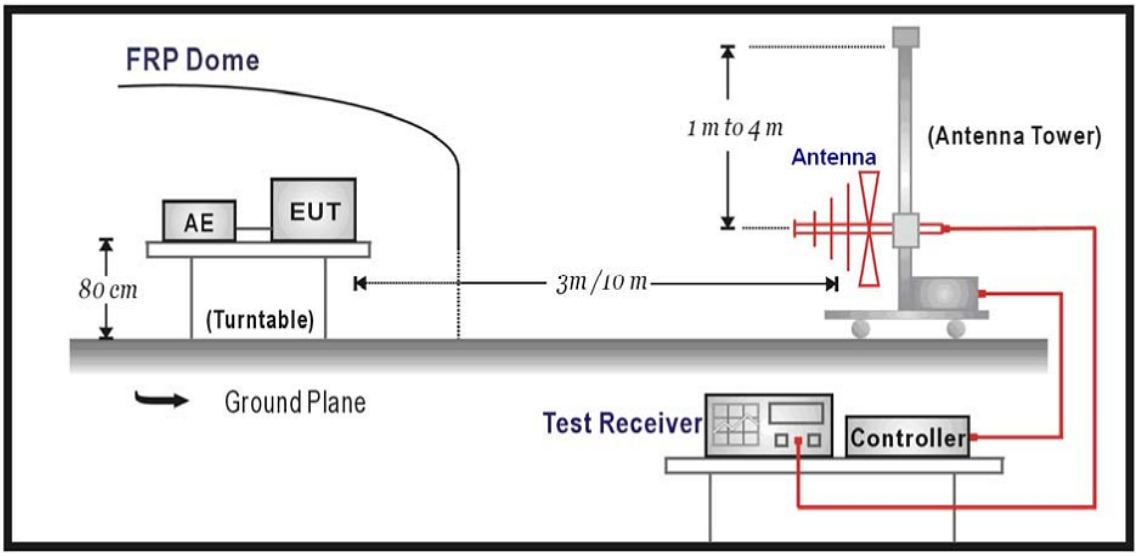
c) The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak/Average detector mode re-measured.

d) If the Peak Mode measured value compliance with and lower than Quasi Peak/Average Mode Limit, the EUT shall be deemed to meet QP/AV Limits and then no additional QP/AV Mode measurement performed.

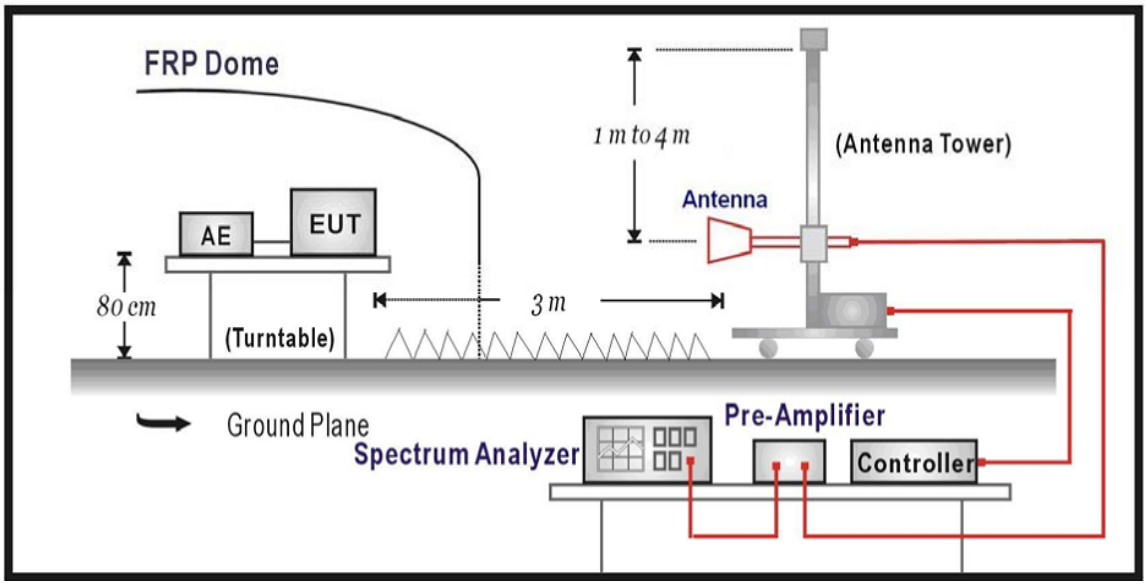
e) For the actual test configuration, please refer to the related Item –EUT Test Photos.

TEST SETUP

Below 1GHz



Above 1GHz



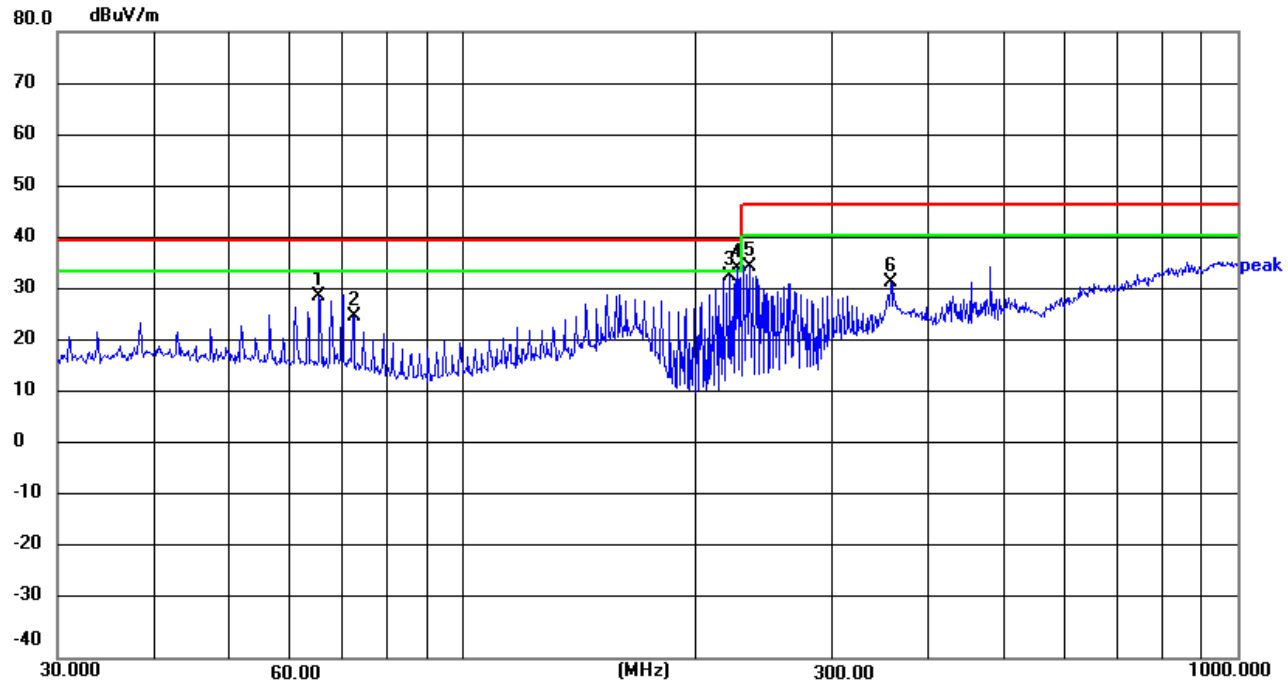
TEST RESULTS

------Passed------

Please refer to the below test data:

30MHz-1GHz

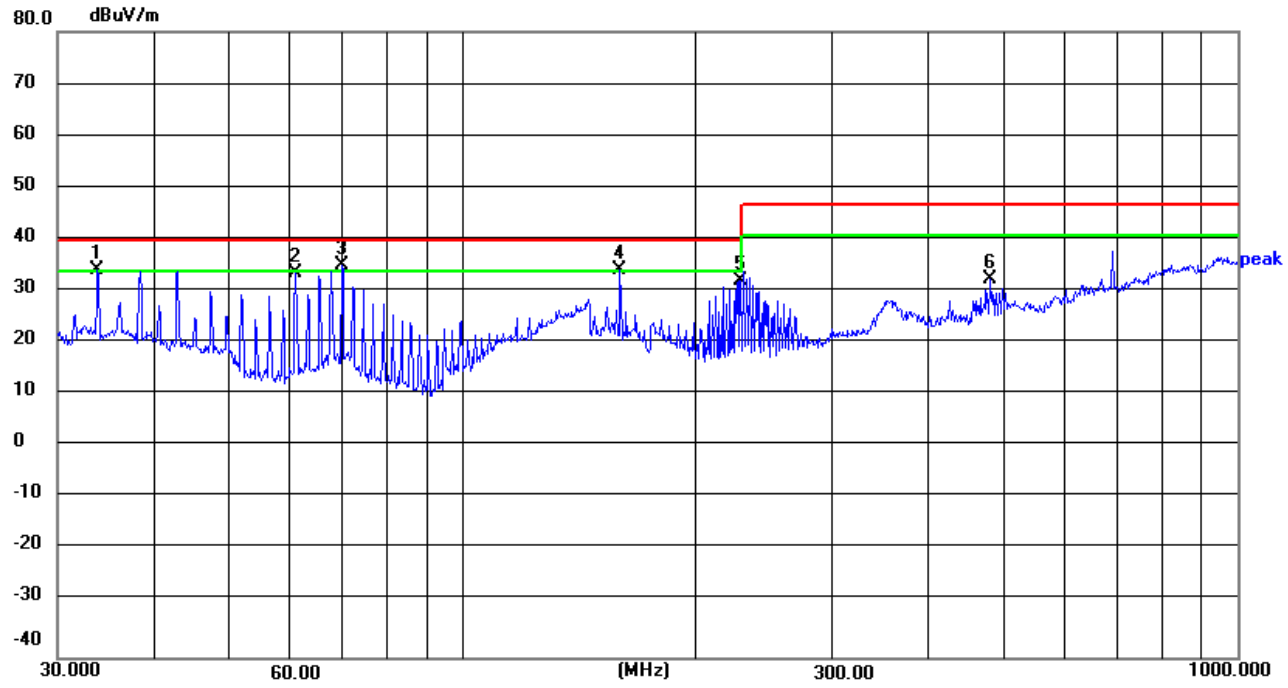
Polarization:	Horizontal



Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.
Measurement Result=Reading Level +Correct Factor;
Over Limit= Measurement Result- Limit;

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.
1	65.3431	40.37	-11.02	29.35	40.00	-10.65	peak
2	72.3375	37.35	-11.80	25.55	40.00	-14.45	peak
3	221.3920	44.41	-11.09	33.32	40.00	-6.68	peak
4	226.0994	45.48	-10.83	34.65	40.00	-5.35	peak
5	234.9910	45.31	-10.17	35.14	47.00	-11.86	peak
6	356.6757	38.51	-6.35	32.16	47.00	-14.84	peak

Polarization:	Vertical

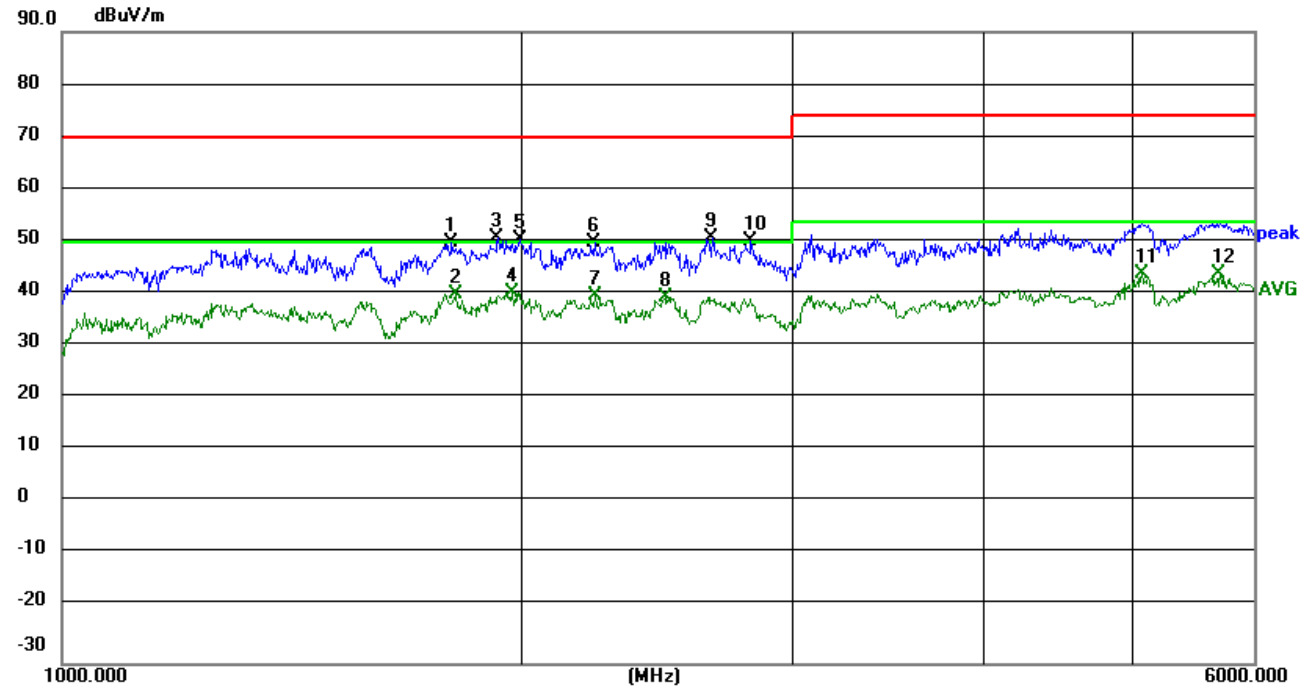


Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.
Measurement Result=Reading Level +Correct Factor;
Margin = Measurement Result- Limit;

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.
1	33.7986	44.52	-9.98	34.54	40.00	-5.46	peak
2	60.9174	44.09	-10.42	33.67	40.00	-6.33	peak
3	69.8450	46.73	-11.43	35.30	40.00	-4.70	peak
4	159.7844	43.51	-9.02	34.49	40.00	-5.51	peak
5	228.4902	43.05	-10.63	32.42	40.00	-7.58	peak
6	480.5276	35.70	-3.01	32.69	47.00	-14.31	peak

Above 1GHz

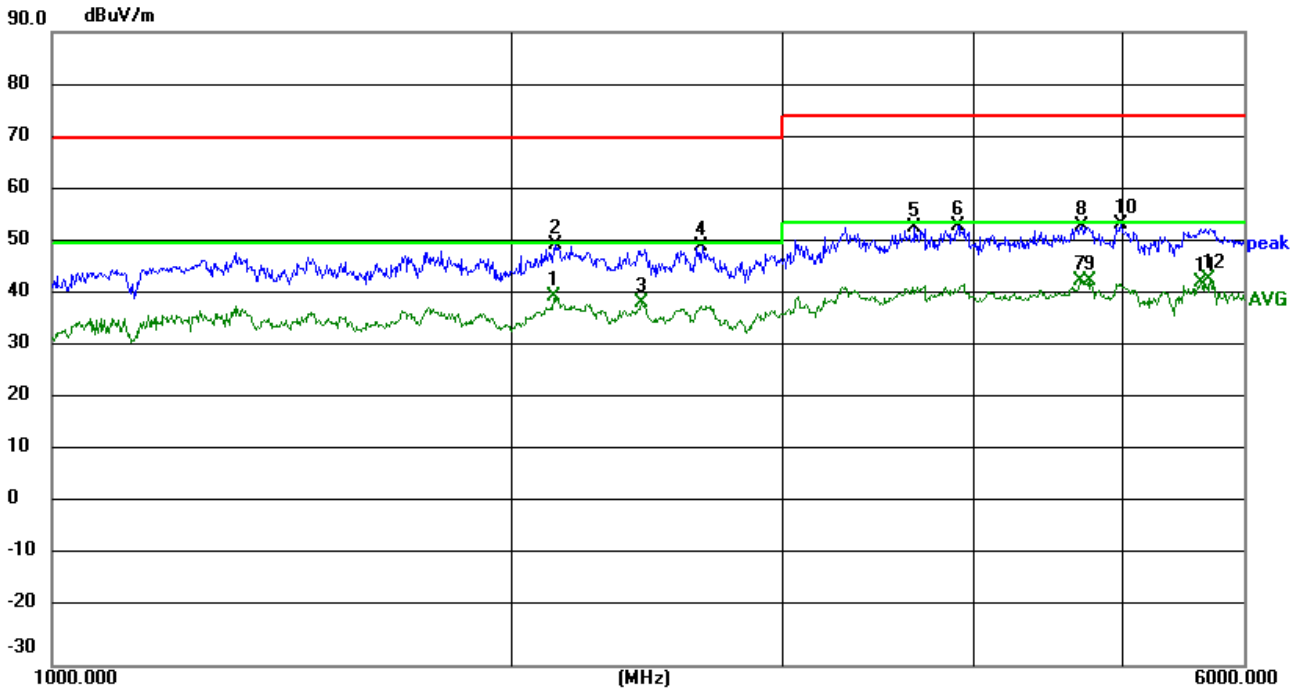
Polarization:	Horizontal



Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.
Measurement Result=Reading Level +Correct Factor;
Over Limit= Measurement Result- Limit;

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.
1	1796.617	59.33	-9.35	49.98	70.00	-20.02	peak
2	1809.539	49.54	-9.35	40.19	50.00	-9.81	AVG
3	1926.652	60.35	-9.40	50.95	70.00	-19.05	peak
4	1968.526	49.73	-9.22	40.51	50.00	-9.49	AVG
5	1989.803	59.80	-9.13	50.67	70.00	-19.33	peak
6	2227.581	57.30	-7.18	50.12	70.00	-19.88	peak
7	2231.576	47.01	-7.13	39.88	50.00	-10.12	AVG
8	2475.965	44.74	-5.05	39.69	50.00	-10.31	AVG
9	2659.932	54.64	-3.83	50.81	70.00	-19.19	peak
10	2816.900	53.03	-2.76	50.27	70.00	-19.73	peak
11	5069.966	39.06	5.03	44.09	54.00	-9.91	AVG
12	5706.410	40.15	3.95	44.10	54.00	-9.90	AVG

Polarization:	Vertical



Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.
Measurement Result=Reading Level +Correct Factor;
Margin = Measurement Result- Limit;

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.
1	2130.001	47.82	-8.00	39.82	50.00	-10.18	AVG
2	2133.821	57.87	-7.97	49.90	70.00	-20.10	peak
3	2427.643	44.19	-5.46	38.73	50.00	-11.27	AVG
4	2659.932	53.14	-3.83	49.31	70.00	-20.69	peak
5	3659.161	52.06	1.04	53.10	74.00	-20.90	peak
6	3902.968	50.26	3.12	53.38	74.00	-20.62	peak
7	4694.016	37.72	5.07	42.79	54.00	-11.21	AVG
8	4702.434	48.23	5.06	53.29	74.00	-20.71	peak
9	4761.784	37.79	5.06	42.85	54.00	-11.15	AVG
10	4988.864	48.47	5.25	53.72	74.00	-20.28	peak
11	5625.198	38.83	3.93	42.76	54.00	-11.24	AVG
12	5706.410	39.15	3.95	43.10	54.00	-10.90	AVG

3.2 EMC IMMUNITY TEST

3.2.1 Immunity Performance criteria

A. General Requirements (ETSI EN 301489-1):

The performance criteria are used to take a decision on whether a radio equipment passes or fails immunity tests.

For the purpose of the present document two categories of performance criteria apply:

- Performance criteria for continuous phenomena.
- Performance criteria for transient phenomena.

(1) Performance criteria for continuous phenomena
During the test, the equipment shall:

- continue to operate as intended;
- not unintentionally transmit;
- not unintentionally change its operating state;
- not unintentionally change critical stored data.

(2) Performance criteria for transient phenomena
For all ports and transient phenomena with the exception described below, the following applies.

- The application of the transient phenomena shall not result in a change of the mode of operation (e.g. unintended transmission) or the loss of critical stored data.
- After application of the transient phenomena, the equipment shall operate as intended.

For surges applied to symmetrically operated wired network ports intended to be connected directly to outdoor lines the following criteria applies:

- For products with only one symmetrical port intended for connection to outdoor lines, loss of function is allowed, provided the function is self-recoverable, or can be otherwise restored. Information stored in non-volatile memory, or protected by a battery backup, shall not be lost.
- For products with more than one symmetrical port intended for connection to outdoor lines, loss of function on the port under test is allowed, provided the function is self-recoverable. Information stored in non-volatile memory, or protected by a battery backup, shall not be lost.
- For products with more than one symmetrical port intended for connection to outdoor lines, loss of function on the port under test is allowed, provided the function is self-recoverable. Information stored in non-volatile memory, or protected by a battery backup, shall not be lost.

B. ETSI EN 301 489-17

Criteria	During test	After test (i.e. as a result of the application of the test)
A	Shall operate as intended. (See note). Shall be no loss of function. Shall be no unintentional transmissions.	Shall operate as intended. Shall be no degradation of performance. Shall be no loss of function. Shall be no loss of critical stored data.
B	May be loss of function.	Functions shall be self-recoverable. Shall operate as intended after recovering. Shall be no loss of critical stored data.
C	May be loss of function.	Functions shall be recoverable by the operator. Shall operate as intended after recovering. Shall be no loss of critical stored data.
NOTE: Operate as intended during the test allows a level of degradation in accordance with clause 6.2.2.		

For equipment that supports a PER or FER, the minimum performance level shall be a PER or FER less than or equal to 10 %. For equipment that does not support a PER or a FER, the minimum performance level shall be no loss of the wireless transmission function needed for the intended use of the equipment.

C. EN55035

General performance criteria

General performance criteria are defined in Clauses 8.2, 8.3 and 8.4. These criteria shall be used during the testing of primary functions where no relevant annex is applicable.

When assessing the impact of a disturbance on a function, the assessment should take into consideration the function's performance prior to the application of the disturbance and only indentify is failures those changes in performance that are a result of the disturbance.

Performance criterion A

The equipment shall continue to operate as intended without operator interception. No degradation of performance, loss of function or change of operation state is allowed below a performance level specified by the manufacturer when the equipment is used as intended. The performance level may be replaced by a permissible loss of performance. If the minimum performance level or the permissible performance loss is not specified by the manufacturer, then either of these may be derived from the product description and documentation, and by what the user may reasonably expect from the equipment if used as intended.

Performance criterion B

During the application of the disturbance, degradation of performance is allowed. However, no unintended change of actual operating state or stored data is allowed to persist after the test.

After the test, the equipment shall continue to operate as intended without operator intervention; no degradation of performance or loss of function is allowed, below a performance level specified by the manufacturer, when the equipment is used as intended. The performance level may be replaced by a permissible loss of performance.

If the minimum performance level (or the permissible performance loss), or recovery time, is not specified by the manufacturer, the either of these may be derived from the product description and documentation, and by what the user may reasonably expect from the equipment if used as intended.

Performance criterion C

Loss of function is allowed, provided the function is self-recoverable, or can be restored by the operation of the controls by the user in accordance with the manufacturer's instructions. A reboot or re-start operation is allowed.

Information stored in non-volatile memory, or protected by a battery backup, shall not be lost.

3.2.2 Monitoring EUT during Immunity Test

Monitoring for Continuous Phenomena Applied to the EUT

- BT Mode

At the start of the test, establish a wireless link between the EUT and CMW500(integrate BT protocol Analyzer);
During the test, observe whether the EUT operate as intended, no loss of function and no unintentional transmissions. Monitoring PER and shall exeed 10%
After the test, Check the function and critical stored data of the EUT with no degration.
In addition, when EUT working in Idle /Receiver mode, monitor whether the transmitter unintentionally operates.

- other Mode

During and after the test, observe the Screen status by eyes or monitor to see whether there is degration of performance

Monitoring for Transient Phenomena Applied to the EUT

- BT Mode

At the start of the test, establish a wireless link between the EUT and CMW500(integrate BT protocol Analyzer);
After the test, Check the function and critical stored data of the EUT with no degration.
In addition, when EUT working in Idle /Receiver mode, monitor whether the transmitter unintentionally operates.

- other Mode

After the test, observe the Screen status by eyes or monitor to see whether there is degration of performance.

3.2.3 Electrostatic Discharge

TEST SPECIFICATION

Basic Standard:	IEC/EN 61000-4-2
Discharge Impedance:	330 ohm / 150 pF
Required Performance	B
Discharge Voltage:	Air Discharge:2kV/4kV/8kV (Direct) Contact Discharge:2kV/4kV (Direct/Indirect)
Polarity:	Positive & Negative
Number of Discharge:	Air Discharge: min. 20 times at each test point Contact Discharge: min. 200 times in total
Discharge Period:	1 second minimum

TEST PROCEDURE

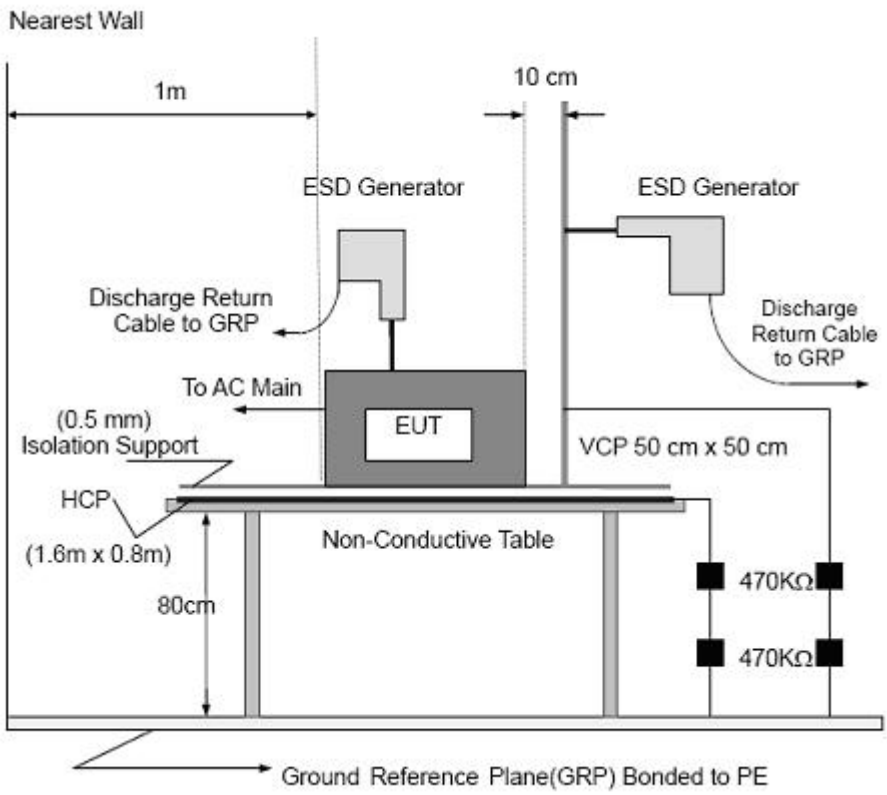
The test generator necessary to perform direct and indirect application of discharges to the EUT in the following manner:

a) Contact discharge was applied to conductive surfaces and coupling planes of the EUT. During the test, it was performed with single discharges. For the single discharge time between successive single discharges was at least 1 second. The EUT shall be exposed to at least 200 discharges, 100 each at negative and positive polarity, at a minimum of four test points. One of the test points shall be subjected to at least 50 indirect discharges to the center of the front edge of the horizontal coupling plane. The remaining three test points shall each receive at least 50 direct contact discharges.
If no direct contact test points are available, then at least 200 indirect discharges shall be applied in the indirect mode. Test shall be performed at a maximum repetition rate of one discharge per second.
Vertical Coupling Plane (VCP):
The coupling plane, of dimensions 0.5m x 0.5m, is placed parallel to, and positioned at a distance 0.1m from, the EUT, with the Discharge Electrode touching the coupling plane. The four faces of the EUT will be performed with electrostatic discharge.
Horizontal Coupling Plane (HCP):
The coupling plane is placed under to the EUT. The generator shall be positioned vertically at a distance of 0.1m from the EUT, with the Discharge Electrode touching the coupling plane. The four faces of the EUT will be performed with electrostatic discharge.

b) Air discharges at insulation surfaces of the EUT. It was at least ten single discharges with positive and negative at the same selected point.

c) For the actual test configuration, please refer to the related Item –EUT Test Photos.

TEST SETUP



Note:

TABLE-TOP EQUIPMENT

The configuration consisted of a wooden table 0.8 meters high standing on the Ground Reference Plane. The GRP consisted of a sheet of aluminum at least 0.25mm thick, and 2.5 meters square connected to the protective grounding system. A Horizontal Coupling Plane (1.6m x 0.8m) was placed on the table and attached to the GRP by means of a cable with 940k total impedance. The equipment under test, was installed in a representative system as described in section 7 of IEC /EN 61000-4-2, and its cables were placed on the HCP and isolated by an insulating support of 0.5mm thickness. A distance of1-meter minimum was provided between the EUT and the walls of the laboratory and any other metallic structure.

FLOOR-STANDING EQUIPMENT

The equipment under test was installed in a representative system as described in section 7 of IEC/EN 61000-4-2, and its cables were isolated from the Ground Reference Plane by an insulating support of0.1-meter thickness. The GRP consisted of a sheet of aluminum that is at least 0.25mm thick, and 2.5meters square connected to the protective grounding system and extended at least 0.5 meters from the EUT on all sides.

TEST RESULTS

------Passed------

Please refer to the below test data:

Direct discharge				
Type of discharge	Discharge voltage (KV)	Observations Performance	Criteria Limit	Result
Contact discharge	±2	A*	B	Pass
	±4	B*	B	
Air discharge	±2	A*	B	
	±4	A*	B	
	±8	A*	B	
Indirect discharge				
Type of discharge	Discharge voltage (KV)	Observations Performance	Criteria Limit	Result
HCP (6 sides)	±2	A*	B	Pass
	±4	A*	B	
VCP (4 sides)	±2	A*	B	
	±4	A*	B	

Note:

A The EUT can maintain communication link and not operate unintentionally during the test also can operate without any loss of user control functions after test.*

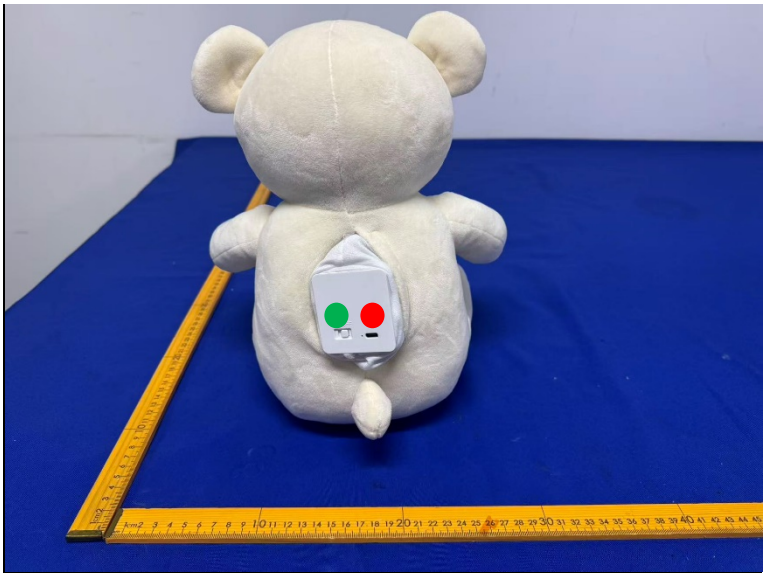
B The EUT loss communication link a while and not operate unintentionally during the test also can link can be self-recoverable after test.*

C The EUT loss communication link a while and not operate unintentionally during the test also can link can manually recovered after test.*

N/A: No such discharge point found.

The Photo for Discharge Points of EUT

– Contact Discharge ● – Air Discharge ●



3.2.4 RF Electromagnetic Field

TEST SPECIFICATION

Basic Standard:	IEC/EN 61000-4-3
Required Performance	A
Frequency Range:	80 MHz -6000 MHz
Field Strength:	3 V/m
Modulation:	1kHz Sine Wave, 80%, AM Modulation
Frequency Step:	1 % of fundamental
Polarity of Antenna:	Horizontal and Vertical
Test Distance:	3m
Antenna Height:	1.5 m
Dwell Time:	at least 3 seconds

TEST PROCEDURE

The EUT and support equipment, which are placed on a table that is 0.8 meter above ground and the testing was performed in a fully-anechoic chamber. The testing distance from antenna to the EUT was 3 meters. The other condition as following manner:

a) The field strength level was 3V/m.

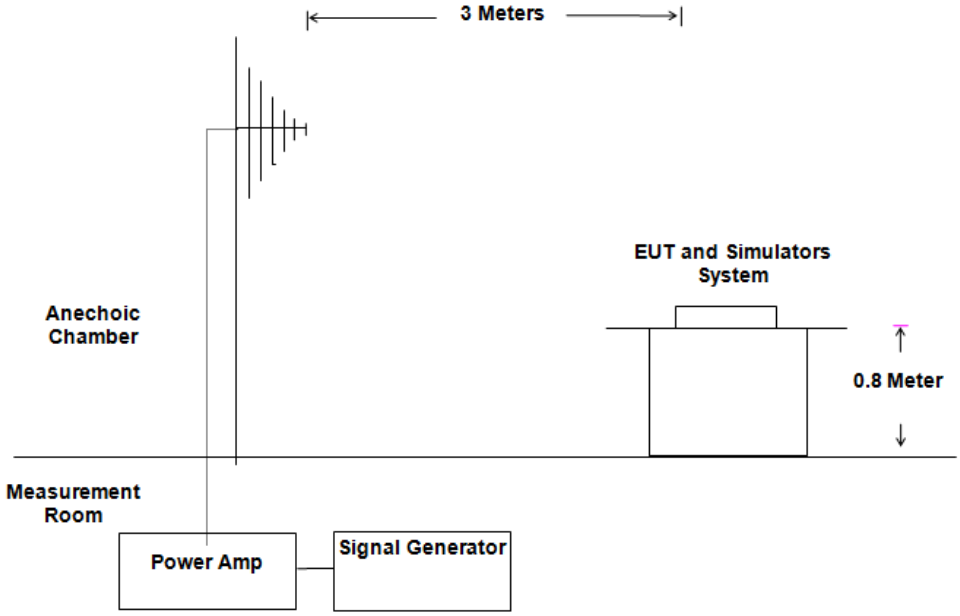
b) The frequency range is swept from 80 MHz to 6000 MHz with the signal 80% amplitude modulated with a 1kHz sine wave. The rate of sweep did not exceed 1.5x 10-3 decade/s. Where the frequency range is swept incrementally, the step size was 1% of fundamental.

c) The dwell time at each frequency shall be not less than the time necessary for the EUT to be able to respond.

d) The test was performed with the EUT exposed to both vertically and horizontally polarized fields on each of the four sides.

e) For the actual test configuration, please refer to the related Item –EUT Test Photos.

TEST SETUP



Note:

TABLE-TOP EQUIPMENT

The EUT installed in a representative system as described in section 7 of IEC/EN 61000-4-3 was placed on a non-conductive table 0.8 meters in height. The system under test was connected to the power and signal wire according to relevant installation instructions.

FLOOR-STANDING EQUIPMENT

The EUT installed in a representative system as described in section 7 of IEC/EN 61000-4-3 was placed on a non-conductive wood support 0.1 meters in height. The system under test was connected to the power and signal wire according to relevant installation instructions.

TEST RESULTS

------Passed------

Please refer to the below test data:

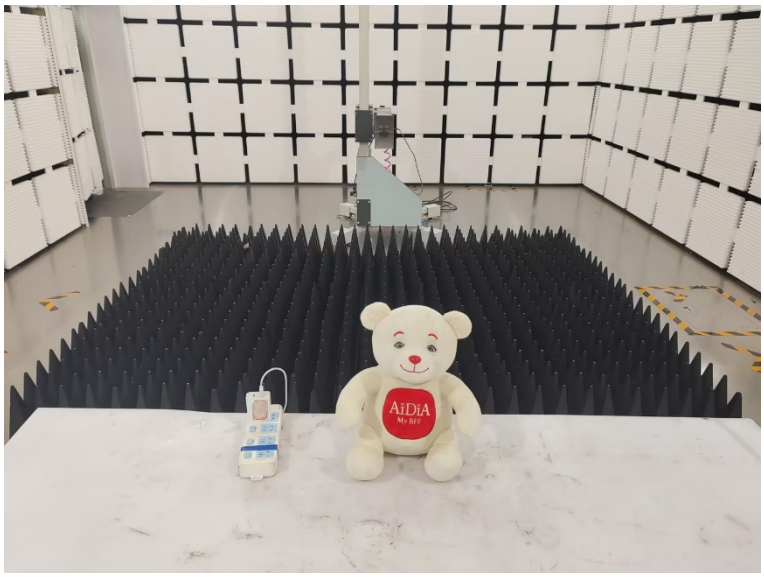
Frequency Range (MHz)	RF Field Position	R.F. Field Strength	Azimuth	Observations Performance	Perform. Criteria	Result
80~6000	H / V	3 V/m (rms) AM Modulated 1000Hz, 80%	Front	A	A	PASS
			Rear	A	A	
			Left	A	A	
			Right	A	A	

Note:

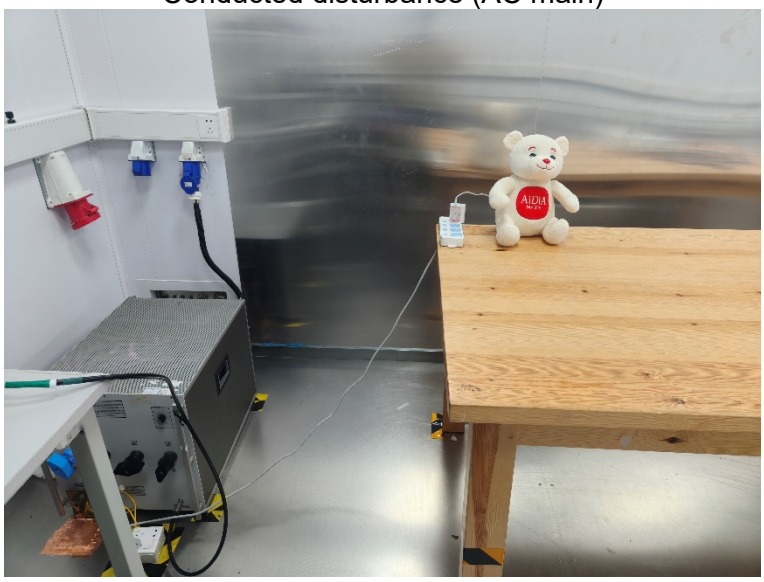
1. *The EUT can maintain communication link and not operate unintentionally during the test also can operate without any loss of user control functions after test.*

4 TEST SETUP PHOTOS

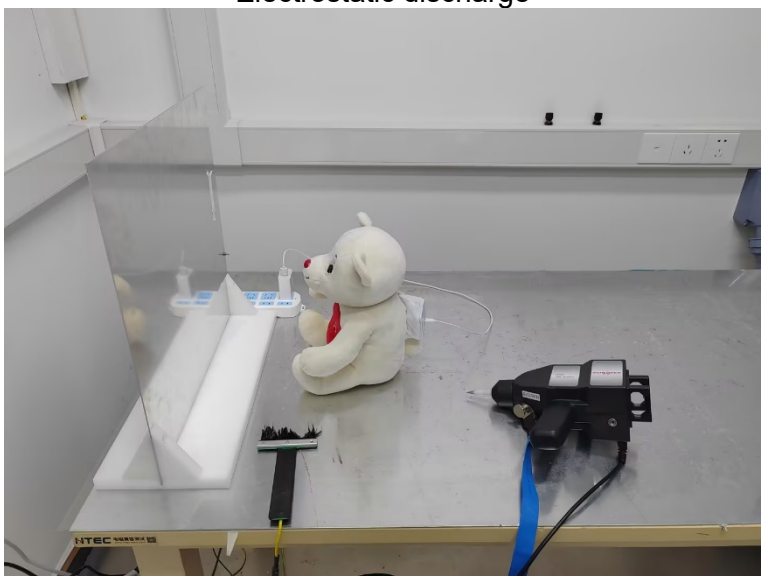
Radiated Emission



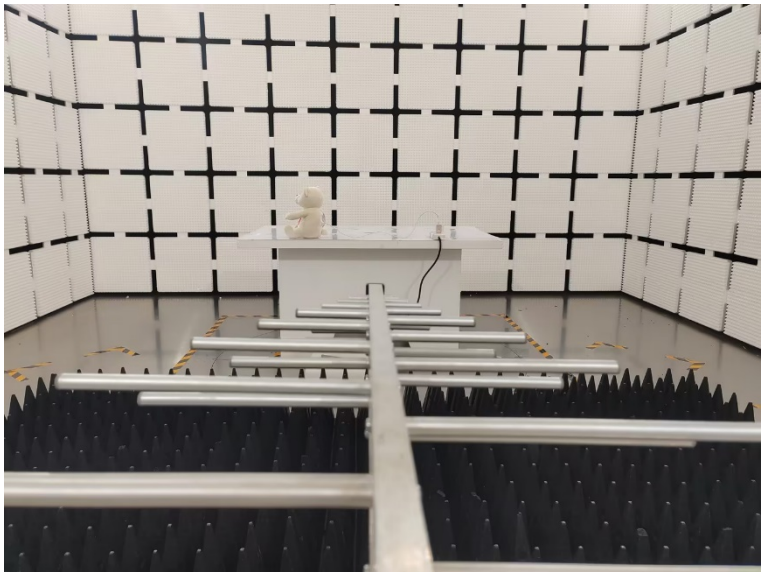
Conducted disturbance (AC main)



Electrostatic discharge

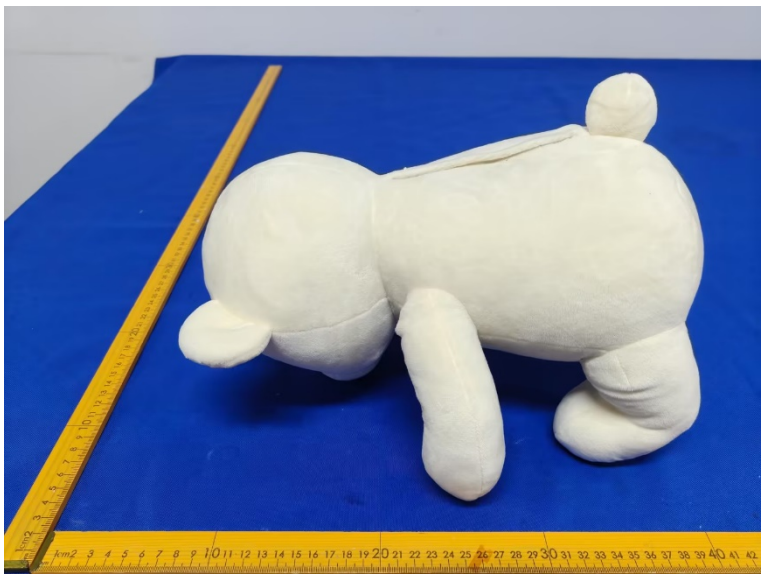


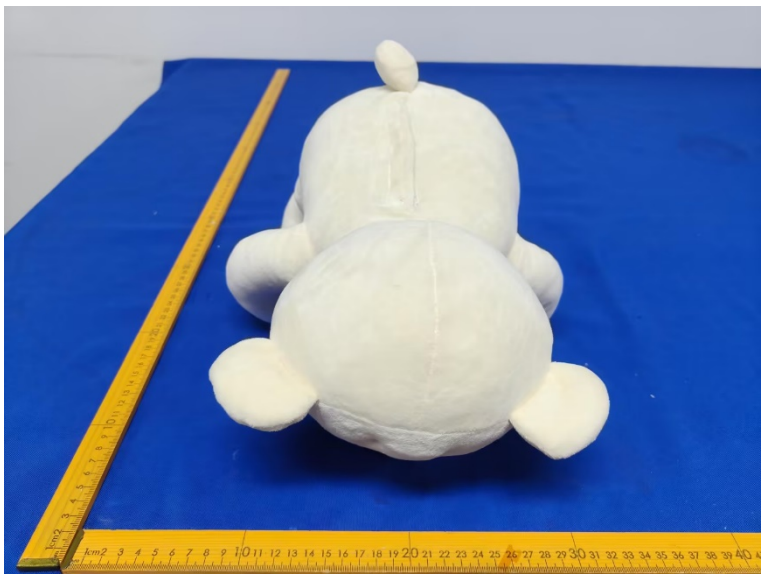
RF Electromagnetic Field



5 PHOTOS OF THE EUT

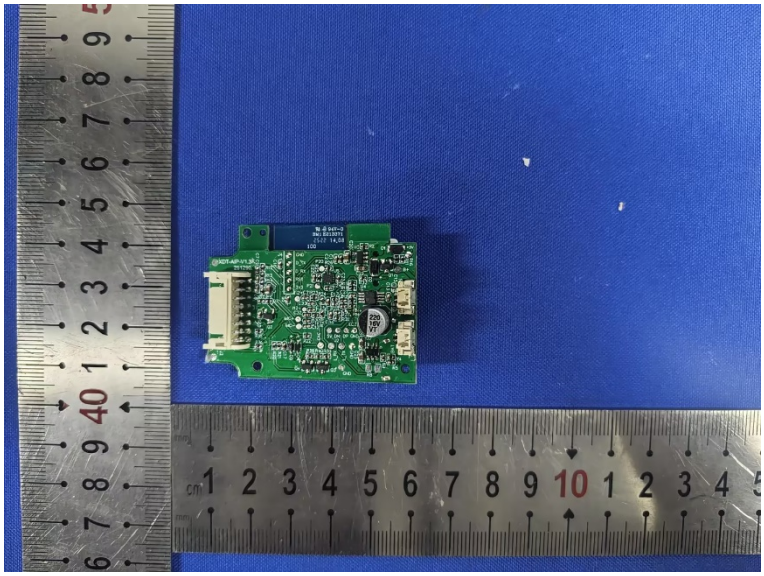
External Photos

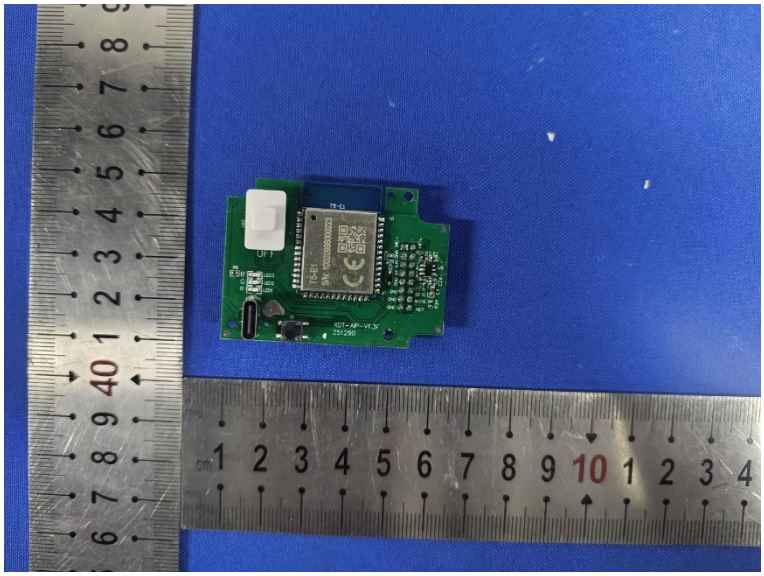


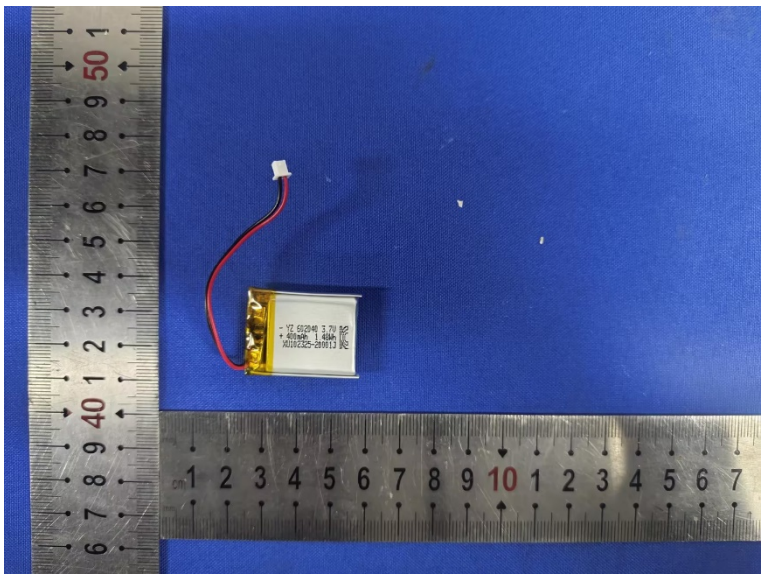


Aidia
My BFF

Internal photos







********** **End of Report** **********