



TEST REPORT
ETSI EN 301 489-1 V2.2.3 (2019-11)
ETSI EN 301 489-3 V2.3.2 (2023-01)

Report Reference No......: **HTT2025041056E-1**

Compiled by

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Kevin Yang

Date of issue.....: **Apr. 30, 2025**

Testing Laboratory Name.....: **Shenzhen HTT Technology Co., Ltd.**

Address.....: **1F, B Building, Huafeng International Robotics Industrial Park,
Gushu, Xixiang Street, Bao'an District, Shenzhen**

Applicant's name.....: **Shenzhen PULUZ Technology Limited**

Address.....: **8/F, 614 Bldg, Bagua 1st Road, Futian, Shenzhen, China**

Test specification.....:

Standard.....: **ETSI EN 301 489-1 V2.2.3 (2019-11)**
ETSI EN 301 489-3 V2.3.2 (2023-01)

Test item description.....: **Magnetic Lavalier Wireless Microphone**

Trade Mark.....: **PULUZ**

Manufacturer.....: **Shenzhen PULUZ Technology Limited**
8/F, 614 Bldg, Bagua 1st Road, Futian, Shenzhen, China

Model/Type reference.....: **PU3155B**

Serial Model.....: **PU3156B**

Ratings.....: **DC 3.7V/120mAh From Battery and DC 5V From External Circuit**

Result.....: **PASS**

**TEST REPORT**

Test Report No. : HTT2025041056E-1	Apr. 30, 2025 Date of issue
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Equipment under Test : Magnetic Lavalier Wireless Microphone

Model Name : PU3155B

Serial Model : PU3156B

Trade Mark : PULUZ

Applicant : **Shenzhen PULUZ Technology Limited**

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Address : 8/F, 614 Bldg, Bagua 1st Road, Futian, Shenzhen, China

Test Result	PASS
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The 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.



Contents

1. TEST STANDARDS	4
2. SUMMARY	5
2.1. General Remarks	5
2.2. Product Description	5
2.3. EUT operation mode	5
2.4. Modifications	5
3. TEST ENVIRONMENT	6
3.1. Address of the test laboratory	6
3.2. Environmental conditions	6
3.3. Test Description	6
3.4. Statement of the measurement uncertainty	7
3.5. Equipments Used during the Test	7
4. TEST CONDITIONS AND RESULTS	9
4.1. EMISSION	9
4.1.1. Radiated Emission	9
4.1.2. Conducted Emission	13
4.1.3. Harmonic Current Emission	16
4.1.4. Voltage Fluctuation and Flicker	17
4.2. IMMUNITY	18
4.2.1. Performance criteria	18
4.2.2. Electrostatic Discharge	19
4.2.3. RF Electromagnetic Field	21
4.2.4. Surges	22
4.2.5. RF- Common Mode 0.15MHz to 80MHz	23
4.2.6. Fast Transients Common Mode	24
4.2.7. Voltage Dips and Interruptions	25
5. TEST SET-UP PHOTOS OF THE EUT	26
6. EXTERNAL AND INTERNAL PHOTOS OF THE EUT	27



1. TEST STANDARDS

The tests were performed according to following standards:

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

ETSI EN 301 489-3 V2.3.2 (2023-01) –ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 3: Specific conditions for Short-Range Devices (SRD) operating on frequencies between 9 kHz and 246 GHz; Harmonised Standard covering the essential requirements of article 3.1(b) of Directive 2014/53/EU



2. SUMMARY

2.1. General Remarks

Date of receipt of test sample	:	Apr. 24, 2025
Testing commenced on	:	Apr. 24, 2025
Testing concluded on	:	Apr. 30, 2025

2.2. Product Description

Product Name:	Magnetic Lavalier Wireless Microphone
Trade Mark:	PULUZ
Model/Type reference:	PU3155B
Serial Model:	PU3156B
Power supply:	DC 3.7V/120mAh From Battery and DC 5V From External Circuit
Modulation Type	GFSK
Operation frequency	From 2402MHz-2480MHz
Number of channels	40

2.3. EUT operation mode

Test Mode	Description
Mode 1	Normal working Mode
Mode 2	Charging Mode

Pre-scan above all test mode, found below test mode which it was worse case mode.

Test item	Test mode (Worse case mode)
EMI	Mode 1
EMS	Mode 1

2.4. Modifications

No modifications were implemented to meet testing criteria.



3. TEST ENVIRONMENT

3.1. Address of the test laboratory

Shenzhen HTT Technology Co., Ltd.

1F, B Building, Huafeng International Robotics Industrial Park, Gushu, Xixiang Street, Bao'an District, Shenzhen

3.2. Environmental conditions

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

Normal Temperature:	25°C
Relative Humidity	55 %
Air Pressure	989 hPa

3.3. Test Description

Emission Measurement		
Radiated Emission	ETSI EN 301 489-1 V2.2.3 (2019-11) ETSI EN 301 489-3 V2.3.2 (2023-01)	PASS
Conducted Emission	ETSI EN 301 489-1 V2.2.3 (2019-11) ETSI EN 301 489-3 V2.3.2 (2023-01)	PASS
Harmonic Current Emissions	ETSI EN 301 489-1 V2.2.3 (2019-11) ETSI EN 301 489-3 V2.3.2 (2023-01)	PASS
Voltage Fluctuations and Flicker	ETSI EN 301 489-1 V2.2.3 (2019-11) ETSI EN 301 489-3 V2.3.2 (2023-01)	PASS
Immunity Measurement		
Electrostatic Discharge	ETSI EN 301 489-1 V2.2.3 (2019-11) ETSI EN 301 489-3 V2.3.2 (2023-01)	PASS
RF Electromagnetic Field	ETSI EN 301 489-1 V2.2.3 (2019-11) ETSI EN 301 489-3 V2.3.2 (2023-01)	PASS
Fast Transients Common Mode	ETSI EN 301 489-1 V2.2.3 (2019-11) ETSI EN 301 489-3 V2.3.2 (2023-01)	PASS
RF Common Mode 0,15 MHz to 80 MHz	ETSI EN 301 489-1 V2.2.3 (2019-11) ETSI EN 301 489-3 V2.3.2 (2023-01)	PASS
Voltage Dips and Interruptions	ETSI EN 301 489-1 V2.2.3 (2019-11) ETSI EN 301 489-3 V2.3.2 (2023-01)	PASS
Surges	ETSI EN 301 489-1 V2.2.3 (2019-11) ETSI EN 301 489-3 V2.3.2 (2023-01)	PASS

Remark:1. N/A means “not applicable” .

2.The measurement uncertainty is not included in the test result.



3.4. Statement of the 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 acc. 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 Shenzhen. Shenzhen Global Test Service Co.,Ltd acc. 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 Shenzhen Shenzhen Global Test Service Co.,Ltd for Products Quality is reported:

Test	Range	Measurement Uncertainty	Notes
Radiated Emission	30~1000MHz	3.45 dB	(1)
Radiated Emission	1~6GHz	3.54 dB	(1)
Conducted Disturbance	0.15~30MHz	2.66 dB	(1)
Harmonic current emission	/	0.634%	(1)
Voltage fluctuations & flicker	/	0.780%	(1)

(1) This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

3.5. Equipments Used during the Test

Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)
1	3m Semi- Anechoic Chamber	Shenzhen C.R.T technology co., LTD	9*6*6	HTT-E028	Aug. 10 2024	Aug. 09 2027
2	Control Room	Shenzhen C.R.T technology co., LTD	4.8*3.5*3.0	HTT-E030	Aug. 10 2024	Aug. 09 2027
3	EMI Test Receiver	Rohde&Schwarz	ESCI7	HTT-E022	Apr. 26 2025	Apr. 25 2026
4	Spectrum Analyzer	Rohde&Schwarz	FSP	HTT-E037	Apr. 26 2025	Apr. 25 2026
5	Coaxial Cable	ZDecl	ZT26-NJ-NJ-0.6M	HTT-E018	Apr. 26 2025	Apr. 25 2026
6	Coaxial Cable	ZDecl	ZT26-NJ-SMAJ-2M	HTT-E019	Apr. 26 2025	Apr. 25 2026
7	Coaxial Cable	ZDecl	ZT26-NJ-SMAJ-0.6M	HTT-E020	Apr. 26 2025	Apr. 25 2026
8	Coaxial Cable	ZDecl	ZT26-NJ-SMAJ-8.5M	HTT-E021	Apr. 26 2025	Apr. 25 2026
9	Composite logarithmic antenna	Schwarzbeck	VULB 9168	HTT-E017	May. 21 2024	May. 20 2025
10	Horn Antenna	Schwarzbeck	BBHA9120D	HTT-E016	May. 20 2024	May. 19 2025
11	Loop Antenna	Zhinan	ZN30900C	HTT-E039	Apr. 26 2025	Apr. 25 2026
12	Horn Antenna	Beijing Hangwei Dayang	OBH100400	HTT-E040	Apr. 26 2025	Apr. 25 2026
13	low frequency Amplifier	Sonoma Instrument	310	HTT-E015	Apr. 26 2025	Apr. 25 2026
14	high-frequency Amplifier	HP	8449B	HTT-E014	Apr. 26 2025	Apr. 25 2026
15	Variable frequency power supply	Shenzhen Anbiao Instrument Co., Ltd	ANB-10VA	HTT-082	Apr. 26 2025	Apr. 25 2026
16	EMI Test Receiver	Rohde & Schwarz	ESCS30	HTT-E004	Apr. 26 2025	Apr. 25 2026
17	Artificial Mains	Rohde & Schwarz	ESH3-Z5	HTT-E006	May. 23 2024	May. 22 2025
18	Artificial Mains	Rohde & Schwarz	ENV-216	HTT-E038	May. 23 2024	May. 22 2025



19	Cable Line	Robinson	Z302S-NJ-BNCJ-1.5M	HTT-E001	Apr. 26 2025	Apr. 25 2026
20	Attenuator	Robinson	6810.17A	HTT-E007	Apr. 26 2025	Apr. 25 2026
21	Variable frequency power supply	Shenzhen Yanghong Electric Co., Ltd	YF-650 (5KVA)	HTT-E032	Apr. 26 2025	Apr. 25 2026
22	Control Room	Shenzhen C.R.T technology co., LTD	8*4*3.5	HTT-E029	Aug. 10 2024	Aug. 09 2027
23	DC power supply	Agilent	E3632A	HTT-E023	Apr. 26 2025	Apr. 25 2026
24	EMI Test Receiver	Agilent	N9020A	HTT-E024	Apr. 26 2025	Apr. 25 2026
25	Analog signal generator	Agilent	N5181A	HTT-E025	Apr. 26 2025	Apr. 25 2026
26	Vector signal generator	Agilent	N5182A	HTT-E026	Apr. 26 2025	Apr. 25 2026
27	Power sensor	Keysight	U2021XA	HTT-E027	Apr. 26 2025	Apr. 25 2026
28	Temperature and humidity meter	Shenzhen Anbiao Instrument Co., Ltd	TH10R	HTT-074	Apr. 26 2025	Apr. 25 2026
29	Radiated Emission Test Software	Farad	EZ-EMC	N/A	N/A	N/A
30	Conducted Emission Test Software	Farad	EZ-EMC	N/A	N/A	N/A
31	RF Test Software	panshanrf	TST	N/A	N/A	N/A

The calibration interval is 1 year

4. TEST CONDITIONS AND RESULTS

4.1. EMISSION

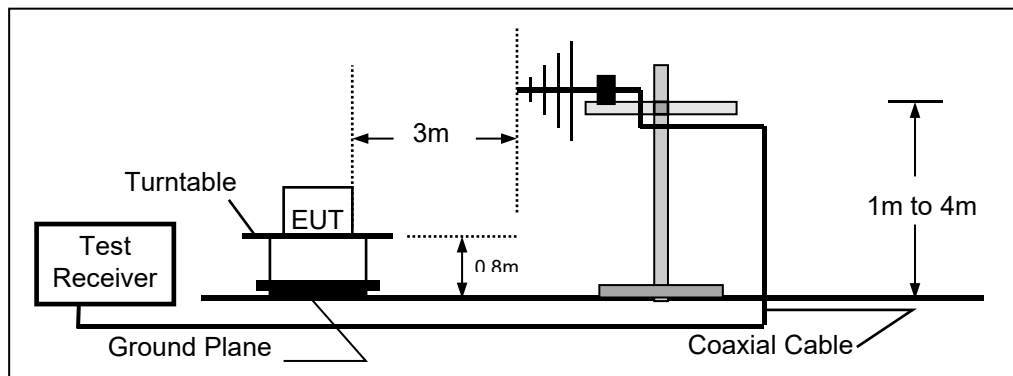
4.1.1. Radiated Emission

LIMIT

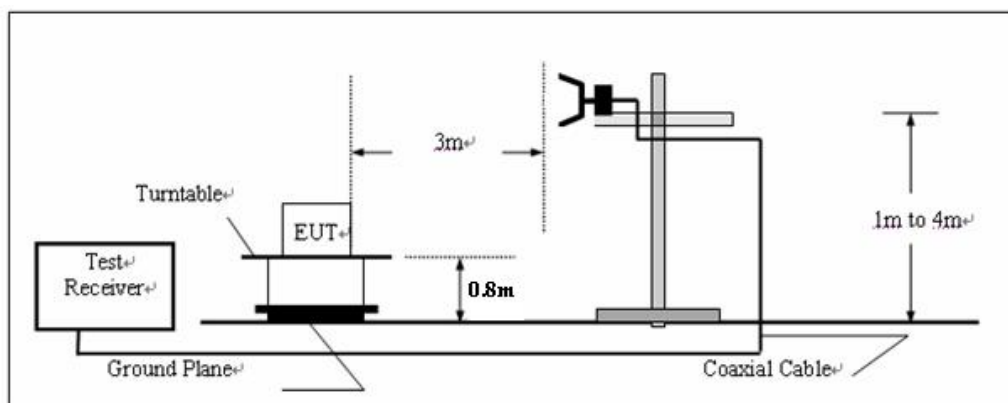
Please refer to ETSI EN301489-1 Clause 8.2.3, Table 4 and EN55032 Annex A, Table A.2,A.3, and Class B

TEST CONFIGURATION

- a) Radiated emission test set-up, frequency below 1000MHz:



- b) Radiated emission test set-up, frequency above 1000MHz



TEST PROCEDURE

Please refer to ETSI EN 301 489-1 Clause 8.2.3 and EN55032 Annex A for the measurement methods

TEST RESULTS

Passed

Please refer to the below test data:

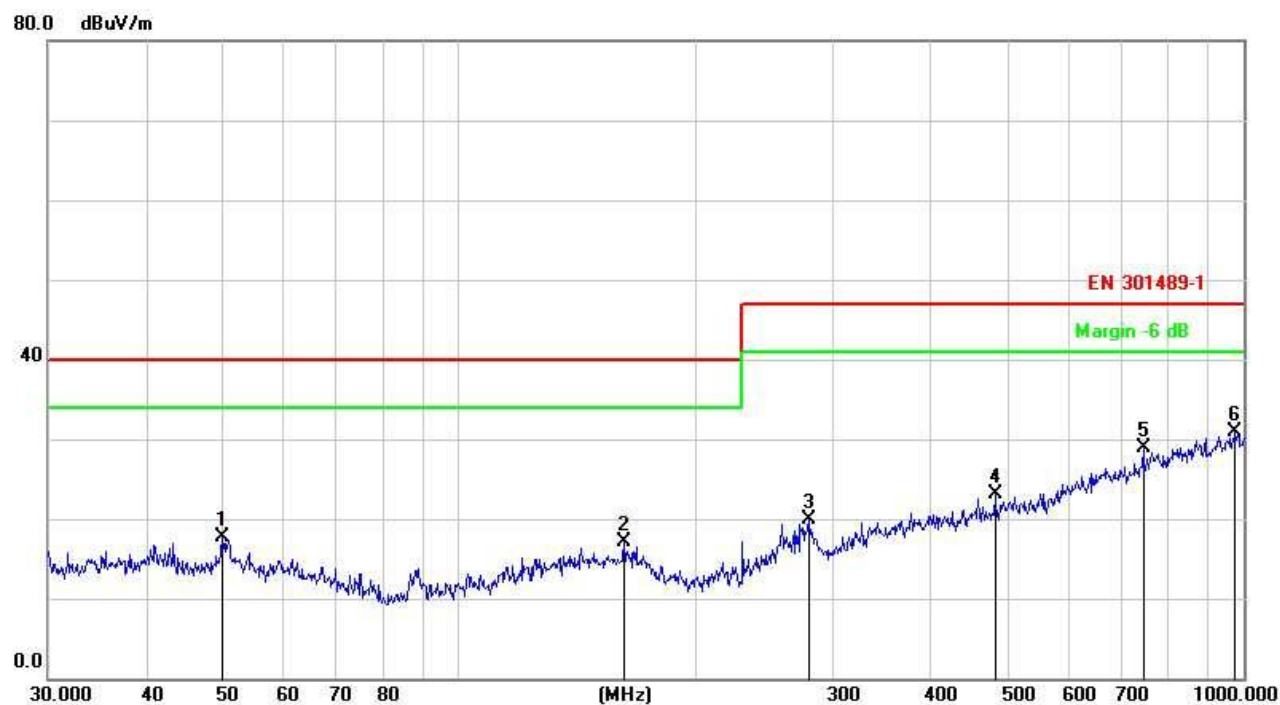


Test mode:

Mode 1

Polarization

Horizontal



No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Over	
		MHz	Level	Factor	ment			Detector
			dBuV	dB	dBuV/m	dB/m	dB	
1		50.0566	29.53	-11.80	17.73	40.00	-22.27	peak
2		162.6106	28.09	-11.04	17.05	40.00	-22.95	peak
3		279.0436	31.03	-11.20	19.83	47.00	-27.17	peak
4		482.2156	28.97	-5.82	23.15	47.00	-23.85	peak
5		744.8661	29.66	-0.66	29.00	47.00	-18.00	peak
6	*	975.7529	27.73	3.12	30.85	47.00	-16.15	peak

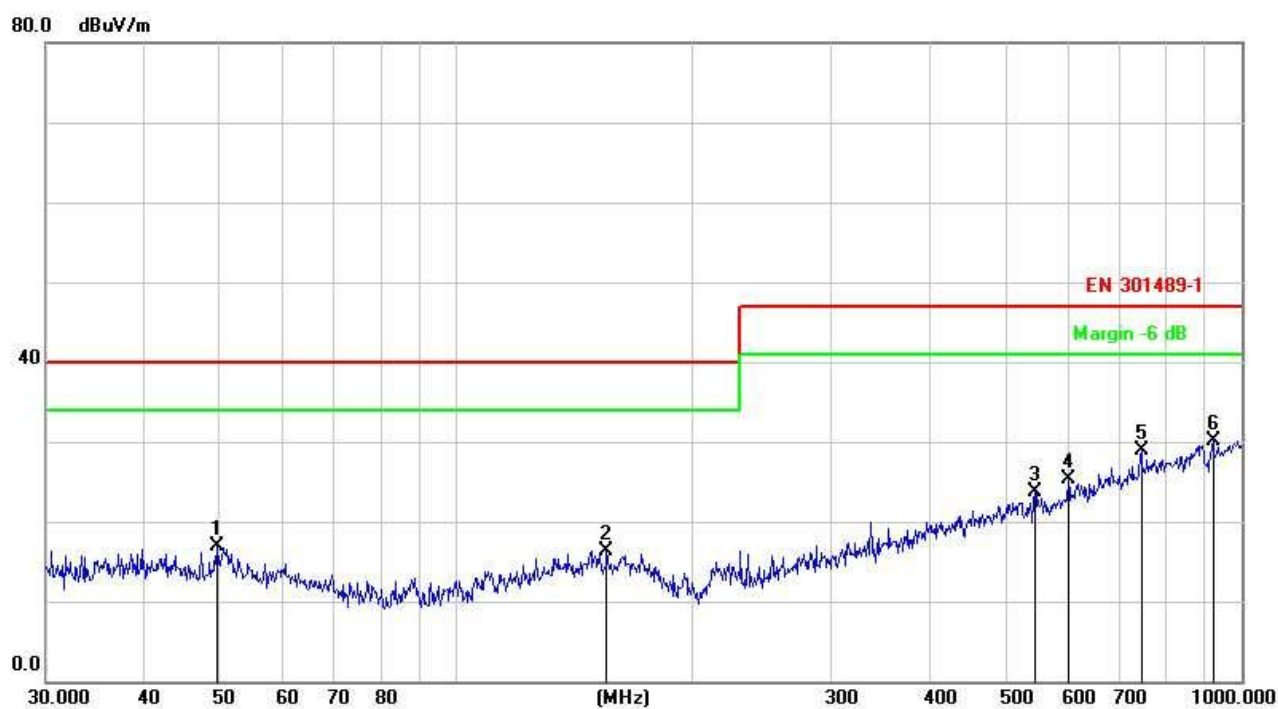


Test mode:

Mode 1

Polarization

Vertical



No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Over
		MHz	Level	Factor	ment		
			dBuV	dB	dBuV/m	dB/m	dB
1		49.5328	28.70	-11.81	16.89	40.00	-23.11 peak
2		155.3643	26.85	-10.46	16.39	40.00	-23.61 peak
3		545.1825	28.81	-5.02	23.79	47.00	-23.21 peak
4		601.4265	28.76	-3.44	25.32	47.00	-21.68 peak
5		744.8660	29.58	-0.66	28.92	47.00	-18.08 peak
6	*	919.2866	28.24	1.92	30.16	47.00	-16.84 peak



1000-6000 MHz

Polar (H/V)	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Remark
	(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
V	1327.56	59.37	-17.52	41.85	70.00	28.15	peak
V	1327.75	54.81	-17.47	37.34	70.00	32.66	AVG
V	1573.92	64.06	-12.32	51.74	70.00	18.26	peak
V	1571.38	55.73	-12.23	43.50	50.00	6.50	AVG
V	3325.56	63.17	-10.52	52.65	74.00	21.35	peak
V	3325.52	54.09	-10.41	43.68	54.00	10.32	AVG
H	1349.49	66.24	-17.55	48.69	70.00	21.31	peak
H	1249.42	60.49	-17.47	43.02	50.00	6.98	AVG
H	3524.32	61.07	-12.63	48.44	70.00	21.56	peak
H	3524.42	49.51	-12.32	37.19	50.00	12.81	AVG
H	4026.56	66.75	-8.65	58.10	74.00	15.90	peak
H	4026.52	53.03	-8.78	44.25	54.00	9.75	AVG

Remark:

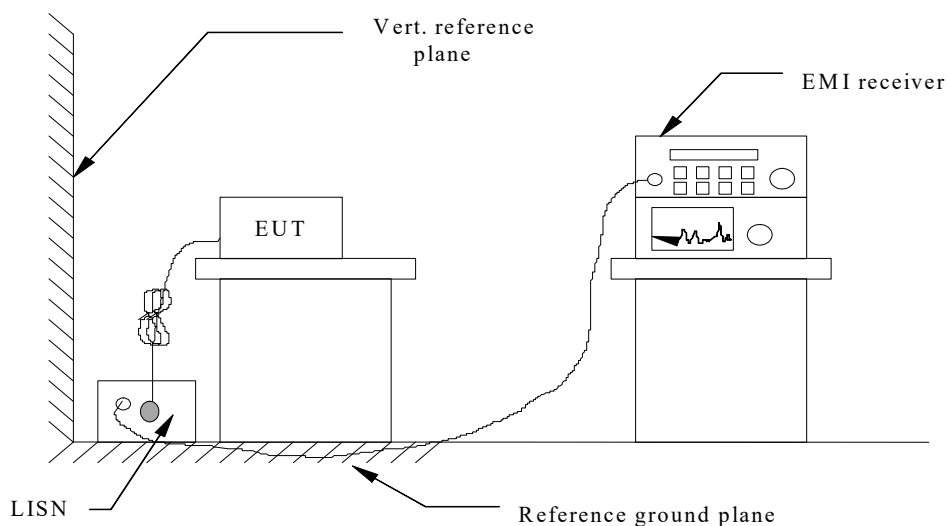
Absolute Level= ReadingLevel+ Factor, Margin= Absolute Level - Limit

4.1.2. Conducted Emission

LIMIT

Please refer to ETSI EN301489-1 Clause 8.4.3, Table 8 and EN55032 Annex A, Table A.10, A.12

TEST CONFIGURATION



TEST PROCEDURE

Please refer to ETSI EN 301 489-1 Clause 8.4.3 and EN55032 Annex A for the measurement methods.

TEST RESULTS

Passed

Please refer to the below test data:

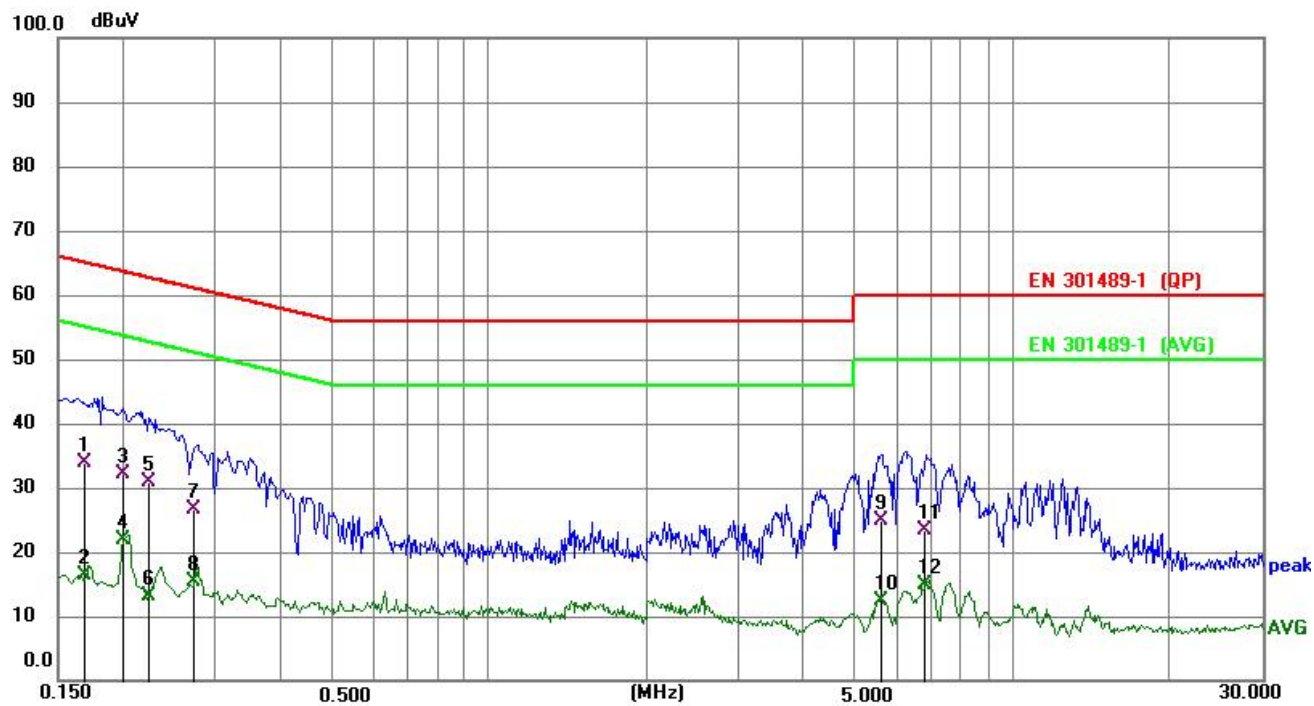


Test mode:

Mode 1

Polarization

L



No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Over	
		MHz	Level	Factor	ment			Detector
1	*	0.1691	23.70	10.07	33.77	65.00	-31.23	QP
2		0.1691	6.32	10.07	16.39	55.00	-38.61	AVG
3		0.2000	21.84	10.19	32.03	63.61	-31.58	QP
4		0.2000	11.66	10.19	21.85	53.61	-31.76	AVG
5		0.2231	20.56	10.21	30.77	62.70	-31.93	QP
6		0.2231	3.02	10.21	13.23	52.70	-39.47	AVG
7		0.2730	16.48	10.22	26.70	61.03	-34.33	QP
8		0.2730	5.13	10.22	15.35	51.03	-35.68	AVG
9		5.6106	14.87	10.11	24.98	60.00	-35.02	QP
10		5.6106	2.28	10.11	12.39	50.00	-37.61	AVG
11		6.8292	13.20	10.12	23.32	60.00	-36.68	QP
12		6.8292	4.66	10.12	14.78	50.00	-35.22	AVG

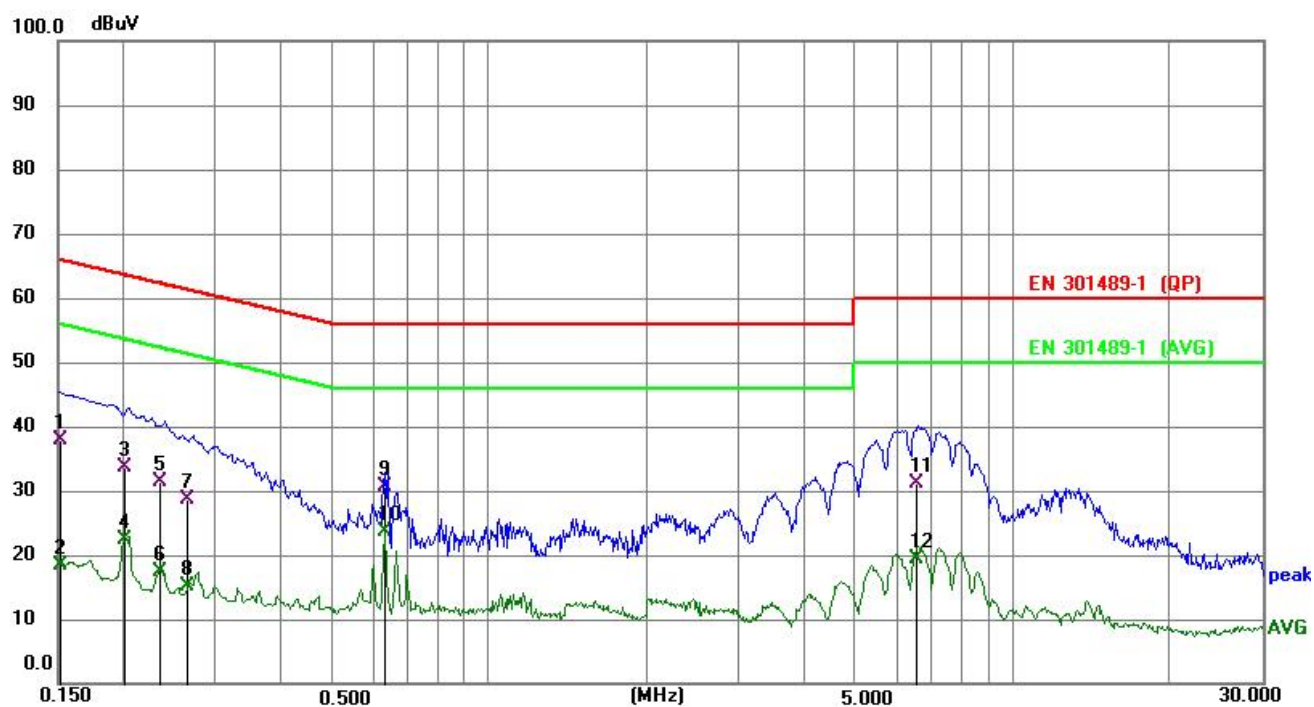


Test mode:

Mode 1

Polarization

N



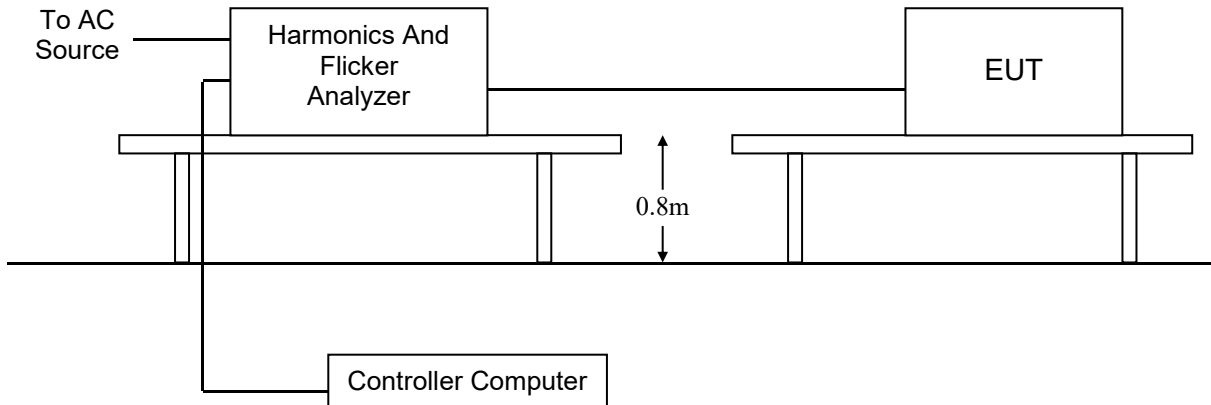
No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Over	
		MHz	Level	Factor	ment			
					dBuV	dBuV	dB	Detector
1		0.1514	27.78	10.16	37.94	65.92	-27.98	QP
2		0.1514	8.18	10.16	18.34	55.92	-37.58	AVG
3		0.2014	23.55	10.20	33.75	63.55	-29.80	QP
4		0.2014	12.19	10.20	22.39	53.55	-31.16	AVG
5		0.2343	21.24	10.20	31.44	62.30	-30.86	QP
6		0.2343	7.21	10.20	17.41	52.30	-34.89	AVG
7		0.2645	18.47	10.20	28.67	61.29	-32.62	QP
8		0.2645	4.86	10.20	15.06	51.29	-36.23	AVG
9		0.6313	20.50	10.19	30.69	56.00	-25.31	QP
10	*	0.6313	13.38	10.19	23.57	46.00	-22.43	AVG
11		6.5998	20.98	10.15	31.13	60.00	-28.87	QP
12		6.5998	9.17	10.15	19.32	50.00	-30.68	AVG

4.1.3. Harmonic Current Emission

LIMIT

Please refer to EN 61000-3-2

TEST CONFIGURATION



TEST PROCEDURE

Please refer to EN 61000-3-2 for the measurement methods.

TEST RESULTS

N/A

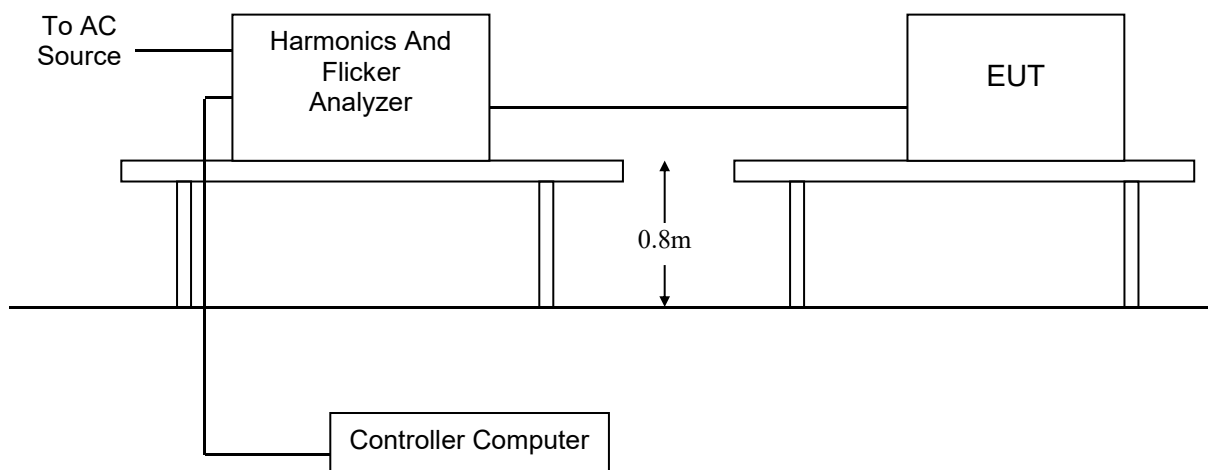
Note: The active input power of the EUT is less than 75W. No limits apply for equipment with an active input power up to and including 75W

4.1.4. Voltage Fluctuation and Flicker

LIMIT

Please refer to EN 61000-3-3

TEST CONFIGURATION



TEST PROCEDURE

Please refer to EN 61000-3-3 for the measurement methods.

TEST RESULTS

N/A

The maximum input power of the EUT is less than 20W, which unlikely to produce significant voltage fluctuation. Therefore this test item is not applicable for the EUT.

See clause 6.1*** *** EN 61000-3-3:2013+A2:2021, clause 6.1:" ... Tests need not be made on equipment which is unlikely to produce significant voltage fluctuations or flicker. ...".

4.2. IMMUNITY

4.2.1. Performance criteria

■ ETSI EN301489-3

In the table below:

performance criterion A applies for immunity tests with phenomena of a continuous nature;

performance criterion B applies for immunity tests with phenomena of a transient nature.

NOTE: Whether a phenomenon is considered transient, continuous or otherwise is indicated in the test procedures for the phenomenon in ETSI EN 301 489-1 [1], clause 9.

Table 2: Performance Requirements

Criterion	During test	After test
A	Operate as intended No loss of function No unintentional responses	Operate as intended No loss of function No degradation of performance No loss of stored data or user programmable functions
B	May show loss of function No unintentional responses	Operate as intended Lost function(s) shall be self-recoverable No degradation of performance No loss of stored data or user programmable functions

Where "operate as intended" or "no loss of function" is specified, the EUT shall demonstrate correct functioning as described in clause 5.

Where the EUT has more than one mode of operation (see clause 4.5.2), an unplanned transition from one mode to another is considered as an unintentional response. The EUT shall be tested in sufficient modes to confirm there are no such unintentional responses.

■ Performance Criterion of EN55035

Criterion A: 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.

Criterion B: After the test, the equipment shall continue to operate as intended without operator intervention. No degradation of performance or loss of function is allowed, after the application of the phenomena below a performance level specified by the manufacturer, when the equipment is used as intended.

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.

■ Performance Criterion of EN55035

Criterion A: 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.

Criterion B: After the test, the equipment shall continue to operate as intended without operator intervention. No degradation of performance or loss of function is allowed, after the application of the phenomena below a performance level specified by the manufacturer, when the equipment is used as intended.

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.

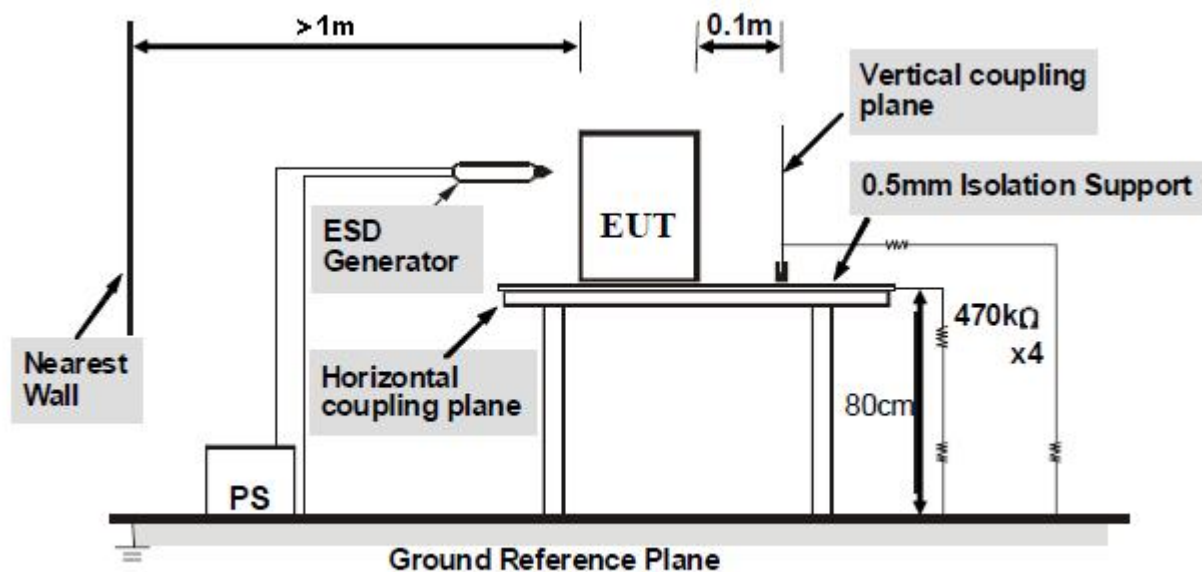
4.2.2. Electrostatic Discharge

LIMIT

SEVERITY LEVELS OF ELECTROSTATIC DISCHARGE

Test level: Contact Discharge at $\pm 2\text{KV}$, $\pm 4\text{KV}$ Air Discharge at $\pm 2\text{KV}$, $\pm 4\text{KV}$, $\pm 8\text{KV}$

TEST CONFIGURATION



TEST PROCEDURE

Please refer to ETSI EN 301 489-1 Clause 9.3.2 , EN 55035 and EN 61000-4-2 for the measurement methods.

Contact Discharge:

The ESD generator is held perpendicular to the surface to which the discharge is applied and the tip of the discharge electrode touch the surface of EUT. Then turn the discharge switch. The generator is then re-triggered for a new single discharge and repeated at least 10 times for each pre-selected test point. This procedure shall be repeated until all the air discharge completed.

Air Discharge:

Air discharge is used where contact discharge can't be applied. The round discharge tip of the discharge electrode shall be approached as fast as possible to touch the EUT. After each discharge, the discharge electrode shall be removed from the EUT. The generator is then re-triggered for a new single discharge and repeated at least 10 times for each pre-selected test point. This procedure shall be repeated until all the air discharge completed.

Indirect discharge for horizontal coupling plane:

At least 10 single discharges shall be applied to the horizontal coupling plane, at points on each side of the EUT.

Indirect discharge for vertical coupling plane:

At least 10 single discharges shall be applied to the center of one vertical edge of the coupling plane. The coupling plane, of dimensions $0.5\text{m} \times 0.5\text{m}$, is placed parallel to, and positioned at a distance of 0.1m from



the EUT. Discharges shall be applied to the coupling plane, with this plane in sufficient different positions that the four faces of the EUT are completely illuminated.

TEST MODE

Please reference to the section 2.3

TEST RESULTS

Direct discharge				
Type of discharge	Discharge voltage (KV)	Observations Performance	Criteria Level	Result
Contact discharge	±2	No degradation in performance of the EUT was observed (A)	B	Pass
	±4		B	
Air discharge	±2	A	B	
	±4	A	B	
	±8	A	B	
Indirect discharge				
Type of discharge	Discharge voltage (KV)	Observations Performance	Criteria Level	Result
HCP (6 sides)	±2	A	B	Pass
	±4	A	B	
VCP (4 sides)	±2	A	B	
	±4	A	B	

Remark: The ancillary equipment's specification for an acceptable level of performance or degradation of performance during and/or after the ESD tests.

4.2.3. RF Electromagnetic Field

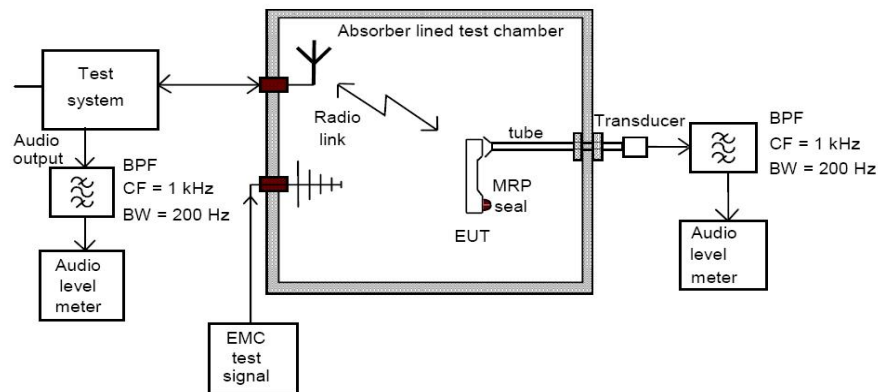
PERFORMANCE CRITERION

Criteria A

TEST LEVEL

3V/m (80%, 1kHz Amplitude Modulation)

TEST CONFIGURATION



TEST PROCEDURE

Please refer to ETSI EN 301 489-1 Clause 9.2.2 and EN 61000-4-3 for the measurement methods.

TEST MODE

Please reference to the section 2.3

TEST RESULTS

Frequency	Level	Modulation	Antenna Polarization	EUT Face	Observations (Performance Criterion)	Result
80MHz-6GHz	3 V/m	1 kHz, 80 % Amp. Mod, 1 % increment, dwell time=3seconds	V	Front	A	Pass
			H		A	Pass
			V	Rear	A	Pass
			H		A	Pass
			V	Left	A	Pass
			H		A	Pass
			V	Right	A	Pass
			H		A	Pass
			V	Top	A	Pass
			H		A	Pass
			V	Bottom	A	Pass
			H		A	Pass

Remark: A: No degradation in performance of the EUT was observed.

4.2.4. Surges

PERFORMANCE CRITERION

Criteria B

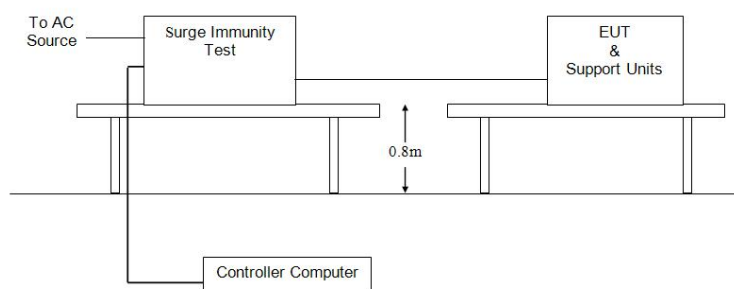
TEST LEVEL

1kV Line to Line: Differential mode

2kV Line to Ground: Common mode

(Voltage Waveform: 1.2/50 us; Current Waveform: 8/20 us)

TEST CONFIGURATION



TEST PROCEDURE

Please refer to ETSI EN 301 489-1 Clause 9.8.2 and EN 61000-4-5 for the measurement methods.

TEST MODE

Please reference to the section 2.3

TEST RESULTS

Location	Level(kV)	Pulse No	Surge Interval	Phase(deg)	Observations (Performance Criterion)	Result
L-N	± 1	5	60s	0°	A	Pass
				90°	A	Pass
				180°	A	Pass
				270°	A	Pass

Remark: A: No degradation in performance of the EUT was observed.

4.2.5. RF- Common Mode 0.15MHz to 80MHz

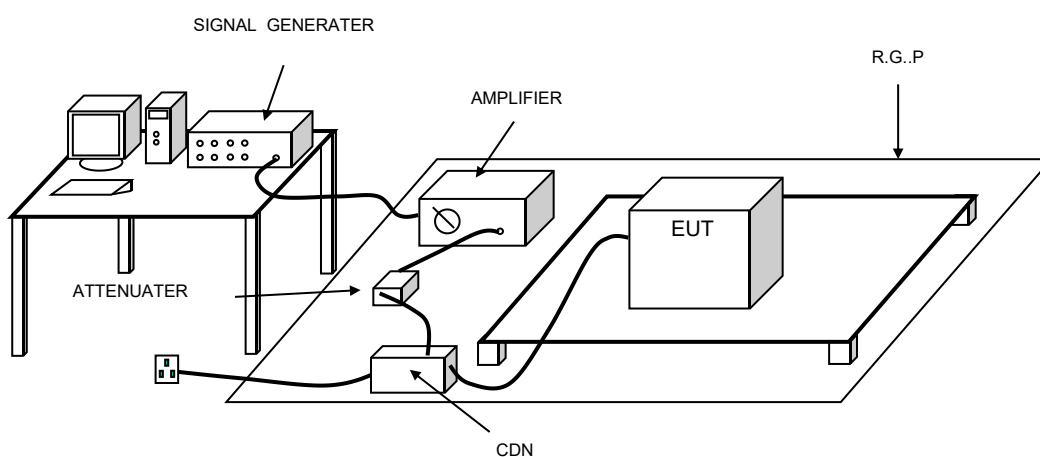
PERFORMANCE CRITERION

Criteria A

TEST LEVEL

3Vrms on AC main port (80%, 1kHz Amplitude Modulation)

TEST CONFIGURATION



TEST PROCEDURE

Please refer to ETSI EN 301 489-1 Clause 9.5.2 and EN 61000-4-6 for the measurement methods.

TEST MODE

Please reference to the section 2.3

TEST RESULTS

TEST RESULTS

Frequency	Injected Position	Coupling Direct/Clamp	Level	Modulation	Observations (Performance Criterion)	Result
150kHz to 80MHz	AC Mains	Direct	3Vrms	1 kHz, 80 % Amp. Mod, 1 % increment, dwell time=3seconds	A	Pass

Remark: A: No degradation in performance of the EUT was observed

4.2.6. Fast Transients Common Mode

PERFORMANCE CRITERION

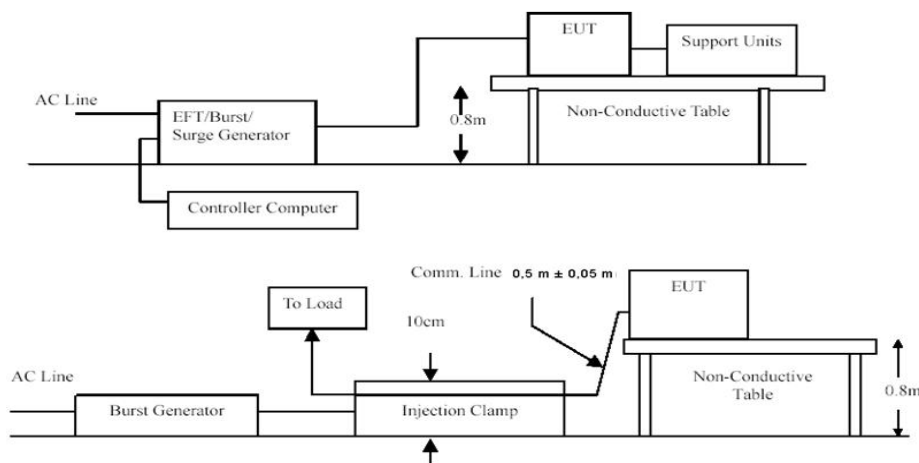
Criteria B

TEST LEVEL

1KV for AC main port

(Impulse Frequency: 5 kHz; Tr/Th: 5/50ns; Burst Duration: 15ms; Burst Period: 3Hz)

TEST CONFIGURATION



TEST PROCEDURE

Please refer to ETSI EN 301 489-1 Clause 9.4.2 , EN55035 and EN 61000-4-4 for the measurement methods.

TEST MODE

Please reference to the section 2.3

TEST RESULTS

Lead under Test	Level ($\pm$ kV)	Coupling Direct/Clamp	Observations (Performance Criterion)	Result
L	± 1	Direct	A	Pass
N	± 1	Direct	A	Pass
L-N	± 1	Direct	A	Pass

Remark: A: No degradation in performance of the EUT was observed

4.2.7. Voltage Dips and Interruptions

PERFORMANCE CRITERION

>95% VD, 0.5 period----Performance criterion: B

>95% VD, 1.0 period----Performance criterion: B

30% VD, 25 period----Performance criterion: C

>95% VI, 250 period----Performance criterion: C

TEST LEVEL

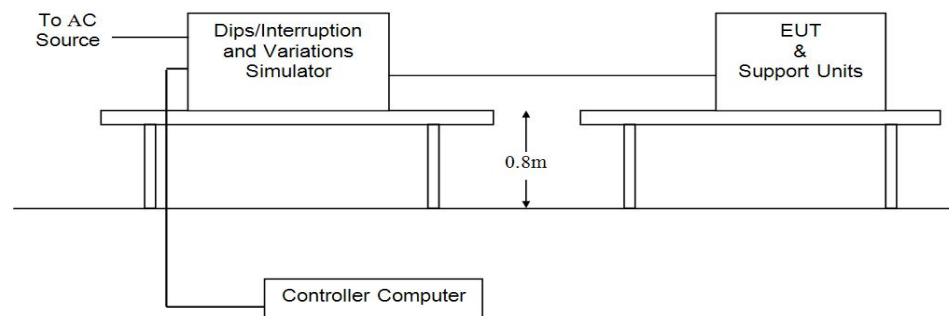
0% of VT(Supply Voltage) for 0.5 period

0% of VT(Supply Voltage) for 1.0 period

70% of VT(Supply Voltage) for 25 period

0% of VT(Supply Voltage) for 250 period

TEST CONFIGURATION



TEST PROCEDURE

Please refer to ETSI EN 301 489-1 Clause 9.7.2 and EN 61000-4-11 for the measurement methods.

TEST MODE

Please reference to the section 2.3

TEST RESULTS

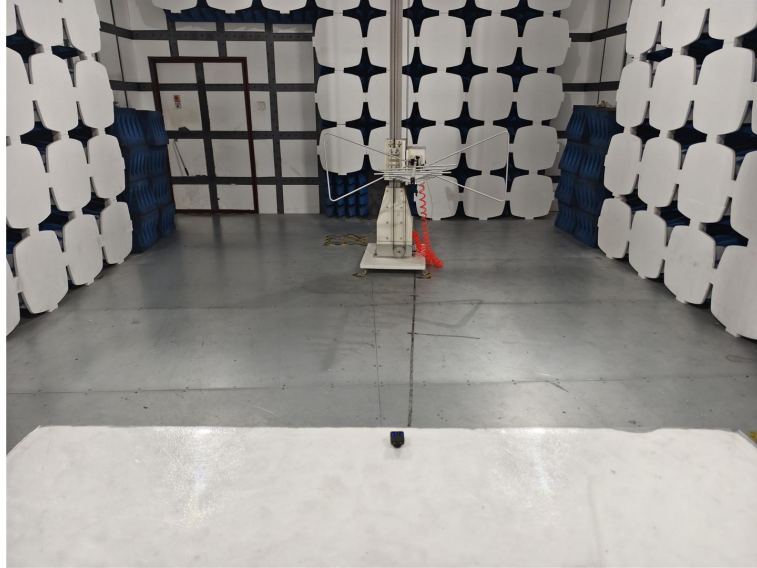
Test Level % UT	Duration (Periods)	Phase angle	No. of drop out	Time between dropout	Observations (Performance Criterion)	Result
0	0.5	0°, 90°, 180°, 270°	3	10s	A	Pass
0	1.0	0°, 90°, 180°, 270°	3	10s	A	Pass
70	25	0°, 90°, 180°, 270°	3	10s	A	Pass
0	250	0°, 90°, 180°, 270°	3	10s	B	Pass

Remark :

A: No degradation in performance of the EUT was observed.

B: During the test, the power shut down, after the experiment, the function can automatically return to normal

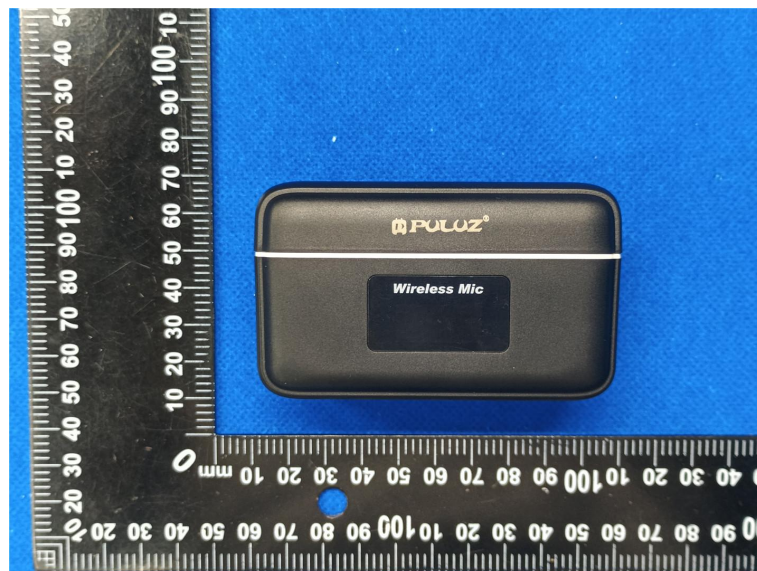
5. Test Set-up Photos of the EUT



6. External and Internal Photos of the EUT



Overall view of the apparatus



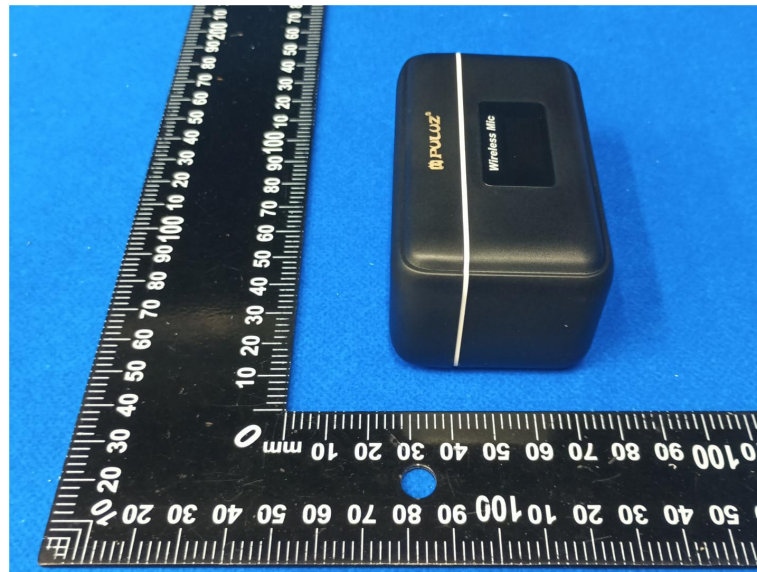
Overall view of the apparatus



Overall view of the apparatus



Overall view of the apparatus



Overall view of the apparatus



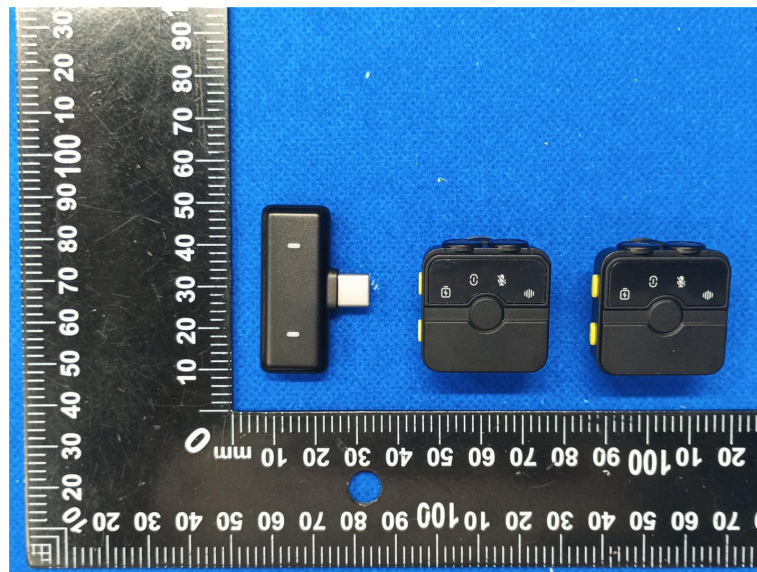
Overall view of the apparatus



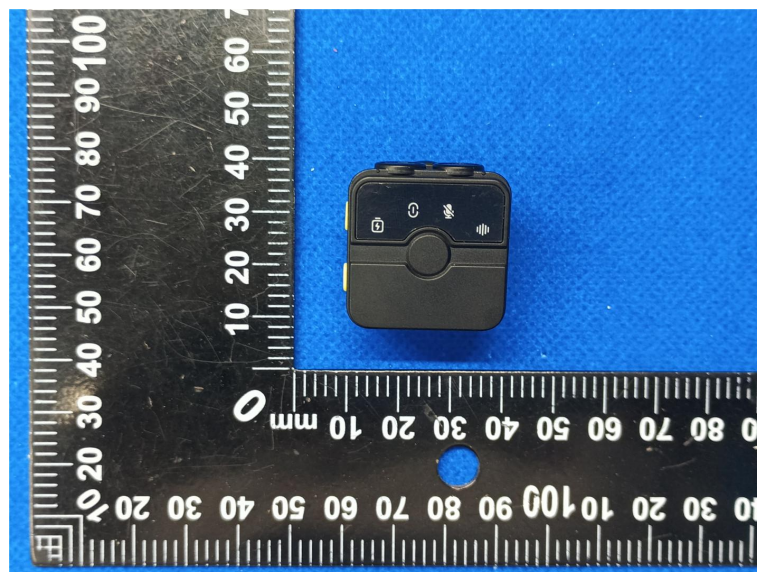
Overall view of the apparatus



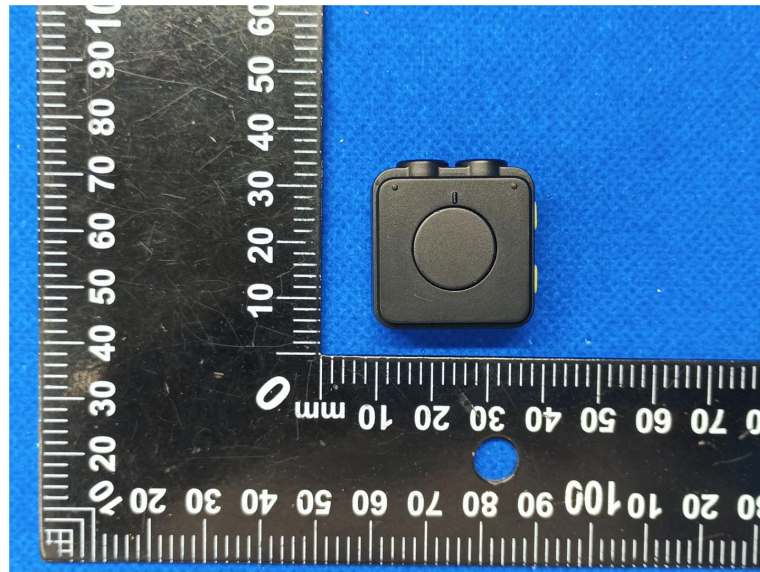
Overall view of the apparatus



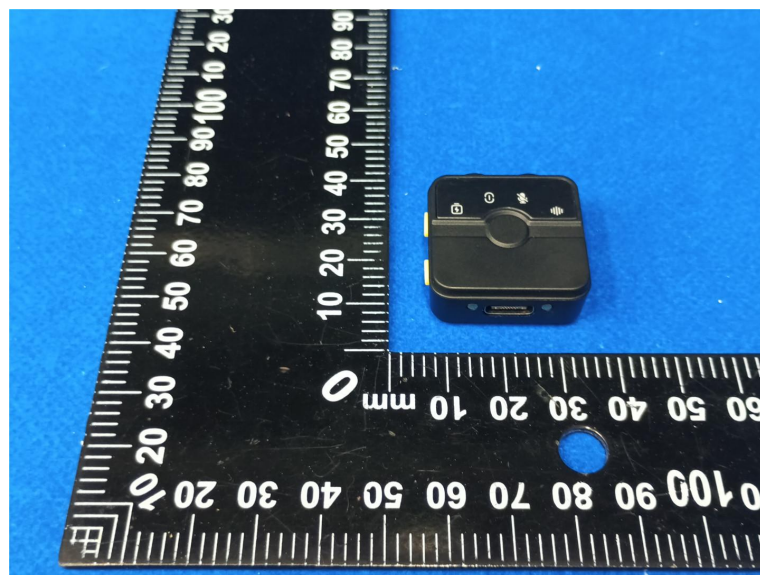
Overall view of the apparatus



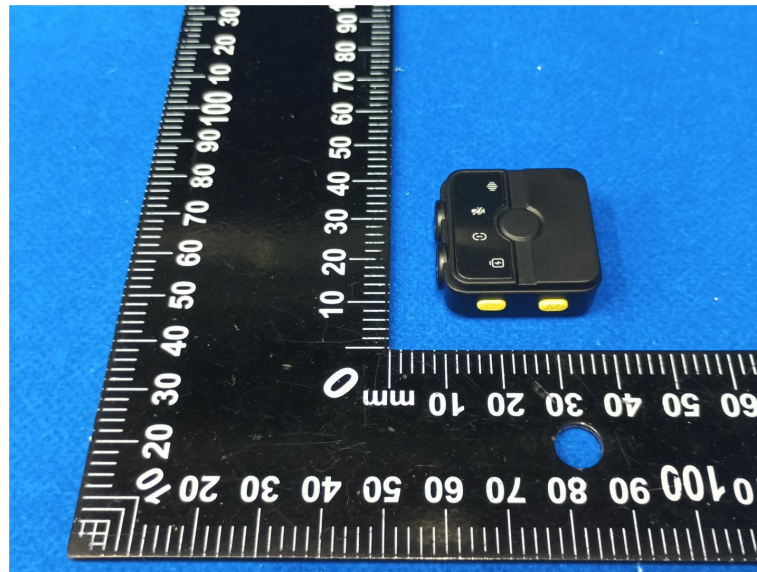
Overall view of the apparatus



Overall view of the apparatus



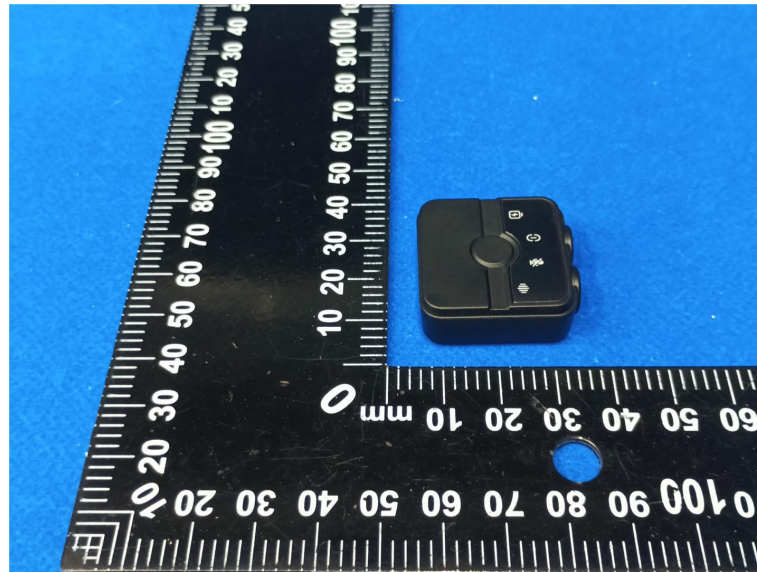
Overall view of the apparatus



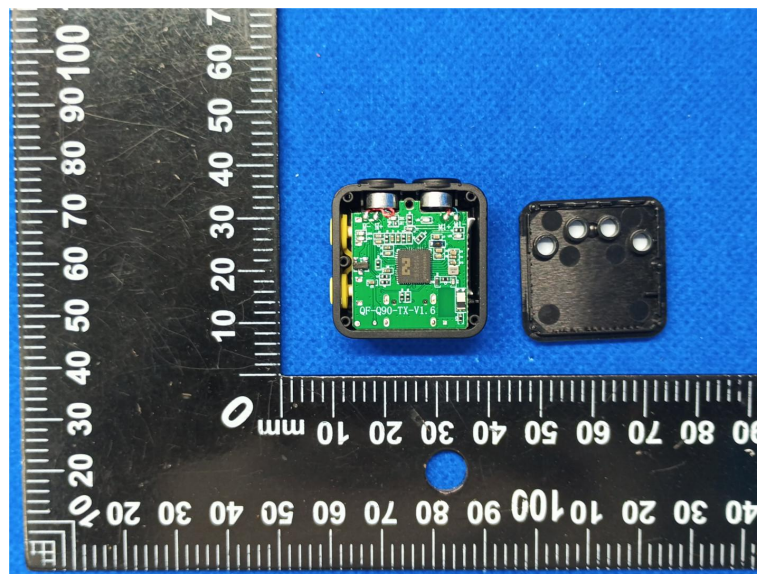
Overall view of the apparatus



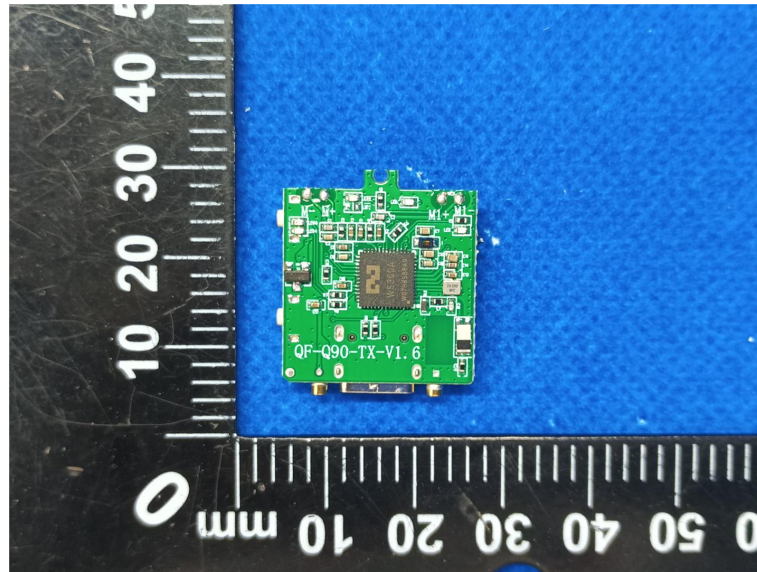
Overall view of the apparatus



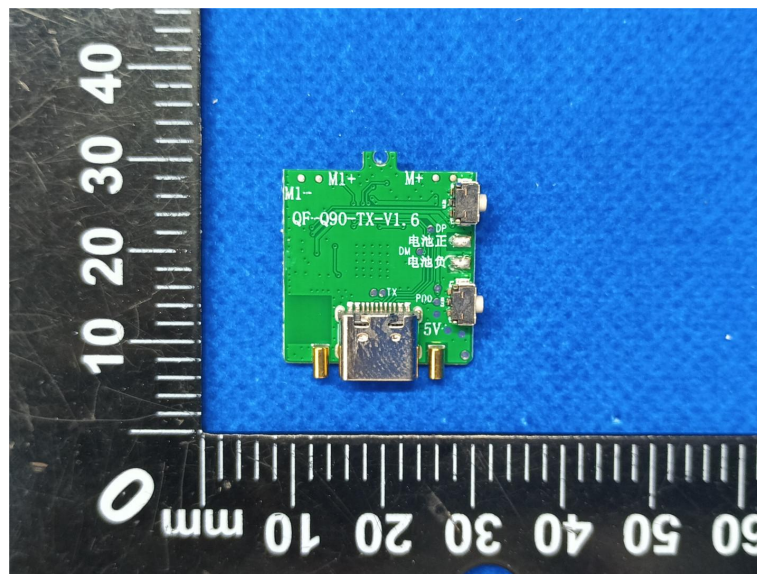
Overall view of the apparatus



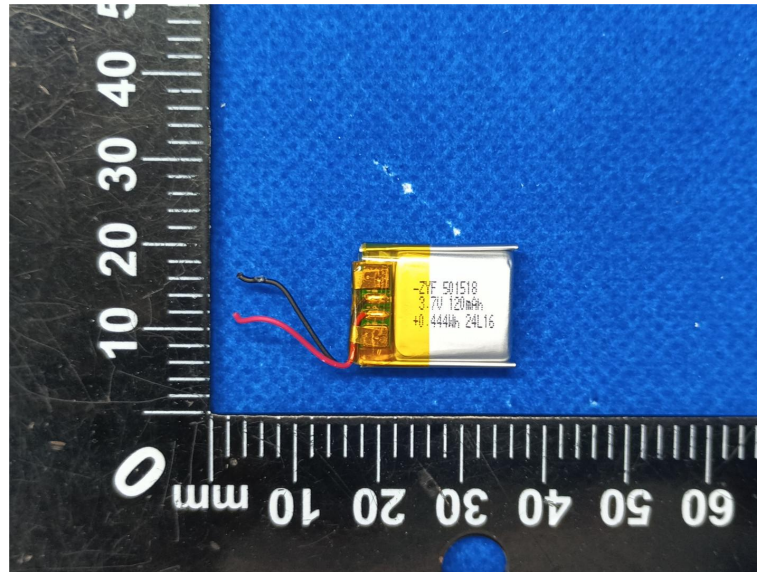
Internal view of the apparatus



Internal view of the apparatus



Internal view of the apparatus



Internal view of the apparatus

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