

EMC TEST REPORT

For

Shenzhen Huafurui Technology Co., Ltd.

Product Name: Wireless Earphone

Test Model(s): Cubot Neo 1

Report Reference No. : DACE250428032RL001

Applicant's Name : Shenzhen Huafurui Technology Co., Ltd.

Address : Unit 601-03, 6/F, Block A, Building 1, Ganfeng Technology Building, No. 993 Jiaxian Road, Shenzhen, China

Testing Laboratory : Shenzhen DACE Testing Technology Co., Ltd.

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Test Specification Standard : ETSI EN 301 489-1 V2.2.3 (2019-11)
ETSI EN 301 489-17 V3.3.1 (2024-09)

Date of Receipt : April 28, 2025

Date of Test : April 28, 2025 to April 30, 2025

Data of Issue : April 30, 2025

Result : Pass

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Apply for company information

Applicant's Name	:	Shenzhen Huafului Technology Co., Ltd.
Address	:	Unit 601-03, 6/F, Block A, Building 1, Ganfeng Technology Building, No. 993 Jiaxian Road, Shenzhen, China
Product Name	:	Wireless Earphone
Test Model(s)	:	Cubot Neo 1
Series Model(s)	:	N/A
Test Specification Standard(s)	:	ETSI EN 301 489-1 V2.2.3 (2019-11) ETSI EN 301 489-17 V3.3.1 (2024-09)

NOTE1:

The CE mark as shown below can be used, under the responsibility of the manufacturer, after completion of an EC Declaration of Conformity and compliance with all relevant EU Directives.



NOTE2:

The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards.

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April 30, 2025

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April 30, 2025

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April 30, 2025



Revision History Of Report

Version	Description	REPORT No.	Issue Date
V1.0	Original	DACE250428032RL001	April 30, 2025

CONTENTS

1 TEST SUMMARY	6
1.1 TEST STANDARDS	6
1.2 SUMMARY OF TEST RESULT	6
2 GENERAL INFORMATION	7
2.1 CLIENT INFORMATION	7
2.2 DESCRIPTION OF DEVICE (EUT)	7
2.3 DESCRIPTION OF TEST MODES	7
2.4 DESCRIPTION OF SUPPORT UNITS	7
2.5 EQUIPMENTS USED DURING THE TEST	8
2.6 STATEMENT OF THE MEASUREMENT UNCERTAINTY	10
3 EVALUATION RESULTS (EVALUATION)	11
3.1 HARMONIC CURRENT EMISSIONS	11
3.1.1 Conclusion:	11
4 EMISSION TEST RESULTS (EMI)	12
4.1 CONDUCTED EMISSIONS (AC POWER PORT)	12
4.1.1 E.U.T. Operation:	12
4.1.2 Test Setup Diagram:	12
4.1.3 Test Data:	13
4.2 RADIATED EMISSIONS (30MHZ-1GHZ)	15
4.2.1 E.U.T. Operation:	15
4.2.2 Test Setup Diagram:	15
4.2.3 Test Data:	16
4.3 VOLTAGE FLUCTUATIONS AND FLICKER	18
4.3.1 E.U.T. Operation:	18
4.3.2 Test Setup Diagram:	18
4.3.3 Test Data:	18
5 IMMUNITY TEST RESULTS (EMS)	19
5.1 ELECTROSTATIC DISCHARGE	21
5.1.1 E.U.T. Operation:	21
5.1.2 Test Setup Diagram:	21
5.1.3 Test Data:	21
5.2 RADIO FREQUENCY ELECTROMAGNETIC FIELD (80 MHZ TO 6 000 MHZ)	22
5.2.1 E.U.T. Operation:	22
5.2.2 Test Setup Diagram:	22
5.2.3 Test Data:	22
5.3 FAST TRANSIENTS, COMMON MODE (AC POWER PORT)	23
5.3.1 E.U.T. Operation:	23
5.3.2 Test Setup Diagram:	23
5.3.3 Test Data:	23
5.4 SURGES (AC POWER PORT)	24
5.4.1 E.U.T. Operation:	24
5.4.2 Test Setup Diagram:	24
5.4.3 Test Data:	24
5.5 RADIO FREQUENCY, COMMON MODE 0,15 MHZ TO 80 MHZ (AC POWER PORT)	25
5.5.1 E.U.T. Operation:	25

5.5.2 Test Setup Diagram:	25
5.5.3 Test Data:	25
5.6 VOLTAGE DIPS AND INTERRUPTIONS	26
5.6.1 E.U.T. Operation:	26
5.6.2 Test Setup Diagram:	26
5.6.3 Test Data:	26
6 TEST SETUP PHOTOS	27
7 PHOTOS OF THE EUT	29

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 and Wideband Data Transmission Systems; Harmonised Standard for ElectroMagnetic Compatibility

1.2 Summary of Test Result

Item	Standard	Method	Requirement	Result
Conducted emissions (AC power port)	ETSI EN 301 489-1 V2.2.3 (2019-11) ETSI EN 301 489-17 V3.3.1 (2024-09)	EN 55032, annex A.3	EN 301 489-1, clause 8.4 EN 301 489-17, clause 7.1	Pass
Radiated emissions (30MHz-1GHz)	ETSI EN 301 489-1 V2.2.3 (2019-11) ETSI EN 301 489-17 V3.3.1 (2024-09)	EN 55032, annex A.2	EN 301 489-1, clause 8.2 EN 301 489-17, clause 7.1	Pass
Harmonic current emissions	ETSI EN 301 489-1 V2.2.3 (2019-11) ETSI EN 301 489-17 V3.3.1 (2024-09)		Class A	Pass
Voltage fluctuations and flicker	ETSI EN 301 489-1 V2.2.3 (2019-11) ETSI EN 301 489-17 V3.3.1 (2024-09)	EN 61000-3-3, clause 6	EN 301 489-1, clause 8.6 EN 61000-3-3	Pass
Electrostatic discharge	ETSI EN 301 489-1 V2.2.3 (2019-11) ETSI EN 301 489-17 V3.3.1 (2024-09)	EN 61000-4-2, clauses 6, 7 and 8	EN 301 489-1, clause 9.3 EN 301 489-17, clause 7.2	Pass
Radio frequency electromagnetic field (80 MHz to 6 000 MHz)	ETSI EN 301 489-1 V2.2.3 (2019-11) ETSI EN 301 489-17 V3.3.1 (2024-09)	EN 61000-4-3, clauses 6, 7 and 8	EN 301 489-1, clause 9.2 EN 301 489-17, clause 7.2	Pass
Fast transients, common mode (AC power port)	ETSI EN 301 489-1 V2.2.3 (2019-11) ETSI EN 301 489-17 V3.3.1 (2024-09)	EN 61000-4-4, clauses 5	EN 301 489-1, clause 9.4 EN 301 489-17, clause 7.2	Pass
Surges (AC power port)	ETSI EN 301 489-1 V2.2.3 (2019-11) ETSI EN 301 489-17 V3.3.1 (2024-09)	EN 61000-4-5, clauses 7 and 8	EN 301 489-1, clause 9.8 EN 301 489-17, clause 7.2	Pass
Radio frequency, common mode 0,15 MHz to 80 MHz (AC power port)	ETSI EN 301 489-1 V2.2.3 (2019-11) ETSI EN 301 489-17 V3.3.1 (2024-09)	EN 61000-4-6, clauses 6 and 8	EN 301 489-1, clause 9.5 EN 301 489-17, clause 7.2	Pass
Voltage dips and interruptions	ETSI EN 301 489-1 V2.2.3 (2019-11) ETSI EN 301 489-17 V3.3.1 (2024-09)	EN 61000-4-11, clause 8	EN 301 489-1, clause 9.7 EN 301 489-17, clause 7.2	Pass

2 GENERAL INFORMATION

2.1 Client Information

Applicant's Name : Shenzhen Huafurui Technology Co., Ltd.
Address : Unit 601-03, 6/F, Block A, Building 1, Ganfeng Technology Building, No. 993 Jiaxian Road, Shenzhen, China

Manufacturer : Shenzhen Huafurui Technology Co., Ltd.
Address : Unit 601-03, 6/F, Block A, Building 1, Ganfeng Technology Building, No. 993 Jiaxian Road, Shenzhen, China

2.2 Description of Device (EUT)

Product Name:	Wireless Earphone
Model/Type reference:	Cubot Neo 1
Series Model:	N/A
Model Difference:	N/A
Trade Mark:	CUBOT
Power Supply:	DC 5V/1A from adapter Battery:DC3.7V 65mAh
Hardware Version:	V1.0
Software Version:	V1.0
Highest Internal Frequency:	>108MHz
Classification of Equipment:	Class B

2.3 Description of Test Modes

No	Title	Description
TM1	Charging	Keep the battery of the EUT in charging mode
TM2	Working	Pair the device with Bluetooth and keep the working mode

2.4 Description of Support Units

Title	Manufacturer	Model No.	Serial No.
AC-DC adapter	HUAWEI TECHNOLOGY	HW100400C01	

2.5 Equipments Used During The Test

Conducted emissions (AC power port)					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
loop antenna	EVERFINE	LLA-2	80900L-C	2024-12-19	2025-12-18
Power absorbing clamp	SCHWARZ BECK	MESS-ELEKTRONIK	/	2024-05-20	2025-05-19
Electric Network	SCHWARZ BECK	CAT5 8158	CAT5 8158#207	/	/
Cable	SCHWARZ BECK	/	/	2024-05-20	2025-05-19
Pulse Limiter	SCHWARZ BECK	VTSD 9561-F Pulse limiter 10dB Attenuation	561-G071	2024-12-06	2025-12-05
50ΩCoaxial Switch	Anritsu	MP59B	M20531	/	/
Test Receiver	Rohde & Schwarz	ESPI TEST RECEIVER	ID:1164.6607K 03-102109-MH	2024-06-12	2025-06-11
L.I.S.N	R&S	ESH3-Z5	831.5518.52	2023-12-12	2025-12-11
L.I.S.N	SCHWARZ BECK	NSLK 8126	05055	2024-06-14	2025-06-13
Pulse Limiter	CYBERTEK	EM5010A	/	2024-09-27	2025-09-26
EMI test software	EZ -EMC	EZ	V1.1.42	/	/

Radiated emissions (30MHz-1GHz)
Radiated emissions (above 1GHz)

Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
Cable(HF)2	SCHWARZ BECK	50Ω	/	2024-05-20	2025-05-19
Cable(HF)1	SCHWARZ BECK	50Ω	/	2024-05-20	2025-05-19
Cable(LF)2	SCHWARZ BECK	50Ω	/	2024-05-20	2025-05-19
Cable(LF)1	SCHWARZ BECK	50Ω	/	2024-05-20	2025-05-19
control	MF	MF-7802	MF780208362	2024-12-09	2025-12-08
Test Receiver	Rohde & Schwarz	ESPI TEST RECEIVER	ID:1164.6607K 03-102109-MH	2024-06-12	2025-06-11
EMI Test software	Farad	EZ -EMC	V1.1.42	/	/
Positioning Controller	MF	MF-7802	/	/	/
Amplifier(18-40G)	COM-POWER	AH-1840	10100008-1	2023-05-19	2025-05-18
Horn antenna	COM-POWER	AH-1840 (18-40G)	10100008	2023-05-19	2025-05-18
Loop antenna	ZHINAN	ZN30900C	ZN30900C	2024-06-14	2026-06-13
Power amplifier(LF)	Schwarzbeck	BBV9743	9743-151	2024-06-12	2025-06-11
Power amplifier(HF)	Schwarzbeck	BBV9718	9718-282	2024-06-12	2025-06-11
Test Receiver	R&S	ESCI 3	1166.5950K03 -101431-Jq	2024-06-13	2025-06-12
Horn Antenna	Sunol Sciences	DRH-118	A091114	2023-05-13	2025-05-12
Broadband Antenna	Sunol Sciences	JB6 Antenna	A090414	2024-09-28	2026-09-27

Voltage fluctuations and flicker

Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
Harmonic current/scintillation analyzer	TTI	AC 2000A	72314	2024-12-06	2025-12-05
PC	/	P2L97	N/A	/	/

Electrostatic discharge

Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
ESD Tester	Prima	ESD61002A	144305	2024-12-06	2025-12-05

Fast transients, common mode (AC power port)

Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
Coupling Clamp	HTEC	H3C	147147	2024-12-06	2025-12-05
Burst Tester	HTEC	HEFT 51	144303	2024-12-24	2025-12-23

Surges (AC power port)

Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
Surge Tester	Prima	SUG61005TB	PR160351170	2024-12-06	2025-12-05
CDN coupling/decoupling network	Prima	DATA-CDN-8B	PR201254826	/	/

Radio frequency, common mode 0,15 MHz to 80 MHz (AC power port)

Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
Attenuator	SCHLODER	DC-1GHz	HA1606	2024-12-06	2025-12-05
Injection Clamp	Rohde & Schwarz	F-2031-23MM	368	2024-12-25	2025-12-24
C/S Test Software	HUBERT	1.5.0	17901493	/	/
CDN	SCHLODER	CDN-M2+M3	17101238-0106/2017	2024-12-06	2025-12-05
Conducted Disturbances Test System	SCHLODER	CDG 6000-25	17901493-0101	2024-12-06	2025-12-05
EM-Clamp	SCHLODER	EMCL-20	20102817-0108	2024-12-06	2025-12-05

Voltage dips and interruptions

Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
Voltage Dips and Interruptions Test	HTEC	HPFS161P	144304	2024-12-24	2025-12-23

2.6 Statement Of The Measurement Uncertainty

Test Item	Measurement Uncertainty
Conducted Disturbance (0.15~30MHz)	±3.41dB
Radiated Emission (Below 1GHz)	±5.79dB
Radiated Emission (Above 1GHz)	±5.46dB
Note: (1) This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.	

3 Evaluation Results (Evaluation)

3.1 Harmonic current emissions

Test Requirement:	Class A
Test Limit:	Not specified

3.1.1 Conclusion:

Refer to EN IEC 61000-3-2 clause 7.1:

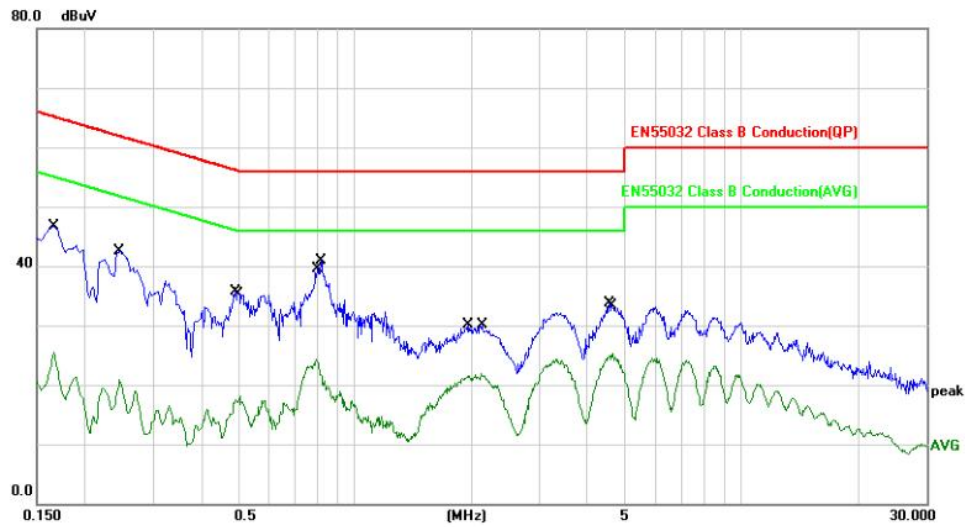
"For the following categories of equipment, limits are not specified in this document:

- lighting equipment with a rated power less than but not equal to 5 W;
- equipment with a rated power of 75 W or less, other than lighting equipment;"

Since the rated power of the EUT is less than above described, it is deemed to comply with the requirement.

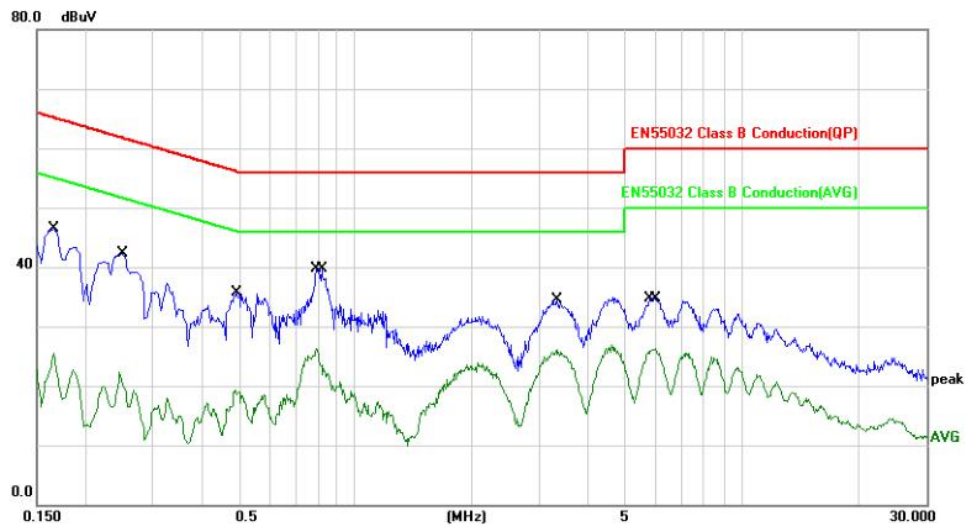
4.1.3 Test Data:

TM1 / Line: Line



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1		0.1660	36.59	10.10	46.69	65.15	-18.46	QP	
2		0.1660	15.48	10.10	25.58	55.15	-29.57	AVG	
3		0.2460	32.36	10.09	42.45	61.89	-19.44	QP	
4		0.2460	10.84	10.09	20.93	51.89	-30.96	AVG	
5		0.4900	25.54	10.08	35.62	56.17	-20.55	QP	
6		0.5020	7.98	10.08	18.06	46.00	-27.94	AVG	
7		0.7940	14.20	10.08	24.28	46.00	-21.72	AVG	
8	*	0.8139	30.78	10.08	40.86	56.00	-15.14	QP	
9		1.9660	20.19	9.99	30.18	56.00	-25.82	QP	
10		2.1180	11.84	10.01	21.85	46.00	-24.15	AVG	
11		4.5420	23.61	10.18	33.79	56.00	-22.21	QP	
12		4.6260	15.05	10.18	25.23	46.00	-20.77	AVG	

TM1 / Line: Neutral



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1		0.1660	36.35	10.10	46.45	65.15	-18.70	QP	
2		0.1660	15.40	10.10	25.50	55.15	-29.65	AVG	
3		0.2460	12.13	10.09	22.22	51.89	-29.67	AVG	
4		0.2500	32.22	10.09	42.31	61.75	-19.44	QP	
5		0.4900	9.18	10.08	19.26	46.17	-26.91	AVG	
6		0.4940	25.63	10.08	35.71	56.10	-20.39	QP	
7		0.7940	16.12	10.08	26.20	46.00	-19.80	AVG	
8	*	0.8180	29.64	10.08	39.72	56.00	-16.28	QP	
9		3.3180	24.39	10.10	34.49	56.00	-21.51	QP	
10		3.3180	15.93	10.10	26.03	46.00	-19.97	AVG	
11		5.7819	24.59	10.21	34.80	60.00	-25.20	QP	
12		5.9860	16.01	10.21	26.22	50.00	-23.78	AVG	

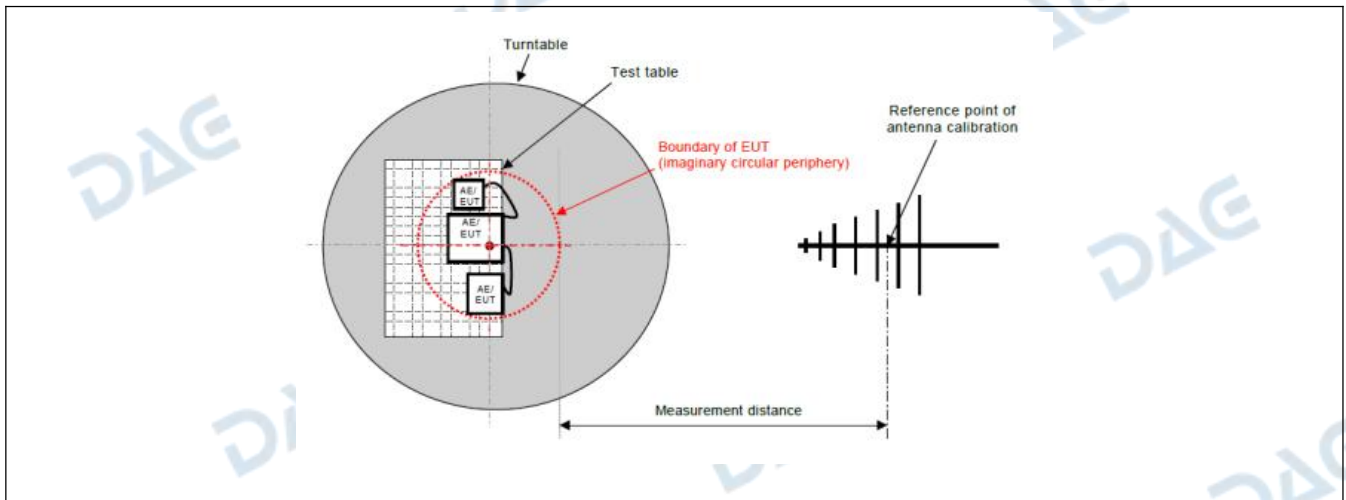
4.2 Radiated emissions (30MHz-1GHz)

Test Requirement:	EN 301 489-1, clause 8.2 EN 301 489-17, clause 7.1		
Test Limit:	FREQUENCY (MHz)	dB(μV/m) At 10m	dB(μV/m) At 3m
	30MHz-230MHz	30	40
	230MHz-1GHz	37	47
	Detector: Peak for pre-scan (120kHz resolution bandwidth) 30M to 1000MHz		
Test Method:	EN 55032, annex A.2		
Procedure:	An initial pre-scan was performed in the chamber using the spectrum analyser in peak detection mode. Quasi-peak measurements were conducted based on the peak sweep graph. The EUT was measured by BiConiLog antenna with 2 orthogonal polarities. Remark: Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor		

4.2.1 E.U.T. Operation:

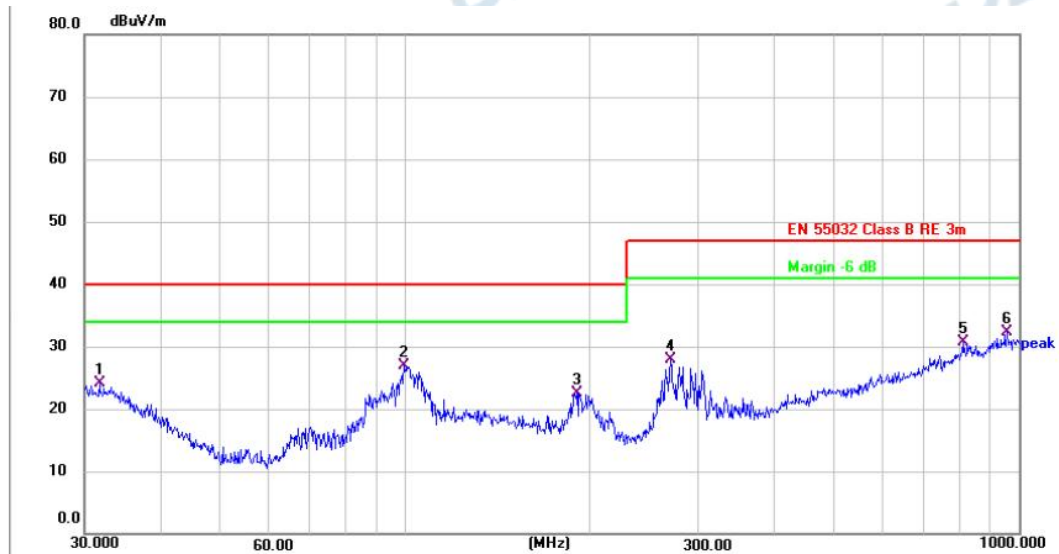
Operating Environment:			
Temperature:	22.1 °C	Humidity:	47 %
Pretest mode:	TM1		
Final test mode:	TM1		

4.2.2 Test Setup Diagram:



4.2.3 Test Data:

TM1 / Polarization: Horizontal



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	31.7313	26.87	-2.71	24.16	40.00	-15.84	QP	100		P	
2 *	99.5281	36.19	-9.24	26.95	40.00	-13.05	QP	100		P	
3	190.4050	32.57	-10.07	22.50	40.00	-17.50	QP	100		P	
4	270.3748	36.61	-8.68	27.93	47.00	-19.07	QP	100		P	
5	810.2654	27.85	2.79	30.64	47.00	-16.36	QP	100		P	
6	955.4381	27.70	4.56	32.26	47.00	-14.74	QP	100		P	

TM1 / Polarization: Vertical



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	30.1054	28.97	-4.09	24.88	40.00	-15.12	QP	100		P	
2	63.5356	42.50	-13.82	28.68	40.00	-11.32	QP	100		P	
3 *	99.8777	47.33	-9.14	38.19	40.00	-1.81	QP	100		P	
4	192.4186	35.78	-9.57	26.21	40.00	-13.79	QP	100		P	
5	492.4685	27.37	-3.33	24.04	47.00	-22.96	QP	100		P	
6	925.7563	27.28	4.32	31.60	47.00	-15.40	QP	100		P	

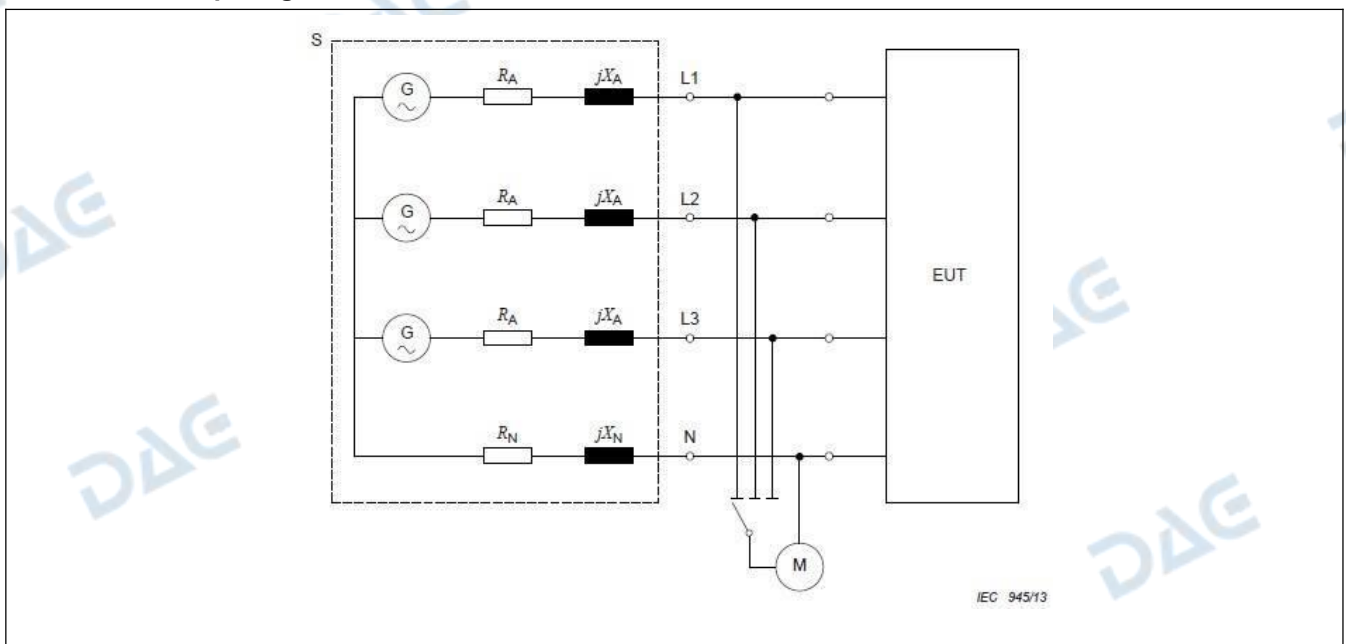
4.3 Voltage fluctuations and flicker

Test Requirement:	EN 301 489-1, clause 8.6 EN 61000-3-3
Test Limit:	EN 61000-3-3, clause 5
Test Method:	EN 61000-3-3, clause 6

4.3.1 E.U.T. Operation:

Operating Environment:					
Temperature:	22.8 °C	Humidity:	55 %	Atmospheric Pressure:	101 kPa
Pretest mode:	TM1				
Final test mode:	TM1				

4.3.2 Test Setup Diagram:



4.3.3 Test Data:

Pass

5 Immunity Test Results (EMS)

Performance Criteria for ETSI EN 301 489-1 V2.2.3 (2019-11)

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.

Continuous and non-continuous operation

Latency is the time delay between the initiation and the completion of operation of the EUT.

Correct functioning requires completing the relevant operation within the maximum latency time.

Where the maximum latency is specified in the applicable harmonised radio standard (in the wanted performance criterion, or an acknowledge requirement), that value shall be used.

Where this is not the case, then the maximum latency is that required by the intended use of the EUT.

Operating modes

Where the EUT has more than one mode of operation (see clause 4.4.1), an unplanned transition from one mode to another is considered as an unintentional response. The EUT shall be tested in all modes to confirm there are no such unintentional responses.

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.

Continuous and non-continuous operation

Latency is the time delay between the initiation and the completion of operation of the EUT.

Correct functioning requires completing the relevant operation within the maximum latency time.

Where the maximum latency is specified in the applicable harmonised radio standard (in the wanted performance criterion, or an acknowledge requirement), that value shall be used.

Where this is not the case, then the maximum latency is that required by the intended use of the EUT.

Operating modes

Where the EUT has more than one mode of operation (see clause 4.4.1), an unplanned transition from one mode to another is considered as an unintentional response. The EUT shall be tested in all modes to confirm there are no such unintentional responses.

Performance Criteria for ETSI EN 301 489-17 V3.3.1 (2024-09)

General performance criteria

The performance criteria are:

- performance criteria A for immunity tests with phenomena of a continuous nature;
- performance criteria B for immunity tests with phenomena of a transient nature;
- performance criteria C for immunity tests with power interruptions exceeding a certain time.

The equipment shall meet the minimum performance criteria as specified in the following clauses.

Performance criteria overview

Table 2: Performance criteria

Criteria	During test	After test(i.e. as a result of the application of the test)
A	Shall operate as	Shall operate as intended.Shall be no degradation of

	intended.(See note).Shall be no loss of function.Shall be no unintentional transmissions.	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.
<p>NOTE: Operate as intended during the test shall be considered as:</p> <ul style="list-style-type: none"> • 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, (e.g. audio equipment and equipment transmitting sporadic messages) the minimum performance level shall be no loss of the wireless transmission function needed for the intended use of the equipment. 		

The performance criteria A shall apply.

Where the EUT is a transmitter in standby mode, unintentional transmission shall not occur during the test.

Where the EUT is a transceiver in receive mode, unintentional transmission shall not occur during the test.

The performance criteria B shall apply for transient phenomena, except for voltage dips greater than or equal to 100 ms, voltage interruptions of 5 000 ms duration, and surges of 10/700 μ s for which performance criteria C shall apply.

Where the EUT is a transmitter in standby mode, unintentional transmission shall not occur as result of the application of the test.

Where the EUT is a transceiver in receive mode, unintentional transmission shall not occur as result of the application of the test.

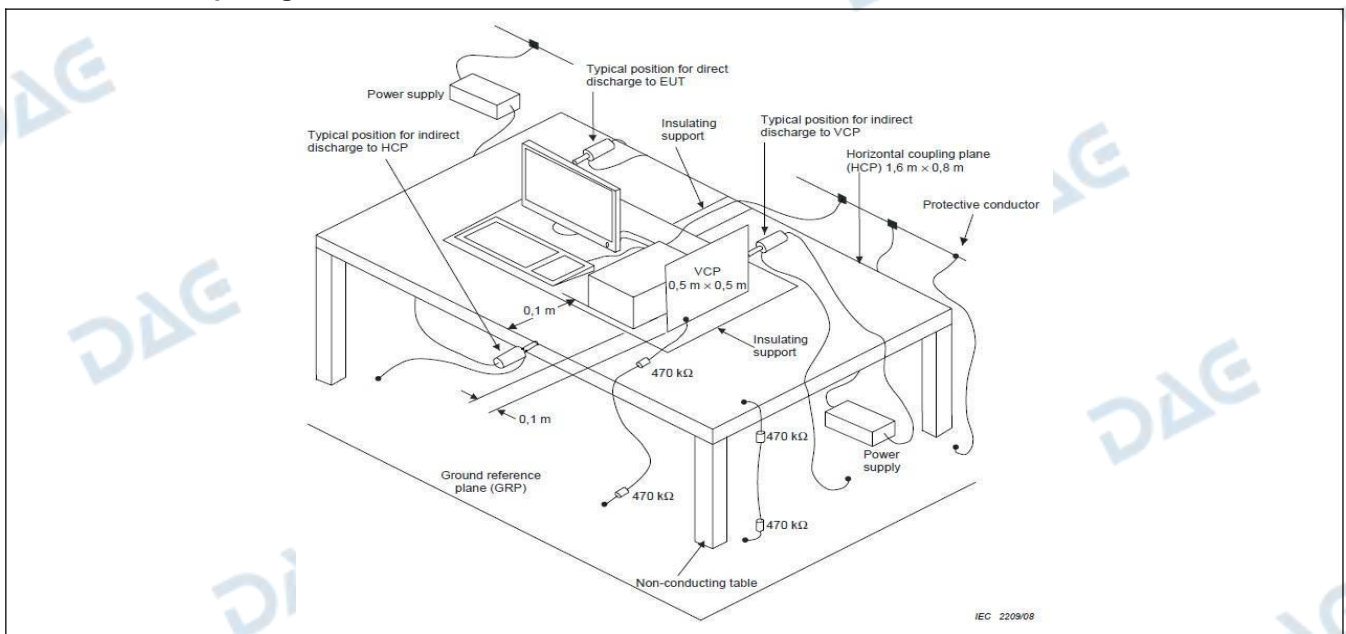
5.1 Electrostatic discharge

Test Requirement:	EN 301 489-1, clause 9.3 EN 301 489-17, clause 7.2
Test Method:	EN 61000-4-2, clauses 6, 7 and 8
Procedure:	Discharge Impedance: 330Ω/150pF Number of Discharge: Minimum 10 times at each test point Discharge Mode: Single Discharge Discharge Period: 1 second minimum
Performance Criteria:	TT(B), TR(B)

5.1.1 E.U.T. Operation:

Operating Environment:						
Temperature:	22.8 °C		Humidity:	55 %	Atmospheric Pressure:	101 kPa
Pretest mode:		TM1				
Final test mode:		TM1				

5.1.2 Test Setup Diagram:



5.1.3 Test Data:

Discharge type	Volt (kV)	Polarity	Test Point	Result/ Observations
Air discharge	2,4,8	+	11	A
Air discharge	2,4,8	-	11	A
Contact discharge	4	+	2	A
Contact discharge	4	-	2	A
Horizontal Coupling	4	+	3	A
Horizontal Coupling	4	-	3	A
Vertical Coupling	4	+	3	A
Vertical Coupling	4	-	3	A

Test Point: 1. All insulated enclosure and seams.

2. All accessible metal parts of the enclosure.

3. All side.

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

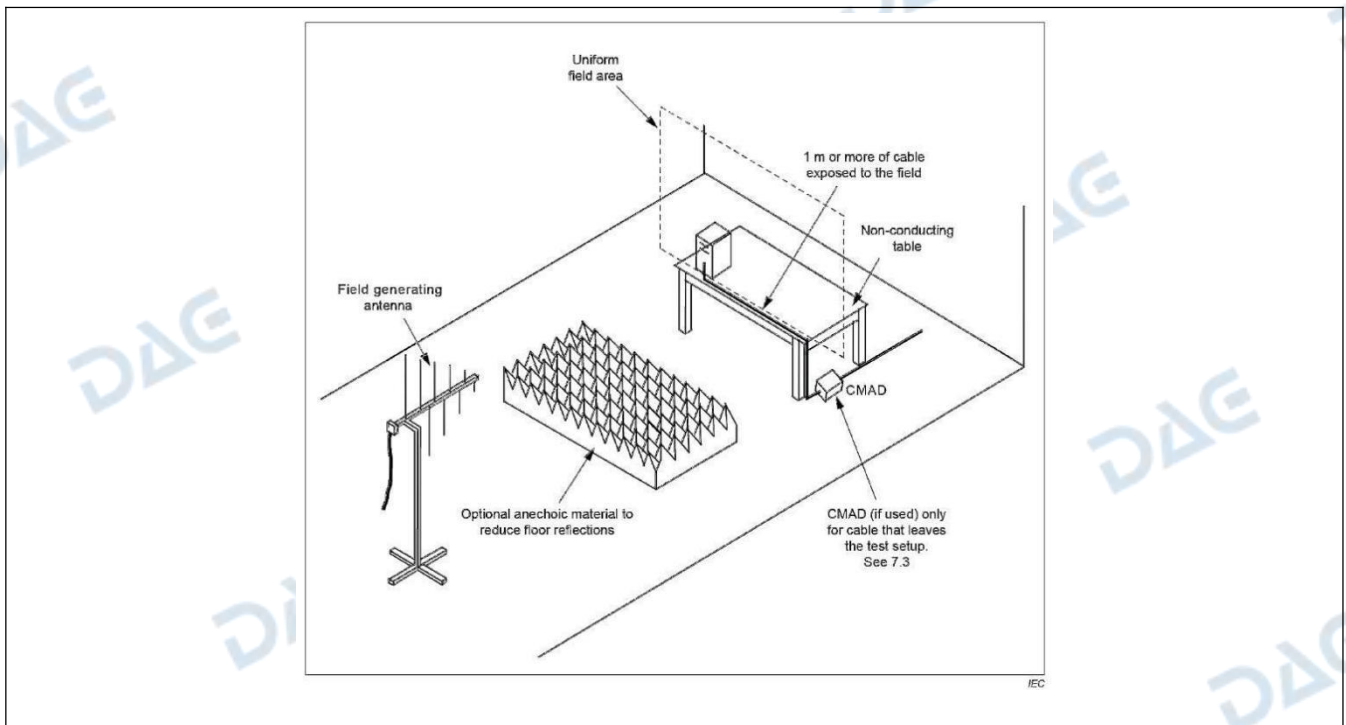
5.2 Radio frequency electromagnetic field (80 MHz to 6 000 MHz)

Test Requirement:	EN 301 489-1, clause 9.2 EN 301 489-17, clause 7.2
Test Method:	EN 61000-4-3, clauses 6, 7 and 8
Procedure:	Frequency Range: 80MHz to 6GHz Antenna Polarisation: Vertical and Horizontal Modulation: 1kHz,80% Amp. Mod,1% increment
Performance Criteria:	CT(A), CR(A)

5.2.1 E.U.T. Operation:

Operating Environment:					
Temperature:	22.8 °C	Humidity:	55 %	Atmospheric Pressure:	101 kPa
Pretest mode:		TM1			
Final test mode:		TM1			

5.2.2 Test Setup Diagram:



5.2.3 Test Data:

Frequency	Field Strength (V/m)	EUT face	Dwell time	Result/ Observations
80MHz-6GHz	3	Front	3s	A
80MHz-6GHz	3	Back	3s	A
80MHz-6GHz	3	Left	3s	A
80MHz-6GHz	3	Right	3s	A
80MHz-6GHz	3	Top	3s	A
80MHz-6GHz	3	Bottom	3s	A

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

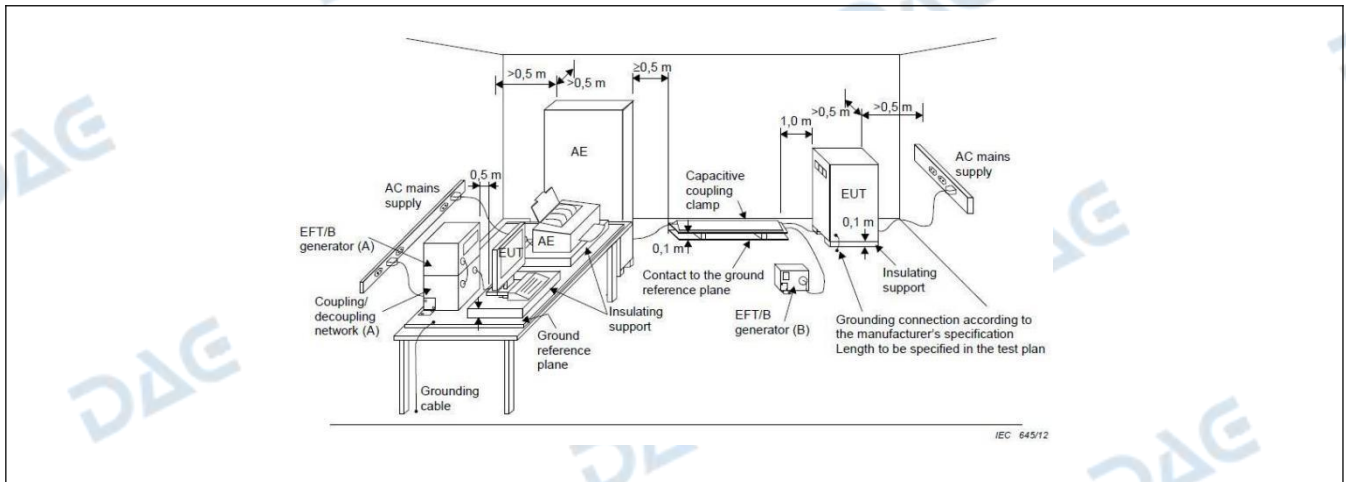
5.3 Fast transients, common mode (AC power port)

Test Requirement:	EN 301 489-1, clause 9.4 EN 301 489-17, clause 7.2
Test Method:	EN 61000-4-4, clauses 5
Procedure:	Repetition Frequency: 5kHz Burst Period: 300ms
Performance Criteria:	TT(B), TR(B)

5.3.1 E.U.T. Operation:

Operating Environment:					
Temperature:	22.8 °C	Humidity:	55 %	Atmospheric Pressure:	101 kPa
Pretest mode:		TM1			
Final test mode:		TM1			

5.3.2 Test Setup Diagram:



5.3.3 Test Data:

Port	Volt (kV)	Polarity	CDN/ Clamp	Result/ Observations
AC power port	1	+	CDN	A
AC power port	1	-	CDN	A

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

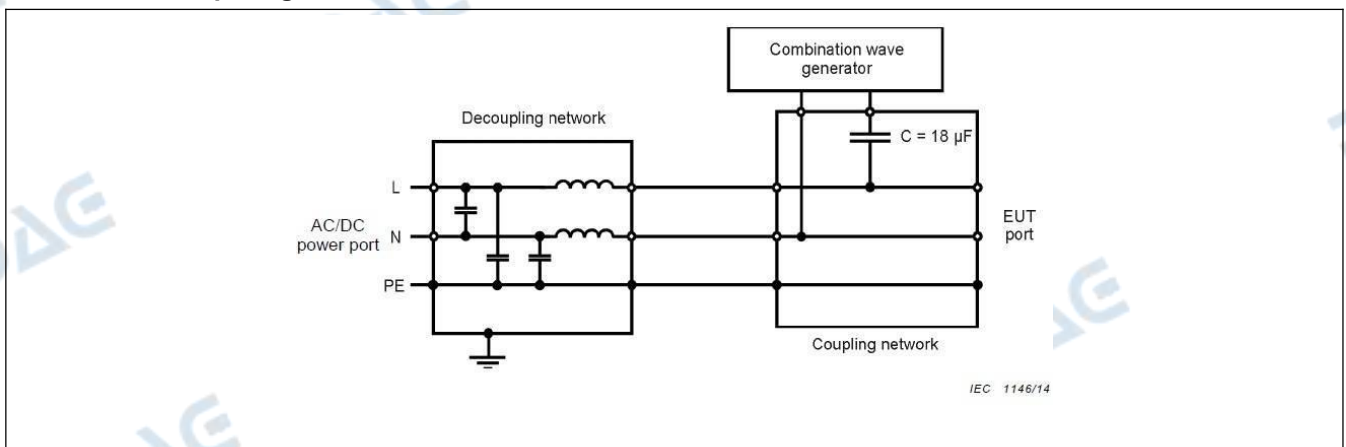
5.4 Surges (AC power port)

Test Requirement:	EN 301 489-1, clause 9.8 EN 301 489-17, clause 7.2
Test Method:	EN 61000-4-5, clauses 7 and 8
Performance Criteria:	TT(B), TR(B)

5.4.1 E.U.T. Operation:

Operating Environment:					
Temperature:	22.8 °C	Humidity:	55 %	Atmospheric Pressure:	101 kPa
Pretest mode:		TM1			
Final test mode:		TM1			

5.4.2 Test Setup Diagram:



5.4.3 Test Data:

Port	Volt (kV)	Polarity	Phase(degree)	Result/ Observations
L-N	1	+	0°	A
L-N	1	-	0°	A
L-N	1	-	90°	A
L-N	1	+	90°	A
L-N	1	-	180°	A
L-N	1	+	180°	A
L-N	1	+	270°	A
L-N	1	-	270°	A

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

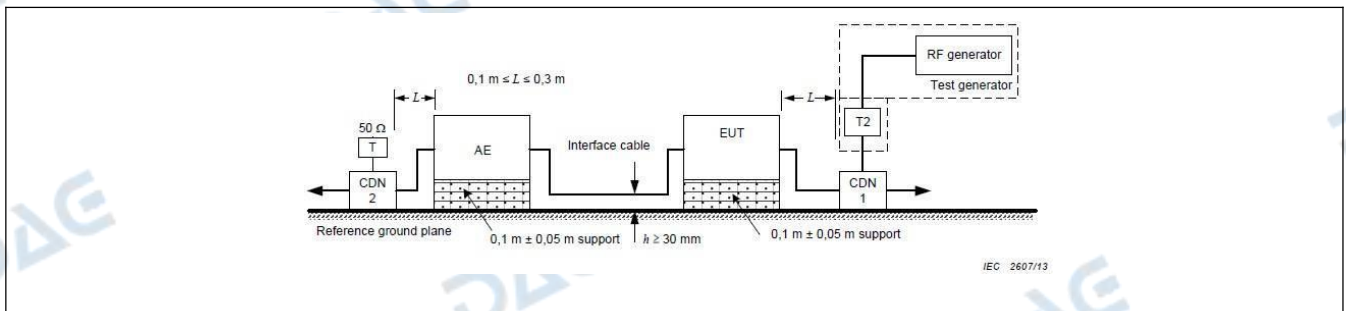
5.5 Radio frequency, common mode 0,15 MHz to 80 MHz (AC power port)

Test Requirement:	EN 301 489-1, clause 9.5 EN 301 489-17, clause 7.2
Test Method:	EN 61000-4-6, clauses 6 and 8
Performance Criteria:	CT(A), CR(A)

5.5.1 E.U.T. Operation:

Operating Environment:					
Temperature:	22.8 °C	Humidity:	55 %	Atmospheric Pressure:	101 kPa
Pretest mode:		TM1			
Final test mode:		TM1			

5.5.2 Test Setup Diagram:



5.5.3 Test Data:

Port	Strength (Vrms)	CDN/Clamp	Dwell time	Result/ Observations
AC power port	3	CDN	3s	A

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

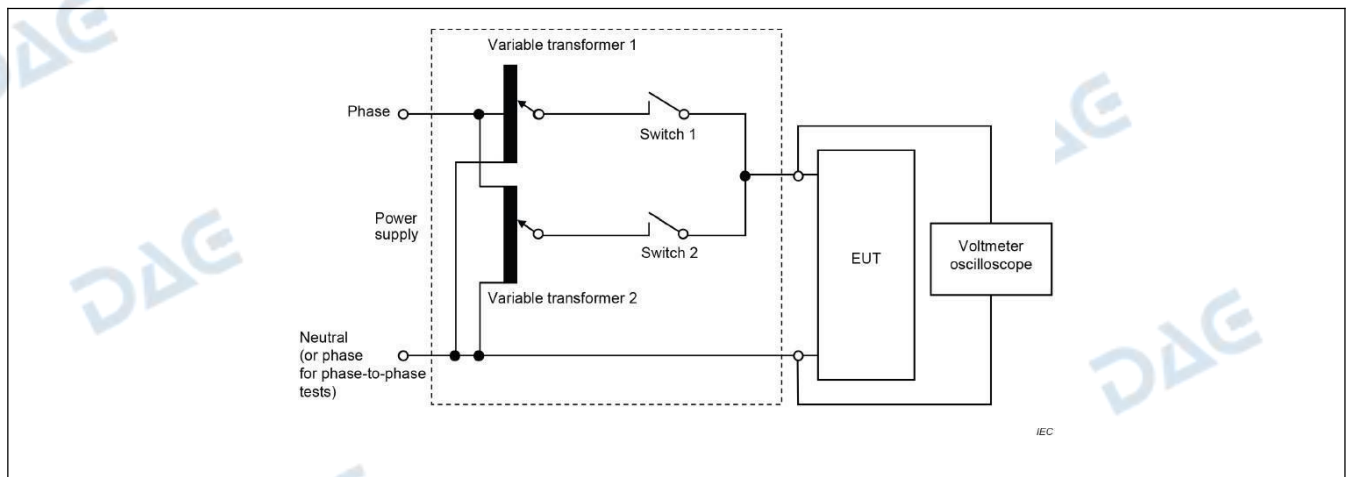
5.6 Voltage dips and interruptions

Test Requirement:	EN 301 489-1, clause 9.7 EN 301 489-17, clause 7.2
Test Method:	EN 61000-4-11, clause 8 The test levels shall be: <ul style="list-style-type: none"> voltage dip: 0 % residual voltage for 0,5 cycle; voltage dip: 0 % residual voltage for 1 cycle; voltage dip: 70 % residual voltage for 25 cycles (at 50 Hz); voltage interruption: 0 % residual voltage for 250 cycles (at 50 Hz).
Performance Criteria:	Voltage dips: TT(B), TR(B) Voltage interruptions: TT(C), TR(C)

5.6.1 E.U.T. Operation:

Operating Environment:					
Temperature:	22.8 °C	Humidity:	55 %	Atmospheric Pressure:	101 kPa
Pretest mode:	TM1				
Final test mode:	TM1				

5.6.2 Test Setup Diagram:



5.6.3 Test Data:

Level %UT	Phase (degree)	Duration	No. of Dips/ Interruptions	Result/ Observations
0	0°	0.5 Cycles	3	A
0	180°	0.5 Cycles	3	A
0	0°	1 Cycles	3	A
0	180°	1 Cycles	3	A
0	0°	250 Cycles	3	A
0	180°	250 Cycles	3	A
70	0°	25 Cycles	3	A
70	180°	25 Cycles	3	A

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

6 TEST SETUP PHOTOS

Conducted emissions (AC power port)



Radiated emissions (30MHz-1GHz)



Electrostatic discharge



7 PHOTOS OF THE EUT

External











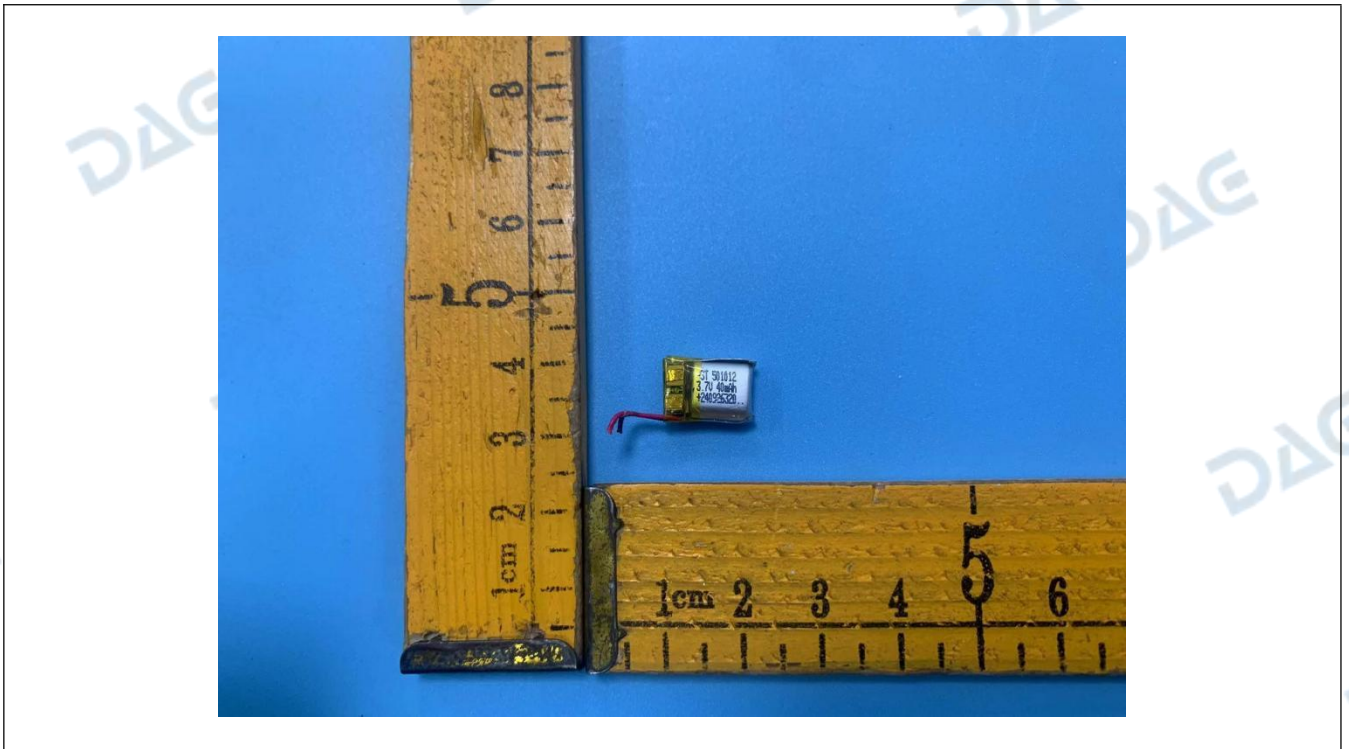
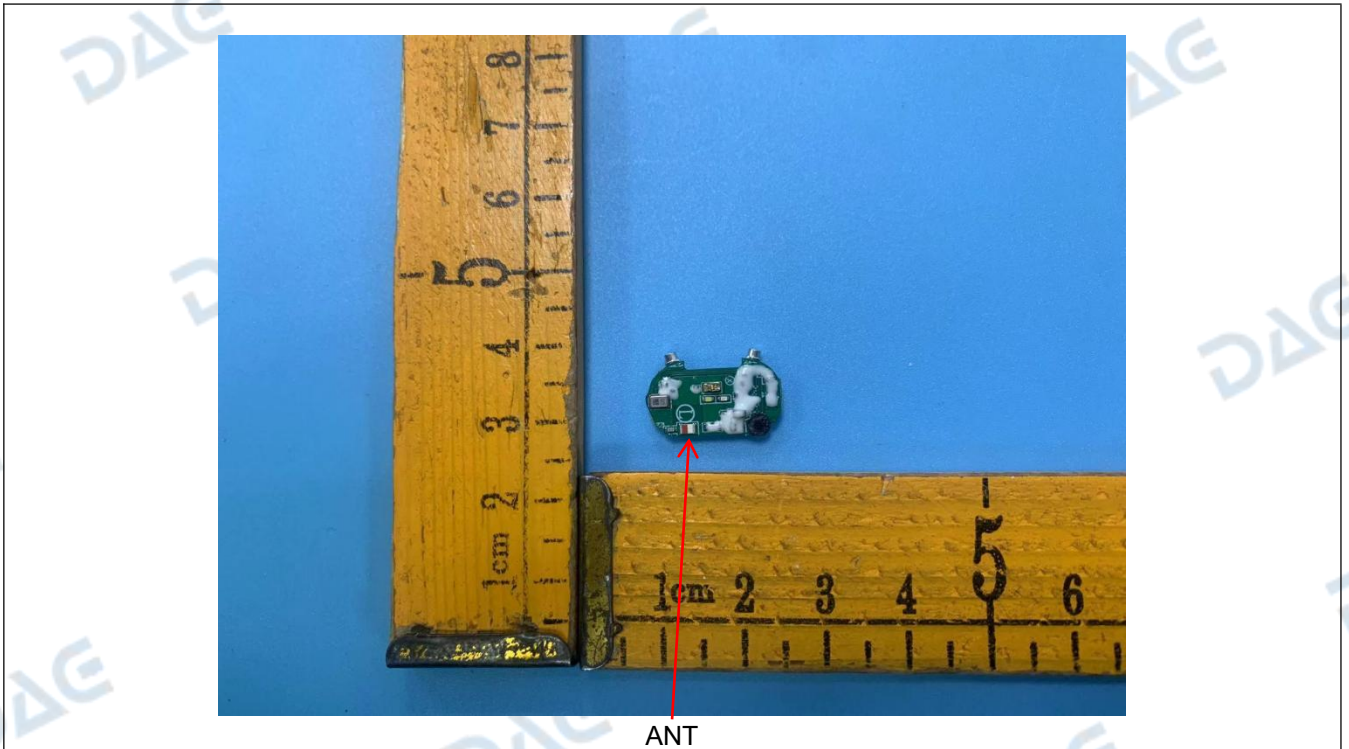




Internal







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